

RADNOR TOWNSHIP

Engineering Department




# WHAT WE DO...

## We Serve:

- **Radnor Township Residents**
- **Board of Commissioners**
- **Township Manager**
- **Township Departments**
- **Builders and Developers**
- **Institutional Developers**
- **Municipalities**
- **Outside Agencies**

# Liaison to Advisory Commissions

- **Planning Commission**
  - **Stormwater Management Advisory Committee**
  - **Shade Tree Commission**
  - **VU CARE Committee**
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**Capital Project planning, forecasting, administration, estimating, budgeting, review, and value engineering.**

- **Traffic Signals & Pedestrian Improvements**
  - **Facilities**
  - **Parks**
  - **Infrastructure**
  - **Sanitary Sewer**
  - **Storm Water**
  - **Bridges**
- 

# SOME CURRENT AND RECENT PROJECTS:

**King of Prussia Road  
Emergency Force Main  
Replacement**

**Clem Macrone Park**

**Skunk Hollow Sanitary Sewer  
Trunk Line Emergency  
Replacement**

**King of Prussia & Radnor  
Chester Roads Wall**

**North Wayne Field Basin  
Cleaning and Repair**

**Radnor TAP Trail**

**Radnor Trail Extension**

**North Wayne Avenue  
Pedestrian Improvements**

**Conestoga Road Tunnel  
Lighting**

**Skunk Hollow Emergency Trunk  
Line Replacement**

**Conestoga Road LH Turn Signal Project**

**Banbury Way Flood Mitigation Project**

**Matsonford Road Pedestrian Bridge**

**Maplewood Outfall**

**Roberts Road Wall/Storm Sewer**

**South Devon Sidewalk**

**Hares Lane Path**

# Permits and Applications

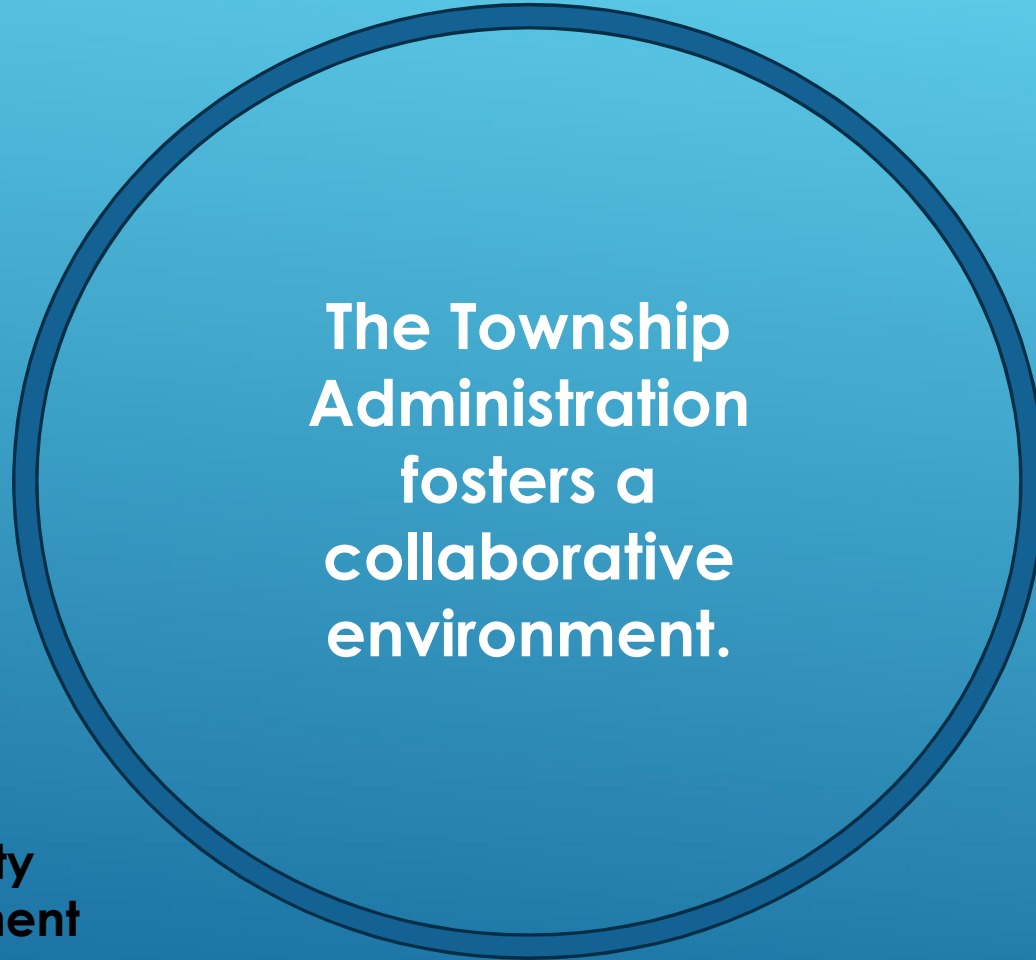
- **SALDO Applications**
  - **Grading Permits**
  - **Clearing Permits**
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**Administration**

**Finance**

**Police**

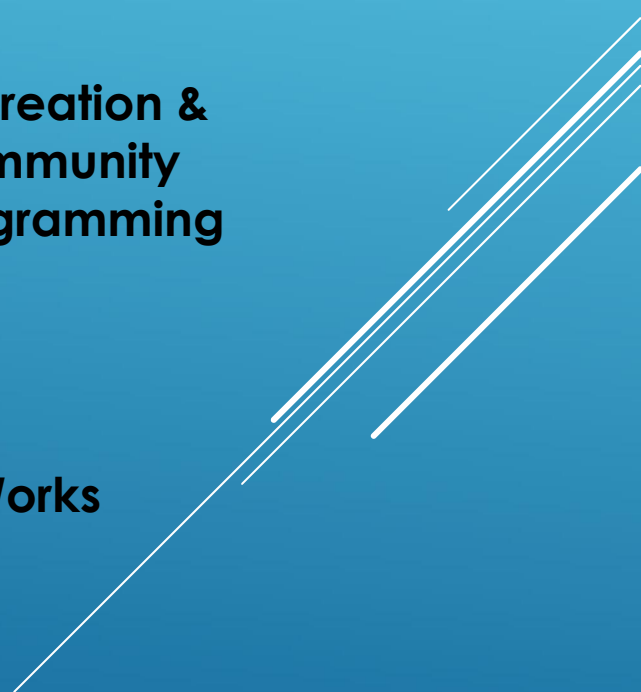
**Community  
Development**



**Engineering**

**Recreation &  
Community  
Programming**

**Public Works**



# WHO WE ARE...

## Township Staff

**Douglas Meder:**  
Engineering Inspector  
and SEO

**Patricia Sherwin:**  
Engineering  
Administrative Assistant

**Stephen Norcini, PE:**  
Township Engineer

## Consultant:

### Gannett Fleming Incorporated

- Subdivision and Land Development Ordinance(SALDO) Reviews
- Zoning Ordinance Reviews
- Stormwater Ordinance Reviews
- Grading Permits (>1,500 SF new impervious)
- Special Projects
- Roger Phillips, PE

## Consultant:

### Gilmore and Associates

- Traffic & Transportation Reviews
- ADA Review
- Transportation Grants
- Special Projects
- Amy Kaminski, PE, PTOE



**The Engineering Department is responsible for budget requests in the following categories, in the Township Manager' s 2018 Recommended Budget:**

**1. Stormwater Fund**

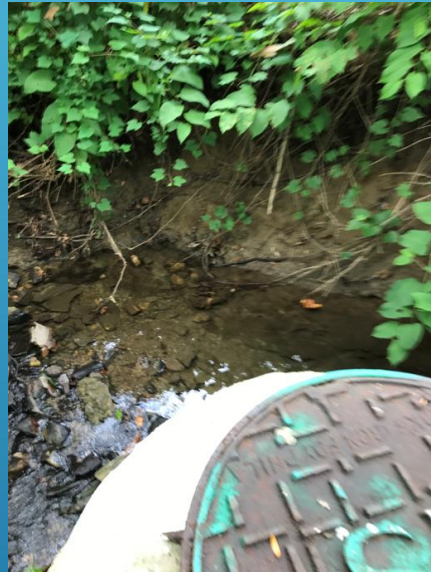
**2. Traffic Signal, Bridges, Pedestrian Improvement Projects**

**3. Sanitary Sewer**

## The major items and issues driving the Capital Plan Budget requests are:

- Vital pedestrian improvement projects
- Long needed traffic signal and intersection improvements
- Aging sanitary sewer (some of which is over 100 years old).
- Aging storm sewer
- Flood mitigation projects
- Regulatory requirements: The mandated MS4 Program, and the Pollution Reduction Plan (PRP)

# EXPOSED MH AND SANITARY SEWER IN MEADOWBROOK RUN.



When originally constructed, this manhole was ten feet into the stream bank. Over the years, erosive forces have eroded the stream bank, and the manhole, as well as the concrete encasement are exposed in the stream. The pipe repair will pale in comparison to the permitting and stream bank restoration costs. This project is requested in the 2018 sanitary sewer capital budget, titled Rawles Run.

# SKUNK HOLLOW SANITARY SEWER TRUNK LINE. This line conveys over 1mgd of sewage.



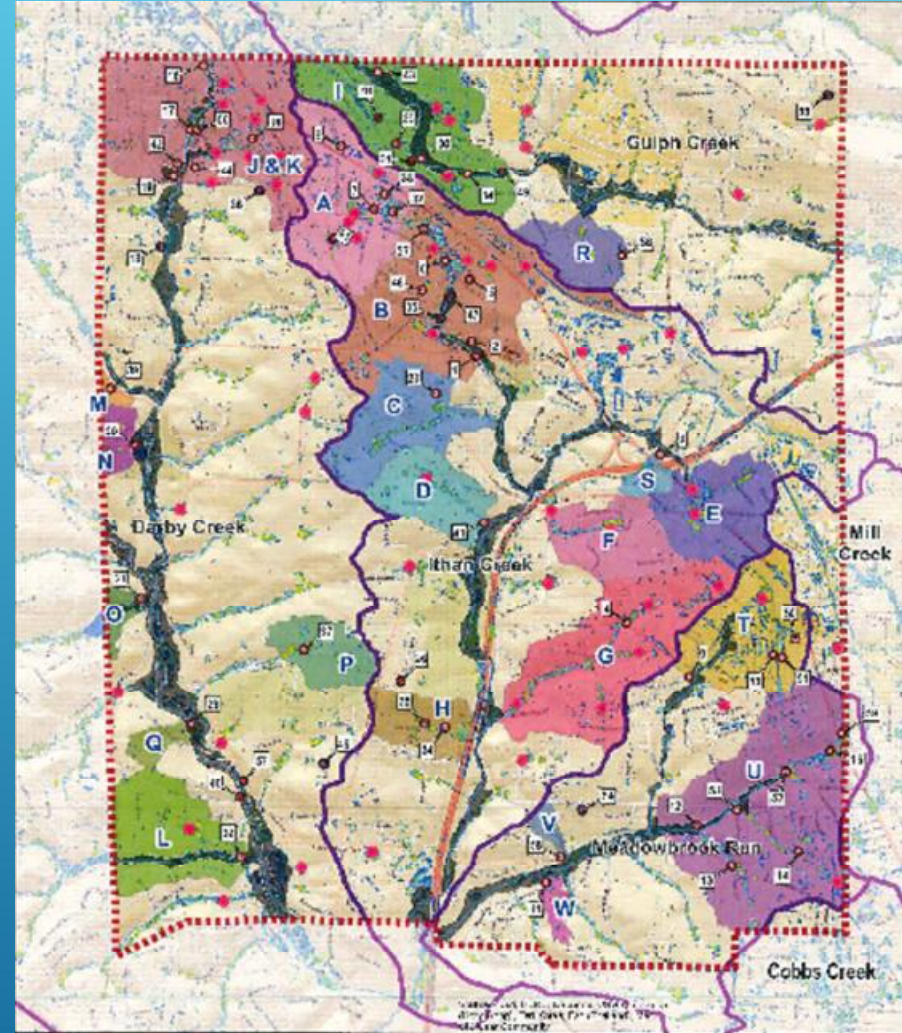


# STORM SEWER INFRASTRUCTURE





# STORMWATER MANAGEMENT: FLOOD MITIGATION



## The following are a small sampling of Capital Plan project requests for the Stormwater Fund:

Upstream Projects of the North Wayne Field Basin (SWM)	\$50,000
Conceptual Designs, Basin Retrofits (PRP)	\$35,000
Legal Fees, Basin Retrofits (PRP)	\$30,000
Update SW Fund Billing Database (annual cost)	\$25,000
Roberts Road Storm sewer, culvert, and end wall (INF)	\$200,000
North Wayne Field Basin Repair and Cleaning (INF)	\$210,000
Maplewood Road Outfall (INF)	\$70,000
Culverts (INF)	
Malin Road Culvert	\$260,000
South Devon Avenue	\$285,000
<b>Poplar Avenue Bypass (FR)</b>	<b>\$1,000,000</b>
<b>Midland Avenue Bypass (FR&amp;SWM)</b>	<b>\$1,000,000</b>
SEPTA - Expanded (FR&SWM)	\$600,000
Basin Retro Fits (PRP)	\$666,077

The requested budget item costs for years 2018 through 2020 are over \$5,800,000 million.

# The following is a snapshot (partial) of Capital Plan project requests for the Sanitary Sewer Fund:

Rhawles Run (permitting & const.)	\$474,000											
Kirks Run	\$240,000											
Midland Avenue	\$650,000	\$650,000										
Emergency Repairs -Annual	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
I&I Study - Annual	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Lancaster Ave. - Iron Works Way towards Chamounix (design)		\$45,000										
Lancaster Ave. - Iron Works Way towards Chamounix (construction)			\$460,000									
Brooke Road		\$270,000										
Woods Lane P.S.		\$40,000										
Hermitage P.S. (design & permitting)		\$75,000										
Hermitage P.S. (construction)			\$367,000									
Lancaster Ave. St. Davis to Pembroke (design & permitting)			\$90,000									
Lancaster Ave, St. Davids to Pembroke (construction)				\$636,000								
Cowan's Alley (design)				\$150,000								
Cowans Alley (construction)					\$750,000	\$1,000,000						
Poplar Avenue (design)			\$200,000									
Poplar Avenue (Construction)				\$900,000	\$600,000							
King of Prussia Road P.S.(design)					\$150,000							
King of Prussia Road P.S.(construction)						\$600,000	\$1,300,000					
Bloomingtondale (design)								\$74,000				
Bloomingtondale (construction)									\$494,000			
Pembroke Ave. (design)								\$46,000				
Pembroke Ave. (construction)									\$395,000			
Windermere (design)								\$50,000				
Windermere (construction)									\$370,000			
Walnut Ave. (design)								\$200,000				
Walnut Ave. (construction)								\$300,000	\$500,000			
Projects TBD										\$500,000	\$500,000	
Projects TBD										\$500,000	\$500,000	
Ten year budgetary estimate: \$15,451,000	\$1,489,000	\$1,205,000	\$1,242,000	\$1,811,000	\$1,625,000	\$1,725,000	\$1,425,000	\$795,000	\$1,884,000	\$1,125,000	\$1,125,000	

The costs of requested projects over a ten year period are over \$13,000,000 million, based on funding for 18 projects. Note: costs are high level, conservative, budgetary estimates.



## The following are Capital Plan project requests for the Pedestrian Improvements and Traffic Studies:

1. Route 30 Traffic Adaptive System (grant -TBD)	\$1,500,000
2. County Line Corridor Study	\$40,000
3. Glenmary Road Pedestrian Improvements \$81,109 grant applied for.	\$115,870
4. Lancaster Avenue Pedestrian Improvements (Garrett Ave. to Barley Cone Lane) \$253,801 grant applied for.	\$397,870
5. Lancaster Avenue Pedestrian Improvements (Iron Works Way to Chamounix Road) \$546,000 grant applied for.	\$950,000
6. North Wayne Sidewalk Improvements (Woodsworth Court To Eagle Road) \$313,406 grant applied for.	\$537,723

## **The following are Capital Plan project requests for the Bridge & Road Construction:**

- 1. Matsonford Road Pedestrian Bridge**
- 2. Conestoga Road Tunnel Lighting**
- 3. Radnor Chester and King of Prussia Road Wall**

**These projects are currently in, or staff will be requesting authorization for, the design phase, and estimated probable costs of construction will be obtained at that time.**

**The following are Capital Plan project requests for  
Traffic Signals:**

- |   |                  |
|---|------------------|
| <b>1. North and South Wayne Left Hand turn Signals</b>          | <b>\$310,000</b> |
| <b>2. Conestoga, Iven, Aberdeen, Church &amp; Conestoga Rd.</b> | <b>\$300,000</b> |
| <b>3. Conestoga Road &amp; Radnor Chester Road</b>              | <b>\$364,00</b>  |

# CHALLENGES

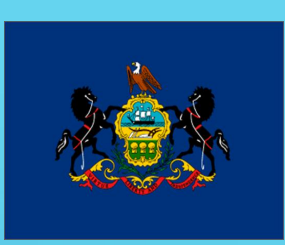
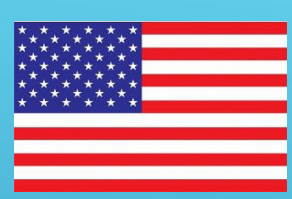
## Facing the Board of Commissioners, staff, various Boards & Commissions, and the Radnor Community

The first challenge is intra-fund; i.e. how do we weigh certain projects against each other, within a specific fund:

Stormwater Fund – Regulatory requirements vs. flood mitigation vs. infrastructure replacement

Sanitary Sewer Fund – three emergency projects in as many months, totaling in the millions of dollars, versus planned replacement projects

The second challenge is inter-fund. How do we fund capital projects when evaluating all capital funds and the operating budget, in their totality, understanding that funding is finite?



**The Engineering  
Department of Radnor  
Township thanks the  
Board of Commissioners,  
Residents of Radnor  
Township, and the  
Township Manager for  
allowing us to serve  
them.**

