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REPORT

September 2019

TOWN OF
Oxford
MASSACHUSETTS

Department of Public Works Facility Feasibility Study

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I. Introduction

The Town of Oxford retained the services of Weston & Sampson to prepare a feasibility study for a new facility to house the Department of Public Works (DPW or Public Works). The object of the study was to develop a DPW building program and site features which are capable of cost effectively and efficiently supporting the services offered by the DPW to the community. The study included inspecting the existing facilities, identifying deficiencies, interviewing staff, identifying current and future needs, developing conceptual alternatives, evaluating the preferred conceptual alternative with the DPW Committee (Committee), and preparing budget cost estimates for the preferred alternative.

II. Space Needs Assessment

The Project Team prepared a space needs assessment to identify the current and future needs of the Public Works. The assessment included analyzing current deficiencies in the facility which need to be corrected with the construction of a new facility. The assessment also included interviewing key staff to learn first-hand the operational issues with the existing facility. The staff interviews were supplemented with support by the project team's knowledge of industry practices and familiarity with solutions which have been implemented on recently constructed public works facilities. A copy of our staff interview notes is included in Appendix A.

Operational Analysis

The operational analysis was based on inspection of the existing facilities which are used to support the Public Works, and a determination of the functional inadequacies and space limitations of the existing building and site.

The DPW is composed of eight divisions, including; Administration/Engineering (and Conservation/GIS), Operations, Highway, Fleet Maintenance, Tree Warden, Facilities Maintenance, Sewer Division, and Cemetery & Grounds (Parks & Trees). These divisions are responsible for

maintenance, repair and construction of the town's infrastructure, public building and property including its parks, playgrounds, streetscapes, sewers, drainage systems, street lighting and road ways.

The existing operations are supported three facilities around town. The main DPW yard is located at 34 Charlton Street, and includes two buildings, a salt shed dome, and a number of storage structures and sheds scattered across the site. This site includes vehicle storage and vehicle maintenance. The Facilities Maintenance Division operates out of 3 Barton Street where offices and storage space for supplies are located. Administration/Engineering (and Conservation/GIS) is located at 450 Main Street and includes the director's office, administration staff offices and workstations, the public counter area

Staff Interviews

The staff interviews conducted by the project team focused on identifying all DPW functions, identifying current deficiencies, and identifying current and future space requirements. The information obtained during these interviews included detailed accounts of space deficiencies in the existing facilities which affect day-to-day operations. A summary of the departmental organization and equipment inventory is as follows:

DPW Staffing Summary

Division	FT	PT	Future	TOTAL
1. Administration/Engineering (and Conservation/GIS)	6	1	1	8
2. Operations	1			1
3. Highway	6			6
4. Fleet Maintenance	2		1	3
5. Tree Warden	1			1
6. Facilities Maintenance	5			5
7. Sewer Division	2			2
Total	23	1	2	26
Offsite:				
1. Cemetery & Grounds (Parks & Trees)	5		1	6

Vehicle Inventory Summary		
Small Vehicles	17	(plus future F550)
Large Vehicles	17	
Equipment	7	
Towable	6	

This listing does not include small support equipment such as pumps, hand tools, etc. However, provisions for storage of these types of items have been included in the final program.

Space Needs / Room Part Plans

The data obtained from the operations analysis and interviews were compiled and analyzed by Weston & Sampson. The analysis consisted of individually identifying the space needs for the operations of each function by developing sketches of individual rooms. Sketches were prepared for each major space including office and office support areas, employee facilities, shop spaces, vehicle maintenance, wash area, and vehicle/equipment storage areas. These space requirements were then assembled into a comprehensive space allocation matrix. The space needs assessment identified an initial requirement of approximately 42,700 square feet. The results of the initial space needs were then reviewed in detail by the Project Team, DPW staff and the Committee to determine if the spaces could be reduced without negatively impacting operations. Based on valuable input from the DPW and the Committee, the team was able to reduce, and in some cases combine, spaces in an effort to control the size and cost of the building program. These reductions resulted in a modified space needs projection of 41,800 square feet. This information is used as a guideline for developing conceptual design alternatives. Refer to Appendix B for space needs matrix and room data sheets.

III. Existing Building Assessments

As part of this study, we evaluated the conditions of the existing building for potential reuse. Our team of designers reviewed the existing building and site layout for efficiencies, life safety, code

compliance, finishes, and other components integral to modern Public Works operations. Findings from the evaluation identified that the status of the existing buildings and their current positions on the site do not lend themselves to effective renovation and/or expansion. Their value is accordingly less than the cost of purpose-built new construction.

In addition to the Report on Existing Building Conditions, we also prepared a Preliminary Report of Hazardous Building Materials Investigation (HBMI). The purpose of the HBMI is to visually identify suspect asbestos-containing materials, lead paint/coatings, polychlorinated biphenyls (PCBs) and other hazardous materials (OHMs) in the existing buildings based on their age, and our observations.

Copies of both assessments are included in Appendix C.

IV. Conceptual Design Alternatives

Based on the results of the final space needs assessment, the Project Team prepared conceptual site alternatives for the development of the DPW Facility at Charlton Street location. The alternatives were prepared with the following operational considerations in mind:

- The DPW and the Committee stressed a desire to house all DPW divisions at this location, with the exception of Cemetery & Grounds (Parks & Trees).
- The DPW and the Committee stressed a desire to shield abutting neighbors from the operations.
- Arrange interior space to provide efficient circulation patterns
- Attempt to segregate small/public vehicle traffic from heavy truck traffic
- Providing adequate parking for public and employees
- Provide full access and safe vehicle movement around the perimeter of the facility
- Provide bulk material storage area with adequate yard area for large vehicle maneuvering
- Maintain safe and functional access to/from the future salt/sand operations area

The conceptual alternatives were prepared by developing "Block Building Plans". These Block Building Plans were developed for each of the major space categories for the new facility as follows:

- Administration & Employee Facilities
- Shops
- Vehicle Maintenance
- Vehicle / Equipment Storage
- Wash Bay

The configuration and size of the planning "block" for each building was developed by assembling the individual room sketches identified during the space needs assessment. This information was used to develop initial alternatives. The alternatives were reviewed with the Committee and the building footprint and program were adjusted to develop a cost effective and efficient building layout. After completing a comprehensive assessment of the alternatives with the DPW Committee, a final preferred alternative was identified as the most desirable, cost effective, and efficient concept based on input received from the Committee. This alternative was developed in a manner to simplify structural framing and resulted in the consolidation of the building program presented in Appendix E. The following is a summary of the final program based on the preferred alternative:

Program:	Area (sf)
Employee Facilities	8,955
Workshops	3,125
Vehicle Maintenance	5,964
Wash Bay	1,645
Equipment & Vehicle Storage	22,601
Total Building Area	42,290

The building area increased slightly due to the two-level administration area. This accounts for the elevator and stairs for egress. The building also includes an open lean-to canopy to provide covered storage of miscellaneous equipment and vehicles. A copy of the floor plan and site plan for

the preferred alternative is included in Appendix E of this report.

V. Conceptual Cost Estimate

A conceptual cost estimate was prepared for the preferred alternative, using square foot costs based on historical data for similar DPW facilities. In general, the cost estimate assumes cost effective building systems, finishes, and equipment as identified in the estimate spreadsheet and as described as follows:

- Construction of a new pre-engineered metal building with partial masonry wall finish and concrete protection wall for the vehicle storage area, maintenance area, wash bay, and shop areas
- Factory foam insulated architectural metal panel with improved exterior finish system.
- Primary industrial support equipment for vehicle maintenance operations
- Site improvements, including storm water management and paving upgrades
- Contingency allowance for unanticipated design / construction costs

Our estimated costs for new building construction and site improvements are based on costs of similar construction for which bid prices are available, supplemented by cost data obtained from published sources. It is assumed that the project will be publicly bid under Chapter 149 requirements, and prices are based on 2019 costs. Our cost projection does account for two (2) years of cost escalation. Additional escalation factors should be included once the project time line has been established by the Town. A summary of the results of this cost estimate is included below:

Building / Equipment Cost:	$13,846,000
Site Development and Support Structure Costs:	$1,206,000
Escalation / Construction Market Adjustment:	$1,311,000
Professional Service Fees:	$1,999,000
Building Systems / Final Fit-out:	$130,000
Miscellaneous Soft Costs:	$2,211,000
Construction Contingency:	$1,017,000
Total Estimated Project Cost:	**$21,720,000**

Due to the preliminary nature of the development of the design for this project, many budget items are based on general building costs per square foot, with site development costs per acre. Estimates include a design contingency to allow for scope adjustments identified during design development. In addition, the estimate includes a construction contingency to account for potential unforeseen conditions which may be discovered during construction. A copy of our conceptual cost estimate as well as a comparison to recently completed/bid DPW facilities is included in Appendix F.