TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST FORM
FY23 FALL TOWN MEETING REQUEST FORM

Department: #220 Fire	**Priority #:**	**1**
Project Title and Description: Replace and Equip 2008 Pumping Engine	**Total Project Cost:**	**$907,588.00**

Department/Division Head: **Chief Neil 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:
_None

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**
Planning and Design			***FY22***		
Labor and Materials			***FY23***		
Administration			***FY24***		
Land Acquisition			***FY25***		
Equipment	**$907,588.00**		***FY26***		
Other					
Contingency					
Total Capital	**$907,588.00**				

Project Justification and Objective: Engine 2 has been the "frontline" Engine for West Plymouth for the last 14 years responding to over 1,600 incidents annually. Unfortunately, Engine 2 is at the end of its serviceable life. High call volume and corrosion of vehicle components expected in the northeast have caused significant frame and mechanical failures. Normally our manufacturers could deliver a new pumping engine in 12 to 14 months from the order date. Today, a pumping engine is averaging over 18 to 22 months before we can expect delivery. Because of this delay, I am requesting this expenditure so we can submit our order and reserve our place in line with the manufacturer.

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 1,250 gallon per minute pumping Engine, VIN 4ENRAAA8281003907. Fair 106,778 odometer miles, 10,647 engine hours

What is the expected lifespan of this new/replacement equipment: 15 Years

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

Date: August 16, 2022

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: FY23 Capital Request

Fire Department Request to Replace and Equip 2008 Pumping Engine $907,588.00

This Fall Annual Town Meeting the Department is requesting $907,588.00, to replace Engine 2, a 2008 Pumping Engine.

Engine 2 is an E-One Typhoon Pumping Engine equipped with a 750-gallon water tank, Class A and B foam capabilities, and a 1,250 gallon per minute fire pump. This apparatus has 106,778 odometer miles and 10,647 engine hours, which calculate to be 447,174 road miles. Massachusetts Registration MF 6090.

Engine 2 has been the "frontline" Engine for West Plymouth for the last 14 years, responding to over 1,600 incidents annually. Unfortunately, this engine that has served our community so well is at the end of its serviceable life. High call volume and corrosion of vehicle components due to the years of corrosive road treatments used in the northeast have caused significant frame and mechanical failures requiring excessive shop hours and operational funding to repair. These repairs will continue to create a disproportionate expenditure of funds and shop hours until replaced.

These deficiencies are not a result of deferred maintenance. Our repair division meets or exceeds the maintenance standards outlined in the National Fire Protection Agency NFPA 1901: Standard for Automotive Fire Apparatus. Our Chief Master Mechanic has previously rated this engine as unacceptable and had to take it off the road before repairs totaling over $80,000.00 allowed us to upgrade the status to Poor and return it to service. While completing this work, a reserve truck had to be used for months, resulting in increased stress on the department's reserve fleet and ultimately causing a failure of a reserve engine. These reserves are not intended to go back to full-time use. Industry standards also reference a replacement schedule for fire apparatus of 10 years of frontline service,

possibly 15 years with a substantial rehab. Engine 2 did have rehab work done in 2018 and will be approaching 15 years in October 2023.

Before the pandemic, fire truck manufacturers could build and deliver a new pumping engine in about 12 months from the order date. Today, a pumping engine is averaging 18 to 22 months. Due to unprecedented manufacturing delays and the current condition of this engine, the department is making this request at the Fall Town Meeting to reserve our place in line and locking in the final cost. Any additional delays could likely result in expensive repairs and reduced reliability. Life-safety equipment needs to be reliable.

This new pumping engine will be equipped with all current safety devices and meet all NFPA Standards. Updates will increase the safety of fire crews and the public we serve. Additionally, the engine will be more maneuverable and carry 250 gallons of additional tank water—essential for a community where about forty percent of the town does not have fire hydrants.