
Town of Rockport
Public Works Facility

Update Presentation
February 16, 2016

Town of Rockport Public Works Facility

Agenda |

- Project History
- Public Works Responsibilities
- Why does the Town need a new facility
- What is proposed
- Summary of Project Costs
- Questions / comments

Town of Rockport Public Works Facility

Site History |

- Original facility built in 1956
 - Miles of road have increased
 - Quantity of Water & Sewer mains have increased
 - The population has increased by 59% since 1956
- Town recognized a need to upgrade the facility in the late 1990's
- Completed an initial feasibility study in 2004
- Town hired Weston & Sampson to prepare a new updated feasibility study in 2007- (*Weston & Sampson brings experience with improvements to more than 100 public works facilities in New England*).
- Updated the feasibility study in 2015/2016



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Public Works Responsibilities

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The DPW touches the lives of the residents everyday by maintaining the infrastructure we rely on including...

- Maintenance of all public roads
- Maintenance of the Stormwater drainage system
- Mowing, cleaning, and general upkeep of Town cemeteries, as well as interments
- Maintenance of all Town-owned buildings and structures, not including School facilities
- Maintenance of all Town parks, beaches, and other Town properties, including mowing grass, fall leaf clean-up, and all general upkeep
- Maintenance of DPW fleet of vehicles / equipment
- Management of the drinking water filtration and reservoir
- Maintain plans (topographical maps, wetland, maps, water, sewerage and drainage plans, and as-built plans) and records and oversees Town projects.
- Management of the Town transportation fuel system as well as water level records and the GIS Program
- Maintenance of the water distribution and sanitary sewer collection systems
- Treatment of wastewater from the Town's sanitary sewer collection system



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The DPW touches the lives of the residents everyday by maintaining the infrastructure we rely on including...

The DPW is also on call 24 hours a day to handle incidents & emergencies including:

- Snow and ice removal operations
- Hurricane / windstorm cleanup
- Removal of road hazards
- Flooding
- Building issues & emergencies
- Road repair
- Emergency response / consequence management
- The support of other emergency departments



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Public Works agencies are considered First Responder and the facilities must support this important role:



Public Works
THE FIRST RESPONDERS WHO ARE THERE
UNTIL THE EMERGENCY IS OVER

“Since the Fall of 2009 DPW’s have been classified as first responders under U.S. Department of Homeland Security’s (DHS) Emergency Services Sector Coordinating Council’s Sector Specific Plan”

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Why Does the Town Need a New Facility?

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Why does the Town need facility improvements?

- The existing facility is 60 years old with no significant improvements
- Public Works responsibilities have increased significantly over the years along with the number of vehicles and pieces of equipment, but the facilities have not kept pace



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Inadequate Employee Facilities



Supervisor support area inadequate

Employee Support Facilities are Undersized and
Inadequate for Today's Operations

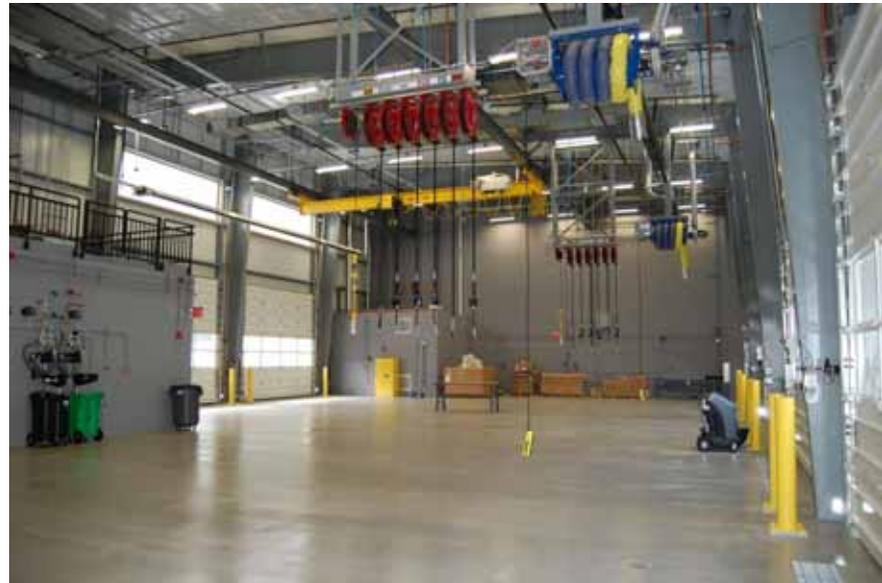
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Vehicle Maintenance Area

- Does not meet acceptable industry and safety standards
- Poor ventilation - antiquated mechanical system
- Poor lighting
- Non code compliant shop equipment



Maintenance bays are undersized to safely and efficiently maintain DPW equipment



Sample Photo of a Safe & Efficient Vehicle
Maintenance Area

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Why does the Town need facility improvements?

- Vehicle and equipment types and sizes have changed significantly since the facility was constructed



Smaller 1950's and 60's era DPW vehicles

Today's larger multipurpose DPW vehicles

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Existing Vehicle Storage



Vehicle and equipment storage area is too small to safely and efficiently store the DPW equipment

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Unprotected vehicle/equipment storage due to undersized facility



As a result, a portion of the multi-million dollar fleet and equipment are stored outdoors due to limited space

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Summary of Deficiencies |

- Existing buildings do not comply with today's Building Code
 - No sprinkler system
 - Inadequate egress
 - ADA Accessibility
 - Fire Separation
- Toilet facilities do not meet current Plumbing Code
 - Number of fixtures
 - Male/female toilet facilities
- Building does not meet current Mechanical Code
 - Ventilation /electric
 - Maintenance air exchanges
 - Carbon monoxide detection system
- Inadequate site security
- Operational inefficiencies due to space constraints
 - Inadequate storage areas
 - Inadequate employee facilities
 - Inadequate material storage areas
 - Undersized maintenance area
 - Inadequate file storage



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Potential risks associated with substandard facilities

Town's Fleet of Plows Crushed in Collapse
(Plymouth CT, NBCConnecticut.com 2011)



Fire destroys town's public works building
*Officials say fire was major loss for town (WMUR
Hopkinton NH 2012)*



Lynnfield DPW Storage Garage Fire (2013)



***Blaze destroys Henniker snow-removal
equipment, leaving 'serious problem'***
(Henniker NH, Concord Monitor 2015)

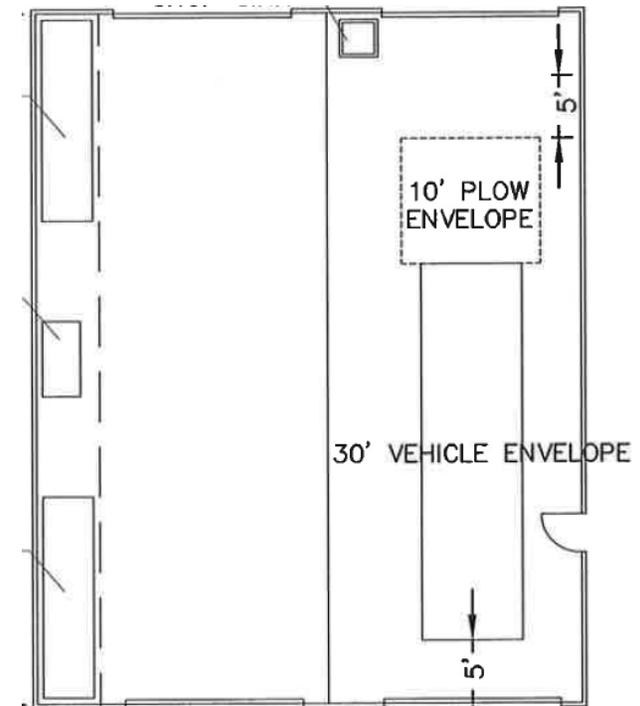
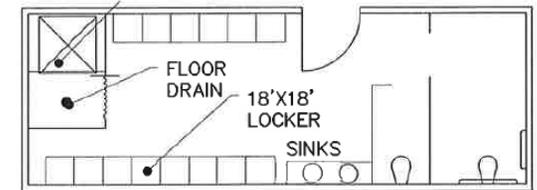
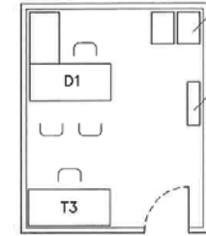


Programming

Town of Rockport Public Works Facility

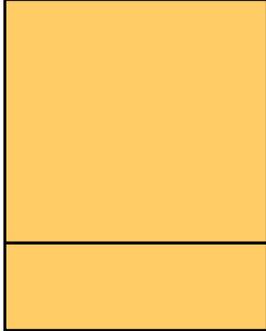
Programming Process |

- Interviewed DPW staff
 - Identified DPW responsibilities
 - Reviewed daily work flow patterns
 - Observed operations
 - Explored potential strategic approaches to improve productivity
 - Explored the optimum work flow and designed a facility around the operations
- Compared interview data to Weston & Sampson standards which are based on the more than 100 public works facility projects completed by Weston & Sampson in New England
- Prepared programming sketches for each operating area



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Programming Results |

<u>Space Needs Assessment</u>	<u>Original Space Needs</u>	<u>Reduced Program</u>	
• Offices / Employee Facilities	3,093 SF	2,680 SF	
• Shops/ Material Storage	2,160 SF	1,379 SF	
• Vehicle Maintenance	4,173 SF	3,364 SF	
• Vehicle Wash	1,375 SF	1,375 SF	
• Vehicle & Equipment Storage	<u>19,257 SF</u>	<u>13,230 SF</u>	
TOTAL:	30,058 SF	22,028 SF	

27% Reduction

Space needs reductions were achieved by
programming space to serve multiple functions

Why Store the DPW Equipment Indoors in a Minimally Heated Garage?

Why put the vehicles and equipment indoors.....

1. **Employee Safety**
2. Public Safety
3. Protection of Equipment
4. Stormwater Pollution Control
5. Cost Effective Operations
6. Efficient Operations



Employee safety is compromised when trying to clear off large equipment in inclement weather conditions as shown above

Why put the vehicles and equipment indoors.....

1. Employee Safety
2. **Public Safety**
3. Protection of Equipment
4. Stormwater Pollution Control
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Vehicles which are covered by snow or ice may take longer to respond to the needs of the community which could result in unsafe conditions for the public



Why put the vehicles and equipment indoors.....

1. Employee Safety
2. Public Safety
- 3. Protection of Equipment**
4. Stormwater Pollution Control
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Outdoor storage contributes to accelerated equipment deterioration

Why put the vehicles and equipment indoors.....

1. Employee Safety
2. Public Safety
3. Protection of Equipment
- 4. Stormwater Pollution Control**
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Vehicles stored outdoors on the existing site have inadequate environmental control measures

Why put the vehicles and equipment indoors.....

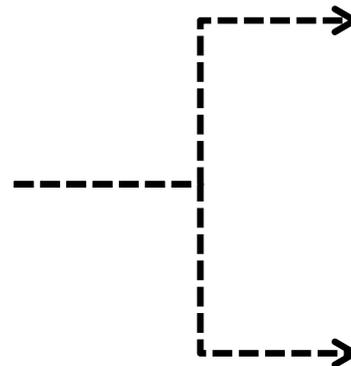
1. Employee Safety
2. Public Safety
3. Protection of Equipment
4. **Stormwater Pollution Control**
5. Cost Effective Operations
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Any drips or spills from vehicles stored inside will be collected in a closed floor drain system preventing them from reaching the environment

Why put the vehicles and equipment indoors.....

1. Employee Safety
2. Public Safety
3. Protection of Equipment
4. Stormwater Pollution Control
5. **Cost Effective Operations**
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Cost to Construct Storage Garage

- Construction
- Maintenance
- Operation

VERSES

Cost Associated with Exterior Storage

- Increased Vehicle Maintenance
- Decrease in Vehicle Life Expectancy
- Non-Productive Labor
- Operational impacts
- Employee Safety & Environmental

SAMPLE CALCULATION – (18 vehicles and small/towed equipment)

Cost Benefit Analysis Summary		
Vehicle and Equipment Storage		
		2/2/2015
Depreciation Component	Truck Replacement Cost Savings Lost Over 50 Years	\$ 241,667
Depreciation Component	Truck Replacement Cost Savings Lost Over 50 Years	\$ 2,083,333
Depreciation Component	Towed Equipment Replacement Cost Savings Lost Over 50 Years	\$ 222,222
Fuel Waste Component - Warm Up	Fuel Dollars Lost Over 50 Years	\$ 137,586
Labor Waste Component - Warm Up	Labor Dollars Lost Over 50 Years	\$ 402,600
Labor/Materials Waste Additional Maintenance Outdoor Storage	Additional Maintenance Cost Over 50 years	\$ 1,620,000
Labor/Materials Due to Loss of Preventative Maintenance	Additional Maintenance Cost Over 50 years	\$ 288,000
Energy Consumption - Engine Block Heaters	Additional Energy Cost Over 50 years	\$ 75,000
Labor Waste - Additional Loading/Unloading Truck Security	Labor Dollars Lost Over 50 Years	\$ 1,287,000
Labor Waste - Reduced Employee Safety/Injury	Labor Dollars Lost Over 50 Years	\$ 13,200
	Total Depreciation, Fuel, and Labor Costs Associated with Exterior Storage	\$ 6,370,608
Building Component	Life Expectancy of Building	50
	Building Houses 18 Trucks and Small/ Towed Equipment - Sq. Ft.	12,211
	Total Building Cost Per Sq. Ft.	\$ 155
	Total Building Cost	\$ 1,891,824
	Total Interest Due to Financing	\$ 794,566
	Annual Bldg. Energy & Operating Cost Per Sq. Ft.	\$ 2.00
	Energy Cost & Operating Cost Over 50 years	\$ 1,221,100
	Total Building & Operating Cost Over 50 Years	\$ 3,907,490
	Average Annual Savings	\$ 49,262
	Total Savings Over 50 Years	\$ 2,463,118

Why put the vehicles and equipment indoors.....

1. Employee Safety
2. Public Safety
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6. **Efficient Operations**



Photo of excessive exhaust associated with cold vehicle starts

Why put the vehicles and equipment indoors.....

Case Study for increased vehicle life expectancy associated with storage of equipment indoors

- Town of Wayland purchased three large dump trucks
- Town only had room to store one indoors
- Remaining two vehicles were stored outdoors
- Two vehicles stored outdoors were removed from service early due to equipment deterioration. Equipment conditions were so poor that they were sold as scrap.
- The vehicles which was stored indoors remained in service for three more years and was in suitable condition when it reached its service life that it was able to be sold at auction



Only room to store one (1) new dump truck indoors



Two (2) vehicles stored outdoors due to limited availability of covered storage

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**Proposal to Meet the Current and Future Needs
of the DPW**

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Assessment of Existing Structure for Potential Adaptive Reuse



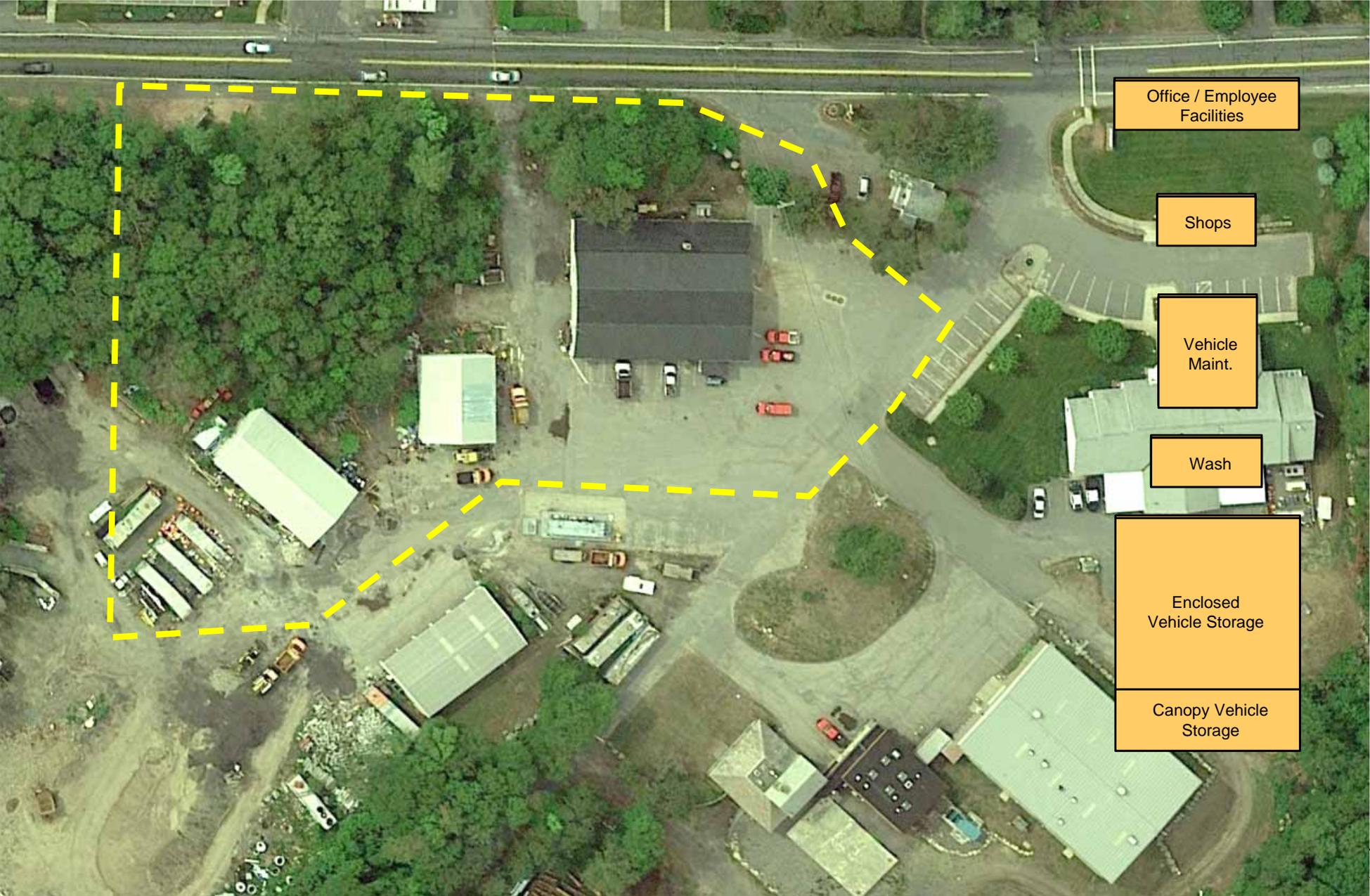
Basic code required upgrades would negate any savings associated with reuse of existing structure:

- Seismic and lateral wind bracing
- Sprinkler system
- ADA Accessibility
- New code compliant toilet facilities
- Protection of combustible construction
- Code required ventilation
- Upgrade of basic electrical service
- Building envelope upgrades to meet current energy code
- Roof structure upgrades due to increased snow loads associated with envelope upgrades

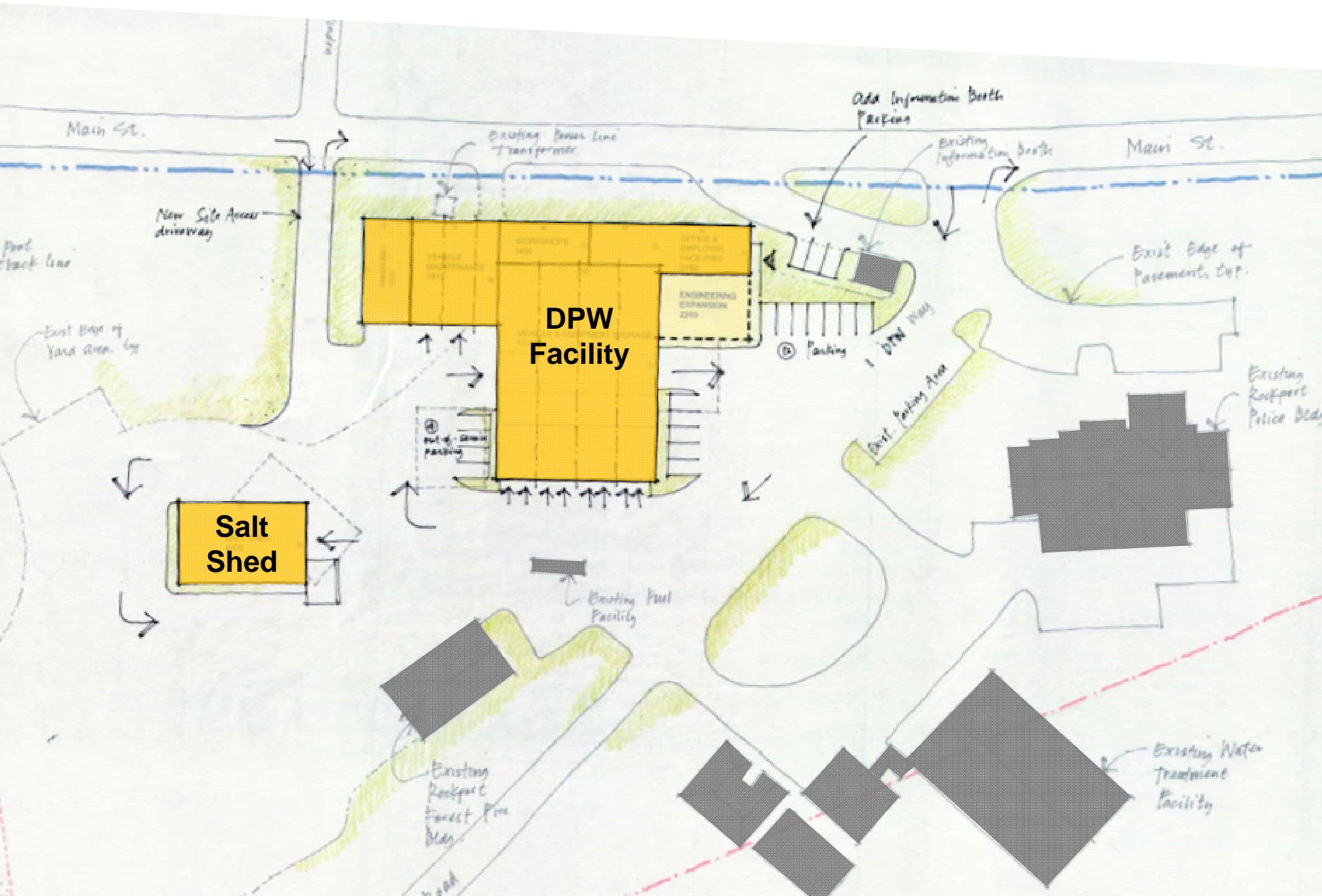
Building size is not compatible with today's standards for safe and efficient DPW operations



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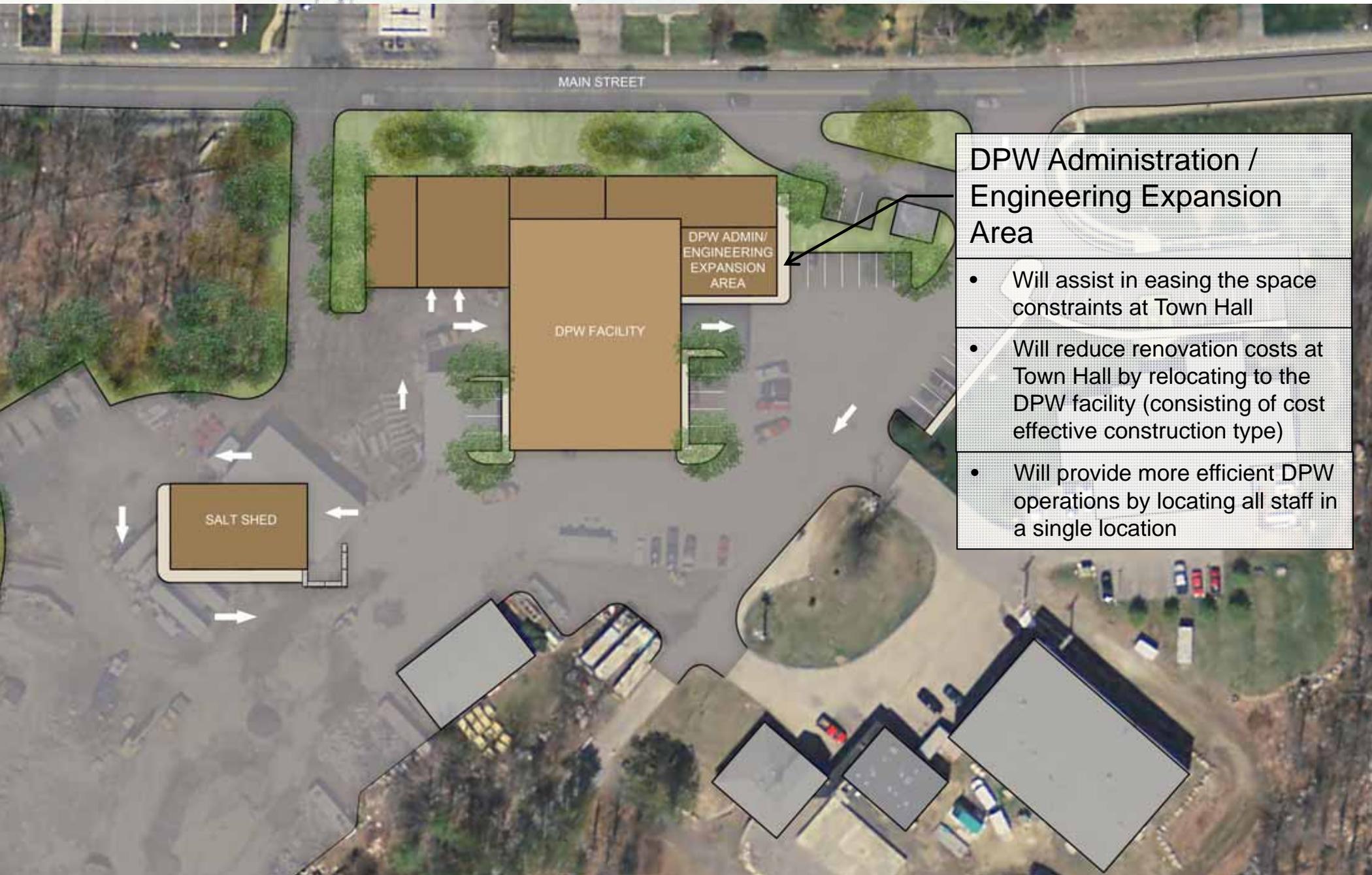
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DPW Administration / Engineering Expansion Area

- Will assist in easing the space constraints at Town Hall
- Will reduce renovation costs at Town Hall by relocating to the DPW facility (consisting of cost effective construction type)
- Will provide more efficient DPW operations by locating all staff in a single location

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-  Office / Employee Facilities
-  Shops
-  Vehicle Maintenance
-  Wash Bay
-  Enclosed Vehicle Storage
-  Open Canopy Vehicle Storage



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Costs

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Project Cost Summary

• Building (19,490 SF Facility)	\$4,498,000
• Open Canopy Storage (3,500 SF Facility)	\$285,000
• Industrial Equipment	\$425,000
• Mezzanines	\$88,000
• Site Development Costs	\$860,000
• DEP mandated stormwater system, site clearing, excavation, gravel borrow	
• Water supply, electrical, paving, curbing, etc.	
• Salt Storage Structure	\$420,000
• Design Contingencies	\$395,000
• Escalation (1 year)	<u>\$209,000</u>
Subtotal Construction Cost:	\$7,180,000
	(\$312/SF)
• Soft Costs & Const. Contingencies	<u>\$1,650,000</u>
• Construction Contingency, A&E costs, Resident Eng Costs, Permitting/Testing, Temp Facilities	
Total Project Cost:	\$8,830,000

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Construction Cost Comparison (**Does not include soft costs**)

<u>Description</u>	<u>Size</u>	<u>Bid Date</u>	<u>Avg Cost/SF</u> <u>(escalated to 2017)</u>
• Rockport Public Works Facility	22,990 SF	Est. 2017	\$312
• Wayland Public Works Facility	39,000 SF	2014	\$278 (no salt shed)
• Medford Public Works Facility	45,000 SF	2014	\$317
• Bourne Public Works Facility	39,040 SF	2014	\$328
• Norwood Public Works Facility	53,870 SF	2014	\$332



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What does this do to my tax bill?

- Total Project Cost: \$8,830,000 (projected to 2017)
- Average Single Family Home Value: approximately \$500,000
- Current Tax Bill Prior to DPW Project:
 - $\frac{\$500,000}{1,000} \times \$11.25 = \$5,625$ per year
- Revised Tax Bill if DPW Project is Approved (30 year loan @ 4.5%):
 - $\frac{\$500,000}{1,000} \times (\$11.25 + \$0.38) = \$5,815$ per year
- This represents a Year 1 increase of \$190 per year (\$15.83 per month) which reduces over the subsequent years of the loan authorization to \$80 per year (less than \$7 per month) at the end of the loan
- This does not factor in other debt exclusions which are being retired

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Benefits of an Improved / Code Compliant Facility?

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What are the benefits |

What will an improved / code compliant facility do for the DPW & community.....

- Code compliant and safe work environment for Town employees
- Protect the Town's multi-million dollar investment in vehicles and equipment by protecting the equipment from corrosive conditions and vandalism which will extend the useful life of the vehicles
- More efficient work space and response times - vehicles, equipment, and workspace are easily accessible
- Eliminates the need to invest money (band-aids) in the existing substandard facility
- Concept includes an area for expansion to accommodate DPW Administration/Engineering (reducing current space constraints at Town Hall)



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Questions?