

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

Department: PPS	Priority #:	2
Project Title and Description: Districtwide HVAC Repair/Replace/assessment	Total Project Cost:	\$525,000

Department/Division Head: Matt Durkee

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>			<i>FY28</i>		
<i>Labor and Materials</i>	\$525,000		<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	\$525,000				

Project Justification and Objective: 13 schools with many HVAC issues. We are continuing to work through the long list of repairs and replacements throughout the District.

Included in this request is a \$25k operational assessment of the PSMS roof top units. This assessment will provide and equipment operational assessment, expected lifespan, and year to year replacement schedule.

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

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

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

Plymouth Schools CAP PLAN 27 HVAC Deficiencies

Town of Plymouth Public School Systems (9/26/2024) Immediate Needs

1. Federal Furnace Elementary School

a ERU-4

b HV-1

i Exhaust fan bearings are loud.

i Does not run in heat

c ERU-6

i Exhaust fan motor bearings noisy

ii Possible condenser fan motor needs to be replaced

iii

d Boiler #2

Supply fan bearings are loud.

i Loss of flame during ignition.

e ERU-2

i Circuit #1 - off on low pressure.

ii Supply Fan Loud Bearings.

iii

f ERU-5

Would not run in high fire for heating attempted to work with ENE.

i Gas cock is off to the unit

ii Exhaust fan bearings are loud

g RTU-7

i Supply Fan belt
loose

2. Indian Brook Elementary School

a ERU-1

i Compressor vfd screen periodic visual
distortion.

b ERU-2

i Circuit #1 tripped on low
pressure.

ii Energy Wheel has no belt.

iii

c. ERU-3

Return fan has loud bearings.

- i. Airflow screen not functioning.
- ii. Energy recovery wheel needs to be tightened

d. ERU-4

- i. Compressor vfd screen not working
- ii. Excessive vibration from compressor
- iii.

e. ERU-5

Burner fan motor is running during cooling operation.

- i. Compressor vfd screen not working.
- ii. Circuit #1 site glass is flashing but condenser coil needs to be cleaned before evaluation

f.

ERU-6

Compressor vfd screen not working.

- ii. Burner was in fault mode at time of evaluation.

3. Plymouth Admin Building

a. RTU-4

- i. Evaluate the unit for heating operation.
- ii. Check with James for BMS operation of the boiler.

4. Plymouth South Middle School

a. Create a service call for a building wide evaluation.

b. AC-9

- i. Replace the entire unit

c. AC-4

- i. Condenser coil is deteriorated beyond repair.

d. AC-1

e. AC-2

- i. In need of replacement
- i. In need of replacement

f. Evaluation of water coil valves and pressure for the system.

5. Hedge Elementary School

a. No problems present. No Cooling in this school

- b. There is only cooling in the gym. This is a portable cooler.

6. West Elementary School

a. ERU-1

- i. Evaluate operation

b. ERU-2

- i. Circuit #1 has high superheat and no subcooling.

ii. Circuit #2 is out of refrigerant.

iii.

iv.

Energy Wheel belt is broken.

Supply fan motor has oil and failed bearings.

- v. Return Fan has oil on the end bell

c. ERU-3

i. Circuit #1 suspected leak and condenser fan vfd issue.

Circuit #2 is off due to a refrigerant leak.

d. ERU-4

e. ERU-5

- i. Circuit#1 switch is off.

- i. Circuit #1 copeland digital scroll in alarm for locked rotor

- ii. Circuit #2 subcooling is low and superheat is high

iii.

iv.

f. ERU-6

g. HV-1

Energy recovery wheel covered in oil and bearings are clicking. Supply fan bearings are clicking.

- i. Circuit #1 TXV Replacement

- ii. Circuit #2 is low on refrigerant. Hot gas is constantly active.

Energy Recovery Wheel bearings are clicking.

iii.

- i. Supply Fan belts loose

7. North High School

a. Chilled Water Pump (Possibly 3)

- i. Locked out and tagged out. Need to figure out why.

b. Check the glycol percentage of both hot water and chilled water loops

c. 2 boilers are off. Need to address during the pm.

d. Look at adding side stream filtration for the condenser water loop.

e. Service Call for the athletic directors office. Condensate issues. Work with John from facilities to provide permanent solution. Possibly adding ductless split system.

i. Possibly use the carrier equipment that's in the maintenance

r. MDF Closets. Revisit the Sampling quotes from Ed Mallos for this project.

8. Cold Spring Elementary School

a. \$40k Cooling Station Project

b. Exhaust Fans for the building need to be replaced. Work with matt on the procurement process for this school. 5 or 6 fans total.

9. Nathaniel Morton Elementary School

a. Cooling Station - \$100k

b. Kitchen Exhaust fan operation. Need to evaluate.

10. Manomet Elementary

a. Outside air damper issues for combustion air

b. Univent Actuation. Look at loop pressure and valve/actuator issues.

c. Look into rooftop replacement for main office.

11. Plymouth Community Intermediate School

a. Paid for (5) Compressors

b. Paid for two of the above compressors to be installed

i. Matt to decide Diamond Mechanicals involvement

c. Multiple (19-20 Condenser Fan Replacements)

d. Look into differential pressure for chilled instead of the paddle style flow switch. e. RTU-25 Trane said there is nothing they can do and it needs to be replaced.



Proposal for RTU Lifeline Analysis Report

South Middle School – Plymouth, Massachusetts

Prepared by: Brian Gerrior Jr – Diamond Mechanical, Inc.

Date: 9/16/2025

Executive Summary

South Middle School has requested an RTU Lifeline Analysis Report to evaluate existing mechanical and electrical systems. The goal of this report is to identify opportunities to improve performance, reduce operating costs, and extend the service life of existing equipment.

This proposal outlines the scope of services, deliverables, and pricing for the project.

Scope of Work

1. Site Assessment

- Review of existing HVAC, mechanical, and control systems.
- Walkthrough inspection of 17 rooftop units (RTUs) and 2 make-up air units (MAUs).
- Identification of current issues, inefficiencies, and longevity.

2. Performance Data Collection

- RTU runtime and setpoint analysis.
- Review of current energy consumption patterns.
- Analysis of system scheduling, setbacks, and occupancy alignment.

3. System Analysis

- Benchmarking RTU and equipment performance against industry standards.
- Identification of opportunities for optimization.
- Preliminary review of potential savings from improvements.

4. Recommendations & Reporting

- Written report with actionable recommendations.
- Prioritized list of low-cost/no-cost adjustments.
- Outline of potential capital upgrades for longer-term savings.
- Estimated cost savings and payback where applicable.





Deliverables

- Comprehensive RTU Lifeline Analysis Report (digital PDF).
- Executive summary suitable for school administration and facilities management.
- Recommendation matrix with estimated savings and next steps.

Timeline

The project will be completed within 4 weeks from notice to proceed, subject to site access and data availability.

Investment

The total cost for completing the RTU Lifeline Analysis Report for South Middle School is:
\$26,695 (twenty-six thousand six hundred ninety-five dollars)

This fee is inclusive of all labor, travel, data analysis, and reporting.

Acceptance

To proceed with this work, please sign below and return a copy to our office.

Authorized Representative – South Middle School

Signature: _____

Name: _____

Date: _____

