Sanitary Sewer Evaluation

Geneva East Basin

Deuchler Engineering Corp.

Underground Maintenance FY2014 to FY2019

- Seven employees
- 122.4 Miles of Sanitary Transmission Mains
- Sanitary Capital Maintenance Expenditures $3.5 Million
- Inspecting/cleaned average of 11 miles per year
- Sewer lining of 55 streets or segments of streets
- Over 10,000 Work Orders
- Repaired 220 Water Main Breaks
- Serviced over 13,000 Fire Hydrants
- Performed over 2,750 hours of snow/ice control operations

Peak Flows, Inflow and Infiltration

- North of SMH 2V-M04
- Average Dry Weather Flows at 0.06 MGD
- May Rains Peak Flow at 1.15 MGD
- Volume of Infiltration & Inflow Warrant Upstream Rehabilitation
- Downstream Flow Indicates Additional Study
- Inflow is water other than Sanitary Flow (improper connections)
- Infiltration is Groundwater (joints)

Parker Court Lift Station

- Hydraulic Disturbance
- Discharges Directly Into Flow Path
- Creates Turbulence that limits downstream flow when Pumping
- Typical Operation is 0.5 Hours/day
- High Flow Event was 1.5 Hours/day
- Re-design Flow Path Entry to Reduce Turbulence
- Detailed Study of the Lift Station Operations

Sanitary Transmission System

- 27,300 Linear Feet of Sanitary Transmission Main
- VCP (Vitrified Clay Pipe) & Ductile Iron at 11,500 LF
- Air Test and Chemical Grout Joints
- CIPP Lining for Root Intrusion
- Segment Repair On Geneva Drive at Lions Park
- Manhole Rehabilitation for 114 Structures
- Smoke Testing
  - 4 Sanitary Service Cleanouts
  - 41 Sanitary Manholes

Sanitary Service Laterals

- Private Property- Construction Easements
- Air Test and Grout
- Identified 21 “Flat” Services
- Holding Fluids in Dry Conditions
- Overhead or Backflow Prevention Recommended for 27 Locations
  - Two Completed
  - Five Underway
- Continue with Sump Pump Inspections

Preliminary Engineers Estimate

- Will Be Utilized in Upcoming Budget Preparation

Sanitary Service Laterals	**$1,184,700**
Overhead Sewer/Backflow System	$405,000
System Repairs	$554,650
Estimated Cost	$2,144,350

- ? Parker Court Pump Station
- ? Downstream Flow Study