

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY27 SPRING ANNUAL TOWN MEETING**

Department: Energy and Environment	Priority #: 3
Project Title and Description: Downtown Resiliency Project, Phase II: Civic Areas	Total Project Cost: 115,250

Department/Division Head: Michael Cahill, Division Head

Check if project is: New Resubmitted Cost estimate was developed: Internally Externally

For project re-submittals, list prior year(s):

List any funding sources and amounts already granted: \$60,400 from CPA funds allocated in 2019 are available for use towards this work.

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	Operations & Maintenance
<i>Planning and Design</i>	115,250		<i>FY28</i>		
<i>Labor and Materials</i>			<i>FY29</i>		
<i>Administration</i>			<i>FY30</i>		
<i>Land Acquisition</i>			<i>FY31</i>		
<i>Equipment</i>			<i>FY32</i>		
<i>Other</i>					
<i>Contingency</i>					
Total Capital	115,250	\$60,400 from Article 16D of 2019 will also be used			

Project Justification and Objective: The project is intended to reduce the impacts of urban heat island effect, improve stormwater management to Plymouth Harbor, improve pedestrian safety and improve overall aesthetics and functionality of the downtown and historic district.

For Capital Project Requests:

Will this project be phased over more than one fiscal year? If yes, enter it on the 5 Year Plan
Can this project be phased over more than one fiscal year?

Yes No
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

N/A

What is the expected lifespan of this new/replacement equipment: N/A

Attach backup information, estimates, or justification to support this request.



Town of Plymouth
Department of Energy & Environment

26 Court Street, Plymouth, MA 02360



MEMO

To: Derek Brindisi, Town Manager
Lynne Barrett, Finance Director

From: Michael Cahill, Climate Resiliency and Sustainability Planner, Department of Energy and Environment

Re: Capital Request – Downtown Resiliency Phase II: Civic Areas Design

Date: September 17, 2025

Plymouth's Downtown Resiliency Project is focused on a 3,000 linear-foot segment of the Route 3A corridor that runs through the community's historic downtown area, from its intersection with Samoset Street to the Main Street Extension parking lot, representing the most densely developed residential and commercial area in town.

The Downtown Resiliency Project will achieve numerous priorities outlined in various Town planning documents (Climate Action and Adaptation Plan, Municipal Vulnerability Preparedness Plan, Master Plan, Plymouth Center & North Plymouth Circulation and Mobility Study, Downtown Master Plan, Open Space & Recreation Plan, etc.). Although climate change poses a severe threat for the community, this project is a prime example of how municipalities can utilize climate change as the impetus to rebuild public spaces to maximize utility and equity for citizens. Once completed, this project will:

- Utilize native trees, vegetation, and pervious surfaces to provide ecosystem services (heat reduction, water filtration, habitat, carbon sequestration, etc.) while aiding in the beautification of the Town's historic downtown business districts
- Install green stormwater management infrastructure to address downtown flooding and improve water quality in Plymouth Harbor
- Redesign the urban streetscape to improve pedestrian safety and connectivity in the downtown district – limiting the need for vehicles and reducing greenhouse gas emissions

Phase II of the Downtown Resiliency Project will focus on Town Square, Court House Green, and the Main Street Extension parking lot. Conceptual designs for these locations have been completed in Spring of 2025; however, additional funding is required to finalize design. The total cost required to complete design and permitting for Phase II is \$175,650. The Department of Energy and Environment will utilize \$60,400 of funding from CPC's 2019 Town Meeting Article 16D: Town Square/Leyden Street Engineering & Permitting. Therefore, this request of \$115,249.87 from the General Fund will cover the remaining costs to complete final design and permitting for Town Square, Court House Green, and the Main Street Extension parking lot.

Cc: David Gould, Director of the Department of Energy and Environment

Sarah McCormack, Natural Resources and Sustainability Specialist

Plymouth Downtown Resiliency Project

Phase 2: Civic Areas

Court House Green, Town Square & Main Street Extension Parking Lot Improvements

Project Description

This scope of services covers design development and plan set preparation for three project sites, in alignment with the Core Principles of the Municipal Vulnerability Preparedness (MVP) Program as follows:

- ❖ Area 1: Court House Green Landscape Improvements
- ❖ Area 2: Town Square Streetscape Improvements
- ❖ Area 3: Main Street Extension Public Parking Lot Landscape Improvements

Area 1: Court House Green

Located on the south side of Court Street, at the base of Town Hall (i.e. the historic 1820 Court House), the Green has significant potential as a downtown civic and social space. While Town Hall has been modernized, the Green has not been meaningfully updated for decades. Phase 1 developed a preliminary concept (Appendix A). Phase 2 will further develop this design, including:

- A smaller, more level lawn for improved accessibility and event use.
- Increased tree canopy and reduced turf coverage to support climate resiliency goals.
- Rainwater harvesting & irrigation.
- Relocation of the flagpole and Vietnam Veteran's Memorial stone to enhance visibility and dignity.
- Additional elements considered include an upper plaza podium, formal four-season garden, and incorporation of historical site elements (i.e. Decorative fountain and fencing).

Area 2: Town Square

At the top of Leyden Street and base of Burial Hill, Town Square is among America's most significant historic sites. Mid-20th century urban renewal projects altered the street's iconic look and reduced its function as a public realm corridor.

In Phase 2, the selected concept (Appendix B) will be advanced, including:

- Restoration of the tree-lined central corridor (while minimizing utility or drain impacts).
- Rainwater harvesting & irrigation.
- Safety, accessibility, and improvements in circulation.
- Enhancements to protect historic assets while ensuring long-term sustainability.
- Social/seating spaces.

Area 3: Main Street Extension Parking Lot

This parking lot, dating to the 1940s, sits on a steep slope above Town Brook. Existing conditions include undersized stalls, non-standard circulation, poor ADA accessibility, and inadequate emergency access.

Phase 1 determined that full reconstruction is not advisable without major reduction in parking spaces or variance to the dimensional standards. Phase 2 will instead focus on maintenance and short-term improvements (Appendix C), such as:

- High-reflectivity pavement coating.
- Pavement reduction within plantable areas.
- Landscaping and planting within islands.

Scope of Services

A conceptual design has been completed and approved, as shown in Appendices A-C. Phase 2 will build from that baseline toward Final Design. The following is a description of tasks that will be required to complete the selected civic areas of the Plymouth Resiliency Project.

Task 1: Concept Validation:

The scope of work acknowledges that the project has already advanced through the conceptual design level. As such, development of new alternatives and concepts is not required. Instead, the effort will focus on reviewing, updating, and confirming the previously developed concept to ensure consistency with current project goals, conditions, and regulatory requirements.

1.1 Milestone Coordination Meetings

Provide virtual meeting coordination during design development up to the hours provided. The following milestone meetings are included:

- Kickoff meeting - Presentation of original design concepts for review and critique. Confirm and validate design direction.
- Design progress check-ins for SD, 75%, and 100%.
- Comment Resolution Meetings (CRM) to address outstanding issues at SD and 75% submissions.

Deliverables: Approximately 2-3 staff members will attend 6 meetings @ an estimated 2 hours each.

1.2 Field Reconnaissance

Conduct a field review of the proposed project interface with adjacent properties, streets, drives, drainage, utilities, riverfront area, etc. to field verify design feasibility.

This task includes a field review and inventory at the following locations:

Court House Green

- 26 Court Street

Town Square

- 4-19 Town Square
- 2-6 Main Street
- 5 Main Street Extension
- 3 Market Street

Main Street Extension Parking Lot

- 15, 19 & 21 Main Street Ext.

Deliverables: Key findings and concerns sent to the Town for discussion and resolution.

1.3 Schematic Design (SD) Plans

Building on the approved conceptual designs, GPI will develop schematic plans at a scale of 1" =20' and 1" =10' to convey overall design intent of the following:

- Illustrate layout of all improvements w/ critical dimensions.
- Provide annotated site elements and materials.
- Provide overall proof of concept grading intent based on the contour interval.
- Illustrate location and massing of planting landscape improvements including trees, shrubs and ground cover.
- Preliminary storm drainage collection.
- Rainwater Harvesting – to be explored by Irrigation Consulting, Inc. as a subconsultant to the project for Court House Green and Town Square (refer to Appendix E for ICI scope & fee).

Deliverables: Schematic Design Plans.

1.4 MHC Project Notification Form (PNF)

Project is subject to MHC review based on the use of state funding. Submit Project Notification Form (950 CMR) to the Massachusetts Historic Commission (MHC) for review and comment.

Deliverables: MHC PNF submission

Task 2 75% Design Development

2.1 Response to Schematic Design Comments

Prepare a written response to all comments received regarding the SD review. Resolve any outstanding comments via a Comment Response Meeting (CRM).

Deliverables:

- *Written response to comments*
- *(1) Comment Resolution Meetings (CRM), as needed*

2.2 Plans & Details

Adjust the design based on the Schematic Design review comments. Plans will be advanced to approximately a 75% design level and will include the following:

- Cover Sheet – Include project title, client name and contract number, funding sources, and table of contents.
- Key Plan - locus plan and key plan of the three locations.
- Existing Condition Plans – Demonstrate the existing conditions based on project survey.
- Site Preparation Plans – Highlight portions of existing conditions to be protected and preserved, items to be removed and reset, and those areas that are to be removed and disposed. Include erosion and sedimentation measures.
- Material Plans – Illustrate location and mix of materials to be used on the project.
- Layout Plans – Provide dimensional layout of all improvements.
- Grading Plans – Provide overall grading intent based on the contour interval as well as provide key spot elevations.
- Drainage & Utility Plans – Illustrate related drainage and utility improvements.
- Planting Plans – Provide complete planting plans, including plant schedule with genus, species, and location of including trees, shrubs and ground cover.
- Details – As required to accurately convey the overall design intent.

<u>Sheet Title</u>	<u>General</u>	<u>Area 'A'</u>	<u>Area 'B'</u>	<u>Area 'C'</u>
Cover Sheet	1			
Key Plan	1			
Existing Conditions Plan		1	1	1
Site Preparation Plan		1	1	1
Materials Plan		1	1	1
Layout Plan		1	1	
Grading Plan		1	1	
Drainage & Utility Plan		1	1	
Planting Plan		1	1	1
Details	2	3	3	
	4	10	10	4

**Estimated Total
Sheets = 28**

Note that irrigation & rainwater harvesting system plans and details will be provided by ICI.

Deliverables: 75% Design Development Plans

2.3 Plymouth HDC - Informal Meeting

Provide information in accordance with the requirements of the Plymouth Historic District Commission (HDC). Be available to meet with the HDC to present the overall scope of the project and seek committee input.

Deliverables:

- *Power Point Presentation for review prior to Historic District Commission.*
- *Meeting with Historic District Commission, presenting initial materials selection.*

2.4 WPA Request for Determination of Applicability (RDA)

The Plymouth Conservation Commission will be consulted regarding environmental permitting requirements for work within the 200' Riverfront Area (Area C only). GPI will submit an RDA to the local conservation commission in accordance with the WPA. Tasks include preparation of associated forms and backup documentation and coordination during review.

The RDA is to be prepared by GPI, however, the need for a WPA Notice of Intent (NOI) is not anticipated as the improvements will be considered “maintenance” activity.

Deliverables:

- *RDA application*
- *Coordination materials as needed.*

Task 3: 100% Design

3.1 Respond to 75% Comments

Prepare a written response to all comments received regarding the 75% review. Resolve any outstanding comments via a Comment Response Meeting (CRM).

Deliverables:

- *Written response to comments*
- *CRM Meetings, as needed (1 meeting Anticipated)*

3.2 Finalize Plans

Prepare a set of plans addressing all comments received from the 75% review. Ensure that the plans are clear and are prepared in accordance with industry standards.

Note that irrigation & rainwater harvesting system plans and details will be provided by ICI.

Deliverables: 100% Design Development Plans

3.3 Probable Cost Estimate

GPI will develop a probable estimate of cost utilizing the CSI format. Develop and submit for the Town review and comment.

Deliverables: Cost Estimate

3.4 HCD Formal Hearing

Final Preparation of presentation for Plymouth Historical District Committee (HCD) - Provide information in accordance with the requirements of the Plymouth Historic District Committee.

Deliverables:

- *Power Point Presentation for review prior to Historic District Committee.*
- *Meeting with Historic District Committee, presenting final materials*

Table of Deliverables

The Consultant will provide the following deliverables at key project milestones:

Milestone	Deliverables
Schematic Design	<ul style="list-style-type: none"> • Kick-Off meeting for design coordination • Schematic Design Plans based on Phase 1 concepts (Appendices A–C) • PNF Submission to Massachusetts Historic Commission (MHC). • Key Findings & Issues memo.
75% Design Development	<ul style="list-style-type: none"> • Written responses to SD review comments • Full Plan Set Including: (Cover Sheet, Existing Conditions, Site Prep, Layout, Grading, Materials, Landscaping, Details) • (1) Comment Resolution Meeting • (1) Plymouth HDC Informal Meeting • RDA Application to Conservation Commission
100% Final Design	<ul style="list-style-type: none"> • Written responses to 75% review comments • 100% Design Plans: (Cover Sheet, Existing Conditions, Site Prep, Layout, Grading, Materials, Landscaping, Details) • Probable Estimate of Cost (Lump Sum) • (1) Plymouth HDC Formal Hearing

Assumptions & Exclusions

Assumptions and exclusions are summarized below.

Assumption	Clarification & Exclusions
Traffic studies	<ul style="list-style-type: none"> Traffic counts or traffic engineering are excluded.
Site Survey	<ul style="list-style-type: none"> Additional Topographic and/or property boundary survey is not included. No wetland resource area delineation is included.
Retaining walls	<ul style="list-style-type: none"> Limited to walls under 4' height.
Meetings	<ul style="list-style-type: none"> Consultants will attend virtual and/or in person meetings up to the hours provided. Approximately 2-3 staff members will attend a max of 6 meetings @ an estimated 2 hours each.
ADA compliance	<ul style="list-style-type: none"> Given the steep topography of the project locations, ADA upgrades will be incorporated to the maximum extent feasible. Improvements limited by site constraints and project limits.
Main St. Ext. lot	<ul style="list-style-type: none"> No geotechnical testing, drainage redesign, stormwater upgrades or full restriping.
Lighting	<ul style="list-style-type: none"> Conceptual pedestrian lighting layout only; no detailed electrical design or photometrics.
Utilities	<ul style="list-style-type: none"> Minor utility relocation- limited to drainage lines, and manhole adjustments anticipated only. Scope includes (2) planned electrical & water connections for rainwater harvesting/irrigation at Town Square and Court House Green. All associated permitting will be secured by the General Contractor.
Rainwater Harvesting & Irrigation	<ul style="list-style-type: none"> Scope includes design of (2) planned rainwater harvesting/irrigation systems at Town Square and Court House Green by ICI. Work excludes the design of any interior plumbing or water wells. All associated permitting will be secured by the General Contractor.
Decorative Fountains	<ul style="list-style-type: none"> Scope includes (1) planned electrical, water, and drain connection for fountain.

	<ul style="list-style-type: none"> • Fountain design (water flow & usage, internal plumbing, recirculation requirements, water treatment, etc.) will be provided by the General Contractor and/or the fountain supplier. • All associated permitting will be secured by the General Contractor.
Design phases	<ul style="list-style-type: none"> • Conceptual Studies Previously completed. • Design Development Scope begins at 25% Design. • Design Submissions limited to SD, 75% and 100%.
Cost estimating	<ul style="list-style-type: none"> • CSI format, Lump Sum, Estimate of Probable Costs at 100% design submission.
Project Specifications	<ul style="list-style-type: none"> • Specifications not included. Will be provided under the future bid phase.
Bid and Construction Services	<ul style="list-style-type: none"> • Bid and Construction Phase Services are considered future phases and not included.
Review cycles	<ul style="list-style-type: none"> • One round of responses at each milestone (Schematic Design, 75%, 100%).
Permitting	<ul style="list-style-type: none"> • Wetlands Protection Act coordination and filings is limited to a Request for Determination of Applicability (RDA) for parking lot area only. • A site visit or public hearing is not anticipated. • Notice of Intent (NOI) is not included. • No MEPA coordination or filings are included. • Historic permitting limited to tasks those provided. • Any variance(s) required through the Massachusetts Architectural Access Board (MAAB) under 521 CMR 4.1 are not included.
Direct expenses	<ul style="list-style-type: none"> • Anticipated printing, shipping, mileage/travel included for prime and subconsultant.
Subconsultant Services	<ul style="list-style-type: none"> • Scope of Services for irrigation and rain harvesting systems for Court House Green and Town Square are included by ICI.

Appendices

Appendix A – Court House Green: Existing Conditions & Concept

Appendix B – Town Square: Existing Conditions & Illustrative Concept

Appendix C – Main Street Extension Parking Lot: Improvement Plan

Appendix D – GPI Fee Estimate

Appendix E – Irrigation Consulting, Inc. Scope & Fee

APPENDIX A: Court House Green (Area 1)

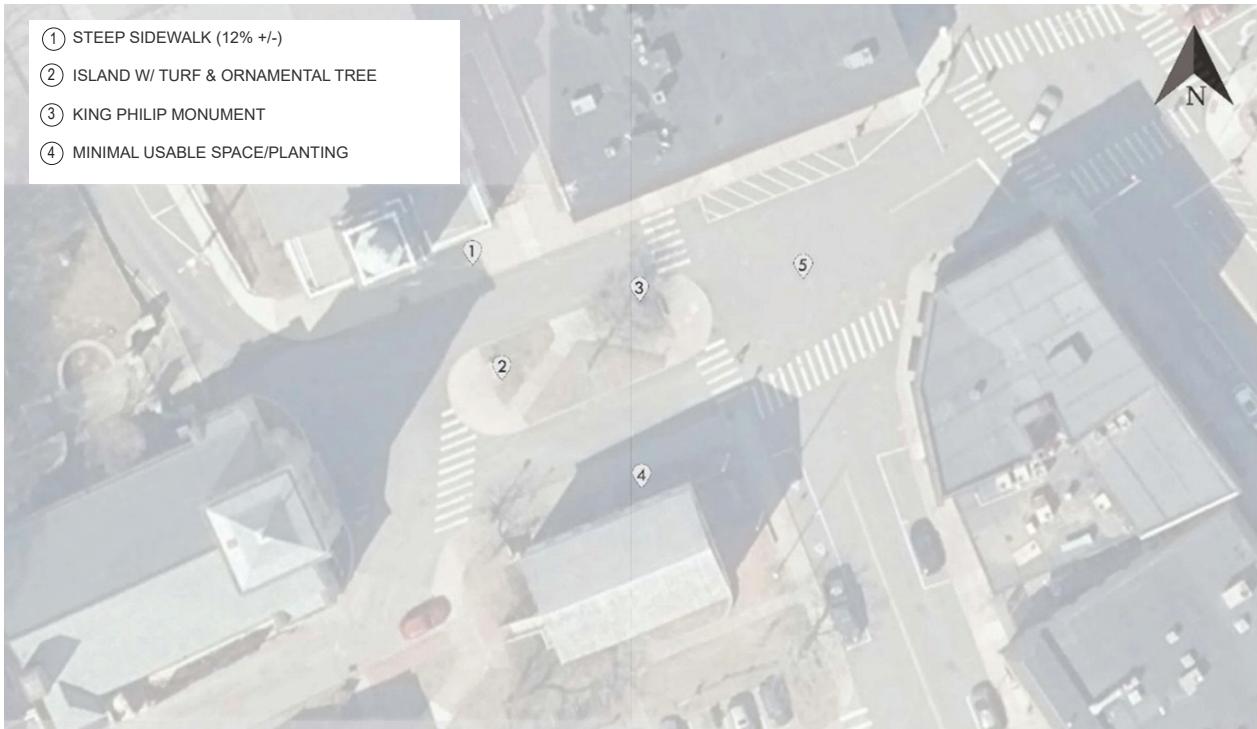


Court House Green - Existing Conditions



Court House Green - Illustrative Concept

APPENDIX B: Town Square (Area 2)

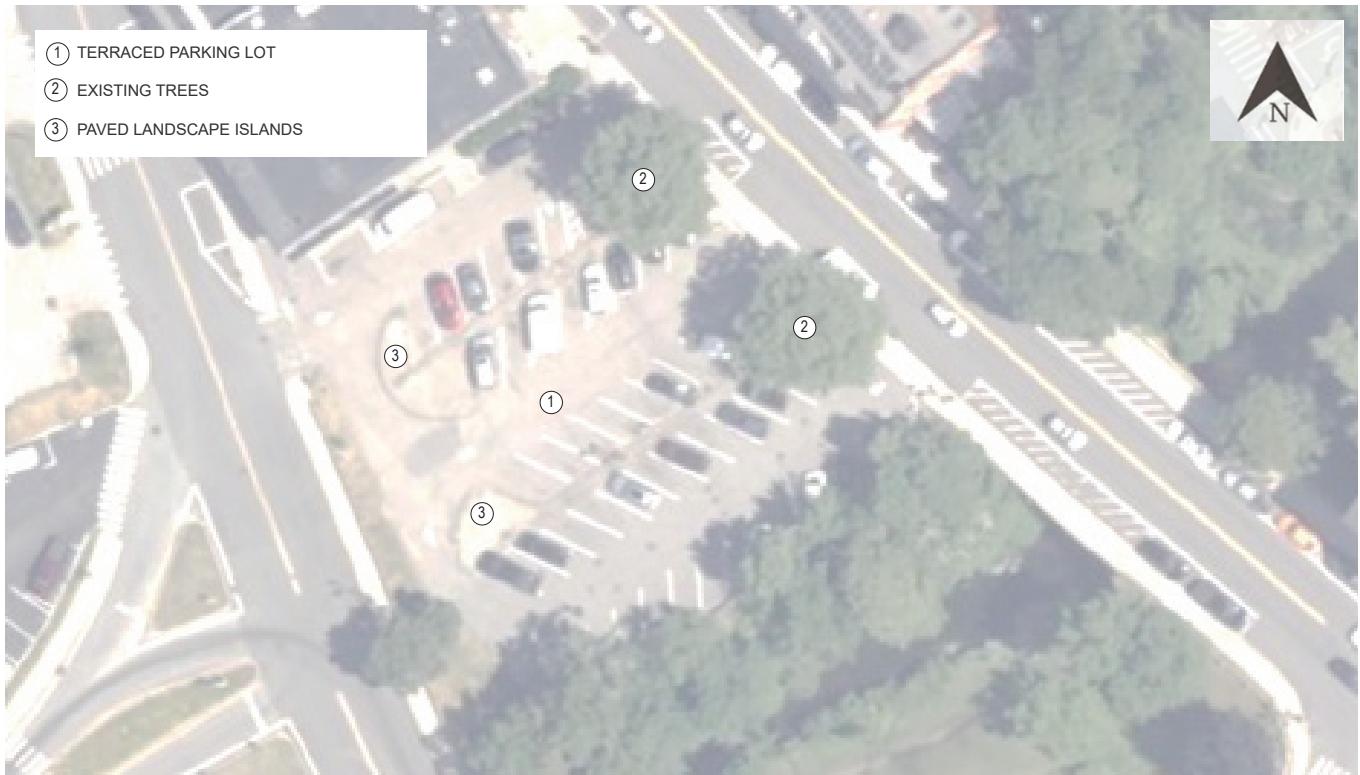


Town Square - Existing Conditions

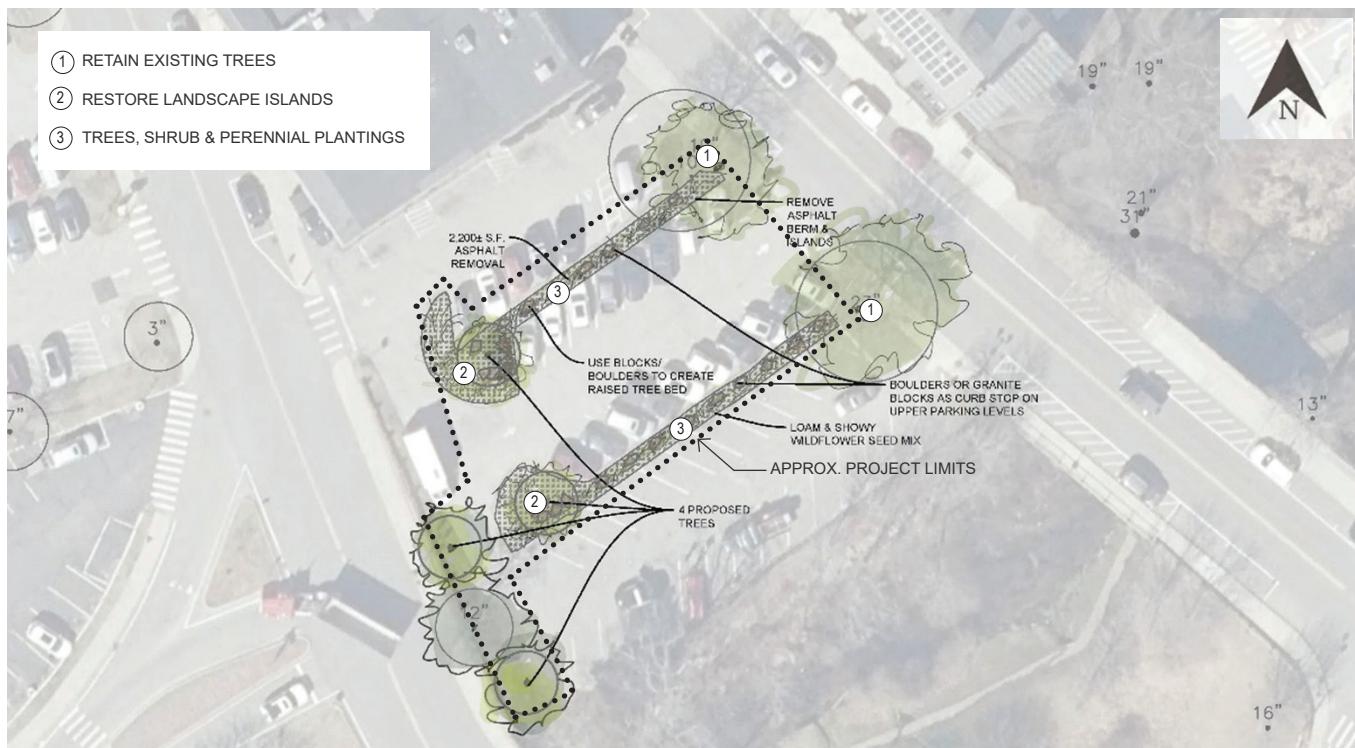


Town Square - Illustrative Concept

APPENDIX C: Main Street Ext. Municipal Parking (Area 3)



Main Street Ext. Municipal Parking - Existing Conditions



Main Street Ext. Municipal Parking - Illustrative Concept

APPENDIX D: GPI Fee Estimate



Design Fee Estimate

Project: Phase 2 - Civic Areas
Location: Downtown Plymouth
Town, State: Plymouth, MA

Proj. #: NEX-2300129.02

Date: 9/16/2025

Prepared By: SW/RH

APPENDIX E: Irrigation Consulting, Inc. Scope & Fee



Providing innovative design solutions for irrigation worldwide.

September 9, 2025

Mr. Ronald Headrick, RLA
Assistant Vice President | Director of Planning and Design
Greenman-Pedersen, Inc.
179 South Street, Second Floor
Boston, MA 02111

Dear Ron:

Irrigation Consulting, Incorporated is pleased to provide you with a proposal for irrigation design and consulting services for the Plymouth Downtown Resiliency Project located in Plymouth, Massachusetts. Our fee proposal is based on your request for proposal, received in our office via email, and various project documents provided and email exchanges between us. The following proposal covers our basic scope of work, fee structure, exclusions, terms and conditions.

BASIC SCOPE OF WORK

Design Phase Services

1. Irrigation Consulting will visit the site prior to beginning any analysis and design work to conduct general site discovery and reconnaissance. During our visit we request having a representative of the Town with us to provide access to any mechanical spaces and answer general questions on site design, existing conditions and operations and maintenance.
2. Irrigation Consulting will provide complete construction documents including irrigation plans, written technical specifications and typical installation details as necessary for an automatic, underground landscape irrigation system for all lawn and landscape areas depicted on the final landscape plans, including plant beds, street trees and lawn areas for project areas 4 and 5. These are the Courthouse Green and the Town Square.
3. Irrigation Consulting will provide a water use and supply adequacy and feasibility analysis for a rainwater harvesting water supply system which will be used to meet/supplement the irrigation water demand for each of the two project areas. The analysis will be based on a thorough evaluation of irrigation system water use and expected rainwater production from a climate and runoff analysis conducted by our firm. The analysis will also be based on the design and constraints of the site's storm water management system. The results of the analysis will provide the expected annual and monthly contribution of alternative water to the overall water budget. Risks of using alternative water as a stand-alone source will also be assessed in addition to requisite tank volume to satisfy project sustainability objectives.

4. Irrigation Consulting will design a pump and filter system for each rain harvesting system (two total), drawing water from new cistern/rainwater harvesting systems (designed by others) and delivering it to the irrigation system. The power supply for the pump system shall be designed by others. The pump system will also include a control system to automate a back-up water supply for the central cistern. The pump controller will have the ability to limit and prioritize water supplies. We will coordinate the electrical aspects of our design with your office, as well as with any possible sub-consultants involved in the project. We will also coordinate our system alarms with your office and if requested, incorporate our alarms into overall site alarm systems.
5. The basic scope of work assumes the irrigation system will utilize harvested rain water from on-site roofs as the primary source of irrigation water. A new or existing domestic water service will also be required as a back-up to the rain harvesting system. We will coordinate, but not design, the civil, mechanical, electrical and plumbing points of connections of our system with your office, as well as with other sub-consultants involved in the project. The design of the required water meter and back flow prevention connections for the domestic water back-up, will be part of the civil/mechanical/electrical/plumbing drawings to be produced by their office and will not be included on our drawings or in our specifications.
6. During the design phase of the project, Irrigation Consulting will participate in web-based coordination calls with the project team to coordinate work across disciplines as necessary.
7. Construction cost estimates will be completed and updated throughout the design phase of the project, as requested by Greenman Pedersen.
8. Document submissions shall be made at the following stages of completion:
 - o Construction Documents – 2 Submission (75% CD and Final 100% CD)

Bidding and Construction Phase Services (N.I.C.)

1. Irrigation Consulting, Inc. will review bid results pertaining to work under our purview and provide recommendations and negotiating assistance to Greenman Pedersen during the bidding and negotiating period.
2. Irrigation Consulting will provide construction coordination services. This will include review and approval of shop drawings/product submittals submitted by the irrigation contractor as well as responding to contractor initiated RFI's regarding irrigation.
3. Irrigation Consulting will provide construction observation site visits and a final punch list/commissioning visit. Site visits will help to ensure the quality of the installation, and will be used to monitor the progress as well as conformance to the contract documents. All visits will be followed by a written report to your office outlining our findings. **Two** progress site visits are included in our basic scope of work and **two** visits to punch list/commission and verify punch list completion.

We will perform our work using the final landscape, utility and site plans when provided in an AutoCAD format. Any changes to these files can be updated through e-mail as required.

We will prepare and return the final irrigation drawings in AutoCAD and PDF Format. Specifications will follow the 32 Division specification format and will be customized to match the project format of fonts, headers, footers, etc. Specifications will be provided in an MS Word format.

PROFESSIONAL FEES, TERMS AND CONDITIONS

- Our fixed fee for the above BASIC scope of **design phase services** is SIXTEEN THOUSAND EIGHT HUNDRED AND 00/100 DOLLARS ... (\$16,800.00) excluding all direct expenses.
- Our fixed fee for the above BASIC scope of **bidding and construction phase services** is SIX THOUSAND FIVE HUNDRED AND 00/100 DOLLARS ... (\$6,500.00) excluding all direct expenses. **(N.I.C.)**
- Additional meetings at the Greenman Pedersen Boston, MA office or project site visits, which are not included in our basic scope of work, will be billed at an hourly rate commensurate with the ICI staff conducting the work.
- All direct expenses including mileage, parking, tolls, overnight delivery, copying, binding, etc. are in addition to this proposal. Expenses are billed at actual direct cost. Mileage is charged at the current IRS reimbursable rate. All expenses will be shared with other Clients, when possible, for other work in the Plymouth, Massachusetts area.
- Services will be billed on a monthly basis for services performed in that month, or immediately upon completion of the work. All services are based on a maximum rate of \$150.00 per hour. Payment terms are Net 10 Days from the date of payment to Greenman Pedersen by their Client.

EXCLUSIONS

- Specifically excluded from this proposal are electrical systems design, final water storage system construction documents, rainwater/stormwater conveyance piping to water storage tanks, permitting, stamping by a state of Massachusetts registered professional engineer, well design, hydro-geological services, water proofing, building design, interior plumbing and conduit routing design, meetings and site visits other than those specifically listed, irrigation design for areas other than those specifically listed and included on the received site plans and record drawing production.

If you have any questions, please do not hesitate to contact our office. Please sign and date below to authorize services to be performed, and to allow this proposal to act as a letter of agreement between Irrigation Consulting, Incorporated and Greenman Pedersen, Incorporated. Please also indicate any purchase order or reference numbers required to invoice this project.

We appreciate your consideration and look forward to working with you on the project.

Sincerely,



Jeffrey R. Bowman, LEED AP, LI, CID, CLIA, EIT
Senior Project Manager

Accepted by: _____
(Greenman-Pedersen, Incorporated Representative)

Date: _____

P. O. Number: _____