TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST FORM
FY25 ANNUAL FALL TOWN MEETING REQUEST FORM

Department:	**WATER DIVISION**	**Priority:**	**One**
Project Title and Description:	**West Plymouth Booster Station Design**	**Total Project Cost:**	**$261,900.00**

Department/Division Head: **Peter Gordon**

Cost estimate was developed: Internally ☐ Externally ☒

Basis of Estimated Costs (attach additional information if available)			**If project has impact on 5 Year Plan and future operating budgets, insert estimated amounts.**		
Capital:	**Cost**	**Comments**	**Fiscal Year:**	**Capital**	**O & M**
Planning and Design	**$261,900.00**	**Includes meetings and coordination, Geo-technical investigation, Preliminary and final design**	***FY23***		
Labor and Materials			***FY24***		
Administration			***FY25***		
Land Acquisition			***FY26***	**3,500,000.00 If the Town builds this booster. Estimate is conservative**	
Equipment			***FY27***		
Other					
Contingency					
Total Capital	**$261,900.00**				

Possible sources and amounts of funding, if known: _____

Project Justification and Objective: __ The design and subsequent construction of the booster station will alleviate the firm capacity deficit of the water supply in the West Plymouth Pressure Zone.

_____

For Capital Project Requests:
Will this project be phased over more than one fiscal year? If yes, enter it on the next 5 Year Plan Yes ☐ No ☒
Can this project be phased over more than one fiscal year? Yes ☐ No ☒

For Capital Equipment Requests:
☐ Check if equipment requested is replacement and enter the year, make & model, VIN and present condition of existing equipment

Attach additional information, estimates, or justification.

TOWN OF PLYMOUTH

Water Division
169 Camelot Drive
Plymouth, Massachusetts 02360

MEMO

To: Lynne Barret, Finance Director

From: Peter Gordon, Water Division Superintendent

CC: Derek Brindisi, Town Manager
Silvio Genao, Assistant Town Manager
William Coyle, Director of Public Works

Plymouth has experienced significant growth in recent years. This growth has necessitated the increase and expansion of the public water infrastructure to meet the needs of the residents as well as providing fire protection. As the West Plymouth area continues develop, a need has arisen to supplement the supply of water in the area to satisfy the demand. As the Town continues to explore options for a new source, the construction of a booster pumping station along the West Plymouth and Plymouth Center pressure zone boundaries will benefit both zones now and in the future. This station would serve to eliminate the deficit during the maximum water usage conditions in West Plymouth and augment the supply of water in two additional zones when a new source is brought online in the future. The Water Division has received a proposal to design this station for the price of $261,900.00 and is seeking funding to move forward with this important project.

Peter Gordon
Water Division Superintendent
Plymouth MA. 02360
508-830-4162 ex. 12141

ENVIRONMENTAL PARTNERS
— An Apex Company —

August 5, 2024

Mr. Peter Gordon, Water Superintendent
Department of Public Works, Water Division
169 Camelot Drive
Plymouth, MA 02360

RE: West Plymouth Booster Pump Station Design
Letter Proposal for Professional Engineering Services

Dear Peter,

Environmental Partners Group, LLC (Environmental Partners/EP) is pleased to submit this letter proposal for professional engineering services to assist the Town of Plymouth Department of Public Works – Water Division (Client) with design of the West Plymouth Booster Pump Station. Environmental Partners developed the proposed scope of services based upon our previous proposals. This proposal reflects the current status of the project and reflects changes, updates, and our knowledge of the project since the previous proposal provided to the Client in November 2022.

Project Understanding

Previous review of a proposed development in the West Plymouth Pressure Zone shed light on the limited capacity at the Deep Water Booster Station and resulting firm capacity deficit in the West Plymouth Pressure Zone. An analysis of supply capacity during high demand periods indicates that the West Plymouth Pressure Zone will experience a water shortage should the Client lose any available water supplies to West Plymouth during peak demand periods.

EP entered into a contract with Claremont Companies (Claremont) in May 2023 to provide engineering services from preliminary design through construction and project closeout. Since then, Claremont's proposed development has been on hold, which put this booster pump station project for the Client on hold. The Client is in a vulnerable situation in regard to firm capacity and greatly needs additional water supply in the West Plymouth Pressure Zone.

As such, the Client requested EP provide a revised proposal to design the new booster pumping station which will convey water from the Plymouth Center Pressure Zone to the West Plymouth Pressure Zone. The pumping station is anticipated to include a flow control valve to supply water in the reverse direction during emergency events.

The MA Plumbing Board recently shed light on the requirement that all structures larger than or equal to 200 SF require a bathroom to be installed. This requirement was not addressed as part of our previous scope of services provided in November 2022, but is now included. The Assumptions and Exclusions section of this proposal details the assumptions we made when preparing this revised proposal. The proposed scope of services and associated fee reflect our current understanding of the project, which has evolved since the original proposal provided in November 2022.

Scope of Services

Environmental Partners proposes the following scope of services to assist the Client with the design of the West Plymouth Booster Pump Station.

Task 1 - Meetings and Coordination

- EP will coordinate and participate in up to three in-person and up to three virtual meetings with the Client and other requested parties to review and discuss stages of design and other aspects of the project. EP will prepare agendas, meeting minutes, and handouts if/as needed and will coordinate and attend one public meeting with abutters and residents in the adjacent neighborhood if requested.

- This task also includes general project support including data collection, review, and coordination for the project.

Task 2 - Field Work and Geotechnical Investigations

- Subcontract with a drilling contractor to advance soil borings at the proposed project site. The geotechnical investigation will be completed in accordance with AWWA D110-13 and ACI 372R-13. Field work for the borings is estimated to take approximately 2-3 days to complete. The scope of work assumes full access to the site and no allowance for police details.

- EP will subcontract with a private utility mark-out company and map subsurface utilities in 10 foot square boxes centered on the proposed geoprobe locations within the limits of Samoset Street using ground penetrating scanning equipment.

- Prepare boring logs, collect and submit soil samples for analyses, and prepare a geotechnical report for the pump station foundation design recommendations and construction considerations in accordance with AWWA D110-13 and ACI 372R-13.

Should police details be required during any of the field work, we have assumed the Client will arrange for and pay for the cost of these services.

Task 3 - Preliminary Design

- Prepare preliminary design drawings and a preliminary design memorandum for review by the Client. The preliminary design will include:

    a. Site layout;
    b. Limits of disturbance;
    c. Configuration of the water main connection to the booster station and existing distribution system;
    d. Hydraulic design of the pump station including flow and operating head range;
    e. Pump Station mechanical and plumbing layout; and
    f. Electrical single-line diagram

- Coordinate design with the Water Division staff and Town officials.

- Provide a preliminary opinion of probable construction cost for a prefabricated, above-grade booster pumping station and water main.

- Evaluate options for sewer service/system design to support the bathroom to be installed at the booster pump station per plumbing code requirements.

Task 4 - Final Design

- Develop final design based on results of Task 3 – Preliminary Design.

- Perform instrumentation and controls design.

- Subcontract with a MEP engineer to provide design plans and specifications. MEP scope of work is anticipated to include mechanical (HVAC/ventilation), electrical (inclusive of an outdoor generator), and plumbing. Building-specific fire protection is not included in the scope of work.

- Prepare engineering design plans and specifications for bidding.

- Prepare an opinion of probable construction cost based on final design.

- Prepare the DEP Water Supply permit BRP WS 32 "Distribution System Modification for System serving > 3,300 people." No additional local, state, or federal permitting is included.

Fee and Payment

Environmental Partners proposes to perform the indicated scope of services as previously described for a lump sum fee of **Two Hundred Sixty One Thousand Nine Hundred Dollars ($261,900).** A breakdown of the fee by task is as follows:

Task	**Fee**
Task 1 – Meetings and Coordination	$29,200
Task 2 - Field Work and Geotechnical Investigations	$45,200
Task 3 – Preliminary Design	$77,500
Task 4 – Final Design	$110,000
Total	**$261,900**

Invoices will be issued to the Client on a monthly basis and will be based upon percentage complete per lump sum task identified above. The compensation indicated above is based on an estimate of the character and extent of work involved. Unforeseen conditions, which become evident during the course of the work, may alter or increase the effort required. The amount will not be exceeded without written amendment between the Client and Environmental Partners.

Project Schedule

Following receipt of an executed contract, EP anticipates the following approximate schedule to perform the above scope of work:

- Field Work, Geotechnical Investigations, and Preliminary Design: 5 months
- Final Design: 4 months

The proposed fee and effort are based upon Environmental Partners' best faith effort to fully understand the needs of this proposal. If the scope of the services to be rendered is changed materially or if the period of time required to render services hereunder is extended beyond the completion dates proposed, the amount of compensation provided shall be adjusted appropriately (if required), upon approval of the Client and Environmental Partners. If project delays outside of Environmental Partners' control cause the completion date to extend substantially, additional compensation may be requested through a written amendment to account for additional coordination time.

Assumptions and Exclusions

- Work under this project includes meetings and coordination, field investigations at the selected project site, preliminary design, and final design. Bidding services, construction administration, onsite resident project representative services for the construction duration, and post-construction record drawings are not included in the Scope of Services.
- Local, state, or federal permitting is not included within the provided Scope of Services, with the exception of the BRP WS 32 "Distribution System Modification for System serving > 3,300 people." Additional permitting with MassDEP and/or the Plymouth Conservation Commission is not included in the Scope of Services.
- The provided scope of work assumes full access to the site and no police details. If a police detail is required to facilitate field work, it will be paid by the Client.
- The Client will arrange for access to and make all provisions for EP and EP's subcontractors to enter upon public and private properties as required to perform the services under this Agreement.
- EP will not operate Client facilities to assist with field testing and data collection.
- EP will solicit a quote for integration services from the Client's Integrator, Woodard & Curran, which will be included as an allowance in the project specifications. Integration work by Woodard & Curran is not included in this scope of services.
- The booster pump station is currently assumed to be a precast building. As such, structural engineering and architectural services are not included in the scope of services.
- It is assumed booster pump station will require a bathroom to be installed per current plumbing code due to the size of the building.
    - Requirements and needs for sewer service/system design to support the bathroom to be installed at the BPS will be evaluated during preliminary design. A contract amendment may be required for final design pending what is found during preliminary design.
- It is assumed the Client will assist EP staff with utility location and access to utility structures in the field as needed.

- The Client previously provided a CAD file with the survey for the project area. It is assumed that the Client will update this survey file as required to reflect current field conditions. The provided base plan will be utilized for design. EP will not be responsible for the accuracy of the survey.
- The Client will prepare Division 00 of the contract specifications, with the exception of the Bid Form, which EP will prepare.

Acceptance

We look forward to working with you on this important project. We would be pleased to discuss the scope of services and proposal with you. If you find the proposed scope and fee acceptable, we can coordinate the preparation and execution of an Agreement. Environmental Partners is ready to begin work upon receipt of a notice to proceed or signed Agreement. Please feel free to contact us with any questions or concerns.

Sincerely,

Environmental Partners Group, LLC

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