

# **Organizational Study of Facilities Maintenance Services for the Town of Oxford**

**December 2016**

**Edward J. Collins, Jr. Center for Public Management**

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**MCCORMACK GRADUATE SCHOOL OF POLICY AND GLOBAL STUDIES**

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# EXECUTIVE SUMMARY

## SCOPE AND METHODOLOGY

The Town of Oxford contracted with the Edward J. Collins, Jr. Center for Public Management (“The Center”) at the University of Boston to perform an organizational study of town and school facilities maintenance that would make recommendations on how to improve efficiency and effectiveness. The project was funded at no cost to the Town by a Community Compact grant program created by the Baker-Polito administration to increase the use of best practices in local government.

As part of this effort, the Center’s project team:

- Interviewed key facilities maintenance and custodial staff;
- Interviewed key customers in school and town departments;
- Reviewed School Department and Town facilities budgets, organizational charts, job descriptions, and work order data;
- Took guided tours of several school and town buildings; and,
- Researched best practices in facilities maintenance.

Within this report, systemic challenges to facilities maintenance and custodial services were identified along with recommendations for improvement. These recommendations take into account the financial challenges that are common to local government, as well as those specific to Oxford.

## OVERVIEW

It is clear from interviews of staff and customers, data analysis, and site visits that the Oxford Facilities Maintenance Department is well run and creative in efforts to fulfill its mission. The Department has been able to accomplish a great deal each year with the limited resources that are available to it. However, continued underinvestment in facilities maintenance places the Town at financial risk, as the cost to repair building systems escalate multi-fold when a breakdown occurs as opposed to keeping buildings in good condition via preventative maintenance. Custodial services is a key component to preventative maintenance as custodians are responsible for replacing key filters and keeping a close eye on building components. When custodial services are under-resourced, custodians have less capacity to engage in preventative maintenance, and facilities become less clean and attractive. This is an issue for consideration throughout this report.

### Strengths:

The Facilities Maintenance Department and school custodial operations exhibit a number of strengths including:

- Oxford has a Facilities Maintenance Department committed to maintaining 616,500 square feet of Town and School Department facilities which have a combined value in excess of \$39.5

million (excluding land). Not all similarly resourced towns do so and it is to Oxford's credit that it has maintained dedicated facilities staff and that they maintain town and school facilities.

- There is a notably deep base of institutional knowledge and cohesiveness in the departmental staff, in large part due to a low turnover rate of employees.
- Staff are aware of the financial constraints that exist and, given this context, routinely engage in creative problem solving to find solutions at lower cost than other commercial solutions that might be available.
- Once deployed for the day, departmental employees are empowered to reset priorities and respond to changing conditions without undue management oversight, thereby streamlining a responsive effort.
- Facilities maintenance staff are generally flexible in their work efforts, performing tasks not typical in their daily routine, but within their capability, in order to address Town and School Department needs.
- Lacking a computerized maintenance management system (CMMS), the facilities maintenance department has designed its own a work order system using available software, to help manage the physical plant and share information across departments.
- School custodial staff appear committed to doing the best they can to maintain school buildings and offer a healthy and clean environment for students.

#### **Challenges/Areas for Improvement:**

Despite the many recognized strengths, a number of challenges and areas for improvement exist, including:

- Facilities maintenance and school custodial services appear to be underfunded and understaffed.
- Professional licensure is needed for additional positions within facilities management to improve the timeliness of response to work order requests and to ensure that proper permits are secured before work begins.
- The Town's home grown facilities work order system has proven useful, but purpose-built technology is available on the market and would improve data collection, allow the Town to calculate the true cost of providing different services, and identify trends in needs and costs. If deployed across multiple departments, a work order system could create synergy/avoid duplication of efforts across departments.
- At present, school custodians do not receive sufficient oversight, guidance, or training.
- School custodians do not have the time nor expertise to provide turf management for the high and middle school fields and, as a result, some of the fields are now unusable.

- Facilities used by the Department of Public Works, Facility Maintenance Department, and the Fleet Division are inefficient to manage supportive operations and could be better organized.

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## SUMMARY OF RECOMMENDATIONS

<b>SUMMARY OF RECOMMENDATIONS</b> <i>Operational Assessment of Oxford Facilities Maintenance and Custodial Services</i>				
Page	Recommendation	Time Frame	Cost Increase	Cost Reduction
21	<b>Finding 1: The Oxford facilities maintenance department follows a number of best practices.</b>			
22	Recommendation 1.1 Continue the practice of having a single organization responsible for facilities maintenance of town and school facilities.	Current	\$0	\$0
22	Recommendation 1.2 Consider having the Facilities Maintenance Department report to the Director of Public Works.	Spring 2017	\$0	\$0
23	<b>Finding 2: The Facilities Department is understaffed when taking into account the total square footage for which it is responsible.</b>			
24	Recommendation 2.1 Hire two additional FTE's, including one licensed electrician and one general craftsman, and offer different paygrades depending upon licensure requirements.	Summer 2017	\$111,500	\$0
25	Recommendation 2.2 In the future, when the Facility Maintenance Director position becomes vacant, hire a licensed General Contractor (GC) into the Director's position.	TBD	\$0	\$0
25	Recommendation 2.3 Provide the technicians with reasonable levels of autonomy in their daily tasks in order to improve efficiency..	Spring 2017	\$0	\$0
25	Recommendation 2.4 Open blanket purchase orders with key service providers who can perform time-sensitive or highly technical repairs, such as fixing roof leaks, to avoid delay.	Summer 2017	\$0	TBD
26	Recommendation 2.5 Undertake a town-wide space needs analysis to determine the amount of space needed for Town operations and the optimal use of existing buildings.	Fall 2017	TBD	TBD
26	Recommendation 2.6 Move the budget and expenditure for custodial services in Town buildings from the supplies account series into the services account series.	July 1, 2017	\$0	\$0
27	<b>Finding 3: Licensed personnel are needed in the Facilities Maintenance Department to be able to secure building permits and ensure construction is done according to code.</b>			
27	Recommendation 3.1 Ensure that all Department staff, including the Director, hold professional licenses pertinent to the type of work they are performing.	Fall 2017	TBD	\$0
28	<b>Finding 4: Personnel changes anticipated in the relatively near future will result in the significant loss of historical knowledge within the Facilities Department.</b>			

<b>SUMMARY OF RECOMMENDATIONS</b> <i>Operational Assessment of Oxford Facilities Maintenance and Custodial Services</i>				
Page	Recommendation	Time Frame	Cost Increase	Cost Reduction
28	Recommendation 4.1 Provide at least two weeks of overlap between the existing director and any new director in order to facilitate the transfer of institutional knowledge.	TBD	\$1,000	\$0
29	<b>Finding 5: Long term deferred maintenance issues are evident in the schools.</b>			
29	Recommendation 5.1 After thoroughly documenting the cause, impact, and cost to repair the leak in the high school roof and associated damage as required by the insurance company, perform the needed repair(s) and seek reimbursement.	Spring 2017	TBD	TBD
29	Recommend 5.2 Contract with a private firm to perform a comprehensive physical assessment of the envelope of key buildings on a recurring basis (e.g. every 5 years) to identify preventative actions to take before damage is sustained.	Fall 2017	TBD	<i>Future savings as facilities remain in good condition</i>
30	<b>Finding 6: Having an electronic work order system is essential in a modern facilities maintenance department, but its implementation should not be unduly burdensome.</b>			
30	Recommendation 6.1 Consider the acquisition of a computerized maintenance management system (CMMS) to manage work orders and track department spending.	Fall 2017	TBD	TBD
30	Recommendation 6.2 Evaluate the merits of providing mobile electronic devices to technicians so that they can gather detailed information relative to work orders, input changes to work order status, and share information with departmental management while in the field.	Winter 2017	TBD	\$0
31	Recommendation 6.3 Develop a "process chart" or document that can be shared with building users which outlines those tasks that require a work order and the process of creating one, and provide this information to building users.	Spring 2017	\$0	\$0
31	Recommendation 6.4 Ensure that customers receive acknowledgement of their work order submission and updates as the work is scheduled for repair.	Summer 2017	\$0	\$0
32	<b>Finding 7: School custodians are not staffed adequately to perform the duties assigned to them.</b>			
34	Recommendation 7.1 Increase the number of school custodians by 3 FTE (+43%) for a total of 10 FTE.	FY2018-FY2019	\$173,000	\$0
35	Recommendation 7.2 Consider having the Department of Public Works oversee grounds maintenance at school buildings including mowing and turf management.	Spring 2017	TBD	TBD

<b>SUMMARY OF RECOMMENDATIONS</b> <i>Operational Assessment of Oxford Facilities Maintenance and Custodial Services</i>				
Page	Recommendation	Time Frame	Cost Increase	Cost Reduction
35	Recommendation 7.3 Clarify and memorialize the roles and responsibilities of the custodians in writing, and share this information with key school administrators and teachers.	Summer 2017	\$0	\$0
36	Recommendation 7.4 Clearly identify the personnel and other resources needed for different types of after school events and the standard to which the facility must be returned.	Fall 2017	\$0	\$0
36	Recommendation 7.5 Cease the practice of “facility checks” at schools every holiday and weekend, unless there is specific reason, such as an impending storm, to warrant a building walk-through. Use the equivalent overtime hours to improve school maintenance.	Fall 2017	<i>Cost neutral</i>	<i>Cost neutral</i>
36	Recommendation 7.6 Establish a better system to fill custodial absences or vacancies.	Summer 2017	\$0	<i>Potential savings if substitutes reduced</i>
37	Recommendation 7.7 Ensure that cleaning equipment is operable and dependable to increase efficiency and effectiveness.	Summer 2017	TBD	\$0
38	<b>Finding 8: School custodians have very little oversight. Supervision can be best described as “management by exception”.</b>			
38	Recommendation 8.1 Assign school custodians to the Facilities Maintenance Department under a Head Custodian to establish a management structure and create synergies between custodial and maintenance activities.	Fall 2017	\$0	\$0
39	Recommendation 8.2 Develop checklist(s) of custodial activities by school, post it a location visible to administrative staff, and engage in periodic spot checks to confirm work is being completed.	Fall 2017	\$0	\$0
40	<b>Finding 9: The DPW office building on Main Street is located over a mile away from the Charlton Street site where most of the workforce report, where equipment is stored and retrieved, and where vehicles are serviced.</b>			
40	Recommendation 9.1: Consider constructing a new building that would combine DPW offices and facilities maintenance on vacant land adjacent to the existing fleet maintenance facility on Charlton Street, thereby creating a Public Works-Facilities compound.	Design to begin in 2018	TBD	\$0

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## BACKGROUND

### ORGANIZATIONAL STRUCTURE AND RESPONSIBILITIES

#### Town and School Facilities Inventory

Together, the Town of Oxford and the Oxford School Department own and operate 608,000 square feet of space in 27 buildings. These range from the 210,000 square foot high school and 109,000 square foot middle school to the 150 square foot Little League Field House at 668 Main Street, the home of the Oxford Little League. The oldest building in the inventory is Town Hall which dates back to 1882. Recent investments include additions to Town Hall (2016), the Oxford Library (2015), the Middle School (2014), and a new building at the animal shelter (2012)

Collectively, the average age of town and school buildings is 42 years of age. Two of the schools, in particular, are 61 years of age – the Chaffee School and the Clara Barton School were both built in 1955. In addition, the Project COFFEE building which is on the high school campus dates to 1976, a wooden structure that is 40 years old. One of the DPW buildings (Building #2) is 57 years old and the Facilities Maintenance Building is 68 years old.

TOWN AND SCHOOL FACILITIES					
No.	Building	Address	Square Feet	Year Built	Renovated
1	Animal Shelter	80 Old Webster Road	1,385	1970	
2	Animal Shelter	80 Old Webster Road	2,000	2012	
3	Bandstand	352 Main Street	1,080	Unknown	
4	Carbuncle Pavilion	495B Main Street	2,300	1950	
5	Chaffee Elementary School	9 Clover Street	52,200	1955	2004
6	Clara Barton Elementary School	25 Depot Road	50,100	1955	2004
7	Community Center <sup>1</sup>	4 Maple Road	39,600	1949	2011
8	DPW Storage Bldg #1 (Grey)	34 Charlton Street	5,000	1990	
9	DPW Maintenance Bldg #2(Green)	34 Charlton Street	8,190	1959	
10	DPW Admin - Bldg #3	450 Main Street	3,600	1970	
11	DPW Salt Shed	34 Charlton Street	1600	1995 (est)	
12	Facilities Maintenance Dept	3 Barton Street	3,500	1948	
13	French River Collaborative <sup>2</sup>	672 Main Street	2,300	1980	
14	Gore Schoolhouse	352 Main Street	540	1900	
15	High School	495 Main Street	210,190	2002	
16	Joslin Annex	8 Maple Road	8,830	1976	
17	Library	339 Main Street	22,390	1904	2003,2015

<sup>1</sup> Second floor of building is leased to a private business.

<sup>2</sup> Facility is leased to a non-profit; Town maintenance is not required.

TOWN AND SCHOOL FACILITIES					
No.	Building	Address	Square Feet	Year Built	Renovated
18	Little League Concession/Restrms	656B Main Street	670	Unkn	
19	Little League Field House	668 Main Street	150	1950	
20	Middle School	497 Main Street	109,380	1968	2014
21	North Cemetery Bldg #1	505 Main Street	2,200	1950	
22	North Cemetery Bldg #2	505 Main Street	430	1950	
23	OFD Headquarters	181 Main Street	12,056	1970	
24	OFD North	656 Main Street	6,400	1975	
25	Police HQs	503 Main Street	31,112	2009	
26	Project COFFEE	493 Main Street	5,750	1976	
27	Ruel Field Concession Stand	27 Locust Street	560	1970	
28	Senior Center	323 Main Street	4,250	1910	1994
29	Town Common Garage	352 Main Street	1,080	1990	
30	Town Hall	325 Main Street	17,425	1882	2000,2016
31	Woodward Building	670 Main Street	10,200	1900	
		<b>TOTAL</b>	<b>616,468</b>	<b>Average age: 42 yrs</b>	

Efforts to keep all facilities in good working order is the responsibility of the Town Facilities Maintenance Department, which performs preventative maintenance work and repair. The general cleanliness (and some very minor repairs) of the buildings, falls to full time school custodians for the four schools, and a service contract for the Town buildings with oversight by a Head Custodian in the Facilities Maintenance Department.

In recent years, the Town has leased some of the available space in the Community Center and the French River Collaborative. However, it appears that one or more of the occupants may not renew their lease(s), offering an opportunity to reconsider how that space is used.

### **Staffing and Organizational Structure (Maintenance)**

Currently, the Town Manager provides day-to-day support and direction to 12 department directors (although three also receive direction from a board or commission) and two administrative staff. Staff who report to the Town Manager include:

- Accountant/Finance Director
- Building Commissioner
- Community Center/Council on Aging Director
- Facility Maintenance Director
- Fire Chief
- Health Agent
- Land Management Clerk
- Library Director
- Police Chief
- Public Works Director
- Town Clerk

- Administrative Assistant for the Board of Selectmen
- Administrative Assistant in the Town' Manager's office

Discussion is underway regarding whether the MIS Director should also report to the Town Manager. At present, the Human Resources Clerk, which is shared with the School Department, reports to the Town Manager but consideration is being given regarding whether to continue this position in the future. The Town Manager must also maintain a liaison relationship with the Superintendent of Schools.

The Facilities Maintenance Department currently consists of five positions, four of which are full time and one – the administrative assistant – is part time at 25 hours per week. Facilities maintenance positions include:

- Facilities Maintenance Director
- Administrative Assistant (0.625 FTE)
- Facilities Maintenance Technician (General Craftsman)
- Facilities Maintenance Technician (HVAC)
- Custodian/Maintenance (Head Custodian)

### **Staffing and Organizational Structure (Custodial)**

#### **Town Custodial Services**

Since 2015, custodial service in Town buildings have been provided by private contractors at a cost of approximately \$115,000 per year. In addition, the Town employs a full time Head Custodian in the Facilities Maintenance Department; this individual oversees the contract cleaners and visits all the facilities on a weekly basis to address deeper cleaning issues. He also undertakes special projects on a case-by-case basis within his skill set such as painting, custom signage, or other projects as needed. Since the contractors typically arrive on site in the mid-afternoon, if significant issues arise that cannot wait until the contractor's arrive, the Head Custodian will respond.

#### **School Custodial Services**

Custodial services for schools and School Department offices continue to be provided in house, but deep cuts have reduced staffing in recent years. In FY2015, there were 12 custodians assigned to the four schools. At the beginning of FY2016, 5 custodians were laid off, with the remaining 7 staff assigned to support the four school facilities. As seen below, custodial hours per school have been cut, with particularly significant cuts (50%) experienced at the high school and middle school.

<b>CHANGE IN CUSTODIAL STAFFING (FY2016-FY2107)</b>					
		<b>FY2016</b>		<b>FY2017</b>	
<b>School</b>	<b>S.F.</b>	<b>Hours/Day</b>	<b>Schedule</b>	<b>Hours/Day</b>	<b>Schedule</b>
Chaffee School	52,200	16	6am - 2:30pm 2:30pm - 11pm	12	6am - 2pm 3:30pm - 7:30pm
Clara Barton School	50,100	16	6am - 2:30pm 2:30pm - 11pm	12	6am - 2pm 3:30pm - 7:30pm
High School	210,190	32	6am - 2:30pm	16	6am - 2pm

CHANGE IN CUSTODIAL STAFFING (FY2016-FY2107)					
		FY2016		FY2017	
School	S.F.	Hours/Day	Schedule	Hours/Day	Schedule
			2:30pm - 11pm		12:30pm - 8:30pm
Middle School	109,380	32	6am - 2:30pm 2:30pm - 11pm	16	6am - 2pm 12:30pm - 8:30pm
Project COFFEE	5,750	4	2pm - 6 pm	0	

Daily priorities and oversight of custodians is informally managed by the respective school principal or assistant principal. Unless there is a specific need to be addressed, custodians across the School Department are self-directed in conducting their daily routines. Custodial scheduling is managed by the Director of the Co-Operative Federation for Educational Experiences (COFFEE) Program<sup>3</sup>, who has taken on the added responsibility of adjusting custodial schedules as needed and finding replacements to cover vacation or sick leave, or to support special events held at schools.

However there exists no centralized management for custodians and as a result, no single person provides consistent guidance on policies and procedures, establishes seasonal cleaning priorities, determines the frequency and standards for various tasks, inspects and validates the work completed, engages in training or professional development, or manage the custodians as a specialized team. Further, no one is formally charged for ensuring that the custodians have the supplies and functioning equipment that they need to do their work. Despite the above, the project team met several custodial staff members who were highly committed to their work and striving to maintain high standards.

### **Responsibilities (Maintenance)**

The Facilities Maintenance Department is charged with maintaining 27 town and school facilities spread out across the town of Oxford. The Department's work can generally be broken down into three broad categories: preventative maintenance, emergency repairs and other work order requests, and the management of larger capital projects. These areas of work can be described as:

- Preventative Maintenance (PM) consists of scheduled efforts that keep buildings in good condition. Activities can include changing filters on the heating, ventilation, and air conditioning (HVAC) systems on a quarterly basis or testing the emergency generators on a monthly basis. The Director keeps records which detail the work conducted since 2008 (9 year history) and indicate that the department proactively undertakes about 70 preventative maintenance work orders per month. The Director logs these into the work order system for tracking.
- Emergency Repairs and Other Work Order Requests typically come from Town and School departments that have identified building-related items in need of repair or improvement. The work order data reveals that between 2008 and 2016, the Department received an average of 75 repair work order requests (non PM) each month. These range from classroom electrical issues, heating/cooling problems, or dripping faucets, up to larger issues such as leaks in the roof. Repair work orders are most often reported by the users of the facility, usually in response to a

<sup>3</sup> The COFFEE Director also manages District transportation and the scheduling of bus drivers.



building system component not functioning properly. They can be submitted to the Facilities Department electronically or via a phone call.

- Larger capital projects, such as boiler or roof replacement, must be contracted out to private businesses that specialize in that work. While the work is not done by staff in the Facilities Department, contractor efforts must be managed by the Department to optimize the scheduled use of the facility and to ensure the specifications of the contract are met.

To implement these categories of work, Department staff maintain a parts and supplies inventory, so that commonly used items are on hand when needed and time consuming trips to stores or last minute purchases can be minimized. Other procurements must be processed for outside technical services, such as annual elevator inspection and maintenance, and for unique projects such as major capital improvements that cannot be done in-house.

## **Responsibilities (Custodial)**

### **Town Custodial Services**

Services provided include cleaning bathrooms and replenishing paper products, emptying trashcans, and vacuuming carpets. The three (3) contract cleaners typically arrive on site in the mid-afternoon, working a late shift from 2 pm – 11 pm. As the contract cleaners do not remain in one facility for the entire shift, but rather rotate to the different buildings throughout the evening, should a significant issue arise that occurs outside the time period the contract cleaners are in the particular building, the Head Custodian in the Facilities Maintenance Department will respond. In addition, on a seasonal basis, or by special request (and at additional cost), the contract cleaners will shampoo carpeting, dust window sills and free-standing tables, and wash and wax tile floors.

Grounds maintenance for Town facilities, unlike the school facilities, is assigned to the Public Works Department, Division of Cemetery & Grounds.

### **School Custodial Services**

Custodian responsibilities include daily cleaning of the classrooms, hallways, cafeteria, and bathrooms, and trash removal. As is typical for school operations, a great deal of the day is spent addressing unforeseen situations and responding to specific principal or teacher requests (e.g. furniture set-up for a class activity) or emergency cleaning (e.g. spilled liquids in a classroom, or a child getting sick in the building). For larger repairs or more complicated facility requests that require technical expertise, custodians will submit work orders to the Facilities Maintenance Department. Emergency requests are typically made by telephone, but routine or less urgent requests are expected to be submitted electronically.

Since under current staffing, there is only one custodian assigned to per shift, should that person be out on vacation or out sick, a replacement must be brought in. However, depending on the school, the substitute may not overlap with the custodian on duty during the other shift, leading to gaps in communication. This reduces efficiency and the transfer of information pertaining to any special circumstances that may exist. More often than not, these special concerns are added to the next shift custodian's duties or waits until the permanent custodian is back at work to be addressed. For the most

part it appears that today, custodians who were previously laid off are servicing as substitutes, but in the future, a substitute that is new to the School Department may not receive training and direction on the tasks to be completed absent a custodial supervisor.

In addition, the custodian's collective bargaining agreement stipulates that each of the four schools be checked every non-business day (e.g., weekends and holidays) by a custodian, who is assigned on a rotating basis. The contract specifically states:

*Buildings shall be checked on Saturdays, Sundays, holidays and on other non-work days in accordance with a schedule determined by the Superintendent of Schools. All building check time shall be paid at a rate of time and one-half of the employee's regular hourly rate. As of July 1st, 2010 building checks at the High School will be guaranteed a minimum of two (2) hours each check, Middle School at one and one-half (1 ½) hours, and at the two elementary schools one (1) hour each.<sup>4</sup>*

This requirement takes place at the cost of 5 1/2 hours of overtime for at least 118 days per year (104 weekend days, 14 holidays). While the purpose of these checks is not documented in the agreements, it most likely originated for security purposes and/or for the early detection of building system failure (e.g. loss of heat or water pipe break). However, no documentation exists that demonstrate such checks have prevented serious damage in the schools.

### **Facility Maintenance Department Offices**

The Facilities Maintenance Department operates out of a 1948 garage at 3 Barton Street, located within a residential neighborhood. The facility is comprised of three (3) maintenance bays, where three vehicles are housed in the front, and inventory is stored on industrial shelving to the rear.

Adjoining office space is occupied by the Facilities Director and staff, operating at four work stations and conducting administrative functions such as call answering, workforce scheduling, and budget tracking.



**Facilities Maintenance Department, 3 Barton Street**

To the rear of the offices, a separate room functions as a locksmith repair shop, operated by the department staff. As virtually all the door locks in Oxford municipal buildings are key entry, considerable fabrication and lock alterations are conducted in this shop at considerable savings to the Town budget.

<sup>4</sup> Agreement between the Oxford School Committee and Local 999 S.E.I.U. CTW, July 1, 2013-June 30, 2016, p. 7.

Finally, outside are located two large metal shipping containers are located outside adjacent to the building in what was once a parking area. These containers provide much needed storage space for supplies.



**Additional storage containers**

## BUDGET OVERVIEW

Over the past three fiscal years, the operating budget for the Facilities Maintenance Department has increased from approximately \$534,500 to \$548,600, representing a 2.6% growth rate. The Department has remained within its budget allocation throughout this period. Since the Town's financial system identifies spending (other than labor) by building, considerable detail is available to help Town officials understand which buildings are requiring the greatest expenditure on services, supplies, and other expenditures.

FACILITIES MAINTENANCE BUDGET VS ACTUALS ( includes encumbrances)						
	2014		2015		2016	
	Budget	Actual <sup>5</sup>	Budget	Actual	Budget	Actual
<b>Total Salaries</b>	317,225.15	316,622.78	350,644.00	347,018.62	266,891.00	264,658.81
<b>Services</b>	113,380.85	117,088.23	111,270.00	109,856.45	110,240.00	107,724.23
<b>Utilities</b>	14,855.02	8,954.77	7,575.00	7,513.04	12,715.00	5,429.63
<b>Equip Maint</b>	5,000.00	1,658.09	3,500.00	1,327.57	5,000.00	1,354.01
<b>Supplies</b>	80,042.98	73,752.09	65,880.00	63,568.34	149,713.00	145,275.12
<b>Training &amp; Other</b>	4,040.00	3,078.65	2,780.00	2,043.59	4,040.00	4,460.26
	<b>534,544.00</b>	<b>521,154.61</b>	<b>541,649.00</b>	<b>531,327.61</b>	<b>548,599.00</b>	<b>528,902.06</b>

Salaries is the single largest expenditure category, typically followed by services. However, in FY2016, the budget for labor was reduced by approximately \$83,700, as the Town transitioned to a contractor to provide custodial support. At the same time, the supply budget was increased by effectively the same amount. Then, within the supply account, \$82,700 was paid to S.J. Services, Inc. the company hired to perform custodial services at Town offices. (This represents a partial year payment, as the full year custodial contract totals \$115,000.)

CONTRACTUAL SERVICES (ACTUAL SPENDING)				
	FY2015		FY2016	
	Amount	Percent	Amount	Percent
Arch/Eng	\$5,454.00	5.3%	\$1,980.00	2.3%
Doors/Glass	\$1,001.10	1.0%	\$852.75	1.0%
Electric	\$9,673.94	9.3%	\$11,276.91	13.1%
Elevator	\$16,154.50	15.6%	\$15,093.59	17.6%
Energy		0.0%	\$8,557.00	10.0%
Fire/Security	\$18,889.08	18.2%	\$12,178.09	14.2%
Garbage/Hauling	\$3,927.04	3.8%		0.0%
Generator	\$3,791.80	3.7%	\$5,618.32	6.5%
HVAC/Plumbing	\$29,911.33	28.9%	\$9,318.00	10.9%
Motor repair	\$945.88	0.9%		0.0%
Pest	\$1,850.00	1.8%	\$1,160.00	1.4%
Roof		0.0%	\$2,759.73	3.2%

<sup>5</sup>"Actuals" include encumbrances that existed on June 30, 2016. Not all of those may have resulted in a payment.

<b>CONTRACTUAL SERVICES (ACTUAL SPENDING)</b>				
	<b>FY2015</b>		<b>FY2016</b>	
	<b>Amount</b>	<b>Percent</b>	<b>Amount</b>	<b>Percent</b>
Sewer	\$12,685.00	12.3%	\$6,695.00	7.8%
Water system	\$2,220.00	2.1%	\$1,865.00	2.2%
Unknown	-\$2,975.82	-2.9%	\$8,500.69	9.9%
<b>Total</b>	<b>\$103,527.85</b>		<b>85,855.08</b>	

Although spending on contractual services varied between FY2015 and FY2016, some types of services were required in both fiscal years and will likely continue to be necessary, including elevator inspection and repair, fire/security alarm system repair and filling of extinguishers, generator maintenance, HVAC/plumbing, and sewer and water system repair and maintenance.

Six buildings have used the vast majority of budget available for contractual services.

<b>SPENDING ON CONTRACTUAL SERVICES</b>		
	<b>FY2015</b>	<b>FY2016</b>
Library	7,686.15	6,202.06
Oxford Community Center - Main	10,147.99	5,547.23
Chaffee School	16,459.44	16,414.47
Clara Barton School	8,984.74	12,683.16
Middle School/Annex	9,885.81	22,401.41
High School/Annex	28,129.20	30,205.67
<b>Sub-Total</b>	<b>81,293.33</b>	<b>93,454.00</b>
<b>% of Annual Budget for Services</b>	<b>73.7%</b>	<b>84.0%</b>

A review of the labor expenses (excluding benefits) for custodial staff in the School Department reveal the cost implications of the reduction of school custodial staff. Specifically, salaries were reduced by \$144,800 between FY2015 and FY2016 (-23.4%).

<b>CUSTODIAL LABOR –SCHOOL DEPARTMENT</b>		
	<b>FY2015</b>	<b>FY2016</b>
Custodial Staff	\$529,878.90	\$394,752.27
Overtime	\$46,603.19	\$30,708.94
Substitutes (custodial)	\$42,320.51	\$48,570.96
Travel	\$24.64	
	\$618,827.24	\$474,032.17

A review of data from the Massachusetts Department of Elementary and Secondary Education (DESE) reveals that in FY2015, before the reduction in school custodial, overall spending per pupil in Oxford was below the median in Massachusetts. Spending on operations and maintenance was \$833 per pupil as compared to \$1,144 across the state, a figure that is 27% below the state median.

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## Summary of Per Pupil Expenditure 2013-2015

All funding sources included	Oxford			Central Berkshire			Narragansett			State		
	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015
<b>FTE Pupils</b>												
<i>In-district residents, choice-in, tuitioned-in</i>	1,907	1,869	1,839	1,766	1,730	1,712	1,400	1,336	1,344	918,545	917,204	913,268
<i>Out-of-district SWD, charter, choice-out, tuitioned-out</i>	107	110	124	155	157	167	136	161	173	63,163	65,266	69,736
<i>All Pupils</i>	2,013	1,979	1,963	1,921	1,887	1,879	1,536	1,496	1,517	981,708	982,470	983,004
<b>Expenditures</b>												
Administration	625	709	607	544	538	504	520	561	613	483	500	531
Instructional Leadership	897	795	1,055	925	945	930	801	780	791	883	935	976
Teachers	4,650	4,762	4,836	5,078	5,399	5,479	4,534	5,224	4,928	5,291	5,441	5,620
<i>Student/teacher Ratio</i>	14.5 :1	14.0 :1	14.0 :1	12.6 :1	12.0 :1	12.3 :1	14.4 :1	13.7 :1	12.8 :1	13.5 :1	13.6 :1	13.3 :1
<i>Teacher average salary</i>	65,920	64,078	65,892	65,142	66,942	69,081	65,826	72,601	63,710	71,983	73,847	74,703
Other Teaching Services	1,261	1,210	1,067	1,232	1,261	1,287	832	828	904	1,089	1,137	1,176
Professional Development	82	94	83	242	373	279	280	333	194	225	217	197
Instructional	364	382	371	335	421	367	111	141	160	410	432	432
Matl/Equip/Technology	369	384	388	481	523	532	332	428	367	403	421	442
Guidance, Counseling, Testing	1,091	1,171	1,197	1,612	1,774	1,807	1,193	1,310	1,336	1,292	1,376	1,430
Pupil Services	924	958	833	1,279	1,186	1,392	1,012	1,348	1,137	1,066	1,103	1,144
Operations and Maintenance	2,361	2,477	2,462	2,892	3,039	3,314	2,081	2,205	2,092	2,367	2,434	2,490
Benefits and fixed charges												
Expenditure per in-district pupil	12,622	12,941	12,898	14,621	15,461	15,890	11,697	13,159	12,523	13,509	13,997	14,440
<i>Median per in-district pupil**</i>	12,506	12,545	13,140	12,506	12,545	13,140	12,506	12,545	13,140			
Expend per out-of-district pupil	16,063	15,286	16,510	8,689	7,216	7,037	14,955	20,599	14,053	21,500	21,839	21,532
Expenditure per pupil	12,804	13,072	13,126	14,143	14,776	15,105	11,986	13,959	12,697	14,023	14,518	14,943

Source: MA Department of Elementary and Secondary Education, District Analysis & Review Tool

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## FINDINGS/RECOMMENDATIONS

### FACILITIES MAINTENANCE DEPARTMENT

**Finding 1: The Oxford Facilities Maintenance Department follows a number of best practices.**

Although by its nature, this organizational study will focus on areas for change and improvement, it is important to recognize the many areas in which the Facilities Maintenance Department has been using best practices in its daily operation.

Best practices exhibited in Oxford include:

- a) The Town has a dedicated Facilities Maintenance Department that maintains town and school facilities;
- b) Maintenance requests are documented in writing and tracked until complete;
- c) Preventative maintenance is scheduled and documented;
- d) Roles and responsibilities within the department are clear;
- e) Staff appear motivated to be productive and provide good service, and have a strong sense of teamwork;
- f) The Facilities Maintenance Director has a reputation outside of the department for being a creative problem solver and frugal with department funds; and,
- g) There is good institutional knowledge of town and school facilities across the department.

The Town's preventative maintenance efforts stand out as a best practice, especially as preventative maintenance has largely gone by the wayside in other communities dealing with financial constraints. However, reducing funding for preventative maintenance typically has the opposite effect as costs actually increase. In fact, studies have shown that time and financial resources spent on preventive maintenance returns \$2 in savings for every \$1 invested.<sup>6</sup> Other benefits of preventative maintenance include:

- Increased life expectancy of assets, thereby eliminating premature replacement of machinery, such as boilers, and building components, such as roofs;
- Reduced need for large-scale and/or emergency repairs;
- Reduced cost of repairs by reducing secondary failures. When parts fail in service, they usually damage other parts;
- Reduced overtime costs and more economical use of maintenance workers, due to working on a scheduled basis instead of a crisis basis to repair damage;
- Ability to identify equipment with excessive maintenance costs, indicating the need for corrective maintenance, operator training, or replacement of equipment; and,
- Improved safety and comfort for building occupants.

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<sup>6</sup> "From Preventive to Proactive", Public Works Magazine, November, 2007.

**Recommendation 1.1 Continue the practice of having a single organization responsible for facilities maintenance of town and school facilities.**

Having a single organization maintaining all facilities benefits the Town and the School Department in a number of ways. By combining resources, the two organizations have been able to fund a multi-disciplinary team that can address most building infrastructure issues – a team that is larger than each organization would be able to fund on its own. In addition, cost efficiencies result from having a single organization purchase parts and supplies to address the needs of all 31 Town and School buildings.

Should Oxford wish to further expand its operation, it could potentially approach abutting communities to see if they would like to procure facilities maintenance services from the Town of Oxford.

**Recommendation 1.2 Consider having the Facilities Maintenance Department report to the Director of Public Works.**

While this restructuring will increase the scope of the Public Works Department, an already wide-reaching department that includes roadway infrastructure, cemetery and grounds maintenance, and fleet maintenance, the number of additional staff is small and the nature of the work is consistent with the skill set found within public works. Combining the departments would allow for efficiencies between the DPW and facilities operations including, but not limited to, shared use of office space, vehicles and equipment, inventory, specialized tools, and increased coordination of activities such as snow response.

An added benefit is that such a change would reduce the span of control for the Town Manager (best management practices recommend no more than seven direct reports for a manager or supervisor and the Town Manager currently has 14), and could increase the capacity of the Facilities Director who would likely have to attend fewer meetings and could therefore spend more time on day-to-day operations.

This recommendation could be implemented over time, starting with an informal, consultative relationship where the DPW Director and Town Engineer could meet with the incoming Facilities Manager on a regular basis to discuss capital project and larger scale repairs. That could transition to a formal reporting relationship thereafter. From a budgetary perspective, the cost center for facilities maintenance should be retained as it offers considerable detail to aide in the deployment of staff and development of future budgets.

**Finding 2: The Facilities Maintenance Department is understaffed when taking into account the total square footage for which it is responsible.**

The breadth of responsibility for the Facilities Department is considered typical for a community of Oxford's size. However a metric commonly used to determine required staffing highlights a possible deficiency. Specifically, best practices for municipal facilities in Massachusetts point to ratios of approximately one maintenance Full Time Equivalent (FTE per 100,000 square feet of facility. As noted above, the Oxford Facilities Maintenance Department is responsible for the upkeep of 608,000 square feet of building space, suggesting the need for 6 maintenance workers. While many factors play into the optimal ratio needed, such as age of building, occupancy and usage, amount of contracted work, extent of annual capital investment, and material and design of the facilities, square footage is most commonly the starting point to determine minimum staffing. That said, some national benchmarks actually suggest ratios as low as 50,000 square feet per FTE.

At present, the Oxford Facilities Maintenance Department is operating with two staff engaging in direct facilities maintenance including a General Craftsman and an HVAC technician. As a result, Oxford's ratio is one maintenance FTE per 300,000 square feet of building. (While the Head Custodian does perform painting and minor repairs, as needed, his primary responsibility is supervising the contract custodians and supporting Town staff during hours when the contract custodians are not in the buildings. As a result, he is not being included in the calculation above.) The constrained staffing is exacerbated further when one of the technical staff takes vacation or is out on sick leave for any period of time. Even when both are on duty at the same time, for worker safety, oftentimes they are assigned to the same work order. This is especially true when large equipment must be moved or installed and/or if a ladder is being used. As is well recognized, employee injury resulting from failure to follow safety protocols could result in significant costs to the Town.

Typically, performing mid-sized repair work in-house is usually cost effective and beneficial for the user of the space who must continue their operations. These types of projects can be rather simple in nature, involving only one or two trades, but may require several days of work by the facility maintenance staff and can include changes to the design of work space or upgrading/modernizing specific components of a facility. Examples include equipment replacement in the kitchen of the Senior Center such as the stove, fans, light fixtures, and counter tops or carpentry work that does not come in contact with the general public, such as in storage areas. These projects are ideal for the in-house workforce as they are not an emergency or technically difficult but do require flexibility in execution to accommodate sometimes busy operational needs, accommodation that may not be available with a private contractor or may be costly. Given that Oxford's buildings range in age from 7 to 113 years old (with an average age of approximately 42 years) and include four schools, it is expected that general repairs/rehabilitations will present themselves from time to time. While these general repairs are not so complicated as to require a building permit, they are still needed to optimize the functioning and usage of the facility.

In Oxford, evidence suggests that currently there are not enough facility maintenance staff to free up the time needed to perform mid-sized repair due to the number of daily work-orders. As such either the mid-sized repair work does not get done, or is much more expensive due to the requirement to pay prevailing wages to private contractors, or lengthy to construct due to the time needed to comply with the State procurement process. In addition, a commercial contractor usually does not have the flexibility

to work a variable work schedule, to include off hours, or stop for a couple days due to an event by the using department.

The existing staffing shortage is evidenced by the fact that some longer duration projects are not getting completed in a timely manner. An example of this situation is the exterior siding on the Senior Center which needs replacement. Due to a lack of Town staff to replace the siding, students from Project COFFEE began the work, but given constraints on the time they could dedicate to the project and the learning curve involved, the work has not been completed. The Center Director must now secure the services of an outside contractor, at greater expense than if performed by Facilities Maintenance, to have the work performed. This issue is time sensitive as winter weather conditions approach.



Senior Center siding conditions

Another delayed project involves the addition of a shower/bathroom in the second floor of the Fire Department headquarter building. Several years after starting the project, construction supplies remain on site, but the space continues to be unusable as the project awaits the licensed personnel required by the building permit.

The short term impact of chronic understaffing is that routine repair work take longer to complete than would be expected. In the longer term though, larger system failures may occur prematurely, may cause greater damage and disruption, or may cost tens or even hundreds of thousands of dollars more than if the facilities were properly maintained with adequate staffing.

The Facilities Maintenance Department is also charged with overseeing the capital requests related to new construction (e.g., Police Station), renovation of existing facilities (e.g., Town Hall), or addition/expansion of existing facilities (e.g., Oxford Library). These projects can be fairly large in scope (up to a year in construction) and expensive (several million dollars), and require considerable time to be managed properly. Oxford's capital process begins in September of each year with the submission of capital projects needed and concludes along with the passage of the annual operating budget at Town Meeting, normally scheduled in May of each year.

**Recommendation 2.1 Hire two additional FTE's, including one licensed electrician and one general craftsman, and offer different paygrades depending upon licensure requirements.**

This combination will allow the Facilities Department to operate more effectively for a number of reasons. First, the addition of a licensed electrician would reduce liability, given work orders that require a building permit and use of licensed personnel. In addition, more modest maintenance work can be assigned to the general craftsman at a lower grade and subsequently less cost, and the craftsman would be assigned to work orders that require a second person to assist. Licensed personnel would therefore be freed up to address other work orders that require their particular expertise, and they could supervise work performed by outside contractors within their area of expertise.

Conversation with the Facilities Maintenance Director and examination of work order data and analysis of the frequency and type of work requiring an electrician indicates that a licensed electrician would most benefit the Department. Not having one on staff can result in delays and additional expense as contractual services must be procured. However, regular analysis of work order requests should inform future decisions pertaining to the composition of the workforce needed.

As with other full time staff, the job description for a new position would highlight the expertise and licenses needed; However, for the Facilities Maintenance Technician (Electrician) position, the job description should indicate that the incumbent will also be performing general maintenance work as, as would be expected of any Facilities Maintenance Department employee. The paygrade for positions that require licensure should be higher than those that do not.

Having Project COFFEE students working alongside professional staff can offer benefits to students and the Facilities Maintenance Department, but projects should managed carefully to ensure that specific skills are being taught and the tasks can be completed within the class hours available.

**Recommendation 2.2 In the future, when the Facility Maintenance Director position becomes vacant, hire a licensed General Contractor (GC) into the Director's position.**

A new Facilities Maintenance Director would be expected to not only oversee and manage facilities maintenance operations, he/she would also be expected to perform work tasks on an as-need basis. At the same time, efforts should be taken to reduce the administrative tasks of the director, such as procurement, inventory management, and maintenance of the work order system, in order that he/she can better oversee and in some cases, participate in, service and repair of the facilities.

**Recommendation 2.3 Provide the technicians with reasonable levels of autonomy in their daily tasks in order to improve efficiency.**

While maintaining accountability is important in any organization, technicians in the field need a reasonable level of autonomy to respond to changing conditions and information gleaned on site. While each day starts with a specific goal or list of tasks to complete, the nature of the job is that there will be many additional demands discovered on-the-spot that require assessment and attention in the field. Increased flexibility - if managed properly - can improve responsiveness and raise appreciation by the customer.

Such flexibility also provides employees with a greater sense of ownership of their work and promotes problem solving and independent thinking on the part of the workforce. The challenge will lie in time management for scheduled and non-scheduled tasks and will require good planning and communications with management so as not to be distracted from other important jobs. As always, it is essential that priority work orders are accomplished in a timely manner. However, by effective multi-tasking, the capacity and productivity of each individual worker is expanded.

**Recommendation 2.4 Open blanket purchase orders with key service providers who can perform time-sensitive repairs, such as fixing roof leaks, to avoid delay.**

While emergency repairs are exempt from the public bidding laws, setting up blanket contracts prior to an emergency happening can ensure lower prices for services and can save time during an event.

Further, even after staffing has been increased in the Facilities Maintenance Department, certain areas of work – such as elevator inspection and repair – will not be performed in house and should be included in contracts for services. One option will be to include some preventative maintenance work within a service contract in order to could free up valuable hours for the departmental technicians to perform other work that is not being completed in a timely manner. Of course, the costs and benefits of using an outside contractor should be considered prior to using their services.

**Recommendation 2.5 Undertake a town-wide space needs analysis to determine the amount of space needed for Town operations and the optimal use of existing buildings.**

With the tenants at two Town buildings potentially leaving, it is an opportune time to revisit the comprehensive space needs of Town offices and programs. It is recommended that an outside entity be hired to quantify the needs of each department, including specific needs such as storage space, public use space, etc. and determine how the Town’s existing inventory best matches those needs. From this, it can be determined if additional space could be made available for lease or buildings sold. This could not only reduce operating costs for the Town but potentially bring in ongoing revenue (via lease payments) or one time revenue (via sale).

**Recommendation 2.6 Move the budget and expenditure for custodial services in Town buildings from the supplies account series into the services account series.**

**Finding 3: Licensed personnel are needed in the Facilities Maintenance Department to be able to secure building permits and ensure construction is done according to code.**

It is not unusual for municipalities to be remiss in securing building permits for the work performed on public buildings. However, this is not a good practice as it does not guarantee that the work is performed according to code and, should an injury accident occur, would put the municipality in a potentially bad position with its insurance company. An example of this permit shortfall is work that was initiated in the fire station. A new bathroom on the second floor was designed, materials stockpiled, and preliminary work initiated. However after years in this state, the bathroom remains only partially completed due to the lack of licensed tradesmen. The delay is also emblematic of the lack of time that staff has to dedicate to projects of this scope. Based on discussions with staff, it seems the most useful technician to be added would be a licensed electrician.

**Recommendation 3.1 Ensure that all Department staff, including the Director, hold professional licenses pertinent to the type of work they are performing.**

When hiring new personnel, consider hiring a licensed individuals in either the Trades or General Contracting who can open building permits with the Town, ensure code requirements are met, and supervise other employees.

<b>Finding 4: Personnel changes anticipated in the relatively near future will result in the significant loss of historical knowledge within the Facilities Department.</b>
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During the course of this study, the Facilities Maintenance Director informed the project team that he hopes to retire some time in 2017. Replacing his well-recognized skills in procurement, management, and development of the work order system will be very difficult for the Town. In addition, the existing Director has years of detailed knowledge of building conditions, much of which is documented in the work order system, but other knowledge can only be transferred person to person.

**Recommendation 4.1 Provide at least two weeks of overlap between the existing director and any new director in order to facilitate the transfer of institutional knowledge.**

The strength of the department lies in the institutional knowledge of the facilities and longer term needed investment. Effectively transferring that knowledge to new leadership will save months of investigative work and allow for a quicker response time to situations that arise after the new hire. If a multi-week overlap is not possible in the transition, perhaps it could be arranged to bring the retiring manager back on an hourly basis after the new person has been hired, to assist with transition.



<b>Finding 5: Long term deferred maintenance issues are evident in the schools.</b>
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In the high school, a roof leak that has existed for several years has required the abandonment of key space in the central area of the school. Not only is this highly visible to the student population, it is demoralizing to staff, and does not allow for all square footage in the building to be used productively. Of even greater importance is the fact that once water enters a building, it can travel horizontally and vertically to locations that are unseen, leaving damage and potential for dangerous mold in its wake.

Officials indicated that the cause was poor workmanship by the contractor that installed the roof, and that they are actively pursuing repair through legal means. However, the delay has the potential to substantially increase the cost and generate health-related issues. Allowing the roof conditions to remain as long as they have is not of benefit to the school facility, students, or staff.

Additional issues observed at the high school include floor tiles that needs replacing or should be re-secured to the sub-floor, ceiling tiles that are discolored and disintegrating, and a general dinginess that could be addressed by cleaning and painting. A visit to one of the elementary schools revealed staining on the walls, indicative of another roof leak.

**Recommendation 5.1 After thoroughly documenting the cause, impact, and cost to repair the leak in the high school roof and associated damage as required by the insurance company, perform the needed repair(s) and seek reimbursement.**

**Recommendation 5.2 Enter into contract with a private firm to perform a comprehensive physical assessment of the envelope of school buildings on a recurring basis (e.g. every 5 years) to identify preventative actions to take before damage is sustained.**

An envelope assessment will identify issues with roofs, windows, doors, etc. and can support future application to the Massachusetts School Building Authority (MSBA) for their roofs and windows grant program which presently has a 60% reimbursement rate. Additional assessment would include critical internal systems (e.g. HVAC), supporting an application to the MSBA's boiler grant program. By performing such an assessment on a recurring basis, the Town and School Department can identify those preventative actions that need to be taken before damage is sustained. Recommended actions can be incorporated into the 5-Year Capital Improvement Plan, as appropriate.

<b>Finding 6: Having an electronic work order system is essential in a modern facilities maintenance department, but its implementation should not be unduly burdensome.</b>
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Current management should be commended for developing and implementing the current work order process, which has proved vital in capturing baseline data and facilitating decision-making. Since 2007, the department has been using a home-grown system consisting of Google Docs and Excel spreadsheets, a system that has worked reasonably well to date. However, departmental operations have progressed to a level of sophistication that require additional analytics, and purpose-built work order software is available today that can benefit the department and users. Such software is easier to use, offers better tools for data analysis for management, and allows the client to track progress on work orders. At present, there are reports of customers bypassing Oxford's electronic system under the belief that this will ensure that someone will get the request directly and that more emphasis will be placed on it in turn.

**Recommendation 6.1 Consider the acquisition of a computerized maintenance management system (CMMS) to manage work orders and track department spending.**

Several popular software packages are in use across Massachusetts. Selection of the appropriate software can depend on several factors such as the department goals for report generation, adaptability by the users, and annual cost factors. A team comprised of representatives from the custodian union, school administration, and facility technicians should evaluate potential software alternatives to help ensure everyone is satisfied with the input requirements and the output provided, and to facilitate the cultural and procedural changes that will inevitably follow acquisition of a new system. Attention should be paid during acquisition to the technical skills of school custodians and their access to electronic systems to ensure that any new system is not unduly burdensome to them. At present, the custodial computer for the high school is in the basement, far from the rooms and spaces for which work orders will be written. It should be noted that a work order system could be acquired that would be of use the DPW, as well as the Facilities Maintenance Department.

**Recommendation 6.2 Evaluate the merits of providing mobile electronic devices to technicians so that they can gather detailed information relative to work orders, input changes to work order status, and share information with departmental management while in the field.**

Currently, work orders are printed out and provided to staff who take them into the field and who provide written documentation of work completed. For many communities, efficiencies and accountability are gained by providing mobile devices that will allow staff to review work order details on a screen, and to input status changes when they occur. Not only will staff have information available to do their work a more timely manner, it will also help prevent incomplete reports, reduce follow-up phone calls from customers or management inquiring about work order status, and capture additional data, such as parts and supplies used, to make informed management decisions. Operations can be improved via access to electronic data such as man-hours required for different type of jobs and the total cost of repair (labor and parts). Data can be collected regarding how often certain parts are used, which can help with inventory control.

**Recommendation 6.3 Develop a “process chart” or document that outlines those tasks that require a work order and the process of creating one, and provide this information to building users.**

Town facilities have many users in addition to those responsible for their maintenance, and in the case of schools, a large number of staff/teachers in addition to the general public. As cleanliness and condition impacts everyone who uses a given building, ensuring that the repair process is clear and efficient, will save valuable time and prevent frustration as users individually try to find out about the process to request service.

Once a process is developed that has been reviewed by key management personnel in each building, it would be useful to have an outreach program that a brief training that can be provided at key times of the year, and electronic posting that can be referenced at any time. Selected times of the year could be identified, such as the start of a new school year, where a representative of the Facilities Maintenance Department could easily explain the protocols and answer any questions. Feedback gathered during such sessions can be invaluable in helping to shape policies and practices going forward. Additionally, a short hand-out should be made available to new employees throughout the year.

**Recommendation 6.4. Ensure that customers receive acknowledgement of their work order submission and updates as the work is scheduled for repair.**

Customers today expect rapid response to their requests and, if rapid response is not possible, at least information that their requests are being heard. An electronic work order system is one means to provide such acknowledgement.

However, old fashioned signage is also effective in certain conditions. Especially in common areas where many building occupants observe an inoperative system (e.g. drinking fountain that is not working), it may help to post a sign that indicates that a work order has been submitted and provide an estimated repair date. This will reduce the number of people calling in the same work order, saving untold time, and will signal to those using the facility that there is a plan for repair. Such action will demonstrate to the community a heightened level of concern to correct such matters impacting public convenience, demonstrate that the work is scheduled and tracked, and offer transparency in departmental operations.

## CUSTODIAL SERVICES AND MINOR MAINTENANCE

### Finding 7: School custodians are not staffed adequately to perform the duties assigned to them.

Interviews with staff revealed that Oxford's school custodians clearly take great pride in the work they do and evidence exists that several are putting their own personal time in to get work completed, not using vacation time earned, arriving to work early, and rearranging their personal schedules. Not surprisingly, these employees have proven to be very knowledgeable about the school facilities, in terms of physical conditions and daily operations. Most have dual role in that they interact with students and can act as de facto counselors in certain situations. High school and middle school custodians are also responsible for maintaining the school grounds for athletic events including mowing the grass and striping the fields. In 2014, there were 12 School Department custodians assigned, but due to budget cuts in the 2015-2016 school year, five were laid off, leaving the remaining 7 to full time equivalent employee (FTE) shown below.

SCHOOL SPACE PER CUSTODIAN			
School	# of Custodians	S.F.	Ratio (SF/FTE)
High School	2	210,190	105,000
Middle School	2	109,380	54,690
Chafee Elementary	1 ½	52,200	34,800
Clara Barton Elementary	1 ½	50,100	33,400
<b>TOTAL</b>	<b>7</b>	<b>421,870</b>	<b>60,267</b>

One metric commonly used to provide insight into the appropriate level of custodian staffing, is the ratio of square footage (sf) per full time employee. The National Center for Education Statistics (NCES) suggests a custodian ratio between 28,000 and 31,000 sf per custodian to provide for acceptable levels of school cleanliness.<sup>7</sup> (NCES defines a higher level of cleanliness for restrooms, special education areas, kindergarten areas, and food service areas at 18,000 to 20,000 per 8 hour shift). Local research found one school district in the metro-Boston area, identified by the MSBA as having very high standards for school cleanliness, reported a ratio of 21,000-23,000 sf per FTE. As can be seen in the table above, in 2016 the ratio of custodian to square footage in Oxford schools varies from 1:33,000 in the two elementary schools to 1:105,000 in the high school. This means that the ratio in the elementary schools is fairly consistent with national measures, but space per custodian in the high and middle schools far higher than recommended.<sup>8</sup> In fact, the ratio at the high school exceeds what the NCES defines as Level 5 cleaning. "Level 5 cleaning can very rapidly lead to an unhealthy situation. Trash cans might be

<sup>7</sup> School Facilities Maintenance Taskforce, National Center for Education Statistics (NCES) and the Association of School Business Officials International (ASBO), Planning Guide for Maintaining School Facilities, February 2003, p. 82, retrieved from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2003347>, November 13, 2016.

<sup>8</sup> It should be noted that the National Education Association (NEA) strongly states its position that there is no national standard for custodian-to-square footage ratio. The number of custodians is dependent upon the conditions and duties in the school. Retrieved from <http://www.nea.org/home/18498.htm>, November 13, 2016.

emptied and carpets vacuumed on a weekly basis. One custodian can clean 85,000 to 90,000 square feet in an eight hour shift.”<sup>9</sup>

The impacts of limited custodial staff in the high school are readily apparent upon visiting the facility - dust-balls visible in the corners of the hallways, floors infrequently waxed and showing a dull look (they are only waxed during the summer), and the general appearance inside the building and for the grounds immediately surrounding can only be described as “fair”. Contributing to this situation was a reduction in force (RIF) at the start of school year 2015-2016. Given the rapid appearance of issues with school cleanliness in the high school less than one year after the staffing reductions, if the situation is not rectified, conditions at the high school can be expected to continue to degrade.

One scheduling issue mentioned above, is the fact that each weekend day and holiday, one custodian is paid for 5 1/2 hours of work to perform checks of the school buildings. That totals approximately 643 staff hours paid at time and one half per year. While ostensibly the inspection is for the purpose of building security and detection of system failure (e.g., heating, water pressure), the efforts are not recorded with data to demonstrate any useful activity. In fact, no checklist of what should be observed first hand appears to exist. The practice may have originated before technology became available to remotely monitor school security (e.g., cameras and motion detectors) and building systems (e.g., automated system notices of problems). In addition, the building check practice does not take into account days when a custodian is assigned to a school to support a weekend event; on those dates, there may be two custodians on site at a time, on an overtime basis. Given current technology, there does not appear to be a justified reason to have custodial visits in each of the schools each and every non-workday. Security would be better monitored by alarm systems tied into the police dispatch, where intrusion would be registered at the time it was happening. Remote building system monitoring (e.g., temperature, water pressure) appears to be in effect for at least some of the schools and, with additional installation, if needed, messages can be sent to the cell phone of Facilities Maintenance personnel in the event of system failure or issue.

An additional impact of the limited custodial staffing is that when a custodian calls in sick or for some other unexpected absence, there are no internal employees available to redistribute to cover the

absence, even on a temporary basis. The Director of COFFEE who manages the custodians (in addition to teaching vocational classes and coordinating over 20 vans that deliver students to out-of-district placements) then has to call around to find a substitute at the last minute, causing a significant interruption to his busy schedule (see Finding #8). At times, a custodial substitute cannot be found in time.



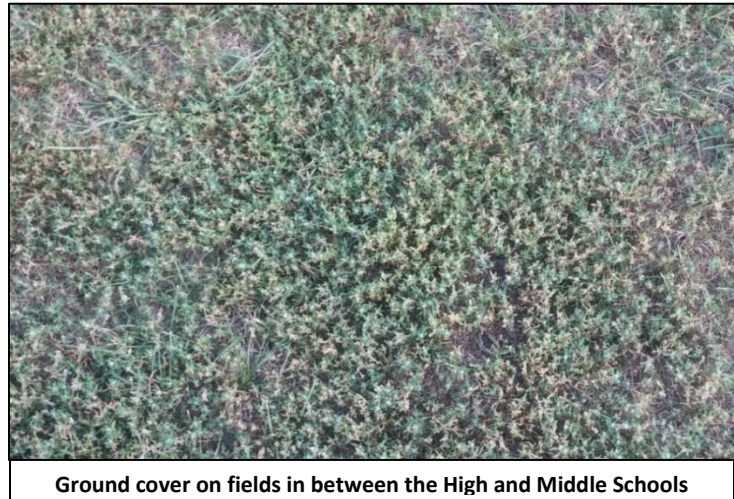
**Stressed conditions at Infield at HS/MS complex**

One more challenge is the fact that, in addition to their duties within the school buildings, the day custodians at the High

<sup>9</sup> NCES, p. 82.

and Middle School complex are also responsible for grounds maintenance. This requires mowing and striping of athletic fields before scholastic sporting competitions. In addition, larger maintenance operations such as grubbing, slice seeding, thatching, weed control, and fertilization of the general grounds are theoretically a custodial responsibility, but it does not appear this type of long term maintenance is being done. As a result, visual inspection reveals that the grounds have suffered from lack of sufficient long term maintenance.

The baseball field (pictured above) is not useable for athletic competition and will require significant attention before any competition can be held there. Further, it appears that the soccer field, which is adjacent to the baseball field, requires complete renovation with either sod or intensive reseeding/weed control. As can be seen in the photo above, a close look at the ground cover reveals that it consists of an invasive weed and not grass.



Ground cover on fields in between the High and Middle Schools

**Recommendation 7.1 Increase the number of school custodians by 3 FTE (+43%) for a total of 10 FTE.**

One of the proposed positions would be added at the high school (bringing the total to 3 FTE), one at the middle school (bringing the total to 3 FTE), and two half-time positions- one at each elementary school – would be brought to full time (bringing the total to 2 FTE). How those positions would be deployed at the high and middle schools will be up to the School Department, but potential schedules include:

- Two day shift custodians (7 am-3 pm) and one evening custodian (3 pm-11 pm) – This would provide for two staff during the day, allowing one high school custodian to remain inside while the other can prepare the playing fields for games. However, it would leave one employee in the evening to clean the school and provide support to evening activities.
- One day shift custodian (7 am-3 pm) and two evening custodians (3 pm-11 pm) – This would allow the two evening employees to work as a team to clean the schools and support activities, but only one during the day when students are on site.
- Overlapping schedule where there is a day shift custodian (7 am- 3 pm), a mid-day custodian (possibly noon to 8 pm), and an evening custodian (3 pm–11 pm) – This offers the greatest coverage and will allow communication among the three custodians, as well as the ability for one custodian to perform field maintenance in the afternoon. However, the mid-day shift is atypical and may be difficult to fill.

One approach to be considered, regardless of the schedule selected, is to have the evening high and middle school custodians work together as a team to clean both buildings. They could strategically plan their shift to efficiently clean both buildings by working together. This would increase their sense of teamwork and hopefully support improved employee morale.

It is further recommended that the facilities be inspected prior to the increased staffing, so that baseline conditions could be documented. Then, once the new staff were hired and trained, ongoing inspections

and data collection would occur for six months to determine if standards were being met or additional resources or reconfiguration of the staffing resources was needed. The staffing increase could potentially take place over two fiscal years so that efficiencies included in Recommendations 7.3 and 7.5 below can be put in place and benefits realized before adding the third FTE. Adding staff at the high school is the highest priority, followed by the middle school as those two buildings are the farthest away from industry standards for staffing.

Although the increased cost of the custodial support will certainly be of concern in a constrained financial environment and will compete with spending for teachers and educational materials, studies have shown a direct link between building condition and academic performance. The components of building environment found to have greatest impact on student achievement were human comfort (e.g., temperature), indoor air quality (e.g., ventilation, filtering), lighting, and acoustic control.<sup>10</sup> Custodians have a direct role in maintaining human comfort and indoor air quality, both through maintenance and observation of building systems, and maintaining a clean environment.

**Recommendation 7.2 Consider having the Department of Public Works oversee grounds maintenance at school buildings including mowing and turf management.**

Currently the custodians are responsible for grounds maintenance at the schools, while Public Works maintains the grounds on all other Town-owned facilities. At the high school/middle school complex, the benefits of this arrangement are that the current custodians like working outside as it affords them a balance of both indoor/outdoor work during the week. Secondly, as the custodians are on the school site every day, they know the latest condition of the fields and the schedule for sports competitions, thereby simplifying the planning and response time to ensure the site is ready for the event. As such, perhaps a division of duties or schedule could be considered where a custodian could continue to provide support to sporting events, such as painting lines and doing pre-game checks, as long as there is custodial back-up coverage within the building. Custodians would also continue to clear snow in proximity to school buildings.

Nevertheless, larger turf management such as routine mowing, aeration, weed and pest control, slice seeding, etc., should be transferred to the DPW. Reorganizing field and grounds maintenance would eliminate redundancies in equipment between the schools and town, and provide the higher level of expertise necessary to maintain the fields in competitive condition. While the land area maintained by DPW will increase, it will not require additional skill training. Consideration should be given to whether DPW may need some modest staffing increase to undertake these new responsibilities. The greatest benefit from this recommendation will be to return the school fields back to active use, but there will likely be some time savings for custodial staff at the high school, in particular, which will allow them more time to complete tasks within the building.

**Recommendation 7.3 Clarify and memorialize the roles and responsibilities of the custodians in writing, and share this information with key school administrators and teachers.**

Over time, some duties have purportedly moved from custodians to building maintenance technicians. As a result, other staff may be confused about who is responsible for what task and what the expected

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<sup>10</sup> Earthman, GI, "Prioritization of 31 Criteria for School Building Adequacy", submitted for *Bradford v. Maryland Board of Education*, American Civil Liberties Union Foundation of Maryland.

response time is. It could be beneficial to host a working session with representatives of each of the schools and maintenance personnel to highlight responsibilities for work orders and preventative maintenance tasks and the associated intervals (e.g. repair leaky flushometer, replace filters, light bulbs, plunge toilet and use hand auger).

**Recommendation 7.4 Clearly identify the personnel and other resources needed for different types of after school events and the standard to which the facility must be returned.**

Users of school facilities should be informed that they are expected to return the space they used back to its original condition, so as to avoid adding more work to the school custodians. The School Department should establish a fee(s) for using the facility and require that a refundable deposit be paid. Upon inspection the following workday, if the facility has not been returned to the defined standard, the monetary deposit (valued at the equivalent of 2 hours of overtime) can be used to pay for staff to make the proper adjustments.

**Recommendation 7.5 Cease the practice of “facility checks” at schools every holiday and weekend, unless there is specific reason, such as an impending storm, to warrant a building walk-through. Use the equivalent overtime hours to improve school maintenance.**

Certainly in times of pending storms or unusually cold/hot weather, having a directed building check when it empty (over a weekend or holiday) is prudent, but in the normal course of business, this practice could be eliminated in favor of more efficient methods, including cameras and motion detectors wired directly to the Police Station, and entry door security using code or key card entry, thus recording who entered the building at what time. However, custodians should be asked to check the building due to extraordinary circumstances such as abnormally cold weather or extremely heavy wind/rain storms when there are concerns about potential damage. A checklist or other documentation of site visit results should be prepared by the custodian on duty and retained in the School Department’s records.

Freeing up the custodians from these routine checks would allow those hours to be used instead to accomplish activities that cannot be done during the work week when the buildings are being utilized including deep cleaning in high traffic area or waxing floors. Or, a team could be deployed to accomplish a series of smaller projects over the course of one day. Ideally, custodians would be asked to brainstorm projects to be done on an overtime basis, using the hours previously used for unproductive site visits. The type of deep cleaning that can be done after hours or during the weekend on an overtime basis will make the schools feel cleaner overall and that standard can then be kept up by the custodians deployed during the week.

**Recommendation 7.6 Establish a better system to fill custodial absences or vacancies.**

Consideration of staffing levels should take into account not only the daily distribution of the regular workforce, but anticipate predictable situations such as vacation usage and unplanned absences due to illness or special circumstances. One option is to have an employee in the Facilities Maintenance Department (e.g., the Head Custodian), or DPW could be trained to fill in for school custodians during absences. While the Town could be reimbursed for the hours worked, the School Department should analyze custodial absences and strive to reduce the budget for custodian overtime/substitutes which was nearly \$150,000 during the 2016 school year.



It should be noted that if three school custodians are added, as recommended, the impacts of short term absences will be less severe than they are today. Once school custodians are increased, team meetings should be held to determine what duties must be accomplished even when a team member is out and what can be postponed to a future date. A portion of the savings generated by having fewer substitute custodians could be used to create one of the three new positions recommended in Finding 7.1. (A Custodian at step 3, has a salary of approximately \$42,578, when benefits are added the total is approximately \$57,578.)

**Recommendation 7.7 Ensure that cleaning equipment is operable and dependable to increase efficiency and effectiveness.**

In a couple of schools visited, “graveyards” of non-functioning or undependable maintenance equipment (e.g., vacuums, floor cleaners, etc.) were observed. Blanket purchase orders for repair services should be put in place to provide for timely repairs. The cost of such services would likely benefit by having similar makes/models of equipment.

Further, the makes/models of equipment varied between schools making it more difficult to reuse parts. Custodians appeared knowledgeable about which models performed the best for the work they do daily and should be consulted when equipment is being purchased. Specifically, they mentioned that the high school had a highly efficient and effective floor stripper, but that equipment was not available in other schools. If it was not affordable to have the same piece of equipment in each of the schools, perhaps it could be rotated among schools under a pre-defined schedule.

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Prior to implementation of the recommendations above, School and Town Officials should closely review the existing custodial bargaining agreement to identify which recommendations may require modification to the agreement. That said,, information-sharing and consultation is always recommended, even for recommendations that do not strictly involve provisions of the agreement.

**Finding 8: School custodians have very little daily oversight. Supervision can be best described as “management by exception”.**

The COFFEE Director has three significant responsibilities: 1) teaching vocational classes; 2) managing out-of-district special education transportation utilizing 26 vans; and, 3) managing custodian attendance in all schools. As a result of these responsibilities, he has not been tasked with (nor does he have capacity to) overseeing custodial training and providing quality control.

Currently, there is an absence of centralized management for custodians; no one is assigned to provide guidance on policies and procedures, set seasonal cleaning priorities, establish frequency and standards, and manage the custodians as a specialized team and address their need for professional development and advancement. As a result, morale suffers, teaching staff and administration are unclear as to the distribution of duties between custodians and the facilities maintenance staff, and standards of cleanliness are at the discretion of the individual custodian. Special events and activities after school hours are managed ad hoc, creating the potential for greater disruption and potentially lower standards of execution. Further, something as fundamental as a daily checklist does not exist to provide guidance to custodians regarding what work is expected to be accomplished and when, nor what was accomplished during the prior day or evening shift.

Although each school has a Custodian III, which is the higher level position, these individuals do not have the authority to address performance deficiencies within the team. At present, the School Department appears to have retained long standing custodial staff who were trained and worked in a different environment and who, by all accounts, are striving to maintain some level of cleanliness and quality. However, as new staff are hired, absent a formal training program and direct supervision, no incentive or ability exists to perform at the highest level. It should be noted that there are marked differences in the tasks and standards between school custodial work and office custodial work, so someone previously employed in an office environment will need to be re-trained after securing a position working in custodial services in a school.

**Recommendation 8.1 Assign school custodians to the Facilities Maintenance Department under the direction of a Head Custodian to establish a management structure and create synergies between custodial and maintenance activities.**

On a day-to-day basis, custodians are responsive to the school principal, as they should be. However, to address policy, training, and/or personnel issues, the Facilities Maintenance Department is better equipped to provide consistent oversight and establish performance standards across all the schools. Not only does the Town’s Head Custodian understand the specifics of the work performed, there is a direct link to facility maintenance as custodians are best positioned to observe building issues and submit work orders for repairs. Custodians also often perform minor repairs themselves, which should be known to facilities management. Even after supervision is transferred to facilities maintenance, each school principal should provide a letter of input to the custodians’ annual performance evaluations.

Alternatively, a Head Custodian could be hired within the School Department to oversee the custodians and perform the day-to-day management for all schools. Based on the low number of custodians to supervise, this Head Custodian should also have custodial duties in one of the schools as well.

**Recommendation 8.2 Develop checklist(s) of custodial activities by school, post it a location visible to administrative staff, and engage in periodic spot checks to confirm work is being completed.**

Custodial work should be codified into Daily, Monthly, and Quarterly tasks, in addition to day shift and evening shift tasks, and should include preventative maintenance tasks that are within the job description of custodians. At the close of each shift, the prior custodian's check list should be available to the custodian coming on duty so he/she knows what has been accomplished and what remains to be done. Custodial management put in place a process where the work is periodically validated to ensure that work is being performed to the established standards.

## FACILITIES MAINTENANCE AND DPW FACILITIES

**Finding 9:** The DPW office building on Main Street is located over a mile away from the Charlton Street site where most of the workforce report, where equipment is stored and retrieved, and where vehicles are serviced.

**Recommendation 9.1** Consider constructing a new building that would combine DPW offices and facilities maintenance on vacant land adjacent to the existing fleet maintenance facility on Charlton Street, thereby creating a Public Works-Facilities compound.

Possibility exists for fleet maintenance, facility maintenance, and the public works offices, which are currently in three different locations, to be consolidated on the Charlton Street property, freeing up two properties for surplus and creating a tighter, more efficient operation at 34 Charlton Street. Construction of a new building would allow for the consolidation of the DPW staff, provide better continuity of operations, and provide indoor storage for the remaining vehicles and equipment currently stored outside. The current 3,600 SF DPW facility occupies prime real estate on Main Street which could be sold and the proceeds could be used help off-set the cost of constructing a new facility.



Department of Public Works on Main Street



Town-owned lot next to the Maintenance Facility

In addition, there is an opportunity to co-locate the Facilities Maintenance Department to this same site as they are currently in a 3,500 SF undersized facility (an old garage) on Barton Street located in a residential neighborhood. The two departments share similar requirements for storage of parts/supplies inventory and tools needed for daily operations, so efficiencies could be identified during the design process for the new building. The Barton Street property could be sold to offset the cost of a new facility.

## APPENDIX

## **Additional Ways to Estimate Number of Needed School Custodians**

Narrative below is from “Stick With a School Maintenance Plan”, published in the American School & University Magazine<sup>11</sup>

### ***Sidebar: How Many?***

A key factor in carrying out a school maintenance plan is determining how many workers are needed to get the job done properly.

In a 2011 operations review of maintenance operations in the Unionville-Chadds Ford District, the Pennsylvania Association of School Business Officials (PASBO) spelled out a staffing formula it relies on to determine the number of full-time-equivalent custodians needed to clean school buildings. The factors weighed: number of teachers, number of students, type of school, size of facility and the number of washroom fixtures:

- Number of teachers divided by 9.
- Number of students divided by 300 for elementary schools and 200 for secondary schools.
- Number of teaching stations divided by 12.
- Amount of building square footage divided by 16,000.
- Number of washroom fixtures divided by 35.

The average of all five factors determines the number of cleaning custodians needed, PASBO says.

A maintenance manual for the Arkansas Division of Public School Academic Facilities and Transportation uses a calculation it calls the “Omaha Formula” to determine custodial and maintenance staffing for elementary and secondary schools. In addition to factors such as building size, numbers of students and teachers, and type of school, it says that schools with stadiums, gymnasiums and swimming pools will need more workers, as well as education facilities with carpeting.

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<sup>11</sup> Kennedy, Mike, “Stick With a School Maintenance Plan”, American School & University Shaping Facility and Business Decisions, June 1, 2012, retrieved from <http://asumag.com/Maintenance/school-maintenance-plan-201206>, November 13, 2016.