

FY17 FMD Capital Budget



*School Committee Presentation
December 2, 2015*

Wellesley Facilities Maintenance Department

AGENDA

- Status Update on Capital Projects
- Role in Capital Planning
- Capital Planning & Budgeting Approach
- Progress on FY16 Capital Projects
- FY17 Cash Capital Budget

**Entire PowerPoint Presentation to be posted on FMD website
http://www.wellesleyma.gov/pages/wellesleyma_facilities/index*

FMD Budget Scope

* No FY17 Requests

Σ *Other Requests*

- * **Preschool (PAWS)**
- Bates
- * **Fiske**
- Hardy
- Hunnewell
- * **Schofield**
- Sprague
- Upham
- Middle School
- High School
- * **Field House**
- Σ *Districtwide*

Mission Statement

*The mission of the Facilities Maintenance Department (FMD) is to treat department managers as highly valued customers, by being responsive to their facility needs and allowing them to focus on their own core missions. Facilities will be professionally managed, operated and maintained in an efficient manner and within established budgets. **FMD shall maximize service life of facilities and equipment, protecting valuable public assets, through regular preventive maintenance and collaboratively prepared long-term capital plans.** FMD staff recognize the uniqueness of each department's building and operational needs and accomplishes their work in a way that minimizes service interruption. **Sustainability and energy efficiency are at the forefront of all FMD operations and practices,** and staff shall endeavor to incorporate these into all aspects of their work.*

Key Tenets w/r to Capital

- *Collaborative* capital plans will be guide for the future
- Emphasis on *sustainability and energy efficiency*

STATUS UPDATE ON CAPITAL PROJECTS

Investment Continues to Pay Off

- Significant Increase in Cash Capital
 - FY13: \$893,000
 - FY14: \$1,141,000
 - FY15: \$1,500,000
 - FY16: \$1,575,000
 - FY17: \$1,750,000
- Proven Success in FY13, FY14, FY15 and 16
 - *FY13: 64 of 66 Projects completed*
 - *FY14: 64 of 67 Projects completed*
 - *FY15: 48 of 50 Projects completed or in progress*
 - *FY16: 45 of 54 Projects completed or in progress*
- Made possible by FMD Organizational Structure
- Completing more projects with in-house staff

“STATE OF THE FMD BUILDINGS”

Significant Progress Made

- \$36M Investment over 3 years
- “Caught Up” on Deferred Maintenance



2012: BEHIND THE WAVE



2015: AHEAD OF THE WAVE

High School



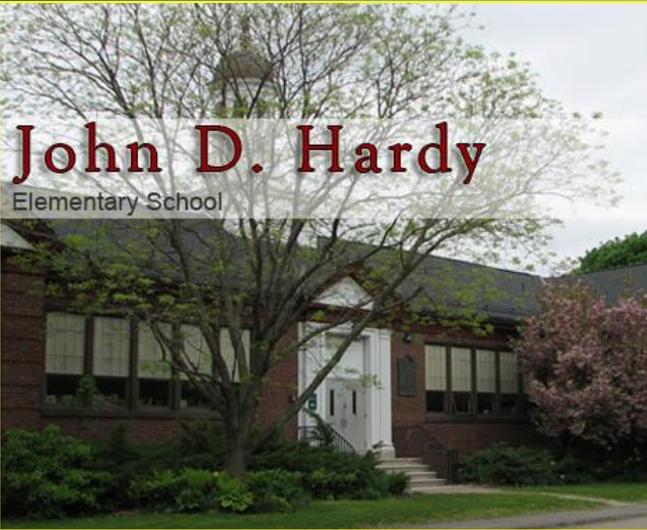
- Preventive maintenance through operating budget
- Minor projects through cash-capital budget

Schofield & Fiske



- Major interior renovations completed summer 2015
- Exterior phase planned for summer 2016

Hardy, Hunnewell & Upham



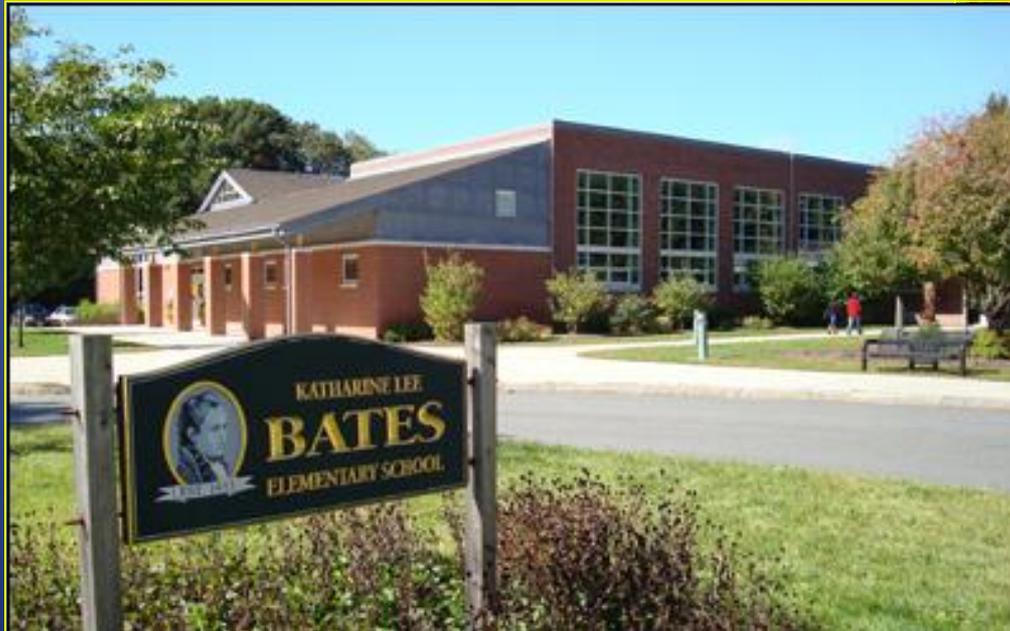
- SFC Presented Recommended Option
- New Upham and Renovated/Expanded Hunnewell
- \$96M Total Project Costs
- 2020 and 2022 Planned Openings

Middle School



- \$7.3 M in Improvements in Capital Plan next 5 Years
- HVAC, Façade, Cabinetry, Doors, Kitchen Upgrades, Paving
- MSBA Window Replacement – Install Summer 2016

Sprague & Bates



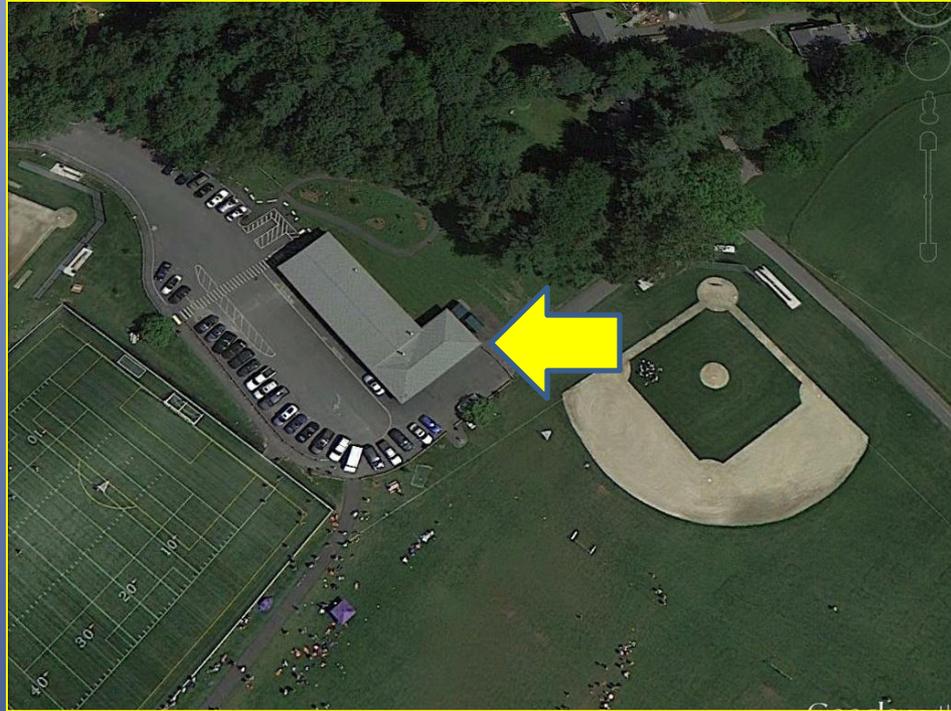
- Preventive maintenance through operating budget
- Minor projects through cash-capital budget

PAWS



- Expansion Feasibility Study on-going
- Preventive maintenance through operating budget
- Minor projects through cash-capital budget

Field House at Sprague



- One of two FMD Maintenance Garages (other at Fiske)
- Preventive maintenance through operating budget
- Minor projects through cash-capital budget

FMD'S ROLE IN CAPITAL PLANNING

Capital Planning Role

- Facilities *Maintenance* Department name is misleading
 - Capital Planning is one of our most important functions
- *ALL* capital projects first identified in FMD
 - Via inspections, feedback, studies
 - FMD manages feasibility study phase
- Involvement starts in August and ends at ATM
 - Advocate for projects up to TM

Capital Planning Role (Cont.)

- If approved at TM, projects proceed in one of three ways:
 1. Typical Cash Capital (under \$100k): FMD executes all aspects of project
 2. Major Projects (over \$100k): PBC manages and FMD should provide liaison support on behalf of our customers (*Senior Project Manager*)
 3. Further Study (i.e. SMMA studies)

PLANNING MAJOR PROJECTS

- Major Projects in 2015
 - Schofield & Fiske
 - MS Windows
 - School Security
- All Projects Originated in FMD's Capital Plans
- The Process is Working – Projects Being Completed!

Schofield & Fiske

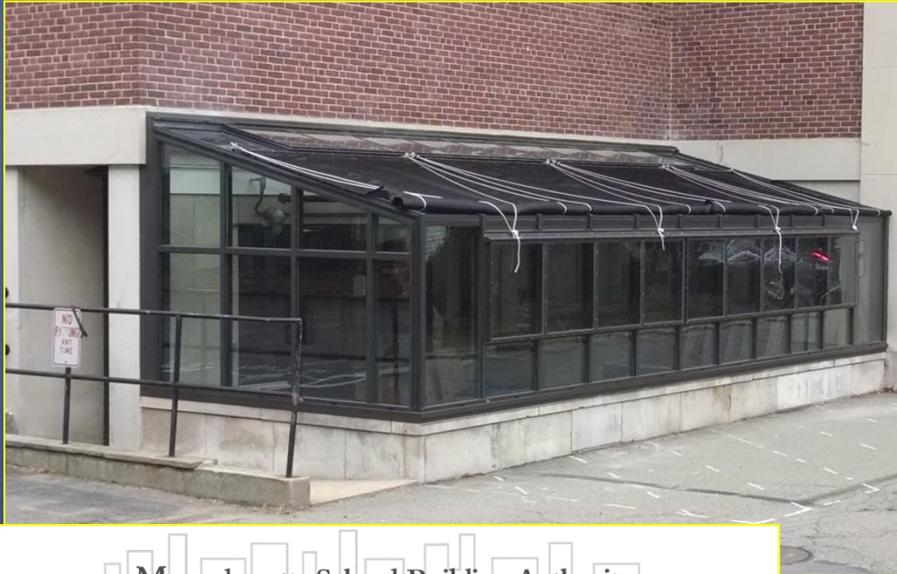


August 21, 2013 Schofield Renovation: Scope of Work

SCHOFIELD SCHOOL - SCOPE OF WORK

Item	Description
A. Site Improvements	<ol style="list-style-type: none"> 1. Pavement overlay and repair 2. Water/sewer/drainage improvements 3. Add fire hydrant(s) 4. Layout changes to address ADA and improve pickup/drop-off 5. Add guardrail 6. Prepare and paint peeling galvanized metal railings – special prep required 7. Landscaping modifications – if not covered under School Security project
B. Building Envelope	<ol style="list-style-type: none"> 1. Replace all windows and uninsulated metal wall panels below, except for the 2006 modular additions (MODS) 2. Paint exposed steel columns/beams and stain exposed wood beams and decking (soffit) 3. Replace older exterior doors 4. Insulate exterior walls where feasible or cost-effective
C. Bathrooms	<ol style="list-style-type: none"> 1. Replace all plumbing fixtures (toilets, urinals and sinks) with low-flow units and sensors 2. Replace all toilet partitions with non-corrosive, vandal resistant phenolic (plastic) units
D. Electrical	<ol style="list-style-type: none"> 1. New power gear and distribution – except 1993 Wing and MODS 2. New exterior and interior lighting – except parking lot lights install in 2009 as part of Temple project 3. Sound and AV system for Gymnasium/Cafeteria – basic system at min. cost 4. Wireless master clock system 5. Modify PA system such that staff can make all-calls (for emergencies) using new phones – assuming the School Security project does not include this 6. Additional cabling to support full wireless access – only if School IT deems necessary (assumed to be minimal) 7. Intrusion Alarm Upgrades – if not included in School Security project
E. Plumbing	<ol style="list-style-type: none"> 1. New central hot water tank to replace point-of-source units in 1993 Wing and MODS – or possibly replace existing 9 year old HW tank with new larger tank and HW recirculator 2. Two or three bubbler/hydration stations that can be used to fill water bottles 3. Replace existing classroom sink units
F. Finishes	<ol style="list-style-type: none"> 1. Replace all interior doors. New master keying system and classroom doors to have "lockdown" type hardware. Certain doors have wood framed glass transoms that may also have to be replaced. 2. Remove and replace gymnasium floor 3. Replace built-in cabinetry opposite the window (long) wall of the classrooms. 4. Replace corridor ceilings – will be required for new sprinkler, fire alarm and lighting anyway 5. Replace some corridor floor sections with new VCT (vinyl composition tile – same as existing) 6. Enclose and insulate exposed steel columns in classrooms

Middle School Windows




Massachusetts School Building Authority
Steven Grossman
Chairman, State Treasurer

John K. McCarthy
Executive Director

June 5, 2014

Dr. David Lussier, Superintendent
Wellesley Public Schools
40 Kingsbury Street
Wellesley, MA 02481

Re: Town Wellesley, Wellesley Middle School

Dear Dr. Lussier:

I am pleased to report that on June 4, 2014, the Board of Directors of the Massachusetts School Building Authority (the "MSBA") voted to invite the Town of Wellesley (the "Town") into the Accelerated Repair Program to collaborate with the MSBA in conducting a Feasibility Study at the Wellesley Middle School for a potential window/door replacement project.

FMD'S CAPITAL PLANNING AND BUDGETING APPROACH

Criteria & Considerations

- Safety (Life Safety & Environmental Health)
- Impact to Learning
- Energy Efficiency/Sustainability
- Preventive Maintenance
- Service Life Exceeded
- Interim School Measures – “Triage”
- Is a major renovation planned?

Major Projects & Triage

- Plan must anticipate upcoming major projects:
 - Hardy/Hunnewell/Upham
 - Middle School Renovations
- “Triage” for schools started in FY13
 - MODS repairs
 - HVAC maintenance winter 2013-2014
 - Doors, carpeting, exterior lighting
 - Smoke detectors, emergency lights, steam traps

Budget Development Process

- Tour all 20 buildings with Managers in August
- Evaluate Previous Year's Requests
- Develop Initial List of Projects
- Generate Costs for Each Project
- Review Lists w/ Principals

Budget Development Process (Cont.)

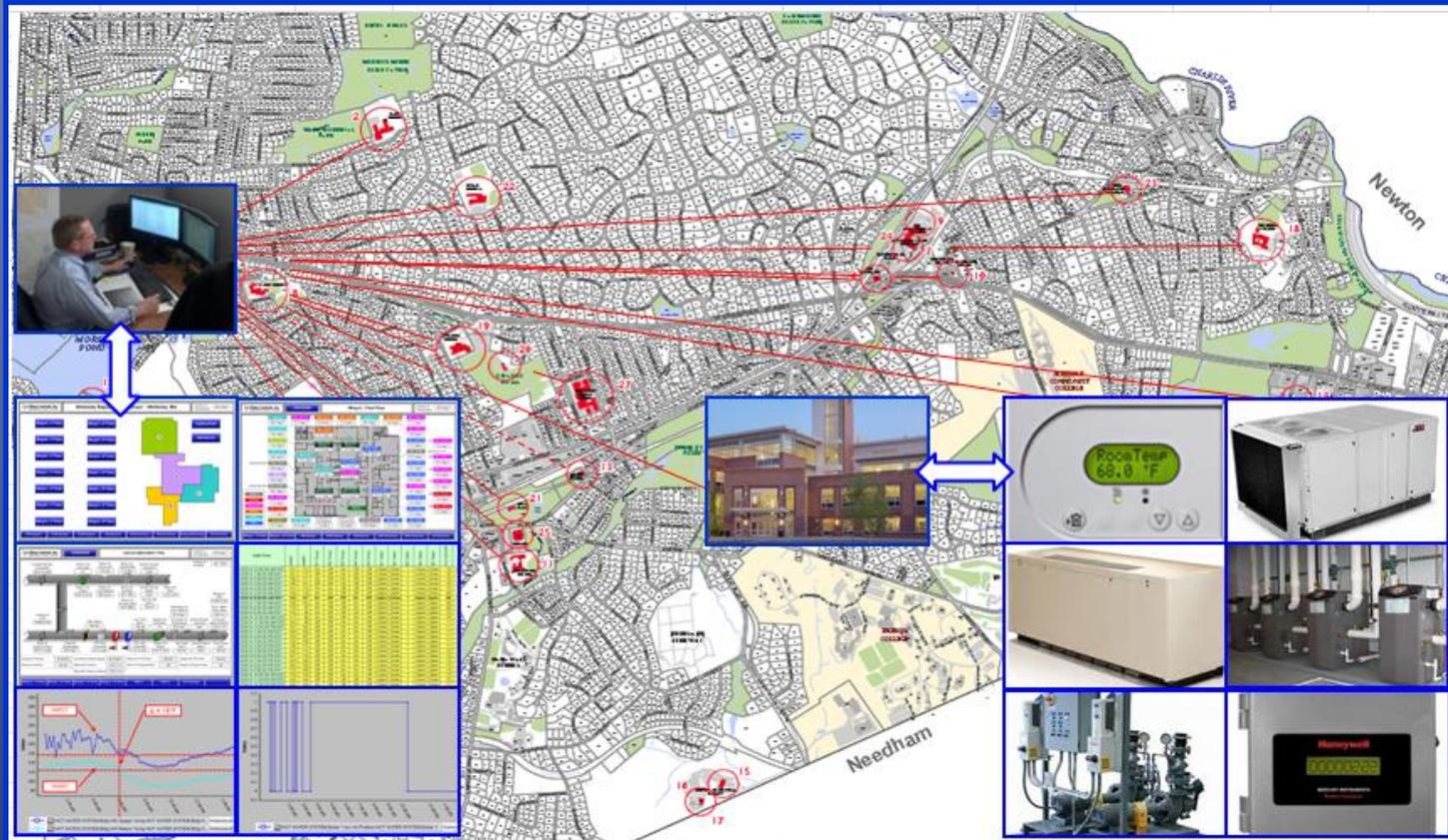
- Review School List with Superintendent and Assistant Superintendent of Finance
- Review Final List with:
 - FMD Managers, Executive Director and Financial Services Dept
- Final Version Presented Tonight for Input
- Continue to advocate for projects until Town Meeting

ENERGY UPDATE & ECM CAPITAL PROJECTS

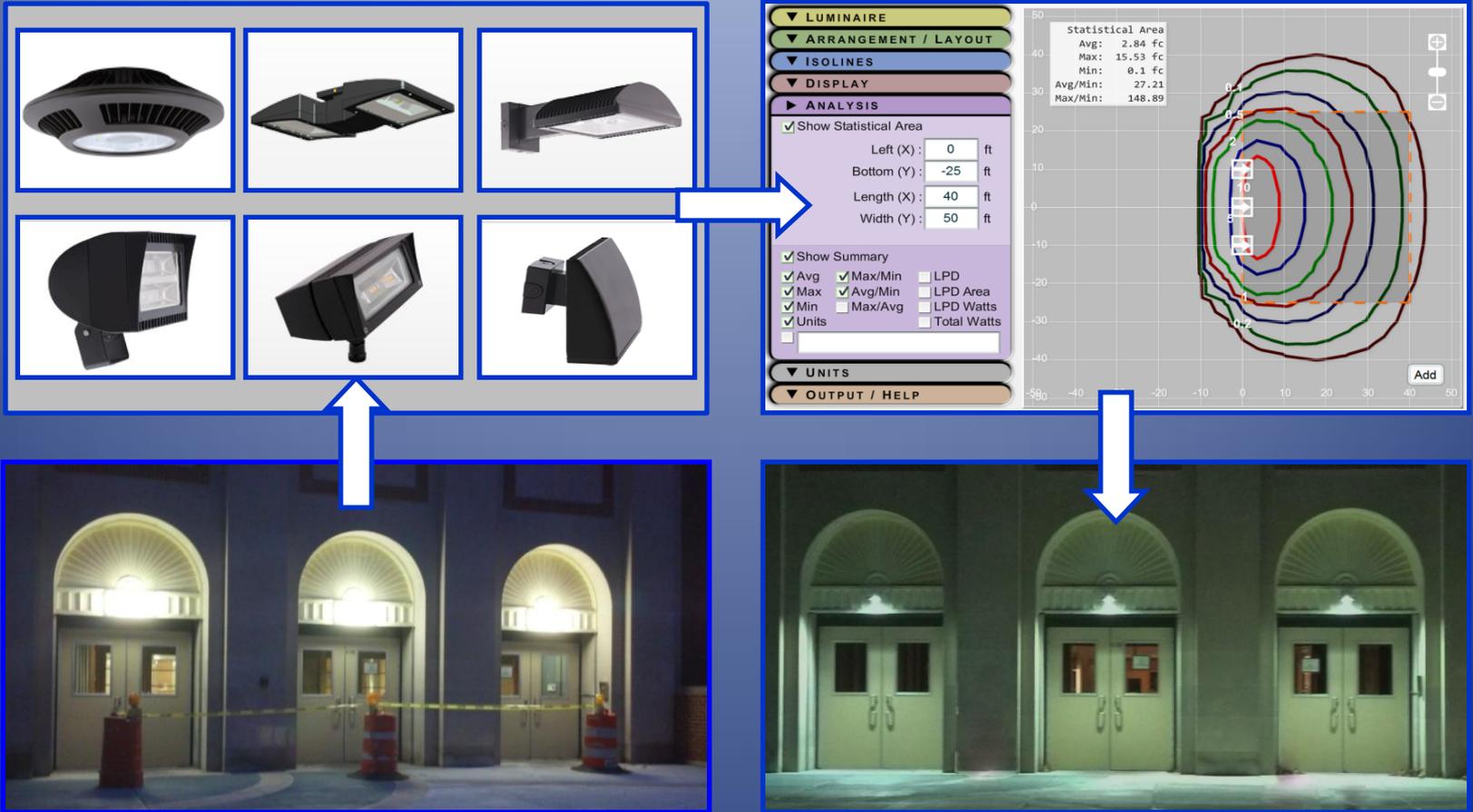
FY15 Normalized Energy Use:

- FY15 v. FY12 normalized energy use
 - Electricity: -3% (Metered -4%)
 - Natural Gas: -12% (Metered +20%)
 - **Total Energy Use: -9% (Metered +11%)**
- 37% more HDD but used 12% less NGS!
- **Annual cost avoidance \$132k**
- Savings largely achieved by \$565k ECMs

ECMs: *Metasys - Network*



ECMs: *LEDs - Exterior*



ECMs: *LEDs - Interior*

The image illustrates the process of selecting and installing LED luminaires in an interior space. It is divided into three main sections:

- Product Selection:** A grid of six different LED luminaire models, including recessed and surface-mounted options.
- Software Configuration:** A screenshot of a lighting design software interface. The selected luminaire is 'LG LGE-2X2LT-53-40-T_UL_LG_LED Lense'. The interface shows calculation parameters (Planned Em: 40 fc, Em from: 33 fc), arrangement options (horizontal and vertical), and a detailed grid of footcandle (fc) readings. A 'Calculate' button is visible at the bottom right.
- Installation Results:** Two photographs of a hallway showing the installed LED luminaires. A blue arrow points from the software interface to the hallway, indicating the application of the calculated lighting plan.

Software Interface Details:

Dimensions (L x B x H): 1.968 x 1.968 x 0.318 ft

Calculation Parameters

Planned Em: 40 fc

Em from: 33 fc

Horizontal arrangement

Number: 14 7.43 ft 3.71 ft

Vertical arrangement

Number: 1 8.00 ft 4.00 ft

Arrangement parameters

Luminaire: 90

Isolux Lines

Automatic
 Free Choice

New: 0.00 fc

	0.08	0.23	0.38	0.53	0.69	0.84	0.99	1.14	1.30	1.45	1.60
3.84	20	21	23	25	26	27	27	27	27	28	28
3.59	20	21	24	26	27	28	28	28	28	28	29
3.34	22	23	25	28	29	30	30	30	31	31	31
3.10	23	25	28	30	31	32	33	33	33	33	34
2.85	24	26	29	31	33	34	34	34	34	35	35
2.60	25	27	30	33	35	36	36	36	36	36	37
2.35	26	28	31	34	36	37	37	37	37	37	38

Summary Table:

Eav [fc]	Emin [fc]	E _{max} [fc]	E _{min} / E _{av}	E _{min} / E _{max}
34	19	41	0.57	0.47

ACCOMPLISHING FY16 CAPITAL PROJECTS

- 45 of 54 Projects Complete or in Progress

Project Phase	Number of Projects
<i>Procurement Regulations</i>	
MGL Chapter 149 – Using FMD’s Major Project Manual	8
MGL Chapter 149 – Competitive Bids and Minor Manual	7
In-House Labor and Direct Purchase Supplies	16
MGL Chapter 30 – Site Work	7
State Bid Contracts	1
MGL 25A, Section 14 (Energy Conservation)	10
MGL Chapter 7-Designer Selection	5
<i>Design</i>	
In-House	48
Outsourced	6
<i>Construction</i>	
In-House	16
Outsourced	36
DPW	2

“Why not bid all 54 projects as one \$1.575M project?”

- **Costs** much less
 - Design costs eliminated or minimized
 - In-house projects often half of bid projects
- **Schedule** benefits
 - Many projects approved at ATM can be completed that same summer
- **Quality** improved by Vested Staff
 - FMD Managers oversight on all projects
 - FMD staff complete many projects

FY16 Projects: Townwide

Hydration Stations – *By FMD Maintenance*



Main Library



Bates School

FY16 Projects: HS, Sprague & Warren

Parking Lot Crack Sealing and Pavement Markings



FY16 Projects: Preschool

Nurse's Sink, Receptionist Glass Partition & Bird Control



FY16 Projects: Bates School

Air-Conditioning Nurses & Principal's Office - *By FMD Maintenance*



FY16 Projects: Upham School

Library Carpet Replacement



FY16 Projects: Middle School

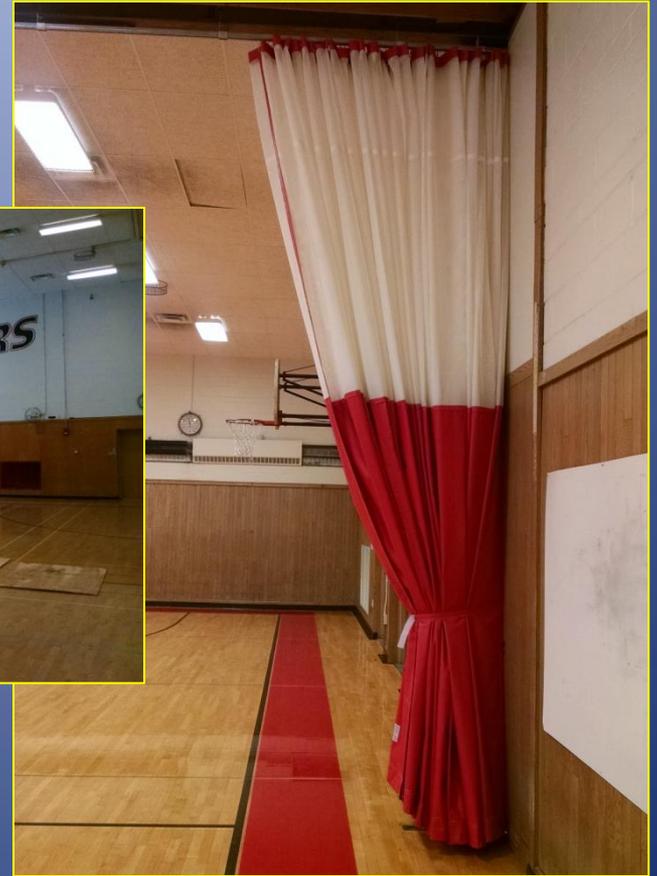
Gym A & B Curtain Replacements



Gym "A"



Demolition of Old Doors



Gym "B"

FY16 Projects: High School

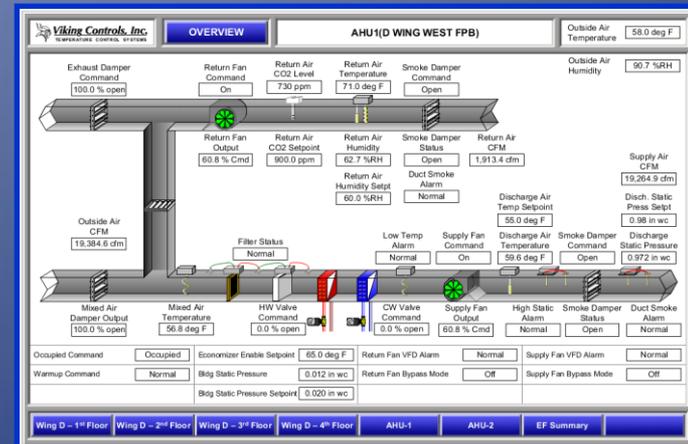
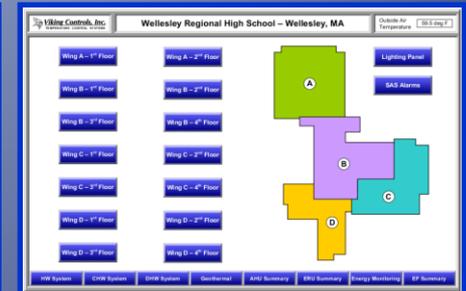
Seaver Street Sidewalk Replacement



FY16 Projects: District Wide

FY16: Energy Conservation Measure Projects

- HVAC Recommissioning at HS
- Metasys HVAC Controls: HS, MS, PAWS, Bates, Sprague



FY17 CASH-CAPITAL BUDGET

SUMMARY – *CASH CAPITAL* REQUESTS

ORGANIZATION	FY17 BUDGET	FY17 REQUESTS
SCHOOL	\$1,073,500	\$1,073,500
MUNICIPAL	\$676,500	\$676,500
Total =	\$1,750,000	\$1,750,000

FMD Cash Capital Budgets

ORGANIZATION	FY13	FY14	FY15	FY16	FY17	FY19
SCHOOL	\$611,250	\$811,292	\$929,400	\$865,000	\$1,073,500	\$2,000,000
MUNICIPAL	\$282,333	\$330,049	\$570,600	\$710,000	\$676,500	
Total =	\$893,583	\$1,141,341	\$1,500,000	\$1,575,000	\$1,750,000	

96% ramp-up since FY13

TOTAL— *SCHOOL CASH CAPITAL*

SCHOOL/GROUP	FY16 REQUESTS
Districtwide	\$122,000
Bates Elementary	\$142,000
Hardy Elementary	\$64,000
Hunnewell Elementary	\$33,000
Sprague Elementary	\$155,500
Upham Elementary	\$42,000
Middle School	\$476,000
High School	\$39,000
Total =	\$1,073,500

PROJECTS OVER \$100,000 INCLUDED IN 10-YEAR CAPITAL PLAN: *SCHOOLS*

PROJECT	YEAR	AMOUNT
MS: HVAC Upgrades	FY18	\$725,000
MS: Site Paving	FY18	\$440,000
MS: Doors and Cabinetry	FY18	\$1,962,000
MS: Façade Masonry Repairs	FY18	\$1,706,000
MS: Kitchen Equip. Replacement	FY21	\$500,000
MS: Lighting Replacement	FY18-22	\$1,340,000
MS: Roofing Repairs	FY21	\$500,000
MS: Steam Piping Replacement	FY24	\$1,056,000
Sprague Paving/Roofing	FY21/FY22	\$860,000
Bates Roofing	FY23	\$1,350,000
Hardy/Hunnewell/Upham	FY19-22	\$96,000,000
Total =		\$106,439,000

FMD FY17 PROJECT SUMMARY

Type of Project	Schools (# projects/cost)	Municipal (# projects/cost)	Total Cost
General Projects	4/\$291,000	2/\$110,000	6/\$401,000
Lighting	2/\$198,000	3/\$101,000	5/\$299,000
System Replacement	9/\$122,500	7/\$102,500	16/\$225,00
Civil/Site	3/\$196,500	1/\$3,000	4/\$199,500
Repairs/Upgrades	1/\$10,000	3/\$129,500	4/\$139,500
A/E Studies	2/\$15,500	2/\$100,000	4/\$115,500
Flooring	2/\$38,000	3/\$43,000	5/\$81,000
Triage	3/\$80,000	-	3/\$80,000
Painting	-	4/\$21,500	4/\$21,500
Townwide or Districtwide	5/\$122,000	4/\$66,000	9/\$188,000
Totals	31/\$1,073,500	29/\$676,500	51/\$1.75M

INDIVIDUAL SCHOOL BUDGETS

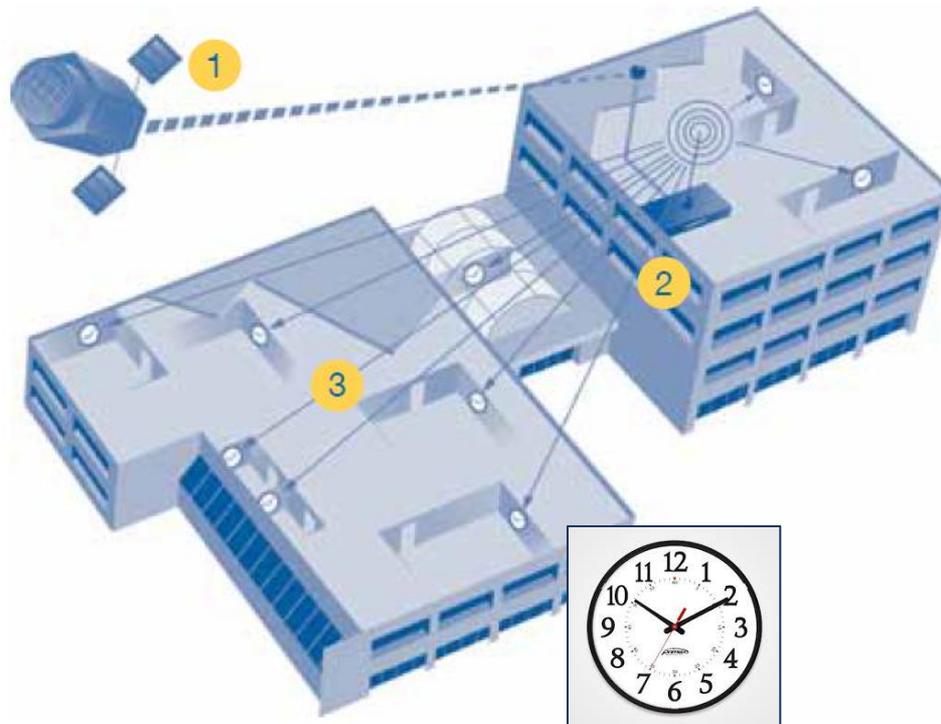
Bates Elementary

PROJECT REFERENCE NO.	PROJECT DESCRIPTION	BUDGET REQUEST
B-1	Site Work – Dumpster Area	\$7,500
B-2	ECM Upgrades - Lighting	\$99,000
B-3	Floor Slab Repairs	\$10,000
B-4	Install Satellite Master Clock System	\$17,000
B-5	Replace Emergency Light Batteries	\$8,500
Total =		\$142,000



BATES: Dumpster Area Upgrades

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1. GPS receiver obtains time from the GPS Satellite
2. Transmitter broadcasts time signal
3. Clocks receive signal and synchronize

BATES: Satellite Master Clock System

Hardy Elementary

PROJECT REFERENCE NO.	PROJECT DESCRIPTION	BUDGET REQUEST
HA-1	<i>Triage Contingency</i>	\$25,000
HA-2	Replace Corridor Carpeting	\$31,000
HA-3	Steam Trap Replacement	\$8,000
Total =		\$64,000



HARDY: Triage Contingency

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HARDY: Corridor Carpeting Replacement

December 2nd FMD Presentation

Hunnewell Elementary

PROJECT REFERENCE NO.	PROJECT DESCRIPTION	BUDGET REQUEST
HU-1	<i>Triage Contingency</i>	\$20,000
HU-2	Smoke Detector Replacement	\$5,000
HU-3	Steam Trap Replacement	\$8,000
Total =		\$33,000



HUNNEWELL: Triage Contingency

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Sprague Elementary

PROJECT REFERENCE NO.	PROJECT DESCRIPTION	BUDGET REQUEST
SP-1	“B” Wing Flooring Evaluation	\$7,500
SP-2	ECM: Interior Lighting Replacement	\$99,000
SP-3	Replace Fire Alarm Control Panel	\$30,000
SP-4	Replace Smoke Detectors	\$11,500
SP-5	Replace 120 gal. Hot Water Heater	\$7,500
Total =		\$155,500



SPRAGUE: "B" Wing Flooring Evaluation

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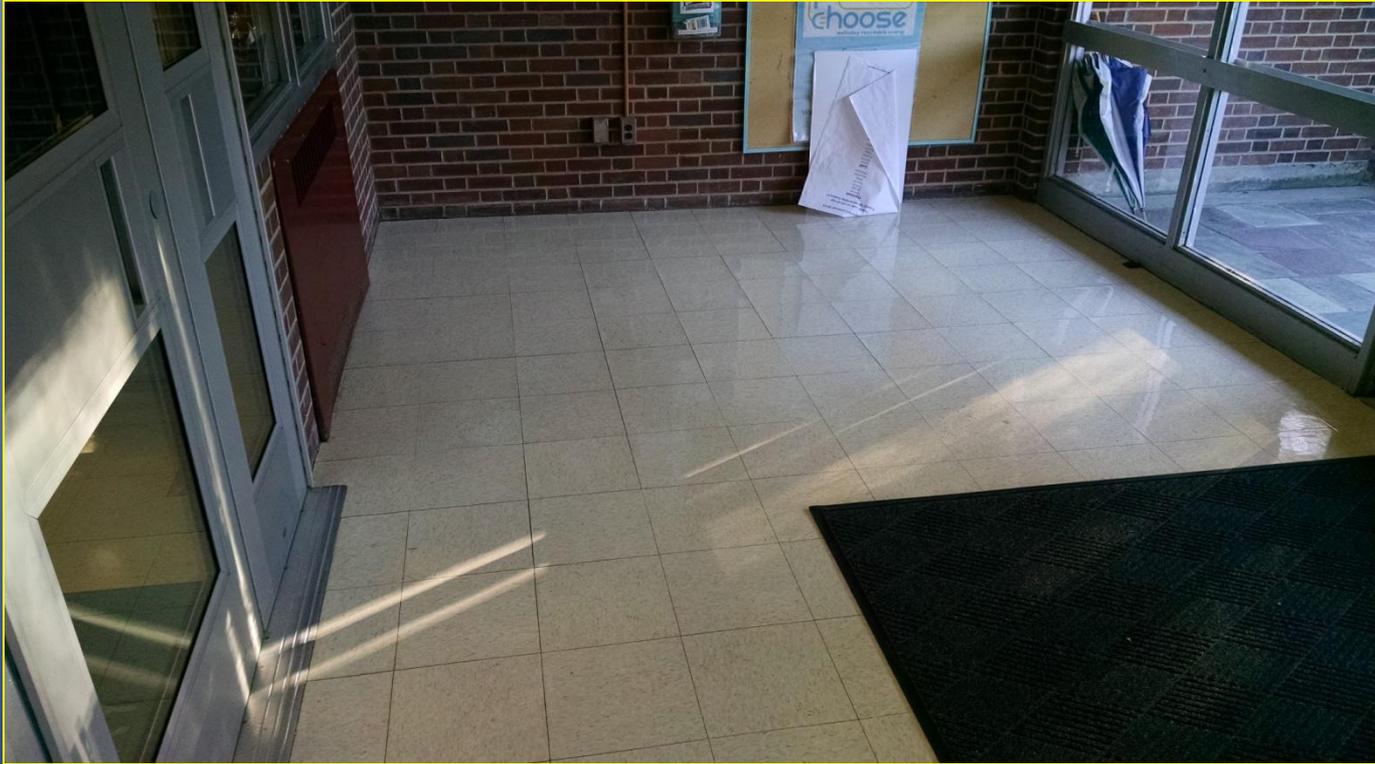


SPRAGUE: Interior Lighting Replacement

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Upham Elementary

PROJECT REFERENCE NO.	PROJECT DESCRIPTION	BUDGET REQUEST
U-1	VCT Replacement in Foyer	\$7,000
U-2	<i>Triage Contingency</i>	\$35,000
Total =		\$42,000

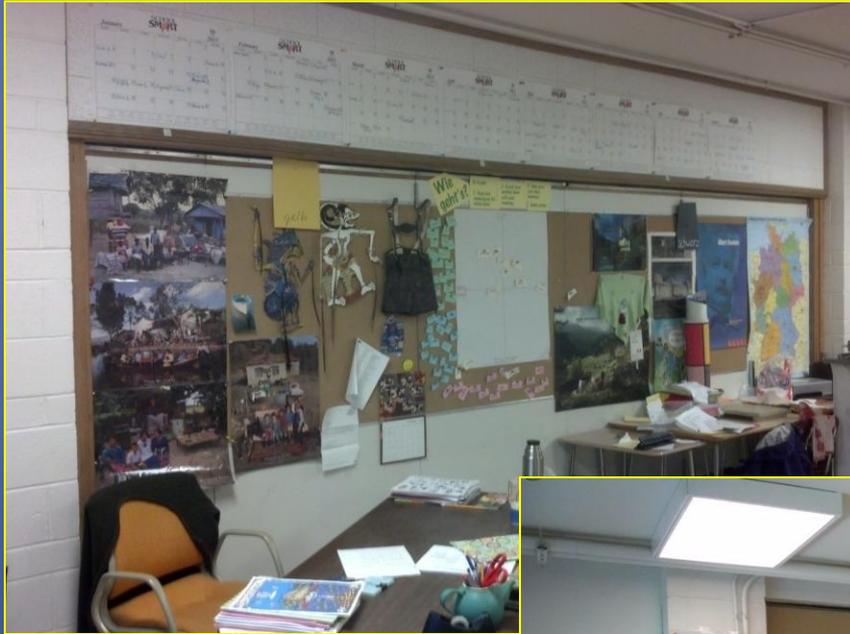


UPHAM: VCT Replacement in Entry Foyer

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Middle School

PROJECT REFERENCE NO.	PROJECT DESCRIPTION	BUDGET REQUEST
MS-1	Steam Trap Replacement	\$27,000
MS-2	Replace 3 Folding Classroom Partitions	\$70,000
MS-3	Entry Lobbies Evaluation	\$8,000
MS-4	Curriculum & Production Area Modifications	\$35,000
MS-5	Oil Tank Removal	\$150,000
MS-6	Musical Instrument Storage	\$95,000
MS-7	Ductless Air-Conditioning Units	\$91,000
Total =		\$476,000



MS: Replace 3 Folding Classroom Partitions

December 2nd FMD Presentation



MS: Entry Lobbies Evaluation

December 2nd FMD Presentation



Production Shop



Proposed Curriculum Office Space

MS: Curriculum/Production Area Modifications

December 2nd FMD Presentation

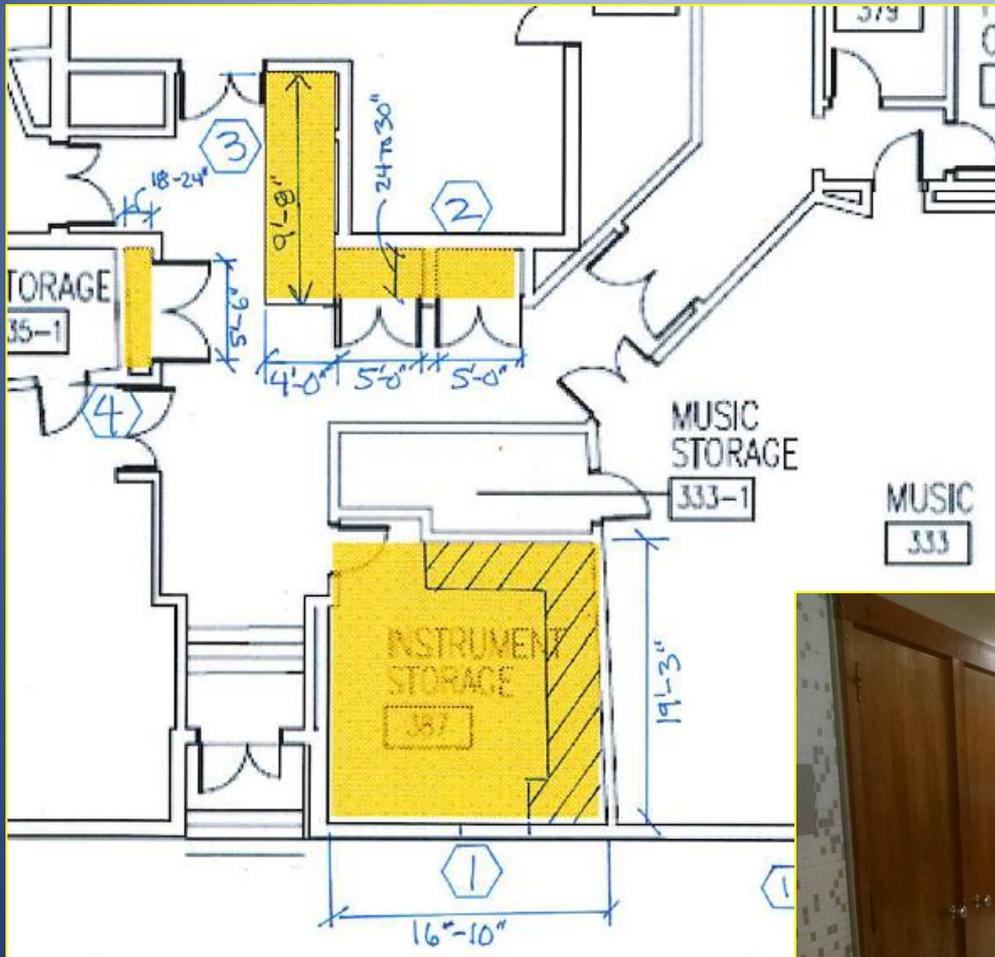


Top of Oil Tank



1997 Installation

MS: 12,500 Gal Oil Tank Removal



MS: Musical Instrument Storage



Typical Window AC Unit to be Removed



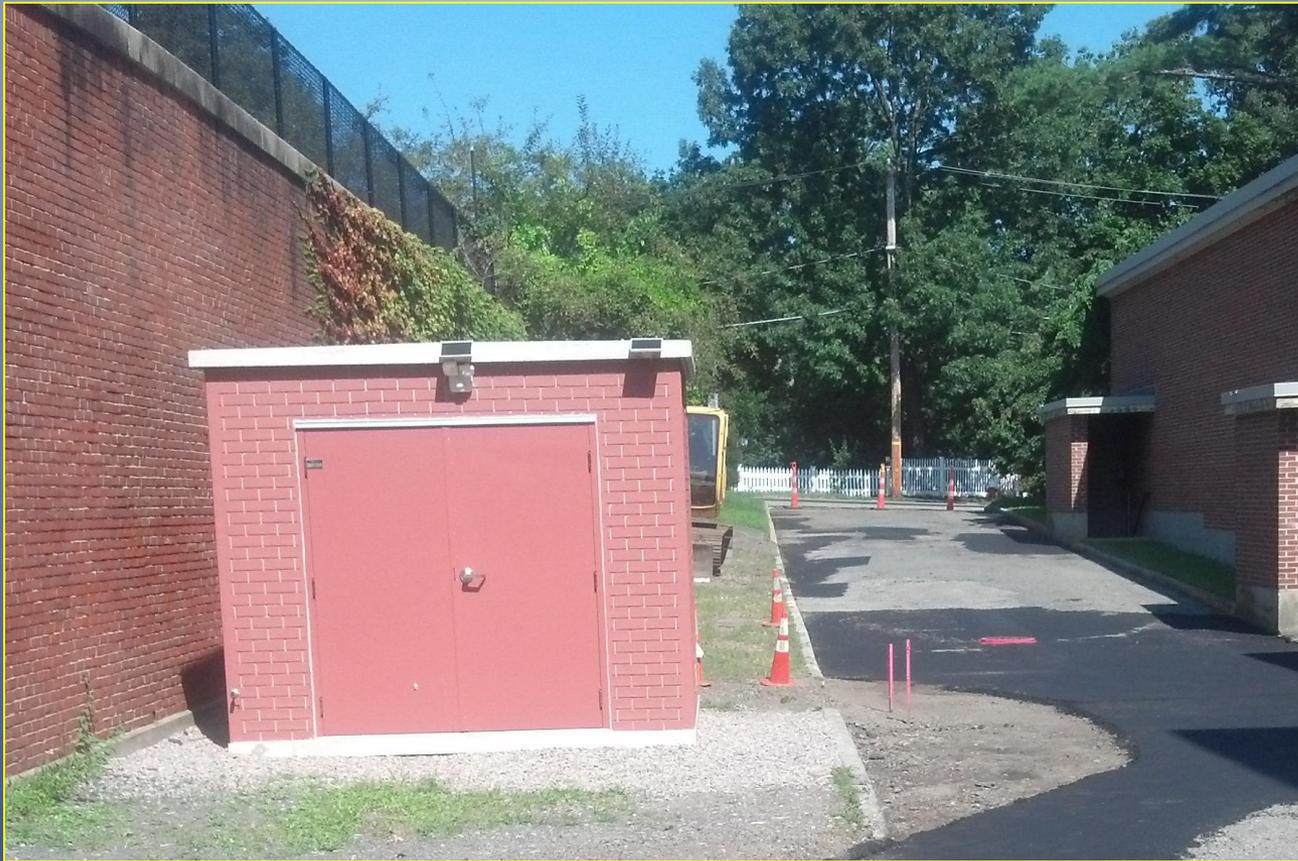
Ductless Split System

MS: Ductless Air-Conditioning Units

December 2nd FMD Presentation

High School

PROJECT REFERENCE NO.	PROJECT DESCRIPTION	BUDGET REQUEST
HS-1	2 Precast Concrete Sheds	\$39,000
Total =		\$39,000



High School: 2 Precast Concrete Storage Sheds

Districtwide

PROJECT REFERENCE NO.	PROJECT DESCRIPTION	BUDGET REQUEST
DW-1	Environmental Testing and Mitigation	\$12,000
DW-2	Space Contingency	\$35,000
DW-3	Custodial Equipment	\$50,000
DW-4	Grounds Equipment	\$15,000
DW-5	Maintenance Equipment	\$10,000
Total =		\$122,000



Space Contingency

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Environmental Testing and Mitigation

December 2nd FMD Presentation



Carbon-fiber Window Washing Kit



Autoscrubber Uses Ionized Water Only

Custodial Equipment

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Next Steps

- SC can review plan in detail (FMD website)
- FMD to respond to SC questions
- Update/finalize plan as necessary
- Advocate for projects up to Annual Town Meeting
- Provide support to SC at Town Meeting
- Implementation in 2016
 - Plan, Design, Bid and Build

FY17 Capital Requests



QUESTIONS?

Email: jmcdonough@wellesleyma.gov

http://www.wellesleyma.gov/pages/wellesleyma_facilities/index

Facilities Maintenance Department