



Town of

Orleans
Massachusetts

Contract No. 2019-01
Downtown Area Wastewater Treatment
Facility and Effluent Disposal

Contract No. 2019-02
Downtown Area Collection System
and Pumping Stations

Summary of Bids

Finance Committee Meeting - May 21, 2020

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Agenda

- ❖ **As-Bid Contract Modifications**
- ❖ **Summary of Bids**
 - Contract No. 2019-01 - Downtown Area Wastewater Treatment Facility and Effluent Disposal
 - Contract No. 2019-02 - Downtown Area Collection System and Pumping Stations
- ❖ **Bidding Climate – Items Impacting Costs**
- ❖ **Award Considerations and Recommendations**
- ❖ **SRF Cost Summary**
- ❖ **Questions and Answers**



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As-Bid Contract Modifications

Goals

- ❖ Ability to Award Both Contracts within Current Funding

Considerations

- ❖ Must Accept the Alternates In the Order Presented
- ❖ Possibility to Increase SRF Funding Allocation
- ❖ Contractor May Hold Pricing of Alternatives for Future Change Order(s)

Modifications

- ❖ Contract No. 2019-01
 - Equipment Storage Facility
 - Fiber Optic Conduits and Handholes
 - Tracer Wire
 - SBR Transfer Pump No. 4
 - SBR Blower No. 4
 - SBR Diffuser Grids
- ❖ Contract No. 2019-02
 - Pavement Restoration
 - P.S. No. 3 Tributary Area
 - Fiber Optic Conduits and Handholes
 - Tracer Wires
 - Highway Crossing Using Jacking

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Contract No. 2019-01 - Downtown Area Wastewater Treatment Facility and Effluent Disposal

Description	Contractor					
	C.H. Nickerson	Daniel O'Connell's	Methuen Construction	MWH Constructors	R.H. White Construction	Waterline Industries
Base Bid – Basis of Award						
Base Bid	---	\$31,141,400	\$34,911,648	\$35,472,747	\$36,955,000	\$31,465,677
Alternatives						
Equipment Storage Facility	---	\$1,560,000	\$1,824,422	\$1,625,000	\$1,966,000	\$1,700,000
Fiber Optic Conduits	---	\$80,000	\$95,609	\$70,000	\$142,000	\$112,000
Tracer Wire	---	\$4,600	\$11,416	\$5,000	\$17,000	\$73,000
SBR Transfer Pump No. 4	---	\$70,000	\$75,178	\$70,000	\$83,000	\$84,000
SBR Blower No. 4	---	\$55,000	\$69,930	\$92,000	\$77,000	\$120,000
SBR Diffuser Grids	---	\$18,000	\$29,165	\$70,000	\$89,000	\$50,000

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Contract No. 2019-02 - Downtown Area Collection System and Pumping Stations

Description	Contractor				
	C.C. Construction	P. Gioioso & Sons	Revoli Construction	Robert B. Our	RJV Construction
Base Bid – Basis of Award					
SRF Eligible Items	\$12,228,109.85	\$9,586,430.92	\$9,738,454.42	\$8,989,312.40	\$11,156,773.32
SRF Ineligible Items	\$425,458.00	\$581,960.40	\$509,060.46	\$404,644.00	\$517,410.40
Totals	\$12,653,567.85	\$10,168,391.32	\$10,247,514.88	\$9,393,956.40	\$11,674,183.72
Alternatives					
Pavement Restoration	\$1,210,410.00	\$1,015,750.00	\$1,071,700.00	\$1,019,430.00	\$1,155,251.00
PS No. 3 Tributary Area	\$11,056,477.76	\$6,971,985.58	\$7,103,469.48	\$7,309,506.10	\$9,662,131.08
Fiber Optic Conduits	\$224,760.00	\$171,550.00	\$230,400.00	\$139,110.00	\$230,400.00
Tracer Wires	\$223,395.00	\$84,300.00	\$28,100.00	\$84,300.00	\$140,500.00
Highway Crossing Using Jacking	\$937,000.00	\$350,000.00	\$875,000.00	\$750,000.00	\$750,000.00

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Contract No. 2019-02 - Downtown Area Collection System and Pumping Stations

SRF Ineligible Items		
Description	CIP Estimate December 2019	Robert B. Our Co., Inc.
Replacement of Water Services	\$213,200	\$105,720
Replacement of Canal Road Water Main	\$346,500	\$271,924
Subtotals	\$543,400	\$377,644
Traffic Police and Contingency	Included Above	\$44,356
Totals	\$559,700	\$422,000
Water Quality Improvements	\$160,000	\$27,000
Traffic Police and Contingency	Included Above	\$15,000
Totals	\$160,000	\$42,000

Funding Required at Town Meeting - \$464,000

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Bidding Climate – Items Impacting Costs

❖ Prior to Covid-19 – Busy Workload / Backlog

- Contractors
- Subcontractors
- Suppliers / Manufacturers

❖ During and After Covid-19

- Raw Materials
- Manufacturing Delays
- Inefficiencies in Construction Operations / Activities

❖ Project Location – Covid-19

- Travel
- Per Diem

❖ Skilled Labor Shortage

- Unemployment Benefits Reducing Workforce

❖ WWTF

- Equipment Storage Facility
- Fiber Optic Conduits, Handholes and Fiber Optic Cable
- Tracer Wire
- Phase 2 Equipment

❖ Collection System

- Regulatory Requirements
- Enhancements / Added Items
- Property Owner Requirements
- Pumping Stations
- Paving Material



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Supply Chain Update | Lead Times and Prices

Gilbane Building Company April 30, 2020

Commodity	Status	Lead Time	Price	Comments
Cast Iron	Green	Consistent	Consistent	No disruption – both major foundries operational
Ceiling/Acoustic	Green	Consistent	Consistent	No disruption – major plants operational
Flooring - Domestic	Green	Consistent	Consistent	No disruption – major plants operational
Flooring - Imported	Yellow	Delayed	Consistent	Watch out – Italy tile
Furniture - Domestic	Yellow	Delayed	Consistent	Watch out – Gunlocke, Herman Miller and Haworth reduced capacities
Furniture - Imported	Yellow	Delayed	Consistent	Watch out – China parts (casters, handles, knobs, etc.)
Glass - Domestic	Green	Consistent	Consistent	No disruption – 6 to 8 weeks lead time
Glass - Imported	Yellow	Delayed	Consistent	Watch out – sporadic temporary plant closures
HVAC/MEP - Domestic	Green	Consistent	Decreasing	No disruption – some evidence of slight price decrease
HVAC/MEP - Imported	Yellow	Delayed	Consistent	Watch out – Mexico shutdown, Germany, Croatia, China delays
Lighting - Imported	Yellow	Impact Unclear	Consistent	Watch out – China, Mexico
Process Equipment - Imported	Yellow	Delayed	Consistent	Watch out – Germany
PPE/C19-Related Equipment	Yellow	Delayed	Decreasing	Watch out – slight decrease in spiked prices, availability improving
Pipe, Valves and Fittings	Green	Consistent	Consistent	No disruption – slight decrease in distributor inventory levels
Stainless Pipe and Fittings	Green	Consistent	Consistent	No disruption
Steel - Domestic	Green	Consistent	Consistent	No disruption – manufacturers and mills operational
Steel - Imported	Yellow	Impact Unclear	Impact Unclear	Watch out – weakening demand, reduced plant capacities



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Award Considerations and Recommendations

- ❖ TMDL Compliance (Nitrogen Removal)
- ❖ SRF Funding at 0%
- ❖ Potential for Stimulus Funding (Shovel Ready Projects)
- ❖ Owner's Development Costs
- ❖ Impacts on Betterments
- ❖ Impacts on User Fees
- ❖ Impacts on Taxes



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Award Considerations and Recommendations (cont.)

Contract No. 2019-01

- ❖ Award to: Danial O'Connell's & Sons, Inc.
- ❖ Base Bid at \$31,141,400
- ❖ Alternatives
 - No. 1 - Equipment Storage Facility: \$1,560,000
 - No. 2 - Fiber Optic Conduits, Handholes and Fiber Optic Cable: \$80,000
 - No. 3 - Tracer Wire: \$4,600
- ❖ Total: \$32,786,000

Contract No. 2019-02

- ❖ Award to: Robert B. Our Co., Inc.
- ❖ Base Bid: \$8,989,312.40
- ❖ Alternatives
 - No. 1 - Pavement Restoration: \$1,019,430.00
 - No. 2 - PS No. 3 Tributary Area: \$7,309,506.10
 - No. 3 - Fiber Optic Conduits and Handholes: \$139,110
 - No. 4 - Tracer Wire: \$84,300
- ❖ Total: \$17,741,658 *

* Does not include SRF Ineligible Items




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Award Recommendation Summary

Description	SRF Application	Post Bids
A. Construction		
a. 2019-01	\$ 23,032,500	\$ 32,786,000
b. 2019-02	\$ 13,773,200	\$ 17,541,658
c. Construction Contingency (10% pre-bid / 5% post-bid)	\$ 3,680,100	\$ 2,558,142
Sub Total	\$ 40,485,800	\$ 52,885,800
B. Construction Services	\$ 5,612,000	\$ 5,612,000
C. Other Costs	\$ 1,285,000	\$ 1,085,000
TOTALS	\$ 47,382,800	\$ 59,582,800

Additional Funding Required at Town Meeting - \$12,200,000





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Questions and Answers

Description	SRF Application	Post Bid
A. Construction		
a. 2019-01	\$ 23,032,500	\$ 32,786,000
b. 2019-02	\$ 13,773,200	\$ 17,541,658
c. Construction Contingency (10% pre-bid / 5% post-bid)	\$ 3,680,100	\$ 2,558,142
Sub Total	\$ 40,485,800	\$ 52,885,800
B. Construction Services		
a. General Supervision	\$ 2,586,635	\$ 2,586,635
b. Resident Engineering	\$ 1,114,765	\$ 1,114,765
c. Testing of Materials	\$ 25,000	\$ 25,000
d. As Built Plans	\$ 260,000	\$ 260,000
e. Operation and Maintenance Manual	\$ 303,600	\$ 303,600
f. Start-up Supervision and Extended Operations	\$ 710,000	\$ 710,000
g. Other: OPM	\$ 612,000	\$ 612,000
Sub Total	\$ 5,612,000	\$ 5,612,000
C. Other Costs		
a. Police – Traffic Detail	\$ 1,000,000	\$ 1,000,000
b. Town Administration	\$ 85,000	\$ 85,000
c. Land / ROW / Easements	\$ 200,000	\$ 0
Sub Total	\$ 1,285,000	\$ 1,085,000
TOTALS	\$ 47,382,800	\$ 59,582,800

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Bidding Climate – Items Impacting Costs (cont.)

Downtown Area WWTF and Effluent Disposal

- ❖ WWTF: \$31,141,400
 - Enhancements
 - Building Construction Materials
 - Security
 - Future Permit Limits
 - Old Kings Highway Historic District Requirements

- ❖ Equipment Storage Facility: \$1,560,000
 - Maintenance / Repair Area
 - Storage of O&M Equipment
 - Storage of Spare Parts
 - Storage of O&M Vehicles
- ❖ Fiber Optic Conduits, Handholes and Fiber Optic Cable: \$80,000
- ❖ Tracer Wire: \$4,600
- ❖ Phase 2 Equipment
 - SBR Transfer Pump No. 4: \$70,000
 - SBR Blower No. 4: \$55,000
 - SBR Diffuser Grids: \$18,000

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Bidding Climate – Items Impacting Costs (cont.)

Downtown Area Collection System and Pumping Station

- ❖ Minimizing the Number of Pumping Stations Increased Overall Depth of System
- ❖ Pumping Stations: \$1,600,000
 - Size and Depth
 - PS No. 3 Site Conditions
 - Property Owners Requirements
 - Electrical Subcontractors are Busy
- ❖ PS No. 3 Tributary Area Dewatering
- ❖ Paving Material Cost
- ❖ Total: \$2,600,000 +/-
- ❖ Regulatory – State
 - Pavement: \$120,000
 - Tracer Wire: \$62,000
 - Inspection: \$10,000
- ❖ Enhancements / Added Items
 - 10 Added Manholes: \$172,000
 - FM Flushing MH: \$25,000
 - Town Roadway Paving: \$198,000
 - Waterline Stops: \$225,000
 - Leaching Catch Basins: \$24,000
 - Electric Co. Service Fee: \$25,000
- ❖ Total: \$856,000



Town of

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Submitted Questions and Answers

Submitted Questions and Answers

- ❖ [Equipment Storage Facility - Requirements vs Alternative](#)
- ❖ [Waterline Industries - Sub-Bids Valid if they are not the General Contractor?](#)
- ❖ [Warranties - Reduced to 1 Year – Why?](#)
- ❖ [MassDOT - Permit Issuance and Impacts](#)
- ❖ [Owner Pre-Selected Equipment - Combined Cost at \\$1.625M - How Reliable / Solid?](#)
- ❖ [System Communications - Base Bid vs. Alternative?](#)
- ❖ [WWTF and Effluent Disposal - Bids Received and Range of Bids](#)
- ❖ [Collection System and Pump Stations - Bids Received and Range of Bids](#)
- ❖ [SRF Program - Additional Funding and Award Date](#)
- ❖ [Project Schedule: State Revolving Fund](#)
- ❖ [Anticipation of Cost Increases](#)
- ❖ [Water System Upgrades and Water Quality Improvements Coordination](#)
- ❖ [Town Long-Term Benefit Enhancements](#)
- ❖ [Contract Documents - Clarifications and Adjustments Based on Feedback From Potential Bidders](#)



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Equipment Storage Facility Requirements vs Alternative

- ❖ **Exterior Based on the Requirements of Old Kings Highway Historic District**
- ❖ **Minimum Requirements**
 - Maintenance / Repair Area (Room 202)
 - One Truck Bay
- ❖ **The Building Provides:**
 - Maintenance / Repair Area
 - Storage of O&M Equipment
 - Storage of Spare Parts
 - Storage of O&M Vehicles
- ❖ **Alternative**
 - Identified Costs to be Increasing
 - Created Alternatives in an Attempt to be Able to Award the Project Within Existing Funding.
- ❖ **If Funding Was Not Available**
 - Two Locations within the WWTF Identified to be Temporarily Repurposed (Room 102) and Basement (Future Chemical Area) for Maintenance / Repair Area; Storage of O&M Equipment; and Storage of Spare Parts
 - Does Not Provide Storage Space for O&M Vehicles.



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Waterline Industries Sub-Bids Valid if they are not the General Contractor?

- ❖ **Waterline Industries Provides Many of the Sub Trades that go into the Construction of a Wastewater Treatment Facility**
 - Miscellaneous Metals
 - Roofing
 - Plumbing
 - HVAC
 - Electrical
- ❖ **Sub-bids Restricted to Themselves as is Allowed by Mass. General Law.**
- ❖ **Other General Contractors Cannot Use Waterline Industries' Restricted Sub-bids.**
- ❖ **Waterline Industries' Sub-bids are Valid, but only when Paired with their Bid as a General Contractor.**



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Warranties Reduced to 1 Year – Why?

- ❖ **Initially the Contract Documents Specified a Longer Warranty (4 Years).**
- ❖ **Bidding Phase Concerns Raised About Specific Extended Warranties. Concerns Relate to Warranties Beginning with the Date of Substantial Completion.**
- ❖ **As the Contractor's Demobilize they Lose the Ability to Control / Maintain Equipment. This is Viewed as a Costly Risk.**
- ❖ **Maintaining Longer Warranties Could Stifle Competition or Lead to Holes in Contractor's Bids Filled by a Guess.**
- ❖ **Contractors Increase Bid Costs for These Guesses. Unknown Cost of Risks = High Costs.**
- ❖ **Mass. General Law Allows For/Requires a 1 Year Warranty and This Change Still Reflects this Standard.**



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MassDOT Permit Issuance and Impacts

- ❖ **MassDOT Permit Application**
 - Submitted in September 2019.
 - Received in March 2020.
- ❖ **MassDOT Meetings**
 - Permit for Route 6A and Route 28 Would Only Take a Few Months.
 - Conditions of the Permit would be Similar to the MassDOT Permit Issued for the Main Street Intersection Project.
 - Therefore, the Contract Documents were Based on the Previously Issued Permit.
- ❖ **Critical Differences Due to MassDOT Requirements**
 - Temporary Trench Pavement Thickness
 - Permanent Trench Pavement Thickness
 - MassDOT inspector at the Route 6 Crossing
 - Utility Tracer Wires
- ❖ **Estimated Cost of \$192,000**



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Owner Pre-Selected Equipment Combined Cost at \$1.625M - How Reliable / Solid?

- ❖ **An Equipment Preselection Process Completed in Early 2019.**
- ❖ **RFPs were Advertised in COMMBUYS; Central Register; and The Cape Codder Newspaper.**
- ❖ **Two-step Selection Process:**
 - (1) Engineering Evaluation of the Technical Proposals; and (2) Life Cycle Cost Analysis.
 - Selection Based on Proposal with Best Value to Town.
- ❖ **RFPs**
 - Proposal price shall include a guaranteed, Lump Sum price in May 2019 US Dollars based on the mechanical and performance specification and the service requirements specified.
 - Lump Sum Price to be adjusted for inflation by the percent increase in the ENR Construction Cost Index between May 2019 and the month in which the Purchase Order is issued.
 - Current Lump Sum Price = \$1.652M



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System Communications Base Bid vs. Alternative?

❖ Base Bid

- Radio Communications
- Between the WWTF, Effluent Disposal and the Three Pump Stations.

❖ Bid Alternatives

- Fiber Optic Communications Between the WWTF, Effluent Disposal and Pump Station No. 1 (Old Colony Way).
- Radio Communications Between the WWTF and Pump Station No. 2 (Snow Library) and Pump Station No. 3 (Stop & Shop).



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WWTF and Effluent Disposal Bids Received on May 13, 2020 and Range of Bids

Contractor	Range of Base Bids Plus Alternatives A-1 thru A-3	Percent Above Low Bidder
Daniel O'Connell's Sons, Inc.	\$32,786,000.00	---
Waterline Industries Corporation	\$33,350,677.00	1.7%
Methuen Construction Co.	\$36,843,095.00	12.4%
MWH Constructors, Inc.	\$37,172,747.00	13.4%
R.H. White Construction, Co.	\$39,080,000.00	19.2%

Note: Six General Contractors were Prequalified Pursuant to M.G.L. c. 149, § 44D½ and 810 CMR 9.00



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Collection System and Pumping Stations Bids Received on May 6, 2020 and Range of Bids

Contractor	Range of Base Bids - SRF Eligible Items Plus Alternatives A-1 thru A-4	Percent Above Low Bidder
Robert B. Our Co., Inc.	\$17,541,658.50	---
P. Gioioso & Sons, Inc.	\$17,830,016.50	1.6%
Revoli Construction Co., Inc.	\$18,172,123.90	3.6%
RJV Construction Corp.	\$22,345,055.40	27.7%
C.C. Construction, Inc.	\$24,943,152.61	42.2%



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SRF Program Additional Funding and Award Date

❖ Additional Funding

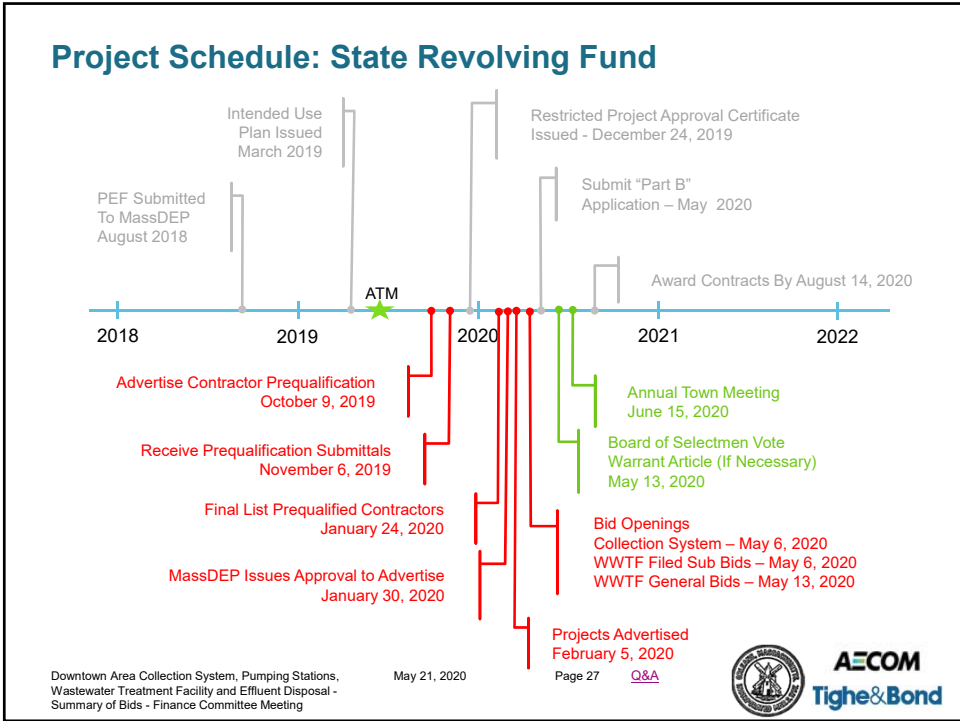
- The Project Team Contacted MassDEP Regarding Additional SRF Funding.
- Message on May 12, 2020 from Steve McCurdy (MassDEP) Stated that the SRF Program has Historically Covered Overages.

❖ Award Date

- The Project Team Contacted MassDEP Regarding Extension of Award Deadline.
- E-Mail on May 19, 2020 from Maria Pinaud (MassDEP Municipal Services) Advising There are Currently No Plans to Further Extend the August 14, 2020 Award Deadline.
- Projects Not Awarded by August 14, 2020 Will Lose SRF Funding and Must Reapply in the Future.



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Anticipation of Cost Increases

- ❖ **The Probability of Costs were Estimated in July 2018 as Part of the SRF Project Evaluation Form**
- ❖ **The Probability of Cost was Based on Preliminary Design Information and Not Completed Contract Documents.**
- ❖ **The Development of the Contract Documents Began in September 2018.**
- ❖ **The Contract Documents were Only 30 Percent Complete and No Updated Cost Information Was Available.**
- ❖ **Probability of Construction Costs were Used for the May 2019 Town Meeting.**

Downtown Area Collection System, Pumping Stations, Wastewater Treatment Facility and Effluent Disposal - Summary of Bids - Finance Committee Meeting May 21, 2020 Page 28 Q&A

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Water System Upgrades and Water Quality Improvements Coordination

Project	Asset Management Plan - 2020	CIP Estimate December 2019	Robert B. Our Co., Inc.	Economies of Scale Savings From CIP	
				Dollars	Percent
Water Services Replacement	\$320,000.00	\$213,200.00	\$112,500.00	\$100,700.00	47.2%
Replacement of Canal Road Water Main (Scheduled for FY2026)	\$293,000.00	\$346,500.00	\$309,500.00	\$37,000.00	10.7%
Water Quality Improvements - Brewster Cross Road and Locust Road	---	\$160,000.00	\$42,000.00	\$118,000.00	73.8%
Reduced CIP Estimate From \$719,700 to \$464,000 =				\$255,700.00	35.5%



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Enhancements Provide Long-Term Benefit to Town

- ❖ **Permanent Surfacing of Local Streets (similar to State specs) Including: Center Place, Jones Road, Liberty Lane and Old County Road.**
- ❖ **Addition of More Manholes for Ease of Access / Maintenance / Monitoring to Properties Abutting System Including Condominium Complexes.**
- ❖ **Work to protect Existing Town Water System Including Replacement of Old Water Services and Water Main Crossing Replacements (Saving the Town Future Costly Repairs and Breaks Resulting in Lost Water and Revenue).**
- ❖ **Network Server and Supervisory Control System for to Operate the Collection System, Pump Stations, WWTF and Effluent Disposal System.**



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Contract Documents - Clarifications and Adjustments Based on Feedback From Potential Bidders

WWTF and Effluent Disposal

- ❖ Insurance Requirements
- ❖ Facility Start-up and Testing Requirements
- ❖ Equipment Warranty
- ❖ General Contractor and Filed Subcontractor Scope of Work Clarifications
- ❖ Updated Town Standard Details
- ❖ Bid Alternatives
- ❖ Design Clarifications / Adjustments

Collection System and Pump Stations

- ❖ Insurance Requirements
- ❖ Permit Requirements
- ❖ Traffic Control Devices
- ❖ Jacking vs. Horizontal Directional Drilling
- ❖ Payment Process
- ❖ Updated Town Standard Details
- ❖ Bid Alternatives
- ❖ Design Clarifications / Adjustments

