ABINGTON TOWNSHIP

MARCH 14, 2024

BOARD OF COMMISSIONERS
REGULAR PUBLIC MEETING

TOWNSHIP OF ABINGTON

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

A G E N D A
March 14, 2024
7:00 PM

There are three ways for the public to participate in the meeting: in-person, online or by phone. Residents who wish to attend in person can do so in the Abington Township Board Room located at 1176 Old York Road, Abington, PA 19001, 2nd Floor. Alternative means of public participation are offered for those who do not wish to or are unable to attend the meetings in person. Residents who wish to participate in the meeting remotely can access the meeting online by a computer, iPad, iPhone, or Android at https://us06web.zoom.us/j/88216803878. This link will enable residents to hear the meeting, see presentations, and ask questions. There will be no video interaction capabilities. Residents, who are unable to join online, can listen to and participate in the meeting by calling 1-929-436-2866 and entering the meeting ID number 882-1680-3878 when prompted.

CALL TO ORDER

ROLL CALL, *BRODSKY, ROTHMAN, DIPLACIDO, LANEY-MARTIN, BROWNE, WINEGRAD, HENRY, ZAPPONE, SPIEGELMAN, BOLE, SCHREIBER, BOWMAN, VAHEY, HECKER*

PLEDGE OF ALLEGIANCE

BOARD PRESIDENT ANNOUNCEMENTS

PUBLIC COMMENT ON AGENDA ITEMS

CONSENT AGENDA

a. Motion to approve the Minutes from the Board of Commissioners Regular Meeting of February 8, 2024.

b. BOC-01-031424 Motion to adopt Traffic Safety Ordinance No. 2211 amending an ordinance Chapter 156 - "Vehicles and Traffic," Article II - "Traffic Regulations" Section 14 - "Stop Intersections"; Article III - "Parking Regulations" Section 25 - "Parking Prohibited at all Times; No Parking Between Signs; No Parking Here to Corner; Parking Prohibited Except Certain Hours; No Stopping or Standing"; and Section 28 - Specialized Parking signs to add the following: a stop sign westbound and eastbound on Woodrow Avenue at the intersection of Tennis Avenue; westbound

and eastbound on Rothley Avenue at Triebel Avenue; westbound on Fairacres Road at Washington Lane; northbound and southbound on Tennis Avenue at Jefferson Avenue; No Parking on northside on Guernsey Avenue at Old York Road and the western driveway edge of 1151 Old York Road; Sherman Avenue, eastside at Rockledge Avenue and point 150' north; and Handicapped Parking signs at 1119 Hall Avenue; Easton Road in front of Roslyn VFW; and remove Handicapped Parking sign at 2123 Curtis Avenue.

c. BOC-02-031424 Motion to approve the release of escrow #6 for LD-19-08, Galman Residential, in the amount of $170,980.88.

d. BOC-03-031424 Motion to approve the release of escrow request #2 and final for LD-21-04 - 521 Moredon Road (Barn Addition) in the amount of $112,692.50.

e. BOC-04-031424 Motion to approve the stipulation to settle the matter of 1801 Susquehanna Road (Sunrise Assisted Living) v Montgomery County Assessment Appeals ET AL and authorize Wisler Pearlstine to sign the stipulation on behalf of the Township of Abington.

f. BOC-05-031424 Motion to approve the stipulation to settle the matter of 261 Old York Road (The Pavilion)v Montgomery County Assessment Appeals ET AL and authorize Wisler Pearlstine to sign the stipulation on behalf of the Township of Abington.

g. BOC-06-031424 Motion to approve Change Order No: 2 from Clipper Pipe and Services, Inc. in the amount of $83,722.25 and Electri Tech in the amount of $11,452.39 for the Abington Township Building HVAC upgrade project.

h. BOC-07-031424 Motion to approve Amendment 2 to Professional Services Agreement for ARPA funding engagement project PROJ-002669 with Witt O'Brien's for continued ARPA funding support as necessary.

i. BOC-08-031424 Motion to approve Resolution #24-015 the submission of the "Ardsley Wildlife Sanctuary Phase 2 Project" grant application to Montgomery County's Montco 2040 Implementation Grant Program.

j. BOC-09-031424 Motion to adopt Resolution No. 24-016 for a Transportation and Community Development Initiative (TCDI) grant application through the Delaware Valley Regional Planning Commission (DVRPC) for a Protected Bike Routes Action Plan in the amount of $75,000.

k. BOC-10-031424 Motion to approve an extension for the agreements (C000064042 and C000070588) by and between the Department of Community & Economic Development for the Multimodal Transportation Fund Grant which support the Old York Road / Susquehanna Road project until June 30, 2025.

l. BOC-11-031424 Motion to approve an extension for agreement C000072116 by and between the Department of Community & Economic Development for the Multimodal Transportation Fund Grant which supports the Abington Jenkintown Connection Project until June 30, 2025.

m. BOC-12-031424 Motion to approve an extension for the agreement C000076378 by and between the Department of Community & Economic Development for the Multimodal Transportation Fund Grant which supports the Abington Jenkintown Connection Project until June 30, 2025.

UNFINISHED BUSINESS

NEW BUSINESS

a. BOC-13-031424 Motion to approve Resolution #24-017 to fill a vacancy on the Board of Commissioners for Ward 10.

b. BOC-14-031424 Motion to appoint Michael Thompson to the Zoning Hearing Board as included in Exhibit A.

c. BOC-15-031424 Motion to approve the Preliminary Major Land Development application LD-23-01 for the location at 711 Fox Chase Road, Jenkintown, PA 19046. (St. Basils) and adopt Resolution No. 24-018.

d. BOC-16-031424 Motion to approve a DRAFT Ordinance amending the Official Zoning Map of Abington Township by Rezoning 2.621 acres of land from the RC Recreation Conservation District to the BC Business Center- Foxcroft District.

e. BOC-17-031424 Motion to award the following annual Public Works Materials Bids and authorize the Township Manager to execute all contracts for the following bids:

- 2024 Superpave Materials Bid - Bid Award to Eureka Stone Quarry, in the amount of $1,267,540.00.
- 2024 Engineered Retaining Wall System Materials Bid - Bid Award to JDM Materials Company, in the amount of $28,540.00.

f. BOC-18-031424 Motion to award the 2022 Montco 2040 Implementation Grant Program Susquehanna Road Sidewalk Project Bid to Fedele Contractors in the amount of $52,291.85.

g. BOC-19-031424 Motion to approve the Memorandum of Agreement between the Township of Abington and Holy Redeemer Health System.

h. BOC-20-031424 Motion to authorize an Ordinance amending Chapter 156 - "Vehicles and Traffic," Article IV – "Metered Parking," Sections 30 Through 38; and Amending Chapter 157 "Parking Of Vehicles," Sections 2 – "Violations and Penalties," and 5 – "Notice," and Repealing all Inconsistent Ordinances.

FINANCE COMMITTEE

a. FC-01-031424 Motion to approve the January 2024 expenditures in the amount of $3,185,054.52 and salaries and wages in the amount of $2,865,034.47 and authorizing the proper officials to sign and approve invoices and supporting documentation in payment of bills and contracts as they mature through the month of April 2024. (Click here to view supporting information for expenditures in January 2024)

(Motion & Roll Call)

b. FC-02-031424 Motion to approve the use of unappropriated fund balance for the purchase of a new emergency generator in the amount of $76,800.00.

c. FC-03-031424 Motion to approve the substantial amendments as described in the attached documents to the PY 2021 and 2022 Annual Action Plans and approve Resolution No. 24-019.

PUBLIC COMMENT

ADJOURNMENT

BOARD POLICY ON PUBLIC PARTICIPATION

For Information Purposes Only

The Township shall conduct business in accordance with the Commonwealth of Pennsylvania Laws governing the conduct of public meetings and only establish guidelines that shall govern public participation at meetings consistent with the law.

Each commenter shall:

- Direct their comments to the Presiding Officer;
- Speak from the podium or into a microphone designated by the presiding officer;
- State their name for the record;
- Either orally or in writing provide their address for the record;
- Have a maximum of three minutes to make their comments. Each commenter when speaking to a specific agenda item, is to keep their comments relative to that identified agenda item;
- Speak one time per agenda item;
- When commenting on non-agenda items, the commenter is to keep their comments related to matters of the Township of Abington, Montgomery County, Pennsylvania.
- State a question to the Presiding Officer after all commenters have spoken, and;
- Be seated after speaking or upon the request of the presiding officer;
- Not engage in debate, dialogue or discussion;
- Not disrupt the public meeting, and;
- Exercise restraint and sound judgement in avoiding the use of profane language, and the maligning of others.

The stated meeting of the Board of Commissioners of the Township of Abington was held on Thursday, February 8, 2024 via webinar and in-person at the Township Administration Building, Abington, PA, with President Hecker presiding.

CALL TO ORDER: 7:00 p.m.

ROLL CALL: Present: Commissioners BRODSKY, ROTHMAN, DiPLACIDO, LANEY-MARTIN, BROWNE, WINEGRAD, HENRY, ZAPPONE, SPIEGELMAN, BOLE, SCHREIBER, BOWMAN, VAHEY, HECKER

Also Present: Township Manager Manfredi
Assistant Legal Counsel Gallagher

PLEDGE OF ALLEGIANCE

BOARD PRESIDENT ANNOUNCEMENTS: None.

PUBLIC COMMENT ON AGENDA ITEMS:

Adele Kubel, resident, expressed concern about traffic safety and frequent accidents.

Joe Rooney, resident, expressed concern about not getting a "good" explanation on the collection of Local Services Tax, and he asked about the DROP program and whether the sewer interceptor project will affect charges on the sewer bill.

Steve Miller, resident, commented that he supports the motion for the inclusive park and playground bid, and he would like to see this project move forward as soon as possible to fill the needs of the community who are disabled.

Erin Glasser, resident, commented that she supports the inclusive park and playground, so our children will have a place where they are valued and welcomed, and she requested the Board to approve it.

Lora Lehmann, resident, expressed concern about not receiving documents for agenda Item BOC-04-020824; also, about notification to residents regarding the Galman medical office building.

Brad Turner, resident, commented that he supports the inclusive playground so our children with special needs will have a place to play like everyone else.

A resident clarified that a lot of the funds for the inclusive park and playground come from federal funding as well as other types of grants, not just from Abington taxes.

CONSENT AGENDA:

Vice President Vahey made a MOTION, seconded by Commissioner Spiegelman to approve Items a. – f. as listed under Consent Agenda as follows:

To approve the minutes from the Board of Commissioners Organization Meeting of January 2, 2024 and the Regular Meeting of January 11, 2024.

To adopt additional Resolution No. 24-008, Resolution No. 24-009, and Resolution No. 24-010 for collection of the Local Services Tax.

To adopt Resolution No. 24-011 affirming its policy for purchases involving trade in or exchange.

To advertise Traffic Safety Ordinance amending an ordinance Chapter 156 - "Vehicles and Traffic," Article II – "Traffic Regulations" Section 14 - "Stop Intersections;" Article III – "Parking Regulations" Section 25 – "Parking Prohibited At All Times; No Parking Between Signs; No Parking Here To Corner; Parking Prohibited Except Certain Hours; No Stopping or Standing;" and Section 28 – Specialized Parking signs to add the following: a "Stop" sign westbound and eastbound on Woodrow Avenue at the intersection of Tennis Avenue; westbound and eastbound on Rothley Avenue at Triebel Avenue; westbound on Fairacres Road at Washington Lane; northbound and southbound on Tennis Avenue at Jefferson Avenue; "No Parking" on northside on Guernsey Avenue at Old York Road and the western driveway edge of 1151 Old York Road; Sherman Avenue, eastside at Rockledge Avenue and point 150' north; and "Handicapped Parking" signs at 1119 Hall Avenue; Easton Road in front of Roslyn VFW; and remove "Handicapped Parking" sign at 2123 Curtis Avenue.

To ratify and approve the agreement between the Township of Abington and the Abington Township Police Department Lieutenants, and ratifying and allowing the current qualifying DROP participants to extend their DROP period in accordance with the ATPA CBA and ratifying and approving the terms and conditions of employment of the Chief of Police.

To approve Change Order No. 1 from Clipper Pipe and Services, Inc. in the amount of $7,436.30 for the Abington Township Building HVAC upgrade project.

President Hecker asked for any comments from Commissioners. There were none.

MOTION was ADOPTED 14-0.

UNFINISHED BUSINESS: None.

NEW BUSINESS:

Item BOC-06-020824:

Vice President Vahey made a MOTION, seconded by Commissioner Spiegelman to accept Ward 10, Commissioner Jessica Carswell's resignation from the Board of Commissioners effective February 16, 2024.

President Hecker said we will be honoring Commissioner Carswell at a future meeting for her service to the Township as she could not be here this evening. Also, the Board of Commissioners will be accepting applications to appoint a new Commissioner.

MOTION was ADOPTED 14-0.

Item BOC-07-020824:

Vice President Vahey made a MOTION, seconded by Commissioner Spiegelman to award the Abington Inclusive Park and Playground Bid to MECO Construction in the amount of $1,951,491 and appropriate $416,104 from the American Rescue Plan Act Capital Item, ARPA Culture-Recreation and Parks Infrastructure Investment.

President Hecker asked for any comments from Commissioners.

Commissioner Browne said he had the opportunity to sit in on several meetings with parents who spearheaded this initiative, and it is inspiring to see how they go to bat for their children. This inclusive park is not just a benefit for them but for the entire Township, and it is so important for these children who have been limited to be able to play, and he fully supports it.

Commissioner Henry said although we will be celebrating Commissioner Carswell at another time, this is a fitting way to honor her service as she put a lot into this, and it will be a huge benefit for the entire community especially for her ward.

Commissioner Rothman said it is humbling to be able to vote in favor of something this wonderful, which is a long time coming, so he is enthusiastic about supporting this initiative.

President Hecker extended his gratitude to the families who devoted their time and energy to this initiative. He knows it is not easy to come forward and share personal details of their struggles, and now they will have an opportunity to celebrate. And this will make the community a better place.

MOTION was ADOPTED 14-0.

Item BOC-08-020824:

Vice President Vahey made a MOTION, seconded by Commissioner Winegrad to refer the Galman requested DRAFT Zoning Map Amendment Ordinance to the Township Planning Commission and the Montgomery County Planning Commission (MCPC) for review and comment.

President Hecker asked for any comments from Commissioners.

Commissioner Winegrad said he welcomes comments from both the County and Township Planning Commissions and supports this moving forward for their review.

MOTION was ADOPTED 14-0.

Item BOC-09-020824:

Vice President Vahey made a MOTION, seconded by Commissioner Rothman to approve the Preliminary/Final Major Land Development Plan for LD-23-04 – 640 Cedar Road (Hopewell Vet) and adopt Resolution No. 24-012.

President Hecker asked for any comments from Commissioners. There were none.

MOTION was ADOPTED 14-0.

Item BOC-10-020824:

Vice President Vahey made a MOTION, seconded by Commissioner Schreiber to approve LD-23-05 – 1216 & 1236 Washington Lane and adopt Resolution No. 24-013.

President Hecker asked for any comments from Commissioners. There were none.

MOTION was ADOPTED 14-0.

Item BOC-11-020824:

Vice President Vahey made a MOTION, seconded by Commissioner Schreiber to approve the Baseball Field Agreement, Abington Township Facilities between the Township of Abington and Manor College.

President Hecker asked for any comments from Commissioners. There were none.

MOTION was ADOPTED 14-0.

Item BOC-12-020824:

Vice President Vahey made a MOTION, seconded by Commissioner Spiegelman to approve settlement agreement with Cheltenham Township for cost-sharing related to the sanitary sewer Interceptor A project and authorize staff and the Solicitor to take all necessary steps in accordance with the agreement.

President Hecker asked for any comments from Commissioners. There were none.

MOTION was ADOPTED 14-0.

FINANCE COMMITTEE:

Item FC-01-020824:

Commissioner Winegrad made a MOTION, seconded by Commissioner Spiegelman to approve the December 2023 expenditures in the amount of $3,967,109.97 and salaries and wages in the amount of $3,671,999.25 and authorize the proper officials to sign and approve invoices and supporting documentation in payment of bills and contracts as they mature through the month of March 2024.

Roll call resulted in motion being passed 14-0.

PUBLIC COMMENT:

Adele Kubel, resident, provided 2023 statistics showing an increase in car collisions on The Fairway where that area has been designated as a family bike path, so building large-scale apartments would jeopardize more people. Also, she presented a petition for the replacement of two benches near a bus stop.

Lora Lehmann, resident, expressed concern that those who participate in using the baseball fields should be paying for it; also, she asked for documents relating to agenda Item BOC-04-020824.

ADJOURNMENT: 7:32 p.m.

Respectfully submitted,

Liz Vile, Minutes Secretary

The following resolutions were adopted by the Board of Commissioners on February 8, 2024:

Resolution No. 24-008
Resolution No. 24-009
Resolution No. 24-010
Resolution No. 24-011
Resolution No. 24-012
Resolution No. 24-013

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024 — *DATE*

BOC-01-031424 — *AGENDA ITEM NUMBER*

Police — *DEPARTMENT*

FISCAL IMPACT	
Cost > $10,000	
Yes	No

PUBLIC BID REQUIRED	
Cost > $20,100	
Yes	No

AGENDA ITEM:

Traffic Safety Ordinance Adoption

EXECUTIVE SUMMARY:

Over the last several months the Traffic Safety Unit has received the following requests:

Stop Sign On	**Direction of Travel**	**At Intersection of**
Woodrow Avenue	Westbound and Eastbound	Tennis Avenue
Rothley Avenue	Westbound and Eastbound	Triebel Avenue
Fairacres Road	Westbound	Washington Lane
Tennis Avenue	Northbound and Southbound	Jefferson Avenue

No Parking	**Side**	**Location**
Guernsey Avenue	North Side	Old York Road and the western driveway edge of 1151 Old York Road

Sherman Avenue	East Side	Rockledge Avenue and a point 150' north

Name of Highway	Authorized Purpose of Vehicle	Location
Hall Avenue	Handicapped Parking	1119 Hall Avenue
Easton Road	Handicapped Parking	West Side in front of the Roslyn VFW
Curtis Avenue	Handicapped Parking	2123 Curtis Avenue

PREVIOUS BOARD ACTIONS:

2/8/24 - Board approved advertisement of Ordinance.

RECOMMENDED BOARD ACTIONS:

Motion to adopt Traffic Safety Ordinance No. 2211 amending an ordinance Chapter 156 - "Vehicles and Traffic," Article II - "Traffic Regulations" Section 14 - "Stop Intersections"; Article III - "Parking Regulations" Section 25 - "Parking Prohibited at all Times; No Parking Between Signs; No Parking Here to Corner; Parking Prohibited Except Certain Hours; No Stopping or Standing"; and Section 28 - Specialized Parking signs to add the following: a stop sign westbound and eastbound on Woodrow Avenue at the intersection of Tennis Avenue; westbound and eastbound on Rothley Avenue at Triebel Avenue; westbound on Fairacres Road at Washington Lane; northbound and southbound on Tennis Avenue at Jefferson Avenue; No Parking on northside on Guernsey Avenue at Old York Road and the western driveway edge of 1151 Old York Road; Sherman Avenue, eastside at Rockledge Avenue and point 150' north; and Handicapped Parking signs at 1119 Hall Avenue; Easton Road in front of Roslyn VFW; and remove Handicapped Parking sign at 2123 Curtis Avenue.

TOWNSHIP OF ABINGTON
MONTGOMERY COUNTY, PENNSYLVANIA

ORDINANCE NO. 2211

AN ORDINANCE AMENDING
CHAPTER 156 – "VEHICLES AND TRAFFIC,"
ARTICLE II – "TRAFFIC REGULATIONS,"
SECTION 14 – "STOP INTERSECTIONS";
ARTICLE III – PARKING REGULATIONS";
SECTION 25 – "PARKING PROHIBITED AT ALL TIMES; NO PARKING BETWEEN SIGNS; NO PARKING HERE TO CORNER; PARKING PROHIBITED EXCEPT CERTAIN HOURS; NO STOPPING OR STANDING"; AND
SECTION 28 – "SPECIAL PURPOSE PARKING ZONES"

WHEREAS, the Township of Abington is a Township of the First Class, duly organized and existing pursuant to the applicable laws of the Commonwealth of Pennsylvania; and

WHEREAS, pursuant to section 1502.20 of the First Class Township Code of the Commonwealth of Pennsylvania, 53 P.S. §56579.20, the Board of Commissioners has the authority to enact and amend provisions of the Abington Township Code ("Code") at any time it deems necessary for the health, safety, morals, general welfare, cleanliness, beauty, convenience and comfort of the Township and the inhabitants thereof; and

WHEREAS, pursuant to section 1502.6 of the First Class Township Code of the Commonwealth of Pennsylvania, 53 P.S. §56579.6, the Board of Commissioners has the authority to take all needful means for securing the safety of persons or property within the Township; and

WHEREAS, pursuant to section 1502.49 of the First Class Township Code of the Commonwealth of Pennsylvania, 53 P.S. §56579.24, the Board of Commissioners has the authority to regulate traffic and parking; and

WHEREAS, the Board of Commissioners of the Township of Abington has determined that the Code of Ordinances of the Township of Abington shall be amended at Chapter 156 – "Vehicles and Traffic," Article II – "Traffic Regulations," Section 14 - "Stop Intersections," Article III – "Parking Regulations," Section 25 – "Parking Prohibited at All Times; No Parking Between Signs; No Parking Here to Corner, Parking Prohibited Except Certain Hours, No Stopping and Standing," and Section 28 – "Special Purpose Parking Zones" should be amended for the health, safety, morals, general welfare, cleanliness, beauty, convenience and comfort of the Township and the inhabitants thereof.

NOW, THEREFORE, the Board of Commissioners of the Township of Abington does hereby **ENACT** and **ORDAIN** as follows:

1. The Code of the Township of Abington is amended at Chapter 156 - "Vehicles and Traffic," Article II – "Traffic Regulations," at Section 14 – "Stop Intersections," to **add** the following restrictions:

Stop Sign On	**Direction of Travel**	**At Intersection of**
Woodrow Avenue	Westbound and Eastbound	Tennis Avenue
Rothley Avenue	Westbound and Eastbound	Triebel Avenue
Fairacres Road	Westbound	Washington Lane
Tennis Avenue	Northbound and Southbound	Jefferson Avenue

2. The Code of the Township of Abington is amended at Chapter 156 - "Vehicles and Traffic," Article III – "Parking Regulations," at Section 25 – "Parking Prohibited at All Times; No Parking Between Signs; No Parking Here to Corner, Parking Prohibited Except Certain Hours, No Stopping or Standing" to **add** the following restrictions:

No Parking	Side	Location
Guernsey Avenue	North Side	Old York Road and the western driveway edge of 1151 Old York Road
Sherman Avenue	East Side	Rockledge Avenue and a point 150' north

3. Chapter 156 – "Vehicles and Traffic," Article III, "Parking Regulations," Section 28 – "Special Purpose Parking Zones" shall be amended to **add** the following restrictions:

Name of Highway	Authorized Purpose of Vehicle	Location
Hall Avenue	Handicapped Parking	1119 Hall Avenue
Easton Road	Handicapped Parking	West Side in front of the Roslyn VFW

4. Chapter 156 – "Vehicles and Traffic," Article III, "Parking Regulations," Section 28 – "Special Purpose Parking Zones" shall be amended to **remove** the following restrictions:

Handicapped Parking	Side	Location
Curtis Avenue		2123 Curtis Avenue

5. All other ordinances, portions of ordinances, or any section of the Code inconsistent with this Ordinance are hereby repealed.

6. This Ordinance shall become effective five (5) days after enactment.

ORDAINED AND ENACTED this _____ day of _____, 2024.

TOWNSHIP OF ABINGTON
BOARD OF COMMISSIONERS

Attest:

_____ By: _____

Richard J. Manfredi, Township Manager & Secretary

Thomas Hecker, President

{00822611;v2}

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024	BOC-02-031424	FISCAL IMPACT
DATE	*AGENDA ITEM NUMBER*	Cost > $10,000
		Yes ☐ No ☐
Administration		PUBLIC BID REQUIRED
DEPARTMENT		Cost > $20,100
		Yes ☐ No ☐

AGENDA ITEM:

LD-19-08 Galman Residential Escrow Release #6

EXECUTIVE SUMMARY:

The Land Development project work has been satisfactorily completed and the developer is requesting a reduction of escrow funds as stated in the attached letter..

PREVIOUS BOARD ACTIONS:

8-8-19 - Land Development application was approved by the Board of Commissioners.
9-8-22 - The Board of Commissioners released Escrow Request #1
11-10-22 - The Board of Commissioners released Escrow Request #2
1-12-23 - The Board of Commissioners released Escrow Request #3
04-13-23 - The Board of Commissioners released Escrow Request #4
07-13-23 - The Board of Commissioners released Escrow Request #5

RECOMMENDED BOARD ACTIONS:

Motion to approve the release of escrow #6 for LD-19-08, Galman Residential, in the amount of $170,980.88.

3100 Horizon Drive
Suite 200
King of Prussia, PA 19406
T: 610-277-2402
F: 610-277-7449

www.pennoni.com

August 16, 2023

ABINT1600.08

Mr. Richard J. Manfredi, Township Manager
Abington Township
1176 Old York Road
Abington, PA 19001

RE: LD-19-08 – Galman Residential
Escrow Release #6

Dear Mr. Manfredi,

We have received an escrow release request dated and received August 3, 2023, for a reduction of escrow funds relating to the above referenced project. A fully executed copy of the land development agreement was received from the Township on October 5, 2022.

Under this Land Development application, the Applicant is proposing to construct a four (4) story 104 dwelling unit apartment building on an existing 3.65-acre lot. Along with this proposed land development, 147 parking spaces will be constructed as well as other improvements such as parking, lighting, landscaping, and storm sewers. This site is located within the BC Business Center Zoning District. Access to and from the site will be by way of four (4) new curb cuts along Spine Road.

Based on our field visit completed on August 11, 2023, and correspondences with the Applicant, we recommend the following release:

Original Construction Escrow Total	$ 1,488,347.85
Construction Escrow Released Prior to this Request	$ 1,313,998.48
Balance Prior to This Release	$ 174,349.37
Recommended Amount This Release	**$ 170,980.88**
Total Construction Escrow Balance Remaining After This Release	$ 3,368.49

Enclosed, you will find the Summary of Construction Cost Breakdown. Please review and process for release. Should you have any questions, please feel free to contact me at (610) 422-2499.

Sincerely,

PENNONI

Khaled R. Hassan, PE
Township Engineer

cc: Terry Castorina, Assistant to the Township Manager
Ashley McIlvaine, Assistant Township Manager & Assistant CAO

LD-19-08 - Galman Residential Apartments
Abington Township, Montgomery County, Pennsylvania

RELEASE NO.: 6
REQUEST DATE: 8/3/2023
REVISED DATE: 8/15/2023

CONSTRUCTION TOTAL: $ 1,294,215.52
10% CONTINGENCY: $ 129,421.55
5% INSPECTION AND ADMIN.: $ 64,710.78
ESCROW TOTAL: $ 1,488,347.85

ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST	CURRENT RELEASE QUANTITY	CURRENT RELEASE COST	RELEASED TO DATE (INCL. CURRENT RELEASE) QUANTITY	RELEASED TO DATE (INCL. CURRENT RELEASE) COST	ESCROW REMAINING QUANTITY	ESCROW REMAINING COST	PERCENT COMPLETE
SITE CLEARING											
Tree Removal	16	EA	$ 300.00	$ 4,800.00		$ -	16	$ 4,800.00	-	$ -	100%
			Subtotal:	$ 4,800.00		$ -		$ 4,800.00		$ -	100%
SITE DEMOLITION											
Curb Removal	1,410	LF	$ 5.00	$ 7,050.00		$ -	1,410	$ 7,050.00	-	$ -	100%
Pavement Removal	2,300	SY	$ 4.00	$ 9,200.00		$ -	2,300	$ 9,200.00	-	$ -	100%
Area Light Removal	2	EA	$ 500.00	$ 1,000.00		$ -	2	$ 1,000.00	-	$ -	100%
			Subtotal:	$ 17,250.00		$ -		$ 17,250.00		$ -	100%
SOIL EROSION & SED. CONTROL											
Erosion Control Matting	2,180	SY	$ 2.00	$ 4,360.00		$ -	2,180	$ 4,360.00	-	$ -	100%
Compost Filter Sock	920	LF	$ 3.50	$ 3,220.00		$ -	920	$ 3,220.00	-	$ -	100%
Temporary seeding	47,700	SF	$ 0.08	$ 3,816.00		$ -	47,700	$ 3,816.00	-	$ -	100%
Tree Protection Fence	580	LF	$ 4.50	$ 2,610.00		$ -	580	$ 2,610.00	-	$ -	100%
Inlet Protection	20	EA	$ 150.00	$ 3,000.00		$ -	20	$ 3,000.00	-	$ -	100%
Construction Entrance	2	EA	$ 2,500.00	$ 5,000.00		$ -	2	$ 5,000.00	-	$ -	100%
			Subtotal:	$ 22,006.00		$ -		$ 22,006.00		$ -	100%
	DEMOLITION AND SITE CLEARANCE TOTALS:			$ 44,056.00		$ -		$ 44,056.00		$ -	100%
FINAL GRADING											
Grading @ Buildings & sidewalks	50,851	SF	$ 0.12	$ 6,102.12		$ -	50,851.00	$ 6,102.12	-	$ -	100%
Grading @ Pavement	60,455	SF	$ 0.10	$ 6,045.50		$ -	60,455.00	$ 6,045.50	-	$ -	100%
Grading @ Landscape areas	47,700	SF	$ 0.10	$ 4,770.00	2,385.00	$ 238.50	45,315.00	$ 4,531.50	2,385.00	$ 238.50	95%
			Subtotal:	$ 16,917.62		$ 238.50		$ 16,679.12		$ 238.50	99%
EARTHWORK											
Strip topsoil	700	CY	$ 3.50	$ 2,450.00		$ -	700	$ 2,450.00	-	$ -	100%
Respread topsoil (with stockpiled topsoil)	700	CY	$ 5.00	$ 3,500.00		$ -	700	$ 3,500.00	-	$ -	100%
Cut to fill (no rock) (0 - 5,000 CY)	8,000	CY	$ 10.00	$ 80,000.00		$ -	8,000	$ 80,000.00	-	$ -	100%
Export fill	3,265	CY	$ 20.00	$ 65,300.00		$ -	3,265	$ 65,300.00	-	$ -	100%
			Subtotal:	$ 151,250.00		$ -		$ 151,250.00		$ -	100%
			CUT AND FILL TOTALS:	$ 168,167.62		$ 238.50		$ 167,929.12		$ 238.50	100%
SITE WORK											
Concrete Curb (6" Reveal)	2,515	LF	$ 18.00	$ 45,270.00		$ -	2,515	$ 45,270.00	-	$ -	100%
Standard Duty Asphalt	2,700	SY	$ 32.00	$ 86,400.00		$ -	2,700	$ 86,400.00	-	$ -	100%
Heavy Duty Asphalt	3,950	SY	$ 36.00	$ 142,200.00		$ -	3,950	$ 142,200.00	-	$ -	100%
Concrete Paving	2,275	SY	$ 30.00	$ 68,250.00		$ -	2,275	$ 68,250.00	-	$ -	100%
Concrete Bollards	7	EA	$ 350.00	$ 2,450.00		$ -	7	$ 2,450.00	-	$ -	100%
4" Concrete sidewalk	7,685	SF	$ 15.00	$ 115,275.00		$ -	7,685	$ 115,275.00	-	$ -	100%
Brick Paver Sidewalk (over stone)	2,520	SF	$ 8.00	$ 20,160.00	2,520	$ 20,160.00	2,520	$ 20,160.00	-	$ -	100%
4' High Galvanized Chainlink Fence	200	LF	$ 32.00	$ 6,400.00	200	$ 6,400.00	200	$ 6,400.00	-	$ -	100%
Bike Rack	2	EA	$ 750.00	$ 1,500.00	1	$ 750.00	2	$ 1,500.00	-	$ -	100%
			Subtotal:	$ 487,905.00		$ 27,310.00		$ 487,905.00		$ -	100%
			SITE WORK TOTAL:	$ 487,905.00		$ 27,310.00		$ 487,905.00		$ -	100%
STRIPING & SIGNAGE											
4" Wide Thermoplastic Striping	2,664	LF	$ 0.85	$ 2,264.40	2,664	$ 2,264.40	2,664	$ 2,264.40	-	$ -	100%

Painted Directional Arrows	16	EA	$ 100.00	$ 1,600.00	0.8	$ 80.00	16	$ 1,600.00	-	$ -	100%
Painted Stop Bars	3	EA	$ 100.00	$ 300.00	3	$ 300.00	3	$ 300.00	-	$ -	100%
Painted Handicap Symbols	6	EA	$ 50.00	$ 300.00		$ -	6	$ 300.00	-	$ -	100%
Handicap Parking Signs	6	EA	$ 150.00	$ 900.00	3	$ 450.00	6	$ 900.00	-	$ -	100%
Traffic Control Signs	24	EA	$ 150.00	$ 3,600.00	12	$ 1,800.00	24	$ 3,600.00	-	$ -	100%
			Subtotal:	**$ 8,964.40**		**$ 4,894.40**		**$ 8,964.40**		**$ -**	100%
			STRIPING & SIGNAGE:	**$ 8,964.40**		**$ 4,894.40**		**$ 8,964.40**		**$ -**	100%
STORM DRAINAGE											
18" HDPE	1,592	LF	$ 30.00	$ 47,760.00		$ -	1,592	$ 47,760.00	-	$ -	100%
Manholes	11	EA	$ 3,500.00	$ 38,500.00		$ -	11	$ 38,500.00	-	$ -	100%
C Inlets	9	EA	$ 2,000.00	$ 18,000.00		$ -	9	$ 18,000.00	-	$ -	100%
M Inlet	6	EA	$ 2,000.00	$ 12,000.00		$ -	6	$ 12,000.00	-	$ -	100%
Trench drain (8" Concrete)	88	LF	$ 170.00	$ 14,960.00		$ -	88	$ 14,960.00	-	$ -	100%
Cleanout	3	EA	$ 300.00	$ 900.00		$ -	3	$ 900.00	-	$ -	100%
Outlet structure w/ trash racks	2	EA	$ 6,000.00	$ 12,000.00	1	$ 6,000.00	2	$ 12,000.00	-	$ -	100%
18" Concrete Headwall (includes walls & footing)	1	EA	$ 2,400.00	$ 2,400.00		$ -	1	$ 2,400.00	-	$ -	100%
Rain Garden	1	EA	$ 15,000.00	$ 15,000.00		$ -	1	$ 15,000.00	-	$ -	100%
Underground Stormwater Detention Basin	1	EA	$ 60,000.00	$ 60,000.00		$ -	1	$ 60,000.00	-	$ -	100%
Underground Stormwater Infiltration Basin	1	EA	$ 75,000.00	$ 75,000.00		$ -	1	$ 75,000.00	-	$ -	100%
Jellyfish Structure	1	EA	$ 25,000.00	$ 25,000.00		$ -	1	$ 25,000.00	-	$ -	100%
Connection to existing manhole/main	1	EA	$ 4,000.00	$ 4,000.00		$ -	1	$ 4,000.00	-	$ -	100%
			Subtotal:	**$ 325,520.00**		**$ 6,000.00**		**$ 325,520.00**		**$ -**	100%
			STORMWATER MANAGEMENT TOTAL:	**$ 325,520.00**		**$ 6,000.00**		**$ 325,520.00**		**$ -**	100%
SANITARY											
8" PVC (SDR 35) (0-8' deep)	932	LF	$ 31.00	$ 28,892.00		$ -	932	$ 28,892.00	-	$ -	100%
4' Diameter Manhole (8'-12' deep)	5	EA	$ 2,800.00	$ 14,000.00		$ -	5	$ 14,000.00	-	$ -	100%
Connection to existing manhole/main	1	EA	$ 4,000.00	$ 4,000.00		$ -	1	$ 4,000.00	-	$ -	100%
			Subtotal:	**$ 46,892.00**		**$ -**		**$ 46,892.00**		**$ -**	100%
			STANDARD (WATER, SANITARY) TOTAL:	**$ 46,892.00**		**$ -**		**$ 46,892.00**		**$ -**	100%
LANDSCAPING											
Shade Tree, (2 1/2" - 3" caliper)	48	EA	$ 435.00	$ 20,880.00	2.0	$ 870.00	48	$ 20,880.00	-	$ -	100%
Evergreen Tree, (6' - 7')	58	EA	$ 400.00	$ 23,200.00	3.0	$ 1,200.00	58	$ 23,200.00	-	$ -	100%
Ornamental Tree (2" - 2 1/2" caliper)	30	EA	$ 300.00	$ 9,000.00		$ -	29	$ 8,700.00	1.00	$ 300.00	97%
Evergreen Shrubs (24" - 30")	98	EA	$ 60.00	$ 5,880.00	5.0	$ 300.00	98	$ 5,880.00	-	$ -	100%
Evergreen Tree, (20')	24	EA	$ 2,800.00	$ 67,200.00		$ -	24	$ 67,200.00	-	$ -	100%
Deciduous Shrubs (18" - 24")	80	EA	$ 75.00	$ 6,000.00		$ -	76	$ 5,700.00	4.00	$ 300.00	95%
Groundcover Shrubs (15" - 18" spread)	261	EA	$ 75.00	$ 19,575.00		$ -	248	$ 18,600.00	13.00	$ 975.00	95%
Perennials	24	GAL.	$ 12.00	$ 288.00		$ -	23	$ 276.00	1.00	$ 12.00	96%
Ornamental grasses	231	GAL.	$ 12.50	$ 2,887.50		$ -	219	$ 2,737.50	12.00	$ 150.00	95%
			Subtotal:	**$ 154,910.50**		**$ 2,370.00**		**$ 153,173.50**		**$ 1,737.00**	99%
			LANDSCAPING TOTAL:	**$ 154,910.50**		**$ 2,370.00**		**$ 153,173.50**		**$ 1,737.00**	99%
LIGHTING											
Site Area Light	11	EA	$ 5,000.00	$ 55,000.00		$ -	11.0	$ 55,000.00	-	$ -	100%
Wall Mounted Light	4	EA	$ 700.00	$ 2,800.00		$ -	4.0	$ 2,800.00	-	$ -	100%
			Subtotal:	**$ 57,800.00**		**$ -**		**$ 57,800.00**		**$ -**	100%
			LIGHTING TOTAL:	**$ 57,800.00**		**$ -**		**$ 57,800.00**		**$ -**	100%
			SUBTOTAL:	**$ 1,294,215.52**		**$ 40,812.90**		**$ 1,292,240.02**		**$ 1,975.50**	99.85%
			10% CONTINGENCY:	**$ 129,421.55**	0.99	**$ 128,127.34**		**$ 128,127.34**		**$ 1,294.22**	99.00%
			5% INSPECTION AND ADMINISTRATION:	**$ 64,710.78**		**$ 2,040.65**		**$ 64,612.00**		**$ 98.78**	99.85%
			GRAND TOTAL ESCROWED:	**$ 1,488,347.85**		**$ 170,980.88**		**$ 1,484,979.36**		**$ 3,368.49**	99.77%

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024	BOC-03-031424	FISCAL IMPACT
DATE	*AGENDA ITEM NUMBER*	Cost > $10,000
		Yes ☐ No ☐
Administration		PUBLIC BID REQUIRED
DEPARTMENT		Cost > $20,100
		Yes ☐ No ☐

AGENDA ITEM:

LD-21-04 Holy Redeemer Barn Escrow Release #2 and Final

EXECUTIVE SUMMARY:

The applicant has requested a final reduction in escrow for LD-21-04 - 521 Moredon Road, as stated in the letter attached.

PREVIOUS BOARD ACTIONS:

4-8-21 - Committee of the Whole moved the agenda item to the Regular Business meeting on May 13, 2021 for approval by the Board of Commissioners.
5-13-21 - The Board of Commissioners approved the Land Development Plan.
4/13/24 - The Board of Commissioners approved Escrow release #1 in the amount of $145,986.25

RECOMMENDED BOARD ACTIONS:

Motion to approve the release of escrow request #2 and final for LD-21-04 - 521 Moredon Road (Barn Addition) in the amount of $112,692.50.

February 21, 2024

ABINT1600.16

Mr. Richard J. Manfredi, Township Manager
Abington Township
1176 Old York Road
Abington, PA 19001

RE: LD-21-04 – 521 Moredon Road (Barn Addition)
Escrow Release #2 (Final)

Dear Mr. Manfredi,

We have received an escrow release request #2 (Final) dated February 16, 2024, last revised on February 20, 2024, and received on February 21, 2024 for a reduction of escrow funds relating to the above referenced project.

Under this Application, the Applicant is proposing to construct a 6,470 SF barn on the same parcel of land as an existing single family detached dwelling and an existing church. As part of the construction of the barn, the Applicant is also proposing a stone access driveway, a stormwater cistern for irrigation purposes and a stormwater basin to manage the surface runoff from barn roof. The barn is proposed to be serviced with public sewer and water, electric and communication lines.

Based on our field visit on December 15, 2023 completed and correspondences with the Applicant, we recommend the following release:

Original Construction Escrow Total	$ 258,678.75
Construction Escrow Released Prior to this Request	$ 145,986.25
Balance Prior to This Release	$ 112,692.50
Recommended Amount This Release	**$ 112,692.50**
Total Construction Escrow Balance Remaining After This Releas	$ 0.00

Enclosed, you will find the Summary of Construction Cost Breakdown. Please note that this escrow release is contingent upon the Applicant meeting its full payment obligations for all outstanding invoices and posting of the maintenance security amount as required by the land development agreement.

Should you have any questions, please feel free to contact me at (610) 422-2499.

Sincerely,

PENNONI ASSOCIATES INC.

Khaled R. Hassan, PE
Township Engineer

cc: Terry Castorina, Assistant to the Township Manager
Ashley McIlvaine, Assistant Township Manager & Assistant CAO

U:\ACCOUNTS\ABINT\ABINT1600 - ABINGTON SITE INSPECTIONS\ADMIN\PHASE 16 - LD-21-04 - 521 MOREDON RD (BARN ADDITION)\ESCROW RELEASES\RELEASE NO. 2\1- COVER LETTER EX.DOCX

LD-21-04 - 521 Moredon Road Barn
Abington Township, Montgomery County, Pennsylvania

RELEASE NO.: 2
REQUEST DATE: 2/16/2024
REVISED DATE: 2/20/2024

CONSTRUCTION TOTAL: $ 235,162.50
10% CONTINGENCY: $ 23,516.25
ESCROW TOTAL: $ 258,678.75

ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST	CURRENT RELEASE		RELEASED TO DATE (INCL. CURRENT RELEASE)		ESCROW REMAINING		PERCENT COMPLETE
					QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	
SITE CLEARING											
Clearing and Grubbing	2.73	Acre	$ 2,000.00	$ 5,460.00		$ -	2.73	$ 5,460.00	-	$ -	100%
			Subtotal:	**$ 5,460.00**		**$ -**		**$ 5,460.00**		**$ -**	100%
EARTHWORK											
Site Grading (Cut/Fill)	4,000	CY	$ 8.00	$ 32,000.00	200	$ 1,600.00	4,000	$ 32,000.00	-	$ -	100%
Topsoil - Strip, Stockpile & Place	2,150	CY	$ 2.00	$ 4,300.00		$ -	2,150	$ 4,300.00	-	$ -	100%
Sand for Amended Soil	190	CY	$ 40.00	$ 7,600.00		$ -	190	$ 7,600.00	-	$ -	100%
			Subtotal:	**$ 43,900.00**		**$ 1,600.00**		**$ 43,900.00**		**$ -**	100%
SOIL EROSION & SED. CONTROL											
Inlet Filter Bag for Type M Inlet	1	EA	$ 250.00	$ 250.00		$ -	1	$ 250.00	-	$ -	100%
Block/Inlet Protection, Including Maintenance	1	EA	$ 250.00	$ 250.00		$ -	1	$ 250.00	-	$ -	100%
Rock Construction Entrance	45	CY	$ 45.00	$ 2,025.00		$ -	45	$ 2,025.00	-	$ -	100%
Compost Filter Sock, 12" Diameter	1,650	LF	$ 6.00	$ 9,900.00		$ -	1,650	$ 9,900.00	-	$ -	100%
Compost Filter Sock, 18" Diameter	1,010	EA	$ 9.00	$ 9,090.00		$ -	1,010	$ 9,090.00	-	$ -	100%
24" Concrete Washout	1	LS	$ 1,000.00	$ 1,000.00		$ -	1	$ 1,000.00	-	$ -	100%
Mulching - Hay	6	TON	$ 400.00	$ 2,400.00	3	$ 1,200.00	6	$ 2,400.00	-	$ -	100%
Erosion Control Mulch Blanket, Swales	150	SY	$ 2.50	$ 375.00	37.50	$ 93.75	150	$ 375.00	-	$ -	100%
			Subtotal:	**$ 25,290.00**		**$ 1,293.75**		**$ 25,290.00**		**$ -**	100%
SITE WORK											
Gravel Road	165	CY	$ 45.00	$ 7,425.00		$ -	165	$ 7,425.00	-	$ -	100%
AASHTO 57 Stone Topping For Road	105	CY	$ 45.00	$ 4,725.00		$ -	105	$ 4,725.00	-	$ -	100%
8" Concrete Pavement on 6" 2A Stone Subbase	340	SY	$ 150.00	$ 51,000.00	340	$ 51,000.00	340	$ 51,000.00	-	$ -	100%
4" Concrete Sidewalk on 6" 2A Stone Subbase	80	SY	$ 110.00	$ 8,800.00	80	$ 8,800.00	80	$ 8,800.00	-	$ -	100%
			Subtotal:	**$ 71,950.00**		**$ 59,800.00**		**$ 71,950.00**		**$ -**	100%
STRIPING											
4" Standard Pavement Markings, Paint White	20	LF	$ 10.00	$ 200.00	20	$ 200.00	20	$ 200.00	-	$ -	100%
4" Standard Pavement Markings, Paint Blue	80	LF	$ 5.00	$ 400.00	80	$ 400.00	80	$ 400.00	-	$ -	100%
			Subtotal:	**$ 600.00**		**$ 600.00**		**$ 600.00**		**$ -**	100%
STORMWATER MANAGEMENT											
6" HDPE Pipe	18	LF	$ 10.00	$ 180.00		$ -	18	$ 180.00	-	$ -	100%
12" Thermoplastic Pipe	65	LF	$ 45.00	$ 2,925.00		$ -	65	$ 2,925.00	-	$ -	100%
15" HDPE Pipe	335	LF	$ 60.00	$ 20,100.00		$ -	335	$ 20,100.00	-	$ -	100%
End Section	3	EA	$ 200.00	$ 600.00		$ -	3	$ 600.00	-	$ -	100%
Anti Seep Collars	2	EA	$ 500.00	$ 1,000.00		$ -	2	$ 1,000.00	-	$ -	100%
Type M Frame & Plate	1	SET	$ 1,100.00	$ 1,100.00		$ -	1	$ 1,100.00	-	$ -	100%
Standard Inlet Box, (Basin Riser)	1	EA	$ 2,250.00	$ 2,250.00	1	$ 2,250.00	1	$ 2,250.00	-	$ -	100%
24" Nyoplast Drain Basin W/ 24" Dome Grate	1	EA	$ 1,000.00	$ 1,000.00		$ -	1	$ 1,000.00	-	$ -	100%
24" Nyoplast Drain Basin W/ 24" Solid Cover	1	EA	$ 1,000.00	$ 1,000.00		$ -	1	$ 1,000.00	-	$ -	100%
Rock, Class R-3 on Non-Woven Geotextile Fabric	18	CY	$ 75.00	$ 1,350.00		$ -	18	$ 1,350.00	-	$ -	100%
Rock, Class R-4 on Non-Woven Geotextile Fabric	6	CY	$ 75.00	$ 450.00		$ -	6	$ 450.00	-	$ -	100%
			Subtotal:	**$ 31,955.00**		**$ 2,250.00**		**$ 31,955.00**		**$ -**	100%

LD-21-04 - 521 Moredon Road Barn
Abington Township, Montgomery County, Pennsylvania

RELEASE NO : 2
REQUEST DATE: 2/16/2024
REVISED DATE: 2/20/2024

CONSTRUCTION TOTAL: $ 235,162.50
10% CONTINGENCY: $ 23,516.25
ESCROW TOTAL: $ 258,678.75

ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST	CURRENT RELEASE		RELEASED TO DATE (INCL. CURRENT RELEASE)		ESCROW REMAINING		PERCENT COMPLETE
					QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	
SANITARY											
3" Sanitary Discharge Line, Schedule 80 PVC	360	LF	$ 25.00	$ 9,000.00		$ -	360	$ 9,000.00	-	$ -	100%
Core Drill/Tie Into Existing Manhole Complete	1	LS	$ 2,500.00	$ 2,500.00		$ -	1	$ 2,500.00	-	$ -	100%
Sanitary Ejector, Sump Pit & Controls	1	LS	$ 10,500.00	$ 10,500.00		$ -	1	$ 10,500.00	-	$ -	100%
			Subtotal:	**$ 22,000.00**		**$ -**		**$ 22,000.00**		**$ -**	100%
LANDSCAPING											
Herbaceous Grass & Perennials - Andropogon	200	EA	$ 17.00	$ 3,400.00	200	$ 3,400.00	200	$ 3,400.00	-	$ -	100%
Herbaceous Grass & Perennials - Carex	260	EA	$ 17.00	$ 4,420.00	260	$ 4,420.00	260	$ 4,420.00	-	$ -	100%
Herbaceous Grass & Perennials - Mondarda	205	EA	$ 12.50	$ 2,562.50	205	$ 2,562.50	205	$ 2,562.50	-	$ -	100%
Herbaceous Grass & Perennials - Panicum	216	EA	$ 12.50	$ 2,700.00	216	$ 2,700.00	216	$ 2,700.00	-	$ -	100%
Shrubs (#2 Gal. Container) - Myrica	12	EA	$ 50.00	$ 600.00	12	$ 600.00	12	$ 600.00	-	$ -	100%
Shrubs (#2 Gal. Container) - Viburnum	10	EA	$ 55.00	$ 550.00	10	$ 550.00	10	$ 550.00	-	$ -	100%
Trees (#7 Gal. Container) - Salix	3	EA	$ 300.00	$ 900.00	3	$ 900.00	3	$ 900.00	-	$ -	100%
Seeding and Soil Supplements - Formula W (1,500 SY)	25	Pound	$ 75.00	$ 1,875.00		$ -	25	$ 1,875.00	-	$ -	
Seeding and Soil Supplements - Formula D (8,300 SY)	425	Pound	$ 40.00	$ 17,000.00	212.50	$ 8,500.00	425	$ 17,000.00	-	$ -	
			Subtotal:	**$ 34,007.50**		**$ 23,632.50**		**$ 34,007.50**		**$ -**	100%
			SUBTOTAL:	**$ 235,162.50**		**$ 89,176.25**		**$ 235,162.50**		**$ -**	100%
			10% CONTINGENCY:	**$ 23,516.25**		**$ 23,516.25**		**$ 23,516.25**		**$ -**	100%
			GRAND TOTAL ESCROWED:	**$ 258,678.75**		**$ 112,692.50**		**$ 258,678.75**		**$ -**	100%

SUBMITTED: _____ 2/21/24
OWNER/DEVELOPER — DATE

RECOMMENDED FOR RELEASE: Khaled Hassan 2/21/24
PENNONI ASSOCIATES, INC — DATE

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024	BOC-04-031424	FISCAL IMPACT
DATE	*AGENDA ITEM NUMBER*	Cost > $10,000
		Yes ☐ No ☐
Administration		PUBLIC BID REQUIRED
DEPARTMENT		Cost > $20,100
		Yes ☐ No ☐

AGENDA ITEM:

1801 Susquehanna Road Assessment Appeal

EXECUTIVE SUMMARY:

This appeal was scheduled for a pretrial conference February 12, 2024. The owner and the District have reached a settlement as detailed below.

The Appeal Board reduced the 2023 assessment from $10,959,530 (2023 fmv: $27,675,600) to $10,098,000 (2023 fmv: $25,500,000; 2024 fmv: $28,445,100), and both the District and owner appealed. The owner's opinion of value was $21,000,000 based on an appraisal. The District filed its appeal protectively while waiting to see what the owner did.

Hearing notes: Wisler Pearlstine attended a hearing on 1801 Susquehanna Road on September 20, 2022. This property is owned by Sunrise Assisted Living. Owner's opinion of value was $21,000,000. Property is 2 connected buildings plus a former Abington school building, which owner's appraiser said adds little value to the property but was kept intact for historical value. Owner said that occupancy is down due to Covid (89% historic occupancy vs. 76% current occupancy, which is "inching up").

Richard Wolf reviewed this appeal and the owner's appraisal report for the District. Richard said that the owner's financials support a value around $17,000,000, which is significantly less than the owner's appraisal value. Richard recommended settling at or above the owner's appraisal value of $21,000,000.

The District and owner have agreed to settle at the following:

Year	Market Value	Current Assessment	Settlement Offer (MV)	Settlement Offer (AV)	District Tax Loss	Township Tax Loss
2023	25,500,000	10,098,000	23,750,000	9,405,000	-24,401	-4,104
2024	28,445,070	10,098,000	24,750,000	8,786,250	-46,187	-7,768
					-70,587	-11,872

PREVIOUS BOARD ACTIONS:

N/A

RECOMMENDED BOARD ACTIONS:

Motion to approve the stipulation to settle the matter of 1801 Susquehanna Road (Sunrise Assisted Living) v Montgomery County Assessment Appeals ET AL and authorize Wisler Pearlstine to sign the stipulation on behalf of the Township of Abington.

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024	BOC-05-031424	FISCAL IMPACT
DATE	*AGENDA ITEM NUMBER*	Cost > $10,000
		Yes ☐ No ☐
Administration		PUBLIC BID REQUIRED
DEPARTMENT		Cost > $20,100
		Yes ☐ No ☐

AGENDA ITEM:

261 Old York Road (The Pavilion) Assessment Appeal

EXECUTIVE SUMMARY:

A pretrial conference was recently held in this appeal. At the conference, the owner made the offer highlighted below. In spite of pressure from the judge, owner's counsel said that the owner was unwilling to go below 25.4m for the 2022 tax year. If we are not able to settle at the owner's latest offer, the appeal will go into the trial pool in May. If it goes into the trial pool, we will have to prepare appraisal reports for all three tax years at issue, and it is very possible that we will not fare better at trial than with the owner's current settlement offer.

The District will be considering this offer and will seek approval at its March 12th Board meeting. This motion is contingent upon the District approving this settlement stipulation. The District has approved the settlement terms for the Pavilion appeal set forth below. A stipulation has been sent to owner's counsel for review and approval subject to final approval by the District and Township.

A summary of this appeal:

The Board denied the owner's request to reduce the 2022 assessment from $18,434,250 (2022 fmv:

$41,239,900; 2023 fmv: $46,551,100; 2024 fmv: $51,927,500), and the owner appealed. The owner's appraisal valued the property at $27,300,000 for 2022. The owner's updated appraisal valued the property at $24,400,000 as of 8-1-21 and $13,000,000 as of 1-1-23. The District's preliminary verbal values were $29,600,000 for 2022 and $19,200,000 for 2023.

Settling this appeal at the owner's appraisal value (carrying 2024 forward):

Year	Market Value	Current Assessment	Settlement Offer (MV)	Settlement Offer (AV)	District Tax Loss	Township Tax Loss
2022	41,239,933	18,434,250	24,400,000	10,906,800	-254,654	-44,578
2023	46,551,136	18,434,250	13,000,000	5,148,000	-467,809	-78,681
2024	51,927,465	18,434,250	13,000,000	4,615,000	-486,576	-81,838
					-1,209,038	-205,096

Settling at the District's preliminary verbal values (carrying 2024 forward):

Year	Market Value	Current Assessment	Settlement Offer (MV)	Settlement Offer (AV)	District Tax Loss	Township Tax Loss
2022	41,239,933	18,434,250	29,600,000	13,231,200	-176,019	-30,812
2023	46,551,136	18,434,250	19,200,000	7,603,200	-381,361	-64,141
2024	51,927,465	18,434,250	19,200,000	6,816,000	-409,079	-68,803
					-966,459	-163,757

Split between appraisals:

Year	Market Value	Current Assessment	Settlement Offer (MV)	Settlement Offer (AV)	District Tax Loss	Township Tax Loss
2022	41,239,933	18,434,250	27,000,000	12,069,000	-215,336	-37,695
2023	46,551,136	18,434,250	16,100,000	6,375,600	-424,585	-71,411
2024	51,927,465	18,434,250	16,100,000	5,715,500	-447,827	-75,320
					-1,087,749	-184,427

The owner offered to settle at the following (the District previously authorized settling down to these values):

Year	Market Value	Current Assessment	Settlement Offer (MV)	Settlement Offer (AV)	District Tax Loss	Township Tax Loss
2022	41,239,933	18,434,250	24,400,000	10,906,800	-254,654	-44,578
2023	46,551,136	18,434,250	19,000,000	7,524,000	-384,150	-64,611
2024	51,927,465	18,434,250	18,000,000	6,390,000	-424,078	-71,326
					-1,062,882	-180,514

At the conference, with the Court's recommendation, the District offered to settle at the following:

Year	Market Value	Current Assessment	Settlement Offer (MV)	Settlement Offer (AV)	District Tax Loss	Township Tax Loss
2022	41,239,933	18,434,250	27,000,000	12,069,000	-215,336	-37,695
2023	46,551,136	18,434,250	19,000,000	7,524,000	-384,150	-64,611
2024	51,927,465	18,434,250	18,000,000	6,390,000	-424,078	-71,326
					-1,023,564	-173,632

The owner rejected this offer and countered at the following:

Year	Market Value	Current Assessment	Settlement Offer (MV)	Settlement Offer (AV)	District Tax Loss	Township Tax Loss
2022	41,239,933	18,434,250	25,400,000	11,353,800	-239,532	-41,930
2023	46,551,136	18,434,250	19,000,000	7,524,000	-384,150	-64,611
2024	51,927,465	18,434,250	18,000,000	6,390,000	-424,078	-71,326
					-1,047,760	-177,867

PREVIOUS BOARD ACTIONS:

N/A

RECOMMENDED BOARD ACTIONS:

Motion to approve the stipulation to settle the matter of 261 Old York Road (The Pavilion)v Montgomery County Assessment Appeals ET AL and authorize Wisler Pearlstine to sign the stipulation on behalf of the Township of Abington.

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024	BOC-06-031424	FISCAL IMPACT
DATE	*AGENDA ITEM NUMBER*	Cost > $10,000
		Yes ☐ No ☐
Administration		PUBLIC BID REQUIRED
DEPARTMENT		Cost > $20,100
		Yes ☐ No ☐

AGENDA ITEM:

Contract Change Order #2 - Clipper Pipe & Service Inc &Electric Tech HVAC Project

EXECUTIVE SUMMARY:

The HVAC system in the Township building is currently being upgraded. This change order is due to discrepancies in site conditions with existing plans and the addition of one split system to address cooling and air circulation needs in the video production room. Unforeseen expenses for this project have been budgeted for given the nature of the project. We anticipate one additional change order for inadequate plans of the existing structure and discrepancies identified in field conditions for two locations in the Township building which will be necessary for fresh air intakes.

PREVIOUS BOARD ACTIONS:

February 8, 2024, Board of Commissioners meeting: "Motion to approve Change Order No: 1 from Clipper Pipe and Services, Inc. in the amount of $7,436.30 for the Abington Township Building HVAC upgrade project."

November 10, 2022, Board of Commissioners meeting: "Motion to award the Abington Township Building HVAC Upgrade to Clipper Pipe & Service Inc. in the amount of $1,371,000.00 and the Electric Upgrade Supporting the HVAC upgrade to Electri-Tech Inc. in the amount of $202,460.00 and authorize the Township Manager to execute the contract."

RECOMMENDED BOARD ACTIONS:

Motion to approve Change Order No: 2 from Clipper Pipe and Services, Inc. in the amount of $83,722.25

and Electri Tech in the amount of $11,452.39 for the Abington Township Building HVAC upgrade project.

CONTRACT CHANGE ORDER

Contract No. HVAC Upgrades

Date 03/06/2024

Change Order No. 2

Project No. ABINT22003

Location Abington Township

To: (Contractor) Clipper Pipe & Service Inc.

You are hereby requested to comply with the following changes from the contract plans and specifications:

Item No. (1)	Description of changes – quantities, units, unit prices, change in completion schedule, etc. (2)	Decrease in Contract Price (3)	Increase in Contract Price (4)
HVAC-02	Hot water piping for AHU 5, and 6		$9,422.25
HVAC-03-01	Outdoor air changes for AHU 11, 12, and 13		$27,000.00
HVAC-03-02	Sheet metal duct and GRDs modification for field conditions		$33,800.00
HVAC-03-03	Additional services for split sytem for 2nd floor IT room		$13,500.00
	Change in contract price due to this Change Order:		
	Total decrease		
	Total increase		$83,722.25
	Difference between Col. (3) and (4)		
	Net (increase/decrease) contract price		$83,722.25

The sum of $83,722.25 is hereby ☒ added to, ☐ deducted from, the total contract price and the total adjusted contract price to date thereby $1,462,158.55.

The time provided for completion in the contract is ☒ unchanged, ☐ increased, ☐ decreased, by 0 calendar days. This document shall become an amendment to the contract and all provisions of the contract will apply hereto.

Accepted by: Clipper Pipe & Service, Inc. Richard R. Winters Digitally signed by Richard R. Winters Date: 2024.03.06 17:07:09 -05'00'

CONTRACTOR DATE

Recommended by: 03/07/2024

ENGINEER DATE

Approved by:

OWNER DATE

REQUEST AND JUSTIFICATION OF CHANGE

Project No.: HVAC Upgrades

Contract No.: _____

Change Order No.: 2

NECESSITY FOR CHANGE:

Additional hot water piping, gravity ventilators, curbs, sheet metal ductwork, GRDs, and penetrations are proposed. As well as ventilation and cooling for two (2) spaces at the request of Abington Township. A description of the construction changes and cost breakdowns are provided below:

- **Additional Costs Item HVAC-02:**
    - Hot water piping

      Description of Change: Design intent was for new hot water main piping to be provided into the cell area from boiler room to feed AHU 5, and 6 hot water coils. The pipes were not included in the base contract price. The hot water coil connections are required for AHU 5 and 6. This is added value to the contract.

      Material:
      Copper $2,224.00
      Insulation $1,200.00
      Material Total $3,424.00

      Labor:
      Steamfitter 22.5 hours @ $151.00 hr.
      Insulator 16 hours @ 151.00 hr.
      Labor Total $5,813.50

      Bond Charge of 2% $184.75

      Total Item HVAC-02 Material and Labor Additional Cost: **$9,422.25**

- **Additional Costs Item HVAC-03-01:**
  Note a bond charge of 2% is included in the below prices.
    - Outside air changes for AHU 11,12, and 13

      Description of Change: Record documentation provided to the design team indicated existing outside air connections to AHU 11, 12, and 13. In the field it was concluded that these connections were not present. The proposed changes are to provide mechanical ventilation for the spaces being served by these air handling units. This is added value to the contract.

      Qty 3, Gravity Ventilators for AHU 11, 12, and 13
      Qty 3, Roof curbs for proposed gravity ventilators

Sheet metal ductwork

Total Item HVAC-03-01 Material and Labor Additional Cost: **$27,000.00**

- **Additional Costs Item HVAC-03-02:**
  Note a bond charge of 2% is included in the below prices.

  - Sheet metal duct and GRDs modifications for field conditions.

    Description of Change: Record documentation provided to the design team depicted ductwork routing and distribution for VAV 11, 12 and EF 6. In the field it was concluded that the ductwork and GRDs were not as indicated. It was also concluded in the field that AHU 7, 9, 10, 11, 12, and 13 and VAV 7, and 8 are inaccessible. The proposed changes are to provide proper airflow distribution as well as ease of maintenance and constructability. This is added value to the contract.

    Qty 3, Gravity Ventilators for AHU 11, 12, and 13
    Qty 3, Roof curbs for proposed gravity ventilators
    Sheet metal ductwork

    Total HVAC-03-02 Material and Labor Additional Cost: **$33,800.00**

- **Additional Costs Item HVAC-03-03:**
  Note a bond charge of 2% is included in the below prices.

  - Split System (indoor and outdoor unit) second floor IT room

    Description of Change: Abington Township requested Pennoni assess and design the second floor IT room/ video editing room for cooling. This is new scope outside of the original HVAC upgrade effort and is added value to the contract.

    Qty 1, Condensing Unit (CU-14)
    Qty 1, Wall mounted AC unit (AC-1)

    Total HVAC-03-03 Material and Labor Additional Cost: **$13,500.0**

Total Change Order Request **$83,722.55**

CONTRACT CHANGE ORDER

Contract No. HVAC Upgrades

Date 03/06/2024

Change Order No. 2

Project No. ABINT22003

Location Abington Township

To: (Contractor) Electri-Tech Inc.

You are hereby requested to comply with the following changes from the contract plans and specifications:

Item No. (1)	Description of changes – quantities, units, unit prices, change in completion schedule, etc. (2)	Decrease in Contract Price (3)	Increase in Contract Price (4)
EC-2.1	IT split unit power & panelboard PC breakers control cabling from CU-14 to AC-1		$11,452.39
	Change in contract price due to this Change Order:		
	Total decrease		
	Total increase		$11,452.39
	Difference between Col. (3) and (4)		
	Net (increase/decrease) contract price		$11,452.39

Julie Hess

The sum of $11,452.39 is hereby ☒ added to, ☐ deducted from, the total contract price and the total adjusted contract price to date thereby $213,912.39.

The time provided for completion in the contract is ☒ unchanged, ☐ increased, ☐ decreased, by 0 calendar days. This document shall become an amendment to the contract and all provisions of the contract will apply hereto.

Accepted by: Bob Bauma, PM — CONTRACTOR — 06MAR2024 — DATE

Recommended by: Robert W. Zoell — ENGINEER — 03/07/2024 — DATE

Approved by: OWNER — DATE

REQUEST AND JUSTIFICATION OF CHANGE

Project No.: HVAC Upgrades

Contract No.: _____

Change Order No.: 2

NECESSITY FOR CHANGE:

Breaker size and wire size changes are proposed. As well as additional power and circuiting to mechanical equipment necessary for the ventilation and cooling of two (2) spaces at the request of Abington Township. A description of the construction changes and cost breakdowns are provided below:

- **Additional Costs Item EC-2.1:**
    - Wire size and breaker size changes

      Description of Change: Wire size, breaker size, and electrical criteria was coordinated with the purchased mechanical equipment.

      Qty 1, BDA36025 breaker
      Qty 4, BDA36035 breakers
      Qty 1, D221NRB 30/2 SN 240V N3R SW
      Qty 3, LFSFLNR20 20A 250V RK5 TD FUS$
      Wiring and components

    - Split System (indoor and outdoor unit) second floor IT room power

      Description of Change: Abington Township requested Pennoni assess and design the second floor IT room/ video editing room for cooling. This is new scope outside of the original HVAC upgrade effort and the mechanical equipment required to cool this space requires power, circuiting, breakers, and disconnects. This is added value to the contract.

      Power to Condensing Unit (CU-14)
      Power to Wall mounted AC unit (AC-1)

Total Change Order Request **$11,452.39**

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024	BOC-07-031424	FISCAL IMPACT
DATE	*AGENDA ITEM NUMBER*	Cost > $10,000
		Yes ☐ No ☐
Administration		PUBLIC BID REQUIRED
DEPARTMENT		Cost > $20,100
		Yes ☐ No ☐

AGENDA ITEM:

Witt Obrien's Contract Amendment

EXECUTIVE SUMMARY:

Witt Obrien's provides professional services to the Township related to the use of the American Rescue Plan Act (ARPA) funding and subsequent compliance and reporting requirements of the Treasury related to the use of the funds. This amendment continues Witt Obrien's engagement and necessary expertise.

PREVIOUS BOARD ACTIONS:

August 12, 2021- Board of Commissioners Meeting- "Motion to Waive the Request For Proposal requirement and to engage Witt O'Brien as consultants to the Township at a cost not to exceed $25,000, to assure compliance with the American Recovery Plan Act and Authorize the Township Manager to execute the appropriate engagement letter and to immediately engage and work with the consultant."

July 8, 2021- Board of Commissioners Committee of the Whole- "Consider a motion to Waive the Request For Proposal requirement and to engage Witt O'Brien as consultants to the Township to assure compliance with the American Recovery Plan Act and Authorize the Township Manager to execute the appropriate engagement letter and to immediately engage and work with the consultant. (Mr. Manfredi)"

RECOMMENDED BOARD ACTIONS:

Motion to approve Amendment 2 to Professional Services Agreement for ARPA funding engagement

project PROJ-002669 with Witt O'Brien's for continued ARPA funding support as necessary.

DocuSign Envelope ID: 53DA2198-D50E-4521-A2E8-A29682CB6916

AMENDMENT 2
To Professional Service Agreement
For ARPA Funding Engagement Project PROJ-002669

This amendment ("Amendment") is made by and between Witt O'Brien's, LLC, with a mailing address of 818 Town & Country Blvd., Suite 200, Houston, Texas 77024 ("the Contractor"), and the Township of Abington, PA (the "Client"), collectively "the parties," modifies the ARPA Act Funding Engagement entered into by the parties on October 13, 2021 and Amendment 1 dated April 8, 2022 (collectively the"Agreement"). This Amendment is effective on January 24, 2024.

The parties hereby agree that the Agreement shall be amended as follows:

The previous contract value for FY 23 (January 1, 2023 thru December 31, 2023) had a not to exceed allocation of $25,000. Each fiscal year a not to exceed of $25,000 will be allocated for the new fiscal year and client will provide written notification that funding is available for the new fiscal year which begins January 1.

Except as set forth in this Amendment, the Agreement is unaffected and shall continue in full force and effect in accordance with its terms.

IN WITNESS WHEREOF, State and Contractor have caused this Amendment to be executed by their duly authorized representatives.

Abington Township, PA

_____
Signature

_Richard J. Manfredi, Township Manager___
Name and Title

Date:_____

Witt O'Brien's, LLC

Cheryl Joiner
_____
Signature

_Cheryl Joiner, Director Contracts & Compliance__
Name and Title

Date: 2/29/2024

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024 — *DATE*

BOC-08-031424 — *AGENDA ITEM NUMBER*

Administration — *DEPARTMENT*

FISCAL IMPACT
Cost > $10,000
Yes ☐ No ☐

PUBLIC BID REQUIRED
Cost > $20,100
Yes ☐ No ☐

AGENDA ITEM:

2024 Montco 2040 Implementation Grant Program Application

EXECUTIVE SUMMARY:

Abington Township is seeking funding through the Montgomery County 2040 Implementation Grant Program for the Ardsley Wildlife Sanctuary Phase 2 Project.The total project cost is approximately $339,680. The Township will be requesting funding from the County in the amount of $151,645.00. The 20% match will be funded through the DCNR C2P2 grant that was awarded in September 2020. The proposed project implements land management recommendations detailed in the June 2008 "Ardsley Wildlife Sanctuary Land Management Plan", and advances stormwater management, forest stewardship, and walkability goals at the local and regional level. The Phase 2 focus is to extend the ADA accessible trail through a restored wetland area and on to a large pond, and to remedy significant erosive stormwater runoff issues. It will provide the visitor with an experience of enhanced meadow views, a wetland boardwalk, and a large pond habitat. The proposed terminus connects directly with miles of existing woodland trails that further connect the visitor with the remainder of this 80-acre property. The proposed project will: extend the ADA-accessible path to the existing basin; address erosive runoff with natural stormwater features (vegetated swales, a rain garden, and spillway), remove and manage reemergence of invasive plant material, restore forest, riparian, and meadow habitat with native plants and add two observation points (ADA elevated walkway and rain garden observation slab) and interpretive signage.

PREVIOUS BOARD ACTIONS:

There are no previous actions related to this application.

The Board approved the application of a DCNR grant for this project on May 7, 2020. The Agenda Item Number is PA-01-051420.

RECOMMENDED BOARD ACTIONS:

Motion to approve Resolution #24-015 the submission of the "Ardsley Wildlife Sanctuary Phase 2 Project" grant application to Montgomery County's Montco 2040 Implementation Grant Program.

MONTCO 2040: IMPLEMENTATION GRANT PROGRAM

ABINGTON TOWNSHIP'S
ARDSLEY WILDLIFE SANCTUARY PHASE 2 PROJECT APPLICATION

1. Project Narrative

This project is Phase 2 of the rehabilitation and development of the Ardsley Wildlife Sanctuary, Abington Township, Montgomery County. The proposed project will: extend the ADA-accessible path to the existing basin; address erosive runoff with natural stormwater features (vegetated swales, a rain garden, and spillway), remove and manage reemergence of invasive plant material, restore forest, riparian, and meadow habitat with native plants and add two observation points (ADA elevated walkway and rain garden observation slab) and interpretive signage. This project is critical to the restoration of the park, flood mitigation, and the reestablishment of wildlife habitat and woodland area.

This project provides several benefits such as environmental, recreation, health, and economic.

ENVIRONMENTAL. The proposed project offers a wide range of environmental benefits, including water quality protection and improvement, flood mitigation, wildlife habitat, air pollution removal and carbon sequestration, and carbon storage. The project area is comprised of natural landscapes, forest, and wetlands, which provide a natural protective buffer between human activities and water supplies. In this case, the project will serve to mitigate sediment loading in the vicinity of the headwaters of the Sandy Run Creek. The proposed project incorporates essential restoration of a riparian corridor, which will provide stormwater to be conveyed safely and slowed and stored by natural systems. The proposed restoration will enhance habitat for land and water-based creatures, thereby increasing the biodiversity and overall ecological health of the natural community, including humans. Re-establishment of the woodland area will mitigate significant amounts of air pollution through respiration processes that remove pollutants from the air. This can improve the health of residents who are impacted by asthma and other respiratory ailments, which are increasingly prevalent in the general population. Further, trees will mitigate the impact of climate change by sequestering and storing atmospheric carbon from carbon dioxide.

RECREATION AND HEALTH. The proposed project offers a range of recreation and health benefits. A large open space right in the neighborhood affords residents the opportunity to get outside on a daily basis in a natural world that can take the form of a quick look at a sunset, shared family time in an area that is accessible to all abilities, or a bike ride into and around the adjacent cemetery properties. It provides all the benefits that trees lend to health and sense of well-being, including large and measurable health benefits and decreased costs due to cardiovascular disease, diabetes, depression, cancers, and obesity. Further, costs to business associated with lost productivity are mitigated by outdoor physical activity. The proposed project will provide easy and direct access to a large open space of approximately 245 acres, and all of the above associated recreation and health benefits available to the approximately 27,000 people, nearly half of the Township's population, who live within a 1-mile distance of these combined properties.

ECONOMIC. It is well documented that protected open space adds value to homes located nearby. Contributing factors include proximity to open space and the size of the open space. Together with the adjacent cemeteries, this site offers over 200 acres of contiguous open space, located in the heart of densely populated residential area. This open space is estimated to contribute 5.4% to the value of

homes that lie within a 1/2-mile radius of the open space, which in turn generates additional tax revenue for the County, Township, and School District. Given that Ardsley Wildlife Sanctuary is located in the heart of high-density residential neighborhoods, it benefits a significant percentage of the overall Township population.

CONNECTING PEOPLE TO THE NATURAL RESOURCE. The western half of Abington Township is densely developed. The Ardsley Wildlife Sanctuary, combined with the adjacent cemetery properties, offers a unique opportunity for a woodland and historical experience within one half mile of approximately 16,000 residential homes. However, residents lack confidence in visiting this natural area and woodlands in general, due to questions of safety, and the uncertainty of where to walk. The Phase 1 project, completed in 2022, combats this stigma by providing an entry point into the sanctuary and the beginning of a woodland experience. This proposed Phase 2 project completes the experience by extending the ADA accessible trail through additional woodlands, providing access to a popular large pond, and establishing a return route that creates a loop trail. Further, it more formally connects the AWS with the adjoining historical cemetery properties. Our project will provide all visitors, particularly parents with young children and those with physical limitations, with clearly marked access points, a firm and stable path, natural resting places, and landscape features that will inspire all to spend more time outdoors. Hence this project will directly address existing risk, liability, and safety issues related to trips, falls, and navigation, and bring the site into compliance with current mobility standards, including ADA, safety and the Universal Construction Code. Furthermore, both Phase 1 and Phase 2 areas are located in the portion of Abington Township that is least served by tree canopy- high density residential.

The design is intended to surprise, delight, and engage visitors of all ages and abilities in self-guided discovery and interaction with the natural world. This experience is supported by a formal entry structure, way-finding features that welcome and inform; observation points, that provide both large landscape and more intimate views; interpretive signs that include "cues to care" tips to deepen understanding and stewardship; paths made from a variety of materials including a durable and attractive ADA accessible walkway that includes an observation platform across the rain garden; and seating and other landscape features constructed from natural materials. Key landscape features include the observation ledge/ outdoor classroom that will overlook the rain garden, the PA fieldstone seating at trail connections, and of course, a diverse collection of native canopy trees, understory trees, shrubs, perennials and meadow mix that will provide four-season beauty and delight. This diverse landscape will support a broad range of users and activities. It provides a multi-habitat experience in a relatively small area, including a woodland, pond, meadow and vernal pool. It includes spaces to encourage children's imaginative play, with boulders for sitting and climbing, stream side habitat and the rain garden observation spot for close-up discovery, access to the existing basin for wildlife viewing and fishing, and run-around areas (whether it be on the path itself or in the meadowland or the adjoining cemetery grounds). These features appeal to children of all ages and abilities and are laid out to accommodate individuals or families; those with limited mobility; a grandparent with young children; a couples walk; a bird watching group; a more structured outdoor education group; and more. The site offers many opportunities for passive experience with nature. The project construction will preserve large, mature trees, while optimizing views. The vegetated swale, rain garden and overflow features will provide visitors a unique experience with a wetland-like habitat. This habitat will include a rain garden and wooden walkway overlook, which will offer

visitors an opportunity to listen for and to closely observe reptiles, amphibians and birds. Access to both the stream and the existing basin will provide the opportunity to compare and contrast species that prefer still vs. moving water. Access to both the woodland and meadow will provide the opportunity to compare and contrast species that prefer sheltered vs. open habitats. The site will provide a unique space for social interaction. It promises to connect people from neighborhoods to the east (near the Maple Avenue entrance) as well as those from the west (Hammel, Monroe, Harrison and Jackson Avenues), providing all an enriched sense of place and connection with the natural world. These interactions and connections are sure to motivate an increasing sense of ownership and stewardship, and to enhance mental and physical health amongst visitors.

This project has been fully designed and is prepared to go to BID. However, due to increases in labor material costs, the available funding is not enough to construct the project as proposed and any further reduction in the scope would be detrimental to the intent and spirit of the project. As such, if approved, the Township is prepared to immediately go to BID and all documentation to date has been approved by DCNR including BID documents.

2. Connection to Montco 2040 Comprehensive Plan Goals

The project implements various goals of the County's Comprehensive Plan under the themes of Connected Communities and Sustainable Places. Connected Communities goal of collaboration among stakeholders is achieved through this project as the project creation and the routine maintenance of the Ardsley Wildlife Sanctuary. Initiated by the Abington Shade Tree Commission, this project, and its predecessor Phase 1, has been led by the efforts of the Shade Tree Commission in collaboration with the Township's Environmental Advisory Council, Wissahickon Trails, Department of Conservation and Natural Resources (DCNR) and local volunteers. The Ardsley Wildlife Sanctuary is regularly the site of volunteer events and hours of dedication by Shade Tree Commission members. This project is a reflection of the community's commitment to this space and a desire to see enhancements in the site including operational improvements, such as stormwater, and recreational improvements such as a ADA-accessible trail. The Ardsley Wildlife Sanctuary is within the Sandy Run Greenway identified in Montco 2040 on pages 23 and 79 and the preservation of this space is one outcome of this project.

The project also addresses the County's Sustainable Places goals through opportunities for healthy lifestyles, protected natural resource, and improved stormwater management. The project addresses the goal of opportunities for healthy lifestyles by providing exercise space and outdoor activity. It is well documented that time in the natural world is essential to mitigating chronic illness, including obesity, diabetes, and respiratory illness. We face an increasing need for local access to natural areas, and the AWS property can fulfill this need for approximately 27,000 Abington residents who live within 1 mile of the continuous green space comprised of the Ardsley Wildlife Sanctuary and adjoining cemetery grounds. Approximately 16,000 of these residents live within 1/2 mile of the combined properties. Phase 2 restoration of the Ardsley Wildlife Sanctuary with the associated connection of people with natural resources is an essential part of the solution for nearly half of the

entire Abington Township population, by offering an expanded area of daily respite and enhancement of health through interaction with the natural world, within an easy walk from home.

In addition, the goal of the phase 2 design centers on the conservation and protection of water resources through the integration of natural stormwater management features including an enhanced riparian buffer combined with walking paths, observation points, and interpretive signs that provide public education on how each of these natural features contribute to the diverse wildlife habitat, healthy streams, clean water, and clean air. Improved and natural stormwater management features include gentle regrading, vegetated swales, a rain garden, and stream bank stabilization. The lower portion of the site will be gently regraded to allow water to flow freely across the site from the cemetery through vegetated swales and the new rain garden feature. Densely vegetated swales and rain garden with engineered soils and native water-loving plants will slow and clean water. A biostabilized overflow stone ford, a stone spillway and fieldstone road paving with a very shallow depression, will be installed across the existing road to allow water to exit from the overflow of the rain garden, and sheet across the road and flow into the stream. Large boulders will be strategically spaced along the edge of the stream to dissipate and cascade water towards the existing stream. The stream bank will be further stabilized by re-vegetating the riparian section of the site with native trees and shrubs. The resulting benefits of the proposed design include reduced rate and flow of stormwater, reduced water pollution, and reduced sediment in the receiving creek. The combination of observation points with interpretive signage will serve to educate the general public about the importance, the methods and the resulting benefits of natural stormwater features, some of which residents can model at home.

3. Diversity, Equity, and Inclusion

Our project is committed to promoting diversity, equity, and inclusion within the Ardsley Wildlife Sanctuary. We recognize the importance of creating a space that is accessible and welcoming to all members of the community, irrespective of their background, abilities, or socio-economic status.

Accessibility: The project includes infrastructure improvements to enhance accessibility, making the sanctuary more welcoming to individuals with varying mobility levels. This includes wheelchair-accessible pathways, signage, and facilities that cater to diverse needs.

Affordability: The expansion of this area creates new and exciting access to nature free for the entire community to experience regardless of their financial status as the Ardsley Wildlife Sanctuary is free of charge to explore.

4. **Project Location**
Project area is outlined in green below and connects to Ardsley Park walking path directly across at the corner of Maple Avenue & Jefferson Avenue. Please see attachment A for additional photos of the Ardsley Wildlife Sanctuary Phase 2 site.



5. **Project Plans**
Plans for this project are complete. Please see attachment B for project plans.

6. **Responsible Parties**
   The responsible parties for the implementation of the Ardsley Wildlife Sanctuary Phase 2 improvements will be the Parks and Recreation Department along with the lowest responsible bidder of the project (TBD).

7. **Required Permits**
   A township issued construction permit will be required to be secured by the lowest responsible bidder once the project is awarded.

8. **Public Knowledge**
   This project was initiated through the Township's Shade Tree Commission. The vision for this project began in 2008 with the creation of the Ardsley Wildlife Sanctuary Land Management Plan. Phase 1 of this project was completed in 2019 and efforts for this project immediately began. The Shade Tree Commission routinely discussed this project at their monthly meetings and events. The project was presented at several meetings of the Township's Board of Commissioners and was approved for a DCNR grant application in May 2020. As part of the process, the Shade Tree Commission regularly reported on the progress of this project, including this video update that was played on the government access channel and other outlets: https://abingtonpa.viebit.com/player.php?hash=dqJKPT7Fc1uM.

9. **Consistency with Planning Documents and Efforts**
   The Ardsley Wildlife Sanctuary Phase 2 project incorporates several visions and themes from both the Abington Township Comprehensive Recreation, Open Space and Parks Plan, Abington Township's Ardsley Wildlife Sanctuary Land Management Plan and Montgomery County's Montco 2040: A Shared Vision plan. Specifically, in the 2023 Abington Township Comprehensive Recreation, Open Space and Parks Plan Vision 2.0's recommendation 2.7 calls for the development of sister parks connecting active parks with adjacent passive park such as Ardsley Park and Ardsley Wildlife Sanctuary. Additionally, Vision 3.0's recommendation 3.4 calls for the incorporation of accessible design into park and open space improvements. A 2008 Ardsley Wildlife Sanctuary Land Management Plan identified and recommended several components of this project including stormwater management, restoration, and education opportunities. This project is also consistent with the Sustainable Places theme in the Montco 2040: A Shared Vision plan. This project addresses improvements to stormwater management in the project area and greater opportunities for healthier lifestyles with the addition of more walking trails through natural areas and their connection to the paths across the street in Ardsley Park which connect to the paths in Roslyn Park.

10. **Maintenance Plan**

A monthly site inspection conducted by the Abington Shade Tree Commission will be conducted to plan routine volunteer events, as well as identity maintenance issues as they arise. The site is routinely inspected by the Parks and Recreation Department Maintenance Crew. Additionally, the site is patrolled by Township police officers, as well as park rangers. With input from each party, Township staff can act promptly to address any issues related to safety, structural features, or nuisance vandalism, involving the walking path,, decking, signage, pond, service road, and to remove any trees that become a hazard. This proactive approach is essential to sustaining the site while minimizing maintenance expenses. Maintenance of the natural site features will focus on soil, weed and pest control, watering, deer protection, young tree tending, and meadow mowing. Soil erosion will be prevented by ensuring that vegetative swales and the rain garden are functioning properly, thereby mitigating any tendency for flow channelization. Weed and pest control will include regular removal of reemerging invasive plants, and public participation to control spotted lantern fly. A watering routine will be implemented to establish new native plantings, and volunteers will replant as needed to create a sustainable, layered canopy. Deer protection will be installed and maintained to prevent browsing and rubbing against tender trees until they are sufficiently established. Young trees will be tended including weeding, mulching, and structural pruning twice annually or as needed. The meadow areas will be mown twice per year. These activities will be funded through the Parks and Recreation Department's operational budget as needed.

11. **Educational or Public Engagement Opportunities**

Creating public engagement opportunities for the ADA-accessible nature path with educational signage at the Ardsley Wildlife Sanctuary is a fantastic initiative to ensure inclusivity and community involvement. Some of the ways we plan to use the Briar Bush Nature Center, Shade Tree Commission and the Parks & Recreation Department to implement this engagement are listed below.

Community Workshops and Events:

Host workshops or events along the nature path, covering topics such as local flora and fauna, environmental conservation, and sustainable practices. These events will be inclusive and accessible to all community members, regardless of ability.

Guided Tours:

Offer regular guided tours led by knowledgeable volunteers. These tours would provide insights into the significance of the nature path, its features, and the educational content on the signage. Ensure that tours are designed to accommodate individuals with different mobility levels.

Educational Workshops for Schools:

Expand our Partnership with the local elementary schools to organize field trips and educational workshops. Utilize our existing curriculum-aligned activities that complement classroom

learning, fostering a love for nature and environmental stewardship among students at this site.

Volunteer Programs:
Expand our existing volunteer programs to the Ardsley Wildlife Sanctuary that allow community members to contribute to the maintenance and improvement of the nature path. This fosters a sense of ownership and pride within the community.

12. Project Budget
The estimated project budget is provided in Attachment C.

13. Resolution
The Abington Township Board of Commissioners will vote on the resolution at their March 14, 2024 meeting. The draft Township resolution is included in Attachment D.

ATTACHMENT A
Project Location

Google Earth
300 ft
N
Maple Ave
Maple Ave
Maple Ave
Maple Ave
Jefferson Ave
Ardsley Wildlife Sanctuary






Urban Forests: Working for Wildlife
Diverse forests provide more of what animals need
Food
A wide variety of native trees and shrubs yields a wide range of food options.
Shelter
Cavity nesters, like screech owls, need dead trees for nesting.
Multiple plant layers mean more hiding spots
Most songbirds, like cardinals, prefer to build nests in a diverse layer shrubs and small trees
Native forest plants can provide more than 30 times the amount of food for wildlife as compared to non-native plants.
TREES AT WORK
Briar Bush NATURE CENTER






In Loving Memory
Brian & Mary Ellen Gallagher
Intrepid Adventurers





ATTACHMENT B
Project Plan

ARDSLEY WILDLIFE SANCTUARY
PHASE 2
Glenside, Abington Township, PA

ABBREVIATIONS:

ABBREVIATIONS ARE VALID WITH OR WITHOUT PERIODS

A.F.F.	above finish floor	D.B.H.	diameter breast height	L.	length (of curve)	RD.	road		
AC.	acres	DIM.	dimension	LT.	light				
ADD.	addendum	DIV.	division	L.P.	linear feet	SAN.	sanitary		
ADJ.	adjustable	DS.	downspout	L.P.	low point	SCH.	schedule		
AGG.	aggregate	D.T.	drain tile			SC.	score line		
ALT.	alternate	DWG.	drawing	M.H.	manhole	SEC.	section		
ALUM.	aluminum	D.F.	drinking fountain	MFR.	manufacturer(er)	SHT.	sheet		
ANC.	anchor, anchorage			MAX.	maximum	SIM.	similar		
ANOD.	anodized	E/K	each way	MECH.	mechanic(al)	SL.	sleeve		
APPROX.	approximate	E.	east	MED.	medium	S.	south		
ARCH.	architectural)	ELEC.	electric(al)	MTL.	metal	SP(TYS).	space(s)		
A.D.	area drain	EL.	elevation	M.	meter(s)	SPEC.	specification		
ASPH.	asphalt	ENCL.	enclosure(ure)	MM.	millimeter(s)	SQ.	square		
				MIN.	minimum	S.S.T.	stainless steel		
B&B	balled and burlapped			MISC.	miscellaneous	STD.	standard		
B.M.	bench mark	ENG.	engineer	MOD.	modular	STA.	station		
BIT.	bituminous	EQ.	equal			STL.	steel		
BLK.	block	EQUIP.	equipment	NOM.	nominal	S.D.	storm drain		
BTM.	bottom	EST.	estimate	N.	north	ST.	street		
B.C.	bottom of curb	EXIST.	existing	N.I.C.	not in contact	STR.	structural		
B.S.	bottom of steps	EXP.	exposed	N.T.S.	not to scale				
B.N.	bottom of nail	EXT.	exterior	NO.	number				
BRK.	brick					T.	tangent		
BLDG.	building	FIN.	finish(ed)	O.C.	on center(s)	TEL.	telephone		
		F.F.E.	finished floor elevation	OPP.	opposite	THK.	thick(ness)		
CAL.	caliper	F.G.	finish grade	O.H.	opposite hand	TOL.	tolerance		
CK.	calk(ing) cavik(ing)	FLSH.	flashing	O.D.	outside diameter	T.C.	top of curb		
C.I.	cast iron	FLEX.	flexible			T.S.	top of steps		
C.I.P.C.	cast-in-place concrete	F.H.	fire hydrant			T.SL.	top of slab		
C.B.	catch basin	FL.	floor	PT(S).	point(sp)	T.N.	top of nail		
CEM.	cement	FT.	foot or feet	PV(G.	pave(ing)	TRD.	tread		
C.L.	center line	FTG.	footing	PVMT.	pavement	TYP.	typical		
CM.	centimeter(s)	FND.	foundation	PERF.	perforate(d)				
CHAM.	chamfer	FUT.	future	PL.	plate				
C.L.F.	chain link fence			PWD.	plywood	U.O.N.	unless otherwise noted		
CIR.	circle	GA.	gage, gauge	PT.	point				
C/RC.	circumference	GALV.	galvanized	P.V.C.	polyvinyl chloride				
CLR.	clear(ance)	G.V.	gas valve	P.S.F.	pounds per square foot	VAR.	varies		
CONC.	concrete	G.C.	general contract(or)	P.S.I.	pound per square inch	VERT.	vertical		
C.M.U.	concrete masonry unit	GD.	grade, grading	P.C.C.	point of compound curvature	V.C.	vertical curve		
CONST.	construction			P.C.	point of curvature	V.I.F.	verify in field		
CONT.	container	GVL.	gravel	P.I.	point of intersection				
C.L.L.	contract limit line	G.	gutter	P.R.C.	point of reverse curvature				
C.J.	contraction joint	HDW.	hardware	P.T.	point of tangent	W.	west		
C.M.P.	corrugated metal pipe	HWD.	hardwood	P.V.C.	point of vertical curvature	WHS.	wheel stop		
CORR.	corrugated	HDR.	header	P.V.I.	point of vertical intersection	W.	width, wide		
CS.	countersink	H.D.	heavy duty	P.V.T.	point of vertical tangent	W/	with		
CRS.	course(s)	HT.	height	PL.	property line	W/O	without		
		H.P.	high point			WD.	wood		
C.F.	cubic foot	HOR.	horizontal	R.	radius	W.M.	woven wire mesh		
C.Y.	cubic yard	H.B.	hose bibb	R.M.C.	rainodler conductor	W.M.F.	welded wire fabric		
				REF.	reference				
DP.	dampproofing	INC.	include (d), (ing)	REBAR	reinforcement bar	Misc.			
D.	degree of curvature	I.D.	inside diameter	R.C.P.	reinforced concrete pipe				
DEMO.	demolish, demolition	INT.	interior	REINF.	reinforcing	@	at		
DEP.	depressed	INV.	invert	REV.	revision(s), revised	'	feet, minutes		
DTL.	detail	I.J.	isolation joint	R.E.	rim elevation	"	inches, seconds		
DIAG.	diagonal			REQ.	required	°	degrees		
DIA.	diameter	JT.	joint	R.O.W.	right of way	℄	center line		
				RIS.	riser	ø	round diameter		
						#	pound, number		

GENERAL NOTES:

1. REVIEW CONTRACT DOCUMENTS AND FIELD CONDITIONS BEFORE STARTING EACH PORTION OF THE WORK. REPORT ERRORS, OMISSIONS, OR INCONSISTENCIES PROMPTLY TO LANDSCAPE ARCHITECT.
2. CONTACT UTILITY COMPANIES AS REQUIRED BY STATE AND LOCAL REGULATIONS BEFORE DIGGING TO LOCATE AND MARK EXISTING UTILITIES. MAINTAIN MARKINGS THROUGHOUT THE PERIOD OF WORK.
3. EXERCISE CARE IN OPERATIONS TO PROTECT EXISTING UNDERGROUND UTILITIES.
4. EXISTING SURVEY (WITH WETLANDS LINES) WAS PROVIDED BY ABINGTON TOWNSHIP AND MAY VARY FROM ACTUAL EXISTING CONDITIONS.
5. EXISTING SPOT ELEVATIONS & INDIVIDUAL EXISTING TREES INDICATED ARE APPROXIMATE AND FROM FIELD SURVEY, AND THERE MAY BE VARIANCE BETWEEN THEM. REVIEW STAKEOUT (WITH ELEVATION MARKINGS) WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION, AND ADJUST AS REQUESTED TO MEET ADA MINIMUM/MAXIMUMS.
6. SURFACE TRANSITIONS SHALL COMPLY WITH 2010 ADA STANDARDS.

BASE BID AND ADD ALTERNATES:

BASE BID: ALL WORK UNLESS INDICATED AS AN ADD ALTERNATE

ADD ALTERNATE 1: FURNISH AND INSTALL PATH, OVERLOOK, AND RELATED WORK INDICATED ON DRAWING L8.0 UNLESS OTHERWISE NOTED

ADD ALTERNATE 2: FURNISH AND INSTALL CYPRESS DECKING, CURB AND SPACERS IN LIEU OF PRESSURE TREATED SOUTHERN YELLOW PINE IN BASE BID

ADD ALTERNATE 3: FURNISH AND INSTALL TREES

ADD ALTERNATE 4: FURNISH AND INSTALL DECK WALK - NORTH LEG AS INDICATED ON L3.0 AND L11.3

ADD ALTERNATE 4A: FURNISH AND INSTALL CYPRESS DECKING, CURB AND SPACERS IN LIEU OF PRESSURE TREATED SOUTHERN YELLOW PINE IN ADD ALT 4

ADD ALTERNATE 5: FURNISH AND INSTALL PERENNIALS/GRASSES PLUGS

NOTES:
1. OWNER RESERVES THE RIGHT TO ACCEPT ADD ALTERNATES IN ANY ORDER.

LIST OF DRAWINGS:

L0.0	COVER SHEET
L0.1	EXISTING CONTEXT
L1.0	EXISTING CONDITIONS OVERALL PLAN
L2.0	EXISTING CONDITIONS, SITE PROTECTION, DEMOLITION, & INVASIVE SPECIES MANAGEMENT PLAN
L3.0	MATERIALS PLAN
L4.0	LAYOUT PLAN
L5.0	GRADING PLAN
L6.0	STABILIZATION PLAN
L7.0	PLANTING PLAN
L8.0	ADD ALTERNATE 1
(L9.0 INTENTIONALLY NOT USED)	
L10.0	E&S CONTROL DETAILS AND NOTES
L11.0	DETAILS
L11.1	DETAILS
L11.2	DECK DETAILS
L11.3	DECK DETAILS
L11.4	PLANT DETAILS

Landscape Architect:
ThinkGreen LLC
Landscape Architecture, Construction
& Ecological Design
P.O. BOX 528
Glenside, PA 19038
Tel 215 887 2595
Fax 215 887 2596
Contact: Thomas Johnston
tjohnston@thinkgreenllc.com
www.ThinkGreenLLC.com

THOMAS J. JOHNSTON
PROFESSIONAL LANDSCAPE ARCHITECT
LICENSE No. LA001722

Client & Owner:
Abington Township, PA
1176 Old York Rd.
Abington, PA 19001

No.	Date	Revisions

Project Name:
ARDSLEY WILDLIFE SANCTUARY - PHASE 2
Glenside, PA

Drawing Set:
BID SET

Drawn:
JN/CV

Checked:

Approved:

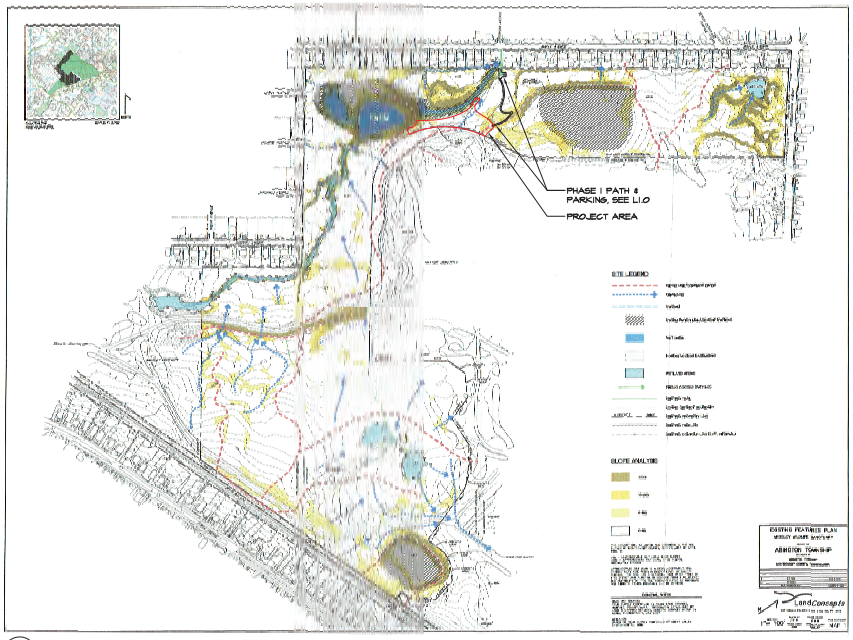
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COVER SHEET

Job Number: 19753

File:

Date: 07/17/23 Scale: AS SHOWN

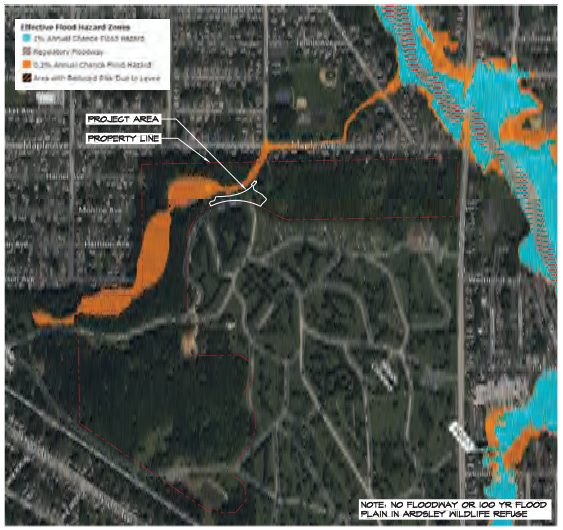
Drawing Number:
L0.0



1 L0.1 EXISTING FEATURES PLAN



2 L0.1 WOODLAND ANALYSIS PLAN



3 L0.1 FLOODPLAINS MAP

The Ardsley Wildlife Sanctuary is located within a densely developed community and abuts a variety of uses. It is "L" shaped with one leg oriented north-south (parallel to Maple Avenue) and the other east-west (parallel to Jenkintown and Susquehanna Roads). To the north of the site is Susquehanna Road, single-family residential and Roslyn Park. To the west is Maple Avenue, single-family residential, and Ardsley Park. To the south is single-family residential and the Ardsley Burial Park. To the east is single-family residential, railroad line (SEPTA), and Hillside Cemetery.



Figure 3: Aerial Photograph

Pedestrian access to the site is possible from nearly every boundary including a formal Township entry along Maple Avenue near Ardsley Park, street ends (Hamel, Monroe, Harrison, and Jackson Avenues), the abutting cemeteries (some fence restrictions), and Susquehanna Road. Vehicular access is more limited to one formal Township entrance from Maple Avenue and two informal entrances through Hillside Cemetery (Susquehanna Road) and Ardsley Burial Park (Jenkintown Road).

4 L0.1 ADJACENT LAND USES



LEGEND

Ch	CODORUS SILT LOAM
Ha	HATBORO SILT LOAM
LeA	LAWRENCEVILLE SILT LOAM, 0-3% SLOPES
LeB	LAWRENCEVILLE SILT LOAM, 3-8% SLOPES
UgB	URBAN LAND, 0-8% SLOPES
UgD	URBAN LAND, 8-25% SLOPES
UHB	URBAN LAND-DUFFIELD, 0-8% SLOPES
UHD	URBAN LAND-EDGEMONT, 8-25% SLOPES
UgB	URBAN LAND-UDORTHENTS, SCHIST & GNEISS, 0-8% SLOPES

5 L0.1 SOIL MAP

Landscape Architect:
ThinkGreen LLC
Landscape Architecture, Construction & Ecological Design
P.O. BOX 528
Glenside, PA 19038
Tel 215 887 2595
Fax 215 887 2596
Contact: Thomas Johnston
tjohnston@thinkgreenllc.com
www.ThinkGreenLLC.com

THOMAS J. JOHNSTON
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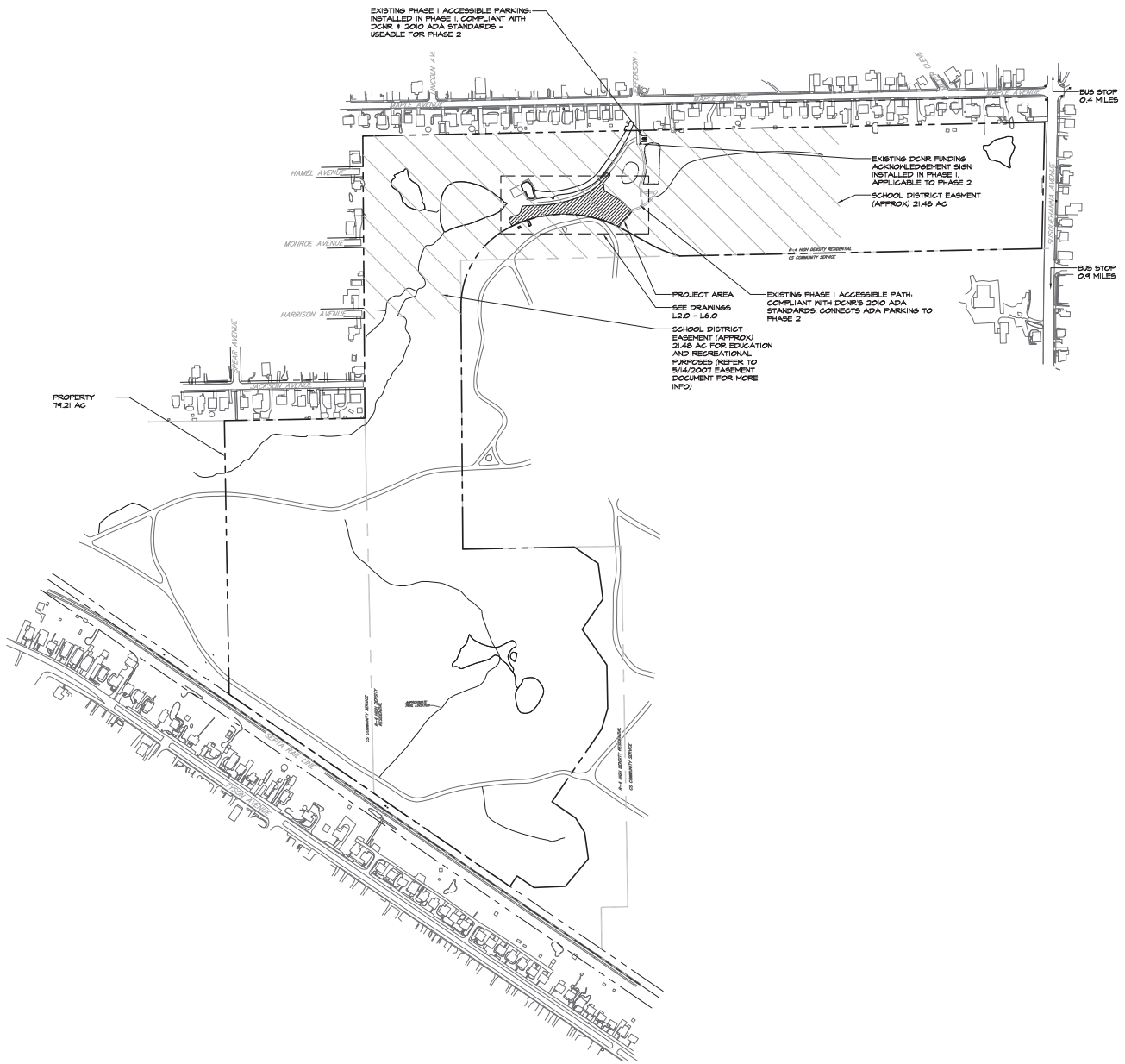
Project Name:
ARDSLEY WILDLIFE SANCTUARY - PHASE 2
Glenside, PA

Drawing Set:
BID SET

Drawn: JN/CV
Checked:
Approved:

Drawing Title:
EXISTING CONTEXT

Job Number: 19753
File:
Date: 07/17/23 Scale: AS SHOWN
Drawing Number:
L0.1



1 / L1.0 EXISTING CONDITIONS - OVERALL PLAN
1" = 200'-0"

Landscape Architect:
ThinkGreen LLC
Landscape Architecture, Construction & Ecological Design
P.O. BOX 528
Glenside, PA 19038
Tel 215 887 2595
Fax 215 887 2596
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tjohnston@thinkgreenllc.com
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Drawing Set:
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Drawn: JN/CV
Checked:
Approved:

Drawing Title:
EXISTING CONDITIONS OVERALL PLAN

Job Number: 19753
File:
Date: 07/17/23 Scale: AS SHOWN
Drawing Number:
L1.0

GENERAL NOTES

1. INSTALL SITE PROTECTION MEASURES BEFORE BEGINNING SITE DEMOLITION.
2. INSTALL SITE AND TREE PROTECTIONS, AS SHOWN, BEFORE THE START OF WORK AND MAINTAIN THROUGHOUT CONSTRUCTION. REMOVE FENCES ONLY TO PERMIT CONSTRUCTION ACTIVITIES WITHIN FENCED AREAS. REINSTALL FENCES DURING PERIODS OF INACTIVITY.
3. REVIEW TREE PRUNING NECESSARY FOR CONSTRUCTION CLEARANCE WITH LANDSCAPE ARCHITECT BEFORE BEGINNING CONSTRUCTION.
4. STRIP TOPSOIL FROM DISTURBED AREAS AND STOCKPILE IN AREA SHOWN.
5. INSTALL CONSTRUCTION FENCE AND SITE PROTECTION MEASURES AROUND AREAS OF TRENCHING BEFORE PROCEEDING WITH TRENCHING.
6. SEE SPECIFICATION 015834.

INVASIVE SPECIES MANAGEMENT NOTES

1. SELECTIVE CUT AND PAINT HERBICIDE OF EXISTING INVASIVE TREES AND SHRUBS
2. NON-SELECTIVE HERBICIDE TREATMENT, PRIOR TO GRADING/SEEDING (ONE TREATMENT BY CONTRACTOR)
3. SELECTIVE HERBICIDE TREATMENT AFTER SEEDING (ONE TREATMENT BY CONTRACTOR)
4. WORK AREA IS WITHIN THE CONSTRUCTION LIMIT LINE
5. SEE DETAILS

E&S PLANNING & DESIGN NOTES PER 102.4(b)(4):

1. THE E&S PLAN MINIMIZES THE EXTENT AND DURATION OF EARTH DISTURBANCE BY MINIMIZING THE AREA TO BE GRADED DURING CONSTRUCTION.
2. THE E&S PLAN MAXIMIZES PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION BY INSTALLING COMPOST FILTER SOCK OR SILT SOCK.
3. THE E&S PLANS UTILIZE OTHER MEASURES OR CONTROLS TO PREVENT OR MINIMIZE THE GENERATION OF INCREASED STORMWATER RUNOFF BY INCORPORATING LANDSCAPE RESTORATIONS TO MINIMIZE THE GENERATION OF INCREASED RUNOFF.

MAINTENANCE OF PROPOSED E&S BMPs - CHAPTER 93 102.4(b)(5)(x):

1. MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR THE DURATION OF THE PROJECT. ALL BMPs SHALL BE INSPECTED WEEKLY AND AFTER EACH MEASURABLE RAINFALL EVENT. ALL BMPs FOUND TO BE IN NEED OF MAINTENANCE OR REPAIR SHALL BE RESTORED AT THE TIME TO ENSURE EFFECTIVE AND EFFICIENT OPERATION.
2. SEDIMENT ACCUMULATED IN SILT FENCING OR SILT SOCK MUST BE CLEANED REGULARLY, AND AFTER PERIODS OF SIGNIFICANT SEDIMENT RUNOFF. E&S CONTROLS MUST BE MAINTAINED AS SPECIFIED FOR THE DURATION OF THE EARTH DISTURBANCE, AND MAY NOT BE REMOVED UNTIL WHICH TIME AS SPECIFIED BY THE MONTGOMERY COUNTY CONSERVATION DISTRICT EROSION AND SEDIMENT CONTROL PLANS.

INSPECTION SCHEDULE FOR E&S BMPs - CHAPTER 93 102.4(b)(5)(x):

1. COMPOST FILTER SOCK/SILT FENCE SHALL BE INSPECTED WEEKLY AND AFTER EACH STORM EVENT. NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION.
2. NOTE: A LOG SHOWING DATES THAT E&S BMPs WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.

DISPOSAL OF MATERIALS PER CHAPTER 93 102.4(b)(5)(xi):

1. ALL BUILDING AND SITE WASTE, INCLUDING BUT NOT LIMITED TO ASPHALT, CONCRETE, SOIL AND VEGETATION, SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENTS SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 260.1 ET SEQ., AND 287.1 ET SEQ. NO BUILDING OR SITE WASTES OR UNUSED MATERIAL SHALL BE BURNED, BURIED, DUMPED OR DISCHARGED AT THE SITE.

NOTES:

1. ENVIRONMENTAL DUE DILIGENCE SHALL BE PERFORMED BY THE CONTRACTOR TO ENSURE ALL FILL MATERIAL ORIGINATING FROM OFF SITE MEETS ALL DEPARTMENT REQUIREMENTS RELATED TO CLEAN FILL.
2. BASED ON THE PROPOSED CONSTRUCTION ACTIVITIES, WHICH ARE LIMITED DEPTH OF DISTURBANCE, NO SOIL LIMITATIONS ARE EXPECTED TO EXIST.
3. BASED ON THE EXISTING SOILS AND GEOLOGIC CONDITIONS AT THE PROJECT SITE, THERE WILL BE NO POTENTIAL FOR GEOLOGIC OR SOIL CONDITIONS TO CAUSE POLLUTION DURING CONSTRUCTION.

SURFACE WATER INFORMATION

NEAREST SURFACE WATER/WATERSHED:
STONY BROOK WATERSHED

SEQUENCE OF CONSTRUCTION

1. CONTACT APPLICABLE AGENCY (MONTGOMERY COUNTY CONSERVATION DISTRICT OR TOWNSHIP) TO SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING AT LEAST SEVEN (7) DAYS PRIOR TO THE START OF CONSTRUCTION.
2. STAKE OUT LIMITS OF DISTURBANCE PRIOR TO COMMENCEMENT OF EARTH DISTURBANCE.
3. INSTALL ROCK CONSTRUCTION ENTRANCE, TREE PROTECTION FENCE AND SILT SOCK/SILT FENCE IN ALL LOCATIONS AS SHOWN ON PLANS.
4. FIELD LOCATE ALL EXISTING UTILITIES PRIOR TO DEMOLITION AND ROUGH GRADING.
5. COMPLETE DEMO OF EXISTING SITE FEATURES AS SHOWN ON PLANS.
6. ROUGH GRADE AND INSTALL PATH, DECK WALK, AND RELATED FEATURES.
7. INSTALL TREES, HERBACEOUS MEADOW PLANTINGS, SEEDING AND COMPLETE FINE GRADING.
8. REMOVE E&S BMPs ONLY AFTER VEGETATION AREAS HAVE ACHIEVED A UNIFORM 70% PERENNIAL VEGETATIVE COVER OVER THE ENTIRE DISTURBED AREA.

LEGEND - EXISTING

- PROPERTY LINE
- 250 — EXISTING 10 FT CONTOURS
- 2 FT CONTOURS
- WETLANDS
- TREELINE
- TREES
- LeB — LAWRENCEVILLE SILT LOAM
- ERODING DITCH
- SURFACE STORMWATER FLOW
- FENCE

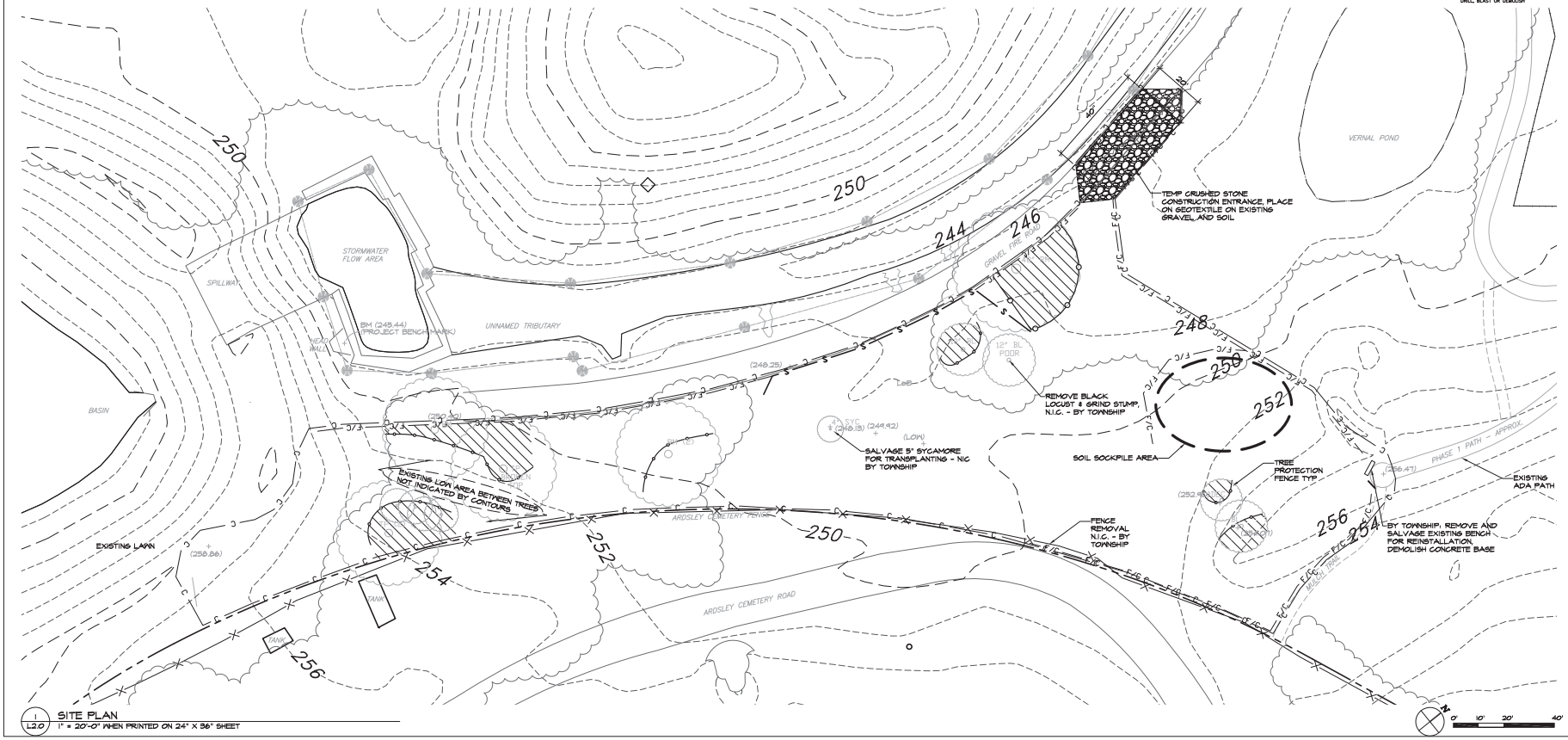
LEGEND - PROPOSED

- C — LIMIT OF DISTURBANCE & CONSTRUCTION LIMIT LINE
- LG — LIMIT OF GRADING
- F/C — TEMP SILT SOCK OR SILT FENCE
- S — TEMP SUPER SILT FENCE
- TEMP TREE PROTECTION FENCE
- TREE & ROOT PROTECTION ZONE

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 Irwin Run Road
West Mifflin, Pennsylvania
15122 - 1078

PENNSYLVANIA ONE CALL SYSTEM, INC. SERIAL NUMBER 20230000000 STOP! CALL BEFORE YOU DIG

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NON-MEMBERS MUST BE CONTACTED DIRECTLY
PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH



1 / L2.0 SITE PLAN
1" = 20'-0" WHEN PRINTED ON 24" X 36" SHEET

Landscape Architect:
ThinkGreen LLC
Landscape Architecture, Construction & Ecological Design
P.O. BOX 528
Glenside, PA 19038
Tel 215 887 2595
Fax 215 887 2596
Contact: Thomas Johnston
tjohnston@thinkgreenllc.com
www.ThinkGreenLLC.com

THOMAS J. JOHNSTON
PROFESSIONAL LANDSCAPE ARCHITECT
LICENSE No. LA001722

Client & Owner:
Abington Township, PA
1176 Old York Rd.
Abington, PA 19001

No.	Date	Revisions

Project Name:
ARDSLEY WILDLIFE SANCTUARY - PHASE 2
Glenside, PA

Drawing Set:
BID SET

Drawn: JN/CV
Checked:
Approved:

Drawing Title:
EXISTING CONDITIONS, SITE PROTECTION, DEMOLITION & AND INVASIVE SPECIES MANAGEMENT PLAN

Job Number: 19753
File:
Date: 07/17/23 Scale: AS SHOWN

Drawing Number:
L2.0

MATERIAL NOTES:

1. FOLLOW PA DOT SPECIFICATIONS PUBLICATION 408 (2020, LATEST EDITION) UNLESS MORE STRINGENT REQUIREMENTS ARE IN THE CONSTRUCTION DOCUMENTS.
2. COMPACTION OF SUBGRADE UNDER PAVEMENTS AND FOOTINGS: 95% PROCTOR PER ASTM D698. PLACE IN 6" LIFTS AND COMPACT EACH LIFT.
3. COMPACTION OF 2A AGGREGATE AND SELECT FILL: 95% PROCTOR PER ASTM D698. PLACE IN 6" LIFTS AND COMPACT EACH LIFT.
4. COMPACTION OF PLANTINGS SOILS AND THE TOP 12" OF SUBGRADE UNDER PLANTING SOILS: 85% PROCTOR PER ASTM D698. (90% PROCTOR FOR SOILS BELOW).
5. SELECT FILL (AGGREGATE): PA 2A
6. CONCRETE: 3500 PSI MIN, AIR ENTRAINED.
7. BLUESTONE: QUARTZITIC SANDSTONE, NATURAL BLUE-GRAY COLOR, CUT 6 SIDES, THERMAL FINISH TOP, PA SOURCE.
8. OFFSET REBAR FROM EDGE OF CONCRETE 3" MIN.
9. SURFACE TRANSITIONS SHALL COMPLY WITH 2010 ADA STANDARDS.

GENERAL NOTES:

1. SEE NOTES ON OTHER DRAWINGS
2. SURFACE TRANSITIONS SHALL COMPLY WITH 2010 ADA STANDARDS.

LEGEND - EXISTING

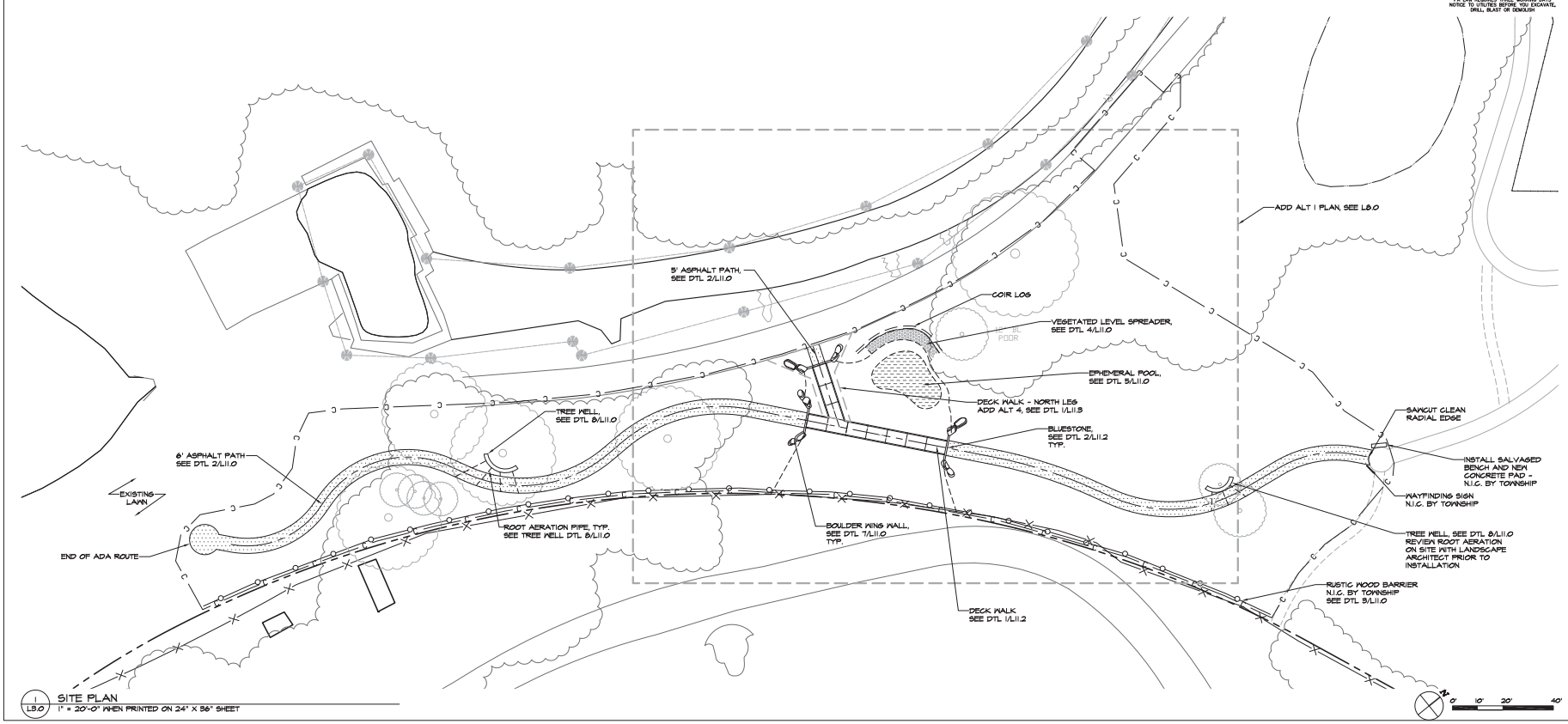
- PROPERTY LINE
- 250 — 10 FT CONTOURS
- 2 FT CONTOURS
- WETLANDS
- TREELINE - APPROX.
- TREES - APPROX.
- LeB — LAWRENCEVILLE SILT LOAM
- ERODING DITCH
- SURFACE STORMWATER FLOW
- FENCE

LEGEND - PROPOSED

- C — LIMIT OF DISTURBANCE & CONSTRUCTION LIMIT LINE
- RUSTIC WOOD BARRIER (N.I.C. BY TOWNSHIP)

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 Irwin Run Road
West Mifflin, Pennsylvania
15122 – 1078

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ARDSLEY WILDLIFE SANCTUARY - PHASE 2
Glenside, PA

Drawing Set:
BID SET

Drawn: JN/CV
Checked:
Approved:

Drawing Title:
MATERIALS PLAN

Job Number: 19753
File:
Date: 07/17/23 Scale: AS SHOWN

Drawing Number:
L3.0

LAYOUT PLAN NOTES:

1. VERIFY DIMENSIONS AND ACCEPT CONDITIONS BEFORE PROCEEDING WITH ANY WORK. REPORT DISCREPANCIES TO LANDSCAPE ARCHITECT.
2. DIMENSIONS TO CURBS AND WALLS ARE TO EXPOSED FACES UNLESS NOTED OTHERWISE.
3. INSTALL ISOLATION JOINTS IN CONCRETE PAVING ABUTTING CURBS, STEPS AND OTHER FIXED OBJECTS.
4. REVIEW BASELINE ON SITE WITH LANDSCAPE ARCHITECT PRIOR TO LAYING OUT REMAINDER OF THE PROJECT. ADJUST AS REQUESTED.
5. TREE LOCATIONS, EXISTING SWALES AND EXISTING GRADING IS APPROXIMATE. REVIEW PATH AND FOOTBRIDGE STAKEOUT WITH LANDSCAPE ARCHITECT AND ADJUST AS REQUESTED.
6. SURFACE TRANSITIONS SHALL COMPLY WITH 2010 ADA STANDARDS.

LEGEND - EXISTING

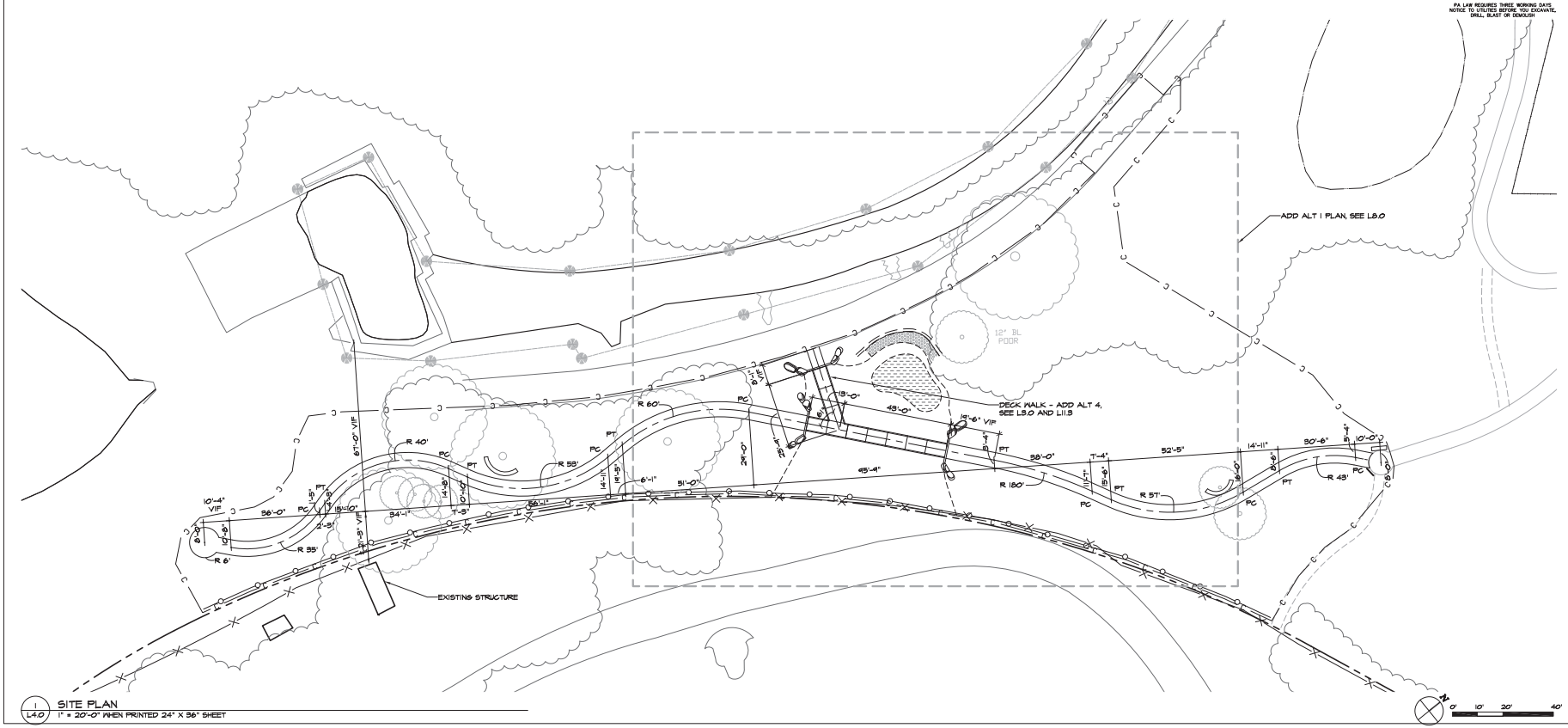
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- FENCE

LEGEND - PROPOSED

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Drawing Set:
BID SET

Drawn: CV
Checked:
Approved:

Drawing Title:
LAYOUT PLAN

Job Number: 19753
File:
Date: 07/17/23 Scale: AS SHOWN

Drawing Number:
L4.0

GRADING NOTES:

1. ROUND BREAKS IN GRADE WITH 5 FEET MINIMUM ROUNDING.
2. MEET ELEVATIONS OF EXISTING SURFACES FLUSH.
3. WHERE EXCAVATING IS REQUIRED WITHIN THE DRIP LINE OF TREES, SEE SPECIFICATIONS FOR TREE PROTECTION AND TRIMMING. DO NOT CUT MAIN LATERAL ROOTS.
4. SEE PLANTING PLAN FOR ADDITIONAL NOTES.
5. REUSE EXISTING TOPSOIL AND AMEND TO BECOME PLANTING SOIL MIX. DO NOT EXPORT TOPSOIL.
6. BALANCE CUT AND FILL ON SITE.
7. CENTERLINE SPOT ELEVATIONS ARE ON FT OR PC UNLESS OTHERWISE SPECIFIED.
8. EXISTING CONDITIONS PROVIDED FOR CONSTRUCTION DOCUMENTATION SHOW 2' CONTOURS. NOTE THAT 1' PROPOSED CONTOURS HAVE BEEN PROVIDED TO REINFORCE THE GRADING CONCEPT AND INTENTION IN AND AROUND THE NEW SITE IMPROVEMENTS.
9. SURFACE TRANSITIONS SHALL COMPLY WITH 2010 ADA STANDARDS.

LEGEND - EXISTING

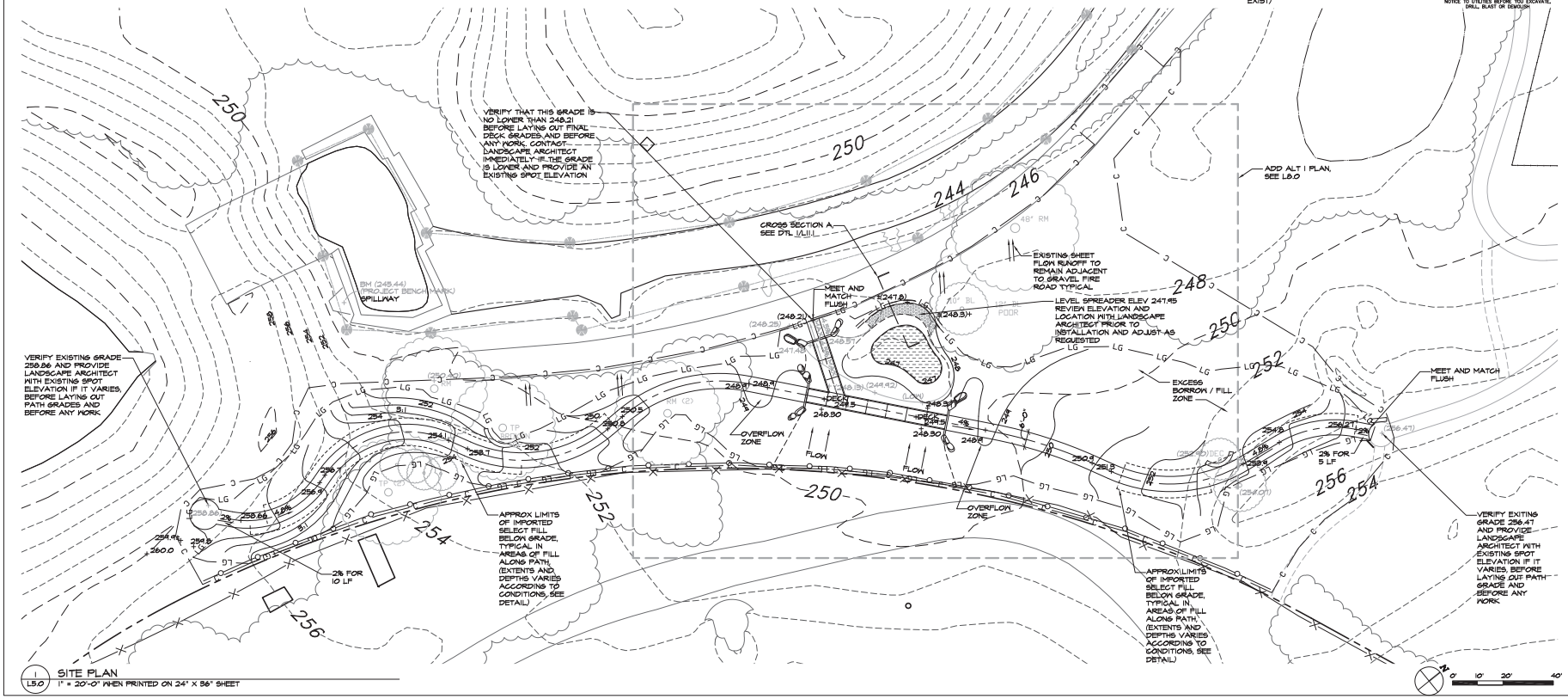
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- ±(250.90) + — APPROX SPOT ELEVATIONS INTERPOLATED BETWEEN CONTOURS WHICH HAVE PLUS-MINUS VARIANCE OF 6"
- (250.90) + — SPOT ELEVATIONS BASED ON FIELD MEASUREMENTS BY THINKGREEN LLC (VARIANCE WITH SURVEY CONTOURS MAY EXIST)

LEGEND - PROPOSED

- C — LIMIT OF DISTURBANCE & CONSTRUCTION LIMIT LINE
- LG — LIMIT OF GRADING
- RUSTIC WOOD BARRIER (N.I.C. BY TOWNSHIP)
- 250 — 1 FT CONTOURS
- +250.90 — SPOT ELEVATIONS
- 250 — ADD ALT 4 - 1 FT CONTOURS
- +250.90 — ADD ALT 4 - SPOT ELEVATIONS

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Drawn: JN/CV
Checked:
Approved:

Drawing Title:
GRADING PLAN

Job Number: 19753
File:
Date: 07/17/23 Scale: AS SHOWN

Drawing Number:
L5.0

SEEDING NOTES:

SEE SPECIFICATION SECTION 329200

1. SEED ALL AREAS DISTURBED BY CONSTRUCTION NOT OTHERWISE CONTAINING PLANTING BEDS, SIDEWALKS, BUILDINGS, ETC.
2. BEFORE SEEDING, PROVIDE SOIL TEST TO DETERMINE APPLICATIONS OF FERTILIZERS AND/OR GROUND LIMESTONE FOR NATIVE PLANTS. INCORPORATE FERTILIZER AND/OR LIMESTONE INTO TOPSOIL TO A DEPTH OF 4".
3. WATER AND MAINTAIN ALL SEEDED AREAS PER SPECIFICATIONS.
4. RESEED BARE OR THIN AREAS PER SPECIFICATIONS.

UPLAND MEADOW SEED MIX - 25 lbs. per acre, plus cover crop

Plateau Tolerant Wildflower & Grass Mix - ERNMX-166

34.8%	Bouteloua curtipendula 'Butte'	Sideoats Grama 'Butte'
28.0%	Schizachyrium scoparium 'Itasca'	Little Bluestem 'Itasca'
8.0%	Echinacea purpurea	Purple Coneflower
4.0%	Linum perenne	Perennial Blue Flax
3.3%	Chamaecrista fasciculata	Partridge Pea
3.0%	Chrysanthemum maximum	Shasta Daisy
3.0%	Coreopsis lanceolata	Lanceleaf Coreopsis
3.0%	Gaillardia aristata	Perennial Gaillardia
3.0%	Gaillardia pulchella	Annual Gaillardia
3.0%	Rudbeckia hirta	Blackeyed Susan
2.0%	Desmanthus illinoensis	Illinois Bundleflower
1.5%	Ratibida pinnata	Grey Headed Coneflower
1.0%	Coreopsis tinctoria	Plains Coreopsis
1.0%	Liatris spicata	Marsh Blazing Star
0.5%	Baptisia australis	Blue False Indigo
0.4%	Monarda fistulosa	Wild Bergamot
0.3%	Aster novae-angliae	New England Aster

COVER CROP

SELECT FROM ONE OF THE FOLLOWING:

Grain Oats: 80 lb per acre, planted January-August
Grain Rye: 80 lb per acre, planted August-December

LOWLAND MEADOW SEED MIX- 30 lbs. per acre, plus cover crop

Rain Garden Mix - ERNMX-180

33.4%	Schizachyrium scoparium 'Itasca'	Little Bluestem 'Itasca'
23.0%	Elymus virginicus	Virginia Wildrye
7.0%	Carex vulpinoidea	Fox Sedge
5.6%	Chasmanthium latifolium	River Oats
5.5%	Echinacea purpurea	Purple Coneflower
5.0%	Chamaecrista fasciculata	Patridge Pea
5.0%	Coreopsis lanceolata	Lanceleaf Coreopsis
5.0%	Panicum rigidulum	Redtop Panicgrass
5.0%	Rudbeckia hirta	Blackeyed Susan
5.0%	Verbena hastata	Blue Vervain
2.0%	Heliopsis helianthoides	Oxeye Sunflower
1.8%	Asclepias incarnata	Swamp Milkweed
1.0%	Carex scoparia	Blunt Broom Sedge
1.0%	Senna hebecarpa	Wild Senna
0.7%	Pycanthemum tenuifolium	Narrowleaf Mountainmint
0.5%	Aster novae-angliae	New England Aster
0.5%	Aster prenanthoides	Zigzag Aster
0.5%	Baptisia australis	Blue False Indigo
0.5%	Zizia aurea	Golden Alexanders
0.4%	Monarda fistulosa	Wild Bergamot
0.3%	Helenium autumnale	Common Sneezeweed
0.3%	Juncus tenuis	Path Rush
0.2%	Eupatorium perfoliatum	Boneset
0.2%	Juncus effusus	Soft Rush
0.2%	Oenothera fruticosa var. fruticosa	Sundrops
0.2%	Solidago nemoralis	Gray Goldenrod
0.2%	Solidago rugosa	Wrinkleleaf Goldenrod

COVER CROP

Grain Rye: 80 lb per acre

LEGEND - EXISTING

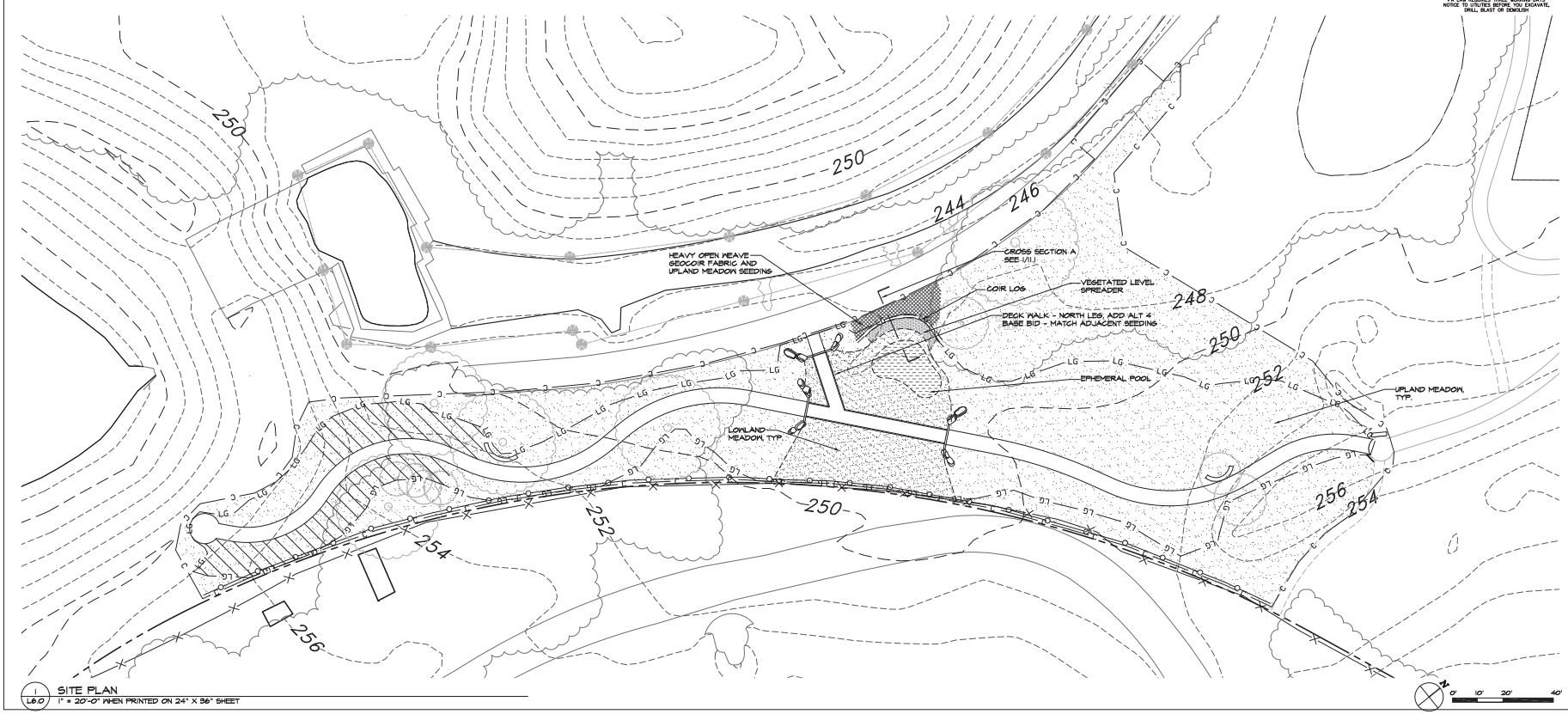
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LEGEND - PROPOSED

- C — LIMIT OF DISTURBANCE & CONSTRUCTION LIMIT LINE
- LG — LIMIT OF GRADING
- RUSTIC WOOD BARRIER (N.I.C. BY TOWNSHIP)
- UPLAND MEADOW SEEDING, APPROX 3"-6" AMENDED TOPSOIL (OR AMENDED EXISTING TOPSOIL AT UNCHANGED GRADES), OPEN WEAVE COIR MATTING WHERE INDICATED, EROSION CONTROL MATTING AT SLOPES 3:1 AND STEEPER, AND LIGHTWEIGHT EROSION CONTROL MATTING ELSEWHERE
- LOWLAND MEADOW SEEDING AND OPEN WEAVE COIR MATTING, SEE VEGETATED SWALE DETAIL
- EPHEMERAL POOL WITH LOWLAND MEADOW SEEDING AND OPEN WEAVE COIR MATTING, SEE EPHEMERAL POOL DETAIL
- EROSION CONTROL MATTING AT SLOPES 3:1 AND GREATER (SEE ALSO UPLAND MEADOW SEEDING NOTE ABOVE)

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Project Name:
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Drawn: CV
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Approved:

Drawing Title:
STABILIZATION PLAN

Job Number: 19753
File:
Date: 07/17/23 Scale: AS SHOWN

Drawing Number:
L6.0

ADD ALTERNATE 3 PLANT LIST						
KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	QUANTITY	NOTES
	Canopy Trees - in Add Alt 3					
AR	*Acer rubrum*	Red Maple	6'	#7 cont	2	
AS	*Acer saccharinum*	Silver Maple	6'	#7 cont	1	
QB	*Quercus bicolor*	Swamp White Oak	6'	#7 cont	2	
	Understory Trees - in Add Alt 3					
AC	*Amelanchier canadensis*	Serviceberry	6'	#7 cont	2	Multistem
BN	*Betula nigra*	River Birch	6'	#7 cont	2	Multistem
CC	*Cercis canadensis*	Eastern Redbud	6'	#7 cont	4	
MV	*Magnolia virginiana*	Sweetbay Magnolia	6'	#7 cont	2	Multistem

ADD ALTERNATE 5 PLANT LIST						
KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	QUANTITY	NOTES
	Perennials / Grasses					
ain	*Asclepias incarnata*	Swamp Milkweed	plug	cont.	200	
cvu	*Carex vulpinoidea*	Fox Sedge	plug	cont.	300	
efi	*Eupatorium fistulosum*	Joe-Pye Weed	plug	cont.	150	
ive	*Iris versicolor*	Flag Iris	plug	cont.	150	
jef	*Juncus effusus*	Soft Rush	plug	cont.	350	
lca	*Lobelia cardinalis*	Cardinal Flower	plug	cont.	100	
mst	*Matteuccia struthiopteris*	Ostrich Fern	plug	cont.	32	North side of deckwalk
ose	*Onoclea sensibilis*	Sensitive Fern	plug	cont.	32	North side of deckwalk
oci	*Osmunda cinnamomea*	Cinnamon Fern	plug	cont.	32	North side of deckwalk
pvi	*Panicum virgatum*	Switchgrass	plug	cont.	500	
ssc	*Schizachyrium scoparium*	Little Bluestem	plug	cont.	250	

PLANT LIST NOTES:
PLUGS: LP50 OR LP32 BY NORTH CREEK NURSERY
OR DP50 BY NEW MOON NURSERY, OR EQUAL.
CANOPY AND UNDERSTORY TREES: OCTORARO NURSERY, OR EQUAL.

PLANTING NOTES

SEE SPECIFICATION SECTIONS 329200 AND 329300. THE NOTES BELOW SUPPLEMENT THOSE SPECIFICATIONS.

1. FURNISH AND INSTALL PLANTS ON THE DRAWING, AS SPECIFIED AND IN THE QUANTITIES OF SYMBOLS INDICATED ON THE PLAN. IF THERE IS A DISCREPANCY BETWEEN THE PLAN AND PLANT SCHEDULE, THE PLAN GOVERNS.
2. NO SUBSTITUTIONS FOR PLANT MATERIAL ARE ACCEPTABLE UNLESS APPROVED AS DESCRIBED IN THE TECHNICAL SPECIFICATIONS.
3. STAKE LOCATIONS OF TREES AND STAKE OUTLINES OF BEDS, FOR REVIEW BY LANDSCAPE ARCHITECT. ADJUST AS REQUESTED. PROVIDE (7) DAYS NOTICE PRIOR TO FIELD REVIEW.
4. PLANT MATERIAL SHALL MEET THE STANDARDS OF AMERICAN STANDARD FOR NURSERY STOCK BY AMERIHORT.
5. ROOT BALLS OF PLANTS SHALL BE ADEQUATELY PROTECTED AT ALL TIMES FROM SUN, DRYING OR FROST. PLANT ROOT SYSTEMS SHALL BE KEPT MOIST UNTIL PLANTED.
6. PLANT STOCK WILL BE INSPECTED ON SITE PRIOR TO INSTALLATION. PLANTING STOCK OF INSUFFICIENT SIZE AND/OR QUALITY SHALL NOT BE INSTALLED. REJECTED MATERIAL SHALL BE REMOVED FROM THE SITE AND REPLACED WITH ACCEPTABLE MATERIALS AT NO ADDITIONAL COST.
7. PLANT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
8. PROVIDE SOIL TESTING TO DETERMINE APPLICATION RATES OF FERTILIZER AND OTHER AMENDMENTS FOR NATIVE PLANTS.
9. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES AND LOCATING ALL UTILITIES PRIOR TO EXCAVATION FOR PLANTING. LOCATIONS OF PROPOSED TREES SHALL BE ADJUSTED AS FIELD CONDITIONS WARRANT TO AVOID CONFLICTS WITH EXISTING AND PROPOSED UTILITIES.
10. TREES ARE TO BE MULCHED WITH A LAYER OF TRIPLE SHREDDED BARK MULCH (SEE DETAILS FOR DEPTHS).
11. PLANTING SHALL OCCUR IN SEASONS AS REQUIRED IN THE TECHNICAL SPECIFICATIONS.
12. PLANT MATERIAL SHALL BE WARRANTED AS REQUIRED IN THE TECHNICAL SPECIFICATIONS. ANY PLANT MATERIAL 25% OR MORE OF WHICH IS DEAD, OR IN UNHEALTHY CONDITION, SHALL BE CONSIDERED DEAD. A TREE SHALL BE CONSIDERED DEAD WHEN THE MAIN LEADER HAS DIED OR 25% OF THE CROWN IS DEAD. DEAD PLANT MATERIAL SHALL BE REPLACED AND INSTALLED ACCORDING TO THE APPROVED PLANTING PRACTICES.
13. SEE LANDSCAPING AND CONSTRUCTION DETAILS FOR TREE AND HERBACEOUS PLANTING.
14. VISIT THE SITE PRIOR TO COMMENCING WORK TO REVIEW EXISTING CONDITIONS. NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES WHICH MAY AFFECT WORK.
15. WATER AND MAINTAIN ALL PLANTINGS AS REQUIRED IN THE TECHNICAL SPECIFICATIONS.

LEGEND - EXISTING

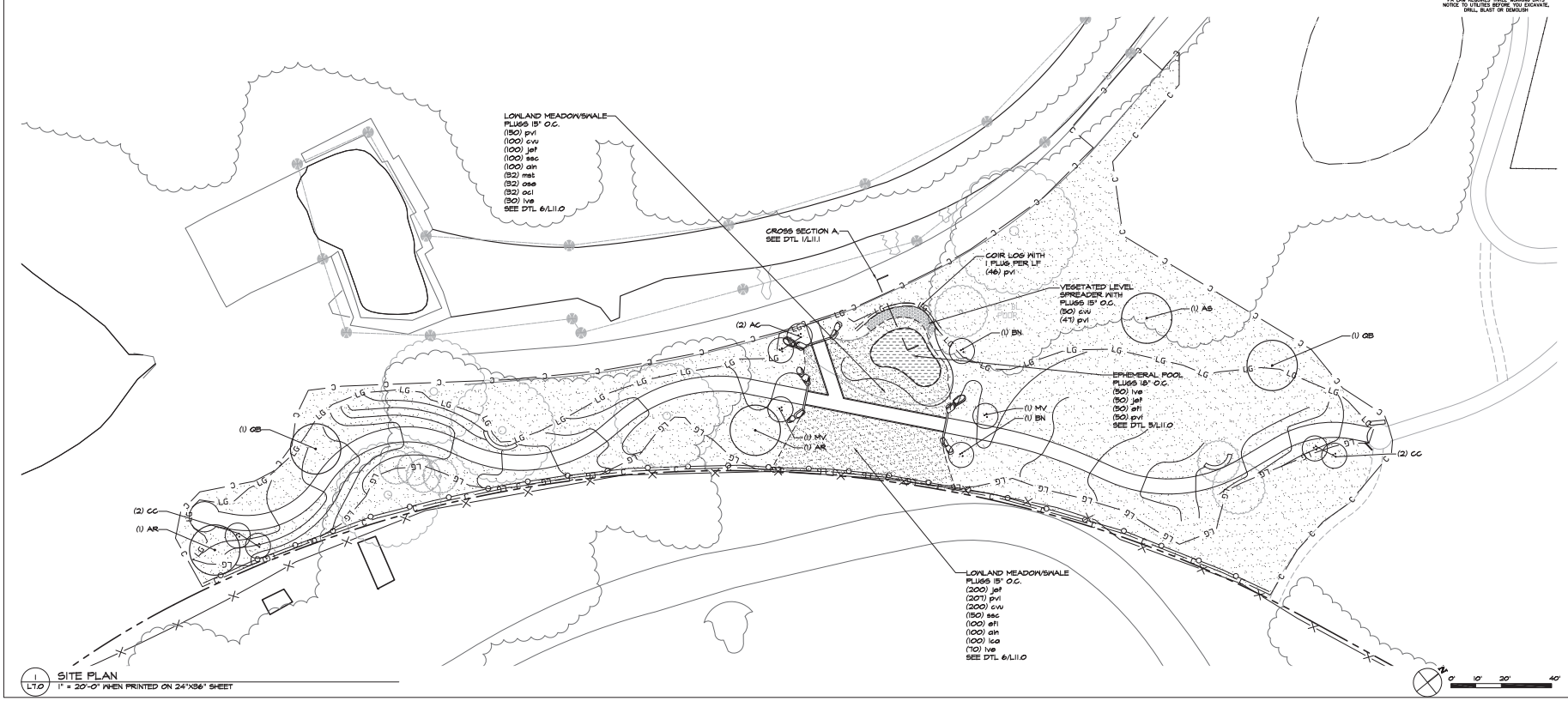
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- CANOPY TREES - IN ADD ALT 5
- UNDERSTORY TREES - IN ADD ALT 5
- UPLAND MEADOW SEEDING
- LOWLAND MEADOW SEEDING

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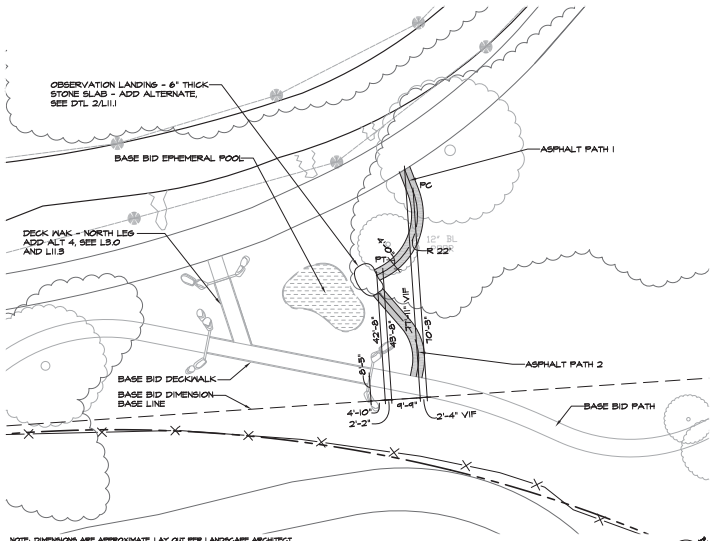
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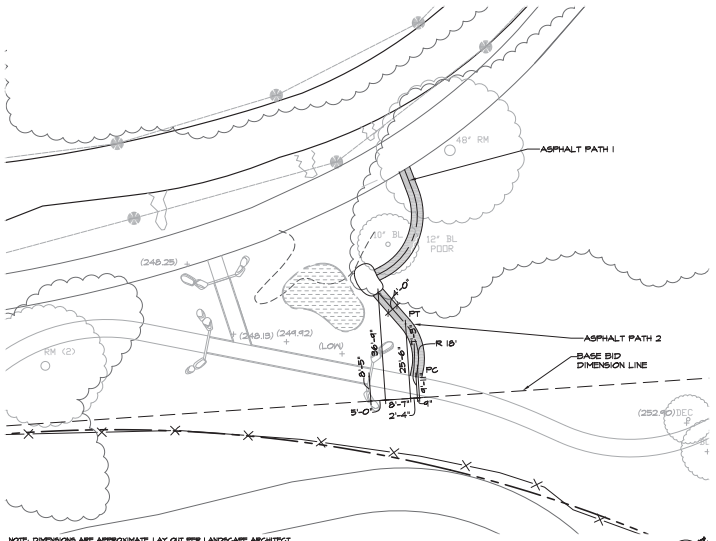
Drawn: CV
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Approved:

Drawing Title:
PLANTING PLAN

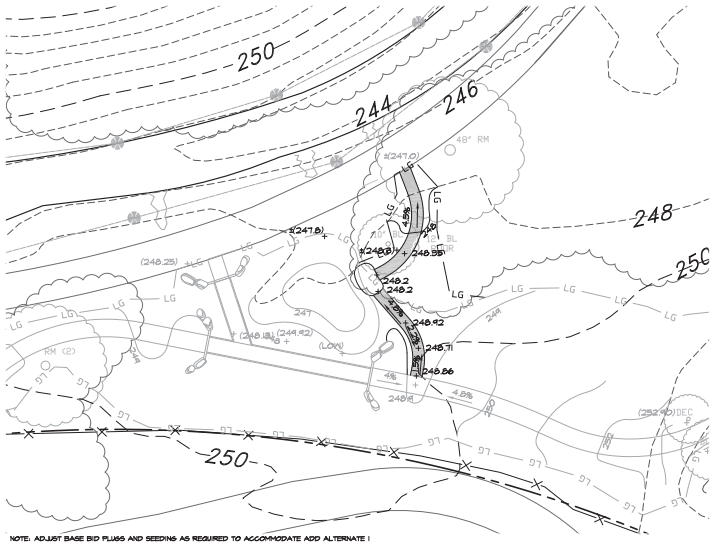
Job Number: 19753
File:
Date: 07/17/23 Scale: AS SHOWN
Drawing Number:
L7.0



1 / L8.0 ADD ALT 1 MATERIALS AND PATH 1 LAYOUT PLAN
1" = 20'-0"



2 / L8.0 ADD ALT 1 PATH 2 LAYOUT PLAN
1" = 20'-0"



3 / L8.0 ADD ALTERNATE 1 GRADING PLAN
1" = 20'-0"

LEGEND - EXISTING

- PROPERTY LINE
- 250 EXISTING 10 FT CONTOURS
- 2 FT CONTOURS
- WETLANDS
- TREELINE
- TREES
- LeB LAWRENCEVILLE SILT LOAM
- ERODING DITCH
- SURFACE STORMWATER FLOW
- FENCE
- ±(250.90) + APPROX SPOT ELEVATIONS INTERPOLATED BETWEEN CONTOURS WHICH HAVE PLUS-MINUS VARIANCE OF 6"
- (250.90) + SPOT ELEVATIONS BASED ON FIELD MEASUREMENTS BY THINKGREEN LLC (VARIANCE WITH SURVEY CONTOURS MAY EXIST)

LEGEND - BASE BID

- LG LIMIT OF GRADING
- 250 1 FT CONTOURS

LEGEND - ADD ALT 1

- LG LIMIT OF GRADING
- 250 1 FT CONTOURS
- +250.90 SPOT ELEVATIONS
- ASPHALT PATH

NOTES
1. SURFACE TRANSITIONS SHALL COMPLY WITH 2010 ADA STANDARDS.
2. SEE ADDITIONAL NOTES ON PREVIOUS DRAWINGS.

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 Irwin Run Road
West Mifflin, Pennsylvania
15122 - 1078

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1-800-242-1776
NON-MEMBERS MUST BE CONTACTED DIRECTLY
PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

Landscape Architect:
ThinkGreen LLC
Landscape Architecture, Construction & Ecological Design
P.O. BOX 528
Glenside, PA 19038
Tel 215 887 2595
Fax 215 887 2596
Contact: Thomas Johnston
tjohnston@thinkgreenllc.com
www.ThinkGreenLLC.com

THOMAS J. JOHNSTON
PROFESSIONAL LANDSCAPE ARCHITECT
LICENSE No. LA001722

Client & Owner:
Abington Township, PA
1176 Old York Rd.
Abington, PA 19001

No.	Date	Revisions

Project Name:
ARDSLEY WILDLIFE SANCTUARY - PHASE 2
Glenside, PA

Drawing Set:
BID SET

Drawn: CV
Checked:
Approved:

Drawing Title:
ADD ALTERNATE 1

Job Number: 19753
File:
Date: 07/17/23 Scale: AS SHOWN

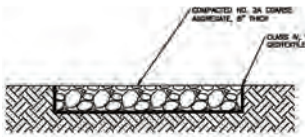
Drawing Number:
L8.0

MONTGOMERY COUNTY CONSERVATION NOTES:

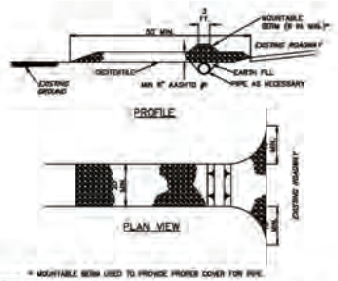
1. All earth disturbance, including clearing and grubbing as well as cuts and fills shall be done in accordance with the approved E&S plan. A copy of the approved drawings (stamped, signed and dated by the reviewing agency) must be available at the project site at all times. The reviewing agency shall be notified of any changes to the approved plan prior to implementation of those changes. The reviewing agency may require a written submittal of those changes for review and approval at its discretion.
2. At least 7 days prior to starting any earth disturbance activities, including clearing and grubbing, the owner and/or operator shall invite all contractors, the landowner, appropriate municipal officials, the E&S plan preparer, the PCSM plan preparer, the licensed professional responsible for oversight of critical stages of implementation of the PCSM plan, and a representative from the local conservation district to an on-site preconstruction meeting.
3. At least 3 days prior to starting any earth disturbance activities, or expanding into an area previously unmarked, the Pennsylvania One Call System Inc. shall be notified at 1-800-242-1776 for the location of existing underground utilities.
4. All earth disturbance activities shall proceed in accordance with the sequence provided on the plan drawings. Deviation from that sequence must be approved in writing from the local conservation district or by the Department prior to implementation.
5. Areas to be filled are to be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots and other objectionable material.
6. Clearing, grubbing, and topsoil stripping shall be limited to those areas described in each stage of the construction sequence. General site clearing, grubbing and topsoil stripping may not commence in any stage or phase of the project until the E&S BMPs specified by the BMP sequence for that stage or phase have been installed and are functioning as described in this E&S plan.
7. At no time shall construction vehicles be allowed to enter areas outside the limit of disturbance boundaries shown on the plan maps. These areas must be clearly marked and fenced off before clearing and grubbing operations begin.
8. Topsoil required for the establishment of vegetation shall be stockpiled at the location(s) shown on the plan map(s) in the amount necessary to complete the bulk grading of all exposed areas that are to be stabilized by vegetation. Each stockpile shall be protected in the manner shown on the plan drawings. Stockpile heights shall not exceed 35 feet. Stockpile slopes shall be 3H:1V or flatter.
9. Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the operator shall implement appropriate best management practices to minimize the potential for erosion and sediment pollution and notify the local conservation district and/or the regional office of this Department.
10. All building materials and wastes shall be removed from the site and recycled or disposed of in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code 260.1 et seq., 271.1, and 287.1 et. seq. No building materials or wastes or unused building materials shall be burned, buried, dumped, or discharged at the site.
11. All off-site waste and borrow areas must have an E&S plan approved by the local conservation district or the Department fully implemented prior to being activated.
12. The contractor is responsible for ensuring that any material brought on site is clean fill. Form FP-001 must be retained by the property owner for any fill material affected by a spill or release of a regulated substance but qualifying as clean fill due to analytical testing.
13. All pumping of water from any work area shall be done according to the procedure described in this plan, over undisturbed vegetated areas.
14. Vehicles and equipment may neither enter directly nor exit directly from into (specify lot numbers) onto (specify road names).
15. Until the site is stabilized, all erosion and sediment BMPs shall be maintained properly. Maintenance shall include inspections of all erosion and sediment BMPs after each runoff event and on a weekly basis. All preventive and remedial maintenance work, including clean out, repair, replacement, regrading, reseeding, remulching and renetting must be performed immediately. If the E&S BMPs fail to perform as expected, replacement BMPs, or modifications of those installed will be required.
16. A log showing dates that E&S BMPs were inspected as well as any deficiencies found and the date they were corrected shall be maintained on the site and be made available to regulatory agency officials at the time of inspection.
17. Sediment tracked onto any public roadway or sidewalk shall be returned to the construction site by the end of each work day and disposed in the manner described in this plan. In no case shall the sediment be washed, shoveled, or swept into any roadside ditch, storm sewer, or surface water.
18. All sediment removed from BMPs shall be disposed of in the manner described on the plan drawings.
19. Areas which are to be topsoiled shall be scarified to a minimum depth of 3 in. 5 inches — 6 to 12 inches on compacted soils —prior to placement of topsoil. Areas to be vegetated shall have a minimum 4 inches of topsoil in place prior to seeding and mulching. Fill outslopes that have a minimum of 2 inches of topsoil.
20. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures and conduits, etc. shall be compacted in accordance with local requirements or codes.
21. All earthen fills shall be placed in compacted layers not to exceed 9 inches in thickness.
22. Fill materials shall be free of frozen particles, brush, roots, sod, or other foreign or objectionable materials that would interfere with or prevent construction of satisfactory fills.
23. Frozen materials or soft, mucky or highly compressible materials shall not be incorporated into fills.
24. Fill shall not be placed on saturated or frozen surfaces.
25. Seeps or springs encountered during construction shall be handled in accordance with the standard and specification for subsurface drain or other approved method.
26. All graded areas shall be permanently stabilized immediately upon reaching finished grade. Cut slopes in competent bedrock and rock fills need not be vegetated. Seeded areas within 50 feet of a surface water, or as otherwise shown on the plan drawings, shall be blanketed according to the standards of this plan.
27. Immediately after earth disturbance activities cease in any area or subarea of the project, the operator must stabilize all disturbed areas. During non-germination months, mulch or protective blanketing shall be applied as described in the plan. Areas not at finished grade, which will be reactivated within 1 year, may be stabilized in accordance with the temporary stabilization specifications. Those areas which will not be reactivated within 1 year shall be stabilized in accordance with the permanent stabilization specifications.
28. Permanent stabilization is defined as a minimum uniform, perennial 70% vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated erosion. Cut and fill slopes shall be capable of resisting failure due to slumping, sliding, or other movements.
29. E&S BMPs shall remain functional as such until all areas tributary to them are permanently stabilized or until they are replaced by another BMP approved by the local conservation district or the Department.
30. Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and/or operator shall contact the local conservation district for an inspection prior to removal/conversion of the E&S BMPs.
31. After final site stabilization has been achieved, temporary erosion and sediment BMPs must be removed or converted to permanent post construction stormwater management BMPs. Areas disturbed during removal or conversion of the BMPs shall be stabilized immediately in order to ensure rapid revegetation of disturbed areas, such removal/conversion are to be done only during the germinating season.
32. Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and/or operator shall contact the local conservation district to schedule a final inspection.
33. Failure to correctly install E&S BMPs, failure to prevent sediment-laden runoff from leaving the construction site, or failure to take immediate corrective action to resolve failure of E&S BMPs may result in administrative, civil, and/or criminal penalties being instituted by the Department as defined in Section 602 of the Pennsylvania Clean Streams Law. The Clean Streams Law provides for up to $10,000 per day in civil penalties, up to $10,000 in summary criminal penalties, and up to $25,000 in misdemeanor criminal penalties for each violation.

OPTIONAL NOTES

1. Concrete wash water shall be handled in the manner described on the plan drawings. In no case shall it be allowed to enter any surface waters or groundwater systems.
2. All channels shall be kept free of obstructions including but not limited to fill, rocks, leaves, woody debris, accumulated sediment, excess vegetation, and construction material/wastes.
3. Underground utilities cutting through any active channel shall be immediately backfilled and the channel restored to its original cross-section and protective lining. Any base flow within the channel shall be conveyed past the work area in the manner described in this plan until such restoration is complete.
4. Channels having riprap, Reno mattress, or gabion linings must be sufficiently over-excavated so that the design dimensions will be provided after placement of the protective lining.
5. Sediment basins and/or traps shall be kept free of all construction waste, wash water, and other debris having potential to clog the basin/trap outlet structures and/or pollute the surface waters.
6. Sediment basins shall be protected from unauthorized acts by third parties.
7. Any damage that occurs in whole or in part as a result of basin or trap discharge shall be immediately repaired by the permittee in a permanent manner satisfactory to the municipality, local conservation district, and the owner of the damaged property.
8. Upon request, the applicant or his contractor shall provide an as-built (record drawing) for any sediment basin or trap to the municipal inspector, local conservation district or the Department.
9. Erosion control blanketing shall be installed on all slopes 3H:1V or steeper within 50 feet of a surface water and on all other disturbed areas specified on the plan maps and/or detail sheets.
10. Fill material for embankments shall be free of roots, or other woody vegetation, organic material, large stones, and other objectionable materials. The embankment shall be compacted in maximum _____ layered lifts at _____% density.



1 L10.0 TEMPORARY CONSTRUCTION ACCESS ROAD
N.T.S.



* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE.

NOTES:

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

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

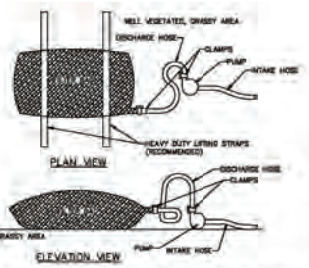
MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

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

2 L10.0 ROCK CONSTRUCTION ENTRANCE
N.T.S.



3 L10.0 TYPICAL COMPOST SOCK WASHOUT
N.T.S.



NOTES:

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

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

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

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

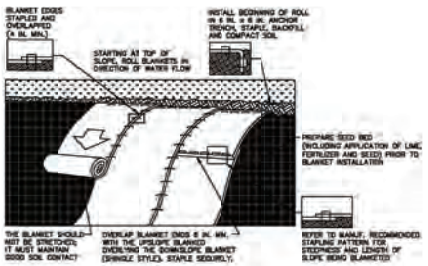
NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

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

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

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

4 L10.0 PUMPED WATER FILTER BAG
N.T.S.



NOTES:

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

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

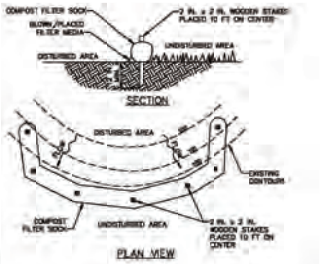
SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.

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

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

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

5 L10.0 EROSION CONTROL BLANKET INSTALLATION
N.T.S.



NOTES:

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

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

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

UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

6 L10.0 COMPOST FILTER SOCK
N.T.S.

Landscape Architect:
ThinkGreen LLC
Landscape Architecture, Construction & Ecological Design
P.O. BOX 528
Glenside, PA 19038
Tel 215 887 2595
Fax 215 887 2596
Contact: Thomas Johnston
tjohnston@thinkgreenllc.com
www.ThinkGreenLLC.com

THOMAS J. JOHNSTON
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Client & Owner:
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Abington, PA 19001

No.	Date	Revisions

Project Name:
ARDSLEY WILDLIFE SANCTUARY - PHASE 2
Glenside, PA

Drawing Set:
BID SET

Drawn:
Checked:
Approved:

Drawing Title:
E&S CONTROL DETAILS AND NOTES

Job Number: 19753
File:
Date: 07/17/23 Scale: AS SHOWN
Drawing Number:
L10.0

GENERAL SUBMITTALS NOTES:

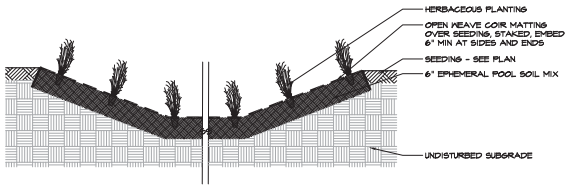
1. WITHIN ONE MONTH OF RECEIVING A NOTICE TO PROCEED WITH THE CONTRACT, COMPILE A SUBMITTAL TRACKING LOG OF EACH REQUIRED CERTIFICATION, SUBMITTAL AND TEST REQUIRED. UPDATE MONTHLY AND RESUBMIT MONTHLY.
2. SUBMIT MATERIALS DATA FOR EACH MATERIAL. FOR "OR EQUAL" SUBSTITUTION SUBMITTALS, SUBMIT SPECIFIED PROOF OF "OR EQUAL" STATUS.
3. DO NOT DELIVER MATERIALS TO THE SITE OR INSTALL ITEMS UNTIL THE SUBMITTAL/ TESTING/ CERTIFICATION PROCESS HAS BEEN NOTED COMPLETED BY THE PROJECT LANDSCAPE ARCHITECT FOR THE CORRESPONDING MATERIALS.
4. SUBMIT ALL PAPERWORK TO OWNER'S REPRESENTATIVE. PROVIDE COPIES OF ALL CORRESPONDENCE WITH OWNER DIRECTLY TO THE PROJECT LANDSCAPE.

GENERAL MATERIALS NOTES:

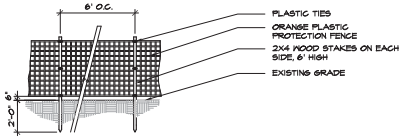
1. COMPACT SELECT FILL TO 95% MIN STANDARD PROCTOR
2. COMPACT SUBSOIL UNDER PAVEMENTS AND UNDER SELECT FILL TO 95% STANDARD PROCTOR (COMPACT SUBSOIL FILL ELSEWHERE TO 90% STANDARD PROCTOR)
3. REMOVE TOPSOIL UNDER AGGREGATE BASE AND UNDER SELECT FILL, USE ELSEWHERE
4. HARDWARE: GALVANIZED STEEL UNLESS OTHERWISE NOTED; OPEN WEAVE COIR MATTING: GEOCOIR 700 MANUFACTURED BY BELTON INDUSTRIES OR APPROVED EQUAL
5. NONWOVEN GEOTEXTILE: SEE TECHNICAL SPECIFICATION "PLANTS"
6. DRAINAGE STONE: PA 2B OR ASHTO #57 CRUSHED STONE
7. AGGREGATE BASE: PA 2A CRUSHED STONE (OK TO BE FROM CRUSHED CONCRETE SOURCE UNLESS OTHERWISE PROHIBITED)
8. SELECT FILL (AGGREGATE): PA 2A
9. CONCRETE: 3500 PSI MIN, AIR ENTRAINED.
10. INSTALL SITE FURNISHINGS PLUMB (FENCE POSTS AND DECK POSTS)
11. WOVEN GEOTEXTILE: GEO MIRAFI 500X OR EQUAL

GENERAL NOTES:

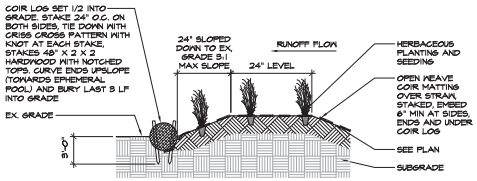
1. SEE NOTES ON OTHER DRAWINGS
2. SURFACE TRANSITIONS SHALL COMPLY WITH 2010 ADA STANDARDS.



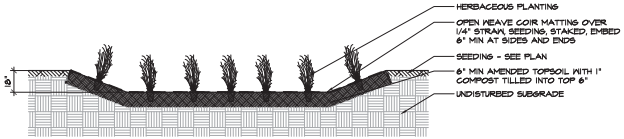
5 / L11.0 EPHEMERAL POOL
N.T.S.



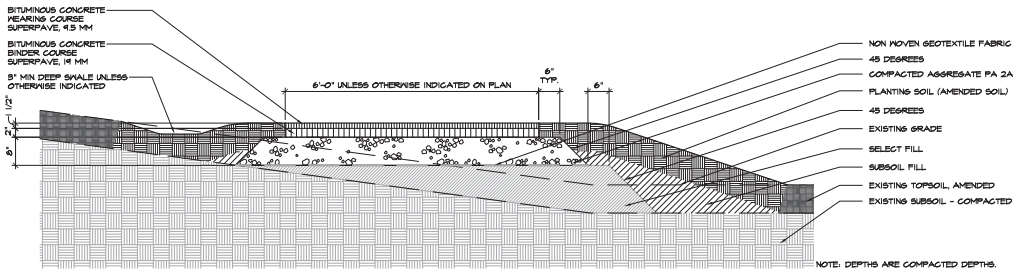
1 / L11.0 TREE PROTECTION FENCE
N.T.S.



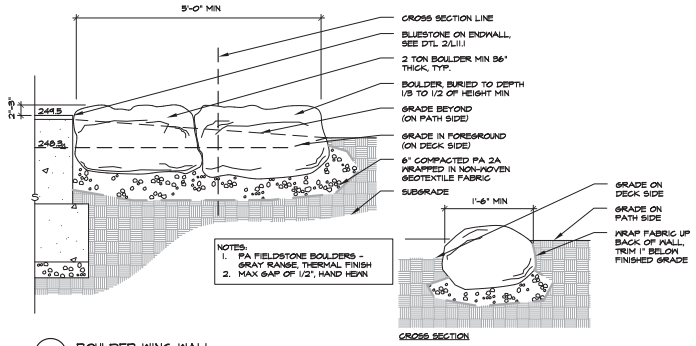
4 / L11.0 VEGETATED LEVEL SPREADER
N.T.S.



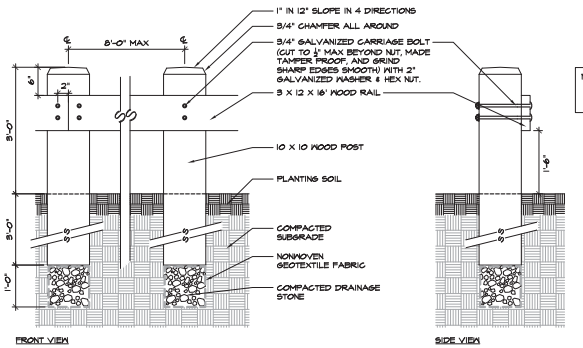
6 / L11.0 VEGETATED SWALE
N.T.S.



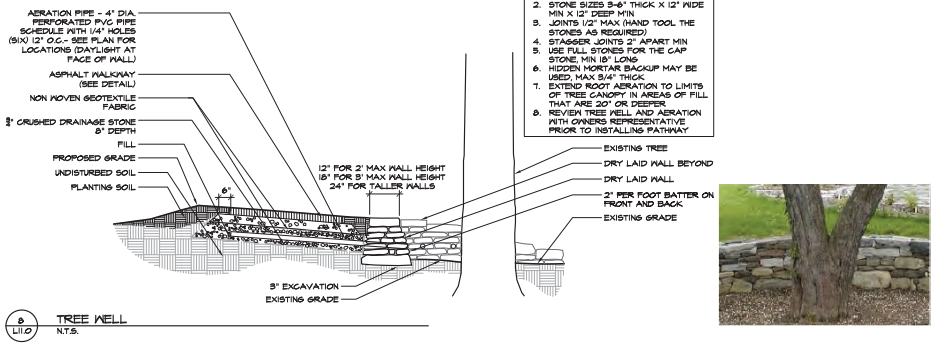
2 / L11.0 ASPHALT PATH
N.T.S.



7 / L11.0 BOULDER WING WALL
N.T.S.



3 / L11.0 RUSTIC WOOD BARRIER - N.I.C. BY TOWNSHIP
N.T.S.



8 / L11.0 TREE WELL
N.T.S.

Landscape Architect:
ThinkGreen LLC
Landscape Architecture, Construction & Ecological Design
P.O. BOX 528
Glenside, PA 19038
Tel 215 887 2595
Fax 215 887 2596
Contact: Thomas Johnston
tjohnston@thinkgreenllc.com
www.ThinkGreenLLC.com

THOMAS J. JOHNSTON
PROFESSIONAL LANDSCAPE ARCHITECT
LICENSE No. LA001722

Client & Owner:
Abington Township, PA
1176 Old York Rd.
Abington, PA 19001

No.	Date	Revisions

Project Name:
ARDSLEY WILDLIFE SANCTUARY - PHASE 2
Glenside, PA

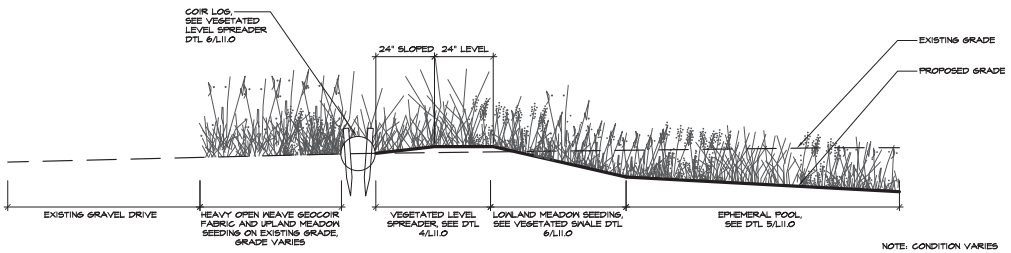
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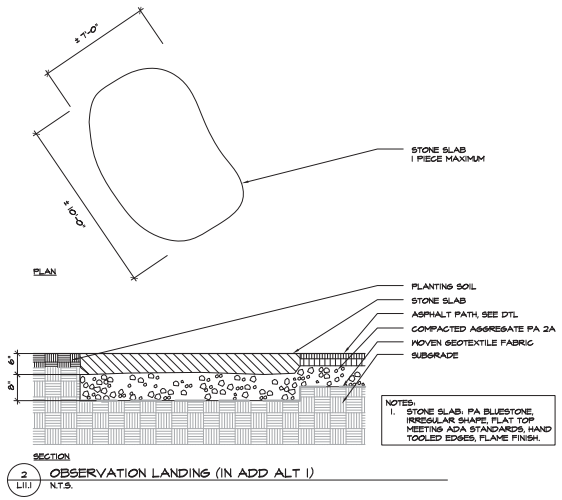
Drawing Title:
DETAILS

Job Number: 19753
File:
Date: 07/17/23 Scale: AS SHOWN

Drawing Number:
L11.0



1 / L11.1 CROSS SECTION A
N.T.S.



2 / L11.1 OBSERVATION LANDING (IN ADD ALT 1)
N.T.S.

GENERAL NOTES:

1. SEE NOTES ON OTHER DRAWINGS
2. SURFACE TRANSITIONS SHALL COMPLY WITH 2010 ADA STANDARDS.

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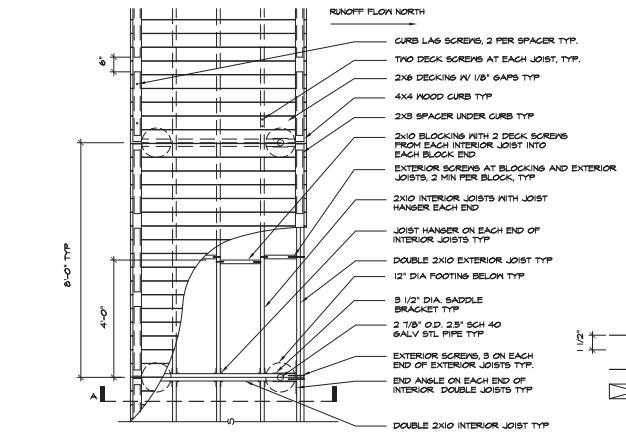
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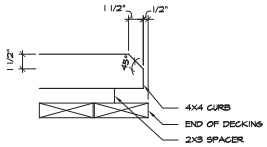
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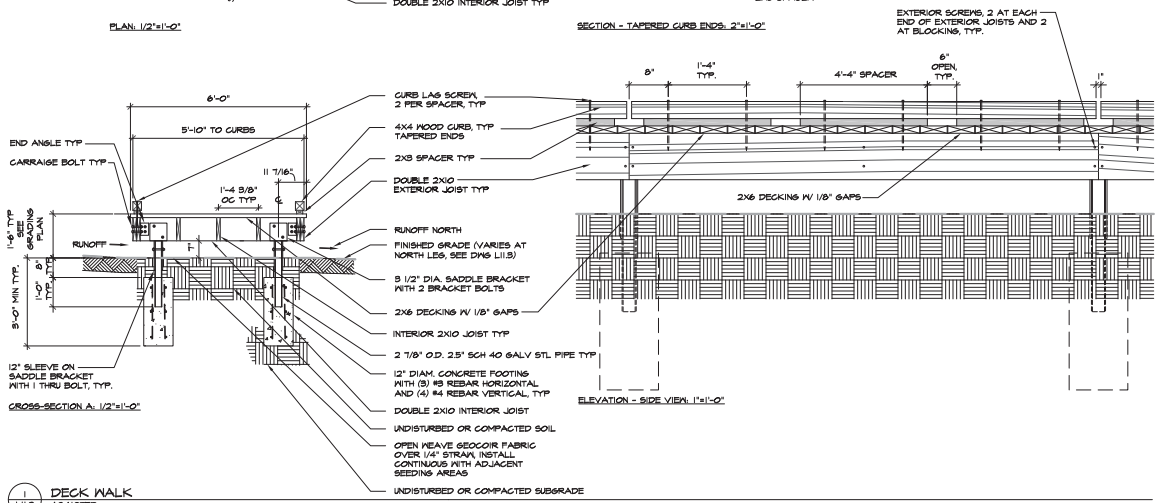
Drawing Number:
L11.1



PLAN: 1/2"=1'-0"



SECTION - TAPERED CURB ENDS: 2"=1'-0"



CROSS-SECTION A: 1/2"=1'-0"

ELEVATION - SIDE VIEW: 1"=1'-0"

1 L11.2 DECK WALK
AS NOTED

HARDWARE NOTES:

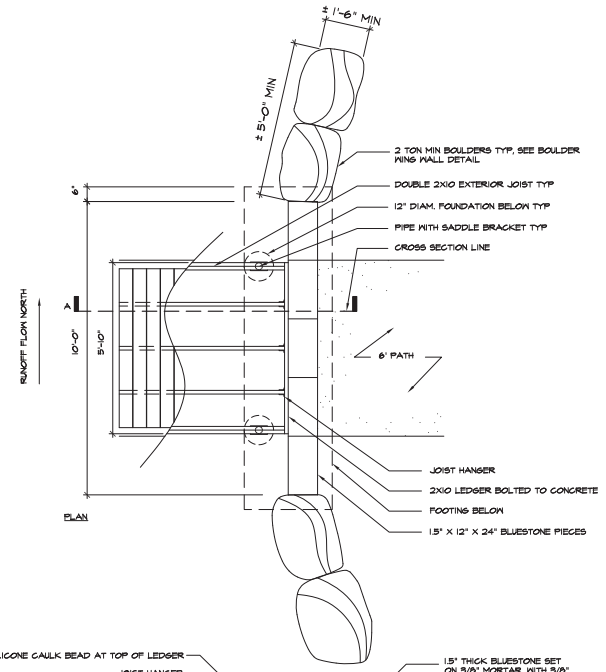
1. DECK SCREWS - GRK R4 #10 X 3 1/2" (OR AS NECESSARY)
2. EXTERIOR SCREWS - GRK R4 #10 X 6 3/8"
3. CURB LAG SCREWS - GRK #12 X 12" (2 PER SPACER)
4. JOIST HANGERS - SIMPSON STRONG-TIE LUS ZMAX GALVANIZED FACE-MOUNT JOIST HANGER FOR 2X10 NOMINAL LUMBER WITH JOIST HANGER NAILS
5. ADJUSTABLE JOIST HANGER - SIMPSON STRONG-TIE LSSJ ZMAX FACE-MOUNT ADJUSTABLE LIGHT SLOPEABLE/ SKEWABLE JACK HANGER FOR 2X10 NOMINAL LUMBER, RIGHT WITH JOIST HANGER NAILS
6. THRU-BOLTS - 3/4" WITH NUTS AND WASHERS
7. SADDLE BRACKET - 3 1/2" DIA., 7" x 7.25", WITH 2 BRACKET BOLTS
8. BRACKET BOLTS - 1/2" DIA. HEX HEAD BOLTS, 4 1/2" LONG WITH NUT AND LOCK WASHER
9. END ANGLE - SIMPSON STRONG-TIE HL95 3X3 HEAVY ANGLE 7 GAUGE GALV (3.25" X 5"), WITH 1/2" CARRIAGE BOLTS, NUTS AND WASHERS
10. BRACKET - 8.25" X 8.25" X 5.25" (EACH LEG), 0.14" THICK
11. JOIST HANGER NAILS - 1.5" X 9 GAUGE OR 10 GAUGE GALV (SIZE AS REQUIRED BY JOIST HANGER MANUFACTURER)
12. WEDGE ANCHOR - 1/2" X 5.5" MIN, STAINLESS STEEL, SIMPSON STRING-TIE WEDGE-ALL OR EUQAL
13. HARDWARE SHALL BE COMPATIBLE WITH ACQ GROUND CONTACT TREATED LUMBER. SUBMIT HARDWARE MANUFACTURERS CERTIFICATION THAT HARDWARE IS COMPATIBLE WITH THE WOOD PRESERVATIVE UTILIZED. HOT DIPPED GALVANIZED STEEL MUST MEET AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) A153 CLASS D STANDARDS AND STAINLESS STEEL MUST BE MADE FROM GRADE 304 OR 316

GENERAL NOTES:

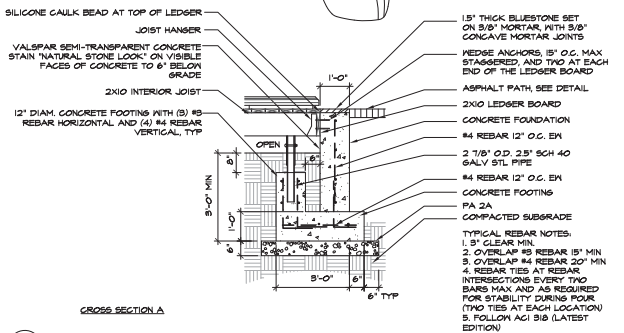
1. SEE NOTES ON OTHER DRAWINGS
2. SURFACE TRANSITIONS SHALL COMPLY WITH 2010 ADA STANDARDS.

DECK WALK NOTES:

1. PROVIDE SHOP DRAWINGS, INCLUDING ALL HARDWARE, WOOD AND RELATED COMPONENTS, SIGNED AND SEALED BY PA ENGINEER. MIN 100 PSF LIVE LOAD.
2. SIZES, QUANTITY AND QUALITY OF LUMBER AND HARDWARE INDICATED ON THESE DRAWINGS ARE A MINIMUM. HOWEVER MAINTAIN 1" CLEAR BELOW DECK AND 1'-6" MAX DECK HEIGHT ABOVE GRADE.
3. DECK BOARDS, CURBS AND SPACERS: SOUTHERN YELLOW PINE, ACQ TREATED FOR GROUND CONTACT, KDAT (KILN DRIED AFTER TREATMENT), #2 PRIME OR BETTER.
4. STRUCTURAL BOARDS (BELOW DECKING), SOUTHERN YELLOW PINE, ACQ TREATED FOR GROUND CONTACT, KDAT (KILN DRIED AFTER TREATMENT), #2 GRADE OR BETTER.
5. ADD ALT 4: DECK BOARDS, CURBS AND SPACERS: CYPRESS, GRADE 2 AND BETTER, ROUGH CUT, BY A&A LUMBER OR APPROVED EQUAL IN LIEU OF SOUTHERN YELLOW PINE.



PLAN



CROSS SECTION A

2 L11.2 DECK WALK/ ASPHALT WALK CONNECTION
1/2" = 1'-0"

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Glenside, PA

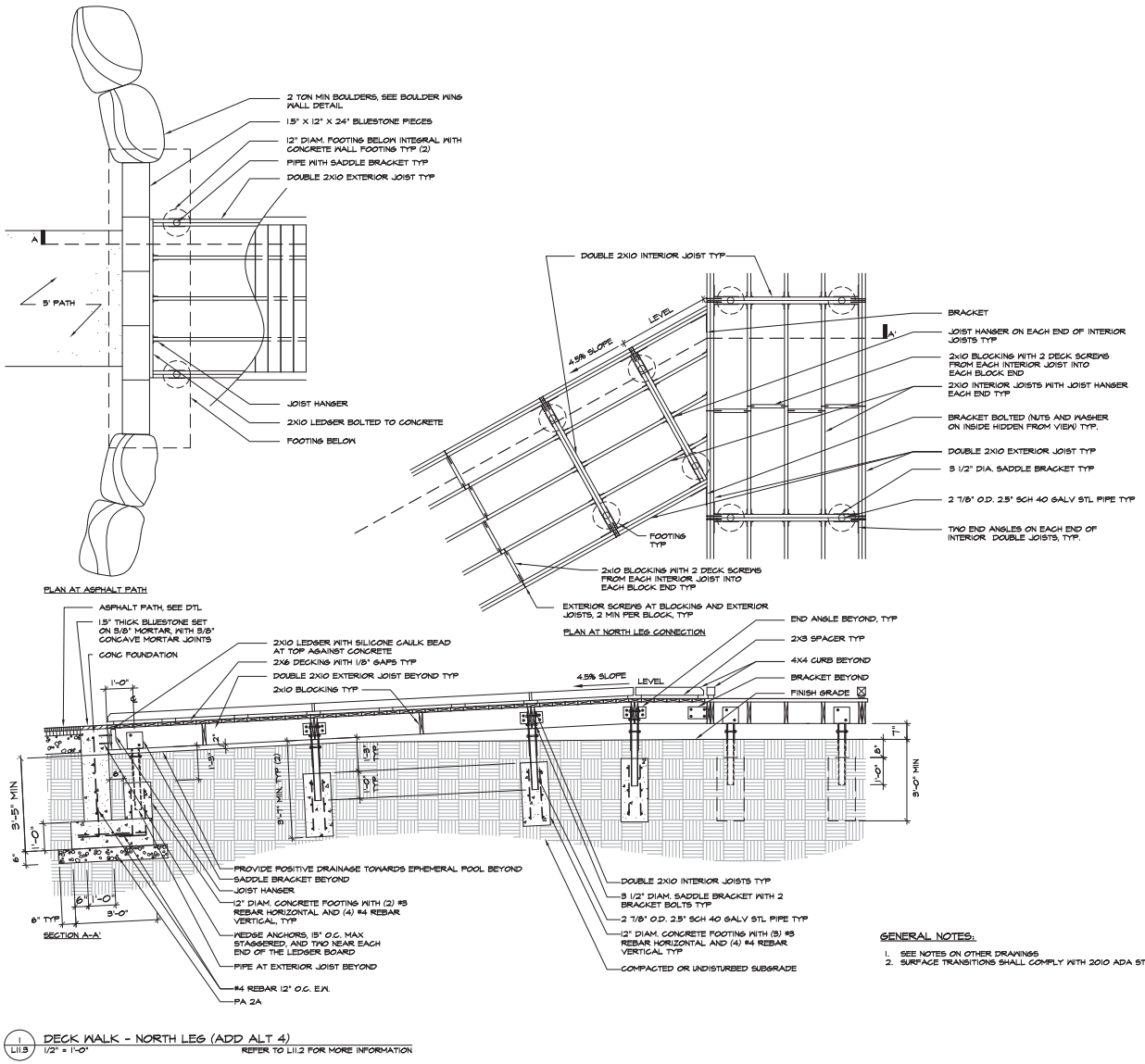
Drawing Set:
BID SET

Drawn: CV
Checked:
Approved:

Drawing Title:
DECK DETAILS

Job Number: 19753
File:
Date: 07/17/23 | Scale: AS SHOWN

Drawing Number:
L11.2



1 L11.3 DECK WALK - NORTH LEG (ADD ALT 4)
1/2" = 1'-0" REFER TO L11.2 FOR MORE INFORMATION

GENERAL NOTES:

1. SEE NOTES ON OTHER DRAWINGS
2. SURFACE TRANSITIONS SHALL COMPLY WITH 2010 ADA STANDARDS.

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PENNSYLVANIA REGISTERED LANDSCAPE ARCHITECT

THOMAS J. JOHNSTON
PROFESSIONAL LANDSCAPE ARCHITECT
LICENSE No. LA001722

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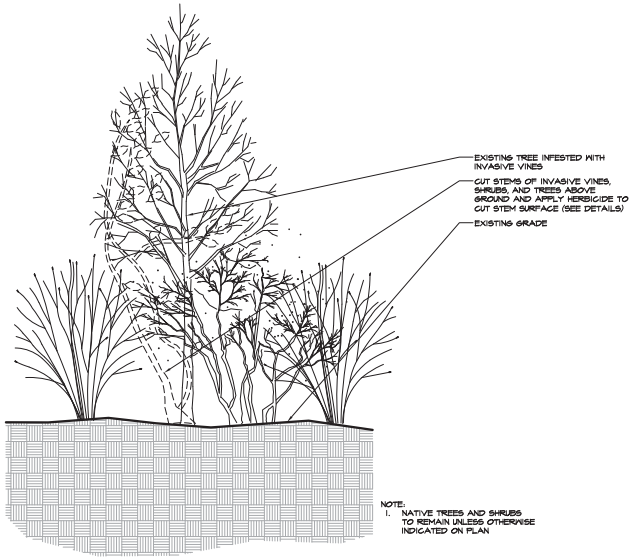
Project Name:
ARDSLEY WILDLIFE SANCTUARY - PHASE 2
Glenside, PA

Drawing Set:
BID SET

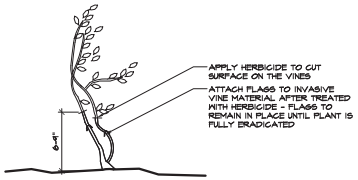
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Approved:

Drawing Title:
DECK DETAILS

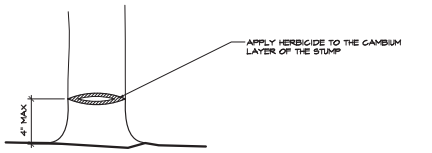
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File:
Date: 07/17/23 Scale: AS SHOWN
Drawing Number:
L11.3



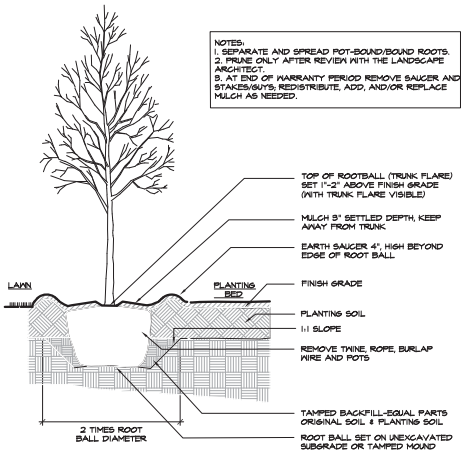
1 L11.4 INVASIVE SPECIES REMOVAL
N.T.S.



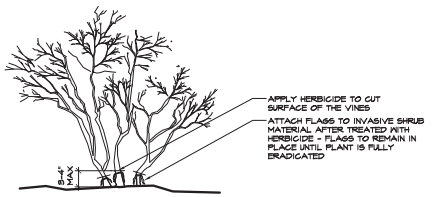
4 L11.4 INVASIVE - VINE REMOVAL
N.T.S.



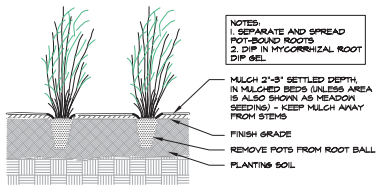
2 L11.4 INVASIVE - TREE REMOVAL
N.T.S.



1 L7.5 DECIDUOUS/EVERGREEN TREE PLANTING-TYP.
N.T.S.



3 L11.4 INVASIVE - SHRUB REMOVAL
N.T.S.



3 L7.5 HERBACEOUS PLANTING - TYP.
N.T.S.

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PENNSYLVANIA REGISTERED LANDSCAPE ARCHITECT

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No.	Date	Revisions

Project Name:
ARDSLEY WILDLIFE SANCTUARY - PHASE 2
Glenside, PA

Drawing Set:
BID SET

Drawn: JN/CV
Checked:
Approved:

Drawing Title:
PLANT DETAILS

Job Number: 19753
File:
Date: 07/17/23 Scale: AS SHOWN

Drawing Number:
L11.4

ATTACHMENT C
Cost Estimate

Opinion of Probable Cost for Ardsley Wildlife Sanctuary - Phase II			
Construction Documentation Phase			
		Description	***Phase II***
A		Furnish and provide landscape architectural and engineering design services for preparation of project construction documents	**$ 30,000.00**
Set-UP			
A		Mobilization	$ 21,600.00
B		Stake-Out	$ 3,500.00
		Subtotal	**$ 25,100.00**
SITE PREPARATION			
A		8" Filter sock	$ 8,340.00
B		Super silt fence	$ 2,260.00
C		Tree protection fence - 4' orange	$ 1,590.00
D		Rock construction entrance	$ 9,270.00
E		E & S stabilization and maintenance	$ 2,880.00
F		Tree removal, clear & grub	$ 4,500.00
		Subtotal	**$ 28,840.00**
Invasive Management			
A		Pre-Installation invasive management	$ 1,920.00
B		Post-Installation invasive selective management	$ 4,785.00
		Subtotal	**$ 6,705.00**
Asphalt Path & Deckwalk			
A		Bulk grade, grade for site, stockpile, fine grade	$ 26,700.00
B		Select fill (imported)	$ 7,400.00
C		19mm bituminous binder (2") and 9.5 mm bitumnious	$ 39,000.00
D		Tree Wells and Root aeration	$ 14,500.00
E		Deckwalk	$ 38,000.00
F		Two Deckwalk endwalls, boulder walls & Bluestone	$ 19,300.00
		Subtotal	**$ 144,900.00**
Meadow, Vegetated Swale & Ephemeral Pool			
A		Ephemeral pool soil mix	$ 2,070.00
B		Lowland meadow seeding	$ 1,690.00
C		Open weave coir matting over straw	$ 8,165.00
D		Level spreader fine grading and 40' core log	$ 2,020.00
E		Upland meadow seed	$ 15,475.00
F		Heavey erosion control fabric	$ 2,020.00

	G	Light erosion control fabric	$ 13,185.00
		Subtotal	**$ 44,625.00**
ADD ALTERNATE 1			
		Path & overlook	$ 10,230.00
ADD ALTERNATE 2			
		Cypress decking, curb & spacers in lieu of PT yellow pine	$ 4,580.00
ADD ALTERNATE 3			
		Furnish & install trees	$ 3,390.00
ADD ALTERNATE 4			
		Deck walk north leg, inclusiveof deck walk, foundations, endwalls, & 38 SF of asphalt	$ 23,800.00
ADD ALTERNATE 4a			
		Cypress decking, curb & spacers in lieu of PT yellow pine at deck walk north end in add alt 4	$ 1,240.00
ADD ALTERNATE 5			
		Deck walk north leg, inclusiveof deck walk, foundations, endwalls, & 38SF of asphalt	$ 16,270.00
		Subtotal	**$ 59,510.00**

		Total (Base Bid & Alts)	**$ 339,680.00**

ATTACHMENT D
Municipal Resolution

A RESOLUTION AUTHORIZING THE SUBMISSION OF A GRANT APPLICATION FOR THE 2024 ROUND OF THE MONTCO 2040 IMPLEMENTATION GRANT PROGRAM

WHEREAS, Montgomery County has established the Montco 2040 Implementation Grant Program as a competitive funding program to assist municipalities in implementing the goals of the county comprehensive plan, *Montco 2040: A Shared Vision;* and

WHEREAS, the County is accepting applications for projects that advance specific goals under either of the county comprehensive plan's three themes: Connecting Communities, Sustainable Places, and a Vibrant Economy; and

WHEREAS, applications and projects must meet all stated requirements within the Montco 2040 Implementation Grant Program Guidebook; and

WHEREAS, Abington Township wishes to obtain $151,645 from the Montco 2040 Implementation Grant Program to provide funding for the Ardsley Wildlife Sanctuary Phase 2 Project to rehabilitate and develop the park to increase accessibility, improve stormwater management, restore forest, riparian and meadow habitat, manage invasive species, and provide greater recreational and educational opportunities to the community;

WHEREAS, Abington Township is aware that this grant program will require a 20% match; and

IN WITNESS THEROF, I affix my hand and attach the seal of the Abington Township Board of Commissioners this 14th day of March 2024.

ABINGTON TOWNSHIP

_____
Thomas Hecker, President
Board of Commissioners

ATTEST:

_____
Richard J. Manfredi, Manager

Application Form
Montco 2040 Implementation Grant Program
Montgomery County, Pennsylvania

Applications must be filled out and emailed with all attachments to anne.leavitt-gruberger@montgomerycountypa.gov or uploaded to Sharepoint.
We suggest saving all grant program documents to your computer to fill out with your preferred pdf software.
Do not use your browser to fill in this document

Applicant and Contact Information

Applicant (Municipality): Township of Abington

Name of Chief Elected Official: Thomas Hecker, President Board of Commissioners

Primary Contact Person for this Project: Patricia Platt

Primary Contact Person's Title: Administration and Grants Manager

Mailing Address: 1176 Old York Road
Abington, PA 19001

Telephone Number: (267) 536-1022

Email: pplatt@abingtonpa.gov

List any partners or third parties involved with the project:

1. Abington Township Shade Tree Commission
2. DCNR
3.

Funding Request Information

What is the name of this project? Ardsley Wildlife Sanctuary Phase 2

In which municipality is this project located? Abington Township

Please give a street address, if applicable. Maple & Jefferson Ave, Ardsley, PA 19038

Please give a brief description of this project.

This project is Phase 2 of the rehabilitation and development of the Ardsley Wildlife Sanctuary in Abington. The proposed project will: extend the ADA accessible path to the existing basin; address erosive runoff with natural stormwater features (vegetated swales, a rain garden, & spillway), remove and mange reemergence of invasive plant material, restore forest, riparian and meadow habitat, and provide recreational and educational

What is the estimated project start date? Early Fall of 2024

What is the estimated project completion date? December 2025

Has this project, or a related project, previously received county funding? ○ yes ◉ no

If yes, for what project was it received, and what was the amount and source of the funding?

Expected life of improvement? With proper and planned maintenance, the improvements should last decades.

Project Narrative

A project narrative, including maps, plans, photos, and other elements must be submitted with this application. This narrative must include the information listed below in a numbered report that follows the order outlined. All elements should be grouped into a single narrative pdf file no larger than 15 MB and given a name in the following format: "Municipality_Project Name_2024.pdf" When you hit 'submit' at the end of this application form, an email will be created in your default email program with the completed form attached. Before sending the email, be sure to attach the narrative pdf file as well.

1. *Complete narrative description of the project and its expected benefits. Provide details on who will benefit from the project and the extent of the project's impacts. Point out any connections to county-owned assets. If your project addresses equity, inclusion, or social justice in some way, please let us know how. Add a statement on how critical this project is for the future of your municipality.*
2. *Identify the goal(s) from the Montco 2040 comprehensive plan being addressed through the project.*
3. *How does your project address diversity, equity, and inclusion? Please see Appendix F for more information on diversity, equity, and inclusion and how it relates to planning.*
4. *Include a map and photos of the project location(s) and the project municipality. The map should be on an 8½ by 11 inch page. Photos are very useful in conveying the location and context of the proposed improvement.*
5. *Plans for the project, if applicable. Plans should be reduced to fit on an 8½ by 11 inch page; full sized plans may be submitted as an addendum.*
6. *A list and explanation of any parties responsible for implementing the project.*
7. *An explanation of permits needed and their status.*
8. *A description of public knowledge of and involvement in this application, including any letters of support and public meetings.*
9. *Demonstrate consistency with the municipal and regional comprehensive plans (if applicable), as well as any other active local planning documents. Note if the project is specifically addressed as an action item in any local plans.*
10. *A detailed maintenance plan for the project including frequency, cost, and how it will be funded.*
11. *Discuss any educational or public engagement opportunities that the project will present. Address how you will address equity and inclusion through your engagement process.*
12. *Provide an itemized budget for the project in addition to the Project Budget Form on the following page. Include appraisals for any land acquisition or easement projects.*
13. *A resolution from the municipal governing body authorizing the project application.*

Funding Sources

In the table below, please outline the proposed method(s) of financing the total project costs. The total project cost is equal to **only** the summation of project costs or the project phases' costs **that are covered in this application**. The first line should indicate the amount of the Montco 2040 grant request, and all eligible local match costs should total at least 20% of the Montco 2040 request.

	Amount	Percent of Total	Source of Funds (CDBG, local budget, grant, etc.)	Are Funds Committed or Pending?	Date of Commitment, if Applicable	Type of Commitment (form, letter, etc.)
County Funds	$ 151,645		Montco 2040 Grant	NA	NA	NA
Local Funds	$ 67,635		Abington Township	Committed	01/01/2021	Budget
	$ 5,400		Shade Tree Commision	Committed	01/01/2021	Budget
Private Funds						
State Funds	$ 115,000		DCNR C2P2 Grant	Committed	01/01/2021	Award
Federal Funds						
Other Funds						
Total Project Cost	$ 339,680	100%				

Project Budget Form
Montco 2040 Implementation Grant Program
Montgomery County, Pennsylvania

Please provide any more detailed budget information, if available, in the attached project narrative

	Total	Enter $ amount for all sources of funds that apply						
		Private Loans	Private Equity	Federal Funds	State Funds	County Funds	Local Funds	Other Funds
ACQUISITION								
Real Estate Purchase	$0							
Real Estate Rental	$0							
Easement Acquisition	$0							
Subtotal	$0	$0	$0	$0	$0	$0	$0	$0
CONSTRUCTION								
New Building Construction	$0							
Renovations and Upgrades	$0							
Tenant Fit Out	$0							
Equipment Purchases	$0							
Subtotal	$0	$0	$0	$0	$0	$0	$0	$0
INFRASTRUCTURE & SITE WORK								
Roads & Streets	$185,764	$0	$0	$0	$115,000	$45,729	$25,035	$0
Parking – Surface or Structured	$0							
Signage & Wayfinding	$0							
Public Safety Improvements	$44,600	$0	$0	$0	$0	$30,000	$14,600	$0
Water	$0							
Sewer	$0							
Utilities	$0							
Demolition	$52,930	$0	$0	$0	$0	$52,930	$0	$0
Excavation/Grading	$0							
Environmental Remediation	$22,986	$0	$0	$0	$0	$22,986	$0	$0
Streetscape Improvements	$3,400	$0	$0	$0	$0	$0	$ 3,400	$0
Subtotal	$309,680	$0	$0	$0	$115,000	$151,645	$43,035	$0
OPERATING COSTS								
Working Capital	$0							
Salaries & Benefits	$0							
Training, Education & Technical Assistance	$0							
Promotions & Public Relations	$0							
Procedural or Regulatory Streamlining	$0							
Subtotal	$0	$0	$0	$0	$0	$0	$0	$0
PLANNING COSTS								
Plans & Plan Preparation	$30,000	$0	$0	$0	$0	$0	$30,000	$0
Conceptual Site Layouts	$0							
Site Surveys	$0							
Appraisals	$0							
Environmental Assessments	$0							
Market Analysis	$0							
Engineering/Architecture	$0							
Subtotal	$30,000	$0	$0	$0	$0	$0	$30,000	$0
OTHER – Soft Costs	$0							
OTHER – Developer Fees/Profits	$0							
OTHER – Government Fees/Permits	$0							
TOTAL	$339,680	$0	$0	$0	$115,000	$151,645	$73,035	$0

Project Timeline Form
Montco 2040 Implementation Grant Program
Montgomery County, Pennsylvania

Project Category	Task	Month/Year to Begin	Month/Year to be Completed
Construction	Preliminary Design Complete		11/2021
	Final Design Complete		06/2023
	All Permits Acquired		
	Land Development Approval Obtained		
	Bid Package Ready to Go Out		10/2023
	Bid Accepted		
	Demolition, if necessary		
	Infrastructure and Site Improvements		
	Building Construction Begins		
	Building Construction Finishes		
	Building, if any, Occupied		
Acquisition	Appraisal of Property		
	Condemnation Proceedings Initiated, if applicable		
	Agreement of Sale		
	Property Obtained		

If you have any questions regarding the application or process, please contact Anne Leavitt-Gruberger at the Planning Commission, Anne.Leavitt-Gruberger@montgomerycountypa.gov, or 610-278-3727.

Save Print SUBMIT Reset

REMINDER: Attach the additional narrative pdf file to the email created after hitting the 'SUBMIT' button

If you are unable to generate an email with the Submit button, please contact Anne to get access to the grant program's Sharepoint drive to upload your documents.

TOWNSHIP OF ABINGTON

Resolution 24-015

A RESOLUTION AUTHORIZING THE SUBMISSION OF A GRANT APPLICATION FOR THE 2024 ROUND OF THE MONTCO 2040 IMPLEMENTATION GRANT PROGRAM

WHEREAS, Montgomery County has established the Montco 2040 Implementation Grant Program as a competitive funding program to assist municipalities in implementing the goals of the county comprehensive plan, *Montco 2040: A Shared Vision;* and

WHEREAS, the County is accepting applications for projects that advance specific goals under either of the county comprehensive plan's three themes: Connecting Communities, Sustainable Places, and a Vibrant Economy; and

WHEREAS, applications and projects must meet all stated requirements within the Montco 2040 Implementation Grant Program Guidebook; and

WHEREAS, Abington Township wishes to obtain $151,645 from the Montco 2040 Implementation Grant Program to provide funding for the Ardsley Wildlife Sanctuary Phase 2 Project to rehabilitate and develop the park to increase accessibility, improve stormwater management, restore forest, riparian and meadow habitat, manage invasive species, and provide greater recreational and educational opportunities to the community;

WHEREAS, Abington Township is aware that this grant program will require a 20% match; and

IN WITNESS THEROF, I affix my hand and attach the seal of the Abington Township Board of Commissioners this 14th day of March 2024.

ABINGTON TOWNSHIP

_____
Thomas Hecker, President
Board of Commissioners

ATTEST:

_____
Richard J. Manfredi,
Township Manager & Secretary

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024	BOC-09-031424	FISCAL IMPACT
DATE	*AGENDA ITEM NUMBER*	Cost > $10,000
		Yes ☐ No ☐
Administration		PUBLIC BID REQUIRED
DEPARTMENT		Cost > $20,100
		Yes ☐ No ☐

AGENDA ITEM:

TCDI Application

EXECUTIVE SUMMARY:

Abington Township is seeking $75,000 in FY25 Pennsylvania Transportation & Community Development Initiative (TCDI) grant funds from the Delaware Valley Regional Planning Commission (DVRPC) for the Abington Protected Bike Routes Action Plan.

The Protected Bike Routes Action Plan will outline the path forward for Abington to build a protected bike lane network. By prioritizing bicycle connections that are safer and provide greater connectivity, the Action Plan will build on the goals and objectives of the Abington Master Bicycle Plan (2016), Walk Park Train Abington (2017), the Abington Noble Transit-Oriented Development Plan, and the Township's Comprehensive Plan (2007).

The Protected Bike Routes Action Plan will:

- Build on the 2016 Abington Master Bicycle Plan's (AMBP) bicycle network, which connects Abington residents to important Township destinations, adjacent municipalities, and transit and trail facilities.
- Provide a definition and design information for protected bike lanes, which are not included in the AMBP.
- Identify 3-6 AMBP bicycle routes or other corridors for potential protected bike lane feasibility analysis, using safety, connectivity, roadway, and traffic data

- Engage with local communities and stakeholders to prioritize among the identified corridors.
- Develop project definitions and preliminary cost estimates to support implementation in the next 5-10 years.

TCDI applications are due on March 27, 2024 at 5pm. A Resolution of Intent (ROI) is required as part of the application.

PREVIOUS BOARD ACTIONS:

N/A

RECOMMENDED BOARD ACTIONS:

Motion to adopt Resolution No. 24-016 for a Transportation and Community Development Initiative (TCDI) grant application through the Delaware Valley Regional Planning Commission (DVRPC) for a Protected Bike Routes Action Plan in the amount of $75,000.

TOWNSHIP OF ABINGTON

RESOLUTION # 24-016

RESOLUTION OF: Township of Abington, County of Montgomery

WHEREAS, the Township of Abington supports the request for planning grant dollars from the Delaware Valley Regional Planning Commission (DVRPC); and

WHEREAS, the Township of Abington fully understands that DVRPC will provide project management and oversight of the planning grant, if chosen for funding; and

WHEREAS, the Township of Abington fully understands the application requirements including county coordination and attachments; and

WHEREAS, the Township of Abington fully understands that DVRPC will provide project management and oversight for the grant and advise on the qualifications-based procurement process, if required; and

WHEREAS, the Township of Abington fully understands that DVRPC will contract directly with a consultant chosen through a fair and open procurement process on behalf of the project sponsor; and

WHEREAS, the Abington Township Board of Commissioners hereby authorizes the Township of Abington to submit an application to DVRPC for a TCDI planning grant.

NOW, THEREFORE, BE IT RESOLVED, that the Township of Abington agrees to, if selected for the TCDI grant, to take all necessary action to complete the project associated with the grant agreement within the 24-month timeframe, and submit the final deliverable to DVRPC; and

BE IT FURTHER RESOLVED, that the Township of Abington agrees to provide all documentation and records that may be required by DVRPC to ensure proper allocation of costs and resources.

BE IT FURTHER RESOLVED, that the Township of Abington agrees to provide proof of adoption or acceptance of the final deliverable by the governing body through a resolution that must be submitted no later than December 31, 2026 to DVRPC.

Adopted this day 14th of March, 2024

BOARD OF COMMISSIONERS

BY: _____
Thomas Hecker, President

ATTEST: _____
Richard J. Manfredi, Township Manager and Secretary

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024	BOC-10-031424	FISCAL IMPACT
DATE	*AGENDA ITEM NUMBER*	Cost > $10,000
		Yes ☐ No ☐
Administration		PUBLIC BID REQUIRED
DEPARTMENT		Cost > $20,100
		Yes ☐ No ☐

AGENDA ITEM:

Contract Extension Request for Department of Community & Economic Development Multimodal Transportation Fund Grants - Old York Road and Susquehanna Road Improvement Project

EXECUTIVE SUMMARY:

The Township was awarded two Multimodal Transportation Fund (MTF) grants from the Department of Community & Economic Development. The scope of the grant funds is for the purpose of purchasing and demolishing 1100, 1102, 1104, & 1106 Old York Road in order to support the vision of the Old York Road / Susquehanna Road project. The MTF grant funds will be used to create a more walkable area, safer roadways and a hub that will connect residents to bike lanes and mass transit, as well as cultural, education and commercial districts The Township has used grant dollars to purchase 1100, 1102, 1104 and 1106 Old York Road. The grants are due to expire June 30, 2024, therefore, we would like to request DCED to extend the contracts for a year to allow additional time to complete the project.

PREVIOUS BOARD ACTIONS:

March 9, 2023: Motion to approve an extension for the agreements (C000064042 and C000070588) by and between the Department of Community & Economic Development for the Multimodal Transportation Fund Grant which support the Old York Road / Susquehanna Road project until June 30, 2024.

March 10, 2022: Motion to approve an extension for the agreements (C000064042 and C000070588) by and between the Department of Community & Economic Development for the Multimodal Transportation Fund Grant which supports the Old York Road / Susquehanna Road project until June 30, 2023.

November 10, 2016: A motion was approved to accept the Multimodal Transportation Fund (MTF) grant from the Department of Community & Economic Development (DCED) in the amount of $812,486.00 to support the Old York Road/Susquehanna Road project.

November 10, 2016: A motion was approved to accept the MTF grant from PennDOT in the amount of $588,153 for improvements to the intersection of Old York Road/Susquehanna Road.

August 11, 2016: Resolution #16-025 was approved authorizing the Township to apply to CFA for a MTF grant for the Old York Road/Susquehanna Road project. The grant accepted with a $900,000 award.

November 12, 2015: Resolution #15-040 was adopted which authorized Abington Township to submit an application to PennDOT for the MTF Program to support the Old York Road/Susquehanna Road project.

July 9, 2015: Resolution #15-025 was adopted which authorized Abington Township to submit an application to DCED for the MTF Program to support the Old York Road/Susquehanna Road project.

RECOMMENDED BOARD ACTIONS:

Motion to approve an extension for the agreements (C000064042 and C000070588) by and between the Department of Community & Economic Development for the Multimodal Transportation Fund Grant which support the Old York Road / Susquehanna Road project until June 30, 2025.

Thomas Hecker, *Board President*
Matthew Vahey, *Board Vice President*
Richard J. Manfredi, *Township Manager*

TOWNSHIP OF ABINGTON

March 14, 2024

PA Department of Community & Economic Development
Attn: Mr. Brandon Cruz
400 North Street, 4th Floor
Harrisburg, PA 17120

RE: **Multimodal Transportation Fund Contract #C000064042 and #C000070588 Extension Request**

Dear Mr. Cruz,

Abington Township is requesting a one-year time extension through June 30, 2025, for the use of funds under the Department of Community & Economic Development Multimodal Transportation Fund Grants - No. C000064042 and Grant No. C000070588 which support the Old York Road/Susquehanna Road project until June 30, 2024.

Currently, the Old York Road and Susquehanna Project continues to advance. The Township successfully completed the demolition of 1100, 1102, 1104, and 1106 Old York Road in May 2023. The project has experienced some delay due to needed easements for roadway improvements. The Township continues to meet with property owners where easements are needed, and in February 2024 hired an independent appraisal company to understand the value of the permanent easements.

To date, expenditures for MTF Grant No. C000064042 is $886,192.69. There has been $111,494.01 in expenditures for C000070588 and available funds will continue to support engineering and construction which is estimated at $770,000.

As requested, the following two people are authorized to sign the grant contract and/or extension:

- Thomas Hecker, President, Board of Commissioners Email: thecker@abingtonpa.gov
- Matthew Vahey, Vice President, Board of Commissioners Email: matt@mattvahey.com

Thank you for your consideration and please do not hesitate to contact my office should you have any questions or require any additional information at 267-536-1004.

Respectfully,

Richard J. Manfredi, Township Manager

cc: Thomas Hecker
Matthew Vahey
Lori Schreiber

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024	BOC-11-031424	FISCAL IMPACT
DATE	*AGENDA ITEM NUMBER*	Cost > $10,000
		Yes ☐ No ☐
Administration		PUBLIC BID REQUIRED
DEPARTMENT		Cost > $20,100
		Yes ☐ No ☐

AGENDA ITEM:

Contract Extension Request for Department of Community & Economic Development Multimodal Transportation Fund Grants - Abington Jenkintown Connection Project Phase 2 and 4

EXECUTIVE SUMMARY:

The Township is requesting a one-year time extension through June 30, 2025, for the use of funds awarded under the 2017 Department of Community & Economic Development for the Multimodal Transportation Fund Grant. This project is part of the Abington Jenkintown Connection Project and will fund stormwater and transportation improvements along Washington Lane and Greenwood Avenue. The project is currently underway and expected to be complete in September 2024. .

PREVIOUS BOARD ACTIONS:

The Board of Commissioners approved a one-year extension request at their March 9, 2023 meeting. The Agenda Item Number is BOC-09-030923.

The Board of Commissioners approved the grant application for this project at their August 10, 2017, meeting. The Agenda Item Resolution Number is 17-023.

RECOMMENDED BOARD ACTIONS:

Motion to approve an extension for agreement C000072116 by and between the Department of Community & Economic Development for the Multimodal Transportation Fund Grant which supports the Abington Jenkintown Connection Project until June 30, 2025.

Thomas Hecker, *Board President*
Matthew Vahey, *Board Vice President*
Richard J. Manfredi, *Township Manager*

TOWNSHIP OF ABINGTON

March 14, 2024

PA Department of Community and Economic Development
Commonwealth Keystone Building
Attention: Brandon Cruz
400 North Street, 4th Floor
Harrisburg, PA 17120-0225

RE: **Multimodal Transportation Fund Contract #C000072116**
Connecting Abington and Jenkintown: A Complete Streets Plan
Abington Township, Montgomery County, PA

Dear Mr. Cruz,

Abington Township is requesting a one-year time extension **through June 30, 2025,** for the use of funds awarded under the above-referenced MTF Contract. **The project is currently under construction**. In 2023, the 2017 MTF Phase 2 & 4 Project had unexpected delays in awarding the project due to funding constraints and the availability of construction materials. These issues have been resolved but resulted in a three-month delay and an anticipated construction completion date of September 2024. As such, the Township is requesting a one-year extension. Should you have any questions or require any additional information, please do not hesitate to contact my office at 267-536-1004.

Additionally, the following two people are authorized to sign the grant contract and/or extension:

- Thomas Hecker, President, Board of Commissioners Email: thecker@abingtonpa.gov
- Matthew Vahey, Vice-President, Board of Commissioners Email: matt@mattvahey.com

Thank you for your consideration.

Respectfully,

_____
Richard J. Manfredi,
Township Manager

CC: Thomas Hecker
Matthew Vahey
Lori Schreiber

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024	BOC-12-031424	FISCAL IMPACT
DATE	*AGENDA ITEM NUMBER*	Cost > $10,000
		Yes ☐ No ☐
Administration		PUBLIC BID REQUIRED
DEPARTMENT		Cost > $20,100
		Yes ☐ No ☐

AGENDA ITEM:

DCED MTF Abington Jenkintown Connection Phase 2 B Grant Extension Request

EXECUTIVE SUMMARY:

The Multimodal Transportation Fund Program awarded Abington Township a grant in the amount of $150,000 for the Abington-Jenkintown Connections Project. The grant will be used for pedestrian accessibility improvements on Greenwood Avenue. This project includes crosswalk with flashers, pedestrian sidewalk, miscellaneous stormwater work and pavement markings. The work has not begun because of delays with another portion of the Abington Jenkintown Connection Project that must be completed in advance of Phase 2B. The Phase 2 & 4 Project had unexpected delays in awarding the project and the availability of construction materials resulting in unforeseen delays. The Phase 2 & 4 project should be completed in September 2024 which will allow the Abington Jenkintown Connection 2B Project to begin the letting and bidding process in October 2024. The grant is due to expire on June 30, 2024, therefore, we would like to request the Department of Economic and Community Development to extend the contract for one year to allow additional time to complete the project.

PREVIOUS BOARD ACTIONS:

October 8, 2020 - Agenda Item Number BOC-04-100820. Motion to adopt Resolution No. 20-049 requesting a Multimodal Transportation Fund Grant from the Commonwealth Financing Authority to be used for the Abington Jenkintown Connections Project.

RECOMMENDED BOARD ACTIONS:

Motion to approve an extension for the agreement C000076378 by and between the Department of Community & Economic Development for the Multimodal Transportation Fund Grant which supports the Abington Jenkintown Connection Project until June 30, 2025.

Thomas Hecker, *Board President*
Matthew Vahey, *Board Vice President*
Richard J. Manfredi, *Township Manager*

TOWNSHIP OF ABINGTON

March 14, 2024

PA Department of Community and Economic Development
Commonwealth Keystone Building
Attention: Mr. Stephen Schelander
400 North Street, 4th Floor
Harrisburg, PA 17120-0225

RE: **Multimodal Transportation Fund Contract #C000076378 Extension Request**

Dear Mr. Schelander,

Abington Township is requesting a one-year time extension **through June 30, 2025,** for the use of funds awarded under the above-referenced MTF Contract. The improvements funded through this grant are a part of a larger project, the Abington Jenkintown Connections (AJC) Project, and include a crosswalk with flashers, pedestrian sidewalk, miscellaneous storm sewer work, and pavement markings. The first phase of the AJC project was awarded last year and construction is expected to begin in March and be complete in September 2024. Construction of this phase was delayed due to funding constraints; however, funding has been obtained and committed. This delay has pushed back the improvements funded through this grant as the first phase of this project must be complete before the installation of improvements associated with this grant. As such, the Township is requesting a one-year extension. Construction of the sidewalk and crosswalk are expected to begin in the Fall of 2024 and be completed no later than Spring 2025. The construction will be completed by the Township's Construction Services team which is prepared to complete the project upon completion of the first phase.

Additionally, as needed, the following two people are authorized to sign the grant contract and/or extension:

- Thomas Hecker, President, Board of Commissioners Email: thecker@abingtonpa.gov
- Matthew Vahey, Vice-President, Board of Commissioners Email: matt@mattvahey.com

Thank you for your consideration and please do not hesitate to contact my office should you have any questions or require any additional information at 267-536-1004.

Respectfully,

_____

Richard J. Manfredi,
Township Manager

CC: Thomas Hecker
Matthew Vahey
Lori Schreiber

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024 — *DATE*

BOC-13-031424 — *AGENDA ITEM NUMBER*

Administration — *DEPARTMENT*

FISCAL IMPACT
Cost > $10,000
Yes ☐ No ☐

PUBLIC BID REQUIRED
Cost > $20,100
Yes ☐ No ☐

AGENDA ITEM:

Appointment of Ward 10 Commissioner

EXECUTIVE SUMMARY:

Consideration of a Resolution to fill a vacancy on the Board of Commissioners for Ward 10.

PREVIOUS BOARD ACTIONS:

n/a

RECOMMENDED BOARD ACTIONS:

Motion to approve Resolution #24-017 to fill a vacancy on the Board of Commissioners for Ward 10.

TOWNSHIP OF ABINGTON

RESOLUTION NO. 24-017

A RESOLUTION OF THE BOARD OF COMMISSIONERS OF THE TOWNSHIP OF ABINGTON TO FILL A VACANCY ON THE BOARD OF COMMISSIONERS FOR WARD 10

AND NOW, this 14th day of March, 2024, pursuant to Section 530 of the Pennsylvania First Class Township Code, 53 P.S. § 55530, the Board of Commissioners does hereby Resolve as follows:

_____, having been a resident of Ward 10 of the Township of Abington for a period in excess of one (1) year, is hereby appointed to fill the vacancy on the Board of Commissioners created by the resignation of Commissioner Jessica Carswell, whose resignation was effective February 16, 2024.

I HEREBY CERTIFY that this Resolution was adopted by the Township of Abington at its public meeting held on the 14th day of March, 2024.

ATTEST:

_____
Richard J. Manfredi
Township Manager & Secretary

TOWNSHIP OF ABINGTON

_____
Thomas Hecker, President
Board of Commissioners

To Whom It May Concern,

My name is William (Bill) O'Brien and I am interested in the Ward 10 Commissioner position. I have lived in Abington Township over 40 years and at my current address on Meadowbrook Road almost 25. My wife Linda and I have raised 3 amazing adults in this township who are all off on their own and blessed us with 5 grandchildren. I believe in this community and would very much like to show my appreciation for it by giving back and helping other members of the township. I am not a stranger to volunteering, having been involved with youth sports programs in various positions for the better part of 15 years. I believe my professional work experience and personal communications skills would be an asset in this position.

Linda and I both retired in 2021 and have been traveling and RVing across the United States and Canada since. I do believe I have the time needed to being responsive to the needs of this community.

Thank you for your consideration.

Bill O'Brien

1856 Meadowbrook Rd

Abington Pa 19001

C -215 692-3252

Bill O'Brien

E: 73Roadster@gmail.com • M: 215 692-3252 • Abington, Pa. 19001

A project manager with a proven track record of performance in the initiation, execution and management of various sized projects and programs. Concurrently identified, planned, scheduled, and tracked the feasibility and performance of such projects and programs. Thrives in a fast-paced setting and operates well under a sense of urgency. Possesses an outstanding proficiency in communications with internal and external customers, and is skilled at building excellent rapport with clients and team members. Is a goal oriented analytical problem solver focusing on the customer.

Core competencies include: Team management • Vendor management • Project discovery & planning • Internal & external communications • Accountability • Risk management • Stakeholder management • Reporting • Budgets • Resource management • Leadership adeptness in cross-functional programs • Innovative problem solving • Service orientation • Viability & financial analysis • Contract negotiations • Strategic planning

PROFESSIONAL EXPERIENCE

SEPTA – 2012 – 2021
Senior Project Leader
Worked as lead PM on project to virtualize all critical IT systems for the Control Center. This included ATDS, CARD and AVPA systems now on a fault tolerant Cisco UCS environment (12 Windows servers in all). Led project and managed team to upgrade CARD system to new Operating Systems for all virtualized servers and user workstations. Manage vendor maintenance contracts for ATDS, AVPA and CARD systems. Host regular maintenance calls with vendors for the tracking of maintenance issues to resolution.

SEPTA – 2006 – 2012
Project Leader
Functioned as both PM and technical lead on Smart Stations project expanding AVPA system to 44 more key stations and dozens more non-key (audio only, no signage). Worked with Control Center and vendor developing new Windows based ATDS system. This conversion/upgrade from a closed network Micro-Vax environment allowed SEPTA to expand the user group from strictly the Control Center dispatchers (51 users) to any Windows desktop user on the SEPTA network. We now have over 500 ATDS users that can access both real-time vehicle positions and archived train data going back 2 years.

SEPTA – 1999- 2006
Senior Programmer Analyst
Worked with vendors and SEPTA Control Center in design and implementation of Audio Visual Public Address System (AVPA) that interfaced off the existing Automated Train Dispatch System (ATDS). Known as the Key Stations Project, this $11M project was rolled out to 31 SEPTA stations on both the RR and CTD side of operations. Continued in role as sole system administrator for this system. In this capacity, I worked with users and vendors in maintaining 24/7 operations of vital real-time information and scheduling system.

AETNA – 1998-1999
Software Developer
Worked as main frame programmer using Cobol MVS and MVS2 in preparation for Y2K changes necessary to core business code.

SEPTA – 1989 - 1999
Signal Maintainer
Worked on the installation, repair, maintenance, testing and troubleshooting of all signal and switch equipment on the CTD Subway and Elevated lines. Significant projects worked on include the Frankford Elevated Reconstruction Project (FERP) and the Fern-Rock Loop project.

VOLUNTEER EXPERIENCE

NEO - North East Optimist, Northeast Philadelphia 1989 -1998
Serving over 900 families in youth sports and activities. Worked in various capacities from fund raising to coaching to administration. Elected and served 2 terms as President and Vice-President.

JYA - Jenkintown Youth Activities 1999-2004
Started boys travel baseball program (Whiz Kids) and grew program to over 12 teams.

FORMAL EDUCATION

Bachelors of Science in Business Administration
Gwynedd-Mercy University • Sigma Beta Delta Honors Society

Associates Degree in Industrial Electricity Spring Garden College
Philadelphia, Pa

CHUBB Institute
COBOL VMS Programming

University of Pennsylvania
Project Management Institute

Christine M. Young-Gertz
1866 Edmund Road
Abington, PA 19001
cmlyg@comcast.net
215-266-9681

February 27, 2024

Theresa Castorina
Assistant to the Township Manager
1176 Old York Road
Abington, PA 19001

Re: Ward 10 Commissioner

Dear Ms. Castorina,

Please consider this as my letter of interest in filling the Ward 10 Commissioner vacancy. I have been a resident and registered voter in Ward 10 since 1999.

My career history qualifies me to serve as a Commissioner and I am confident I would make a positive contribution to the Board of Commissioners' work of providing the best possible government service to every Abington resident. As an attorney I directed the legislative affairs of a trade organization. Prior to attending law school I worked in recreation therapy with vulnerable populations including special needs children and geriatric patients. I understand the needs of residents, including those who face extraordinary struggles. My enclosed resume highlights my most recent work experience.

Our Ward 10 residents are concerned with a host of issues including public safety, the impact of land use decisions, and the township budget- to name a few. They have been served by some of the hardest working public servants in Pennsylvania, who take every issue seriously and have been accessible to everyone in the township. I am determined to continue that same high level of service.

Thank you for your consideration. I look forward to hearing from you about this opportunity.

Sincerely,

Christine Young Gertz

CHRISTINE M. YOUNG GERTZ

1866 Edmund Rd. Abington, PA 19001; cmlyg@comcast.net; 215 266-9681

ABINGTON RESIDENT SINCE 1987. WARD 10 RESIDENT SINCE 1999.

CAREER SUMMARY

Government relations attorney, state lobbyist and legislative staffer with excellent constituent service, communication, and advocacy skills.

- **Advocacy:** Directed advocacy strategies for a trade association. Issues included fair housing, landlord/tenant law, property management, taxes, and environmental regulation. Negotiated changes to state and local laws. Directed grassroots activity of trade association members. Managed coalitions among like-minded organizations.
- **Communication:**
  - Authored white papers, fact sheets, legislative amendments, and testimony for legislative hearings. Drafted press releases. Wrote summaries and explanations of issues and legislation in plain terms for a variety of audiences. Presented oral testimony at public hearings. Oversaw interviews with the media.
- **Constituent Service:** Legislative aide and constituent service advisor for PA State Representatives in Abington.
- **Editing and publishing:** Co-authored and self-published the Pennsylvania Apartment Association's Guide to Landlord and Tenant Law, 1st, 2d and 3rd editions.
- **Management:** Supervised trade association's government affairs staff and volunteers.
- **Instructor:** Taught professional development classes to apartment industry managers.

POSITIONS:

- **St. Representative Ben Sanchez,** Abington, PA. Constituent service advisor, part time. January, 2024 - present
- **Pennsylvania Apartment Association,** Bala Cynwyd, PA. Government Affairs Director. 2005-2018
- **State Representative Ellen M. Bard 153rd Pennsylvania Legislative District,** Abington, PA. Legislative Aide. 2001-2004

COMMUNITY SERVICE:

- **Committeeperson**, Abington Rockledge Democratic Committee, 2019 - present. Recording Secretary, 2022 – present.
  Tutor, Abington Library Adult Literacy Program, 2019-2022.

LICENSES:

- Pennsylvania Notary, current.
- Bar of the Commonwealth of Pennsylvania, retired.

EDUCATION:

- New York Law School, J.D.
- Rider University, B.A. Psychology

Theresa Castorina
Assistant to the Township Manager
1176 Old York Road, Abington, PA 19001

February 29, 2024

Dear Theresa Castorina,

I am writing to express my interest in the local Ward 10 commissioner position for Abington Township. I learned about the vacancy from an article in The Patch and I was immediately drawn to the opportunity to serve my community in this capacity. I have over 20 years of experience in the customer support and client services sector. I believe I have the skills, knowledge, and passion to be an effective and valuable local commissioner for Ward 10 of Abington Township.

As a local commissioner, I would strive to promote the well-being and prosperity of the Abington Township and its residents. I am familiar with the township's vision, values, and strategic plan, and I share its commitment to enhancing the quality of life, fostering a vibrant and diverse economy, and preserving the natural and cultural heritage of the township. I have 4 children all of whom have been raised in Abington. Two are currently in the Senior High School and the other two are soon to attend Overlook elementary.

I am confident that I can bring my skills, experience, and vision to the local commissioner position and contribute to the Abington Township's continued growth and success. I am eager to meet with you and discuss how I can best serve the township and the community. I am available for an interview at your convenience and you can reach me by phone or email. Thank you for your consideration and I look forward to hearing from you soon.

Sincerely,

Michael Delany

Michael Delany

Abington, PA 19001 | (215) 313-1664 | mikedelany@gmail.com | linkedin.com/in/michael-delany

CAREER SUMMARY

Offering more than 20 years of technical experience in customer support and team management in the healthcare environment. Highly effective and customer-centric support services Director with strong problem-solving skills. Information Technology Director with a startup product support management and implementation services background. Exceptional crisis management skills to meet customer needs to drive problem resolution. Flexibility while showing sound judgement in the solution design and product development process. I bring an authentic leadership style to build trust within the cross-functional teams manage.

PROFESSIONAL ACCOMPLISHMENTS

- Integral in customer engagement with various stakeholders and organizational departments in large organizations
- Designed customer support operations and service delivery from the ground up: This included, hiring, managing and mentoring staff, training development, software selection, and creating KPIs to ensure we achieved the highest quality customer service operations
- Increased throughput by using emerging technologies and automation - This yielded increased efficiency for both the support and engineering teams
- Used data-driven insights for process optimization to increase customer satisfaction and increase customer retention
- Owned the processes for capturing all the data for KPI's and data warehouse analytics in a variety of departments while gathering technical requirements
- Led a team of Product, Support and Success managers for cross-functional collaboration to improve organizational metrics by 40%
- Primary point of contact for finding innovative solutions for complex technological issue to help the customer be more productive while creating a strategy for competitive analysis

SKILLS AND STRENGTHS

Analytics • CRM • APIs • Vmware • Microsoft Office Suite • SAP Business Objects • Crystal Reports • MS SQL • Oracle • Databases • SharePoint • Relationship Management • HL7 Interfaces • Software Development Life Cycle (SDLC) • Agile Software Development • Windows • Azure • Virtualization • AI • Relational Databases • Business Case Development • Contract Negotiation • Software Design • Sales Support • Hubspot • Azure Devops • Jira • Atlassian • Confluence • HaloITSM • Customer Success • Creative Thinker • Slack • Tableau

WORK HISTORY

Swift Medical, Toronto, ON • Director, Customer Support & IT **07/2022 - Present**

Customer Support and IT Director for a SaaS based medical software company. Worked with a variety of Enterprise and ancillary integration software companies to bring our product and services to thousands of healthcare facilities in North America. Lead organization wide ITSM best practices for both internal users and our clients for a more streamlined data-driven approach to customer experiences.

- Assisted in cloud migrations from Amazon Web Services (AWS) to Microsoft Azure

- Escalated customer issues with DevOps leadership for to make sure our product and services were aligned with client and market needs
- Implement processes for the support team to analyze and improve decision-making skills for L1 and L2 support analysts to ensure scalability across
- Monitor and delegate support service tickets utilizing HaloITSM and Jira for all support, development, and engineering issues
- Worked directly with the engineering and development teams on streamlining how we handle process issues and automation for overall process improvements.
- Hyper focused on meeting the SLA's of our clients – developed an internal SLA for cross-functional team management within our organization
- Increased resolution times by 30% by implementing embedded metrics into our ticketing systems
- Extensively involved with the crafting of product portfolio documentation for new product introductions

Nucleus Healthcare, Radnor, PA • Director of Implementations & Client Services 11/2020 – 07/2022
IT Director for a solutions-based SaaS software development company. Heavily involved in the team development for those under my domain as well as customer relationship management. My team has implemented and supported software for an extensive list of major universities, healthcare systems, long term care facilities, as well as many other large corporations across the United States. Utilized principles of software implementation best practice for all clients.

- Built the Zendesk framework for customer technical support and implementation teams from the ground up
- Coordinate with key stakeholders at a variety of large organizations for capacity planning
- Work closely with the development team on strategic planning and improvements to the software for the technology roadmap
- Engaged in team-building exercises for Implementation Techs and Client Success Managers as well as analyze performance too improve customer service operations
- Monitor and delegate implementation service tickets utilizing Zendesk for all support related issues
- Heavily involved in the technical testing, technical design, and technical review of CRM systems software to ensure data analysis could be achieved in our ticket management systems
- Continuous follow-up written communication, with leaders to ensure key metrics were being met to maintain operational excellence
- Meet with clients to acquire their needs for my team to implement our software and meet expectations
- Created automation workflow in Zendesk for service excellence to extract key performance indicators

Temple University Health System, Philadelphia, PA • Systems Manager 05/2016 – 11/2020
Dedicated and highly respected IT Systems Manager at a National Cancer Institute – designated Comprehensive Cancer Center and research facility.
- Supervised up to 10 support analysts, ensuring quick solutions to user and EMR system issues.
- Oversaw operations, integration, and communication strategy of all information systems technical staff in 2 health system hospitals
- Directed Systems Analysts at each location on tasks related to improving the departments efficiency
- Developed all SAP Crystal Reports for computer science department modernization

- Extracted data from multiple sources and organized it for health system executives
- Project Management – managed multiple projects with individuals from a variety of departments
- Held the highest level of service quality for all clinical departments that I managed
- Guided decision making for all new technologies that enter the hospital to assure compliance
- Created strategic planning and policies and procedures for downtime events
- Conducted performance reviews for all systems analysts
- Audited and ordered all system hardware for clinical areas as well as training rooms

Temple University Health System, Philadelphia, PA • Systems Analyst 05/2009 – 05/2016

- Maintained all clinical information systems with an emphasis on improving the EMR software and hardware for staff to use more efficiently in real-time
- Managed all projects related to the systems within the Operating Room, Preoperative, and Postoperative areas creating continuous improvement and improved metrics
- Heavily involved in product management and value proposition of new technology
- Coordinated all IT & clinical personnel for projects including go-live events leading to dozens of successful implementations
- Served as the primary support person for the Spacelabs physiological system throughout the hospital
- Troubleshooting of many issues that arose due to technical difficulties in all areas of the hospital
- Hands on analyst that would meet with the clinical staff monthly to discuss potential improvements for all EHR systems

EDUCATION

TEMPLE UNIVERSITY, Fox School of Business, Philadelphia, PA
Bachelor of Business Administration
Major: Business Management

MATTHEW **FLINT**
1835 Cleveland Ave, Abington, PA 19001 · (215) 913-1450
mtthwjflnt@gmail.com · https://www.linkedin.com/in/matthew-flint-it/

February 26, 2024

Abington Township Board of Commissioners

Commissioners of the Board,

I am writing in regard to the Abington Township Ward 10 Commissioner vacancy. I am a longtime Abington Township resident with family still currently in most neighborhoods. I've raised 5 children in Abington, the older two in college having already graduated from Abington Senior High School and 3 still in the district. I'm an advanced technologist who spearheaded remote solutions across the educational industry during Covid-19 protocols. I'm also a decorated United States Army Infantry Veteran who understand civic duty and putting others success above my own. I'd love for the opportunity to represent Ward 10 of Abington Township, PA and propose to do my very best in keeping this great township on the correct path of honoring our history and creating the brightest future for our children.

I grew up at 149 N. Keswick Avenue in Glenside, a home my parents bought in 1972. I lived there until I left for my Army service in 2003. Upon returning, my wife and two children purchased a home at 671 Hamel Avenue in Ardsley in 2006 and had one more child. We lived there until we outgrew it and moved to 1912 Edge Hill Road in Abington in 2008 where our younger two were born. We loved the neighborhood so much, my wife having grew up across from Roychester Park, that when we wanted a bigger house, we moved right around the corning to our current residence 1835 Cleveland Avenue in Abington. As I've explained I've lived all my life in this very township, and that doesn't seem to be ending anytime soon and I want the very best for our great neighbors and neighborhood. I want my children to want to live in the town they grew up in just as me and my wife, Melissa, did.

In addition to my technical resume, which you'll find attached, my time in the United States Army as a combat Infantryman instilled in me qualities of leadership and an ability to not allow the stress of the moment knock me off course. I perform extremely well under pressure and learned exactly when to know to ask for help if needed. This combination of forward-thinking technical acumen alongside of a combat veterans' unshakable sense of pushing through no matter how difficult the problem enables me to perform well in any IT capacity and take the lead when needed. This should be an asset to any organization that is looking to build a strong infrastructure team that deals with current troubleshooting, plans for how to improve and trains those who are lacking so there is redundancy of abilities across the team.

I would love to discuss the current vacancy and how I might be of service to the township in this position. Please feel free to contact me by email at mtthwjflnt@gmail.com or via phone at (215) 913-1450. I look forward to hearing from you and please don't hesitate to reach out if there is anything else I can provide you with in the interim. Thank you in advance for your consideration.

Sincerely,

Matthew J. Flint, Sr

Matthew J. Flint, Sr

MATTHEW **FLINT**

1835 Cleveland Ave, Abington, PA 19001 · (215) 913-1450

mtthwjflnt@gmail.com · https://www.linkedin.com/in/matthew-flint-it/

I strive to use the combination of my education, my military experience and leadership, and my acquired technical and customer service skills to lead a team to drive towards excellence in cutting edge technological solutions.

EXPERIENCE

JANUARY 2024 – PRESENT

SR DIRECTOR OF INFRASTRUCTURE & TECHNOLOGY OPERATIONS, ZEROEYES

Lead 3 teams of cutting-edge technologists for the industry leading AI Optical Weapons detection solution: Infrastructure team responsible for the designing, monitoring and maintaining of SaaS hardware accompanying appliance for over 300 vertically diverse clients in over 35 states. Develop and maintain all password vaulting processes and policies, as well as life cycle management for over 150 user devices and all network peripherals at 3 ZE managed physical sites; Technical Sales Engineering team responsible for all pre-sales data verification and collection to streamline complex integration into ever changing client network/camera environments; Technical Solutions team providing white glove on-site physical security as well as overall camera coverage consulting.

APRIL 2023 – DECEMBER 2023

DIRECTOR OF TECHNICAL SALES ENGINEERING, ZEROEYES

Developed a newly existing Technical Sales Engineering team responsible for all pre-sales data verification and collection to streamline complex integration into ever changing client network/camera environments. Trained TSEs on product prerequisites, network resource requirements and solution specific engineering techniques in support of Sales and Operations departments to streamline client "Go Live" time thresholds and set proper client expectations about implementation.

SEPTEMBER 2022 – MARCH 2023

ASSOCIATE DIRECTOR OF INFRASTRUCTURE, ZEROEYES

Responsible for the designing, monitoring and maintaining of SaaS hardware accompanying appliance. Project Lead on SaaS appliance implementation automation script. Windows domain and Ubuntu admin.

JUNE 2021 – AUGUST 2022

SOLUTIONS ENGINEER II, RAZOR TECHNOLOGY

Perform pre-sales consultation, environmental pre-configuration and delivery of technical solutions for over 160 clients ranging from hospitals and law firms to financial and educational institutions. Administer Cisco DUO Enterprise application across multiple clients. Lead engineer on Enterprise privilege access management (PAM) solution from conception to production. Lead member of Futurist Committee, Employee of the Quarter recipient Q1 2022.

SEPTEMBER 2020 – MAY 2021

NETWORK ADMINISTRATOR, ABINGTON SCHOOL DISTRICT

Responsible for designing, monitoring and troubleshooting all 3 layers of network connectivity for an enterprise environment with 220 managed switches, over 700 Meraki APs (Access Points) and 9,000 users. Planned and executed installation of 75 Aruba PoE (Power Over Ethernet) switches, 1,100 Polycom

telephones and complete overhaul of existing copper phone infrastructure to segregated voice VLAN \ building (9) with accompanying sub-net and QoS configuration from Comware Core to Aruba access layer completely independent within my first 3 months in position. Responsible day to day for all network account creation including AD (Active Directory), Exchange, Google, Student Management System through PowerShell script. Phone connectivity, 8,800 student wireless device connectivity, and email \ network security, server maintenance and network monitoring.

APRIL 2018 – SEPTEMBER 2020

SR. NETWORK ENGINEER, ARCADIA UNIVERSITY

Responsible for designing, monitoring and troubleshooting all 3 layers of network connectivity for an enterprise environment with over 350 managed switches, over 700 Aruba APs and 3800 users. Planned and executed overhaul of existing peer core edge from HPE Comware to Cisco Catalyst 9500, HPE Comware distribution layer and HPE Procurve access layer switches to Cisco Meraki. Designed and implemented National Science Foundation Grant approved proposal for Science DMZ for Education Research utilizing a Cisco ASR platform capable of 40Gb frictionless traffic. Planned and executed ISP changes from 400Mb non redundant faculty \ staff and 1Gb student internet connections to two fully redundant 5Gb (burstable to 10Gb) fiber connections.

MAY 2007 – PRESENT (P/T SINCE APRIL 2018)

DIRECTOR OF TECHNOLOGY, MONITOR DATA CORPORATION

Created and continue to maintain a complex MS SVR 2008 \ MS SVR 2016 single-domain environment, including but not limited to user security, network shares, ADS, DNS (Domain Name System) and remote access. Troubleshoot network, system and application issues. Daily maintenance of FTP web access for over 200 commercial and 25,000 residential clients.

MAY 2012 – AUGUST 2012

ENGINEER, QUATRO SYSTEMS (CONTRACTED TO SUNGARD SYSTEMS)

Completed three disaster-recovery tests for leading software and IT service companies, serving SunGard's clients Baptist Health Support in Florida, the Coach handbag retailer, and McKesson Technology Solutions. Focused on recovering virtual servers through Symantec Backup Exec.

MARCH 2009 – OCTOBER 2009 (P/T EVENINGS)

INSTRUCTOR, CHI INSTITUTE (KAPLAN HIGHER EDUCATION)

Introduce students to fundamental operating system and networking configuration. Initiate creative learning tools and scenarios to produce real world simulation. Ensure students gained above and beyond required knowledge for entry-level Customer Support Technician positions.

NOVEMBER 2003 – NOVEMBER 2006

INFANTRYMAN, UNITED STATES ARMY

Served with the United States Army in the Iraq War, beginning my tour as a Radio Technical Operator and promoted to a truck commander and a team leader in a Personal Security Detail for Lt. Col. Arthur Kandarian, Commander of the 1/32 Cav Regiment RSTA. Supervised three-man truck during combat missions across Dyala Providence, Iraq.

Awards: Army Commendation Medal 2nd Award, Army Achievement Medal 2nd Award, Army Good Conduct Medal, National Defense Service Medal, Iraq Campaign Medal, Overseas Service Ribbon, Combat Infantryman Badge, Expert Infantryman Badge, Air Assault Badge, Driver and Mechanic Badge, Overseas Service Bar 2nd Award, Wheeled Vehicles Clasp, Global War on Terrorism Medal, Expeditionary Global War on Terrorism Medal.

EDUCATION

MAY 2008

ASSOCIATE DEGREE IN SPECIALIZED TECHNOLOGY, CHI INSTITUTE

Network Engineering

2003 - 2006

MILITARY COURSES, UNITED STATES ARMY

Blue Force Tracker, Combat Communications, Combatives Level I, Eagle First Responder, Javelin, Nuclear Biological & Chemical, Air Assault.

CERTIFICATIONS

VMware VCP-DCV2021
Dell Server \ Workstation Sales Certificate

FOCUSED TECHNOLOGIES

Systems: MS Windows Server, Ubuntu 20.04 - 22.04, Active Directory, Google Admin, Exchange Admin, VMware, Nutanix, Zerto, LastPass Admin
Network: Cisco, Cisco Meraki, HPE, HPE Comware, Aruba AOS, Aruba ClearPass, Aruba Mobility Master, Fortinet, Delinea (Formerly Thycotic), Cisco DUO, Azure AD & M365

Julie Getz CPA
1913 Lycoming Ave, Abington, PA 19001
juliegetzemail@gmail.com
215-518-9570

March 5, 2024

To Whom It May Concern:

In 2017 I moved back to Abington Township after my husband and I purchased our home and I immediately felt a need to be involved in the community. I have great respect and care for my neighbors in ward 10. We are determined to stay in our home and neighborhood and for decades to come with our three young children.

I am a CPA (Certified Public Accountant) at Kreischer Miller, a regional accounting firm, located in Horsham as a Manager in the Small Business Advisory group. I work with predominantly family businesses (ranging from 3-30 million in revenue) where I advise business owners and their accounting teams.

I am a democrat but not a political person. I care more about listening to people's experiences and getting to know them on a personal level.

I have had experiences in my life that I believe would make me an asset to my ward and would love the opportunity to become a commissioner for ward 10.

I look forward to hearing from you and answering any questions that you may have.

Respectfully submitted,

Julie Getz

Julie Getz

Julie Getz CPA
1913 Lycoming Ave, Abington, PA 19001
juliegetzemail@gmail.com
215-518-9570

Kreischer Miller
Horsham, PA
2014 - current position
Manager, Small Business Advisory

- Oversee completion of reviewed and compiled financial statements
- Review the S-Corporation, C- Corporation, Partnership, and individual tax returns including the Federal and any applicable states
- Manage between 20-35 relationships with business owners and related accounting departments, businesses typically have between 3-30M in revenue
- Advisory projects as necessary including: sum of value calculations, monthly or quarterly review of internal accounting closes, QuickBooks Online support
- Manage calendar of work and scheduling workload for staff and senior accountants
- Deliver feedback as a career counselor to counselees
- Develop and deliver formal training on various topics including: the statement of cash flows, common accounting entries including retained earnings, Schedule M-1 training to reconcile book net income to taxable net income, and various on the job training

David Michael
Philadelphia, PA
2010 - 2014
Staff Accountant

- Complete monthly, quarterly and year-end accounting close activities
- Track and maintain financial statements and general ledger including fixed assets
- Maintain QuickBooks for Canadian subsidiary
- Prepare and complete consolidation for international subsidiaries in France, Mexico, China, and the Netherlands
- Assisted other account departments (accounts payable, accounts receivable and finance team) as needed
- Filing of monthly and quarterly sales tax

Certification

CPA – Certified Public Accountant

Proficient in:

QuickBooks/QuickBooks Online
Microsoft 365 - Excel/Word/PowerPoint/OneNote/Outlook
Prosystems Axcess tax software
Prosystems Engagement
Prosystems Fixed Assets Software

Education

Bachelor's degree received from Temple University (Major: Accounting Minor: German)

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024	BOC-14-031424	FISCAL IMPACT
DATE	*AGENDA ITEM NUMBER*	Cost > $10,000 Yes ☐ No ☐
Administration		PUBLIC BID REQUIRED
DEPARTMENT		Cost > $20,100 Yes ☐ No ☐

AGENDA ITEM:

APPOINTMENTS BCCC - 2024

EXECUTIVE SUMMARY:

The Township Board of Commissioners actively engages citizens to serve on our volunteer Boards, Commissions, Committees and Councils. After reviewing and considering citizens who expressed their interest to serve, the attached Exhibit A presents the slate of individual(s) to be considered for appointment to the various positions as listed.

PREVIOUS BOARD ACTIONS:

n/a

RECOMMENDED BOARD ACTIONS:

Motion to appoint Michael Thompson to the Zoning Hearing Board as included in Exhibit A.

2024 Boards, Commissions, Committees and Councils Slate				
Board, Commission, Committee or Council	First Name	Last Name	Appointed	Term Expiress
Zoning Hearing Board	Michael	Thompson	3/14/2024	12/31/2028

Michael J. Thompson, AIA, LEED AP, NCARB
427 Roslyn Avenue
Glenside, PA 19038

Board of Commissioners
Abington Township
1176 Old York Road
Abington, PA 19001

February 28, 2024

Re: Zoning Hearing Board Vacancy

Dear Commissioners,

I am writing to express my interest in serving as a member of the Zoning Hearing Board for Abington Township. With a deep-seated passion for community development and a robust background in architecture and planning, I am enthusiastic about the opportunity to contribute to the regulatory and decision-making processes that shape our local environment.

Over the years, I have observed the critical role that the Zoning Hearing Board plays in maintaining the integrity of our community while fostering responsible growth and development. As a dedicated advocate for balanced urban planning and sustainable land use, I am eager to lend my expertise and insights to support the Board's objectives. My professional background in architecture has equipped me with a comprehensive understanding of zoning regulations, land use policies, and planning principles. Through my work experience, I have honed my analytical skills and developed a strategic mindset that aligns with the complexities inherent in zoning decisions.

Furthermore, my commitment to civic engagement and service has been demonstrated through my involvement in various community initiatives and organizations. I believe in the power of collaboration and consensus-building to address diverse perspectives and find equitable solutions to complex issues.

If appointed to the Zoning Hearing Board, I am committed to upholding the highest standards of integrity, impartiality, and transparency. I am prepared to dedicate the time and effort necessary to review cases thoroughly, engage with stakeholders, and make informed decisions that serve the best interests of our community.

In conclusion, I am genuinely excited about the prospect of contributing to the Zoning Hearing Board and playing a constructive role in shaping the future of Abington. I am confident that my background, skills, and dedication would make me a valuable asset to the Board.

Thank you for considering my application. Please feel free to contact me at (215-495-95710 or neighborsformikethompson@gmail.com to schedule a meeting or to address any questions you may have.

Sincerely,



Michael J. Thompson, AIA, LEED AP, NCARB

MICHAEL J. THOMPSON, AIA, LEED AP, NCARB

427 Roslyn Avenue, Glenside, PA 19038 | 215.495.9571 | neighborsformikethompson@gmail.com

EDUCATION

Temple University

Bachelor of Architecture (B.Arch) **2002**

PROFESSIONAL REGISTRATIONS

Registered Architect

Pennsylvania **2008 – Present**

New Jersey **2013 – Present**

LEED Accredited Professional **2008 – Present**

NCARB Certification **2008 – Present**

PROFESSIONAL AFFILIATIONS/ TITLES

Moving Montco Forward **2024 – Present**

Planning, Transportation, and Infrastructure Committee

Sustainability Subcommittee

SEPTA Citizens Advisory Committee/ Member **2023 – Present**

North Hills Civic Association/ Vice President **2023 – Present**

Pennsylvania Uniform Construction Code- Review and Advisory Council/ Member **2020 – Present**

International Building Code Technical Advisory Committee (IBC TAC)

International Energy Conservation Code Technical Advisory Committee (IECC TAC)

International Existing Building Code Technical Advisory Committee (IEBC TAC)

National Architectural Accreditation Board **2009 – Present**

California Polytechnic State University/ Visiting Team Member

Virginia Polytechnic Institute and State University/ Visiting Team Member

Tulane University/ Visiting Team Member

University of Colorado/ Visiting Team Chair

Oklahoma State University/ Visiting Team Chair

Newschool of Architecture and Design/ Visiting Team Chair

Arizona State University/ Visiting Team Member

Lebanon American University (Lebanon)/ Visiting Team Member

New York City College of Technology/ Visiting Team Member

Notre Dame de Louaize (Lebanon)/ Visiting Team Member

University of North Carolina at Charlotte/ Visiting Team Chair

Abington Township Board of Commissioners **2018 – 2023**
Ward 6 Commissioner
Land Development/ Land Use Committee/ Chair
Comprehensive Plan Development Team/ Chair
Comprehensive Plan Consistency Committee/ Chair
Public Safety Committee/ Member
Infrastructure Committee/ Member
Inclusive Playground Committee/ Lead Commissioner

American Institute of Architects **2006 – Present**
2016 AIA National Convention Steer Committee/ Member
2016 AIA National Convention Tours Committee/ Co-Chair

American for Humanity **2013-2015**
Philadelphia Chapter founder

TEACHING EXPERIENCE

Temple University
Associate Adjunct Faculty- Architectural History I & II **2008-2013**
Adjunct Instructor- Methods and Materials II **2003**
Grading Assistant- Introduction to Design **2002**

JUROR/ LECTURER EXPERIENCE

Guest Juror
Temple University
Philadelphia University
Community College of Philadelphia

Guest Lecturer/ Panelist
Temple University- Various Professional Practice class discussions
Community College of Philadelphia- Various Professional Practice class discussions
AIA Pennsylvania- "Ask a Citizen Architect Panel," September 12, 2018

MEDIA

"Pa. Officials Plan to Regulate and Test for PFAS- but Residents Want Faster Results" Philadelphia Inquirer, April 15, 2019- Quoted
"PFAS Chemical Showing Up in Montco Water Beyond Military Bases" WHYY/ NPR August 23, 2018- Quoted
"PFAS Water Level Concerns: North Hills Well Shut Down" Glenside Local, August 3, 2018- Quoted
Neighbors4mike.com Personal website and blog
"Citizen Architect Profile: Mike Thompson, AIA" AIA Pennsylvania, January 3, 2018- Profiled

CAREER SUMMARY

Designblendz Architecture, LLP

Project Manager **2023 - Present**

Manage a variety of projects in a variety of sectors, including (clients typically confidential):

- Various multi-family residential projects (Project Manager)
- Commercial office space fit-outs (Project Manager)
- Institutional projects (Project Manager)

KCBA Architects

Project Manager **2021 - 2023**

Managed institutional projects of varying size and complexity.

- Delaware County- Facilities Conditions and Needs Assessment (Project Manager)
- Delaware County- Various Projects (Owner's Representative)
- Delaware County- Capital Improvement Plan (CIP) Steer Committee (Consultant, FY2022, FY2023, FY2024)
- Delaware County- Health Department (DCHD) Headquarters Study and Project (Project Manager)
- Delaware County- Central Intake and Release Facility Study (Project Manager)
- University of Pennsylvania- Sheerr Pool Feasibility Study and Project (Project Manager)
- Thaddeus Stevens College Community Learning Center (Project Manager)
- Upper Moreland Township- Township Building Renovations & Addition Study (Project Manager)

SFCS Architects

Associate, Project Manager **2018 - 2021**

Managed the master planning, design, and documentation process for senior living clients. Clients are typically confidential in this sector.

Stantec

Associate, Project Architect, Project Manager **2007 - 2018**

Various roles in the design, documentation, and construction administration of institutional projects, including healthcare, higher education, K-12, and corporate interiors work. Notable projects include:

- **Temple University**- Charles Library (joint venture with Snohetta) (Project Manager)
- **School District of Philadelphia**- Ben Franklin/ Science Leadership Academy Co-location Project (Senior Project Architect)
- **Thomas Jefferson University Hospital**- Renovated/ Expanded Central Pharmacy (Project Architect)
- **Main Line Health**- Exton Square (Urgent Care/ Specialty Care Center) (Project Architect, Construction Administrator)
- **Penn Medicine**- Penn Plastic Surgery Center Bryn Mawr (Project Manager)
- **Parkland School District**- District Feasibility Study (Project Manager)
- **Amerihealth**- Various projects (Project Architect)
- **Centennial School District**- Davis Elementary School (Construction Administrator)
- **Centennial School District**- McDonald Elementary School (Construction Administrator)

- **Community College of Philadelphia**- Main Campus Renovation (Project Architect)
- **Community College of Philadelphia**- Pavilion Building (Project Architect)

Peter Zimmerman Architects
Intern Architect **2004 - 2007**
Prepared drawings for high end single family residential projects in the Philadelphia suburbs and beyond.

Smith/ Kolo, LLC
Intern Architect **2003-2004**
Prepared drawings for high end single family residential projects and tenant fitouts in Philadelphia and its suburbs.

Streibert Associates
Intern Architect **2002-2003**
Prepared drawings for high end single family residential projects on Cape Cod and the Boston suburbs.

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024	BOC-15-031424	FISCAL IMPACT
DATE	*AGENDA ITEM NUMBER*	Cost > $10,000
		Yes ☐ No ☐
Administration		PUBLIC BID REQUIRED
DEPARTMENT		Cost > $20,100
		Yes ☐ No ☐

AGENDA ITEM:

Toll Mid-Atlantic LP Company, Inc. Application

EXECUTIVE SUMMARY:

Under this Preliminary Land Development application, the Applicant is proposing to demolish the existing structures of the former St. Basil Academy School site; and construct a total of 150 age-restricted carriage homes as well as a clubhouse and pool on an existing parcel of land located within the newly created AR - Age Restricted Carriage Home Overlay District. The entire site consists of approx. 46.37 acres and is located within the CS - Community Service Zoning District. Other site improvements for this site include parking, curbing, sidewalk, landscaping, lighting, and sanitary and stormwater management facilities. Access to/from the site will be by way of one (1) proposed entrance off Fox Chase Road. In addition, an emergency access road is proposed off of Fox Chase Road on the northwestern corner of the site.

PREVIOUS BOARD ACTIONS:

08.12.22 - A revised Ordinance was sent to address the Planning Commissions comments from the August 4, 2022 meeting. This Ordinance is attached and marked Revised 08.12.22.
08.23.22 - The Planning Commission recommended moving forward to the Comprehensive Plan Consistency Committee on August 31, 2022 with the recommendations stated in the Executive Summary.
09.08.22 - Working Session - recommended to move to the next Board of Commissioners meeting on October 13, 2022
10.13.22 - The Board of Commissioners approved advertisement of amendment
11.10.22 - Ordinance # 2199 was adopted.
05.23.23 - The Planning Commission reviewed the Conditional Use Application.

07.13.23 - The Board of Commissioners approved the Conditional Use Application.

RECOMMENDED BOARD ACTIONS:

Motion to approve the Preliminary Major Land Development application LD-23-01 for the location at 711 Fox Chase Road, Jenkintown, PA 19046. (St. Basils) and adopt Resolution No. 24-018.

RESOLUTION NO. 24-018

BEFORE THE ABINGTON TOWNSHIP BOARD OF COMMISSIONERS

Applicant:
Toll Mid-Atlantic LP Company, Inc.

Property:
711 Fox Chase Road, Jenkintown, PA 19046

Parcel No:
30-00-22424-00-1
30-00-22420-00-5

Application No.:
LD-23-01-711

PRELIMINARY LAND DEVELOPMENT APPROVAL

BE IT RESOLVED, the Board of Commissioners grants Conditional Preliminary/Final Approval of Applicant's Land Development Application number, LD-23-01-711, Sheet 1 of 64, prepared by ESE Consultants, Inc. dated March 24, 2023, last revised October 13, 2023 ("Plan")[1] proposing the demolition of existing structures and the construction of homes and other buildings ("Project") of the property located at 711 Fox Chase Road, Jenkintown, PA 19046 ("Property")[2].

This Conditional Approval is subject to Applicant satisfying the following conditions prior to the Plan's recording:

Without limiting the generality of the foregoing, the Board of Commissioners has approved the Plans subject to specific compliance with the following additional terms and acknowledgements:

[1] More fully detailed on the Plan, attached as Exhibit "A."
[2] The Property is further identified as Tax Parcel number 30-00-22424-00-1 & 30-00-22420-00-5.

1. The Applicant shall submit a minimum of four (4) paper copies and two (2) mylar copies of the approved Record Plan(s), and a PDF-formatted disk with the full Approved Plan set, for recording by the Applicant.

2. Complying with all applicable Township review letters, as amended, including: [3]
   a. Abington Township Environmental Advisory Council May 11, 2023 Review Letter;
   b. Township Fire Marshal's November 9, 2023 Review Letter;
   c. Montgomery County Conservation District August 29, 2023 Review Letter;
   d. Township Engineer's November 16, 2023 Review Letters;
   e. Montgomery County Planning Commission's May 19, 2023 and November 9, 2023 Review Letters;
   f. Township Wastewater Department May 12, 2023 and November 9, 2023 Review Letters;
   g. Abington Shade Tree Commission May 10, 2023 Review Letter;
   h. Traffic Planning and Design, Inc. April 28, 2023 and November 10, 2023 Review Letters.[4]

3. The Applicant shall execute and deliver the required financial security and development agreements as well as all other appropriate agreements as shall be required by the Township Solicitor or Township Engineer, at the time the plan is submitted to Abington Township for recording.

4. The Applicant shall, within ninety (90) days from the date of this Approval, obtain the appropriate signatures from Abington Township and record the final plan with the Montgomery County Recorder of Deeds Office. Following release and recording of the record plan, the Applicant shall notify the Township Manager and the Township Solicitor in writing of the plan book, page number and date of recording by the Montgomery County Recorder of Deeds.

5. Prior to construction, the Applicant shall submit to the Township evidence of all required permits and approvals necessary to complete construction, including but not limited to the following:

   a. All applicable permits issued by PaDEP;
   b. Soil Erosion and Sediment Pollution Control Plan approval by the Montgomery County Conservation District, if applicable;
   c. Approval of the Abington Township Fire Marshal;

[3] *See* Review Letters attached as Exhibit "B."

[4] This Resolution will be supplemented with the Minutes after they are approved, and they will be added to Exhibit "B."

d. Approval of the Abington Township Traffic Engineer, if applicable;
e. Approval of the Abington Township Environmental Advisory Council, if required;
f. PennDOT Highway Occupancy Permit, if required;
g. Building permits, construction permits, road opening permits, electrical permits, earth disturbance permits from Abington Township, as applicable;
h. Shop drawings for all materials associated with water, sanitary sewer and/or storm sewer utilities shall be submitted, reviewed and approved by the Township Engineer prior to commencement of construction.

6. Material specifications and standards of construction shall be in accordance with Abington Township requirements, except as otherwise provided for herein or by the terms of any future variances, waivers or resolutions related to this project.

7. This Approval is subject to Applicant's compliance with all regulations, rules, resolutions and ordinances of Abington Township, except as otherwise provided for herein or by the terms of any variances, waivers or resolutions related to this project.

8. The Applicant shall sign a Developer's Agreement with the Township.

9. The Applicant shall sign an Operations and Maintenance Agreement with the Township covering all proposed stormwater management BMPs. The Maintenance Agreement shall be transferred with transfer of ownership of the property. The Operations and Maintenance Plan, and Operations and Maintenance Agreements shall be recorded by the applicant in the Office of the Recorder of Deeds for Montgomery County along with the Record Plan.

10. All administrative, legal and engineering expenses owed to the Township for plan review and/or planning services shall be paid in full by the Applicant prior to release of signed record plans.

11. The Applicant shall comply in all respects with the rules, regulations and requirements of all governmental agencies and/or bodies having jurisdiction with respect to this Application and shall assume all costs, expense and responsibility in connection therewith, without any liability whatsoever on the part of the Township.

DRAFT

BE IT FURTHER RESOLVED that the following waivers are GRANTED based on the scope of the Project and the existing conditions of the Property at Applicant's request as follows:

1. §146-11.A.(4) – Property Identification Plans – A partial waiver from the requirement to show tract boundary information, including tax map parcel numbers, names of owners, and approximate acreage, within 400 feet.
2. §146-11.B.(3) – Existing Features Plan – A partial waiver from the requirement that existing features plan shall include property lines and names of landowners within 400 feet of the site.
3. §146-11.B.(7) – Existing Features Plan – A partial waiver from the requirement to provide all utility information within 400 feet of the subject property.
4. §146-27.C – Sidewalks and Curbs – Location – A partial waiver from the requirement to located sidewalks between the curb and right-of-way line, six inches from the property line.
5. §146-27.F – Sidewalks and Curbs – A partial waiver to permit the curbing on the interior roads to be constructed with 6" Belgian Block.
6. §146-29.A – Blocks – Length – A partial waiver for internal roads C, D, F, and G from the requirement that blocks have a minimum length of 500 feet.
7. §1460-33.I – Drainage – A waiver from the requirement to direct roof drains under the sidewalk and connect to storm drains.
8. §146-35.C.(2) – Design and construction of sewers – Size, grade and type – A partial waiver to permit modification of the material of the sanitary sewer main to SDR-26 (plastic pipe) from ductile iron.
9. §146-43.C.(3).(a) – Excavations and fills – A partial waiver to permit cut and fill slopes greater than 15% for the stormwater basin berms and allow basin slopes and slopes to tie into natural grade up to 33%.

***

NOTE:
This Resolution shall become effective on the date upon which all of the above stated conditions are acknowledged and accepted by the Applicant in writing below. If, for any reason, Applicant fails to sign the Acknowledgment and Acceptance below within 10 days from this Resolution's date, then the Applicant's conditional approval granted herein shall become null and void, the waivers and/or deferrals requested shall be deemed denied; and the Subdivision Application and Plan shall be denied for failure to comply with the Township's Zoning and/or Subdivision and Land Development Ordinances for the reasons cited herein or as set forth in the Review Letters referenced above and attached to this Resolution.

***

DRAFT

DULY PRESENTED AND ADOPTED by the Board of Commissioners at a duly advertised public meeting held this ____ day of _____.

MOTION BY:

SECOND BY: VOTE:

DRAFT

APPLICANT'S ACKNOWLEDGEMENT AND
ACCEPTANCE OF APPROVAL CONDITIONS

Applicant acknowledges and accepts the above approval conditions this ____ day of _____, 2024.

Toll Mid-Atlantic LP Company, Inc.

By: _____

Name: _____

Title: _____

DRAFT

DRAFT

Exhibit "A"
Plan

DRAFT

Exhibit "B"
Review Letters

November 17, 2023

ABINT130030

Mr. Richard Manfredi, Township Manager
Abington Township
1176 Old York Road
Abington, PA 19001

RE: Executive Summary for LD-23-01-711 Fox Chase Road (St. Basil)
PARID: 30-00-22424-00-1/ TMID: 30059 025
PARID: 30-00-22424-00-5/ TMID: 30059 026
Preliminary Major Land Development Plans Review (3rd Submission)

Dear Mr. Manfredi:

We have received a copy of the "Preliminary/Final Major Land Development Plans" consisting of sixty-four (64) sheets dated March 24, 2023, last revised October 13, 2023, and received on October 18, 2023; as prepared by ESE Consultants, Inc., located at 1140 Virginia Drive, in Fort Washington, PA for the above referenced project on behalf of the property owner, Sisters of St. Basil the Great, and the equitable owner, Toll Mid-Atlantic, L.P Company, Inc. (the Applicant).

Under this Preliminary Land Development application, the Applicant is proposing to demolish the existing structures of the former St. Basil Academy School site; and construct a total of 150 age-restricted carriage homes as well as a clubhouse and pool on an existing parcel of land located within the newly created AR – Age Restricted Carriage Home Overlay District. The entire site consists of approx. 46.37 acres and is located within the CS – Community Service Zoning District. Other site improvements for this site include parking, curbing, sidewalk, landscaping, lighting, and sanitary and stormwater management facilities. Access to/from the site will be by way of one (1) proposed entrance off Fox Chase Road. In addition, an emergency access road is proposed off of Fox Chase Road on the northwestern corner of the site.

This project is located within the CS – Community Service Zoning District with the newly created AR – Age Restricted Carriage Home Overlay District being an overlay for the underlying district. The site is fronted by Fox Chase Road to the southwest; residential properties zoned in the R1 – Low Medium Density Residential Zoning District to the north or northeast; residential properties zoned in the R3 – Medium Density Residential Zoning District, as well as the RC – Recreation/Conservation Zoning District, to the southeast; and residential properties zoned in the R4 – High Density Residential Zoning District to the south. In addition, a tributary of the Pennypack Creek traverses from north to south within the eastern corner of the track.

In accordance with the FEMA, Flood Insurance Rate Map (FIRM) Panel No. 42091C0403G, effective March 2, 2016, the tract is identified to be primarily located within Zone X, an area outside the 0.2% chance flood and minimal flood hazard. However, the area where the Pennypack Creek tributary traverses the site is located within Flood Zone X, an area of 0.2% annual chance flood hazard, areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile. Therefore, based on the FEMA FIRM determination, this site is not located within the Floodplain Conservation District, and is therefore not subject to the floodplain regulations of the Floodplain Conservation District. However, per the Abington Township Riparian Corridor Analysis Map, Figure 15.2, this parcel is identified as a parcel which is located within and intersecting the Riparian Corridor; and is therefore, subject to the regulations of the Riparian Corridor Conservation District.

routing the stormwater from the site.

Issues:

The following issues have been identified from the staff reviews as follows:

- Traffic:
  - Coordinate with SEPTA to review existing bus stops in the area and explore possibility of providing shelters and pedestrian connectivity along the site frontage.
  - Provide modifications to the northbound Manor College Drive for proper alignment with the proposed boulevard style site access driveway.
  - Fully modernize the traffic signal in conjunction with the roadway improvements and PennDOT coordination.
  - Provide separate left and right turn lanes on Fox Chase Road at the intersection with the Manor College driveway and the proposed site driveway.
  - Consideration should be given to provide on-street parking spread evenly throughout the development as well as explore traffic calming measures in conjunction with on-street parking such as curb extensions and midblock bump outs.
  - Provide additional details on the clubhouse operations to determine the appropriate amount of parking they may be required.
  - Provide vehicular circulation plans for the Abington Township fire truck and a refuse collection vehicle.

- Dimensional Requirements:
  - Clarify the qualifying open space calculation on the plans.

- Utilities:
  - Include new sanitary sewer system within parcel boundaries as part of the HOA O&M.
  - Revise the fire hydrant and water line location adjacent to the clubhouse between inlets 206 and 212 to not be located directly overtop the underground electric line.
  - Revise the 8" diameter sewer pipes to have a minimum slope of 0.70%. Sanitary manholes with proposed invert in pipe connections less than 3 feet above the invert out should not be constructed as a drop manhole. The slope of the invert in pipe should be increased so that the pipe connects to the manhole 0.20 feet above the invert out elevation.
  - Provide the lateral wyes installed across the 8" diameter sanitary sewers a minimum of 4 feet apart. Tee fittings are prohibited.

- Landscaping:
  - Confirm trees to be removed and provide a tree replacement calculation on the plans. The proposed street tree and buffer trees satisfy the tree replacement requirement.
  - Landscaping notes shall be revised to reflect the best practices as indicated by the STC review.

- Site lighting:
  - Clarification on streetlighting along site frontage.

- Sidewalks & Curbs
  - Recommend additional curb replacement across the entire site frontage to the south.
  - Recommend curbing be provided along the entire site frontage to provide a safety barrier between the edge of the roadway and new sidewalk.

- Stormwater Management:
  - Since project will be disturbing more than 1 acre, a NPDES Permit will be required.

- The Applicant may be able to avoid adding proposed inlet 808 at the Basin 1 emergency spillway by relocating proposed inlet 804 along proposed Road A further downstream of the emergency spillway, prior to the stop bar to capture the flows prior to leaving the site and flowing onto Fox Chase Road. We also recommend relocating proposed inlet 810 at the Basin 2 emergency spillway further down to the base of emergency spillway slope for higher efficiency in capturing the runoff and to allow infiltration prior to being conveyed by the proposed inlet.

Summary:

Since the outstanding zoning comments can be addressed without going before the Zoning Hearing Board, the Applicant would be eligible for Preliminary Major Land Development Plans approval conditioned that the Applicant addresses the above referenced comments, in particular the zoning and traffic comments.

If you have any questions or comments with this submittal, please do not hesitate to contact me.

Sincerely,

PENNONI ASSOCIATES INC.

Khaled R. Hassan, PE
Township Engineer

cc: Terry Castorina, Assistant to the Township Manager
Ashley McIlvaine, Assistant Township Manager & Assistant CAO

U:\ACCOUNTS\ABINT\ABINT130030 - LD-23-01 - 710 FOX CHASE RD (ST. BASIL)\ADMIN\LD-23-01-PC MTG EXEC SUMMARY - ST. BASIL 11.17.23.DOCX

APPLICATION FOR SUBDIVISION/LAND DEVELOPMENT

PROJECT NAME: Sisters of St. Basil

APPLICANT NAME: Toll Mid-Atlantic LP Company, Inc.

TO BE COMPLETED BY THE TOWNSHIP
Submission Information:

Application Number:_____ Date Complete:_____

Project Title:_____ 90 Day Date:_____

File Date:_____ Ward No.:_____

REQUIRED MATERIAL FOR ALL SUBDIVISION/LAND DEVELOPMENT APPLICATIONS:

1. This form **MUST** be completed and submitted.
2. A Subdivision/ Land Development Application MUST include all of the items listed in the application checklist in Section V to be considered complete.
3. Incomplete application will **NOT** be placed on the Planning Commission agenda. Incomplete applications will be returned to the applicant.
4. Complete applications must be received at least 45 DAYS (see schedule) prior to the Planning Commission meeting at which it will be heard.
5. Ten (10) full size paper copies, and one (1) 11x17 reduced copy of the plans, plus three (3) copies of each report or study are to be submitted in the initial submission of the complete application. A digital copy of all submitted documents must be included with the application.

   ***It is highly encouraged to submit applications in a digital format**

I. CONTACT INFORMATION

Applicant Information

Toll Mid-Atlantic LP Company, Inc. c/o Brian Thierrin
Name

1140 Virginia Drive, Fort Washington, PA 19034
Address

215-938-8000 _____
Phone Fax

BThierrin@tollbrothers.com
Email Address

Property Owners Information (if different than applicant)

Sisters of St. Basil the Great
Name

710 Fox Chase Road, Jenkintown, PA 19046
Address

_____ _____
Phone Fax

_____
Email Address

Architect/ Planner

ESE Consultants, Inc., Erin DeRocini, RLA
Name

1140 Virginia Drive, Fort Washington, PA 19034
Address

215-293-5495 _____
Phone Fax

Ederocini@eseconsultants.com
Email Address

Engineer/ Surveyor	ESE Consultants, Inc.; Jeff Madden, P.E. Name 1140 Virginia Drive, Fort Washington, PA 19034 Address
Engineer/ Surveyor Cont'd	215-293-5441 _____ _____ Phone Fax JMadden@eseconsultants.com Email Address
Attorney	Alyson M. Zarro, Esquire Name Riley Riper Hollin & Colagreco 717 Constitution Drive, Suite 201, Exton, PA 19341 Address 610-458-4400 _____ _____ Phone Fax Alyson@rrhc.com Email Address

II. PROJECT INFORMATION

Application Type:

_____Minor Subdivision _____Minor Land Develop. __X__Preliminary Major SD & LD
_____Preliminary Major Subdivision _____Prelim. Major Land Develop. _____Final Major SD & LD
_____Final Major Subdivision _____Final Major Land Develop.

Full street address of the property: 711 Fox Chase Road, Jenkintown, PA 19046

Tax Parcel No.: 30-00-22424-001 30-00-22420-005 County Deed Book No.: 1572 2573 Page No.: 209 0467

Description of Proposed Work: Redevelopment of the property with 150 Age-Restricted Carriage Home Dwelling Units and accessory uses, such as a clubhouse and pool.

Total Tract Acreage: 46.37 acres Project Acreage: _____

Zoning District: AR - Age Restricted Carriage Home Overlay District Existing Number of Lots: 2 Proposed Number of Lots: 150 Units

Existing Sewer Flows: Public Proposed Sewer Flows: Public

Proposed Land Use:

_____Single Family Detached __X__Single Family Attached _____Single Family Semi-Detached
_____Multi-Family _____Commercial _____Office _____Industrial
_____Other (Describe): _____

III. REVIEW

Please complete the following section by circling a response:

• Have you met with the Zoning Officer regarding this plan?	**Yes**	No
• Are there known variances/any zoning relief necessary for this project?*	Yes	**No**
• If YES, have you submitted an application to the Zoning Hearing Board?	Yes	No
• Has this plan been heard by the Zoning Hearing Board?	Yes	No
• Has this plan been submitted to, considered by, or received any formal action by the Planning Commission or Board of Commissioners in the past?	Yes	No

*Please be advised that if any variances are found to be necessary during the course of the review of this plan, you will be required to go to the Zoning Hearing Board prior to proceeding to the Planning Commission. In addition, you will be requested to grant the Township a waiver to the 90-day action period or an immediate denial of this application will be made, and you will be required to resubmit the application.

It is recommended that ALL Land Development and Major Subdivision applications have a pre-submission meeting to discuss the project prior to full application submittal.

Minor Subdivision applications may request a pre-submission meeting; if one is desired.

Meetings are typically held the fourth Tuesday of each month at the Township Administrative Offices.

Applicants assume responsibility of any fees associated with this meeting.

Applicant signature _____ _____

Date

To schedule a pre-submission meeting, please contact the Office of the Township Manager at 267-536-1003 or email TCastorina@abingtonpa.gov

IV. WAIVERS

List of Requested Waivers: Attach separate sheet if required.

Section/Requirement:	**Relief Requested:**
See enclosed Addendum.	

IV. WAIVERS

List of Waivers Requested:

1) **Section 146-11.A(4) Tract boundaries with tax parcel numbers, owner's names and approximate acreage of lots surrounding any portion of the site for a distance of 400 feet.**

   The plan shows the immediately surrounding information for TMP's and names of owners, acreage, and any information the Township Engineer deems necessary. A waiver is requested to not show the all the information of the TMP, names of owners, the approx. acreage, and similar features within 400 feet.

2) **Section 146-11.B(3) The location of property lines and names of landowners within 400 feet of any part of the site to be subdivided or developed.**

   The plan shows the immediately surrounding information for property lines and names of owners and any information the Township Engineer deems necessary. A waiver is requested to not show the all the information of the location of property lines and names of owners, and similar features within 400 feet.

3) **Section 146-11.B(7) The location, size and ownership of all underground and above ground public or private utilities, on the site and within 400 feet of any portion of the site, including waterlines, sanitary sewer lines, storm sewer lines, electric lines, telephone lines, gas mains, fire hydrants and streetlights.**

   All necessary sanitary sewers, storm drains, stormwater features, and similar features for the project to tie into surrounding the site have been obtained. The plan shows the immediately surrounding information for utilities. A waiver is requested to not show the all the information of the underground and above ground utilities, and similar features within 400 feet.

4) **Section 146-27.C Sidewalks shall be located between the curb and right-of-way line, six inches from the property line.**

   A waiver is requested for the sidewalk along Fox Chase Road. The existing locations of the sidewalk along portions of the road are within a few feet of the curb and roadway. The existing location will be repaired/ replaced with a new sidewalk and extended along the entire frontage. The area between the sidewalk and the right-of-way (roughly 12'+) will be used for street tree plantings.

5) **Section 146-27.F Curb design. Curbs shall be the vertical type and constructed in accordance with township specifications.**

   Discussions with the Township Engineer revealed the standard curb is a 6" concrete curb. A waiver is requested for the curbing on the interior roads to be constructed with 6" Belgian Block. The internal roadways will be privately maintained. This variation will help with the subdivision aesthetics and maintenance.

6) **Section 146-29.A Length. In general, all blocks in a subdivision/land development shall have a minimum length of 500 feet and a maximum length of 1,200 feet unless special conditions warrant a variance.**

The internal roads on the subdivision plans are the same layout as the previouslt presented sketch plans.
The following 4 roads are less than the 500' min. length:

- *Road C is approximately 360' from intersection to intersection.*
- *Road D is approximately 470' from intersection to intersection.*
- *Road F is approximately 310' from intersection to intersection.*
- *Road G is approximately 320' from intersection to intersection.*

A waiver is requested to allow for roads less than the 500' minimum length. All roads orientation and lengths have been affected by the layout and the extended buffer around the property.

7) **Section 146-33.I Stormwater roof drains. Stormwater roof drains and pipes shall not discharge water over a sidewalk but shall extend under the sidewalk to the gutter. Where storm drains are accessible, the roof drain shall be connected thereto.**

A waiver is requested to not extend roof leaders to road gutter under sidewalk or connect to storm drains, but to instead allow roof drains to flow over lawn to allow pollutants to settle out and infiltrate into the topsoil. This section of the SALDO is also in conflict with 142-802.A of the Stormwater Management Ordinance.

8) **Section 146-35.C(2) Size, grade and type. Sanitary sewers shall have a minimum inside diameter of eight inches and a minimum grade of 1/2%. Ductile iron pipe shall be used in all cases.**

A waiver is requested to modify the material of the sanitary sewer main to SDR-26 (plastic pipe) from ductile iron. The supply of the SDR-26 is more readily available.

V. SUBMISSION

APPLICATION CHECKLIST

The applicant is responsible for the submission of a complete application. This checklist will aid both the applicant and staff in ensuring that all applications are complete. The following is a per item submission checklist for all Subdivision, Land Development and Conditional Use Applications for the Township of Abington.

- ✓ Application Form: completed and signed by the owner/applicant
- ✓ 10 (ten) copies of the proposed plan, folded to legal file size. Plan should not be smaller than 1" = 50' and not exceed a sheet size of 24"x 36"
- ✓ One (1) reduced copy of the proposed plan, no larger than 11"x17"
- ✓ Two (2) sets of tentative architectural plans for all applications proposing construction or land development
- ✓ One (1) copy of the Recreation Facilities Plan (if required by §146-40)
- ✓ Letter of Sanitary Sewer availability from the Township Wastewater Treatment Department - to be submitted under separate cover
- ✓ Two (2) copies of Sewage Facilities Planning Module Applications - to be submitted under separate cover
- ✓ Letter of Water availability from AQUA PA
- N/A One (1) copy of any previous Zoning Hearing Board decisions related to the subject property
- ✓ One (1) digital copy of all submitted documents
- ✓ Application Fee: Check made payable to the Township of Abington
- ✓ Escrow Fee: Check made payable to the Township of Abington. Separate check from application fee

VI. SIGNATURE

The undersigned represents that to the best of his/her knowledge and belief, all the above statements are true, correct, and complete.

Signature of Applicant — Date: 3/24/23

Signature of Property Owner (if different than applicant) — Date: 3/24/2023

THE FOLLOWING IS FOR INTERNAL USE ONLY:

PAYMENT

____ Application Fee Amount: $_____ Check No.: #_____

____ Review Escrow Fee Amount: $_____ Check No.: #_____

DECISION INFORMATION

Approval _____ Denial_____ Decision Date: _____

Comments/Conditions:_____

_____

_____

_____

_____

PLANNING PROCESS EXTENSION AGREEMENT

FOR

Sisters of St. Basil the Great
PROJECT NAME

The Pennsylvania Municipality Planning Code (MPC) and the Abington Township Subdivision and Land Development Ordinance state that action must be taken by the Township within ninety (90) days after a complete application is filed with the Township. In the Township, complicated, unique, and community impactful projects have or may require additional time in order to complete a thorough review before being considered for approval. As such, an applicant may voluntarily waive the timing requirement at any time, but is encouraged to submit this waiver with the completed application.

I, the applicant, hereby voluntarily waive the timing requirement as set forth in the MPC (Section 53 P.S. 10508) and the Abington Township Subdivision and Land Development Ordinance (Section 146-13). Applicant acknowledges that this waiver can be revoked at any time upon written notice to the Township Manager. The time limitations set forth in 53 P.S. 10508 and Section 146-13 of the Abington Township Code shall be calculated from the date that the written revocation is received by the Township Manager.

Signed: _____ Date: 3/24/23
Applicant

Received: _____ Date: _____
Township

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT PLANS FOR

SISTERS OF ST. BASIL

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA
TAX MAP PARCELS: 30-00-22424-00-1, 30-00-22420-00-5



ZONING MAP
SCALE: 1"=500'

GRAPHIC SCALE
500 0 250 500 1000 2000
(IN FEET)
1 inch = 500 ft.



LOCATION MAP
SCALE: 1"=500'

GRAPHIC SCALE
500 0 250 500 1000 2000
(IN FEET)
1 inch = 600 ft.

TYPE OF WATER SUPPLY - PUBLIC WATER
TYPE OF SEWAGE DISPOSAL - PUBLIC SEWER

OWNER AND APPLICANT:

SISTERS OF ST. BASIL THE GREAT
711 FOX CHASE ROAD
JENKINTOWN, PA. 19046-4198

EQUITABLE OWNER AND APPLICANT:

TOLL MID-ATLANTIC, L.P. COMPANY, INC.
1140 VIRGINIA DRIVE
FORT WASHINGTON, PA 19034
(215) 938-8000

ENGINEER, SURVEYOR, PLANNER, LANDSCAPE ARCHITECT

ESE CONSULTANTS, INC.
1140 VIRGINIA DRIVE
FORT WASHINGTON, PA 19034
(215) 914-2050

ARCHITECT:

TOLL ARCHITECTURE
1140 VIRGINIA DRIVE
FORT WASHINGTON, PA 19034
(215) 938-8000

ATTORNEY:

ALYSON M. ZARRO, ESQ
RILEY RIPER HOLLIN & COLAGRECO
717 CONSTITUTION DRIVE, SUITE 201
EXTON, PA 19341
(610) 458-4400 EXT. 202

NOTE:
PUBLIC WATER TO BE SUPPLIED BY - AQUA, PA.
PUBLIC SEWER TO BE PROVIDED BY - ABINGTON SANITARY SEWER AUTHORITY

STREET INDEX	
PLAN IDENTIFICATION	STREET NAME
ROAD "A"	XXXXX
ROAD "B"	XXXXX
ROAD "C"	XXXXX
ROAD "D"	XXXXX
ROAD "E"	XXXXX
ROAD "F"	XXXXX
ROAD "G"	XXXXX

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

THIS MAP DEPICTS PHYSICAL FEATURES VISIBLE ON THE SURFACE. BELOW GROUND STRUCTURES ARE SHOWN FOR GRAPHIC REPRESENTATION PURPOSES ONLY, ALTHOUGH EFFORTS HAVE BEEN MADE TO ACCURATELY DEPICT THE BELOW GROUND STRUCTURES, EXACT LOCATIONS ARE TO BE VERIFIED BY AND ARE THE RESPONSIBILITY OF PERSON(S) USING THIS MAP.

ALL CONTRACTORS WORKING ON THIS PROJECT SHALL VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK AND SHALL COMPLY WITH THE REQUIREMENTS OF P.L. 852, NO. 287 DECEMBER 10, 1974 AS AMENDED ON DECEMBER 12, 1986, P.L. 1574, NO. 172. PA-ONE CALL SERIAL NUMBER FOR DESIGN PURPOSES ONLY.

PA ONE CALL WAS INITIATED 01-18-2023
SERIAL NO. 20230532913, 20230532932, 20230532933 AND 20230532937.

SHEET INDEX

SUBDIVISION PLANS		
SHEET NO.	REFERENCE NO.	DESCRIPTION
1	SD01.01	COVER SHEET
2-5	RP01.01 - RP01.04	RECORD PLANS
6	SD02.01	GENERAL NOTES
7-10	SD03.01 - SD03.04	EXISTING FEATURES PLANS/ERSAM
11	SD04.01	OVERALL SITE PLAN
12-19	SD05.01 - SD05.08	GRADING PLANS
20-27	SD07.01 - SD07.08	UTILITY PLANS
28-34	SD08.01 - SD08.07	ROAD PLAN & PROFILE
35-39	SD08.08 - SD08.12	EASEMENT PROFILES
40-41	SD09.01 - SD09.02	CONSTRUCTION DETAILS
42-43	SD09.03 - SD09.04	STORM SEWER DETAILS
44-45	SD09.05 - SD09.06	SANITARY SEWER DETAILS
46	SD09.07	WATER DETAILS
47-55	SD09.08 - SD09.16	BASIN DETAILS
56-63	SD10.01 - SD10.08	LANDSCAPE & LIGHTING PLANS
64	SD10.09	LANDSCAPE & LIGHTING DETAILS & NOTES

ESE CONSULTANTS
ENGINEERING • PLANNING • SURVEYING • ENVIRONMENTAL
ESE Consultants, Inc.
1140 Virginia Drive • Fort Washington, PA 19034
T: 215-914-2050

REV.	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

COVER SHEET

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

APPLICATION NUMBER LD-23-01

DATE: 03-24-23 | SCALE: AS NOTED
DESIGN: | DRAWN: EJS
JOB NO.: 7662 | FILE NAME: 7662-S-01-COVER
REF. NO.: SD01.01
SHEET NO.: 1 OF 64

N:\PROJECTS\PENNSYLVANIA\7662-RYDAL ST. BASILS\ENGDEPT\DRAWINGS\7662-S-01-COVER.DWG-Eric Stengel-10/17/2023 11:58 AM

PRELIMINARY/FINAL MAJOR SUBDIVISION AND LAND DEVELOPMENT PLANS FOR

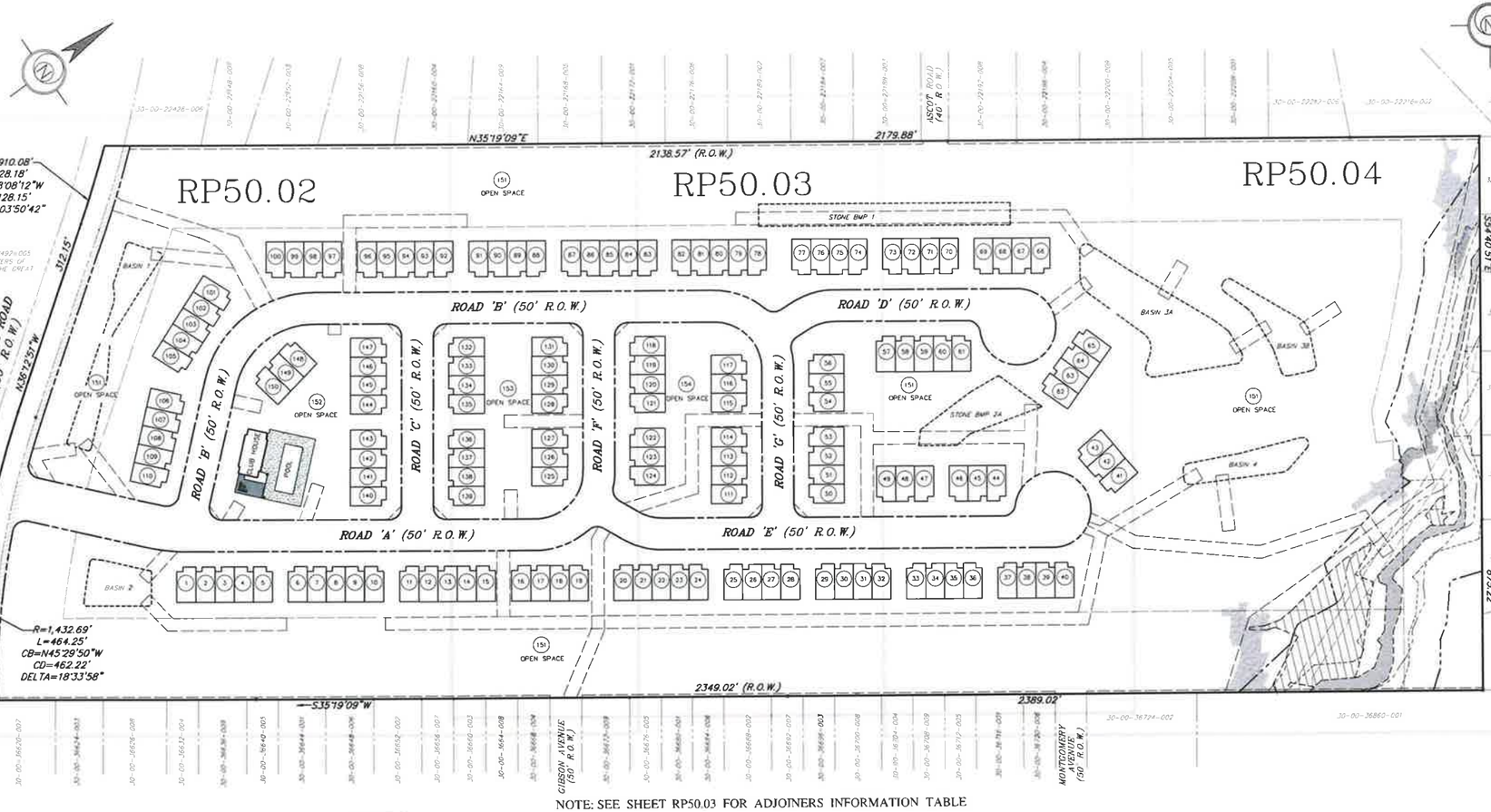
SISTERS OF ST. BASIL

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

TAX MAP PARCELS: 30-00-22424-00-1 AND 30-00-22420-00-5

OWNER AND APPLICANT:
SISTERS OF ST. BASIL THE GREAT
711 FOX CHASE ROAD
ABINGTON, PA 19046-4198

EQUITABLE OWNER AND APPLICANT:
TOLL MD-ATLANTIC, L.P. COMPANY, INC
1140 VIRGINIA DRIVE
FORT WASHINGTON, PA 19034
(215)938-8000



NOTE: SEE SHEET RP50.03 FOR ADJOINERS INFORMATION TABLE



LOCATION MAP
SCALE: 1"=800'

GENERAL NOTES:

1. DESIGN ENGINEER, SURVEYOR, PLANNER, LANDSCAPE ARCHITECT
ESE CONSULTANTS, INC
1140 VIRGINIA DRIVE
FORT WASHINGTON, PA 19034
215/914-2050
2. WETLANDS CONSULTANT
ESE CONSULTANTS, INC
1140 VIRGINIA DRIVE
FORT WASHINGTON, PA 19034
215/914-2050
3. WETLAND PRELIMINARY JURISDICTION DETERMINATION WAS OBTAINED ON SEPTEMBER 1, 2022 (NAP-2022-00532-1E).
4. FLOODPLAIN SHOWN ON THE PLAN HAS BEEN TAKEN FROM THE FLOOD INSURANCE RATE MAP (FIRM), MAP NUMBER 42091C0136E, EFFECTIVE DATE MARCH 2, 2016.
5. SOILS SHOWN WERE TAKEN FROM "SOIL SURVEY, MONTGOMERY COUNTY, PENNSYLVANIA", PREPARED BY THE NATURAL RESOURCE CONSERVATION SURVEY, DATED NOVEMBER 22, 2021.
6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT ABINGTON TOWNSHIP CODES, SPECIFICATIONS AND THE ENGINEERING AND CONSTRUCTION STANDARDS.
7. THE EXISTING LAND USE IS A PARKING LOT AND SCHOOL WITH ATHLETIC FIELDS. THE PROPOSED USE IS ONE HUNDRED FIFTY (150) AGE RESTRICTED CARRIAGE HOME DWELLING UNITS (SINGLE FAMILY ATTACHED), PROPOSED ROADS, UTILITIES AND OPEN SPACE PARCELS.
8. THESE PLANS WERE PREPARED PER ABINGTON TOWNSHIP, STORMWATER MANAGEMENT ORDINANCE, SUBDIVISION AND LAND DEVELOPMENT ORDINANCE AND THE ZONING AND PLANNED RESIDENTIAL DEVELOPMENT ORDINANCE, AS LAST AMENDED.
9. THE EXISTING LAND USE IS A SCHOOL WITH A PARKING LOT AND ATHLETIC FIELDS WITH ACCESSORY STRUCTURES AND OUTBUILDINGS. THE PROPOSED LAND USE IS FOR ONE HUNDRED AND FIFTY (150) CARRIAGE HOMES, PROPOSED ROADS, UTILITIES, CLUBHOUSE AND OPEN SPACE PARCELS.
10. FURTHER SUBDIVISION OF ANY OF THE LOTS, BOTH PRIVATE LOTS AND OPEN SPACE LOTS IN THIS SUBDIVISION IS PROHIBITED.
11. THE PROPOSED ROADS SHALL BE OWNED AND MAINTAIN BY THE HOMEOWNERS ASSOCIATION. ROADS TO BE BUILT TO TOWNSHIP STANDARDS. THE HOMEOWNER ASSOCIATION WILL MAINTAIN STORM SEWER, SIDEWALK, CURBING AND ROADS WITHIN THE RIGHT OF WAYS.
12. OFFER OF DEDICATION TO THE ULTIMATE RIGHTS-OF-WAY LINE ON FOX CHASE ROAD AND SHALL RUN IN PERPETUITY IN FAVOR OF THE APPLICABLE GOVERNMENT AUTHORITY.
13. PROPOSED LOTS TO BE SERVED BY PUBLIC WATER AND PUBLIC SEWER.
14. THE LOCATION OF THE HOUSES AND DRIVEWAYS AS SHOWN ON THE PLAN ARE FOR ILLUSTRATION AND PLANNING PURPOSES ONLY. THE APPLICANT RESERVES THE RIGHT TO MODIFY THE HOUSE SIZE, SHAPE AND LOCATION AT THE TIME OF BUILDING PERMIT APPLICATION.
15. STATE OR TOWNSHIP ROAD OCCUPANCY PERMITS, AS APPLICABLE, TO BE OBTAINED AS NECESSARY.
16. NO TREES, SHRUBS, FENCES, SIGNS, STRUCTURE OD ANY TYPE OR ANY OTHER OBSTRUCTION SHALL BE PLACED, PLANTED, SET OR PUT WITHIN THE AREA OF A EASEMENT. THE AREA SHALL BE KEPT AS LAWN.
17. SIGHT TRIANGLE
   A. CLEAR SIGHT TRIANGLES SHALL BE PROVIED AT ALL STREET INTERSECTIONS. WITHIN SUCH TRIANGLES, NO VISION OBSTRUCTING OBJECTS SHALL BE PERMITTED WHICH OBSCURES VISION ABOVE THE HEIGHT OF THIRTY (30) INCHES AND BELOW TEN (10) FEET MEASURED FROM THE CENTERLINE GRADE OF INTERSECTING STREETS.
18. ALL CONTRACTORS WORKING ON THIS PROJECT SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION ACTIVITIES RELATED TO THIS PROJECT ARE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE OSHA (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION) STANDARDS.
19. THE DEVELOPER, ITS SUCCESSORS AND ASSIGNS, HEREBY RESERVES THE RIGHT TO ENTER UPON, EACH AND EVERY LOT AND AREA OF THE SUBDIVISION/DEVELOPMENT DEPICTED HEREON, WHETHER PRIOR OR SUBSEQUENT TO CONVEYANCE OF ANY LOT, UNTIL EXPIRATION OF THE STATUTORY MAINTENANCE PERIOD FOLLOWING DEDICATION OF PUBLIC IMPROVEMENTS AS SET FORTH AT SECTION 509 OF THE PENNSYLVANIA MUNICIPALITIES PLANNING CODE, AS AMENDED, 53 P.S. 10509, FOR THE PURPOSE OF COMPLETING ANY LANDSCAPING AS REQUIRED BY THE MUNICIPALITY AND FURTHER TO MAKE SUCH MODIFICATIONS IN GRADING AND/OR DRAINAGE IMPROVEMENTS ON ANY LOT AS MAY BE NECESSARY IN THE DISCRETION OF THE DEVELOPER, ITS SUCCESSORS AND ASSIGNS AND/OR THE TOWNSHIP ENGINEER FOR SATISFACTORY STORM WATER MANAGEMENT.
20. THE SWM FACILITIES SHOWN ON THESE PLANS ARE A BASIC AND PERPETUAL PART OF THE STORM DRAINAGE SYSTEM OF ABINGTON, AND AS SUCH IS TO BE PROTECTED AND PRESERVED, IN ACCORDANCE WITH THE APPROVED FINAL PLANS BY THE OWNERS OF THOSE LANDS WHERE THE STRUCTURE(S) ARE LOCATED. WHERE THE MAINTENANCE OF STORMWATER RETENTION FACILITIES IS THE RESPONSIBILITY OF THE INDIVIDUAL LOT OWNER, A HOMEOWNERS ASSOCIATION OR SIMILAR ENTITY, AND IN THE EVENT THAT THE PARTY OR PARTIES RESPONSIBLE FOR THE MAINTENANCE OF THE STORMWATER RETENTION FACILITIES OR PRIVATE STREETS IN THE DEVELOPMENT FAIL TO PROPERLY MAINTAIN SAID FACILITIES, THE TOWNSHIP MAY, BUT SHALL NOT BE OBLIGATED TO, PROVIDE SAID PARTIES WITH 30 DAYS NOTICE OF THE TOWNSHIP'S INTENTION TO PERFORM SAID MAINTENANCE OR REPAIR. IN THE EVENT THAT SAID PARTIES DO NOT PERFORM OR COMMENCE TO PERFORM SAID MAINTENANCE OR REPAIR WITHIN THE 30 DAY NOTICE PERIOD, THE TOWNSHIP MAY, PERFORM SAID MAINTENANCE OR REPAIR AND CHARGE THE BUT SHALL NOT BE OBLIGATED TO, PERFORM SAID MAINTENANCE OR REPAIR AND CHARGE THE COST THEREOF, INCLUDING ANY FEES OF THE TOWNSHIP PROFESSIONALS, PROPORTIONATELY TO EACH OF THE HOMEOWNERS IN THE DEVELOPMENT AND MAY FILE A LIEN AGAINST THE PROPERTY OF THE HOMEOWNER UNTIL SUCH AMOUNTS ARE FULLY REIMBURSED TO THE TOWNSHIP.
21. THE PROPOSED SWM FACILITIES HAVE BEEN DESIGNED TO ACCOMMODATE THE MAX. ALLOWABLE (50%) IMPERVIOUS SURFACE FOR HOUSE BOX.
22. THE APPLICANT/OWNER OF THIS PROPERTY ACKNOWLEDGES THE REQUIREMENT TO COMPLY WITH ALL STATE AND FEDERAL REGULATIONS REGARDING THE DISTURBANCE OF WETLANDS. ANY IMPROVEMENTS WHICH CANNOT BE COMPLETED AS SHOWN SHALL BE AMENDED TO THE SATISFACTION OF THE TOWNSHIP AND SHALL BE DEPICTED ON REVISED PLANS WHICH SHALL BE SUBMITTED TO THE TOWNSHIP FOR REVIEW. THE APPLICANT/OWNER OF THIS PROPERTY ACCEPTS ALL RESPONSIBILITY WITH RESPECT TO STATE AND FEDERAL REGULATIONS.
23. ALL IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS PROVIDED IN THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE OR OTHER SPECIFICATIONS OF THE TOWNSHIP, THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION, PENNDOT PUBLICATION 408, AS AMENDED, THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION STANDARDS, AS AMENDED, PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OR THE AUTHORITY HAVING JURISDICTION OVER SAID IMPROVEMENTS.
24. AN NPDES PERMIT IS REQUIRED FOR THIS PROJECT FROM THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION.
25. THE SPEED LIMIT WITHIN THIS DEVELOPMENT IS TO BE POSTED AT 20 M.P.H.
26. THE APPLICANT RESERVES THE RIGHT TO CONSTRUCT LANDSCAPE TOPSOIL BERMS WITHIN OPEN SPACE AND BUFFER YARDS.
27. BLANKET EASEMENT FOR ALL STORMWATER MANAGEMENT FACILITIES.
28. A CONDITIONAL USE APPROVAL ON JULY 13, 2023 WAS RECEIVED FOR THE ZONE 2 DISTURBANCE TO CONNECT THE SITE SANITARY SEWER TO THE EXISTING SANITARY SEWER LINE.

AREA TABULATION - SISTERS OF ST. BASIL:

TOTAL SITE AREA:	2,019,856 SQ. FT. OR	46.370 ACRES
ROAD A ROW AREA:	50,023 SQ. FT. OR	1.148 ACRES
ROAD B ROW AREA:	56,102 SQ. FT. OR	1.288 ACRES
ROAD C ROW AREA:	15,796 SQ. FT. OR	0.363 ACRES
ROAD D ROW AREA:	26,461 SQ. FT. OR	0.653 ACRES
ROAD E ROW AREA:	45,345 SQ. FT. OR	1.041 ACRES
ROAD F ROW AREA:	16,073 SQ. FT. OR	0.369 ACRES
ROAD G ROW AREA:	16,225 SQ. FT. OR	0.372 ACRES
FOX CHASE ROAD LEGAL ROW AREA:	27,139 SQ. FT. OR	0.623 ACRES
FOX CHASE ROAD DEDICATED ROW AREA:	9,048 SQ. FT. OR	0.208 ACRES
TOTAL ENCROACHMENT AREA:	26,577 SQ. FT. OR	0.610 ACRES
OPEN SPACE LOT 151 AREA:	1,505,948 SQ. FT. OR	34.572 ACRES*
OPEN SPACE LOT 152 AREA:	82,151 SQ. FT. OR	1.886 ACRES**
OPEN SPACE LOT 153 AREA:	70,865 SQ. FT. OR	1.627 ACRES***
OPEN SPACE LOT 154 AREA:	70,101 SQ. FT. OR	1.609 ACRES****
TOTAL OPEN SPACE:	1,729,065 SQ. FT. OR	39.694 ACRES

*OPEN SPACE LOT 151 INCLUDES CARRIAGE LOTS 1 THROUGH 110
**OPEN SPACE LOT 152 INCLUDES CARRIAGE LOTS 140 THROUGH 150 AND CLUBHOUSE
***OPEN SPACE LOT 153 INCLUDES CARRIAGE LOTS 125 THROUGH 139
****OPEN SPACE LOT 154 INCLUDES CARRIAGE LOTS 11 THROUGH 124

GRAPHIC SCALE

100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

CERTIFICATION OF ACCURACY

I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE THAT THE THE PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE LAND SUBDIVISION REGULATIONS OF THE TOWNSHIP OF ABINGTON.

THOMAS B. HENDRICKS
PA LICENSE NO. SU-044552-E

SURVEYOR CERTIFICATION

I HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL LAND SURVEYOR, LICENSED IN COMPLIANCE WITH THE LAWS OF THE COMMONWEALTH OF PENNSYLVANIA; THAT TO THE BEST OF MY KNOWLEDGE THIS IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE LAND SUBDIVISION REGULATIONS OF THE TOWNSHIP OF ABINGTON.

THOMAS B. HENDRICKS, P.L.S.
PA LICENSE NO. SU-044552-E

COUNTY RECORDER OF DEEDS:

RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS IN NORRISTOWN, PENNSYLVANIA, IN PLAN BOOK_____ PAGE NO._____ ON THIS____DAY OF_____ 2023.

COUNTY RECORDER OF DEEDS

FIRE HYDRANTS AND STREETLIGHTS ARE TO BE INSTALLED AT THE EXPENSE IF THE SUBDIVIDER/LAND DEVELOPER IN ACCORDANCE WITH THE TOWNSHIP STANDARDS AND WITH THE RECOMMENDATIONS OF THE RESPECTIVE UTILITY COMPANIES, SUBJECT TO THE APPROVAL OF THE BOARD OF COMMISSIONERS.

STREETLIGHTS AND STREET NAME SIGNS ARE TO BE INSTALLED AT THE EXPENSE OF THE SUBDIVIDER/LAND DEVELOPER IN ACCORDANCE WITH TOWNSHIP STANDARDS AND DEDICATED TO THE TOWNSHIP.

THE PHILADELPHIA ELECTRIC COMPANY AND BELL TELEPHONE COMPANY OF PENNSYLVANIA ARE GRANTED THE RIGHT TO CONSTRUCT, MAINTAIN AND REPAIR POLE LINES AND UNDERGROUND EQUIPMENT ON, UNDER AND ACROSS LOTS, AND THIS SHALL BE SO RECITED IN ALL DEED DESCRIPTIONS, TOGETHER WITH THE RIGHT TO CONSTRUCT, MAINTAIN AND REPAIR POLE LINES AND UNDERGROUND EQUIPMENT ON, UNDER AND ACROSS ALL HIGHWAYS IN THIS TRACT.

WHERE A PLAN REQUIRES ACCESS TO A HIGHWAY WHICH IS UNDER THE JURISDICTION OF THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION, A HIGHWAY OCCUPANCY PERMIT IS REQUIRED BY SECTION 420 P.L. 1242, NO. 428 KNOWN AS THE STATE HIGHWAY LAW, BEFORE DRIVEWAY ACCESS TO A HIGHWAY IS PERMITTED OR CONSTRUCTED. WHERE A PLAN REQUIRES ACCESS TO A HIGHWAY WHICH IS UNDER THE JURISDICTION OF THE MONTGOMERY COUNTY, IT SHALL INCLUDE THE FOLLOWING NOTATION: "A DIVISION OF THE MONTGOMERY COUNTY PUBLIC WORKS BEFORE DRIVEWAY ACCESS TO A COUNTY HIGHWAY IS PERMITTED OR CONSTRUCTED."

WHEN THE INSTALLATION OF CURBS OR SIDEWALKS IS WAIVED FOR A PARTICULAR DEVELOPMENT PLAN, CURBS AND/OR SIDEWALKS MAY BE REQUIRED TO BE INSTALLED BY SUBSEQUENT LANDOWNERS AT THEIR EXPENSE, BY DIRECTION OF THE BOARD OF COMMISSIONERS.

OTHER NOTATIONS AS REQUIRED BY THIS CHAPTER AND THE BOARD OF COMMISSIONERS.

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF MONTGOMERY

EQUITABLE OWNER/CORPORATE CERTIFICATION

I DO HEREBY CERTIFY THAT TOLL MD-ATLANTIC L.P. COMPANY, INC., A DELAWARE CORPORATION IS THE REGISTERED EQUITABLE OWNER AND APPLICANT OF THE LAND HEREIN SUBDIVIDED, PROPOSED TO BE DEVELOPED AND THAT IT DOES ADOPT THIS PLAN AND DESIRE THE SAME TO BE RECORDED.

BY _____
BRIAN THIERRIN
SENIOR VICE PRESIDENT

T.M.P. NO. 30-00-22424-00-1 AND 30-00-22420-00-5

NOTARY PUBLIC
COMMONWEALTH OF PENNSYLVANIA
COUNTY OF MONTGOMERY

ON THIS _____ DAY OF _____, 2023, BEFORE ME THE UNDERSIGNED NOTARY PUBLIC, PERSONALLY APPEARED BRIAN THIERRIN, WHO ACKNOWLEDGED HIMSELF TO BE SENIOR VICE PRESIDENT OF TOLL MD-ATLANTIC, L.P. COMPANY, INC., A DELAWARE CORPORATION, AND HE AS SUCH OFFICER BEING AUTHORIZED TO DO SO, HAS EXECUTED THE FOREGOING PLAN BY SIGNING HIS NAME AS SUCH OFFICER

IN WITNESS WHEREOF, I HEREUNDER SET MY HAND AND OFFICIAL SEAL.

NOTARY PUBLIC _____

MY COMMISSION EXPIRES: _____

CERTIFICATE OF MUNICIPAL APPROVAL

APPROVED BY THE BOARD OF COMMISSIONERS OF THE TOWNSHIP OF ABINGTON
THIS____DAY OF_____ 2023

_____
PRESIDENT

ATTEST: _____
SECRETARY

MONTGOMERY COUNTY PLANNING COMMISSION

PROCESSED AND REVIEWED _____
A REPORT HAS BEEN PREPARED BY THE MONTGOMERY COUNTY PLANNING COMMISSION IN ACCORDANCE WITH THE MUNICIPALITIES PLANNING CODE.
CERTIFIED THIS DATE: _____

_____
FOR THE DIRECTOR

TOWNSHIP ENGINEER CERTIFICATION

THIS PLAN HAS BEEN REVIEWED BY THE ABINGTON TOWNSHIP ENGINEER IN ACCORDANCE WITH THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE AT THE TIME OF SUBDIVISION.

_____ _____
ENGINEER DATE

CAUTION:
IF THIS DOCUMENT DOES NOT CONTAIN THE ORIGINAL SEAL OF THE PROFESSIONAL LAND SURVEYOR, IT IS NOT AN AUTHORIZED ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED.

THOMAS B. HENDRICKS
PROFESSIONAL LAND SURVEYOR
PA LICENSE NO. SU-044552-E

ESE CONSULTANTS
ENGINEERING • PLANNING • SURVEYING • ENVIRONMENTAL
ESE Consultants, Inc.
1140 Virginia Drive • Fort Washington, PA 19034
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REV.	DATE	DESCRIPTION	DRAWN
1	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	KMS
2	11/13/23	TOWNSHIP REVIEW LETTERS	KMS

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

RECORD PLAN
(RECORD SHEET 1 OF 4)

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 03/24/23	SCALE: 1"=100'
DESIGN: JMM	DRAWN: KMS
JOB NO.: 7562	FILE NAME: RP50.01
REF. NO.: RP50.01	
SHEET NO.: 2 OF 64	

ZONING TABLE:

TAX MAP PARCEL NO.: 30-00-22424-00-1 AND 30-00-22420-00-5
TOTAL TAX PARCEL AREA: 46.37 ACRES
ZONING DISTRICT: CS- COMMUNITY SERVICE WITH AR-AGE RESTRICTED CARRIAGE HOME OVERLAY DISTRICT
PROPOSED USE: H-13 AGE RESTRICTED CARRIAGE HOMES SINGLE FAMILY ATTACHED DWELLINGS

TOTAL SITE AREA:	46.37 ACRES
EXISTING ROW AREA:	0.62 ACRES
60' ROW DEDICATED AREA:	0.21 ACRES
ENCROACHMENT EASEMENT AREA:	0.62 ACRES
GROSS SITE AREA:	44.92 ACRES

TOTAL NUMBER OF PROPOSED UNITS: 150 SINGLE FAMILY ATTACHED (CARRIAGES)

	EXISTING	REQUIRED	PROVIDED
MINIMUM SITE AREA:	46.58 AC.	40.0 AC.	46.37 AC.
MINIMUM SETBACK FROM ULTIMATE ROW:	100'	100'	100'
MINIMUM SETBACK FROM OTHER TRACT BOUNDARY LINES	125'	125'	125'
DWELLING SETBACK FROM FACE OF CURB/ EDGE OF CARTWAY	>50'	30'	>30'
MAXIMUM BUILDING AREA*	<25%	25% (11.23 AC.)	19.8% (8.89 AC.)
MAXIMUM IMPERVIOUS*	<50%	50% (22.46 AC.)	35.6% (15.99 AC.)
MINIMUM GREEN AREA*	>50%	50% (22.46 AC.)	64.4% (28.93 AC.)
MINIMUM OPEN SPACE*	>40%	40% (17.97 AC.)	50.5% (22.60 AC.)
MAXIMUM DENSITY*	N/A	3.4 DU/AC.	3.34 DU/AC.
*USING GROSS SITE AREA			
PARKING REQUIREMENTS (2 PER UNIT) PLUS ½ SPACE/UNIT OVERFLOW		300 IN DRIVEWAYS 38 OVERFLOW	300 IN DRIVEWAYS 42 OVERFLOW**
CLUBHOUSE PARKING (USE A-6):	N/A	N/A	12 (INCL. 1 H.C. SPACE)
MAXIMUM UNIT WIDTH:		6 UNITS	6 OR LESS UNITS
MINIMUM UNIT WIDTH:	N/A	3 UNITS	3 PLUS UNITS
BUILDING TO BUILDING SEPARATION:			
SIDE TO SIDE:	N/A	20'	>20'
MAX. HEIGHT:	N/A	35' MAX	<35'
MAX. CARRIAGE HOME LENGTH:	N/A	160'	<160'
AGE RESTRICTED CARRIAGE HOMES:			
MINIMUM WIDTH:	N/A	28'	28'
MINIMUM DEPTH:	N/A	50'	50'+

*PARKING PROVIDED FOR 2 VEHICLES IN GARAGE, 2 VEHICLES IN DRIVEWAY, AND ON-STREET STALLS. SINGLE CAR GARAGE MAY NOT BE UTILIZED AS REQUIRED PARKING SPACES, UNLESS A BASEMENT IS PROVIDED.

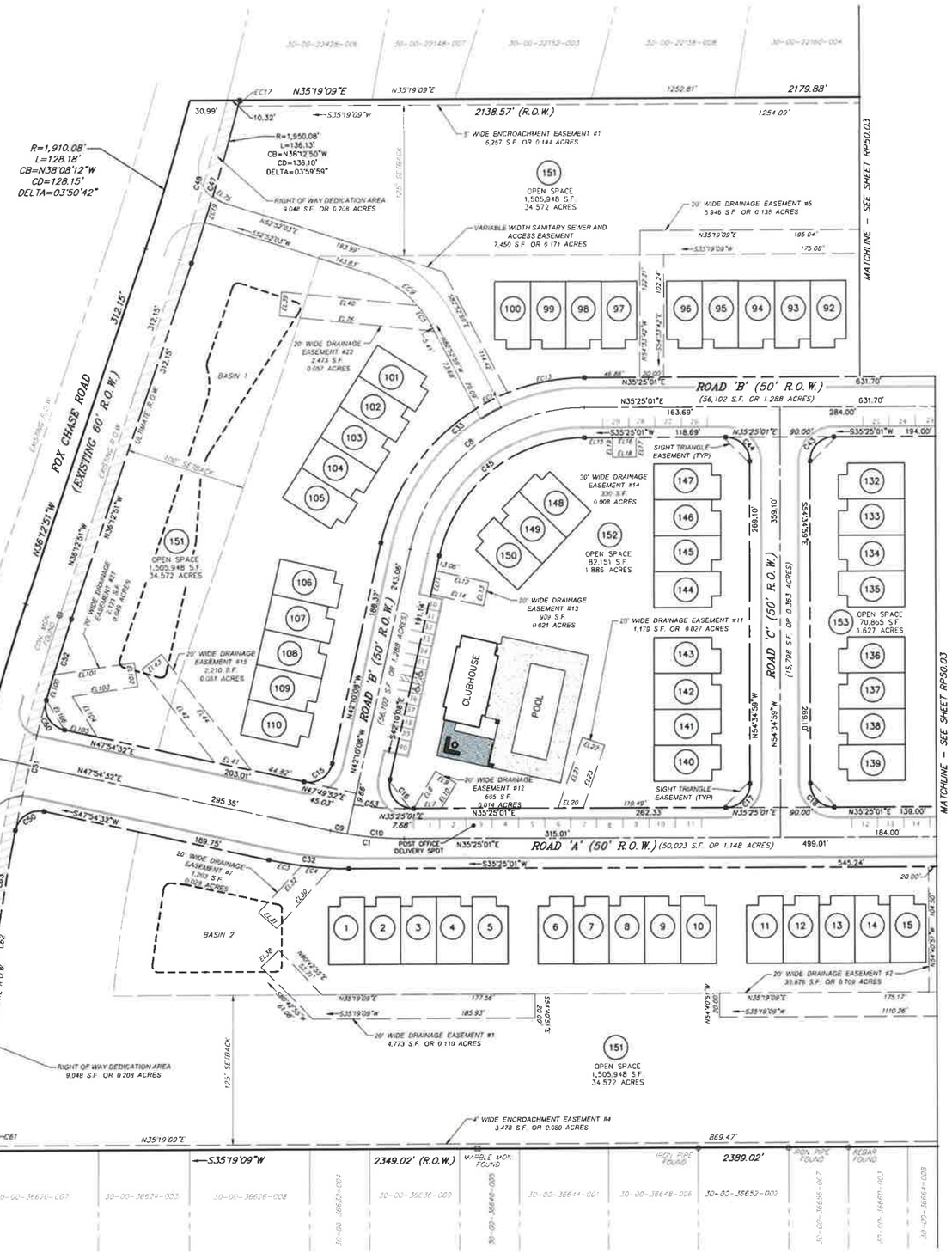
**OVERFLOW PARKING INCLUDES 39 PARKING SPACES, 2 HANDICAP SPACES AND 1 POST OFFICE SPOT.

LEGEND:

- MONUMENT TO BE SET
- MONUMENT FOUND
- IRON PIN/PIPE FOUND
- (50) PROPOSED LOT NUMBER
- BUILDING SETBACK LINE
- PROPOSED CENTER LINE
- STREAM LINE
- PROPOSED PROPERTY LINE
- PROPOSED R.O.W.
- OUTBOUND LINE
- ZONING BOUNDARY LINE
- PROPOSED EASEMENT
- TOWNSHIP RIPARIAN BUFFER – ZONE 1
- TOWNSHIP RIPARIAN BUFFER – ZONE 2
- STEEP SLOPES 15% TO 25%
- STEEP SLOPES > 25%
- WETLANDS LIMIT
- WATERS OF THE U.S.
- FLOODPLAIN (ZONE X)

30-00-22492-005 N/F SISTERS OF ST. BASIL THE GREAT

EASEMENT LINE TABLE		
LINE	BEARING	DISTANCE
EL7	S35°25'01"W	23.29'
EL8	N23°45'18"W	36.20'
EL9	N66°14'42"E	20.00'
EL10	S23°45'18"E	24.26'
EL11	N42°10'08"W	20.00'
EL12	N47°49'52"E	45.47'
EL13	S42°10'08"E	20.00'
EL14	S47°49'52"W	45.47'
EL15	N35°25'01"E	23.82'
EL16	N35°25'01"E	20.00'
EL17	S54°34'59"E	16.50'
EL18	S35°25'01"W	20.00'
EL19	N54°34'59"W	16.50'
EL20	S35°25'01"W	21.15'
EL21	N35°37'41"W	62.38'
EL22	N54°22'19"E	20.00'
EL23	S35°37'41"E	55.51'
EL30	S12°11'54"E	67.98'
EL31	S77°48'06"W	20.00'
EL32	N12°11'54"W	52.72'
EL38	N09°17'05"W	20.00'
EL39	N48°46'46"W	20.00'
EL40	N41°13'14"E	114.75'
EL41	S47°54'32"W	31.20'
EL42	S87°46'16"W	98.51'
EL43	N02°13'44"W	20.00'
EL44	N87°46'16"E	122.47'
EL75	N68°58'58"E	9.45'
EL76	S41°13'14"W	131.10'
EL100	N38°40'10"W	21.97'
EL101	N26°54'34"E	67.15'
EL102	S63°05'25"E	20.00'
EL103	S26°54'34"W	54.58'
EL104	S85°36'22"E	39.71'
EL105	S47°54'32"W	27.58'
EL106	N85°36'22"W	29.01'



EASEMENT CURVE TABLE						
CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE	TANGENT
EC3	310.00'	27.72'	27.71'	S45°20'49"W	5°07'26"	13.87'
EC4	310.00'	25.16'	25.16'	S40°27'34"W	4°39'03"	12.59'
EC5	90.00'	20.49'	20.45'	N89°24'18"W	13°02'38"	10.29'
EC9	90.00'	69.51'	67.79'	N74°59'32"E	44°14'58"	36.59'
EC13	175.00'	66.31'	65.92'	N24°33'41"E	21°42'40"	33.56'
EC14	175.00'	30.05'	30.01'	N08°47'12"E	9°50'18"	15.06'
EC17	1950.08'	5.16'	5.16'	S40°17'22"E	0°09'06"	2.58'
EC19	1950.08'	22.62'	22.62'	N37°35'50"W	0°39'53"	11.31'

CURVE TABLE						
CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE	TANGENT
C1	285.00'	62.14'	62.01'	S41°39'46"W	12°29'32"	31.18'
C8	150.00'	203.12'	187.95'	S03°22'34"E	77°35'09"	120.57'
C9	285.00'	14.49'	14.49'	S46°27'09"W	2°54'47"	7.25'
C10	285.00'	47.65'	47.59'	S40°12'23"W	9°34'44"	23.88'
C15	20.00'	31.44'	28.30'	S82°52'12"W	90°04'40"	20.03'
C16	20.00'	35.75'	31.18'	S86°37'26"W	102°24'51"	24.88'
C17	20.00'	31.42'	28.28'	S09°34'59"E	90°00'00"	20.00'
C18	20.00'	31.42'	28.28'	S80°25'01"W	90°00'00"	20.00'
C32	310.00'	67.59'	67.45'	N41°39'46"E	12°29'32"	33.93'
C33	175.00'	236.97'	219.28'	S03°22'34"E	77°35'09"	140.67'
C43	20.00'	31.42'	28.28'	N09°34'59"W	90°00'00"	20.00'
C44	20.00'	31.42'	28.28'	N80°25'01"E	90°00'00"	20.00'
C45	125.00'	169.27'	156.63'	N03°22'34"W	77°35'09"	100.48'
C46	1392.69'	269.05'	268.63'	S49°14'55"E	11°04'08"	134.94'
C47	1950.08'	141.29'	141.26'	S38°17'23"E	4°09'05"	70.68'
C48	1940.08'	138.01'	137.98'	N38°15'07"W	4°04'33"	69.04'
C49	1402.69'	454.58'	452.59'	N45°29'54"W	18°34'06"	229.30'
C50	20.00'	31.98'	28.68'	S02°05'30"W	91°37'24"	20.57'
C51	1392.69'	111.64'	111.61'	S41°25'04"E	04°35'35"	55.85'
C52	1392.69'	91.72'	91.71'	S38°06'03"E	3°46'25"	45.88'
C53	260.00'	42.23'	42.18'	S40°04'12"W	9°18'22"	21.16'
C60	20.00'	32.45'	29.01'	S85°36'22"E	92°58'11"	21.06'
C61	1392.69'	4.00'	4.00'	S54°42'03"E	0°09'52"	2.00'
C62	1392.69'	265.05'	264.65'	N49°09'59"W	10°54'15"	132.93'
C63	1392.69'	451.36'	449.38'	N45°29'55"W	18°34'08"	227.67'

AREA TABULATION - SISTERS OF ST. BASIL:

TOTAL SITE AREA:	2,019,856 SQ. FT. OR 46.370 ACRES
ROAD A ROW AREA:	50,023 SQ. FT. OR 1.148 ACRES
ROAD B ROW AREA:	56,102 SQ. FT. OR 1.288 ACRES
ROAD C ROW AREA:	15,796 SQ. FT. OR 0.363 ACRES
ROAD D ROW AREA:	28,461 SQ. FT. OR 0.653 ACRES
ROAD E ROW AREA:	45,345 SQ. FT. OR 1.041 ACRES
ROAD F ROW AREA:	16,073 SQ. FT. OR 0.369 ACRES
ROAD G ROW AREA:	16,225 SQ. FT. OR 0.372 ACRES
FOX CHASE ROAD LEGAL ROW AREA:	27,139 SQ. FT. OR 0.623 ACRES
FOX CHASE ROAD DEDICATED ROW AREA:	9,048 SQ. FT. OR 0.208 ACRES
TOTAL ENCROACHMENT AREA:	26,577 SQ. FT. OR 0.610 ACRES
OPEN SPACE LOT 151 AREA:	1,505,948 SQ. FT. OR 34.572 ACRES*
OPEN SPACE LOT 152 AREA:	82,151 SQ. FT. OR 1.886 ACRES**
OPEN SPACE LOT 153 AREA:	70,865 SQ. FT. OR 1.627 ACRES***
OPEN SPACE LOT 154 AREA:	70,101 SQ. FT. OR 1.609 ACRES****
TOTAL OPEN SPACE:	1,729,065 SQ. FT. OR 39.694 ACRES

*OPEN SPACE LOT 151 INCLUDES CARRIAGE LOTS 1 THROUGH 110
**OPEN SPACE LOT 152 INCLUDES CARRIAGE LOTS 140 THROUGH 150 AND CLUBHOUSE
***OPEN SPACE LOT 153 INCLUDES CARRIAGE LOTS 125 THROUGH 139
****OPEN SPACE LOT 154 INCLUDES CARRIAGE LOTS 11 THROUGH 124

GRAPHIC SCALE

50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

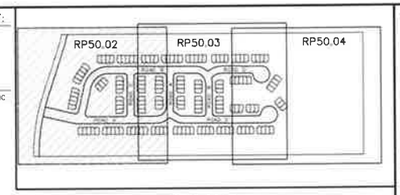
SURVEYOR CERTIFICATION

I HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL LAND SURVEYOR, LICENSED IN COMPLIANCE WITH THE LAWS OF THE COMMONWEALTH OF PENNSYLVANIA: THAT TO THE BEST OF MY KNOWLEDGE THIS IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE LAND SUBDIVISION REGULATIONS OF THE TOWNSHIP OF ABINGTON.

THOMAS B. HENDRICKS, P.L.S.
PA LICENSE NO. SU-044552-E

OWNER AND APPLICANT:
SISTERS OF ST. BASIL THE GREAT
711 FOX CHASE ROAD
ABINGTON, PA 19046-4198

EQUITABLE OWNER AND APPLICANT:
TOLL MID-ATLANTIC, L.P. COMPANY, INC.
1140 VIRGINIA DRIVE
FORT WASHINGTON, PA 19034
(215)938-8000



KEY MAP
N.T.S.

CAUTION:
THIS DOCUMENT DOES NOT CONTAIN A RAISED SEAL OF THE PROFESSIONAL AND MAY HAVE BEEN ALTERED

THOMAS B. HENDRICKS
PROFESSIONAL LAND SURVEYOR
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ESE CONSULTANTS
ENGINEERING • PLANNING • SURVEYING • ENVIRONMENTAL
ESE Consultants, Inc.
1140 Virginia Drive • Fort Washington, PA 19034
T: 215-914-2050

REV.#	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	KMS
1	7/24/23	TOWNSHIP REVIEW LETTERS	KMS

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT–NOT TO BE RECORDED

RECORD PLAN
(RECORD SHEET 2 OF 4)

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 03/24/23	SCALE: 1"=50'
DESIGN: JMH	DRAWN: KMS
JOB NO.: 7662	FILE NAME: RP50.02
REF. NO.: RP50.02	
SHEET NO.: 3 OF 64	



CURVE TABLE						
CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE	TANGENT
C2	100.00'	157.08'	141.42'	S09°34'59"E	90°00'00"	100.00'
C3	100.00'	52.36'	51.76'	S50°25'01"W	30°00'00"	26.79'
C5	100.00'	157.08'	141.42'	N80°25'01"E	90°00'00"	100.00'
C6	100.00'	55.43'	54.72'	S19°32'18"W	31°45'25"	28.45'
C11	100.00'	104.72'	100.00'	S05°25'01"W	60°00'00"	57.74'
C12	100.00'	52.36'	51.76'	S39°34'59"E	30°00'00"	26.79'
C13	100.00'	101.67'	97.34'	S64°32'32"W	58°15'02"	55.72'
C14	100.00'	55.41'	54.71'	N70°27'28"W	31°44'58"	28.44'
C19	75.00'	117.81'	106.07'	S09°34'59"E	90°00'00"	75.00'
C20	20.00'	31.42'	28.28'	N80°25'01"E	90°00'00"	20.00'
C21	20.00'	31.42'	28.28'	N09°34'59"W	90°00'00"	20.00'
C22	125.00'	26.01'	25.96'	N48°37'23"W	11°55'12"	13.05'
C23	20.00'	25.10'	23.49'	N78°37'23"W	71°55'12"	14.51'
C24	75.00'	39.27'	38.82'	S30°25'01"W	30°00'00"	20.10'
C25	20.00'	31.42'	28.28'	S09°34'59"E	90°00'00"	20.00'
C26	20.00'	31.42'	28.28'	S80°25'01"W	90°00'00"	20.00'
C29	125.00'	65.45'	64.70'	N50°25'01"E	30°00'00"	33.49'
C30	20.00'	25.10'	23.49'	N29°27'25"E	71°55'12"	14.51'
C31	125.00'	91.46'	89.43'	N14°27'25"E	41°55'12"	47.88'
C34	125.00'	87.63'	85.85'	S55°30'04"W	40°10'06"	45.70'
C35	20.00'	25.11'	23.49'	S39°37'22"W	71°55'31"	14.51'
C36	125.00'	69.28'	68.40'	S19°32'18"W	31°45'25"	35.56'
C39	75.00'	41.57'	41.04'	N19°32'18"E	31°45'25"	21.33'
C40	20.00'	25.10'	23.49'	N32°17'30"W	71°54'53"	14.51'
C41	125.00'	29.83'	29.76'	N61°25'08"W	13°40'18"	14.98'
C42	75.00'	117.81'	106.07'	N80°25'01"E	90°00'00"	75.00'
C54	125.00'	78.89'	77.59'	S24°34'59"E	36°09'36"	40.81'
C55	125.00'	78.89'	77.59'	N86°20'05"W	36°09'36"	40.81'
C56	75.00'	54.87'	53.66'	S14°27'25"W	41°55'12"	28.73'
C57	75.00'	62.94'	61.11'	S30°33'35"E	48°04'48"	33.45'
C58	75.00'	52.58'	51.51'	S55°30'04"W	40°10'06"	27.42'
C59	75.00'	65.23'	63.19'	N79°29'58"W	49°49'54"	34.84'

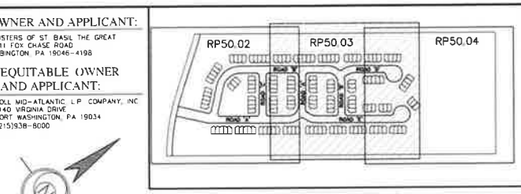
EASEMENT CURVE TABLE						
CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE	TANGENT
EC18	20.00'	8.39'	8.33'	N53°23'31"E	24°02'59"	4.26'

OWNER AND APPLICANT:

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ABINGTON, PA 19046-4198

EQUITABLE OWNER AND APPLICANT:

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1140 VIRGINIA DRIVE
FORT WASHINGTON, PA 19034
(215)938-8000



KEY MAP
N.T.S.

EASEMENT CURVE TABLE		
LINE	BEARING	DISTANCE
EL24	S35°25'01"W	27.54'
EL25	S35°25'01"W	20.00'
EL26	N54°40'54"W	46.20'
EL27	N35°19'06"E	20.00'
EL28	S54°40'54"E	46.24'
EL29	N54°35'02"W	20.00'
EL45	N54°34'59"W	20.00'
EL46	N35°25'01"E	126.88'
EL54	S35°25'01"W	106.86'
EL79	S24°34'59"E	17.99'
EL80	S54°40'51"E	2.01'
EL81	S35°19'09"W	20.00'
EL82	N54°40'51"W	5.99'
EL83	N24°34'59"W	21.61'

LEGEND:

- MONUMENT TO BE SET
- MONUMENT FOUND
- IRON PIN/PIPE FOUND
- (50) PROPOSED LOT NUMBER
- BUILDING SETBACK LINE
- PROPOSED CENTER LINE
- STREAM LINE
- PROPOSED PROPERTY LINE
- PROPOSED R.O.W.
- OUTBOUND LINE
- ZONING BOUNDARY LINE
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- WATERS OF THE U.S.
- FLOODPLAIN (ZONE X)

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****OPEN SPACE LOT 154 INCLUDES CARRIAGE LOTS 11 THROUGH 124

GRAPHIC SCALE

50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

ADJOINERS INFORMATION TABLE

PARCEL NUMBER	OWNER	ADDRESS	ACREAGE
30-00-22148-007	ARDEN C. AND KEATHLEEN A. HANDER	615 FORREST AVENUE, JENKINGTOWN, PA 19046	0.44
30-00-22157-003	ARNOLD J. AND SANDRA BERSON	623 FORREST AVENUE, JENKINGTOWN, PA 19046	0.68
30-00-22156-008	ROY B. AND LESLIE G. PORTNER	631 FORREST AVENUE, JENKINGTOWN, PA 19046	0.44
30-00-22160-004	CHARLES T. AND GLORIA MCDERMOTT	637 FORREST AVENUE, JENKINGTOWN, PA 19046	0.36
30-00-22164-009	LAZAROS KARASAVAS	645 FORREST AVENUE, JENKINGTOWN, PA 19046	0.36
30-00-22168-005	LUCAS BURKE	653 FORREST AVENUE, JENKINGTOWN, PA 19046	0.36
30-00-23172-001	THEODORE A. AND PATRICIA ZALEWSKI	661 FORREST AVENUE, JENKINGTOWN, PA 19046	0.34
30-00-23176-006	KILE F. AND KATHLEEN T. WIDMAN	669 FORREST AVENUE, JENKINGTOWN, PA 19046	0.34
30-00-23180-002	LISA A. HARKINS	677 FORREST AVENUE, JENKINGTOWN, PA 19046	0.34
30-00-22184-007	BILL RAY AND PATRICIA ANN JACOBS	685 FORREST AVENUE, JENKINGTOWN, PA 19046	0.34
30-00-22188-003	DENNIS JOHN AND NICOLE CYNTHIA LAURIA	693 FORREST AVENUE, JENKINGTOWN, PA 19046	0.38
30-00-22102-008	JOYCE M. AND DAVIS S. LEFF	707 FORREST AVENUE, JENKINGTOWN, PA 19046	0.38
30-00-22196-004	THOMAS P. DENNERY	715 FORREST AVENUE, JENKINGTOWN, PA 19046	0.34
30-00-22200-009	PEARSE P. AND ELIZABETH V. KERR	723 FORREST AVENUE, JENKINGTOWN, PA 19046	0.34
30-00-22204-005	HOWARD A. AND KATHLEEN A. WILSON	731 FORREST AVENUE, JENKINGTOWN, PA 19046	0.34
30-00-22208-001	ROBERT W. AND KIMBERLYA. GEISLER	739 FORREST AVENUE, JENKINGTOWN, PA 19046	0.34
30-00-22212-006	GLENN GRESSEN	747 FORREST AVENUE, JENKINGTOWN, PA 19046	0.39
30-00-22216-002	GEORGE H. JR. MORGAN	755 FORREST AVENUE, JENKINGTOWN, PA 19046	0.67
30-00-22428-006	SAMUEL AND NANCY KRENZEL	777 FOX CHASE ROAD, JENKINGTOWN, PA 19046	0.38
30-00-12796-008	SIMON AND TOBY GALAPO	803 DELENE ROAD, RYDAL, PA 19046	0.97
30-00-63688-009	JODY LIEBERMAN GOLDSBOROUGH	756 SUFFORK ROAD, RYDAL, PA 19046	0.47
30-00-63684-004	CHRISTINA BARTOSH	748 SUFFORK ROAD, RYDAL, PA 19046	0.36
30-00-63680-008	ROBERT AND ALBERINA DRIZA	742 SUFFORK ROAD, JENKINGTOWN, PA 19046	0.36
30-00-63876-003	ARBEN PROFKA	732 SUFFORK ROAD, JENKINGTOWN, PA 19046	0.35
30-00-63872-007	KOSTANDIN AND NEKE TURTULLI	726 SUFFORK ROAD, JENKINGTON, PA 19046	0.35
30-00-63868-002	DIANE MEEHAN	716 SUFFORK ROAD, JENKINGTON, PA 19046	0.35
30-00-10052-007	SARAH AND JULINDA SHEHU	863 COLWYN ROAD, JENKINGTOWN, PA 19046	0.48
30-00-36620-007	ROBERT AND THERESE WAAS	608 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.28
30-00-36674-003	VINCENT J. AND JULIE A. KELLY	614 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.20
30-00-36678-008	GREGORY J. POEHLMANN	622 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.27
30-00-36632-004	ROY A. AND CAROLE ANNE STEYN	626 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.28
30-00-36636-009	JOSEPH AND DOLORES HURLEY	632 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.20
30-00-36640-005	MICHAEL GAZZARA AND JESSICA RUCH	636 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30-00-36644-001	MICHAEL S. AND LINDA TOBIN	642 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.20
30-00-36648-006	STEVEN D. HUNTZINGER	648 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.20
30-00-36652-002	FRANCES C. MCKEOWN AND MICHAEL P. BURNER	654 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.20
30-00-36656-007	HARRY J. VANPELT AND LESLIE E. MAXWELL	658 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.14
30-00-36660-003	HARRY J. AND KAREN A. LOOBY	662 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.14
30-00-36664-008	JOHN A. AND ODARKA CHARAMBURA	666 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30-00-36668-004	ALEXANDRA L. STEES	670 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30-00-36672-009	JED K. MARGOLIS AND CARLEY M. TAYLOR	702 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.20
30-00-36676-005	JOSEPH E. AND JANIE M. AVON	706 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30-00-36680-001	HUGH B. AND KATHLEEN A. MCHUGH	710 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30-00-36684-006	RAYMOND AND KATE VANDEGRIFT	714 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30-00-36688-002	RALPH AND ERMA F. HERRES	718 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.20
30-00-36692-007	PAMELA M. JONES	724 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30-00-36696-003	WILLIAM P. AND PAMELA ANNE HAGERTY	728 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30-00-36700-008	GLEN E. AND LISA B. HERMAN	734 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.20
30-00-36704-004	FRANCIS N. AND CYNTHIA L. MAY	738 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30-00-36708-009	WALTER G. IR AND PATRICIA A. WYATT	742 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30-00-36712-005	VINCENT J. AND JEANETTE M. CALGIURI	746 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30-00-36716-001	JESSE G. AND ELIZABETH M. GRAZIANI	752 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.20
30-00-36720-006	LORRAINE ZWOLAK	756 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30-00-36724-002	DENNIS AND CHERYL D. CONARD	802 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.60
30-00-36460-001	ABINGTON TOWNSHIP	KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	12.00

SURVEYOR CERTIFICATION

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PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT - NOT TO BE RECORDED

RECORD PLAN
(RECORD SHEET 3 OF 4)

SISTERS OF ST. BASIL

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

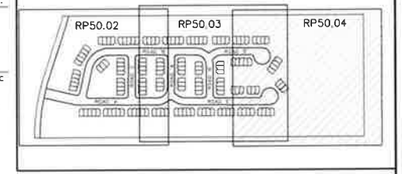
DATE: 03/24/23	SCALE: 1"=50'
DESIGN: JMM	DRAWN: KMS
JOB NO.: 7662	FILE NAME: RP50.03
REF. NO.: RP50.03	
SHEET NO.: 4 OF 64	

OWNER AND APPLICANT:

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KEY MAP
N.T.S.

LEGEND:

- MONUMENT TO BE SET
- MONUMENT FOUND
- IRON PIN/PIPE FOUND
- (50) PROPOSED LOT NUMBER
- BUILDING SETBACK LINE
- PROPOSED CENTER LINE
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- STEEP SLOPES > 25%
- WETLANDS LIMIT
- WATERS OF THE U.S.
- FLOODPLAIN (ZONE X)

EASEMENT LINE TABLE		
LINE	BEARING	DISTANCE
EL1	S44°15'12"E	129.60'
EL2	S41°04'45"E	103.32'
EL3	S62°25'53"E	34.27'
EL4	N33°26'33"E	26.58'
EL5	S57°20'25"E	31.42'
EL6	N35°21'38"E	15.11'
EL33	N54°35'34"W	41.58'
EL34	N35°24'26"E	20.00'
EL35	S54°35'34"E	51.90'
EL36	S50°41'37"E	61.77'
EL37	N50°41'37"W	71.94'
EL46	N35°25'01"E	126.88'
EL47	S54°37'53"E	29.43'
EL48	N35°24'03"E	240.03'
EL49	S54°36'47"E	20.00'
EL50	S35°24'03"W	239.37'
EL51	S54°35'34"E	114.54'
EL52	S35°25'01"W	20.00'
EL53	N54°35'34"W	143.86'
EL58	S88°36'17"E	77.15'
EL59	S00°23'43"W	20.00'
EL60	N89°36'17"W	66.71'
EL61	N88°17'13"E	20.00'
EL62	S85°02'22"E	20.00'
EL63	S54°39'07"W	19.01'
EL64	N54°39'07"E	18.77'
EL65	S01°42'45"E	75.74'
EL66	N01°42'45"W	71.76'
EL70	N62°10'17"E	81.45'
EL71	S88°47'02"E	77.50'
EL72	S01°12'58"W	20.00'
EL73	N88°47'02"W	62.50'
EL74	S62°10'17"W	81.16'
EL84	N23°54'34"W	60.34'
EL85	N66°05'56"E	20.00'
EL86	S23°54'34"E	60.34'
EL87	S66°05'56"W	20.00'
EL88	N02°58'13"E	66.15'
EL89	S87°01'47"E	20.00'
EL90	S02°58'13"W	66.15'
EL91	N87°01'47"W	20.00'
EL92	N04°00'36"E	66.50'
EL93	S85°59'24"E	20.00'
EL94	S04°00'36"W	66.50'
EL95	N85°59'24"W	20.00'
EL96	N28°17'05"E	20.00'
EL97	S61°42'55"E	88.53'
EL98	S28°17'05"W	20.00'
EL99	N61°42'55"W	88.53'

EASEMENT CURVE TABLE						
CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE	TANGENT
EC1	60.00'	27.15'	26.92'	S34°25'56"E	25°55'31"	13.81'
EC2	60.00'	29.46'	29.17'	S07°24'09"E	28°08'04"	15.03'
EC6	60.00'	20.39'	20.29'	S25°34'25"E	19°28'25"	10.30'
EC7	60.00'	20.49'	20.39'	S80°27'34"E	19°34'04"	10.35'
EC10	60.00'	58.12'	55.88'	S62°00'20"W	55°30'06"	31.57'
EC11	60.00'	54.76'	52.90'	S10°19'14"W	52°18'52"	29.47'
EC12	60.00'	20.52'	20.42'	S39°28'14"E	19°35'42"	10.36'

CURVE TABLE						
CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE	TANGENT
C4	100.00'	71.25'	69.76'	S15°00'16"W	40°49'30"	37.21'
C7	100.00'	71.25'	69.76'	S55°49'45"W	40°49'30"	37.21'
C27	20.00'	28.91'	26.46'	S05°59'21"E	82°48'43"	17.64'
C28	60.00'	276.33'	89.27'	S84°32'29"W	263°52'22"	66.79'
C37	60.00'	276.43'	89.20'	N13°45'33"W	263°58'21"	66.87'
C38	20.00'	28.91'	26.46'	N76°49'19"E	82°48.37"	17.64'

AREA TABULATION - SISTERS OF ST. BASIL:

TOTAL SITE AREA:	2,019,656 SQ. FT. OR	46.370 ACRES
ROAD A ROW AREA:	50,023 SQ. FT. OR	1.148 ACRES
ROAD B ROW AREA:	56,102 SQ. FT. OR	1.288 ACRES
ROAD C ROW AREA:	15,798 SQ. FT. OR	0.363 ACRES
ROAD D ROW AREA:	28,461 SQ. FT. OR	0.653 ACRES
ROAD E ROW AREA:	45,345 SQ. FT. OR	1.041 ACRES
ROAD F ROW AREA:	16,073 SQ. FT. OR	0.369 ACRES
ROAD G ROW AREA:	16,225 SQ. FT. OR	0.372 ACRES
FOX CHASE ROAD LEGAL ROW AREA:	27,139 SQ. FT. OR	0.623 ACRES
FOX CHASE ROAD DEDICATED ROW AREA:	9,045 SQ. FT. OR	0.208 ACRES
TOTAL ENCROACHMENT AREA:	26,577 SQ. FT. OR	0.610 ACRES
OPEN SPACE LOT 151 AREA:	1,505,948 SQ. FT. OR	34.572 ACRES*
OPEN SPACE LOT 152 AREA:	82,151 SQ. FT. OR	1.886 ACRES**
OPEN SPACE LOT 153 AREA:	70,865 SQ. FT. OR	1.627 ACRES***
OPEN SPACE LOT 154 AREA:	70,101 SQ. FT. OR	1.609 ACRES****
TOTAL OPEN SPACE:	1,729,065 SQ. FT. OR	39.694 ACRES

*OPEN SPACE LOT 151 INCLUDES CARRIAGE LOTS 1 THROUGH 110
**OPEN SPACE LOT 152 INCLUDES CARRIAGE LOTS 140 THROUGH 150 AND CLUBHOUSE
***OPEN SPACE LOT 153 INCLUDES CARRIAGE LOTS 125 THROUGH 139
****OPEN SPACE LOT 154 INCLUDES CARRIAGE LOTS 11 THROUGH 124

SURVEYOR CERTIFICATION

I HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL LAND SURVEYOR, LICENSED IN COMPLIANCE WITH THE LAWS OF THE COMMONWEALTH OF PENNSYLVANIA; THAT TO THE BEST OF MY KNOWLEDGE THIS IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE LAND SUBDIVISION REGULATIONS OF THE TOWNSHIP OF ABINGTON.

THOMAS B. HENDRICKS, P.L.S.
PA LICENSE NO. SU-044552-E

GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.

CAUTION:
IF THIS DOCUMENT DOES NOT CONTAIN A RAISED SEAL OF A PROFESSIONAL LAND SURVEYOR, IT IS NOT AN ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED.

THOMAS B. HENDRICKS
PROFESSIONAL LAND SURVEYOR
PA LICENSE NO. SU-044552-E

ESE CONSULTANTS
ENGINEERING • PLANNING • SURVEYING • ENVIRONMENTAL
ESE Consultants, Inc.
1140 Virginia Drive • Fort Washington, PA 19034
T: 215-914-2050

REV.	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	KMS
1	7/24/23	TOWNSHIP REVIEW LETTERS	KMS

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT - NOT TO BE RECORDED

RECORD PLAN
(RECORD SHEET 4 OF 4)

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 03/24/23	SCALE: 1"=50'
DESIGN: JMM	DRAWN: KMS
JOB NO.: 7662	FILE NAME: RP50.04
REF. NO.: RP50.04	
SHEET NO.: 5 OF 64	

GENERAL NOTES:

1. DESIGN ENGINEER, SURVEYOR, PLANNER, LANDSCAPE ARCHITECT:
   ESE CONSULTANTS, INC.
   1140 VIRGINIA DRIVE
   FORT WASHINGTON, PA. 19034
   215/914-2050

2. WETLANDS CONSULTANT:
   ESE CONSULTANTS, INC.
   1140 VIRGINIA DRIVE
   FORT WASHINGTON, PA. 19034
   215/914-2050

3. WETLAND PRELIMINARY JURISDICTION DETERMINATION WAS OBTAINED ON SEPTEMBER 1, 2022 (NAP-2022-00532-45.

4. FLOODPLAIN SHOWN ON THE PLAN HAS BEEN TAKEN FROM THE FLOOD INSURANCE RATE MAP (FIRM), MAP NUMBER 42091C043G, EFFECTIVE DATE MARCH 2, 2016.

5. SOILS SHOWN WERE TAKEN FROM "SOIL SURVEY, MONTGOMERY COUNTY, PENNSYLVANIA", PREPARED BY THE NATURAL RESOURCE CONSERVATION SURVEY, DATED NOVEMBER 22, 2021.

6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT ABINGTON TOWNSHIP CODES, SPECIFICATIONS AND THE ENGINEERING AND CONSTRUCTION STANDARDS.

7. THESE PLANS WERE PREPARED PER THE ABINGTON TOWNSHIP, STORMWATER MANAGEMENT ORDINANCE, SUBDIVISION AND LAND DEVELOPMENT ORDINANCE AND THE ZONING AND PLANNED RESIDENTIAL DEVELOPMENT ORDINANCE, AS LAST AMENDED.

8. THE EXISTING LAND USE IS A PARKING LOT, AND SCHOOL WITH ATHLETIC FIELDS. THE PROPOSED LAND USE IS FOR ONE HUNDRED FIFTY (150) AGE RESTRICTED CARRIAGE HOME DWELLING UNITS (SINGLE-FAMILY ATTACHED), PROPOSED ROADS, UTILITIES AND OPEN SPACE PARCELS.

9. FURTHER SUBDIVISION OF ANY OF THE LOTS, BOTH PRIVATE LOTS AND OPEN SPACE LOTS IN THIS SUBDIVISION IS PROHIBITED.

10. THE PROPOSED ROADS SHALL BE OFFERED FOR DEDICATION TO THE TOWNSHIP. ROADS TO BE BUILT TO TOWNSHIP STANDARDS. THE HOA WILL MAINTAIN STORM SEWER, SIDEWALK, CURBING AND ROADS WITHIN THE RIGHT OF WAYS, ONCE DEDICATED.

11. STATE OR TOWNSHIP ROAD OCCUPANCY PERMITS, AS APPLICABLE, TO BE OBTAINED AS NECESSARY.

12. PROPOSED LOTS TO BE SERVED BY PUBLIC WATER AND PUBLIC SEWER.

13. THE LOCATION OF THE HOUSES AND DRIVEWAYS AS SHOWN ON THE PLAN ARE FOR ILLUSTRATION AND PLANNING PURPOSES ONLY. THE APPLICANT RESERVES THE RIGHT TO MODIFY THE HOUSE SIZE, SHAPE AND LOCATION AT THE TIME OF BUILDING PERMIT APPLICATION.

14. GRADING:
   A. NO PLANTINGS, BUILDINGS, OR OTHER STRUCTURES, INCLUDING DRIVEWAYS, MAY BE PLACED IN OR ON DRAINAGE, UTILITY OR SANITARY SEWER EASEMENTS.
   B. MAXIMUM CUT AND FILL SLOPES SHALL BE 3 HORIZONTAL : 1 VERTICAL, UNLESS APPROVED BY THE TOWNSHIP.

15. DRIVEWAYS:
   A. PRIVATE DRIVEWAYS, EITHER INDIVIDUAL OR SHARED, SHALL BE PROVIDED FOR ALL RESIDENCES AND THE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REGULATIONS OF THIS SECTION IN ORDER TO PROVIDE SAFE ACCESS TO TOWNSHIP AND STATE ROADS AND TO ELIMINATE PROBLEMS OF STORMWATER RUNOFF.
   B. AT LEAST TWO (2) OFF-STREET PARKING SPACES WITH ACCESS TO A PUBLIC STREET SHALL BE PROVIDED FOR EACH PROPOSED DWELLING UNIT EITHER WITHIN A STRUCTURE OR IN THE OPEN. (DEPENDING ON SIZE OF GARAGE)

16. STATE OR TOWNSHIP ROAD OCCUPANCY PERMITS, AS APPLICABLE, TO BE OBTAINED AS NECESSARY.

17. NOTHING SHALL BE PERMITTED TO BE PLACED, PLANTED, SET OR PUT WITHIN THE AREA OF A UTILITY EASEMENT EXCEPT LAWNS, LOW GROUND COVER, OR OTHER LANDSCAPING THAT WILL NOT ADVERSELY AFFECT THE UTILITY OR THE EASEMENT.

18. SIGHT TRIANGLE:
   A. CLEAR SIGHT TRIANGLES SHALL BE PROVED AT ALL STREET INTERSECTIONS. WITHIN SUCH TRIANGLES, NO VISION OBSTRUCTING OBJECTS SHALL BE PERMITTED WHICH OBSCURES VISION ABOVE THE HEIGHT OF THIRTY (30) INCHES AND BELOW TEN (10) FEET MEASURED FROM THE CENTERLINE GRADE OF INTERSECTING STREETS.
   B. CLEAR SIGHT TRIANGLES OF 60 FEET ALONG RIGHT-OF-WAY LINES FROM THEIR POINTS OF JUNCTION SHALL BE PROVIDED AT ALL INTERSECTIONS; AND NO BUILDINGS, STRUCTURES, GRADES OR PLANTINGS HIGHER THAN THIRTY (30) INCHES OR LOWER THAN 10 FEET ABOVE THE CENTER LINES OF THE STREET SHALL BE PERMITTED WITHIN SUCH SIGHT TRIANGLES. ANY OBSTRUCTION TO SIGHT SHALL BE REMOVED AT THE TIME THE STREET IS GRADED OR AT A TIME A BUILDING OR STRUCTURE IS ERECTED, WHICHEVER SHALL FIRST OCCUR.

19. ALL CONTRACTORS WORKING ON THIS PROJECT SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION ACTIVITIES RELATED TO THIS PROJECT ARE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE OSHA (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION) STANDARDS.

20. THE DEVELOPER, ITS SUCCESSORS AND ASSIGNS, HEREBY RESERVES THE RIGHT TO ENTER UPON EACH AND EVERY LOT AND AREA OF THE SUBDIVISION/DEVELOPMENT DEPICTED HEREON, WHETHER PRIOR OR SUBSEQUENT TO CONVEYANCE OF ANY LOT, UNTIL EXPIRATION OF THE STATUTORY MAINTENANCE PERIOD FOLLOWING DEDICATION OF PUBLIC IMPROVEMENTS AS SET FORTH AT SECTION 509 OF THE PENNSYLVANIA MUNICIPALITIES PLANNING CODE, AS AMENDED, 53 P.S. 10509, FOR THE PURPOSE OF COMPLETING ANY LANDSCAPING AS REQUIRED BY THE MUNICIPALITY AND FURTHER TO MAKE SUCH MODIFICATIONS IN GRADING AND/OR DRAINAGE IMPROVEMENTS ON ANY LOT AS MAY BE NECESSARY IN THE DISCRETION OF THE DEVELOPER, ITS SUCCESSORS AND ASSIGNS AND/OR THE TOWNSHIP ENGINEER FOR SATISFACTORY STORM WATER MANAGEMENT.

21. THE APPLICANT/OWNER OF THIS PROPERTY ACKNOWLEDGES THE REQUIREMENT TO COMPLY WITH ALL STATE AND FEDERAL REGULATIONS REGARDING THE DISTURBANCE OF WETLANDS. ANY IMPROVEMENTS WHICH CANNOT BE COMPLETED AS SHOWN SHALL BE AMENDED TO THE SATISFACTION OF THE TOWNSHIP AND SHALL BE DEPICTED ON REVISED PLANS WHICH SHALL BE SUBMITTED TO THE TOWNSHIP FOR REVIEW. THE APPLICANT/OWNER OF THIS PROPERTY ACCEPTS ALL RESPONSIBILITY WITH RESPECT TO STATE AND FEDERAL REGULATIONS.

22. ALL IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS PROVIDED IN THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE OR OTHER SPECIFICATIONS OF THE TOWNSHIP, THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION, PENNDOT PUBLICATION 408, AS AMENDED, AND THE PENNDOT ROAD CONSTRUCTION STANDARDS, AS AMENDED, PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OR THE AUTHORITY HAVING JURISDICTION OVER SAID IMPROVEMENTS.

23. AN NPDES PERMIT IS REQUIRED FOR THIS PROJECT FROM THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

24. THE SPEED LIMIT WITHIN THIS DEVELOPMENT IS TO BE POSTED AT 20 M.P.H.

25. THE APPLICANT RESERVES THE RIGHT TO CONSTRUCT LANDSCAPE TOPSOIL BERMS WITHIN OPEN SPACE AND BUFFER YARDS.

26. STORM SEWERS:
   A. ALL INLETS TO BE TYPE AS NOTED.
   B. DEVELOPER/CONTRACTOR IS RESPONSIBLE FOR PROVIDING SHOP DRAWINGS FOR ALL STRUCTURES.
   C. PIPES THROUGH BASIN EMBANKMENTS SHALL BE O-RING GASKETED PIPE WITH ANTI-SEEP COLLARS. ALL JOINTS SHALL BE MORTARED.
   D. A MINIMUM OF 24" OF COVER OVER THE BELL OF PIPE IS PROPOSED.
   E. STORMWATER ROOF DRAINS AND SUMP PUMPS SHALL DISCHARGE TO LAWNS, MULCH BEDS, GRASSED SWALES, OR UNDERGROUND WATER QUALITY BMPs AND NOT TO PAVED IMPERVIOUS SURFACES AND SHALL NOT CONNECT DIRECTLY TO A STORM SEWER SYSTEM W/O PRIOR APPROVAL FROM THE TOWNSHIP ENGINEER.
   F. STORM SEWERS, AS REQUIRED, SHALL BE PLACED UNDER OR IMMEDIATELY IN FRONT OF THE CURB, WHEN PARALLEL TO A PUBLIC STREET AND WITHIN THE RIGHT-OF-WAY. WHEN LOCATED IN UNDEDICATED LAND, THEY SHALL BE PLACED WITHIN AN EASEMENT NOT LESS THAN TWENTY (20) FEET WIDE AS APPROVED BY THE TOWNSHIP ENGINEER.
   G. STORM SEWERS SHALL HAVE A MINIMUM DIAMETER OF FIFTEEN (15) INCHES, AND SHALL BE GASKETED REINFORCED CONCRETE PIPE OR GASKETED SMOOTH LINED CURROGATED HIGH DENSITY POLYETHYLENE PIPE. MINIMUM GRADE SHALL BE ONE HALF PERCENT (0.5%). CHANGES IN ALIGNMENT SHALL BE BY STRAIGHT SECTIONS CONNECTED BY INLETS OR MANHOLES.
   H. MANHOLES SHALL BE NOT MORE THAN THREE HUNDRED (300) FEET APART FOR PIPE DIAMETER UP TO TWENTY-FOUR (24) INCHES, AND NOT MORE THAN FOUR HUNDRED AND FIFTY (450) FEET APART FOR GREATER DIAMETERS. INLETS MAY BE SUBSTITUTED FOR MANHOLES UPON APPROVAL BY THE TOWNSHIP ENGINEER.
   I. INLETS, MANHOLES, COVERS, AND FRAMES SHALL CONFORM TO PENNSYLVANIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.

28. SANITARY SEWER:
   A. SANITARY SEWERS SHALL BE DESIGNED AND CONSTRUCTED IN STRICT ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES STANDARDS AND ABINGTON SEWER AUTHORITY (ASA) SPECIFICATIONS.
   B. SANITARY SEWERS SHALL NOT BE USED TO CARRY STORMWATER.
   C. REQUIREMENTS NOT REFERENCED IN THIS DOCUMENT SHALL BE REFERRED TO THE PENNSYLVANIA DEP SEWERAGE MANUAL, LATEST EDITION.
   D. SHOP DRAWINGS MUST BE SUBMITTED TO AND APPROVED BY THE ASA FOR ALL MATERIALS, STRUCTURES, EQUIPMENT, PIPING AND APPURTENANCES FOR THE SEWER PRIOR TO ORDERING ANY OF THESE ITEMS.
   E. ALL SEWER WORK MUST BE REVIEWED BY THE ASA AS THE INSTALLATION PROGRESSES. WORK PERFORMED WITHOUT SUCH INSPECTION IS SUBJECT TO REJECTION. A MINIMUM OF 48 HOURS ADVANCE NOTICE TO THE BCWSA IS REQUIRED.
   F. ALL SANITARY SEWER PIPING MUST BE TESTED IN THE PRESENCE OF THE ASA USING THE ASA STANDARD PROCEDURES. A MINIMUM OF 48 HOURS ADVANCE NOTICE TO THE ASA IS REQUIRED.
   G. THE ABINGTON SEWER AUTHORITY IS TO BE CONTACTED ONE WEEK PRIOR TO SANITARY SEWER CONSTRUCTION, AND 72 HOURS PRIOR TO EXCAVATING NEAR OR CONNECTING INTO ANY EXISTING SEWER FACILITIES.
   H. CLEANOUTS SHALL BE PROVIDED FOR ALL SANITARY LATERALS AT THE EDGE OF THE RIGHT-OF-WAY AND AT ALL MAJOR CHANGES IN DIRECTION. ALL LATERALS SHOULD BE PROVIDED WITH MINIMUM TWO PERCENT (2%) SLOPE BETWEEN THE SEWER MAIN AND FIRST CLEANOUT. CLEANOUTS SHOULD BE CUT TO SIX INCHES ABOVE FINISHED GRADE AND PROVIDED WITH A RECESSED TYPE PLUG. CLEANOUTS WITHIN PAVED AREAS OR WITHIN THREE FEET OF PAVED AREAS SHOULD BE PROVIDED WITH A CLEANOUT PROTECTION SLEEVE.
   I. MANHOLES SHALL BE LOCATED AT INTERVALS OF 300 FEET AND AT EACH CHANGE OF LINE OR GRADE. IN EXCEPTIONAL CASES, THE INTERVAL MAY BE EXTENDED TO NOT MORE THAN 300 FEET.
   J. TEN FEET OF HORIZONTAL CLEARANCE OR 18 ONCHES OF VERTICAL CLEARANCE SHOULD BE PROVIDED BETWEEN THE SANITARY SEWER AND ALL OTHER UTILITIES. OTHERWISE, CONCRETE ENCASEMENT OF THE SANITARY SEWER SHOULD BE PROVIDED.
   K. PIPE MATERIAL TO BE SDR-26.
   L. TESTING THE SANITARY SEWER SYSTEM SHALL BE TESTED IN ACCORDANCE WITH THE STANDARDS OF THE TOWNSHIP OF ABINGTON AND SHALL BE APPROVED BY THE TOWNSHIP ENGINEER BEFORE BUILDINGS ARE PERMITTED TO BE CONNECTED TO THE LATERALS.

29. WATER SERVICE:
   A. ALL WATER SYSTEM DESIGN SHALL BE IN ACCORDANCE WITH DESIGN STANDARDS AND REGULATIONS.
   B. ADEQUATE AND POTABLE WATER SUPPLY SYSTEM(S) SHALL BE INSTALLED CONSISTENT WITH DESIGN PRINCIPLES AND REQUIREMENTS CONTAINED IN THIS ORDINANCE AND TOWNSHIP STANDARDS, WHICH ARE THE U.S. PUBLIC HEALTH CRITERIA FOR DRINKING WATER AS ADMINISTERED BY THE EXISTING ENVIRONMENTAL PROTECTION AGENCY SAFE-DRINKING WATER ACT.
   C. THE SUBDIVISION SHALL BE PROVIDED WITH A COMPLETE PUBLIC WATER DISTRIBUTION SYSTEM. THE DESIGN AND INSTALLATION OF SUCH PUBLIC SYSTEM SHALL BE SUBJECT TO THE APPROVAL OF THE TOWNSHIP; THE DESIGN AND INSTALLATION OF SUCH COMMUNITY DISTRIBUTION SYSTEM SHALL BE SUBJECT TO THE APPROVAL OF THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES AND SUCH SYSTEM SHALL BE FURTHER SUBJECT TO SATISFACTORY PROVISION FOR THE MAINTENANCE THEREOF.
   D. FIRE HYDRANTS SUITABLE FOR THE COUPLING OF EQUIPMENT SERVING THE TOWNSHIP SHALL BE INSTALLED AS SPECIFIED BY THE INSURANCE SERVICES OFFICES OF PENNSYLVANIA.
      (1) ALL FIRE HYDRANTS WILL BE LOCATED ON AN EIGHT (8) INCH LINE OR A LOOPED SIX (6) INCH LINE
      (2) FIRE HYDRANTS SHALL BE SPACED IN A DEVELOPMENT SO THAT ALL PROPOSED BUILDING(S) WILL BE NO MORE THAN SIX HUNDRED (600) FEET FROM THE HYDRANT MEASURED ALONG TRAVELED WAYS.
      (3) ALL COMMUNITY WATER SYSTEMS MUST PROVIDE A MINIMUM OF FIVE HUNDRED (500) GPM AT A RESIDUAL PRESSURE OF TWENTY (20) PSI FOR A TWO (2) HOUR PERIOD.
   E. NO PLANTINGS OR STRUCTURES SHALL BE LOCATED WITHIN THE WATER MAIN EASEMENTS OR WITHIN 5 FEET OF THE PROPOSED WATER MAINS OR WATER SERVICES.
   F. WATER MAIN TO BE DEFLECTED, WITHOUT BENDS, AROUND INLETS.

30. ALL OTHER UTILITY LINES INCLUDING, BUT NOT LIMITED TO ELECTRIC, GAS, STREET LIGHT SUPPLY, CABLE TELEVISION, AND TELEPHONE SHALL BE PLACED UNDERGROUND. INSTALLATION OF ALL UTILITIES SHALL BE IN STRICT ACCORDANCE WITH THE ENGINEERING STANDARDS AND SPECIFICATIONS OF THE TOWNSHIP AND PUBLIC UTILITY CONCERNED.

31. IN ACCORDANCE WITH THE PROVISIONS OF ACT 287, ALL DEVELOPERS, CONTRACTORS, ETC., WILL CONTACT ALL APPLICABLE UTILITIES AND ACCURATELY DETERMINE THE LOCATIONS AND DEPTH OF ALL UNDERGROUND UTILITIES WITHIN THE BOUNDARIES OF THE TRACT PROPOSED FOR DEVELOPMENT, PRIOR TO EXCAVATION. A LIST OF THE APPLICABLE UTILITIES AND THEIR PHONE NUMBERS SHALL APPEAR ON THE PLANS SUBMITTED FOR REVIEW AND PROOF SHALL BE PRESENTED TO THE TOWNSHIP PRIOR TO FINAL PLAN APPROVAL.

32. IT SHALL BE UNLAWFUL TO ALTER OR REMOVE ANY PERMANENT STORMWATER BMP REQUIRED BY AN APPROVED BMP OPERATIONS AND MAINTENANCE PLAN, OR ALLOW THE PROPERTY TO REMAIN IN A CONDITION WHICH DOES NOT CONFORM TO AN APPROVED BMP OPERATIONS AND MAINTENANCE PLAN, UNLESS AN EXCEPTION IS GRANTED IN WRITING BY THE TOWNSHIP.

33. HOME OWNERS ASSOCIATION:
   A. THE HOMEOWNERS ASSOCIATION MAY NOT BE DISSOLVED, NOR MAY IT DISPOSE OF THE OPEN SPACE BY SALE OR OTHERWISE, WITHOUT FIRST OFFERING TO DEDICATE THE SAME TO THE TOWNSHIP AT NO COST.
   B. THE HOMEOWNERS ASSOCIATION DOCUMENTS WILL CONTAIN AN OPEN SPACE MANAGEMENT PLAN TO PROTECT THE SIGNIFICANT NATURAL FEATURES OF THE PROPERTY.
   C. THE HOMEOWNERS ASSOCIATION DOCUMENTS SHALL BE SUBMITTED FOR REVIEW BY THE TOWNSHIP SOLICITOR AS PART OF THE FINAL SUBDIVISION AND LAND DEVELOPMENT APPROVAL.
   D. THE HOME OWNERS ASSOCIATION WILL BE RESPONSIBLE FOR THE MAINTENANCE OF ENTRANCE SIGN, DECORATIVE WALLS, FENCES OR LANDSCAPE ASSOCIATED WITH THEM.

34. EASEMENTS SHALL BE ESTABLISHED IN CONNECTION WITH ANY REGULATED ACTIVITY FOR ALL PERMANENT BMP'S AND CONVEYANCES THAT WILL NOT BE DEDICATED TO OR OTHERWISE OWNED BY THE MUNICIPALITY, (INCLUDING ANY TO BE LOCATED ON ANY PROPERTY OTHER THAN THE PROPERTY BEING DEVELOPED BY THE APPLICANT), AND SHALL:
   A. INCLUDE ALL LAND AREA OCCUPIED BY EACH BMP OR CONVEYANCE;
   B. INCLUDE A TEN (10)-FOOT WIDE PERIMETER (OR OTHER WIDTH AS DETERMINED IN CONSULTATION WITH THE MUNICIPAL ENGINEER) SURROUNDING THE FEATURE(S);
   C. PROVIDE SUFFICIENT VEHICULAR INGRESS AND EGRESS FROM A PUBLIC RIGHT-OF-WAY AND ROADWAY;
   D. GRANT THE MUNICIPALITY THE RIGHT, BUT NOT THE DUTY, TO ACCESS EVERY BMP AND CONVEYANCE FROM A PUBLIC RIGHT-OF-WAY OR PUBLIC ROADWAY TO CONDUCT PERIODIC INSPECTIONS AND TO UNDERTAKE OTHER ACTIONS THAT MAY BE NECESSARY TO ENFORCE THE REQUIREMENTS OF THIS ORDINANCE, OR OF ANY APPLICABLE O&M PLAN OR O&M AGREEMENT; WHERE ROADWAYS WILL NOT BE DEDICATED TO THE MUNICIPALITY, THE MUNICIPALITY SHALL BE GRANTED ACCESS TO THE PRIVATE ROADWAYS AS NECESSARY TO ACCESS EVERY BMP AND CONVEYANCE;
   E. GRANT THE OWNER OF EACH BMP AND CONVEYANCE THE RIGHT TO ACCESS, INSPECT, OPERATE, MAINTAIN, AND REPAIR THE BMP OR CONVEYANCE WHEN THE FEATURE IS TO BE OWNED, OPERATED AND MAINTAINED BY A PERSON OTHER THAN THE MUNICIPALITY AND OTHER THAN THE OWNER OF THE PARCEL ON WHICH IT IS LOCATED;
   F. LAWN-NO TREES, FENCES, SIGNS, STRUCTURES OF ANY TYPE OR ANY OTHER OBSTRUCTION SHALL BE PLACED, PLANTED, SET OR PUT WITHIN THE AREA OF AN EASEMENT. THE AREA SHALL BE KEPT AS LAWN.

35. THE APPLICANT/DEVELOPER SHALL PROMPTLY GRADE AND STABILIZE SLOPES AND OPEN DITCHES AND PROVIDE CONSTRUCTION FENCING WHEN DEEMED NECESSARY BY THE TOWNSHIP ENGINEER.

36. REMAINING AREAS DESIGNED AS OPEN SPACE WILL BE USED FOR ACTIVE AND PASSIVE OPEN SPACE ONLY.

37. ALL EXISTING STRUCTURES AND UTILITIES TO BE REMOVED UNLESS OTHERWISE NOTED.

38. THE HOMEOWNERS ASSOCIATION WILL BE RESPONSIBLE FOR THE MAINTENANCE OF ENTRANCE SIGNS, DECORATIVE WALLS, FENCES OR LANDSCAPE ASSOCIATED WITH THEM.

39. SIDEWALKS SHALL BE CONSTRUCTED OF CONCRETE WITH A MINIMUM TWENTY-EIGHT (28) DAY STRENGTH OF 4000 PS w/AIR, WITH A MINIMUM WIDTH OF FOUR (4) FEET AND A THICKNESS OF FOUR (4) INCHES EXCEPT AT DRIVEWAY CROSSINGS WHEN THE SIDEWALK THICKNESS SHALL BE INCREASED TO SIX (6) INCHES WITH REINFORCEMENT.

40. LIGHTING:
   A. ALL LIGHTING AND ACCESSORY EQUIPMENT SHALL BE STANDARD EQUIPMENT PROVIDED BY PECO OR VARIATIONS APPROVED BY PECO AND THE BOARD OF SUPERVISORS.
   B. ALL PERMITTED LIGHTING AND ALL EXTERNAL LIGHTING FIXTURES APPURTENANT TO A STRUCTURE SHALL BE SHIELDED FROM ALL RESIDENTIAL PROPERTIES AND FROM ALL ROWs SO AS TO ELIMINATE LIGHT GLARE BEYOND AN ANGLE OF THIRTY-FIVE (35) DEGREES FROM A VERTICAL PLANE.

41. TRAFFIC NOTES:
   A. ALL TRAFFIC CONTROL SIGNS SHALL BE POSTED IN ACCORDANCE WITH THE 2009 MUTCD AND THE MOST RECENT VERSION OF PENNDOT PUBLICATION 236M, "HANDBOOK OF APPROVED SIGNS".
   B. TRAFFIC CONTROL SIGNS MUST BE POSTED ON PENNDOT APPROVED BREAKAWAY POSTS IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE TC-8700 SERIES IN PENNDOT PUBLICATION 111M."
   C. ALL PROPOSED PEDESTRIAN FACILITIES REFLECTED ON THESE PLANS SHALL BE CONSTRUCTED TO COMPLY WITH THE FOLLOWING STANDARDS:
      C.a. PENNDOT DESIGN MANUAL 2, CHAPTER 6.
      C.b. PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, PUBLICATION 72M, RC-67M.
      C.c. U.S. ACCESS BOARD, PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) AND ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAAG).

42. OBSTRUCTIONS IN RIGHT-OF-WAY - NO FENCES, HEDGES, TREES, SHRUBBERY, PLANTS, WALLS, SIGNS OR OTHER OBSTRUCTIONS SHALL BE LOCATED OR BE PERMITTED WITHIN THE RIGHT-OF-WAY.

43. ALL TREE/SHRUB LIMBS SHALL BE PRUNED OR TRIMMED BACK, AND ALL ABOVE GROUND UTILITY CABLE LINES AND FREE STANDING SIGNS SHALL BE INSTALLED SUCH THAT EVERY ACCESSWAY WILL HAVE A VERTICAL CLEARANCE OF AT LEAST 14 FEET.

ON JULY 13, 2023 TOLL MID-ATLANTIC WAS GRANTED CONDITIONAL USE FOR THE PROJECT

IMPERVIOUS COVERAGE BREAKDOWN WITHIN PROJECT	
ROAD AND ACCESS ROAD	3.78 ACRES
CLUBHOUSE BUILDING AND ACCESSORY AREA	0.27 ACRES
UNIT BUILDINGS (SHOWN)	8.29 ACRES
UNIT BUILDINGS/SERVICE WALK/DRIVEWAY,ETC. (NOT SHOWN)	0.32 ACRES
SERVICE WALK/DRIVEWAY	1.74 ACRES
SIDEWALK	1.09 ACRES
FOX CHASE ROAD R.O.W.	0.50 ACRES
TOTAL	15.99 ACRES

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T: 215-914-2050

JEFFREY H. MADDEN — LICENSED PROFESSIONAL ENGINEER — COMMONWEALTH OF PENNSYLVANIA

REV'D	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

PRELIMINARY-MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

APPLICATION NUMBER LD-23-01

GENERAL NOTES

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: AS NOTED
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-S-02-NOTES
REF. NO.:	SD02.01
SHEET NO.: 6 OF 64	

N:\PROJECTS\PENNSYLVANIA\7662-RYDAL ST. BASIL\ENGDEPT\DRAWINGS\7662-S-02-NOTES.DWG-Eric Stengel-10/17/2023 11:58 AM

SOILS LEGEND:

Map Unit Symbol	Map Unit Name	Rating
GnB	Glenig Silt Loam, 3 to 8 Percent Slopes	B
GsA	Glenville Silt Loam, Somewhat Poorly Drained, 0 to 3 Percent Slopes	C/D
GsB	Glenig Silt Loam, 3 to 8 Percent Slopes	C/D
Ha	Hatboro Silt Loam	B/D
MaB	Manor Loam, 3 to 8 Percent Slopes	B
MaC	Manor Loam, 8 to 15 Percent Slopes	B
MaD	Manor Loam, 15 to 25 Percent Slopes	B
UdsB	Udorthents, Schist and Gneiss 0 to 8 Percent Slopes	C
UgB	Urban Land, 0 to 8 Percent Slopes	
UugB	Urban Land–Udorthents, Schist and Gneiss Complex, 0 to 8 Percent Slopes	

NATURAL RESOURCE CALCULATIONS:

	SITE AREA	PROTECTION %	REQUIRED PROTECTION	DESIGN PROTECTION
FLOODPLAIN	N/A	100%	N/A	N/A
FLOODPLAIN SOILS:	3.19 AC.	100%*	3.19 AC.	3.15 AC.
WATERS OF THE US	0.28 AC.	100%	0.28 AC.	0.28 AC.
WETLANDS:	0.51 AC.	100%	0.51 AC.	0.51 AC.
WOODLANDS	3.64 AC.	75%	2.73 AC.	3.41 AC.
STEEP SLOPES: 15-25:	0.74 AC.	75%	0.56 AC.	0.58 AC.
STEEP SLOPES: >25:	0.07 AC.	85%	0.06 AC.	0.07 AC.
ZONE 1 BUFFER:	1.31 AC.	100%*	1.31 AC.	1.30 AC.
ZONE 2 BUFFER:	1.50 AC.	100%*	1.50 AC.	1.48 AC.

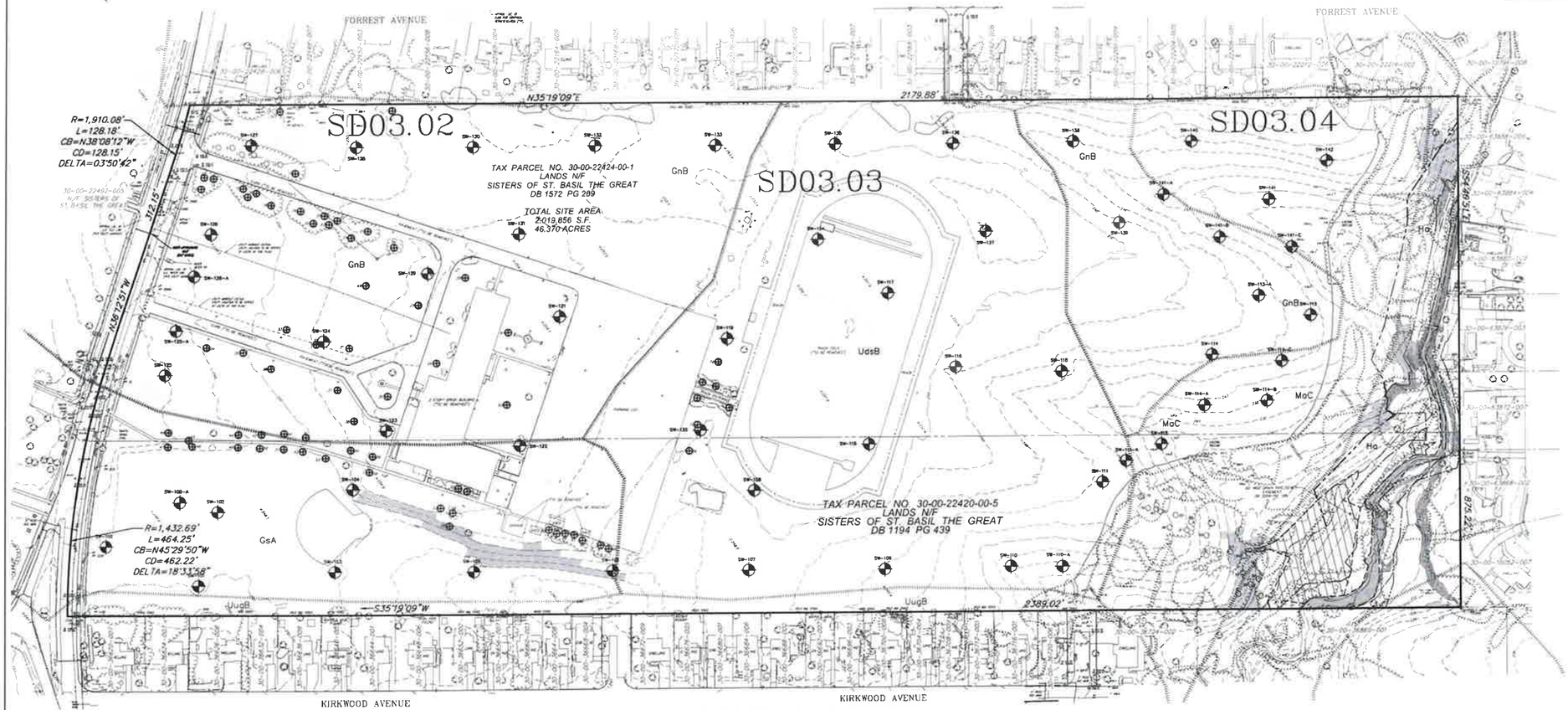
*CERTAIN USES WITHIN DISTRICT ARE ALLOWED TO DISTURB AREAS

OWNER AND APPLICANT:
SISTERS OF ST BASIL THE GREAT
711 FOX CHASE ROAD
ABINGTON, PA 19046-4192

EQUITABLE OWNER AND APPLICANT:
TOLL MID-ATLANTIC L.P. COMPANY, INC.
1140 VIRGINIA DRIVE
FORT WASHINGTON, PA 19034
(215)938-8000



LOCATION MAP
SCALE: 1"=800'



NOTE: SEE SHEET SD03.04 FOR ADJOINERS INFORMATION TABLE
SEE SHEET SD03.02 FOR EXISTNG TREE DESIGNATION CHART

NOTES:

1. PLANIMETRIC AND TOPOGRAPHIC FEATURES COMPILED BY ESE CONSULTANTS, INC. UTILIZING PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHY. AERIAL PHOTOGRAPHY PERFORMED BY KEYSTONE AERIAL PHOTOGRAPHY ON JANUARY 21, 2021 WITH A PHOTO SCALE OF 5cm GSD.
2. PHOTOGRAMMETRIC MAPPING HAS BEEN COMPILED IN ACCORDANCE WITH PROCEDURES THAT HAVE BEEN DEMONSTRATED TO COMPLY WITH THE AMERICAN SOCIETY OF PHOTOGRAMMETRY AND REMOTE SENSING (ASPRS) CLASS 1 STANDARD FOR A HORIZONTAL MAPPING SCALE OF 1"=50' AND A CONTOUR INTERVAL OF 1'.
3. FEATURES ARE LIMITED TO THOSE VISIBLE AT TIME OF THE PHOTOGRAPHY AND ARE SUBJECT TO FIELD VERIFICATION BY THE END USER. BUILDING OUTLINES REPRESENT APPROXIMATE ROOF LINE LOCATIONS AS SEEN ON THE AERIAL PHOTOGRAPHY. SUPPLEMENTED WITH VARIOUS FIELD DATA AS REQUESTED BY CLIENT.
4. DELINEATED AREAS DESIGNATED AS "OBSCURED" INDICATE THE GROUND IS OBSCURED BY VEGETATION OR SHADOWS. MAPPING WITHIN THESE AREAS MAY NOT MEET STANDARD ACCURACY.
5. THE VERTICAL DATUM SHOWN IS BASED ON NAVD88.
6. BOUNDARY INFORMATION TAKEN FROM A PLAN ENTITLED "PLAN OF SURVEY, LANDS N/F SISTERS OF ST. BASIL THE GREAT, DATED MARCH 22, 2021, LAST REVISED APRIL 14, 2021, PREPARED BY NAVE NEWELL, WAYNE, PA 19087.
7. WETLANDS INFORMATION SHOWN HEREIN TAKEN FROM A PLAN ENTITLED, "MAP OF WETLAND LOCATIONS, RYDAL ST. BASILS", DATED JUNE 16, 2022, LAST REVISED JULY 08, 2022. PREPARED BY ESE CONSULTANTS INC, FORT WASHINGTON PA 19034.
8. THE ABINGTON SEWER AUTHORITY VERTICAL DATUM IS 3.59' LOWER THAN THE VERTICAL DATUM USED.

LEGEND:

EXISTING DIRT/GRAVEL ROAD
EXISTING R.O.W.
EXISTING BOUNDARY LINE
EXISTING EASEMENT
MAJOR CONTOURS
MINOR CONTOURS
EXISTING SETBACK LINE
OBSCURED
EXISTING SPOT ELEVATION
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EXISTING MAIL BOX
EXISTING UTILITY POLE
EXISTING INLET
EXISTING MANHOLE
SOILS LINE
MINOR STREAM
CONCRETE MONUMENT

EXISTING GAS LINE
EXISTING WATER LINE
EXISTING STORM PIPE
EXISTING WATER VALVES
EXISTING HYDRANTS
STREAM LIMIT OF ORDINARY HIGH WATER MARK
WATERS OF THE U.S.
FLOODPLAIN LINE (ZONE X)
EXISTING 15-25% SLOPES
EXISTING >25% SLOPES
TOWNSHIP RIPARIAN BUFFER - ZONE 1
TOWNSHIP RIPARIAN BUFFER - ZONE 2
EXISTING TREES TO BE REMOVED
SW-103 TEST PIT

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GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

INFILTRATION TESTING SUMMARY

Test Pit	Depth/Rock (in)	Redox (in)	Test Depth (in)	Infiltration Rate (in/hr)
SW-100	115+	26-48	82	0.75/4.5
SW-101	120+	23-50	TBD	TBD
SW-102	108R	-	76	1.0/1.5
SW-102A	100R	-	76	6.0/7.5
SW-103	125+	20-34	TBD	TBD
SW-104	115+	-	TBD	TBD
SW-105	125+	-	84	3.0/3.0
SW-106	126+	-	84	1.25/9.0
SW-106	126+	-	36	5.25/3.75
SW-107	122+	-	TBD	TBD
SW-108	101R	-	TBD	TBD
SW-109	126+	34-46	TBD	TBD
SW-110	122+	22-45	96	2.0/0.75
SW-110A	112R	35-68	72	8.25/9.0
SW-111	120+	35-48	TBD	TBD
SW-111A	92R	-	48	6.0/6.0
SW-112	128+	24-46	54	5.25/8.25
SW-113	52R	-	28	3.0/2.0
SW-113A	48R	-	24	0.25/1.25
SW-114	56R	-	26	3.0/2.5
SW-114A	108R	28-40	66	6.0/10.5
SW-114B	84R	-	60	8.25/10.5
SW-114C	50R	-	26	0.75/0.5
SW-115	104R	-	80	3.0/6.0
SW-116	122+	-	92	7.5/7.5
SW-117	126+	8-24	TBD	TBD
SW-118	116+	-	TBD	TBD
SW-119	108+	-	72	6.0/1.0
SW-120	125+	-	TBD	TBD
SW-121	101+			
SW-122	108+			
SW-123	120+	-	TBD	TBD
SW-124	108+	-	TBD	TBD
SW-125	120+	28-90	90	0.04/0.04
SW-125A	132+	28-48	102	2.0/2.0
SW-126	150+	-	120	2.0/7.5
SW-126A	132+	-	108	3.75/1.75
SW-127	102+	-	54/78	0/0
SW-128	118+	18-28	TBD	TBD
SW-129	115+	-	TBD	TBD
SW-130	106+	-	TBD	TBD
SW-131	108+	-	TBD	TBD
SW-132	76R	-	TBD	TBD
SW-133	112+	-	84	3.25/3.0
SW-134	120+	-	TBD	TBD
SW-135	117+	-	84	5.25/6.0
SW-136	120+	-	72	9.0/6.0
SW-137	78R	-	TBD	TBD
SW-138	108+	32-90+	TBD	TBD
SW-139	80R	-	24	3.0/3.0
SW-140	118+	28-60	TBD	TBD
SW-141	88+	27-60	24	0.0/0.02
SW-141A	114R	-	50	0.75/1.5
SW-141B	36R	-	12	1.25/1.5
SW-141C	60R	-	24	0.75/0.25
SW-142	45R	-	TBD	TBD

= Bedrock Limitations
= Feasible Reults
= Not Feasible Results

THOMAS B. HENDRICKS
PROFESSIONAL LAND SURVEYOR
P.A. LICENSE NO. SU-044552-E

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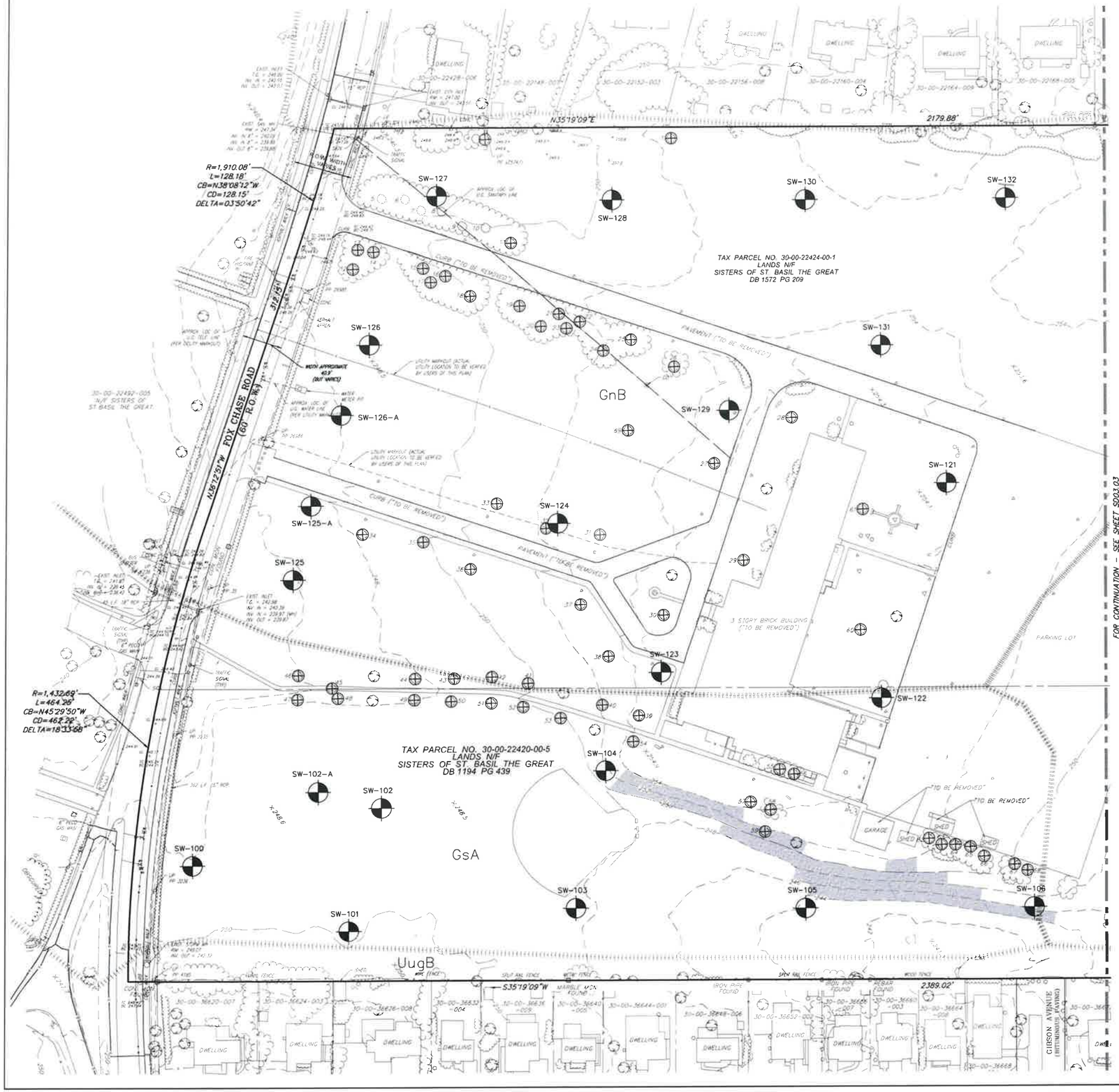
REV.	DATE	DESCRIPTION
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1	7/24/23	TOWNSHIP REVIEW LETTERS
		DRAWN
		KMS
		KMS

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT - NOT TO BE RECORDED

EXISTING FEATURES PLAN/ERSAM
(SHEET 1 OF 4)

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 03/24/23	SCALE: 1"=100'
DESIGN: JMM	DRAWN: KMS
JOB NO.: 7662	FILE NAME: SD03.01
REF. NO.: SD03.01	
SHEET NO.: 7 OF 64	

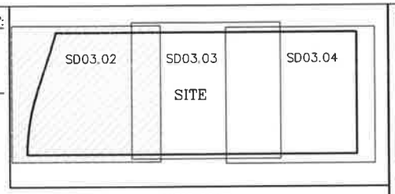


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FORT WASHINGTON, PA 19034
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KEY MAP
N.T.S.

EXISTING TREE 10" OR GREATER IN DIAMETER CHART

EXISTING TREE CONSTRUCTION DESIGNATION CHART			
Tag	Code	Trunk	Designation
1	TREE OF HEAVEN	14	TO BE REMOVED
2	BLACK WALNUT	18	TO REMAIN
3	TREE OF HEAVEN	18	TO BE REMOVED
4	BLACK WALNUT	16	TO REMAIN
5	WHITE PINE	26	TO REMAIN
6	WHITE PINE	20	TO REMAIN
7	WHITE PINE	17	TO REMAIN
8	WHITE PINE	22	TO REMAIN
9	WHITE PINE	23	TO REMAIN
10	WHITE PINE	23	TO REMAIN
11	WHITE PINE	24	TO BE REMOVED
12	WHITE PINE	22	TO BE REMOVED
13	WHITE PINE	17	TO BE REMOVED
14	WHITE PINE	32	TO BE REMOVED
15	WHITE PINE	23	TO BE REMOVED
16	WHITE PINE	24	TO BE REMOVED
17	WHITE PINE	21	TO BE REMOVED
18	WHITE PINE	34	TO BE REMOVED
19	WHITE PINE	30	TO BE REMOVED
20	WHITE PINE	28	TO BE REMOVED
21	WHITE PINE	18	TO BE REMOVED
22	WHITE PINE	23	TO BE REMOVED
23	WHITE PINE	24	TO BE REMOVED
24	WHITE PINE	32	TO BE REMOVED
25	WHITE PINE	26	TO BE REMOVED
26	WHITE PINE	22	TO BE REMOVED
27	GRAY BIRCH	17	TO BE REMOVED
28	CRABAPPLE	14	TO BE REMOVED
29	CRABAPPLE	15	TO BE REMOVED
30	ORNAMENTAL CHERRY	14	TO BE REMOVED
31	ORNAMENTAL CHERRY	34	TO BE REMOVED
32	CRABAPPLE	10	TO BE REMOVED
33	ORNAMENTAL CHERRY	23	TO BE REMOVED
34	ORNAMENTAL CHERRY	27	TO BE REMOVED
35	CRABAPPLE	12	TO BE REMOVED
36	ORNAMENTAL CHERRY	34	TO BE REMOVED
37	ORNAMENTAL CHERRY	31	TO BE REMOVED
38	SAUCER MAGNOLIA	10	TO BE REMOVED
39	BRADFORD PEAR	11	TO BE REMOVED
40	BRADFORD PEAR	12	TO BE REMOVED
41	BRADFORD PEAR	12	TO BE REMOVED
42	BRADFORD PEAR	12	TO BE REMOVED
43	BRADFORD PEAR	10	TO BE REMOVED
44	BRADFORD PEAR	12	TO BE REMOVED
45	BRADFORD PEAR	12	TO BE REMOVED
46	BRADFORD PEAR	12	TO BE REMOVED
47	BRADFORD PEAR	12	TO BE REMOVED
48	BRADFORD PEAR	12	TO BE REMOVED
49	BRADFORD PEAR	13	TO BE REMOVED
50	BRADFORD PEAR	12	TO BE REMOVED
51	BRADFORD PEAR	13	TO BE REMOVED
52	BRADFORD PEAR	11	TO BE REMOVED
53	BRADFORD PEAR	11	TO BE REMOVED
54	BRADFORD PEAR	13	TO BE REMOVED
55	CEDAR	11	TO BE REMOVED
56	CEDAR	12	TO BE REMOVED
57	CRABAPPLE	10	TO BE REMOVED
58	CRABAPPLE	16	TO BE REMOVED
59	NORWAY MAPLE	31	TO BE REMOVED
60	RED MAPLE	32	TO BE REMOVED
61	WEEPING CHERRY	16	TO BE REMOVED
62	CEDAR	10	TO BE REMOVED
63	CEDAR	12	TO BE REMOVED
64	CEDAR	13	TO BE REMOVED
65	CEDAR	13	TO BE REMOVED
66	CEDAR	13	TO BE REMOVED
67	CEDAR	11	TO BE REMOVED
68	CEDAR	10	TO BE REMOVED
69	RED MAPLE	20	TO BE REMOVED
70	RED MAPLE	17	TO BE REMOVED
71	ORNAMENTAL CHERRY	10	TO BE REMOVED
72	ORNAMENTAL CHERRY	11	TO BE REMOVED
73	ORNAMENTAL CHERRY	13	TO BE REMOVED
74	ORNAMENTAL CHERRY	13	TO BE REMOVED
75	RED MAPLE	18	TO BE REMOVED
76	RED MAPLE	20	TO BE REMOVED
77	RED OAK	20	TO REMAIN
78	SHAGBARK HICKORY	19	TO REMAIN
79	BEECH	20	TO REMAIN
80	RED OAK	14	TO REMAIN
81	RED MAPLE	10	TO REMAIN
82	RED OAK	27	TO REMAIN
83	BLACK CHERRY	13	TO REMAIN
84	BEECH	38	TO REMAIN
85	BEECH	25	TO REMAIN
86	TULIP POPLAR	23	TO REMAIN
87	TULIP POPLAR	27	TO REMAIN
88	TULIP POPLAR	18	TO REMAIN
89	BLACK CHERRY	14	TO REMAIN
90	RED OAK	17	TO REMAIN
91	RED OAK	22	TO REMAIN
92	TULIP POPLAR	28	TO REMAIN
93	TULIP POPLAR	12	TO REMAIN
94	BEECH	32	TO REMAIN
95	BEECH	34	TO REMAIN
96	BLACK CHERRY	17	TO REMAIN
97	RED OAK	30	TO REMAIN
98	RED MAPLE	12	TO REMAIN
99	RED MAPLE	23	TO REMAIN
100	SLIPPERY ELM	21	TO REMAIN

SOILS LEGEND:

Map Unit Symbol	Map Unit Name	Rating
GnB	Glenig Silt Loam, 3 to 8 Percent Slopes	B
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LEGEND:

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- EXISTING R.O.W.
- EXISTING BOUNDARY LINE
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- MAJOR CONTOURS
- MINOR CONTOURS
- EXISTING SETBACK LINE
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- MINOR STREAM
- CONCRETE MONUMENT
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING STORM PIPE
- EXISTING WATER VALVES
- EXISTING HYDRANTS
- STREAM LIMIT OF ORDINARY HIGH WATER MARK
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GRAPHIC SCALE
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(IN FEET)
1 inch = 50 ft.

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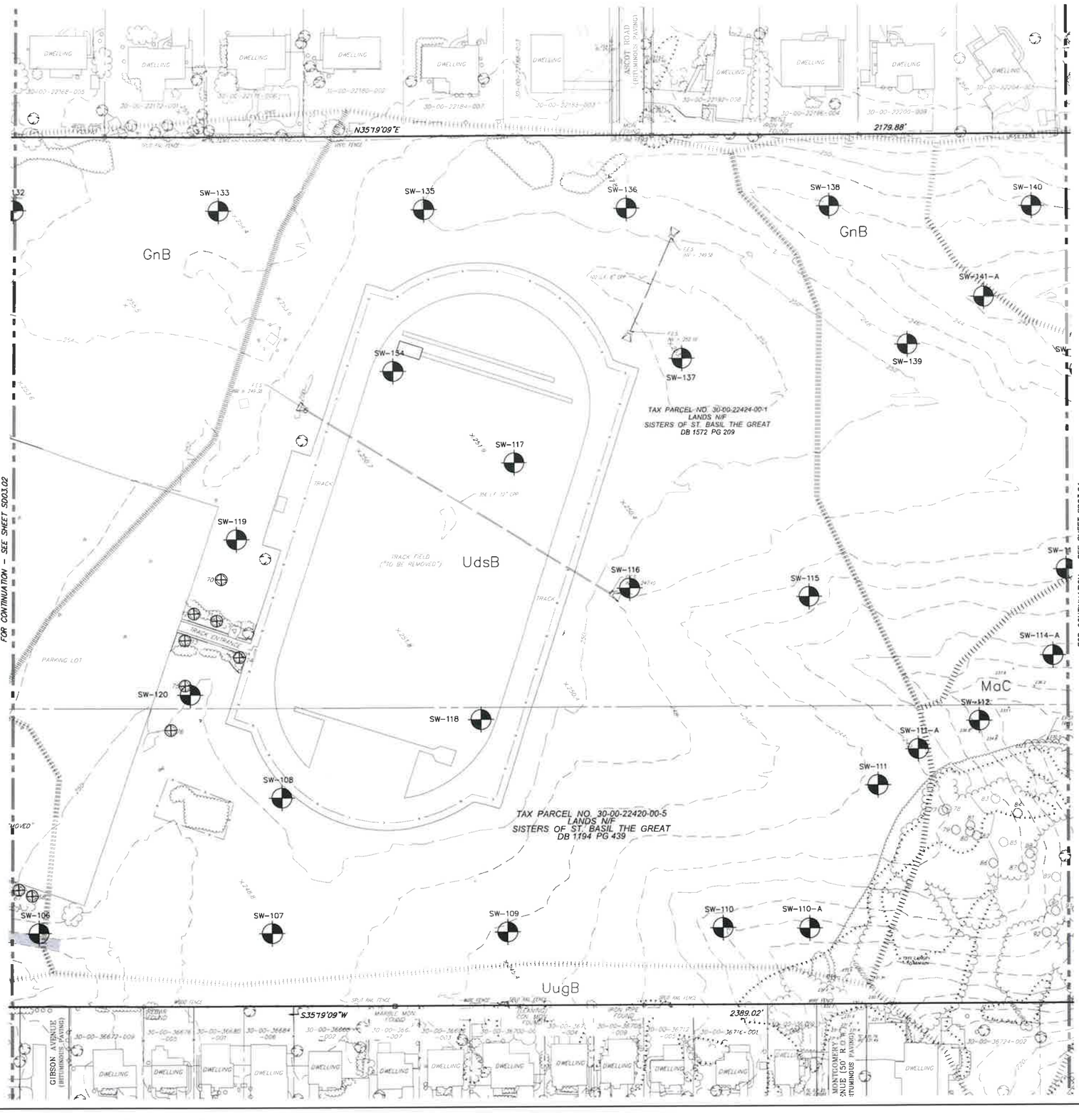
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PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT–NOT TO BE RECORDED

EXISTING FEATURES PLAN/ERSAM
(SHEET 2 OF 4)

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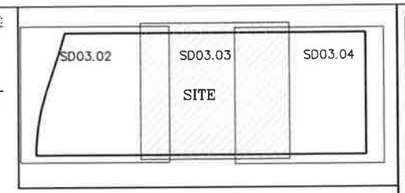


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KEY MAP
N.T.S.

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- EXISTING HYDRANTS
- STREAM LIMIT OF ORDINARY HIGH WATER MARK
- WATERS OF THE U.S.
- FLOODPLAIN LINE (ZONE X)
- EXISTING 15-25% SLOPES
- EXISTING >25% SLOPES
- TOWNSHIP RIPARIAN BUFFER - ZONE 1
- TOWNSHIP RIPARIAN BUFFER - ZONE 2
- EXISTING TREES TO BE REMOVED
- SW-103 TEST PIT

811 Know what's **below.** **Call** before you dig.

Pennsylvania One Call System, Inc.
925 Irwin Run Road
West Mifflin PA 15122-1078
1-800-242-1776
or 8-1-1
www.paonecall.org

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

THOMAS B. HENDRICKS
PROFESSIONAL LAND SURVEYOR
P.A. LICENSE NO. SU-044552-E

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PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

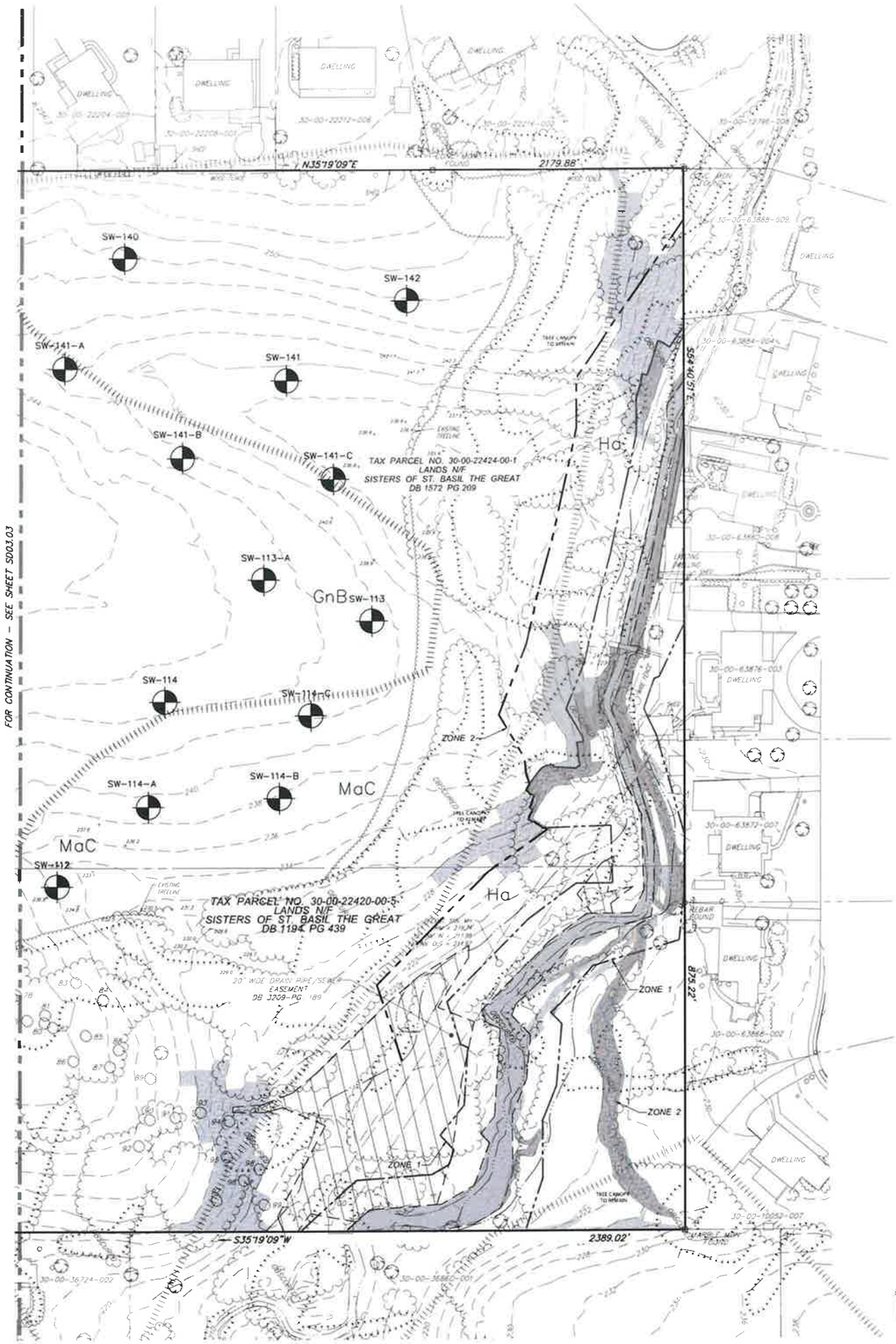
REV	DATE	DESCRIPTION
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS
1	7/24/23	TOWNSHIP REVIEW LETTERS

DRAWN: KMS
CHECKED: KMS

EXISTING FEATURES PLAN/ERSAM
(SHEET 3 OF 4)

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 03/24/23	SCALE: 1"=50'
DESIGN: JMM	DRAWN: KMS
JOB NO.: 7662	FILE NAME: SD03.03
REF. NO.: SD03.03	
SHEET NO.: 9 OF 64	



SOILS LEGEND:

Map Unit Symbol	Map Unit Name	Rating
GnB	Glenig Silt Loam, 3 to 8 Percent Slopes	B
GsA	Glenville Silt Loam, Somewhat Poorly Drained, 0 to 3 Percent Slopes	C/D
GsB	Glenig Silt Loam, 3 to 8 Percent Slopes	C/D
Ha	Holboro Silt Loam	B/D
MaB	Manor Loam, 3 to 8 Percent Slopes	B
MaC	Manor Loam, 8 to 15 Percent Slopes	B
MaD	Manor Loam, 15 to 25 Percent Slopes	B
UdsB	Udorthents, Schist and Gneiss 0 to 8 Percent Slopes	C
UgB	Urban Land, 0 to 8 Percent Slopes	
UugB	Urban Land-Udorthents, Schist and Gneiss Complex, 0 to 8 Percent Slopes	

LEGEND:

- EXISTING DIRT/GRAVEL ROAD
- EXISTING R.O.W.
- EXISTING BOUNDARY LINE
- EXISTING EASEMENT
- MAJOR CONTOURS
- MINOR CONTOURS
- EXISTING SETBACK LINE
- OBSCURED
- EXISTING SPOT ELEVATION
- EXISTING TREE LINE
- EXISTING VEGETATION LINE
- EXISTING TREE PER AERIAL MAPPING
- EXISTING TREE 10" OR GREAT DIAMETER
- EXISTING SHRUB
- EXISTING SIGN
- EXISTING MAIL BOX
- EXISTING UTILITY POLE
- EXISTING INLET
- EXISTING MANHOLE
- SOILS LINE
- MINOR STREAM
- CONCRETE MONUMENT
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING STORM PIPE
- EXISTING WATER VALVES
- EXISTING HYDRANTS
- STREAM LIMIT OF ORDINARY HIGH WATER MARK
- WATERS OF THE U.S.
- FLOODPLAIN LINE (ZONE X)
- EXISTING 15-25% SLOPES
- EXISTING >25% SLOPES
- TOWNSHIP RIPARIAN BUFFER - ZONE 1
- TOWNSHIP RIPARIAN BUFFER - ZONE 2
- EXISTING TREES TO BE REMOVED
- SW-103 TEST PIT

811 Know what's below. Call before you dig.

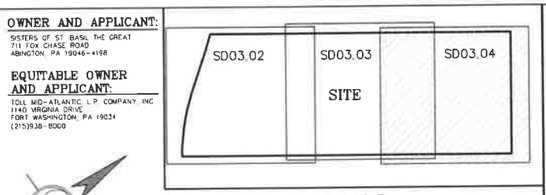
Pennsylvania One Call System, Inc.
925 Irwin Run Road
West Mifflin, PA 15122-1078
1-800-242-1776
or 8-1-1
www.paonecall.org

GRAPHIC SCALE

50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft

OWNER AND APPLICANT:
SISTERS OF ST. BASIL THE GREAT
711 FOX CHASE ROAD
ABINGTON, PA 19046-4158

EQUITABLE OWNER AND APPLICANT:
TOLL MID-ATLANTIC L.P. COMPANY, INC
1140 VIRGINIA DRIVE
FORT WASHINGTON, PA 19034
(215)938-8000



KEY MAP
N.T.S.

ADJOINERS INFORMATION TABLE

PARCEL NUMBER	OWNER	ADDRESS	ACREAGE
30-00-22148 007	ARDEN C. AND KEATHLEEN A. WANDER	615 FORREST AVENUE, JENKINGTOWN, PA 19046	0.44
30 00 22152 003	ARNOLD J. AND SANDRA BERSON	623 FORREST AVENUE, JENKINGTOWN, PA 19046	0.48
30 00 22156-008	ROY B. AND LESLIE G. PORTNER	631 FORREST AVENUE, JENKINGTOWN, PA 19046	0.44
30 00 22160-004	CHARLES T. AND GLORIA MCDERMOTT	637 FORREST AVENUE, JENKINGTOWN, PA 19046	0.38
30 00 22164 009	LAZAROS KARASAVAS	645 FORREST AVENUE, JENKINGTOWN, PA 19046	0.36
30 00-22168 005	LUCAS BURKE	653 FORREST AVENUE, JENKINGTOWN, PA 19046	0.34
30-00-22172 001	THEODORE A. AND PATRICIA ZALESKI	661 FORREST AVENUE, JENKINGTOWN, PA 19046	0.34
30 00 22176 006	KEE F. AND KATHLEEN T. WIDMAN	669 FORREST AVENUE, JENKINGTOWN, PA 19046	0.34
30 00 22180 002	LISA A. HARKINS	677 FORREST AVENUE, JENKINGTOWN, PA 19046	0.34
30 00 22184 007	BILL RAY AND PATRICIA ANN JACOBS	685 FORREST AVENUE, JENKINGTOWN, PA 19046	0.34
30 00-22188 003	DENNIS JOHN AND NICOLE CYNTHIA LAURIA	693 FORREST AVENUE, JENKINGTOWN, PA 19046	0.38
30 00-22192 008	JOYCE M. AND DAVIS S. IEFF	707 FORREST AVENUE, JENKINGTOWN, PA 19046	0.38
30 00 22196 004	THOMAS P. DENNERY	715 FORREST AVENUE, JENKINGTOWN, PA 19046	0.34
30-00-22200-009	PEARSE P. AND ELIZABETH V. KERR	723 FORREST AVENUE, JENKINGTOWN, PA 19046	0.34
30 00 22204 005	HOWARD A. AND KATHLEEN A. WILSON	731 FORREST AVENUE, JENKINGTOWN, PA 19046	0.34
30 00 22208 001	ROBERT W. AND KIMBERLYA. GEISLER	739 FORREST AVENUE, JENKINGTOWN, PA 19046	0.34
30 00-22212 006	GLENN GRESSEN	747 FORREST AVENUE, JENKINGTOWN, PA 19046	0.39
30 00-22216-002	GEORGE H JR. MORGAN	755 FORREST AVENUE, JENKINGTOWN, PA 19046	0.67
30 00-22428 006	SAMUEL AND NANCY KRENZEL	777 FOX CHASE ROAD, JENKINGTOWN, PA 19046	0.88
30 00 12796-008	SIMON AND TOBY GALAPO	858 DELENE ROAD, RYDAL, PA 19046	0.87
30-00-63883 009	JODY LIEBERMAN GOLDSBOROUGH	756 SUFFORK ROAD, RYDAL, PA 19046	0.47
30-00 63884 004	CHRISTINA BARTOSH	748 SUFFORK ROAD, RYDAL, PA 19046	0.36
30-00-63880-008	ROBERT AND ALBERINA DAIZA	742 SUFFORK ROAD, JENKINGTOWN, PA 19046	0.36
30-00-63876-001	ARBEN PROKA	732 SUFFORK ROAD, JENKINGTOWN, PA 19046	0.35
30 00 63872-007	KOSTANDIN AND NERIE TURTULLI	726 SUFFORK ROAD, JENKINGTON, PA 19046	0.35
30 00-63868 002	DIANE MEEHAN	716 SUFFORK ROAD, JENKINGTON, PA 19046	0.35
30 00-10052 007	SAIMIR AND IOLINDA SHEHU	861 COLWYN ROAD, JENKINGTOWN, PA 19046	0.48
30-00-36620 007	ROBERT AND THERESA WAAS	608 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.28
30-00 36624-003	VINCENT J. AND JULIE A. KELLY	614 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.20
30 00 36628 008	GREGORY J. POENLMANN	622 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.27
30 00 36632 004	ROY A. AND CAROLE ANNE STEIN	626 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.14
30 00 36636 009	JOSEPH AND DOLORES HURLEY	632 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.20
30 00 36640 005	MICHAEL GAZZARA AND JESSICA RUCH	636 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30 00 36644 001	MICHAEL S. AND LINDA TOBIN	642 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.20
30-00-36648 006	STEVEN D. HUNTZINGER	648 KIRKWOOD AVENUE JENKINGTOWN, PA 19046	0.20
30-00-36652 002	FRANCES C. MCKEOWN AND MICHAEL P. BURNER	654 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.20
30-00-36656-007	HARRY J. VANPELT AND LESLIE E. MAXWELL	658 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.14
30 00-36660 003	HARRY J. AND KAREN A. LOOBY	662 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.14
30 00-36664 008	JOHN A. AND ODARKA CHARAMBURA	666 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30-00 36668-004	ALEXANDRA L. STILES	670 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30 00 36672-009	JED K. MARGOLIS AND CARLEY M. TAYLOR	702 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.20
30-00-36676-005	JOSEPH F. AND JAIME M. AVON	706KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30 00-36680-001	HUGH B. AND KATHLEEN A. MCHUGH	710 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30-00-36684 006	RAYMOND AND KATE VANDEGRIFT	714 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30 00 36688-002	RALPH AND ERMA F. YERKES	718 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.20
30 00-36692 007	PAMELA M. JONES	724 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30-00-36696-003	WILLIAM F. AND PAMELA ANNE HAGERTY	728 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30-00-36700 008	GLEN E. AND LISA R. HEILMAN	734 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.20
30 00-36704 004	FRANCIS N. AND CYNTHIA L. MAY	738 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30 00-36708-009	WALTER G. JR AND PATRICIA A. WYATT	742 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30-00-36712 005	VINCENT J. AND JEANETTE M. CALGIURI	746 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30 00 36716-001	JESSIE G. AND ELIZABETH M. GRAZIANI	752 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.20
30 00-36720-006	LORRAINE ZWOLAK	756 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.13
30 00 36724 002	DENNIS AND CHERYL D. CONARD	802 KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	0.60
30 00-36860 001	ABINGTON TOWNSHIP	KIRKWOOD AVENUE, JENKINGTOWN, PA 19046	12.00

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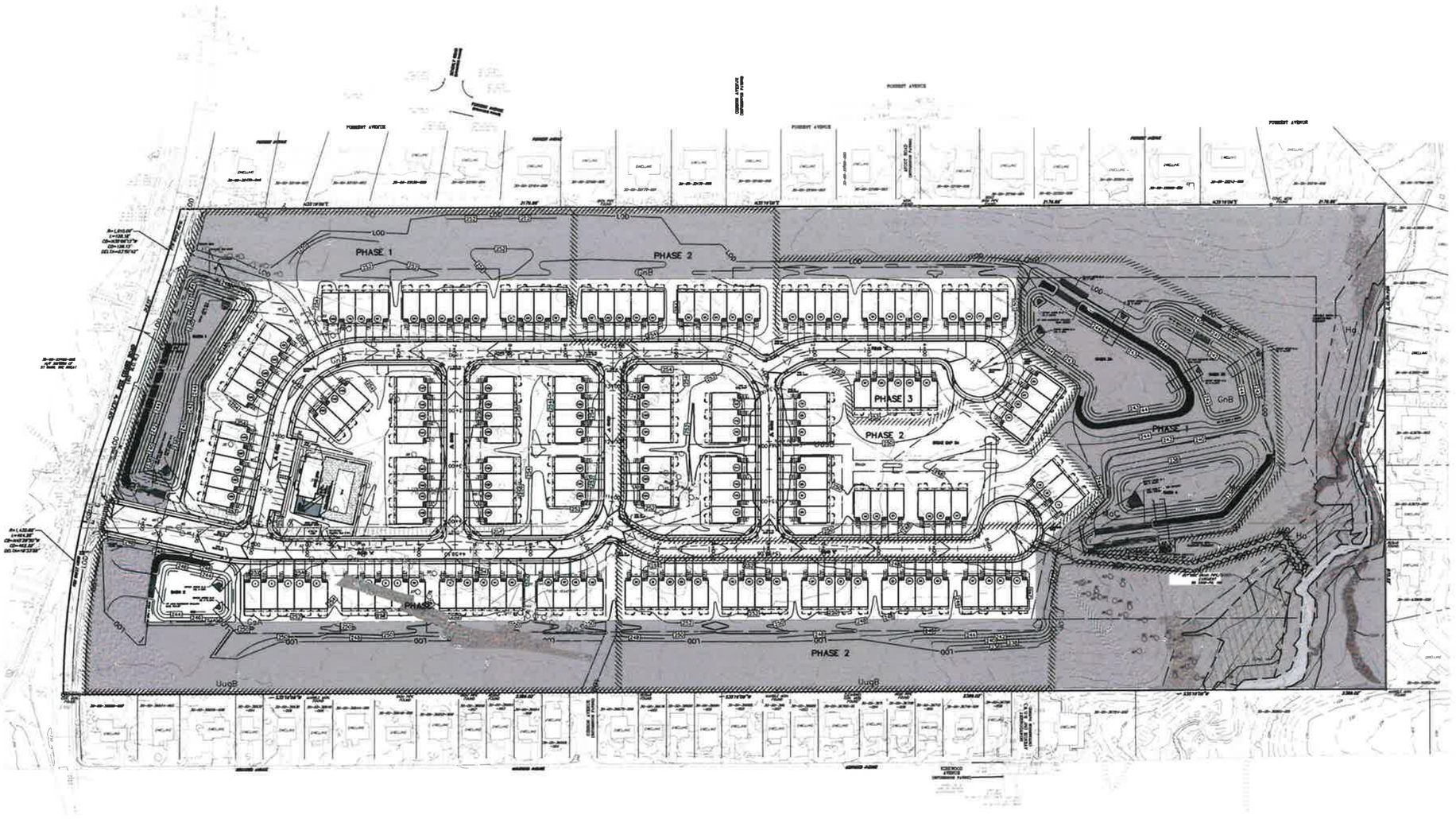
REV.	DATE	DESCRIPTION
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS
1	7/24/23	TOWNSHIP REVIEW LETTERS
		KMS DRAWN
		KMS CHECKED

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT - NOT TO BE RECORDED

EXISTING FEATURES PLAN/ERSAM
(SHEET 4 OF 4)

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 03/24/23	SCALE: 1"=50'
DESIGN: JMM	DRAWN: KMS
JOB NO.: 7662	FILE NAME: SD03.04
REF. NO.: SD03.04	
SHEET NO.: 10 OF 64	



LEGEND

- EXISTING STRUCTURE
- EXISTING CONTOURS
- PROPOSED TREE LINE
- EXISTING TREE LINE
- WETLANDS LIMIT
- WATERS OF THE U.S.
- BUILDING SETBACK LINE
- PROPOSED CENTER LINE
- STREAM LINE
- PROPOSED PROPERTY LINE
- PROPOSED R.O.W.
- EXISTING CARTWAY
- PROPOSED CURB
- PROPOSED 4' WIDE SIDEWALK WITH ACCESS RAMP
- OUTBOUND LINE
- PROPOSED SPLIT RAIL FENCE
- PROPOSED EASEMENT
- (68) PROPOSED LOT NUMBER
- QUALIFYING OPEN SPACE 22.6 AC
- PHASE LINE

PHASE 1	68 HOMES
PHASE 2	61 HOMES
PHASE 3	21 HOMES
TOTAL	150 HOMES

HORIZONTAL GRAPHIC SCALE

100 0 100 200

(IN FEET)
1" = 100 FEET

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT - NOT TO BE RECORDED

APPLICATION NUMBER: LD-23-01

REV.	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

OVERALL SITE AND PHASING PLAN

SISTERS OF ST. BASIL

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: 1" = 100'
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-S-04-SITE
REF. NO.: SD04.01	
SHEET NO.: 11 OF 64	

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JEFFREY H. MADDEN
PROFESSIONAL ENGINEER

N:\PROJECTS\PENNSYLVANIA\7662-RYDAL ST. BASILS\ENGDEPT\DRAWINGS\7662-S-04-SITE.DWG-E/a, Slenger-10/17/2023 11:59 AM

FORREST AVENUE

FOX CHASE ROAD

DWELLING

30-00-22428-006

30-00-22148-007

30-00-22152-003

30-00-22492-005
N/F SISTERS OF
ST BASIL THE GREAT

REMOVE CURB

BOLLARD AND CHAIN

BASIN 1

RIPRAP APRON R-4
12'L x 18'W

WIDEN APPROXIMATE
40.9'
BUT VARIES

50' LONG EMERGENCY SPILLWAY
ELEV. 248.50

RIPRAP APRON R-3
12'L x 18'W

CON IRON
FOUND

ROAD B

DEPRESSED
CURB

30'
DWELLING
SETBACK

ROOF LEADER
(TYP.)

GnB

T.W.=255.21
G.F.=254.54

T.W.=254.54
G.F.=253.87

T.W.=254.54
G.F.=253.87

T.W.=253.87
G.F.=253.20

T.W.=256.07
G.F.=255.40

T.W.=254.87
G.F.=254.20

T.W.=253.53
G.F.=252.86

T.W.=256.30
G.F.=255.63

T.W.=256.97
G.F.=256.30

F.F.=255.30

KEYMAP

SD05.01	SD05.02	SD05.03	SD05.04
SD05.05	SD05.06	SD05.07	SD05.08

LEGEND

- TW= TOP OF WALL ELEVATION
- BF= BASEMENT FLOOR ELEVATION
- GF= GARAGE FLOOR ELEVATION
- EXISTING STRUCTURE
- EXISTING DIRT/GRAVEL ROAD
- EXISTING STREET SIGN
- EXISTING UTILITY POLE
- EXISTING R.O.W.
- EXISTING CARTWAY
- STREAM LINE
- EXISTING CENTER LINE
- EXISTING BOUNDARY LINE
- SOILS LINE
- EXISTING OVERHEAD UTILITY (ELECTRIC, PHONE, CABLE, ETC.)
- EXISTING CONCRETE MONUMENT
- EXISTING IRON PIN
- EXISTING SIGN
- EXISTING UTILITY POLE
- EXISTING INLET
- EXISTING SPOT ELEVATION
- EXISTING TREE
- TOWNSHIP RIPARIAN BUFFER - ZONE 1
- TOWNSHIP RIPARIAN BUFFER - ZONE 2
- STEEP SLOPES 15% TO 25%
- STEEP SLOPES > 25%
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- EXISTING TREE LINE
- EXISTING VEGETATION
- PROPOSED TREE LINE
- EXISTING INLET W/ STORM SEWER
- PROPOSED STORM SEWER W/ STRUCTURE NUMBER
- PROPOSED STORM MANHOLE W/ STRUCTURE NUMBER
- PROPOSED FLARED END SECTION W/STRUCTURE NUMBER
- PROPOSED UNDERGROUND UTILITIES (ELECTRIC, PHONE, CABLE, ETC.)
- PROPOSED SPLIT RAIL FENCE
- PROPOSED SIGHT TRIANGLE
- PROPOSED WATER LATERAL
- PROPOSED SANITARY LATERAL w/ CLEANOUT
- TREE PROTECTION FENCE
- RIP-RAP APRON
- LOT NUMBER
- LIGHT POST
- STREET SIGN
- DO NOT ENTER SIGN
- SPEED LIMIT SIGN
- PEDESTRIAN CROSSING SIGN
- STOP SIGN 30"X30"
- NO PARKING SIGN
- STOP BAR
- WETLANDS
- WATERS OF THE U.S.
- SANITARY MAIN AND MANHOLE w/ STRUCTURE NUMBER
- PROPOSED 8" WATERMAIN

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1" = 30 FEET

JEFFREY M. MADDEN
PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA

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REV'D	DATE	DESCRIPTION	DRAWN
1.	7/24/23	TOWNSHIP REVIEW LETTERS	ESE
2.	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT - NOT TO BE RECORDED

APPLICATION NUMBER LD-23-01

GRADING PLAN

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: 1" = 30'
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-5-05-GRADE
REF. NO.:	SD05.01
SHEET NO.:	12 OF 64

N:\PROJECTS\PENNSYLVANIA\7662-RYDAL ST. BASILS\ENGDEPT\DRAWINGS\7662-5-05-GRADE.DWG-File Stengel-10/17/2023 11:59 AM

FORREST AVENUE

FORREST AVENUE

DWELLING

DWELLING

DWELLING

DWELLING

DWELLING

DWELLING

DWELLING

30-00-22152-003

30-00-22156-008

30-00-22160-004

30-00-22164-009

30-00-22168-005

30-00-22172-001

30-00-22176-006

30-00-22180-002

IRON PIPE FOUND

GnB

ROAD 'B'

ROAD 'C'

ROAD 'F'

ROAD 'G'

30' CARTWAY

50' ROW

TYPE 4A CURB RAMP

KEYMAP

SD05.01 SD05.02 SD05.03 SD05.04

SD05.05 SD05.06 SD05.07 SD05.08

LEGEND

- TW= TOP OF WALL ELEVATION
- BF= BASEMENT FLOOR ELEVATION
- GF= GARAGE FLOOR ELEVATION
- EXISTING STRUCTURE
- EXISTING DIRT/GRAVEL ROAD
- EXISTING STREET SIGN
- EXISTING UTILITY POLE
- EXISTING R.O.W.
- EXISTING CARTWAY
- STREAM LINE
- EXISTING CENTER LINE
- EXISTING BOUNDARY LINE
- SOILS LINE
- EXISTING OVERHEAD UTILITY (ELECTRIC, PHONE, CABLE, ETC.)
- EXISTING CONCRETE MONUMENT
- EXISTING IRON PIN
- EXISTING SIGN
- EXISTING UTILITY POLE
- EXISTING INLET
- EXISTING SPOT ELEVATION
- EXISTING TREE
- TOWNSHIP RIPARIAN BUFFER - ZONE 1
- TOWNSHIP RIPARIAN BUFFER - ZONE 2
- STEEP SLOPES 15% TO 25%
- STEEP SLOPES > 25%
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- EXISTING TREE LINE
- EXISTING VEGETATION
- PROPOSED TREE LINE
- EXISTING INLET W/ STORM SEWER
- PROPOSED STORM SEWER W/ STRUCTURE NUMBER
- PROPOSED STORM MANHOLE W/ STRUCTURE NUMBER
- PROPOSED FLARED END SECTION W/STRUCTURE NUMBER
- PROPOSED UNDERGROUND UTILITIES (ELECTRIC, PHONE, CABLE, ETC.)
- PROPOSED SPLIT RAIL FENCE
- PROPOSED SIGHT TRIANGLE
- PROPOSED WATER LATERAL
- PROPOSED SANITARY LATERAL w/ CLEANOUT
- TREE PROTECTION FENCE
- RIP-RAP APRON
- LOT NUMBER
- LIGHT POST
- STREET SIGN
- DO NOT ENTER SIGN
- SPEED LIMIT SIGN
- PEDESTRIAN CROSSING SIGN
- STOP SIGN 30"X30"
- NO PARKING SIGN
- STOP BAR
- WETLANDS
- WATERS OF THE U.S.
- SANITARY MAIN AND MANHOLE w/ STRUCTURE NUMBER
- PROPOSED 8" WATERMAIN

GRAPHIC SCALE

30 0 30 60

(IN FEET)
1" = 30 FEET

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REV.	DATE	DESCRIPTION
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2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS

DRAWN: ESE
CHECKED: ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

APPLICATION NUMBER 0-23-01

GRADING PLAN

SISTERS OF ST. BASIL

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: 1" = 30'
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-5-05-GRADE
REV. NO.:	SD05.02
SHEET NO.:	13 OF 64

N:\PROJECTS\PENNSYLVANIA\7662-RYDAL ST. BASILS\PROPERTY\DRAWINGS\7662-5-05-GRADE.DWG - Eric Stenger - 10/17/2023 11:59 AM

FORREST AVENUE

ASCOT ROAD (BITUMINOUS PAVING)

DWELLING

00-22176-006

30-00-22180-002

30-00-22184-007

30-00-22188-003

30-00-22192-008

30-00-22196-004

30-00-22200-009

30-00-2220-

MON. FOUND

BENT IRON PIPE FOUND

LOD

ROAD 'D'

50' CARRYWAY / 50' ROW

TYPE 4A CURB RAMP

TYPE 4 CURB RAMP

ROAD 'G'

CARRYWAY 50' ROW

DEPRESSED CURB

BASIN ACCESS DRIVE

BASIN 3A

STONE BMP 2A

RIPRAP APRON R-3 9'L X 58'W

RIPRAP APRON R-3 8'L X 12.5'W

45' LONG EMERGENCY SPILLWAY ELEV. 245.80'

RIPRAP APRON R-4 12'L X 18'W

GnB

UdsB

KEYMAP

SD05.01 SD05.02 SD05.03 SD05.04 SD05.05 SD05.06 SD05.07 SD05.08

LEGEND

- TW= TOP OF WALL ELEVATION
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- GF= GARAGE FLOOR ELEVATION
- EXISTING STRUCTURE
- EXISTING DIRT/GRAVEL ROAD
- EXISTING STREET SIGN
- EXISTING UTILITY POLE
- EXISTING R.O.W.
- EXISTING CARTWAY
- STREAM LINE
- EXISTING CENTER LINE
- EXISTING BOUNDARY LINE
- SOILS LINE
- EXISTING OVERHEAD UTILITY (ELECTRIC, PHONE, CABLE, ETC.)
- EXISTING CONCRETE MONUMENT
- EXISTING IRON PIN
- EXISTING SIGN
- EXISTING UTILITY POLE
- EXISTING INLET
- EXISTING SPOT ELEVATION
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- TOWNSHIP RIPARIAN BUFFER - ZONE 1
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- STEEP SLOPES 15% TO 25%
- STEEP SLOPES > 25%
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- PROPOSED CONTOURS
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- EXISTING TREE LINE
- EXISTING VEGETATION
- PROPOSED TREE LINE
- EXISTING INLET W/ STORM SEWER
- PROPOSED STORM SEWER W/ STRUCTURE NUMBER
- PROPOSED STORM MANHOLE W/ STRUCTURE NUMBER
- PROPOSED FLARED END SECTION W/STRUCTURE NUMBER
- PROPOSED UNDERGROUND UTILITIES (ELECTRIC, PHONE, CABLE, ETC.)
- PROPOSED SPLIT RAIL FENCE
- PROPOSED SIGHT TRIANGLE
- PROPOSED WATER LATERAL
- PROPOSED SANITARY LATERAL W/ CLEANOUT
- TREE PROTECTION FENCE
- RIP-RAP APRON
- LOT NUMBER
- LIGHT POST
- STREET SIGN
- DO NOT ENTER SIGN
- SPEED LIMIT SIGN
- PEDESTRIAN CROSSING SIGN
- STOP SIGN 30"X30"
- NO PARKING SIGN
- STOP BAR
- WETLANDS
- WATERS OF THE U.S.
- SANITARY MAIN AND MANHOLE W/ STRUCTURE NUMBER
- PROPOSED 8" WATERMAIN

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1" = 30 FEET

APPLICATION NUMBER LD-23-01

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

JEFFREY H. HADDEN — LICENSED PROFESSIONAL ENGINEER — COMMONWEALTH OF PENNSYLVANIA

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ESE Consultants, Inc.
1140 Virginia Drive • Fort Washington, PA 19034
T: 215-914-2050

REV.	DATE	DESCRIPTION
1	7/24/23	TOWNSHIP REVIEW LETTERS
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS

GRADING PLAN

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: 1" = 30'
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-5-05-GRADE
REF. NO.: SD05.03	
SHEET NO.: 14 OF 64	

N:\PROJECTS\PENNSYLVANIA\7662-PYDAL ST. BASILS\ENGDEPT\DRAWINGS\7662-5-05-GRADE.DWG-Eric Stenger-10/17/2023 11:59 AM

FORREST AVENUE

DWELLING

30-00-22200-009

DWELLING

30-00-22204-005

DWELLING

30-00-22208-001

DWELLING

30-00-22212-006

DWELLING

30-00-22216-002

30-00-12796-008

CONC. MON. FOUND

CONC. MON. FOUND

30-00-63888-009

DWELLING

30-00-63884-004

DWELLING

30-00-63880-008

DWELLING

30-00-63876-003

DWELLING

GnB

RIPRAP APRON R-3
8'L X 58'W

RIPRAP APRON R-3
8'L X 12.5'W

RIPRAP APRON R-3
8'L X 12.5'W

45' LONG EMERGENCY SPILLWAY
ELEV. 245.80'

RIPRAP APRON R-4
12'L X 18'W

TOP OF BERM = 246.00

RIPRAP APRON R-2
8'L X 41'W

RIPRAP APRON R-3
8'L X 11.75'W

30' LONG EMERGENCY SPILLWAY
ELEV. 244.60'

BASIN 3A

BASIN 3B

RIPRAP APRON R-3
8'L X 11.75'W

GnB

TOP OF BERM = 246.00

ASIN
CCESS
RIVE

RIPRAP APRON R-4

VARIABLE WIDTH
CONSERVATION
EASEMENT

Ha

ZONE 2

SD05.01 SD05.02 SD05.03 SD05.04
SD05.05 SD05.06 SD05.07 SD05.08

KEYMAP

LEGEND

- TW= TOP OF WALL ELEVATION
- BF= BASEMENT FLOOR ELEVATION
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- EXISTING STRUCTURE
- EXISTING DIRT/GRAVEL ROAD
- EXISTING STREET SIGN
- EXISTING UTILITY POLE
- EXISTING R.O.W.
- EXISTING CARTWAY
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- EXISTING CENTER LINE
- EXISTING BOUNDARY LINE
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- EXISTING OVERHEAD UTILITY (ELECTRIC, PHONE, CABLE, ETC.)
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- EXISTING UTILITY POLE
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- EXISTING CONTOURS
- PROPOSED CONTOURS
- 1000 EXISTING SPOT ELEVATION
- + 100.00 PROPOSED SPOT ELEVATION
- EXISTING TREE LINE
- EXISTING VEGETATION
- PROPOSED TREE LINE
- EXISTING INLET W/ STORM SEWER
- PROPOSED STORM SEWER W/ STRUCTURE NUMBER
- 10 11 PROPOSED STORM MANHOLE W/ STRUCTURE NUMBER
- 12 PROPOSED FLARED END SECTION W/STRUCTURE NUMBER
- PROPOSED UNDERGROUND UTILITIES (ELECTRIC, PHONE, CABLE, ETC.)
- PROPOSED SPLIT RAIL FENCE
- PROPOSED SIGHT TRIANGLE
- W PROPOSED WATER LATERAL
- S PROPOSED SANITARY LATERAL w/ CLEANOUT
- TREE PROTECTION FENCE
- RIP-RAP APRON
- 3 LOT NUMBER
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- WETLANDS
- WATERS OF THE U.S.
- 6 SANITARY MAIN AND MANHOLE w/ STRUCTURE NUMBER
- 8"W PROPOSED 8" WATERMAIN

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1" = 30 FEET

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JEFFREY M. MADDEN — COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER

REV.	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

APPLICATION NUMBER LD-23-01

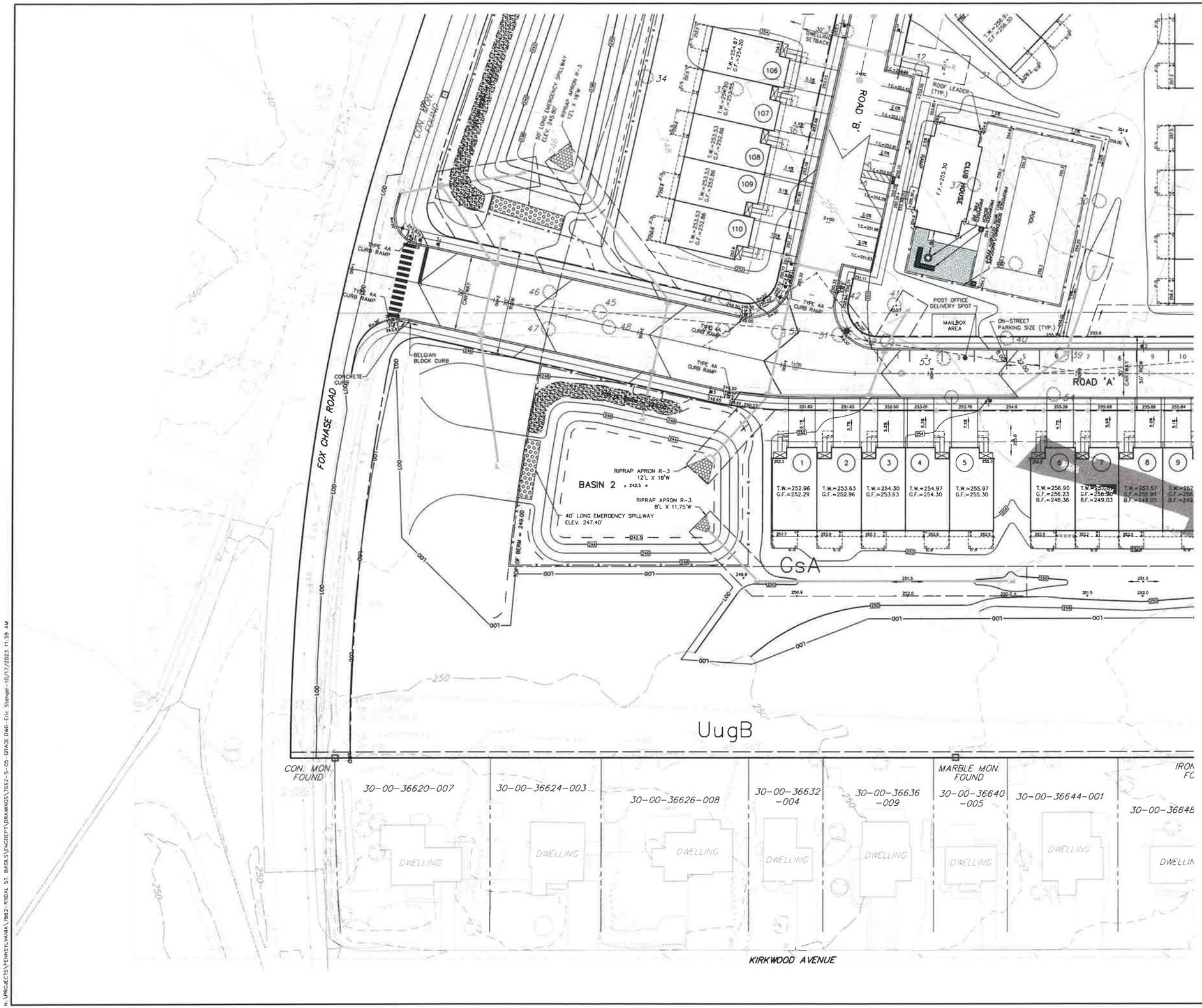
GRADING PLAN

SISTERS OF ST. BASIL

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: 1" = 30'
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-S-05-GRADE
REF. NO.: SD05.04	
SHEET NO.: 15 OF 64	

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REV.	DATE	DESCRIPTION	DRAWN
2	10/17/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

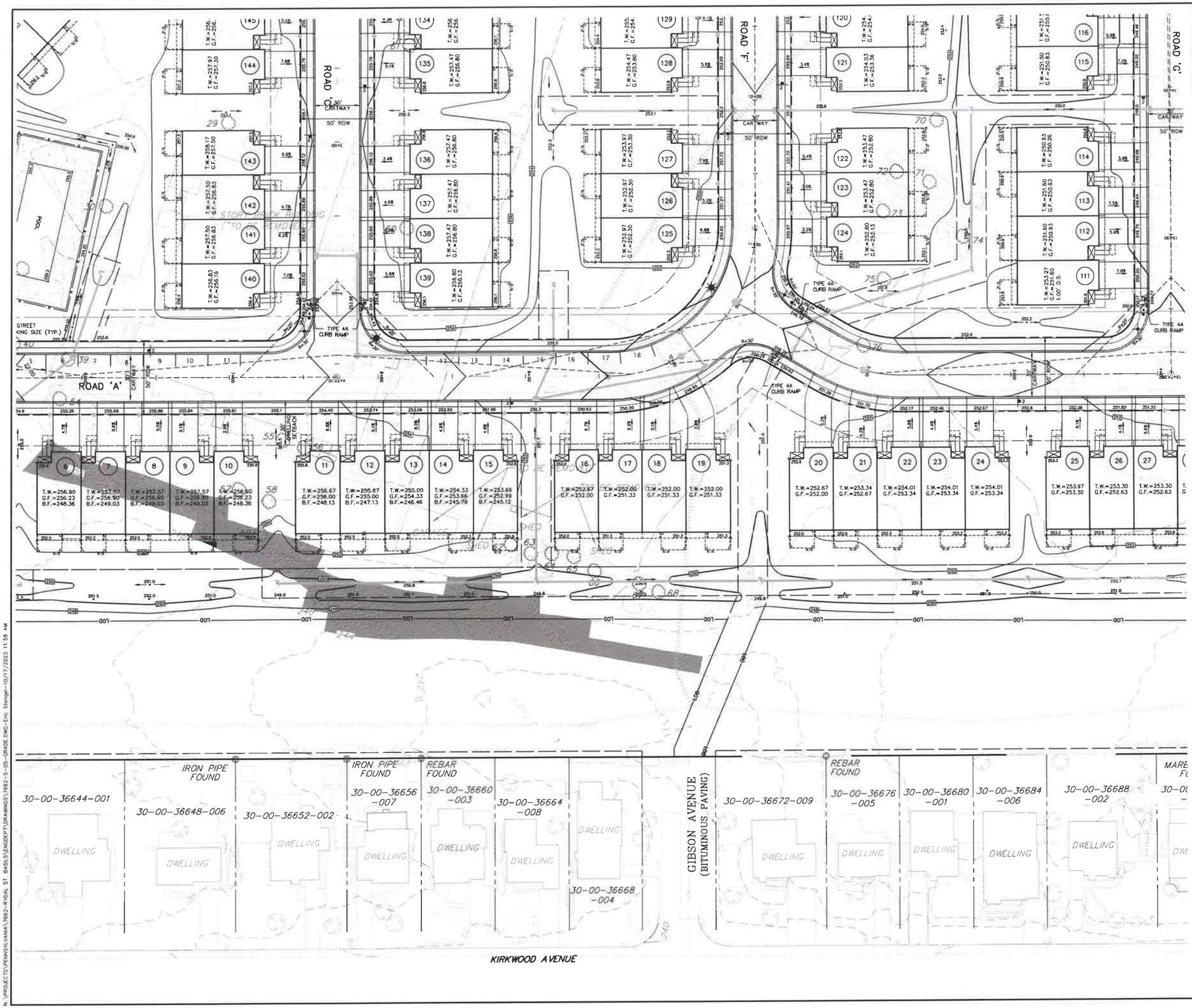
APPLICATION NUMBER: LD-23-01

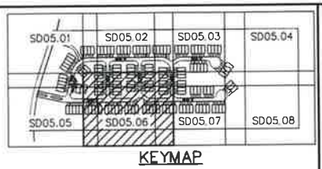
GRADING PLAN

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: 1"= 30'
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-S-05-GRADE
REF. NO.: SD05.05	
SHEET NO.: 16 OF 64	

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KEYMAP

LEGEND

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GRAPHIC SCALE
30 0 30 60
(IN FEET)
1" = 30 FEET

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JEFFREY M. MADDEN
PROFESSIONAL ENGINEER

REV.	DATE	DESCRIPTION	DRAWN
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE
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PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

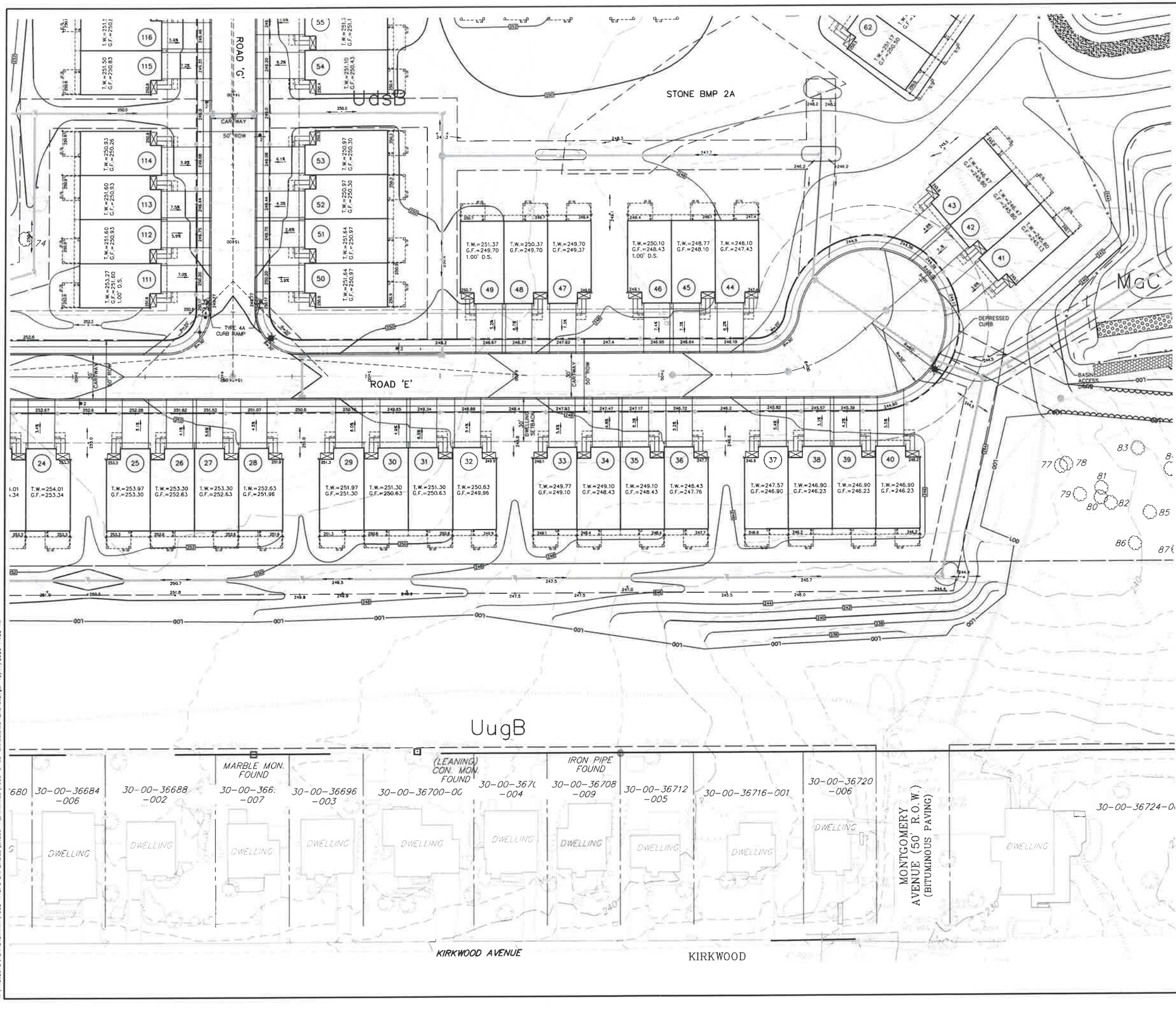
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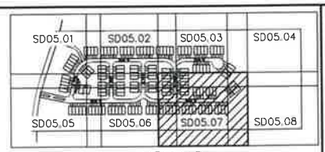
SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

APPLICATION NUMBER LD-23-01

DATE: 3-24-23	SCALE: 1" = 30'
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-5-05-GRADE
REF. NO.: SD05.06	
SHEET NO.: 17 OF 64	

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KEYMAP

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GRAPHIC SCALE
30 0 30 60
(IN FEET)
1" = 30 FEET

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JEFFREY H. MADDEN — PROFESSIONAL ENGINEER — No. PE037181 — COMMONWEALTH OF PENNSYLVANIA

REV.	DATE	DESCRIPTION
1	10/13/23	REVISIONS PER TOWNSHIP COMMENTS
2	7/31/23	TOWNSHIP REVIEW LETTERS
		ESE (DRAWN)
		ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

APPLICATION NUMBER: LD-23-01

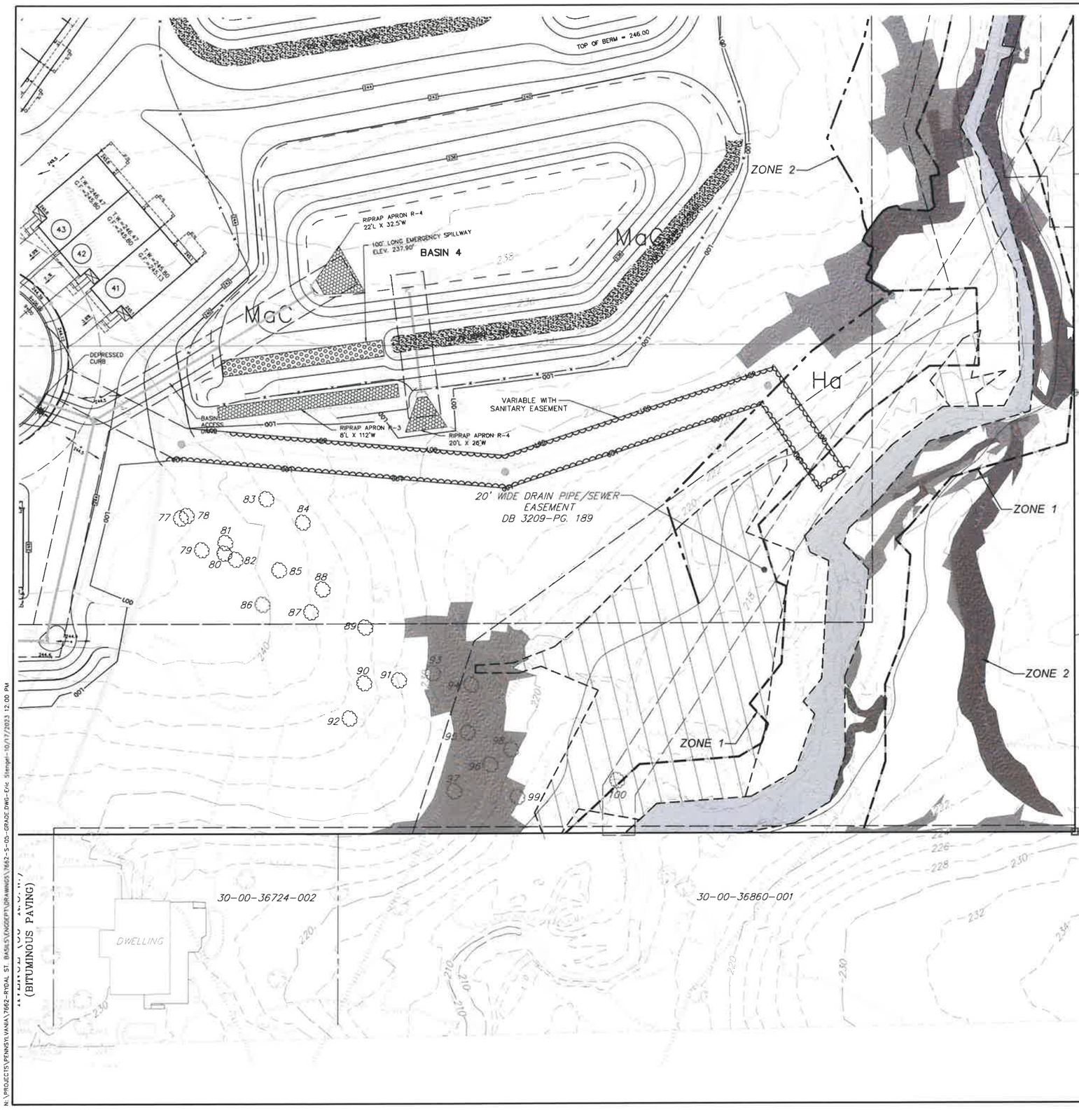
GRADING PLAN

SISTERS OF ST. BASIL

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: 1"= 30'
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-S-05-GRADE
REF. NO.:	SD05.07
SHEET NO.:	18 OF 64

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SD05.01 | SD05.02 | SD05.03 | SD05.04
SD05.05 | SD05.06 | SD05.07 | SD05.08

KEYMAP

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- 6 SANITARY MAIN AND MANHOLE w/ STRUCTURE NUMBER
- 8"W PROPOSED 8" WATERMAIN

GRAPHIC SCALE
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(IN FEET)
1" = 30 FEET

JEFFREY H. MADDEN — PROFESSIONAL ENGINEER — COMMONWEALTH OF PENNSYLVANIA

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REV.	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

APPLICATION NUMBER LD-23-01

GRADING PLAN

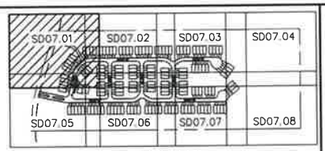
SISTERS OF ST. BASIL

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: 1"= 30'
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-S-05-GRADE
REF. NO.: SD05.08	
SHEET NO.: 19 OF 64	

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FORREST AVENUE



KEYMAP

30-00-22428-006 | 30-00-22148-007 | 30-00-22152-003 | 30-0C

DWELLING

FOX CHASE ROAD

SAN. M.H. #EXIST
RIM=247.34
INV. IN=240.01 (#32)

81 L.F. 8" D.I.P. CLASS 52 @ 2.99%

REMOVE CURB

BOLLARD AND CHAIN

SAN. M.H. #32
RIM=246.31
INV. IN=242.31 (#31)
INV. OUT=242.11

220 L.F. 8" SDR-26 @ 0.94%

INLET #416, TYPE 'M'
STANDARD BOX
T.G.=250.00
INV. IN=245.78 (#417)
INV. OUT=245.28

SAN. M.H. #31
RIM=252.80
INV. IN=244.58 (#22)
INV. OUT=244.38

STORM 4' DIA. M.H. #404
RIM=253.00
INV. IN=240.20 (#406)
INV. OUT=240.00

E.W. #400
T.W.=244.53
INV.=236.00

RIPRAP APRON R-4
12'L X 18'W

119 L.F. 24" R.C.P. @ 1.67%

INLET #408, TYPE 'C'
TYPE 4 BOX
STA. 6+03.04, 16.0' LT.
T.G.=251.40
INV. IN=244.97 (#410)
INV. IN=244.67 (#416)
INV. OUT=244.47

121 L.F. 24" R.C.P. @ 0.50%

SAN. M.H. #21
STA. 5+82.05, ℄
RIM=251.96
INV. OUT=245.96

BASIN 1

INLET #406, TYPE 'M'
TYPE 4 BOX
STA. 4+72.02, 15.5' LT.
T.G.=252.94
INV. IN=243.00 (#408)
INV. OUT=242.80

SAN. M.H. #22
STA. 4+82.18, ℄
RIM=253.28
INV. IN=246.70 (#23)
INV. IN=245.46 (#21)
INV. OUT=245.26

137 L.F. 24" R.C.P. @ 1.07%

99 L.F. 8" SDR-26 @ 0.51%

32 L.F. 18" R.C.P. @ 2.81%

23 L.F. 15" R.C.P. @ 0.50%

15 L.F. 15" R.C.P. @ 1.56%

DEPRESSED CURB

INLET #412, TYPE 'C'
STANDARD BOX
STA. 5+80.00, 16.1' RT.
T.G.=251.46
INV. IN=248.06 (#414)
INV. OUT=247.67

72 L.F. 8" SDR-26 @ 1.50%

SAN. M.H. #23
STA. 4+09.24, ℄
RIM=254.11
INV. IN=247.26 (#24)
INV. OUT=247.06

INLET #414, TYPE 'M'
STANDARD BOX
T.G.=251.70
INV. OUT=248.30

INLET #410, TYPE 'C'
STANDARD BOX
STA. 6+03.04, 16.0' RT.
T.G.=251.40
INV. IN=247.75 (#418)
INV. IN=247.75 (#412)
INV. OUT=247.50

86 L.F. 8" SDR-26 @ 1.50%

SAN. M.H. #24
STA. 3+43.06, ℄
RIM=253.59
INV. OUT=247.59

30 L.F. 15" R.C.P. @ 0.50%

INLET #224, TYPE 'M'
STANDARD BOX
T.G.=252.40
INV. OUT=249.00

45 L.F. 15" R.C.P. @ 0.53%

INLET #220, TYPE 'C'
STANDARD BOX
STA. 3+20.00, 15.0' LT.
T.G.=252.74
INV. IN=248.41 (#222)
INV. OUT=248.21

ROOF LEADER (TYP.)

SAN. M.H. #25
STA. 2+98.23, ℄
RIM=252.87
INV. OUT=246.87

ROAD 'B'

INLET #222, TYPE 'C'
STANDARD BOX
STA. 3+20.00, 15.0' RT.
T.G.=252.74
INV. IN=248.76 (#224)
INV. OUT=248.56

152 L.F. 15" R.C.P. @ 0.98%

CLUB HOUSE

30-00-22492-005
N/F SISTERS OF
ST BASIL THE GREAT

WIDTH APPROXIMATE
40.9'
(BUT VARIES)

RIPRAP APRON R-3
12'L X 18'W

STORM 4' DIA. M.H. #802
RIM=246.50
INV. IN=240.22 (#804)
INV. IN=240.02 (#1)
INV. OUT=240.02

O.S. #1
T.G.=245.50
INV. OUT=240.30

E.W. #300
T.W.=242.34
INV.=238.00

INLET #500, TYPE 'M'
STANDARD BOX
T.G.=242.98
INV. IN=239.87 (#502)

28 L.F. 15" R.C.P. @ 0.54%

56 L.F. 15" R.C.P. @ 0.50%

NOTE: ALL WORK WILL BE PERFORMED IN STRICT COMPLIANCE WITH THE PROVISIONS OF PENNSYLVANIA STATE ACT 287, GOVERNING THE INSTALLATION OF PUBLIC UTILITIES.

UTILITY OWNERSHIP

GAS AND ELECTRIC	PECO
PHONE AND CABLE	VERIZON
WATER	AQUA

LEGEND

- EXISTING DIRT/GRAVEL ROAD
- EXISTING R.O.W.
- EXISTING CARTWAY
- STREAM LINE
- EXISTING CENTER LINE
- EXISTING BOUNDARY LINE
- SOILS LINE
- EXISTING OVERHEAD UTILITY (ELECTRIC, PHONE, CABLE, ETC.)
- EXISTING UTILITY POLE
- EXISTING FIRE HYDRANT
- EXISTING INLET
- EXISTING TREE
- EXISTING TREE LINE
- EXISTING VEGETATION
- PROPOSED TREE LINE
- EXISTING INLET W/ STORM SEWER
- 10 PROPOSED STORM SEWER W/ STRUCTURE NUMBER
- 11 PROPOSED STORM MANHOLE W/ STRUCTURE NUMBER
- 12 PROPOSED FLARED END SECTION W/STRUCTURE NUMBER
- U PROPOSED UNDERGROUND UTILITIES (ELECTRIC, PHONE, CABLE, ETC.)
- x x x PROPOSED SPLIT RAIL FENCE
- W PROPOSED WATER LATERAL
- S PROPOSED SANITARY LATERAL w/ CLEANOUT
- 3 LOT NUMBER
- WETLANDS
- WATERS OF THE U.S.
- 6 SANITARY MAIN AND MANHOLE w/ STRUCTURE NUMBER
- 8"W PROPOSED 8" WATERMAIN
- STREET SIGN
- STOP SIGN
- PROPOSED FIRE HYDRANT

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1" = 30 FEET

NOTE: ALL WORK WILL BE PERFORMED IN STRICT COMPLIANCE WITH THE PROVISIONS OF PENNSYLVANIA STATE ACT 287, GOVERNING THE INSTALLATION OF PUBLIC UTILITIES.

JEFFREY M. MADDEN
REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA

ESE CONSULTANTS
ENGINEERING • PLANNING • SURVEYING • ENVIRONMENTAL
ESE Consultants, Inc.
1140 Virginia Drive • Fort Washington, PA 19034
T: 215-914-2050

REV.	DATE	DESCRIPTION	DRAWN
3	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
2	7/24/23	TOWNSHIP REVIEW LETTERS	ESE
1			

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

APPLICATION NUMBER LD-23-01

UTILITY PLAN

SISTERS OF ST. BASIL

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: 1" = 30'
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-S-07-UTILITY
REF. NO.:	SD07.01
SHEET NO.:	20 OF 64

N:\PROJECTS\PENNSYLVANIA\7662-RYDAL ST. BASILS\ENGDEPT\DRAWINGS\7662-S-07-UTILITY.DWG-Eric Stengel-10/17/2023 12:00 PM

FORREST AVENUE

FORREST AVENUE

DWELLING

DWELLING

DWELLING

DWELLING

DWELLING

DWELLING

DWELLING

30-00-22152-003

30-00-22156-008

30-00-22160-004

30-00-22164-009

30-00-22168--005

30-00-22172-001

30-00-22176-006

30-00-22180-002

IRON PIPE FOUND

LOD

INLET #416, TYPE 'M' STANDARD BOX T.G.=250.00 INV. IN=245.78 (#417) INV. OUT=245.28

INLET #417, TYPE 'M' STANDARD BOX T.G.=250.40 INV. OUT=246.65

175 L.F. 18" R.C.P. @ 0.50%

INLET #608, TYPE 'M' STANDARD BOX T.G.=250.00 INV. OUT=246.70

121 L.F. 24" R.C.P. @ 0.50%

INLET #408, TYPE 'C' TYPE A BOX STA. 6+03.04, 16.0' LT. T.G.=251.40 INV. IN=244.97 (#410) INV. IN=244.67 (#416) INV. OUT=244.47

SAN. M.H. #21 STA. 5+82.05, ℄ RIM=251.96 INV. OUT=245.96

137 L.F. 24" R.C.P. @ 1.07%

8.99 L.F. 8" SDR-26 @ 0.51%

32 L.F. 18" R.C.P. @ 1.91%

15 L.F. 15" R.C.P. @ 1.55%

23 L.F. 15" R.C.P. @ 0.50%

INLET #412, TYPE 'C' STANDARD BOX STA. 5+80.00, 16.1' RT. T.G.=251.46 INV. IN=248.06 (#614) INV. OUT=247.87

INLET #414, TYPE 'M' STANDARD BOX T.G.=251.70 INV. OUT=248.30

INLET #410, TYPE 'C' STANDARD BOX STA. 6+03.04, 16.0' RT. T.G.=251.40 INV. IN=247.75 (#418) INV. IN=247.75 (#412) INV. OUT=247.50

SAN. M.H. #18 STA. 6+24.37, ℄ RIM=251.98 INV. OUT=245.98

93 L.F. 18" R.C.P. @ 1.38%

STORM 4' DIA. M.H. #418 STA. 6+95.84, 15.4' RT. RIM=252.63 INV. IN=249.23 (#424) INV. IN=249.23 (#420) INV. OUT=249.03

67 L.F. 15" R.C.P. @ 1.07%

INLET #420, TYPE 'C' STANDARD BOX STA. 1+81.89, 15.0' RT. T.G.=253.70 INV. IN=250.15 (#422) INV. OUT=249.94

61 L.F. 15" R.C.P. @ 0.88%

30 L.F. 15" R.C.P. @ 0.51%

INLET #422, TYPE 'C' STANDARD BOX STA. 1+81.89, 15.0' LT. T.G.=253.70 INV. OUT=250.30

SAN. M.H. #26 STA. 1+91.89, ℄ RIM=254.39 INV. OUT=248.39

INLET #424, TYPE 'C' STANDARD BOX STA. 7+57.25, 16.0' RT. T.G.=253.37 INV. IN=249.97 (#426) INV. OUT=249.77

INLET #426, TYPE 'C' STANDARD BOX STA. 7+78.00, 16.0' LT. T.G.=253.68 INV. OUT=250.29

38 L.F. 15" R.C.P. @ 0.82%

SAN. M.H. #20 STA. 8+82.05, ℄ RIM=255.57 INV. IN=244.69 (#18) INV. OUT=244.49

258 L.F. 8" SDR-26 @ 0.50%

296 L.F. 8" SDR-26 @ 0.50%

ROAD 'B'

ROAD 'C'

ROAD 'F'

ROAD 'G'

INLET #516, TYPE 'C' STANDARD BOX STA. 10+97.98, 15.0' LT. T.G.=252.56 INV. OUT=249.06

30 L.F. 15" R.C.P. @ 0.50%

INLET #514, TYPE 'C' STANDARD BOX STA. 10+97.98, 15.0' RT. T.G.=252.56 INV. IN=248.91 (#516) INV. OUT=248.71

SAN. M.H. #19 STA. 11+77.87, ℄ RIM=251.85 INV. IN=243.01 (#20) INV. OUT=242.81

INLET #512, TYPE 'C' STANDARD BOX STA. 11+75.00, 15.0' RT. T.G.=251.60 INV. IN=248.30 (#514) INV. OUT=248.10

SAN. M.H. #17 STA. 12+79.54, ℄ RIM=250.32 INV. IN=242.32 (#19) INV. IN=240.26 (#27) INV. OUT=240.06

INLET #510, TYPE 'C' STANDARD BOX STA. 12+45.03, 14.9' LT. T.G.=250.36 INV. IN=246.96 (#512) INV. OUT=246.71

75 L.F. 15" R.C.P. @ 1.53%

77 L.F. 15" R.C.P. @ 0.53%

97 L.F. 8" SDR-26 @ 0.50%

69 L.F. 18" R.C.P. @ 0.51%

SAN. M.H. #16 STA. 13+24.10, ℄ RIM=249.64 INV. IN=239.84 (#17) INV. OUT=239.64

INLET #744, TYPE 'M' STANDARD BOX T.G.=251.80 INV. OUT=248.30

INLET #742, TYPE 'C' STANDARD BOX STA. 11+93.00, 15.0' LT. T.G.=251.35 INV. IN=247.69 (#744) INV. OUT=247.49

193 L.F. 8" SDR-26 @ 0.50%

INLET #740, TYPE 'C' STANDARD BOX STA. 11+93.00, 15.0' RT. T.G.=251.35 INV. IN=247.34 (#742) INV. OUT=246.59

123 L.F. 15" R.C.P. @ 0.50%

30 L.F. 15" R.C.P. @ 0.50%

133 L.F. 24" R.C.P. @ 1.64%

INLET #724, TYPE 'M' STANDARD BOX T.G.=248.80 INV. IN=244.67 (#726) INV. IN=244.41 (#740) INV. OUT=243.91

INLET #722, TYPE 'C' STANDARD BOX STA. 14+15.10, 15.0' RT. T.G.=248.05 INV. IN=243.30 (#724) INV. OUT=243.10

121 L.F. 30" R.C.P. @ 0.50%

30 L.F. 30" R.C.P. @ 0.50%

108 L.F. 15" R.C.P. @ 0.50%

157 L.F. 8" SDR-26 @ 1.00%

SDR-26 @ 0.50%

KEYMAP

SD07.01 SD07.02 SD07.03 SD07.04 SD07.05 SD07.06 SD07.07 SD07.08

LEGEND

- EXISTING DIRT/GRAVEL ROAD
- EXISTING R.O.W.
- EXISTING CARTWAY
- STREAM LINE
- EXISTING CENTER LINE
- EXISTING BOUNDARY LINE
- SOILS LINE
- EXISTING OVERHEAD UTILITY (ELECTRIC, PHONE, CABLE, ETC.)
- EXISTING UTILITY POLE
- EXISTING FIRE HYDRANT
- EXISTING INLET
- EXISTING TREE
- EXISTING TREE LINE
- EXISTING VEGETATION
- PROPOSED TREE LINE
- EXISTING INLET W/ STORM SEWER
- PROPOSED STORM SEWER W/ STRUCTURE NUMBER
- PROPOSED STORM MANHOLE W/ STRUCTURE NUMBER
- PROPOSED FLARED END SECTION W/STRUCTURE NUMBER
- PROPOSED UNDERGROUND UTILITIES (ELECTRIC, PHONE, CABLE, ETC.)
- PROPOSED SPLIT RAIL FENCE
- PROPOSED WATER LATERAL
- PROPOSED SANITARY LATERAL W/ CLEANOUT
- LOT NUMBER
- WETLANDS
- WATERS OF THE U.S.
- SANITARY MAIN AND MANHOLE W/ STRUCTURE NUMBER
- PROPOSED 8" WATERMAIN
- STREET SIGN
- STOP SIGN
- PROPOSED FIRE HYDRANT

GRAPHIC SCALE

30 0 30 60

(IN FEET)

1" = 30 FEET

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT--NOT TO BE RECORDED

APPLICATION NUMBER LD-23-01

REV.:	DATE:	DESCRIPTION:	BY:
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE

JEFFREY M. MADDEN
PROFESSIONAL ENGINEER
No. PE039166
COMMONWEALTH OF PENNSYLVANIA
REGISTERED

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UTILITY PLAN

SISTERS OF ST. BASIL

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23

SCALE: 1" = 30'

DESIGN:

DRAWN: EJS

JOB NO.: 7662

FILE NAME: 7662-S-07-UTILITY

REF. NO.: SD07.02

SHEET NO.: 21 OF 64

N:\PROJECTS\PENNSYLVANIA\7662-ROYAL ST. BASILS\ENGDEPT\DRAWINGS\7662-S-07-UTILITY.DWG-Eric Stenge-10/17/2023 12:00 PM

FORREST AVENUE

ASCOT ROAD (BITUMINOUS PAVING)

DWELLING

00-22176-006

30-00-22180-002

30-00-22184-007

30-00-22188-003

30-00-22192-008

30-00-22196-004

30-00-22200-009

30-00-2220-

MON. FOUND

BENT IRON PIPE FOUND

INLET #608, TYPE 'M' STANDARD BOX T.G.=250.00 INV. OUT=246.70

INLET #606, TYPE 'M' STANDARD BOX T.G.=250.20 INV. IN=245.65 (#608) INV. OUT=245.40

INLET #604, TYPE 'M' STANDARD BOX T.G.=249.80 INV. IN=244.68 (#606) INV. OUT=244.48

INLET #602, TYPE 'M' STANDARD BOX T.G.=248.50 INV. IN=243.70 (#604) INV. OUT=243.50

211 L.F. 15" PERFORATED PIPE @ 0.50%

145 L.F. 18" PERFORATED PIPE @ 0.50%

155 L.F. 18" R.C.P. @ 0.50%

56 L.F. 18" R.C.P. @ 0.50%

RIPRAP APRON R-3 9'L X 58'W

E.W. #600 T.W.=245.44 INV.=243.00

RIPRAP APRON R-3 8'L X 12.5'W

45' LONG EMERGENCY SPILLWAY ELEV. 245.80'

E.W. #10 T.W.=244.44 INV.=242.00

39 L.F. 18" R.C.P. @ 0.50%

RIPRAP APRON R-4 12'L X 18'W

E.W. #500 T.W.=245.71 INV.=243.00

O.S. #3A-1 T.G.=245.80 INV. OUT=242.50

BASIN 3A

SAN. M.H. #19 STA. 11+77.87, ℄ RIM=251.85 INV. IN=243.01 (#20) INV. OUT=242.81

INLET #510, TYPE 'C' STANDARD BOX STA. 12+45.03, 14.9' LT. T.G.=250.36 INV. IN=246.96 (#512) INV. OUT=246.71

INLET #518, TYPE 'C' STANDARD BOX STA. 14+51.00, 15.0' LT. T.G.=250.07 INV. OUT=246.57

SAN. M.H. #27 STA. 1+89.29, ℄ RIM=251.12 INV. IN=240.91 (#28) INV. OUT=240.71

INLET #520, TYPE 'C' STANDARD BOX STA. 4+26.75, 15.0' LT. T.G.=250.40 INV. OUT=246.90

INLET #502, TYPE 'C' STANDARD BOX STA. 5+39.59, 45.4' LT. T.G.=247.83 INV. IN=243.59 (#504) INV. OUT=243.39

ROAD 'D'

30 L.F. 15" R.C.P. @ 0.53%

69 L.F. 18" R.C.P. @ 0.51%

75 L.F. 15" R.C.P. @ 1.53%

97 L.F. 8" SDR-26 @ 0.50%

77 L.F. 15" R.C.P. @ 0.53%

227 L.F. 8" SDR-26 @ 0.50%

30 L.F. 15" R.C.P. @ 6.42%

46 L.F. 8" SDR-26 @ 0.50%

75 L.F. 24" R.C.P. @ 0.52%

127 L.F. 24" R.C.P. @ 0.50%

207 L.F. 18" R.C.P. @ 0.51%

59 L.F. 18" R.C.P. @ 0.50%

83 L.F. 8" SDR-26 @ 0.50%

INLET #512, TYPE 'C' STANDARD BOX STA. 11+75.00, 15.0' RT. T.G.=251.60 INV. IN=248.30 (#514) INV. OUT=248.10

INLET #508, TYPE 'C' STANDARD BOX STA. 1+51.00, 15.0' RT. T.G.=250.07 INV. IN=246.36 (#510) INV. IN=246.41 (#518) INV. OUT=246.26

INLET #506, TYPE 'C' STANDARD BOX STA. 2+19.42, 14.6' RT. T.G.=251.10 INV. IN=245.97 (#508) INV. OUT=245.77

SAN. M.H. #28 STA. 4+16.75, ℄ RIM=251.03 INV. IN=242.24 (#29) INV. OUT=242.04

INLET #504, TYPE 'C' STANDARD BOX STA. 4+26.75, 15.0' RT. T.G.=250.40 INV. IN=244.98 (#520) INV. IN=244.72 (#506) INV. OUT=244.22

SAN. M.H. #29 STA. 4+63.49, ℄ RIM=250.33 INV. IN=242.57 (#30) INV. OUT=242.47

SAN. M.H. #30 STA. 5+47.24, ℄ RIM=248.98 INV. OUT=242.98

BASIN ACCESS DRIVE

DEPRESSED CURB

SAN. M.H. #17 STA. 12+79.54, ℄ RIM=250.32 INV. IN=242.32 (#19) INV. IN=240.26 (#27) INV. OUT=240.06

SAN. M.H. #16 STA. 13+24.10, ℄ RIM=249.64 INV. IN=239.84 (#17) INV. OUT=239.64

ROAD 'G'

INLET #724, TYPE 'M' STANDARD BOX T.G.=248.80 INV. IN=244.67 (#726) INV. IN=244.41 (#740) INV. OUT=243.91

INLET #722, TYPE 'C' STANDARD BOX T.G.=248.05 INV. IN=243.30 (#724) INV. OUT=243.10

INLET #720, TYPE 'C' STANDARD BOX STA. 14+15.10, 15.0' LT. T.G.=248.05 INV. IN=242.95 (#722) INV. OUT=242.75

30 L.F. 30" R.C.P. @ 0.50%

121 L.F. 30" R.C.P. @ 0.50%

127 L.F. 30" R.C.P. @ 0.51%

108 L.F. 15" R.C.P. @ 0.50%

INLET #716, TYPE 'M' TYPE 4 BOX T.G.=248.30 INV. IN=242.10 (#720) INV. OUT=241.90

STONE BMP 2A

INLET #710, TYPE 'M' STANDARD BOX T.G.=247.80 INV. OUT=242.80

INLET #712, TYPE 'M' TYPE 4 BOX T.G.=247.80 INV. IN=242.44 (#714) INV. OUT=242.80

INLET #708, TYPE 'M' TYPE 4 BOX T.G.=245.80 INV. IN=240.20 (#712) INV. IN=240.20 (#710) INV. OUT=239.70

29 L.F. 30" R.C.P. @ 0.68%

76 L.F. 24" PERFORATED @ 0.47%

103 L.F. 30" R.C.P. @ 2.52%

42 L.F. 30" R.C.P. @ 6.27%

81 L.F. 30" R.C.P. @ 0.62%

STORM 4' DIA. M.H. #716 RIM=249.00 INV. IN=241.70 (#718) INV. IN=243.50 (#734) INV. OUT=241.50

INLET #714, TYPE 'M' TYPE 4 BOX T.G.=247.70 INV. IN=241.00 (#716) INV. OUT=242.80

SD07.01 SD07.02 SD07.03 SD07.04 SD07.05 SD07.06 SD07.07 SD07.08

KEYMAP

N

LEGEND

- EXISTING DIRT/GRAVEL ROAD
- EXISTING R.O.W.
- EXISTING CARTWAY
- STREAM LINE
- EXISTING CENTER LINE
- EXISTING BOUNDARY LINE
- SOILS LINE
- EXISTING OVERHEAD UTILITY (ELECTRIC, PHONE, CABLE, ETC.)
- EXISTING UTILITY POLE
- EXISTING FIRE HYDRANT
- EXISTING INLET
- EXISTING TREE
- EXISTING TREE LINE
- EXISTING VEGETATION
- PROPOSED TREE LINE
- EXISTING INLET W/ STORM SEWER
- 10 PROPOSED STORM SEWER W/ STRUCTURE NUMBER
- 11 PROPOSED STORM MANHOLE W/ STRUCTURE NUMBER
- 12 PROPOSED FLARED END SECTION W/STRUCTURE NUMBER
- PROPOSED UNDERGROUND UTILITIES (ELECTRIC, PHONE, CABLE, ETC.)
- PROPOSED SPLIT RAIL FENCE
- PROPOSED WATER LATERAL
- PROPOSED SANITARY LATERAL w/ CLEANOUT
- 3 LOT NUMBER
- WETLANDS
- WATERS OF THE U.S.
- 6 SANITARY MAIN AND MANHOLE w/ STRUCTURE NUMBER
- 8"W PROPOSED 8" WATERMAIN
- STREET SIGN
- STOP SIGN
- PROPOSED FIRE HYDRANT

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1" = 30 FEET

ESE CONSULTANTS
ENGINEERING • PLANNING • SURVEYING • ENVIRONMENTAL
ESE Consultants, Inc.
1140 Virginia Drive • Fort Washington, PA 19034
T: 215-914-2050

REV.	DATE	DESCRIPTION
1	7/24/23	TOWNSHIP REVIEW LETTERS
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS
		ESE
		ESE
		DRAWN

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

APPLICATION NUMBER LD-23-01

UTILITY PLAN

SISTERS OF ST. BASIL

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: 1" = 30'
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-5-07-UTILITY
REF. NO.:	SD07.03
SHEET NO.:	22 OF 64

N:\PROJECTS\PENNSYLVANIA\7662-RYDAL ST BASIL'S\ENGDEPT\DRAWINGS\7662-5-07-UTILITY.DWG-Eric Stenger-10/17/2023 12:00 PM

FORREST AVENUE

DWELLING

30-00-22200-009

30-00-22204-005

30-00-22208-001

30-00-22212-006

30-00-22216-002

30-00-12796-008

CONC. MON. FOUND

CONC. MON. FOUND

30-00-63888-009

30-00-63884-004

30-00-63880-008

30-00-63876-003

LOD

RIPRAP APRON R-3
9'L X 58'W

50 LF 18" RCP @ 0.50%

E.W. #600
T.W.=245.44
INV.=243.00

RIPRAP APRON R-3
8'L X 12.5'W

45' LONG EMERGENCY SPILLWAY
ELEV. 245.80'

RIPRAP APRON R-4
12'L X 18'W

E.W. #500
T.W.=245.71
INV.=243.00

RIPRAP APRON R-3
8'L X 12.5'W

E.W. #10
T.W.=244.44
INV.=242.00

39 LF 18" R.C.P. @ 1.00%

O.S. #3A-1
T.C.=245.80
INV. OUT=242.50

BASIN 3A

RIPRAP APRON R-2
8'L X 41'W

E.W. #30
T.W.=238.44
INV.=236.00

RIPRAP APRON R-3
8'L X 11.75'W

F.E.S. #20
INV.=242.00

49 LF 15" R.C.P. @ 1.12%

BASIN 3B

RIPRAP APRON R-3
8'L X 11.75'W

O.S. #3B
T.C.=244.25
INV. OUT=237.00

O.S. #3A-2
T.C.=245.80
INV. OUT=242.50

RIPRAP APRON R-4

ZONE 2

VARIABLE WIDTH CONSERVATION EASEMENT

65

ASIN
CCESS
RIVE

SD07.01 SD07.02 SD07.03 SD07.04
SD07.05 SD07.06 SD07.07 SD07.08

KEYMAP

LEGEND

- EXISTING DIRT/GRAVEL ROAD
- EXISTING R.O.W.
- EXISTING CARTWAY
- STREAM LINE
- EXISTING CENTER LINE
- EXISTING BOUNDARY LINE
- SOILS LINE
- EXISTING OVERHEAD UTILITY (ELECTRIC, PHONE, CABLE, ETC.)
- EXISTING UTILITY POLE
- EXISTING FIRE HYDRANT
- EXISTING INLET
- EXISTING TREE
- EXISTING TREE LINE
- EXISTING VEGETATION
- PROPOSED TREE LINE
- EXISTING INLET W/ STORM SEWER
- 10 PROPOSED STORM SEWER W/ STRUCTURE NUMBER
- 11 PROPOSED STORM MANHOLE W/ STRUCTURE NUMBER
- 12 PROPOSED FLARED END SECTION W/STRUCTURE NUMBER
- PROPOSED UNDERGROUND UTILITIES (ELECTRIC, PHONE, CABLE, ETC.)
- PROPOSED SPLIT RAIL FENCE
- PROPOSED WATER LATERAL
- PROPOSED SANITARY LATERAL W/ CLEANOUT
- 3 LOT NUMBER
- WETLANDS
- WATERS OF THE U.S.
- 6 SANITARY MAIN AND MANHOLE W/ STRUCTURE NUMBER
- PROPOSED 8" WATERMAIN
- STREET SIGN
- STOP SIGN
- PROPOSED FIRE HYDRANT

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1" = 30 FEET

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JEFFREY M. MADDEN
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
Jeff Madden

REV.	DATE	DESCRIPTION
1	7/24/23	TOWNSHIP REVIEW LETTERS
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS

ESE
ESE
DRAWN

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

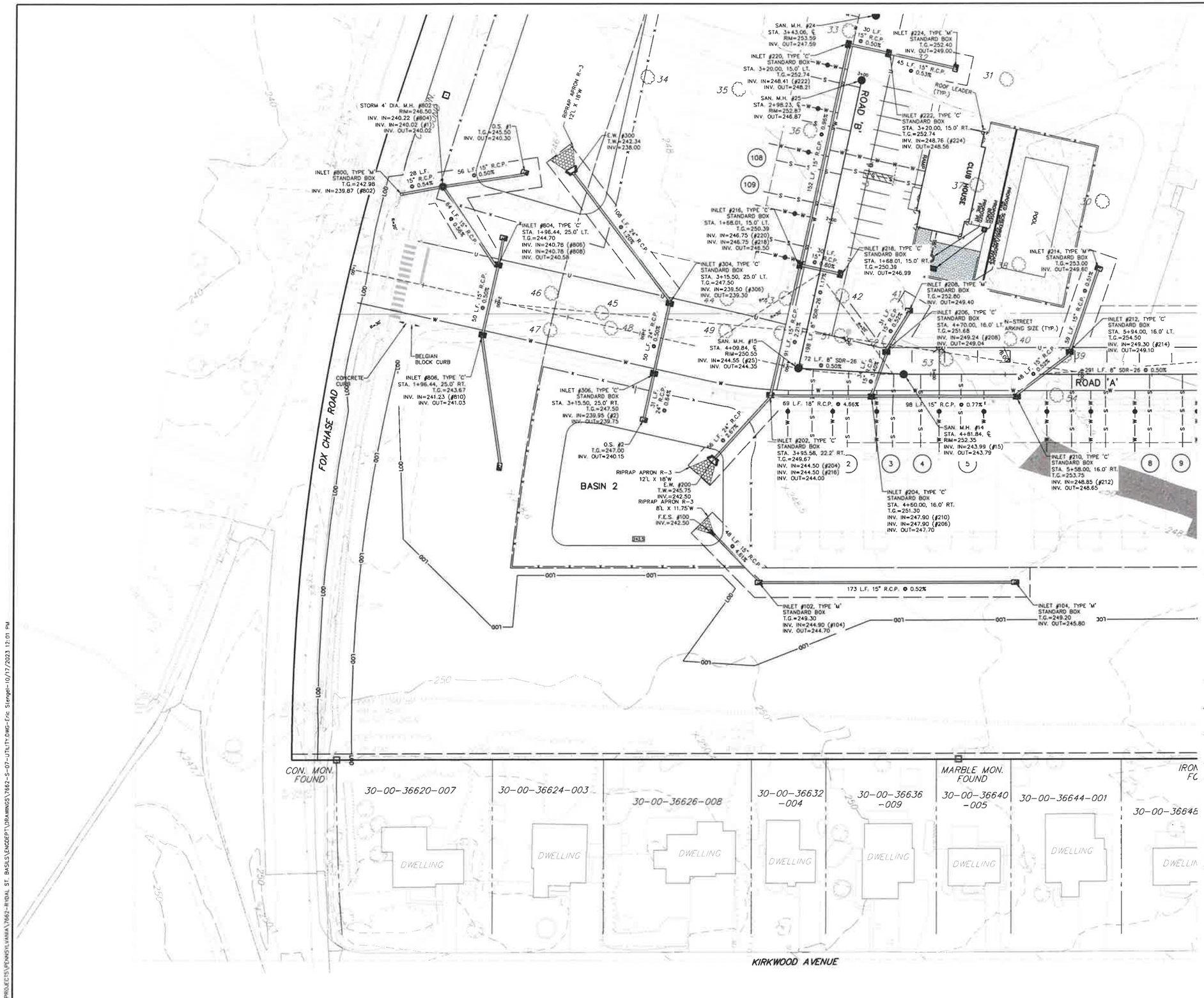
APPLICATION NUMBER LD-23-01

UTILITY PLAN

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: 1"= 30'
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-S-07-UTILITY
REF. NO.: SD07.04	
SHEET NO.: 23 OF 64	

N:\PROJECTS\PENNSYLVANIA\7662-RYDAL ST BASILS\ENGDEPT\DRAWINGS\7662-S-07-UTILITY.DWG-Eric Stenger-10/17/2023 12:00 PM



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JEFFREY H. MADDEN — REGISTERED PROFESSIONAL ENGINEER — COMMONWEALTH OF PENNSYLVANIA

REV.	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTER	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

APPLICATION NUMBER: LD-23-01

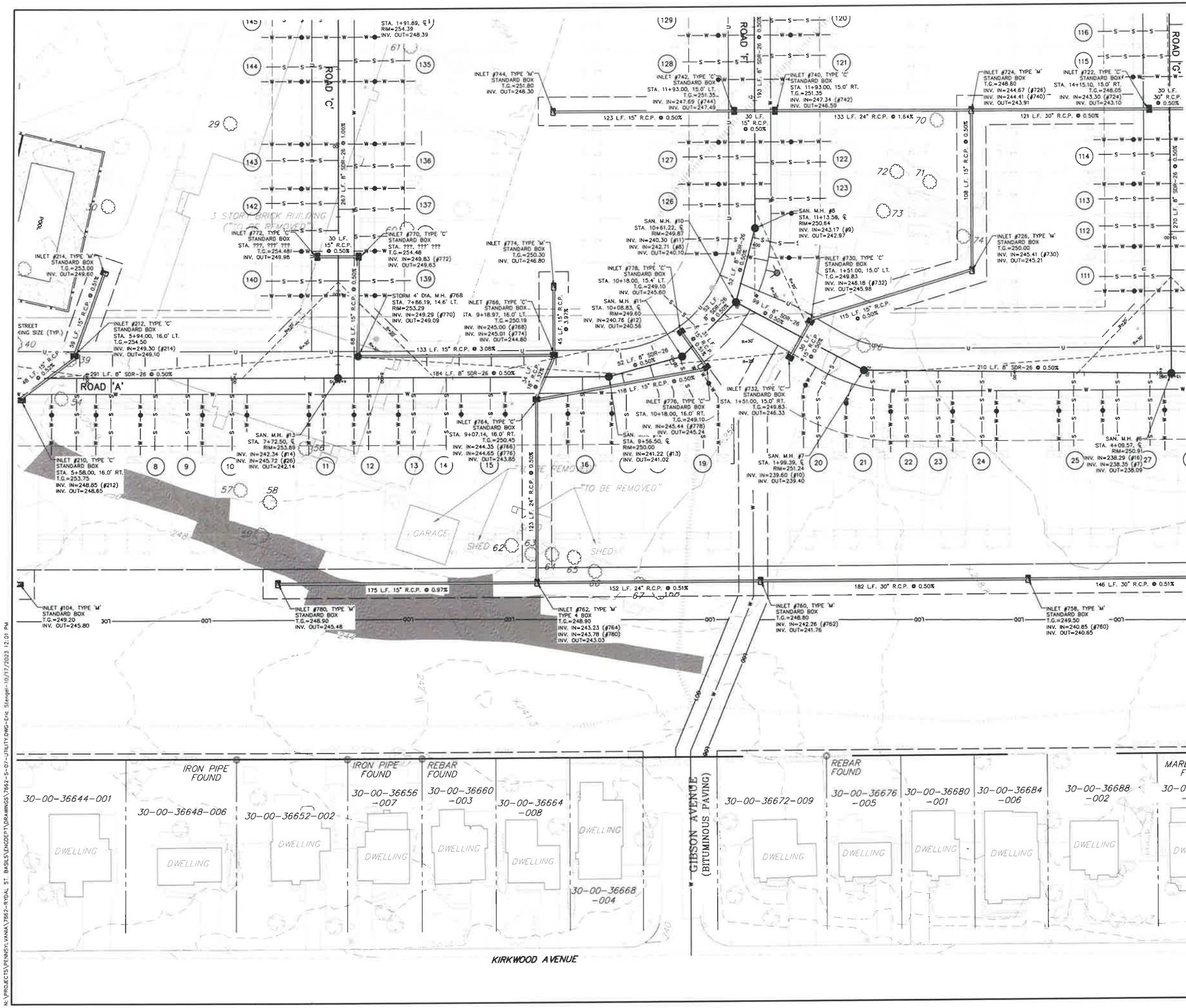
UTILITY PLAN

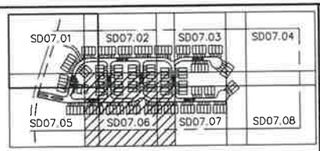
SISTERS OF ST. BASIL

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: 1"= 30'
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-S-07-UTILITY
REF. NO.: SD07.05	
SHEET NO.: 24 OF 64	

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KEYMAP

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JEFFREY H. MADDEN — ENGINEER No. PE039104 — COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL

REV.	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT–NOT TO BE RECORDED

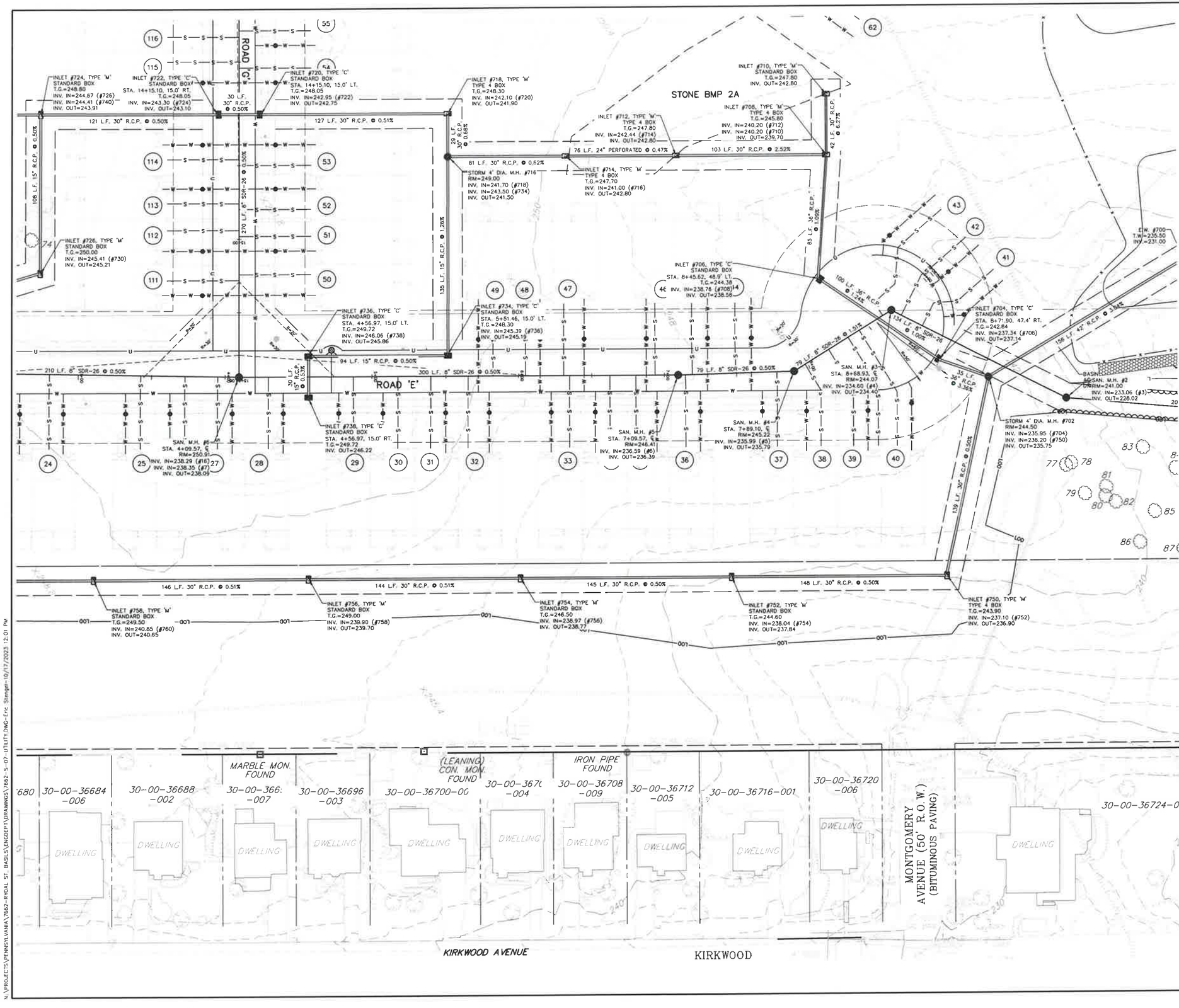
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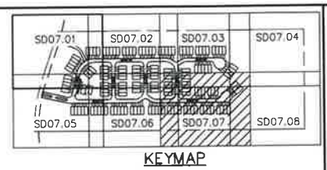
UTILITY PLAN

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: 1" = 30'
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: PM62-5-07-UTILITY
REF. NO.:	SD07.06
SHEET NO.:	25 OF 64

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KEYMAP

LEGEND

- EXISTING DIRT/GRAVEL ROAD
- EXISTING R.O.W.
- EXISTING CARTWAY
- STREAM LINE
- EXISTING CENTER LINE
- EXISTING BOUNDARY LINE
- SOILS LINE
- EXISTING OVERHEAD UTILITY (ELECTRIC, PHONE, CABLE, ETC.)
- EXISTING UTILITY POLE
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- PROPOSED TREE LINE
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- PROPOSED WATER LATERAL
- PROPOSED SANITARY LATERAL W/ CLEANOUT
- 3 LOT NUMBER
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- WATERS OF THE U.S.
- SANITARY MAIN AND MANHOLE W/ STRUCTURE NUMBER
- 6 PROPOSED 8" WATERMAIN
- STREET SIGN
- STOP SIGN
- PROPOSED FIRE HYDRANT

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1" = 30 FEET

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REV.	DATE	DESCRIPTION
1	7/24/23	TOWNSHIP REVIEW LETTERS
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS
		ESE DRAWN
		ESE DESIGN

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

APPLICATION NUMBER LD-23-01

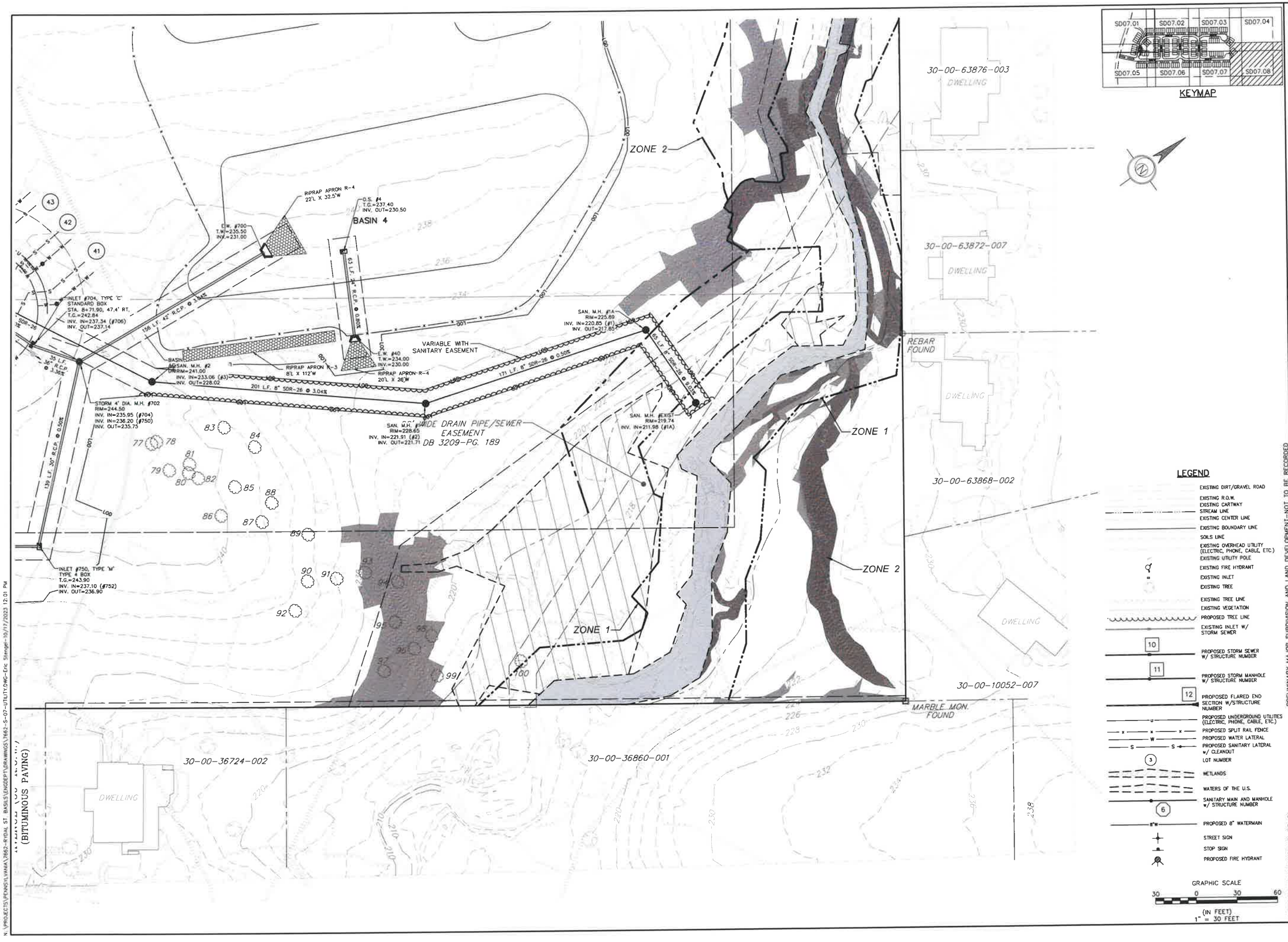
UTILITY PLAN

SISTERS OF ST. BASIL

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: 1"= 30'
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-S-07-UTILITY
REF. NO.:	SD07.07
SHEET NO.:	26 OF 64

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JEFFREY H. MADDEN — REGISTERED PROFESSIONAL ENGINEER — No. PE035810

REV.	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

APPLICATION NUMBER L0-23-01

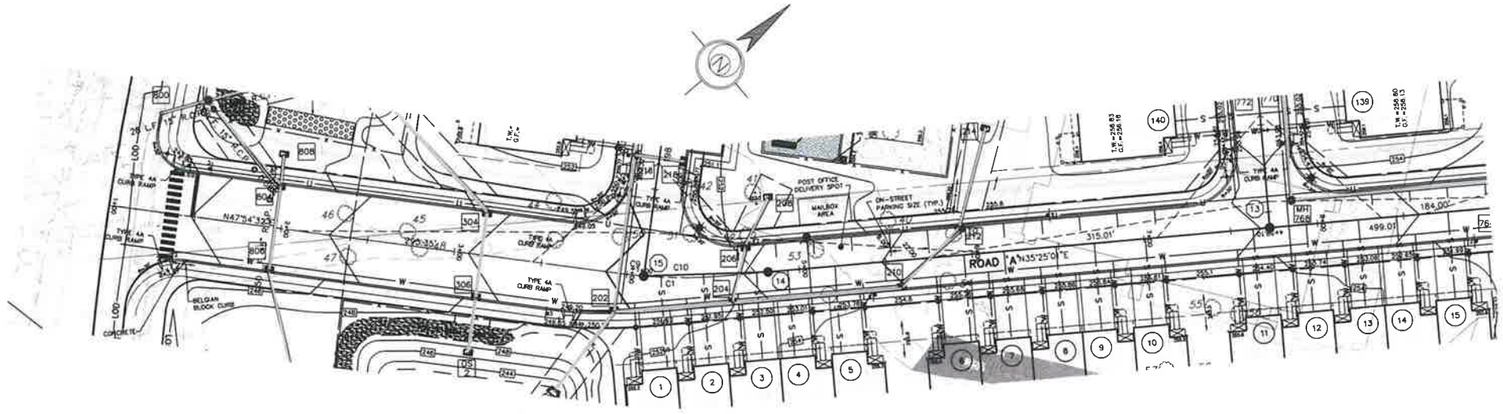
UTILITY PLAN

SISTERS OF ST. BASIL

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

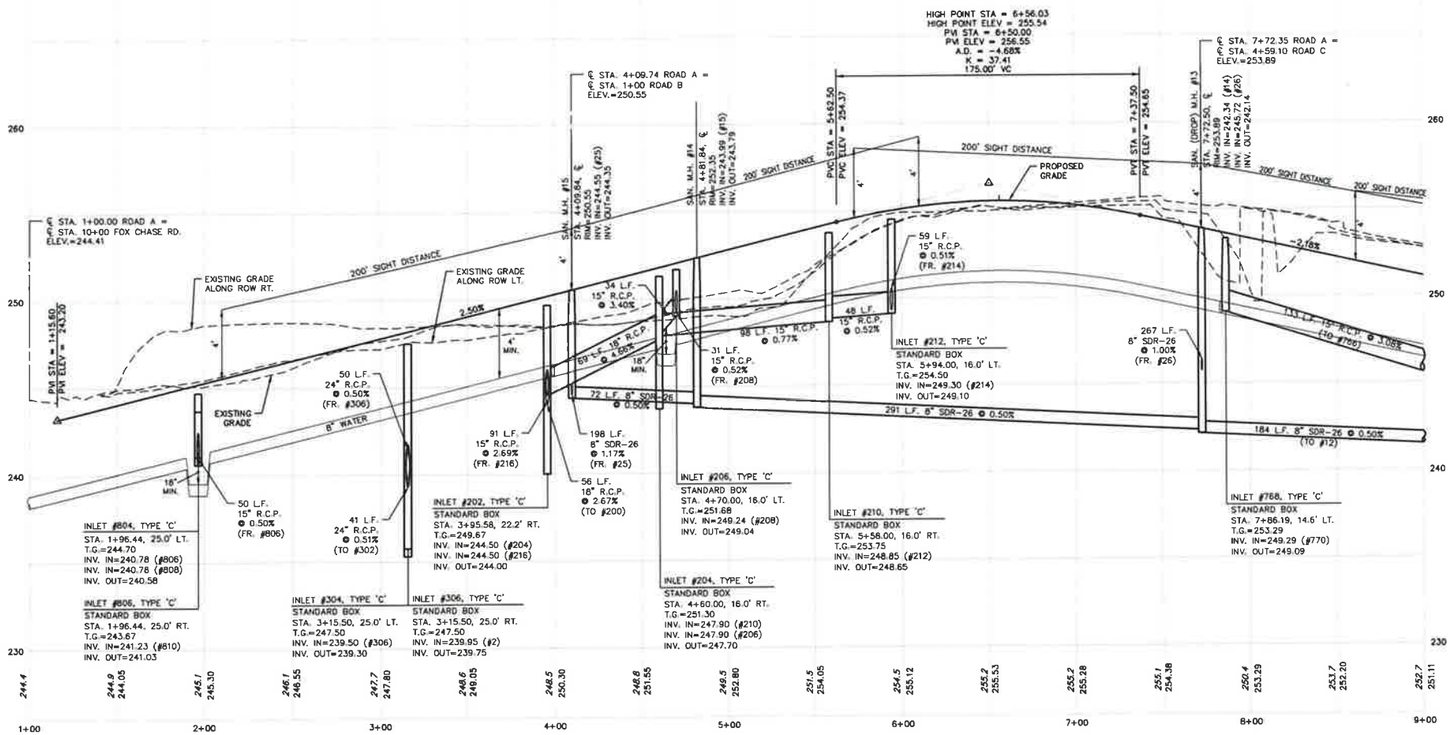
DATE: 3-24-23	SCALE: 1" = 30'
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-S-07-UTILITY
REF. NO.:	SD07.08
SHEET NO.:	27 OF 64

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PLAN: ROAD 'A'
SCALE: 1"= 40'

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE	TANGENT
C1	285.00'	62.14'	62.01'	S41°39'46"W	12°29'32"	31.19'
C9	285.00'	14.49'	14.49'	S46°27'09"W	2°54'47"	7.25'
C10	285.00'	47.65'	47.59'	S40°12'23"W	9°34'44"	23.88'



PROFILE: ROAD A
1"=40' Horizontal
1"=4' Vertical

NOTE: SIZE OF THE INLETS AND MANHOLES MAY BE UPDATED BY CONTRACTOR DURING THE CONSTRUCTION PROCESS, AS THE SIZES ARE ONLY GUIDANCE AND MAY NOT BE REFLECTIVE OF THE PIPE ANGLES. GENERAL SIZE SHOP DRAWINGS WILL NEED TO BE REVIEWED BY TOWNSHIP PRIOR TO INSTALLATION.

GRAPHIC SCALE
1 inch = 4 ft. Vertical

GRAPHIC SCALE
1 inch = 40 ft. Horizontal

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JEFFREY H. MADDEN
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS
1	7/24/23	TOWNSHIP REVIEW LETTER

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

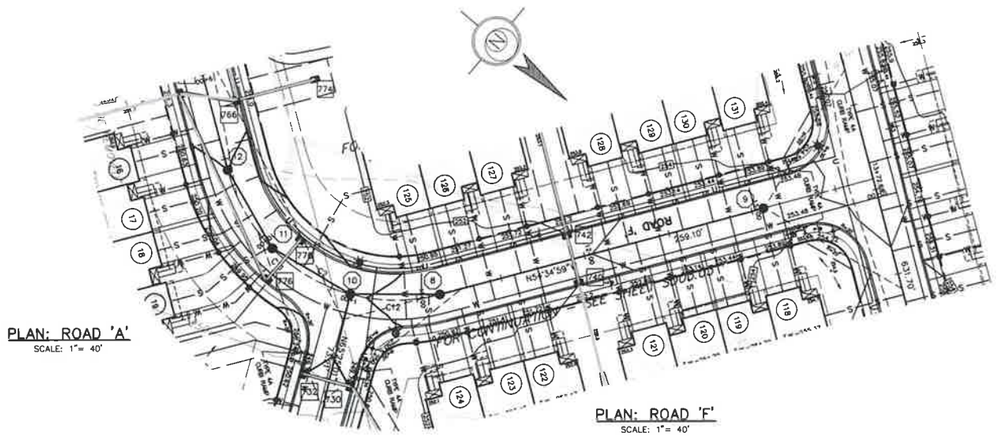
APPLICATION NUMBER LD-23-01

PLAN AND PROFILE
ROAD A STA 1+00 TO 9+00

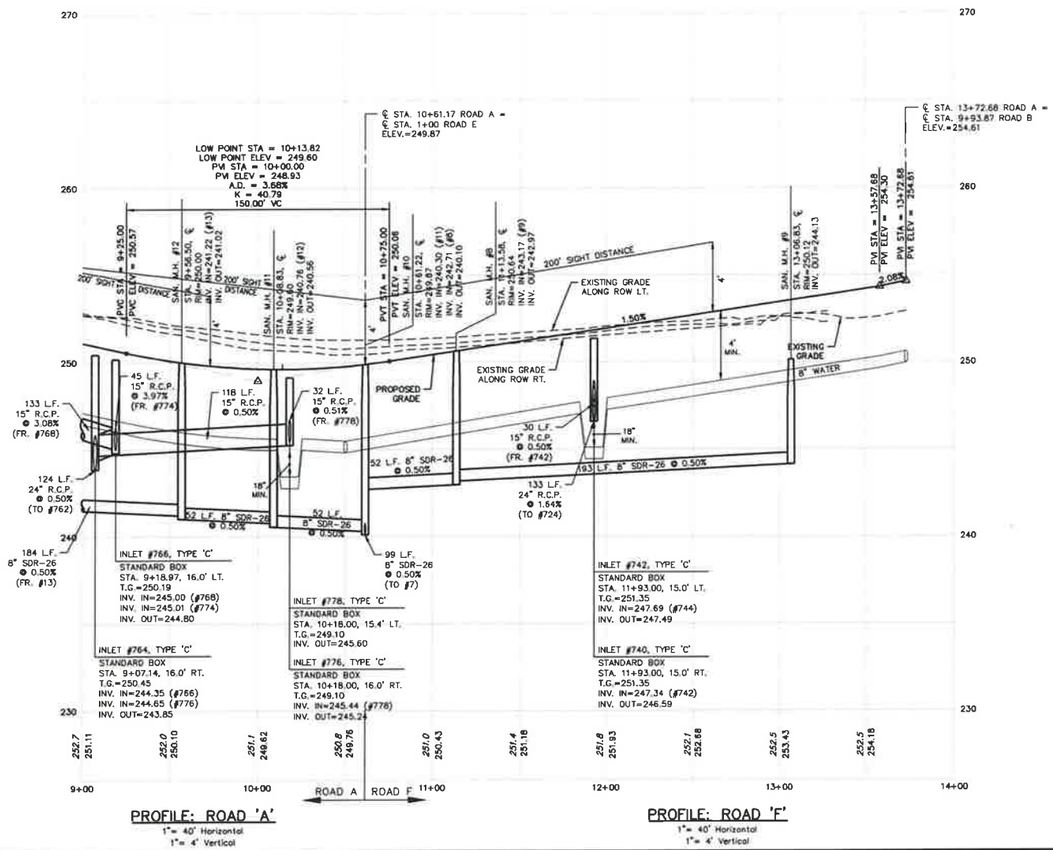
SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: AS NOTED
DESIGN: JMM	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-5-08-PROF
REF. NO.: SD08.01	
SHEET NO.: 28 OF 64	

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CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE	TANGENT
C2	100.00'	157.08'	141.42'	S09°34'59"E	90°00'00"	100.00'
C11	100.00'	104.72'	100.00'	S05°25'01"W	60°00'00"	57.74'
C12	100.00'	52.36'	51.76'	S39°34'59"E	30°00'00"	26.79'



PROFILE: ROAD 'A'
1"= 40' Horizontal
1"= 4' Vertical

PROFILE: ROAD 'F'
1"= 40' Horizontal
1"= 4' Vertical

NOTE: SIZE OF THE INLETS AND MANHOLES MAY BE UPDATED BY CONTRACTOR DURING THE CONSTRUCTION PROCESS, AS THE SIZES ARE ONLY GUIDANCE AND MAY NOT BE REFLECTIVE OF THE PIPE ANGLES. GENERAL SIZE SHOP DRAWINGS WILL NEED TO BE REVIEWED BY TOWNSHIP PRIOR TO INSTALLATION.

GRAPHIC SCALE
1 inch = 4 ft. Vertical

GRAPHIC SCALE
1 inch = 40 ft. Horizontal

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JEFFREY H. MADDEN
LICENSED PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT–NOT TO BE RECORDED

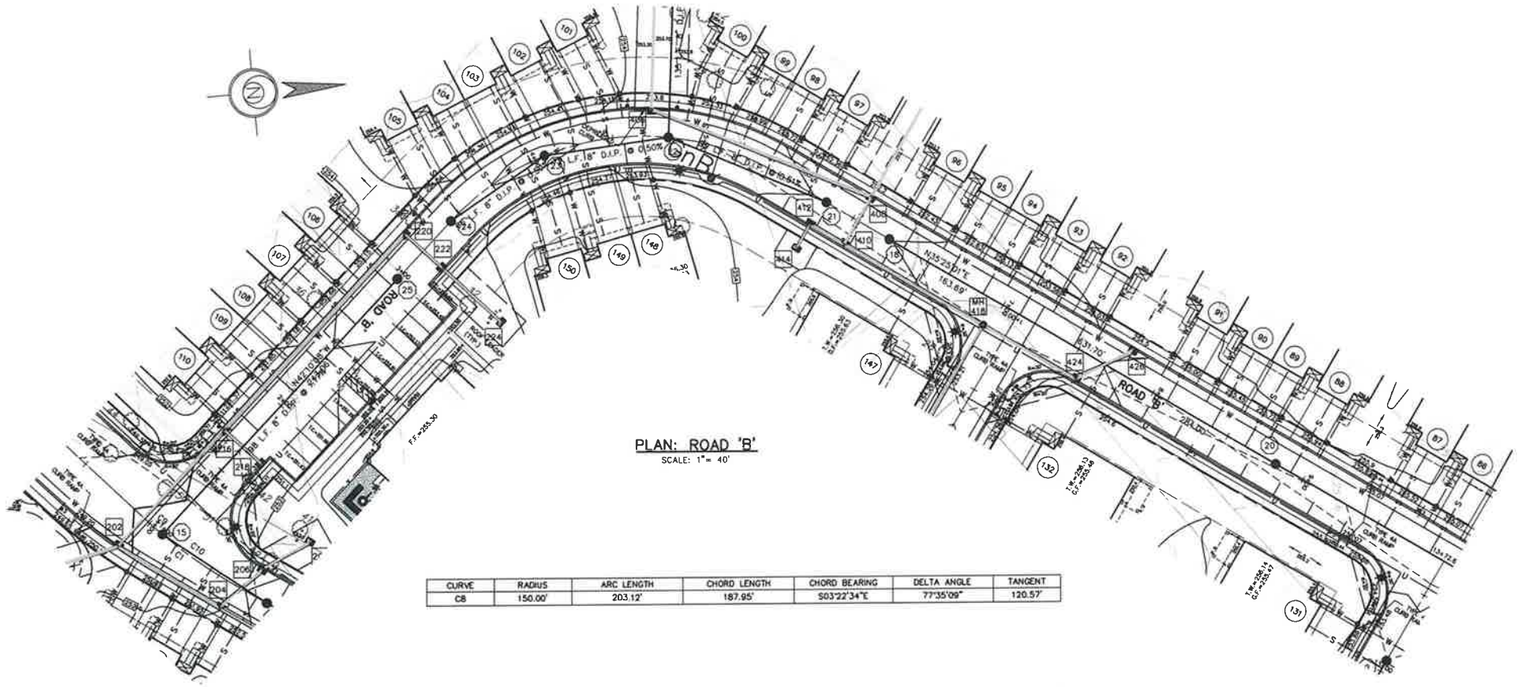
PLAN AND PROFILE
ROAD A STA 9+00 TO 10+61.17
ROAD F STA 10+61.17 TO 13+72.68

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: AS NOTED
DESIGN: JMM	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-S-08-PROF
REF. NO.:	SD08.02
SHEET NO.:	29 OF 64

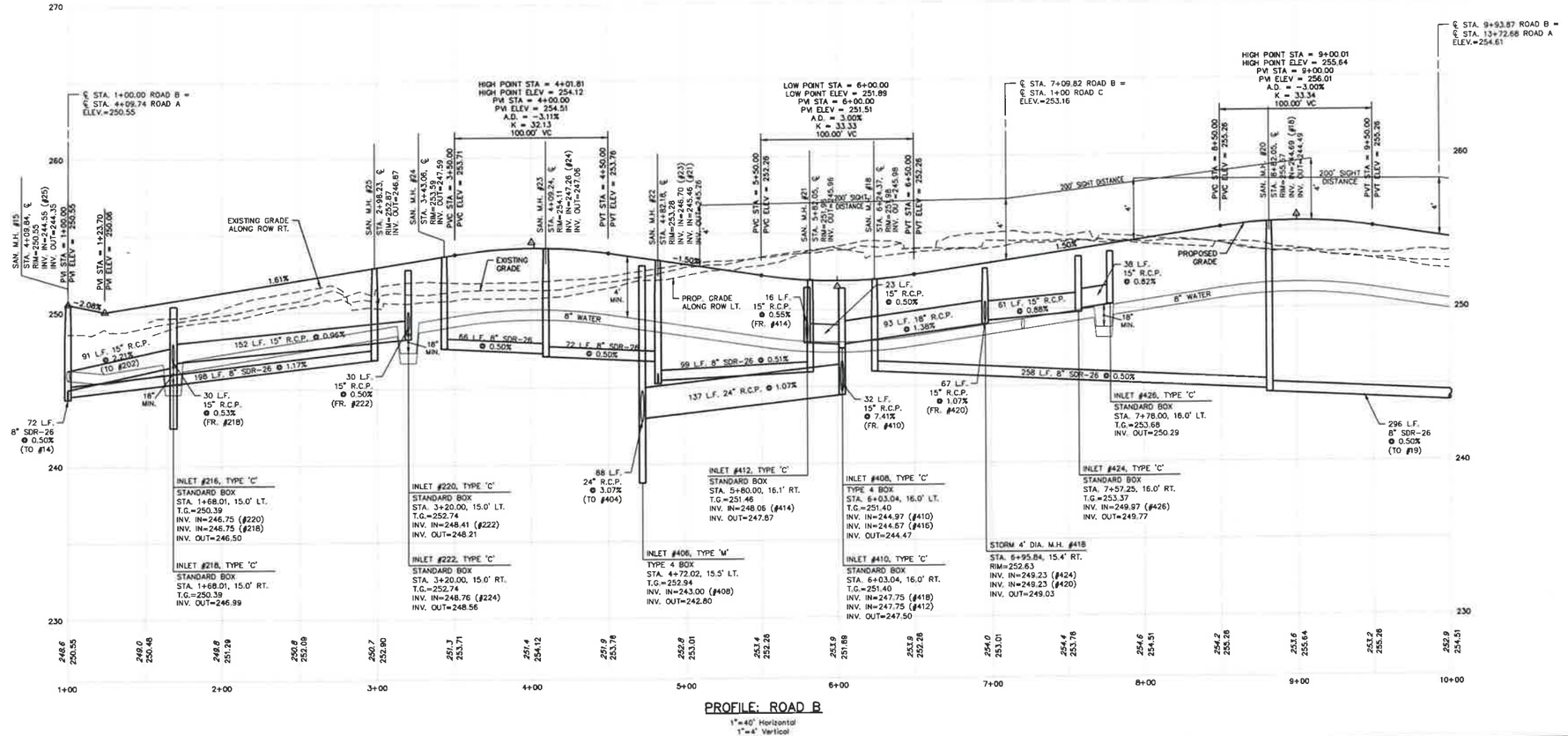
APPLICATION NUMBER: LD-23-01

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CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE	TANGENT
C8	150.00'	203.12'	187.95'	S03°22'34"E	77°35'09"	120.57'

NOTE: SIZE OF THE INLETS AND MANHOLES MAY BE UPDATED BY CONTRACTOR DURING THE CONSTRUCTION PROCESS, AS THE SIZES ARE ONLY GUIDANCE AND MAY NOT BE REFLECTIVE OF THE PIPE ANGLES. GENERAL SIZE SHOP DRAWINGS WILL NEED TO BE REVIEWED BY TOWNSHIP PRIOR TO INSTALLATION.



PROFILE: ROAD B
1"=40' Horizontal
1"=4' Vertical

GRAPHIC SCALE
1 inch = 4 ft. Vertical
FEET 0 4

GRAPHIC SCALE
1 inch = 40 ft. Horizontal
FEET 40 0 20 40 80

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COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JEFFREY H. MADDEN ENGINEER

REV.	DATE	DESCRIPTION
1	7/24/23	TOWNSHIP REVIEW LETTERS
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

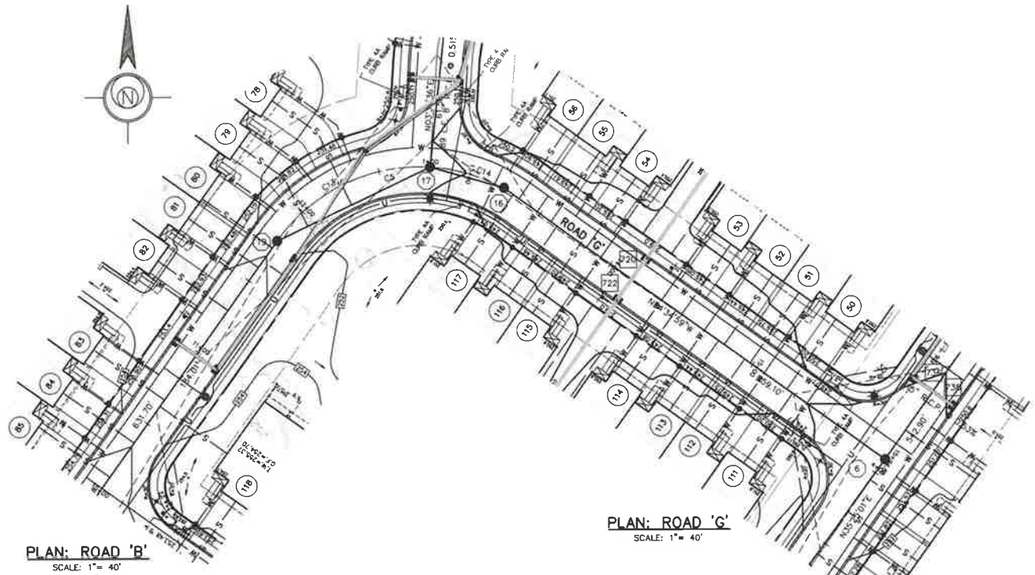
APPLICATION NUMBER: LD-23-01

PLAN AND PROFILE
ROAD B STA 1+00 TO 10+00

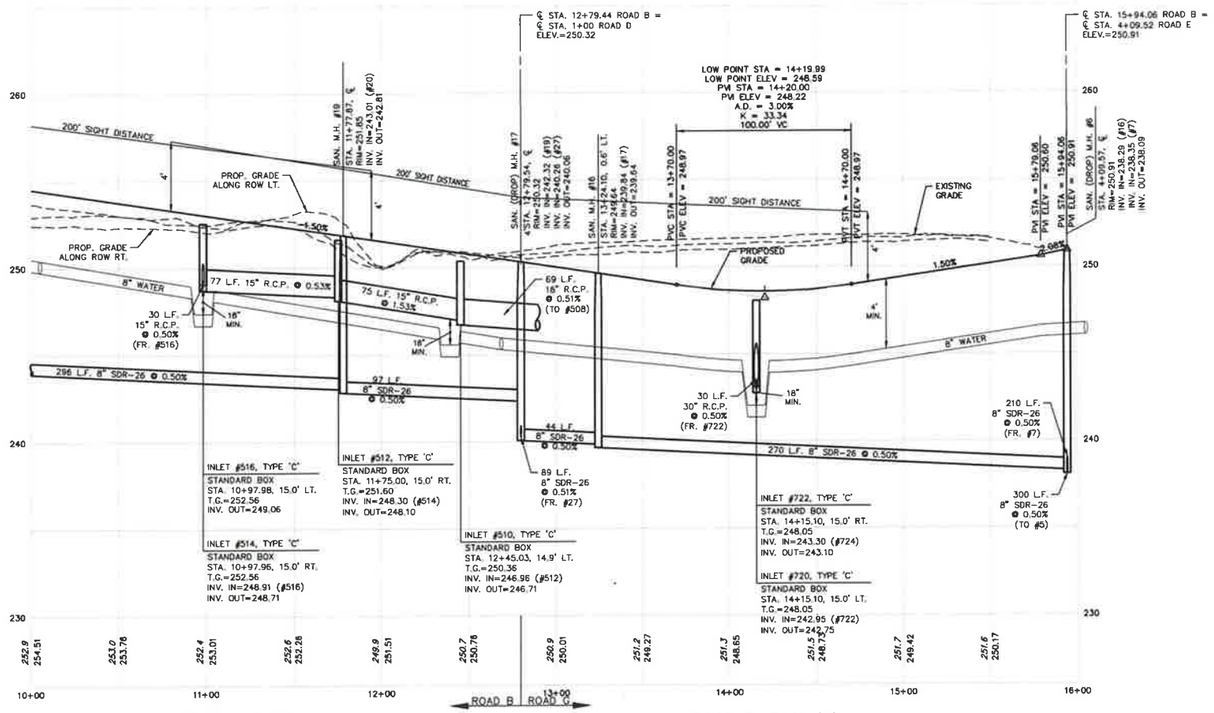
SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: AS NOTED
DESIGN: JMM	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-5-08-PROF
REF. NO.:	SD08.03
SHEET NO.:	30 OF 64

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CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE	TANGENT
C5	100.00'	157.08'	141.42'	N80°25'01"E	90°00'00"	100.00'
C13	100.00'	101.67'	97.34'	S64°32'32"W	58°15'02"	55.72'
C14	100.00'	55.41'	54.71'	N70°27'28"W	31°44'58"	28.44'



PROFILE: ROAD 'B'
1"= 40' Horizontal
1"= 4' Vertical

PROFILE: ROAD 'G'
1"= 40' Horizontal
1"= 4' Vertical

NOTE: SIZE OF THE INLETS AND MANHOLES MAY BE UPDATED BY CONTRACTOR DURING THE CONSTRUCTION PROCESS, AS THE SIZES ARE ONLY GUIDANCE AND MAY NOT BE REFLECTIVE OF THE PIPE ANGLES. GENERAL SIZE SHOP DRAWINGS WILL NEED TO BE REVIEWED BY TOWNSHIP PRIOR TO INSTALLATION.

GRAPHIC SCALE
1 inch = 4 ft. Vertical

GRAPHIC SCALE
1 inch = 40 ft. Horizontal

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

APPLICATION NUMBER LD-23-01

REV.	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

PLAN AND PROFILE
ROAD B STA 10+00 TO 12+79.44
ROAD G STA 12+79.44 TO 15+94.06

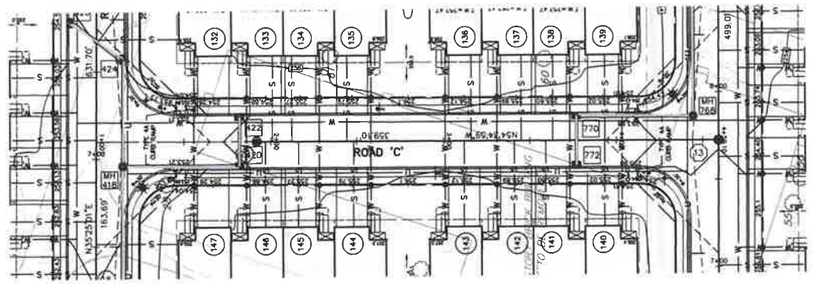
SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

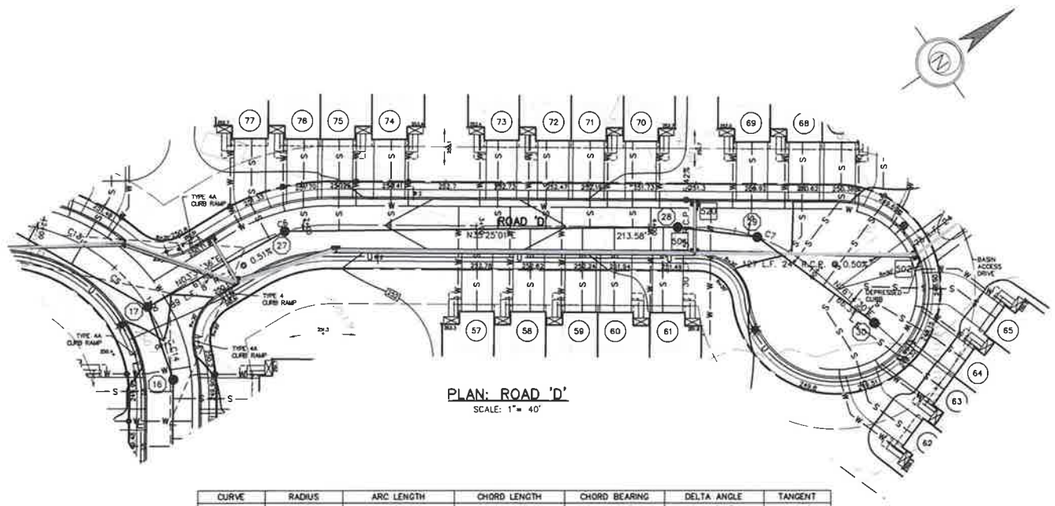
DATE: 3-24-23	SCALE: AS NOTED
DESIGN: JMM	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-5-08-PROF
REF. NO.:	SD08.04
SHEET NO.:	31 OF 64

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JEFFREY H. MADDEN
ENGINEER
PROFESSIONAL ENGINEER

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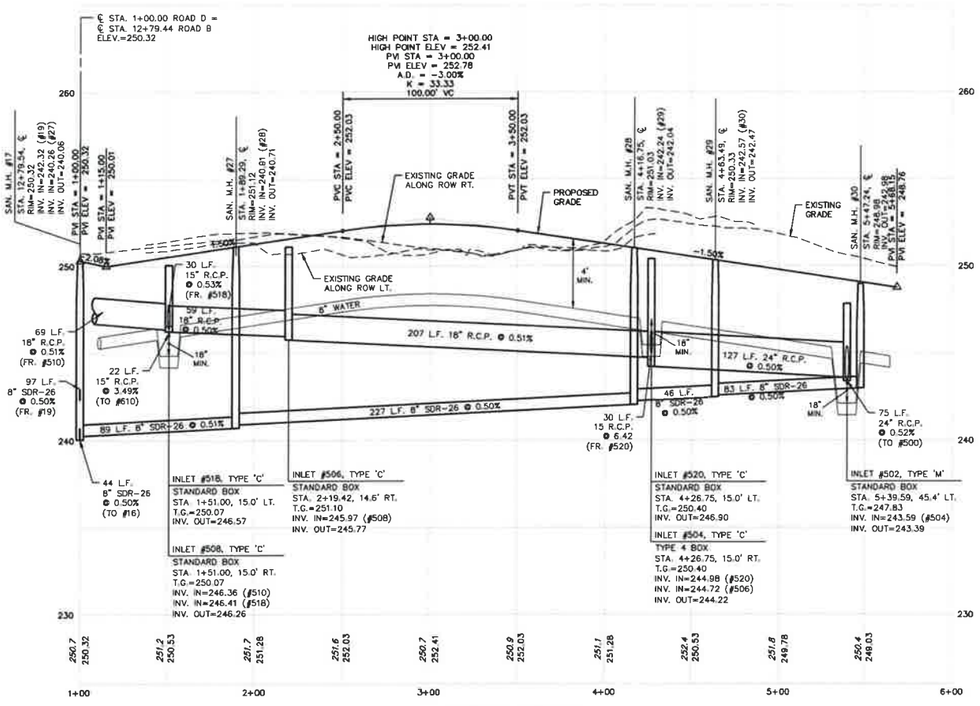

ROAD 'C'
N34°58'58"W
359.10'
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
770
772
493.01
631.70'
163.69'
N35°25'01"E
MH1
MH2
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MH40



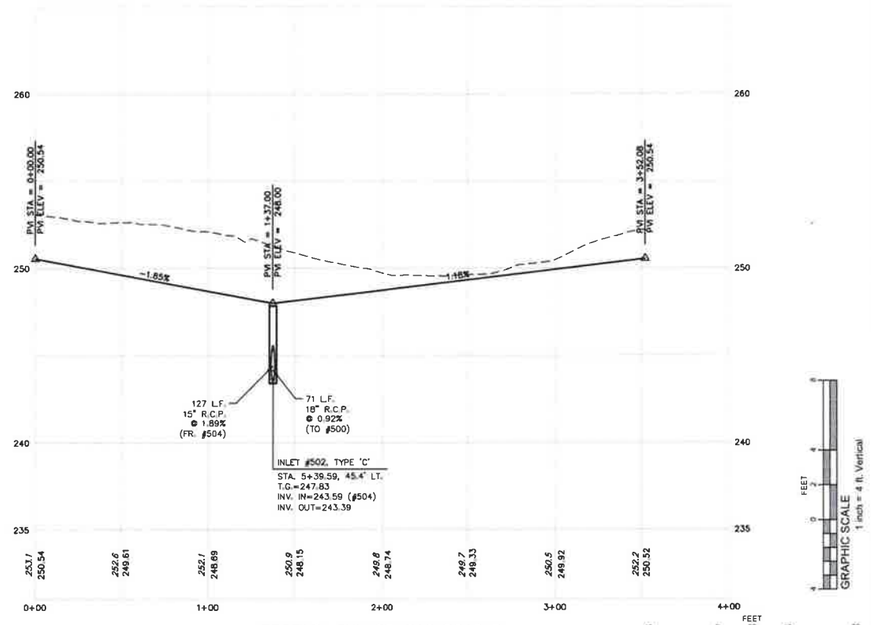
PLAN: ROAD 'D'
SCALE: 1"= 40'

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE	TANGENT
C6	100.00'	55.43'	54.72'	S19°32'18"W	31°45'25"	28.45'
C7	100.00'	71.25'	69.76'	S55°48'45"W	40°49'30"	37.21'

NOTE: SIZE OF THE INLETS AND MANHOLES MAY BE UPDATED BY CONTRACTOR DURING THE CONSTRUCTION PROCESS, AS THE SIZES ARE ONLY GUIDANCE AND MAY NOT BE REFLECTIVE OF THE PIPE ANGLES. GENERAL SIZE SHOP DRAWINGS WILL NEED TO BE REVIEWED BY TOWNSHIP PRIOR TO INSTALLATION.



PROFILE: ROAD D
1"=40' Horizontal
1"=4' Vertical



PROFILE: CUL-DE-SAC ROAD D
1"=40' Horizontal
1"=4' Vertical

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JEFFREY H. MADDEN
REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA

REV.	DATE	DESCRIPTION
1	7/24/23	TOWNSHIP REVIEW LETTERS
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

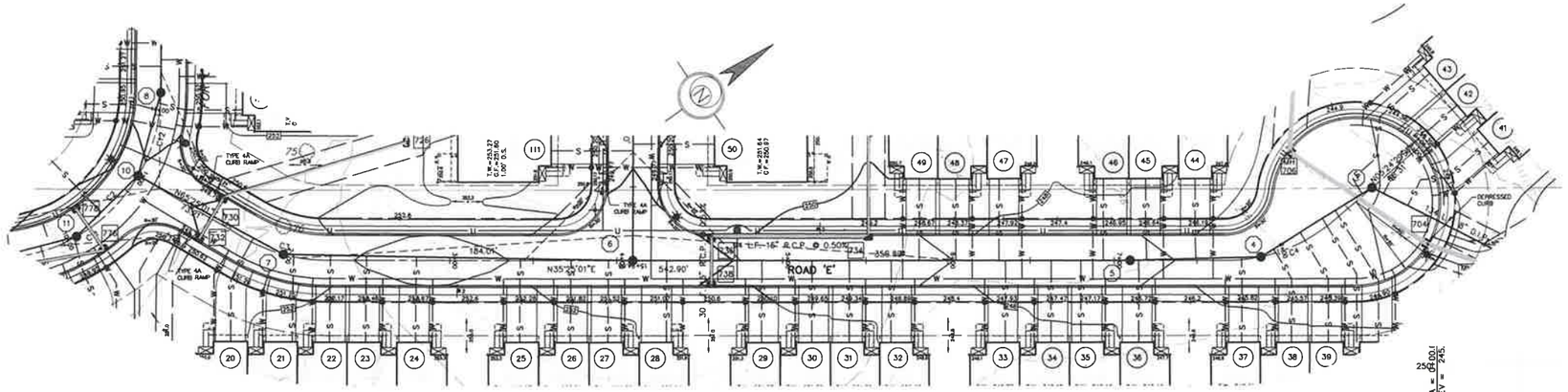
PLAN AND PROFILE
ROAD D STA 1+00 TO 5+68.15

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: AS NOTED
DESIGN: JMM	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-5-08-PROF
REF. NO.: SD08.06	
SHEET NO.: 33 OF 64	

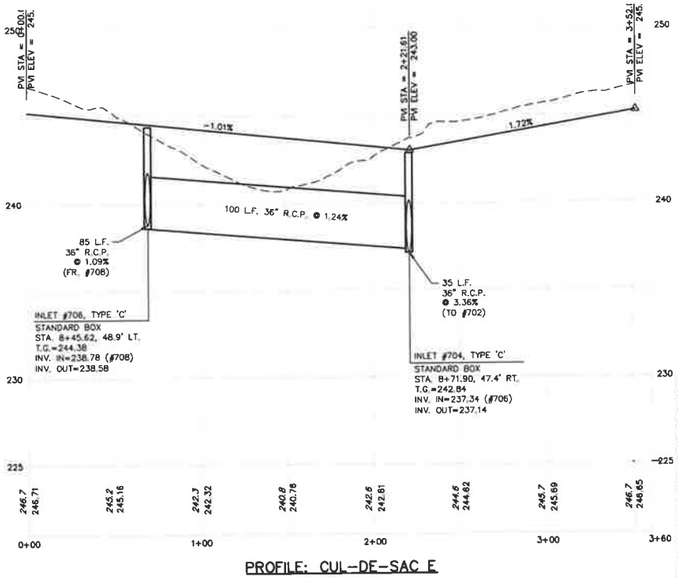
APPLICATION NUMBER: LD-23-01

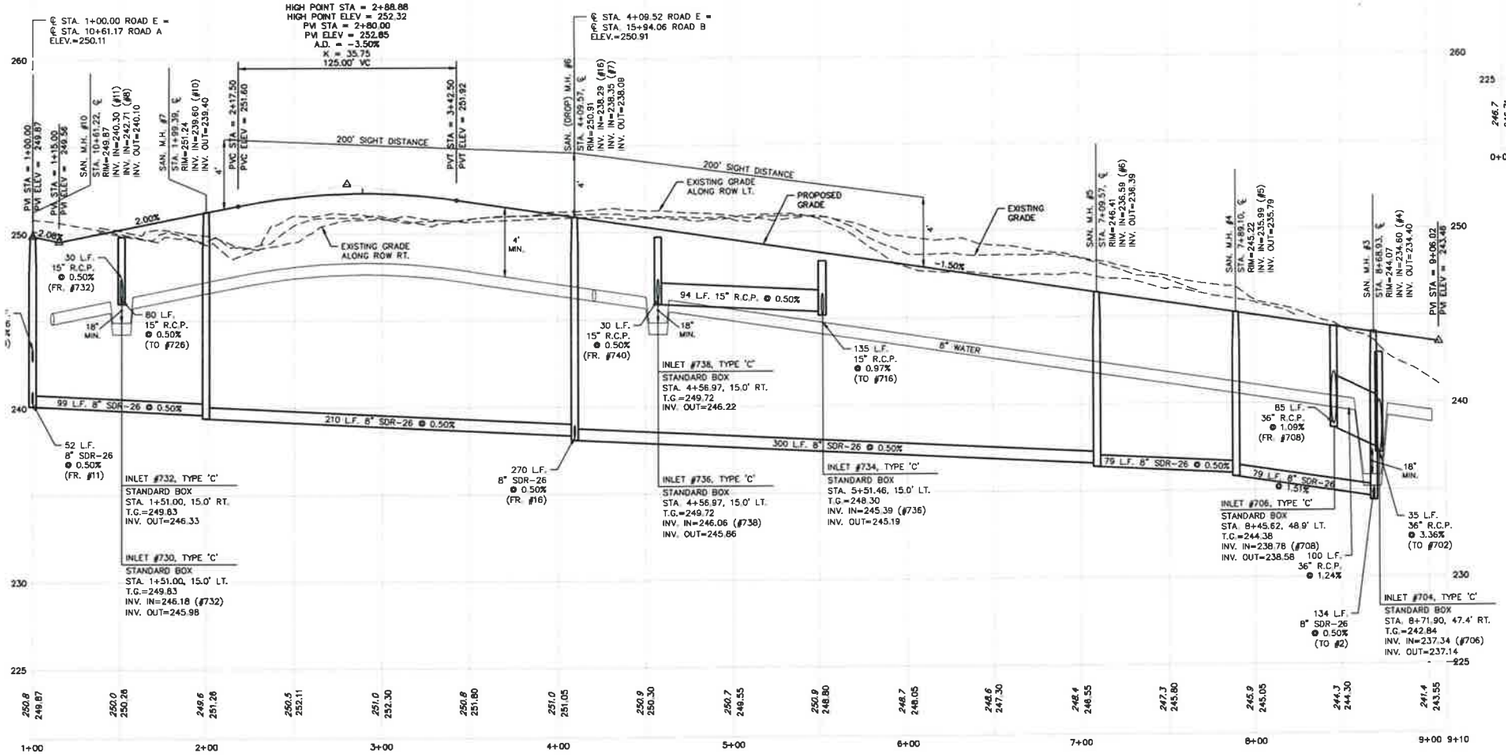
N:\PROJECTS\PENNSYLVANIA\7662-RYDAL ST. BASIL\ENGDEPT\DRAWINGS\7662-5-08-PROF DWG-File Stength-10/17/2023 12:02 PM



CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE	TANGENT
C3	100.00'	52.36'	51.76'	S50°25'01"W	30°00'00"	26.79'
C4	100.00'	71.25'	69.76'	S15°00'16"W	40°49'30"	37.21'

PLAN: ROAD 'E'
SCALE: 1"= 40'





PROFILE: ROAD E
1"=40' Horizontal
1"=4' Vertical

PROFILE: CUL-DE-SAC E
1"=40' Horizontal
1"=4' Vertical

NOTE: SIZE OF THE INLETS AND MANHOLES MAY BE UPDATED BY CONTRACTOR DURING THE CONSTRUCTION PROCESS, AS THE SIZES ARE ONLY GUIDANCE AND MAY NOT BE REFLECTIVE OF THE PIPE ANGLES. GENERAL SIZE SHOP DRAWINGS WILL NEED TO BE REVIEWED BY TOWNSHIP PRIOR TO INSTALLATION.

GRAPHIC SCALE
1 inch = 4 ft. Vertical
FEET 0 2 4 8

GRAPHIC SCALE
1 inch = 40 ft. Horizontal
FEET 40 0 20 40 80

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JEFFREY H. MADDEN — COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — No. PE035911

REV.	DATE	DESCRIPTION
1	7/24/23	TOWNSHIP REVIEW LETTERS
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS

ESE
ESE
DRAWN

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

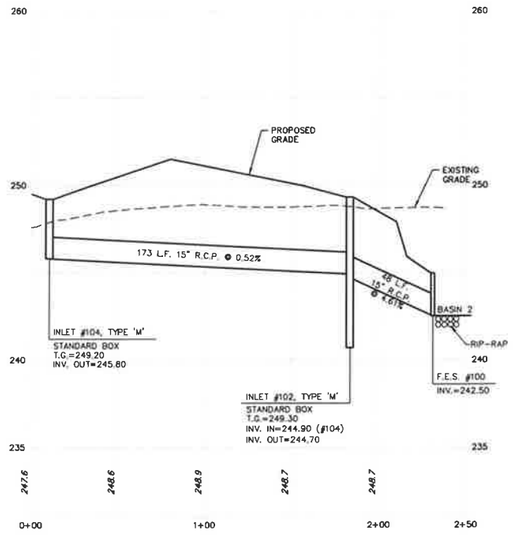
APPLICATION NUMBER LD-23-01

PLAN AND PROFILE
ROAD E STA 1+00 TO 9+06.02

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

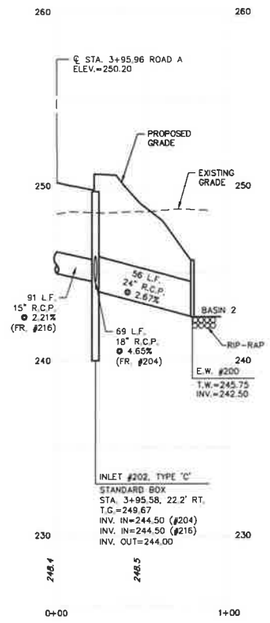
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JOB NO.: 7662	FILE NAME: 7662-5-08-PROF
REF. NO.: SD08.07	
SHEET NO.: 34 OF 64	

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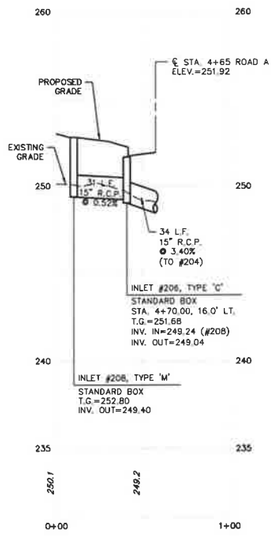
PROFILE: 104-100

1"=40' Horizontal
1"=4' Vertical



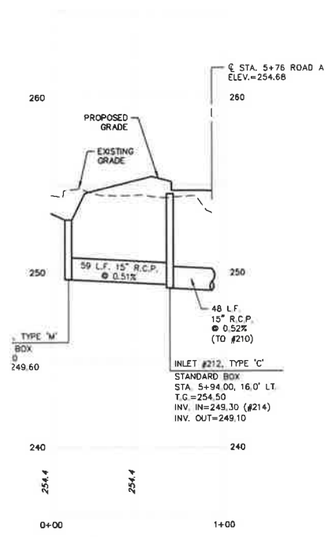
PROFILE: 202-200

1"=40' Horizontal
1"=4' Vertical



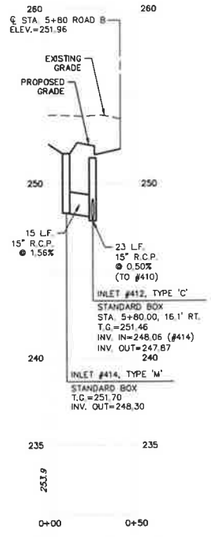
PROFILE: 208-204

1"=40' Horizontal
1"=4' Vertical



PROFILE: 214-210

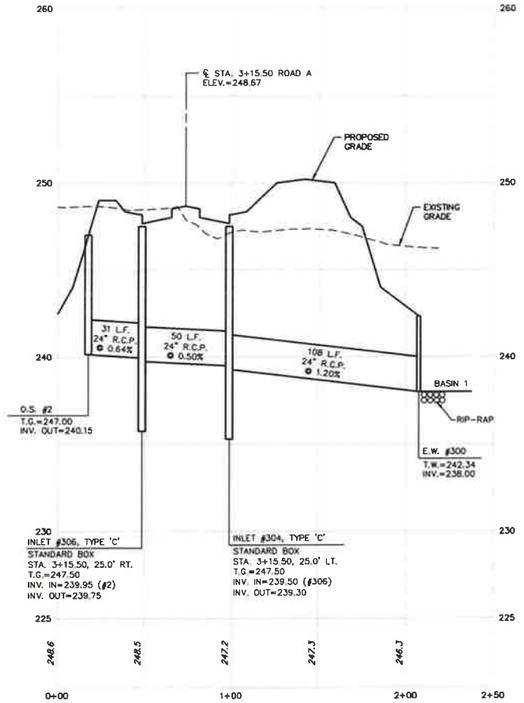
1"=40' Horizontal
1"=4' Vertical



PROFILE: 414-412

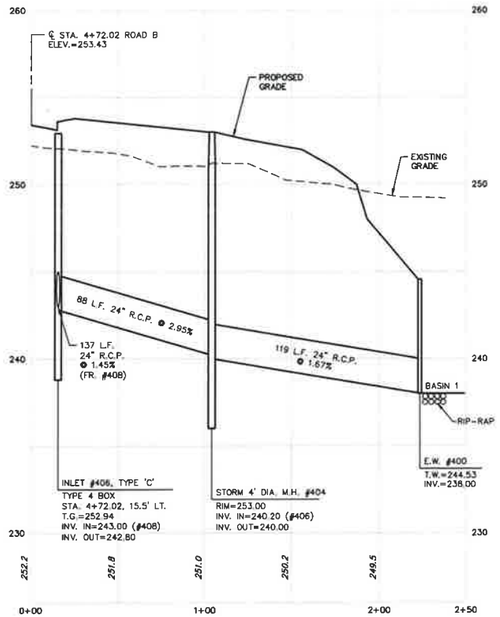
1"=40' Horizontal
1"=4' Vertical

NOTE: SIZE OF THE INLETS AND MANHOLES MAY BE UPDATED BY CONTRACTOR DURING THE CONSTRUCTION PROCESS, AS THE SIZES ARE ONLY GUIDANCE AND MAY NOT BE REFLECTIVE OF THE PIPE ANGLES. GENERAL SIZE SHOP DRAWINGS WILL NEED TO BE REVIEWED BY TOWNSHIP PRIOR TO INSTALLATION.



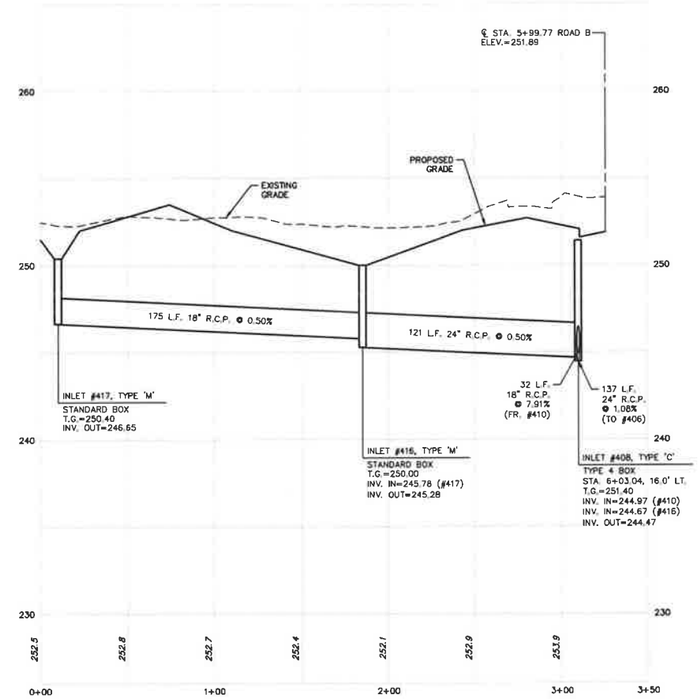
PROFILE: 308-300

1"=40' Horizontal
1"=4' Vertical



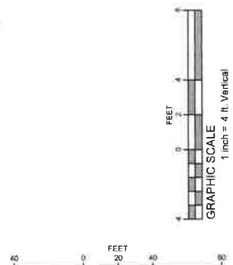
PROFILE: 406-400

1"=40' Horizontal
1"=4' Vertical



PROFILE: 428-408

1"=40' Horizontal
1"=4' Vertical



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JEFFREY H. MADDEN — COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER

REV.	DATE	DESCRIPTION
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS
1	7/24/23	TOWNSHIP REVIEW LETTERS

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT—NOT TO BE RECORDED

EASEMENT PROFILES

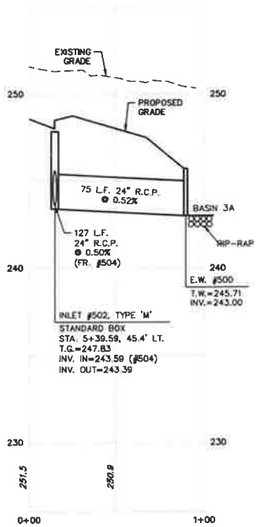
SISTERS OF ST. BASIL

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: AS NOTED
DESIGN: JMM	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-S-08-PROF
REF. NO.: SD08.08	
SHEET NO.: 35 OF 64	

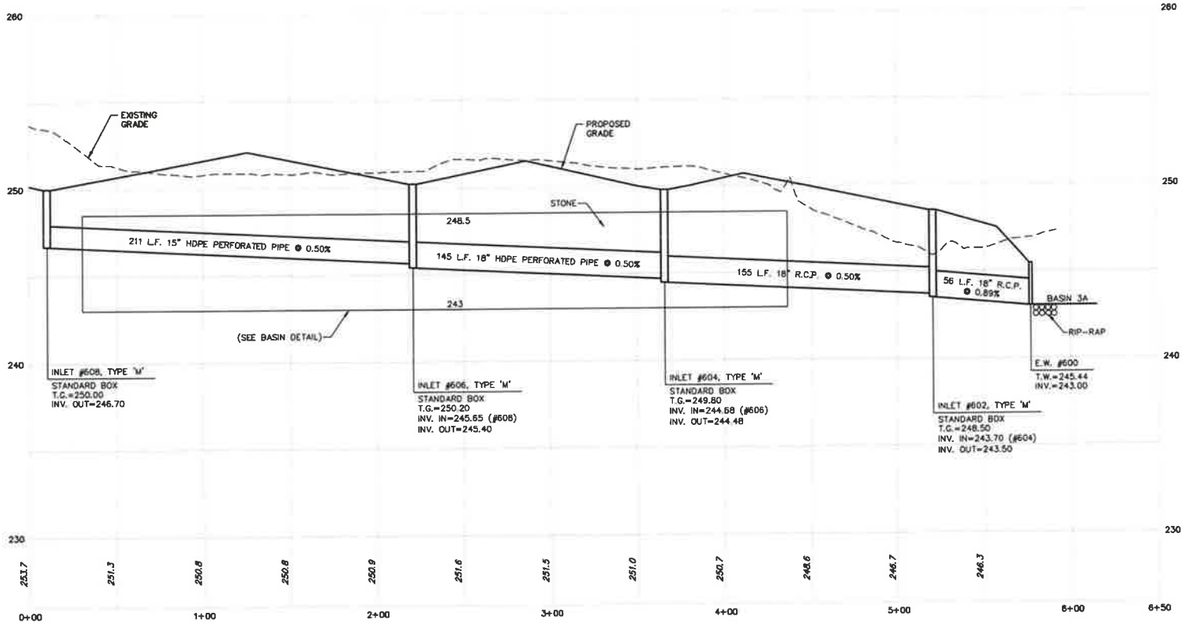
APPLICATION NUMBER LD-23-01

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PROFILE: 502 to 500

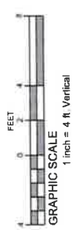
1"=40' Horizontal
1"=4' Vertical

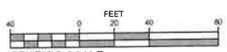


PROFILE: 626 to 600

1"=40' Horizontal
1"=4' Vertical

NOTE: SIZE OF THE INLETS AND MANHOLES MAY BE UPDATED BY CONTRACTOR DURING THE CONSTRUCTION PROCESS, AS THE SIZES ARE ONLY GUIDANCE AND MAY NOT BE REFLECTIVE OF THE PIPE ANGLES. GENERAL SIZE SHOP DRAWINGS WILL NEED TO BE REVIEWED BY TOWNSHIP PRIOR TO INSTALLATION.





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PROFESSIONAL ENGINEER — JEFFREY M. MADDEN — No. PE059161 — COMMONWEALTH OF PENNSYLVANIA

REV.	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT—NOT TO BE RECORDED

APPLICATION NUMBER LD-23-01

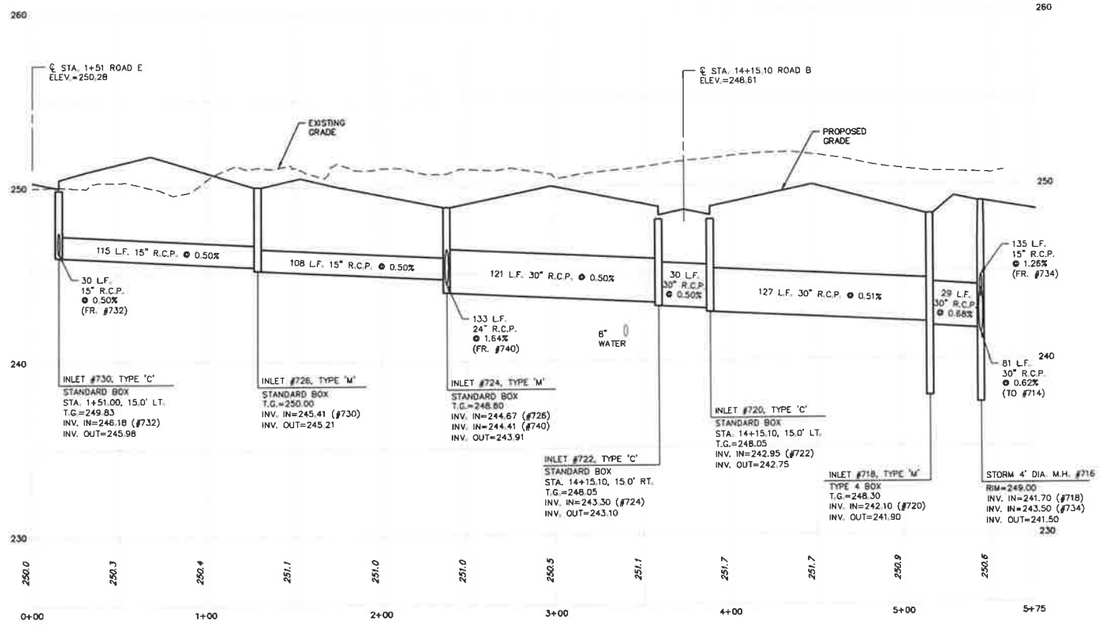
EASEMENT PROFILES

SISTERS OF ST. BASIL

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

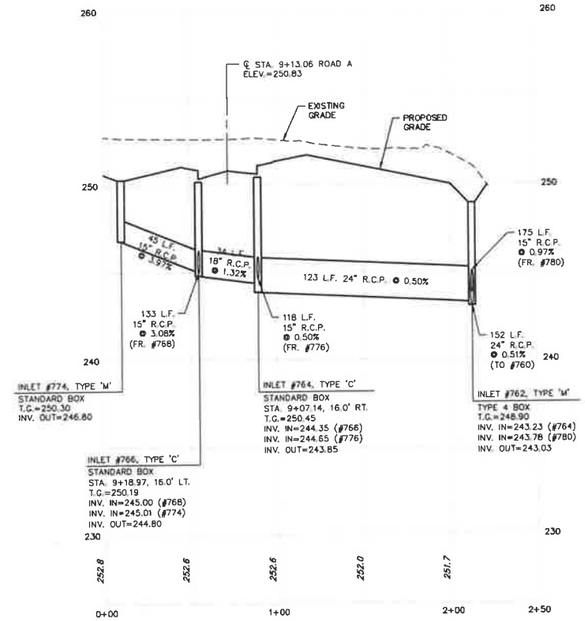
DATE: 3-24-23	SCALE: AS NOTED
DESIGN: JMM	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-S-08-PROF
REF. NO.:	SD08.09
SHEET NO.:	36 OF 64

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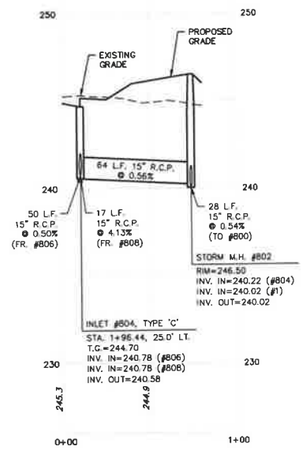
PROFILE: 728 to 716

1"=40' Horizontal
1"=4' Vertical



PROFILE: 774 TO 762

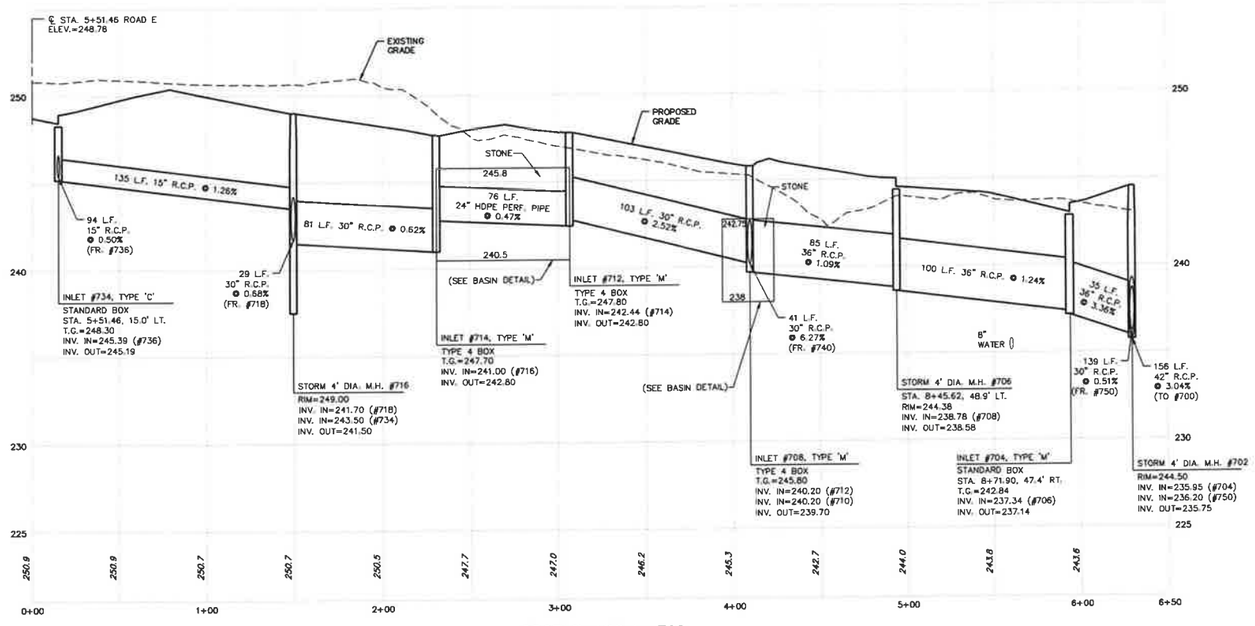
1"=40' Horizontal
1"=4' Vertical



PROFILE: 804-802

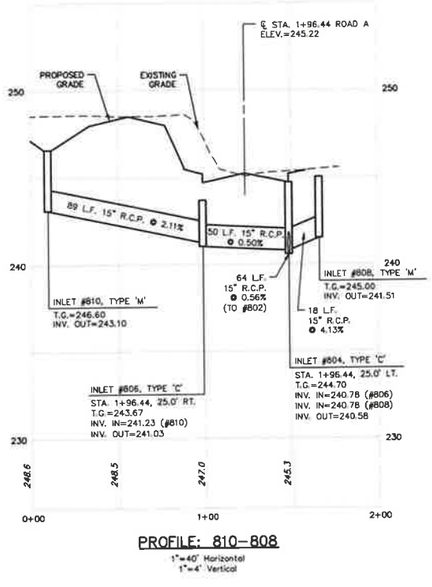
1"=40' Horizontal
1"=4' Vertical

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PROFILE: 716 to 702

1"=40' Horizontal
1"=4' Vertical



PROFILE: 810-808

1"=40' Horizontal
1"=4' Vertical

GRAPHIC SCALE
1 inch = 4 ft. Vertical

GRAPHIC SCALE
1 inch = 40 ft. Horizontal

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REV.	DATE	DESCRIPTION
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS
1	7/24/23	TOWNSHIP REVIEW LETTERS

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

EASEMENT PROFILES

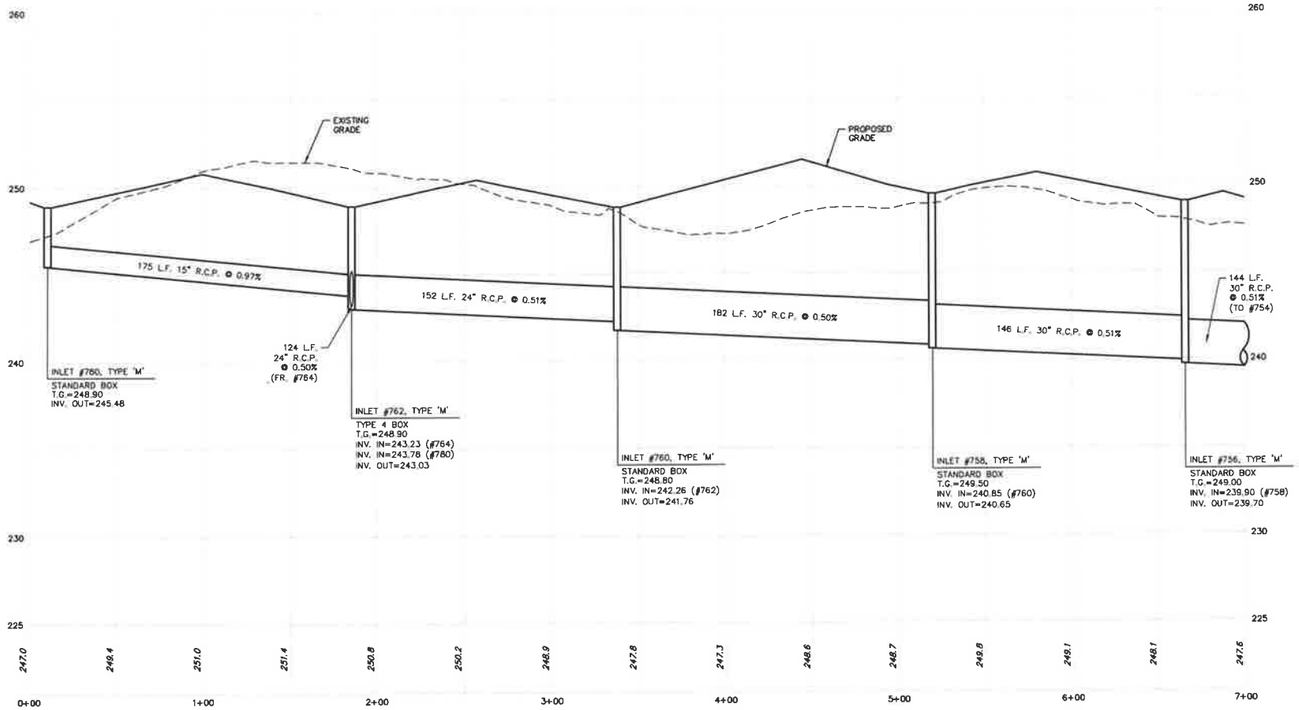
SISTERS OF ST. BASIL

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

APPLICATION NUMBER LD-23-01

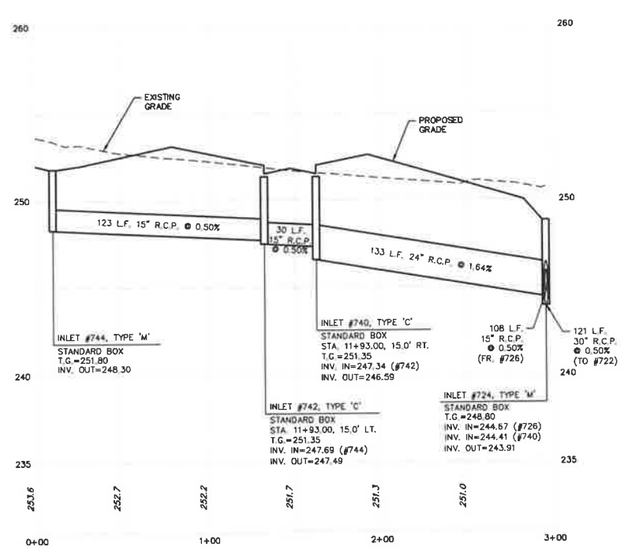
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DESIGN: JMM	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-S-08-PROF
REF. NO.: SD08.10	
SHEET NO.: 37 OF 64	

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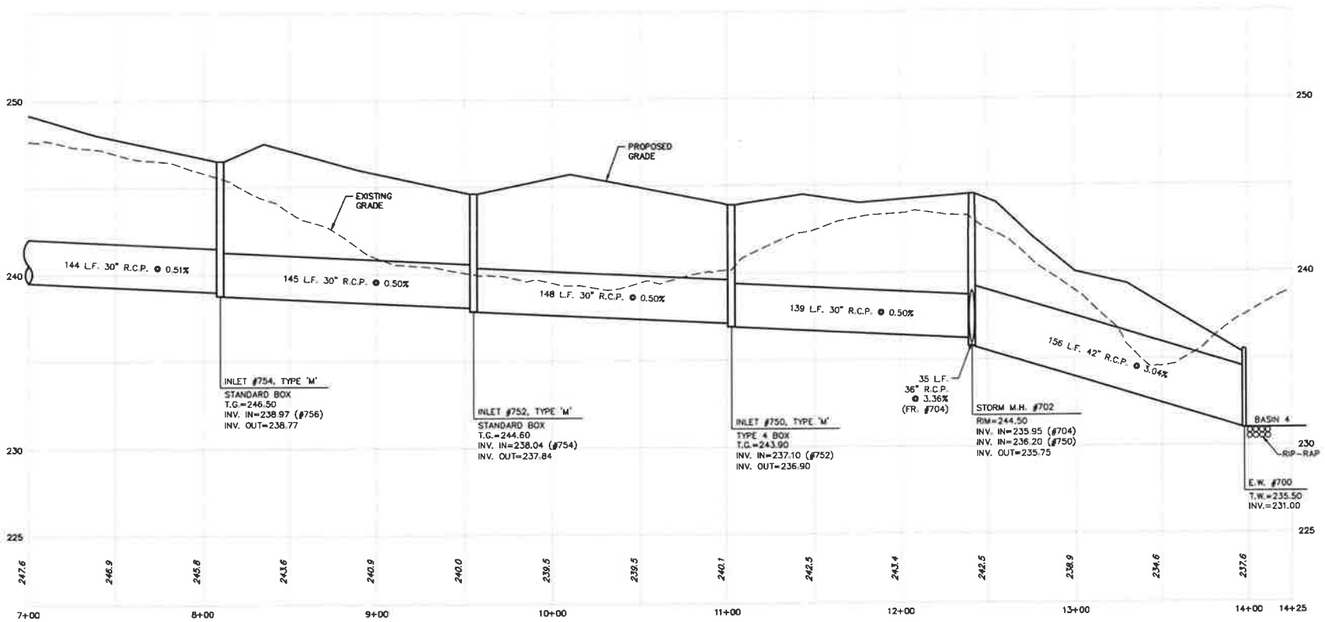
PROFILE: 780-700

1"=40' Horizontal
1"=4' Vertical



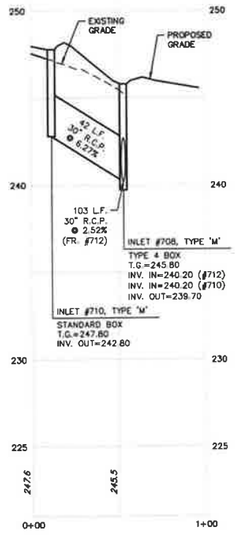
PROFILE: 744-724

1"=40' Horizontal
1"=4' Vertical



PROFILE: 780-700

1"=40' Horizontal
1"=4' Vertical



PROFILE: 710 to 708

1"=40' Horizontal
1"=4' Vertical

NOTE: SIZE OF THE INLETS AND MANHOLES MAY BE UPDATED BY CONTRACTOR DURING THE CONSTRUCTION PROCESS, AS THE SIZES ARE ONLY GUIDANCE AND MAY NOT BE REFLECTIVE OF THE PIPE ANGLES. GENERAL SIZE SHOP DRAWINGS WILL NEED TO BE REVIEWED BY TOWNSHIP PRIOR TO INSTALLATION.

GRAPHIC SCALE
1 inch = 4 ft. Vertical

GRAPHIC SCALE
1 inch = 40 ft. Horizontal

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JEFFREY M. MADDEN — REGISTERED PROFESSIONAL ENGINEER — No. PE037121 — COMMONWEALTH OF PENNSYLVANIA

REV.	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

APPLICATION NUMBER LD-23-01

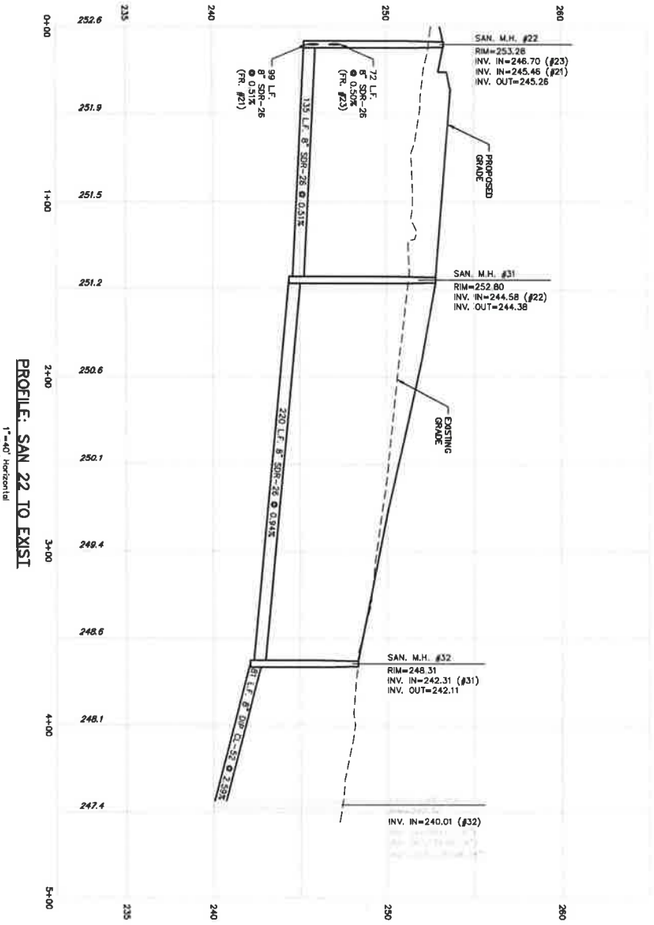
EASEMENT PROFILES

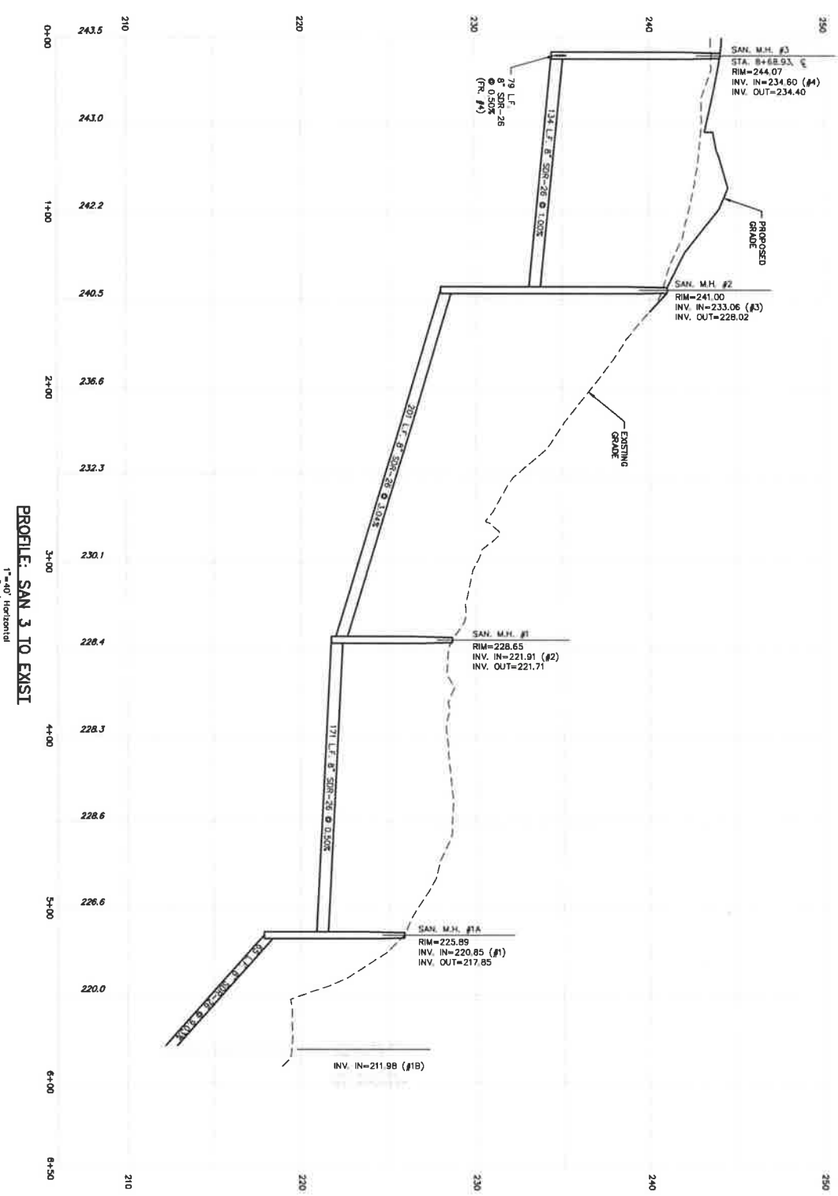
SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: AS NOTED
DESIGN: JMM	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-S-08-PROF
REF. NO.: SD08.11	
SHEET NO.: 38 OF 64	

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NOTE: SIZE OF THE INLETS AND MANHOLES MAY BE UPDATED BY CONTRACTOR DURING THE CONSTRUCTION PROCESS, AS THE SIZES ARE ONLY GUIDANCE AND MAY NOT BE REFLECTIVE OF THE PIPE ANGLES. GENERAL SIZE SHOP DRAWINGS WILL NEED TO BE REVIEWED BY TOWNSHIP PRIOR TO INSTALLATION.

GRAPHIC SCALE
1 inch = 40 ft. Horizontal

GRAPHIC SCALE
1 inch = 4 ft. Vertical

APPLICATION NUMBER LD-23-01

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

SHEET NO.: 39 OF 64
REF. NO.: SD08.12
DATE: 5-24-23
SCALE: AS NOTED
JOB NO.: 7682
DESIGN: JMM
DRAWN: ESE
FILE NAME: 7682-S-08-PROF

EASEMENT PROFILES

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

REV.	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

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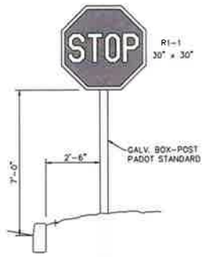
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JEFFREY M. MADDEN
ENGINEER
No. PE079768
Jeff Madden



PEDESTRIAN CROSSING SIGN DETAIL
N.T.S.
(W11A-2)



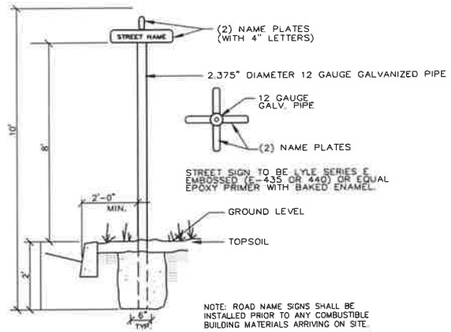
SPEED LIMIT SIGN DETAIL
N.T.S.
(R2-1)



INSTALLATION, DIMENSIONS, COLORS AND DETALS OF VARIOUS SIZE SIGNS, SHIELDS AND ACCESORY PANELS TO FOLLOW STANDARDS IN THE CURRENT "STANDARD HIGHWAY SIGNS PUBLICATION" AND THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".

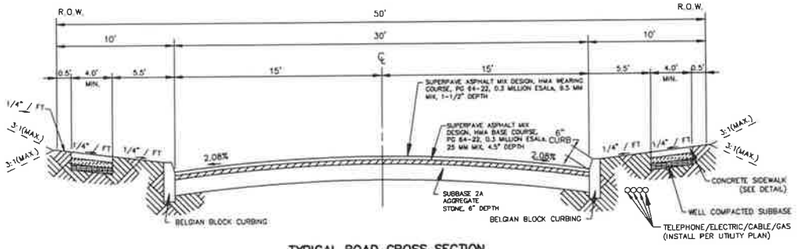
NOTE: ALL SIGNS SHALL BE IN ACCORDANCE WITH DEPT. OF TRANSPORTATION STANDARDS.

STOP SIGN LOCATION DETAIL
N.T.S.
(R1-1)

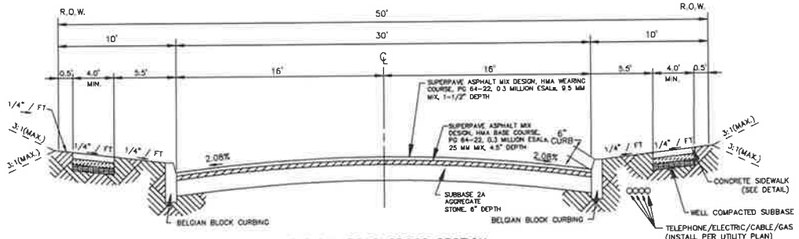


NOTE: ROAD NAME SIGNS SHALL BE INSTALLED PRIOR TO ANY COMBUSTIBLE BUILDING MATERIALS ARRIVING ON SITE.

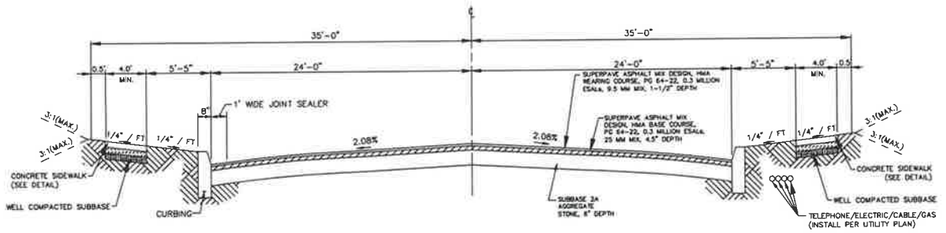
STREET SIGN
N.T.S.



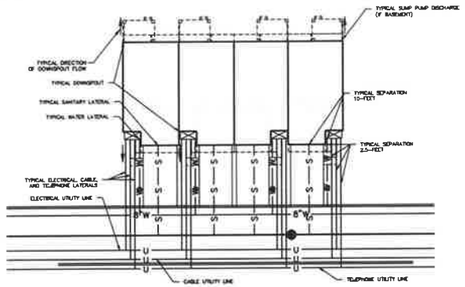
TYPICAL ROAD CROSS SECTION
(INTERIOR ROADS WITHOUT PARKING)
N.T.S



TYPICAL ROAD CROSS SECTION
(INTERIOR ROADS PARKING)
ROAD A STA. 4+50 TO 10+00 ROAD B STA. 3+50 TO 9+50
N.T.S

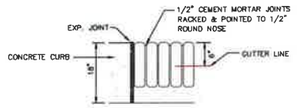


ENTRANCE NEAR FOX CHASE ROAD CROSS SECTION
N.T.S
ROAD A STA. 1+00 TO 4+00

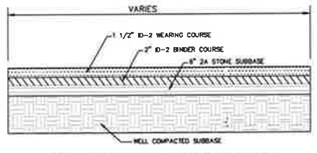


TYPICAL UTILITY LAYOUT
N.T.S.

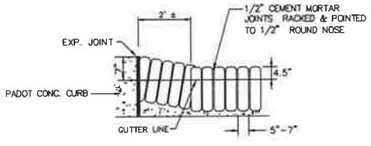
NOTE: EROSION DISSIPATORS TO BE PLACED AT ALL DOWNSPOUT AND SUMP PUMP DISCHARGES.



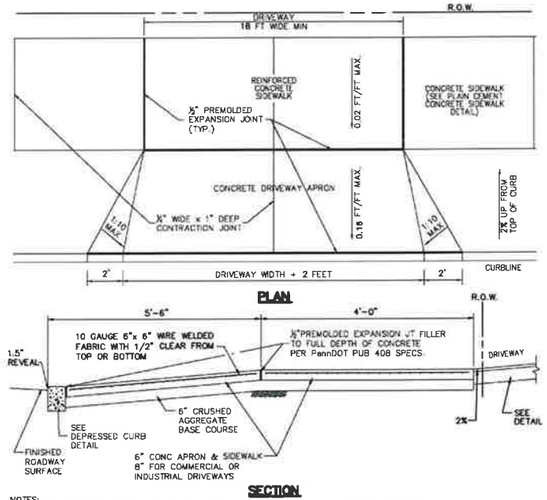
CONCRETE CURB TO BELGIAN BLOCK CURB TRANSITION DETAIL
N.T.S.



DRIVEWAY CROSS-SECTION DETAIL
N.T.S.

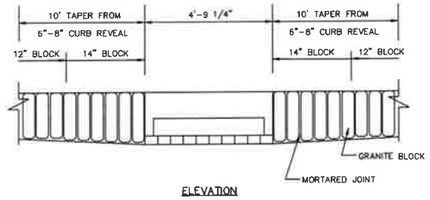


PADOT CURB TO BELGIAN BLOCK TRANSITION DETAIL
N.T.S.



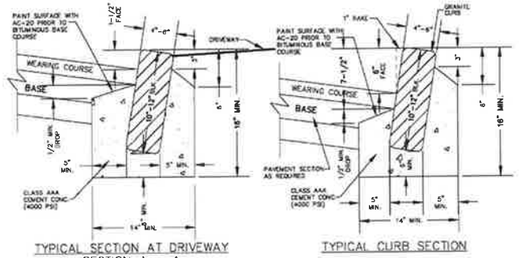
NOTES:
1. MAINTAIN SIDEWALK GRADE @ 2% ABOVE TOP OF FULL HEIGHT (6" REVEAL) CURB AS PROJECTED THROUGH DRIVEWAY.
2. CONCRETE SHALL HAVE A MINIMUM 3,000 PSI COMPRESSIVE STRENGTH, AIR ENTRAINED WITH A MAXIMUM SLUMP OF 5".
3. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE UPPER PROVIDENCE TOWNSHIP ENGINEERING AND CONSTRUCTION STANDARDS AND IMPROVEMENT PROCEDURES AND PennDOT PUBLICATION 408, LATEST EDITION, WHICHEVER IS MORE RESTRICTIVE.

CURB, APRON & DRIVEWAY DETAIL



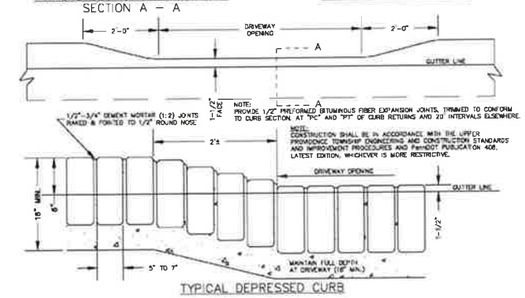
ELEVATION

BELGIAN BLOCK CURB TRANSITION @ TYPE C INLET
N.T.S.



TYPICAL SECTION AT DRIVEWAY SECTION A – A

TYPICAL CURB SECTION



TYPICAL DEPRESSED CURB

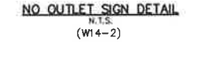
BELGIAN BLOCK CURB DETAIL
N.T.S.

COLOR: LEGEND AND BORDER	WHITE (REFLECTORIZED)
BACKGROUND	RED (REFLECTORIZED)

SIGN SIZE	DIMENSIONS A	B	C*	SERIES	BORDER	BLANK STUD
24 x 24	24	8	12	C	⅝	B1-24
30 x 30	30	12	12½	C	¾	B1-30
36 x 36	36	12	15	C	⅞	B1-36
48 x 48	48	16	20	C	1½	B1-48

* REDUCE SPACING BY 40%

STOP SIGN DETAIL (*) (#1)
N.T.S.
(R1-1)



NO OUTLET SIGN DETAIL
N.T.S.
(W14-2)

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JEFFREY H. HADDEN — REGISTERED PROFESSIONAL — CHECKED — No. PE037431 — COMMONWEALTH OF PENNSYLVANIA

REV.	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

APPLICATION NUMBER LD-23-01

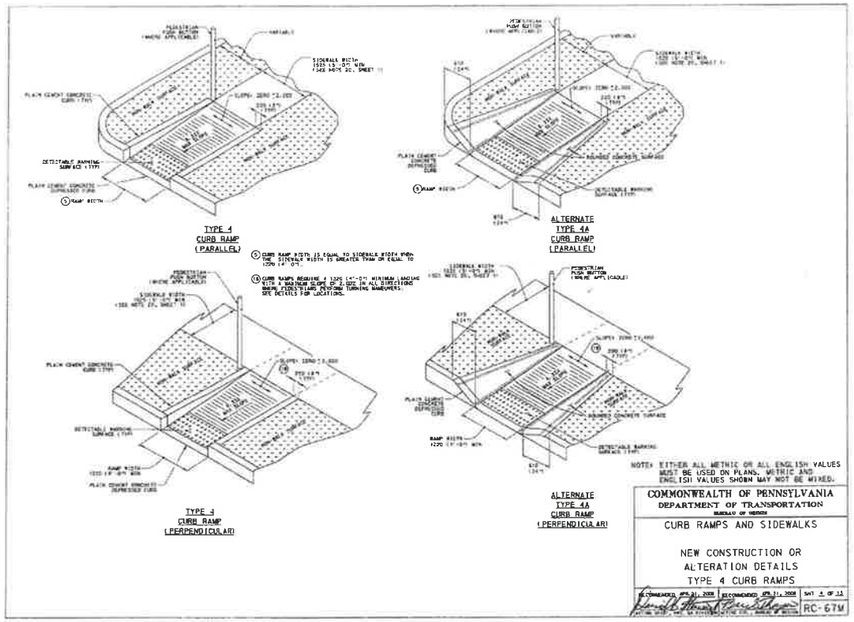
PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

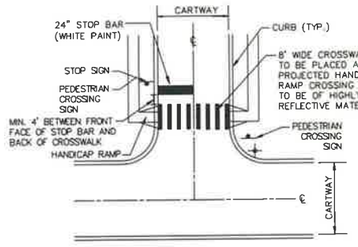
CONSTRUCTION DETAILS

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

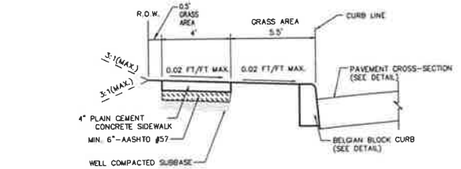
DATE: 3-24-23	SCALE: AS NOTED
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-S-09-DET-CONST
REF. NO.:	SD09.01
SHEET NO.:	40 OF 64

N:\PROJECTS\PENNSYLVANIA\7662-RYDAL ST. BASILS\ENGDEPT\DRAWINGS\7662-S-09-DET-CONSTDWG-Eric Stengel-10/17/2023 12:04 PM





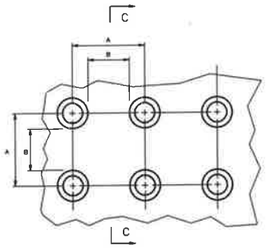
INTERSECTION STRIPING & SIGN DETAIL
N.T.S.



NOTES:

1. CONCRETE SHALL HAVE A MINIMUM 3,000 PSI COMPRESSIVE STRENGTH, 6% AIR ENTRAINMENT WITH A MAXIMUM SLUMP OF 3".
2. ALL SIDEWALKS SHALL RECEIVE A BROOM FINISH UNLESS APPROVED OTHERWISE BY THE TOWNSHIP ENGINEER.
3. EXPANSION JOINTS SHALL BE EVERY 30', WITH CONTRACTION JOINTS EVERY 5', A MINIMUM OF 1" IN DEPTH. THE CONCRETE SHALL BE PLACED SO THAT THERE IS A SEPARATE JOINT EVERY 5' AND SHALL BE CONSTRUCTED SO THAT THE 5' SECTIONS ARE COMPLETELY SEPARATED FROM THE ADJACENT SECTIONS. A 0.5-INCH PREMOLDED EXPANSION JOINT SHALL BE PLACED WHERE THE CONCRETE SIDEWALK ABUTS A CONCRETE CURB. ADDITIONAL EXPANSION MATERIAL SHALL BE PLACED BETWEEN ANY CURB AND DRIVEWAY APRONS AND IN THE SIDEWALK AT THE DRIVEWAY LIMITS.
4. CONSTRUCTION SHALL BE IN ACCORDANCE WITH ABINGTON TOWNSHIP ENGINEERING AND CONSTRUCTION STANDARD AND IMPROVEMENT PROCEDURES AND PENNDOT PUBLICATION 408, LATEST EDITION, WHICHEVER IS MORE RESTRICTIVE.
5. ALL EDGES TO BE ROUNDED WITH A 1/4" TOOL.
6. 6" THICK @ DRIVEWAY CROSSINGS.

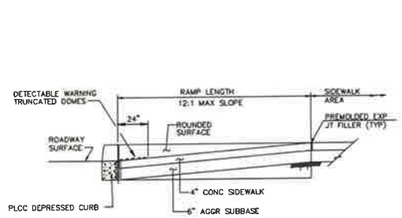
CONCRETE SIDEWALK DETAIL
N.T.S.



TRUNCATED DOME DIMENSIONS		
DIM	MIN	MAX
A	1.6"	2.4"
B	0.65"	1.5"
C	(13)	(13)
D	0.9"	1.4"

(13) THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

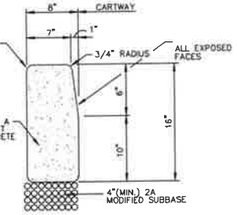
DETECTABLE WARNING SURFACE (DWS)
TRUNCATED DOME DETAIL
NTS
Pa-DOT RC-67M



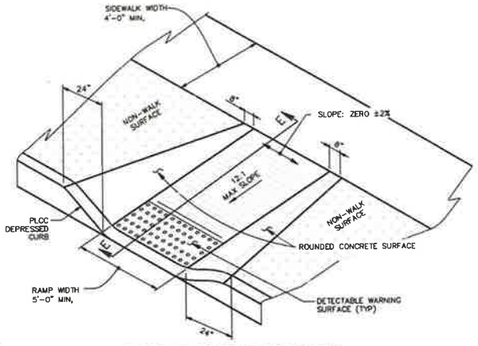
SECTION E-E



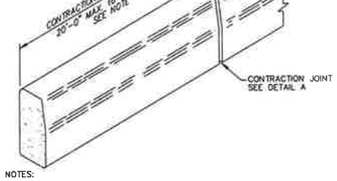
DETAIL A
CONTRACTION JOINT



TYPICAL CROSS SECTION



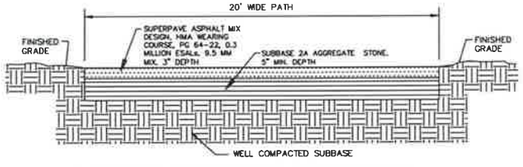
TYPE 4A CURB RAMP DETAIL
(PERPENDICULAR)
Pa-DOT RC-67M
NTS



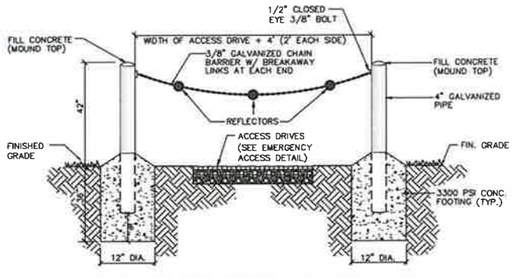
NOTES:

1. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATIONS PUBLICATION 408, SECTION 630 FOR PLAIN CONCRETE CURB AND DEPRESSED CURB.
2. SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS.
3. PLACE 3/4" PREMOLDED EXPANSION JOINT FILLER MATERIAL AT STRUCTURES AND AT THE END OF THE WORK DAY. CUT MATERIAL TO CONFORM TO AREA ADJACENT TO CURB OR TO CONFORM TO CROSS-SECTIONAL AREA OF CURB.

6" CONCRETE CURB DETAIL
N.T.S.
(CONSTRUCT NEAR FOX CHASE ROAD)

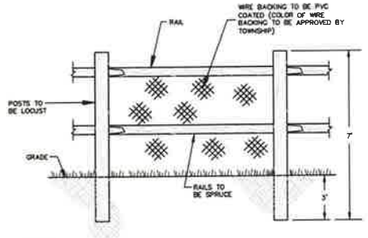


EMERGENCY ACCESS CROSS-SECTION DETAIL
N.T.S.



NOTES
1. THIS BARRIER IS SUBJECT TO REVIEW AND APPROVAL OF THE TOWNSHIP FIRE MARSHALL
2. SHOP DRAWINGS AND OR CUT SHEETS SHALL BE SENT TO TOWNSHIP PRIOR TO INSTALLATION OF THIS BARRIER
3. PROVIDE BREAKAWAY BOLLARDS AND CHAINS
4. TOWNSHIP FIRE MARSHAL TO BE PROVIDED WITH KNOX BOX PAD LOCK KEYS TO LOCKS ON CHAIN, AS USED IN TOWNSHIP.

ACCESS BOLLARDS AND CHAIN
FOR EMERGENCY ACCESS
N.T.S.



NOTES:
1. ALL RAILS TO BE SPRUCE AND POSTS TO BE LOCUST WOOD.
2. WIRE MESH TO BE INSTALLED ON FENCES ABOVE WALLS AND SURROUNDING THE STORMWATER BASINS.
3. WIRE MESH TO BE INSTALLED 4" ABOVE GROUND SURFACE AND PVC COATED.
4. ANY RETAINING WALL THREE FEET OR MORE IN HEIGHT SHALL HAVE A FENCE APPROVED BY THE TOWNSHIP.

SPLIT-RAIL FENCE DETAIL
N.T.S.

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JEFFREY H. MADDEN
PROFESSIONAL ENGINEER
No. PE079161
COMMONWEALTH OF PENNSYLVANIA

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PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

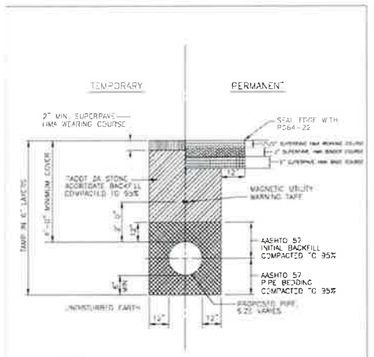
CONSTRUCTION DETAILS

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: AS NOTED
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-5-09-DET-CONST
REF. NO.:	SD09.02
SHEET NO.:	41 OF 64

APPLICATION NUMBER LD-23-01

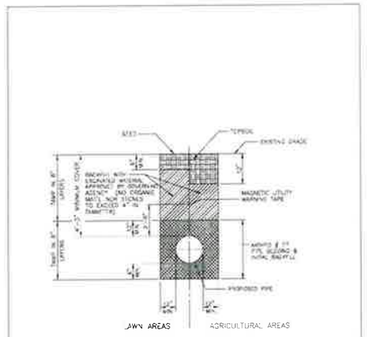
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NOTES:
1. ALL MATERIALS AND CONSTRUCTION METHODS SHALL COMPLY WITH PADOT PUBLICATION 408 REGULATIONS.
2. CONTRACTOR SHALL PROVIDE UNIFORM GRADE FROM EXISTING PAVEMENT.
3. TEMPORARY RESTORATION SHALL BE MAINTAINED FOR A MIN. 90 DAYS.

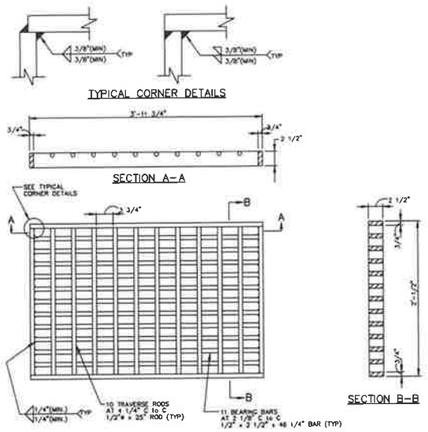
TRENCH BACKFILL AND PAVEMENT RESTORATION DETAIL FOR TOWNSHIP ROADS

Date: JUNE 2007
Detail: 1



TRENCH RESTORATION LAWN / AGRICULTURAL AREAS

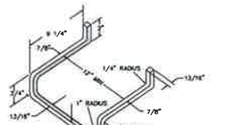
DATE: JUNE 2007
DETAIL: 2



STRUCTURAL STEEL GRATE (BICYCLE SAFE)

N.T.S.

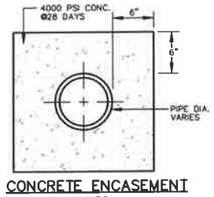
1. ALL PRE-CAST STRUCTURES SHALL BE DESIGNED AND MANUFACTURED AND INSTALLED IN ACCORDANCE WITH PENNDOT'S STANDARDS FOR ROADWAY CONSTRUCTION (APRIL 2000 EDITION, AS LAST REVISED) AND PENNDOT SPECIFICATIONS PUBLICATION 408/2000 (APRIL 2000 AS LAST REVISED).
2. THE CONTRACTOR SHALL ONLY USE PRE-CAST INLET BOXES SUPPLIED BY A MANUFACTURE LISTED IN PENNDOT'S BULLENTIN 15.
3. CLASS AA CONCRETE SHALL BE USED FOR ALL PRE-CAST INLET BOXES.
4. CLIMBING RUNGS ARE REQUIRED TO BE PROVIDED ON ALL STRUCTURES 5 FEET OR GREATER IN DEPTH. THE CLIMBING RUNGS SHALL BEGIN AT A MAXIMUM HEIGHT OF 24 INCHES FROM THE STRUCTURE INVERT, SHALL BE SPACED 12 INCHES ON CENTER, AND SHALL TERMINATE 12 INCHES FROM THE TOP OF THE STRUCTURE.
5. IN CASES WHERE COVER ADJUSTMENT SLABS AND CLIMBING RUNGS ARE REQUIRED, THE OPENING IN THE COVER ADJUSTMENT SLAB SHALL BE LOCATED APPROPRIATELY TO ACCOMMODATE THE STRUCTURE CLIMBING RUNGS. INACCESSIBLE INLETS WILL NOT BE ACCEPTED.
6. CONCRETE LOW FLOW CHANNELS (3300 PSI MINIMUM) SHALL BE POURED IN THE BASE OF ALL INLET STRUCTURES AFTER THE STRUCTURES AND ASSOCIATED PIPING ARE INSTALLED.
7. A MINIMUM OF 4 INCHES SHALL BE MAINTAINED BETWEEN THE TOP OF THE PIPE BLOCKOUTS AND THE TOP OF THE BASE OR RISER SECTION IN ACCORDANCE WITH PENNDOT RC STANDARDS. WHEN PROJECTS REQUIRE PIPE BLOCKOUTS TO BE FORMED WITHIN 4 INCHES FROM THE TOP OF THE INLET BOX OR RISER, THE MANUFACTURER SHALL AS A MINIMUM PROVIDE AN ADDITIONAL NO. 3 REINFORCEMENT BAR LOCATED 1-5/8 INCHES FROM THE TOP OF THE INLET BASE, FULL WIDTH ALONG THE INLET FACE. THE CONTRACTOR SHALL REMOVE ANY VISIBLE PORTION OF THE BAR, IF REQUIRED, DURING INSTALLATION AND PRIOR TO JOINING THE PIPE TO THE INLET. THE REINFORCING ROD SHALL BE PROVIDED ON THE SHOP DRAWING WHEN APPROPRIATE.
8. IF REINFORCED CONCRETE PIPE IS USED, THE PIPE BLOCKOUT MAY BE FORMED "FLUSH" WITH THE INLET BASE.
9. FOR ALL INLET BOXES, RISER SECTIONS, AND COVER ADJUSTMENT SLABS THAT ARE NOT MONOLITHIC, CONSTRUCTION JOINTS, AS SHOWN ON THE PENNDOT RC STANDARDS, SHALL BE PROVIDED.
10. ALL STRUCTURE SECTIONS, INCLUDING THE BOX TOPS SHALL BE SET ON A BUTYL SEAL (1"x 1" MINIMUM).
11. ALL PIPES SHALL BE SET FLUSH WITH THE INSIDE STRUCTURE FACE AND PARGED USING FIBROUS MORTAR IN ACCORDANCE WITH PENNDOT PUBLICATION 408/2000.
12. PRE-CAST RISER SECTIONS AND GRATE ADJUSTMENT RINGS SHALL BE USED TO ADJUST THE INLET GRATE. THE USE OF CONCRETE BLOCK/BRICK AND MORTAR IS NOT PERMITTED.
13. PIPE BLOCKOUT SIZES ARE LIMITED TO THOSE LISTED IN PENNDOT'S ROAD CONSTRUCTION STANDARDS. THIS INCLUDES PIPES WHICH ENTER INLET BOXES AT A SKEW ANGLE. ENCROACHMENT INTO THE CORNERS WILL NOT BE PERMITTED.
14. IN CASES WHERE ROADWAY SUBGRADE DRAINS DISCHARGE INTO PRE-CAST CONCRETE INLET BOXES, THE ROADWAY SUBGRADE DRAIN OPENING SHALL BE PRE-CAST OR CORE DRILLED INTO THE INLET STRUCTURE. ALL ROADWAY SUBGRADE DRAIN DISCHARGE OPENINGS SHALL BE PARGED WITH FIBROUS MORTAR IN ACCORDANCE WITH PENNDOT PUBLICATION 408/2000.
15. ALL PRE-CAST STRUCTURES SHALL BE DESIGNED TO WITHSTAND AN AASHTO HS-20 LIVE LOAD.
16. ALL STORM SEWER INLETS AND MANHOLES SHALL BE SET AND COMPLETELY BACKFILLED WITH 2-A MODIFIED STONE IN ACCORDANCE WITH THE APPROVED PLANS AND IN THE PRESENCE OF THE TOWNSHIP ENGINEER. THE AREA IMMEDIATELY AROUND THE INLET AND MANHOLE FACILITIES SHALL BE COMPACTED.
17. PRIOR TO INSTALLATION OF PRE-CAST STRUCTURES, 12" OF SUBBASE MATERIAL (2-A MODIFIED STONE) SHALL BE PLACED MEETING THE REQUIREMENTS OF PUBLICATION 408-200, SECTION 350.2, IN MAXIMUM LAYERS 4" THICK, AND COMPACTED TO A DENSITY SATISFACTORY TO THE TOWNSHIP ENGINEER.



NOTES
1. STEPS TO BE EXTRUDED OF 6061-T6 ALUMINUM OR EQUAL.
2. STEPS SHALL BE PROVIDED AT 12" ON CENTER.

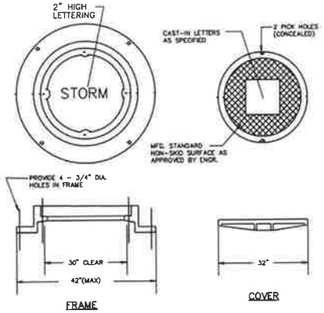
ALUMINUM STEP

N.T.S.



CONCRETE ENCASEMENT

N.T.S.



ALL MATERIAL GRAY CAST IRON, A.S.T.M. A-48, CL30 SUITABLE FOR HIGHWAY LOADING

ALL FRAMES & COVERS SHALL BE COATED WITH COAL TAR PITCH VARNISH.

VENT HOLES ARE REQUIRED IN COVERS FOR TERMINAL MANHOLES, AND WHERE SHOWN ON DRAWINGS.

PROVIDE FOUR (4) ANCHOR BOLT HOLES, 3/4" DIA. MIN.

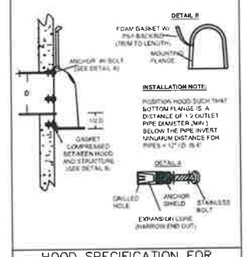
STANDARD MANHOLE FRAME & COVER

N.T.S.

NOTES:

1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE
   AS MANUFACTURED BY:
   BEST MANAGEMENT PRODUCTS, INC
   9 MATHEWS DRIVE, UNIT A1-A2
   EAST HADDAM, CT 06423
   TOLL FREE: (800) 504-8008 OR (888) 434-0277, FAX: (877) 434-3197
   WEB SITE: www.bmpinc.com
   OR PRE-APPROVED EQUAL
2. ALL HOODS SHALL BE CONSTRUCTED OF A CLASS REINFORCED RESIN COMPOSITE WITH
   ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE,
   AND AN ANTI-SIPHON VENT PIPE AND ELBOW AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS
   PER MANUFACTURER'S RECOMMENDATION (SNOUT SIZE ALWAYS LARGER THAN PIPE SIZE)
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A MINIMUM DISTANCE EQUAL TO
   1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF
   12" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED
   SMOOTH AND FREE OF LOOSE MATERIAL AND PIPE SHALL BE FINISHED FLUSH TO WALL.
8. ALL STRUCTURE JOINTS SHALL BE WATERTIGHT.
9. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS
   STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER.
   (SEE INSTALLATION DETAIL)
10. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED
    INSTALLATION KIT
    INSTALLATION KIT SHALL INCLUDE:
    A INSTALLATION INSTRUCTIONS
    B PVC ANTI-SIPHON VENT PIPE AND ADAPTER
    C OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
    D 3/8" STAINLESS STEEL BOLTS
    E ANCHOR SHIELDS

INSTALLATION DETAIL



HOOD SPECIFICATION FOR CATCH BASINS AND WATER QUALITY STRUCTURES

DESCRIPTION	DATE	SCALE
OIL- DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL)	09/08/18	NONE
	DRAWING NUMBER	SP-SN

MAINTENANCE RECOMMENDATIONS:
- MONTHLY MONITORING FOR THE FIRST YEAR OF A NEW INSTALLATION AFTER THE SITE HAS BEEN STABILIZED IS A RECOMMENDED PRACTICE.
- MEASUREMENTS SHOULD BE TAKEN AFTER EACH RAIN EVENT OF .5 INCHES OR MORE, OR MONTHLY, AS DETERMINED BY LOCAL WEATHER CONDITIONS.
- CHECKING SEDIMENT DEPTH AND NOTING THE SURFACE POLLUTANTS IN THE STRUCTURE WILL BE HELPFUL IN PLANNING MAINTENANCE.
- THE POLLUTANTS COLLECTED IN SNOUT EQUIPPED STRUCTURES WILL CONSIST OF FLOATABLE DEBRIS AND OILS ON THE SURFACE OF THE CAPTURED WATER, AND GRIT AND SEDIMENT ON THE BOTTOM OF THE STRUCTURE.
- IT IS BEST TO SCHEDULE MAINTENANCE BASED ON THE SOLIDS COLLECTED IN THE SUMP.
- OPTIMALLY, THE STRUCTURE SHOULD BE CLEANED WHEN THE SUMP IS HALF FULL (E.G. WHEN 2 FEET OF MATERIAL COLLECTS IN A 4 FOOT SUMP, CLEAN IT OUT).
- STRUCTURES SHOULD ALSO BE CLEANED IF A SPILL OR OTHER INCIDENT CAUSES A LARGER THAN NORMAL ACCUMULATION OF POLLUTANTS IN A STRUCTURE.
- MAINTENANCE IS BEST DONE WITH A VACUUM TRUCK.

- INLETS AND MANHOLES TO HAVE SNOUTS INSTALLED: 102, 202, 204, 216, 304, 306, 406, 612, 626, 718, 404, 610 AND 716.

SNOUT DETAIL

N.T.S.

TABLE A
DESIGN FOR MAX 2:1 SLOPES; MAX 3:1 SLOPES USED)

PIPE DIAMETER	SKEW ≤ +90° TO 60° Φ = 30°			SKEW ≥ 55° Φ = 35°			SKEW ≤ 50° Φ = 40°			SKEW ≥ 45° Φ = 45°			SKEW ≤ 40° Φ = 50°			SKEW ≥ 30° Φ = 60°			SKEW ≤ 20° Φ = 70°			SKEW ≥ 10° Φ = 80°			
D_{int} (in.)	L_{min} (Ft.)	S (Ft.)	W$_t$ (Ft.)	L_{min} (Ft.)	S (Ft.)	W$_t$ (Ft.)	L_{min} (Ft.)	S (Ft.)	W$_t$ (Ft.)	L_{min} (Ft.)	S (Ft.)	W$_t$ (Ft.)	L_{min} (Ft.)	S (Ft.)	W$_t$ (Ft.)	L_{min} (Ft.)	S (Ft.)	W$_t$ (Ft.)	L_{min} (Ft.)	S (Ft.)	W$_t$ (Ft.)	L_{min} (Ft.)	S (Ft.)	W$_t$ (Ft.)	W$_{min}$ (Ft.)	P_{min} (in.)
36	5.8	0	4.8	6.0	.33	4.9	6.2	.5	5.2	6.5	.67	5.7	7.0	.75	6.2	8.3	1.33	8.0	11.1	1.75	11.7	19.6	5.0	23.0	4.6	12
42	6.3	0	5.8	6.6	.33	6.1	6.9	.5	6.5	7.3	.67	7.1	7.8	.75	7.8	9.3	1.33	10.0	12.5	1.75	14.6	22.5	5.0	26.8	5.8	12
48	6.8	0	6.8	7.2	.33	7.3	7.5	.5	7.8	8.0	.67	8.5	8.5	.75	9.4	10.3	1.33	12.0	14.0	1.75	17.5	25.3	5.0	34.6	6.9	12
54	7.3	0	8.0	7.8	.33	8.5	8.2	.5	9.1	8.7	.67	9.9	9.3	.75	10.9	11.3	1.33	14.0	15.5	1.75	20.5	28.2	5.0	40.3	8.0	12
60	8.1	0	9.3	8.4	.33	9.8	8.8	.5	10.4	9.4	.67	11.3	10.1	.75	12.5	12.3	1.33	16.0	16.9	1.75	23.4	31.1	5.0	46.0	9.2	15
72	9.2	0	11.5	9.6	.33	12.2	10.1	.5	13.0	10.8	.67	14.1	11.7	.75	15.6	14.3	1.33	20.0	19.8	1.75	29.2	36.9	5.0	57.6	11.5	15

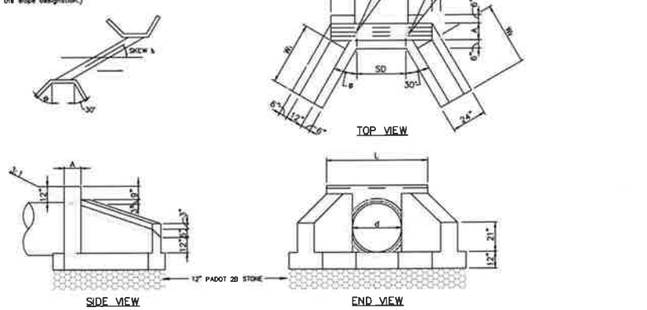
NOTES
1. Construct in accordance with the requirements of Publication 408, Section 605.
2. Use Class A cement concrete or better.
3. Chamfer exposed edges one inch.
4. End Walls 13, 14, 15, AND 19 require 45° beveled edges as shown on detail at right.
5. Pipes smaller than 36" required type "D" endwall (see detail).

$SD = \frac{D_{int}}{\cos\Phi} - \frac{D_{int}}{\sin\Phi \tan\Phi}$

$L = SD + 2.3'$

$W_t = \frac{D_{int}}{\cos\Phi} - 2'$ (DESIGN FOR MAX 2:1 SLOPES; MAX 3:1 SLOPES USED)

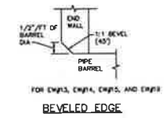
$W_t = \frac{X}{\cos\Phi}(D_{int} - 0.5 - \frac{1.0}{X})$
(For variable slope when X equals horizontal dimension of the slope designation.)



(SEE TABLE 'A' FOR DIMENSIONS NOT INCLUDED)

TYPE D-W ENDWALL

N.T.S.



FOR E-W13, E-W14, E-W15, AND E-W19

BEVELED EDGE

TABLE A
BASE SLAB DIMENSIONS

MAXIMUM DIAMETER OF PIPE	TYPE OF MANHOLE	DEPTH FROM TOP OF MANHOLE TO INVERT OF PIPE	AS DESIGNED ** TONS PER SQUARE FOOT	AS DESIGNED ** MINIMUM WIDTH OF BASE	AS DESIGNED ** MINIMUM THICKNESS OF BASE BELOW BOTTOM OF THE PIPE
30"	A	MAX. 10'-0"	0.65	6'-6"	0'-8"
30"	A	MAX. 20'-0"	0.82	7'-0"	0'-8"
30"	A	MAX. 30'-0"	1.12	7'-0"	0'-8"
30"	B	MAX. 40'-0"	1.38	7'-6"	1'-0"
30"	B	MAX. 50'-0"	1.90	8'-0"	1'-0"
30"	B	MAX. 60'-0"	1.55	7'-6"	1'-0"
30"	MOD.	MAX. 40'-0"	1.05	7'-0"	1'-0"

** A SAFE BEARING CAPACITY OF 1.50 TONS PER SQUARE FOOT IS ASSUMED TO DETERMINE THE BASE SIZE. WHEN THE SUBSOIL IS EXTREMELY POOR, PROCEED WITH CONSTRUCTION ONLY AFTER THE ENGINEER SPECIFIES AN ADEQUATE BASE DESIGN.

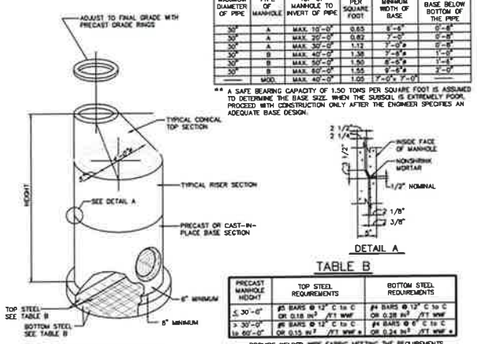


TABLE B

PRECAST MANHOLE HEIGHT	TOP STEEL REQUIREMENTS	BOTTOM STEEL REQUIREMENTS
≤ 30'-0"	#5 BARS @ 12" C to C OR 0.18 in²/FT WWF	#4 BARS @ 12" C to C OR 0.28 in²/FT WWF
> 30'-0" to 60'-0"	#5 BARS @ 12" C to C OR 0.33 in²/FT WWF *	#4 BARS @ 6" C to C OR 0.24 in²/FT WWF *

PROVIDE WELDED WIRE FABRIC MEETING THE REQUIREMENTS OF PUBLICATION 408 SPECIFICATIONS, SECTION 709.3

NOTE:
ALL MANHOLES IN NON-PAVED AREAS TO UTILIZE BOLTED COVER.

STORM MANHOLE DETAIL

ESE CONSULTANTS
ENGINEERING • PLANNING • SURVEYING • ENVIRONMENTAL
ESE Consultants, Inc.
1140 Virginia Drive • Fort Washington, PA 19034
T: 215-914-2050

JEFFREY H. MADDEN — PROFESSIONAL ENGINEER — COMMONWEALTH OF PENNSYLVANIA

REV.	DATE	DESCRIPTION	DRAWN
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

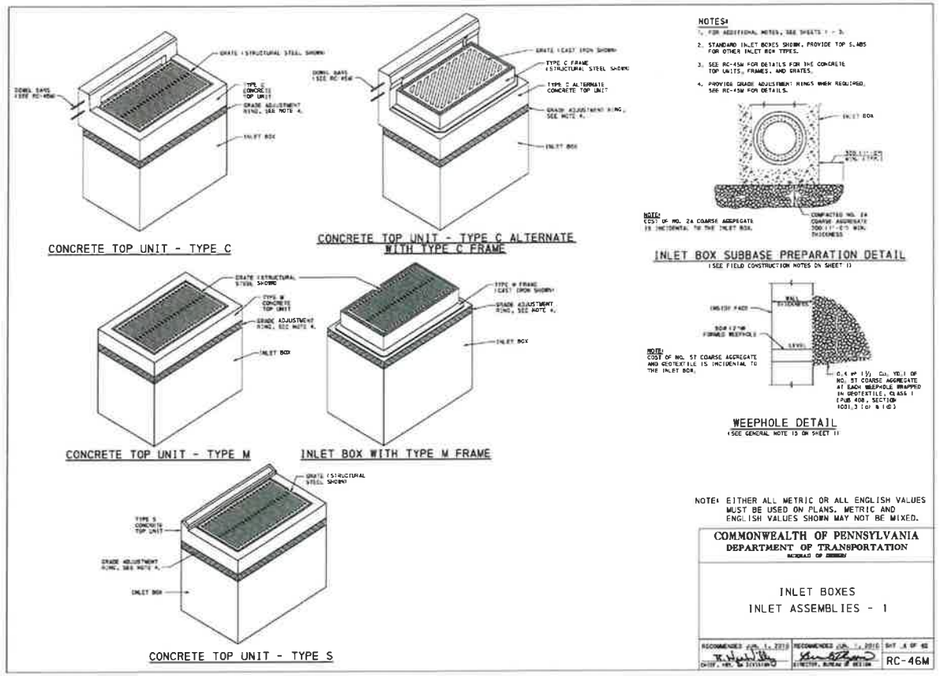
STORM SEWER DETAILS

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: AS NOTED
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: PM2-5-09-DET-STORM
REF. NO.:	SD09.03
SHEET NO.:	42 OF 64

APPLICATION NUMBER: LD-23-01

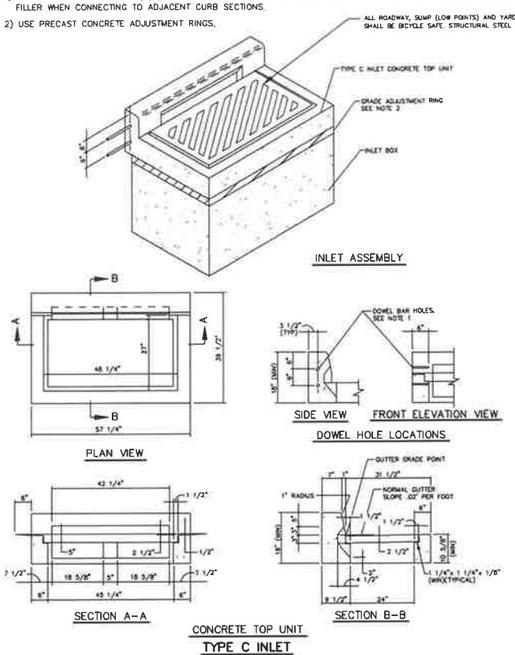
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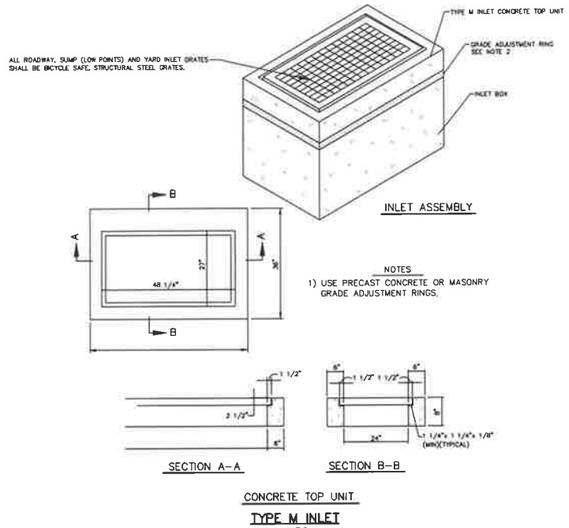


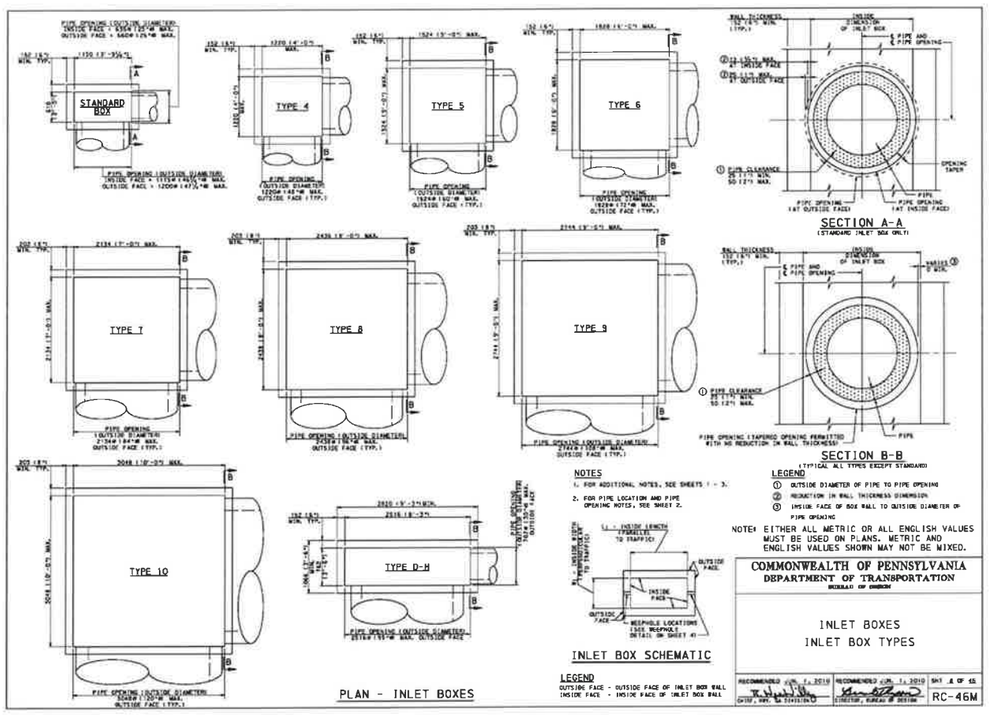
NOTES

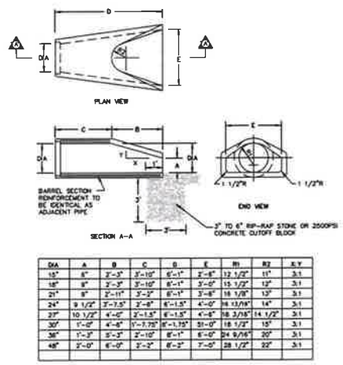
1) DOWEL INLET TOPUNIT WITH (2) #8 x 1'-0" DOWEL BARS AND PLACE 1/4" PREMOLDED EXPANSION JOINT FILLER WHEN CONNECTING TO ADJACENT CURB SECTIONS.

2) USE PRECAST CONCRETE ADJUSTMENT RINGS.

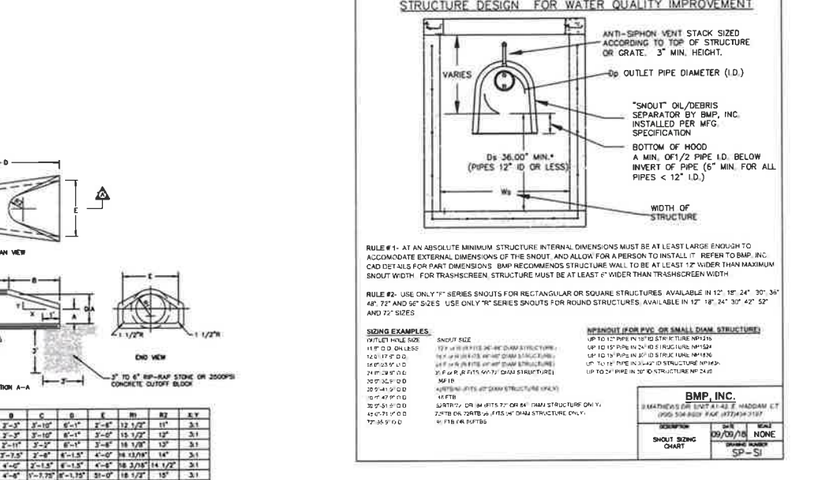








DIA	A	B	C	D	E	R1	R2	S:Y
15"	6"	2'-3"	2'-10"	6'-1"	2'-6"	12 1/2"	11"	3:1
18"	9"	2'-3"	3'-10"	6'-1"	3'-0"	15 1/2"	13"	3:1
21"	9"	2'-11"	3'-2"	6'-1"	3'-6"	18 1/8"	13"	3:1
24"	9 1/2"	3'-3.5"	3'-6"	6'-1.5"	4'-0"	18 13/16"	14"	3:1
27"	10 1/2"	4'-0"	3'-11.5"	6'-1.5"	4'-6"	18 3/16"	14 1/2"	3:1
30"	1'-0"	4'-6"	4'-7.75"	6'-1.75"	5'-0"	18 1/2"	15"	3:1
36"	1'-3"	5'-3"	5'-10"	6'-1"	6'-0"	24 9/16"	20"	3:1
48"	2'-0"	6'-0"	7'-2"	6'-3"	7'-0"	28 1/2"	22"	3:1



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ESE Consultants, Inc.
1140 Virginia Drive • Fort Washington, PA 19034
T: 215-914-2050

NO.	DATE	REVISIONS PER TOWNSHIP COMMENTS	DRAWN
2	10/13/23	TOWNSHIP REVIEW LETTER'S	ESE
1	7/24/23		ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT - NOT TO BE RECORDED

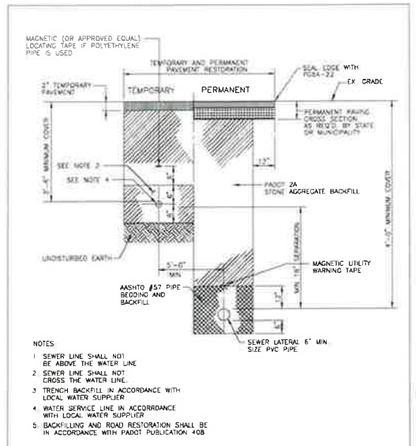
APPLICATION NUMBER LD-23-01

STORM SEWER DETAILS

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: AS NOTED
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-S-09-DET-STORM
REF. NO.:	SD09.04
SHEET NO.:	43 OF 64

N:\PROJECTS\PENNSYLVANIA\7662-RYDAL ST. BASIL\ENGDEPT\DRAWINGS\7662-S-09-DET - STORM.DWG - Eric Stenger - 10/17/2023 12:05 PM



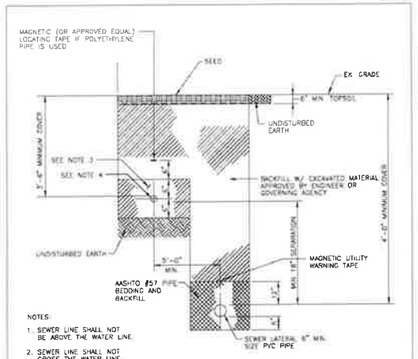
NOTES:

1. SEWER LINE SHALL NOT BE ABOVE THE WATER LINE
2. SEWER LINE SHALL NOT CROSS THE WATER LINE.
3. TRENCH BACKFILL IN ACCORDANCE WITH LOCAL WATER SUPPLIER
4. WATER SERVICE LINE IN ACCORDANCE WITH LOCAL WATER SUPPLIER
5. BACKFILLING AND ROAD RESTORATION SHALL BE IN ACCORDANCE WITH PADOT PUBLICATION 408

(NOT REQUIRED FOR NEW ROADS)

COMBINED TRENCH DETAIL-SEWER LATERAL/ WATER SERVICE LINE STATE / TWP. ROADS

DATE: JUNE 2007
DETAIL: 3

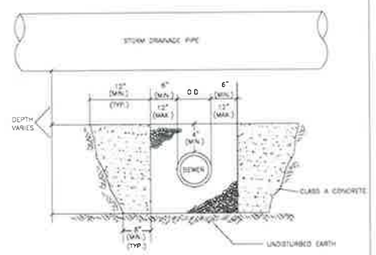


NOTES:

1. SEWER LINE SHALL NOT BE ABOVE THE WATER LINE.
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4. WATER SERVICE LINE IN ACCORDANCE WITH LOCAL WATER SUPPLIER

COMBINED TRENCH DETAIL-SEWER LATERAL/ WATER SERVICE LINE LAWN / AGRICULTURAL AREAS

DATE: JUNE 2007
DETAIL: 4

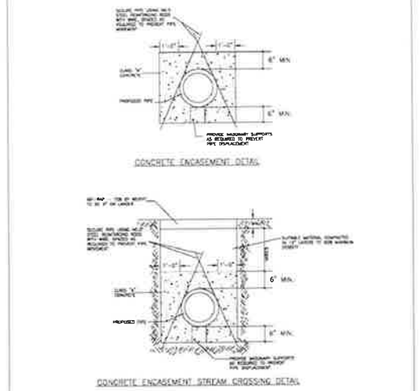


NOTES:

1. PIERS TO BE 5 FT. LONG CENTERED ON STORM DRAIN
2. USE 3000 PSI CLASS A CONCRETE
3. FORM PIERS AGAINST SOLID TRENCH WALLS
4. PIERS REQUIRED WHEN CLEARANCE BETWEEN PIPES IS LESS THAN 18"
5. MAINTAIN SLOPE OF EACH UTILITY AT CROSSING

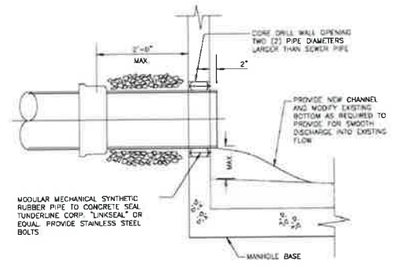
GRAVITY SEWER CROSSING DETAIL USING PIER SUPPORTS

DATE: JUNE 2007
DETAIL: 7



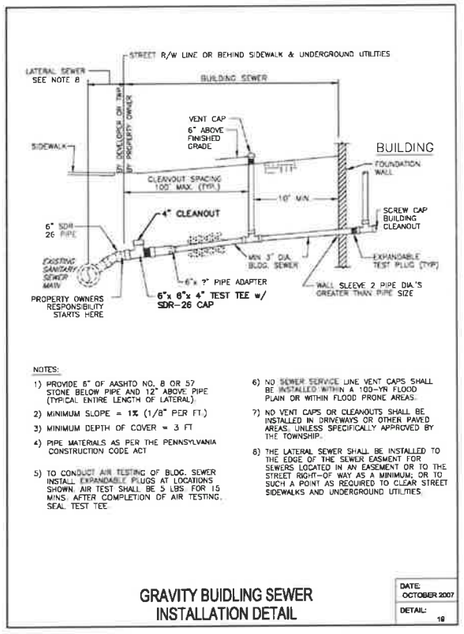
STANDARD CONCRETE ENCASEMENT DETAILS

DATE: JUNE 2007
DETAIL: 9



PIPE CONNECTION TO AN EXISTING MANHOLE

N.T.S.



NOTES:

1) PROVIDE 6" OF AASHTO NO. 8 OR 57 STONE BELOW PIPE AND 12" ABOVE PIPE (TYPICAL ENTIRE LENGTH OF LATERAL)
2) MINIMUM SLOPE = 1% (1/8" PER FT.)
3) MINIMUM DEPTH OF COVER = 3 FT
4) PIPE MATERIALS AS PER THE PENNSYLVANIA CONSTRUCTION CODE ACT
5) TO CONDUCT AIR TESTING OF BLDG. SEWER INSTALL EXPANDABLE PLUGS AT LOCATIONS SHOWN. AIR TEST SHALL BE 5 LBS. FOR 15 MINS. AFTER COMPLETION OF AIR TESTING, SEAL TEST TEE.
6) NO SEWER SERVICE LINE VENT CAPS SHALL BE INSTALLED WITHIN A 100-YR FLOOD PLAIN OR WITHIN FLOOD PRONE AREAS.
7) NO VENT CAPS OR CLEANOUTS SHALL BE INSTALLED IN DRIVEWAYS OR OTHER PAVED AREAS. UNLESS SPECIFICALLY APPROVED BY THE TOWNSHIP.
8) THE LATERAL SEWER SHALL BE INSTALLED TO THE EDGE OF THE SEWER EASEMENT FOR SEWERS LOCATED IN AN EASEMENT OR TO THE STREET RIGHT-OF WAY AS A MINIMUM, OR TO SUCH A POINT AS REQUIRED TO CLEAR STREET SIDEWALKS AND UNDERGROUND UTILITIES.

GRAVITY BUIDLING SEWER INSTALLATION DETAIL

DATE: OCTOBER 2007
DETAIL: 18

JEFFREY M. MADDEN — REGISTERED PROFESSIONAL ENGINEER — PROFESSIONAL ENGINEER SEAL — COMMONWEALTH OF PENNSYLVANIA

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ESE Consultants, Inc.
1140 Virginia Drive • Fort Washington, PA 19034
T: 215-914-2050

REV.	DATE	DESCRIPTION	
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTER'S	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT--NOT TO BE RECORDED

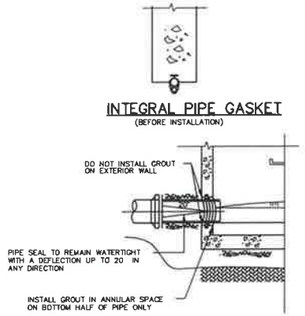
APPLICATION NUMBER 10-23-01

SANITARY SEWER DETAILS

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

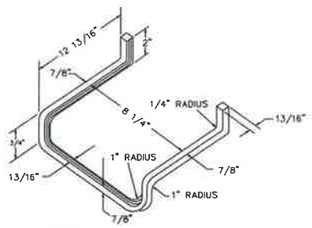
DATE: 3-24-23	SCALE: AS NOTED
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-5-09-DET-SAN
REF. NO.:	SD09.05
SHEET NO.:	44 OF 64

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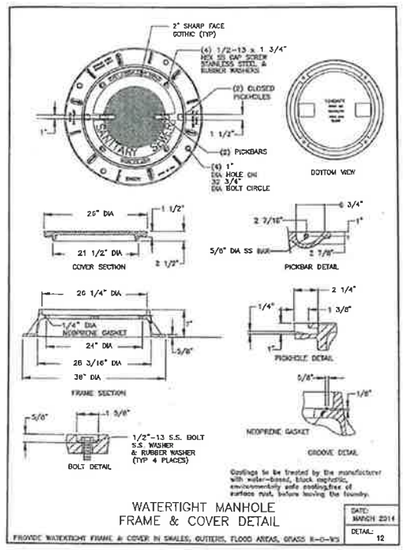
INTEGRAL PIPE GASKET
(BEFORE INSTALLATION)

MANHOLE PIPE GASKET (DMG-02)
N.T.S.



NOTES
1. STEPS TO BE EXTRUDED OF 6061-T6 ALUMINUM.
2. STEPS SHALL BE PROVIDED AT 12" ON CENTER.

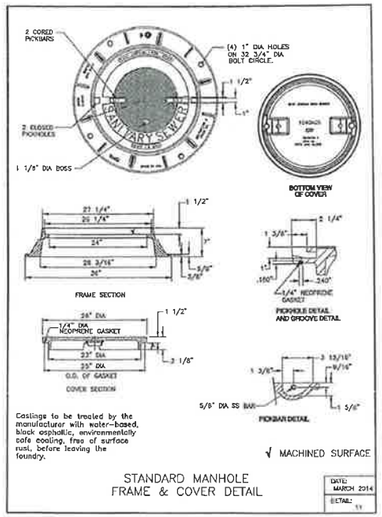
ALUMINUM STEP
N.T.S.



WATERTIGHT MANHOLE FRAME & COVER DETAIL

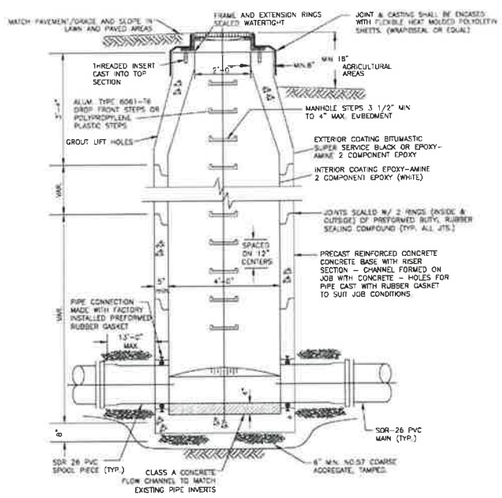
DATE: MARCH 2014
DETAIL: 12

PROVIDE WATERTIGHT FRAME & COVER IN SWALES, GUTTERS, FLOOD AREAS, GRASS H-O-W-S



STANDARD MANHOLE FRAME & COVER DETAIL

DATE: MARCH 2014
DETAIL: 11



PRECAST CONCRETE STANDARD MANHOLE
N.T.S.

MANHOLE COATING SPECIFICATIONS

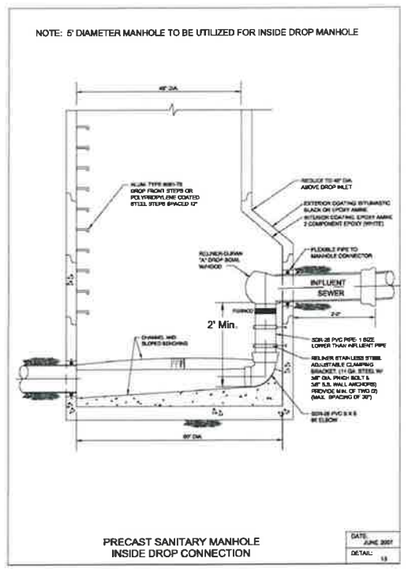
EXTERIOR

1. THE COATING SHALL BE BITUMASTIC SUPER SERVICE BLACK AS MANUFACTURED BY KOPPERS Co., INC. EQUIVALENT OF MOBIL CHEMICAL Co., OR EQUAL. AT LEAST TWO (2) COATS SHALL BE APPLIED GIVING A TOTAL DRY FILM THICKNESS OF A MINIMUM OF 24.0 MILS. AFTER INSTALLATION, DAMAGED SURFACES SHALL BE RECOATED IN ACCORDANCE WITH COATING MANUFACTURER'S RECOMMENDATION TO GIVE THE REQUIRED 24 MILS DRY FILM THICKNESS.

2. AS AN ALTERNATE, THE COATING SHALL INCLUDE TWO (2) COATS OF EPOXY-AMINE ADDUCT, MULTI-MIL, TWO COMPONENT, CATALYZED EPOXY, WITH TOTAL SOLIDS VOLUME OF 49-51% WHICH IS RESISTANT TO ALKALI SALT AND GROUND WATER IMMERSION, PERTOLEUM PRODUTS AND ACIDS. COATING SHALL MEET AWWA D102-78 PAINT SYSTEM No. 1 STANDARDS AND A MINIMUM 12 MILSDRY FILM THICKNESS PER COAT.

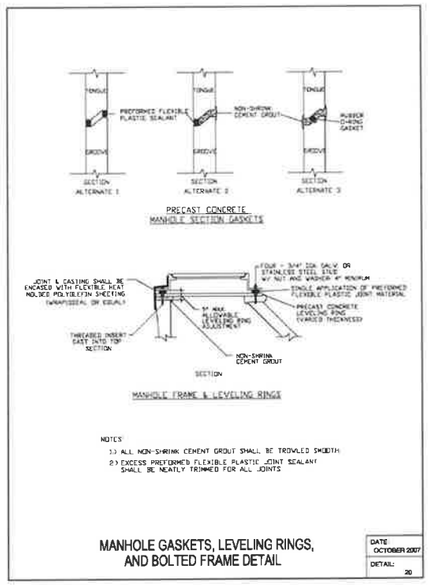
INTERIOR

1. THE COATING SHALL INCLUDE 2 COATS OF EPOXY-AMINE ADDUCT, MULTI-MIL, TWO COMPONENT, CATALYZED EPOXY, WITH TOTAL SOLIDS VOLUME OF 49-51% WHICH IS RESISTANT TO ALKALI SALT AND GROUNDWATER IMMERSION, PETROLEUM PRODUCTS AND ACIDS. COATING SHALL MEET AWWA D102-78, PAINT SYSTEM No. 1 STANDARDS AND A MINIMUM 12 MILS DRY THICKNESS PER COAT.



PRECAST SANITARY MANHOLE INSIDE DROP CONNECTION

DATE: JUNE 2007
DETAIL: 13



PRECAST CONCRETE MANHOLE SECTION GASKETS

MANHOLE FRAME & LEVELING RINGS

NOTES:
1) ALL NON-SHRINK CEMENT GROUT SHALL BE TROWLED SMOOTH.
2) EXCESS PREFORMED FLEXIBLE PLASTIC JOINT SEALANT SHALL BE NEATLY TRIMMED FOR ALL JOINTS

MANHOLE GASKETS, LEVELING RINGS, AND BOLTED FRAME DETAIL

DATE: OCTOBER 2007
DETAIL: 20

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JEFFREY H. MADDEN — REGISTERED PROFESSIONAL ENGINEER — COMMONWEALTH OF PENNSYLVANIA

REV.	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

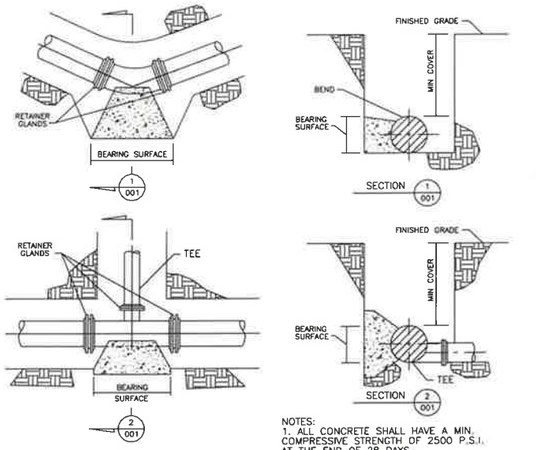
APPLICATION NUMBER LD-23-01

SANITARY SEWER DETAILS

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: AS NOTED
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-S-09-DET-SAN
REF. NO.: SD09.06	
SHEET NO.: 45 OF 64	

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NOTES:
1. ALL CONCRETE SHALL HAVE A MIN. COMPRESSIVE STRENGTH OF 2500 P.S.I. AT THE END OF 28 DAYS.
2. NO COUPLING OR JOINTS SHALL BE COVERED WITH CONCRETE.
3. FOR BEARING SURFACE DIMENSIONS SEE TABLES FOR VARIOUS PIPE SIZES.
4. BEARING SURFACE MUST BE UNDISTURBED EARTH.
5. PIPING SHALL BE WRAPPED WITH POLYETHYLENE PRIOR TO PLACEMENT OF CONCRETE.

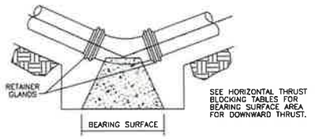
HORIZONTAL THRUST BLOCKING 150 PSI WORKING PRESSURE

PIPE SIZES	6" AND 8"				10" AND 12"			
TYPE OF BEARING MATERIAL AND ALLOWABLE LOADS	DEGREE BEND OR DEFLECTION				DEGREE BEND OR DEFLECTION			
	11 1/4°	22 1/2°	45°	90°	11 1/4°	22 1/2°	45°	90°
SAND 1 TON/SQ.FT, SOFT CLAY 1 TON/SQ.FT.	1.50	3.00	6.00	12.00	3.00	6.00	12.00	24.50
SAND & GRAVEL 2 TON/SQ.FT.	1.00	1.50	3.00	6.00	1.50	3.00	6.00	12.00
CLAY 3 TON/SQ.FT.	1.00	1.00	2.00	4.00	1.00	2.00	4.00	8.00
SOFT ROCK 5 TON/SQ.FT.	1.00	1.00	1.00	2.50	1.00	1.00	2.50	5.00
ROCK 20 TON/SQ.FT.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

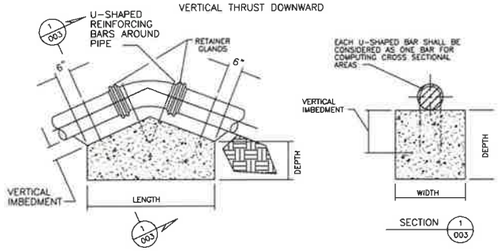
PIPE SIZES	14 AND 16"			
TYPE OF BEARING MATERIAL AND ALLOWABLE LOADS	DEGREE BEND OR DEFLECTION			
	11 1/4°	22 1/2°	45°	90°
SAND 1 TON/SQ.FT, SOFT CLAY 1 TON/SQ.FT.	5.50	11.00	21.50	43.00
SAND & GRAVEL 2 TON/SQ.FT.	2.50	5.50	11.00	21.50
CLAY 3 TON/SQ.FT.	2.00	3.50	7.00	14.00
SOFT ROCK 5 TON/SQ.FT.	1.00	2.00	4.50	8.50
ROCK 20 TON/SQ.FT.	1.00	1.00	1.00	2.00

NOTE:
BEARING SURFACE AREAS SHOWN ARE MINIMUMS FOR THE VARIOUS PIPE SIZES.

HORIZONTAL THRUST BLOCKING AND VERTICAL THRUSTS DOWNWARD BEARING SURFACE AREA



VERTICAL THRUST DOWNWARD



VERTICAL THRUST UPWARD

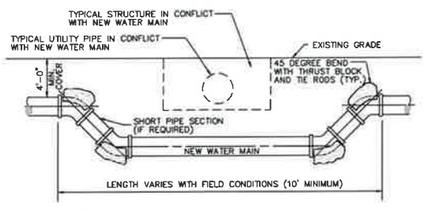
NOTES:
1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 P.S.I. AT THE END OF 28 DAYS.
2. PAINT ALL EXPOSED STEEL WITH TWO COATS OF ASPHALT PAINT.
3. NO COUPLING OR JOINTS SHALL BE CONVEYED WITH CONCRETE.
4. ALL-THREADS WITH PIPE STRAPS MAY BE USED IN PLACE OF REINFORCING BARS.
5. ALL THRUST BLOCKS SHOWN ARE INTENDED AS A GUIDE AND SHALL WITHSTAND THE REQUIRED PRESSURE.
6. RETAINER GLANDS REQUIRED ON ALL MECHANICAL JOINT FITTINGS.
7. CERTAIN SITUATIONS MAY WARRENT THE USE OF TIE RODS, AUTHORIZED BY THE WATER COMPANY ONLY.

VERTICAL THRUST BLOCKING

PIPE SIZE	6" AND 8"			10" AND 12"			14" AND 16"		
DEGREE BEND OR DEFLECTION	11 1/4°	22 1/2°	45°	11 1/4°	22 1/2°	45°	11 1/4°	22 1/2°	45°
LENGTH	3.00	4.00	6.00	4.50	6.00	8.00	6.00	8.00	11.00
WIDTH	3.00	3.00	3.00	3.00	3.00	4.00	3.50	3.50	5.00
DEPTH	2.00	3.00	4.00	3.00	4.50	5.00	3.50	5.00	5.00
SQ. IN. REINFORCING	0.17	0.33	0.65	0.37	0.74	1.46	0.66	1.32	2.60

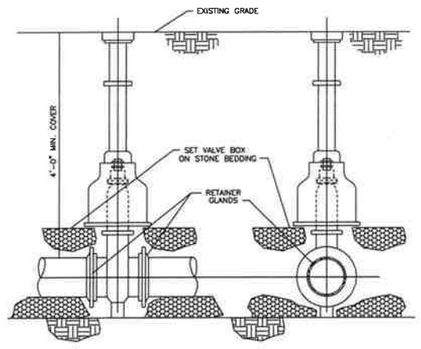
BAR NO.	5	6	7	8	9	10	11
CROSS-SECTION IN.² PER BAR	0.31	0.44	0.60	0.79	1.00	1.27	1.56
VERTICAL IMBEDMENT	15"	19"	26"	35"	44"	56"	68"

VERTICAL THRUST BLOCKING – UPWARD THRUSTS SCHEDULE OF DIMENSIONS 150 P.S.I. WORKING PRESSURE



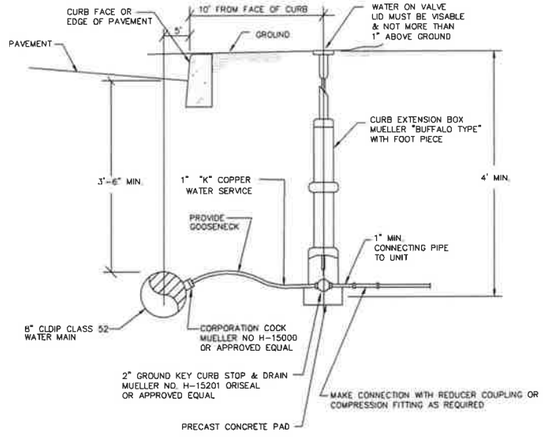
NOTES:
1. THIS METHOD OF CONSTRUCTION SHALL BE UTILIZED BY THE CONTRACTOR WHERE IT IS NECESSARY TO PASS BENEATH AN EXISTING UTILITY PIPE OR STRUCTURE TO MAINTAIN A MINIMUM 3'-6" COVER OVER THE NEW WATER MAIN.
2. THIS DETAIL IS TO BE USED AS DIRECTED BY AQUA PENNSYLVANIA.

WATER MAIN/UTILITY PIPE CROSSING DETAIL
N.T.S.

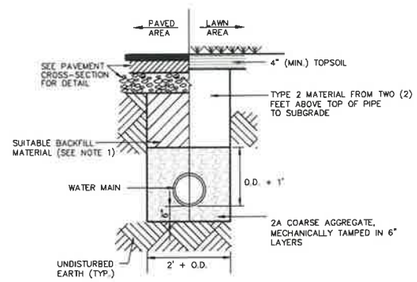


NOTES:
1. RETAINER GLANDS REQUIRED ON ALL MECHANICAL JOINT FITTINGS.
2. VALVE BOX SHALL BE 2 PIECE SCREW TYPE.

GATE VALVE INSTALLATION

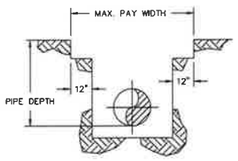


WATER SERVICE CONNECTIONS
N.T.S.



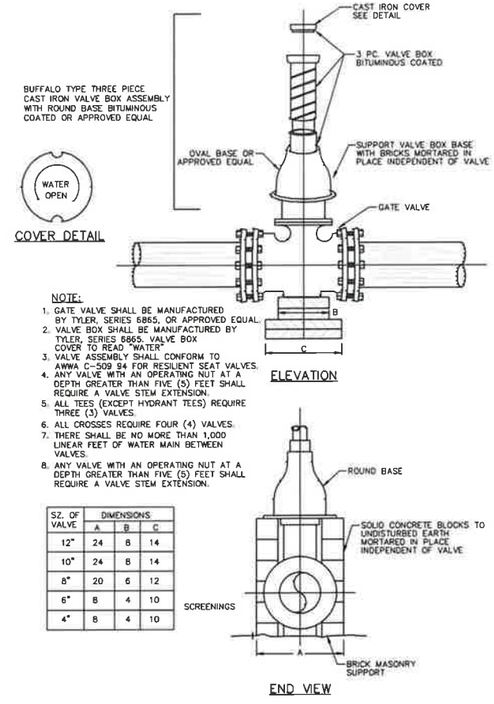
NOTES
1. SUITABLE BACKFILL MATERIAL, WHEN USED AS BACKFILL SHALL BE CAPABLE OF BEING COMPACTED TO AT LEAST NINETY-FIVE PERCENT (95%) OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.
2. TYPE 1 MATERIAL: EXCAVATED MATERIAL FROM THE TRENCH OR MATERIALS FROM OTHER SOURCES WHICH ARE FREE FROM LARGE CLODS, ROOTS, OR STONES LARGER THAT TWO INCHES MAY BE USED.
3. TYPE 2 MATERIAL: EXCAVATED MATERIAL FROM THE TRENCH OR MATERIALS FROM OTHER SOURCES WHICH ARE FREE FROM LARGE CLODS, ROOTS, OR STONES LARGER THAN EIGHT INCHES MAY BE USED.

WATER MAIN TRENCH DETAIL
N.T.S.



NOMINAL PIPE DIA. (IN.)	MAX. PAY WIDTH PIPE DEPTH 0'-6"	PIPE DEPTH OVER 6'
4	5.0	6.0
8	5.0	6.0
8	5.0	6.0
10	5.0	6.0
12	5.0	6.0
14	5.5	6.0
15	5.5	6.0
16	5.5	6.0
18	5.5	6.0
20	8.0	8.0
24	8.0	8.0
27	–	8.5
30	–	8.5
36	–	7.0
42	–	8.0
48	–	8.5
54	–	9.0
60	–	9.5

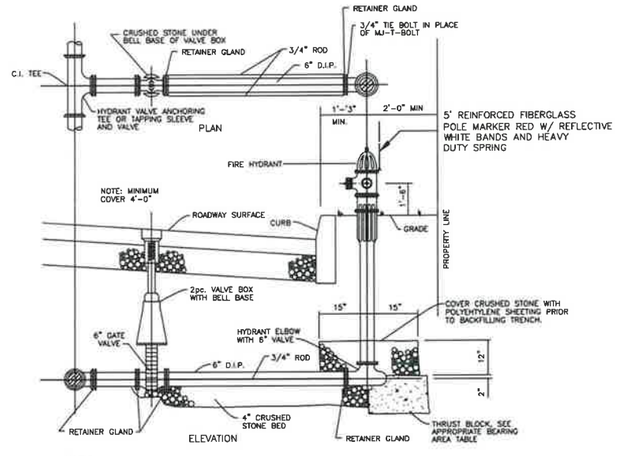
MAXIMUM TRENCH WIDTHS FOR STREET REPAVING



NOTE:
1. GATE VALVE SHALL BE MANUFACTURED BY TYLER, SERIES 6865, OR APPROVED EQUAL.
2. VALVE BOX SHALL BE MANUFACTURED BY TYLER, SERIES 6865, VALVE BOX COVER TO READ "WATER"
3. VALVE ASSEMBLY SHALL CONFORM TO AWWA C-509 94 FOR RESILIENT SEAT VALVES.
4. ANY VALVE WITH AN OPERATING NUT AT A DEPTH GREATER THAN FIVE (5) FEET SHALL REQUIRE A VALVE STEM EXTENSION.
5. ALL TEES (EXCEPT HYDRANT TEES) REQUIRE THREE (3) VALVES.
6. ALL CROSSES REQUIRE FOUR (4) VALVES.
7. THERE SHALL BE NO MORE THAN 1,000 LINEAR FEET OF WATER MAIN BETWEEN VALVES.
8. ANY VALVE WITH AN OPERATING NUT AT A DEPTH GREATER THAN FIVE (5) FEET SHALL REQUIRE A VALVE STEM EXTENSION.

SZ. OF VALVE	DIMENSIONS A	B	C
12"	24	8	14
10"	24	8	14
8"	20	6	12
6"	8	4	10
4"	8	4	10

GATE VALVE WITH VALVE BOX DETAIL
N.T.S.



NOTES:
1.1. THREAD SPECIFICATION: NATIONAL STANDARD;
BARREL COLOR: FIRE PROT. RED; BONNET COLOR: REFLECTIVE WHITE; CAP COLOR: GLOSS WHITE.
2. APPROVED HYDRANT MODELS ARE MUELLER CENTURION, DARLING B-84-B AND KENNEDY GUARDIAN.
3. ALL HYDRANTS SHALL INCLUDE ONE 4½" PUMPER NOZZLE AND TWO 2½" HOSE NOZZLES.
4. HYDRANT VALVE OPENING SHALL BE 5¼".
5. ALL HYDRANTS SHALL OPEN LEFT.
6. ALL HYDRANTS SHALL BE EQUIPPED WITH A 5 FOOT REINFORCED FIBERGLASS POLE MARKER WITH RED AND WHITE REFLECTIVE BANDS. THE POLE MARKER SHALL HAVE A FLEXIBLE SHAFT, HEAVY DUTY SPRING AND INTEGRAL MOUNTING BRACKET. REFERENCE MODEL 22516 FROM USA BLUE BOOK.
7. RETAINER GLANDS REQUIRED ON ALL MECHANICAL JOINT FITTINGS.
8. DRAIN HOLE IN HYDRANT MUST NOT BE OBSTRUCTED WITH CONCRETE.
9. ALL TIE BOLTS, RODS NUTS AND WASHERS SHALL BE COATED WITH BITUMASTIC AFTER INSTALLATION.
10. A BLUE PLASTIC ROAD REFLECTOR TO BE PLACED IN CENTER OF ROADWAY LOCATED IN FRONT OF FIRE HYDRANT. REFLECTOR TO BE RECESSED INTO ROADWAY.
11. CURBING IN FRONT OF HYDRANT 15' ON EACH SIDE TO BE PAINTED YELLOW.
12. FIRE HYDRANT MUST BE SUPPLIED WITH AT LEAST 8" MAIN.

FIRE HYDRANT DETAIL

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1140 Virginia Drive • Fort Washington, PA 19034
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JEFFREY H. MADDEN — DEGREE — REGISTERED PROFESSIONAL ENGINEER — COMMONWEALTH OF PENNSYLVANIA

REV'D	DATE	DESCRIPTION
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS
1	7/24/23	TOWNSHIP REVIEW LETTER
		ESE (DRAWN)

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT – NOT TO BE RECORDED

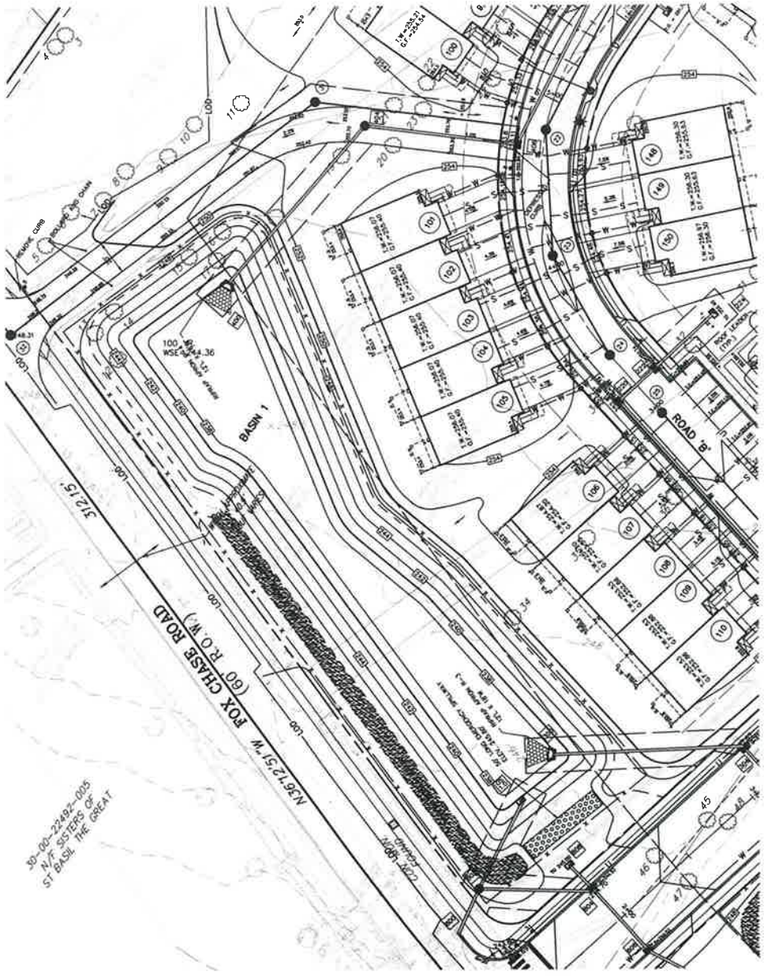
APPLICATION NUMBER: LD-23-01

WATER DETAILS

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

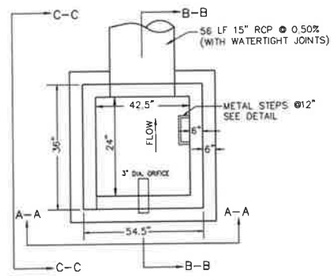
DATE: 3-24-23	SCALE: AS NOTED
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-5-09-DET-WATER
REF. NO.: SD09.07	
SHEET NO.: 46 OF 64	

N:\PROJECTS\PENNSYLVANIA\7662-RYDAL ST. BASILS\DWGS\PDF\DRAWINGS\7662-5-09-DET-WATER.DWG-Eric Stenger-10/17/2023 12:06 PM

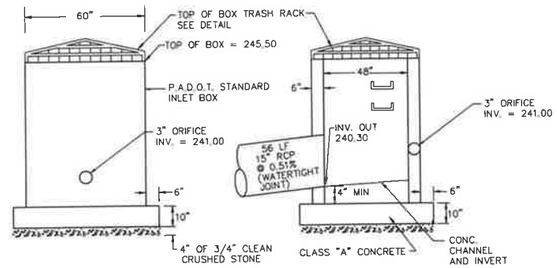


PLAN VIEW: BASIN #1

SCALE: 1"=40'



PLAN



ELEVATION A-A

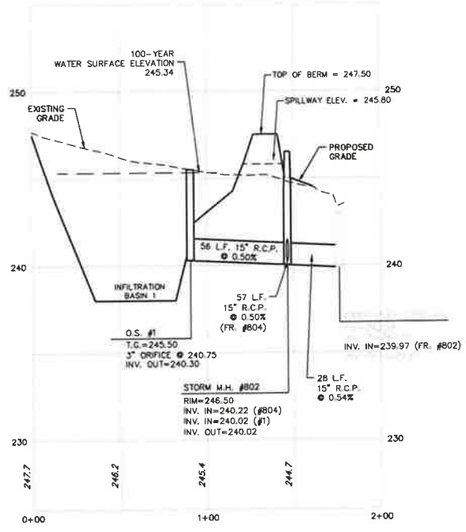
SECTION B-B

NOTES:

1. WATERTIGHT SEALS TO BE USED ON ALL JOINTS.
2. LOWER ORIFICE TO BE CLOSED DURING CONSTRUCTION.
3. DURING CONSTRUCTION TOP OF BOX TO BE 245.00.

OUTLET STRUCTURE #1

N.T.S.



PROFILE: BASIN 1

1"=40' Horizontal
1"=4' Vertical

STORAGE CHART:

Elevation (feet)	Surf. Area (sq-ft)	Inc. Store (cubic-feet)	Cum. Store (cubic-feet)
238.00	10,750	0	0
240.00	15,500	26,250	26,250
242.00	20,750	36,250	62,500
244.00	26,000	46,750	109,250
246.00	31,600	57,600	166,850
247.50	36,000	50,700	217,550

DESIGN WATER SURFACE ELEVATION:

1-YR	=	240.37
2-YR	=	240.89
5-YR	=	241.63
10-YR	=	242.33
25-YR	=	243.30
50-YR	=	244.28
100-YR	=	245.34

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JEFFREY H. MADDEN — PROFESSIONAL ENGINEER — COMMONWEALTH OF PENNSYLVANIA

REV.	DATE:	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

APPLICATION NUMBER: LD-23-01

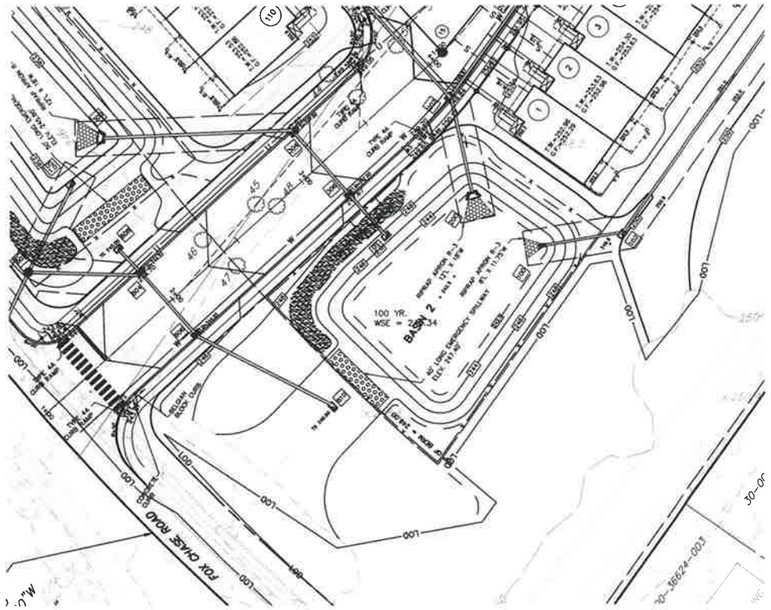
BASIN DETAILS BASIN #1

SISTERS OF ST. BASIL

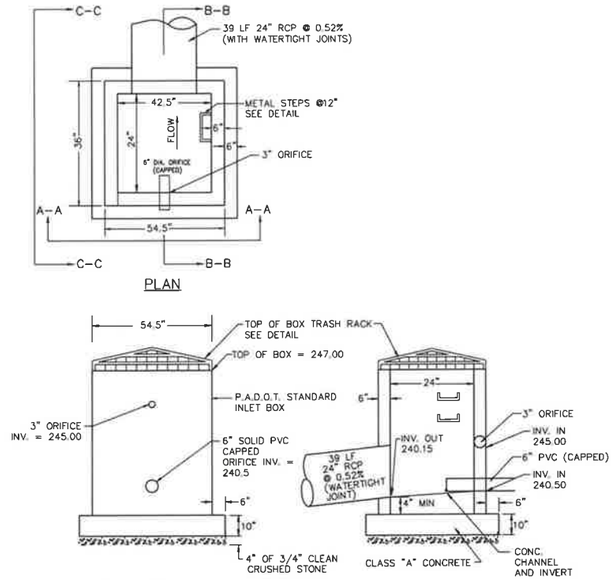
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: AS NOTED
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-S-09-DET-BASIN
REF. NO.:	SD09.08
SHEET NO.:	47 OF 64

N:\PROJECTS\PENNSYLVANIA\7662-RYDAL ST. BASILS\ENGDEPT\DRAWINGS\7662-S-09-DET-BASIN.DWG: Eric Stengel-10/17/2023 12:07 PM

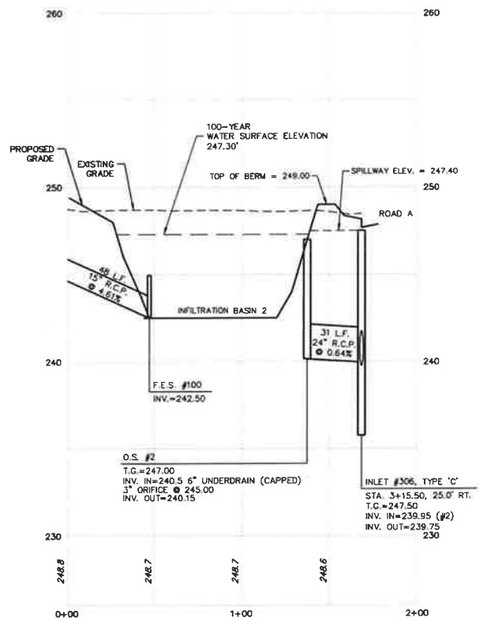


PLAN VIEW: BASIN #2
SCALE: 1"=40'



NOTES:
1. WATERTIGHT SEALS TO BE USED ON ALL JOINTS.
2. BASIN NOT TO BE USED DURING CONSTRUCTION.

OUTLET STRUCTURE #2
N.T.S.



PROFILE: BASIN 2
1"=40' Horizontal
1"=4' Vertical

STORAGE CHART:

Elevation (feet)	Surf. Area (sq-ft)	Inc. Store (cubic-feet)	Cum. Store (cubic-feet)
242.50	6,500	0	0
244.00	8,000	10,875	10,875
246.00	10,400	18,400	29,275
248.00	12,900	23,300	52,575
249.00	14,750	13,825	66,400

DESIGN WATER SURFACE ELEVATION:

1-YR	=	244.00
2-YR	=	244.63
5-YR	=	245.40
10-YR	=	245.98
25-YR	=	246.90
50-YR	=	247.11
100-YR	=	247.30

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REV.	DATE	DESCRIPTION
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS
1	7/24/23	TOWNSHIP REVIEW LETTERS

BASIN DETAILS
BASIN #2

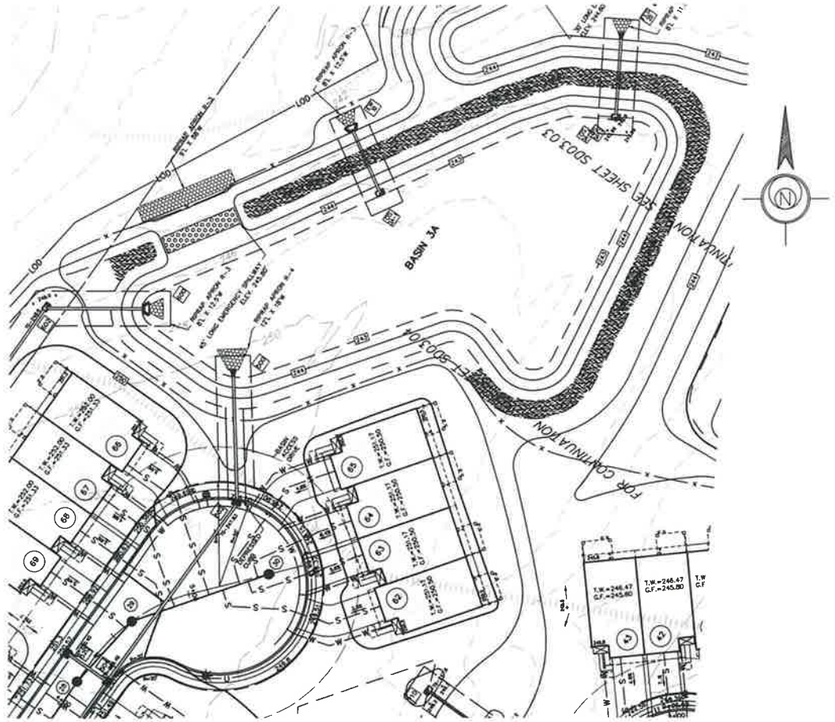
SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23 | SCALE: AS NOTED
DESIGN: | DRAWN: EJS
JOB NO.: 7662 | FILE NAME: 7662-S-09-DET-BASIN
REF. NO.: SD09.09
SHEET NO.: 48 OF 64

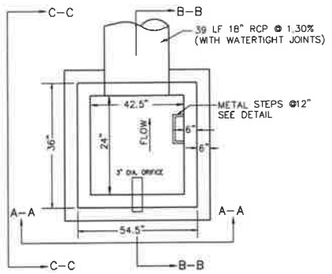
APPLICATION NUMBER: LD-23-01

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

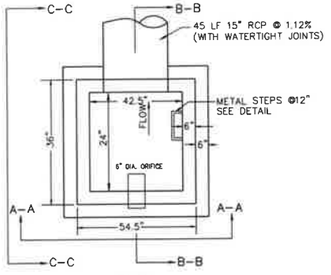
N:\PROJECTS\PENNSYLVANIA\7662-RYDAL ST. BASIL\ENGDEPT\DRAWINGS\7662-S-09-DET-BASIN.DWG-Eric Stengt-10/17/2023 12:07 PM



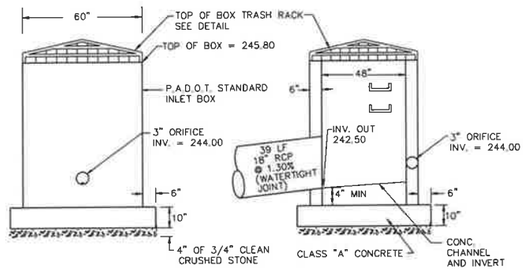
PLAN VIEW: BASIN #3A
SCALE: 1"=40'



PLAN



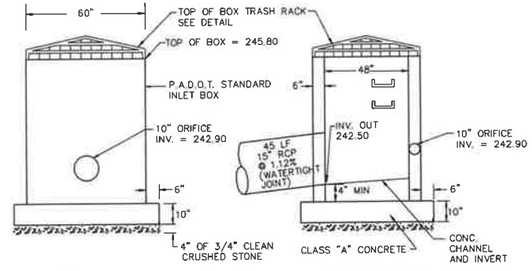
PLAN



ELEVATION A-A SECTION B-B

NOTES:
1. WATERTIGHT SEALS TO BE USED ON ALL JOINTS.
2. LOWER ORIFICE TO BE CLOSED DURING CONSTRUCTION.

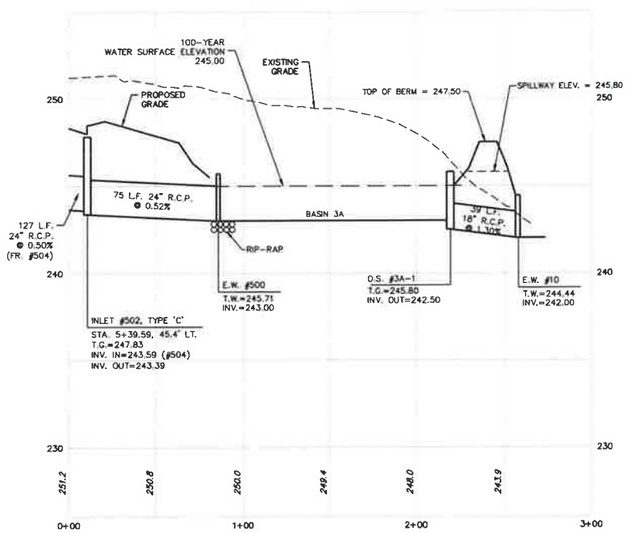
OUTLET STRUCTURE #3A-1
N.T.S.



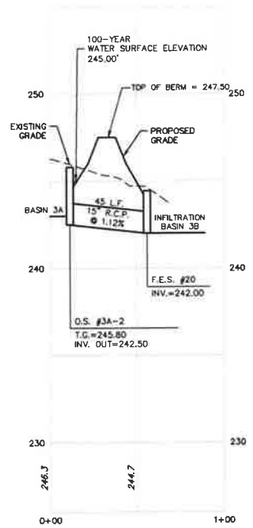
ELEVATION A-A SECTION B-B

NOTES:
1. WATERTIGHT SEALS TO BE USED ON ALL JOINTS.
2. ORIFICE TO BASIN 3B TO BE CLOSED DURING CONSTRUCTION.
3. TOP OF GRATE OS3A-1 TO BE 245.20 DURING CONSTRUCTION.

OUTLET STRUCTURE #3A-2
N.T.S.



PROFILE: BASIN 3A-1
1"=40' Horizontal
1"=4' Vertical



PROFILE: BASIN 3A-2
1"=40' Horizontal
1"=4' Vertical

STORAGE CHART:

Elevation (feet)	Surf. Area (sq-ft)	Inc. Store (cubic-feet)	Cum. Store (cubic-feet)
242.90	0	0	0
243.00	22,840	115	115
244.00	27,390	25,115	25,234
246.00	32,170	59,560	84,794
247.50	37,180	52,013	136,807

DESIGN WATER SURFACE ELEVATION:

1-YR = 243.41
2-YR = 243.66
5-YR = 244.05
10-YR = 244.31
25-YR = 244.48
50-YR = 244.65
100-YR = 245.00

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REV.	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	1/24/23	TOWNSHIP REVIEW LETTERS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

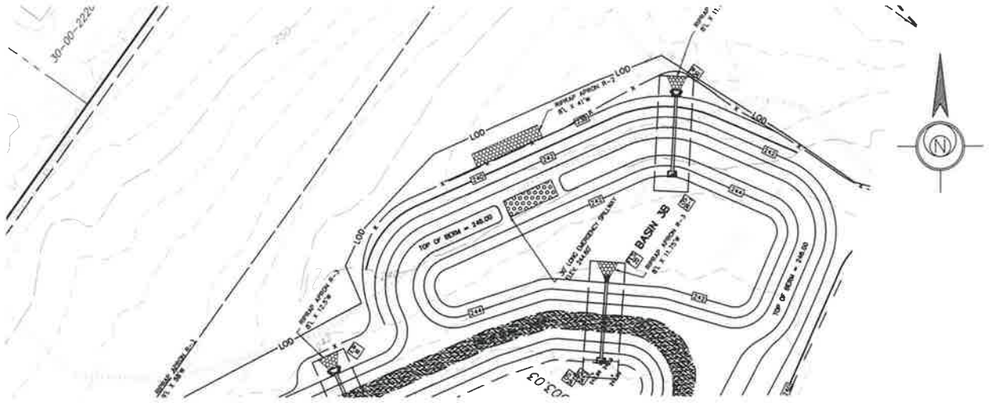
APPLICATION NUMBER LD-23-01

BASIN DETAILS
BASIN #3A

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23
SCALE: AS NOTED
DESIGN:
DRAWN: EJS
JOB NO.: 7662
FILE NAME: 7662-S-09-DET-BASIN
REF. NO.: SD09.10
SHEET NO.: 49 OF 64

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PLAN VIEW: BASIN #3B

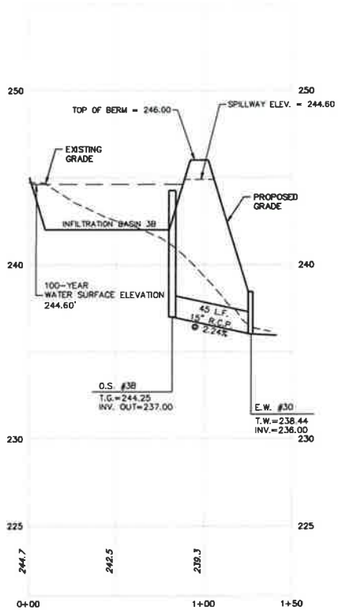
SCALE: 1"=40'

STORAGE CHART:

Elevation (feet)	Surf. Area (sq-ft)	Inc. Store (cubic-feet)	Cum. Store (cubic-feet)
242.50	8,470	0	0
244.00	11,340	14,858	14,858
246.00	14,450	25,790	40,648

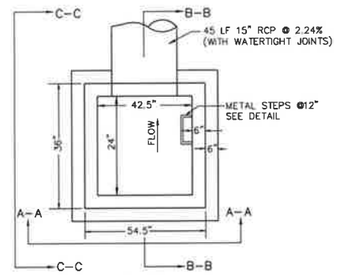
DESIGN WATER SURFACE ELEVATION:

1-YR	=	243.41
2-YR	=	243.66
5-YR	=	244.05
10-YR	=	244.31
25-YR	=	244.46
50-YR	=	244.53
100-YR	=	244.60

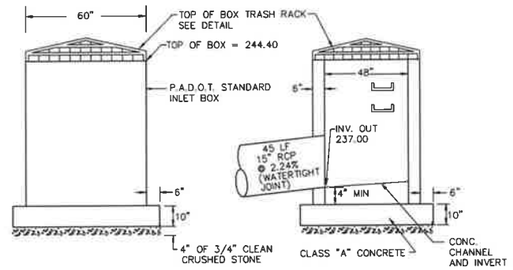


PROFILE: BASIN 3B

1"=40' Horizontal
1"=4' Vertical



PLAN



ELEVATION A-A SECTION B-B

NOTES:

1. WATERTIGHT SEALS TO BE USED ON ALL JOINTS.
2. BASIN 3B TO NOT BE USED DURING CONSTRUCTION.

OUTLET STRUCTURE #3B

N.T.S.

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PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA

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REV.	DATE	DESCRIPTION	DRAWN
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

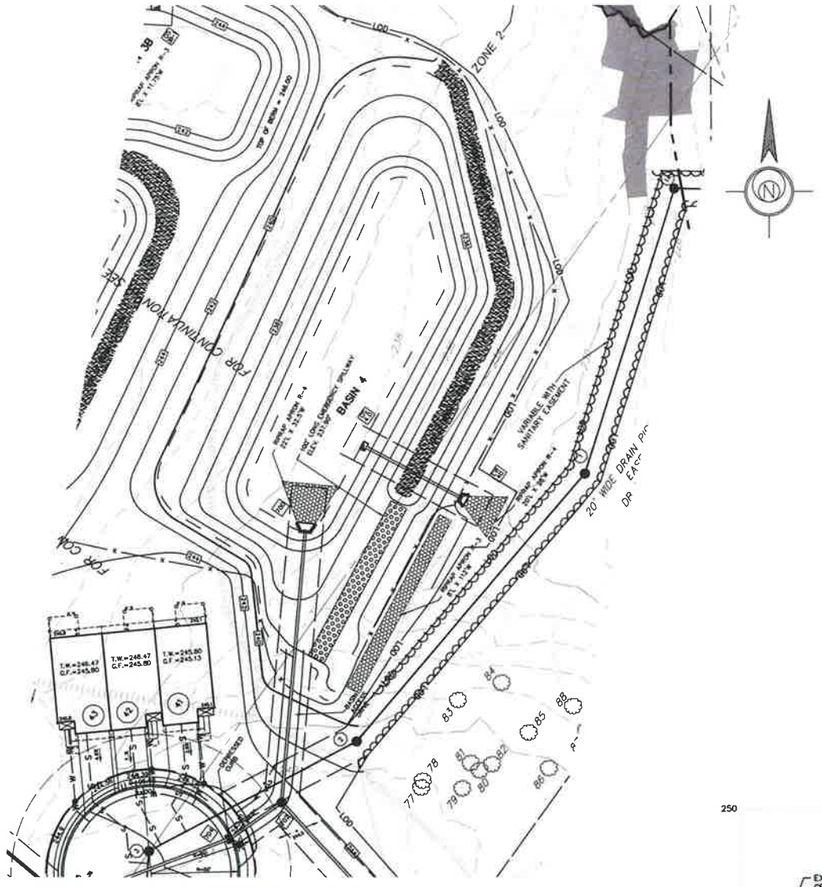
APPLICATION NUMBER: LD-23-01

BASIN DETAILS
BASIN #3B

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: AS NOTED
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: PM2-5-09-DET-BASIN
REF. NO.: SD09.11	
SHEET NO.: 50 OF 64	

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ZONE 2
100
FOR CONTINUATION SEE
BASIN 4
TOP OF BERM = 239.60
SPILLWAY ELEV. = 237.90
VARIABLE WIDTH SANITARY EASEMENT
20' WIDE DRAIN PIP
EAST
FOR CONTINUATION SEE
TOP OF BERM = 239.60
S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
S11
S12
S13
S14
S15
S16
S17
S18
S19
S20
S21
S22
S23
S24
S25
S26
S27
S28
S29
S30
S31
S32
S33
S34
S35
S36
S37
S38
S39
S40

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APPLICATION NUMBER LD-23-01

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

SHEET NO: 52 OF 64

REF. NO: SD09.13

JOB NO.: 7662

FILE NAME: 7662-S-09-DET-BASIN

DESIGN:

DRAWN: EJS

DATE: 3-24-23

SCALE: AS NOTED

BASIN DETAILS
STONE BMP #1

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

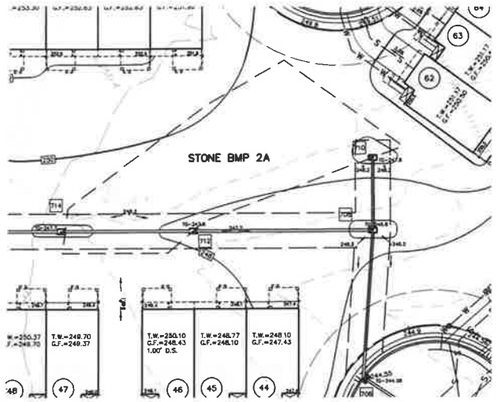
REV.	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

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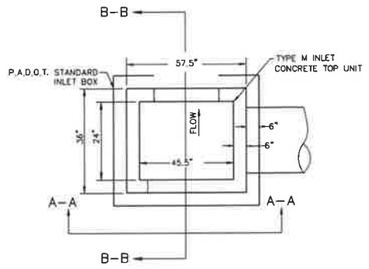
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER JEFFREY M. MADDEN

Jeff Madden



PLAN VIEW: STONE BMP #2A

SCALE: 1"=40'



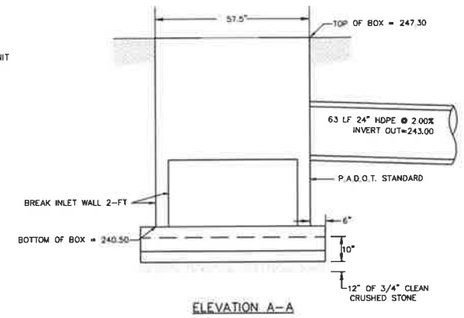
PLAN

NOTE:

1. WATERTIGHT SEALS TO BE USED ON ALL JOINTS.

INLET 746

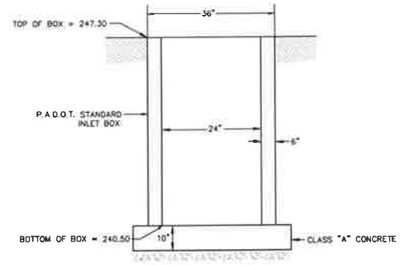
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ELEVATION A-A

INLET 746

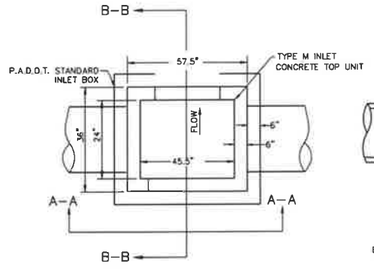
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ELEVATION B-B

INLET 746

N.T.S.



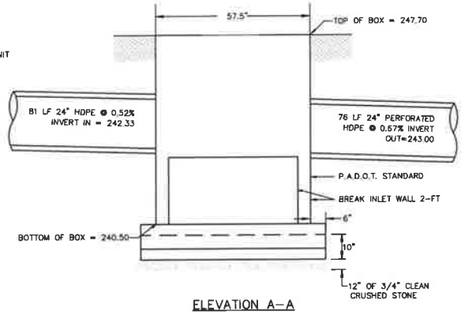
PLAN

NOTE:

1. WATERTIGHT SEALS TO BE USED ON ALL JOINTS.

INLET 714 AND 712

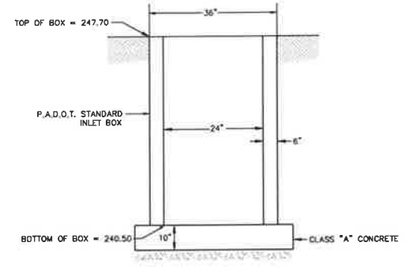
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ELEVATION A-A

INLET 714

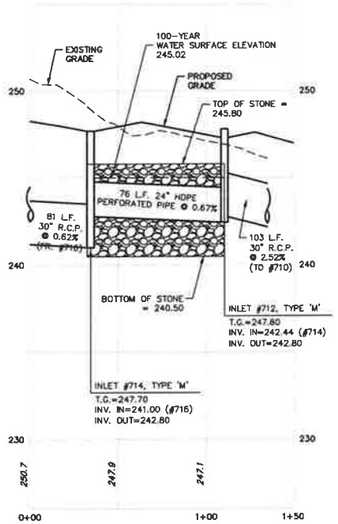
N.T.S.



ELEVATION B-B

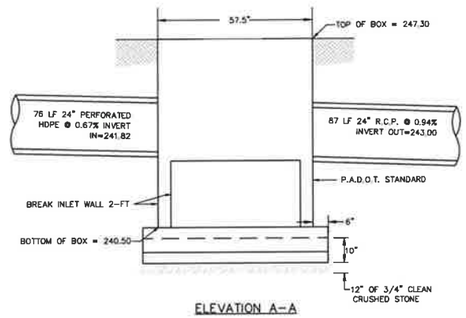
INLET 714

N.T.S.



PROFILE: BMP 2A

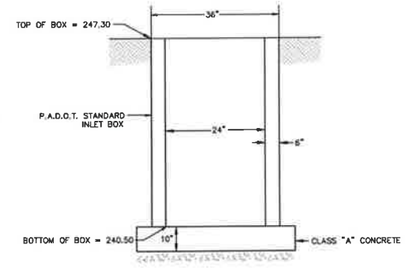
1"=40' Horizontal
1"=4' Vertical



ELEVATION A-A

INLET 712

N.T.S.



ELEVATION B-B

INLET 712

N.T.S.

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JEFFREY H. MADDEN — COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — ENGINEER

REV.	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

APPLICATION NUMBER: LD-23-01

BASIN DETAILS
STONE BMP #2A

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: AS NOTED
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-5-09-DET-BASIN
REF. NO.: SD09.14	
SHEET NO.: 53 OF 64	

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JEFFREY H. HAUBERT — ENGINEER — No. PE059324

REV.	DATE	DESCRIPTION	
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTER	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

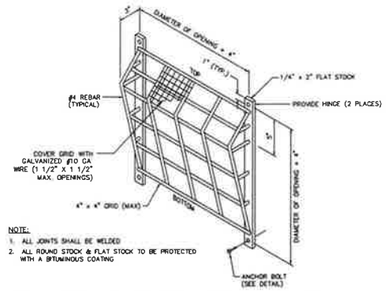
APPLICATION NUMBER LD-23-01

BASIN DETAILS
STONE BMP #2B

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: AS NOTED
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-5-09-DET-BASN
REF. NO.:	SD09.15
SHEET NO.:	54 OF 64

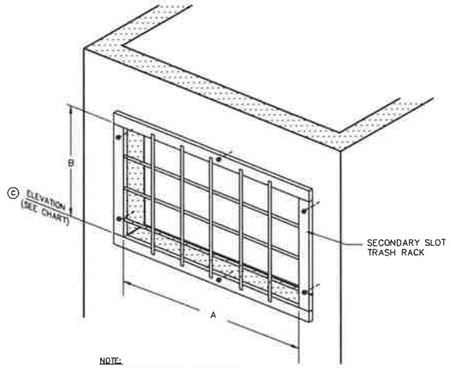
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NOTE:
1. ALL JOINTS SHALL BE WELDED
2. ALL ROUND STOCK & FLAT STOCK TO BE PROTECTED WITH A BITUMINOUS COATING

PRIMARY ORIFICE ABOVE BASIN BOTTOM TRASH RACK DETAIL

N.T.S.

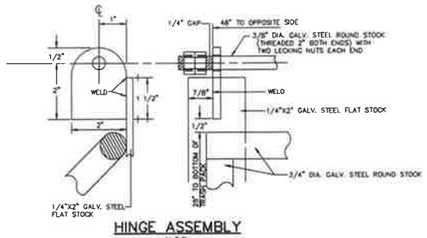


NOTE:
1. ALL JOINTS SHALL BE WELDED
2. ALL ROUND STOCK & FLAT STOCK TO BE PROTECTED WITH A BITUMINOUS COATING

BASIN	STRUCTURE #	A (FEET)	B (FEET)	C (ELEVATION)
4	O.S. #4.0	FRONT: 2.33	0.83	234.00.

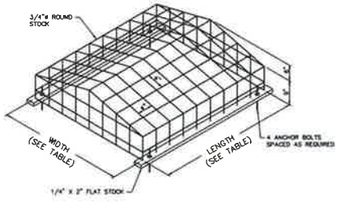
SECONDARY SLOT TRASH RACK DETAIL

N.T.S.



HINGE ASSEMBLY

N.T.S.

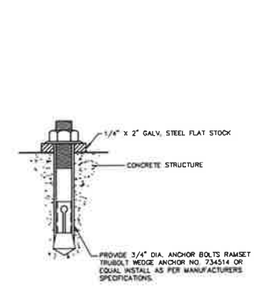


NOTE:
1. ALL JOINTS SHALL BE WELDED
2. ALL ROUND STOCK & FLAT STOCK TO BE PROTECTED WITH A BITUMINOUS COATING

BASIN	STRUCTURE #	LENGTH	WIDTH
1	O.S. #1.0	52"	30"
2	O.S. #2.0	52"	30"
3A	O.S. #3A-1	52"	30"
3A	O.S. #3A-2	52"	30"
3B	O.S. #3B-1	52"	30"
4	O.S. #4.0	52"	30"

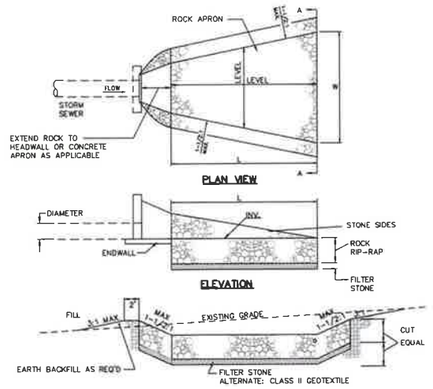
TOP OF STRUCTURE TRASH RACK

N.T.S.



ANCHOR BOLT DETAIL

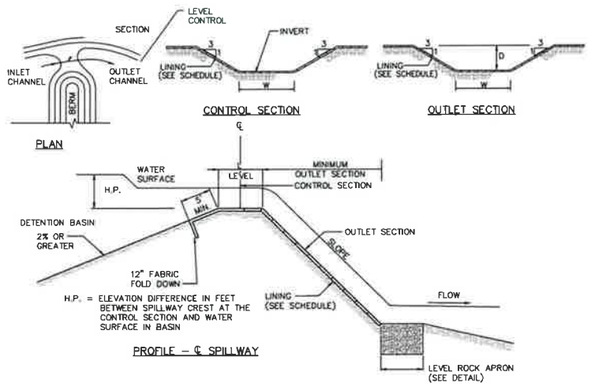
N.T.S.



SECTION A-A

STORM SEWER OUTLET ROCK APRON SCHEDULE

OUTLET #	PIPE DIA (in)	RIP-RAP CALCULATED SIZE	RIP-RAP PROVIDED SIZE	RIP-RAP THICK (in)	MIN. APRON DIM. L (ft)	MIN. APRON DIM. INITIAL WIDTH (ft)	MIN. APRON DIM. TERMINAL W (ft)
FES 100	15	R-3	R-3	9	8	3.75	11.75
EW 200	24	R-3	R-3	9	12	6	18.0
EW 300	24	R-3	R-3	9	12	6	18.0
EW 400	24	R-3	R-3	9	12	6	18.0
FES 500	24	R-3	R-3	9	12	6	18.0
EW 600	18	R-3	R-3	9	8	4.5	12.5
EW 700	42	R-4	R-4	18	22	10.5	32.5
O.S. 3A-2	18	R-3	R-3	9	12.5	4.5	12.5
O.S. 3A-4	15	R-3	R-3	9	11.80	3.75	11.75
O.S. 3B-2	15	R-3	R-3	9	8	3.75	11.75
O.S. 4.1	24	R-4	R-4	18	20	6	26.0

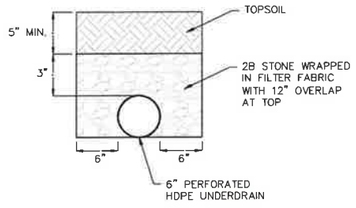


EMERGENCY SPILLWAY SCHEDULE

BASIN #	TOP OF BERM ft.	PERMANENT CONTROL SECTION WIDTH ft.	PERMANENT CONTROL SECTION INVERT ft.	PERMANENT CONTROL SECTION LINING	TEMPORARY CONTROL SECTION WIDTH ft.	TEMPORARY CONTROL SECTION INVERT ft.	TEMPORARY CONTROL SECTION LINING	OUTLET SECTION MAX SLOPE	OUTLET SECTION W ft.	OUTLET SECTION D ft.	OUTLET SECTION LINING
1	247.50	50	245.80	C-125	NA	NA	NA	3:1	50	1.70	C-125
2	249.00	40	247.40	C-125	NA	NA	NA	3:1	40	1.60	C-125
3A	247.50	45	245.80	C-125	NA	NA	NA	3:1	45	1.70	C-125
3B	246.00	30	244.60	C-125	NA	NA	NA	3:1	30	1.40	C-125
4	239.60	100	237.90	C-125	NA	NA	NA	3:1	100	1.70	C-125

EMERGENCY SPILLWAY CALCULATION

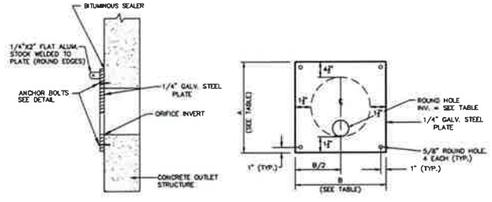
FORMULA: Q =2.7 L (H 3/2)



NOTE: UNDERDRAIN TO INCLUDE A THREADED CAP AT THE OUTLET STRUCTURE CONNECTION.

INFILTRATION BASIN UNDERDRAIN

N.T.S.



BASIN #	STRUCTURE #	A (in.)	B (in.)	ORIFICE DIAMETER (in.)	ORIFICE INVERT (ft.)	
1	O.S. #1.0	9	6	3.0	241.00	
2	O.S. #2.0	9	6	3.0	245.00	
3A	O.S. #3A-1	15	13	10.0	242.90	TWO (2) 10" ORIFICES
3A	O.S. #3A-2	9	6	3.0	244.00	
4	O.S. #4.0	14	11	8.0	231.00	

ORIFICE PLATE DETAIL

N.T.S.

RIPRAP APRONS AT PIPE OUTLETS WITH D-W ENDWALLS

RIPRAP

PADOT No.	Size inches (sq. openings) Max.	Avg. (1)	Min. (2)	Filter Stone NCSA Size No.
R-3	6	3	2	FS-2
R-4	12	6	3	FS-2
R-5	18	9	5	FS-2
R-6	24	12	7	FS-3
R-7	30	15	12	FS-3
R-8	48	24	15	FS-3

FILTER STONE

Size inches (sq. openings)

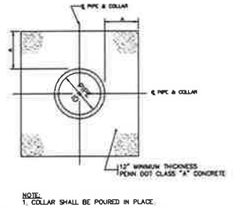
NCSA No.	Max	Avg.	Min	Thickness
FS-2	2	No. 4	No. 100	4 in (minimum)
FS-3	6-1/2	2.5	No. 16	8 in (minimum)

NOTES:
1. "AVERAGE SIZE" IS THAT SIZE EXCEEDED BY AT LEAST 50% OF THE TOTAL WEIGHT OF THE TONNAGE SHIPPED; 50% OF THE TONNAGE SHALL CONSIST OF PIECES LARGER THAN THE "AVERAGE" SIZE.
2. PIECES SMALLER THAN THE MINIMUM SIZE SHOWN SHALL NOT EXCEED 15% OF THE TONNAGE SHIPPED.
3. THE TABLE ASSUMES A STONE DRY DENSITY OF 165 POUNDS PER CUBIC FOOT.
4. PLACE FILTER STONE TO SPECIFIED THICKNESS UNDER RIP RAP.
5. FILTER STONE ALTERNATIVE: PADOT CLASS 2 GEOTEXTILE MAY BE SUBSTITUTED FOR FILTER STONE AS FOLLOWS:
   TYPE A - UNDER R-3, R-4, R-5, AND R-6 RIP RAP.
   TYPE B - UNDER R-7 AND R-8 RIP RAP.
6. ALL APRONS ARE TO BE LEVEL AT ELEVATIONS MATCHING THE PIPE OUTLET INVERT.
7. ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

STORM SEWER ROCK APRONS

(NOT TO SCALE)

BASIN #	# OF COLLARS	VERTICAL PROJECTION A (IN.)	SPACING (FT.)	DISTANCE TO FIRST COLLAR (FT)	BARREL DIA. (IN)
O.S. 3A-1	2	12	8.12	8.12	18
O.S. 3A-2	2	12	8.06	8.06	15
O.S. 3B-1	3	18	14.02	14.02	15
O.S. 4.0	3	18	12.11	12.11	24



NOTE:
1. COLLAR SHALL BE POURED IN PLACE.

CONCRETE ANTI-SEEP COLLAR

N.T.S.

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1140 Virginia Drive • Fort Washington, PA 19034
T: 215-914-2050

JEFFREY H. MADDEN — PROFESSIONAL ENGINEER — No. PE039161 — COMMONWEALTH OF PENNSYLVANIA

REV.	DATE	DESCRIPTION	DRAWN
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

APPLICATION NUMBER LD-23-01

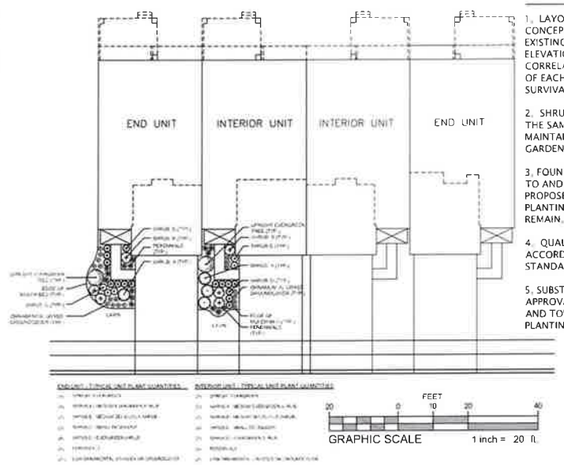
BASIN DETAILS

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 3-24-23	SCALE: AS NOTED
DESIGN:	DRAWN: EJS
JOB NO.: 7662	FILE NAME: 7662-5-09-DET-BASIN
REF. NO.: SD09.16	
SHEET NO.: 55 OF 64	

N:\PROJECTS\PENNSYLVANIA\7662-RYDAL ST. BASIL\ENGDEPT\DRAWINGS\7662-5-09-DET-BASIN.DWG-Eric Stenger-10/17/2023 12:08 PM

TYPICAL UNIT LANDSCAPING



TYPICAL UNIT PLANTING NOTES:

1. LAYOUT OF PLANTING BED IS CONCEPTUAL AND MAY VARY DUE TO EXISTING SITE CONDITIONS AND MODEL ELEVATION. SPECIES CHOSEN SHALL CORRELATE WITH EXISTING SITE CONDITIONS OF EACH HOME (IE. SUN/SHADE) TO ENSURE SURVIVABILITY OF PLANT.
2. SHRUBS SHALL BE PLANTED IN GROUPS OF THE SAME SPECIES (3 - 5 PLANTS) TO MAINTAIN BALANCE THROUGHOUT THE GARDEN.
3. FOUNDATION PLANTS ARE IN ADDITION TO AND ARE TO BE COORDINATED WITH PROPOSED STREET TREES, OPEN SPACE PLANTINGS AND EXISTING VEGETATION TO REMAIN.
4. QUALITY OF PLANT SHALL BE IN ACCORDANCE WITH THE AMERICAN STANDARDS FOR NURSERY STOCK.
5. SUBSTITUTIONS PERMITTED WITH WRITTEN APPROVAL BY ESE LANDSCAPE ARCHITECT AND TOWN REPRESENTATIVE PRIOR TO PLANTING.

TYPICAL UNIT PLANT LIST

Upright Evergreen Tree
Chamaecyparis nootkanensis 'Pendula'
Ilex 'Nellie R. Stevens'
Thuja plicata 'Green Giant'

Shrub A - Medium Evergreen
Ilex glabra 'Densa' or 'Shamrock'
*Ilex x meserveae 'Blue Princess' ***plant with 1 male for berries***
*Ilex x meserveae 'Blue Prince' ***1 needed as pollinator***
Rhododendron x 'PJM'
Taxus x media 'Hatfield'

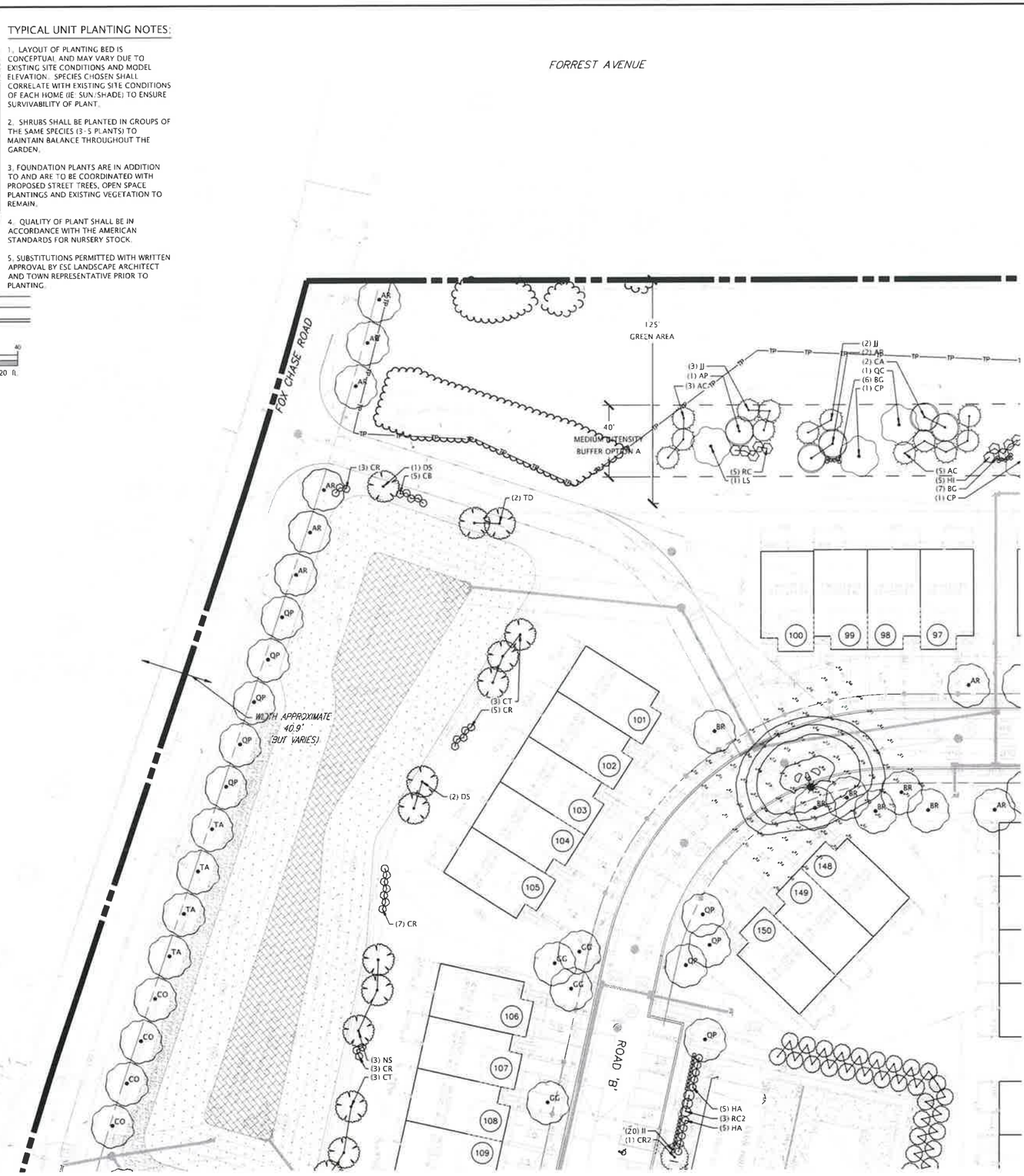
Shrub B - Medium Deciduous
Comptonia peregrina
Hydrangea arborescens 'Invincibell'
Itea virginica 'Little Henry'
Rosa rugosa 'Radtko' or 'Sunny Knockout'

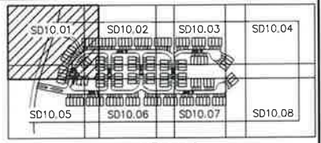
Shrub C - Small Deciduous
Azalea 'Encore Autumn Cheer'
Buxus 'Winter Gem' or 'Green Mound'
Thuja occidentalis 'Hetz Midget'

Shrub D - Small Evergreen
Azalea 'Encore Autumn Cheer'
Buxus 'Winter Gem' or 'Green Mound'
Thuja occidentalis 'Hetz Midget'

Perennials
Sun/ Part Shade
nepeta racemosa 'Little Trudy' or 'Walker's Low'
Rudbeckia fulgida var. sullivanti 'Little Goldstar' - Full Sun
Sedum 'Black Beauty'
Part Shade/ Full Shade
Bergenia cordifolia
Geranium macrorrhizum 'Bevans Variety'
Heuchera x 'Plum Pudding'
Hosta varieties

Ornamental Grasses/ Groundcover
Sun/ Part Shade
Pennisetum alopecuriodes 'Hameln'
Dianthus gratianopolitanus 'Bath's Pink'
Liriope muscari 'Big Blue or 'Variegata'
Sedum x 'Vera Jomeson'
Part Shade/ Full Shade
Hakonechloa macra 'Aureola'
Liriope muscari 'Big Blue or 'Variegata'
Phlox stolonifero 'Sherwood Purple'
Tiarella 'Sugar and Spice'





KEYMAP

PLANT LEGEND

STREET TREES

SYMBOL		BOTANICAL/COMMON NAME
	AR	ACER RUBRUM 'BOTTOMLESS PIT' / AUTUMN RED MAPLE
	BP	BETULA NIGRA 'RIVER BIRCH'
	CO	CARPINUS CAROLINIANA 'ORANGE COLUMN' / AMERICAN HORNBEAM
	QP	QUERCUS PHELLOS / WILLOW OAK
	GC	GLEDITSIA TRIACANTHOS - GREEN GLORY' HONEY LOCUST
	TA	TILIA AMERICANA / AMERICAN LINDEN

BUFFER CANOPY TREES

SYMBOL		BOTANICAL/COMMON NAME
	CT	CELTIS OCCIDENTALIS 'PRAIRIE PRIDE' / HACKBERRY
	LS	LIQUIDAMBAR STYRACIFLUA / AMERICAN SWEET GUM
	QC	QUERCUS COCCINEA / SCARLET OAK
	QR	QUERCUS RUBRA 'REDMOND'

BUFFER EVERGREEN TREES

SYMBOL		BOTANICAL/COMMON NAME
	AB	ABIES CONCOLOR 'WINTER SNOW'
	PG	PICEA GLAUCA 'WHITE SPRUCE'
	PS	PICEA PUNGENS 'BABY BLUE' - BABY BLUE COLORADO SPRUCE

BUFFER UNDERSTORY TREES

SYMBOL		BOTANICAL/COMMON NAME
	AF	AMELANCHIER X GRANDIFLORA 'APPLE SERVICEBERRY'
	CA	CERCIS CANADENSIS 'ALLEY CAT' / EASTERN REDBUD
	LT	CORNUS FLORIDA 'RUTGAN' - CHEROKEE LACE DOGWOOD
	MG	MAMMOTH GRANDMA' - COMMON WITCH HAZEL

BUFFER SHRUBS

SYMBOL		BOTANICAL/COMMON NAME
	RG	RUBUS 'GREEN MOUNTAIN' / GREEN MOUNTAIN BOYNOOD
	CC	CORNUS RACEMOSA 'CERF' / DOGWOOD
	HI	HYDRANGEA ARBORESCENS 'INCREDIBALL' / HYDRANGEA
	IH	ITEA VIRGINICA 'SCHIPKA' / SWEETSPIRE 'ITEA VIRGINICA'
	RC	RHODODENDRON CATAWBIENSE 'CAROLINIANUM' / RHODODENDRON

CLUBHOUSE FOUNDATION

SYMBOL		BOTANICAL/COMMON NAME
	CS2	CORNUS X 'KELSEYI' STELLAR PINK' / DOGWOOD
	HA	HYDRANGEA ARBORESCENS 'ANNABELLE' / HYDRANGEA
	K	KALMIA 'COMPACTA' / COMPACT KALMIA
	RG2	RHODODENDRON CATAWBIENSE 'GRANDIFLORUM' / RHODODENDRON

SITE ELEMENT SCREEN

SYMBOL		BOTANICAL/COMMON NAME
	TO	THUJA OCCIDENTALIS 'AMERICAN ARBORVITAE'

BASIN TREES

SYMBOL		BOTANICAL/COMMON NAME
	SS	AMELANCHIER SPICATA / DOWNY SERVICEBERRY
	CT	CHAMAECYPARIS THYOIDES / ATLANTIC WHITE CYPRESS
	NS	NYSSA SYLVATICA / TUPELO
	TD	TAXODIUM / BALD CYPRESS

BASIN SHRUBS

SYMBOL		BOTANICAL/COMMON NAME
	CA	CLETHRA ALNIFOLIA / RUBY SPICE SUMMERSWEET
	CS	CORNUS SERICEA - 'KELSEY'S RED TWIG DOGWOOD
	KL	ILEX CLARA / PINEBARK HOLLY

BASIN SEED MIX

SYMBOL		NAME
	122	DETENTION BASIN BOTTOM EMIST SEED MIX 122
	126	BASIN BOTTOM EMIST SEED MIX 126
	131	BASIN SIDE SLOPE EMIST SEED MIX 131

TP TP TP

TEMPORARY TREE PROTECTION FENCING
NOT TO SCALE

VEGETATION TO REMAIN
NOT TO SCALE

STREET LIGHT LUMINAIRE
NOT TO SCALE

LANDSCAPE NOTES:

1. ALL LANDSCAPE BUFFERS SHALL BE MAINTAINED AND KEPT CLEAN OF DEBRIS, RUBBISH, NOXIOUS WEEDS AND INVASIVE SPECIES.
2. EXISTING VEGETATION TO BE UTILIZED AS BUFFERS SHALL BE FREE OF NOXIOUS WEEDS AND INVASIVE SPECIES. IF EXISTING VEGETATION CONTAINS NOXIOUS WEEDS OR INVASIVE SPECIES, THESE SPECIES SHALL BE REMOVED AND ERADICATED PRIOR TO ACCEPTANCE.

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1" = 30 FEET

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REV.	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT - NOT TO BE RECORDED

LANDSCAPE PLAN

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

APPLICATION NUMBER LD-23-01

DATE:	SCALE: 1"= 30'
DESIGN:	DRAWN: ECD
JOB NO.: 7662	FILE NAME: 7662-S-09-LAND
REF. NO.:	SD10.01
SHEET NO.:	56 or 64

N:\PROJECTS\PENNSYLVANIA\7662-ROYAL ST. BASILS\CNDEP\DRAWINGS\7662-S-09-LAND.DWG-Eric Stenge-10/17/2023 12:09 PM

FORREST AVENUE

125'
GREEN AREA

40'
MEDIUM INTENSITY
BUFFER OPTION A

(2) JJ
(2) AR
(2) CA
(1) QC
(6) BG
(1) CP

(5) AC
(5) HI
(7) BG
(1) CP

(2) AC
(2) LS
(3) HV
(4) IA

(3) BG
(6) IM

(2) AC
(1) QA
(1) CA
(3) JJ

(3) CG

(3) QC

(3) CF
(5) IA
(1) AC
(5) RC

(5) JJ
(2) CP

(1) AP
(5) CG
(1) CP

(5) AC
(5) IM
(3) QA

(1) CP

(3) QA
(5) AC
(3) AP

(5) HI
(5) CG
(5) IM

(2) JJ
(5) RC
(1) CP
(1) JJ

(3) CG
(3) BG

ROAD 'B'

ROAD 'C'

ROAD 'F'

ROAD 'C'

T.W.=254.77
G.F.=254.10

KEYMAP

PLANT LEGEND

STREET TREES

SYMBOL		BOTANICAL/COMMON NAME
	AR	ACER RUBRUM 'AUTUMN RED' / AUTUMN RED MAPLE
	BR	BETULA NIGRA / RIVER BIRCH
	CO	CARPINUS CAROLINIANA 'ORANGE CALUMN' / IRONWOOD
	QP	QUERCUS PHELLOS / WILLOW OAK
	GG	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER' / THORNLESS HONEYLOCUST
	TA	TILIA AMERICANA / AMERICAN LINDEN

BUFFER CANOPY TREES

SYMBOL		BOTANICAL/COMMON NAME
	CP	CELTIS OCCIDENTALIS 'PRAIRIE MARKET' / HACKBERRY
	LS	LIQUIDAMBAR STYRACIFLUA / AMERICAN SWEET GUM
	QC	QUERCUS COCCINEA / SCARLET OAK
	QR	QUERCUS RUBRA / RED OAK

BUFFER EVERGREEN TREES

SYMBOL		BOTANICAL/COMMON NAME
	AR	ABIES FRASERI / FRASER FIR
	PG	PICEA GLAUCA 'WHITE SPRUCE'
	PS	PICEA PUNGENS 'SARY BLUE' / SARY BLUE COLORADO SPRUCE

BUFFER UNDERSTORY TREES

SYMBOL		BOTANICAL/COMMON NAME
	AP	AMELANCHIER X GRANDIFLORA 'APPLE' / SERVICEBERRY
	CA	CERCIS CANADENSIS 'ALLEY CAT' / EASTERN REDBUD
	CF	CORNUS FLORIDA 'RUBA' / DOGWOOD
	HV	HAMAMELIS VIRGINIANA / COMMON WITCH-HAZEL

BUFFER SHRUBS

SYMBOL		BOTANICAL/COMMON NAME
	RG	RUBUS 'GREEN MOUNTAIN' / GREEN MOUNTAIN BOYSENBERRY
	CG	CORNUS RACEMOSA / GRAY DOGWOOD
	HI	HYDRANGEA ARBORESCENS 'HALOPEARL' / HYDRANGEA
	HR	HYDRANGEA MACROPHYLLA SERRATA 'TUFF STUFF' / MOUNTAIN HYDRANGEA
	RG	RHODODENDRON CATAWBIENSE 'GRANDIFLORUM' / RHODODENDRON

CLUBHOUSE FOUNDATION

SYMBOL		BOTANICAL/COMMON NAME
	CKJ	CORNUS X 'BUTCAN' / STELLAR PINK DOGWOOD
	HA	HYDRANGEA ARBORESCENS 'ANNABELLE' / HYDRANGEA
	X	ILEX CRENATA 'COMPACTA' / COMPACT INKBERRY
	RG	RHODODENDRON CATAWBIENSE 'GRANDIFLORUM' / RHODODENDRON

SITE ELEMENT SCREEN

SYMBOL		BOTANICAL/COMMON NAME
	TO	THUJA OCCIDENTALIS 'AMERICAN ARBORVITAE'

BASIN TREES

SYMBOL		BOTANICAL/COMMON NAME
	BN	AMELANCHIER ARBOREA / DOWNY SERVICEBERRY
	C	CHAMAECYPARIS THYOIDES / ATLANTIC WHITE CYPRESS
	NS	NYSSA SYLVATICA / TUPELO
	TD	TAXODIUM / BALD CYPRESS

BASIN SHRUBS

SYMBOL		BOTANICAL/COMMON NAME
	CR	CLETHRA ALNIFOLIA / RUBY SPICE SUMMERSWEET
	CS	CORNUS SERICEA / BAILEY'S RED TWIG DOGWOOD
	IC	ILEX CRENATA / INKBERRY HOLLY

BASIN SEED MIX

SYMBOL		NAME
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TP TP TP

TEMPORARY TREE PROTECTION FENCING
NOT TO SCALE

VEGETATION TO REMAIN
NOT TO SCALE

STREET LIGHT LUMINAIRE
NOT TO SCALE

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GRAPHIC SCALE
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(IN FEET)
1" = 30 FEET

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REV.	DATE	DESCRIPTION	
2	10/31/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT - NOT TO BE RECORDED

APPLICATION NUMBER LD-23-01

LANDSCAPE PLAN

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE:	SCALE: 1" = 30'
DESIGN:	DRAWN: EED
JOB NO.: 7662	FILE NAME: 7662-S-09-LAND
REF. NO.:	SD10.02
SHEET NO.:	57 OF 64

N:\PROJECTS\PENNSYLVANIA\7662-RYDAL ST. BASILS\ENGDEPT\DRAWINGS\7662-S-09-LAND.DWG- Eric Strenge- 10/17/2023 12:09 PM

KEYMAP

PLANT LEGEND

STREET TREES

SYMBOL		BOTANICAL/COMMON NAME
	AR	ACER RUBRUM 'BOWHALL' / BOWHALL RED MAPLE
	BP	BETULA NIGRA / RIVER BIRCH
	CO	CHAMPAGNE CAROLINIANA 'ORANGE CRUSH' / ORANGE CRUSH OAK
	QP	QUERCUS PHELLOS / WILLOW OAK
	CC	GLEDITSIA TRIACANTHOS f. INERMIS 'CHRISTY' / CHRISTY HONEYLOCUST
	TA	TILIA AMERICANA / AMERICAN LINDEN

BUFFER CANOPY TREES

SYMBOL		BOTANICAL/COMMON NAME
	CP	CELTIS OCCIDENTALIS 'PRAIRIE SENTINEL' / PRAIRIE SENTINEL HACKBERRY
	LS	LIQUIDAMBAR STYRACIFLUA / AMERICAN SWEET GUM
	QC	QUERCUS COCCINEA / SCARLET OAK
	QR	QUERCUS RUBRA 'RED OAK'

BUFFER EVERGREEN TREES

SYMBOL		BOTANICAL/COMMON NAME
	AG	ABIES CONCOLOR 'WINTER SNOW' / WINTER SNOW WHITE FIR
	PG	PICEA GLAUCA 'WHITE SPRUCE' / WHITE SPRUCE
	PS	PICEA PUNGENS 'SARP BLUE' / SARP BLUE COLORADO SPRUCE

BUFFER UNDERSTORY TREES

SYMBOL		BOTANICAL/COMMON NAME
	AF	AMELANCHIER X GRANDIFLORA 'APPLE' / APPLE SERVICEBERRY
	CR	CERCIS CANADENSIS 'ALLEY CAT' / EASTERN REDBUD
	LT	CORNUS FLORIDA 'RUTGA' / RUTGAN DOGWOOD
	WV	HAMAMELIS VIRGINIANA / COMMON WITCH-HAZEL

BUFFER SHRUBS

SYMBOL		BOTANICAL/COMMON NAME
	BG	BUXUS X 'GREEN MOUNTAIN' / GREEN MOUNTAIN BOXWOOD
	CC	CORNUS RACEMOSA / GRAY DOGWOOD
	HI	HYDRANGEA ARBORESCENS 'KOLKWITZIA' / HYDRANGEA
	HV	ITEA VIRGINICA 'HENRY'S GARNET' / HENRY'S GARNET SWEETSPIRE
	RC	RHODODENDRON CATAWBIENSE 'CATAWBA' / RHODODENDRON

CLUBHOUSE FOUNDATION

SYMBOL		BOTANICAL/COMMON NAME
	LNT	CORNUS X 'ROLLINS' / STELLAR PINK DOGWOOD
	HA	HYDRANGEA ARBORESCENS 'ANNABELLE' / HYDRANGEA
	JI	ILEX GLABRA 'COMPACTA' / COMPACT INKBERRY
	RACJ	RHODODENDRON CATAWBIENSE 'CATAWBA' / RHODODENDRON

SITE ELEMENT SCREEN

SYMBOL		BOTANICAL/COMMON NAME
	TO	THUJA OCCIDENTALIS 'AMERICAN ARBORVITAE'

BASIN TREES

SYMBOL		BOTANICAL/COMMON NAME
	SD	AMELANCHIER ARBOREA / DOWNY SERVICEBERRY
	CT	CHAMAECYPARIS THYOIDES / ATLANTIC WHITE CYPRESS
	NS	NYSSA SYLVATICA / TUPELO
	TD	TAXODIUM / BALD CYPRESS

BASIN SHRUBS

SYMBOL		BOTANICAL/COMMON NAME
	CR	CLETHRA ALNIFOLIA / RUBY SPICE SUMMERSWEET
	CS	CORNUS SERICEA / BAILEY'S RED TWIG DOGWOOD
	IG	ILEX GLABRA / INKBERRY HOLLY

BASIN SEED MIX

SYMBOL		NAME
	122	DETENTION BASIN BOTTOM ERNST SEED MIX 122
	126	BASIN BOTTOM ERNST SEED MIX 126
	131	BASIN SIDE SLOPE ERNST SEED MIX 131

TP TP TP

TEMPORARY TREE PROTECTION FENCING
NOT TO SCALE

VEGETATION TO REMAIN
NOT TO SCALE

STREET LIGHT LUMINAIRE
NOT TO SCALE

LANDSCAPE NOTES:

1. ALL LANDSCAPE BUFFERS SHALL BE MAINTAINED AND KEPT CLEAN OF DEBRIS, RUBBISH, NOXIOUS WEEDS AND INVASIVE SPECIES.
2. EXISTING VEGETATION TO BE UTILIZED AS BUFFERS SHALL BE FREE OF NOXIOUS WEEDS AND INVASIVE SPECIES. IF EXISTING VEGETATION CONTAINS NOXIOUS WEEDS OR INVASIVE SPECIES, THESE SPECIES SHALL BE REMOVED AND ERADICATED PRIOR TO ACCEPTANCE.

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1" = 30 FEET

PENNSYLVANIA REGISTERED LANDSCAPE ARCHITECT

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NO.	DATE	REVISIONS PER TOWNSHIP COMMENTS	
2	10/13/23	TOWNSHIP REVIEW LETTERS	ESE
1	7/24/23		ESE
			DRAWN

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT NOT TO BE RECORDED

APPLICATION NUMBER 10-23-01

LANDSCAPE PLAN

SISTERS OF ST. BASIL

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE:	SCALE: 1" = 30'
DESIGN:	DRAWN: EED
JOB NO.: 7662	FILE NAME: 7662-5-09-LAND
REF. NO.:	SD10.03
SHEET NO.:	58 OF 64

N:\PROJECTS\PENNSYLVANIA\7662-RYDAL ST. BASIL\ENGDEPT\DRAWINGS\7662-5-09-LAND.DWG - Eric Stenger - 10/17/2023 12:09 PM

FORREST AVENUE

125'
GREEN AREA

(2) CP
(3) IA
(2) CA

(1) AP
(5) JJ
(2) AP

(2) AP
(1) QC
(1) CF

(2) HV
(1) CP
(3) AC

(1) LS
(5) JJ

(5) AC

(3) JJ
(1) CF
(2) LS
(1) CF

40'
MEDIUM INTENSITY
BUFFER OPTION A

(1) LS
(3) CA
(3) QA
(3) JJ

TREE CANOPY
TO REMAIN

(5) DS

(3) CT

(5) CR
(1) CT

(3) CB
(2) CT

(3) CR
(3) TD

(3) CR

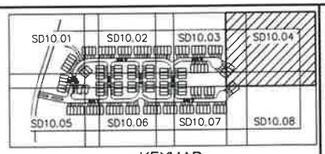
(3) NS
(3) CR

(3) DS

(3) TD

(3) DS

ZONE 2



KEYMAP

PLANT LEGEND

STREET TREES

SYMBOL		BOTANICAL/COMMON NAME
	AR	ACER RUBRUM 'AUTUMN RED' / AUTUMN RED MAPLE
	BP	BETULA NIGRA / RIVER BIRCH
	CO	CARPINUS CAROLINIANA 'ORANGE CRUSH' / ORANGE CRUSH IRONWOOD
	GF	GLEDITSIA TRIACANTHOS / GREEN GLORY HONEY LOCUST
	GS	GLEDITSIA TRIACANTHOS / GREEN GLORY HONEY LOCUST
	TA	TILIA AMERICANA / AMERICAN LINDEN

BUFFER CANOPY TREES

SYMBOL		BOTANICAL/COMMON NAME
	CP	CELTIS OCCIDENTALIS 'PRAIRIE PARTNER' / HACKBERRY
	LS	LIQUIDAMBER STYRACIFLUA / AMERICAN SWEET GUM
	QC	QUERCUS COCCINEA / SCARLET OAK
	QR	QUERCUS RUBRA / RED OAK

BUFFER EVERGREEN TREES

SYMBOL		BOTANICAL/COMMON NAME
	AA	ABIES CONCOLOR / WHITE FIR
	PG	PICEA GLAUCA / WHITE SPRUCE
	PS	PICEA PUNGENS 'BABY BLUE' / BABY BLUE COLORADO SPRUCE

BUFFER UNDERSTORY TREES

SYMBOL		BOTANICAL/COMMON NAME
	AP	AMELANCHIER X GRANDIFLORA 'APPLE' / SERVICEBERRY
	CA	CERCIS CANADENSIS 'ALLEY CAT' / EASTERN REDBUD
	CF	CORNUS FLORIDA 'CHEROKEE' / FLOWERING DOGWOOD
	HV	HAMAMELIS VIRGINIANA / COMMON WITCH HAZEL

BUFFER SHRUBS

SYMBOL		BOTANICAL/COMMON NAME
	BG	BUXUS 'GREEN MOUNTAIN' / GREEN MOUNTAIN BOXWOOD
	CG	CORNUS RACEMOSA / GRAY DOGWOOD
	HI	HYDRANGEA ARBORESCENS 'INCREDIBALL' / HYDRANGEA
	IM	ILEX VERTICILLATA 'NORDIC' / WINTERBERRY
	RG	RHODODENDRON CATAWBIENSE 'GRUMPY' / RHODODENDRON

CLUBHOUSE FOUNDATION

SYMBOL		BOTANICAL/COMMON NAME
	CKJ	CORNUS X 'RUTGAN' STELLAR PINK' / DOGWOOD
	HY	HYDRANGEA ARBORESCENS 'ANNABELLE' / HYDRANGEA
	Y	TAXUS MEDIA 'DENSIFORMIS' / COMPACT YEW
	RCC	RHODODENDRON CATAWBIENSE 'GRUMPY' / RHODODENDRON

SITE ELEMENT SCREEN

SYMBOL		BOTANICAL/COMMON NAME
	TO	THUJA OCCIDENTALIS / AMERICAN ARBORVITAE

BASIN TREES

SYMBOL		BOTANICAL/COMMON NAME
	GO	AMELANCHIER GRANDIFLORA / DOWNY SERVICEBERRY
	CT	CHAMAECYPARIS THYOIDES / ATLANTIC WHITE CYPRESS
	NS	NYSSA SYLVATICA / TUPELO
	TD	TAXODIUM / BALD CYPRESS

BASIN SHRUBS

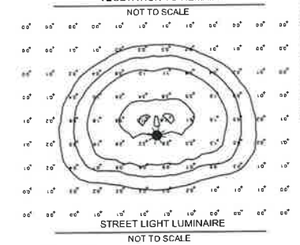
SYMBOL		BOTANICAL/COMMON NAME
	CR	CLETHRA ALNIFOLIA / RUBY SPICE SUMMERSWEET
	CB	CORNUS SERICEA / BAYLEY'S RED TWIG DOGWOOD
	IG	ILEX GLABRA / INKBERRY HOLLY

BASIN SEED MIX

SYMBOL		NAME
	122	DETENTION BASIN BOTTOM EKNST SEED MIX 122
	126	BASIN BOTTOM EKNST SEED MIX 126
	717	BASIN SIDE SLOPE EKNST SEED MIX 717

TEMPORARY TREE PROTECTION FENCING
NOT TO SCALE

VEGETATION TO REMAIN
NOT TO SCALE



STREET LIGHT LUMINAIRE
NOT TO SCALE

LANDSCAPE NOTES:

1. ALL LANDSCAPE BUFFERS SHALL BE MAINTAINED AND KEPT CLEAN OF DEBRIS, RUBBISH, NOXIOUS WEEDS, AND INVASIVE SPECIES.
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GRAPHIC SCALE
30 0 30 60
(IN FEET)
1" = 30 FEET

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REV.	DATE	DESCRIPTION	DRAWN
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	1/24/23	TOWNSHIP REVIEW LETTERS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT - NOT TO BE RECORDED

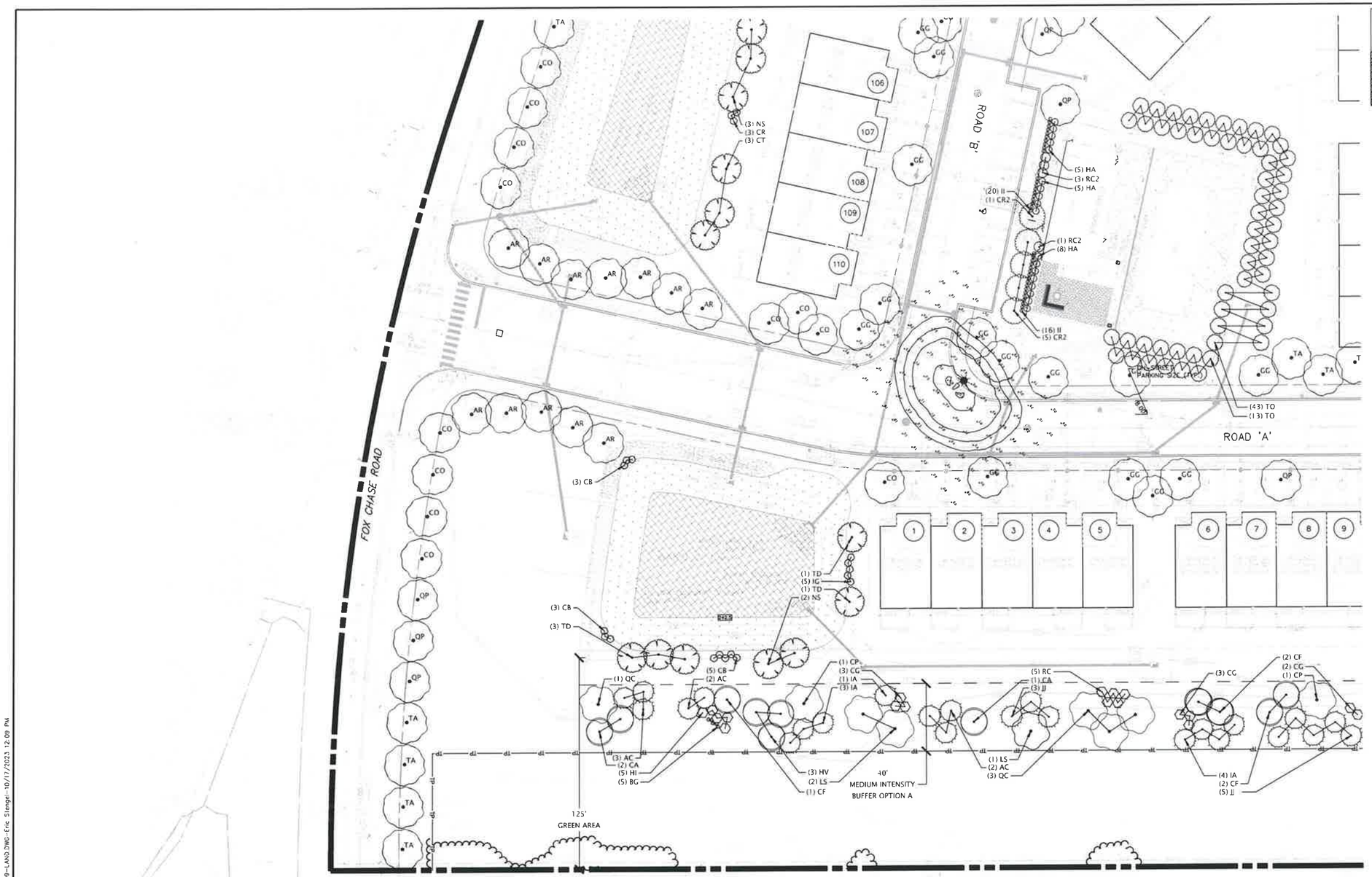
APPLICATION NUMBER: LD-23-01

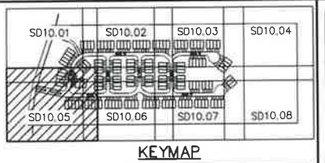
LANDSCAPE PLAN

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE:	SCALE: 1" = 30'
DESIGN:	DRAWN: EED
JOB NO.: 7662	FILE NAME: 7662-S-09-LAND
REF. NO.:	SD10.04
SHEET NO.:	59 OF 64

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KEYMAP

PLANT LEGEND

STREET TREES

SYMBOL		BOTANICAL/COMMON NAME
	AR	ACER RUBRUM 'AUTUMN BLAZE' / AUTUMN BLAZE MAPLE
	BP	BETULA NIGRA 'HERITAGE' / HERITAGE RIVER BIRCH
	CO	CARPINUS CAROLINIANA 'ORANGE CRUSH' / ORANGE CRUSH AMERICAN HORNBEAM
	QP	QUERCUS PHELLOS / WILLOW OAK
	GG	GLEDITSIA TRIACANTHOS f. INERMIS 'SHADEMASTER' / SHADEMASTER HONEYLOCUST
	TA	TILIA AMERICANA / AMERICAN LINDEN

BUFFER CANOPY TREES

SYMBOL		BOTANICAL/COMMON NAME
	CP	CELTIS OCCIDENTALIS 'PRAIRIE PRIDE' / PRAIRIE PRIDE HACKBERRY
	LS	LIQUIDAMBAR STYRACIFLUA / AMERICAN SWEETGUM
	QC	QUERCUS COCCINEA 'SCARLET OAK' / SCARLET OAK
	QR	QUERCUS RUBRA / RED OAK

BUFFER EVERGREEN TREES

SYMBOL		BOTANICAL/COMMON NAME
	AB	ABIES FRASERI / FRASER FIR
	PG	PICEA GLAUCA 'WHITE SPRUCE' / WHITE SPRUCE
	PB	PICEA PUNGENS 'BABY BLUE' / BABY BLUE COLORADO SPRUCE

BUFFER UNDERSTORY TREES

SYMBOL		BOTANICAL/COMMON NAME
	AP	AMELANCHIER X GRANDIFLORA 'APPLE SERVICEBERRY' / APPLE SERVICEBERRY
	EA	CERCIS CANADENSIS 'ALLEY CAT' / EASTERN REDBUD
	CF	CORNUS FLORIDA 'RUTGA' / RUTGAN DOGWOOD
	HV	HAMAMELIS VIRGINIANA / COMMON WITCH HAZEL

BUFFER SHRUBS

SYMBOL		BOTANICAL/COMMON NAME
	BG	BUXUS X 'GREEN MOUNTAIN' / GREEN MOUNTAIN BOXWOOD
	CS	CORNUS RACEMOSA / GRAY DOGWOOD
	HI	HYDRANGEA ARBORESCENS 'INCREDIBALL' / INCREDIBALL HYDRANGEA
	IV	ILEX VERTICILLATA 'WINTER GOLD' / WINTER GOLD COMMON WINTERBERRY
	IG	ILEX X MESERVEAE 'BLUE PRINCESS' / BLUE PRINCESS HOLLY

CLUBHOUSE FOUNDATION

SYMBOL		BOTANICAL/COMMON NAME
	CFG	CORNUS X 'BUTLER' / STELLAR PINK DOGWOOD
	HA	HYDRANGEA ARBORESCENS / ANNABELLE HYDRANGEA
	I	ILEX GLABRA 'COMPACTA' / COMPACT INKBERRY
	RG	RHODODENDRON CATAWBIENSE 'GRANDIFLORUM' / GRANDIFLORUM ROSEBAY RHODODENDRON

SITE ELEMENT SCREEN

SYMBOL		BOTANICAL/COMMON NAME
	TO	THUJA OCCIDENTALIS / AMERICAN ARBORVITAE

BASIN TREES

SYMBOL		BOTANICAL/COMMON NAME
	AA	AMELANCHIER ARBOREA / DOWNY SERVICEBERRY
	CT	CHAMAECYPARIS THYOIDES / ATLANTIC WHITE CYPRESS
	NS	NYSSA SYLVATICA / TUPELO
	TD	TAXODIUM / BALD CYPRESS

BASIN SHRUBS

SYMBOL		BOTANICAL/COMMON NAME
	CA	CLETHRA ALNIFOLIA / RUBY SPICE SUMMERSWEET
	CR	CORNUS SERICEA / BAILEY'S RED TWIG DOGWOOD
	IC	ILEX GLABRA / INKBERRY HOLLY

BASIN SEED MIX

SYMBOL		NAME
	123	DETENTION BASIN BOTTOM EMIST SEED MIX 123
	126	BASIN BOTTOM EMIST SEED MIX 126
	127	BASIN SIDE SLOPE EMIST SEED MIX 127

TP TP TP

TEMPORARY TREE PROTECTION FENCING
NOT TO SCALE

VEGETATION TO REMAIN
NOT TO SCALE

STREET LIGHT LUMINAIRE
NOT TO SCALE

LANDSCAPE NOTES:

1. ALL LANDSCAPE BUFFERS SHALL BE MAINTAINED AND KEPT CLEAN OF DEBRIS, RUBBISH, NOXIOUS WEEDS AND INVASIVE SPECIES.
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GRAPHIC SCALE
30 0 30 60
(IN FEET)
1" = 30 FEET

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REV.	DATE	DESCRIPTION	DRAWN
1	10/13/23	RESPONSES PER TOWNSHIP COMMENTS	ESE
2	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

APPLICATION NUMBER LD-23-01

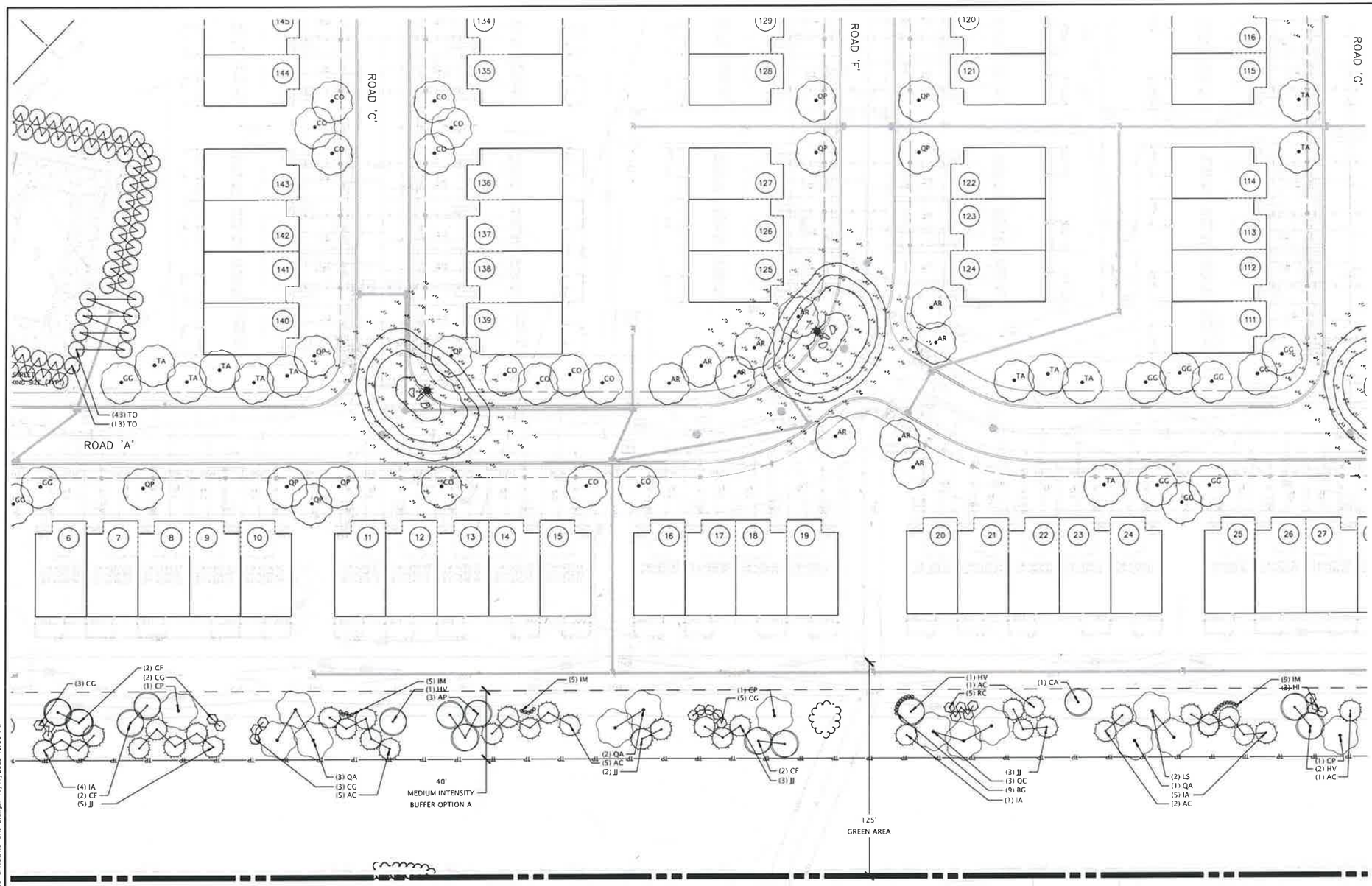
PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT - NOT TO BE RECORDED

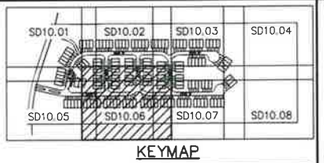
LANDSCAPE PLAN

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE:	SCALE: 1"= 30'
DESIGN:	DRAWN: EED
JOB NO.: 7662	FILE NAME: 7662-S-09-LAND
REF. NO.:	SD10.05
SHEET NO.:	60 OF 64

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KEYMAP

PLANT LEGEND

STREET TREES

SYMBOL		BOTANICAL/COMMON NAME
	AR	ACER RUBRUM 'AUTUMN BLAZE' / AUTUMN BLAZE RED MAPLE
	BP	BETULA NIGRA 'HERITAGE' / HERITAGE RIVER BIRCH
	CO	CARPINUS CAROLINIANA 'ORANGE CRUSH' / ORANGE CRUSH HORNBEAM
	QP	QUERCUS PHELLOS / WILLOW OAK
	GG	GLEDITSIA TRIACANTHOS f. INERMIS 'SKYLINE' / SKYLINE HONEYLOCUST
	TA	TILIA AMERICANA / AMERICAN LINDEN

BUFFER CANOPY TREES

SYMBOL		BOTANICAL/COMMON NAME
	CP	CELTIS OCCIDENTALIS 'PRAIRIE PRIDE' / PRAIRIE PRIDE HACKBERRY
	LS	LIQUIDAMBAR STYRACIFLUA / AMERICAN SWEET GUM
	QC	QUERCUS COCCINEA / SCARLET OAK
	QR	QUERCUS RUBRA / RED OAK

BUFFER EVERGREEN TREES

SYMBOL		BOTANICAL/COMMON NAME
	AB	ABIES CONCOLOR / WHITE FIR
	PG	PICEA GLAUCA / WHITE SPRUCE
	PS	PICEA PUNGENS 'BABY BLUE' / BABY BLUE COLORADO SPRUCE

BUFFER UNDERSTORY TREES

SYMBOL		BOTANICAL/COMMON NAME
	AP	AMELANCHIER X GRANDIFLORA / APPLE SERVICEBERRY
	CA	CERCIS CANADENSIS 'RILEY CAT' / EASTERN REDBUD
	CF	CORNUS FLORIDA 'RUBRA' / RUBY DOGWOOD
	HV	HAMAMELIS VIRGINIANA / COMMON WITCH-HAZEL

BUFFER SHRUBS

SYMBOL		BOTANICAL/COMMON NAME
	BG	BUXUS X 'GREEN MOUNTAIN' / GREEN MOUNTAIN BOXWOOD
	CC	CORNUS RACEMOSA / GRAY DOGWOOD
	HI	HYDRANGEA ARBORESCENS 'INCREDIBALL' / HYDRANGEA
	IM	ILEX VERTICILLATA 'WINTER RED' / WINTERBERRY HOLLY
	RJ	RHODODENDRON CATAWBIENSE 'CATAWBA' / RHODODENDRON

CLUBHOUSE FOUNDATION

SYMBOL		BOTANICAL/COMMON NAME
	CKU	CORNUS X 'KUSTUS STELLAR PINK' / DOGWOOD
	HA	HYDRANGEA ARBORESCENS 'ANNABELLE' / HYDRANGEA
	I	ILEX GLABRA 'COMPACTA' / COMPACT INKBERRY
	RJ	RHODODENDRON CATAWBIENSE 'CATAWBA' / RHODODENDRON

SITE ELEMENT SCREEN

SYMBOL		BOTANICAL/COMMON NAME
	TO	THUJA OCCIDENTALIS / AMERICAN ARBORVITAE

BASIN TREES

SYMBOL		BOTANICAL/COMMON NAME
	DV	AMELANCHIER ARBOREA / DOWNY SERVICEBERRY
	CT	CHAMAECYPARIS THYOIDES / ATLANTIC WHITE CYPRESS
	NS	NYSSA SYLVATICA / TUPELO
	TD	TAXODIUM / BALD CYPRESS

BASIN SHRUBS

SYMBOL		BOTANICAL/COMMON NAME
	CN	CLETHRA ALNIFOLIA / BUSY SPICE SUMMERSWEET
	CR	CORNUS SERICEA 'BAILEY'S RED TWIG' / DOGWOOD
	IG	ILEX GLABRA / INKBERRY HOLLY

BASIN SEED MIX

SYMBOL		NAME
	125	DETENTION BASIN BOTTOM EMAC SEED MIX 125
	126	BASIN BOTTOM EMAC SEED MIX 126
	735	BASIN SIDE SLOPE EMAC SEED MIX 735

TP TP TP

TEMPORARY TREE PROTECTION FENCING
NOT TO SCALE

VEGETATION TO REMAIN
NOT TO SCALE

STREET LIGHT LUMINAIRE
NOT TO SCALE

LANDSCAPE NOTES:

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T: 215-914-2050

REV.	DATE	DESCRIPTION	DRAWN
1	7/24/23	TOWNSHIP REVIEW LETTER	ESE
2	10/13/23	REVISIONS PER TOWNSHIP COMMENTS	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT - NOT TO BE RECORDED

APPLICATION NUMBER LD-23-01

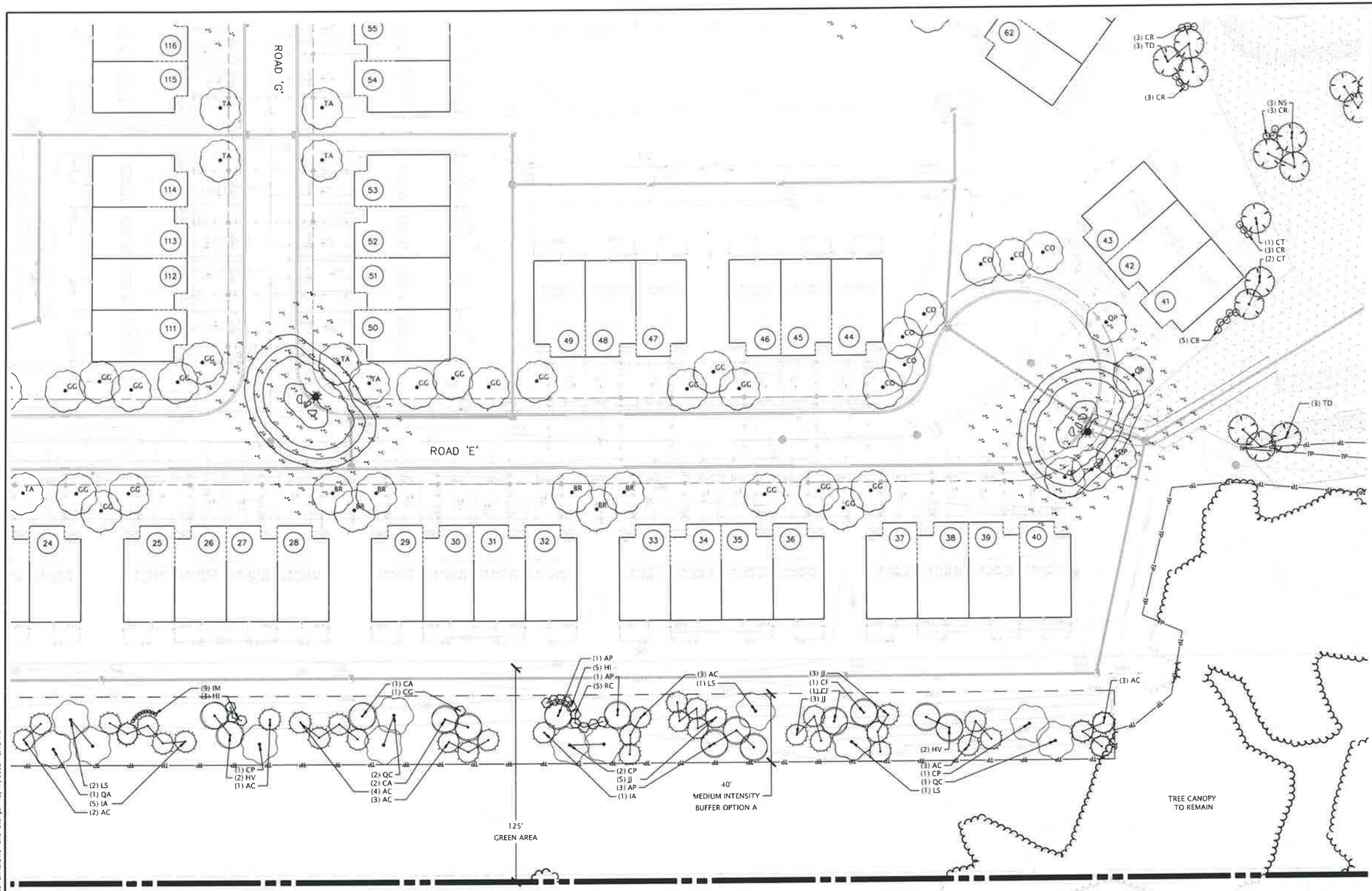
LANDSCAPE PLAN

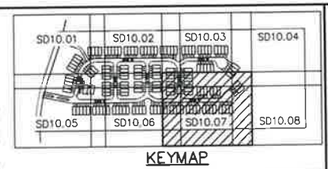
SISTERS OF ST. BASIL

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE:	SCALE: 1" = 30'
DESIGN:	DRAWN: EED
JOB NO.: 7662	FILE NAME: 7662-S-09-LAND
REF. NO.:	SD10.06
SHEET NO.:	61 OF 64

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KEYMAP

PLANT LEGEND

STREET TREES

SYMBOL		BOTANICAL/COMMON NAME
	AR	ACER RUBRUM 'RUTGERS' / RUTGERS RED MAPLE
	BR	BETULA NIGRA / RIVER BIRCH
	CD	CARPINUS CAROLINIANA 'ORANGE CRISP' / ORANGE CRISP HORNBEAM
	QP	QUERCUS PHELLOS / WILLOW OAK
	GG	GLEDITSIA TRIACANTHOS - GREEN GLORY / HONEY LOCUST
	TA	TILIA AMERICANA / AMERICAN LINDEN

BUFFER CANOPY TREES

SYMBOL		BOTANICAL/COMMON NAME
	CT	CELTIS OCCIDENTALIS 'PRAIRIE MARKET' / HACKBERRY
	LS	LIQUIDAMBAR STYRACIFLUA / AMERICAN SWEET GUM
	QC	QUERCUS COCCINEA / SCARLET OAK
	QP	QUERCUS PHELLOS / WILLOW OAK

BUFFER EVERGREEN TREES

SYMBOL		BOTANICAL/COMMON NAME
	AC	ABIES CONCOLOR / WHITE FIR
	PG	PICEA GLAUCA / WHITE SPRUCE
	PS	PICEA PUNGENS 'GREY BLUE' / BABY BLUE COLORADO SPRUCE

BUFFER UNDERSTORY TREES

SYMBOL		BOTANICAL/COMMON NAME
	AP	AMELANCHIER X GRANDIFLORA 'APPLE' / SERVICEBERRY
	CA	CERCIS CANADENSIS 'ALLEY CAT' / EASTERN REDBUD
	CF	CORNUS FLORIDA 'FIRST LADY' / DOGWOOD
	HV	HAMAMELIS VIRGINIANA / COMMON WITCH HAZEL

BUFFER SHRUBS

SYMBOL		BOTANICAL/COMMON NAME
	BG	BUXUS X 'GREEN MOUNTAIN' / GREEN MOUNTAIN BOXWOOD
	CC	CORNUS RACEMOSA / GRAY DOGWOOD
	IH	ILEX GLABRA 'SHAMROCK' / SHAMROCK INKBERRY
	IV	ILEX VERTICILLATA 'WINTER RED' / WINTER RED
	RG	RHODODENDRON CATAWBIENSE 'GRANDIFLORUM' / CATAWBA RHODODENDRON

CLUBHOUSE FOUNDATION

SYMBOL		BOTANICAL/COMMON NAME
	CKU	CORNUS X 'KUSCAN' / KUSCAN RED DOGWOOD
	HA	HYDRANGEA ARBORESCENS / WILD HYDRANGEA
	I	ILEX GLABRA 'COMPACTA' / COMPACT INKBERRY
	RCJ	RHODODENDRON CATAWBIENSE 'CHRISTMAS MAGIC' / CHRISTMAS MAGIC RHODODENDRON

SITE ELEMENT SCREEN

SYMBOL		BOTANICAL/COMMON NAME
	TO	THUJA OCCIDENTALIS / AMERICAN ARBORVITAE

BASIN TREES

SYMBOL		BOTANICAL/COMMON NAME
	BA	AMELANCHIER ARBOREA / DOWNY SERVICEBERRY
	CT	CRYPTOMERIA JAPONICA / ATLANTIC WHITE CYPRESS
	NS	NYSSA SYLVATICA / TUPELO
	TT	TAXODIUM / BALD CYPRESS

BASIN SHRUBS

SYMBOL		BOTANICAL/COMMON NAME
	CA	CLETHRA ALNIFOLIA / RUBY SPICE SUMMERSWEET
	CR	CORNUS SERICEA 'BAILEY'S' / RED TWIG DOGWOOD
	IG	ILEX GLABRA / INKBERRY HOLLY

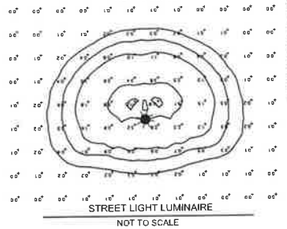
BASIN SEED MIX

SYMBOL		NAME
	122	DETENTION BASIN BOTTOM ERNST SEED MIX 122
	126	BASIN BOTTOM ERNST SEED MIX 126
	131	BASIN SIDE SLOPE ERNST SEED MIX 131

TP — TP — TP

TEMPORARY TREE PROTECTION FENCING
NOT TO SCALE

VEGETATION TO REMAIN
NOT TO SCALE



STREET LIGHT LUMINAIRE
NOT TO SCALE

LANDSCAPE NOTES:

1. ALL LANDSCAPE BUFFERS SHALL BE MAINTAINED AND KEPT CLEAN OF DEBRIS, RUBBISH, NOXIOUS WEEDS AND INVASIVE SPECIES.
2. EXISTING VEGETATION TO BE UTILIZED AS BUFFERS SHALL BE FREE OF NOXIOUS WEEDS AND INVASIVE SPECIES. IF EXISTING VEGETATION CONTAINS NOXIOUS WEEDS OR INVASIVE SPECIES, THESE SPECIES SHALL BE REMOVED AND ERADICATED PRIOR TO ACCEPTANCE.

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1" = 30 FEET

APPLICATION NUMBER LD-23-01
PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT PLAN NOT TO BE RECORDED

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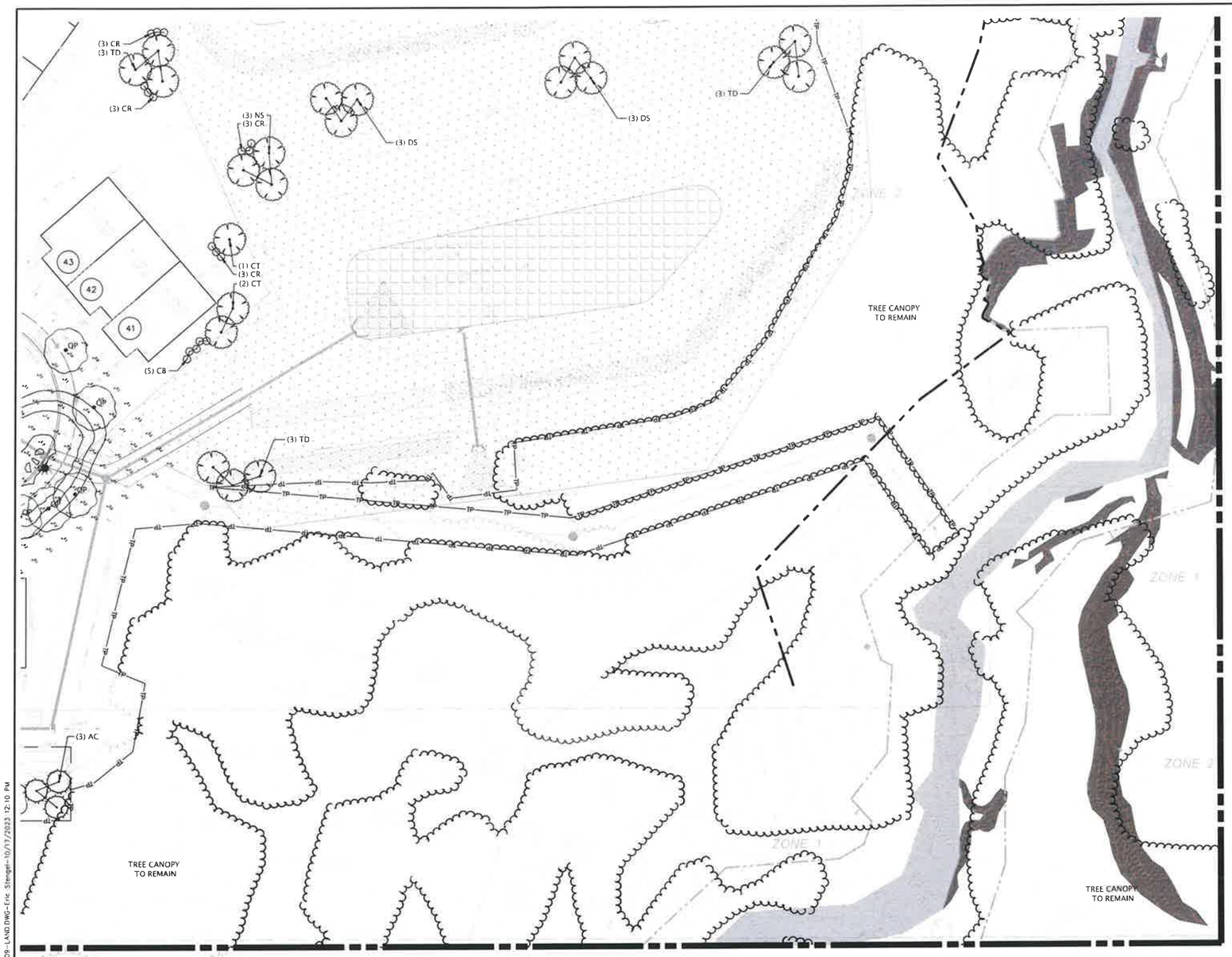
REV.	DATE	DESCRIPTION	DRAWN
2	10/11/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
1	7/24/23	TOWNSHIP REVIEW LETTERS	ESE

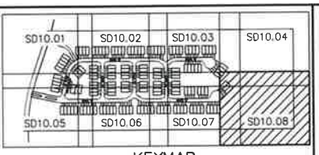
LANDSCAPE PLAN

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE:	SCALE: 1" = 30'
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JOB NO.: 7662	FILE NAME: 7662-S-09-LAND
REF. NO.:	SD10.07
SHEET NO.:	62 OF 64

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KEYMAP

PLANT LEGEND

STREET TREES		
SYMBOL		BOTANICAL/COMMON NAME
	AR	ACER RUBRUM 'AUTUMN RED' / AUTUMN RED MAPLE
	BP	BETULA NIGRA 'RIVER BIRCH
	CO	CAMPSIS CAROLINIANA 'ORANGE CRUSH' / ORANGEAM
	GP	GLEDITSIA TRIACANTHOS / GREEN GLORY HONEY LOCUST
	GC	GLEDITSIA TRIACANTHOS / GREEN GLORY HONEY LOCUST
	TA	TILIA AMERICANA / AMERICAN LINDEN

BUFFER CANOPY TREES		
SYMBOL		BOTANICAL/COMMON NAME
	CP	CELTIS OCCIDENTALIS 'PRAIRIE MARKET' / HACKBERRY
	LL	LIQUIDAMBAR LEVIGATA 'LUCY' / AMERICAN SWEET GUM
	QC	QUERCUS COCCINEA / SCARLET OAK
	QR	QUERCUS RUBRA / RED OAK

BUFFER EVERGREEN TREES		
SYMBOL		BOTANICAL/COMMON NAME
	AE	ABIES CONCOLOR / WHITE FIR
	PG	PICEA GLAUCA 'WHITE SPRUCE'
	PS	PICEA PUNGENS 'BABY BLUE' / BABY BLUE COLORADO SPRUCE

BUFFER UNDERSTORY TREES		
SYMBOL		BOTANICAL/COMMON NAME
	AP	AMELANCHIER X GRANDIFLORA 'APPLE' / APPLE SERVICEBERRY
	CA	CERCIS CANADENSIS 'ALLEY CAT' / EASTERN REDBUD
	CT	CORNUS 'STELLAR PINK' / LADY DOGWOOD
	HV	HAMAMELIS VIRGINIANA / COMMON WITCH-HAZEL

BUFFER SHRUBS		
SYMBOL		BOTANICAL/COMMON NAME
	BG	BERBERIS X 'CHERRY' / CHERRY MOUNTAIN BARBERRY
	CC	CORNUS RACEMOSA / GRAY DOGWOOD
	HI	HYDRANGEA ARBORESCENS 'INCREDIBALL' / HYDRANGEA
	IW	ILEX VERTICILLATA 'WINNEMAC' / WINTERBERRY
	RC	RHODODENDRON CATAWBIENSE 'CAPE LAVENDER' / RHODODENDRON

CLUBHOUSE FOUNDATION		
SYMBOL		BOTANICAL/COMMON NAME
	CR2	CORNUS X 'RUTGAN' / STELLAR PINK DOGWOOD
	HA	HYDRANGEA ARBORESCENS 'INVINCIBELLE' / HYDRANGEA
	I	ILEX CRENATA 'COMPACTA' / COMPACT JAPANESE
	RJ2	RHODODENDRON CATAWBIENSE 'CAPE LAVENDER' / RHODODENDRON

SITE ELEMENT SCREEN		
SYMBOL		BOTANICAL/COMMON NAME
	TO	THUJA OCCIDENTALIS 'AMERICAN ARBORVITAE'

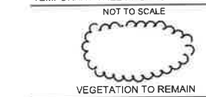
BASIN TREES		
SYMBOL		BOTANICAL/COMMON NAME
	AS	AMELANCHIER SPICATA / DOWNY SERVICEBERRY
	CT	CHAMAECYPARIS THYOIDES / ATLANTIC WHITE CYPRESS
	NS	NYSSA SYLVATICA / TUPELO
	TD	TAXODIUM / BALD CYPRESS

BASIN SHRUBS		
SYMBOL		BOTANICAL/COMMON NAME
	CS	CLETHRA ALNIFOLIA / BUBBY SPICE SUMMERSWEET
	CR	CORNUS SERICEA 'BAILEY'S RED TWIG' / DOGWOOD
	IC	ILEX GLABRA / INKBERRY HOLLY

BASIN SEED MIX		
SYMBOL		NAME
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TP TP TP

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STREET LIGHT LUMINAIRE
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LANDSCAPE NOTES:

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PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT PLAN TO BE RECORDED

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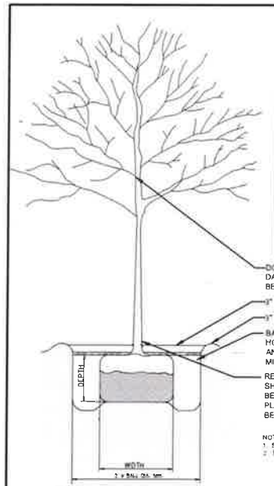
LANDSCAPE PLAN

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE:	SCALE: 1" = 30'
DESIGN:	DRAWN: EED
JOB NO.: 7662	FILE NAME: 7662-S-09-LAND
REF. NO.:	SD10.08
SHEET NO.:	63 OF 64

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TYPE 1 & 2 SHADE TREES	
CALIPER	MIN. B&B ROOTBALL
1/2 INCH	12 INCH
3/4 INCH	14 INCH
1 INCH	16 INCH
1 1/4 INCH	18 INCH
1 1/2 INCH	20 INCH
1 3/4 INCH	22 INCH
2 INCH	24 INCH
2 1/2 INCH	28 INCH
3 INCH	32 INCH
3 1/2 INCH	36 INCH
4 INCH	42 INCH
4 1/2 INCH	48 INCH
5 INCH	54 INCH
5 1/2 INCH	57 INCH
6 INCH	60 INCH
7 INCH	70 INCH
8 INCH	80 INCH



DO NOT CUT CENTRAL LEADER. TREES WITH DAMAGED/CUT/BROKEN CENTRAL LEADERS WILL BE REJECTED.

3" MULCH WITH NO MULCH AGAINST TRUNK

3" EARTH SAUCER

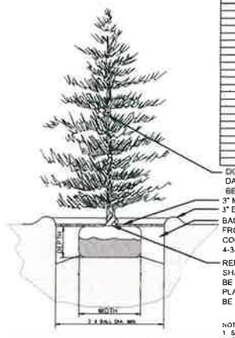
BACKFILL MIXTURE: 2 PARTS PARENT SOIL DUG FROM HOLE THAT HAS BEEN AMENDED WITH 1 PART COMPOST AND ESPOMA BIO-TONE STARTER PLUS 4-3-3 MIXED THOROUGHLY

REMOVE BURLAP FROM ENTIRE BASE. NO BURLAP SHALL BE SEEN ABOVE SOILS LINE. ROPE & TWINE TO BE REMOVED FROM PIT. CUT WIRE BASKET IN 4 PLACES. FOLD DOWN 8" INTO HOLE. TOP OF BALL TO BE LEVEL WITH GRADE. ROOT FLARE EXPOSED.

NOTE
1. SEE CHART FOR MINIMUM ROOTBALL DIAMENTER.
2. THE DEPTH OF ROOTBALL SHALL BE NO LESS THAN 80% ITS WIDTH

TREE PLANTING DETAIL
NOT TO SCALE

TYPE 1 (3.5' SPREADING GROUND COVERS & UPRIGHT)		TYPE 1&2 PYRAMIDAL SHRUBS & UPRIGHT		TYPE 3 COLUMNAR	
	MIN. POT SIZE	HEIGHT	MIN. POT SIZE	HEIGHT	MIN. POT SIZE
	1 GAL.	12"-15"	1 GAL.	12"-15"	1 GAL.
	2 GAL.	15"-18"	2 GAL.	15"-18"	2 GAL.
	3 GAL.	18"-24"	3 GAL.	18"-24"	3 GAL.
	5 GAL.	24"-30"	5 GAL.	24"-30"	5 GAL.
	7 GAL.	30"-36"	7 GAL.	30"-36"	7 GAL.
	10 GAL.	36"-42"	10 GAL.	36"-42"	10 GAL.
	15 GAL.	42"-48"	15 GAL.	42"-48"	15 GAL.
	20 GAL.	48"-54"	20 GAL.	48"-54"	20 GAL.
	25 GAL.	54"-60"	25 GAL.	54"-60"	25 GAL.
	30 GAL.	60"-72"	30 GAL.	60"-72"	30 GAL.
	45 GAL.	72"-84"	45 GAL.	72"-84"	45 GAL.
	65 GAL.	84"-96"	65 GAL.	84"-96"	65 GAL.
	95 GAL.	96"-108"	95 GAL.	96"-108"	95 GAL.
	150 GAL.	108"-120"	150 GAL.	108"-120"	150 GAL.



DO NOT CUT CENTRAL LEADER. TREES WITH DAMAGED/CUT/BROKEN CENTRAL LEADERS WILL BE REJECTED.

3" MULCH WITH NO MULCH AGAINST TRUNK

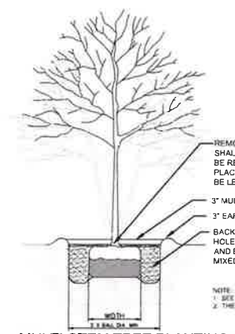
3" EARTH SAUCER

BACKFILL MIXTURE: 2 PARTS PARENT SOIL DUG FROM HOLE THAT HAS BEEN AMENDED WITH 1 PART COMPOST AND ESPOMA BIO-TONE STARTER PLUS 4-3-3 MIXED THOROUGHLY

REMOVE BURLAP FROM ENTIRE BASE. NO BURLAP SHALL BE SEEN ABOVE SOILS LINE. ROPE & TWINE TO BE REMOVED FROM PIT. CUT WIRE BASKET IN 4 PLACES. FOLD DOWN 8" INTO HOLE. TOP OF BALL TO BE LEVEL WITH GRADE. ROOT FLARE EXPOSED.

NOTE
1. SEE CHART FOR MINIMUM ROOTBALL DIAMENTER.
2. THE DEPTH OF ROOTBALL SHALL BE NO LESS THAN 80% ITS WIDTH

CONIFER PLANTING DETAIL
NOT TO SCALE



REMOVE BURLAP FROM ENTIRE BASE. NO BURLAP SHALL BE SEEN ABOVE SOILS LINE. ROPE & TWINE TO BE REMOVED FROM PIT. CUT WIRE BASKET IN 4 PLACES. FOLD DOWN 8" INTO HOLE. TOP OF BALL TO BE LEVEL WITH GRADE. ROOT FLARE EXPOSED.

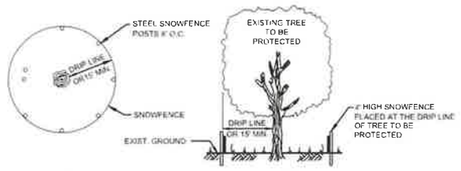
3" MULCH WITH NO MULCH AGAINST TRUNK

3" EARTH SAUCER

BACKFILL MIXTURE: 2 PARTS PARENT SOIL DUG FROM HOLE THAT HAS BEEN AMENDED WITH 1 PART COMPOST AND ESPOMA BIO-TONE STARTER PLUS 4-3-3 MIXED THOROUGHLY

NOTE:
1. SEE CHART FOR MINIMUM ROOTBALL DIAMENTER.
2. THE DEPTH OF ROOTBALL SHALL BE NO LESS THAN 80% ITS WIDTH

MULTI-STEM TREE PLANTING
NOT TO SCALE



PLAN SECTION

NOTES:
1. TREE PROTECTION SHALL BE PROVIDED FOR ANY AND ALL TREES TO BE PRESERVED DURING AND AFTER CONSTRUCTION. TREE PROTECTION SHALL BE LOCATED WITHIN 25 FEET OF ANY PROPOSED DISTURBANCE.
2. WHEN FENCING HAS BEEN INSTALLED, ITS SHALL BE INSPECTED AND APPROVED BY THE TOWNSHIP PRIOR TO COMMENCING CLEARING AND FURTHER CONSTRUCTION.
3. 4' HIGH SNOWFENCE TO BE REPLACED WITH APPROPRIATELY SIZED COMPOST FILTER SOCK WHERE INDICATED ON THE PLANS, OR WHERE SITE CONDITIONS ALLOW.
4. BOARDS SHALL NOT BE NAILED TO TREES DURING CONSTRUCTION.
5. ROOTS SHALL NOT BE CUT IN AN AREA INSIDE THE DRIP LINE OF THE TREE BRANCHES.
6. TREE LIMB REMOVAL, WHERE NECESSARY, WILL BE MADE IN LINE WITH THE TRUNK COLLAR OR MAIN LIMB COLLAR. CUTS SHALL NOT BE PAINTED, AND BE PERFORMED UNDER THE IMMEDIATE SUPERVISION OF A LICENSED NURSERYMAN.

TREE PROTECTION FENCE DETAIL
NOT TO SCALE

LANDSCAPE AND LIGHTING NOTES

LANDSCAPE NOTES:
1. IN THE EVENT THAT ANY DISCREPANCIES BETWEEN THE QUANTITIES OF PLANTS INDICATED ON THE PLANT SCHEDULE AND THOSE INDICATED ON THE PLAN, THE QUANTITIES INDICATED ON THE PLAN SHALL GOVERN.
2. NO SUBSTITUTIONS SHALL BE ACCEPTED, EXCEPT WITH THE WRITTEN PERMISSION OF THE LANDSCAPE ARCHITECT OR HIS AGENT.
3. THE LANDSCAPE ARCHITECT OR HIS AGENT SHALL BE THE SOLE JUDGE OF THE QUALITY AND ACCEPTABILITY OF THE MATERIALS. ALL REJECTED MATERIALS SHALL BE IMMEDIATELY REPLACED WITH ACCEPTABLE MATERIAL AT NO ADDITIONAL COST.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLANTING AT CORRECT GRADES AND ALIGNMENT.
5. THE TREES SHALL BE NURSERY STOCK COMPATIBLE WITH SOILS, EXISTING TREES AND CLIMATIC CONDITIONS IN THE SUBDIVISION. THEY SHALL BE SYMMETRICAL IN GROWTH, FREE OF INSECTS AND DISEASE AND SUITABLE FOR STREET PLANTINGS.
6. PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY; HAVE NORMAL GROWTH HABITS; WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE FROM DEFECTS AND INJURIES.
7. THE CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITION CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL.
8. QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH "AMERICAN STANDARDS FOR NURSERY STOCK" ANSI Z60 (MOST RECENT EDITION) AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
9. B & B PLANTS SHALL BE HANDLED FROM THE BOTTOM OF THE ROOT BALL ONLY. PLANTS WITH BROKEN, SPLIT OR DAMAGED ROOT BALLS SHALL BE REJECTED.
10. TREES SHALL BE LOCATED IN A MANNER WHICH WILL NOT OBSTRUCT ACCESS TO FIRE HYDRANT OR VISIBILITY OF STREET OR TRAFFIC SIGNS. NO TREES OR SHRUBS SHALL BE PLANTED IN A SIGHT TRIANGLE. NO TREES SHALL BE PLANTED IN ANY UTILITY OR MUNICIPAL EASEMENTS.
11. TREES SHALL BE STRUCTURALLY PRUNED, WATERED AND MULCHED ACCORDING TO ISA BEST MANAGEMENT PRACTICES UNTIL THEY ARE ESTABLISHED.
12. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITION ARE SUITABLE. SPRING PLANTING SEASON SHALL BE: MARCH 1ST TO JUNE 1ST. FALL PLANTING SEASON SHALL BE: AUGUST 15TH TO DECEMBER 15TH FOR EVERGREEN PLANTS AND SEPTEMBER 15TH TO DECEMBER 15TH, FOR DECIDUOUS PLANTS.
13. SET ALL PLANTS PLUMB AND STRAIGHT. SET AT SUCH LEVEL THAT, AFTER SETTLEMENT, A NORMAL OR NATURAL RELATIONSHIP TO THE CROWN OF THE PLANT WITH THE GROUND SURFACE WILL BE ESTABLISHED. LOCATE PLANTS IN THE CENTER OF THE PLANTING PIT.
14. THE LOCATION OF ALL PLANT MATERIAL IS DIAGRAMMATIC. FINAL LOCATION OF ALL PLANT MATERIAL SHALL BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE LANDSCAPE ARCHITECT OR HIS AGENT.
15. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY BEARING UPON THE PERFORMANCE OF THE WORK.
16. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALL FOR UTILITY LOCATIONS, IF NECESSARY AND NOTIFY ALL UTILITY COMPANIES PRIOR TO EXCAVATING PLANT PITS. PLANT LOCATIONS MAY BE ADJUSTED IN FIELD TO AVOID INTERFERENCE WITH UTILITIES.
17. SEE THE SOIL EROSION AND SEDIMENT CONTROL PLAN FOR ALL TURF SPECIFICATIONS.
18. INDIVIDUAL LOT LANDSCAPING SHALL BE PLANTED PRIOR TO THE ISSUANCE OF A USE AND OCCUPANCY PERMIT.
19. GUARANTY: ALL LANDSCAPING REQUIRED UNDER THIS SECTION AND THE PROVISIONS OF THE ZONING CODE SHALL BE GUARANTEED BY THE SUBDIVIDER/LAND DEVELOPER OR BUILDER FOR A PERIOD OF ONE YEAR AFTER THE TOWNSHIP HAS ISSUED AN OCCUPANCY PERMIT FOR THE PROPERTY. IT SHALL BE THE RESPONSIBILITY OF THE SUBDIVIDER/LAND DEVELOPER OR BUILDER TO PROTECT, MAINTAIN AND FEED (IF NECESSARY) BOTH NEWLY PLANTED AND EXISTING PLANT MATERIALS DURING THIS PERIOD TO ENSURE THAT PLANTS ARE ALIVE AND HEALTHY. AN INSPECTION SHALL BE MADE BY THE TOWNSHIP AT THE END OF THE ONE YEAR PERIOD. ANY PLANT MATERIALS UNACCEPTABLE AT THE TIME OF INSPECTION SHALL BE REPLACED IN ORDER TO SATISFY THE LANDSCAPING REQUIREMENTS OF THIS SECTION AND THE ZONING CODE.
20. TREE PROTECTION DURING CONSTRUCTION: TREE PROTECTION AREAS SHALL BE DELINEATED TO IMPLEMENT THE STANDARDS CONTAINED IN THE TOWNSHIP ZONING ORDINANCE AND THIS ORDINANCE REGARDING PRESERVATION OF TREES, WOODLANDS, AND FORESTS DURING THE DEVELOPMENT AND CONSTRUCTION PROCESS.
21. TREE PROTECTION AREA: AN AREA THAT IS RADIAL TO THE TRUNK OF A TREE. THE TREE PROTECTION AREA SHALL BE 15 FEET FROM THE TRUNK OF THE TREE TO BE RETAINED, OR THE DISTANCE FROM THE TRUNK TO THE DRIP LINE (THE LINE MARKING THE OUTER EDGE OF THE BRANCHES OF THE TREE) WHICHEVER IS GREATER. WHERE THERE IS A GROUP OF TREES OR WOODLANDS, THE TREE PROTECTION AREA SHALL BE THE AGGREGATE OF THE PROTECTION AREAS FOR THE INDIVIDUAL TREES.

LIGHTING NOTES:
22. POST APPROVAL ALTERATIONS TO LIGHTING PLANS, OR INTENDED SUBSTITUTIONS FOR APPROVED LIGHTING EQUIPMENT, SHALL BE SUBMITTED TO TOWNSHIP FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
23. TOWNSHIP RESERVES THE RIGHT TO CONDUCT A POST-INSPECTION OF LIGHTING TO VERIFY COMPLIANCE WITH APPROVED-PLAN COMMITMENTS, AND IF APPROPRIATE, TO REQUIRE REMEDIAL ACTION AT NO EXPENSE TO TOWNSHIP.

BASIN SEED MIX

BASIN SIDE SLOPE
(±176,335 SF) ERNST SEED MIX 183 (OR APPROVED EQUAL)
20 LB PER ACRE OR 1/2 LB PER 1,000 SQ

BASIN BOTTOM - LOW MAINTENANCE
(±26,265 SF) ERNST SEED MIX 126 (OR APPROVED EQUAL)
20-40 LB PER ACRE OR 1LB PER 1,000 SF)

DETENTION BASIN BOTTOM
(±32,925 SF) ERNST SEED MIX 122 (OR APPROVED EQUAL)
20 LB PER ACRE OR 1/2 LB PER 1,000 SQ

NLS LIGHTING, LLC CAL-1 PEDESTRIAN LUMINARIES. RSAP POLE, AND DPB-500 POLE BASE (OR APPROVED EQUAL)

TOP 3



SHADE 5

CAL-1	TP3	S5	13	48L	53	30K8	UNV	AM	BLK	
Cat #	Top	Shade	Light Dist	# of LEDs	Milliamps	Kelvin	Volts	Mounting	Color	Options
CAL-1	TP1 / TP2 / TP3	S1 / S2 / S3 / S4 / S5 / S6 / S7 / S8	T2 / T3 / T4 / T5	32L / 48L / 64L	350 (35) / 530 (53) / 700 (7) / 1000 (1)	27K (2700K) / 30K (3000K) / 35K (3500K) / 40K (4000K) / 50K (5000K)	120-277 (UNV) / 347-480 (HV)	AM / WM	BRZ / WHT / SWT / DVB / BLK / SBK / GPH / GRY / CS	MSS / BS / PE / PCA / PER / FSP-4 / FSP-30 / FSP-40 / FS-40 / FL

Notes:
1. 4K, 6K: Opt.
2. Consult Factory for Lead Time. Consult Factory for 7/3 CRI Requests.
3. For Arm Mount (Plate select at Architectural Arm (AA) separately
4. Universal Voltage 120-277
5. Only compatible with Arm Mount Arch Arms: 2.3.3-11-1218
6. 4K option only, using IR Trained Nitrogen Optics
7. 3000K or warmer Must be selected to meet Ambassador Dark Sky Association certification.
8. For Wall Mount, please select an Architectural Arm (AA) separately

ALL STREET LIGHTS SHALL HAVE MOTION CONTROLLED DYNADIMMERS AND SHALL BE PROGRAMMED TO DIM LIGHTING TO 25% BETWEEN THE HOURS OF 11PM TO 6AM. FULL LIGHT OUTPUT MODE WHEN MOTION DETECTION OCCURS, RETURNING TO 25% OUTPUT AFTER 5 MINUTES OF NO MOTION. (OR TOWNSHIP APPROVED EQUAL)

STREET LIGHT DETAIL (QTY:11)
NOT TO SCALE

NLS LIGHTING. DPB-500-4R-BLK POLE BASE (OR APPROVED EQUAL)



LIGHT POLE BASE DETAIL
NOT TO SCALE

STREET TREE PLANT SCHEDULE

2402.B.2.c. STREET TREES = 9,195 LF /40 = 230 TREES REQUIRED
146-39.B.(3)[2] >10 PARKING SPACES = 1 TREE REQUIRED

STREET TREES	QUANTITY	BOTANICAL NAME	COMMON NAME	CONT.	SIZE
AR	50	ACER RUBRUM 'AUTUMN RED'	AUTUMN RED MAPLE	B & B	2" CAL.
BR	21	BETULA NIGRA	RIVER BIRCH	B & B	10' MIN. HT.
CO	41	CARPINUS CAROLINIANA 'ORANGE CRUSH'	ORANGE CRUSH AMERICAN HORNBEAM	B & B	2" CAL.
GG	40	GLEDITSIA TRIACANTHOS 'GREEN GLORY'	GREEN GLORY HONEY LOCUST	B & B	2" CAL.
QP	47	QUERCUS PHELLOS	WILLOW OAK	B & B	2" CAL.
TA	32	TILIA AMERICANA	AMERICAN LINDEN	B & B	2" CAL.
TOTAL REQUIRED	231				
TOTAL PROPOSED	231				

40' MEDIUM INTENSITY BUFFER OPTION "A" PLANT SCHEDULE

2403.B.4.a.[2][A] BUFFERS AND SCREENS / MEDIUM INTENSITY BUFFER: PER 100 LF = 3,480 LF
SHADE 35.0 (2 TREES) = 70 TREES, FLOWERING 35.0 (2 TREES) = 70 TREES,
EVERGREEN 35.0 (5 TREES) = 175 TREES, SHRUBS 35.0 (5 SHRUBS) = 175 SHRUBS

BUFFER CANOPY TREES	QUANTITY	BOTANICAL NAME	COMMON NAME	CONT.	SIZE
CP	18	CELTIS OCCIDENTALIS 'PRAIRIE HARVEST'	PRAIRIE HARVEST HACKBERRY	B & B	2" CAL.
LS	15	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	B & B	2" CAL.
QA	17	QUERCUS ALBA	WHITE OAK	B & B	2" CAL.
QC	20	QUERCUS COCCINEA	SCARLET OAK	B & B	2" CAL.
TOTAL REQUIRED	70				
TOTAL PROPOSED	70				
BUFFER EVERGREEN TREES	QUANTITY	BOTANICAL NAME	COMMON NAME	CONT.	SIZE
AC	78	ABIES CONCOLOR	WHITE FIR	B & B	8' MIN. HT.
IA	30	ILEX OPACA	AMERICAN HOLLY	B & B	8' MIN. HT.
JJ	67	JUNIPERUS COMMUNIS	COMMON JUNIPER	B & B	8' MIN. HT.
TOTAL REQUIRED	175				
TOTAL PROPOSED	175				
BUFFER UNDERSTORY TREES	QUANTITY	BOTANICAL NAME	COMMON NAME	CONT.	SIZE
AP	20	AMELANCHIER X GRANDIFLORA 'PRINCESS DIANA'	PRINCESS DIANA APPLE SERVICEBERRY	B & B	1 1/2" MIN. CAL.
CA	17	CERCIS CANADENSIS 'ALLEY CAT'	ALLEY CAT EASTERN REDBUD	B & B	1 1/2" MIN. CAL.
CF	17	CORNUS FLORIDA 'FIRST LADY'	FIRST LADY DOGWOOD	B & B	1 1/2" MIN. CAL.
HV	16	HAMAMELIS VIRGINIANA	COMMON WITCH HAZEL	B & B	1 1/2" MIN. CAL.
TOTAL REQUIRED	70				
TOTAL PROPOSED	70				
BUFFER SHRUBS	QUANTITY	BOTANICAL NAME	COMMON NAME	CONT.	SIZE
BG	39	BUXUS X 'GREEN MOUNTAIN'	GREEN MOUNTAIN BOXWOOD	CONT.	24" MIN HT.
CG	36	CORNUS RACEMOSA	GRAY DOGWOOD	CONT.	24" MIN HT.
HI	30	HYDRANGEA ARBORESCENS 'KOLPINBEL'	PINKERELLA™ HYDRANGEA	CONT.	24" MIN HT.
IM	35	ITEA VIRGINICA 'MORNING STAR'	MORNING STAR SWEETSPIRE	CONT.	24" MIN HT.
RC	35	RHODODENDRON CATAWBIENSE 'CAPISTRANO'	YELLOW FLOWERED RHODODENDRON	CONT.	24" MIN HT.
TOTAL REQUIRED	175				
TOTAL PROPOSED	175				

CLUBHOUSE FOUNDATION PLANT SCHEDULE

CLUBHOUSE FOUNDATION	QUANTITY	BOTANICAL NAME	COMMON NAME	CONT.	SIZE
CR2	6	CORNUS X 'RUTGAN'	STELLAR PINK® DOGWOOD	B & B	1 1/2" MIN. CAL.
HA	18	HYDRANGEA ARBORESCENS 'ANNABELLE'	ANNABELLE HYDRANGEA	CONT.	24" MIN HT.
II	37	ILEX GLABRA 'COMPACTA'	COMPACT INKBERRY	CONT.	24" MIN HT.
RC2	4	RHODODENDRON CATAWBIENSE 'CAPISTRANO'	YELLOW FLOWERED RHODODENDRON	CONT.	24" MIN HT.
TOTAL PROPOSED	65				

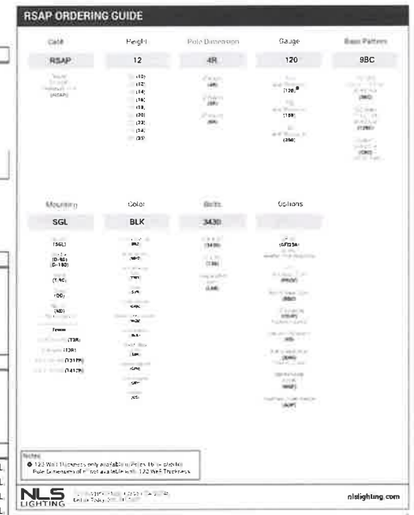
SITE ELEMENT SCREEN PLANT SCHEDULE

SITE ELEMENT SCREEN	QUANTITY	BOTANICAL NAME	COMMON NAME	CONT.	SIZE
TO	56	THUJA OCCIDENTALIS	AMERICAN ARBORVITAE	B & B	6' MIN. HT

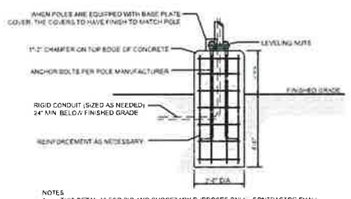
BASIN PLANT SCHEDULE

BASIN TREES	QUANTITY	BOTANICAL NAME	COMMON NAME	CONT.	SIZE
DS	14	AMELANCHIER ARBOREA	DOWNY SERVICEBERRY	B & B	2" CAL.
CT	15	CHAMAECYPARIS THYOIDES	ATLANTIC WHITE CYPRESS	B & B	8' MIN. HT.
NS	9	NYSSA SYLVATICA	TUPELO	B & B	2" CAL.
TD	18	TAXODIUM DISTICHUM	BALD CYPRESS	B & B	8' MIN. HT.
TOTAL PROPOSED	56				
BASIN SHRUBS	QUANTITY	BOTANICAL NAME	COMMON NAME	CONT.	SIZE
CR	35	CLETHRA ALNIFOLIA 'RUBY SPICE'	RUBY SPICE SUMMERSWEET	CONT.	24" MIN HT.
CB	29	CORNUS SERICEA 'BAILEYI'	BAYLEY'S RED TWIG DOGWOOD	CONT.	24" MIN HT.
IG	5	ILEX GLABRA	INKBERRY HOLLY	CONT.	24" MIN HT.
TOTAL PROPOSED	69				

RSAP ORDERING GUIDE

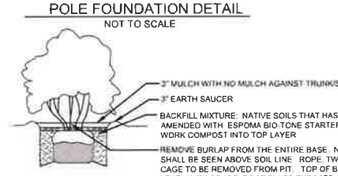


LIGHT POLE ORDER DETAILS
NOT TO SCALE



NOTES
1. THIS DETAIL IS FOR BID AND BUDGETARY PURPOSES ONLY. CONTRACTOR SHALL ENSURE DESIGN IS PREPARED BY A QUALIFIED STRUCTURAL ENGINEER CONSIDERING LIGHTING MANUFACTURER REQUIREMENTS, LOCAL WIND LOADS, SITE SPECIFIC SOIL PARAMETERS
2. ALL REBAR SHALL HAVE A YIELD OF 60 ksi, AND MAINTAIN A 3" MIN. CLEARANCE FROM SURFACES
3. FOUNDATION HEIGHT SHALL BE 6" ABOVE GRADE EXCEPT WHEN ADJACENT TO HEAD-IN PARKING WHERE IT SHALL BE 30" ABOVE GRADE.

POLE FOUNDATION DETAIL
NOT TO SCALE



NOTE
SHRUB ROOTBALLS SHALL BE TYPICALLY 12" WIDE. THE DEPTH OF THE ROOTBALL SHALL BE NO LESS THAN 80% ITS WIDTH.

SHRUB PLANTING
NOT TO SCALE

ESE CONSULTANTS
ENGINEERING • PLANNING • SURVEYING • ENVIRONMENTAL
ESE Consultants, Inc.
1140 Virginia Drive • Fort Washington, PA 19034
T: 215 914-2050

REV	DATE	DESCRIPTION	BY
1	10/31/23	REVISIONS PER TOWNSHIP COMMENTS	ESE
2	7/24/23	TOWNSHIP REVIEW LETTER	ESE

PRELIMINARY MAJOR SUBDIVISION AND LAND DEVELOPMENT-NOT TO BE RECORDED

APPLICATION NUMBER 10-23-01

LANDSCAPE DETAILS

SISTERS OF ST. BASIL
ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE:	SCALE: AS NOTED
DESIGN:	DRAWN: EED
JOB NO.: 7652	FILE NAME: 7652-5-09-DET-LAND
REF. NO.:	SD10.09
SHEET NO.:	64 OF 64

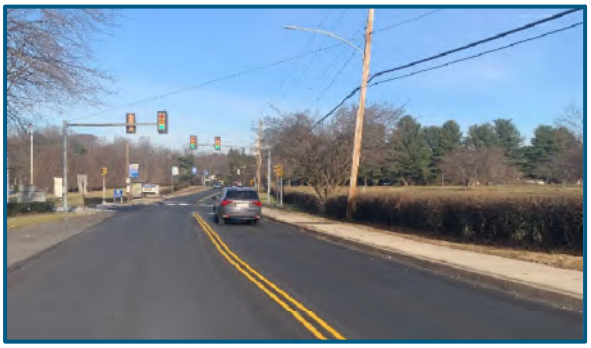
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McMAHON
A BOWMAN COMPANY

Transportation Impact Assessment for the St. Basil Redevelopment

Abington Township, Montgomery County, PA





COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SANDY A. KOZA
ENGINEER
PE059911

Sandy A. Koza, P.E., PTOE
PA PE License Number PE059911

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215.283.9444

Prepared for
Toll Brothers

February 10, 2023
Last revised March 13, 2023

McMahon Project Number 921B20

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Executive Summary

Toll Brothers proposes to redevelop the former St. Basil Academy located along Fox Chase Road across from Manor College in Abington Township, Montgomery County, Pennsylvania (see **Figure 1**). The redevelopment of the property is associated with a proposed Zoning Overlay District and Text Amendment, which was approved by Abington Township. According to the latest redeveloped site plan prepared by ESE Planning, the existing St. Basil Academy is proposed to be redeveloped to provide approximately 150 age-restricted carriage homes. Access to the new residential subdivision would be provide via a full-movement access (Road A), which would be located along Fox Chase Road directly opposite the Manor College Access. An emergency only access is also proposed along Fox Chase Road located approximately 480 feet to the north of the signalized access. The two existing St. Basil's Academy accesses will then be removed. A schematic of the site plan is illustrated in **Figure 2.**

As the Township does not have specific requirements related to the preparation of a traffic impact studies, the scope of the study generally follows PennDOT's guidelines outlined in their *Policies and Procedures for Transportation Impact Studies,* as documented in Appendix A of PennDOT *Publication 282*. The purpose of this study is to evaluate the traffic impacts associated with the redevelopment of the parcel based upon the approved Zoning Overlay District and Text Amendment. The scope of this study includes an evaluation of the existing weekday morning and weekday afternoon peak hours, as well as the future 2029 build-out year, both without and with the redevelopment of the parcel at the following study intersections:

- Fox Chase Road and Forrest Avenue;
- Fox Chase Road and Manor College/Proposed Local Road (Road A); and
- Fox Chase Road (S.R. 2019) and Cedar Road (S.R. 2058).

Based upon data compiled by the Institute of Transportation Engineers (ITE) in their publication entitled, *Trip Generation Manual, 11th Edition*, the proposed Zoning Overlay District and Text Amendment to permit the development of approximately 150 age-restricted carriage homes on the former St. Basil Academy parcel will generate approximately 836 total trips (entering and exiting) on a typical weekday, of which 53 and 61 total trips (entering and exiting) would be generated during the weekday morning and afternoon commuter peak hours, respectively. During a typical weekday, the school at its peak enrollment generated more trips than the proposed age-restricted carriage homes. The proposed age-restricted carriage homes also result in less peak hour trips during both the weekday morning and afternoon commuter peak period compared to the former school use at its peak enrollment.

Based upon the traffic evaluation, no off-site mitigation measures are recommended as the two signalized intersections along Fox Chase Road with Forrest Avenue and Cedar Road will both continue to operate at acceptable levels of service overall (LOS C or better) during both peak hours with the lane groups also operating acceptably (LOS D or better).

As the site access will be located directly opposite the Manor College Access along Fox Chase Road, it would then form the fourth leg of the traffic control signal. The following access improvements are recommended, which will require the review and approval of PennDOT and Abington Township:

- Provide one ingress lane and one egress lane for the access, which may be separated by a landscaped median,
- Relocate and replace any impacted traffic signal equipment due to the inclusion of the new access road,

- Provide pedestrian equipment and pushbuttons to/from all corners of the signalized intersection of Fox Chase Road (SR 2019) with Manor College Access and the proposed site access (Road A), and
- Provide ADA compliant ramps and/or landing areas to/from northwest and northeast quadrants of the intersection as a result of the installation of the site access.

The proposed emergency access will also require review and coordination with Abington Township's emergency service providers. Since the former parcel use was a school, it is recommended that any associated wayfinding signage for the school be removed and that the school speed limit signing, flashing devices, and other associated school signage along Fox Chase Road be removed in conjunction with the redevelopment of the parcel.

The traffic analyses contained herein reveal that efficient access to and from the proposed redevelopment can be provided, and furthermore, site-generated traffic can be accommodated at the study area intersections.

Existing Transportation Settings and Conditions

The former St. Basil Academy, which is proposed to be redeveloped based upon a proposed Zoning Overlay District and Text Amendment, is located along Fox Chase Road across from Manor College in Abington Township, Montgomery County, Pennsylvania (see **Figure 1**). The existing roadways and intersections in the vicinity of the site, which comprise the study area roadway network, are described in this section.

Roadway Characteristics

The study area roadway network and characteristics are summarized below in **Table 1**.

Table 1. Existing Roadway Characteristics

Roadway Name (Jurisdiction)	Average Daily Traffic Volumes (vehicles per day)	Roadway Classification		Travel Lanes (per direction)	Posted Speed Limit (mph)
		PennDOT Typology (1)	PennDOT (2) / Township		
Fox Chase Road (Township)	4,324 (3)	Community Collector	Primary Street	1	35
Fox Chase Road (S.R. 2019 – State)	6,112 (3)	Community Collector	Urban, Major Collector	1	35
Forrest Avenue (Township)	n/a	Local	Local	1	25
Cedar Road (S.R. 2058 – State)	6,930 (3)	Community Collector	Urban, Major Collector	1	35

(1) Based on Table 1.2 – Roadway Typologies in the PennDOT *Publication 13M, Design Manual Part 2*.
(2) Based on the roadway classifications provided on PennDOT's Traffic Information Repository (TIRe) website.
(3) Based on traffic data from the Delaware Valley Regional Planning Commission website from 2018 or 2019 when St. Basil's Academy was operational.

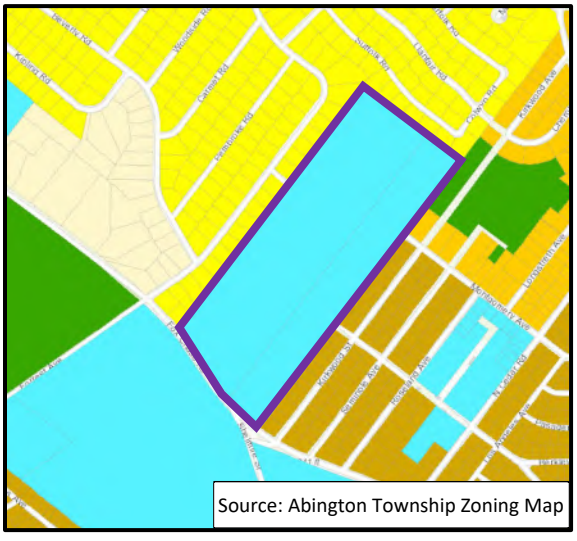
The following key intersections in the vicinity of the site comprise the study area:

- Fox Chase Road and Forrest Avenue;
- Fox Chase Road and Manor College/Proposed Local Road (Road A); and
- Fox Chase Road (S.R. 2019) and Cedar Road (S.R. 2058).

The existing characteristics of the study intersections, including photographs, field sketches, and signal permit plans are provided in **Appendix A**.

Land Use Context

The proposed development is currently located in Abington Township, within the CS – Community Service zoning district as seen in the Abington Township Zoning Map illustrated in **Exhibit A**. The proposed redevelopment of the parcel to provide for the age-restricted carriage homes is based upon the recently approved Zoning Overlay District and Text Amendment.



Source: Abington Township Zoning Map

Pedestrian, Bicycle, and Transit Facilities

Under current conditions, there is no sidewalk provided along the site's Fox Chase Road (SR 2019) frontage from where it terminates to the south across from the signalized access to Manor College and to the northern full-movement access for St. Basil's Academy. On the opposite side of Fox Chase Road, the sidewalk terminates on the north side of the signalized access for Manor College and a paved asphalt trail is then provided. With the redevelopment of the site, ADA compliant curb ramps and crosswalks will be provided at the signalized access, as well as pedestrian pushbuttons and equipment for all corners.

SEPTA Bus Route 28 currently provide provides services between Torresdale-Cottman to Fern Rock Transportation Center and includes a dedicated route along Fox Chase Road (SR 2019) from Forrest Avenue to Cedar Road. There is currently a box stop with a shelter provided on the west side of Fox Chase Road (SR 2019), to the north of the signalized Manor College access and on the east side of Fox Chase Road (SR 2019), there is a landing area provided adjacent to a utility pole that is to the south of the former main access for St. Basil's Academy.

There are currently no dedicated on-road bicycle lanes provided along Fox Chase Road or off-road paths provided along the site frontage. A review of the *DRAFT Township of Abington Master Bicycle Plan*, dated September 2015, does indicate future connections in the area provided along Forrest Avenue, as well as Fox Chase Road from Manor College to Cedar Road, which would most likely be an off-road path in this area.

Traffic Count Data

Daily traffic counts were obtained from the Delaware Valley Regional Planning Commission Website, which is summarized in Table 1. Copies of the daily traffic data is provided in **Appendix B**. Turning movement traffic counts, were conducted in January 2022 during the weekday morning (7:00 AM to 9:00 AM) and weekday afternoon (4:00 PM to 6:00 PM) peak periods when the Manor College and area schools were in session. However, it is noted that St. Basil's Academy had closed by this time. The results of these traffic counts are tabulated by 15-minute intervals in **Appendix C**. The four highest consecutive 15-minute peak intervals during these traffic count periods constitute the peak hours that are the basis of this traffic analysis.

Traffic volumes along Fox Chase Road were conservatively balanced between the Manor College Access and Forrest Avenue, resulting in a net zero difference in volumes between these two intersections. The resultant peak hour traffic volumes are depicted in **Figure 3A** for the weekday morning and weekday afternoon peak hours. These traffic volumes were then analyzed to determine the existing operating conditions, and the results are shown on **Figure 3B.** Specific details regarding the analysis results and traffic operations are provided later in this report.

Crash Summary

Reportable crash data was obtained from PennDOT for the most recent available five-year period, from January 1, 2017 to December 31, 2021. A reportable crash is one in which an injury occurred and/or a vehicle was towed from the scene. Typically, PennDOT considers five reportable, correctable crashes within a 12-month period a threshold value which would result in further analysis to determine if safety improvements should be provided.

Table 2 below summarizes the frequency of the crashes within the study area, while **Table 3** summarizes the types of crashes. Based upon a review of the crash data, there were no discernable crash patterns.

Table 2. Reportable Crash Summary by Year

Location along Fox Chase Road	Crash Frequency Per Year					Total	Average Per Year
	2017	2018	2019	2020	2021		
Intersection with Forrest Avenue	0	1	0	0	0	1	0.3
Site Frontage	1	0	0	0	0	1	0.3
Intersection with Manor College Access	0	0	0	0	0	0	0.0
Intersection with Cedar Road (S.R. 2058)	2	2	1	2	0	7	1.8
Total	**3**	**3**	**1**	**2**	**0**	**9**	**2.1**

Table 3. Reportable Crash Summary by Type

Location along Fox Chase Road	Crash Type			Total
	Angle	Rear-End	Pedestrian	
Intersection with Forrest Avenue	0	0	1	1
Site Frontage	0	1	0	1
Intersection with Manor College Access	0	0	0	0
Intersection with Cedar Road (S.R. 2058)	6	1	0	7
Total	**6**	**2**	**1**	**9**

At the signalized intersection of at Cedar Road (S.R. 2058) and Fox Chase Road, there was a total of 7 reportable crashes. The majority of crashes were angle crashes (86% or 6 out of 7) and rear end crashes (14% or 1 out of 7). Three of the six angle crashes were caused by the driver running a red light, two had unknown causes, and one was caused by an improper or careless turn.

Site Characteristics

This section presents the details regarding the proposed site, including the incremental increase in traffic volumes generated by the development during the peak hours and the distribution of site traffic to the study area roadways, as well as the proposed site access configuration, traffic control, and sight distance requirements. A trip generation comparison to the former St. Basil Academy and the proposed redevelopment is provided.

Trip Generation

The site parcel currently contains the former St. Basil Academy, which was a private school for girls in grades 9 through 12 that closed following the end of the 2020 to 2021 school year on June 21, 2021. According to an article published by CatholicPhilly.com, the school enrollment was as high as 400 students, but had declined to 226 students in the 2020 to 2021 school year. The school had classes from 8:00 AM to 2:55 PM, with the doors opening as early as 7:00 AM. During the 2020 to 2021 school year, the school operated under a hybrid model due to the COVID-19 restrictions. According to the school's website, in-person classes were held on Mondays and Wednesday for grades 9 and 10 and on Tuesdays and Thursdays for grades 11 and 12 with Friday classes alternating between in-person and virtual classes for the two groups.

Typical weekday daily, commuter weekday morning (7:00 AM to 9:00 AM), and weekday afternoon (4:00 PM to 6:00 PM) trip generation characteristics have been estimated for the former private school based upon the peak and current student enrollment, as well as the proposed redevelopment to provide up to 150 age-restricted carriage homes. The trip generation characteristics are based upon data compiled by the Institute of Transportation Engineers (ITE) in their publication entitled, *Trip Generation Manual, 11th Edition*.

Table 4 provides a summary of the vehicular trip generation characteristics for the former school and the proposed age-restricted carriage homes that are permitted within the zoning overlay district and text amendment, which was approved by the township. During a typical weekday, the school at its peak enrollment generated more trips than the proposed age-restricted carriage homes. The proposed age-restricted carriage homes also result in less peak hour trips during both the weekday morning and afternoon commuter peak period compared to the former school use at its peak enrollment.

Trip Distribution and Assignment

Site-generated traffic will approach and depart the site via different routes depending on factors such as the existing traffic patterns, location of major roadways, and the location of the development's site access. The distribution percentages for the anticipated directions of approach and departure are illustrated in **Figure 4A**, based upon a typical cordon-area of the study intersections. Application of the percentages in Figure 4A to the trips associated with the proposed age-restricted carriage homes from Table 4, provides an estimate of the site traffic to be added to the study area, which is then illustrated in **Figure 4B** for the peak hours.

Table 4 –Vehicular Trip Generation Comparison [1]

Land Use	Size/ Variable	Daily	Weekday Morning Peak Hour (7:00 AM to 9:00 AM)			Weekday Afternoon Peak Hour (4:00 PM to 6:00 PM)		
			In	Out	Total	In	Out	Total
Existing School [2]								
Peak Enrollment	400 students	868	156	108	264	30	46	76
2020 to 2021 Enrollment	226 students	490	88	61	149	17	26	43
Zoning Overlay District & Text Amendment								
Proposed Age-Restricted Carriage Homes [3]	**150 d.u.**	**836**	**17**	**36**	**53**	**37**	**24**	**61**

(1) Based on the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 11th Edition.*
(2) Based on the rates for ITE Land Use Code 534: Private High School.
(3) Based on the equations for ITE Land Use Code 251: Senior Adult Housing – Single-Family.

School Signage and Equipment

With the redevelopment of the site, a thorough review of area signage will need to be conducted to remove all traffic control devices, including any school crossing and speed limit devices from the area, as well as any associated wayfinding signs for the former school. At a minimum, there is an overhead mast-arm with a flashing beacon provided for vehicles traveling north that is located on the west side of Fox Chase Road to the south of Kirkwood Avenue that will need to be removed and for vehicles traveling south, there is an overhead mast-arm with a flashing beacon located on the east side of Fox Chase Road, to the north of the St. Basil's Academy northern access.

Site Access Configuration and Traffic Control

The existing St. Basil's Academy has one main vehicular access located along Fox Chase Road (SR 2019) approximately 410 feet south of Forrest Avenue and a second access located 265 feet south of the main access, which has gates and bollards that restrict vehicles from utilizing the access. With the redevelopment of the site, the existing accesses would be closed and a new full-movement access (Road A) would be provided along Fox Chase Road directly opposite the access for Manor College, forming the fourth leg of the intersection, which would be designed to provide a landscaped median separating the single ingress lane and single egress lane for the access. An emergency only access is also proposed along Fox Chase Road located approximately 480 feet to the north of the signalized access.

The need for separate left- and/or right-turn lanes at the signalized intersection of Fox Chase Road with Manor College Access/Proposed Local Road (Road A) was based on the current PennDOT guidelines in accordance with *Publication 46, Chapter 11 – Traffic Studies*. **Table 5** summarizes the results of the auxiliary turn lane warrants for the local road intersection along Fox Chase Road. The various warrant/guideline analysis worksheets are contained in **Appendix D**.

Table 5 – Turn Lane Warrant Summary for the Intersection of Fox Chase Road with Manor College Access/Proposed Local Road (Road A)

Approach and Movement	Warrant Satisfied? (1)	Required Lane Length (1)	Proposed Lane Length (feet)
Southbound Left	No	Not Required	n/a
Northbound Right	No	Not Required	n/a
Northbound Left	No	Not Required	n/a

As the site access will be located directly opposite the Manor College Access along Fox Chase Road, the left-turn conflict factors were also reviewed for all of the approaches to determine if separate left-turn phasing should be provided for any of the approaches. The worksheet for this evaluation is also contained in Appendix D, which does not indicate the need for left-turn phasing on any of the approaches. The following access improvements are recommended, which will require the review and approval of PennDOT and Abington Township:

- Provide one ingress lane and one egress lane for the access, which may be separated by a landscaped median,
- Relocate and replace any impacted traffic signal equipment due to the inclusion of the new access road,
- Provide pedestrian equipment and pushbuttons to/from all corners of the signalized intersection of Fox Chase Road (SR 2019) with Manor College Access and the proposed site access (Road A), and
- Provide ADA compliant ramps and/or landing areas to/from northwest and northeast quadrants of the intersection as a result of the installation of the site access.

Sight Distance

An evaluation of the existing available sight distance at the proposed Fox Chase Road access was performed to determine if safe sight distances are available, which would allow for right-turn on red movements to be made at the signalized access. Generally, the prevailing travel speed, roadway grades and profiles, and number of travel lanes play a role in determining if safe sight distances are available.

Table 6 provides a summary of the existing available distance for egress vehicles looking to the left, which does meet the minimum required sight distance to permit right turn on red movements according to *Exhibit 4-22 of PennDOT Publication 46*. This distance will be confirmed during the highway occupancy permit phase of the project when the signal is designed. The distances for a left-turn vehicle looking ahead and for a vehicle approaching from the rear are also adequate based upon the minimum intersection sight distance criteria from the American Association of State Highway and Transportation Officials (AASHTO) in their publication entitled *A Policy on Geometric Design of Highways and Streets.*

Table 6 - Sight Distance Evaluation
Proposed Fox Chase Road Access (Road A)

Movement	Direction	Posted Speed (mph)	Approximate Grade	Minimum Required Sight Distance (feet)	Available Sight Distance (feet)	Meets Criteria?
Exiting	**Looking Left**	35	+2%	247 (1)	253 (3)	Yes
Left-Turn Entering	**Looking Ahead**	35	+2%	285 (2)	441	Yes
	From the Rear	35	-2%	285 (2)	470	Yes

(1) Meets PennDOT's minimum sight distance criteria from *Exhibit 4-22 of Publication* 46 to allow for right-turn on red movements based on the posted speed limit and a grade of 0%. .

(2) Based on Table 9-17 for a left-turn from the major road from AASHTO's *A Policy on Geometric Design of Highways and Streets.* PennDOT's desirable sight distance for a left-turning vehicle entering from a main highway is 300 feet based *on Table 5 of Title 67 Chapter 441* for a travel speed of 35 miles per hour, which is also met.

(3) Requires removal of existing vegetation along site frontage.

A clear sight distance triangle will also be maintained for the proposed access in accordance with *Section 146-25.F. of the SALDO*. The triangle will be measured along the center line a minimum of 65 feet from the point of intersection and no vegetation or other obstruction will be provided in this area, with the exception of the traffic signal equipment. The sight distance will be further evaluated during the land development phase of the project with the Township, as well as the during the traffic signal design phase with PennDOT.

Future Traffic Conditions

This section presents the future build-out year 2029 traffic conditions, both without and with the proposed redevelopment of the St. Basil Academy based upon the proposed zoning overlay district and text amendment to allow for the age-restricted carriage homes, which are anticipated to be constructed and occupied by 2029. The future 2029 build-out year without-development traffic volumes were estimated by increasing the existing 2022 traffic volumes to account for regional growth, as described below. The incremental increase due to the anticipated trip generation for the site was then added, resulting in the future 2029 build-out year with-development traffic volumes.

Regional Traffic Growth

To account for regional traffic growth, the existing traffic volumes were increased by an annual traffic growth rate of 0.33 percent per year, which was compounded for three years to 2029 or 2.33 percent total. This growth rate is consistent with the traffic growth rate recommended by the PennDOT Bureau of Planning and Research's *Growth Factors for August 2021 to July 2022* for similar urban, non-interstate roadways in Montgomery County. It is noted the recent growth factors for August 2022 to July 2023 is 0.27 percent per year. There are no other known developments within Abington Township in this area of the Township, which would impact the study area intersections.

Planned Roadway Improvements

There are no known roadway improvement projects planned by PennDOT, the County, or the Township that would impact the operations of the study area intersections.

Future Traffic Volumes

The total background growth traffic volumes were then added to the existing 2022 traffic volumes, resulting in the future 2029 without-development traffic volumes. Next, the site generated traffic volumes, as shown in Figure 4B, were added to the future 2029 without-development traffic volumes, resulting in the future 2029 with-development traffic volumes.

The resultant future 2029 peak hour traffic volumes without development are illustrated in **Figure 5A,** and the future 2029 with-development peak hour traffic volumes are illustrated in **Figures 5B** for the weekday morning and weekday afternoon. These traffic volumes were then analyzed to determine the future 2029 without and with development traffic operating conditions, and the results of this analysis are shown in **Figures 5C and 5D.** Detailed traffic volume projection worksheets are provided in **Appendix E.**

Capacity/Level-of-Service Results

The peak hour traffic volumes were analyzed to determine the existing and future traffic operating conditions, both without and with the proposed age-restricted carriage homes, in accordance with the standard techniques contained in the current *Highway Capacity Manual (6th Edition)* for signalized intersections. The HCM 6th Edition Methodology within Synchro 10.3 (build 151, rev. 0) traffic analysis software was utilized in the traffic analyses.

These standard capacity/level-of-service analysis techniques, which calculate total control delay, are described in **Appendix F** for signalized intersections, as well as the correlation between average total control delay and the respective level-of-service (LOS) criteria for each intersection type. The following procedures and assumptions were utilized for the analysis, which are also based upon PennDOT's *Policies and Procedures for Transportation Impact Studies Related to Highway Occupancy Permit Plans,* as well as other general engineering principals:

- For signalized intersections, the Pennsylvania base saturation flow rate (Exhibit 10-9) and Pennsylvania traffic signal control calibration parameters (Exhibit 10-10) outlined in PennDOT's *Publication 46, Traffic Engineering Manual*, were used.

- If the evaluation of without-development to with-development conditions indicates that the overall intersection level-of-service has dropped, mitigation will be required if the increase in delay is greater than 10 seconds. If the overall intersection delay increase is less than or equal to 10 seconds, mitigation of the intersection will not be required.

- The existing traffic signal phasing at the intersection of Fox Chase Road (S.R. 2019) and Cedar Road is not currently supported by the *Highway Capacity Manual* methodology due to the advanced left-turn phases provided on two approaches where separate left-turn lanes are not provided. Therefore, delay and queue results for this intersection are based on the Synchro percentile methodology.

The existing, future build-out year 2029 traffic conditions, both without and with the proposed development, are summarized in **Figures 3B, 5C, and 5D,** respectively. The detailed capacity/level-of-service analysis worksheets are provided in **Appendices G, H, and I**. **Table 6** below summarizes the overall levels of service for the study area intersections for the two peak hours. The detailed results of the level-of-service analysis and the 95th percentile queues are contained in the matrices provided in **Tables 7 and 8**, respectively.

Based on the results of the analysis, mitigation measures are not required at the two off-site study area intersections as a result of the redevelopment of the site. All of the study area intersections are anticipated to operate at acceptable levels of service overall (LOS C or better) during both peak hours with the corresponding lane groups also operating acceptably (LOS D or better).

Table 6. Overall Intersection Levels-of-Service

Weekday Morning Peak Hour

Intersection of Fox Chase Road	Overall Level-of-Service (Delay in Seconds)		Drop in LOS/ Increase in Delay [2]	Requires Mitigation
	Without Development	With Development [1]		
Forrest Avenue	A (8.9)	A (8.8)	No LOS Drop	No
Manor College Access/Proposed Local Road	A (1.7)	A (3.5)	No LOS Drop	No
Cedar Road (S.R. 2058)	C (28.8)	C (29.5)	No LOS Drop	No

Weekday Afternoon Peak Hour

Intersection of Fox Chase Road	Overall Level-of-Service (Delay in Seconds)		Drop in LOS/ Increase in Delay [2]	Requires Mitigation
	Without Development	With Development [1]		
Forrest Avenue	A (9.4)	A (9.3)	No LOS Drop	No
Manor College Access/Proposed Local Road	A (3.8)	A (4.4)	No LOS Drop	No
Cedar Road (S.R. 2058)	C (27.3)	C (28.7)	No LOS Drop	No

(1) With-development base conditions without improvements.
(2) Based on the difference in delay from without-development to with-development conditions, in accordance with PennDOT's level of service requirements.

Conclusions and Recommendations

The development of up to 150 age-restricted carriage homes on the former St. Basil Academy parcel will generate approximately 836 total trips (entering and exiting) on a typical weekday, of which 53 and 61 total trips (entering and exiting) would be generated during the weekday morning and afternoon commuter peak hours, respectively. During a typical weekday, the school at its peak enrollment, generated more trips than the proposed age-restricted carriage homes. The proposed age-restricted carriage homes also result in less peak hour trips during both the weekday morning and afternoon commuter peak period compared to the former school use at its peak enrollment.

Based upon the traffic evaluation, no off-site mitigation measures are recommended as the two signalized intersections along Fox Chase Road with Forrest Avenue and Cedar Road will both continue to operate at acceptable levels of service overall (LOS C or better) during both peak hours with the lane groups also operating acceptably (LOS D or better).

As the site access will be located directly opposite the Manor College Access along Fox Chase Road, it would then form the fourth leg of the traffic control signal. The following access improvements are recommended, which will require the review and approval of PennDOT and Abington Township:

- Provide one ingress lane and one egress lane for the access, which may be separated by a landscaped median,
- Relocate and replace any impacted traffic signal equipment due to the inclusion of the new access road,
- Provide pedestrian equipment and pushbuttons to/from all corners of the signalized intersection of Fox Chase Road (SR 2019) with Manor College Access and the proposed site access (Road A), and
- Provide ADA compliant ramps and/or landing areas to/from northwest and northeast quadrants of the intersection as a result of the installation of the site access.

The proposed emergency access will also require review and coordination with Abington Township's emergency service providers. Since the former parcel use was a school, it is recommended that any associated wayfinding signage for the school be removed and that the school speed limit signing, flashing devices, and other associated school signage along Fox Chase Road be removed in conjunction with the redevelopment of the parcel.

The traffic analyses contained herein reveal that efficient access to and from the proposed redevelopment can be provided, and furthermore, site-generated traffic can be accommodated at the study area intersections.

Table 7 - Level of Service Matrices

1. Fox Chase Road and Forrest Avenue

Time Period			Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
Design Year			2022	2025 Build-Out Year		2022	2025 Build-Out Year	
Development Condition			Existing	w/o Dev	w/Dev	Existing	w/o Dev	w/Dev
Forrest Avenue	EB	Left	C	C	C	C	C	C
		Thru						
		Right	21.6	21.7	21.7	22.5	22.5	22.6
	WB	Left	C	C	C	C	C	C
		Thru						
		Right	21.3	21.3	21.3	20.7	20.7	20.7
Fox Chase Road	NB	Left	A	A	A	A	A	A
		Thru						
		Right	3.7	3.7	3.7	3.4	3.4	3.4
	SB	Left	A	A	A	A	A	A
		Thru						
		Right	3.1	3.2	3.2	3.2	3.2	3.2
Overall			A	A	A	A	A	A
			8.8	8.9	8.8	9.3	9.4	9.3

Table 7 - Level of Service Matrices

3. Fox Chase Road and Manor College Access / Proposed Local Road

Time Period			Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
Design Year			2022	2025 Build-Out Year		2022	2025 Build-Out Year	
Development Condition			Existing	w/o Dev	w/Dev	Existing	w/o Dev	w/Dev
Manor College Access	EB	Left	C	C	C	C	C	C
		Thru	26.5	26.5	24.7	29.6	29.6	25.5
		Right						
Proposed Local Road	WB	Left	-	-	C	-	-	C
		Thru			26.1			25.0
		Right						
Fox Chase Road	NB	Left	A	A	A	A	A	A
		Thru	1.5	1.5		1.7	1.7	
		Right	-	-	1.9	-	-	1.9
	SB	Left	-	-	A	-	-	A
		Thru	A	A		A	A	
		Right	1.5	1.5	1.8	1.9	1.9	2.1
Overall			A	A	A	A	A	A
			1.7	1.7	3.5	3.7	3.8	4.4

Table 7 - Level of Service Matrices

4. Fox Chase Road (S.R. 2019) and Cedar Road (S.R. 2058)

Time Period			Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
Design Year			2022	2025 Build-Out Year		2022	2025 Build-Out Year	
Development Condition			Existing	w/o Dev	w/Dev	Existing	w/o Dev	w/Dev
Cedar Road (S.R. 2058)	EB	Left	C	C	C	C	C	C
		Thru	24.0	25.2	26.5	22.1	23.1	25.5
		Right						
	WB	Left	D	D	D	C	C	D
		Thru	35.3	35.8	36.1	34.0	34.7	35.0
		Right						
Fox Chase Road (S.R. 2019)	NB	Left	D	D	D	D	D	D
		Thru	36.6	37.5	38.5	35.7	36.1	37.1
		Right						
Fox Chase Road	SB	Left	B	B	B	B	C	C
		Thru	17.8	18.0	19.2	19.8	20.1	21.3
		Right						
Overall			C	C	C	C	C	C
			28.1	28.8	29.5	25.5	27.3	28.7

Table 8- 95th Percentile Queue Matrices

1. Fox Chase Road and Forrest Avenue

Time Period			Current Storage [1]	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
Design Year				2022	2025 Build-Out Year		2022	2025 Build-Out Year	
Development Condition				Existing	w/o Dev	w/Dev	Existing	w/o Dev	w/Dev
Forrest Avenue	EB	Left	*2,950'*	48	48	48	65	68	68
		Thru							
		Right							
	WB	Left	-	50	50	53	35	35	38
		Thru							
		Right							
Fox Chase Road	NB	Left	*775'*	33	35	38	25	28	25
		Thru							
		Right							
	SB	Left	*3,425'*	25	25	25	25	25	25
		Thru							
		Right							

(1) Distance to adjacent intersections shown in italics.

Table 8- 95th Percentile Queue Matrices

3. Fox Chase Road and Manor College Access / Proposed Local Road

Time Period			Current Storage [1]	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
Design Year				2022	2025 Build-Out Year		2022	2025 Build-Out Year	
Development Condition				Existing	w/o Dev	w/Dev	Existing	w/o Dev	w/Dev
Manor College Access	EB	Left	-	25	25	25	25	25	25
		Thru							
		Right							
Proposed Local Road	WB	Left	-	-	-	25	-	-	25
		Thru							
		Right							
Fox Chase Road	NB	Left	*1450'*	25	25	25	25	25	25
		Thru							
		Right		-	-		-	-	
	SB	Left	*775'*	-	-	25	-	-	25
		Thru		25	25		25	25	
		Right							

(1) Distance to adjacent intersections shown in italics.

Table 8- 95th Percentile Queue Matrices

4. Fox Chase Road (S.R. 2019) and Cedar Road (S.R. 2058)

Time Period			Current Storage [1]	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
Design Year				2022	2025 Build-Out Year		2022	2025 Build-Out Year	
Development Condition				Existing	w/o Dev	w/Dev	Existing	w/o Dev	w/Dev
Cedar Road (S.R. 2058)	EB	Left	*4,875'*	245	253	257	269	282	297
		Thru							
		Right							
	WB	Left	*2,050'*	255	262	265	261	271	283
		Thru							
		Right							
Fox Chase Road (S.R. 2019)	NB	Left	-	184	192	196	155	158	165
		Thru							
		Right							
Fox Chase Road	SB	Left	*1,450'*	163	168	187	200	204	217
		Thru							
		Right							

(1) Distance to adjacent intersections shown in italics.



FIGURE 1

Location Map

ST. BASIL REDEVELOPMENT

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PA

McMAHON

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FIGURE 2

Site Plan

ST. BASIL REDEVELOPMENT

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PA

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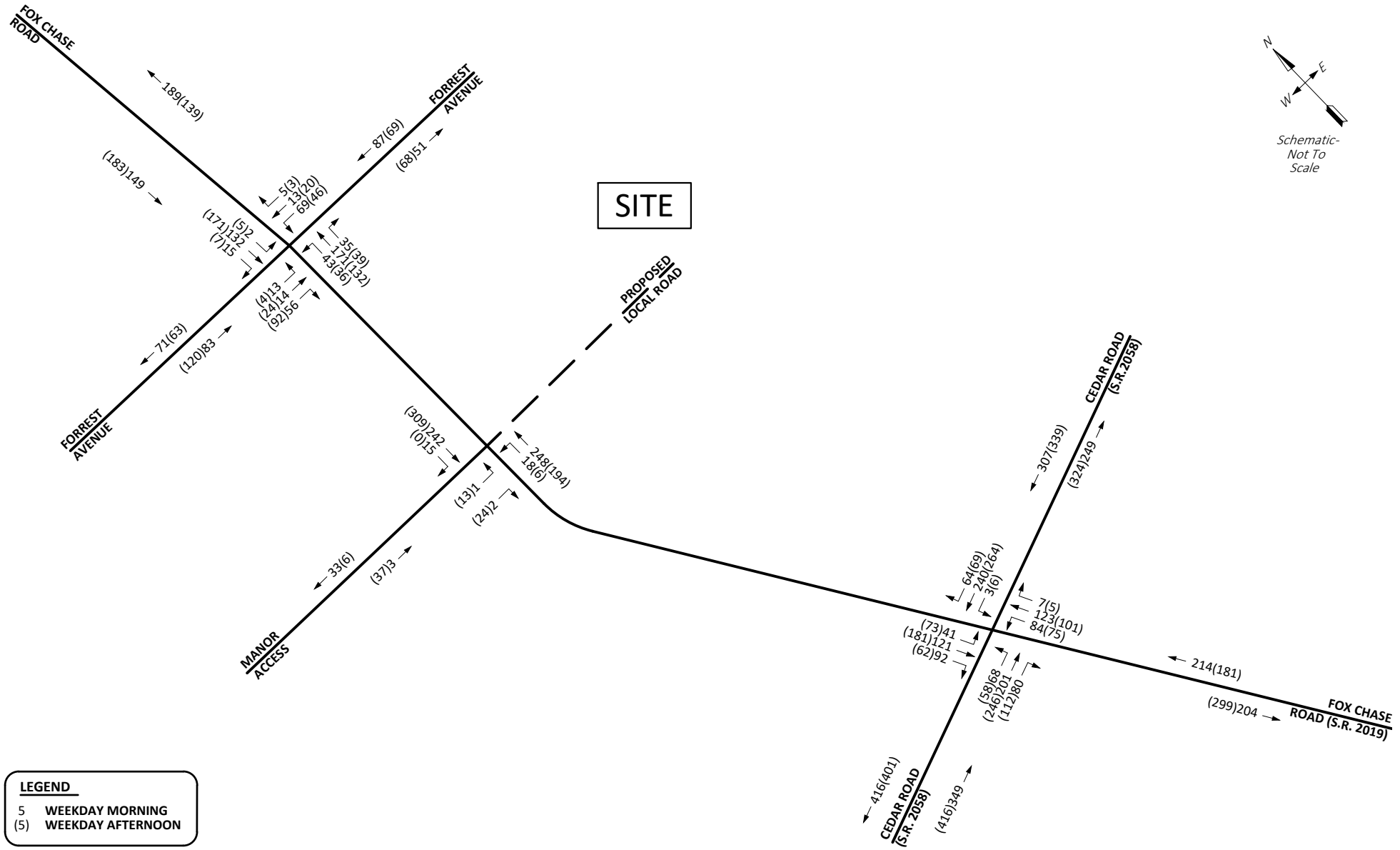


FIGURE 3A

2022 Existing Peak Hour Volumes

ST. BASIL REDEVELOPMENT

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PA

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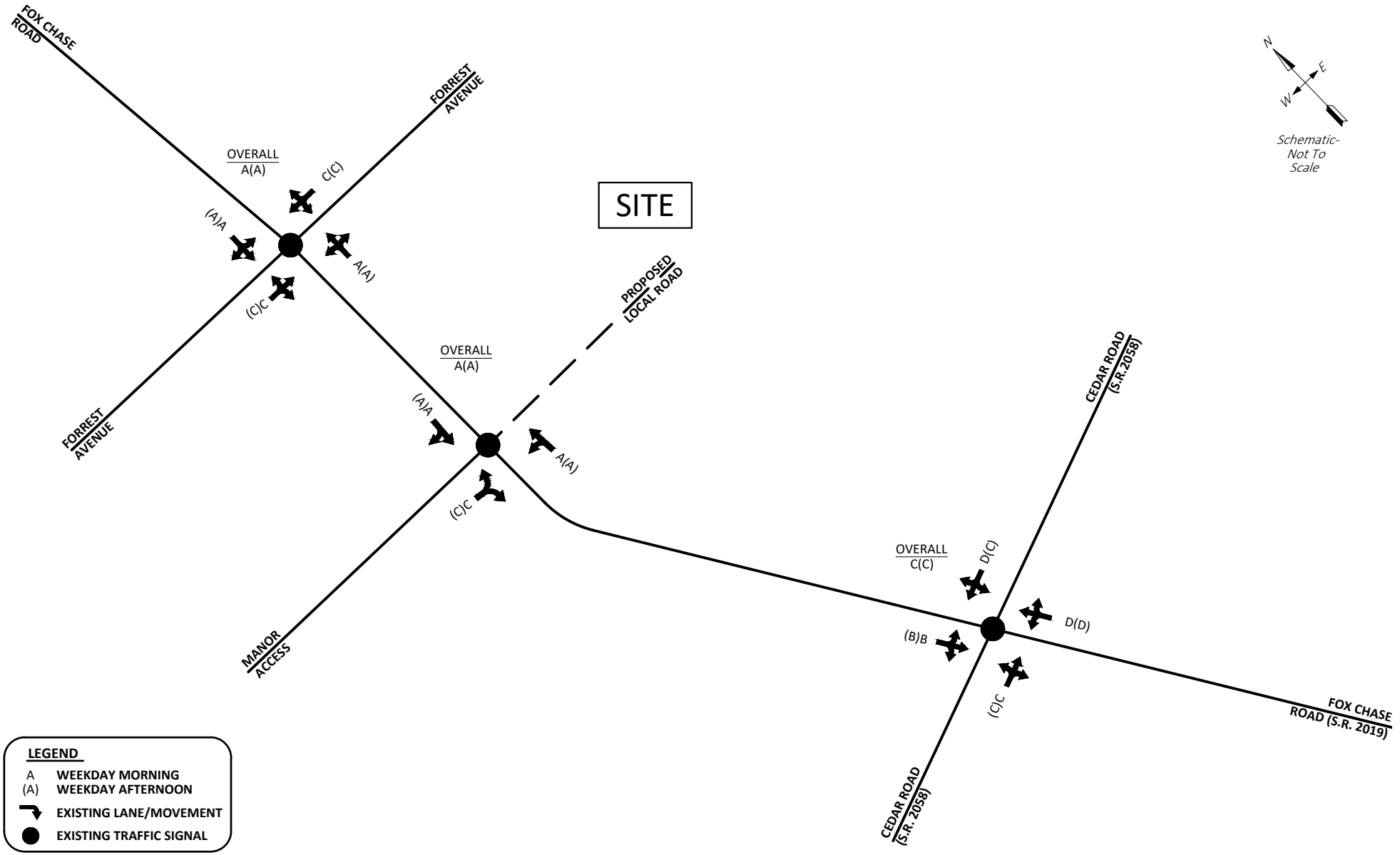


FIGURE 3B

2022 Existing Peak Hour Levels-of-Service

ST. BASIL REDEVELOPMENT

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PA

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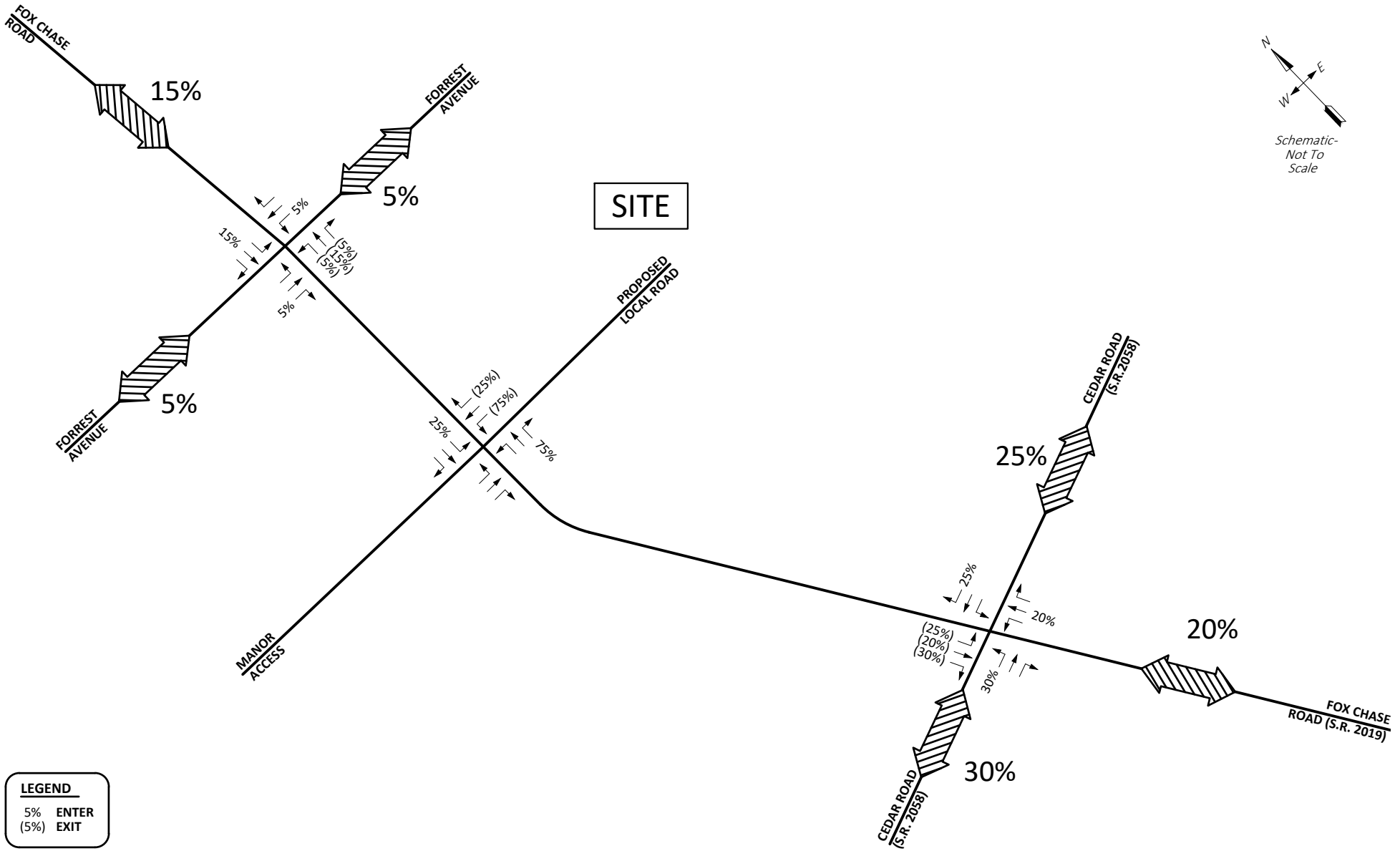


FIGURE 4A

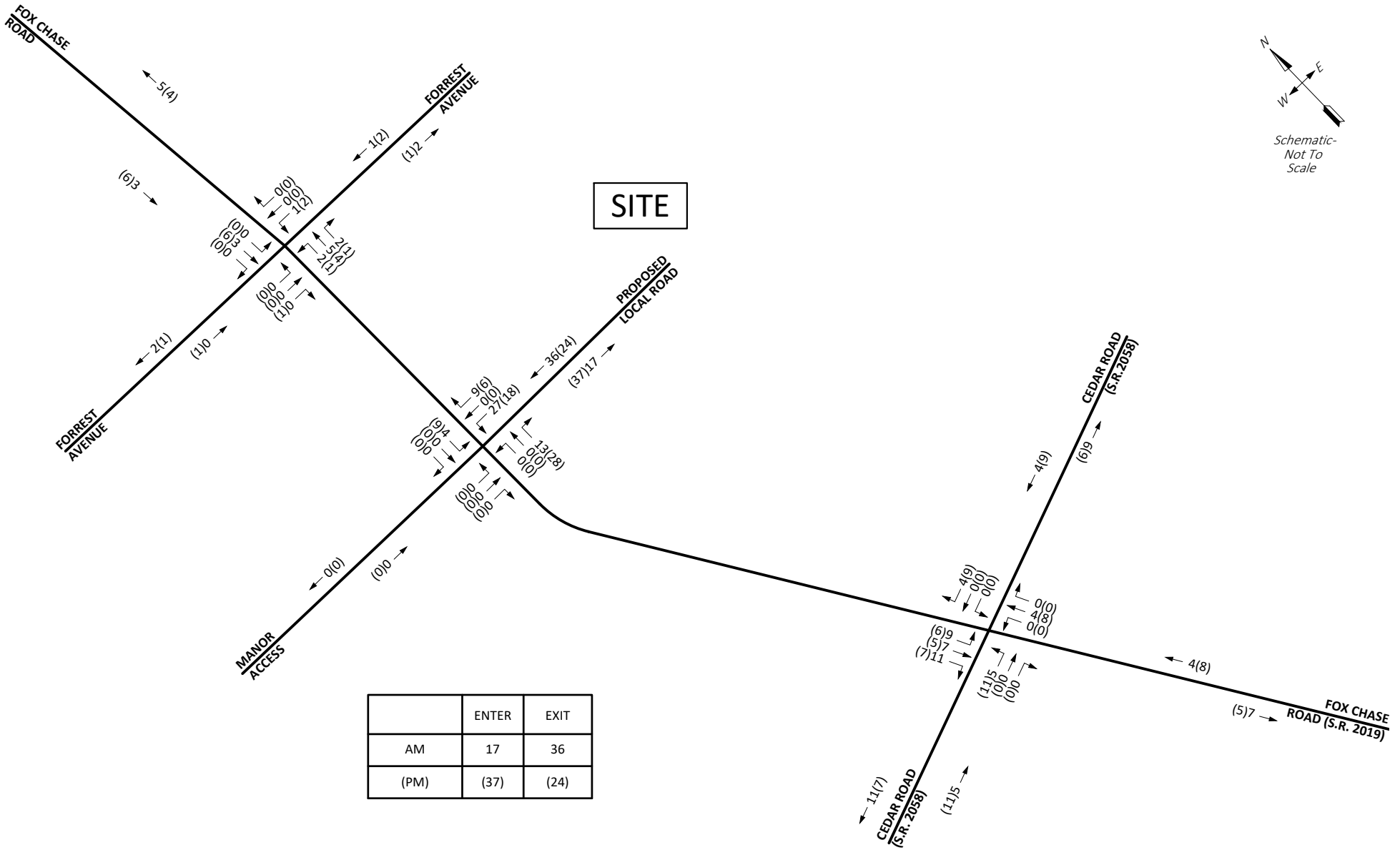
Site Trip Distribution

ST. BASIL REDEVELOPMENT

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PA

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	ENTER	EXIT
AM	17	36
(PM)	(37)	(24)

FIGURE 4B

Site Trip Assignment

ST. BASIL REDEVELOPMENT

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PA

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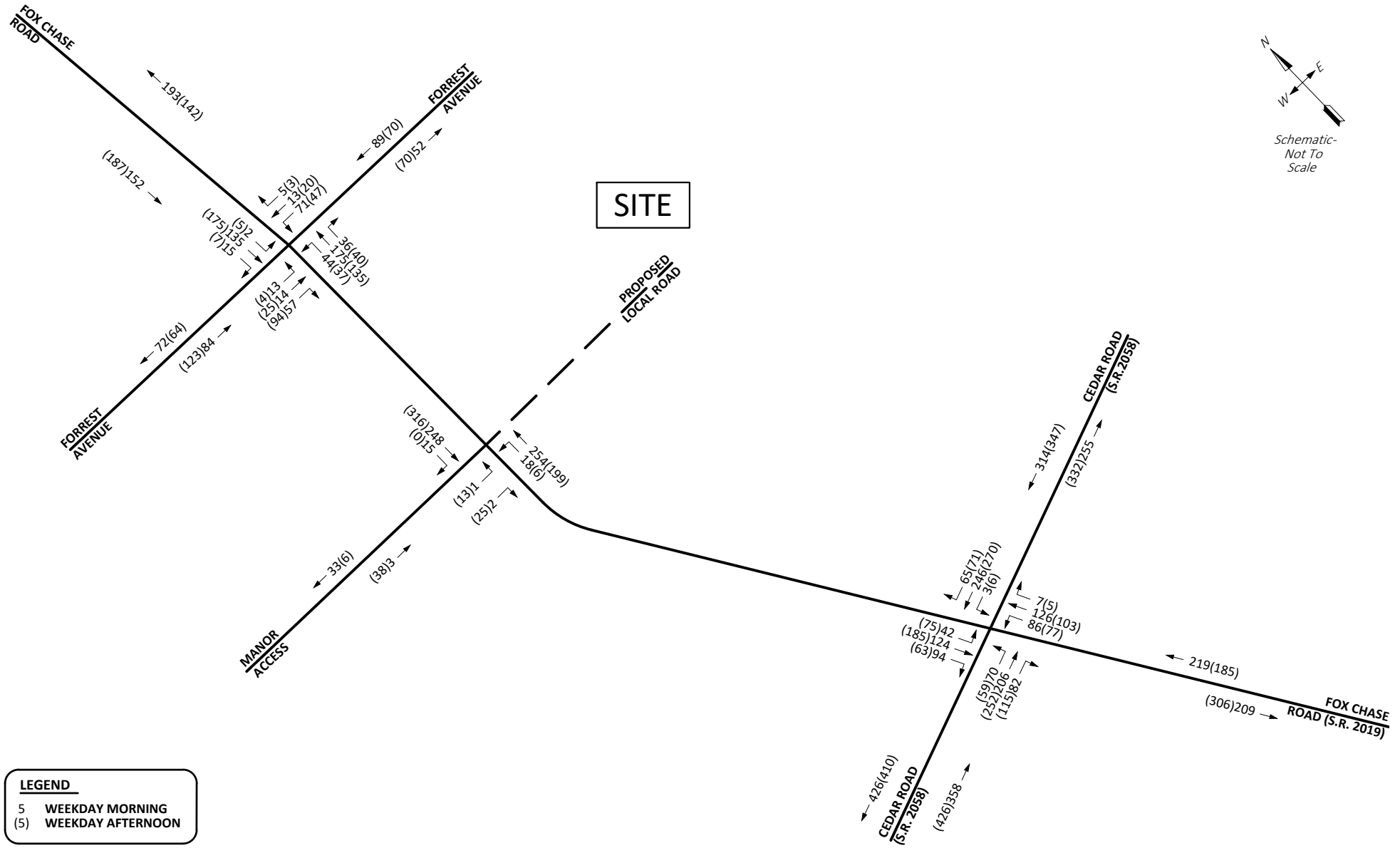


FIGURE 5A

2029 Future Peak Hour Traffic Volumes without Development

ST. BASIL REDEVELOPMENT

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PA

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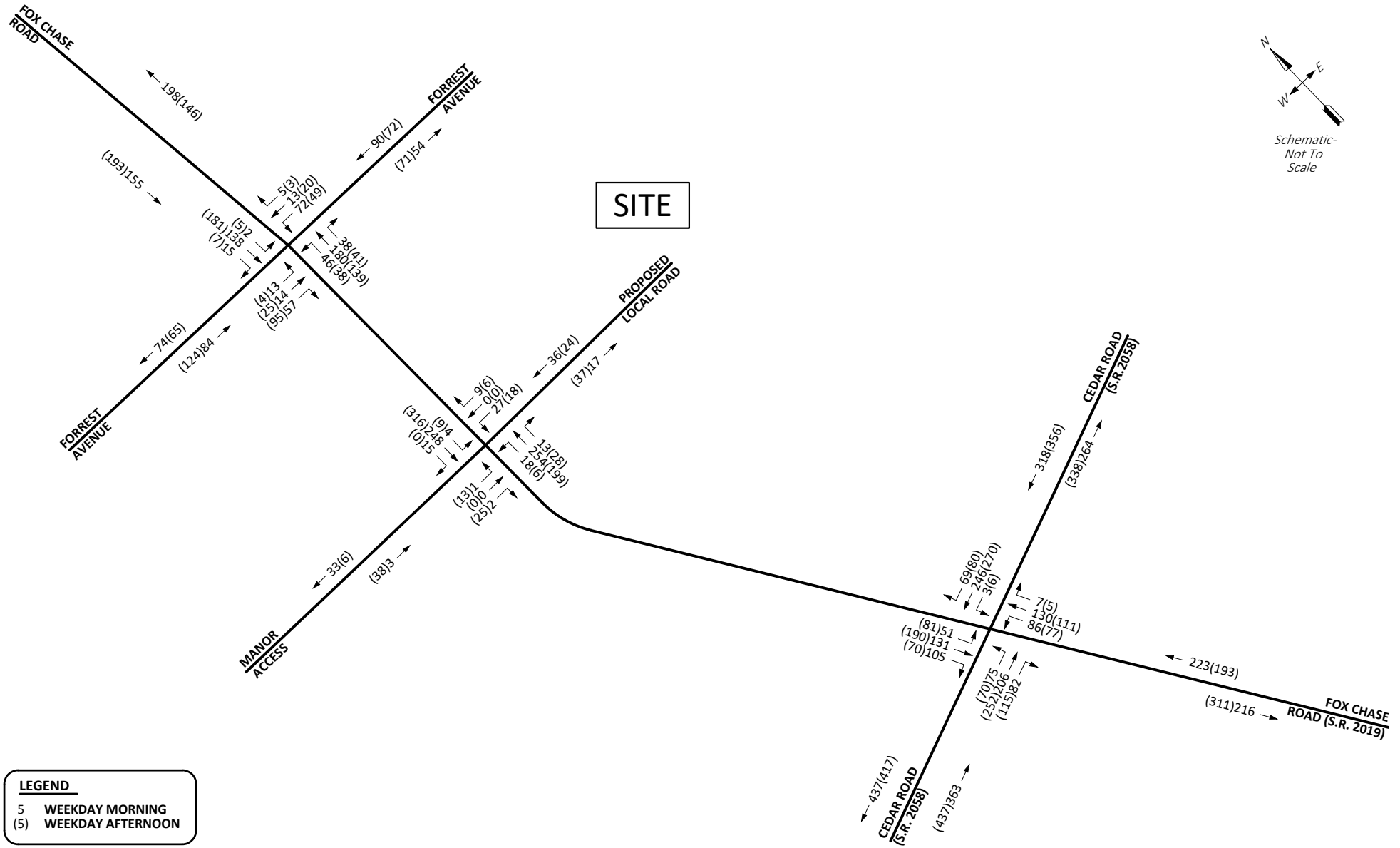


FIGURE 5B

2029 Future Peak Hour Traffic Volumes with Development

ST. BASIL REDEVELOPMENT

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PA

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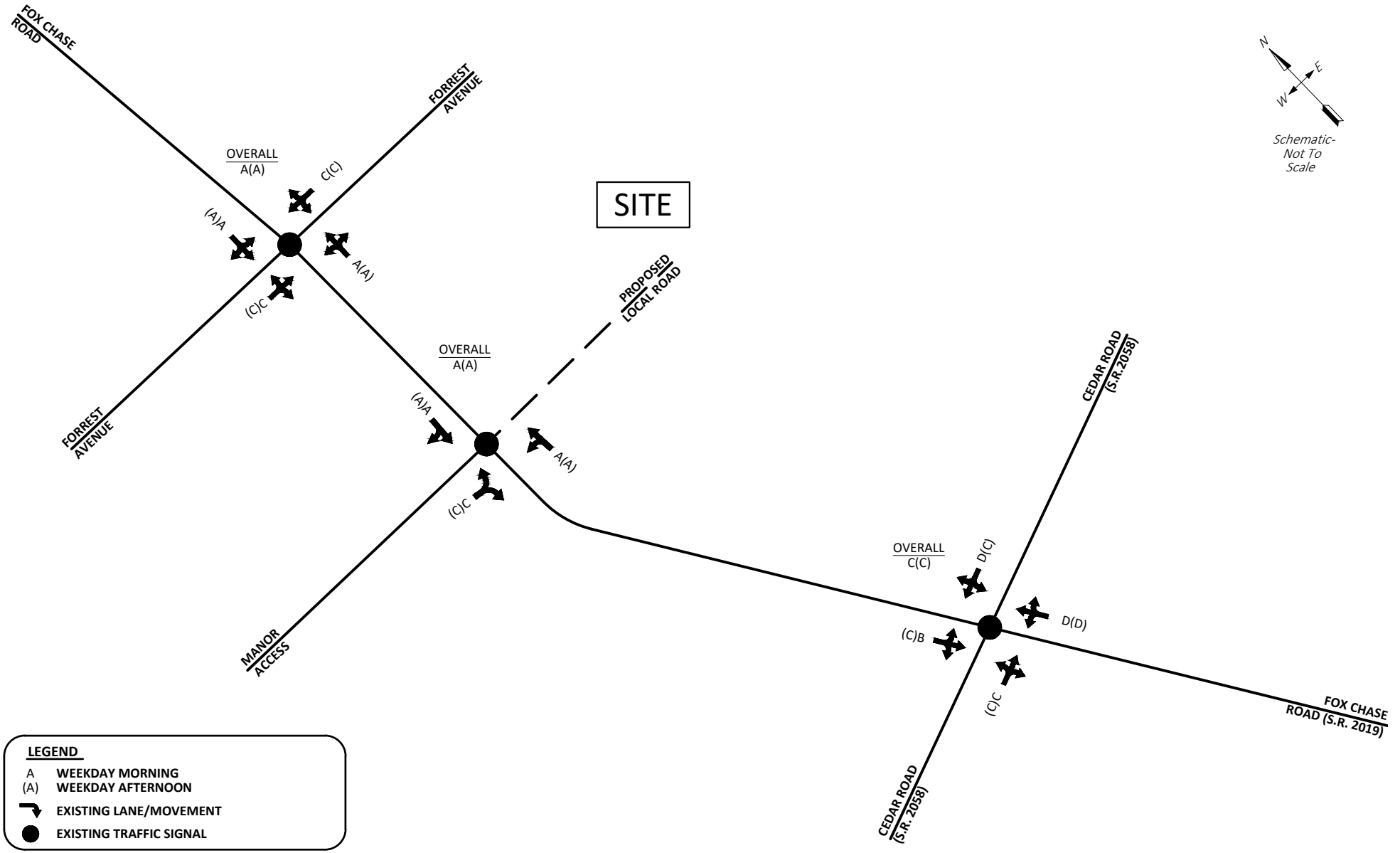


FIGURE 5C

2029 Future Peak Hour Levels of Service without Development

ST. BASIL REDEVELOPMENT

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PA

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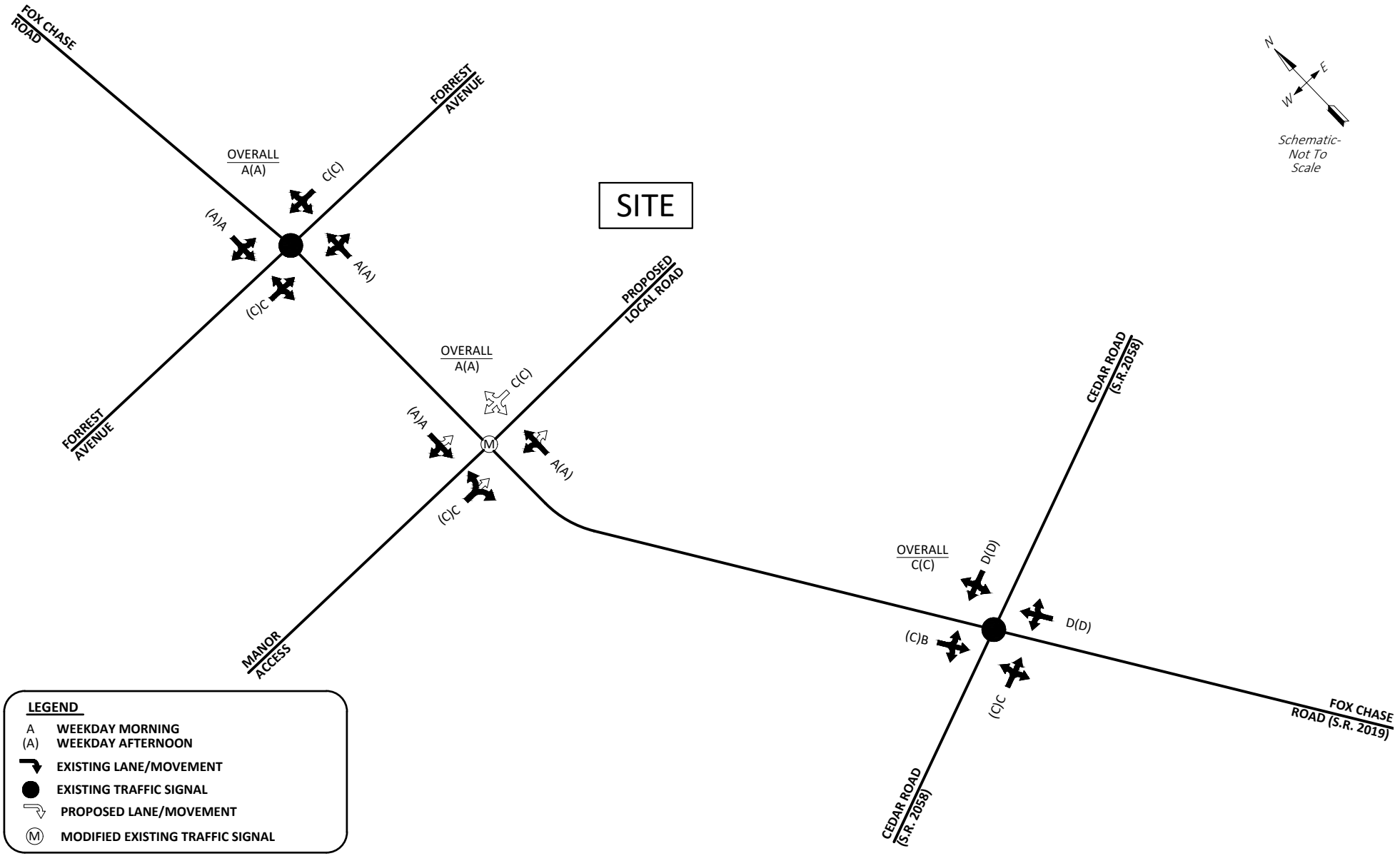


FIGURE 5D

2029 Future Peak Hour Levels of Service with Development

ST. BASIL REDEVELOPMENT

ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PA

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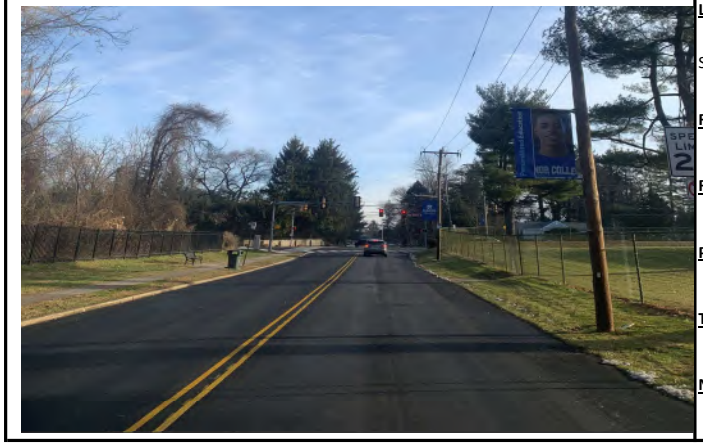
Appendix A

Intersection Inventory

INTERSECTION INVENTORY SUMMARY

Fox Chase Road and Forrest Avenue

Eastbound Forrest Avenue Approach



Lane Geometry

Shared Left/Through/Right

Roadway Classification

Local

Roadway Ownership

Township

Posted Speed Limit

25 MPH

Traffic Control

Traffic Signal

Notes

Westbound Forrest Avenue Approach



Lane Geometry

Shared Left/Through/Right

Roadway Classification

Local

Roadway Ownership

Township

Posted Speed Limit

25 MPH

Traffic Control

Traffic Signal

Notes

Northbound Fox Chase Road Approach



Lane Geometry

Shared Left/Through/Right

Roadway Classification

Urban - Major Collector

Roadway Ownership

Township

Posted Speed Limit

35 MPH

Traffic Control

Traffic Signal

Notes

Southbound Fox Chase Road Approach



Lane Geometry

Shared Left/Through/Right

Roadway Classification

Urban - Major Collector

Roadway Ownership

Township

Posted Speed Limit

35 MPH

Traffic Control

Traffic Signal

Notes

INTERSECTION INVENTORY SUMMARY

Fox Chase Road and Manor College Access

Eastbound Manor College Access Approach



Lane Geometry

Shared Left//Right

Roadway Classification

Private

Roadway Ownership

Private

Posted Speed Limit

NPSL

Traffic Control

Traffic Signal

Notes

Northbound Fox Chase Road Approach



Lane Geometry

Shared Left/Through

Roadway Classification

Urban - Major Collector

Roadway Ownership

Township

Posted Speed Limit

35 MPH

Traffic Control

Traffic Signal

Notes

Southbound Fox Chase Road Approach



Lane Geometry

Shared Through/Right

Roadway Classification

Urban - Major Collector

Roadway Ownership

Township

Posted Speed Limit

35 MPH

Traffic Control

Traffic Signal

Notes

INTERSECTION INVENTORY SUMMARY

Fox Chase Road (S.R. 2019) and Cedar Road (S.R. 2058)

Eastbound Cedar Road (S.R. 2058) Approach



Lane Geometry

Shared Left/Through/Right

Roadway Classification

Urban - Major Collector

Roadway Ownership

State

Posted Speed Limit

35 MPH

Traffic Control

Traffic Signal

Notes

Westbound Cedar Road (S.R. 2058) Approach



Lane Geometry

Shared Left/Through/Right

Roadway Classification

Urban - Major Collector

Roadway Ownership

State

Posted Speed Limit

35 MPH

Traffic Control

Traffic Signal

Notes

Northbound Fox Chase Road (S.R. 2019) Approach



Lane Geometry

Shared Left/Through/Right

Roadway Classification

Urban - Major Collector

Roadway Ownership

State

Posted Speed Limit

35 MPH

Traffic Control

Traffic Signal

Notes

Southbound Fox Chase Road Approach



Lane Geometry

Shared Left/Through/Right

Roadway Classification

Urban - Major Collector

Roadway Ownership

Township

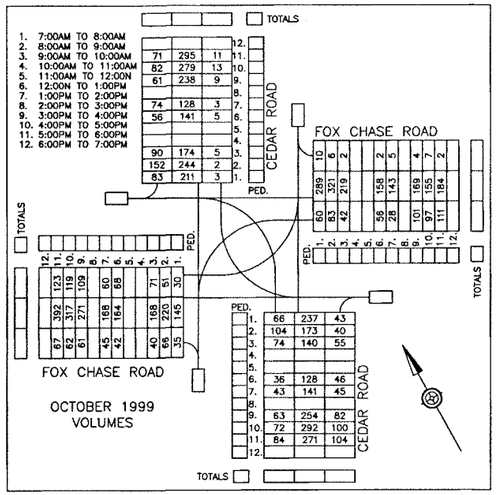
Posted Speed Limit

35 MPH

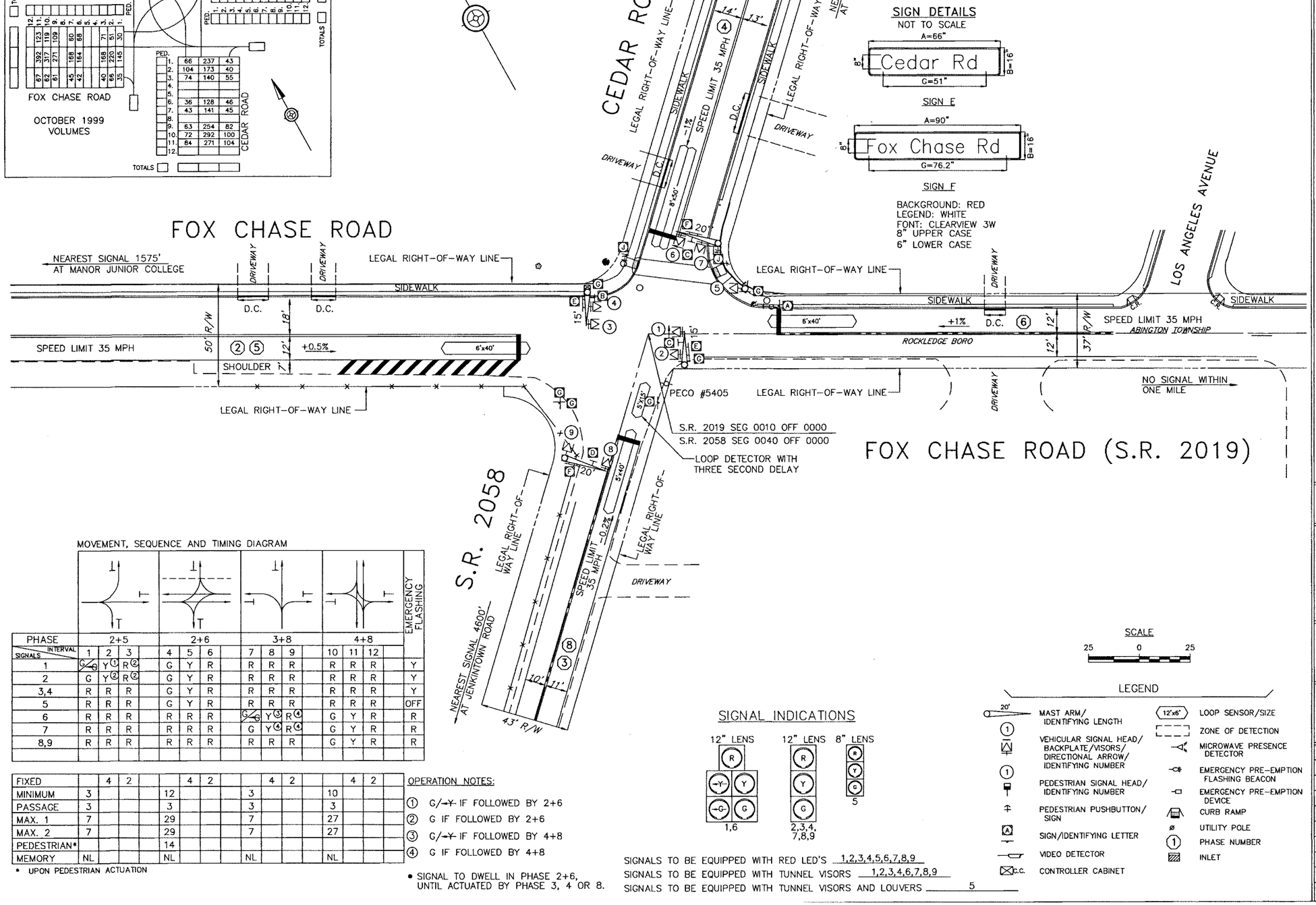
Traffic Control

Traffic Signal

Notes



SIGN TABULATION			
PLAN SYMBOL	SERIES NUMBER	SIZE	REMARKS
A	R10-6AL	24"X30"	STOP HERE ON RED
B	R10-11	30"X36"	NO TURN ON RED
C	R10-12	30"X36"	LEFT TURN YIELD ON GREEN ●
E	D3-4	66"X16"	OVERHEAD STREET NAME SIGN (SEE DETAIL)
F	D3-4	96"X16"	OVERHEAD STREET NAME SIGN (SEE DETAIL)
G	R9-3	18"X18"	NO PEDESTRIAN CROSSING
J	R10-4	9"X12"	PUSH BUTTON FOR GREEN SIGNAL



SIGN DETAILS

NOT TO SCALE

SIGN E

SIGN F

BACKGROUND: RED
LEGEND: WHITE
FONT: CLEARVIEW 3W
8" UPPER CASE
6" LOWER CASE

GENERAL NOTES

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ALL MAINTENANCE WORK INCLUDING TRIMMING OF TREES, NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS IS THE RESPONSIBILITY OF THE PERMITTEE.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PUBLICATION NO. 212.

POST MOUNTED SIGNALS SHALL BE INSTALLED WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF CURB OR THE EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMUM CLEARANCE HORIZONTALLY OF 2 FEET.

SIGNALS ERECTED OVER THE ROADWAY SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 16 FT. ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEWALK OR PAVEMENT.

ALL OVERHEAD SIGNALS MUST BE RIGIDLY MOUNTED, TOP AND BOTTOM, AND EQUIPPED WITH BACKPLATES.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNALS MEASURED AT RIGHT ANGLES TO THE APPROACH SHALL BE 8 FEET.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

CURBING TO BE INSTALLED BY MUNICIPALITY AND WHERE NOTED, SHALL BE PLAIN CEMENT CONCRETE CURB OR GRANITE CURB, INSTALLED IN ACCORDANCE WITH DEPARTMENT SPECIFICATIONS FORM 408.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT, FOR REVIEW, PRIOR TO BIDDING.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-8800 SERIES.

MOVEMENT, SEQUENCE AND TIMING DIAGRAM

PHASE	2+5			2+6			3+8			4+8			EMERGENCY FLASHING
INTERVAL / SIGNALS	1	2	3	4	5	6	7	8	9	10	11	12	
1	G/→Y←	Y①	R②	G	Y	R	R	R	R	R	R	R	Y
2	G	Y②	R②	G	Y	R	R	R	R	R	R	R	Y
3,4	R	R	R	G	Y	R	R	R	R	R	R	R	Y
5	R	R	R	G	Y	R	R	R	R	R	R	R	OFF
6	R	R	R	R	R	R	G/→Y←	Y④	R④	G	Y	R	R
7	R	R	R	R	R	R	G	Y④	R④	G	Y	R	R
8,9	R	R	R	R	R	R	R	R	R	G	Y	R	R

FIXED		4	2			4	2			4	2			4	2	
MINIMUM	3				12				3				10			
PASSAGE	3				3				3				3			
MAX. 1	7				29				7				27			
MAX. 2	7				29				7				27			
PEDESTRIAN*					14											
MEMORY	NL				NL				NL				NL			

* UPON PEDESTRIAN ACTUATION

OPERATION NOTES:

① G/→Y← IF FOLLOWED BY 2+6
② G IF FOLLOWED BY 2+6
③ G/→Y← IF FOLLOWED BY 4+8
④ G IF FOLLOWED BY 4+8

● SIGNAL TO DWELL IN PHASE 2+6, UNTIL ACTUATED BY PHASE 3, 4 OR 8.

SIGNAL INDICATIONS

SIGNALS TO BE EQUIPPED WITH RED LED'S 1,2,3,4,5,6,7,8,9
SIGNALS TO BE EQUIPPED WITH TUNNEL VISORS 1,2,3,4,6,7,8,9
SIGNALS TO BE EQUIPPED WITH TUNNEL VISORS AND LOUVERS 5

SCALE

25 0 25

LEGEND

- 20' MAST ARM/ IDENTIFYING LENGTH
- ① VEHICULAR SIGNAL HEAD/ BACKPLATE/VISORS/ DIRECTIONAL ARROW/ IDENTIFYING NUMBER
- ① PEDESTRIAN SIGNAL HEAD/ IDENTIFYING NUMBER
- PEDESTRIAN PUSHBUTTON/ SIGN
- A SIGN/IDENTIFYING LETTER
- VIDEO DETECTOR
- C.C. CONTROLLER CABINET
- 12'x6' LOOP SENSOR/SIZE
- ZONE OF DETECTION
- MICROWAVE PRESENCE DETECTOR
- EMERGENCY PRE-EMPTION FLASHING BEACON
- EMERGENCY PRE-EMPTION DEVICE
- CURB RAMP
- UTILITY POLE
- ① PHASE NUMBER
- INLET

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: MONTGOMERY
MUNICIPALITY: ABINGTON TOWNSHIP / ROCKLEDGE BOROUGH
INTERSECTION: FOX CHASE ROAD (S.R. 2019) & CEDAR ROAD (S.R. 2058)

REVIEWED:

DATE

MUNICIPAL OFFICIAL DATE

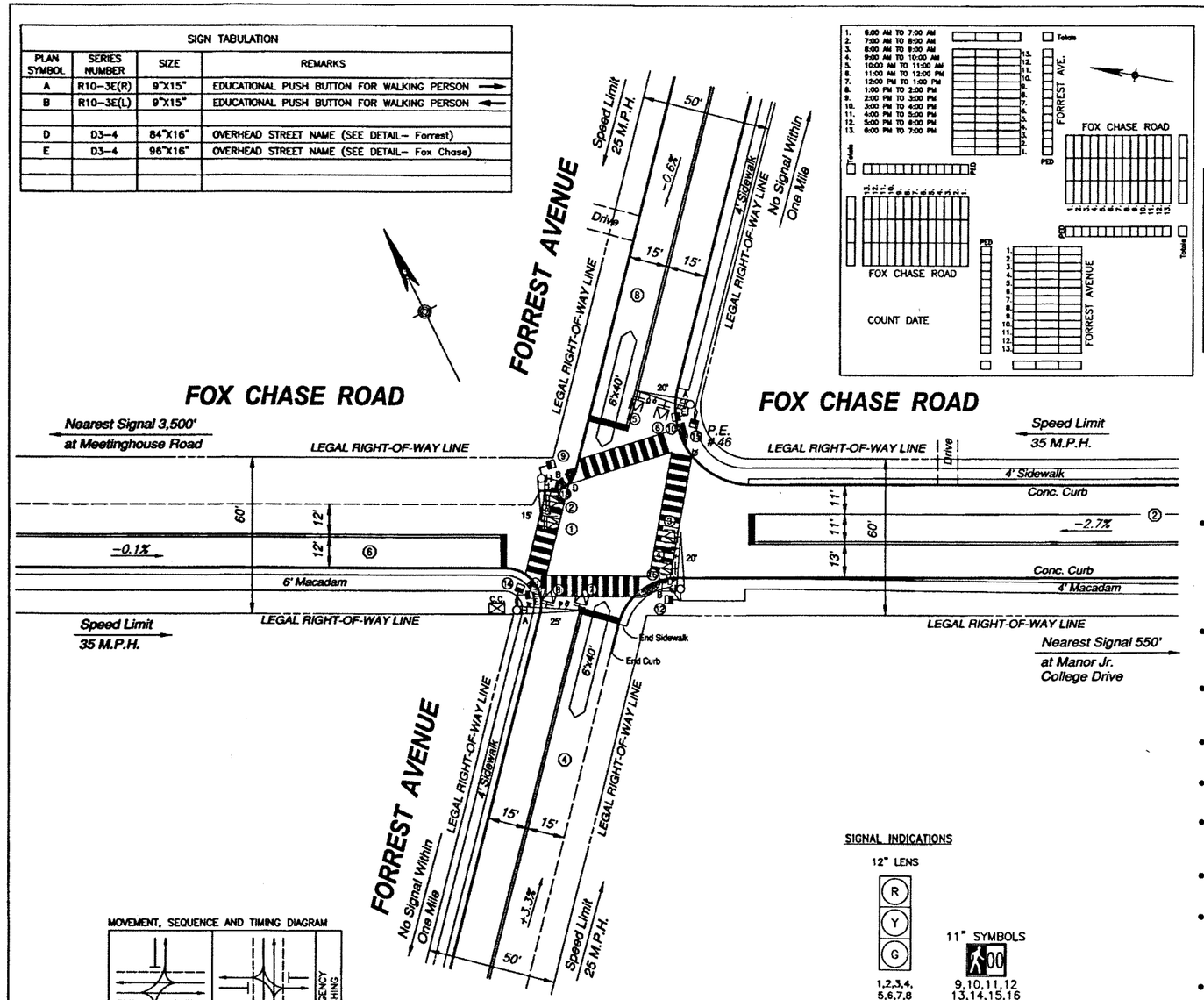
RECOMMENDED:

WERNER J EICHORN 2-7-00
DISTRICT TRAFFIC ENGINEER DATE

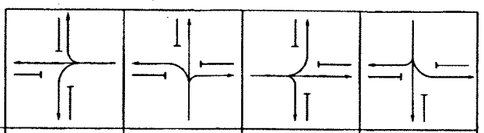
NO.	REVISION	DES./ REVW.	DATE	REVW.	DATE	RECOM.	DATE
1	ADD NB ADVANCE, CHNGE MA ON NW & SE CORNER TO 15'	JPS	1/11/00	MLK	1/12/00	WJE	2/7/00
2	NEW DWG, REVISED CURB RAMPS AND PEDESTRIAN TIMES	MCM		DLA	2/17/11	ABP	2/18/11
3	REVISED PAVEMENT MARKINGS FOR EB FOX CHASE ROAD	EJR	8/30/18	KPL	10/17/18	DLA	10/19/18
4							
5							
6							
7							
8							

SHEET 2 OF 2 PERMIT # 64-0347 FILE # 0347

SIGN TABULATION			
PLAN SYMBOL	SERIES NUMBER	SIZE	REMARKS
A	R10-3E(R)	9"X15"	EDUCATIONAL PUSH BUTTON FOR WALKING PERSON →
B	R10-3E(L)	9"X15"	EDUCATIONAL PUSH BUTTON FOR WALKING PERSON ←
D	D3-4	84"X16"	OVERHEAD STREET NAME (SEE DETAIL- Forrest)
E	D3-4	96"X16"	OVERHEAD STREET NAME (SEE DETAIL- Fox Chase)



EMERGENCY PRE-EMPTION PHASING
MOVEMENT, SEQUENCE AND TIMING DIAGRAM



PHASE	2			4			6			8		
SIGNALS \ INTERVAL	9	10	11	12	13	14	15	16	17	18	19	20
1,2	G	Y◎	R◎	R	R	R	R	R	R	R	R	R
3,4	R	R	R	R	R	R	G	Y◎	R◎	R	R	R
5,6	R	R	R	G	Y	R	R	R	R	R	R	R
7,8	R	R	R	R	R	R	R	R	R	G	Y	R
9,10	H	H	H	H	H	H	H	H	H	H	H	H
11,12	H	H	H	H	H	H	H	H	H	H	H	H
13,14	H	H	H	H	H	H	H	H	H	H	H	H
15,16	H	H	H	H	H	H	H	H	H	H	H	H
FIXED	**	4	2	**	3	2	**	4	2	**	3	2

* FOR DURATION OF PRE-EMPTION
◎ G WHEN RETURNING TO NORMAL OPERATION.
NOTE: IF PRE-EMPTION EQUIPMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO "00" FEATURE ON, TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PRE-EMPTION.

EMERGENCY PRE-EMPTION NOTES:

- CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION FOR THE WESTBOUND AND EASTBOUND APPROACH OF FOX CHASE ROAD AND THE NORTHBOUND AND SOUTH-BOUND APPROACH OF FORREST AVENUE WITH A FLASHING FAIL SAFE DEVICE FOR EACH DIRECTION OF OPERATION.

  THIS FAIL SAFE DEVICE SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT AND SHALL BEGIN FLASHING WHEN THE PRE-EMPTION PHASE DISPLAYS PRE-EMPTION GREEN FOR THE EMERGENCY VEHICLE APPROACH.
- THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS, ACCORDINGLY. THEN THE GREEN INTERVAL FOR THE PRE-EMPTED PHASE SHALL FOLLOW.
- THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, SHALL TIME OUT ALL YELLOW AND RED INDICATIONS FOLLOWED BY THE GREEN INTERVAL OF THE PRE-EMPTION PHASE GOVERNED BY THE ACTUATION OF THE APPROACHING EMERGENCY VEHICLE.
- IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, ARE FLASHING ALL SIGNALS SHALL REMAIN FLASHING.
- UPON COMPLETION OF PRE-EMPTION PHASE 2, 4, 6 OR 8 IN RETURNING TO NORMAL OPERATION PHASE 2+6 INTERVAL 1 SHALL FOLLOW.
- IF ADDITIONAL PRE-EMPTION PHASES ARE ACTIVATED WHILE IN PRE-EMPTION, THE ORIGINAL PRE-EMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PRE-EMPTION PHASE.
- IN EMERGENCY PRE-EMPTION, NO PRIORITY SHALL BE ESTABLISHED, PRE-EMPTION SHALL BE A "FIRST COME, FIRST SERVED" OPERATION.
- THE FIELD LOCATIONS OF THE PRE-EMPTION DETECTORS MAY DIFFER FROM THE LOCATIONS DEPICTED ON THE CONDITION DIAGRAM, AS THE DETECTORS MAY NEED TO BE RELOCATED AND/OR ADJUSTED TO PROVIDE ACCEPTABLE OPERATION AS DEEMED APPROPRIATE BY DEPARTMENT PERSONNEL.
- IF THE SIGNAL HAS BEEN ACTUATED BY A PEDESTRIAN PUSH BUTTON, AND THE SIGNAL IS PRE-EMPTED, THE PED WALK INTERVAL SHALL TERMINATE IMMEDIATELY, FOLLOWED BY THE PED CLEAR INTERVAL. THIS INTERVAL SHALL TIME OUT, FOLLOWED BY THE APPROPRIATE SELECTIVE CLEARANCES, BEFORE GOING INTO EMERGENCY PRE-EMPTION.

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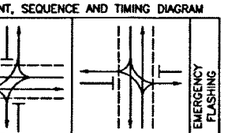
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MOVEMENT, SEQUENCE AND TIMING DIAGRAM



PHASE	2 & 6				4 & 8				EMERGENCY FLASHING
SIGNALS \ INTERVAL	1	2	3	4	5	6	7	8	
1,2	G	G	Y	R	R	R	R	R	Y
3,4	G	G	Y	R	R	R	R	R	Y
5,6	R	R	R	R	G	G	Y	R	R
7,8	R	R	R	R	G	G	Y	R	R
9,10	M	FH	H	H	H	H	H	H	OFF
11,12	M	FH	H	H	H	H	H	H	OFF
13,14	H	H	H	H	M	FH	H	H	OFF
15,16	R	R	R	R	M	FH	H	H	OFF

FIXED			4	2			3	2	
MINIMUM	15				7				
PASSAGE					3				
MAXIMUM 1	35				20				
MAXIMUM 2	35				20				
PEDESTRIAN*	7	15			7	17			
MEMORY	MX				NL				

* UPON PEDESTRIAN ACTUATION ONLY

MAX 1 TO OPERATE AT ALL TIMES

SIGNAL INDICATIONS

12" LENS

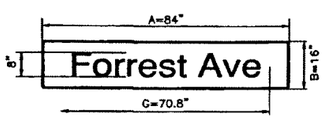
1,2,3,4, 5,6,7,8

11" SYMBOLS

9,10,11,12 13,14,15,16

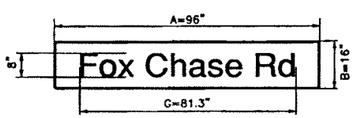
SIGNALS TO BE EQUIPPED WITH TUNNEL VISORS 1,2,3,4,5,6,7,8

SIGN DETAILS
NOT TO SCALE



SIGN D

BACKGROUND: RED
LEGEND: WHITE
FONT: HELVETICA BOLD
8" UPPER CASE
6" LOWER CASE



SIGN E

BACKGROUND: RED
LEGEND: WHITE
FONT: HELVETICA BOLD
8" UPPER CASE
6" LOWER CASE

25' 0 25'

LEGEND

- 20' — MAST ARM/ IDENTIFYING LENGTH
- ② — VEHICULAR SIGNAL HEAD/ BACKPLATE/ VISORS/ DIRECTIONAL ARROW/ IDENTIFYING NUMBER
- ② — PEDESTRIAN SIGNAL HEAD/ IDENTIFYING NUMBER
- PEDESTRIAN PUSHBUTTON/ SIGN
- E — SIGN/ IDENTIFYING LETTER
- 5'x40" — LOOP SENSOR/SIZE
- MICROWAVE DETECTOR
- EMERGENCY PREEMPTION DEVICE
- CURB CUT RAMP
- UTILITY POLE
- (1) — PHASE NUMBER

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: MONTGOMERY
MUNICIPALITY: ABINGTON TOWNSHIP
INTERSECTION: FOX CHASE ROAD AND FORREST AVENUE

REVIEWED:

DATE

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

MARK L. KRAY 5/26/95
DATE

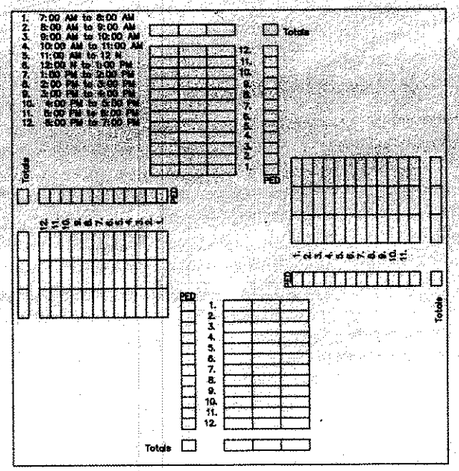
DOUGLAS MAY 5/26/95
DISTRICT TRAFFIC ENGINEER DATE

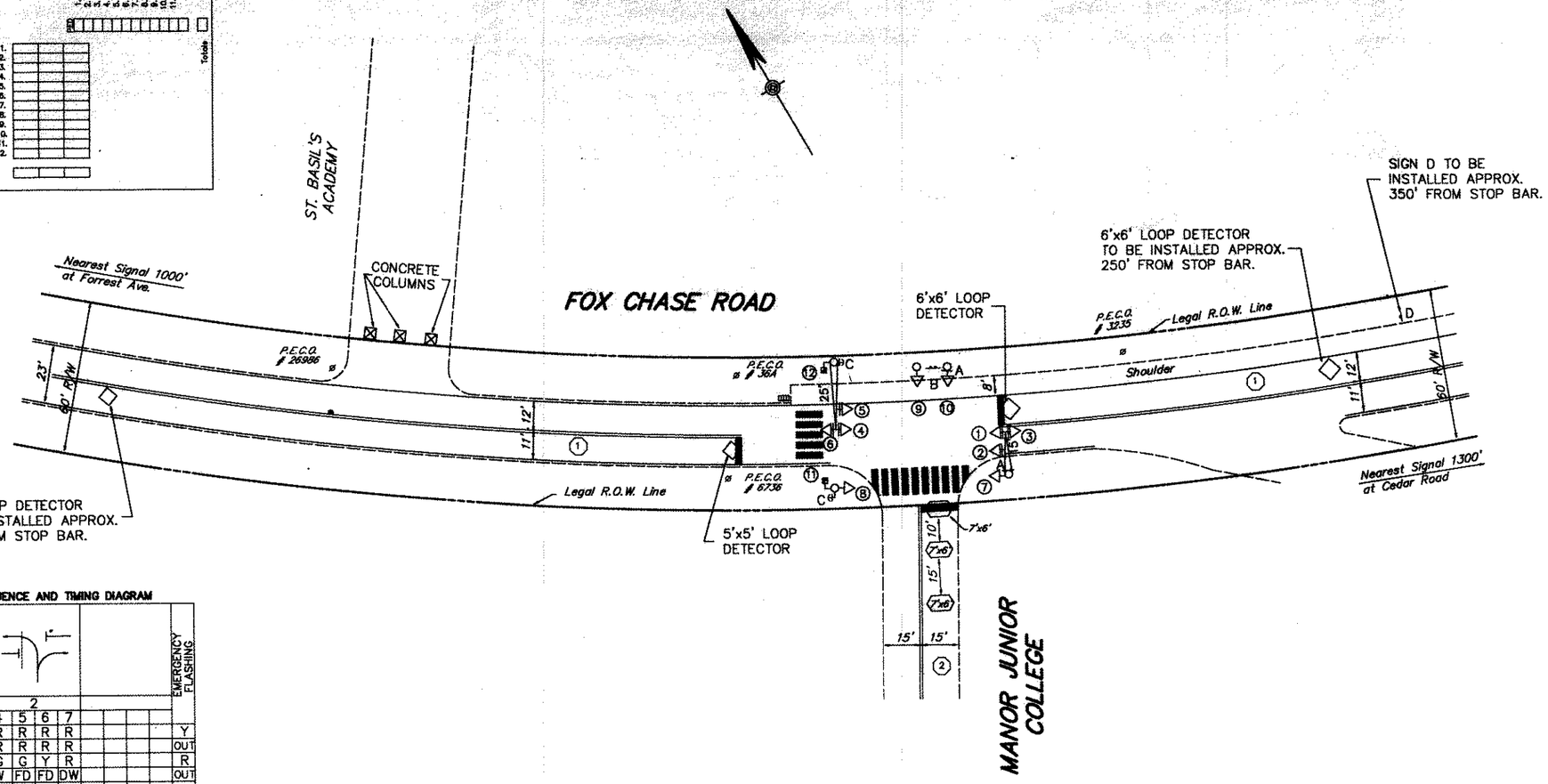
NO.	REVISION	DES./ REVW	DATE	REVW.	DATE	RECOM.	DATE
1	UPGRADE AND NEW MAST ARMS	M.E.P.	8/17/05	MK	9/2/05	LRB	10/3/05
2	REMOVE SIGN 'C' & TURN ARROW	M.E.P.	10/2/05	MLK	11/30/05	LRB	12/9/05
3	ADD COUNTDOWN MAST/HANDS, UPDATE PEDESTRIAN TIMES, REVISE PRE-EMPTION NOTES	KPL	7/13/17	DL	7/17/17	LRB	8/8/17
4							
5							
6							
7							
8							

SHEET 2 OF 2 | PERMIT # 64-0011 | FILE # 0011

PERMIT NO. 64-2762	SHEET 2 OF 2
DATE ISSUED: 3/31/92	Part of 44102

SIGN TABULATION			
PLAN SYMBOL	SERIES NUMBER	SIZE	REMARKS
A	R9-3	18"x18"	NO PEDESTRIAN CROSSING
B	W1-7	48"x24"	DOUBLE ARROW SIGN
C	R10-4L	9"x12"	PUSH BUTTON FOR WALK SIGNAL
D	W3-3	36"x36"	SIGNAL AHEAD SIGN





MOVEMENT, SEQUENCE AND TIMING DIAGRAM

PHASE / INTERVAL / SIGNALS	1			2				EMERGENCY FLASHING
	1	2	3	4	5	6	7	
1,2,3,4,5,6	G	Y	R	R	R	R	R	Y
7,8	G	Y	R	R	R	R	R	OUT
9,10	R	R	R	G	G	Y	R	R
**11,12	DW	DW	DW	W	FD	FD	DW	OUT

FIXED		4	2			3	2					
MINIMUM	15			3								
ADDED INITIAL	2											
MAX. INITIAL	26											
PASSAGE	4			3								
TO REDUCE	10											
BEFORE RED	26											
MIN. GAP	2											
MAX. I	36			--15--								
MAX. II *	41			--15--								
PEDESTRIAN				8	7							
MEMORY	MR			NL								

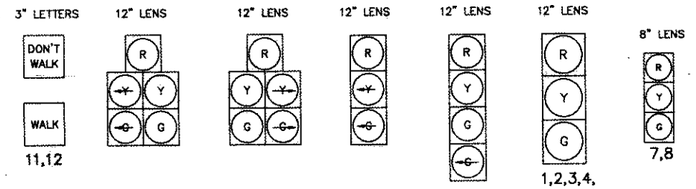
** UPON PEDESTRIAN ACTUATION, OTHERWISE WALK DON'T WALK AT ALL TIMES.

5 SEC. DELAY ON MANOR JUNIOR COLLEGE DRIVE

MAX II SHOULD OPERATE 7:00-9:00 AM AND 2:00-6:00 PM

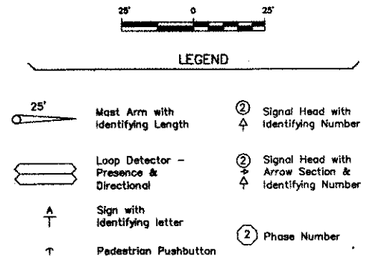
MAX I SHOULD OPERATE ALL OTHER TIMES

SIGNAL INDICATIONS



SIGNALS TO BE EQUIPPED WITH TUNNEL VISORS _____

SIGNALS TO BE EQUIPPED WITH TUNNEL VISORS and LOUVERS _____



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THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNALS MEASURED AT RIGHT ANGLES TO THE APPROACH SHALL BE 8 FEET.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

CURBING TO BE INSTALLED BY MUNICIPALITY AND WHERE NOTED, SHALL BE PLAIN CEMENT CONCRETE CURB OR GRANITE CURB, INSTALLED IN ACCORDANCE WITH DEPARTMENT SPECIFICATIONS FORM 408.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

IN ADDITION TO THIS SIGNAL PERMIT THE PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT PRIOR TO ANY OPENINGS BEING MADE IN OR UNDER ANY PORTION OF A STATE HIGHWAY.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF ACT 172, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, EFFECTIVE DATE DECEMBER 12, 1986.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT, FOR REVIEW, PRIOR TO BIDDING.

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: MONTGOMERY

MUNICIPALITY: ABINGTON TOWNSHIP

INTERSECTION: FOX CHASE ROAD AND MANOR JR. COLLEGE DRIVE

REVIEWED:

MUNICIPAL OFFICIAL DATE

RECOMMENDED: 4/2/92

DISTRICT TRAFFIC ENGINEER DATE 4/3/92

Revised: New Drwg. MV. 3/31/92 MK DWDM 4/3/92

Revised: MAX I & II OPER. TIMES, AND DELAY. RM 6/8/92

Revised:

Revised:

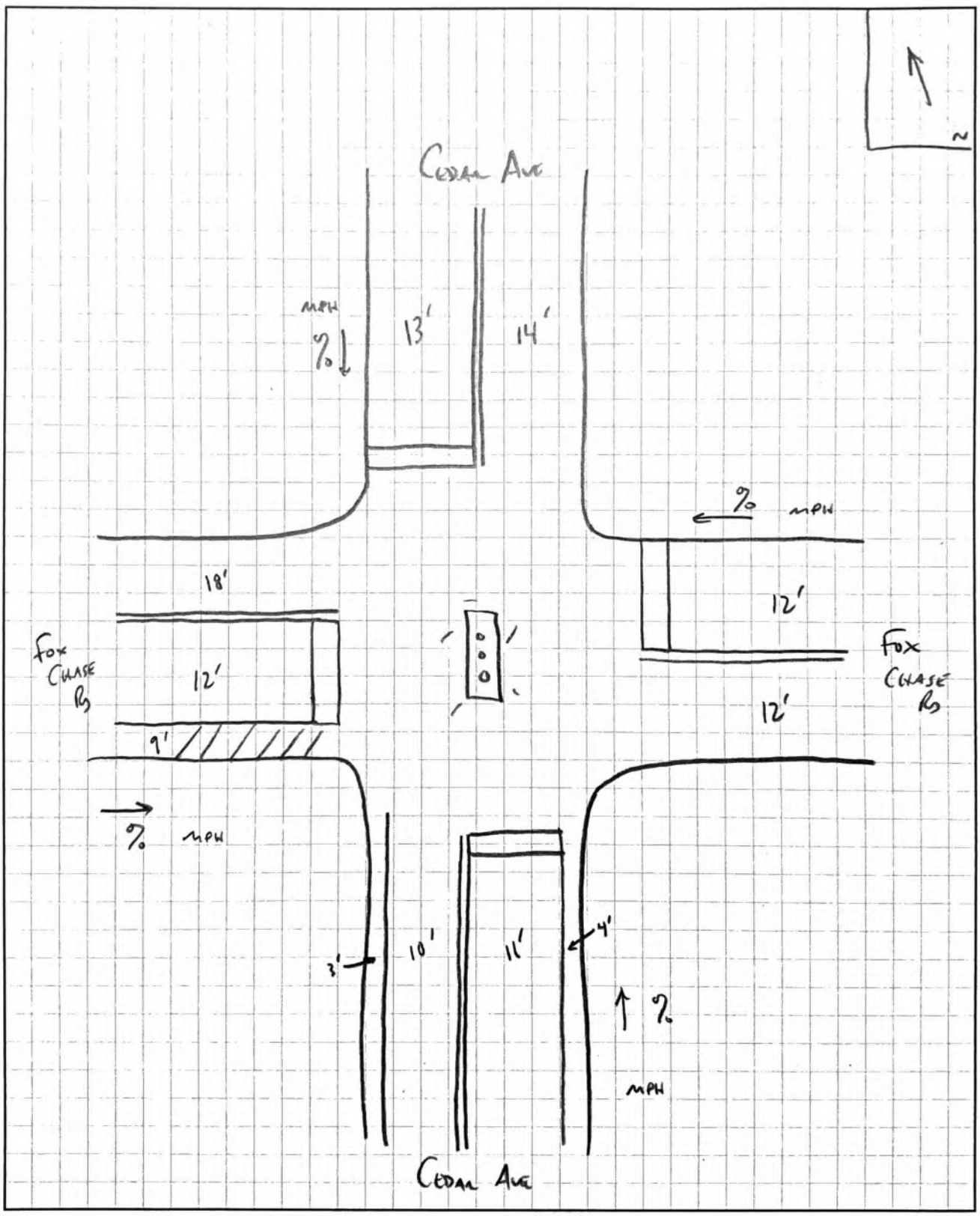
PNDT 8255.007.26 PADOT #: 64-2762-25 3/9/92

McMAHON
TRANSPORTATION ENGINEERS & PLANNERS

Job _____ McMahon Project No. _____ Sheet _____ of ____

Description Fox Chase Rd x Cedar Ave Designed By NDB Date _____

Checked By _____ Date _____

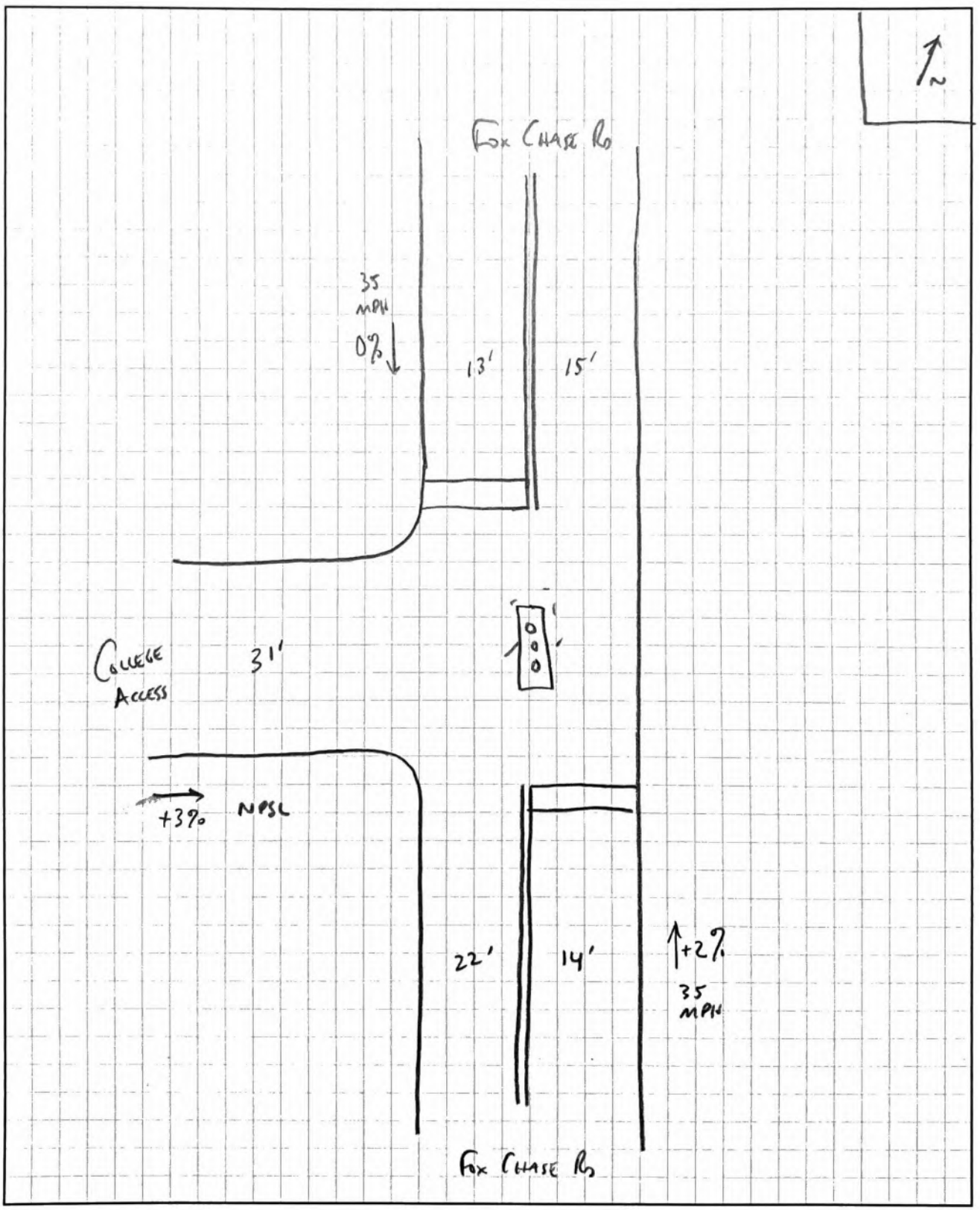


McMAHON
TRANSPORTATION ENGINEERS & PLANNERS

Job _____ McMahon Project No. _____ Sheet _____ of ____

Description Fox Chase Rd Designed By NDB Date _____

Marion College Access Checked By _____ Date _____

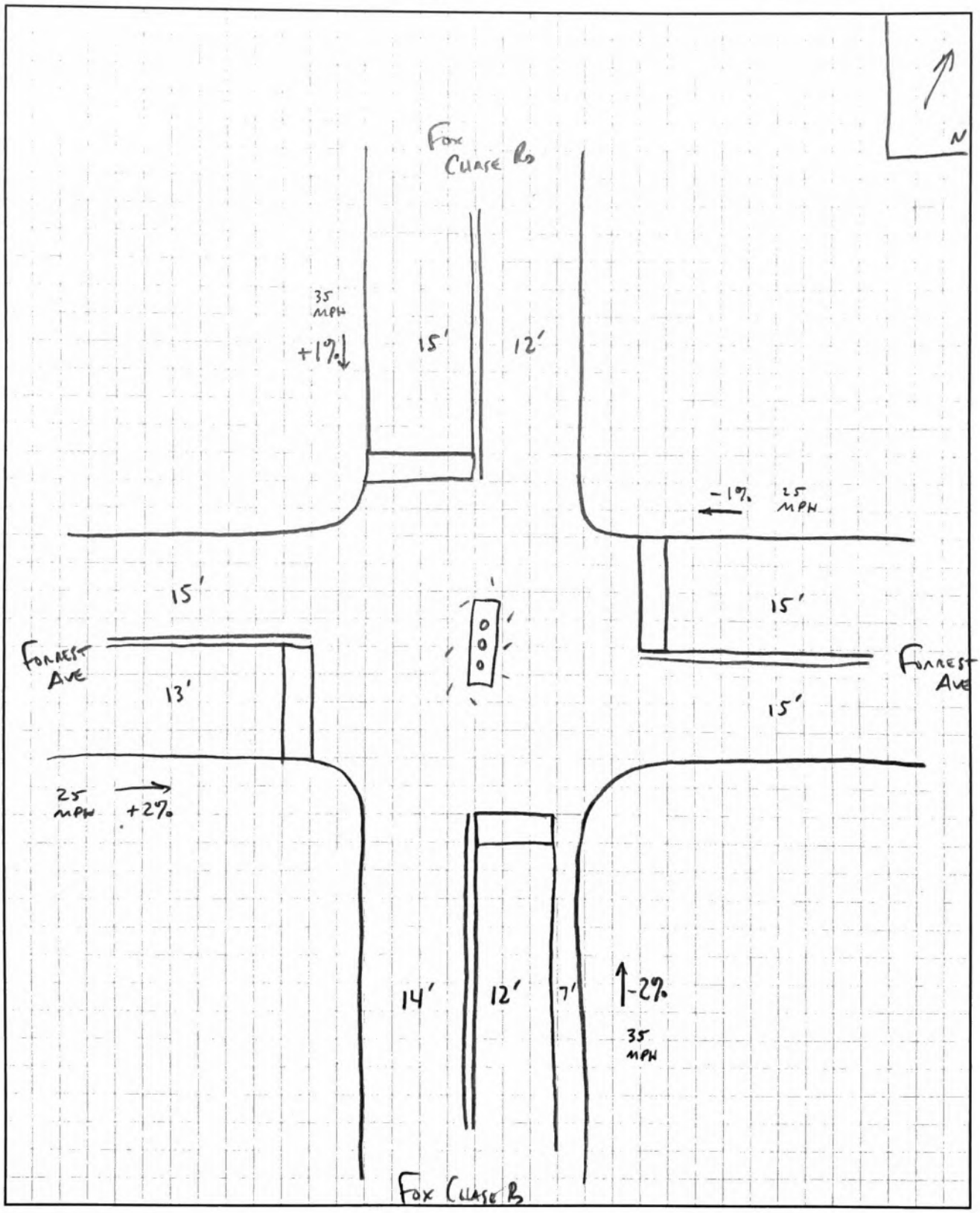


McMAHON
TRANSPORTATION ENGINEERS & PLANNERS

Job _____ McMahon Project No. _____ Sheet _____ of ____

Description Fox Chase Rd & Forest Ave Designed By NOB Date _____

Checked By _____ Date _____



Appendix B

Daily Traffic Data

DVRPC - Travel Monitoring

TAKEN BY: TI **DATE:** 6/19/2019 **PROJECT:** 19-PAM **STATION ID:** 029355

ROAD: FOX CHASE RD **SR/SEG/OFF:** G116/0070/0500

FROM: MEETINGHOUSE RD **TO:** FORREST AVE

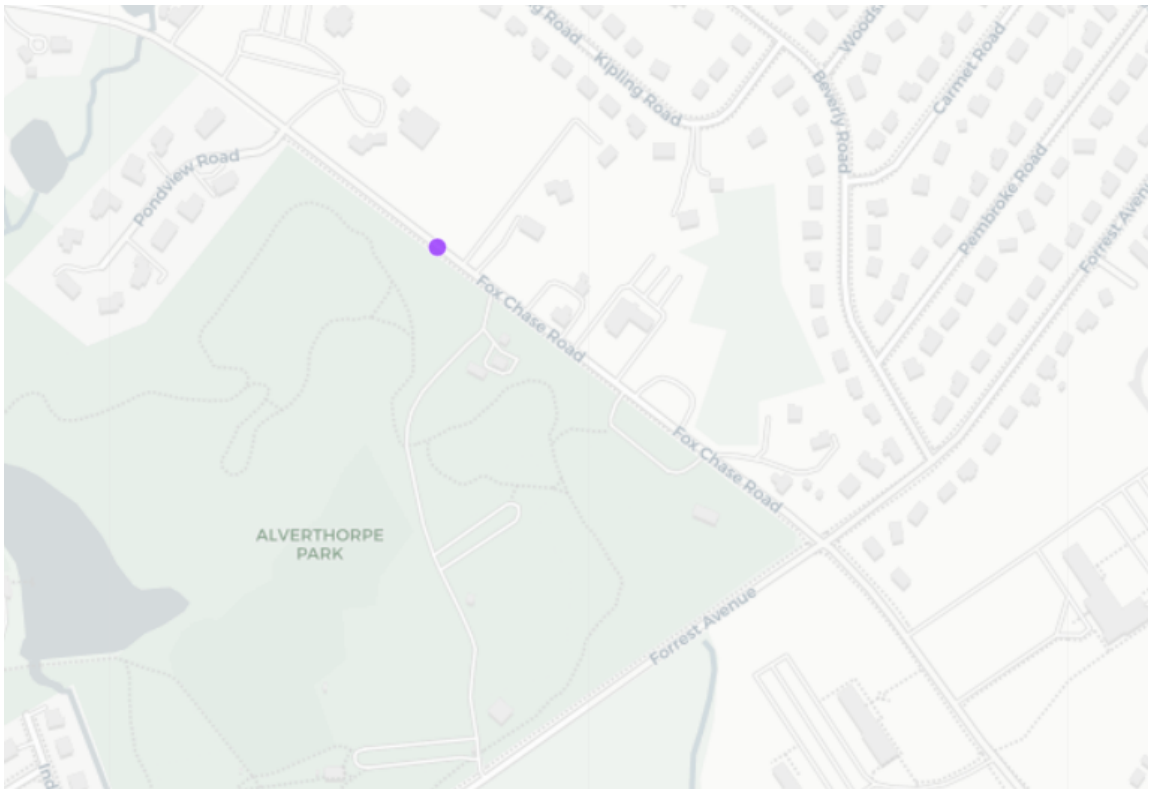
STATE: PA **COUNTY:** MONTGOMERY **MCD:** 4209100156 - ABINGTON TWP

COUNT DIR: BOTH **TRAFFIC DIR:** BOTH **SPEED LIMIT:** 35 **FC:** 17

DVRPC FILE #: 148252 **COUNTER #:** 1874 **WEATHER:** FAIR **DATA SOURCE:** EXTERNAL

COMMENTS:

Hour Beginning	Wednesday 6/19/2019
12 AM	13
1 AM	10
2 AM	6
3 AM	4
4 AM	14
5 AM	53
6 AM	179
7 AM	317
8 AM	409
9 AM	263
10 AM	269
11 AM	256
12 PM	309
1 PM	252
2 PM	294
3 PM	378
4 PM	398
5 PM	464
6 PM	393
7 PM	241
8 PM	198
9 PM	150
10 PM	86
11PM	54
Total	**5,010**



AXLE CORR. FACTOR: 1.000 **AADT:** 4,324 **AM Peak %:** 8.2 **Hour Beginning:** 8:00 AM

SEASONAL FACTOR: 0.863 **PM Peak %:** 9.3 **Hour Beginning:** 5:00 PM

DVRPC - Travel Monitoring

TAKEN BY: KH **DATE:** 9/5/2018 **PROJECT:** 18-PAM **STATION ID:** 018289

ROAD: FOX CHASE RD **SR/SEG/OFF:** 2019/0010/0739

FROM: CEDAR RD **TO:** PA 232 HUNTINGDON PK

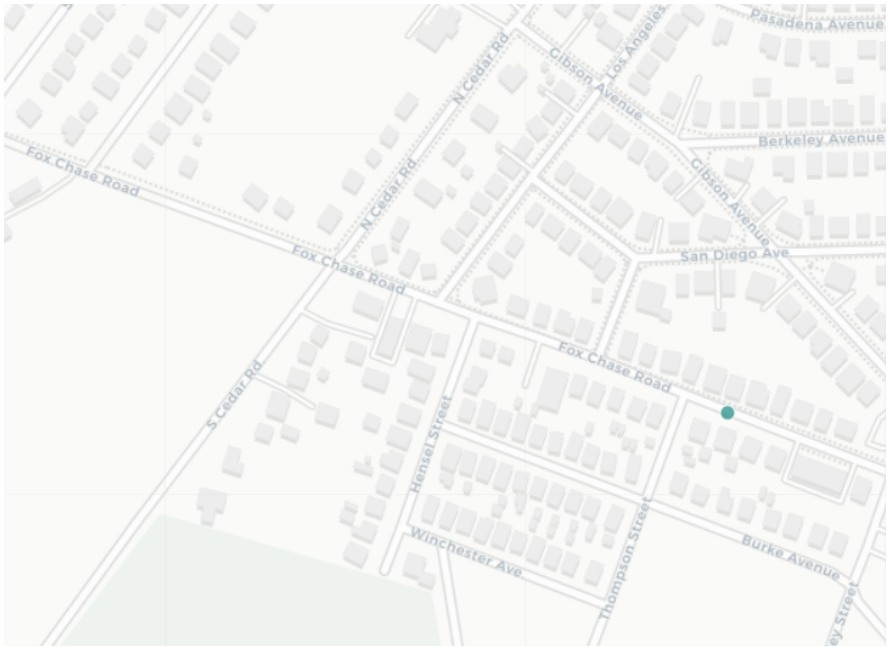
STATE: PA **COUNTY:** MONTGOMERY **MCD:** 4209100156 - ABINGTON TWP

COUNT DIR: BOTH **TRAFFIC DIR:** BOTH **SPEED LIMIT:** 35 **FC:** 17

DVRPC FILE #: 141031 **COUNTER #:** 1414 **WEATHER:** F **DATA SOURCE:** EXTERNAL

COMMENTS:

Hour Beginning	Tuesday 9/4/2018	Wednesday 9/5/2018	Thursday 9/6/2018
12 AM		28	26
1 AM		15	12
2 AM		7	13
3 AM		6	5
4 AM		16	20
5 AM		68	74
6 AM		225	207
7 AM		497	494
8 AM		471	452
9 AM	170	453	425
10 AM	352	353	381
11 AM	364	393	365
12 PM	380	427	411
1 PM	414	407	438
2 PM	464	500	53
3 PM	537	549	
4 PM	514	538	
5 PM	577	586	
6 PM	504	488	
7 PM	346	360	
8 PM	270	237	
9 PM	159	172	
10 PM	92	86	
11PM	63	69	
Total	**5,206**	**6,951**	**3,376**



AXLE CORR. FACTOR: 0.976 **AADT:** 6,112 **AM Peak %:** 7.2 **Hour Beginning:** 7:00 AM

SEASONAL FACTOR: 0.901 **PM Peak %:** 8.4 **Hour Beginning:** 5:00 PM

DVRPC - Travel Monitoring

TAKEN BY: BN **DATE:** 5/8/2019 **PROJECT:** 19-PAM **STATION ID:** 019219

ROAD: CEDAR RD **SR/SEG/OFF:** 2058/0030/1920

FROM: PA 73 TOWNSHIP LINE RD **TO:** FOX CHASE RD

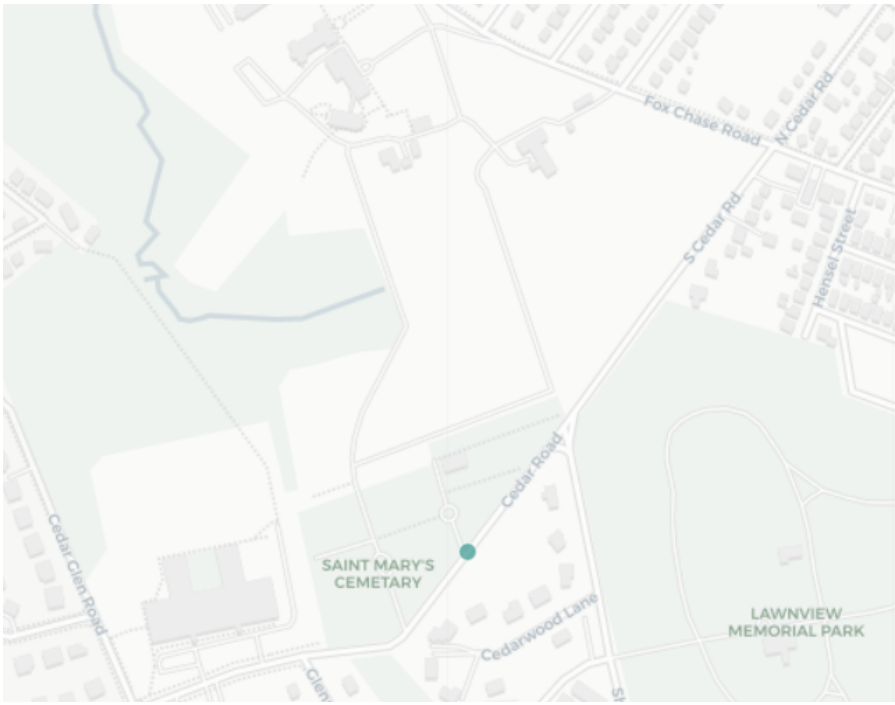
STATE: PA **COUNTY:** MONTGOMERY **MCD:** 4209100156 - ABINGTON TWP

COUNT DIR: BOTH **TRAFFIC DIR:** BOTH **SPEED LIMIT:** 35 **FC:** 17

DVRPC FILE #: 148251 **COUNTER #:** 1189 **WEATHER:** F **DATA SOURCE:** EXTERNAL

COMMENTS:

Hour Beginning	Tuesday 5/7/2019	Wednesday 5/8/2019	Thursday 5/9/2019
12 AM		29	42
1 AM		14	20
2 AM		13	14
3 AM		28	18
4 AM		62	51
5 AM		188	184
6 AM		473	438
7 AM		666	771
8 AM		728	729
9 AM		419	447
10 AM		399	411
11 AM		428	386
12 PM		402	194
1 PM	129	440	
2 PM	523	573	
3 PM	728	705	
4 PM	804	708	
5 PM	885	735	
6 PM	584	569	
7 PM	419	416	
8 PM	285	297	
9 PM	165	183	
10 PM	98	130	
11PM	80	96	
Total	**4,700**	**8,701**	**3,705**



AXLE CORR. FACTOR: 0.976 **AADT:** 6,930 **AM Peak %:** 8.4 **Hour Beginning:** 8:00 AM

SEASONAL FACTOR: 0.816 **PM Peak %:** 8.4 **Hour Beginning:** 5:00 PM

Appendix C

Turning Movement Counts

SCHOOL CALENDARS FOR JANUARY 2022

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27 Christmas Day Observed -	28	29	30	31 New Year's Eve - No	1 New Year's Day - No
2 New Year's Day - No Classes/College Closed	3	4	5	6 10:30am - Orientation for	7	8
9 New Student Resident Returning Student	10 SP-22 Classes Begin SP-22 Drop/Add Begins 12pm - Week of Welcome	11 12pm - Week of Welcome	12 12:15pm - Week of	13	14 12pm - Week of Welcome	15
16	17 Martin Luther King Jr.	18 Drop/Add Ends 12pm - School Supplies &	19	20 11:30am - Cuisine with 1pm - MLK Day of Service	21	22 10am - Winter 3pm - Men's Basketball
23	24	25	26	27 12pm - Founders' Day and 6pm - Men's Basketball	28 12pm - Blessing Bags	29
30	31	1	2 12pm - L.E.A.D. Program:	3 12:15pm - Your Voice 7pm - CANCELED: Men's	4	5

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27 WINTER RECESS -	28 WINTER RECESS -	29 WINTER RECESS -	30 WINTER RECESS -	31 WINTER RECESS -	1
2	3 KEYSTONE EXAMS	4	5 7:30pm - PARENT	6 6:30pm - WILLOW HILL 7pm - MCKINLEY PTO	7	8
9	10 KEYSTONE EXAMS 9am - HIGHLAND PTO	11 ASD COVID-19 BOOSTER 7:30pm - SCHOOL	12	13	14 9:30am - COPPER BEECH 9:30am - MCKINLEY MLK 1:30pm - OVERLOOK	15
16	17 DR. MARTIN LUTHER	18 7pm - SCHOOL BOARD -	19 7:30pm - PARENT	20 ROSLYN BOOK FAIR 6pm - WILLOW HILL	21	22
23	24 ROSLYN BOOK FAIR	25 7:30pm - SCHOOL	26 6:30pm - GIFTED	27	28	29
30	31 ROSLYN BOOK FAIR SECOND MARKING 6pm - ROSLYN PTO 7pm - ROSLYN PTO 8pm - RYDAL PTO	1 7pm - ABINGTON JR.	2 KINDERGARTEN 5:30pm - COPPER BEECH 7pm - OVERLOOK PTO 7:30pm - PARENT	3 9am - MCKINLEY PTO	4 6:30pm - HIGHLAND	5

TURNING MOVEMENT COUNTS

McMahon Associates, Inc.

Transporation Engineers & Planners
425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Abington Township
Location: Fox Chase Road &
Forrest Avenue
Counter: M

File Name : stbasils01w
Site Code :
Start Date : 1/11/2022
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

	Fox Chase Rd Southbound			Forrest Avenue Westbound			Fox Chase Rd Northbound			Forrest Avenue Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	1	5	0	1	3	8	5	30	5	10	2	0	70
07:15 AM	2	21	1	0	3	4	5	29	3	7	5	1	81
07:30 AM	2	15	1	2	5	6	10	39	7	9	6	5	107
07:45 AM	1	22	1	3	6	12	5	43	6	10	3	6	118
Total	6	63	3	6	17	30	25	141	21	36	16	12	376
08:00 AM	3	35	0	0	0	18	6	39	12	8	2	4	127
08:15 AM	4	34	1	1	4	14	7	46	11	8	4	2	136
08:30 AM	6	33	0	1	2	14	7	44	9	20	6	1	143
08:45 AM	2	30	1	3	7	23	11	41	10	20	2	6	156
Total	15	132	2	5	13	69	31	170	42	56	14	13	562
04:00 PM	4	43	0	0	1	18	16	32	7	20	4	2	147
04:15 PM	1	39	1	0	5	10	6	50	8	21	6	2	149
04:30 PM	2	43	2	1	3	12	10	24	8	20	5	2	132
04:45 PM	2	40	1	2	4	13	10	36	11	21	7	0	147
Total	9	165	4	3	13	53	42	142	34	82	22	6	575
05:00 PM	2	47	1	0	8	11	13	22	9	30	6	0	149
05:15 PM	2	39	2	1	3	14	8	24	8	14	3	2	120
05:30 PM	3	44	0	0	2	10	8	34	12	15	2	0	130
05:45 PM	1	46	2	1	4	5	8	25	10	12	2	3	119
Total	8	176	5	2	17	40	37	105	39	71	13	5	518
Grand Total	38	536	14	16	60	192	135	558	136	245	65	36	2031
Apprch %	6.5	91.2	2.4	6	22.4	71.6	16.3	67.3	16.4	70.8	18.8	10.4	
Total %	1.9	26.4	0.7	0.8	3	9.5	6.6	27.5	6.7	12.1	3.2	1.8	
Passenger Vehicles	33	517	10	15	57	185	127	540	125	230	63	34	1936
% Passenger Vehicles	86.8	96.5	71.4	93.8	95	96.4	94.1	96.8	91.9	93.9	96.9	94.4	95.3
Heavy Vehicles	5	19	4	1	3	7	8	18	11	15	2	2	95
% Heavy Vehicles	13.2	3.5	28.6	6.2	5	3.6	5.9	3.2	8.1	6.1	3.1	5.6	4.7

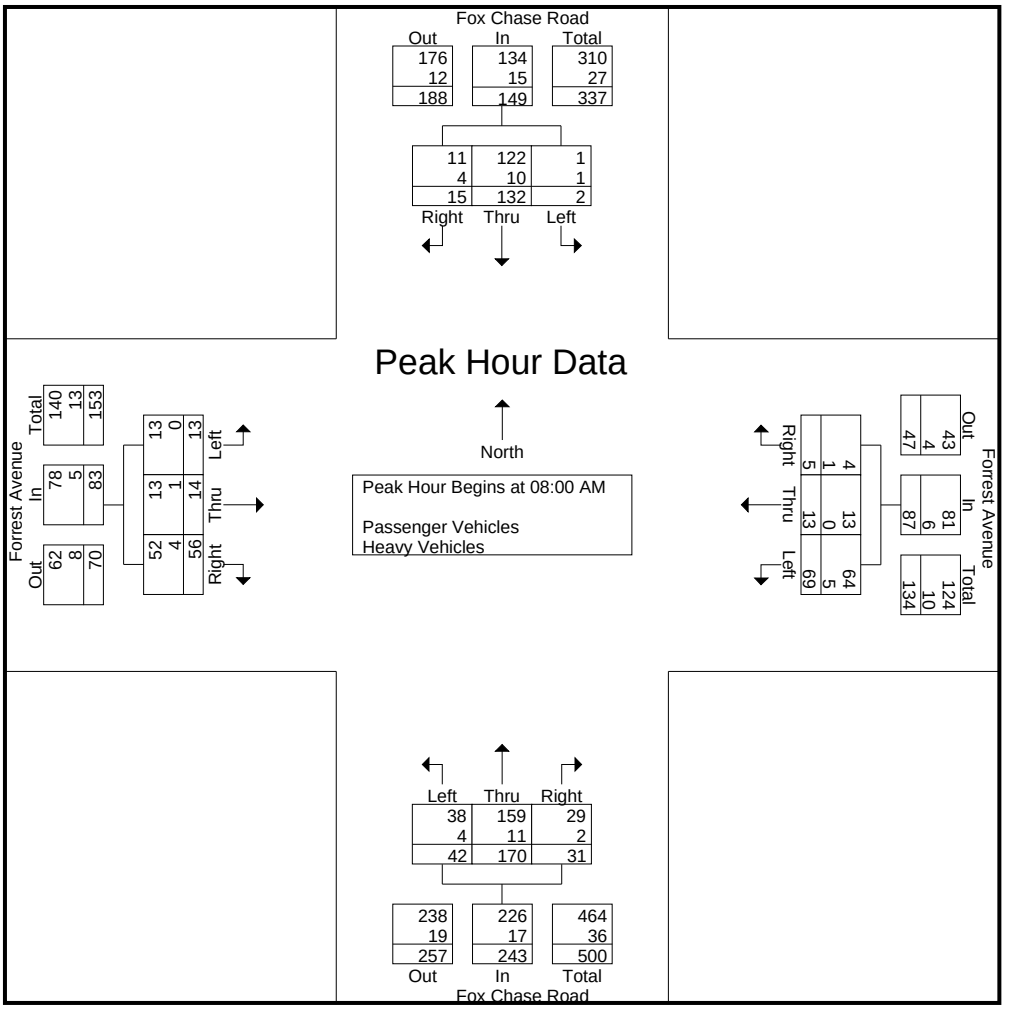
McMahon Associates, Inc.

Transporation Engineers & Planners
425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Abington Township
Location: Fox Chase Road &
Forrest Avenue
Counter: M

File Name : stbasils01w
Site Code :
Start Date : 1/11/2022
Page No : 2

	FOX CHASE ROAD				FORREST AVENUE				FOX CHASE ROAD				FORREST AVENUE				
	Fox Chase Road Southbound				Forrest Avenue Westbound				Fox Chase Road Northbound				Forrest Avenue Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	3	**35**	0	38	0	0	18	18	6	39	**12**	57	8	2	4	14	127
08:15 AM	4	34	**1**	**39**	1	4	14	19	7	**46**	11	**64**	8	4	2	14	136
08:30 AM	**6**	33	0	39	1	2	14	17	7	44	9	60	**20**	**6**	1	27	143
08:45 AM	2	30	1	33	**3**	**7**	**23**	**33**	**11**	41	10	62	20	2	**6**	**28**	**156**
Total Volume	15	132	2	149	5	13	69	87	31	170	42	243	56	14	13	83	562
% App. Total	10.1	88.6	1.3		5.7	14.9	79.3		12.8	70	17.3		67.5	16.9	15.7		
PHF	.625	.943	.500	.955	.417	.464	.750	.659	.705	.924	.875	.949	.700	.583	.542	.741	.901
Passenger Vehicles	11	122	1	134	4	13	64	81	29	159	38	226	52	13	13	78	519
% Passenger Vehicles	73.3	92.4	50.0	89.9	80.0	100	92.8	93.1	93.5	93.5	90.5	93.0	92.9	92.9	100	94.0	92.3
Heavy Vehicles	4	10	1	15	1	0	5	6	2	11	4	17	4	1	0	5	43
% Heavy Vehicles	26.7	7.6	50.0	10.1	20.0	0	7.2	6.9	6.5	6.5	9.5	7.0	7.1	7.1	0	6.0	7.7



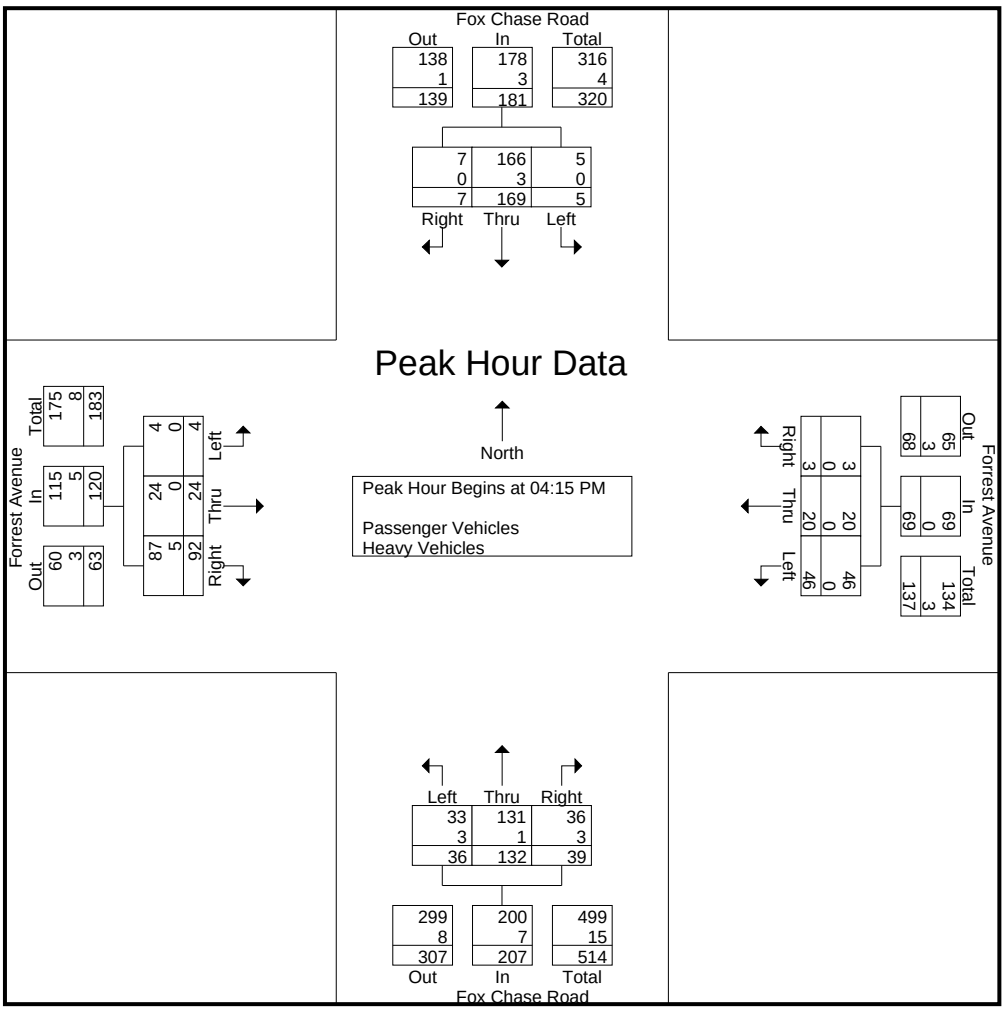
McMahon Associates, Inc.

Transporation Engineers & Planners
425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Abington Township
Location: Fox Chase Road &
Forrest Avenue
Counter: M

File Name : stbasils01w
Site Code :
Start Date : 1/11/2022
Page No : 3

	Fox Chase Road Southbound				Forrest Avenue Westbound				Fox Chase Road Northbound				Forrest Avenue Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	1	39	1	41	0	5	10	15	6	**50**	8	**64**	21	6	**2**	29	**149**
04:30 PM	**2**	43	**2**	47	1	3	12	16	10	24	8	42	20	5	2	27	132
04:45 PM	2	40	1	43	**2**	4	**13**	**19**	10	36	**11**	57	21	**7**	0	28	147
05:00 PM	2	**47**	1	**50**	0	**8**	11	19	**13**	22	9	44	**30**	6	0	**36**	149
Total Volume	7	169	5	181	3	20	46	69	39	132	36	207	92	24	4	120	577
% App. Total	3.9	93.4	2.8		4.3	29	66.7		18.8	63.8	17.4		76.7	20	3.3		
PHF	.875	.899	.625	.905	.375	.625	.885	.908	.750	.660	.818	.809	.767	.857	.500	.833	.968
Passenger Vehicles	7	166	5	178	3	20	46	69	36	131	33	200	87	24	4	115	562
% Passenger Vehicles	100	98.2	100	98.3	100	100	100	100	92.3	99.2	91.7	96.6	94.6	100	100	95.8	97.4
Heavy Vehicles	0	3	0	3	0	0	0	0	3	1	3	7	5	0	0	5	15
% Heavy Vehicles	0	1.8	0	1.7	0	0	0	0	7.7	0.8	8.3	3.4	5.4	0	0	4.2	2.6



McMahon Associates, Inc.

Transporation Engineers & Planners
425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Abington Township
Location: Fox Chase Road &
Forrest Avenue
Counter: M

File Name : stbasils01w
Site Code :
Start Date : 1/11/2022
Page No : 1

Groups Printed- Pedestrians

	Forrest Avenue Southbound			Fox Chase Road Westbound			Forrest Avenue Northbound			Fox Chase Road Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:15 AM	0	0	0	0	2	0	0	0	0	0	1	0	3
07:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
Total	0	1	0	0	4	0	0	0	0	0	1	0	6
08:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	0	0	0	0	2	0	0	0	0	0	0	0	2
04:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
Total	0	1	0	0	3	0	0	0	0	0	0	0	4
05:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	1	0	0	3	0	0	0	0	0	1	0	5
Grand Total	0	3	0	0	12	0	0	0	0	0	2	0	17
Apprch %	0	100	0	0	100	0	0	0	0	0	100	0	
Total %	0	17.6	0	0	70.6	0	0	0	0	0	11.8	0	

McMahon Associates, Inc.

Transporation Engineers & Planners
425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Abington Township
Location: Fox Chase Road &
Manor College Access
Counter: M

File Name : stbasils02w
Site Code :
Start Date : 1/11/2022
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

	Fox Chase Rd Southbound		Fox Chase Rd Northbound		Manor College Access Eastbound		
Start Time	Right	Thru	Thru	Left	Right	Left	Int. Total
07:00 AM	0	20	43	0	0	0	63
07:15 AM	1	31	35	0	0	0	67
07:30 AM	3	28	54	6	3	0	94
07:45 AM	4	39	55	7	0	0	105
Total	8	118	187	13	3	0	329
08:00 AM	5	55	58	7	1	0	126
08:15 AM	3	55	62	5	1	0	126
08:30 AM	2	64	63	3	0	0	132
08:45 AM	5	67	65	3	0	1	141
Total	15	241	248	18	2	1	525
04:00 PM	2	77	50	0	3	1	133
04:15 PM	0	67	60	1	7	0	135
04:30 PM	0	78	44	1	8	3	134
04:45 PM	0	73	49	3	6	2	133
Total	2	295	203	5	24	6	535
05:00 PM	0	91	36	1	3	8	139
05:15 PM	0	65	36	0	7	1	109
05:30 PM	0	67	53	1	3	1	125
05:45 PM	0	63	46	1	0	0	110
Total	0	286	171	3	13	10	483
Grand Total	25	940	809	39	42	17	1872
Apprch %	2.6	97.4	95.4	4.6	71.2	28.8	
Total %	1.3	50.2	43.2	2.1	2.2	0.9	
Passenger Vehicles	25	899	774	39	42	17	1796
% Passenger Vehicles	100	95.6	95.7	100	100	100	95.9
Heavy Vehicles	0	41	35	0	0	0	76
% Heavy Vehicles	0	4.4	4.3	0	0	0	4.1

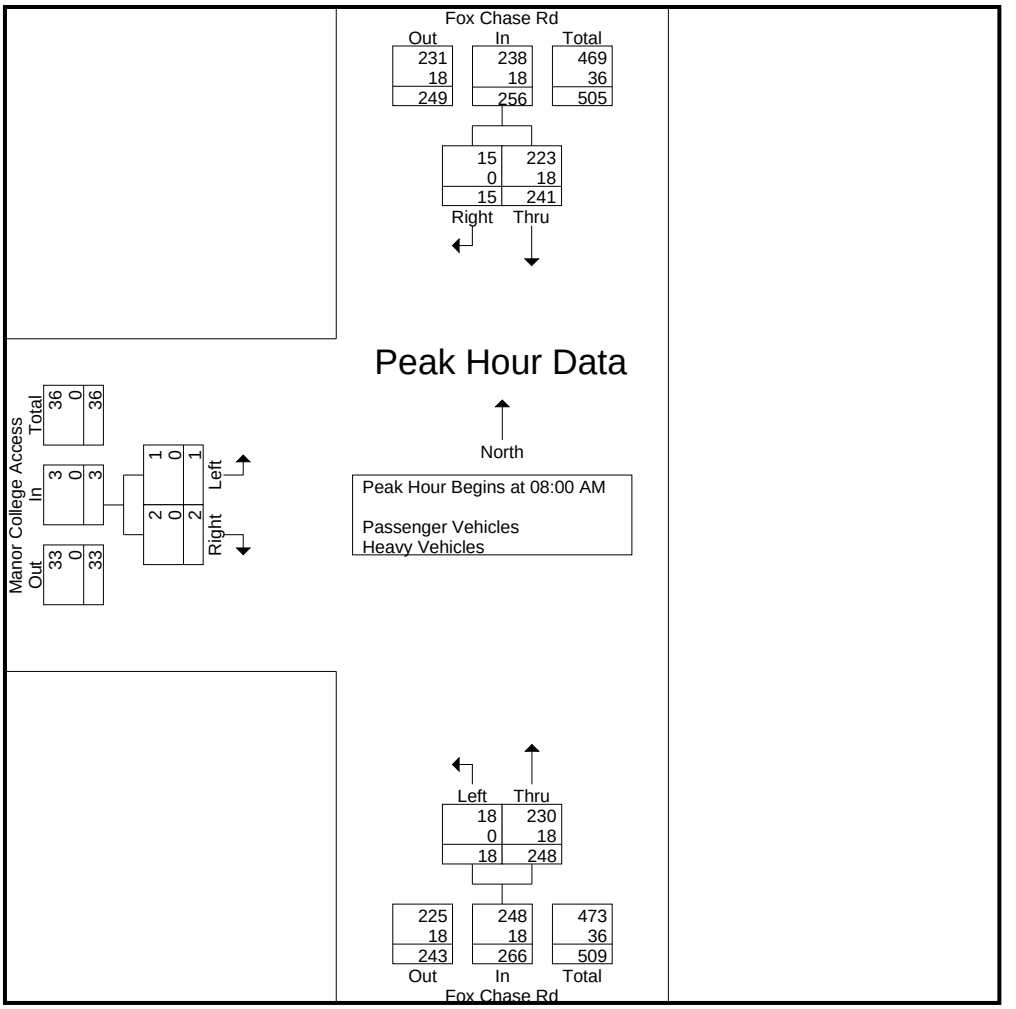
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Fort Washington, PA 19034

Municipality: Abington Township
Location: Fox Chase Road &
Manor College Access
Counter: M

File Name : stbasils02w
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	Fox Chase Rd Southbound			Fox Chase Rd Northbound			Manor College Access Eastbound			
Start Time	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	**5**	55	60	58	**7**	65	**1**	0	**1**	126
08:15 AM	3	55	58	62	5	67	1	0	1	126
08:30 AM	2	64	66	63	3	66	0	0	0	132
08:45 AM	5	**67**	**72**	**65**	3	**68**	0	**1**	1	**141**
Total Volume	15	241	256	248	18	266	2	1	3	525
% App. Total	5.9	94.1		93.2	6.8		66.7	33.3		
PHF	.750	.899	.889	.954	.643	.978	.500	.250	.750	.931
Passenger Vehicles	15	223	238	230	18	248	2	1	3	489
% Passenger Vehicles	100	92.5	93.0	92.7	100	93.2	100	100	100	93.1
Heavy Vehicles	0	18	18	18	0	18	0	0	0	36
% Heavy Vehicles	0	7.5	7.0	7.3	0	6.8	0	0	0	6.9



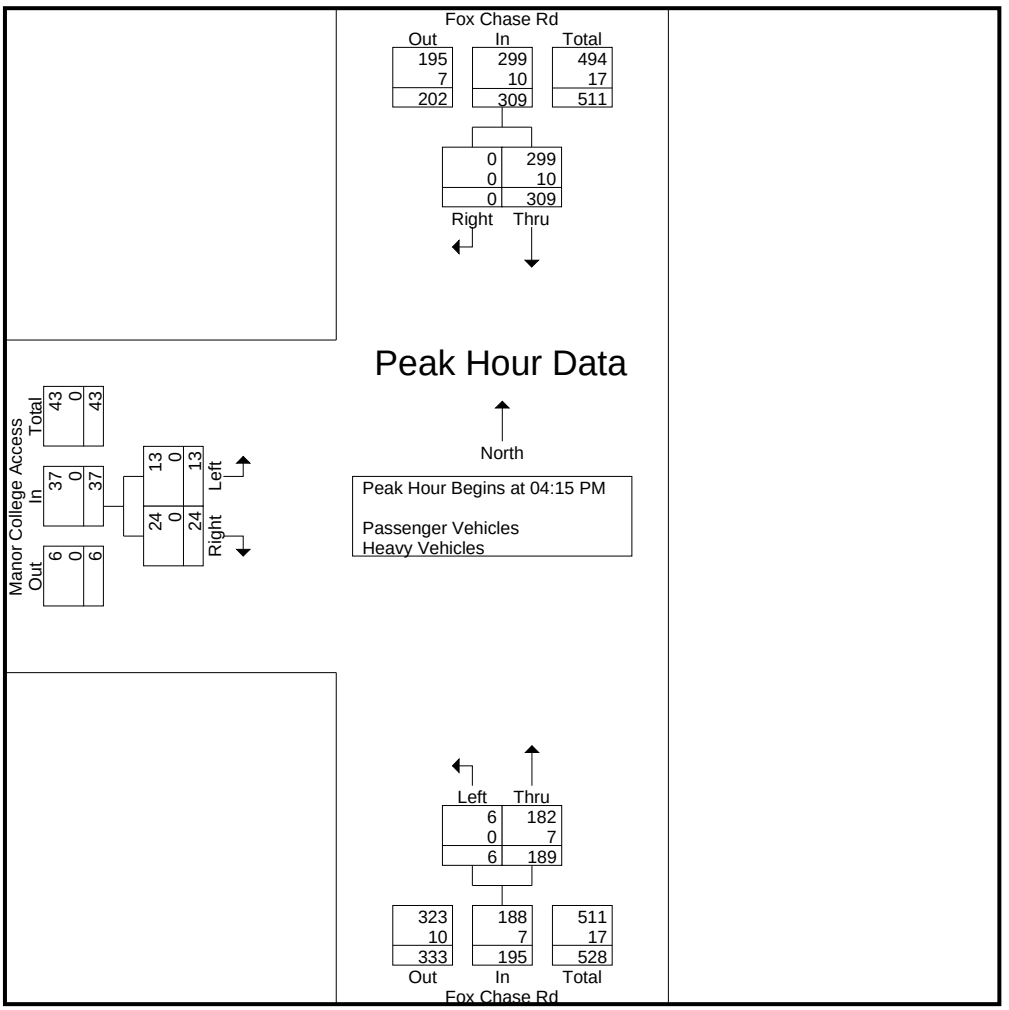
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Counter: M

File Name : stbasils02w
Site Code :
Start Date : 1/11/2022
Page No : 3

	Fox Chase Rd Southbound			Fox Chase Rd Northbound			Manor College Access Eastbound			
Start Time	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	0	67	67	**60**	1	**61**	7	0	7	135
04:30 PM	0	78	78	44	1	45	**8**	3	**11**	134
04:45 PM	0	73	73	49	**3**	52	6	2	8	133
05:00 PM	0	**91**	**91**	36	1	37	3	**8**	11	**139**
Total Volume	0	309	309	189	6	195	24	13	37	541
% App. Total	0	100		96.9	3.1		64.9	35.1		
PHF	.000	.849	.849	.788	.500	.799	.750	.406	.841	.973
Passenger Vehicles	0	299	299	182	6	188	24	13	37	524
% Passenger Vehicles	0	96.8	96.8	96.3	100	96.4	100	100	100	96.9
Heavy Vehicles	0	10	10	7	0	7	0	0	0	17
% Heavy Vehicles	0	3.2	3.2	3.7	0	3.6	0	0	0	3.1



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File Name : stbasils02w
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Start Date : 1/11/2022
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Groups Printed- Pedestrians

	Fox Chase Rd Southbound		Fox Chase Rd Northbound		Manor College Access Eastbound		
Start Time	Right	Thru	Thru	Left	Right	Left	Int. Total
08:00 AM	0	1	0	0	1	0	2
08:15 AM	0	1	0	0	0	0	1
Total	0	2	0	0	1	0	3
04:15 PM	0	0	0	0	1	0	1
Total	0	0	0	0	1	0	1
05:30 PM	0	0	0	0	1	0	1
05:45 PM	0	1	0	0	0	0	1
Total	0	1	0	0	1	0	2
Grand Total	0	3	0	0	3	0	6
Apprch %	0	100	0	0	100	0	
Total %	0	50	0	0	50	0	

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Municipality: Abington Township
Location: Fox Chase Road & Cedar Road
Counter: M

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Start Date : 1/11/2022
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Groups Printed- Passenger Vehicles - Heavy Vehicles

	Cedar Rd Southbound			Fox Chase Rd Westbound			Cedar Rd Northbound			Fox Chase Rd Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	13	43	0	0	20	14	13	34	8	5	17	4	171
07:15 AM	14	35	1	1	20	23	18	43	6	4	19	7	191
07:30 AM	10	71	1	3	37	17	19	59	11	13	20	3	264
07:45 AM	19	59	1	0	31	21	24	50	16	10	21	9	261
Total	56	208	3	4	108	75	74	186	41	32	77	23	887
08:00 AM	15	57	2	0	34	21	16	41	13	18	33	10	260
08:15 AM	21	62	0	3	28	15	24	51	12	24	25	8	273
08:30 AM	16	61	0	1	36	32	23	42	17	31	29	9	297
08:45 AM	12	60	1	3	25	16	17	67	26	19	34	14	294
Total	64	240	3	7	123	84	80	201	68	92	121	41	1124
04:00 PM	23	63	1	0	22	24	28	65	14	15	45	18	318
04:15 PM	17	61	2	3	36	15	31	64	15	14	46	19	323
04:30 PM	15	71	1	0	18	7	22	59	16	15	51	19	294
04:45 PM	14	69	2	2	25	29	31	58	13	18	39	17	317
Total	69	264	6	5	101	75	112	246	58	62	181	73	1252
05:00 PM	9	68	1	1	21	13	30	67	6	13	51	25	305
05:15 PM	7	71	2	2	23	16	29	47	8	13	39	23	280
05:30 PM	14	82	1	1	22	13	19	54	16	12	41	17	292
05:45 PM	13	52	2	1	19	13	24	40	20	8	31	17	240
Total	43	273	6	5	85	55	102	208	50	46	162	82	1117
Grand Total	232	985	18	21	417	289	368	841	217	232	541	219	4380
Apprch %	18.8	79.8	1.5	2.9	57.4	39.8	25.8	59	15.2	23.4	54.5	22.1	
Total %	5.3	22.5	0.4	0.5	9.5	6.6	8.4	19.2	5	5.3	12.4	5	
Passenger Vehicles	219	966	16	17	408	280	364	817	202	219	529	204	4241
% Passenger Vehicles	94.4	98.1	88.9	81	97.8	96.9	98.9	97.1	93.1	94.4	97.8	93.2	96.8
Heavy Vehicles	13	19	2	4	9	9	4	24	15	13	12	15	139
% Heavy Vehicles	5.6	1.9	11.1	19	2.2	3.1	1.1	2.9	6.9	5.6	2.2	6.8	3.2

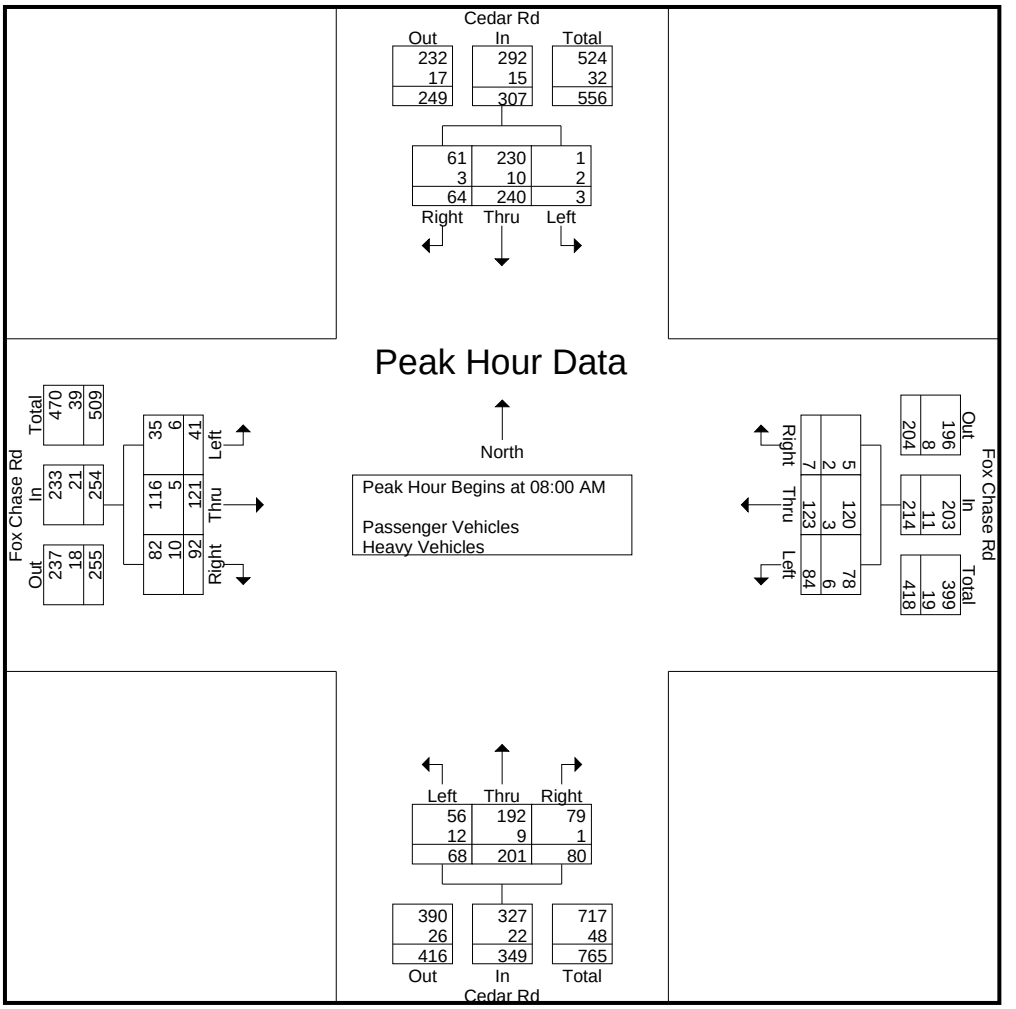
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425 Commerce Drive, Suite 200
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Municipality: Abington Township
Location: Fox Chase Road & Cedar Road
Counter: M

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	Cedar Rd Southbound				Fox Chase Rd Westbound				Cedar Rd Northbound				Fox Chase Rd Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	15	57	**2**	74	0	34	21	55	16	41	13	70	18	33	10	61	260
08:15 AM	**21**	**62**	0	**83**	**3**	28	15	46	**24**	51	12	87	24	25	8	57	273
08:30 AM	16	61	0	77	1	**36**	**32**	**69**	23	42	17	82	**31**	29	9	**69**	**297**
08:45 AM	12	60	1	73	3	25	16	44	17	**67**	**26**	**110**	19	**34**	**14**	67	294
Total Volume	64	240	3	307	7	123	84	214	80	201	68	349	92	121	41	254	1124
% App. Total	20.8	78.2	1		3.3	57.5	39.3		22.9	57.6	19.5		36.2	47.6	16.1		
PHF	.762	.968	.375	.925	.583	.854	.656	.775	.833	.750	.654	.793	.742	.890	.732	.920	.946
Passenger Vehicles	61	230	1	292	5	120	78	203	79	192	56	327	82	116	35	233	1055
% Passenger Vehicles	95.3	95.8	33.3	95.1	71.4	97.6	92.9	94.9	98.8	95.5	82.4	93.7	89.1	95.9	85.4	91.7	93.9
Heavy Vehicles	3	10	2	15	2	3	6	11	1	9	12	22	10	5	6	21	69
% Heavy Vehicles	4.7	4.2	66.7	4.9	28.6	2.4	7.1	5.1	1.3	4.5	17.6	6.3	10.9	4.1	14.6	8.3	6.1



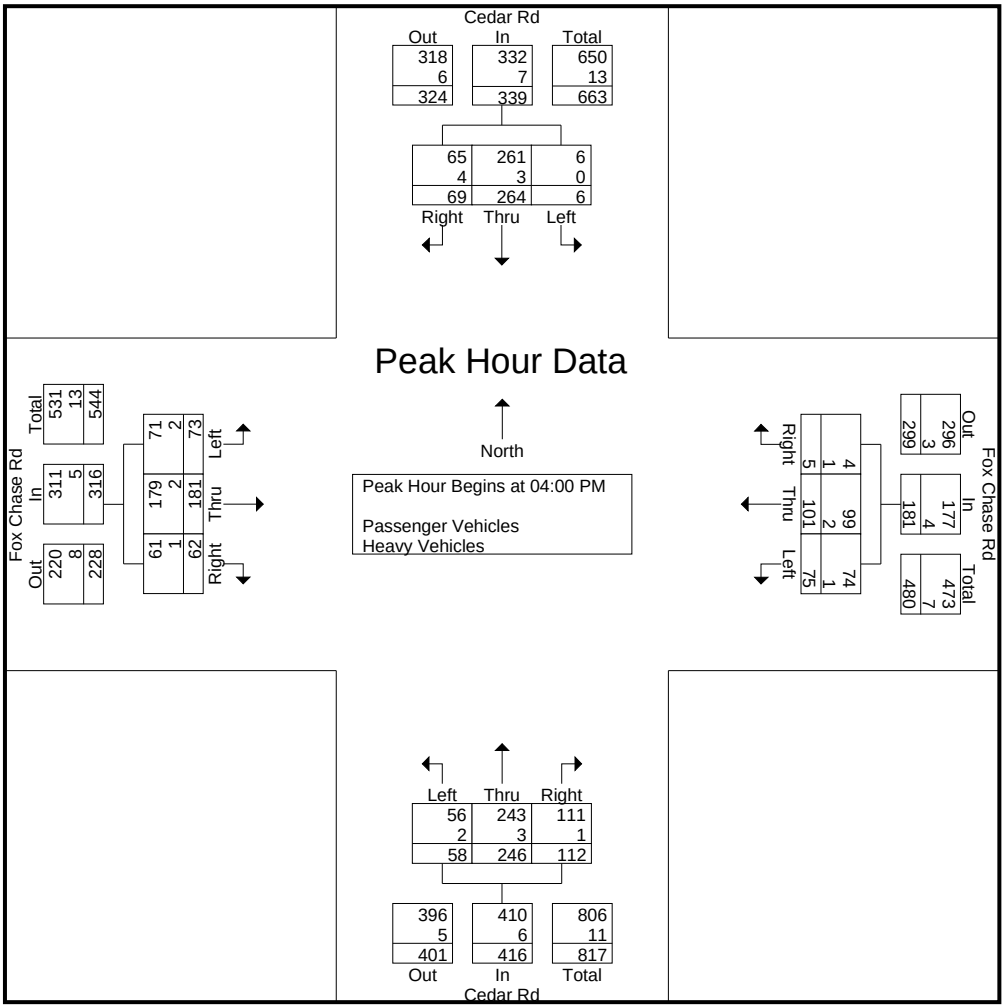
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Municipality: Abington Township
Location: Fox Chase Road & Cedar Road
Counter: M

File Name : stbasils03w
Site Code :
Start Date : 1/11/2022
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	Cedar Rd Southbound				Fox Chase Rd Westbound				Cedar Rd Northbound				Fox Chase Rd Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**23**	63	1	**87**	0	22	24	46	28	**65**	14	107	15	45	18	78	318
04:15 PM	17	61	**2**	80	**3**	**36**	15	54	**31**	64	15	**110**	14	46	**19**	79	**323**
04:30 PM	15	**71**	1	87	0	18	7	25	22	59	**16**	97	15	**51**	19	**85**	294
04:45 PM	14	69	2	85	2	25	**29**	**56**	31	58	13	102	**18**	39	17	74	317
Total Volume	69	264	6	339	5	101	75	181	112	246	58	416	62	181	73	316	1252
% App. Total	20.4	77.9	1.8		2.8	55.8	41.4		26.9	59.1	13.9		19.6	57.3	23.1		
PHF	.750	.930	.750	.974	.417	.701	.647	.808	.903	.946	.906	.945	.861	.887	.961	.929	.969
Passenger Vehicles	65	261	6	332	4	99	74	177	111	243	56	410	61	179	71	311	1230
% Passenger Vehicles	94.2	98.9	100	97.9	80.0	98.0	98.7	97.8	99.1	98.8	96.6	98.6	98.4	98.9	97.3	98.4	98.2
Heavy Vehicles	4	3	0	7	1	2	1	4	1	3	2	6	1	2	2	5	22
% Heavy Vehicles	5.8	1.1	0	2.1	20.0	2.0	1.3	2.2	0.9	1.2	3.4	1.4	1.6	1.1	2.7	1.6	1.8



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Municipality: Abington Township
Location: Fox Chase Road & Cedar Road
Counter: M

File Name : stbasils03w
Site Code :
Start Date : 1/11/2022
Page No : 1

Groups Printed- Pedestrians

	Cedar Rd Southbound			Fox Chase Rd Westbound			Cedar Rd Northbound			Fox Chase Rd Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	0	0	0	0	0	0	0	0	1
04:00 PM	0	2	0	0	0	0	0	0	0	0	1	0	3
04:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	4	0	0	0	0	0	0	0	0	1	0	5
05:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	7	0	0	0	0	0	0	0	0	1	0	8
Apprch %	0	100	0	0	0	0	0	0	0	0	100	0	
Total %	0	87.5	0	0	0	0	0	0	0	0	12.5	0	

Appendix D

Warrant Analysis Worksheets

Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Abington Township	**Analysis Date:**	1/28/2022
County:	Montgomery County	**Conducted By:**	BGG
PennDOT Engineering District:	6	**Checked By:**	JDG
		Agency/Company Name:	McMahon Associates, Inc.

Intersection & Approach Description: Fox Chase Road and Local Road / Manor Access
Southbound Fox Chase Road Left-Turn

Analysis Period:	2029 Build	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Signalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	4	2.0%	5
	Through	-	248	8.0%	258
	Right	Yes	15	0.0%	15
Opposing	Left	Yes	18	0.0%	18
	Through	-	254	7.0%	263
	Right	Yes	13	2.0%	14

Advancing Volume:	278
Opposing Volume:	295
Left Turn Volume:	5
% Left Turns in Advancing Volume:	1.80%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left		0	0.0%	N/A
	Through	-	0	0.0%	N/A
	Right	-	0	0.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: **Figure 1**

Warrant Met?: **No**

Right Turn Lane Warrant Findings

Applicable Warrant Figure: **N/A**

Warrant Met?: **N/A**

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Signalized
Design Hour Volume of Turning Lane:	5
Cycles Per Hour (Assumed):	Known
Cycles Per Hour (If Known):	54

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

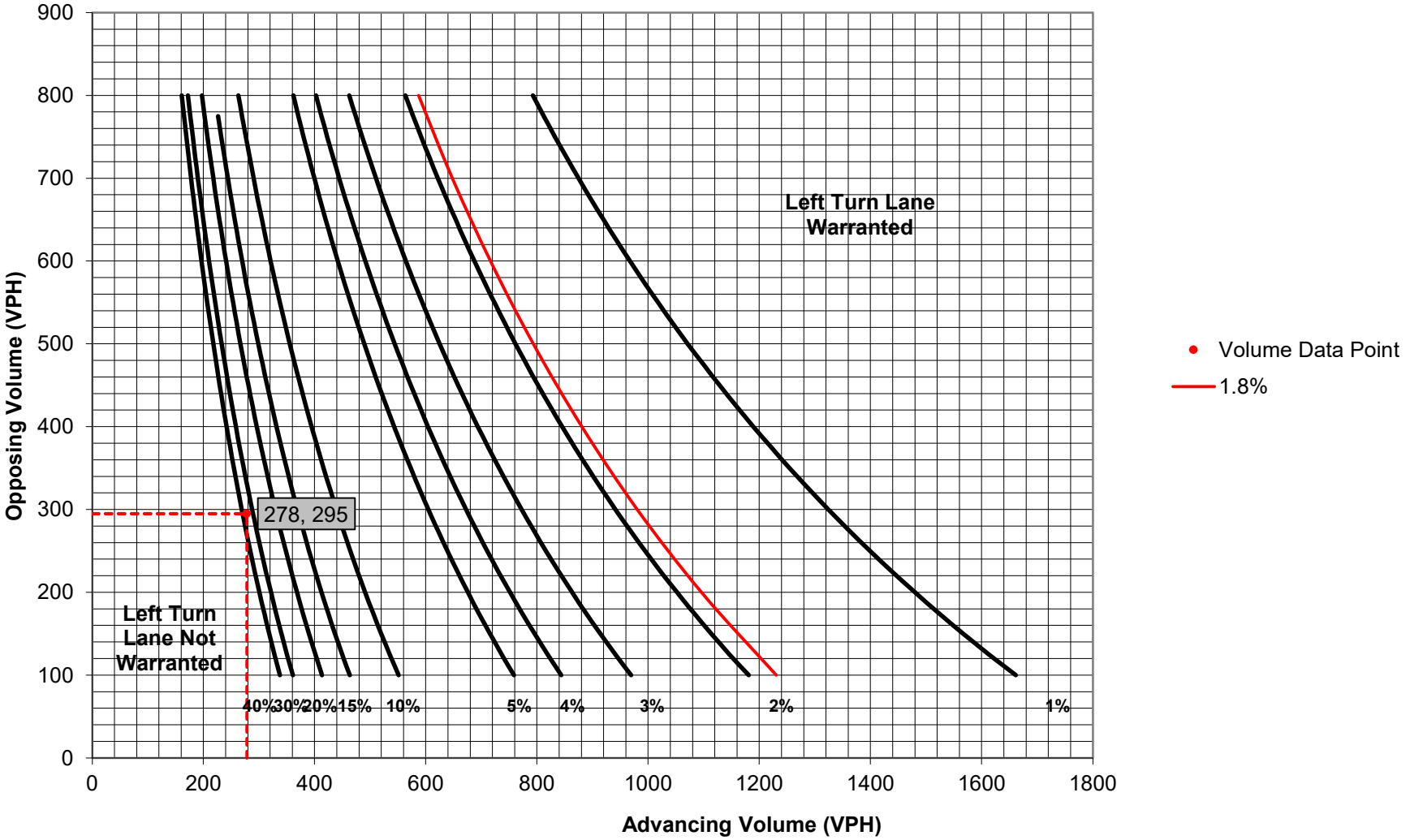
Left Turn Lane Storage Length, Condition A:	**N/A**	**Feet**
Condition B:	**N/A**	**Feet**
Condition C:	**N/A**	**Feet**
Required Left Turn Lane Storage Length:	**N/A**	**Feet**

Additional Findings:
N/A

Additional Comments / Justifications:

Figure 1. Warrant for left turn lanes on two-lane roadways (speeds to 35 mph, unsignalized and signalized intersections)

(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Abington Township	**Analysis Date:**	1/28/2022
County:	Montgomery County	**Conducted By:**	BGG
PennDOT Engineering District:	6	**Checked By:**	JDG
		Agency/Company Name:	McMahon Associates, Inc.

Intersection & Approach Description: Fox Chase Road and Local Road / Manor Access
Southbound Fox Chase Road Left-Turn Lane

Analysis Period:	2029 Build	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Signalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	9	2.0%	10
	Through	-	316	3.0%	321
	Right	Yes	0	0.0%	0
Opposing	Left	Yes	6	0.0%	6
	Through	-	199	4.0%	203
	Right	Yes	28	2.0%	29

Advancing Volume:	331
Opposing Volume:	238
Left Turn Volume:	10
% Left Turns in Advancing Volume:	3.02%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	N/A
	Through	-	0	0.0%	N/A
	Right	-	0	0.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: **Figure 1**

Warrant Met?: **No**

Right Turn Lane Warrant Findings

Applicable Warrant Figure: **N/A**

Warrant Met?: **N/A**

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Signalized
Design Hour Volume of Turning Lane:	10
Cycles Per Hour (Assumed):	Known
Cycles Per Hour (If Known):	54

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

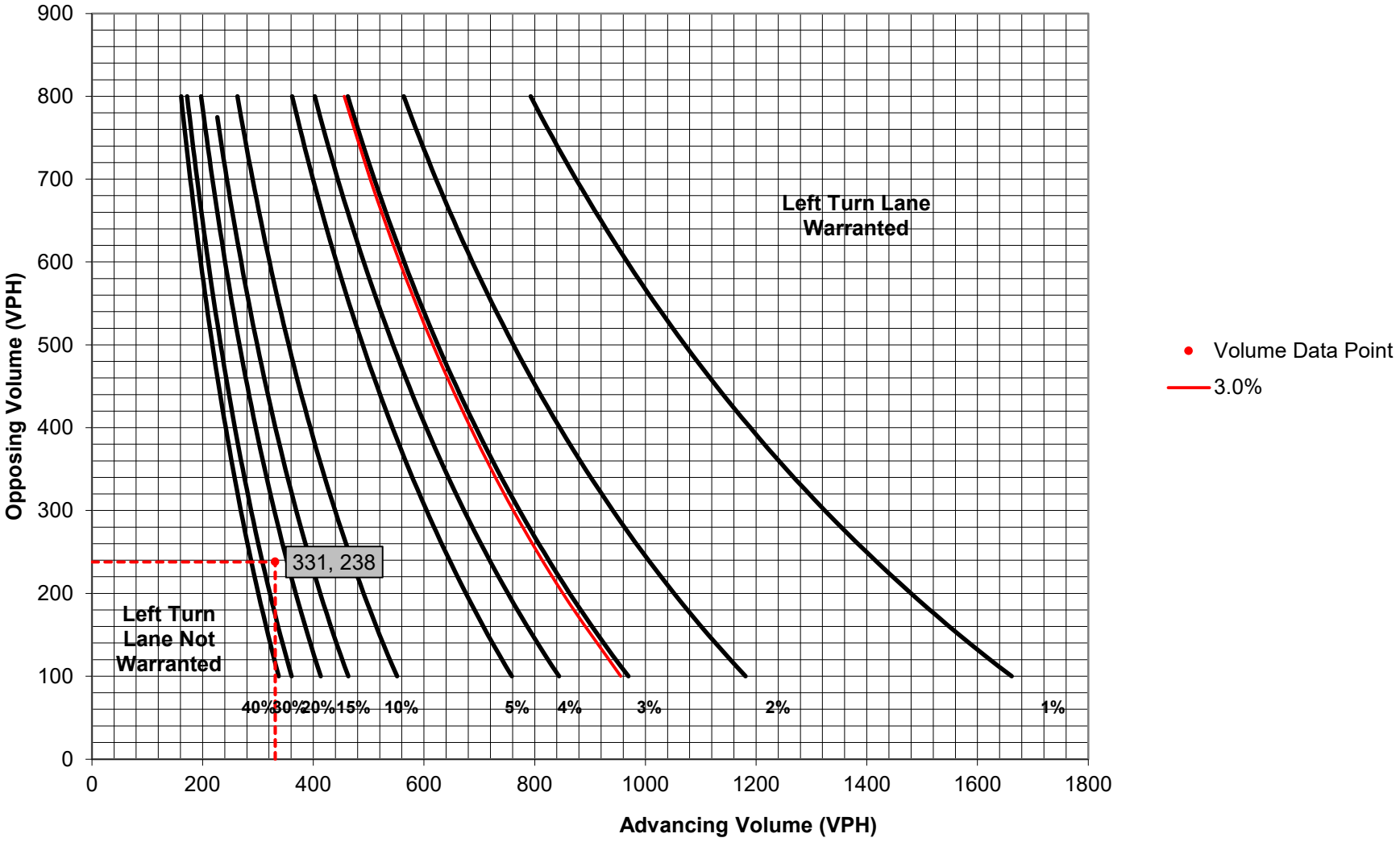
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Left Turn Lane Storage Length, Condition A:	**N/A**	**Feet**
Condition B:	**N/A**	**Feet**
Condition C:	**N/A**	**Feet**
Required Left Turn Lane Storage Length:	**N/A**	**Feet**

Additional Findings:
N/A

Additional Comments / Justifications:

Figure 1. Warrant for left turn lanes on two-lane roadways (speeds to 35 mph, unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Abington Township	**Analysis Date:**	1/28/2022
County:	Montgomery County	**Conducted By:**	BGG
PennDOT Engineering District:	6	**Checked By:**	JDG
		Agency/Company Name:	McMahon Associates, Inc.

Intersection & Approach Description: Fox Chase Road and Local Road / Manor Access
Northbound Fox Chase Road Left-Turn

Analysis Period:	2029 Build	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Signalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	18	0.0%	18
	Through	-	254	7.0%	263
	Right	Yes	13	2.0%	14
Opposing	Left	Yes	4	2.0%	5
	Through	-	248	8.0%	258
	Right	Yes	15	0.0%	15

Advancing Volume:	295
Opposing Volume:	278
Left Turn Volume:	18
% Left Turns in Advancing Volume:	6.10%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left				N/A
	Through	-			N/A
	Right	-			N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: **Figure 1**

Warrant Met?: **No**

Right Turn Lane Warrant Findings

Applicable Warrant Figure: **N/A**

Warrant Met?: **N/A**

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Signalized
Design Hour Volume of Turning Lane:	18
Cycles Per Hour (Assumed):	Known
Cycles Per Hour (If Known):	54

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

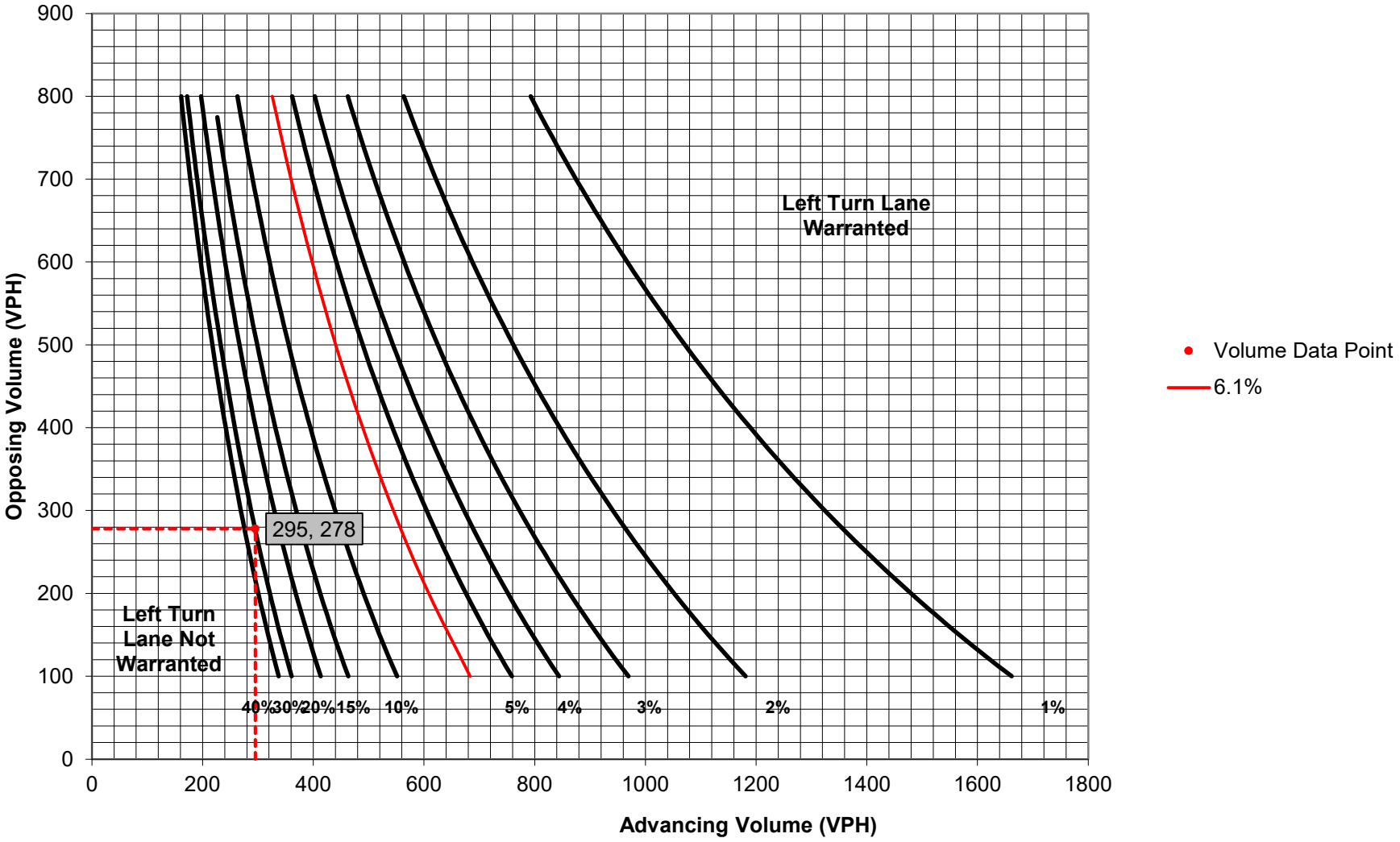
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Left Turn Lane Storage Length, Condition A:	**N/A**	**Feet**
Condition B:	**N/A**	**Feet**
Condition C:	**N/A**	**Feet**
Required Left Turn Lane Storage Length:	**N/A**	**Feet**

Additional Findings:
N/A

Additional Comments / Justifications:

Figure 1. Warrant for left turn lanes on two-lane roadways
(speeds to 35 mph, unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Abington Township	**Analysis Date:**	1/28/2022
County:	Montgomery County	**Conducted By:**	BGG
PennDOT Engineering District:	6	**Checked By:**	JDG
		Agency/Company Name:	McMahon Associates, Inc.

Intersection & Approach Description: Fox Chase Road and Local Road / Manor Access
Northbound Fox Chase Road Left-Turn Lane

Analysis Period:	2029 Build	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Signalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	6	0.0%	6
	Through	-	199	4.0%	203
	Right	Yes	28	2.0%	29
Opposing	Left	Yes	9	2.0%	10
	Through	-	316	3.0%	321
	Right	Yes	0	0.0%	0

Advancing Volume:	238
Opposing Volume:	331
Left Turn Volume:	6
% Left Turns in Advancing Volume:	2.52%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes			N/A
	Through	-			N/A
	Right	-			N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: **Figure 1**

Warrant Met?: **No**

Right Turn Lane Warrant Findings

Applicable Warrant Figure: **N/A**

Warrant Met?: **N/A**

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Signalized
Design Hour Volume of Turning Lane:	6
Cycles Per Hour (Assumed):	Known
Cycles Per Hour (If Known):	54

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

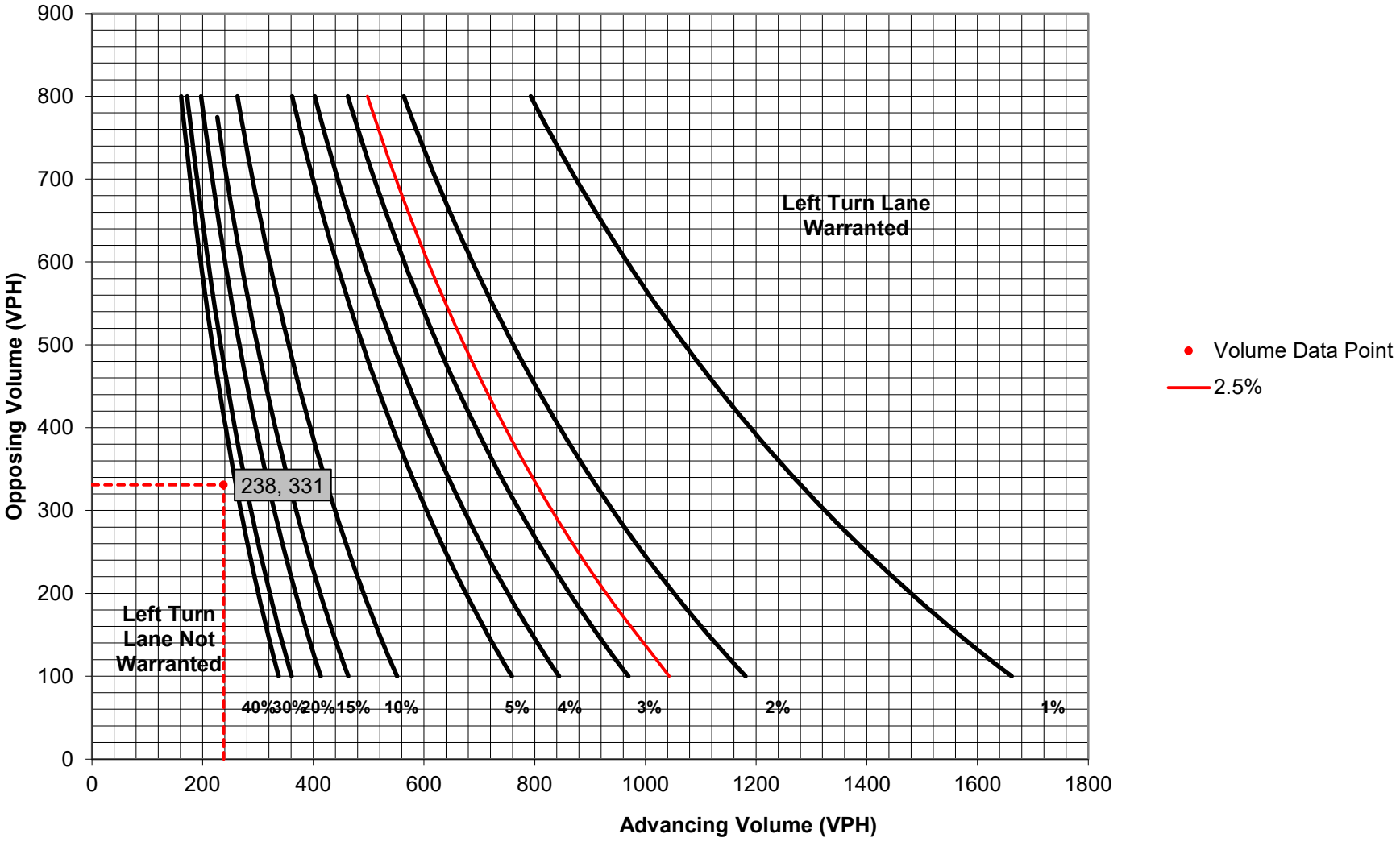
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Left Turn Lane Storage Length, Condition A:	**N/A**	**Feet**
Condition B:	**N/A**	**Feet**
Condition C:	**N/A**	**Feet**
Required Left Turn Lane Storage Length:	**N/A**	**Feet**

Additional Findings:
N/A

Additional Comments / Justifications:

Figure 1. Warrant for left turn lanes on two-lane roadways
(speeds to 35 mph, unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Abington Township	**Analysis Date:**	1/28/2022
County:	Montgomery County	**Conducted By:**	BGG
PennDOT Engineering District:	6	**Checked By:**	JDG
		Agency/Company Name:	McMahon Associates, Inc.

Intersection & Approach Description: Fox Chase Road and Local Road / Manor Access
Northbound Right-Turn Fox Chase Road

Analysis Period:	2029 Build	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Signalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	4	2.0%	N/A
	Through	-	248	8.0%	N/A
	Right	Yes	15	0.0%	N/A
Opposing	Left	Yes	18	0.0%	N/A
	Through	-	254	7.0%	N/A
	Right	Yes	13	2.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	18	0.0%	18
	Through	-	254	7.0%	263
	Right	-	13	2.0%	14

Advancing Volume:	295
Right Turn Volume:	14

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Signalized
Design Hour Volume of Turning Lane:	14
Cycles Per Hour (Assumed):	Known
Cycles Per Hour (If Known):	54

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

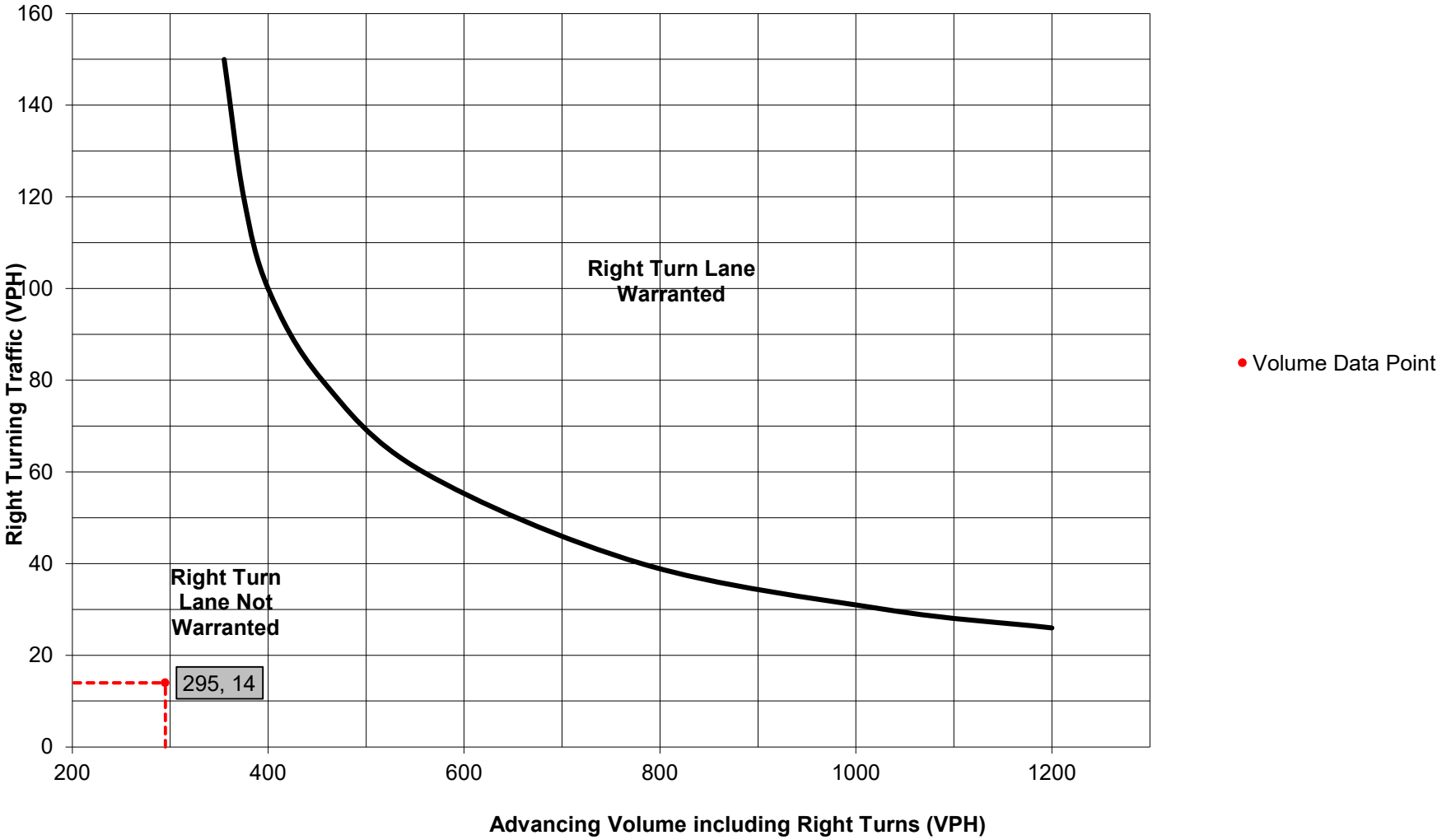
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings:
N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Abington Township	**Analysis Date:**	1/28/2022
County:	Montgomery County	**Conducted By:**	BGG
PennDOT Engineering District:	6	**Checked By:**	JDG
		Agency/Company Name:	McMahon Associates, Inc.

Intersection & Approach Description: Fox Chase Road and Local Road / Manor Access
Northbound Right-Turn Fox Chase Road

Analysis Period:	2029 Build	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Signalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	9	2.0%	N/A
	Through	-	316	3.0%	N/A
	Right	Yes	0	0.0%	N/A
Opposing	Left	Yes	6	0.0%	N/A
	Through	-	199	4.0%	N/A
	Right	Yes	28	2.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	6	0.0%	6
	Through	-	199	4.0%	203
	Right	-	28	2.0%	29

Advancing Volume:	238
Right Turn Volume:	29

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Signalized
Design Hour Volume of Turning Lane:	29
Cycles Per Hour (Assumed):	Known
Cycles Per Hour (If Known):	54

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

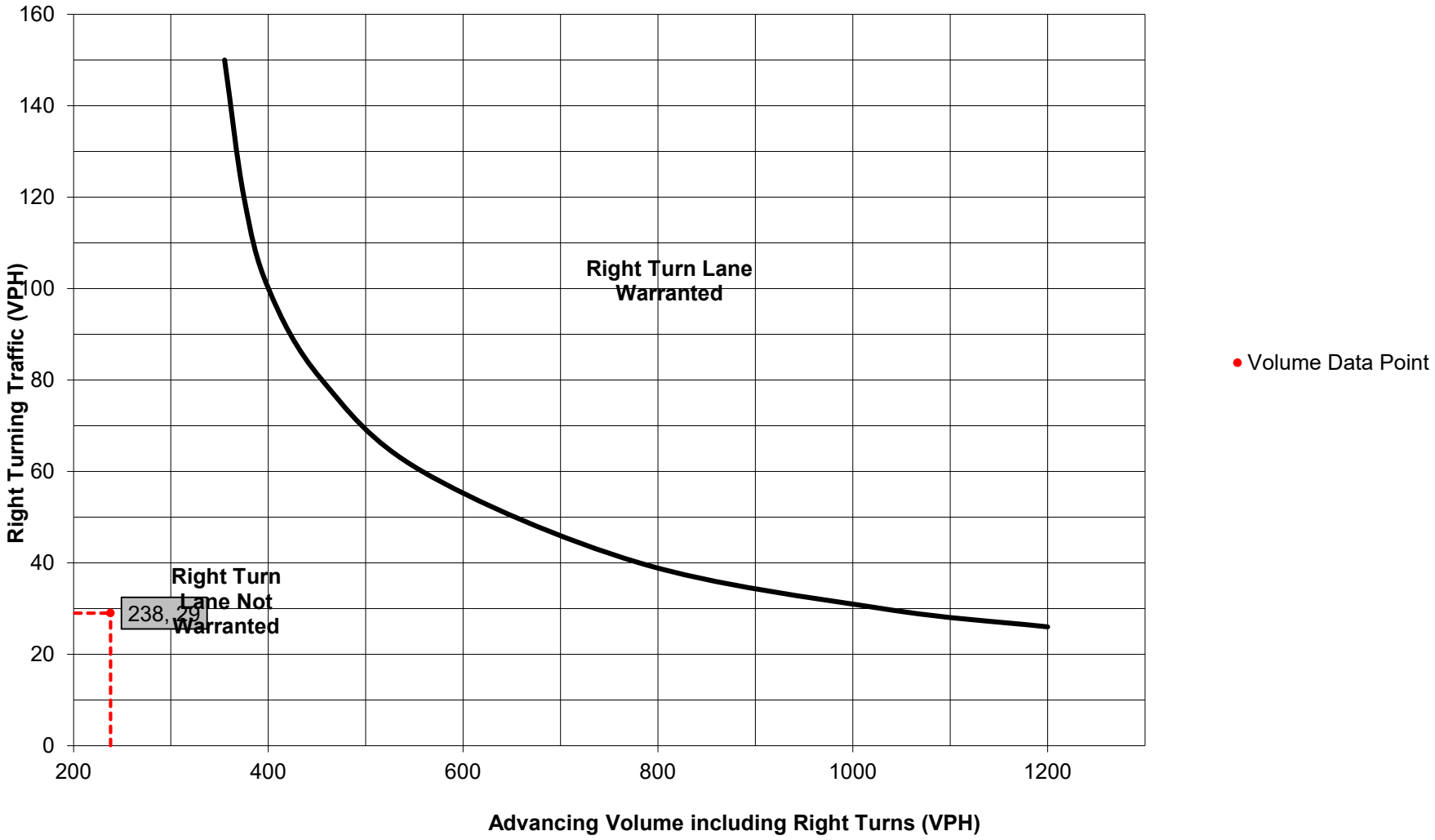
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings:
N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



LEFT-TURN CONFLICT FACTOR WORKSHEET

INTERSECTION:	Fox Chase Road and Manor College / Proposed Local Road	**PEMIT NUMBER:**	64-2762
COUNTY:	Montgomery	**MUNICIPALITY:**	Abington Township
		COUNT DATE / SCENARIO:	2029 Projected

INTERSECTION VOLUMES

	NORTHBOUND FOX CHASE ROAD			SOUTHBOUND FOX CHASE ROAD			EASTBOUND MANOR COLLEGE			WESTBOUND PROPOSED LOCAL ROAD			CYCLE LENGTH (sec)
INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
AM PEAK	18	254	13	4	248	15	1	0	2	27	0	9	67
MIDDAY PEAK													
PM PEAK	6	199	28	9	316	0	13	0	25	18	0	6	67
SAT PEAK													

LEFT-TURN CONFLICT FACTOR CALCULATIONS [1]

NORTHBOUND APPROACH	FOX CHASE ROAD
Exclusive Left-Turn Lane	NO
Number of Opposing Lanes	1
Include Opposing Right-Turn	YES
Required C.F (Prot/Permit)	35,000
Required C.F (Prot/Prohib)	N/A

NOTES

Hour	NB Left	Opposing Volume	Turns per Cycle	NB Conflict Factor	L.T.P. Justified
AM PEAK	18	263	0.34	4734	NO
MIDDAY PEAK	0	0		0	NO
PM PEAK	6	316	0.11	1896	NO
SAT PEAK	0	0		0	NO

SOUTHBOUND APPROACH	FOX CHASE ROAD
Exclusive Left-Turn Lane	NO
Number of Opposing Lanes	1
Include Opposing Right-Turn	YES
Required C.F (Prot/Permit)	35,000
Required C.F (Prot/Prohib)	N/A

NOTES

Hour	SB Left	Opposing Volume	Turns per Cycle	SB Conflict Factor	L.T.P. Justified
AM PEAK	4	267	0.07	1068	NO
MIDDAY PEAK	0	0		0	NO
PM PEAK	9	227	0.17	2043	NO
SAT PEAK	0	0		0	NO

EASTBOUND APPROACH	MANOR COLLEGE
Exclusive Left-Turn Lane	NO
Number of Opposing Lanes	1
Include Opposing Right-Turn	YES
Required C.F (Prot/Permit)	35,000
Required C.F (Prot/Prohib)	N/A

NOTES

Hour	EB Left	Opposing Volume	Turns per Cycle	EB Conflict Factor	L.T.P. Justified
AM PEAK	1	9	0.02	9	NO
MIDDAY PEAK	0	0		0	NO
PM PEAK	13	6	0.24	78	NO
SAT PEAK	0	0		0	NO

WESTBOUND APPROACH	PROPOSED LOCAL ROAD
Exclusive Left-Turn Lane	NO
Number of Opposing Lanes	1
Include Opposing Right-Turn	YES
Required C.F (Prot/Permit)	35,000
Required C.F (Prot/Prohib)	N/A

NOTES

Hour	WB Left	Opposing Volume	Turns per Cycle	WB Conflict Factor	L.T.P. Justified
AM PEAK	27	2	0.50	54	NO
MIDDAY PEAK	0	0		0	NO
PM PEAK	18	25	0.34	450	NO
SAT PEAK	0	0		0	NO

RECOMMENDATIONS:	No dedicated left-turn phases.

COMPLETED BY:	BGG	1/31/2022
QAQC BY:	SAK	2/3/2022

(1) Based on guidelines outlined within PennDOT Publication 149, Chapter 3.1

Appendix E

Traffic Volume Projection Worksheets

Fox Chase Road & Forrest Avenue
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 7 AM - 9 AM

		EASTBOUND Forrest Avenue			WESTBOUND Forrest Avenue			NORTHBOUND Fox Chase Road			SOUTHBOUND Fox Chase Road		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		13	14	56	69	13	5	42	170	31	2	132	15
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	1	1	4	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**13**	**14**	**56**	**69**	**13**	**5**	**43**	**171**	**35**	**2**	**132**	**15**
Background Growth to 2029	2.33%	0	0	1	2	0	0	1	4	1	0	3	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2029 WITHOUT DEVELOPMENT VOLUMES		**13**	**14**	**57**	**71**	**13**	**5**	**44**	**175**	**36**	**2**	**135**	**15**
Senior Adult Housing—Single-Family	DIST IN			5%	5%							15%	
	DIST OUT							(5%)	(15%)	(5%)			
	ASSIGN	0	0	0	1	0	0	2	5	2	0	3	0
Total New Site Trip Assignment		*0*	*0*	*0*	*1*	*0*	*0*	*2*	*5*	*2*	*0*	*3*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2029 WITH DEVELOPMENT VOLUMES		**13**	**14**	**57**	**72**	**13**	**5**	**46**	**180**	**38**	**2**	**138**	**15**

Fox Chase Road & Forrest Avenue
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 4 PM - 6 PM

		EASTBOUND Forrest Avenue			WESTBOUND Forrest Avenue			NORTHBOUND Fox Chase Road			SOUTHBOUND Fox Chase Road		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		4	24	92	46	20	3	36	132	39	5	169	7
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	2	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**4**	**24**	**92**	**46**	**20**	**3**	**36**	**132**	**39**	**5**	**171**	**7**
Background Growth to 2029	2.33%	0	1	2	1	0	0	1	3	1	0	4	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2029 WITHOUT DEVELOPMENT VOLUMES		**4**	**25**	**94**	**47**	**20**	**3**	**37**	**135**	**40**	**5**	**175**	**7**
Senior Adult Housing—Single-Family	DIST IN			5%	5%							15%	
	DIST OUT							(5%)	(15%)	(5%)			
	ASSIGN	0	0	1	2	0	0	1	4	1	0	6	0
Total New Site Trip Assignment		*0*	*0*	*1*	*2*	*0*	*0*	*1*	*4*	*1*	*0*	*6*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2029 WITH DEVELOPMENT VOLUMES		**4**	**25**	**95**	**49**	**20**	**3**	**38**	**139**	**41**	**5**	**181**	**7**

Fox Chase Road & Manor Access / Site Access
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 7 AM - 9 AM

		EASTBOUND Manor Access			WESTBOUND Site Access			NORTHBOUND Fox Chase Road			SOUTHBOUND Fox Chase Road		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		1	0	2	0	0	0	18	248	0	0	241	15
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	1	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**1**	**0**	**2**	**0**	**0**	**0**	**18**	**248**	**0**	**0**	**242**	**15**
Background Growth to 2029	2.33%	0	0	0	0	0	0	0	6	0	0	6	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2029 WITHOUT DEVELOPMENT VOLUMES		**1**	**0**	**2**	**0**	**0**	**0**	**18**	**254**	**0**	**0**	**248**	**15**
Senior Adult Housing—Single-Family	DIST IN									75%	25%		
	DIST OUT				(75%)		(25%)						
	ASSIGN	0	0	0	27	0	9	0	0	13	4	0	0
Total New Site Trip Assignment		*0*	*0*	*0*	*27*	*0*	*9*	*0*	*0*	*13*	*4*	*0*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2029 WITH DEVELOPMENT VOLUMES		**1**	**0**	**2**	**27**	**0**	**9**	**18**	**254**	**13**	**4**	**248**	**15**

Fox Chase Road & Manor Access / Site Access
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 4 PM - 6 PM

		EASTBOUND Manor Access			WESTBOUND Site Access			NORTHBOUND Fox Chase Road			SOUTHBOUND Fox Chase Road		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		13	0	24	0	0	0	6	189	0	0	309	0
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	5	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**13**	**0**	**24**	**0**	**0**	**0**	**6**	**194**	**0**	**0**	**309**	**0**
Background Growth to 2029	2.33%	0	0	1	0	0	0	0	5	0	0	7	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2029 WITHOUT DEVELOPMENT VOLUMES		**13**	**0**	**25**	**0**	**0**	**0**	**6**	**199**	**0**	**0**	**316**	**0**
Senior Adult Housing—Single-Family	DIST IN									75%	25%		
	DIST OUT				(75%)		(25%)						
	ASSIGN	0	0	0	18	0	6	0	0	28	9	0	0
Total New Site Trip Assignment		*0*	*0*	*0*	*18*	*0*	*6*	*0*	*0*	*28*	*9*	*0*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2029 WITH DEVELOPMENT VOLUMES		**13**	**0**	**25**	**18**	**0**	**6**	**6**	**199**	**28**	**9**	**316**	**0**

Fox Chase Road & Cedar Road
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 7 AM - 9 AM

		EASTBOUND Cedar Road			WESTBOUND Cedar Road			NORTHBOUND Fox Chase Road			SOUTHBOUND Fox Chase Road		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		68	201	80	3	240	64	84	123	7	41	121	92
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**68**	**201**	**80**	**3**	**240**	**64**	**84**	**123**	**7**	**41**	**121**	**92**
Background Growth to 2029	2.33%	2	5	2	0	6	1	2	3	0	1	3	2
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2029 WITHOUT DEVELOPMENT VOLUMES		**70**	**206**	**82**	**3**	**246**	**65**	**86**	**126**	**7**	**42**	**124**	**94**
Senior Adult Housing—Single-Family	DIST IN	30%					25%		20%				
	DIST OUT										(25%)	(20%)	(30%)
	ASSIGN	5	0	0	0	0	4	0	4	0	9	7	11
Total New Site Trip Assignment		*5*	*0*	*0*	*0*	*0*	*4*	*0*	*4*	*0*	*9*	*7*	*11*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2029 WITH DEVELOPMENT VOLUMES		**75**	**206**	**82**	**3**	**246**	**69**	**86**	**130**	**7**	**51**	**131**	**105**

Fox Chase Road & Cedar Road
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 4 PM - 6 PM

		EASTBOUND Cedar Road			WESTBOUND Cedar Road			NORTHBOUND Fox Chase Road			SOUTHBOUND Fox Chase Road		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		58	246	112	6	264	69	75	101	5	73	181	62
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**58**	**246**	**112**	**6**	**264**	**69**	**75**	**101**	**5**	**73**	**181**	**62**
Background Growth to 2029	2.33%	1	6	3	0	6	2	2	2	0	2	4	1
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2029 WITHOUT DEVELOPMENT VOLUMES		**59**	**252**	**115**	**6**	**270**	**71**	**77**	**103**	**5**	**75**	**185**	**63**
Senior Adult Housing—Single-Family	DIST IN	30%					25%		20%				
	DIST OUT										(25%)	(20%)	(30%)
	ASSIGN	11	0	0	0	0	9	0	8	0	6	5	7
Total New Site Trip Assignment		*11*	*0*	*0*	*0*	*0*	*9*	*0*	*8*	*0*	*6*	*5*	*7*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2029 WITH DEVELOPMENT VOLUMES		**70**	**252**	**115**	**6**	**270**	**80**	**77**	**111**	**5**	**81**	**190**	**70**

Appendix F

LOS / Capacity Analysis Methodology

CAPACITY/LEVEL-OF-SERVICE ANALYSIS METHODOLOGY

The detailed capacity/level-of-service analysis contained in this transportation impact study was performed in accordance with the standard techniques contained in the *Highway Capacity Manual 6th Edition.* By definition, capacity represents "the maximum sustainable hourly flow rate at which persons or vehicles reasonably can be expected to traverse a point or a uniform section of a lane or roadway during a given time period under prevailing roadway, environmental, traffic, and control conditions." The level at which an intersection or a uniform section of a lane or roadway function can be expressed in terms of a level of service. Level of service (LOS) is defined as "a quantitative stratification of a performance measure or measures that represent quality of service, measured on an A-F scale, with LOS A representing the best operating conditions from the traveler's perspective and LOS F the worst."

Signalized Intersections

At three or four-legged signalized intersections, a methodology for evaluating the capacity and quality of service provided to road users traveling through the signalized intersection. For signalized intersections, the level of service can be characterized for the entire intersection, each approach, and each lane group. The level of service is based upon the control delay and volume-to-capacity ratio. The delay quantifies the increase in travel time due to the traffic signal control and is a surrogate measure of driver discomfort and fuel consumption, while the volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group. Input data in determining the delay and volume-to-capacity ratio include:

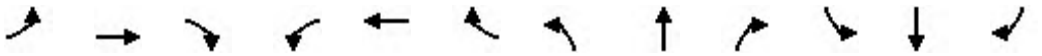
- Demand flow rate for each entering vehicular movement and pedestrian crossing movement, including right-turn on red volumes and percent of heavy vehicles;
- Initial queue for each lane group;
- Number and configuration of lanes on each approach;
- Type of signal control and phase sequence;
- Allocation of minimum/maximum green times and clearance intervals (Yellow plus All Red phases); and
- Phase recall.

At signalized intersections, the level of service is based upon the control delay, as well as the corresponding volume-to-capacity ratio for each movement/lane group. The following table provides a summary of the relationship between the level of service, control delay, and volume-to-capacity ratio for signalized intersections.

Control Delay (Sec/Veh)	**LOS by Volume-to-Capacity Ratio**	
	v/c ≤ 1.0	**v/c > 1.0**
≤ 10	A	F
> 10 – 20	B	F
> 20 – 35	C	F
> 35 – 55	D	F
> 55 – 80	E	F
> 80	F	F

Appendix G

Existing
Capacity / LOS Analysis Worksheets



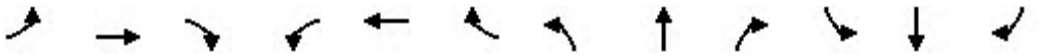
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	14	56	69	13	5	43	171	35	2	132	15
Future Volume (vph)	13	14	56	69	13	5	43	171	35	2	132	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	13	15	15	15	12	12	12	15	15	15
Grade (%)		2%			-1%			-2%			1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00							
Frt		0.909			0.992			0.981			0.986	
Flt Protected		0.992			0.962			0.991			0.999	
Satd. Flow (prot)	0	1567	0	0	1776	0	0	1644	0	0	1757	0
Flt Permitted		0.941			0.795			0.935			0.998	
Satd. Flow (perm)	0	1486	0	0	1467	0	0	1551	0	0	1755	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		345			428			876			325	
Travel Time (s)		9.4			11.7			17.1			6.3	
Confl. Peds. (#/hr)	2					2						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	7%	7%	7%	0%	20%	10%	7%	7%	50%	8%	27%
Adj. Flow (vph)	14	16	62	77	14	6	48	190	39	2	147	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	92	0	0	97	0	0	277	0	0	166	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	0.94	0.94	0.94	1.06	1.06	1.06	0.95	0.95	0.95
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	0		1	0	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	35		20	35		20	0		20	0	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	12.0	12.0		12.0	12.0		21.0	21.0		21.0	21.0	
Total Split (s)	25.0	25.0		25.0	25.0		41.0	41.0		41.0	41.0	
Total Split (%)	37.9%	37.9%		37.9%	37.9%		62.1%	62.1%		62.1%	62.1%	
Maximum Green (s)	20.0	20.0		20.0	20.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 66	
Actuated Cycle Length: 56.2	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	

Splits and Phases: 1: Fox Chase Road & Forrest Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	14	56	69	13	5	43	171	35	2	132	15
Future Volume (veh/h)	13	14	56	69	13	5	43	171	35	2	132	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1849	1747	1747	1807	1911	1615	1732	1775	1775	1136	1749	1472
Adj Flow Rate, veh/h	14	16	62	77	14	6	48	190	39	2	147	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	7	7	7	0	20	10	7	7	50	8	27
Cap, veh/h	98	52	146	289	50	14	219	818	157	71	1053	120
Arrive On Green	0.12	0.14	0.12	0.12	0.14	0.12	0.67	0.68	0.67	0.67	0.68	0.67
Sat Flow, veh/h	130	362	1017	1156	350	99	203	1194	229	3	1537	176
Grp Volume(v), veh/h	92	0	0	97	0	0	277	0	0	166	0	0
Grp Sat Flow(s),veh/h/ln	1509	0	0	1605	0	0	1626	0	0	1716	0	0
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.9	0.0	0.0	2.6	0.0	0.0	3.2	0.0	0.0	1.8	0.0	0.0
Prop In Lane	0.15		0.67	0.79		0.06	0.17		0.14	0.01		0.10
Lane Grp Cap(c), veh/h	267	0	0	323	0	0	1163	0	0	1212	0	0
V/C Ratio(X)	0.34	0.00	0.00	0.30	0.00	0.00	0.24	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	645	0	0	686	0	0	1163	0	0	1212	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.9	0.0	0.0	20.7	0.0	0.0	3.2	0.0	0.0	2.9	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	0.0	0.0	2.0	0.0	0.0	1.3	0.0	0.0	0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.6	0.0	0.0	21.3	0.0	0.0	3.7	0.0	0.0	3.1	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		92			97			277			166	
Approach Delay, s/veh		21.6			21.3			3.7			3.1	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.0		11.6		41.0		11.6				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		35.0		20.0		35.0		20.0				
Max Q Clear Time (g_c+I1), s		0.0		4.9		0.0		4.6				
Green Ext Time (p_c), s		0.0		0.2		0.0		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			8.8									
HCM 6th LOS			A									

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	2	18	248	242	15
Future Volume (vph)	1	2	18	248	242	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	14	14	13	13
Grade (%)	3%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00			1.00	1.00	
Frt	0.910				0.992	
Flt Protected	0.984			0.997		
Satd. Flow (prot)	1746	0	0	1779	1714	0
Flt Permitted	0.984			0.976		
Satd. Flow (perm)	1744	0	0	1741	1714	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	30			35	35	
Link Distance (ft)	250			379	876	
Travel Time (s)	5.7			7.4	17.1	
Confl. Peds. (#/hr)	2		1			1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	7%	8%	0%
Adj. Flow (vph)	1	2	19	267	260	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	0	286	276	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	15			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.00	1.00	1.03	1.03
Turning Speed (mph)	15	9	15			9
Number of Detectors	3		1	2	2	
Detector Template			Left			
Leading Detector (ft)	40		20	256	255	
Trailing Detector (ft)	-3		0	0	0	
Detector 1 Position(ft)	-3		0	0	0	
Detector 1 Size(ft)	6		20	6	5	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	5.0	
Detector 2 Position(ft)	13			250	250	
Detector 2 Size(ft)	6			6	5	
Detector 2 Type	Cl+Ex			Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0	0.0	
Detector 3 Position(ft)	34					
Detector 3 Size(ft)	6					
Detector 3 Type	Cl+Ex					
Detector 3 Channel						
Detector 3 Extend (s)	0.0					
Turn Type	Prot		Perm	NA	NA	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4			2	6	
Permitted Phases			2			
Detector Phase	4		2	2	6	
Switch Phase						
Minimum Initial (s)	3.0		15.0	15.0	15.0	
Minimum Split (s)	8.0		21.0	21.0	21.0	
Total Split (s)	20.0		47.0	47.0	47.0	
Total Split (%)	29.9%		70.1%	70.1%	70.1%	
Maximum Green (s)	15.0		41.0	41.0	41.0	
Yellow Time (s)	3.0		4.0	4.0	4.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0			-1.0	-1.0	
Total Lost Time (s)	4.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		4.0	4.0	4.0	
Minimum Gap (s)	3.0		2.0	2.0	2.0	
Time Before Reduce (s)	0.0		26.0	26.0	26.0	
Time To Reduce (s)	0.0		10.0	10.0	10.0	
Recall Mode	None		Max	Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 67	
Actuated Cycle Length: 64.3	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 3: Fox Chase Road & Manor Access





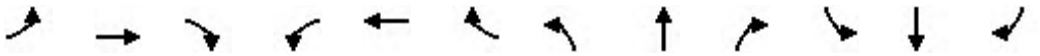
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	2	18	248	242	15
Future Volume (veh/h)	1	2	18	248	242	15
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.98	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1820	1820	1849	1747	1755	1872
Adj Flow Rate, veh/h	1	2	19	267	260	16
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	7	8	0
Cap, veh/h	9	18	117	1333	1317	81
Arrive On Green	0.02	0.00	0.79	0.81	0.81	0.79
Sat Flow, veh/h	409	818	53	1656	1636	101
Grp Volume(v), veh/h	4	0	286	0	0	276
Grp Sat Flow(s),veh/h/ln	1635	0	1709	0	0	1737
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	1.9
Cycle Q Clear(g_c), s	0.1	0.0	2.0	0.0	0.0	1.9
Prop In Lane	0.25	0.50	0.07			0.06
Lane Grp Cap(c), veh/h	37	0	1417	0	0	1398
V/C Ratio(X)	0.11	0.00	0.20	0.00	0.00	0.20
Avail Cap(c_a), veh/h	501	0	1417	0	0	1398
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	25.2	0.0	1.2	0.0	0.0	1.2
Incr Delay (d2), s/veh	1.3	0.0	0.3	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	0.2	0.0	0.0	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.5	0.0	1.5	0.0	0.0	1.5
LnGrp LOS	C	A	A	A	A	A
Approach Vol, veh/h	4			286	276	
Approach Delay, s/veh	26.5			1.5	1.5	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		47.0		5.2		47.0
Change Period (Y+Rc), s		6.0		5.0		6.0
Max Green Setting (Gmax), s		41.0		15.0		41.0
Max Q Clear Time (g_c+I1), s		4.0		2.6		3.9
Green Ext Time (p_c), s		5.6		0.0		5.3

Intersection Summary	
HCM 6th Ctrl Delay	1.7
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

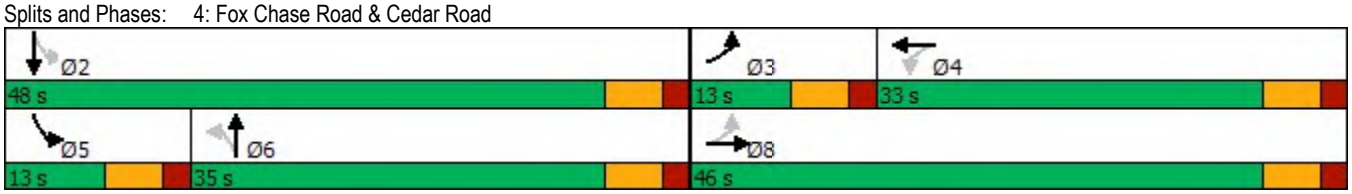


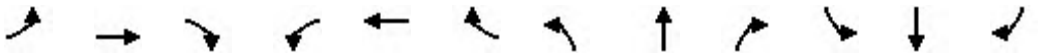
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	201	80	3	240	64	84	123	7	41	121	92
Future Volume (vph)	68	201	80	3	240	64	84	123	7	41	121	92
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	14	14	14	12	12	12	12	12	12
Grade (%)		0%			-1%			1%			1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.969			0.972			0.996			0.951	
Flt Protected		0.990						0.981			0.992	
Satd. Flow (prot)	0	1565	0	0	1790	0	0	1670	0	0	1560	0
Flt Permitted		0.766			0.996			0.760			0.941	
Satd. Flow (perm)	0	1211	0	0	1783	0	0	1294	0	0	1480	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		299			432			438			399	
Travel Time (s)		5.8			8.4			8.5			7.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	18%	5%	1%	67%	4%	5%	7%	2%	29%	15%	4%	11%
Adj. Flow (vph)	72	212	84	3	253	67	88	129	7	43	127	97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	368	0	0	323	0	0	224	0	0	267	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	0.98	0.98	0.98	1.08	1.08	1.08	1.08	1.08	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	35		20	35		20	35		20	35	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	3	8			4			6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		4	4		6	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	10.0		10.0	10.0		12.0	12.0		3.0	12.0	
Minimum Split (s)	9.0	16.0		16.0	16.0		18.0	18.0		9.0	18.0	
Total Split (s)	13.0	46.0		33.0	33.0		35.0	35.0		13.0	48.0	
Total Split (%)	13.8%	48.9%		35.1%	35.1%		37.2%	37.2%		13.8%	51.1%	
Maximum Green (s)	7.0	40.0		27.0	27.0		29.0	29.0		7.0	42.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag	Lead			Lag	Lag		Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	None		None	None		None	None		Max	None	
Act Effct Green (s)		33.0			19.7			19.8			33.1	
Actuated g/C Ratio		0.43			0.26			0.26			0.43	
v/c Ratio		0.66			0.70			0.67			0.41	
Control Delay		24.0			35.3			36.6			17.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		24.0			35.3			36.6			17.8	
LOS		C			D			D			B	
Approach Delay		24.0			35.3			36.6			17.8	
Approach LOS		C			D			D			B	
Queue Length 50th (ft)		121			135			94			82	
Queue Length 95th (ft)		245			255			184			163	
Internal Link Dist (ft)		219			352			358			319	
Turn Bay Length (ft)												
Base Capacity (vph)		702			668			519			860	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.52			0.48			0.43			0.31	

Intersection Summary			
Area Type:	Other		
Cycle Length: 94			
Actuated Cycle Length: 76.4			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 28.1		Intersection LOS: C	
Intersection Capacity Utilization 75.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 4: Fox Chase Road & Cedar Road





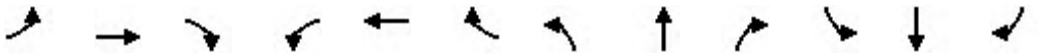
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	24	92	46	20	3	36	132	39	5	171	7
Future Volume (vph)	4	24	92	46	20	3	36	132	39	5	171	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	13	15	15	15	12	12	12	15	15	15
Grade (%)		2%			-1%			-2%			1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00			1.00	
Frt		0.897			0.994			0.975			0.995	
Flt Protected		0.998			0.968			0.991			0.999	
Satd. Flow (prot)	0	1588	0	0	1913	0	0	1697	0	0	1921	0
Flt Permitted		0.990			0.754			0.937			0.994	
Satd. Flow (perm)	0	1575	0	0	1490	0	0	1604	0	0	1911	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		345			428			876			325	
Travel Time (s)		9.4			11.7			17.1			6.3	
Confl. Peds. (#/hr)	4					4	2					2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	8%	1%	8%	0%	2%	0%
Adj. Flow (vph)	4	25	95	47	21	3	37	136	40	5	176	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	124	0	0	71	0	0	213	0	0	188	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	0.94	0.94	0.94	1.06	1.06	1.06	0.95	0.95	0.95
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	0		1	0	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	35		20	35		20	0		20	0	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	12.0	12.0		12.0	12.0		21.0	21.0		21.0	21.0	
Total Split (s)	25.0	25.0		25.0	25.0		41.0	41.0		41.0	41.0	
Total Split (%)	37.9%	37.9%		37.9%	37.9%		62.1%	62.1%		62.1%	62.1%	
Maximum Green (s)	20.0	20.0		20.0	20.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 66	
Actuated Cycle Length: 56.6	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	

Splits and Phases: 1: Fox Chase Road & Forrest Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	24	92	46	20	3	36	132	39	5	171	7
Future Volume (veh/h)	4	24	92	46	20	3	36	132	39	5	171	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1849	1849	1776	1911	1911	1911	1761	1860	1761	1866	1837	1866
Adj Flow Rate, veh/h	4	25	95	47	21	3	37	136	40	5	176	7
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	5	0	0	0	8	1	8	0	2	0
Cap, veh/h	74	51	177	247	99	10	225	792	217	77	1192	46
Arrive On Green	0.13	0.14	0.13	0.13	0.14	0.13	0.67	0.68	0.67	0.67	0.68	0.67
Sat Flow, veh/h	22	351	1224	923	686	71	211	1158	316	10	1741	68
Grp Volume(v), veh/h	124	0	0	71	0	0	213	0	0	188	0	0
Grp Sat Flow(s),veh/h/ln	1598	0	0	1679	0	0	1685	0	0	1819	0	0
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.8	0.0	0.0	1.8	0.0	0.0	2.3	0.0	0.0	1.9	0.0	0.0
Prop In Lane	0.03		0.77	0.66		0.04	0.17		0.19	0.03		0.04
Lane Grp Cap(c), veh/h	271	0	0	324	0	0	1202	0	0	1281	0	0
V/C Ratio(X)	0.46	0.00	0.00	0.22	0.00	0.00	0.18	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	676	0	0	691	0	0	1202	0	0	1281	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.3	0.0	0.0	20.3	0.0	0.0	3.0	0.0	0.0	2.9	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.6	0.0	0.0	1.4	0.0	0.0	1.0	0.0	0.0	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.5	0.0	0.0	20.7	0.0	0.0	3.4	0.0	0.0	3.2	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		124			71			213			188	
Approach Delay, s/veh		22.5			20.7			3.4			3.2	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.0		11.6		41.0		11.6				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		35.0		20.0		35.0		20.0				
Max Q Clear Time (g_c+I1), s		0.0		5.8		0.0		3.8				
Green Ext Time (p_c), s		0.0		0.3		0.0		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			9.3									
HCM 6th LOS			A									

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	24	6	194	309	0
Future Volume (vph)	13	24	6	194	309	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	14	14	13	13
Grade (%)	3%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor				1.00		
Frt	0.911					
Flt Protected	0.983			0.999		
Satd. Flow (prot)	1747	0	0	1828	1806	0
Flt Permitted	0.983			0.992		
Satd. Flow (perm)	1747	0	0	1815	1806	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	30			35	35	
Link Distance (ft)	250			379	876	
Travel Time (s)	5.7			7.4	17.1	
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	4%	3%	0%
Adj. Flow (vph)	13	25	6	200	319	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	38	0	0	206	319	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	15			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.00	1.00	1.03	1.03
Turning Speed (mph)	15	9	15			9
Number of Detectors	3		1	2	2	
Detector Template			Left			
Leading Detector (ft)	40		20	256	255	
Trailing Detector (ft)	-3		0	0	0	
Detector 1 Position(ft)	-3		0	0	0	
Detector 1 Size(ft)	6		20	6	5	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	5.0	
Detector 2 Position(ft)	13			250	250	
Detector 2 Size(ft)	6			6	5	
Detector 2 Type	Cl+Ex			Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0	0.0	
Detector 3 Position(ft)	34					
Detector 3 Size(ft)	6					
Detector 3 Type	Cl+Ex					
Detector 3 Channel						
Detector 3 Extend (s)	0.0					
Turn Type	Prot		Perm	NA	NA	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4			2	6	
Permitted Phases			2			
Detector Phase	4		2	2	6	
Switch Phase						
Minimum Initial (s)	3.0		15.0	15.0	15.0	
Minimum Split (s)	8.0		21.0	21.0	21.0	
Total Split (s)	20.0		47.0	47.0	47.0	
Total Split (%)	29.9%		70.1%	70.1%	70.1%	
Maximum Green (s)	15.0		41.0	41.0	41.0	
Yellow Time (s)	3.0		4.0	4.0	4.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0			-1.0	-1.0	
Total Lost Time (s)	4.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		4.0	4.0	4.0	
Minimum Gap (s)	3.0		2.0	2.0	2.0	
Time Before Reduce (s)	0.0		26.0	26.0	26.0	
Time To Reduce (s)	0.0		10.0	10.0	10.0	
Recall Mode	None		Max	Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 67	
Actuated Cycle Length: 61.3	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 3: Fox Chase Road & Manor Access





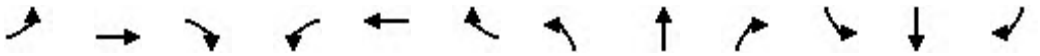
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	24	6	194	309	0
Future Volume (veh/h)	13	24	6	194	309	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1820	1820	1849	1790	1828	1872
Adj Flow Rate, veh/h	13	25	6	200	319	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	4	3	0
Cap, veh/h	27	52	79	1382	1430	0
Arrive On Green	0.05	0.03	0.76	0.78	0.78	0.00
Sat Flow, veh/h	536	1030	13	1767	1828	0
Grp Volume(v), veh/h	39	0	206	0	319	0
Grp Sat Flow(s),veh/h/ln	1607	0	1780	0	1828	0
Q Serve(g_s), s	1.3	0.0	0.0	0.0	2.5	0.0
Cycle Q Clear(g_c), s	1.3	0.0	1.5	0.0	2.5	0.0
Prop In Lane	0.33	0.64	0.03			0.00
Lane Grp Cap(c), veh/h	80	0	1429	0	1430	0
V/C Ratio(X)	0.48	0.00	0.14	0.00	0.22	0.00
Avail Cap(c_a), veh/h	479	0	1429	0	1430	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	25.1	0.0	1.4	0.0	1.5	0.0
Incr Delay (d2), s/veh	4.5	0.0	0.2	0.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.0	0.3	0.0	0.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.6	0.0	1.7	0.0	1.9	0.0
LnGrp LOS	C	A	A	A	A	A
Approach Vol, veh/h	39			206	319	
Approach Delay, s/veh	29.6			1.7	1.9	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		47.0		6.7		47.0
Change Period (Y+Rc), s		6.0		5.0		6.0
Max Green Setting (Gmax), s		41.0		15.0		41.0
Max Q Clear Time (g_c+I1), s		3.5		3.8		5.0
Green Ext Time (p_c), s		3.8		0.0		6.2

Intersection Summary	
HCM 6th Ctrl Delay	3.7
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	246	112	6	264	69	75	101	5	73	181	62
Future Volume (vph)	58	246	112	6	264	69	75	101	5	73	181	62
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	14	14	14	12	12	12	12	12	12
Grade (%)		0%			-1%			1%			1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00			1.00	
Frt		0.964			0.973			0.996			0.973	
Flt Protected		0.993			0.999			0.980			0.989	
Satd. Flow (prot)	0	1645	0	0	1831	0	0	1713	0	0	1687	0
Flt Permitted		0.845			0.990			0.727			0.885	
Satd. Flow (perm)	0	1399	0	0	1814	0	0	1268	0	0	1510	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		299			432			438			399	
Travel Time (s)		5.8			8.4			8.5			7.8	
Confl. Peds. (#/hr)	1					1	4					4
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	1%	1%	0%	1%	6%	1%	2%	20%	3%	1%	2%
Adj. Flow (vph)	60	254	115	6	272	71	77	104	5	75	187	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	429	0	0	349	0	0	186	0	0	326	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	0.98	0.98	0.98	1.08	1.08	1.08	1.08	1.08	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	35		20	35		20	35		20	35	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	3	8			4			6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		4	4		6	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	10.0		10.0	10.0		12.0	12.0		3.0	12.0	
Minimum Split (s)	9.0	16.0		16.0	16.0		18.0	18.0		9.0	18.0	
Total Split (s)	13.0	46.0		33.0	33.0		35.0	35.0		13.0	48.0	
Total Split (%)	13.8%	48.9%		35.1%	35.1%		37.2%	37.2%		13.8%	51.1%	
Maximum Green (s)	7.0	40.0		27.0	27.0		29.0	29.0		7.0	42.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag	Lead			Lag	Lag		Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	None		None	None		None	None		Max	None	
Act Effct Green (s)		33.3			20.1			17.8			31.1	
Actuated g/C Ratio		0.45			0.27			0.24			0.42	
v/c Ratio		0.66			0.71			0.61			0.50	
Control Delay		22.1			34.0			35.7			19.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		22.1			34.0			35.7			19.8	
LOS		C			C			D			B	
Approach Delay		22.1			34.0			35.7			19.8	
Approach LOS		C			C			D			B	
Queue Length 50th (ft)		137			141			76			105	
Queue Length 95th (ft)		269			261			155			200	
Internal Link Dist (ft)		219			352			358			319	
Turn Bay Length (ft)												
Base Capacity (vph)		809			692			518			905	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.53			0.50			0.36			0.36	

Intersection Summary			
Area Type:	Other		
Cycle Length: 94			
Actuated Cycle Length: 74.6			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 26.7		Intersection LOS: C	
Intersection Capacity Utilization 76.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 4: Fox Chase Road & Cedar Road



Appendix H

2029 Future without Development Capacity / LOS Analysis Worksheets

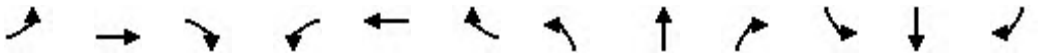
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	14	57	71	13	5	44	175	36	2	135	15
Future Volume (vph)	13	14	57	71	13	5	44	175	36	2	135	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	13	15	15	15	12	12	12	15	15	15
Grade (%)		2%			-1%			-2%			1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00							
Frt		0.909			0.992			0.981			0.986	
Flt Protected		0.993			0.962			0.991			0.999	
Satd. Flow (prot)	0	1569	0	0	1776	0	0	1644	0	0	1758	0
Flt Permitted		0.942			0.791			0.934			0.998	
Satd. Flow (perm)	0	1488	0	0	1460	0	0	1549	0	0	1756	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		345			428			876			325	
Travel Time (s)		9.4			11.7			17.1			6.3	
Confl. Peds. (#/hr)	2					2						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	7%	7%	7%	0%	20%	10%	7%	7%	50%	8%	27%
Adj. Flow (vph)	14	16	63	79	14	6	49	194	40	2	150	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	93	0	0	99	0	0	283	0	0	169	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	0.94	0.94	0.94	1.06	1.06	1.06	0.95	0.95	0.95
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	0		1	0	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	35		20	35		20	0		20	0	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	12.0	12.0		12.0	12.0		21.0	21.0		21.0	21.0	
Total Split (s)	25.0	25.0		25.0	25.0		41.0	41.0		41.0	41.0	
Total Split (%)	37.9%	37.9%		37.9%	37.9%		62.1%	62.1%		62.1%	62.1%	
Maximum Green (s)	20.0	20.0		20.0	20.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 66	
Actuated Cycle Length: 56.3	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	

Splits and Phases: 1: Fox Chase Road & Forrest Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	14	57	71	13	5	44	175	36	2	135	15
Future Volume (veh/h)	13	14	57	71	13	5	44	175	36	2	135	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1849	1747	1747	1807	1911	1615	1732	1775	1775	1136	1749	1472
Adj Flow Rate, veh/h	14	16	63	79	14	6	49	194	40	2	150	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	7	7	7	0	20	10	7	7	50	8	27
Cap, veh/h	97	52	147	291	49	14	219	817	157	71	1055	118
Arrive On Green	0.13	0.14	0.13	0.13	0.14	0.13	0.67	0.68	0.67	0.67	0.68	0.67
Sat Flow, veh/h	128	358	1022	1165	342	97	203	1193	230	3	1541	173
Grp Volume(v), veh/h	93	0	0	99	0	0	283	0	0	169	0	0
Grp Sat Flow(s),veh/h/ln	1508	0	0	1605	0	0	1625	0	0	1716	0	0
Q Serve(g_s), s	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.9	0.0	0.0	2.6	0.0	0.0	3.3	0.0	0.0	1.8	0.0	0.0
Prop In Lane	0.15		0.68	0.80		0.06	0.17		0.14	0.01		0.10
Lane Grp Cap(c), veh/h	267	0	0	324	0	0	1162	0	0	1212	0	0
V/C Ratio(X)	0.35	0.00	0.00	0.31	0.00	0.00	0.24	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	645	0	0	685	0	0	1162	0	0	1212	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.9	0.0	0.0	20.8	0.0	0.0	3.2	0.0	0.0	2.9	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	0.0	0.0	2.0	0.0	0.0	1.4	0.0	0.0	0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.7	0.0	0.0	21.3	0.0	0.0	3.7	0.0	0.0	3.2	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		93			99			283			169	
Approach Delay, s/veh		21.7			21.3			3.7			3.2	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.0		11.6		41.0		11.6				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		35.0		20.0		35.0		20.0				
Max Q Clear Time (g_c+I1), s		0.0		4.9		0.0		4.6				
Green Ext Time (p_c), s		0.0		0.2		0.0		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			8.9									
HCM 6th LOS			A									

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	2	18	254	248	15
Future Volume (vph)	1	2	18	254	248	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	14	14	13	13
Grade (%)	3%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00			1.00	1.00	
Frt	0.910				0.992	
Flt Protected	0.984			0.997		
Satd. Flow (prot)	1746	0	0	1779	1714	0
Flt Permitted	0.984			0.976		
Satd. Flow (perm)	1744	0	0	1741	1714	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	30			35	35	
Link Distance (ft)	250			379	876	
Travel Time (s)	5.7			7.4	17.1	
Confl. Peds. (#/hr)	2		1			1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	7%	8%	0%
Adj. Flow (vph)	1	2	19	273	267	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	0	292	283	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	15			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.00	1.00	1.03	1.03
Turning Speed (mph)	15	9	15			9
Number of Detectors	3		1	2	2	
Detector Template			Left			
Leading Detector (ft)	40		20	256	255	
Trailing Detector (ft)	-3		0	0	0	
Detector 1 Position(ft)	-3		0	0	0	
Detector 1 Size(ft)	6		20	6	5	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	5.0	
Detector 2 Position(ft)	13			250	250	
Detector 2 Size(ft)	6			6	5	
Detector 2 Type	Cl+Ex			Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0	0.0	
Detector 3 Position(ft)	34					
Detector 3 Size(ft)	6					
Detector 3 Type	Cl+Ex					
Detector 3 Channel						
Detector 3 Extend (s)	0.0					
Turn Type	Prot		Perm	NA	NA	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4			2	6	
Permitted Phases			2			
Detector Phase	4		2	2	6	
Switch Phase						
Minimum Initial (s)	3.0		15.0	15.0	15.0	
Minimum Split (s)	8.0		21.0	21.0	24.0	
Total Split (s)	20.0		47.0	47.0	47.0	
Total Split (%)	29.9%		70.1%	70.1%	70.1%	
Maximum Green (s)	15.0		41.0	41.0	41.0	
Yellow Time (s)	3.0		4.0	4.0	4.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0			-1.0	-1.0	
Total Lost Time (s)	4.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		4.0	4.0	4.0	
Minimum Gap (s)	3.0		2.0	2.0	2.0	
Time Before Reduce (s)	0.0		26.0	26.0	26.0	
Time To Reduce (s)	0.0		10.0	10.0	10.0	
Recall Mode	None		Max	Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 67	
Actuated Cycle Length: 64.3	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 3: Fox Chase Road & Manor Access





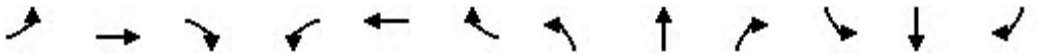
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	2	18	254	248	15
Future Volume (veh/h)	1	2	18	254	248	15
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.98	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1820	1820	1849	1747	1755	1872
Adj Flow Rate, veh/h	1	2	19	273	267	16
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	7	8	0
Cap, veh/h	9	18	115	1335	1320	79
Arrive On Green	0.02	0.00	0.79	0.81	0.81	0.79
Sat Flow, veh/h	409	818	52	1658	1639	98
Grp Volume(v), veh/h	4	0	292	0	0	283
Grp Sat Flow(s),veh/h/ln	1635	0	1710	0	0	1737
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	2.0
Cycle Q Clear(g_c), s	0.1	0.0	2.1	0.0	0.0	2.0
Prop In Lane	0.25	0.50	0.07			0.06
Lane Grp Cap(c), veh/h	37	0	1417	0	0	1399
V/C Ratio(X)	0.11	0.00	0.21	0.00	0.00	0.20
Avail Cap(c_a), veh/h	501	0	1417	0	0	1399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	25.2	0.0	1.2	0.0	0.0	1.2
Incr Delay (d2), s/veh	1.3	0.0	0.3	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	0.2	0.0	0.0	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.5	0.0	1.5	0.0	0.0	1.5
LnGrp LOS	C	A	A	A	A	A
Approach Vol, veh/h	4			292	283	
Approach Delay, s/veh	26.5			1.5	1.5	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		47.0		5.2		47.0
Change Period (Y+Rc), s		6.0		5.0		6.0
Max Green Setting (Gmax), s		41.0		15.0		41.0
Max Q Clear Time (g_c+I1), s		4.1		2.6		4.0
Green Ext Time (p_c), s		5.7		0.0		5.5

Intersection Summary	
HCM 6th Ctrl Delay	1.7
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

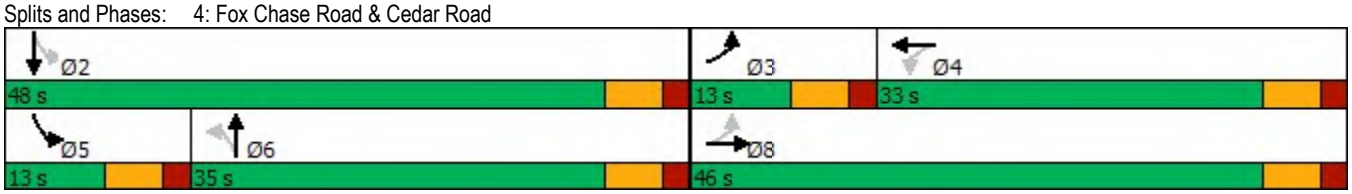


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	206	82	3	246	65	86	126	7	42	124	94
Future Volume (vph)	70	206	82	3	246	65	86	126	7	42	124	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	14	14	14	12	12	12	12	12	12
Grade (%)		0%			-1%			1%			1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.969			0.972			0.996			0.951	
Flt Protected		0.990						0.981			0.992	
Satd. Flow (prot)	0	1565	0	0	1790	0	0	1670	0	0	1560	0
Flt Permitted		0.754			0.996			0.756			0.938	
Satd. Flow (perm)	0	1192	0	0	1783	0	0	1287	0	0	1475	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		299			432			438			399	
Travel Time (s)		5.8			8.4			8.5			7.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	18%	5%	1%	67%	4%	5%	7%	2%	29%	15%	4%	11%
Adj. Flow (vph)	74	217	86	3	259	68	91	133	7	44	131	99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	377	0	0	330	0	0	231	0	0	274	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	0.98	0.98	0.98	1.08	1.08	1.08	1.08	1.08	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	35		20	35		20	35		20	35	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	3	8			4			6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		4	4		6	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	10.0		10.0	10.0		12.0	12.0		3.0	12.0	
Minimum Split (s)	9.0	16.0		16.0	16.0		18.0	18.0		9.0	18.0	
Total Split (s)	13.0	46.0		33.0	33.0		35.0	35.0		13.0	48.0	
Total Split (%)	13.8%	48.9%		35.1%	35.1%		37.2%	37.2%		13.8%	51.1%	
Maximum Green (s)	7.0	40.0		27.0	27.0		29.0	29.0		7.0	42.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag	Lead			Lag	Lag		Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	None		None	None		None	None		Max	None	
Act Effct Green (s)		33.4			20.1			20.2			33.5	
Actuated g/C Ratio		0.43			0.26			0.26			0.43	
v/c Ratio		0.68			0.71			0.69			0.42	
Control Delay		25.2			35.8			37.5			18.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		25.2			35.8			37.5			18.0	
LOS		C			D			D			B	
Approach Delay		25.2			35.8			37.5			18.0	
Approach LOS		C			D			D			B	
Queue Length 50th (ft)		127			140			98			86	
Queue Length 95th (ft)		253			262			192			168	
Internal Link Dist (ft)		219			352			358			319	
Turn Bay Length (ft)												
Base Capacity (vph)		687			661			511			849	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.55			0.50			0.45			0.32	

Intersection Summary			
Area Type:	Other		
Cycle Length: 94			
Actuated Cycle Length: 77.1			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 28.8		Intersection LOS: C	
Intersection Capacity Utilization 77.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 4: Fox Chase Road & Cedar Road



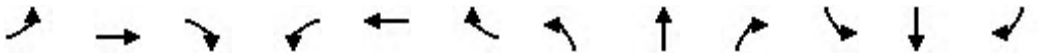
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	25	94	47	20	3	37	135	40	5	175	7
Future Volume (vph)	4	25	94	47	20	3	37	135	40	5	175	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	13	15	15	15	12	12	12	15	15	15
Grade (%)		2%			-1%			-2%			1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00			1.00	
Frt		0.897			0.994			0.975			0.995	
Flt Protected		0.998			0.968			0.991			0.999	
Satd. Flow (prot)	0	1588	0	0	1913	0	0	1697	0	0	1921	0
Flt Permitted		0.990			0.745			0.935			0.994	
Satd. Flow (perm)	0	1575	0	0	1472	0	0	1600	0	0	1911	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		345			428			876			325	
Travel Time (s)		9.4			11.7			17.1			6.3	
Confl. Peds. (#/hr)	4					4	2					2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	8%	1%	8%	0%	2%	0%
Adj. Flow (vph)	4	26	97	48	21	3	38	139	41	5	180	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	127	0	0	72	0	0	218	0	0	192	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	0.94	0.94	0.94	1.06	1.06	1.06	0.95	0.95	0.95
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	0		1	0	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	35		20	35		20	0		20	0	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	12.0	12.0		12.0	12.0		21.0	21.0		21.0	21.0	
Total Split (s)	25.0	25.0		25.0	25.0		41.0	41.0		41.0	41.0	
Total Split (%)	37.9%	37.9%		37.9%	37.9%		62.1%	62.1%		62.1%	62.1%	
Maximum Green (s)	20.0	20.0		20.0	20.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 66	
Actuated Cycle Length: 56.7	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	

Splits and Phases: 1: Fox Chase Road & Forrest Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	25	94	47	20	3	37	135	40	5	175	7
Future Volume (veh/h)	4	25	94	47	20	3	37	135	40	5	175	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1849	1849	1776	1911	1911	1911	1761	1860	1761	1866	1837	1866
Adj Flow Rate, veh/h	4	26	97	48	21	3	38	139	41	5	180	7
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	5	0	0	0	8	1	8	0	2	0
Cap, veh/h	74	52	177	249	98	10	225	790	217	77	1193	45
Arrive On Green	0.13	0.14	0.13	0.13	0.14	0.13	0.67	0.68	0.67	0.67	0.68	0.67
Sat Flow, veh/h	22	356	1221	936	677	70	212	1155	317	10	1743	66
Grp Volume(v), veh/h	127	0	0	72	0	0	218	0	0	192	0	0
Grp Sat Flow(s),veh/h/ln	1599	0	0	1682	0	0	1683	0	0	1819	0	0
Q Serve(g_s), s	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.9	0.0	0.0	1.8	0.0	0.0	2.3	0.0	0.0	2.0	0.0	0.0
Prop In Lane	0.03		0.76	0.67		0.04	0.17		0.19	0.03		0.04
Lane Grp Cap(c), veh/h	272	0	0	326	0	0	1200	0	0	1280	0	0
V/C Ratio(X)	0.47	0.00	0.00	0.22	0.00	0.00	0.18	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	676	0	0	690	0	0	1200	0	0	1280	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.3	0.0	0.0	20.3	0.0	0.0	3.1	0.0	0.0	2.9	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.7	0.0	0.0	1.4	0.0	0.0	1.0	0.0	0.0	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.5	0.0	0.0	20.7	0.0	0.0	3.4	0.0	0.0	3.2	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		127			72			218			192	
Approach Delay, s/veh		22.5			20.7			3.4			3.2	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.0		11.6		41.0		11.6				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		35.0		20.0		35.0		20.0				
Max Q Clear Time (g_c+I1), s		0.0		5.9		0.0		3.8				
Green Ext Time (p_c), s		0.0		0.3		0.0		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			9.4									
HCM 6th LOS			A									

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	25	6	199	316	0
Future Volume (vph)	13	25	6	199	316	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	14	14	13	13
Grade (%)	3%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor				1.00		
Frt	0.910					
Flt Protected	0.984			0.999		
Satd. Flow (prot)	1746	0	0	1828	1806	0
Flt Permitted	0.984			0.992		
Satd. Flow (perm)	1746	0	0	1815	1806	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	30			35	35	
Link Distance (ft)	250			379	876	
Travel Time (s)	5.7			7.4	17.1	
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	4%	3%	0%
Adj. Flow (vph)	13	26	6	205	326	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	0	211	326	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	15			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.00	1.00	1.03	1.03
Turning Speed (mph)	15	9	15			9
Number of Detectors	3		1	2	2	
Detector Template			Left			
Leading Detector (ft)	40		20	256	255	
Trailing Detector (ft)	-3		0	0	0	
Detector 1 Position(ft)	-3		0	0	0	
Detector 1 Size(ft)	6		20	6	5	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	5.0	
Detector 2 Position(ft)	13			250	250	
Detector 2 Size(ft)	6			6	5	
Detector 2 Type	Cl+Ex			Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0	0.0	
Detector 3 Position(ft)	34					
Detector 3 Size(ft)	6					
Detector 3 Type	Cl+Ex					
Detector 3 Channel						
Detector 3 Extend (s)	0.0					
Turn Type	Prot		Perm	NA	NA	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4			2	6	
Permitted Phases			2			
Detector Phase	4		2	2	6	
Switch Phase						
Minimum Initial (s)	3.0		15.0	15.0	15.0	
Minimum Split (s)	8.0		21.0	21.0	21.0	
Total Split (s)	20.0		47.0	47.0	47.0	
Total Split (%)	29.9%		70.1%	70.1%	70.1%	
Maximum Green (s)	15.0		41.0	41.0	41.0	
Yellow Time (s)	3.0		4.0	4.0	4.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0			-1.0	-1.0	
Total Lost Time (s)	4.0			5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		4.0	4.0	4.0	
Minimum Gap (s)	3.0		2.0	2.0	2.0	
Time Before Reduce (s)	0.0		26.0	26.0	26.0	
Time To Reduce (s)	0.0		10.0	10.0	10.0	
Recall Mode	None		Max	Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 67	
Actuated Cycle Length: 61.3	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 3: Fox Chase Road & Manor Access





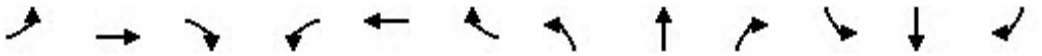
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	25	6	199	316	0
Future Volume (veh/h)	13	25	6	199	316	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1820	1820	1849	1790	1828	1872
Adj Flow Rate, veh/h	13	26	6	205	326	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	4	3	0
Cap, veh/h	27	53	79	1382	1429	0
Arrive On Green	0.05	0.03	0.76	0.78	0.78	0.00
Sat Flow, veh/h	522	1044	13	1768	1828	0
Grp Volume(v), veh/h	40	0	211	0	326	0
Grp Sat Flow(s),veh/h/ln	1606	0	1780	0	1828	0
Q Serve(g_s), s	1.3	0.0	0.0	0.0	2.5	0.0
Cycle Q Clear(g_c), s	1.3	0.0	1.6	0.0	2.5	0.0
Prop In Lane	0.32	0.65	0.03			0.00
Lane Grp Cap(c), veh/h	82	0	1427	0	1429	0
V/C Ratio(X)	0.49	0.00	0.15	0.00	0.23	0.00
Avail Cap(c_a), veh/h	478	0	1427	0	1429	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	25.1	0.0	1.5	0.0	1.6	0.0
Incr Delay (d2), s/veh	4.5	0.0	0.2	0.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.0	0.3	0.0	0.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.6	0.0	1.7	0.0	1.9	0.0
LnGrp LOS	C	A	A	A	A	A
Approach Vol, veh/h	40			211	326	
Approach Delay, s/veh	29.6			1.7	1.9	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		47.0		6.7		47.0
Change Period (Y+Rc), s		6.0		5.0		6.0
Max Green Setting (Gmax), s		41.0		15.0		41.0
Max Q Clear Time (g_c+I1), s		3.6		3.8		5.0
Green Ext Time (p_c), s		3.9		0.1		6.3

Intersection Summary	
HCM 6th Ctrl Delay	3.8
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	252	115	6	270	71	77	103	5	75	185	63
Future Volume (vph)	59	252	115	6	270	71	77	103	5	75	185	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	14	14	14	12	12	12	12	12	12
Grade (%)		0%			-1%			1%			1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00			1.00	
Frt		0.963			0.972			0.996			0.974	
Flt Protected		0.993			0.999			0.980			0.989	
Satd. Flow (prot)	0	1643	0	0	1829	0	0	1713	0	0	1689	0
Flt Permitted		0.839			0.991			0.723			0.880	
Satd. Flow (perm)	0	1388	0	0	1814	0	0	1262	0	0	1503	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		299			432			438			399	
Travel Time (s)		5.8			8.4			8.5			7.8	
Confl. Peds. (#/hr)	1					1	4					4
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	1%	1%	0%	1%	6%	1%	2%	20%	3%	1%	2%
Adj. Flow (vph)	61	260	119	6	278	73	79	106	5	77	191	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	440	0	0	357	0	0	190	0	0	333	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	0.98	0.98	0.98	1.08	1.08	1.08	1.08	1.08	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	35		20	35		20	35		20	35	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	3	8			4			6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		4	4		6	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	10.0		10.0	10.0		12.0	12.0		3.0	12.0	
Minimum Split (s)	9.0	16.0		16.0	16.0		18.0	18.0		9.0	18.0	
Total Split (s)	13.0	46.0		33.0	33.0		35.0	35.0		13.0	48.0	
Total Split (%)	13.8%	48.9%		35.1%	35.1%		37.2%	37.2%		13.8%	51.1%	
Maximum Green (s)	7.0	40.0		27.0	27.0		29.0	29.0		7.0	42.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag	Lead			Lag	Lag		Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	None		None	None		None	None		Max	None	
Act Effct Green (s)		33.7			20.5			18.2			31.5	
Actuated g/C Ratio		0.45			0.27			0.24			0.42	
v/c Ratio		0.68			0.73			0.62			0.51	
Control Delay		23.1			34.7			36.1			20.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		23.1			34.7			36.1			20.1	
LOS		C			C			D			C	
Approach Delay		23.1			34.7			36.1			20.1	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)		144			146			79			109	
Queue Length 95th (ft)		282			271			158			204	
Internal Link Dist (ft)		219			352			358			319	
Turn Bay Length (ft)												
Base Capacity (vph)		796			686			511			893	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.55			0.52			0.37			0.37	

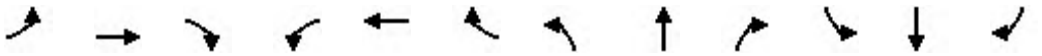
Intersection Summary			
Area Type:	Other		
Cycle Length: 94			
Actuated Cycle Length: 75.4			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 27.3		Intersection LOS: C	
Intersection Capacity Utilization 78.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 4: Fox Chase Road & Cedar Road



Appendix I

2029 Future with Development Capacity / LOS Analysis Worksheets



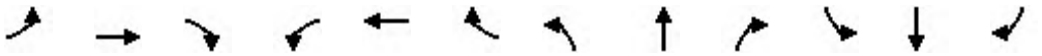
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	14	57	72	13	5	46	180	38	2	138	15
Future Volume (vph)	13	14	57	72	13	5	46	180	38	2	138	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	13	15	15	15	12	12	12	15	15	15
Grade (%)		2%			-1%			-2%			1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00							
Frt		0.909			0.992			0.981			0.987	
Flt Protected		0.993			0.962			0.991			0.999	
Satd. Flow (prot)	0	1569	0	0	1776	0	0	1644	0	0	1760	0
Flt Permitted		0.942			0.790			0.932			0.998	
Satd. Flow (perm)	0	1488	0	0	1458	0	0	1546	0	0	1758	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		345			428			876			325	
Travel Time (s)		9.4			11.7			17.1			6.3	
Confl. Peds. (#/hr)	2					2						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	7%	7%	7%	0%	20%	10%	7%	7%	50%	8%	27%
Adj. Flow (vph)	14	16	63	80	14	6	51	200	42	2	153	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	93	0	0	100	0	0	293	0	0	172	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	0.94	0.94	0.94	1.06	1.06	1.06	0.95	0.95	0.95
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	0		1	0	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	35		20	35		20	0		20	0	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	12.0	12.0		12.0	12.0		21.0	21.0		21.0	21.0	
Total Split (s)	25.0	25.0		25.0	25.0		41.0	41.0		41.0	41.0	
Total Split (%)	37.9%	37.9%		37.9%	37.9%		62.1%	62.1%		62.1%	62.1%	
Maximum Green (s)	20.0	20.0		20.0	20.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 66	
Actuated Cycle Length: 56.4	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	

Splits and Phases: 1: Fox Chase Road & Forrest Avenue





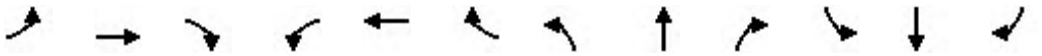
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	14	57	72	13	5	46	180	38	2	138	15
Future Volume (veh/h)	13	14	57	72	13	5	46	180	38	2	138	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1849	1747	1747	1807	1911	1615	1732	1775	1775	1136	1749	1472
Adj Flow Rate, veh/h	14	16	63	80	14	6	51	200	42	2	153	17
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	7	7	7	0	20	10	7	7	50	8	27
Cap, veh/h	97	52	147	292	49	14	220	813	159	71	1057	116
Arrive On Green	0.13	0.14	0.13	0.13	0.14	0.13	0.67	0.68	0.67	0.67	0.68	0.67
Sat Flow, veh/h	128	358	1022	1169	339	96	204	1187	233	3	1544	170
Grp Volume(v), veh/h	93	0	0	100	0	0	293	0	0	172	0	0
Grp Sat Flow(s),veh/h/ln	1508	0	0	1604	0	0	1623	0	0	1717	0	0
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.9	0.0	0.0	2.6	0.0	0.0	3.5	0.0	0.0	1.9	0.0	0.0
Prop In Lane	0.15		0.68	0.80		0.06	0.17		0.14	0.01		0.10
Lane Grp Cap(c), veh/h	268	0	0	324	0	0	1161	0	0	1212	0	0
V/C Ratio(X)	0.35	0.00	0.00	0.31	0.00	0.00	0.25	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	645	0	0	685	0	0	1161	0	0	1212	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.9	0.0	0.0	20.8	0.0	0.0	3.2	0.0	0.0	2.9	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	0.0	0.0	2.1	0.0	0.0	1.5	0.0	0.0	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.7	0.0	0.0	21.3	0.0	0.0	3.7	0.0	0.0	3.2	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		93			100			293			172	
Approach Delay, s/veh		21.7			21.3			3.7			3.2	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.0		11.6		41.0		11.6				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		35.0		20.0		35.0		20.0				
Max Q Clear Time (g_c+I1), s		0.0		4.9		0.0		4.6				
Green Ext Time (p_c), s		0.0		0.2		0.0		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			8.8									
HCM 6th LOS			A									

Notes

User approved pedestrian interval to be less than phase max green.

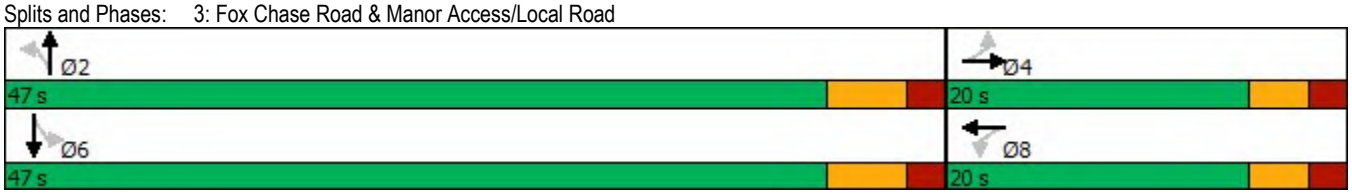


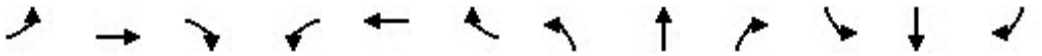
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	2	27	0	9	18	254	13	4	248	15
Future Volume (vph)	1	0	2	27	0	9	18	254	13	4	248	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	16	16	16	14	14	14	13	13	13
Grade (%)		3%			0%			2%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00						1.00			1.00	
Frt		0.910			0.965			0.994			0.992	
Flt Protected		0.984			0.964			0.997			0.999	
Satd. Flow (prot)	0	1746	0	0	1861	0	0	1771	0	0	1713	0
Flt Permitted		0.874			0.793			0.977			0.997	
Satd. Flow (perm)	0	1549	0	0	1530	0	0	1736	0	0	1710	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			25			35			35	
Link Distance (ft)		250			253			379			876	
Travel Time (s)		5.7			6.9			7.4			17.1	
Confl. Peds. (#/hr)	2						1					1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	2%	0%	2%	2%	2%	0%	7%	2%	2%	8%	0%
Adj. Flow (vph)	1	0	2	29	0	10	19	273	14	4	267	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	3	0	0	39	0	0	306	0	0	287	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.91	0.91	0.91	1.00	1.00	1.00	1.03	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	3	1		1	1		1	2		1	2	
Detector Template				Left			Left			Left		
Leading Detector (ft)	40	35		20	35		20	236		20	236	
Trailing Detector (ft)	-3	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	-3	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	6	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	5.0	
Detector 2 Position(ft)	13							230			230	
Detector 2 Size(ft)	6							6			6	
Detector 2 Type	Cl+Ex							Extend			Extend	
Detector 2 Channel												
Detector 2 Extend (s)	0.0							0.0			0.0	
Detector 3 Position(ft)	34											
Detector 3 Size(ft)	6											
Detector 3 Type	Cl+Ex											
Detector 3 Channel												
Detector 3 Extend (s)	0.0											
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	8.0	8.0		8.0	8.0		21.0	21.0		21.0	21.0	
Total Split (s)	20.0	20.0		20.0	20.0		47.0	47.0		47.0	47.0	
Total Split (%)	29.9%	29.9%		29.9%	29.9%		70.1%	70.1%		70.1%	70.1%	
Maximum Green (s)	15.0	15.0		15.0	15.0		41.0	41.0		41.0	41.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		26.0	26.0		26.0	26.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		10.0	10.0		10.0	10.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 67	
Actuated Cycle Length: 61.4	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 3: Fox Chase Road & Manor Access/Local Road

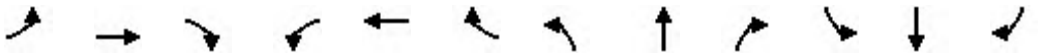




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	2	27	0	9	18	254	13	4	248	15
Future Volume (veh/h)	1	0	2	27	0	9	18	254	13	4	248	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.97		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1820	1791	1820	1843	1843	1843	1849	1747	1820	1843	1755	1872
Adj Flow Rate, veh/h	1	0	2	29	0	10	19	273	14	4	267	16
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	0	2	2	2	0	7	2	2	8	0
Cap, veh/h	114	0	49	172	0	19	109	1234	61	72	1281	76
Arrive On Green	0.05	0.00	0.03	0.03	0.00	0.03	0.77	0.78	0.77	0.77	0.78	0.77
Sat Flow, veh/h	515	0	1029	1137	0	392	48	1574	78	4	1633	97
Grp Volume(v), veh/h	3	0	0	39	0	0	306	0	0	287	0	0
Grp Sat Flow(s),veh/h/ln	1544	0	0	1529	0	0	1699	0	0	1735	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.0	0.0	1.3	0.0	0.0	2.5	0.0	0.0	2.3	0.0	0.0
Prop In Lane	0.33		0.67	0.74		0.26	0.06		0.05	0.01		0.06
Lane Grp Cap(c), veh/h	164	0	0	162	0	0	1372	0	0	1396	0	0
V/C Ratio(X)	0.02	0.00	0.00	0.24	0.00	0.00	0.22	0.00	0.00	0.21	0.00	0.00
Avail Cap(c_a), veh/h	524	0	0	514	0	0	1372	0	0	1396	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.6	0.0	0.0	25.4	0.0	0.0	1.5	0.0	0.0	1.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.8	0.0	0.0	0.4	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	0.0	0.9	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	0.0	0.0	26.1	0.0	0.0	1.9	0.0	0.0	1.8	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		3			39			306			287	
Approach Delay, s/veh		24.7			26.1			1.9			1.8	
Approach LOS		C			C			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	47.0	6.6	47.0	6.6
Change Period (Y+Rc), s	6.0	5.0	6.0	5.0
Max Green Setting (Gmax), s	41.0	15.0	41.0	15.0
Max Q Clear Time (g_c+I1), s	4.5	2.6	4.3	3.3
Green Ext Time (p_c), s	5.6	0.0	5.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	3.5
HCM 6th LOS	A

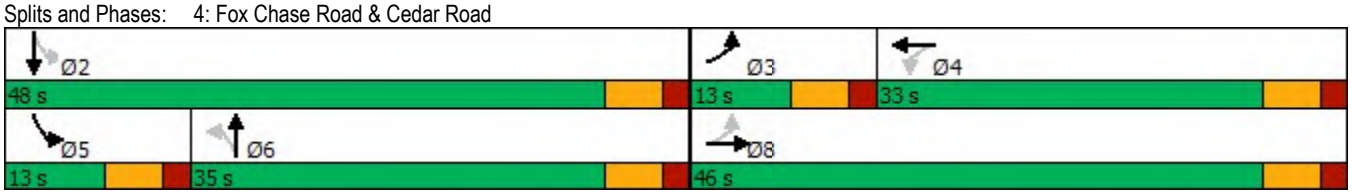


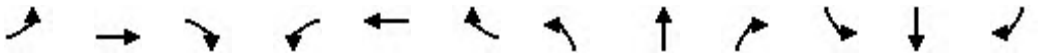
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	206	82	3	246	69	86	130	7	51	131	105
Future Volume (vph)	75	206	82	3	246	69	86	130	7	51	131	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	14	14	14	12	12	12	12	12	12
Grade (%)		0%			-1%			1%			1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.970			0.971			0.996			0.951	
Flt Protected		0.990						0.981			0.991	
Satd. Flow (prot)	0	1565	0	0	1788	0	0	1671	0	0	1555	0
Flt Permitted		0.728			0.996			0.748			0.917	
Satd. Flow (perm)	0	1151	0	0	1781	0	0	1274	0	0	1439	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		299			432			438			399	
Travel Time (s)		5.8			8.4			8.5			7.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	18%	5%	1%	67%	4%	5%	7%	2%	29%	15%	4%	11%
Adj. Flow (vph)	79	217	86	3	259	73	91	137	7	54	138	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	382	0	0	335	0	0	235	0	0	303	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	0.98	0.98	0.98	1.08	1.08	1.08	1.08	1.08	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	35		20	35		20	35		20	35	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	3	8			4			6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		4	4		6	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	10.0		10.0	10.0		12.0	12.0		3.0	12.0	
Minimum Split (s)	9.0	16.0		16.0	16.0		18.0	18.0		9.0	18.0	
Total Split (s)	13.0	46.0		33.0	33.0		35.0	35.0		13.0	48.0	
Total Split (%)	13.8%	48.9%		35.1%	35.1%		37.2%	37.2%		13.8%	51.1%	
Maximum Green (s)	7.0	40.0		27.0	27.0		29.0	29.0		7.0	42.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag	Lead			Lag	Lag		Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	None		None	None		None	None		Max	None	
Act Effct Green (s)		33.9			20.6			20.7			34.0	
Actuated g/C Ratio		0.43			0.26			0.27			0.44	
v/c Ratio		0.70			0.71			0.70			0.48	
Control Delay		26.5			36.1			38.5			19.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		26.5			36.1			38.5			19.2	
LOS		C			D			D			B	
Approach Delay		26.5			36.1			38.5			19.2	
Approach LOS		C			D			D			B	
Queue Length 50th (ft)		132			144			102			99	
Queue Length 95th (ft)		257			265			196			187	
Internal Link Dist (ft)		219			352			358			319	
Turn Bay Length (ft)												
Base Capacity (vph)		662			653			500			823	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.58			0.51			0.47			0.37	

Intersection Summary			
Area Type:	Other		
Cycle Length: 94			
Actuated Cycle Length: 78.1			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 29.5		Intersection LOS: C	
Intersection Capacity Utilization 76.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 4: Fox Chase Road & Cedar Road





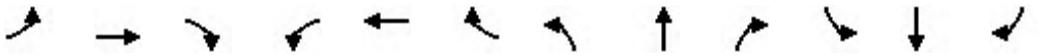
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	25	95	49	20	3	38	139	41	5	181	7
Future Volume (vph)	4	25	95	49	20	3	38	139	41	5	181	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	13	15	15	15	12	12	12	15	15	15
Grade (%)		2%			-1%			-2%			1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00			1.00	
Frt		0.897			0.995			0.975			0.995	
Flt Protected		0.998			0.967			0.991			0.999	
Satd. Flow (prot)	0	1588	0	0	1913	0	0	1697	0	0	1921	0
Flt Permitted		0.990			0.729			0.934			0.994	
Satd. Flow (perm)	0	1575	0	0	1442	0	0	1599	0	0	1911	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		345			428			876			325	
Travel Time (s)		9.4			11.7			17.1			6.3	
Confl. Peds. (#/hr)	4					4	2					2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	8%	1%	8%	0%	2%	0%
Adj. Flow (vph)	4	26	98	51	21	3	39	143	42	5	187	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	128	0	0	75	0	0	224	0	0	199	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	0.94	0.94	0.94	1.06	1.06	1.06	0.95	0.95	0.95
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	0		1	0	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	35		20	35		20	0		20	0	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	12.0	12.0		12.0	12.0		21.0	21.0		21.0	21.0	
Total Split (s)	25.0	25.0		25.0	25.0		41.0	41.0		41.0	41.0	
Total Split (%)	37.9%	37.9%		37.9%	37.9%		62.1%	62.1%		62.1%	62.1%	
Maximum Green (s)	20.0	20.0		20.0	20.0		35.0	35.0		35.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 66	
Actuated Cycle Length: 56.7	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	

Splits and Phases: 1: Fox Chase Road & Forrest Avenue





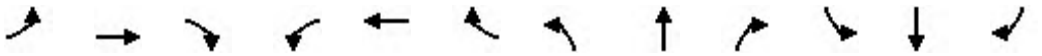
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	25	95	49	20	3	38	139	41	5	181	7
Future Volume (veh/h)	4	25	95	49	20	3	38	139	41	5	181	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1849	1849	1776	1911	1911	1911	1761	1860	1761	1866	1837	1866
Adj Flow Rate, veh/h	4	26	98	51	21	3	39	143	42	5	187	7
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	5	0	0	0	8	1	8	0	2	0
Cap, veh/h	74	51	178	255	94	10	225	790	216	77	1194	44
Arrive On Green	0.13	0.15	0.13	0.13	0.15	0.13	0.66	0.68	0.66	0.66	0.68	0.66
Sat Flow, veh/h	22	353	1224	964	649	67	211	1156	315	9	1746	64
Grp Volume(v), veh/h	128	0	0	75	0	0	224	0	0	199	0	0
Grp Sat Flow(s),veh/h/ln	1599	0	0	1680	0	0	1682	0	0	1820	0	0
Q Serve(g_s), s	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.0	0.0	0.0	1.9	0.0	0.0	2.4	0.0	0.0	2.1	0.0	0.0
Prop In Lane	0.03		0.77	0.68		0.04	0.17		0.19	0.03		0.04
Lane Grp Cap(c), veh/h	272	0	0	327	0	0	1198	0	0	1280	0	0
V/C Ratio(X)	0.47	0.00	0.00	0.23	0.00	0.00	0.19	0.00	0.00	0.16	0.00	0.00
Avail Cap(c_a), veh/h	676	0	0	688	0	0	1198	0	0	1280	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.3	0.0	0.0	20.4	0.0	0.0	3.1	0.0	0.0	3.0	0.0	0.0
Incr Delay (d2), s/veh	1.3	0.0	0.0	0.4	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.7	0.0	0.0	1.5	0.0	0.0	1.0	0.0	0.0	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.6	0.0	0.0	20.7	0.0	0.0	3.4	0.0	0.0	3.2	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		128			75			224			199	
Approach Delay, s/veh		22.6			20.7			3.4			3.2	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.0		11.6		41.0		11.6				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		35.0		20.0		35.0		20.0				
Max Q Clear Time (g_c+I1), s		0.0		6.0		0.0		3.9				
Green Ext Time (p_c), s		0.0		0.3		0.0		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			9.3									
HCM 6th LOS			A									

Notes

User approved pedestrian interval to be less than phase max green.

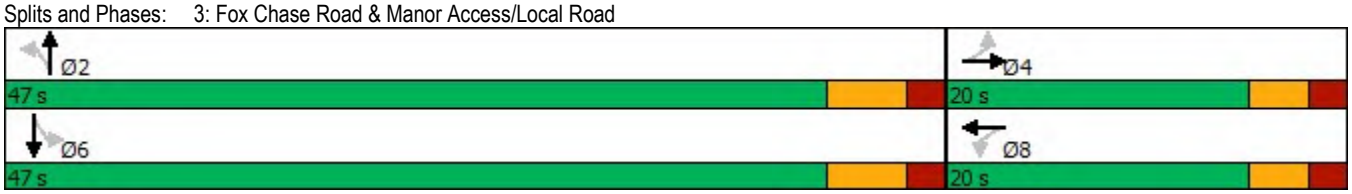


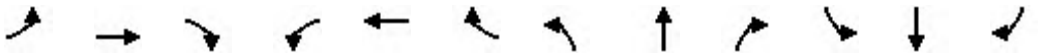
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	0	25	18	0	6	6	199	28	9	316	0
Future Volume (vph)	13	0	25	18	0	6	6	199	28	9	316	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	12	15	12	12	12	14	14	12	12	13	13
Grade (%)		3%			0%			2%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00				
Frt		0.910			0.968			0.984				
Flt Protected		0.984			0.963			0.999			0.999	
Satd. Flow (prot)	0	1588	0	0	1645	0	0	1803	0	0	1804	0
Flt Permitted		0.879			0.819			0.993			0.993	
Satd. Flow (perm)	0	1418	0	0	1399	0	0	1792	0	0	1794	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			25			35			35	
Link Distance (ft)		250			228			379			876	
Travel Time (s)		5.7			6.2			7.4			17.1	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	0%	2%	2%	2%	0%	4%	2%	2%	3%	0%
Adj. Flow (vph)	13	0	26	19	0	6	6	205	29	9	326	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	0	0	25	0	0	240	0	0	335	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	1.09	0.97	1.07	1.07	1.07	1.00	1.00	1.09	1.07	1.03	1.03
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	3	1		1	1		1	2		1	2	
Detector Template				Left			Left			Left		
Leading Detector (ft)	40	35		20	35		20	236		20	236	
Trailing Detector (ft)	-3	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	-3	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	6	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	5.0	
Detector 2 Position(ft)	13							230			230	
Detector 2 Size(ft)	6							6			6	
Detector 2 Type	Cl+Ex							Extend			Extend	
Detector 2 Channel												
Detector 2 Extend (s)	0.0							0.0			0.0	
Detector 3 Position(ft)	34											
Detector 3 Size(ft)	6											
Detector 3 Type	Cl+Ex											
Detector 3 Channel												
Detector 3 Extend (s)	0.0											
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	8.0	8.0		8.0	8.0		21.0	21.0		21.0	21.0	
Total Split (s)	20.0	20.0		20.0	20.0		47.0	47.0		47.0	47.0	
Total Split (%)	29.9%	29.9%		29.9%	29.9%		70.1%	70.1%		70.1%	70.1%	
Maximum Green (s)	15.0	15.0		15.0	15.0		41.0	41.0		41.0	41.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		26.0	26.0		26.0	26.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		10.0	10.0		10.0	10.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 67	
Actuated Cycle Length: 58.5	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 3: Fox Chase Road & Manor Access/Local Road

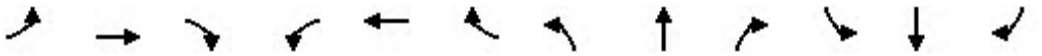




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	0	25	18	0	6	6	199	28	9	316	0
Future Volume (veh/h)	13	0	25	18	0	6	6	199	28	9	316	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			Yes			No			No	
Adj Sat Flow, veh/h/ln	1820	1722	1820	1772	1772	1772	1849	1790	1750	1772	1828	1872
Adj Flow Rate, veh/h	13	0	26	19	0	6	6	205	29	9	326	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	0	2	2	2	0	4	2	2	3	0
Cap, veh/h	118	0	60	195	0	25	75	1175	163	78	1394	0
Arrive On Green	0.06	0.00	0.05	0.05	0.00	0.05	0.75	0.77	0.75	0.75	0.77	0.00
Sat Flow, veh/h	475	0	949	1238	0	391	10	1524	211	13	1807	0
Grp Volume(v), veh/h	39	0	0	25	0	0	240	0	0	335	0	0
Grp Sat Flow(s),veh/h/ln	1424	0	0	1629	0	0	1745	0	0	1820	0	0
Q Serve(g_s), s	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.4	0.0	0.0	0.8	0.0	0.0	2.0	0.0	0.0	2.8	0.0	0.0
Prop In Lane	0.33		0.67	0.76		0.24	0.02		0.12	0.03		0.00
Lane Grp Cap(c), veh/h	179	0	0	190	0	0	1381	0	0	1438	0	0
V/C Ratio(X)	0.22	0.00	0.00	0.13	0.00	0.00	0.17	0.00	0.00	0.23	0.00	0.00
Avail Cap(c_a), veh/h	501	0	0	501	0	0	1381	0	0	1438	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.8	0.0	0.0	24.7	0.0	0.0	1.7	0.0	0.0	1.8	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.0	0.0	0.6	0.0	0.0	0.5	0.0	0.0	0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.5	0.0	0.0	25.0	0.0	0.0	1.9	0.0	0.0	2.1	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		39			25			240			335	
Approach Delay, s/veh		25.5			25.0			1.9			2.1	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		47.0		7.5		47.0		7.5				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		41.0		15.0		41.0		15.0				
Max Q Clear Time (g_c+I1), s		4.0		3.9		4.8		2.8				
Green Ext Time (p_c), s		4.2		0.0		6.1		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			4.4									
HCM 6th LOS			A									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	252	115	6	270	80	77	111	5	81	190	70
Future Volume (vph)	70	252	115	6	270	80	77	111	5	81	190	70
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	14	14	14	12	12	12	12	12	12
Grade (%)		0%			-1%			1%			1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00			1.00	
Frt		0.964			0.970			0.997			0.972	
Flt Protected		0.992			0.999			0.980			0.988	
Satd. Flow (prot)	0	1642	0	0	1822	0	0	1715	0	0	1683	0
Flt Permitted		0.786			0.991			0.725			0.863	
Satd. Flow (perm)	0	1301	0	0	1808	0	0	1267	0	0	1470	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		299			432			438			399	
Travel Time (s)		5.8			8.4			8.5			7.8	
Confl. Peds. (#/hr)	1					1	4					4
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	1%	1%	0%	1%	6%	1%	2%	20%	3%	1%	2%
Adj. Flow (vph)	72	260	119	6	278	82	79	114	5	84	196	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	451	0	0	366	0	0	198	0	0	352	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	0.98	0.98	0.98	1.08	1.08	1.08	1.08	1.08	1.08
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	35		20	35		20	35		20	35	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases	3	8			4			6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		4	4		6	6		5	2	
Switch Phase												
Minimum Initial (s)	3.0	10.0		10.0	10.0		12.0	12.0		3.0	12.0	
Minimum Split (s)	9.0	16.0		16.0	16.0		18.0	18.0		9.0	18.0	
Total Split (s)	13.0	46.0		33.0	33.0		35.0	35.0		13.0	48.0	
Total Split (%)	13.8%	48.9%		35.1%	35.1%		37.2%	37.2%		13.8%	51.1%	
Maximum Green (s)	7.0	40.0		27.0	27.0		29.0	29.0		7.0	42.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag	Lead			Lag	Lag		Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	None		None	None		None	None		Max	None	
Act Effct Green (s)		34.6			21.4			18.8			32.1	
Actuated g/C Ratio		0.45			0.28			0.24			0.42	
v/c Ratio		0.73			0.73			0.64			0.55	
Control Delay		25.5			35.0			37.1			21.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		25.5			35.0			37.1			21.3	
LOS		C			D			D			C	
Approach Delay		25.5			35.0			37.1			21.3	
Approach LOS		C			D			D			C	
Queue Length 50th (ft)		153			154			84			118	
Queue Length 95th (ft)		297			283			165			217	
Internal Link Dist (ft)		219			352			358			319	
Turn Bay Length (ft)												
Base Capacity (vph)		744			671			504			861	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.61			0.55			0.39			0.41	

Intersection Summary			
Area Type:	Other		
Cycle Length: 94			
Actuated Cycle Length: 76.9			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 28.7		Intersection LOS: C	
Intersection Capacity Utilization 80.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 4: Fox Chase Road & Cedar Road



January 29, 2021

Michael Downs, P.E.
Vice President, Land Development
Toll Brothers
1140 Virginia Drive
Fort Washington, PA 19034

Re: Water Availability
Sisters of St Basil the Great Property
Abington Township, Montgomery County

Dear Mike:

This letter will serve as confirmation that the above referenced property is situated within Aqua Pennsylvania Inc.'s ("Aqua") service territory. Service will be provided in accordance with Aqua's Rules and Regulations.

This proposed development will require a main extension(s) for service to be available. The main extension would originate from Aqua's existing 6-inch main in Fox Chase Road (this main is currently in design stage for replacement). Based on the proposed road layouts, additional tie-ins would be made to Aqua's 8-inch main in Forrest Avenue, and the 6-inch main in Kirkwood Road. A main extension plan utilizing Aqua plan standards must be prepared and submitted to this office for review and approval. Following approval of the main extension design and plan, construction of the main extension project would be completed by the Builder under our standard Builder's Extension Agreement.

Flow data information may be obtained from our Production Department so that you may determine the adequacy of our supply for your project needs. Please fax a written request to Lisa Thomas Oliva at 610-645-1162 containing the address, street, cross street and municipality and all pertinent contact information.

If I can be of further assistance, you may contact me at (610) 645-1105.

Sincerely,

David C. McIntyre
Manager, New Business and Contract Operations

Cc: John Diemer

3100 Horizon Drive
Suite 200
King of Prussia, PA 19406
T: 610-277-2402
F: 610-277-7449

www.pennoni.com

June 1, 2023

ABINT130030

Mr. Richard Manfredi, Township Manager
Abington Township
1176 Old York Road
Abington, PA 19001

RE: LD-23-01-711 Fox Chase Road (St. Basil)
PARID: 30-00-22424-00-1/ TMID: 30059 025
PARID: 30-00-22424-00-5/ TMID: 30059 026
Conditional Use Application Zoning Review

Dear Mr. Manfredi:

We have received a copy of the Conditional Use Application, application narrative, and redacted agreement of sale received on March 30, 2023, in conjunction with the subdivision and land development application submission of the Preliminary/Final Major Land Development Plans dated March 24, 2023, as submitted by the Applicant, Toll Mid-Atlantic, L.P Company, Inc. for the above referenced property on behalf of the property owner, Sisters of St. Basil the Great.

The Applicant is proposing to demolish the existing structures of the former St. Basil Academy School site; and construct a total of 150 age-restricted carriage homes as well as a clubhouse and pool on an existing parcel of land located within the newly created AR – Age Restricted Carriage Home Overlay District. The entire site consists of approx. 46.37 acres and is located within the CS – Community Service Zoning District. Other site improvements for this site include parking, curbing, sidewalk, landscaping, lighting, and sanitary and stormwater management facilities. Access to/from the site will be by way of one (1) proposed entrance off Fox Chase Road. In addition, an emergency access road is proposed off of Fox Chase Road on the northwestern corner of the site. The proposed development will be serviced by public water and sewer.

This project is located within the CS – Community Service Zoning District and the newly created AR – Age Restricted Carriage Home Overlay District as adopted by Ordinance no. 2199 on November 10, 2022. The site is fronted by Fox Chase Road to the southwest; residential properties zoned in the R1 – Low Medium Density Residential Zoning District to the north or northeast; residential properties zoned in the R3 – Medium Density Residential Zoning District, as well as the RC – Recreation/Conservation Zoning District, to the southeast; and residential properties zoned in the R4 – High Density Residential Zoning District to the south. In addition, a tributary of the Pennypack Creek traverses from north to south within the eastern corner of the track.

In accordance with the FEMA, Flood Insurance Rate Map (FIRM) Panel No. 42091C0403G, effective March 2, 2016, the tract is identified to be primarily located within Zone X, an area outside the 0.2% chance flood and minimal flood hazard. However, the area where the Pennypack Creek tributary traverses the site is located within Flood Zone X, an area of 0.2% annual chance flood hazard, areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile. Therefore, based on the FEMA FIRM determination, this site is not located within the Floodplain Conservation District, and is therefore not subject to the floodplain regulations of the Floodplain Conservation District. However, per the Abington

Township Riparian Corridor Analysis Map, Figure 15.2, and Section 1502.A.1, this parcel is identified as a parcel which is located within and intersecting the Riparian Corridor; and is therefore, subject to the regulations of the Riparian Corridor Conservation District.

Under this Conditional Use Application, the Applicant is proposing to provide a new sewer main connection for the majority of the Property to the existing sanitary sewer manhole located within a 20-foot wide sanitary sewer easement located on the east side of the property and within Zone 2 of the Riparian Corridor Conservation District.

CONDITIONAL USE REQUESTED

The Applicant is requesting the following conditional use approval from the Abington Township Zoning Code:

1. **§1503.B.2.b - Used Permitted by Conditional Use, Zone 2 –** A conditional use approval to allow for the installation of a central sewer line in Zone 2 of the Riparian Corridor Conservation District. **The Applicant is proposing a new central sewer main to cross Zone 2 of the Riparian Corridor Conservation District which requires conditional use approval from the Abington Township Board of Commissioners.**

The following documents have been reviewed:

Title	Sheet	Dated	Revised
Conditional Use Application Submittal			
Conditional Use Application & Application Fee	3 pages	-----	-----
Application Narrative	1 page	-----	-----
Redacted Agreement of Sale	40 pages	05/04/20	-----
Land Development Plans			
Cover Sheet	1 of 64	03/24/23	-----
Record Plans	2-5 of 64	03/24/23	-----
General Notes	6 of 64	03/24/23	-----
Existing Features Plans	7-10 of 64	03/24/23	-----
Overall Site Plan	11 of 64	03/24/23	-----
Grading Plans	12-19 of 64	03/24/23	-----
Utility Plans	20-27 of 64	03/24/23	-----
Road Plan & Profile	28-34 of 64	03/24/23	-----
Easement Profiles	35-39 of 64	03/24/23	-----
Construction Details	40-41 of 64	03/24/23	-----
Storm Sewer Details	42-43 of 64	03/24/23	-----
Sanitary Sewer Details	44-45 of 64	03/24/23	-----
Water Details	46 of 64	03/24/23	-----
Basin Details	47-55 of 64	03/24/23	-----
Landscape & Lighting Plans	56-63 of 64	03/24/23	-----
Landscape & Lighting Details & Notes	64 of 64	03/24/23	-----
Erosion and Sediment Control Plans			
Cover Sheet	1 of 15	03/24/23	-----
Erosion and Sediment Control Plan	2-9 of 15	03/24/23	-----
Erosion and Sediment Control Details	10-13 of 15	03/24/23	-----
Erosion and Sediment Control Notes	14-15 of 15	03/24/23	-----

Stormwater Management Narrative	660 pages	03/2023	-----

We have performed a review of the above referenced plans for compliance with the Zoning Ordinance (Chapter 162). We offer the following comments for your consideration:

ZONING COMMENTS

1. **Per §301 – Permitted Uses –** Based on the Abington Township Comprehensive Use Matrix, the existing and proposed uses on the above referenced property are:

   - **Existing/Former Use E-14 – School/College –** The former St. Basil Academy, which is classified as a Use E-14 – School/College use is a permitted use within the CS – Community Service Zoning District.

   - **Proposed Use H-13 - Age-Restricted Carriage Home Dwelling Unit (Single-Family Attached) –** The Applicant is utilizing the AR - Age-Restricted Carriage Home Overlay District for the proposed carriage homes on the site. A Use H-13 is a permitted use within the AR - Age-Restricted Carriage Home Overlay District for the site.

2. **Per §1503.B.2.b – Used Permitted by Conditional Use, Zone 2 –** Corridor crossings by centralized sewer and water lines and/or public utility transmission lines, provided that any disturbance is offset by corridor mitigation measures as outlined in §1508, Riparian Management of this chapter, and provided underground utility and pipe crossings are located at least 3 feet below stream invert.
   The eastern portion of this site is located within the Riparian Corridor Conservation District Zone 2. Based on the utility plans, the Applicant is proposing new sanitary lines to be located within Zone 2 of the Riparian Corridor which is only permitted by conditional use. As part of this Land Development application, the Applicant has included a completed conditional use application seeking approval from this Code Section to allow for the sanitary sewer crossing within Zone 2 of the Riparian Corridor Conservation District.

3. **Per §1710.A – Use Regulations –** Based on the Abington Township comprehensive Use Matrix, Use H-13 – Age-Restricted Carriage Home Dwelling Unit (Single-Family attached) was created as part of Ordinance No. 2199 which permits Use H-13 within the AR – Age Restricted Carriage Home Overlay Zoning District.
   Based on Ordinance No. 2199 as adopted on November 10, 2022, the subject property is located within the AR – Age Restricted Carriage Home Overlay Zoning District; therefore, a Use H-13 is permitted within this overlay zoning district.

4. **Per §1710.B – Use Regulations –** Based on the Abington Township comprehensive Use Matrix, Use A-6 Clubhouse, Use A-18 – Outdoor Recreation, Uses Accessory to, Use A-24 Swimming Pool, and Use A-25 Tennis/Sports Court are all permitted within the AR Overlay Zoning District.
   The Applicant is proposing a clubhouse, pool, and outdoor recreation areas as part of this land development which are permitted within the AR – Age Restricted Carriage Home Overlay Zoning District.

5. **Per §1711, Figure 17.2 – Dimensional Regulations –** The minimum lot area shall be 40 acres gross.
   Based on the plans, the total tract area is 46.37 acres which is in compliance with this Code Section.

6. **Per §1711, Figure 17.2 – Dimensional Regulations –** The minimum front yard setback shall be 30 feet dwelling setback from the face of the curb and/or edge of cartway.

Based on our measurements, it appears that the Applicant will comply with the required dwelling setback dimensions; however, dimensions for the building setbacks shall be provided on the plans to ensure compliance with this Code Section.

7. **Per §1711, Figure 17.2 – Dimensional Regulations –** The maximum building coverage shall be 25%.
The Applicant has provided a building coverage percentage of 19.8% which is in compliance with this Code Section. The Applicant shall provide a building coverage calculation on the plans showing the total building areas and the resulting percentages to ensure compliance with this Code Section.

8. **Per §1711, Figure 17.2 – Dimensional Regulations –** The maximum impervious coverage shall be 50% and the minimum green area shall be 50%.
The Applicant has provided a building coverage percentage of 34.3% which is in compliance with this Code Section. The Applicant shall provide an impervious coverage calculation on the plans showing the total impervious areas and the resulting percentages to ensure compliance with this Code Section.

9. **Per §1711, Figure 17.2 – Dimensional Regulations –** The minimum open space shall be the gross site area (in acres) x 0.40.
The Applicant has provided a building coverage percentage of 34.3% which is in compliance with this Code Section. The Applicant shall provide an open space calculation on the plans showing the total open space and the resulting percentages to ensure compliance with this Code Section.

10. **Per §1711, Figure 17.2 – Dimensional Regulations –** The maximum density shall be the gross site area (in acres) x 3.4.
The Applicant is proposing 150 dwellings on 46.37 acres of land which results in a density of 3.23 DU/Ac. which is less than the maximum allowable of 3.4 DU/Ac.; however, per §201 – Definitions – density is defined as the dwelling units per developable acre. The definition of developable acre is land remaining at a development site after excluding existing easements; rights-of-ways; areas consisting of floodplain and wetlands which are protected from development by federal, state, or local land regulations; and steep slope areas (including those steep slope areas for which a grant of special exception has been denied by the Township Zoning Hearing Board). The Applicant shall provide a developable acreage calculation on the plan and also provide a density calculation based on the developable acreage to ensure compliance with this Code Section.

11. **Per §1711, Figure 17.2 – Dimensional Regulations –** The maximum building height shall be 35 feet.
The Applicant is indicating that the building heights will be less than 30 feet. The Applicant has provided architectural renderings; however, no dimensions were shown on the renderings. The Applicant shall provide architectural drawings or update the renderings to include the building height dimensions for the proposed dwellings and clubhouse to ensure the buildings are no more than 35 feet in height.

12. **Per §1712.B – Special Development Regulations –** Along any boundary line of the tract adjoining an existing residential use, a 125-foot-wide green area shall be provided. In addition, a screening buffer conforming to §2403.B.4 Buffer specifications, Medium Intensity Buffer Option A, with a depth of not less than 40 feet, shall be situated within the green area, the final location if which shall be determined during land development.
The Applicant is proposing a 125-foot-wide green area which includes a 40-foot-wide medium intensity buffer area, and is therefore in compliance with the above Code Section.

13. **Per §1806.B – Conditional Uses –** The Board of Commissioners shall grant a conditional use only if it finds adequate evidence that any proposed development submitted will meet all of the following general requirements as well as any specific requirements and standards listed herein for the proposed use. The Board shall require that any proposed use, and its location among other things, shall be:
    1. In accordance with the Abington Township Comprehensive Plan.
    2. Consistent with the spirit, purposes, and intent of the applicable zoning district.
    3. An improvement which is not a detriment to the properties in the immediate vicinity, and which shall be in the best interests of the Township.
    4. In conformance with all applicable requirements of this Ordinance and all municipal, state and federal codes applicable to the use or process in question.

    The Applicant will be required to meet the requirements and standards of this Code provision.

14. **Per §1806.G – Criteria for Conditional Use Approval –** Applications for conditional use approval shall contain all data, information, and reports necessary for the Board of Commissioners to evaluate the proposal. In addition to the requirements of the Pennsylvania Municipalities Planning Code (MPC), the following criteria shall be considered by the Board of Commissioners:

    1. Consistency with the goals, objectives, and recommendations of the Township and County Comprehensive Plans; Old York Road Corridor Improvement Plan; Township Open Space, Recreation, and Environmental Resource Protection Plan; Township Revitalization Plans, and other plans adopted by the Township.

    2. Suitability of the proposed use for the property in question. This criterion shall consider issues such as traffic, vehicular and pedestrian circulation, adjacent land use(s), buffering, and other impacts on the surrounding area.

    3. Community Character. The impact of the proposed use on the surrounding community shall be considered. If the proposal is adjacent to a residential district, the scale of the use shall relate to and complement the surrounding area. The location and design of parking areas shall be in harmony with preserving the general appearance and character of the area. All new buildings shall be architecturally compatible with existing buildings on the site.

    4. Nuisance/Safety Analysis. The use shall not generate excessive noise, noxious odors, air pollution or lighting, or result in pedestrian conflict or other safety hazards to people or property. Artificial light shall be directed away from adjacent property and buildings. Artificial lighting shall be located to avoid shining into habitable room windows offsite. Outdoor uses and accessory facilities shall only be permitted where the noise generated by the use will have a minimal impact on nearby residential uses and where hazards are contained on the site to the maximum extent possible.

    5. Traffic Impact. The existing road system must be able to accommodate the peak traffic generated by the proposed use in a safe and efficient manner. Existing residential areas shall not be impacted by significant volumes of traffic from the proposed facility. The Board of Commissioners may request a traffic impact study, as described in Traffic Impact Study section of the SALDO.

    6. Public Utilities. All uses shall be capable of being served by public sewer. A use may be permitted to be served by an on lot sanitary system, only if deemed acceptable by the Board of Commissioners and the adopted 537 Plan of the Township, upon recommendation of the Township Engineer, and upon approval of the Pennsylvania Department of Environmental Protection. Sufficient water supply must be available to accommodate all the needs of the proposed use.

    The Applicant will be required to meet the criteria of these Code provisions.

15. **Per §2103.H Use H-13.1 – Age-Restricted Carriage Home Dwelling Unit (Single-Family Attached) –** Age Restricted carriage homes may be one or two-level dwelling units above grade, provided that they do not exceed the district height limitation and may have a third level serving as a basement.
The Applicant shall provide architectural drawings or updated renderings of the dwellings to show total number of stories for the buildings, as well as the building heights to ensure compliance with this Code Section.

16. **Per §2103.H Use H-13.2 – Age-Restricted Carriage Home Dwelling Unit (Single-Family Attached) –** All age-restricted carriage home dwelling units must connect to public water and sewer.
On the Utility Plans, there are some locations where the water lines are not shown connecting to the dwellings within the development. The Applicant shall confirm the connections and revise accordingly.

17. **Per Article XXII – Signs –** Any monument/landmark signage proposed as part of the land development shall be shown on the plan. The Applicant shall be responsible for obtaining the required sign permits.

18. **Per §2304.H Use H-13 – Age-Restricted Carriage Home Dwelling Unit (Single-Family Attached) –** 2 parking spaces exclusive of garage space, plus one-quarter (1/4) parking space per dwelling unit for visitor and overflow parking shall be provided. The visitor and overflow parking may be provided in designated on-street parking spaces; parking spaces may be reduced to 9' x 18'; and single car garages may not be utilized as required parking spaces, unless a basement is provided.
The Applicant is proposing 150 dwelling units which requires the following parking spaces.
    - **150 Units x 2 spaces per unit = 300 parking spaces**
    - **150 Units x (1/4) spaces per unit = 37.5 = 38 parking spaces**

    In total, the Applicant is required to provide 338 parking spaces for the dwelling units. Based on the plan provided, the Applicant is proposing 359 parking spaces on site consisting of 300 parking spaces in the driveways of the dwelling units and 59 parking spaces on Roads A, B, D, and E as well as in front of the clubhouse area. The Applicant shall clarify if any basements will be provided for the proposed dwelling units to confirm the total number of parking spaces being provided on the site. The Applicant shall update the parking calculation on the Record Plan (Sheet 3) to reflect the correct number of parking spaces required and proposed.

19. **Per §2307.A – Parking for Individuals with Disabilities –** Accessible parking spaces shall be provided for any place of public accommodation or any commercial facility, pursuant to the Americans with Disabilities Act of 1990, as amended and shall be designed in accordance with the Rules and Regulations of said Act, as amended.
The Applicant is not required to provide ADA accessible parking for the private on-lot parking spaces within the driveway areas of the individual dwellings; however, the Applicant shall provide ADA accessible parking located in front of the proposed clubhouse area for the additional overflow parking requirements. Based on the overflow parking requirements, the Applicant is proposing 59 parking spaces which requires a minimum of three (3) accessible parking spaces to be provided, of which one of the accessible parking spaces shall be van accessible in accordance with ADA guidelines.

20. **Per §2310.A – Parking Lot and Frontage Development Standards –** The minimum width of drives and parking aisles shall be 24 feet for two-way travel and 12 feet for one-way travel.
Based on the plans, in the areas where the Applicant is proposing on-street parking, the drive aisle width for the two-way road around the on-street parking is only 20 feet wide which is less than the required 24 feet wide. The Applicant shall revise the parking and drive layout to ensure a minimum of 24 feet for two-way travel is provided.

21. **Per §2401.A.2.d.(1).(a) – Preservation and Protection of Existing Vegetation –** Tree replacement shall occur when new impervious coverage exceeds 500 SF and a tree with a minimum caliper of six (6) inches is removed. In such cases, two new trees, each a minimum of 3-to-3.5" caliper, measured 6" above grade, shall be planted for each tree with a minimum caliper of 6" or greater that is removed.
Based on the Existing Features Plan (Sheet 7), the Applicant is indicating that they are removing 67 trees as part of this Land Development project. The trees shall be labeled with a diameter of the tree to be removed to confirm the required tree replacement. A tree replacement calculation shall be provided on the landscaping plan showing the total number of trees removed and the total number of trees proposed based on this code requirement. In addition, the Applicant shall label the trees that are proposed to remain. For example, on the Existing Features Plan (Sheet 7), the existing trees that are not labeled which are located between the trees labeled 44 and 45 and 48 and 49 as not proposed to be removed; however, on the Utility Plan (Sheet 24) there is storm piping proposed directly underneath those trees which will require those trees to be removed. The Applicant shall clarify and confirm all trees to remain or to be removed and update the label on the Existing Features plan accordingly.

22. **Per §2401.A.2.d.(1).(c) – Preservation and Protection of Existing Vegetation –** Each mature tree with a 10-inch caliper or greater on the site shall be designated either "TO REMAIN" or "TO BE REMOVED".
The Applicant shall label all trees with a ten (10) in caliper or greater as "TO REMAIN" or "TO BE REMOVED".

23. **Per §2401.A.2.d.(2) – Preservation and Protection of Existing Vegetation –** Existing vegetation designated "TO REMAIN," in accordance with the landscaping plan of a subdivision or land development shall be identified in the field prior to any clearing and shall be physically protected throughout the construction process. A temporary tree protection zone, constructed according to the standards expressed below, shall be erected a minimum of one foot outside the drip line on all sides of individual trees or tree masses prior to major clearing or construction. The barrier shall be placed to prevent disturbance to or compaction of soil inside the barrier and shall remain until construction is complete. The barrier shall be shown on the landscape plan.
On the E&S plans, there is a callout for tree protection fencing in the legend; however, it is unclear where the tree protection fencing is provided on the plans to protect the existing vegetation shown to remain on the site. The Applicant shall clarify and update the plans accordingly to distinguish the tree protection fencing.

24. **Per §2402.A.2.a.(4) – Planting Islands –** Each planting island shall contain one shade tree plus shrubs and/or groundcover to cover the entire area at maturity. Parking lot trees shall be a minimum of three inches in caliper, branching at 6 feet to 8 feet in height and of the recommended species as listed in the 'Recommended Plant Materials' List in the SALDO. Parking lot islands shall be planted in lawn or ground cover only.
The Applicant is proposing a planting island in front of the proposed clubhouse building with no shade tree proposed in this planting island. A shade tree shall be required based on the requirement of the above Code Section.

25. **Per §2402.A.2.a.(5) – Planting Islands –** Shade trees located within any parking island which is less than 300 SF measured from outside curb to outside curb will require permanently installed irrigation.
The planting island in front of the proposed clubhouse building at 200 SF is less than 300 SF. The Applicant will need to revise the size of the planting island or be required to provide the required irrigation system per this Code Section.

26. **Per §2402.B.2.c – Street Trees –** Trees shall be planted at a ratio of at least one tree per 40 LF of frontage

or fraction thereof. Trees shall be distributed along the entire frontage of the property, although they need not be evenly spaced.
Based on our measurements, there is approximately 9,195 LF of frontage which will require 9,195/40 = 230 street trees. The Applicant is indicating that there is 8,845 LF of frontage and which will require 222 street trees. The Applicant shall update the street tree calculation and provide the additional required street trees.

27. **Per §2601.H.4 – Lighting Standards -** Lighting standards in parking areas shall not be located farther than 200' apart and may not be taller than 18' in height. No pedestrian lighting standard may exceed 14' in height.
The Applicant has provided street lighting with the Landscape and Lighting Details Plan, however, the mounting heights for the proposed street lighting along the proposed internal roadways and the iso-foot-candles for these lights have not been provided on the plans. The Applicant shall confirm the mounting heights of the lights and revise the plans to show the mounting heights and the iso-foot-candles for the proposed lights.

GENERAL COMMENTS

28. Per the Existing Features Plans (Sheets 7 to 10), there are multiple locations where private fencing and structures are shown to be encroaching within the site boundaries from the abutting properties that front Forrest Avenue, Kirkwood Street, and Suffolk Road. The Applicant shall clarify if the private fences and structures are permitted to remain or be required to be removed outside the site boundaries. It is recommended that a written agreement to permit these encroachments for each of the properties should be provided to the Township.

29. The Applicant shall address the review comments as issued under the SALDO application submission.

If you have any questions or comments with this submittal, please do not hesitate to contact me.

Sincerely,

PENNONI

Allison A. Lee, PE
Assistant Zoning Officer

cc: Terry Castorina, Assistant to the Township Manager
Ashley McIlvaine, Assistant Township Manager & Assistant CAO

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TOWNSHIP OF ABINGTON

CONDITIONAL USE APPLICATION

Section 1806 of The Zoning Ordinance of the Township of Abington contains the requirements for the submission, review procedures and the criteria for approval of a Conditional Use application within the Township of Abington. This form has been provided for your use. Please complete the entire form and submit the completed application with the required plan(s), reports(s) and application fee.

Name of Applicant: Toll Mid-Atlantic LP Company, Inc.

Address of Applicant: 1140 Virginia Drive, Fort Washington, PA 19034

Attn.: Brian Thierrin

Telephone Number: 215-938-8000

E-Mail Address: BThierrin@tollbrothers.com

Name of Land Owner: Sisters of St. Basil the Great

Address of Land Owner: 710 Fox Chase Road, Jenkintown, PA 19046

Telephone Number:

Submit proof of standing for the property involved in this application. A copy of the deed, agreement of sale or lease can be submitted. Please feel free to delete the financial terms of the sales agreement or lease.

Name of Attorney: Alyson M. Zarro, Esquire

Address of Attorney: Riley Riper Hollin & Colagreco, 717 Consitution Drive, Suite 201

Exton, PA 19341

Attorney's Phone Number: 610-458-4400

Attorney's E-Mail Address: Alyson@rrhc.com

A written narrative may be submitted with this application that addresses the need for this application, an assessment of the property involved, the community character, safety related issues, traffic impact, storm water management and the effect on public utilities.

The undersigned herewith declares this submission to be true and correct as to the facts known as of the date of this application.

Signature of Applicant: _____

Signature of Land Owner: _____

Section #3 of Ordinance #1951 of the Township of Abington contains the fee schedule for matters heard by the Board of Commissioners and include zoning change applications, map amendments, conditional use application, petitions and curative amendments.

A fee of $2,000.00 is required to be submitted as the time the application is received. Checks are to be made payable to the Township of Abington and submitted to the Zoning Officer.

Date Received: 03/30/2023 Receipt Number: $2,000.00 - Check no. 10628581

Signature of Zoning Officer: Allison A. Lee

If there are any questions that you may have, please feel free to contact Allison Lee @ 610-422-2360 or by e-mail at aalee@Pennoni.com.

ABINGTON TOWNSHIP
CONDITIONAL USE APPLICATION NARRATIVE

Toll Mid-Atlantic LP Company, Inc.
1140 Virginia Drive, Fort Washington, Pennsylvania 19034

Toll Mid-Atlantic LP Company, Inc. ("Applicant") is the equitable owner of a property located at 711 Fox Chase Road, Jenkintown, Pennsylvania 19046, consisting of approximately 46.37 acres, and more specifically identified as Tax Parcel Numbers 30-00-22424-001 and 30-00-22420-005 ("Property"). The Property was formerly used for Saint Basil Academy. Applicant proposes to redevelop the Property pursuant to the AR Age-Restricted Carriage Home Overlay District with 150 Age-Restricted Single-Family Attached Carriage Home Dwelling Units and accessory uses. In connection with the proposed redevelopment of the Property, Applicant requests conditional use approval, pursuant to Section 1503.B.2.b of the Abington Township Zoning Ordinance, to allow the installation of a central sewer line in Zone Two of the Riparian Corridor Conservation District.

The proposed development would be served by public sewer. Public sewer for the majority of the Property will be provided via connection to an existing sanitary sewer manhole located within a 20-foot wide sanitary sewer easement generally on the east side of the Property. The location of the existing sanitary sewer easement and manhole are shown on the enclosed Conditional Use Plan prepared by ESE Consultants, Inc. dated March 2023.

Portions of the eastern end of the Property are within the Riparian Corridor Conservation District. Zone One and Zone Two of the Riparian Corridor Conservation District are shown on the Subdivision and Land Development Plan being filed contemporaneously with this conditional use application. An enlarged area of the two Zones are shown on the Conditional Use Plan. The existing sanitary sewer improvements in Zone One are not specifically permitted uses in Zone One but are proposed to be continued as an existing nonconforming use pursuant to Section 1505 of the Zoning Ordinance.

Applicant is proposing to connect the new central sanitary sewer line at the existing manhole. In order to connect the portion of the Property being developed with homes and accessory facilities such as a clubhouse, the new central sewer line is required to cross Zone Two of the Riparian Corridor Conservation District. Accordingly, Applicant is seeking conditional use approval for the new central sanitary sewer line within Zone Two pursuant to Section 1503.B.2.b of the Abington Township Zoning Ordinance. The installation of the sanitary sewer line in this location will allow for the most efficient and direct connection to the existing public sewer system. Mitigation measures and riparian corridor planting will be in compliance with Section 1508 of the Zoning Ordinance and applicable regulations of the Subdivision and Land Development Ordinance. Landscaping throughout the proposed development will utilize native species. The proposed installation of the sanitary sewer line in Zone Two will have no adverse effect on the character of the community, safety, traffic, or public utilities.

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AGREEMENT OF SALE

THIS AGREEMENT OF SALE (the "Agreement") is made as of this 4th day of May, 2020, between **SISTERS OF ST. BASIL THE GREAT**, a Pennsylvania non-profit corporation, having an address at 711 Fox Chase Road, Abington, PA 19046-4198 (collectively, "Seller") and **TOLL MID-ATLANTIC LP COMPANY, INC.,** a Delaware corporation, 250 Gibraltar Road, Horsham, PA 19044 ("Buyer").

WITNESSETH:

In consideration of the covenants and provisions contained herein, and subject to the terms and conditions hereinafter set forth, the parties hereto, intending to be legally bound, agree as follows:

1. Sale. Seller hereby agrees to sell and convey to Buyer, who hereby agrees to purchase from Seller, that certain tract of land, located in Abington Township, Montgomery County, State of Pennsylvania, designated on the Tax Map of Abington Township as Tax Parcel Numbers 30-00-22424-001 and 30-00-22420-005 with approximately 46.5 total acres as more particularly described on Exhibit "A" attached hereto and incorporated herein (the "Property"). The Property includes (i) all tenements, hereditaments, appurtenances, easements, covenants, permits, approvals, escrows and other rights arising from or appertaining to the land; (ii) all structures (including the existing school), fixtures, systems, improvements, topsoil, trees, shrubbery and landscaping situated on, in or under or used in connection with the land; (iii) all agreements that are in force and effect and benefit the Property; (iv) all intangible property now or hereafter owned by Seller and used by Seller in the ownership or operation of the Property, excluding all trademarks, logos, tradenames and other intellectual property; (v) all existing sewer and/or water capacity reserved for the benefit of the Property; and (vi) all surveys, plans, specifications, reports, engineering work-product and other information that Seller has in its possession or control relating to the Property (all items set forth in this subparagraph (vi) collectively, the "Seller's Plans"). Seller agrees to provide to Buyer copies of Seller's Plans on or before the date of this Agreement.

2. [redacted]

(a) [redacted]

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(d) [redacted]

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3. [redacted]

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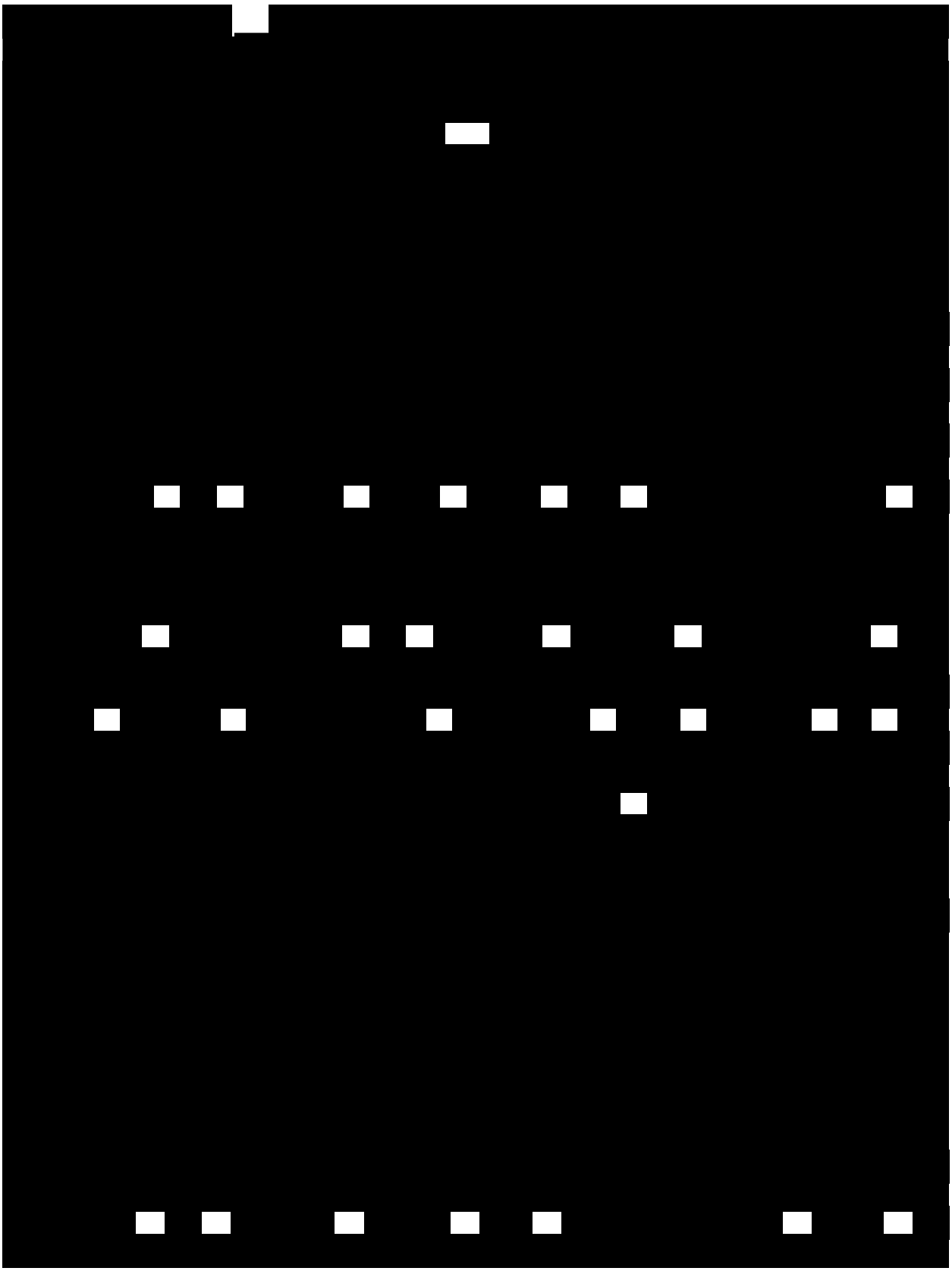




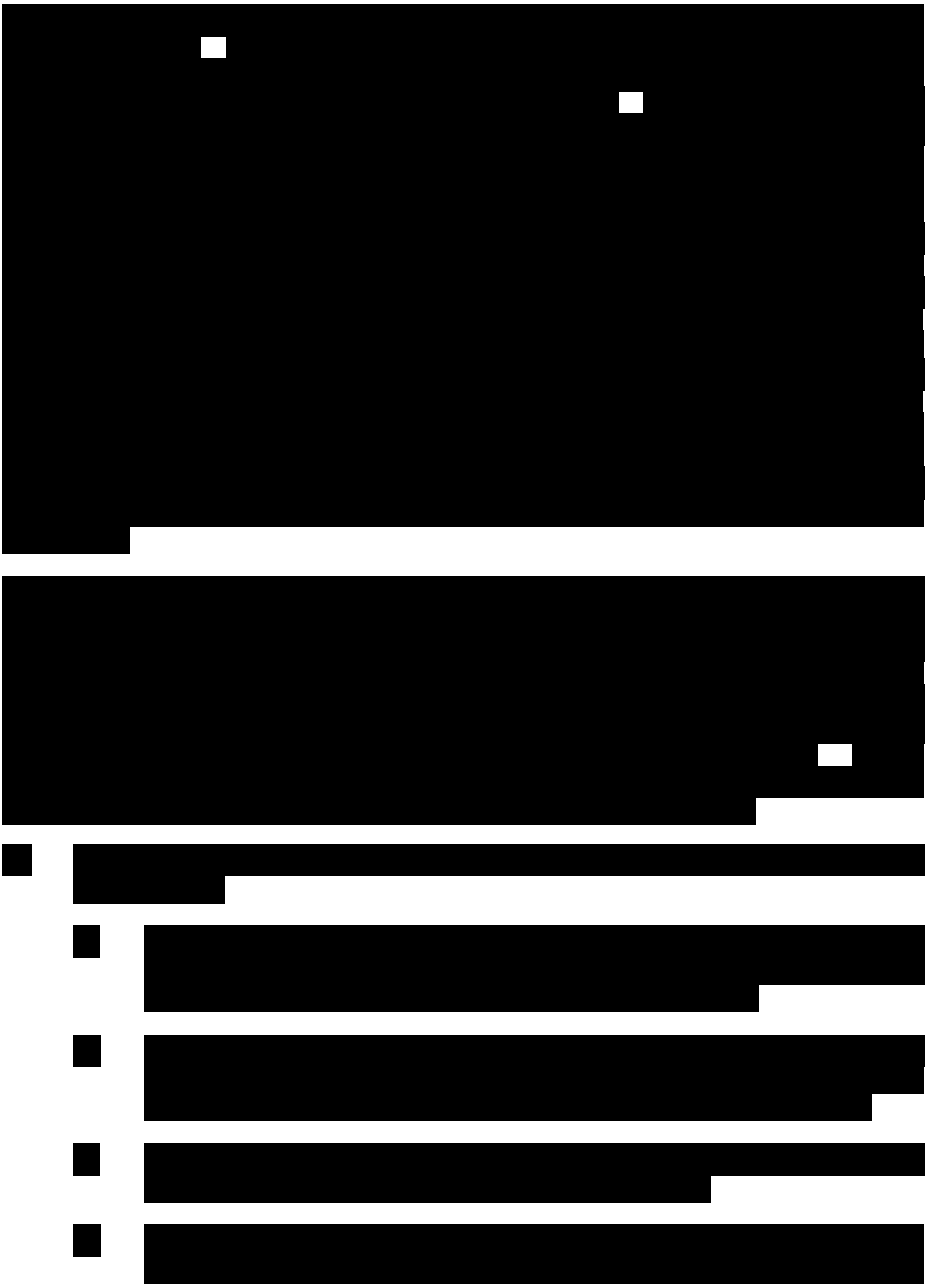
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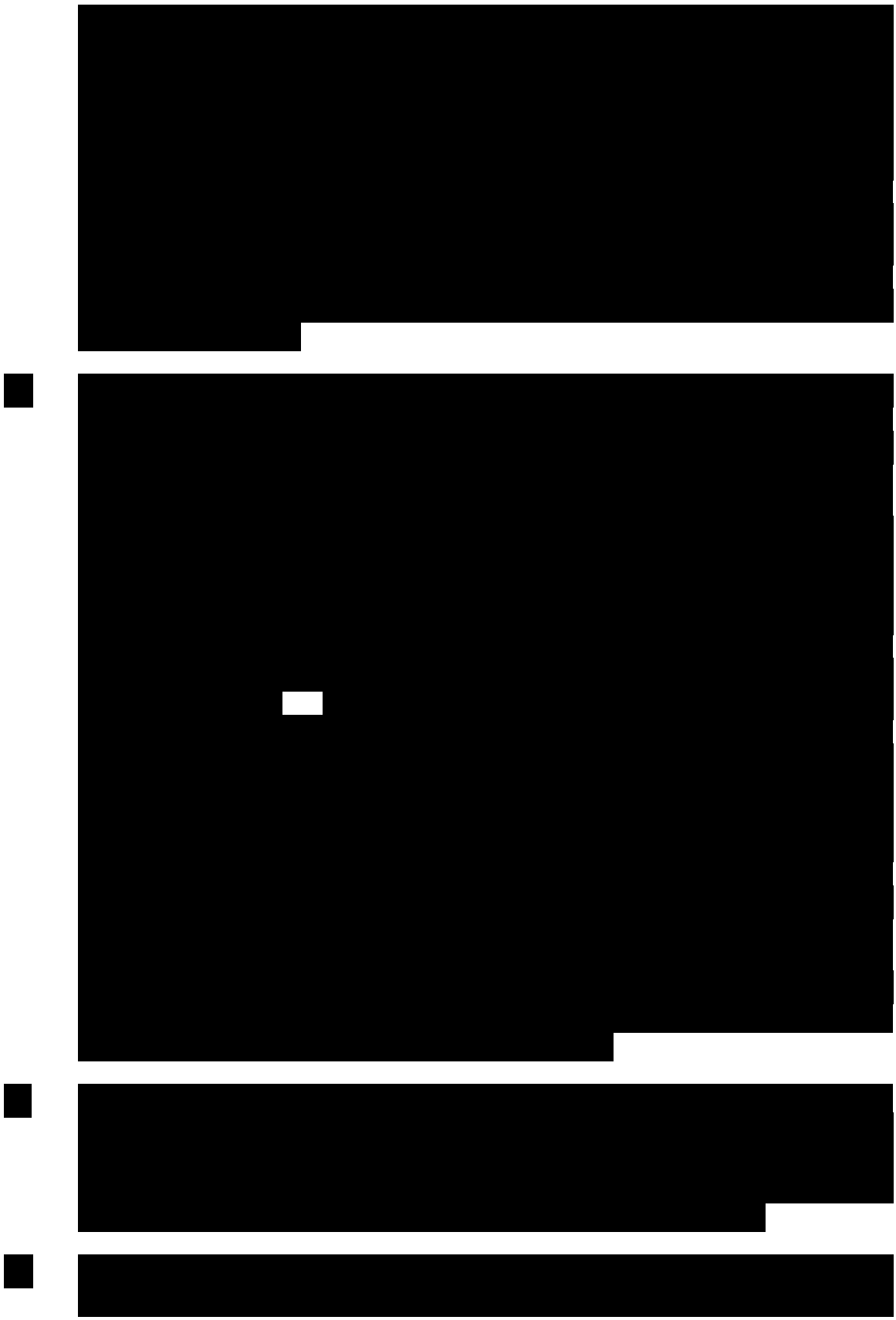


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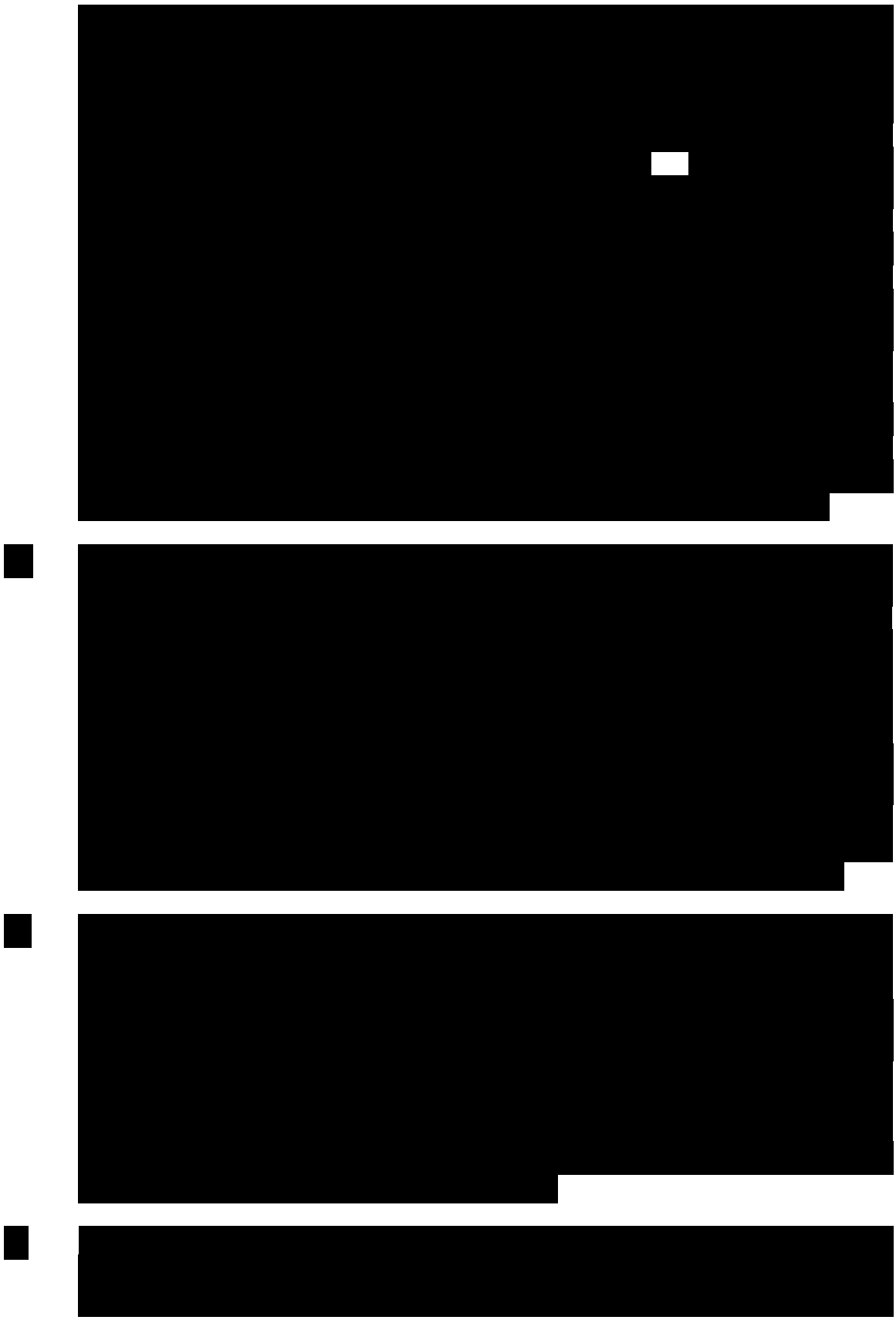
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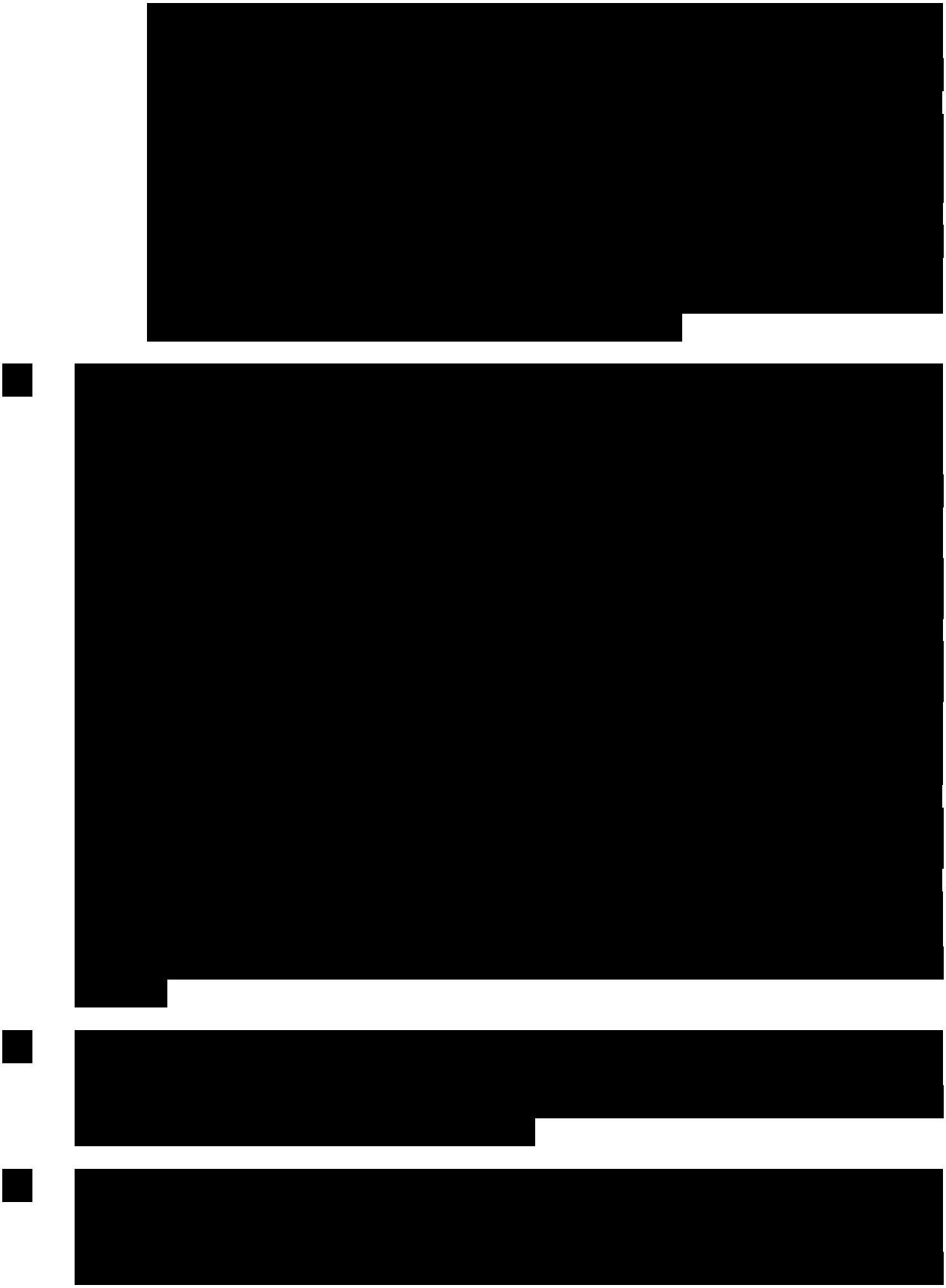
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To Seller: Sister Dorothy Ann Busowski, OSBM
Provincial Superior
Sisters of St. Basil the Great
710 Fox Chase Road
Jenkintown PA 19046
Email: dabusowski@stbasils.com

With a copy to: John Morozin, Jr.
116 Thomas Gates
Williamsburg, VA 23185
Email: jjmyellow@cox.net

and a copy to: Stradley Ronon Stevens & Young, LLP
30 Valley Stream Parkway
Malvern PA 19355
Attn: Christopher E, Cummings, Esq.
Email: ccummings@stradley.com

To Buyer: Toll Mid-Atlantic LP Company, Inc.
c/o Toll Bros., Inc.
250 Gibraltar Road
Horsham, PA 19044
Attn: Kevin Golden, Esquire,
Assistant Vice President and Counsel
Fax: (215) 938-8255
Email: kgolden@tollbrothers.com

With a copy to: Toll Mid-Atlantic LP Company, Inc.
c/o Toll Bros., Inc.
250 Gibraltar Road
Horsham, PA 19044
Attn: Christopher Gaffney, Regional President
Email: CGAFFNEY@tollbrothers.com

And a copy to: Toll Mid-Atlantic LP Company, Inc.
c/o Toll Bros., Inc.
250 Gibraltar Road
Horsham, PA 19044
Attn: John Dean, Division President
Email: jdean@tollbrothers.com

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IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals the day and year first above written.

BUYER:
TOLL MID-ATLANTIC LP COMPANY, INC.,
a Delaware corporation

DocuSigned by:
By: John Dean
C461DD7458584D3...
Name: John Dean
Title: Division President

Date of Execution: 05-04-2020

SELLER:
SISTERS OF ST. BASIL THE GREAT,
a Pennsylvania non-profit corporation

By: Sister Dorothy Ann Burowski, OSBM
Name: SISTER DOROTHY ANN BUROWSKI, OSBM
Title: PROVINCIAL

Date of Execution: 5/4/2020

TITLE COMPANY:
Westminster Abstract Company

By:
Name: STEVEN R. RICHARDSON
Title: COMMERCIAL TITLE MANAGER

Date of Execution: 5/5/2020

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EXHIBIT "A"

DESCRIPTION OF PROPERTY

and assigns,

ALL THAT CERTAIN tract or piece of land SITUATE in the Township of Abington, County of Montgomery, Commonwealth of Pennsylvania, described according to a survey and plan thereof made by Barton and Martin Civil Engineers, of Philadelphia, Pennsylvania, on October 20, 1943, as

BEGINNING at a nail set in the middle line of Fox Chase Road (60 feet wide), which nail is situate at the distance of three hund twenty-three and seventy-seven one-hundredths feet measured in a South-easterly direction along the middle line of Fox Chase Road from its poi of intersection with the middle line of Forest Avenue (33 feet wide) and extending thence from the above mentioned nail and place of beginning, through land of the Sellers, of which this is a part, and passing over a concrei monument set in the Northeasterly side of Fox Chase Road, North forty-four degrees fifty-seven minutes ten seconds East the distance of twenty one hundred eighty-one and thirteen one-hundredths feet to a concrete monument, and extending thence still through land of the Sellers, South forty-five degrees two minutes fifty seconds East the distance of five hundred seventy-five and twenty-two one-hundredths feet to a concrete monument marking a corner of other land of the Buyer, and extending thei by the said Buyer's land South forty-four degrees fifty-seven minutes t seconds West the distance of twenty-three hundred fifty-nine and two on hundredths feet, passing over a marble stone set in the Northeasterly s of Fox Chase Road to a nail in the middle line of Fox Chase Road, and extending thence by the same the three following courses and distances: (1) On a line curving to the right in a Northwesterly direction with a radius of fourteen hundred thirty-two and sixty-nine one-hundredths fee the arc distance of one hundred sixty-two and forty-six one-hundredths to a point of tangency, (2) North twenty-six degrees thirty-four minute fifty seconds West three hundred twelve and fifteen one-hundredths feet a point of curve, (3) On a line curving to the left in a Northwesterly direction with a radius of nineteen hundred ten and eight one-hundredth feet the arc distance of one hundred twenty-nine and twelve one-hundred feet to the first above mentioned nail and place of beginning. CONTAIN thirty acres of land.

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ALL THAT CERTAIN lot or piece of ground SITUATE in Abington Township, Montgomery County, Pennsylvania

BEGINNING at the point of intersection which the original centerline of Fox Chase Road (33 feet wide) makes with the southwesterly side of the new location of Fox Chase Road(60 feet wide) at the arc distan of 267.56 feet, measured along the said southwesterly side of Fox Chase Road by a line curving to the right in a northwesterly direction with a radius of 1462.69 feet from a point of tangent; said point of tangent being at the distance of 13.5 feet measured South 22 deg. 19 min. West from a point in the said southwesterly side of Fox Chase Road (33 feet wide, but since widened 8.5 feet on the northeasterly side the present width of 41.5 feet); said last mentioned point being at the distance of 810.80 feet measured North 67 deg. 41 min. West from the point of intersection which the said southwesterly side of Fox Chase Road extended, makes with the original centerline of Cedar Road (33 feet wide, but since widened 10 feet on the northwesterly side to the present width of 43 feet); thence from the first mentioned point and along the original centerline of Fox Chase Road, being line of land of Sisters of St. Basil the Great, North 67 deg. 58 min. 30 sec. West 193.78 feet to an angle point, the intersection which the said original centerline of Fox Chase Road makes with the centerline of Shelmire Street(recently vacated); thence from said angle point along the said original centerline of Fox Chase Road, being line of land of Sisters of St. Basil, the Great, North 28 deg. 59 min. West 154.75 feet to the point of intersection which the said original centerline of Fox Chase Road makes with the said southwesterly side of the new location of Fox Chase Road; thence along the same concentric with the centerline of concrete paving and 30.00 feet southwest therefrom, by a line curving to the left in a southeasterly direction with a radius of 1462.69 feet, the arc distance of 329.50 feet to the place of beginning.

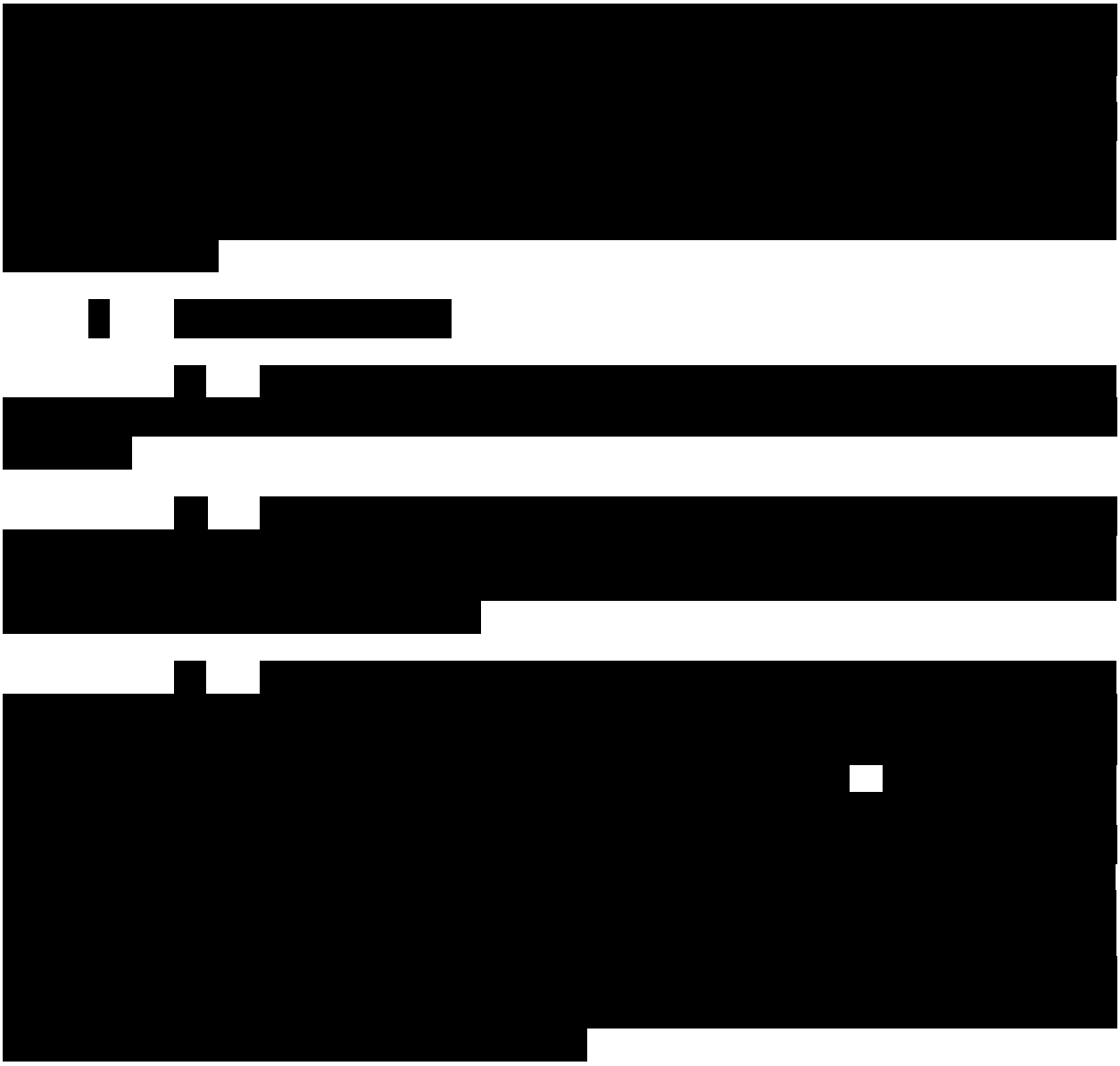
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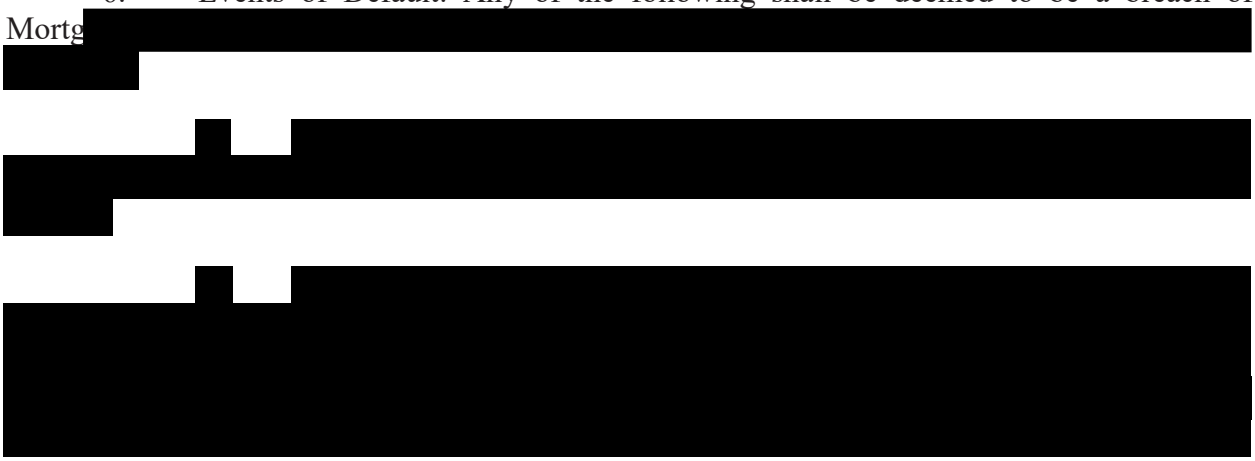
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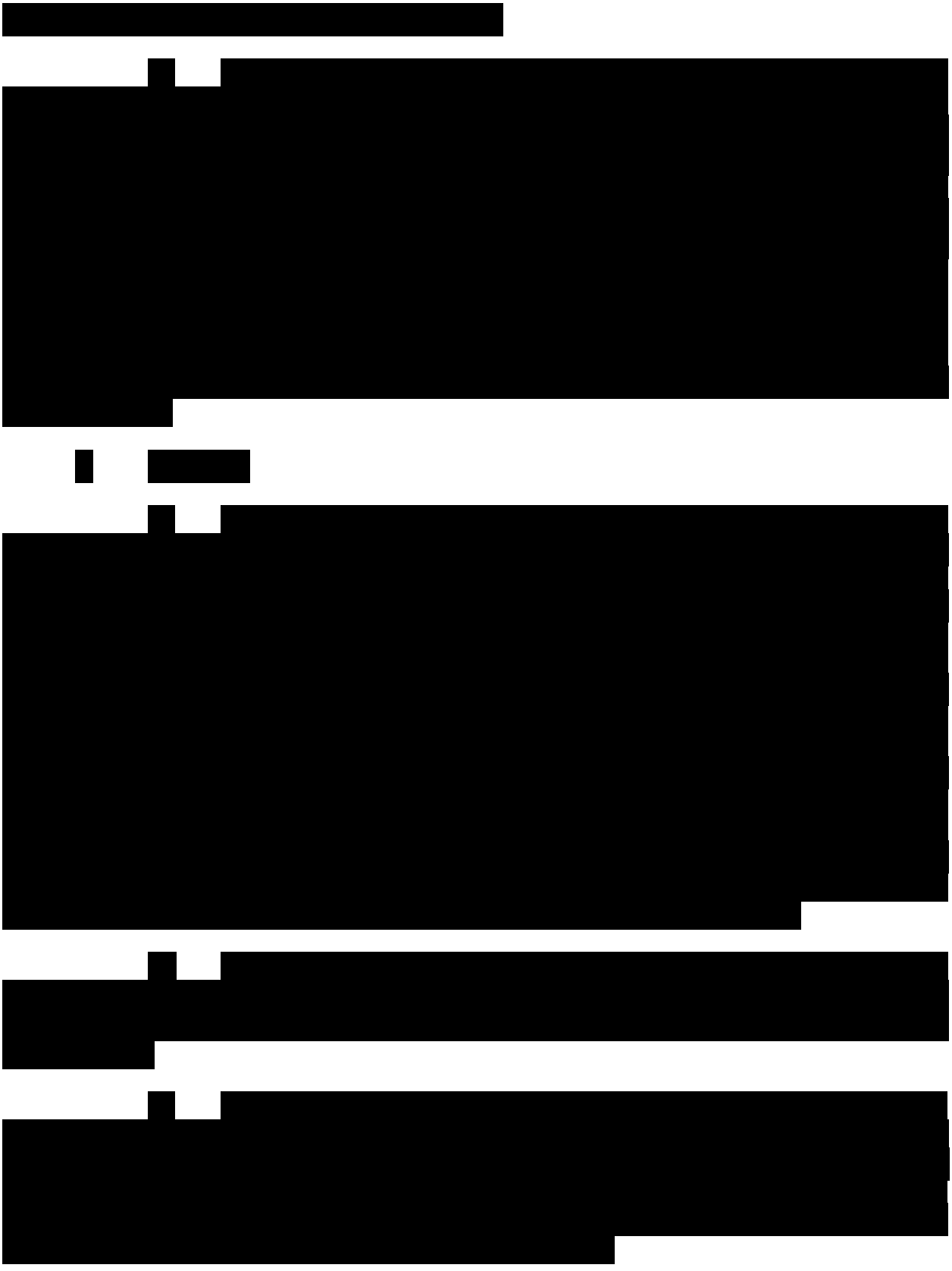
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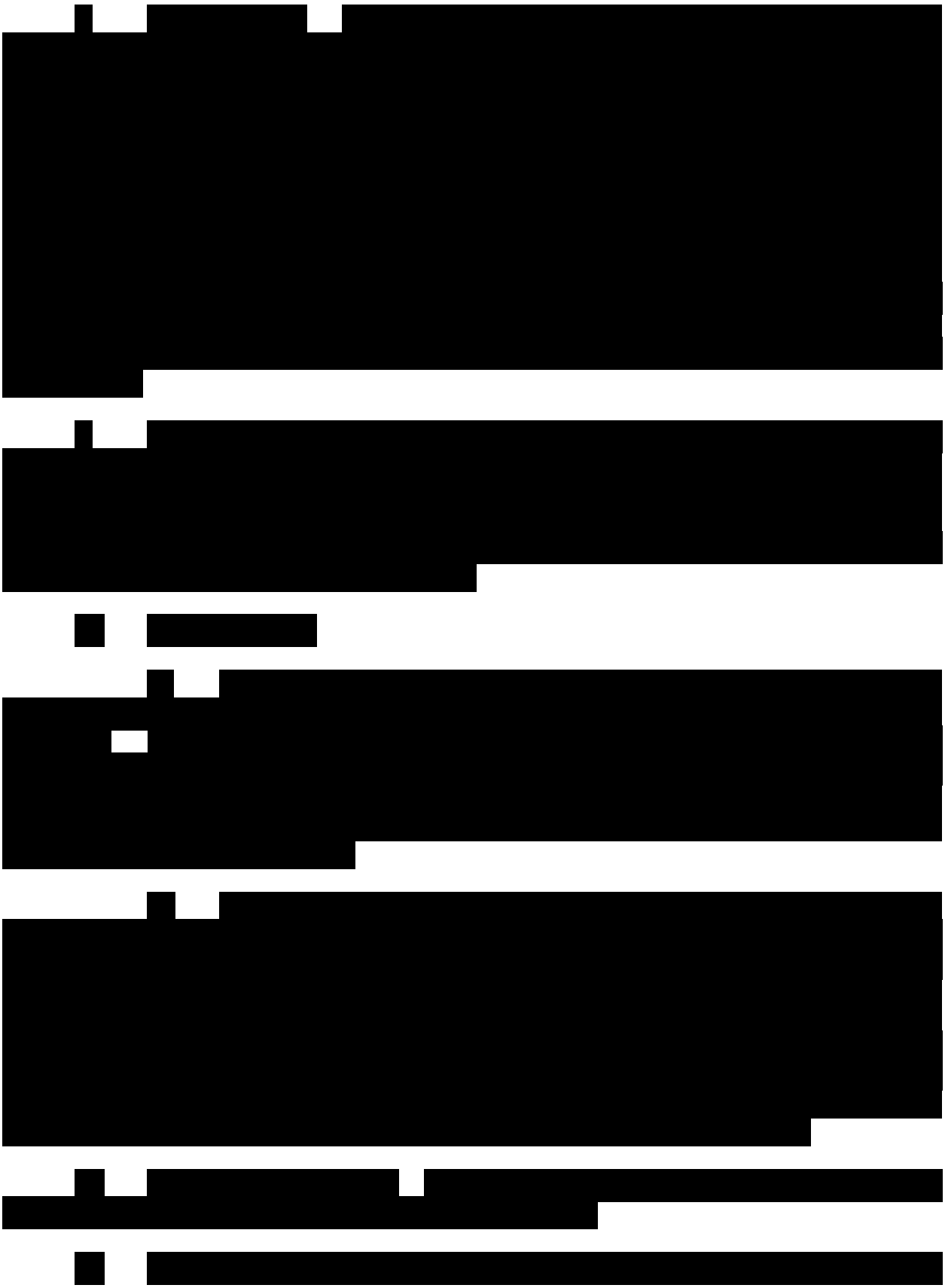
6. Events of Default. Any of the following shall be deemed to be a breach of Mortg



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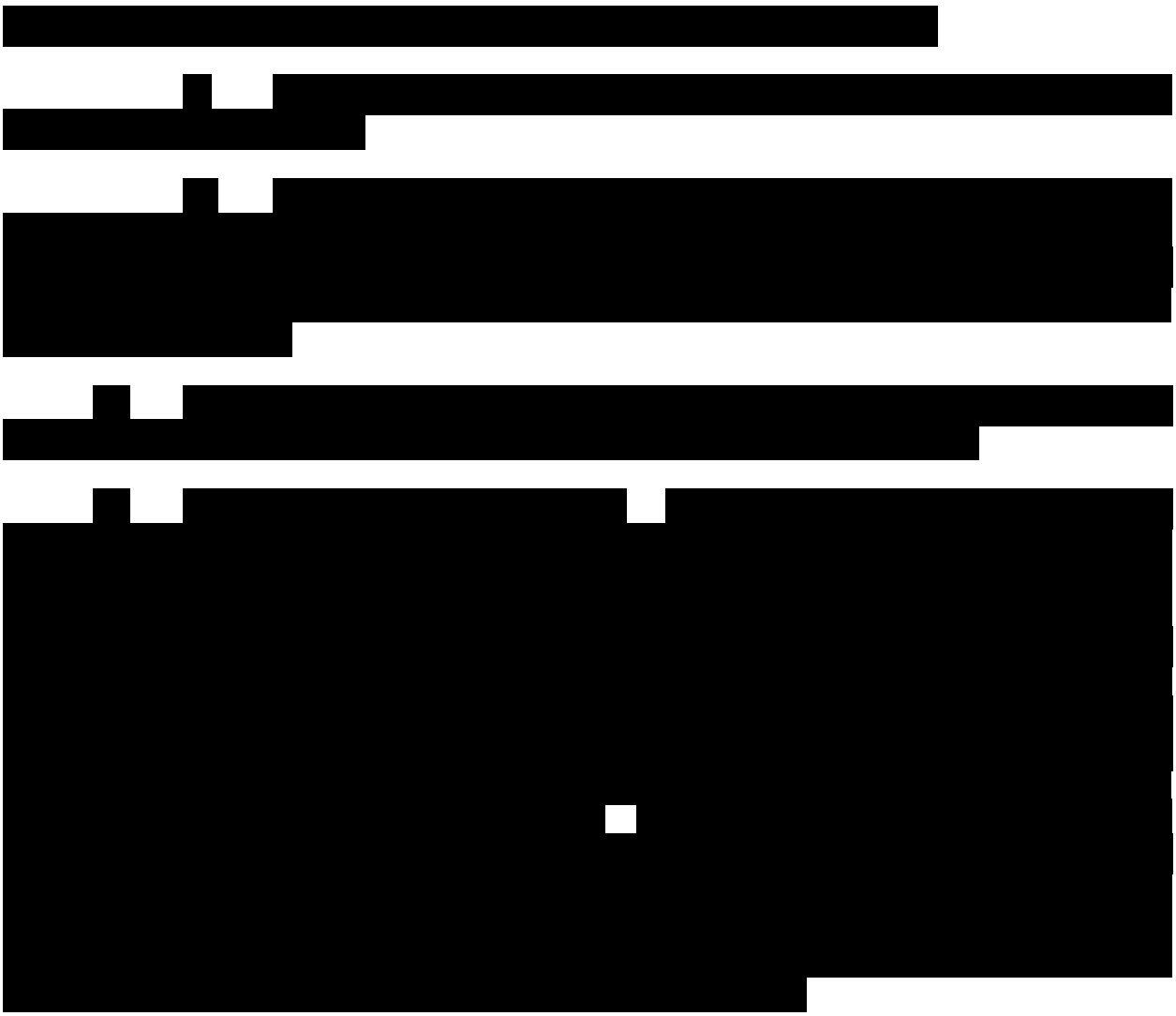
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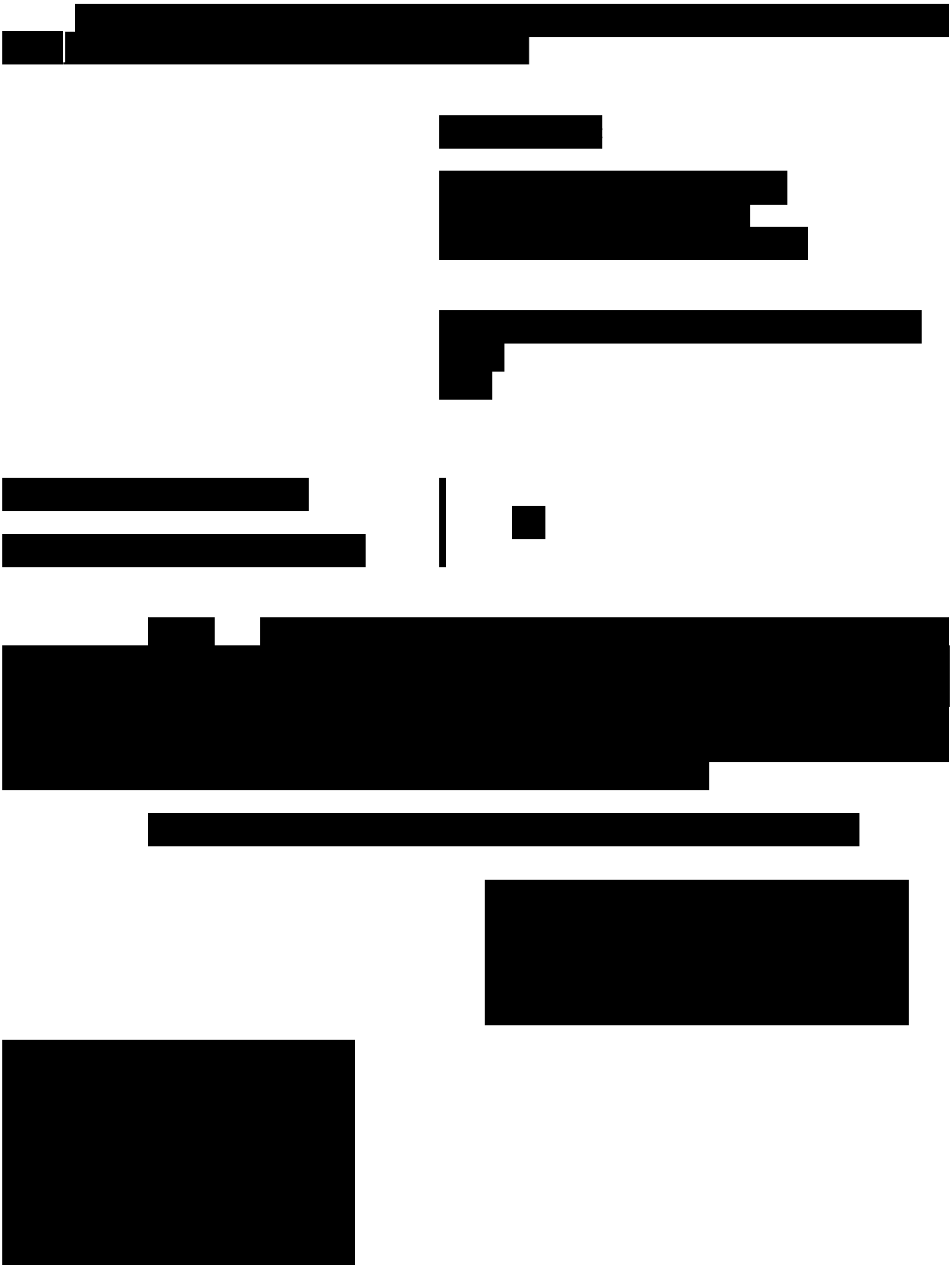
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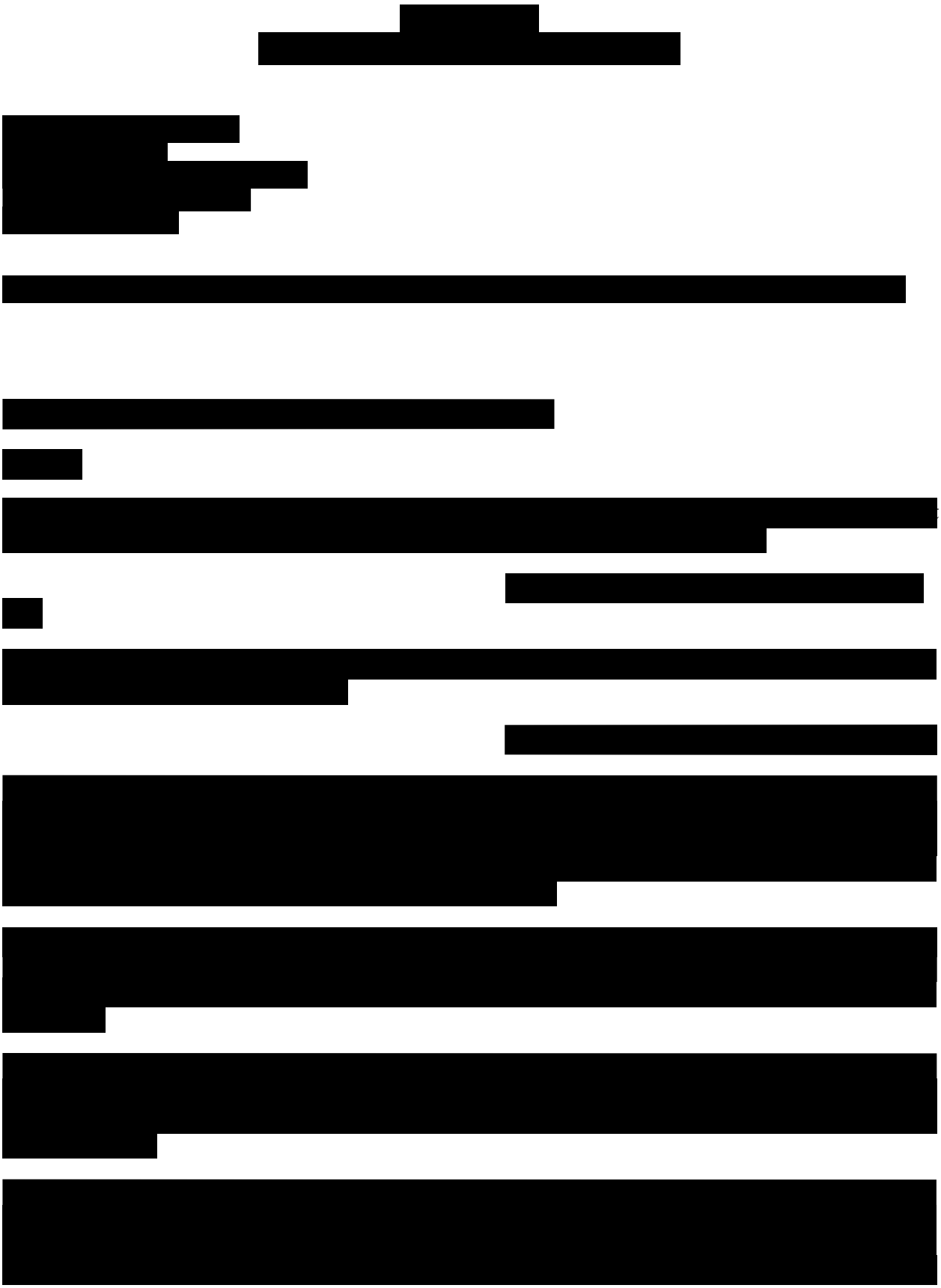


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May 11, 2023

MEMO

To: Lucy Strackhouse, Chair – Abington Township Planning Commission
From: Abington Township Environmental Advisory Council
RE: Sisters of St. Basil LD-23-01, 711 Fox Chase Road
Plan Set Date: March 24, 2023

EAC Review Dates: April 12, May 10, 2023

Site Summary
Owner: Sisters of St. Basil the Great
Zone – CS – Community Service District, with AR (Age restricted) Carriage home overlay.
Watershed – Tookany Creek and Pennypack Creek Tributaries
Plan: Proposed 150- single family attached units Subdivision and Land Development Plan

Dear Chairperson, Strackhouse,

The members of the Abington Township Environmental Advisory Council (EAC) have reviewed the above referenced land development plan at our regular meetings on April 12 and May 10. The following comments and questions are based on our review with EAC members and Shade Tree Commission (STC) members:

Existing Features Plan - Sheet 8 of 64, Sheet 2 of 4
According to the construction designation chart showing existing trees of 10" diameter or more, Tags **# 1 and #3** – are to remain. We recommend **removal of these trees** as these are Tree of Heaven, an invasive tree species known to be critical in the Spotted Lantern Fly life cycle. **Tag 84** – indicates removal of a large beech tree for a sewer line easement – **See also, Sheet 62**. If this is a healthy tree, we request that placement of the easement be re-evaluated to avoid removal of this tree. Can the developer please explain the rationale for the proposed placement?

Landscape Plans – Sheets 56-64
Plans note that 5 basins will be constructed to manage stormwater runoff. Please confirm that all basins will be designed as "naturalized" detention basin features as described in the draft PA DEP Post Construction Stormwater Manual (386-0300-001 / January 28, 2023 / DRAFT / Page 3-292). Naturalized detention basins are preferrable stormwater control measures to traditional grass basins as they provide both peak rate and water quality management benefits.

Basin 1/Long Emergency Spillway – It appears that the emergency spillway would discharge directly out onto Fox Chase Rd. Can this be explained, especially the potential impacts to existing drainage capacity of the road?

Basin Long Term Operation and Maintenance. Plans indicate that development will be turned over to a Homeowner's Association who will be responsible for common area land management and maintenance of the proposed stormwater detention basins. The EAC requests that a strong O & M agreement be developed, providing the township with access to these facilities for regular inspection and if necessary, access to make any repairs.

Invasive plants/trees in wooded area – In addition to strong O & M agreements for proper maintenance of stormwater control measures, we highly recommend that an invasive plant management plan be funded by the developer and conducted by either the township or specialized contractor for the existing wooded area. This plan should be included in any required long- term O&M agreements. For example, akebia is known to exist in the adjacent woodlands. This is considered a PA invasive vine that spreads/fruits throughout the wooded area preventing native plant growth.

Green Areas, Open Space and Connectivity – It appears that a significant portion of the "green area" perimeter is proposed to be grass. The EAC strongly recommends minimizing lawn areas and instead provide additional native trees, shrubs, and deep-rooted warm season native grasses. These promote better water infiltration, require less mowing and less use of herbicides. As currently proposed, there are no cross access or walking trails proposed within these "green areas," missing an opportunity to build connectivity to the neighborhood, Alverthorpe Park and Crosswicks Sanctuary. Natural connective trails are desirable for both new residents and the surrounding neighborhood as they provide alternative non-motorized options for residents.

Related to the above, will the natural areas be protected from future infringements? We recommend placing conservation easements or deed restrictions in these areas to protect them in perpetuity. This comment is applicable to the common-owned "green areas" proposed to surround the development. These appear to be of sufficient depth and width to accommodate additional lots, especially since they could be connected to the existing street networks.

The EAC also recommends consideration of improving connectivity and pedestrian safety between the new development and Alverthorpe Park. We offer two potential options: 1) connect the sidewalk in front of the new development to existing sidewalks along Fox Chase Road to Forrest Ave, where there is an existing traffic light and crosswalk or 2) create a new crosswalk by the new access area. We feel this would likely become an informal crossing point to access the park so adding a pedestrian crosswalk at this mid-block location could help increase safety.

Green Area and Open Space Calculations[i]. As described in the plan, 65.7% or 29.53 acres are classified as "Green Area," while 50.5% or 22.6 acres are classified as open space. Since these two figures exceed the actual area of the site, we assume that the green areas include those considered as open space area. Can these calculations be confirmed by our zoning officer? We understand that open space cannot include required yard areas.

Additional comments/questions raised by EAC members.

Emergency access – There appears to be a main entrance and a secondary access way from Fox Chase Road. Please confirm if the secondary access point is considered an emergency access? How many emergency access points will be onsite?

Roadways in development – Street widths appear to be large enough for on-street parking. Is this amount of impervious roadway necessary? Would street parking be allowed on one or both sides? Have permeable pavement options been considered for areas designed for on-street parking?

Sustainable Building Best Practices
We encourage the following sustainable building best practices:

a. Consider: Designed to Meet the Energy Star for new construction and Energy Star Portfolio Manager or another benchmarking tool for existing buildings greater than 10,000 sf
b. Low embodied carbon materials for construction and materials management
c. Building electrification for HVAC systems to avoid fossil fuels such as natural gas and support the Township's aspirations to be carbon neutral by 2050.
d. Rely on Renewable Energy sources and microgrids wherever possible.
e. Electric vehicle conduits or charging stations to reduce direct vehicle emissions and improve air quality.

Again, we thank you for the opportunity to comment on this important land development plan.

Respectfully submitted,

Susan S. Myerov

Susan Myerov,
Chair, Abington Township EAC

cc: Richard Manfredi
Michael Narcowich
Shaun Littlefield
Planning Commission Members
EAC Members
Abington Shade Tree Commission Members

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TOWNSHIP OF ABINGTON

Office of the Fire Marshal

Richard J. Manfredi, *Township Manager*
Chris Platz, *Fire Marshal*

November 9th, 2023

Toll Mid-Atlantic LP Company, Inc.
1140 Virginia Drive
Fort Washington, PA 19034

Re: LD-23-01 - 711 Fox Chase Rd Land Development of
Parcels 30-00-22424-00-1 and 30-00-22420-00-5

Thank you for the opportunity to review the submitted plans for Preliminary Major Subdivision and Land Development at 711 Fox Chase Road Jenkintown, PA 19046. The project outlined is for the creation of 150 townhome style single family attached dwellings, as well as a Clubhouse structure.

I have reviewed the submitted Full Plan Set originally dated 03/24/2023 and since revised on 10/13/2023. Additionally, I reviewed the accompanying plans for the various home styles. At this time, I have the following concern.

Withing the "Full Plan Set" document, on page SD02.01 (sheet 6 of 64), there is General Note 29-D2 which states "FIRE HYDRANTS SHALL BE SPACED IN A DEVELOPMENT SO THAT ALL PROPOSED BUILDING(S) WILL BE NO MORE THAN SIX HUNDRED (600) FEET FROM THE HYDRANT MEASURED ALONG TRAVEL WAYS."

Abington's Subdivision and Land Development Ordinance has specific requirements as it relates to water supply, specifically fire hydrant placement. SALDO 146-41 B(4)d requires a fire hydrant to be located within 500 feet of all buildings under construction. While it states all buildings under construction, hydrants are generally not a temporary solution, and my interpretation would be within 500 feet of all buildings constructed.

I'd look forward to hearing how this concern would/could be addressed.

Aside from the above issue, I have no other concerns at this time with the Preliminary Major Subdivision and Land Development proposed in these plans.

Should you have any questions or concerns, please feel free to contact me at 267-536-1089 or via email at CPlatz@AbingtonPA.gov or FireMarshal@AbingtonPA.gov.

Sincerely,

Chris Platz

Chris Platz,
Fire Marshal

MONTGOMERY COUNTY
CONSERVATION DISTRICT
143 Level Road • Collegeville, PA 19426-3313 • 610-489-4506 • Fax: 610-489-9795
www.montgomeryconservation.org

August 29, 2023

Toll Mid-Atlantic LP Company, Inc.
Attn: Mike Downs, Vice President Land Development
1140 Virginia Drive
Fort Washington, PA 19034-3204

Re: **Incompleteness Review Letter**
Sisters of St. Basil
NPDES Permit Application No. PAC460839
Abington Township, Montgomery County

Dear Mike Downs:

The Montgomery County Conservation District has reviewed the above NOI for PAG-02 NPDES General Permit Coverage and has determined that it is incomplete. The list below specifies the items that must be included in the resubmittal of your NOI and/or the submission of additional information. The *Pennsylvania Erosion and Sediment Pollution Control Program Manual* (E&S Manual) and the *Pennsylvania Stormwater Best Management Practices Manual* (BMP Manual) include information that may aid you in responding to some of the items listed below. The items are based on applicable laws and regulations, and the guidance sets forth the DEP's preferred means of satisfying the applicable regulatory requirements.

Please note that pursuant to 25 Pa. Code §102.6(c), this information must be received within 60 calendar days by **October 28, 2023**, or Montgomery County Conservation District may consider the NOI withdrawn.

Please also note that when the NPDES application is administratively incomplete, the resubmission of requested information will be handled at no additional fee.

Items for Resubmittal or Submission of Additional Information

The Completeness Review Item comments below taken from the NPDES PAG-02 General Permit Fact Sheet from Attachment B of the Standard Operating Procedure (SOP); Review of PAG-02 General NPDES Permit NOIs. The SOP can be found at the following link:
http://files.dep.state.pa.us/Water/Wastewater%20Management/EDMRPortalFiles/SOPs/BPNPSM_NPDES_SOP_PAG-02.pdf

1. **§102.6(a)(1) – NOI form** (3800-PM-BCW0405b)
    a. Applicant Information Question 2: The Employer ID# (EIN) should be completed.
    b. Earth Disturbance Question 1: The total earth disturbance area should be consistent between the MCCD Application (36.0 acres), the NOI (32.05 acres), and the PCSM Spreadsheet (32.02 / 32.05 / 32.51 acres).

c. Earth Disturbance Question 2: The Pre-Construction Impervious Area should be consistent between the NOI (256,633 sf or 5.89 acres) and the PSCM Spreadsheet (6.04 acres or 5.58 acres).
d. Earth Disturbance Question 3: The Post-Construction Impervious Area should be consistent between the NOI (695,718 sf or 15.97 acres) and the PSCM Spreadsheet (15.92 acres or 15.54 acres).
e. Stormwater Discharge Information Questions 1 and 2 Non-Surface Waters: Please clarify if the streams discharge directly to either the East Branch Jenkintown Creek or the unnamed tributary to Pennypack Creek; if a Discharge Point does not discharge directly to a receiving water (requiring a Chapter 105 permit), then it is considered a non-surface water discharge.
f. Stormwater Discharge Information Question 3: Please identify all Discharge Points that will discharge to the MS4. Also, it is not clear which Discharge Points will discharge to the MS4 as they are not identified on the PCSM Plans.
g. Stormwater Discharge Information Question 5: It appears that there will be new non-surface discharges prior to reaching surface waters.
h. Stormwater Discharge Information Question 6: Please note that decreasing the drainage area in the post-construction condition to meet the stormwater runoff rate, volume, and water quality regulations is considered a non-discharge alternative.

2. **§102.6(a)(1) – E&S Module 1** (3800-PM-BCW0406a)
   a. 102.4(b)(5)(ix) – *Details were provided for all E&S BMPs (Question 5 of E&S Plan Information).*
      - All E&S BMPs that were modified to meet ABACT requirements should be listed as such under the Deviation(s) from E&S Manual column and be consistent with the Approved E&S and PCSM BMP document from DEP.
      - The data table included in Standard Construction Detail #7-4 is inconsistent with the data table provided in Standard Construction Detail #7-14 regarding riser crest elevations. Please verify that all provided elevations are consistent throughout the application documents.
      - Construction Detail #4-10 should include a note that states super silt fence should only be used as a sediment basin baffle. All baffle details should be kept together on the plan sheets.
      - The provided Rock Construction Entrance Detail is not consistent with the minimum requirements of the E&S Manual.

   b. 102.4(b)(5)(viii) – *Standard E&S Worksheets from the E&S Manual (or their equivalent) were attached*.
      - Socks with diameters less than 12" should only be used for residential housing lots of ¼ acre or less that are tributary to a sediment basin or sediment trap. Please revise Standard E&S Worksheet #1 and the E&S Plan Drawing(s) to be consistent with the minimum requirements of the E&S Manual.
      - Reductions to the dewatering zone volume cannot be used for proposed sediment basins if the basin discharges to a surface water identified in DEP's latest published Integrated Water Quality Monitoring and Assessment Report (Integrated Report) as being impaired for siltation, suspended solids, turbidity, water/flow variability, flow modification/alterations, or nutrients. Please revise Standard E&S Worksheets for proposed sediment basins to reflect this.
      - According to Standard E&S Worksheet #16, Sediment Basin 3A's calculated dewatering time is 1.4 days. This does not meet the required dewatering time of 2

to 7 days (4 to 7 days in special protection watersheds) listed on Page 160 of the E&S Manual. Please revise the calculations for Sediment Basin 3A to meet the dewatering time requirement.
- For Standard E&S Worksheet #11, please provide the manufacturer's actual allowable shear stress for proposed erosion control blankets.
- For all proposed riprap aprons, please provide all applicable information from Standard E&S Worksheet #20.

c. 102.4(c) – *An Off-site Discharge Analysis was provided, if applicable*.
- An Off-site Discharge Analysis could not be found in the submitted package. Please provide an Off-site Discharge Analysis for the applicable discharge points.

d. 102.4(b)(5)(v) – *If hydric soils are present, a wetland determination was submitted*.
- The appropriate box is checked but a wetland determination could not be found attached to E&S Module 1.

3. **§102.4(b)(5)(ix) – E&S Plan Drawing(s)**
   a. 102.4(b)(5)(v) – *The Drawing(s) show receiving surface water(s) and watershed boundaries, if applicable, within the project site and floodway or floodplain*.
      - Please identify where the discharge from the site enters the surface waters. The path can be shown on the location map in the instances where the surface waters are not located within the surveyed area.
      - Please label all streams on the appropriate E&S Plan Drawing(s).
   b. 102.4(b)(5)(ix) – *The Drawing(s) identify all discharge points*.
      - Please identify all discharge points on the E&S Plan Drawing(s).
   c. 102.4(b)(5)(vi) – *The Drawing(s) show the location of all BMPs and drainage areas to the BMPs as applicable*.
      - Please label the drainage areas to proposed sediment basins on the E&S Plan Drawing(s).
      - Please provide an Inlet Protection Drainage Map to verify that the maximum drainage area requirements are met.
   d. 102.4(b)(5)(iii) – The *Drawing(s) show existing and proposed utilities and site improvements*.
      - Show the locations of all existing utilities on the E&S plan maps.
      - Show the locations of all proposed utilities on the E&S plan maps.

PCSM Comments

4. **§102.6(a)(1) – PCSM Module 2** (3800-PM-BCW0406b)
   a. Please complete one PCSM Module 2 with multiple Stormwater Analysis – Runoff Volume and Stormwater Analysis – Peak Rate sections within the consolidated Module 2 corresponding with the receiving stream / PCSM Spreadsheet.
   b. PCSM Plan Information Question 1: Identify all proposed structural and non-structural PCSM BMPs for implementation at the project site that will be utilized for volume, water quality, and/or rate control, consistent with the PCSM Plan.
   c. PCSM Plan Information Question 1 BMP ID: Provide a BMP ID number for each listed BMP, starting at 1. If there are two BMPs in series, each BMP should be listed on a separate row with a separate number. These BMP IDs numbers should also be identified on PCSM Plan Drawings and consistent with those used in the PCSM Spreadsheet.

d. PCSM Plan Information Question 1 BMP ID: The BMP IDs should be consecutive between multiple discharge points.
e. PCSM Plan Information Question 1 Undetained Areas: The undetained areas noted on the Module (16.74 acres) and used in the PCSM Spreadsheet (4.03 acres or 3.20 acres) should be consistent.
f. PCSM Plan Information Question 2: Please either provide the supplemental sheets as noted or provide the PCSM Plan sheet which contains the information for this section.
g. PCSM Plan Information Question 5: Recycling and proper disposal of materials associated with PCSM BMPs information could not be located on the PCSM plans; recycling and proper disposal of materials associated with PCSM BMPs are to be addressed as part of long-term operation and maintenance of the PCSM BMPs.
h. Infiltration Information: Please provide complete soil logs as part of the soil/geologic information. Soil and geologic testing must be completed for PCSM BMPs in accordance with 25 Pa. Code § 102.8(g)(1) and the BMP Manual, as amended, and results must be attached to the NOI. 102.8(g)(1).
i. Infiltration Information BMP ID: At the top of each table, enter the BMP ID number as reported in the PCSM Plan Information section.
j. PCSM Spreadsheet Comment [102.8(f)(8), 102.8(g)(2) & 102.8(g)(4)]:
    i. The total earth disturbance areas on the General Information worksheets (6.04 acres) and the Volume Management worksheets (5.58 acres) should be consistent.
    ii. The total existing impervious areas on the General Information worksheets (15.92 acres) and the Volume Management worksheets (15.54 acres) should be consistent.
    iii. The total undetained areas on the General Information worksheets (4.03 acres) and the Volume Management worksheets (3.20 acres) should be consistent.
    iv. Volume Management Worksheet Incremental BMP DA (Structural BMP Volume Credits table): Enter the drainage area, in acres, that is tributary to the reported BMP within the disturbed area.
    v. Volume Management Worksheet Volume Routed to BMP (Structural BMP Volume Credits table): Calculate and report the volume routed to the BMP during the 2-year/24-hour storm event from the disturbed area. Additional volume from outside the disturbed area (within or outside of the project site) may indeed flow into the BMP and would need to be accounted for in the design; however, for the purpose of crediting volume reduction or management to meet regulatory compliance, this additional volume cannot be considered.
    vi. The total pre-constriction specific hydrologic soil group (HSG) areas and the total post-construction HSG areas should be consistent.
    vii. “Other” volume may not be used as volume credit; please remove the “Other” volume credits.
    viii. The Characterize Undetained Areas used on the Water Quality worksheet should be consistent with the undetained areas used on the General Information and Volume Management worksheets.
    ix. Pollutant removal methodologies may not be used with the Water Quality worksheet; please remove the “Other” water credits.

5. **§102.8(f)(9) – PCSM Plan Drawing(s)**
    a. 102.8(f)(3) – *The Drawing(s) include the project site boundary*.
        - The project site boundary should be provided which includes the total area of the project site. A project site is the entire area of activity, development, lease,

or sale including: 1) the area of an earth disturbance activity, 2) the area planned for an earth disturbance activity, and 3) other areas which are not subject to an earth disturbance activity.

b. 102.8(f)(3) – *The Drawing(s) include the limit of earth disturbance within the project site*.
   - The limits of earth disturbance area is to include all areas of earth disturbance.

c. 102.8(f)(5) – *The Drawing(s) show receiving surface water(s) and watershed boundaries, if applicable, within the project site and floodway or floodplain*.
   - Please identify where the discharge from the site enters the surface waters. The path can be shown on the location map in the instances where the surface waters are not located within the surveyed area.

d. 102.8(f)(9) – *The Drawing(s) identify all discharge points*.
   - All discharge points are to be shown.

e. 102.8(f)(6) – *The Drawing(s) show the location of all BMPs with identifiers cross-referenced to PCSM Module 2*.
   - The PCSM BMPs are to be identified, cross-referenced to PCSM Module 2.

f. 102.8(f)(9) – *Details were provided for all PCSM BMPs (Question 1 of PCSM Plan Information)*.
   - Please include the PCSM ID as cross-referenced to PCSM Module 2 on the plan details.

g. 102.8(f)(3) – *The Drawing(s) show existing and proposed utilities and site improvements*.
   - All proposed utilities are to be shown, including gas, electric, and telecom service lines.

h. 102.8(f)(7) & 102.8(f)(10) – *The Drawing(s) show the sequence of PCSM BMP implementation, a long-term operation and maintenance (O&M) schedule, procedures for recycling or disposing of materials, and critical stages of BMP implementation (not necessary if a separate narrative is attached)*.
   i. The PCSM plans should show the PCSM BMP sequence of implementation for each BMP cross-referenced in PCSM Module 2.
   ii. A long-term operation and maintenance (O&M) schedule should be provided for each BMP cross-referenced in PCSM Module 2.
   iii. The anticipated post-construction materials should be identified.
   iv. Procedures for recycling or disposing of the anticipated post-construction materials should be provided.
   v. Critical stages of BMP implementation should be provided for each BMP cross-referenced in PCSM Module 2.

i. 102.8(g)(1) – *The Drawing(s) show the location of test pits used for infiltration testing as cross-referenced to PCSM Module 2, Infiltration Information*.
   - The location of test pits used for infiltration testing as cross-referenced to PCSM Module 2, Infiltration Information is to be shown.

A. Miscellaneous

1. Please note that when the NPDES application is administratively incomplete, the first resubmission of requested information will be handled at no additional fee. Subsequent submissions may be subject to additional fees.
2. Please take note that MCCD will not accept "piecemeal" plan revisions and all revisions must be submitted as part of a complete application package. In the event that it is agreed upon and

allowed by the reviewer for individual sheets or pages to be "swapped out," a meeting must be arranged with District staff to make the original submission available.

As stipulated in 25 Pa. Code § 102.6(c)(2) of DEP's Chapter 102 rules and regulations (regarding complete applications), information requested by this office must be received within sixty (60) calendar days from the date of this letter, or the Montgomery County Conservation District may consider the NOI to be withdrawn by the applicant and no further action will be taken. Fees are not refunded when an NOI is withdrawn.

If you have questions about the information contained in this letter, please contact Jeffrey McKenna by e-mail at JMcKenna@montgomeryconservation.org or by telephone at (610) 489-4506, ext. 16, and refer to PAC460839 – Sisters of St. Basil.

Sincerely,

Jessica Buck

Jessica Buck
District Manager
Montgomery County Conservation District

cc: Jeff Madden, PE; ESE Consultants, Inc.
Abington Township
DEP Permits Section Chief
File

MONTGOMERY COUNTY
BOARD OF COMMISSIONERS

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MONTGOMERY COUNTY
PLANNING COMMISSION

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NORRISTOWN, PA 19404-0311
610-278-3722
FAX: 610-278-3941 • TDD: 610-631-1211
WWW.MONTCOPA.ORG

SCOTT FRANCE, AICP
EXECUTIVE DIRECTOR

May 19, 2023

Mr. Rich Manfredi, Manager
Abington Township
1176 Old York Road
Abington, Pennsylvania 19001-3713

Re: MCPC #23-0064-001
Plan Name: Sisters of St. Basil
150 units on 46.37 acres (3.2 gross dwelling units per acre[1])
Situate: 737 & 801 Huntingdon Pike
Abington Township

Dear Mr. Manfredi:

We have reviewed the above-referenced land development plan in accordance with Section 502 of Act 247, "The Pennsylvania Municipalities Planning Code," as you requested on April 4, 2023. We forward this letter as a report of our review.

BACKGROUND

Toll Mid-Atlantic, L.P. Company, Inc., the applicant, has submitted a preliminary land development plan for 150 townhomes (age-restricted carriage homes) on the site of the former St. Basil's Academy. The site is the current location of a three-story brick building, accessory buildings including sheds and a garage, and a running track and athletic field. The site is located in the CS Community Service and Age-Restricted Overlay zoning districts, and is served by public water and sewer. A conditional use is required for the proposed sanitary sewer to cross Zone 2 of the Riparian Corridor Conservation District; 1,023 square feet of Zone 2 would be disturbed and 271 square feet of Zone 1 would be disturbed. In the conditional use application, the applicant confirmed that mitigation measures and riparian corridor planting would be undertaken, consistent with Section 1508. Riparian Management of the zoning ordinance, by widening the length of the riparian buffer by two feet. The applicant proposes a homeowners' association, the related documents of which would be submitted for review by the township solicitor as part of the final subdivision and land development approval. The applicant submitted a preliminary plan dated March 24, 2023. We previously reviewed the then-proposed Age-Restricted Overlay District in a letter of August 19, 2022 (MCPC #22-0205-001).

[1] The Abington zoning ordinance defines density as "Dwelling units per developable acre" [§201. Definitions]. However, the Age-Restricted Overlay District limits density based on gross site area.

CONSISTENCY WITH COMPREHENSIVE AND OTHER PLANS

The proposed improvements are generally consistent with *MONTCO 2040: A Shared Vision, The Montgomery County Comprehensive Plan*. The comprehensive plan notes that, having an interconnected road network with many choices reduces congestion and provides alternative routes around accidents or other incidents. The plan's future land use map shows the proposed land development being located in the "Suburban Residential" future land use area. The plan recommends that appropriate street trees and central open space should be provided in this area. Although the proposed land development is consistent with *MONTCO 2040* in some ways, it falls short in others (including lack of an interconnected street and pedestrian network with the surrounding area, lack of central open space, and gaps in street tree canopy cover).

The proposed land development is consistent in some ways, but not in others, with the Abington Comprehensive Plan of 2007. The plan is inconsistent in that it shows the development site located in the "Institutional – Schools, Churches" future land use category. However, the plan is consistent in that it recommends, throughout the township, that housing options be improved and that housing be targeted to aging residents that will encourage them to stay in the township.

RECOMMENDATION

The Montgomery County Planning Commission (MCPC) generally supports the applicant's proposal, however, in the course of our review we have identified the following issues that the applicant and township may wish to consider prior to final plan approval. Our comments are as follows:

REVIEW COMMENTS

RELEVANT COMMENTS FROM PREVIOUS REVIEW LETTER (FOR AGE-RESTRICTED CARRIAGE HOME OVERLAY DISTRICT, MCPC #22-0205-001)

A. Buffer Zone – We noted that the wide buffer zone surrounding the development with no landscaping seems like a lost opportunity for a landscaped open space.

B. Landscaping - Backyard Landscaping – We recommended that, where homes back to one another, that landscaping be added in between them to provide more privacy and visual interest (they might also provide passive cooling).

C. Property Line Buffer – We observed that the proposed open space does not seem to comply with the requirements of zoning [§2601.K. Open Space Standards].

D. Stormwater Basin – We noted that the basin along Fox Chase Road will be located in a prominent location and could serve as a prominent visual enhancement for the development, and recommended that all basins be sufficiently naturalized and landscaped.

E. Transportation

    1. Intersection Configuration – We suggested that the design of the proposed street intersections (where intersections would be located along curving roads, such as the intersection of Roads, D, B, and G; and the intersection of Roads A, F, and E) would be less confusing if traffic circles, rather than curves, were used to calm traffic. The applicant agreed to consider this, but design issues remain.

2. Guest Parking – We recommended that guest parking areas be provided in convenient locations.
3. Bus Shelter – Has the applicant communicated with SEPTA about the advisability of constructing a bus shelter and concrete waiting pad at this location? (*SEPTA's Bus Revolution initiative proposes doubling the frequency of bus service in this location*).

NEW COMMENTS (PREPARED FOR THE PLAN DATED MARCH 23, 2023):

APPLICABILITY OF COMMUNITY SERVICE DISTRICT

Since the Age-Restricted Overlay District does not clarify how to interpret the overlay zoning when and where it is in conflict with the underlying zoning district (CS Community Service District), we defer to the solicitor as to how the proposed plan conforms with the CS District requirements for cases where the CS Community Service District conflicts with, and has the stricter requirement than, the Age-Restricted Carriage-Home Overlay District. For example, the Community Service District has the following requirements that are stricter than the Overlay: minimum front yard (75 feet), minimum side yard (50 feet), and minimum sidewalk width on public streets (8 feet). *Note: see also ZONING TEXT Comment A. in our letter of #22-0205-001.*

OPEN SPACE

A. Open Space– The Age-Restricted Carriage Home Overlay District states that "Land preserved for open space purposes shall be in compliance with **Open Space Standards of the SALDO** for the Township Zoning Ordinance." The last part of the sentence is difficult to interpret (i.e., the zoning and SALDO are separate chapters—furthermore, does this mean that it need not comply with the open space standards of zoning?).
    1. A description and contract for the ownership, management and maintenance of open space shall be provided. Restrictive covenants governing the reservation and maintenance of undedicated open space shall be included. [§146-11.M]. The plan notes state that documents pertaining to the homeowners association will provided to the township solicitor for review with the final plan.
    2. If the open space standards of the zoning ordinance [§2601.K] do apply to development under the Age-Restricted Overlay District, the proposed land development does not comply with the requirement for: access (open space shall have safe and convenient pedestrian and maintenance access), visibility - it does not meet the requirement for open space to be visible from dwelling units and roadways, and being contiguous – it shall not consist of more than three non-contiguous areas to be counted towards the minimum required (it consists of at least four separate areas).
    3. Open space is more usable and appealing when there are amenities. In addition to trails and paths, we suggest that—particularly in more central open space areas—the applicant consider providing amenities for future residents, such as benches, picnic tables, or gazebos. If proposed, these shall be shown, per §146-11.C.

B. Trail and Paths
    1. We suggest that the property line buffer be designed to allow for a trail corridor for use by the residents of the age-restricted carriage-home development, so that future residents could access and appreciate land on their own property (and that may also make them more likely to monitor and maintain it).

2. We suggest that the applicant consider adding pathways through open space areas #152, 153, and 154, outside of the utility easements, and through #151, connecting the two cul-de-sacs, provided that safe passage is practical in proximity to the stone stormwater management areas.

C. Open Space Lot 150 – The Area Tabulation states that "open space lot 150 includes carriage lots 1 through 110." Open space lot 150 is not labeled on the plan.

D. Open Space Calculation – Open space "shall be substantially free of structures," as defined in the SALDO, and does not include required yards. Although there are no required yard areas in this overlay district, we suggest that the applicant show on the plans specifically which areas are being counted as open space, and show equivalent yard areas based on minimum separation distance between buildings and minimum distance from the curb; these types of areas are generally not counted towards meeting minimum open space requirements, nor should they be.

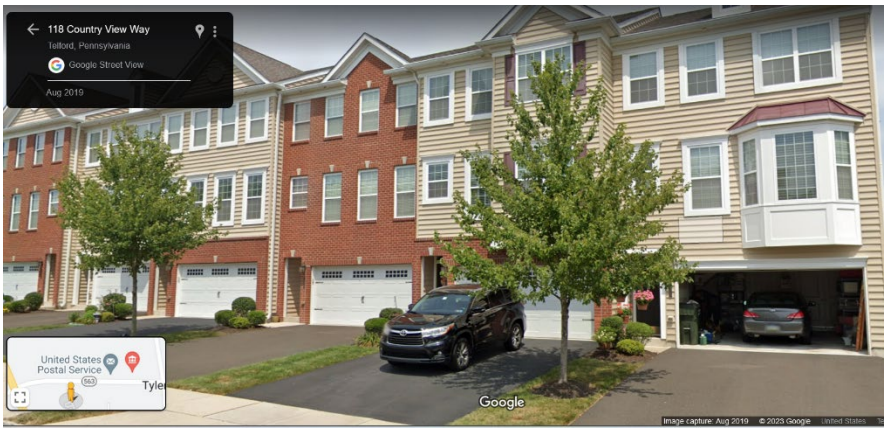
LANDSCAPING

A. Street Trees

1. Gaps. Street trees are required every 40 linear feet, although they do not need be evenly spaced. There are numerous gaps in street tree coverage of 100 linear feet or more. We feel that 100 linear foot spacing does not meet the intent of this section, nor the following sections of the Landscaping chapter's intent section:

   - "Improve the environment for pedestrians along streets, parking lots, and other pedestrian areas to provide cooling, encourage pedestrian activity, and reduce the urban heat island effect."
   - "Aesthetically improve the appearance and character of public and private streets."

2. Trees in Front Homes. We recognize that the siting of the proposed homes' driveways directly in front of the townhomes, in conjunction with the location of utilities, makes it challenging to find a location to plant street trees in front of the homes. However, we suggest that locations for street trees in front of the homes might still be possible to find, particularly if the water lines could be relocated or driveways paired, thus creating larger contiguous green areas in front of the homes. See image above for example of trees planted in front of new townhomes (Location: Country View Way, Tylersport).



3. Species. We do not feel that River Birch is an appropriate street tree.

B. Tree Protection and Replacement

1. Trees to be removed or preserved shall be marked as such on the plans [§2401.A].

2. On existing lots, tree replacement shall occur when new impervious coverage exceeds 500 s.f. and a tree with a minimum caliper of six inches (6") is removed. In such cases, two new trees, each a minimum of 3-to-3.5" caliper, measured 6" above grade, shall be planted for each tree with a minimum caliper of 6" or greater that is removed. Has the applicant calculated the tree replacement requirement? If so, where is it provided? [§2401. Preservation and Protection of Existing Vegetation].

C. Invasive Vegetation – Tree of Heaven is both invasive[2] and a favorite host of the spotted lantern fly. Please remove it from the planting schedule.

D. Property Line Buffer - Each buffer containing a wall or fence or other continuous element shall contain a 5- to 10-foot break at least once every 50 feet, for the purpose of pedestrian access, maintenance access, and/or to avoid creating a monolithic feature. The buffer does not have such breaks. For example, see the continuous buffer proposed behind units #32 through 37.

E. Site Element Screen - The pool shall be screened with a high-intensity site element screen, consistent with the requirement for "outdoor recreation, fields, and play areas, when adjacent to, or within 100' of a residential district or use." The plan states that there is a "proposed screening/landscape wall with security fence." A fence may be used as part of a high-intensity site element screen, as follows: "This shall consist of a 6-foot tall opaque fence surrounding the site element on at least three sides with additional plantings at a minimum rate of three shrubs (24" minimum height at time of planting) and two ornamental trees or large shrubs for each 10 linear feet of proposed fence, arranged formally or informally next to the fence."

F. Foundation Landscaping –Building foundation landscaping shall be provided between (a) the foundations of nonresidential principal buildings' facades and (b) sidewalks, access drives, or parking areas. The clubhouse requires foundation landscaping [§2403.D]. We suggest planting shrubs and perennials around the neighborhood, visible from the street and fronts of homes, to provide more greenery, small stormwater

[2] PA Department of Conservation and Natural Resources' Invasive Plant Fact Sheets: https://www.dcnr.pa.gov/Conservation/WildPlants/InvasivePlants/InvasivePlantFactSheets/Pages/default.aspx

management areas, and variety in plantings. Although the renderings provided by the applicant show clusters of shrubs and perennials around the bases of trees between rows of homes, and along the homes' foundations, they are not included in the landscape plans.



G. Off-Street Parking Areas – The island in the off-street parking area requires a deciduous or ornamental tree, and five percent of the area shall be landscaped [§146-39.B].

ENVIRONMENTAL MANAGEMENT

A. Stone Stormwater Management Area - We recommend that a naturalized area be established around and over the stormwater management structure labeled "Stone BMP 2A."

B. Steep Slopes - The use of conservation easements on steep slopes shall be required to preserve the area in perpetuity. A conservation easement for the slope area required to be preserved shall be delineated on the plan.

TRANSPORTATION

A. Proposed Intersections of Three Streets - Multiple intersections involving the junction of more than two streets shall be avoided [§146-25]. Note: see transportation comment in *Relevant Comments from previous review letter, above.*

B. Crosswalk - There is a crosswalk shown on the Construction Details Plan (p.41). Where will this be painted? (They do not appear on the plans). We recommend that, at a minimum, one of these be painted so as to continue the sidewalk along Fox Chase Road over the entrance to the proposed development (Road A) [§146-29.D]. The SALDO notes that crosswalks may be required where necessary to provide access to buildings of public assembly (adding them at the intersection of Roads A and B, at the Club House and Pool and close to Fox Chase Road seem like appropriate locations).

OTHER PLAN INFORMATION

A. Dimensional Criteria – Building setback lines from the face of the curb/edge of cartway (30 feet) shall be shown [§146-11.C].

B. Architectural Plans – Plans shall (in addition to façade elevations) provide side and rear elevations of buildings, and shall indicate whether a basement is proposed [§146-11.L]

CONCLUSION

We wish to reiterate that MCPC generally supports the applicant's proposal but we believe that our suggested revisions will better achieve the township's planning objectives for residential development.

Please note that the review comments and recommendations contained in this report are advisory to the township and final disposition for the approval of any proposal will be made by the township.

Should the governing body approve a final plat of this proposal, the applicant must present the plan to our office for seal and signature prior to recording with the Recorder of Deeds office. A paper copy bearing the municipal seal and signature of approval must be supplied for our files. Please print the assigned MCPC number (#23-0064-001) on any plans submitted for final recording.

Sincerely,

Mike Narcowich, AICP
Community Planning Assistant Manager II
610.278.5238 - mnarcowi@montcopa.org

c: Toll Mid-Atlantic L.P. Company, Inc., Applicant
Alyson Zarro, Esq.; Riley, Riper, Hollin, & Colagreco; Applicant's Representative
Khaled R. Hassan, P.E., Pennoni, Township Engineer
Michael P. Clarke, Esq., Rudolph Clarke, LLC, Township Solicitor
Andrew Ferry, Acting Director for Service Planning, SEPTA
Bryan Poster, Manager, Rockledge Borough

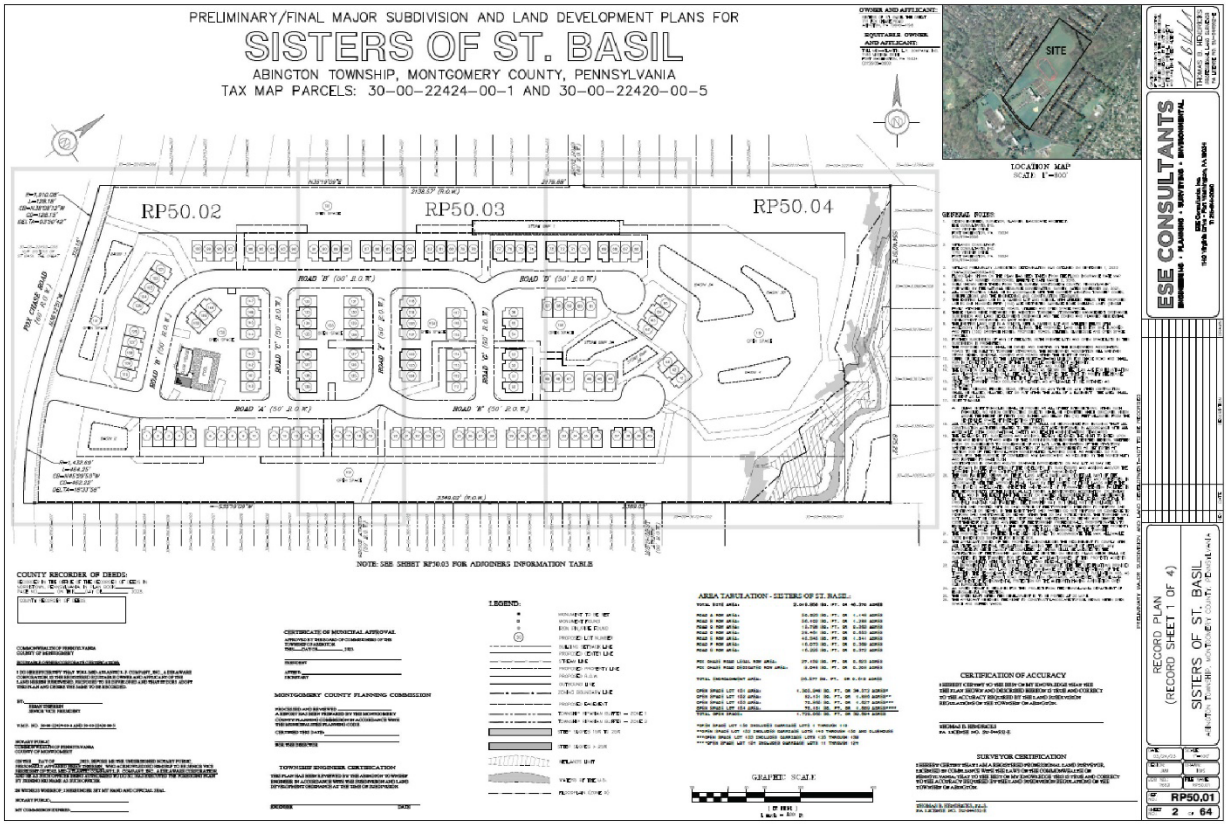
Attachments: APPENDIX 1: Aerial Image, Project Site
APPENDIX 2: Applicant's Plan
APPENDIX 3: MCPC Review Letter #22-0205-001

APPENDIX 1: AERIAL IMAGE, PROJECT SITE



Sisters of St Basil
MCPC#230064001

APPENDIX 2: APPLICANT'S PLAN



MONTGOMERY COUNTY
BOARD OF COMMISSIONERS

KENNETH E. LAWRENCE, JR., CHAIR
JAMILA H. WINDER, VICE CHAIR
JOSEPH C. GALE, COMMISSIONER

MONTGOMERY COUNTY
PLANNING COMMISSION

MONTGOMERY COUNTY COURTHOUSE • PO BOX 311
NORRISTOWN, PA 19404-0311
610-278-3722 • FAX: 610-278-3941
WWW.MONTGOMERYCOUNTYPA.GOV
SCOTT FRANCE, AICP
EXECUTIVE DIRECTOR

November 9, 2023

Mr. Rich Manfredi, Manager
Abington Township
1176 Old York Road
Abington, Pennsylvania 19001-3713

Re: MCPC #23-0064-002
Plan Name: Sisters of St. Basil's
150 units on 46.37 acres
Situate: 711 Fox Chase Road
Abington Township

Dear Mr. Manfredi:

We have reviewed the above-referenced subdivision and land development plan in accordance with Section 502 of Act 247, "The Pennsylvania Municipalities Planning Code," as you requested on October 20, 2023. We forward this letter as a report of our review.

BACKGROUND

Toll Mid-Atlantic L.P. Company, Inc., the applicant, has resubmitted a preliminary land development plan for 150 townhomes (age-restricted carriage homes) on the site of the former St. Basil's Academy. The site is the current location of a three-story brick building, accessory buildings including sheds and a garage, and a running track and athletic field. The site is located in the CS Community Service and Age-Restricted Overlay zoning districts, and is served by public water and sewer. The plan is dated March 24, 2023. We previously reviewed proposals for this site on April 4, 2023 (#23-0064-001), and August 19, 2022 (MCPC #22-0205-001).

CONSISTENCY WITH COMPREHENSIVE AND OTHER PLANS

In our previous letter, we noted how the proposed improvements are generally consistent with *MONTCO 2040: A Shared Vision, The Montgomery County Comprehensive Plan,* but parts of the proposal are not consistent. The county comprehensive plan notes that having an interconnected road network with many choices reduces congestion and provides alternative routes around accidents or other incidents. The plan's future land use map shows the proposed land development being located in the "Suburban Residential" future land use area. The plan says that appropriate central open space should be provided in this area.

The proposed land development is consistent in some ways, but not in others, with the Abington Comprehensive Plan of 2007. That plan shows the development site located in the "Institutional – Schools, Churches" future land use category. However, the plan is consistent in that it recommends, throughout the township, that housing

options be improved and that housing be targeted to aging residents that will encourage them to stay in the township.

RECOMMENDATION

The Montgomery County Planning Commission (MCPC) generally supports the applicant's proposal, however, in the course of our review we have identified the following issues that the applicant and township may wish to consider prior to final plan approval. Our comments are as follows:

REVIEW COMMENTS

For key issues remaining that we identified in past review letters, please refer to those letters (attached).

CONCLUSION

We wish to reiterate that MCPC generally supports the applicant's proposal but we believe that our suggested revisions will better achieve the township's planning objectives for residential development.

Please note that the review comments and recommendations contained in this report are advisory to the township and final disposition for the approval of any proposal will be made by the township.

Should the governing body approve a final plat of this proposal, the applicant must present the plan to our office for seal and signature prior to recording with the Recorder of Deeds office. A paper copy bearing the municipal seal and signature of approval must be supplied for our files. Please print the assigned MCPC number (#23-0064-002) on any plans submitted for final recording.

Sincerely,

Mike Narcowich, AICP
Community Planning Assistant Manager II
610.278.5238 - mnarcowi@montcopa.org

c: Toll Mid-Atlantic L.P. Company, Inc., Applicant
Alyson Zarro, Esq.; Riley, Riper, Hollin, & Colagreco; Applicant's Representative
Khaled R. Hassan, P.E., Pennoni, Township Engineer
Michael P. Clarke, Esq., Rudolph Clarke, LLC, Township Solicitor

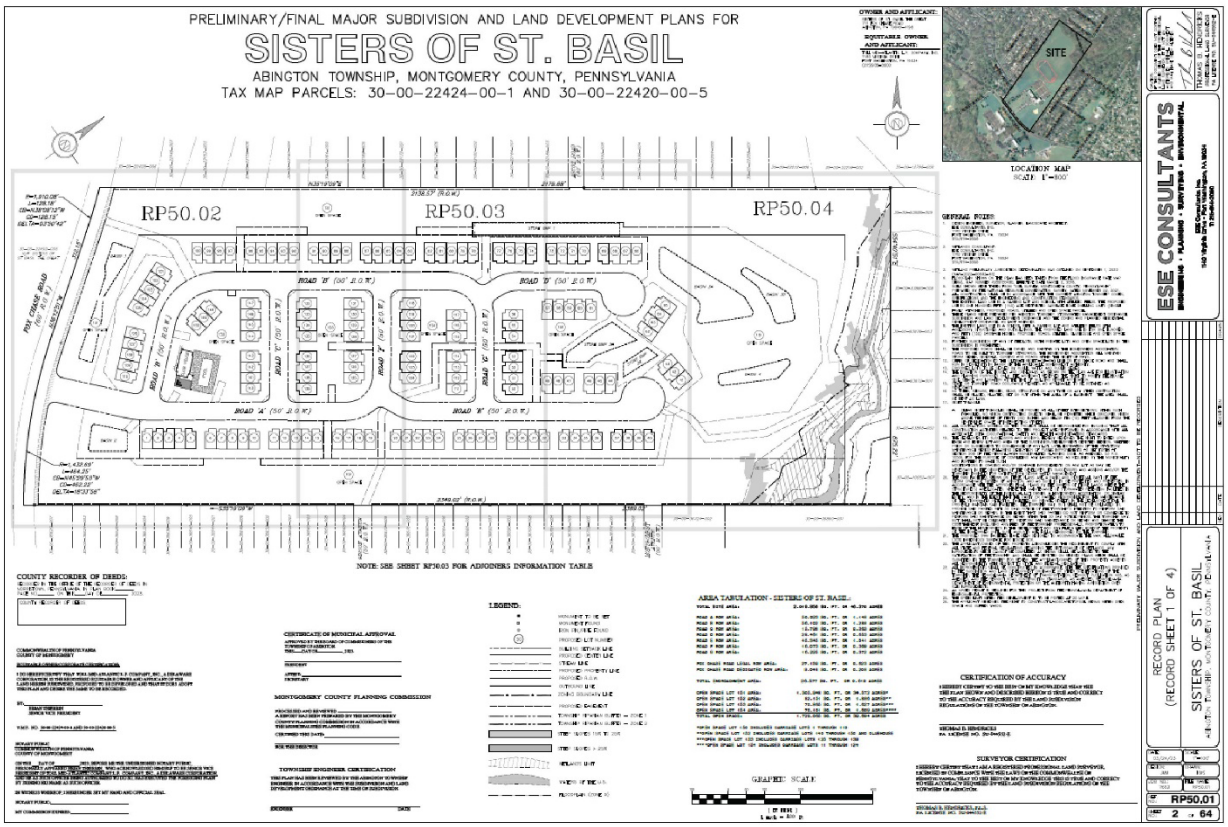
Attachments: APPENDIX 1: Aerial Image, Project Site
APPENDIX 2: Applicant's Plan
APPENDIX 3: MCPC Review Letter #23-0064-001 (May 19, 2023)

APPENDIX 1: AERIAL IMAGE, PROJECT SITE



Sisters of St Basil
MCPC#230064001

APPENDIX 2: APPLICANT'S PLAN



3100 Horizon Drive
Suite 200
King of Prussia, PA 19406
T: 610-277-2402
F: 610-277-7449

www.pennoni.com

May 16, 2023

ABINT130030

Mr. Richard Manfredi, Township Manager
Abington Township
1176 Old York Road
Abington, PA 19001

RE: LD-23-01-711 Fox Chase Road (St. Basil)
PARID: 30-00-22424-00-1/ TMID: 30059 025
PARID: 30-00-22424-00-5/ TMID: 30059 026
Preliminary Major Land Development Plans Review (1st Submission)

Dear Mr. Manfredi:

We have received a copy of the "Preliminary/Final Major Land Development Plans" consisting of sixty-four (64) sheets dated March 24, 2023, and received on March 30, 2023, as well as a copy of the Erosion and Sediment Control Plans consisting of fifteen (15) sheets; as prepared by ESE Consultants, Inc., located at 1140 Virginia Drive, in Fort Washington, PA for the above referenced project on behalf of the property owner, Sisters of St. Basil the Great, and the equitable owner, Toll Mid-Atlantic, L.P Company, Inc. (the Applicant).

Under this Preliminary Land Development application, the Applicant is proposing to demolish the existing structures of the former St. Basil Academy School site; and construct a total of 150 age-restricted carriage homes as well as a clubhouse and pool on an existing parcel of land located within the newly created AR – Age Restricted Carriage Home Overlay District. The entire site consists of approx. 46.37 acres and is located within the CS – Community Service Zoning District. Other site improvements for this site include parking, curbing, sidewalk, landscaping, lighting, and sanitary and stormwater management facilities. Access to/from the site will be by way of one (1) proposed entrance off Fox Chase Road. In addition, an emergency access road is proposed off of Fox Chase Road on the northwestern corner of the site.

This project is located within the CS – Community Service Zoning District with the newly created AR – Age Restricted Carriage Home Overlay District being an overlay for the underlying district. The site is fronted by Fox Chase Road to the southwest; residential properties zoned in the R1 – Low Medium Density Residential Zoning District to the north or northeast; residential properties zoned in the R3 – Medium Density Residential Zoning District, as well as the RC – Recreation/Conservation Zoning District, to the southeast; and residential properties zoned in the R4 – High Density Residential Zoning District to the south. In addition, a tributary of the Pennypack Creek traverses from north to south within the eastern corner of the track.

In accordance with the FEMA, Flood Insurance Rate Map (FIRM) Panel No. 42091C0403G, effective March 2, 2016, the tract is identified to be primarily located within Zone X, an area outside the 0.2% chance flood and minimal flood hazard. However, the area where the Pennypack Creek tributary traverses the site is located within Flood Zone X, an area of 0.2% annual chance flood hazard, areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile. Therefore, based on the FEMA FIRM determination, this site is not located within the Floodplain Conservation District, and is therefore not subject to the floodplain regulations of the Floodplain Conservation District. However, per the Abington

Township Riparian Corridor Analysis Map, Figure 15.2, this parcel is identified as a parcel which is located within and intersecting the Riparian Corridor; and is therefore, subject to the regulations of the Riparian Corridor Conservation District.

CONDITIONAL USE REQUESTED

The Applicant is requesting the following conditional use approval from the Abington Township Zoning Code:

1. **§1503.B.2.b - Used Permitted by Conditional Use, Zone 2 –** A conditional use approval to allow for the installation of a central sewer line in Zone 2 of the Riparian Corridor Conservation District.
   The Applicant is proposing a new central sewer to cross Zone 2 of the Riparian Corridor Conservation District which requires conditional use approval from the Abington Township Board of Commissioners.

WAIVERS REQUESTED

The Applicant is requesting the following waivers from the Abington Township Subdivision and Land Development Code:

1. **§146-11.A.(4) – Property Identification Plans –** A waiver to not show all the information of the TMP, names of owners, the approx. acreage, and similar features within 400 feet.
   The Applicant has provided the property identification information for the immediately surrounding parcels abutting the site, and not the entire 400 feet distance per this Code Section.

2. **§146-11.B.(3) – Existing Features Plan –** A waiver is requested to not show the all the information of the location of property lines and names of owners, and similar features within 400 feet.
   The Applicant has provided the property lines and landowner information for the immediately surrounding parcels abutting the site and not the entire 400 feet distance per this Code Section.

3. **§146-11.B.(7) – Existing Features Plan – A** waiver is requested to not show the all the information of the underground and above ground utilities, and similar features within 400 feet.
   The Applicant has provided the utility information immediately surrounding the parcel and not the entire 400 feet distance per this Code Section.

4. **§146-27.C – Sidewalks and Curbs – Location -** A waiver is requested for the sidewalk along Fox Chase Road. The existing locations of the sidewalk along portions of the road are within a few feet of the curb and roadway. The existing location will be repaired/ replaced with a new sidewalk and extended along the entire frontage. The area between the sidewalk and the right-of-way (roughly 12'+) will be used for street tree plantings.
   The Applicant is proposing to retain some portions the existing curb and sidewalk and make repairs or replacements as needed along the site frontage on Fox Chase Road. The Applicant is proposing new 5 feet wide sidewalk primarily along the center portion of the site frontage which will be located approximately 24 feet to 27 feet from the property line along Fox Chase Road. In addition, the Applicant is proposing to plant street trees between the edge of roadway and proposed new sidewalk.

5. **§146-27.F – Sidewalks and Curbs** – A waiver is requested for the curbing on the interior roads to be constructed with 6" Belgian Block. The internal roadways will be privately maintained. This variation will help with the subdivision aesthetics and maintenance.

The Applicant is proposing 6-inch high Belgian Blocks along the interior roadways. The Township standard curb type is 6-inch high cement concrete curb. The Applicant has requested a waiver from this Code Section to provide 6-inch high Belgian Blocks instead of the Township cement concrete curb standard since the internal roadways will be privately maintained and for aesthetics complementary to the land development.

6. **§146-29.A – Blocks – Length** - A waiver is requested to allow for the internal roads C, D, F, and G to have less than the 500' minimum length. All roads orientation and lengths have been affected by the layout and the extended buffer around the property.
The internal Road C has an approximate length of 360 feet between intersections; Road D has an approximate length of 470 feet between intersections; Road F has an approximate length of 410 feet between intersections; and Road G has an approximate length of 320 feet between intersections, all of which do not meet the minimum 500 feet length requirement per this Code Section.

7. **Per §146.33.I – Drainage** – A waiver is requested to not extend roof leaders to road gutter under sidewalk or connect to storm drains, but to instead allow roof drains to flow over lawn to allow pollutants to settle out and infiltrate into the topsoil. This section of the SALDO is also in conflict with 142-802.A of the Stormwater Management Ordinance.
The Applicant shall show the roof drains and sump pumps (if any) for the proposed clubhouse building, as well as, for each of the proposed townhome dwellings on the plans. Stormwater Ordinance §142-802.A requires roof drains not to be connected to streets, sanitary or storm sewers, or roadside ditches, and shall discharge to infiltration areas or vegetative BMPs to the maximum extent practicable. The Applicant has requested a waiver from this Code Section to allow for roof drains to flow over the lawn areas and infiltration instead of extending under the sidewalk to the gutter.

8. **§146.5.C.(2) – Design and construction of sewers - Size, grade and type** - A waiver is requested to modify the material of the sanitary sewer main to SDR-26 (plastic pipe) from ductile iron. The supply of the SDR-26 is more readily available.
The Applicant is proposing 8-inch SDR-26 piping for the proposed sanitary sewer system to the site instead of ductile iron pipe per this Code Section. We defer to the Abington Township Wastewater Utilities department for any sewer related comments.

The following documents have been reviewed:

Title	Sheet	Dated	Revised
Land Development Plans			
Cover Sheet	1 of 64	03/24/23	-----
Record Plans	2-5 of 64	03/24/23	-----
General Notes	6 of 64	03/24/23	-----
Existing Features Plans	7-10 of 64	03/24/23	-----
Overall Site Plan	11 of 64	03/24/23	-----
Grading Plans	12-19 of 64	03/24/23	-----
Utility Plans	20-27 of 64	03/24/23	-----
Road Plan & Profile	28-34 of 64	03/24/23	-----
Easement Profiles	35-39 of 64	03/24/23	-----
Construction Details	40-41 of 64	03/24/23	-----
Storm Sewer Details	42-43 of 64	03/24/23	-----

Sanitary Sewer Details	44-45 of 64	03/24/23	-----
Water Details	46 of 64	03/24/23	-----
Basin Details	47-55 of 64	03/24/23	-----
Landscape & Lighting Plans	56-63 of 64	03/24/23	-----
Landscape & Lighting Details & Notes	64 of 64	03/24/23	-----
Erosion and Sediment Control Plans			
Cover Sheet	1 of 15	03/24/23	-----
Erosion and Sediment Control Plan	2-9 of 15	03/24/23	-----
Erosion and Sediment Control Details	10-13 of 15	03/24/23	-----
Erosion and Sediment Control Notes	14-15 of 15	03/24/23	-----
Stormwater Management Narrative	660 pages	03/2023	-----

We have performed a review of the above referenced plans for compliance with the Zoning Ordinance (Chapter 162); Subdivision and Land Development Ordinance (Chapter 146); and Stormwater Management Ordinance (Chapter 142). We offer the following comments for your consideration:

ZONING COMMENTS

1. **Per §1503.B.2.b – Used Permitted by Conditional Use, Zone 2 –** Corridor crossings by centralized sewer and water lines and/or public utility transmission lines, provided that any disturbance is offset by corridor mitigation measures as outlined in §1508, Riparian Management of this chapter, and provided underground utility and pipe crossings are located at least 3 feet below stream invert.
The eastern portion of this site is located within the Riparian Corridor Conservation District Zone 2. Based on the utility plans, the Applicant is proposing new sanitary lines to be located within Zone 2 of the Riparian Corridor which is only permitted by conditional use. As part of this Land Development application, the Applicant has included a completed conditional use application seeking approval from this Code Section to allow for the sanitary sewer crossing within Zone 2 of the Riparian Corridor Conservation District.

2. **Per §1710.A – Use Regulations –** Based on the Abington Township comprehensive Use Matrix, Use H-12 – Age-Restricted Carriage Home Dwelling Unit (Single-Family attached) was created as part of Ordinance No. 2199 which permits Use H-12 within the AR – Age Restricted Carriage Home Overlay Zoning District.
Based on Ordinance No. 2199 as adopted on November 10, 2022, the subject property is located within the AR – Age Restricted Carriage Home Overlay Zoning District; therefore, a Use H-12 is permitted within this overlay zoning district.

3. **Per §1710.B – Use Regulations –** Based on the Abington Township comprehensive Use Matrix, Use A-6 Clubhouse, Use A-18 – Outdoor Recreation, Uses Accessory to, Use A-24 Swimming Pool, and Use A-25 Tennis/Sports Court are all permitted within the AR Overlay Zoning District.
The Applicant is proposing a clubhouse, pool, and outdoor recreation areas as part of this land development which are permitted within the AR – Age Restricted Carriage Home Overlay Zoning District.

4. **Per §1711, Figure 17.2 – Dimensional Regulations –** The minimum lot area shall be 40 acres gross.
Based on the plans, the total tract area is 46.37 acres which is in compliance with this Code Section.

5. **Per §1711, Figure 17.2 – Dimensional Regulations –** The minimum front yard setback shall be 30 feet dwelling setback from the face of the curb and/or edge of cartway.

Based on our measurements, it appears that the Applicant will comply with the required dwelling setback dimensions; however, dimensions for the building setbacks shall be provided on the plans to ensure compliance with this Code Section.

6. **Per §1711, Figure 17.2 – Dimensional Regulations –** The maximum building coverage shall be 25%.
The Applicant has provided a building coverage percentage of 19.8% which is in compliance with this Code Section. The Applicant shall provide a building coverage calculation on the plans showing the total building areas and the resulting percentages to ensure compliance with this Code Section.

7. **Per §1711, Figure 17.2 – Dimensional Regulations –** The maximum impervious coverage shall be 50% and the minimum green area shall be 50%.
The Applicant has provided a building coverage percentage of 34.3% which is in compliance with this Code Section. The Applicant shall provide an impervious coverage calculation on the plans showing the total impervious areas and the resulting percentages to ensure compliance with this Code Section.

8. **Per §1711, Figure 17.2 – Dimensional Regulations –** The minimum open space shall be the gross site area (in acres) x 0.40.
The Applicant has provided a building coverage percentage of 34.3% which is in compliance with this Code Section. The Applicant shall provide an open space calculation on the plans showing the total open space and the resulting percentages to ensure compliance with this Code Section.

9. **Per §1711, Figure 17.2 – Dimensional Regulations –** The maximum density shall be the gross site area (in acres) x 3.4.
The Applicant is proposing 150 dwellings on 46.37 acres of land which results in a density of 3.23 DU/Ac. which is less than the maximum allowable of 3.4 DU/Ac.; however, per §201 – Definitions – density is defined as the dwelling units per developable acre. The definition of developable acre is land remaining at a development site after excluding existing easements; rights-of-ways; areas consisting of floodplain and wetlands which are protected from development by federal, state, or local land regulations; and steep slope areas (including those steep slope areas for which a grant of special exception has been denied by the Township Zoning Hearing Board). The Applicant shall provide a developable acreage calculation on the plan and also provide a density calculation based on the developable acreage to ensure compliance with this Code Section.

10. **Per §1711, Figure 17.2 – Dimensional Regulations –** The maximum building height shall be 35 feet.
The Applicant is indicating that the building heights will be less than 30 feet. The Applicant has provided architectural renderings; however, no dimensions were shown on the renderings. The Applicant shall provide architectural drawings or update the renderings to include the building height dimensions for the proposed dwellings and clubhouse to ensure the buildings are no more than 35 feet in height.

11. **Per §1712.B – Special Development Regulations –** Along any boundary line of the tract adjoining an existing residential use, a 125-foot-wide green area shall be provided. In addition, a screening buffer conforming to §2403.B.4 Buffer specifications, Medium Intensity Buffer Option A, with a depth of not less than 40 feet, shall be situated within the green area, the final location if which shall be determined during land development.
The Applicant is proposing a 125-foot-wide green area which includes a 40-foot-wide medium intensity buffer area, and is therefore in compliance with the above Code Section.

12. **Per §2103.H Use H-13.1 – Age-Restricted Carriage Home Dwelling Unit (Single-Family Attached) –** Age Restricted carriage homes may be one or two-level dwelling units above grade, provided that they do not exceed the district height limitation and may have a third level serving as a basement.
The Applicant shall provide architectural drawings or updated renderings of the dwellings to show total number of stories for the buildings, as well as the building heights to ensure compliance with this Code Section.

13. **Per §2103.H Use H-13.2 – Age-Restricted Carriage Home Dwelling Unit (Single-Family Attached) –** All age-restricted carriage home dwelling units must connect to public water and sewer.
On the Utility Plans, there are some locations where the water lines are not shown connecting to the dwellings within the development. The Applicant shall confirm the connections and revise accordingly.

14. **Per Article XXII – Signs –** Any monument/landmark signage proposed as part of the land development shall be shown on the plan. The Applicant shall be responsible for obtaining the required sign permits.

15. **Per §2304.H Use H-13 – Age-Restricted Carriage Home Dwelling Unit (Single-Family Attached) –** 2 parking spaces exclusive of garage space, plus one-quarter (1/4) parking space per dwelling unit for visitor and overflow parking shall be provided. The visitor and overflow parking may be provided in designated on-street parking spaces; parking spaces may be reduced to 9' x 18'; and single car garages may not be utilized as required parking spaces, unless a basement is provided.
The Applicant is proposing 150 dwelling units which requires the following parking spaces.
    - **150 Units x 2 spaces per unit = 300 parking spaces**
    - **150 Units x (1/4) spaces per unit = 37.5 = 38 parking spaces**

    In total, the Applicant is required to provide 338 parking spaces for the dwelling units. Based on the plan provided, the Applicant is proposing 359 parking spaces on site consisting of 300 parking spaces in the driveways of the dwelling units and 59 parking spaces on Roads A, B, D, and E as well as in front of the clubhouse area. The Applicant shall clarify if any basements will be provided for the proposed dwelling units to confirm the total number of parking spaces being provided on the site. The Applicant shall update the parking calculation on the Record Plan (Sheet 3) to reflect the correct number of parking spaces required and proposed.

16. **Per §2307.A – Parking for Individuals with Disabilities –** Accessible parking spaces shall be provided for any place of public accommodation or any commercial facility, pursuant to the Americans with Disabilities Act of 1990, as amended ans shall be designed in accordance with the Rules and Regulations of said Act, as amended.
The Applicant is not required to provide ADA accessible parking for the private on-lot parking spaces within the driveway areas of the individual dwellings; however, the Applicant shall provide ADA accessible parking located in front of the proposed clubhouse area for the additional overflow parking requirements. Based on the overflow parking requirements, the Applicant is proposing 59 parking spaces which requires a minimum of three (3) accessible parking spaces to be provided, of which one of the accessible parking spaces shall be van accessible in accordance with ADA guidelines.

17. **Per §2310.A – Parking Lot and Frontage Development Standards –** The minimum width of drives and parking aisles shall be 24 feet for two-way travel and 12 feet for one-way travel.
Based on the plans, in the areas where the Applicant is proposing on-street parking, the drive aisle width for the two-way road around the on-street parking is only 20 feet wide which is less than the required 24 feet wide. The Applicant shall revise the parking and drive layout to ensure a minimum of 24 feet for two-way travel is provided.

18. **Per §2401.A.2.d.(1).(a) – Preservation and Protection of Existing Vegetation –** Tree replacement shall occur when new impervious coverage exceeds 500 SF and a tree with a minimum caliper of six (6) inches is removed. In such cases, two new trees, each a minimum of 3-to-3.5" caliper, measured 6" above grade, shall be planted for each tree with a minimum caliper of 6" or greater that is removed.
Based on the Existing Features Plan (Sheet 7), the Applicant is indicating that they are removing 67 trees as part of this Land Development project. The trees shall be labeled with a diameter of the tree to be removed to confirm the required tree replacement. A tree replacement calculation shall be provided on the landscaping plan showing the total number of trees removed and the total number of trees proposed based on this code requirement. In addition, the Applicant shall label the trees that are proposed to remain. For example, on the Existing Features Plan (Sheet 7), the existing trees that are not labeled which are located between the trees labeled 44 and 45 and 48 and 49 as not proposed to be removed; however, on the Utility Plan (Sheet 24) there is storm piping proposed directly underneath those trees which will require those trees to be removed. The Applicant shall clarify and confirm all trees to remain or to be removed and update the label on the Existing Features plan accordingly.

19. **Per §2401.A.2.d.(1).(c) – Preservation and Protection of Existing Vegetation –** Each mature tree with a 10-inch caliper or greater on the site shall be designated either "TO REMAIN" or "TO BE REMOVED".
The Applicant shall label all trees with a ten (10) in caliper or greater as "TO REMAIN" or "TO BE REMOVED".

20. **Per §2401.A.2.d.(2) – Preservation and Protection of Existing Vegetation –** Existing vegetation designated "TO REMAIN," in accordance with the landscaping plan of a subdivision or land development shall be identified in the field prior to any clearing and shall be physically protected throughout the construction process. A temporary tree protection zone, constructed according to the standards expressed below, shall be erected a minimum of one foot outside the drip line on all sides of individual trees or tree masses prior to major clearing or construction. The barrier shall be placed to prevent disturbance to or compaction of soil inside the barrier and shall remain until construction is complete. The barrier shall be shown on the landscape plan.
On the E&S plans, there is a callout for tree protection fencing in the legend; however, it is unclear where the tree protection fencing is provided on the plans to protect the existing vegetation shown to remain on the site. The Applicant shall clarify and update the plans accordingly to distinguish the tree protection fencing.

21. **Per §2402.A.2.a.(4) – Planting Islands** – Each planting island shall contain one shade tree plus shrubs and/or groundcover to cover the entire area at maturity. Parking lot trees shall be a minimum of three inches in caliper, branching at 6 feet to 8 feet in height and of the recommended species as listed in the 'Recommended Plant Materials' List in the SALDO. Parking lot islands shall be planted in lawn or ground cover only.
The Applicant is proposing a planting island in front of the proposed clubhouse building with no shade tree proposed in this planting island. A shade tree shall be required based on the requirement of the above Code Section.

22. **Per §2402.A.2.a.(5) – Planting Islands –** Shade trees located within any parking island which is less than 300 SF measured from outside curb to outside curb will require permanently installed irrigation.
The planting island in front of the proposed clubhouse building at 200 SF is less than 300 SF. The Applicant will need to revise the size of the planting island or be required to provide the required irrigation system per this Code Section.

23. **Per §2402.B.2.c – Street Trees –** Trees shall be planted at a ratio of at least one tree per 40 LF of frontage or fraction thereof. Trees shall be distributed along the entire frontage of the property, although they

need not be evenly spaced.
Based on our measurements, there is approximately 9,195 LF of frontage which will require 9,195/40 = 230 street trees. The Applicant is indicating that there is 8,845 LF of frontage and which will require 222 street trees. The Applicant shall update the street tree calculation and provide the additional required street trees.

24. **Per §2601.H.4 – Lighting Standards** - Lighting standards in parking areas shall not be located farther than 200' apart and may not be taller than 18' in height. No pedestrian lighting standard may exceed 14' in height.
The Applicant has provided street lighting with the Landscape and Lighting Details Plan, however, the mounting heights for the proposed street lighting along the proposed internal roadways and the iso-foot-candles for these lights have not been provided on the plans. The Applicant shall confirm the mounting heights of the lights and revise the plans to show the mounting heights and the iso-foot-candles for the proposed lights.

CHAPTER 146
SUBDIVISION & LAND DEVELOPMENT COMMENTS

25. **Per §146-9.A.(1) – Type of Application, Stages –** A preliminary plan is a first-stage plan in a two-stage approval process. The preliminary plan is required for all subdivision, land development or combination subdivision and land development plans within the township, wherein public improvements are proposed.
The Applicant has entitled the Land Development Plans as Preliminary/Final Major Subdivision and LD plan, whereas, on the application the LD plans submission is for Preliminary Plan only. The Applicant shall confirm the plans submission stage as either a preliminary plan submission or a preliminary/final plan submission. If the Applicant is proposing a preliminary/final plan submission, a waiver will be required from this Code Section to allow for a one-stage preliminary/final plan submission.

26. **Per §146-10.B.(5) – General Requirements –** Once the Applicant confirms the submission type, the submission type in accordance with §146-9.D shall be indicated on all the plan sheets as either "Preliminary Major Subdivision and Land Development" or "Preliminary/Final Major Subdivision and Land Development" and noted as land development application number "LD-23-01".

27. **Per §146-11.A.(2) – Property Identification Plans –** The property identification plans shall contain a location map the site to be subdivided or developed, at a scale of not less than 800 feet to the inch, showing the relation of the site to adjoining property and to all public and private streets and municipal boundaries existing within 1,000 feet of any part of the property.
The location maps on the Cover Sheet (Sheet 1) show the zoning district boundary lines; however, the maps are only showing public and private streets and zoning boundaries within approximately 600 feet of the property. The maps shall be revised to show public and private streets and zoning boundaries within 1,000 feet of the property.

28. **Per §146-11.A.(4) – Property Identification Plans –** The property identification plans shall contain tract boundaries with tax parcel numbers, owner's names, and approximate acreage of lots surrounding any portion of the site for a distance of 400 feet.
The Applicant has provided the property identification information for the immediately surrounding parcels abutting the site, and not the entire 400 feet distance per this Code Section. The Applicant has requested a waiver from this Code Section to not provide the property identification information for properties located within a 400 feet distance.

29. **Per §146-11.A.(7) – Property Identification Plans –** The property identification plans shall provide an indication that the elevations are based upon sanitary sewer datum of the Township of Abington.
The Applicant has noted on the Existing Features Plan (Sheet 7) that the vertical datum on the plans is based on NAVD88. However, there is no note regarding the Abington Township Sanitary Sewer Datum. The Applicant shall provide a reference for the Township Sanitary Sewer Datum on the plans.

30. **Per §146-11.A.(8) – Property Identification Plans** – The property identification plans shall contain the existing cartways of streets and on adjoining the site, with existing and ultimate rights-of-ways and legislative and traffic route numbers.
The existing cartway widths and right-of-way lines for Fox Chase Road shall be provided on the plans.

31. **Per §146-11.B.(2) – Existing Features Plan –** The existing features plan shall contain the location, names, and widths of all streets, whether including right-of-way, cartway, or center lines.
The Applicant shall label the cartway width for Fox Chase Road.

32. **Per §146-11.B.(3) – Existing Features Plan –** The existing features plan shall contain the location of property lines and names of landowners within 400 feet of any part of the site to be subdivided or developed.
The Applicant has provided the property lines and landowner information for the immediately surrounding parcels abutting the site, and not the entire 400 feet distance per this Code Section. The Applicant has requested a waiver from this Code Section to not provide the property information for properties located within a 400 feet distance.

33. **Per §146-11.B.(7) – Existing Features Plan –** The existing features plan shall contain the location, size, and ownership of all underground and above ground public or private utilities, on the site ad within 400 feet of any portion of the site, including waterlines, sanitary sewer lines, storm sewer lines, electric lines, telephone lines, gas mains, fire hydrants, and streetlights.
The Applicant has provided the utility information immediately surrounding the parcel, and not the entire 400 feet distance per this Code Section. The Applicant has requested a waiver from this Code Section to not show the all the information of the underground and above ground utilities, and similar features within 400 feet.

34. **Per §146-11.B.(8).(d).[1] & [2] – Existing Features Plan –** The existing features plan shall contain the steep slope delineation by shading and notation of all areas of 15% to 25% or greater than 25%.
On the Existing Features Plan (Sheet 7) there are additional areas to the east of the existing parking lot that are greater than 15% slope. In addition, there are areas located to the north of the lot located within the riparian area that also has a slope of 15% or greater. These areas shall be shaded accordingly on the plans.

35. **Per §146-11.D.(7) – Grading Plans –** The grading plans shall show the delineation of the limits of work areas and the portions to remain undisturbed.
An overall site grading plan shall be provided which shows the total limit of disturbance area and delineates the limit of disturbance area. Since the disturbance will be greater than one (1) acre of disturbance, a NPDES Permit will be required.

36. **Per §146-11.F.(1).(a) – Stormwater Management Plan –** Stormwater Management Plans shall contain mapping of the watershed areas in which the site is located.
In the PCSM Report submitted, there is a section for Drainage Area Plans; however, the plans are not provided in the report. The pre-disturbance and post-disturbance drainage area plans shall be provided.

37. **Per §146-11.F.(4).(b).[5] – Storm Sewer Profiles –** The storm sewer profiles shall show the type and size of pipe, manholes, and inlets.
On the storm pipe profiles on the Plan & Profile Plans (Sheets 28-34), the size of the inlets and manholes were not shown. This information shall be shown on the profiles per this code requirement.

38. **Per §146-11.G.(1).(d) – Utility Plan –** The utility plan shall show fire hydrants, fire lanes, and fire department connections.
The utility plans shall clearly show the locations of existing fire hydrants, and the symbol and description for the fire hydrants shall be provided in the legend. The Applicant shall ensure there is a working hydrant located within 500 feet of all the dwellings under construction per §146-41.B.(4)(d).

39. **Per §146-11.G.(1).(e),(f),&(h) – Utility Plan –** The utility plan shall show the electrical lines, junctions, vaults, telephone lines, cable television lines and other related appurtenances.
The Applicant is showing the underground utilities running along the roadways within the development; however, the electrical, telephone, cable, etc. lines are not shown connecting to the proposed dwellings. The Applicant shall provide these connections on the Utility Plans. The Applicant shall also show the electrical lines connecting to the proposed streetlights.

40. **Per §146-11.L.(1).(a) thru (h) – Architectural Plans –** Architectural plans shall be submitted for review and approval which provide the requirements as indicated in the above Code Sections.

41. **Per §146-11.M.(1).(1) – Documentation, agreements, certifications, covenants, restrictions and permits –** A letter certifying the availability of public sewer facilities from the appropriate utility shall be provided.
The Applicant is indicating that public sewer will be provided by the Abington Sanitary Sewer Authority. A letter of sewer availability shall be provided from the Abington Sanitary Sewer Authority.

42. **Per §146-12.E – Recording notations –** The plans shall provide the recording notations as indicated in this Code Section on the Record Plan Sheet 1 of 4 (Sheet 2 of 64 of the plans set).

43. **Per §146-24.D.(2) – Islands and Medial Strips** – Islands and medial strips may be permitted in streets immediately adjacent to and in commercial zones.
The Applicant is proposing a medial strip at the site entrance on proposed Road A. The property is zoned within the proposed CS – Community Service Zoning District with the newly created AR – Age Restricted Carriage Home Overlay District being an overlay for the underlying district and is not adjacent to commercial zones; therefore, the medial strip is not permitted on proposed Road A. The Layout shall be revised to not provide the medial strip.

44. **Per §146-24.E.(1) – Alignments –** A minimum sight distance of 300 feet for secondary streets and 200 feet for residential streets, measured at the centerline and at driver's eye height of four feet, shall be provided.
The sight distances shall be provided at the intersections within the development to ensure the required sight distances are being met.

45. **Per §146-24.E.(1).(a) – Alignments, Horizontal Curves -** Horizontal curves shall have a minimum radius on the center line of 200 feet on secondary streets and 100 feet on residential streets. A long radius curve shall be used rather than a series of curves connected by short tangents. Reverse curves shall be separated by tangents of not less than 50 feet. Minimum-radius curves at the end of long tangents will not be approved. Super elevation and additional width may be used for curves of less than six-hundred-foot radii on secondary streets and of less than three-hundred-foot radii on residential streets.
Based on the horizontal curve table proposed on the Record Plan sheet 2 of 4, there are multiple curves that do not meet the minimum 100 feet radius for the residential streets (e.g., C15-C18, C43-C44, C50

and C60). The Applicant shall revise the horizontal curves to comply with this Code Provision, or be required to obtain a waiver from this Code Section to permit the reduced minimum horizontal curves as shown on the plans.

46. **Per §146-24.F – Street Names and Signs –** Names for all new streets must be approved by the Township. No street name which will duplicate or be confused with the name of an existing street will be approved. Existing street names shall be projected wherever possible. Signposts and nameplates shall be placed at street intersections by the Township at the expense of the subdivided/land developer.
The proposed street names shall be approved by the Township and labeled on the plans accordingly once approved.

47. **Per §146-25.D – Intersections, Curb -** Wherever practicable, curblines shall be rounded by a tangential arc, the minimum radius of which shall be 20 feet. The curbline radius shall be concentric with that of the right-of-way line, except at the intersections of streets having different widths between curblines and right-of-way lines.
The curb radius at the intersection of the site entrance and Fox Chase Road shall be shown on the plans to ensure the required curb radius is provided.

48. **Per §146-27.A – Sidewalks and Curbs -** Sidewalks shall be provided along all streets except where, in the opinion of the Board of Commissioners, they are unnecessary for the public safety and convenience.
The Applicant is proposing to tie into the existing sidewalk along Fox Chase Road. The Applicant is also proposing new 5 feet wide sidewalk primarily along the center portion of the site frontage which will be located approximately 24 feet to 27 feet from the property line along Fox Chase Road.

49. **Per §146-27.C – Sidewalks and Curbs – Location -** Sidewalks shall be located between the curb and right-of-way line, six inches from the property line.
The Applicant is proposing to retain portions of the existing curb and sidewalk and make repairs or replacements as needed along the site frontage on Fox Chase Road. The Applicant is proposing new 5 feet wide sidewalk primarily along the center portion of the site frontage which will be located approximately 24 feet to 27 feet from the property line along Fox Chase Road. In addition, the Applicant is proposing to plant street trees between the edge of roadway and proposed new sidewalk. The Applicant has requested a waiver from this Code Section to provide sidewalk not located six inches from the property line.

50. **Per §146-27.E – Sidewalks and Curbs –** At corners and other pedestrian street-crossing points, sidewalks shall be extended to the curbline with ramps for adequate and reasonable access across curbs by physically handicapped persons, including those in wheelchairs.
The proposed curb ramps shall be called out on the plan with the respective ramp types, spot elevations, and slopes shall be provided to ensure compliance with ADA requirements.

51. **Per §146-27.F – Sidewalks and Curbs –** Curbs shall be the vertical type and constructed in accordance with Township specifications.
Based on existing conditions, there is existing curbing along the northwestern and southwestern site frontage of Fox Chase Road. The Applicant is not proposing new curbing along the entire site frontage along Fox Chase Road. We recommend that curbing be provided along the entire site frontage to provide a safety barrier between the edge of roadway and new sidewalk, as well as, for consistency of the entire site. In addition, the Applicant is proposing 6-inch high Belgian Blocks along the interior roadways. The Township standard curb type is 6-inch high cement concrete curb. The Applicant has requested a waiver from this Code Section to provide 6-inch high Belgian Blocks instead of the Township cement concrete curb standard since the internal roadways will be privately maintained and for

aesthetics complementary to the land development.

52. **Per §146-29.A – Blocks – Length -** In general, all blocks in a subdivision/land development shall have a minimum length of 500 feet and a maximum length of 1,200 feet unless special conditions warrant a variance.
The internal Road C has an approximate length of 360 feet between intersections; Road D has an approximate length of 470 feet between intersections; Road F has an approximate length of 410 feet between intersections; and Road G has an approximate length of 320 feet between intersections, all of which do not meet the minimum 500 feet length requirement per this Code Section. The Applicant has requested a waiver from this Code Section to permit these internal roadways to be less than the minimum 500 length requirement.

53. **Per §146.31.A.(6) – Reserve strips; rights-of-ways; easements –** Easements for present or ultimate construction of storm drains and sanitary sewers having a minimum width of twenty (20) feet shall be provided where necessitated by topographical conditions.
The Applicant shall provide an easement around the proposed stormwater management facilities; or the Applicant may wish to consider providing a blanket easement for the proposed stormwater management facilities as part of the stormwater bmp operations and maintenance agreement with the Township.

54. **Per §146.33.I – Drainage –** Stormwater roof drains and pipes shall not discharge water over a sidewalk but shall extend under the sidewalk to the gutter. Where storm drains are accessible, the roof drain shall be connected thereto.
The Applicant shall show the roof drains and sump pumps (if any) for the proposed clubhouse building, as well as, for each of the proposed townhome dwellings on the plans. The Applicant has requested a waiver from this Code Section to allow for roof drains to flow over the lawn areas and infiltration instead of extending under the sidewalk to the gutter in accordance with Stormwater Ordinance Section §142-802.A where roof drains shall not be connected to streets, sanitary or storm sewers, or roadside ditches, and shall discharge to infiltration areas or vegetative BMPs to the maximum extent practicable.

55. **Per §146.5.C.(2) – Design and construction of sewers - Size, grade and type -** Sanitary sewers shall have a minimum inside diameter of eight inches and a minimum grade of 1/2%. Ductile iron pipe shall be used in all cases.
The Applicant is proposing 8-inch SDR-26 piping for the proposed sanitary sewer system to the site instead of ductile iron pipe per this Code Section. The Applicant has requested a waiver from this Code Section to not provide the required ductile iron pipe. We defer to the Abington Township Wastewater Utilities department for any sewer related comments.

56. **Per §146.37 – Utilities –** All water mains, gas mains, electric, telephone, and other communication services shall be located underground; and such facilities shall be installed prior to street paving. Electric, telephone, and communication service facilities, both main and service lines, shall be provided by underground cables.
A note shall be provided on the plans stating that all utilities will be installed underground.

57. **Per §146-43.A.(1) – Erosion and Sediment Control –** No change shall be made in the contour of the land nor shall grading, excavating, removal, or destruction of the topsoil, trees, or other vegetative cover of the land can be commenced until such time that a grading permit is applied for and approved.

58. **Per §146-43.C.(3)(a) – Erosion and Sediment Control** – Cut and fill slopes shall not be 15% or steeper,

except as approved by the Township Zoning Hearing Board.
There are slopes on site that have grades of 33% which is greater than 15%. The grades shall be revised to be less than 15% in all locations; or otherwise, a waiver from this Code Section will be required to permit the proposed 33% slope.

CHAPTER 142
STORMWATER MANAGEMENT COMMENTS

59. **Per §142-Attachment 1 – Watershed Map Figure 1.03** – Based on Figure 1.03, the proposed site is split between the Pennypack Creek, Area P watershed, and the Tookany/Tacony-Frankford Creek, Area T watershed.
Based on Figure 409.1P, Area P Management District Watershed Map, the northern portion of the site is located within District B of the Pennypack Creek Watershed. In addition, per Figure 409.1T, Area T Management District Watershed Map, and the southern portion of the site is located within District B of the Tacony Creek Watershed. Based on §142-409.A.1.(b) and §142-409.B.(1).(b) the following reductions are required in the subareas:

Area P District B			**Area T District B**		
Proposed Storm		Existing Storm	Proposed Storm		Existing Storm
2-year	Reduced To	1-year	2-year	Reduced To	1-year
5-year		2-year	5-year		2-year
10-year		5-year	10-year		5-year
25-year		10-year	25-year		10-year
50-year		25-year	50-year		25-year
100-year		50-year	100-year		100-year

Based on the Allowable Post Development Flows Chart provided in the PCSM Report, the Applicant is reducing the post-development flows as required for the two districts and is in compliance with this Code Section.

60. **Per §142-302.B.(1).(a) – SWM Site Plan Contents** – The stormwater management plan shall provide a general description of the project.
The Applicant shall provide SWM Plans for review. The PCSM Plans shall provide a general description of the project. Additional comments may occur once the PCSM Plans have been provided.

61. **Per §142-302.B.(1).(m) – SWM Site Plan Contents –** The following signature block for the Municipality:
"(Municipal official or designee), on this date (date of signature), has reviewed and hereby certifies that the SWM site plan meets all design standards and criteria of the Municipal Ordinance No. (number assigned to the Ordinance)."
The above signature block shall be added to the PCSM plan as required per this Code Section.

62. **Per §142.302.B.(2).(a) – SWM Site Plan Requirements –** The Applicant shall prepare an existing resource and site analysis map (ERSAM) showing environmentally sensitive areas including, but not limited to, steep slopes, ponds, lakes, streams, wetlands, hydric soils, vernal pools, stream buffers, floodplains, hydrologic soil groups, closed topographic depressions and recharge areas. Land development, existing recharge areas, and any other requirements specifically outlined in the municipal SALDO also shall be included.
An ERSAM Plan shall be provided as part of this submission and shall show the information as indicated per this Code Section.

63. **Per §142-302.B.(2).(b).[5] – SWM Site Plan Requirements** – The PCSM Plan shall show the locations of all existing and proposed utilities, sanitary sewers, and water lines within fifty (50) feet of the property lines.
The PCSM Plan shall show the existing and proposed features within fifty (50) feet of the property lines as indicated in this Code Section.

64. **Per §142-302.B.(2).(b).[9] – SWM Site Plan Requirements** – The PCSM Plan shall include O&M plan in accordance with §142-702 of this chapter, for all existing and proposed physical stormwater management facilities. This plan shall address long-term ownership and responsibilities for O&M as well as schedules and costs for O&M activities.
An Operation & Maintenance (O&M) plan shall be provided on the PCSM Plan showing how the proposed BMPS will be operated and maintained.

65. **Per §142-302.B.(2).(b).[10] – SWM Site Plan Requirements** – The PCSM Plan shall show the limits of earth disturbance, including the type and amount of impervious area that is proposed.
The total limit of disturbance shall be labeled and called out on the PCSM Plan.

66. **Per §142-302.B.(2).(b).[22] – SWM Site Plan Requirements** – The PCSM Plan shall show a fifteen-foot-wide access easement around all stormwater management facilities to provide ingress to and egress from a public right-of-way.
If the Applicant is proposing 15-foot-wide easements around all stormwater facilities, these easements shall be shown on the plan and legal descriptions shall be provided to our office for review and approval prior to recording of the plans. The Applicant may wish to provide a blanket easement for the entire site covering all stormwater facilities proposed. If so, a legal description of the blanket easement shall be provided to our office for review and approval prior to recording of the plans.

67. **Per §142-302.B.(2).(b).[25] – SWM Site Plan Requirements** – The PCSM Plan shall provide a statement, signed by the Applicant, acknowledging that any revision to the approved drainage plan must be approved by the Township, and that a revised erosion and sediment control plan must be submitted to the Township or Conservation District for approval.
The required acknowledgement statement shall be provided on the PCSM Plan per this Code Section.

68. **Per §142-302.B.(2).(b).[26] – SWM Site Plan Requirements** – The PCSM Plan shall provide the following signature block for the design engineer:
"I, (Design Engineer), on this date (date of signature) hereby certify that the drainage plan meets all requirements of the Department of Environmental Protection's regulations and this chapter."
The design engineer signature block shall be provided on the PCSM Plan.

69. **Per §142-303.A.(1) – Plan Submission** – Proof of application or documentation of a National Pollutant Discharge Elimination System (NPDES) shall be provided.
Since the project will be disturbing more than one (1) acre of land, a NPDES permit will be required. The Applicant shall forward to our office a copy of all submissions to the Montgomery County Conservation District for the project records.

70. **Per §142-401.A – General Requirements** – For any of the activities regulated by this chapter, unless preparation of a stormwater management (SWM) site plan is specifically exempted, the preliminary or final approval of subdivision and/or land development plans, the issuance of any building or occupancy permit, the commencement of any earth disturbance activity may not proceed until the property owner or applicant or his/her agent has received written approval from the Municipality of a SWM site plan

that demonstrates compliance with the requirements of this chapter, and a written approval of an adequate erosion and sediment (E&S) control plan from the Municipality or County Conservation District when required.
In the current LD plan Submission, there is no plan that is labeled a Post Construction Stormwater Management Plan. A PCSM Plan shall be provided as part of this LD application submission before preliminary/final approval is granted.

71. **Per §142-401.H – General Requirements –** No regulated activities shall commence until the Township issues written approval of an SWM site plan, which demonstrates compliance with the requirements of this chapter.

72. **Per §142-704.A – Operation and Maintenance Agreement for Privately Owned Stormwater Controls and BMPs –** Prior to final approval of the PCSM site plan, the owner shall sign and record an operation and maintenance (O&M) agreement covering all stormwater control facilities which are to be privately owned.

GENERAL STORMWATER MANAGEMENT COMMENTS

73. The Applicant shall provide PCSM Plans for review and approval before preliminary/final approval is granted. Once the PCSM Plans are provided, there may be additional SWM comments upon review.

74. There are multiple locations in the Storm Sewer Tabulation sheets in the PCSM Report where the hydraulic grade elevations are greater than the grade/rim elevations which will result in surcharging of the pipes and associated inlet/manhole. Below are the Line ID of the lines identified in the report:
    - MH-404 to outfall HGL DN larger
    - 620-MH-618 HGL UP larger
    - 622 to 620 HGL DN larger and HGL UP larger
    - 624 to MH-610 HGL DN larger and HGL UP larger
    - MH-702 to E.W. 7 HGL DN larger
    - 726-724 HGL UP larger

    The HGL elevations shall be confirmed and revised accordingly to ensure that no surcharging of the inlets/manholes will occur.

75. Dewatering calculations shall be provided in the PCSM report.

76. A cross-section profile shall be provided for the BMPs, and the 100-year stormwater elevation shall be shown on all cross-sections to ensure the BMPs can adequately capture and convey the 100-year storm.

77. The emergency spillway for Basin 1 is shown on the plans to be directed towards Fox Chase Road. The emergency spillway for Basin 1 should be revised to minimize impacts to the main street. The Applicant may wish to redirect the overflow towards the open space across from the emergency access drive to allow for additional infiltration and/or extend the existing storm sewer located on Fox Chase Road adjacent to 777 Fox Chase Road (PARID No. 30-00-22428-00-6).

GENERAL COMMENTS

78. The Applicant shall add a column each for the existing, required, and proposed conditions in the Zoning Data Table on the Record Plan Sheet 2 of 4 (Sheet 3 of 64 of the plans set).

79. Details for Belgium block curb and standard concrete curbing are provided on the plans. The Applicant shall clarify and indicate the location where the proposed Belgium blocks will tie-in to the existing concrete curbing.

80. Per the Existing Features Plans (Sheets 7 to 10), there are multiple locations where private fencing and structures are shown to be encroaching within the site boundaries from the abutting properties that front Forrest Avenue, Kirkwood Street, and Suffolk Road. The Applicant shall clarify if the private fences and structures are permitted to remain or be required to be removed outside the site boundaries. It is recommended that a written agreement to permit these encroachments for each of the properties should be provided to the Township.

81. The parking spaces shown along the proposed new roads shall be dimensioned.

82. The existing features shall be turned off on the proposed improvement plans.

83. The roadway cross-section detail on the Construction Details Plan (Sheet 40) has the roadway cross-section detail and stationing for Providence Road which should be corrected to reflect Fox Chase Road and the correct stationing.

84. A detail of the proposed emergency access chain and bollards is provided on the Construction Details Plan (Sheet 41); however, the chain and bollard does not appear to be shown on the plans. The Applicant shall show the location of the chain and bollard for the proposed emergency access. The Applicant should provide no parking signs at the entrances to the emergency access in addition to the proposed "DO NOT ENTER" sign located adjacent to Unit 100.

85. We defer to the Fire Marshal for any fire related comments.

86. We defer to the Wastewater Utilities for any sewer related comments.

We have received the following documents/permits/reviews:

- AQUA Will Serve Letter (January 29, 2021)
- Transportation Impact Assessment (February 10, 2023, last revised March 13, 2023)
- Conditional Use Application (March 27, 2023)
- MCPC Request for Review (March 27, 2023)
- Application for SALDO Review (March 27, 2023)
- Waivers Request (included w/ SALDO Application) (March 27, 2023)
- Post Construction Stormwater Management Report (March 2023)
- TPD Traffic Review (April 29, 2023)
- Sanitary Sewer Review (May 12, 2023)
- STC Review (May 10, 2023)
- Fire Marshal Review (May 12, 2023 via email)
- EAC Review (May 11, 2023)

We have not received the following documents/permits/reviews:

- MCPC Review
- MCCD Review
- Sanitary Sewer Availability Letter
- Application for Sewage Facilities Planning Module Exemption Mailer
- NPDES Permit

- Financial Escrow
- LD Agreements
- Stormwater BMP O&M Agreement
- Legal Descriptions & Exhibits of all easements

SUMMARY

We do not recommend Preliminary Major Land Development Plans approval until the Applicant addresses the above referenced comments, in particular the zoning and traffic comments. We would be willing to attend a technical discussion meeting upon request by the Applicant.

If you have any questions or comments with this submittal, please do not hesitate to contact me.

Sincerely,

PENNONI

Khaled R. Hassan, PE
Township Engineer

cc: Terry Castorina, Executive Assistant to the Township Manager
Ashley McIlvaine, Assistant Township Manager

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August 23, 2023

ABINT130030

Mr. Richard Manfredi, Township Manager
Abington Township
1176 Old York Road
Abington, PA 19001

RE: LD-23-01-711 Fox Chase Road (St. Basil)
PARID: 30-00-22424-00-1/ TMID: 30059 025
PARID: 30-00-22424-00-5/ TMID: 30059 026
Preliminary Major Land Development Plans Review (2nd Submission)

Dear Mr. Manfredi:

We have received a copy of the "Preliminary/Final Major Land Development Plans" consisting of sixty-four (64) sheets dated March 24, 2023, revised July 24, 2023 and received on July 26, 2023, as well as Erosion and Sediment Control Plans consisting of fifteen (15) sheets and Post Construction Stormwater Management Plans consisting of twenty-two (22) sheets; as prepared by ESE Consultants, Inc., located at 1140 Virginia Drive, in Fort Washington, PA for the above referenced project on behalf of the property owner, Sisters of St. Basil the Great, and the equitable owner, Toll Mid-Atlantic, L.P Company, Inc. (the Applicant).

This project is located within the CS – Community Service Zoning District with the newly created AR – Age Restricted Carriage Home Overlay District being an overlay for the underlying district. The site is fronted by Fox Chase Road to the southwest; residential properties zoned in the R1 – Low Medium Density Residential Zoning District to the north or northeast; residential properties zoned in the R3 – Medium Density Residential Zoning District, as well as the RC – Recreation/Conservation Zoning District, to the southeast; and residential properties zoned in the R4 – High Density Residential Zoning District to the south. In addition, a tributary of the Pennypack Creek traverses from north to south within the eastern corner of the track.

Under this Preliminary Land Development application, the Applicant is proposing to demolish the existing structures of the former St. Basil Academy School site; and construct a total of 150 age-restricted carriage homes as well as a clubhouse and pool on an existing parcel of land located within the newly created AR – Age Restricted Carriage Home Overlay District. The entire site consists of approx. 46.37 acres and is located within the CS – Community Service Zoning District. Other site improvements for this site include parking, curbing, sidewalk, landscaping, lighting, and sanitary and stormwater management facilities. Access to/from the site will be by way of one (1) proposed entrance off Fox Chase Road. In addition, an emergency access road is proposed off of Fox Chase Road on the northwestern corner of the site.

In accordance with the FEMA, Flood Insurance Rate Map (FIRM) Panel No. 42091C0403G, effective March 2, 2016, the tract is identified to be primarily located within Zone X, an area outside the 0.2% chance flood and minimal flood hazard. However, the area where the Pennypack Creek tributary traverses the site is located within Flood Zone X, an area of 0.2% annual chance flood hazard, areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile. Therefore, based on the FEMA FIRM determination, this site is not located within the Floodplain Conservation District, and is therefore not subject to the floodplain regulations of the Floodplain Conservation District. However, per the Abington

Township Riparian Corridor Analysis Map, Figure 15.2, this parcel is identified as a parcel which is located within and intersecting the Riparian Corridor; and is therefore, subject to the regulations of the Riparian Corridor Conservation District.

CONDITIONAL USE REQUESTED

The Applicant appeared before the Abington Township Board of Commissioners at the Public Hearing held on July 13, 2023. The Applicant was granted the following conditional use approval from the Abington Township Zoning Code:

1. **§1503.B.2.b - Used Permitted by Conditional Use, Zone 2 –** A conditional use approval to allow for the installation of a central sewer line in Zone 2 of the Riparian Corridor Conservation District.

WAIVERS REQUESTED

The Applicant is requesting the following waivers from the Abington Township Subdivision and Land Development Code:

1. **§146-11.A.(4) – Property Identification Plans –** A waiver to not show all the information of the TMP, names of owners, the approx. acreage, and similar features within 400 feet.

   The Applicant has provided the property identification information for the immediately surrounding parcels abutting the site, and not the entire 400 feet distance per this Code Section.

2. **§146-11.B.(3) – Existing Features Plan –** A waiver is requested to not show the all the information of the location of property lines and names of owners, and similar features within 400 feet.

   The Applicant has provided the property lines and landowner information for the immediately surrounding parcels abutting the site and not the entire 400 feet distance per this Code Section.

3. **§146-11.B.(7) – Existing Features Plan – A** waiver is requested to not show the all the information of the underground and above ground utilities, and similar features within 400 feet.

   The Applicant has provided the utility information immediately surrounding the parcel and not the entire 400 feet distance per this Code Section.

4. **§146-27.C – Sidewalks and Curbs – Location -** A waiver is requested for the sidewalk along Fox Chase Road. The existing locations of the sidewalk along portions of the road are within a few feet of the curb and roadway. The existing location will be repaired/ replaced with a new sidewalk and extended along the entire frontage. The area between the sidewalk and the right-of-way (roughly 12'+) will be used for street tree plantings.

   The Applicant is proposing to retain some portions the existing curb and sidewalk and make repairs or replacements as needed along the site frontage on Fox Chase Road. The Applicant is proposing new 5 feet wide sidewalk primarily along the center portion of the site frontage which will be located approximately 24 feet to 27 feet from the property line along Fox Chase Road. In addition, the Applicant is proposing to plant street trees between the edge of roadway and proposed new sidewalk.

5. **§146-27.F – Sidewalks and Curbs –** A waiver is requested for the curbing on the interior roads to be constructed with 6" Belgian Block. The internal roadways will be privately maintained. This variation will help with the subdivision aesthetics and maintenance.

   The Applicant is proposing 6-inch high Belgian Blocks along the interior roadways. The Township standard curb type is 6-inch high cement concrete curb. The Applicant has requested a waiver from this Code Section to provide 6-inch high Belgian Blocks instead of the Township cement concrete curb standard since the internal roadways will be privately maintained and for aesthetics complementary to the land development.

6. **§146-29.A – Blocks – Length -** A waiver is requested to allow for the internal roads C, D, F, and G to have less than the 500' minimum length. All roads orientation and lengths have been affected by the layout and the extended buffer around the property.

   The internal Road C has an approximate length of 360 feet between intersections; Road D has an approximate length of 470 feet between intersections; Road F has an approximate length of 410 feet between intersections; and Road G has an approximate length of 320 feet between intersections, all of which do not meet the minimum 500 feet length requirement per this Code Section.

7. **Per §146.33.I – Drainage –** A waiver is requested to not extend roof leaders to road gutter under sidewalk or connect to storm drains, but to instead allow roof drains to flow over lawn to allow pollutants to settle out and infiltrate into the topsoil. This section of the SALDO is also in conflict with 142-802.A of the Stormwater Management Ordinance.

   The Applicant shall show the roof drains and sump pumps (if any) for the proposed clubhouse building, as well as, for each of the proposed townhome dwellings on the plans. Stormwater Ordinance §142-802.A requires roof drains not to be connected to streets, sanitary or storm sewers, or roadside ditches, and shall discharge to infiltration areas or vegetative BMPs to the maximum extent practicable. The Applicant has requested a waiver from this Code Section to allow for roof drains to flow over the lawn areas and infiltrate instead of extending under the sidewalk to the gutter.

8. **§146.35.C.(2) – Design and construction of sewers - Size, grade and type -** A waiver is requested to modify the material of the sanitary sewer main to SDR-26 (plastic pipe) from ductile iron. The supply of the SDR-26 is more readily available.

   The Applicant is proposing 8-inch SDR-26 piping for the proposed sanitary sewer system to the site instead of ductile iron pipe per this Code Section. We defer to the Abington Township Wastewater Utilities department for any sewer related comments.

9. **§146.43.C.(3).(a) – Excavations and fills –** A waiver is requested to construct cut and fill slopes greater than 15% for the stormwater basin berms and allow basin slopes and slopes to tie into natural grade up to 33%. The steeper berms will limit the areas taken up by the berms while still adequately capturing and routing the stormwater from the site.

   The Applicant is proposing grades of 3:1 or approximately 33% primarily for the stormwater basins to limit the earth disturbance on the site.

The following documents have been reviewed:

Title	Sheet	Dated	Revised
Land Development Plans			
Cover Sheet	1 of 64	03/24/23	7/24/23
Record Plans	2-5 of 64	03/24/23	7/24/23
General Notes	6 of 64	03/24/23	7/24/23
Existing Features Plans	7-10 of 64	03/24/23	7/24/23
Overall Site Plan	11 of 64	03/24/23	7/24/23
Grading Plans	12-19 of 64	03/24/23	7/24/23
Utility Plans	20-27 of 64	03/24/23	7/24/23
Road Plan & Profile	28-34 of 64	03/24/23	7/24/23
Easement Profiles	35-39 of 64	03/24/23	7/24/23
Construction Details	40-41 of 64	03/24/23	7/24/23
Storm Sewer Details	42-43 of 64	03/24/23	7/24/23
Sanitary Sewer Details	44-45 of 64	03/24/23	7/24/23
Water Details	46 of 64	03/24/23	7/24/23
Basin Details	47-55 of 64	03/24/23	7/24/23
Landscape & Lighting Plans	56-63 of 64	03/24/23	7/24/23
Landscape & Lighting Details & Notes	64 of 64	03/24/23	7/24/23
Erosion and Sediment Control Plans			
Cover Sheet	1 of 15	03/24/23	-----
Erosion and Sediment Control Plan	2-9 of 15	03/24/23	-----
Erosion and Sediment Control Details	10-13 of 15	03/24/23	-----
Erosion and Sediment Control Notes	14-15 of 15	03/24/23	-----
Erosion and Sedimentation Control Narrative	114 pages	03/2023	July 2023
Post-Construction Stormwater Management Plans			
Cover Sheet	1 of 22	07/17/23	-----
PCSM Notes	2-3 of 22	07/17/23	-----
Existing Features Plan	4 of 22	07/17/23	-----
PCSM Overall Plan	5 of 22	07/17/23	-----
Pre-Developed Drainage Plan	6 of 22	07/17/23	-----
Post Developed Drainage Plan	7 of 22	07/17/23	-----
PCSM Grading Plans	8-15 of 22	07/17/23	-----
PCSM Details	16-22 of 22	07/17/23	-----
Stormwater Management Narrative	602 pages	July 2023	
NPDES Narrative	6 pages	July 2023	

We have performed a review of the above referenced plans for compliance with the Zoning Ordinance (Chapter 162); Subdivision and Land Development Ordinance (Chapter 146); and Stormwater Management Ordinance (Chapter 142). We offer the following comments for your consideration:

ZONING COMMENTS

1. **Per §1503.B.2.b – Used Permitted by Conditional Use, Zone 2 –** Corridor crossings by centralized sewer and water lines and/or public utility transmission lines, provided that any disturbance is offset by corridor mitigation measures as outlined in §1508, Riparian Management of this chapter, and provided underground utility and pipe crossings are located at least 3 feet below stream invert.

The eastern portion of this site is located within the Riparian Corridor Conservation District Zone 2. Based on the utility plans, the Applicant is proposing new sanitary lines to be located within Zone 2 of the Riparian Corridor which is only permitted by conditional use. As part of this Land Development application, the Applicant has included a completed conditional use application seeking approval from this Code Section to allow for the sanitary sewer crossing within Zone 2 of the Riparian Corridor Conservation District.

The Applicant appeared before the Abington Township Board of Commissioners at a Public Hearing held on July 13, 2023; and was granted conditional use approval to permit the sanitary sewer connection to the existing sanitary system within Zone 2 of the Riparian Corridor.

5. **Per §1711, Figure 17.2 – Dimensional Regulations –** The minimum front yard setback shall be 30 feet dwelling setback from the face of the curb and/or edge of cartway.
Based on our measurements, it appears that the Applicant will comply with the required dwelling setback dimensions; however, dimensions for the building setbacks shall be provided on the plans to ensure compliance with this Code Section.
*The Applicant has shown the required 30 feet dwelling setback line on the Overall Site Plan (Sheet 11)***.**

In addition to the 30 feet dwelling setback line shown on the Overall Site Plan, the Applicant shall provide the required front yard setback dimensions on the plan to ensure compliance with the above code requirement. Based on our measurements, the setline lines appear to be shown at the correct distances, but dimensions are needed to be shown on the plans to clarify and confirm the required setback distances.

7. **Per §1711, Figure 17.2 – Dimensional Regulations –** The maximum impervious coverage shall be 50% and the minimum green area shall be 50%.
The Applicant has provided a building coverage percentage of 34.3% which is in compliance with this Code Section. The Applicant shall provide an impervious coverage calculation on the plans showing the total impervious areas and the resulting percentages to ensure compliance with this Code Section.

The Applicant has provided a breakdown of the building and impervious coverage proposed on the site. Based on the provided breakdown, for the 44.92 Ac gross site area, the impervious coverage is calculated as follows:

	Impervious Coverage (SF)
Proposed Clubhouse & Acc. Area	**0.27 Ac**
Proposed Unit Buildings	**8.61 Ac**
Proposed Road & Access Road	**3.78 Ac**
Proposed Service Walk/Driveway	**1.74 Ac**
Proposed Sidewalk	**1.09 Ac**
Fox Chase Road R/W	**0.5 Ac**
Total Proposed Impervious Area	**15.99 Ac**
Proposed Building Coverage	**35.60% (<50% required max. impervious coverage)**

Based on our calculations of the information provided, the total of the impervious coverage is 15.99 acres which is 35.60% of the gross site area and is in compliance with this Code Section. However, there is a discrepancy between the impervious coverage given on the Record Plan (Record Sheet 2 of 4) and the total impervious coverage breakdown given on the General Notes (Sheet 6). The discrepancy shall be confirmed and revised to be consistent on both plan sheets.

8. **Per §1711, Figure 17.2 – Dimensional Regulations –** The minimum open space shall be the gross site area (in acres) x 0.40.
The Applicant has provided a building coverage percentage of 34.3% which is in compliance with this Code Section. The Applicant shall provide an open space calculation on the plans showing the total open space and the resulting percentages to ensure compliance with this Code Section.

The Applicant is showing the proposed open space on the Overall Site Plan (Sheet 11) and has provided the open space calculations on the Record Plan (Record Sheet 2 of 4). However, there is discrepancy between the open space calculated in the Area Tabulation (39.694 Ac) and the open space acreage given in the Zoning Table (22.6 Ac). The discrepancy shall be confirmed and revised to be consistent on both plan sheets.

15. **Per §2304.H Use H-13 – Age-Restricted Carriage Home Dwelling Unit (Single-Family Attached) –** 2 parking spaces exclusive of garage space, plus one-quarter (1/4) parking space per dwelling unit for visitor and overflow parking shall be provided. The visitor and overflow parking may be provided in designated on-street parking spaces; parking spaces may be reduced to 9' x 18'; and single car garages may not be utilized as required parking spaces, unless a basement is provided.
The Applicant is proposing 150 dwelling units which requires the following parking spaces.
    - *150 Units x 2 spaces per unit = 300 parking spaces*
    - *150 Units x (1/4) spaces per unit = 37.5 = 38 parking spaces*

In total, the Applicant is required to provide 338 parking spaces for the dwelling units. Based on the plan provided, the Applicant is proposing 359 parking spaces on site consisting of 300 parking spaces in the driveways of the dwelling units and 59 parking spaces on Roads A, B, D, and E as well as in front of the clubhouse area. The Applicant shall clarify if any basements will be provided for the proposed dwelling units to confirm the total number of parking spaces being provided on the site. The Applicant shall update the parking calculation on the Record Plan (Sheet 3) to reflect the correct number of parking spaces required and proposed.

The Applicant, in their response letter dated July 25, 2023, clarified that all units will have 2-car garages with no qualifying overflow parking spaces for each garage, and that 38 overflow spaces and 1 space for the common mailbox area are provided within the subdivision. On the provided Overall Site Plan (Sheet 11), we counted 42 additional on-street parking spaces are shown including 2 handicap spaces. The Record Plans (Record Sheets 1 to 4 of 4) do not show any of the proposed off-street and on-street parking spaces. The Applicant shall show the parking spaces on the Record Plans (Record Sheets 1 to 4 of 4) as shown on the Overall Site Plan (Sheet 11). In addition, the Zoning Table on Record Sheet 2 of 4 is noting the parking requirements in the provided condition as "339 or Less Units". The Zoning Table shall show the actual total number of parking spaces for the site to clarify and confirm the total number of proposed parking spaces for the site and ensure compliance with this Code Section.

18. ***Per §2401.A.2.d.(1).(a) – Preservation and Protection of Existing Vegetation –*** *Tree replacement shall occur when new impervious coverage exceeds 500 SF and a tree with a minimum caliper of six (6) inches is removed. In such cases, two new trees, each a minimum of 3-to-3.5" caliper, measured 6" above grade, shall be planted for each tree with a minimum caliper of 6" or greater that is removed.*
Based on the Existing Features Plan (Sheet 7), the Applicant is indicating that they are removing 67 trees as part of this Land Development project. The trees shall be labeled with a diameter of the tree to be removed to confirm the required tree replacement. A tree replacement calculation shall be provided on the landscaping plan showing the total number of trees removed and the total number of trees proposed based on this code requirement. In addition, the Applicant shall label the trees that are proposed to remain. For example, on the Existing Features Plan (Sheet 7), the existing trees that are not labeled which are

located between the trees labeled 44 and 45 and 48 and 49 as not proposed to be removed; however, on the Utility Plan (Sheet 24) there is storm piping proposed directly underneath those trees which will require those trees to be removed. The Applicant shall clarify and confirm all trees to remain or to be removed and update the label on the Existing Features plan accordingly.

The Applicant is indicating that they are subdividing the property and creating new lots; therefore §2401.A.2.d.(1).(b) should be used for this project. The Applicant is indicating that no more than 25% of the existing tree canopy is being removed, and the tree replacement requirement does not apply. However, for the site, only the proposed individual homes will be lotted out but the entire site as a whole will be under a homeowner's association or similar entity that will be operating and maintaining the common areas and the Zoning Table is showing a total site area of 46.37-acres in the proposed condition for the existing 46.58-acre site area. Therefore, Section §2401.A.2.d.(1).(a) would be applicable to this site. Based on the existing tree chart provided on the Existing Features Plan (Sheet 8), 66 of the 100 trees on the list are being removed which will require tree replacement for trees with a 6-inch caliper or greater at a rate of 2:1. The tree replacement calculation and the proposed replacement trees shall be provided on the plans accordingly.

CHAPTER 146
SUBDIVISION & LAND DEVELOPMENT COMMENTS

26. ***Per §146-10.B.(5) – General Requirements –*** *Once the Applicant confirms the submission type, the submission type in accordance with §146-9.D shall be indicated on all the plan sheets as either "Preliminary Major Subdivision and Land Development" or "Preliminary/Final Major Subdivision and Land Development" and noted as land development application number "LD-23-01".*
The submission type is preliminary major subdivision and land development. The Applicant has revised the plans accordingly.

The submission type has been included on the plans; however, the application number "LD-23-01" has not been included on the plans. This application number should be included.

27. *Per §146-11.A.(2) – Property Identification Plans – The property identification plans shall contain a location map the site to be subdivided or developed, at a scale of not less than 800 feet to the inch, showing the relation of the site to adjoining property and to all public and private streets and municipal boundaries existing within 1,000 feet of any part of the property.*
The location maps on the Cover Sheet (Sheet 1) show the zoning district boundary lines; however, the maps are only showing public and private streets and zoning boundaries within approximately 600 feet of the property. The maps shall be revised to show public and private streets and zoning boundaries within 1,000 feet of the property.

The location map provided on the plans is not showing all existing features within 1,000 feet of any part of the property. The location map shall be revised to show this information.

29. ***Per §146-11.A.(7) – Property Identification Plans –*** *The property identification plans shall provide an indication that the elevations are based upon sanitary sewer datum of the Township of Abington.*
The Applicant has noted on the Existing Features Plan (Sheet 7) that the vertical datum on the plans is based on NAVD88. However, there is no note regarding the Abington Township Sanitary Sewer Datum. The Applicant shall provide a reference for the Township Sanitary Sewer Datum on the plans.
The Applicant has indicated in their response letter that they are working with the sanitary sewer authority to verify the elevations and will update the notes on the plans when available.

30. ***Per §146-11.A.(8) – Property Identification Plans –*** *The property identification plans shall contain the existing cartways of streets and on adjoining the site, with existing and ultimate rights-of-ways and legislative and traffic route numbers.*
The existing cartway widths and right-of-way lines for Fox Chase Road shall be provided on the plans.

On the Location Map on the Cover Sheet, the right-of-way of Fox Chase Road is called out as 50 feet wide, and on the Record Plan (Record Sheet 1 of 4), the right-of-way is identified as 60 feet wide. The correct right-of-way width shall be confirmed and revised accordingly to be consistent on the plans.

37. ***Per §146-11.F.(4).(b).[5] – Storm Sewer Profiles –*** *The storm sewer profiles shall show the type and size of pipe, manholes, and inlets.*
On the storm pipe profiles on the Plan & Profile Plans (Sheets 28-34), the size of the inlets and manholes were not shown. This information shall be shown on the profiles per this code requirement.

A note has been added to the profiles indicating that the size of the inlets and manholes will be determined by contractor during the construction process and shop drawings will be reviewed by the Township prior to installation. The design of the storm system, including inlet and manhole sizes shall be provided prior to plans approval to ensure that there are no conflicts with any existing utilities.

39. ***Per §146-11.G.(1).(e),(f),&(h) – Utility Plan –*** *The utility plan shall show the electrical lines, junctions, vaults, telephone lines, cable television lines and other related appurtenances.*
The Applicant is showing the underground utilities running along the roadways within the development; however, the electrical, telephone, cable, etc. lines are not shown connecting to the proposed dwellings. The Applicant shall provide these connections on the Utility Plans. The Applicant shall also show the electrical lines connecting to the proposed streetlights.

There are multiple locations where a proposed fire hydrant is located directly on top of the underground electric line; i.e., the proposed fire hydrant adjacent to Unit 148 on Road B; adjacent to the side of Unit 118 on Road B; adjacent to the proposed clubhouse on Road A between inlets no. 206 and 212; adjacent to the side of Unit 50 on Road E. The plans show be updated to avoid any utility conflicts.

40. ***Per §146-11.L.(1).(a) thru (h) – Architectural Plans –*** *Architectural plans shall be submitted for review and approval which provide the requirements as indicated in the above Code Sections.*

The Applicant has indicated that they are holding off on this comment to discuss with the Township or to forward the plans in the future. Architectural plans shall be provided to our office for review and approval to ensure compliance with the above code provisions.

47. ***Per §146-25.D – Intersections, Curb -*** *Wherever practicable, curblines shall be rounded by a tangential arc, the minimum radius of which shall be 20 feet. The curbline radius shall be concentric with that of the right-of-way line, except at the intersections of streets having different widths between curblines and right-of-way lines.*
The curb radius at the intersection of the site entrance and Fox Chase Road shall be shown on the plans to ensure the required curb radius is provided.

The curb radii of 16 feet are shown on the northwestern corner at the intersection of Fox Chase Road and the site entrance. A minimum curb radius of 20 feet shall be provided for this intersection.

50. ***Per §146-27.E – Sidewalks and Curbs –*** *At corners and other pedestrian street-crossing points, sidewalks shall be extended to the curbline with ramps for adequate and reasonable access across curbs by physically*

handicapped persons, including those in wheelchairs.
The proposed curb ramps shall be called out on the plan with the respective ramp types, spot elevations, and slopes shall be provided to ensure compliance with ADA requirements.

The curb ramp types have not been called out on the plans. In addition, all ADA ramps shall show the detectable wearing surface (DWS) on the plans.

51. ***Per §146-27.F – Sidewalks and Curbs –*** *Curbs shall be the vertical type and constructed in accordance with Township specifications.*
Based on existing conditions, there is existing curbing along the northwestern and southwestern site frontage of Fox Chase Road. The Applicant is not proposing new curbing along the entire site frontage along Fox Chase Road. We recommend that curbing be provided along the entire site frontage to provide a safety barrier between the edge of roadway and new sidewalk, as well as, for consistency of the entire site. In addition, the Applicant is proposing 6-inch high Belgian Blocks along the interior roadways. The Township standard curb type is 6-inch-high cement concrete curb. The Applicant has requested a waiver from this Code Section to provide 6-inch high Belgian Blocks instead of the Township cement concrete curb standard since the internal roadways will be privately maintained and for aesthetics complementary to the land development.

The Applicant has indicated that they will discuss the curbing with the Township. We had recommended that curbing be provided along the entire site frontage to provide a safety barrier between the edge of roadway and new sidewalk, as well as, for consistency of the entire site.

54. ***Per §146.33.I – Drainage –*** *Stormwater roof drains and pipes shall not discharge water over a sidewalk but shall extend under the sidewalk to the gutter. Where storm drains are accessible, the roof drain shall be connected thereto.*
The Applicant shall show the roof drains and sump pumps (if any) for the proposed clubhouse building, as well as, for each of the proposed townhome dwellings on the plans. The Applicant has requested a waiver from this Code Section to allow for roof drains to flow over the lawn areas and infiltration instead of extending under the sidewalk to the gutter in accordance with Stormwater Ordinance Section §142-802.A where roof drains shall not be connected to streets, sanitary or storm sewers, or roadside ditches, and shall discharge to infiltration areas or vegetative BMPs to the maximum extent practicable.

A typical utility layout has been included on the Construction Details (Sheet 40) which shows the typical downspout locations for the carriage home dwellings; however, the discharge point of these downspouts is unclear. The layout shall be revised to clearly indicate where the discharge point of the downspouts will be and where the flow will be directed to. In addition, erosion dissipaters shall be provided at the discharge points of the roof drains to help with any erosion from the discharge.

55. **Per §146.5.C.(2) – Design and construction of sewers - Size, grade and type -** Sanitary sewers shall have a minimum inside diameter of eight inches and a minimum grade of 1/2%. Ductile iron pipe shall be used in all cases.
The Applicant is proposing 8-inch SDR-26 piping for the proposed sanitary sewer system to the site instead of ductile iron pipe per this Code Section. The Applicant has requested a waiver from this Code Section to not provide the required ductile iron pipe. We defer to the Abington Township Wastewater Utilities department for any sewer related comments.

The Applicant has indicated in their response letter that the Abington Township Wastewater Authority has accepted the SDR-26 piping within the site and Ductile Iron Pipe (DIP) along Fox Chase

Road. The Applicant has requested a waiver from this Code Section to permit the SDR-26 piping within the site in lieu of the required ductile iron pipe.

CHAPTER 142
STORMWATER MANAGEMENT COMMENTS

62. ***Per §142.302.B.(2).(a) – SWM Site Plan Requirements –*** *The Applicant shall prepare an existing resource and site analysis map (ERSAM) showing environmentally sensitive areas including, but not limited to, steep slopes, ponds, lakes, streams, wetlands, hydric soils, vernal pools, stream buffers, floodplains, hydrologic soil groups, closed topographic depressions and recharge areas. Land development, existing recharge areas, and any other requirements specifically outlined in the municipal SALDO also shall be included. An ERSAM Plan shall be provided as part of this submission and shall show the information as indicated per this Code Section.*

The Applicant has indicated that the information as indicated per the above Code Section is being provided on the Existing Features Plans (Sheets 7-10). The Applicant may wish to rename these plans as Existing Features Plans/ERSAM Plans to ensure compliance with the requirements of the above Code Section.

GENERAL STORMWATER MANAGEMENT COMMENTS

74. *There are multiple locations in the Storm Sewer Tabulation sheets in the PCSM Report where the hydraulic grade elevations are greater than the grade/rim elevations which will result in surcharging of the pipes and associated inlet/manhole. Below are the Line ID of the lines identified in the report:*
    a. *MH-404 to outfall HGL DN larger*
    b. *620-MH-618 HGL UP larger*
    c. *622 to 620 HGL DN larger and HGL UP larger*
    d. *624 to MH-610 HGL DN larger and HGL UP larger*
    e. *MH-702 to E.W. 7 HGL DN larger*
    f. *726-724 HGL UP larger*

    The HGL elevations shall be confirmed and revised accordingly to ensure that no surcharging of the inlets/manholes will occur.

    Based on the updated PCSM Report, there are three (3) discrepancies for the invert elevations between the PCSM Report and what is labeled on the plans. These discrepancies shall be confirmed and revised accordingly:
    a. Invert Dn for Line ID 422 to 420
    b. Invert Up for Line ID 425 to 424
    c. Invert Dn for Line ID 520 to 504

77. *The emergency spillway for Basin 1 is shown on the plans to be directed towards Fox Chase Road. The emergency spillway for Basin 1 should be revised to minimize impacts to the main street. The Applicant may wish to redirect the overflow towards the open space across from the emergency access drive to allow for additional infiltration and/or extend the existing storm sewer located on Fox Chase Road adjacent to 777 Fox Chase Road (PARID No. 30-00-22428-00-6).*

    In the current resubmission, the Applicant has revised the emergency spillway for Basin 1 to discharge to internal Road A near the site entrance. The runoff from the emergency spillway will sheet flow from Basin 1 over the proposed sidewalk on Road A to be primarily captured by proposed inlet no. 804. However, the flows from proposed inlet no. 804 will be discharged to the same manhole no. 802

and existing storm sewer system as the routed flows from Basin 1. The Applicant may wish to consider relocating the emergency spillway towards the emergency access end and evaluate the feasibility of directing flows onto the open space and tie into the existing storm sewer system at that end instead of discharging to the same storm sewer system on Fox Chase Road adjacent to the site entrance on Road A. The Applicant may also wish to consider moving the proposed inlets no. 804 and 806 closer to the stop sign on Road A to capture additional stormwater runoff prior to sheet flow onto Fox Chase Road. In addition, the Applicant should consider the feasibility of capturing the runoff from the emergency spillway of Basin 2 and direct the flows into the existing storm sewer that runs parallel to Fox Chase Road prior to sheet flow onto the existing sidewalk.

GENERAL COMMENTS

80. *Per the Existing Features Plans (Sheets 7 to 10), there are multiple locations where private fencing and structures are shown to be encroaching within the site boundaries from the abutting properties that front Forrest Avenue, Kirkwood Street, and Suffolk Road. The Applicant shall clarify if the private fences and structures are permitted to remain or be required to be removed outside the site boundaries. It is recommended that a written agreement to permit these encroachments for each of the properties should be provided to the Township.*

The Applicant has indicated that they are working with the Township and the neighboring properties that currently encroach the site boundary to remove the encroachments.

82. *The existing features shall be turned off on the proposed improvement plans.*

We have received the following documents/permits/reviews:

- AQUA Will Serve Letter (January 29, 2021)
- Transportation Impact Assessment (February 10, 2023, last revised March 13, 2023)
- Conditional Use Application (March 27, 2023)
- MCPC Request for Review (March 27, 2023)
- Application for SALDO Review (March 27, 2023)
- Waivers Request (included w/ SALDO Application) (March 27, 2023)
- Post Construction Stormwater Management Report (March 2023)
- TPD Traffic Review (April 29, 2023)
- Sanitary Sewer Review (May 12, 2023)
- STC Review (May 10, 2023)
- Fire Marshal Review (May 12, 2023 via email)
- EAC Review (May 11, 2023)
- MCPC Review (May 19, 2023)

We have not received the following documents/permits/reviews:

- MCCD Review
- Sanitary Sewer Availability Letter (pending historical downstream sewer capacity evaluation)
- Application for Sewage Facilities Planning Module Exemption Mailer
- NPDES Permit
- Financial Escrow
- LD Agreements
- Stormwater BMP O&M Agreement
- Legal Descriptions & Exhibits of all easements

SUMMARY

We do not recommend Preliminary Major Land Development Plans approval until the Applicant addresses the above referenced comments, in particular the zoning and traffic comments. We are available to meet for a technical discussion upon request by the Applicant.

If you have any questions or comments with this submittal, please do not hesitate to contact me.

Sincerely,

PENNONI

Khaled Hassan

Khaled R. Hassan, PE
Township Engineer

cc: Terry Castorina, Assistant to the Township Manager
Ashley McIlvaine, Assistant Township Manager & Assistant CAO

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November 13, 2023

ABINT130030

Mr. Richard Manfredi, Township Manager
Abington Township
1176 Old York Road
Abington, PA 19001

RE: LD-23-01-711 Fox Chase Road (St. Basil)
PARID: 30-00-22424-00-1/ TMID: 30059 025
PARID: 30-00-22424-00-5/ TMID: 30059 026
Preliminary Major Land Development Plans Review (3rd Submission)

Dear Mr. Manfredi:

We have received a copy of the " Preliminary Major Land Development Plans" consisting of sixty-four (64) sheets dated March 24, 2023, revised October 13, 2023, and received on October 18, 2023, as prepared by ESE Consultants, Inc., located at 1140 Virginia Drive, in Fort Washington, PA for the above referenced project on behalf of the property owner, Sisters of St. Basil the Great, and the equitable owner, toll Mid-Atlantic, L.P Company, Inc. (the Applicant).

This project is located within the CS – Community Service Zoning District with the newly created AR – Age Restricted Carriage Home Overlay District being an overlay for the underlying district. The site fronted by Fox Chase Road to the southwest; residential properties zoned in the R1 – Low Medium Density Residential Zoning District to the north or northeast; residential properties zoned in the R3 – Medium Density Residential Zoning District, as well as the RC – Recreation/Conservation Zoning District, to the southeast; and residential properties zoned in the R4 – High Density Residential Zoning District to the south. In addition, a tributary of the Pennypack Creek traverses from north to south within the eastern corner of the track.

Under this Preliminary Land Development application, the Applicant is proposing to demolish the existing structures of the former St. Basil Academy School site; and construct a total of 150 age-restricted carriage homes as well as a clubhouse and pool on an existing parcel of land located within the newly created AR – Age Restricted Carriage Home Overlay District. The entire site consists of approx. 46.37 acres and is located within the CS – Community Service Zoning District. Other site improvements for this site include parking, curbing, sidewalk, landscaping, lighting, and sanitary and stormwater management facilities. Access to/from the site will be by way of one (1) proposed entrance off Fox Chase Road. In addition, an emergency access road is proposed off of Fox Chase Road on the northwestern corner of the site.

In accordance with the FEMA, Flood Insurance Rate Map (FIRM) Panel No.42091C0403G, effective March 2, 2016, the tract is identified to be primarily located within Zone X, an area outside the 0.2% chance flood and minimal flood hazard. However, the area where the Pennypack Creek tributary traverses the site is located within Flood Zone X, an area of 0.2% annual chance flood hazard, areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile. Therefore, based on the FEMA FIRM determination, this site is not located within the Floodplain Conservation District, and is therefore not subject to the floodplain regulations of the Floodplain Conservation District. However, per the Abington Township Riparian Corridor Analysis Map, Figure 15.2, this parcel is identified as a parcel which is located within and intersecting the Riparian Corridor; and is therefore subject to the regulations of the Riparian Corridor Conservation District.

CONDITIONAL USE GRANTED

The Applicant appeared before the Abington Township Board of Commissioners at the Public Hearing held on July 13, 2023. The Applicant was granted the following conditional use approval from the Abington Township Zoning Code:

1. **§1503.B.2.b – Uses Permitted by Conditional Use, Zone 2** – A conditional use approval to allow for the installation of a central sewer line in Zone 2 of the Riparian Corridor Conservation District.

WAIVERS REQUESTED

The Applicant is requesting the following waivers from the Abington Township Subdivision and Land Development Code:

1. **§146-11.A.(4) – Property Identification Plans** – A waiver to not show all the information of the TMP, names of owners, the approx. acreage, and similar features within 400 feet.

   The Applicant has provided the property identification information for the immediately surrounding parcels abutting the site, and not the entire 400 feet distance per this Code Section.

2. **§146-11.B.(3) – Existing Features Plan** – A waiver is requested to not show the all the information of the location of property lines and names of owners, and similar features within 400 feet.

   The Applicant has provided the property lines and landowner information for the immediately surrounding parcels abutting the site and not the entire 400 feet distance per this Code Section.

3. **§146-11.B.(7) – Existing Features Plan** – A waiver is requested to not show the all the information of the underground and above ground utilities, and similar features within 400 feet.

   The Applicant has provided the utility information immediately surrounding the parcel and not the entire 400 feet distance per this Code Section.

4. **§146-27.C – Sidewalks and Curbs - Location** – A waiver is requested for the sidewalk along Fox Chase Road. The existing locations of the sidewalk along portions of the road are within a few feet of the curb and roadway. The existing location will be repaired/replaced with a new sidewalk and extended along the entire frontage. The area between the sidewalk and the right-of-way (roughly 12'+) will be used for street tree plantings.

   The Applicant is proposing to retain some portions of the existing curb and sidewalk and make repairs or replacement as needed along the site frontage on Fox Chase Road. The Applicant is proposing new 5 feet wide sidewalk primarily along the center portion of the site frontage which will be located approximately 24 feet to 27 feet from the property line along Fox Chase Road. In addition, the Applicant is proposing to plant street trees between the edge of the roadway and proposed new sidewalk.

5. **§146-27.F – Sidewalks and Curbs** – A waiver is requested for the curbing on the interior roads to be constructed with 6" Belgian Block. The internal roadways will be privately maintained. This variation will help with the subdivision aesthetics and maintenance.

   The Applicant is proposing 6-inch high Belgian Blocks along the interior roadways. The Township standard curb type is 6-inch-high cement concrete curb. The Applicant has requested a waiver from this Code Section to provide 6-inch high Belgian Blocks instead of the Township cement concrete

curb standard since the internal roadways will be privately maintained and for aesthetics complementary to the land development.

6. **§146-29.A – Blocks – Length** – A waiver is requested to allow for the internal roads C, D, F and G to have less than the 500' minimum length. All roads orientation and lengths have been affected by the layout and the extended buffer around the property.

   The internal Road C has an approximate length of 360 feet between intersections; Road D has an approximate length of 470 feet between intersections; Road F has an approximate length of 410 feet between intersections; and Road G has an approximate length of 320 feet between intersections, all of which do not meet the minimum 500 feet length requirement per this Code Section.

7. **§146-33.I – Drainage –** A waiver is requested to not extend rood leaders to road gutter under sidewalk or connect to storm drains, but to instead allow roof drains to flow over lawn to allow pollutants to settler out and infiltrate into the topsoil. This section of the SALDO is also in conflict with 142-802.A of the Stormwater Management Ordinance.
   The Applicant shall show the roof drains and sump pumps (if any) for the proposed clubhouse building, as well as, for each of the proposed townhome dwellings on the plans. Stormwater Ordinance §142-802.A requires roof drains not to be connected to streets, sanitary or storm sewers, or roadside ditches, and shall discharge to infiltration areas or vegetative BMPs to the maximum extent practicable. The Applicant has requested a waiver from this Code Section to allow for roof drains to flow over the lawn areas and infiltrate instead of extending under the sidewalk to the gutter.

   The Applicant has added a typical dwelling unit to the sheet 40 to show possible locations of the roof drains or sump pump (if basement) and updated the sheet 16 to show the possible locations for the roof drains of the clubhouse. The Applicant is requesting a waiver from this Code Section to allow for roof drains to flow over the lawn areas and infiltrate instead of extending under the sidewalk to the gutter.

8. **§146-35.C.(2) – Design and construction of sewers – Size, grade and type –** A waiver is requested to modify the material of the sanitary sewer main to SDR-26 (plastic pipe) from ductile iron. The supply of the SDR-26 is more readily available.
   The Applicant is proposing 8-inch SDR-26 piping for the proposed sanitary sewer system to the site instead of ductile iron pipe per this Code Section. We defer to the Abington Township Wastewater Utilities department for any sewer related comments.

   The Applicant has received acceptance from the wastewater utilities department.

9. **§146-43.C.(3).(a) – Excavations and fills** – A waiver is requested to construct cut and fill slopes greater than 15% for the stormwater basin berms and allow basin slopes and slopes to ties into natural grade up to 33%. The steeper berms will limit the areas taken up by the berms while still adequately capturing and routing the stormwater from the site.

   The applicant is proposing grades of 3:1 or approximately 33% primarily for the stormwater basins to limit the earth disturbance on the site.

The following documents have been reviewed:

Title	Sheet	Dated	Revised
Land Development Plans			
Cover Sheet	1 of 64	03/24/23	10/13/23
Record Plans	2-5 of 64	03/24/23	10/13/23

General Notes	6 of 64	03/24/23	10/13/23
Existing Features Plans	7-10 of 64	03/24/23	10/13/23
Overall Site Plan	11 of 64	03/24/23	10/13/23
Grading Plans	12-19 of 64	03/24/23	10/13/23
Utility Plans	20-27 of 64	03/24/23	10/13/23
Road Plan & Profile	28-34 of 64	03/24/23	10/13/23
Easement Profiles	35-39 of 64	03/24/23	10/13/23
Construction Details	40-41 of 64	03/24/23	10/13/23
Storm Sewer Details	42-43 of 64	03/24/23	10/13/23
Sanitary Sewer Details	44-45 of 64	03/24/23	10/13/23
Water Details	46 of 64	03/24/23	10/13/23
Basin Details	47-55 of 64	03/24/23	10/13/23
Landscape & Lighting Plans	56-63 of 64	03/24/23	10/13/23
Landscape & Lighting Details & Notes	64 of 64	03/24/23	10/13/23
Stormwater Management Narrative	419 pages	July 2023	October 2023

We have performed a review of the above referenced plans for compliance with the Zoning Ordinance (Chapter 162); Subdivision and Land Development Ordinance (Chapter 146); and Stormwater Management Ordinance (Chapter 142), and our previous review dated August 23, 2023. We offer the following outstanding comments for your consideration:

ZONING COMMENTS

8. **Per §1711, Figure 17.2 – Dimensional Regulations** – The minimum open space shall be the gross site area (in acres) x 0.40.
The Applicant has provided a building coverage percentage of 34.3% which is in compliance with this Code Section. The Applicant shall provide an open space calculation on the plans showing the total open space and the resulting percentages to ensure compliance with this Code Section.

The Applicant is showing the proposed open space on the Overall Site Plan (Sheet 11) and has provided the open space calculations on the Record Plan (Record Sheet 2 of 4). However, there is discrepancy between the open space calculated in the Area Tabulation (39.694 Ac) and the open space acreage given in the Zoning Table (22.6 Ac). The discrepancy shall be confirmed and revised to be consistent on both plan sheets.

The Applicant clarified that the open space calculated in the Area Tabulation (39.694 Ac) is all the area outside the road ROW's and the encroachment areas. The open space acreage in the Zoning Table (22.6 Ac) is the qualifying open space for the site. The applicant shall add the qualifying open space acreage at the end of the Area Tabulation to clarify the qualifying open space calculation.

18. ***Per §2401.A.2.d.(1).(a) – Preservation and Protection of Existing Vegetation*** *– Tree replacement shall occur when new impervious coverage exceeds 500 SF and a tree with a minimum caliper of six (6) inches is removed. In such cases, two new trees, each a minimum of 3-to-3.5" caliper, measured 6" above grade, shall be planted for each tree with a minimum caliper of 6" or greater that is removed.*

Based on the Existing Features Plan (Sheet 7), the Applicant is indicating that they are removing 67 trees as part of this Land Development project. The trees shall be labeled with a diameter of the tree to be removed to confirm the required tree replacement. A tree replacement calculation shall be provided on the landscaping plan showing the total number of trees removed and the total number of trees proposed based on this code requirement. In addition, the Applicant shall label the trees that are proposed to remain. For example, on the Existing Features Plan (Sheet 7), the existing trees that are not labeled which are located between the trees labeled 44 and 45 and 48 and 49 as not proposed to be removed; however, on the Utility

Plan (Sheet 24) there is storm piping proposed directly underneath those trees which will require those trees to be removed. The Applicant shall clarify and confirm all trees to remain or to be removed and update the label on the Existing Features plan accordingly.

The Applicant is indicating that they are subdividing the property and creating new lots; therefore §2401.A.2.d.(1).(b) should be used for this project. The Applicant is indicating that no more than 25% of the existing tree canopy is being removed, and the tree replacement requirement does not apply. However, for the site, only the proposed individual homes will be lotted out but the entire site as a whole will be under a homeowner's association or similar entity that will be operating and maintaining the common areas and the Zoning Table is showing a total site area of 46.37-acres in the proposed condition for the existing 46.58-acre site area. Therefore, Section §2401.A.2.d.(1).(a) would be applicable to this site. Based on the existing tree chart provided on the Existing Features Plan (Sheet 8), 66 of the 100 trees on the list are being removed which will require tree replacement for trees with a 6-inch caliper or greater at a rate of 2:1. The tree replacement calculation and the proposed replacement trees shall be provided on the plans accordingly.

The Applicant is proposing 67 trees to be removed which will require a tree replacement of 134 trees. As part of the landscaping proposed for the site, the Applicant is proposing 231 street trees, 70 buffer canopy trees, 175 buffer evergreen trees, and 70 buffer understory trees all of which would satisfy the tree replacement requirement as well as the street tree and buffer tree requirements. The Applicant shall provide a tree replacement calculation on the plans and indicate that the required replacement trees have been included under the street tree and buffer tree requirements. The street tree planting schedule and buffer canopy tree planting schedule shall be revised to reflect a minimum size of 3" to 3.5" to meet the tree replacement specifications.

CHAPTER 146
SUBDIVISION & LAND DEVELOPMENT COMMENTS

26. ***Per §146-10.B.(5) – General Requirements*** *– Once the Applicant confirms the submission type, the submission type in accordance with §146-9.D shall be indicated on all the plan sheets as either "Preliminary Major Subdivision and Land Development" or "Preliminary/Final Major Subdivision and Land Development" and noted as land development application number "LD-23-01".*
The submission type is preliminary major subdivision and land development. The Applicant has revised the plans accordingly.

The submission type has been included on the plans; however, the application number "LD-23-01" has not been included on the plans. This application number should be included.

The Application number LD-23-01 shall be included on all plan sheets. Currently the application number is only shown on the Cover Sheet.

39. ***Per §146-11.G.(1).(e),(f),&(h) – Utility Plan*** *– The utility plan shall show the electrical lines, junctions, vaults, telephone lines, cable television lines and other related appurtenances.*

The Applicant is showing the underground utilities running along the roadways within the development; however, the electrical, telephone, cable, etc. lines are not shown connecting to the proposed dwellings. The Applicant shall provide these connections on the Utility Plans. The Applicant shall also show the electrical lines connecting to the proposed streetlights.

There are multiple locations where a proposed fire hydrant is located directly on top of the underground electric line; i.e., the proposed fire hydrant adjacent to Unit 148 on Road B; adjacent to the side of Unit 118 on Road B; adjacent to the proposed clubhouse on Road A between inlets no. 206 and 212; adjacent to the side of Unit 50 on Road E. The plans show be updated to avoid any utility conflicts.

The fire hydrant adjacent to the proposed clubhouse between inlets 206 and 212 is still shown to be directly overtop the underground electric line. The plan shall be updated to avoid any utility conflicts.

51. ***Per §146-27.F – Sidewalks and Curbs*** *– Curbs shall be the vertical type and constructed in accordance with Township specifications.*

Based on existing conditions, there is existing curbing along the northwestern and southwestern site frontage of Fox Chase Road. The Applicant is not proposing new curbing along the entire site frontage along Fox Chase Road. We recommend that curbing be provided along the entire site frontage to provide a safety barrier between the edge of roadway and new sidewalk, as well as, for consistency of the entire site. In addition, the Applicant is proposing 6-inch high Belgian Blocks along the interior roadways. The Township standard curb type is 6-inch-high cement concrete curb. The Applicant has requested a waiver from this Code Section to provide 6-inch high Belgian Blocks instead of the Township cement concrete curb standard since the internal roadways will be privately maintained and for aesthetics complementary to the land development.

The Applicant has indicated that they will discuss the curbing with the Township. We had recommended that curbing be provided along the entire site frontage to provide a safety barrier between the edge of roadway and new sidewalk, as well as, for consistency of the entire site.

This comment will remain open until the Applicant discusses the curbing along Fox Chase Road with the Township.

GENERAL STORMWATER MANAGEMENT COMMENTS

77. *The emergency spillway for Basin 1 is shown on the plans to be directed towards Fox Chase Road. The emergency spillway for Basin 1 should be revised to minimize impacts to the main street. The Applicant may wish to redirect the overflow towards the open space across from the emergency access drive to allow for additional infiltration and/or extend the existing storm sewer located on Fox Chase Road adjacent to 777 Fox Chase Road (PARID No. 30-00-22428-00-6).*

In the current resubmission, the Applicant has revised the emergency spillway for Basin 1 to discharge to internal Road A near the site entrance. The runoff from the emergency spillway will sheet flow from Basin 1 over the proposed sidewalk on Road A to be primarily captured by proposed inlet no. 804. However, the flows from proposed inlet no. 804 will be discharged to the same manhole no. 802 and existing storm sewer system as the routed flows from Basin 1. The Applicant may wish to consider relocating the emergency spillway towards the emergency access end and evaluate the feasibility of directing flows onto the open space and tie into the existing storm sewer system at that end instead of discharging to the same storm sewer system on Fox Chase Road adjacent to the site entrance on Road A. The Applicant may also wish to consider moving the proposed inlets no. 804 and 806 closer to the stop sign on Road A to capture additional stormwater runoff prior to sheet flow onto Fox Chase Road. In addition, the Applicant should consider the feasibility of capturing the runoff from the emergency spillway of Basin 2 and direct the flows into the existing storm sewer that runs parallel to Fox Chase Road prior to sheet flow onto the existing sidewalk.

The Applicant has added additional inlets 808 and 810 to capture the stormwater flows from the emergency spillways of Basins 1 and 2, respectively. The Applicant also relocated proposed inlets 804 and 806 further upstream from the entrance intersection with Fox Chase Road. The Applicant may be able to avoid adding proposed inlet 808 at the Basin 1 emergency spillway by relocating proposed inlet 804 along proposed Road A further downstream of the emergency spillway, prior to the stop bar to capture the flows prior to leaving the site and flowing onto Fox Chase Road. We also recommend relocating proposed inlet 810 at the Basin 2 emergency spillway further down to the base of emergency

spillway slope for higher efficiency in capturing the runoff and to allow infiltration prior to being conveyed by the proposed inlet.

GENERAL COMMENTS

80. *Per the Existing Features Plans (Sheets 7 to 10), there are multiple locations where private fencing and structures are shown to be encroaching within the site boundaries from the abutting properties that front Forrest Avenue, Kirkwood Street, and Suffolk Road. The Applicant shall clarify if the private fences and structures are permitted to remain or be required to be removed outside the site boundaries. It is recommended that a written agreement to permit these encroachments for each of the properties should be provided to the Township.*

The Applicant has indicated that they are working with the Township and the neighboring properties that currently encroach the site boundary to remove the encroachments.

The Applicant has indicated that they are working to resolve the disposition of the encroachments. All encroachments shall be rectified prior to recording of the plans. Copies of written agreements shall be provided to the Township for encroachments to remain.

82. *The existing features shall be turned off on the proposed improvement plans.*

For clarity, the existing features including but not limited to the existing trees, pavement, sidewalk, curbing, buildings, etc. which are labeled as "To Be Removed" shall not be shown on the proposed improvement plans.

In addition, sheets 52 and 54 are labeled as intentionally blank within the plan set. The Applicant shall clarify if information shall be provided on these plans. If no information is to be provided, these plan sheets can be removed from the plans set.

84. *A detail of the proposed emergency access chain and bollards is provided on the Construction Details Plan (Sheet 41); however, the chain and bollard does not appear to be shown on the plans. The Applicant shall show the location of the chain and bollard for the proposed emergency access. The Applicant should provide no parking signs at the entrances to the emergency access in addition to the proposed "DO NOT ENTER" sign located adjacent to Unit 100.*

As part of the emergency management/access for this site, vehicular circulation plans shall be provided showing the fire truck movement for the site to determine if the Abington Township fire truck can adequately maneuver throughout the site. A vehicular circulation plan for a refuse collection truck shall also be provided.

We have received the following documents/permits/reviews:

- AQUA Will Serve Letter (January 29, 2021)
- Transportation Impact Assessment (February 10, 2023, last revised March 13, 2023)
- Conditional Use Application (March 27, 2023)
- MCPC Request for Review (March 27, 2023)
- Application for SALDO Review (March 27, 2023)
- Waivers Request (included w/ SALDO Application) (March 27, 2023)
- Post Construction Stormwater Management Report (March 2023)
- TPD Traffic Review (April 29, 2023; November 11, 2023)
- Sanitary Sewer Review (May 12, 2023; November 9, 2023)
- STC Review (May 10, 2023)
- Fire Marshal Review (May 12, 2023 via email; November 9, 2023)

- EAC Review (May 11, 2023)
- MCPC Review (May 19, 2023; November 9, 2023)
- MCCD Incompleteness Review Letter (August 29, 2023)
- MCPC Request for Review (October 18, 2023)

We have not received the following documents/permits/reviews:

- MCCD Approval
- Sanitary Sewer Availability Letter (pending historical downstream sewer capacity evaluation)
- Application for Sewage Facilities Planning Module Exemption Mailer
- NPDES Permit
- Financial Escrow
- LD Agreements
- Stormwater BMP O&M Agreement
- Legal Descriptions & Exhibits of all easements

SUMMARY

Since the outstanding zoning comments can be addressed without going before the Zoning Hearing Board, we recommend Preliminary Major Land Development Plans approval conditioned that the Applicant addresses the above referenced comments, in particular the zoning and traffic comments.

If you have any questions or comments with this submittal, please do not hesitate to contact me.

Sincerely,

PENNONI

Khaled R. Hassan, PE
Township Engineer

cc: Terry Castorina, Assistant to the Township Manager
Ashley McIlvaine, Assistant Township Manager & Assistant CAO

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WASTEWATER DEPARTMENT

George Wrigley, Director

May 12, 2023

Toll Mid-Atlantic LP Company, Inc.
1140 Virginia Drive
Fort Washington, PA 19034

RE: Sisters of St. Basil The Great (Parcel #3000224001 & 30002242005)
Abington Sanitary Sewer Review

Gentlemen:

The Abington Township Wastewater Utilities Department has reviewed plans for the land development at 711 Fox Chase Road, Jenkintown, PA 19046 dated March 24, 2023, prepared by ESE Consultants, Inc. in regards to the proposed sanitary sewer collection system and the projected sanitary sewer generation rates to be discharged to the existing sanitary sewer system. We have the following comments:

Estimated sanitary generation rates:

The criteria for verifying the existing sanitary sewer collection and conveyance systems are based on the water consumption rates for similar "townhouse style" residential age restricted residential homes in Abington Township. The average sanitary generation rate is 265 gallons per day (gpd) per Equivalent Dwelling Unit (EDU). There are 150 two story residential units proposed for the development and the existing school buildings is proposed to be demolished.

We have received and reviewed the April 17, 2023 letter from Ebert Engineering, Inc. which summarized sanitary flows from Stony Creek Farms in Worchester Township, Montgomery County, Green Hill Sewer Association in East Goshen Township, Chester County and Riviera at Concord Wastewater Treatment Facility in Concord Township, Delaware County. It was determined that each of the three sanitary systems annual average flow was less than the minimum of 150 gallons per day (gpd) that would be accepted by PaDEP. Therefore, we have investigated properties within Abington Township that are similar to the proposed age restricted townhouse style homes to determine a flow rate per unit.

The Walnut Hill development located on Harpers Lane in Huntingdon Valley, PA 19006 consists of age restricted townhouses similar to the proposed units for the 711 Fox Chase Road property. Table A summarizes five years of quarterly water useage data provided by Aqua Pa, which we routinely use for our sewer billing each year. The daily water use for each property was averaged over the five years, with an overall average flow rate for all properties of 203 gpd per unit.

The maximum recorded water useage of the existing school was 1,795 gpd based on the peak annual recorded water use in 2018. At the average sanitary generation rate of 265 gpd, this

WASTEWATER DEPARTMENT

George Wrigley, Director

amounts to an existing capacity of 6.7 EDU. This existing capacity is within the drainage area that flows through our Jenkintown meter prior to discharge into the Aqua Pa (Cheltenham) sanitary sewer system. A maximum of eight (8) proposed units would need to be conveyed to the existing sanitary collection system in Fox Chase Road.

The projected sanitary flow generated by this land development for 150 units is 30,450 gpd (150 units X 203 gpd = 30,450 gals), which equates to a total of 114.9 EDU. Deducting the existing capacity of 6.7 EDU from the total of 114.9 EDU, results in a projected additional need for 108.2 EDU. The current tapping / capacity fee is $3,500.00 per EDU, which would total $378,700.00 for the additional EDU. The additional flow of 28,655 gpd would need to be conveyed to the existing sanitary sewer located along the rear (northern) boundary of the property, which eventually discharges to the Philadelphia Water Department's Pennypack Creek Interceptor.

DEP Planning Module Exemption Mailer:

The DEP mailer form should be completed utilizing the editable PDF or WORD digital file provided by PaDEP, along with all supporting documents. Since the land development would require the demolition of the existing school that discharged to the Aqua Pa (Cheltenham) collection system. a written narrative should be submitted describing the demolition and partial flows to Aqua Pa (Cheltenham) and to PWD's Pennypack interceptor and the PWD Northeast Water Pollution Control Facility for treatment.

Land Development plan review:

The following comments are based on the set of development plans consisting of Sheet 1 of 64 thru 64 of 64 dated March 24, 2023.

Sheets 20 through 27 – Utility Plans – The proposed 8" diameter sanitary sewer within Fox Chase Road should utilize Ductile Iron Pipe Class 52.

Sheets 20 through 27 – Utility Plans – If the proposed internal roads are to be dedicated to the Township of Abington, all sanitary sewers should be Ductile Iron Pipe Class 52, otherwise the proposed SDR-26 PVC pipe is acceptable.

Sheets 20 through 27 – Utility Plans – Adjacent lateral wyes installed across the 8" dia. sanitary sewers shall be located a minimum of 4 feet apart. No Tee fittings are acceptable.

Sheets 20 through 27 – Utility Plans – The majority of 8" dia. sewers are proposed with minimum slopes of 0.50%. As many as possible of these sanitary sewers should be revised to provide a minimum slope of 0.70%.

WASTEWATER DEPARTMENT

George Wrigley, Director

Should you have any questions or require any additional information, please contact me at 215-884-8329 or email at gwrigley@abingtonPa.gov.

Sincerely,

George R. Wrigley, Director
Abington Township Wastewater Utilities Department

pc: Ashley McIlvaine, Assistant Township Manager
Terry Castorina, Executive Assistant
Khaled Hassan, PE. Pennoni
Allison Lee, PE. Pennoni
Frederick E. Ebert, PE. Ebert Engineering, Inc.

Enclosures

TABLE A

Abington Township - Walnut Hill Townhomes Age Restricted

Aqua Water Account Service Address	2022 Average Daily Flow (gpd)	2021 Average Daily Flow (gpd)	2020 Average Daily Flow (gpd)	2019 Average Daily Flow (gpd)	2018 Average Daily Flow (gpd)	5 year Avg. Daily Flow (gpd)
1379 HARPERS LN	273	180	205	185	(1)	211
1375 HARPERS LN	335	255	276	157	(1)	255
1371 HARPERS LN	117	180	180	186	182	169
1367 HARPERS LN	329	221	(1)	(1)	(1)	275
1363 HARPERS LN	(1)	(1)	204	183	221	203
1359 HARPERS LN	(1)	(1)	(1)	(1)	(1)	-----
1355 HARPERS LN	280	199	447	215	195	267
1350 HARPERS LN	213	243	118	221	173	194
1354 HARPERS LN	179	172	191	168	187	179
1358 HARPERS LN	(1)	(1)	(1)	(1)	(1)	-----
1366 HARPERS LN	189	206	282	257	279	243
1370 HARPERS LN	132	136	108	131	107	123
1374 HARPERS LN	124	116	131	(1)	70	110
1351 HARPERS LN	217	193	252	195	160	203
					Average All Accounts	203

NOTES: (1) Indicates properties that are vacant for one or more quarters.

WASTEWATER DEPARTMENT

George Wrigley, Director

November 9, 2023

Toll Mid-Atlantic LP Company, Inc.
1140 Virginia Drive
Fort Washington, PA 19034

RE: Sisters of St. Basil The Great (Parcel #3000224001 & 30002242005)
Abington Sanitary Sewer Review of Preliminary Plans

Gentlemen:

The Abington Township Wastewater Utilities Department has reviewed the Preliminary Major Subdivision and Land Development plans for 711 Fox Chase Road, Jenkintown, PA 19046 dated March 24, 2023 and last revised October 13, 2023, as prepared by ESE Consultants, Inc. in regards to the proposed sanitary sewer collection system.

Land Development plan review:

The following comments are based on the set of development plans consisting of Sheet 1 of 64 thru Sheet 64 of 64 and our sanitary review letter of May 12, 2023.

Sheet 2 –Record Plan– General Note 11 should be revised to include …"and new sanitary sewer pipe systems located in Right of Ways, Parcels, Lots, Open Spaces and Roadways".

Sheet 2 –Record Plan– General Note 13 should be revised to the following: "Proposed Lots to be served by existing domestic and/or fire public water systems and existing public sanitary sewer systems".

Sheets 20 through 27 – Utility Plans – A note should be added stating "Adjacent lateral wyes installed in an 8" diameter sanitary sewer main shall be located a minimum of 4 feet apart. Tee fittings are prohibited".

Sheets 20 through 27 – Utility Plans – The majority of 8" diameter sewers are proposed with slopes of 0.50%. A minimum slope of 0.70% should be utilized for sanitary sewers. Sanitary manholes with proposed invert in pipe connections less than 3.0 feet above the invert out should not be constructed as a drop manhole. The slope of the invert in pipe should be increased so that the pipe connects to the manhole 0.2 feet above the invert out elevation.

Sheet 44– Sanitary Sewer Details – Detail No. 13 "Precast Sanitary Manhole Inside Drop Connection" should be added to the plans. (see enclosed)

WASTEWATER DEPARTMENT

George Wrigley, Director

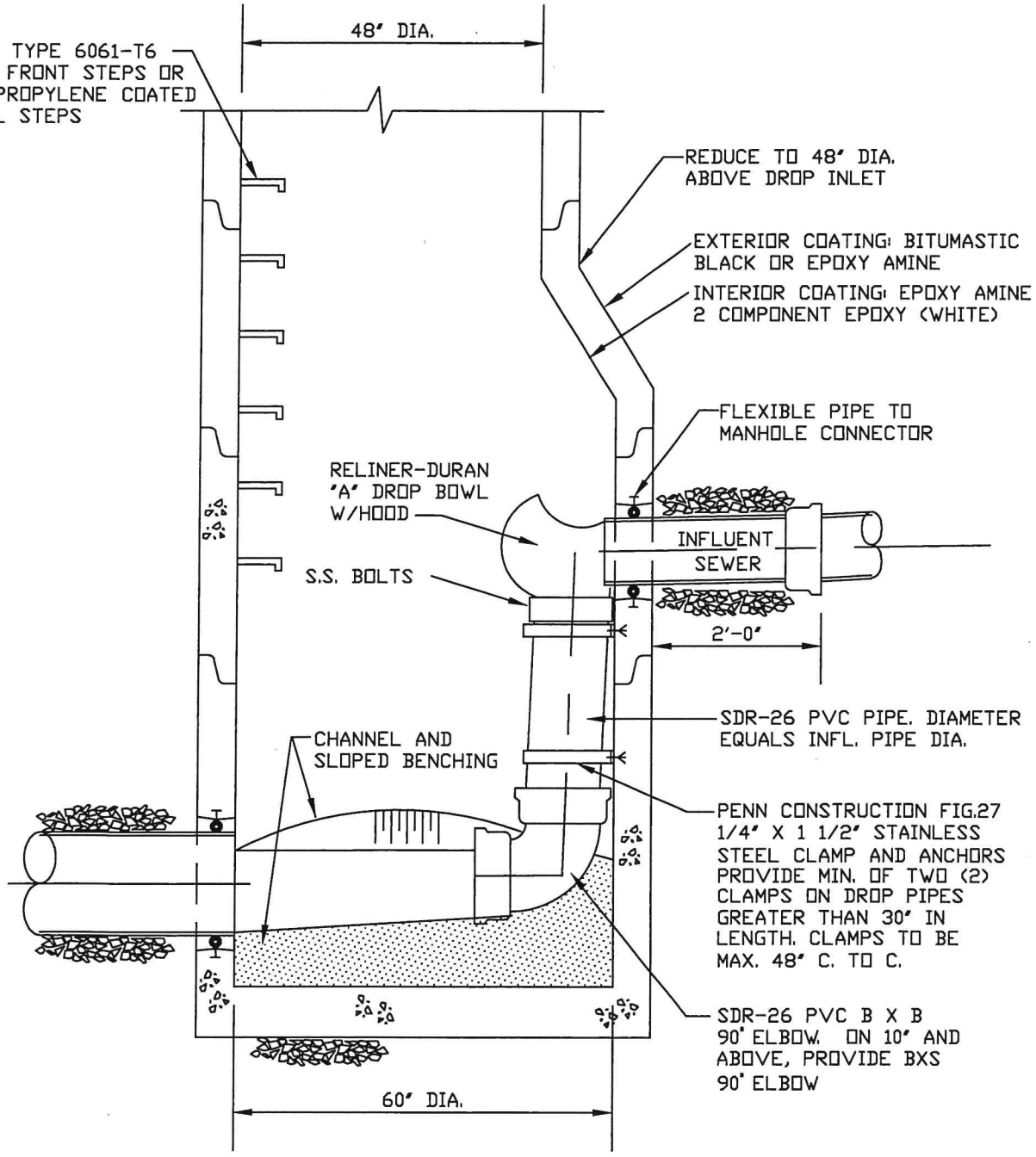
Should you have any questions or require any additional information, please contact me at 215-884-8329 or email at gwrigley@abingtonPa.gov.

Sincerely,

George R. Wrigley, Director
Abington Township Wastewater Utilities Department

pc: Ashley McIlvaine, Assistant Township Manager
Terry Castorina, Executive Assistant
Khaled Hassan, PE. Pennoni
Allison Lee, PE. Pennoni
Frederick E. Ebert, PE. Ebert Engineering, Inc.

Enclosures



NOTES: 5' DIAMETER MANHOLE TO BE UTILIZED FOR INSIDE DROP MANHOLE
PIPED DROP TO BE USED FOR VERTICAL ELEVATION CHANGE GREATER THAN 2 FT.

Township of Abington STANDARD DETAIL - SEWER SYSTEM	
PRECAST SANITARY MANHOLE INSIDE DROP CONNECTION (8" - 24" SEWERS)	DATE: NOVEMBER 2015 DETAIL: 13

May 10, 2023

MEMO

To: Lucy Strackhouse, Chair – Abington Township Planning Commission
From: Abington Township Shade Tree Commission
RE: Sisters of St. Basil LD-23-01, 711 Fox Chase Road
Plan Set Date: March 24, 2023

Site Summary
Owner: Sisters of St. Basil the Great
Zone – CS – Community Service District, with AR (Age restricted) Carriage home overlay
Watershed – Tookany Creek and Pennypack Creek Tributaries
Plan: Proposed 150- single family attached units Subdivision and Land Development Plan

Dear Chairperson Strackhouse,

The members of the Abington Township Shade Tree Commission have had the opportunity to review the above referenced land development plan set dated March 24, 2023 and distributed to us on April 6. The project was included on our regular May 9 meeting agenda where STC members gave feedback and discussed. The following comments are based on our review.

1) For the wooded area located on the northeast corner of the plan the STC recommends a plan be developed and funded by the developer to address significant invasive plant pressure on this wooded area.

2) Under tree protection notes on page 64 instructions incorrectly note pruning flush with the trunk and painting the pruned area. Best practice states pruning cuts should be made in line with the branch collar and cuts should not be painted.

   The STC strongly recommends that the standard #2 under tree protection notes on page 64 is followed closely. This states that a responsible person from the township should be notified to inspect the tree protection before construction begins. In our experience if this is not set-up correctly before construction begins trees will be damaged and lost.

3) Under planting detail of trees, conifers and shrubs on page 64 – the STC recommends following the best practice of completely removing all burlap & twine and all or at least as much of the cage as possible from the planting hole of all B&B trees and shrubs.

4) On page 8 chart 'Existing trees 10" or greater in diameter':

   a. Tag #1 & #3 Tree of Heaven listed as 'remaining'. This is an invasive non-native species – the STC recommends that these be removed if possible.

   b. Tag #84 Beech identified as 'to be removed' the STC recommends, if at all possible, this tree remain. (See EAC comments in detail regarding this)

5) Under Plant Legend beginning with page 56:

   a. The STC appreciates that the developer included all native species in the plant list.

   b. Under Street Trees- The STC recommends removing the Red Oak, *Quercus rubra* due mainly to the issue of bacterial leaf scorch. Replace these with the use of White Oak, *Quercus alba*.

   c. Under Buffer Evergreen TreesThe STC recommends removing or at minimum reducing the use of the White Spruce, *Picea glauca* and the Baby Blue Colorado Spruce, *Picea pungens* due to the failure frequency of these plants in our area due mainly to heat stress. In place we recommend: American Holly, *Ilex opaca* and Common Juniper, *Juniperus communis.*

6) In the open spaces outside of the tree and shrub buffers there appears to be large areas unidentified and likely grass, which provides almost no value to wildlife or storm water absorption function. The STC strongly recommends expanding the tree and shrub buffers into these areas to reduce the amount of grass. Alternatively, well-defined sections within these areas could be seeded with native perennial grasses and wildflowers, providing ecological value to local wildlife and aesthetic value to the homeowners and visitors.

7) The backyard areas of the homes indicate few trees. The STC recommends adding more native trees to the backyard areas of the homes to offer the benefit of shade for the homes.

Respectfully submitted,

John Kennedy

John Kennedy
Abington Township STC

cc: Richard Manfredi
Michael Narcowich
Shaun Littlefield
Planning Commission Members
EAC Members
Abington Shade Tree Commission Members

TRAFFIC PLANNING AND DESIGN, INC.

WWW.TRAFFICPD.COM

Memorandum

To: Richard Manfredi, Manager - Abington Township

From: Greg Richardson, P.E.

Date: April 28, 2023

Re: Sister of St. Basil – Active-Adult Development
Traffic Review #2
Abington Township, Montgomery County, PA
TPD No. ABTO.00033

cc: Board of Commissioners
Planning Commission
Tim Clark
Ashley McIlvaine
Terry Castorina
Khal Hassan, P.E.
Allison A. Lee, P.E.

Per your request and on behalf of Abington Township, Traffic Planning and Design, Inc. (TPD) has completed a traffic review of the above-referenced application. TPD reviewed the following documents:

- Traffic Impact Assessment prepared by McMahon Associates, Inc. – Dated March13, 2023
- Concept "L" Plan prepared by ESE Planning – Dated January 19, 2022.

The following are our comments:

Traffic Impact Assessment Study Review

1. As stated in our August 2022 review, the Applicant should coordinate with SEPTA to review the existing bus stops in the immediate project area and explore the possibility of providing shelters and pedestrian connectivity along the site frontage. The response letter states that some level of coordination took place, however, no correspondence was provided confirming such.
2. As per our August 2022 review, modifications to the northbound Manor College Drive will be necessary to provide proper alignment with the proposed boulevard-style access driveway for the development.
3. As per our August 2022 review, it is recommended that the Applicant fully modernize the traffic signal in conjunction with the roadway improvements for the development. However, we will defer to the Township regarding this matter.

Site Plan Review

1. As per our August 2022 review, due to the type of proposed development (active-adult), separate left and right turn lanes should be provided on Fox Chase Road at its intersection with the Manor College driveway and the proposed site driveway. However, we will defer to the Township and PennDOT regarding this item.
2. As per our August 2022 review, the anticipated parking for the development should be specified and clearly identified on the plan. Consideration should be given to providing on-street parking which is spread evenly throughout the development to accommodate visitors, special events, families, etc. The Applicant should explore traffic calming measures in conjunction with on-street parking, such as curb extensions and midblock bump-outs, to reduce vehicle speeds on the long and straight internal roads. It does not appear that the sketch plan that was submitted has not addressed this comment.
3. As per our August 2022 review, additional details should be provided on the clubhouse operations to determine the appropriate amount of parking that may be necessary to service its intended use.
4. As per our August 2022 review, the need for streetlighting along the internal roads and along the property frontage on Fox Chase Road should be discussed with the Township. The applicant's response is that they would like to discuss this item during the Land Development phase.
5. As per our August 2022 review, the Township Fire Chief should review the plan and approve the proposed circulation patterns. The applicant's response is that they would like to discuss this item during the Land Development phase.
6. New comment: Based on the Land Development plans, curb is proposed to be replaced at the driveway tie-in. To the north of the driveway, there is no existing curb on Fox Chase Road (based on Streetview). We recommend that the Township consider requesting additional curb along the entire site frontage.
7. New comment: To the south, the sidewalk is asphalt, behind the curb with no buffer, and looks to be in poor condition. We recommend that the Township consider a requirement to replace sidewalk across the entire site frontage to the south.

General

1. Since any modifications to the signalized intersection of Fox Chase Road, the Manor College driveway, and the proposed site driveway is subject to PennDOT review and approval, any correspondence to and from the Department must also be coordinated with our office and the Township, and evaluated and addressed accordingly in subsequent submissions.
2. A response letter must be provided with the resubmission detailing how each comment above has been addressed, and where each can be found in the resubmission materials (i.e., plan sheet number(s), page number(s), etc.) to assist in the re-review process.

TPD reserves the right to make additional comments upon receipt of additional documents or changes to the plan and studies

TRAFFIC PLANNING AND DESIGN, INC.

WWW.TRAFFICPD.COM

Memorandum

To: Richard Manfredi, Manager - Abington Township

From: Greg Richardson, P.E.

Date: November 10, 2023

Re: Sister of St. Basil – Active-Adult Development
Traffic Review #3
Abington Township, Montgomery County, PA
TPD No. ABTO.00033

cc: Board of Commissioners
Planning Commission
Tim Clark
Ashley McIlvaine
Terry Castorina
Khal Hassan, P.E.
Allison A. Lee, P.E.

Per your request and on behalf of Abington Township, Traffic Planning and Design, Inc. (TPD) has completed a traffic review of the above-referenced application. TPD reviewed the following documents:

- Traffic Impact Assessment prepared by McMahon Associates, Inc. – Dated March 13, 2023
- Preliminary Major Subdivision Plans prepared by ESE Planning – Dated October 13, 2023.

The following are our comments:

Traffic Signal Design Review

1. The Applicant has indicated that it will implement modernization of the existing traffic signal and has submitted to PennDOT for review (received comments from 5/23). However, to date, TPD has not received any traffic signal plans or other correspondence related to the signals. Therefore, we defer our review on this item until receipt of these plans.

Site Plan Review

1. Our initial review of this project recommended that separate left and right turn lanes should be provided on Fox Chase Road at its intersection with the Manor College driveway and the proposed site driveway. The Applicant responded that PennDOT was not requiring these lanes. The Township should comment on whether it desires that these lanes be constructed.

2. Confirm that the need for streetlighting along the internal roads and along the property frontage on Fox Chase Road has been discussed with the Township. The applicant's response is that they would like to discuss this item during the Land Development phase.

3. Confirm that the Township Fire Chief has reviewed the plan and approved the proposed circulation patterns. The applicant's response is that they would like to discuss this item during the Land Development phase.

4. Based on the Land Development plans, curb is proposed to be replaced at the driveway tie-in. To the north of the driveway, there is no existing curb on Fox Chase Road (based on Streetview). We previously recommended that the Township consider requesting additional curb along the entire site frontage. The applicant's response is that they would like to discuss this item during the Land Development phase.

General

1. Since any modifications to the signalized intersection of Fox Chase Road, the Manor College driveway, and the proposed site driveway is subject to PennDOT review and approval, any correspondence to and from the Department must also be coordinated with our office and the Township, and evaluated and addressed accordingly in subsequent submissions.

2. A response letter must be provided with the resubmission detailing how each comment above has been addressed, and where each can be found in the resubmission materials (i.e., plan sheet number(s), page number(s), etc.) to assist in the re-review process.

TPD reserves the right to make additional comments upon receipt of additional documents or changes to the plan and studies

ALYSON M. ZARRO

RILEY RIPER HOLLIN & COLAGRECO
ATTORNEYS AT LAW

December 4, 2023

Via First-Class Mail

Abington Township
1176 Old York Road
Abington, PA 19001

Re: Toll Mid-Atlantic LP Company, Inc.; 711 Fox Chase Road
Notice of Land Development Plan Application
Your UPI No. 30-00-21972-00-3

Dear Property Owner:

This firm represents Toll Mid-Atlantic LP Company, Inc. ("Applicant"), the equitable owner of a property located at 711 Fox Chase Road in Abington Township, more particularly identified as Tax Parcel Numbers 30-00-22424-001 and 30-00-22420-005 (the "Property"). In accordance with Section 146-14.F(1)-(2) of the Abington Township Subdivision and Land Development Ordinance, this letter is written to advise you that the Applicant submitted a Preliminary Subdivision and Land Development Plan Application to Abington Township (the "Application"), seeking preliminary subdivision and land development plan approval to develop the Property with 150 age-restricted single-family detached carriage homes.

The Application will be reviewed by the Abington Township Planning Commission at a public meeting on December 20, 2023, at 7:30 pm in the Abington Township Municipal Building, Second Floor Board Room, 1176 Old York Road, Abington, Pennsylvania 19001.

This is the only notice that you will receive of the Application. You are not required to attend the meeting but may attend if you are interested.

Very truly yours,

/s/ Alyson M. Zarro

Alyson M. Zarro

DEC 7 AM 10:41

AMZ/rmf

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024	BOC-16-031424	FISCAL IMPACT
DATE	*AGENDA ITEM NUMBER*	Cost > $10,000
		Yes ☐ No ☐
Code		PUBLIC BID REQUIRED
DEPARTMENT		Cost > $20,100
		Yes ☐ No ☐

AGENDA ITEM:

Galman Zoning Amendment

EXECUTIVE SUMMARY:

Review the Galman requested DRAFT Zoning Map Amendment Ordinance to the Township Planning Commission and comment.

PREVIOUS BOARD ACTIONS:

1-11-24 - Applicant presented to the Board of Commissioners at the Working Session.
2-8-24 - The Board of Commissioners at their regular public meeting approved a motionto refer the Galman requested DRAFT Zoning Map Amendment Ordinance to the Township Planning Commission and the Montgomery County Planning Commission (MCPC) for review and comment.
3-27-24 - Planning Commission

RECOMMENDED BOARD ACTIONS:

Motion to approve a DRAFT Ordinance amending the Official Zoning Map of Abington Township by Rezoning 2.621 acres of land from the RC Recreation Conservation District to the BC Business Center-Foxcroft District.

TOWNSHIP OF ABINGTON
ORDINANCE NO._____

AN ORDINANCE AMENDING THE OFFICIAL ZONING MAP OF ABINGTON TOWNSHIP BY REZONING 2.621 ACRES OF LAND FROM THE RC RECREATION CONSERVATION DISTRICT TO THE BC BUSINESS CENTER - FOXCROFT DISTRICT

WHEREAS, the Board of Commissioners of the Township of Abington is empowered to amend the Zoning Map regulating the use and control of land within the Township;

WHEREAS, the Board of Commissioners of the Township of Abington has determined that it is in the interest of the health, safety, and welfare of the residents of the Township to rezone 2.621 acres of land within the Township and identified below from the RC Recreation Conservation District to the BC Business Center-Foxcroft District;

WHEREAS, the Board of Commissioners of the Township of Abington has determined that the rezoning of this area of land from the RC Recreation Conservation District to the BC Business Center-Foxcroft District is consistent with the community development goals and directives for Abington Township, and the economic vitality of the Township;

WHEREAS the general purpose and intent set forth in The Revised Abington Township Zoning Ordinance include strengthening the viability of commercial areas; and

WHEREAS, the zoning map amendment will further that general purpose and intent.

NOW THEREFORE, the Board of Commissioners of the Township of Abington does hereby enact and ordain as follows:

Section 1. The Official Zoning Map of Abington Township, as provided for in section 300.2 of the Revised Abington Township Zoning Ordinance is hereby amended follows: the area of land shown in the plan attached as Exhibit “A” and as described in the legal metes and bounds on Exhibit “B” is hereby rezoned from the RC Recreation Conservation District to the BC Business Center-Foxcroft District.

Section 2. Severability.

If any section, subsection, or clause of this ordinance shall be deemed to be unconstitutional or otherwise invalid, the validity of the remaining sections, subsections, and clauses shall not be affected.

Section 3. Conflicting Ordinances Repealed.

All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

Section 4. Effective Date.

This ordinance shall become effective and shall be enforced from and after ____, 2023.

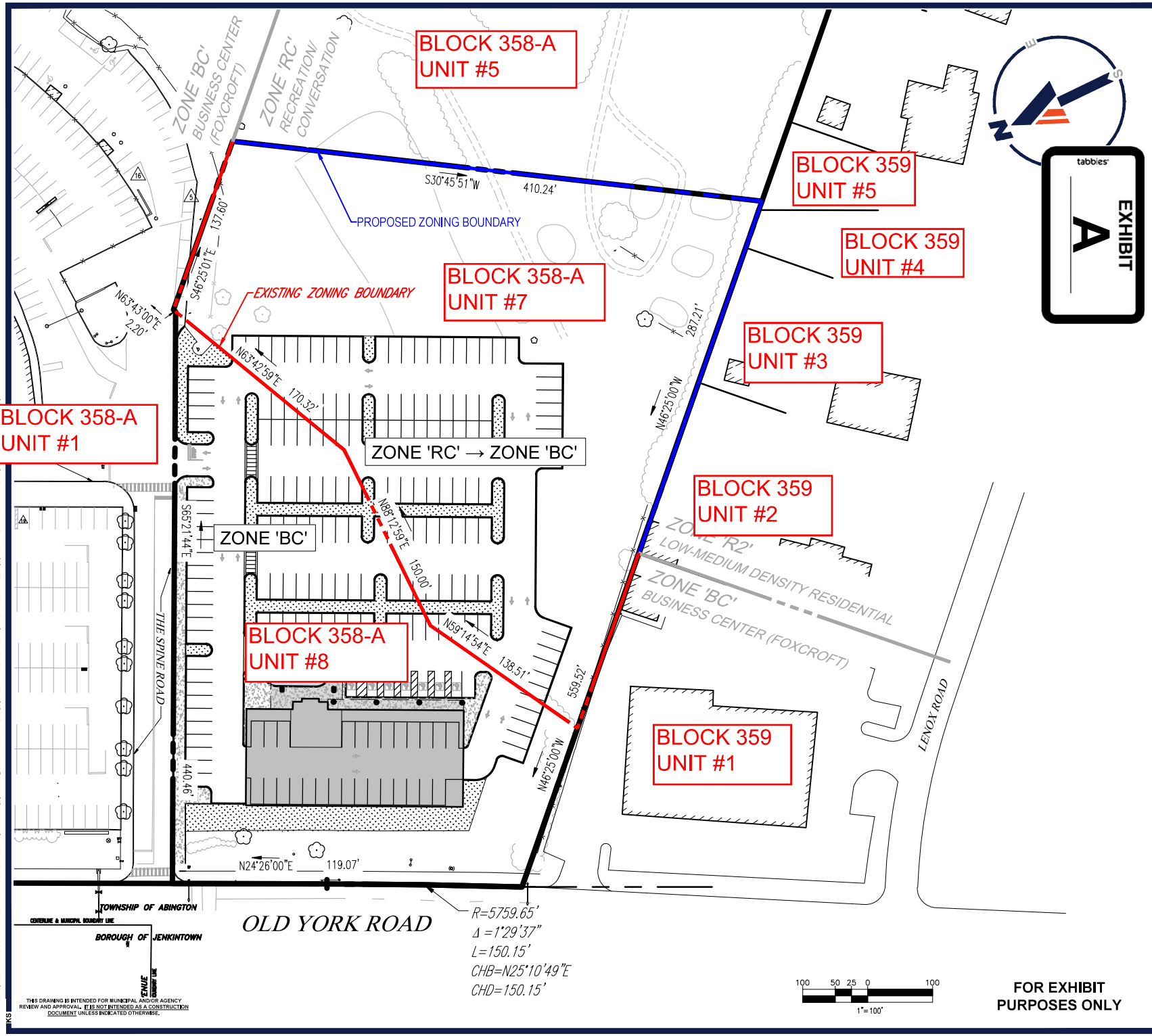
ENACTED AND ORDAINED the _____ day of _____, 2023.

TOWNSHIP OF ABINGTON

Attest:

_____ By:_____

Richard J. Manfredi, Thomas Hecker, President
Township Manager and Secretary Board of Commissioners



BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DATA AND DESIGNS CONTAINED IN THESE PLANS ARE THE PROPERTY OF BOHLER AND ARE NOT TO BE USED IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAN THE SPECIFIC PROJECT AND SPECIFIC PURPOSE FOR WHICH THEY WERE PREPARED AND PUBLISHED. ANY REUSE WITHOUT THE EXPRESS WRITTEN PERMISSION OF BOHLER IS PROHIBITED AND WILL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO BOHLER. © BOHLER

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY

PROJECT No.:	PP203231
DRAWN BY:	KAS
CHECKED BY:	SU
DATE:	01/31/2023

PP203231-ZONING BOUNDARY EXHIBIT-0

PROJECT:

ZONING BOUNDARY EXHIBIT

FOR

OLD YORK ROAD &
MEETINGHOUSE RD
ABINGTON TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA

BOHLER
1515 MARKET STREET, SUITE 920
PHILADELPHIA, PA 19102
Phone: (267) 402-3400
Fax: (267) 402-3401
www.BohlerEngineering.com

M. KEARSE
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE092980

SHEET TITLE:

EXHIBIT PLAN

SHEET NUMBER:

C-101

J:\NETSHARES\PA-PROJECTS\2023\PP203231\DRAWINGS\EXHIBITS\ZONING BOUNDARY EXHIBIT\REV-0\PP203231-ZONING BOUNDARY EXHIBIT-0—LAYOUT: C-101 ZONING EXHIBIT
KS

CONTROL POINT ASSOCIATES, INC.
traditional methods | modern approaches

1600 Manor Drive, Ste 210
Chalfont, PA 18914
Tel: 215.712.9800
cpasurvey.com

FEBRUARY 2, 2023
02-020043-15

EXHIBIT
B

METES AND BOUNDS DESCRIPTION
AREA TO BE RE-ZONED
BLOCK 358-A, UNIT 7
APN #30-00-42724-01-4
LANDS NOW OR FORMERLY
TIP UNIT ACQUISITION LP
TOWNSHIP OF ABINGTON, MONTGOMERY COUNTY
COMMONWEALTH OF PENNSYLVANIA

BEGINNING AT A POINT ON THE DIVIDING LINE BETWEEN BLOCK 358-A, UNIT 7 AND BLOCK 358-A, UNIT 1, LANDS NOW OR FORMERLY PAVILION UNIT ACQUISITION LP, SAID POINT BEING DISTANT 440.46 FEET, ON A COURSE OF SOUTH 65 DEGREES - 21 MINUTES - 44 SECONDS EAST, FROM THE INTERSECTION WITH THE SOUTHEASTERLY RIGHT-OF-WAY LINE OF OLD YORK ROAD (64 FEET WIDE, PUBLIC RIGHT-OF-WAY) AND FROM SAID POINT OF BEGINNING RUNNING, THENCE;

THE FOLLOWING TWO (2) COURSES AND DISTANCES ALONG THE DIVIDING LINE OF BLOCK 358-A, UNIT 7 AND UNIT 1:

1. NORTH 63 DEGREES - 43 MINUTES - 00 SECONDS EAST, A DISTANCE OF 2.20 FEET TO A POINT, THENCE;

2. SOUTH 46 DEGREES - 25 MINUTES - 01 SECONDS EAST, A DISTANCE OF 137.60 FEET TO A POINT, THENCE;

3. ALONG THE DIVIDING LINE OF BLOCK 358-A, UNIT 7 AND UNIT 5, LANDS NOW OR FORMERLY JOHN BARNES TRUSTEES INC. SOUTH 30 DEGREES - 45 MINUTES - 51 SECONDS WEST, A DISTANCE OF 410.24 FEET TO A POINT, THENCE;

4. THENCE ALONG THE COMMON DIVIDING LINE OF BLOCK 358-A, UNIT 7 AND BLOCK 359, UNIT 5, LANS NOW OR FORMERLY BOLLAM & BUCHWALD; BLOCK 357, UNIT 4; BLOCK 359, UNIT 3, LANDS NOW OR FORMERLY FARRINGTON; BLOCK 359, UNIT 2, LANDS NOW OR FORMERLY NIU AND BLOCK 359; UNIT 1, LANDS NOW OR FORMERLY YORK PROFESSIONAL PLAZA ASSOCIATES, NORTH 46 DEGREES - 25 MINUTES - 00 SECONDS WEST, A DISTANCE OF 287.21 FEET TO A POINT, THENCE;

THE FOLLOWING THREE (3) COURSES AND DISTANCES ALONG THE DIVIDING LINE OF BLOCK 358-A, UNIT 7 AND UNIT 8:

5. NORTH 59 DEGREES - 14 MINUTES - 54 SECONDS EAST, A DISTANCE OF 138.51 FEET TO A POINT, THENCE;

6. NORTH 88 DEGREES - 12 MINUTES - 59 SECONDS EAST, A DISTANCE OF 150.00 FEET TO A POINT, THENCE;

7. NORTH 63 DEGREES - 42 MINUTES - 59 SECONDS WEST, A DISTANCE OF 170.32 FEET TO THE POINT AND PLACE OF BEGINNING.

CONTAINING 114,178 SQUARE FEET OR 2.621 ACRE

THIS PROPERTY IS SUBJECT TO RESTRICTIONS, COVENANTS AND/OR EASEMENTS EITHER WRITTEN OR IMPLIED.

THIS DESCRIPTION WAS WRITTEN BASED UPON A MAP ENTITLED "ZONING BOUNDARY EXHIBIT FOROLD YORK ROAD & MEETINGHOUSE RD, ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA", PREPARED BY BOHLER ENGINEERING, DATED 01/31/2023, PROJECT NO. PP203231, SHEET C-101.



CONTROL POINT ASSOCIATES, INC.

02-02-2023

JAMES C. WEED, P.L.S. DATE
COMMONWEALTH OF PENNSYLVANIA
PROFESSIONAL LAND SURVEYOR # SU075250

S:\SURVEYS\02\CP02043\02-020043-15 -GALMAN_THEPLAZA - COPY\M&B\M&B_AREA_TO_BE_REZONED.DOCX
PREPARED BY: MMM REVIEWED BY: JCW

MONTGOMERY COUNTY
BOARD OF COMMISSIONERS

JAMILA H. WINDER, CHAIR
NEIL K. MAKHIJA, VICE CHAIR
THOMAS DIBELLO, COMMISSIONER

WWW.MONTGOMERYCOUNTYPA.GOV

MONTGOMERY COUNTY
PLANNING COMMISSION

MONTGOMERY COUNTY • PO BOX 311
NORRISTOWN, PA 19404-0311

610-278-3722
PLANNING@MONTGOMERYCOUNTYPA.GOV

SCOTT FRANCE, AICP
EXECUTIVE DIRECTOR

March 4, 2024

Mr. Rich Manfredi, Manager
Abington Township
1176 Old York Road
Abington, Pennsylvania 19001-3713

Re: MCPC #24-0043-001
Plan Name: Galman Zoning Map Amendment
Abington Township

Dear Mr. Manfredi:

We have reviewed the above-referenced zoning map amendment in accordance with Section 502 of Act 247, "The Pennsylvania Municipalities Planning Code," as you requested on February 22, 2024. We forward this letter as a report of our review.

BACKGROUND

The township has submitted a proposed zoning map amendment that would rezone Block 358-A Unit #7 (2.62 acres) at 160 Old York Road from RC Recreation Conservation to BC Business Center (Foxcroft). The land proposed for rezoning is currently leased by the owner of Block 358-A Unit #8 (the site of a parking area) to John Barnes Trustees Inc.; the latter property owner operates the Abington Club. The exhibit included with the proposal (Attachment A) for review is dated January 31, 2023.

RECOMMENDATION

The Montgomery County Planning Commission (MCPC) supports the applicant‘s proposal without comment as we have found it to be generally consistent with the township and county comprehensive plans.

CONCLUSION

Should the governing body adopt this proposed zoning ordinance amendment, Section 609 of the Municipalities Planning Code requires that we be sent an official copy within 30 days.

Sincerely,



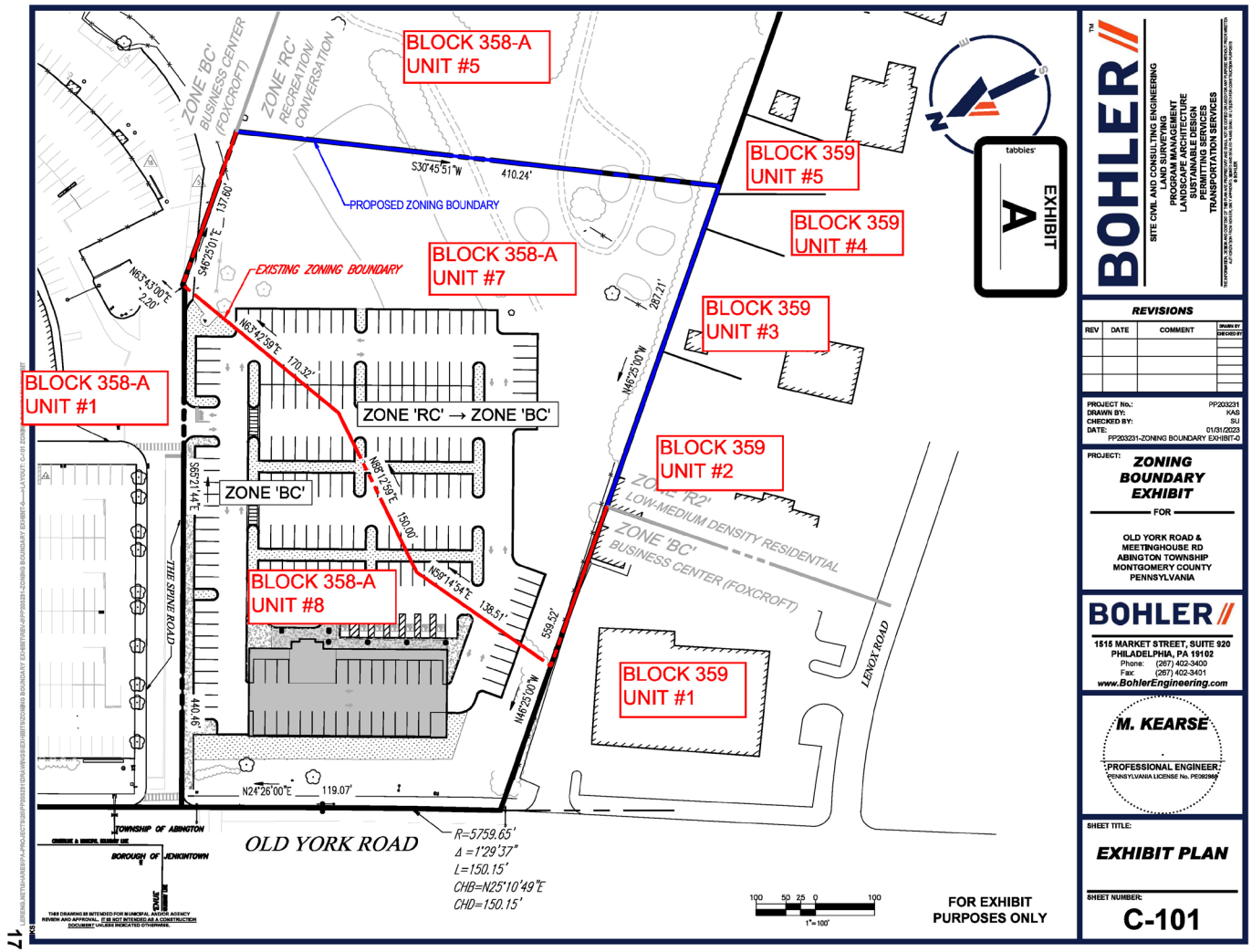
Michael Narcowich, AICP, Community Planning Assistant Manager II
michael.narcowich@montgomerycountypa.gov – 610-278-5238

c:

Nicholas Brown, Chair, Township Planning Commission
Khaled R. Hassan, P.E., Pennoni, Township Engineer
Michael P. Clarke, Esq., Rudolph Clarke, LLC, Township Solicitor

Attachment A: Reduced Exhibit Plan
Attachment B: Aerial Image of Land Proposed for Rezoning

ATTACHMENT A: REDUCED EXHIBIT PLAN



ATTACHMENT B: AERIAL IMAGE



February 28, 2024

ABINT17000.33

Mr. Richard Manfredi, Township Manager
Abington Township
1176 Old York Road
Abington, PA 19001

RE: 160 Old York Road - Galman Zoning Map Amendment
Block 358-A, Unit #7
PARID: 30-00-42724-01-4/TMID: 30358A007
Zoning Map Amendment Review

Dear Mr. Manfredi:

As requested, we have completed our review of the "Exhibit Plan" dated January 31, 2023, and received on February 15, 2024 for the above referenced address. Under this proposed zoning map amendment, the Applicant, The Galman Group, is proposing a rezoning of the existing 2.621 acres land parcel (Block 358-A, Unit #7) located at the above referenced address from the RC – Recreation Conservation District to the BC – Business Center, Foxcroft District. Based on the Exhibit Plan, the Applicant is proposing future site improvements on the subject land parcel for a future parking lot expansion of the adjoining parcel fronting Old York Road (Block 358-A, Unit #8, a.k.a. Old York Road Pad Site) which is located within the BC – Business Center, Foxcroft District.

The subject land parcel is an irregularly shaped property zoned within the RC – Recreation Conservation Zoning District. The site is currently an expansion of the adjoining private recreational golf course parcel (Block 358-A, Unit #5) zoned within the RC – Recreation Conservation District to the east. The site is also bounded by residential properties zoned within R-2 – Low-Medium Density Residential Zoning District to the south; and commercial properties zoned within the BC – Business Center – Foxcroft Zoning District in all other directions.

Based on our review of the Exhibit Plan as noted above, we offer the following comments for your consideration:

ZONING ORDINANCE COMMENTS

1. **Per §1102 & 1301, Permitted Uses in the BC – Business Center District & Uses Specifically Prohibited in the RC – Recreation Conservation District –** The permitted uses will be in accordance with the Abington Comprehensive Use Matrix.

   Per the Abington Comprehensive Matrix, a Use G-6: Golf Course, is only permitted by Special Exception within the RC – Recreation Conservation District. In addition, a Use G-6: Golf Course is not permitted within the BC – Business Center, Foxcroft District; however, since the golf course is an existing use on the subject parcel, the golf course will be considered an existing nonconforming use with the proposed zoning map amendment. The Applicant shall clarify how the operations and

maintenance and/or agreements with the golf course will be impacted, if any, since portions of the golf course is shown on the Exhibit Plan to remain within the subject parcel.

2. **Per §1103, Figure 11.9 – BC – Business Center District – Minimum Lot Area –** The minimum lot area for the BC – Business Center, Foxcroft District shall be 1 Acre.

   Per §1302, Figure 13.1 – RC – Recreation Conservation District – Minimum Lot Area – The minimum lot area for the RC - Recreation Conservation District shall be 5 Acres.

   The lot area of the site is 2.621-acres which is considered an existing nonconforming lot within the RC – Recreation Conservation District since the lot area is less than the required minimum 5-acres lot size. With the proposed zoning map amendment of the site to the BC – Business Center, Foxcroft District, the existing 2.621-acres parcel will be in compliance with the required minimum 1-acre lot size of the BC – Business Center, Foxcroft District, and will be in line with the remaining surrounding parcels owned by the Applicant.

3. **Per §1103, Figure 11.9 – BC – Business Center District – Minimum Lot Width –** The minimum lot width for the BC – Business Center, Foxcroft District shall be 100 feet.

   Per §1302, Figure 13.1 – RC – Recreation Conservation District – Minimum Lot Width – The minimum lot width for the RC - Recreation Conservation District shall be 300 feet.

   The site is an irregularly shaped parcel. Per Section 201- Specific Definitions, the lot width is the distance measured between lot lines, other than the front and rear lot lines, at the front building setback, build-to line, or portion of the build-to-zone closest to the street. There are no existing buildings on the site, and based on our measurements, the lot width is 399.87 feet, which is in compliance with the required minimize lot widths for both zoning districts.

4. **Per §1103, Figure 11.9 – BC – Business Center District – Minimum Lot Depth** – The minimum lot depth BC – Business Center, Foxcroft District shall be 150 feet.

   Per §1302, Figure 13.1 – RC – Recreation Conservation District – Minimum Lot Depth – The minimum lot depth for the RC - Recreation Conservation District shall be 300 feet.

   The site is an irregularly shaped parcel. Per Section 201- Specific Definitions, the lot depth is the average distance between the front and rear lot lines. Our measurements and calculations of the lot depth is as follows:

   Northern property line:137.60 feet
   Southern property line: 430.03 feet
   Average depth : (137.60 feet + 430.03 feet)/2 = 283.95 feet

   Based on our calculations of the lot depth of 283.95 feet, the site is considered existing nonconforming since the current lot depth does not meet the required minimum 300 feet lot depth for the RC – Recreation Conservation District. With the proposed rezoning of the site to the BC – Business Center, Foxcroft District, the site will be in compliance with the required minimum 150 feet minimum lot depth of the BC – Business Center, Foxcroft District.

5. **Per §1103, Figure 11.9 – BC – Business Center District – Minimum Green Area –** The minimum green area BC – Business Center, Foxcroft District shall be 25%.

   Per §1302, Figure 13.1 – RC – Recreation Conservation District – Minimum Green Area – The minimum green area for the RC - Recreation Conservation District shall be 85%.

The site is currently an expansion of the adjoining private recreational golf course parcel (Block 358-A, Unit #5) zoned within the RC – Recreation Conservation District. Based on the Exhibit Plan, the proposed parking lot expansion and existing golf trails are both shown within the subject parcel. The Applicant shall clarify and confirm the existing and proposed minimum green areas for the subject parcel since no zoning data table comparison is provided on the Exhibit Plan.

GENERAL COMMENTS

6. A zoning data table showing the existing and proposed conditions of the subject parcel shall be provided.

7. The label on the subject parcel as shown on the Exhibit Plan indicates the zoning district will be rezoned from 'RC' to 'BC.' This label should be revised to clarify and specify the rezoning from 'RC' to 'BC-FoxCroft' zoning district.

8. On the Exhibit Plan provided, there are two distances shown for the southern property line as 559.52 feet and 287.21 feet for the same bearing. On line item no. 4 of the "Metes and Bounds Description of the Area to be Rezoned," the distance is given as 287.21 feet. Based on the Montgomery County property records, the distance for the southern property line is shown as 430.03 feet. The Applicant shall clarify and distinguish the distances between the subject parcel and the adjoining parcel fronting Old York Road, and revise the Exhibit Plan and legal description accordingly to be consistent.

9. On line item no. 7 of the "Metes and Bounds Description of the Area to be Rezoned" legal description, the bearing of the northwesterly property line currently shows "North 63 degrees - 42 Minutes – 59 Seconds West" with a distance of 170.32 feet, whereas the Exhibit Plan shows the bearing to be "North 63 degrees - 42 Minutes – 59 Seconds East" with a distance of 170.32 feet. Based on our traverse of this property line, the distance of this bearing should be 168.11 feet so as not to overlap the bearing length of 2.20 feet that is already described in line item 1 of this legal description. The Applicant shall clarify and confirm the distances, and revise the Exhibit Plan and legal description accordingly to be consistent.

10. Based on our traverse of the legal description, the parcel size was 114,183.44 SF. The parcel size as shown in the legal description provided is 114,178 SF. The Applicant shall clarify and confirm the square footage of the parcel size, and revise the legal description accordingly.

11. The Applicant shall clarify if they intend to consolidate the subject parcel with the adjoining parcel fronting Old York Road (Block 358-A, Unit #8, a.k.a. Old York Road Pad Site) as part of a future land development application of the sites.

12. The proposed improvements shown on the Exhibit Plan constitutes land development by definition; therefore, the Applicant shall be subject to a land development application in accordance with §146-9.A & B. Additional comments may follow upon SALDO and stormwater management reviews.

If you have any questions or comments with this submittal, please do not hesitate to contact me.

Sincerely,

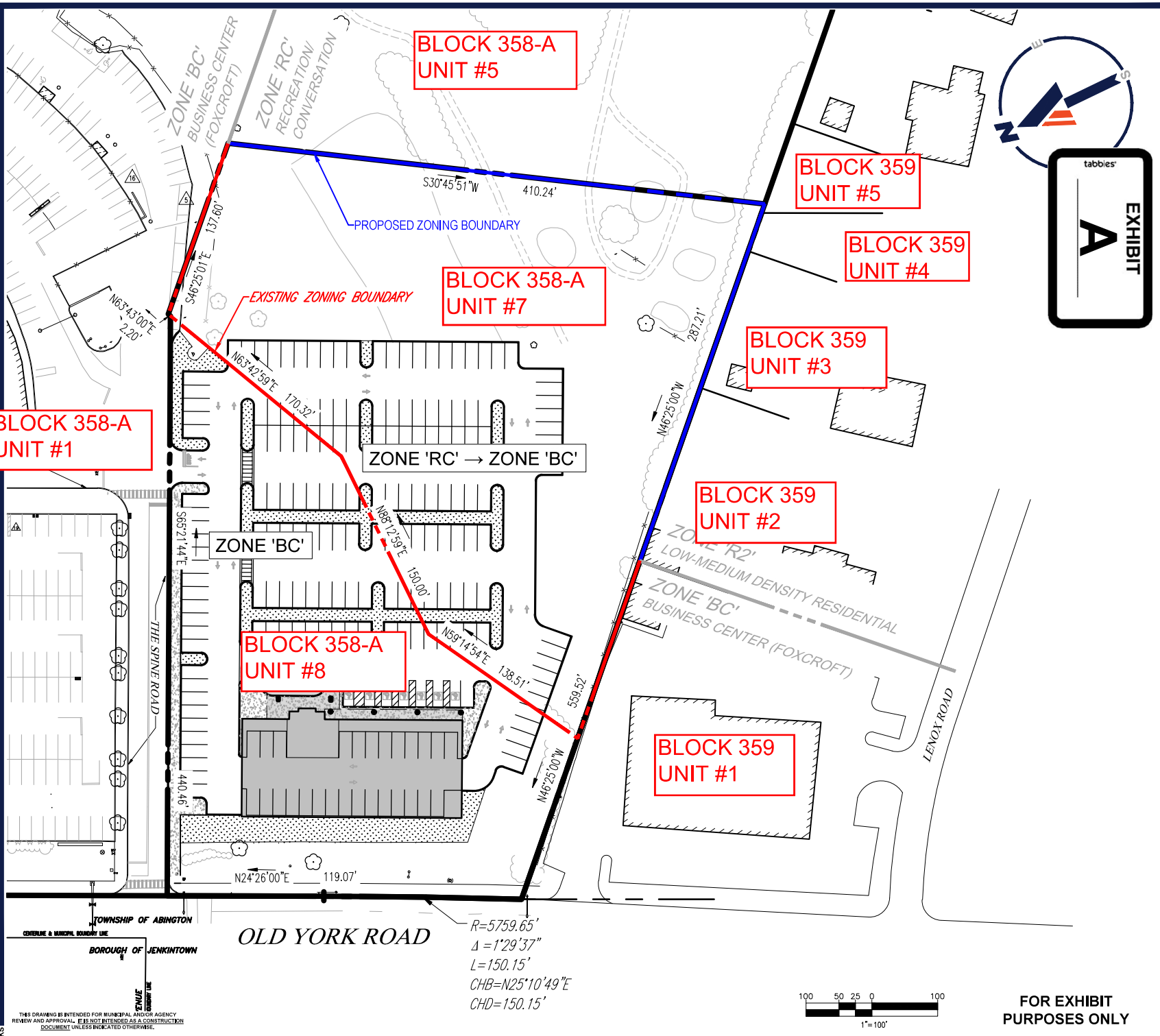
PENNONI ASSOCIATES INC.

Khaled Hassan

Khaled R. Hassan, PE
Township Engineer

cc: Terry Castorina, Assistant to the Township Manager
Ashley McIlvaine, Assistant Township Manager & Assistant CAO

U:\ACCOUNTS\ABINT\ABINT17000 - ZONING REVIEWS\ADMIN\PHASE 33 - 160 OLD YORK ROAD (GALMAN ZONING MAP AMENDMENT)\EXHIBIT PLAN REVIEW\ZR01022824 160 OLD YORK ROAD DOCX



BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY

PROJECT No.:	PP203231
DRAWN BY:	KAS
CHECKED BY:	SU
DATE:	01/31/2023

PP203231-ZONING BOUNDARY EXHIBIT-0

PROJECT:

ZONING BOUNDARY EXHIBIT

FOR

OLD YORK ROAD &
MEETINGHOUSE RD
ABINGTON TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA

BOHLER
1515 MARKET STREET, SUITE 920
PHILADELPHIA, PA 19102
Phone: (267) 402-3400
Fax: (267) 402-3401
www.BohlerEngineering.com

M. KEARSE
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE092980

SHEET TITLE:

EXHIBIT PLAN

SHEET NUMBER:

C-101

500

CONTROL POINT ASSOCIATES, INC.
traditional methods | modern approaches

1600 Manor Drive, Ste 210
Chalfont, PA 18914
Tel: 215.712.9800
cpasurvey.com

FEBRUARY 2, 2023
02-020043-15

EXHIBIT
B

METES AND BOUNDS DESCRIPTION
AREA TO BE RE-ZONED
BLOCK 358-A, UNIT 7
APN #30-00-42724-01-4
LANDS NOW OR FORMERLY
TIP UNIT ACQUISITION LP
TOWNSHIP OF ABINGTON, MONTGOMERY COUNTY
COMMONWEALTH OF PENNSYLVANIA

BEGINNING AT A POINT ON THE DIVIDING LINE BETWEEN BLOCK 358-A, UNIT 7 AND BLOCK 358-A, UNIT 1, LANDS NOW OR FORMERLY PAVILION UNIT ACQUISITION LP, SAID POINT BEING DISTANT 440.46 FEET, ON A COURSE OF SOUTH 65 DEGREES - 21 MINUTES - 44 SECONDS EAST, FROM THE INTERSECTION WITH THE SOUTHEASTERLY RIGHT-OF-WAY LINE OF OLD YORK ROAD (64 FEET WIDE, PUBLIC RIGHT-OF-WAY) AND FROM SAID POINT OF BEGINNING RUNNING, THENCE;

THE FOLLOWING TWO (2) COURSES AND DISTANCES ALONG THE DIVIDING LINE OF BLOCK 358-A, UNIT 7 AND UNIT 1:

1. NORTH 63 DEGREES - 43 MINUTES - 00 SECONDS EAST, A DISTANCE OF 2.20 FEET TO A POINT, THENCE;

2. SOUTH 46 DEGREES - 25 MINUTES - 01 SECONDS EAST, A DISTANCE OF 137.60 FEET TO A POINT, THENCE;

3. ALONG THE DIVIDING LINE OF BLOCK 358-A, UNIT 7 AND UNIT 5, LANDS NOW OR FORMERLY JOHN BARNES TRUSTEES INC. SOUTH 30 DEGREES - 45 MINUTES - 51 SECONDS WEST, A DISTANCE OF 410.24 FEET TO A POINT, THENCE;

4. THENCE ALONG THE COMMON DIVIDING LINE OF BLOCK 358-A, UNIT 7 AND BLOCK 359, UNIT 5, LANS NOW OR FORMERLY BOLLAM & BUCHWALD; BLOCK 357, UNIT 4; BLOCK 359, UNIT 3, LANDS NOW OR FORMERLY FARRINGTON; BLOCK 359, UNIT 2, LANDS NOW OR FORMERLY NIU AND BLOCK 359; UNIT 1, LANDS NOW OR FORMERLY YORK PROFESSIONAL PLAZA ASSOCIATES, NORTH 46 DEGREES - 25 MINUTES - 00 SECONDS WEST, A DISTANCE OF 287.21 FEET TO A POINT, THENCE;

THE FOLLOWING THREE (3) COURSES AND DISTANCES ALONG THE DIVIDING LINE OF BLOCK 358-A, UNIT 7 AND UNIT 8:

5. NORTH 59 DEGREES - 14 MINUTES - 54 SECONDS EAST, A DISTANCE OF 138.51 FEET TO A POINT, THENCE;

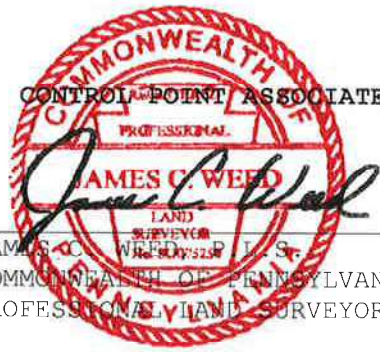
6. NORTH 88 DEGREES - 12 MINUTES - 59 SECONDS EAST, A DISTANCE OF 150.00 FEET TO A POINT, THENCE;

7. NORTH 63 DEGREES - 42 MINUTES - 59 SECONDS WEST, A DISTANCE OF 170.32 FEET TO THE POINT AND PLACE OF BEGINNING.

CONTAINING 114,178 SQUARE FEET OR 2.621 ACRE

THIS PROPERTY IS SUBJECT TO RESTRICTIONS, COVENANTS AND/OR EASEMENTS EITHER WRITTEN OR IMPLIED.

THIS DESCRIPTION WAS WRITTEN BASED UPON A MAP ENTITLED "ZONING BOUNDARY EXHIBIT FOROLD YORK ROAD & MEETINGHOUSE RD, ABINGTON TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA", PREPARED BY BOHLER ENGINEERING, DATED 01/31/2023, PROJECT NO. PP203231, SHEET C-101.



CONTROL POINT ASSOCIATES, INC.

02-02-2023

JAMES C. WEED, P.L.S. DATE
COMMONWEALTH OF PENNSYLVANIA
PROFESSIONAL LAND SURVEYOR # SU075250

S:\SURVEYS\02\CP02043\02-020043-15 -GALMAN_THEPLAZA - COPY\M&B\M&B_AREA_TO_BE_REZONED.DOCX
PREPARED BY: MMM REVIEWED BY: JCW

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024	BOC-17-031424	FISCAL IMPACT
DATE	*AGENDA ITEM NUMBER*	Cost > $10,000 Yes ☐ No ☐
Public Works		PUBLIC BID REQUIRED
DEPARTMENT		Cost > $20,100 Yes ☐ No ☐

AGENDA ITEM:

2024 Public Works Bids Award

EXECUTIVE SUMMARY:

All of the Public Works Materials Bids were advertised in the Intelligencer Newspaper on February 9, 2024. Proof of publication was received. Copies of the bids were placed on the township's website and on PennBid as well. Bids were opened electronically via PennBid on Wednesday, February 21, 2024 at 10AM.

2024 Engineered Retaining Wall System Materials Bid

JDM Materials Company was the single bidder and therefore the lowest responsible bidder with a total bid of **$28,540.00**. JDM Materials Company was awarded the bid in 2019, 2020, 2021, 2022 & 2023 as well. We have been very pleased with JDM's products and service and are confident that they will continue to provide satisfactory services to the township. The materials from this bid will be used by the Construction Services crew for Stormwater Capital Improvement Projects. A copy of the bid tabulation sheet is included for your review.

2024 Superpave Materials Bid

Two bids were received and **Eureka Stone Quarry** was the lowest responsible bidder with a total bid price of **$1,267,540.00.** We have worked with Eureka Stone Quarry in years passed and are satisfied with both their products and service. The materials will be used primarily for the streets overlay

program, Construction Services crew for Capital Improvement Projects, in-kind services for grant work that the township has committed to as well as smaller jobs including pothole repair and permanent road patching. A copy of the Bid tabulation sheet is included for your review.

PREVIOUS BOARD ACTIONS:

These bids are yearly procurement bids for township projects for roadway materials, concrete, storm sewer inlets and manhole structures and engineered concrete blocks for retaining walls.

RECOMMENDED BOARD ACTIONS:

Motion to award the following annual Public Works Materials Bids and authorize the Township Manager to execute all contracts for the following bids:

- 2024 Superpave Materials Bid - Bid Award to Eureka Stone Quarry, in the amount of $1,267,540.00.
- 2024 Engineered Retaining Wall System Materials Bid - Bid Award to JDM Materials Company, in the amount of $28,540.00.

LOCALiQ
Erie Times-News | The Intelligencer
Bucks County Courier Times
The Daily American | Beaver County Times
Pocono Record | Burlington County Times

PO Box 630531 Cincinnati, OH 45263-0531

PROOF OF PUBLICATION

LISA ERKERT
Abington Township
1176 Old York RD
Abington PA 19001-3731

STATE OF PENNSYLVANIA, COUNTY OF BUCKS

The Intelligencer, a newspaper of general circulation, published and having its place of business at Doylestown, Bucks County, PA and Horsham, Montgomery County, PA; that said newspaper was established in 1886; that attached hereto is a facsimile of the printed notice which is exactly as printed and published in said newspaper issue dated on:

02/09/2024

That said newspaper was regularly issued and circulated on those dates.

Sworn to and subscribed before on 02/09/2024

Legal Clerk

Notary, State of WI, County of Brown

My commision expires 6/30/2025

Publication Cost:	$155.20		
Order No:	9832084	# of Copies:	
Customer No:	799795	1	
PO #:			

THIS IS NOT AN INVOICE!

Please do not use this form for payment remittance.

AMY KOKOTT
Notary Public
State of Wisconsin

NOTICE TO BIDDERS

Sealed bids for "READY MIX CONCRETE" are being accepted electronically via PennBid by the TOWNSHIP OF ABINGTON, Department of Public Works by 9:00 A.M., WEDNESDAY, FEBRUARY 21, 2024. Bids will be opened and displayed publicly on PennBid at 10:00 AM ON WEDNESDAY, FEBRUARY 21, 2024.

BIDS must show price for materials and/or equipment delivered to the Township Building.

THE TOWNSHIP reserves the right to reject any and all bids. A bid bond is required with each bid. A performance bond will be required from the successful bidder.

Bidding Documents including instructions to Bidders and Bid Proposals are available at no cost on PennBid at https://pennbid.bonfirehub.com

By ORDER of the
BOARD OF COMMISSIONERS,
Richard J. Manfredi,
Secretary

LOCALiQ
Erie Times-News | The Intelligencer
Bucks County Courier Times
The Daily American | Beaver County Times
Pocono Record | Burlington County Times

PO Box 630531 Cincinnati, OH 45263-0531

PROOF OF PUBLICATION

LISA ERKERT
Abington Township
1176 Old York RD
Abington PA 19001-3731

STATE OF PENNSYLVANIA, COUNTY OF BUCKS

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02/09/2024

That said newspaper was regularly issued and circulated on those dates.

Sworn to and subscribed before on 02/09/2024

Legal Clerk

Notary, State of WI, County of Brown

My commision expires 6/30/2025

Publication Cost:	$158.83	
Order No:	9832143	# of Copies:
Customer No:	799795	1
PO #:		

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Please do not use this form for payment remittance.

AMY KOKOTT
Notary Public
State of Wisconsin

NOTICE TO BIDDERS

Sealed bids for "Storm Sewer Inlets and Manhole Structures" are being accepted electronically via PennBid by the TOWNSHIP OF ABINGTON, Department of Public Works by 9:00 A.M., Wednesday, February 21, 2024. Bids will be opened and displayed publicly on PennBid at 10:00 AM on Wednesday, February 21, 2024.

BIDS must show price for materials and/or equipment delivered to the Township Building.

THE TOWNSHIP reserves the right to reject any and all bids. A Bid Bond is required to be submitted with the bid. A performance bond will be required from the successful bidder.

Bidding Documents including instructions to Bidders and Bid Proposals are available at no cost on PennBid at https://pennbid.bonfirehub.com

By ORDER of the
BOARD OF COMMISSIONERS,
Richard J. Manfredi,
Secretary

LOCALiQ
Erie Times-News | The Intelligencer
Bucks County Courier Times
The Daily American | Beaver County Times
Pocono Record | Burlington County Times

PO Box 630531 Cincinnati, OH 45263-0531

PROOF OF PUBLICATION

LISA ERKERT
Abington Township
1176 Old York RD
Abington PA 19001-3731

STATE OF PENNSYLVANIA, COUNTY OF BUCKS

The Intelligencer, a newspaper of general circulation, published and having its place of business at Doylestown, Bucks County, PA and Horsham, Montgomery County, PA; that said newspaper was established in 1886; that attached hereto is a facsimile of the printed notice which is exactly as printed and published in said newspaper issue dated on:

02/09/2024

That said newspaper was regularly issued and circulated on those dates.

Sworn to and subscribed before on 02/09/2024

Legal Clerk

Notary, State of WI, County of Brown

My commision expires 6/30/2025

Publication Cost:	$155.20	
Order No:	9832161	# of Copies:
Customer No:	799795	1
PO #:		

THIS IS NOT AN INVOICE!

Please do not use this form for payment remittance.

AMY KOKOTT
Notary Public
State of Wisconsin

NOTICE TO BIDDERS

Sealed bids for "Superpave Materials" are being accepted electronically via PennBid by the TOWNSHIP OF ABINGTON, Department of Public Works by 9:00 AM., Wednesday, February 21, 2024. Bids will be opened and displayed publicly on PennBid at 10:00 AM on Wednesday, February 21, 2024.

BIDS must show price for materials and/or equipment delivered to the Township Building.

THE TOWNSHIP reserves the right to reject any and all bids. A bid bond is required with each bid. A performance bond will be required from the successful bidder.

Bidding Documents including instructions to Bidders and Bid Proposals are available at no cost on PennBid at https://pennbid.bonfirehub.com .

By ORDER of the
BOARD OF COMMISSIONERS,
Richard J. Manfredi,
Secretary

LOCALiQ
Erie Times-News | The Intelligencer
Bucks County Courier Times
The Daily American | Beaver County Times
Pocono Record | Burlington County Times

PO Box 630531 Cincinnati, OH 45263-0531

PROOF OF PUBLICATION

LISA ERKERT
Abington Township
1176 Old York RD
Abington PA 19001-3731

STATE OF PENNSYLVANIA, COUNTY OF BUCKS

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02/09/2024

That said newspaper was regularly issued and circulated on those dates.

Sworn to and subscribed before on 02/09/2024

Legal Clerk

Notary, State of WI, County of Brown

My commision expires 6/30/2025

Publication Cost:	$162.46		
Order No:	9832180	# of Copies:	
Customer No:	799795	1	
PO #:			

THIS IS NOT AN INVOICE!

Please do not use this form for payment remittance.

AMY KOKOTT
Notary Public
State of Wisconsin

NOTICE TO BIDDERS

Sealed bids for "ENGINEERED RETAINING WALL SYSTEM MATERIALS BID" are being accepted electronically via PennBid by the TOWNSHIP OF ABINGTON, Department of Public Works by 9:00 A.M., Wednesday, February 21, 2024. Bids will be opened and displayed publicly on PennBid at 10:00 AM on Wednesday, February 21, 2024.

BIDS must show price for materials and/or equipment delivered to the Township Building.

THE TOWNSHIP reserves the right to reject any and all bids. A Bid Bond is required to be submitted with the bid. A performance bond will be required from the successful bidder.

Bidding Documents including instructions to Bidders and Bid Proposals are available at no cost on PennBid at https://pennbid.bonfirehub.com

By ORDER of the
BOARD OF COMMISSIONERS,
Richard J. Manfredi,
Secretary

2024 Engineered Retaining Wall Materials Bid-JDM Materials Company

Responses

Success: All data is valid!

Status	#	Description	Unit of Measure	Quantity Required	Numeric Unit Price	Total Cost
Base Bid Pricing						
Success: All values provided	#1-1	**41" Base Sections**	Each	25	$ 135.00	$ 3,375.00
Success: All values provided	#1-2	**41" Riser Sections**	Each	50	$ 135.00	$ 6,750.00
Success: All values provided	#1-3	**41" Top Sections**	Each	25	$ 134.00	$ 3,350.00
Success: All values provided	#1-4	**41" Half Sections**	Each	10	$ 67.50	$ 675.00
Success: All values provided	#1-5	**28" Base Sections**	Each	25	$ 133.00	$ 3,325.00
Success: All values provided	#1-6	**28" Riser Sections**	Each	50	$ 133.00	$ 6,650.00
Success: All values provided	#1-7	**28" Top Sections**	Each	25	$ 132.00	$ 3,300.00
Success: All values provided	#1-8	**28" Half Sections**	Each	10	$ 66.50	$ 665.00
Basket Total						**$ 28,090.00**
Delivery Charge						
Success: All values provided	#2-1	**Delivery charge to location within Abington Township**	per Truck Load	1	$ 450.00	$ 450.00
Basket Total						**$ 450.00**
Grand Total						**$ 28,540.00**

Abington Township - 2024 Superpave Bid Tabulation

						Eureka Stone Quarry		Glasgow, Inc.	
					Total Cost	$ 1,267,540.0		$ 1,332,050.0	
					Selected #	0		0	
					Selected ($)	$ 0		$ 0	
#	Items	Lowest	Comment	UnitofMeasu	QuantityRequired	UnitPrice	TotalCost	UnitPrice	TotalCost
1	PART I: SUPERPAVE ASPHALT MIXTURE (1)								
#1-1	Superpave Asphalt Mixture Design, 9.5 mm, PG 64 – 22, Wearing Course, 0.0 to 0.3 million ESAL's, SRL H,	$ 1,063,050.0	Delivered to Abington Township and deposited in Paver hopper.	per Ton	15000	$ 70.87	**$ 1,063,050.0**	$ 75.5	$ 1,132,500.0
2	PART II SUPERPAVE ASPHALT MIXTURE (1)								
#2-1	Superpave Asphalt Mixture Design, 9.5 mm, PG 64 – 22, Wearing Course, 0.0 to 0.3 million ESAL's, SRL H,	$ 147,500.0	Picked up at Vendor's Plant by Township trucks	per Ton	2500	$ 60.87	$ 152,175.0	$ 59	**$ 147,500.0**
3	PART III SUPERPAVE ASPHALT MIXTURE (2)								
#3-1	Superpave Asphalt Mixture Design, 25.0 mm, PG 64 – 22, Base Course, 0.0 to 0.3 million ESAL's, SRL H	$ 24,550.0	Picked Up	per Ton	500	$ 54.72	$ 27,360.0	$ 49.1	**$ 24,550.0**
#3-2	Superpave Asphalt Mixture Design, 19.0 mm, PG 64 - 22, Binder Course, 0.0 to 0.3 million ESAL's, SRL H	$ 24,955.0	Picked Up	per Ton	500	$ 49.91	**$ 24,955.0**	$ 55	$ 27,500.0

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024	BOC-18-031424	FISCAL IMPACT
DATE	*AGENDA ITEM NUMBER*	Cost > $10,000
		Yes ☐ No ☐
Administration		PUBLIC BID REQUIRED
DEPARTMENT		Cost > $20,100
		Yes ☐ No ☐

AGENDA ITEM:

2022 Montco 2040 Implementation Grant Program - Safe Routes for Youth and Seniors (Susquehanna Road Sidewalk Project) Bid Award

EXECUTIVE SUMMARY:

The 2022 Montco 2040 Implementation Grant Program - Safe Routes for Youth and Seniors looks to construct needed pedestrian infrastructure at two locations, one along Edge Hill Road and one along Susquehanna Road. These improvements will increase walkability by providing, to each respective location, immediate access to educational, community, recreational, medical and shopping services. The Susquehanna Road component of this project, which this bid award is for, will continue the sidewalk along Susquehanna Road from where it currently terminates outside of Rydal Park to the recently built Rydal Waters trail. Its completion will provide senior residents of both Rydal Park and Rydal Waters, as well as college students at the Penn State Dormitory a safer and more direct connection between the important commercial districts of Old York Road and Susquehanna Road. The project went out to bid on January 28, 2024 and the bids were received on February 16, 2024. Pennoni Associates is recommending the Township award this project to Fedele Contractors, Inc. for a total bid of $52,291.85, contingent upon the contractor supplying the required bonds, insurance, and execution of the contract.

PREVIOUS BOARD ACTIONS:

March 10, 2022 - Resolution 22-011 authorizing the submission of a grant application for the 2022 round of the Montco 2040 Implementation Grant Program.

RECOMMENDED BOARD ACTIONS:

Motion to award the 2022 Montco 2040 Implementation Grant Program Susquehanna Road Sidewalk Project Bid to Fedele Contractors in the amount of $52,291.85.

February 28, 2024

ABINT22011

Mr. Richard Manfredi, Township Manager
Abington Township
1176 Old York Road
Abington, PA 19001

RE: Township of Abington
Susquehanna Rd - Rydal Park Sidewalk Construction
Bid Recommendation Letter

Dear Mr. Manfredi:

Attached herewith is a tabulation of bids received on February 16, 2024 at 11:00 AM, EST for the above referenced project. The apparent low bidder is Fedele Contractors, Inc. of Horsham, PA with a total bid of $52,291.85.

We have not worked with Fedele Contractors, Inc.in the past, however, we have completed reviews of the references provided and found responses to our inquires all to be satisfactory.

We recommend that the Township award this project to Fedele Contractors, Inc. for the total bid of $52,291.85, contingent upon the contractor supplying the required bonds, insurance, and execution of the contract.

If you concur with our recommendation, please notify us as soon as possible so that we may proceed with the preparation of the award documents.

For the Township's information, our Engineer's Opinion of Probable Cost for this project was $90,861.00.

If you should have any questions or comments relative to the above, please do not hesitate to contact the undersigned.

Sincerely,

PENNONI ASSOCIATES INC.

Khaled Hassan

Khaled R. Hassan, PE
Township Engineer

cc: Terry Castorina, Assistant to the Township Manager
Ashley McIlvaine, Assistant Township Manager & Assistant CAO

U:\ACCOUNTS\ABINT\ABINT22011 - SUSQUEHANNA ROAD_RYDAL PARK SIDEWALK\CONSTRUCTION\BID\SUSQUEHANNA-RYDAL SIDEWALK CONSTR BID RECOMMENDATION LETTER.DOCX

Pennoni

Abington Township
Tabulation of Bids Received 02/16/2024

Susquehanna Road Rydal Park Sidewalk
Tabulation of Bids

ABINT22011

					FEDELE CONTRACTORS, INC. 904 HERMAN ROAD HORSHAM, PA 19044		T. SCHIEFER CONTRACTORS, INC. 3864 OLD EASTON ROAD DOYLESTOWN, PA 18902		DRUMHELLER CONSTRUCTION CO., INC. 1176 COMMERCE DRIVE POTTSTOWN, PA 19464		DELAWARE ENVIRONMENTAL CONSTRUCTION SERVICES 1805 SAULSBURY AVE WILMINGTON, DE 19805		ASSOCIATED PAVING CONTRACTORS, INC. 1525 CAMPUS DRIVE WARMINSTER, PA 18974	
ITEM	QUANTITY	UNIT	TYPE	DESCRIPTION	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL
#0-1	2,289	SF	Base	5' Wide Concrete Sidewalk	$16.65	$38,111.85	$19.50	$44,635.50	$18.50	$42,346.50	$19.00	$43,491.00	$19.55	$44,749.95
#0-2	172	LF	Base	Reset Existing Fence	$15.00	$2,580.00	$60.00	$10,320.00	$95.00	$16,340.00	$31.00	$5,332.00	$70.00	$12,040.00
#0-3	5	EA	Base	Remove Trees	$1,500.00	$7,500.00	$1,400.00	$7,000.00	$2,000.00	$10,000.00	$2,500.00	$12,500.00	$1,850.00	$9,250.00
#0-4	2	EA	Base	ADA Ramps	$1,600.00	$3,200.00	$2,500.00	$5,000.00	$1,450.00	$2,900.00	$5,500.00	$11,000.00	$4,800.00	$9,600.00
#0-5	3	EA	Base	Sign Relocation	$300.00	$900	$500.00	$1,500.00	$200.00	$600	$400.00	$1,200.00	$800.00	$2,400.00
				TOTAL BASE BID		**$52,291.85**		**$68,455.50**		**$72,186.50**		**$73,523.00**		**$78,039.95**

Abington Township
Tabulation of Bids Received 02/16/2024

Susquehanna Road Rydal Park Sidewalk
Tabulation of Bids

ABINT22011

					LAWRENCE SITE CONTRACTORS 554 GILBERTSVILLE ROAD GILBERTSVILLE, PA 19525		NJS CONCRETE, LLC 37 TERRY DRIVE TREVOSE, PA 19053		ERNEL CO., INC. P.O. BOX 778 BROOMALL, PA 19008		PLY-MAR CONSTRUCTION CO., INC. 965 PLYMOUTH ROAD PLYMOUTH MEETING, PA 19462		G&B CONSTRUCTION 632 DAVISVILLE ROAD WILLOW GROVE, PA 19090		GORECON, INC. 3240 BRISTOL ROAD CHALFONT, PA 18914	
ITEM	QUANTITY	UNIT	TYPE	DESCRIPTION	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL
#0-1	2,289	SF	Base	5' Wide Concrete Sidewalk	$25.00	$57,225.00	$23.00	$52,647.00	$22.00	$50,358.00	$24.00	$54,936.00	$25.00	$57,225.00	$32.56	$74,529.84
#0-2	172	LF	Base	Reset Existing Fence	$18.00	$3,096.00	$76.00	$13,072.00	$60.00	$10,320.00	$100.00	$17,200.00	$130.00	$22,360.00	$132.12	$22,724.64
#0-3	5	EA	Base	Remove Trees	$1,800.00	$9,000.00	$1,500.00	$7,500.00	$2,000.00	$10,000.00	$1,450.00	$7,250.00	$1,200.00	$6,000.00	$2,194.88	$10,974.40
#0-4	2	EA	Base	ADA Ramps	$5,000.00	$10,000.00	$3,000.00	$6,000.00	$7,000.00	$14,000.00	$4,000.00	$8,000.00	$5,200.00	$10,400.00	$8,672.12	$17,344.24
#0-5	3	EA	Base	Sign Relocation	$100.00	$300	$200.00	$600	$500.00	$1,500.00	$225.00	$675	$125.00	$375	$422.56	$1,267.68
				TOTAL BASE BID		**$79,621.00**		**$79,819.00**		**$86,178.00**		**$88,061.00**		**$96,360.00**		**$126,840.80**

We declare this to be a true Tabulation of Bids received on February 16, 2024 by Abington Township - Susquehanna Road Rydal Park Sidewalk

PENNONI ASSOCIATES INC.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
KHALED RAMEZ HASSAN
ENGINEER
No. PE060958

Khaled R. Hassan, P.E., PENNA REG. NO. PE060958

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024	BOC-19-031424	FISCAL IMPACT
DATE	*AGENDA ITEM NUMBER*	Cost > $10,000
		Yes ☐ No ☐
Administration		PUBLIC BID REQUIRED
DEPARTMENT		Cost > $20,100
		Yes ☐ No ☐

AGENDA ITEM:

HRH PILOT Agreement

EXECUTIVE SUMMARY:

n/a

PREVIOUS BOARD ACTIONS:

n/a

RECOMMENDED BOARD ACTIONS:

Motion to approve the Memorandum of Agreement between the Township of Abington and Holy Redeemer Health System.

MEMORANDUM OF AGREEMENT

MEMORANDUM OF AGREEMENT made this 14th day of March, 2024 by and between HOLY REDEEMER HEALTH SYSTEM (hereinafter "System") and ABINGTON TOWNSHIP (hereinafter "Township").

BACKGROUND

System participant, Holy Redeemer Hospital and Medical Center (hereinafter "Hospital"), occupies real estate in the Township that is exempt from real estate taxes. This real estate is identified by Tax Parcel No. 30-00-3100000-2. System recognizes that Hospital receives services from the Township in the form of police and fire protection and ambulance services. System wishes to make a contribution on behalf of Hospital to the Township to help defray the cost of services that Hospital receives.

AGREEMENT

For the calendar year 2022, System contributed $150,181.49 to the Township and the Township has accepted that amount for 2022.

For the calendar year 2023, System agrees to contribute to Township a sum equal to $151,189.00 for Tax Parcel No. 30-00-3100000-2 and this payment will be made by December 31, 2023.

For the following calendar years, beginning with 2024, System agrees to contribute to Township a sum equal to $ 151,189.00 plus an annual adjustment on the then current contribution amount equal to the consumer price index for the Philadelphia region (Philadelphia-Camden-Wilmington, PA-NJ-DE-MD, CPI-U) published as the end of the preceding calendar year (i.e. each December 31), with the understanding that in no event will such adjustment exceed 5% for any calendar year, for Tax Parcel No. 30-00-3100000-2 (the "contribution").

Beginning in calendar year 2024, the contribution will be made in quarterly installments, i.e. on or before March 31, June 30, September 30 and December 31 of each year while the agreement is in effect. System will use the

After October 1 in any calendar year, with regard to the following calendar year, this agreement may be terminated by either party upon written notice to the other on or before March 1 of such calendar year. This agreement shall continue from year to year unless and until either party exercises its right to terminate the agreement as set forth above.

If the law of Pennsylvania concerning the applicability of the Township real estate taxes to nonprofit Hospital entities should be changed, the Township and the System will first attempt to reach an amicable modified agreement, but the System and the Township will maintain a right to terminate if a modified agreement cannot be reached within 90 days.

This agreement shall apply only to the tax parcel identified herein and shall not affect taxes due on any other property owned by Holy Redeemer Health System or an affiliate located in Abington Township.

If any other taxing authority including the county or school district commences any legal proceedings or files a notice of intention to appeal the exempt status of System (which owns Holy Redeemer Hospital and Medical Center), then System shall at any time thereafter be entitled to terminate this agreement. Since the conditions prevailing at the time of a possible tax-exempt challenge cannot be fully known, the Township and the System will first attempt to reach an amicable modified agreement, but the System will maintain its right to terminate if a modified agreement cannot be reached within 90 days.

Attest:

_____
Cristina Peoples, Secretary

HOLY REDEEMER HEALTH SYSTEM

By: _____
Michael B. Laign, President & CEO

TOWNSHIP OF ABINGTON

Attest:

_____
Richard J. Manfredi,
Township Manager & Secretary

By:_____
Thomas Hecker
President, Board of Commissioners

MEMORANDUM OF AGREEMENT

MEMORANDUM OF AGREEMENT made this 18th day of January 1994 by and between HOLY REDEEMER HEALTH SYSTEM (hereinafter "System") and ABINGTON TOWNSHIP (hereinafter "Township").

BACKGROUND

System participant, Holy Redeemer Hospital and Medical Center (hereinafter "Hospital"), occupies real estate in the Township that is exempt from real estate taxes. This real estate is identified by Tax Parcel No. 30-00-3100000-2. System recognizes that Hospital receives services from the Township in the form of police and fire protection and ambulance services. System wishes to make a contribution on behalf of Hospital to the Township to help defray the cost of services that Hospital receives.

AGREEMENT

System agrees to contribute to Township a sum equal to the millage attributable to police, fire and ambulance services as applied to Tax Parcel No. 30-00-3100000-2 (the "contribution"). At this time the assessed value of this parcel is $2,935,700 and the millage is 34.508 mills for General Purpose (Police); 3.0 mills for Fire; and 0.209 mills for Ambulance, so that the payment for 1994 will be $110,726.

The contribution will be made on or before October 1 of each year while the agreement is in effect. After October 1, 1994, this agreement may be terminated by either party upon written notice to the other before April 30 of any year.

For as long as System participant, Redeemer Villages, continues to make voluntary payments to the Township on the Redeemer Village property (Tax Parcel No. 30-00-3167600-1, at 1551 Huntingdon Pike), such payment will be credited against the contribution described in the above paragraph.

This agreement shall continue from year to year although the assessed valuation and the millage rate may change. The applicable assessment and millage rates shall apply to each year.

This agreement shall be contingent upon Township obtaining a similar agreement with Abington Memorial Hospital.

In the event that the law of Pennsylvania concerning the applicability of the Township real estate taxes to Hospital should be changed, this agreement shall be deemed to be amended to reflect such changes.

This agreement shall apply only to the tax parcel identified herein and shall not affect taxes due on any other property owned by Holy Redeemer Health System or an affiliate located in Abington Township.

In the event that any other taxing authority including the county or school district commences any legal proceedings or files a notice of intention to appeal the exempt status of System, Holy Redeemer Hospital and Medical Center, or the Provincialate, then System shall at any time thereafter be entitled to terminate this agreement. Since the conditions prevailing at the time of a possible tax-exempt challenge cannot be fully known, the Township and the System will first attempt to reach an amicable modified agreement, but the System will maintain its right to terminate if a modified agreement cannot be reached within 90 days.

HOLY REDEEMER HEALTH SYSTEM

Attest:

By: _____

TOWNSHIP OF ABINGTON

Attest:

_____
Secretary

By: _____
President

(MBL:dt:1/18/94)

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024	BOC-20-031424	FISCAL IMPACT
DATE	*AGENDA ITEM NUMBER*	Cost > $10,000
		Yes ☐ No ☐
Administration		PUBLIC BID REQUIRED
DEPARTMENT		Cost > $20,100
		Yes ☐ No ☐

AGENDA ITEM:

Park Mobile DRAFT Ordinance

EXECUTIVE SUMMARY:

Motion to authorize an Ordinance establishing electronic meter parking

PREVIOUS BOARD ACTIONS:

n/a

RECOMMENDED BOARD ACTIONS:

Motion to authorize an Ordinance amending Chapter 156 - "Vehicles and Traffic," Article IV – "Metered Parking," Sections 30 Through 38; and Amending Chapter 157 "Parking Of Vehicles," Sections 2 – "Violations and Penalties," and 5 – "Notice," and Repealing all Inconsistent Ordinances.

TOWNSHIP OF ABINGTON
Ordinance No. _____

ORDINANCE AMENDING CHAPTER 156 – "VEHICLES AND TRAFFIC," ARTICLE IV – "METERED PARKING," SECTIONS 30 THROUGH 38; AND AMENDING CHAPTER 157 "PARKING OF VEHICLES," SECTIONS 2 – "VIOLATIONS AND PENALTIES," AND 5 – "NOTICE," AND REPEALING ALL INCONSISTENT ORDINANCES

WHEREAS, pursuant to section 1502.44 of the First Class Township Code of the Commonwealth of Pennsylvania, 53 P.S. §56544, the Board of Commissioners has the authority to enact and amend provisions of the Abington Township Code ("Code") at any time it deems necessary for the health, safety, morals, general welfare, cleanliness, beauty, convenience and comfort of the Township and the inhabitants thereof; and

WHEREAS, pursuant to section 1502.10 of the First Class Township Code of the Commonwealth of Pennsylvania, 53 P.S. §56510, the Board of Commissioners has the authority to take all needful means for securing the safety of persons or property within the Township; and

WHEREAS, pursuant to section 1502.49 of the First Class Township Code of the Commonwealth of Pennsylvania, 53 P.S. §56549, the Board of Commissioners has the authority to regulate traffic and parking; and

WHEREAS, the Board of Commissioners has determined that it is in the best interests of the health, safety and welfare of its residents to amend Chapter 156 – "Vehicles and Traffic," at Article IV – "Metered Parking," Sections 30 through 38, and Chapter 157 – "Parking of Vehicles," at Sections 2 – "Violations and Penalties, and 5 – "Notice," as set forth herein. .

NOW, THEREFORE, it is hereby ordained, enacted and adopted by the Board of Commissioners of the Township of Abington, as follows:

Section 1. Amendment of Chapter 156. Chapter 156 "Vehicles and Traffic," is amended at Article IV – "Metered Parking," Sections 30 through 38 as set forth in Exhibit "A" hereto, with the stricken text indicating the deleted portions of the Code and the underlined text indicating the added portions of the Code.

Section 2. Amendment of Chapter 157. Chapter 157 – "Parking of Vehicles," is amended as follows:

A. Section 2 – "Violations and Penalties," is amended at Subsection A, to read as follows, with the stricken text indicating the deleted portions of the Code and the underlined text indicating the added portions of the Code:

   "Penalty for parking violations in metered <u>zones</u> ~~parking areas~~ shall be $20."

B. Section 5 – "Notice," is amended at Subsection 1(d), to read as follows, with the stricken text indicating the deleted portions of the Code and the underlined text indicating the added portions of the Code:

   "(d) Meter ~~number~~ <u>zone</u>, where applicable."

Section 3. **Severability.** Should any section, paragraph, clause or phrase of this Ordinance be declared unconstitutional or invalid by legislation or a court of competent jurisdiction, the remainder of this Ordinance shall not be affected thereby, and shall remain in full force and effect.

Section 4. **Inconsistencies.** All prior ordinances, resolutions and/or other official acts or parts thereof inconsistent herewith are hereby repealed to the extent of such inconsistencies.

Section 5. **Effective Date.** This Ordinance shall take effect sixty (60) days after enactment.

DULY ORDAINED, ENACTED AND ADOPTED BY THE BOARD OF COMMISSIONERS OF TOWNSHIP OF ABINGTON THIS _____ DAY OF _____, 2024.

ABINGTON TOWNSHIP

_____

Thomas Hecker, President
Board of Commissioners

ATTEST:

_____

Richard J. Manfredi,
Township Manager & Secretary

{01764749;v3}

Exhibit "A"

§ 156-30 Installation of Metered Parking Signage

A. In said metered parking zones, ~~parking meters shall be installed upon the curb, sidewalk or pavement immediately adjacent to the~~ appropriate signage shall be installed in the area of the parking spaces provided in § **156-37** of this article, indicating the parking zone number and method(s) of payment. The Police Department shall be responsible for ~~the regulation, control, operation, maintenance and use of such parking meters~~ ensuring the signage is correctly placed and is visible.

B. ~~Each device shall be so set as to display a signal showing legal parking upon the deposit of the appropriate coin for the period of time hereinafter prescribed. Each device shall be so arranged that, upon the expiration of the lawful time limit, it will indicate by a proper, visible signal that the lawful parking period has expired, and in such case the right of such vehicle to occupy such space shall cease and the operator, owner, possessor or manager thereof shall be subject to the penalties hereinafter provided.~~

§ 156-31 Manner of Parking

~~A.~~ When a parking space in any metered parking ~~meter~~ zone is parallel with the adjacent curb or sidewalk, any vehicle parked in such parking space shall be parked so that the foremost part of such vehicle shall be nearest to the parking ~~meter~~ sign; provided, however, that where double parking ~~meters~~ signs are installed upon one standard so as to serve two parking spaces, any vehicle parked in the space just beyond the parking ~~meters~~ sign shall be parked so that the rear bumper of such vehicle shall be nearest to the parking ~~meters~~ sign. When a parking space in any metered parking ~~meter~~ zone is diagonal to the curb or sidewalk, any vehicle parked in such parking space shall be parked with the foremost part of such vehicle nearest to such ~~meter~~ sign.

~~B. Where lines or markings painted or placed upon the curb, sidewalk, highway and/or paved surface adjacent to each parking meter provide for parking at an angle and not parallel or perpendicular to the curb, it shall be unlawful for the operator of any motor vehicle to cross the center line of the highway to enter or leave said parking area.~~

§ 156-32 ~~Deposit of Coins~~ Payment for Parking

When any vehicle shall be parked in any space adjacent to which a parking ~~meter~~ sign is located in accordance with the provisions of this article, the operator shall, upon entering the said parking space, immediately ~~deposit or cause to be deposited such coin or coins of the United States~~ make payment as is required for such parking ~~meter~~ and as is designated by proper instructions on the parking ~~meter~~ sign, and failure to ~~deposit such coin or coins~~ make appropriate payment shall constitute a breach of this article and shall subject such person to the penalty prescribed hereafter. Upon ~~the deposit of such coin or coins and placing said meter in operation~~ making the required payment, the parking space may be lawfully occupied by such vehicle during the period of parking time which has been prescribed for the zone in which said parking space is located and for which ~~a coin or coins is or are deposited, as indicated on the parking meter~~ the payment was made. If said

vehicle shall remain parked in any such parking space beyond the parking time limit so fixed for such parking space, ~~the parking meter shall, by its violation signal, dial or pointer, indicate such illegal parking, and in that event~~ such vehicle shall be considered as parked overtime and beyond the period of legal parking time. The parking of a vehicle overtime or beyond the period of legal parking time in any metered parking zone, shall be a violation of this article and punishable as hereinafter set forth.

§156-32.1 Special parking privileges.

…

B. Exemption for disabled veterans, handicapped persons, former prisoners of war and Congressional Medal of Honor holders from parking time limits and parking ~~meter~~ fees.

1. When a motor vehicle bearing a disabled veterans plate, disabled veteran placard, a handicapped plate, a handicapped placard, a prisoner of war plate or a Congressional Medal of Honor plate is being operated by or for transportation of a disabled veteran or a physically handicapped person, the driver shall be entitled to park without limitation as to time and without payment of any parking ~~meter~~ fees on streets where parking is limited but not prohibited by Abington parking regulations or by the Vehicle Code.

2. Such motor vehicles shall comply with all parking prohibitions.

…

§ 156-33 Violations

It shall be unlawful and a violation of the provisions of this article for any person:

A. To cause, allow, permit or suffer any vehicle registered in the name of or operated by such person to be parked overtime or beyond the period of legal parking time established for any <u>metered</u> parking ~~meter~~ zone as herein described ~~or to deposit in any parking meter any coin for the purpose of parking beyond the maximum legal parking time for the particular parking meter zone~~.

~~B. To permit any vehicle to remain or be placed in any parking space adjacent to any parking meter while said meter is displaying a signal indicating that the vehicle occupying such parking space has already been parked beyond the period prescribed for such parking space.~~

C. To park any vehicle across any line or marking of a <u>metered</u> parking ~~meter~~ space or in such position that the vehicle shall not be entirely within the area designated by such lines or markings.

D. To deface, injure, tamper with, or willfully break, destroy or impair the usefulness of any parking ~~meter~~ sign installed under the provisions of this article.

~~E. To deposit or cause to be deposited in any parking meter any slug, device or metal substance or other substitute for lawful corns.~~

~~F. To park or permit the parking of any vehicle in any parking meter space where the meter does not register lawful parking.~~

§ 156-34 RESERVED

§ 156-35 ~~Collection of Coins from Meters~~ RESERVED

~~It shall be the duty of the Chief of Police to designate some proper person or persons to make regular collections of the moneys deposited in said meters.~~

§ 156-36 General Provisions

A. Temporary suspension of provisions. The provisions of this article may be temporarily suspended by the ~~Mayor~~ Township and ~~he~~ the Township may prescribe temporarily such other rules and regulations as traffic conditions may require.

B. Suspension of provisions on designated holidays. ~~The use of parking meters~~ All metered parking throughout the Township of Abington is hereby dispensed with on the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving and Christmas.

C. Erection of signs. The ~~Mayor~~ Township is authorized to erect or cause to be erected appropriate signs notifying the operators of motor vehicles of the provisions of this article.

D. ~~Tokens. Where the deposit of any coin or coins is required under the provisions of this article, it shall be permissible to use such token or tokens for that deposit as shall be designated and approved by the Mayor.~~

§ 156-37 Parking Meter Zones Established

On-highway parking zones. Metered parking ~~meter~~ zones are hereby established upon the highways or parts of highways described below, with maximum parking time periods as indicated:

…

B. Off-highway parking zones. Off-highway metered parking ~~meter~~ zones are hereby established as described below, the maximum parking time periods as indicated on all days, except Sundays and holidays, during the hours of to.

§ 156-38 Metered Parking ~~Meter~~ Rates

The charge for the zones established above shall be $1.00 ~~$0.25 in the form of a twenty-five-cent coin~~ for parking 60 minutes or any portion thereof. This parking rate does not include any charges or convenience fees imposed by a 3rd party vendor for the use of their application to make parking payments.

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024 — *DATE*

FC-01-031424 — *AGENDA ITEM NUMBER*

Finance — *DEPARTMENT*

FISCAL IMPACT
Cost > $10,000
Yes ☐ No ☐

PUBLIC BID REQUIRED
Cost > $20,100
Yes ☐ No ☐

AGENDA ITEM:

Expenditures Salaries & Wages for January 2024

EXECUTIVE SUMMARY:

N/A

PREVIOUS BOARD ACTIONS:

N/A

RECOMMENDED BOARD ACTIONS:

Motion to approve the January 2024 expenditures in the amount of $3,185,054.52and salaries and wages in the amount of $2,865,034.47 and authorizing the proper officials to sign and approve invoices and supporting documentation in payment of bills and contracts as they mature through the month of April 2024. (Click here to view supporting information for expenditures in January 2024)

(Motion & Roll Call)

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024	FC-02-031424	FISCAL IMPACT
DATE	*AGENDA ITEM NUMBER*	Cost > $10,000
		Yes ☐ No ☐
Finance		PUBLIC BID REQUIRED
DEPARTMENT		Cost > $20,100
		Yes ☐ No ☐

AGENDA ITEM:

Emergency Generator Replacement

EXECUTIVE SUMMARY:

The Township Municipal Building emergency generator is failing and parts are no longer available due to its age. The Township received a quote from Foley Cat Power Systems through Sourcewell, an authorized cooperative purchasing agency, in the amount of $76,800.00..

PREVIOUS BOARD ACTIONS:

N/A

RECOMMENDED BOARD ACTIONS:

Motion to approve the use of unappropriated fund balance for the purchase of a new emergency generator in the amount of $76,800.00.

FOLEY POWER SYSTEMS CAT

Division of Foley, Incorporated

Project Proposal

From: **Anthony Singlar**
Asinglar@Foleyinc.com

PHONE: 267-229-6156

DATE: February 6, 2024

RE: **Township of Abington**

QUOTE # AJS240124-1R1
Sourcewell – #092222-CAT

In response to your request, we are pleased to offer the following quotation on a **Caterpillar Emergency Generator System** for your consideration:

One (1) New, **UL2200 Listed, EPA Certified**, Caterpillar emergency generator **Model DG100** Natural Gas Fueled, rated **100 kW**, Standby Power, **120/208 Volts**, 3 Phase, 4 Wires, 1800 rpm, 60 Hertz. Package to include manufacturers standard model features and optional attachments as listed below.

Total net package price...$76,800.00 (Tax not included) (Price Valid for 30 Days)
FOB with freight allowed to first destination

This quotation is valid for 30 days. Due to the fluctuating costs associated with key materials such as steel, aluminum, and copper, Foley CAT reserves the right to review quotation pricing at the time of order and again at time of equipment release. If material costs increase by greater than 2%, Foley CAT will update our quotation accordingly. We appreciate your understanding during this volatile time and look forward to partnering with you as we work through it together.

Scope of Work (Riley Electric):

- **Riley Electric to install (1) new 100kw Cat Gas generator.**
- **Tie in & removal of temporary generator outside of ATS room.**
- **Disconnect and remove the existing Generator from existing concrete Pad.**
- **Install new generator on existing concrete pad. Owner supplied.**
- **Reconnect all existing power and control wiring to the new generator.**
- **Reconnect existing gas line to the new generator.**
- **Assist Foley Cat with start-up.**

***Exclusions:** Sales tax (if applicable), overtime rates, electrical permits and/or inspections, engineered drawings, utility fees, blacktop restoration, rock excavation, disposal of spoils off site, & unmarked utilities.*

Engine

- 6.2 Liter, 8 Cylinder, Turbocharged – Aftercooled, 4 Cycle Engine, Natural Gas,
- EPA Certified
- Standard Air Cleaner
- Standard Electronic Governor

Cooling System

- Standard Radiator and Cooling Fan complete with Protective Guards
- 50% coolant antifreeze/corrosion inhibitor

FOLEY POWER SYSTEMS CAT

Division of Foley, Incorporated

- Jacket Water Heater

Enclosure
- Caterpillar White, Sound Attenuated, Weatherproof, Steel Enclosure (74 dBA @ 23')

Exhaust
- Enclosed Critical Grade Exhaust Silencer

Control Panel
- GCCP1.2 Generator Control Panel
- Qty. (1) NFPA 99/110 Remote Annunciator **(Shipped Loose)**
- Qty. (1) Remote Emergency Stop Switch **(Shipped Loose)**

Generator
- Permanent Magnet Generator
- Generator Anti-Condensation Heater

Power Termination
- Qty. (1) 400A, 100% Rated, LSI, Circuit Breaker w/ Shunt Trip (Lugs-Bus Bar)

Starting / Charging System
- 12 Volt Starting Motor
- Lead Acid Batteries with Battery Rack and Cables
- Battery Charger, 10A, NFPA 110

Mounting
- Elastomeric Vibration Isolators

Lube
- Lubricating Oil, Filter, Filler and Dipstick

General
- Qty. (1) O&M Manual **(Shipped Loose)**

Tests
- Standard Caterpillar Factory Test

Service: Provided by FPS during normal time, Monday – Friday, 7:30 am – 3:30 pm
- Labor to perform Startup Service
- Labor for Genset Site Testing.
- (2 Hour - Resistive Load Bank Test)
  NOTE: A Resistive Load Bank and 50 Feet of Cables will be supplied for testing purposes. Electrical connections and disconnections to be performed by other than FPS.

Warranty
- Caterpillar 5 Year Manufacturers Product Warranty as Per Warranty Documents.
  Note: Applicable to Caterpillar Consist Parts Only.

FOLEY POWER SYSTEMS CAT

Division of Foley, Incorporated

Notes/Exceptions/Deviations

1. The above proposal is based upon replacement for existing Olympian G100 generator set received by Foley Power Systems and is limited to the listed Bill of Materials.
2. NOTE: FPS = Foley Power Systems
3. NOTE: Any third party testing (noise level, I/R, etc.) or certified reports of onsite testing by others.
4. NOTE: Permitting, Off-Loading, Rigging and Installation of Genset and all shipped loose items to be provided by other than FPS. Electrical connections and disconnections of Genset by other than FPS. Fuel to be supplied by other than FPS. Coordination study, protective device setting, and third party testing must be provided by other than FPS.

Terms and Conditions of Sale: AJS240124-1R1

a) All quotations are valid for 30 days from date of quotation unless otherwise noted.
b) All quotations are FOB first destination and delivery will be made using a Flatbed or Step Deck Trailer with offloading by others. Customer must provide clear and unobstructed access to the site so equipment can be off-loaded.
c) Payment terms are net 30 days. If startup occurs within 30 days of invoice date, payment is due immediately. All projects greater than $1MM will be subject to progress billing. The progress billing structure is listed below:

I.	Receipt of Purchase Order:	10%
II.	Approved Submittals and release of equipment:	25%
III.	Delivery of equipment to site:	55%
IV.	Successful testing of equipment:	10%

d) Our payment terms will include interest on the 31st day on all outstanding invoices; the interest will be based on the current market value.
e) All quotations are subject to owners or specifying engineer's approval of our project submittals.
f) Federal, State and local sales tax is not included in our price quotation.
g) Standard factory lead times will apply after receipt of approved submittal and notification to proceed with equipment fabrication.
h) Federal, State and local code compliance is strictly the responsibility of the owner and his engineers and/or representatives.
i) All materials listed in this quotation are covered by the manufacturer warranty only unless specifically stated otherwise.
j) Foley Power Systems requests (14) fourteen-day notification to schedule unit start up services.
k) Fuel oil and or other consumables required for unit start up and site testing is not included in this quotation and shall be provided "By Others".
l) Title and risk of loss will pass to Buyer upon delivery of the equipment to project job site.
m) If the Buyer cannot accept delivery of the equipment or requests that the delivery be delayed, Foley Power Systems will invoice Buyer for the purchase price of the equipment and make arrangements for equipment storage. Storage charges will accrue at a monthly rate of (2) two percent of the invoiced purchase price for every month or portion thereof, during which the equipment is being stored by Foley Power Systems. Buyer is responsible for any additional freight, off-loading, rigging, or special equipment charges as a result of the delay in taking delivery.
n) Buyer may not cancel a purchase order, return equipment, or change the delivery date without Foley Power Systems written consent. Any cancellation, return, or change of delivery dates is subject to additional charges based on Foley Power Systems actual costs.
o) Foley Power Systems is not responsible for serving and paying fees for permits, licenses, or registrations required by any agency that may be required for the installation and operation of the above quoted equipment.
p) Any and all installation of this equipment shall be "By Others".
q) This proposal is confined to the Bill of Materials as listed above.
r) Any claim of any kind whatsoever asserted by buyer or Foley Power Systems against the other, arising out of or in any way relating to this agreement shall be resolved exclusively by submitting such claim to arbitration in accordance with the rules of the American Arbitration Association. The place of arbitration shall be in New Jersey. Judgment upon any such arbitration award may be entered in (1) the appropriate State or Federal court with Jurisdiction over Middlesex County, New Jersey.
s) Foley Power Systems does not accept "paid when paid" conditions as part of the Terms and Conditions of the contract
t) The power connection to the Generator is sized for copper wire only. If an alternate material is used for the power connection; the proposal price is subject to change.
u) Buyer shall indemnify, hold harmless, and defend seller from all liability for loss, damage or injury to person or property to the extent caused by the negligent act or omission of buyer. Buyer shall defend seller in accordance with and to the extent of the above indemnification, provided the buyer is (i) promptly notified by seller, in writing, of any claims, demands or suits for such damages or injuries; and (ii) has the right to select and direct counsel and settle such claims.
v) Foley shall not be responsible for any failure to perform, or delay in performance of its obligations resulting from or associated with the COVID-19 pandemic or any future pandemic, and the Buyer shall not be entitled to any damages including but not limited to liquidated, special, consequential, or punitive, resulting thereof. Furthermore, the seller's product times are based upon the information provided to seller from its suppliers at the time of quotation. The buyer accepts that lead times for products can change and do so without notice and due to reasons, that are beyond any control of the seller. As such, the seller

FOLEY POWER SYSTEMS CAT

Division of Foley, Incorporated

shall not be responsible for any failure to perform, or delay in performance of, its obligations resulting from lead times that extend past those originally quoted, and Buyer shall not be entitled to any damages resulting thereof.

w) In the event of significant delay or price increase of material, equipment or labor occurring during the performance of the contract through no fault of Foley Inc., the Contract Sum, time of completion or contract requirements shall be equitably adjusted by Change Order in accordance with the procedures of the Contract Documents. A change in price of an item of material, equipment, or labor will be considered significant when the price of an item increases 2% or more between the date of this Contract and the date of installation/delivery/time of order.

Accepted by: _____(Print)

Signature: _____ Date: _____

BOARD OF COMMISSIONERS REGULAR PUBLIC MEETING

AGENDA ITEM

March 14, 2024	FC-03-031424	FISCAL IMPACT
DATE	*AGENDA ITEM NUMBER*	Cost > $10,000
		Yes ☐ No ☐
Community Development		PUBLIC BID REQUIRED
DEPARTMENT		Cost > $20,100
		Yes ☐ No ☐

AGENDA ITEM:

CDBG 2021 & 2022 Substantial Amendments

EXECUTIVE SUMMARY:

In order to make best and most timely use of the CDBG funds, periodic reviews of previous approved action plans are performed by CD Department staff.

In the 2021 program year, $260,000 had been set aside to support the USACE riparian buffer project in Grove Park. Anticipated costs for this project were added into the 2024 Township budget (approved Dec. 2023), freeing up these funds for other use. Because of the swift pace of progress and on-going need for the Township's Owner-Occupied Home Rehabilitation Program (OORP), the Department recommends re-allocating $260K to the OORP.

In the 2022 program year, $20,385 had been allocated to a residential spot blight demolition program. Since August of 2022, no residents have requested to make use of these funds. During that same period, more than five households have been able to use the Emergency Home Rehabilitation Program (ERP) funds, with many more requests coming in each month. Because of the swift pace of progress and on-going need, the Department recommends re-allocating these funds to the ERP.

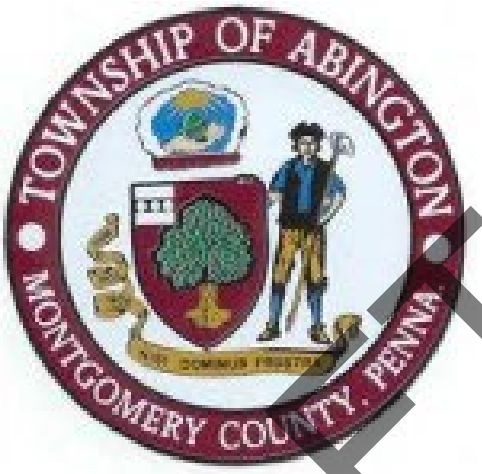
PREVIOUS BOARD ACTIONS:

Approval of the CDBG AAPs in the summer of the Program Year.

RECOMMENDED BOARD ACTIONS:

Motion to approve the substantial amendments as described in the attached documents to the PY 2021 and 2022 Annual Action Plans and approve Resolution No. 24-019.

ABINGTON TOWNSHIP, PENNSYLVANIA



DRAFT

SUBSTANTIAL AMENDMENT TO:

FY 2021 and FY 2022 CDBG PROGRAM

SUBMITTED BY:
Office of Community Development
Township of Abington
1176 Old York Road
Abington, PA 19001

SUBMITTED TO:
U.S. Department of Housing & Urban Development
The Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107

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2. Narrative
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1. Budget
2. Narrative
3. Project sheet

DRAFT

A. EXECUTIVE SUMMARY –

It is necessary for the Township of Abington to process a "Substantial Amendment" to the Township's FY 2021 and FY 2022 Annual Action Plans for the use of Community Development Block Grant (CDBG) funds. In accordance with the CDBG Program's Regulations, the Township is allowed to make substantial amendments to its Annual Plans and Budgets in accordance with the Township's Citizen Participation Plan.

The Township has determined that it is necessary to amend previously approved CDBG program years' budgets as some of these activities are completed with a remaining balance, cancelled, changed budget amounts, or create new projects.

The Township of Abington is substantially amending its FY 2021 and FY 2022 Annual Action Plan to reallocate CDBG funds to existing activities. This is considered a substantial amendment in accordance with the Township's Citizen Participation Plan since the following applies: (e.) deletion or elimination of a previously approved activity; and (f) a change of 50% of more of a line item amount of an approved activity, either increased or decreased.

The following CDBG activities are amended under the FY 2021 Annual Action Plan:

- Cancel Public Facilities Improvements – Grove Park $260,000.
- Increase Owner-Occupied Housing Rehabilitation Program by $260,000 to a new budget total of $364,070.

The following CDBG activities are amended under the FY 2022 Annual Action Plan:

- Cancel Spot Blight Residential Demolition $20,385.
- Increase Emergency Repairs Program by $20,385 to a new budget total of $92,385.

DRAFT

B. CITIZEN PARTICIPATION –

The Township of Abington held a Public Hearing on February 15, 2024. Attached is a copy of the advertisement that appeared in the local newspaper, as well as the meeting sign-in sheet and meeting notes.

DRAFT

PUBLIC HEARING NOTICE
FY 2024 CDBG NEEDS HEARING
AND FY 2021/FY 2022 SUBSTANTIAL AMENDMENT
TOWNSHIP OF ABINGTON, MONTGOMERY COUNTY, PENNSYLVANIA
COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) PROGRAM

Notice is hereby given that the Township of Abington, Montgomery County, Pennsylvania will hold a public hearing on Thursday, February 15, 2024, at 10:00 AM at the Township Building, 1176 Old York Road, First Floor Conference Room, Abington, PA 19001 and by virtual conference call. There are two ways for the public to virtually participate in the meeting. Residents can access the meeting online, by a computer, iPad, iPhone or Android at **https://us06web.zoom.us/j/85422837760**. This link will enable residents to hear the meeting and see presentations. There will be no video capabilities. Residents, who are unable to join online, can listen to the meeting by calling **+1 929-436-2866** and entering the meeting ID number **854 2283 7760** when prompted. If special arrangements are needed to accommodate any resident in order for them to participate in this public hearing, please contact the Community Development Department at (267) 536-1000 ext. 5, or by email at communitydevelopment@AbingtonPA.gov, or hearing-impaired persons may call Pennsylvania Relay at 711, to make such arrangements. Cualquier persona que no habla Inglés que deseen asistir a la audiencia pública deben comunicarse con el Departamento de Desarrollo Comunitario y un intérprete de lenguaje se proporcionará.

The purpose of this public hearing is to discuss the housing, community, and economic development needs for the Township's FY 2024 Annual Action Plan, which the Township must submit to the U.S. Department of Housing and Urban Development for the Community Development Block Grant (CDBG) Entitlement Funds Program.

The Township of Abington anticipates a CDBG entitlement grant in the amount of $730,982 for FY 2024. In order to receive these funds, the Township of Abington must prepare a One Year Annual Action Plan for the use of the CDBG funds. At least 70% of the CDBG funds must benefit low to moderate income persons living in the Township of Abington. In preparing its CDBG application, the Township intends to afford residents, local agencies, and interested parties the opportunity to become involved in the planning process.

All interested residents are encouraged to attend this public hearing and they will be given the opportunity to present oral or written testimony concerning the needs of the Township of Abington and the use of CDBG funds to address those needs over the next year. Written comments may be addressed to the Township of Abington, Community Development Department, 1176 Old York Road, Abington, PA 19001 or email at to communitydevelopment@AbingtonPA.gov.

DRAFT

Additional notice is hereby given that the Township of Abington has prepared an amendment to its FY 2021 and FY 2022 Annual Action Plan. In accordance with the regulations and requirements of the U.S. Department of Housing and Urban Development (HUD), the plan will be on public display for a period of 30 days, beginning January 29, 2024 until March 1, 2024 at the following locations:

PHYSICAL COPY: The Township of Abington
Department of Community Development
1176 Old York Road, Abington, PA 19001

ELECTRONIC COPY: https://www.abingtonpa.gov/cd

The following CDBG activities are amended under the FY 2021 and FY 2022 Annual Action Plans:

- FY 2021 Cancel Public Facilities Improvements Grove Park $260,000.
- FY 2021 Increase Owner-Occupied Housing Rehabilitation Program by $260,000 to a new budget total of $364,070.
- FY 2022 Cancel Spot Blight Demolition $20,385.
- FY 2022 Increase Emergency Repairs Program by $20,385 to a new budget total of $92,385.

The plan is available for public inspection during normal business hours of operation. An electronic copy may be obtained by emailing communitydevelopment@AbingtonPA.gov. Written or oral comments will be accepted until March 1, 2024. Comments may be directed to Township of Abington, Community Development Department, 1176 Old York Road, Abington, PA 19001 or emailed to communitydevelopment@AbingtonPA.gov or phone at (267) 536-1000 ext. 5.

DRAFT

Honorable Thomas Hecker, President
Board of Commissioners

C. RESOLUTION –

The Township of Abington's Board of Commissioners approved the Substantial Amendment on March 14, 2024.

Attached is a copy of the resolution that was approved by the Township's Board of Commissioners and authorized the filing of the Amendment with HUD.

DRAFT

TOWNSHIP OF ABINGTON
MONTGOMERY COUNTY, PENNSYLVANIA
RESOLUTION NO. 24-____

Resolution of the Board of Commissioners of the Township of Abington, Montgomery County, Pennsylvania amending the FY 2021 and FY 2022 Annual Action Plans.

Whereas, the Township of Abington, Pennsylvania is a recipient of grant funds under the Community Development Block Grant (CDBG) Program administered by the U.S. Department of Housing and Urban Development (HUD); and

Whereas, the Township of Abington had previously approved an Annual Action Plans for the FY 2021 and FY 2022 CDBG Program years; and

Whereas, HUD permits grant recipients to revise and amend its previous budgets and Annual Action Plans; and

Whereas, in accordance with the Federal Regulations governing the CDBG Program certain changes and revisions to the Annual Action Plans may be considered a substantial amendment as outlined in the Township of Abington's Citizen Participation Plan; and

Whereas, it has been determined that the proposed changes and revisions to the FY 2021 and FY 2022 Annual Action Plans are a substantial amendment and the Township's Citizen Participation Plan has been followed.

DRAFT

Now therefore, be it resolved by the Board of Commissioners of the Township of Abington, Montgomery County, Pennsylvania, as follows:

Section 1. The amended FY 2021 and FY 2022 Annual Action Plans are approved as presented, and as shown in the budgets for each program year which is attached and marked "EXHIBIT A".

Section 2. The President of the Board of Commissioners is hereby authorized to sign and submit the amended FY 2021 and FY 2022 Annual Action Plans to the U.S. Department of Housing and Urban Development.

ADOPTED INTO A RESOLUTION THIS 14TH DAY OF MARCH 2024 BY THE BOARD OF COMMISSIONERS OF THE TOWNSHIP OF ABINGTON, PENNSYLVANIA

APPROVED:

ABINGTON TOWNSHIP
BOARD OF COMMISSIONERS

_____ _____
Date Thomas Hecker, President

ATTEST:

_____ **ADOPTED:** _____
Richard Manfredi, Township Manager

DRAFT

EXHIBIT A

The Township of Abington is substantially amending its FY 2021 and FY 2022 Annual Action Plan to reallocate CDBG funds to existing activities. This is considered a substantial amendment in accordance with the Township's Citizen Participation Plan since the following applies: (e.) deletion or elimination of a previously approved activity; and (f) a change of 50% of more of a line item amount of an approved activity, either increased or decreased.

The following CDBG activities are amended under the FY 2021 Annual Action Plan:

- Cancel Public Facilities Improvements – Grove Park $260,000.
- Increase Owner-Occupied Housing Rehabilitation Program by $260,000 to a new budget total of $364,070.

The following CDBG activities are amended under the FY 2022 Annual Action Plan:

- Cancel Spot Blight Residential Demolition $20,385.
- Increase Emergency Repairs Program by $20,385 to a new budget total of $92,385.

DRAFT

D. FY 2021 CDBG PROGRAM

1. Budget

The following line item adjustments to the FY 2021 CDBG program budget will be:

Activity Name	Previous Budget	Adjustment	Proposed Budget
Public Facilities Improvements – Grove Park	$ 260,000	($ 260,000)	$ 0
Owner-Occupied Housing Rehabilitation Program	$ 104,070	$ 260,000	$ 364,070

2. Narrative

The amendment to the FY 2021 Annual Action Plan will cancel the public facility improvements to Grove Park activity and reallocate $260,000 in FY 2021 CDBG funds an existing activity, Owner-Occupied Housing Rehabilitation Program, for a new budget total of $364,070. This action is considered a substantial amendment in accordance with the Township's Citizen Participation Plan since the following applies: (e.) deletion or elimination of a previously approved activity; and (f) a change of 50% of more of a line item amount of an approved activity, either increased or decreased.

DRAFT

3. IDIS Project Sheet

CD-21-AM	**Project Name**	Owner-Occupied Housing Rehabilitation Program
	Target Area	Areawide
	Goals Supported	HS-3 Housing Rehabilitation
	Needs Addressed	Housing Need
	Funding	CDBG: $364,070

	Description	Housing Rehabilitation assistance for LMI households.
	Target Date	9/30/2025
	Estimate the number and type of families that will benefit from the proposed activities	6 LMI households
	Location Description	Township of Abington
	Planned Activities	Matrix Code: 14A Rehabilitation: Single-Unit Residential 24 CFR 570.202(a)(1) National Objective: LMH Low/mod housing benefit: activities carried out for the purpose of providing or improving permanent residential structures which, upon completion, will be occupied by low- and moderate-income households. 570.208(a)(3)

DRAFT

E. FY 2022 CDBG PROGRAM

1. Budget

The following line item adjustments to the FY 2022 CDBG program budget will be:

Activity Name	Previous Budget	Adjustment	Proposed Budget
Spot Blight Residential Demolition	$ 20,385	($ 20,385)	$ 0
Emergency Repairs Program	$ 72,000	$ 20,385	$ 92,385

2. Narrative

The amendment to the FY 2022 Annual Action Plan will cancel the Spot Blight Residential activity and reallocate $20,385 in FY 2022 CDBG funds an existing activity, Emergency Repairs Program, for a new budget total of $92,385. This action is considered a substantial amendment in accordance with the Township's Citizen Participation Plan since the following applies: (e.) deletion or elimination of a previously approved activity.

3. IDIS Project Sheet

CD-22-AM	**Project Name**	Emergency Repairs Program
	Target Area	Areawide
	Goals Supported	HS-3 Housing Rehabilitation
	Needs Addressed	Housing Need
	Funding	CDBG: $92,385
	Description	Emergency repair housing rehabilitation assistance for LMI households.

DRAFT

	Target Date	9/30/2025
	Estimate the number and type of families that will benefit from the proposed activities	10 LMI households
	Location Description	Township of Abington
	Planned Activities	Matrix Code: 14A Rehabilitation: Single-Unit Residential 24 CFR 570.202(a)(1) National Objective: LMH Low/mod housing benefit: activities carried out for the purpose of providing or improving permanent residential structures which, upon completion, will be occupied by low- and moderate-income households. 570.208(a)(3)

DRAFT



PROPOSED CDBG
Annual Action Plan Amendments

Abington's CDBG Program

- What is the Community Development Block Grant Program?
- Schedule for the Annual Action Plans Amendments
- Draft Amendments
- Schedule for the Annual Action Plans Amendments
- Conclude

What is the Community Development Block Grant Program?

- Funded by the US Department of Housing & Urban Development (HUD)
- Abington is an “entitlement community”
- Supports community development activities to build stronger and more resilient communities and improve the quality of life
- Projects include economic development, municipal public improvements, housing and human services projects and programs
- Principally benefit low- and moderate-income persons
- Targeted to neighborhoods with the highest percentage of low- and moderate-income residents

Annual Action Plan Amendment Schedule

Date	Milestone
Jan. 18, 2024	Presentation of Proposal to the Finance Committee
Jan. 29- Mar. 1, 2024	Public Display of Draft
Feb. 15, 2024	Public Hearing
Mar. 14, 2024	Submission of Final Plan for Approval by the Board of Commissioners
Mar. 15, 2024	Submission to HUD

PROPOSED Substantial Amendment for 2021

Cancel	Amount
Public Facilities Improvements – Grove Park (2021-X)	$260,000
Increase	**Amount**
Owner-Occupied Housing Rehabilitation Program (2021-10)	$260,000 ($364,070 Total)

PROPOSED Substantial Amendment for 2022

Cancel	Amount
Spot Blight Residential Demolition (2022-?)	$20,385
Increase	**Amount**
Emergency Repairs Program (2022-3)	$20,385 ($92,385 Total)

Annual Action Plan Amendment Schedule

Date	Milestone
Jan. 18, 2024	Presentation of Proposal to the Finance Committee
Jan. 29- Mar. 1, 2024	Public Display of Draft
Feb. 15, 2024	Public Hearing
Mar. 14, 2024	Submission of Final Plan for Approval by the Board of Commissioners
Mar. 15, 2024	Submission to HUD



Thank you

TOWNSHIP OF ABINGTON
MONTGOMERY COUNTY, PENNSYLVANIA
RESOLUTION NO. 24-019

Resolution of the Board of Commissioners of the Township of Abington, Montgomery County, Pennsylvania amending the FY 2021 and FY 2022 Annual Action Plans.

Whereas, the Township of Abington, Pennsylvania is a recipient of grant funds under the Community Development Block Grant (CDBG) Program administered by the U.S. Department of Housing and Urban Development (HUD); and

Whereas, the Township of Abington had previously approved an Annual Action Plans for the FY 2021 and FY 2022 CDBG Program years; and

Whereas, HUD permits grant recipients to revise and amend its previous budgets and Annual Action Plans; and

Whereas, in accordance with the Federal Regulations governing the CDBG Program certain changes and revisions to the Annual Action Plans may be considered a substantial amendment as outlined in the Township of Abington's Citizen Participation Plan; and

Whereas, it has been determined that the proposed changes and revisions to the FY 2021 and FY 2022 Annual Action Plans are a substantial amendment and the Township's Citizen Participation Plan has been followed.

Now therefore, be it resolved by the Board of Commissioners of the Township of Abington, Montgomery County, Pennsylvania, as follows:

Section 1. The amended FY 2021 and FY 2022 Annual Action Plans are approved as presented, and as shown in the budgets for each program year which is attached and marked "EXHIBIT A".

Section 2. The President of the Board of Commissioners is hereby authorized to sign and submit the amended FY 2021 and FY 2022 Annual Action Plans to the U.S. Department of Housing and Urban Development.

ADOPTED INTO A RESOLUTION THIS 14TH DAY OF MARCH 2024 BY THE BOARD OF COMMISSIONERS OF THE TOWNSHIP OF ABINGTON, PENNSYLVANIA

ATTEST: TOWNSHIP OF ABINGTON

_____ _____

Richard J. Manfredi Thomas Hecker, President

Township Manager & Secretary

Board of Commissioners