

TECH PARK SANITARY SEWER OUTFALL REPLACEMENT PROJECT

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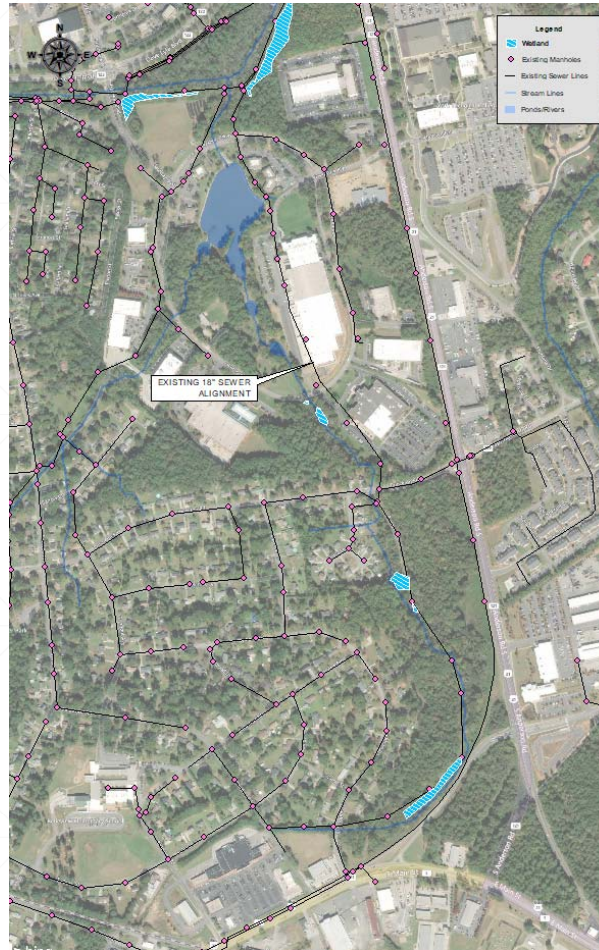


Presentation Summary

- Existing Sewer
 - Purpose of New Improvements
 - Alternatives Evaluated
 - Results of Evaluation
 - Proposed Sewer System Improvements
 - Construction Impacts
 - Princeton Road Closure
 - Lakeshore Parkway
 - Creek and Wetland Crossing
 - SRF Loan
 - Schedule
 - Questions?
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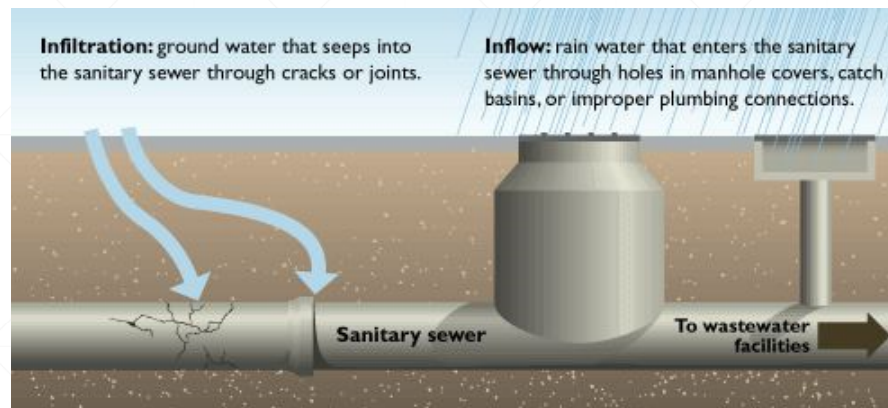
Existing Sewer

- 18" Diameter
Vitrified Clay Pipe (VCP)
- Date of Construction: 1949



Purpose of New Improvements

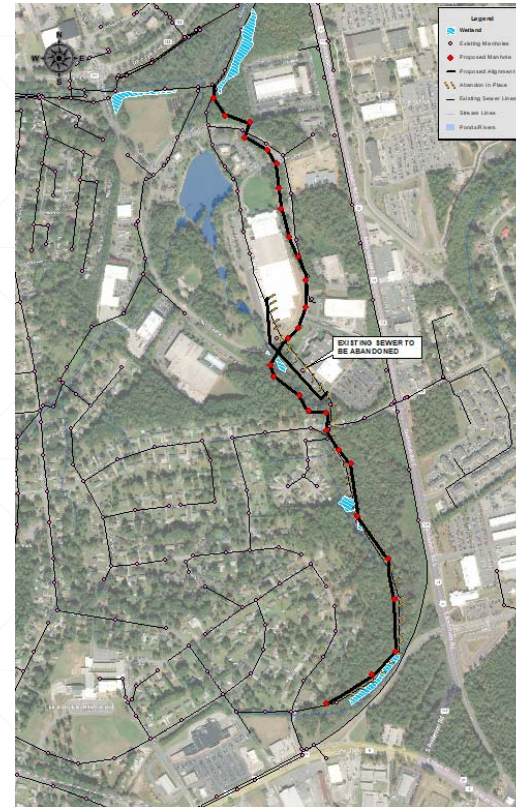
- Existing Sewer is subject to excessive Infiltration and Inflow (I&I)
 - I&I occurs when rainwater and groundwater enter the sewer system
 - Excessive I&I reduces the carrying capacity of the sewer lines, which can lead to overflowing manholes



Retrieved from: <https://salemva.gov/Departments/Water-Sewer-Dept/Wastewater-Operations/Inflow-and-Infiltration>

Purpose of New Improvements (contd)

- Wildcat Creek Force Main
 - Abandonment of Anderson Road Sewer
 - Abandonment of Inverted Siphon



Alternatives Evaluated

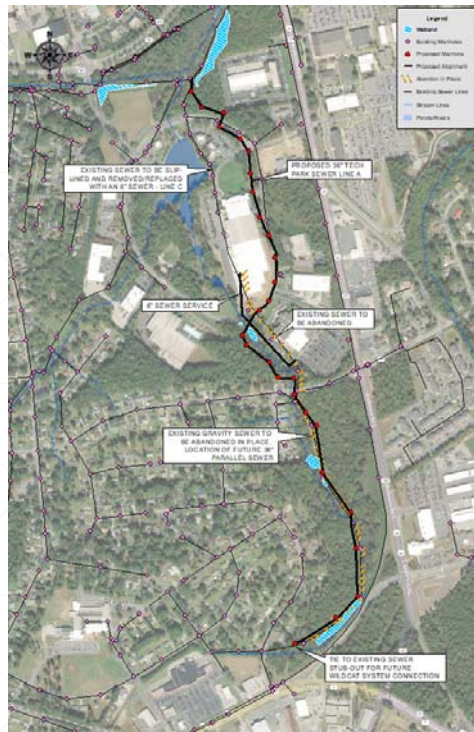
Alternative #1: No Action



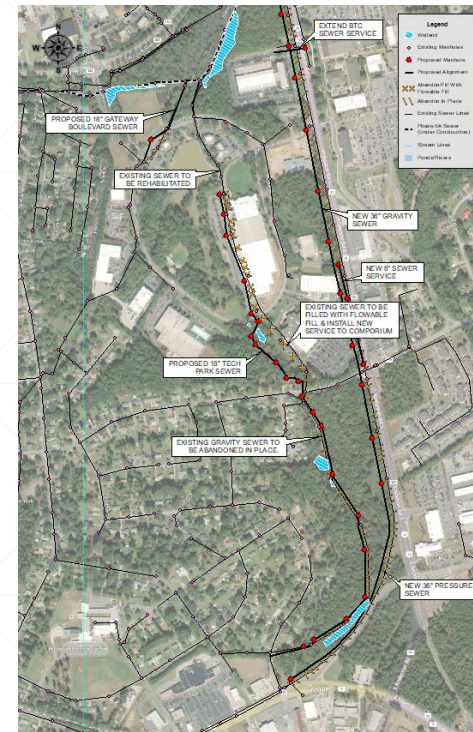
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Alternatives Evaluated (cont'd)

Alternative #2: Construct Tech Park
Sewer Replacement:



Alternative #3: Replace/Rehabilitate
Existing Sewers Separately:



Results of Evaluation

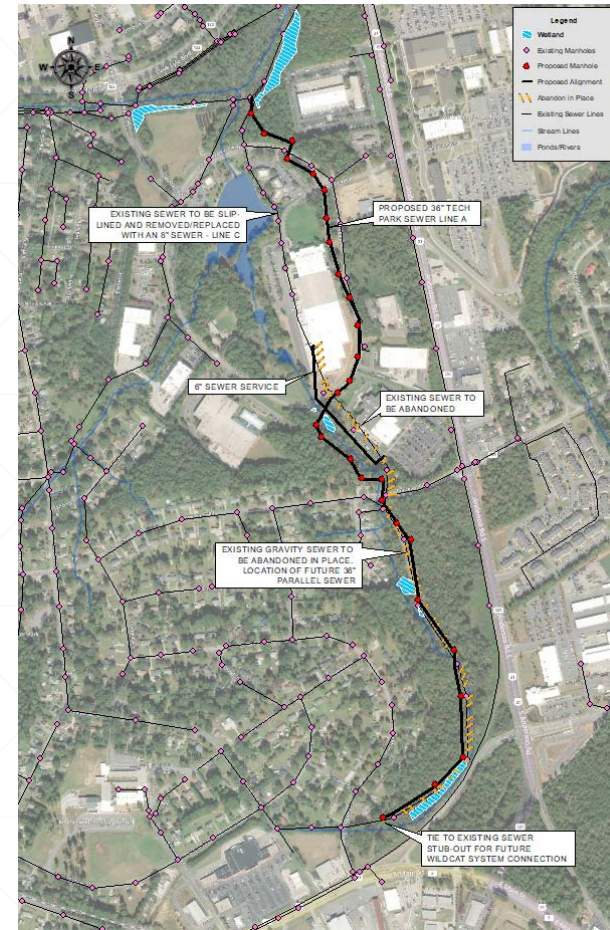
- Alternative Chosen: #2
- Advantages:
 - *Eliminates the inverted siphon*
 - *Replaces failing infrastructure that has reached the end of its useful life*
 - *More cost effective than Alternative 3*
- Disadvantages:
 - *New easements are required*
 - *More impact on business in Tech Park Business Park*



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Proposed Sewer System Improvements:

- Proposed Alignment
 - *Approximately 6,500 LF of 36" diameter sewer*
 - *Approximately 3,000 LF of 6" and 8" diameter sewer to serve industries/commercial businesses*
 - *Stub-out for Future Wildcat Force Main Connection*
- Abandon Existing Sewer



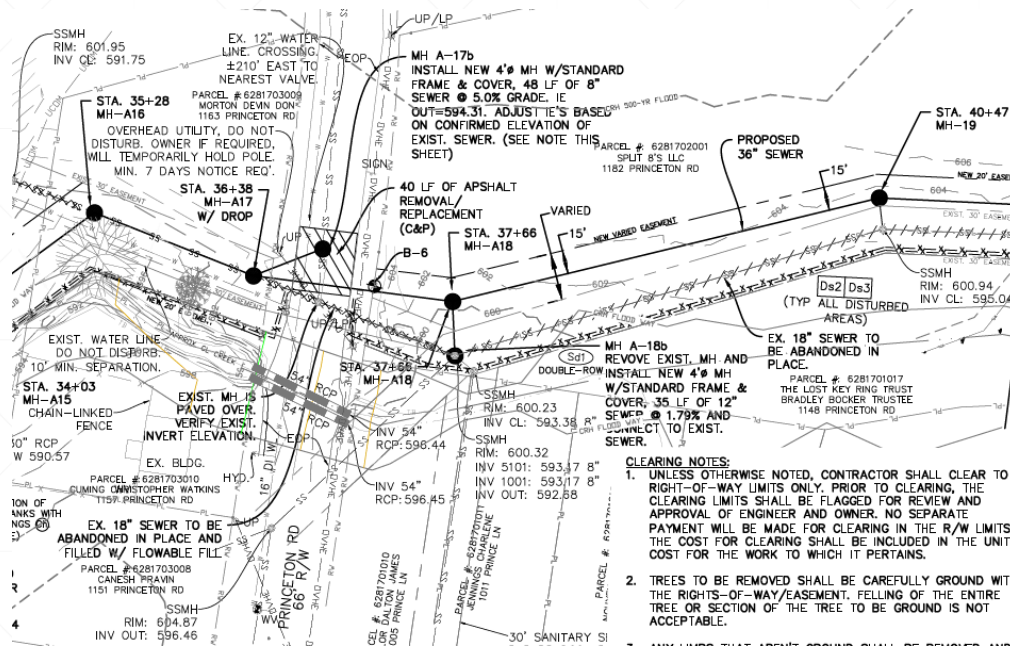
Construction Impacts

- Traffic
- Temporary Impacts to Wetlands and Creeks



Princeton Road Closure

- Princeton Road: Maximum 14-day Road Closure
- Temporary Road Closure Detour Required

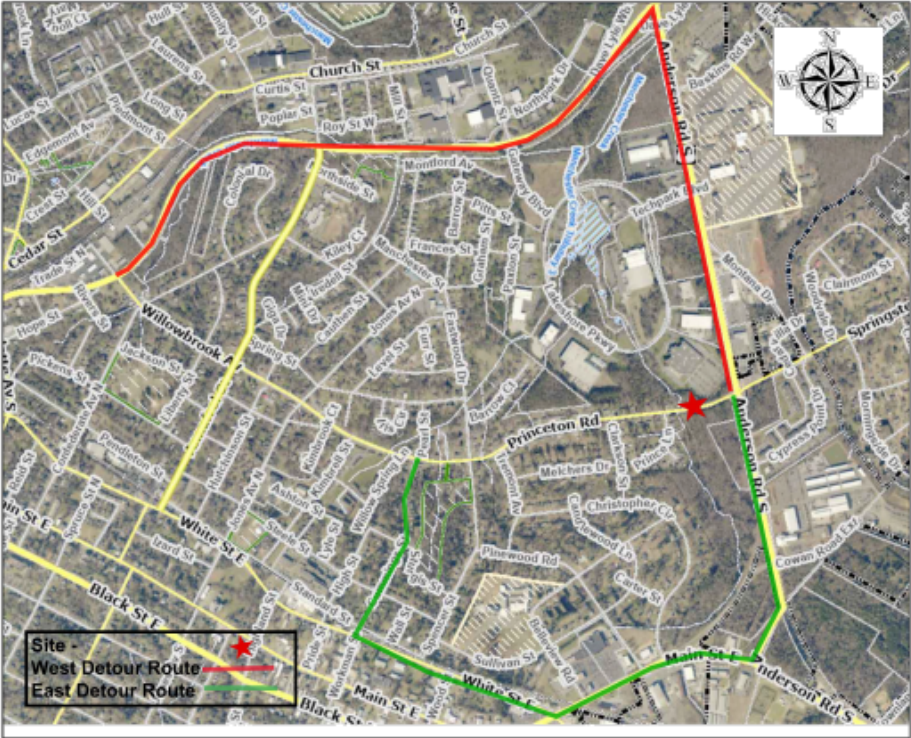


NOTES

1. THRU TRAFFIC ON PRINCETON RD MAY BE TEMPORARILY CLOSED FOR A MAX. OF 14 DAYS TO INSTALL THE SEWER FROM STA. 35+28 TO STA. 40+47 AND TO COMPLETE THE ASPHALT REPAIRS AND PLACE THE ROAD BACK IN SERVICE.
2. THE PROPOSED SEWER BEGINNING AT STA. 35+28 (LINE A) CAN NOT BE COMPLETED UNTIL THE DOWNSTREAM SEWER IS COMPLETED, TESTED AND PERMITTED BY DHD TO RECEIVE FLOW. AS REQUIRED, PROVIDE BYPASS PUMPING TO MAINTAIN SEWER FLOWS UNTIL WASTEWATER CAN BE DIVERTED TO THE NEW SEWER.
3. MH A-17b: EXISTING MH IS PAVED OVER AND THE ELEVATION OF THE EXISTING 8" SEWER IN PRINCETON ROAD COULD NOT BE CONFIRMED. FIELD VERIFY ELEVATION OF EXISTING 8" SEWER.
4. CONTROL PLACEMENT OF FLOWABLE FILL TO ELIMINATE THE POTENTIAL FOR FLOATATION, LATERAL DISPLACEMENT OR PIPE BUCKLING.
5. ASPHALT PLACEMENT SHALL BE DELAYED UNTIL AFTER INITIAL SET AND SHRINKAGE AND THE FLOWABLE FILL HAS REACHED ADEQUATE STRENGTH. HOWEVER, ALLOW AT LEAST SEVEN DAYS FOR CURING BEFORE ASPHALT PLACEMENT.
6. NO SLOPED EXCAVATION OF TRENCH WALLS AT ROAD CROSSING. AS REQUIRED, PROMDE/INSTALL AT NO ADDITIONAL COST TO OWNER, BENCH SHIELD/TEMPORARY SHEETING/SHORING.
7. EXCESS SPOIL MATERIAL SHALL BE HAULED OFF-SITE AND DISPOSED OF BY THE GENERAL CONTRACTOR.
8. BORE HOLE LOCATIONS SHOWN ARE APPROXIMATE. SEE GEOTECH REPORT FOR ADDITIONAL INFORMATION.
9. LAKESHORE PARKWAY INCLUDES CRITICAL ELECTRIC/COMMUNICATION / WATER/OTHER UTILITIES THAT ARE VITAL TO THE OPERATION OF THE BUSINESSES AND INDUSTRIES SURROUNDING LAKESHORE PARKWAY. THESE UTILITIES CAN'T BE DISTURBED AND MUST BE PROTECTED DURING CONSTRUCTION. AT LEAST 15 DAYS PRIOR TO STARTING CONSTRUCTION, A MEETING MUST BE HELD ONSITE WITH THE UTILITY PROVIDERS AND THE GENERAL CONTRACTOR TO DISCUSS THE PROJECT AND POTENTIAL IMPACTS TO THE EXISTING UTILITIES.

Princeton Road Closure (cont'd)

Princeton Road (S-487) Temporary Road Closure Detour



Traffic heading east on Princeton Road will be advised to the detour as follows: Anderson Road South (US 21) to East Main Street (SC 5) to East White Street (S-245) to Cummings Street (S-487) to Princeton Road (S-487)

Traffic heading west on Princeton Road will be advised to the detour as follows: Anderson Road North (US 21) to Dave Lyle Blvd (SC 122) to Willowbrook Ave (S-487) to to Princeton Road (S-487)

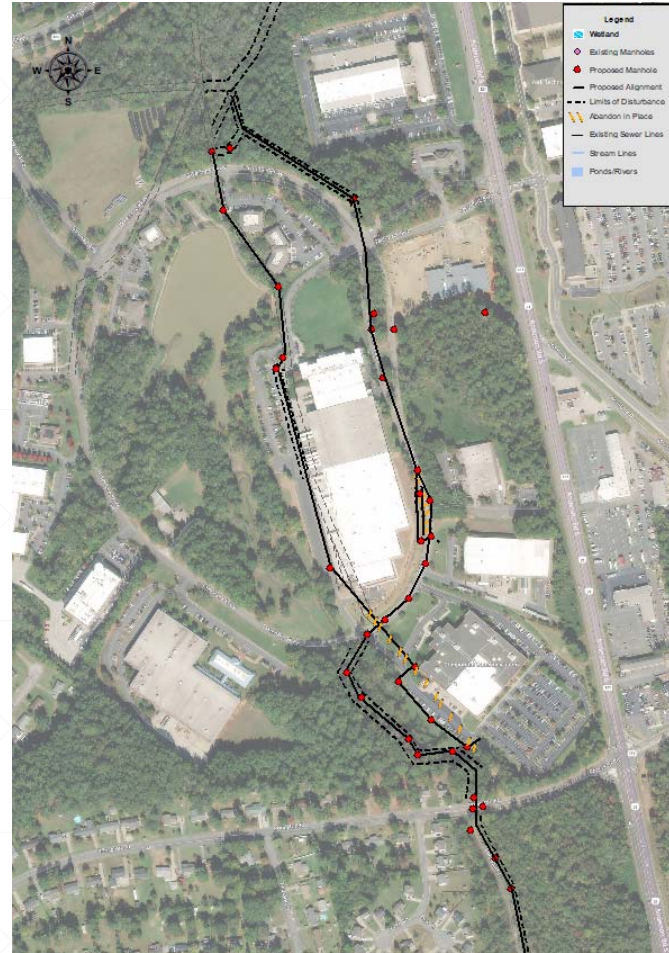
Approximate Detour Length 4.5 miles

Note: The temporary road closure is for permitting purposes and includes the minimum requirements for road closure. The final details shall be determined by the contractor and submitted for review and approval of Engineer and SCDOT and shall include all temporary traffic control devices to ensure safe and convenient passage for vehicles and emergency vehicles. Special information signs (message boards), including closure dates, will be required in both directions and shall be posted at least one week prior to closure.

Refer to SCDOT Work Zone Traffic Control Procedures and Guidelines Manual, Detours (Page 33) for Detour requirements and Detour Signing for Secondary Routes (Drawing No. 805.02, Pages DS-3 & DS-4).

Lakeshore Parkway

- Overview of roads in Tech Park
- Limits of construction



State Revolving Fund (SRF) Loan

- Loan Amount: \$7,373,599



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Project Schedule

All Land, ROW & Easement Acquisition	<u>Nov-21</u>
Bid Advertisement	<u>4-Oct-21</u>
Bid Opening	<u>4-Nov-21</u>
Contract Execution	<u>5-Jan-22</u>
Notice to Proceed	<u>5-Jan-22</u>
Start of Construction	<u>17-Jan-22</u>
# of Contract Days	<u>360</u>
Issuance of DHEC Permit to Operate	<u>12-Jan-23</u>
Completion of Construction Contract	<u>12-Jan-23</u>



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