

Ronald Wastewater District - Sanitary Sewer Rehabilitation
Project Summary: Briarcrest CIP No. 1 (10-D)

Neighborhood: Briarcrest

Permits: City of Shoreline Right-of-Way Permit

Project Areas: NE 148th St between 17th Ave NE and 20th Ave NE
Easement between 20th Ave NE and 22nd Ave NE from NE 147th St to NE 150th St
Easement between 22nd Ave NE and 23rd Ave NE from NE 147th St to NE 150th St
NE 147th St between 20th Ave NE and 23rd Ave NE

Condition Assessment: Through the District's ongoing maintenance, TV inspection personnel assess the entire system once every six to eight years, noting the various types and severity of defects in the sewer mainlines. Pipe segments in the Briarcrest CIP No. 1 were selected for replacement due to root intrusion, pulled joints, and evidence of infiltration and inflow (I/I).

Cost/Construction:

Engineer's Estimate: \$637,555

Contractor's Bid Price: \$443,508

Change Order: none

Final Construction Cost: \$403,716.88

Cost per lineal foot main line: \$199.66 per LF

Engineer: Scott Christensen, P.E., Craig Christensen, CHS Engineers, LLC

Inspector: David Jensen, CHS Engineers

Contractor: Budget Sewer

Notes:

Replacement/Rehabilitation:

8" Concrete Sanitary Sewer Pipeburst with 8" HDPE: 2,022 LF

Cleanouts Installed: 44

Side Sewers Replaced (4" HDPE): 42

Side Sewers Replaced (6" HDPE): 3

Additional Side Sewer Connections/Replacements: 7

Manholes Rehabilitated (Frame, Cover and Neck): 9

Manholes Rehabilitated (Neck Only): 6

Side Sewer Stubs Replaced: 6

Private Replacement/Participation:

Number of private side sewers in project: 53

Number of property owners that signed up (signed ROE): 40

Number of side sewers not needing replacement (per video): 2

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| House # | Street | ROE | Old Material | New Material | Replacement | | Size | Notes |
|---------|-------------------------|-----|--------------|--------------|-------------|-----------------------|------|---|
| | | | | | Side Sewer | Stub (to edge of R/W) | | |
| 1756 | NE 148 th St | Y | Unknown | HDPE | X | | 4" | SS replaced |
| 1750 | NE 148 th St | Y | Unknown | HDPE | X | | 4" | SS replaced |
| 1753 | NE 148 th St | Y | Clay | HDPE | X | | 4" | SS replaced |
| 1747 | NE 148 th St | Y | PVC/Conc | HDPE | X | | 4" | SS replaced |
| 1746 | NE 148 th St | Y | Unknown | HDPE | X | | 4" | SS replaced |
| 1740 | NE 148 th St | Y | Conc | HDPE | X | | 4" | SS replaced |
| 1741 | NE 148 th St | Y | Conc | HDPE | X | | 6" | SS replaced |
| 1737 | NE 148 th St | Y | Unknown | | | | | Not replaced |
| 1732 | NE 148 th St | Y | Unknown | HDPE | X | | 4" | SS replaced |
| 1727 | NE 148 th St | Y | Unknown | HDPE | X | | 4" | Mostly replaced then connected to unknown ex. pipe |
| 1728 | NE 148 th St | Y | Conc/CIP | HDPE | X | | 4" | Partly replaced then connected to ex. 4" HDPE |
| 1723 | NE 148 th St | | Unknown | HDPE | | X | 4" | Stub connected to unknown ex. pipe |
| 1720 | NE 148 th St | Y | Unknown | HDPE | X | | 4" | SS connected with 1720 ½ |
| 1720 ½ | NE 148 th St | Y | Unknown | HDPE | X | | 4" | SS connected with 1720. Mostly replaced then connected to ex. 4" Conc |
| 1716 | NE 148 th St | Y | Conc | HDPE | X | | 4" | SS replaced |
| 1715 | NE 148 th St | Y | Unknown | HDPE | X | | 4" | SS replaced |
| 1709 | NE 148 th St | Y | Conc | HDPE | X | | 4" | SS replaced |
| 1701 | NE 148 th St | Y | Unknown | HDPE | X | | 4" | SS replaced |
| 1704 | NE 148 th St | Y | Unknown | HDPE | X | | 4" | Mostly replaced then connected to unknown ex. pipe |
| 1710 | NE 148 th St | | Conc | HDPE | | X | 4" | Stub connected to ex. 4" PVC |
| 14705 | 22 nd Ave NE | Y | Conc | | | | | Not replaced |
| 2010 | NE 147 th St | | Conc | | | | | Not replaced |

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| | | | | | Side Sewer | Stub (to edge of R/W) | | |
| 14711 | 22 nd Ave NE | Y | Conc | HDPE | X | | 4" | Mostly replaced then connected to ex. 4" Conc |
| 14717 | 22 nd Ave NE | Y | Conc | HDPE | X | | 4" | Mostly replaced then connected to ex. 4" Conc |
| 14723 | 22 nd Ave NE | Y | Conc | HDPE | X | | 4" | Mostly replaced then connected to ex. 4" Conc |
| 14729 | 22 nd Ave NE | Y | PVC | HDPE | X | | 4" | Mostly replaced then connected to ex. 4" Conc |
| 14735 | 22 nd Ave NE | Y | Conc | PVC | X | | 4" | Mostly replaced then connected to ex. 4" Conc |
| 14741 | 22 nd Ave NE | Y | Conc | HDPE | X | | 4" | Mostly replaced then connected to ex. 4" Conc |
| 14747 | 22 nd Ave NE | | Conc | | | | | Not replaced |
| 14753 | 22 nd Ave NE | Y | Conc | HDPE | X | | 4" | Additional ex. 3" ABS SS connected with wye to side of house. |
| 14759 | 22 nd Ave NE | Y | Conc | | | | | Not replaced |
| 2015 | NE 150 th St | | Conc | | | | | 2 SS's. Not replaced |
| 14704 | 22 nd Ave NE | Y | Conc | HDPE | X | | 4" | Mostly replaced then connected to ex. 4" Conc |
| 14705 | 23 rd Ave NE | Y | Conc | HDPE | X | | 4" | |
| 14711 | 23 rd Ave NE | Y | Conc | HDPE | X | | 4" | Mostly replaced then connected to ex. 4" Conc |
| 14710 | 22 nd Ave NE | Y | Conc | HDPE | X | | 4" | |
| 14716 | 22 nd Ave NE | Y | Conc | HDPE | X | | 4" | Mostly replaced then connected to ex. 4" Conc |
| 14717 | 23 rd Ave NE | Y | Conc | HDPE | X | | 4" | Mostly replaced then connected to ex. 4" Conc |

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| | | | | | Side Sewer | Stub (to edge of R/W) | | |
| 14723 | 23 rd Ave NE | Y | Conc | HDPE | X | | 4" | Mostly replaced then connected to ex. 4" Conc |
| 14722 | 22 nd Ave NE | Y | Conc | HDPE | X | | 4" | |
| 14728 | 22 nd Ave NE | | Clay | | | | | Not replaced |
| 14729 | 23 rd Ave NE | Y | Conc | HDPE | X | | 4" | Mostly replaced then connected to ex. 4" Conc |
| 14734 | 22 nd Ave NE | Y | Conc | HDPE | X | | 4" | Mostly replaced then connected to ex. 4" Conc |
| 14735 | 23 rd Ave NE | Y | Conc | HDPE | X | | 4" | Mostly replaced then connected to ex. 4" Conc |
| 14741 | 23 rd Ave NE | Y | Conc | HDPE | X | | 4" | Mostly replaced then connected to ex. 4" Conc |
| 14740 | 22 nd Ave NE | Y | Conc | HDPE | X | | 4" | Mostly replaced then connected to ex. 4" Conc |
| 14746 | 22 nd Ave NE | Y | Conc | HDPE | X | | 4" | Mostly replaced then connected to ex. 4" Conc |
| 14747 | 23 rd Ave NE | Y | Conc | HDPE | X | | 4" | Mostly replaced then connected to ex. 4" Conc |
| 14752 | 22 nd Ave NE | Y | Conc | HDPE | X | | 4" | Mostly replaced then connected to ex. 4" Conc |
| 14753 | 23 rd Ave NE | Y | Conc | HDPE | X | | 4" | Mostly replaced then connected to ex. 4" Conc |
| 14759 | 23 rd Ave NE | Y | Conc | HDPE | X | | 4" | |
| 14758 | 22 nd Ave NE | | Conc | | | | | Not replaced |
| 14559 | NE 147 th St | Y | Conc | HDPE | X | | 4" | Mostly replaced then connected to ex. 4" Conc |
| 2215 | NE 147 th St | | Unknown | HDPE | | X | 6" | Stub connected to ex. 6" PVC |
| 2215 | NE 147 th St | | Unknown | HDPE | | X | 6" | Stub connected to ex. 6" Conc |