From Airfields to Amphitheaters: MGRHS Outdoor Placemaking Project

Sarah Cooperman, Michael Ding, Sasha Langesfeld, Roshny Vijayakar
What is placemaking?
Project Goals

- **Analyze** student/faculty input
- **Design** four main spaces that prioritize environmental engagement - literally and visually
  - Outdoor cafeteria
  - Bus waiting area
  - Outdoor classroom
  - Open space behind school

The Mount Greylock Way: Responsibility, Perseverance, Integrity
Background

Case Studies

Data Collection, Results and Funding

Funding

Site Design Recommendations

Analysis of Classroom Options
Why go outside at school?

**Orr 1994** → Increased ecological literacy from outdoor education

**Farnham et al. 1997** → Playing and learning outside regularly improved group cohesion, reduced tension/anxiety in special needs middle school students

**Tanner 2009** → ‘Positive outdoor spaces’ correlated with student achievement

**Bratman et al. 2015** → Nature experiences reduce rumination

*Adolescents need recess too!*
School Community Profile

- Williamstown-Lanesborough combined district; additional tuition-paying students
- 600 students now in grades 7-12 (school designed for up to 1300)
- High-achieving, highly-scheduled...very little free time to go outside
Integrative Eco Strategy
The Renovation
Bus Waiting Area
Case Studies: Outdoor Classroom

Mason Pilot Elementary School
Boston, MA

Swarthmore College
Swarthmore, PA
Case Study: Outdoor Classroom

Olympia High School
Stanford, IL
Survey Setup

- 73 in-person student responses from our focus groups
- 25 online student survey responses
- 41 faculty responses
Student Online Survey Results

Please rank the following in terms of how important they are to you to have in your new school (1 is most important, 4 is least important):
Faculty Survey Results

Rank the following in order of importance (1 is highest, 4 is lowest):

95% of faculty responded that they would like to eat outside.
Faculty Survey-Classroom Use

If there were an outdoor classroom, how often would you use it (assuming good weather)?

- Never; 3%
- Weekly; 18%
- Once a month; 37%
- Once a semester; 42%
Some Responses...

- Exotic fruit stand
- Petting zoo
- Fountain for “various liquids”
- Koi pond
- Outdoor grilling station
- Smoothie stand
- Garden devoted exclusively to beets
Current Funding Sources

Massachusetts School Building Authority
Funding Affordable, Sustainable and Efficient Schools for Local Communities

$64.8 Million
Potential Funding Sources

Lowe’s Toolbox for Education Program
- Award size: $2,000 to $5,000

Project Learning Tree GreenWorks!
- Award Size: Up to $1,000

American Academy of Dermatology Shade Structure Grant Program
- Award Size: Up to $8,000

The Lorrie Otto Seeds for Education Grant Program
- Award Size: $100 to $500

Canoga Park High School, Los Angeles
Potential Funding Sources

Berkshire Taconic Community Foundation
Sustaining Educational Excellence (SEE) Fund
  - Award Size: $100 to $2,500

Williams College Office of Corporate and Foundation Relations → Mary Ellen Czerniak
Background

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Analysis of Classroom Options
# Laws and Regulations

American Disabilities Act/Massachusetts Architectural Access Board

<table>
<thead>
<tr>
<th>Feature</th>
<th>521 CMR Standards</th>
</tr>
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<tbody>
<tr>
<td>Walking aisles/paths</td>
<td>Access aisles must be 36” in width to accommodate wheelchairs</td>
</tr>
<tr>
<td>Open space/clear floor space</td>
<td>30” x 38” at minimum to accommodate wheelchair movement through open floor space</td>
</tr>
<tr>
<td>Seating at tables/counters</td>
<td>If seating for disabled persons is provided at tables or counters, knee spaces must be at least 27” deep</td>
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<tr>
<td>Table/counter height</td>
<td>Tops of accessible tables must be from 28” to 34” off of the finished floor or ground</td>
</tr>
<tr>
<td>Movement between levels</td>
<td>Handicap accessible ramps or elevators must be provided when stairs are present to accommodate wheelchairs</td>
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</table>
Bus Loop Area Design

Cost estimate: $751

- 56.3% of students ranked this least important - low priority
- Students want: shelter, benches, more trees, vending machines
Outdoor Cafeteria Design

“I think an outdoor space for lunch would benefit every student-allowing students to get outside and give social opportunities.”
- Faculty Focus Group Survey

“One of the most popular things for almost all the guys at lunch is like our single rusted basketball hoop – that’s what we all do, so something like that would be great.”
- Student Focus Group
Outdoor Cafeteria Design

Cost estimate: $8,986

- Stationary tables of different sizes
- Shade from retractable awning
- Games → basketball hoops, tetherball, box ball, chess
- Grass chairs at edge of patio area
- Trash/recycling bins
“Swings would be nice but not like really far away.”
- Student Focus Group Survey

“I would like to play around on something other than a quarter of a basketball court.”
- Student Focus Group Survey
Open Space Design

Cost estimate: $10,910

- Conscious of overflow parking, nordic storage, facilities storage
- Fitness equipment
- Picnic tables
- Hammocks
Fitness Area Design

Cost estimate: $9,500

Clearance Space

ADA Accessible Swingset (2 seats)

Swingset (4 seats)

Elliptical

Fitness Multi-Station

Rubber Pavers

Power Tower

Workout Bench

7.5' 15' 22.5' 30'
Analysis of Classroom Options
Classroom Options

North-facing Classroom in Current Plan

Option 1: No Second Classroom

OR

Option 2: Flexible Features

OR

Option 3: Permanent Features

OR

Option 4: Multi-Use Amphitheater
Option 1: No Second Classroom

- **Simple** green space with meandering path
- Pollinator beds
“You can't walk around and get away from the stress of the school day.” - Student Focus Group Survey
Option 1: No Second Classroom

- Simple green space with meandering path
- Pollinator beds
“Used to [go outside] once in a while. Distracting to other classes, discouraged to do so...close to P.E. activities (distracting).” - Faculty Focus Group Survey
Option 2: Flexible Features

- Classroom with **movable seating**
- Folding chairs with detachable arm desks
- Shade sails over space
Option 3: Permanent Features

- Non-movable fixtures
- Benches form seminar style around rectangular tables
- Freestanding retractable pergola awning
- Storage shed for classroom supplies
Option 4: Multi-Use Amphitheater

- Multi-use space with amphitheatre set up, shade sails, storage shed
- Steps built into man-made hill
Cost of Options

Option 1 → No Second Classroom: $3,055

Option 2 → Flexible Features: $4,345

Option 3 → Permanent Features: $13,200 - $15,200

Option 4 → Multi-use Amphitheater: ≤ $15,000
Feasibility (Evaluation Process)

Cost Estimates by Site

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<th>Price</th>
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- Outdoor engagement
- Environmental Impact
- Fiscal Cost
- Teaching
- Learning
- Aesthetics
- Accessibility
- Multi-use Potential
# Feasibility (Evaluation Process)

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**Outdoor Classroom**

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<th>Pros</th>
<th>Cons</th>
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<tbody>
<tr>
<td>Option 1</td>
<td>$3,055</td>
<td>Minimal impact and lowest cost</td>
<td>No additional outdoor classroom</td>
</tr>
<tr>
<td>Option 2</td>
<td>$4,345</td>
<td>Flexible space; little installation</td>
<td>No local materials</td>
</tr>
<tr>
<td>Option 3</td>
<td>$13,200-$15,200</td>
<td>Best classroom features</td>
<td>Not movable; expensive</td>
</tr>
<tr>
<td>Option 4</td>
<td>≤ $15,000</td>
<td>Multi-use; natural materials</td>
<td>Costly; most physical alteration</td>
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**Outdoor engagement • Environmental Impact • Fiscal Cost • Teaching • Learning • Aesthetics • Accessibility • Multi-use Potential**
Review

**Open space** → fitness area and swings

**Bus loop** → More seating

**Outdoor cafeteria** → Basketball court/other games and more tables

**Outdoor Classroom** → 4 options to choose from based on school needs

**Priorities**

1. Outdoor cafeteria
2. Outdoor classroom (chosen based on demonstrated need once new school is built)
3. Open space/fitness zone
4. Bus loop
Acknowledgements

- Sarah Gardner, professor at Williams College
- Stephanie Boyd, client
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- Paula Consolini, Building Committee co-chair
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- Mary Ellen Czerniak, Dir. Corp. and Foundation Relations at Williams
- Countryside Landscaping in Williamstown
- ENVI 302 Fall 2016 and our TA, Sophia Schmidt
Thank you!

When a kid sets foot in this building, when a parent sets foot in this building, when a teacher sets foot in this building, they will know their work is valued.

Sen. Benjamin Downing, iBerkshires