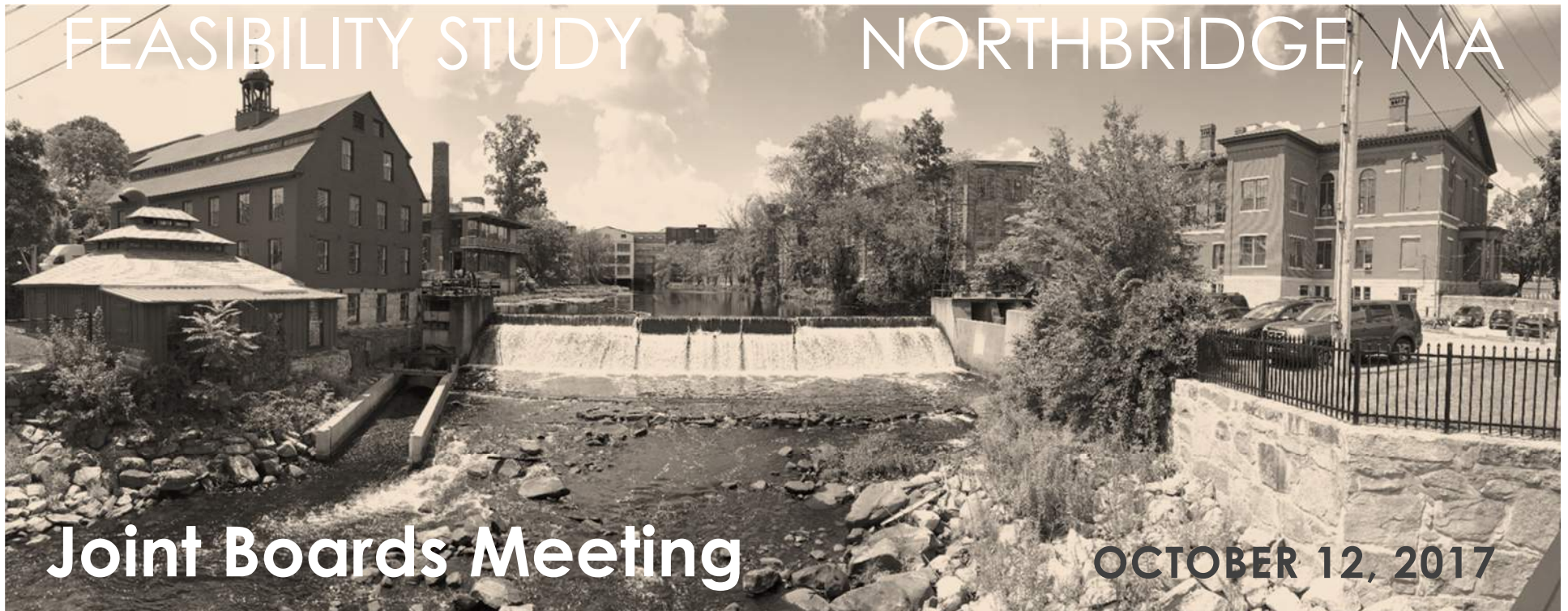


W. EDWARD BALMER SCHOOL

FEASIBILITY STUDY

NORTHBRIDGE, MA



Joint Boards Meeting

OCTOBER 12, 2017



Massachusetts School Building Authority
Funding Affordable, Sustainable, and Efficient Schools in Partnership with Local Communities



- 
- 1. Introductions**
 - 2. Process and Schedule**
 - 3. Defining the Need**
 - 4. Site Selection**
 - 5. Sustainable Design**
 - 6. Selected Design Alternatives**
 - 7. Conceptual Cost Estimates**
 - 8. Community-Wide Survey**
 - 9. Questions, Comments, Feedback**



SCHOOL BUILDING COMMITTEE:

Joseph Strazzulla	Chair, School Building Committee
James Marzec	Member, Board of Selectmen
Michael LeBrasseur	Chair, School Committee
Adam Gaudette	Town Manager
Steven Gogolinski	Member, Finance Committee
Dr. Catherine Stickney	Superintendent of Schools
Melissa Walker	School Business Manager
Steve Von Bargen	Director of Facilities & Operations
Karlene Ross	Principal, Balmer Elementary School
Jill Healy	Principal, Northbridge Elementary School
Kathleen Perry	Director of Pupil Personnel Services
Paul Bedigian	Building, Planning, Construction Comm.
Jeffrey Tubbs	Community Member
Peter L'Hommedieu	Community Member
Jeff Lundquist	Community Member
Andrew Chagnon	Community Member
Spencer Pollock	Parent Representative

study team



OWNER' PROJECT MANAGER (OPM)

Symmes Maini & McKee Associates

DESIGNER (Architect) and its team of CONSULTANTS

Dore & Whittier Architects

PUBLIC SCHOOL CONSTRUCTION PARTNER

Massachusetts School Building Authority (MSBA)

study team





PROCESS AND SCHEDULE

MASSACHUSETTS SCHOOL BUILDING AUTHORITY (MSBA) PROCESS:

Partners with the District to support the design and construction of public school facilities that are:

- Educationally Appropriate
- Flexible
- Sustainable
- Cost-Effective

MSBA will fund 57.11% plus incentives of eligible project costs for an approved project if accepted by the voters of Northbridge.

FEASIBILITY STUDY SCOPE:

- Two grade configurations/enrollments/school sizes:
 - Grades 2-4 (510 students)
 - Grades PK-5 (1030 students)
- Educational Program Requirements
- Space Program
- Location/site
- Conceptual design alternatives:
 - Renovation of existing only (bring up to code)
 - Renovation/addition (like-new interiors)
 - New Construction
- Conceptual Cost Estimates

DESIGN ALTERNATIVES

Grade 2-4
Option

MSBA-
Reimbursed
Project

Future
Projects

EXISTING SITE

2nd -4th
(510)

Balmer ES

- NEW
- ADD/
RENO

PK-1st

NES

5th-8th

NMS

9th-12th

NHS

District
Offices

Admin Bldg.

feasibility study

DESIGN ALTERNATIVES

Grade PK-5 Option

MSBA-
Reimbursed
Project

Future
Projects

EXISTING SITE

PK-5
(1030)

Balmer ES

- NEW
- ADD/
RENO

RE-
PURPOSED

NES

6th-8th
Internal
Reorg.

NMS

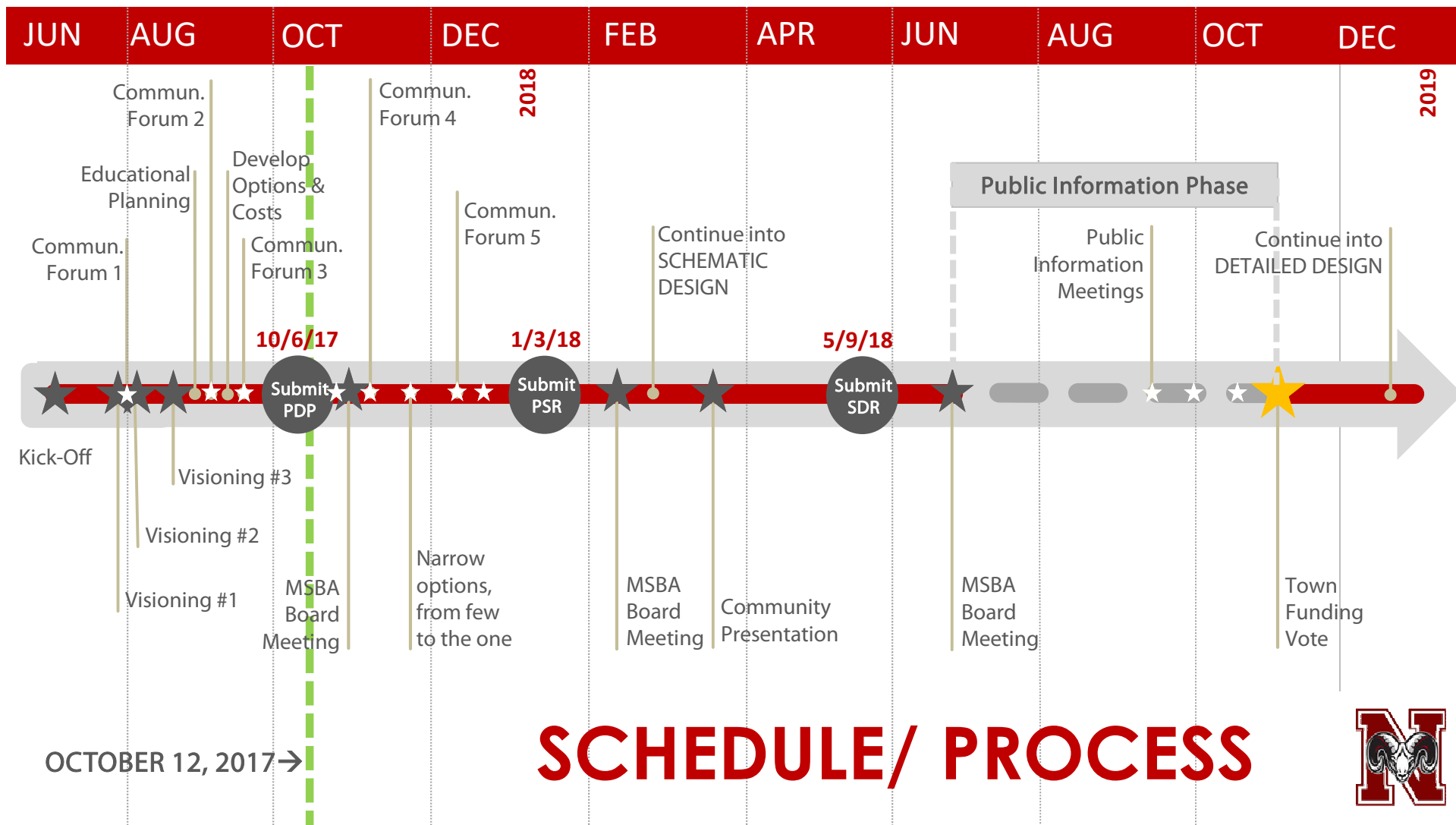
9th-12th

NHS

District
Offices

Admin Bldg.

feasibility study



COMPLETED PROJECT MILESTONES:

- January 2009 – Northbridge submits first SOI to MSBA
- May 3, 2016 – Town Meeting approves Feasibility Study Funding
- September 22, 2016 – MSBA approves student enrollment
- November 9, 2016 – MSBA executes Feasibility Study Agreement

2017:

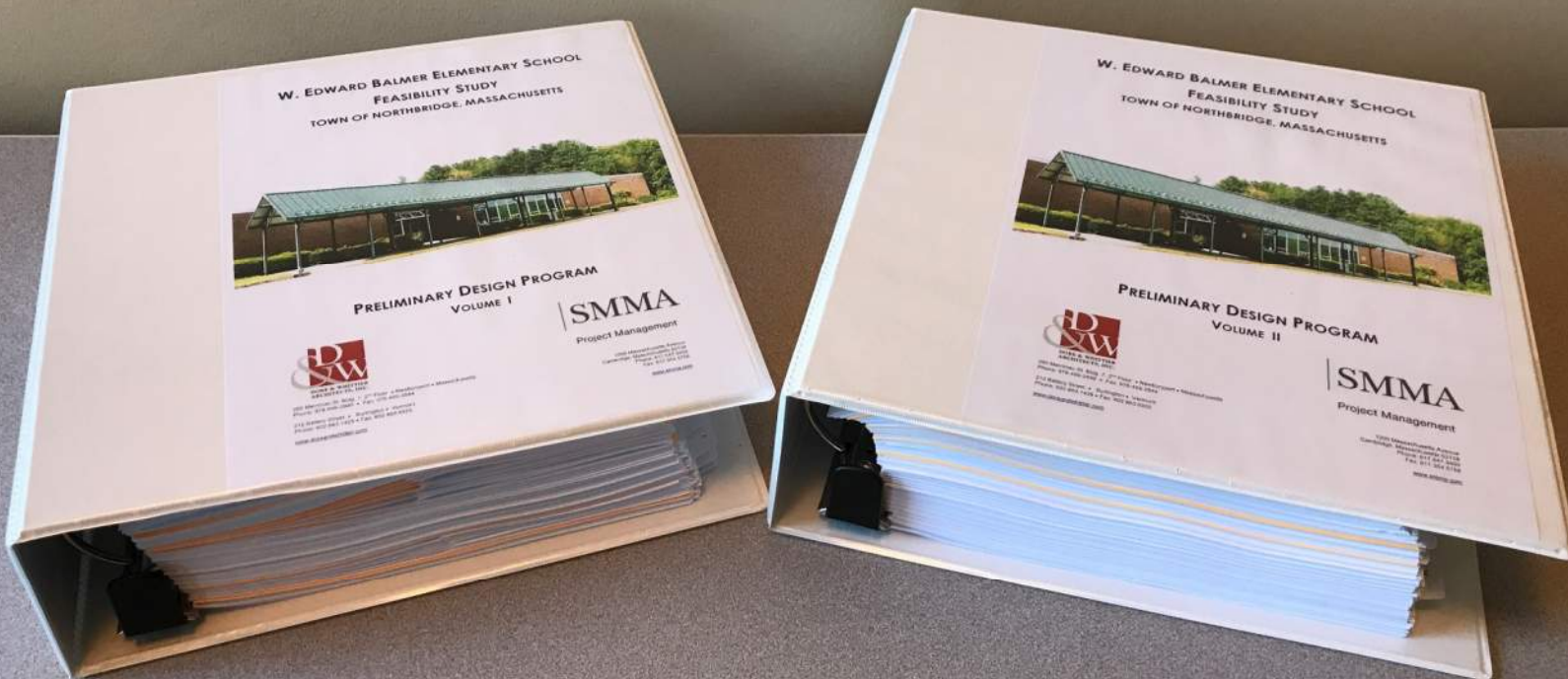
- April -June – Town retains Owner's Project Manager (OPM) and Architect
- July-August – Educational Visioning Sessions
- August 1 – Community Forum #1
- August 21 – SBC updates Select Board on project visioning
- August 28 - Community Forum #2
- September 6-10 – updates given to PTA, Parks & Rec, Baseball
- September 18 – Community Forum #3
- October 3 – SBC votes to submit Preliminary Design Program (PDP) w/ 4 options
- October 6 – Design Team submits PDP to the MSBA

feasibility study

COMPLETED TASKS:

- Site Analysis and Selection
- Educational Visioning Workshops
- Educational Programming
- Space Summary Spreadsheets
- Building Condition Evaluations
- Hazardous Material Investigation
- Phase I Site Assessment
- Preliminary Site Survey
- Wetland Delineation
- Traffic Evaluations
- Preliminary Soils Investigation
- Design Options Development
- Preliminary Cost Estimates
- Cost Analysis

COMPLETED TASKS:



PRELIMINARY DESIGN PROGRAM REPORT

Available for review at District Offices or Project Website

feasibility study



QUESTIONS?



DORE & WHITTIER
ARCHITECTS, INC.



DEFINING THE NEED

DEFINING THE NEED

- Need a long-term solution to resolve deteriorating school buildings
- Provide educational spaces to meet MSBA standards
- Update school to meet Educational Visioning Session goals
- Provide 21st century educational spaces
- Provide schools that are safe, code-compliant, and places Northbridge can be proud of.



BALMER: EXISTING PHYSICAL LIMITATIONS

Built 1968 Issues:

- Windows/ Curtain Wall
- Exterior Walls/ Thermal Insulation
- Roof patched and leaky
- Ceilings/ Interior Walls
- Cracks/ Interiors worn



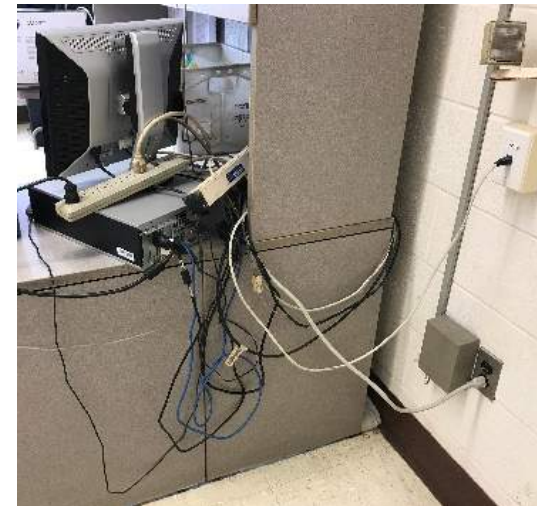
facilities assessment



BALMER: EXISTING PHYSICAL LIMITATIONS

MEP FP Issues:

- Original Mechanical/ Electrical/ Plumbing systems beyond expected lifespan
- Low Efficiency
- No Sprinkler System
- Technology exposed to room



facilities assessment



N.E.S. : EXISTING PHYSICAL LIMITATIONS

Built 1952/ 1983/ Modulares 2000

Architectural Issues

- Windows Drafty / Roof Leaky
- Exterior Walls/ Insulation
- Interiors Worn



facilities assessment



N.E.S. : EXISTING PHYSICAL LIMITATIONS

MEP FP Issues:

- Original Mechanical/ Electrical/ Plumbing systems beyond expected lifespan
- Low Efficiency
- No Sprinkler System
- Technology exposed to room



facilities assessment



BALMER: EXISTING EDUCATIONAL LIMITATIONS



MSBA SPACE NEEDS SUMMARY

- Between 90% & 110% MSBA Guideline
- Less Than 90% MSBA Guideline
- More Than 110% MSBA Guideline

space assessment



N.E.S.: EXISTING EDUCATIONAL LIMITATIONS



MSBA SPACE NEEDS SUMMARY

- Between 90% & 110% MSBA Guideline
- Less Than 90% MSBA Guideline
- More Than 110% MSBA Guideline

space assessment



EXISTING EDUCATIONAL LIMITATIONS

Grade 2-4 Option (510 enrollment):

- Existing Area (Balmer): 71,871 GSF
- Proposed (meets MSBA standard): 89,463 GSF
- **Existing Balmer School is ~ 20% undersized**

Grade PK-5 Option (1030 enrollment):

- Existing Area (Balmer + NES) 128,431 GSF
- Proposed (meets MSBA standard): 171,345 GSF
- **Existing Balmer + NES space is ~ 25% undersized**





QUESTIONS?



DORE & WHITTIER
ARCHITECTS, INC.



SITE EVALUATION CRITERIA

- **SBC reviewed all Northbridge parcels over 8 acres**
- **Public sites: 24 → made shortlist of 4 for further study**
- **Private sites: 11 → made shortlist of 3 for further study**
- **Scored seven sites using 11 development criteria:**
 - Buildable Area (Acres)
 - Wetlands/ Riparian Buffers/ Flood Zones
 - Topography
 - Soils
 - Parklands/ Article 97 issues
 - Site Utilities (Water, Sewer, Electric)
 - Two-Way Access
 - Safety
 - Location/ Bussing
 - Land Acquisition Cost
 - “Fatal Flaws”

preliminary site analysis



PREFERRED SITE: BALMER SCHOOL

- **LEAST COST**
- DISTRICT OWNS SITE
- RELATIVELY LEVEL, BUILDABLE SITE
- LIMITED WETLANDS
- GOOD SOILS
- ALL UTILITIES ON SITE
- GOOD SITE SAFETY
- 2-WAY CIRCULATION POSSIBLE
- LOCATION NEAR POPULATION
- NO ARTICLE 97 ISSUES





QUESTIONS?





GREEN & SUSTAINABLE STRATEGIES

SUSTAINABLE DESIGN:

WHY GREEN?



- Healthier, happier occupants
- Better academic achievement
- Less absenteeism
- More efficient systems, less waste
- More durable building
- Better for the planet

green strategies



PROPOSED GREEN BUILDING RATING SYSTEM: LEED BD+C for Schools



Credits or Points in Six Key Categories + *Enhancements*

- Location and Transportation
- Sustainable Site Planning
- Water Efficiency
- Energy and Atmosphere
- Materials and Resources
- Indoor Environmental Quality
- *Innovation*
- *Regional Priority*

Four Certification Levels:

Certified, Silver, Gold, Platinum

green strategies





QUESTIONS?



DORE & WHITTIER
ARCHITECTS, INC.

SELECTED DESIGN ALTERNATIVES AND COSTS



A SERIES (RENO ONLY)

- A1**
2 - 4
Balmer ES
- RENOVATIONS TO EXISTING BUILDINGS
- CODE AND DEFERRED MAINTENANCE UPGRADES
- A2**
PK-1st
NES
- NO EDUCATIONAL IMPROVEMENTS

**NON- MSBA-
Reimbursed
Projects**

B SERIES (GRADE 2-4)

- B1**
RENO/
ADD
Balmer ES
- B2**
NEW/
REAR
- B3**
NEW/
FRONT

**MSBA-
Reimbursed
Projects**

C SERIES (GRADE PK-5)

- C1**
RENO/ADD
DEMO CR
Balmer ES
- C2**
RENO/ADD
KEEP CR
Balmer ES
- C3**
NEW/
REAR
- C4**
NEW/
EAST-REAR
- C5**
NEW/
FRONT

**MSBA-
Reimbursed
Projects**

DESIGN ALTERNATIVES

preliminary design





B1 \$57.1M



B2 \$61.5M



C1 \$107.9M



C3 \$104.7M



B3 \$60.6M



C2 \$102.4M



C4 \$113.1M



C5 \$104.1M

GROUP A
Balmer + NES
CODE/ DM
ONLY
\$53.0M
total

OPTIONS OVERVIEW WITH PROJECT COST

Estimated costs are preliminary and subject to change as the project is refined.

options evaluation





B1 \$29.0M



B2 \$34.6M



C1 \$61.3M



C3 \$58.9M



B3 \$33.8M



C2 \$55.6M



C4 \$66.6M



C5 \$58.3M

GROUP A
Balmer + NES
CODE/ DM
ONLY
\$53.0M
total

OPTIONS OVERVIEW WITH COST TO TOWN

Estimated costs are preliminary and subject to change as the project is refined.

options evaluation





B1 \$29.0M



B2 \$34.6M



C1 \$61.3M



C3 \$58.9M



B3 \$33.8M



C2 \$55.6M



C4 \$66.6M



C5 \$58.3M

GROUP A
Balmer + NES
CODE/ DM
ONLY
\$53.0M
total

OPTIONS OVERVIEW WITH COST TO TOWN

Estimated costs are preliminary and subject to change as the project is refined.

options evaluation



B SERIES OPTION SELECTION: PROS AND CONS

B1 – Eliminated because does not benefit the largest number of students; of the 2-4 options, add/reno is most disruptive

B3 - Eliminated due to safety and phasing concerns; Vail fields at rear of site not preferred

B2 – Advanced as the most cost-effective, clean 2-4 solution; rear location for school, with Vail remaining in front, is preferred



C SERIES OPTION SELECTION:

PROS AND CONS

C1 – Eliminated because phasing is as complex as C2 and costs more; of the PK-5 options, this add/reno is most disruptive.

C4 – Eliminated due to cost inefficient, sprawling layout; costliest of the new construction options.

C2 – Advanced as the more cost-effective, least disruptive PK-5 add/reno solution that serves largest number of students.

C3 – Advanced as a cost- and space-efficient new construction option: rear location for school, with Vail remaining in front, is preferred.

C5 – Advanced: need to study a front option due to wetland and topo concerns in rear, and potential cost advantages in front.

preliminary design



OPTION A – CODE AND DEFERRED MAINTENANCE UPGRADES

To extend the life of the building, this renovation-only option addresses:

- deferred maintenance
- code deficiencies
- life safety issues
- basic functional deficiencies
- Does not address educational program
- **This work is not MSBA-reimbursable**



preliminary design



BALMER + NES TOTAL PROJECT COST = \$53.0 M

Estimated costs are preliminary and subject to change as the project is refined.

OPTION B2

- 2-4 (510)
- NEW CONSTRUCT.
- 2 STORIES
- REAR OF SITE
- 2 YEAR DURATION

\$61.5M

Estimated costs are preliminary and subject to change as the project is refined.



preliminary design



OPTION C2

- PK-5 (1,030)
- ADD/RENO-KEEP
- TWO STORY ADDITIONS
- 4 YEAR DURATION

\$102.4M

Estimated costs are preliminary and subject to change as the project is refined.



preliminary design



OPTION C3

- PK-5 (1,030)
- NEW CONSTRUCT.
- 3 STORIES
- REAR OF SITE
- 3 YEAR DURATION

\$104.7M

Estimated costs are preliminary and subject to change as the project is refined.



preliminary design



OPTION C5

- PK-5 (1,030)
- NEW CONSTRUCT.
- 3 STORIES
- FRONT OF SITE
- 3 YEAR DURATION

\$104.1M

Estimated costs are preliminary and subject to change as the project is refined.



preliminary design

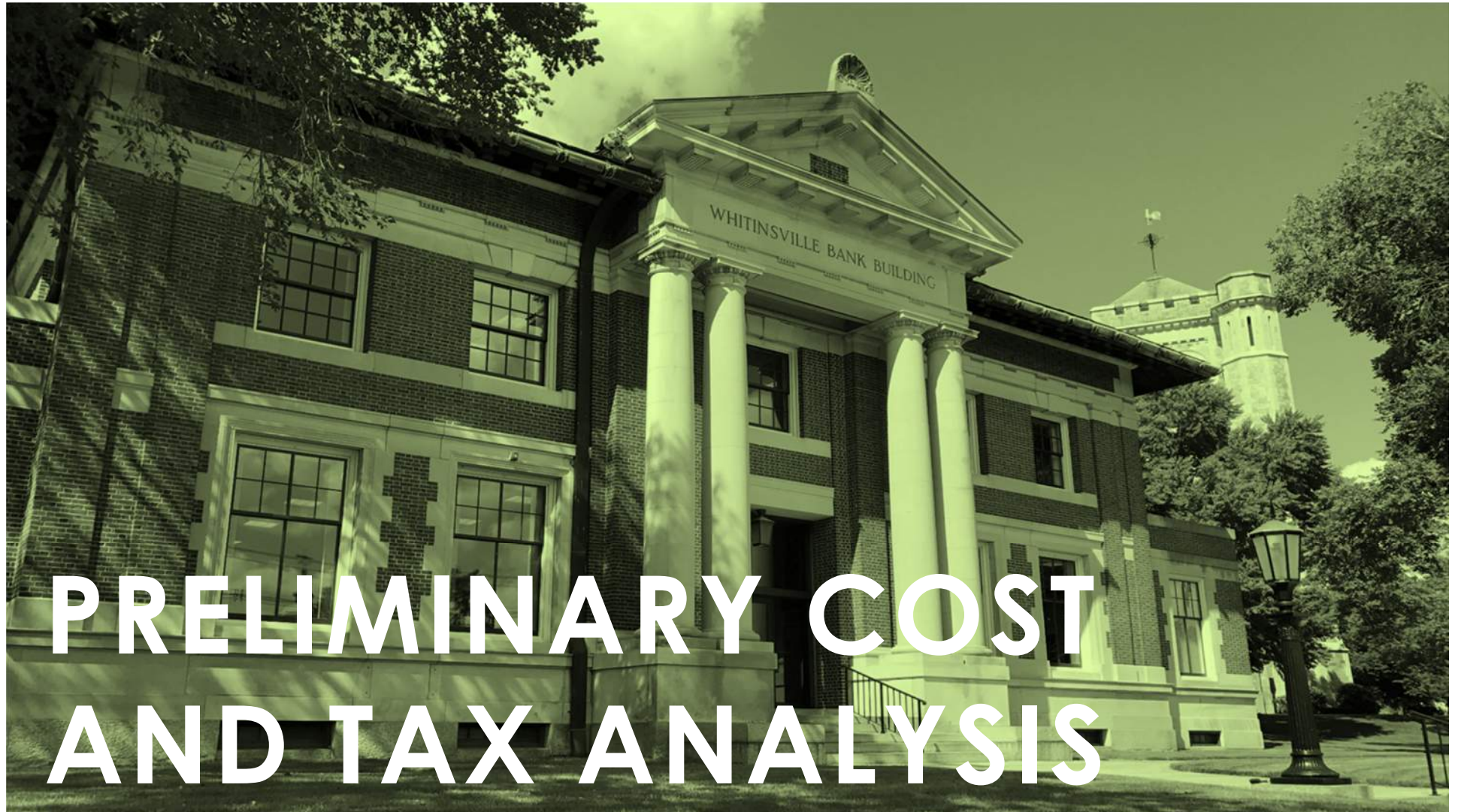




QUESTIONS?



DORE & WHITTIER
ARCHITECTS, INC.



PRELIMINARY COST AND TAX ANALYSIS

MSBA REIMBURSEMENT PROCESS

- MSBA is the state authority that administers and funds a grant program for Massachusetts school projects.
- MSBA mandates a rigorous, multi-step study and approval process.
- MSBA will reimburse all Eligible Costs, at the mandated District Base Rate (57.11% for Northbridge), plus bonus points.
- Examples of Ineligible Costs include:
 - Site costs over 8%
 - Building costs over \$326/SF
 - Asbestos flooring abatement
 - FF&E/ Technology costs over \$2,400 per student
 - Legal Fees, Moving Expenses, Construction contingencies over 1% for new construction or 2% for renovations.
 - Classroom modulares used for temporary swing space

preliminary costs



CONCEPTUAL PROJECT COST ESTIMATES

A SERIES (RENO ONLY)

- A1**
2 - 4
Balmer ES
\$32.7M
 - RENOVATIONS TO EXISTING BUILDINGS
 - CODE AND DEFERRED MAINTENANCE UPGRADES
- A2**
PK-1st
NES
\$20.3M
 - NO EDUCATIONAL IMPROVEMENTS

\$ 53.0M total

**NON-MSBA-
Reimbursed Project(s)**

B SERIES (GRADE 2-4)

B2
NEW/
REAR
\$61.5M

**MSBA- Reimbursed
Project**

C SERIES (GRADE PK-5)

C2
RENO/ADD
KEEP CR WING
\$102.4M

C3
NEW/
REAR
\$104.7M

C5
NEW/
FRONT
\$104.1M

**MSBA- Reimbursed
Project**

Estimated costs are preliminary and subject to change as the project is refined.



PRELIMINARY REIMBURSEMENT RATES

A SERIES (RENO ONLY)

A1
2 - 4
Balmer ES
0

- RENOVATIONS TO EXISTING BUILDINGS

- CODE AND DEFERRED MAINTENANCE UPGRADES

A2
PK-1st
NES
0

- NO EDUCATIONAL IMPROVEMENTS

0

**NON-MSBA-
Reimbursed Project(s)**

B SERIES (GRADE 2-4)

B2
NEW/
REAR
61.11%

**MSBA- Reimbursed
Project**

C SERIES (GRADE PK-5)

C2
RENO/ADD
KEEP CR WING
63.19%

C3
NEW/
REAR
61.11%

C5
NEW/
FRONT
61.11%

**MSBA- Reimbursed
Project**

Estimated costs are preliminary and subject to change as the project is refined.



APPROXIMATE PROJECT COST TO TOWN

A SERIES (RENO ONLY)

- A1**
2 - 4
Balmer ES
\$32.7M
- RENOVATIONS TO EXISTING BUILDINGS
- CODE AND DEFERRED MAINTENANCE UPGRADES
- A2**
PK-1st
NES
\$20.3M
- NO EDUCATIONAL IMPROVEMENTS

\$ 53.0M total

**NON-MSBA-
Reimbursed Project(s)**

B SERIES (GRADE 2-4)

B2
NEW/
REAR
\$37.4M

**MSBA- Reimbursed
Project**

C SERIES (GRADE PK-5)

C2
RENO/ADD
KEEP CR WING
\$55.6M

C3
NEW/
REAR
\$58.9M

C5
NEW/
FRONT
\$58.3M

**MSBA- Reimbursed
Project**

Estimated costs are preliminary and subject to change as the project is refined.



APPROXIMATE TAX IMPACTS

A SERIES (RENO ONLY)

A1
2 - 4
\$457.77
\$1.61
Balmer

← 20-YR AVERAGE
ANNUAL TAX
IMPACT, AVERAGE
HOME*

A2
PK-1st
\$283.50
\$.998
NES

← AVERAGE
ANNUAL TAX
INCREASE PER
\$1000 VALUATION

**NON-MSBA-
Reimbursed Project(s)**

B SERIES (GRADE 2-4)

B2
NEW/REAR
\$523.87
\$1.85

**MSBA- Reimbursed
Project**

C SERIES (GRADE PK-5)

C2
RENO/ADD
\$777.72
\$2.74

C3
NEW/REAR
\$824.36
\$2.90

C5
NEW/FRONT
\$815.86
\$2.87

**MSBA- Reimbursed
Project**

* AVERAGE HOMESTEAD VALUE = \$284,000, FY 2017 VALUATION
ASSUMPTIONS: BOND RATE 5% TERM 20 YEARS
Estimated costs are preliminary and subject to change as the project is refined





QUESTIONS?



DORE & WHITTIER
ARCHITECTS, INC.

COMMUNITY-WIDE SURVEY #1

The SBC has devised a survey designed to gather information on:

- Stakeholder group membership
- Which option is most beneficial
- Most important project considerations
- How stakeholder gets news
- How can communication with SBC be improved

COMMUNITY-WIDE SURVEY #1

**SURVEY GOES LIVE TODAY, 10/12
AND CLOSSES 10/26**

Online electronic survey at project website at
[https://www.nps.org/w-edward-balmer-school-
building-project](https://www.nps.org/w-edward-balmer-school-building-project)

And paper survey at:

Library, Community Center, Senior Center, and Town
Hall

process



NEXT STEPS

- School Building Committee meetings are every two weeks. Meetings and agendas are posted on the District's website.
- October 12-26, 2017 – Survey #1 issued
- October 30, 2017 – Community Forum #4 at Balmer ES Library
- December 6, 2017 – Community Forum #5 at NES Cafeteria
- December, 2017 - Survey #2 issued
- January 3, 2018 – Submit Preferred Schematic Report (PSR) to MSBA
- May 9, 2018 - Submit Schematic Design (SD) documents to MSBA
- June 27, 2018 – MSBA board meeting to approve project to bring to voters
- Fall 2018 – Town Vote

COMMUNITY RESOURCES

Project Website:

<https://www.nps.org/w-edward-balmer-school-building-project>

Project Email:

SBC@nps.org





B1 \$29.0M



B2 \$34.6M



C1 \$61.3M



C3 \$58.9M



B3 \$33.8M



C2 \$55.6M



C4 \$66.6M



C5 \$58.3M

GROUP A
Balmer + NES
CODE/ DM
ONLY
\$53.0M
total

OPTIONS OVERVIEW WITH COST TO TOWN

Estimated costs are preliminary and subject to change as the project is refined.

options evaluation





THANK YOU



DORE & WHITTIER
ARCHITECTS, INC.