

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST
FY24 FALL ANNUAL TOWN MEETING**

Department: Fire Department	Priority #:	1
Project Title and Description: Replace and Equip Pumping Engine 5	Total Project Cost:	\$925,596.00

Department/Division Head: Neil. J. Foley

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: _____

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>			FY23		
<i>Labor and Materials</i>			FY24		
<i>Administration</i>			FY25	\$994,818.63	
<i>Land Acquisition</i>			FY26		
<i>Equipment</i>	\$925,596.00		FY27		
<i>Other</i>					
<i>Contingency</i>					
Total Capital					

Project Justification and Objective: This request aligns with the Department's Apparatus replacement practices, published national standards, and the 2023 Fire Department and EMS Analysis report recommendations that state fire apparatus should not exceed 15 years front line service. See memo for additional supporting information.

For Capital Project Requests:

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

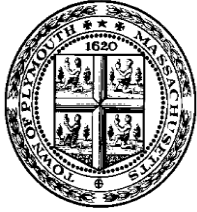
For Capital Equipment Requests:

☒ Check if equipment requested is replacement and enter the year, make & model, VIN and present condition of existing equipment

2008 E-One, Typhoon 1250 GPM Pumping Engine VIN# 4ENRAAA8481003908 Condition: Poor

What is the expected lifespan of this new/replacement equipment: 10 - 15 Years Front line possibly additional 5+ Years in Reserve

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



Town of Plymouth
Fire Department
114 Sandwich Street
Plymouth, Massachusetts 02360
508-830-4213
Fax 508-830-4174

Date: August 1, 2023

To: Select Board
Advisory and Finance Committee
Capital Improvement Committee

Cc: Lynne Barrett, Finance Director
Derek Brindisi, Town Manager
Brad Brothers, Asst. Town Manager

From: Neil Foley, Chief of Department

Re: Fire Department Request to Replace and Equip 2008 Pumping Engine \$925,596.00

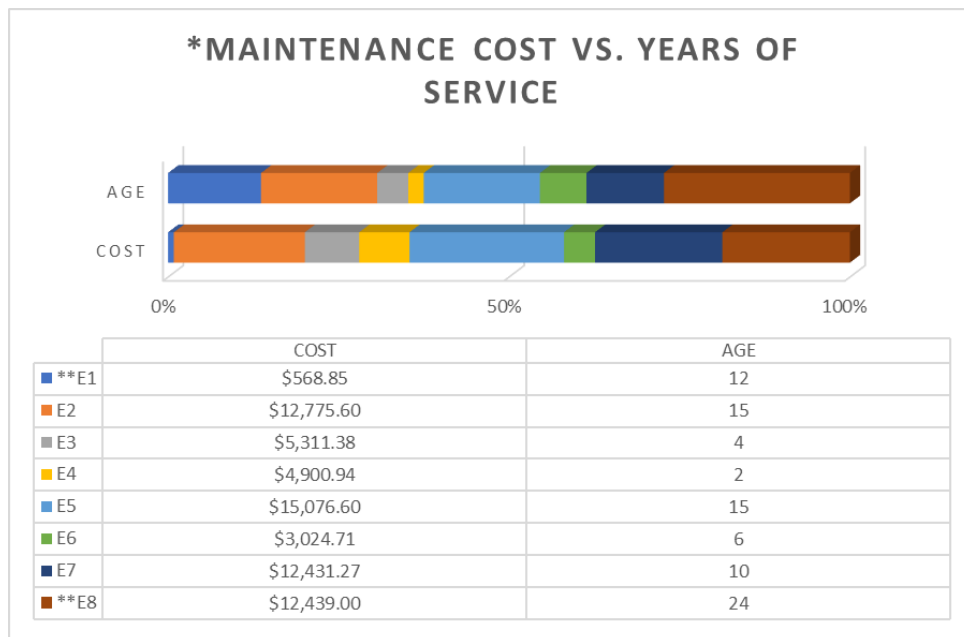
This Fall Town Meeting, the Department requests **\$925,596.00** to replace Engine 5, a 2008 Pumping Engine purchased at the same time as Engine 2, which was funded for replacement last Fall. Engine 5 is an E-One Typhoon Pumping Engine equipped with a 750-gallon water tank, a 30-gallon foam tank, and a 1,250-gallon per minute fire pump. This Apparatus has over 91,000 odometer miles and 8,539 engine hours, equivalent to 358,638 road miles. Massachusetts Registration MF 215A.

Engine 5 has been in our Capital Plan for replacement this next spring. I am asking to move it to the October Town Meeting for two reasons. The first is due to a significant redesign of one of the two most popular diesel engines used in fire apparatus, causing a potential shortage of availability; thankfully, we do not use that engine in our specifications. As a result, an opportunity may become available for Plymouth to "Jump the Line" and take delivery of the new Engine 5 in 18 months. This would be significant for the Department operationally, considering the current built time estimate of 24 to 30 months. The second benefit to moving this capital purchase to this Fall is cost. Before the pandemic, fire apparatus typically saw an average annual increase of 4 %. In the last several years, the industry is experiencing a 9 to 11% increase. By locking in the order this Fall, we can avoid subsequent price increases, potentially saving over **\$70,000.00** if projections remain consistent.

This new pumping engine will be equipped with all current safety devices and meet all NFPA Standards. Updates will increase the safety of firefighters and the public we serve. Additional benefits with a new Engine 5 will be a decreased turning radius increasing Engine 5's maneuverability on the narrow dirt roads in the Manomet Village area. The New Engine will

carry an additional 250 gallons of tank water—essential for a community where about forty percent of the town does not have fire hydrants.

While it is the personnel of the PFD that provide emergency services within the community, the Department's fleet of response vehicles is essential to its operational success. Engine 5 has been the "frontline" Engine for Manomet for the last 14 years, responding to over 1,200 incidents annually. The high call volume and corrosion of vehicle components due to winter road treatments used in the northeast have caused significant frame and mechanical failures. As of the date of this memo, Engine 5's repair costs have exceeded **\$15,000.00** since January and is currently the most expensive of our Pumping Engines to maintain, with Engine 2 a close second (See Chart). Our Chief Master Mechanic has rated Engine 5 (Poor) but feels we may be able to get additional years as a "Reserve" however, if no action is taken major repairs (fire pump and engine rebuild) will continue to create a disproportionate expenditure of funds and shop hours until replaced.



* Maintenance costs calculated YTD does not include preventive maintenance

**E8 has been in service for E1 while out for a substantial rehabilitation

This replacement request aligns with the Department's Apparatus replacement practices, published national standards, and the 2023 [Fire Department and EMS Analysis](#) Report. These standards state that Apparatus should not exceed 15 years of service on the front line. Once an apparatus reaches this age, one alternative is for the Apparatus to undergo a Level 1 refurbishing in accordance with NFPA 1912, Standard for Fire Apparatus Refurbishing (current standard), or the Apparatus is replaced if maintenance records and wear and tear warrant replacement. Engine 5 underwent partial rehabilitation in 2018.