



## ARTICLE 14: CMS Facilities

### **ARTICLE 14. CONCORD MIDDLE SCHOOL FEASIBILITY STUDY**

Ms. Bout moves: that the Town take affirmative action on Article 14 as printed in the Handout pertaining to the Article.



## ARTICLE 14: CMS Facilities

# **The Concord Middle School buildings are at a critical juncture.**

- Both buildings are obsolete and deteriorating.
- We believe that trying to extend their life will cost Concord taxpayers more in the end.



## ARTICLE 14: CMS Facilities

### Agenda

- Tonight's Request
- How Did We Get Here
- Options to Move Forward
- Costs & Implications
- Next Steps



## ARTICLE 14: CMS Facilities

Requesting up to \$1.5M to cover:

Feasibility Study	\$400,000 ( <i>negotiated; not to exceed</i> )
Schematic Design	\$500,000 ( <i>negotiated; not to exceed</i> )
Testing/Environmental/Survey	\$300,000 ( <i>budget amount</i> )
Owner's Project Manager (OPM)	\$300,000 ( <i>negotiated; not to exceed</i> )





## ARTICLE 14: CMS Facilities

### **Feasibility Study:**

With guidance from the Building Committee, the feasibility study will analyze alternatives to construct a middle school building on the Sanborn site.



## ARTICLE 14: CMS Facilities

### **Schematic Design:**

The Project Team will develop a schematic design of sufficient detail to establish the scope, budget, and schedule for a proposed project.



## Testing and Surveys:

The Feasibility Study and Schematic Design will collectively require analysis of factors such as:

- Site Survey
- Geotechnical and Geo-environmental Investigations
- Hazardous Materials Reports
- Boring Tests
- Test Pits
- Observation wells
- Testing and Chemical Analysis of site substrate conditions
- Traffic Study (if necessary)



## ARTICLE 14: CMS Facilities

### **Owner's Project Manager:**

The OPM is a professional construction management firm hired by the Building Committee to oversee the entire construction project.



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## ARTICLE 14: CMS Facilities

CMS operates as “one school” in two buildings, located a mile apart.

### Sanborn – 55 Years Old

- 84,438 sf on 31.29 acres
- Opened in 1964 as Jr. High
- Dual-classroom modular buildings added 2004-2016 to address overcrowding

### Peabody – 49 Years Old

- 56,388 sf on 7.99 acres
- Designed as Open-Concept Elementary School
- Opened in 1970 as CMS overflow



## ARTICLE 14: CMS Facilities

### 2016 – CMS Facilities Planning Committee Formed

- Committee of 15 community members
- Met monthly, held public forums
- Finegold Alexander Architects asked to answer the following:
  - *What would it take to remain in the current buildings for 10 years?*
  - *What are options and estimated costs for a renovation?*
  - *What are options and estimated costs for a new building?*



## 2017– Finegold Alexander Architects Findings

### Current Conditions

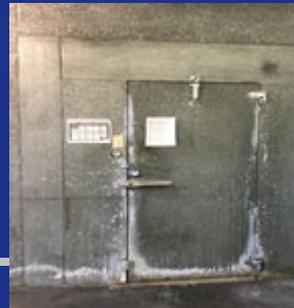
- Peabody and Sanborn Conditions are Deteriorated and Obsolete
- Though well-maintained, they are at the end of their reliable life
- Two Campus Configuration is Inefficient and Expensive
- Result is sub-optimal educational experience



## ARTICLE 14: CMS Facilities

### Current Conditions at Sanborn and Peabody

- Operational Inefficiency – approx. \$548K/ year
- Outdated infrastructure – Pipes, Septic, Roofs, etc.
- Aging Equipment – unreliable, parts often unavailable
- Overcrowding – 3 mods, closets as learning space, etc.
- Environmentally Unsound – energy inefficiency





# Untapped Educational Potential





## 2017– Finegold Alexander Architects Findings

### 10-Year Outlook

To remain in current buildings for 10 years and attain appropriate educational environment will require significant investment.

Estimated Cost:

\$34-47 Million

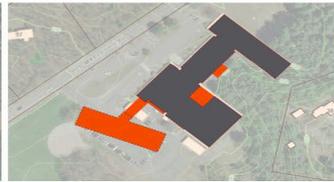


## ARTICLE 14: CMS Facilities

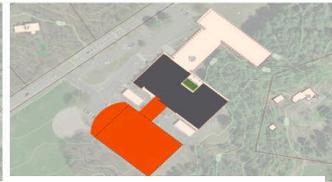
# 2017– Finegold Alexander Architects Findings\*



**Existing Condition**  
**\$67.9 Million**



**Classroom Addition**  
**\$58.3 Million**



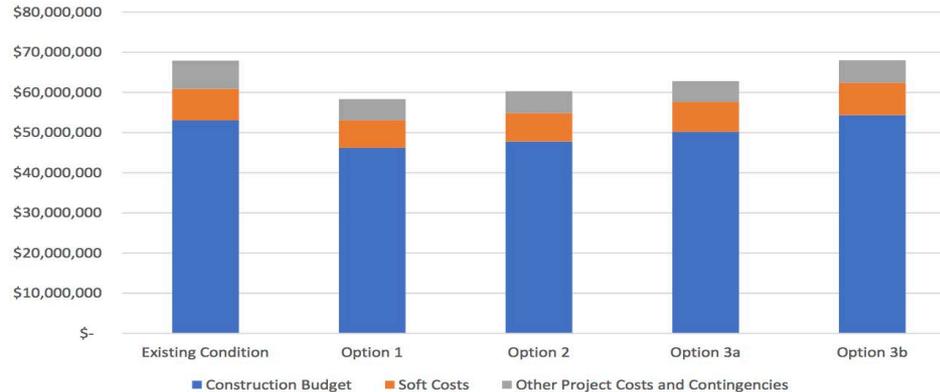
**Reconfiguration**  
**\$60.3 Million**



**New - MSBA**  
**\$62.8 Million**



**New – MSBA+**  
**\$68.0 Million**



\*Cost estimates  
in 2017 dollars



### MSBA Prospects

- The MSBA (Mass School Building Authority) partially subsidizes school building projects based on a town's "wealth factor".
- Concord applied in 2017 and 2018. Results were:
  - **Need confirmed by MSBA.**
  - **Insufficient funding to support all needs in the state.**
- Applying in 2019.



### MSBA Prospects

We believe that MSBA Reimbursement is unlikely.

- Acceptance rate 17% and decreasing yearly.
- Construction costs escalating faster than available funds.
- Concord has already been funded 3 times in the past 15 years.



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## ARTICLE 14: CMS Facilities

### Options Considered:

1. Maintain existing buildings indefinitely

- 2017 Cost Estimate: \$67.9M → *Dismissed*

2. Wait 10 years, then renovate or rebuild

- 2017 Cost Estimate: \$34-47M → *Dismissed*

3. Move forward with renovation

4. Move forward with new building project



## Renovate vs. Rebuild

### Renovation ~ \$80M

- Unknown abatement costs
- Relocation of students
- Less energy-efficient
- Ongoing maintenance
- Design possibilities limited

### New Building ~ \$90M

- Negates abatement risk
- No disruption to education
- Maximizes energy efficiency
- Minimizes post-construction maintenance needs
- Allows for design to fulfill school and community needs



## ARTICLE 14: CMS Facilities

### Recommendation

**Based on analysis and discussions with Finegold Alexander Architects, the CMS Facilities Planning Committee and the Concord School Committee recommend planning for a new building on the Sanborn site.**



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## ARTICLE 14: CMS Facilities

### Estimated Project Cost of a New Building

Avg Cost/SF in Middle School Construction:	\$648
Recommended CMS Square Footage:	125K
Annual Escalation in MS Construction Costs 2010-16:	6.93%

Total Project Cost estimated to be in the \$90 million+ range



## ARTICLE 14: CMS Facilities

### Cost of Waiting

- \$2.5 - 7.5M/ year in Escalation Cost
- \$548K/ year in Operating Costs
- \$100K/ year in Maintenance/Repair Costs
- Yearly risk of major expense due to system failures
  - *Plumbing, Septic and Roof would total over \$6M*

TOTAL COST:

\$3.15 - \$8.15M/ YEAR

At Risk:

\$6M+ at any time



## Tax Impact

*Assuming: 4.25% interest, 25 year term, 3-7% yearly escalation*

### Estimated Yearly Cost per Median Household

<u>Feasibility Year</u>	<u>Peak Year</u>	<u>Yearly Average</u>
<b>2019</b>	<b>\$1,015</b>	<b>\$764/year</b>
2020	\$1,045-1,086	\$788-825/year
2021	\$1,076-1,162	\$813-891/year
2022	\$1,108-1,243	\$839-961/year



## Cost of Waiting for MSBA

- Extends building process by ~1 year
- Even if we are accepted in 2019 (<17% chance):
  - 2-year delay and subsequent cost escalation

2-Year Cost:	\$6.3-\$16.3M
At Risk:	\$6M+ at any time
TOTAL COST:	\$6.3-22.3M
<i>Estimated Reimbursement:</i>	<i>\$18-22.5M (Potentially Consumed)</i>



## ARTICLE 14: CMS Facilities

### Recommendation

**The Concord School Committee recommends immediate action as the most cost-effective and responsible plan.**



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## ARTICLE 14: CMS Facilities

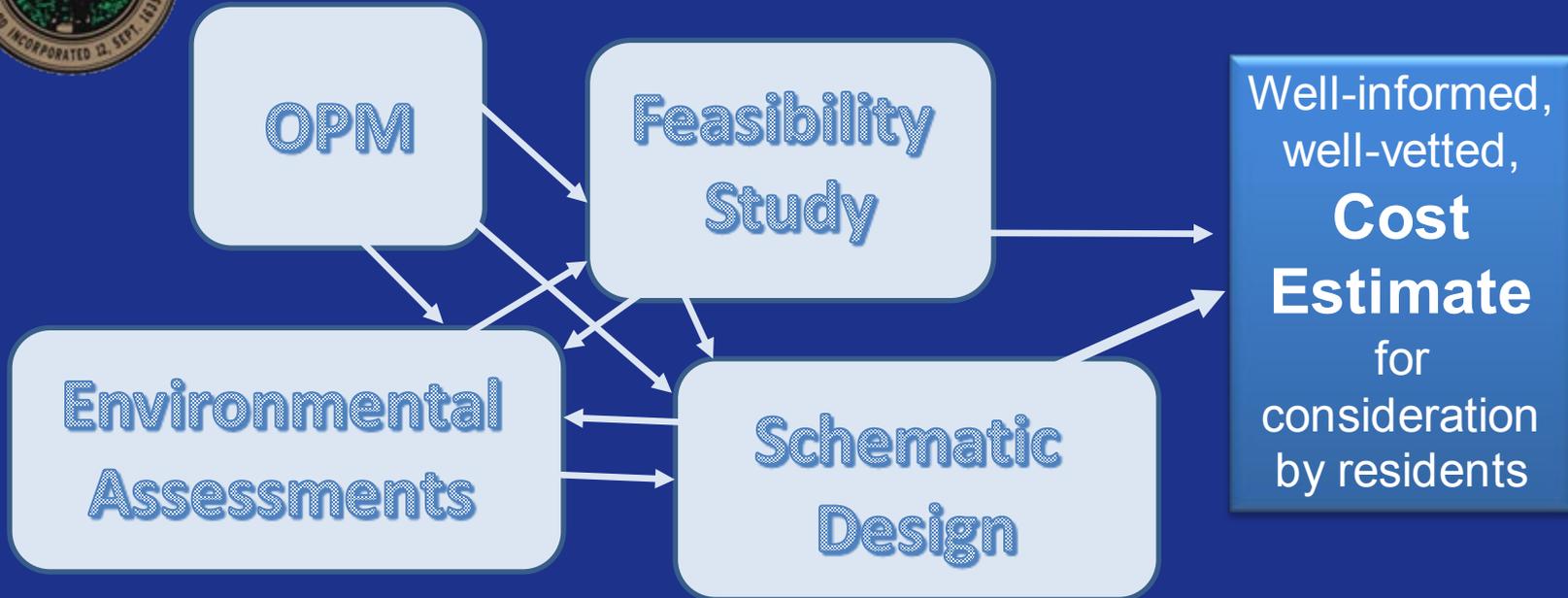
### Funding for Feasibility Study & Design

Feasibility Study	\$400,000 <i>(negotiated; not to exceed)</i>
Schematic Design	\$500,000 <i>(negotiated; not to exceed)</i>
Testing/Environmental/Survey	\$300,000 <i>(budget amount)</i>
Owner's Project Manager (OPM)	\$300,000 <i>(negotiated; not to exceed)</i>
<b>TOTAL</b>	<b><i>up to \$1.5M</i></b>

*2019 Tax Impact to Median Household:* **\$28.74**



## ARTICLE 14: CMS Facilities



Components are integral to each other and critical to informed decisions.



## Funding for Feasibility Study & Design

**Industry Standard since 2010:**

**Feasibility Study &  
Schematic Design bid  
and contracted together.**

### **Risks of separating elements:**

- Cost for each element increases
- Cost of eventual project increases
- Delays project timeline and limits potential project bidders
- Necessary information is lacking



## Conclusion

The CMS Facilities need is a reality.  
To address it responsibly, we must:

**Fund the full Feasibility Study & Schematic Design to  
minimize burden on Concord taxpayers**



## ARTICLE 14: CMS Facilities

### **ARTICLE 14. CONCORD MIDDLE SCHOOL FEASIBILITY STUDY**

Ms. Bout moves: that the Town take affirmative action on Article 14 as printed in the Handout pertaining to the Article.



## ARTICLE 14: CMS Facilities

# School Committee Statement



## ARTICLE 14: CMS Facilities

**Thank you to all who have joined us for  
Information Sessions, Public Forums, and  
Building Tours!**



## The Tax Burden

We realize it's a burden. We feel it. We wish there were another way.  
**Unfortunately, the alternative is a heavier burden.**

### Estimated Yearly Cost per Median Household

<u>Feasibility Year</u>	<u>Peak Year</u>	<u>Yearly Average</u>
<b>2019</b>	<b>\$1,015</b>	<b>\$764/year</b>
2020	\$1,045-1,086	\$788-825/year
2021	\$1,076-1,162	\$813-891/year
2022	<b>\$1,108-1,243</b>	<b>\$839-961/year</b>



## Why Now

For every year we wait...

- Building cost increases by \$3-8 Million
- We spend \$548,000 on redundancy costs.
- We spend \$100,00 or more on maintenance and repairs.

**The longer we wait, the more we spend.**



## Why \$1.5 Million

MSBA Practice: To contract Modules 3 and 4 (Feasibility Study and Schematic Design) together

- ❖ Environmental Assessments inform both steps
- ❖ Provides better information and more accurate estimate
- ❖ Allows for Town to authorize building plans with confidence
- ❖ To provide for less would be to limit our ability to conduct thorough and comprehensive planning.

**It's essential that we do this right.**



## Our Values as Priorities

In Concord, we value Education.

We need to provide for it.

We hope you'll support us in doing so  
effectively and responsibly.



## ARTICLE 14: CMS Facilities

# ADDENDUM



## ARTICLE 14: CMS Facilities

### **Feasibility Study:**

With guidance from the Building Committee, the feasibility study will:

- Generate an initial space summary based on the District's educational program
- Establish design parameters
- Develop alternatives to construct a new middle school building on the Sanborn site
- Perform preliminary and final evaluation of alternatives
- Recommend the most cost-effective and educationally appropriate solution.



## ARTICLE 14: CMS Facilities

### **Schematic Design:**

During Schematic Design:

- The Project Team will develop a robust schematic design of sufficient detail to establish the scope, budget, and schedule upon which to evaluate the basis for a proposed project.
- The design will be of sufficient detail to request DESE approval of the proposed project in relation to the District's Special Educational program and to request Town authorization and financial support to move forward.



## ARTICLE 14: CMS Facilities

### **Geo-Environmental and Other Assessments:**

Both the Feasibility Study and Schematic Design will require analysis of factors such as:

- Hazardous materials
- Geo-environmental issues
- Other environmental factors that could both affect the building process and/or appear as results of it.

Other Services and Contingency will cover additional services and unanticipated costs as requested by the Building Committee.



## ARTICLE 14: CMS Facilities

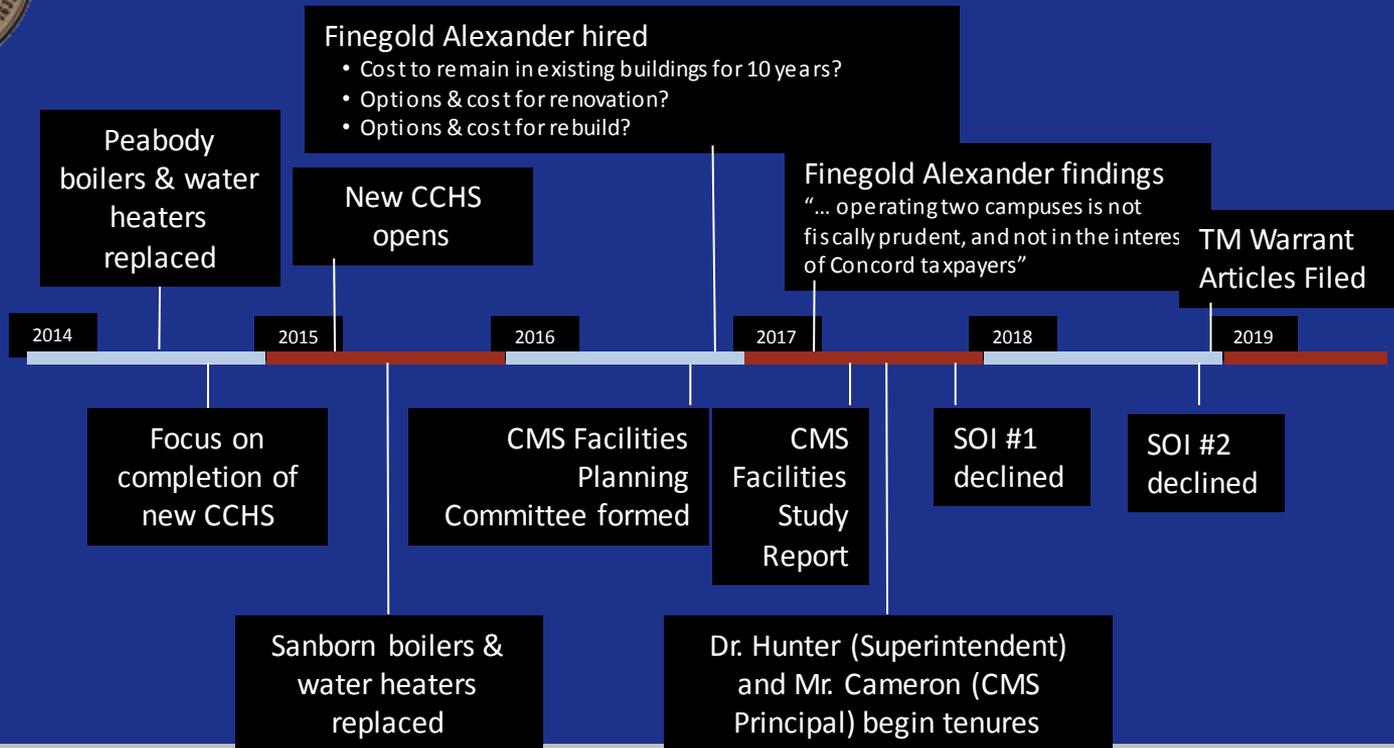
### **Owner's Project Manager:**

The OPM is a professional construction management firm hired by the Building Committee to provide project management services. The OPM provides:

- Consultation regarding design, scope of work, cost estimating, designer and contractor selection, and project evaluation
- Monitoring of procurement, quality of service, workmanship, timeliness, and contractual obligations/compliance with State Laws and requirements.
- Help with Site Evaluation and Contractor Management
- Coordination of Informational and Input sessions



# ARTICLE 14: CMS Facilities





## Operational Inefficiency

- Challenge to maintain educational and service equity between two buildings
- Requires redundant positions
- Expensive utility costs due to outdated systems
- **Excess operational expenses of \$548,000 per year to maintain two buildings**



## Outdated Infrastructure

- Original Heating, Plumbing, & Electrical Systems
- Sarnafil PVC roofs are at end of projected lifespan
- Septic systems are over 50 years old
- Ventilation and air circulation are nonexistent
- Hazardous materials such as asbestos, mercury and PCBs are in both buildings
- Neither building has a fire suppression system
- Concrete is flaking off the Peabody building - final stages of concrete failure





# Aging Equipment

- Most mechanical and electrical equipment original to buildings.
- Mechanical equipment unreliable and subject to failure.
- No backup generator for power failure.
- Parts often not available.





# Overcrowded Buildings

- 3 modular units at Sanborn
  - Students must continuously exit and enter building
  - Often creates delays in class start times
  - No bathrooms leads to extra time out of class
- Sanborn custodial closet converted to learning space
- Peabody “cafeteria” congested with lockers
- Peabody stairwell stiflingly congested between classes



## ARTICLE 14:CMS FACILITIES



### Imagine...

Team-based spaces for interdisciplinary and project-based learning  
(Also maintains “small community” feel.)



An inspiring learning environment  
leveraging natural light and fresh air



## Long-Term Viability of CMS Buildings

2014/2015: Projected to last 15-30 years *with investment*.  
Capital Expense plans totaled \$9.44 million.

2016: School Committee concerned about investment  
without better understanding of conditions.  
Facilities Planning Committee formed.

2017: Finegold Alexander Architects completes Existing  
Conditions Report. Recommends against  
maintaining buildings.



## ARTICLE 14: CMS FACILITIES

**The School Committee believes that our chances of receiving MSBA reimbursement again are very low.**

- MSBA Acceptance rates have declined since 2015:  
2015: 27% 2016: 19% 2017: 18% 2018: 17%
- Growth in available funds outpaced by growth in building costs. -  
Burlington: 7 yrs Dudley-Charlton Regional School District: 11 yrs
- Concord has already received MSBA support for 3 schools.
- Concord's last experience with the MSBA presented some challenges.



# MSBA Data

## 2016 MSBA School Survey

MSBA surveyed 1,497 schools across the state

270 schools require moderate to extensive renovation  
and/or subsist in generally poor condition

131 schools over 100 years old

105 schools over capacity

98 schools use temporary spaces (e.g., portable classrooms)  
for more than 10% of total classroom space



# Self-Funding Precedent

ARTICLE 14: CMS FACILITIES

- Other Schools that have self-funded new building projects:
  - Lincoln Public Schools
  - Brookline High School
  - Watertown Public Schools
  - Willard Elementary School
- Other Schools that have self-funded renovation projects:
  - Watertown Public Schools
  - Wakefield Public School
  - Bedford Public Schools (3 buildings)
  - Dighton-Rehoboth (5 buildings)



## Project Cost - Construction

- Average cost for 2019-2020 MSBA middle school projects is **\$648 per square foot**
- 2017 Finegold Alexander study suggests **~125,000 square foot** building to deliver our educational program
- Total estimated cost in 2019 is approximately \$81 million
- Construction cost growth from 2010 to 2016 for MSBA funded projects averaged **6.93% per year**
- Similar projects in process are projected at over \$90 million
- Given our best timeline, likely cost in **\$90 million + range**



## ARTICLE 14: CMS Facilities

### Estimated Project Cost after Escalation (assuming 3-7% yearly escalation)

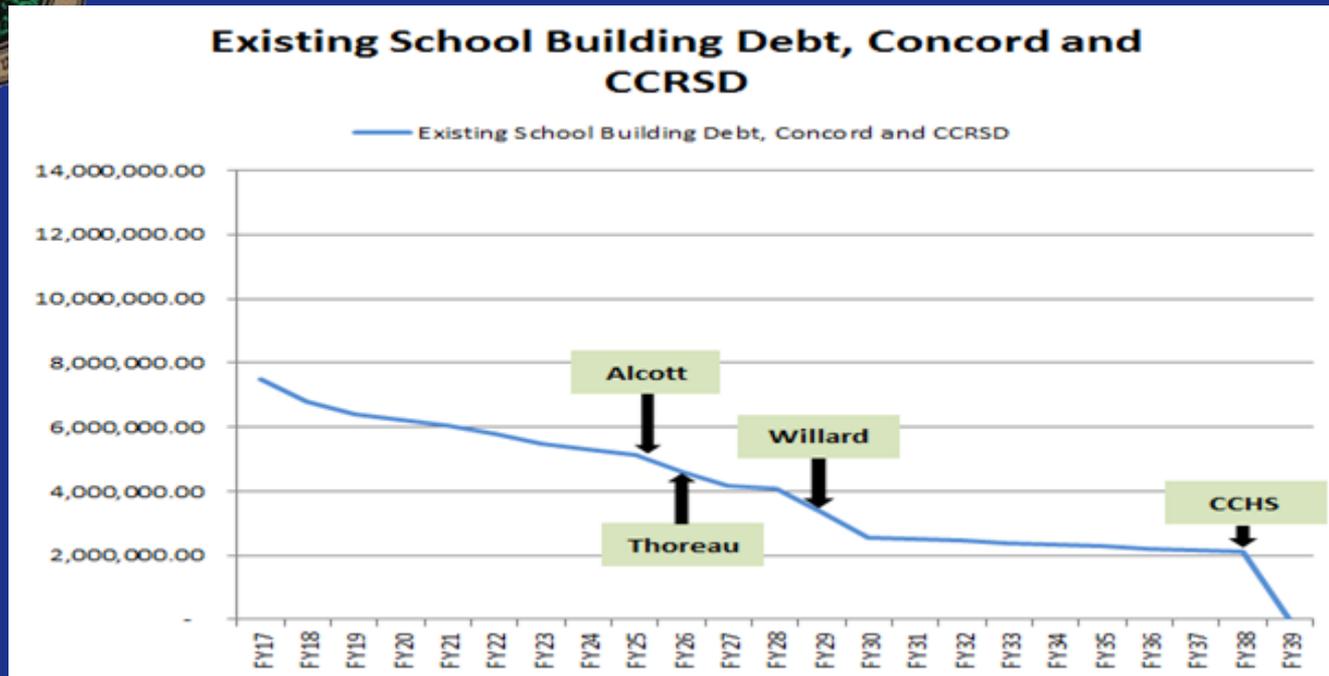
Building Cost with 2019 Feasibility (approx):	~\$90M
Building Cost after 1 year escalation:	~\$92.5-97.5M
Building Cost after 2 years escalation:	~\$95-105M

*Note: These are rough estimates for calculation purposes only.*



# Town Fiscal Factors

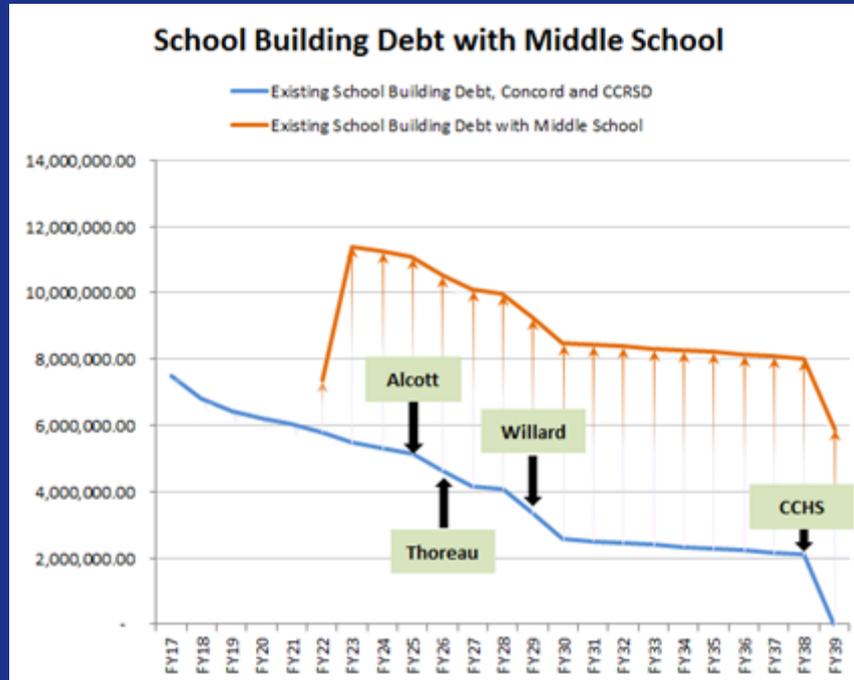
ARTICLE 14: CMS FACILITIES





# Town Fiscal Factors

ARTICLE 14:CMS FACILITIES





## Heating lines show signs of corrosion:

## ARTICLE 14: CMS FACILITIES

- Recent leak at Sanborn
- Total cost to replace heating lines in both buildings: **\$1,168,000**

## Sarnafil PVC roofs at end of projected lifespan:

- Small leaks patched, Larger seam failure possible
- Total cost to replace roof in both buildings: **\$4,556,000**
- Septic System over 50 years old:
  - Recent back up at Sanborn – Cost \$20,000 to repair
  - Total cost to repair or replace septic: estimated at **\$300,000+**
  - **Potential Repair/ Replacement Costs Exceed \$6,000,000**



## ARTICLE 14: CMS Facilities

### Other Cost/ Impact Factors

If we consolidate to one building:

1. Reduction of taxpayer impact from reduced Operating costs
2. Reduction of taxpayer impact from reduced maintenance
3. Improved energy efficiency and sustainability
4. Peabody can be returned to Town as asset



# Potential Reimbursement

ARTICLE 14: CMS FACILITIES

- Reimbursement is based on a town's "wealth factor"
- CCHS project baseline reimbursement rate was 34.5%
- CCHS project effective reimbursement rate (after exclusions) was 29%
- Scope exclusions have continued to grow over time
- Middle Schools excludes – auditoriums, regulation gymnasiums, etc
- CMS project effective reimbursement rate is estimated to be 20-25%
- On a \$90m Building, estimated reimbursement is \$18-22.5m
- Reimbursement benefit is significantly consumed by waiting



## ARTICLE 14: CMS Facilities

### Other benefits to moving forward without MSBA

- Potential for Environmentally Sustainable Design
- Potential for flexible design, long-term building
- Potential for Community Use
- Faster Timeline



# Timeline

## ARTICLE 14: CMS FACILITIES

- **Feb/ Mar/ Apr/ May, 2017:** Facilities Planning Committee discusses facilities options.
- **June, 2017:** FPC approves two “viable options” to move forward: renovate or rebuild.
- Allows for multiple forms of MSBA involvement.
- Discussion of cost-benefit analysis of renovating vs. rebuilding.
- **June, 2017:** School Committee discusses FPC analysis.
- **Aug/ Sep, 2017:** School Committee reviews and discusses plans.
- **Feb/ Mar/ Sep/ Nov/ Dec, 2018:** SC reviews and discusses plans
- **December, 2018:** School Committee recommends Feasibility Study.



## ARTICLE 14: CMS Facilities

### Next Steps

- ❖ Authorize Funding – Town Meeting
  - Form Building Committee – Select Board
  - Hire OPM – Building Committee
  - Conduct Feasibility Study & Schematic Design – OPM
- ❖ Authorize Funding for Proposed Design – Town Meeting
  - Solicit Detailed Design – OPM
  - Begin Construction – Contracted Firm

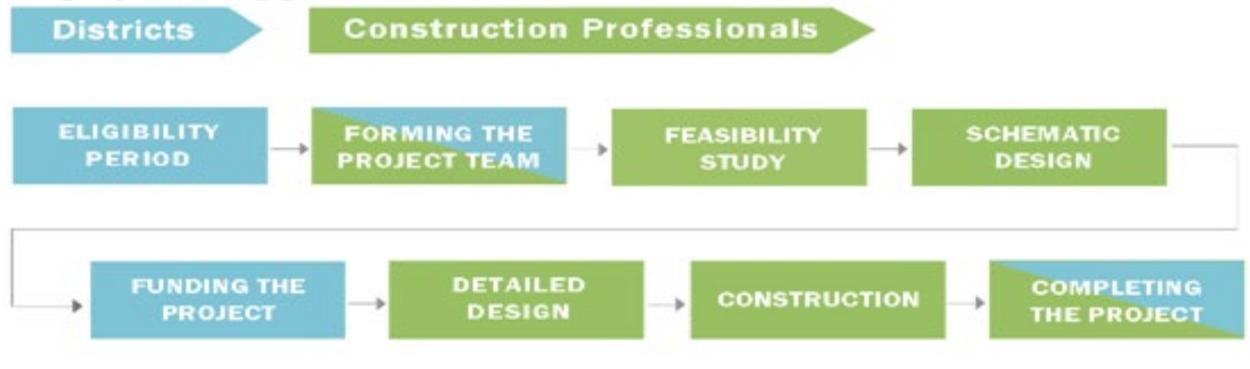


# MSBA Process

ARTICLE 14: CMS FACILITIES

## MSBA Building Process

*Steps primarily for:*



- Once invited to the MSBA program, the estimated time to project completion is 5-6 years
- Concord was not invited in to the MSBA pool in 2017 or 2018



## ARTICLE 14: CMS Facilities

### Concord must decide:

1. Fund preparations for a new, more efficient building
2. Delay the inevitable, funding both short-term renovations and a long-term building project – at a higher cost to residents