Alewife Brook Pump Station Rehabilitation
Design/CA/RE Services
Contract 7034 – Amendment No. 3

April 12, 2017
Work to date:

• Installation of flood control measures at exterior openings
• Construction of bypass pumping system discharge vault
  – Will later serve as the Alewife Brook Conduit meter vault
• Installation of bypass pumping system pumps, piping and valves
• Commencement of PCB remediation

Upcoming work:

• Full bypass, then station rehabilitation

Substantial Completion May 2018
Work to Date

Bypass Pumping Discharge Lines
Work to Date

Construction of Bypass System Discharge Vault

Flood Plank Frames Installed at Screen Room Door

Installation of Bypass System Pumps and Suction Lines
Additional Contractor Submittal Review Services $95,266

- Contract quantity of 220 has been reached
- Additional 167 submittals projected to be reviewed
- Cost based on actual incurred for the initial 220 submittals
Construction of a Section of the Reading Extension Sewer (circa. 1919) along Prospect Street near the Stoneham/Wakefield town line.
• Reading Extension Sewer – 12,240 feet of 15, 18, 20-in VC constructed in 1919

• Metropolitan Sewer – 2,280 ft of 15-in VC constructed in 1890s

• Both sewers revealed both structural and non-structural deficiencies during CCTV inspections
7164 Project Information and Summary

- Rehabilitation of 13,100 ft of pipe utilizing Cured-in-Place Pipe (CIPP) and lining 62 manholes and structures
- Bypass pumping and flow diversions
- Coordination with other projects (MWRA NIH, Eversource Energy and Rail Trail)
Contract 7164 – Bid Tabulation

- Bids opened on February 23, 2017

<table>
<thead>
<tr>
<th>Contractor</th>
<th>Bid Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Mountain Pipeline Services, Inc.</td>
<td>$2,048,945</td>
</tr>
<tr>
<td>Insituform Technologies, LLC</td>
<td>$2,154,000</td>
</tr>
<tr>
<td>Layne Inliner, LLC</td>
<td>$2,891,160</td>
</tr>
<tr>
<td>Engineer’s Estimate</td>
<td>$4,240,000</td>
</tr>
</tbody>
</table>

- Staff recommend to award Contract 7164 to Green Mountain Pipeline Services, Inc.
7164 Estimate Differences

- More Aggressive Installation Rate (fewer lining setups):
  - Insertion lengths longer than assumed
  - Lower equipment time/labor hours
  - Reduction in bypass pumping time
  - Less traffic maintenance (Police and devices)

- Lower overhead with lining company General Contractor

- More aggressive bid as a past General Contractor and subcontractor for MWRA

- Close range of bids indicates correct level of effort to successfully complete project
Contract Award to: Green Mountain Pipeline Services, Inc.

Contract Bid: $2,048,945

Notice to Proceed: May 2017

Contract Substantial Completion: August 2018

Contract Duration: 487 calendar days
Section 80 Repair
MWRA Contract No. 7532

Construction Update
April 12, 2017
Section 80 Emergency Repair
MWRA Contract No. OP-352
Construction Update
April 2-3, 2017
Section 80 Emergency Repair
Section 80 Emergency Repair

Cutting pavement in lane
4/2, 10:15 P.M.

Buried manhole cover found
4/2, 10:45 P.M.
Section 80 Emergency Repair

Air Release Valve Assembly (mounted on flanged plate)

Air Release Valve assembly installed on existing pipe
4/2, 11:55 P.M.

Manual Air Release Valve

Automatic Air Release Valve
Section 80 Emergency Repair

Top of Flange without A.R.V
4/3, 12:05 A.M.

New Flange Plate installed
4/3, 12:40 A.M.
Section 80 Emergency Repair

Prepared Trench
4/3, 1:20 A.M.

Backfilled with CDF
4/3, 1:30 A.M.
Section 80 Emergency Repair

Temporary Trench paving
4/3, 2:40 A.M.
• Leak at 6:00 on pipe between removed thrust block and coupling
Excavation and Repair
Quabbin Reservoir and Drought Status Update

April 12, 2017
Massachusetts Drought Status March 1, 2017

MASSACHUSETTS DROUGHT STATUS
As of March 1, 2017

Drought Levels
- Drought Regions
- MWRA Service Area

NOTE: The MWRA/DCR water system has an individual Drought Management Plan. Some partially supplied member communities are subject to regional drought status.

Drought Levels
- Emergency
- Warning
- Watch
- Advisory
- Normal

0 10 20 Miles

March 8, 2017 (mnp)
Data sources: MassGIS & DCR Office of Water Resources
• Staff contacted community elected officials and water superintendents with pointers to water conservation

• MWRA sent out Public Service Announcements asking residents and businesses to conserve water

• MWRA used its website and social media to draw awareness of the need to conserve

• The target is to keep water usage at previous year levels without issuing mandatory restrictions
Overall Demand Tracking Lower Than Last Year

Fully Supplied Communities

Partially Supplied Communities
### Status Looking Forward from April 1, 2017

<table>
<thead>
<tr>
<th></th>
<th>1-Month</th>
<th>3-Months</th>
<th>6-Months</th>
<th>12-Months</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Median Yield</strong></td>
<td>Below Normal</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td><strong>Dry</strong> (75th Percentile)</td>
<td>Below Normal</td>
<td>Below Normal</td>
<td>Normal</td>
<td>Below Normal</td>
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<tr>
<td><strong>Driest</strong> (of Record)</td>
<td>Below Normal</td>
<td>Below Normal</td>
<td>Below Normal</td>
<td><strong>Drought Warning</strong></td>
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<tr>
<td>Stage</td>
<td>Target Water Use Reduction</td>
<td></td>
<td></td>
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<tr>
<td>------------------------------</td>
<td>------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Normal Operation</td>
<td>0</td>
<td></td>
<td></td>
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<tr>
<td>Below Normal</td>
<td>Previous year’s use (Voluntary)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Drought Warning</td>
<td>5% (Primarily Voluntary)</td>
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<tr>
<td>Drought Emergency</td>
<td>(Mandatory Restrictions)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Stage 1</td>
<td>10%</td>
<td></td>
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<tr>
<td>Stage 2</td>
<td>15%</td>
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<tr>
<td>Stage 3</td>
<td>30%</td>
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</tbody>
</table>
Quabbin’s Long-term Track

Quabbin – Percent Full

- Normal
- Below Normal
- Warning
- Below ~55% Drought Emergency Stage 1
- Below 38% Drought Emergency Stage 2
- Below 25% Drought Emergency Stage 3
Rainfall Deficit Reducing In The Service Area

Two year cumulative daily total

7.4” Deficit

75%
95%
75%
50%
50%
25%
25%
95%
75%
50%
25%