

BOARD OF COMMISSIONERS
Revised AGENDA
Monday, September 24, 2018 - 6:30 PM

Pledge of Allegiance

Notice of Executive Session preceding the Board of Commissioners meeting of September 24, 2018

1. Consent Agenda

- a) Disbursement Review & Approval
- b) Acceptance of Department Monthly Reports
- c) Acceptance of Final Staff Traffic Committee Meeting Minutes – August 15, 2018
- d) Approval of minutes of the Board of Commissioner meeting August 13, 2018 and August 20, 2018
- e) Resolution 2018-87 - Authorizing the Purchase of Veridesk Office Furniture from Veridesk LLC at a Cost of \$8,869.50
- f) Resolution #2018-88 - Authorizing the Award of the Annual Winter Road De-Icing Salt Contract
- g) Resolution #2018-89 - Awarding the contract for Tree Planting for the Big Tree Program
- h) Resolution #2018-103 - Waiver Request, Ordinance #2005-11, Stormwater Management, Radnor TAP Trail
- i) Resolution 2018-93 - Establishing the 2019 Minimum Municipal Obligation (“MMO”), subject to further amendment during the 2018 budget process
- j) Resolution #2018-96 - Approval of Supplemental Design and Survey Services to Simone Collins, Incorporated, Radnor TAP Trail
- k) Resolution #2018-101 - Authorizing Meliora Design to Provide Permitting, Design, and Bidding Documents for Stormwater Management at Arbor and Cumberland Places, in the Amount of \$26,065
- l) Resolution #2018-102 - Authorizing the Execution of a Settlement Agreement with Officer William Derr and The Honorable Discharge of William Derr
- m) HARB Certificates
 - HARB-2018-05 – 309 Midland Avenue – Demolish Garage and building new garage.
 - HARB-2018-07 – 310 N Wayne Avenue - Addition of 1st floor family room and 2nd floor bedroom. Garage renovation. Re-siding of whole house exterior
- n) Resolution #2018-104 - PennDOT Master Castings Agreement

2. Recognition of Kim Crews Englehard, Garrett Hill July 4th Parade/Celebration Committee
3. Recognition of Former Commissioner James C. Higgins
4. Appointments to Various Boards and Commissions
5. Presentation to the Board of Commissioners of the Delaware County William H. Bates Award for Radnor Township/Clem Macrone Park
6. Public Participation - *Individual comment shall be limited to not more than five (5) minutes per Board policy*
7. Committee Reports

PUBLIC SAFETY

- A. Resolution #2018-94 - Establishing A Radnor Township Youth Aid Panel Consisting of Community Volunteers to Assist Juveniles Who Are First Time Offenders

COMMUNITY DEVELOPMENT

- B. Discussion and possible motion to authorize the Township Manager to enter into contract negotiations for an UCC and 3rd Party Services firm to assist the Community Development Department

FINANCE & AUDIT

- C. Ordinance #2018-11 - **[Introduction]** Amending Chapters §235 and §246 of the Township Code combining the Sanitary Sewer Rent and Stormwater Fee, decreasing the Sanitary Sewer Rent penalty and interest, and extending the payment period to thirty (x30) days
- D. Resolution #2018-95 - Engaging PFM as Financial Advisor to provide services relating to a Sanitary Sewer Financing Transaction as budgeted in the 2018 budget and required due to emergency sewer replacement costs

PERSONNEL & ADMINISTRATION

- E. Approval of Special Counsel for Radnor Memorial Library Litigation
- F. ~~Willows Project Update~~

PUBLIC WORKS & ENGINEERING

- G. Resolution #2018-99 - Authorizing the Township Manager to Execute Easement Agreements with the Pennsylvania Department of Transportation
- H. Resolution #2018-100 - 415 Maplewood Drive – Final – Preliminary Subdivision and Land Development Plans
- I. Resolution #2018-90 - Awarding the Kirks Run Sanitary Sewer Encasement and Stream Bank Rehabilitation project, Contract #B-18-006, to Total Site Development, Incorporated, in the Amount of \$149,086.12
- J. Resolution #2018-91 - Awarding the Maplewood Avenue Storm Sewer Extension Project Contract #B-18-008, to Lechmanik in the Amount of \$84,260.31
- K. Resolution #2018-92 - Awarding North Wayne Field SWM Basin Repair and Cleaning Contract #B-18-010, to N. Abbonizio Contractors, Incorporated, in the Amount of \$669,000
- L. Resolution #2018-97 - Awarding the Matsonford Road Pedestrian Bridge Rehabilitation, Contract #B-18-005, to Professional Construction Contractors, in the Amount of \$553,990
- M. Resolution #2018-98 - Awarding the Sproul Road (SR 0320) & Conestoga Road (SR 1019) Traffic Signal Installation Contract #B-18-007, to Lenni Electric Corporation, in the Amount of \$52,875.01

PARKS & RECREATION

LIBRARY

PUBLIC HEALTH

New Business

- Presentation: 2018 Valley Run Stream Assessment by Rettew Associates
- Progress of the comfort station at Emlen Tunnell Park **(Requested by Commissioner Farhy)**
- Recycling Program – **(Requested by Commissioner Abel)**

Old Business

Public Participation

Adjournment

RADNOR TOWNSHIP
DISBURSEMENTS SUMMARY
September 24, 2018

The table below summarizes the amount of disbursements made since the last public meeting held on August 13, 2018. As approved by the Board, the Administration is now making weekly accounts payable disbursement batches and publishing those lists on the Township's web site at the following link. Please refer to those files for a detailed listing of the amounts paid by vendor by account code.

Link: <http://radnor.com/728/Disbursements-List>

Fund (Fund Number)	2018-8B August 10, 2018	2018-8C August 17, 2018	2018-8D August 24, 2018	2018-8E August 31, 2018	2018-9A September 7, 2018	2018-9B September 14, 2018	Total
General Fund (01)	\$201,169.00	\$412,472.49	\$170,145.60	\$207,480.23	\$164,294.83	\$99,525.33	\$1,255,087.48
Sewer Fund (02)	3,106.75	248,256.39	9,551.50	1,171,748.11	26,666.15	4,767.79	1,464,096.69
Liquid Fuels Fund (03)	0.00	0.00	0.00	0.00	0.00	7,316.00	7,316
Storm Sewer Management (04)	1,983.30	25,323.39	0.00	805.08	28,121.28	3,475.27	59,708.32
Capital Improvement Fund (05)	8,869.71	70,637.43	49,693.50	44,075.96	4,095.03	68,771.46	246,143.09
Police Pension Fund (07)	0.00	4,250.00	0.00	0.00	5,459.74	0.00	9,709.74
OPEB Fund (08)	0.00	135,782.16	0.00	0.00	934.54	549.84	137,266.54
Civilian Pension Fund (11)	0.00	4,500.00	0.00	0.00	5,240.23	0.00	9,740.23
Investigation Fund (12)	0.00	250.74	0.00	0.00	250.74	0.00	501.48
\$8 Million Settlement Fund (18)	0.00	0.00	0.00	5,072.89	8,246.08	1,499.81	14,818.78
The Willows Fund (23)	0.00	13,084.00	19,668.40	768.17	368.45	56.75	33,945.77
Library Improvement Fund (500)	147.21	34,687.25	0.00	0.00	66,675.42	148.93	101,658.81
Park & Trail Improvement Fund (501)	26,847.33	19,410.00	0.00	5,819.75	9,798.77	7,878.20	69,754.05
Total Accounts Payable Disbursements	\$242,123.30	\$968,653.85	\$249,059.00	\$1,435,770.19	\$320,151.26	\$193,989.38	\$3,409,746.98
<i>Electronic Disbursements</i>	n/a	n/a	n/a	n/a	n/a	n/a	\$1,373,426.11
Grand Total	\$242,123.30	\$968,653.85	\$249,059.00	\$1,435,770.19	\$320,151.26	\$193,989.38	\$4,783,173.09

In addition to the accounts payable checks, the Township also has various electronic payments including payroll, debt service, credit card purchases and fees as well as others from time to time. The attached table reflects all of the electronic payments made since the last public Board meeting as well as those anticipated prior to the next Board meeting.

The Administration has adopted various internal control and processing procedures to ensure that amounts obligated are within the budgetary limits established by the Board of Commissioners. Those procedures are monitored on a daily basis by members of the Finance Department and responsible employees of the various departments. The amounts included in the table above have been scrutinized as part of the internal control and processing procedures and have obtained the required approvals prior to disbursement.

If you should have any questions, please contact the Finance Department.

Respectfully Submitted,



 William M. White
 Finance Director

ELECTRONICALLY PAID DISBURSEMENT LISTING

Estimated Through October 8, 2018

Description	Account No.	Date	Purpose	Amount
Credit Card Revenue Fees - Actual	01-Variou	Various	8/18 Credit Card Revenue Processing Fees	\$7,414.68
Payroll [Pension] Transaction - Estimated	07-492-4980	10/1/2018	10/18 Police Pension Payments	\$204,600.90
Payroll [Pension] Transaction - Estimated	11-495-4980	10/1/2018	10/18 Civilian Pension Payments	\$155,410.53
Payroll [Bi-Weekly] Transaction - Estimated	01-various	9/20/2018	Salaries and Payroll Taxes - General Fund	\$485,500.00
Payroll [Bi-Weekly] Transaction - Estimated	02-various	9/20/2018	Salaries and Payroll Taxes - Sewer Fund	\$17,500.00
Payroll [Bi-Weekly] Transaction - Estimated	01-various	10/4/2018	Salaries and Payroll Taxes - General Fund	\$485,500.00
Payroll [Bi-Weekly] Transaction - Estimated	02-various	10/4/2018	Salaries and Payroll Taxes - Sewer Fund	\$17,500.00
Period Total				\$1,373,426.11

<u>Original Estimate</u>			<u>Actual Amount</u>
\$485,500.00	8/9/2018	Salaries and Payroll Taxes - General Fund	\$531,206.50
\$17,500.00	8/9/2018	Salaries and Payroll Taxes - Sewer Fund	\$16,832.95
\$503,000.00			\$548,039.45
\$485,500.00	8/23/2018	Salaries and Payroll Taxes - General Fund	\$420,313.96
\$17,500.00	8/23/2018	Salaries and Payroll Taxes - Sewer Fund	\$16,362.58
\$0.00	8/23/2018	Salaries and Payroll Taxes - Willows Fund	\$207.83
\$503,000.00			\$436,884.37
\$485,500.00	9/6/2018	Salaries and Payroll Taxes - General Fund	\$432,113.84
\$17,500.00	9/6/2018	Salaries and Payroll Taxes - Sewer Fund	\$16,087.63
\$503,000.00			\$448,201.47
\$205,000.00	9/1/2018	Police Pension Payroll	\$210,284.83
\$150,500.00	9/1/2018	Civilian Pension Payroll	\$149,458.99
\$355,500.00			\$359,743.82
\$0.00	8/27/2018	Longevity Daly Final - General Fund	\$495.19



RECREATION & COMMUNITY PROGRAMMING DEPARTMENT JULY & AUGUST 2018 REPORT

Programs/Excursions/Community Events

Summer:

- Men's Pickup Basketball at Radnor Activity Center (41 participants)
- Pickleball at Radnor Activity Center (72 participants throughout season since fall 2017)
- Radnor Steps Community Walking Program along the Trail – (participation varies each week)
- Junior and Adult Tennis Summer with Pam Rende at Warren Filipone Park (3 sessions/23 participants)
- Junior Soccer with Soccer Shots at Clem Macrone Park (52 participants /4 sessions)
- Harry Potter Camp with Brandywine Learning Center at Sacred Heart Academy (2 sessions/74 participants)
- Youth Theatre Camp with Theatre Horizon at Christ Church Ithan (17 participants)
- Chess Camp with Shining Knights Chess at Kumon Learning Center of Wayne (14 participants)
- Soccer Camp with World Cup Sports Academy at Radnor Memorial (Week 1: 8 participants; Week 2: 9 participants; Week 3: 13 participants)
- Soccer Nights with World Cup Sports Academy at Dittmar Park (9 participants)
- All-Star Sports Camp with World Cup Sports Academy at Radnor Activity Center (Week 1: 13 participants; Week 2: 24 participants; Week 3: cancelled; Week 4: cancelled; Week 5: 14 participants; Week 6: 23 participants; Week 7: 16 participants)
- Junior All-Star Sports Camp with World Cup Sports Academy at Radnor Activity Center (5 participants)
- Survivor Nature Camp with World Cup Sports Academy at the Willows Park (Week 1: 32 participants; Week 2: 36 participants; Week 3: 21 participants; Week 4: 29 participants; Week 5: 44 participants; Week 6: 63 participants)
- Radnor Day Camp at Radnor Elementary School (190 participants registered to date – 185 Full Day participants; 5 Half Day participants; 31 RTSD Extended School Year Programming participants)

Fall (registration is still underway):

- T-ball with Jump Start Sports at Clem Macrone Park (14 participants)
- Junior Soccer with Soccer Shots at Clem Macrone Park (152 participants)
- Men's Pickup Basketball at Radnor Activity Center (11 participants)
- Junior/Adult Tennis Lessons with David Broida at Radnor Racquet Club (9 participants)
- Champions Basketball at Radnor Activity Center (1 participant)
- Pickleball at Radnor Activity Center (25 participants)
- After-School Chess Club with Shining Knights at Ithan Elementary School (26 participants)
- After-School Science Club with Mad Science at Ithan Elementary School (20 participants)

PRPS Discount Ticket Program:

- Regal Movie Discount Ticket Program (169 sold to date 2018)
- Amusement Park Discount Tickets (99 sold to date 2018)

Community Events:

- Summer Concert Chico's Vibe took place on Wednesday, July 11 at Clem Macrone Park (approximately 1,000 in attendance)
- Night at the Ball Park/Wiffleball Classic & Fireworks Event took place on Wednesday, July 18 at Encke Park (approximately 1,000 in attendance)

Additional Programming Activity:

- Distributed Summer 2018 Recreation Activities Brochure and promoted all upcoming seasonal programming and events.
- Coordinated filming of programming with Radnor Studio 21.

- Met with summer/fall programming/camps and event vendors/instructors, developed program details, contractual agreements, coordinated facility schedules, program logistics, participant communications, and emergency/safety procedures.
- Met to plan logistics and communications for upcoming camps at facilities at Sacred Heart Country Day School and Kumon Learning Center.
- Met with representatives of Radnor Youth Basketball League to discuss and plan 2018-2019 season – programming for kindergarten to second grade will be transitioned to the RYBL.
- Met with Township risk management representatives and worked with programming vendors regarding new insurance limit requirements for abuse and molestation.
- **Radnor Day Camp:** Continued comprehensive planning and execution – worked with Radnor Township School District personnel on building usage/logistics at Radnor Elementary School, Radnor High School Pool, and Radnor Middle School along with finalizing camp scholarships and organizing the campers who attend RTSD Extended School Year programming; coordinated ongoing camp website updates, camp parent communications, weekly planning for daily structure, activities, trips, and special events; met with parents to discuss incidences at camp; coordinated staffing payroll, held weekly staff meetings at all levels to discuss camp dynamics and plan all components of camp, conducted staff performance evaluations and met with each staff member; held staff appreciation dinner and recognitions; coordinated major camp events including Olympics; Performance & Art Show, and Camp Carnival; coordinated camp close-down and camp performance evaluations.
 - Summary of 2018 Summer Staff Information:
 - Returning staff: 22 New staff: 21 Total: 43 (down from 45 in 2017)
 - Radnor High School alumni staff: 14 Current RHS students on staff: 9
 - Total Radnor Township residents on staff: 29
 - Certified Teachers: 5 Pursuing degree in education/related field: 9
 - Support Aides/Paraprofessionals currently working in schools: 4 (13 campers require one-one-one support; 11 require group-based support)
 - Designated special needs support staff for one-on-one/extra support: 12
- Continued working with the PA Recreation and Parks Society (PRPS) regarding the child care licensing requirements for preschool-age programming participants under the Pennsylvania Department of Human Services - a structured, operating protocol was developed and submitted to the DHS under which public recreation providers would operate and consideration/waiver request by the DHS has been denied; other steps are being taken on this issue.
- Coordinated with Recreation/Public Works/Police/Fire Departments along with partners to prepare and plan for upcoming events including the Summer Concert at Clem Macrone Park, Night at the Ball Park/Wiffleball Classic/Fireworks at Encke Park and our upcoming fall and winter event schedule; discussed logistics, set up, activities and entertainment, staffing, registration, promotions, and supplies.
- Met to with representative to discuss and plan Highland Avenue Block Party event.
- Continued sponsorship and partnership development by working with local businesses and organizations; solicited sponsorship proceeds for 2018 events and programs.
- Met with Jim Sears, David Auto, The Saturday Club, and Taste of Britain.
- Prepared season-end financial reporting and evaluation of programming, discount ticket program, community events, and projects.

Administrative

- Processed daily phone and email communications in order to provide information on community sports, recreational activities, and events; coordinated registrations for programs; prepared purchase orders/invoices, deposited income; prepared program financial reports that include participation reconciliation, instructor payments, and performance analyses; distributed program evaluations to participants; coordinated locations and logistics for programming, scheduled facility reservations/submitted applications, maintained Outlook event calendars, met with instructors and vendors to develop program agreements and process background checks; continued utilization of PEN (Programmer's Exchange Network) listserv to obtain and share information to evaluate operations; updated all Department areas of the Township website and social media page and distributed seasonal e-newsletters; filmed monthly segment for the *Radnor 411* television show and

prepared slides for the Radnor Cable Channel; coordinated marketing efforts; managed inventories and distributed supplies to programs; worked with Township solicitor on various Department items.

- Monitored Department budgetary line items and developed year-to-date performance analyses for program and service areas.
- Developed Draft of 2019 Department Goals and Objectives; submitted initial list of capital projects for Parks and Recreation to the Township Manager.
- Continued to work with and meet with Program Supervisor, Program Coordinator, and Recreation Assistant on daily planning, programming, events, operations, and projects.
- Continued meetings with the Finance Department on the implementation of Tyler Munis Enterprise Resource Planning Project (financial software) and implementation and evaluate of Tyler Parks and Recreation, the Department's new online registration system.
- Attended weekly staff meetings with the Township Manager and Department Heads.
- Attended monthly Board of Commissioners and Parks Board Meetings and prepared reports.
- Met/took part in calls with Commissioners to update on various projects.
- Met with Township Parks & Recreation Board Members to prepare for upcoming meetings.
- Met with representative of State Health Department Young Lungs at Play Program.
- Worked with Township and Department staff to organize records retention and disposal.
- Attended monthly Staff Safety Committee Meeting.
- Attended monthly Sports Legends of Delaware County Museum Board Meeting.
- Met with Radnor Township School District Superintendent.
- Met with Darby Creek Valley Association to discuss facilities and programming.
- Participated in Public Works Superintendent position candidate interview.
- Met with and toured Township parks with new Public Works Parks Supervisor.
- Met with In-Community to discuss potential magazine for Township.

Parks & Facilities Usage

- **Athletic Fields:** Coordinated field schedules at 10 locations and light schedule (Radnor Memorial) for summer and fall usage seasons.
- **Park Areas/Picnic Rentals (does not include athletic fields):** Reservations 2018 to date:
 - Clem Macrone Park (24 rentals)
 - Cowan Park (2 rentals)
 - Dittmar Park (1 rental)
 - Emlen Tunnell Park (1 rental)
 - Fenimore Woods (29 rentals)
 - Odorisio Park (1 rental)
 - Warren Filipone Park (2 rental)
 - Willows Park (8 rentals)
 - Veterans Park (1 rental)
- **Radnor Activity Center:** Coordinated rentals and usage - 3 rentals in July; 1 rental in August; most were for multiple days including Wayne Wildcats Tumbling; usage also included the Department's seasonal programming for Men's Basketball and World Cup Sports Academy All Star Sports Camp; worked with Radnor Township School District to coordinate insurance adjuster facility visit to evaluate damage from flooding; coordinated floor damage assessment; coordinated usage cancellations while facility was closed for 5 days after the storm; met with Township's contracted cleaners to review custodial services; coordinated roof analysis.

Parks & Recreation Facilities Projects

- **AEDs:** Continued evaluating a project to install AEDs at various Township parks and recreation facilities as part of the 2019 budget; coordinated more immediate installation of AEDs at the Township Building, Public Works Facility, and Radnor Activity Center.

- **Eagle Scout Projects:**
 - Radnor Trail overpass median painting – project currently underway.
 - Bike repair station at Friends of Radnor Trails Park – met to discuss project details.
 - Kiosk installation at the Willows Park trail entrance – discussed project details.
 - Emlen Tunnell Park restoration and painting field boxes – discussed project details.
- **Incredible Edible Radnor Community Gardens** – coordinated operating agreement with members and established projects along the Radnor Trail and Wayne Senior Center.
- **Park Signage Replacement:**
 - Saw Mill Park sign has been put on hold as we evaluate the park traffic flow and logistics.
 - Radnor Memorial Park, Ithan Valley Park, Bo Connor Park, Emlen Tunnell Park, and Fenimore Woods are under development.
- **Park and Trail Improvements** – a bond ordinance was voted at the October 26, 2015 Board of Commissioners Meeting for the following parks and trails (\$5.75M - \$4.3M Parks/\$1.45M Trails); met with staff and continued working towards completion of the various park projects that have been outlined – see update provided to the Parks & Recreation Board at the June meeting.

Bo Connor Park (underway)
Cappelli Golf Range (underway)
Clem Macrone Park (complete)
Emlen Tunnel Park (underway)
Encke Park (complete)
Fenimore Woods (underway)
Ithan Valley Park (underway)
Petrie Park (complete)
Radnor Trail (underway)
Skunk Hollow Park (complete)
Warren Filipone Park (underway)
Ardrossan Trail
West Wayne Segment (8A-E, 1C, 1D)
Marth Brown Segment
Villanova – Chew Segment (16A, 9C, ½) - omitted
Radnor Station to Harford Park (9F)

- **Bo Connor Park Improvements:** Coordinated engineering site survey and scope of work development for site improvements/continued working with Gannett Fleming to develop bid documentation; coordinated public review with the Parks Board in July.
- **Emlen Tunnell Park:** continued development of prospective comfort station design, building amenities, and site location options; coordinated updated site survey with Township engineering firm; anticipated further discussion at upcoming September Parks Board Meeting.
- **Ithan Valley Park Improvements:** coordinated with Friends of Ithan Valley Park evaluation of anticipated park improvements – met to discuss signage development.
- **Fenimore Woods Rehabilitation Project:** Comprehensive park renovation project planning underway; park outbound site and topographical surveys have been prepared; project agreement with Gilmore & Associates approved by the BOC in July - anticipate updated preliminary plan review, project and budget development review with the Parks Board this fall along with environmental and traffic review.
- **Radnor Trail - Brookside Parking Lot Restroom:** worked on restroom design options with various vendors; coordinated site layout with Gannett Fleming to prepare bid documentation.
- **Warren Filipone Park Improvement:** Coordinated engineering site survey and scope of work development for site improvements/continued working with Gannett Fleming to develop bid documentation; coordinated public review with the Parks Board in July; met at the park with Commissioner/resident/Radnor Wayne Little League to discuss possible baseball training infield and batting cages project.

- **The Willows Mansion:** The Board of Commissioners approved a lease agreement to the Willows Park Preserve (WPP) nonprofit organization for their operation, preservation, and maintenance of the Willows Mansion - this agreement will allow for the Mansion's continued public use and public usage of the park with minimal impacts; an update on the project will be provided by the WPP at the upcoming Board of Commissioners Meeting in September.
- **The Willows Park:** Met with Township Engineer and Radnor Police Superintendent to evaluate traffic calming plan at the Willows exit bridge.

Storms Impact/Parks & Recreation Facilities – August 13th:

- Radnor Activity Center (see above) – facility was closed for 5 days for water clean up.
- Cowan Park Playground – playground was closed for 3 weeks for replacement of perimeter fencing, bench, and wood-fibered surfacing.
- Park Fields – significant repairs needed due to impact from water flow.

Respectfully Submitted,



Tammy S. Cohen
Director of Recreation & Community Programming

RADNOR TOWNSHIP POLICE DEPARTMENT

Monthly Report



September 2018

**Christopher B. Flanagan
Police Superintendent**



<u>Description</u>	<u>Primary Count</u>
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Parking Tickets

Month of August 2018	872
January 1, 2018 – August 31, 2018	8,237

Residential and Commercial False Alarm Violations

Month of August 2018	87
January 1, 2018 – August 31, 2018	676

Moving Violations

Month of August 2018	428
January 1, 2018 – August 31, 2018	2,277

Radnor Police Training – August 2018

Det. Metzler, Ofc. Matijasich, and Ofc. Greaves attended:

SCAN – Scientific Content Analysis.

SCAN is an effective technique for obtaining information and detecting deception strictly by means of verbal communication. Investigators learn how to extract vital information from oral or written statements given by suspects, witnesses, victims or informers, information which otherwise will not be obtained by any other investigative method.

Calls for Service - by Keyword

RADNOR TOWNSHIP

Incidents Reported Between 08/01/2018 and 08/31/2018

Code	Description	Primary Count	Secondary UCR Count		
			Code 2	Code 3	Code 4
3501	DISTURBANCE-COMPLAINT OF NOISE,MUSIC,ETC	14			
3520	DOMESTIC PROBLEM (NO ARREST)	14	1		
3650	PECO-ENEGY NOTIFICATION/POWER OUTAGES	3			
4000	JUVENILE PROBLEMS (NO ARREST)	5			
4301	MENTAL HEALTH-ALL OTHERS	7	3		
4500	OPEN DOORS/WINDOWS	7			
4600	ORDINANCE VIOL.-EXCEPT BURNING/SOLICIT	1			
4650	POLICE INFORMATION	53			
4660	911 HANG UP CALL	25			
4700	ADDED PATROL-REQUEST FOR	85			
4701	ADDED PATROL - BUSINESS CHECKS	91	1		
4800	SOLICITING-WITHOUT PERMIT	2			
4801	SOLICITING-COMPLAINTS	2			
4900	SUSPICIOUS PERSON	18			
4901	SUSPICIOUS CIRCUMSTANCE	29	1		
4902	SUSPICIOUS VEHICLES	14			
5000	TELEPHONE CALLS-HARASSING/SUSPICIOUS	5			
5100	TRAFFIC SIGNALS-DAMAGED/NEED REPAIR	2			
5300	TREES DOWN AND/OR BLOCKING ROADWAY,ETC	7	1		
5400	VEHICLES-ABANDONED	1	1		
5401	VEHICLES-ASSIST MOTORIST(INCL LOCKOUTS)	25			
5402	VEHICLES-DISABLED	20			
5403	VEHICLES-MV VIOLATIONS & MVV COMPLAINTS	30	2	1	
5404	VEHICLES-PARKING COMPLAINTS	13			
5405	VEHICLES-TOWED	14	4		1
5406	VEHICLES-REGISTRATION/LOST OR STOLEN	1			
5501	WIRES DOWN - NO HAZARD	2			
5600	WARRANT-ARREST (ISSUED OUTSIDE RADNOR)	2	1		
6001	ACCIDENT - WITH INJURIES	3	1		
6003	ACCIDENT - NON REPORTABLE	36			
6005	ACCIDENT - NO REPORT DONE	8			
6007	ACCIDENT - BRIDGE STRIKE	3			
8001	BURG/HOLDUP/PANIC ALARM - NO CITATION	87			
8003	FIRE/MEDICAL ALARM - NO CITATION	30			
8004	ANY ALARM- SEVERE WEATHER- NO CITATION	2			
9001	ANIMALS-RABID/SICK	1			
9005	ANIMALS - ALL INVOLVING DEER	1			
9038	K-9 ASSIST	4			
9050	ASSIST SICK/INJURED	106	1		
9051	ASSIST AMBULANCE	10			
9052	ASSIST OTHER POLICE DEPARTMENT	1			
9966	SELECTIVE ENFORCEMENT-CITATION ISSUED	111			
9968	SELECTIVE ENFORCEMENT-WARNING ISSUED	50			
9970	SELECTIVE ENFORCEMENT-NO ISSUANCE	32			
9972	MOTOR OFFICER ACTIVITY	0	2	1	
		<u>977</u>			

ACCIDENT

3200 CHECK ON WELFARE 14

ADMIN

9000 ANIMALS - DOG COMPLAINTS 4

Calls for Service - by Keyword

RADNOR TOWNSHIP

Incidents Reported Between 08/01/2018 and 08/31/2018

Code	Description	Primary Count	Secondary UCR Count		
			Code 2	Code 3	Code 4
ADMIN					
9002	ANIMALS - ALL OTHER	4			
9055	ASSIST SICK/INJURED ALCOHOL/DRUG RELATED	6	3	1	
		<u>14</u>			
ALL OTHER					
2640	ALL OTHER ORDINANCE VIOLATIONS	2			
2660	TRESPASSING OF REAL PROPERTY	3			
		<u>5</u>			
ANIMAL					
5502	ANIMAL COMPLAINTS - BARKING DOGS	2			
5506	ANIMAL COMPLAINTS - STRAY ANIMALS	10			
5510	ANIMAL COMPLAINTS - OTHER	14			
5590	ANIMAL COMPLAINTS - REPORTS	6			
		<u>32</u>			
ASSAULT					
0440	ASSAULT - ATROCIOUS- HANDS,FISTS,FEET	1			
0810	SIMPLE PHYSICAL ASSAULTS	1			
		<u>2</u>			
ASSIST					
7502	ASSIST OTHER AGENCIES - FIRE DEPT.	7			
7504	ASSIST OTHER AGENCIES - OTHER POLICE	3			
7506	ASSISTING OTHER AGENCIES - ALL OTHERS	1			
7590	ASSISTING OTHER AGENCIES - REPORTS	1			
		<u>12</u>			
BICYCLES					
5005	FOUND BICYCLES	1			
BURGLARY					
0514	BURGLARY-FORCE ENTRY-NON-RESID-NIGHT	1			
0533	ATTEMPTED FORCIBLE ENTRY-RES.-UNKNOWN	1			
		<u>2</u>			
CIVIL					
3300	CIVIL DISPUTES	4			
CRIM MISCH					
1410	CRIMINAL MISCHIEF TO AUTOMOBILES	4			
1440	CRIMINAL MISCHIEF - ALL OTHER	1			
1490	CRIMINAL MISCHIEF - REPORTS	3			
		<u>8</u>			
DISORDERLY					
2400	DISORDERLY CONDUCT	0	1		
2410	HARASSMENT BY COMMUNICATION	6			
2450	HARASSMENT	3			1
		<u>9</u>			
DISTURBANC					
3610	DISTURBANCES-JUVENILE	2			
3620	DISTURBANCES-OTHER (FIGHTS,DISPUTES,ETC)	6			

Calls for Service - by Keyword

RADNOR TOWNSHIP

Incidents Reported Between 08/01/2018 and 08/31/2018

Code	Description	Primary Count	Secondary UCR Count		
			Code 2	Code 3	Code 4
		8			
DRUG					
1810	DRUG VIOLATIONS	1			
1811	NARCOTICS-SALE-MORPHINE, HEROIN, CODEINE	2			
1812	NARCOTICS-SALE-MARIJUANA, HASHISH, ETC.	1			
1831	NARCOTICS-POSSESSION-MORPHINE, HEROIN, ETC	2		1	
1832	NARCOTICS-POSSESSION-MARIJUANA, ETC.	3	2		
1834	NARCOTICS-POSSESSION-OTHER DANGEROUS	1			
		10			
DUI					
2111	DRIVING UNDER THE INFLUENCE - ALCOHOL	4			
2112	DRIVE UNDER INFLUENCE-ALCOHOL-IMPAIRED	1			
2122	DRIVE UNDER INFLUENCE - DRUGS-IMPAIRED	1			
		6			
FIRE					
3700	FIRE - RESIDENTIAL	2			
3701	FIRE-COMMERCIAL	2			
3703	FIRE-ALL OTHERS	3			
3840	FIRES (INCLUDING ALARMS-FOUNDED/UNFOUNDED)	3			
		10			
FRAUD					
1100	FRAUD	3			
1130	FRAUD - ALL OTHERS (FLIM-FLAM, ETC.)	3			
1150	FRAUD - CREDIT CARDS	2			
1191	FRAUD - REPORTS	10			
		18			
HVERFORD					
9041	ASSIST HVERFORD PD	5			
LIQUOR					
2211	LIQUOR LAW-UNDERAGE-PURCH, CONSMP, POSSES	1			
LMPD					
9040	ASSIST LOWER MERION PD	6			
LOST/FOUND					
5002	LOST & FOUND - FOUND ANIMAL	2			
5004	LOST & FOUND - FOUND ARTICLES	5			
5006	LOST & FOUND - LOST ANIMAL	1			
5008	LOST & FOUND - LOST ARTICLES	8			
		16			
MISSING PE					
2900	JUVENILE RUNAWAYS	9			
5090	LOST & FOUND/MISSING PERSONS - REPORTS	1			
		10			
MV ACCIDEN					
6002	ACCIDENT - NO INJURIES (REPORTABLE)	10			
6004	ACCIDENT - HIT & RUN	6	1		

Calls for Service - by Keyword

RADNOR TOWNSHIP

Incidents Reported Between 08/01/2018 and 08/31/2018

Code	Description	Primary Count	Secondary UCR Count		
			Code 2	Code 3	Code 4
		16			
N-TRAF CIT					
CITN	NON-TRAFFIC CITATION	15			
NEWTOWN					
9043	ASSIST NEWTOWN PD	2			
OTHER					
4012	NON-CRIMINAL - GAS LEAKS & EXPLOSIONS	1			
4018	NON-CRIMINAL-ST. LIGHT OUT, ST. REPAIRS.	5			
		6			
PFA					
2647	ALL OTHERS - PROTECTIVE ORDERS	2			
PROPERTY					
2910	LOST/MISSING PROPERTY	2			
PSP					
9047	ASSIST PSP	1	1		
PUBL DRUNK					
2300	PUBLIC DRUNKENESS	2			1
2390	DRUNKENESS - REPORTS	1			
		3			
RECOV PROP					
3000	LOST/RECOVERED PROPERTY	1			
SERVICE					
7002	NOTIFICATION - COMMUNITY DEVELOPMENT	1			
7006	NOTIFICATION - HIGHWAY DEPT.	1			
7014	PUBLIC SERVICE - OTHERS (OFFICER ASSIST)	7			
7090	PUBLIC SERVICES - REPORTS	7			
		16			
SUICIDE					
3401	DEATH INVESTIGATION-SUSPICIOUS/SUICIDE	1			
SUSPICIOUS					
3500	DISTURBANCE - DISORDERLY PERSONS	6			
SVC CALL					
3810	SERVICE CALL-ALARMS-UNFOUNDED-EXCPT FIRE	5			
3850	HAZARDOUS CONDITIONS	17			
3880	OPEN DOORS/WINDOWS - DISCOVERED	10			
3900	GAS LEAKS (NATURAL GAS)	4			
		36			
THEFT					

Calls for Service - by Keyword



RADNOR TOWNSHIP

Incidents Reported Between 08/01/2018 and 08/31/2018

Code	Description	Primary Count	Secondary UCR Count		
			Code 2	Code 3	Code 4
THEFT					
0613	THEFT-\$200 & OVER-RETAIL THEFT	1			
0617	THEFT-\$200 & OVER-FROM BUILDINGS	1			
0619	THEFT-\$200 & OVER-ALL OTHER	3			
0627	THEFT-\$50 TO \$200-FROM BUILDINGS	1			
0629	THEFT-\$50 TO \$200-ALL OTHER	1			
0633	THEFT-UNDER \$50-RETAIL THEFT	1			
0634	THEFT-UNDER \$50-FROM AUTO (EXCEPT 0635)	1			
0637	THEFT - UNDER \$50 - FROM BUILDINGS	1			
0644	THEFT-ATTEMPTED-FROM AUTO (EXCEPT 0645)	2			
0690	THEFT - REPORTS	1			
		13			
TRAF CIT					
CITT	TRAFFIC CITATION	11			
TRAFFIC					
4010	TRAFFIC OFFENSES	2			
6312	TRAFFIC ENFORCEMENT - WARNINGS	1			
6610	TRAFFIC RELATED - MOTORIST AID	1			
6612	TRAFFIC RELATED - SIGNALS-SIGNS OUT	6			
6614	TRAFFIC RELATED - OTHER TRAFFIC	1			
		11			
TREDYFFRIN					
9045	ASSIST TREDYFFRIN PD	1			
VUPD					
9049	ASSIST VUPD	20			
WARRANT					
8010	WARRANTS - LOCAL - CRIMINAL	0	1		
8090	WARRANTS - LOCAL - REPORTS	1			
8110	WARRANTS - OTHER AUTHORITY - CRIMINAL	1			
		2			
	Total Calls	1,335			

Radnor Township Police Department
Community Events

1. Our Lady of the Assumption Annual Parish Festival - August 12, 2018
2. 2018 Unity in the Community Block Party - August 18, 2018
3. Porchfest – September 15, 2018
4. Wayne Business Association Fall Festival – September 16, 2018
5. Day of Service at Villanova University – September 15, 2018

Subject: OLA Festival

Chris,

My sincere thanks to you and the Officers for the services provided at the 2018 Our Lady of the Assumption Festival. The added patrol of the church property over that weekend was very much appreciated.

Officer In Charge Chris Gluck was kind enough to provide the festival with the Special Operations truck, motorcycle, patrol vehicle and patrol bicycle for demonstration at the festival. Officers Nick Laffredo, Josh McCann, Ryan Collins, Steve Ryan were proud representatives of the police department, took photos with the children and had meaningful conversations with the adults. Officer Laffredo stayed many hours in the heat and humidity to interact with the people and demonstrate the equipment.

Citizens don't always get the opportunity for a personal encounter with an officer which is the reason that police/community relations are so important, especially in today's climate.

All the officers looked sharp and were the ultimate professionals at the festival. Please forward my thank you to all the officers. You will be receiving a formal thank you letter from OLA in the next few weeks.









Thank you again,

Joe Paolantonio

The information in this email, and any attachments, may contain confidential information. Use and further disclosure must be consistent with applicable laws. However, if you believe you've received this email in error, delete it immediately and do not use, disclose or store the information it contains

Commissioners,

We had a powerful day at the Unity in The Community Event, held August 18, 2018 on Highland Ave. The value and spirit of those in attendance was at an all-time high.

We had the following:

Commissioners

Radnor Chaplains Team

Christ Church, Wayne AME and Second Baptist

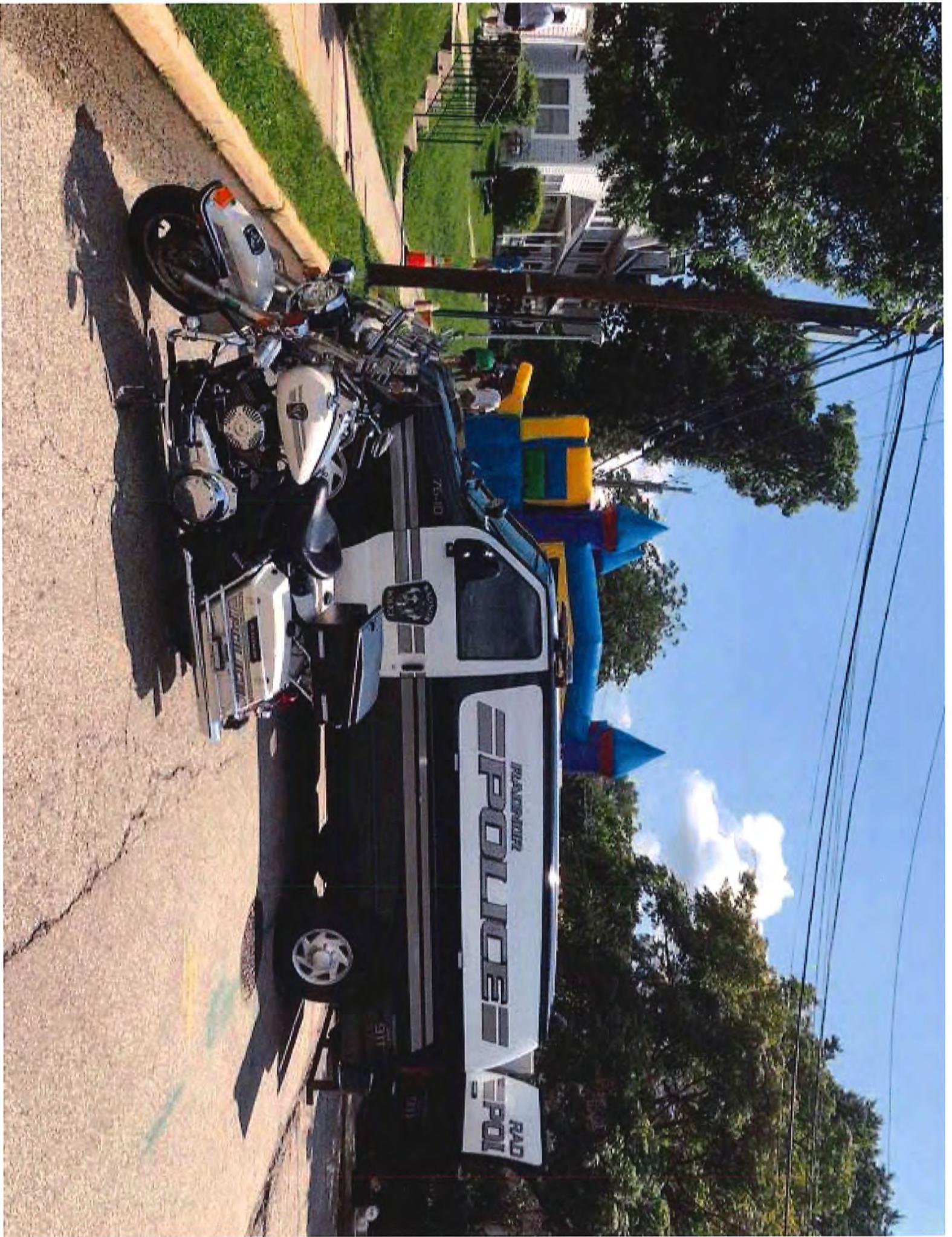
And several other groups and vendors

Most importantly great residents and children from our community!

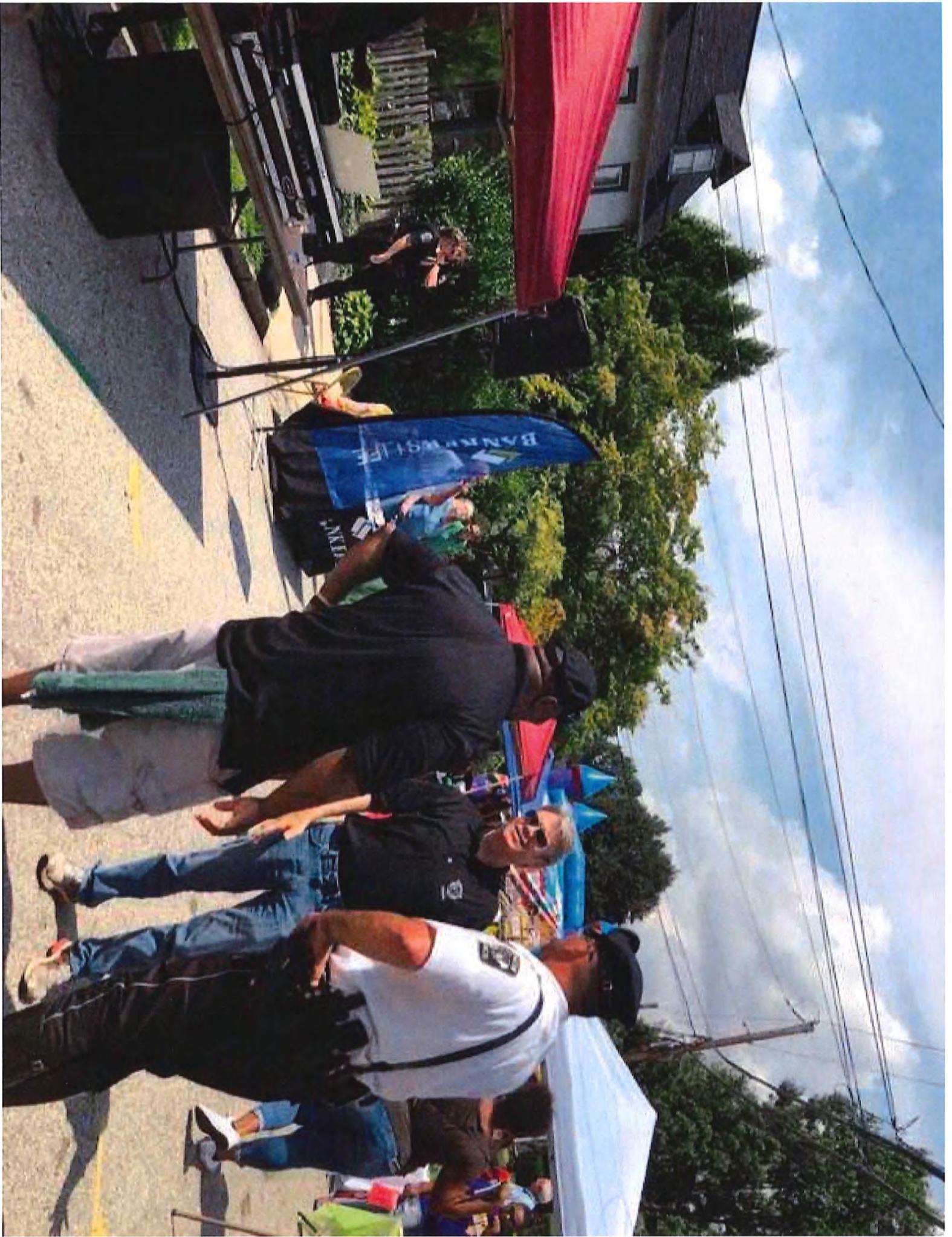
I appreciate the support of the Commissioners and Mr. Z for letting us participate. Please take an opportunity to thank Rev. Manuel Howard and his Church for making this day a great success.

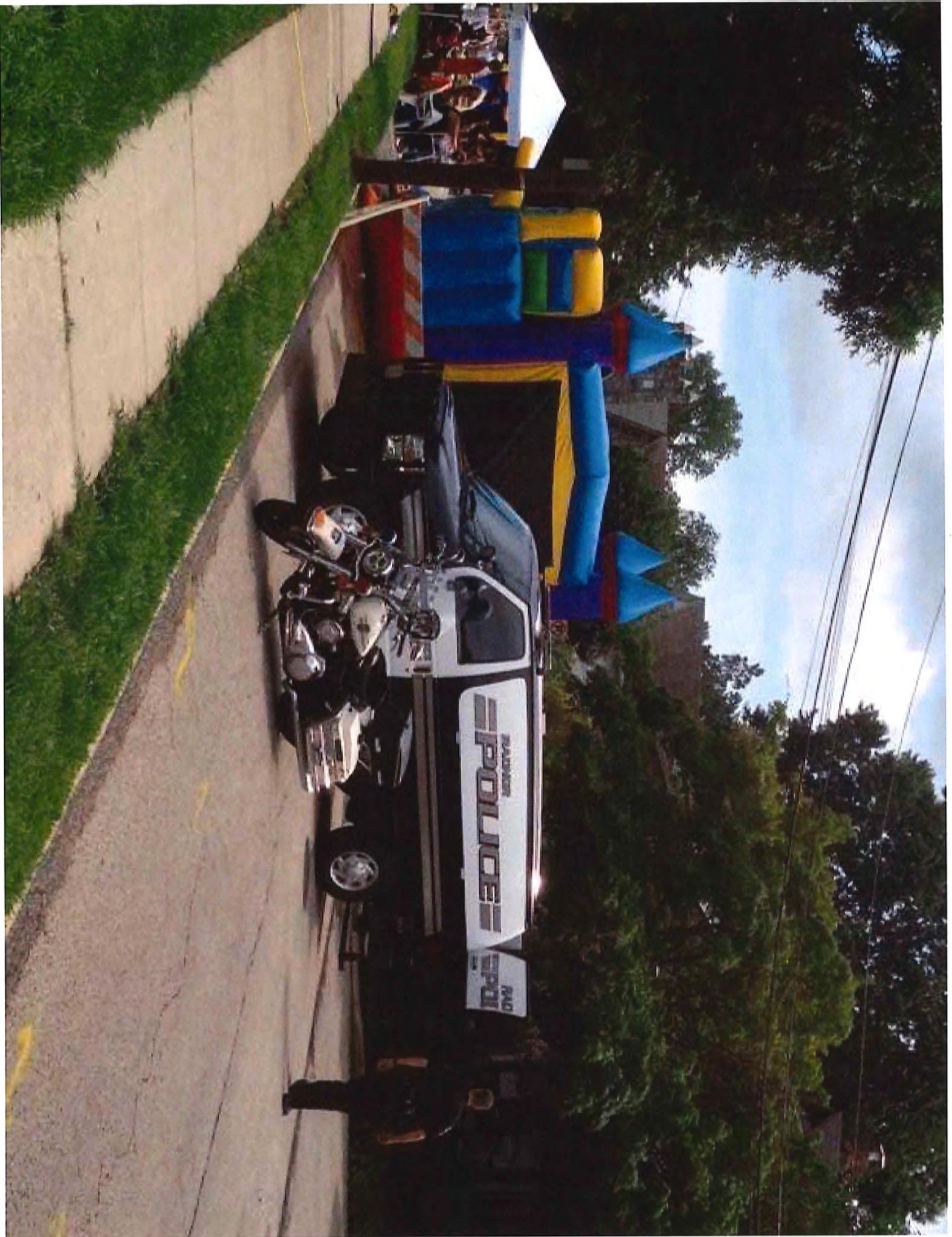
In Service,

Christopher B. Flanagan #501
Superintendent of Police









Good morning, gentlemen,

I just wanted to share a quick note of thanks for all you and your staff contributed to ensuring the success of the great Radnor events this weekend.

I had the opportunity to attend several of the events and at each and every single one it was plainly evident how you and your staff were contributing to the success of the day and the enjoyment of all those in attendance. From VU service projects to Porchfest, WBA Fall Festival, and the many block parties, your support and attention to detail was clearly evident.

Please share my sincere thanks with your staff and accept my congratulations on, once again, a job well done on behalf of the residents and businesses of Radnor. A great weekend for all!

Many thanks,
Lisa

Radnor Township Police Department
Thank you to Officers

1. Wellness Check

Dear Superintendent,

On August 17th 2018 at approximately 7pm, 3 of your officers responded to my condo for a wellness check requested by my sister since I had not shown up at work for my shift as a nurse 4hrs earlier. Thankfully, your officers responded and did not give up until I answered the door because I was critically ill. From what my sister told me one of your officers kept in contact with her while one was talking to me and then Narberth Ambulance took me to Lankenau Hospital where I was found to have severe pneumonia and hypoxia and spent 3 days in the ICU and 8 days in the hospital. I wanted to commend those officers involved in my case and thank them for their diligence and kindness. I have been a resident of Radnor for 44yrs and I am grateful you are here to support our township citizens.

Sincerely,

Radnor Resident

RADNOR TOWNSHIP POLICE DEPARTMENT

301 Iven Avenue
Wayne, Pennsylvania 19087-5297
(610) 688-0503 □ Fax (610) 688-1238

Christopher B. Flanagan
Police Superintendent

TO: Radnor Township Commissioners; Robert A. Zienkowski, Township Manager; William M. White, Director of Finance; Stephen F. Norcini, Township Engineer; Steve McNelis, Public Works Director; Tammy Cohen, Director of Recreation and Community Programming; Kevin W. Kochanski, Director of Community Development; Bill Cassidy, Field Leader; Officer Alex Janoski; Officer Pat Lacey, Officer Ken Piree, Traffic Safety Unit; William Gallagher, Supervisor of Parking; Amy Kaminski, Traffic Engineer for Gilmore and Associates; Vera DiMaio and Lori DeNicola

FR: Christopher B. Flanagan

RE: STAFF TRAFFIC COMMITTEE MEETING HELD IN THE POLICE ROLL CALL ROOM, WEDNESDAY, AUGUST 15, 2018, 10:00 AM.

NEW BUSINESS

1. Wayne Business Association – Annual Fall Festival – September 16, 2018

Staff Traffic Committee approves the Wayne Business Association Annual Fall Festival on September 16, 2018.

2. John Velutini requests to have North Wayne Avenue at Walnut Avenue (Traffic Triangle) evaluated for possible safety improvements before a new tree is planted in the in the “traffic triangle”

Mr. Velutini was not present at this meeting.
This item was tabled until the September 19, 2018 meeting.

OLD BUSINESS

See attached spreadsheet for pending issues



RADNOR TOWNSHIP POLICE DEPARTMENT

301 Iven Ave., Wayne, PA 19087

September 2018 Staff Traffic Status Report

Project Name	Project Information	Status Update
<p>Pedestrian access to walking trail</p> <p>Conestoga Road @ S Wayne Avenue</p> <p>Conestoga Road @ Brooke Road Brooke Road: Sidewalks to trail</p>	<p>Pedestrians request better walkability to Radnor pedestrian trail</p> <p>Will do crash history for past 5 years</p>	<p>At this time, only 1 complaint has been received.</p> <p>The crash history report results will be reported at the September Staff Traffic meeting.</p>
<p>Radnor Fire Company requests evaluation of traffic and parking on South Wayne Avenue</p>	<p>12/20/2017 Radnor Fire Company is interested in:</p> <ul style="list-style-type: none"> • Pursuing parking elimination along S. Wayne Avenue • Revising the intersection to reflect the most recent signed signal permit plan • Emergency pre-emption at the Fire Station on S. Wayne Avenue. • Concerns with parking in front of New Wayne Pizza 	<p>Township Engineer, Steve Norcini, and Radnor Police have evaluated the concerns. Letter to PennDot dated June 8, 2018. See Gilmore and Associates traffic pre-emption quote for Fire Company is \$33,500.00 has been submitted to Manager and BOC for review (See attached information and letter) Parking in front of New Wayne Pizza will be striped once road is paved.</p>
<p>S. Wayne Avenue</p>	<p>S. Wayne Avenue traffic speed and traffic marker island design</p>	<p>Letter dated June 8, 2018 to PennDot regarding this island discusses this issue.</p>
<p>Sugartown Road and Morris Road</p>	<ul style="list-style-type: none"> • Painting of travel lanes to ensure organized travel as drivers approach Lancaster Avenue 	<p>Field Leader Bill Cassidy stated quote has been received and is awaiting start date</p>

Radnor Township Police Staff Traffic Monthly Status Report

<p>County Line Corridor Study (from Lancaster Avenue to Conestoga Road)</p>	<p>Staff Traffic Committee & Lower Merion Township discussions to expand study area to County Line Road corridor study</p>	<p>A community meeting on site is planned the month of July to review resident input.</p> <ul style="list-style-type: none"> Passed on 5/21/18 by BOC for Gilmore and Associates to begin work Counts have been collected Accident data is being collected from the Townships and PennDot and the data is being analyzed <p>Gilmore and Associates started evaluating the existing conditions</p>
<p>King of Prussia Bridge</p>	<p>Strike issues</p>	<ul style="list-style-type: none"> Radnor Township awaits approved warning device plan and funding from PennDot
<p>Sproul Road and Conestoga Road Left turn signal improvements</p>	<p>RT 2017 Engineering Line Item Budget: \$300,000 to evaluate, design and construct signal improvements to include intersection left turn lanes</p>	<p>This project is currently out to bid. We anticipate requesting award at the September 24, 2018 BOC meeting.</p>
<p>N. Wayne Ave/Poplar Ave/West Avenue Pedestrian Improvement Signal project</p>	<ul style="list-style-type: none"> DCED MTF grant awarded; construct signal and pedestrian improvements at intersection 	<p>Still awaiting PennDot review</p>
<p>King of Prussia Rd & Eagle Rd intersection improvements</p>	<p>Submit joint application for DCED MTF grant with Cabrini & Eastern for left turn lanes on King of Prussia Road at Eagle Road/Pine Tree Rd</p>	<p>This Grant application has been submitted.</p>
<p>Eagle Rd & North Wayne Pedestrian Improvements DCED MTF</p>	<p>Prepare DCED MTF grant for sidewalk, signal and curb ramp improvements; grant submission due late July, 2017</p>	<p>This project is under review.</p>

TOWNSHIP OF RADNOR
Minutes of the Meeting of August 13, 2018

The Radnor Township Board of Commissioners met at approximately 6:50 PM in the Radnorshire Room in the Radnor Township Municipal Building, 301 Iven Avenue, Wayne, PA 19087

Commissioners Present

<i>Lisa Borowski, President</i>	<i>Luke Clark, Vice-President</i>	<i>Jake Abel</i>	<i>Richard Booker</i>
<i>Jack Larkin</i>	<i>John Nagle</i>		

Absent - Sean Farhy

Also Present: Robert A. Zienkowski, Township Manager; John Rice, Township Solicitor; William White, Assistant Township Manager/Finance Director; Shawn Dietrich, Lieutenant of Police; Steve McNelis, Public Works Director; Kevin Kochanski, Director of Community Development; Roger Philips, Township Engineer/Gannet Fleming; Amy Kaminski, Traffic Engineer; Amy Lacey, Revenue Coordinator and Jennifer DeStefano, Executive Assistant to the Township Manager.

President Borowski called the meeting to order and led the assembly in the Pledge of Allegiance

Notice of Executive Session preceding the Board of Commissioners meeting of August 13, 2018

There was an Executive Session on August 13, 2018 where matters of and matters of Litigation, Real Estate and Personnel were discussed. All Commissioners were present except for Commissioner Clark and Commissioner Farhy joined by conference call.

Consent Agenda

- a) Disbursement Review & Approval
- b) Approval of minutes of the Board of Commissioner meeting on July 16, 2018
- c) Staff Traffic Committee Meeting Minutes – Final – July 18, 2018
- d) Acceptance of Department Monthly Reports
- e) HARB
 - HARB-2018-06 – 429 Midland Avenue – Replace back porch with slightly larger one. Add shed roof to the garage side door.
- f) Resolution #2018-73 - Application for County Aid for Allocation of Delaware County Liquid Fuels Tax Funds
- g) Resolution #2018-75 - Award of the 2018 Superpave Resurfacing Program
- h) Resolution #2018-78 - Application for County Aid for the 2018 Pothole Assistance for Taxpayers (PAT) Program
- i) Resolution #2018-79 - Authorization to Purchase Seed and Fertilizer from Site One Landscape Supply
- j) Resolution #2018-76 - Approving the property and casualty insurance binder, effective August 1, 2018 through July 31, 2019 at a premium cost of \$346,961
- k) Resolution #2018-77 - Renewing the Township's Microsoft 365 subscription for one year at a price of \$14,695
- l) Resolution #2018-84 – 427 East Lancaster, Sewage Facility Planning Module
- m) Motion to Authorize proposals from qualified independent CPA firms to conduct the Township's annual audit
- n) Resolution #2018-80 – Amending Resolution 2016-60 adding the Tyler Citizens Transparency

Module to the ERP Program at an annual price of \$12,000, plus implementation costs of \$3,500

Items d, l and n were removed from the consent agenda by Commissioners.

Commissioner Clark made a motion to approve excluding items d, l & n; seconded by Commissioner Abel. Motion passed 6-0 with Commissioner Farhy absent.

Community Recognitions

a) Music is Love Foundation in conjunction with the WBA

Commissioner Borowski presented representative with a certificate of appreciation for their efforts of the Wayne MusicFest.

b) Main Line School Night 80 Years

Commissioner Clark presented representatives of Main Line School Night for their 80th Anniversary.

Acceptance of Department Monthly Reports

Commissioner inquired for Lieutenant Dietrich to briefly describe the drug incidents listed in the Police Department report.

Commissioner Larkin made a motion to approve, seconded by Commissioner Clark. Motion passed 6-0 with Commissioner Farhy absent.

Resolution #2018-84 - 427 East Lancaster, Sewage Facility Planning Module

Commissioner Booker asked for a review of the above that all conditions were met, and everything was in order. Mr. Philips briefly explained that all the conditions were met as well as the applicants engineer was in attendance to explain. There was a brief discussion.

Commissioner Nagle made a motion to approve, seconded by Commissioner Larkin.

Commissioner Booker requested for the minutes to reflect that the numbers for sewer capacity will be provided to the public at the September meeting.

Public Comment

Toni Bailey – She spoke that she wanted to address the board tonight but with Commissioner Farhy absent she will wait until September to address them as a whole.

Leslie Morgan, Farm Road – She commented regarding her concerns and that the sewer capacities need to be reviewed.

Jane Galli – She commented with her concerns of the sewer capacity.

Commissioner Borowski called the vote, motion passed 5-0 with Commissioner Booker abstaining and Commissioner Farhy absent.

Resolution #2018-80 - Amending Resolution 2016-60 adding the Tyler Citizens Transparency Module to the ERP Program at an annual price of \$12,000, plus implementation costs of \$3,500

Mr. White briefly described the proposed software module. There was a brief discussion.

Commissioner Clark made a motion, seconded by Commissioner Abel. Motion passed 6-0 with Commissioner Farhy absent.

3. Appointments to Various Boards and Commissions

Commissioner Booker made a motion to appoint Al Murphy to CARFAC, seconded by Commissioner Clark. Motion passed 5-1 with Commissioner Nagle opposed and Commissioner Farhy absent.

Mosquito Spraying – Update for Public Notification (Requested by Commissioner Abel)

Marie Carbonara, Township Health Inspector briefly discussed Mosquito spraying proposed for the Township.

Mosquito Spray Update:

The Delaware County Mosquito-Borne Disease control program will conduct an Ultra-Low Volume mosquito adulticide spraying portions of Radnor in Delaware County. Residential and recreational areas within this treatment area will be sprayed to control adult mosquitoes. This is a result of high trap counts and the identification of positive mosquito pools in the area. The spray will take place on Friday August 17th, beginning around 7:30 pm and ending by 11 pm. The rain date is schedule for Monday, August 20th, 2018. The Delaware County Mosquito-Borne Disease Control Program will perform the work using truck mounted spraying equipment with the Business license (BU 10544) visible on the equipment. The Product used will be Deltagard applied at rate of 0.66 ounces per acre. This product is designed to provide quick knockdown and effective control of adult mosquitoes. The EPA assures the product does not pose risks of concern to the general population, children or pregnant women when applied and used according to the label.

Public Comment

Sara Pilling commented answering a question from Commissioner Nagle regarding the harm of spraying for mosquitos around bees; she commented that she would think its not danger as bees are in their hives at nighttime.

4. Public Participation - Individual comment shall be limited to not more than five (5) minutes per Board policy

Keith Martin – He commented regarding flooding damage to his buildings on West Avenue and when he calls the Township with questions regarding his concerns. Mr. Zienkowski commented that he will meet with him tomorrow.

Leslie Morgan – She commented in support of the proposed Wawa on Lancaster Avenue and asked the Commissioners to get there lists together to discuss with Wawa.

Bill Bruno – He spoke regarding the flooding in the N. Wayne area this morning.

Toni Bailey – She spoke that she wanted to address the board tonight but with Commissioner Farhy absent she will wait until September to address them as a whole.

Ted Merriman, 109 Poplar Avenue – He commented regarding the flooding in his home today had reached 7 ft.

Laura Reimer – She introduced herself as the new Director of the Garrett Hill Parade Committee and thanked Township staff for their support.

Mr. Zienkowski showed a brief presentation of stormwater damage from the storms this morning and discussed the large flooding issue within the Township. It can be found on the Township website at:

<http://www.radnor.com/1050/Flood-Pictures>

<https://www.youtube.com/watch?v=pdeu2FEreQs&feature=youtu.be>. There was a discussion amongst the Commissioners regarding stormwater.

Leslie Morgan – She discussed how important it is to implement the stormwater projects.

5. Committee Reports

COMMUNITY DEVELOPMENT

H. 200 S. Ithan Avenue - Settlement Agreement

Solicitor Rice briefly described the proposed settlement agreement.

Commissioner Clark made a motion to approve, seconded by Commissioner Larkin. Motion passed 5-0 with Commissioner Abel out of the room and Commissioner Farhy absent.

I. Resolution #2018-82 - Approving the Intermunicipal Liquor License Transfer Application of Mozzarella, LLC Pursuant to The Code of Radnor Township

Ken Taylor, representing the applicant briefly described the application.

Commissioner Clark made a motion to approve, seconded by Commissioner Larkin. Motion passed 3-2 with Commissioner Abel out of the room, Commissioners Booker and Nagle opposed and Commissioner Farhy absent.

PUBLIC SAFETY

A. Ordinance #2018-09 - (Adoption) - 741-747 Moore Avenue - No Parking between Signs

Commissioner Clark made a motion to adopt, seconded by Commissioner Nagle. Motion passed 6-0 with Commissioner Farhy absent.

B. Ordinance #2018-10 - (Adoption) - 250 North Aberdeen Avenue - New Handicapped Parking Space

Commissioner Clark made a motion to adopt, seconded by Commissioner Larkin. Motion passed 6-0 with Commissioner Farhy absent.

PUBLIC WORKS & ENGINEERING

F. Resolution #2018-83 - 409, 411, 413 East Lancaster Avenue, Emerson, Final Land Development (Requesting a waiver)

Mr. Rice gave a summary of the project. There was a discussion amongst the Commissioners, staff and the applicant.

Commissioner Nagle made a motion to approve, seconded by Commissioner Clark. Motion passed 4-2 with Booker and Abel opposed.

PERSONNEL & ADMINISTRATION

C. Motion authorizing the Administration to pursue the Potential Sale of the Township Sanitary Sewer Utility Assets with Aqua PA under §7.11.E.4 and the Administrative Code §5-52

Tabled to Future Meeting

D. Resolution #2018-81 – Engaging Gannett Fleming Valuation and Rate Consultants, LLC to prepare a Full Valuation Study of the Township’s Sanitary Sewer System in Accordance with Act 12 Requirements

Tabled to Future Meeting

E. Board Discussion setting the Finance Subcommittee of the Board of Commissioners Public Meeting Dates to discuss the potential sale of the Township Sanitary Sewer Utility Assets

Tabled to Future Meeting

Commissioner Clark made a motion to table items C, D & E to a future meeting, seconded by Commissioner Abel. Motion passed 6-0 with Commissioner Farhy absent.

FINANCE & AUDIT

G. Discussion and Direction regarding the combination of the Township's Sewer and Stormwater Billing

Mr. White and Mrs. Lacey discussed the above agenda item commenting that it is a recommendation from the Administration to combine the sewer rent and stormwater utility bills. We feel strongly that combining these bills makes sense for our Residents, will save the Township some money, and make the Finance Department more efficient. There was a brief discussion and the sense of the Board was to continue moving forward.

PARKS & RECREATION

LIBRARY

PUBLIC HEALTH

New Business

- Recycling Program – (Requested by Commissioner Abel)
- Utility Wires – Discussion (Requested by Commissioner Abel)

Tabled until next meeting

Old Business

- Township Manager Update of Professional Services RFP's as authorized by the Board of Commissioners

Public Participation

None

There being no further business, the meeting adjourned on a motion duly made and seconded.

*Respectfully submitted,
Jennifer DeStefano*

TOWNSHIP OF RADNOR
Minutes of the Special Meeting of August 20, 2018

The Radnor Township Board of Commissioners met at approximately 7:30 PM in the Radnorshire Room in the Radnor Township Municipal Building, 301 Iven Avenue, Wayne, PA 19087

Commissioners Present

Lisa Borowski, President Luke Clark, Vice-President Jake Abel
Jack Larkin John Nagle

Absent - Sean Farhy Richard Booker

Also Present: *William White, Assistant Township Manager and Finance Director; Christopher B. Flanagan, Superintendent of Police; Sergeant George Smith, Radnor Police; Jennifer DeStefano, Executive Assistant to the Township Manager and Larry Bak, Delaware County Emergency Management.*

President Borowski called the meeting to order and led the assembly in the Pledge of Allegiance

Resolution #2018-85 - Declaration of Disaster Emergency

Larry Bak, from Delaware County Emergency Management Services gave an overview of what the resolution does and what it sets in motion. He discussed the flooding that occurred on August 13, 2018 as well as discussed that declaring a disaster emergency at the municipal level is the first step to possibly opening help to residents whom had damages from the storm. Many residents participated in conversations with Mr. Bak regarding help that is available for recovering from the flooding which happened on August 13, 2018. Superintendent of Police, Chris Flanagan explained that the Township will continue to pick-up any storm debris on Wednesday's.

Commissioner Larkin made a motion to approve, seconded by Commissioner Clark.

Public Comment

Kelly Martin – She discussed the damages to businesses on West Avenue, a steel plate that was purported to have been over the storm drain in the AT&T lot and the need for stormwater projects to be completed.

Sean Waters – He spoke regarding a severe call of action for stormwater projects to be completed as it is a severe safety issue and it is only getting worse.

Chip Layfield – He commented regarding the funds used for the comfort station at the park on Willow avenue as well as discussions he has had with residents regarding a plate in the AT&T lot.

Commissioner Borowski called the vote, motion passed 5-0 with Commissioners Farhy and Booker absent.

Discussion and Authorization to send Letter to Governor Wolf

Commissioner Borowski explained that the letter was drafted in collaboration with Commissioner Abel and Clark. There was discussion to amend the letter to include a request for a federal declaration as well as revisions to paragraph 5 to read *We are disappointed you were not able to see first-hand the devastation experienced in Radnor Township during your visit to Delaware County on Thursday, August*

16. There was a brief discussion amongst the Commissioners and staff. There was a consensus of the Board to send the letter to the Governor.

Mr. White explained that this Wednesday, the Township will offer bulk pick up of storm debris and will continue to pick up the debris as long as it is necessary. He also encouraged the residents to sign up on the Township alert system. He then asked the Board to consider a motion to waive permit fees for storm related damage and he will bring a resolution back at the September 10, 2018 meeting to formalize the motion.

Commissioner Larkin made a motion to direct staff to reimburse residents who have already paid permit fees due to storm related damage incurred with the August 13, 2018 storm and waive permit fees for residents going forward which are storm related, seconded by Commissioner Nagle. Motion passed 5-0 with Commissioner Farhy and Booker absent.

Mr. White discussed that the Township will put together a press release regarding the motion to be distributed as well as on the website.

Commissioner Larkin said a few words regarding shovel ready projects that are being worked on by Meliora.

Public Participation

Ted Merrimann – He inquired regarding the alert system if there is a way for senior citizens to be included that do not have access to a computer to sign up.

Mr. White responded that the resident can call Jim Doling or visit in person and we can sign them up.

Chip Layfield – He commented regarding the project on Poplar Avenue that Commissioner Larkin mentioned.

Commissioner Borowski thanked all Township staff and first responders for the assistance during the storm on August 13, 2018.

There being no further business, the meeting adjourned on a motion duly made and seconded.

Respectfully submitted,

Jennifer DeStefano

**RESOLUTION 2018-87
RADNOR TOWNSHIP**

**A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE COUNTY,
PENNSYLVANIA, AUTHORIZING THE PURCHASE OF VERIDESK OFFICE
FURNITURE FROM VERIDESK LLC AT A COST OF \$8,869.50**

WHEREAS, the Delaware Valley Insurance Trust has provided Radnor Township with an opportunity to participate in its Workplace Wellness Grant Program that has a goal of providing the Township with financial support to help enhance and improve the health and well-being of its employees; and

WHEREAS, Veridesk LLC has submitted a cost proposal that incorporates discount pricing of 10% off per item from the National IPA Cooperative Purchasing Contract to provide the corresponding active workspace, sit-stand office furniture; and

WHEREAS, Radnor Township has designated the appropriate funding for the purchase from Veridesk LLC that will be reimbursed in full by the Workplace Wellness Grant Program; and

NOW THEREFORE, BE IT RESOLVED that the Board of Commissioners of Radnor Township does hereby authorize the purchase of Veridesk Office Furniture from Veridesk LLC, with the incorporated discount pricing from the National IPA Cooperative Purchasing Contract, at a cost of \$8,869.50 in accordance with the Home Rule Charter of Radnor Township.

Vendor:	Veridesk LLC
Contract #:	National IPA – R180404
Amount:	\$8,869.50

SO RESOLVED this 24th day of September, 2018.

TOWNSHIP OF RADNOR

By: _____
Name: Lisa Borowski
Title: President

ATTEST: _____
Name: Robert A. Zienkowski
Title: Township Manager/Secretary

Radnor Township

PROPOSED LEGISLATION



DATE: September 4, 2018

TO: Radnor Township Board of Commissioners

FROM: Tammy Cohen, Director of Recreation & Community Programming 

LEGISLATION: Resolution 2018-87 Authorizing the Purchase of Veridesk Office Furniture from Veridesk LLC at a Cost of \$8,869.50.

LEGISLATIVE HISTORY: There is no previous legislative history.

PURPOSE AND EXPLANATION: Request is being made to authorize the purchase of Veridesk Office Furniture from Veridesk LLC at a cost of \$8,869.50 – this cost incorporates discount pricing of 10% off per item from the National IPA Cooperative Purchasing Contract. A total of 32 pieces of active workspace and sit-stand office furniture is proposed for purchase upon approval. These items are designed to improve workplace health and wellness for employees. The entire purchase from Veridesk LLC will be reimbursed in full by the Delaware Valley Insurance Trust's Workplace Wellness Grant Program.

IMPLEMENTATION SCHEDULE: If approved by the Board of Commissioners, the purchase will be made immediately.

FISCAL IMPACT: Funding for cost of the office furniture will be expensed under the Building & Grounds – Minor Equipment portion of the Township Budget and will be reimbursed in full by the Delaware Valley Insurance Trust's Workplace Wellness Grant Program.

RECOMMENDED ACTION: I would like to respectfully request that the Board approve Resolution 2018-87 Authorizing the Purchase of Veridesk Office Furniture from Veridesk LLC at a Cost of \$8,869.50.

Vendor: Veridesk LLC
Contract #: National IPA – R180404
Amount: \$8,869.50



Quote

Q-99699
Date: 7/30/2018
Account Number: 1310174

VARIDESK LLC
(800) 207-2587
sales@varidesk.com

Billing Address
Tammy Cohen
Radnor Township
301 Iven Avenue
Wayne, PA 19087
United States

Shipping Address
Tammy Cohen
Radnor Township
301 Iven Avenue
Wayne, PA 19087
United States

Terms	Quote Exp Date	Customer Ref #	Sales Rep	Shipping Method
Net 30	8/29/2018		Carly Cooksey	Freight

Quantity	Item	Description	Unit Price	Amount
10	49901 ProPlus 30™ (Black)	ProPlus 30™ (Black)	\$375.00	\$3,750.00
2	34603 Pro 36™ (Black)	Pro 36™ (Black)	\$395.00	\$790.00
2	49900 ProPlus 36™ (Black)	ProPlus 36™ (Black)	\$395.00	\$790.00
2	48504 ProPlus™ 36 Electric (Black)	ProPlus™ 36 Electric (Black)	\$495.00	\$990.00
1	49884 CubePlus 40™ (Black)	CubePlus 40™ (Black)	\$450.00	\$450.00
3	49921 CubePlus 48™ (Black)	CubePlus 48™ (Black)	\$495.00	\$1,485.00
3	49770 PowerHub	PowerHub	\$45.00	\$135.00
2	48003 Dual-Monitor Arm	Dual-Monitor Arm	\$195.00	\$390.00
1	49976 VARIChair®	VARIChair®	\$195.00	\$195.00
2	43759 VARIChair® Pro	VARIChair® Pro	\$250.00	\$500.00
4	49892 The ActiveMat™	The ActiveMat™	\$95.00	\$380.00

Subtotal				\$9,855.00
Discount - Negotiated 10%				-\$985.50
Shipping / Handling				\$0.00
Tax				\$0.00
Order Total				\$8,869.50

RESOLUTION NO. 2018 - 88

**A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE COUNTY,
PENNSYLVANIA, AWARDING THE CONTRACT FOR ROAD DE-ICING SALT
FOR THE 2018/19 WINTER SEASON TO EASTERN SALT COMPANY,
INCORPORATED**

WHEREAS, Radnor Township annually joins Newtown Township, Delaware County along with nine other municipalities for the purpose of purchasing road de-icing salt

WHEREAS, the Township uses de-icing salt during winter months to treat certain Township streets for vehicular traffic mobility

NOW, THEREFORE, be it *RESOLVED* the Board of Commissioners of Radnor Township does hereby approve the lowest qualified bidder, Eastern Salt Company, Incorporated, to provide road de-icing salt at the cost of \$50.90 per ton, delivered to the Township.

SO RESOLVED this 24th day of September, A.D., 2018

RADNOR TOWNSHIP

By: _____
Name: Lisa Borowski
Title: President

ATTEST: _____
Robert A. Zienkowski
Manager/Secretary

Radnor Township

PROPOSED LEGISLATION

DATE: September 10, 2018

TO: Radnor Township Board of Commissioners

CC: Robert A. Zienkowski, Township Manager
William R. White, Finance Director/Assistant Township Manager

FROM: Stephen McNelis, Director of Public Works

LEGISLATION: Resolution 2018-88: Award of bid for Road De-Icing Salt for the 2018-2019 Winter Season

LEGISLATIVE HISTORY: The Township is part of a de-icing salt consortium administered by Newtown Township, Delaware County. The bids were received by Newtown Township for de-icing salt, per ton, delivered to Radnor Township.

PURPOSE AND EXPLANATION: The Public Works Department is seeking the award of the bid to purchase de-icing salt for the 2018/2019 winter season. This product is bid annually with a consortium of ten municipalities. The lowest bid, submitted by Eastern Salt Company, Incorporated, is \$1.58/ton LESS than last year's price and \$4.50 LESS than the State Contract Price. This year's bid tabulation is as follows:

Eastern Salt Company, Inc.	\$50.90/ton
Morton Salt, Inc.	\$54.52/ton
Riverside Construction Materials	\$54.54/ton
Cargill DeIcing Technology	\$61.27/ton
Detroit Salt Company	\$68.01/ton

The Public Works Department is requesting the Board of Commissioners award the bid to Eastern Salt Company, Incorporated at the cost of \$50.90/ton

IMPLEMENTATION SCHEDULE: Award of bid by the Board of Commissioners, Requisition processed and Purchase Order Created, De-Icing Salt to be purchased as needed during the winter.

FISCAL IMPACT: De-Icing Salt purchases are funded in the Snow and Ice Removal Operating Supplies Account #01430201-43050.

RECOMMENDED ACTION: I respectfully request the Board of Commissioners to award the 2018-2019 contract for Road De-Icing Salt to Eastern Salt Company, Incorporated, in the amount of \$50.90 ton.

MOVEMENT OF LEGISLATION: It is being requested that the Board of Commissioners approve the legislation for this purchase in order to safely maintain vehicular traffic on Township roadways during the winter storms.

2018 De-Icing Salt Contract for 10 Delaware County Municipalities

Contract 2018-05

(Bid Opening 8-6-18)

2017 Salt Contract Bid Tabulations

Bidder (Sent Contract)	Bid Price Price/Ton	Trans. Price/Ton
Eastern Salt Company, Inc.	\$50.90	Included
Morton Salt, Inc.	\$54.52	Included
Riverside Construction Materials	\$54.54	Included
Cargill Deicing Technology	\$61.27	Included
Detroit Salt Company	\$68.01	Included
American Rock Salt Co., LLC	No Bid	N/A
Compass Materials	No Bid	N/A
Haven Salt Company, LLC	No Bid	N/A

Newtown Township
 209 Bishop Hollow Road
 Newtown Square, PA 19073
 610-356-0200
www.newtowntownship.org

Historic Salt Contract Prices

(recorded by Middletown and Newtown Townships)

Winter	Township Bid		State Contract		Difference
	Supplier	Price	Supplier	Price	
2018-19	Eastern Salt	\$50.90	Eastern Salt	\$55.40	-4.5
2017-18	Eastern Salt	\$52.48	Eastern Salt	\$55.40	-2.92
2016-17	Eastern Salt	\$56.43	Eastern Salt	\$55.40	1.03
2015-16	Cargill	\$62.85	Morton	\$64.14	-1.29
2014-15	Oceanport	\$56.47	Morton	\$57.81	-1.34
2013-14	International	\$53.48	International	\$52.56	0.92
2012-13	Oceanport	\$55.25	International	\$56.91	-1.66
2011-12	Oceanport	\$59.74	International	\$56.35	3.39
2010-11	Eastern Salt	\$60.29	International	\$61.35	-1.06
2009-10	Oceanport	\$65.83	International	\$58.97	6.86
2008-09	Oceanport	\$69.04	International	\$60.90	8.14
2007-08	Eastern Salt	\$49.60	American	\$50.37	-0.77
2006-07	Oceanport	\$43.03	Oceanport	\$43.53	-0.5
2005-06	Oceanport	\$42.12	Oceanport	\$41.78	0.34
2004-05	International	\$42.72	International	\$38.73	3.99
2003-04	Oceanport	\$33.12	Oceanport	\$28.73	4.39
2002-03	International	\$31.86	International	\$29.76	2.1
2001-02	Oceanport	\$33.60	Oceanport	\$31.86	1.74
2000-01	Rochez	\$31.45	?	?	-
1999-00	International	\$29.72	?	?	-
1998-99	Rochez	\$27.79	?	?	-
1997-98	Cargill	\$30.70	?	?	-
1996-97	Akzo	\$33.52	?	?	-
1995-96	Oceanport	\$32.12	?	?	-
1994-95	?	?	Oceanport	\$32.35	-
1993-94	?	?	Cargill	\$31.98	-
1992-93	?	?	Cargill	\$32.98	-

RESOLUTION NO. 2018-89

**A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE COUNTY,
PENNSYLVANIA, AWARDING THE BIG TREE PLANTING CONTRACT TO
BRYN MAWR LANDSCAPING, INCORPORATED**

WHEREAS, Radnor Township Administers the Big Tree Program which is funded by Chanticleer

WHEREAS, Bryn Mawr Landscaping, Incorporated, has submitted a valid proposal to supply and install forty trees as part of the Big Tree Program

NOW, THEREFORE, be it *RESOLVED* the Board of Commissioners of Radnor Township does hereby authorize the award of the contract for the Big Tree Program to Bryn Mawr Landscaping, Incorporated, in the amount of \$24,800

SO RESOLVED this 24th day of September, A.D., 2018

RADNOR TOWNSHIP

By: _____
Name: Lisa Borowski
Title: President

ATTEST: _____
Robert A. Zienkowski
Manager/Secretary

Radnor Township
PROPOSED LEGISLATION

DATE: September 10, 2018

TO: Radnor Township Board of Commissioners

CC: Robert A. Zienkowski, Township Manager
William R. White, Finance Director/Assistant Township Manager

FROM: Stephen McNelis, Director of Public Works

LEGISLATION: Resolution 2018-89: Awarding the contract for 2018 Tree Planting for the Big Tree Program

LEGISLATIVE HISTORY: The Township is administering the Big Tree Program, funded by Chanticleer and put forth by staff the Kimberley Donches (formerly of the Radnor Conservancy). The Township's appointed independent arborist also supplied technical expertise.

PURPOSE AND EXPLANATION: The year's Big Tree Program entails the planting of forty trees, on various streets with the Right of Way, and Township parks. The planting list includes: ten (each) Black Gum trees, ten (each) Hackberry trees, ten (each) Swamp White Oaks, five (each) Yellowwood Trees, and five (each) Rutgers Dogwood, pink, trees.

IMPLEMENTATION SCHEDULE: Upon approval by the Board of Commissioners, a requisition request will be processed. Upon receiving a purchase order number, the contractor will be given the notice to proceed. The Big Tree Program's 40 trees will be installed this fall.

FISCAL IMPACT: The Big Tree Program is funded by the Chanticleer Donation and will be charged to the Shade Tree Account #15430000-44051.

RECOMMENDED ACTION: I respectfully request the Board of Commissioners award the Contract for the Big Tree Program to Byn Mawr Landscaping, in the amount of \$24,800.

MOVEMENT OF LEGISLATION: It is being requested that the Board of Commissioners approve the award of this contract.



P.O. Box 308
Newtown Square, PA 19073
(Page 1 of 2)

August 31, 2018

Kimberley Donches
Radnor Township
301 Iven Avenue
Wayne, PA 19087-5297
610-688-5600
kdonch@gmail.com

RADNOR TOWNSHIP 2018 TREE PLANTING PROPOSAL

<u>Description</u>	<u>Amount</u>
• <u>Install 40 Trees</u>	\$24,800.00
– 10 (ten) Black Gum – 2.5" cal. @ \$620.00 each	
– 10 (ten) Hackberry – 2.5" cal. @ \$620.00 each	
– 10 (ten) Swamp White Oak – 2.5 cal. @ \$620.00 each	
– 5 (five) Yellowwood – 2.5" cal. @ \$620.00	
– 5 (five) Rutgers Dogwood – Pink – 2.5" cal. @ \$620.00 each	

If the foregoing proposal is acceptable please sign where indicated and return to *Bryn Mawr Landscaping Co., Inc.*

Accepted by: _____

Date: _____

"The official registration number from the Pennsylvania Office of Attorney General's Bureau of Consumer for Bryn Mawr Landscaping Co., Inc. is **PA006892**. The toll-free number within Pennsylvania is 1-888-520-6680. Registration does not imply endorsement."

"You, the buyer, may cancel this transaction at any time prior to midnight of the third business day after the date of this transaction. See the attached notice of cancellation form for an explanation of this right."

Sincerely,

Thomas J. Foga, Jr.
President
Bryn Mawr Landscaping Co., Inc.

610-353-1978

Fax 610-353-1956

brynmawrlandscaping@comcast.net

RESOLUTION NO. 2018-103
A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE COUNTY,
PENNSYLVANIA, GRANTING A WAIVER FROM ORDINANCE #2005-11,
STORMWATER MANAGEMENT AND SURVEY REQUIREMENTS OF THE
GRADING PERMIT

WHEREAS, infiltration testing in an area of the proposed Radnor TAP Trail has shown that infiltration rates are extremely low

WHEREAS, a waiver is requested from Section 408, Peak Flows, Ordinance #2005-11, Stormwater Management

WHEREAS, a waiver is requested from surveying all trees with DBH > 6" within 25 feet of the disturbance.

NOW, THEREFORE, be it *RESOLVED* by the Board of Commissioners of Radnor Township Does Grant the requested waivers,

SO RESOLVED this 24th day of September, A.D., 2018

RADNOR TOWNSHIP

By: _____

Name: Lisa Borowski

Title: President

ATTEST:

Robert A. Zienkowski
Manager/Secretary



August 30, 2018

Mr. Steve Norcini, P.E.
Township Engineer
301 Iven Avenue
Wayne, PA 19087
snorcini@radnor.org

Re: Radnor TAP Trail

Request for Ordinance Waivers

- 1. Ordinance #2005-11. Stormwater Management Ordinance of Radnor Township, Section 408, Peak Flows**
- 2. Grading Permit - Survey of trees over 6" caliper within 25 feet of disturbance.
SC project # 15091.30**

Dear Mr. Norcini:

As per our recent conversations and project coordination, our office is requesting the above subject waivers from the Township Ordinances.

Project Stormwater Challenges and Proposed Design Solution

The construction disturbance of the trail along the perimeter of Radnor High School exceeds 1 acre. Accordingly, a National Pollution Discharge Elimination System (NPDES) permit is required; which is administered by the Delaware County Conservation District. The NPDES permit has both infiltration and peak rate reduction requirements. In addition to the NPDES permit requirements; this project site is site is part of the Darby Cobbs Act 167 Watershed. The Darby Cobbs Act 167 Watershed Management Plan has its own infiltration and peak rate reduction requirements; which are administered through Radnor Township's storm water regulations.

Our team conducted infiltration testing along the perimeter of the High School site. Unfortunately, the results of the tests were quite poor, meaning water infiltrated into the soils at an extremely low rate. This limits our ability to infiltrate stormwater into the soil, as is required, when feasible, by current NPDES and Township regulations. Despite poor infiltration results, we

expect to meet the minimum requirements as specified in Section 245-22 of Radnor Township's stormwater regulations.

The High School Section of the Radnor TAP project is within the Darby Cobbs Act 167 Stormwater Management District B-1 and B-2. These management districts have stricter peak flow requirements than the NPDES permit application. Currently, the trail has a defined limit of disturbance, and there are underground utilities within the project area. There isn't enough space to meet the peak rate requirements of the Darby Cobbs Act 167 Plan, (specifically the 50-year storm proposed condition to the 10-year existing condition storm requirement) within the existing proposed limit of disturbance.

However, even without meeting the 50-year storm requirement, our stormwater drainage design will make the peak rate of runoff going on to the overall school site better, i.e. the peak rate will be lower – even with the new trail - than is presently going onto the site.

Our proposed stormwater management solution includes the use of an underground detention system to keep the stormwater systems hidden from view and to avoid concerns about standing water on the site. Overflow from these underground detention "cells" will go into small tributaries located along KOP road and Lancaster Avenue. . This will result in a minimal increase in the width (5 to 10 feet in most locations) of the limit of disturbance of the High School site parallel to Lancaster Ave.

If we were to increase underground holding capacity of the cells to meet the Act 167 peak flow requirements, we would disturb at least an additional 11,500 square feet of area. The disturbance width would increase an 10 to 15 feet and perhaps more, due to the sloping nature of the terrain along Route 30. Since the area along Route 30 is heavily vegetated and net benefit of detaining more stormwater in underground cells is questionable given the increased disturbance that would be required.

The other significant section of off road trail construction The Friends of Radnor Trail Section (West Wayne Preserve) which is in District A of the Darby Cobbs Act 167 Stormwater Management District. An above ground basin is proposed at this site. Above ground basins require less square footage than underground detention systems to treat the same amount of water. We are proposing to significantly increase the size of this basin from approximately 50 feet in diameter to approximately 105 feet in diameter to meet the peak flow requirements at the high school. In other words, we will be making up for the water that we are not detaining at the High School at the West Wayne Preserve, a site that was set aside, at least in part, for stormwater management.

We are requesting a waiver to allow offset peak flow requirements from the High School at the Friends of Radnor Trail Section. The requirements for the overall project will still be met; but the distribution between the trail sections will change. Because the Darby Cobbs Act 167 Peak Rate Requirements are administered through Radnor Township's Stormwater Ordinance – Radnor Township is required to grant the waiver. The NPDES peak flow requirements are less stringent, and Delaware County Conservation District only requires a letter stating that the project is in compliance with Radnor's Stormwater Regulations.

The second waiver request is for the survey of trees within 25 feet of the limit of disturbance. We suggest that this is unnecessary since we have assessed all the trees that will be removed by trail construction and are providing replacement trees at the High School site.

Sincerely,

Simone Collins
Landscape Architecture

A handwritten signature in black ink, appearing to read "Peter M. Simone". The signature is stylized with a large initial "P" and "S".

Peter M. Simone, RLA, FASLA
President

Radnor Township

PROPOSED LEGISLATION

DATE: September 17, 2018

TO: Radnor Township Board of Commissioners

FROM: Stephen F. Norcini, P.E., Township Engineer *SN*

CC: Robert A. Zienkowski, Township Manager
William M. White, Assistant Township Manager/Finance Director

LEGISLATION: Resolution #2018-103- Waiver Request, Ordinance #2005-11, Stormwater Management, Radnor TAP Trail

LEGISLATIVE HISTORY: This agenda item has not been before the Board of Commissioners previously.

PURPOSE AND EXPLANATION: The Radnor TAP Trail has a portion that is proposed to be constructed on the periphery of the Radnor High School grounds. Previously, our consultant, has met with, and toured the proposed area of the TAP Trail with School District Officials. After performing infiltration testing on the site, it was evident that the ability to infiltrate stormwater runoff would be at a very low rate. If the Ordinance is met, it would require considerable additional disturbance at the High School (we would need to meet with School District Officials for permission to do so).

The consultant is requesting a waiver from the Stormwater Management Ordinance at the High School, noting that the proposed design will make peak rate runoff better than the existing situation. Subsequently, the consultant is proposing to increase the size of a proposed basin at the West Wayne Preserve (also part of the TAP Trail) to offset the proposed waiver at the Senior High.

Please see the attached letter from Peter Simone, which provides clear detail on the waiver request. Peter Simone will be present at the meeting to provide answers to specific questions in this regard.

As part of this request, the consultant is requesting a waiver form surveying all trees with DBH > 6" within 25 feet of the disturbance.

IMPLEMENTATION SCHEDULE: The project timeline calls for the project to be ready for bidding in late December of this year. Addressing the waiver request (granted or denied) is critical to meeting this time line.

FISCAL IMPACT: Should the waiver request not be granted, considerable costs will be incurred to the project, which have yet to be determined.

RECOMMENDED ACTION: Staff respectfully requests that the Board of Commissioners Grant the Waiver Request for Stormwater Management and Tree Survey.

**RESOLUTION 2018-93
RADNOR TOWNSHIP**

**A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE
COUNTY, PENNSYLVANIA, ADOPTING THE 2019
MINIMUM MUNICIPAL OBLIGATION (MMO)**

WHEREAS, The Commonwealth of Pennsylvania General Assembly, on December 18, 1984 adopted the Municipal Pension Plan Funding Standards and Recovery Act (Act 205 of 1984), which has been amended in part by Act 189 of 1990, Act 82 of 1988, and act 44 of 2009; and

WHEREAS, The Municipal Pension Plan Funding Standards and Recovery Act requires that municipalities calculate a Minimum Municipal Obligation (“MMO”) prior to September 30 for the subsequent budget year; and

WHEREAS, The MMO can be amended during the budget process based on changes in payroll projections and resubmitted to the State; and

WHEREAS, On September 18, 2017, the Board of Commissioners held a special meeting to review the most recent bi-annual Actuarial Valuation as of January 1, 2017, prepared by Mockenhaupt Associates for both the Police and Civilian Pension Plans which provides the necessary components to calculate the MMO for 2019;

NOW, THEREFORE, it is hereby *RESOLVED* that the Board of Commissioners of Radnor Township hereby adopts the 2019 minimum municipal obligation for the Radnor Township Pension Plans in the following amounts as calculated on the attached worksheets:

POLICE PENSION PLAN	\$2,455,000
CIVILIAN PENSION PLAN	\$1,587,000

SO RESOLVED, at a duly convened meeting of the Board of Commissioners of Radnor Township conducted on this 24th day of September, A.D., 2018.

RADNOR TOWNSHIP

By: _____
Name: Lisa Borowski
Title: President

ATTEST: _____
Robert A. Zienkowski,
Township Manager / Secretary

Radnor Township



PROPOSED LEGISLATION

DATE: September 18, 2018

TO: Board of Commissioners

FROM: William M. White, Finance Director

A handwritten signature in blue ink, appearing to read "William M. White".

LEGISLATION: Resolution 2018-93 Adopting the Township's 2019 Minimum Municipal Obligation (MMO) as required by Act 205.

PURPOSE AND EXPLANATION: In accordance with the provisions of Act 205 the Minimum Municipal Obligation (MMO), which represents the Township's annual pension contribution requirement, must be submitted and approved by the Board of Commissioners no later than September 30 of each year.

This resolution will establish the Township's 2019 MMO to be incorporated into the preliminary 2019 budget estimates. Please note that these MMO estimates can change as a result of the budget review process, which will occur over the next three months.

Major assumptions include:

- Current staffing counts
- CBA Wage adjustments
- Actuarial Assumptions as included in the 1/1/2017 Actuarial Report [noting that the actuarial reports are done biennially, with the next report due in Fall 2019]

FISCAL IMPACT: The pension obligations included in the legislation total \$4,042,000 which is made up of \$2,455,000 from the Police Pension Plan (+0% from 2018) and \$1,587,000 from the Civilian Pension Plan (+0% from 2018). This amount represents an aggregate increase of \$22,000 over the 2018 MMO totals.

RECOMMENDED ACTION: The Administration recommends that Board of Commissioners adopt the 2019 MMO calculations as drafted with the understanding that a revised MMO can be drafted if significant payroll estimates change during the 2019 budget process.

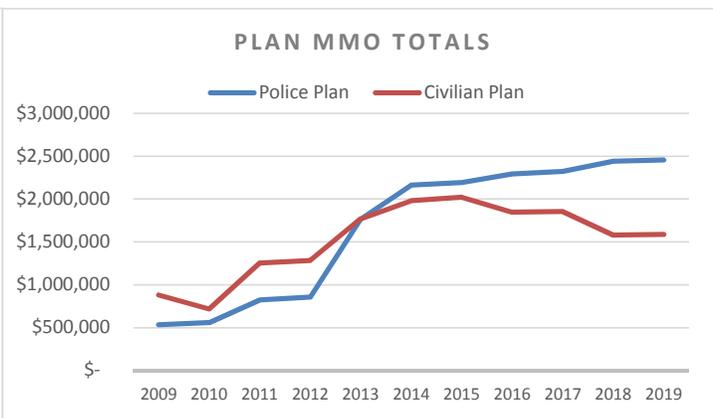
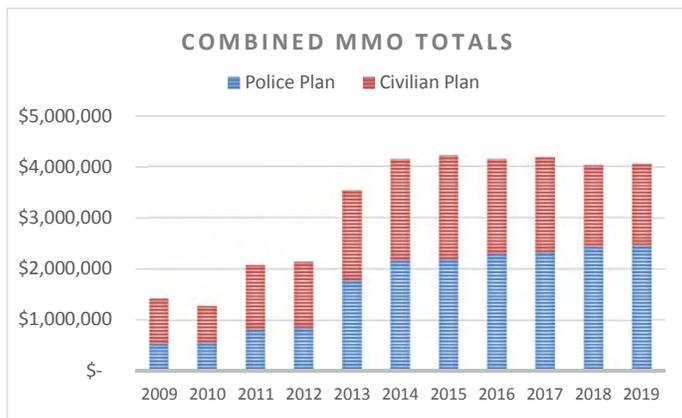
CERTIFICATION OF
FISCAL YEAR 2019
MINIMUM MUNICIPAL OBLIGATION
POLICE AND CIVILIAN PENSION PLANS

RESOLUTION 2018-93
RADNOR TOWNSHIP, PA
SEPTEMBER 24, 2018

RADNOR TOWNSHIP, PA
2019 MINIMUM MUNICIPAL OBLIGATION
POLICE & CIVILIAN PENSION PLANS AND COMBINED



ACT 205 FUNDING FORMULA	Police Plan	Civilian Plan	Total Obligation
Financial Requirements:			
1. Estimated 2019 Payroll (rounded)	\$ 5,270,000	\$ 7,000,000	\$ 12,270,000
2. Normal Cost of Plan from Actuarial Report (% of payroll)	<u>17.755%</u>	<u>11.496%</u>	<u>14.184%</u>
3. Total Normal Cost of Plan (1 x 2)	\$ 935,689	\$ 804,720	\$ 1,740,409
4. Plan Amortization Requirement	1,633,849	1,048,355	2,682,204
5. Plan Administrative Expenses from Actuary Report (Police:1.5%, Civilian:1.1%)	<u>79,050</u>	<u>84,000</u>	<u>163,050</u>
6. Total Financial Requirements (3 + 4 + 5)	<u>\$ 2,648,588</u>	<u>\$ 1,937,075</u>	<u>\$ 4,585,663</u>
Credits to Township Funding Requirements:			
7. Estimated Employee Contributions	(193,500)	(350,000)	(543,500)
8. Rounding Adjustment	<u>(88)</u>	<u>(75)</u>	<u>(163)</u>
9. Total Credits to Township Funding Requirements	<u>\$ (193,588)</u>	<u>\$ (350,075)</u>	<u>\$ (543,663)</u>
10. Recommended MMO	<u>\$ 2,455,000</u>	<u>\$ 1,587,000</u>	<u>\$ 4,042,000</u>



MMO History:

2009 MMO Total	\$ 534,000	\$ 881,500	\$ 1,415,500	n/a
2010 MMO Total	\$ 558,404	\$ 717,342	\$ 1,275,746	-9.9%
2011 MMO Total	\$ 822,301	\$ 1,252,960	\$ 2,075,261	62.7%
2012 MMO Total	\$ 855,232	\$ 1,280,125	\$ 2,135,357	2.9%
2013 MMO Total	\$ 1,765,384	\$ 1,767,162	\$ 3,532,546	65.4%
2014 MMO Total	\$ 2,160,223	\$ 1,979,695	\$ 4,139,918	17.2%
2015 MMO Total	\$ 2,190,903	\$ 2,020,393	\$ 4,211,296	1.7%
2016 MMO Total	\$ 2,292,574	\$ 1,845,031	\$ 4,137,605	-1.8%
2017 MMO Total	\$ 2,322,459	\$ 1,852,440	\$ 4,174,899	0.9%
2018 MMO Total	\$ 2,440,000	\$ 1,580,000	\$ 4,020,000	-3.7%
2019 MMO Total	\$ 2,455,000	\$ 1,587,000	\$ 4,042,000	0.6%

RESOLUTION NO. 2018-96
A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE COUNTY,
PENNSYLVANIA, APPROVAL OF SUPPLEMENTAL DESIGN AND SURVEY
SERVICES TO SIMONE COLLINS, INCORPORATED, RADNOR TAP TRAIL

WHEREAS, infiltration testing, additional topographic survey, infiltration testing coordination and review, and Pennsylvania Department of Environmental Protection permitting are required

WHEREAS, change orders 2 through 5 for the above referenced work total \$29,301.97

NOW, THEREFORE, be it *RESOLVED* by the Board of Commissioners of Radnor Township Authorize Payment to Simone Collins, Incorporated, for Change Orders 2 through 5, in the Amount of \$29,301.97

SO RESOLVED this 24th day of September, A.D., 2018

RADNOR TOWNSHIP

By: _____

Name: Lisa Borowski

Title: President

ATTEST: _____

Robert A. Zienkowski
Manager/Secretary

Radnor Township
PROPOSED LEGISLATION

DATE: September 17, 2018

TO: Radnor Township Board of Commissioners

FROM: Stephen F. Norcini, P.E., Township Engineer

CC: Robert A. Zienkowski, Township Manager
William M. White, Assistant Township Manager & Finance Director

LEGISLATION: **Resolution #2018- 96 - Approval of Supplemental Design and Survey Services to Simone Collins, Incorporated, Radnor TAP Trail**

LEGISLATIVE HISTORY: This legislation has not been before the Board of Commissioners previously.

PURPOSE AND EXPLANATION: In a project that encompasses the scope, depth, and breadth of the Radnor TAP Trail, out of scope services are required to address unforeseeable conditions that require additional work to be performed. *Please see the attached outline of additional services that are required for completing the Radnor TAP Trail design and permitting.*

Implementation Schedule: Pending Board of Commissioners approval, a purchase order will be processed.

Fiscal Impact: The total cost of the Change Orders, \$29,301.97, will be funded by account 00450000-48216, TAP Trail Engineering and Design.

Recommended Action: I respectfully request the Board of Commissioners authorize the payment of Change Orders 2 through 5, totaling \$29,301.97, for payment to Simone Collins, Incorporated.

Enclosures: Change Order Summary
Sub-Consultant Costs

Resolution #2018-96, Approval of Supplemental Design and Survey Services to Simone Collins, Radnor TAP Trail - Change Order Details				
CO	Additional Scope/Work	Sub-consultant	Task	Cost
#2	Additional Day of Infiltration Testing	R&S Hardscaping	The testing required additional infiltration testing, beyond that of the original estimate	\$2,810.00
#3	Preparation of Post Stormwater Review	AD Marble	Infiltration testing review, coordination, and Radnor School District Staff Coordination	\$6,609.71
#4	DEP GP 4 Permit Application	AD Marble	A change in design required the unanticipated requirement for a DEP GP 4 Permit to be applied for	\$12,992.26
#5	Additional Survey Required	Bursich Associates	Additional survey required for unanticipated are needed for SWM requirements on RSD property, and increased SWM basin at the West Wayne Preserve	\$6,890.00
TOTAL Cost of Change Orders 2, 3, 4, & 5				\$29,301.97

R&S Hardscaping, LLC

2760 Schuylkill Road
Spring City, PA 19475 US
(484) 955-0084

randshardscaping@yahoo.com
http://www.randshardscaping.com

RADNOR TAP TRAIL CO # 1



ESTIMATE

ADDRESS

Radnor Township
301 Iven Avenue
Wayne, PA 19087-5297

ESTIMATE # 2123

DATE 05/08/2018

EXPIRATION DATE 06/30/2018

ACTIVITY	QTY	RATE	AMOUNT
Excavation -Excavation cost per hour for one operator, excavator, one laborer to help access sites as well as cleanup once infiltration test holes are dug and then filled in. Price will be billed per hour from time we dispatch our office in (Spring City PA) until time we get back to office (Spring City PA). Estimate is based on a 3 day testing at 10 hours with travel time included in the 10 hour days. Additional time needed will be billed at \$205 an hour.	30	205.00	6,150.00
Materials -Materials needed for temporarily fencing off test pit holes with construction fence during the testing, straw, grass seed chain saw usage to remove any trees that may be hindering access to test holes.	1	450.00	450.00

All Estimates are subject to change due to unforeseen conditions in excavation, pipes, electrical, wires, concrete, soil, height, widths within the scope of this project. Customer is responsible to remove any buried lines or objects prior to the start of our project. Estimates are subject to 6% sales tax. Credit Card transactions are subject to 4% surcharge for processing.

TOTAL

\$6,600.00

Accepted By

Accepted Date

R&S Hardscaping, LLC

2760 Schuylkill Road
 Spring City, PA 19475 US
 (484) 955-0084
 randshardscaping@yahoo.com
 http://www.randshardscaping.com



INVOICE

BILL TO

Peter M. Simone
 SIMONE COLLINS, INC.
 LANDSCAPE ARCHITECTURE
 119 East Lafayette Street
 Norristown, PA 19401

INVOICE # 6690

DATE 06/15/2018

DUE DATE 07/01/2018

TERMS Due on receipt

ACTIVITY	QTY	RATE	AMOUNT
<p>Excavation -Excavation cost per hour for one operator, excavator, one laborer to help access sites as well as cleanup once infiltration test holes are dug and then filled in. Price will be billed per hour from time we dispatch our office in (Spring City PA) until time we get back to office (Spring City PA). Estimate is based on a 3 day testing at 10 hours with travel time included in the 10 hour days. Additional time needed will be billed at \$205 an hour.</p>	44	205.00	9,020.00
<p>Materials -Materials needed for temporarily fencing off test pit holes with construction fence during the testing, straw, grass seed chain saw usage to remove any trees that may be hindering access to test holes.</p>	1	390.00	390.00

BALANCE DUE

\$9,410.00

CHANGE ORDER #2 TOTAL = \$2,810.00

A.D. MARBLE

environmental·cultural·engineering

RADNOR TAP TRAIL CHANGE ORDER #3

TECHNICAL SUPPLEMENT

**Radnor Township Coordination – Infiltration Testing
RADNOR (Villanova Ithan Road) TRAIL SECTION (TAP)
COUNTY OF DELAWARE, PA**

June 19, 2018

A.D. Marble is pleased to submit this supplemental scope of work to provide Professional Design and consulting services for the Radnor (Villanova Ithan Road) Trail Section (TAP). This is a supplement is to cover the coordination with Radnor Township and their staff for the infiltration testing along the Radnor Trail Segments (Radnor Rail Trail / Radnor High School) to support the submittal of an approved NPDES permit.

Task 3.0: Preparation of Post Construction Stormwater Management Plans

These tasks were completed in support of the development of the PCSWM Plans and involved coordination with Radnor Township and their staff. In addition, a fourth day of infiltration testing was required to complete the testing within the Radnor High School property.

- Supplemental Task: 1 extra day (4th) was needed to complete the infiltration testing at the Radnor High School Site.
- Coordination with Radnor Township/School District Staff prior to hiring private contractor for infiltration testing.
 - Preparation of figures for School District meeting.
 - Complete PA One-Call for township
 - Site walk with project team, township and school district
 - Site walk with Radnor township staff (equipment operators)
 - Coordination with Radnor township for tree removals (Radnor Rail Trail Site)
 - Coordination and site walks with private contractors (3)

Note: These costs do not include those incurred by R&H Hardscaping, LLC. Those costs are provided in the attached invoice.

Total Cost: \$6,609.71

An Employee Owned Company

A.D. MARBLE

environmental · cultural · engineering

COST PROPOSAL FORM RADNOR TAP TRAIL CO #4
BUDGET WORKSHEET

Client: Simone Collins
 Ultimate Client: Radnor Township
 Project Name : Radnor TAP Trails (P1585)
 Agreement Number:
 Task/Wk Order Number:
 Description of work: DEP GP and Township Permitting (Supplement 2)
 ADM Opportunity #: OPP2098
 Type : New
 Start Date: July 16, 2018
 Duration: 6 months
 Computed By: Xriva, Edaluis
 Approved By: Jonell Gauss
 Date: July 10, 2018

TASK	Phase Description	Senior Project Engineer	Engineer I	Sr Env Scientist / Sr. NEPA Specialist	Env Scientist I / NEPA Specialist I	GIS / CAD II	Editor	Total Hours	Total Direct Labor	Total Fee
7	Task 7: Radnor Township Stormwater & DEP Perm	6.00	40.00	12.00	52.00	14.00	18.00	142.00	4,694.82	12,326.44
Total Hours		6.0	40.0	12.0	52.0	14.0	18.0	142.0		
Rate per hour		\$ 46.65	\$ 36.56	\$ 42.59	\$ 29.42	\$ 30.76	\$ 26.72			
Total Direct Labor		\$ 279.90	\$ 1,462.40	\$ 511.08	\$ 1,529.84	\$ 430.64	\$ 480.96	\$ 4,694.82		
Total Fee		\$ 773.93	\$ 4,043.59	\$ 1,413.16	\$ 4,230.07	\$ 1,190.74	\$ 1,329.87	\$ 12,981.36	\$ 10.90	\$ 12,992.26
									Direct Labor	\$ 4,694.82
									Overhead	153.464% \$ 7,204.86
									Fixed Fee Labor	9.09% \$ 1,081.68
									Total Labor Fee	\$ 12,981.36
									Other Direct Costs	\$ 10.90
									TOTAL PROJECT FEE	\$ 12,992.26

RADNOT TAP TRAIL CO # 4

TECHNICAL SUPPLEMENT (No. 2)

**RADNOR (Villanova Ithan Road) TRAIL SECTION (TAP)
COUNTY OF DELAWARE, PA**

July 10, 2018

A.D. Marble is pleased to submit this supplemental scope of work to provide Professional Design and consulting services for the Radnor (Villanova Ithan Road) Trail Section (TAP). This is a supplement to provide an approved NPDES permit, a Radnor Township Permit and a Chapter 105 General Permit 4 for inclusion in the final bid documents. Tasks (**in Bold**) will include the following:

Task 1: Review and Assimilation of Background Information

- NO CHANGE

Task 2: Preparation of Erosion and Sediment Control Plans

- NO CHANGE

Task 3: Preparation of Post Construction Stormwater Management Plans

- NO CHANGE

Task 4: Preparation of NPDES Permit

- NO CHANGE

Task 5: Meetings and Agency Coordination

- NO CHANGE

Task 6: Preparation of Construction Bid Documents

- NO CHANGE

Task 7: PaDEP GP 4 & Radnor Township Stormwater Permit (New Tasks)

This task involves the completion and submission of a PaDEP General Permit 4 (GP-4) (intakes/outfalls) and a Radnor Township Stormwater Permit. The GP-4 is required for outfalls associated with proposed BMPs on the Radnor high School Property. A.D. Marble will assemble the permit and provide a PDF copy to Simone Collins and the township to review prior to submitting to PaDEP. Three (3) hard copies will be provided to DEP for review and approval.

The Radnor Township Stormwater permit requires the submission of a drainage plan and report highlighting compliance with Radnor township regulations.

The existing wetland/waterway survey will be updated based on a survey of the new LOD required to incorporate sufficiently large BMPs at the Friends of Radnor Trail site and within the High School property. Survey results will be included in a revised wetland/waterway report. It is assumed that proposed BMPs will be designed to avoid wetland impacts. Any additional wetland flags will be surveyed by Simone Collins surveyor and provided to A.D. Marble to be incorporated into the report figures.

Assumptions:

- ADM assumes all fees are being paid by Radnor Township (either to itself or waived)
- The stormwater permit requires information on trees impacted by the project. If necessary, ADM assumes Simone Collins will be providing all relevant tree information and completing coordination noted below:
 - How many trees, greater than 6 inch diameter are being cut down
 - Attend a Shade Tree Commission meeting
 - Information to be provided on plans includes;
 - Tree protection fence (if applicable)
 - Trees within 25 feet of construction disturbance need to be shown on the plans. Including:
 - *Location of all trees over 6" DBH*
 - *DBH of all trees over 6" DBH*
 - *Common and Latin name of trees.*
 - *Size and type of compensatory trees (if applicable)*



Engineers | Planners | Surveyors | Landscape Architects

Proposal

for

Radnor TAP

Tree and Topographic Survey

August 15, 2018

Prepared for

Simone Collins
119 E. Lafayette Street
Norristown, PA 19401

Bursich Proposal No. P157670.01

Prepared by

Bursich Associates, Inc.
2129 East High Street
Pottstown, PA 19464
610-323-4040

I. General Description of Service

Bursich Associates, Inc. (Bursich) will perform surveying services for Simone Collins (Client), for a tree and topographic survey in support of trail design along the route outlined below in Radnor Township, Delaware County, PA., approximately one (1) wooded acre located in West Wayne Preserve, and approximately 2900 linear feet of topographic survey along Route 30, and King of Prussia Roads.

II. Outline of Service

A. Survey Requirements

1. West Wayne Preserve

Contact PA One Call for field delineation of utilities and available maps; locate with elevations existing underground utilities as identified by others and above ground features within and along the target area.

Provide tree and topographic survey of approximately one wooded acre of an area located to the South of Conestoga Road, and to the North of the existing trail known as the "Friends of Radnor trail. Trees of 6" or greater caliper will be survey located. The tree caliper and species (if known) will be noted. A topographic survey of the one acre area will be performed to locate with elevations, existing underground utilities as identified by others, above ground features including but not limited to, fire hydrants, valves, utility poles, electrical transformers, storm sewer structures, sanitary sewer manholes, gas valves, light standards, ground contours, existing buildings, centerline and edge of roads, signs, etc. existing features and contours within the area as outlined in the exhibit as part of the RFP.

2. Radnor High School Property

Contact PA One Call for field delineation of utilities and available maps; locate with elevations existing underground utilities as identified by others and above ground features within and along the target area.

Along the north side of Route 30 and along West side of King of Prussia road located in Radnor Township, three (3) separate areas totaling approximately 2900 feet in length and 100 feet in width adjacent and next to the existing roadway will be surveyed. A topographic survey will be performed to locate with elevations, existing underground utilities as identified by others, above ground features including but not limited to, fire hydrants, valves, utility poles, electrical transformers, storm sewer structures, sanitary sewer manholes, gas valves, light standards, ground contours, existing buildings, centerline and edge of roads, signs, etc. existing features and contours within the area as outlined in the exhibit as part of the RFP. No individual trees will be located as part of this survey.

3. Tree Survey and Topographic Deliverable

Prepare a CAD file in Auto CAD Civil 3D, 2017 version or newer of the existing features utilizing survey information from above to include above ground features, utilities, contours, spot grades, rights-of-way and easements, and woodlands.

Tree species and caliper, not drip width will be labeled as part of the survey, only in the West Wayne Preserve area. This information will be added to the existing survey CAD file previously prepared by Bursich Associates, and be transmitted electronically to Simone Collins upon completion.

This survey is prepared without consideration of any township ordinance or regulation and is not meant to be submitted to a township or reviewing authority for approval or comment.

Total Lump Sum Cost Item II.A. \$6,890.00

B. Miscellaneous Services

1. Communications

We will maintain open and frequent communication with you and the appropriate governmental agencies in an effort to keep you informed and to expedite the process through telephone calls and e-mails.

2. Non-Payroll Expenses

Print services, computer services, photocopies, mileage, postage, courier, administrative assistant, etc. will be billed per the Bursich 2018 Prevailing Fee Schedule.

III. Proposal Assumptions and Exclusions

- A. This proposal is in response to RFP prepared by Simone Collins received via email dated 8/14/2018 including a KMZ file of the area to be surveyed as an exhibit.
- B. Provisions have not been included for Bursich Associates to locate wetlands as part of this survey.
- C. Provisions have not been included for Bursich Associates to perform a boundary survey.
- D. The survey will be performed without the benefit of a title report.
- E. The Client has secured permission for Bursich field surveyors to enter the properties in question.
- F. Horizontal datum for the survey will be based on the PA South State Plane Coordinate System (SPC), North American Datum 1983 (NAD83).
- G. Vertical datum for the topographic survey will be based on the North American Vertical Datum 1988 (NAVD 88),
- H. Provisions have not been included for the installation of property corners (iron pins/ concrete monuments).

- I. A reasonable allocation of time has been included for in-house supervision and checking for each line item.
- J. Bursich Terms and Conditions are attached to this proposal.

We propose to complete the work described above for a **Lump Sum Cost of \$6,890.00.**
(Excludes any Communications and Non-Payroll Expenses in Section II.B. above)

The quote for services is subject to a time restriction of 30 days unless both parties have agreed to an extension.

IV. Completion Schedule

Understanding the importance of a timeline for completion and your desire to obtain approval in an expeditious manner, we have prepared the following schedule for your use:

- Receipt of Authorization for Service
- Complete Survey within **3 weeks** from receipt of Authorization for Service.

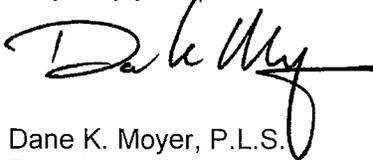
V. Qualifications

All work will be performed under the supervision of engineers and/or surveyors registered in the Commonwealth of Pennsylvania. We are equipped with the latest electronic distance measuring instruments, automatic levels, and in house computers. Professional and client references will be furnished upon request.

For your convenience in accepting this proposal and authorizing completion of this work, we have included two authorization pages. Please sign one copy where indicated and return it to us for our files.

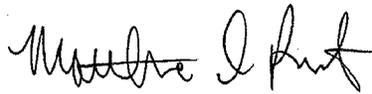
Thank you for the opportunity to submit this proposal. We look forward to working with you on this project.

Very truly yours,



Dane K. Moyer, P.L.S.
President
Bursich Associates, Inc.

Very truly yours,



Matthew D. Prout, P.L.S.
Director of Survey
Bursich Associates, Inc.

Authorization for Service

Project Name: Radnor TAP

Client: Simone Collins

Authorized by:

Signature

Date

Printed Name

Title

Please keep this copy for your files.



**2129 East High Street
Pottstown PA 19464**

**610-323-4040
610-323-8240 (f)**

Authorization for Service

Project Name: Radnor TAP

Client: Simone Collins

Authorized by:

Signature

Date

Printed Name

Title

Please sign, date, and return this page to:



**Bursich Associates, Inc.
2129 East High Street
Pottstown PA 19464**

**610-323-4040
610-323-8240 (f)**

Bursich Associates, Inc.

Engineers | Planners | Surveyors | Landscape Architects

2018 Prevailing Fee Schedule

Effective January 1 – December 31, 2018

<u>Position</u>	<u>Rate/Hour</u>
Principal.....	\$200.00
Senior Project Manager	\$155.00
Project Manager	\$140.00
Senior Project Engineer	\$135.00
Project Engineer/Surveyor	\$120.00
Senior Project Designer	\$115.00
Project/CADD Designer	\$108.00
Junior Project Engineer.....	\$105.00
Junior Project Designer.....	\$88.00
CADD Technician	\$70.00
2-Person Survey Crew (Standard/GPS).....	\$155.00
1-Person Survey Crew (Standard/GPS).....	\$125.00
Administrative Assistant.....	\$50.00
Expert Testimony (P.E., P.L.S., R.L.A.).....	\$260.00

<u>Non-Payroll Expenses</u>	<u>Unit Cost</u>
Photocopying – 8.5 x 11	\$0.10
Photocopying – 8.5 x 14	\$0.12
Photocopying – 11 x 17	\$0.20
Drawing Reproductions – 24 x 36	\$2.50
Drawing Reproductions – 30 x 42	\$3.60
Rendering Plan/Color Printing – 24 x 36	\$36.00
Rendering Plan/Color Printing – 30 x 42	\$52.50
Mileage.....	Current Federal Rate
Postage	Actual Cost plus 10%



Terms and Conditions

Bursich Associates, Inc.

I. **Additional Work**

The Client and Bursich Associates, Inc. (Consultant) have agreed to a list of Basic Services the Consultant will provide to the Client as listed under Description of Work. If agreed to in writing by the Client and the Consultant, the Consultant shall provide Additional Services. Additional Services are not included as part of the Scope of Services and shall be paid for by the client in addition to payment for Basic Services, in accordance with the Consultant's current prevailing fee schedule as provided for, or as agreed to by the Client and Consultant.

In the event that work is to be performed on a time and materials basis, fees will be based on productive time accumulated to the nearest quarter hour and computed in accordance with the current fee schedule.

II. **Payment Terms**

Payment of invoices is due upon presentation and is considered past due if not paid within 30 calendar days of the due date. If payment is not received on the 31st calendar day, you will be notified in writing. If payment is not received by the 40th calendar day, all work will cease immediately. Work will recommence with the receipt of payment. Past due accounts are subject to a service charge of 1.5 percent per month (or the maximum rate allowed by law whichever is less) of the PAST DUE amount per month, which shall be calculated from the invoice due date. Invoices will normally be submitted to the Client on a monthly or bimonthly basis for work completed the previous month. **For new clients, a 20% retainer is required prior to the start of any work. At the Consultant's discretion, for projects consisting of only one phase and valued at \$5,000 or less, a 50% retainer may be required prior to the start of any work. Said retainer payments will be applied to the last invoice(s). Payment is required in full prior to the release of the ALTA surveys, boundary and topo plans of survey, or the release of any plans for recording purposes.**

III. **Price Adjustment**

Annual price adjustments to contracts following the contract term, if applicable, shall be based on the rate of increase in the cost of living as reflected by the Federal Bureau of Labor Statistics, Consumer Price Index (CPI) or any other index which may be substituted in the future. The CPI for the last 12-month period of the contract will be the CPI base on which later adjustments are computed. Each time an adjustment is made, the earlier CPI base will be replaced by the adjusted CPI base. The percentage of adjustment to contract prices shall in no event exceed the percentage change in the index.

IV. **Suspension of Services**

If Client fails to make payments within **40** days of invoice or otherwise is in breach of this Agreement; the Consultant **will** suspend or terminate performance of services. The Consultant shall have no liability whatsoever to the Client for any cost or damages as a result of such suspension caused by any breach of this agreement by the Client. Upon payment in full by Client, the Consultant shall resume services under this agreement and the time schedule and compensation shall be adjusted to compensate for the period of suspension plus reasonable cost to resume performance.

V. **Collection Costs**

If the Client fails to make payments when due and the Consultant incurs any costs in order to collect overdue sums from the Client, the Client agrees that all such collection costs incurred shall immediately become due and payable to the Consultant. Collection costs shall include, without limitation, legal fees, collection agency fees and expenses, court costs, collection bonds and reasonable Consultant staff costs at standard billing rates for the Consultant's time spent in efforts to collect. This obligation of the Client to pay the Consultant's collection costs shall survive the term of this Agreement or any earlier termination by either party.

VI. **Set-Offs, Back Charges, Discounts**

Payment of invoices shall not be subject to any discounts or set-offs by the Client, unless agreed to in writing by the Consultant, Payment to the Consultant for services rendered and expenses incurred shall be due and payable regardless of any subsequent suspension or termination of this Agreement by either party.

VII. **Disputed Invoices**

If the Client objects to any portion of an invoice, the Client shall so notify the Consultant in writing within 14 calendar days of receipt of the invoice. The Client shall identify in writing specific cause of disagreement and the amount in dispute and shall pay that portion of the invoice not in dispute in accordance with the other payment terms of this agreement. Any dispute over invoiced amounts due which cannot be resolved within 10 days after presentation of invoice by direct negotiation between the parties shall be resolved within 30 days through non-binding mediation unless the parties mutually agree otherwise.

VIII. **Schedule for Rendering of Services**

The Consultant shall prepare and submit for Client approval a schedule for the performance of the Consultant's services. This schedule shall include reasonable allowances for review and approval times required by the Client, performance of services by the Client's consultant's, and review and approval times required by public authorities having jurisdiction over the project. This schedule shall be equitably adjusted as the Project progresses, allowing for changes in the scope, character or size of the Project requested by the Client, or for delays or other causes beyond the Consultant's reasonable control.

IX. **Defects in Service**

The Client shall promptly report to the Consultant any defects or suspected defects in the Consultant's services of which the Client becomes aware, so that the Consultant may take measures to minimize the consequences of such a defect. The Client further agrees to impose a similar notification requirement on all contractors in its Client/Contractor contract and shall require all subcontracts at any level to contain a like requirement. Failure by the Client and the Client's contractors or subcontractors to notify the Consultant shall relieve the Consultant of the cost of remedying the defects above the sum such remedy would have cost had prompt notification been given when such defects were first discovered.

X. **Contract Revisions**

For purposes of this contract, normal plan revisions shall include minor changes based upon specific ordinances and regulations by the various regulatory agencies. Discretionary review comments based upon engineering preferences and philosophy not specified prior to plan preparation, changes in regulations during the review process, any changes in the layout resulting in a modification to the approved sketch plan or contract, client changes, and any other item not specifically addressed under the "Scope of Work" shall not be considered normal plan revisions and are not part of the contract.

XI. **Basis of Costs**

The costs of the various items included in this proposal were developed utilizing the current applicable ordinances of the municipality and Bursich Associates familiarity with these ordinances and their interpretation by the municipalities' elected and appointed officials, staff and consultants. Bursich Associates reserves the right to reevaluate the cost of any item included in this contract should any of these factors change during the completion of the work. This includes the adoption or amendment of ordinances and election or appointment of new reviewing or approving officials such as supervisors, commissioners, councilors, planning commission members, municipal staff, consultants, etc. which results in a change of philosophy or interpretation of the ordinances.

The Client assumes all responsibility for interpretation of the Contract Documents and for construction observation, and the client waves any claims against the Consultant that may be in any way connected thereto.

In addition, the Client agrees, to the fullest extent permitted by law, to indemnify and hold harmless the Consultant, its officials, directors, employees and sub consultant (collectively the Consultant) against all damages, liabilities or costs, including reasonable attorney fees and defense cost, arising out of or in any way connected with the performance of such services by other persons or entities and from any and all claims arising from modifications, interpretations, adjustments or changes made to the Contract Documents to reflect changed field conditions, except for claims arising from the sole negligence or willful misconduct of the Consultant.

XII. **Ownership Of Instruments Of Service**

All reports, drawings, specifications, computer files, field data, notes and other documents and instruments prepared by the Consultant as instruments of service shall remain the property of the Consultant. The Consultant shall retain all common law, statutory and reserved rights, including copyright thereto.

XIII. **Termination**

In the event of termination of this Agreement by either party, the Client shall within fifteen (15) calendar days of termination pay the Consultant for all services rendered and all reimbursable costs incurred by the Consultant up to the date of termination, in accordance with the payment provisions of this Agreement.

The Client may terminate this Agreement for the Client's convenience and without cause upon giving the Consultant not less than seven (7) calendar days' written notice.

Either party may terminate this Agreement for cause upon giving the other party not less than seven (7) calendar days' written notice for any of the following reasons:

- Substantial failure by the other party to perform in accordance with the terms of this Agreement and through no fault of the terminating party;
- Assignment of this Agreement or transfer of the Project by either party to any other entity without the prior written consent of the other party;
- Suspension of the Project or the Consultant's services by the Client for more than ninety (90) calendar days, consecutive or in the aggregate;
- Material changes in the conditions under which this Agreement was entered into, the Scope of Services or the nature of the Project and the failure of the parties to reach agreement on the compensation and schedule adjustments necessitated by such changes.

In the event of any termination that is not the fault of the Consultant, the Client shall pay the Consultant, in addition to payment for services rendered and reimbursable costs incurred, for all expenses reasonably incurred by the Consultant in connection with the orderly termination of this Agreement, including but not limited to demobilization, reassignment of personnel, associated overhead costs and all other expenses directly resulting from the termination.

RESOLUTION NO. 2018-101
A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE COUNTY,
PENNSYLVANIA, AUTHORIZING MELIORA DESIGN, LLC, TO PROVIDE
PERMITTING, DESIGN, AND BIDDING DOCUMENTS FOR STORMWATER
MANAGEMENT AT ARBOR AND CUMBERLAND PLACES, IN THE AMOUNT OF
\$26,065

WHEREAS, #102 Cumberland Place receives considerable stormwater runoff from the development/street: Arbor Place

WHEREAS, Meliora Design has provided a cost proposal to provide a solution to the runoff issues experienced at 102 Cumberland Place

NOW, THEREFORE, be it **RESOLVED** by the Board of Commissioners of Radnor Township does hereby Authorize Meliora Design to Provide Permitting, Design, and Bidding Documents for Stormwater Management at Arbor and Cumberland Places, in the Amount of \$26,065

SO RESOLVED this 24th day of September, A.D., 2018

RADNOR TOWNSHIP

By: _____
Name: Lisa Borowski
Title: President

ATTEST: _____
Robert A. Zienkowski
Manager/Secretary

Radnor Township
PROPOSED LEGISLATION

DATE: September 17, 2018
TO: Radnor Township Board of Commissioners
FROM: Stephen F. Norcini, P.E., Township Engineer *SN*
CC: Robert A. Zienkowski, Township Manager
William M. White, Assistant Township Manager & Finance Director

LEGISLATION: **Resolution #2018-101 - Authorizing Meliora Design to Provide Permitting, Design, and Bidding Documents for Stormwater Management at Arbor and Cumberland Places, in the Amount of \$26,065**

LEGISLATIVE HISTORY: This legislation has not been before the Board of Commissioners previously.

PURPOSE AND EXPLANATION: Arbor Place, off of Clyde Road, was constructed in late 1970s. This time period of construction pre-dates our current Stormwater Management Ordinance, enacted in 2005. The property at #102 Cumberland Place, receives considerable runoff from Arbor Place, causing drainage problems. To that end, the Township has solicited a proposal from Meliora Design, LLC, to provide a solution.

Implementation Schedule: Pending Board of Commissioners approval, a purchase order will be processed, and work will begin immediately.

Fiscal Impact: The cost of this proposal is \$26,605, to be funded by the "04" Stormwater Fund.

Recommended Action: I respectfully request the Board of Commissioners Authorize Meliora Design, LLC, to Provide Permitting, Design, and Bidding Documents for Stormwater Management at Arbor and Cumberland Places, in the Amount of \$26,065.

Enclosure: Meliora Design, LLC Cost Proposal

September 14, 2018

Mr. Stephen F. Norcini
Township Engineer
Radnor Township
301 Iven Avenue
Wayne, PA 19087

RE: 102 Cumberland Avenue

Dear Mr. Norcini:

Meliora Design is pleased to submit this proposal to provide Professional Design and Consulting Services for evaluation of an existing drainage problem, and preparation of bid documents for improvements to address the drainage problem.

Project Understanding and Work Tasks

It is our understanding that the drainage from Arbor Place discharges to what is shown on the original 1979 plans as a 2-foot high stone "stilling basin". Runoff from the discharge location is draining downslope towards 102 Cumberland Avenue and creating drainage issues at that property. It is unclear if the stormwater system was built as depicted on the 1979 plans, and it is unclear what the current conditions are, as the site is overgrown. It is our understanding that Radnor would like to determine a drainage solution to alleviate problems at 102 Cumberland Avenue.

We have divided this work into two tasks:

Task 1 Concept Plan: In this first task we will review the plans and available parcel information and conduct a site visit. We have also included a site survey to determine existing conditions, including whether the storm sewer system was installed as originally indicated on the 1979 plans. We will develop stormwater calculations of flow and rate based upon the estimated drainage area, and based on this information, we will develop a Concept stormwater plan to address the current conditions. We will review the plan with the Township and with the affected property owners.

Tangible Work Products:

- Review available plans and conduct site walk
- Stormwater drainage analysis and calculations
- Site topographic survey including relevant property lines and existing structures
- Concept Plan for recommendation improvements
- One (1) Township engineering meeting and one (1) residents' meeting

Task 2 Construction Documents: In this task we will document to approved Concept Design to Construction Documents, including specifications.

Tangible Work Products:

- Construction Documents
- Review with Township Engineering
- Cost Estimate

Mr. Stephen F. Norcini
September 14, 2018

2



All work products will be provided in hard copy and digital format.

We have divided this work into two tasks because it is unclear what the existing conditions are. The 1979 plans include redlines that state "storm sewer revised due to rock", and from reviewing an aerial of current conditions, it appears that structures (a large pool) may have been built over storm sewer easements (and so the storm sewers may not be there).

We look forward to supporting Radnor Township and appreciate the opportunity to support this project. If you have any questions or concerns, we can be reached at 610-933-0123, or MicheleA@Melioradesign.com and March@Melioradesign.com.

Sincerely yours,

A handwritten signature in black ink, appearing to read "m-a", written over a light blue horizontal line.

Michele C. Adams, PE, LEED AP
Principal

A handwritten signature in black ink, appearing to read "Marc Henderson", written over a light blue horizontal line.

Marc B. Henderson, PE
Project Manager

Radnor 102 Cumberland Ave
 Meliora Detailed Fee Estimate
 Prepared for Steve Norcini
 September 14, 2018

Meliora Design - Fee Estimate - Detailed

Title	Senior Engineer	Water Resources Engineer	Cad Technician	Total Hours	Total Fee
Billing Rate	\$135.00	\$95.00	\$85.00		
1 Site Evaluation and Concept					
Review plans and visit Site to confirm conditions	4	4		8	\$ 920
Stormwater calculations to estimate flows and rates	1	8		9	\$ 895
Concept design and review with Radnor	4	16		20	\$ 2,060
Meeting with homeowner	4	4		8	\$ 920
Review Survey	2			2	\$ 270
				0	\$ -
				0	\$ -
				0	\$ -
Site Evaluation and Concept Hours	15	32	0	47	
Site Evaluation and Concept Total	\$ 2,025	\$ 3,040	\$ -		\$ 5,065
2 Construction Documents					
				0	\$ -
Construction Documents for Bid (plans, specifications, etc.)	32	80		112	\$ 11,920
Review with Township	4			4	\$ 540
Cost Estimate		8		8	\$ 760
Document Stormwater Easements for Recording		16		16	\$ 1,520
Construction Documents Hours	24	104	0	128	
Construction Documents Total	\$ 3,240	\$ 9,880	\$ -		\$ 13,120
Project Hours Total	39	136	0	175	
Project Labor Total	\$ 5,265	\$ 12,920	\$ -		\$ 18,185
Reimbursables					
	Expense Estimated at	2%			\$ 380
Subconsultants					
	Survey				\$ 7,500
	Subconsultants Subtotal				\$ 7,500
	Total Fee				\$ 26,065

RESOLUTION NO. 2018-102

A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA, AUTHORIZING THE EXECUTION OF A SETTLEMENT AGREEMENT WITH OFFICER WILLIAM DERR AND THE HONORABLE DISCHARGE OF WILLIAM DERR

WHEREAS, the Township has reached a tentative Agreement with William Derr, one of the Township's police officers who became disabled during the performance of his duties, and his collective bargaining representative, Delaware County Lodge No. 27, Fraternal Order of Police ("FOP Lodge 27"); and

WHEREAS, in exchange for certain benefits, Officer Derr is to receive an honorable discharge from employment as a Township Police Officer, effective August 31, 2018; and

WHEREAS; Officer Derr and FOP Lodge 27 have executed the Separation Agreement, and Officer Derr's statutory right to revoke the Agreement within seven days after he executed the agreement has expired; and

WHEREAS; the Township desires to execute the agreement and to obtain and/or to provide the benefits afforded to each party under the agreement.

NOW, THEREFORE, the Township hereby resolves as follows:

1. Since the expiration of the period in which Officer Derr may revoke his acceptance of the Agreement has expired, Township Manager Robert Zienkowski is hereby empowered and authorized to execute the Separation Agreement on behalf of the Township.
2. Mr. Zienkowski is further empowered to take all steps necessary to effectuate the terms of the Agreement.
3. The Township hereby grants William Derr an honorable discharge, effective August 31, 2018.

4. The resolution shall take effect immediately.

SO RESOLVED, at a duly convened meeting of the Board of Commissioners of Radnor Township conducted on this 24th day of September, 2018.

RADNOR TOWNSHIP

BY: _____
Name: Lisa Borowski
Title: President

ATTEST: _____

CERTIFICATE OF APPROPRIATENESS

Radnor Township Historical and Architectural Review Board
Radnor Township, Pennsylvania



NAME OF OWNER: BURNIP JENNA L & DANIEL W
OWNER ADDRESS: 310 N WAYNE AVE, WAYNE, PA 19087
ADDRESS OF PROPERTY: 310 N WAYNE AV , WAYNE PA 19087
APPLICATION NUMBER: HARB-2018-07

Subject to the conditions below the above owner, having complied with the Radnor Township Historical and Architectural Review Board (HARB) process, is hereby granted this permit for the

Addition of 1st floor family room and 2nd floor bedroom. Garage renovation. Re-siding of whole house exterior.

at the address specified and may proceed with the building permit process. If not completed within one year of the date hereof, this permit is void and new application must be made. This Approval is subject to the Applicant applying for and receiving all necessary permits and approvals; and complying with all applicable Municipal regulations. Owner specifically gives the building inspector or designated official the right to inspect the work during progress and at completion.

NOTES AND/OR CONDITIONS OF APPROVAL:

Application approved as submitted.

ISSUED: Monday, September 24, 2018

TOWNSHIP OFFICIAL

ACCEPTED BY APPLICANT

RESOLUTION NO. 2018-104

**A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE COUNTY,
PENNSYLVANIA, AUTHORIZING THE PRESIDENT OF THE BOARD OF
COMMISSIONERS AS THE SIGNING AUTHORITY FOR THE EXECUTION
OF A MASTER CASTING AGREEMENT WITH THE PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION**

BE IT RESOLVED by authority of the Board of Commissioners of Radnor Township, Delaware County, and it is hereby resolved by authority of the same, that the President of the Board of Commissioners of Radnor Township be authorized and directed to sign the attached Agreement on its behalf and the Township Manager be authorized and directed to attest the same.

RADNOR TOWNSHIP

By: _____
Name: Lisa Borowski
Title: President

ATTEST: _____
Robert A. Zienkowski
Manager/Secretary

SEAL

I, Lisa Borowski of the Radnor Township Board of Commissioners do hereby certify that the foregoing is a true and correct copy of the Resolution adopted September 24th, 2018, at the regular meeting of the Board of Commissioners held the 24th day of September, 2018.

DATE _____

Radnor Township

PROPOSED LEGISLATION

DATE: September 24, 2018

TO: Radnor Township Board of Commissioners

CC: Robert A. Zienkowski, Township Manager
William R. White, Finance Director/Assistant Township Manager

FROM: Stephen McNelis, Director of Public Works

LEGISLATION: Resolution 2018-104: Pennsylvania Department of Transportation (PennDOT) Master Casting Agreement

LEGISLATIVE HISTORY: Radnor Township previously executed a Master Casting Agreement with PennDOT for a three-year term which expired on September 30, 2017. The agreement before you (attached) is a three year term, from October 1, 2017 to September 30, 2020.

PURPOSE AND EXPLANATION: A Master Casting Agreement is an agreement used for manhole or inlet adjustments in conjunction with PennDOT paving projects. It allows the local municipality to have the adjustments done by the PennDOT awarded contractor, as part of the contractor's schedule, at flat fee rates, on what are usually very heavily traveled State Roads. The purpose of the Resolution is to verify the signing authority of the person who signs the agreement.

IMPLEMENTATION SCHEDULE: If approved by the Board of Commissioners, the Master Casting Agreement will be executed by the Township is short order.

FISCAL IMPACT: There is no fiscal impact in executing the agreement.

RECOMMENDED ACTION: I respectfully request the Board of Commissioners authorize the President of the Board signing authority in order to execute a Master Casting Agreement with the Pennsylvania Department of Transportation.

MOVEMENT OF LEGISLATION: It is being requested that the Board of Commissioners approve the attached resolution.

EFFECTIVE DATE _____
(PennDOT will insert)

AGREEMENT No. 0601209
FEDERAL I.D. No. 23-6000200
SAP VENDOR No. 138597-001
CUSTOMER No.

MASTER AGREEMENT FOR CASTING ADJUSTMENTS

This Master Agreement for Casting Adjustments ("Agreement") is made by and between the Commonwealth of Pennsylvania, Department of Transportation ("PennDOT"),

and

Radnor Township, a municipality ("Utility").

BACKGROUND

PennDOT plans to perform one or both of general maintenance and reconstruction of section(s) of certain State Routes within the Counties of Bucks, Chester, Delaware, Montgomery and Philadelphia, Pennsylvania ("Project").

The Project requires adjustments, replacements or both one or both of adjustment and replacement of the Utility's castings ("Utility Work").

PennDOT is willing to incorporate the Utility Work into PennDOT's third party contract for the Project ("Project Contract").

This Agreement outlines the process for incorporation of Utility Work into the Project Contract with reimbursement to PennDOT of Utility Work costs.

The parties, intending to be legally bound, agree as follows:

1. **Initiation of Process.** PennDOT will notify the Utility of the scheduled Project. If the Utility wants the Utility Work of all or a certain number of its castings to be incorporated in the Project Contract at the Utility's expense, the Utility shall initiate the execution of the Project Initiation Form ("PIF"), Exhibit A, which is attached to this Agreement. The PIF shall identify the requested Utility Work and the cost. If PennDOT agrees to incorporate the work the appropriate PennDOT representative shall countersign the PIF and return a copy to the Utility. When signed by both parties the PIF shall be incorporated into this Agreement. Any written change to the PIF must be done through a change order which is attached to this Agreement as Exhibit B. When a change order is signed by both parties it shall be incorporated into this Agreement.

2. **Designated Representative.** In the PIF, the parties will each identify the individual that has the full authority to execute the PIF and change orders, if any ("Designated Representative"). If the Utility is not a corporation, it must provide proof of the authority for the Designated Representative. The Designated Representative shall be available throughout the Project to confer as needed.

3. **Compliance with Federal and State Statutes.** All work performed pursuant to this Agreement shall comply with the Buy America provisions in 23 U.S.C. § 313 and 23 C.F.R. § 635.410, the Steel Products Procurement Act, 73 P.S. § 1881 et seq. and 67 Pa. Code Part 459.

4. **Purchase of Castings.** Prior to construction of the Project, the Utility shall deliver the necessary castings to the Project site for installation by PennDOT. If during construction of the Project additional castings are necessary, the Utility is entitled to provide the castings or authorize PennDOT to acquire the casting(s) on the open market. If PennDOT acquires castings on the

open market, the Utility shall reimburse PennDOT the actual costs upon receipt of invoice from PennDOT.

5. **Performance of Work.** PennDOT shall perform the Utility Work required to adjust the castings to the proper elevation, on a full brick and mortar bed, in accordance with the then current PennDOT's Publication 408, Section 104.03 titled "Extra Work". The Utility acknowledges that the costs for each item are identified in Exhibit C, which is attached to this Agreement. The items identified in Exhibit C will set forth in the Project Contract.

6. **Term of Agreement.** The term of this Agreement shall commence on the Effective Date (as defined below) or October 1, 2017, whichever is later, and shall remain in effect through September 30, 2020. The term of this Agreement shall not exceed a three (3) year term. The Effective Date shall be the date that this Agreement is fully executed by the Utility and PennDOT and all approvals required by Commonwealth contracting procedures have been obtained, as indicated by the date of the last Commonwealth signature. Following full execution, PennDOT will insert the Effective Date at the top of Page 1.

7. **Termination.** PennDOT has the right to terminate this Agreement for its convenience if PennDOT determines termination to be in its best interest. The Utility shall pay for work satisfactorily completed prior to the effective date of the termination, but in no event shall the Utility be entitled to recover loss of profit. Termination shall be effective upon written notice to the Utility.

8. **Cooperation of Parties.** If the Utility supplies materials to PennDOT, performs any additional work, either with its own contractor or its own forces, or both the Utility shall cooperate with PennDOT in such a manner as not to interfere with or hinder the progress of the Project. Any materials provided and additional work performed by the Utility will be at the Utility's sole expense.

9. **Invoicing and Payment.** Upon completion of the Utility Work by PennDOT to the satisfaction of the Utility, PennDOT shall certify to the Utility the costs in accordance with Exhibit C, and the Utility shall pay PennDOT within 60 days of receipt of PennDOT's invoice.

10. **Indemnification.** The Utility shall hold PennDOT harmless from and indemnify PennDOT against all claims, demands and actions based upon or arising out of any activities performed by the Utility and its employees and agents under this Agreement and shall, at the request of PennDOT, defend all actions brought against PennDOT base upon any such claims or demands.

11. **Highway Occupancy Permit.** Upon completion of the Project, the Utility facilities remaining in the State highway right-of-way continue to be subject to the terms and conditions of any applicable highway occupancy permit issued by PennDOT pursuant to 67 Pa. Code Part 459. The Utility shall maintain and keep the adjusted castings in good repair in accordance with applicable State laws and regulations.

12. **Public Utility Commission ("PUC").** Notwithstanding anything contained herein to the contrary, if the PUC assumes jurisdiction of the Project under the Public Utility Code of 1978, Act of July 1, 1978, P.L. 598, as amended, the parties shall be bound by any orders issued by the PUC or decisions of an appropriate tribunal after the exhaustion of all appeals.

13. **Withdrawal of Incorporated Work.** If the Utility withdraws its request for the incorporation of the Utility Work into the Project Contract after the award of the Project Contract, the Utility shall reimburse PennDOT for all actual costs, if any, incurred by PennDOT for necessary labor and materials performed for the Utility Work prior to the time of withdrawal. The Utility shall also be responsible for the cost of necessary materials for the Utility Work that were ordered by PennDOT prior to Utility's withdrawal if the order for said materials

cannot be cancelled and if the materials cannot be used elsewhere in the Project.

14. **Cancellation of Project.** If PennDOT decides to cancel the Project or delay the construction beyond the scheduled construction season, PennDOT will notify the Utility in accordance with Section 23 below. Upon notification, the PIF and any change order shall become null and void and neither party shall be responsible to the other for any further costs.

15. **Right-to-Know Law.** The Pennsylvania Right-to-Know Law, 65 P.S. §§ 67.101–3104, applies to this Agreement. Therefore, this Agreement is subject to, and the Utility shall comply with, the clause entitled *Contract Provisions – Right to Know Law* attached as Exhibit D and made a part of this Agreement. As used in this Agreement, the term “Contractor” refers to the Utility.

16. **Amendments and Modifications.** No alterations or variations to this Agreement shall be valid unless made in writing and signed by the parties. Amendments to this Agreement shall be accomplished through a formal written document signed by the parties with the same formality as the original Agreement.

17. **Titles Not Controlling.** Titles of sections are for reference only, and shall not be used to construe the language in this Agreement.

18. **Severability.** The provisions of this Agreement shall be severable. If any phrase, clause, sentence or provision of this Agreement is declared to be contrary to the Constitution of Pennsylvania or of the United States or of the laws of the Commonwealth of Pennsylvania the applicability thereof to any government, agency, person or circumstance is held invalid, the validity of the remainder of this Agreement and the applicability thereof to any government, agency, person or circumstance shall not be affected thereby.

19. **No Waiver.** Either party may elect not to enforce its rights and remedies under this Agreement in the event of a breach by other party of any term or condition of this Agreement. In any event, the failure by either party to enforce its rights and remedies under this Agreement shall not be construed as a waiver of any subsequent breach of the same or any other term or condition of this Agreement.

20. **Independence of the Parties.** It is understood by and between the parties that nothing contained herein is intended or shall be construed to, in any respect, create or establish the relationship of partners between the Utility and PennDOT, or as constituting PennDOT as the representative or general agent of Utility for any purpose whatsoever.

21. **Assignment.** This Agreement may not be assigned by the Utility, either in whole or in part, without the written consent of PennDOT.

22. **No Third Party Beneficiary Rights.** The parties to this Agreement understand that this Agreement does not create or intend to confer any rights in or on persons or entities not a party to this Agreement.

23. **Notices.** All notices and reports arising out of, or from, the provisions of this Agreement shall be in writing and given to the parties at the address provided under this Agreement, either by regular mail, facsimile, e-mail, or delivery in person.

If to PennDOT:

Title: District Utility Manager
Address: PennDOT Engineering District 6-0, 7000 Geerdes Blvd,
King of Prussia, PA 19406-1525
Fax: 610-205-6900
E-mail: malang@pa.gov

If to the Utility:

Title: Township Manager
Address: 301 Iven Ave., Wayne, PA 19087-8297
Fax: 610-688-1279
E-mail: rzienkowski@radnor.org

24. **Integration and Merger.** This Agreement and, as applicable any attachments and exhibits, when executed, approved and delivered, shall constitute the final, complete and exclusive Agreement between the parties containing all the terms and conditions agreed on by the parties. All representations, understandings, promises and agreements pertaining to the subject matter of this Agreement made prior to or at the time this Agreement is executed are superseded by this Agreement unless specifically accepted by any other term or provision of this Agreement. There are no conditions precedent to the performance of this Agreement except as expressly set forth herein.

[The remainder of this page is intentionally left blank.]

The parties have executed this Agreement to be effective as of the date of the last signature affixed below.

ATTEST:

Radnor Township

by _____
Signature Date

by _____
Signature Date

Title

Title

If a Corporation, the President or Vice President must sign and the Secretary, Treasurer, Assistant Secretary or Assistant Treasurer must attest; if a sole proprietorship, only the owner must sign; if a partnership, only one partner need sign; if a limited partnership, only the general partner must sign.

If a Municipality or Authority a resolution for signature authority for the Master Agreement and the Project Initiation Form must be attached.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

by _____
District Utility Manager Date

APPROVED AS TO LEGALITY
AND FORM

PRELIMINARILY APPROVED

by _____
for Chief Counsel Date

by _____
Senior Counsel in Charge Date

by _____
Deputy General Counsel Date

Funds Commitment Document
Number _____
Certified Funds Available under SAP
Number _____
SAP Cost Center _____
GL Account _____
Amount _____
SAP Vendor Number _____

by _____
Deputy Attorney General Date

by _____
Office of Comptroller Date
Operations

Former Preapproved form:
OGC No. 18-FA-52.1
Appv'd OAG 04/16/2014

Agreement No. _____
Vendor No. _____
Customer No. _____
FID No. _____
MPMS No. _____

PROJECT INITIATION FORM (PIF)
MASTER AGREEMENT FOR CASTING ADJUSTMENTS
2017-2020

- 1. Utility Name: _____

- 2. Project Initiation Form Number: _____ Date: _____

- 3. Project Name: _____

- 4. Location: _____

- 5. Description of Work to be Performed:

- 6. Project Funding: FHWA STATE LOCAL

- 7. Estimated Utility Cost: \$ _____ (Cost detail below)

PIF Number: _____

Date: _____

Estimated number of castings which are being incorporated into the Project by this Project Initiation Form (PIF).

Number of Castings	Bid Item	Unit Price	Total Cost
	9999-9950	\$388.00	
	9999-9951	\$365.00	
	9999-9952	\$473.00	
	9999-9953	\$477.00	
	9999-9954	\$591.00	
	9999-9955	\$567.00	
	9999-9956	\$690.00	
	9999-9957	\$713.00	
	9999-9958	\$908.00	
	9999-9959	\$735.00	
	9999-9960	\$951.00	
	9999-9961	\$1,183.00	
	9999-9962	\$558.00	
	9999-9963	\$250.00	
	9999-9964	\$404.00	
	9999-9965	\$279.00	
	9999-9966	\$465.00	
	9999-9967	\$495.00	

PROJECT INITIATION FORM (PIF)

Designated Project Representatives

For PennDOT:

For _____:

Utility Name

Signature

Date

Signature

Date

Name

Name

Title

Title

Email

Email

Telephone

Telephone

Address

Address

Close Out Data ~ For Internal Use Only

Completed on: _____

Final Cost: _____

Agreement No. _____
Vendor No. _____
Customer No. _____
FID No. _____
MPMS No. _____

CHANGE ORDER FORM Master Agreement for Casting Adjustments

1. P.I. F. No. _____ Change Order No.: _____ Date: _____

2. Project Name:

3. Department Bridge Number/DOT Number:

4. Location:

5. Description of Change:

6. Estimated Project Costs:

Prior Estimated Project Cost \$ _____

CO Estimated Project Cost \$ _____

New Total Estimated Project Cost \$ _____

Agreement No. _____
Vendor No. _____
Customer No. _____
FID No. _____
MPMS No. _____

Designated Project Representatives

For Department:

For Utility:

Signature Date

Signature Date

Name

Name

Title

Title

Email

Email

Telephone

Telephone

Address

Address

Approval and Authorization

For Department:

For Utility:

Signature Date

Signature Date

Name

Name

Title

Title

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Completed on: _____ Final Cost: _____

Contract Provisions

Type A - One-step adjustment of casting – applies where change in grade:

- (1) Does not exceed 3 inches or
- (2) Exceeds 3 inches but protrusion into roadway of casting reset to proposed final grade does not present a hazard to vehicular traffic

ITEM 9999-9950	0 to 15 inch diameter Utility Casting Adjustment for Resurfacing - Type A - Concrete Base - \$388.00 each
9999-9951	0 to 15 inch diameter Utility Casting Adjustment for Resurfacing - Type A - Flexible Base - \$365.00 each
9999-9952	16 to 36 inch diameter Utility Casting Adjustment for Resurfacing - Type A - Concrete Base - \$473.00 each
9999-9953	16 to 36 inch diameter Utility Casting Adjustment for Resurfacing - Type A - Flexible Base - \$477.00 each
9999-9954	37 to 54 inch diameter Utility Casting Adjustment for Resurfacing - Type A - Concrete Base - \$591.00 each
9999-9955	37 to 54 inch diameter Utility Casting Adjustment for Resurfacing - Type A - Flexible Base - \$567.0 each

This work shall consist of the resetting or grade adjustment of an existing utility casting for a vertical height of 8 inches or less, in accordance with Section 606 (Grade Adjustment of Existing Miscellaneous Structures) and within reasonably close conformity to the lines and grades shown on the drawings or established by the engineer. The casting diameter shall be determined by measuring the diameter of the lid. The base course replaced shall be of the same type removed, either concrete or flexible.

The resetting or adjustment shall be completed in a one-step operation with no temporary work anticipated. Any other change to castings shall be the responsibility of the contractor and shall be repaired or replaced at his expense.

The existing castings shall be carefully removed and cleaned, the casting reset to the proper elevation on a brick and mortar bed in accordance with (the Utility Company's specifications if attached) Section 606. Inserts, extensions or risers are not acceptable under this item. Castings requiring replacement will be provided for and delivered to the site by the Utility Company for installation by the contractor.

This item will not include any adjustment to the conical section of a manhole. That work, if required, will be paid under Item 9999-9962 Utility Manhole Neck Rebuilding.

This work will be measured by the unit each, after completion and acceptance by the Utility and the Department.

This work will be paid for at the respective predetermined contract unit price each, which price will be indicated in the proposal by the Department, complete in place as specified.

Type B - Two-step adjustment of casting – applies where change in grade:

- (1) Exceeds 3 inches and
- (2) Protrusion into roadway of casting reset to proposed final grade presents a hazard to vehicular traffic.

ITEM 9999-9956	0 to 15 inch diameter Utility Casting	Adjustment for Resurfacing - Type B - Concrete Base - \$690.00 each
9999-9957	0 to 15 inch diameter Utility Casting	Adjustment for Resurfacing - Type B - Flexible Base - \$713.00 each
9999-9958	16 to 36 inch diameter Utility Casting	Adjustment for Resurfacing - Type B - Concrete Base- \$908.00 each
9999-9959	16 to 36 inch diameter Utility Casting	Adjustment for Resurfacing - Type B - Flexible Base - \$735.00 each
9999-9960	37 to 54 inch diameter Utility Casting	Adjustment for Resurfacing - Type B - Concrete Base - \$951.00 each
9999-9961	37 to 54 inch diameter Utility Casting	Adjustment for Resurfacing - Type B - Flexible Base - \$1,183.00 each

This work shall consist of the resetting or grade adjustment of an existing utility casting for a vertical height of 8 inches or less, in accordance with Section 606 (Grade Adjustment of Existing Miscellaneous Structures) and within reasonably close conformity to the lines and grades shown on the drawings or established by the engineer. The casting diameter shall be determined by measuring the diameter of the lid. The base course replaced shall be of the same type removed, either concrete or flexible.

The adjustment (resetting) will be completed in a two-step operation when a casting reset at the proposed final grade will protrude more than 3 inches and may cause damage to vehicular traffic or be a safety hazard prior to paving. The first adjustment will be to a temporary grade that will permit traffic to move safely over the casting. The second adjustment will be to the final grade for paving. The contractor is permitted to use steel plates in lieu of the temporary (first) adjustment for a period not exceeding five calendar days. The contractor shall be required to provide a means of access to each utility facility so that one man may enter the facility within 30 minutes without special equipment or tools. The facility location and name of utility shall be temporarily marked for emergency use. Any other change to the castings shall be the responsibility of the contractor and shall be repaired or replaced at his expense.

The existing castings shall be carefully removed and cleaned, the casting reset to the proper elevation on a brick and mortar bed in accordance with the utility specifications if attached or with Section 606. Inserts, extensions or risers are not acceptable under this item. Castings requiring replacement will be provided for and delivered to the site by the Utility Company for installation by the contractor.

This item will not include any adjustment to the conical section of a manhole. That work, if required, will be paid under Item 9999-9962 Utility Manhole Neck Rebuilding.

This work will be paid for at the respective predetermined contract unit price each, which price will be indicated in the proposal by the Department complete in place as specified.

ITEM 9999-9962 Utility Manhole Neck Rebuilding - \$558.00 per vertical foot

This work shall consist of rebuilding manhole necks any size or type for a vertical distance in excess of eight inches and resetting the existing casting within reasonable close conformity to the lines and grades shown on the drawings or established by the engineer. Only those requiring rebuilding, as determined by the Utility Company and engineer, will be measured for payment.

The existing casting will be carefully removed and cleaned. The neck shall be adjusted using brick and mortar as required. The casting shall then be set and sealed with mortar on the neck at the proper elevation for paving. If the utility and the engineer determine that the existing manhole deck is in unsatisfactory condition or cannot be adjusted, then the neck shall be removed and rebuilt as required. Any exposed brick shall be parged. All work shall be in accordance with (the Utility Company's specifications if attached) Section 600 (Incidental Construction).

This work shall be measured by the vertical foot with a minimum measurement of one foot. Where a manhole is rebuilt for a height of more than one foot, the additional height will be measured and paid to the next foot.

This work will be paid for at the respective predetermined contract unit price each, which price will be indicated in the proposal by the Department, complete in place as specified.

Type C - one piece fabricated adjustable riser with one turnbuckle for adjustments of 0 inch to 3 inches.

ITEM 9999-9963 0 to 15 inch diameter Utility Casting
Adjustment for Resurfacing - Type C - \$250.00 each

9999-9964 16 to 54 inch diameter Utility Casting
Adjustment for Resurfacing - Type C - \$404.00 each

This work shall consist of the resetting or grade adjustment of an existing utility casting by means of a one-piece prefabricated adjustment riser for a vertical height of greater than 0 inches and less than 3 inches in accordance with Section 606 (Grade Adjustment of Existing Miscellaneous Structures) and within reasonable close conformity to the lines and grades shown on the drawing or established by the engineer. The casting diameter shall be determined by measuring the diameter of the lid.

The resetting or adjustment shall be completed in a one-step operation with no temporary work anticipated. Any other change to casting shall be the responsibility of the contractor and shall be repaired or replaced at his expense.

This work will be paid for at the respective predetermined contract unit price each, which price will be indicated in the proposal by the Department, complete in place as specified.

Type D - One piece fabricated adjustable riser with one turnbuckle for adjustments greater than 3 inches.

ITEM 9999-9965 0 to 15 inch diameter Utility Casting

Adjustment for Resurfacing - Type D - \$279.00 each

9999-9966 16 to 54 inch diameter Utility Casting

Adjustment for Resurfacing - Type D- \$465.00 each

This work shall consist of the resetting or grade adjustment of an existing utility casting by means of a one-piece prefabricated adjustment riser for a vertical height of greater than 3 inches and less than 4 inches in accordance with Section 606 (Grade Adjustment of Existing Miscellaneous Structures) and within reasonable close conformity to the lines and grades shown on the drawing or established by the engineer. The casting diameter shall be determined by measuring the diameter of the lid.

The resetting or adjustment shall be completed in a one-step operation with no temporary work anticipated. Any other change to casting shall be the responsibility of the contractor and shall be repaired or replaced at his expense.

This work will be paid for at the respective predetermined contract unit price each, which price will be indicated in the proposal by the Department, complete in place as specified.

Item 9999-9967 201 Box Adjustment for Resurfacing - \$495.00 each

This work shall consist of the resetting or grade adjustment of an existing utility 201 Box casting, in accordance with Section 606 (Grade Adjustment of Existing Miscellaneous Structures) and within reasonably close conformity to the lines and grades shown on the drawings or established by the engineer. The base course replaced shall be of the same type removed, either concrete or flexible.

The adjustment (resetting) will be completed in a two-step operation when a casting reset at the proposed final grade will protrude more than 3 inches and may cause damage to vehicular traffic or be a safety hazard prior to paving. The first adjustment will be to a temporary grade that will permit traffic to move safely over the casting. The second adjustment will be to the final grade for paving. The contractor is permitted to use steel plates in lieu of the temporary (first) adjustment for a period not exceeding five calendar days. The contractor shall be required to provide a means of access to each utility facility so that one man may enter the facility within 30 minutes without special equipment or tools. The facility location and name of utility shall be temporarily marked for emergency use. Any other change to the castings shall be the responsibility of the contractor and shall be repaired or replaced at his expense.

The existing casting will be carefully removed and cleaned, the casting reset to the proper elevation in accordance with the utility specifications if attached or with PennDOT Publication 408, Section 606 (Grade Adjustment of Existing Miscellaneous Structures). Inserts, extensions or risers are not acceptable under this item. Castings requiring replacement will be provided for and delivered to the site by the Utility Company for installation by the contractor.

This work will be paid for at the respective predetermined contract unit price each, which price will be indicated in the proposal by the Department complete in place as specified.

Purchase of Sewer and Water Castings

Where it is determined prior to the Notice to Proceed Date, that the sewer and water castings are needed for adjustments due to type of resurfacing alternate selected, the contractor will be ordered to purchase the castings and will be reimbursed the amount of the invoice price plus ten percent for handling.

Where it is determined during construction, that the sewer and water castings are needed for adjustments, and upon concurrence by the Utility Company, the contractor will be ordered to purchase the castings in accordance with PennDOT Publication 408, Section 104.03 (Extra work).

The existing casting shall be carefully cleaned, the casting adjusted to the proper elevation by placing the riser over the cover for initial fit and 100% contact, then tighten the turnbuckle with wrench for swedge fit in accordance with (the Utility Company's specifications if attached) Section 606. Turnbuckle will be installed so as not to protrude into manhole crawl area.

Only one (1) riser will be applied to each casting adjustment and will not be applied to existing risers.

Units with two-piece risers, vertical elevating bolts, or with more than one (1) turnbuckle will not be accepted.

This item will not include any adjustment to the conical section of a manhole. That work, if required, will be paid under Item 9999-9962 Utility Manhole Neck Rebuilding.

This work will be measured by the unit each, after completion and acceptance by the Utility and the Department.

This work will be paid for at the respective predetermined contract unit price each, which price will be indicated in the proposal by the Department, complete in place as specified.

Contract Provisions – Right to Know Law

- a. The Pennsylvania Right-to-Know Law, 65 P.S. §§ 67.101-3104, (“RTKL”) applies to this Contract. For the purpose of these provisions, the term “the Commonwealth” shall refer to the contracting Commonwealth agency.
- b. If the Commonwealth needs the Contractor’s assistance in any matter arising out of the RTKL related to this Contract, it shall notify the Contractor using the legal contact information provided in this Contract. The Contractor, at any time, may designate a different contact for such purpose upon reasonable prior written notice to the Commonwealth.
- c. Upon written notification from the Commonwealth that it requires the Contractor’s assistance in responding to a request under the RTKL for information related to this Contract that may be in the Contractor’s possession, constituting, or alleged to constitute, a public record in accordance with the RTKL (“Requested Information”), the Contractor shall:
 1. Provide the Commonwealth, within ten (10) calendar days after receipt of written notification, access to, and copies of, any document or information in the Contractor’s possession arising out of this Contract that the Commonwealth reasonably believes is Requested Information and may be a public record under the RTKL; and
 2. Provide such other assistance as the Commonwealth may reasonably request, in order to comply with the RTKL with respect to this Contract.
- d. If the Contractor considers the Requested Information to include a request for a Trade Secret or Confidential Proprietary Information, as those terms are defined by the RTKL, or other information that the Contractor considers exempt from production under the RTKL, the Contractor must notify the Commonwealth and provide, within seven (7) calendar days of receiving the written notification, a written statement signed by a representative of the Contractor explaining why the requested material is exempt from public disclosure under the RTKL.
- e. The Commonwealth will rely upon the written statement from the Contractor in denying a RTKL request for the Requested Information unless the Commonwealth determines that the Requested Information is clearly not protected from disclosure under the RTKL. Should the Commonwealth determine that the Requested Information is clearly not exempt from disclosure, the Contractor shall provide the Requested Information within five (5) business days of receipt of written notification of the Commonwealth’s determination.
- f. If the Contractor fails to provide the Requested Information within the time period required by these provisions, the Contractor shall indemnify and hold the Commonwealth harmless for any damages, penalties, costs, detriment or harm that the Commonwealth may incur as a result of the Contractor’s failure, including any statutory damages assessed against the Commonwealth.

g. The Commonwealth will reimburse the Contractor for any costs associated with complying with these provisions only to the extent allowed under the fee schedule established by the Office of Open Records or as otherwise provided by the RTKL if the fee schedule is inapplicable.

h. The Contractor may file a legal challenge to any Commonwealth decision to release a record to the public with the Office of Open Records, or in the Pennsylvania Courts, however, the Contractor shall indemnify the Commonwealth for any legal expenses incurred by the Commonwealth as a result of such a challenge and shall hold the Commonwealth harmless for any damages, penalties, costs, detriment or harm that the Commonwealth may incur as a result of the Contractor's failure, including any statutory damages assessed against the Commonwealth, regardless of the outcome of such legal challenge. As between the parties, the Contractor agrees to waive all rights or remedies that may be available to it as a result of the Commonwealth's disclosure of Requested Information pursuant to the RTKL.

i. The Contractor's duties relating to the RTKL are continuing duties that survive the expiration of this Contract and shall continue as long as the Contractor has Requested Information in its possession.

Recognition of Kim Crews
Englehard, Garrett Hill
July 4th
Parade/Celebration
Committee

Recognition of Former
Commissioner James C.
Higgins

Appointments to Various Boards and Commissions

Presentation to the Board
of Commissioners of the
Delaware County
William H. Bates Award
for Radnor
Township/Clem Macrone
Park

Public Participation

RESOLUTION NO. 2018-94

A RESOLUTION OF THE BOARD OF COMMISSIONERS OF RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA, ESTABLISHING A RADNOR TOWNSHIP YOUTH AID PANEL CONSISTING OF COMMUNITY VOLUNTEERS TO ASSIST JUVENILES WHO ARE FIRST TIME OFFENDERS

WHEREAS, local Youth Aid Panels (YAP), represents an innovative approach by law enforcement towards juvenile offenders; and

WHEREAS, the YAP programs provide a second chance for juveniles who have committed summary offences; and

WHEREAS, the YAP encourages community involvement and awareness of juveniles who have entered the criminal justice system and are in need of rehabilitation.

NOW, THEREFORE, it is hereby *RESOLVED* that the Radnor Township Board of Commissioners does hereby establish a Youth Aid Panel consisting of residents of Radnor Township who have experience in the criminal justice system or an interest in problem solving in the community.

SO RESOLVED, at a duly convened meeting of the Board of Commissioners conducted on this 10th day of September, 2018.

RADNOR TOWNSHIP

By: _____
Name: Lisa Borowski
Title: President

ATTEST: _____
Robert A. Zienkowski, Secretary

INTEROFFICE MEMORANDUM

TO: ROBERT ZIENKOWSKI, TOWNSHIP MANAGER
FROM: KEVIN KOCHANSKI, DIRECTOR
SUBJECT: UCC & 3RD PARTY SERVICES
DATE: 8/7/2018



As requested, the Community Development Department solicited proposals for work being contract out by the Department. Currently, Keystone Municipal Services assists the department in UCC Building Inspections and Plan reviews, Rental Housing Inspections, and some Property Maintenance Inspections. The RFP, which was sent out and posted on the PennBid Site on June 11, 2018, had a response date of June 28, 2018. The Scope of Services in the RFP included those currently provided by Keystone Municipal Services with the addition of Fire Safety Inspections.

Two (2) proposals were received in response to the RFP. Keystone Municipal Services and Barry Isett & Associates. Both firms are fully qualified in meeting the scope of the RFP and indicated that if awarded the contract could provide stabilized staffing either immediately or within a reasonable time frame (3-6 months).

While both firms have indicated that the submitted rates are subject to modification upon negotiation, below are the rates included with the proposals:

Keystone Municipal Services:

	2018	2019	2020
UCC Inspections	\$68	\$72	\$74
UCC Plan Review	\$68	\$72	\$74
Fire Safety Inspections	\$72	\$74	\$78
Rental Housing Inspections	\$68	\$72	\$74
Property Maintenance Inspections	\$68	\$72	\$74

Barry Isett & Associates:

UCC Inspections	\$105		
UCC Plan Review	\$140		
Fire Safety Inspections	\$93		
Rental Housing Inspections	\$93		
Property Maintenance Inspections	\$93		

After careful review and consideration of the responding firms' qualifications, I have no doubt that either firm would be able to provide excellent service to the residents and businesses of Radnor Township. However, the Community Development Staff would respectfully request that contract negotiations be entered into with Keystone Municipal Services for the following reasons:

1. Keystone Municipal Services has been providing Radnor Township with a high level of service since July 2009. This has been led for most of this time by Mr. Dan Stanton; who is proposed to remain on the project team;
2. Keystone Municipal Services Staff hold a high degree of institutional knowledge of the various on-going projects. This provides consistency for our Residents, Businesses, and Contractors;
3. Keystone Municipal Services' rates, without any negotiation, are significantly lower;
4. Keystone Municipal Services' proposal includes keeping the majority of the plan reviews within the Township Building (versus taking to their corporate office). Staff felt this was important to have the plan reviewer available for impromptu meetings with staff, design professionals, and contractors.

ORDINANCE 2018-11

AN ORDINANCE OF RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA, AMENDING CHAPTER 235, ARTICLE III, SEWER SERVICE CHARGES AND CHAPTER 246 STORMWATER MANAGEMENT FEES, BY REVISING PAYMENT AND LATE PENALTIES

WHEREAS, Chapter 235, Article III in the Radnor Township Revised Code provides the service charges for the Township's Sanitary Sewer System; and

WHEREAS, the Township currently bills and collects the Sewer Rent in April (April 1 – April 30), annually; and

WHEREAS, the Board of Commissioners adopted Ordinance 2013-15 on October 14, 2013 establishing a Stormwater Management Fee under Chapter 246 of the Radnor Township Code; and

WHEREAS, the Township currently bills and collects the Stormwater Management Fee in January (January 1 – January 31), annually; and

WHEREAS, the Township's software system in 2013 would not allow the Township to add a fee under the same account, which would have allowed for a single combined bill that included both the Sewer Rent and the Stormwater Management Fee, resulting in the Township having to issue two separate bills; and

WHEREAS, the Township has implemented a new financial software system that will allow the Sewer Rent and Stormwater Management Fee to be combined into one account, which will allow the Township to bill and collect these two items on one invoice; and

WHEREAS, to assist Residents and Businesses with the adjustment, that the combined billing cycle be increased from 30 days to 60 days, from May 1 to June 30, annually; and

WHEREAS, the penalty charges for the Sanitary Sewer Rent will be reduced to mirror the rates adopted under the Stormwater Management Fee, from 1.0% per month to 0.50% per month on all unpaid balances.

The Board of Commissioners of the Township of Radnor does hereby ENACT and ORDAIN the following amendments to Sections 235-12 and 246-7 as follows:

Section 1. Chapter 235-12, Payment; late penalties, is hereby amended to extend the face amount payable date and reduced interest charge as follows:

“The face amount of all service charges shall be payable on or before ~~April 30~~ **May 31** of each year, with a penalty of 10% on ~~May 1 June 1~~. On the first day of each subsequent month in which the account remains unpaid, ~~an interest charge shall be added to the account~~ **an interest charge of 0.5% shall be added to the account**. All unpaid sewer charges shall be a lien against the property, and the Township Solicitor shall file such liens on or after January 31 of the following year. Any collection and filing fees shall be borne by the user.”

Section 2. Chapter 246-7(A) Billing and collection of user fees, is hereby amended to extend the face amount payable time frame and due date as follows:

“A. The user fees fixed and established by this chapter shall be effective as to all properties that use, are served, or are benefited by the Radnor stormwater management system existing as of the effective date of this chapter, and shall be effective to all other properties thereof that use, are served or benefitted by the stormwater management system subsequent to the effective date of this chapter. User fees imposed by this chapter shall be assessed and billed by Radnor on an annual basis. Such assessments shall be payable at their face amount during the ~~30~~ **60** days next following the date on which said assessment bill was mailed. The annual billing date shall be on or about ~~January 1~~ **April 1**. The user fees assessed and collection will not be subject to proration or refund by Radnor in the event a property is sold; provided, however, that this sentence shall not bind a buyer and seller from making their own proration of any user fees assessed hereunder.”

Section 3. Chapter 246-8, Late payment penalty; interest paid on unpaid user fees, is hereby amended to extend the date on which the penalty will be applied to the unpaid balance as follows:

The face amount of all user fee charges shall be payable within ~~30~~ **60** days of annual bill distribution, with a penalty of 10% assessed on the ~~31st~~ **61st** day. On the first day of each subsequent month in which the account remains unpaid, an interest charge of 0.5% per month shall be added to the account. All unpaid user charges shall be a lien against the property, and the Township Solicitor shall file such lien on or after ~~December~~ **January** 31 of the **following** year in which the account remains unpaid. Any collection, legal and filing fees, as set forth in Chapter 162 of the Radnor Code of Ordinances, **[1]** shall be borne by the user.

Section 4. Repealer. All ordinances or parts of ordinances which are inconsistent herewith are hereby repealed.

Section 5. Severability. If any section, paragraph, subsection, clause or provision of this Ordinance shall be declared invalid or unconstitutional by a court of competent jurisdiction, such decision shall not affect the validity of this Ordinance as a whole or any part thereof other than that portion specifically declared invalid.

Section 6. Effective Date. This Ordinance shall become effective in accordance with the Home Rule Charter of Radnor Township.

ENACTED and **ORDAINED** this 8 day of October, 2018.

RADNOR TOWNSHIP

By: _____
Name: Lisa Borowski
Title: President

ATTEST: _____
Robert A. Zienkowski, Secretary

Radnor Township



PROPOSED LEGISLATION

DATE: September 18, 2018

TO: Board of Commissioners

FROM: William M. White, Finance Director

LEGISLATION: Ordinance amending the necessary sections of the Code to combine the Sewer Rent and Stormwater Management Fee into one, consolidated invoice and extending the payment period to 60 days and reducing the Sewer Rent interest charge to 0.50% [to mirror the Stormwater Management Fee interest]

PURPOSE AND EXPLANATION:

Customer Benefits:

- More time to pay: Currently, customers have 30 days to pay each of the bills. In January, residents are required to pay the stormwater fee, then in April, required to pay the Sewer Rent. The Administration's recommendation is to lengthen the billing period to 60 days. The combined bill would be mailed April 1 and be due May 31, annually.
- Savings: For those customers who fall behind, or are late on their payment, the interest on delinquencies would be less [as a result of lowering the interest rate from 1.0% per month, to 0.5% per month]. The Board, in adopting the stormwater ordinance, has already established that it is comfortable with the lower interest rate, so this recommendation is making our code consistent.
- Less confusion: On a consistent basis, we receive calls from customers who confuse the two bills. Many pay one and then ignore the other thinking that they already paid it. Combining them into one bill will simplify the program for all customers.
- "New Year" invoice complaint: Each year, we receive negative feedback on the timing of the stormwater fee; being that it hits their mailbox within the first couple days of January, immediately following the Holiday season. Admittedly, this isn't a major issue, but the recommendation resolves those who are frustrated with the timing.
- Citizen Self-Service: The new software will allow customers to create an account and manage / pay their utility bills online. In keeping with the theme of simplifying the program, combining the bills will simplify their online account by only having them manage one utility bill instead of two.

Efficiency Improvements:

- Processing Efficiencies: As discussed when the software was being considered, the Finance Department will now only process one set of invoices, instead of two. This will allow the department to dedicate more time to other priorities in January which include year-end reporting, audit compliance, accrual entries, and others. Currently, these items require overtime and are delayed by weeks / months.

FISCAL IMPACT: The fiscal impact will be minimal, only impacting the Township in the following ways:

- Lower billing costs (\$10,000): If adopted, we will be eliminating the printing, mailing, handling, etc. of approximately 8,000 invoices.
- Lower Interest Revenue in the Sewer Fund: If adopted, the interest revenue would be reduced by half which would result in a couple thousand dollars per year in the Sewer Fund.

RECOMMENDED ACTION: The Administration respectfully recommends that this Ordinance be introduced at the September 24 meeting, and adopted at the October 8 after the proper advertisement.

INTEROFFICE MEMORANDUM

TO: BOARD OF COMMISSIONERS
FROM: WILLIAM WHITE, ASSISTANT TOWNSHIP MANAGER & FINANCE DIRECTOR
SUBJECT: **COMBINING SEWER AND STORMWATER UTILITY BILLS**
DATE: JULY 30, 2018
CC: ROBERT ZIENKOWSKI, TOWNSHIP MANAGER
AMY LACEY, REVENUE COORDINATOR



Finance
Department

The purpose of this memorandum is to provide the Board of Commissioners with the details behind a recommendation from the Administration to combine the sewer rent and stormwater utility bills. We feel strongly that combining these bills makes sense for our Residents, will save the Township some money, and make the Finance Department more efficient.

HISTORY

The Township has been billing and collecting the annual sewer rent since mid-1970's and has been billing and collecting the stormwater fee since January 2014. When the decision was made to enact the stormwater fee late in 2013, the original plan was to outsource the billing and collection. Instead, to save money, the Township Revenue Coordinator, Amy Lacey, built the billing and collection program concluding that keeping it in-house achieved that goal. However, due to software limitations, we had to keep the stormwater fee separate from the sewer rent, which forced us to squeeze the billing and collection period in January. The ideal scenario would have been to have one bill with both charges on it.

RECOMMENDATION

The Administration is recommending that we combine the two separate utility bills, and that the billing period be April 1 through May 31, annually. In doing so, the January billing would be eliminated and the length of the billing period is being extended from 30 days to 60 days. Additionally, we are recommending that we lower the sewer rent interest charged to delinquent accounts from 1.0% per month to 0.5%, to mirror the stormwater ordinance.

REASONING

First, the average residential billing amount for the utilities are \$418 for Sewer Rent, and \$58 for Stormwater Management. Therefore, a combined residential bill, on average, would be \$476. Second, we are implementing the new ERP software which has the capability to combine these two account structures into one. The software go-live is scheduled for later this year, with the first billing cycle to occur in 2019.

Customer Benefits:

- **More time to pay:** Currently, customers have 30 days to pay each of the bills. In January, residents are required to pay the stormwater fee, then in April, required to pay the Sewer Rent. The Administration's recommendation is to lengthen the billing period to 60 days. The combined bill would be mailed April 1 and be due May 31, annually.
- **Savings:** For those customers who fall behind, or are late on their payment, the interest on delinquencies would be less [as a result of lowering the interest rate from 1.0% per month, to 0.5% per month]. The Board, in adopting the stormwater ordinance, has already established that it is comfortable with the lower interest rate, so this recommendation is making our code consistent.

- Less confusion: On a consistent basis, we receive calls from customers who confuse the two bills. Many pay one and then ignore the other thinking that they already paid it. Combining them into one bill will simplify the program for all customers.
- “New Year” invoice complaint: Each year, we receive negative feedback on the timing of the stormwater fee; being that it hits their mailbox within the first couple days of January, immediately following the Holiday season. Admittedly, this isn’t a major issue, but the recommendation resolves those who are frustrated with the timing.
- Citizen Self-Service: The new software will allow customers to create an account and manage / pay their utility bills online. In keeping with the theme of simplifying the program, combining the bills will simplify their online account by only having them manage one utility bill instead of two.

Efficiency Improvements:

- More Cost Effective: Currently, the Township is paying for the mailing of two separate utility bills at roughly \$10,000 per mailing [postage, envelopes, printing, etc]. Combining the two bills would eliminate \$10,000 in expenses.
- Processing Efficiencies: As discussed when the software was being considered, the Finance Department will now only process one set of invoices, instead of two. This will allow the department to dedicate more time to other priorities in January which include year-end reporting, audit compliance, accrual entries, and others. Currently, these items require overtime and are delayed by weeks / months.

CODE

The billing and collection laws are defined as follows: Sewer Rent is in Article III of Chapter §235, and Stormwater is in Chapter §246. If combined, we would introduce an Ordinance that amends these two sections of the Code to reflect the new program; effective with the 2019 billing and collection period.

NEXT STEPS

In order to properly complete the software implementation in August / September, we would like direction from the Board at the August 13 meeting. If directed to proceed in August, we would prepare an Ordinance that would amend the impacted sections of the Code to reflect these recommended changes. Accordingly, the Ordinance would be introduced at the September 10 meeting and adopted at the September 24 meeting.

**RESOLUTION 2018-95
RADNOR TOWNSHIP**

**A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE COUNTY,
PENNSYLVANIA AUTHORIZING THE TOWNSHIP MANAGER TO ENTER
INTO AN AGREEMENT WITH PFM TO SERVE AS FINANCIAL ADVISOR TO
PROVIDE SERVICES RELATING TO A SANITARY SEWER FINANCING
TRANSACTION**

WHEREAS, The Township experienced unplanned, significant sanitary sewer capital costs as a result of several sewer breaks in 2017 and again in 2018; and

WHEREAS, the Sanitary Sewer Fund (#002) did not have the cash resources needed to pay for the costs of the sewer replacements in 2017 and again in 2018; and

WHEREAS, The Board of Commissioners included in the 2018 Board Adopted Budget a plan to issue financing to reimburse the General Fund for amounts transferred in the amount of approximately \$3,500,000; and

WHEREAS, the Township wishes to engage PFM as Financial Advisor to assist in evaluating and determining the most cost-effective financing method to achieve the budgetary goals of the transaction while maintaining financial flexibility; and

WHEREAS, the General Fund (#001) will fall short of Ordained fund balance policies without completing the financing transaction in 2018.

NOW, THEREFORE, it is hereby **RESOLVED** that the Board of Commissioners of Radnor Township hereby authorizes the Township Manager to execute an agreement with PFM for services related to financing transactions (includes short-term financings, notes, loans, letters of credit, line of credit and/or bonds) at a cost not-to-exceed \$12,000.

SO RESOLVED, at a duly convened meeting of the Board of Commissioners of Radnor Township conducted on this 24th day of September, A.D., 2018.

RADNOR TOWNSHIP

By: _____
Name: Lisa Borowski
Title: President

ATTEST: _____
Robert A. Zienkowski
Township Manager / Secretary

Radnor Township



PROPOSED LEGISLATION

DATE: September 18, 2018

TO: Board of Commissioners

FROM: William M. White, Finance Director

LEGISLATION: A Resolution engaging PFM as financial advisor to evaluate and complete a financing transaction to reimburse the General Fund for unplanned capital expenses realized in 2017 and 2018.

PURPOSE AND EXPLANATION:

- Why do we need the transaction: The 2018 Budget included a \$3,500,000 line-item to account for this anticipated borrowing. The purpose is to borrow an amount (of roughly \$3.5M, or higher due to more unplanned capital costs in 2018) to pay for various emergency sanitary sewer replacement projects that have occurred in 2017 and 2018. These emergency projects were originally funded by fund balances in the General Fund. This borrowing will allow the Sanitary Sewer Fund to reimburse the General Fund for these projects.

Failure to complete this transaction will result in General Fund balances to fall short of the Township's fund balance requirements. Moreover, these projects were sanitary sewer projects and should be funded by the Sewer Rent, which is paid by all properties on the system for these exact situations.

- Why PFM: PFM has served as financial advisor to the Township in prior transactions and has always done a terrific job of independently providing the Township with all options that will achieve the desired financial outcomes. Their expertise spans all the financial instruments available to the Township.

IMPLEMENTATION SCHEDULE: The administration will work with PFM to evaluate financing alternatives that provide the Township with the best outcomes. We will come back to the Board for approval in October with an anticipated closing date in late November / early December.

FISCAL IMPACT: The cost of the engagement will not exceed \$12,000. These costs will be capitalized into the borrowing and paid for over the life of the financing instrument.

RECOMMENDED ACTION: The Administration strongly recommends that we proceed with engaging PFM to assist in completing this transaction in the time frame identified above.

A. Approval of Special
Counsel for Radnor
Memorial Library
Litigation

RESOLUTION NO. 2018-99
A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE COUNTY,
PENNSYLVANIA, AUTHORIZING THE TOWNSHIP MANAGER TO EXECUTE
AGREEMENTS WITH THE PENNSYLVANIA DEPARTMENT OF
TRANSPORTATION

WHEREAS, The Pennsylvania Department of Transportation (Penn DOT) is proposing to construct two new culverts on Darby Paoli Road; the first is over Little Darby Creek, near the intersection of Brook and Darby Paoli Road, the second is over Wigwam Run, by skunk Hollow Park.

WHEREAS, Penn DOT requires the following land from Radnor Township to construct the bridges as designed: R.O.W., slope easements, temporary construction easements, and a drainage easement.

WHEREAS, Penn DOT has offered the following compensation for said land:

Aggregate Summary of Penn DOT Offers				
Parcel	Area SF/Acres	Type of Acquisition	Compensation	
2	585 /0.013	R.O.W.	\$2,925.00	Offer for R.O.W
3	1,481 /0.034	R.O.W.	\$17,000.00	Offer for R.O.W
	2,308 /0.053	Temporary Construction Easement		
	3,093 /0.071	Slope Easement		
4	7,492 /0.172	R.O.W.	\$53,400.00	Offer to Purchase and Summary of Just Compensation
	4,835 /0.111	Slope Easement		
	3,746 /0.086	Temporary Construction Easement		
	697 /0.016	Drainage Easement		
TOTALS	24,237 /0.556		\$73,325.00	

NOW, THEREFORE, be it **RESOLVED** by the Board of Commissioners of Radnor Township does hereby award Authorize the Township Manager to Execute the Attached Pennsylvania Department of Transportation Agreements, as Outlined in the Attached Memorandum and Plan Set, for the Total Compensation of \$73,325.

SO RESOLVED this 24th day of September, A.D., 2018

RADNOR TOWNSHIP

By: _____
 Name: Lisa Borowski
 Title: President

ATTEST: _____

Robert A. Zienkowski
Manager/Secretary

Radnor Township

PROPOSED LEGISLATION

DATE: September

TO: Radnor Township Board of Commissioners

FROM: Stephen F. Norcini, P.E., Township Engineer *SN*

CC: Robert A. Zienkowski, Township Manager
William M. White, Assistant Township Manager & Finance Director

LEGISLATION: **Resolution #2018-Authorizing the Township Manager to Execute Agreements with the Pennsylvania Department of Transportation**

LEGISLATIVE HISTORY: This item has not been before the Board of Commissioners.

PURPOSE AND EXPLANATION: The Pennsylvania Department of Transportation (Penn DOT) is proposing to construct two new culverts on Darby Paoli Road; the first is over Little Darby Creek, near the intersection of Brook and Darby Paoli Road, the second is over Wigwam Run, by skunk Hollow Park. The bridge by Brook Road is adjacent to the Willows Park entrance. This bridge, currently too narrow, will be constructed at a wider width to safely accommodate two lane traffic.

Penn DOT requires the following land from Radnor Township to construct the bridges as designed: R.O.W., slope easements, temporary construction easements, and a drainage easement. The Purpose of this legislation is to authorize the Township Manager to execute the required agreements with Penn DOT, for the compensation offered by Penn DOT. A summary of the proposed land requirements and compensation is as follows:

Aggregate Summary of Penn DOT Offers				
Parcel	Area SF/Acres	Type of Acquisition	Compensation	
2	585 /0.013	R.O.W.	\$2,925.00	Offer for R.O.W
3	1,481 /0.034	R.O.W.	\$17,000.00	Offer for R.O.W
	2,308 /0.053	Temporary Construction Easement		
	3,093 /0.071	Slope Easement		
4	7,492 /0.172	R.O.W.	\$53,400.00	Offer to Purchase and Summary of Just Compensation
	4,835 /0.111	Slope Easement		
	3,746 /0.086	Temporary Construction Easement		
	697 /0.016	Drainage Easement		
TOTALS	24,237 /0.556		\$73,325.00	

Attached to this memorandum are the following documents:

1. Resolution # 2018-99
2. Penn DOT Parcel 2 Agreement of Sale
3. Penn DOT Parcel 2 Offer for R.O.W.
4. Penn DOT Parcel 3 Agreement of Sale
5. Penn DOT Parcel 3 Offer to Purchase and Summary of Just Compensation
6. Penn DOT Parcel 4 Offer to Purchase and Summary of Just Compensation
7. Penn DOT Parcel 4 Temporary Easement for Construction Purposes
8. Penn DOT Plan Set

Mr. George Gumas of Penn DOT will be present at the Commissioners meeting to answer any specific questions you may have.

IMPLEMENTATION SCHEDULE: Pending Board of Commissioners approval, the Township Manager will execute the agreements (attached) in short order.

FISCAL IMPACT: The Township will receive \$73,325 in revenue.

RECOMMENDED ACTION: *Staff respectfully recommends the Commissioners authorize the Township Manager to execute the attached Penn DOT agreements.*

RW-371A (7/07)

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION



ROW OFFICE PROJ. NO.	060343
COUNTY	Delaware
S.R. - SECTION	1015-RAD
MUNICIPALITY	Radnor Township
PARCEL NO.	2
CLAIM NO.	2300907000
CLAIMANT	Radnor Township

OFFER FOR RIGHT-OF-WAY

Date: February 23, 2018

Radnor Township
301 Iven Avenue
Wayne, PA 19087-5297
Attn: Mr. Zienkowski

RE: Property Location: Various Parcels along Darby-Paoli Road

Dear Mr. Zienkowski:

In earlier correspondence, you received a plan showing the right-of-way required from your property for this highway project. The determination of the value of that property has been completed. We are enclosing an offer letter along with a summary of the compensation for your review.

Within the next few weeks, your Right-of-Way Representative will telephone you to discuss the offer and your claim. If you desire a personal visit for additional discussion, an appointment can be arranged at that time. Of course, you may telephone the Right-of-Way Representative, at the number below, at any time to discuss your claim or to request a personal visit.

Thank you for your continued cooperation.

Sincerely,

A handwritten signature in black ink, appearing to read "Roger Joseph", is written over a faint, larger signature.

Roger Joseph
District Right-of-Way Administrator
Engineering District 6-0

Your Right-of-Way Representative is: Henry A. Litwin
Telephone No.: 610.205.6554

Enclosures:

- Offer Letter
- Summary of Just Compensation
- Deed & Agreement of Sale
- Settlement Statement
- Plot Plan, Form W-9
- Return Envelope

2

ROW OFFICE PROJ. NO.	060343
COUNTY	Delaware
S.R. - SECTION	1015 - RAD R/W
MUNICIPALITY	Radnor Township
PARCEL NO.	2
CLAIM NO.	2300907000
CLAIMANT	Radnor Township

**OFFER TO PURCHASE
 AND SUMMARY
 OF JUST COMPENSATION**

Date: February 8, 2018

301 Iven Avenue
 Wayne, PA 19087
 Attn: Robert Zienkowski

Dear Claimant:

We are pleased to offer you the sum of \$2,925.00 for the right-of-way required from your property for the transportation improvement and for the effects on your remaining property, if any. This offer is intended to provide just compensation for all interests in your property, including tenants, if any.

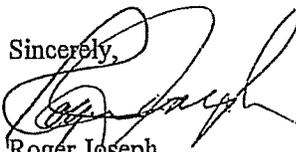
The areas required are as follows:

Required Right of Way: 585 Square Feet (.013 Acre)

The amount offered is summarized as follows:

1. Direct Damages	\$2,925.00
2. Temporary Easement	<u>\$0.00</u>
3. Cost of Adjustment	<u>\$0.00</u>
TOTAL DAMAGES OFFERED (items 1, 2 and 3 above)	<u>\$2,925.00</u>

We hope that you will indicate your acceptance of our offer to the Right-of-Way Representative who delivers this letter so that we can process your payment as soon as possible. If you are undecided about accepting the offer, the Right-of-Way Representative will be glad to visit you again for further discussion of your claim.

Sincerely,

 Roger Joseph
 District Right-of-Way Administrator
 Engineering District 6-0

Attachment: Plan of Property to be Acquired

Your Right-of-Way Representative is: Henry Litwin/dvm
 Telephone Number: 610-205-6554

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	DELAWARE	1015	RAD R/A	13 OF 15
RAZORHURD TOWNSHIP		1016	RAD R/A	
RAZORHURD TOWNSHIP		1017	RAD R/A	
RAZORHURD TOWNSHIP		1018	RAD R/A	
RAZORHURD TOWNSHIP		1019	RAD R/A	
RAZORHURD TOWNSHIP		1020	RAD R/A	
RAZORHURD TOWNSHIP		1021	RAD R/A	
RAZORHURD TOWNSHIP		1022	RAD R/A	
RAZORHURD TOWNSHIP		1023	RAD R/A	
RAZORHURD TOWNSHIP		1024	RAD R/A	
RAZORHURD TOWNSHIP		1025	RAD R/A	
RAZORHURD TOWNSHIP		1026	RAD R/A	
RAZORHURD TOWNSHIP		1027	RAD R/A	
RAZORHURD TOWNSHIP		1028	RAD R/A	
RAZORHURD TOWNSHIP		1029	RAD R/A	
RAZORHURD TOWNSHIP		1030	RAD R/A	
RAZORHURD TOWNSHIP		1031	RAD R/A	
RAZORHURD TOWNSHIP		1032	RAD R/A	
RAZORHURD TOWNSHIP		1033	RAD R/A	
RAZORHURD TOWNSHIP		1034	RAD R/A	
RAZORHURD TOWNSHIP		1035	RAD R/A	
RAZORHURD TOWNSHIP		1036	RAD R/A	
RAZORHURD TOWNSHIP		1037	RAD R/A	
RAZORHURD TOWNSHIP		1038	RAD R/A	
RAZORHURD TOWNSHIP		1039	RAD R/A	
RAZORHURD TOWNSHIP		1040	RAD R/A	
RAZORHURD TOWNSHIP		1041	RAD R/A	
RAZORHURD TOWNSHIP		1042	RAD R/A	
RAZORHURD TOWNSHIP		1043	RAD R/A	
RAZORHURD TOWNSHIP		1044	RAD R/A	
RAZORHURD TOWNSHIP		1045	RAD R/A	
RAZORHURD TOWNSHIP		1046	RAD R/A	
RAZORHURD TOWNSHIP		1047	RAD R/A	
RAZORHURD TOWNSHIP		1048	RAD R/A	
RAZORHURD TOWNSHIP		1049	RAD R/A	
RAZORHURD TOWNSHIP		1050	RAD R/A	

RIGHT-OF-WAY CLAIM INFORMATION
 COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION
 STATE RTE. 1015 SEC. NO. RAD R/A 2 RADROR TOWNSHIP DELAWARE COUNTY
 PARCEL NO. 2 SHEET NO. 6 & 7 CLAIM IN THE TOWNSHIP OF RADROR, A BODY CORPORATE AND POLITICAL ORGANIZATION, COUNTY OF DELAWARE, STATE OF PENNSYLVANIA, PARTNERSHIP
 PROPERTY OWNER(S) M. Y. MILLON AND HERBERT S. RILAND, EXECUTORS OF THE ESTATE OF CHARLOTTE DORRANCE WRIGHT

TRACT	DEED BOOK	ACRES	REQUIRED AREA	SF
	0153	0.285 AC	0.285 AC	585
	0154	0.285 AC	0.285 AC	585
	0155	0.285 AC	0.285 AC	585
	0156	0.285 AC	0.285 AC	585
	0157	0.285 AC	0.285 AC	585
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	0162	0.285 AC	0.285 AC	585
	0163	0.285 AC	0.285 AC	585
	0164	0.285 AC	0.285 AC	585
	0165	0.285 AC	0.285 AC	585
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	0167	0.285 AC	0.285 AC	585
	0168	0.285 AC	0.285 AC	585
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	0193	0.285 AC	0.285 AC	585
	0194	0.285 AC	0.285 AC	585
	0195	0.285 AC	0.285 AC	585
	0196	0.285 AC	0.285 AC	585
	0197	0.285 AC	0.285 AC	585
	0198	0.285 AC	0.285 AC	585
	0199	0.285 AC	0.285 AC	585
	0200	0.285 AC	0.285 AC	585

VERIFICATION 08/20/2017
 DRAWN BY _____
 SCALE: AS SHOWN

RIGHT-OF-WAY CLAIM INFORMATION
 COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION
 STATE RTE. 1015 SEC. NO. RAD R/A 3 RADROR TOWNSHIP DELAWARE COUNTY
 PARCEL NO. 3 SHEET NO. 6 & 7 CLAIM IN THE TOWNSHIP OF RADROR, A BODY CORPORATE AND POLITICAL ORGANIZATION, COUNTY OF DELAWARE, STATE OF PENNSYLVANIA, PARTNERSHIP
 PROPERTY OWNER(S) THE TOWNSHIP OF RADROR, A BODY CORPORATE AND POLITICAL ORGANIZATION, COUNTY OF DELAWARE, STATE OF PENNSYLVANIA, PARTNERSHIP

TRACT	DEED BOOK	ACRES	REQUIRED AREA	ACRES
	0153	0.285 AC	0.285 AC	0.285
	0154	0.285 AC	0.285 AC	0.285
	0155	0.285 AC	0.285 AC	0.285
	0156	0.285 AC	0.285 AC	0.285
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	0158	0.285 AC	0.285 AC	0.285
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	0162	0.285 AC	0.285 AC	0.285
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	0164	0.285 AC	0.285 AC	0.285
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	0171	0.285 AC	0.285 AC	0.285
	0172	0.285 AC	0.285 AC	0.285
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	0174	0.285 AC	0.285 AC	0.285
	0175	0.285 AC	0.285 AC	0.285
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	0198	0.285 AC	0.285 AC	0.285
	0199	0.285 AC	0.285 AC	0.285
	0200	0.285 AC	0.285 AC	0.285

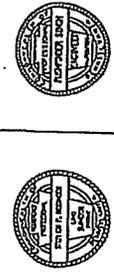
VERIFICATION 08/20/2017
 DRAWN BY _____
 SCALE: AS SHOWN

RIGHT-OF-WAY CLAIM INFORMATION
 COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION
 STATE RTE. 1015 SEC. NO. RAD R/A 4 RADROR TOWNSHIP DELAWARE COUNTY
 PARCEL NO. 4 SHEET NO. 6 & 7 CLAIM IN THE TOWNSHIP OF RADROR, A BODY CORPORATE AND POLITICAL ORGANIZATION, COUNTY OF DELAWARE, STATE OF PENNSYLVANIA, PARTNERSHIP
 PROPERTY OWNER(S) M. Y. MILLON AND HERBERT S. RILAND, EXECUTORS OF THE ESTATE OF CHARLOTTE DORRANCE WRIGHT (TRACT B)
 MILLONS DESIGNS, INC. AND P. ALEXANDER DUNFORD SUBSTITUTED TRUSTEE UNDER DEED OF TRUST OF EDWARD L. MILLON, JR. AND ROSE B. MILLER SUBSEQUENT, HIS WIFE (TRACT C)

TRACT	DEED BOOK	ACRES	REQUIRED AREA	ACRES
	0153	0.285 AC	0.285 AC	0.285
	0154	0.285 AC	0.285 AC	0.285
	0155	0.285 AC	0.285 AC	0.285
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	0166	0.285 AC	0.285 AC	0.285
	0167	0.285 AC	0.285 AC	0.285
	0168	0.285 AC	0.285 AC	0.285
	0169	0.285 AC	0.285 AC	0.285
	0170	0.285 AC	0.285 AC	0.285
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	0172	0.285 AC	0.285 AC	0.285
	0173	0.285 AC	0.285 AC	0.285
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	0181	0.285 AC	0.285 AC	0.285
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	0183	0.285 AC	0.285 AC	0.285
	0184	0.285 AC	0.285 AC	0.285
	0185	0.285 AC	0.285 AC	0.285
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	0189	0.285 AC	0.285 AC	0.285
	0190	0.285 AC	0.285 AC	0.285
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	0194	0.285 AC	0.285 AC	0.285
	0195	0.285 AC	0.285 AC	0.285
	0196	0.285 AC	0.285 AC	0.285
	0197	0.285 AC	0.285 AC	0.285
	0198	0.285 AC	0.285 AC	0.285
	0199	0.285 AC	0.285 AC	0.285
	0200	0.285 AC	0.285 AC	0.285

VERIFICATION 08/20/2017
 DRAWN BY _____
 SCALE: AS SHOWN

Property of the Township of Radnor
 Signed By _____
 Date: _____



Request for Taxpayer Identification Number and Certification

Give Form to the
 requester. Do not
 send to the IRS.

Print or type See Specific Instructions on page 2.	1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank. Radnor Township	
	2 Business name/disregarded entity name, if different from above	
	3 Check appropriate box for federal tax classification; check only one of the following seven boxes: <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ P <small>Note. For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner.</small> <input type="checkbox"/> Other (see instructions) ▶	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____ <small>(Applies to accounts maintained outside the U.S.)</small>
	5 Address (number, street, and apt. or suite no.) 301 Iven Avenue	Requester's name and address (optional)
	6 City, state, and ZIP code Wayne, PA 19087	
	7 List account number(s) here (optional)	

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Social security number	
[] [] [] - [] [] - [] [] [] [] [] []	
or	
Employer identification number	
[] [] [] [] - [] [] [] [] [] [] [] [] [] []	

Note. If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

Sign Here	Signature of U.S. person ▶	Date ▶
------------------	----------------------------	--------

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.
Future developments. Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at www.irs.gov/fw9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)

- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding? on page 2.

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting?* on page 2 for further information.

Prepared By: Henry A. Litwin
 Commonwealth of Pennsylvania
 Department of Transportation
 7000 Geerdes Boulevard
 King of Prussia, PA 19406-1525

Return To: Henry A. Litwin
 Commonwealth of Pennsylvania
 Department of Transportation
 7000 Geerdes Boulevard
 King of Prussia, PA 19406-1525

Site Location: Tax Parcel Number:

RW-317F (7/07)
 18-K-560

**COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION**



ROW OFFICE PROJ. NO.	060343
COUNTY	Delaware
S.R. - SECTION	1015-RAD
MUNICIPALITY	Radnor Township
PARCEL NO.	2
CLAIM NO.	2300907000
CLAIMANT	Radnor Township

**DEED
 (Fee Simple)**

THIS INDENTURE, made by Radnor Township owner(s) of property affected by the construction or improvement of the above mentioned State Route, their heirs, executors, administrators, successors, and/or assigns, hereinafter, whether singular or plural, called the GRANTOR, and the Commonwealth of Pennsylvania, Department of Transportation, hereinafter called the COMMONWEALTH,

WITNESSETH:

WHEREAS the COMMONWEALTH intends to record a plan in the Recorder of Deeds Office of the aforesaid County indicating its authorization to condemn property for the above highway from the aforesaid property; and

WHEREAS the parties hereto have agreed that, in lieu of condemnation, the GRANTOR will convey in fee simple and such other estate(s) as designated, if any, to the COMMONWEALTH the property or portion thereof required by the COMMONWEALTH,

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration, the GRANTOR does hereby grant and convey to the COMMONWEALTH

- In fee simple the premises described by metes and bounds in exhibit "A".
- In fee simple that portion of the aforesaid premises designated as required right-of-way or as acquired in fee simple for other purposes on the plot plan attached hereto and made a part hereof; and those areas, if any, designated as required for easement purposes as identified by the plot plan and set forth below.

BEING all or a portion of the same property conveyed or devised to the GRANTOR by DEED of Samuel M.V. Hamilton & Herbert S Riband, Jr., Executors of the Estate of Charlotte Dorrance Wright, , dated May 4, 1979 and recorded in Deed Book No. 2693, Page 0184. This conveyance contains 585 Square Feet of Right-of-Way and is identified on COMMONWEALTH plans as Parcel 2, together with the improvements, hereditaments and appurtenances thereto and the GRANTOR warrants GENERALLY the property hereby conveyed.

RESERVING, however, to the GRANTOR the right to deep mine minerals and remove gas and oil within the areas hereunder acquired from a minimum depth to be determined by the COMMONWEALTH, from mine shafts or by means of wells located off the right-of-way.

The GRANTOR does further remise, release, quitclaim and forever discharge the COMMONWEALTH or any agency or political subdivision thereof or its or their employees or representatives of and from all suits, damages, claims and demands which the GRANTOR might otherwise have been entitled to assert under the provisions of the Eminent Domain Code, 26 Pa.C.S. § 101 et seq., for or on account of this conveyance and any injury to or destruction of the aforesaid property of the GRANTOR through or by reason of the aforesaid highway construction or improvement, except damages, if any, under Section 710 (Limited Reimbursement of Appraisal, Attorney and Engineering Fees) and Section 711 (Payment on Account of Increased Mortgage Costs) of the Eminent Domain Code; provided, however, that if relocation of a residence or business or farm operation is involved, this release shall likewise not apply to damages, if any, under Section 902 (Moving Expenses) and/or Section 903 and/or 904 (Replacement Housing) of the Eminent Domain Code.

The GRANTOR does further indemnify the COMMONWEALTH against any claim made by any lessee of the aforesaid property who has not entered into a Settlement Agreement with the COMMONWEALTH.

Certificate of Residence

I hereby certify the Grantee's precise residence to be:

Commonwealth of Pennsylvania
Department of Transportation
7000 Geerdes Boulevard\
King of Prussia, PA 1906-1525

Witness my hand this _____ day of _____, _____

Agent for the Commonwealth of Pennsylvania
Department of Transportation

The GRANTOR has executed or caused to be executed these presents, intending to be legally bound thereby.

INDIVIDUALS

ENTITIES*

GRANTOR:

Radnor Township
(Name of Entity)

BY: _____
Robert Zienkowski - Township Manager

BY: _____

* Use this block for a corporation, partnership, LLC, government entity, school district, church, trust, club, association, POA, attorney-in-fact, executor, administrator or any other entity. See R/W Manual Section 3.06.

INDIVIDUAL

ENTITY

STATE OF PENNSYLVANIA
COUNTY OF _____

On this _____ day of _____, 20____, before me, _____, the undersigned officer, personally appeared _____, known to me (or satisfactorily proven) to be the person(s) whose name(s) _____ subscribed to the within instrument, and acknowledged that _____ executed the instrument for the purposes contained in it.

In witness whereof, I hereto set my hand and official seal.

[Signature]

[Title]

[Seal]

STATE OF PENNSYLVANIA
COUNTY OF _____

On this _____ day of _____, 20____, before me, _____, the undersigned officer, personally appeared _____, who acknowledged _____ self to be the _____ [title] of _____ [name of entity], and that as such _____ [title], being authorized to do so, executed the foregoing instrument for the purposes contained in it by signing on behalf of the entity as _____ [title].

In witness whereof, I hereto set my hand and official seal.

[Signature]

[Title]

[Seal]

APPROVED AS TO FORM AND LEGALITY:

For Chief Counsel

RW-317AF (7/07)
18-K-580

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION



ROW OFFICE PROJ. NO.	060343
COUNTY	Delaware
S.R. - SECTION	1015-RAD
MUNICIPALITY	Radnor Township
PARCEL NO.	2
CLAIM NO.	2300907000
CLAIMANT	Radnor Township

AGREEMENT OF SALE
(Fee Simple)

Made on _____ by Radnor Township owner(s) of property affected by the construction or improvement of the above mentioned State Route, their heirs, executors, administrators, successors and/or assigns, hereinafter, whether singular or plural, called the SELLER, and the Commonwealth of Pennsylvania, Department of Transportation, hereinafter called the COMMONWEALTH,

WITNESSETH:

WHEREAS the COMMONWEALTH intends to file a plan in the Recorder of Deeds Office of the aforesaid County indicating its authorization to condemn property for the above highway from the aforesaid property; and

WHEREAS the parties hereto have agreed that, in lieu of condemnation, the SELLER will convey in fee simple and such other lesser estate(s) as designated, if any, to the COMMONWEALTH the property or portion thereof required by the COMMONWEALTH.

NOW, THEREFORE, in consideration of the sum of Two Thousand Nine Hundred and Twnty Five (\$2,925.00) Dollars and other good and valuable consideration, the SELLER hereby agrees to sell and convey to the COMMONWEALTH and the COMMONWEALTH agrees to purchase
 in fee simple the premises described by metes and bounds in Exhibit "A"
 in fee simple that portion of the aforesaid property designated as required right-of-way or as acquired in fee simple for other purposes on the plot plan attached hereto and made a part hereof; and those areas, if any, designated as required for easement purposes as identified by the plot plan and set forth below.

Being all or a portion of the same property conveyed or devised to the SELLER by DEED of Samuel M.V. Hamilton & Herbert S. Riband, Jr., Executors of the Estate of Charlotte Dornnace Wright dated May 4, 1979, recorded in Deed Book 2693 Page 0184. This conveyance contains 585 Square of Right of Way and is identified on COMMONWEALTH plans as Parcel 2, together with the improvements, hereditaments and appurtenances thereto, except those which may be agreed below to be retained by the SELLER, free and clear of all liens, charges, delinquent taxes and assessments, and of all leases, agreements and other encumbrances which the SELLER has the right to terminate or remove. The SELLER will assign to the COMMONWEALTH all of the SELLER'S right, title and interest in those leases, agreements, and other encumbrances which cannot be terminated or removed. The SELLER will warrant GENERALLY the property interest to be conveyed.

Reserving, however, to the SELLER the right to deep mine minerals and remove gas and oil within the areas hereunder acquired from a minimum depth to be determined by the COMMONWEALTH, from mine shafts or by means of wells located off the right-of-way.

All expenses of examination of the title and of preparation and recording of the deed shall be paid by the COMMONWEALTH. Payment of the purchase price shall be made within ninety (90) days of the date of this agreement.

Loss or damage to the property by fire or other casualty shall be at the risk of the SELLER until possession of the property has been delivered to the COMMONWEALTH. The SELLER may continue to insure the property after possession has been delivered until title has passed to the COMMONWEALTH under this agreement, any insurance policy(ies) on such building(s) shall be amended to provide for payment thereunder (by means of a standard mortgage clause) to the COMMONWEALTH of the amount paid to the SELLER under this agreement.

The SELLER is assured that the COMMONWEALTH will not require vacation of the property for at least ninety (90) days from the execution of this agreement.

The SELLER will receive a NOTICE TO VACATE at least thirty (30) days before possession will be required by the COMMONWEALTH.

SELLER may remain in possession, on a rent free basis, until _____ after which date SELLER will pay rental to the COMMONWEALTH in the sum of \$ _____ per month, in advance, beginning _____, on a month-to-month basis until possession has been delivered. It is understood and agreed that the SELLER may relocate at their convenience prior to this date. From and after the execution of this instrument, the COMMONWEALTH, its agents and contractors, shall have the right to enter upon the premises to be conveyed for making studies, tests, soundings, and appraisals. The SELLER agrees to execute the Department's Lease Agreement, Form RW-670. Upon the expiration of one year, the amount of rental may be changed at the discretion of the COMMONWEALTH.

The SELLER does further remise, release, quitclaim and forever discharge the COMMONWEALTH or any agency or political subdivision thereof or its or their employees or representatives of and from all suits, damages, claims and demands which the SELLER might otherwise have been entitled to assert under the provisions of the Eminent Domain Code, 26 Pa.C.S. § 101 et seq., for or on account of this conveyance and any injury to or destruction of the aforesaid property of the SELLER through or by reason of the aforesaid highway construction or improvement, except damages, if any, under Section 710 (Limited Reimbursement of Appraisal, Attorney and Engineering Fees) and Section 711 (Payment on Account of Increased Mortgage Costs) of the Eminent Domain Code; provided, however, that if relocation of a residence or business or farm operation is involved, this release shall likewise not apply to damages, if any, under Section 902 (Moving Expenses) and/or Section 903 and/or 904 (Replacement Housing) of the Eminent Domain Code.

The SELLER does further indemnify the COMMONWEALTH against any claim made by any lessee of the aforesaid property who has not entered into a Settlement Agreement with the COMMONWEALTH.

The Parties have executed or caused to be executed these presents, intending to be legally bound thereby.

INDIVIDUALS

ENTITIES*

SELLER:

Radnor Township
(Name of Entity)

BY: _____
Robert Zienkowski - Township Manager

BY: _____

* Use this block for a corporation, partnership, LLC, government entity, school district, church, trust, club, association, POA, attorney-in-fact, executor, administrator or any other entity. See R/W Manual Section 3.06.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BY: _____
District Right-of-Way Administrator



ROW OFFICE PROJ NO	060343
COUNTY	Delaware
S.R. - SECTION	1015-RAD
MUNICIPALITY	Radnor Township
PARCEL NO.	2
CLAIM NO.	2300907000
CLAIMANT	Radnor Township.

SETTLEMENT STATEMENT

Final Settlement

PROJECTED DISTRIBUTION DATE

Date: February 23, 2018

ADDRESS OF CLAIMANT(S)	LOCATION (ADDRESS) OF PROPERTY	CLAIMANT'S ATTORNEY AND ADDRESS
301 Iven Avenue, Wayne, PA 19087-5297	Parcels along Darby Road and Brooke Road, Radnor Township, PA 19087	

Final Settlement		\$2,925.00
Commonwealth's Pro-Rata Share of Current Realty Taxes	_____ Actual	
Mortgage Pre-Payment Penalty	_____	
Mortgage Satisfaction Fee	_____	
Less Monies Previously Paid	_____	
Less Monies Credited for Owner Retained Items	_____	
Withheld Pending Building Removal by Owner	_____	
Total Available for Distribution		\$2,925.00

CHARGES:	
Mortgage(s):	
Mortgagee:	
Principal:	_____
Interest (to date: _____)	_____
Pre-Payment Penalty*:	_____
Satisfaction Fee*:	_____
Unpaid Current Taxes:	
Claimant(s) Pro-Rata Share	_____
Commonwealth's Pro-Rata Share*	_____
	TOTAL _____
Liens and/or Delinquent Taxes and Municipal Claims:	_____
Judgment(s):	_____
	TOTAL CHARGES _____

*Paid by Pennsylvania Department of Transportation

Minus Total Charges	_____	
Balance Due Claimant(s)		\$2,925.00

The distribution of funds as shown on the reverse hereof is approved and the "Balance Due Claimant(s)" is acknowledged to be correct. I hereby acknowledge receipt of a copy of this settlement statement.

INDIVIDUALS

ENTITIES*

GRANTOR:

Radnor Township
(Name of Entity)

BY:

Robert Zienkowski - Township Manager

BY:

* Use this block for a corporation, partnership, LLC, government entity, school district, church, trust, club, association, POA, attorney-in-fact, executor, administrator or any other entity. See R/W Manual Section 3.06.

I Hereby Certify That The Information On This Form Is True And Correct, According To The Records Of The Pennsylvania Department of Transportation.

Signature

Title

Date -

RW-371A (7/07)

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION



ROW OFFICE PROJ. NO.	060343
COUNTY	Delaware
S.R. - SECTION	1015-RAD
MUNICIPALITY	Radnor Township
PARCEL NO.	3
CLAIM NO.	2300908000
CLAIMANT	Radnor Township

OFFER FOR RIGHT-OF-WAY

Date: February 23, 2018

Radnor Township
301 Iven Avenue
Wayne, PA 19087-5297
Attn: Mr. Zienkowski

RE: Property Location: Various Parcels along Darby-Paoli Road

Dear Mr. Zienkowski:

In earlier correspondence, you received a plan showing the right-of-way required from your property for this highway project. The determination of the value of that property has been completed. We are enclosing an offer letter along with a summary of the compensation for your review.

Within the next few weeks, your Right-of-Way Representative will telephone you to discuss the offer and your claim. If you desire a personal visit for additional discussion, an appointment can be arranged at that time. Of course, you may telephone the Right-of-Way Representative, at the number below, at any time to discuss your claim or to request a personal visit.

Thank you for your continued cooperation.

Sincerely,

A handwritten signature in black ink, appearing to read "Roger Joseph", is written over the word "Sincerely,".

Roger Joseph
District Right-of-Way Administrator
Engineering District 6-0

Your Right-of-Way Representative is: Henry A. Litwin
Telephone No.: 610.205.6554

Enclosures:

- Offer Letter
- Summary of Just Compensation
- Deed & Agreement of Sale
- Temporary Construction Easement
- Settlement Statement
- Plot Plan, Form W-9
- Return Envelope

copy

1/13



ROW OFFICE PROJ. NO.	060343
COUNTY	Delaware
S.R. - SECTION	1015 - RAD R/W
MUNICIPALITY	Radnor Township
PARCEL NO.	3
CLAIM NO.	2300908000
CLAIMANT	Radnor Township

**OFFER TO PURCHASE
AND SUMMARY
OF JUST COMPENSATION**

Date: February 15, 2018

301 Iven Avenue
Wayne, PA 19087
Attn: Robert Zienkowski

Dear Claimant:

We are pleased to offer you the sum of \$17,000.00 for the right-of-way required from your property for the transportation improvement and for the effects on your remaining property, if any. This offer is intended to provide just compensation for all interests in your property, including tenants, if any.

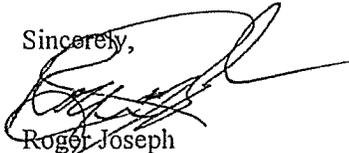
The areas required are as follows:

- Required Right of Way: 1,481 Square Feet (.034 Acre)
- Temporary Construction Easement: 2,308 Square Feet (.053 Acre)
- Slope Easement: 3,093 Square Feet (.071 Acre)

The amount offered is summarized as follows:

1. Direct Damages	\$15,100.00
2. Temporary Easement	<u>\$1,900.00</u>
3. Cost of Adjustment	<u>\$0.00</u>
TOTAL DAMAGES OFFERED (items 1, 2 and 3 above)	<u>\$17,000.00</u>

We hope that you will indicate your acceptance of our offer to the Right-of-Way Representative who delivers this letter so that we can process your payment as soon as possible. If you are undecided about accepting the offer, the Right-of-Way Representative will be glad to visit you again for further discussion of your claim.

Sincerely,

 Roger Joseph
 District Right-of-Way Administrator
 Engineering District 6-0

Attachment: Plan of Property to be Acquired

Your Right-of-Way Representative is: Henry Litwin/dvm
 Telephone Number: 610-205-6554

Prepared By: Henry A. Litwin
 Commonwealth of Pennsylvania
 Department of Transportation
 7000 Geerdes Boulevard
 King of Prussia, PA 19406-1525

Return To: Henry A. Litwin
 Commonwealth of Pennsylvania
 Department of Transportation
 7000 Geerdes Boulevard
 King of Prussia, PA 19406-1525

Site Location: Tax Parcel Number:

RW-317F (7/07)
 18-K-560

**COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION**



ROW OFFICE PROJ. NO.	060343
COUNTY	Delaware
S.R. - SECTION	1015-RAD
MUNICIPALITY	Radnor Township
PARCEL NO.	3
CLAIM NO.	2300908000
CLAIMANT	Radnor Township

**DEED
 (Fee Simple)**

THIS INDENTURE, made _____ by Radnor Township owner(s) of property affected by the construction or improvement of the above mentioned State Route, their heirs, executors, administrators, successors, and/or assigns, hereinafter, whether singular or plural, called the GRANTOR, and the Commonwealth of Pennsylvania, Department of Transportation, hereinafter called the COMMONWEALTH,

WITNESSETH:

WHEREAS the COMMONWEALTH intends to record a plan in the Recorder of Deeds Office of the aforesaid County indicating its authorization to condemn property for the above highway from the aforesaid property; and

WHEREAS the parties hereto have agreed that, in lieu of condemnation, the GRANTOR will convey in fee simple and such other estate(s) as designated, if any, to the COMMONWEALTH the property or portion thereof required by the COMMONWEALTH,

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration, the GRANTOR does hereby grant and convey to the COMMONWEALTH

- In fee simple the premises described by metes and bounds in exhibit "A".
- In fee simple that portion of the aforesaid premises designated as required right-of-way or as acquired in fee simple for other purposes on the plot plan attached hereto and made a part hereof; and those areas, if any, designated as required for easement purposes as identified by the plot plan and set forth below.

BEING all or a portion of the same property conveyed or devised to the GRANTOR by DEED of Inveraray Associates, A Pennsylvania Partnership, , dated May 16, 1984 and recorded in Deed Book No. 158, Page 0419. This conveyance contains 0.034 Acres of Right-of-Way & 0.071 Acres of Required Slope Easement and is identified on COMMONWEALTH plans as Parcel 3, together with the improvements, hereditaments and appurtenances thereto and the GRANTOR warrants GENERALLY the property hereby conveyed.

RESERVING, however, to the GRANTOR the right to deep mine minerals and remove gas and oil within the areas hereunder acquired from a minimum depth to be determined by the COMMONWEALTH, from mine shafts or by means of wells located off the right-of-way.

The GRANTOR does further remise, release, quitclaim and forever discharge the COMMONWEALTH or any agency or political subdivision thereof or its or their employees or representatives of and from all suits, damages, claims and demands which the GRANTOR might otherwise have been entitled to assert under the provisions of the Eminent Domain Code, 26 Pa.C.S. § 101 et seq., for or on account of this conveyance and any injury to or destruction of the aforesaid property of the GRANTOR through or by reason of the aforesaid highway construction or improvement, except damages, if any, under Section 710 (Limited Reimbursement of Appraisal, Attorney and Engineering Fees) and Section 711 (Payment on Account of Increased Mortgage Costs) of the Eminent Domain Code; provided, however, that if relocation of a residence or business or farm operation is involved, this release shall likewise not apply to damages, if any, under Section 902 (Moving Expenses) and/or Section 903 and/or 904 (Replacement Housing) of the Eminent Domain Code.

The GRANTOR does further indemnify the COMMONWEALTH against any claim made by any lessee of the aforesaid property who has not entered into a Settlement Agreement with the COMMONWEALTH.

Certificate of Residence

I hereby certify the Grantee's precise residence to be:

Commonwealth of Pennsylvania
Department of Transportation
7000 Geerdes Boulevard\
King of Prussia, PA 1906-1525

Witness my hand this _____ day of _____, _____

Agent for the Commonwealth of Pennsylvania
Department of Transportation

The GRANTOR has executed or caused to be executed these presents, intending to be legally bound thereby.

INDIVIDUALS

ENTITIES*

GRANTOR:

Radnor Township
(Name of Entity)

BY: _____
Robert Zienkowski - Township Manager

BY: _____

* Use this block for a corporation, partnership, LLC, government entity, school district, church, trust, club, association, POA, attorney-in-fact, executor, administrator or any other entity. See R/W Manual Section 3.06.

INDIVIDUAL

ENTITY

STATE OF PENNSYLVANIA
COUNTY OF _____
On this _____ day of _____, 20____,
before me, _____,
the undersigned officer, personally appeared _____
_____, known to me
(or satisfactorily proven) to be the person(s) whose
name(s) _____ subscribed to the within instrument,
and acknowledged that _____ executed the
instrument for the purposes contained in it.
In witness whereof, I hereto set my hand and official
seal.

[Signature]

[Title]
[Seal]

STATE OF PENNSYLVANIA
COUNTY OF _____
On this _____ day of _____, 20____,
before me, _____, the undersigned
officer, personally appeared _____
_____, who acknowledged _____ self
to be the _____ [title] of
_____ [name of entity],
and that as such _____
_____ [title], being authorized to do so,
executed the foregoing instrument for the purposes
contained in it by signing on behalf of the entity as

[title].
In witness whereof, I hereto set my hand and official seal.

[Signature]

[Title]
[Seal]

APPROVED AS TO FORM AND LEGALITY:

For Chief Counsel

RW-317AF (7/07)
18-K-580

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION**



ROW OFFICE PROJ. NO.	060343
COUNTY	Delaware
S.R. - SECTION	1015-RAD
MUNICIPALITY	Radnor Township
PARCEL NO.	3
CLAIM NO.	2300908000
CLAIMANT	Radnor Township

AGREEMENT OF SALE
(Fee Simple)

Made on _____ by Radnor Township owner(s) of property affected by the construction or improvement of the above mentioned State Route, their heirs, executors, administrators, successors and/or assigns, hereinafter, whether singular or plural, called the SELLER, and the Commonwealth of Pennsylvania, Department of Transportation, hereinafter called the COMMONWEALTH,

WITNESSETH:

WHEREAS the COMMONWEALTH intends to file a plan in the Recorder of Deeds Office of the aforesaid County indicating its authorization to condemn property for the above highway from the aforesaid property; and

WHEREAS the parties hereto have agreed that, in lieu of condemnation, the SELLER will convey in fee simple and such other lesser estate(s) as designated, if any, to the COMMONWEALTH the property or portion thereof required by the COMMONWEALTH.

NOW, THEREFORE, in consideration of the sum of Fifteen Thousand & One Hundred (\$15,100.00) Dollars and other good and valuable consideration, the SELLER hereby agrees to sell and convey to the COMMONWEALTH and the COMMONWEALTH agrees to purchase
 in fee simple the premises described by metes and bounds in Exhibit "A"
 in fee simple that portion of the aforesaid property designated as required right-of-way or as acquired in fee simple for other purposes on the plot plan attached hereto and made a part hereof; and those areas, if any, designated as required for easement purposes as identified by the plot plan and set forth below.

Being all or a portion of the same property conveyed or devised to the SELLER by DEED of Inveraray Associates, A Pennsylvania Partnership dated May 16, 1984, recorded in Deed Book 0158 Page 0419. This conveyance contains 0.034 Acres Right of Way & 0.071 Acres of Required Slope Easement and is identified on COMMONWEALTH plans as Parcel 3, together with the improvements, hereditaments and appurtenances thereto, except those which may be agreed below to be retained by the SELLER, free and clear of all liens, charges, delinquent taxes and assessments, and of all leases, agreements and other encumbrances which the SELLER has the right to terminate or remove. The SELLER will assign to the COMMONWEALTH all of the SELLER'S right, title and interest in those leases, agreements, and other encumbrances which cannot be terminated or removed. The SELLER will warrant GENERALLY the property interest to be conveyed.

Reserving, however, to the SELLER the right to deep mine minerals and remove gas and oil within the areas hereunder acquired from a minimum depth to be determined by the COMMONWEALTH, from mine shafts or by means of wells located off the right-of-way.

All expenses of examination of the title and of preparation and recording of the deed shall be paid by the COMMONWEALTH. Payment of the purchase price shall be made within ninety (90) days of the date of this agreement.

Loss or damage to the property by fire or other casualty shall be at the risk of the SELLER until possession of the property has been delivered to the COMMONWEALTH. The SELLER may continue to insure the property after possession has been delivered until title has passed to the COMMONWEALTH under this agreement, any insurance policy(ies) on such building(s) shall be amended to provide for payment thereunder (by means of a standard mortgage clause) to the COMMONWEALTH of the amount paid to the SELLER under this agreement.

The SELLER is assured that the COMMONWEALTH will not require vacation of the property for at least ninety (90) days from the execution of this agreement.

The SELLER will receive a NOTICE TO VACATE at least thirty (30) days before possession will be required by the COMMONWEALTH.

SELLER may remain in possession, on a rent free basis, until _____ after which date SELLER will pay rental to the COMMONWEALTH in the sum of \$ _____ per month, in advance, beginning _____, on a month-to-month basis until possession has been delivered. It is understood and agreed that the SELLER may relocate at their convenience prior to this date. From and after the execution of this instrument, the COMMONWEALTH, its agents and contractors, shall have the right to enter upon the premises to be conveyed for making studies, tests, soundings, and appraisals. The SELLER agrees to execute the Department's Lease Agreement, Form RW-670. Upon the expiration of one year, the amount of rental may be changed at the discretion of the COMMONWEALTH.

The SELLER does further remise, release, quitclaim and forever discharge the COMMONWEALTH or any agency or political subdivision thereof or its or their employees or representatives of and from all suits, damages, claims and demands which the SELLER might otherwise have been entitled to assert under the provisions of the Eminent Domain Code, 26 Pa.C.S. § 101 et seq., for or on account of this conveyance and any injury to or destruction of the aforesaid property of the SELLER through or by reason of the aforesaid highway construction or improvement, except damages, if any, under Section 710 (Limited Reimbursement of Appraisal, Attorney and Engineering Fees) and Section 711 (Payment on Account of Increased Mortgage Costs) of the Eminent Domain Code; provided, however, that if relocation of a residence or business or farm operation is involved, this release shall likewise not apply to damages, if any, under Section 902 (Moving Expenses) and/or Section 903 and/or 904 (Replacement Housing) of the Eminent Domain Code.

The SELLER does further indemnify the COMMONWEALTH against any claim made by any lessee of the aforesaid property who has not entered into a Settlement Agreement with the COMMONWEALTH.

The Parties have executed or caused to be executed these presents, intending to be legally bound thereby.

INDIVIDUALS

ENTITIES*

SELLER:

Radnor Township
(Name of Entity)

BY: _____
Robt Zienkowski - Township Manager

BY: _____

* Use this block for a corporation, partnership, LLC, government entity, school district, church, trust, club, association, POA, attorney-in-fact, executor, administrator or any other entity. See R/W Manual Section 3.06.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BY: _____
District Right-of-Way Administrator

RW-341 (2/15)
18-FA-44.0



ROW OFFICE PROJ. NO.	060343
COUNTY	Delaware
S.R. - SECTION	1015- RAD
MUNICIPALITY	Radnor Township
PARCEL NO.	3
CLAIM NO.	23009080000
CLAIMANT	Radnor Township

TEMPORARY EASEMENT FOR CONSTRUCTION PURPOSES

THIS INDENTURE, made this _____ Day of _____, by Radnor Township Owner(s) of property affected by the construction or improvement of the above mentioned transportation improvement, their heirs, executors, administrators, successors and/or assigns, hereinafter, whether singular or plural, called the OWNER, and the Commonwealth of Pennsylvania, Department of Transportation, hereinafter called the COMMONWEALTH,

WITNESSETH:

WHEREAS the COMMONWEALTH intends to record a plan in the Recorder of Deeds Office of the aforesaid County indicating its authorization to condemn real property for the above transportation improvement from the aforesaid property; and

WHEREAS the parties hereto have agreed that, in lieu of condemnation, the OWNER will grant to the COMMONWEALTH a temporary easement for construction purposes from the aforesaid property,

NOW, THEREFORE, in consideration of the sum of One Thousand & Nine Hundred (\$1,900.00) Dollars, the Owner hereby grants to the COMMONWEALTH a temporary easement for the purpose of undertaking the above construction or improvement, said easement to extend to the area shown on the plot plan attached hereto and made a part hereof and to authorize the entry and re-entry of employees, agents and contractors of the COMMONWEALTH upon said area to do any and all work necessary for the completion of the project, including the removal of any buildings and/or other structures located on the area covered by the easement; provided, however, that, upon completion of the project, the COMMONWEALTH shall be obligated to restore the area covered by the easement to a condition commensurate with that of the balance of the property of the OWNER, such restoration to include removal of debris, filling of holes left by the removal of buildings or structures, draining, filling and/or capping of wells, cesspools and septic tanks; grading and sowing of grass. The estimated completion date of the construction or improvement is two years from the commencement of construction. The temporary easement for construction area is 0.053 Acres.

The OWNER does further remise, release, quitclaim and forever discharge the COMMONWEALTH or any agency or political subdivision thereof or its or their employees or representatives of and from all suits, damages, claims and demands which the OWNER might otherwise have been entitled to assert under the provisions of the Eminent Domain Code, 26 Pa.C.S. § 101 et seq., for or on account of this conveyance and any injury to or destruction of the aforesaid property of the OWNER through or by reason of the aforesaid construction or improvement.

The OWNER hereby indemnifies the Department for any claim made by a successor in interest should OWNER transfer the property to another prior to the completion of construction for which the temporary easement was given.

The consideration referenced above includes (\$ _____) Dollars paid as a cost of adjustment for the purpose of ..

The Parties have executed or caused to be executed these presents, intending to be legally bound thereby.

INDIVIDUALS

ENTITIES*

OWNER:

Radnor Township

(Name of Entity)

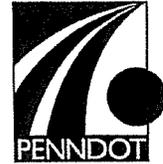
BY: _____
Robert Zienkowski - Township Manager

BY: _____

* Use this block for a corporation, partnership, LLC, government entity, school district, church, trust, club, association, POA, attorney-in-fact, executor, administrator or any other entity. See R/W Manual Section 3.06.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BY: _____
District Right-of-Way Administrator



ROW OFFICE PROJ NO	060343
COUNTY	Delaware
S.R. - SECTION	1015-RAD
MUNICIPALITY	Radnor Township
PARCEL NO.	3
CLAIM NO.	2300908000
CLAIMANT	Radnor Township.

SETTLEMENT STATEMENT

Final Settlement

PROJECTED DISTRIBUTION DATE

Date: February 23, 2018

ADDRESS OF CLAIMANT(S)	LOCATION (ADDRESS) OF PROPERTY	CLAIMANT'S ATTORNEY AND ADDRESS
301 Iven Avenue, Wayne, PA 19087-5297	Parcels along Darby Road and Brooke Road, Radnor Township, PA 19087	

Final Settlement		\$17,000.00
Commonwealth's Pro-Rata Share of Current Realty Taxes	_____ Actual	
Mortgage Pre-Payment Penalty	_____	
Mortgage Satisfaction Fee	_____	
Less Monies Previously Paid	_____	
Less Monies Credited for Owner Retained Items	_____	
Withheld Pending Building Removal by Owner	_____	
Total Available for Distribution		\$17,000.00

CHARGES:	
Mortgage(s):	
Mortgagee:	
Principal:	_____
Interest (to date: _____)	_____
Pre-Payment Penalty*:	_____
Satisfaction Fee*:	_____
Unpaid Current Taxes:	
Claimant(s) Pro-Rata Share	_____
Commonwealth's Pro-Rata Share*	_____
	TOTAL _____
Liens and/or Delinquent Taxes and Municipal Claims:	_____
Judgment(s):	_____
	TOTAL CHARGES _____

*Paid by Pennsylvania Department of Transportation

Minus Total Charges	_____
Balance Due Claimant(s)	\$17,000.00

The distribution of funds as shown on the reverse hereof is approved and the "Balance Due Claimant(s)" is acknowledged to be correct. I hereby acknowledge receipt of a copy of this settlement statement.

INDIVIDUALS

ENTITIES*

GRANTOR:

Radnor Township
(Name of Entity)

BY: _____
Robert Zienkowski - Township Manager

BY: _____

* Use this block for a corporation, partnership, LLC, government entity, school district, church, trust, club, association, POA, attorney-in-fact, executor, administrator or any other entity. See R/W Manual Section 3.06.

I Hereby Certify That The Information On This Form Is True And Correct, According To The Records Of The Pennsylvania Department of Transportation.

Signature

Title

Date -

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-D	DELAWARE	1015	1015	14 OF 15
RADNOR TOWNSHIP				DATE
REVISIONS				DT

LEGEND

REQUIRE RIGHT-OF-WAY

RIGHT-OF-WAY RESERVED BY THE TOWNSHIP AND/OR AMERICAN TELEGRAPH AND TELEPHONE COMPANY AND/OR RADNOR TOWNSHIP

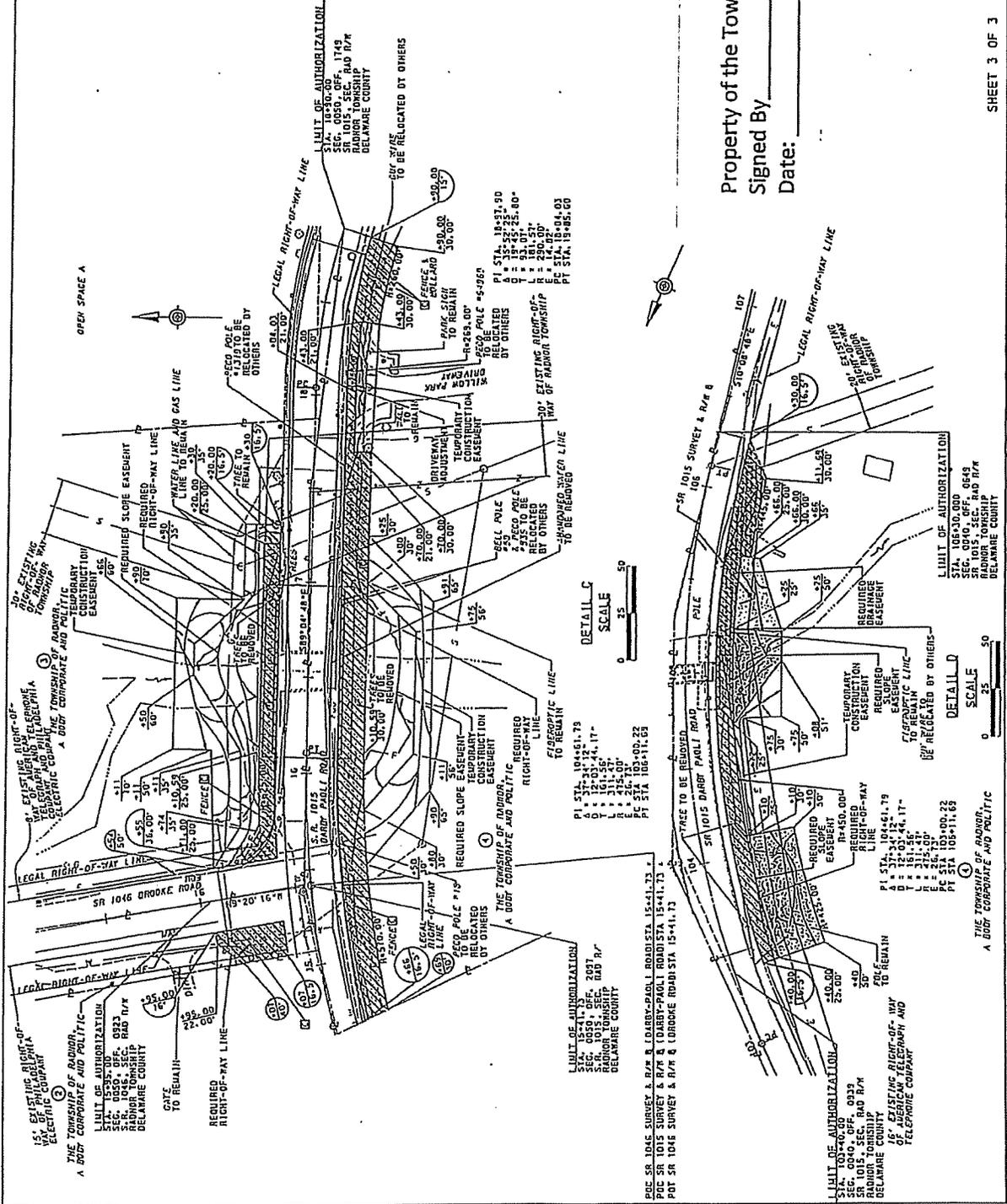
PRIVATE PROPERTY LINES ARE OBTAINED FROM THE DEED OF RECORD. RECORDS ARE OBTAINED FROM THE PLANS, EXISTING TOPOGRAPHICAL FEATURES AND SURVEYOR RESPONSIBLE FOR THE PROJECT. BUILDINGS AND STRUCTURES MARKED HAVE BEEN OR TO BE REMOVED OR ALTERED BY THE DEPARTMENT OF PUBLIC WORKS. RESPONSIBLE FOR THE PATENT OF PROPERTY DAMAGES.

THIS PROPERTY PLOT IS NOT TO BE SUBSTITUTED FOR A BOUNDARY SURVEY.

TEMPORARY CONSTRUCTION EASEMENT. AN EASEMENT TO BE USED FOR THE CONSTRUCTION OF A ROAD OR HIGHWAY UNTIL THE CONSTRUCTION OR WORK INDICATED BY THE PLOT IS COMPLETED. THIS EASEMENT IS NOT TO BE USED FOR ANY OTHER PURPOSES.

REQUIRE EASEMENT. AN EASEMENT FOR THE CONSTRUCTION AND ALTERATION OF HIGHWAY, REPAIR, MAINTENANCE, INSPECTION, AND ALTERATION OF HIGHWAY. PREVENT THE PROPERTY OWNER FROM MAKING ANY ALTERATION TO THE PROPERTY THAT WOULD BE DETRIMENTAL TO THE USE OF THE HIGHWAY. THIS EASEMENT IS NOT TO BE USED FOR ANY OTHER PURPOSES.

THE DEPARTMENT'S PIPE OR DITCH, WITHOUT ADVANCED WRITTEN APPROVAL BY THE DEPARTMENT OF PUBLIC WORKS.



Property of the Township of Radnor
Signed By _____
Date: _____



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	DELAWARE	1015	RAD R/W	13 OF 15
RADHOR TOWNSHIP		1016	RAD R/W	
REVISIONS				
DATE	BY			

RIGHT-OF-WAY CLAIM INFORMATION
 COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION
 STATE RTE. 1015, SEC. NO. RAD R/W, RADHOR TOWNSHIP DELAWARE COUNTY
 PARCEL NO. 2, SHEET NO. 6 & 7
 PROPERTY OWNER(S) THE TOWNSHIP OF RADHOR, A BODY CORPORATE AND POLITICAL ENTITY
 GRANITOR(S) MARILYN AND HERBERT S. RIZARD, JR., EXECUTORS OF THE ESTATE OF CHARLES W. RIZARD

AREAS		REQUIRED AREA	
DEED	5F	OF WAY	5F
CALCULATED	0.235 AC	TEMPORARY	0.000
TOTAL	0.235	CONSTRUCTION	0.000
ADVERTISE	0.000	EASEMENT	0.000
LEGAL R/W	0.235	RESIDUE SLOPE	0.000
EFFECTIVE	0.235	RESIDUE LT	0.000
TOTAL REQ'D R/W	0.235	RESIDUE RT	0.000
TOTAL RESIDUE	0.235	DATE	08/02/2017
RESIDUE LT	0.000	DRAWN BY	SEL
RESIDUE RT	0.000	SCALE	AS SHOWN

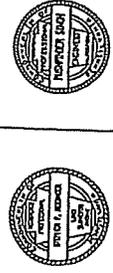
RIGHT-OF-WAY CLAIM INFORMATION
 COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION
 STATE RTE. 1015, SEC. NO. RAD R/W, RADHOR TOWNSHIP DELAWARE COUNTY
 PARCEL NO. 3, SHEET NO. 6 & 7
 PROPERTY OWNER(S) THE TOWNSHIP OF RADHOR, A BODY CORPORATE AND POLITICAL ENTITY
 GRANITOR(S) INDEPENDENT ASSOCIATES, A PENNSYLVANIA PARTNERSHIP

AREAS		REQUIRED AREA	
DEED	0.000	OF WAY	0.000
CALCULATED	0.000	TEMPORARY	0.000
TOTAL	0.000	CONSTRUCTION	0.000
ADVERTISE	0.000	EASEMENT	0.000
LEGAL R/W	0.000	RESIDUE SLOPE	0.000
EFFECTIVE	0.000	RESIDUE LT	0.000
TOTAL REQ'D R/W	0.000	RESIDUE RT	0.000
TOTAL RESIDUE	0.000	DATE	08/02/2017
RESIDUE LT	0.000	DRAWN BY	SEL
RESIDUE RT	0.000	SCALE	AS SHOWN

RIGHT-OF-WAY CLAIM INFORMATION
 COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION
 STATE RTE. 1015, SEC. NO. RAD R/W, RADHOR TOWNSHIP DELAWARE COUNTY
 PARCEL NO. 4, SHEET NO. 6 & 7
 PROPERTY OWNER(S) THE TOWNSHIP OF RADHOR, A BODY CORPORATE AND POLITICAL ENTITY
 GRANITOR(S) SHELBY D. V. BRANTON AND HERBERT S. RIZARD, JR., EXECUTORS OF THE WILL OF DEW. CO. TRUST OF CHARLOTTE ORRANCE WRIGHT (TRACT B)
 GRANITOR(S) CHARLOTTE ORRANCE WRIGHT (TRACT B)
 GRANITOR(S) CHARLOTTE ORRANCE WRIGHT AND P. ALEXANDER MONTGOMERY SUBSTITUTED TRUSTEE UNDER CHARLOTTE ORRANCE WRIGHT TRUST (TRACT B)
 GRANITOR(S) CHARLOTTE ORRANCE WRIGHT AND ROBE B. TILER TRUSTEES (TRACT B)

AREAS		REQUIRED AREA	
DEED	2344	OF WAY	0.172
CALCULATED	142.84	TEMPORARY	0.111
TOTAL	2344	CONSTRUCTION	0.000
ADVERTISE	2344	EASEMENT	0.000
LEGAL R/W	142.84	RESIDUE SLOPE	0.000
EFFECTIVE	2344	RESIDUE LT	0.000
TOTAL REQ'D R/W	142.84	RESIDUE RT	0.000
TOTAL RESIDUE	2344	DATE	08/02/2017
RESIDUE LT	0.000	DRAWN BY	SEL
RESIDUE RT	0.000	SCALE	AS SHOWN

Property of the Township of Radhor
 Signed By _____
 Date: _____



Issues and Concerns

DATE: FEBRUARY 26, 2018

TO: Claimant/ Claimants

FROM: Henry A Litwin
Real Estate Specialist,
Engineering District 6-0
7000 Geerdes Boulevard
King of Prussia, PA 19406-1525

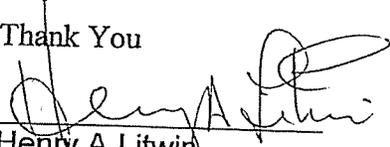
SUBJECT: CORRESPONDENCE TO PROJECT MANAGER

THE FOLLOWING ISSUES & CONCERNS:

PLEASE BE ADVISED THAT THE DEFINITION OF CONSTRUCTION CONCERNS,
ISSUES OR CHANGES (RAMIFICATIONS) ARE TO BE ADDRESSED IN LETTER FORM
OR E-MAILED TO THE REAL ESTATE SPECIALIST HANDLING THE CLAIM.

E-Mail Me at hlitwin@pa.gov

Thank You


Henry A Litwin

RW-341 (2/15)
18-FA-44.0



ROW OFFICE PROJ. NO.	060343
COUNTY	Delaware
S.R. - SECTION	1015- RAD
MUNICIPALITY	Radnor Township
PARCEL NO.	4
CLAIM NO.	23009090000
CLAIMANT	Radnor Township

TEMPORARY EASEMENT FOR CONSTRUCTION PURPOSES

THIS INDENTURE, made this _____ Day of _____, by Radnor Township Owner(s) of property affected by the construction or improvement of the above mentioned transportation improvement, their heirs, executors, administrators, successors and/or assigns, hereinafter, whether singular or plural, called the OWNER, and the Commonwealth of Pennsylvania, Department of Transportation, hereinafter called the COMMONWEALTH,

WITNESSETH:

WHEREAS the COMMONWEALTH intends to record a plan in the Recorder of Deeds Office of the aforesaid County indicating its authorization to condemn real property for the above transportation improvement from the aforesaid property; and

WHEREAS the parties hereto have agreed that, in lieu of condemnation, the OWNER will grant to the COMMONWEALTH a temporary easement for construction purposes from the aforesaid property,

NOW, THEREFORE, in consideration of the sum of Three Thousand (\$3,000.00) Dollars, the Owner hereby grants to the COMMONWEALTH a temporary easement for the purpose of undertaking the above construction or improvement, said easement to extend to the area shown on the plot plan attached hereto and made a part hereof and to authorize the entry and re-entry of employees, agents and contractors of the COMMONWEALTH upon said area to do any and all work necessary for the completion of the project, including the removal of any buildings and/or other structures located on the area covered by the easement; provided, however, that, upon completion of the project, the COMMONWEALTH shall be obligated to restore the area covered by the easement to a condition commensurate with that of the balance of the property of the OWNER, such restoration to include removal of debris, filling of holes left by the removal of buildings or structures, draining, filling and/or capping of wells, cesspools and septic tanks; grading and sowing of grass. The estimated completion date of the construction or improvement is two years from the commencement of construction. The temporary easement for construction area is 0.086 Acres.

The OWNER does further remise, release, quitclaim and forever discharge the COMMONWEALTH or any agency or political subdivision thereof or its or their employees or representatives of and from all suits, damages, claims and demands which the OWNER might otherwise have been entitled to assert under the provisions of the Eminent Domain Code, 26 Pa.C.S. § 101 et seq., for or on account of this conveyance and any injury to or destruction of the aforesaid property of the OWNER through or by reason of the aforesaid construction or improvement.

The OWNER hereby indemnifies the Department for any claim made by a successor in interest should OWNER transfer the property to another prior to the completion of construction for which the temporary easement was given.

The consideration referenced above includes (\$ _____) Dollars paid as a cost of adjustment for the purpose of ..

The Parties have executed or caused to be executed these presents, intending to be legally bound thereby.

INDIVIDUALS

ENTITIES*

OWNER:

Radnor Township

(Name of Entity)

BY: _____
Robert Zienkowski - Township Manager

BY: _____

* Use this block for a corporation, partnership, LLC, government entity, school district, church, trust, club, association, POA, attorney-in-fact, executor, administrator or any other entity. See R/W Manual Section 3.06.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BY: _____
District Right-of-Way Administrator



ROW OFFICE PROJ NO	060343
COUNTY	Delaware
S.R. - SECTION	1015-RAD
MUNICIPALITY	Radnor Township
PARCEL NO.	4
CLAIM NO.	2300909000
CLAIMANT	Radnor Township.

SETTLEMENT STATEMENT

Final Settlement

PROJECTED DISTRIBUTION DATE

Date: February 23, 2018

ADDRESS OF CLAIMANT(S)	LOCATION (ADDRESS) OF PROPERTY	CLAIMANT'S ATTORNEY AND ADDRESS
301 Iven Avenue, Wayne, PA 19087-5297	Parcels along Darby Road and Brooke Road, Radnor Township, PA 19087	

Final Settlement		\$53,400.00
Commonwealth's Pro-Rata Share of Current Realty Taxes	_____ Actual	
Mortgage Pre-Payment Penalty	_____	
Mortgage Satisfaction Fee	_____	
Less Monies Previously Paid	_____	
Less Monies Credited for Owner Retained Items	_____	
Withheld Pending Building Removal by Owner	_____	
Total Available for Distribution		<u>\$53,400.00</u>

CHARGES:	
Mortgage(s):	
Mortgagee:	
Principal:	_____
Interest (to date: _____)	_____
Pre-Payment Penalty*:	_____
Satisfaction Fee*:	_____
Unpaid Current Taxes:	
Claimant(s) Pro-Rata Share	_____
Commonwealth's Pro-Rata Share*	_____
	TOTAL _____
Liens and/or Delinquent Taxes and Municipal Claims:	_____
Judgment(s):	_____
	TOTAL CHARGES _____

*Paid by Pennsylvania Department of Transportation

Minus Total Charges	_____	
Balance Due Claimant(s)		<u>\$53,400.00</u>

The distribution of funds as shown on the reverse hereof is approved and the "Balance Due Claimant(s)" is acknowledged to be correct. I hereby acknowledge receipt of a copy of this settlement statement.

INDIVIDUALS

ENTITIES*

GRANTOR:

Radnor Township
(Name of Entity)

BY: _____
Robert Zienkowski - Township Manager

BY: _____

* Use this block for a corporation, partnership, LLC, government entity, school district, church, trust, club, association, POA, attorney-in-fact, executor, administrator or any other entity. See R/W Manual Section 3.06.

I Hereby Certify That The Information On This Form Is True And Correct, According To The Records Of The Pennsylvania Department of Transportation.

Signature

Title

Date -

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	DELAWARE	1015	1016	13 OF 15
TRACT NO.		SECTION		DATE
1015		1016		BY
REVISIONS				

RIGHT-OF-WAY CLAIM INFORMATION
 COMMONWEALTH OF PENNSYLVANIA - DEPARTMENT OF TRANSPORTATION
 STATE RTE. 1015, SEC. NO. 1015, TOWNSHIP OF RADNOR, DELAWARE COUNTY
 PARCEL NO. 2, SHEET NO. 6 & 7, CLANDON
 PROPERTY OWNER(S) THE TOWNSHIP OF RADNOR, A BODY CORPORATE AND POLITICAL ENTITY
 GRANTEE(S) SAUPE D.V. HAMILTON AND HERBERT S. RIBAR, JR., EXECUTORS OF THE ESTATE OF CHARLOTTE CORRANCE WRIGHT

TRACT DEED BOOK	2651	AREAS	REQUIRED AREA	SF
DATE OF DEED	05/07/1978	CALCULATED	REQUIRED RIGHT	580
CONSIDERATION	\$1.00	ADVERTISEMENTS	OF WAY	580
TAX STAMPS	50.00	EFFECTIVE		580
		TOTAL RES'D R/W		580
		TOTAL RESIDUE		580
		RESIDUE LT		580
		RESIDUE RT		580
VERIFICATION		05/24/2017		
DRAWN BY		SEL		
SCALE: AS SHOWN				

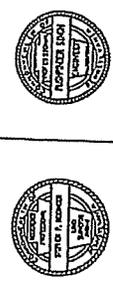
RIGHT-OF-WAY CLAIM INFORMATION
 COMMONWEALTH OF PENNSYLVANIA - DEPARTMENT OF TRANSPORTATION
 STATE RTE. 1015, SEC. NO. 1015, TOWNSHIP OF RADNOR, DELAWARE COUNTY
 PARCEL NO. 3, SHEET NO. 6 & 7, CLANDON
 PROPERTY OWNER(S) THE TOWNSHIP OF RADNOR, A BODY CORPORATE AND POLITICAL ENTITY
 GRANTEE(S) LINERAT ASSOCIATES, A PENNSYLVANIA PARTNERSHIP

TRACT DEED BOOK	0150	AREAS	REQUIRED AREA	ACRES
DATE OF DEED	05/17/1984	CALCULATED	REQUIRED RIGHT	0.014
CONSIDERATION	\$27,719.00	ADVERTISEMENTS	TOTAL	0.014
TAX STAMPS	10.00	EFFECTIVE	CONSTRUCTION	0.014
		TOTAL RES'D R/W	EASEMENT	0.014
		TOTAL RESIDUE	EASEMENT SLOPE	0.014
		RESIDUE LT	EASEMENT	0.014
		RESIDUE RT	EASEMENT	0.014
VERIFICATION		05/24/2017		
DRAWN BY		SEL		
SCALE: AS SHOWN				

RIGHT-OF-WAY CLAIM INFORMATION
 COMMONWEALTH OF PENNSYLVANIA - DEPARTMENT OF TRANSPORTATION
 STATE RTE. 1015, SEC. NO. 1015, TOWNSHIP OF RADNOR, DELAWARE COUNTY
 PARCEL NO. 4, SHEET NO. 6 & 7, CLANDON
 PROPERTY OWNER(S) THE TOWNSHIP OF RADNOR, A BODY CORPORATE AND POLITICAL ENTITY
 GRANTEE(S) SAUPE D.V. HAMILTON AND HERBERT S. RIBAR, JR., EXECUTORS OF THE ESTATE OF CHARLOTTE CORRANCE WRIGHT (TRACT B)
 GRANTEE(S) SAUPE D.V. HAMILTON AND HERBERT S. RIBAR, JR., EXECUTORS OF THE ESTATE OF CHARLOTTE CORRANCE WRIGHT (TRACT B)
 GRANTEE(S) SAUPE D.V. HAMILTON AND HERBERT S. RIBAR, JR., EXECUTORS OF THE ESTATE OF CHARLOTTE CORRANCE WRIGHT (TRACT B)
 GRANTEE(S) SAUPE D.V. HAMILTON AND HERBERT S. RIBAR, JR., EXECUTORS OF THE ESTATE OF CHARLOTTE CORRANCE WRIGHT (TRACT B)

TRACT DEED BOOK	2651	AREAS	REQUIRED AREA	ACRES
DATE OF DEED	05/07/1978	CALCULATED	REQUIRED RIGHT	0.112
CONSIDERATION	\$1.00	ADVERTISEMENTS	TOTAL	0.112
TAX STAMPS	50.00	EFFECTIVE	CONSTRUCTION	0.112
		TOTAL RES'D R/W	EASEMENT	0.112
		TOTAL RESIDUE	EASEMENT SLOPE	0.112
		RESIDUE LT	EASEMENT	0.112
		RESIDUE RT	EASEMENT	0.112
VERIFICATION		05/24/2017		
DRAWN BY		SEL		
SCALE: AS SHOWN				

Property of the Township of Radnor
 Signed By _____
 Date: _____



Request for Taxpayer Identification Number and Certification

Give Form to the
 requester. Do not
 send to the IRS.

Print or type See Specific Instructions on page 2.	1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank. Radnor Township		
	2 Business name/disregarded entity name, if different from above		
	3 Check appropriate box for federal tax classification; check only one of the following seven boxes: <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ P Note. For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner. <input type="checkbox"/> Other (see instructions) ▶	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____ <i>(Applies to accounts maintained outside the U.S.)</i>	
	5 Address (number, street, and apt. or suite no.) 301 Iven Avenue	Requester's name and address (optional)	
	6 City, state, and ZIP code Wayne, PA 19087		
	7 List account number(s) here (optional)		

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 5.

Social security number									
or									
Employer identification number									

Note. If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 5.

Sign Here	Signature of U.S. person ▶	Date ▶
------------------	----------------------------	--------

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.
Future developments. Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at www.irs.gov/w9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)

- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1095-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding? on page 2.

By signing the filled-out form, you:

- Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
- Certify that you are not subject to backup withholding, or
- Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
- Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting?* on page 2 for further information.

Issues and Concerns

DATE: FEBRUARY 26, 2018

TO: Claimant/ Claimants

FROM: Henry A Litwin
Real Estate Specialist,
Engineering District 6-0
7000 Geerdes Boulevard
King of Prussia, PA 19406-1525

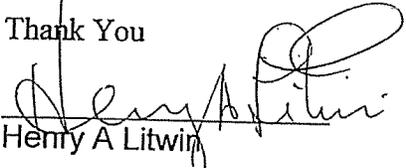
SUBJECT: CORRESPONDENCE TO PROJECT MANAGER

THE FOLLOWING ISSUES & CONCERNS:

PLEASE BE ADVISED THAT THE DEFINITION OF CONSTRUCTION CONCERNS, ISSUES OR CHANGES (RAMIFICATIONS) ARE TO BE ADDRESSED IN LETTER FORM OR E-MAILED TO THE REAL ESTATE SPECIALIST HANDLING THE CLAIM.

E-Mail Me at hlitwin@pa.gov

Thank You


Henry A Litwin

RW-371A (7/07)

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION



ROW OFFICE PROJ. NO.	060343
COUNTY	Delaware
S.R. - SECTION	1015-RAD
MUNICIPALITY	Radnor Township
PARCEL NO.	4
CLAIM NO.	2300909000
CLAIMANT	Radnor Township

OFFER FOR RIGHT-OF-WAY

Date: February 23, 2018

Radnor Township
301 Iven Avenue
Wayne, PA 19087-5297
Attn: Mr. Zienkowski

RE: Property Location: Various Parcels along Darby-Paoli Road

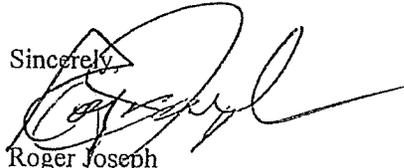
Dear Mr. Zienkowski:

In earlier correspondence, you received a plan showing the right-of-way required from your property for this highway project. The determination of the value of that property has been completed. We are enclosing an offer letter along with a summary of the compensation for your review.

Within the next few weeks, your Right-of-Way Representative will telephone you to discuss the offer and your claim. If you desire a personal visit for additional discussion, an appointment can be arranged at that time. Of course, you may telephone the Right-of-Way Representative, at the number below, at any time to discuss your claim or to request a personal visit.

Thank you for your continued cooperation.

Sincerely,



Roger Joseph
District Right-of-Way Administrator
Engineering District 6-0

Your Right-of-Way Representative is: Henry A. Litwin
Telephone No.: 610.205.6554

Enclosures:

Offer Letter
Summary of Just Compensation
Deed & Agreement of Sale
Temporary Construction Agreement
Settlement Statement
Plot Plan, Form W-9
Return Envelope

14

ROW OFFICE PROJ. NO.	060343
COUNTY	Delaware
S.R. - SECTION	1015 - RAD and 1046 - RAD R/W
MUNICIPALITY	Radnor Township
PARCEL NO.	4
CLAIM NO.	2300909000
CLAIMANT	Radnor Township

**OFFER TO PURCHASE
 AND SUMMARY OF
 JUST COMPENSATION**

Date: 2/13/18

301 Aven Avenue
 Wayne, PA 19087
 Attn: Robert Zienkowski, Radnor Township Manager

Dear Claimant:

Our appraisal of the effect of the above transportation improvement on your property has been completed. Accordingly, we are pleased to offer you the sum of \$53,400 for the right-of-way required from your property for the transportation improvement and for the effects on your remaining property, if any. This offer is intended to provide just compensation for all of your property interests, including tenants, if any.

The areas required are as follows:

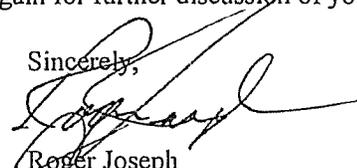
- Right of Way 7,492 Square Feet (.172 Acre)
- Slope Easement 4,835 Square Feet (.111 Acre)
- Temporary Construction Easement (3,746 Square Feet (.086 Acre)
- Drainage Easement 697 Square Feet (.016 Acre)

SITE improvements are included in direct damages

The amount offered is summarized as follows:

1. Direct Damages		\$50,400.00	
2. Indirect Damages		\$0.00	
Severance	\$0.00		
Cost to Cure	<u>\$0.00</u>		
3. Temporary Easement		<u>\$3,000.00</u>	
TOTAL DAMAGES OFFERED (items 1 to 3 above)			<u>\$53,400.00</u>

We hope that you will indicate your acceptance of our offer to the Right-of-Way Representative who delivers this letter so that we can process your payment as soon as possible. If you are undecided about accepting the offer, the Right-of-Way Representative will be glad to visit you again for further discussion of your claim.

Sincerely,

 Roger Joseph
 District Right-of-Way Administrator
 Engineering District 6-0

Attachments: Plan of Area to be Acquired
 Your Right-of-Way Representative is: Henry Litwin
 Telephone Number: 610-205-6554

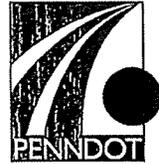
Prepared By: Henry A. Litwin
Commonwealth of Pennsylvania
Department of Transportation
7000 Geerdes Boulevard
King of Prussia, PA 19406-1525

Return To: Henry A. Litwin
Commonwealth of Pennsylvania
Department of Transportation
7000 Geerdes Boulevard
King of Prussia, PA 19406-1525

Site Location: Tax Parcel Number:

RW-317F (7/07)
18-K-560

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION**



ROW OFFICE PROJ. NO.	056342
COUNTY	Delaware
S.R. - SECTION	1015-RAD
MUNICIPALITY	Radnor Township
PARCEL NO.	4
CLAIM NO.	2300909000
CLAIMANT	Radnor Township

**DEED
(Fee Simple)**

THIS INDENTURE, made _____ by Radnor Township owner(s) of property affected by the construction or improvement of the above mentioned State Route, their heirs, executors, administrators, successors, and/or assigns, hereinafter, whether singular or plural, called the GRANTOR, and the Commonwealth of Pennsylvania, Department of Transportation, hereinafter called the COMMONWEALTH,

WITNESSETH:

WHEREAS the COMMONWEALTH intends to record a plan in the Recorder of Deeds Office of the aforesaid County indicating its authorization to condemn property for the above highway from the aforesaid property; and

WHEREAS the parties hereto have agreed that, in lieu of condemnation, the GRANTOR will convey in fee simple and such other estate(s) as designated, if any, to the COMMONWEALTH the property or portion thereof required by the COMMONWEALTH,

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration, the GRANTOR does hereby grant and convey to the COMMONWEALTH

- In fee simple the premises described by metes and bounds in exhibit "A".
- In fee simple that portion of the aforesaid premises designated as required right-of-way or as acquired in fee simple for other purposes on the plot plan attached hereto and made a part hereof; and those areas, if any, designated as required for easement purposes as identified by the plot plan and set forth below.

BEING all or a portion of the same property conveyed or devised to the GRANTOR by DEED of Samuel M.V. Hamilton & Herbert S Riband, Jr., Executors of the Estate of Charlotte Dorrance Wright, , dated May 4, 1979 and recorded in Deed Book No. 2693, Page 0184. This conveyance contains 0.172 Acres of Right-of-Way, Slope Easement of 0.111 Acres and Drainage Easement of 0.016 Acres. and is identified on COMMONWEALTH plans as Parcel 4, together with the improvements, hereditaments and appurtenances thereto and the GRANTOR warrants GENERALLY the property hereby conveyed.

RESERVING, however, to the GRANTOR the right to deep mine minerals and remove gas and oil within the areas hereunder acquired from a minimum depth to be determined by the COMMONWEALTH, from mine shafts or by means of wells located off the right-of-way.

The GRANTOR does further remise, release, quitclaim and forever discharge the COMMONWEALTH or any agency or political subdivision thereof or its or their employees or representatives of and from all suits, damages, claims and demands which the GRANTOR might otherwise have been entitled to assert under the provisions of the Eminent Domain Code, 26 Pa.C.S. § 101 et seq., for or on account of this conveyance and any injury to or destruction of the aforesaid property of the GRANTOR through or by reason of the aforesaid highway construction or improvement, except damages, if any, under Section 710 (Limited Reimbursement of Appraisal, Attorney and Engineering Fees) and Section 711 (Payment on Account of Increased Mortgage Costs) of the Eminent Domain Code; provided, however, that if relocation of a residence or business or farm operation is involved, this release shall likewise not apply to damages, if any, under Section 902 (Moving Expenses) and/or Section 903 and/or 904 (Replacement Housing) of the Eminent Domain Code.

The GRANTOR does further indemnify the COMMONWEALTH against any claim made by any lessee of the aforesaid property who has not entered into a Settlement Agreement with the COMMONWEALTH.

Certificate of Residence

I hereby certify the Grantee's precise residence to be:

Commonwealth of Pennsylvania
Department of Transportation
7000 Geerdes Boulevard\
King of Prussia, PA 1906-1525

Witness my hand this _____ day of _____, _____

Agent for the Commonwealth of Pennsylvania
Department of Transportation

The GRANTOR has executed or caused to be executed these presents, intending to be legally bound thereby.

INDIVIDUALS

ENTITIES*

GRANTOR:
Radnor Township
(Name of Entity)

BY: _____
Robert Zienkowski - Township Manager

BY: _____

* Use this block for a corporation, partnership, LLC, government entity, school district, church, trust, club, association, POA, attorney-in-fact, executor, administrator or any other entity. See R/W Manual Section 3.06.

INDIVIDUAL

ENTITY

STATE OF PENNSYLVANIA
 COUNTY OF _____
 On this _____ day of _____, 20____,
 before me, _____,
 the undersigned officer, personally appeared _____
 _____,
 _____, known to me
 (or satisfactorily proven) to be the person(s) whose
 name(s) _____ subscribed to the within instrument,
 and acknowledged that _____ executed the
 instrument for the purposes contained in it.
 In witness whereof, I hereto set my hand and official
 seal.
 _____ [Signature]
 _____ [Title]
 [Seal]

STATE OF PENNSYLVANIA
 COUNTY OF _____
 On this _____ day of _____, 20____,
 before me, _____, the undersigned
 officer, personally appeared _____
 _____, who acknowledged _____ self
 to be the _____ [title] of
 _____ [name of entity],
 and that as such _____
 _____ [title], being authorized to do so,
 executed the foregoing instrument for the purposes
 contained in it by signing on behalf of the entity as
 _____ [title].
 In witness whereof, I hereto set my hand and official seal.
 _____ [Signature]
 _____ [Title]
 [Seal]

APPROVED AS TO FORM AND LEGALITY:

For Chief Counsel

RW-317AF (7/07)
18-K-580

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION



ROW OFFICE PROJ. NO.	060343
COUNTY	Delaware
S.R. - SECTION	1015-RAD
MUNICIPALITY	Radnor Township
PARCEL NO.	4
CLAIM NO.	2300909000
CLAIMANT	Radnor Township

AGREEMENT OF SALE
(Fee Simple)

Made on _____ by Radnor Township owner(s) of property affected by the construction or improvement of the above mentioned State Route, their heirs, executors, administrators, successors and/or assigns, hereinafter, whether singular or plural, called the SELLER, and the Commonwealth of Pennsylvania, Department of Transportation, hereinafter called the COMMONWEALTH,

WITNESSETH:

WHEREAS the COMMONWEALTH intends to file a plan in the Recorder of Deeds Office of the aforesaid County indicating its authorization to condemn property for the above highway from the aforesaid property; and

WHEREAS the parties hereto have agreed that, in lieu of condemnation, the SELLER will convey in fee simple and such other lesser estate(s) as designated, if any, to the COMMONWEALTH the property or portion thereof required by the COMMONWEALTH.

NOW, THEREFORE, in consideration of the sum of Fifty Thousand & Four Hundred (\$50,400.00) Dollars and other good and valuable consideration, the SELLER hereby agrees to sell and convey to the COMMONWEALTH and the COMMONWEALTH agrees to purchase
 in fee simple the premises described by metes and bounds in Exhibit "A"
 in fee simple that portion of the aforesaid property designated as required right-of-way or as acquired in fee simple for other purposes on the plot plan attached hereto and made a part hereof; and those areas, if any, designated as required for easement purposes as identified by the plot plan and set forth below.

Being all or a portion of the same property conveyed or devised to the SELLER by DEED of Samuel M.V. Hamilton & Herbert S. Riband, Jr., Executors of the Estate of Charlotte Dornace Wright dated May 4, 1979, recorded in Deed Book 2344 Page 1015. This conveyance contains 0.172 Acres of Right of Way, 0.111 Acres of Slope Easement and 0.016 Acres of Drainage Easement and is identified on COMMONWEALTH plans as Parcel 4, together with the improvements, hereditaments and appurtenances thereto, except those which may be agreed below to be retained by the SELLER, free and clear of all liens, charges, delinquent taxes and assessments, and of all leases, agreements and other encumbrances which the SELLER has the right to terminate or remove. The SELLER will assign to the COMMONWEALTH all of the SELLER'S right, title and interest in those leases, agreements, and other encumbrances which cannot be terminated or removed. The SELLER will warrant GENERALLY the property interest to be conveyed.

Reserving, however, to the SELLER the right to deep mine minerals and remove gas and oil within the areas hereunder acquired from a minimum depth to be determined by the COMMONWEALTH, from mine shafts or by means of wells located off the right-of-way.

All expenses of examination of the title and of preparation and recording of the deed shall be paid by the COMMONWEALTH. Payment of the purchase price shall be made within ninety (90) days of the date of this agreement.

Loss or damage to the property by fire or other casualty shall be at the risk of the SELLER until possession of the property has been delivered to the COMMONWEALTH. The SELLER may continue to insure the property after possession has been delivered until title has passed to the COMMONWEALTH under this agreement, any insurance policy(ies) on such building(s) shall be amended to provide for payment thereunder (by means of a standard mortgage clause) to the COMMONWEALTH of the amount paid to the SELLER under this agreement.

The SELLER is assured that the COMMONWEALTH will not require vacation of the property for at least ninety (90) days from the execution of this agreement.

The SELLER will receive a NOTICE TO VACATE at least thirty (30) days before possession will be required by the COMMONWEALTH.

SELLER may remain in possession, on a rent free basis, until _____ after which date SELLER will pay rental to the COMMONWEALTH in the sum of \$ _____ per month, in advance, beginning _____, on a month-to-month basis until possession has been delivered. It is understood and agreed that the SELLER may relocate at their convenience prior to this date. From and after the execution of this instrument, the COMMONWEALTH, its agents and contractors, shall have the right to enter upon the premises to be conveyed for making studies, tests, soundings, and appraisals. The SELLER agrees to execute the Department's Lease Agreement, Form RW-670. Upon the expiration of one year, the amount of rental may be changed at the discretion of the COMMONWEALTH.

The SELLER does further remise, release, quitclaim and forever discharge the COMMONWEALTH or any agency or political subdivision thereof or its or their employees or representatives of and from all suits, damages, claims and demands which the SELLER might otherwise have been entitled to assert under the provisions of the Eminent Domain Code, 26 Pa.C.S. § 101 et seq., for or on account of this conveyance and any injury to or destruction of the aforesaid property of the SELLER through or by reason of the aforesaid highway construction or improvement, except damages, if any, under Section 710 (Limited Reimbursement of Appraisal, Attorney and Engineering Fees) and Section 711 (Payment on Account of Increased Mortgage Costs) of the Eminent Domain Code; provided, however, that if relocation of a residence or business or farm operation is involved, this release shall likewise not apply to damages, if any, under Section 902 (Moving Expenses) and/or Section 903 and/or 904 (Replacement Housing) of the Eminent Domain Code.

The SELLER does further indemnify the COMMONWEALTH against any claim made by any lessee of the aforesaid property who has not entered into a Settlement Agreement with the COMMONWEALTH.

The Parties have executed or caused to be executed these presents, intending to be legally bound thereby.

INDIVIDUALS

ENTITIES*

SELLER:

Radnor Township
(Name of Entity)

BY: _____
Robert Zienkowski - Township Manager

BY: _____

* Use this block for a corporation, partnership, LLC, government entity, school district, church, trust, club, association, POA, attorney-in-fact, executor, administrator or any other entity. See R/W Manual Section 3.06.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BY: _____
District Right-of-Way Administrator

DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
6-0	DELAWARE	1015	RAD R/W	13 OF 15	
		1046	RAD R/W		
RADNOR TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY

RIGHT-OF-WAY CLAIM INFORMATION
COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION

STATE RTE. 1015 SEC. NO. RAD R/W RADNOR TOWNSHIP DELAWARE COUNTY
 PARCEL NO. 2 SHEET NO. 6 & 7 CLAIM NO. _____
 PROPERTY OWNER(S) THE TOWNSHIP OF RADNOR, A BODY CORPORATE AND POLITIC
 GRANTOR(S) SAMUEL M. V. HAMILTON AND HERBERT S. RIBAND, JR., EXECUTORS OF THE ESTATE OF CHARLOTTE DORRANCE WRIGHT

TRACT	<u>A</u>	AREAS	SF	REQUIRED AREA	SF
DEED BOOK	<u>2693</u>	DEED	<u>0.225 AC</u>	REQUIRED RIGHT	<u>585</u>
PAGE	<u>0184</u>	CALCULATED	<u>9801</u>	OF WAY	
DATE OF DEED	<u>05/04/1979</u>	TOTAL			
DATE OF RECORD	<u>05/09/1979</u>	ADVERSES			
CONSIDERATION	<u>\$1.00</u>	LEGAL R/W	<u>4655</u>		
TAX STAMPS	<u>\$0.00</u>	EFFECTIVE	<u>5146</u>		
		TOTAL REQ'D R/W	<u>585</u>		
		TOTAL RESIDUE	<u>4561</u>	VERIFICATION	<u>08/04/2017</u>
		RESIDUE LT	<u>4561</u>	DATE	
		RESIDUE RT		DRAWN BY	<u>SCI</u>
				SCALE:	<u>AS SHOWN</u>

RIGHT-OF-WAY CLAIM INFORMATION
COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION

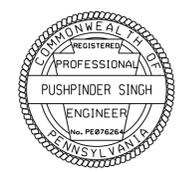
STATE RTE. 1015 SEC. NO. RAD R/W RADNOR TOWNSHIP DELAWARE COUNTY
 PARCEL NO. 3 SHEET NO. 6 & 7 CLAIM NO. _____
 PROPERTY OWNER(S) THE TOWNSHIP OF RADNOR, A BODY CORPORATE AND POLITIC
 GRANTOR(S) INVERARAY ASSOCIATES, A PENNSYLVANIA PARTNERSHIP

TRACT	<u>C</u>	AREAS	ACRES	REQUIRED AREA	ACRES
DEED BOOK	<u>0158</u>	DEED	<u>3.194</u>	REQUIRED RIGHT	<u>0.034</u>
PAGE	<u>0419</u>	CALCULATED		OF WAY	
DATE OF DEED	<u>05/16/1984</u>	TOTAL		TEMPORARY	<u>0.053</u>
DATE OF RECORD	<u>05/22/1984</u>	ADVERSES		CONSTRUCTION	
CONSIDERATION	<u>\$1.00</u>	LEGAL R/W	<u>0.387</u>	EASEMENT	
TAX STAMPS	<u>\$0.00</u>	EFFECTIVE	<u>2.807</u>	REQUIRED SLOPE	<u>0.071</u>
		TOTAL REQ'D R/W	<u>0.034</u>	EASEMENT	
		TOTAL RESIDUE	<u>2.773</u>	VERIFICATION	<u>08/04/2017</u>
		RESIDUE LT	<u>2.773</u>	DATE	
		RESIDUE RT		DRAWN BY	<u>SCI</u>
				SCALE:	<u>AS SHOWN</u>

RIGHT-OF-WAY CLAIM INFORMATION
COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION

STATE RTE. 1015 SEC. NO. RAD R/W RADNOR TOWNSHIP DELAWARE COUNTY
 PARCEL NO. 4 SHEET NO. 6 & 7 CLAIM NO. _____
 PROPERTY OWNER(S) THE TOWNSHIP OF RADNOR, A BODY CORPORATE AND POLITIC
 GRANTOR(S) SAMUEL M. V. HAMILTON AND HERBERT S. RIBAND, JR., EXECUTORS OF THE ESTATE OF CHARLOTTE DORRANCE WRIGHT (TRACT B) WILLOWS DEV. CO., A PENNSYLVANIA CORPORATION, NORMAN WOLGIN AND MARIAN WOLGIN, HIS WIFE (TRACT D) GIRARD TRUST COMPANY, TRUSTEE AND R. ALEXANDER MONTGOMERY SUBSTITUTED TRUSTEE UNDER DEED OF TRUST OF ROBERT L. MONTGOMERY AND HOPE B. TYLER MONTGOMERY, HIS WIFE (TRACT E)

TRACT	<u>B</u>	<u>E</u>	AREAS	ACRES	REQUIRED AREA	ACRES
DEED BOOK	<u>2693</u>	<u>2344</u>	DEED	<u>142.84</u>	REQUIRED	
PAGE	<u>0184</u>	<u>1015</u>	CALCULATED		RIGHT-OF-WAY	<u>0.172</u>
DATE OF DEED	<u>05/04/1979</u>	<u>06/24/1969</u>	ADVERSES		REQUIRED SLOPE	<u>0.111</u>
DATE OF RECORD	<u>05/09/1979</u>	<u>07/08/1969</u>	LEGAL R/W	<u>2.266</u>	EASEMENT	
CONSIDERATION	<u>\$1.00</u>	<u>\$300000.00</u>	EFFECTIVE	<u>140.574</u>	TEMPORARY	
TAX STAMPS	<u>\$0.00</u>	<u>\$0.00</u>	TOTAL REQ'D R/W	<u>0.172</u>	CONSTRUCTION	<u>0.086</u>
TRACTS	<u>D</u>		TOTAL RESIDUE	<u>140.402</u>	EASEMENT	
DEED BOOK	<u>2472</u>		RESIDUE LT		REQUIRED	<u>0.016</u>
PAGE	<u>0318</u>		RESIDUE RT	<u>140.402</u>	DRAINAGE	
DATE OF DEED	<u>06/14/1973</u>				EASEMENT	
DATE OF RECORD	<u>06/19/1973</u>				VERIFICATION	<u>08/04/2017</u>
CONSIDERATION	<u>\$1150000.00</u>				DATE	
TAX STAMPS	<u>\$0.00</u>				DRAWN BY	<u>SCI</u>
					SCALE:	<u>AS SHOWN</u>



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	DELAWARE	1015	RAD R/W	14 OF 15
		1046	RAD R/W	
RADNOR TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
△	CHANGED PARCEL NUMBER			

LEGEND

-  REQUIRED RIGHT-OF-WAY
-  RIGHT-OF-WAY RESERVED BY PHILADELPHIA ELECTRIC COMPANY AND/OR AMERICAN TELEGRAPH AND TELEPHONE COMPANY AND/OR RADNOR TOWNSHIP

PRIVATE PROPERTY LINES ARE PLOTTED FROM THE DEED OF RECORD, RECORDED SUBDIVISION OR LOT PLANS, EXISTING TOPOGRAPHICAL FEATURES AND LIMITED FIELD DATA. PRIVATE PROPERTY LINES WERE NOT SURVEYED BY THE PROFESSIONAL LAND SURVEYOR RESPONSIBLE FOR THE PROJECT.

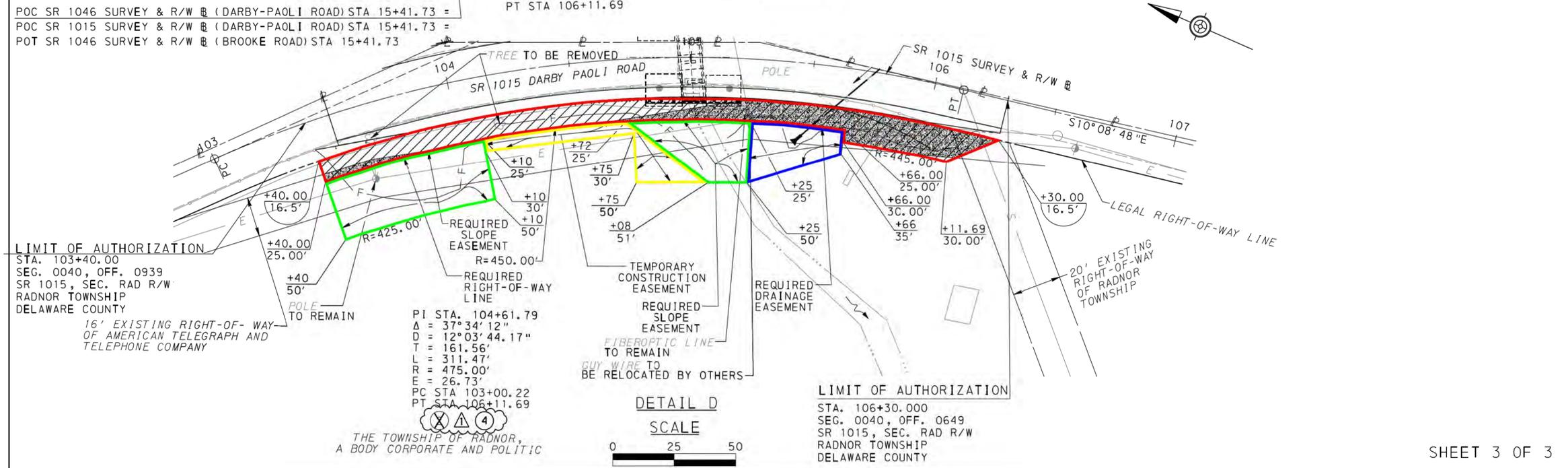
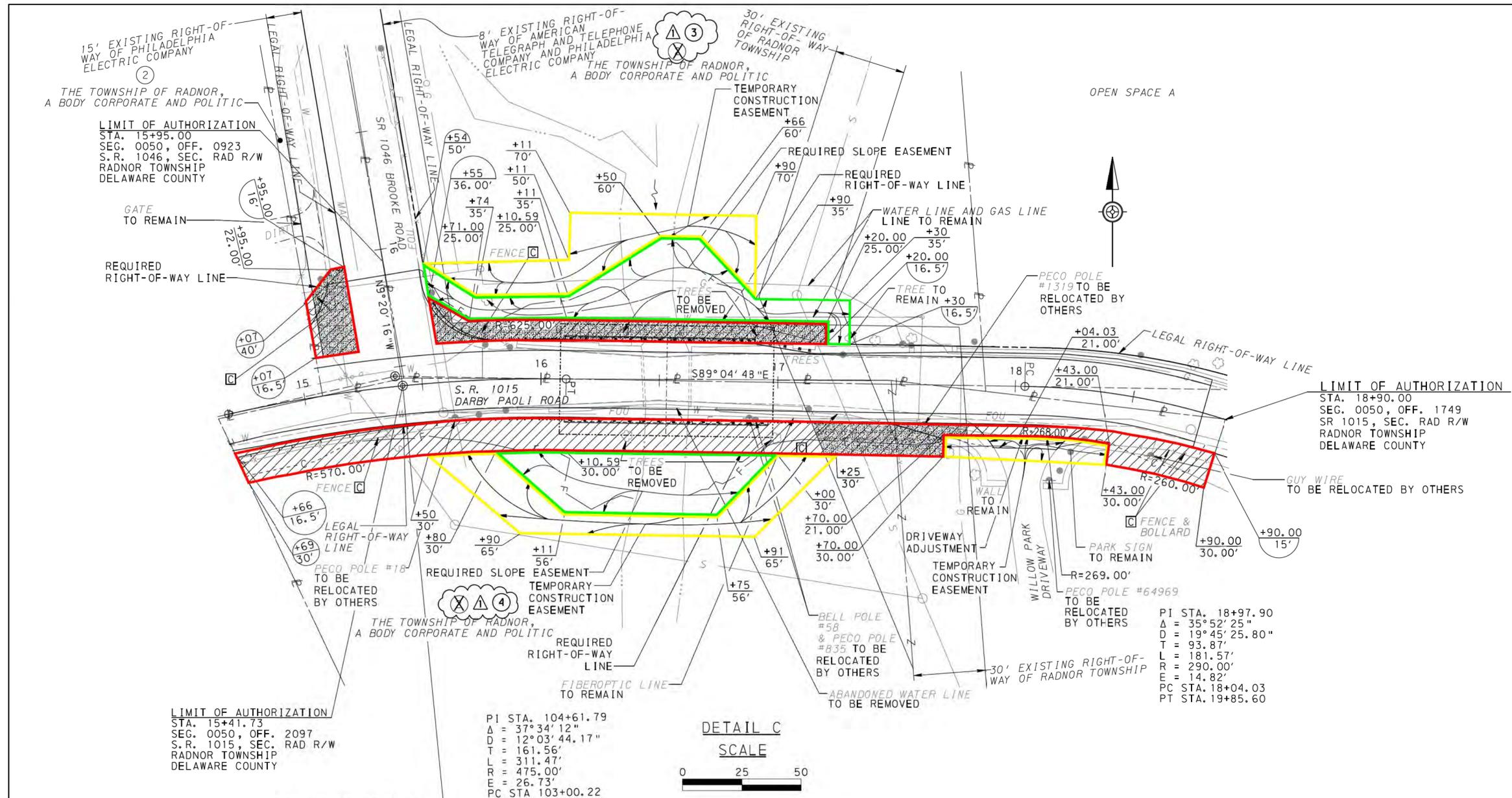
BUILDINGS AND STRUCTURES MARKED [] HAVE BEEN OR ARE TO BE REMOVED OR ALTERED BY THE DEPARTMENT OR OTHER AUTHORITY RESPONSIBLE FOR THE PAYMENT OF PROPERTY DAMAGES.

THIS PROPERTY PLOT IS NOT TO BE SUBSTITUTED FOR A BOUNDARY SURVEY.

TEMPORARY CONSTRUCTION EASEMENT. AN EASEMENT TO USE THE LAND AS NECESSARY DURING CONSTRUCTION OF THE PROJECT. THE EASEMENT IS REQUIRED ONLY UNTIL THE CONSTRUCTION OR WORK INDICATED BY THE PLAN IS COMPLETED, UNLESS SOONER RELINQUISHED IN WRITING BY THE DEPARTMENT.

SLOPE EASEMENT. AN EASEMENT FOR THE SUPPORT AND PROTECTION OF THE HIGHWAY, INCLUDING THE RIGHT TO CONSTRUCT, INSPECT, MAINTAIN, REPAIR, RECONSTRUCT AND ALTER DRAINAGE FACILITIES AND THE CONTOUR OF THE LAND. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY SUPPORT AND PROTECTION OF THE HIGHWAY RIGHT-OF-WAY AND THE SAFETY OF THE TRAVELING PUBLIC.

DRAINAGE EASEMENT. AN EASEMENT FOR THE CONSTRUCTION, INSPECTION, MAINTENANCE, REPAIR, RECONSTRUCTION AND ALTERATION OF HIGHWAY DRAINAGE FACILITIES. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY FLOW OF WATER. HOWEVER, NO STRUCTURE OF ANY KIND MAY BE ERRECTED IN THE AREA, NOR MAY ANY PIPE OR DITCH BE CONNECTED TO THE DEPARTMENT'S PIPE OR DITCH WITHOUT ADVANCED WRITTEN APPROVAL BY THE DEPARTMENT OF TRANSPORTATION.

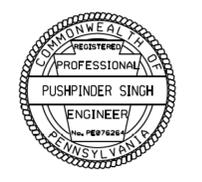


POC SR 1046 SURVEY & R/W (DARBY-PAOLI ROAD) STA 15+41.73 =
 POC SR 1015 SURVEY & R/W (DARBY-PAOLI ROAD) STA 15+41.73 =
 POT SR 1046 SURVEY & R/W (BROOKE ROAD) STA 15+41.73

LIMIT OF AUTHORIZATION
 STA. 103+40.00
 SEG. 0040, OFF. 0939
 SR 1015, SEC. RAD R/W
 RADNOR TOWNSHIP
 DELAWARE COUNTY

PI STA. 104+61.79
 $\Delta = 37^\circ 34' 12''$
 $D = 12^\circ 03' 44.17''$
 $T = 161.56'$
 $L = 311.47'$
 $R = 475.00'$
 $E = 26.73'$
 PC STA 103+00.22
 PT STA 106+11.69

LIMIT OF AUTHORIZATION
 STA. 106+30.00
 SEG. 0040, OFF. 0649
 SR 1015, SEC. RAD R/W
 RADNOR TOWNSHIP
 DELAWARE COUNTY



RADNOR TOWNSHIP

ENGINEERING DEPARTMENT



Memorandum

To: Radnor Township Board of Commissioners

From: Stephen F. Norcini, PE, Township Engineer *SN*

CC: Robert A. Zienkowski, Township Manager
William M. White, Assistant Manager/Director of Finance

Date: September 18, 2018

Re: SALDO Application #2016-SD-10, 415 Maplewood Avenue, Semerjian, Preliminary Approval

Before the Board of Commissioners will be representatives of 415 Maplewood Avenue, David Semerjian's Application, for Preliminary Approval. This project dates to 2016. The time period for action by the Commissioners is September 25th, 2018. The project consists of ten proposed townhouses to be constructed at the D'Antonio Paving facility (Central Avenue).

Over the summer, Commissioner Abel convened a Town Hall meeting where the applicant presented the proposed plans. Residents were able to ask questions and provide input to the applicant, staff, and Commissioner Abel. From this meeting, topics arose from the residents that are to be discussed at the September 19, 2018 Staff Traffic Meeting:

- Speeding on Maplewood Avenue
- Speeding on Highland Avenue
- Emergency vehicle access on Maplewood Avenue

Please find attached, for your information:

- Resolutions as provided by the Solicitor
- Review letters
- Waiver request by the applicant
- Applicant's letter noting the date for action by the Commissioners
- Plan set

PIERCE, CANIGLIA & TAYLOR

ATTORNEYS AT LAW

125 STRAFFORD AVENUE - SUITE 110

P. O. BOX 312

WAYNE, PENNSYLVANIA 19087

JAMES M. PIERCE
NICHOLAS J. CANIGLIA
KENNETH C. TAYLOR

TELEPHONE
(610) 688-2626
FAX
(610) 688-5761

September 17, 2018

Stephen F. Norcini, PE
Township Engineer
Township of Radnor
301 Iven Avenue
Wayne, PA 19087

**Re: 415 Maplewood Avenue
2016-SD-10
Preliminary Land Development Application
Waivers**

Dear Steve:

Kindly distribute and file this letter as a Supplement to Applicant's Land Development Application regarding the requested Waivers. As indicated below one of the requested Waivers addresses the existing non-conforming right-of-way on Maplewood Avenue; all of the others related to the access to the site.

BACKGROUND: The site is 1.69 acres zoned R-5 Residential. The R-5 Zoning District permits single family dwellings, single-family detached dwellings (twins), multiple dwellings, apartment house, and townhomes. It does not permit any commercial uses. The site is currently divided into seven (7) separate lots and tax parcels. The Property is non-conforming in regards to use in that it contains two single-family dwellings, two garages devoted to commercial uses, and multiple types of commercial contractor uses, such as landscapers, pavers, tree surgeons, and construction contractors. The Property is also non-conforming with respect to side yard setback with the Bike Trail and impervious coverage. The Property has no storm-water management system.

Applicant proposes to replace the existing uses on a narrow linear Property. The Plan indicates the merger of the seven separate lots into one lot, the removal of all zoning non-conformities, and the construction of ten (10) townhomes on the lot. The proposed Plan complies with all zoning requirements. The Applicant will comply with all township requirements regarding storm-water management. The proposed development is consistent with all other recent townhome developments in the Township located at West Wayne Avenue, Bloomingdale Avenue, West Wayne and Conestoga Road, and Strafford Avenue.

REQUESTED WAIVERS FROM SUBDIVISION AND LAND DEVELOPMENT ORDINANCE (“SALDO”):

§255.27.C(1) – The Township’s consultant has advised the Applicant that a Waiver is required from this section of the SALDO. Applicant proposes to keep the existing right of way on Maplewood Avenue which is 33 feet or 16.5 feet from the centerline of the road. §255.27.C(1) of the SALDO provides a chart for suggested rights-of-way. For minor collectors such as Maplewood Avenue it suggests a 60 foot right-of-way. §255.27.C(2) states: “Additional right-of-way and/or cartway *may be required* by the Board of Commissioners in order to lessen traffic congestion, to secure safety from fire, panic and other dangers, to facilitate the adequate provision for transportation and other public requirements and to promote the general welfare.” This provision is a discretionary and not a mandatory provision of the SALDO by the language of the ordinance that the Township “may require” additional right-of-way. Any recommendation by the Township of acquiring additional right-of-way would require the Township to compensate a developer since it is a “taking” of land. Since this is a discretionary provision of the SALDO, a Waiver is not required, however, in the alternative, Applicant requests a Waiver for the grounds set forth below.

To the west of the Property are existing single family dwellings situated in close proximity to the existing right-of-way. To the east is a railroad (Bike Trail) bridge abutment. The right of way on either side of the proposed project will not be increased without major costs as it would have to be obtained through condemnation or purchase. The purpose of obtaining additional right-of-way is to widen an existing cartway and/or install, repair or replace existing utilities. Applicant proposed to increase the right-of-way fronting on its Property from 16.5 feet to 25 feet. This additional area is more than adequate to provide for utility installation. Due to the anticipated costs to the Township to further widen Maplewood Avenue beyond the proposed project is not feasible. Due to the peculiar conditions of the Property and its surrounding area literal enforcement of this provision of the SALDO will exact undue hardship on the Applicant, and will not be contrary to the public interest and the purpose and intent of the ordinance. Furthermore, in the past the Township has consistently waived this provision for similar developments.

§255.27.E(2) – The section provides: “The private street shall have a right-of-way width ... consistent with the requirements for public street.” The SALDO requires for a twenty-eight (28) foot cartway and sixty (60) foot right-of-way for “Local streets.” This width is consistent with a traditional residential street with parking on one side of the street. No parking will be permitted on the proposed access to the townhomes. The SALDO requires twenty-four (24) foot driveways and aisles for parking areas. Applicant proposes a twenty-four (24) foot driveway consistent with this provision. Applicant does not propose a street, but an access drive for the townhomes, hence §255.27.E(2) should

415 Maplewood Avenue

Page 3

Waivers

not be applicable. This project is similar in nature to other townhome developments in the Township, none of which have required the applicant to comply with this provision of the SALDO. If this provision were to be applied to this Property, the 60-foot right-of-way, plus the 50-foot front yard setback, plus the 30-foot rear yard setback would require a total of 140 feet before a home could even be constructed. The Property is a narrow irregularly-shaped linear lot which in most areas is less than 140 feet. The literal enforcement of the ordinance would have no benefit to the public, would frustrate the effect of the improvements, and offers no substantial equivalence to the SALDO requirement. The enforcement of this section of the SALDO would prevent any development on the Property.

§255.27.F(2)(a) – This section requires a minimum center-line radii for curves to be 150 feet. Similar to the above discussion this provision is the minimum for a residential development plan for residential single lots, not a townhome development. In addition with the cartway and right-of-way requirements it would prevent development of the Property. The Plan indicates adequate truck turning and fire-safety requirements. The enforcement of this provision on a townhome development would have no benefit to the public, would frustrate the effect of the improvements, and offers no substantial equivalence to the SALDO requirement. Hence, the previous approvals of similar developments in the Township have not required compliance with this section.

§255.27.H(6) – This section specifies that the intersection radii for a local residential street must be twenty-five (25') feet. This access drive is not a local residential street with through traffic. It is an access driveway to a townhome development. The Waiver requests a reduced radius of twenty (20') on the western side of the driveway where it intersects with Maplewood Avenue. The proposed radii permit a smooth and safe access to the site for all types of vehicles. The truck turning templates indicate that adequate access will be provided with the radii proposed. The strict enforcement of this section offers no benefit to the public and due to the narrow shape of the Property literal enforcement will cause undue hardship on the Applicant.

§255.27.A(5)&(6) – Both of these sections require that Dead-end streets shall be prohibited except when designed as culs-de-sac. The Plan calls for an access drive to townhomes. No townhome development in the Township provides a cul-de-sac. This provision is not relevant to townhome developments. If a Waiver is required the Plan provides for emergency access through an existing private street. The Applicant has agreed to maintain and upgrade the remainder of the private street. No townhome development would exist in the Township if these provisions were literally enforced. The installation of a cul-de-sac would take up the entire width of the Property. The irregular nature and narrowness of the Property creates an undue hardship which would frustrate the effect of the improvements and serve no benefit. The proposed access offers a substantial equivalence to the SALDO requirements.

415 Maplewood Avenue

Page 4

Waivers

§255.28 – The Township sets sight distance requirements greater than those established by the Pennsylvania Department of Transportation. The proposed access is located at the same location as the existing access to the site. As stated by the Township's Traffic Consultant, the Applicant is providing adequate sight distance per the PA Code §441.8(h)(1). No development would exist on the site if literal enforcement of the Township's specifications is enforced.

Very truly yours,



NICHOLAS J. CANIGLIA

- c. John Rice, Esquire
- Peter Nelson, Esquire
- Roger Phillips, P.E.
- Amy Kaminski, P.E.

PIERCE, CANIGLIA & TAYLOR

ATTORNEYS AT LAW

125 STRAFFORD AVENUE - SUITE 110

P. O. Box 318

WAYNE, PENNSYLVANIA 19087

JAMES M. PIERCE
NICHOLAS J. CANIGLIA
KENNETH C. TAYLOR

TELEPHONE
(610) 688-2626
FAX
(610) 688-5761

August 10, 2018

Steve Norcini, P.E.
Engineering Department
Township of Radnor
301 Iven Avenue
Wayne, Pa. 19087

**RE: 415 Maplewood Avenue – Preliminary Subdivision Plan
Number: 2016-SD-10**

Dear Steve:

The above required 90-day review by the Township on the above was extended indefinitely by the engineer on the project by letter dated November 29, 2016. This Plan has been pending before the Township since January of 2018. Due to the length of time already transpired, the Applicant hereby grants the Board of Commissioners until September 25, 2018 to take action on the Application.

I understand that the Staff Traffic Committee may consider traffic on Maplewood Avenue adjacent to the proposed development at its August 15th meeting. Both David Semerjian and I will be on vacation that week and will be unable to attend that meeting. We are willing to meet with Staff Traffic at its September 19th meeting.

Thank you for your time and consideration.

Very truly yours,



NICHOLAS J. CANIGLIA

c. John Rice, Esquire
Roger Phillips, P.E.



*Excellence Delivered **As Promised***

Date: July 9, 2018

To: Stephen Norcini, P.E. – Township Engineer

From: Roger Phillips, PE

cc: Kevin W. Kochanski, RLA, CZO – Director of Community Development
Peter Nelson, Esq. – Grim, Biehn, and Thatcher
Amy B. Kaminski, P.E. – Gilmore & Associates, Inc.
Patricia Sherwin – Radnor Township Engineering Department

RE: 415 Maplewood Avenue – Preliminary Subdivision Plan
David Semerjian Builders – Applicant

Date Accepted: July 5, 2016

90 Day Review: October 3, 2016, extended indefinitely

Gannett Fleming, Inc. has completed a review of the Preliminary Subdivision Plans for compliance with the Radnor Township Code. These plans were reviewed for conformance with Zoning, Subdivision and Land Development, and other applicable codes of the Township of Radnor.

The applicant is proposing to consolidate parcels and construct 10 town houses on the site. This project is located in the R-5 district of the Township.

The applicant has indicated on the plans that the following waivers are being requested:

- §255-27.C(1) – To maintain the existing condition right-of-way and cartway for Highland and Maplewood Avenues.
- §255-27.E(2) – To allow a 24' wide cartway for the internal drive.
- §255-27.F(2)(a) – To permit centerline radius less than 150' as the access is a private driveway to be owned and maintained by the homeowners association.
- §255-27.H(6) – To permit the proposed radii of 15' as the proposed drive is not a local street.

Preliminary Subdivision Plans – 415 Maplewood Avenue

Plans Prepared By: Edward B. Walsh & Associates, Inc.

Dated: 12/8/2014 and last revised 06/06/2018



Sewage Facilities Planning

- I. Final plan approval will not be granted until Planning Approval is received from the PA DEP. The applicant is in the process of obtaining capacity certifications.

Zoning

1. §280-4.B – Parking space is defined as an outdoor or garage space used for parking motor vehicles, which shall measure not less than 9 feet six inches x 20 feet, accessible from a street, alley or driveway and surfaced with a Township approved durable dustproof and all-weather surface. The applicant must clearly demonstrate that there is adequate parking in the driveway and garage of each unit for 2 parking spaces. The width of each drive way is dimensioned on the plans as 18 feet. **The driveway length for unit 9 and 10 is shown as less than 20 feet on the plans.** The applicant has indicated that the dimensions and size of parking spaces in the garage will be provided with the building permit submission. We believe this should be provided prior to plan approval.
2. §280-4.B – The dimensions of the over flow parking spaces must be shown on the plans.
3. §280-35.B(9) – The maximum impervious surfaces allowed for this project is 36%. The plans indicate that the total impervious provided is 36% with using a porosity reduction. Without the reduction, the applicant is above the maximum allowable impervious coverage.

Subdivision and Land Development

1. §255-27.C(1) – Maplewood Avenue is classified as a Minor Collection Road. The required right of way is 60 feet and the required cartway is 36 feet. Highland Avenue is a local road. The required right of way is 60 feet and the required cartway is 28 feet. Curbing and sidewalks must be provided. The applicant has provided right-of-way 25 feet from the centerline of Maplewood Avenue. The existing legal right of way along Highland Avenue is 50 feet. The applicant is requesting a waiver from this requirement.
2. §255-27.E(2) – The private street shall have a right-of-way width and a horizontal and vertical alignment consistent of the requirements for public streets. The applicant is requesting a waiver from this section to allow a 24' wide cartway for the internal drive.
3. §255-27.F(2)(a) – The minimum center-line radii for horizontal curves for local collector streets and courts shall be 150 feet. The applicant has requested a waiver to this requirement.

4. §255-27.H(6) – Minimum curb radii at street intersections shall be 25 feet for local streets, 30 feet for collectors; 35 feet for arterials and 10 feet for driveways. The applicant has indicated a 15-foot curb radii on the plans. The applicant is requesting a waiver from this requirement.
5. §255-35 – A sanitary sewer easement description must be provided prior to recording the final plans.
6. §255-37.E – Sidewalks and pedestrian paths shall be adequately lighted, if required by the Board of Commissioners. The applicant has provided 5 street lights along the proposed private driveway.
7. §255-38 – Sheet 12 of 18 indicates that there will be plantings located in the existing private street and interfering with the proposed 12' emergency access. This must be revised.
8. §255-38.H – All street trees provided on the plans must be in accordance with this section. There are trees listed on sheet 12 of the plans that are not listed in this section. This must be revised or a waiver requested. The applicant has indicated that due to the changes of the plan, they are required to go back to shade tree.
9. §255-40.C(2) – Access and circulation for fire-fighting and their emergency equipment, moving vans, fuel trucks, garbage collection, deliveries and snow removal shall be planned for efficient operation and convenience. The applicant has provided a 12' emergency access from the private street. Significant concern exists as to the ability to access the proposed houses from the single driveway. This must be reviewed and approved by the Township Code Official/Fire Marshall.
10. §255-40.E(3) – All driveways shall be paved and constructed in accordance with Township Standards. The applicant is intending to utilize pavers for the driveways.
11. §255-43.1.B(1) – For all residential subdivisions or land developments involving a total of four or more lots and/or dwelling units, a minimum of 1,440 square feet or suitable park and recreation land shall be provided per dwelling unit within such subdivision/land development, unless the developer agrees to a fee in lieu of \$3,307 per dwelling unit (existing or proposed).
12. §255-54.B – The central water system should be designed with adequate capacity and appropriately spaced fire hydrants for fire-fighting purposes pursuant to the specification of the National Fire Protection Association. Review and approval by the Township Engineer and the Township Fire Marshall shall be required in order to ensure that adequate fire protection is provided.

Stormwater

1. The Infiltration Bed #1 detail shows 4 sections of 55 LF of pipe; however, the stormwater report is based on 5 sections of 55 LF of pipe. This discrepancy must be revised.
2. There appears to be a mathematical error in calculating the water quality volume (WQ_v). The WQ_v should be 0.0666 ac-ft or 2901 cf. This equation must be revised.
3. The pre-development drainage area encompasses 2.61 acres whereas the post-development drainage area encompasses 2.51 acres. These two areas should be of equivalent size. In addition, the leader for Post-Developed Drainage Area to POI #1 appears to be pointing to the existing private street off Highland Avenue, which is not included within the project drainage area. Based on the proposed contours, there is a high point elevation of 462 in the northern corner of the site which would send runoff east to the bypass drainage area and west to presumably POI #1. The drainage area maps must be revised.
4. Worksheet 5 (page 142) and the Stormwater BMP Information tables in the plans list the volume to be infiltrated for Bed #2 as 1393 cf whereas the hydrographs show 1383 cf to be infiltrated. This discrepancy must be revised.
5. We note that the applicant will include gas and electric crossings on the profiles when the respective utility companies have laid out the utility locations.
6. The Stormwater BMP Information POI #2 table on sheet 8 must be updated to be consistent with the infiltration bed details and stormwater report.
7. Final approval of the stormwater management plan will be required as part of the Grading Permit process. Any revisions to the size or location of the individual structures or other features will be addressed at that time.

General

1. We note that there are 2 trees proposed in the snow disposal area by the overflow parking spaces. These must be relocated.

The applicant appeared before the Planning Commission on March 5, 2018. The Planning Commission recommended approval of the plans and requested waivers along with the additional waivers of:

- §255-27.I(7) – No common driveway shall provide access to more than three lots or single family dwellings.
- §255-29.A(2) – Parking areas shall be designed to permit each motor vehicle to proceed to and from the parking spaces provided for it without requiring the moving of any other motor vehicles.

Steve Norcini
415 Maplewood Avenue
July 9, 2018

- §255-29.A(3) – All parking spaces shall be marked so as to provide for orderly and safe parking.
- §255-29.A(15) – All dead-end parking areas shall be designated to provide sufficient backup area for the end stalls of a parking area.

Along with these additional waivers, the Planning Commission recommended that the applicant add the following information to the Home Owners Association documents:

- Garages cannot be converted to living space
- There shall be one contracted trash service for the development
- No parking of cars shall overhang on the sidewalks
- There shall be one contracted snow removal service and snow must not be placed on any other property
- Ingress and Egress will be provided for the 4 properties

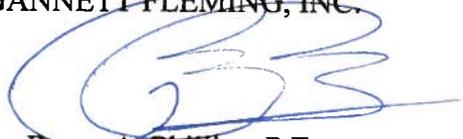
Additionally, all Township Zoning requirements must be met.

The applicant was before the Planning Commission again on June 2, 2018 due to numerous changes on the plan. The Planning Commission approved the plan and requested waivers. Also the Planning Commission requested a stop sign on the private street and to limit access except for emergency vehicles.

If you have any questions or require any additional information, please contact me.

Very truly yours,

GANNETT FLEMING, INC.



Roger A. Phillips, P.E.
Senior Project Manager



MEMORANDUM

Date: July 5, 2018

To: Steve Norcini, P.E.
Radnor Township Engineer

From: Amy Kaminski, P.E., PTOE
Transportation Services Manager

cc: John Rice, Esq., Grim Biehn & Thatcher
Peter Nelson, Esq., Grim Biehn & Thatcher
Roger Phillips, P.E., Senior Associate, Gannett Fleming, Inc.
Damon Drummond, P.E., PTOE, Gilmore & Associates, Inc.

Reference: Radnor Township – 415 Maplewood Avenue 2016-SD-10
Preliminary Subdivision Plan Review #5
Radnor Township, Delaware County, PA
G&A 15-01021

Gilmore & Associates, Inc. (G&A) has completed a transportation review of the referenced Preliminary/Final Subdivision Plan for a ten (10) unit residential townhouse development at 415 Maplewood Avenue. The Applicant proposes to remove two (2) existing dwelling units, construct five (5) residential buildings consisting of a total of ten (10) townhouse units, and terminate Central Avenue near Highland Avenue on a 2.17 acre parcel located in the R-5 Zoning District. The dwelling units will take access via Maplewood Avenue from a modified existing private access identified as Central Avenue.

We offer the following discussion for Radnor Township consideration:

A. DOCUMENTS REVIEWED

1. Preliminary Subdivision Plans for 415 Maplewood Avenue, prepared for David Semerjian Builders, prepared by Edward B. Walsh & Associates, Inc., consisting of 18 sheets, dated December 8, 2014, last revised June 6, 2018.
2. Response letter prepared by Edward B. Walsh & Associates, Inc., dated June 8, 2018.

B. SUBDIVISION AND LAND DEVELOPMENT ORDINANCE COMMENTS

1. §255-27.A(5) – Dead-end streets shall be prohibited, except as stubs to permit future street extension into adjoining tracts or when designed as cul-de-sac. The application creates two Central Avenue dead-end streets by eliminating the continuous connection to both Highland Avenue and Maplewood Avenue. Both roadway terminations of Central Avenue require a cul-de-sac end treatment. **The Applicant is requesting a waiver from this requirement.**
2. §255-27.A(6) – Stub streets greater in length than one lot width shall be provided with a turnaround designed to meet the standards required for cul-de-sac and shall be

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65 E. Butler Avenue | Suite 100 | New Britain, PA 18901
Phone: 215-345-4330 | Fax: 215-345-8606

www.gilmore-assoc.com

provided with sufficient rights-of-way to permit future extension of the street into the adjacent property. The application creates two Central Avenue dead-end streets by eliminating the continuous connection to both Highland Avenue and Maplewood Avenue. Both roadway terminations of Central Avenue require a cul-de-sac end treatment. **The Applicant is requesting a waiver from this requirement.**

3. §255-27.C(1) Maplewood Avenue shall be provided the required dimensional standards for local streets including a 60 foot right-of-way (30 foot half-width right-of-way), 28 foot cartway width (14 foot half-width) and curbing and sidewalk along the site frontages. The cartway widths shown on the adjacent roadways do not meet the dimensional standards of this section; Maplewood Avenue requires curbing along the site frontage west of Central Avenue and sidewalks widths must be labeled on the plan. **The Applicant is requesting a waiver from this requirement.**
4. §255-27.E(1) – No more than five lots may be permitted to front on a private street. The Applicant indicates that the plan is designed as condominiums with one proposed lot. Although the HOA will maintain the overall property outside the residential structures, each residential unit structure will be individually owned and is considered an individual lot with a tax map parcel number. We defer to the Township Solicitor regarding this comment.
5. §255-27.E(2) – The access street shall include a twenty-eight (28) foot cartway, sidewalk and curbing along the entire frontage. Although the access street is proposed as a private street; the design must meet Township public street standards. The Applicant is proposing a twenty-four (24) foot cartway and is **requesting a waiver from this section.**
6. §255-27.F(2)(a) – The minimum center-line radii for horizontal curves on local roadways shall be no less than 150 feet. **The Applicant is requesting a waiver from this requirement.**
7. §255-27.H(6) –The minimum curb radii provided at street intersections shall be 25 feet for local streets. The Applicant is providing 15 foot radii and is **requesting a waiver from this requirement.** We note that sanitation trucks cannot maneuver the site without encroaching into opposing lanes.
8. §255-28 – Section 255-27.B(3)(d) indicates that Maplewood Avenue is classified as a minor collector street and therefore requires a stopping sight distance of 275 feet. We note the Applicant is providing adequate sight distance per PA Code 441.8(h)(1) (195' right and 250' left). The Applicant is requesting a waiver from this requirement.
9. §255-40.C(2) – Access and circulation for fire-fighting and other emergency equipment, moving vans, fuel trucks, garbage collection, deliveries and snow removal shall be planned for efficient operation and convenience. Revise the truck turning templates to include the fire truck accessing the site via the emergency access drive. We recommend the Applicant discuss with the Township Code Official as to the Township preference for deterring motorists from using this emergency access.



EDWARD B. WALSH & ASSOCIATES, INC.
Complete Civil Engineering Design / Consultation Services
Lionville Professional Center
125 Dowlin Forge Road
Exton, PA 19341

June 8, 2018

Roger Phillips, P.E. /Patricia Kaufman
Gannett Fleming
P.O. Box 80794
Valley Forge, Pa. 19484

Dear Roger and Patricia;

As you aware we received a recommendation for approval from the Radnor Township Planning Commission for the revised 10 unit 415 Maplewood Road Development plan. This submission has incorporated revisions as requested within your May 25, 2018 review letter and those requested by the Planning Commission. Thos comments that are related to zoning and waiver items or that did not require plan revisions have not been addressed and are not part of this letter. Its enumeration will be that as presented in your review letter.

We have not made any changes relative to the Gilmore and Associates letter as their comments were all relative to the waiver requests.

Gannett Fleming Letter

Sewage Facilities Planning

1. We concur that Radnor Township will not issue Final approval until we receive Planning Module approval. To that end the modules have been submitted to the Municipalities, Municipal Authorities and agencies that are required to sign off on the modules. That process is currently on going.

Zoning

1. My client will provide documentation within the building permit submission that dimensions and shows the size of the parking spaces within each garage.
2. We reviewed the impervious cover reduction information with the zoning officer prior to submission and received concurrence from him that the reductions relative to impervious coverage were acceptable. Stormwater management has been designed without the reductions. This item has not changed.

Subdivision

1-4. These comments are referencing the waiver requests. We are not sure if they are still necessary but we have left them on the plan.
5. We have added a Sanitary Sewer easement plan to the set.
6. Commentary. The lighting plan has only been changed to remove the lights along the access to Highland Avenue.
7. The Landscape plan has been adjusted to remove the trees from the Emergency access.
8. The street trees proposed were placed there because our Landscape architect felt that they were more appropriate to the setting within this project. We are required to go back before the Tree Commission to review this plan as some components have changed since they originally approved it. We will discuss the tree choices with them and adjust the plan as needed. The replacement tree note did not belong on this plan

June 8, 2018
415 Maplewood response letter

it was from a prior version before the arborist reviewed the trees on site and got permission to remove them.

9. The truck turning templates have been reviewed and found to be adequate by the traffic consultant. We were told the planning commission that they were going to be doing the review until a new Fire marshal is in place.

10. We believe that the driveways are being constructed in accordance with the Township standards. The standard requires stable and dust free.

11. We added a buffer screen along the eastern property line.

12. We concur.

13. The plan shows the proposed water main and fire hydrants. We believe their spacing to be compliant with the National Fire Protection Association. However if the Fire Marshal wants them adjusted we make the necessary adjustments. To date we have not received a review from the Fire Marshal.

Stormwater

1. Infiltration bed detail has been adjusted.

2. The bed three detail has been corrected.

3. We have modified the Outlet structure detail to match the calculations.

4. The Stormwater narrative has been modified to state that an emergency access will be provided to Highland Avenue.

5. The reference to the credit for vegetation has been removed.

6. The flow chart has been revised.

7. We corrected the WQV calculation within the report.

8. The label for POI 1 has been adjusted and the leader for the bypass area has been shifted.

9. We have adjusted the profiles to show all the specific crossing that were listed and revised the invert elevations of the inlets as necessary.

10. We do not know the location of the proposed gas and electric at this time. We will add that data when it is received. Both of these utilities are laid out by the respective utility companies and that has not occurred yet.

Sanitary Sewer

1. We were told that the Sanitary will most likely be owned by the township so we have added an easement plan to the set.

2. We have made an effort to keep the trees as far away from the laterals and sewer lines as possible and made every effort to maintain a minimum separation of 5'. Additionally we have added a note directing the contractor to maintain that separation if possible. See note 37 on the Landscape plan.

3. The label for the sewer should have been MH 5. We have revised it.

4. We added the laterals for units 3 and 4.

5. The lateral for unit 4 has been shifted.

General

1. We removed the retaining wall reference from the legend.

2. The signature block has been adjusted.

The other item that has been adjusted is that the planning commission requested that we increase the radius of the driveway at Maplewood to have a 25' radius on the eastern side and a 20' radius on the western side. We revised the plan and the ramps and sidewalk accordingly.

I believe we have addressed all of your concerns within this submission. If you have any questions or need any additional information please contact me.

Very truly yours,
EDWARD B. WALSH & ASSOC., INC.

Andrew Eberwein
Project Manager
Cc David Sermerjian

RADNOR TOWNSHIP

ENGINEERING DEPARTMENT

Memorandum

To: Radnor Township Planning Commission

From: Stephen F. Norcini, PE, Township Engineer *SN*

CC: Robert A. Zienkowski, Township Manager

Date: May 29, 2018

Re: **415 Maplewood Avenue**. Preliminary Subdivision Plan, David Semerjian Builders.
#2016-SD-10
Plans by Edward B. Walsh Associates, sheets 1-16, dated 12/08/2014, last revised 04/11/2018.
Ninety Day Review Period: October 3, 2016, extended indefinitely

This application was originally before the Planning Commission in 2016. The first iteration of plans depicted twelve dwelling units. The Planning Commission may recall that at previous Commission meetings, residents attended and voiced concerns over the project. A few of the concerns raised were:

- Disturbance of the properties on Highland Avenue and the private street
- Stormwater runoff regarding the properties on Maplewood Avenue
- Access/egress
- Snow removal

To this end, Commissioner Jacob Abel is convening a Town Hall Meeting on Wednesday, May 30, 2018, so the applicant can meet with the surrounding residents. Staff and our consultants will also be in attendance. Staff will update the Planning Commission on the outcome of the meeting.

The plan before the Planning Commission now puts forth ten dwelling units, and the driveway now terminates at the western end of the subdivision. There is an emergency access constructed of grass pavers proposed, to allow access to Highland Avenue. The detailed review letters and plans are attached for your review.



*Excellence Delivered **As Promised***

Date: May 25, 2018

To: Stephen Norcini, P.E. – Township Engineer

From: Roger Phillips, PE

cc: Kevin W. Kochanski, RLA, CZO – Director of Community Development
Peter Nelson, Esq. – Grim, Biehn, and Thatcher
Amy B. Kaminski, P.E. – Gilmore & Associates, Inc.
Patricia Sherwin – Radnor Township Engineering Department
Andy Pancoast – Radnor Township Code Official

RE: 415 Maplewood Avenue – Preliminary Subdivision Plan
David Semerjian Builders – Applicant

Date Accepted: July 5, 2016

90 Day Review: October 3, 2016, extended indefinitely

Gannett Fleming, Inc. has completed a review of the Preliminary Subdivision Plans for compliance with the Radnor Township Code. These plans were reviewed for conformance with Zoning, Subdivision and Land Development, and other applicable codes of the Township of Radnor.

The applicant is proposing to consolidate parcels and construct 10 town houses on the site. This project is located in the R-5 district of the Township.

The applicant has indicated on the plans that the following waivers are being requested:

- §255-27.C(1) – To maintain the existing condition right-of-way and cartway for Highland and Maplewood Avenues.
- §255-27.E(2) – To allow a 24' wide cartway for the internal drive.
- §255-27.F(2)(a) – To permit centerline radius less than 150' as the access is a private driveway to be owned and maintained by the homeowners association.
- §255-27.H(6) – To permit the proposed radii of 15' as the proposed drive is not a local street.

Preliminary Subdivision Plans – 415 Maplewood Avenue

Plans Prepared By: Edward B. Walsh & Associates, Inc.

Dated: 12/8/2014 and last revised 05/02/2018



Sewage Facilities Planning

- I. Final plan approval will not be granted until Planning Approval is received from the PA DEP.

Zoning

1. §280-4.B – Parking space is defined as an outdoor or garage space used for parking motor vehicles, which shall measure not less than 9 feet six inches x 20 feet, accessible from a street, alley or driveway and surfaced with a Township approved durable dustproof and all-weather surface. The applicant must clearly demonstrate that there is adequate parking in the driveway and garage of each unit for 2 parking spaces. The width of each drive way is dimensioned on the plans as 18 feet. The driveway length for unit 9 and 10 is less than 20 feet. Also, the dimensions of the over flow parking spaces must be shown on the plans.
2. §280-35.B(9) – The maximum impervious surfaces allowed for this project is 36%. The plans indicate that the total impervious provided is 36% with using a porosity reduction. Without the reduction, the applicant is above the maximum allowable impervious coverage.

Subdivision and Land Development

1. §255-27.C(1) – Maplewood Avenue is classified as a Minor Collection Road. The required right of way is 60 feet and the required cartway is 36 feet. Highland Avenue is a local road. The required right of way is 60 feet and the required cartway is 28 feet. Curbing and sidewalks must be provided. The applicant has provided right-of-way 25 feet from the centerline of Maplewood Avenue. The existing legal right of way along Highland Avenue is 50 feet. The applicant is requesting a waiver from this requirement.
2. §255-27.E(2) – The private street shall have a right-of-way width and a horizontal and vertical alignment consistent of the requirements for public streets. The applicant is requesting a waiver from this section to allow a 24' wide cartway for the internal drive.
3. §255-27.F(2)(a) – The minimum center-line radii for horizontal curves for local collector streets and courts shall be 150 feet. The applicant has requested a waiver to this requirement.
4. §255-27.H(6) – Minimum curb radii at street intersections shall be 25 feet for local streets, 30 feet for collectors; 35 feet for arterials and 10 feet for driveways. The applicant has indicated a 15-foot curb radii on the plans. The applicant is requesting a waiver from this requirement.



5. §255-35 – If the sanitary sewer system is to be dedicated to the Township, an easement in accordance with this section must be provided.
6. §255-37.E – Sidewalks and pedestrian paths shall be adequately lighted, if required by the Board of Commissioners. The applicant has provided 4 street lights along the proposed driveway. There is no additional lighting proposed at the intersection of Maplewood.
7. §255-38 – Sheet 12 of 18 indicates that there will be plantings located in the existing private street and interfering with the proposed 12' emergency access. This must be revised.
8. §255-38.H – All street trees provided on the plans must be in accordance with this section. There are trees listed on sheet 12 of the plans that are not listed in this section. This must be revised or a waiver requested. The applicant has provided street trees and buffer trees. The last plan submission indicated that 53 replacement trees were provided, but have been removed from this submission. An explanation must be provided to why the 53 replacement trees are no longer being provided.
9. §255-40.C(2) – Access and circulation for fire-fighting and their emergency equipment, moving vans, fuel trucks, garbage collection, deliveries and snow removal shall be planned for efficient operation and convenience. The applicant has provided a 12' emergency access from the private street. Significant concern exists as to the ability to access the proposed houses from the single driveway. This must be reviewed and approved by the Township Code Official/Fire Marshall.
10. §255-40.E(3) – All driveways shall be paved and constructed in accordance with Township Standards. The applicant is intending to utilize pavers for the driveways.
11. §255-42 – Buffer screens shall be provided along the easterly property line in accordance with this section and Table 1 Determination of Buffer Yard Class.
12. §255-43.1.B(1) – For all residential subdivisions or land developments involving a total of four or more lots and/or dwelling units, a minimum of 1,440 square feet or suitable park and recreation land shall be provided per dwelling unit within such subdivision/land development, unless the developer agrees to a fee in lieu of \$3,307 per dwelling unit (existing or proposed).
13. §255-54.B – The central water system should be designed with adequate capacity and appropriately spaced fire hydrants for fire-fighting purposes pursuant to the specification of the National Fire Protection Association. Review and approval by the Township Engineer and the Township Fire Marshall shall be required in order to ensure that adequate fire protection is provided.

Stormwater

1. The profile of Infiltration Bed #1 shows 4 sections of 36" pipe; however, the plan view lists 5 sections of pipe. This discrepancy must be revised.
2. The Post Construction Stormwater Management Plan shows Pipe Storage Bed #3 to consist of various pipe lengths. Infiltration Bed #3 on the detail sheet indicates uniform pipe length. This discrepancy must be revised and the naming convention made consistent.
3. The Bed #3 Outlet Structure Detail on Sheet 10 and the orifice structures listed in the hydrograph (page 35) are not consistent. This inconsistency must be revised.
4. The stormwater narrative "Project Summary" references the entrance on Highland Avenue. The project summary must be updated.
5. The stormwater narrative "Infiltration" states that volume credits for native vegetation are utilized to meet the net two-year infiltration volume. We note that the native vegetation credit is not counted for the Radnor Township infiltration. This should be clarified in the summary.
6. In the Flow Chart (page 2) the "allowable out for POI #2" for the 2-year storm event should be the sum of the 1-year pre-developed onsite and the 2-year pre-developed offsite. There is not a rate control requirement for the 1-year post-developed storm. This discrepancy must be revised.
7. There appears to be a mathematical error in calculating the impervious area for the water quality volume. The sum of the impervious areas contributing to the BMPs is 0.8 acres (0.18 + 0.13 + 0.49). In addition, it is unclear how the 3044 cf of infiltration provided was calculated. The water quality volume sheet must be revised.
8. The Post Developed Drainage Area Plan must be revised to clearly show the 0.10-acre drainage area to POI #1.
9. The following profiles must be revised to correct the following:
 - a. There is a water crossing between the existing sanitary manhole and SAN MH 1 which is not shown on the plans.
 - b. There is a water crossing between SAN MH 3 and SAN MH 4 which is not shown on the plans.
 - c. Profile Inlet 4 to Bed 3 does not show a sanitary sewer crossing.
 - d. Profile Inlet 2 to Bed 3 does not show a sanitary sewer crossing.
 - e. Profile Bed 3 to Level Spreader does not show a sanitary sewer crossing.
 - f. The inverts for the inlets shown in the stormwater profiles do not match the inlet inverts shown in the Profile Proposed Driveway.

- g. All other utility crossings, such as gas or electric, must be shown on the plan and in the profiles.
10. Final approval of the stormwater management plan will be required as part of the Grading Permit process. Any revisions to the size or location of the individual structures or other features will be addressed at that time.

Sanitary Sewer

1. Will the sanitary sewers be dedicated to the Township? If so, a sanitary sewer easement must be provided.
2. All plantings must be a minimum of 5 feet away from the proposed sanitary sewer laterals. There are numerous locations where there are trees proposed less than 5 feet.
3. There are two manholes numbered as sanitary sewer manhole #3 on the plan sheet. This must be revised.
4. The sanitary sewer lateral connections for units 3 and 4 must be shown on the plans.
5. There is zero horizontal clearance shown between the sanitary sewer lateral for unit 7 and proposed storm inlet 4. This must be revised.

General

1. The legend on sheet 1 indicates a proposed retaining wall. If a retaining wall is proposed, it must be clearly shown on the plans.
2. The signature block on sheet 1 refers to Supervisors instead of Commissioners.

The applicant appeared before the Planning Commission on March 5, 2018. The Planning Commission recommended approval of the plans and requested waivers along with the additional waivers of:

- §255-27.I(7) – No common driveway shall provide access to more than three lots or single family dwellings.
- §255-29.A(2) – Parking areas shall be designed to permit each motor vehicle to proceed to and from the parking spaces provided for it without requiring the moving of any other motor vehicles.
- §255-29.A(3) – All parking spaces shall be marked so as to provide for orderly and safe parking.

Steve Norcini
415 Maplewood Avenue
May 25, 2018

- §255-29.A(15) – All dead-end parking areas shall be designated to provide sufficient backup area for the end stalls of a parking area.

Along with these additional waivers, the Planning Commission recommended that the applicant add the following information to the Home Owners Association documents:

- Garages cannot be converted to living space
- There shall be one contracted trash service for the development
- No parking of cars shall overhang on the sidewalks
- There shall be one contracted snow removal service and snow must not be placed on any other property
- Ingress and Egress will be provided for the 4 properties

Additionally, all Township Zoning requirements must be met.

If you have any questions or require any additional information, please contact me.

Very truly yours,

GANNETT FLEMING, INC.



Roger A. Phillips, P.E.
Senior Project Manager

SUBDIVISION OF LAND

255 Attachment 2

Township of Radnor

Table 1: Determination of Buffer Yard Class

Adjacent land use:	Single-Family Detached	Planned Cluster Development	Multifamily	Institutional	Proposed Land Use				Nonresidential Off-Street Parking	Proposed Street				
					Office	Retail and Consumer Service	Utilities, Public Service	Industrial		Expressway	Arterial	Major Collector	Minor Collector	Local/Court
Single-family detached	—	—	A	B	B	B	B	B	B	B	B	A	A	*
Planned cluster development	—	—	A	B	B	B	B	B	B	B	B	A	A	*
Multifamily	—	A	—	B	B	B	B	B	B	B	B	A	A	*
Institutional	—	B	B	—	—	A	A	A	B	B	A	A	A	*
Office	—	B	B	—	—	—	—	A	B	*	*	*	*	*
Retail and consumer service	—	B	B	A	—	—	—	A	*	*	*	*	*	*
Utilities, public service	—	B	B	A	—	—	—	A	*	*	*	*	*	*
Industrial	—	B	B	A	—	—	—	A	A	*	*	*	*	*
Nonresidential off-street parking	B	B	B	B	A	A	A	—	A	A	A	A	A	A
Vacant land:														
A-1, A-2, R-1, R-2, R-3, R-4, R-5 and PA Districts	—	—	A	B	B	B	B	B	B	B	B	A	A	A
CO, C-1, C-2, C-3, and PB Districts	—	—	A	—	—	—	—	—	—	—	—	—	—	—
PLO and PI Districts	—	A	A	—	—	—	—	—	—	—	—	—	—	—
Adjacent street classification:														
Expressway	B	B	B	B	B	B	B	B	B	B	B	A	A	*
Arterial	B	B	B	A	A	A	A	A	A	A	A	A	A	*
Major collector	A	A	A	A	A	A	A	A	A	A	A	A	A	*
Minor collector	A	A	A	A	A	A	A	A	A	A	A	A	A	*
Local/court	*	*	*	*	*	*	*	*	*	*	*	*	*	*

NOTES:
*Street trees as required by § 255-38.



MEMORANDUM

Date: May 16, 2018

To: Steve Norcini, P.E.
Radnor Township Engineer

From: Amy Kaminski, P.E., PTOE
Transportation Services Manager

cc: John Rice, Esq., Grim Biehn & Thatcher
Peter Nelson, Esq., Grim Biehn & Thatcher
Roger Phillips, P.E., Senior Associate, Gannett Fleming, Inc.
Damon Drummond, P.E., PTOE, Gilmore & Associates, Inc.

Reference: Radnor Township – 415 Maplewood Avenue 2016-SD-10
Preliminary Subdivision Plan Review #5
Radnor Township, Delaware County, PA
G&A 15-01021

Gilmore & Associates, Inc. (G&A) has completed a transportation review of the referenced Preliminary/Final Subdivision Plan for a ten (10) unit residential townhouse development at 415 Maplewood Avenue. The Applicant proposes to remove two (2) existing dwelling units, construct five (5) residential buildings consisting of a total of ten (10) townhouse units, and terminate Central Avenue near Highland Avenue on a 2.17 acre parcel located in the R-5 Zoning District. The dwelling units will take access via Maplewood Avenue from a modified existing private access identified as Central Avenue.

We offer the following discussion for Radnor Township consideration:

A. DOCUMENTS REVIEWED

1. Preliminary Subdivision Plans for 415 Maplewood Avenue, prepared for David Semerjian Builders, prepared by Edward B. Walsh & Associates, Inc., consisting of 18 sheets, dated December 8, 2014, last revised May 14, 2018.
2. Response letter prepared by Edward B. Walsh & Associates, Inc., dated May 4, 2018.

B. SUBDIVISION AND LAND DEVELOPMENT ORDINANCE COMMENTS

1. §255-27.A(5) – Dead-end streets shall be prohibited, except as stubs to permit future street extension into adjoining tracts or when designed as cul-de-sac. The application creates two Central Avenue dead-end streets by eliminating the continuous connection to both Highland Avenue and Maplewood Avenue. Both roadway terminations of Central Avenue require a cul-de-sac end treatment. In addition, we recommend signage to adequately identify the Maplewood and Highland Avenue intersections with Central Avenue are not through streets. **The Applicant is requesting a waiver from this requirement.**

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2. §255-27.A(6) – Stub streets greater in length than one lot width shall be provided with a turnaround designed to meet the standards required for cul-de-sac and shall be provided with sufficient rights-of-way to permit future extension of the street into the adjacent property. The application creates two Central Avenue dead-end streets by eliminating the continuous connection to both Highland Avenue and Maplewood Avenue. Both roadway terminations of Central Avenue require a cul-de-sac end treatment. **The Applicant is requesting a waiver from this requirement.**
3. §255-27.C(1) Maplewood Avenue shall be provided the required dimensional standards for local streets including a 60 foot right-of-way (30 foot half-width right-of-way), 28 foot cartway width (14 foot half-width) and curbing and sidewalk along the site frontages. The cartway widths shown on the adjacent roadways do not meet the dimensional standards of this section; Maplewood Avenue requires curbing along the site frontage west of Central Avenue and sidewalks widths must be labeled on the plan. **The Applicant is requesting a waiver from this requirement.**
4. 255-27.E(1) – No more than five lots may be permitted to front on a private street. The Applicant indicates that the plan is designed as condominiums with one proposed lot. Although the HOA will maintain the overall property outside the residential structures, each residential unit structure will be individually owned and is considered an individual lot with a tax map parcel number. We defer to the Township Solicitor regarding this comment.
5. §255-27.E(2) – The access street shall include a twenty-eight (28) foot cartway, sidewalk and curbing along the entire frontage. Although the access street is proposed as a private street; the design must meet Township public street standards. The Applicant is proposing a twenty-four (24) foot cartway and is **requesting a waiver from this section.**
6. §255-27.F(2)(a) – The minimum center-line radii for horizontal curves on local roadways shall be no less than 150 feet. **The Applicant is requesting a waiver from this requirement.**
7. §255-27.H(6) –The minimum curb radii provided at street intersections shall be 25 feet for local streets. The Applicant is providing 15 foot radii and is **requesting a waiver from this requirement.** We note that sanitation trucks cannot maneuver the site without encroaching into opposing lanes.
8. §255-28 – The Applicant shall revise the preliminary and final plans to label the available and required sight distance for the terminus of the access street to Maplewood Avenue in accordance with this section. §255-27.B(3)(d) indicates that Maplewood Avenue is classified as a minor collector street and thus requires a stopping sight distance of 275 feet. We note the Applicant is providing adequate sight distance per PA Code 441.8(h)(1) (195' right and 250' left); however, a waiver is required if the sight distance requirements of the Township cannot be met.
9. §255-40.C(2) – Access and circulation for fire-fighting and other emergency equipment, moving vans, fuel trucks, garbage collection, deliveries and snow removal shall be planned for efficient operation and convenience. We recommend the Applicant discuss with the Township Code Official as to the Township preference for deterring motorists from using this emergency access.



EDWARD B. WALSH & ASSOCIATES, INC.
Complete Civil Engineering Design / Consultation Services
Lionville Professional Center
125 Dowlin Forge Road
Exton, PA 19341

May 4, 2018

Amy Kaminski, P.E.
Gilmore and Associates
65 E. Butler Avenue
Suite 100
New Britain, Pa. 18901

Dear Amy;

We have revised the 415 Maplewood Avenue plans in accordance with your April 25, 2018 memorandum. This letters enumeration follows that of your memorandum.

Gilmore & Associates

Subdivision

1. We have added a waiver request to sheet 1 of the plan set to permit the creation of a private driveway access for the condominium development we are proposing and a stub Private street that provides access to parking for two lots. Waiver request 5.
2. We have added a waiver request to sheet 1 of the plan set to permit the driveway and Private stub street without cul-de-sacs. We have also added proposed signs to both identifying them as not being through streets.
3. A waiver has been requested.
4. We do not believe a waiver is required for private access to one lot. However, if the solicitor believes that the eight unit condominium constitutes eight lots than we will request a waiver of this provision and add it to sheet 1.
5. A waiver has been requested.
6. A waiver has been requested.
7. We have provided an additional truck turning plan to the plan set (sheet 16) that demonstrates the trash trucks ability to access and maneuver through the site.
8. The sight distance was inadvertently left off of the last submission. They are now shown on sheet 1.
9. We concur.
10. a. We looked at the grades on the sidewalks mentioned in the comment and have revised the elevation on the sidewalk in front of unit 2. Units 1 and 8 reflect a grade

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May 4, 2018
415 Maplewood response letter

difference of .1 feet in 5 feet of sidewalk which represents 2%. We did not modify those grades.

10. b. The concrete hatching has been removed.
11. a. We have added a detail of the grass paver to sheet 18. Additionally we show a sign restricting access to emergency vehicles and two bollards and a chain across the access. We will provide whatever the township needs in place of or in addition too our suggested delineation and restrictions.
- b. We have added snow disposal areas to the plan and note 16 dealing with snow removal.
- ci. We revised the truck turning plans on sheets 15 and 16. The plan shows the trucks entering from both directions in the existing directional appropriate lanes.
- cii. See comment above.
- ciii. We have added sheet 16 that shows sanitation trucks.
- Civ. The turn around proposed between lots 2 and 3 was made slightly larger so that the fire truck can make the turn around maneuver in one movement.
12. We have added the depressed curb detail to sheet 10.

General Comments

1. We have added sign details on sheet 18 and a description of each sign to sheet 1.
2. The relocated utility pole will have 1.5' of clearance. The graphics on the plan show the pole larger than it will be so it can be seen.
3. A No Parking sign has been added to the turnaround as requested.
4. See note 15 on sheet 1.

I believe we have addressed all of your concerns within this submission. If you have any questions or need any additional information please contact me.

Very truly yours,
EDWARD B. WALSH & ASSOC., INC.



Andrew Eberwein
Project Manager
Cc David Sermerjian



MEMORANDUM

Date: April 25, 2018

To: Steve Norcini, P.E.
Radnor Township Engineer

From: Amy Kaminski, P.E., PTOE
Transportation Services Manager

cc: John Rice, Esq., Grim Biehn & Thatcher
Peter Nelson, Esq., Grim Biehn & Thatcher
Roger Phillips, P.E., Senior Associate, Gannett Fleming, Inc.
Damon Drummond, P.E., PTOE, Gilmore & Associates, Inc.

Reference: Radnor Township – 415 Maplewood Avenue 2016-SD-10
Preliminary Subdivision Plan Review #4
Radnor Township, Delaware County, PA
G&A 15-01021

Gilmore & Associates, Inc. (G&A) has completed a transportation review of the referenced Preliminary/Final Subdivision Plan for a ten (10) unit residential townhouse development at 415 Maplewood Avenue. The Applicant proposes to remove two (2) existing dwelling units, construct five (5) residential buildings consisting of a total of ten (10) townhouse units, and terminate Central Avenue near Highland Avenue on a 2.17 acre parcel located in the R-5 Zoning District. The dwelling units will take access via Maplewood Avenue from a modified existing private access identified as Central Avenue.

We offer the following discussion for Radnor Township consideration:

A. DOCUMENTS REVIEWED

1. Preliminary Subdivision Plans for 415 Maplewood Avenue, prepared for David Semerjian Builders, prepared by Edward B. Walsh & Associates, Inc., consisting of 16 sheets, dated June 30, 2016, last revised April 11, 2018.
2. Response letter prepared by Edward B. Walsh & Associates, Inc., dated April 12, 2018.

B. SUBDIVISION AND LAND DEVELOPMENT ORDINANCE COMMENTS

1. §255-27.A(5) – Dead-end streets shall be prohibited, except as stubs to permit future street extension into adjoining tracts or when designed as cul-de-sac. The application creates two Central Avenue dead-end streets by eliminating the continuous connection to both Highland Avenue and Maplewood Avenue. Both roadway terminations of Central Avenue require a cul-de-sac end treatment. In addition, we recommend signage to adequately identify the Maplewood and Highland Avenue intersections with Central Avenue are not through streets.

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2. §255-27.A(6) – Stub streets greater in length than one lot width shall be provided with a turnaround designed to meet the standards required for cul-de-sac and shall be provided with sufficient rights-of-way to permit future extension of the street into the adjacent property. The application creates two Central Avenue dead-end streets by eliminating the continuous connection to both Highland Avenue and Maplewood Avenue. Both roadway terminations of Central Avenue require a cul-de-sac end treatment. In addition, we recommend signage to adequately identify the Maplewood and Highland Avenue intersections with Central Avenue are not through streets.
3. §255-27.C(1) Maplewood Avenue shall be provided the required dimensional standards for local streets including a 60 foot right-of-way (30 foot half-width right-of-way), 28 foot cartway width (14 foot half-width) and curbing and sidewalk along the site frontages. The cartway widths shown on the adjacent roadways do not meet the dimensional standards of this section; Maplewood Avenue requires curbing along the site frontage west of Central Avenue and sidewalks widths must be labeled on the plan. **The Applicant is requesting a waiver from this requirement.**
4. 255-27.E(1) – No more than five lots may be permitted to front on a private street. The Applicant indicates that the plan is designed as condominiums with one proposed lot. Although the HOA will maintain the overall property outside the residential structures, each residential unit structure will be individually owned and is considered an individual lot with a tax map parcel number. We defer to the Township Solicitor regarding this comment.
5. §255-27.E(2) – The access street shall include a twenty-eight (28) foot cartway, sidewalk and curbing along the entire frontage. Although the access street is proposed as a private street; the design must meet Township public street standards. The Applicant is proposing a twenty-four (24) foot cartway and is **requesting a waiver from this section.**
6. §255-27.F(2)(a) – The minimum center-line radii for horizontal curves on local roadways shall be no less than 150 feet. **The Applicant is requesting a waiver from this requirement.**
7. §255-27.H(6) –The minimum curb radii provided at street intersections shall be 25 feet for local streets. The Applicant is providing 15 foot radii and is requesting a waiver from this requirement. Whether the waiver is accepted or not, the Applicant must provide turning templates for the largest anticipated vehicle (minimally a sanitation truck) demonstrating the vehicle can safely enter, exit and navigate through the site without encroaching beyond the centerline of the roadways.
8. §255-28 – The Applicant shall revise the preliminary and final plans to label the available and required sight distance for the terminus of the access street to Maplewood Avenue in accordance with this section. The sight distance was not provided as indicated in the response letter.
9. §255-29 – We note that the driveway provided for dwelling lot 8 does not have sufficient length to park two vehicles in the driveway.
10. §255-37.F - The Applicant shall address the following comments regarding ADA compliant ramps for pedestrian crossings on driveways at the Central Avenue intersection with Maplewood Avenue and the sidewalk along Central Avenue:
 - a. Sheet 7 of 16: Verify that all sidewalks have a maximum 2.00% cross slope. The spot elevations at Lots 1, 2 and 8 appear to exceed the 2.00% maximum.

- b. Sheet 14 of 16: Remove the extra concrete hatch shown on the northern end of the Type 4 perpendicular ramp adjacent to the sidewalk and flare. This area is intended to be grass and should be shown as such.
11. §255-40.C(2) – Access and circulation for fire-fighting and other emergency equipment, moving vans, fuel trucks, garbage collection, deliveries and snow removal shall be planned for efficient operation and convenience.
 - a. Provide a detail for the proposed grass pavers at the emergency access. In addition, the Applicant shall discuss this comment further with the Township Code Official as to the Township preference for deterring motorists from using this emergency access..
 - b. The applicant shall revise the plans to indicate the location(s) for snow disposal.
 - c. The Applicant shall demonstrate through truck turning templates that adequate onsite circulation for the identified vehicles is provided. Revise the truck turning template as follows:
 - i. The fire truck should be shown turning into the site from the appropriate lane along Maplewood Avenue.
 - ii. All movements should be shown entering and exiting the site. Currently the plans only show the left-in movement and should be revised accordingly.
 - iii. Provide turning maneuvers for a sanitation truck in addition to the fire truck templates shown.
 - iv. The truck turn-around maneuver should be shown as one movement, approaching and departing the turn-around point. It appears the stall size between lots 2 and 3 may need to be increased.
12. §255-40.E (1) – Driveway details for each unit shall be provided to include the grade as well as the width. We were unable to verify the proposed curb reveal for the depressed curb at all driveways. Additional grading elevations or a detail should be provided ensuring that the curb height does not exceed 1 ½ inches along the length of the depressed curb. See PennDOT Publication RC-64M for further guidance

C. GENERAL COMMENTS

1. Provide details, including size, for all proposed signage. Although the response letter indicates sign details were provide in this submission; no sign details were provided on the plans.
2. Verify that the relocated utility pole will have a minimum 1½ foot horizontal clearance between the face of curb and the utility pole.
3. Include a NO PARKING sign to deter motorists from parking in the emergency turnaround area between Lots 2 and 3.
4. We recommend the Township require the Applicant include a note on the plans indicating that garages may not be converted into living spaces so as to avoid a reduction in the number of parking spaces.

.018

Chris and Chad Welsh
503 Maplewood Avenue
Wayne, PA 19087



Dear *Kevin*:

We, the residents of Maplewood Avenue and Highland Avenue, are sending you a copy of a neighborhood meeting held last Monday night to discuss the pending construction of townhomes at 415 Maplewood Avenue.

Our minutes reflect our concerns regarding this project. We feel it is important for you to know that we intend on staying actively involved with this project going forward. Several of us within the closest proximity to 415 have stayed informed since the project was initially brought to the township. But many neighbors have not ever received one letter informing them of meetings about the project. More importantly, the builder, Mr. Smerjian was asked to meet with neighbors months ago and has not made any effort to do so.

The minutes from the meeting address all of the issues we feel need to be addressed and the questions that we feel remain unanswered. After you've had a chance to review them, we hope you will contact us to set up a meeting with the builder so that we can continue the discussion and keep all of the neighbors on Maplewood and Highland "in the loop".

Sincerely,

Chris Welsh

Proposed Townhome Development at 415 Maplewood Avenue

Minutes from Neighbors Meeting - March 26, 2018 - At the home of Chris & Chad Welsh 503 Maplewood Ave.

In attendance:

Chris and Chad Welsh: 503 Maplewood Avenue
Leslie Clifton and Paul Leufkens: 414 Maplewood Avenue
Ann and Bill Higgins: 411 Maplewood Avenue
Agnes Whyte: 505 Maplewood Avenue
Lou Londrillo: 257 Highland Avenue
Bob and Denise Bryan: 265 Highland Avenue
Greg Hunger: 255 Highland Avenue
Lisa Horstmann: 263 Highland Avenue
Betty Phillips (Brown) 255 Highland Avenue
Brittany Pierce: 311 Maplewood Avenue

At the March 5, 2018 Planning Commission Meeting, plans for the townhome development were discussed, and the Commission approved the plans, with a few changes/additional requirements, by a 5-4 vote. The Commissioners mentioned that, at a previous meeting, they had asked Mr. D'Antonio, the owner of the property, and Mr. Semerjian, the builder, to hold a meeting with neighbors to discuss concerns and answer questions. The Commissioners seemed concerned that neither Mr. D'Antonio nor Mr. Semerjian have arranged this meeting, and neighbors have many concerns and feel left "out of the loop." Neighbors decided to hold a meeting to discuss questions and concerns regarding the proposed townhome development.

- 1. The status of the road through the property at 415 Maplewood:** At a previous Planning Commission meeting, residents objected to the property owner's claim that the road through the property was his "private" road. The residents at the Highland end of that road had been using the roadway for years, and they are in possession of deed granting them the rights to use it in perpetuity. At the March 5, 2018 Planning Commission meeting, the issue was raised, and residents were informed that the owner or builder had gone to court and obtained a judgment, called an "Order of Quiet Title" to have the road deemed as "private." At the meeting, the roadway was referred to as a "private driveway" or "private cart way." Residents with houses on this road were never given notice of the hearing, and therefore did not attend and could not raise an objection. Because of this ruling, the residents have lost the right to park on the roadway in front of their houses. They will lose property and landscaping that was theirs to use, and that they maintained, for years. The builder said the homeowners will still be permitted to drive down the roadway to access their homes and then park in their own driveways. The Commissioners stated that the only recourse for those neighbors at this point is for them to *hire their own attorney*. This raises several questions: Why weren't neighbors notified so they could attend the hearing? Why should they be expected to pay for an attorney when the builder and possibly the township deprived them of their due process? Can the homeowners drive the whole length of the driveway, using both the Highland and Maplewood entrances, as they have in the past?
- 2. Water run-off from the site:** We would like further clarification on storm water issues. The builder assured everyone at the meeting that his water management plans will be sufficient. Residents are concerned there may still be a run-off issue, particularly down the slope to the right of the driveway on Maplewood, an area that will not be served by a retention basin or by the underground pipe-field. This is a special concern if the retaining wall on Maplewood is removed and in the event of heavy downpours. Also, the plan to discharge the overflow pipe from the pipe-field at a location above the Art Center driveway could cause a flooding problem there. Run-off already flows down Maplewood Avenue (where there are no storm sewers) and collects down near the Art Center, where it creates flooding, ice, and erosion issues.

3. **Parking:** Parking is a huge concern for residents on Maplewood and Highland Avenues. The builder has provided only 3 “visitor” spaces on site, and parking will not be allowed on the development’s driveway. The builder claims that two cars can fit in each garage and two cars on each house’s driveway. We believe this is not realistic. Units 2, 3, and 8 can’t fit two cars in their driveways under the current configuration. The townhomes’ garages and garage doors are too narrow to realistically fit two vehicles of the type typically driven by local residents. Overflow parking would end up on Highland and Maplewood, which already suffer from congestion, impaired visibility, and traffic flow problems with the current amount of parking. The builder has suggested that only older people and young, childless professionals will be buying these townhomes, so a lot of parking will not be needed. But the townhome community is not going to be age-restricted, so the builder cannot control who purchases the homes. Suggestions: The builder should turn the 3-space on-site lot into 4 spaces and ensure they are kept available for visitors, rather than occupied by residents’ vehicles. The builder should try to find space on-site for additional parking for a few more cars. Residents would like to meet with the township traffic and safety manager to discuss other possibilities, such as rules or permits to limit use of some street parking to homeowners on Maplewood and Highland Avenues and their guests. Perhaps the development’s driveway could be designated one way, and parking allowed on one side. We would like to request a meeting with township officials to further discuss these issues.
4. **Access for large trucks and emergency vehicles:** Residents are concerned that Maplewood and Highland Avenue entry-ways to the development will not have the space needed by large trucks and emergency equipment to turn in and out of the townhome development (especially when cars are parked on the street). Also, the Maplewood Avenue entry slope is too steep, and large vehicles bottom out on it. The builder says the streets and the development driveway are wide enough for trucks and emergency vehicles to get in and out, although he said he would widen the entry-ways. A variance was already given to him, so he can build the driveway narrower than code. According to the National Fire Code, structures as tall as these townhomes need to be accessible by an aerial platform fire truck. Residents question whether the two entry-ways to the site can accommodate the approximately 50-ft. radius curve that such equipment needs. At the meeting, it was stated that the Fire Commissioner is the final arbiter on this. Residents would like confirmation from the township that emergency equipment and large trucks will be able to get in and out of the townhome site, even when vehicles are parked on the street. We do not want vehicles driving over our lawns to get in or out of the townhouse site, and we do not want to find out after the development is built that we can no longer park in front of our properties because emergency vehicles can’t get in and out.
5. **Lighting:** We have been told that all lighting on the townhouse site will be from 5 or 6 down-facing LED spots, the light will not leave the property, and that there will be no additional street lighting or illuminated signage on Maplewood or Highland. We would like to know how many total lumens of light will be emitted by the development’s lights.
6. **Snow Removal:** Residents are concerned about where snow from the townhouse site will be dumped. At the meeting, the Commissioners said they want the builder to identify where the snow will be dumped on the site. Residents would like confirmation that adequate provision has been made for snow from the development to be dumped on the development’s site.
7. **Aesthetics:** The builder has not shown residents what the proposed houses and retaining walls will look like. We are concerned about the aesthetics of the townhome property, as it will dominate the view from many of our homes and it will also affect our property values. What material is going to be used for the townhome siding, for example? (Cement board should be used, not vinyl siding.) Regarding retaining walls: The current wall and hedge that front on Maplewood Ave. interfere with visibility of cars exiting the driveway. If the current wall is removed, a new retaining wall should be built to decrease run-off from that slope, but the wall would need to be moved back inside the front yard setback, and it should not exceed a

height of 2 feet. What material would it be built of? What material will the wall be along the existing properties located on the Highland end of the townhome driveway?

8. **Water and sewer:** Will the sewer be private on-site or hooked in to the township sewer system? We want to make sure that the sewer system has adequate capacity for the proposed new townhomes. Also, will the township maintain the sewer lines? Residents of Maplewood and Highland do not want to end up with a sewage problem because of the townhomes. Also, we are concerned about being assessed to build increased sewer capacity if the builder's proposed system is inadequate. Is there adequate water service to maintain water pressure in the existing neighborhood homes?
9. **Park land requirement:** The documents handed out at the Planning Commission meeting state that the builder must provide on-site park and recreation land, or money, to the township. For the 10 properties, the builder is required to provide 1,140 square feet of park land *per dwelling* or he must pay \$3,307 per dwelling unit. Which has he done? We do not see park and recreation land on the plans. If he intends to build it, can people who do not live in the townhomes (area residents) use it for recreation and/or trail access? If the builder opted to pay the fee, has he paid it, and will it be used to make improvements for our neighborhood?
10. **Homeowners' Association rules:** At the Planning Commission meeting, the Commissioners told the builder to include a stipulation in the Homeowners' contract that garages not be turned into living spaces. The residents would like to request that the following additional prohibitions also be included in the Homeowners' contract: No professional offices in homes (as that would create additional traffic and would result in a need for more parking); no repaving of private driveways with impervious surfaces such as asphalt, pavers set in concrete, or concrete; no parking of boats, RVs, or trailers on site or on the street, and no parking of residents' vehicles in the on-site "public" parking spaces (which would prevent visitors from parking on-site). Patios and decks should not be permitted to be expanded, which would create more area of impervious surface.
11. **Landscaping and buffer zones:** At the Planning Commission meeting, there was discussion about the need for an 8-foot-wide buffer zone with landscape plantings required under zoning laws wherever a new development abuts existing residential properties. The buffer zone is not on the builder's current plans, and the design does not leave room for it. Neighbors with properties abutting the new townhome development would like clarification about this.
12. **Adequate financing to complete the project:** Residents would like assurance from the township that the builder has adequate funding and ability to complete the entire construction process within a reasonable timeframe. Several nearby developments have not been completed in a timely fashion due to issues such as this, which has impacted neighborhood aesthetics, safety, and property values.
13. **Construction Process:** We would like to request that entry/exit of construction vehicles, and construction itself, be limited to the hours between 7:00 a.m. and 5:00 PM on weekdays, and that no weekend or holiday construction be permitted. We would also like to request that the driveway be made *one way* for construction vehicles, with entry at one end of the driveway and exit at the other, so that construction traffic and noise are equitably divided between Maplewood and Highland Avenues. Furthermore, the property owners at 503 Maplewood have specific concerns about precautions being taken to protect their house and property during construction, as their property abuts 501 Maplewood, where the existing house will be torn down and where the groundwater "pipe-field" is going to be constructed.
14. **Meetings:** The residents of Maplewood Avenue and Highland Avenue are requesting to be notified in a timely manner of all meetings, going forward, regarding this project.

The concerns discussed at the neighbors' meeting on March 26, 2018 will be presented to officials of Radnor Township for their consideration and response. We will try to arrange meetings with township officials to discuss our concerns. As new information about the project is learned, Maplewood and Highland Avenue neighbors will be notified. Another neighbors' meeting will be arranged, if needed. Please contact Chris Welsh (chris@secret-ingredient.com , 610-322-3160) or Leslie Clifton (lesliec414@gmail.com , 610-639-3222) if you have questions or additional concerns.

Respectfully,

Chris & Leslie



EDWARD B. WALSH & ASSOCIATES, INC.
Complete Civil Engineering Design / Consultation Services
Lionville Professional Center
125 Dowlin Forge Road
Exton, PA 19341

April 12, 2018

Roger Phillips, P.E. /Patricia Kaufman
Gannett Fleming
P.O. Box 80794
Valley Forge, Pa. 19484

Dear Roger and Patricia;

As you aware we received a recommendation for approval from the Radnor Township Planning Commission for the 10 unit 415 Maplewood Road Development plan. The recommendation was a one vote differential approval and many of the neighbors were present and not in favor of the plan because of its modification to the access on Highland Avenue. Since that meeting we have reevaluated the plan and my client has advised me to make modifications to the plan eliminating the continuation out to Highland Avenue and therefore eliminating many of the neighbors concerns and issues. The plan that we are submitting now is substantially the same plan with the exception of the Highland Avenue link. In order to make this work we shifted the location of units 1 and 2 and the access to those units to the Northwest; rotated the orientation of units 3 and 4 and designed an emergency Vehicle turn around between until 2 and three. The plan allows for the movement of Radnor Fire trucks into and out of the development and as an added protection we are proposing a 12' wide emergency access off of the existing Private Street. This allows the project to be autonomous form Highland Avenue and allows those residents utilizing the existing private street to do in the exact manor that they are today. We have added additional Landscaping along the adjacent highland Avenue residences and continue that buffer along that entire side of the new project.

Along with theses revisions we have made revisions to the plans in accordance with your February 27, 2018 review letter and the Gilmore Associates February 16, 2018 review Memorandum. The following letter will help you follow those revisions. Its enumeration will follow those of the two cited letters.

Gannett Fleming Letter

Sewage Facilities Planning

1. We concur that Radnor Township will not issue Final approval until we receive Planning Module approval. To that end the modules have been submitted to the Municipalities, Municipal Authorities and agencies that are required to sign off on the modules. That process is currently on going.

Zoning

1. We have amended the zoning table on sheet one to include a column for the existing conditions.
2. We reviewed the impervious cover reduction information with the zoning officer prior to submission and received concurrence from him that the reductions relative to impervious coverage were acceptable. Stormwater management has been designed without the reductions. This item has not changed.
3. The wall that was being proposed along the access to Highland Avenue has been removed.

Subdivision

1-4. These comments are referencing the waiver requests. We are not sure if they are still necessary but we have left them on the plan.

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5. The access to Maplewood Avenue has been increased to 25' and is labeled on the plan.
6. We concur and if the township takes ownership of the sewer system we will create the necessary easements. At this time we have been informed that it is going to be privately owned.
7. Commentary. The lighting plan has only been changed to remove the lights along the access to Highland Avenue.
8. The Landscape plan has been adjusted to include additional trees and to address this comment.
9. A truck turning plan has been added to the plan set showing that a Radnor fire truck can maneuver through the proposed driveway. We have added signs restricting parking along the driveway.
10. We believe that the driveways are being constructed in accordance with the Township standards. The standard requires stable and dust free.
11. The buffer screen has been expanded and modified to comply with this comment. The adjacent land uses have been labeled on the landscape plan and an aerial plan is provided as sheet 4 of the plan set.
12. See note 13 on sheet 1.
13. The plan shows the proposed water main and fire hydrants. We believe their spacing to be compliant with the National Fire Protection Association. However if the Fire Marshal wants them adjusted we make the necessary adjustments. To date we have not received a review from the Fire Marshal.

Stormwater

1. The Unit hydrographs for the 1 year storm have been included in the revised calculations.
2. The Chart on sheet 7 and the calculations have been adjusted for consistency.
3. The water main crossings have been added to the profiles as necessary.
4. The drainage area plans have been modified to remove the extra drainage lines.
5. The drainage area plans have been made consistent with the calculations.
6. We revised the calculation for WQV to be consistent as requested.
7. Additional area has been added to infiltration system 1 and it has been increased in size so that we can infiltrate the additional volume to comply with the volume credits for trees.
8. We have submitted stormwater calculations with this submission that we believe demonstrate compliance with the Stormwater Ordinance. These calculations will be submitted with all subsequent grading permit submissions and final plan submission.

Sanitary Sewer

1. The Sanitary sewer has been modified to include the two Radnor specific details and any erroneous references to other municipalities have been removed from the remaining details.
2. We are not sure if it has been fully determined if the township will be the owner of the sewer system. If it is determined that they will own it, we will add the easement.
3. We have made an effort to keep the trees as far away from the laterals and sewer lines as possible and made every effort to maintain a minimum separation of 5'. Additionally we have added a note directing the contractor to maintain that separation if possible.

Gilmore & Associates

Subdivision

1. A waiver has been requested.
2. The plan is designed as a condominium and there is only one lot proposed. Additionally they access is via a private driveway.
3. A waiver has been requested.
4. A waiver has been requested.
5. We have modified the development driveway to comply with the geometric difference.
6. The Highland Avenue access and wall is no longer proposed.
7. There are no longer any intrusions with the sight triangle as the Highland Avenue access and wall is no longer proposed.
8. A waiver has been requested.
9. The sight distances are provided on sheet 4.
10. The plan has been revised to show additional spot grades and an expanded leveling area on the Maplewood ramps depicted on sheet 7. We have also added the Penn dot type 4 ramp detail to the plan set. The ramps on Highland Avenue are no longer necessary as the access through to Highland has been removed.
11. A fire truck movement plan is part of the plan set. The development's driveway has No Parking signs placed on both sides.

April 12, 2018
415 Maplewood response letter

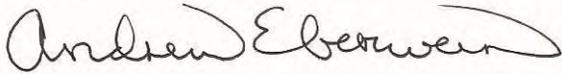
12. We have added driveway details to sheet 14.

General Comments

1. We have added sign details to the plan set.
2. Only one pole is proposed to be relocated along Maplewood Avenue and we have added a label to that pole and shown its new location.
3. a. In accordance with our conversation, the internal pavers are concrete pavers and not brick. We have modified the labels accordingly.
b. The centerline and R.O.W of Maplewood Avenue have been added to the profile.

I believe we have addressed all of your concerns within this submission. If you have any questions or need any additional information please contact me.

Very truly yours,
EDWARD B. WALSH & ASSOC., INC.



Andrew Eberwein
Project Manager
Cc David Sermerjian



DELAWARE COUNTY PLANNING DEPARTMENT

COURT HOUSE/GOVERNMENT CENTER
201 W. Front St. Media, PA 19063

COUNCIL

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MICHAEL F. CULP
KEVIN M. MADDEN
BRIAN P. ZIDEK

Office Location: Toal Building, 2nd & Orange Sts., Media, PA 19063
Phone: (610) 891-5200 FAX: (610) 891-5203
E-mail: planning_department@co.delaware.pa.us

LINDA E. HILL
DIRECTOR

March 6, 2018

Robert A. Zienkowski, Manager
Radnor Township
301 Iven Avenue
Wayne, PA 19087

RE: Act 537 Review
415 Maplewood Avenue
Radnor Township
1-23013-256-3J

Dear Mr. Zienkowski:

The Delaware County Planning Department (DCPD) has completed its review of the planning module for 415 Maplewood Avenue. The proposed plan calls for the replacement of two single-family dwellings and two commercial buildings with 10 duplex dwellings on an approximately 2.7-acre site. The project will raze and replace the existing uses, which currently utilize public sewer to dispose of 3 EDU's of sewage. The new development is expected to generate 2,625 gallons per day (GPD), or 10 EDU's of wastewater to be disposed of via a connection to public sewer and treated at the Philadelphia Southwest Water Pollution Control Facility. This is a net increase in flow of 7 EDU's or 1,837.50 GPD.

Because of a self-imposed connection management plan set in place by Springfield Township for the RHM Springfield Township sewer service area, no connections are being allowed that will require flow through Springfield Township. A separate approval will be needed from Springfield Township as long as this limit on connections is in place. The development will connect to public sewer after these connection issues are resolved and planning approval is obtained by DEP.

Understanding this, DCPD has no objection to the proposed method of wastewater disposal. Enclosed is the completed DEP Component 4B County Planning Agency Review Form. If you have any questions or require additional information, please do not hesitate to contact me at (610) 891-5214.

Sincerely,

Steven R. Beckley, AICP
Senior Planner

Enclosures: (1) Completed DEP Review Form

cc: PA Department of Environmental Protection
Scott J. Andress, Edward B. Walsh and Associates, Inc.
David Semerjian, David Semerjian Builders





**SEWAGE FACILITIES PLANNING MODULE
COMPONENT 4B - COUNTY PLANNING AGENCY REVIEW
(or Planning Agency with Areawide Jurisdiction)**

Note to Project Sponsor: To expedite the review of your proposal, one copy of your completed planning package and one copy of this *Planning Agency Review Component* should be sent to the county planning agency or planning agency with areawide jurisdiction for their comments.

SECTION A. PROJECT NAME (See Section A of instructions)

Project Name
415 Maplewood Avenue

SECTION B. REVIEW SCHEDULE (See Section B of instructions)

1. Date plan received by county planning agency January 18, 2018
2. Date plan received by planning agency with areawide jurisdiction Not applicable
Agency name _____
3. Date review completed by agency March 6, 2018

SECTION C. AGENCY REVIEW (See Section C of instructions)

- | Yes | No | |
|-------------------------------------|-------------------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1. Is there a county or areawide comprehensive plan adopted under the Municipalities Planning Code (53 P.S. 10101 <i>et seq.</i>)? <i>Delaware County 2035 was adopted on November 27, 2013. Responses to #2, #3, #4, & #5 are based on this plan.</i> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2. Is this proposal consistent with the comprehensive plan for land use? _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. Does this proposal meet the goals and objectives of the plan? _____
If no, describe goals and objectives that are not met _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Is this proposal consistent with the use, development, and protection of water resources?
If no, describe inconsistency _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 5. Is this proposal consistent with the county or areawide comprehensive land use planning relative to Prime Agricultural Land Preservation?
If no, describe inconsistencies: _____ |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 6. Does this project propose encroachments, obstructions, or dams that will affect wetlands? <i>Response based on information contained in the National Wetlands Inventory Maps and review of the site development plan.</i>
If yes, describe impact _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 7. Will any known historical or archeological resources be impacted by this project? <i>Response based on information contained in the Delaware County Preservation Planning files and documents.</i>
If yes, describe impacts <u>One building to be demolished appears of local significance. See additional comments.</u> |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 8. Will any known endangered or threatened species of plant or animal be impacted by the development project? <i>Response based on information from the Natural Heritage Inventory of Delaware County.</i>
If yes, describe impacts _____ |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 9. Is there a county or areawide zoning ordinance? |
| <input type="checkbox"/> | <input type="checkbox"/> | 10. Does this proposal meet the zoning requirements of the ordinance? |

If no, describe inconsistencies Not applicable

SECTION C. AGENCY REVIEW (continued)

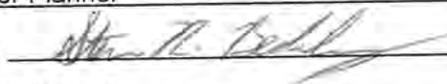
Yes No

- 11. Have all applicable zoning approvals been obtained? Unknown, subject to municipal approval.
- 12. Is there a county or areawide subdivision and land development ordinance? *The Delaware County Subdivision & Land Development Ordinance is used by some, but not all municipalities. It is not applicable to this municipality.*
- 13. Does this proposal meet the requirements of the ordinance? Not applicable
If no, describe which requirements are not met _____
- 14. Is this proposal consistent with the municipal Official Sewage Facilities Plan?
If no, describe inconsistency _____
- 15. Are there any wastewater disposal needs in the area adjacent to this proposal that should be considered by the municipality?
If yes, describe _____
- 16. Has a waiver of the sewage facilities planning requirements been requested for the residual tract of this subdivision? _____
- If yes, is the proposed waiver consistent with applicable ordinances.
If no, describe the inconsistencies Not applicable
- 17. Does the county have a stormwater management plan as required by the Stormwater Management Act? *Only for the Ridley, Chester, Darby, and Crum Creek watersheds. This project is located in the Darby Creek watershed.*
- If yes, will this project plan require the implementation of storm water management measures?

18. Name, Title and signature of person completing this section:

Name: Steven R. Beckley, AICP

Title: Senior Planner

Signature: 

Date: March 6, 2018

Name of County or Areawide Planning Agency: Delaware County Planning Department

Address: Court House & Government Center, 201 W. Front Street, Media, PA 19063

Telephone Number: 610-891-5214

SECTION D. ADDITIONAL COMMENTS (See Section D of instructions)

This component does not limit county planning agencies from making additional comments concerning the relevancy of the proposed plan to other plans or ordinances. If additional comments are needed, attach additional sheets.

The county planning agency must complete this component within 60 days.
This component and any additional comments are to be returned to the applicant.

Comments begin on the next page.

Section C.7 Will any known historical or archeological resources be impacted by this project? Response based on information contained in the Delaware County Preservation Planning files and documents.

The proposed development will occur in a zone that has a low potential for underground archaeological resources. Plans are to demolish two single family dwellings and a series of attached commercial/garage units. One of the homes is a Colonial Revival home that is stucco with a stone foundation, built in 1934, according to the County Tax Assessor's Database. It appears of local significance and though it is not on the Radnor Historic Resource Survey, may have been an overlooked addition. The second dwelling unit is a smaller stucco bungalow, and is attached to a long series of garage units. It does not appear of historic significance, although some of the garage units do appear to meet the age criteria for being considered historic. No National Register-eligible or listed resources will be affected by this development.



*Excellence Delivered **As Promised***

Date: February 27, 2018

To: Stephen Norcini, P.E. – Township Engineer

From: Roger Phillips, PE

cc: Kevin W. Kochanski, RLA, CZO – Director of Community Development
Peter Nelson, Esq. – Grim, Biehn, and Thatcher
Amy B. Kaminski, P.E. – Gilmore & Associates, Inc.
Patricia Sherwin – Radnor Township Engineering Department
Ray Daly – Radnor Township Codes Official
Steve Gabriel - Rettew

RE: 415 Maplewood Avenue – Preliminary Subdivision Plan
David Semerjian Builders – Applicant

Date Accepted: July 5, 2016

90 Day Review: October 3, 2016, extended indefinitely

Gannett Fleming, Inc. has completed a review of the Preliminary Subdivision Plans for compliance with the Radnor Township Code. These plans were reviewed for conformance with Zoning, Subdivision and Land Development, and other applicable codes of the Township of Radnor.

The applicant is proposing to consolidate parcels and construct 10 town houses on the site. This project is located in the R-5 district of the Township. The proposed development includes the private road Central Avenue. The deeds for the properties refer to Central Avenue as a Private Road and “together with the free and common use, right, liberty, and privilege of the above referred to 40 feet wide private road, with ingress and egress of same at all time hereafter forever in common with the owners, tenants and occupiers of the other lots bounding thereon.

The applicant has indicated on the plans that the following waivers are being requested:

- §255-27.C(1) – To maintain the existing condition right-of-way and cartway for Highland and Maplewood Avenues.
- §255-27.E(2) – To allow a 24’ wide cartway for the internal drive.
- §255-27.F(2)(a) – To permit centerline radius less than 150’ as the access is a private driveway to be owned and maintained by the homeowners association.
- §255-27.H(6) – To permit the proposed radii of 15’ as the proposed drive is not a local street.



Preliminary Subdivision Plans – 415 Maplewood Avenue

Plans Prepared By: Edward B. Walsh & Associates, Inc.

Dated: 12/8/2014 and last revised 01/29/2018

Sewage Facilities Planning

- I. Final plan approval will not be granted until Planning Approval is received from the PA DEP.

Zoning

1. A zoning table provided on the plans must indicate the existing zoning information for the existing properties.
2. §280-35.B(9) – The maximum impervious surfaces allowed for this project is 36%. The plans indicate that the total impervious provided is 36% with using a porosity reduction. Without the reduction, the applicant is above the maximum allowable impervious coverage.
3. §280-109.A – No fence or wall, except for retaining walls or the walls of a building as permitted under the terms of this chapter, shall exceed a height of six feet, provided further that within R-4 and R-5 Districts, no fence or wall erected within the required front yard setback. The applicant has indicated that they are not designing the proposed wall and a detail will be provided prior to construction for review.

Subdivision and Land Development

1. §255-27.C(1) – Maplewood Avenue is classified as a Minor Collection Road. The required right of way is 60 feet and the required cartway is 36 feet. Highland Avenue is a local road. The required right of way is 60 feet and the required cartway is 28 feet. Curbing and sidewalks must be provided. The applicant has provided right-of-way 25 feet from the centerline of Maplewood Avenue. The existing legal right of way along Highland Avenue is 50 feet. The applicant is requesting a waiver from this requirement.
2. §255-27.E(2) – The private street shall have a right-of-way width and a horizontal and vertical alignment consistent of the requirements for public streets. The applicant has requested a waiver to this requirement, but it does not appear to be applicable since this is not considered a private street.

3. §255-27.F(2)(a) – The minimum center-line radii for horizontal curves for local collector streets and courts shall be 150 feet. The applicant has requested a waiver to this requirement, but it does not appear to be applicable since this is not considered a private street.
4. §255-27.H(6) – Minimum curb radii at street intersections shall be 25 feet for local streets, 30 feet for collectors; 35 feet for arterials and 10 feet for driveways. The applicant has indicated a 15-foot curb radii on the plans. The applicant is requesting a waiver from this requirement, but it does not appear to be applicable since this is not considered a private street.
5. §255-29.A(12)(b) – The width of entrance and exit drives shall be a minimum of 25 feet for two-way use. This must be revised or a waiver must be requested.
6. §255-35 – If the sanitary sewer system is to be dedicated to the Township, an easement in accordance with this section must be provided.
7. §255-37.E – Sidewalks and pedestrian paths shall be adequately lighted, if required by the Board of Commissioners. The applicant has provided 6 street lights along the proposed driveway. There is no additional lighting proposed at the intersection of Highland or Maplewood.
8. §255-38.H – All street trees provided on the plans must be in accordance with this section. There are trees listed on sheet 12 of the plans that are not listed in this section. This must be revised or a waiver requested. Additionally, the number of trees provided must clearly be indicated. There are 51 Street Trees, 17 Canopy Trees and 24 Evergreen Trees required according to code. The plan also indicates that there are 53 total replacement trees. The total number of plans provided in the evergreen and deciduous planting schedules is 100 total trees. An explanation must be provided.
9. §255-40.C(2) – Access and circulation for fire-fighting and their emergency equipment, moving vans, fuel trucks, garbage collection, deliveries and snow removal shall be planned for efficient operation and convenience. This must be reviewed and approved by the Township Code Official/Fire Marshall. Significant concern exists as to the ability to access the proposed houses from the single driveway. Additionally, on street parking is prohibited along the private driveway.
10. §255-40.E(3) – All driveways shall be paved and constructed in accordance with Township Standards. The applicant is intending to utilize pavers for the driveways.
11. §255-42.A – Buffer screens are required between subdivisions and land developments and along existing streets to soften visual impact, to screen glare and to create a visual barrier between conflicting land use. Information regarding the adjacent land uses must be provided on the landscape plan.

12. §255-43.1.B(1) – For all residential subdivisions or land developments involving a total of four or more lots and/or dwelling units, a minimum of 1,440 square feet or suitable park and recreation land shall be provided per dwelling unit within such subdivision/land development, unless the developer agrees to a fee in lieu of \$3,307 per dwelling unit (existing or proposed).
13. §255-54.B – The central water system should be designed with adequate capacity and appropriately spaced fire hydrants for fire-fighting purposes pursuant to the specification of the National Fire Protection Association. Review and approval by the Township Engineer and the Township Fire Marshall shall be required in order to ensure that adequate fire protection is provided.

Stormwater

1. Applicant must provide unit hydrographs for the 1-year storm event for both POI #1 and POI #2.
2. The volume to be infiltrated or permanently removed listed in the BMP Information Table on Sheet 7 does not match the Stormwater BMP Information Chart on page 136 of the stormwater report. This discrepancy must be revised.
3. The applicant must show the water line crossings on the stormwater profiles on Sheet 10, specifically between Inlets #3 and #4, Inlets #1 and #2, and between Bed #3 and the level spreader.
4. The Post-Developed Drainage Area Plan appears to have extra drainage area boundary lines. Drainage area to Bed #3 POI #2 appears to be broken into parts. Please remove excess boundary lines such as the one running from the corner of the townhome south to the drainage boundary, the line running along the centerline of the road, and the pre-development boundary line running along the southern property line.
5. The Post-Development Drainage Area Plan calls out drainage area for Bed #3 POI #2 as 1.37 acres in contrast with the 1.42 acres used in the stormwater report. This discrepancy must be revised.
6. We note that the applicant is using 1.36 acres with 0.55 impervious to Bed #3 in the water quality volume calculation; however, the stormwater report shows 1.42 acres with 0.56 impervious to Bed #3. This discrepancy must be revised.
7. There is no volume credit is given for tree replacement. The net 2-year and water quality volume must be provided by the dead storage volume and the volume infiltrated.

Steve Norcini
415 Maplewood Avenue
February 27, 2018

8. Stormwater calculations demonstrating that the requirements of the stormwater ordinance must be submitted as part of the Final Plan submission. Final approval of the stormwater management plan will be required as part of the Grading Permit process. Any revisions to the size or location of the individual structures or other features will be addressed at that time.

Sanitary Sewer

1. The sanitary sewer details provided are not applicable to Radnor Township.
2. Will the sanitary sewers be dedicated to the Township? If so, a sanitary sewer easement must be provided.
3. All plantings must be a minimum of 5 feet away from the proposed sanitary sewer laterals. There are numerous locations where there are trees proposed less than 5 feet.

Should the Planning Commission consider recommending approval of this project, we suggest that the recommendation be conditioned on requiring the applicant to satisfactorily address the above comments.

If you have any questions or require any additional information, please contact me.

Very truly yours,

GANNETT FLEMING, INC.



Roger A. Phillips, P.E.
Senior Project Manager



MEMORANDUM

Date: February 16, 2018

To: Steve Norcini, P.E.
Radnor Township Engineer

From: Amy Kaminski, P.E., PTOE
Transportation Services Manager

cc: John Rice, Esq., Grim Biehn & Thatcher
Peter Nelson, Esq., Grim Biehn & Thatcher
Roger Phillips, P.E., Senior Associate, Gannett Fleming, Inc.
Damon Drummond, P.E., PTOE, Gilmore & Associates, Inc.

Reference: Radnor Township – 415 Maplewood Avenue
Preliminary Subdivision Plan Review #3
Radnor Township, Delaware County, PA
G&A 15-01021

Gilmore & Associates, Inc. (G&A) has completed a transportation review of the referenced Preliminary/Final Subdivision Plan for a ten (10) unit residential townhouse development at 415 Maplewood Avenue. The Applicant proposes to remove two (2) existing dwelling units and construct five (5) residential buildings consisting of a total of ten (10) townhouse units on a 2.17 acre parcel located in the R-5 Zoning District. The dwelling units will take access via Maplewood Avenue and Highland Avenue from a modified existing private access.

We offer the following discussion for Radnor Township consideration:

A. DOCUMENTS REVIEWED

1. Preliminary Subdivision Plans for 415 Maplewood Avenue, prepared for David Semerjian Builders, prepared by Edward B. Walsh & Associates, Inc., consisting of 16 sheets, dated June 30, 2016, last revised January 29, 2018.
2. Response letter prepared for Gannett Fleming, prepared by Edward B. Walsh & Associates, Inc., dated January 30, 2018.

B. SUBDIVISION AND LAND DEVELOPMENT ORDINANCE COMMENTS

1. §255-27.C(1) – Highland Avenue and Maplewood Avenue shall be provided the required dimensional standards for local streets including a 60 foot right-of-way (30 foot half-width right-of-way), 28 foot cartway width (14 foot half-width) and curbing and sidewalk along the site frontages. The cartway widths shown on the adjacent roadways do not meet the dimensional standards of this section; Maplewood Avenue requires curbing along the site frontage west of Central Avenue and sidewalks widths must be labeled on the plan. **The Applicant is requesting a waiver from this requirement** to maintain the existing right-of-way and cartway widths along Highland and Maplewood Avenues.

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2. §255-27.E(1) – No more than five lots may be permitted to front on a private street. To consider more than five permitted lots, **a waiver must be requested.**
3. §255-27.E(2) – The access street shall include a twenty-eight (28) foot cartway, sidewalk and curbing along the entire frontage. Although the access street is proposed as a private street; the design must meet Township public street standards. The Applicant is proposing a twenty-four (24) foot cartway and is **requesting a waiver from this section.**
4. §255-27.F(2)(a) – The minimum center-line radii for horizontal curves on local roadways shall be no less than 150 feet. **The Applicant is requesting a waiver from this requirement.**
5. §255-27.G(4) – Verify that the grade differences between the access street at its intersection with both Highland Avenue and Maplewood Avenue are not greater than an 8% algebraic difference. Label the existing cross slopes on the roadway profile for Highland Avenue and Maple Avenue to demonstrate compliance. Although the response letter by the Applicant indicates the design was verified to comply with this section, it appears the algebraic grade difference between Maplewood Avenue and the proposed road exceeds the allowable 8% algebraic difference.
6. §255-27.H(3) - The plans shall include additional details of the proposed wall at the Highland Avenue access and identify the material, foundation and height including sufficient information to indicate the maximum height of the wall and the design will not obstruct sight distance visibility. The Applicant's engineer indicates the wall design will be submitted for review by others; however, the wall design must be submitted within the plan set for review.
7. §255-27.H(3) – No structure, fence or planting shall be maintained between a plane two feet above curb level and a plane seven feet above curb level so as to interfere with traffic visibility across the corner within that part of the required front, side or rear yard which is within the clear sight triangle. Verify that all existing and proposed trees will not obstruct visibility at the Maplewood Avenue and Highland Avenue accesses and the proposed wall adjacent to the Highland Avenue access will not obstruct motorists' visibility for the Highland Avenue access. It appears the wall exceeds a height of two (2) feet within the clear sight triangle.
8. §255-27.H(6) –The minimum curb radii provided at street intersections shall be 25 feet for local streets. The Applicant is providing 15 foot radii and is **requesting a waiver from this requirement.** Whether the waiver is accepted or not, the the Applicant must provide turning templates for the largest anticipated vehicle (minimally a sanitation truck) demonstrating the vehicle can safely enter, exit and navigate through the site without encroaching beyond the centerline of the roadways.
9. §255-28 – The Applicant shall revise the preliminary and final plans to label the available and required sight distance for the terminus of the access street to Maplewood Avenue and Highland Avenue in accordance with this section.
10. §255-37.F - The Applicant should revise the following comments regarding ADA complaint ramps for pedestrian crossings on driveways at the Central Avenue intersections with Maplewood Avenue and Highland Avenue and the sidewalk along Central Avenue :
 - a. Sheet 7 of 16:
 - Verify that all sidewalks have a maximum 2.00% cross slope. The spot elevations at Lot 6 and Lot 8 appear to exceed the 2.00% maximum.

- Verify the sidewalk grade in front of Lot 9. The spot elevations (467.75 and 467.67) are noted considerably higher than the surrounding grades.
 - b. Sheet 14 of 16: Label the ramp types (i.e. Type 1) to be installed on the 1"=10' details sheet and include details for a Type 4 ramp
 - c. Provide a minimum 4'x4' turning area where the sidewalk changes direction for both proposed ramps at Highland Avenue.
 - d. The slope across the length of the DWS must be constant to ensure the DWS will not be warped during installation. Revise the western Highland Avenue ramp to provide a continuous slope over the DWS.
 - e. Provide additional spot elevations for all points where the proposed sidewalk meets the existing grade/sidewalk. In addition, it appears multiple elevation points are missing at the corners of the proposed DWS'.
 - f. The eastern ramp at Maplewood Avenue does not appear to maintain a minimum 4'x4' landing area at the back of the ramp; verify and dimension all landing areas
 - g. Label all proposed to existing sidewalk tie-in points along Maplewood Avenue and Highland Avenue on the Grading Plan
11. §255-40.C(2) – Access and circulation for fire-fighting and other emergency equipment, moving vans, fuel trucks, garbage collection, deliveries and snow removal shall be planned for efficient operation and convenience. The Applicant shall demonstrate through truck turning templates that adequate onsite circulation for the identified vehicles is provided. The Fire Marshall must also review turning templates to evaluate and determine the need for parking restrictions. The Applicant is proposing no parking on the south side of the roadway; however, the truck turning templates appear to conflict with parking on the north side of the roadway. Revise the truck turning plan and/or the no parking signage accordingly.
12. §255-40.E (1) – Driveway details for each unit shall be provided to include the grade as well as the width and length of all driveways with particular attention to the driveway width at the street access.

C. GENERAL COMMENTS

1. Provide details, including size, for all proposed signage.
2. Clearly label relocated utility poles and note the proposed relocation on both the preliminary plan sheet (sheet 1) and the grading plan sheet (sheet 6).
3. Sheet 10 of 16:
 - a. The internal driveway cross section detail appears to include a brick paver walkway and a 4' concrete sidewalk; update the detail to identify an ADA compliant sidewalk. Brick pavers are not ADA compliant.
 - b. Revise the profile for the proposed road to identify the centerline and right-of-way line for both Maplewood Avenue and Highland Avenue. Include the existing cross slopes of both Maplewood Avenue and Highland Avenue at their intersections with Central Avenue.



EDWARD B. WALSH & ASSOCIATES, INC.
Complete Civil Engineering Design / Consultation Services
Lionville Professional Center
125 Dowlin Forge Road
Exton, PA 19341

January 30, 2018

Patricia Kaufman
Gannett Fleming
P.O. Box 80794
Valley Forge, Pa. 19484

Dear Patricia;

We have revised the 415 Maplewood Avenue plans in accordance with several meetings that we had with Radnor's staff and consultants, the Gilmore & Associates December 22, 2017 and the Gannett Fleming January 3, 2018 review letters. The meetings were held to discuss several issues including the impervious cover, private driveway width, driveway material and stormwater. The outcome of those meetings as we understand it was that the Radnor staff would support the following:

- a. 24' wide driveway with the radii that we show tying into the existing street in the same location as the existing private driveway.
- b. The ultimate R.O.W. width for Maplewood and highland would be acceptable as depicted on the plans.
- c. We could utilize brick pavers with the pervious voids as we have proposed for the driveways and sidewalk for the calculation of impervious cover for zoning provided we included the entire area as impervious in the stormwater calculations.
- d. We would adhere to the 36% impervious cover and would reduce the number of units to 10 to accomplish that.

These items are now memorialized on the plans through waiver requests.

With those items being highlighted we offer the following to accompany the re-submission. This letter's enumeration follows that of your consultants review letter.

Gannett Fleming Letter

Sewage Facilities Planning

1. we concur that Radnor township will not issue Final approval until we receive Planning Module approval. To that end the modules have been submitted to the Municipalities, Municipal Authorities and agencies that are required to sign off on the modules. That process is currently on going.

Zoning

1. We have added a comprehensive zoning table to sheet one indicating the items specified in the ordinance.
2. The minimum room sizes have been added to the table on sheet 1.
3. We reviewed the impervious cover reduction information with the zoning officer prior to submission and received concurrence from him that the reductions relative to impervious coverage were acceptable. Stormwater management has been designed without the reductions.
4. We modified the impervious cover calculations to be consistent as requested.
5. The information and plant calculations for the 10' buffer yards have been added to the landscape plans.
6. The parking calculations have been clarified to included two parking spaces per unit in the garage. Additionally we moved the unit back to permit a space for parking a car in the front of the units within the

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driveway on all units that we could. This will allow at least every unit to have a parking space within the driveway for one car in case part of the garage was utilized for storage and not parking.

7. Additional grades have been added to the proposed wall defining the elevations of the top and bottom of wall. We are not designing the proposed wall and a detail will be provided prior to construction for review and approval.

Subdivision

1. We have specified the zoning district on sheet 1 above the zoning table and added the extents of the zoning district and surrounding districts boundary to the location map.
2. An aerial photo with the development superimposed on it has been added to the plan set to provide the adjoining property information.
3. The lighting plan has been modified to show and label all the proposed lights more clearly. We have not proposed any additional lighting at the intersections as both intersections are existing and Highland and Maplewood Avenues have existing street lights located along them.
4. The water availability letter is attached hereto.
5. in accordance with the meetings with staff we have requested a waiver for the provision of additional R.O.W.
6. We do not believe this section will apply if the waiver to the R.O.W. is granted.
7. A waiver request has been added to sheet one requesting a waiver of the internal drive width and radii connections to the existing roads.
8. Three additional off street parking spaces have been added to comply with this requirement.
9. The internal driveway width dimension label has been corrected.
10. We concur and if the township takes ownership of the sewer system we will create the necessary easements.
11. The street tree calculation has been adjusted on the landscape plan and additional trees have been added as required.
12. Tree species have been modified to comply with eth list.
13. A truck turning plan has been added to the plan set showing that a fire truck can maneuver through the proposed driveway. We have added signs restricting parking along the driveway.
14. See comment three above.
15. Dimensions have been added to all unit driveways.
16. The developer wishes to utilize pavers for the driveway. We believe that the pavers meet the intent of the ordinance and provide a stable dust free access as required.
17. The Landscape plan has been mofoified to address all required buffers.
18. See note 13 on sheet 1.
19. The plan shows the proposed water main and fire hydrants. We believe their spacing to be compliant with the National Fire Protection Association. However if the Fire Marshal wants them adjusted we make the necessary adjustments. To date we have not received a review from the Fire Marshal.

Stormwater

1. The stormwater profiles have been modified to show all crossings.
2. The stormwater calculations and pipe storage design has been modified to provide the necessary storage for the rate reduction. The flow chart on page 2 has been modified accordingly.
3. The flow chart and the calculations have been adjusted for constancy.
4. We modified the drainage labels on the post development drainage plan as necessary.
5. The requested modification has been made.
6. The composite CN's have been adjusted so that they are consistent.
7. we revised the calculation for WQV as requested.
8. The site is comprised of one soil type. That soil type is listed on sheet 6 and 7.
9. The engineer's certification of compliance to the Radnor Stormwater Management Ordinance has been added to sheet 8.
10. We have submitted stormwater calculations with this submission that we believe demonstrate compliance with the Stormwater Ordinance. These calculations will be submitted with all subsequent grading permit submissions and final plan submission.

Sanitary Sewer

1. The Sanitary sewer manhole numbers have been added to the plan sheet 6.
2. The sewer profiles have been adjusted so that a minimum cover of 5' is provided on all the sewer lines.
3. We have added sanitary details to the plans.
4. All utility crossing have been added to the profiles.

- 5 The sewer lateral has been adjusted so that they are not located within the unit's driveway.
6. The existing sewer in Maplewood Avenue has been added to the plans.
7. We are not sure if it has been fully determined if the township will be the owner of the sewer system. If it is determined that they will own it, we will add the easement.
8. We have made an effort to keep the trees as far away from the laterals and sewer lines as possible and made every effort to maintain a minimum separation of 5'. Additionally we have added a note directing the contractor to maintain that separation if possible.

General

1. The signature block has been revised.
2. The Title plan has been revised to reflect the new parking total.
3. Revised.
4. Completed.
5. Grass pavers have been removed from the legend.
6. Trash and mail will be picked up and delivered at each unit.
7. The Highland and Maplewood intersection is shown on sheet 4.

Gilmore & Associates

Subdivision

1. An Aerial photograph plan with our project superimposed on it has been added to the plan set to show the existing features within 500'.
2. A waiver has been requested.
3. A waiver has been requested.
4. We have added a cross-section and paving spec for the internal drive.
5. A waiver has been requested.
6. We have verified the geometric difference and the design complies.
7. Additional elevations have been added to grading plan. We are not designing the wall so details of the wall will need to be submitted for review and approval by others.
8. Both access points are existing and we do not have the authority to alter vegetation on an adjoining property. We have added the Penn DOT mandated sight distance and the available sight distance to the plan. The sight distance to the left at the Highland Avenue access does not meet the Penn DOT required sight distance due to the geometry of the existing roadway. We believe that the use of the driveway is acceptable because it is existing and has been in continual use for both Commercial and residential access. We can add driveway ahead signs along Highland to warn motorists of the driveway if the township desires to provide additional warning to motorists.
9. A waiver has been requested.
10. See comment 8 above.
11. A typical sidewalk detail has been added.
12. We have added ADA compliant ramps to the driveway intersection. Additional grading detail has been added to the unit driveways and the plan depicts continuous sidewalk across the driveways.
13. A fire truck movement plan has been added to the plan set. The internal driveway will be have restricted parking.
14. Driveway dimensions have been added to the site plan and a detail has been added to the detail sheet.

General Comments

1. A sidewalk detail has been added.
2. Signs are depicted on the title plan.
3. The dimensional inconstancy has been removed. The cartway is 24'.

I believe we have addressed all of you consultants concerns within this submission. If you have any questions or need any additional information please contact me.

January 30, 2018
415 Maplewood response letter

Very truly yours,
EDWARD B. WALSH & ASSOC., INC.

A handwritten signature in black ink, appearing to read "Andrew Eberwein". The signature is fluid and cursive, with a long horizontal stroke at the end.

Andrew Eberwein
Project Manager
Cc David Sermerjian



Gannett Fleming

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Date: January 3, 2018

To: Stephen Norcini, P.E. – Township Engineer

From: Roger Phillips, PE

cc: Kevin W. Kochanski, RLA, CZO – Director of Community Development
Peter Nelson, Esq. – Grim, Biehn, and Thatcher
Amy B. Kaminski, P.E. – Gilmore & Associates, Inc.
Patricia Sherwin – Radnor Township Engineering Department
Ray Daly – Radnor Township Codes Official
Steve Gabriel - Rettew

RE: 415 Maplewood Avenue – Preliminary Subdivision Plan
David Semerjian Builders – Applicant

Date Accepted: July 5, 2016

90 Day Review: October 3, 2016, extended indefinitely

Gannett Fleming, Inc. has completed a review of the Preliminary Subdivision Plans for compliance with the Radnor Township Code. These Plans was reviewed for conformance with Zoning, Subdivision and Land Development, and other applicable codes of the Township of Radnor.

The applicant is proposing to consolidate parcels and construct 10 town houses on the site. This project is located in the R-5 district of the Township. The proposed development includes the private road Central Avenue. The deeds for the properties refer to Central Avenue as a Private Road and “together with the free and common use, right, liberty, and privilege of the above referred to 40 feet wide private road, with ingress and egress of same at all time hereafter forever in common with the owners, tenants and occupiers of the other lots bounding thereon.

Preliminary Subdivision Plans – 415 Maplewood Avenue

Plans Prepared By: Edward B. Walsh & Associates, Inc.

Dated: 12/8/2014 and last revised 11/28/2017

Sewage Facilities Planning

- I. Final plan approval will not be granted until Planning Approval is received from the PA DEP.



Zoning

1. A zoning table must be provided on the plans that indicates the existing and proposed zoning information. This table must include all information specified in §280-35.B.1 through §280-35.B.10.
2. §280-35.B(6) – The minimum rooms sizes as identified in this section must be indicated on the plans.
3. §280-35.B(9) – The maximum impervious surfaces allowed for this project is 36%. The applicant is proposing 36% impervious coverage, but is taking a porosity reduction. Without the reduction, the applicant is above the maximum allowable impervious coverage.
4. §280-35.B(9) – The proposed impervious calculations on the bottom of sheet 1 appear to be calculated incorrectly. This must be revised and be consistent with the calculations shown on the top of sheet 1. The calculations provided on sheet 2 must also be revised.
5. §280-36.B – Along each side or rear property line which directly abuts a residence area not devoted to apartment use in the district or in an adjoining district or municipality, a buffer planting strip, as defined in §280-4B, of not less than 10 feet in width must be provided. Information regarding the planting calculation for the buffer strip must be provided on the landscape plan.
6. §280-103.B(1) – Two parking spaces must be provided for each dwelling plus additional parking in accordance with §255-29.A(20). The applicant has indicated on the plans that 32 parking spaces are being provided. The applicant must indicate where the parking spaces are to be provided and the spaces must be dimensioned on the plan. In accordance with §280-4.B. a parking space shall measure not less than nine feet six inches by 20 feet.
7. §280-109.A – No fence or wall, except for retaining walls or the walls of a building as permitted under the terms of this chapter, shall exceed a height of six feet, provided further that within R-4 and R-5 Districts, no fence or wall erected within the required front yard setback. The plans indicate that the bottom of the wall and the top of the wall will be 262.00 at the end and 7 feet to the west the top of the wall will be 461.60 and the bottom of the wall will be 461.00. Please provide a detail of the proposed wall along with accurate elevations.

Subdivision and Land Development

1. §255-20.B(1)(d)[1] – The applicable zoning district and district boundaries must be shown on the plans.



2. §255-20.B(1)(n) – Existing principal buildings (and their respective uses) and driveways on the adjacent peripheral strip. Sewer lines, storm drains, culverts, bridges, utility easements, quarries, railroad and other significant man-made features within 500 feet of and within the site (this includes properties across street) must be shown on the site plan or a waiver requested. Additionally, the houses located along the existing Central Ave near Highland Avenue must be shown on the plans. The applicant has indicated a waiver would be requested for this requirement.
3. §255-20.B(1)(o)[8] – The location of all street lights must be shown on the lighting plan. The plan indicates that 6 lights will be provided, but we are unable to locate them on the plans.
4. §255-20.B(6)(b) – A letter indicating the availability of central water supply from the appropriate utility must be provided.
5. §255-27.C(1) – Maplewood Avenue is classified as a Minor Collection Road. The required right of way is 60 feet and the required cartway is 36 feet. Highland Avenue is a local road. The required right of way is 60 feet and the required cartway is 28 feet. Curbing and sidewalks must be provided. The applicant has provided right-of-way 25 feet from the centerline of Maplewood Avenue. The existing legal right of way along Highland Avenue is 50 feet.
6. §255-27.C(4) – Where a subdivision abut or contains an existing street of inadequate right-of-way width, the Board of Commissioners may require the reservation or dedication of right-of-way to conform to the standards above.
7. §255-27.H(6) – Minimum curb radii at street intersections shall be 25 feet for local streets, 30 feet for collectors; 35 feet for arterials and 10 feet for driveways. The applicant has indicated a 15-foot curb radii on the plans. This must be revised or a waiver requested.
8. §255-29.A(20) – Where semi-attached, attached or multiple dwellings are proposed and where private garages or driveways are proposed to be used to meet the off-street parking requirements, one parking space per four dwelling units of overflow off-street parking shall be provided.
9. The applicant has indicated that the driveway width provided is 24 feet. The plan has the driveway width dimension as 22 feet. This must be revised.
10. §255-35 – If the sanitary sewer system is to be dedicated to the Township, an easement in accordance with this section must be provided.
11. §255-38.B – Street trees 2 ½ inches dbh at intervals of not more than 30 feet along both sides of new streets and along one or both sides of an existing street within the proposed subdivision or land development. The street trees calculations indicate 1 tree for every 40

- feet. This must be revised. The applicant should verify the length of Maplewood Ave and the new driveway included in the calculations.
12. §255-38.H – All street trees provided on the plans must be in accordance with this section. There are trees listed on sheet 11 of the plans that are not listed in this section. This must be revised or a waiver requested.
 13. §255-40.C(2) – Access and circulation for fire-fighting and their emergency equipment, moving vans, fuel trucks, garbage collection, deliveries and snow removal shall be planned for efficient operation and convenience. This must be reviewed and approved by the Township Code Official/Fire Marshall. Significant concern exists as to the ability to access the proposed houses from the single driveway. Additionally, on street parking is prohibited along the private driveway.
 14. §255-37.E – Sidewalks and pedestrian paths shall be adequately lighted, if required by the Board of Commissioners. Lighting along the private access drive and at the intersections with Maplewood and Highland must be shown on the lighting plan.
 15. §255-40.E(1) – Driveways shall be provided on the site where necessary for convenient access to dwelling units, garage compounds, parking areas, service entrances of buildings, collection of refuse and all other necessary services. The dimensions of all the individual driveways must be shown on the plans.
 16. §255-40.E(3) – All driveways shall be paved and constructed in accordance with Township Standards.
 17. §255-42.A – Buffer screens are required between subdivisions and land developments and along existing streets to soften visual impact, to screen glare and to create a visual barrier between conflicting land use. Buffer screens must be provided in accordance with this section. Information regarding the adjacent land uses provided and buffer calculations must be provided on the landscape plan.
 18. §255-43.1.B(1) – For all residential subdivisions or land developments involving a total of four or more lots and/or dwelling units, a minimum of 1,440 square feet or suitable park and recreation land shall be provided per dwelling unit within such subdivision/land development, unless the developer agrees to a fee in lieu of \$3,307 per dwelling unit (existing or proposed).
 19. §255-54.B – The central water system should be designed with adequate capacity and appropriately spaced fire hydrants for fire-fighting purposes pursuant to the specification of the National Fire Protection Association. Review and approval by the Township Engineer and the Township Fire Marshall shall be required in order to ensure that adequate fire protection is provided.



Stormwater

1. The applicant must update the stormwater management profiles on Sheet 9 of 12 to include the sanitary sewer crossings.
2. The 2-year post-development runoff rate exceeds the 1-year pre-development runoff rate for both POI #1 and POI #2. Please revise the stormwater management system to meet the rate control requirements as listed in Table 408.1 in §245-25(A)(1)(b).
3. Please revise the Total Post to POI #2 in the Flow Chart on page 2 to be consistent with the peak discharges as shown in the hydrograph reports.
4. The labels on the Post-Developed Drainage Area Plan do not appear to correspond with the drainage areas outlined on the plan for POI #1 and Bed #3 POI #2. Please revise the drainage area map to clearly show the boundaries for each BMP post-development drainage area.
5. The total pre-development drainage area shown on the map and used in the stormwater hydrographs is 2.71 acres whereas the total post-development drainage area shown on the map and used in the stormwater hydrographs is 2.66 acres. The pre- and post-development drainage areas need to be revised to be the same acreage.
6. The composite CN's for Hyd. No. 7 – Bed #1 POI #2 (page 17), Hyd. No. 12 – Bed #2 PIO #2 (page 22), and Hyd. No. 20 - Bypass (page 30) do not have matching areas in the formulas. Please revise so that the areas are consistent.
7. §245-23(D)(1) - The following calculation formula is to be used to determine the water quality storage volume (WQ_v) in acre-feet of storage required by this chapter:
 $WQ_v = [(P)(R_v)(A)]/12$, where:
 WQ_v = Water quality volume (acre-feet)
 P = 1 inch
 A = Area of the project contributing to the water quality BMP (acres)
 R_v = $0.05 + 0.009(I)$ where I is the percent of the area that is impervious surface
 $[(\text{impervious area}/A) \times 100]$
It appears the applicant used the total area evaluated for the stormwater report. Please revise “A” to be only the area contributing to the stormwater management system and “I” to be the percent impervious area within that subarea. Please note that in the R_v equation, “I” is multiplied by 100 and not use as the decimal version of percentage.
8. §245-13(B)(6) – Soil names and boundaries not shown.

9. §245-13(B)(23) – Statement by engineer about drainage plan meeting Radnor Township Stormwater Management Ordinance not included.
10. Stormwater calculations demonstrating that the requirements of the stormwater ordinance must be submitted as part of the Final Plan submission. Final approval of the stormwater management plan will be required as part of the Grading Permit process. Any revisions to the size or location of the individual structures or other features will be addressed at that time.

Sanitary Sewer

1. The proposed sanitary sewer MH numbers must be shown on the utility plan.
2. The minimum coverage for sanitary sewers must be 5 feet. There is less than 5 feet of coverage between MH 3-MH 4 and MH 4-MH 5.
3. Sanitary sewer details must be provided.
4. All utility crossings must be shown on the sanitary sewer profile.
5. Sanitary sewer laterals should not be located in driveways.
6. The existing sanitary sewer must be shown on Maplewood Road.
7. Will the sanitary sewers be dedicated to the Township? If so, a sanitary sewer easement must be provided.
8. All plantings must be a minimum of 5 feet away from the proposed sanitary sewer laterals.

General

1. The signature blocks on the cover sheet indicates that Radnor Township is in Chester County. This must be revised to indicate Delaware County.
2. The cover sheet indicates that 32 parking spaces will be provided. This must be verified and updated if necessary.
3. The site date provided on sheet must be revised to represent the proposed site conditions.
4. Landscape note #4 must be revised to indicate Township instead of Borough.

Steve Norcini
415 Maplewood Avenue
January 3, 2018

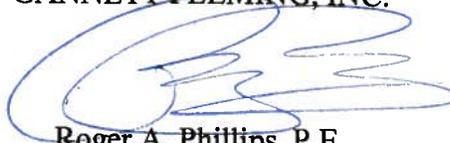
5. The legend indicates proposed grass pavers. If these are no longer proposed for this project, this should be removed from the legend. Also, the reference to the grass pavers on sheet 1 below the impervious calculations must be removed.
6. The applicant should indicate how mail service and trash collection will be provided.
7. The intersection of Highland Avenue and Maplewood Avenue must be shown on the plans.

Should the Planning Commission consider recommending approval of this project, we suggest that the recommendation be conditioned on requiring the applicant to satisfactorily address the above comments.

If you have any questions or require any additional information, please contact me.

Very truly yours,

GANNETT FLEMING, INC.



Roger A. Phillips, P.E.
Senior Project Manager



MEMORANDUM

Date: December 22, 2017

To: Steve Norcini, P.E.
Radnor Township Engineer

From: Amy Kaminski, P.E., PTOE
Transportation Services Manager

cc: John Rice, Esq., Grim Biehn & Thatcher
Peter Nelson, Esq., Grim Biehn & Thatcher
Roger Phillips, P.E., Senior Associate, Gannett Fleming, Inc.
Damon Drummond, P.E., PTOE, Gilmore & Associates, Inc.

Reference: Radnor Township – 415 Maplewood Avenue
Preliminary Subdivision Plan Review #2
Radnor Township, Delaware County, PA
G&A 15-01021

Gilmore & Associates, Inc. (G&A) has completed a transportation review of the referenced Preliminary/Final Subdivision Plan for a ten (10) unit residential townhouse development at 415 Maplewood Avenue. The applicant proposes to remove two (2) existing dwelling units and construct five (5) residential buildings consisting of a total of ten (10) townhouse units on a 2.17 acre parcel located in the R-5 Zoning District. The dwelling units will take access via Maplewood Avenue and Highland Avenue from a modified existing private access.

We offer the following discussion for Radnor Township consideration:

A. DOCUMENTS REVIEWED

1. Preliminary Subdivision Plans for 415 Maplewood Avenue, prepared for David Semerjian Builders, prepared by Edward B. Walsh & Associates, Inc., consisting of 12 sheets, dated June 30, 2016, last revised November 28, 2017.
2. Response letter prepared for Gannett Fleming, prepared by Edward B. Walsh & Associates, Inc., dated December 6, 2017.

B. SUBDIVISION AND LAND DEVELOPMENT ORDINANCE COMMENTS

1. §255-20.B(1)(n) and/or 21.B(1)(n) – Site plan shall show existing principal buildings (and their respective uses) and driveways on the adjacent peripheral strip; sewer lines, storm drains, culverts, bridges, utility easements, quarries, railroads and other significant man-made features within 500 feet of and within the site. The Applicant indicates they will request a waiver from this section.

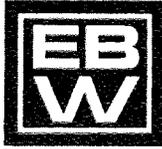
2. §255-27.C(1) – Highland Avenue and Maplewood Avenue shall be provided the required dimensional standards for local streets including a 60 foot right-of-way (30 foot half-width right-of-way), 28 foot cartway width (14 foot half-width) and curbing and sidewalk along the site frontages. The cartway widths shown on the adjacent roadways do not meet the dimensional standards of this section; Maplewood Avenue requires curbing along the site frontage west of Central Avenue and sidewalks widths must be labeled on the plan. The Applicant shall comply with this section or a waiver is required.
3. §255-27.E(2) – The access street shall include a twenty-eight (28) foot cartway, sidewalk and curbing along the entire frontage. Although the access street is proposed as a private street; the design must meet Township public street standards. The Applicant is proposing a twenty-four (24) foot cartway and indicates they will request a waiver from this section.
4. §255-27.E(3) - Provide a typical section and pavement detail for the proposed roadway.
5. §255-27.F(2)(a) – The minimum center-line radii for horizontal curves on local roadways shall be no less than 150 feet. All centerline radii for the access street are shown at less than the required 150 feet. The Applicant shall comply with this section or a waiver is required.
6. §255-27.G(4) – Verify that the grade differences between the access street at its intersection with both Highland Avenue and Maplewood Avenue are not greater than an 8% algebraic difference. Label the existing cross slopes of Highland Avenue and Maple Avenue to demonstrate compliance.
7. §255-27.H(3) - The plans shall include additional details of the proposed wall at the Highland Avenue access and identify the material, foundation and height. Provide sufficient information to indicate the maximum height of the wall and verify the design will not obstruct sight distance visibility.
8. §255-27.H(3) – No structure, fence or planting shall be maintained between a plane two feet above curb level and a plane seven feet above curb level so as to interfere with traffic visibility across the corner within that part of the required front, side or rear yard which is within the clear sight triangle. Verify that all existing and proposed trees will not obstruct visibility at the Maplewood Avenue and Highland Avenue accesses and the proposed wall adjacent to the Highland Avenue access will not obstruct motorists' visibility for the Highland Avenue access.
9. §255-27.H(6) –The minimum curb radii provided at street intersections shall be 25 feet for local streets.
10. §255-28 – The Applicant shall revise the plans to label the available and required sight distance for the terminus of the access street to Maplewood Avenue and Highland Avenue in accordance with this section.
11. §255-37.I - The plans shall be revised to provide a typical detail for the proposed sidewalk to include the thickness and construction materials for the sidewalk.
12. §255-37.F - The applicant is to provide ADA complaint ramps with detailed grading for pedestrian crossings on driveways at the Central Avenue intersections with

Maplewood Avenue and Highland Avenue. Additionally, detailed grading information should be provided to show continuous sidewalks across all driveways along Central Avenue.

13. §255-40.C(2) – Access and circulation for fire-fighting and other emergency equipment, moving vans, fuel trucks, garbage collection, deliveries and snow removal shall be planned for efficient operation and convenience. The Applicant shall demonstrate through truck turning templates that adequate onsite circulation for the identified vehicles is provided. The Fire Marshall should also review turning templates to evaluate and determine the need for parking restrictions. Parking restrictions to one side or both sides of the streets may be necessary.
14. §255-40.E (1) – Driveway details for each unit shall be provided to include the grade as well as the width and length of all driveways with particular attention to the width at the street access.

C. GENERAL COMMENTS

1. The plans should be revised to provide a typical detail for the proposed sidewalk to include the thickness and construction materials for the sidewalk.
2. The plans should include a pavement marking and signage sheet; at a minimum, stop signs should be proposed on Central Avenue at the intersection with both Highland Avenue and Maplewood Avenue.
3. The plans show inconsistency regarding the 22-foot dimension for the roadway cartway width near Sta 2+90. Verify the cartway width is a consistent 24 foot width and update all cartway width dimensions accordingly.



EDWARD B. WALSH & ASSOCIATES, INC.
Complete Civil Engineering Design / Consultation Services
Lionville Professional Center
125 Dowlin Forge Road
Exton, PA 19341

December 6, 2017

Patricia Kaufman
Gannett Fleming
P.O. Box 80794
Valley Forge, Pa. 19484

Dear Patricia;

We have revised the 415 Maplewood avenue plans in accordance with several meetings that we had with Radnor's staff and consultants. These meetings were held to discuss several issues including the impervious cover, private driveway width, driveway material and stormwater. The outcome of those meetings as we understand it was that the Radnor staff would support the following:

- a. 24' wide driveway with the radii that we show tying into the existing street in the same location as the existing private driveway.
- b. The ultimate R.O.W. width for Maplewood and highland would be acceptable as depicted on the plans.
- c. We could utilize brick pavers with the pervious voids as we have proposed for the driveways and sidewalk for the calculation of impervious cover for zoning provided we included the entire area as impervious in the stormwater calculations.
- d. we would adhere to the 36% impervious cover and would reduce the number of units to 10 to accomplish that.

I am not sure how these items are to be memorialized on the plans. We can add any notes or waivers that are necessary.

With those items being highlighted we offer the following to accompany the re-submission. This letter's enumeration follows that of your August 30, 2016 review letter.

Zoning

1. The minimum room sizes will be provided by others.
2. We believe we now comply.
- 3-5. The overflow parking spaces have been removed. We have a two car garage for each unit that will provide the parking required.
6. We have added top of wall and bottom of wall elevations to the proposed wall. It will be well under 2' in height.

Subdivision

1. The plan label has been changed to preliminary.
2. The zoning data is on the plan.
3. We are going to request a waiver of the requirement to provide significant and topographic information within 500 feet.
4. We have added a lighting plan.
5. We will provide the water availability letter once we receive it.
6. Per the meetings with staff we believe the R.O.W. shown is acceptable.
7. We believe what is shown is acceptable.

REGISTERED PROFESSIONAL ENGINEERS & LAND SURVEYORS
Pennsylvania, New Jersey, Delaware, Maryland & North Carolina
610-903-0060 FAX 610-903-0080
www.ebwalshinc.com
Established 1985

8. The parking spaces have been eliminated.
9. the plan is proposing private driveway and we do not believe street trees are required.
10. We agree and ask do we submit to the Fire Marshall for review or is that done by the Township.
11. We added alighting plan.
12. N/A.
13. As discussed we believe that the driveways are acceptable as designed.
14. This is an item between our client and the township.
15. We have added a lighting plan.
16. We concur and await the Fire Marshall's review.

Stormwater

We have revised the stormwater system in accordance with you review comments. The two infiltration systems, beds 1 and 2, as well as the rate control bed 3 system have been redesigned as all pipe storage systems.

Sanitary Sewer

1. The Sanitary sewer manhole numbers will be added to the plan.
2. The existing features that are to removed have been taken off the plan.
3. The minimum cover will be 5' on all the sewer lines.
4. We will add the sanitary details but we are not sure if the township has a specific set of details that they require. If there are specific Radnor Township Sanitary details could you send them to us or let us know where we can obtain them.
5. We believe that all the storm crossings are shown on the profile. We will add the water line crossing once the main extension plan is approved.
6. We are not sure if it has been fully determined if the township will be the owner of the sewer system. If it is determined that they will own it, we will add the easement.

General

1. We did not revise the signature block and will do so on the next submission.
2. The Title plan has been revised to reflect the new parking total.
3. Revised.
4. No revision needed.
5. We revised the tree protection fence detail.
6. Revised.

Very truly yours,
EDWARD B. WALSH & ASSOC., INC.



Andrew Eberwein
Project Manager
Cc David Sermerjian



EDWARD B. WALSH & ASSOCIATES, INC.
Complete Civil Engineering Design / Consultation Services
Lionville Professional Center
125 Dowlin Forge Road
Exton, PA 19341

November 29, 2016

Radnor Township Commissioners
301 Iven Avenue
Wayne, Pa. 19087

Dear Township Commissioner Members;

Edward B. Walsh and Associates, Inc. authorized by and acting as agents for Mr. David Sermerjian hereby grants the Commissioners of the Township of Radnor an indefinite extension to the statutory review period decision date for the Land Development plan of 415 Maplewood Avenue.

Very truly yours,
EDWARD B. WALSH & ASSOC., INC.

Andrew Eberwein
Project Manager
Cc David Sermerjian



Date: August 30, 2016

To: Radnor Township Planning Commission

From: Roger Phillips, PE

cc: Stephen Norcini, P.E. – Director of Public Works
Kevin W. Kochanski, RLA, CZO – Director of Community Development
Peter Nelson, Esq. – Grim, Biehn, and Thatcher
Amy B. Kaminski, P.E. – Gilmore & Associates, Inc.
Suzan Jones – Radnor Township Engineering Department
William Miller – Radnor Township Codes Official
Ray Daly – Radnor Township Codes Official
Steve Gabriel - Rettew

RE: 415 Maplewood Avenue – Preliminary Subdivision Plan
David Semerjian Builders – Applicant

Date Accepted: July 5, 2016
90 Day Review: October 3, 2016

Gannett Fleming, Inc. has completed a review of the Preliminary Subdivision Plans for compliance with the Radnor Township Code. These Plans was reviewed for conformance with Zoning, Subdivision and Land Development, and other applicable codes of the Township of Radnor.

The applicant is proposing to consolidate parcels and construct 12 town houses on the site. This project is located in the R-5 district of the Township. The proposed development includes the private road Central Avenue. The deeds for the properties refer to Central Avenue as a Private Road and “together with the free and common use, right, liberty, and privilege of the above referred to 40 feet wide private road, with ingress and egress of same at all time hereafter forever in common with the owners, tenants and occupiers of the other lots bounding thereon.

Preliminary Subdivision Plans – 415 Maplewood Avenue

Plans Prepared By: Edward B. Walsh & Associates, Inc.
Dated: 12/8/2014 and last revised 04/10/2015

I. Zoning

1. §280-35.B(6) – The minimum rooms sizes as identified in this section must be indicated on the plans.



2. §280-35.B(9) – The maximum impervious surfaces allowed for this project is 36%. The applicant is proposing 36% impervious coverage, but is taking a porosity reduction. Without the reduction, the applicant is above the maximum allowable impervious coverage. Also, should the overflow parking spaces be paved as required, the impervious coverage will be above the required limit.
3. §280-35.B(9) – The applicant must include the 6 overflow parking spaces that are proposed to be grass pavers in the impervious calculations. Overflow parking must be constructed in accordance with the Township standards or a variance requested.
4. §280-103.B(1) – Two parking spaces must be provided for each dwelling. The applicant must indicate where the two parking spaces are to be provided and the spaces must be dimensioned on the plan. There does not appear to be adequate driveway access for Lot #3 and lot #4.
5. §280-103.B(1) – Parking spaces must be surfaced with a Township approved durable, dustproof and all-weather surface as defined in §280-4.
6. §280-109.A – No fence or wall, except for retaining walls or the walls of a building as permitted under the terms of this chapter, shall exceed a height of six feet, provided further that within R-4 and R-5 Districts, no fence or wall erected within the required front yard setback. Information must be provided for the proposed wall near Highland Avenue.

II. Subdivision and Land Development

1. §255-12.A – This plan was submitted as preliminary/final. Since this plan is a Land Development plan, Preliminary and Final submissions must be made.
2. §255-20.B(1)(d)[1] – The applicable zoning district and district boundaries must be shown on the plans.
3. §255-20.B(1)(n) – Existing principal buildings (and their respective uses) and driveways on the adjacent peripheral strip. Sewer lines, storm drains, culverts, bridges, utility easements, quarries, railroad and other significant man-made features within 500 feet of and within the site (this includes properties across street) must be shown on the site plan or a waiver requested. Additionally, the houses located along the existing Central Ave near Highland Avenue must be shown on the plans.
4. §255-20.B(1)(o)[8] – The location of all street lights must be shown on the proposed layout plan.

5. §255-20.B(6)(b) – A letter indicating the availability of central water supply from the appropriate utility must be provided.
6. §255-27.C(1) – Maplewood Avenue Road is classified as a Minor Collection Road. The required right of way is 60 feet and the required cartway is 36 feet. Highland Avenue is a local road. The required right of way is 60 feet and the required cartway is 28 feet. Curbing and sidewalks must be provided. Additional right of way is required along Highland Avenue.
7. §255-27.H(6) – Minimum curb radii at street intersections shall be 25 feet for local streets, 30 feet for collectors; 35 feet for arterials and 10 feet for driveways. This must be shown on the plans.
8. §255-29.A(1) – Parking space dimensions must be provided on the plans. Also the degree of angle of the overflow parking spaces must be shown on the plans.
9. §255-38.B – Street trees must be provided for the access along Highland Avenue.
10. §255-40.C(2) – Access and circulation for fire-fighting and their emergency equipment, moving vans, fuel trucks, garbage collection, deliveries and snow removal shall be planned for efficient operation and convenience. This must be reviewed and approved by the Township Code Official/Fire Marshall. Significant concern exists as to the ability to access the proposed houses from the single driveway. Additionally, on street parking is prohibited along the private driveway.
11. §255-37.E – Sidewalks and pedestrian paths shall be adequately lighted, if required by the Board of Commissioners. Lighting along the private access drive and at the intersections with Maplewood and Highland must be provided.
12. §255-40.E(1) – Driveways shall be provided on the site where necessary for convenient access to dwelling units, garage compounds, parking areas, service entrances of buildings, collection of refuse and all other necessary services. The driveways to unit 3 and 4 do not look adequate for access to the dwelling units.
13. 255-40.E(3) – All driveways shall be paved and constructed in accordance with Township Standards.
14. 255-43.1.B(1) – For all residential subdivisions or land developments involving a total of four or more lots and/or dwelling units, a minimum of 1,440 square feet or suitable park and recreation land shall be provided per dwelling unit within such subdivision/land development, unless the developer agrees to a fee in lieu of \$3,307 per dwelling unit (existing or proposed).

15. §255-49 – Where appropriate, the developer shall install or cause to be at the developer’s expenses, metal or fiberglass pole streetlights.
16. §255-54.B – The central water system should be designed with adequate capacity and appropriately spaced fire hydrants for fire-fighting purposes pursuant to the specification of the National Fire Protection Association. Review and approval by the Township Engineer and the Township Fire Marshall shall be required in order to ensure that adequate fire protection is provided.

III. Stormwater

1. §245-18(F) – The applicant should consider an alternative method and location for the discharge of pipe storage bed #3.
2. §245-22(A),(1).(b) – The infiltration BMPs shall have an infiltration rate sufficient to accept the additional stormwater load and dewater completely as determined by field tests conducted by the applicant's design professional. The recharge bed does not appear to have had an infiltration test completed in the vicinity of the proposed BMP. Please clarify.
3. §245-23 (D) – Water Quality Requirements – The applicant has not provided supporting calculations or documentation demonstrating that the Water Quality volumes requirements have been met. The required water quality volume (WQ_v) is the storage capacity needed to capture and treat a portion of stormwater runoff from the developed areas of the site. Currently, the applicant has only provided information for the net two year volume approach.
4. §245-27.J – Underground stormwater management systems must be designed to store the two- through one-hundred-year storms within a pipe or other open system that will permit the inspection and maintenance of the system. The entire storm must be placed in the pipe (i.e., the stone bedding around the pipe is not to be included in the volume calculations). We note that the applicant is proposing to address stormwater management onsite utilizing infiltration beds and a recharge system. The stormwater report appears to show that the applicant is proposing to use stone void as part of the volume provided. This is not permitted. The applicant must provide an alternative was to handle the stormwater management onsite.
5. Please update the storm sewer profiles to include all utility crossings.
6. Stormwater calculations demonstrating that the requirements of the stormwater ordinance must be submitted as part of the Final Plan submission. Final approval of the stormwater management plan will be required as part of the Grading Permit process. Any revisions to

the size or location of the individual structures or other features will be addressed at that time.

IV. Sanitary Sewer

1. The proposed MH numbers must be shown on the utility plan.
2. The existing features that will be removed during construction must be removed from the grading and utility plan.
3. The minimum coverage for sanitary sewers must be 5 feet. There is less than 5 foot of coverage between MH 3-MH 4 and MH 4 – MH 5.
4. Sanitary sewer details must be provided.
5. All utility crossings must be shown on the sanitary sewer profile.
6. Will the sanitary sewers be dedicated to the Township? If so, a sanitary sewer easement must be provided.

V. General

1. The signature blocks on the cover sheet indicates that Radnor Township is in Chester County. This must be revised to indicate Delaware County.
2. The cover sheet indicates that 32 parking spaces will be provided. If 2 parking spaces are provided per dwelling unit, it appears than there are 30 parking spaces indicated on the plans. This must be verified and updated if necessary.
3. Landscape note #4 must be revised to indicate Township instead of Borough.
4. We have reviewed the sewage facilities planning module exemption form for the project. The name of the existing interceptor should be revised to be Skunk Hollow and not Windmere Avenue. Once this is revised the exemption form will be executed. Please note, that a full planning module submission will be required by the PA DEP due to CMP located downstream.
5. It appears the applicant has provided a tree protection detail that is inconsistent with Radnor Township's standard detail. Please use the Radnor Township standard tree protection detail which can be found on the Township's website.
6. It appears the bearing for 501 Maplewood is incorrect. It should be S28°40'00"E instead of S28°40'00"W. Please verify and correct.

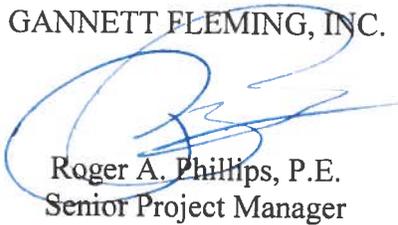
In addition to our review comments, a memorandum dated July 25, 2016 from Any Kaminski of Gilmore & Associates, Inc. the Township Traffic Engineer has been attached and is incorporated herein by reference.

Should the Planning Commission consider recommending approval of this project, we suggest that the recommendation be conditioned on requiring the applicant to satisfactorily address the above comments.

If you have any questions or require any additional information, please contact me.

Very truly yours,

GANNETT FLEMING, INC.

A handwritten signature in blue ink, appearing to read "R. Phillips", is written over the printed name and title.

Roger A. Phillips, P.E.
Senior Project Manager



MEMORANDUM

Date: July 25, 2016

To: Steve Norcini, P.E.
Radnor Township Public Works Director

From: Amy Kaminski, P.E., PTOE
Transportation Services Manager

cc: Kevin Kochanski, ASLA, R.L.A., Director of Community Development
Roger Phillips, P.E., Senior Project Manager, Gannett Fleming, Inc.
Damon Drummond, P.E., PTOE, Gilmore & Associates, Inc.

Reference: Radnor Township – 415 Maplewood Avenue
Preliminary/Final Subdivision Plan Review #1
Radnor Township, Delaware County, PA
G&A 15-01021

Gilmore & Associates, Inc. (G&A) has completed a transportation review of the referenced Preliminary/Final Subdivision Plan for a twelve (12) unit residential townhouse development at 415 Maplewood Avenue. The applicant proposes to remove two (2) existing dwelling units and construct four (4) residential buildings consisting of a total of twelve (12) townhouse units on a 2.17 acre parcel located in the R-5 Zoning District. The dwelling units will take access via Maplewood Avenue and Highland Avenue from a modified existing private access.

We offer the following discussion for Radnor Township consideration:

A. DOCUMENTS REVIEWED

1. Preliminary/Final Subdivision Plans for 415 Maplewood Avenue, prepared for David Semerjian Builders, prepared by Edward B. Walsh & Associates, Inc., consisting of 10 sheets, dated June 30, 2016.
2. Drainage Area Plan, prepared for David Semerjian Builders, prepared by Edward B. Walsh & Associates, Inc., consisting of 2 sheets, dated June 30, 2016.
3. Subdivision and Land Development Application Form.

B. SUBDIVISION AND LAND DEVELOPMENT ORDINANCE COMMENTS

1. §255-20.B(1)(n) and/or 21.B(1)(n) – Site plan shall show existing principal buildings (and their respective uses) and driveways on the adjacent peripheral strip; sewer lines, storm drains, culverts, bridges, utility easements, quarries, railroads and other significant man-made features within 500 feet of and within the site.

2. §255-27.C(1) – Highland Avenue and Maplewood Avenue shall be provided the required dimensional standards for local streets including a 60 foot right-of-way (30 foot half-width right-of-way), 28 foot cartway width (14 foot half-width) and include curbing and sidewalk along the site frontages. The cartway widths shown on the adjacent roadways do not meet the dimensional standards of this section, Maplewood Avenue requires curbing along the site frontage west of Central Avenue and sidewalks widths must be labeled on the plan.
3. §255-27.E(2) – The access street shall include a twenty-eight (28) foot cartway, sidewalk and curbing along the entire frontage. Although the access street is proposed as a private street; the design must meet Township public street standards.
4. §255-27.F(2)(a) – The minimum center-line radii for horizontal curves on local roadways shall be no less than 150 feet. All centerline radii for the access street are shown at less than the required 150 feet.
5. §255-27.G(4) – Verify that the grade differences between the access street at its intersection with Highland Avenue and Maplewood Avenue are not greater than an 8% algebraic difference. Label the existing cross slopes of Highland Avenue and Maple Avenue to demonstrate compliance.
6. §255-27.H(3) – No structure, fence or planting shall be maintained between a plane two feet above curb level and a plane seven feet above curb level so as to interfere with traffic visibility across the corner within that part of the required front, side or rear yard which is within the clear sight triangle. Verify that all existing and proposed trees will not obstruct visibility at the Maplewood Avenue and Highland Avenue accesses and the proposed wall adjacent to the Highland Avenue access will not obstruct visibility for the Highland Avenue access.
7. §255-27.H(6) – The Applicant shall revise the plans to label the curb radii for the accesses at Maplewood Avenue and Highland Avenue. The minimum curb radii provided at street intersections shall be 25 feet for local streets.
8. §255-28 – The Applicant shall revise the plans to label the available and required sight distance for the terminus of the access street to Maplewood Avenue and Highland Avenue in accordance with this section.
9. §255-40.C(2) – Access and circulation for fire-fighting and other emergency equipment, moving vans, fuel trucks, garbage collection, deliveries and snow removal shall be planned for efficient operation and convenience. The Applicant shall demonstrate through truck turning templates that adequate onsite circulation for the identified vehicles is provided.
10. §255-40.E (1) – Driveway details for each unit shall be provided to include the grade as well as the width and length of all driveways. Of particular concern is the driveway interaction for Unit 3 and 4. It appears there is insufficient width provided for Unit 3 at the street line.

C. GENERAL COMMENTS

1. The plans should be revised to show the existing/relocated utility pole located on the northeast corner of the Highland Avenue access. The Applicant should verify

its location and if the Highland Avenue access design will require the relocation of this utility pole.

2. The plans should be revised to provide a typical detail for the proposed sidewalk to include the thickness and construction materials for the sidewalk.
3. The applicant is to provide ADA complaint ramps with detailed grading for the pedestrian crossings the driveways at the Central Avenue intersections with Maplewood Avenue and Highland Avenue. Additionally, detailed grading information should be provided to show continuous sidewalk across all driveways along Central Avenue.
4. The plans should include a detail of the proposed wall at the Highland Avenue access and identify the material, foundation and height.
5. The plans should include a pavement marking and signage sheet; at a minimum, stop signs should be proposed on Central Avenue at the intersection with both Highland Avenue and Maplewood Avenue.
6. Consideration should be given to identify a centralized location for all mailboxes through coordination with the United States Postal Service regarding the configuration of mailboxes.



DELAWARE COUNTY PLANNING COMMISSION

COURT HOUSE/GOVERNMENT CENTER
201 W. Front St. Media, PA 19063

COUNCIL
MARIO J. CIVERA, JR. CHAIRMAN
COLLEEN P. MORRONE VICE CHAIRMAN
JOHN P. McBLAIN
DAVID J. WHITE
MICHAEL F. CULP

Office Location: Toal Building, 2nd & Orange Sts., Media, PA 19063
Phone: (610) 891-5200 FAX: (610) 891-5203
E-mail: planning_department@co.delaware.pa.us

PLANNING COMMISSION
WILLIAM C. PAYNE CHAIRMAN
THOMAS J. JUDGE VICE CHAIRMAN
KENNETH J. ZITARELLI SECRETARY
LINDA F. HILL DIRECTOR

August 18, 2016

Robert A. Zienkowski
Radnor Township
301 Iven Avenue
Wayne, PA 19087

RE: Name of Dev't: David Semerjian Builders
DCPD File No.: 34-7183-16
Developer: David Semerjian
Location: The north and south sides of Central Avenue
Recv'd in DCPD: July 11, 2016

Dear Mr. Zienkowski:

In accordance with the provisions of Section 502 of the Pennsylvania Municipalities Planning Code, the above described proposal has been sent to the Delaware County Planning Commission for review. At a meeting held on August 18, 2016, the Commission took action as shown in the recommendation of the attached review.

Please refer to the DCPD file number shown above in any future communications related to this application.

Very truly yours,

[Handwritten signature of Linda F. Hill]

Linda F. Hill
Director

cc: David Semerjian
EB Walsh Associates, Inc.



DCPD

DELAWARE COUNTY PLANNING DEPARTMENT

Court House/ Government Center , 201 W. Front St., Media, PA 19063
Office Location: Toal Building, 2nd & Orange Sts., Media, PA 19063
Phone: (610) 891-5200 FAX: (610) 891-5203
E-mail: planning_department@co.delaware.pa.us

Date: August 18, 2016
File No.: 34-7183-16

PLAN TITLE: David Semerjian Builders
DATE OF PLAN: December 8, 2014
OWNER OR AGENT: David Semerjian
LOCATION: North and south sides of Central Avenue
MUNICIPALITY: Radnor Township
TYPE OF REVIEW: Final subdivision
ZONING DISTRICT: R-5 Residential
SUBDIVISION ORDINANCE: Local
PROPOSAL: Subdivide 2.17 acres into 13 lots
UTILITIES: Public
RECOMMENDATIONS: Approval, contingent upon incorporating staff comments
STAFF REVIEW BY: Michael A. Leventry
REMARKS:

CURRENT PROPOSAL

The plan proposes to consolidate eight parcels and demolish three existing dwellings in order to develop twelve townhomes, a new private street, stormwater facilities, and associated parking.



Date: August 18, 2016
File No.: 34-7183-16

REMARKS (continued):

SITE CHARACTERISTICS

The site is bounded by single-family residences on all sides, with exception to the north where it is bounded by the Radnor Trail.

APPLICABLE ZONING

The proposal is located within the R-5 Residential district which is subject to applicable regulations set forth in the Township's zoning code.

NONCONFORMITIES

The site's existing dwellings do not appear to comply with the front and side yard setback regulations as established within the Township zoning code. Where §280-35 B(3) requires front yards to be not less than 50' in depth, and side yards to be not less than 30' in width, the existing parcels do not comply. However, said nonconformities will be cured as the noncompliant structures are to be demolished.

COMPLIANCE

The proposal appears to comply with the R-5 Residential district provisions pertaining to multiple dwellings.

SITE DESIGN

Street lights and trees are recommended for the private street. Care of said infrastructure should be addressed within the homeowners' association by-laws.

Consideration should be given to notching the street's central portion on the south side to add additional on-street parking. Pervious pavers should be used for all parking.

Date: August 18, 2016
File No.: 34-7183-16

REMARKS (continued):

It appears that Units 3 and 4 partially share a driveway. In order to proactively address parking and garage access conflicts, the plan and should delineate the shared area as "no parking" and the homeowners association bylaws, as well as the deeds for said units, should reference said restriction.

A passive pocket park that is designed to be low maintenance should be considered for the area between Unit 12 and Maplewood Avenue.

The applicant should consider providing a short trail connection from the property to the Radnor Trail, which runs adjacent to the property. The nearest pedestrian access points to the trail are from the Friends of the Radnor Trail Park off of West Wayne Avenue, approximately two blocks away, and from the Wayne Arts Center, which is accessible via the Maplewood Avenue underpass, which does not have a sidewalk.

ENVIRONMENTAL

The developer should contact the Pennsylvania Department of Environmental Protection regarding the need for sewage facilities planning approval.

The Township should confirm receipt of any necessary Pennsylvania Department of Environmental Protection planning approval prior to final plan approval.

STORMWATER MANAGEMENT

The Township Engineer must verify the adequacy of all proposed stormwater management facilities.

Date: August 18, 2016
File No.: 34-7183-16

REMARKS (continued):

HISTORICAL AND ARCHEOLOGICAL SIGNIFICANCE

The proposed development is on a site that has a low potential for underground archeological resources.

Two of the homes on the site are slated for demolition. While the dwellings may be of local significance, they are not listed on Radnor Townships Historic Sites Survey and do not appear to be National Register-eligible.

RECORDING

In accordance with Section 513(a) of the Pennsylvania Municipalities Planning Code (MPC), final plans must be recorded within ninety (90) days of municipal approval.



DELAWARE COUNTY PLANNING COMMISSION

COURT HOUSE/GOVERNMENT CENTER
201 W. Front St. Media, PA 19063

Office Location: Toal Building, 2nd & Orange Sts., Media, PA 19063
Phone: (610) 891-5200 FAX: (610) 891-5203
E-mail: planning_department@co.delaware.pa.us

PLANNING COMMISSION

THOMAS J. O'BRIEN, AIA
CHAIRMAN

THOMAS J. JUDGE
VICE CHAIRMAN

KENNETH J. ZITARELLI
SECRETARY

LINDA F. HILL
DIRECTOR

COUNCIL

MARIO J. CIVERA, JR.
CHAIRMAN

COLLEEN P. MORRONE
VICE CHAIRMAN

JOHN P. McBLAIN
DAVID J. WHITE
MICHAEL F. CULP

July 27, 2016

Mr. Robert A. Zienkowski
Radnor Township
301 Iven Avenue
Wayne, PA 19087-5297

RE: Title: David Semerjian Builders
Applicant(s): Davide Semerjian
File Number: 34-7183-16
Meeting Date: 08/18/2016
Municipality: Radnor Township
Location: The north and south sides of Central Avenue
Received: 07/11/2016

Dear Mr. Zienkowski,

This is to acknowledge receipt of the above referenced application for review and report. The Commission has tentatively scheduled consideration of the application for its public meeting on the date shown above at 4:00 p.m. in the Government Center Building, (Room 100), Court House Complex, Media, PA. Attendance is not required but is welcomed. If you have any questions concerning this matter, please contact Dennis De Rosa at (610) 891-5222.

NOTE: In order to avoid processing delays, the DCPD file number shown above MUST be provided in any transactions with the county regarding this or future applications related to this location.

Very truly yours,

Linda F. Hill
Linda F. Hill
Director

LFH/pmg

cc: Davide Semerjian
EB Walsh Associates, inc.



RADNOR TOWNSHIP
301 IVEN AVE
WAYNE PA 19087
P) 610 688-5600
F) 610 971-0450
WWW.RADNOR.COM

SUBDIVISION ~ LAND DEVELOPMENT

Location of Property 415 MAPLEWOOD AVENUE WAYNE

Zoning District R-5

Application No. _____
(Twp. Use)

Fee _____

Ward No. _____

Is property in HARB District _____

Applicant: (Choose one) Owner _____

Equitable Owner

Name DAVID SEMERJIAN BUILDERS LLC

Address 2425 WHITE HORSE ROAD BERWYN PA 19312

Telephone (484) 437-5771 Fax (610) 695-0609 Cell (484) 437-5771

Email DAVID.SEMERJIAN@MEN.COM

Designer: (Choose one) Engineer

Surveyor _____

Name EDWARD B WALSH & ASSOCIATES INC

Address 125 DOWLIN FORGE ROAD EXTON PA 19341

Telephone (610) 903-0060 Fax (610) 903-0080

Email ANDYE@EBWALSHINC.COM

Area of property 94,581 sq Area of disturbance 33,230 sq

Number of proposed buildings (4) BUILDINGS Proposed use of property TOWNHOMES
TOTAL (12) UNITS

Number of proposed lots _____

Plan Status: Sketch Plan _____ Preliminary _____ Final Revised _____

Are there any requirements of Chapter 255 (SALDO) that are not in compliance with?

Are there any requirements of Chapter 255 (SALDO) not being adhered to?
Explain the reason for noncompliance.

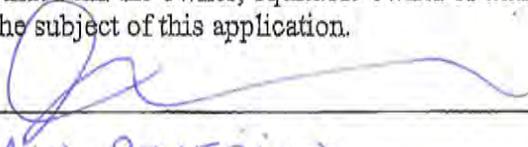
Are there any infringements of Chapter 280 (Zoning), and if so what and why?

Individual/Corporation/Partnership Name

DAVID SEMERJIAN BUILDERS LLC

I do hereby certify that I am the owner, equitable owner or authorized representative of the property which is the subject of this application.

Signature



Print Name

DAVID SEMERJIAN

By filing this application, you are hereby granting permission to Township officials to visit the site for review purposes.

NOTE: All requirements of Chapter 255 (Subdivision of Lane) of the Code of the Township of Radnor must be complied with whether or not indicated in this application.

DELAWARE COUNTY PLANNING COMMISSION

APPLICATION FOR ACT 247 REVIEW

Incomplete applications will be returned and will not be considered "received" until all required information is provided.

Please type or print legibly

DEVELOPER/APPLICANT

Name DAVID SEMERJIAN E-mail DAVIDSEMERJIAN@MSN.COM

Address 2425 WHITE HORSE ROAD BERWYNPA 19312 Phone 484-437-5771

Name of Development MARLENSOOD WALK

Municipality RADNOR TOWNSHIP

ARCHITECT, ENGINEER, OR SURVEYOR

Name of Firm EB WALSKA ASSOC. INC Phone 610 903-0060

Address 125 DOWLIN FORBES ROAD ERTON PA 19341

Contact SCOTT ANDROSS or Andy FROMM SANDRESS@ebwaska.com

Table with 5 columns: Type of Review, Plan Status, Utilities Existing, Utilities Proposed, Environmental Characteristics. Includes checkboxes for Zoning Change, Land Development, Subdivision, PRD, Sketch, Preliminary, Final, Tentative, Public/Private Sewerage/Water, Wetlands, Floodplain, Steep Slopes.

Zoning District R-5

36-20-025-000, 36-20-026-001
36-20-026-000, 36-20-061-000
Tax Map # 1 1 1 1 36-20-063-000
Tax Folio # 1 1 1 1 36-20-064-000

30-20-65 26 26 1
64 63 61 25

STATEMENT OF INTENT

WRITING "SEE ATTACHED PLAN" IS NOT ACCEPTABLE.

Existing and/or Proposed Use of Site/Buildings:

12 TOWNHOMES

Total Site Area 94,581 sq ft 2.17 Acres

Size of All Existing Buildings 4% Square Feet

Size of All Proposed Buildings 14.71% Square Feet

Size of Buildings to be Demolished 1300 sq ft Square Feet

DAVID SEMERIAN (BULLERBUC)
Print Developer's Name

[Signature]
Developer's Signature

MUNICIPAL SECTION

ALL APPLICATIONS AND THEIR CONTENT ARE A MUNICIPAL RESPONSIBILITY.

Local Planning Commission Regular Meeting August 1, 2016

Local Governing Body Regular Meeting _____

Municipal request for DCPD staff comments prior to DCPC meeting, to meet municipal meeting date:

Actual Date Needed _____

IMPORTANT: If previously submitted, show assigned DCPD File # _____

Roger A. Phillips, PE Township Engineer
Print Name and Title of Designated Municipal Official

610-688-5600
Phone Number

[Signature]
Official's Signature

7/7/2016
Date

FOR DCPD USE ONLY

Review Fee: Check # _____ Amount \$ _____ Date Received _____

Applications with original signatures must be submitted to DCPD.

1. Development Information

Name of Development David Semerjian Builders
 Developer Name David Semerjian Builders
 Address 2425 White Horse Road
Berwyn, PA 19312
 Telephone # 6106950444
 Email NA

2. Location of Development

a. County Delaware
 b. Municipality Radnor
 c. Address or Coordinates 415 Maplewood Avenue

 d. Tax Parcel # 30-20-65,26,26.1,64,63,61,25
 e. USGS Quad Name Valley Forge
 inches up 7 over 2.5
 from bottom right corner of map.
 f. Located in a High Quality/Exceptional Value watershed?
 Yes No

3. Type of Development Proposed (check appropriate box)

Residential Multi-Residential
 Describe 12 Unit Townhouse Development (site contains two existing Dwellings to be removed)
 Commercial Institutional
 Describe _____
 Brownfield Site Redevelopment
 Other (specify) _____

4. Size

a. # of lots 1 # of EDUs 10 new
 b. # of lots since 5/15/72 NA
 c. Development Acreage 2.17
 d. Remaining Acreage 0

5. Sewage Flows 2,625 gpd

6. Proposed Sewage Disposal Method (check applicable boxes)

a. Sewerage System
 Existing (connection only) New (extension)
 Public Private
 Pump Station(s)/Force Main Gravity
 Name of existing system being extended
Radnor Township
 Interceptor Name Windermere Ave
 Treatment Facility Name Philadelphia Southwest WWTP

 NPDES Permit # PA0026671
 b. Construction of Treatment Facility
 With Stream Discharge
 With Land Application (not including IRSIS)
 Other
 Repair?
 Name of waterbody where point of discharge is proposed (if stream discharge)

- c. Onlot Sewage Disposal Systems (check appropriate box)
 Individual onlot system(s) (including IRSIS)
 Community onlot system
 Large-Volume onlot system
 d. Retaining tanks

Number of Holding Tanks _____
 Number of Privies _____

7. Request Sewage Facilities Planning Module forms in electronic format

8. Request for Planning Exemption

a. Protection of rare, endangered or threatened species
 Check one:
 The "PNDI Project Environmental Review Receipt" is attached. or
 A completed "PNDI Project Planning & Environmental Review Form," (PNDI Form) is attached. I request DEP staff to complete the required PNDI search for my project. I realize that my planning exemption will be considered incomplete and that the DEP processing of my planning exemption request will be delayed, until a "PNDI Project Environmental Review Receipt" and all supporting documentation from jurisdictional agencies (when necessary) is/are received by DEP.

Applicant or Consultant Initials _____

- b. Plot Plan Attached Site Reports Attached

c. Onlot Disposal Systems

(1) I certify that the Official Plan shows this area as an onlot service area.

 (Signature of Municipal Official) / Date

 Name (Print) / Title

Municipality (must be same as in 2.b.) _____

Telephone # _____

(2) I certify that each lot in this subdivision has been tested and is suitable for both a primary and replacement sewage disposal system.

 Signature of SEO) / Date

 Name (Print) / Certification #

Telephone # _____

(3) I certify that each lot in this subdivision is at least 1 acre in size

 (Signature of Project Applicant/Agent) / Date

- d. Public Sewerage Service (i.e., ownership by municipality or authority)

Based upon written documentation, I certify that the facilities proposed for use have capacity and that no overload exists or is projected within 5 years. (Attach documents.)

 (Signature of Municipal Official) / Date

 Name (Print) / Title

Municipality (must be same as in 2.b.) _____

Telephone # _____

Narrative

Existing Conditions

The site is a +/-2.17 acre irregularly shaped lot that has a ground cover of grass and impervious surfaces. There are two existing dwellings on the property that are currently served with public water and sewer.

Project Summary

The proposed project is a Land Development plan for David Semerjian Builders. The site is located on 415 Maplewood Drive in Radnor Township. The purpose of this subdivision is to consolidate the parcels and develop the site as 12 townhouses. The development will have two entrances one on Maplewood and one on Highland Avenue. The proposed development will connect to existing public sewer and water service.

The existing dwellings are to be removed and replaced with new dwellings. The total estimated flow for the project is 12 EDU's or 3,150 gallons per day based on 262.5 gallons per EDU. Therefore the proposed new/increased flows from the project are from the 10 new connections to the public sewer system or 2,625 gallons per day.

415 Maplewood Avenue / Davis Semerjian Builders



1. PROJECT INFORMATION

Project Name: **David Semerjian Builders**

Date of Review: **6/29/2016 02:01:53 PM**

Project Category: **Development, Residential, Subdivision containing more than 2 lots and/or 2 single-family units**

Project Area: **2.49 acres**

County(s): **Delaware**

Township/Municipality(s): **RADNOR**

ZIP Code: **19087**

Quadrangle Name(s): **VALLEY FORGE**

Watersheds HUC 8: **Lower Delaware**

Watersheds HUC 12: **Darby Creek**

Decimal Degrees: **40.038347, -75.392905**

Degrees Minutes Seconds: **40° 2' 18.497" N, 75° 23' 34.4595" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate no known impacts to threatened and endangered species and/or special concern species and resources within the project area. Therefore, based on the information you provided, no further coordination is required with the jurisdictional agencies. This response does not reflect potential agency concerns regarding impacts to other ecological resources, such as wetlands.

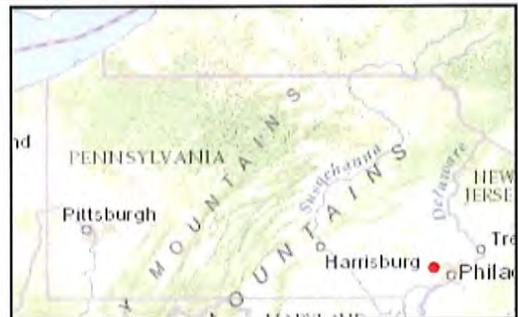
Note that regardless of PNDI search results, projects requiring a Chapter 105 DEP individual permit or GP 5, 6, 7, 8, 9 or 11 in certain counties (Adams, Berks, Bucks, Carbon, Chester, Cumberland, Delaware, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Schuylkill and York) must comply with the bog turtle habitat screening requirements of the PASPGP.

David Semerjian Builders



- Project Boundary
- Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA,

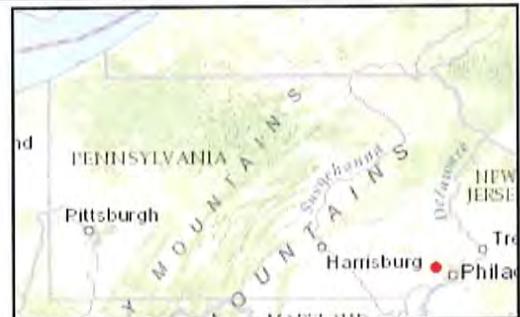


David Semerjian Builders



- Project Boundary
- Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



RESPONSE TO QUESTION(S) ASKED

Q1: The proposed project is in the range of the Indiana bat. Describe how the project will affect bat habitat (forests, woodlots and trees) and indicate what measures will be taken in consideration of this.

Your answer is: The project will affect 1 to 39 acres of forests, woodlots and trees.

Q2: Is tree removal, tree cutting or forest clearing of 40 acres or more necessary to implement all aspects of this project?

Your answer is: No

3. AGENCY COMMENTS

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

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

PA Game Commission

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Fish and Boat Commission

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

U.S. Fish and Wildlife Service

RESPONSE:

No impacts to **federally** listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq. is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

4. DEP INFORMATION

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

5. ADDITIONAL INFORMATION

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

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

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources

Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov
Fax: (717) 772-0271

PA Fish and Boat Commission

Division of Environmental Services
450 Robinson Lane, Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

U.S. Fish and Wildlife Service

Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
NO Faxes Please

PA Game Commission

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

7. PROJECT CONTACT INFORMATION

Name: Scott Andress
Company/Business Name: Edward B. Walsh and Associates, Inc.
Address: 125 South Forge Rd.
City, State, Zip: Exton, PA 19341
Phone: (610) 903 0060 Fax: (610) 903 0080
Email: sandress@ebwalshinc.com

8. CERTIFICATION

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

[Signature] Agent
applicant/project proponent signature

6/29/2016
date

RECEIVED

MAY 23 2018

RADNOR TOWNSHIP

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(If issued as a certificate of mailing, or for additional copies of this bill) Postmark and Date of Receipt

Check type of mail or service:
 Certified
 COD
 Registered
 Delivery Confirmation
 Express Mail
 Insured
 Recorded Delivery (International)
 Return Receipt for Merchandise
 Signature Confirmation

Article Number	Addressee (Name, Street, City, State, & ZIP Code)	Postage	Actual Value If Registered	Handling Charge	Value	Insured	Registered	Fee	Fee	Fee	Fee	Fee
1.	Radnor Twp Civic Assn-C/O Lovella Luchie P.O. Box 240 Wayne, PA 19087											
2.	Brooks and Deena Oppenheimer 250 Highland Ave. Wayne, PA 19087											
3.	Alita Byrd 262 Highland Ave. Wayne, PA 19087											
4.	James Saunders 129 Pennsylvania Ave. Wayne, PA 19087											
5.	Russell and Lora Jo Dickhart 509 Maplewood Ave. Wayne, PA 19087											
6.	James and Rebecca Nardaul 514 Maplewood Ave. Wayne, PA 19087											
7.	Wen Kang Shieh 234 Highland Ave. Wayne, PA 19087											
8.	Laura Bautista 242 Highland Ave. Wayne, PA 19087											

U.S. POSTAGE PAID WAYNE, PA 19087 MAY 23, 18 AMOUNT \$3.20 R2304H108037-13



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Total Number of Pieces Listed by Sender: 8

Total Number of Pieces Received at Post Office: 8

Postmaster, Per (Name of receiving employee)

See Privacy Act Statement on Reverse

Complete by Typewriter, Ink, or Ball Point Pen

Name and Address of Sender

David Sementjan Builds
2425 White Horse Rd
Berwyn PA 19087

Check type of mail or service:

- Certified
- COD
- Delivery Confirmation
- Express Mail
- Insured
- Recorded Delivery (International)
- Registered
- Return Receipt for Merchandise
- Signature Confirmation

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(If issued as a certificate of mailing, or for additional copies of this bill)

Postmark and Date of Receipt

Article Number	Addressee (Name, Street, City, State, & ZIP Code)	Postage	Handling Charge	Fee	Actual Value If Registered	Insured Value	Due Sender if COD	DC Fee	SC Fee	SH Fee	RD Fee	RR Fee
1.	Christopher Adams 251 Highland Ave Wayne PA 19087											
2.	Diane McCommas 13 Greystone Woods Cir Wayne PA 19087											
3.	Seveny Luisa Mygale 29 Meadowood Road Rosemont, PA 19070											
4.	Samantha Martin 33 Greystone Woods Cir Wayne PA 19087											
5.	Garyt Christine McClain P.O. Box 236 Clayton, NJ 08312											
6.	Peter Annamay Charrington 37 Greystone Woods Cir Wayne PA 19087											
7.	Bernard Philipowski Daniela Romberg 45 Greystone Woods Cir Wayne PA 19087											
8.	James T. Elke 48 Greystone Woods Cir Wayne PA 19087											

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19087
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Postmaster, Per (Name of receiving employee)

[Signature]

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Name and Address of Sender

David Semerjian Builders
2425 White Horse Rd.
Berwyn PA 19312

Article Number

Check type of mail or service:

- Certified
- COD
- Delivery Confirmation
- Express Mail
- Insured
- Recorded Delivery (International)
- Registered
- Return Receipt for Merchandise
- Signature Confirmation

Address (Name, Street, City, State, & ZIP Code)

Andrew Dimaggio, Inslec
250 Chestnut St
Wayne, PA 19087

Setner Elliott
74 Greythorne Woods Cir
Wayne PA 19087

250 Montgomery Assoc.
Plaza 16 - E. Lancaster Ave #101
Aremore PA 19003

Tracy Whitman
34 Greythorne Woods Cir
Wayne PA 19087

Brittany Biesecker
46 Greythorne Woods Cir
Wayne PA 19087

Usman & Qurat Chuman
49 Greythorne Woods Cir
Wayne PA 19087

Tracy Biesecker
25 Greythorne Woods Cir
Wayne PA 19087

Edward & Lana Hopsadar
37 Greythorne Woods Cir
Wayne PA 19087

Total Number of Pieces Listed by Sender

Total Number of Pieces Received at Post Office

Postmaster Per (Name of receiving employee)

[Signature]

Affix Stamp Here (If issued as a certificate of mailing, or for additional copies of this bill) Postmark and Date of Receipt

Handling Charge

Fee

Actual Value if Registered

Insured Value

DC Fee

SC Fee

SH Fee

RD Fee

RR Fee

U.S. POSTAGE

PAID WAYNE PA 19087 MAY 23 18 AMOUNT

\$3.20

R2304H108037-13



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See Privacy Act Statement on Reverse

Complete by Typewriter, Ink, or Ball Point Pen

Name and Address of Sender
 David Semeniyan Builders
 2425 White Horse Rd.
 Germantown PA 19312

Check type of mail or service:
 Certified
 COD
 Registered
 Delivery Confirmation
 Express Mail
 Insured

Recorded Delivery (International)
 Registered
 Return Receipt for Merchandise
 Signature Confirmation

Affix Stamp Here
 (If issued as a certificate of mailing, or for additional copies of this bill) Postmark and Date of Receipt

Article Number	Address (Name, Street, City, State, & ZIP Code)	Postage	Handling Charge	Actual Value if Registered	Insured Value	Due Sender if COD	DC Fee	SC Fee	SH Fee	RD Fee	RR Fee
1.	Wayne Art Center 413 Maplewood Ave Wayne PA 19087										
2.	Michael & Elyse Salek 403 Maplewood Ave Wayne PA 19087										
3.	James Mountain Trustee Terese Peyine Trustee 408 Maplewood Ave Wayne PA 19087										
4.	Catherine Mecal 402 Maplewood Ave Wayne PA 19087										
5.	Kyle & Ajahna Lawry 317 Edgehill Road Wayne PA 19087										
6.	Lynn Ruto 36 Greythorne Woods Cir Wayne PA 19087										
7.	Tony Chen Alison Panella 405 Maplewood Ave Wayne PA 19087										
8.	Glenn David Sylvia Mathys 447 High School Way Mountain View, PA 19087										

U.S. POSTAGE
 PAID
 WAYNE PA
 MAY 23 18
 AMOUNT
\$3.20
 R2304H108037-13



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Total Number of Pieces Listed by Sender: 8
 Total Number of Pieces Received at Post Office: 8

See Privacy Act Statement on Reverse

Postmaster, Per (Name of receiving employee)
[Signature]
 Complete by Typewriter, Ink, or Ball Point Pen

Name and Address of Sender
 David Semerjian Builders
 2425 White Horse Rd
 Berwyn PA 19312

Article Number

Check type of mail or service:
 Certified
 COD
 Registered
 Delivery Confirmation
 Express Mail
 Insured
 Recorded Delivery (International)
 Return Receipt for Merchandise
 Signature Confirmation

Affix Stamp Here
 (If issued as a certificate of mailing, or for additional copies of this bill) Postmark and Date of Receipt

1.	2.	3.	4.	5.	6.	7.	8.	Actual Value if Registered	Insured Value	Due Sender if COD	DC Fee	SC Fee	SH Fee	RD Fee	RR Fee
Naomi Gabernick 24 Greythorne Woods Cir Wayne PA 19087	Anthony & Margaret Vincent 29 Greythorne Woods Cir Wayne PA 19087	Steven & Wenchel 249-B Highland Ave Wayne PA 19087	Harry Callands 253 Highland Ave Wayne PA 19087	Russell J. Brown, Trustee 255 Highland Ave Wayne PA 19087	Albertina P. Antonio 519 Paoli Point Dr Paoli, PA 19301	Nelson & Gwendolyn Thompson 270 Highland Ave Wayne PA 19087	Trudy & Lawrence 116 N. Walnut Street Ridley Park, PA 19078								

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PA 19087
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Postmaster (Name of receiving employee)

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PS Form 3877, February 2002 (Page 1 of 2)

Name and Address of Sender
 David Semerjian Builders
 2425 White Horse Rd.
 Bernyn, PA 19312

Article Number

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Article Number	Addressee (Name, Street, City, State, & ZIP Code)	Postage	Handling Charge	Actual Value if Registered	Insured Value	Due Sender if COD	DC Fee	SC Fee	SH Fee	RD Fee	RR Fee	Total Number of Pieces	
												Listed by Sender	Received at Post Office
1.	William Marie Orr 27 Greyhorne Woods Cir. Wayne PA 19087												
2.	Andrew DiMaio Trustee 250 Conestoga Road Wayne PA 19087												
3.	Calvin Schmidt 407 Maplewood Ave. Wayne PA 19087												
4.	Ann Higgins 1490 Leboult Rd Malvern PA 19355												
5.	Christopher Wells Lisa Devine 404 Maplewood Ave. Wayne PA 19087												
6.	Mark & Anne Judd 306 Conestoga Rd. Wayne PA 19087												
7.	Healy & Michaela M 550 Maplewood Ave. Wayne PA 19087												
8.	Anthony & Margaret Vincent 29 Greyhorne Woods Cir. Wayne PA 19087												

U.S. POSTAGE
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 19087
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Total Number of Pieces Listed by Sender: 8

Postmaster: P (Name of receiving employee)

See Privacy Act Statement on Reverse

Name and Address of Sender

David Semerjian Builders
 2425 White Horse Rd.
 Berwyn PA 19312

Check type of mail or service:

- Certified
- Registered Delivery (International)
- COD
- Registered
- Delivery Confirmation
- Return Receipt for Merchandise
- Express Mail
- Signature Confirmation
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1.	Louis Landrillo Wayne PA 19087										
2.	Elizabeth Faneli 263 Highland Ave Wayne PA 19087										
3.	Charles & Christine Welsh 503 Maplewood Ave Wayne PA 19087										
4.	Albert & Mary D'Antonio 125 Woodmere Court Paoli, PA 19301										
5.	Lillian Wister 1135 Bryntaugh Rd. Villanova PA 19085										
6.	Lawrence & Nancy Mansfield 22 Greythorne Woods Cir Wayne PA 19087										
7.	Fagebaga Herman 23 Greythorne Woods Cir Wayne PA 19087										
8.	Mukesh & Bina Patel 518 Maplewood Ave Wayne PA 19087										

U.S. POSTAGE
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 19087
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Total Number of Pieces Listed by Sender: 8

Total Number of Pieces Received at Post Office

Postmaster, Per (Name of receiving employee)

See Privacy Act Statement on Reverse

Name and Address of Sender
 David Semejian Builders
 2425 White Horse Rd.
 Bernyn PA 19312

Check type of mail or service:

- Certified
- COD
- Registered
- Delivery Confirmation
- Express Mail
- Insured
- Reconstituted Delivery (International)
- Return Receipt for Merchandise
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1.	Michael & Maude Dinda 40 Maplewood Ave Wayne PA 19087											
2.	Howard & Iris Ashby 259 Highland Ave Wayne PA 19087											
3.	Robert Bryan Jr. 265 Highland Ave Wayne PA 19087											
4.	James & Albert D'Antonio 215 Duttonmill Rd. West Chester, PA 19380											
5.	Gayle Farmer 17 Greythorne Woods Cir Wayne PA 19087											
6.	Pourkay Larjani LLC 1020 Taylor Drive Newtown Square PA 19073											
7.	Carl & Savannah Martin 23 Greythorne Woods Cir Wayne PA 19087											
8.	Robert & Alexandra Floyd 26 Greythorne Woods Cir Wayne PA 19087											

U.S. POSTAGE
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 19087
 MAY 23, 18
 AMOUNT
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 R2304H108037-13



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Total Number of Pieces Listed by Sender: 8

Total Number of Pieces Received at Post Office: 8

Postmaster, Per (Name of receiving employee): [Signature]

See Privacy Act Statement on Reverse

Complete by Typewriter, Ink, or Ball Point Pen

Name and Address of Sender
 David Semerjian Builders
 2425 White Horse Road
 Berryn PA 19312

Check type of mail or service:
 Certified
 COD
 Registered
 Delivery Confirmation
 Express Mail
 Insured

Recorded Delivery (International)
 Registered
 Return Receipt for Merchandise
 Signature Confirmation

Affix Stamp Here
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Article Number	Address (Name, Street, City, State, & ZIP Code)	Postage	Handling Charge	Fee	Actual Value if Registered	Insured Value	Due Sender if COD	DC Fee	SC Fee	SH Fee	RD Fee	RR Fee
1.	James Walter Ebony Gilley 260 Highland Ave. Wayne PA 19087											
2.	Zhangwei & Liyan 1488 Salomon Lane Wayne PA 19087											
3.	Mary S Kaiserman 507 Maplewood Ave. Wayne PA 19087											
4.	Jennifer Sophia Keh 513 Maplewood Ave. Wayne PA 19087											
5.	William Anne Henderson 512 Maplewood Ave. Wayne PA 19087											
6.	Vincent Gango ra V. Ferranda 510 Maplewood Ave. Wayne PA 19087											
7.	Geoffrey Leslie Clift 414 Maplewood Ave. Wayne PA 19087											
8.	Tessmy Ruth Maggs 510 Maplewood Ave. Wayne PA 19087											

U.S. POSTAGE
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 WAYNE, PA
 19087
 MAY 23, 18
 AMOUNT
\$3.20
 R2304H108037-13



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Total Number of Pieces Listed by Sender: _____
 Total Number of Pieces Received at Post Office: _____

Postmaster (Print Name of receiving employee)

[Signature]

See Privacy Act Statement on Reverse

Complete by Typewriter, Ink, or Ball Point Pen

Name and Address of Sender: **David Samenjian-Buibles**
 2425 White Horse Rd
 Berwyn PA 19312

Check type of mail or service:
 Certified
 COD
 Registered
 Delivery Confirmation
 Express Mail
 Insured

Check type of mail or service:
 Recorded Delivery (International)
 Return Receipt for Merchandise
 Signature Confirmation

Affix Stamp Here
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1.	Charles Brown 261 Highland Ave. Wayne PA 19087										
2.	Agnes Wryte Thelma Richey 505 Maplewood Ave. Wayne PA 19087										
3.	James Anna Falcone Frank & Maurine Falcone 67 Mount Heres St. Palm Beach, FL 33410										
4.	Richard & Jeanne Condos 18 Greythorne Woods Cir. Wayne PA 19087										
5.	Joselle Rad 21 Greythorne Woods Cir. Wayne PA 19087										
6.	Noami Gubernick 24 Greythorne Woods Cir. Wayne PA 19087										
7.	Joseph Marino 508 Maplewood Ave. Wayne PA 19087										
8.	Anthony Elizabeth Lanzone 412 Maplewood Ave. Wayne PA 19087										

U.S. POSTAGE
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Total Number of Pieces Listed by Sender: **8** Total Number of Pieces Received at Post Office: **8**

Postmaster, Per (Name of receiving employee): **[Signature]**

See Privacy Act Statement on Reverse

Name and Address of Sender
 David Semegenian Builders
 2425 White Horse Road
 Berryn PA 19312

Check type of mail or service:
 Certified
 COD
 Registered
 Delivery Confirmation
 Express Mail
 Insured
 Recorded Delivery (International)
 Return Receipt for Merchandise
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Article Number	Addressee (Name, Street, City, State, & ZIP Code)	Postage	Handling Charge	Actual Value if Registered	Insured Value	Due Sender if COD	DC Fee	SC Fee	SH Fee	RD Fee	RR Fee
1.	Second Baptist Church Rectory Trustees 246 Highland Ave. Wayne PA 19087										
2.	Capital First Trust Co Trustees 234 W. Florida St #400 Milwaukee, WI 53204										
3.	Mark & Louise Graye 258 Highland Ave. Wayne PA 19087										
4.	Nicholas Erico 264 Highland Ave. Wayne PA 19087										
5.	Deborah Wright 504 Maplewood Ave. Wayne PA 19087										
6.	Mark & Virginia Bullock 511 Maplewood Ave. Wayne PA 19087										
7.	Marie & Joanne Trethewey 516 Maplewood Ave. Wayne PA 19087										
8.	Andrew & Deborah Brown 257 Highland Ave. Wayne PA 19087										

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Total Number of Pieces Listed by Sender: 8
 Total Number of Pieces Received at Post Office: 8

Postmaster, Per (Name of receiving employee)

[Signature]

See Privacy Act Statement on Reverse

Complete by Typewriter, Ink, or Ball Point Pen

Name and Address of Sender:
 David Semerjian Builders
 2425 White Horse Rd
 Berwyn, PA 19312

Check type of mail or service:

- Certified
- Registered Delivery (International)
- COD
- Return Receipt for Merchandise
- Delivery Confirmation
- Signature Confirmation
- Express Mail
- Insured

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1.	Maryam Barana 15 Greythorne Woods Cir. Wayne, PA 19087											
2.	Rodrigos Camargos Ashley Seaton 31 Greythorne Woods Cir. Wayne, PA 19087											
3.	Leena Sawaf 44 Greythorne Woods Cir. Wayne, PA 19087											
4.	James and Mary Ann Lockard 47 Greythorne Woods Cir. Wayne, PA 19087											
5.	Lawrence Biegelesen 30 Greythorne Woods Cir. Wayne, PA 19087											
6.	Lillian Wister 19 Greythorne Woods Cir. Wayne, PA 19087											
7.	Michael McKeon Jr. 38 Greythorne Woods Cir. Wayne, PA 19087											
8.	Delaware County Housing Auth 1855 Constitution Ave. Woodlyn, PA 19094											
Total Number of Pieces Listed by Sender		Total Number of Pieces Received at Post Office		Postmaster, Per (Name of receiving employee)								



U.S. POSTAGE
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 19087
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Complete by Typewriter, Ink, or Ball Point Pen

Name and Address of Sender

David Semer, window builders
2425 White Horse Rd
Brynar, PA 19312

Check type of mail or service:

- Certified
- COD
- Delivery Confirmation
- Express Mail
- Insured
- Recorded Delivery (International)
- Registered
- Return Receipt for Merchandise
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1.	Kevin Meandro Nicole Fagano 466 Maplewood Ave. Wayne PA 19087											
2.	Keith Sayuk Dawn Roscillo 304 Conestoga Road Wayne PA 19087											
3.	Kevin Mollie Rptkur 329 Edgemoor Road Wayne PA 19087											
4.												
5.												
6.												
7.												
8.												

U.S. POSTAGE
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19087
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Postmaster, Post (Name of receiving employee)

Total Number of Pieces Listed by Sender

Total Number of Pieces Received at Post Office

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WAIVER REQUEST

- SECTION 255-27.C(1) TO MAINTAIN THE EXISTING CONDITION R.O.W. AND CARTWAY FOR HIGHLAND AND MAPLEWOOD AVENUES.
- SECTION 255-27.E(2) TO ALLOW A 24' WIDE CARTWAY FOR THE INTERNAL DRIVE.
- SECTION 255-27.F(2)(a) TO PERMIT CENTERLINE RADIUS LESS THAN 150' AS THE ACCESS IS A PRIVATE DRIVEWAY TO BE OWNED AND MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.
- SECTION 255-27.H(6) TO PERMIT THE PROPOSED DRIVEWAY TO BE ON THE EAST AND 2'-0" ON THE WEST AS THE PROPOSED DRIVEWAY IS NOT A LOCAL STREET.
- SECTION 255-27.A(5) TO PERMIT DEAD END STREET (ORWAY) AS STUB STREET WITHOUT A CUL-DE-SAC. AS STREETS OWNERSHIP IS PRIVATE.
- SECTION 255-27.A(6) TO NOT REQUIRE A CUL-DE-SAC AND R.O.W. TO EXTEND THE PRIVATE STREETS.
- SECTION 255-28 TO PERMIT A WAIVER OF THE REQUIRED SIGHT DISTANCE OF 275 FEET, AS THE EXISTING AVAILABLE SIGHT DISTANCE COMPLIES WITH PENN DOT'S REQUIRED SIGHT DISTANCES.



ZONED R-5 RESIDENTIAL

LOT AREA & WIDTH	5500 SF/55' SINGLE FAMILY DETACHED 5445 SF/40' SINGLE FAMILY SEMIDETACHED 5445 SF/80' TWO-FAMILY DETACHED
FRONT YARD	20'
REAR YARD	30'
SIDE YARD	10'
MAX. BLDG HEIGHT	35'
MAX IMPERVIOUS (TOTAL)	40%

MULTIPLE DWELLINGS

LOT AREA & WIDTH	5445 SF PER DWELLING UNIT/100'
FRONT YARD	50'
REAR YARD	30'
SIDE YARD	30'
MAX. BLDG HEIGHT	40'
MAX IMPERVIOUS (BLDG.)	30%
MAX IMPERVIOUS (TOTAL)	36%

ZONING DATA MULTIPLE DWELLINGS

REQUIRED	EXISTING	PROVIDED
5,455 SF/DU; 100'	N/A	7,950 SF/DU; 105' (11,360 S.F.) 13.29%
LOT AREA & WIDTH		
MAX. BLDG COVER	30%	30%
MIN. FRONT YARD	50'	27'
MIN. SIDE YARD	30'	30'
MIN. REAR YARD	30'	290'
MAX. BLDG HEIGHT	40'	<40'
MAX. BLDG SIZE (APT. BLDG.)	160'	N/A
MIN. ROOM SIZE		
FIRST BEDROOM	160 S.F.	212 S.F.
ALL OTHER BEDROOMS	120 S.F.	138.25 S.F.
LIVING ROOM	240 S.F.	286 S.F.
DINING ROOM	180 S.F.	212.17 S.F.
DINETTE	120 S.F.	N/A
KITCHEN	80 S.F.	203 S.F.
BATH	40 S.F.	89.58 S.F.
MIN. HABITAT FLOOR AREA (APT.)	600 S.F.	N/A
MAX. IMPERVIOUS COVER	36%	30,164 S.F. (37.94%)
RIPARIAN BUFFER SETBACK	35'	28,491 S.F. (35.84%)

SITE DATA

GROSS AREA	= 85,785 S.F.
NET LOT AREA	= 79,499 S.F.
TO R.O.W.	N/A
REQ. LOT AREA	= 54,450 S.F.

PARKING DATA

PARKING REQUIRED	= 2 SP./D.U. + 1 SP./4 D.U. OVERFLOW 10 D.U. x 2 = 20 10/4 x 2.5 = 3 TOTAL REQUIRED = 23 SP.
PARKING PROVIDED	= 2 GARAGE SP./D.U. = 20 SP. 3 OVERFLOW SPACES = 3 SP. TOTAL PROVIDED = 23 SP.

GENERAL NOTES:

- THE PURPOSE OF THIS PLAN IS TO CONSOLIDATE THE DEPICTED PARCELS INTO ONE PROPERTY AND TO DEVELOP THE SITE AS 10 TOWNHOUSES.
- BOUNDARY, EXISTING FEATURES AND TOPOGRAPHIC INFORMATION IS FROM A FIELD SURVEY PERFORMED BY EDWARD B. WALSH & ASSOCIATES, INC. (EBWA) IN JULY, 2010.
- BOUNDARY SURVEY WAS BASED UPON DEEDS OF RECORD. A TITLE REPORT WAS NOT PROVIDED, THEREFORE, THIS SURVEY DOES NOT PURPORT TO DEPICT ALL RIGHTS, EASEMENTS AND OTHER MATTERS OF TITLE WHICH A CURRENT AND COMPLETE TITLE REPORT WOULD DISCLOSE.
- PROJECT BENCHMARK IS THE RIM OF SANITARY MANHOLE LOCATED AT INTERSECTION OF CENTRAL AND MAPLEWOOD AVENUE. DATUM RADNOR TOWNSHIP SEWER DATUM.
- THE SITE IS SERVED BY PUBLIC SEWER AND WATER.
- TOTAL TRACT AREA (TO TITLE LINES) = 2.171 ACRES
- A HOMEOWNERS ASSOCIATION WILL BE CREATED FOR THE SHARED RESPONSIBILITIES OF THE DRIVEWAY, COMMON AREA, STORM-WATER MANAGEMENT FACILITIES AND SIDEWALK.
- OWNER/APPLICANT:
DAVID SEMERJIAN BUILDERS
2425 WHITE HORSE ROAD
BERWYN, PA. 19312
610-695-0444
- ACCESS TO THE PROPOSED TOWNHOMES IS TO BE PROVIDED VIA A 24' WIDE PRIVATE DRIVEWAY THAT WILL BE OWNED AND MAINTAINED BY A HOMEOWNERS ASSOCIATION.
- PROPOSED RIGHT-OF-WAY TO A DISTANCE OF 25 FEET FROM THE CENTER OF MAPLEWOOD AVENUE IS HEREBY OFFERED FOR DEDICATION TO RADNOR TOWNSHIP.
- CONCRETE MONUMENTS ARE TO BE SET AT LOCATIONS INDICATED THUS "■" AT THE COMPLETION OF SITE GRADING.
- ADA COMPLIANT H.C. RAMPS ARE REQUIRED AT THE INTERSECTIONS OF THE PROPOSED DRIVE AND HIGHLAND AND MAPLEWOOD AVENUES.
- A FEE IN LIEU OF OPEN SPACE OF \$3,307/D.U. IS REQUIRED FOR THIS DEVELOPMENT.
- THE CONTRACTOR SHALL MAKE EVERY REASONABLE EFFORT TO MAINTAIN A 5' SEPARATION BETWEEN TREES, SHRUBS AND SANITARY SEWER LATERALS.
- GARAGES ARE HEREBY RESTRICTED FROM BEING CONVERTED INTO LIVING SPACES. SAID RESTRICTION SHALL BE MADE PART OF THE HOMEOWNERS ASSOCIATION DOCUMENTS. ADDITIONALLY LANGUAGE SHALL BE ADDED IN THE DOCUMENTS THAT CREATION OF ANY ADDITIONAL IMPERVIOUS SURFACES BY EITHER A HOMEOWNER OR THE ASSOCIATION.
- THE SNOW DISPOSAL AREAS SHOWN FOR NORMAL SNOWFALLS (UP TO ±6"). IF A SNOWFALL EVENT OCCURS THAT EXCEEDS THE ABILITY TO STORE THE SNOW IN THE DESIGNATED AREAS THEN THE ASSOCIATION IS RESPONSIBLE TO HAVE THE SNOW REMOVED FROM THE PROPERTY.

OWNER'S NAMES AND MAILING ADDRESS:

- TAX MAP NO. 36-20-025-000
DAVID SEMERJIAN
2425 WHITE HORSE RD
BERWYN PA 19312-2131
- TAX MAP NO. 36-20-026-000
N/F ALBERTINA DANTONIO TRUSTEE
HENRY DANTONIO TRUST
125 WOODMERE CT
PAOLI PA 19301-1234
- TAX MAP NO. 36-20-026-001
N/F ALBERTINA DANTONIO TRUSTEE
HENRY DANTONIO TRUST
125 WOODMERE CT
PAOLI PA 19301-1234
- TAX MAP NO. 36-20-061-000
ALBERT V DANTONIO
& MARY S DANTONIO
215 DUTTON MILL RD
WEST CHESTER PA 19380-6604
- TAX MAP NO. 36-20-063-000
ALBERT V DANTONIO
& MARY S DANTONIO
125 WOODMERE CT
PAOLI PA 19301-1234
- TAX MAP NO. 36-20-064-000
ALBERT V DANTONIO
& MARY T DANTONIO
125 WOODMERE CT
PAOLI PA 19301-1234
- TAX MAP NO. 36-20-065-000
ALBERTINA DANTONIO TRUSTEE
HENRY DANTONIO TRUST
125 WOODMERE CT
PAOLI PA 19301-1234



LOCATION MAP
1" = 600'

COMMONWEALTH OF PENNSYLVANIA COUNTY OF DELAWARE

On the _____ day of _____ A.D. 20__ before me, the subscriber, a Notary Public of the Commonwealth of Pennsylvania, residing in _____, personally appeared _____ who acknowledges himself to be the _____ of _____, a Corporation, and that as such to do so, he executed the foregoing plan by signing the name of the said Corporation by himself as _____ is the owner of the designated land, that all necessary approval of the plan has been obtained and is endorsed thereon and that the said Corporation desires that the foregoing plan may be duly recorded.

Notary Public

My Commission Expires: _____

REVIEWED by the Planning Commission of Radnor Township, Delaware County, Pa., this _____ day of _____, 20__.

APPROVED by the Board of Commissioner of Radnor Township, Delaware County, Pa., this _____ day of _____, 20__.

REVIEWED by the Delaware County Planning Commission this _____ day of _____, 20__.

Secretary

APPROVED by the Radnor Township Engineer:

Date

Recorded in the Office of the Recorder of Deeds of Delaware County, Pennsylvania in _____ on the _____ day of _____, 20__.

(Deputy) Recorder of Deeds

CERTIFICATE OF CONFORMANCE

I hereby certify that to the best of my knowledge, these plans are in conformity with engineering, zoning, building, sanitation and other applicable township ordinances and regulations.

Theodore J. Gacomis, P.E.

PRELIMINARY TITLE PLAN

8. 6-6-18	REV PER TWP. COMMENTS
7. 5-14-18	GENERAL REVISIONS
6. 5-2-18	REV. PER TWP. ENG. COMMENTS OF 4-25-18
5. 4-11-18	REV. PER TWP. ENG. COMMENTS OF 2-27-18 & 2-16-18
4. 1-29-18	REV. PER TWP. ENG. COMMENTS OF 12-22-17 & 1-3-18
3. 11-28-17	REDUCED THE NUMBER OF UNITS; REVISED ROAD SIZE; REVISED STORMWATER FACILITIES
2. 4-10-15	MODIFIED FOOTPRINT AND SIDEWALK
1. 3-9-15	ADDED ADDITION PROPERTY

DEVELOPMENT PLAN FOR DAVID SEMERJIAN BUILDERS
415 MAPLEWOOD AVENUE
RADNOR TOWNSHIP DELAWARE COUNTY, PA.

Edward B. Walsh & Associates, Inc.
CIVIL ENGINEERS & SURVEYORS

Project- 4063
Date- 12-8-14
Scale- 1" = 30'
Drawn- R.F.N.
Checked- A.E.
Sheet- 1 OF 19

125 Dowlin Forge Road
Eaton, Pennsylvania 19341
Phone (610) 903-0060
Fax (610) 903-0080

Plotted: 6/9/2018 File: F:\J\B\4063\4063-b5-pro Ver: 000

IMPERVIOUS CALCS

EXISTING	PROPOSED
HOUSES 6,080 S.F.	11,360 S.F.
BLACKTOP 22,508 S.F.	
DRIVEWAY 12,061 S.F.	
HOUSE DRIVEWAY 3,143 S.F. (TOTAL PERVIOUS SURFACE AFTER 13% REDUCTION)	
SIDEWALK 1,576 S.F.	1,324 S.F. (TOTAL PERVIOUS SURFACE AFTER 16% REDUCTION)
HOUSE WALK 142 S.F.	
PARKING 656 S.F.	
	30,164 S.F. (37.94%) 28,491 S.F. (35.84%)

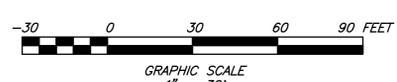
ALL INTERNAL SIDEWALK TO BE STAMPED POROUS CONC. PAVER WITH 16% POROSITY.
ALL OVERFLOW PARKING TO BE PAVED.
ALL DRIVEWAYS TO BE POROUS PAVER WITH 13% POROSITY.

SIGN LEGEND /SPECIFICATIONS

STOP SIGN	R1-1	30" X 30"
NO PARKING SIGN	R7-302	12" X 18"
DO NOT ENTER	R5-1	30" X 30"
EMERGENCY & AUTHORIZED VEHICLES ONLY	R5-101	24" X 30"
NO OUTLET		30" X 30"

SHEET INDEX

SITE PLAN	1 OF 19
LOT CONSOLIDATION PLAN	2 OF 19
EXISTING FEATURES PLAN	3 OF 19
AERIAL PLAN	4 OF 19
DEMO PLAN	5 OF 19
GRADING AND UTILITIES PLAN	6 OF 19
EROSION AND SEDIMENTATION CONTROL PLAN	7 OF 19
POST CONSTRUCTION STORMWATER MANAGEMENT PLAN	8 OF 19
EROSION AND SEDIMENTATION CONTROL DETAILS	9 OF 19
POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS AND PROFILES	10 OF 19
POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS	11 OF 19
LANDSCAPE PLAN	12 OF 19
LIGHTING PLAN	13 OF 19
RAMP DETAILS	14 OF 19
TRUCK TURNING PLAN	15 OF 19
TRUCK TURNING PLAN	16 OF 19
SANITARY SEWER DETAILS	17 OF 19
DETAILS	18 OF 19
SEWER EASEMENT PLAN	19 OF 19

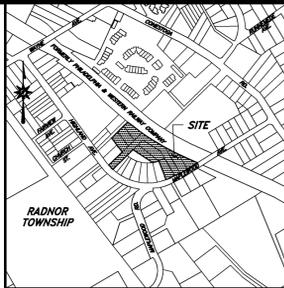


ACT 121 as amended SERIAL NUMBER 20181812834
20181812858
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UTILITIES NOTIFIED

VERIZON PENNSYLVANIA, INC.
PECO ENERGY
AQUA PENNSYLVANIA, INC.
COMCAST CABLE
RADNOR TOWNSHIP
EXTENET SYSTEMS



LOCATION MAP
1"=600'

GENERAL NOTES:

1. THE PURPOSE OF THIS PLAN IS TO CONSOLIDATE THE DEPICTED PARCELS INTO ONE PROPERTY.
2. BOUNDARY INFORMATION IS FROM A FIELD SURVEY PERFORMED BY EDWARD B. WALSH & ASSOCIATES, INC. (EBWA) IN JULY, 2010.
3. BOUNDARY SURVEY WAS BASED UPON DEEDS OF RECORD. A TITLE REPORT WAS NOT PROVIDED, THEREFORE, THIS SURVEY DOES NOT PURPORT TO DEPICT ALL RIGHTS, EASEMENTS AND OTHER MATTERS OF TITLE WHICH A CURRENT AND COMPLETE TITLE REPORT WOULD DISCLOSE.
4. PROJECT BENCHMARK IS THE RIM OF SANITARY MANHOLE LOCATED AT INTERSECTION OF CENTRAL AND MAPLEWOOD AVENUE. DATUM RADNOR TOWNSHIP SEWER DATUM.
5. THE SITE IS SERVED BY PUBLIC SEWER AND WATER.
6. TOTAL TRACT AREA (TO TITLE LINES) = 2.171 ACRES

OWNER'S NAMES AND MAILING ADDRESS:

- TAX MAP NO. 36-20-025-000
DAVID SEMERJIAN
2425 WHITE HORSE RD
BERWYN PA 19312-2131
- TAX MAP NO. 36-20-026-000
N/F ALBERTINA DANTONIO TRUSTEE
HENRY DANTONIO TRUST
125 WOODMERE CT
PAOLI, PA 19301-1234
- TAX MAP NO. 36-20-026-001
N/F ALBERTINA DANTONIO TRUSTEE
HENRY DANTONIO TRUST
125 WOODMERE CT
PAOLI, PA 19301-1234
- TAX MAP NO. 36-20-061-000
JAMES A DANTONIO
& ALBERT V DANTONIO
215 DUTTON MILL RD
WEST CHESTER PA 19380-6604
- TAX MAP NO. 36-20-063-000
ALBERT V DANTONIO
& MARY S DANTONIO
125 WOODMERE CT
PAOLI PA 19301-1234
- TAX MAP NO. 36-20-064-000
ALBERT V DANTONIO
& MARY T DANTONIO
125 WOODMERE CT
PAOLI PA 19301-1234
- TAX MAP NO. 36-20-065-000
ALBERTINA DANTONIO TRUSTEE
HENRY DANTONIO TRUST
125 WOODMERE CT
PAOLI PA 19301-1234

TOTAL TRACT AREA
TO TITLE LINES
1.969 AC.

PHILADELPHIA & WESTERN RAILWAY COMPANY
FORMERLY
ZONED R-5
A=1506.48
R=190.09
C=115.03
S=715.95 E

FORMER
CENTRAL AVENUE
PRIVATE ROAD - NOT DEDICATED
R=2000.00
A=148.08

ZONED R-5

LOT AREA & WIDTH	
5500 SF/55'	SINGLE FAMILY DETACHED
5445 SF/40'	SINGLE FAMILY SEMI-DETACHED
5445 SF/80'	TWO-FAMILY DETACHED
FRONT YARD	25'
REAR YARD	20'
SIDE YARD	10'
MAX. BLDG HEIGHT	35'
MAX IMPERVIOUS (TOTAL)	40%
MULTIPLE DWELLINGS	
LOT AREA & WIDTH	5445 SF PER DWELLING UNIT/100'
FRONT YARD	50'
REAR YARD	30'
SIDE YARD	30'
MAX. BLDG HEIGHT	40'
MAX IMPERVIOUS (BLDG.)	30%
MAX IMPERVIOUS (TOTAL)	36%
GROSS AREA	= 94,501 S.F.
NET AREA	= 89,273 S.F.

LOT CONSOLIDATION PLAN

8. 6-6-18	REV PER TWP. COMMENTS
7. 5-14-18	GENERAL REVISIONS
6. 5-2-18	REV. PER TWP. ENG. COMMENTS OF 4-25-18
5. 4-11-18	REV. PER TWP. ENG. COMMENTS OF 2-27-18 & 2-16-18
4. 1-29-18	REV. PER TWP. ENG. COMMENTS OF 12-22-17 & 1-3-18
3. 11-28-17	REDUCED THE NUMBER OF UNITS; REVISED ROAD SIZE; REVISED STORMWATER FACILITIES
2. 4-10-15	MODIFIED FOOTPRINT AND SIDEWALK
1. 3-9-15	ADDED ADDITION PROPERTY

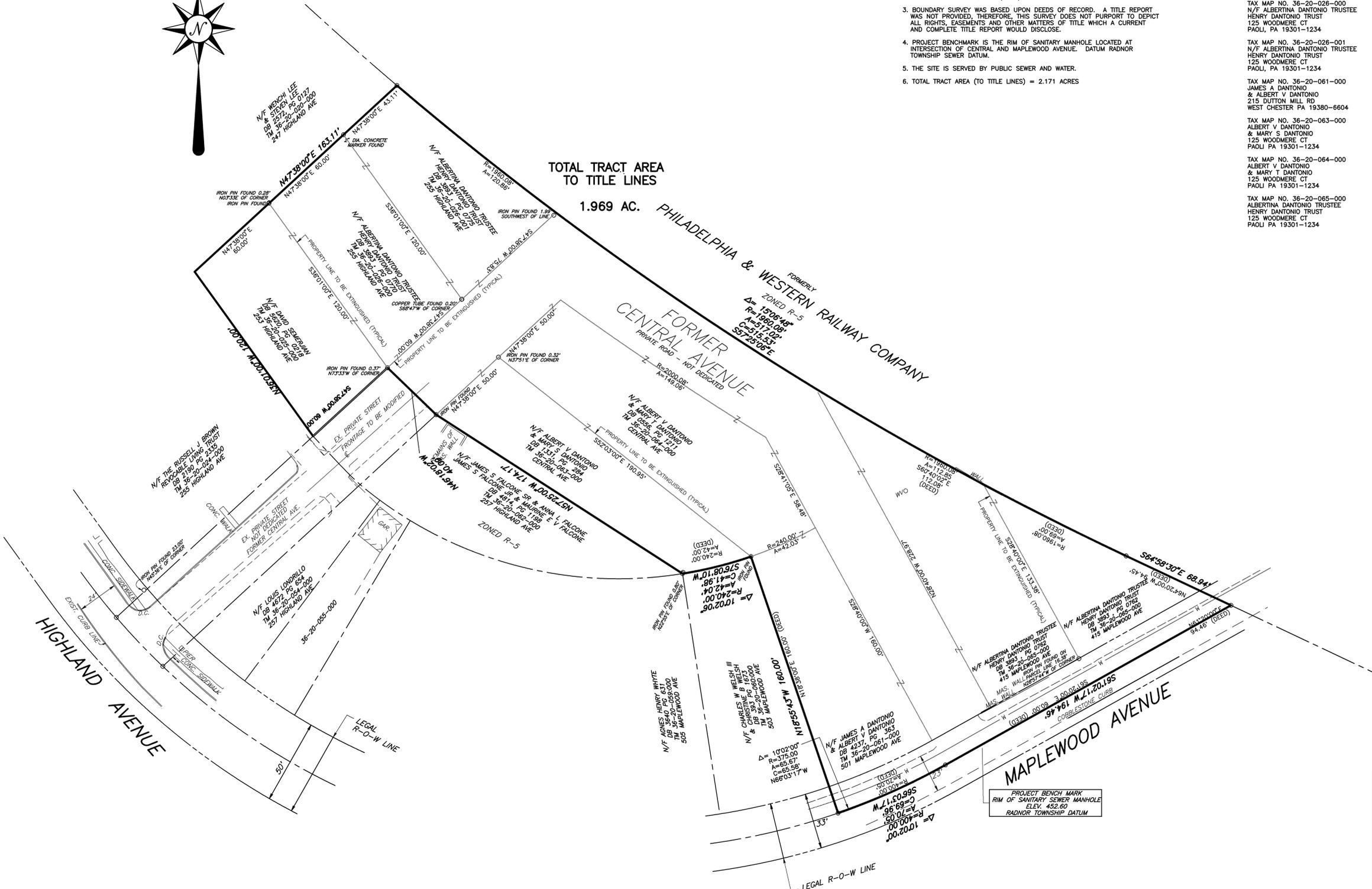
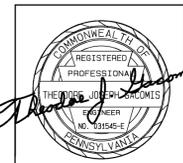
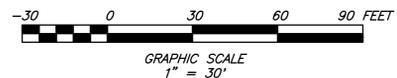
DEVELOPMENT PLAN
FOR
DAVID SEMERJIAN BUILDERS
415 MAPLEWOOD AVENUE
RADNOR TOWNSHIP DELAWARE COUNTY, PA.

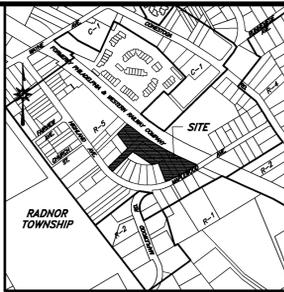
Edward B. Walsh & Associates, Inc.
CIVIL ENGINEERS & SURVEYORS

125 DOWLIN FORGE ROAD
EATON, PENNSYLVANIA 19341
Phone (610) 903-0060
Fax (610) 903-0080

Project- 4063
Date- 12-8-14
Scale- 1"= 30'
Drawn- R.F.N.
Checked- A.E.
Sheet- 2 OF 19

Plotted: 6/9/2018 File: F:\DB\4063\4063-b5.prc Ver.- 000





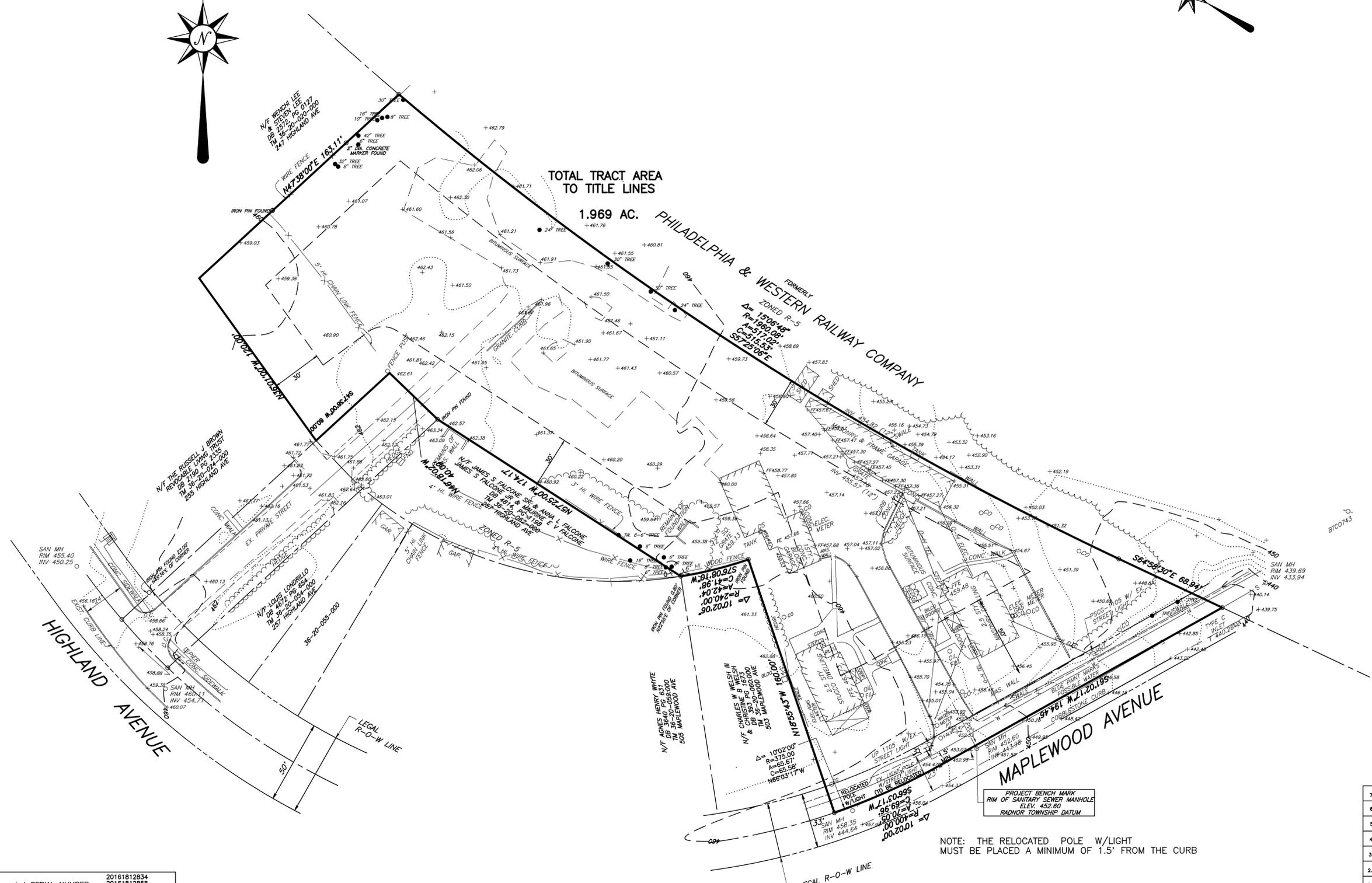
LOCATION MAP
1"=600'



TOTAL TRACT AREA
TO TITLE LINES
1.969 AC.

PHILADELPHIA & WESTERN RAILWAY COMPANY
FORMERLY ZONED R-5
A=1306.48
R=900.00
C=115.53
S=715.06'E

LEGEND	
	EXISTING BUILDING
	EXISTING INDEX CONTOUR
	EXISTING INTERIOR CONTOUR
	EXISTING STORM SEWER PIPE
	EXISTING TREE LINE
	EXISTING WETLANDS
	EXISTING EDGE OF PAVING
	RIGHT OF WAY LINE
	EXISTING FENCE
	EXISTING SANITARY SEWER PIPE
	EXISTING ELECTRIC LINE
	EXISTING WATER LINE
	EXISTING CURB
	EXISTING CONCRETE WALK
	EXISTING SPOT ELEVATION
	EXISTING INLET
	EXISTING STORM MANHOLE
	EXISTING SANITARY MANHOLE
	WATER METER
	WATER VALVE
	EXISTING UTILITY POLE
	EXISTING TREE



PRELIMINARY
EXISTING FEATURES PLAN

7. 6-6-18	REV PER TWP. COMMENTS
6. 5-14-18	GENERAL REVISIONS
5. 5-2-18	REV. PER TWP. ENG. COMMENTS OF 4-25-18
4. 4-11-18	REV. PER TWP. ENG. COMMENTS OF 2-27-18 & 2-16-18
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2. 11-28-17	REDUCED THE NUMBER OF UNITS; REVISED ROAD SIZE; REVISED STORMWATER FACILITIES
1. 3-9-15	ADDED ADDITION PROPERTY

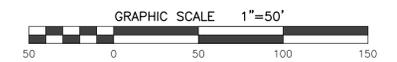
NOTE: THE RELOCATED POLE W/LIGHT
MUST BE PLACED A MINIMUM OF 1.5' FROM THE CURB

ACT 121 as amended SERIAL NUMBER 20161812834
20161812858
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UTILITIES NOTIFIED
VERIZON PENNSYLVANIA, INC.
PECO ENERGY
AQUA PENNSYLVANIA, INC.
COMCAST CABLE
RADNOR TOWNSHIP
EXETEN SYSTEMS

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DEVELOPMENT PLAN
FOR
DAVID SEMERJIAN BUILDERS
415 MAPLEWOOD AVENUE
RADNOR TOWNSHIP DELAWARE COUNTY, PA.
Edward B. Walsh & Associates, Inc.
CIVIL ENGINEERS & SURVEYORS
125 Dowlan Forge Road
Eaton, Pennsylvania 19341
Phone (610) 903-0060
Fax (610) 903-0080
Project- 4063
Date- 12-8-14
Scale- 1"= 30'
Drawn- R.F.N.
Checked- A.E.
Sheet- 3 OF 19
Plotted: 6/8/2018 File: F:\JB\4063\4063-b5.prc Ver.- 000



AERIAL PLAN

8. 6-6-18 REV. PER TWP. COMMENTS

**DEVELOPMENT PLAN
FOR
DAVID SEMERJIAN BUILDERS**

RADNOR TOWNSHIP DELAWARE COUNTY, PA

Edward B. Walsh & Associates, Inc.

CIVIL ENGINEERS & SURVEYORS
Livonia Professional Center
125 Drexlin Forge Road
Exton, Pennsylvania 19341
Phone: (610) 903-0060
Fax: (610) 903-0080

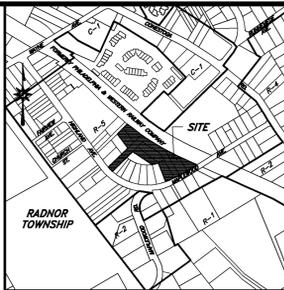


PROJECT #4063
DATE: 6/8/2018
SCALE: 1" = 50'
DRAWN: ----
CHECKED: ----
SHEET: 4 OF 19

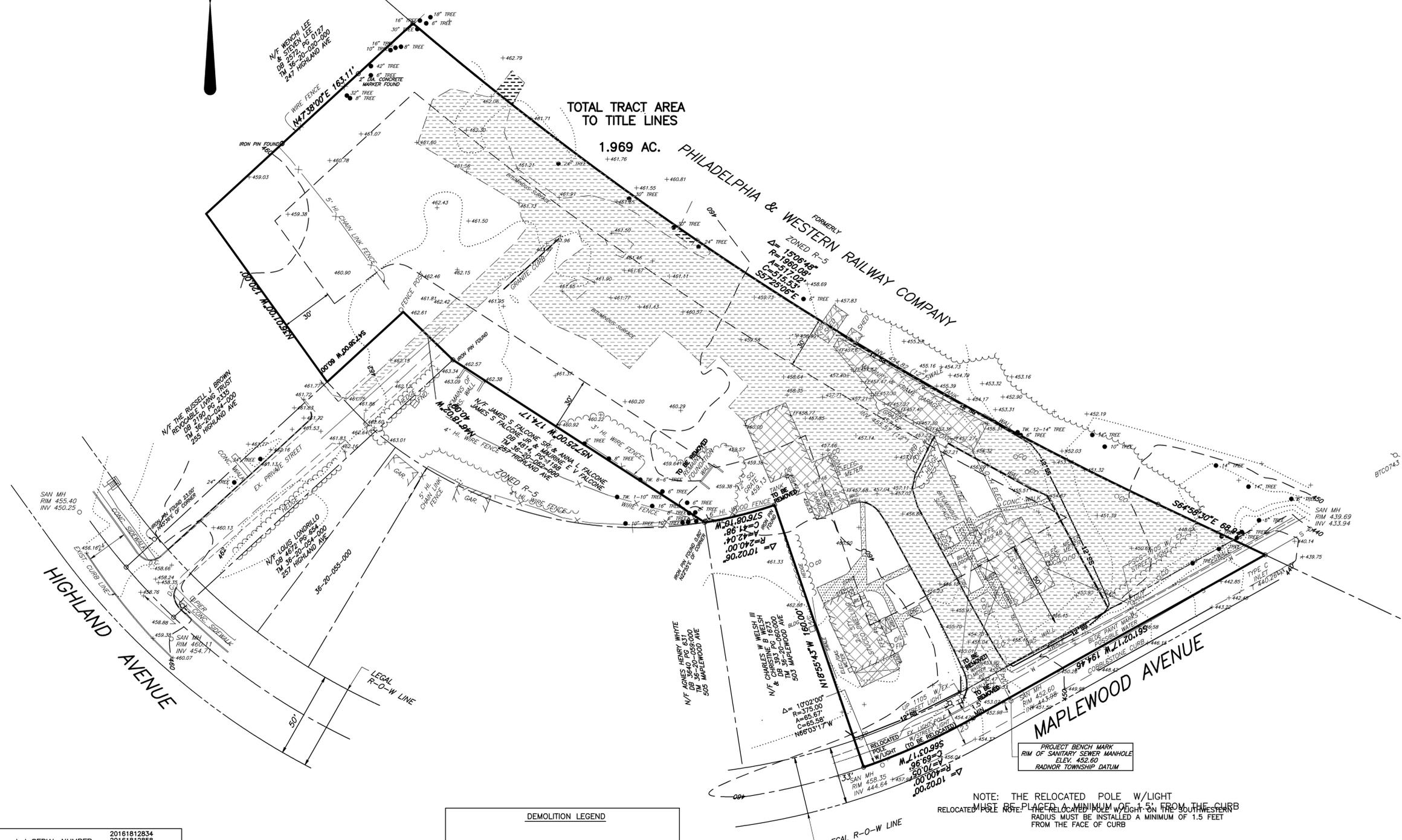


DEMOLITION NOTES:

1. CONTRACTOR SHALL CONTACT ALL OF THE UTILITY COMPANIES TO HAVE SERVICES TURNED-OFF AND TO OBTAIN THE REQUIREMENTS FOR REMOVAL OF AND CAPPING THEIR RESPECTIVE UTILITY.
2. REMOVAL OF ALL UTILITIES SHALL BE IN STRICT CONFORMANCE WITH SAID UTILITY COMPANY REQUIREMENTS AND/OR ANY STATE OR LOCAL REGULATION.
3. UNLESS REQUIRED OTHERWISE ALL GAS SERVICES SHALL BE REMOVED AND CAPPED AT THE R.O.W. LINE.
4. ALL DEMOLITION DEBRIS SHALL BE TAKEN OFF SITE AND DISPOSED OF IN A LICENSED AND APPROVED DISPOSAL OR RECYCLING FACILITY.
5. IF ANY HAZARDOUS SUBSTANCES ARE ENCOUNTERED DURING DEMOLITION THAN THE APPROPRIATE PROTOCOL MUST BE FOLLOWED FOR REMOVAL AND DISPOSAL OF SAID HAZARDOUS SUBSTANCE.



LOCATION MAP
1"=600'



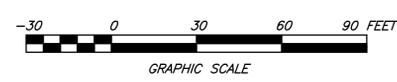
PRELIMINARY DEMOLITION PLAN

7. 6-6-18	REV PER TWP. COMMENTS
6. 5-14-18	GENERAL REVISIONS
5. 5-2-18	REV. PER TWP. ENG. COMMENTS OF 4-25-18
4. 4-11-18	REV. PER TWP. ENG. COMMENTS OF 2-27-18 & 2-16-18
3. 1-29-18	REV. PER TWP. ENG. COMMENTS OF 12-22-17 & 1-3-18
2. 11-28-17	REDUCED THE NUMBER OF UNITS; REVISED ROAD SIZE; REVISED STORMWATER FACILITIES
1. 3-9-15	ADDED ADDITION PROPERTY

NOTE: THE RELOCATED POLE W/LIGHT
RELOCATED POLE SHALL BE PLACED A MINIMUM OF 5 FEET FROM THE CURB
RADIUS MUST BE INSTALLED A MINIMUM OF 1.5 FEET
FROM THE FACE OF CURB

DEMOLITION LEGEND

	BUILDING TO BE REMOVED
	CONC. SLAB OR SIDEWALK TO BE REMOVED
	CONC. CURB OR WALL TO BE REMOVED
	BLACKTOP TO BE REMOVED



ALL ON-SITE SOIL IS THE FOLLOWING:

SOIL SYMBOL	SOIL NAME
Md	MADE LAND, GABBRO AND DIABASE MATERIALS, 0 TO 8 PERCENT SLOPE

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20161812858
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UTILITIES NOTIFIED

VERIZON PENNSYLVANIA, INC.
PECO ENERGY
AQUA PENNSYLVANIA, INC.
COMCAST CABLE
RADNOR TOWNSHIP
EXTENET SYSTEMS

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DEVELOPMENT PLAN
FOR
DAVID SEMERJIAN BUILDERS
415 MAPLEWOOD AVENUE
RADNOR TOWNSHIP DELAWARE COUNTY, PA.

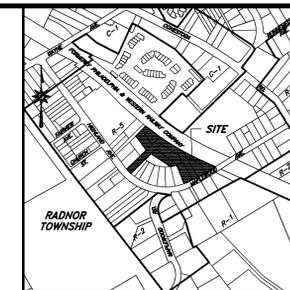
Edward B. Walsh & Associates, Inc.
CIVIL ENGINEERS & SURVEYORS

Project- 4063
Date- 12-8-14
Scale- 1"= 30'
Drawn- DJD
Checked- A.E.
Sheet- 5 OF 19

125 Dowlin Forge Road
Eaton, Pennsylvania 19341
Phone (610) 903-0060
Fax (610) 903-0080

Plotted: 6/8/2018 File: F:\JWB\4063\4063-b5.prc Ver: 000





LOCATION MAP
1"=600'

GENERAL NOTES:

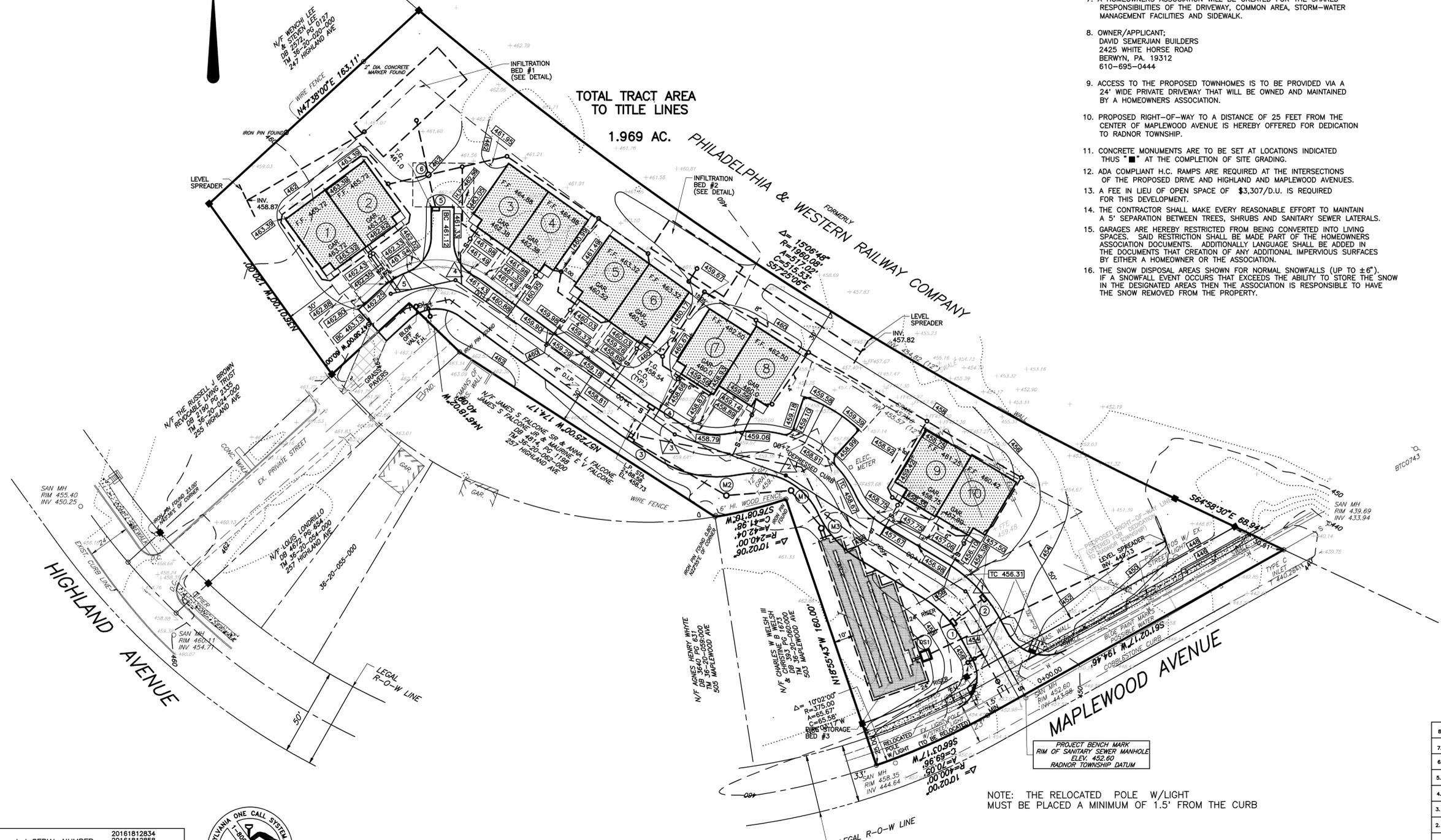
1. THE PURPOSE OF THIS PLAN IS TO CONSOLIDATE THE DEPICTED PARCELS INTO ONE PROPERTY AND TO DEVELOP THE SITE AS 10 TOWNHOUSES.
2. BOUNDARY, EXISTING FEATURES AND TOPOGRAPHIC INFORMATION IS FROM A FIELD SURVEY PERFORMED BY EDWARD B. WALSH & ASSOCIATES, INC. (EBWA) IN JULY, 2010.
3. BOUNDARY SURVEY WAS BASED UPON DEEDS OF RECORD. A TITLE REPORT WAS NOT PROVIDED, THEREFORE, THIS SURVEY DOES NOT PURPORT TO DEPICT ALL RIGHTS, EASEMENTS AND OTHER MATTERS OF TITLE WHICH A CURRENT AND COMPLETE TITLE REPORT WOULD DISCLOSE.
4. PROJECT BENCHMARK IS THE RIM OF SANITARY MANHOLE LOCATED AT INTERSECTION OF CENTRAL AND MAPLEWOOD AVENUE. DATUM RADNOR TOWNSHIP SEWER DATUM.
5. THE SITE IS SERVED BY PUBLIC SEWER AND WATER.
6. TOTAL TRACT AREA (TO TITLE LINES) = 2.171 ACRES
7. A HOMEOWNERS ASSOCIATION WILL BE CREATED FOR THE SHARED RESPONSIBILITIES OF THE DRIVEWAY, COMMON AREA, STORM-WATER MANAGEMENT FACILITIES AND SIDEWALK.
8. OWNER/APPLICANT:
DAVID SEMERJIAN BUILDERS
2425 WHITE HORSE ROAD
BERWYN, PA 19312
610-695-0444
9. ACCESS TO THE PROPOSED TOWNHOMES IS TO BE PROVIDED VIA A 24' WIDE PRIVATE DRIVEWAY THAT WILL BE OWNED AND MAINTAINED BY A HOMEOWNERS ASSOCIATION.
10. PROPOSED RIGHT-OF-WAY TO A DISTANCE OF 25 FEET FROM THE CENTER OF MAPLEWOOD AVENUE IS HEREBY OFFERED FOR DEDICATION TO RADNOR TOWNSHIP.
11. CONCRETE MONUMENTS ARE TO BE SET AT LOCATIONS INDICATED THUS "■" AT THE COMPLETION OF SITE GRADING.
12. ADA COMPLIANT H.C. RAMPS ARE REQUIRED AT THE INTERSECTIONS OF THE PROPOSED DRIVE AND HIGHLAND AND MAPLEWOOD AVENUES.
13. A FEE IN LIEU OF OPEN SPACE OF \$3,307/D.U. IS REQUIRED FOR THIS DEVELOPMENT.
14. THE CONTRACTOR SHALL MAKE EVERY REASONABLE EFFORT TO MAINTAIN A 5' SEPARATION BETWEEN TREES, SHRUBS AND SANITARY SEWER LATERALS.
15. GARAGES ARE HEREBY RESTRICTED FROM BEING CONVERTED INTO LIVING SPACES. SAID RESTRICTION SHALL BE MADE PART OF THE HOMEOWNERS ASSOCIATION DOCUMENTS. ADDITIONALLY LANGUAGE SHALL BE ADDED IN THE DOCUMENTS THAT CREATION OF ANY ADDITIONAL IMPERVIOUS SURFACES BY EITHER A HOMEOWNER OR THE ASSOCIATION.
16. THE SNOW DISPOSAL AREAS SHOWN FOR NORMAL SNOWFALLS (UP TO ±6"). IF A SNOWFALL EVENT OCCURS THAT EXCEEDS THE ABILITY TO STORE THE SNOW IN THE DESIGNATED AREAS THEN THE ASSOCIATION IS RESPONSIBLE TO HAVE THE SNOW REMOVED FROM THE PROPERTY.

LEGEND

---	430	---	EXISTING INDEX CONTOUR
---	432	---	EXISTING INTERIOR CONTOUR
---	438	---	PROPOSED CONTOUR
---	---	---	EXISTING STORM SEWER PIPE
---	---	---	PROPOSED STORM SEWER PIPE
---	---	---	EXISTING TREE LINE
---	---	---	EXISTING WETLANDS
---	---	---	EDGE OF PAVING
---	---	---	RIGHT OF WAY LINE
X	X		FENCE
S			EXISTING SANITARY SEWER PIPE
S			PROPOSED SANITARY SEWER PIPE
E			EXISTING ELECTRIC LINE
E			PROPOSED ELECTRIC LINE
W			EXISTING WATER LINE
W			PROPOSED WATER LINE
---	---	---	EXISTING CONCRETE WALK
---	---	---	EXISTING CURB
---	---	---	PROPOSED CURB
432.45			EXISTING SPOT ELEVATION
452.28			PROPOSED SPOT ELEVATION
□			EXISTING INLET
□			PROPOSED INLET
○			EXISTING STORM MANHOLE
○			PROPOSED STORM MANHOLE
○			EXISTING SANITARY MANHOLE
○			PROPOSED SANITARY MANHOLE
○			WATER METER
○			WATER VALVE
○			PROPOSED FIRE HYDRANT
●			EXISTING TREE

TOTAL TRACT AREA TO TITLE LINES
1.969 AC.

PHILADELPHIA & WESTERN RAILWAY COMPANY
FORMERLY
DAVID SEMERJIAN BUILDERS
2425 WHITE HORSE ROAD
BERWYN, PA 19312
610-695-0444



NOTE: THE RELOCATED POLE W/LIGHT MUST BE PLACED A MINIMUM OF 1.5' FROM THE CURB

PRELIMINARY
GRADING AND UTILITIES PLAN

8. 6-6-18	REV PER TWP. COMMENTS
7. 5-14-18	GENERAL REVISIONS
6. 5-2-18	REV. PER TWP. ENG. COMMENTS OF 4-25-18
5. 4-11-18	REV. PER TWP. ENG. COMMENTS OF 2-27-18 & 2-16-18
4. 1-29-18	REV. PER TWP. ENG. COMMENTS OF 12-22-17 & 1-3-18
3. 11-28-17	REVISED NUMBER OF UNITS; REVISED ROAD SIZE; REVISED STORMWATER FACILITIES
2. 4-10-15	MODIFIED FOOTPRINT AND SIDEWALK
1. 3-9-15	ADDED ADDITION PROPERTY

DEVELOPMENT PLAN
FOR
DAVID SEMERJIAN BUILDERS
415 MAPLEWOOD AVENUE
RADNOR TOWNSHIP DELAWARE COUNTY, PA.
Edward B. Walsh & Associates, Inc.
CIVIL ENGINEERS & SURVEYORS

Project- 4063
Date- 12-8-14
Scale- 1"= 30'
Drawn- DJD
Checked- A.E.
Sheet- 6 OF 19

125 Dowlan Forge Road
Eaton, Pennsylvania 19341
Phone (610) 903-0060
Fax (610) 903-0080

Plotted: 6/8/2018 File: F:\JWB\4063\4063-b5-pro Ver.- 000

ACT 121 as amended SERIAL NUMBER 20181812834
20181812858
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UTILITIES NOTIFIED

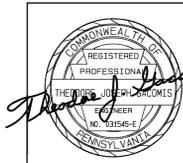
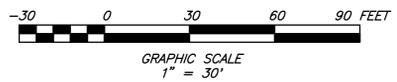
VERIZON PENNSYLVANIA, INC.
PECO ENERGY
AQUA PENNSYLVANIA, INC.
COMCAST CABLE
RADNOR TOWNSHIP
EXTENET SYSTEMS



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ALL ON-SITE SOIL IS THE FOLLOWING:

SOIL SYMBOL	SOIL NAME
Md	MADE LAND, GABBRO AND DIABASE MATERIALS, 0 TO 8 PERCENT SLOPE



LEGEND

- 430 EXISTING INDEX CONTOUR
- 432 EXISTING INTERIOR CONTOUR
- 433 PROPOSED CONTOUR
- EXISTING STORM SEWER PIPE
- PROPOSED STORM SEWER PIPE
- EXISTING TREE LINE
- EXISTING WETLANDS
- EDGE OF PAVING
- RIGHT OF WAY LINE
- FENCE
- EXISTING SANITARY SEWER PIPE
- PROPOSED SANITARY SEWER PIPE
- EXISTING ELECTRIC LINE
- PROPOSED ELECTRIC LINE
- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING CONCRETE WALK
- EXISTING CURB
- PROPOSED CURB
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- EXISTING INLET
- PROPOSED INLET
- EXISTING ENDWALL
- EXISTING STORM MANHOLE
- PROPOSED STORM MANHOLE
- EXISTING SANITARY MANHOLE
- PROPOSED SANITARY MANHOLE
- WATER METER
- WATER VALVE
- PROPOSED FIRE HYDRANT
- EXISTING TREE

EROSION & SEDIMENTATION CONTROL LEGEND

- TRACT BOUNDARY/NPDES BOUNDARY
- LIMIT OF DISTURBANCE
- CONSTRUCTION FENCE
- 12" SILT FENCE
- 18" SILT FENCE
- INLET PROTECTION
- TOPSOIL STOCKPILE
- ROCK CONSTR. ENTRANCE
- EROSION CONTROL BLANKET
- EROSION CONTROL BLANKET SHADING

STORMWATER BMP INFORMATION

INFLTRATION INFORMATION	BMP INFORMATION								
MEASURED INFILTRATION RATE (Site Specific) in./hr.	DESIGN INFILTRATION RATE in./hr.	DEWATERING TIME hrs.	INFILTRATION ELEVATION	ELEVATION OF BASIN BOTTOM (IF APPLIES)	VOLUME TO BE INFILTRATED OR PERMANENTLY REMOVED				
INFILTRATION BED #1	7.50	2	3.75	12	459.75	456.00	461.00	N/A	2002
INFILTRATION BED #2	9.00	2	4.5	10	458.75	455.00	460.00	N/A	1,393
PIPE STORAGE #3	N/A	N/A	N/A	N/A	454.50	450.71	N/A	N/A	N/A

GENERAL BMP AND E&S NOTES

- ALL OF THE BMP'S IDENTIFIED/PROPOSED ON THIS PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS SHOWN HEREIN AND THE NOTES CONTAINED ON THIS SHEET. THE WETLAND VEGETATION FOR THE BASINS SHALL NOT BE INSTALLED UNTIL 70% STABILIZATION OF THE TRIBUTARY AREA IS ACHIEVED AND THE CONVERSION TO ITS FINAL CONFIGURATION IS COMPLETE.
- NO BMP SHALL BE INSTALLED UNTIL 70% VEGETATIVE COVER IS ACHIEVED. THE CONSERVATION DISTRICT SHALL BE NOTIFIED PRIOR TO THE INSTALLATION AND MUST CONCUR WITH THE 70% COVER BEFORE INSTALLATION IS BEGUN.
- DURING CONSTRUCTION THE CONTRACTOR SHALL TAKE EVERY EFFORT TO KEEP SEDIMENT LAIDEN WATER OUT OF THE INFILTRATION BASINS. IF ANY SEDIMENT LAIDEN WATER SHALL ENTER THE FACILITY, IMMEDIATE STEPS MUST BE UNDERTAKEN TO REMOVE IT, INCLUDING BUT NOT LIMITED TO CLEANING THE FABRIC AND STONE OR REPLACING IT DEPENDING ON THE SEVERITY OF THE INCONVENIENCE.
- 50' BUFFER AREAS ARE REQUIRED AT THE STREAM CROSSING. ALL CLEARING, SOIL DISTURBANCES, EXCAVATION AND EQUIPMENT TRAFFIC SHOULD BE AVOIDED AND/OR MINIMIZED. ALL OTHER CONSTRUCTION OPERATIONS SHALL TAKE PLACE OUTSIDE THE BUFFER.

UTILITY LINE TRENCH EXCAVATION NOTES

- LIMIT ADVANCED CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY.
- WORK CREWS AND EQUIPMENT FOR TRENCHING, PLACEMENT OF PIPE, PLUS CONSTRUCTION AND BACKFILLING WILL BE SELF CONTAINED AND SEPARATE FROM CLEARING AND GRUBBING AND SITE RESTORATION AND STABILIZATION OPERATIONS.
- ALL SOIL EXCAVATED FROM THE TRENCH WILL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.
- LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT. DAILY INSTALLATION AND BACKFILLING CAN BE COMPLETED THE SAME DAY.
- WATER THAT ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING BEFORE PIPE PLACEMENT AND/OR BACKFILLING BEGINS. WATER REMOVED FROM THE TRENCH SHALL BE PUMPED THROUGH A FILTRATION DEVICE.
- ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS AND IMMEDIATELY STABILIZED.

ALL ON-SITE SOIL IS THE FOLLOWING:

SOIL SYMBOL	SOIL NAME
Md	MADE LAND, GABBRO AND DIABASE MATERIALS, 0 TO 8 PERCENT SLOPE

SOIL RESOLUTION

- ANY WATER THAT IS ENCOUNTERED IN THE WORK ZONE MUST BE PUMPED TO AN APPROVED DEWATERING FACILITY.

CONSTRUCTION SEQUENCE

- A PRE-CONSTRUCTION MEETING IS REQUIRED ON SITE PRIOR TO THE START OF CONSTRUCTION. THE ATTENDEES MUST BE THE OWNER, SITE CONTRACTOR, TOWNSHIP ENGINEER, DESIGN ENGINEER AND A REPRESENTATIVE FROM THE DELAWARE COUNTY CONSERVATION DISTRICT. THE CONSERVATION DISTRICT REQUIRES 7 DAYS NOTICE PRIOR TO THE MEETING.
- DELINEATE THE LIMIT OF DISTURBANCE IN THE FIELD. INSTALL ORANGE CONSTRUCTION FENCE AROUND THE TWO INFILTRATION FACILITIES.
- INSTALL BOTH CONSTRUCTION ENTRANCES AND THE SILT SOCK.
- ONCE THE FACILITIES IN STEP 3 ARE INSTALLED AND FUNCTIONING THEN BEGIN THE SITE DEMOLITION IN ACCORDANCE WITH THE DEMOLITION PLAN. REMOVE ALL DEBRIS FROM THE SITE AND DISPOSE OR RECYCLE IT IN A LICENSED APPROVED FACILITY.
- ONCE THE DEMOLITION IS COMPLETE THEN CLEAR THE SITE AND STRIP THE TOPSOIL STOCKPILE THE TOPSOIL AS SHOWN. ONCE COMPLETE THEN STABILIZE AND SURROUND WITH 18" SILT FENCE.
- ROUGH GRADE THE SITE. INSTALL THE STORM SEWER AND THE PIPE STORAGE SYSTEM. INSTALL THE CURB, THE SMALL RETAINING WALL ATA STATION 5+60 THRU 6+10.
- INSTALL THE REMAINING UTILITIES IN THE DRIVEWAY. PLACE THE STONE BASE AND BINDER COURSE. FINISH PAVING BUILDING SITES.
- HOUSE CONSTRUCTION CAN COMMENCE CONCURRENTLY WITH THE INSTALLATION OF UTILITIES.
- INFILTRATION BEDS 1 AND 2 MUST BE CONSTRUCTED IMMEDIATELY AFTER THE FIRST UNIT TYING INTO THEM IS UNDER THE ROOF. CONSTRUCT THE BEDS IN ACCORDANCE WITH THE NOTES, DETAILS AND SPECIFICATIONS FOUND ON THE POST CONSTRUCTION STORM WATER MANAGEMENT PLAN. THIS IS A CRITICAL BMP ENGINEERING OVERSIGHT IS REQUIRED.
- ONCE THE BEDS ARE CONSTRUCTED THE ROOF DRAIN STUBS MUST BE CAPPED UNTIL SUCH TIME AS THE UNITS ARE COMPLETED.
- FINISH THE HOUSE (UNIT) CONSTRUCTION. SPREAD TOPSOIL AS NEEDED AND SEED MULCH AND STABILIZE IMMEDIATELY.
- ALL E & S CONTROLS MUST BE MAINTAINED UNTIL THE ENTIRE SITE HAS ACHIEVED 70% UNIFORM VEGETATIVE COVER AS APPROVED BY THE CONSERVATION DISTRICT. CONTACT THE DISTRICT FOR THEIR FINAL INSPECTION REMOVE THE FACILITIES AND STABILIZE.
- COMPLETE AND SUBMIT THE NOTICE OF TERMINATION FOR THE SITE.

PAST AND PRESENT USES

THE SITE WAS PREVIOUSLY USED FOR RESIDENTIAL PURPOSES AND AS A PAVING COMPANY'S YARD AND FACILITY.

POST CONSTRUCTION STORMWATER MANAGEMENT FACILITIES/ CRITICAL BMP ENGINEERING OVERSIGHT INCLUDE THE FOLLOWING:

- INFILTRATION BEDS
- PIPE STORAGE SYSTEM

GEOLOGIC FORMATIONS

THERE ARE NO GEOLOGIC FORMATIONS WITH LIMITATIONS PRESENT ON THIS SITE.

PAST AND PRESENT USE

THE SITE WAS PREVIOUSLY USED FOR RESIDENTIAL PURPOSES AND AS A PAVING COMPANY'S YARD AND FACILITY.

GEOLOGIC FORMATIONS

THERE ARE NO GEOLOGIC FORMATIONS WITH LIMITATIONS PRESENT ON THIS SITE.

WATERSHED

UNNAMED TRIBUTARY TO LITTLE DARBY CREEK AND THIAN CREEK BOTH OF WHICH ARE PART OF THE DARBY CREEK WATERSHED.

CLASSIFICATION: CWF

GENERAL NOTES

- Should unforeseen erosive conditions develop during construction, the contractor is advised to remedy such conditions and to prevent damage to adjacent properties as a result of increased runoff and/or sediment. Sediment control measures must be immediately implemented by the contractor to eliminate all such problems.
- Only limited utility work will be permitted to provide access to sediment traps and interceptor channels for grading and scouring prior to construction.
- Erosion and sedimentation controls must be constructed, stabilized, and functional before general site disturbance within the tributary areas of these controls.
- After final site stabilization has been achieved, temporary erosion and sedimentation controls must be removed. Areas disturbed during removal of the controls must be stabilized.
- Until the site is stabilized, seeding and mulching activities must be maintained properly. Maintenance must include inspections of all erosion control devices, repair and replacement of any damaged devices, and re-seeding and mulching as needed.
- The contractor is advised to become thoroughly familiar with the provisions of Appendix 64, Erosion Control Rules and Regulations, Title 25, Part 1, Department of Environmental Resources, Sub-Part C, Protection of Natural Resources, Article 11, Water Resources, Chapter 102, Erosion Control.
- A copy of this plan must be posted at the construction site in accordance with the provisions of the above.
- Limits of disturbance must be clearly marked in the field prior to disturbance. Any change or encroachment into these areas without Conservation District review and approval may require the developer to cease disturbance.
- The developer must develop and have approved by the County Conservation District, a separate erosion and sedimentation control plan for each structure, or other work area not detailed in the approved plan, whether located within or outside the construction site.
- Sediment must be removed when accumulations reach 1/2 above ground heights of 88 feet.
- If any significant changes are to be made to the limits of disturbance or to the erosion and sediment control plan, the builder or landowner will contact the Chester County Conservation District at 25 PA CODE 2901 ET SEQ. 271.1 ET SEQ. AND 281.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DAMP OR DISCHARGE ANY BUILDING MATERIAL OR WASTE AT THE SITE.
- All areas requiring interim or final stabilization must be addressed immediately upon completion of disturbance. Areas utilizing vegetative stabilization must be seeded/planted or mulched in sufficient time to remedy such conditions and to prevent damage to adjacent properties as a result of increased runoff and/or sediment. Seeding will be accomplished through the use of hydro-seeding techniques. Stockpiles of seed and mulch shall be stored at a rate of 3.0 tons per acre as recommended in the Penn State Agronomy Guide.

CRITICAL STAGES

- INSTALLATION OF EVERY INFILTRATION BED

MAINTENANCE AND CONSTRUCTION NOTES

- STORM WATER DETENTION SHALL BE INSPECTED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF PA ON BEHALF OF THE UNIT OWNER OR RESPONSIBLE TAKE ACTION LOCAL TOWNSHIP ENGINEER ON THE FOLLOWING BASIS:
 - TWO INSPECTIONS PER YEAR FOR THE FIRST TWO YEARS.
 - ONE INSPECTION PER YEAR FOR THE FOLLOWING THREE YEARS.
 - ONE INSPECTION EVERY THREE YEARS THEREAFTER.
 - DIURNAL OR IMMEDIATELY AFTER CESSATION OF A 100-YEAR OR GREATER STORM EVENT.
- IF THE INSPECTING ENGINEER CONDUCTING THE INSPECTION SHALL BE REQUIRED TO SUBMIT A WRITTEN REPORT TO THE TOWNSHIP WITHIN ONE MONTH FOLLOWING THE DATE OF THE INSPECTION. THE REPORT WILL PRESENT DOCUMENTATION AND INCLUDE PICTURES REGARDING THE CONDITION OF THE FACILITY AND RECOMMEND NECESSARY REPAIRS, IF NEEDED. ANY REPAIRS SHALL BE COMPLETED BY THE OWNER WITHIN ONE (1) MONTH OF THE REPORT ISSUANCE DATE.
- THE COMPLIANCE ACTIONS AND THE DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION WILL BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE DISTRICT UPON REQUEST.
- ALL PREVENTIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN UP, REPAIR, REPLACEMENT, RESEEDING, MULCHING, IDENTIFYING, MUST BE PERFORMED IMMEDIATELY UPON COMPLETION OF INSPECTION AND MUST BE PERFORMED AS EXPECTED REPLACEMENT BMP'S OF EQUIVALENT OR BETTER PERFORMANCE WHERE BMP'S ARE FOUND TO BE NON-COMPLIANT. THE PERMITTEE OR CO-PERMITTEE SHALL INCLUDE THE FOLLOWING INFORMATION:
 - THE LOCATION AND SEVERITY OF THE BMP'S FAILURE AND ANY POLLUTION EVENTS.
 - ALL STEPS TAKEN TO REDUCE, ELIMINATE AND PREVENT THE REOCCURRENCE OF THE NON-COMPLIANCE.
 - THE TIME FRAME TO CORRECT THE NON-COMPLIANCE, INCLUDING THE EARLIEST DATE WHEN THE PROPERTY WILL RETURN TO COMPLIANCE.
- 3:1 SLOPES TO BE STABILIZED W/ EROSION CONTROL BLANKET NORTH AMERICAN 5-75.
- AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
- BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE EROSION AND SEDIMENT CONTROL PLAN, THE OPERATOR SHALL IMMEDIATELY UPON DISCOVERY OF ANY EROSION AND SEDIMENT CONTROL DEFICIENCIES, CONTACT THE COUNTY CONSERVATION DISTRICT. THE OPERATOR SHALL IMMEDIATELY UPON DISCOVERY OF ANY EROSION AND SEDIMENT CONTROL DEFICIENCIES, CONTACT THE COUNTY CONSERVATION DISTRICT. THE OPERATOR SHALL IMMEDIATELY UPON DISCOVERY OF ANY EROSION AND SEDIMENT CONTROL DEFICIENCIES, CONTACT THE COUNTY CONSERVATION DISTRICT.
- THE CONTRACTOR IS RESPONSIBLE TO PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE THAT IMPORTED FILL MATERIAL MEETS THE PACKED QUANTITIES "CLEAR" MADE AS DEFINED AS UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREGGED MATERIAL, USED ASPHALT, AND BRICK. BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE.)
- ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP HISTORY, PROPERTY HISTORY, SANDIUM MARK, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECT TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IT MUST BE HELD TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE PA DEP'S POLICY "MANAGEMENT OF FILL".
- FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE PADEP'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE.
- SEDIMENT TRACKED ONTO ANY ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORKDAY AND DISPOSED IN A MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOULDERED OR SHEPT INTO ANY ROAD SIDE DITCH, STORM SEWER OR SURFACE WATER.
- SEEDS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
- UPON REQUEST, THE PERMIT HOLDER AND/OR HIS CONTRACTOR SHALL PROVIDE AN AS-BUILT FOR ANY SEDIMENT BASIN OR TRAP TO THE MUNICIPAL INSPECTOR, LOCAL CONSERVATION DISTRICT OR DEP.
- UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT WILL EXCEED 4 DAYS, OR AN PART THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.
- CONSTRUCTION OF THE SITE MUST BE COMPLETED IN A MANNER TO MINIMIZE SOIL COMPACTION IN PROPOSED GRASS AREAS.
- ALL EXISTING DRAINAGE FEATURES MUST BE PROTECTED AND NOT DISTURBED IN ANY WAY.
- THE PROPOSED E & S BMP'S HAVE BEEN PROVIDED TO PREVENT SEDIMENT DISCHARGE FROM THE SITE AND TO ENSURE AN INCREASE IN THE RATE OF RUNOFF DOES NOT OCCUR DURING CONSTRUCTION.
- THE SITE DEVELOPMENT AND CONSTRUCTION SEQUENCE HAS BEEN GENERATED TO MINIMIZE THE EXTENT AND DURATION OF EARTH DISTURBANCE.
- THE E&S DESIGN HAS BEEN COMPLETED IN A MANNER TO BE PREVENTED FOR EXTENDED PERIODS OF TIME TO AVOID THERMAL ISSUES.
- THE NPDES BOUNDARY IS LIMITED TO THE OUTER PERIMETER OF THE SITE AREAS WITHIN THE LIMIT OF DISTURBANCE THAT ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL, INCLUDING OFFSITE FACILITIES SUCH AS UTILITIES AND ROADWAY IMPROVEMENTS.

NOTE:

ALL SLOPES GREATER THAN 3:1 MUST UTILIZE ECB'S.

CLEAN FILL RESPONSIBILITY

THE CONTRACTOR IS RESPONSIBLE TO PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE THAT IMPORTED FILL MATERIAL MEETS THE PACKED QUANTITIES FOR "CLEAN FILL".

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

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ACT 121 as amended SERIAL NUMBER 20161812834 20161812858

Edward B. Walsh & Associates, Inc. does not guarantee the accuracy of the locations for existing subsurface utility lines, structures, etc. shown on the plans, nor does E. B. Walsh & Assoc., Inc. guarantee that all subsurface utility lines, structures, etc. are shown.

Contractor shall verify the location and elevations of all subsurface utility lines, structures, etc. before the start of work, by calling the Pennsylvania One Call System at 1-800-242-1776.

UTILITIES NOTIFIED

VERIZON PENNSYLVANIA, INC.
PECO ENERGY
AQUA PENNSYLVANIA, INC.
COMCAST CABLE
RADNOR TOWNSHIP
EXTENET SYSTEMS

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXACT LOCATIONS AND ELEVATIONS OF ALL UNDERGROUND UTILITIES AND OTHER STRUCTURES BEFORE THE START OF CONSTRUCTION ON THIS PROJECT. THIS NOTICE APPLIES TO INFORMATION FOR THIS PROJECT INCLUDING PLANS OF SAME PREPARED BY OTHERS, E.G. UTILITY COMPANY PLANS. THIS NOTICE IS GIVEN AS PER ACT 121 OF THE COMMONWEALTH OF PENNSYLVANIA, SERIAL #20161812834 & 20161812858

STORMWATER BMP INFORMATION

INFLTRATION INFORMATION	BMP INFORMATION								
MEASURED INFILTRATION RATE (Site Specific) in./hr.	DESIGN INFILTRATION RATE in./hr.	DEWATERING TIME hrs.	INFILTRATION ELEVATION	ELEVATION OF BASIN BOTTOM (IF APPLIES)	VOLUME TO BE INFILTRATED OR PERMANENTLY REMOVED				
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- NO BMP SHALL BE INSTALLED UNTIL 70% VEGETATIVE COVER IS ACHIEVED. THE CONSERVATION DISTRICT SHALL BE NOTIFIED PRIOR TO THE INSTALLATION AND MUST CONCUR WITH THE 70% COVER BEFORE INSTALLATION IS BEGUN.
- DURING CONSTRUCTION THE CONTRACTOR SHALL TAKE EVERY EFFORT TO KEEP SEDIMENT LAIDEN WATER OUT OF THE INFILTRATION BASINS. IF ANY SEDIMENT LAIDEN WATER SHALL ENTER THE FACILITY, IMMEDIATE STEPS MUST BE UNDERTAKEN TO REMOVE IT, INCLUDING BUT NOT LIMITED TO CLEANING THE FABRIC AND STONE OR REPLACING IT DEPENDING ON THE SEVERITY OF THE INCONVENIENCE.
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PAST AND PRESENT USES

THE SITE WAS PREVIOUSLY USED FOR RESIDENTIAL PURPOSES AND AS A PAVING COMPANY'S YARD AND FACILITY.

POST CONSTRUCTION STORMWATER MANAGEMENT FACILITIES/ CRITICAL BMP ENGINEERING OVERSIGHT INCLUDE THE FOLLOWING:

- INFILTRATION BEDS
- PIPE STORAGE SYSTEM

GEOLOGIC FORMATIONS

THERE ARE NO GEOLOGIC FORMATIONS WITH LIMITATIONS PRESENT ON THIS SITE.

PAST AND PRESENT USE

THE SITE WAS PREVIOUSLY USED FOR RESIDENTIAL PURPOSES AND AS A PAVING COMPANY'S YARD AND FACILITY.

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UNNAMED TRIBUTARY TO LITTLE DARBY CREEK AND THIAN CREEK BOTH OF WHICH ARE PART OF THE DARBY CREEK WATERSHED.

CLASSIFICATION: CWF

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CRITICAL STAGES

- INSTALLATION OF EVERY INFILTRATION BED

MAINTENANCE AND CONSTRUCTION NOTES

- STORM WATER DETENTION SHALL BE INSPECTED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF PA ON BEHALF OF THE UNIT OWNER OR RESPONSIBLE TAKE ACTION LOCAL TOWNSHIP ENGINEER ON THE FOLLOWING BASIS:
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 - ONE INSPECTION PER YEAR FOR THE FOLLOWING THREE YEARS.
 - ONE INSPECTION EVERY THREE YEARS THEREAFTER.
 - DIURNAL OR IMMEDIATELY AFTER CESSATION OF A 100-YEAR OR GREATER STORM EVENT.
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 - THE LOCATION AND SEVERITY OF THE BMP'S FAILURE AND ANY POLLUTION EVENTS.
 - ALL STEPS TAKEN TO REDUCE, ELIMINATE AND PREVENT THE REOCCURRENCE OF THE NON-COMPLIANCE.
 - THE TIME FRAME TO CORRECT THE NON-COMPLIANCE, INCLUDING THE EARLIEST DATE WHEN THE PROPERTY WILL RETURN TO COMPLIANCE.
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- AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
- BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE EROSION AND SEDIMENT CONTROL PLAN, THE OPERATOR SHALL IMMEDIATELY UPON DISCOVERY OF ANY EROSION AND SEDIMENT CONTROL DEFICIENCIES, CONTACT THE COUNTY CONSERVATION DISTRICT. THE OPERATOR SHALL IMMEDIATELY UPON DISCOVERY OF ANY EROSION AND SEDIMENT CONTROL DEFICIENCIES, CONTACT THE COUNTY CONSERVATION DISTRICT.
- THE CONTRACTOR IS RESPONSIBLE TO PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE THAT IMPORTED FILL MATERIAL MEETS THE PACKED QUANTITIES "CLEAR" MADE AS DEFINED AS UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREGGED MATERIAL, USED ASPHALT, AND BRICK. BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE.)
- ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP HISTORY, PROPERTY HISTORY, SANDIUM MARK, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECT TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IT MUST BE HELD TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE PA DEP'S POLICY "MANAGEMENT OF FILL".
- FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE PADEP'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE.
- SEDIMENT TRACKED ONTO ANY ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORKDAY AND DISPOSED IN A MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOULDERED OR SHEPT INTO ANY ROAD SIDE DITCH, STORM SEWER OR SURFACE WATER.
- SEEDS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
- UPON REQUEST, THE PERMIT HOLDER AND/OR HIS CONTRACTOR SHALL PROVIDE AN AS-BUILT FOR ANY SEDIMENT BASIN OR TRAP TO THE MUNICIPAL INSPECTOR, LOCAL CONSERVATION DISTRICT OR DEP.
- UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT WILL EXCEED 4 DAYS, OR AN PART THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.
- CONSTRUCTION OF THE SITE MUST BE COMPLETED IN A MANNER TO MINIMIZE SOIL COMPACTION IN PROPOSED GRASS AREAS.
- ALL EXISTING DRAINAGE FEATURES MUST BE PROTECTED AND NOT DISTURBED IN ANY WAY.
- THE PROPOSED E & S BMP'S HAVE BEEN PROVIDED TO PREVENT SEDIMENT DISCHARGE FROM THE SITE AND TO ENSURE AN INCREASE IN THE RATE OF RUNOFF DOES NOT OCCUR DURING CONSTRUCTION.
- THE SITE DEVELOPMENT AND CONSTRUCTION SEQUENCE HAS BEEN GENERATED TO MINIMIZE THE EXTENT AND DURATION OF EARTH DISTURBANCE.
- THE E&S DESIGN HAS BEEN COMPLETED IN A MANNER TO BE PREVENTED FOR EXTENDED PERIODS OF TIME TO AVOID THERMAL ISSUES.
- THE NPDES BOUNDARY IS LIMITED TO THE OUTER PERIMETER OF THE SITE AREAS WITHIN THE LIMIT OF DISTURBANCE THAT ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL, INCLUDING OFFSITE FACILITIES SUCH AS UTILITIES AND ROADWAY IMPROVEMENTS.

NOTE:

ALL SLOPES GREATER THAN 3:1 MUST UTILIZE ECB'S.

CLEAN FILL RESPONSIBILITY

THE CONTRACTOR IS RESPONSIBLE TO PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE THAT IMPORTED FILL MATERIAL MEETS THE PACKED QUANTITIES FOR "CLEAN FILL".

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

ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP HISTORY, PROPERTY HISTORY, SANDIUM MARK, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECT TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IT MUST BE HELD TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE PA DEP'S POLICY "MANAGEMENT OF FILL".

FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE PADEP'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE.

ACT 121 as amended SERIAL NUMBER 20161812834 20161812858

Edward B. Walsh & Associates, Inc. does not guarantee the accuracy of the locations for existing subsurface utility lines, structures, etc. shown on the plans, nor does E. B. Walsh & Assoc., Inc. guarantee that all subsurface utility lines, structures, etc. are shown.

Contractor shall verify the location and elevations of all subsurface utility lines, structures, etc. before the start of work, by calling the Pennsylvania One Call System at 1-800-242-1776.

UTILITIES NOTIFIED

VERIZON PENNSYLVANIA, INC.
PECO ENERGY
AQUA PENNSYLVANIA, INC.
COMCAST CABLE
RADNOR TOWNSHIP
EXTENET SYSTEMS

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXACT LOCATIONS AND ELEVATIONS OF ALL UNDERGROUND UTILITIES AND OTHER STRUCTURES BEFORE THE START OF CONSTRUCTION ON THIS PROJECT. THIS NOTICE APPLIES TO INFORMATION FOR THIS PROJECT INCLUDING PLANS OF SAME PREPARED BY OTHERS, E.G. UTILITY COMPANY PLANS. THIS NOTICE IS GIVEN AS PER ACT 121 OF THE COMMONWEALTH OF PENNSYLVANIA, SERIAL #20161812834 & 20161812858

STORMWATER BMP INFORMATION

INFLTRATION INFORMATION	BMP INFORMATION								
MEASURED INFILTRATION RATE (Site Specific) in./hr.	DESIGN INFILTRATION RATE in./hr.	DEWATERING TIME hrs.	INFILTRATION ELEVATION	ELEVATION OF BASIN BOTTOM (IF APPLIES)	VOLUME TO BE INFILTRATED OR PERMANENTLY REMOVED				
INFILTRATION BED #1	7.50	2	3.75	12	459.75	456.00	461.00	N/A	2002
INFILTRATION BED #2	9.00	2	4.5	10	458.75	455.00	460.00	N/A	1,393
PIPE STORAGE #3	N/A	N/A	N/A	N/A	454.50	450.71	N/A	N/A	N/A

GENERAL BMP AND E&S NOTES

- ALL OF THE BMP'S IDENTIFIED/PROPOSED ON THIS PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS SHOWN HEREIN AND THE NOTES CONTAINED ON THIS SHEET. THE WETLAND VEGETATION FOR THE BASINS SHALL NOT BE INSTALLED UNTIL 70% STABILIZATION OF THE TRIBUTARY AREA IS ACHIEVED AND THE CONVERSION TO ITS FINAL CONFIGURATION IS COMPLETE.
- NO BMP SHALL BE INSTALLED UNTIL 70% VEGETATIVE COVER IS ACHIEVED. THE CONSERVATION DISTRICT SHALL BE NOTIFIED PRIOR TO THE INSTALLATION AND MUST CONCUR WITH THE 70% COVER BEFORE INSTALLATION IS BEGUN.
- DURING CONSTRUCTION THE CONTRACTOR SHALL TAKE EVERY EFFORT TO KEEP SEDIMENT LAIDEN WATER OUT OF THE INFILTRATION BASINS. IF ANY SEDIMENT LAIDEN WATER SHALL ENTER THE FACILITY, IMMEDIATE STEPS MUST BE UNDERTAKEN TO REMOVE IT, INCLUDING BUT NOT LIMITED TO CLEANING THE FABRIC AND STONE OR REPLACING IT DEPENDING ON THE SEVERITY OF THE INCONVENIENCE.
- 50' BUFFER AREAS ARE REQUIRED AT THE STREAM CROSSING. ALL CLEARING, SOIL DISTURBANCES, EXCAVATION AND EQUIPMENT TRAFFIC SHOULD BE AVOIDED AND/OR MINIMIZED. ALL OTHER CONSTRUCTION OPERATIONS SHALL TAKE PLACE OUTSIDE THE BUFFER.

PAST AND PRESENT USES

THE SITE WAS PREVIOUSLY USED FOR RESIDENTIAL PURPOSES AND AS A PAVING COMPANY'S YARD AND FACILITY.

POST CONSTRUCTION STORMWATER MANAGEMENT FACILITIES/ CRITICAL BMP

LEGEND

- TRACT BOUNDARY/MPDES BOUNDARY
- LIMIT OF DISTURBANCE
- BMP DRAINAGE AREA BOUNDARY
- EXISTING INDEX CONTOUR
- EXISTING INTERIOR CONTOUR
- PROPOSED CONTOUR
- EXISTING STORM SEWER PIPE
- PROPOSED STORM SEWER PIPE
- EXISTING TREE LINE
- EXISTING WETLANDS
- EDGE OF PAVING
- RIGHT OF WAY LINE
- FENCE
- EXISTING SANITARY SEWER PIPE
- PROPOSED SANITARY SEWER PIPE
- EXISTING ELECTRIC LINE
- PROPOSED ELECTRIC LINE
- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING CONCRETE WALK
- EXISTING CURB
- PROPOSED CURB
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- EXISTING INLET
- PROPOSED INLET
- PROPOSED ENDWALL
- EXISTING STORM MANHOLE
- PROPOSED STORM MANHOLE
- EXISTING SANITARY MANHOLE
- PROPOSED SANITARY MANHOLE
- WATER METER
- WATER VALVE
- PROPOSED FIRE HYDRANT
- EXISTING TREE

GENERAL BMP AND EAS NOTES

- ALL OF THE BMP'S IDENTIFIED/PROPOSED ON THIS PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS SHOWN HEREIN AND THE NOTES CONTAINED ON THE SHEET. THE WETLAND VEGETATION FOR THE BASINS SHALL NOT BE INSTALLED UNTIL 70% STABILIZATION OF THE TRIBUTARY AREA IS ACHIEVED AND THE CONVERSION TO ITS FINAL CONFIGURATION IS COMPLETE.
- NO BMP SHALL BE INSTALLED UNTIL 70% VEGETATIVE COVER IS ACHIEVED. THE OBSERVATION DISTRICT SHALL BE NOTIFIED PRIOR TO THE INSTALLATION AND MUST CONCUR WITH THE 70% COVER BEFORE INSTALLATION IS BEGUN.
- DURING CONSTRUCTION THE CONTRACTOR SHALL TAKE EVERY EFFORT TO KEEP SEDIMENT LADEN WATER OUT OF THE INFILTRATION BMP'S. IF ANY SEDIMENT LADEN WATER SHALL ENTER THE FACILITY, IMMEDIATE STEPS MUST BE UNDERTAKEN TO REMOVE IT, INCLUDING BUT NOT LIMITED TO CLEANING THE FABRIC AND STONE OR REPLACING IT DEPENDING ON THE SEVERITY OF THE INCURSION.
- 50' BUFFER AREAS ARE REQUIRED AT THE STREAM CROSSING. ALL CLEARING SOD DISTURBANCES, EXCAVATION AND EQUIPMENT TRAFFIC SHOULD BE AVOIDED AND/OR MINIMIZED. ALL OTHER CONSTRUCTION OPERATIONS SHALL TAKE PLACE OUTSIDE THE BUFFER.

NOTES

- ALL OF THE BMP'S IDENTIFIED/PROPOSED ON THIS PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS SHOWN HEREIN AND THE NOTES CONTAINED ON THE SHEET. THE WETLAND VEGETATION FOR THE BASINS SHALL NOT BE INSTALLED UNTIL 70% STABILIZATION OF THE TRIBUTARY AREA IS ACHIEVED AND THE CONVERSION TO ITS FINAL CONFIGURATION IS COMPLETE.
- NO BMP SHALL BE INSTALLED UNTIL 70% VEGETATIVE COVER IS ACHIEVED. THE OBSERVATION DISTRICT SHALL BE NOTIFIED PRIOR TO THE INSTALLATION AND MUST CONCUR WITH THE 70% COVER BEFORE INSTALLATION IS BEGUN.
- DURING CONSTRUCTION THE CONTRACTOR SHALL TAKE EVERY EFFORT TO KEEP SEDIMENT LADEN WATER OUT OF THE INFILTRATION BMP'S. IF ANY SEDIMENT LADEN WATER SHALL ENTER THE FACILITY, IMMEDIATE STEPS MUST BE UNDERTAKEN TO REMOVE IT, INCLUDING BUT NOT LIMITED TO CLEANING THE FABRIC AND STONE OR REPLACING IT DEPENDING ON THE SEVERITY OF THE INCURSION.
- 50' BUFFER AREAS ARE REQUIRED AT THE STREAM CROSSING. ALL CLEARING SOD DISTURBANCES, EXCAVATION AND EQUIPMENT TRAFFIC SHOULD BE AVOIDED AND/OR MINIMIZED. ALL OTHER CONSTRUCTION OPERATIONS SHALL TAKE PLACE OUTSIDE THE BUFFER.

ACT 121 as amended SERIAL NUMBER 20161812834
20161812858

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COMCAST CABLE
RADNOR TOWNSHIP
EXTENET SYSTEMS

ALL ON-SITE SOIL IS THE FOLLOWING:

SOIL SYMBOL	SOIL NAME
Md	MADE LAND, GABBRO AND DIABASE MATERIALS, 0 TO 8 PERCENT SLOPE

SOIL TYPE	INFILTRATION POTENTIAL	DEPTH TO SEASONALLY HIGH WATER TABLE	DEPTH TO BEDROCK	HYDROLOGIC SOIL GROUP	RETENTION/DETENTION LOCATION	SOIL ERODIBILITY CLASS	UNIFIED SOIL CLASSIFICATION	HYDRIC SOIL YES/NO?	ALLUVIAL SOIL YES/NO?
Md	>80"	>80"	>80"	C	WELL DRAINED	MEDIUM	GM	YES	NO

SOIL RESOLUTION

1. ANY WATER THAT IS ENCOUNTERED IN THE WORK ZONE MUST BE PUMPED TO AN APPROVED DETERNERING FACILITY.

STORMWATER BMP INFORMATION POI #2

PROPOSED INFILTRATION BMP(S) (Site Specific)	INFILTRATION INFORMATION			BMP INFORMATION					
	MEASURED INFILTRATION RATE In./hr.	DESIGN FACTOR SAFETY 2 min.	DESIGN INFILTRATION RATE In./hr.	DEWATERING TIME hrs.	ELEVATION SOILS, WATER TABLE ROCK	INFL. ELEVATION TOP OF BODY BASIN	INFL. ELEVATION BOTTOM OF BODY BASIN	ELEVATION EAS SEDIMENT BASIN BOTTOM (IF APPLIES)	VOLUME TO BE INFILTRATED PERMANENTLY REMOVED C.F.
INFILTRATION BED #1	7.50	2	3.75	12	---	459.75	456.00	461.00	N/A
INFILTRATION BED #2	9.00	2	4.5	10	---	458.75	455.00	460.00	N/A
PIPE STORAGE #3	N/A	N/A	N/A	N/A	---	454.50	450.71	N/A	N/A
LANDSCAPE RESTORATION (MATURE SPECIES)	18 EVERGREEN x 10 C.F. 14 DEC x 6 C.F.								180 C.F. 84 C.F.

TOTAL INFILTRATED = 3,030 C.F.
TOTAL REQ WS4 = 2,992 C.F. (POI #2)

CRITICAL STAGES

- INSTALLATION OF BOTH INFILTRATION BEDS
- INSTALLATION OF PIPE STORAGE SYSTEM

MAINTENANCE AND CONSTRUCTION NOTES

A. STORM WATER INFILTRATION BEDS AND PIPE STORAGE SYSTEM SHALL BE INSPECTED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF PA. ON BEHALF OF THE UNIT OWNER OR RESPONSIBLE ENTITY (INCLUDING THE TOWNSHIP ENGINEER ON THE FOLLOWING DATES:

- TWO INSPECTIONS PER YEAR FOR THE FIRST TWO YEARS.
- ONE INSPECTION PER YEAR FOR THE FOLLOWING THREE YEARS.
- ONE INSPECTION EVERY THREE YEARS THEREAFTER.
- DURING OR IMMEDIATELY AFTER CESSATION OF A 100-YEAR OR GREATER STORM EVENT.

B. THE PROFESSIONAL ENGINEER CONDUCTING THE INSPECTION SHALL BE REQUIRED TO SUBMIT A WRITTEN REPORT TO THE TOWNSHIP WITHIN ONE (1) MONTH FOLLOWING COMPLETION OF THE INSPECTION. THE REPORT WILL PRESENT DOCUMENTATION AND INCLUDE PICTURES REGARDING THE CONDITION OF THE FACILITY AND RECOMMEND NECESSARY REPAIRS, IF NEEDED. ANY NEEDED REPAIRS SHALL BE IMPLEMENTED BY THE OWNER WITHIN ONE (1) MONTH OF THE REPORT ISSUANCE DATE.

C. THE INLET PROTECTION MUST REMAIN UNTIL ALL DISTURBED AREAS ARE STABILIZED WITH ESTABLISHED GROWTH OF GRASS (MIN. COVERAGE = 70%).

D. THE STORMWATER MANAGEMENT SYSTEM MAY NOT BE DISRUPTED OR WORKED IN ANY WAY UNLESS APPROVED BY RADNOR TOWNSHIP.

E. ALL INLET AND MANHOLES CONTAINING SNOUTS MUST BE INSPECTED AS SPECIFIED IN NOTE # ABOVE. THE INSPECTOR SHALL ENSURE THE BOTTOM OF THE STRUCTURE IS FREE OF DEBRIS AND THE SNOUT IS NOT DAMAGED. ALL DEBRIS MUST BE REMOVED FROM THE STRUCTURES ON A YEARLY BASIS AND SENT TO AN APPROVED FACILITY.

PAST AND PRESENT USES

THE SITE WAS PREVIOUSLY USED FOR RESIDENTIAL PURPOSES AND AS A PAVING COMPANY'S YARD AND FACILITY.

POST CONSTRUCTION STORMWATER MANAGEMENT FACILITIES/CRITICAL BMP'S REQUIRING ENGINEERING OVERSIGHT INCLUDE THE FOLLOWING:

- INFILTRATION BEDS 1 & 2

GEOLOGIC FORMATIONS

THERE ARE NO GEOLOGIC FORMATIONS WITH LIMITATIONS PRESENT ON THIS SITE.

WATERSHED

UNNAMED TRIBUTARY TO LITTLE DARBY CREEK AND DARBY CREEK, BOTH OF WHICH ARE PART OF THE DARBY CREEK WATERSHED. CLASSIFICATION: CWF

UTILITY LINE TRENCH EXCAVATION NOTES

- LIMIT ADVANCED CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY.
- WORK CREWS AND EQUIPMENT FOR TRENCHING, PLACEMENT OF PIPE, PLUG CONSTRUCTION AND BACKFILLING WILL BE SELF-CONTAINED AND SEPARATE FROM CLEARING AND GRUBBING AND SITE RESTORATION AND STABILIZATION OPERATIONS.
- ALL SOIL EXCAVATED FROM THE TRENCH WILL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.
- LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT. PLUG INSTALLATION AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY.
- WATER THAT ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING BEFORE PIPE PLACEMENT AND/OR BACKFILLING. EXCESS WATER REMOVED FROM THE TRENCH SHALL BE PUMPED THROUGH A FILTRATION DEVICE.
- ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS AND IMMEDIATELY STABILIZED.

INFILTRATION BED CONSTRUCTION SEQUENCE (ENGINEERING OVERSIGHT REQUIRED)

- EXCAVATE AREA FOR BED TO SPECIFIED ELEVATION. CONTRACTOR MUST FOLLOW ALL NOTES AND DETAILS PROVIDED ON PCSWM PLAN REGARDING INSTALLATION.
- CONTRACTOR SHALL BE VERY CAREFUL NOT TO RUN HEAVY EQUIPMENT OVER THE BOTTOM OF BED TO MINIMIZE POTENTIAL COMPACTION. SCARIFY BOTTOM.
- PLACE GEOTEXTILE FABRIC ON BOTTOM AND ALL SIDES OF BED.
- FILL BED WITH STONE TO THE ELEVATION OF THE INFLOW PIPES.
- INSTALL INFLOW PIPES AND COMPLETE PLACEMENT OF STONE UP TO INVERT ELEVATION OF OUTLET STRUCTURE. INSTALL OUTLET STRUCTURE AND COMPLETE PLACEMENT OF STONE.
- PLACE GEOTEXTILE OVER TOP OF BED WITH A MINIMUM OVERLAP OF 12 INCHES.
- PLACE 1 FOOT OF COVER OVER ENTIRE BED AND INSTALL AN IMPERVIOUS GEOTEXTILE FABRIC AS SPECIFIED ON PLAN. BACKFILL THE REMAINDER OF THE BED. SEED MULCH AND STABILIZE IMMEDIATELY.

POST CONSTRUCTION SNOTOUT BMP MAINTENANCE NOTES:

MONTHLY MONITORING FOR THE FIRST YEAR OF A NEW INSTALLATION RECOMMENDED AFTER THE SITE HAS BEEN STABILIZED. MEASUREMENT OF SEDIMENT DEPTH AND NOTING THE SURFACE POLLUTANTS WILL BE HELPFUL IN PLANNING MAINTENANCE.

THE STRUCTURE SHALL BE CLEANED WHEN THE SLUMP IS HALF FULL. WHEN A SPILL OR OTHER INCIDENT CAUSES A LARGER THAN NORMAL ACCUMULATION OF POLLUTANTS IN A STRUCTURE, MAINTENANCE IS BEST PERFORMED WITH A VACUUM TRUCK.

AN ANNUAL INSPECTION OF THE ANTI-SIPHON VENT AND ACCESS HATCH ARE RECOMMENDED. A SIMPLE FLUSHING OF THE VENT OR SNOTOUT RODDING WITH A FLEXIBLE WIRE SHOULD BE PERFORMED TO MAINTAIN THE ANTI-SIPHON PROPERTIES. TO ENSURE TROUBLE-FREE SERVICE, OPENING AND CLOSING THE ACCESS HATCH AT THIS TIME IS ALSO RECOMMENDED.

CONSTRUCTION DEBRIS HANDLING:

- CONSTRUCTION DEBRIS MUST BE STORED IN REFUSE CONTAINERS ON THE SITE. THE CONTAINERS MUST BE PLACED IN ACCESSIBLE LOCATIONS.
- NO DEBRIS MAY BE STORED/LEFT IN AREAS OR DEPRESSIONS ON THE SITE.
- NO FUEL MAY BE STORED ON SITE.
- ALL COLLECTED WASTES MUST BE HANDLED AND DISPOSED OF ACCORDING TO LOCAL ENVIRONMENTAL REQUIREMENTS.

POST-CONSTRUCTION LONG TERM OPERATION AND MAINTENANCE OF STORMWATER FACILITIES:

THE OPERATION AND MAINTENANCE OF THE BMP'S IS THE RESPONSIBILITY OF THE PROPERTY OWNER.

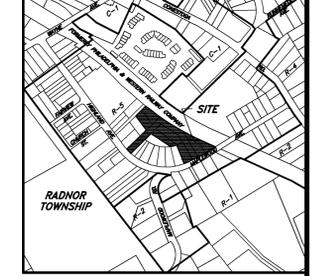
STORMWATER DETENTION FACILITY:

- IF WATER IS STILL IN THE BOTTOM OF THE STRUCTURES, SEDIMENT REMOVAL MUST BE PERFORMED WHEN IT HAS NO STANDING WATER. ACCUMULATED SEDIMENT MUST BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER. IF THE AMOUNT OF SEDIMENT REQUIRES ITS TRANSPORT TO ANOTHER SITE, THE SITE MUST HAVE AN NPDES PERMIT.
- SYSTEM DEWATERING IS REQUIRED DEWATERING OF THE BASIN AREA IS REQUIRED. THE WATER MUST BE DISCHARGED TO A DEP APPROVED DEWATERING FACILITY (DIRT BAG OR EQUAL).
- THE BASIN OUTLET MUST BE INSPECTED TO ENSURE THE STRUCTURES ARE FREE OF DEBRIS. ALL DEBRIS MUST BE REMOVED FROM THE STRUCTURES ON A YEARLY BASIS.
- IF THE SYSTEM IS CONSIDERED FAILING IF IT DOES NOT DEWATER IN 72 HOURS, IF IT IS NOT DEWATERING, THE OUTLET SYSTEM MUST BE CHECKED AND CLEARED OF ANY DEBRIS CLOGGING THE OUTLET SYSTEM.

REGULAR REMOVAL OF LITTER AND DEBRIS WITHIN THE PROPERTY SHALL BE PERFORMED. STORMWATER FACILITIES SHALL BE INSPECTED AT LEAST ANNUALLY. THE PROFESSIONAL ENGINEER CONDUCTING THE INSPECTION SHALL NOT BE REQUIRED TO SUBMIT A WRITTEN REPORT TO THE TOWNSHIP UPON THE COMPLETION OF EACH INSPECTION REQUIRED BY THIS PARAGRAPH. INSTEAD, THE PROFESSIONAL ENGINEER SHALL BE REQUIRED TO SUBMIT A WRITTEN INSPECTION REPORT TO THE TOWNSHIP IN ACCORDANCE WITH THE SCHEDULE ESTABLISHED UNDER THE POST-CONSTRUCTION STORMWATER MANAGEMENT FACILITIES INSPECTION REQUIREMENTS SET FORTH SEPARATELY ON THESE PLANS. ANY TRASH, DEBRIS, SEDIMENT, ETC., SHALL BE REMOVED AND PROPERLY DISPOSED OF. THE STORMWATER MANAGEMENT FACILITIES SHOWN ON THESE PLANS, INCLUDING STORM INLETS, STORM DRAIN PIPES, DETENTION SYSTEMS, SAND CATCHES, AND ROOF DRAIN CONNECTIONS ARE PERMANENT AND ARE NOT TO BE REMOVED.

UNDERGROUND STONE RECHARGE BED:

- IF WATER IS STILL IN THE BOTTOM OF THE INLETS AT THE RECHARGE BED 72 HOURS AFTER A STORM EVENT, THE SYSTEM HAS FAILED AND MUST BE REPAIRED.
- SYSTEM MAY NEED TO BE DEWATERED AND NEW STONE INSTALLED.
- SHOULD DEWATERING BE REQUIRED, THE WATER MUST BE DISCHARGED TO A DEP APPROVED DEWATERING FACILITY (DIRTBAG OR EQUAL).
- ANY DEBRIS OR TRASH IN THE BOTTOM OF THE INLETS MUST BE REMOVED AND DISPOSED OF PROPERLY.



LOCATION MAP
1" = 600'

THE PCSWM PLAN/DESIGN PROVIDES THE FOLLOWING:

- PREPARE THE INTEGRITY OF STREAM CHANNELS AND MAINTAIN AND PROTECT THE PHYSICAL, BIOLOGICAL AND CHEMICAL QUALITIES OF THE RECEIVING STREAM BY REDUCING THE FLOW RATE TO PRE DEVELOPED RATES.
- PREVENT AN INCREASE IN THE RATE OF STORMWATER RUNOFF BY DETAINING RUNOFF IN STORMWATER MANAGEMENT SYSTEMS.
- MINIMIZE ANY INCREASE IN STORMWATER RUNOFF BY DETAINING RUNOFF IN STORMWATER MANAGEMENT SYSTEMS.
- MINIMIZE IMPERVIOUS AREAS BY INSTALLING THE MINIMUM DRIVEWAY AREA NEEDED.
- MAXIMIZE THE PROTECTION OF EXISTING DRAINAGE FEATURES AND EXISTING VEGETATION.
- MINIMIZE LAND CLEARING AND GRADING.
- MINIMIZE SOIL COMPACTION.
- UTILIZES BMP'S THAT PREVENT OR MINIMIZE CHANGES IN STORMWATER RUNOFF.
- UTILIZES BMP'S TO PREVENT THERMAL IMPACTS WITH THE STORMWATER DISCHARGE AND DISCHARGE TO VEGETATED AREAS TO COOL THE RUNOFF.

PCSWM SHORT TERM OPERATIONS AND MAINTENANCE REQUIREMENTS

UNTIL THE PERMITTEE OR CO-PERMITTEE HAS RECEIVED WRITTEN APPROVAL OF A NOTICE OF TERMINATION, THE PERMITTEE OR CO-PERMITTEE WILL REMAIN RESPONSIBLE FOR COMPLIANCE WITH THE PERMIT TERMS AND CONDITIONS INCLUDING LONG-TERM OPERATION AND MAINTENANCE OF ALL PCSWM BMP'S ON THE PROJECT SITE AND IS RESPONSIBLE FOR VIOLATIONS OCCURRING ON THE PROJECT SITE.

THE PERMITTEE OR CO-PERMITTEE SHALL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF PCSWM BMP'S UNLESS A DIFFERENT PERSON IS IDENTIFIED IN THE NOTICE OF TERMINATION AND HAS AGREED TO LONG-TERM OPERATION AND MAINTENANCE OF PCSWM BMP'S.

FOR ANY PROPERTY CONTAINING A PCSWM BMP, THE PERMITTEE OR CO-PERMITTEE SHALL RECORD AN INSTRUMENT WITH THE RECORDER OF DEEDS WHICH WILL ASSURE DISCLOSURE OF THE PCSWM BMP AND THE RELATED OBLIGATIONS IN THE ORDINARY COURSE OF A TITLE SEARCH OF THE SUBJECT PROPERTY. THE RECORDED INSTRUMENT MUST IDENTIFY THE PCSWM BMP, PROVIDE FOR NECESSARY ACCESS RELATED TO LONG-TERM OPERATION AND MAINTENANCE FOR PCSWM BMP'S AND PROVIDE NOTICE THAT THE RESPONSIBILITY FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSWM BMP IS A COVENANT THAT RUNS WITH THE LAND THAT IS BINDING AND ENFORCEABLE BY SUCCESSOR GRANTEE, AND PROVIDE PROOF OF FILING WITH THE NOTICE OF TERMINATION UNDER (102.7)(b)(5) (RELATING TO PERMIT TERMINATION).

THE PERSON RESPONSIBLE FOR PERFORMING LONG-TERM OPERATION AND MAINTENANCE MAY ENTER INTO AN AGREEMENT WITH ANOTHER PERSON, INCLUDING A CONSERVATION DISTRICT, NONPROFIT ORGANIZATION, MUNICIPALITY, PRIVATE CORPORATION OR OTHER PERSON, TO TRANSFER THE RESPONSIBILITY FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSWM BMP TO THAT PERSON. LONG-TERM OPERATION AND MAINTENANCE OF THE PCSWM BMP'S LOCATED ON THE PROPERTY, AND MAINTENANCE OF THE PCSWM BMP OR OTHERWISE FAILS TO COMPLY WITH THIS REQUIREMENT SHALL REMAIN JOINTLY AND SEVERALLY RESPONSIBLE WITH THE PERMITTEE OR CO-PERMITTEE FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSWM BMP'S LOCATED ON THE PROPERTY.

POST CONSTRUCTION REPORTING & RECORD KEEPING

- THE POST CONSTRUCTION STORMWATER PLAN, INSPECTION REPORTS AND MONITORING RECORDS SHALL BE AVAILABLE FOR REVIEW AND INSPECTION BY THE G.I.E.P. OR THE CONSERVATION DISTRICT.

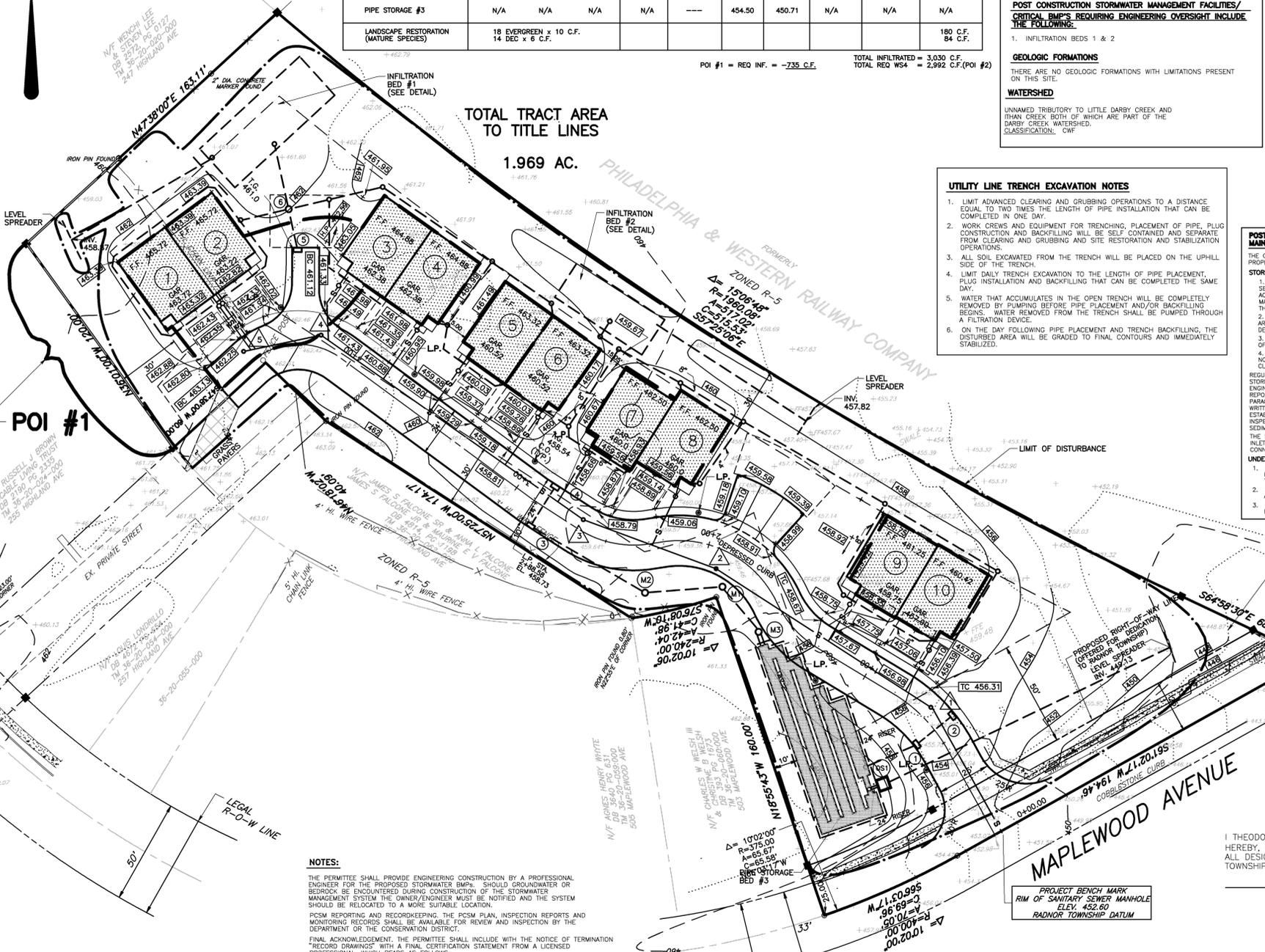
POST CONSTRUCTION INFILTRATION BED AND STORMWATER FACILITIES MAINTENANCE NOTES

- Regular removal of filter and debris within the property shall be performed. Stormwater facilities shall be inspected quarterly and any trash, debris, sediment, etc., shall be removed and properly disposed of.
- Observations shall be made to determine the length of time needed for retained water to infiltrate into the soil after a storm event. The observations shall be made by reeding the water level in the test basin(s) of the underground system several times over a period of two (2) days after a large storm event. The first of these observations shall provide a record of how well the system is working when compared to future observations. Observations shall be made twice the first year and yearly thereafter.
- Stormwater detention and retention basins or facilities shall be inspected by, or under the direction of, a registered professional engineer licensed in the Commonwealth of Pennsylvania on behalf of the applicant or responsible entity (including the Township Engineer for dedicated facilities) on the following basis:
 - Annually for the first five (5) years.
 - Once every three (3) years thereafter.
 - During or immediately after the cessation of a 100-year or greater storm event.

The professional engineer conducting the inspection shall be required to submit a written report to the Township within one (1) month following completion of the inspection. The report will present documentation and include pictures regarding the condition of the facility and recommend necessary repairs, if needed. Any needed repairs shall be implemented by the owner within one (1) month of the report issuance date.

4. The stormwater management facilities shown on these plans, including storm inlets, storm drain pipes, underground detention systems, and roof drain connections, are permanent and are not to be removed. The individual owner or successor or assignee shall assume the responsibility for perpetual maintenance of the said facilities. If the owner, his successor or assignee, fails in any way to maintain the said facilities or causes the facilities to be altered or removed, upon written notification by the municipality, the defects shall be promptly corrected at the owner's expense. Upon the owner's failure to correct the defect within the time specified by the municipality, the owner, his successor or assignee do hereby authorize the municipality to enter upon the said property and cause the repairs needed and/or corrections to be made. A fee may be filed against the property for all costs of all corrections, including applicable engineering and/or attorney fees, although the municipality is under no obligation to take action to file such a lien. The municipality shall constitute an access easement for maintenance purposes should some be necessary by the municipality in the sole opinion of the municipality. This maintenance responsibility shall be added into the deed.

5. All inflow and outflow points to the individual on-lot systems should be kept clear of leaves and other debris. Any leaves or debris will negatively impact the performance of these systems. All downspouts and overflow pipes should be kept in good working order.



NOTES:

THE PERMITTEE SHALL PROVIDE ENGINEERING CONSTRUCTION BY A PROFESSIONAL ENGINEER FOR THE PROPOSED STORMWATER BMP'S. SHOULD GROUNDWATER OR BEDROCK BE ENCOUNTERED DURING CONSTRUCTION OF THE STORMWATER MANAGEMENT SYSTEM THE OWNER/ENGINEER MUST BE NOTIFIED AND THE SYSTEM SHOULD BE RELOCATED TO A MORE SUITABLE LOCATION.

PCSWM REPORTING AND RECORDKEEPING. THE PCSWM PLAN, INSPECTION REPORTS AND MONITORING RECORDS SHALL BE AVAILABLE FOR REVIEW AND INSPECTION BY THE DEPARTMENT OR THE CONSERVATION DISTRICT.

FINAL ACKNOWLEDGEMENT. THE PERMITTEE SHALL INCLUDE WITH THE NOTICE OF TERMINATION RECORD DRAWINGS WITH A FINAL CERTIFICATION STATEMENT FROM A LICENSED PROFESSIONAL, WHICH READS AS FOLLOWS:

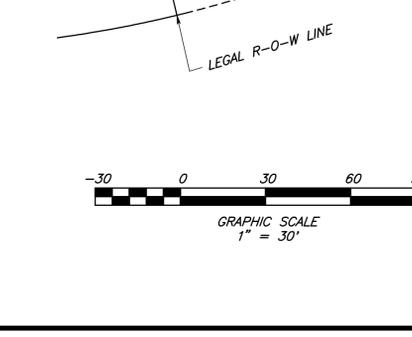
"I (NAME) DO HEREBY, IN MY PROFESSIONAL OPINION, ACKNOWLEDGE PURSUANT TO THE PENALTIES OF 18 PA. C.S.A. § 4904 TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE ACCOMPANYING RECORD DRAWINGS ACCURATELY REFLECT THE AS-BUILT CONDITIONS ARE TRUE AND CORRECT, AND ARE IN CONFORMANCE WITH CHAPTER 102 OF THE RULES AND REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THAT THE PROJECT SITE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PCSWM PLAN, ALL APPROVED PLAN CHANGES AND ACCEPTED CONSTRUCTION PRACTICES.

(1) THE PERMITTEE SHALL RETAIN A COPY OF THE RECORD DRAWINGS AS PART OF THE APPROVED PCSWM PLAN.

(2) THE PERMITTEE SHALL PROVIDE A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSWM PLAN TO THE PERSON IDENTIFIED IN THIS SECTION AS BEING RESPONSIBLE FOR THE LONG-TERM OPERATION AND MAINTENANCE OF THE PCSWM BMP'S UPON PERMANENT STABILIZATION OF THE EARTH DISTURBANCE ACTIVITY UNDER § 102.22(c)(2) (RELATING TO PERMANENT STABILIZATION), AND INSTALLATION OF BMP'S IN ACCORDANCE WITH AN APPROVED PLAN PREPARED AND IMPLEMENTED IN ACCORDANCE WITH §§ 102.4 AND 102.8 (RELATING TO EROSION AND SEDIMENT CONTROL REQUIREMENTS; AND PCSWM REQUIREMENTS). THE PERMITTEE OR CO-PERMITTEE SHALL SUBMIT A NOTICE OF TERMINATION TO THE DEPARTMENT OR CONSERVATION DISTRICT. THE NOTICE OF TERMINATION MUST INCLUDE:

- THE FACILITY NAME, ADDRESS AND LOCATION.
- THE OPERATOR NAME AND ADDRESS.
- THE PERMIT NUMBER.
- THE REASON FOR PERMIT TERMINATION.
- IDENTIFICATION OF THE PERSONS WHO HAVE AGREED TO AND WILL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSWM BMP'S IN ACCORDANCE WITH § 102.8(m) AND PROOF OF COMPLIANCE WITH § 102.8(m)(2).
- THE NOTICE OF TERMINATION MUST INCLUDE A RECORD DRAWING/BMP AS-BUILT SURVEY PLAN.

PRIOR TO ACCEPTING THE NOT, THE DEPARTMENT AND/OR CONSERVATION DISTRICT SHALL PERFORM A FINAL INSPECTION AND APPROVE OR DENY THE NOTICE OF TERMINATION.



1 THEODORE J. GACOMIS, P.E., ON 2018, HEREBY, CERTIFY THAT THE DRAINAGE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE RADNOR TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.

PROJECT BENCH MARK RIM OF SANITARY SEWER MANHOLE ELEV. 452.60 RADNOR TOWNSHIP DATUM

REVISIONS:

7. 6-6-18	REV PER TWP. COMMENTS
6. 5-14-18	GENERAL REVISIONS
5. 4-11-18	REV. PER TWP. ENG. COMMENTS OF 2-27-18 & 2-16-18

PRELIMINARY POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

4. 1-29-18 REV. PER TWP. ENG. COMMENTS OF 12-22-17 & 1-3-18

3. 11-28-17 REDUCED THE NUMBER OF UNITS; REVISED ROAD SIZE; REVISED STORMWATER FACILITIES

2. 4-10-15 MODIFIED FOOTPRINT AND SIDEWALK

1. 3-9-15 ADDED ADDITION PROPERTY

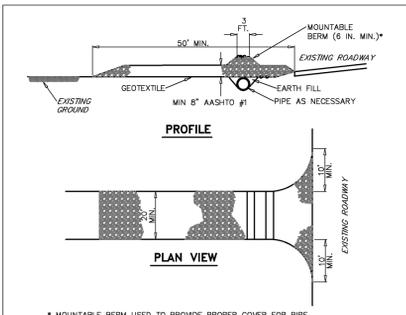
DEVELOPMENT PLAN FOR DAVID SEMERJIAN BUILDERS 415 MAPLEWOOD AVENUE DELAWARE COUNTY, PA.

Edward B. Walsh & Associates, Inc. CIVIL ENGINEERS & SURVEYORS

Project- 4063
Date- 12-8-14
Scale- 1" = 30'
Drawn- R.F.N.
Checked- A.E.
Sheet- 8 OF 19

125 Dowlin Forge Road
Exton, Pennsylvania 19341
Phone (610) 933-0800
Fax (610) 903-0080

Plotted: 6/9/2018 File: F:\JWB\4063\4063-b5-pro Ver.- 000



PROFILE

PLAN VIEW

* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

NOTES:

REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION 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.

INSTALLATION SEQUENCE:

1. PREPARE SURFACE BY REMOVING ANY DEBRIS AND TOPSOIL.
2. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.
3. UPON REMOVAL OF CONSTRUCTION ENTRANCE, REMOVE STONE AS NEEDED AND STABILIZE ACCORDINGLY DEPENDS ON THE PERMANENT USE OF THE AREA.

MAINTENANCE NOTES:

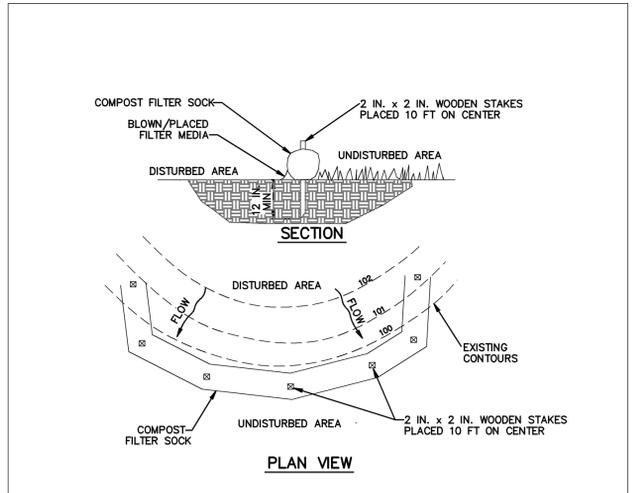
MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE 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 SHEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

INSPECTIONS:

INSPECTIONS MUST BE PERFORMED AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE. THE COMPLIANCE ACTIONS AND THE DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION, THE INSPECTION LOG WILL BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE DISTRICT UPON REQUEST.

**STANDARD CONSTRUCTION DETAIL #3-1
ROCK CONSTRUCTION ENTRANCE**

NOT TO SCALE



SECTION

PLAN VIEW

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.

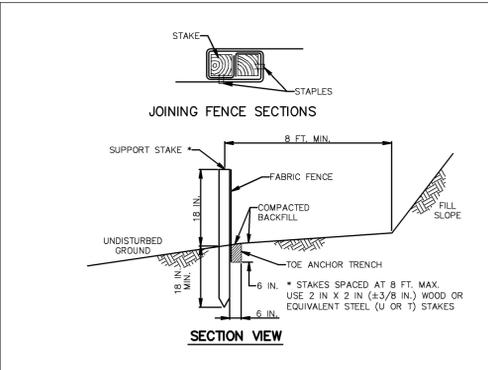
COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

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.

**STANDARD CONSTRUCTION DETAIL #4-1
COMPOST FILTER SOCK**

NOT TO SCALE



SECTION VIEW

NOTES:

FABRIC SHALL HAVE THE MINIMUM PROPERTIES AS SHOWN IN TABLE 4.3 OF THE PA DEP EROSION CONTROL MANUAL.

FABRIC WIDTH SHALL BE 30 IN. MINIMUM. STAKES SHALL BE HARDWOOD OR EQUIVALENT STEEL (U OR T) STAKES.

SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.

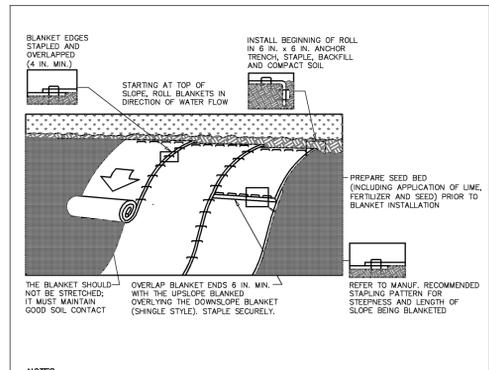
SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE FENCE.

ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET (STANDARD CONSTRUCTION DETAIL # 4-6).

FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.

**STANDARD CONSTRUCTION DETAIL #4-7
STANDARD SILT FENCE (18" HIGH)**

NOT TO SCALE



SECTION VIEW

NOTES:

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

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

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

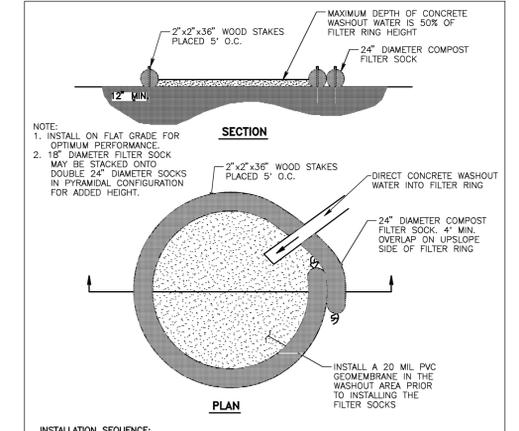
BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.

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

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

**STANDARD CONSTRUCTION DETAIL #11-1
EROSION CONTROL BLANKET INSTALLATION**

NOT TO SCALE



SECTION

PLAN

NOTES:

1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.

2. DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.

3. 24" DIAMETER COMPOST FILTER SOCK. 4" MIN OVERLAP ON UPSLOPE SIDE OF FILTER RING.

4. INSTALL A 20 MIL PVC GEOMEMBRANE IN THE WASHOUT AREA PRIOR TO INSTALLING THE FILTER SOCKS.

INSTALLATION SEQUENCE:

1. PREPARE SURFACE BY REMOVING ANY DEBRIS AND ENSURING A SMOOTH CONSISTENT SURFACE IS PROVIDED.
2. INSTALL PVC GEOMEMBRANE IN WASHOUT AREA.
3. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL OVERLAP TO FORM A CIRCLE AS SHOWN.
4. UPON REMOVAL OF THE WASHOUT AREA, 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.
5. ALL CONCRETE AND THE GEOMEMBRANE MUST BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED DEP FACILITY.

MAINTENANCE NOTES:

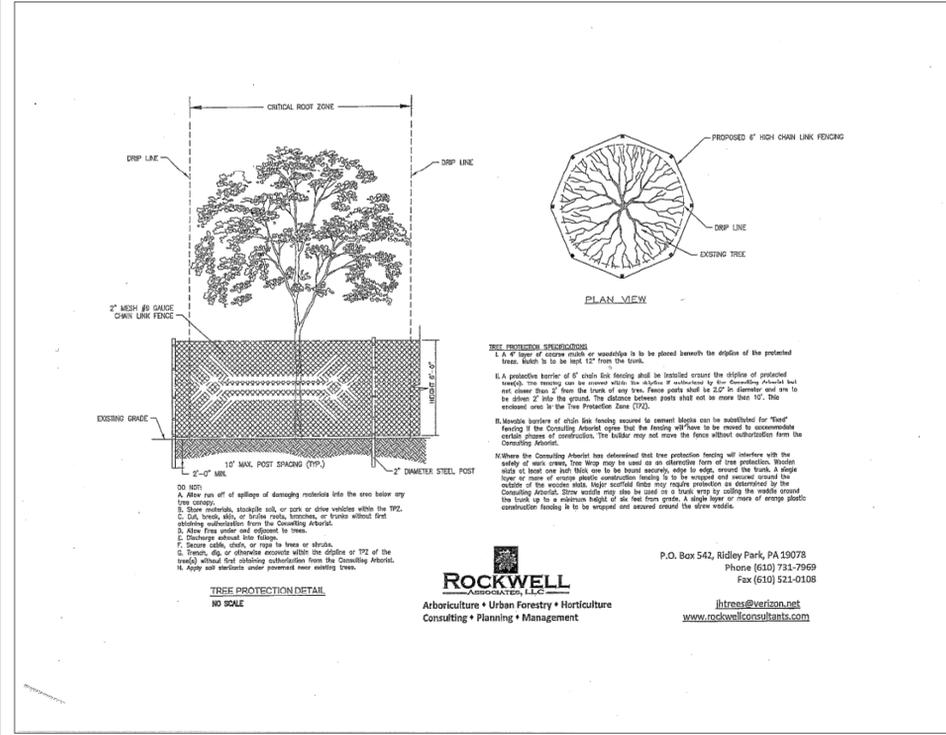
WASHOUT AREA SHALL BE INSPECTED WEEKLY. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

INSPECTIONS:

INSPECTIONS MUST BE PERFORMED ON A WEEKLY BASIS. ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE. THE COMPLIANCE ACTIONS AND THE DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION, THE INSPECTION LOG WILL BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE DISTRICT UPON REQUEST.

CONCRETE WASHOUT AREA DETAIL

N.T.S.



TREE PROTECTION DETAIL

NO SCALE

NOTES:

1. A protective barrier of 2" chain link fencing shall be installed around the drip line of protected trees. The fencing shall be secured to the ground by 2x4 posts spaced at 10' intervals and shall be driven 2" into the ground. The distance between posts shall not be more than 10'. This method meets the Tree Protection Code (TPC).
2. Flexible barriers of chain link fencing secured to cement blocks can be substituted for "tree" fencing if the Consulting Arborist agrees that the fencing will allow for tree movement, seasonal changes of condition. The barrier may not cross the fence without authorization from the Consulting Arborist.
3. If the Consulting Arborist has determined that tree protection fencing will interfere with the safety of work crews, that fence may be used as an alternative form of tree protection. Broken limbs or limbs that block work for the tree surgeon, edge to edge, around the trunk, a single layer or more of erosion plastic construction fencing is to be wrapped and secured around the exterior of the exposed area. Higher quality erosion plastic may be substituted for the Consulting Arborist. Snow weights may also be used as a trunk wrap by cutting the weights around the trunk up to a maximum height of six feet from grade. A single layer or more of erosion plastic construction fencing is to be wrapped and secured around the stem wounds.

TO DO:

1. After run off of spillage of damaging materials into the area below any tree canopy.
2. Show materials, stakelike soil, or rock or other vehicles within the TPC.
3. Call levels, utility, or locate marks, locations, or lines around each existing infrastructure from the Consulting Arborist.
4. Allow time to install tree fencing.
5. Remove all other tree fencing.
6. Secure cables, chains, or ropes to trees or stakelike.
7. Erect sign of structural elements within the drip line or TPC of the tree(s) without first obtaining authorization from the Consulting Arborist.
8. Apply soil nutrients under permanent tree existing trees.

ROCKWELL ASSOCIATES, L.L.C.

Arboriculture • Urban Forestry • Horticulture
Consulting • Planning • Management

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Phone (610) 731-7969
Fax (610) 521-0108

intrens@verizon.net
www.rockwellconsultants.com

SEED MIX SPECIFICATIONS

Grass Seed: All seed shall be fresh, and new crop seed shall be labeled in accordance with the U.S. Department of Agriculture's Rules and Regulations under the Federal Seed Act in effect on the date of invitation for bids. All seed shall be furnished in sealed standard containers, bearing the warranty of the supplier and certifying as to the kind, percent by weight, purity and germination. The grass seed shall contain the percentages of varieties and shall be of the quality indicated by the percentages of purity and germination indicated on the list furnished with the applicable plan. Seed mix shall be as specified. Spread at the rate of 4 lbs. per 1000 sq. ft. minimum for slopes 3:1 or greater, use 5 lbs. per 1000 sq. feet.

PERMANENT SEEDING DATES MARCH 1 TO JUNE 1, AUGUST 1 TO OCTOBER 1

NAME	PARTS BY WEIGHT	%PURITY	GERMINATION
Kentucky Blue Grass			
Varieties	35%	95%	85%
Perennial Ryegrass	35%	95%	90%
Perennial Fescue	15%	95%	85%
Annual Ryegrass	15%	90%	80%

Mulch: Shall be hay which is free of weeds and seeds, not moldy or rotten, and shall be applied at all disturbed areas at a rate of 3 tons per acre.

Kentucky Bluegrass Sod (if called for)
Sod shall be grown under supervision of the Bureau of Plant Industry Pennsylvania Department of Agriculture or shall be composed of only Blue Tag Certified Seed.

Temporary Seeding Dates: Anytime

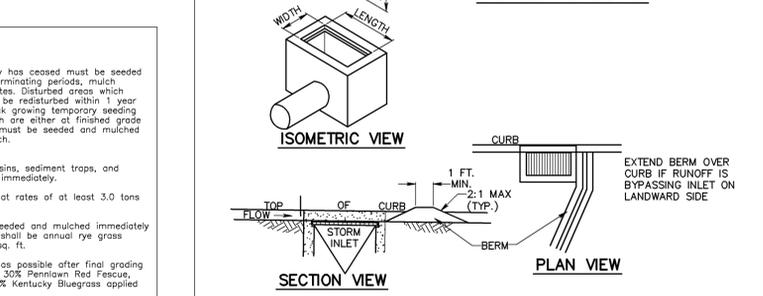
Temporary Seeding: Shall be annual ryegrass at 40 lbs. per acre. Site preparation - apply 1 ton of agricultural grade limestone per acre plus fertilizer at the rate of 50-50-50 per acre and work in where possible. After seeding, mulch with hay or straw at a rate of 3 tons per acre.

Hydroseeding: Shall be lime, fertilizer, grass seeds, legume seeds and inoculant mixed with water and applied as slurry, at a rate of 1,000 gallons per acre. Fertilizer: at rate of 50-100-100 per acre. Inoculant: use 5 times rate recommended on the package when seeding with a hydroseeder.

PERMANENT SEEDING: For permanent seeding, soil supplements shall be applied to areas to be seeded as follows: 10-20-20 fertilizer shall be applied to 25 LBS/1000 Sq. Ft. pulverized dolomite limestone at 50 LBS/1000 Sq. Ft.

SEEDING AND MULCH NOTES

1. Any undisturbed area on which activity has ceased must be seeded and mulched immediately. During non-germinating periods, mulch must be applied at the recommended rates. Disturbed areas which are not at finished grade and which will be redisturbed within 1 year may be seeded and mulched with a quick growing temporary seeding mixture and mulch. Disturbed areas which are either at finished grade or will not be redisturbed within 1 year must be seeded and mulched with a permanent seed mixture and mulch.
2. Diversions, channels, sedimentation basins, sediment traps, and stockpiles must be seeded and mulched immediately.
3. Hay or straw mulch must be applied at rates of at least 3.0 tons per acre.
4. Graded areas are to be temporarily seeded and mulched immediately following earth moving procedures. Seed shall be annual ryegrass applied at the rate of 3 lbs. per 1000 sq. ft.
5. Establish permanent seeding as soon as possible after final grading is complete. Permanent seeding shall be 30% Perennial Red Fescue, 10% Perennial Ryegrass and 60% Kentucky Bluegrass applied at the rate of 3.5 lbs. per 1000 sq. ft.



ISOMETRIC VIEW

SECTION VIEW

PLAN VIEW

INSTALLATION DETAIL

NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

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

ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT. AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS. A MINIMUM BURST STRENGTH OF 200 PSI. AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

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

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

**STANDARD CONSTRUCTION DETAIL #4-15
FILTER BAG INLET PROTECTION - TYPE C INLET**

NOT TO SCALE

**PRELIMINARY
EROSION AND SEDIMENTATION
CONTROL DETAILS**

7. 6-6-18	REV PER TWP. COMMENTS
6. 5-14-18	GENERAL REVISIONS
5. 4-11-18	REV. PER TWP. ENG. COMMENTS OF 2-27-18 & 2-16-18
4. 1-29-18	REV. PER TWP. ENG. COMMENTS OF 12-22-17 & 1-3-18
3. 11-28-17	REDUCED THE NUMBER OF UNITS; REVISED ROAD SIZE; REVISED STORMWATER FACILITIES
2. 4-10-15	MODIFIED FOOTPRINT AND SIDEWALK
1. 3-9-15	ADDED ADDITION PROPERTY

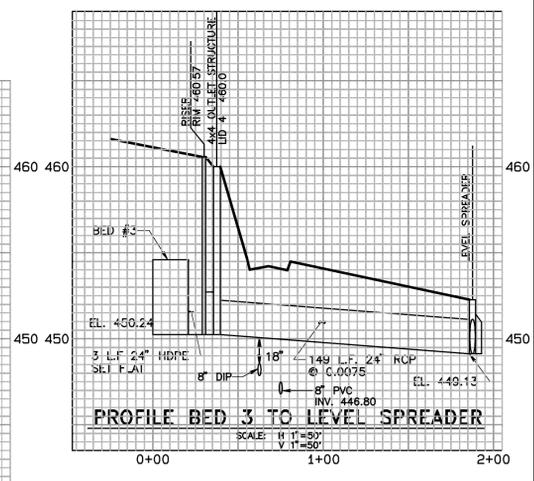
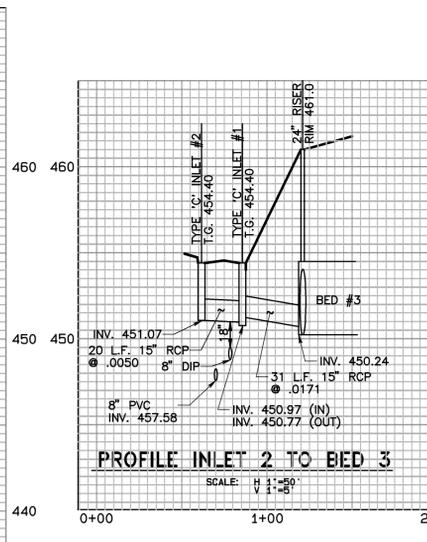
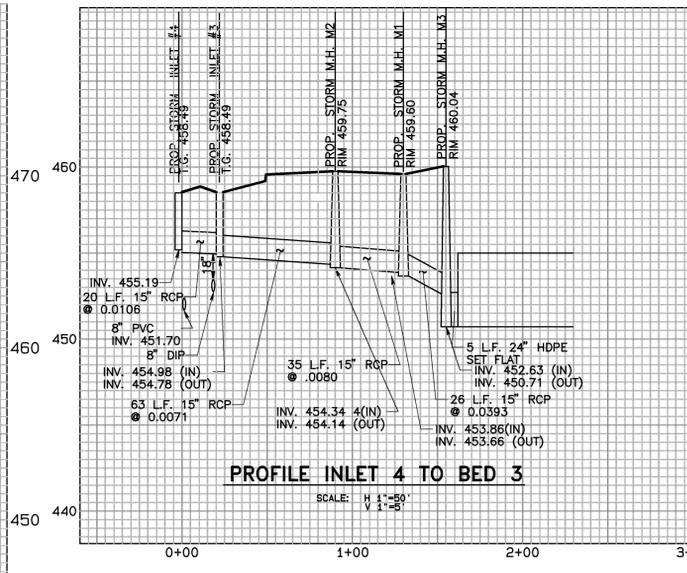
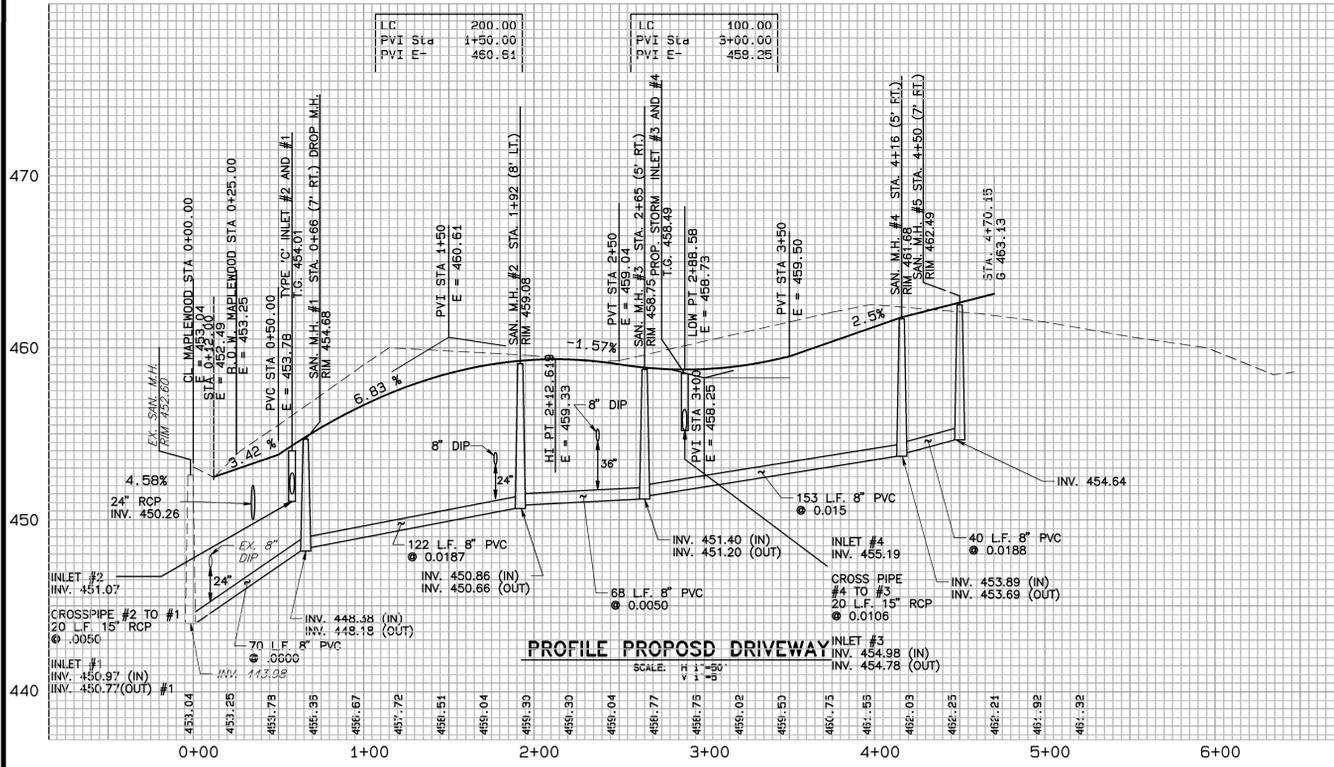
DEVELOPMENT PLAN FOR
DAVID SEMERJIAN BUILDERS
415 MAPLEWOOD AVENUE
RADNOR TOWNSHIP DELAWARE COUNTY, PA.

Edward B. Walsh & Associates, Inc.
CIVIL ENGINEERS & SURVEYORS

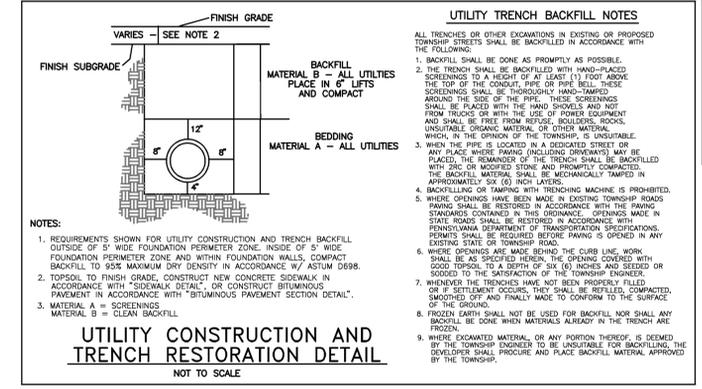
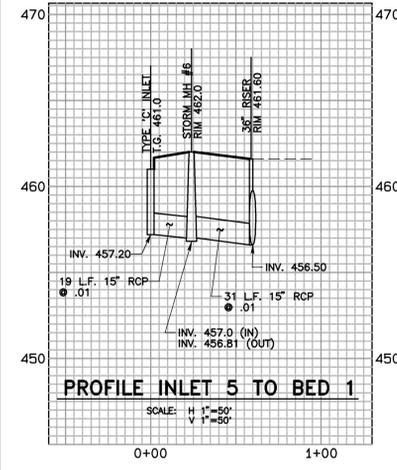
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125 Dowlin Forge Road
Pottsville, Pennsylvania 19341
Phone (610) 903-0060
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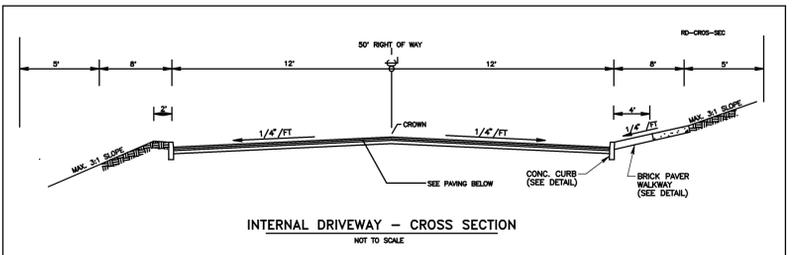
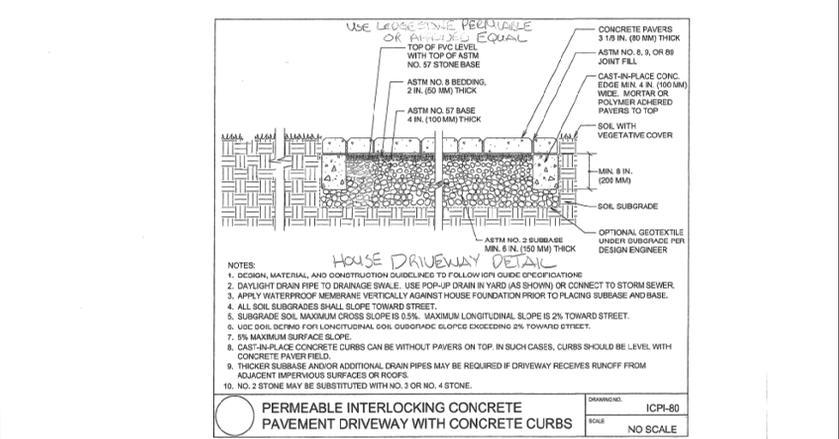
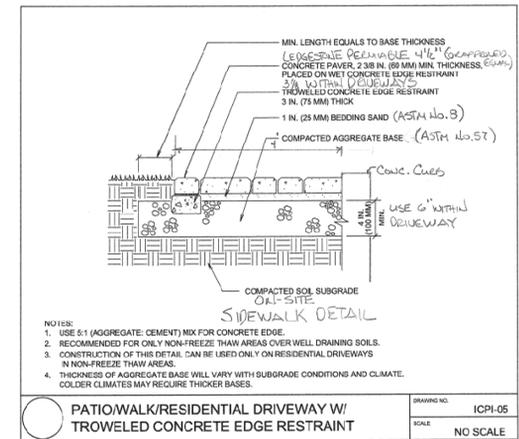
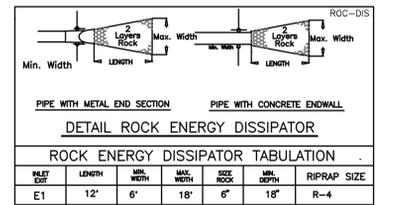
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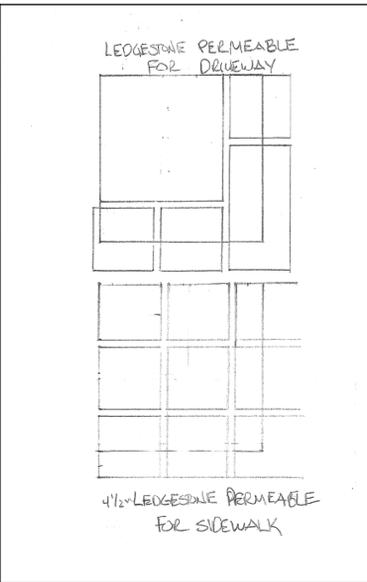
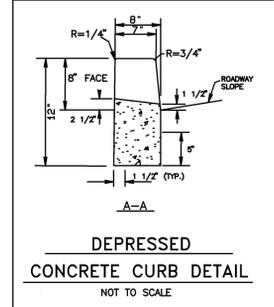
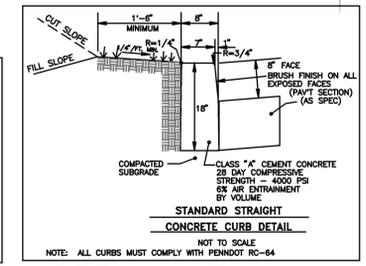
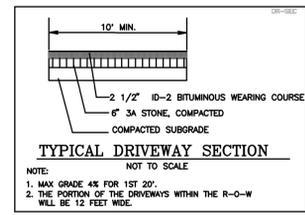
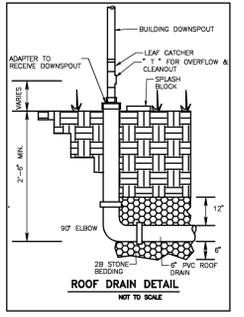
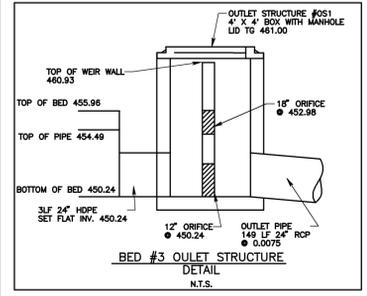
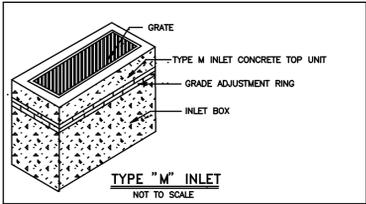
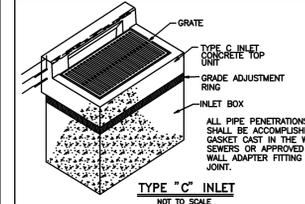
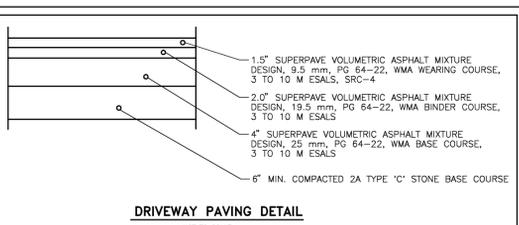
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- UTILITY TRENCH BACKFILL NOTES**
- BACKFILL SHALL BE DONE AS PROMPTLY AS POSSIBLE.
 - THE TRENCH SHALL BE BACKFILLED WITH HAND-PLACED SCREENING TO A HEIGHT OF AT LEAST 1'1" FOOT ABOVE THE TOP OF THE CONDUIT PIPE OR PIPE SIZES THESE SCREENINGS SHALL BE THOROUGHLY HAND-TAMPED AROUND THE SIZE OF THE PIPE. THESE SCREENINGS SHALL BE PLACED WITH THE HAND SHOVELS AND NOT FROM TRUCKS OR WITH THE USE OF POWER EQUIPMENT AND SHALL BE FREE FROM REFUSE, BOULDERS, ROCKS, UNSUITABLE ORGANIC MATERIAL, OR OTHER MATERIAL WHICH, IN THE OPINION OF THE TOWNSHIP, IS UNSUITABLE.
 - WHEN THE PIPE IS LOCATED IN A DEDICATED STREET OR ANY PLACE WHERE PAVING (INCLUDING DRIVEWAYS) MAY BE PLACED, THE REMAINDER OF THE TRENCH SHALL BE BACKFILLED WITH 2" OR MORE SIZED STONE AND PROMPTLY COMPACTED. THE BACKFILL MATERIAL SHALL BE MECHANICALLY TAMPED IN APPROXIMATELY SIX (6) INCH LAYERS.
 - BACKFILLING OR TAMPING WITH TRENCHING MACHINE IS PROHIBITED.
 - WHERE OPENINGS HAVE BEEN MADE IN EXISTING TOWNSHIP ROADS PAVING SHALL BE RESTORED IN ACCORDANCE WITH THE BRASS STAMPS COVERED IN THE ORDINANCE. OPENINGS MADE IN STONE ROADS SHALL BE RESTORED IN ACCORDANCE WITH BRASS STAMPS COVERED IN THE ORDINANCE. PERMITS SHALL BE REQUIRED BEFORE PAVING IS ORDERED IN ANY EXISTING SIDE OF TOWNSHIP ROAD.
 - WHERE OPENINGS ARE MADE BEHIND THE CURB LINE, WORK SHALL BE AS SPECIFIED HEREIN. THE OPENING COVERED WITH GOOD TOPSOIL TO A DEPTH OF SIX (6) INCHES AND SEEDED OR SOILED TO THE SATISFACTION OF THE TOWNSHIP ENGINEER.
 - WHENEVER THE TRENCHES HAVE NOT BEEN PROPERLY FILLED OR IF SETTLEMENT OCCURS, THEY SHALL BE REFILED, COMPACTED, SMOOTHED OFF, AND FINALLY MADE TO CONFORM TO THE SURFACE OF THE GROUND.
 - FROZEN EARTH SHALL NOT BE USED FOR BACKFILL NOR SHALL ANY BACKFILL BE DONE WHEN MATERIALS ALREADY IN THE TRENCH ARE FROZEN.
 - WHERE EXCAVATED MATERIAL, OR ANY PORTION THEREOF, IS DEEMED BY THE TOWNSHIP ENGINEER TO BE UNSUITABLE FOR BACKFILLING, THE DEVELOPER SHALL PROCURE AND PLACE BACKFILL MATERIAL, APPROVED BY THE TOWNSHIP.



NOTE: ALL MATERIALS ENTERING THE CONSTRUCTION OF STREETS AND THE METHOD OF CONSTRUCTION OF STREETS, AND DRAINAGE FACILITIES SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, PUB. 406, DATED 1990.



PRELIMINARY POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS AND PROFILES

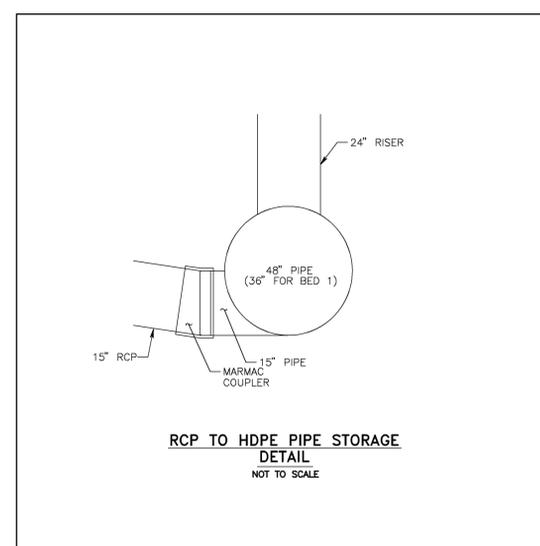
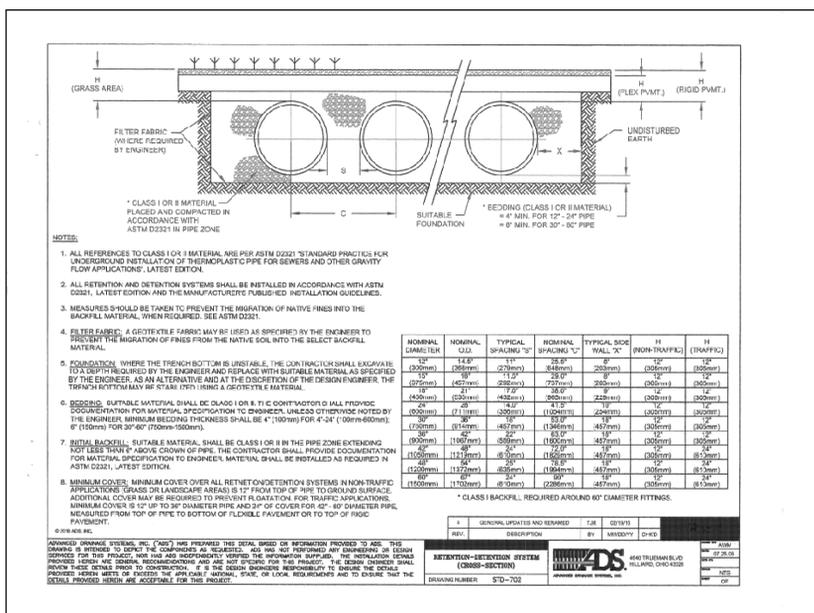
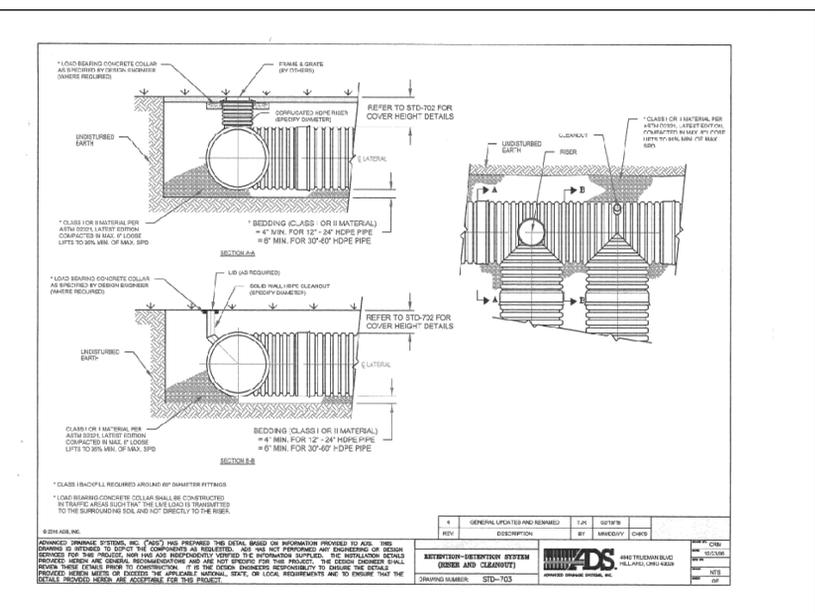
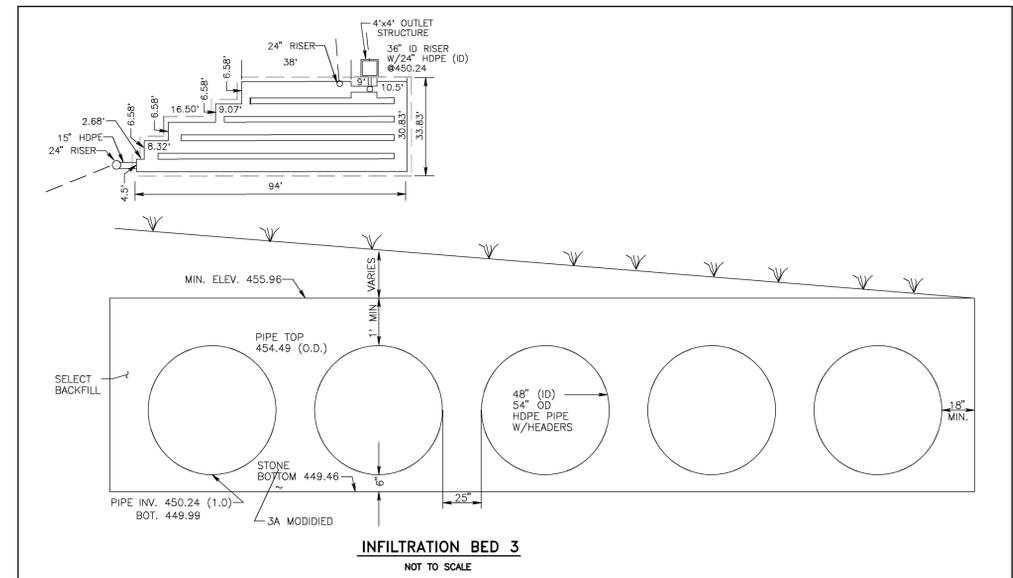
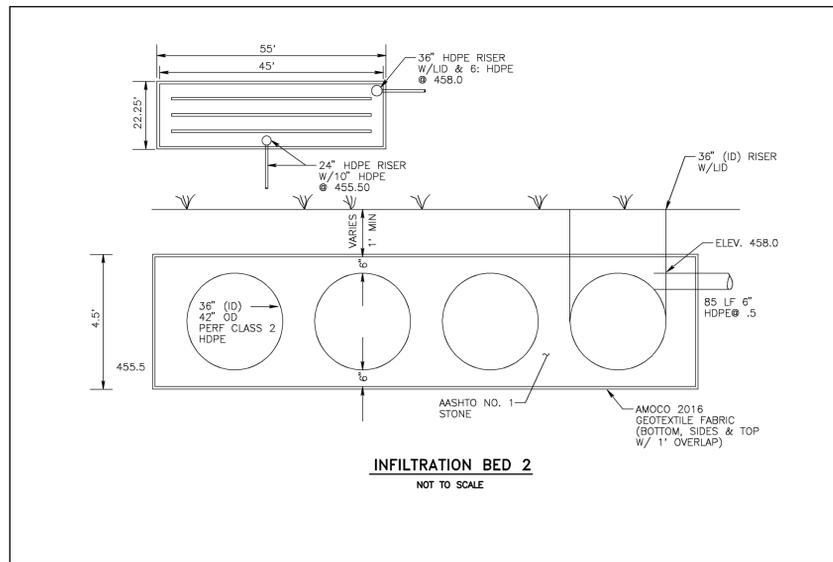
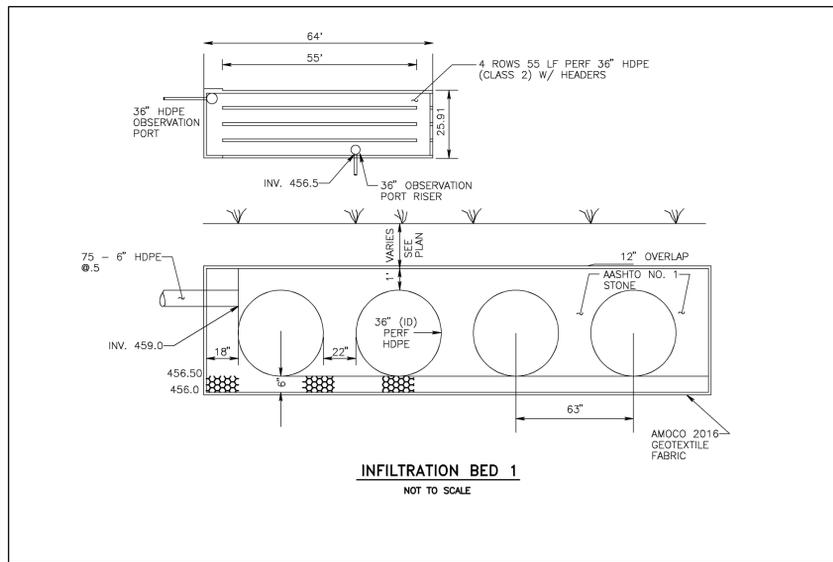
7. 6-18	REV PER TWP. COMMENTS
6. 5-14-18	GENERAL REVISIONS
5. 4-11-18	REV. PER TWP. ENG. COMMENTS OF 2-27-18 & 2-16-18
4. 1-29-18	REV. PER TWP. ENG. COMMENTS OF 12-22-17 & 1-3-18
3. 11-28-17	REDUCED THE NUMBER OF UNITS; REVISED ROAD SIZE; REVISED STORMWATER FACILITIES
2. 4-10-15	MODIFIED FOOTPRINT AND SIDEWALK
1. 3-9-15	ADDED ADDITION PROPERTY

DEVELOPMENT PLAN FOR DAVID SEMERJIAN BUILDERS
415 MAPLEWOOD AVENUE DELAWARE COUNTY, PA.
Edward B. Walsh & Associates, Inc. CIVIL ENGINEERS & SURVEYORS

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125 Dowlin Forge Road
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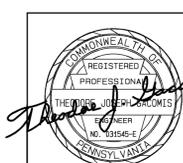
PRELIMINARY
POST CONSTRUCTION
STORMWATER MANAGEMENT
DETAILS

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DEVELOPMENT PLAN
FOR
DAVID SEMERJIAN BUILDERS
415 MAPLEWOOD AVENUE DELAWARE COUNTY, PA.
Edward B. Walsh & Associates, Inc. CIVIL ENGINEERS & SURVEYORS
125 DOWLIN FORGE ROAD
EATON, PENNSYLVANIA 19341
Phone (610) 903-0060
Fax (610) 903-0080

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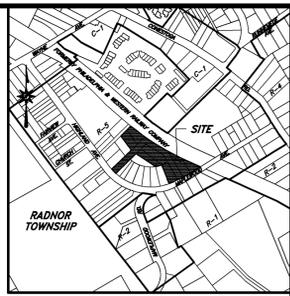
BUFFER RESIDENTIAL USE	PLANTING STRIP "A"	MULTI FAMILY TO ADJACENT SINGLE FAMILY DETACHED
PROPERTY LINE	CANOPY TREE 1/40'	EVERGREEN TREE 1/30'
N47°38'00"E (163')	4	6
N36°01'00"W (120')	3	4
N57°25'00"W (174')	5	6
R 240' (42')	1	2
N18°55'43"W (160')	4	6
EASTERN PROP. (605.96')	15	20
RAILROAD (605.96')	15	20
TOTAL REQUIRED	32	44
TOTAL PROVIDED	32	46

PLANT SCHEDULE
EVERGREEN TREES

SYMBOL	QTY.	BOTANICAL NAME	COMMON NAME	SPREAD/HEIGHT	CONDITION
AC	11	Abies Concolor	White Fir	6'	B & B
PA	16	Picea Abies	Norway Spruce	6'	B & B
PS	5	Pinus Strobus	Eastern White Pine	6'	B & B
PST	14	Pseudotsuga Taxifolia	Douglas Fir	6'	B & B
TOTAL = 46					

PLANT SCHEDULE
DECIDUOUS TREES

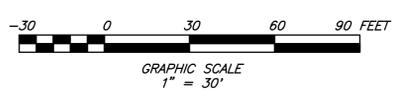
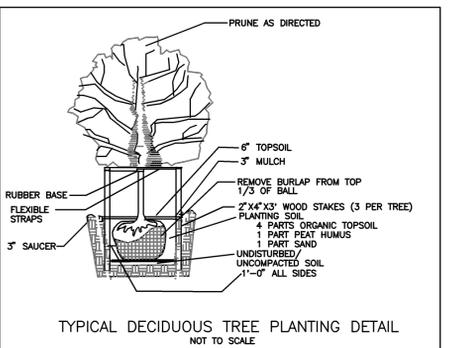
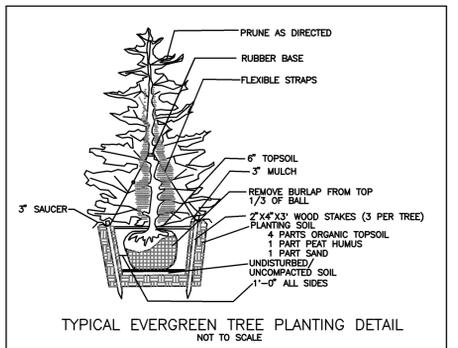
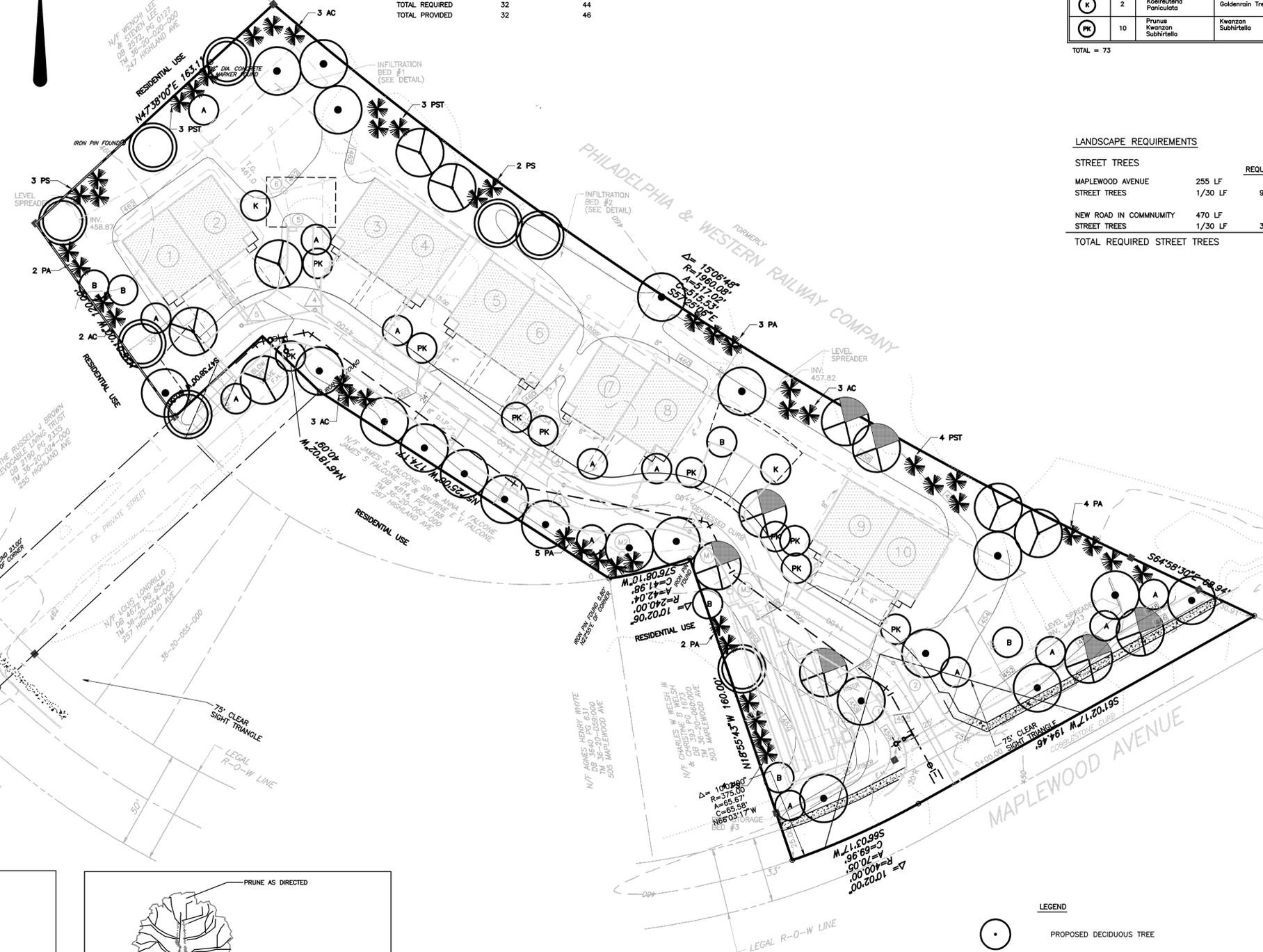
SYMBOL	QTY.	BOTANICAL NAME	COMMON NAME	HEIGHT	CALIPER	CONDITION
⊙	20	Acer Rubrum Red Sunset	Red Sunset Maple	12'-14'	2 1/2"	B & B
⊗	7	Platanus Acerifolia Bloodgood	Bloodgood London Plane Tree	12'-14'	2 1/2"	B & B
⊙	8	Quercus Phellos	Willow Oak	12'-14'	2 1/2"	B & B
⊙	7	Gleditsia Tria Inermis Shademaster	Shademaster Honeylocust	12'-14'	2 1/2"	B & B
A	13	Acer Ginnala	Amur Maple	8'-10'	2 1/2"	B & B
B	5	Phellodron Amurense	Amur Cork Tree	12'-14'	2 1/2"	B & B
K	2	Koeleruteria Paniculata	Goldenrain Tree	8'-10'	2 1/2"	B & B
PK	10	Prunus Kwanzon Subhirtella	Kwanzan Subhirtella	6'-8'	2 1/2"	B & B
TOTAL = 73						



- LANDSCAPE NOTES**
- PLANT LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL STAKE LOCATIONS FOR APPROVALS BY THE LANDSCAPE ARCHITECT PRIOR TO THE INSTALLATION OF ANY PLANT MATERIAL.
 - PROVIDE CONTINUOUS MULCH (2" THICK) IN ALL BEDDING AND GROUND COVER AREAS AND AT THE BASE OF SPECIMEN TREES.
 - SIZES OF PLANT MATERIAL GIVEN ARE TO BE CONSIDERED MINIMUM.
 - NO SUBSTITUTIONS FOR PLANT MATERIAL ARE ACCEPTABLE UNLESS APPROVED BY RADNOR TOWNSHIP.
 - CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE, INCLUDING WATERING OF PLANT MATERIAL AND LAWN AREAS UNTIL JOB IS TURNED OVER TO OWNER AND ACCEPTED BY THE OWNER.
 - CONTRACTOR SHALL LOOSEN SUBGRADE OF PLANTING BED AREAS TO A MINIMUM DEPTH OF TWENTY-FOUR INCHES (24") USING A CULTIVATOR OR SIMILAR EQUIPMENT. REMOVE STONES ONE TO ONE AND A HALF INCHES (1 - 1 1/2") IN ANY DIMENSIONS AND STICKS, RUBBER AND OTHER EXTRANEIOUS MATTER.
 - WHEN CONDITIONS DETRIMENTAL TO PLANT GROWTH ARE ENCOUNTERED OR SUSPECTED, SUCH AS RUBBLE FILL, UNACCEPTABLE TOPSOIL, ADVERSE DRAINAGE CONDITIONS OR OTHER OBSTRUCTIONS, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE OWNER AND THE LANDSCAPE ARCHITECT IN WRITING BEFORE PLANTING ANY TREES, SHRUBS OR LAWN AREAS.
 - TREES AND SHRUBS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, HAVE NORMAL GROWTH HABITS, WELL DEVELOPED, DENSELY FOLIATED BRANCHES, AND VIGOROUS, FIBROUS ROOT SYSTEMS.
 - TREES AND SHRUBS SHALL BE FREE FROM DEFECTS AND INJURIES AND CERTIFIED BY APPROPRIATE FEDERAL AND STATE AUTHORITIES TO BE FREE FROM DISEASES AND INSECT INFESTATIONS.
 - TREES AND SHRUBS SHALL BE FRESHLY DUG AND NURSERY GROWN. THEY SHALL HAVE BEEN GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN LOCALITY OF THE PROJECT OR PROPERLY ACCLIMATED TO CONDITIONS OF THE LOCALITY OF THE PROJECT.
 - ALL PLANTING BEDS AND TREES SHALL BE MULCHED WITH LICORICE ROOT MULCH INSTALLED AT A MINIMUM DEPTH OF THREE INCHES (3").
 - ALL CANOPY TREES MUST HAVE A SPREAD EQUAL TO FIFTY PERCENT (50%) OF THE HEIGHT.
 - ALL PLANTING BEDS WITHOUT SHRUB OR GROUND COVER PLANT MATERIAL SHALL BE PLANTED WITH A BLUE GRASS SEED MIX.
 - ALL PARKING LOT TREES ARE TO BE PRUNED TO PROVIDE SEVEN FEET (7') CLEARANCE FROM THE GROUND AT BASE OF TREE.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXACT LOCATIONS AND ELEVATIONS OF ALL UNDERGROUND UTILITIES AND OTHER STRUCTURES BEFORE THE START OF CONSTRUCTION ON THIS PLAN.
 - THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE OWNER AND/OR LANDSCAPE ARCHITECT.
 - THIS PLAN IS INTENDED FOR LANDSCAPE PURPOSES ONLY.
 - NO MORE THAN FIVE INCHES (5") OF SOIL SHALL BE PLACED AROUND THE TRUNKS OF TREES WHICH ARE TO REMAIN. FOR THOSE TREES WHICH ARE TO REMAIN WHERE MORE THAN FIVE INCHES (5") OF SOIL ARE TO BE PLACED, TREE WELLS SHALL BE CONSTRUCTED TO PRESERVE SUCH TREES.
 - ALL SIZES AND GRADING STANDARD FOR PLANT MATERIALS SHALL CONFORM WITH THE LATEST EDITION OF AMERICAN STANDARD OF NURSERY STOCK AS SPONSORED BY THE AMERICAN ASSOCIATES OF NURSEMEN, INC., AND APPROVED MAY 2, 1986 BY THE AMERICAN NATIONAL STANDARDS INSTITUTE, INC., OR THE LATEST REVISED EDITION OF THIS STANDARD.
 - TOPSOIL REMOVED BY GRADING OPERATIONS SHALL BE REDISTRIBUTED AND STABILIZED AS SOON AS POSSIBLE FOLLOWING THE COMPLETION OF A PHASE OF WORK OR THE ENTIRE PROJECT. ALL EXPOSED EARTH SURFACES SHALL BE STABILIZED BY THE FOLLOWING MEANS OR APPROVED EQUAL: (A) SEEDING OR PLANTING OF GRASS SLOPES WITH A GRADIENT OF THIRTY PERCENT (30%) OR LESS STEEP. (B) SODDING OR HYDRO SEEDING OF SLOPES WITH A GRADIENT OF THIRTY PERCENT (30%) OR MORE STEEP.
 - ALL TREES TO BE RETAINED SHALL BE PROTECTED DURING CONSTRUCTION FROM EQUIPMENT DAMAGE BY SNOW FENCING OR OTHER EFFECTIVE BARRIERS.
 - THE CONTRACTOR SHALL LABEL EACH TREE AND SHRUB WITH SECURELY ATTACHED WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTANICAL AND COMMON NAME.
 - ALL DISTURBED AREAS ARE TO BE SEED TO ESTABLISH A VIABLE LAWN.
 - ANY TREE OR SHRUB WHICH DIES WITHIN EIGHTEEN (18) MONTHS OF THE DEDICATION OF PUBLIC IMPORTANCE SHALL BE REPLACED. ANY TREE OR SHRUB WHICH WITHIN THE AFORESAID TIME PERIOD IS DEEMED, IN THE OPINION OF AN AGENT AUTHORIZED BY THE BOROUGH NOT TO HAVE SURVIVED OR GROWN IN A MANNER CHARACTERISTIC OF ITS TYPE SHALL BE REPLACED. ANY SUBSTITUTIONS SHALL BE APPROVED BY THE BOROUGH.
 - EXISTING TREES AND SHRUBS AT THE CORNER OF AN INTERSECTION OF STREETS AND/OR DRIVEWAYS, SHALL BE CUT TO THE HEIGHT OF TWENTY-FOUR INCHES (24") FROM POINT OF INTERSECTION OF CORNER PROPERTY LINES BACK FIFTY FEET (50') TO AVOID BLOCKING SIGHT DISTANCE TO ONCOMING TRAFFIC AND SHRUBS OR GROUNDCOVERS TO BE PLANTED SHALL BE OF THE DWARF VARIETY AND SHALL NOT EXCEED TWENTY-FOUR INCHES (24") IN HEIGHT AT MATURITY.
 - ALL TREES ALONG THE RIGHT-OF-WAY OF ANY PROPERTY SHALL BE KEPT TRIMMED NINE FEET (9') ABOVE ANY SIDEWALK AND ELEVEN FEET (11') ABOVE ALL STREETS.
 - PROPER SIGHT LINES SHALL BE MAINTAINED AT ALL INTERSECTIONS OF STREETS. THERE SHALL BE A CLEAR SIGHT TRIANGLE MEASURING FIFTY FEET (50') ALONG THE INTERSECTING STREET LINES FROM THE POINT OF INTERSECTION INDICATING ON THE PLAN, THAT IS MAINTAINED FREE AND CLEAR OF STRUCTURES, SIGNS AND OTHER VISUAL OBSTRUCTIONS.
 - ALL TREES TO BE RETAINED WITHIN TWENTY-FIVE FEET (25') OF A BUILDING, PARKING OR OTHER PROPOSED IMPROVEMENTS SHALL BE PROTECTED DURING CONSTRUCTION FROM EQUIPMENT DAMAGE BY SNOW FENCING OR OTHER EFFECTIVE BARRIERS.
 - ALL PLANTING BEDS, LAWN AREAS AND TREE BASES ARE TO BE TOP DRESSED WITH 4" OF ORGANIC TOPSOIL.
 - ALL PLANTS SHALL CONFORM WITH THE STANDARDS FOR NURSERY STOCK OF AMERICAN ASSOCIATION OF NURSEMEN.
 - PLANTING SOIL SHALL CONSIST OF 4 PARTS ORGANIC TOPSOIL, 1 PART PEAT HUMUS, 1 PART WASHED SAND.
 - TOPSOIL SHALL HAVE THE FOLLOWING COMPOSITION AND MAKE-UP:
- SHALL BE FRABLE
- SHALL CONTAIN ORGANIC MATTER SUITABLE TO SUPPORT PLANT LIFE, INCLUDING A COMPOSITION OF APPROXIMATELY: 5-10% SAND, 7-15% ORGANIC MATERIAL, NO MORE THAN 30% WEIGHT OF CLAY.
- SHALL BE FREE FROM FREE (ABSENCE OF LIVING/DYING WEED CONTAMINANT)
- SHALL HAVE LESS THAN 2% BY WEIGHT OF UNWANTED MATERIALS SUCH AS STONES (NO LARGER THAN 12mm IN DIAMETER IN THE TOP 50mm, CONCRETE, STEEL, CLAY LUMPS, TREE ROOTS, STICKS OR OTHER INORGANIC MATERIAL.
 - NO TREES SHALL BE PLANTED CLOSER THAN FIFTEEN (15) FEET FROM THE FIRE HYDRANTS OR STOP SIGNS.
 - NO TREES SHALL BE PLACED WITH THEIR CENTERS LESS THAN FIVE (5) FEET FROM ANY PROPERTY LINE AND NO SHRUBS WITH THEIR CENTERS LESS THAN THREE (3) FEET FROM ANY PROPERTY LINE.
 - FERTILIZER ALL LAWN AREAS WITH A 10-20-15 FERTILIZER AT A RATE OF SLBS/1,000 SF.
 - THE CONTRACTOR SHALL REMOVE THE WOODEN TREE STAKES FROM THE DECIDUOUS TREES AND EVERGREEN TREES ONE YEAR AFTER THE COMPLETED DATE OF THE LANDSCAPE INSTALLATION.
 - NO TREE MAY BE PLANTED CLOSER THAN 5' TO A SANITARY SEWER LATERAL.

LANDSCAPE REQUIREMENTS

STREET TREES	REQUIRED	PROVIDED
MAPLEWOOD AVENUE	255 LF	
STREET TREES	1/30 LF	9
NEW ROAD IN COMMUNITY	470 LF	
STREET TREES	1/30 LF	32
TOTAL REQUIRED STREET TREES		= 41



- LEGEND**
- ⊙ PROPOSED DECIDUOUS TREE
 - ⊗ PROPOSED EVERGREEN TREE

PRELIMINARY LANDSCAPE PLAN

6-5-14-18 GENERAL REVISIONS
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 4-1-29-18 REV. PER TWP. ENG. COMMENTS OF 12-22-17 & 1-3-18
 3-11-28-17 REV. PER TWP. ENG. COMMENTS OF 12-22-17 & 1-3-18
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 1-3-9-15 ADDED ADDITION PROPERTY

REVISIONS

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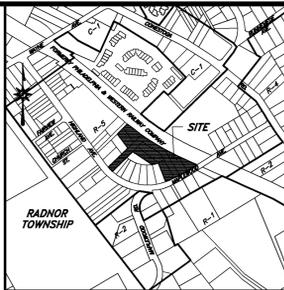
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LUMINAIRE SCHEDULE							
Symbol	Qty	Description	Lamp	Mounting Height	File	Lumens	LLF
⊙	6	LUMEC (ZENITH SERIES) Z47A-65K42LED 4K-R-AC-RLE3-HS	TYPE III OPTICE ACRYLIC PRISMATIC GLOBE, 4000K 42 LED	12'	Z47A-65K42LED 4K-R-AC-RLE3-HS (TR160688) .IES	ABSOLUTE	0.95

MAINTAINED FOOTCANDLES
 AVERAGE Fc = 0.4
 MAXIMUM Fc = 1.7
 MINIMUM Fc = 0.2

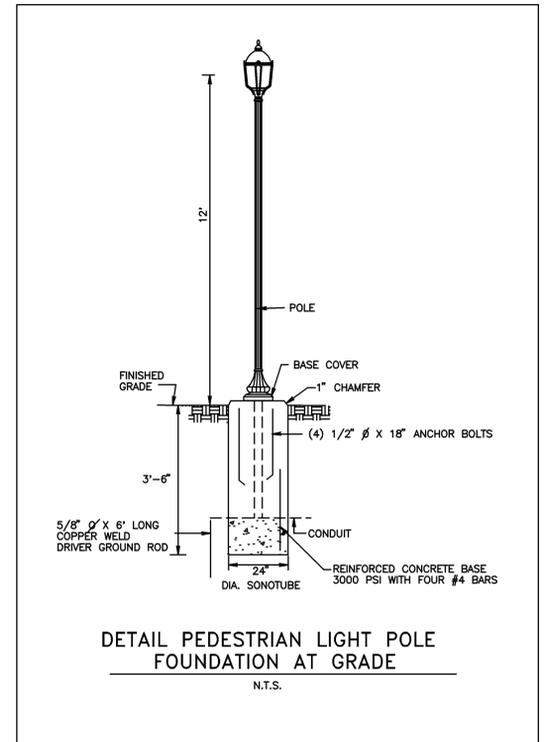
INITIAL FOOTCANDLES
 AVERAGE Fc = 0.42
 MAXIMUM Fc = 1.78
 MINIMUM Fc = 0.21



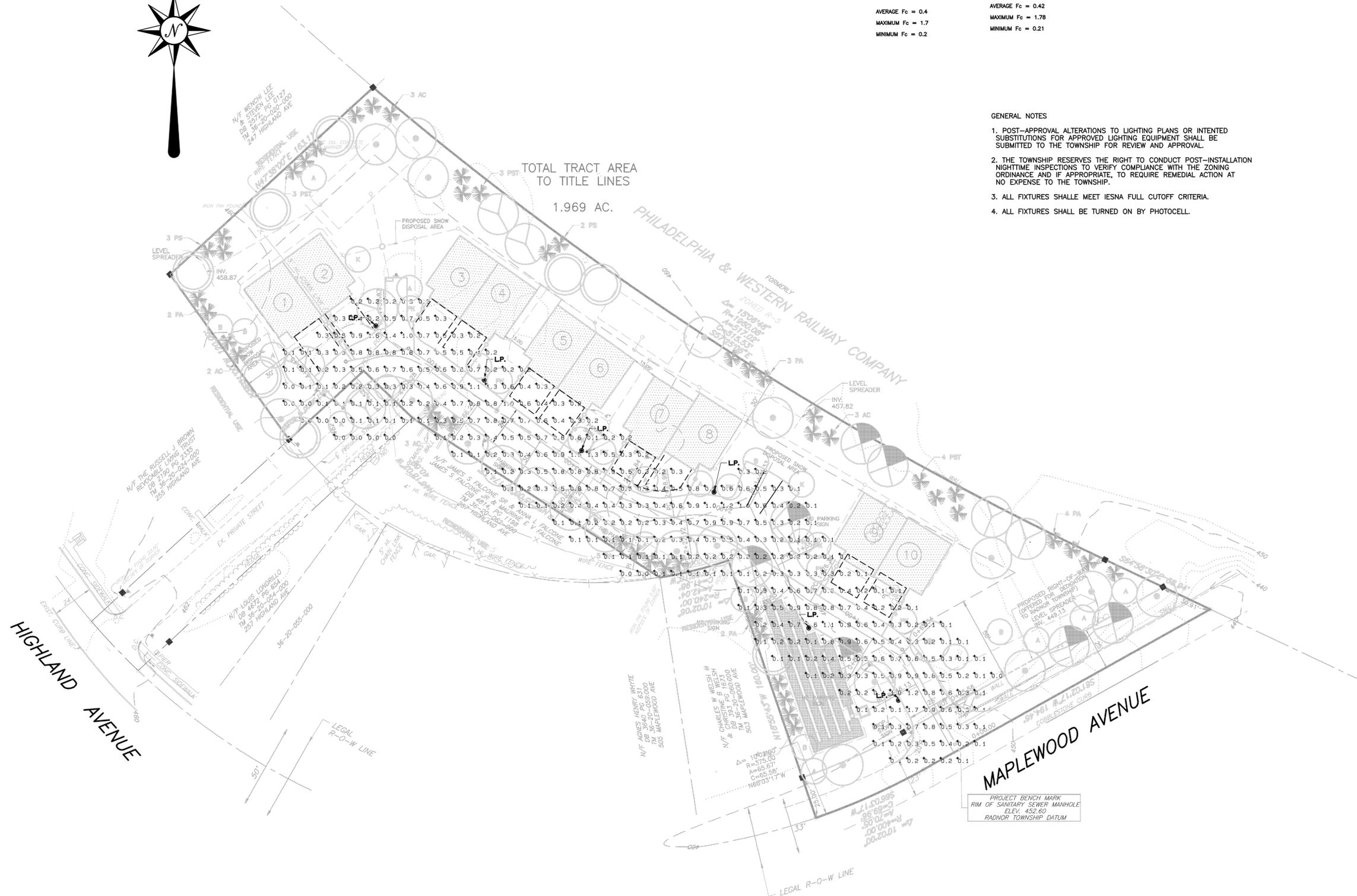
LOCATION MAP
1"=600'

GENERAL NOTES

1. POST-APPROVAL ALTERATIONS TO LIGHTING PLANS OR INTENDED SUBSTITUTIONS FOR APPROVED LIGHTING EQUIPMENT SHALL BE SUBMITTED TO THE TOWNSHIP FOR REVIEW AND APPROVAL.
2. THE TOWNSHIP RESERVES THE RIGHT TO CONDUCT POST-INSTALLATION NIGHTTIME INSPECTIONS TO VERIFY COMPLIANCE WITH THE ZONING ORDINANCE AND IF APPROPRIATE, TO REQUIRE REMEDIAL ACTION AT NO EXPENSE TO THE TOWNSHIP.
3. ALL FIXTURES SHALL MEET IESNA FULL CUTOFF CRITERIA.
4. ALL FIXTURES SHALL BE TURNED ON BY PHOTOCELL.



DETAIL PEDESTRIAN LIGHT POLE FOUNDATION AT GRADE
N.T.S.



PRELIMINARY/FINAL LIGHTING PLAN

7. 6-6-18	REV PER TWP. COMMENTS
6. 5-14-18	GENERAL REVISIONS
5. 4-11-18	REV. PER TWP. ENG. COMMENTS OF 2-27-18 & 2-16-18
4. 1-29-18	REV. PER TWP. ENG. COMMENTS OF 12-22-17 & 1-3-18
3. 11-28-17	REDUCED THE NUMBER OF UNITS; REVISED ROAD SIZE; REVISED STORMWATER FACILITIES
2. 4-10-15	MODIFIED FOOTPRINT AND SIDEWALK
1. 3-9-15	ADDED ADDITION PROPERTY

DEVELOPMENT PLAN

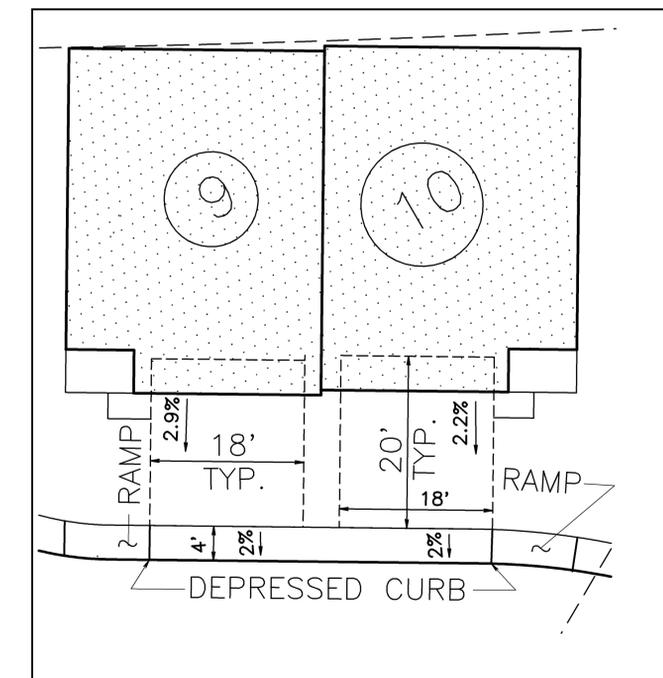
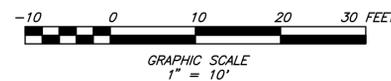
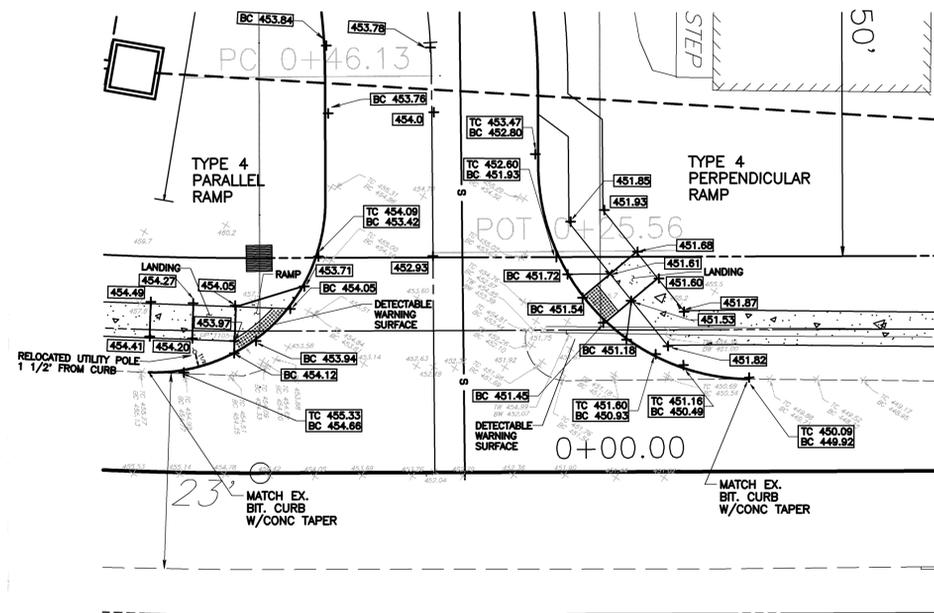
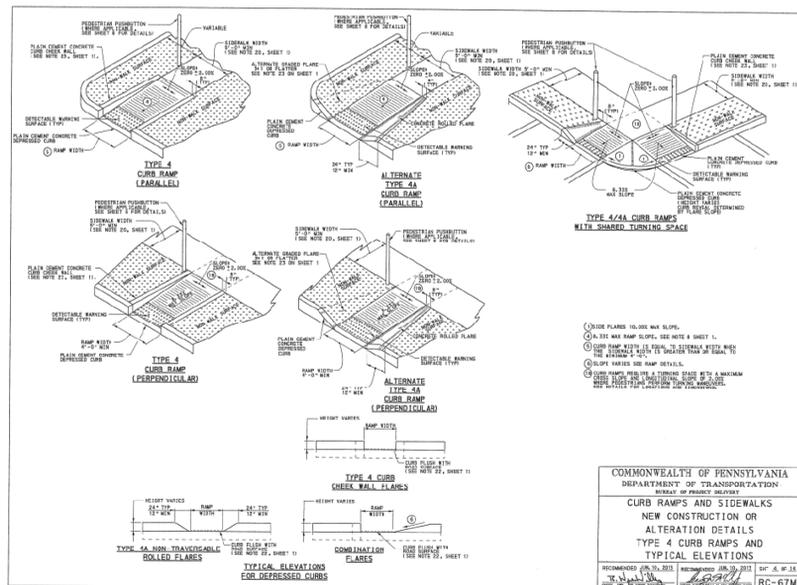
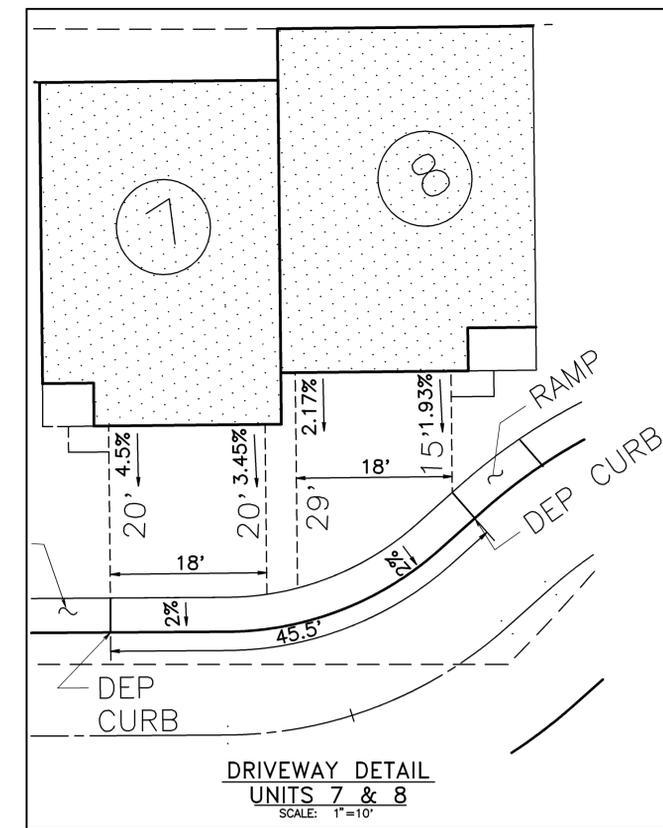
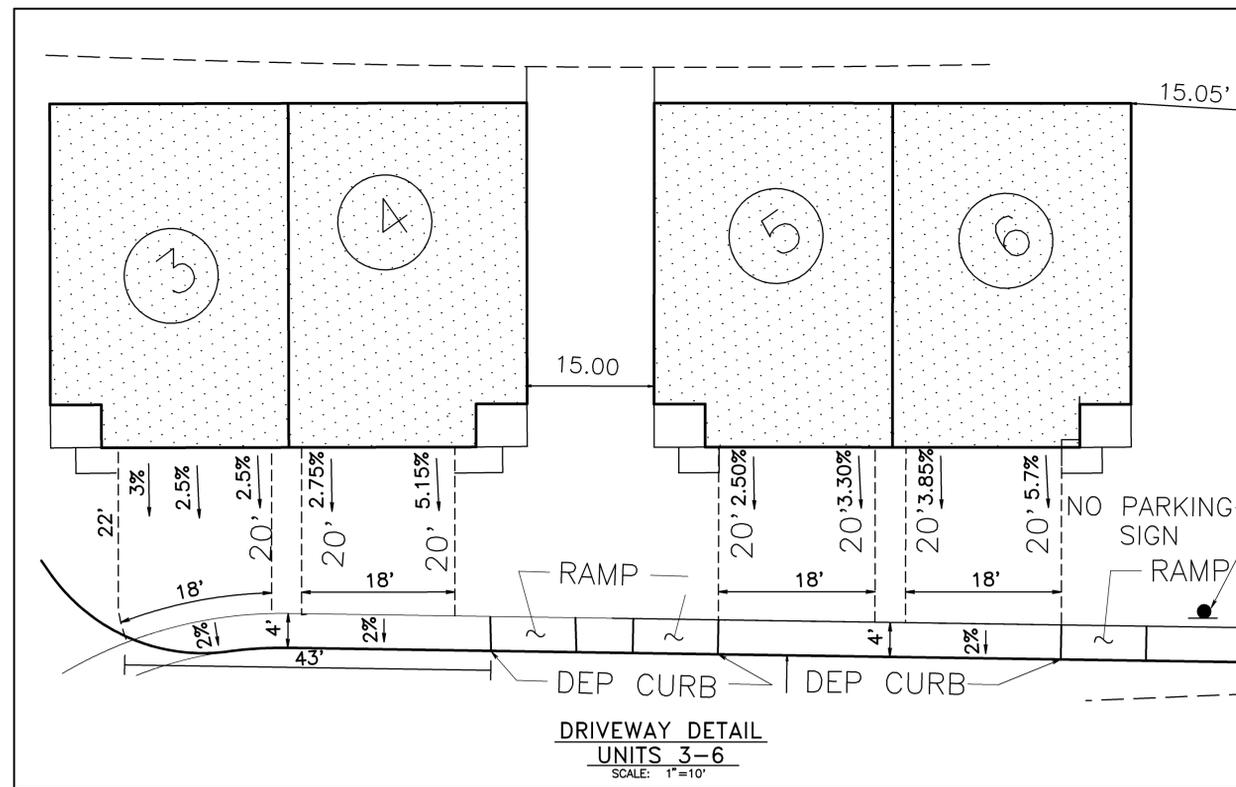
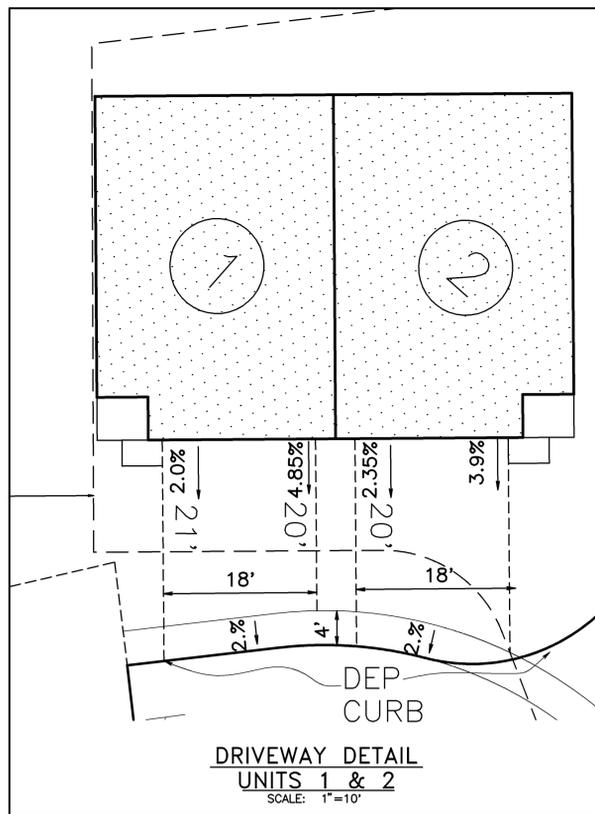
DAVID SEMERJIAN BUILDERS
415 MAPLEWOOD AVENUE DELAWARE COUNTY, PA.

Radnor Township
Edward B. Walsh & Associates, Inc.
CIVIL ENGINEERS & SURVEYORS

Project- 4063
Date- 12-8-14
Scale- 1"= 30'
Drawn- R.F.N.
Checked- A.E.
Sheet- 13 OF 19

125 Dowlin Forge Road
Exton, Pennsylvania 19341
Phone (610) 903-0060
Fax (610) 903-0080





PRELIMINARY/FINAL
RAMP DETAILS

3. 5-14-18	GENERAL REVISIONS
2. 4-11-18	REV. PER TWP. ENG. COMMENTS OF 2-27-18 & 2-16-18
1. 1-29-18	REV. PER TWP. ENG. COMMENTS OF 12-22-17 & 1-3-18

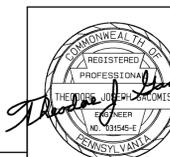
DEVELOPMENT PLAN

DAVID SEMERJIAN BUILDERS
415 MAPLEWOOD AVENUE DELAWARE COUNTY, PA.

RADNOR TOWNSHIP
Edward B. Walsh & Associates, Inc.
CIVIL ENGINEERS & SURVEYORS

Project- 4063
Date- 12-8-14
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Drawn- R.F.N.
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Sheet- 14 OF 19

125 DOWLIN FORGE ROAD
EATON, PENNSYLVANIA 19341
Phone (610) 903-0060
Fax (610) 903-0080

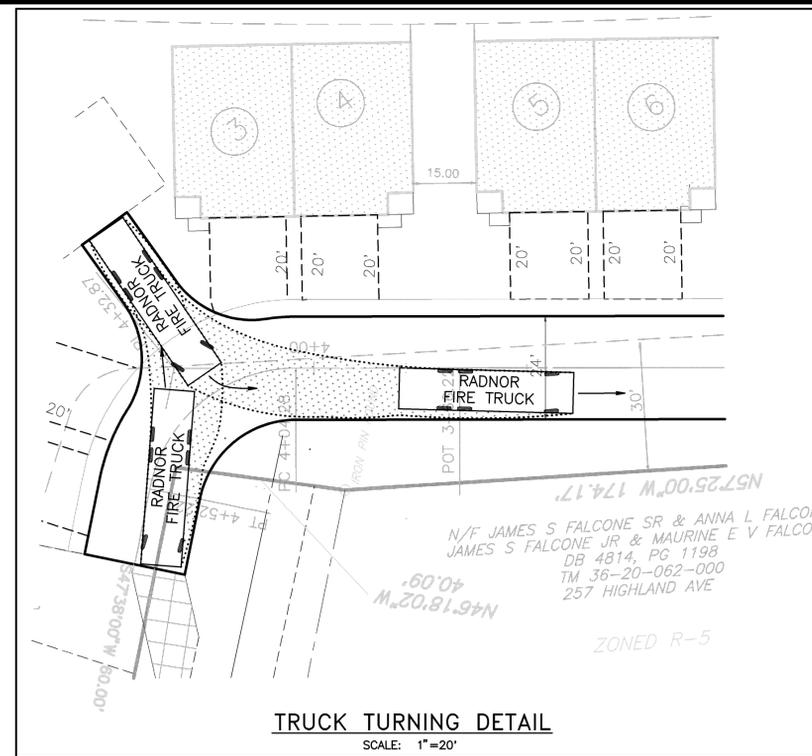


LEGEND

	PROPOSED CURB
	PROPOSED RETAINING WALL
	PROPOSED GRASS PAVERS
	PROPOSED BRICK PAVER SIDEWALK
	PROPOSED CONCRETE SIDEWALK



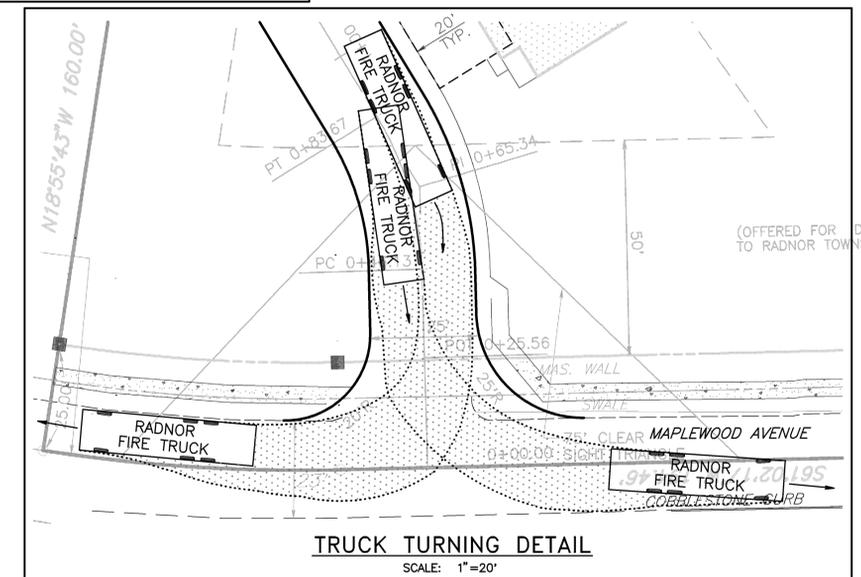
TOTAL TRACT AREA
TO TITLE LINES
1.969 AC.



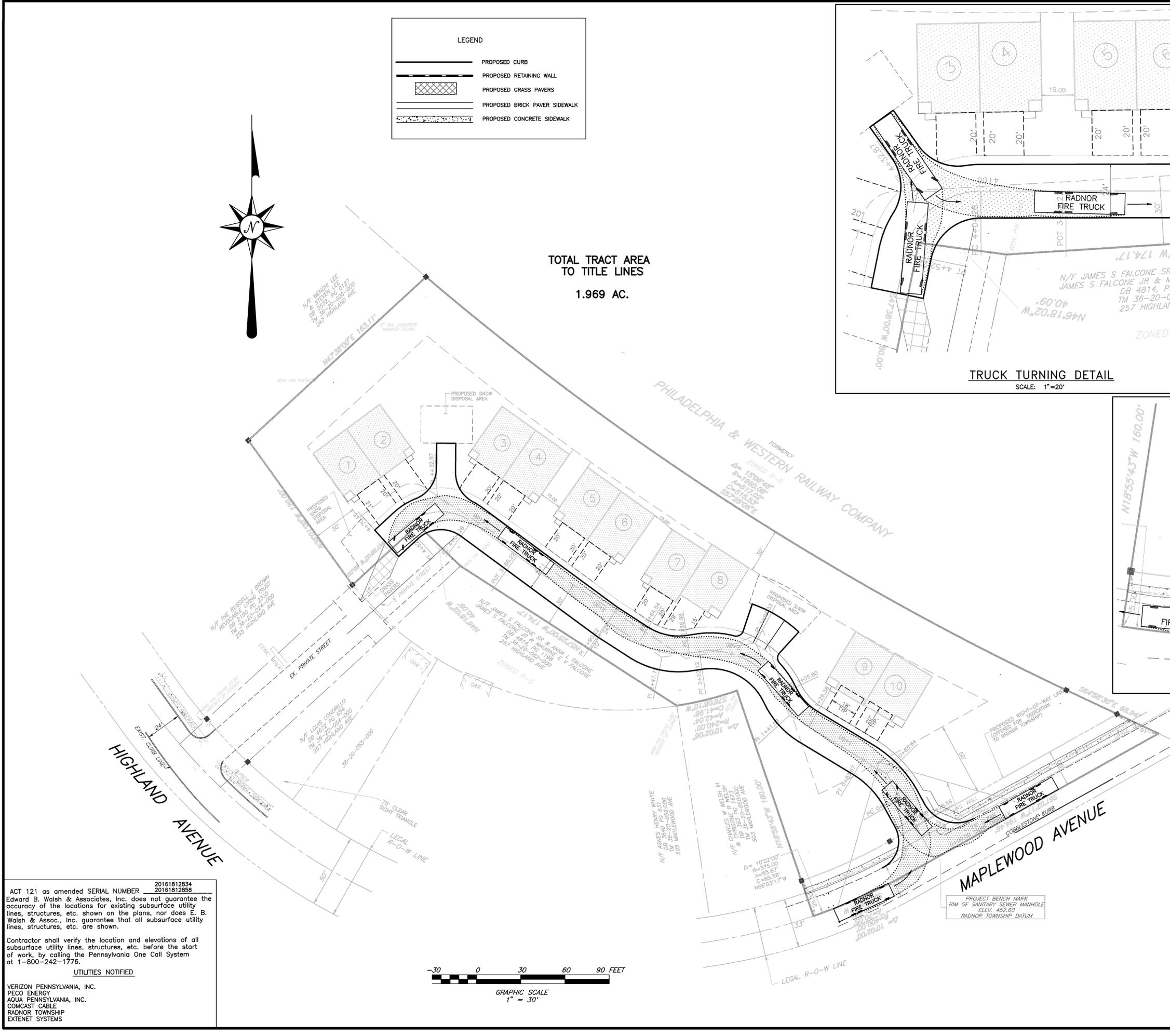
TRUCK TURNING DETAIL
SCALE: 1"=20'



LOCATION MAP
1"=600'



TRUCK TURNING DETAIL
SCALE: 1"=20'



PRELIMINARY
TRUCK TURNING PLAN

7. 6-6-18	REV PER TWP. COMMENTS
6. 5-14-18	GENERAL REVISIONS
5. 4-11-18	REV. PER TWP. ENG. COMMENTS OF 2-27-18 & 2-16-18
4. 1-29-18	REV. PER TWP. ENG. COMMENTS OF 12-22-17 & 1-3-18
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2. 4-10-15	MODIFIED FOOTPRINT AND SIDEWALK
1. 3-9-15	ADDED ADDITION PROPERTY

DEVELOPMENT PLAN
FOR
DAVID SEMERJIAN BUILDERS
415 MAPLEWOOD AVENUE DELAWARE COUNTY, PA.
Edward B. Walsh & Associates, Inc. CIVIL ENGINEERS & SURVEYORS

Project- 4063
Date- 12-8-14
Scale- 1"= 30'
Drawn- R.F.N.
Checked- A.E.
Sheet- 15 OF 19

125 DOWLIN FORGE ROAD
EASTON, PENNSYLVANIA 19341
Phone (610) 903-0060
Fax (610) 903-0080

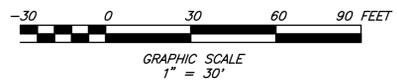
Plotted: 6/9/2018 File: F:\DB\4063\4063-b5.prc Ver: 000

ACT 121 as amended SERIAL NUMBER 20181812834
20181812858
Edward B. Walsh & Associates, Inc. does not guarantee the accuracy of the locations for existing subsurface utility lines, structures, etc. shown on the plans, nor does E. B. Walsh & Associates, Inc. guarantee that all subsurface utility lines, structures, etc. are shown.

Contractor shall verify the location and elevations of all subsurface utility lines, structures, etc. before the start of work, by calling the Pennsylvania One Call System at 1-800-242-1776.

UTILITIES NOTIFIED

VERIZON PENNSYLVANIA, INC.
PECO ENERGY
AQUA PENNSYLVANIA, INC.
COMCAST CABLE
RADNOR TOWNSHIP
EXTENET SYSTEMS

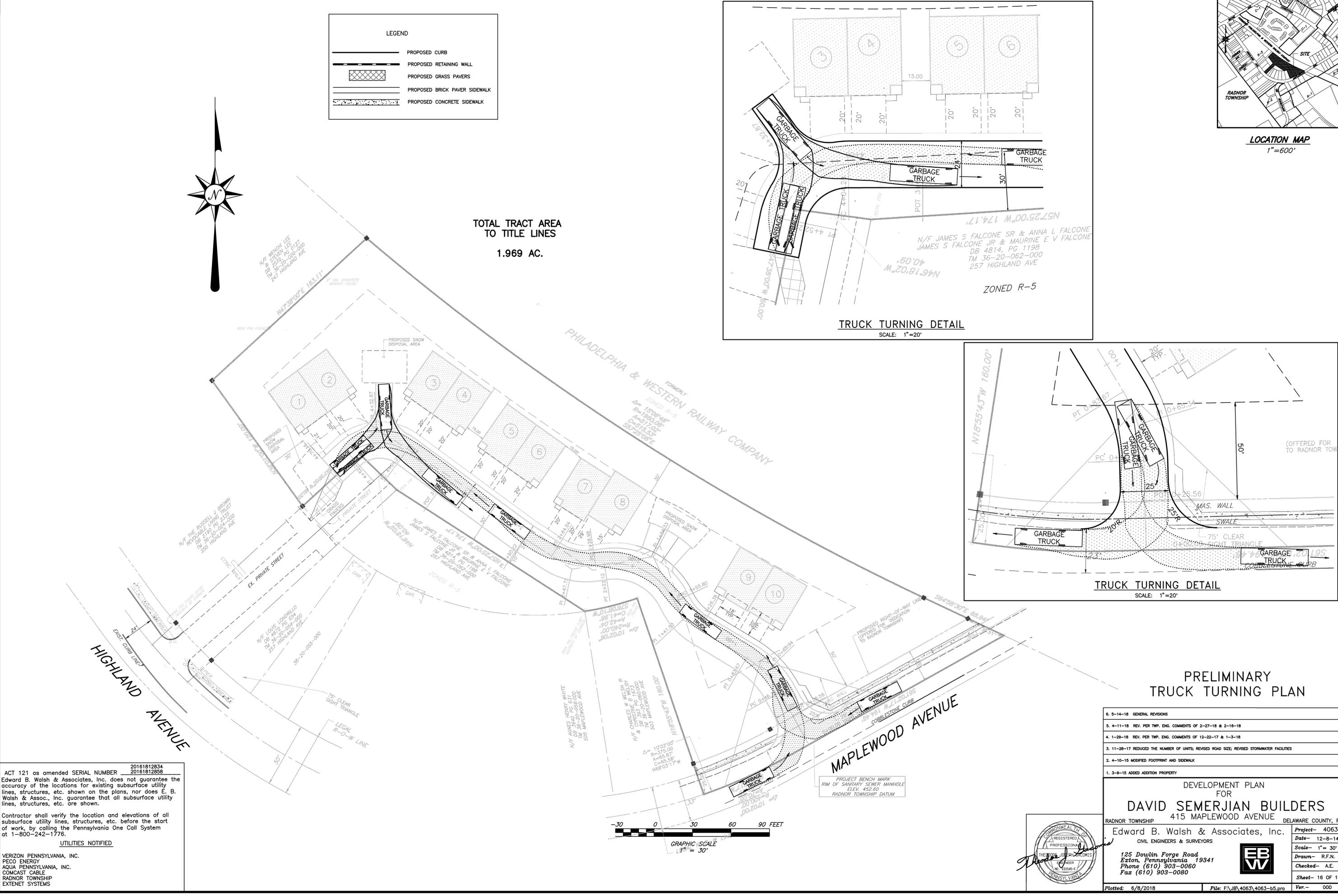
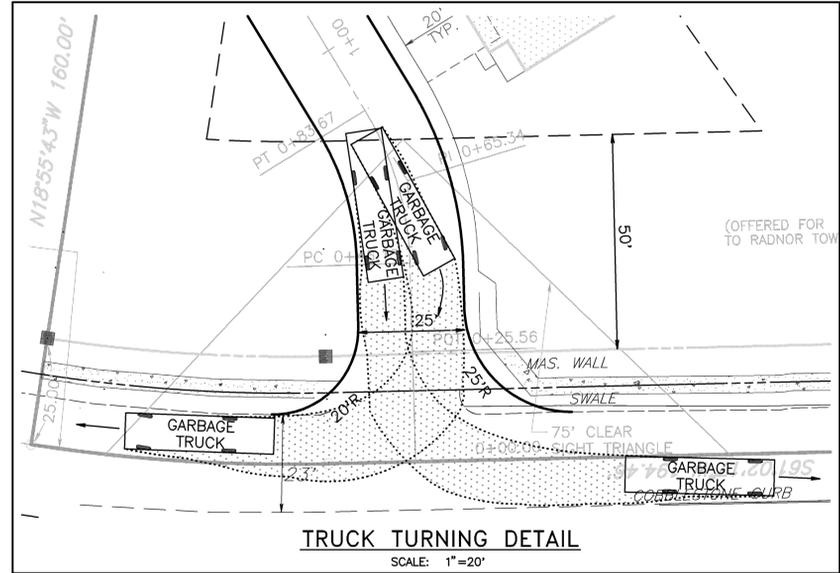
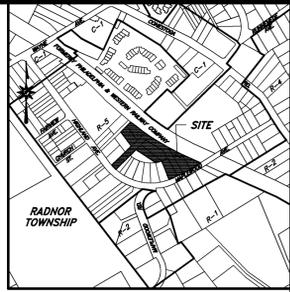
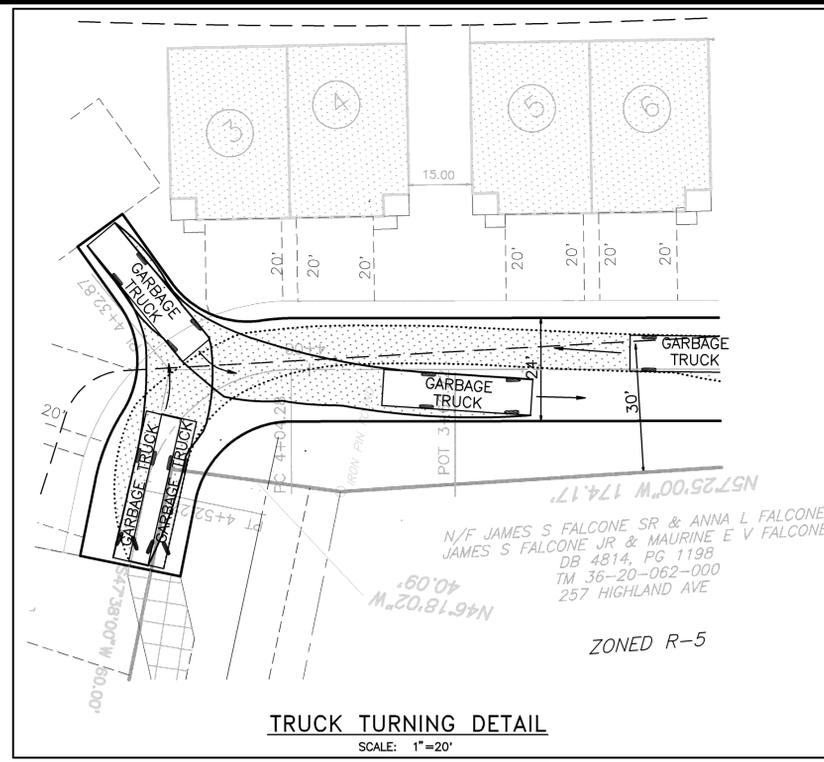




LEGEND

	PROPOSED CURB
	PROPOSED RETAINING WALL
	PROPOSED GRASS PAVERS
	PROPOSED BRICK PAVER SIDEWALK
	PROPOSED CONCRETE SIDEWALK

**TOTAL TRACT AREA
TO TITLE LINES**
1.969 AC.



**PRELIMINARY
TRUCK TURNING PLAN**

6. 5-14-18	GENERAL REVISIONS
5. 4-11-18	REV. PER TWP. ENG. COMMENTS OF 2-27-18 & 2-16-18
4. 1-29-18	REV. PER TWP. ENG. COMMENTS OF 12-22-17 & 1-3-18
3. 11-28-17	REDUCED THE NUMBER OF UNITS; REVISED ROAD SIZE; REVISED STORMWATER FACILITIES
2. 4-10-15	MODIFIED FOOTPRINT AND SIDEWALK
1. 3-9-15	ADDED ADDITION PROPERTY

**DEVELOPMENT PLAN
FOR
DAVID SEMERJIAN BUILDERS**
415 MAPLEWOOD AVENUE
RADNOR TOWNSHIP, DELAWARE COUNTY, PA.

Edward B. Walsh & Associates, Inc.
CIVIL ENGINEERS & SURVEYORS

Project- 4063
Date- 12-8-14
Scale- 1"= 30'
Drawn- R.F.N.
Checked- A.E.
Sheet- 16 OF 19

125 Dowlin Forge Road
Eaton, Pennsylvania 19341
Phone (610) 903-0060
Fax (610) 903-0080

Plotted: 6/9/2018 File: F:\DB\4063\4063-b5-pro Ver: 000

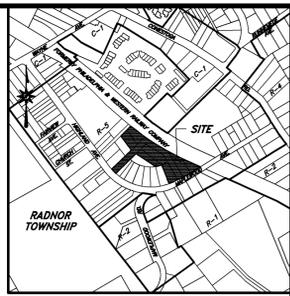
ACT 121 as amended SERIAL NUMBER 20181812834
20181812858
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UTILITIES NOTIFIED

VERIZON PENNSYLVANIA, INC.
PECO ENERGY
AQUA PENNSYLVANIA, INC.
COMCAST CABLE
RADNOR TOWNSHIP
EXTENET SYSTEMS



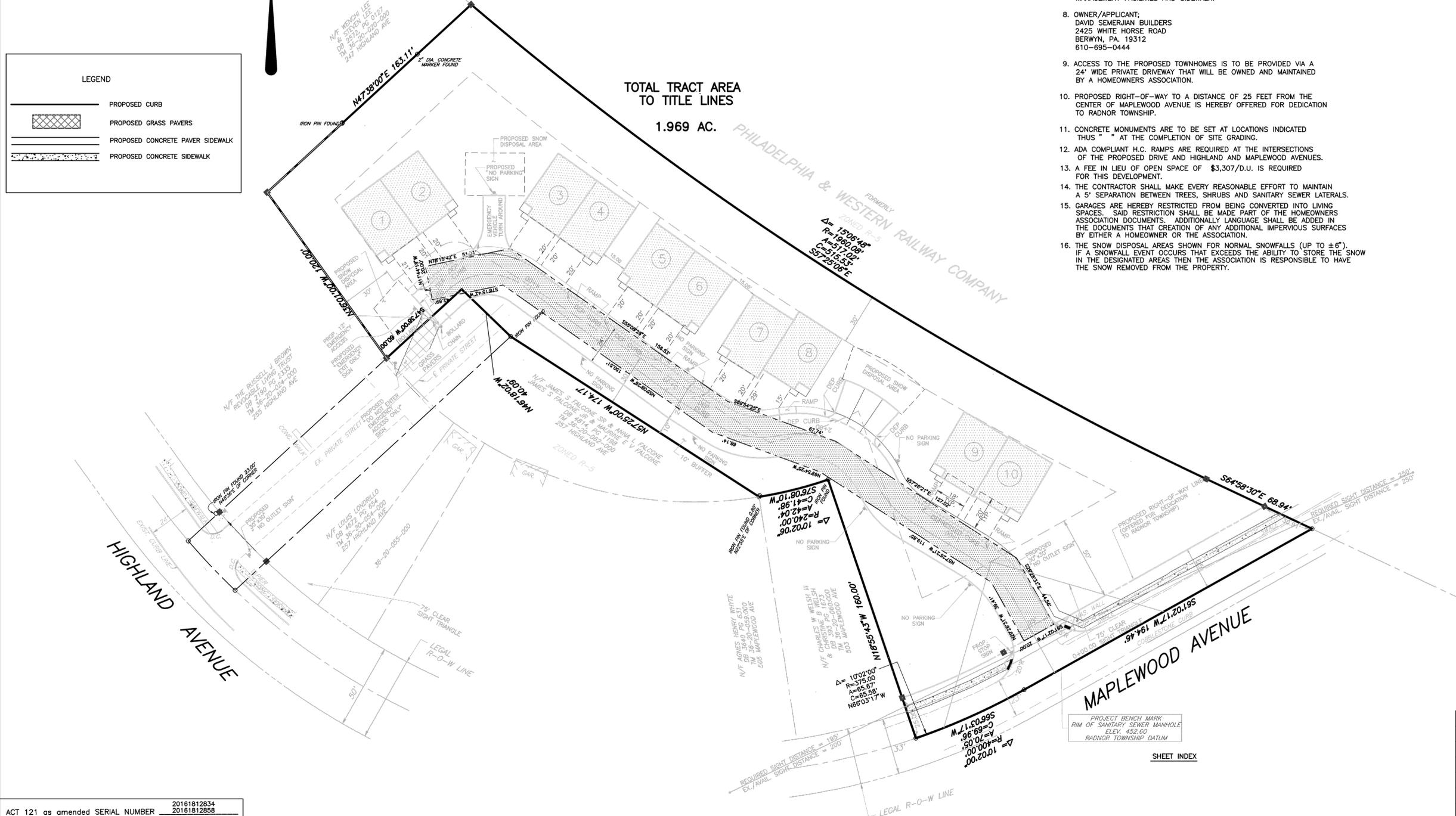


LOCATION MAP
1" = 600'

- GENERAL NOTES:
1. THE PURPOSE OF THIS PLAN IS TO CONSOLIDATE THE DEPICTED PARCELS INTO ONE PROPERTY AND TO DEVELOP THE SITE AS 10 TOWNHOUSES.
 2. BOUNDARY, EXISTING FEATURES AND TOPOGRAPHIC INFORMATION IS FROM A FIELD SURVEY PERFORMED BY EDWARD B. WALSH & ASSOCIATES, INC. (EBWA) IN JULY, 2010.
 3. BOUNDARY SURVEY WAS BASED UPON DEEDS OF RECORD. A TITLE REPORT WAS NOT PROVIDED, THEREFORE, THIS SURVEY DOES NOT PURPORT TO DEPICT ALL RIGHTS, EASEMENTS AND OTHER MATTERS OF TITLE WHICH A CURRENT AND COMPLETE TITLE REPORT WOULD DISCLOSE.
 4. PROJECT BENCHMARK IS THE RIM OF SANITARY MANHOLE LOCATED AT INTERSECTION OF CENTRAL AND MAPLEWOOD AVENUE. DATUM RADNOR TOWNSHIP SEWER DATUM.
 5. THE SITE IS SERVED BY PUBLIC SEWER AND WATER.
 6. TOTAL TRACT AREA (TO TITLE LINES) = 2.171 ACRES
 7. A HOMEOWNERS ASSOCIATION WILL BE CREATED FOR THE SHARED RESPONSIBILITIES OF THE DRIVEWAY, COMMON AREA, STORM-WATER MANAGEMENT FACILITIES AND SIDEWALK.
 8. OWNER/APPLICANT:
DAVID SEMERJIAN BUILDERS
2425 WHITE HORSE ROAD
BERWYN, PA. 19312
610-695-0444
 9. ACCESS TO THE PROPOSED TOWNHOMES IS TO BE PROVIDED VIA A 24' WIDE PRIVATE DRIVEWAY THAT WILL BE OWNED AND MAINTAINED BY A HOMEOWNERS ASSOCIATION.
 10. PROPOSED RIGHT-OF-WAY TO A DISTANCE OF 25 FEET FROM THE CENTER OF MAPLEWOOD AVENUE IS HEREBY OFFERED FOR DEDICATION TO RADNOR TOWNSHIP.
 11. CONCRETE MONUMENTS ARE TO BE SET AT LOCATIONS INDICATED THUS " * " AT THE COMPLETION OF SITE GRADING.
 12. ADA COMPLIANT H.C. RAMPS ARE REQUIRED AT THE INTERSECTIONS OF THE PROPOSED DRIVE AND HIGHLAND AND MAPLEWOOD AVENUES.
 13. A FEE IN LIEU OF OPEN SPACE OF \$3,307/D.U. IS REQUIRED FOR THIS DEVELOPMENT.
 14. THE CONTRACTOR SHALL MAKE EVERY REASONABLE EFFORT TO MAINTAIN A 5' SEPARATION BETWEEN TREES, SHRUBS AND SANITARY SEWER LATERALS.
 15. GARAGES ARE HEREBY RESTRICTED FROM BEING CONVERTED INTO LIVING SPACES. SAID RESTRICTION SHALL BE MADE PART OF THE HOMEOWNERS ASSOCIATION DOCUMENTS. ADDITIONALLY LANGUAGE SHALL BE ADDED IN THE DOCUMENTS THAT CREATION OF ANY ADDITIONAL IMPERVIOUS SURFACES BY EITHER A HOMEOWNER OR THE ASSOCIATION.
 16. THE SNOW DISPOSAL AREAS SHOWN FOR NORMAL SNOWFALLS (UP TO ±6"). IF A SNOWFALL EVENT OCCURS THAT EXCEEDS THE ABILITY TO STORE THE SNOW IN THE DESIGNATED AREAS THEN THE ASSOCIATION IS RESPONSIBLE TO HAVE THE SNOW REMOVED FROM THE PROPERTY.

LEGEND

- PROPOSED CURB
- PROPOSED GRASS PAVERS
- PROPOSED CONCRETE PAVER SIDEWALK
- PROPOSED CONCRETE SIDEWALK



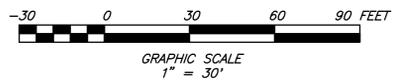
PRELIMINARY
SANITARY SEWER
EASEMENT PLAN

ACT 121 as amended SERIAL NUMBER 20161812834 / 20161812858
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UTILITIES NOTIFIED

VERIZON PENNSYLVANIA, INC.
PECO ENERGY
AQUA PENNSYLVANIA, INC.
COMCAST CABLE
RADNOR TOWNSHIP
EXTENET SYSTEMS



1, 6-5-18 REV PER TWP. COMMENTS

DEVELOPMENT PLAN
FOR
DAVID SEMERJIAN BUILDERS
415 MAPLEWOOD AVENUE
RADNOR TOWNSHIP DELAWARE COUNTY, PA.

Edward B. Walsh & Associates, Inc.
CIVIL ENGINEERS & SURVEYORS

Project- 4063
Date- 12-8-14
Scale- 1" = 30'
Drawn- R.F.N.
Checked- A.E.
Sheet- 19 OF 19

125 Dowlan Forge Road
Eaton, Pennsylvania 19341
Phone (610) 903-0060
Fax (610) 903-0080

Plotted: 6/9/2018 File: F:\J\B\4063\4063-b5.pro Ver: 000

RESOLUTION NO. 2018-90

A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA, AWARDING THE KIRKS RUN SANITARY SEWER ENCASEMENT AND STREAM BANK REHABILITATION PROJECT, CONTRACT #B-18-006, TO TOTAL SITE DEVELOPMENT, INCORPORATED, IN THE AMOUNT OF \$149,086.12

WHEREAS, the Township's sanitary sewer line is exposed in Kirks Run

WHEREAS, sealed bids were received for the project to address the situation

NOW, THEREFORE, be it *RESOLVED* by the Board of Commissioners of Radnor Township does hereby Award the Kirks Run Sanitary Sewer Encasement and Stream Bank Rehabilitation project, Contract #B-18-006, to Total Site Development, Incorporated, in the Amount of \$149,086.12

SO RESOLVED this 24th day of September, A.D., 2018

RADNOR TOWNSHIP

By: _____
Name: Lisa Borowski
Title: President

ATTEST: _____
Robert A. Zienkowski
Manager/Secretary

Radnor Township
PROPOSED LEGISLATION

DATE: September 17, 2018

TO: Radnor Township Board of Commissioners

FROM: Stephen F. Norcini, P.E., Township Engineer *SFN*

CC: Robert A. Zienkowski, Township Manager
 William M. White, Assistant Township Manager/Finance Director

LEGISLATION: **Resolution #2018-90; Awarding the Kirks Run Sanitary Sewer Encasement and Stream Bank Rehabilitation project, Contract #B-18-006, to Total Site Development, Incorporated, in the Amount of \$149,086.12**

LEGISLATIVE HISTORY: The Board of Commissioners previously authorized the receipt of sealed bids for this project.

PURPOSE AND EXPLANATION: The Township was alerted to an exposed sanitary sewer pipe that runs parallel with Kirks Run (this portion of Kirks Run is in the area of Wyldhaven Road). In addition to the exposed sanitary pipe, a manhole is now exposed. What was once a sewer pipe and manhole that were buried in the stream bank, are now facilities that are exposed, in the middle of the stream, due to years of erosion. This project entails the concrete encasement of a portion of the sewer line, armoring the manhole, and restoring the bank, which will once again cover the sewer pipe. The results of the sealed bids are as follows:

Contract #B-18-006	
Total Site Development, Inc.	\$149,086.12
Eagle Contracting Inc.	\$239,794.10
Bill Anskis Co., Inc.	\$267,120.00

IMPLEMENTATION SCHEDULE: Pending Board of Commissioners authorization, a Notice to Proceed will be issued by Melissa Conn, Purchasing Coordinator, once all required documentation is in hand.

FISCAL IMPACT: This project is listed in the Five-Year Capital Plan of the 2018 Approved Budget listed as "Kirks Run" and will be funded from the "02" Sanitary Sewer Capital Fund.

Recommendation: *Staff respectfully request that the Board of Commissioners Award the Kirks Run Sanitary Sewer Encasement and Stream Bank Rehabilitation project, Contract #B-18-006, to Total Site Development, Incorporated, in the Amount of \$149,086.12*

RESOLUTION NO. 2018-91

**A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE
COUNTY, PENNSYLVANIA, AWARDING THE
MAPLEWOOD AVENUE STORM SEWER EXTENSION
PROJECT CONTRACT #B-18-008, TO LECHMANIK,
INCORPORATED, IN THE AMOUNT OF \$84,260.31**

WHEREAS, the Township wishes to extend a storm sewer outfall to alleviate a dangerous condition created by an eroded swale

WHEREAS, sealed bids were received for the project to address the situation

NOW, THEREFORE, be it *RESOLVED* by the Board of Commissioners of Radnor Township does hereby Award the Maplewood Avenue Storm Sewer Extension Project Contract #B-18-008, to Lechmanik, Incorporated, in the Amount of \$84,260.31

SO RESOLVED this 24th day of September, A.D., 2018

RADNOR TOWNSHIP

By: _____

Name: Lisa Borowski

Title: President

ATTEST: _____

Robert A. Zienkowski
Manager/Secretary

Radnor Township

PROPOSED LEGISLATION

DATE: September 17, 2018

TO: Radnor Township Board of Commissioners

FROM: Stephen F. Norcini, P.E., Township Engineer *sm*

CC: Robert A. Zienkowski, Township Manager
William R. White, Assistant Township Manager & Finance Director

LEGISLATION: **Resolution #2018-91; Awarding the Maplewood Avenue Storm Sewer Extension Project Contract #B-18-008, to Lechmanik, Incorporated, in the Amount of \$84,260.31**

LEGISLATIVE HISTORY: The Board of Commissioners previously authorized the receipt of sealed bids for this project.

PURPOSE AND EXPLANATION: The Township's existing storm sewer outfall, from an inlet located in the 500 block of Maplewood Avenue, outlets at the property line of a resident and Odorisio Park. This outfall has created a very eroded swale, which creates a hazardous condition for our residents and users of the Park, as well as creating sediment laden runoff. Sealed bids were received to address this situation:

Contract #B-18-008	
Lechmanik, Inc.	\$84,260.31
A.J. Jurich, Inc.	\$87,640.00
Pipeline Excavation, Inc	\$88,884.00
Ply-Mar Construction Co. Inc.	\$91,628.00
Eagle Contracting Inc.	\$117,821.83
JMC Contractors, Inc.	\$134,988.00

Implementation Schedule: Pending Board of Commissioners a Notice to Proceed will be issued by Melissa Conn, Purchasing Coordinator, once all required documentation is received.

Fiscal Impact: This project is noted in the 2018 Board of Commissioners Approved Budget, Stormwater Fund Capital and Infrastructure, and will be funded by the "04" Stormwater Fund.

Recommended Action: *Staff respectfully requests the Board of Commissioners Award the Maplewood Avenue Storm Sewer Extension Project Contract #B-18-008, to Lechmanik, Incorporated, in the Amount of \$84,260.31*

RESOLUTION NO. 2018-92

**A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE
COUNTY, PENNSYLVANIA, AWARDING NORTH
WAYNE FIELD SWM BASIN REPAIR AND CLEANING
CONTRACT #B-18-010, TO N. ABBONIZIO
CONTRACTORS, INCORPORATED, IN THE AMOUNT OF
\$669,000**

WHEREAS, the North Wayne Field Basin requires cleaning and repair

WHEREAS, sealed bids were received for the project to address the situation

NOW, THEREFORE, be it **RESOLVED** by the Board of Commissioners of Radnor Township does hereby Award the North Wayne Field SWM Basin Repair and Cleaning Contract #B-18-010, to N. Abbonizio Contractors, Incorporated, in the Amount of \$669,000

SO RESOLVED this 24th day of September, A.D., 2018

RADNOR TOWNSHIP

By: _____
Name: Lisa Borowski
Title: President

ATTEST: _____
Robert A. Zienkowski
Manager/Secretary

Radnor Township

PROPOSED LEGISLATION

DATE: September 17, 2018
TO: Radnor Township Board of Commissioners
FROM: Stephen F. Norcini, P.E., Township Engineer 
CC: Robert A. Zienkowski, Township Manager
William M. White, Assistant Township Manager & Finance Director

LEGISLATION: Resolution #2018 – 92; Awarding North Wayne Field SWM Basin Repair and Cleaning Contract #B-18-010, to N. Abbonizio Contractors, Incorporated, in the Amount of \$669,000

LEGISLATIVE HISTORY: The Board of Commissioners previously authorized the receipt of sealed bids.

PURPOSE AND EXPLANATION: The North Wayne Field Basin has been clogged with sediment and in need of repair for some time. The bidding documents call for the following:

1. Cleaning of the underground stormwater management system
2. Installation of two hydrodynamic separators
3. Installation of an additional manifold and manhole access

Sealed bids were received for the project, with the results as follows:

Contract B-18-10	
Infrastructure Solution Services, Inc.*	\$580,000.00
N. Abbonizio Contractors, Inc.	\$669,000.00
Eagle Contracting Inc.	\$677,023.77
Road-Con, Inc.	\$722,722.00

*Please note that Infrastructure Solutions Services did not submit all required documents with the bid. The solicitor was contacted, and the contractor is deemed a non-responsive bidder. The project is slated to be awarded the lowest responsible bidder.

Implementation Schedule: Pending Board of Commissioners approval, a Notice to Proceed will be issued once Melissa Conn, Purchasing Coordinator, receives the required documents.

Fiscal Impact: The project, at a cost of \$669,000, will be funded by the “04” Stormwater Fund

Recommended Action: Staff respectfully request the Board of Commissioners Award North Wayne Field SWM Basin Repair and Cleaning Contract #B-18-010, to N. Abbonizio Contractors, Incorporated, in the Amount of \$669,000

RESOLUTION NO. 2018-97

**A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE
COUNTY, PENNSYLVANIA, AWARDING THE
MATSONFORD ROAD PEDESTRIAN BRIDGE
REHABILITATION, CONTRACT #B-18-005, TO
PROFESSIONAL CONSTRUCTION CONTRACTORS, IN
THE AMOUNT OF \$553,990**

WHEREAS, the Matsonford Road Pedestrian Bridge is in need of repairs and painting

WHEREAS, sealed bids were received for the project to address the repairs and painting

WHEREAS, Radnor Township will pay for the construction costs, inspection and consulting costs, and seek reimbursement from the Radnor School District and Brandywine Realty Trust for their one third each share of the costs, based upon a previously executed tri-party agreement.

NOW, THEREFORE, be it *RESOLVED* by the Board of Commissioners of Radnor Township does hereby Award the Matsonford Road Pedestrian Bridge Rehabilitation, Contract #B-18-005, to Professional Construction Contractors, in the Amount of \$553,990

SO RESOLVED this 24th day of September, A.D., 2018

RADNOR TOWNSHIP

By:

Name: Lisa Borowski
Title: President

ATTEST:

Robert A. Zienkowski
Manager/Secretary

Radnor Township

PROPOSED LEGISLATION

DATE: September 17, 2018

TO: Radnor Township Board of Commissioners

FROM: Stephen F. Norcini, P.E., Township Engineer 

CC: Robert A. Zienkowski, Township Manager
William M. White, Assistant Township Manager & Finance Director /

LEGISLATION: **Resolution #2018-97 - Awarding the Matsonford Road Pedestrian Bridge Rehabilitation, Contract #B-18-005, to Professional Construction Contractors, in the Amount of \$553,990**

LEGISLATIVE HISTORY: The Board of Commissioners previously authorized receipt of sealed bids for this project.

PURPOSE AND EXPLANATION: The Matsonford Road Pedestrian Bridge Rehabilitation Project originally started out for the purpose of painting. Further inspection revealed addition work to needed: roof repairs, abutment repairs, bearing pin repairs, as well as others. Sealed bids were received for the project, with the results as follows:

Contract #B-18-005	
Professional Construction Contractors Inc.	\$553,990.00
Bill Anskis Co., Inc.	\$705,700.00
Eastern Highway Specialists, Inc.	\$741,000.00

Implementation Schedule: Pending Board of Commissioners approval, a Notice to Proceed will be issued by Melissa Conn, Purchasing Coordinator, once all required documents are received.

Fiscal Impact: The cost of this project, \$553,990, is to be funded by the Capital Highway Bridge account. *Please note that the bridge is covered under a tri-party agreement between Radnor Township, Radnor School District and Brandywine Realty Trust. Once the project is completed, and all payment applications, inspection and consultant costs paid, an invoice will be sent to the aforementioned parties for payment of their one third share of the cost.*

Recommended Action: Staff respectfully requests the Board of Commissioners Award the Matsonford Road Pedestrian Bridge Rehabilitation, Contract #B-18-005, to Professional Construction Contractors, in the Amount of \$553,990

RESOLUTION NO. 2018-98

**A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE
COUNTY, PENNSYLVANIA, AWARDING THE SPROUL
ROAD (SR 0320) & CONESTOGA ROAD (SR 1019)
TRAFFIC SIGNAL INSTALLATION CONTRACT #B-18-
007, TO LENNI ELECTRIC CORPORATION, IN THE
AMOUNT OF \$52,875.01**

WHEREAS, the Township wishes to install a dedicated left-hand turn phase for east bound Conestoga Road to north bound Sproul Road

WHEREAS, sealed bids were received for the project to perform this work

NOW, THEREFORE, be it *RESOLVED* by the Board of Commissioners of Radnor Township does hereby Award the Sproul Road (SR 0320) & Conestoga Road (SR 1019) Traffic Signal Installation Contract #B-18-007, to Lenni Electric Corporation, in the Amount of \$52,875.01

SO RESOLVED this 24th day of September, A.D., 2018

RADNOR TOWNSHIP

By: _____
Name: Lisa Borowski
Title: President

ATTEST: _____
Robert A. Zienkowski
Manager/Secretary

Radnor Township

PROPOSED LEGISLATION

DATE: September 17, 2018

TO: Radnor Township Board of Commissioners

FROM: Stephen F. Norcini, P.E., Township Engineer 

CC: Robert A. Zienkowski, Township Manager
William M. White, Assistant Township Manager & Finance Director

LEGISLATION: Resolution #2018- 98 - Awarding the Sproul Road (SR 0320) & Conestoga Road (SR 1019) Traffic Signal Installation Contract #B-18-007, to Lenni Electric Corporation, in the Amount of \$52,875.01

LEGISLATIVE HISTORY: The Board of Commissioners previously authorized receipt of sealed bids for this project.

PURPOSE AND EXPLANATION: This project entails the installation of a dedicated left-hand turn signal form east bound Sproul Lane to north bound Sproul Road. The sealed bid results are in the table below.

Contract #B-18-007	
Lenni Electric Corporation	\$52,875.01
Carr & Duff Inc.	\$74,635.00
Miller Bros.	\$93,419.50

Implementation Schedule: Pending Board of Commissioners approval, a Notice to Proceed will be issued by Melissa Conn, Purchasing Coordinator, once all required documents are received.

Fiscal Impact: The cost of this project, \$52,095.01, is funded in the Capital Plan, highway improvements.

Recommended Action: Staff respectfully requests the Board of Commissioners Award the Sproul Road (SR 0320) & Conestoga Road (SR 1019) Traffic Signal Installation Contract #B-18-007, to Lenni Electric Corporation, in the Amount of \$52,875.01

New Business

**Stream Assessment and Monitoring
Headwaters of Valley Run**

RETTEW Project No. 101442012/Phase 451

Located In:

Radnor Township
Delaware County
Pennsylvania

Prepared for:

Radnor Township
301 Iven Avenue
Wayne, PA 19087

Prepared by:

RETTEWSM

Natural Sciences Service Area
3020 Columbia Avenue
Lancaster, PA 17603
(717) 394-3721

June 2018

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- VIII. ESC ANALYTICAL REPORT – WATER AND SEDIMENT CHEMISTRY RESULTS
- IX. PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
(eMapPA – Valley Run 303(d) listing)

I. ASSESSMENT AND MONITORING DESCRIPTION

ASSESSMENT AND MONITORING DESCRIPTION

In May of 2018, RETTEW Associates, Inc. conducted a stream assessment within the headwaters of Valley Run. This was the second year for the assessment, with the first completed in May of 2017. Due to concerns over construction activities at Villanova University, Radnor Township hired RETTEW to investigate and monitor stream conditions downstream of the campus. *See Section III for Location Map identifying the general area of the assessment.*

The Township wanted to know if and how the planned conversion of a 7.3-acre paved parking lot into a parking garage, dormitory and other accessory use buildings might impact Valley Run. Construction activities began in 2017 and continue as of this writing.

As part of the assessment process, RETTEW established four sampling locations. These four locations were sampled on May 9, 2017 and again on May 9, 2018. The sampling locations are as follows: *See Section IV for aerial photograph depicting sampling locations.*

1. **RT-1** – Located on the south, downstream side of the SEPTA railbed where the stream exits a culvert from underneath the railbed. This location is also south and downstream of the subject parking lot.
2. **RT-2** – Located just upstream and north of a road culvert underneath South Ithan Avenue in an area referred to as the Aldwyn Triangle.
3. **RT-3** – Located just downstream and south of a road culvert underneath Brooklea Road.
4. **RT-4** – Located within Macrone Park downstream of the tennis courts, and northeast of Yorkshire Road.

To assess current stream conditions, RETTEW utilized the Pennsylvania Department of Environmental Protection's (PADEP) In-stream Comprehensive Evaluation (ICE) Survey protocol on May 9, 2017 and repeated the process the subsequent year on May 9, 2018. The assessment consists of the following:

1. Physical Characterization (in field) – *See Sections VI and VII for field data sheets*
2. In-stream Macroinvertebrate Community (collected in field and identified in lab) – *See Section V for completed macroinvertebrate metrics.*
3. Water Quality Parameters/Chemistry – *See Sections VI and VIII for field and lab results.*
 - a. Temperature, dissolved oxygen, pH and specific conductance (in field).
 - b. Dissolved solids, oil and grease, turbidity, acidity, alkalinity, chloride, nitrate, nitrite, sulfate, total phosphorus, pH, dissolved oxygen, total organic carbon, barium, calcium, iron, magnesium, potassium, sodium, methane, ethane, and ethene (in lab).
 - *Note – Dissolved oxygen and pH (sampled in both field and lab)*
 - c. In 2018 only, sediment samples from the substrate (stream bottom) were also taken at RT-1 and RT-4 and tested for lead and benzo(a)pyrene.

Photographs were also taken at each sampling location. *See Section IV.*

II. RESULTS/FINDINGS

RESULTS/FINDINGS

Sampling locations RT-1 through RT-4 are located within the Valley Run Watershed. According to Pennsylvania Department of Environmental Protection (PADEP) mapping available through the Commonwealth's eMapPA service, the subject parking lot at Villanova University is also considered to be within the Valley Run Watershed. Stormwater management facilities for the proposed University improvements (now under construction) at the parking lot are contributory to Valley Run. Additionally, some 1,128 feet of SEPTA rail (located immediately adjacent and south of the subject parking lot) is within the Valley Run Watershed.

Health of Valley Run

The PADEP considers the stream currently impaired – meaning the stream does not meet an acceptable water quality standard as per criteria established by the Federal Clean Water Act. In this case, PCBs (polychlorinated biphenyl) are listed as the source/cause of the impairment. PCBs are man-made compounds. Prior to banning in 1979 under the Toxic Substances Control Act, PCBs were used in coolants and lubricants, dust control, pesticides, paints, printing inks, protective coatings, and fire retardants. PCBs can accumulate in sediments and be continuously re-suspended in a stream system. Also worth noting is the PADEP's mapping of Valley Run (the reach of stream assessed) only begins at Brooklea Road (the location of sampling point RT-3). It is likely the PADEP does not consider Valley Run upstream of Brooklea Road to be perennial. *See Section IX for Pennsylvania Department of Environmental Protection eMapPa – Valley Run 303(d) listing regarding stream impairment.*

In using applicable portions of the PADEP's In-stream Comprehensive Evaluation (ICE) Survey protocol on May 9, 2018, RETTEW (for the second consecutive year) arrived at the same conclusion that Valley Run is impaired.

Benthic Macroinvertebrates

The type and numbers of organisms found resulted in very low IBI values (Index of Biotic Integrity). Given the time of year sampling occurred, an IBI score of less than 50 is considered "impaired". IBI scores for RT-3 and RT-4 were 18.80 and 23.18 respectively. RETTEW could only perform a modified macroinvertebrate investigation at RT-3 and RT-4 because only 22 and 42 organisms were collected respectively due to limited presence (similar to 2017 findings). The protocol is typically based upon the random collection of 200 organisms. The protocol has a fixed area of substrate to be sampled given the time of year. Once that area has been sampled, the various macroinvertebrate indices are performed whether or not 200 organisms have been collected. In this situation, low numbers of organisms are in fact an indication of impairment. It was not possible to generate any sort of numerical IBI score for RT-1 and RT-2 due to the lack of macroinvertebrates (likely due to the stream being intermittent at RT-1 and RT-2). RETTEW observed two snails, two dragonflies, one damselfly, one crayfish and one mayfly collectively at RT-1 and RT-2. *See Section V for completed macroinvertebrate metrics.*

Qualitative Habitat

Sampling locations RT-1, RT-2 and RT-3 can be considered sub-optimal for a second year in a row mainly due to the developed, urbanized character of the drainage areas tributary at those locations within the watershed. RT-4 could be considered optimal mainly because of the intact forest buffer within the Macrone Park. Given this stream type, a total habitat score less than 120 would indicate habitat impairment. Once again in 2018, RT-1 had an overall score of 103, RT-2 a score of 138, RT-3 a score of 119, and RT-4 a score of 168. Qualitative habitat scores consider physical characteristics of the stream

channel and riparian zone. There were not any significant changes in these scoring parameters since the first assessment conducted on May 9, 2017. *See Sections VI and VII for field data sheets.*

Water and Sediment Chemistry

Collected samples tested high for chlorides, total organic carbon, barium, magnesium, sodium and benzo(a)pyrene at one or more sampling locations. **See Table 1 “Comparison of Water/Sediment Chemistry Between 2017 and 2018”** below for sampling results.

TABLE 1 COMPARISON OF WATER/SEDIMENT CHEMISTRY BETWEEN 2017 AND 2018								
	SAMPLING LOCATION AND YEAR							
	RT-1		RT-2		RT-3		RT-4	
	2017	2018	2017	2018	2017	2018	2017	2018
<i>water sampled</i>								
Dissolved solids (mg/l)	1380.0	1440.0	1320.0	1410.0	1180.0	1110.0	721.0	736.0
Oil and Grease	ND	ND	ND	ND	ND	ND	ND	ND
Turbidity (NTU)	0.643	1.26	1.08	3.17	2.11	1.45	0.612	0.588
Acidity (mg/l)	ND	ND	ND	ND	ND	ND	ND	ND
Alkalinity (mg/l)	196.0	227.0	192.0	201.0	184.0	201.0	114.0	116.0
Chloride (mg/l)	468.0	524.0	453.0	501.0	407.0	386.0	237.0	226.0
Nitrate (mg/l)	1.46	1.93	1.32	1.13	1.33	1.95	1.92	2.14
Nitrite (mg/l)	ND	ND	ND	ND	ND	ND	ND	ND
Sulfate (mg/l)	33.5	67.4	32.4	60.5	23.2	30.9	26.8	30.2
Phosphorus (mg/l)	ND	ND	ND	ND	ND	ND	ND	ND
pH	7.70	7.18	7.82	7.69	7.71	7.57	7.30	7.20
Dissolved Oxygen (mg/l)	9.0	9.4	9.0	9.4	9.0	9.1	9.4	9.2
Total Organic Carbon (mg/l)	1.67	2.40	1.92	2.61	2.69	2.88	1.78	1.89
Barium (mg/l)	0.261	0.187	0.272	0.228	0.383	0.432	0.257	0.278
Calcium (mg/l)	153.0	159.0	157.0	153.0	130.0	124.0	87.4	84.0
Iron (mg/l)	0.108	0.238	0.698	0.545	0.468	0.199	0.109	ND
Magnesium (mg/l)	62.9	86.9	64.9	81.2	55.4	55.8	35.1	35.0
Potassium (mg/l)	6.51	19.6	6.81	18.8	5.69	18.3	4.42	8.55
Sodium (mg/l)	116.0	156.0	118.0	151.0	108.0	138.0	65.2	73.4
Methane (mg/l)	ND	0.0562	ND	ND	ND	0.0252	ND	ND
Ethane (mg/l)	ND	ND	ND	ND	ND	ND	ND	ND
Ethene (mg/l)	ND	ND	ND	ND	ND	ND	ND	ND
<i>sediment sampled</i>								
Lead (mg/kg)	NS	95.0	NS	NS	NS	NS	NS	89.3
Benzo(a)pyrene (mg/kg)	NS	0.211	NS	NS	NS	NS	NS	1.32
ND = not detectable NS = not sampled Sampling occurred on May 9, 2017 and May 9, 2018								

Chloride

Readings above 250 mg/l exceed public drinking water standards. Though it is assumed no one is drinking directly from the subject stream, readings as high as 524 mg/l at RT-1 are likely impairing the aquatic community from RT-1 downstream to RT-3. Readings of 237 mg/l in 2017 and 226 mg/l in 2018 at RT-4 are also rather high if these levels are the norm (a chronic condition). Freshwater fish generally begin to exhibit stress when chronic levels exceed 230 mg/l. Chloride can be toxic to many forms of aquatic life and it can increase in toxicity when combined with other cations such as potassium and magnesium. RETTEW suggests chloride in this stream system is likely due to road salts and deicers being spread on parking lots and roadways within the headwater drainage basin and atmospheric deposition respectively.

Total Organic Carbon

Levels in 2018 were higher than in 2017. Total organic carbon is defined as being the amount of organic matter in the water. Generally acceptable levels of TOC in treated drinking water is 2 mg/l and 4 mg/l for the original source of water to be treated for use as drinking water. Fish under certain conditions can begin to exhibit stress when levels exceed 2 mg/l. Not all organic matter is harmful, but nonetheless it is treated in drinking water, typically by adding chlorine.

Barium

Allowable levels in drinking water are limited to 2.0 mg/l. Freshwater streams can naturally range between 0.002 mg/l to 0.34 mg/l. Readings of 0.383 mg/l in 2017 and 0.432 mg/l in 2018 at RT-3 are higher than what would typically be expected in the subject stream though actually below the set US EPA maximum contaminant level of 2 mg/l for drinking water. Sources of barium can include natural mineral deposits, drilling wastes, smelting of copper and vehicle parts manufacturing. Potential health effects from barium include difficulty in breathing, increased blood pressure, and damage to the liver, heart, kidneys and spleen.

Magnesium

Magnesium is typically discussed hand in hand with calcium in terms of water hardness and having a correct balance between the two for health reasons. For example, drinking water should contain at least 10 mg/l of magnesium and a minimum of 20 mg/l of calcium – and – a maximum of 30 mg/l of magnesium and 60 mg/l of calcium. Roughly the balance between magnesium and calcium is 1:2. Too little of each leads to weakened bones and teeth, while too much can lead to hardening of the arteries. INTERESTINGLY the balance of magnesium to calcium in the subject stream is more or less 1:2 at each sampling location for both years. In freshwater streams, magnesium levels typically range between 5-50 mg/l. Readings in the subject stream exceed the typical 50 mg/l in all sampling locations for both years except for RT-4. RETTEW believes this may be due to hardwater groundwater contributions around RT-1 through RT-3 with surface water eventually diluting stream flow around RT-4.

Sodium

The subject stream Valley Run continues to have higher than expected sodium readings – the highest being 156 mg/l at sampling location RT-1 in 2018. The averaged sodium level across all four sampling locations for 2017 and 2018 sampling events is 115.7 mg/l. Most water supplies contain less than 20 mg/l of sodium. Freshwater streams (to be still considered freshwater) contain less than 500 mg/l, so there can be a considerable range of sodium in freshwater streams. However, in this region of Pennsylvania, RETTEW believes a typical range of sodium in a non-impaired freshwater stream is between 20 mg/l to perhaps as high as 50 mg/l. Similarly, (though Valley Run is in the Delaware River Watershed) a recent Susquehanna River Basin Commission study states that any sodium levels above 20 mg/l were of concern within the Susquehanna River Basin. A tributary stream (Leggetts Creek) within their study area had

sodium levels as high as 84.3 mg/l. Leggetts Creek is considered to be impaired by the PADEP. The Delaware River Basin Commission requirements for public water supply are to average less than 100 mg/l for a 30-day time period. It is likely a 30-day average for Valley Run would exceed 100 mg/l.

High readings of chlorides and salts in freshwater streams in developed areas are usually attributable to road salts/de-icers, potable water treatment, and atmospheric deposition. Having higher than naturally normal levels of chloride and sodium in Valley Run is of no surprise, but likely impacts the more sensitive aquatic organisms in this given situation.

Benzo(a)pyrene

In 2018, RETTEW tested sediments within Valley Run for benzo(a)pyrene and lead for the first time due to the request of Radnor Township. Soil samples taken in 2017 from the 7.3-acre paved parking lot at Villanova University, benzo(a)pyrene, was detected above its residential Direct Contact MSC (Medium Specific Concentration) (0.58 mg/kg) in two soil samples, those being R-2 (13-15 ft. depth) at a concentration of 1.19 mg/kg, and R-6 (1-2 ft. depth) at a concentration of 2.66 mg/kg. Interestingly, benzo(a)pyrene within Valley Run sediments collected at RT-1 (which is immediately downslope/downstream of the SEPTA railway and subject parking lot) had a reading of 0.211 mg/kg – significantly below the MSC threshold of 0.58 mg/kg and far below the prior stated readings within the parking lot soils. Conversely, benzo(a)pyrene levels at RT-4 (the most downstream sampled locations) registered at 1.32 mg/kg. If construction activity had released benzo(a)pyrene from the parking lot area, RETTEW would suspect to see the higher reading in sediments at RT-1 not RT-4. One can never be sure how the timing of storm events coincided with the washing of sediments from the construction activity downstream through the sampling locations and how that coincides with when RETTEW performed its sampling. Based on sampling that was performed and professional opinion, RETTEW is not led to believe construction activity at the parking lot has resulted in the introduction of benzo(a)pyrene into Valley Run. Additionally, there was no indication during RETTEW's site visits in 2017 or 2018 that sediment was or had left the construction site at the parking lot, entered the culvert under the SEPTA railway and entered Valley Run. RETTEW simply saw no indication of such.

Benzo(a)pyrene is a polycyclic aromatic hydrocarbon and can be found in coal tar, tobacco smoke and grilled meats. Examples of atmospheric sources or causes include wood burning, diesel exhaust, volcanoes and the backyard barbecue grill. Historically chimney sweeps routinely developed "chimney sweeps' carcinoma" in the form of a scrotal cancer that was attributed to the soot they were removing from chimneys. Short term health effects include a skin rash or eye irritation. Long term health effects can be deadly as benzo(a)pyrene is a cancer-causing agent in humans. However, a significant amount of time would have to be spent wallowing in the sediments of Valley Run and drinking its raw, untreated water for human health to be affected. Rather, Valley Run residents are far more likely to be exposed to benzo(a)pyrene by breathing it in due to prolonged exposure to diesel exhaust, the burning of trash or too much time bent over the barbecue grill and eating charbroiled meats.

In terms of benzo(a)pyrene affecting aquatic organisms, the hydrocarbon bonds to sediments. Organisms in contact with sediment can accumulate benzo(a)pyrene and given the amount of time and/or the concentration of benzo(a)pyrene in the sediments, accumulate a level of benzo(a)pyrene that starts to cause ill effects. It can also bio-accumulate, meaning one organism containing benzo(a)pyrene eats another. Freshwater mussels for example can be used as a biomonitor (canary in the mineshaft) to measure contamination of hydrocarbons in aquatic environs.

Lead

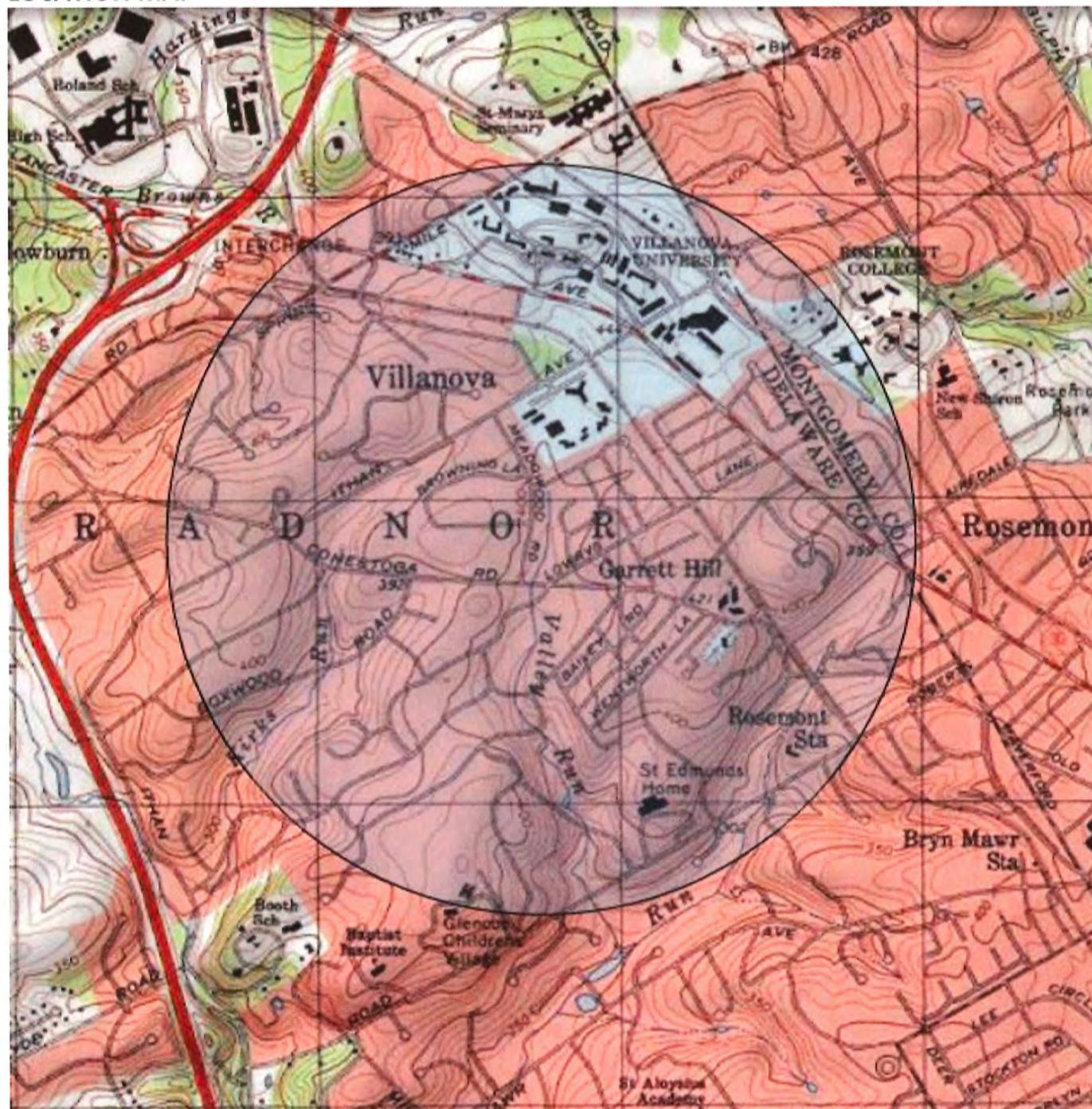
Lead concentrations at RT-1 and RT-4 were significantly below the residential Direct Contact MSC (500 mg/kg) threshold limit. Lead had been detected in sample R-8 (1-2 ft. depth) at a concentration of 972 mg/kg in the soils of the subject parking lot, but there is no indication of lead migrating downstream into Valley Run due to construction activities – at least in the tested sediments. Lead bonds to soil, so sediments tend to trap lead resulting in long residence time and limited mobility. Once in sediment, lead tends to bind with other chemicals and is typically converted to insoluble forms thereby greatly reducing its bioavailability to aquatic organisms. In fact, competition with other cations such as calcium and magnesium (which are present in significant amounts in Valley Run) tend to greatly reduce lead bioavailability. ***See Sections VI and VIII for field and lab results***

When considering assessment of a stream for biological impairment, examination of the macroinvertebrate community is a far better indicator of chronic conditions as compared to the occasional, collected water or sediment sample tested for its chemical compositions. Given the field investigation that was conducted by RETTEW on May 9, 2017 and 2018, RETTEW would recommend the reader of this report consider the macroinvertebrate metrics to be the most reliable indicator of stream health at this time.

It is important to note Villanova University has gone through a regulated, acceptable land development planning and permitting process; part of which involves securing a National Pollutant Discharge Elimination System (NPDES) permit and approval of a post construction stormwater management plan. Said NPDES permit and post construction stormwater plan was reviewed and issued by the Delaware County Conservation District and the PADEP. The post construction stormwater plan manages both rate of discharge and quality of the stormwater being discharged. On that basis, long-term, once all stormwater BMPs (Best Management Practices) are installed as per the approved post construction stormwater management plan, the stormwater being discharged from the converted parking lot site should be of better quality than it had been when being discharged from the prior existing parking lot (where/when no water quality BMPs existed).

III. LOCATION MAP

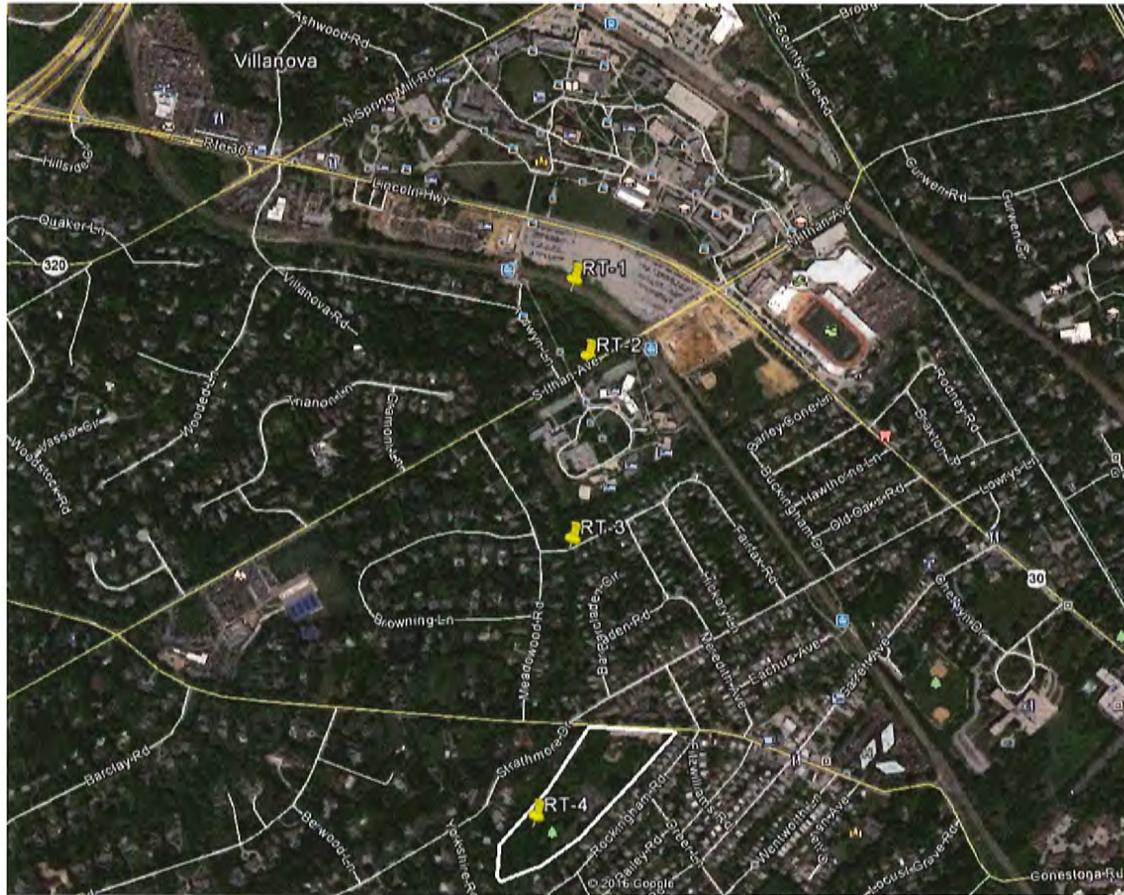
LOCATION MAP



NORRISTOWN, PENNSYLVANIA – USGS QUAD

IV. PHOTOGRAPHS

SAMPLING LOCATIONS



SAMPLING LOCATION RT-1

Sampling location at 40° 02' 00.52" North x 75° 20' 31.49" West
Elevation approximately 428 feet



Photographs #1 and #2 –
View of sampling location RT-1 looking north and upstream towards the SEPTA rails. The stream emerges from a culvert underneath the SEPTA railroad bed. Given site conditions as of May 9, 2017 and 2018, it is RETTEW's opinion the stream is intermittent at this point in the Valley Run Watershed.

Note – All photographs in this report were taken on May 9 in consecutive years 2017 and 2018





Photo #3 - 2017

Photographs #3 and #4 –
View of sampling location
RT-1 looking southeast and
downstream.



Photo #4 - 2018

SAMPLING LOCATION RT-2

Sampling location at 40° 01' 56.88" North x 75° 20' 31.74" West
Elevation approximately 415 feet



Photograph #5 and #6 -
View of sampling location RT-2 looking northwest and upstream into the Aldwyn Triangle Area. Given site conditions as of May 9, 2017 and 2018, it is RETTEW's opinion the stream is intermittent at this point in the Valley Run Watershed.





Photo #7 - 2017

Photograph #7 and #8 – View of sampling location RT-2 looking southeast and downstream. The stream enters a culvert under South Ithan Avenue and is enclosed for several hundred feet in the area of Stanford Hall, Villanova University.



Photo #8 - 2018

SAMPLING LOCATION RT-3

Sampling location at 40° 01' 44.85" North x 75° 20' 33.41" West
Elevation approximately 399 feet



Photograph #9 and #10 – View of sampling location RT-3 looking north and upstream towards Brooklea Road. Given the presence of freshwater shrimp (*Amphipoda*) and sow bugs (*Isopoda*) and surface water assessment work completed by the Pennsylvania Department of Environmental Protection, it is RETTEW's opinion the stream in this location is typically perennial.





Photo #11 - 2017

Photograph #11 and #12 – View of sampling location RT-3 looking south and downstream. The Pennsylvania Department of Environmental Protection identifies this reach of Valley Run as being impaired as per criteria of the Federal Clean Water Act – Section 303(d) relating to Impaired Waters and Total Maximum Daily Loads (TMDLs).



Photo #12 - 2018

SAMPLING LOCATION RT-4

Sampling location at 40° 01' 27.04" North x 75° 20' 36.46" West
Elevation approximately 388 feet



Photo #13 - 2017

Photograph #13 and #14 – View of sampling location RT-4 looking northeast and upstream. Notice the smaller 1st order unnamed tributary entering from the east (right side of photograph – near orange bucket). Given site conditions, RETTEW believes the main stem of Valley Run is perennial and the smaller 1st order tributary entering from the east is intermittent and mainly comprised of stormwater.



Photo #14 - 2018



Photo #15 - 2017

Photograph #15 and #16 – View of sampling location RT-4 looking southwest and downstream. RT-4 is located within Macrone Park which underwent renovations on May 2017. There is signage within the park describing a “NO MOW” area within the riparian zone which serves to protect the present forest buffer.

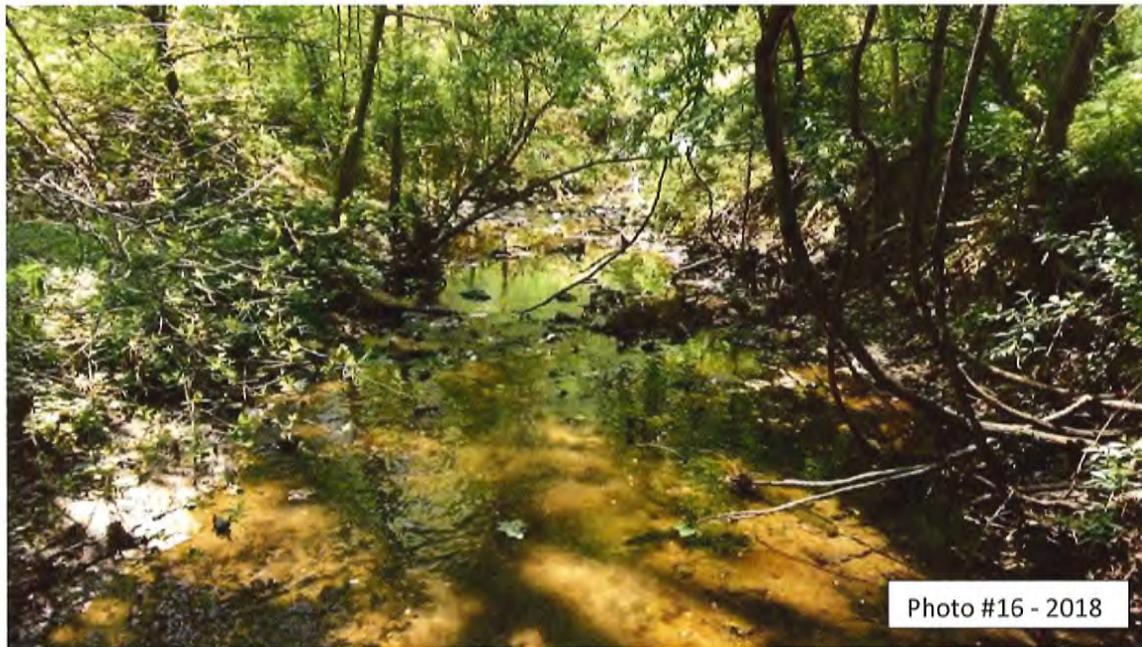


Photo #16 - 2018

Photograph #17 – Close-up photograph of a Blacknose dace (*Rhinichthys atratulus*) captured at RT-4. These dace were common on May 9, 2017 and 2018 within this reach of Valley Run though RETTEW did not find them just upstream at RT-3 (Brooklea Road).



V. MACROINVERTEBRATE METRICS

RETTEW Associates, Inc.
 Radnor Township - Valley Run Headwaters
 DATE: 5/9/2018
 PROJECT NO. & NAME: 101442012, Soils and Stream Assessment
 INVESTIGATORS: MAM ID: MAM

	Modified Becks Index	EPT Taxa Richness (TV 0-4)	Total Taxa Richness	Shannon Diversity Index	HBI Index	% Sensitive Individuals (TV 3 or less)
RT-4	0	2	8	1.355	5.38	0.00
RT-3	0	0	5	1.271	5.68	0.00

RT-4				
Metric	Standardization Equation	Observed Metric Value	Standardized Metric Score	Adjusted Standardized Metric Score (Maximum = 1,000)
Modified Becks Index	observed value / 38	0	0.000	0.000
EPT Taxa Richness	observed value / 19	2	0.105	0.105
Total Taxa Richness	observed value / 33	8	0.242	0.242
Shannon Diversity Index	observed value/2.86	1.355	0.474	0.474
Hilsenhoff Biotic Index	(10-observed value) / (10-1.89)	5.381	0.570	0.570
Percent Intolerant Individuals	observed value / 84.5	0.00	0.000	0.000
IBI Score=				23.18

RT-3				
Metric	Standardization Equation	Observed Metric Value	Standardized Metric Score	Adjusted Standardized Metric Score (Maximum = 1,000)
Modified Becks Index	observed value / 38	0	0.000	0.000
EPT Taxa Richness	observed value / 19	0	0.000	0.000
Total Taxa Richness	observed value / 33	5	0.152	0.152
Shannon Diversity Index	observed value/2.86	1.271	0.444	0.444
Hilsenhoff Biotic Index	(10-observed value) / (10-1.89)	5.682	0.532	0.532
Percent Intolerant Individuals	observed value / 84.5	0.00	0.000	0.000
IBI Score=				18.80

VI. FLOWING WATERBODY FIELD DATA FORMS

RT-1



COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT
FLOWING WATERBODY FIELD DATA FORM

(Information and comments for fields boxed in double lines are required database entries. Other fields are optional for personal use.)

Date-Time-Initials* Example 20040212-0312-XYZ	5/9/2018 - 0939 - MAM	Watershed Code (HUC)	Stream Code	Ch. 93 Use
	Date Time Initials	02040202505	00781	CWF, MF
Secondary Station ID	REACH CODE 02040202005189	Surveyed by:	MARK A. METZLER	

*Date as YYYYMMDD, time as military time, and your Initials uniquely identify the stream reach. **SWP Watershed** 03G

Survey Type

(1) Basin Survey, (2) Cause / Effect, (3) Fish Tissue, (4) Instream Comprehensive Evaluation [ICE], (5) Point-of-First-Use, (6) SERA, (7) Antidegradation [Special Protection], (8) Toxics, (10) Use Attainability, (11) WQN, (12) Limestone, (13) Low-gradient [Multihabitat]

Location

County:	DELAWARE	Municipality:	RADNOR TWP	Topo Quad:	NORRISTOWN
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Location Description: RT-1 SEPTA/PARKING LOT

Land Use

Residential:	15 %	Commercial:	30 %	Industrial:	5 %	Cropland:	%	Pasture:	%
Abd. Mining:	%	Old Fields:	3 %	Forest:	25 %	Other:	22 %		

Land Use Comments: SEPTA TRACK IS ADJACENT AT CULVERT DISCHARGE. THERE ARE OVERHEAD POWER LINES & IT IS IN A MOWED ROW.
 Canopy cover: open partly shaded mostly shaded fully shaded

Water Quality

Collector-sequence #	Field Meter Readings:					Bottle Notes (N-normal, MNF-metals non-filtered, MF-metals filtered, B-bac't, Others: indicate)
	Temp (°C)	DO (mg/l)	pH	Cond (µS/cm)	Alkalinity (mg/l)	
1.	17.27	10.2	7.45	2.80 ms/cm		36 ORP mV
2.						
3.						

Water Appearance/Odor Comments: (* see bottom of back for common descriptors)
 SIGNIFICANT ALGAE GROWTH

Findings

Not Impaired:	<input type="checkbox"/>	Impaired biology?	<input checked="" type="checkbox"/>	Impaired habitat?	<input checked="" type="checkbox"/>	Is impact localized?	<input type="checkbox"/>	Reevaluate designated use?	<input type="checkbox"/>
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Decision comments. Describe the rationale for your "Not Impaired" or "Impaired" decision; reach locations for use designation reevaluations; special condition comments; etc.:

IBI Score:	N/A	Total Habitat Score:	103
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NO FISH.

Macroinvertebrate sampling

Sampling method: Std. kick screen: D-frame: Surber: Other: method?: _____

Comments/Abundance Notes:

CRAYFISH
 DRAGONFLY LARVAE (ASH)
 DAMSELFLY LARVAE
 MAYFLY (EPH)
 SNAIL

Habitat Impairment Thresholds	Metric Score
#3 Riff/Run: embeddedness <i>or</i> #3 Glide/Pool: substrate character + #6 Sediment Deposition = 24 or less (20 or less for warm water, low gradient streams)	7
#9 Condition of Banks + #10 Bank Vegetation = 24 or less (20 or less for warm water, low gradient streams) 18 + 18	36
Total habitat score 140 or less for forested, cold water, high gradient streams (120 or less for warm water, low gradient streams)	103

Habitat Comments:

SAME/SIMILAR TO LAST YEAR - STREAM FLOWS THRU A CULVERT UNDER
 SEPTA TRACKS. SEEMS MORE LIKE A SPRING SEEP THAN A STREAM +
 IS HIGHLY VEGETATED. STREAM FLOWS THRU PEM WETLAND W/ ABUNDANT
 SENSITIVE FERN.

Special Condition

Use this block to describe conditions that justify attainment/impairment of stations with IBI score <63 and >53.

*Common descriptors: Water Odors - none normal sewage petroleum chemical other; Water Surface Oils - none slick sheen globs flecks; Turbidity - clear slight turbid opaque; NPS Pollution - no evidence some potential obvious; Sediment Odors - none normal sewage petroleum chemical anaerobic; Sediment Oils - absent slight moderate profuse; Deposits - none sludge sawdust paper fiber sand relict shells other. Are the undersides of stones deeply embedded black?



COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT
FLOWING WATERBODY FIELD DATA FORM

(Information and comments for fields boxed in double lines are required database entries. Other fields are optional for personal use.)

Date-Time-Initials* Example 20040212-0312-XYZ	5-9-2018 - 1020 - MAM	Watershed Code (HUC)	Stream Code	Ch. 93 Use
	Date Time Initials	020402020505	00781	CWF, MF
Secondary Station ID	REACH CODE 02040202005189	Surveyed by:	MARK A. METZLER	

*Date as YYYYMMDD, time as military time, and your initials uniquely identify the stream reach. SWP Watershed 03G

Survey Type

(1) Basin Survey, (2) Cause / Effect, (3) Fish Tissue, (4) Instream Comprehensive Evaluation [ICE], (5) Point-of-First-Use, (6) SERA, (7) Antidegradation [Special Protection], (8) Toxics, (10) Use Attainability, (11) WQN, (12) Limestone, (13) Low-gradient [Multihabitat]

Location

County:	DELAWARE	Municipality:	RADNOR TWP	Topo Quad:	NORRISTOWN
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Location Description: RT-2 ALDWYN TRIANGLE AREA

Land Use

Residential:	5 %	Commercial:	10 %	Industrial:	15 %	Cropland:	%	Pasture:	%
Abd. Mining:	%	Old Fields:	%	Forest:	30 %	Other:	40 %	LAWN	

Land Use Comments:

LAWNS, ROADS, BUILDINGS & A PARKING LOT, & FOREST W/ A PEM WETLAND UPSTREAM FROM SAMPLE POINT.

Canopy cover: open partly shaded mostly shaded fully shaded

Water Quality

Collector-sequence #	Field Meter Readings:					Bottle Notes (N-normal, MNF-metals non-filtered, MF-metals filtered, B-bac't, Others: indicate)
	Temp. (°C)	DO (mg/l)	pH	Cond. (µS/cm)	Alkalinity mg/l	
1.	17.55	10.2	8.0	264		124 ORP mV
2.						
3.						

Water Appearance/Odor Comments: (* see bottom of back for common descriptors)

SEDIMENT/SAND LADEN W/ PLASTIC TRASH (BOTTLES)

Findings

Not Impaired:	<input type="checkbox"/>	Impaired biology?	<input checked="" type="checkbox"/>	Impaired habitat?	<input checked="" type="checkbox"/>	Is impact localized?	<input type="checkbox"/>	Reevaluate designated use?	<input type="checkbox"/>
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Decision comments. Describe the rationale for your "Not Impaired" or "Impaired" decision; reach locations for use designation reevaluations; special condition comments; etc.:

IBI Score:	N/A	Total Habitat Score:	138
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NO FISH
 HEAVILY IMPACTED BY UPSTREAM LAND USE

Macroinvertebrate sampling

Sampling method: Std. kick screen: D-frame: Surber: Other: method?: _____

Comments/Abundance Notes:

SNAIL
 DRAGONFLY LARVAE (ASH)

Habitat Impairment Thresholds	Metric Score
#3 Riff/Run: embeddedness <u>or</u> #3 Glide/Pool: substrate character + #6 Sediment Deposition = 24 or less (20 or less for warm water, low gradient streams)	13
#9 Condition of Banks + #10 Bank Vegetation = 24 or less (20 or less for warm water, low gradient streams)	37
Total habitat score 140 or less for forested, cold water, high gradient streams (120 or less for warm water, low gradient streams)	138

Habitat Comments:

SIMILAR TO PREVIOUS YEAR. WOULD BE A 1ST ORDER, COLD WATER STREAM INFLUENCED BY SPRING FLOW & WETLANDS UPSTREAM IF IT WERE IN A NATURAL SETTING. SEEMS INTERMITTENT.

Special Condition

Use this block to describe conditions that justify attainment/impairment of stations with IBI score <63 and >53.

*Common descriptors: Water Odors - none normal sewage petroleum chemical other; Water Surface Oils - none slick sheen globs flecks; Turbidity - clear slight turbid opaque; NPS Pollution - no evidence some potential obvious; Sediment Odors - none normal sewage petroleum chemical anaerobic; Sediment Oils - absent slight moderate profuse; Deposits - none sludge sawdust paper fiber sand relic shells other. Are the undersides of stones deeply embedded black?



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

RT-3

FLOWING WATERBODY FIELD DATA FORM

(Information and comments for fields boxed in double lines are required database entries. Other fields are optional for personal use.)

Date-Time-Initials* Example 20040212-0312-XYZ	5-9-2018 - 1053 - MAM	Watershed Code (HUC)	Stream Code	Ch. 93 Use
Date	Time	Initials		
		020402020505	00781	CWF, MF
Secondary Station ID	REACH CODE 02040202005189	Surveyed by:	MARK A. METZLER	

*Date as YYYYMMDD, time as military time, and your initials uniquely identify the stream reach.

SWP Watershed 03G

Survey Type

(1) Basin Survey, (2) Cause / Effect, (3) Fish Tissue, (4) Instream Comprehensive Evaluation [ICE], (5) Point-of-First-Use, (6) SERA, (7) Antidegradation [Special Protection], (8) Toxics, (10) Use Attainability, (11) WQN, (12) Limestone, (13) Low-gradient [Multihabitat]

Location

County: DELAWARE **Municipality:** RADNOR TWP **Topo Quad:** NORRISTOWN

Location Description: RT-3 BROOKLEA RD

Land Use

Residential:	100 %	Commercial:	%	Industrial:	%	Cropland:	%	Pasture:	%
Abd. Mining:	%	Old Fields:	%	Forest:	%	Other:	%		

Land Use Comments:

LOCATED IN A RESIDENTIAL NEIGHBORHOOD W/ SIGNIFICANT LAWN AREAS, TREES + SHRUBS

Canopy cover: open partly shaded mostly shaded fully shaded

Water Quality

Collector-sequence #	Field Meter Readings:					Bottle Notes (N-normal, MNF-metals non-filtered, MF-metals filtered, B-bac't, Others: indicate)
	Temp (°C)	DO (mg/l)	pH	Cond. (µS/cm)	Alkalinity (mg/l)	
1.	18.25	9.8	8.19	2.14		129 ORP mV
2.						
3.						

Water Appearance/Odor Comments: (* see bottom of back for common descriptors)

ENTRENCHED CHANNEL, SAND/SILT (SEDIMENT) LADEN

Findings

Not Impaired:	<input type="checkbox"/>	Impaired biology?	<input checked="" type="checkbox"/>	Impaired habitat?	<input checked="" type="checkbox"/>	Is impact localized?	<input type="checkbox"/>	Reevaluate designated use?	<input type="checkbox"/>
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Decision comments. Describe the rationale for your "Not Impaired" or "Impaired" decision; reach locations for use designation reevaluations; special condition comments; etc.:

IBI Score: 14.84 **Total Habitat Score:** 119

NO FISH

Macroinvertebrate sampling

Sampling method: Std. kick screen: D-frame: Surber: Other: method?: _____

Comments/Abundance Notes:

DAMSEFLY
FRESHWATER SHRIMP

Habitat Impairment Thresholds	Metric Score
#3 Riff/Run: embeddedness <i>or</i> #3 Glide/Pool: substrate character + #6 Sediment Deposition = 24 or less (20 or less for warm water, low gradient streams)	17
#9 Condition of Banks + #10 Bank Vegetation = 24 or less (20 or less for warm water, low gradient streams)	31
Total habitat score 140 or less for forested, cold water, high gradient streams (120 or less for warm water, low gradient streams)	119

Habitat Comments:

SIMILAR / SAME AS LAST YEAR: SIGNIFICANT STORMWATER INFLUENCE

Special Condition

Use this block to describe conditions that justify attainment/impairment of stations with IBI score <63 and >53.

*Common descriptors: Water Odors - none normal sewage petroleum chemical other; Water Surface Oils - none slick sheen globs flecks; Turbidity - clear slight turbid opaque; NPS Pollution - no evidence some potential obvious; Sediment Odors - none normal sewage petroleum chemical anaerobic; Sediment Oils - absent slight moderate profuse; Deposits - none sludge sawdust paper fiber sand relict shells other.
Are the undersides of stones deeply embedded black?

RT-4



COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT
FLOWING WATERBODY FIELD DATA FORM

(Information and comments for fields boxed in double lines are required database entries. Other fields are optional for personal use.)

Date-Time-Initials* Example 20040212-0312-XYZ	5-9-2018 - 1136 - MAM	Watershed Code (HUC)	Stream Code	Ch. 93 Use	
	Date Time Initials	020402020505	00781	CWF, MF	
Secondary Station ID	REACH CODE 02040202.005189	Surveyed by:	MARK H. METZLER		
*Date as YYYYMMDD, time as military time, and your initials uniquely identify the stream reach.			SWP Watershed	036	
Survey Type					
(1) Basin Survey, (2) Cause / Effect, (3) Fish Tissue, (4) Instream Comprehensive Evaluation [ICE], (5) Point-of-First-Use, (6) SERA, (7) Antidegradation [Special Protection], (8) Toxics, (10) Use Attainability, (11) WQN, (12) Limestone, (13) Low-gradient [Multihabitat]					
Location					
County:	DELAWARE	Municipality:	RADNOR TWP	Topo Quad: NORRISTOWN	
Location Description:	RT-4 MACRONE PARK NEAR CONFLUENCE W/ SMALLER DRAINAGE WITHIN THE PARK				
Land Use					
Residential:	50 %	Commercial:	%	Industrial: %	
Abd. Mining:	%	Old Fields:	%	Forest: %	
				Cropland: %	
				Pasture: %	
				Other: 50 %	
				PARKLAND	
Land Use Comments:	MACRONE PARK				
Canopy cover:	open	partly shaded	mostly shaded	fully shaded	
Water Quality					
Collector-sequence #	Field Meter Readings:				Bottle Notes (N-normal, MNF-metals non-filtered, MF-metals filtered, B-bac't, Others: indicate)
	Temp (°C)	DO (mg/l)	pH	Cond. (µS/cm)	Alkalinity (mg/l)
1.	17.68	10.0	7.82	1.16	
2.					
3.					
186 ORP mV					
Water Appearance/Odor Comments: (* see bottom of back for common descriptors) CLEAR, MOSTLY FREE OF SEDIMENT					
Findings					
Not Impaired:	<input type="checkbox"/>	Impaired biology?	<input checked="" type="checkbox"/>	Impaired habitat?	<input checked="" type="checkbox"/>
Is impact localized?	<input type="checkbox"/>	Reevaluate designated use?	<input type="checkbox"/>		
Decision comments. Describe the rationale for your "Not Impaired" or "Impaired" decision; reach locations for use designation reevaluations; special condition comments; etc.:					
IBI Score:	31.76	Total Habitat Score:	168		
BLACKNOSE DACE (RHINICHTHYS ATRATULUS)					

Macroinvertebrate sampling

Sampling method: Std. kick screen: D-frame: Surber: Other: method?: _____

Comments/Abundance Notes:

Habitat Impairment Thresholds	Metric Score
#3 Riff/Run: embeddedness <i>or</i> #3 Glide/Pool: substrate character + #6 Sediment Deposition = 24 or less (20 or less for warm water, low gradient streams)	29
#9 Condition of Banks + #10 Bank Vegetation = 24 or less (20 or less for warm water, low gradient streams)	24
Total habitat score 140 or less for forested, cold water, high gradient streams (120 or less for warm water, low gradient streams)	168

Habitat Comments: SIMILAR TO /SAME AS PREVIOUS YEAR: NO-MOW ZONE IS PRESENT IN THE RIPARIAN ZONE, PROTECTING A FOREST BUFFER. CHANNEL REMAINS ENTRENCHED, W/ SIGNS OF FLASH + STORMWATER FLOWS.

Special Condition

Use this block to describe conditions that justify attainment/impairment of stations with IBI score <63 and >53.

*Common descriptors: Water Odors - none normal sewage petroleum chemical other; Water Surface Oils - none slick sheen globs flecks; Turbidity - clear slight turbid opaque; NPS Pollution - no evidence some potential obvious; Sediment Odors - none normal sewage petroleum chemical anaerobic; Sediment Oils - absent slight moderate profuse; Deposits - none sludge sawdust paper fiber sand relict shells other.
Are the undersides of stones deeply embedded black?

VII. WATER QUALITY NETWORK – HABITAT ASSESSMENT FORMS



103

**WATER QUALITY NETWORK
HABITAT ASSESSMENT**

REACH CODE 02040202005189

WATERBODY NAME HEADWATERS OF VALLEY CREEK STR CODE/RMI 00781

STATION NUMBER RT-1 LOCATION SEPTA / PARKING LOT

DATE 5-9-2018 TIME 0939

AQUATIC ECOREGION _____ COUNTY DELAWARE

INVESTIGATORS MARK A METZLER & AMANDA C.S. ZUCKERMAN

FORM COMPLETED BY SAME **RIFFLE/RUN PREVALENCE**

Habitat Parameter	Category			
	Optimal	Suboptimal	Marginal	Poor
1. Instream Cover (Fish) SCORE <u>6</u>	Greater than 50% mix of boulder, cobble, submerged logs, undercut banks, or other stable habitat. 20 19 18 17 16	30-50% mix of boulder, cobble, or other stable habitat; adequate habitat. 15 14 13 12 11	10-30% mix of boulder, cobble, or other stable habitat; habitat availability less than desirable. 10 9 8 7 (6)	Less than 10% mix of boulder, cobble, or other stable habitat; lack of habitat is obvious. 5 4 3 2 1
2. Epifaunal Substrate SCORE <u>4</u>	Well-developed riffle and run, riffle is as wide as stream and length extends two times the width of stream; abundance of cobble. 20 19 18 17 16	Riffle is as wide as stream but length is less than two times width; abundance of cobble; boulders and gravel common. 15 14 13 12 11	Run area may be lacking; riffle not as wide as stream and its length is less than two times the stream width; gravel or large boulders and bedrock prevalent; some cobble present. 10 9 8 7 6	Riffles or run virtually nonexistent; large boulders and bedrock prevalent; cobble lacking. 5 (4) 3 2 1
3. Embeddedness SCORE <u>3</u>	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. 20 19 18 17 16	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment. 15 14 13 12 11	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment. 10 9 8 7 6	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment. 5 4 (3) 2 1
4. Velocity/Depth Regimes SCORE <u>5</u>	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). 20 19 18 17 16	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes). 15 14 13 12 11	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score lower than if missing other regimes). 10 9 8 7 6	Dominated by 1 velocity/depth regime (usually slow-deep). (5) 4 3 2 1
5. Channel Alteration SCORE <u>6</u>	No channelization or dredging present. 20 19 18 17 16	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present. 15 14 13 12 11	New embankments present on both banks; and 40-80% of stream reach channelized and disrupted. 10 9 8 7 (6)	Banks shored gabion or cement; over 80% of the stream reach channelized and disrupted. 5 4 3 2 1
Total Side 1 <u>24</u>				

RIFFLE/RUN PREVALENCE

Habitat Parameter	Category			
	Optimal	Suboptimal	Marginal	Poor
6. Sediment Deposition SCORE <u>4</u>	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition. 20 19 18 17 16	Some new increase in bar formation, mostly from coarse gravel; 5-30% of the bottom affected; slight deposition in pools. 15 14 13 12 11	Moderate deposition of new gravel, coarse sand on old and new bars; 30-50% of the bottom affected; sediment deposits at obstruction, constriction, and bends; moderate deposition of pools prevalent. 10 9 8 7 6	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition. 5 (4) 3 2 1
7. Frequency of Riffles SCORE <u>5</u>	Occurrence of riffles relatively frequent; distance between riffles divided by the width of the stream equals 5 to 7; variety of habitat. 20 19 18 17 16	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream equals 7 to 15. 15 14 13 12 11	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25. 10 9 8 7 6	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is between ratio >25. (5) 4 3 2 1
8. Channel Flow Status SCORE <u>17</u>	Water reaches base of both lower banks and minimal amount of channel substrate is exposed. 20 19 18 (17) 16	Water fills > 75% of the available channel; or <25% of channel substrate is exposed. 15 14 13 12 11	Water fills 25-75% of the available channel and/or riffle substrates are mostly exposed. 10 9 8 7 6	Very little water in channel and mostly present as standing pools. 5 4 3 2 1
9. Condition of Banks SCORE <u>18</u>	Banks stable; no evidence of erosion or bank failure. 20 19 (18) 17 16	Moderately stable; infrequent, small areas of erosion mostly healed over. 15 14 13 12 11	Moderately unstable; up to 60% of banks in reach have areas of erosion. 10 9 8 7 6	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; on side slopes, 60-100% of bank has erosional scars. 5 4 3 2 1
10. Bank Vegetative Protection SCORE <u>18</u>	More than 90% of the streambank surface covered by vegetation. 20 19 (18) 17 16	70-90% of the streambank surface covered by vegetation. 15 14 13 12 11	50-70% of the streambank surfaces covered by vegetation. 10 9 8 7 6	Less than 50% of the streambank surface covered by vegetation. 5 4 3 2 1
11. Grazing or Other Disruptive Pressure SCORE <u>11</u>	Vegetative disruption, through grazing or mowing, minimal or not evident; almost all plants allowed to grow naturally. 20 19 18 17 16	Disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining. 15 14 13 12 (11)	Disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining. 10 9 8 7 6	Disruption of vegetation is very high; vegetation has been removed to 2 inches or less in average stubble height. 5 4 3 2 1
12. Riparian Vegetative Zone Width SCORE <u>6</u>	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone. 20 19 18 17 16	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally. 15 14 13 12 11	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal. 10 9 8 7 (6)	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities. 5 4 3 2 1
Total Side 2 <u>79</u>				
Total Score <u>103</u>				



SCORE
138

**WATER QUALITY NETWORK
HABITAT ASSESSMENT**

REACH CODE 02040202.005189

WATERBODY NAME HEADWATERS OF VALLEY CREEK STR CODE/RMI 00781

STATION NUMBER RT-2 LOCATION ALDWYN TRIANGLE AREA

DATE 5-9-2018 TIME 1020

AQUATIC ECOREGION _____ COUNTY DELAWARE

INVESTIGATORS MARK A. METZLER, AMANDA C.S. ZUCKERMAN

FORM COMPLETED BY SAME **RIFFLE/RUN PREVALENCE**

Habitat Parameter	Category			
	Optimal	Suboptimal	Marginal	Poor
1. Instream Cover (Fish) SCORE <u>5</u>	Greater than 50% mix of boulder, cobble, submerged logs, undercut banks, or other stable habitat. 20 19 18 17 16	30-50% mix of boulder, cobble, or other stable habitat; adequate habitat. 15 14 13 12 11	10-30% mix of boulder, cobble, or other stable habitat; habitat availability less than desirable. 10 9 8 7 6	Less than 10% mix of boulder, cobble, or other stable habitat; lack of habitat is obvious. 5 4 3 2 1
2. Epifaunal Substrate SCORE <u>11</u>	Well-developed riffle and run, riffle is as wide as stream and length extends two times the width of stream; abundance of cobble. 20 19 18 17 16	Riffle is as wide as stream but length is less than two times width; abundance of cobble; boulders and gravel common. 15 14 13 12 11	Run area may be lacking; riffle not as wide as stream and its length is less than two times the stream width; gravel or large boulders and bedrock prevalent; some cobble present. 10 9 8 7 6	Riffles or run virtually nonexistent; large boulders and bedrock prevalent; cobble lacking. 5 4 3 2 1
3. Embeddedness SCORE <u>5</u>	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. 20 19 18 17 16	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment. 15 14 13 12 11	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment. 10 9 8 7 6	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment. 5 4 3 2 1
4. Velocity/Depth Regimes SCORE <u>8</u>	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). 20 19 18 17 16	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes). 15 14 13 12 11	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score lower than if missing other regimes). 10 9 8 7 6	Dominated by 1 velocity/depth regime (usually slow-deep). 5 4 3 2 1
5. Channel Alteration SCORE <u>12</u>	No channelization or dredging present. 20 19 18 17 16	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present. 15 14 13 12 11	New embankments present on both banks; and 40-80% of stream reach channelized and disrupted. 10 9 8 7 6	Banks shored gabion or cement; over 80% of the stream reach channelized and disrupted. 5 4 3 2 1
Total Side 1 <u>41</u>				

RIFFLE/RUN PREVALENCE

Habitat Parameter	Category			
	Optimal	Suboptimal	Marginal	Poor
6. Sediment Deposition SCORE <u>8</u>	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition. 20 19 18 17 16	Some new increase in bar formation, mostly from coarse gravel; 5-30% of the bottom affected; slight deposition in pools. 15 14 13 12 11	Moderate deposition of new gravel, coarse sand on old and new bars; 30-50% of the bottom affected; sediment deposits at obstruction, constriction, and bends; moderate deposition of pools prevalent. 10 9 8 7 6	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition. 5 4 3 2 1
7. Frequency of Riffles SCORE <u>10</u>	Occurrence of riffles relatively frequent; distance between riffles divided by the width of the stream equals 5 to 7; variety of habitat. 20 19 18 17 16	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream equals 7 to 15. 15 14 13 12 11	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25. 10 9 8 7 6	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is between ratio >25. 5 4 3 2 1
8. Channel Flow Status SCORE <u>14</u>	Water reaches base of both lower banks and minimal amount of channel substrate is exposed. 20 19 18 17 16	Water fills > 75% of the available channel; or <25% of channel substrate is exposed. 15 14 13 12 11	Water fills 25-75% of the available channel and/or riffle substrates are mostly exposed. 10 9 8 7 6	Very little water in channel and mostly present as standing pools. 5 4 3 2 1
9. Condition of Banks SCORE <u>18</u>	Banks stable; no evidence of erosion or bank failure. 20 19 18 17 16	Moderately stable; infrequent, small areas of erosion mostly healed over. 15 14 13 12 11	Moderately unstable; up to 60% of banks in reach have areas of erosion. 10 9 8 7 6	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; on side slopes, 60-100% of bank has erosional scars. 5 4 3 2 1
10. Bank Vegetative Protection SCORE <u>19</u>	More than 90% of the streambank surface covered by vegetation. 20 19 18 17 16	70-90% of the stream-bank surface covered by vegetation. 15 14 13 12 11	50-70% of the stream-bank surfaces covered by vegetation. 10 9 8 7 6	Less than 50% of the streambank surface covered by vegetation. 5 4 3 2 1
11. Grazing or Other Disruptive Pressure SCORE <u>12</u>	Vegetative disruption, through grazing or mowing, minimal or not evident; almost all plants allowed to grow naturally. 20 19 18 17 16	Disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining. 15 14 13 12 11	Disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining. 10 9 8 7 6	Disruption of vegetation is very high; vegetation has been removed to 2 inches or less in average stubble height. 5 4 3 2 1
12. Riparian Vegetative Zone Width SCORE <u>16</u>	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone 20 19 18 17 16	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally. 15 14 13 12 11	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal. 10 9 8 7 6	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities. 5 4 3 2 1
Total Side 2 <u>97</u>				
Total Score <u>138</u>				



SCORE
119

WATER QUALITY NETWORK HABITAT ASSESSMENT

REACH CODE 02040202 005189

WATERBODY NAME HEADWATERS OF VALLEY CREEK STR CODE/RMI 00781

STATION NUMBER RT-3 LOCATION BROOKLEA ROAD

DATE 5-9-2018 TIME 1053

AQUATIC ECOREGION _____ COUNTY DELAWARE

INVESTIGATORS MARK A. METZLER + AMANDA C.S. ZUCKERMAN

FORM COMPLETED BY SAMZ RIFFLE/RUN PREVALENCE

Habitat Parameter	Category			
	Optimal	Suboptimal	Marginal	Poor
1. Instream Cover (Fish) SCORE <u>9</u>	Greater than 50% mix of boulder, cobble, submerged logs, undercut banks, or other stable habitat. 20 19 18 17 16	30-50% mix of boulder, cobble, or other stable habitat; adequate habitat. 15 14 13 12 11	10-30% mix of boulder, cobble, or other stable habitat; habitat availability less than desirable. 10 9 8 7 6	Less than 10% mix of boulder, cobble, or other stable habitat; lack of habitat is obvious. 5 4 3 2 1
2. Epifaunal Substrate SCORE <u>10</u>	Well-developed riffle and run, riffle is as wide as stream and length extends two times the width of stream; abundance of cobble. 20 19 18 17 16	Riffle is as wide as stream but length is less than two times width; abundance of cobble; boulders and gravel common. 15 14 13 12 11	Run area may be lacking; riffle not as wide as stream and its length is less than two times the stream width; gravel or large boulders and bedrock prevalent; some cobble present. 10 9 8 7 6	Riffles or run virtually nonexistent; large boulders and bedrock prevalent; cobble lacking. 5 4 3 2 1
3. Embeddedness SCORE <u>9</u>	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. 20 19 18 17 16	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment. 15 14 13 12 11	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment. 10 9 8 7 6	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment. 5 4 3 2 1
4. Velocity/Depth Regimes SCORE <u>10</u>	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). 20 19 18 17 16	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes). 15 14 13 12 11	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score lower than if missing other regimes). 10 9 8 7 6	Dominated by 1 velocity/depth regime (usually slow-deep). 5 4 3 2 1
5. Channel Alteration SCORE <u>7</u>	No channelization or dredging present. 20 19 18 17 16	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present. 15 14 13 12 11	New embankments present on both banks; and 40-80% of stream reach channelized and disrupted. 10 9 8 7 6	Banks shored gabion or cement; over 80% of the stream reach channelized and disrupted. 5 4 3 2 1
Total Side 1 <u>45</u>				

RIFFLE/RUN PREVALENCE

Habitat Parameter	Category			
	Optimal	Suboptimal	Marginal	Poor
6. Sediment Deposition SCORE <u>8</u>	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition. 20 19 18 17 16	Some new increase in bar formation, mostly from coarse gravel; 5-30% of the bottom affected; slight deposition in pools. 15 14 13 12 11	Moderate deposition of new gravel, coarse sand on old and new bars; 30-50% of the bottom affected; sediment deposits at obstruction, constriction, and bends; moderate deposition of pools prevalent. 10 9 8 7 6	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition. 5 4 3 2 1
7. Frequency of Riffles SCORE <u>8</u>	Occurrence of riffles relatively frequent; distance between riffles divided by the width of the stream equals 5 to 7; variety of habitat. 20 19 18 17 16	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream equals 7 to 15. 15 14 13 12 11	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25. 10 9 8 7 6	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is between ratio >25. 5 4 3 2 1
8. Channel Flow Status SCORE <u>13</u>	Water reaches base of both lower banks and minimal amount of channel substrate is exposed. 20 19 18 17 16	Water fills > 75% of the available channel; or <25% of channel substrate is exposed. 15 14 13 12 11	Water fills 25-75% of the available channel and/or riffle substrates are mostly exposed. 10 9 8 7 6	Very little water in channel and mostly present as standing pools. 5 4 3 2 1
9. Condition of Banks SCORE <u>14</u>	Banks stable; no evidence of erosion or bank failure. 20 19 18 17 16	Moderately stable; infrequent, small areas of erosion mostly healed over. 15 14 13 12 11	Moderately unstable; up to 60% of banks in reach have areas of erosion. 10 9 8 7 6	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; on side slopes, 60-100% of bank has erosional scars. 5 4 3 2 1
10. Bank Vegetative Protection SCORE <u>17</u>	More than 90% of the streambank surface covered by vegetation. 20 19 18 17 16	70-90% of the streambank surface covered by vegetation. 15 14 13 12 11	50-70% of the streambank surfaces covered by vegetation. 10 9 8 7 6	Less than 50% of the streambank surface covered by vegetation. 5 4 3 2 1
11. Grazing or Other Disruptive Pressure SCORE <u>8</u>	Vegetative disruption, through grazing or mowing, minimal or not evident; almost all plants allowed to grow naturally. 20 19 18 17 16	Disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining. 15 14 13 12 11	Disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining. 10 9 8 7 6	Disruption of vegetation is very high; vegetation has been removed to 2 inches or less in average stubble height. 5 4 3 2 1
12. Riparian Vegetative Zone Width SCORE <u>6</u>	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone. 20 19 18 17 16	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally. 15 14 13 12 11	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal. 10 9 8 7 6	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities. 5 4 3 2 1
Total Side 2 <u>74</u>				
Total Score <u>119</u>				



SCORE
168

WATER QUALITY NETWORK HABITAT ASSESSMENT

WATERBODY NAME HEADWATERS OF VALLEY CREEK REACH CODE 02040202005189
 STATION NUMBER RT-4 LOCATION MACRONE PARK
 DATE 5-9-2018 TIME 1136
 AQUATIC ECOREGION _____ COUNTY DELAWARE
 INVESTIGATORS MARK A. METZLER + AMANDA C.S. ZUCKERMAN
 FORM COMPLETED BY SAME RIFFLER/RUN PREVALENCE

Habitat Parameter	Category			
	Optimal	Suboptimal	Marginal	Poor
1. Instream Cover (Fish) SCORE <u>13</u>	Greater than 50% mix of boulder, cobble, submerged logs, undercut banks, or other stable habitat. 20 19 18 17 16	30-50% mix of boulder, cobble, or other stable habitat; adequate habitat. 15 14 <u>13</u> 12 11	10-30% mix of boulder, cobble, or other stable habitat; habitat availability less than desirable. 10 9 8 7 6	Less than 10% mix of boulder, cobble, or other stable habitat; lack of habitat is obvious. 5 4 3 2 1
2. Epifaunal Substrate SCORE <u>15</u>	Well-developed riffle and run, riffle is as wide as stream and length extends two times the width of stream; abundance of cobble. 20 19 18 17 16	Riffle is as wide as stream but length is less than two times width; abundance of cobble; boulders and gravel common. <u>15</u> 14 13 12 11	Run area may be lacking; riffle not as wide as stream and its length is less than two times the stream width; gravel or large boulders and bedrock prevalent; some cobble present. 10 9 8 7 6	Riffles or run virtually nonexistent; large boulders and bedrock prevalent; cobble lacking. 5 4 3 2 1
3. Embeddedness SCORE <u>15</u>	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. 20 19 18 17 16	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment. <u>15</u> 14 13 12 11	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment. 10 9 8 7 6	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment. 5 4 3 2 1
4. Velocity/Depth Regimes SCORE <u>15</u>	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). 20 19 18 17 16	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes). <u>15</u> 14 13 12 11	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score lower than if missing other regimes). 10 9 8 7 6	Dominated by 1 velocity/depth regime (usually slow-deep). 5 4 3 2 1
5. Channel Alteration SCORE <u>14</u>	No channelization or dredging present. 20 19 18 17 16	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present. 15 <u>14</u> 13 12 11	New embankments present on both banks; and 40-80% of stream reach channelized and disrupted. 10 9 8 7 6	Banks shored gabion or cement; over 80% of the stream reach channelized and disrupted. 5 4 3 2 1
Total Side 1 <u>72</u>				

RIFFLE/RUN PREVALENCE

Habitat Parameter	Category																			
	Optimal					Suboptimal					Marginal					Poor				
6. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.					Some new increase in bar formation, mostly from coarse gravel; 5-30% of the bottom affected; slight deposition in pools.					Moderate deposition of new gravel, coarse sand on old and new bars; 30-50% of the bottom affected; sediment deposits at obstruction, constriction, and bends; moderate deposition of pools prevalent.					Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.				
SCORE <u>14</u>	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
7. Frequency of Riffles	Occurrence of riffles relatively frequent; distance between riffles divided by the width of the stream equals 5 to 7; variety of habitat.					Occurrence of riffles infrequent; distance between riffles divided by the width of the stream equals 7 to 15.					Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.					Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is between ratio >25.				
SCORE <u>15</u>	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
8. Channel Flow Status	Water reaches base of both lower banks and minimal amount of channel substrate is exposed.					Water fills > 75% of the available channel; or <25% of channel substrate is exposed.					Water fills 25-75% of the available channel and/or riffle substrates are mostly exposed.					Very little water in channel and mostly present as standing pools.				
SCORE <u>16</u>	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
9. Condition of Banks	Banks stable; no evidence of erosion or bank failure.					Moderately stable; infrequent, small areas of erosion mostly healed over.					Moderately unstable; up to 60% of banks in reach have areas of erosion.					Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; on side slopes, 60-100% of bank has erosional scars.				
SCORE <u>11</u>	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
10. Bank Vegetative Protection	More than 90% of the streambank surface covered by vegetation.					70-90% of the streambank surface covered by vegetation.					50-70% of the streambank surfaces covered by vegetation.					Less than 50% of the streambank surface covered by vegetation.				
SCORE <u>13</u>	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
11. Grazing or Other Disruptive Pressure	Vegetative disruption, through grazing or mowing, minimal or not evident; almost all plants allowed to grow naturally.					Disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.					Disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.					Disruption of vegetation is very high; vegetation has been removed to 2 inches or less in average stubble height.				
SCORE <u>15</u>	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
12. Riparian Vegetative Zone Width	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.					Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.					Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.					Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.				
SCORE <u>12</u>	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Total Side 2 <u>96</u>																				
Total Score <u>168</u>																				

VIII. ESC ANALYTICAL REPORT – WATER AND SEDIMENT CHEMISTRY RESULTS

May 22, 2018

RETTEW

Sample Delivery Group: L992686
Samples Received: 05/10/2018
Project Number:
Description: Radnor TWP

Report To: Mr. Mark Metzler
3020 Columbia Avenue
Lancaster, PA 17603

Entire Report Reviewed By:



T. Alan Harvill
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.

RT1 L992686-01 WW Collected by: Mark A Metzler
Collected date/time: 05/09/18 09:39
Received date/time: 05/10/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG110606	1	05/13/18 09:09	05/13/18 09:30	BS
Wet Chemistry by Method 1664A	WG110240	1	05/11/18 16:39	05/12/18 00:32	ALA
Wet Chemistry by Method 2130 B-2011	WG1109418	1	05/10/18 15:35	05/10/18 15:35	MLW
Wet Chemistry by Method 2310 B-2011	WG110950	1	05/17/18 00:42	05/17/18 00:42	MZ
Wet Chemistry by Method 2320 B-2011	WG1109719	1	05/11/18 18:59	05/11/18 18:59	GB
Wet Chemistry by Method 300.0	WG1109596	1	05/10/18 23:52	05/10/18 23:52	MAJ
Wet Chemistry by Method 300.0	WG1109596	20	05/11/18 00:07	05/11/18 00:07	MAJ
Wet Chemistry by Method 365.4	WG1109920	1	05/10/18 16:23	05/11/18 09:00	KK
Wet Chemistry by Method 4500H+ B-2011	WG1109937	1	05/11/18 10:30	05/11/18 10:30	ITB
Wet Chemistry by Method 45000 G-2011	WG111700	1	05/10/18 15:28	05/10/18 15:28	JB
Wet Chemistry by Method 5310 B-2011	WG111305	1	05/15/18 15:33	05/15/18 15:33	SJM
Metals (ICP) by Method 200.7	WG1109700	1	05/11/18 09:30	05/13/18 12:00	WBD
Volatile Organic Compounds (GC) by Method RSK175	WG110930	1	05/14/18 13:12	05/14/18 13:12	BG

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

RT2 L992686-02 WW Collected by: Mark A Metzler
Collected date/time: 05/09/18 10:20
Received date/time: 05/10/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG110606	1	05/13/18 09:09	05/13/18 09:30	BS
Wet Chemistry by Method 1664A	WG110240	1	05/11/18 16:39	05/12/18 00:32	ALA
Wet Chemistry by Method 2130 B-2011	WG1109418	1	05/10/18 15:35	05/10/18 15:35	MLW
Wet Chemistry by Method 2310 B-2011	WG110950	1	05/17/18 00:42	05/17/18 00:42	MZ
Wet Chemistry by Method 2320 B-2011	WG1109719	1	05/11/18 19:06	05/11/18 19:06	GB
Wet Chemistry by Method 300.0	WG1109596	1	05/11/18 00:22	05/11/18 00:22	MAJ
Wet Chemistry by Method 300.0	WG1109596	20	05/11/18 01:09	05/11/18 01:09	MAJ
Wet Chemistry by Method 365.4	WG1109920	1	05/10/18 16:24	05/11/18 09:01	KK
Wet Chemistry by Method 4500H+ B-2011	WG1109937	1	05/11/18 10:30	05/11/18 10:30	ITB
Wet Chemistry by Method 45000 G-2011	WG111697	1	05/15/18 14:03	05/15/18 14:03	PB
Wet Chemistry by Method 5310 B-2011	WG111305	1	05/15/18 15:51	05/15/18 15:51	SJM
Metals (ICP) by Method 200.7	WG1109700	1	05/11/18 09:30	05/13/18 12:03	WBD
Volatile Organic Compounds (GC) by Method RSK175	WG110930	1	05/14/18 13:14	05/14/18 13:14	BG

RT3 L992686-03 WW Collected by: Mark A Metzler
Collected date/time: 05/09/18 10:53
Received date/time: 05/10/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG110606	1	05/13/18 09:09	05/13/18 09:30	BS
Wet Chemistry by Method 1664A	WG110240	1	05/11/18 16:39	05/12/18 00:33	ALA
Wet Chemistry by Method 2130 B-2011	WG1109418	1	05/10/18 15:35	05/10/18 15:35	MLW
Wet Chemistry by Method 2310 B-2011	WG110950	1	05/17/18 00:42	05/17/18 00:42	MZ
Wet Chemistry by Method 2320 B-2011	WG1109719	1	05/11/18 19:13	05/11/18 19:13	GB
Wet Chemistry by Method 300.0	WG1109596	1	05/11/18 01:24	05/11/18 01:24	MAJ
Wet Chemistry by Method 300.0	WG1109596	20	05/11/18 01:40	05/11/18 01:40	MAJ
Wet Chemistry by Method 365.4	WG1109920	1	05/10/18 16:24	05/11/18 09:03	KK
Wet Chemistry by Method 4500H+ B-2011	WG1109937	1	05/11/18 10:30	05/11/18 10:30	ITB
Wet Chemistry by Method 45000 G-2011	WG111697	1	05/15/18 14:06	05/15/18 14:06	PB
Wet Chemistry by Method 5310 B-2011	WG111305	1	05/15/18 16:24	05/15/18 16:24	SJM
Metals (ICP) by Method 200.7	WG1109700	1	05/11/18 09:30	05/13/18 12:06	WBD
Volatile Organic Compounds (GC) by Method RSK175	WG110930	1	05/14/18 13:16	05/14/18 13:16	BG

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.

RT4 L992686-04 WW

Collected by: Mark A Metzler
 Collected date/time: 05/09/18 11:36
 Received date/time: 05/10/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG110606	1	05/13/18 09:09	05/13/18 09:30	BS
Wet Chemistry by Method 1664A	WG110240	1	05/11/18 16:39	05/12/18 00:33	ALA
Wet Chemistry by Method 2130 B-2011	WG1109418	1	05/10/18 15:35	05/10/18 15:35	MLW
Wet Chemistry by Method 2310 B-2011	WG110950	1	05/17/18 00:42	05/17/18 00:42	MZ
Wet Chemistry by Method 2320 B-2011	WG1109719	1	05/11/18 19:20	05/11/18 19:20	GB
Wet Chemistry by Method 300.0	WG1109596	1	05/11/18 01:55	05/11/18 01:55	MAJ
Wet Chemistry by Method 300.0	WG1109596	10	05/11/18 02:10	05/11/18 02:10	MAJ
Wet Chemistry by Method 365.4	WG1109920	1	05/10/18 16:24	05/11/18 09:04	KK
Wet Chemistry by Method 4500H+ B-2011	WG1109937	1	05/11/18 10:30	05/11/18 10:30	JTB
Wet Chemistry by Method 45000 G-2011	WG1111700	1	05/10/18 15:29	05/10/18 15:29	JB
Wet Chemistry by Method 5310 B-2011	WG1111305	1	05/15/18 16:41	05/15/18 16:41	SJM
Metals (ICP) by Method 200.7	WG1109700	1	05/11/18 09:30	05/13/18 11:25	WBD
Volatile Organic Compounds (GC) by Method RSK175	WG111874	1	05/16/18 11:48	05/16/18 11:48	BG

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

RT1 L992686-05 Solid

Collected by: Mark A Metzler
 Collected date/time: 05/09/18 09:39
 Received date/time: 05/10/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1111439	1	05/15/18 13:09	05/15/18 13:20	KDW
Metals (ICP) by Method 6010B	WG1111364	1	05/15/18 10:01	05/15/18 14:47	ST
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1110863	1	05/14/18 07:55	05/15/18 10:42	DMG

RT4 L992686-06 Solid

Collected by: Mark A Metzler
 Collected date/time: 05/09/18 11:36
 Received date/time: 05/10/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1111439	1	05/15/18 13:09	05/15/18 13:20	KDW
Metals (ICP) by Method 6010B	WG1111364	1.515152	05/15/18 10:01	05/15/18 15:10	ST
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1110863	1	05/14/18 07:55	05/16/18 09:07	DMG



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

T. Alan Harvill
Technical Service Representative

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Sample Handling and Receiving

The following analysis were performed from an unpreserved, insufficiently or inadequately preserved sample.

<u>ESC Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L992686-03	RT3	45000 G-2011

RT1

SAMPLE RESULTS - 01

ONE LAB. NATIONWIDE.



Collected date/time: 05/09/18 09:39

L992686

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	1440		10.0	1	05/13/2018 09:30	WG110606

1 Cp

2 Tc

Wet Chemistry by Method 1664A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Oil & Grease (Hexane Extr)	ND		5.00	1	05/12/2018 00:32	WG110240

3 Ss

4 Cn

Wet Chemistry by Method 2130 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Turbidity	1.26		0.300	1	05/10/2018 15:35	WG1109418

5 Sr

6 Qc

Wet Chemistry by Method 2310 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acidity	ND		10.0	1	05/17/2018 00:42	WG110950

7 Gl

8 Al

Sample Narrative:

L992686-01 WG110950: Endpoint pH 8.3

9 Sc

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity	227		20.0	1	05/11/2018 18:59	WG1109719

Sample Narrative:

L992686-01 WG1109719: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	524		20.0	20	05/11/2018 00:07	WG1109596
Nitrate as (N)	1.93		0.100	1	05/10/2018 23:52	WG1109596
Nitrite as (N)	ND		0.100	1	05/10/2018 23:52	WG1109596
Sulfate	67.4		5.00	1	05/10/2018 23:52	WG1109596

Wet Chemistry by Method 365.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Phosphorus, Total	ND		0.100	1	05/11/2018 09:00	WG1109920

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.18	T8		1	05/11/2018 10:30	WG1109937

Sample Narrative:

L992686-01 WG1109937: 7.18 at 10.1C

Wet Chemistry by Method 4500O G-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
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RT1

SAMPLE RESULTS - 01

ONE LAB. NATIONWIDE.



Collected date/time: 05/09/18 09:39

L992686

Wet Chemistry by Method 45000 G-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Oxygen	9.4 at 20.8c	T8	3	1	05/10/2018 15:28	WG1111700

1 Cp

2 Tc

Wet Chemistry by Method 5310 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	2.40		1.00	1	05/15/2018 15:33	WG1111305

3 Ss

4 Cn

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Barium	0.187		0.00500	1	05/13/2018 12:00	WG1109700
Calcium	159		1.00	1	05/13/2018 12:00	WG1109700
Iron	0.238		0.100	1	05/13/2018 12:00	WG1109700
Magnesium	86.9		1.00	1	05/13/2018 12:00	WG1109700
Potassium	19.6		1.00	1	05/13/2018 12:00	WG1109700
Sodium	156		1.00	1	05/13/2018 12:00	WG1109700

5 Sr

6 Qc

7 Gl

8 Al

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Methane	0.0562		0.0100	1	05/14/2018 13:12	WG1110930
Ethane	ND		0.0130	1	05/14/2018 13:12	WG1110930
Ethene	ND		0.0130	1	05/14/2018 13:12	WG1110930

9 Sc



Collected date/time: 05/09/18 10:20

L992686

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	1410		10.0	1	05/13/2018 09:30	WG110606

1 Cp

2 Tc

Wet Chemistry by Method 1664A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Oil & Grease (Hexane Extr)	ND		5.00	1	05/12/2018 00:32	WG110240

3 Ss

4 Cn

Wet Chemistry by Method 2130 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Turbidity	3.17		0.300	1	05/10/2018 15:35	WG109418

5 Sr

6 Qc

Wet Chemistry by Method 2310 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acidity	ND		10.0	1	05/17/2018 00:42	WG110950

7 Gl

8 Al

Sample Narrative:

L992686-02 WG110950: Endpoint pH 8.3

9 Sc

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity	201		20.0	1	05/11/2018 19:06	WG1109719

Sample Narrative:

L992686-02 WG1109719: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	501		20.0	20	05/11/2018 01:09	WG1109596
Nitrate as (N)	1.13		0.100	1	05/11/2018 00:22	WG1109596
Nitrite as (N)	ND		0.100	1	05/11/2018 00:22	WG1109596
Sulfate	60.5		5.00	1	05/11/2018 00:22	WG1109596

Wet Chemistry by Method 365.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Phosphorus, Total	ND		0.100	1	05/11/2018 09:01	WG1109920

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.69	T8		1	05/11/2018 10:30	WG1109937

Sample Narrative:

L992686-02 WG1109937: 7.69 at 8.5C

Wet Chemistry by Method 4500O G-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
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RT2

SAMPLE RESULTS - 02

ONE LAB. NATIONWIDE.



Collected date/time: 05/09/18 10:20

L992686

Wet Chemistry by Method 45000 G-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Oxygen	9.4 at 18.4c	<u>T8</u>	3	1	05/15/2018 14:03	WG111697

1 Cp

2 Tc

Wet Chemistry by Method 5310 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	2.61		1.00	1	05/15/2018 15:51	WG111305

3 Ss

4 Cn

Metals (ICP) by Method 200.7

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Barium	0.228		0.00500	1	05/13/2018 12:03	WG1109700
Calcium	153		1.00	1	05/13/2018 12:03	WG1109700
Iron	0.545		0.100	1	05/13/2018 12:03	WG1109700
Magnesium	81.2		1.00	1	05/13/2018 12:03	WG1109700
Potassium	18.8		1.00	1	05/13/2018 12:03	WG1109700
Sodium	151		1.00	1	05/13/2018 12:03	WG1109700

5 Sr

6 Qc

7 Gl

8 Al

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	05/14/2018 13:14	WG1110930
Ethane	ND		0.0130	1	05/14/2018 13:14	WG1110930
Ethere	ND		0.0130	1	05/14/2018 13:14	WG1110930

9 Sc



Collected date/time: 05/09/18 10:53

L992686

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	1110		10.0	1	05/13/2018 09:30	WG110606

1 Cp

2 Tc

Wet Chemistry by Method 1664A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Oil & Grease (Hexane Extr)	ND		5.00	1	05/12/2018 00:33	WG110240

3 Ss

4 Cn

Wet Chemistry by Method 2130 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Turbidity	1.45		0.300	1	05/10/2018 15:35	WG1109418

5 Sr

6 Qc

Wet Chemistry by Method 2310 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acidity	ND		10.0	1	05/17/2018 00:42	WG110950

7 Gl

8 Al

Sample Narrative:

L992686-03 WG110950: Endpoint pH 8.3

9 Sc

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity	201		20.0	1	05/11/2018 19:13	WG1109719

Sample Narrative:

L992686-03 WG1109719: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	386		20.0	20	05/11/2018 01:40	WG1109596
Nitrate as (N)	1.95		0.100	1	05/11/2018 01:24	WG1109596
Nitrite as (N)	ND		0.100	1	05/11/2018 01:24	WG1109596
Sulfate	30.9		5.00	1	05/11/2018 01:24	WG1109596

Wet Chemistry by Method 365.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Phosphorus, Total	ND		0.100	1	05/11/2018 09:03	WG1109920

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.57	T8	1	05/11/2018 10:30	WG1109937

Sample Narrative:

L992686-03 WG1109937: 7.57 at 8.3C

Wet Chemistry by Method 45000 G-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
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RT3

SAMPLE RESULTS - 03

ONE LAB. NATIONWIDE.



Collected date/time: 05/09/18 10:53

L992686

Wet Chemistry by Method 45000 G-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Oxygen	9.1 at 18.4c	<u>T8</u>	3	1	05/15/2018 14:06	WG1111697

1 Cp

2 Tc

Wet Chemistry by Method 5310 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	2.88		1.00	1	05/15/2018 16:24	WG1111305

3 Ss

4 Cn

Metals (ICP) by Method 200.7

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Barium	0.432		0.00500	1	05/13/2018 12:06	WG1109700
Calcium	124		1.00	1	05/13/2018 12:06	WG1109700
Iron	0.199		0.100	1	05/13/2018 12:06	WG1109700
Magnesium	55.8		1.00	1	05/13/2018 12:06	WG1109700
Potassium	18.3		1.00	1	05/13/2018 12:06	WG1109700
Sodium	138		1.00	1	05/13/2018 12:06	WG1109700

5 Sr

6 Qc

7 Gl

8 Al

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	0.0252		0.0100	1	05/14/2018 13:16	WG1110930
Ethane	ND		0.0130	1	05/14/2018 13:16	WG1110930
Ethene	ND		0.0130	1	05/14/2018 13:16	WG1110930

9 Sc



Collected date/time: 05/09/18 11:36

L992686

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	736		10.0	1	05/13/2018 09:30	WG110606

1 Cp

2 Tc

Wet Chemistry by Method 1664A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Oil & Grease (Hexane Extr)	ND		5.00	1	05/12/2018 00:33	WG110240

3 Ss

4 Cn

Wet Chemistry by Method 2130 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Turbidity	0.588		0.300	1	05/10/2018 15:35	WG1109418

5 Sr

6 Qc

Wet Chemistry by Method 2310 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Acidity	ND		10.0	1	05/17/2018 00:42	WG110950

7 Gl

8 Al

Sample Narrative:

L992686-04 WG110950: Endpoint pH 8.3

9 Sc

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity	116		20.0	1	05/11/2018 19:20	WG1109719

Sample Narrative:

L992686-04 WG1109719: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	226		10.0	10	05/11/2018 02:10	WG1109596
Nitrate as (N)	2.14		0.100	1	05/11/2018 01:55	WG1109596
Nitrite as (N)	ND		0.100	1	05/11/2018 01:55	WG1109596
Sulfate	30.2		5.00	1	05/11/2018 01:55	WG1109596

Wet Chemistry by Method 365.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Phosphorus, Total	ND		0.100	1	05/11/2018 09:04	WG1109920

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	7.20	T8		1	05/11/2018 10:30	WG1109937

Sample Narrative:

L992686-04 WG1109937: 7.2 at 8.9C

Wet Chemistry by Method 4500O G-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
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RT4

SAMPLE RESULTS - 04

ONE LAB. NATIONWIDE.



Collected date/time: 05/09/18 11:36

L992686

Wet Chemistry by Method 45000 G-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Oxygen	9.2 at 21.0c	<u>T8</u>	3	1	05/10/2018 15:29	WG1111700

1 Cp

2 Tc

Wet Chemistry by Method 5310 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	1.89	<u>B</u>	1.00	1	05/15/2018 16:41	WG1111305

3 Ss

4 Cn

Metals (ICP) by Method 200.7

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Barium	0.278		0.00500	1	05/13/2018 11:25	WG1109700
Calcium	84.0	<u>V</u>	1.00	1	05/13/2018 11:25	WG1109700
Iron	ND		0.100	1	05/13/2018 11:25	WG1109700
Magnesium	35.0	<u>J5</u>	1.00	1	05/13/2018 11:25	WG1109700
Potassium	8.55		1.00	1	05/13/2018 11:25	WG1109700
Sodium	73.4	<u>V</u>	1.00	1	05/13/2018 11:25	WG1109700

5 Sr

6 Qc

7 Gl

8 Al

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Methane	ND		0.0100	1	05/16/2018 11:48	WG1111874
Ethane	ND		0.0130	1	05/16/2018 11:48	WG1111874
Ethene	ND		0.0130	1	05/16/2018 11:48	WG1111874

9 Sc

RT1

Collected date/time: 05/09/18 09:39

SAMPLE RESULTS - 05

L992686

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	42.8		1	05/15/2018 13:20	WG111439

1 Cp

2 Tc

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Lead	95.0		1.17	1	05/15/2018 14:47	WG111364

3 Ss

4 Cn

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	0.211		0.0140	1	05/15/2018 10:42	WG1110863
(S) p-Terphenyl-d14	57.1		23.0-120		05/15/2018 10:42	WG1110863
(S) Nitrobenzene-d5	77.0		14.0-149		05/15/2018 10:42	WG1110863
(S) 2-Fluorobiphenyl	41.6		34.0-125		05/15/2018 10:42	WG1110863

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 05/09/18 11:36

L992686

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	72.8		1	05/15/2018 13:20	WG1111439

1 Cp

2 Tc

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Lead	89.3		1.04	1.515152	05/15/2018 15:10	WG1111364

3 Ss

4 Cn

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	1.32		0.00824	1	05/16/2018 09:07	WG1110863
(S) p-Terphenyl-d14	79.7		23.0-120		05/16/2018 09:07	WG1110863
(S) Nitrobenzene-d5	45.5		14.0-149		05/16/2018 09:07	WG1110863
(S) 2-Fluorobiphenyl	58.4		34.0-125		05/16/2018 09:07	WG1110863

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

WG1110606

Gravimetric Analysis by Method 2540 C-2011

QUALITY CONTROL SUMMARY

[L992686-01,02,03,04](#)

ONE LAB. NATIONWIDE.



Method Blank (MB)

(MB) R3309557-1 05/13/18 09:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		2.82	10.0

1 Cp

2 Tc

3 Ss

L993197-05 Original Sample (OS) • Duplicate (DUP)

(OS) L993197-05 05/13/18 09:30 • (DUP) R3309557-4 05/13/18 09:30

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	538	542	1	0.741		5

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3309557-2 05/13/18 09:30 • (LCSD) R3309557-3 05/13/18 09:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dissolved Solids	8800	8530	8570	96.9	97.4	85.0-115			0.468	5

7 Gl

8 Al

9 Sc

ACCOUNT:
RETTEW

PROJECT:

SDG:
L992686

DATE/TIME:
05/22/18 13:43

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WG1111439

Total Solids by Method 2540 G-2011

QUALITY CONTROL SUMMARY

[L992686-05_06](#)

ONE LAB. NATIONWIDE.



Method Blank (MB)

(MB) R3310210-1 05/15/18 13:20

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

Cp

Tc

Ss

L992818-11 Original Sample (OS) + Duplicate (DUP)

(OS) L992818-11 05/15/18 13:20 + (DUP) R3310210-3 05/15/18 13:20

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Total Solids	92.9	93.1	1	0.156		5

Cn

Sr

Qc

Laboratory Control Sample (LCS)

(LCS) R3310210-2 05/15/18 13:20

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Gl

Al

Sc

ACCOUNT:
RETTW

PROJECT:

SDG:
L992686

DATE/TIME:
05/22/18 13:43

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WG1110240

Wet Chemistry by Method 1664A

QUALITY CONTROL SUMMARY

[L992686-01,02,03,04](#)

ONE LAB. NATIONWIDE.



Method Blank (MB)

(MB) R3309159-1 05/12/18 00:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Oil & Grease (Hexane Extr)	U		1.16	5.00

¹ Cp

² Tc

³ Ss

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3309159-2 05/11/18 22:40 • (LCSD) R3309159-3 05/11/18 22:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Oil & Grease (Hexane Extr)	40.0	38.7	39.2	96.8	98.0	78.0-114			1.28	20

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCOUNT:
RETTEW

PROJECT:

SDG:
L992686

DATE/TIME:
05/22/18 13:43

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WG1109418

Wet Chemistry by Method 2130 B-2011

QUALITY CONTROL SUMMARY

[L992686-01,02,03,04](#)

ONE LAB. NATIONWIDE



Method Blank (MB)

(MB) R3308763-1 05/10/18 15:35

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Turbidity	0.0450	↓	0.0310	0.300

1 Cd

2 Tc

3 Ss

L992611-01 Original Sample (OS) • Duplicate (DUP)

(OS) L992611-01 05/10/18 15:35 • (DUP) R3308763-4 05/10/18 15:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Turbidity	71.6	70.6	1	1.41		20

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3308763-2 05/10/18 15:35 • (LCSD) R3308763-3 05/10/18 15:35

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Turbidity	40.0	43.1	43.1	108	108	90.0-110			0.000	20

7 Gl

8 Al

9 Sc

ACCOUNT:
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PROJECT:

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L992686

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WG1110950

Wet Chemistry by Method 2310 B-2011

QUALITY CONTROL SUMMARY

[L992686-01,02,03,04](#)

ONE LAB. NATIONWIDE.



Method Blank (MB)

(MB) R3310559-1 05/17/18 00:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Acidity	U		3.63	10.0

Sample Narrative:

BLANK: Endpoint pH 8.3

L992686-01 Original Sample (OS) • Duplicate (DUP)

(OS) L992686-01 05/17/18 00:42 • (DUP) R3310559-4 05/17/18 00:42

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Acidity	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 8.3

DUP: Endpoint pH 8.3

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3310559-2 05/17/18 00:42 • (LCSD) R3310559-3 05/17/18 00:42

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Acidity	20.0	20.0	18.0	100	90.0	85.0-115			10.5	20

Sample Narrative:

LCS: Endpoint pH 8.3

LCSD: Endpoint pH 8.3

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

ACCOUNT:
RETTEW

PROJECT:

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L992686

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WG1109719

Wet Chemistry by Method 2320 B-2011

QUALITY CONTROL SUMMARY

L992686-01,02,03,04

ONE LAB. NATIONWIDE.



L991820-01 Original Sample (OS) • Duplicate (DUP)

(OS) L991820-01 05/11/18 17:17 • (DUP) R3309158-1 05/11/18 17:27

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	310	286	1	8.19		20

Sample Narrative:

OS: Endpoint pH 4.5 HEADSPACE
DUP: Endpoint pH 4.5

L992686-04 Original Sample (OS) • Duplicate (DUP)

(OS) L992686-04 05/11/18 19:20 • (DUP) R3309158-3 05/11/18 19:27

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	116	113	1	2.23		20

Sample Narrative:

OS: Endpoint pH 4.5 HEADSPACE
DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3309158-2 05/11/18 18:18 • (LCSD) R3309158-9 05/11/18 20:33

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Alkalinity	100	104	106	104	106	85.0-115			1.30	20

Sample Narrative:

LCS: Endpoint pH 4.5
LCSD: Endpoint pH 4.5

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

ACCOUNT:
RETTEW

PROJECT:

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WG1109596

Wet Chemistry by Method 300.0

QUALITY CONTROL SUMMARY

L992686-01,02,03,04

ONE LAB. NATIONWIDE.



Method Blank (MB)

(MB) R3309148-1 05/10/18 12:16

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.0519	1.00
Nitrate	U		0.0227	0.100
Nitrite	U		0.0277	0.100
Sulfate	U		0.0774	5.00

L992639-01 Original Sample (OS) • Duplicate (DUP)

(OS) L992639-01 05/10/18 18:59 • (DUP) R3309148-4 05/10/18 19:14

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	2.65	2.68	1	0.962		20
Nitrate	0.998	1.08	1	8.20		20
Nitrite	ND	0.000	1	0.000		20
Sulfate	6.88	6.86	1	0.215		20

L992682-01 Original Sample (OS) • Duplicate (DUP)

(OS) L992682-01 05/10/18 23:05 • (DUP) R3309148-7 05/10/18 23:21

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	3.03	2.99	1	1.46		20
Nitrate	3.14	3.14	1	0.102		20
Nitrite	ND	0.000	1	0.000		20
Sulfate	13.7	13.5	1	1.61		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3309148-2 05/10/18 12:31 • (LCSD) R3309148-3 05/10/18 12:46

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40.0	39.3	39.6	98.1	99.1	90.0-110			0.965	20
Nitrate	8.00	8.34	8.20	104	103	90.0-110			1.72	20
Nitrite	8.00	8.01	8.12	100	102	90.0-110			1.37	20
Sulfate	40.0	40.6	39.8	101	99.5	90.0-110			1.90	20

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

ACCOUNT:
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Wet Chemistry by Method 300.0

QUALITY CONTROL SUMMARY

L992686-01,02,03,04

ONE LAB. NATIONWIDE.



L992639-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L992639-01 05/10/18 18:59 • (MS) R3309148-5 05/10/18 19:30 • (MSD) R3309148-6 05/10/18 19:45

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	2.65	53.2	52.8	101	100	1	80.0-120			0.673	20
Nitrate	5.00	0.998	6.08	6.23	102	105	1	80.0-120			2.50	20
Nitrite	5.00	ND	5.11	5.14	102	103	1	80.0-120			0.650	20
Sulfate	50.0	6.88	57.0	57.7	100	102	1	80.0-120			1.12	20

L992682-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L992682-01 05/10/18 23:05 • (MS) R3309148-8 05/10/18 23:36

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	3.03	52.9	99.7	1	80.0-120	
Nitrate	5.00	3.14	8.15	100	1	80.0-120	
Nitrite	5.00	ND	5.10	102	1	80.0-120	
Sulfate	50.0	13.7	64.3	101	1	80.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

ACCOUNT:
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WG1109920

Wet Chemistry by Method 365.4

QUALITY CONTROL SUMMARY

L992686-01,02,03,04

ONE LAB. NATIONWIDE



Method Blank (MB)

(MB) R3308915-1 05/11/18 08:38

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Phosphorus, Total	U		0.0350	0.100

L992037-02 Original Sample (OS) • Duplicate (DUP)

(OS) L992037-02 05/11/18 08:58 • (DUP) R3308915-7 05/11/18 08:59

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Phosphorus, Total	1.23	1.12	1	9.36		20

L992013-01 Original Sample (OS) • Duplicate (DUP)

(OS) L992013-01 05/11/18 09:38 • (DUP) R3308915-8 05/11/18 09:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Phosphorus, Total	6.80	6.40	5	6.06		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3308915-2 05/11/18 08:40 • (LCSD) R3308915-3 05/11/18 08:41

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Phosphorus, Total	2.00	1.94	1.92	97.0	96.0	90.0-110			1.04	20

L992020-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L992020-02 05/11/18 08:50 • (MS) R3308915-5 05/11/18 08:54 • (MSD) R3308915-6 05/11/18 08:55

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Phosphorus, Total	2.50	0.651	3.00	2.91	94.0	90.4	1	90.0-110			3.05	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

ACCOUNT:
RETTEW

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Wet Chemistry by Method 4500H+ B-2011

QUALITY CONTROL SUMMARY

L992686-01,02,03,04

ONE LAB. NATIONWIDE.



L992578-01 Original Sample (OS) • Duplicate (DUP)

(OS) L992578-01 05/11/18 10:30 • (DUP) R3308957-3 05/11/18 10:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
pH	7.45	7.42	1	0.403		1

Sample Narrative:
OS: 7.45 at 19.8C
DUP: 7.42 at 19.9C

L993076-01 Original Sample (OS) • Duplicate (DUP)

(OS) L993076-01 05/11/18 10:30 • (DUP) R3308957-4 05/11/18 10:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
pH	6.17	6.17	1	0.000		1

Sample Narrative:
OS: 6.17 at 12.4C
DUP: 6.17 at 12.5C

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3308957-1 05/11/18 10:30 • (LCSD) R3308957-2 05/11/18 10:30

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
pH	10.0	9.97	9.97	99.7	99.7	99.0-101			0.000	1

Sample Narrative:
LCS: 9.97 at 19.4C
LCSD: 9.97 at 19.5C

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

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WG1111305

Wet Chemistry by Method 5310 B-2011

QUALITY CONTROL SUMMARY

[L992686-01,02,03,04](#)

ONE LAB. NATIONWIDE.



Method Blank (MB)

(MB) R3310105-1 05/15/18 08:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TOC (Total Organic Carbon)	0.212	J	0.102	1.00

1 Cp

2 Tc

3 Ss

L992619-05 Original Sample (OS) • Duplicate (DUP)

(OS) L992619-05 05/15/18 10:46 • (DUP) R3310105-3 05/15/18 11:04

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOC	1.91	1.50	1	24.2	P1	20

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3310105-2 05/15/18 10:05 • (LCSD) R3310105-4 05/15/18 13:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TOC	75.0	72.6	72.3	96.8	96.4	85.0-115			0.428	20

7 GI

8 AI

9 Sc

L992882-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L992882-08 05/15/18 20:26 • (MS) R3310105-6 05/15/18 20:44 • (MSD) R3310105-7 05/15/18 21:01

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TOC	50.0	0.695	47.1	47.3	92.8	93.1	1	80.0-120			0.360	20

ACCOUNT:
RETTEW

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Metals (ICP) by Method 200.7

QUALITY CONTROL SUMMARY

L992686-01,02,03,04

ONE LAB. NATIONWIDE.



Method Blank (MB)

(MB) R3309367-1 05/13/18 11:17

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Barium	U		0.00100	0.00500
Calcium	U		0.100	1.00
Iron	U		0.0282	0.100
Magnesium	U		0.0168	1.00
Potassium	U		0.107	1.00
Sodium	U		0.0939	1.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3309367-2 05/13/18 11:20 • (LCSD) R3309367-3 05/13/18 11:22

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Barium	1.00	1.01	1.07	101	107	85.0-115			5.12	20
Calcium	10.0	10.1	10.7	101	107	85.0-115			5.33	20
Iron	10.0	10.0	10.6	100	106	85.0-115			5.16	20
Magnesium	10.0	10.7	11.2	107	112	85.0-115			4.49	20
Potassium	10.0	10.3	10.9	103	109	85.0-115			5.35	20
Sodium	10.0	10.2	10.7	102	107	85.0-115			5.13	20

L992686-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L992686-04 05/13/18 11:25 • (MS) R3309367-5 05/13/18 11:30 • (MSD) R3309367-6 05/13/18 11:32

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Barium	1.00	0.278	1.36	1.32	108	104	1	70.0-130			2.87	20
Calcium	10.0	84.0	100	96.9	161	129	1	70.0-130	V		3.28	20
Iron	10.0	ND	10.8	10.5	107	104	1	70.0-130			2.85	20
Magnesium	10.0	35.0	48.5	46.9	135	119	1	70.0-130	J5		3.30	20
Potassium	10.0	8.55	20.0	19.4	114	109	1	70.0-130			2.91	20
Sodium	10.0	73.4	88.4	85.4	151	121	1	70.0-130	V		3.46	20

L992792-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L992792-02 05/13/18 11:35 • (MS) R3309367-7 05/13/18 11:37 • (MSD) R3309367-8 05/13/18 11:40

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Barium	1.00	0.0883	1.12	1.11	103	102	1	70.0-130			0.640	20
Calcium	10.0	43.1	54.0	54.0	108	109	1	70.0-130			0.156	20
Iron	10.0	0.702	11.1	11.0	103	103	1	70.0-130			0.418	20

ACCOUNT:
RETTEW

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- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

WG1109700

Metals (ICP) by Method 200.7

QUALITY CONTROL SUMMARY

L992686-01,02,03,04

ONE LAB. NATIONWIDE.



L992792-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L992792-02 05/13/18 11:35 • (MS) R3309367-7 05/13/18 11:37 • (MSD) R3309367-8 05/13/18 11:40

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Magnesium	10.0	22.0	33.4	33.1	114	111	1	70.0-130			0.908	20
Sodium	10.0	50.3	61.7	62.0	114	117	1	70.0-130			0.525	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

ACCOUNT:
RETTEW

PROJECT:

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L992686

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WG1111364

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

[L992686-05_06](#)

ONE LAB. NATIONWIDE.



Method Blank (MB)

(MB) R3310046-1 05/15/18 14:40

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Lead	U		0.190	0.500

1 Cp

2 Tc

3 Ss

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3310046-2 05/15/18 14:42 • (LCSD) R3310046-3 05/15/18 14:45

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Lead	100	98.3	99.0	98.3	99.0	80.0-120			0.695	20

4 Cn

5 Sr

6 Qc

L992686-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L992686-05 05/15/18 14:47 • (MS) R3310046-6 05/15/18 14:55 • (MSD) R3310046-7 05/15/18 14:57

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	234	95.0	320	322	96.3	97.2	1	75.0-125			0.662	20

7 Gl

8 Al

9 Sc

ACCOUNT:
RETTEW

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L992686

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WG1110930

Volatile Organic Compounds (GC) by Method RSK175

QUALITY CONTROL SUMMARY

L992686-01,02,03

ONE LAB. NATIONWIDE.



Method Blank (MB)

(MB) R3309548-1 05/14/18 12:25

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Methane	U		0.00291	0.0100
Ethane	U		0.00407	0.0130
Ethene	U		0.00426	0.0130

L991820-03 Original Sample (OS) • Duplicate (DUP)

(OS) L991820-03 05/14/18 12:38 • (DUP) R3309548-2 05/14/18 12:58

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L992686-02 Original Sample (OS) • Duplicate (DUP)

(OS) L992686-02 05/14/18 13:14 • (DUP) R3309548-3 05/14/18 13:38

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3309548-4 05/14/18 13:41 • (LCSD) R3309548-5 05/14/18 13:44

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	0.0752	0.0769	111	113	85.0-115			2.16	20
Ethane	0.129	0.116	0.115	90.0	89.5	85.0-115			0.584	20
Ethene	0.127	0.117	0.117	92.5	91.8	85.0-115			0.787	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

ACCOUNT:
RETEW

PROJECT:

SDG:
L992686

DATE/TIME:
05/22/18 13:43

PAGE:
30 of 37

WG111874

Volatile Organic Compounds (GC) by Method RSK175

QUALITY CONTROL SUMMARY

L992686-04

ONE LAB. NATIONWIDE.



Method Blank (MB)

(MB) R3310425-1 05/16/18 11:42

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Methane	U		0.00291	0.0100
Ethane	U		0.00407	0.0130
Ethene	U		0.00426	0.0130

L993101-05 Original Sample (OS) • Duplicate (DUP)

(OS) L993101-05 05/16/18 12:07 • (DUP) R3310425-2 05/16/18 13:58

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L993811-03 Original Sample (OS) • Duplicate (DUP)

(OS) L993811-03 05/16/18 14:19 • (DUP) R3310425-3 05/16/18 14:35

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Methane	ND	0.000	1	0.000		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3310425-4 05/16/18 14:37 • (LCSD) R3310425-5 05/16/18 14:43

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	0.0731	0.0757	108	112	85.0-115			3.52	20
Ethane	0.129	0.115	0.115	88.8	89.3	85.0-115			0.589	20
Ethene	0.127	0.116	0.118	91.2	92.8	85.0-115			1.77	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

ACCOUNT:
RETTEW

PROJECT:

SDG:
L992686

DATE/TIME:
05/22/18 13:43

PAGE:
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WG110863

QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE.

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

[L992686-05_06](#)

Method Blank (MB)

(MB) R3309945-3 05/15/18 10:00

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzo(a)pyrene	U		0.000600	0.00600
(S) Nitrobenzene-d5	65.0			14.0-149
(S) 2-Fluorobiphenyl	70.4			34.0-125
(S) p-Terphenyl-d14	87.8			23.0-120

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3309945-1 05/15/18 09:18 • (LCSD) R3309945-2 05/15/18 09:39

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzo(a)pyrene	0.0800	0.0639	0.0633	79.9	79.2	42.0-121			0.924	20
(S) Nitrobenzene-d5				80.1	87.4	14.0-149				
(S) 2-Fluorobiphenyl				76.3	78.4	34.0-125				
(S) p-Terphenyl-d14				88.1	90.8	23.0-120				

L992742-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L992742-01 05/15/18 12:11 • (MS) R3309945-4 05/15/18 12:32 • (MSD) R3309945-5 05/15/18 12:53

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzo(a)pyrene	0.0800	ND	0.0475	0.0557	59.4	69.6	1	14.0-138			15.8	27
(S) Nitrobenzene-d5					67.1	71.5		14.0-149				
(S) 2-Fluorobiphenyl					55.2	61.0		34.0-125				
(S) p-Terphenyl-d14					59.0	73.9		23.0-120				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

ACCOUNT:
RETTEW

PROJECT:

SDG:
L992686

DATE/TIME:
05/22/18 13:43

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Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.



ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.



ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.



State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana ¹	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

Third Party Federal Accreditations

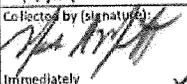
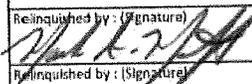
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



RETTEW 3020 Columbia Avenue Lancaster, PA 17603		Billing Information: Mr. Mark Metzler 3020 Columbia Ave. Lancaster, PA 17603		Pres Chk		Analysis / Container / Preservative										Chain of Custody Page ___ of ___					
Report to: Mr. Mark Metzler		Email To: mmetzler@rettew.com		City/State Collected:		<input checked="" type="checkbox"/> ALK 500mlHDPE-NoPres <input checked="" type="checkbox"/> Acc, Turb, TDS 250mlHDPE-NoPres <input checked="" type="checkbox"/> Benzo(a)pyrene 8270 4ozClr-NoPres <input checked="" type="checkbox"/> Cl, SO4, NO2, NO3 125mlHDPE-NoPres <input checked="" type="checkbox"/> Lead, TS 2ozClr-NoPres <input checked="" type="checkbox"/> Metals 250mlHDPE-HNO3 <input checked="" type="checkbox"/> OGHEx 1L-Clr-Add HCl <input checked="" type="checkbox"/> PT 250mlHDPE-H2SO4 <input checked="" type="checkbox"/> RSK175 40mlAmb-HCl <input checked="" type="checkbox"/> TOC 250mlAmb-HCl										 12065 Lebanon Rd Mount Laurel, NJ 07122 Phone: 815-258-5854 Phone: 800-767-5858 Fax: 815-258-9858 					
Project Description: RADNOE TWP		Client Project #		Lab Project # RETTEW-0308125												L # 992626					
Phone: 717-394-3721 Fax: 717-394-1063		Site/Facility ID #		P.O. #												Table #					
Collected by (print): MM		Rush? (Lab MUST Be Notified)		Quote #												Account: RETTEW					
Collected by (signature): 		<input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day		Date Results Needed												Template: T122685					
Immediately Packed on ice <input type="checkbox"/> N <input checked="" type="checkbox"/> Y <input type="checkbox"/> X																Prelogin: P650096					
																TSR: 364 - T. Alan Harvill					
																PB: B 4-30-13					
																Shipped Via: FedEX Ground					
Sample ID		Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs											Remarks	Sample # (Lab only)		
RT 1			GW		5/9/18	0929	10	X	X	X	X	X	X	X	X	X	X	X	X	-01	
RT 2			GW		4	1020	10	X	X	X	X	X	X	X	X	X	X	X	X	-2	
RT 3			GW		11	1053	10	X	X	X	X	X	X	X	X	X	X	X	X	-03	
RT 4			GW		22	1136	10	X	X	X	X	X	X	X	X	X	X	X	X	-04	
			SS				2			X		X									
			SS				2			X		X									
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Biossay WW - Wastewater DW - Drinking Water OT - Other _____		Remarks:		pH _____ Temp _____ Flow _____ Other _____		Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier		Tracking # 4380 6886 201/2012		Trip Blank Received: Yes/No <input type="checkbox"/> MCL / MeOH <input checked="" type="checkbox"/> TBA		Temp: _____ °C Bottles Received: _____		If preservation required by Login: Date/Time		Sample Receipt Checklist: CDO Seal Present/Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N CDO Signed/Aspirate: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N If Applicable VQA Zero Headspace: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N					
Relinquished by: (Signature) 		Date: 5-9-18	Time: 1300	Received by: (Signature)		Temp: 0.59		Date: 5/10/18		Time: 845		Hold:		Condition: <input checked="" type="checkbox"/> NCE / <input type="checkbox"/> OK							
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)		Temp: _____ °C		Date:		Time:		Hold:		Condition:							
Relinquished by: (Signature)		Date:	Time:	Received for lab by: (Signature) 		Date: 5/10/18		Time: 845		Hold:		Condition:									

RETTEW

3020 Columbia Avenue
Lancaster, PA 17603

Billing Information:
Mr. Mark Metzler
3020 Columbia Ave.
Lancaster, PA 17603

Email To: mmetzler@rettew.com

Report to:
Mr. Mark Metzler

Project Description:

City/State Collected:

Phone: 717-394-3721
Fax: 717-394-1063

Client Project #

Lab Project #
RETTEW-030812S

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #

Date Results Needed

Immediately Packed on Ice N Y

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 1



12005 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 615-767-5859
Fax: 615-758-5839

L# 992636

Table #

Acctnum: RETTEW

Template: T122685

Prelogin: P650096

TSR: 364 - T. Alan Haryill

PB: B 4-30-13

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	pH	DO	125mHDP	No Pres
		GW				10	X			
		GW				10	X			
		GW				10	X			
		GW				10	X			
		GW				10	X			
		SS				2				
		SS				2				

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks:

pH _____ Temp _____
 Flow _____ Other _____

Samples returned via:
 UPS FedEx Courier

Tracking #

SAMPLE RECEIPT CHECKLIST

COC Seal Present/Intact: Y N
 COC signed/Associate: Y N
 Bottles airtight/Intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 IF Applicable
 VOA Zero Headspace: Y N
 Preservation Correct/Checked: Y N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No 2 HCL / MeOH TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.54 2.34 °C Bottles Received: 40+2
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 5/10/13 Time: 8:15

If preservation required by Login: Date/Time

Hold: Condition: OK / NOK

Ian White

ESC Lab Sciences
Non-Conformance Form

Login #: L992686	Client: RETREW	Date: 05/10/18	Evaluated by: Christian Kacar
------------------	----------------	----------------	-------------------------------

Non-Conformance (check applicable items)

Sample Integrity	Chain of Custody Clarification	If Broken Container:
Parameter(s) past holding time	x Login Clarification Needed	
Improper temperature	Chain of custody is incomplete	Insufficient packing material around container
Improper container type	Please specify. Metals requested.	Insufficient packing material inside cooler
Improper preservation	Please specify. TCLP requested.	Improper handling by carrier (FedEx / UPS / Courte
Insufficient sample volume.	Received additional samples not listed on coc.	Sample was frozen
Sample is biphasic.	Sample ids on containers do not match ids on coc	Container lid not intact
Vials received with headspace.	Trip Blank not received.	If no Chain of Custody:
Broken container	Client did not "X" analysis.	Received by:
Broken container.	Chain of Custody is missing.	Date/Time:
Sufficient sample remains		Temp./Rate Rec./pH:
		Carrier:
		Tracking#:

Login Comments: 2 Soils labeled RT-1 and 2 Soils labeled RT-4. Dates and times match water sample containers for those IDs

Client informed by:	Call	Email	Voice Mail	Date: 5/10/18	Time: 14:54
TSR Initials: TAH	Client Contact: Mark Metzler				

Login Instructions: log these soils for the analyses in T122685/P650096.

This E-mail and any attached files are confidential, and may be copyright protected. If you are not the addressee, any dissemination of this communication is strictly prohibited. If you have received this message in error, please contact the sender immediately and delete/destroy all information received.

IX. PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

(eMapPA – Valley Run 303(d) listing)

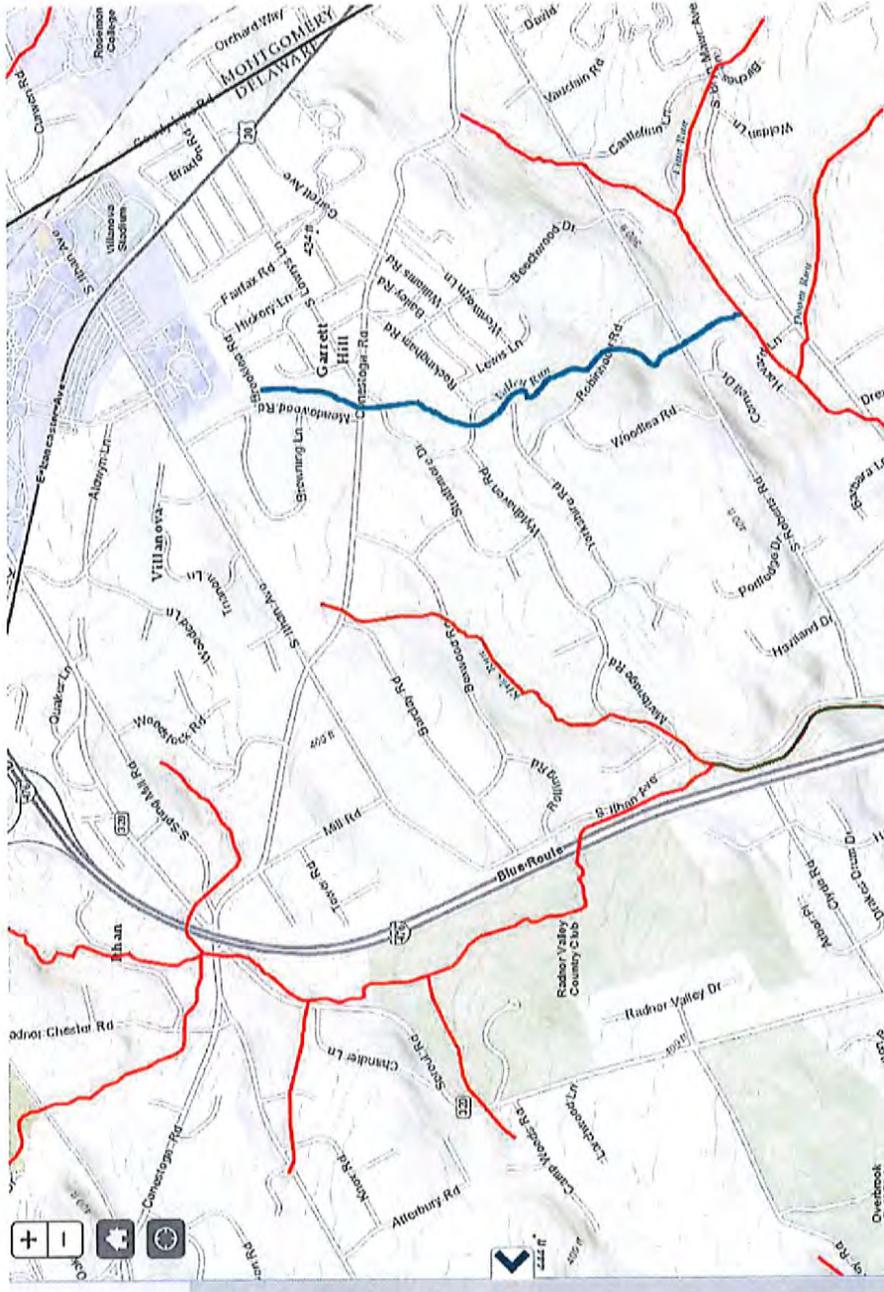
Assessment_ Unit_ID	GNS_Name	GNS_ID	Assessed_LU	Attain_Use	Attained	Source_Cau	HUC	Reachcode	COMID	Length_Miles	Symbol	Date_Create
18881	Null	Null	Fish Consumption	Impaired	N	Source Unknown - PCB	02040202	02040202004616	25601569	0.048467	-1	10/27/2015 7:34:23 AM
18881	Null	Null	Fish Consumption	Impaired	N	Source Unknown - PCB	02040202	02040202003055	25615936	0.294529	-1	10/27/2015 7:34:23 AM
18881	Abrahams Run	01168031	Fish Consumption	Impaired	N	Source Unknown - PCB	02040202	02040202008555	25620422	0.348589	-1	10/27/2015 7:34:23 AM
18881	Null	Null	Fish Consumption	Impaired	N	Source Unknown - PCB	02040202	02040202004623	25615934	0.028583	-1	10/27/2015 7:34:23 AM
18881	Null	Null	Fish Consumption	Impaired	N	Source Unknown - PCB	02040202	02040202008442	25617948	0.004971	-1	10/27/2015 7:34:23 AM
18881	Cobbs Creek	01172099	Fish Consumption	Impaired	N	Source Unknown - PCB	02040202	02040202001354	25601213	0.758071	-1	10/27/2015 7:34:23 AM
18881	Valley Run	01193008	Fish Consumption	Impaired	N	Source Unknown - PCB	02040202	02040202005189	25612970	0.700284	-1	10/27/2015 7:34:23 AM



eMapPA

Layers Legend Tasks Links

- eMapPA Layers
- Complaints
- Federal EPA Sites
- Regulated Facilities and Related Information
- Areas POI - Geological
- Areas POI - Environmental
- Areas POI - General
- Boundaries
- Zip Code Points
- DEP Regions



applied. The 303(G) list includes the reason for impairment, which may be one or more point sources, like industrial or sewage discharges, or non-point sources, like abandoned mine lands or agricultural runoff and the pollutant causing the impairment such as metals, pH, mercury or siltation. 305(b) is the narrative report. See 2016 Integrated Report for details. For questions or general assistance with the Integrated Report please contact the Division of Water Quality Standards at 717-787-9637 or send email to RA-WQAssessments@pa.gov.

Find

Select query:
 Select a Stream or Lake by Name

Search for:
 valley run

Find exact matches only

Clear Search

350 Results found

Name	Assessment	Status	County
Valley Run	10739	Supporting	Bents
Valley Run	10801	Impaired	Delaware