

Lower Frederick Township Sanitary Sewer Extension Project

Presented March 23, 2021



Value Engineering Inc



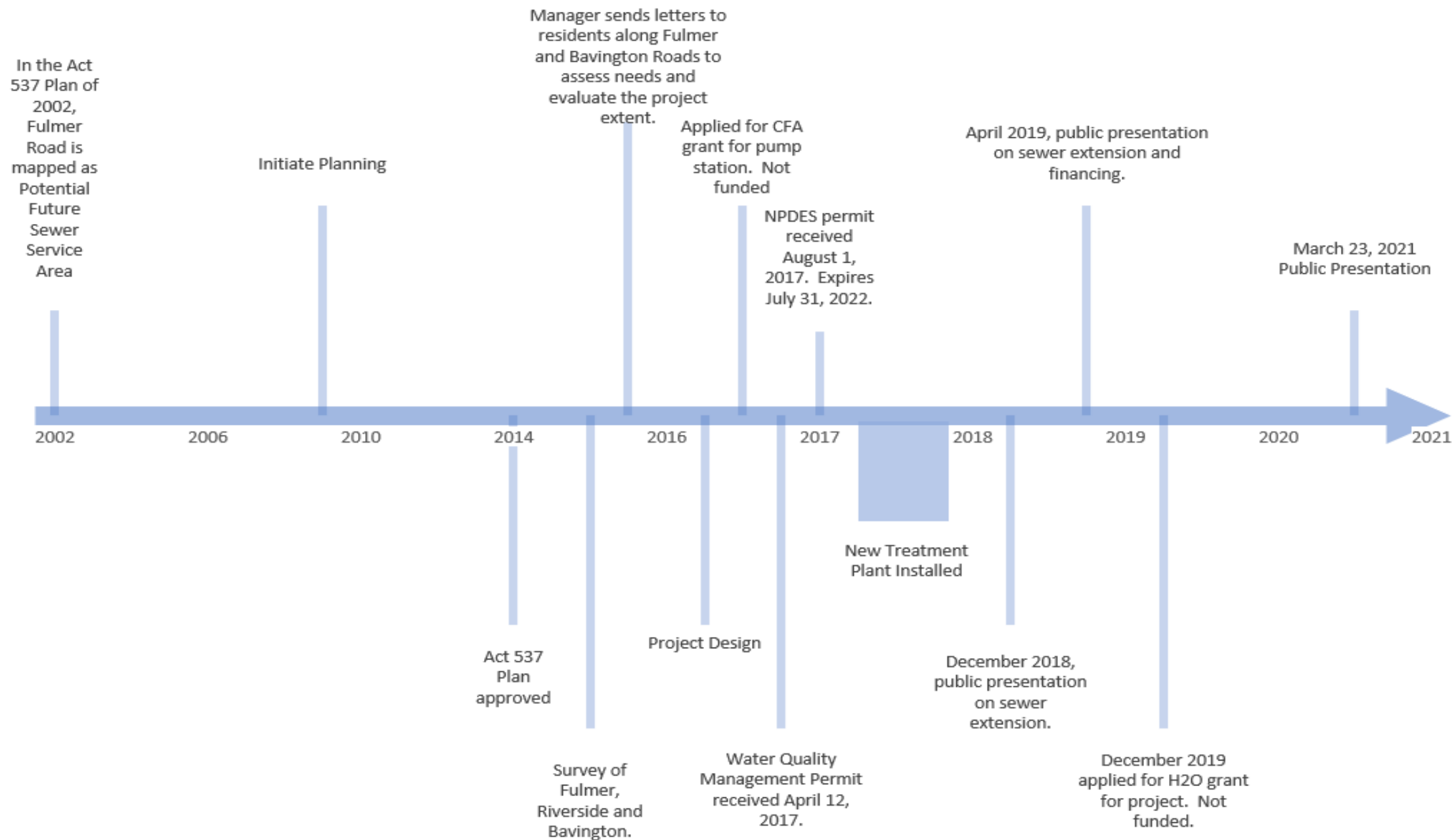
Supporting Community Goals with Professional Service and Solutions



Ground Rules

- Please allow the engineers to get through the presentation. The answer to your question may appear on a later slide!
- Questions will be accepted and addressed at the end of the presentation.
- This is a public meeting, and all questions and comments are welcome. However, Township officials want to prioritize the questions of impacted homeowners.





Collection System Extension History

Presentation Outline:

Gravity vs Low
Pressure

Scope of
Project

Roads Affected

Construction
Costs

Timeline

Property
Owner
Responsibilities

Collection System Extension Options Fulmer and Riverside

Gravity Collection System

Permits have been obtained and current design can be bid and installed.

Low Pressure System

Full redesign and re-permitting through PADEP, MCCD would be required, significantly extending timelines.

Low pressure works very well in situations where other options are not viable. For this project, we evaluated:

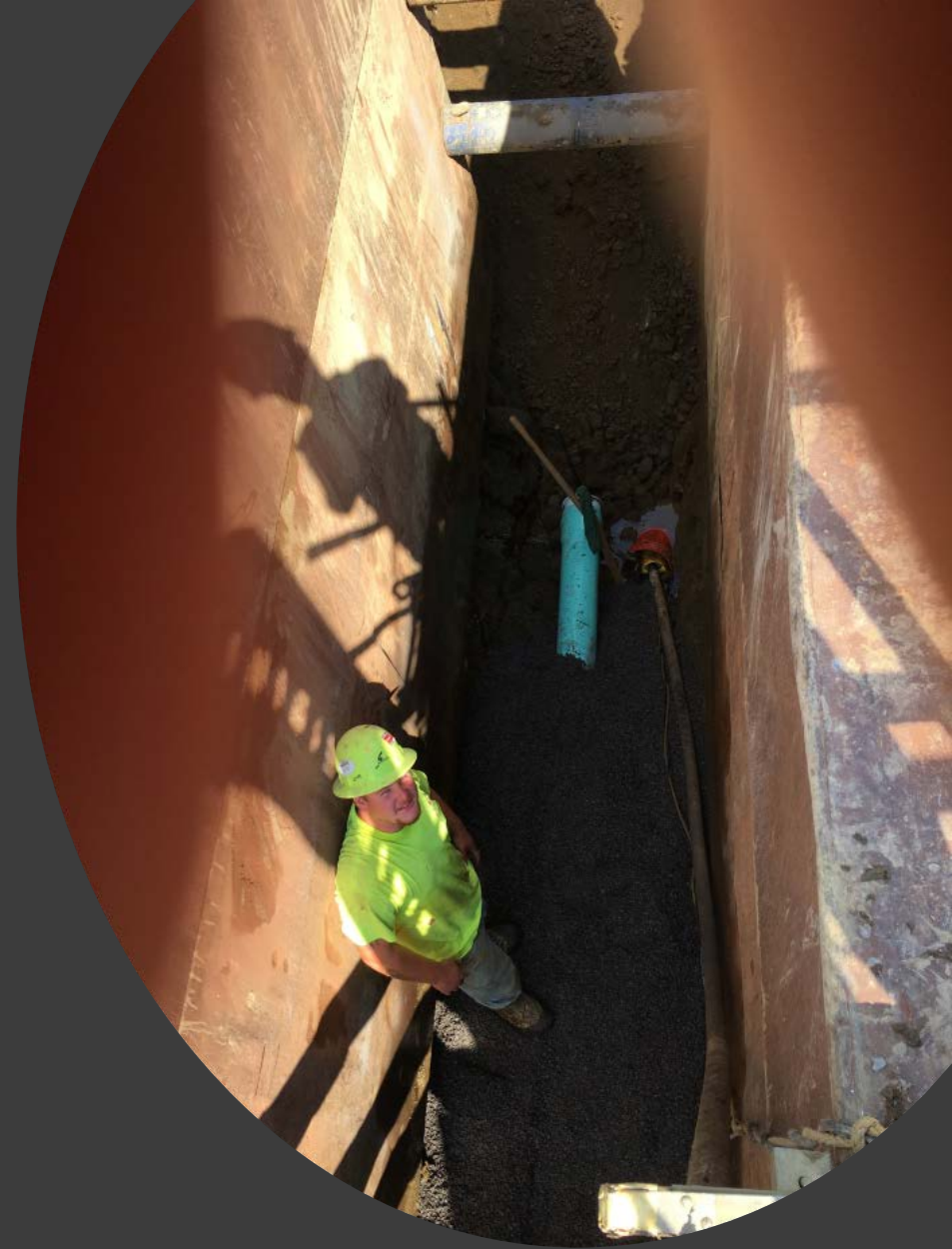
- Costs to construct
- Costs to residential customers
- Timeline to bidding and construction
- Maintenance Concerns
- Component Life Cycles ...

To provide information and a recommendation to the Lower Frederick Township Board of Supervisors.

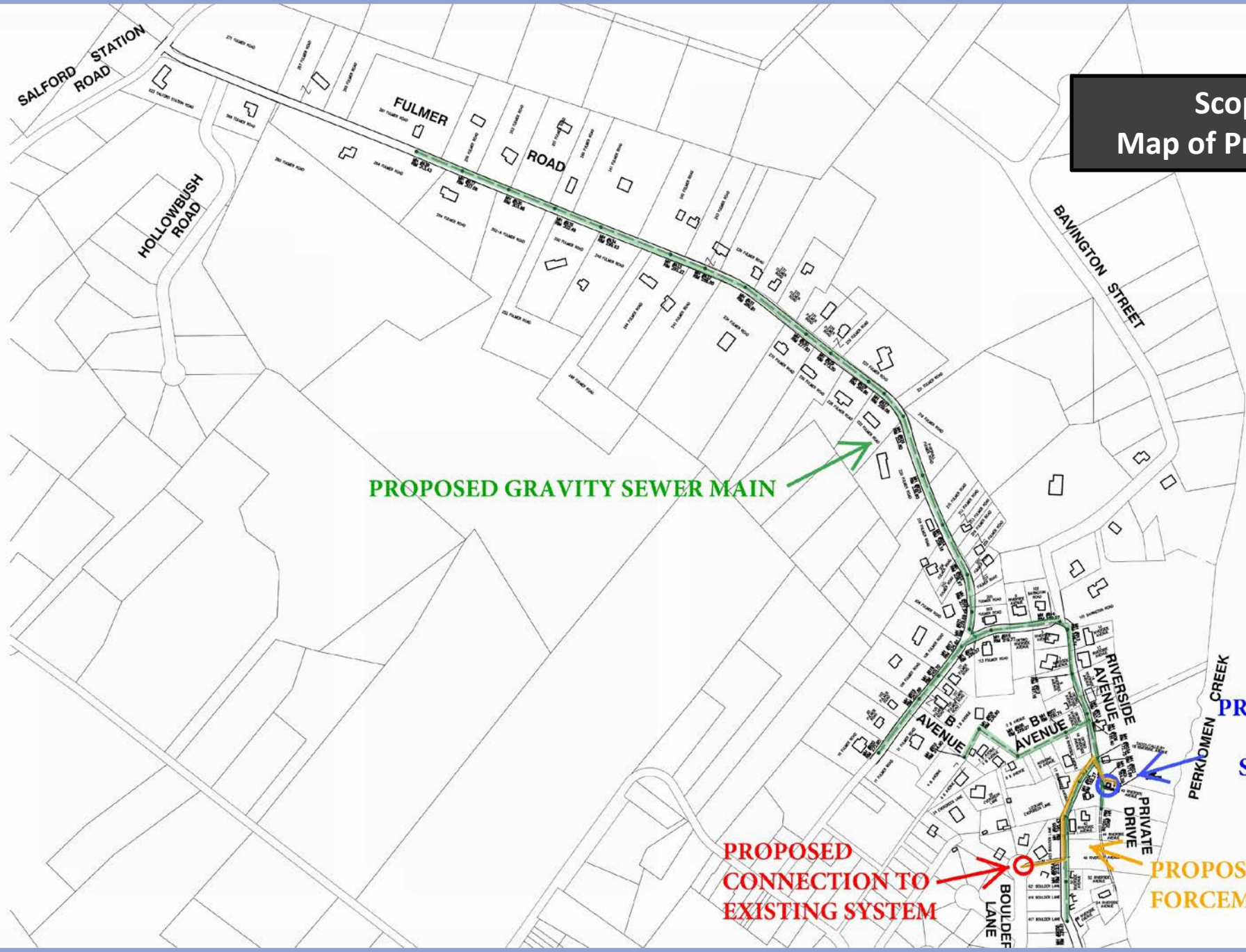
Gravity Collection is recommended to the Board.

Scope of Project

Lower Frederick will install up to 6,265 ft. of 8" Gravity Sewer which will drain to a new Pump Station. That station will connect to the existing sewer system.



Scope of Project
Map of Proposed Extension

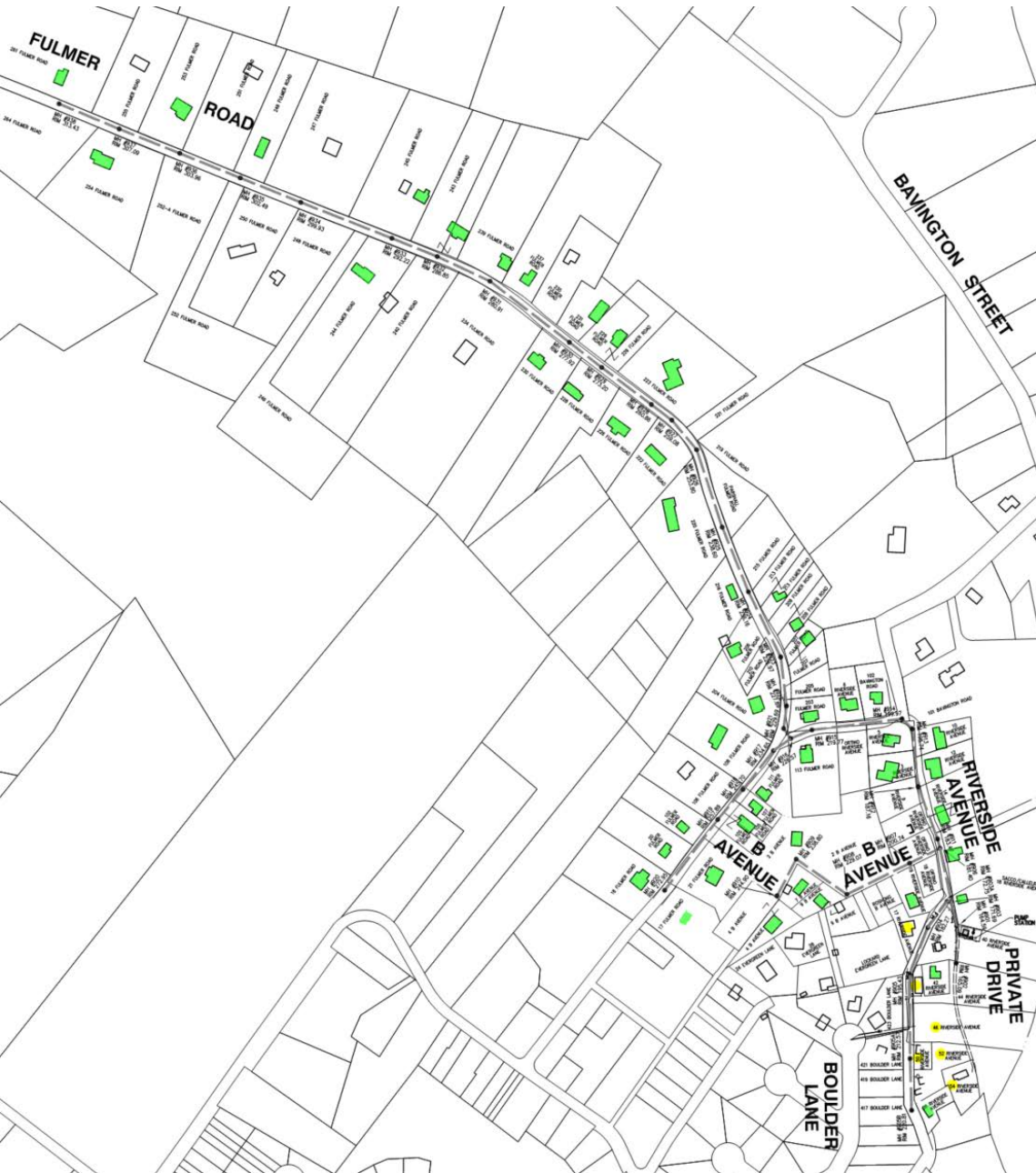


PROPOSED GRAVITY SEWER MAIN

PROPOSED
CONNECTION TO
EXISTING SYSTEM

PROPOSED
PUMP
STATION

PROPOSED
FORCEMAIN



51 homes within 150 LF of main can be required to connect.

Note: Some homes have rental units: more than one EDU.



15 more homes can connect, may be 150 feet or more from main.



7 properties with existing force main connection will be reconnected.



14 existing vacant lots along route that can connect.



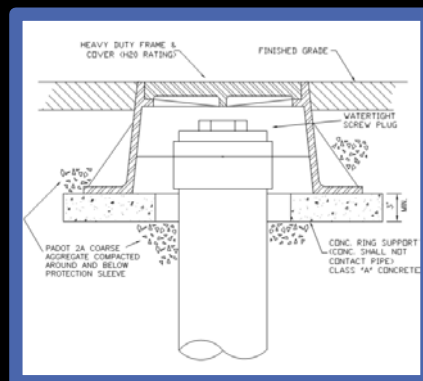
Two more homes on Bavington have requested connection by grinder pump.

Scope of Project

Approximately 82 sewer lateral stubs will be installed to provide a point of connection for each existing property along the sewer route.

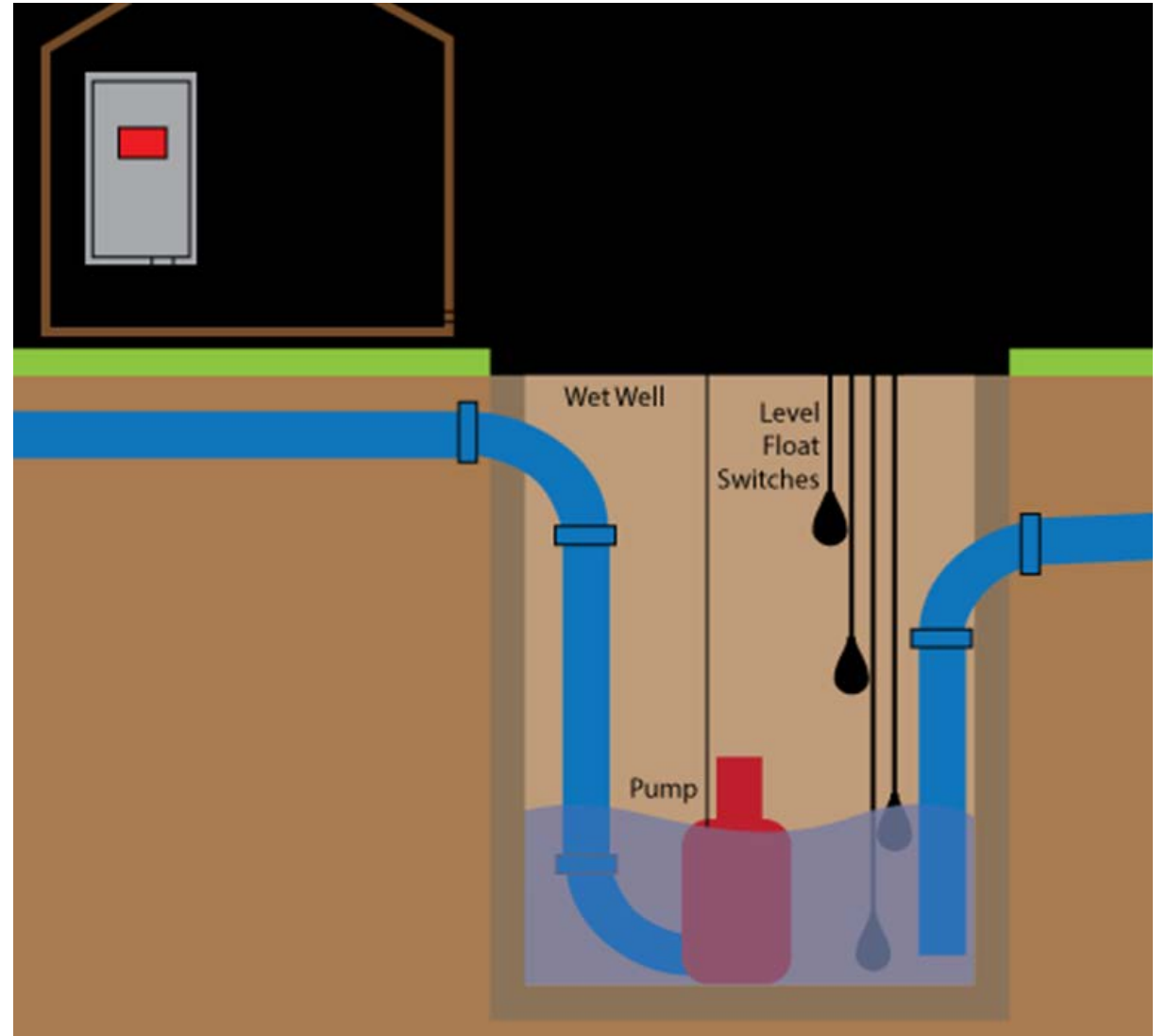
The laterals stubs will terminate with a cleanout to grade at the road right-of-way.

The Engineer will attempt to coordinate with property owners regarding lateral stub locations.



Scope of Project

A Pump Station will be constructed at a low point near Riverside Avenue. About 500 feet of force main will carry the pumped wastewater to an existing manhole in the Boulder Lane cul-de-sac.



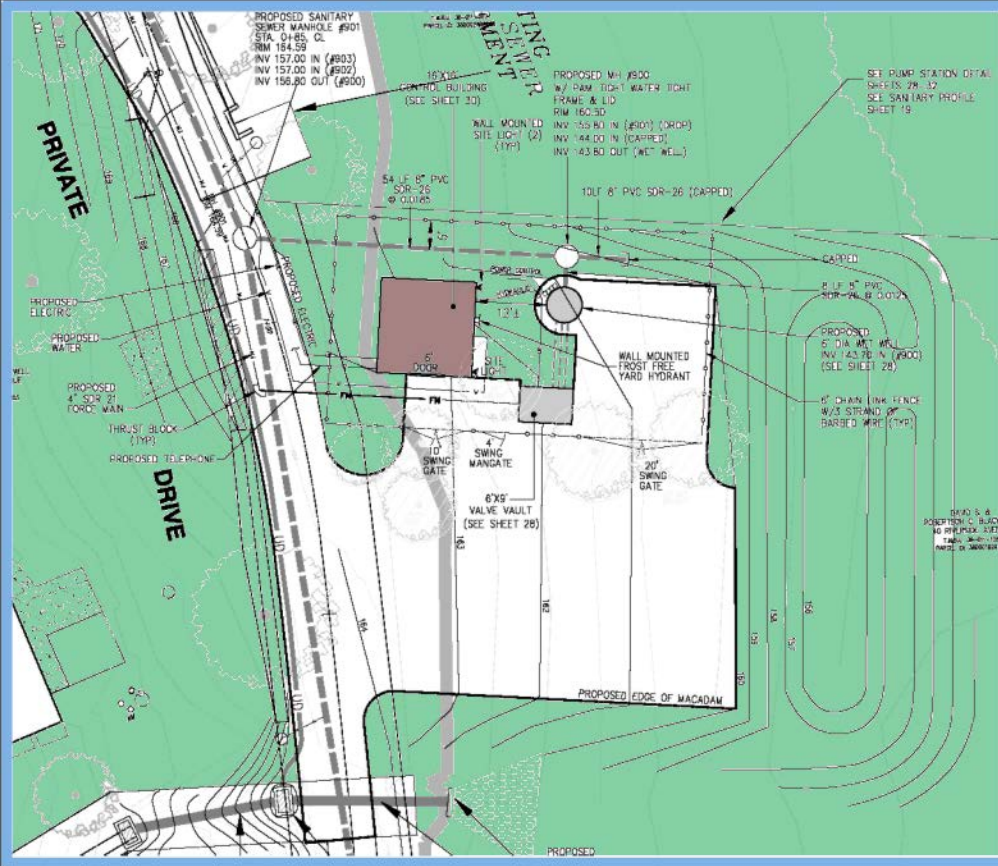
Scope of Project

Components of Pump Station

Small control building surrounded by fence with parking and turning area.

Wet well to pump effluent to the existing sewer collection system in Boulder Lane.

Generator that will run during power outages and during weekly daytime exercising.



Construction Cost



The probable construction cost is estimated to be 2.75 million dollars.

The project will be publicly bid and awarded to the lowest responsible bidder.

Gravity Collection System – budget numbers

Total Project Estimate

Overall Estimate, 2020

Subtotal	\$ 2,501,800.00
Contingencies (10%)	\$250,180.00
Total Probable Construction Cost	\$2,751,980.00
Engineering and Inspection (10%)	\$275,198.00
Total Probable Cost	\$3,027,178.00

Off-Road Portion of Sewer Extension

Without Ave B

Subtotal	\$2,501,800.00
	-\$136,000.00
	\$2,365,800.00
Contingencies (10%)	\$236,580.00
Total Probable Construction Cost	\$2,602,380.00
Engineering and Inspection (10%)	\$260,238.00
Total Probable Cost	\$2,862,618.00

Remove Wearing Course Paving

	\$2,501,800.00
	-\$100,000.00
Subtotal	\$2,401,800.00
Contingencies (10%)	\$240,180.00
Total Probable Construction Cost	\$2,641,980.00
Engineering and Inspection (10%)	\$264,198.00
Total Probable Cost	\$2,906,178.00

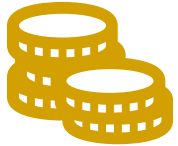
Finish Pavement Under Roads Program

Without Ave B and Wearing Course

Subtotal	\$2,501,800.00
	-\$236,000.00
	\$2,265,800.00
Contingencies (10%)	\$226,580.00
Total Probable Construction Cost	\$2,492,380.00
Engineering and Inspection (10%)	\$249,238.00
Total Probable Cost	\$2,741,618.00

Gravity Collection System – budget numbers

The Construction Costs are **estimates!** Actual bids may be higher or lower.



- Other projects in the area and how eager contractors are to secure work
- Material costs may rise or fall
- Wage rates may change
- Fuel prices for running equipment may impact bids



Project Cost:	\$ 2,265,800.00
Contingencies (10%)	\$ 226,580.00
Eng. & Inspections:	<u>\$ 249,238.00</u>
Total:	\$ 2,741,618.00

Portions of the project will be bid as “Alternate”

If actual bids are favorable, the Township can award these alternate items:

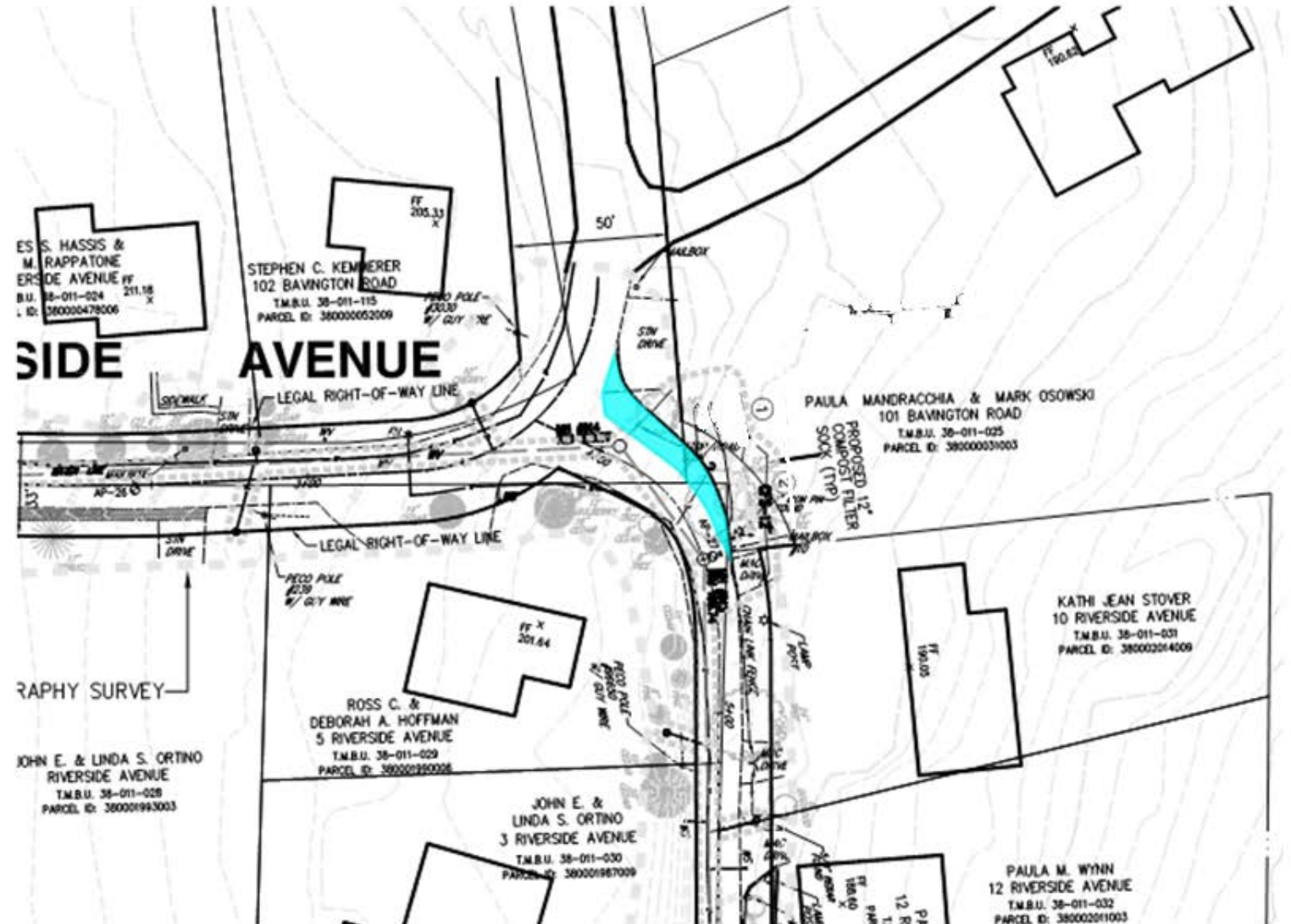
- Extending a sewer line off-road to serve Avenue B
- Place Wearing Course of Pavement as part of project, rather than as a street project after the sewer work is complete.

If the bids received are high, if they exceed the fiscal resources of the Township, the Township can reject all bids and re-evaluate the project.

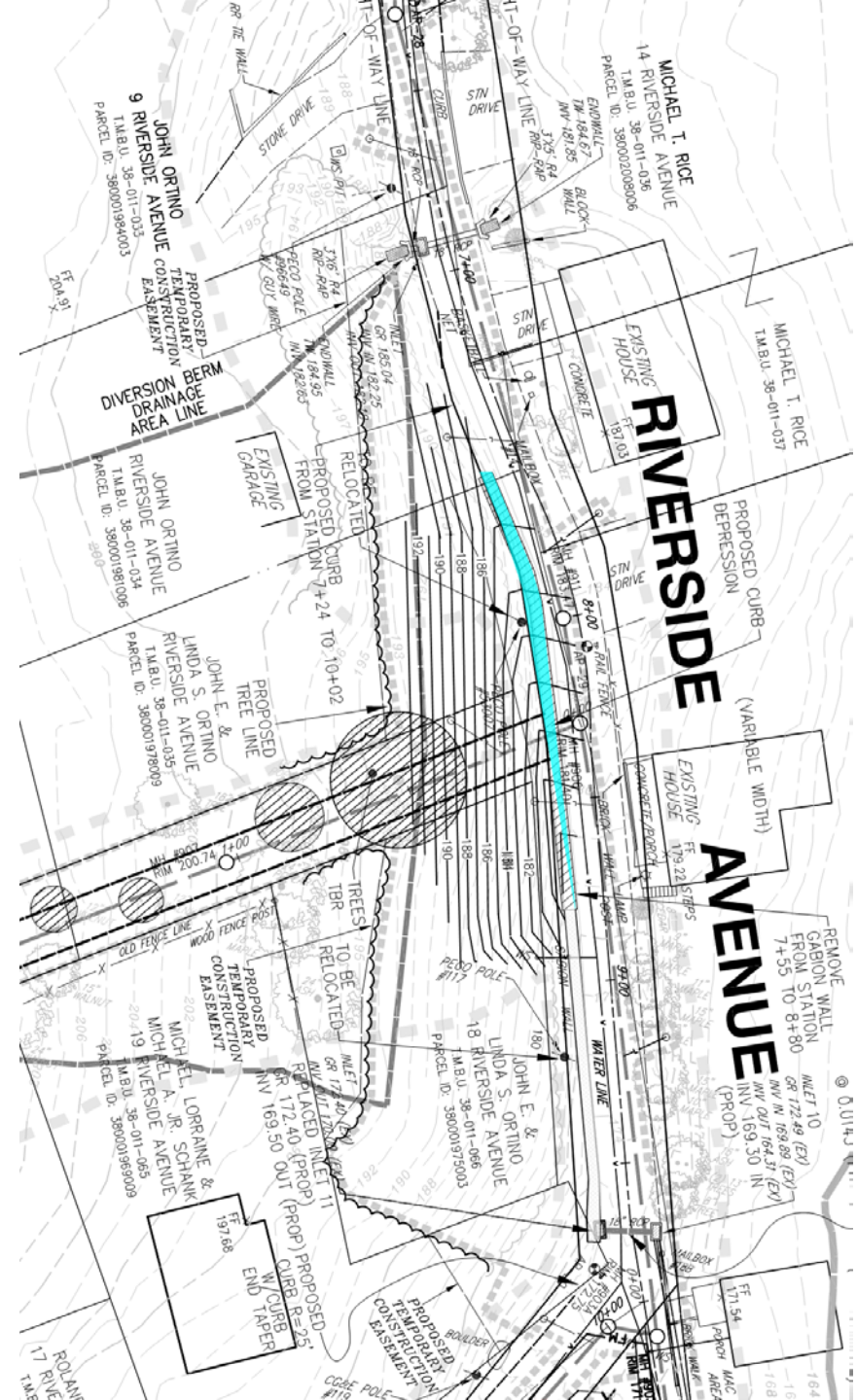


Riverside Avenue Access Improvements

The Riverside Avenue intersection with Bavington will be improved to provide turning radius for larger vehicles.



Portions of the existing gabion wall along Riverside Avenue will be removed and the road widened to an 18-foot width to accommodate vehicles that build and service the pump station.



Bid Process:

- Competitive bids will be obtained through the PennBid procurement system.

Rock:

- Test borings were previously performed at each proposed manhole location to identify depth of rock, and results provided on the plans for contractor information. All excavation will be bid as unclassified; the bidder assumes the risk.



Impacted Roads

Access to all properties will be maintained, but through traffic may be restricted.

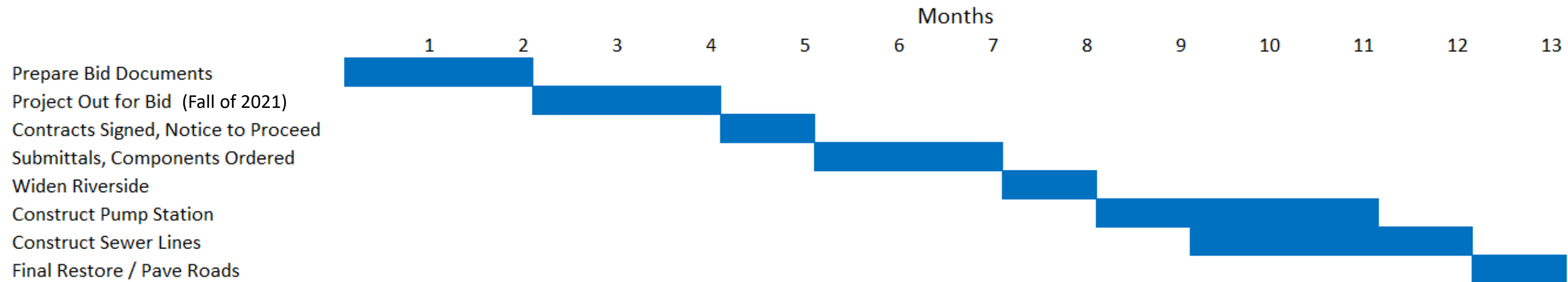
All impacted roads will receive a pavement overlay at the conclusion of the project.





CONSTRUCTION Timeline

- The estimated timeline for substantial completion after contract award is approximately 9 months
- Prior to that is 5 months for the bidding and contract award process
- Months 5-7 is contractor lead time for obtaining equipment, submittals, utility coordination, etc.
- Months 8-13 are slated for construction.



Property Owner Responsibilities

What Do I
Need To Do?



- ✓ Homes within 150' of the proposed sewer extension must connect to public sewer.
- ✓ A licensed plumber must install a lateral from the house to the lateral stub near the road.



Property Owner Responsibilities

How much time do I have?

- The connection must be completed within 60 days of receipt of a written notice from the Township requiring connection.
- This notice will be issued by the Township upon completion of the extension installation. Likely late 2022.



Property Owner Responsibilities

\$7,405

New sewer connections are charged a tapping fee for each dwelling unit.

\$325

Property owners must obtain a Connection Permit before lateral installation.

\$_____

Cost for your plumber to connect your home to the new system and septic tank/cistern decommissioning

Property Owner
Responsibilities

How much will
the plumber cost?



Each property is unique, and
you will negotiate costs with
your own plumber.

Local plumbers advise that typical
costs to connect to the new system
and decommission the old is in the
range of \$7,000.

The same work when a grinder
pump is needed is likely to cost
about \$17,000

In a prior presentation, a resident asked about a Benefit Assessment

The Benefit Assessment is a cost assessed to each benefitting property owner for the new sewer line. It is addressed by Section 2507 of the Second Class Township Code....

When a sanitary sewer system is constructed by a township for the benefit only of a certain portion of the township and the cost of main sanitary sewers, pumping stations, pressure lines, et cetera, is charged against the sanitary sewer district or sanitary sewer districts, all or part of the amount charged to each district may be assessed to the district by an assessment upon each lot or piece of land in the district ...

At this time the Township does not anticipate or plan to charge a benefit assessment on top of the tapping fee. Project funding was obtained as part of the loan established for both this project and replacement of the sewer treatment plant.

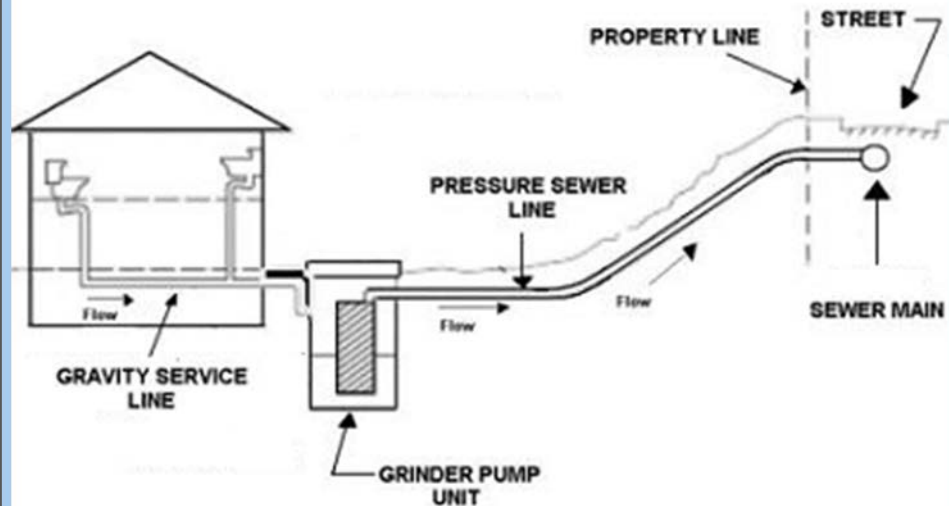
Property Owner Responsibilities

What is a Grinder Pump?

For properties where the sewer piping exiting the building is lower than the new sewer main, a grinder pump will be required.

Grinder pump systems must be installed by a licensed plumber and under a Connection Permit obtained through the Township.

Individual property owners will be responsible for operation, maintenance, and repairs to the grinder pump system, and will be required to enter into a grinder pump agreement with the Township.



Property Owner Responsibilities

Some homes may require grinder pumps to make a new connection to the collection system extension.

Grinder pump installation is not part of the Township's work; homeowner's must have these installed as part of their lateral connection work.

Needed to serve the first floor:

- 207 Fulmer Road
- 209 Fulmer Road
- 17 Fulmer Road

Needed to serve the basement:

- 213 Fulmer Road
- 50 Riverside Avenue
- 52 Riverside Avenue
- 56 Riverside Avenue

Continued use of existing grinder pump likely:

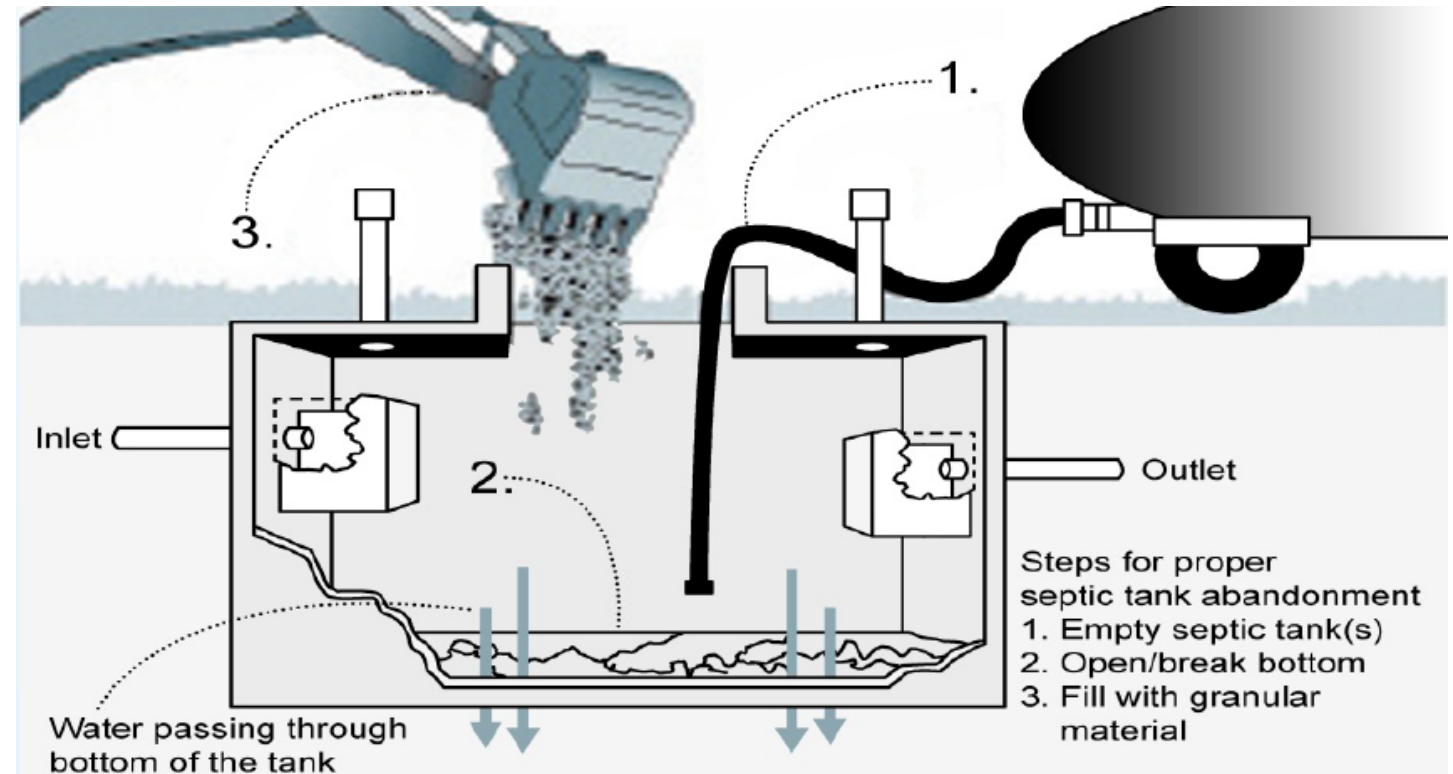
- 42 Riverside
- 46 Riverside
- 54 Riverside

Added Connections

- Two property owners on Bavington Road have contacted the Township. Both are able to connect by using a grinder pump.

Property Owner Responsibilities

For safety, existing septic tanks or cesspools must be properly abandoned.





Up to \$25,000 Financial Assistance is available to Homeowners to pay for connection to public sewer.

LOAN TERMS:

- Fixed interest rate for life of loan, as low as 1.75 percent. Up to 20 years to repay the loan balance.
- The loan must include the construction costs and can also include the tapping fee.
- The property must be owner occupied to qualify for the loan.
- The Township will request a PennVest representative be available to meet with residents



The PENNVEST Homeowner Septic Loan Program helps qualified homeowners connect to public sewer.



Call the Pennsylvania Housing Finance Agency (PHFA) Solution Center at 855-U-ARE-HOME (855-827-3466) or visit www.phfa.org to learn more.



Questions?