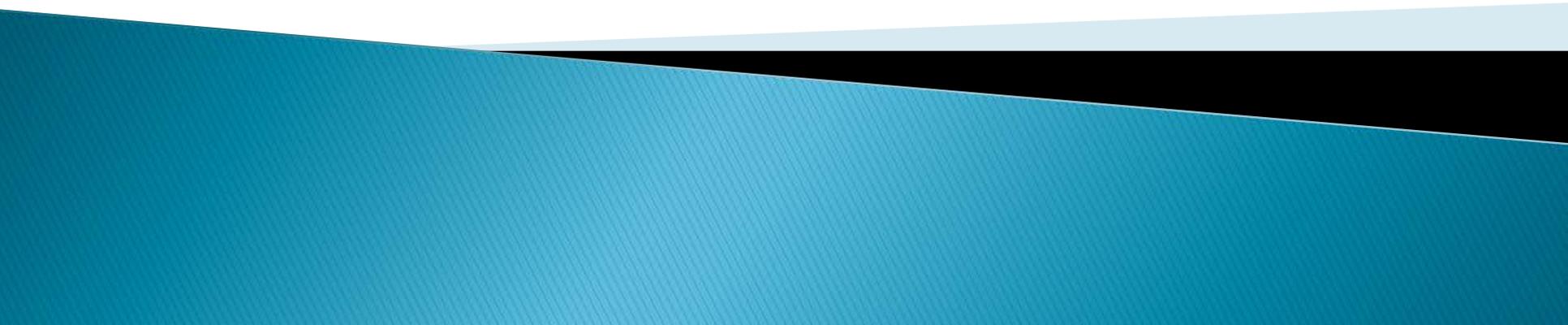


# Vocational Education Advisory Committee Report

February 2016



# Committee Members

- ▶ Susan Bak, Chair
- ▶ Anne McNeece, Clerk
- ▶ Brigid Bieber
- ▶ Gary Kushner
- ▶ Hugh Fortmiller

# Mission Statement

The Committee's mission was to research, evaluate, analyze and recommend the best option or options for Vocational Technical Education that are both academically and financially appropriate for the Town of Boxborough and its students.

# Factors considered

- ▶ Location
- ▶ Community makeup of district
- ▶ Academic and vocational tech program offerings
- ▶ Innovative education strategies
- ▶ Extra-curricular programs
- ▶ Physical plant
- ▶ Costs
- ▶ Pros/Cons of not being a part of a district

# Process used

- ▶ Identified and selected Vocational Ed schools
- ▶ Toured and compared three schools
- ▶ Collected and compiled data
- ▶ Interviewed current and former MM students and parents
- ▶ Met with the five Boxborough students currently enrolled at MM

# Selected schools to consider

- ▶ Schools in rural communities similar to ours
- ▶ Schools in close proximity to Boxborough
- ▶ Schools not heavily weighted toward one town
- ▶ Lowell, Worcester, Lawrence and Monty Tech did not meet our criteria and were not considered
- ▶ Selected: Minuteman, Assabet, Nashoba

# Towns in each District

| <b>Minuteman<br/>Enrollment: 673</b>  | <b>Assabet<br/>Enrollment: 1058</b>  | <b>Nashoba<br/>Enrollment: 735</b>   |
|---|--|--|
| <ol style="list-style-type: none"><li>1. Acton</li><li>2. Arlington</li><li>3. Belmont</li><li>4. Bolton</li><li>5. Boxborough</li><li>6. Carlisle</li><li>7. Concord</li><li>8. Dover</li><li>9. Lancaster</li><li>10. Lexington</li><li>11. Lincoln</li><li>12. Needham</li><li>13. Stow</li><li>14. Sudbury</li><li>15. Wayland</li><li>16. Weston</li></ol> | <ol style="list-style-type: none"><li>1. Marlborough</li><li>2. Berlin</li><li>3. Hudson</li><li>4. Maynard</li><li>5. Northborough</li><li>6. Southborough</li><li>7. Westborough</li></ol> | <ol style="list-style-type: none"><li>1. Ayer</li><li>2. Chelmsford</li><li>3. Groton</li><li>4. Littleton</li><li>5. Pepperell</li><li>6. Shirley</li><li>7. Townsend</li><li>8. Westford</li></ol> |

# Enrollment

|                     | Minuteman | Assabet | Nashoba |
|---------------------|-----------|---------|---------|
| Capacity            | 800       | 1200    | 900     |
| Enrollment          | 673       | 1058    | 735     |
| In District         | 57%       | 67%     | 85%     |
| Out of District     | 43%       | 33%     | 15%     |
| Freshman applicants | 197       | 480     | 322     |
| Freshman accepted   | 190       | 285     | 202     |
| Acceptance rate     | 96%       | 59%     | 63%     |

Capacity for MM once new building is complete is 628.  
Projecting 83% in-District.

# Admission Decision Criteria

- ▶ Academic achievement/grades
- ▶ Attendance
- ▶ Recommendation from RJ Grey
- ▶ Discipline Record
- ▶ Personal Interview

# Distance from Boxborough

| School    | Distance from Boxborough Town Hall | Average commute time |
|-----------|------------------------------------|----------------------|
| Minuteman | 13.6 miles                         | 34                   |
| Assabet   | 13.5 miles                         | 16                   |
| Nashoba   | 11.1 miles                         | 14                   |

Time from Town Hall to the School

# Comparison of Schools

# Technical Programs: at all three schools

|   |                                |
|---|--------------------------------|
| Automotive mechanics                    | Culinary Arts & Hospitality    |
| Bio Technology                          | Design & Visual Communications |
| Carpentry                               | Electrical wiring              |
| Computer Programing and Web development | Engineering                    |
| Cosmetology                             | Plumbing & Heating             |

# Technical Programs: differences among schools

| Minuteman  | Assabet                     | Nashoba                 |
|--|-----------------------------|-------------------------|
| Robotics   |                             | Robotics                |
| Telecommunications & Fiber-optics<br>(Ends 6/2018) |                             |                         |
| Environmental Science & Technology                 |                             |                         |
|  | Auto Collision              | Auto Collision          |
| Metal Fabrication & Welding                        | Metal Fabrication & Welding | Machine Tool Technology |
| Advanced Manufacturing<br>(Starts 9/2016)          | Advanced Manufacturing      |                         |

# Technical Programs: differences among schools

| Minuteman                  | Assabet                        | Nashoba                         |
|----------------------------|--------------------------------|---------------------------------|
|                            | Draft Design Technology        |                                 |
|                            | Painting & Design Technologies |                                 |
| Multi-media Engineering    |                                | Television, Media, Theater Arts |
|                            | Business Technology            |                                 |
| Marketing<br>(Ends 9/2018) |                                | Banking, Retail & Marketing     |

# Technical Programs: differences among schools

| Minuteman                  | Assabet           | Nashoba              |
|----------------------------|-------------------|----------------------|
| Health Assisting           | Health Technology | Health Assisting     |
| Dental Assisting           |                   | Dental Assisting     |
| Early Education, Care      |                   | Early Education Care |
|                            |                   | Veterinary Assistant |
| Horticulture & Landscaping |                   |                      |

# Most Popular Programs

| Minuteman  | Assabet   | Nashoba   |
|--|---|---|
| Automotive   | Health Tech   | Carpentry   |
| Engineering/Robotics   | Metal Fabrication   | Engineering   |
| Biotechnology  | Cosmetology   | Health Assistant  |
| Environmental  | Culinary Arts   | Veterinarian Assistant  |
| Plumbing & Heating   | Plumbing & HVAC   | Plumbing & Heating  |
| Culinary Arts  | Electrical & Wiring                                       | Electrical & Wiring   |
| <b>Students are wait listed:<br/>Engineering/Robotics,<br/>Environmental,<br/>Plumbing</b> | <b>Students wait listed all<br/>of the above programs</b> | <b>No students were wait<br/>listed for these<br/>programs.</b> |

# Innovative Strategies

|                                     | Minuteman | Assabet | Nashoba       |
|-------------------------------------|-----------|---------|---------------|
| Dual enrollment                     | Yes       | Yes     | Yes           |
| Girls in STEM                       | Yes       | Yes     | Yes           |
| Co-ops                              | Yes       | Yes     | Yes           |
| AP Offerings                        | Yes       | Yes     | Yes           |
| Accreditation for Associates Degree | Yes       | No      | Working on it |

**New Information: MM post graduate students can earn an Associates degree from MM and Middlesex Community College in Auto Technology and Construction Management**

# Extra-curricular: variations exist among schools

- ▶ Academic teams
- ▶ Vocational clubs
- ▶ Music, drama, art clubs
- ▶ Gay/Straight Alliance
- ▶ Student Council
- ▶ Yearbook and Newspaper
- ▶ Sports
  - Baseball, basketball, cross-country, football, volleyball, lacrosse, hockey, soccer, cheerleading, swimming, tennis, golf.....

# Key Performance Indicators

| Key performance indicators                                | Minuteman     | Assabet | Nashoba        |
|---|---------------|---------|----------------|
| Student/teacher ratio:<br>2014/2015                       | <b>8.5: 1</b> | 10.4:1  | 12.6:1         |
| Accountability level: 2014<br>Level 1 is highest of 5     | Level 2       | Level 2 | <b>Level 1</b> |
| Graduation rate: 2014/2015                                | 90.54%        | 95.24%  | 98.08%         |
| Academic Attainment Language<br>Arts: 2014/2015           | 93.21%        | 92.86%  | 95.48%         |
| Academic Attainment Math:<br>2014/2015                    | 68.52%        | 76.37%  | 76.13%         |
| Technical Skill Attainment:<br>2014/2015                  | 98.26%        | 97.92%  | <b>100%</b>    |
| Graduates attending College or<br>University<br>2012/2013 | 50.4%         | 56.1%   | 54%            |

# Educator Evaluations 2014–2015

| District  | Exemplary | Proficient | Needs Improvement | Unsatisfactory |
|-----------|-----------|------------|-------------------|----------------|
| Minuteman | 5.3%      | 90.5%      | 3.2%              | 1.1%           |
| Assabet   | 6.0%      | 90.6%      | 3.4%              | 0.0%           |
| Nashoba   | 8.8%      | 70.6%      | 16.2%             | 4.4%           |

Data from the DESE website

# High Needs Population

|  | Minuteman    | Assabet | Nashoba |
|--|--------------|---------|---------|
| Economically disadvantaged               | 19.2%        | 20.7%   | 19.2%   |
| Students w/ Individual Educational Plans | <b>50.8%</b> | 33.6%   | 32.7%   |
| English Language Learners                | .3%          | 1.4%    | 0%      |

DESE report card 2015

# Eligibility for Individual Education Plans: IEP

- ▶ Diagnosis of a disability
- ▶ Failure to progress (poor grades and test results)
- ▶ Lack of progress is a result of the disability
- ▶ The need for specially designed instruction or related services

# MCAS – Spring 2015

| MCAS % of Students              | Minuteman | Assabet | Nashoba |
|---------------------------------|-----------|---------|---------|
| <b>Math</b>                     |           |         |         |
| Advanced & Proficient           | 73%       | 75%     | 78%     |
| Needs Improvement               | 21%       | 20%     | 17%     |
|                                 |           |         |         |
| <b>English Language Arts</b>    |           |         |         |
| Advanced & Proficient           | 97%       | 96%     | 93%     |
| Needs Improvement               | 3%        | 4%      | 7%      |
|                                 |           |         |         |
| <b>Science/Tech Engineering</b> |           |         |         |
| Advanced & Proficient           | 70%       | 85%     | 80%     |
| Needs Improvement               | 29%       | 14%     | 18%     |

# SAT 2015

| Subject matter | Minuteman | Assabet | Nashoba |
|----------------|-----------|---------|---------|
| Reading        | 476       | 466     | 439     |
| Writing        | 447       | 437     | 413     |
| Math           | 452       | 457     | 452     |

# Post Graduate Opportunities

|   | Minuteman | Assabet | Nashoba |
|---|-----------|---------|---------|
| Accepts in District students ages 18–21   | Yes       | Yes     | Yes     |
| Accepts out of District students 18–21    | Yes       | Yes     | No      |
| Accepts adult students over the age of 21 | Yes       | Yes     | No      |

# Financial: In District

|   | Minuteman | Assabet                    | Nashoba                    |
|---|-----------|----------------------------|----------------------------|
| In-District Tuition<br>Current Fiscal Year FY2016 | \$27,224  | \$11,000<br>to<br>\$14,000 | \$10,000<br>to<br>\$14,000 |
| Cost per pupil (2013)                             | \$26,246  | \$18,252                   | \$15,104                   |
| Cost of administration per pupil (2013)           | \$2,203   | \$951                      | \$774                      |
| Cost of administration % of total (2013)          | 8.39%     | 5%                         | 5%                         |

# Financial: Out-of-District FY2016

|  | Minuteman              | Assabet  | Nashoba  |
|--|------------------------|----------|----------|
| Out of District Tuition<br>(SPED & Transportation<br>not included) | \$17,556               | \$16,420 | \$14,341 |
| Special Education  | \$4,500                | \$0      | \$3,000  |
| Charge for Capital<br>(FY2017)                                     | \$8,121<br>Per student | \$0      | \$0      |
| Cost of transportation<br>-out sourced                             | \$36,000               | \$36,000 | \$36,000 |
| Cost to buy-in   | N/A                    | N/A      | TBD      |

Cost of transportation calculated for students going to **one** school. If students go to more than one school cost of transportation increases.

# Interviewed Minuteman Parents and Students

# What MM parents & students liked best

- ▶ Hands-on learning experience
- ▶ Balance of traditional academic learning with the skills learned in a vocational program
- ▶ Reasonable class sizes
- ▶ Got to know teachers well because of small class sizes
- ▶ Flexibility of MM administration to offer credit for independent study

# MM Parent and Student interviews

## Drawbacks of going to MM

- ▶ Pressure from peers to go to ABRHS
- ▶ Misperception that students that go to MM are not college bound
- ▶ Not as many AP offerings
- ▶ Longer commute versus going to AB
- ▶ Does not have band or a theater program

# MM Parent and Student Interviews

## Additional feedback

- ▶ Teachers are available to offer extra help
- ▶ Very happy w/ high school experience at MM
- ▶ Involved in extracurricular activities
- ▶ Some students were planning on college, some were undecided
- ▶ Some parents were concerned that students would have struggled at ABRHS because of the competitiveness

# Options Available to Boxborough

# Options to consider

- ▶ **Stay at Minuteman**
- ▶ **Withdraw from MM**
  - Enter into an Inter-municipal Agreement (IMA)
  - Join another District
  - Do not join another District
  - Preferred school option

# Stay at Minuteman

## Pros

- Guaranteed access for qualified students
- Seat on the School Committee
- State of the Art Building once the funding approved & building completed
- Excellent Technical programs
- Connections to legacy of parents and siblings and Acton classmates

## Cons

- Higher cost per pupil
- Capital assessment to non-member Towns under the new agreement is not guaranteed
- Congested commute via Route 2
- Accreditation is in jeopardy given current condition of the building
- If building project fails, member Towns pay for renovations with no state contribution

# Minuteman Assessment

| Assessment                    | FY2017<br>16 Member<br>Current<br>Agreement | FY2020<br>10 Member<br>Towns<br>Amended<br>Agreement | FY2020<br>16 Member<br>Towns<br>Current<br>Agreement |
|-------------------------------|---|--|--|
| Minimum Required Contribution | \$108,137                                   | \$75,535   | \$82,665   |
| Transportation                | \$8,624                                     | \$11,742   | \$9,813  |
| Operating Assessment          | \$48,144                                    | \$41,568   | \$35,553   |
| Capital Assessment            | \$16,614                                    | \$82,422   | \$49,183   |
| Total Assessment              | \$181,519                                   | \$211,268  | \$177,214  |
| Enrollment                    | 5   | 5  | 5  |
| Per pupil cost                | \$36,304                                    | \$42,254   | \$35,443   |

FY2020 includes capital for new building

# Minuteman Assessment Property taxes

| Assessment                    | FY2017<br>16 Member<br>Current<br>Agreement | FY2020<br>10 Member<br>Towns Amended<br>Agreement | FY2020<br>16 Member<br>Towns Current<br>Agreement |
|-------------------------------|---|---|---|
| Per pupil cost                | \$36,304                                    | \$42,254  | \$35,443  |
| Per household<br>Per pupil*   | \$19.52                                     | \$23.14   | \$19.41   |
| Per household @<br>5 students | \$97.59                                     | \$115.68  | \$97.03   |
| Per thousand<br>Per pupil*    | .0356                                       | .0390   | .0327   |

FY2017 Based on \$1.021B Town valuation  
and average house valuation of \$548,990

# Withdraw from Minuteman

# Inter-municipal Agreement Option

- ▶ Under an IMA, the school holds a specific number of slots open for **qualified** Boxborough students.
- ▶ No guarantee that qualified Boxborough students will be accepted under the agreement, because in-District students must be accepted before out-of-District students
- ▶ Costs negotiated
- ▶ Town is responsible for the cost of transportation.
- ▶ Currently, neither Assabet nor Nashoba have an IMA with any non-member sending Towns

# Join another District

- ▶ Boxborough would have to negotiate a buy-in cost with the Vocational Education District
- ▶ Member towns in the District would have to vote to accept Boxborough into the District and amend their agreement
- ▶ Boxborough would have to vote to join the District
- ▶ Several years before we could become a member

# If we joined Nashoba District

| Pros  | Cons   |
|---|--|
| <ul style="list-style-type: none"><li>• Guaranteed access for qualified students</li><li>• Cost of education is all inclusive: tuition, transportation, SPED and capital.</li><li>• Cost is lower than MM</li><li>• Less congested commute as compared to MM</li><li>• Excellent Technical programs</li></ul> | <ul style="list-style-type: none"><li>• Uncertainty of membership</li><li>• Buy-in cost: amount unknown</li><li>• School in transition: search for new Superintendent</li><li>• 2004 Rehab of older building</li><li>• Could take several years before the Town becomes a member</li></ul> |

# Do not join a District

- ▶ Boxborough youth could select from any Vocational School in the Commonwealth
- ▶ No guaranteed access to Vocational Education for **qualified** Boxborough students (out-of-District)
- ▶ Pay out-of-district tuition plus the cost of transportation plus special education and capital (if charged)
- ▶ The Town would have to arrange for transportation for students

# Preferred School Option

- ▶ Town could select a “preferred” school
- ▶ Town must give clear and timely notice to students and their families well in advance of the application process
- ▶ Selecting a “preferred” school does not **guarantee** access to qualified Boxborough students, because Boxborough is still out-of-District
- ▶ If the preferred school does not offer a specific program for example: Robotics, the student could select a school other than a preferred school
- ▶ Town is responsible for the cost of tuition, special education and transportation

# If Assabet were the Preferred School

## Pros

- Lower cost per pupil
- Less congested commute as compared to MM
- Rehab of building completed October 2015
- Excellent Technical programs
- Licensed Practical Nurse Post graduate program

## Cons

- No guaranteed access for qualified Boxborough students
- Town arranges for and pays for Transportation
- No reimbursement for transportation by the State

# Transportation

Out-of-District

# Transportation: Out-of-District

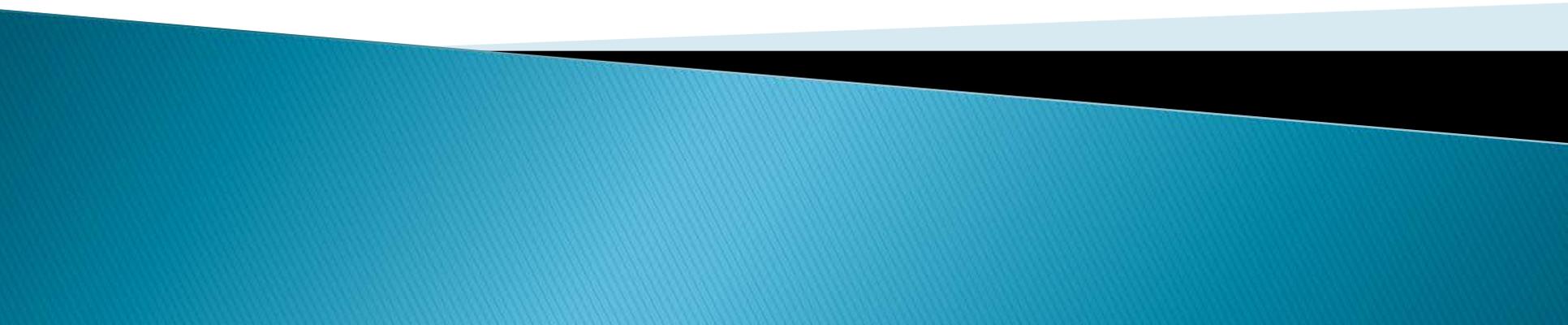
- ▶ Town responsible for transportation if not a member of a District
  
- ▶ Options:
  1. Purchase and operate van
  2. Outsource
  3. Piggy back w/ another Town
  4. Reimburse parents for mileage (may not be an option for all parents)

# Estimated Cost of Transportation

| Options                       | Cost                   |
|-------------------------------|------------------------|
| Purchase and operate a van    | \$25,000               |
| Outsource                     | \$36,000               |
| Piggy back with another Town  | <\$36,000              |
| Reimburse parents for mileage | \$2,643<br>Per student |

Cost of transportation calculated for students going to **one** school. If students go to more than one school, cost of transportation increases.

**What's in the best  
interests of the students?**



# Best interests of the students

- ▶ Town is a member of a District
- ▶ Qualified students have a guaranteed place and access to programs
- ▶ Retain a voice on the School Committee
- ▶ Stability of administration and services
- ▶ Favorable student/teacher ratio
- ▶ State of the art facilities and programs
- ▶ School accreditation
- ▶ Reasonable commute time
- ▶ Students are well informed about choice of vocational education

# What's the estimated financial impact on taxpayers?

|                               | Minuteman<br>In-District<br>FY2017 | Assabet<br>Out-of-District<br>Estimate<br>FY2017 | Nashoba<br>Out-of-District<br>Estimate<br>FY2017 |
|-------------------------------|------------------------------------|--|--|
| Per pupil cost                | \$36,304                           | \$23,620   | \$24,541   |
| Per household<br>Per pupil*   | \$19.52                            | \$12.70  | \$13.19  |
| Per household @<br>5 students | <b>\$97.59</b>                     | <b>\$63.50</b>                                   | <b>\$65.97</b>                                   |
| Per thousand<br>Per pupil*    | .0356                              | .0231  | .0240  |

FY2017 Based on \$1.021B Town valuation  
and average house valuation of \$548,990

# Minuteman FY2020

|                            | Amended Agreement<br>10 Member Towns | Current Agreement<br>16 Member Towns |
|----------------------------|--------------------------------------|--------------------------------------|
| Per pupil cost             | \$42,254                             | \$35,443                             |
| Per household Per pupil*   | \$23.14                              | \$19.41                              |
| Per household @ 5 students | \$115.68                             | \$97.03                              |
| Per thousand Per pupil*    | .0390                                | .0327                                |

FY2020 based on \$1.105B Town valuation  
and average house valuation of \$593,300

# Conclusions / Recommendations

- ▶ We find that all three schools provide a variety of excellent technical programs and comparable academic programs.
- ▶ We find that each of the three schools provide these educational options at varying costs with MM being the highest and Nashoba the lowest.
- ▶ **Majority Opinion:** We recommend (3–2) that MM is the best educational option for Boxborough students because of **guaranteed access for qualified students**, outweighing the higher cost.
- ▶ **Minority Opinion:** We do not recommend MM because the unpredictability at MM presents too high a risk for the foreseeable future.

**Thank you!**

