• School Facilities Assessment Committee
  - Douglas Lapp, Assistant Town Manager
  - Michelle Austin, School Business Administrator
  - John Juros, Capital Improvement Planning Committee
  - Sheila Lima, Wing School Interim Principal
  - Paul Spiro, Building Inspector
  - Skip Tetreault, School Department, Head of Buildings and Grounds
Project Team

• Consultants
  - Symmes Maini & McKee Associates, Inc.
    - Joel G. Seeley, AIA, Principal-In-Charge
    - David Frieder, AIA, Project Architect
    - Philip J. Poinelli, AIA, Educational Programmer
  - Frank Locker Educational Planning
    - Frank Locker, Ph.D, AIA
  - Garcia • Galuska • Desousa, Electrical Engineers
**Project Scope**

- Symmes Maini & McKee Associates, Inc. (SMMA) was retained by the Town of Sandwich to:
  - Facility Condition Assessment: Building envelope; major building components and systems
  - Evaluate educational need of the school building
  - Evaluate educational need in context of population changes
  - Conduct educational visioning
  - Develop alternatives to meet needs
Project Goals

• Committee Objective
• Process
• Educational
• Community
• Building
• Site
• Construction
• Evaluation focused on:
  - Condition of Building Components / Systems
  - Repair / Replace Building Components / Systems
  - Warm, safe and dry
  - Accessibility (Handicapped)
  - How well school fulfills educational program needs
  - Range of alternatives
Town Growth

• Population increases already experienced
  ➢ 1995 to 2009 Total population increase 4,658 = 25%.
  ➢ 1995 to 2009 Student population increase 26 = <1% of the 25%.
  ➢ Student population as a % of total population 19.93% to 16.03%
  ➢ 1995 to 2011 Increase of total housing units 1,852 Added units; Decrease in % of second home units

(info from Town records)
Enrollment

• New England School Development Council (NESDEC) Report
  ➢ Historical
    ➢ 2000 to 2003 Stable K-8 population
    ➢ 2004 to Present 548 student (drop 19%)
    ➢ Current K-8 Enrollment 2,341 students
  ➢ Projected
    ➢ 2010 – 2020 Declining population, further reduction of 328 students
    ➢ 2020 Projected enrollment K-8 = 2,013 + 80 PreK
    ➢ Slow and steady decline
Despite past and expected future decline of enrollment, three K-8 schools required

<table>
<thead>
<tr>
<th>School</th>
<th>Current Population</th>
<th>PreK</th>
<th>Total Population</th>
<th>Design Capacity</th>
<th>Current Over Capacity</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Forestdale</td>
<td>767</td>
<td>0</td>
<td>767</td>
<td>750</td>
<td>17</td>
<td></td>
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<tr>
<td>Oakridge</td>
<td>801</td>
<td>0</td>
<td>801</td>
<td>750</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>H.T. Wing</td>
<td>773*</td>
<td>70</td>
<td>843</td>
<td>816</td>
<td>27</td>
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</table>

<table>
<thead>
<tr>
<th>School</th>
<th>Propose K-* Population</th>
<th>PreK</th>
<th>Total Population</th>
<th>Design Capacity</th>
<th>Under Capacity</th>
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</thead>
<tbody>
<tr>
<td>Forestdale</td>
<td>671</td>
<td>0</td>
<td>671</td>
<td>750</td>
<td>(79)</td>
<td></td>
</tr>
<tr>
<td>Oakridge</td>
<td>671</td>
<td>0</td>
<td>671</td>
<td>750</td>
<td>(79)</td>
<td></td>
</tr>
<tr>
<td>H.T. Wing</td>
<td>671</td>
<td>80</td>
<td>751</td>
<td>751</td>
<td>0</td>
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</table>

3 Equal Size Schools, 2020 PreK-8 Population = 2,093

Maximize Forestdale and Oakridge, smaller Wing for K-8

<table>
<thead>
<tr>
<th>School</th>
<th>Current Population</th>
<th>PreK</th>
<th>Total Population</th>
<th>Design Capacity</th>
<th>Under Capacity</th>
<th>Comments</th>
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</thead>
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<tr>
<td>Forestdale</td>
<td>750</td>
<td>0</td>
<td>750</td>
<td>750</td>
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<td>Redistrict</td>
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<tr>
<td>Oakridge</td>
<td>750</td>
<td>0</td>
<td>750</td>
<td>750</td>
<td>0</td>
<td>Redistrict</td>
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<tr>
<td>H.T. Wing</td>
<td>513</td>
<td>80</td>
<td>593</td>
<td>593</td>
<td>0</td>
<td>Redistrict, design for smaller school, 3 section school</td>
</tr>
</tbody>
</table>
Visioning

Edward T Wing School

Sandwich Public Schools
Sandwich, MA

October 2010
Frank Locker Educational Planning
• Acknowledgements
  ➢ Town
    ▪ Bud Dunham
    ▪ John Juros
    ▪ Douglas Lapp
    ▪ John Vibberts
    ▪ Jim Pierce
  ➢ School Committee
    ▪ Sherry Marshall
  ➢ Central Office
    ▪ Mary Ellen Johnson
    ▪ Skip Tetreault
  ➢ Parents & Community Members
    ▪ Courtney Bridge
    ▪ Melinda Ellis
    ▪ Walter Lesiak

• Discussion Topics
  ➢ Wing School
    ▪ Michele Dunham
    ▪ Laura Dunn
    ▪ Joanna Hughes
    ▪ Sheila Lima
    ▪ Paul Soltis
    ▪ Donna Tuohey
    ▪ Janet Vallee
  ➢ Architect (SMMA)
    ▪ David Frieder
    ▪ Phil Poinelli
    ▪ Lee Morrissette
    ▪ Kathryn Hovis
  ➢ Educational Planner
    ▪ Frank Locker Educational Planning

Wing School successes
Needs improvement
Potential grade configurations
Facility Concepts
Wing School organizational diagram
Educational Programming

• Teacher Meetings – Understand how school functions; How school would like to function Spinnaker, PreK, all grade levels, academic coaches

• Existing Building Size, 141, 595 SF
  ➢ Larger than MSBA standards for population
  ➢ Less net educational teaching area than MSBA standards
  ➢ Numerous undersized classrooms
  ➢ Inadequate Spinnaker program area
  ➢ Does not include 21st Century configurations discussed during visioning session
Summary of Spaces (Portion of)

<table>
<thead>
<tr>
<th>ELEMENTARY SCHOOL</th>
<th>Existing Conditions</th>
<th>New</th>
<th>MSBA Guidelines (refer to MSBA Educational Program &amp; Space Standard Guidelines)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROOM NFA¹</td>
<td># OF RUS</td>
<td>area totals</td>
</tr>
<tr>
<td><strong>CORE ACADEMIC SPACES</strong></td>
<td>42</td>
<td>37,926</td>
<td>38</td>
</tr>
<tr>
<td>(List classrooms of different sizes separately)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-Kindergarten w/toilet</td>
<td>varies</td>
<td>2</td>
<td>2,000</td>
</tr>
<tr>
<td>Kindergarten w/toilet</td>
<td>varies</td>
<td>3</td>
<td>4,846</td>
</tr>
<tr>
<td>General Classrooms - Grades 1-5</td>
<td>varies</td>
<td>20</td>
<td>17,131</td>
</tr>
<tr>
<td>General Classroom - Grades 6-8 (includes Foreign Language)</td>
<td>varies</td>
<td>13</td>
<td>11,957</td>
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<tr>
<td>Science Classroom/Lab</td>
<td>varies</td>
<td>2</td>
<td>2,061</td>
</tr>
<tr>
<td>Science Prep room</td>
<td>varies</td>
<td>2</td>
<td>281</td>
</tr>
<tr>
<td><strong>SPECIAL EDUCATION</strong></td>
<td>3,388</td>
<td>4,550</td>
<td>5,050</td>
</tr>
<tr>
<td>(List rooms of different sizes separately)</td>
<td>528</td>
<td>528</td>
<td>560</td>
</tr>
<tr>
<td>(Intervention)</td>
<td>varies</td>
<td>2</td>
<td>1,564</td>
</tr>
<tr>
<td>Self-Contained SFED - Grades 1-5 toilet</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Self-Contained SFED - Grades 6-8 toilet</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Resource Room - Grades 6-8 (Literacy)</td>
<td>516</td>
<td>516</td>
<td>500</td>
</tr>
<tr>
<td>Resource Room - Grades 1-5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Small Group Room/Reading (Reading Recovery)</td>
<td>varies</td>
<td>2</td>
<td>880</td>
</tr>
<tr>
<td><strong>ART &amp; MUSIC</strong></td>
<td>4,014</td>
<td>5,700</td>
<td>8,850</td>
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<tr>
<td>Art Classroom - Grades 1-5 (all grades)</td>
<td>1,424</td>
<td>1,424</td>
<td>1,000</td>
</tr>
<tr>
<td>Art Classroom - Grades 6-8</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Art Workroom/Storage &amp; Kiln</td>
<td>202</td>
<td>202</td>
<td>156</td>
</tr>
<tr>
<td>Band/Chorus - 100 seats</td>
<td>885</td>
<td>885</td>
<td>1,500</td>
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<tr>
<td>Music Classroom/Large Group - 25-50 seats</td>
<td>1,273</td>
<td>1,273</td>
<td>1,200</td>
</tr>
<tr>
<td>Music Practice/Ensemble - Grades 1-5</td>
<td>210</td>
<td>210</td>
<td>75</td>
</tr>
<tr>
<td>Music Practice/Ensemble - Grades 6-8</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tbody>
</table>
Interior Teaching Spaces

Second Floor

Third Floor
Undersized Teaching/Program Spaces

First Floor
Undersized Teaching/Program Spaces

Second Floor

Third Floor
Henry T. Wing Site Plan - Aerial
History of Building Additions

1927
History of Building Additions

1927

1958

1927
History of Building Additions

1927
1958
1963
1963
1963
1963
1927
History of Building Additions

- 1927
- 1958
- 1963
- 1963
- 1974
- 1963
- 1963
- 1927
Existing Building and Site Condition

• Building Envelope
  ➢ Largely single glazed windows
  ➢ Where insulated glass – numerous failures
  ➢ 1927 Windows not operable
  ➢ Roof membrane – beyond expected life
  ➢ Masonry wall repointing, repair required

• Site
  ➢ Lacks accessible routes
  ➢ Surfaces in need of upgrading
Existing Building Condition

• Fire Sprinklers – None
• Plumbing
  ➢ Toilet rooms not accessible
  ➢ Hot water boiler – beyond expected life
  ➢ Valves, fittings and equipment – beyond expected life
• Mechanical
  ➢ Only one heating boiler
  ➢ Hot water distribution – beyond expected life
  ➢ Terminal Units – beyond expected life
  ➢ Limited / Non Functioning Air Conditioning
Existing Building Conditions

• Electrical
  ➢ Switchgear, panels, wiring – beyond expected life
  ➢ Non Functioning / Obsolete Systems: Clock, paging, telephone, security, fire alarm

• Hazardous Materials
  ➢ Asbestos containing materials (non-friable)
  ➢ Lead paint – many locations: handrails, other
Accessibility

- The school is largely inaccessible
  - Lacks accessible toilet rooms
  - Portions of building are inaccessible, i.e. 1927 wing
  - Some ramps too steep (exterior & interior)
  - Stair handrails and details non conforming
  - Doors, hardware, signage, drinking fountains, clearances, etc.
Accessibility Floor Level Changes/Toilet Rooms

Stairs/Ramps that require modifications
Non Accessible Toilet Rooms

First Floor
Accessibility Floor Level Changes/Toilet Rooms

Stairs/Ramps that require modifications

Non Accessible Toilet Rooms

Second Floor

Third Floor
School for Early Learning – Modular Structure

- Interior / Exterior Visual Inspection
- Fit to inhabit bit well beyond their useful life
- Will require continuous repair
- Installed as temporary, should not be considered as part of a long range plan
Options Explored

• Option 1 – Renovation Only
  - Building Components and Systems
  - No Educational Changes
  - Phased Construction, 24-30 months

• Option 2A – Renovations / Additions
  - 853 Students (with Partial Removal)
  - Building and Educational Improvements
  - Phased Construction, 30-36 months

• Option 2B – Renovations / Additions
  - 692 Students (with Partial Removal)
  - Building and Educational Improvements
  - Phased Construction, 30-36 months
Options Explored

• **Option 3A** – All New Construction, Replacement School
  - 853 Students
  - On same site
  - New Construction, 20-24 months

• **Option 3B** – All New Construction, Replacement School
  - 692 Students
  - On same site
  - New Construction, 20-24 months
Option 1: Renovations Only

- No Educational Renovations
- Building Envelope
  - Roof replacement; Window replacement; Masonry wall repair
- Handicapped Accessibility
  - Access to all areas (less 1927 wing)
  - Upgrade stairs, ramps, handrails
  - Provide accessible toilet rooms
  - Provide accessibility signage
Option 1: Renovations Only (continued)

- Hazardous Materials Abatement
  - Asbestos; Lead Paint
- Add Fire Protection System (sprinklers) – none exist
- Replace Plumbing System
- Replace Mechanical System
- Replace Electrical System
- Assumes MSBA / SOI Process
Option 2A: Renovations/Additions – 853 Students

• Building Renovation/Addition (with partial removal)
  ➢ Abandon 1927 Wing – turn over to Town
  ➢ Remove portions of building
  ➢ Building addition with 21st century teaching spaces (per vision)
  ➢ Educational renovations with 21st century teaching spaces (per vision)
  ➢ Comprehensive renovation of building envelope and systems
  ➢ School population/size to be determined
  ➢ Assumes MSBA / SOI process
Option 2B: Renovations/Additions – 692 Students

- Building Renovation/Addition (with partial removal)
  - Abandon 1927 Wing – turn over to Town
  - Remove portions of building
  - Building addition with 21st century teaching spaces (per vision) – smaller building addition
  - Educational renovations with 21st century teaching spaces (per vision)
  - Comprehensive renovation of building envelope and systems
  - School population/size to be determined
  - Assumes MSBA / SOI process
Option 2: Renovations/Additions

Partial Demolition
Option 2: Renovations/Additions

First Floor
Option 2: Renovations/Additions

Second Floor
Option 3A – All New Construction – 853 Students

• Building Replacement
  ➢ Assume MSBA compliant new K-8 school somewhere on Wing School site
  ➢ School population / size to be determined
  ➢ Removal of existing school building (partial?)
  ➢ Assumes MSBA / SOI process
Option 3B – All New Construction – 692 Students

• Building Replacement
  ➢ Assume MSBA compliant new K-8 school somewhere on Wing School site
  ➢ School population / size to be determined
  ➢ Removal of existing school building (partial?)
  ➢ Assumes MSBA / SOI process
Option Costs

- **Option 1 – Renovations Only**
  - Construction $21.4 MM
  - FFE and Technology $0.0 MM
  - OPM, Fees, Moving, Testing & Expenses $3.4 MM
  - Contingency $2.2 MM
  (In 2011 Dollars) **TOTAL** $27.0 MM

- Escalation to 2014 Construction Start $3.1 MM
  **TOTAL** $30.1 MM
## Option Costs

### Option 2A – Additions / Renovations, 853

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<tr>
<th>Item</th>
<th>Cost</th>
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<td>Construction</td>
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<tr>
<td>FFE and Technology</td>
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<tr>
<td>OPM, Fees, Moving, Testing &amp; Expenses</td>
<td>$4.4 MM</td>
</tr>
<tr>
<td>Contingency (In 2011 Dollars)</td>
<td>$2.6 MM</td>
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**TOTAL** $37.8 MM

**Escalation to 2014 Construction Start** $4.6 MM

**TOTAL** $42.7 MM
Option Costs

• Option 2B – Renovations / Additions, 692

- Construction $26.4 MM
- FFE and Technology $2.3 MM
- OPM, Fees, Moving, Testing & Expenses $4.1 MM
- Contingency $2.4 MM
  (In 2011 Dollars) TOTAL $35.2 MM

- Escalation to 2014 Construction Start $4.3 MM
  TOTAL $39.5 MM
**Option Costs**

- **Option 3A – All New Construction, 853**
  - Construction: $39.2 MM
  - FFE and Technology: $2.8 MM
  - OPM, Fees, Moving, Testing & Expenses: $5.7 MM
  - Contingency: $2.8 MM
  
  (In 2011 Dollars)  
  TOTAL: $50.5 MM

- Escalation to 2014 Construction Start: $6.1 MM

  TOTAL: $56.6 MM
Option 3B – All New Construction, 692

- Construction: $36.2 MM
- FFE and Technology: $2.3 MM
- OPM, Fees, Moving, Testing & Expenses: $5.4 MM
- Contingency: $2.6 MM
  (In 2011 Dollars)  TOTAL: $46.5 MM

- Escalation to 2014 Construction Start: $5.6 MM
  TOTAL: $52.1 MM
## Summary of Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Project Cost In 2011 Dollars</th>
<th>Project Cost with Escalation to 2014</th>
<th>Construction Period</th>
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<tbody>
<tr>
<td>1</td>
<td>Renovations Only</td>
<td>$27 M</td>
<td>$30.1 M</td>
<td>24 - 30 months</td>
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<tr>
<td>2A</td>
<td>Renovations / Addition, 853 Students</td>
<td>$37.8 M</td>
<td>$42.7 M</td>
<td>30 - 36 months</td>
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<tr>
<td>2B</td>
<td>Renovations / Addition, 692 Students</td>
<td>$35.2 M</td>
<td>$39.5 M</td>
<td>30 - 36 months</td>
</tr>
<tr>
<td>3A</td>
<td>Building Replacement (new construction) 853 Students</td>
<td>$50.5 M</td>
<td>$56.6 M</td>
<td>20 - 24 months</td>
</tr>
<tr>
<td>3B</td>
<td>Building Replacement (new construction) 692 Students</td>
<td>$46.5 M</td>
<td>$52.1 M</td>
<td>20 - 24 months</td>
</tr>
</tbody>
</table>

MSBA Reimbursement Rate for Sandwich Approximately 49%
**MSBA Process**

- **Spring/Summer 2011**
  - Submit Statement of Interest (SOI) to MSBA

- **Fall 2011**
  - MSBA Reviews and Selects Town for Feasibility/Schematic Stage

- **Spring 2012**
  - Town Appropriates Owner’s Project Manager (OPM) and Architect Fees for Feasibility / Schematic Stage
• **Winter 2012**
  - MSBA and Town agree on Preferred Feasibility / Schematic Scope and Cost

• **Spring 2013**
  - Town Appropriates Full Project Amount

• **Winter 2013**
  - Architect Completes Bidding Documents

• **Summer 2014**
  - Construction Commences
School Committee: Can this study be expanded to include the High School, Oakridge & Forestdale Schools? (Master Plan)

Thank You