# Appendix A:

# Televising Reports

Brentwood 1-3 Point Repairs

# National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

**CITY OF JOLIET**

**Upstream**
**17439**

**Downstream**
**17608**

| Surveyors name | Certificate Number | System Owner | Survey Customer | Drainage Area | Engineer |
|---|---|---|---|---|---|
| G. Espinoza | U-913-0619266 | NPR | CITY OF JOLIET | | |

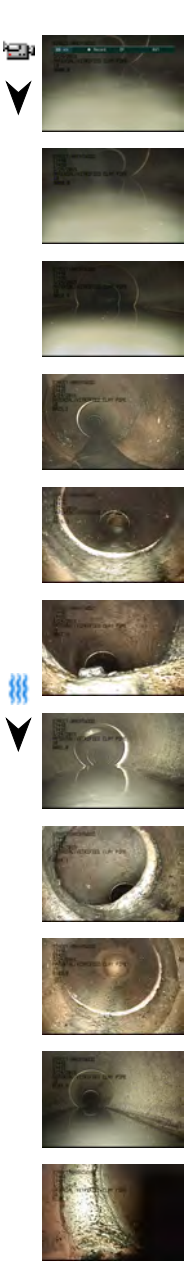
| Project | P/O No. | Date | Time | Location (Street Name and number) | Locality |
|---|---|---|---|---|---|
| | | 20150324 | 09:55 | BRENTWOOD | JOLIET |

| Work Order Job # | Pipeline Segment Reference | Upstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade |
|---|---|---|---|---|---|
| JOL010-15 | 16158 | 17439 | 8 | | |

| Downstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade | Use of Sewer | Direction | Flow Control | Height |
|---|---|---|---|---|---|---|---|
| 17608 | 8 | | | Sanitary | Downstream | | 10 |

| Width | Shape | Material | Ln. Method | Pipe Joint Length | Total Length | Length Surveyed | Counter Start | Counter End | Tape / Media Number |
|---|---|---|---|---|---|---|---|---|---|
| | Circular | Vitrified Clay Pipe | | | 184 | 183.7 | 35629 | 41552 | GE-3 |

| Purpose | Sewer Category | Pre-Cleaning | Cleaned | Weather | Additional Information | TV Truck ID |
|---|---|---|---|---|---|---|
| Routine Assessment | | Jetting | | Dry | | TV-56 |



| Ftg. | Code | Description | Position | Comment |
|---|---|---|---|---|
| 0.0 | AMH | Access Point - Manhole | | Starting Manhole: 17439. |
| 0.0 | MWL | Water Level | | |
| 10.8 | MWLS | Water Level: Sag | | |
| 25.1 | MWLS | Water Level: Sag | | |
| 26.3 | TFA | Tap, Factory Made: Active | 10 | |
| 67.9 | TBA | Tap, Break-in / Hammer: Active | 2 | |
| 81.0 | MWLS | Water Level: Sag | | |
| 84.7 | TFA | Tap, Factory Made: Active | 10 | |
| 103.0 | TFA | Tap, Factory Made: Active | 2 | |
| 103.9 | MWLS | Water Level: Sag | | |
| 125.7 | DAE | Deposits Attached: Encrustation | 12 to 12 | |

Brentwood 1-3 Point Repairs

# National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

**CITY OF JOLIET**

**Upstream**
**17439**

**Downstream**
**17608**

| Surveyors name | Certificate Number | System Owner | Survey Customer | Drainage Area | Engineer |
|---|---|---|---|---|---|
| G. Espinoza | U-913-0619266 | NPR | CITY OF JOLIET | | |

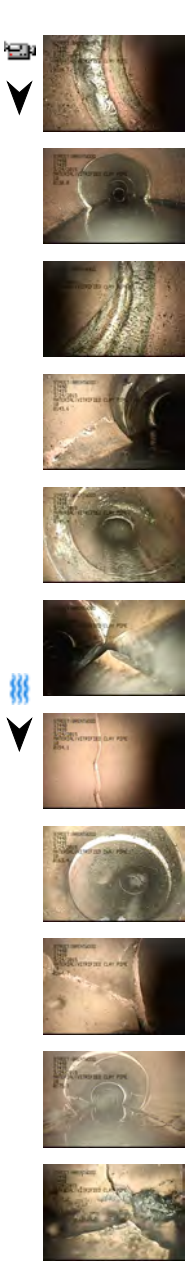
| Project | P/O No. | Date | Time | Location (Street Name and number) | Locality |
|---|---|---|---|---|---|
| | | 20150324 | 09:55 | BRENTWOOD | JOLIET |

| Work Order Job # | Pipeline Segment Reference | Upstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade |
|---|---|---|---|---|---|
| JOL010-15 | 16158 | 17439 | 8 | | |

| Downstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade | Use of Sewer | Direction | Flow Control | Height |
|---|---|---|---|---|---|---|---|
| 17608 | 8 | | | Sanitary | Downstream | | 10 |

| Width | Shape | Material | Ln. Method | Pipe Joint Length | Total Length | Length Surveyed | Counter Start | Counter End | Tape / Media Number |
|---|---|---|---|---|---|---|---|---|---|
| | Circular | Vitrified Clay Pipe | | | 184 | 183.7 | 35629 | 41552 | GE-3 |

| Purpose | Sewer Category | Pre-Cleaning | Cleaned | Weather | Additional Information | TV Truck ID |
|---|---|---|---|---|---|---|
| Routine Assessment | | Jetting | | Dry | | TV-56 |



| Ftg. | Code | Description | Position | Comment |
|---|---|---|---|---|
| 128.7 | DAE | Deposits Attached: Encrustation | 12 to 12 | |
| 130.0 | MWLS | Water Level: Sag | | |
| 134.9 | DAE | Deposits Attached: Encrustation | 12 to 12 | |
| 143.6 | FM | Fracture Multiple | 12 to 12 | |
| 145.4 | TFA | Tap, Factory Made: Active | 10 | |
| 145.4 | B | Pipe Broken | 12 to 12 | |
| 154.1 | CC | Crack Circumferential | 6 to 12 | |
| 163.4 | TFA | Tap, Factory Made: Active | 2 | |
| 164.7 | FM | Fracture Multiple | 12 to 12 | |
| 175.3 | MWLS | Water Level: Sag | | |
| 177.2 | FM | Fracture Multiple | 12 to 12 | |

Brentwood-1 PR

Brentwood-2 PR

Generated on Tuesday, 3/24/2015 at 11:06 AM by the PipeTech® TV inspection system.

Brentwood 1-3 Point Repairs

# National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

**CITY OF JOLIET**

**Upstream**
**17439**

**Downstream**
**17608**

| Surveyors name | Certificate Number | System Owner | Survey Customer | Drainage Area | Engineer |
|---|---|---|---|---|---|
| G. Espinoza | U-913-0619266 | NPR | CITY OF JOLIET | | |

| Project | P/O No. | Date | Time | Location (Street Name and number) | Locality |
|---|---|---|---|---|---|
| | | 20150324 | 09:55 | BRENTWOOD | JOLIET |

| Work Order Job # | Pipeline Segment Reference | Upstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade |
|---|---|---|---|---|---|
| JOL010-15 | 16158 | 17439 | 8 | | |

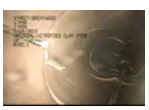
| Downstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade | Use of Sewer | Direction | Flow Control | Height |
|---|---|---|---|---|---|---|---|
| 17608 | 8 | | | Sanitary | Downstream | | 10 |

| Width | Shape | Material | Ln. Method | Pipe Joint Length | Total Length | Length Surveyed | Counter Start | Counter End | Tape / Media Number |
|---|---|---|---|---|---|---|---|---|---|
| | Circular | Vitrified Clay Pipe | | | 184 | 183.7 | 35629 | 41552 | GE-3 |

| Purpose | Sewer Category | Pre-Cleaning | Cleaned | Weather | Additional Information | TV Truck ID |
|---|---|---|---|---|---|---|
| Routine Assessment | | Jetting | | Dry | | TV-56 |

| Ftg. | Code | Description | Position | Comment |
|---|---|---|---|---|
| 182.1 | B | Pipe Broken | 12 to 12 | |
| 183.7 | MSA | Survey Abandoned | | BROKEN PIPE CANNOT GET THROUGH |

Brentwood-2 PR





Generated on Tuesday, 3/24/2015 at 11:06 AM by the PipeTech® TV inspection system.

Brentwood 1-3 Point Repairs

# National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

**CITY OF JOLIET**

**Upstream**
**17439**

**Downstream**
**17608**

| Surveyors name | Certificate Number | System Owner | Survey Customer | Drainage Area | Engineer |
|---|---|---|---|---|---|
| G. Espinoza | U-913-0619266 | NPR | CITY OF JOLIET | | |

| Project | P/O No. | Date | Time | Location (Street Name and number) | Locality |
|---|---|---|---|---|---|
| | | 20150324 | 11:06 | BRENTWOOD | JOLIET |

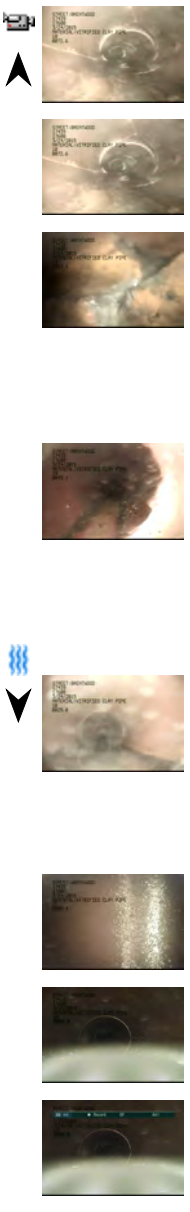
| Work Order Job # | Pipeline Segment Reference | Upstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade |
|---|---|---|---|---|---|
| JOL010-15 | 16158 | 17439 | 8 | | |

| Downstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade | Use of Sewer | Direction | Flow Control | Height |
|---|---|---|---|---|---|---|---|
| 17608 | 8 | | | Sanitary | Upstream | | 10 |

| Width | Shape | Material | Ln. Method | Pipe Joint Length | Total Length | Length Surveyed | Counter Start | Counter End | Tape / Media Number |
|---|---|---|---|---|---|---|---|---|---|
| | Circular | Vitrified Clay Pipe | | | 73 | 72.6 | 41552 | 42525 | GE-3 |

| Purpose | Sewer Category | Pre-Cleaning | Cleaned | Weather | Additional Information | TV Truck ID |
|---|---|---|---|---|---|---|
| Routine Assessment | | Jetting | | Dry | | TV-56 |

| Ftg. | Code | Description | Position | Comment |
|---|---|---|---|---|
| 72.6 | MSA | Survey Abandoned | | BROKEN PIPE CANNOT CONTINUE |
| 72.6 | B | Pipe Broken | 12 to 12 | |
| 65.6 | B | Pipe Broken | 12 to 12 | |
| 43.1 | TBA | Tap, Break-in / Hammer: Active | 10 | |
| 29.0 | MWLS | Water Level: Sag | | |
| 9.4 | MWLS | Water Level: Sag | | |
| 0.0 | MWL | Water Level | | |
| 0.0 | AMH | Access Point - Manhole | | Starting Manhole: 17608. |



Brentwood-3 PR

Douglas Point Repair

# National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

**CITY OF JOLIET**

**Upstream**
**16924**

**Downstream**
**17166**

| Surveyors name | Certificate Number | System Owner | Survey Customer | Drainage Area | Engineer |
|---|---|---|---|---|---|
| G. Espinoza | U-913-0619266 | NPR | CITY OF JOLIET | | |

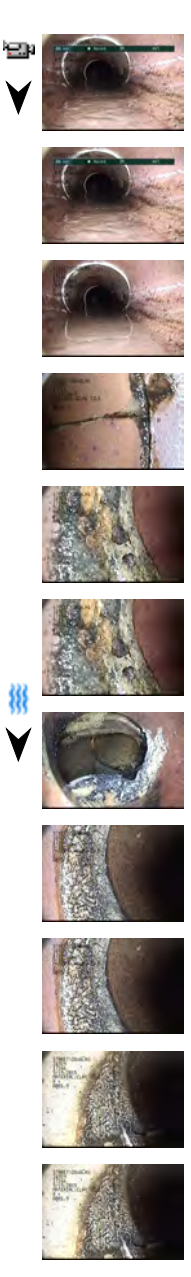
| Project | P/O No. | Date | Time | Location (Street Name and number) | Locality |
|---|---|---|---|---|---|
| | | 20150519 | 12:03 | DOUGLAS | JOLIET |

| Work Order Job # | Pipeline Segment Reference | Upstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade |
|---|---|---|---|---|---|
| JOL010-15 | 15276 | 16924 | | | |

| Downstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade | Use of Sewer | Direction | Flow Control | Height |
|---|---|---|---|---|---|---|---|
| 17166 | | | | Sanitary | Downstream | | 8 |

| Width | Shape | Material | Ln. Method | Pipe Joint Length | Total Length | Length Surveyed | Counter Start | Counter End | Tape / Media Number |
|---|---|---|---|---|---|---|---|---|---|
| | Circular | Clay Tile | | | 277 | 277.1 | 43000 | 44400 | GE-12 |

| Purpose | Sewer Category | Pre-Cleaning | Cleaned | Weather | Additional Information | TV Truck ID |
|---|---|---|---|---|---|---|
| Routine Assessment | | Jetting | | Dry | | TV-56 |



| Ftg. | Code | Description | Position | Comment |
|---|---|---|---|---|
| 0.0 | AMH | Access Point - Manhole | | Starting Manhole: 16924. |
| 0.0 | MWL | Water Level | | |
| 8.8 | MWLS | Water Level: Sag | | |
| 18.7 | CM | Crack Multiple | 12 to 12 | |
| 39.8 | DAE | Deposits Attached: Encrustation | 12 to 12 | |
| 62.1 | TFA | Tap, Factory Made: Active | 10 | |
| 64.1 | CL | Crack Longitudinal | 12 | |
| 75.9 | DAE | Deposits Attached: Encrustation | 12 to 12 | |
| 77.7 | TB | Tap, Break-in / Hammer | 2 | |
| 81.9 | DAE | Deposits Attached: Encrustation | 12 to 12 | |
| 116.0 | CM | Crack Multiple | 12 to 12 | |

Douglas Point Repair

# National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

**CITY OF JOLIET**

**Upstream**
**16924**

**Downstream**
**17166**

| Surveyors name | Certificate Number | System Owner | Survey Customer | Drainage Area | Engineer |
|---|---|---|---|---|---|
| G. Espinoza | U-913-0619266 | NPR | CITY OF JOLIET | | |

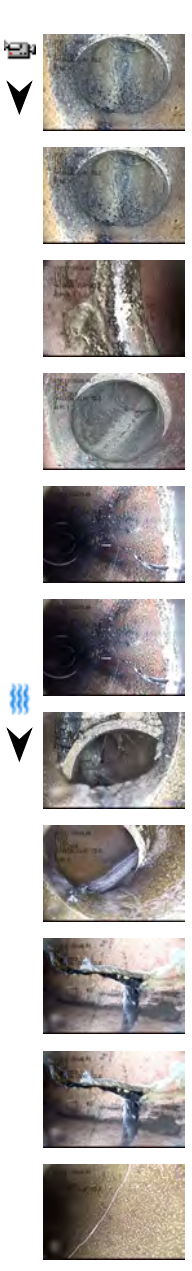
| Project | P/O No. | Date | Time | Location (Street Name and number) | Locality |
|---|---|---|---|---|---|
| | | 20150519 | 12:03 | DOUGLAS | JOLIET |

| Work Order Job # | Pipeline Segment Reference | Upstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade |
|---|---|---|---|---|---|
| JOL010-15 | 15276 | 16924 | | | |

| Downstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade | Use of Sewer | Direction | Flow Control | Height |
|---|---|---|---|---|---|---|---|
| 17166 | | | | Sanitary | Downstream | | 8 |

| Width | Shape | Material | Ln. Method | Pipe Joint Length | Total Length | Length Surveyed | Counter Start | Counter End | Tape / Media Number |
|---|---|---|---|---|---|---|---|---|---|
| | Circular | Clay Tile | | | 277 | 277.1 | 43000 | 44400 | GE-12 |

| Purpose | Sewer Category | Pre-Cleaning | Cleaned | Weather | Additional Information | TV Truck ID |
|---|---|---|---|---|---|---|
| Routine Assessment | | Jetting | | Dry | | TV-56 |



| Ftg. | Code | Description | Position | Comment |
|---|---|---|---|---|
| 128.7 | TFA | Tap, Factory Made: Active | 10 | |
| 184.8 | DAE | Deposits Attached: Encrustation | 12 to 12 | |
| 193.6 | CM | Crack Multiple | 12 to 12 | |
| 195.1 | TFA | Tap, Factory Made: Active | 10 | |
| 199.8 | CM | Crack Multiple | 12 to 12 | |
| 229.4 | CL | Crack Longitudinal | 12 | |
| 234.2 | TFA | Tap, Factory Made: Active | 2 | |
| 246.6 | TFA | Tap, Factory Made: Active | 10 | |
| 269.4 | HSV | Hole in Pipe: Soil Visible | 4 | |
| 269.4 | B | Pipe Broken | 12 to 12 | |
| 272.6 | CM | Crack Multiple | 12 to 12 | |

Douglas PR

Douglas Point Repair

# National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

**CITY OF JOLIET**

**Upstream**
**16924**

**Downstream**
**17166**

| Surveyors name | Certificate Number | System Owner | Survey Customer | Drainage Area | Engineer |
|---|---|---|---|---|---|
| G. Espinoza | U-913-0619266 | NPR | CITY OF JOLIET | | |

| Project | P/O No. | Date | Time | Location (Street Name and number) | Locality |
|---|---|---|---|---|---|
| | | 20150519 | 12:03 | DOUGLAS | JOLIET |

| Work Order Job # | Pipeline Segment Reference | Upstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade |
|---|---|---|---|---|---|
| JOL010-15 | 15276 | 16924 | | | |

| Downstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade | Use of Sewer | Direction | Flow Control | Height |
|---|---|---|---|---|---|---|---|
| 17166 | | | | Sanitary | Downstream | | 8 |

| Width | Shape | Material | Ln. Method | Pipe Joint Length | Total Length | Length Surveyed | Counter Start | Counter End | Tape / Media Number |
|---|---|---|---|---|---|---|---|---|---|
| | Circular | Clay Tile | | | 277 | 277.1 | 43000 | 44400 | GE-12 |

| Purpose | Sewer Category | Pre-Cleaning | Cleaned | Weather | Additional Information | TV Truck ID |
|---|---|---|---|---|---|---|
| Routine Assessment | | Jetting | | Dry | | TV-56 |

| Ftg. | Code | Description | Position | Comment |
|---|---|---|---|---|



277.1 AMH Access Point - Manhole DS MH/ 17166

Madison-1 Point Repair

# National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

**CITY OF JOLIET**

**Upstream**
**17029**

**Downstream**
**17028**

| Surveyors name | Certificate Number | System Owner | Survey Customer | Drainage Area | Engineer |
|---|---|---|---|---|---|
| G. Espinoza | U-913-0619266 | NPR | CITY OF JOLIET | | |

| Project | P/O No. | Date | Time | Location (Street Name and number) | Locality |
|---|---|---|---|---|---|
| | | 20150415 | 08:47 | MADISON | JOLIET |

| Work Order Job # | Pipeline Segment Reference | Upstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade |
|---|---|---|---|---|---|
| JOL010-15 | 15265 | 17029 | | | |

| Downstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade | Use of Sewer | Direction | Flow Control | Height |
|---|---|---|---|---|---|---|---|
| 17028 | 8 | | | Sanitary | Downstream | | 8 |

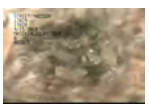
| Width | Shape | Material | Ln. Method | Pipe Joint Length | Total Length | Length Surveyed | Counter Start | Counter End | Tape / Media Number |
|---|---|---|---|---|---|---|---|---|---|
| | Circular | Clay Tile | | | 38 | 38 | 4725 | 5300 | GE-7 |

| Purpose | Sewer Category | Pre-Cleaning | Cleaned | Weather | Additional Information | TV Truck ID |
|---|---|---|---|---|---|---|
| Routine Assessment | | Jetting | | Dry | | TV-56 |

| Ftg. | Code | Description | Position | Comment |
|---|---|---|---|---|
| 0.0 | AMH | Access Point - Manhole | | Starting Manhole: 17029. |
| 0.0 | MWL | Water Level | | |
| 8.3 | MWLS | Water Level: Sag | | |
| | | Madison-1 PR | | |
| 33.0 | DAE | Deposits Attached: Encrustation | 12 to 12 | |
| 33.3 | JSL | Joint Separated (open): Large | | SOIL VISIBLE |
| 38.0 | AM | Access Point - Meter | | DS MH/ 17028 |








Madison-2 Point Repair

# National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

**CITY OF JOLIET**

**Upstream**
**17123**

**Downstream**
**16955**

| Surveyors name | Certificate Number | System Owner | Survey Customer | Drainage Area | Engineer |
|---|---|---|---|---|---|
| G. Espinoza | U-913-0619266 | NPR | CITY OF JOLIET | | |

| Project | P/O No. | Date | Time | Location (Street Name and number) | Locality |
|---|---|---|---|---|---|
| | | 20150414 | 13:28 | MADISON | JOLIET |

| Work Order Job # | Pipeline Segment Reference | Upstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade |
|---|---|---|---|---|---|
| JOL010-15 | 15347 | 17123 | | | |

| Downstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade | Use of Sewer | Direction | Flow Control | Height |
|---|---|---|---|---|---|---|---|
| 16955 | 8 | | | Sanitary | Downstream | | 8 |

| Width | Shape | Material | Ln. Method | Pipe Joint Length | Total Length | Length Surveyed | Counter Start | Counter End | Tape / Media Number |
|---|---|---|---|---|---|---|---|---|---|
| | Circular | Clay Tile | | | 252 | 251.7 | 1700 | 2810 | GE-7 |

| Purpose | Sewer Category | Pre-Cleaning | Cleaned | Weather | Additional Information | TV Truck ID |
|---|---|---|---|---|---|---|
| Routine Assessment | | Jetting | | Dry | | TV-56 |



| Ftg. | Code | Description | Position | Comment |
|---|---|---|---|---|
| 0.0 | AMH | Access Point - Manhole | | Starting Manhole: 17123. |
| 0.0 | MWL | Water Level | | |
| 10.0 | FM | Fracture Multiple | 12 to 12 | |
| 10.5 | RPP | Point Repair - Patch Repair | 12 to 12 | CLAY REPAIR |
| 62.4 | MWLS | Water Level: Sag | | |
| 82.5 | TFA | Tap, Factory Made: Active | 3 | |
| 158.8 | TFA | Tap, Factory Made: Active | 3 | |
| 168.0 | CM | Crack Multiple | 12 to 12 | |
| 206.0 | MWLS | Water Level: Sag | | |
| 209.0 | DAE | Deposits Attached: Encrustation | 12 to 12 | |
| 235.1 | TFA | Tap, Factory Made: Active | 3 | |

Madison-2 Point Repair

# National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

**CITY OF JOLIET**

**Upstream**
**17123**

**Downstream**
**16955**

| Surveyors name | Certificate Number | System Owner | Survey Customer | Drainage Area | Engineer |
|---|---|---|---|---|---|
| G. Espinoza | U-913-0619266 | NPR | CITY OF JOLIET | | |

| Project | P/O No. | Date | Time | Location (Street Name and number) | Locality |
|---|---|---|---|---|---|
| | | 20150414 | 13:28 | MADISON | JOLIET |

| Work Order Job # | Pipeline Segment Reference | Upstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade |
|---|---|---|---|---|---|
| JOL010-15 | 15347 | 17123 | | | |

| Downstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade | Use of Sewer | Direction | Flow Control | Height |
|---|---|---|---|---|---|---|---|
| 16955 | 8 | | | Sanitary | Downstream | | 8 |

| Width | Shape | Material | Ln. Method | Pipe Joint Length | Total Length | Length Surveyed | Counter Start | Counter End | Tape / Media Number |
|---|---|---|---|---|---|---|---|---|---|
| | Circular | Clay Tile | | | 252 | 251.7 | 1700 | 2810 | GE-7 |

| Purpose | Sewer Category | Pre-Cleaning | Cleaned | Weather | Additional Information | TV Truck ID |
|---|---|---|---|---|---|---|
| Routine Assessment | | Jetting | | Dry | | TV-56 |

| Ftg. | Code | Description | Position | Comment |
|---|---|---|---|---|

Madison-2 PR



251.7 BSV Pipe Broken: Soil Visible — 12 to 12



251.7 MSA Survey Abandoned — PIPE COLLAPSE CANNOT CONTINUE

Madison-2 Point Repair

# National Power Rodding

2500 W. Arthington, Chicago, IL 60612
Tel.: (312) 666-7700 - Fax: (312) 666-5810

**CITY OF JOLIET**

**Upstream**
**17123**

**Downstream**
**16955**

| Surveyors name | Certificate Number | System Owner | Survey Customer | Drainage Area | Engineer |
|---|---|---|---|---|---|
| G. Espinoza | U-913-0619266 | NPR | CITY OF JOLIET | | |

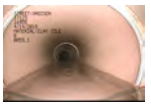
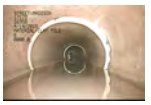
| Project | P/O No. | Date | Time | Location (Street Name and number) | Locality |
|---|---|---|---|---|---|
| | | 20150414 | 14:04 | MADISON | JOLIET |

| Work Order Job # | Pipeline Segment Reference | Upstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade |
|---|---|---|---|---|---|
| JOL010-15 | 15347 | 17123 | | | |

| Downstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade | Use of Sewer | Direction | Flow Control | Height |
|---|---|---|---|---|---|---|---|
| 16955 | 8 | | | Sanitary | Upstream | | 8 |

| Width | Shape | Material | Ln. Method | Pipe Joint Length | Total Length | Length Surveyed | Counter Start | Counter End | Tape / Media Number |
|---|---|---|---|---|---|---|---|---|---|
| | Circular | Clay Tile | | | 80 | 80 | 2810 | 3330 | GE-7 |

| Purpose | Sewer Category | Pre-Cleaning | Cleaned | Weather | Additional Information | TV Truck ID |
|---|---|---|---|---|---|---|
| Routine Assessment | | Jetting | | Dry | | TV-56 |

| | Ftg. | Code | Description | Position | Comment |
|---|---|---|---|---|---|
|  | 80.0 | MSA | Survey Abandoned | | PIPE COLLAPSE CANNOT CONTINUE |
|  | 80.0 | BSV | Pipe Broken: Soil Visible | 12 to 12 | |
|  | 67.3 | MWLS | Water Level: Sag | | |
|  | 53.1 | MWLS | Water Level: Sag | | Madison-2 PR |
|  | 24.4 | B | Pipe Broken | 12 to 12 | |
|  | 24.0 | TFA | Tap, Factory Made: Active | 9 | |
|  | 23.1 | CM | Crack Multiple | 12 to 12 | |
|  | 0.0 | MWL | Water Level | | |
|  | 0.0 | AMH | Access Point - Manhole | | Starting Manhole: 16955. |

129th Infantry Point Repair

Michel's Pipe Services
817 W. Main St. I PO Box 128
Brownsville, WI 53006
Ph: (920)583-3132 I Fax:(920)924-4320
Email: cipp@michels.us I Web: www.michels.us

| Surveyors Name | Pipe Segment Reference | Customer | Date | Time |
|---|---|---|---|---|
| DAVID REICH | 9861 | CITY OF JOLIET IL. | 20190206 | 11:11 |

| Upstream MH | Rim To Invert (U) | Downstream MH | Rim To Invert (D) | Use of Sewer | Shape |
|---|---|---|---|---|---|
| 10132 | 14 | 10131 | | Sanitary | Circular |

| Survey Direction | Total Length | Length Surveyed | Pre-Cleaning | Weather | Width | Height |
|---|---|---|---|---|---|---|
| Downstream | | 314.8 | Jetting | Damp | 18 | 18 |

| Street | Location Details |
|---|---|
| CAMPBELL ST. | BACK YARD OF 204 INFANTRY DR. |

| Flow Control | Purpose |
|---|---|
| Not Controlled | Post Rehabilitation Survey |

**Additional Information**

INV. # 187



| Ftg. | Code | Description | Position | Comment |
|---|---|---|---|---|
| 0.0 | AMH | Access Point - Manhole | | Starting Manhole: 10132 |
| 0.0 | MWL | Water Level | | |
| 37.4 | TBA | Tap, Break-in / Hammer: Active | 1 | PVC 202 |
| 40.2 | TFA | Tap, Factory Made: Active | 11 | 125 |
| 106.0 | TFA | Tap, Factory Made: Active | 11 | 123 |
| 122.4 | TBA | Tap, Break-in / Hammer: Active | 1 | PVC 200 |
| 169.4 | TFA | Tap, Factory Made: Active | | |
| 190.5 | TBA | Tap, Break-in / Hammer: Active | 1 | PVC 126 |
| 232.4 | TFA | Tap, Factory Made: Active | 11 | 119 |
| 264.4 | TBA | Tap, Break-in / Hammer: Active | 1 | PVC 124 |
| 295.8 | TFA | Tap, Factory Made: Active | 11 | 117 |
| 314.8 | AMH | Access Point - Manhole | | CENTER OF DSMH 10131 |

129th Infantry PR

Inwood-1 Point Repair

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Email: cipp@michels.us l Web: www.michels.us

| Surveyors Name | Pipe Segment Reference | Customer | Date | Time |
|---|---|---|---|---|
| Jake Janda | 9658 | joliet | 20190308 | 08:51 |

| Upstream MH | Rim To Invert (U) | Downstream MH | Rim To Invert (D) | Use of Sewer | Shape |
|---|---|---|---|---|---|
| 10599 | 8 | 10600 | 8.5 | Sanitary | Circular |

| Survey Direction | Total Length | Length Surveyed | Pre-Cleaning | Weather | Width | Height |
|---|---|---|---|---|---|---|
| Downstream | | 367 | Jetting | Dry | 8 | 8 |

| Street | Location Details |
|---|---|
| Campbell | |

| Flow Control | Purpose |
|---|---|
| Not Controlled | Post Rehabilitation Survey |

**Additional Information**

| Ftg. | Code | Description | Position | Comment |
|---|---|---|---|---|
| 0.0 | AMH | Access Point - Manhole | | Starting Manhole: 10599 |
| 0.0 | MWL | Water Level | | |
| 16.4 | TFA | Tap, Factory Made: Active | 2 | |
| 42.9 | TFA | Tap, Factory Made: Active | 10 | |
| 80.5 | TFA | Tap, Factory Made: Active | 2 | |
| 103.8 | TFA | Tap, Factory Made: Active | 10 | |
| 153.8 | TFA | Tap, Factory Made: Active | 2 | |
| 166.5 | TFA | Tap, Factory Made: Active | 9 | |
| 215.9 | TFA | Tap, Factory Made: Active | 2 | |
| 227.8 | TFA | Tap, Factory Made: Active | 10 | |
| 288.1 | TFA | Tap, Factory Made: Active | 11 | |
| 343.3 | TFA | Tap, Factory Made: Active | 10 | |
| 367.0 | AMH | Access Point - Manhole | | dsmh |

Inwood-1 PR

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Brownsville, WI 53006
Ph: (920)583-3132 l Fax:(920)924-4320
Email: cipp@michels.us l Web: www.michels.us

| Surveyors name | Certificate Number | System Owner | Survey Customer | Drainage Area | Sheet |
|---|---|---|---|---|---|
| G.DELTORO | U-116-07002811 | City Of Joilet | City OF Joliet | | 1 |

| P/O No. | Pipeline Segment Reference | Date | Time | Location (Street Name and number) | Locality |
|---|---|---|---|---|---|
| 180212 | 9657 | 20180711 | 10:55 | Richmond St | City Of Joliet |

| Further Location details | Upstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade |
|---|---|---|---|---|
| | 10549 | 7.5 | | |

| Downstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade | Use of Sewer | Direction | Flow Control | Height |
|---|---|---|---|---|---|---|---|
| 10599 | 7.5 | | | Sanitary | Downstream | | 8 |

| Width | Shape | Material | Ln. Method | Pipe Joint Length | Total Length | Length Surveyed | Year Laid | Year Rehabilitated | Tape / Media Number |
|---|---|---|---|---|---|---|---|---|---|
| 8 | Circular | VCP | | | | 361.3 | | | GD |

| Purpose | Sewer Category | Pre-Cleaning | Cleaned | Weather | Additional Information |
|---|---|---|---|---|---|
| A | | Jetting | | Dry | |

| Distance (Feet) | Code | | Continuous defect | Value | | | | Joint | Circumferential Location | | Image Ref. | Struct. Grade | O&M Grade | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Group/ Descriptor | Modifier/ severity | | S/M/L | Inches 1st | Inches 2nd | % | | At / From | To | | | | |
| 0.0 | AMH | | | | | | | | | | AMH@0 | | | Starting Manhole: 10549 |
| 0.0 | MWL | | | | | | 5 | | | | MWL@0 | | | |
| 6.4 | RF | | | | | | | J | 12 | | RFJ@6.4 | | 1 | |
| 9.7 | RF | | S01 | | | | | J | 12 | | RFJ@9.7 | | | |
| 21.3 | B | | | | | | | | 1 | 2 | B@21.3 | 5 | | |
| 21.7 | TB | A | | | 6 | | | | 3 | | TBA@21.7 | | | |
| 38.3 | FC | | | | | | | | 12 | 12 | FC@38.3 | 2 | | |
| 47.5 | TB | A | | | 6 | | | | 9 | | TBA@47.5 | | | |
| 48.5 | B | | | | | | | | 1 | 3 | B@48.5 | 5 | | |
| 83.1 | TB | A | | | 6 | | | | 3 | | TBA@83.1 | | | |
| 107.2 | TB | A | | | 6 | | | | 9 | | TBA@107.2 | | | |
| 125.1 | FC | | | | | | | | 12 | 12 | FC@125.1 | 2 | | |
| 133.3 | FC | | S02 | | | | | | 12 | 12 | FC@133.3 | | | |
| 150.5 | B | VV | | | | | | | 1 | 2 | BVV@150.5 | 5 | | |
| 151.7 | TB | A | | | 6 | | | | 3 | | TBA@151.7 | | | |
| 167.5 | TB | A | | | 6 | | | | 9 | | TBA@167.5 | | | |
| 193.6 | TB | A | | | 6 | | | | 1 | | TBA@193.6 | | | UNABLE TO CUT TAP |
| 222.1 | TB | A | | | 6 | | | | 9 | | TBA@222.1 | | | |
| 262.2 | TB | A | | | 6 | | | | 3 | | TBA@262.2 | | | |
| 285.2 | TB | A | | | 6 | | | | 9 | | TBA@285.2 | | | |
| 311.4 | MMC | | | | | | | | | | MMC@311.4 | | | FROM CLAY TO PVC |
| 314.5 | TF | A | | | 6 | | | | 3 | | TFA@314.5 | | | |
| 317.7 | MMC | | | | | | | | | | MMC@317.7 | | | BACK TO CLAY |
| 344.6 | TB | A | | | 6 | | | | 9 | | TBA@344.6 | | | |
| 361.3 | RF | | F01 | | | | | J | 12 | | RFJ@361.3 | | 1×70 | |
| 361.3 | FC | | F02 | | | | | | 12 | 12 | FC@361.3 | 2×46 | | |
| 361.3 | AMH | | | | | | | | | | | | | DS MH 10599 |

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Ph: (920)583-3132 l Fax:(920)924-4320
Email: cipp@michels.us l Web: www.michels.us

| Surveyors name | Certificate Number | System Owner | Survey Customer | Drainage Area | Sheet |
|---|---|---|---|---|---|
| G.DELTORO | U-116-07002811 | City Of Joilet | City OF Joliet | | 2 |

| P/O No. | Pipeline Segment Reference | Date | Time | Location (Street Name and number) | Locality |
|---|---|---|---|---|---|
| 180212 | 9657 | 20180711 | 10:55 | Richmond St | City Of Joliet |

| Further Location details | Upstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade |
|---|---|---|---|---|
| | 10549 | 7.5 | | |

| Downstream Manhole Number | Rim to Invert | Grade to Invert | Rim to Grade | Use of Sewer | Direction | Flow Control | Height |
|---|---|---|---|---|---|---|---|
| 10599 | 7.5 | | | Sanitary | Downstream | | 8 |

| Width | Shape | Material | Ln. Method | Pipe Joint Length | Total Length | Length Surveyed | Year Laid | Year Rehabilitated | Tape / Media Number |
|---|---|---|---|---|---|---|---|---|---|
| 8 | Circular | VCP | | | | 361.3 | | | GD |

| Purpose | Sewer Category | Pre-Cleaning | Cleaned | Weather | Additional Information |
|---|---|---|---|---|---|
| A | | Jetting | | Dry | |

| Distance (Feet) | Code | | Continuous defect | Value | | | | Joint | Circumferential Location | | Image Ref. | Struct. Grade | O&M Grade | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Group/ Descriptor | Modifier/ severity | | S/M/L | Inches 1st | Inches 2nd | % | | At / From | To | | | | |

| | Structural | | | | | | | | O & M | | | | | | | | Overall | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Segment | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Rating | Quick | Index | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Rating | Quick | Index | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Rating | Quick | Index |
| Richmond St_10549_10599_Downstream_2018071 | 0 | 96 | 0 | 0 | 15 | 111 | 532H | 2.2 | 71 | 0 | 0 | 0 | 0 | 71 | 1M00 | 1.0 | 71 | 96 | 0 | 0 | 15 | 182 | 532H | 1.5 |

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| Surveyors Name | Pipe Segment Reference | Customer | Date | Time |
|---|---|---|---|---|
| G.DELTORO | 9657 | City OF Joliet | 20180711 | 10:55 |

| Upstream MH | Rim To Invert (U) | Downstream MH | Rim To Invert (D) | Use of Sewer | Shape |
|---|---|---|---|---|---|
| 10549 | 7.5 | 10599 | 7.5 | Sanitary | Circular |

| Survey Direction | Total Length | Length Surveyed | Pre-Cleaning | Weather | Width | Height |
|---|---|---|---|---|---|---|
| Downstream | | 361.3 | Jetting | Dry | 8 | 8 |

| Street | Location Details |
|---|---|
| Richmond St | |

| Flow Control | Purpose |
|---|---|
| | Maintenance Related |

**Additional Information**



| Ftg. | Code | Description | Position | Comment |
|---|---|---|---|---|
| 0.0 | AMH | Access Point - Manhole | | Starting Manhole: 10549 |
| 0.0 | MWL | Water Level | | |
| 6.4 | RFJ | Roots, Fine: Joint | 12 | |
| 9.7 | RFJ | Roots, Fine: Joint | 12 | |
| 21.3 | B | Pipe Broken | 1 to 2 | |
| 21.7 | TBA | Tap, Break-in / Hammer: Active | 3 | |
| 38.3 | FC | Fracture Circumferential | 12 to 12 | |
| 47.5 | TBA | Tap, Break-in / Hammer: Active | 9 | |
| 48.5 | B | Pipe Broken | 1 to 3 | |
| 83.1 | TBA | Tap, Break-in / Hammer: Active | 3 | |
| 107.2 | TBA | Tap, Break-in / Hammer: Active | 9 | |
| 125.1 | FC | Fracture Circumferential | 12 to 12 | |
| 133.3 | FC | Fracture Circumferential | 12 to 12 | |
| 150.5 | BVV | Pipe Broken: Void Visible | 1 to 2 | |
| 151.7 | TBA | Tap, Break-in / Hammer: Active | 3 | |
| 167.5 | TBA | Tap, Break-in / Hammer: Active | 9 | |
| 193.6 | TBA | Tap, Break-in / Hammer: Active | 1 | UNABLE TO CUT TAP |
| 222.1 | TBA | Tap, Break-in / Hammer: Active | 9 | |
| 262.2 | TBA | Tap, Break-in / Hammer: Active | 3 | |
| 285.2 | TBA | Tap, Break-in / Hammer: Active | 9 | |
| 311.4 | MMC | Material Change | | FROM CLAY TO PVC |
| 314.5 | TFA | Tap, Factory Made: Active | 3 | |
| 317.7 | MMC | Material Change | | BACK TO CLAY |
| 344.6 | TBA | Tap, Break-in / Hammer: Active | 9 | |
| 361.3 | RFJ | Roots, Fine: Joint | 12 | |
| 361.3 | FC | Fracture Circumferential | 12 to 12 | |
| 361.3 | AMH | Access Point - Manhole | | DS MH 10599 |

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| Surveyors Name | Pipe Segment Reference | Customer | Date | Time |
|---|---|---|---|---|
| G.DELTORO | 9657 | City OF Joliet | 20180711 | 10:55 |

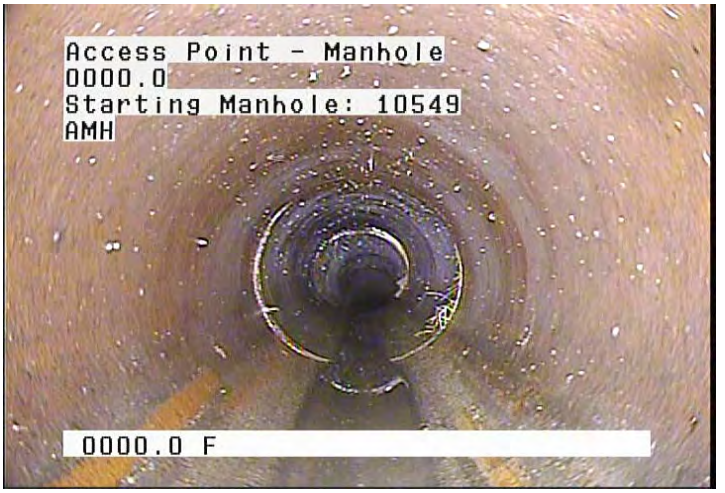
| Upstream MH | Rim To Invert (U) | Downstream MH | Rim To Invert (D) | Use of Sewer | Shape |
|---|---|---|---|---|---|
| 10549 | 7.5 | 10599 | 7.5 | Sanitary | Circular |

| Survey Direction | Total Length | Length Surveyed | Pre-Cleaning | Weather | Width | Height |
|---|---|---|---|---|---|---|
| Downstream | | 361.3 | Jetting | Dry | 8 | 8 |

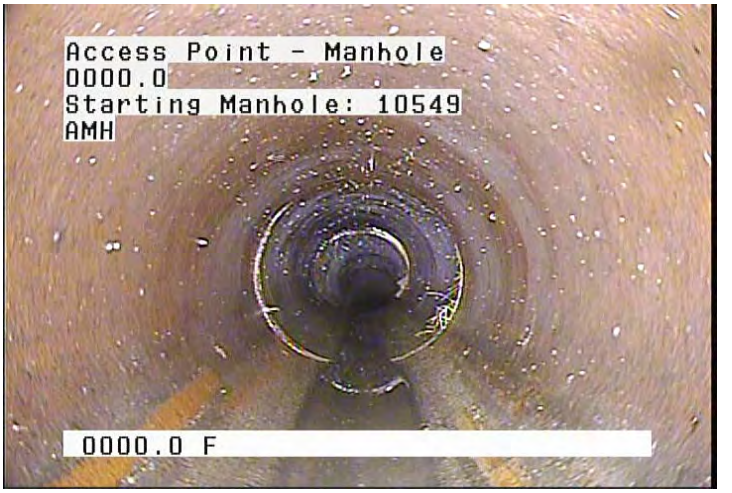
| Street | Location Details |
|---|---|
| Richmond St | |

| Flow Control | Purpose |
|---|---|
| | Maintenance Related |

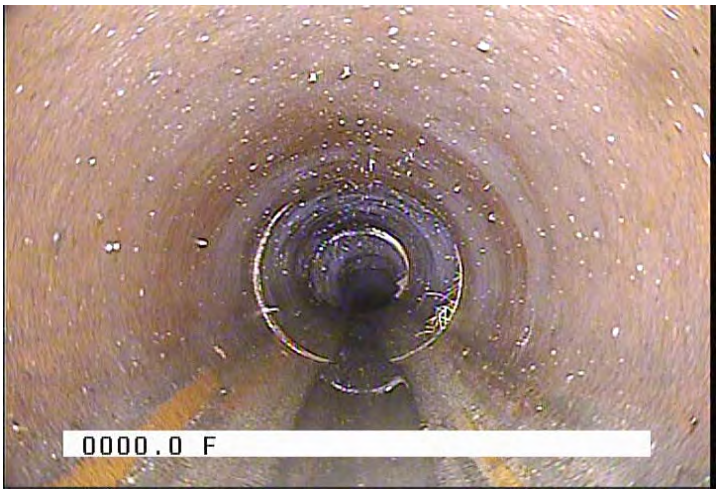
**Additional Information**



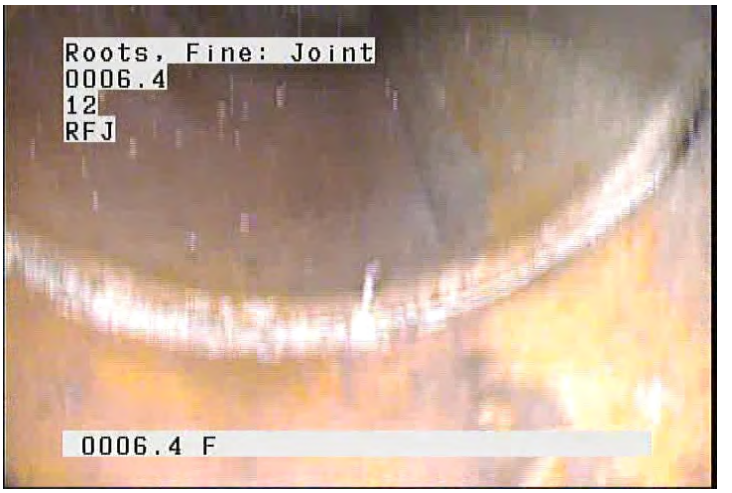

AMH - Access Point - Manhole @ 0.0 ft.
Starting Manhole: 10549




MWL - Water Level @ 0.0 ft.




RFJ - Roots, Fine: Joint @ 6.4 ft.




RFJ - Roots, Fine: Joint @ 9.7 ft.

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| Surveyors Name | Pipe Segment Reference | Customer | Date | Time |
|---|---|---|---|---|
| G.DELTORO | 9657 | City OF Joliet | 20180711 | 10:55 |

| Upstream MH | Rim To Invert (U) | Downstream MH | Rim To Invert (D) | Use of Sewer | Shape |
|---|---|---|---|---|---|
| 10549 | 7.5 | 10599 | 7.5 | Sanitary | Circular |

| Survey Direction | Total Length | Length Surveyed | Pre-Cleaning | Weather | Width | Height |
|---|---|---|---|---|---|---|
| Downstream | | 361.3 | Jetting | Dry | 8 | 8 |

| Street | Location Details |
|---|---|
| Richmond St | |

| Flow Control | Purpose |
|---|---|
| | Maintenance Related |

**Additional Information**




B - Pipe Broken @ 21.3 ft.




TBA - Tap, Break-in / Hammer: Active @ 21.7 ft.




FC - Fracture Circumferential @ 38.3 ft.




TBA - Tap, Break-in / Hammer: Active @ 47.5 ft.

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| Surveyors Name | Pipe Segment Reference | Customer | Date | Time |
|---|---|---|---|---|
| G.DELTORO | 9657 | City OF Joliet | 20180711 | 10:55 |

| Upstream MH | Rim To Invert (U) | Downstream MH | Rim To Invert (D) | Use of Sewer | Shape |
|---|---|---|---|---|---|
| 10549 | 7.5 | 10599 | 7.5 | Sanitary | Circular |

| Survey Direction | Total Length | Length Surveyed | Pre-Cleaning | Weather | Width | Height |
|---|---|---|---|---|---|---|
| Downstream | | 361.3 | Jetting | Dry | 8 | 8 |

| Street | Location Details |
|---|---|
| Richmond St | |

| Flow Control | Purpose |
|---|---|
| | Maintenance Related |

**Additional Information**




B - Pipe Broken @ 48.5 ft.




TBA - Tap, Break-in / Hammer: Active @ 83.1 ft.




TBA - Tap, Break-in / Hammer: Active @ 107.2 ft.




FC - Fracture Circumferential @ 125.1 ft.

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| Surveyors Name | Pipe Segment Reference | Customer | Date | Time |
|---|---|---|---|---|
| G.DELTORO | 9657 | City OF Joliet | 20180711 | 10:55 |

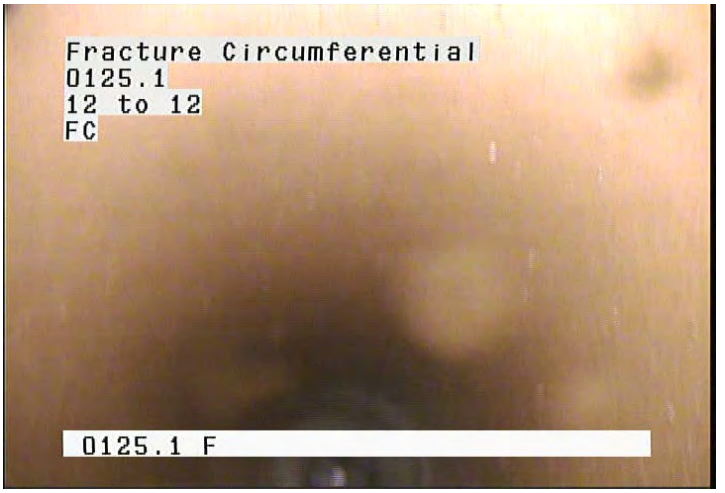
| Upstream MH | Rim To Invert (U) | Downstream MH | Rim To Invert (D) | Use of Sewer | Shape |
|---|---|---|---|---|---|
| 10549 | 7.5 | 10599 | 7.5 | Sanitary | Circular |

| Survey Direction | Total Length | Length Surveyed | Pre-Cleaning | Weather | Width | Height |
|---|---|---|---|---|---|---|
| Downstream | | 361.3 | Jetting | Dry | 8 | 8 |

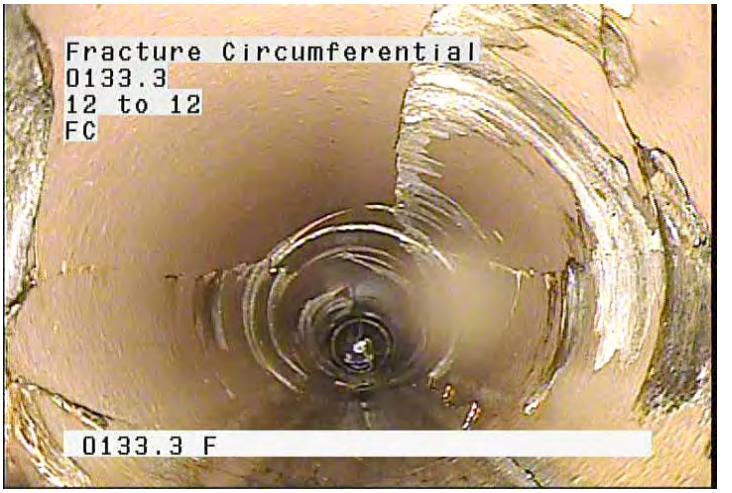
| Street | Location Details |
|---|---|
| Richmond St | |

| Flow Control | Purpose |
|---|---|
| | Maintenance Related |

**Additional Information**




FC - Fracture Circumferential @ 133.3 ft.




BVV - Pipe Broken: Void Visible @ 150.5 ft.




TBA - Tap, Break-in / Hammer: Active @ 151.7 ft.




TBA - Tap, Break-in / Hammer: Active @ 167.5 ft.

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| Surveyors Name | Pipe Segment Reference | Customer | Date | Time |
|---|---|---|---|---|
| G.DELTORO | 9657 | City OF Joliet | 20180711 | 10:55 |

| Upstream MH | Rim To Invert (U) | Downstream MH | Rim To Invert (D) | Use of Sewer | Shape |
|---|---|---|---|---|---|
| 10549 | 7.5 | 10599 | 7.5 | Sanitary | Circular |

| Survey Direction | Total Length | Length Surveyed | Pre-Cleaning | Weather | Width | Height |
|---|---|---|---|---|---|---|
| Downstream | | 361.3 | Jetting | Dry | 8 | 8 |

| Street | Location Details |
|---|---|
| Richmond St | |

| Flow Control | Purpose |
|---|---|
| | Maintenance Related |

**Additional Information**




TBA - Tap, Break-in / Hammer: Active @ 193.6 ft. UNABLE TO CUT TAP




TBA - Tap, Break-in / Hammer: Active @ 222.1 ft.




TBA - Tap, Break-in / Hammer: Active @ 262.2 ft.




TBA - Tap, Break-in / Hammer: Active @ 285.2 ft.

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| Surveyors Name | Pipe Segment Reference | Customer | Date | Time |
|---|---|---|---|---|
| G.DELTORO | 9657 | City OF Joliet | 20180711 | 10:55 |

| Upstream MH | Rim To Invert (U) | Downstream MH | Rim To Invert (D) | Use of Sewer | Shape |
|---|---|---|---|---|---|
| 10549 | 7.5 | 10599 | 7.5 | Sanitary | Circular |

| Survey Direction | Total Length | Length Surveyed | Pre-Cleaning | Weather | Width | Height |
|---|---|---|---|---|---|---|
| Downstream | | 361.3 | Jetting | Dry | 8 | 8 |

| Street | Location Details |
|---|---|
| Richmond St | |

| Flow Control | Purpose |
|---|---|
| | Maintenance Related |

**Additional Information**



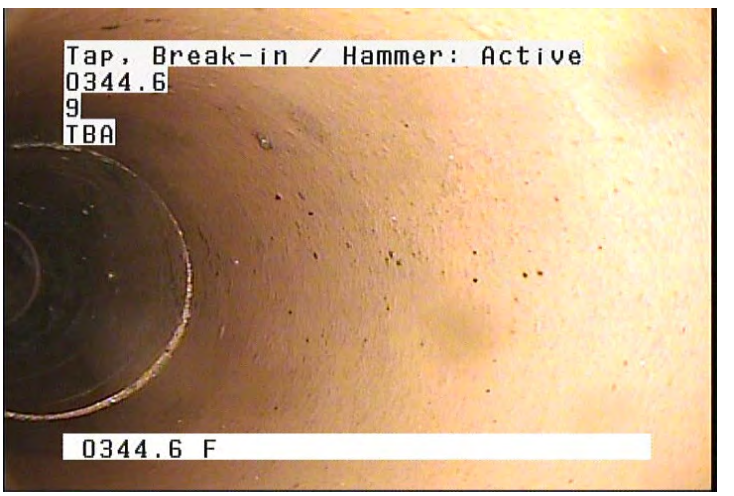

MMC - Material Change @ 311.4 ft.
FROM CLAY TO PVC




TFA - Tap, Factory Made: Active @ 314.5 ft.




MMC - Material Change @ 317.7 ft.
BACK TO CLAY




TBA - Tap, Break-in / Hammer: Active @ 344.6 ft.

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Email: cipp@michels.us l Web: www.michels.us

| Surveyors Name | Pipe Segment Reference | Customer | Date | Time |
|---|---|---|---|---|
| G.DELTORO | 9657 | City OF Joliet | 20180711 | 10:55 |

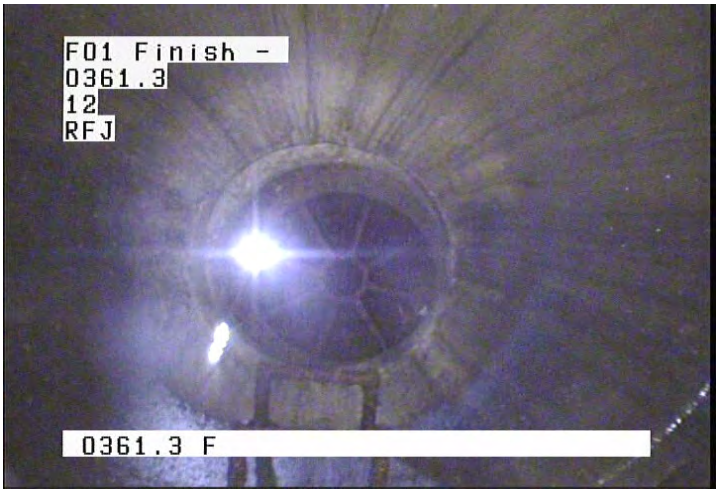
| Upstream MH | Rim To Invert (U) | Downstream MH | Rim To Invert (D) | Use of Sewer | Shape |
|---|---|---|---|---|---|
| 10549 | 7.5 | 10599 | 7.5 | Sanitary | Circular |

| Survey Direction | Total Length | Length Surveyed | Pre-Cleaning | Weather | Width | Height |
|---|---|---|---|---|---|---|
| Downstream | | 361.3 | Jetting | Dry | 8 | 8 |

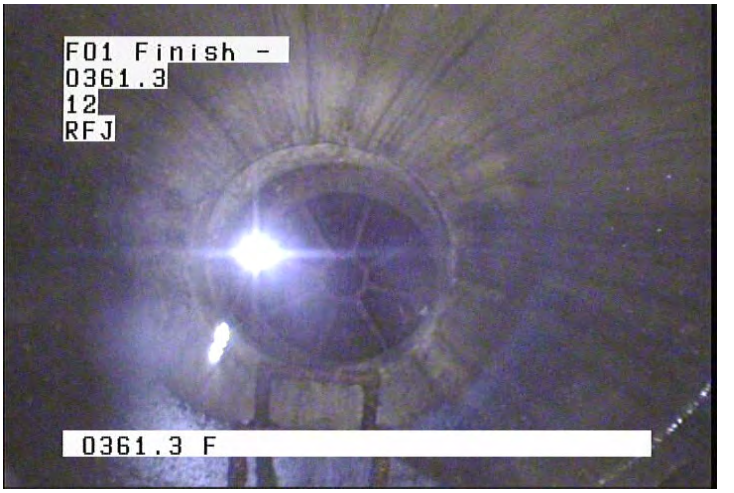
| Street | Location Details |
|---|---|
| Richmond St | |

| Flow Control | Purpose |
|---|---|
| | Maintenance Related |

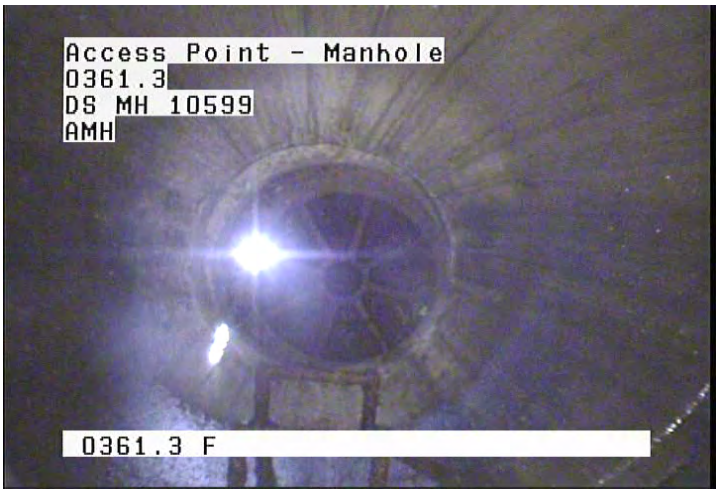
**Additional Information**




RFJ - Roots, Fine: Joint @ 361.3 ft.




FC - Fracture Circumferential @ 361.3 ft.




AMH - Access Point - Manhole @ 361.3 ft.
DS MH 10599

Inwood-2 Point Repair

Michel's Pipe Services
817 W. Main St. I PO Box 128
Brownsville, WI 53006
Ph: (920)583-3132 I Fax:(920)924-4320
Email: cipp@michels.us I Web: www.michels.us

| Surveyors Name | Pipe Segment Reference | Customer | Date | Time |
|---|---|---|---|---|
| G.DELTORO | 9657 | City OF Joliet | 20180711 | 10:55 |

| Upstream MH | Rim To Invert (U) | Downstream MH | Rim To Invert (D) | Use of Sewer | Shape |
|---|---|---|---|---|---|
| 10549 | 7.5 | 10599 | 7.5 | Sanitary | Circular |

| Survey Direction | Total Length | Length Surveyed | Pre-Cleaning | Weather | Width | Height |
|---|---|---|---|---|---|---|
| Downstream | | 361.3 | Jetting | Dry | 8 | 8 |

| Street | Location Details |
|---|---|
| Richmond St | |

| Flow Control | Required Pressure Value (PSI) |
|---|---|
| | |

**Additional Information**



| Ftg. | Code | Description | Grout (Gallons) | Final Pressure (PSI) | Position | Comment |
|---|---|---|---|---|---|---|
| 0.0 | AMH | Access Point - Manhole | | | | Starting Manhole: 10549 |
| 0.0 | MWL | Water Level | | | | |
| 6.4 | RFJ | Roots, Fine: Joint | | | 12 | |
| 9.7 | RFJ | Roots, Fine: Joint | | | 12 | |
| 21.3 | B | Pipe Broken | | | 1 to 2 | |
| 21.7 | TBA | Tap, Break-in / Hammer: Active | 6 | | 3 | |
| 38.3 | FC | Fracture Circumferential | | | 12 to 12 | |
| 47.5 | TBA | Tap, Break-in / Hammer: Active | 6 | | 9 | |
| 48.5 | B | Pipe Broken | | | 1 to 3 | |
| 83.1 | TBA | Tap, Break-in / Hammer: Active | 6 | | 3 | |
| 107.2 | TBA | Tap, Break-in / Hammer: Active | 6 | | 9 | |
| 125.1 | FC | Fracture Circumferential | | | 12 to 12 | |
| 133.3 | FC | Fracture Circumferential | | | 12 to 12 | |
| 150.5 | BVV | Pipe Broken: Void Visible | | | 1 to 2 | |
| 151.7 | TBA | Tap, Break-in / Hammer: Active | 6 | | 3 | |
| 167.5 | TBA | Tap, Break-in / Hammer: Active | 6 | | 9 | |
| 193.6 | TBA | Tap, Break-in / Hammer: Active | 6 | | 1 | UNABLE TO CUT TAP |
| 222.1 | TBA | Tap, Break-in / Hammer: Active | 6 | | 9 | |
| 262.2 | TBA | Tap, Break-in / Hammer: Active | 6 | | 3 | |
| 285.2 | TBA | Tap, Break-in / Hammer: Active | 6 | | 9 | |
| 311.4 | MMC | Material Change | | | | FROM CLAY TO PVC |
| 314.5 | TFA | Tap, Factory Made: Active | 6 | | 3 | |
| 317.7 | MMC | Material Change | | | | BACK TO CLAY |
| 344.6 | TBA | Tap, Break-in / Hammer: Active | 6 | | 9 | |
| 361.3 | RFJ | Roots, Fine: Joint | | | 12 | |
| 361.3 | FC | Fracture Circumferential | | | 12 to 12 | |
| 361.3 | AMH | Access Point - Manhole | | | | DS MH 10599 |

Inwood-2 PR

Barney Point Repair

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Ph: (920)583-3132 l Fax:(920)924-4320
Email: cipp@michels.us l Web: www.michels.us

| Surveyors Name | Pipe Segment Reference | Customer | Date | Time |
|---|---|---|---|---|
| Jake Janda | 9590 | joliet | 20190409 | 09:56 |

| Upstream MH | Rim To Invert (U) | Downstream MH | Rim To Invert (D) | Use of Sewer | Shape |
|---|---|---|---|---|---|
| 9936 | 8 | 9937 | 8.5 | Sanitary | Circular |

| Survey Direction | Total Length | Length Surveyed | Pre-Cleaning | Weather | Width | Height |
|---|---|---|---|---|---|---|
| Downstream | | 404.3 | Jetting | Dry | 8 | 8 |

| Street | Location Details |
|---|---|
| Richmond | |

| Flow Control | Purpose |
|---|---|
| Not Controlled | Post Rehabilitation Survey |

**Additional Information**



| Ftg. | Code | Description | Position | Comment |
|---|---|---|---|---|
| 0.0 | AMH | Access Point - Manhole | | Starting Manhole: 9937 |
| 0.0 | MWL | Water Level | | |
| 7.8 | TFA | Tap, Factory Made: Active | 3 | |
| 39.9 | TFA | Tap, Factory Made: Active | 9 | |
| 67.3 | TFA | Tap, Factory Made: Active | 2 | |
| 129.2 | TFA | Tap, Factory Made: Active | 3 | |
| 198.3 | TFA | Tap, Factory Made: Active | 3 | |
| 225.1 | TFA | Tap, Factory Made: Active | 10 | |
| 261.8 | TFA | Tap, Factory Made: Active | 2 | |
| 304.0 | TFA | Tap, Factory Made: Active | 9 | |
| 327.8 | TFA | Tap, Factory Made: Active | 2 | |
| 379.7 | TFA | Tap, Factory Made: Active | 2 | |
| 380.3 | TFA | Tap, Factory Made: Active | 9 | |
| 404.3 | AMH | Access Point - Manhole | | dsmh |

Barney PR

Richmond Point Repair

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| Surveyors Name | Pipe Segment Reference | Customer | Date | Time |
|---|---|---|---|---|
| aj aler | 9592 | joliet | 20181017 | 15:57 |

| Upstream MH | Rim To Invert (U) | Downstream MH | Rim To Invert (D) | Use of Sewer | Shape |
|---|---|---|---|---|---|
| 20470 | 9.5 | 10548 | | Sanitary | Circular |

| Survey Direction | Total Length | Length Surveyed | Pre-Cleaning | Weather | Width | Height |
|---|---|---|---|---|---|---|
| Downstream | | 326 | Jetting | Dry | 8 | 8 |

| Street | Location Details |
|---|---|
| richmond st.(easment) | |

| Flow Control | Purpose |
|---|---|
| De-Watered using Jetter | Post Rehabilitation Survey |

**Additional Information**



| Ftg. | Code | Description | Position | Comment |
|---|---|---|---|---|
| 0.0 | AMH | Access Point - Manhole | | Starting Manhole: 20470 |
| 0.0 | MWL | Water Level | | |
| 4.3 | TFA | Tap, Factory Made: Active | 2 | |
| 63.2 | TFA | Tap, Factory Made: Active | 2 | |
| 122.3 | TBA | Tap, Break-in / Hammer: Active | 2 | |
| 191.3 | TFA | Tap, Factory Made: Active | 2 | |
| 259.5 | TFA | Tap, Factory Made: Active | 2 | |
| 295.5 | TBA | Tap, Break-in / Hammer: Active | 1 | |
| 326.0 | AMH | Access Point - Manhole | | dsmh |

Richmond PR