

**Ronald Wastewater District - Sanitary Sewer Rehabilitation**  
**Project Summary: Briarcrest CIP No. 2 (10-B)**

**Neighborhood:** Briarcrest

**Permits:** City of Shoreline Right-of-Way Permit

**Project Areas:** NE 147<sup>th</sup> St between 15<sup>th</sup> Ave NE and 17<sup>th</sup> Ave NE  
NE 146<sup>th</sup> St and 17<sup>th</sup> Ave NE  
NE 145<sup>th</sup> St between 17<sup>th</sup> Ave NE and 20<sup>th</sup> 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. 2 were selected for replacement due to root intrusion, pulled joints, broken pipe, and evidence of infiltration and inflow (I/I).

**Cost/Construction:**

Engineer's Estimate: \$596,080

Contractor's Bid Price: \$496,040

Change Orders (2): \$100,478.06

Final Construction Cost: \$554,631.12

Cost per lineal foot main line: \$304.74 per LF

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

Inspector: David Jensen, CHS Engineers

Contractor: Landis & Landis Construction, LLC

Notes: All estimates, prices, and costs are without tax.

**Replacement/Rehabilitation:**

8" Concrete Sanitary Sewer Pipeburst with 8" HDPE: 1,820 LF

Cleanouts Installed: 34

Private Side Sewers Replaced (4" HDPE): 19

Private Side Sewers Replaced (6" HDPE): 9

Additional Side Sewer Connections/Replacements: 14

Manholes Rehabilitated (Frame, Cover and Neck): 2

Manholes Rehabilitated (Neck Only): 1

Side Sewer Stubs Replaced: 2

**Private Replacement/Participation:**

Number of private side sewers in project: 34

Number of property owners that signed up (signed ROE): 27

Number of side sewers not needing replacement (per video): 1

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| House #    | Street                  | ROE | Old Material | New Material | Replacement |                       | Size | Notes   |
|------------|-------------------------|-----|--------------|--------------|-------------|-----------------------|------|---|
|            |                         |     |              |              | Side Sewer  | Stub (to edge of R/W) |      |   |
| 1512       | NE 147 <sup>th</sup> St | Y   | PVC/ABS      | HDPE         | X           |                       | 4"   | SS replaced   |
| 1517       | NE 147 <sup>th</sup> St |     | Conc/PVC     | HDPE         |             | X                     | 6"   | Part replaced then connected to ex. 6" PVC  |
| 1523/1523A | NE 147 <sup>th</sup> St | Y   | Conc         | HDPE         | X           |                       | 4"   | SS replaced   |
| 1520       | NE 147 <sup>th</sup> St | Y   | Unknown      | HDPE         | X           |                       | 4"   | Mostly replaced then connected to unknown ex. pipe                                      |
| 1528       | NE 147 <sup>th</sup> St | Y   | Unknown      | HDPE         | X           |                       | 4"   | Two (2) separate SS connections made to front (ex. 4" ABS/corrugated) and side of house |
| 1529       | NE 147 <sup>th</sup> St | Y   | Unknown      | HDPE         | X           |                       | 4"   | SS replaced   |
| 1533       | NE 147 <sup>th</sup> St | Y   | Unknown      | HDPE         | X           |                       | 4"   | SS replaced   |
| 1532       | NE 147 <sup>th</sup> St | Y   | AC           | HDPE         | X           |                       | 4"   | SS replaced   |
| 1539       | NE 147 <sup>th</sup> St |     | Unknown      | HDPE         | X           |                       | 4"   | Part replaced then connected to ex. 4" PVC  |
| 1546       | NE 147 <sup>th</sup> St |     | Unknown      | HDPE         |             | X                     | 6"   | Part replaced then connected to ex. 6" PVC  |
| 1548       | NE 147 <sup>th</sup> St | Y   | Conc/ABS     | HDPE         | X           |                       | 4"   | SS replaced   |
| 1545       | NE 147 <sup>th</sup> St | Y   | Unknown      | HDPE         | X           |                       | 4"   | SS replaced   |
| 1550       | NE 147 <sup>th</sup> St | Y   | Conc         | HDPE         | X           |                       | 4"   | SS replaced   |
| 14707      | 17 <sup>th</sup> Ave NE | Y   | Unknown      | HDPE         | X           |                       | 4"   | SS replaced   |
| 1551       | NE 147 <sup>th</sup> St | Y   | Unknown      |              |             |                       |      | Not replaced  |
| 1553       | NE 147 <sup>th</sup> St | Y   | Unknown      |              |             |                       |      | Not replaced  |
| 14601      | 17 <sup>th</sup> Ave NE | Y   | Unknown      | HDPE         | X           |                       | 4"   | Mostly replaced then connected to unknown ex. pipe                                      |
| 1550       | NE 146 <sup>th</sup> St | Y   | Unknown      | HDPE         | X           |                       | 4"   | SS replaced   |

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|-----------|-------------------------|-----|---------------|--------------|-------------|-----------------------|------|--|
|           |                         |     |               |              | Side Sewer  | Stub (to edge of R/W) |      |  |
| 1546      | NE 146 <sup>th</sup> St | Y   | Conc          | HDPE         | X           |                       | 4"   | SS replaced  |
| 14521     | 17 <sup>th</sup> Ave NE | Y   | PVC           |              |             |                       |      | Not replaced                                       |
| 1551      | NE 146 <sup>th</sup> St | Y   | Conc          | HDPE         | X           |                       | 4"   | SS replaced  |
| 14500A    | 15 <sup>th</sup> Ave NE | Y   | PVC           | HDPE         | X           |                       | 6"   | Mostly replaced then connected to unknown ex. pipe |
| 1530      | NE 146 <sup>th</sup> St | Y   | Conc          | HDPE         | X           |                       | 6"   | SS replaced  |
| 1750      | NE 145 <sup>th</sup> St | Y   | AC            | HDPE         | X           |                       | 6"   | SS replaced  |
| 1750      | NE 145 <sup>th</sup> St | Y   | AC            | HDPE         | X           |                       | 6"   | SS replaced  |
| 1750      | NE 145 <sup>th</sup> St | Y   | AC            | HDPE         | X           |                       | 6"   | SS replaced  |
| 1728      | NE 145 <sup>th</sup> St | Y   | Conc or AC    | HDPE         | X           |                       | 4"   | SS replaced  |
| 1722      | NE 145 <sup>th</sup> St | Y   | Conc/Clay/PVC | HDPE         | X           |                       | 4"   | SS replaced  |
| 1710/1712 | NE 145 <sup>th</sup> St | Y   | Unknown       | HDPE         | X           |                       | 4"   | SS replaced  |
| 1710/1712 | NE 145 <sup>th</sup> St | Y   | Clay          | HDPE         | X           |                       | 6"   | SS replaced  |
| 1700      | NE 145 <sup>th</sup> St | Y   | Clay          | HDPE         | X           |                       | 4"   | SS replaced  |