

JANUARY 25, 2024

Fox Hill Elementary School Sustainability Charette

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AGENDA

- 1. Introductions (5')**
- 2. Sustainability Goals (10')**
- 3. Sustainable School Precedents (10')**
- 4. LEED Scorecard Status (5')**
 - Location and Transportation (5')
 - Sustainable Sites (5')
 - Water Efficiency (10')
 - Energy Optimization (10')
 - Materials and Resources (10')
 - Indoor Environmental Quality (5')
 - Innovation (5')
- 5. Action Items and Next Steps (20')**

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 - Innovation (5')
- 5. Action Items and Next Steps (20')**

SUSTAINABILITY FRAMEWORK

Sustainability Goals:

- **MSBA Green Schools 2023 Policy - LEED Silver (v4 with v4.1 selective credits) Pathway**
- **Burlington – Stretch Code Community**
- **Net Zero Energy**
 - EUI Goal: 25 kBtu/sf/year
 - All Electric
 - Fully On-Site Renewables

MSBA GREEN SCHOOLS PROGRAM – 2023 POLICY

Minimum Requirements	Additional Reimbursement
<p>Achieve LEED for Schools Silver Minimum or NE-CHPS Verified Minimum</p> <p>For LEED: Achieve a minimum total of 3 points out of 7 possible points from the following categories:</p> <ul style="list-style-type: none">• MR Building Product Disclosure & Opt - Material Ingredients• IEQ - Low Emitting Materials• IEQ – Indoor Air Quality Assessment	<p>For LEED: For an additional reimbursement of 1% of the Estimated Basis of Total Facilities Grant, projects must achieve a minimum total of 5 points out of 7 possible points in the LEED indoor air quality points</p>
<p>Meet the minimum energy efficiency requirements described in the MA DOER “Stretch Code Green Community” standards</p>	<p>For an additional reimbursement of 3% of the Estimated Basis of Total Facilities Grant (and in addition to the minimum requirements) projects must meet the minimum energy efficiency requirements described in the MA DOER “Opt-in Specialized Code” standards</p>

TODAY'S GOAL

Review sustainability strategies and preliminary LEED checklist.

Evaluate current project status and **explore opportunities** for additional credits and sustainability measures.

SUSTAINABILITY IN SCHOOLS PRECEDENTS



NET ZERO ENERGY, WATER, WASTE



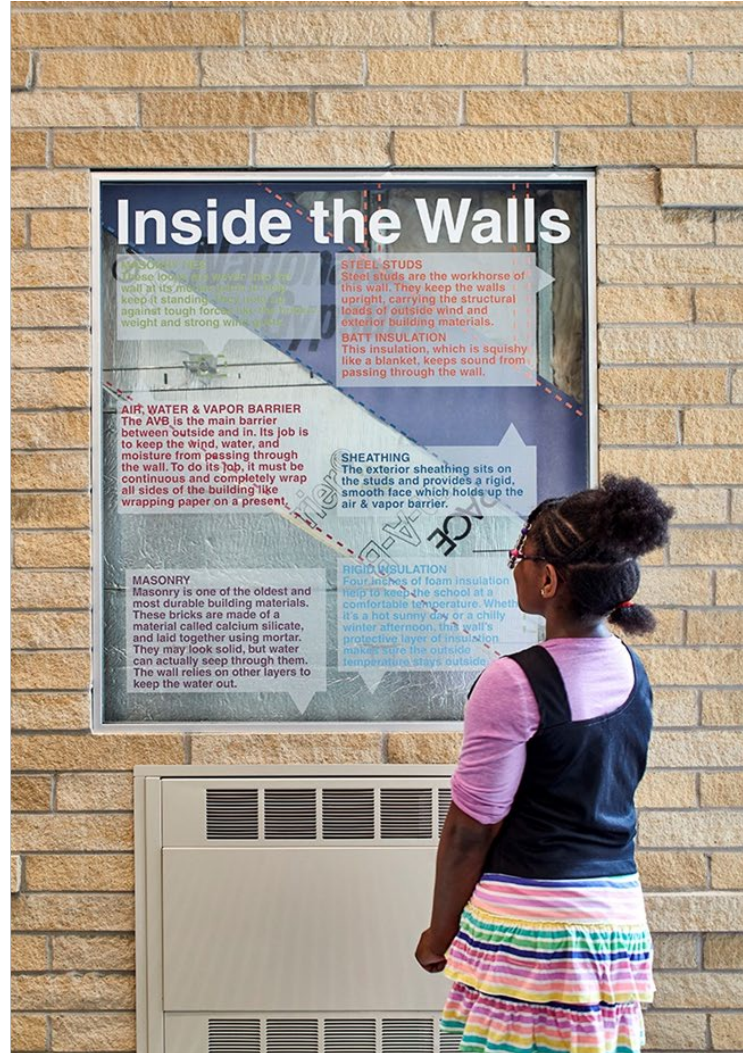
Douglas Elementary School
Action-Boxborough School District

DAYLIGHT



Fales Elementary School
Westborough, MA

SCHOOL AS A TEACHING TOOL



MLK Elementary School
Cambridge, MA

LEED SCORECARD STATUS



LEED SCORECARD STATUS

1/25/2024

MSBA
Requirements
(2023 Policy)

Y	7+	7-	N		
1				Credit 1	Integrative Process

3	2	5	5	Possible Points:	15
			15	Credit 1	LEED for Neighborhood Development Location

OR Points can be achieved in the following credits LTc2 through LTc8.

1				Credit 2	Sensitive Land Protection	1
1			1	Credit 3	High Priority Site	2
		2	3	Credit 4	Surrounding Density and Diverse Uses	5
	1	3		Credit 5	Access to Quality Transit	4
			1	Credit 6	Bicycle Facilities	1
	1			Credit 7	Reduced Parking Footprint	1
1				Credit 8	Green Vehicles	1

7	3	1	1	Possible Points:	12
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Y				Prereq 1	Construction Activity Pollution Prevention	Required
Y				Prereq 2	Environmental Site Assessment	Required
1				Credit 1	Site Assessment	1
	1	1		Credit 2	Site Development--Protect or Restore Habitat	2
1				Credit 3	Open Space	1
1	2			Credit 4	Rainwater Management	3
2				Credit 5	Heat Island Reduction	2
1				Credit 6	Light Pollution Reduction	1
			1	Credit 7	Site Master Plan	1
1				Credit 8	Joint Use of Facilities	1

5	1	1	5	Possible Points:	12
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Y				Prereq 1	Outdoor Water Use Reduction	Required
Y				Prereq 2	Indoor Water Use Reduction	Required
Y				Prereq 3	Building-Level Water Metering	Required
2				Credit 1	Outdoor Water Use Reduction	2
2	1	1	3	Credit 2	Indoor Water Use Reduction	7
			2	Credit 3	Cooling Tower Water Use	2
1				Credit 4	Water Metering	1

22	5	4	0	Possible Points:	31
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Y				Prereq 1	Fundamental Commissioning and Verification	Required
Y				Prereq 2	Minimum Energy Performance	Required
Y				Prereq 3	Building-Level Energy Metering	Required
Y				Prereq 4	Fundamental Refrigerant Management	Required
6				Credit 1	Enhanced Commissioning	6
14	2			Credit 2	Optimize Energy Performance	16
1				Credit 3	Advanced Energy Metering	1
		2		Credit 4	Demand Response	2
	3	2		Credit 5	Renewable Energy Production	5
1				Credit 6	Enhanced Refrigerant Management	1

5	2	3	3	Possible Points:	13
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Y				Prereq 1	Storage and Collection of Recyclables	Required
Y				Prereq 2	Construction and Demolition Waste Management Planning	Required
		2	3	Credit 1	Building Life-Cycle Impact Reduction	5
1	1			Credit 2	Building Product Disclosure and Optimization - Environmental Product Declarations	2
1	1	1		Credit 3	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
1	1			Credit 4	Building Product Disclosure and Optimization - Material Ingredients	2
2				Credit 5	Construction and Demolition Waste Management	2

8	2	4	2	Possible Points:	16
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Y				Prereq 1	Minimum Indoor Air Quality Performance	Required
Y				Prereq 2	Environmental Tobacco Smoke Control	Required
2				Credit 1	Enhanced Indoor Air Quality Strategies	2
2	1			Credit 2	Low-Emitting Materials	3
1				Credit 3	Construction Indoor Air Quality Management Plan	1
2				Credit 4	Indoor Air Quality Assessment	2
	1			Credit 5	Thermal Comfort	1
1		1		Credit 6	Interior Lighting	2
		1	2	Credit 7	Daylight	3
		1		Credit 8	Quality Views	1
		1		Credit 9	Acoustic Performance	1

6				Possible Points:	6
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1				ID Innovation in Design: Green Building Education	1
1				ID Exemplary Performance- Heat Island Reduction	1
1				ID Innovation in Design: O+M starter kit	1
1				ID Pilot Credit: Integrative Analysis of building materials	1
1				ID Pilot Credit: Biophilic Design	1
1				ID LEED Accredited Professional	1

3	1	0	0	Possible Points:	4
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1				RP Regional Priority: High Priority Site (2 pt threshold)	1
1				RP Regional Priority: Indoor Water Use Reduction (4 pt threshold)	1
	1			RP Regional Priority: Rainwater management (2 pt threshold)	1
1				RP Regional Priority: Renewable Energy Production (2 pt threshold)	1
				RP Regional Priority: Optimize Energy Performance (8 pt threshold)	1
				RP Regional Priority: Building life-cycle Impact Reduction (2 pt threshold)	1

60	16	18	16	Total
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60-68 Points

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

Based on progress drawings from January 2024

ASSUMPTIONS



LEED BOUNDARY

Site Area w/in LOW: 566,280 sf
Sports Fields: - 160,000 sf
406,280 sf

**Proposed LEED boundary is Limit of Work (LOW) shown with blue dashed line.*

**Square footages need to be verified on a scaled site plan.*



OCCUPANCY ASSUMPTIONS

Project Occupancy (Peak & Daily Average)

- FTEs (91)
 - Teachers
 - Administration
 - Other Staff
- Students (325)
- Visitors
- Schedule (e.g. seasonal fluctuations)

LOCATION AND TRANSPORTATION



LOCATION AND TRANSPORTATION

LTC3 High Priority Site

- v4 Option 1: Historic District - Locate the project on an infill location in a historic district;
- v4 Option 2: Priority Designation- Locate the project on a site listed by EPA National Priorities List, FEZ, FEC, FRC (See LEED v4 for full list);
- v4 Option 3: Brownfield Remediation - Locate on a brownfield where soil or groundwater contamination has been identified, and perform required remediations;
- v4.1 Option 2: Equity Plan.

Project is located in a difficult development zone (1 pt).

3	2	5	5	Location and Transportation	Possible Points:	15
			15	Credit 1 LEED for Neighborhood Development Location		15
OR Points can be achieved in the following credits LTc2 through LTc8.						
1				Credit 2 Sensitive Land Protection		1
1			1	Credit 3 High Priority Site		2
		2	3	Credit 4 Surrounding Density and Diverse Uses		5
	1	3		Credit 5 Access to Quality Transit		4
			1	Credit 6 Bicycle Facilities		1
	1			Credit 7 Reduced Parking Footprint		1
1				Credit 8 Green Vehicles		1

LOCATION AND TRANSPORTATION

LTc4 Surrounding Density and Diverse Uses

- V4.1 Option 3: WalkScore = 45 (1 point)

Action Item: TT to continue to evaluate diverse uses under v4.

3	2	5	5	Location and Transportation	Possible Points:	15
			15	Credit 1 LEED for Neighborhood Development Location		15
OR Points can be achieved in the following credits LTc2 through LTc8.						
1				Credit 2 Sensitive Land Protection		1
1			1	Credit 3 High Priority Site		2
		2	3	Credit 4 Surrounding Density and Diverse Uses		5
	1	3		Credit 5 Access to Quality Transit		4
			1	Credit 6 Bicycle Facilities		1
	1			Credit 7 Reduced Parking Footprint		1
1				Credit 8 Green Vehicles		1



LOCATION AND TRANSPORTATION

LTc7 Reduced Parking Footprint

- 121 parking spaces
- TT to confirm based on # of students served by the school

Action Item: DiNisco to provide update on parking requirements and student body count.

3	2	5	5	Location and Transportation	Possible Points:	15
			15	Credit 1 LEED for Neighborhood Development Location		15
OR Points can be achieved in the following credits LTc2 through LTc8.						
1				Credit 2 Sensitive Land Protection		1
1			1	Credit 3 High Priority Site		2
		2	3	Credit 4 Surrounding Density and Diverse Uses		5
	1	3		Credit 5 Access to Quality Transit		4
			1	Credit 6 Bicycle Facilities		1
	1			Credit 7 Reduced Parking Footprint		1
1				Credit 8 Green Vehicles		1

LOCATION AND TRANSPORTATION

LTc8 Green Vehicles

- 125 parking spaces
 - Install electrical vehicle supply equip. in 5% of all parking spaces (Level 2 or greater) = **7 spots**
- OR**
- Make 10% of all parking EV Ready (Level 2 or greater) = **13 spots**

Action Items:

- DiNisco to confirm number of spaces planned for preferred parking and EV charging stations.
- DiNisco to coordinate with the owner on details of charging stations to be cross-checked against LEED requirements.

3 2 5 5				Location and Transportation	Possible Points:	15
			15	Credit 1 LEED for Neighborhood Development Location		15
OR Points can be achieved in the following credits LTc2 through LTc8.						
1				Credit 2 Sensitive Land Protection		1
1			1	Credit 3 High Priority Site		2
		2	3	Credit 4 Surrounding Density and Diverse Uses		5
	1	3		Credit 5 Access to Quality Transit		4
			1	Credit 6 Bicycle Facilities		1
	1			Credit 7 Reduced Parking Footprint		1
1				Credit 8 Green Vehicles		1

SUSTAINABLE SITES



SUSTAINABLE SITES

SSc1 Site Assessment

Action Items:

- TT to circulate the LEED Site Assessment worksheet for DiNisco and consultants to review.
- DiNisco and consultants to complete the site assessment worksheet prior to the end of SD.

7	3	1	1	Sustainable Sites	Possible Points:	12
Y				Prereq 1 Construction Activity Pollution Prevention		Required
Y				Prereq 2 Environmental Site Assessment		Required
1				Credit 1 Site Assessment		1
	1	1		Credit 2 Site Development--Protect or Restore Habitat		2
1				Credit 3 Open Space		1
1	2			Credit 4 Rainwater Management		3
2				Credit 5 Heat Island Reduction		2
1				Credit 6 Light Pollution Reduction		1
			1	Credit 7 Site Master Plan		1
1				Credit 8 Joint Use of Facilities		1

SUSTAINABLE SITES

SSc2 Site Development – Protect or Restore Habitat

For LEED v4.1, credit requirements have become more achievable:

- 15% of the total site area can be restored for 1 pt
- 25% of the total site area can be restored for 2 pts
- Vegetation in compliant area must include at least 6 types of vegetation that are native to the region in at least two categories, and a 30 sf pollinator garden must be designated

Action Items:

- TT to develop preliminary LEED boundary.
- Landscape architect to review v4.1 credit requirements and verify the feasibility of providing the required native vegetation and pollinator garden areas.

7	3	1	1	Sustainable Sites	Possible Points:	12
Y				Prereq 1 Construction Activity Pollution Prevention		Required
Y				Prereq 2 Environmental Site Assessment		Required
1				Credit 1 Site Assessment		1
	1	1		Credit 2 Site Development--Protect or Restore Habitat		2
1				Credit 3 Open Space		1
1	2			Credit 4 Rainwater Management		3
2				Credit 5 Heat Island Reduction		2
1				Credit 6 Light Pollution Reduction		1
			1	Credit 7 Site Master Plan		1
1				Credit 8 Joint Use of Facilities		1

Site Area w/in LOW: 566,280 sf
 Sports Fields: - 160,000 sf

406,280 sf

15%: 60,942 sf
25%: 101,570 sf

**Square footages need to be verified on a scaled site plan.*

SUSTAINABLE SITES

SSc3 Open Space

- Designate 30% of total site area (including building footprint) as open space
 - 25% min. of that outdoor space must be vegetated (pedestrian-oriented paving/turf, recreation-oriented paving/turf and garden space can contribute towards compliance)

Action Items:

- DiNisco to send TT scaled, updated site plan.
- TT to refine preliminary LEED boundary.
- Action Item: Landscape architect to review v4.1 credit requirements and verify the feasibility of providing the required native vegetation and pollinator garden areas.

7	3	1	1	Sustainable Sites	Possible Points:	12
Y				Prereq 1 Construction Activity Pollution Prevention		Required
Y				Prereq 2 Environmental Site Assessment		Required
1				Credit 1 Site Assessment		1
	1	1		Credit 2 Site Development--Protect or Restore Habitat		2
1				Credit 3 Open Space		1
1	2			Credit 4 Rainwater Management		3
2				Credit 5 Heat Island Reduction		2
1				Credit 6 Light Pollution Reduction		1
			1	Credit 7 Site Master Plan		1
1				Credit 8 Joint Use of Facilities		1

Site Area w/in LOW:	566,280 sf
Sports Fields:	- 160,000 sf
	406,280 sf

30%:	121,884 sf
25% of ^:	30,471 sf

**Square footages need to be verified on a scaled site plan.*

SUSTAINABLE SITES

SSc4 Rainwater Management (v4.1)

- In a manner best replicating natural site hydrology processes, manage on site the runoff from the developed site for the xxth percentile of regional or local rainfall events *using low-impact development (LID) and green infrastructure*
 - 80th percentile (1 pt) **OR**
 - 85th percentile (2 pts) **OR**
 - 90th percentile (3 pts) **OR**

Action Item: This credit can be difficult to achieve and requires low-impact development and site run-off strategies that replicate natural site hydrology. Landscape architect to weigh in on feasibility.

7	3	1	1	Sustainable Sites	Possible Points:	12
Y				Prereq 1 Construction Activity Pollution Prevention		Required
Y				Prereq 2 Environmental Site Assessment		Required
1				Credit 1 Site Assessment		1
	1	1		Credit 2 Site Development--Protect or Restore Habitat		2
1				Credit 3 Open Space		1
1	2			Credit 4 Rainwater Management		3
2				Credit 5 Heat Island Reduction		2
1				Credit 6 Light Pollution Reduction		1
			1	Credit 7 Site Master Plan		1
1				Credit 8 Joint Use of Facilities		1

SUSTAINABLE SITES

SSc5 Heat Island Reduction

- Option 1: Nonroof and Roof - meet the roof and nonroof area requirements as specified in the LEED v4 guide– non-roof, high-reflectance roof, and vegetated roof measures may be used in achieving this requirement
- The lighter the roof, the less the site needs to be compliant-- project should aim for at least 50% of the site hardscaping to be light colored, PV, or shaded with vegetation

Action Item: DiNisco & landscape architect to confirm light-colored roof and paving as well as shading are planned.

7	3	1	1	Sustainable Sites	Possible Points:	12
Y				Prereq 1 Construction Activity Pollution Prevention		Required
Y				Prereq 2 Environmental Site Assessment		Required
1				Credit 1 Site Assessment		1
	1	1		Credit 2 Site Development--Protect or Restore Habitat		2
1				Credit 3 Open Space		1
1	2			Credit 4 Rainwater Management		3
2				Credit 5 Heat Island Reduction		2
1				Credit 6 Light Pollution Reduction		1
			1	Credit 7 Site Master Plan		1
1				Credit 8 Joint Use of Facilities		1

SUSTAINABLE SITES

SSc6 Light Pollution Reduction

- Meet uplight and light trespass requirements using either the backlight-uplight-glare (BUG) method or calculation method
- Property line is used as lighting boundary, and can be adjusted when located adjacent to public street, corridors, etc.

Action Item: DiNisco and electrical engineer to confirm credit feasibility and ensure compliant lighting fixtures are specified.

7	3	1	1	Sustainable Sites	Possible Points:	12
Y				Prereq 1 Construction Activity Pollution Prevention		Required
Y				Prereq 2 Environmental Site Assessment		Required
1				Credit 1 Site Assessment		1
	1	1		Credit 2 Site Development--Protect or Restore Habitat		2
1				Credit 3 Open Space		1
1	2			Credit 4 Rainwater Management		3
2				Credit 5 Heat Island Reduction		2
1				Credit 6 Light Pollution Reduction		1
			1	Credit 7 Site Master Plan		1
1				Credit 8 Joint Use of Facilities		1

SUSTAINABLE SITES

SSc8 Joint Use of Facilities

- Option 1: Making Building Space Open to the General Public - ensure three types of spaces in the school are accessible and available for shared use by general public
 - Auditorium
 - Gymnasium
 - Cafeteria
 - One or more classrooms
 - Playing fields and stadiums
 - Joint parking
- Provisions for communicating availability to the public is required for the credit

Action Item: DiNisco to confirm that three of the required spaces are open to outside organizations.

7	3	1	1	Sustainable Sites	Possible Points:	12
Y				Prereq 1 Construction Activity Pollution Prevention		Required
Y				Prereq 2 Environmental Site Assessment		Required
1				Credit 1 Site Assessment		1
	1	1		Credit 2 Site Development--Protect or Restore Habitat		2
1				Credit 3 Open Space		1
1	2			Credit 4 Rainwater Management		3
2				Credit 5 Heat Island Reduction		2
1				Credit 6 Light Pollution Reduction		1
			1	Credit 7 Site Master Plan		1
1				Credit 8 Joint Use of Facilities		1

WATER EFFICIENCY



WATER EFFICIENCY



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WATER EFFICIENCY

WEp1/WEc1 Outdoor Water Use Reduction

- Currently assuming landscape does not require permanent irrigation system beyond a two-year establishment period
- Athletic fields can be exempted
- Assuming no water reclamation/reuse at this time

Action Item: Landscape architect to confirm that no irrigation is planned for the project beyond the establishment period for landscaping other than the athletic fields.

5	1	1	5	Water Efficiency	Possible Points:	12
Y				Prereq 1 Outdoor Water Use Reduction		Required
Y				Prereq 2 Indoor Water Use Reduction		Required
Y				Prereq 3 Building-Level Water Metering		Required
2				Credit 1 Outdoor Water Use Reduction		2
2	1	1	3	Credit 2 Indoor Water Use Reduction		7
			2	Credit 3 Cooling Tower Water Use		2
1				Credit 4 Water Metering		1

WATER EFFICIENCY

WEp2/WEc2 Indoor Water Use Reduction

- Assumes a 30% to 35% water reduction
- Assuming no water reclamation/reuse at this time
- TT recommends that the following flush / flow rates:
 - Toilets: 1.1 gpf
 - Urinals: 0.125 gpf or hybrid
 - Public lavatory: 0.35 gpm
 - Kitchen faucet: 1 gpm
 - Shower: 0.125 gpm (if included)

Action Items:

- DiNisco to provide occupancy assumptions.
- DiNisco to provide commercial kitchen equipment specs.
- MEP to provide anticipated flush and flow rates.

5	1	1	5	Water Efficiency	Possible Points:	12
Y				Prereq 1 Outdoor Water Use Reduction		Required
Y				Prereq 2 Indoor Water Use Reduction		Required
Y				Prereq 3 Building-Level Water Metering		Required
2				Credit 1 Outdoor Water Use Reduction		2
2	1	1	3	Credit 2 Indoor Water Use Reduction		7
			2	Credit 3 Cooling Tower Water Use		2
1				Credit 4 Water Metering		1

WATER EFFICIENCY

WEp3/WEc4 Water Metering

- In addition to building and grounds water metering to meet the prerequisite-
- Install permanent water meters for two of the following:
 - Irrigation
 - Indoor plumbing fixtures and fittings
 - Domestic hot water
 - Boiler with aggregate projected annual water use of 100,000 gal or more
 - Reclaimed water
 - Other process water

Action Item: MEP to confirm that water submeters will be provided for two of the six possible options.

5	1	1	5	Water Efficiency	Possible Points:	12
Y				Prereq 1 Outdoor Water Use Reduction		Required
Y				Prereq 2 Indoor Water Use Reduction		Required
Y				Prereq 3 Building-Level Water Metering		Required
2				Credit 1 Outdoor Water Use Reduction		2
2	1	1	3	Credit 2 Indoor Water Use Reduction		7
			2	Credit 3 Cooling Tower Water Use		2
1				Credit 4 Water Metering		1

ENERGY AND ATMOSPHERE



MA STRETCH CODE REQ'S

Burlington MA is a Stretch Code community

1. Targeted Performance (TEDI) Energy Model
2. Prescriptive envelope or Component performance alternative (envelope backstop)
3. Electrification
 - High glazed wall system: full electrification unless average ventilation > 0.5 cfm/sf
4. Air leakage compliance
 - Maximum 0.35 cfm/sf at 75 Pa
 - C406 Reduced air leakage maximum 0.20 cfm/sf at 75 Pa
5. C406 Additional Efficiency Requirements (15 credits)
6. Energy Recovery
 - 50% sensible heat recovery for labs
 - 70% sensible and latent energy recovery for all others
7. EV Charging
 - Future EV charging minimum 10-20% of spaces depending on project type
8. Solar Readiness

MSBA 2023 Policy Requirements

Required: Meet the minimum energy efficiency requirements described in the MA DOER “Stretch Code Green Community” standards

Optional Additional 3% Reimbursement of the Estimated Basis of Total Facilities Grant:

Meet the minimum energy efficiency requirements described in the MA DOER “Opt-in Specialized Code” standards

OPT-IN SPECIALIZED CODE

Burlington MA is not a Specialized Opt-In Code Community however optional additional MSBA funding is available for meeting these requirements

1. **Zero Energy:**
 1. On site energy production \geq building energy use
2. **All-Electric:**
 1. Full space and water heating electrification
3. **Mixed Fuel:**
 - On-site renewable capacity $\geq 1.5 \text{ W/ft}^2$ multiplied by sum of floor area of three largest floors
 - More efficient HVAC equipment performance
 - Wiring for future electrification



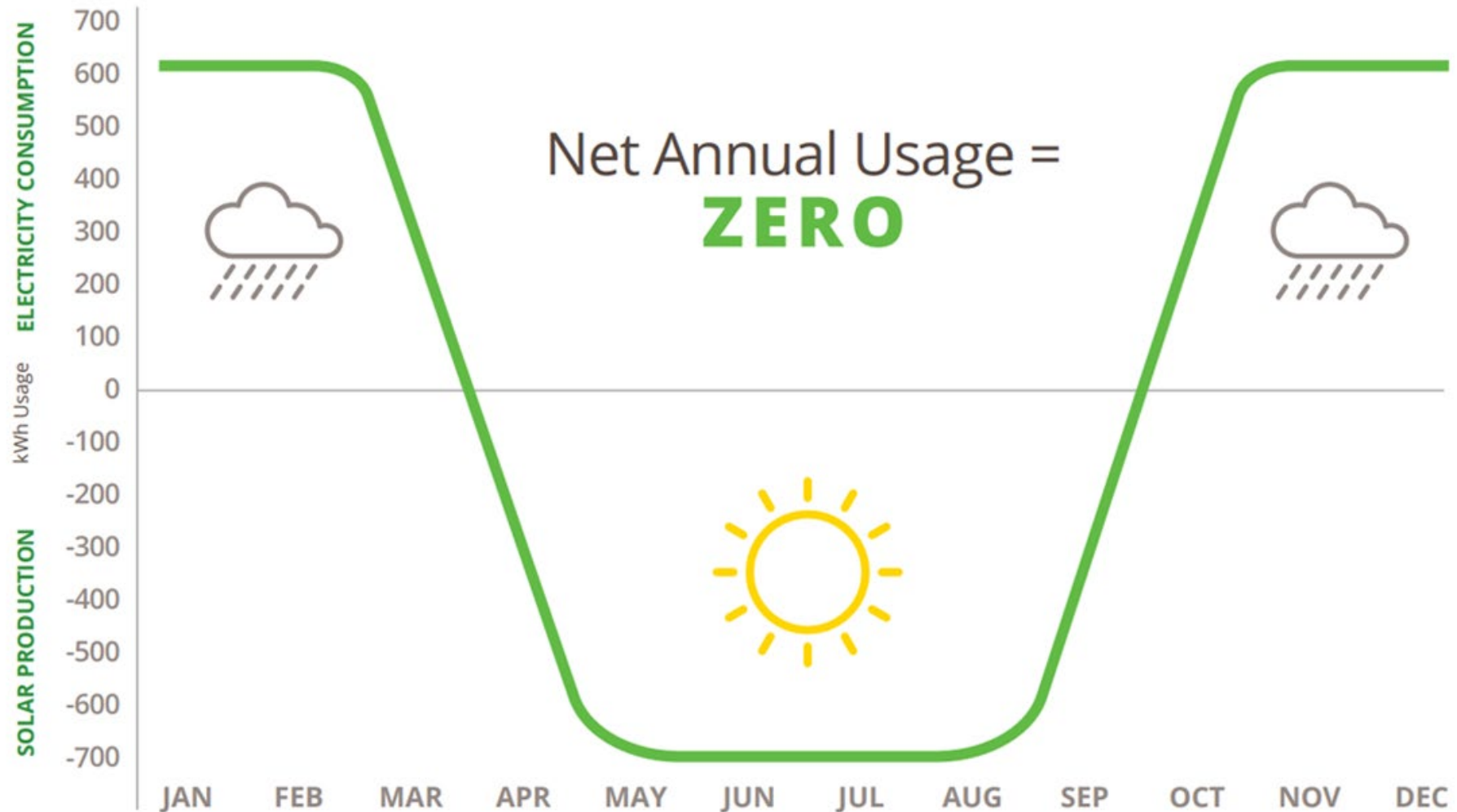
MSBA 2023 Policy Requirements

Required: Meet the minimum energy efficiency requirements described in the MA DOER “Stretch Code Green Community” standards

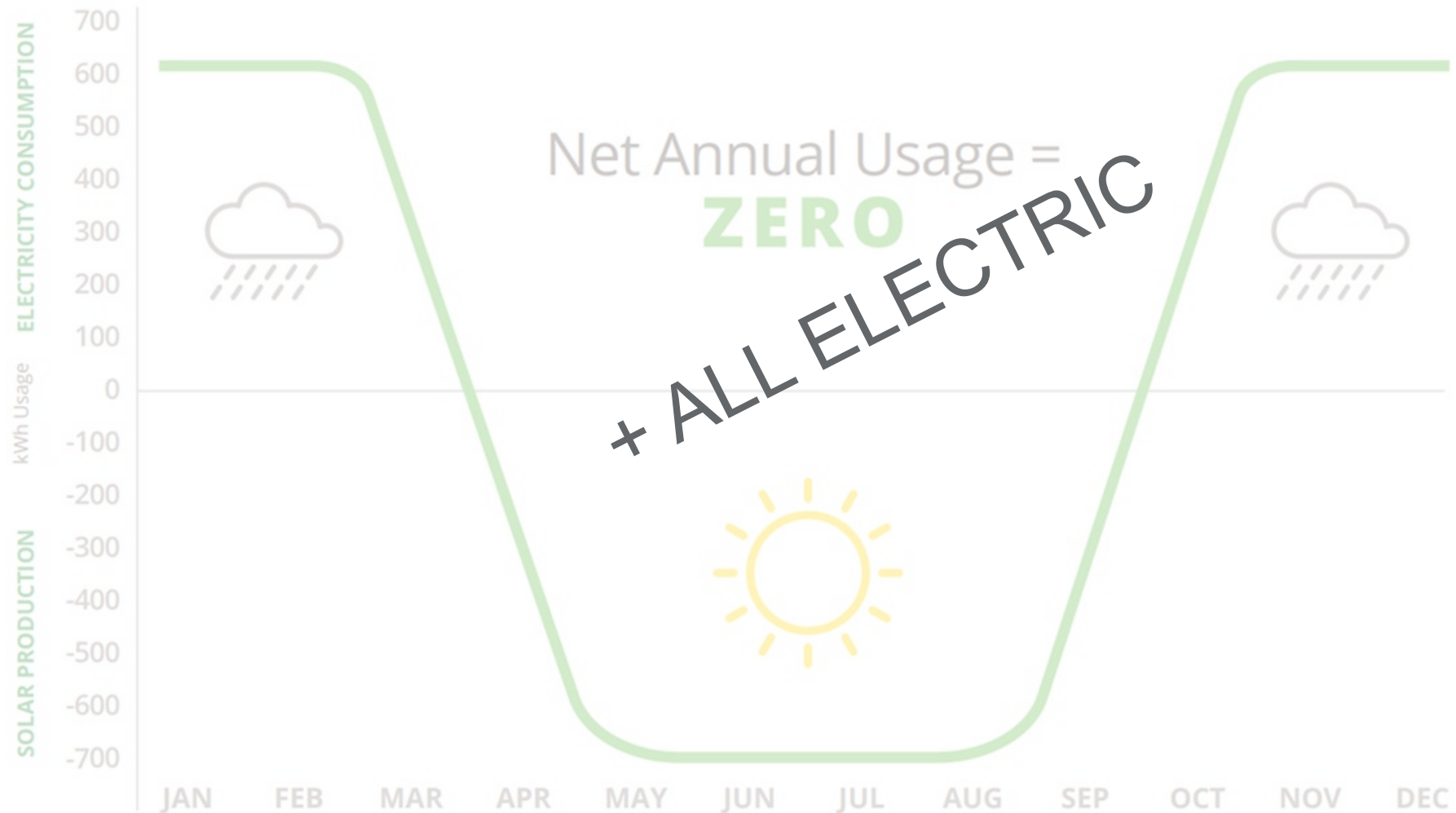
Optional Additional 3% Reimbursement of the Estimated Basis of Total Facilities Grant:

Meet the minimum energy efficiency requirements described in the MA DOER “Opt-in Specialized Code” standards

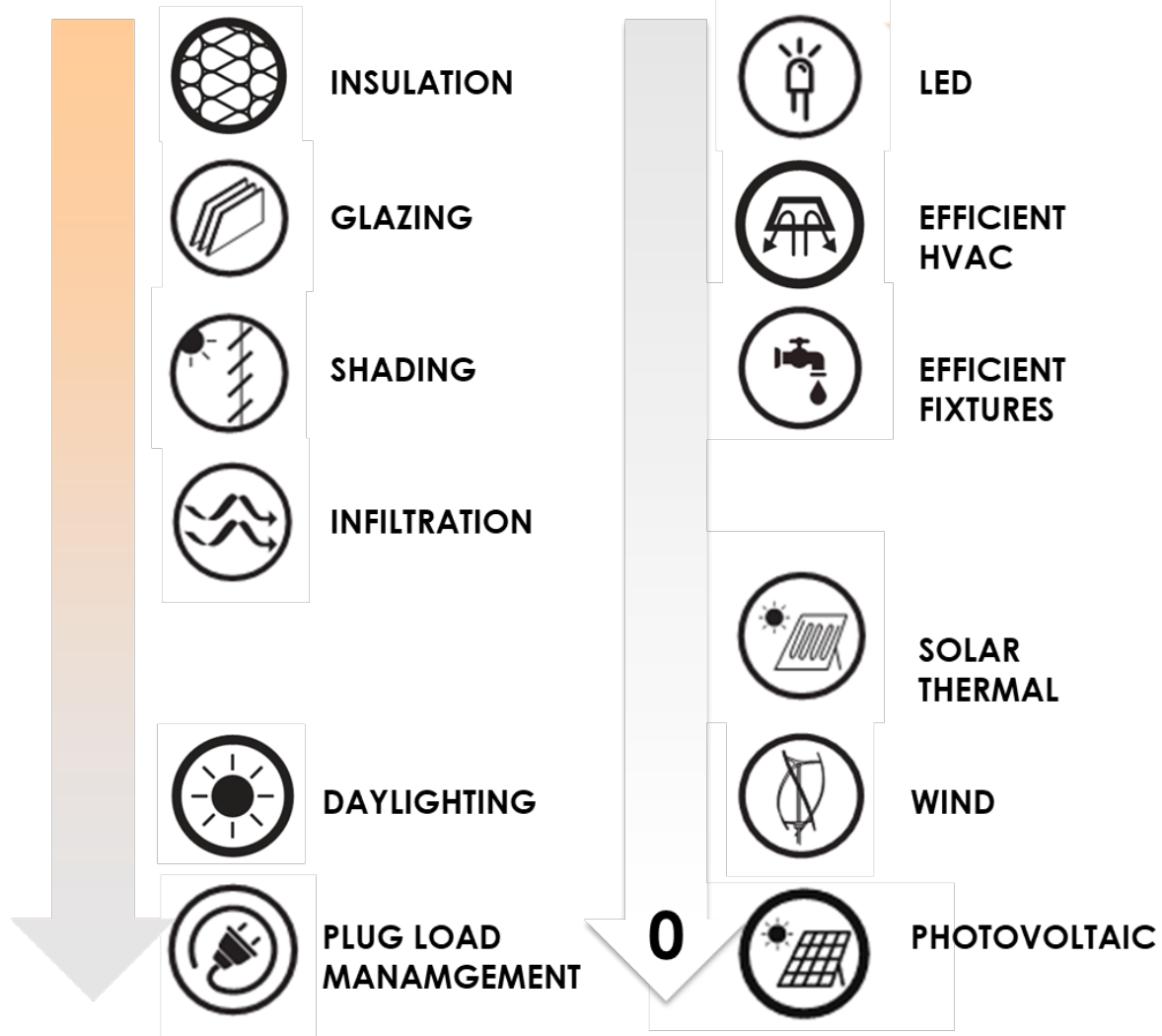
NET ZERO ENERGY



NET ZERO CARBON



NET ZERO CARBON



- Minimize loads
- Maximize energy efficiency
- Implement energy recovery opportunities where feasible
- Balance the actual annual source energy consumption with on-site renewable energy generation.

ENERGY AND ATMOSPHERE

EAc1 Enhanced Commissioning

- *Enhanced Systems Commissioning* for MEP and renewable energy systems and assemblies for HVAC&R systems **AND**
- *Monitoring-Based Commissioning* - develop monitoring-based procedures and identify points to be measured and evaluated (energy- and water-consuming systems) **AND**
- *Envelope Commissioning*

Action Items:

- **A Cx agent will need to be hired during DD phase to do enhanced reviews.**

22	5	4	0	Energy and Atmosphere	Possible Points:	31
Y				Prereq 1 Fundamental Commissioning and Verification	Required	
Y				Prereq 2 Minimum Energy Performance	Required	
Y				Prereq 3 Building-Level Energy Metering	Required	
Y				Prereq 4 Fundamental Refrigerant Management	Required	
6				Credit 1 Enhanced Commissioning		6
14	2			Credit 2 Optimize Energy Performance		16
1				Credit 3 Advanced Energy Metering		1
		2		Credit 4 Demand Response		2
	3	2		Credit 5 Renewable Energy Production		5
1				Credit 6 Enhanced Refrigerant Management		1

MSBA 2023 Policy Requirements

Required: Meet the minimum energy efficiency requirements described in the MA DOER “Stretch Code Green Community” standards

Optional Additional 3% Reimbursement of the Estimated Basis of Total Facilities Grant:

Meet the minimum energy efficiency requirements described in the MA DOER “Opt-in Specialized Code” standards

ENERGY AND ATMOSPHERE

EAc2 Optimize Energy Performance

- Project Goal: Net Zero Energy
 - EUI Goal: 25 kBtu/sf/year
 - All Electric
 - Fully On-Site Renewables
- LEED energy model will be started in SD
- Project is anticipated to achieve the majority of points under this credit if it reaches net zero energy

22	5	4	0	Energy and Atmosphere	Possible Points:	31
Y				Prereq 1 Fundamental Commissioning and Verification		Required
Y				Prereq 2 Minimum Energy Performance		Required
Y				Prereq 3 Building-Level Energy Metering		Required
Y				Prereq 4 Fundamental Refrigerant Management		Required
6				Credit 1 Enhanced Commissioning		6
14	2			Credit 2 Optimize Energy Performance		16
1				Credit 3 Advanced Energy Metering		1
		2		Credit 4 Demand Response		2
	3	2		Credit 5 Renewable Energy Production		5
1				Credit 6 Enhanced Refrigerant Management		1

MSBA 2023 Policy Requirements

Required: Meet the minimum energy efficiency requirements described in the MA DOER “Stretch Code Green Community” standards

Optional Additional 3% Reimbursement of the Estimated Basis of Total Facilities Grant:

Meet the minimum energy efficiency requirements described in the MA DOER “Opt-in Specialized Code” standards

ENERGY AND ATMOSPHERE

EAp3/EAc3 Adv Energy Metering

- Provide building level energy meters, track at 1-month intervals, share data for min. 5 years with USGBC
- Install advanced energy metering for all whole-building energy sources used by the building, and any energy end use that represent *10% or more* of the total annual consumption of the building
 - All building electric
 - Lighting panels
 - Receptacle loads
 - Kitchen Loads
 - HVAC ventilation
 - HVAC VRF or geothermal
 - MDF/IDF power

Action Item: Design team to confirm sub-metering will be included.

22	5	4	0	Energy and Atmosphere	Possible Points:	31
Y				Prereq 1 Fundamental Commissioning and Verification		Required
Y				Prereq 2 Minimum Energy Performance		Required
Y				Prereq 3 Building-Level Energy Metering		Required
Y				Prereq 4 Fundamental Refrigerant Management		Required
6				Credit 1 Enhanced Commissioning		6
14	2			Credit 2 Optimize Energy Performance		16
1				Credit 3 Advanced Energy Metering		1
		2		Credit 4 Demand Response		2
	3	2		Credit 5 Renewable Energy Production		5
1				Credit 6 Enhanced Refrigerant Management		1

MSBA 2023 Policy Requirements

Required: Meet the minimum energy efficiency requirements described in the MA DOER “Stretch Code Green Community” standards

Optional Additional 3% Reimbursement of the Estimated Basis of Total Facilities Grant:

Meet the minimum energy efficiency requirements described in the MA DOER “Opt-in Specialized Code” standards

ENERGY AND ATMOSPHERE

EAc4 Demand Response

- Design a system with the capabilities of DR
- Enroll in a 1-year contract with qualified DR program for at least 10% of estimated peak electricity demand
- When an event is called, all setpoints should be switched to unoccupied; the temperatures will increase during peak loads, but this is likely to happen during summer-- when this does occur, the temperatures may be uncomfortable for the occupants, so should be reviewed w/ School District

Action Item: Team to discuss feasibility.

22	5	4	0	Energy and Atmosphere	Possible Points:	31
Y				Prereq 1 Fundamental Commissioning and Verification	Required	
Y				Prereq 2 Minimum Energy Performance	Required	
Y				Prereq 3 Building-Level Energy Metering	Required	
Y				Prereq 4 Fundamental Refrigerant Management	Required	
6				Credit 1 Enhanced Commissioning		6
14	2			Credit 2 Optimize Energy Performance		16
1				Credit 3 Advanced Energy Metering		1
		2		Credit 4 Demand Response		2
	3	2		Credit 5 Renewable Energy Production		5
1				Credit 6 Enhanced Refrigerant Management		1

MSBA 2023 Policy Requirements

Required: Meet the minimum energy efficiency requirements described in the MA DOER “Stretch Code Green Community” standards

Optional Additional 3% Reimbursement of the Estimated Basis of Total Facilities Grant:

Meet the minimum energy efficiency requirements described in the MA DOER “Opt-in Specialized Code” standards

ENERGY AND ATMOSPHERE

EAc5 Renewable Energy Production

- 3 points assumes 10% Tier 1 (on-site renewable energy generation) **OR** 30% Tier 2 (new off-site renewable energy generation) **OR** 100% Tier 3 (off-site renewable)
- 5 points assumes 20% Tier 1 (on-site renewable energy generation) **OR** 50% Tier 2 (new off-site renewable energy generation)

Action Item: DiNisco to provide update on photovoltaic array plans, location, and size. TT Energy model is in progress.

22	5	4	0	Energy and Atmosphere	Possible Points:	31
Y				Prereq 1 Fundamental Commissioning and Verification		Required
Y				Prereq 2 Minimum Energy Performance		Required
Y				Prereq 3 Building-Level Energy Metering		Required
Y				Prereq 4 Fundamental Refrigerant Management		Required
6				Credit 1 Enhanced Commissioning		6
14	2			Credit 2 Optimize Energy Performance		16
1				Credit 3 Advanced Energy Metering		1
		2		Credit 4 Demand Response		2
	3	2		Credit 5 Renewable Energy Production		5
1				Credit 6 Enhanced Refrigerant Management		1

MSBA 2023 Policy Requirements

Required: Meet the minimum energy efficiency requirements described in the MA DOER “Stretch Code Green Community” standards

Optional Additional 3% Reimbursement of the Estimated Basis of Total Facilities Grant:

Meet the minimum energy efficiency requirements described in the MA DOER “Opt-in Specialized Code” standards

ENERGY AND ATMOSPHERE

EAc6 Enhanced Refrigerant Management

- Option 2 Recommended: Calculation of refrigeration impact - select refrigerants that are used in HVAC&R equipment to minimize or eliminate the emission of compounds that contribute to ozone depletion and climate change
- Achievement of this credit depends on which mechanical systems are selected as well as kitchen refrigeration equipment

Action Item: MEP to comment on the credit feasibility and pathway.

22	5	4	0	Energy and Atmosphere	Possible Points:	31
Y				Prereq 1 Fundamental Commissioning and Verification		Required
Y				Prereq 2 Minimum Energy Performance		Required
Y				Prereq 3 Building-Level Energy Metering		Required
Y				Prereq 4 Fundamental Refrigerant Management		Required
6				Credit 1 Enhanced Commissioning		6
14	2			Credit 2 Optimize Energy Performance		16
1				Credit 3 Advanced Energy Metering		1
		2		Credit 4 Demand Response		2
	3	2		Credit 5 Renewable Energy Production		5
1				Credit 6 Enhanced Refrigerant Management		1

MSBA 2023 Policy Requirements

Required: Meet the minimum energy efficiency requirements described in the MA DOER “Stretch Code Green Community” standards

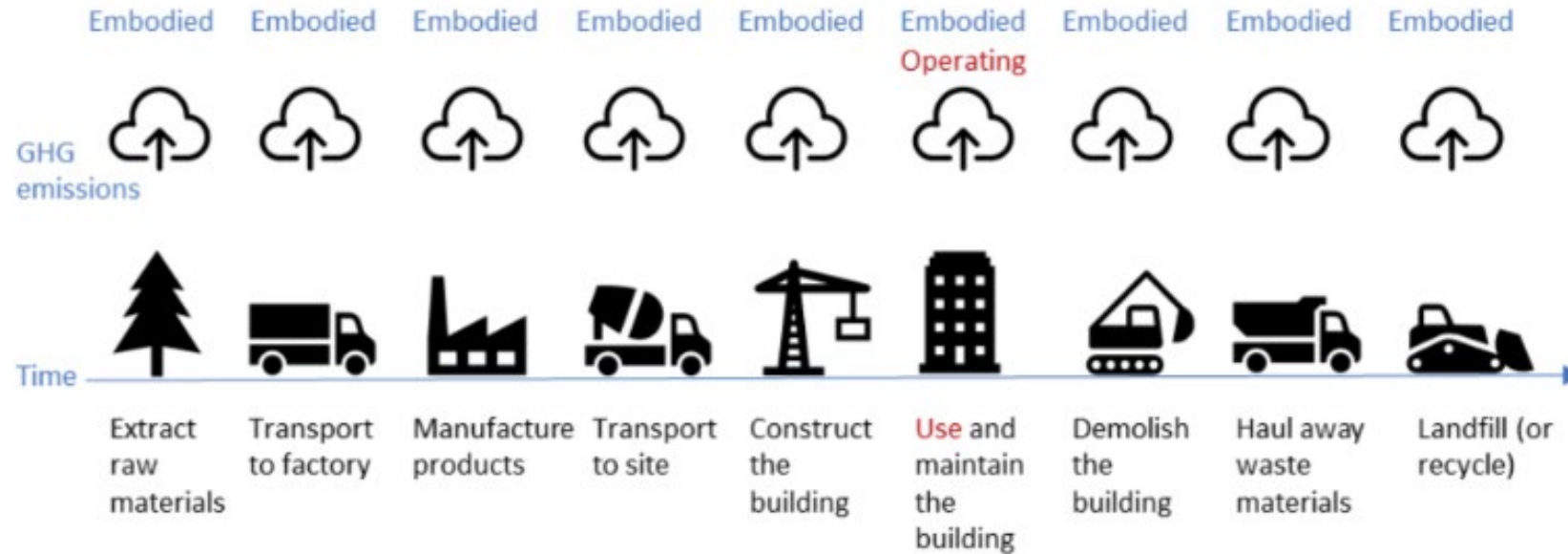
Optional Additional 3% Reimbursement of the Estimated Basis of Total Facilities Grant:

Meet the minimum energy efficiency requirements described in the MA DOER “Opt-in Specialized Code” standards

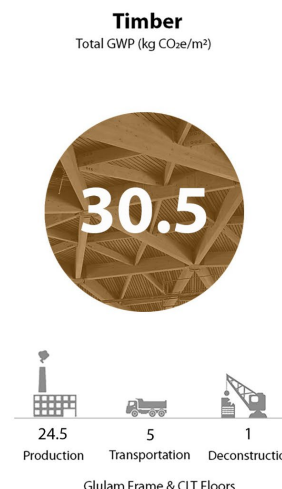
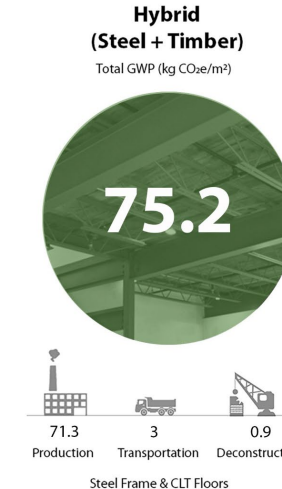
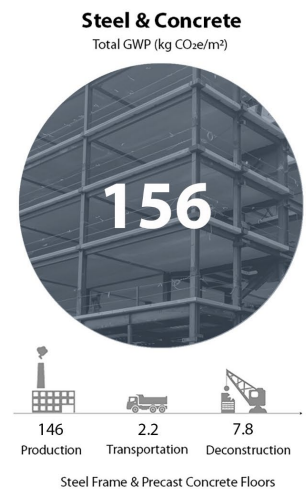
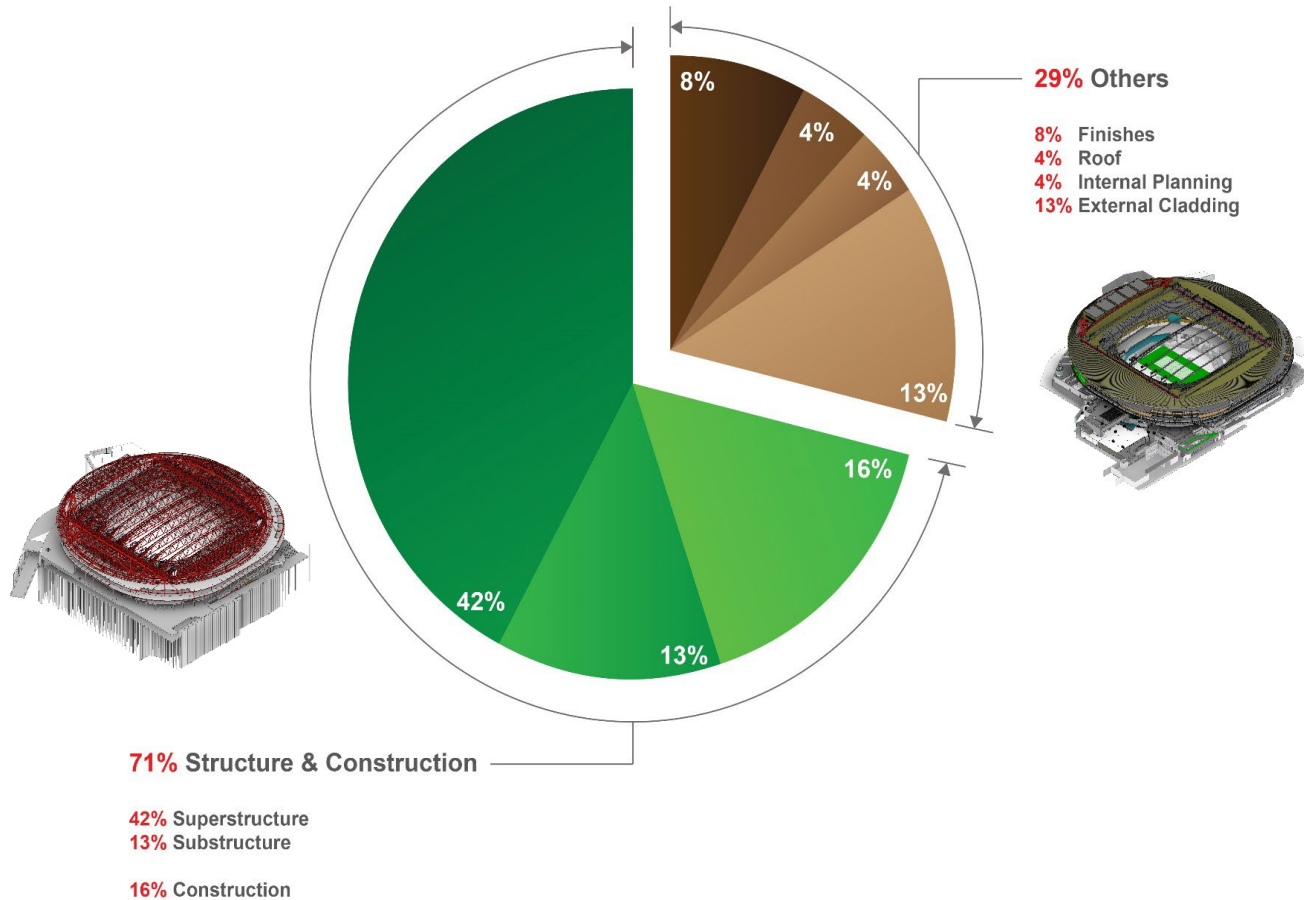
MATERIALS AND RESOURCES

EMBODIED CARBON

- Building materials emit massive amounts of carbon long before the lights go on



EMBODIED CARBON



EMBODIED CARBON STRATEGIES

- Cement replacements are cost neutral and low hanging fruit
- Reduce material quantities overall
- Reuse materials
- Select recycled material options



ENVIRONMENTALLY AND HEALTH CONSCIOUS MATERIALS



- Select products that declare environmental impact and chemicals of concern

MATERIALS AND RESOURCES

MRc1 Building Life-Cycle Impact Reduction (v4.1)

- Life-cycle assessment (structure and enclosure)
 - 1 pt for conducting an LCA
 - 2 pts for achieving 5% reduction
 - 3 pts for achieving 10% reduction
- Alternatively, reuse or salvage building materials from off-site or on-site as a percentage of the surface area

Action Item: DiNisco to share credit calculations, if any have been performed to date, and confirm preferred pathway for the project.

5	2	3	3	Materials and Resources		Possible Points:	13
Y				Prereq 1	Storage and Collection of Recyclables		Required
Y				Prereq 2	Construction and Demolition Waste Management Planning		Required
		2	3	Credit 1	Building Life-Cycle Impact Reduction		5
1	1			Credit 2	Building Product Disclosure and Optimization - Environmental Product Declarations	2	
1		1		Credit 3	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2	
1	1			Credit 4	Building Product Disclosure and Optimization - Material Ingredients	2	
2				Credit 5	Construction and Demolition Waste Management	2	

MATERIALS AND RESOURCES

MRc2 BPDO - EPDs

- Environmental Product Declaration: use at least 20 different permanently installed products sourced from at least 5 different manufacturers that meet the EPD requirements (product-specific LCAs)
- Use products that comply with one of the LEED criteria for 50%, by cost, of the total value of permanently installed products in the project (this point can be more difficult to obtain)

Action Item: DiNisco to specify an appropriate list of products that cannot be substituted in order to ensure the credit threshold is met.

5	2	3	3	Materials and Resources		Possible Points:	13
Y				Prereq 1	Storage and Collection of Recyclables		Required
Y				Prereq 2	Construction and Demolition Waste Management Planning		Required
		2	3	Credit 1	Building Life-Cycle Impact Reduction		5
1	1			Credit 2	Building Product Disclosure and Optimization - Environmental Product Declarations		2
1		1		Credit 3	Building Product Disclosure and Optimization - Sourcing of Raw Materials		2
1	1			Credit 4	Building Product Disclosure and Optimization - Material Ingredients		2
2				Credit 5	Construction and Demolition Waste Management		2

MATERIALS AND RESOURCES

MRc3 BPDO – Sourcing of Raw Materials

- Use at least 20 different permanently installed products from at least 5 different manufacturers that have publicly released a report from their raw materials suppliers which include raw material supplier extraction locations, a commitment to long-term ecologically responsible land use, a commitment to reducing environmental harms, and a commitment to meeting applicable standards or programs

Action Item: Team to continue to evaluate feasibility of achieving 1 point within this credit.

5	2	3	3	Materials and Resources		Possible Points:	13
Y				Prereq 1	Storage and Collection of Recyclables		Required
Y				Prereq 2	Construction and Demolition Waste Management Planning		Required
		2	3	Credit 1	Building Life-Cycle Impact Reduction		5
1	1			Credit 2	Building Product Disclosure and Optimization - Environmental Product Declarations		2
1		1		Credit 3	Building Product Disclosure and Optimization - Sourcing of Raw Materials		2
1	1			Credit 4	Building Product Disclosure and Optimization - Material Ingredients		2
2				Credit 5	Construction and Demolition Waste Management		2

MATERIALS AND RESOURCES

MRc4 BRDO – Material Ingredients

- Use at least 20 different permanently installed products from at least 5 different manufacturers that use approved programs to demonstrate the chemical inventory of the product to at least 0.1% (this includes HPDs)

Action Items:

- DiNisco to incorporate into project specifications.
- TT will review the specifications when available.

5	2	3	3	Materials and Resources		Possible Points:	13
Y				Prereq 1	Storage and Collection of Recyclables		Required
Y				Prereq 2	Construction and Demolition Waste Management Planning		Required
		2	3	Credit 1	Building Life-Cycle Impact Reduction		5
1	1			Credit 2	Building Product Disclosure and Optimization - Environmental Product Declarations		2
1		1		Credit 3	Building Product Disclosure and Optimization - Sourcing of Raw Materials		2
1	1			Credit 4	Building Product Disclosure and Optimization - Material Ingredients		2
2				Credit 5	Construction and Demolition Waste Management		2

MSBA 2023 Policy Requirements

Required: 3 points from the credits listed below

Optional Additional 1% Reimbursement:

5 points from the credits listed below

- [BPDO - Material Ingredients](#)
- [Low Emitting Materials](#)
- [Indoor Air Quality Assessment](#)

MATERIALS AND RESOURCES

MRc5 BRDO – Construction and Demolition Waste Management

- Construction waste management is planned for the project
- *75% diversion* and *4 streams* should be specified to achieve 2 points

Action Item: DiNisco to incorporate into project specifications.

5	2	3	3	Materials and Resources		Possible Points:	13
Y				Prereq 1	Storage and Collection of Recyclables		Required
Y				Prereq 2	Construction and Demolition Waste Management Planning		Required
		2	3	Credit 1	Building Life-Cycle Impact Reduction		5
1	1			Credit 2	Building Product Disclosure and Optimization - Environmental Product Declarations		2
1		1		Credit 3	Building Product Disclosure and Optimization - Sourcing of Raw Materials		2
1	1			Credit 4	Building Product Disclosure and Optimization - Material Ingredients		2
2				Credit 5	Construction and Demolition Waste Management		2

INDOOR ENVIRONMENTAL QUALITY



INDOOR ENVIRONMENTAL QUALITY



INDOOR ENVIRONMENTAL QUALITY

EQc1 Enhanced Indoor Air Quality Strategies

- *Entryway systems:* permanent entryway systems at least 10 feet long in the primary direction of travel, including grilles or walk-off mats
- *Interior cross-contamination prevention:* sufficiently exhaust spaces where hazardous gases or chemicals may be present (e.g. janitor closets and kiln room) to create negative pressurization + self-closing doors and deck-to-deck partitions or a hard-lid ceiling
- *Filtration:* include MERV 13 filters on OA
- *Carbon dioxide monitoring:* include CO2 sensors in densely occupied spaces, between 3-6 ft above the floor, with audible or visual indicators or alerts

8	2	4	2	Indoor Environmental Quality		Possible Points:	16
Y				Prereq 1	Minimum Indoor Air Quality Performance		Required
Y				Prereq 2	Environmental Tobacco Smoke Control		Required
2				Credit 1	Enhanced Indoor Air Quality Strategies		2
2	1			Credit 2	Low-Emitting Materials		3
1				Credit 3	Construction Indoor Air Quality Management Plan		1
2				Credit 4	Indoor Air Quality Assessment		2
	1			Credit 5	Thermal Comfort		1
1		1		Credit 6	Interior Lighting		2
		1	2	Credit 7	Daylight		3
		1		Credit 8	Quality Views		1
		1		Credit 9	Acoustic Performance		1

Action Items:

- **MEP to confirm CO2 sensors and MERV 13 filters and exhaust are planned for the project**
- **DiNisco to confirm entryway systems are planned for all regularly used building entrances. Provide door closers for all janitorial closets.**
- **Note that rolled out mats can be used but will need to be cleaned weekly and confirmed by a narrative from the owner.**

INDOOR ENVIRONMENTAL QUALITY

EQc2 Low Emitting Materials

- 2 points: three compliant categories
- **3 points: four compliant categories**
 - Interior paints
 - Ceilings
 - Flooring
 - Insulation
 - Composite wood
 - Furniture
 - Adhesives/sealants*
- This credit may be difficult to achieve, but is important for schools

Action Item: TT will provide a specifications review matrix when they are available.

8	2	4	2	Indoor Environmental Quality		Possible Points:	16
Y				Prereq 1	Minimum Indoor Air Quality Performance	Required	
Y				Prereq 2	Environmental Tobacco Smoke Control	Required	
2				Credit 1	Enhanced Indoor Air Quality Strategies		2
2	1			Credit 2	Low-Emitting Materials		3
1				Credit 3	Construction Indoor Air Quality Management Plan		1
2				Credit 4	Indoor Air Quality Assessment		2
	1			Credit 5	Thermal Comfort		1
1		1		Credit 6	Interior Lighting		2
		1	2	Credit 7	Daylight		3
		1		Credit 8	Quality Views		1
		1		Credit 9	Acoustic Performance		1

MSBA 2023 Policy Requirements

Required: 3 points from the credits listed below

Optional Additional 1% Reimbursement:

5 points from the credits listed below

- [BPDO - Material Ingredients](#)
- [Low Emitting Materials](#)
- [Indoor Air Quality Assessment](#)

INDOOR ENVIRONMENTAL QUALITY

EQc3 Construction IAQ

- Develop and implement an IAQ Management plan for construction and preoccupancy phases
 - HVAC Protection
 - Source Control
 - Pathway Interruption
 - Housekeeping
 - Scheduling

- Prohibit the use of tobacco products in the building and within 25' of building entrance during construction

Action Item: DiNisco to incorporate an IAQ specification into project specifications.

8	2	4	2	Indoor Environmental Quality		Possible Points:	16
Y				Prereq 1	Minimum Indoor Air Quality Performance	Required	
Y				Prereq 2	Environmental Tobacco Smoke Control	Required	
2				Credit 1	Enhanced Indoor Air Quality Strategies		2
2	1			Credit 2	Low-Emitting Materials		3
1				Credit 3	Construction Indoor Air Quality Management Plan		1
2				Credit 4	Indoor Air Quality Assessment		2
	1			Credit 5	Thermal Comfort		1
1		1		Credit 6	Interior Lighting		2
		1	2	Credit 7	Daylight		3
		1		Credit 8	Quality Views		1
		1		Credit 9	Acoustic Performance		1

INDOOR ENVIRONMENTAL QUALITY

EQc4 Indoor Air Quality Assessment (v4.1)

- Option 1: Flush-out Before or During Occupancy (1 pt)

AND/OR

- Option 2: Air Testing - after construction ends and before occupancy, but under ventilation conditions typical for occupancy, conduct baseline IAQ testing for all occupied spaces (1-2 pts)
 - Path 1. Particulate Matter and Inorganic Gases **and/or**
 - Path 2. Volatile Organic Compounds

Action Item: Team to discuss plan for achieving this credit.

8	2	4	2	Indoor Environmental Quality		Possible Points:	16
Y				Prereq 1	Minimum Indoor Air Quality Performance	Required	
Y				Prereq 2	Environmental Tobacco Smoke Control	Required	
2				Credit 1	Enhanced Indoor Air Quality Strategies		2
2	1			Credit 2	Low-Emitting Materials		3
1				Credit 3	Construction Indoor Air Quality Management Plan		1
2				Credit 4	Indoor Air Quality Assessment		2
	1			Credit 5	Thermal Comfort		1
1		1		Credit 6	Interior Lighting		2
		1	2	Credit 7	Daylight		3
		1		Credit 8	Quality Views		1
		1		Credit 9	Acoustic Performance		1

MSBA 2023 Policy Requirements

Required: 3 points from the credits listed below

Optional Additional 1% Reimbursement:

5 points from the credits listed below

- [BPDO - Material Ingredients](#)
- [Low Emitting Materials](#)
- [Indoor Air Quality Assessment](#)

INDOOR ENVIRONMENTAL QUALITY

EQc5 Thermal Comfort

- Provide individual thermal comfort controls for at least 50% of individual occupant spaces
- Provide group thermal comfort controls for all shared multi-occupant spaces, and for any individual occupant spaces without individual controls
- Occupants should be able to adjust air temperature, radiant temperature, air speed, and/or humidity

Action Items:

- MEP to confirm that a high level of thermal comfort control is planned in the design.
- TT to provide a Space Matrix in DD phase to cross-check space-by-space requirements.

8	2	4	2	Indoor Environmental Quality		Possible Points:	16
Y				Prereq 1	Minimum Indoor Air Quality Performance	Required	
Y				Prereq 2	Environmental Tobacco Smoke Control	Required	
2				Credit 1	Enhanced Indoor Air Quality Strategies		2
2	1			Credit 2	Low-Emitting Materials		3
1				Credit 3	Construction Indoor Air Quality Management Plan		1
2				Credit 4	Indoor Air Quality Assessment		2
	1			Credit 5	Thermal Comfort		1
1		1		Credit 6	Interior Lighting		2
		1	2	Credit 7	Daylight		3
		1		Credit 8	Quality Views		1
		1		Credit 9	Acoustic Performance		1

INDOOR ENVIRONMENTAL QUALITY

EQc5 Interior Lighting

- Option 1: Lighting Control - For at least 90% of individual occupant spaces, provide individual lighting controls with at least 3 lighting levels/scenes
- All multi-occupant spaces must have multizone control systems, lighting for presentations to be separately controlled

Action Items:

- Design team to confirm that dimmers and accessibility of controls are planned to meet the requirements
- TT to provide a Space Matrix in DD phase to cross-check space-by-space requirements

8	2	4	2	Indoor Environmental Quality		Possible Points:	16
Y				Prereq 1	Minimum Indoor Air Quality Performance		Required
Y				Prereq 2	Environmental Tobacco Smoke Control		Required
2				Credit 1	Enhanced Indoor Air Quality Strategies		2
2	1			Credit 2	Low-Emitting Materials		3
1				Credit 3	Construction Indoor Air Quality Management Plan		1
2				Credit 4	Indoor Air Quality Assessment		2
	1			Credit 5	Thermal Comfort		1
1		1		Credit 6	Interior Lighting		2
		1	2	Credit 7	Daylight		3
		1		Credit 8	Quality Views		1
		1		Credit 9	Acoustic Performance		1

INNOVATION



INNOVATION

A variety of innovation credits are available: to be assessed and discussed with the design team to best reflect the project's story and key features.

Some Possibilities:

- Designing With Nature
- Design for Active Occupants
- Exemplary Performance EPDs
- Exemplary Performance Energy
- Low Mercury Lighting
- Green Education
- Integrated Product Analysis
- Safety First Credits
- Occupant Survey

As the project progresses we will continue to look for opportunities for Innovation credits that are most in line with the ambitions and values of this project.

LEED SCORECARD



LEED SCORECARD STATUS

1/25/2024

MSBA
Requirements
(2023 Policy)

Y	7+	7-	N			
1				Credit 1	Integrative Process	1
3	2	5	5	Location and Transportation		Possible Points: 15
			15	Credit 1	LEED for Neighborhood Development Location	15
OR Points can be achieved in the following credits LTc2 through LTc8.						
1				Credit 2	Sensitive Land Protection	1
1			1	Credit 3	High Priority Site	2
		2	3	Credit 4	Surrounding Density and Diverse Uses	5
	1	3		Credit 5	Access to Quality Transit	4
			1	Credit 6	Bicycle Facilities	1
	1			Credit 7	Reduced Parking Footprint	1
1				Credit 8	Green Vehicles	1
7	3	1	1	Sustainable Sites		Possible Points: 12
Y				Prereq 1	Construction Activity Pollution Prevention	Required
Y				Prereq 2	Environmental Site Assessment	Required
1				Credit 1	Site Assessment	1
	1	1		Credit 2	Site Development--Protect or Restore Habitat	2
1				Credit 3	Open Space	1
1	2			Credit 4	Rainwater Management	3
2				Credit 5	Heat Island Reduction	2
1				Credit 6	Light Pollution Reduction	1
			1	Credit 7	Site Master Plan	1
1				Credit 8	Joint Use of Facilities	1
5	1	1	5	Water Efficiency		Possible Points: 12
Y				Prereq 1	Outdoor Water Use Reduction	Required
Y				Prereq 2	Indoor Water Use Reduction	Required
Y				Prereq 3	Building-Level Water Metering	Required
2				Credit 1	Outdoor Water Use Reduction	2
2	1	1	3	Credit 2	Indoor Water Use Reduction	7
			2	Credit 3	Cooling Tower Water Use	2
1				Credit 4	Water Metering	1
22	5	4	0	Energy and Atmosphere		Possible Points: 31
Y				Prereq 1	Fundamental Commissioning and Verification	Required
Y				Prereq 2	Minimum Energy Performance	Required
Y				Prereq 3	Building-Level Energy Metering	Required
Y				Prereq 4	Fundamental Refrigerant Management	Required
6				Credit 1	Enhanced Commissioning	6
14	2			Credit 2	Optimize Energy Performance	16
1				Credit 3	Advanced Energy Metering	1
		2		Credit 4	Demand Response	2
	3	2		Credit 5	Renewable Energy Production	5
1				Credit 6	Enhanced Refrigerant Management	1

Y	7+	7-	N			
5	2	3	3	Materials and Resources		Possible Points: 13
Y				Prereq 1	Storage and Collection of Recyclables	Required
Y				Prereq 2	Construction and Demolition Waste Management Planning	Required
		2	3	Credit 1	Building Life-Cycle Impact Reduction	5
1	1			Credit 2	Building Product Disclosure and Optimization - Environmental Product Declarations	2
1	1	1		Credit 3	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
1	1			Credit 4	Building Product Disclosure and Optimization - Material Ingredients	2
2				Credit 5	Construction and Demolition Waste Management	2

Y	7+	7-	N			
8	2	4	2	Indoor Environmental Quality		Possible Points: 16
Y				Prereq 1	Minimum Indoor Air Quality Performance	Required
Y				Prereq 2	Environmental Tobacco Smoke Control	Required
2				Credit 1	Enhanced Indoor Air Quality Strategies	2
2	1			Credit 2	Low-Emitting Materials	3
1				Credit 3	Construction Indoor Air Quality Management Plan	1
2				Credit 4	Indoor Air Quality Assessment	2
	1			Credit 5	Thermal Comfort	1
1		1		Credit 6	Interior Lighting	2
		1	2	Credit 7	Daylight	3
		1		Credit 8	Quality Views	1
		1		Credit 9	Acoustic Performance	1

Y	7+	7-	N			
6				Innovation		Possible Points: 6
1				ID Innovation in Design: Green Building Education		1
1				ID Exemplary Performance- Heat Island Reduction		1
1				ID Innovation in Design: O+M starter kit		1
1				ID Pilot Credit: Integrative Analysis of building materials		1
1				ID Pilot Credit: Biophilic Design		1
1				ID LEED Accredited Professional		1

Y	7+	7-	N			
3	1	0	0	Regional Priority		Possible Points: 4
1				RP Regional Priority: High Priority Site (2 pt threshold)		1
1				RP Regional Priority: Indoor Water Use Reduction (4 pt threshold)		1
	1			RP Regional Priority: Rainwater management (2 pt threshold)		1
1				RP Regional Priority: Renewable Energy Production (2 pt threshold)		1
				RP Regional Priority: Optimize Energy Performance (8 pt threshold)		1
				RP Regional Priority: Building life-cycle Impact Reduction (2 pt threshold)		1

60 16 18 16 **Total**

60-68 Points

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

Based on progress drawings from January 2024

ACTION ITEMS AND NEXT STEPS



THANK YOU



ThorntonTomasetti.com