

MH 5748-371
Approx depth = 6.5 ft

Remove and replace 16 lf
of pavement and/or curb
Install 16 lf of Flowable Fill

Remove 240 lf of 8" pipe
Install 240 lf of 8" pipe

Reconstruct Outside Drop
Approx pipe depth = 9.3 ft
Approx MH depth = 15.3 ft

MH 5748-370
Replace Manhole Frame & Cover

(no water or storm water sewer in Elm)

Elm Street

MH 5748-382
Approx depth = 7.3 ft

Remove and replace 16 lf
of pavement and/or curb
Install 16 lf of Flowable Fill

Point Repair: Remove and replace
70 lf of 8" pipe from MH 5748-382 to
70 lf south, including two service
connection replacements for 555 N.
Pershing and 556 N. Terrace
(see tv log)

MH 5748-381
Approx depth = 10.4 ft

Estimated 9 Service Reconnections (4")
Estimated 40 lf Silt Fence
Estimated 44 sy Erosion Control Mat
Estimated 40 lf Back of Curb Protection
Estimated 1 Construction Entrance



SITE 3

Sheet 11 of 22

Central

Crestway

Terrace

Pershing

199'

200'

240'

239'

240'

242'

556

555

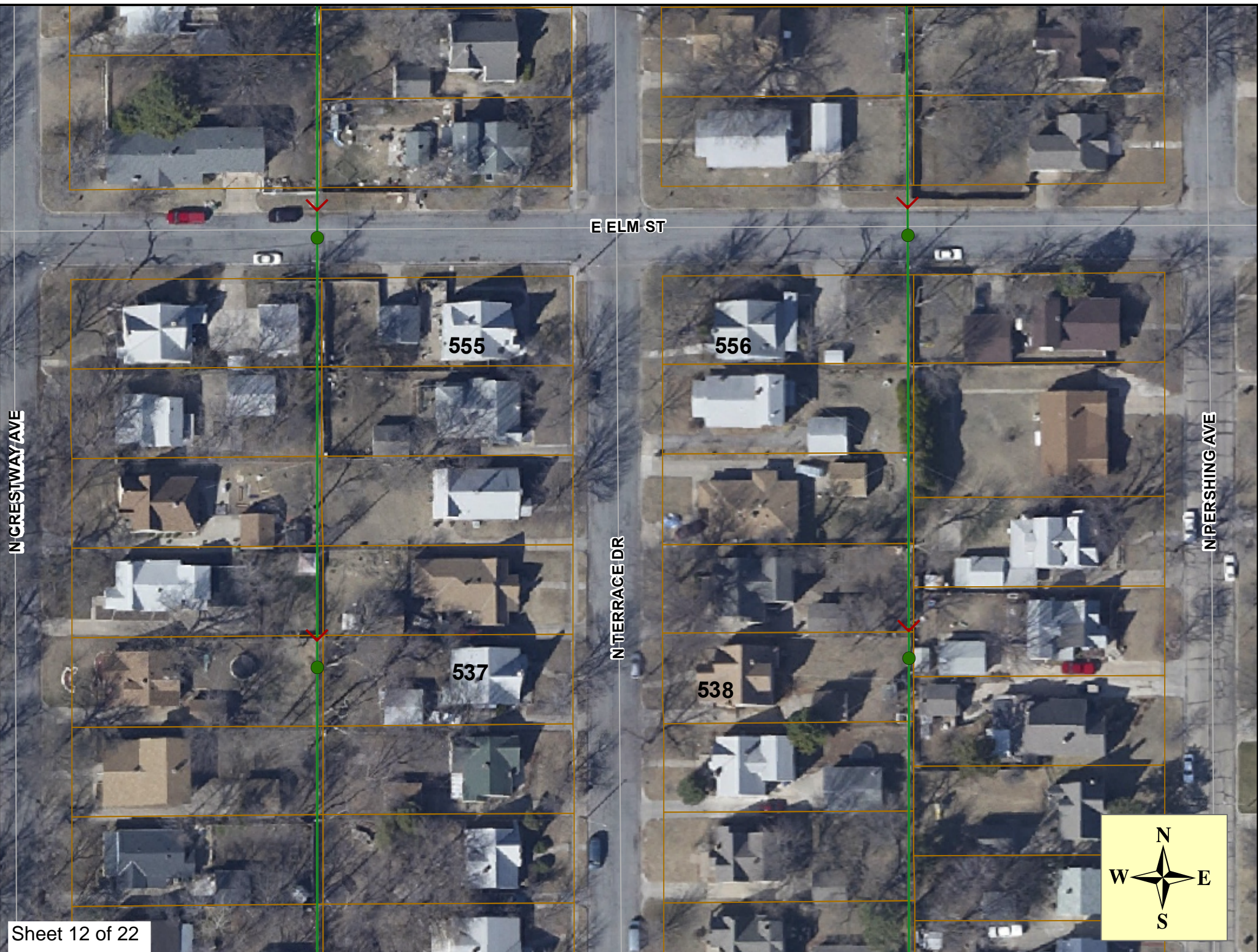
556

555

537

538

518



E ELM ST

N CRESTWAY AVE

N PERSHING AVE

N TERRACE DR

555

556

537

538



Television Inspection Master Report

9/20/2011

12:38 PM

US Structure: 5748-371 555 N TERRACE DR Date Insp: 4/16/2010 Basin: E04E
 DS Structure: 5748-370 537 N TERRACE DR Dir Televised: Upstream To Downstream

Pipe Information

Project No. : C-011 Dia: 8 Material: VCP Length: 240.0 Slope: 0.400

| Obs. # | VTR Counter | Distance | Location | Description | Rating | Obsrvd (gpm) | Ratings | | | Remain (gpm) |
|--------|-------------|----------|------------------------|----------------------|--------|--------------|------------|--------|-------|--------------|
| | | | | | | | Est. (gpm) | Struct | Clean | |
| 1 | | 0.0 | | 5748-371 US Manhole | | | | | | |
| 2 | | 1.0 | | Crack-Radial | 3 | 0.004 | 5 | 0 | 0.004 | |
| 3 | | 7.4 | | Crack-Radial | 3 | 0.004 | 5 | 0 | 0.004 | |
| 4 | | 12.0 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 | |
| 5 | | 19.7 | | Crack-Radial | 3 | 0.004 | 5 | 0 | 0.004 | |
| 6 | | 21.4 | 556 NORTH TERRACE | Wye Service | 1 | 0.000 | 0 | 0 | 0.000 | |
| 7 | | 23.9 | 556 NORTH CRESTWAY | Wye Service | 1 | 0.000 | 0 | 0 | 0.000 | |
| 8 | | 35.4 | | Sag | 3 | 0.000 | 5 | 0 | 0.000 | |
| 9 | | 39.3 | | Sag | 3 | 0.000 | 5 | 0 | 0.000 | |
| 10 | | 42.7 | (sag over camera lens) | Sag | 2 | 0.000 | 2 | 0 | 0.000 | |
| 11 | | 46.9 | 555 NORTH TERRACE | Wye Service | 2 | 0.000 | 0 | 0 | 0.000 | |
| 12 | | 49.7 | 556 NORTH CRESTWAY | Wye Service | 1 | 0.000 | 0 | 0 | 0.000 | |
| 13 | | 53.2 | | Grease | 4 | 0.000 | 0 | 10 | 0.000 | |
| 14 | | 64.5 | (due to heavy grease) | Stopped Inspection | 4 | 0.000 | 0 | 0 | 0.000 | |
| 15 | | 64.4 | | Continued Inspection | 1 | 0.000 | 0 | 0 | 0.000 | |
| 16 | | 68.5 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 | |
| 17 | | 71.0 | | Broken Pipe | 3 | 0.010 | 60 | 0 | 0.010 | |
| 18 | | 72.5 | 551 NORTH TERRACE | Wye Service | 3 | 0.000 | 2 | 0 | 0.000 | |
| 19 | | 73.8 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 | |
| 20 | | 75.7 | 554 NORTH CRESTWAY | Wye Service | 1 | 0.000 | 0 | 0 | 0.000 | |
| 21 | | 77.7 | | Crack-Horizontal | 2 | 0.002 | 2 | 0 | 0.002 | |
| 22 | | 79.0 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 | |
| 23 | | 82.3 | | Roots | 3 | 0.008 | 5 | 8 | 0.008 | |
| 24 | | 84.3 | | Roots | 3 | 0.008 | 5 | 8 | 0.008 | |
| 25 | | 84.3 | | Broken Pipe | 3 | 0.010 | 60 | 0 | 0.010 | |
| 26 | | 86.6 | | Broken Pipe | 3 | 0.010 | 60 | 0 | 0.010 | |
| 27 | | 88.5 | 551 NORTH TERRACE | Break-In Conn | 1 | 0.001 | 0 | 0 | 0.001 | |
| 28 | | 91.5 | | Roots | 3 | 0.008 | 5 | 8 | 0.008 | |
| 29 | | 91.5 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 | |
| 30 | | 94.8 | | Roots | 4 | 0.010 | 10 | 25 | 0.010 | |
| 31 | | 94.8 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 | |
| 32 | | 97.2 | | Roots | 3 | 0.008 | 5 | 8 | 0.008 | |
| 33 | | 98.2 | roots / seal is broken | Sealed Off Wye | 4 | 0.000 | 0 | 0 | 0.000 | |
| 34 | | 99.4 | | Crack-Radial | 3 | 0.004 | 5 | 0 | 0.004 | |

Television Inspection Master Report

9/20/2011

12:38 PM

US Structure: 5748-371 555 N TERRACE DR Date Insp: 4/16/2010 Basin: E04E
 DS Structure: 5748-370 537 N TERRACE DR Dir Televised: Upstream To Downstream

| | | | | | | | | |
|----|-------|--------------------------|-------------------|---|-------|----|---|-------|
| 35 | 101.3 | 554 NORTH CRESTWAY | Wye Service | 1 | 0.000 | 0 | 0 | 0.000 |
| 36 | 104.7 | | Crack-Radial | 3 | 0.004 | 5 | 0 | 0.004 |
| 37 | 107.3 | | Roots | 3 | 0.008 | 5 | 8 | 0.008 |
| 38 | 107.3 | | Crack-Horizontal | 2 | 0.002 | 2 | 0 | 0.002 |
| 39 | 109.9 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 40 | 119.7 | | Broken Pipe | 3 | 0.010 | 60 | 0 | 0.010 |
| 41 | 122.9 | | Broken Pipe | 3 | 0.010 | 60 | 0 | 0.010 |
| 42 | 123.9 | | Sealed Off Wye | 1 | 0.000 | 0 | 0 | 0.000 |
| 43 | 125.2 | | Broken Pipe | 3 | 0.010 | 60 | 0 | 0.010 |
| 44 | 126.8 | | Sealed Off Wye | 1 | 0.000 | 0 | 0 | 0.000 |
| 45 | 127.9 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 46 | 133.0 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 47 | 137.8 | | Broken Pipe | 2 | 0.008 | 44 | 0 | 0.008 |
| 48 | 140.3 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 49 | 142.7 | 542 NORTH CRESTWAY | PVC Break-In Conn | 1 | 0.001 | 0 | 0 | 0.001 |
| 50 | 143.4 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 51 | 145.3 | | Other | 1 | 0.000 | 0 | 0 | 0.000 |
| 52 | 145.3 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 53 | 148.1 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 54 | 149.5 | 547 NORTH TERRACE / poor | Break-In Conn | 4 | 0.002 | 0 | 0 | 0.002 |
| 55 | 150.4 | 542 NORTH CRESTWAY | Break-In Conn | 1 | 0.001 | 0 | 0 | 0.001 |
| 56 | 151.1 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 57 | 152.4 | | Sealed Off Wye | 1 | 0.000 | 0 | 0 | 0.000 |
| 58 | 153.8 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 59 | 156.0 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 60 | 158.6 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 61 | 161.6 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 62 | 163.8 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 63 | 166.6 | | Broken Pipe | 3 | 0.010 | 60 | 0 | 0.010 |
| 64 | 168.5 | | Broken Pipe | 3 | 0.010 | 60 | 0 | 0.010 |
| 65 | 172.0 | | Broken Pipe | 3 | 0.010 | 60 | 0 | 0.010 |
| 66 | 174.0 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 67 | 175.5 | | Sealed Off Wye | 1 | 0.000 | 0 | 0 | 0.000 |
| 68 | 176.6 | | Broken Pipe | 3 | 0.010 | 60 | 0 | 0.010 |
| 69 | 178.3 | 540 SOUTH CRESTWAY | Break-In Conn | 1 | 0.001 | 0 | 0 | 0.001 |
| 70 | 179.5 | | Broken Pipe | 3 | 0.010 | 60 | 0 | 0.010 |
| 71 | 181.6 | | Broken Pipe | 3 | 0.010 | 60 | 0 | 0.010 |
| 72 | 184.5 | 545 NORTH TERRACE | Break-In Conn | 1 | 0.001 | 0 | 0 | 0.001 |
| 73 | 184.9 | | Broken Pipe | 3 | 0.010 | 60 | 0 | 0.010 |
| 74 | 187.1 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 75 | 189.5 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |

Television Inspection Master Report

9/20/2011

12:38 PM

US Structure: 5748-371 555 N TERRACE DR Date Insp: 4/16/2010 Basin: E04E
 DS Structure: 5748-370 537 N TERRACE DR Dir Televised: Upstream To Downstream

| | | | | | | | | |
|----|-------|--------------------|------------------------------------------------------------------|---|-------|-----|---|-------|
| 76 | 192.4 | | Crack-Horizontal | 2 | 0.002 | 2 | 0 | 0.002 |
| 77 | 194.4 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 78 | 197.3 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 79 | 199.8 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 80 | 201.5 | | Sealed Off Wye | 1 | 0.000 | 0 | 0 | 0.000 |
| 81 | 202.5 | | Broken Pipe | 2 | 0.008 | 44 | 0 | 0.008 |
| 82 | 204.1 | | Sealed Off Wye | 1 | 0.000 | 0 | 0 | 0.000 |
| 83 | 205.1 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 84 | 207.6 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 85 | 210.7 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 86 | 212.8 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 87 | 221.0 | | Crack-Radial | 3 | 0.004 | 5 | 0 | 0.004 |
| 88 | 223.4 | | Crack-Horizontal | 2 | 0.002 | 2 | 0 | 0.002 |
| 89 | 227.1 | | Sealed Off Wye | 1 | 0.000 | 0 | 0 | 0.000 |
| 90 | 228.6 | | Crack-Horizontal | 3 | 0.004 | 5 | 0 | 0.004 |
| 91 | 229.9 | | Sealed Off Wye | 1 | 0.000 | 0 | 0 | 0.000 |
| 92 | 230.7 | | Broken Pipe | 3 | 0.010 | 60 | 0 | 0.010 |
| 93 | 233.6 | | Broken Pipe | 3 | 0.010 | 60 | 0 | 0.010 |
| 94 | 236.3 | 537 NORTH TERRACE | Break-In Conn | 5 | 0.010 | 400 | 0 | 0.010 |
| | | | Cavity between main and service line / not connected to the main | | | | | |
| 95 | 237.5 | | Material Chngs to PVC | 1 | 0.000 | 0 | 0 | 0.000 |
| 96 | 239.5 | 538 NORTH CRESTWAY | PVC Break-In Conn | 1 | 0.001 | 0 | 0 | 0.001 |
| 97 | 241.2 | Inside drop | 5748-370 DS Manhole | 1 | 0.000 | 0 | 0 | 0.000 |
| | | | Need to construct an outside drop / manhole has roots | | | | | |

Television Inspection Master Report

9/2/2011

2:54 PM

US Structure: 5748-382 556 N TERRACE ST Date Insp: 2/28/2011 Basin: E04E
 DS Structure: 5748-381 538 N TERRACE DR Dir Televised: Upstream To Downstream

Pipe Information

Project No. : C-027 Dia: 8 Material: VCP Length: 238.7 Slope: 0.001 Rear Easement

| Obs. # | VTR Counter | Distance | Location | Description | Rating | Obsrvd (gpm) | Ratings | | | Remain (gpm) |
|-------------------------------------------------------------------------------------------------------------|-------------|----------|--------------------------------|-----------------------------|--------|--------------|------------|--------|-------|--------------|
| | | | | | | | Est. (gpm) | Struct | Clean | |
| 1 | | 0.0 | | 5748-382 US Manhole | 1 | 0.000 | 0 | 0 | 0.000 | |
| | | 3.0 | Offset Joint | | | | | | | |
| 2 | | 5.5 | | Sag begins | 1 | 0.000 | 1 | 0 | 0.000 | |
| 3 | | 5.5 | Full tile sag (or close to it) | Sag | 5 | 0.000 | 25 | 0 | 0.000 | |
| 4 | | 13.6 | camera emerges from sag | Sag | 1 | 0.000 | 1 | 0 | 0.000 | |
| 5 | | 13.6 | | Sag ends | 1 | 0.000 | 1 | 0 | 0.000 | |
| 6 | | 18.3 | | Roots | 1 | 0.002 | 1 | 1 | 0.002 | |
| 7 | | 23.8 | | Sag begins | 1 | 0.000 | 1 | 0 | 0.000 | |
| 8 | | 25.2 | 70% to 80% sag | Sag | 4 | 0.000 | 10 | 0 | 0.000 | |
| 9 | | 37.2 | camera emerges | Sag | 1 | 0.000 | 1 | 0 | 0.000 | |
| 10 | | 37.2 | | Sag ends | 1 | 0.000 | 1 | 0 | 0.000 | |
| 11 | | 37.4 | | Sealed Off Wye | 1 | 0.000 | 0 | 0 | 0.000 | |
| 12 | | 41.1 | 555 N PERSHING | Wye Service / full of roots | 5 | 0.000 | 400 | 0 | 0.000 | |
| 13 | | 18.1 | | Roots | 1 | 0.002 | 1 | 1 | 0.002 | |
| 14 | | 62.8 | | Mat. Chngs to PVC | 1 | 0.000 | 0 | 0 | 0.000 | |
| 15 | | 65.6 | 556 N TERRACE | PVC Extended Tap | 3 | 0.002 | 2 | 0 | 0.002 | |
| 16 | | 66.8 | | Mat. Chngs back to VCP | 1 | 0.000 | 0 | 0 | 0.000 | |
| <p>Poor grade / area has a history of backups and surcharges in manholes / need to eliminate these sags</p> | | | | | | | | | | |
| 17 | | 91.3 | 552 N TERRACE | Wye Service | 1 | 0.000 | 0 | 0 | 0.000 | |
| 18 | | 93.9 | | Sealed Off Wye | 1 | 0.000 | 0 | 0 | 0.000 | |
| 19 | | 117.5 | | Sealed Off Wye | 1 | 0.000 | 0 | 0 | 0.000 | |
| 20 | | 119.9 | | Sealed Off Wye | 1 | 0.000 | 0 | 0 | 0.000 | |
| 21 | | 143.9 | | Sealed Off Wye | 1 | 0.000 | 0 | 0 | 0.000 | |
| 22 | | 146.3 | 553 N PERSHING | Wye Service | 1 | 0.000 | 0 | 0 | 0.000 | |
| 23 | | 165.0 | 548 N TERRACE | Break-In Conn | 1 | 0.001 | 0 | 0 | 0.001 | |
| 24 | | 169.3 | | Sealed Off Wye | 1 | 0.000 | 0 | 0 | 0.000 | |
| 25 | | 172.5 | | Sealed Off Wye | 1 | 0.000 | 0 | 0 | 0.000 | |
| 26 | | 177.3 | 547 N PERSHING | Break-In Conn | 1 | 0.001 | 0 | 0 | 0.001 | |
| 27 | | 195.2 | 544 N TERRACE | Break-In Conn | 2 | 0.002 | 0 | 0 | 0.002 | |
| 28 | | 198.3 | | Sealed Off Wye | 1 | 0.000 | 0 | 0 | 0.000 | |
| 29 | | 222.7 | | Sealed Off Wye | 1 | 0.000 | 0 | 0 | 0.000 | |
| 30 | | 225.7 | 541 N PERSHING / roots | Wye Service | 5 | 0.000 | 400 | 0 | 0.000 | |
| 44 | | 236.2 | | Crack-Radial | 3 | 0.004 | 5 | 0 | 0.004 | |
| 31 | | 238.8 | | 5748-381 DS Manhole | 1 | 0.000 | 0 | 0 | 0.000 | |

There are other smaller sags in the line but not as extreme as the upstream 70 lf.