

# Pierce School Building Committee Meeting

10/21/2021



# Analysis

## CRITERIA

3b

3b-H

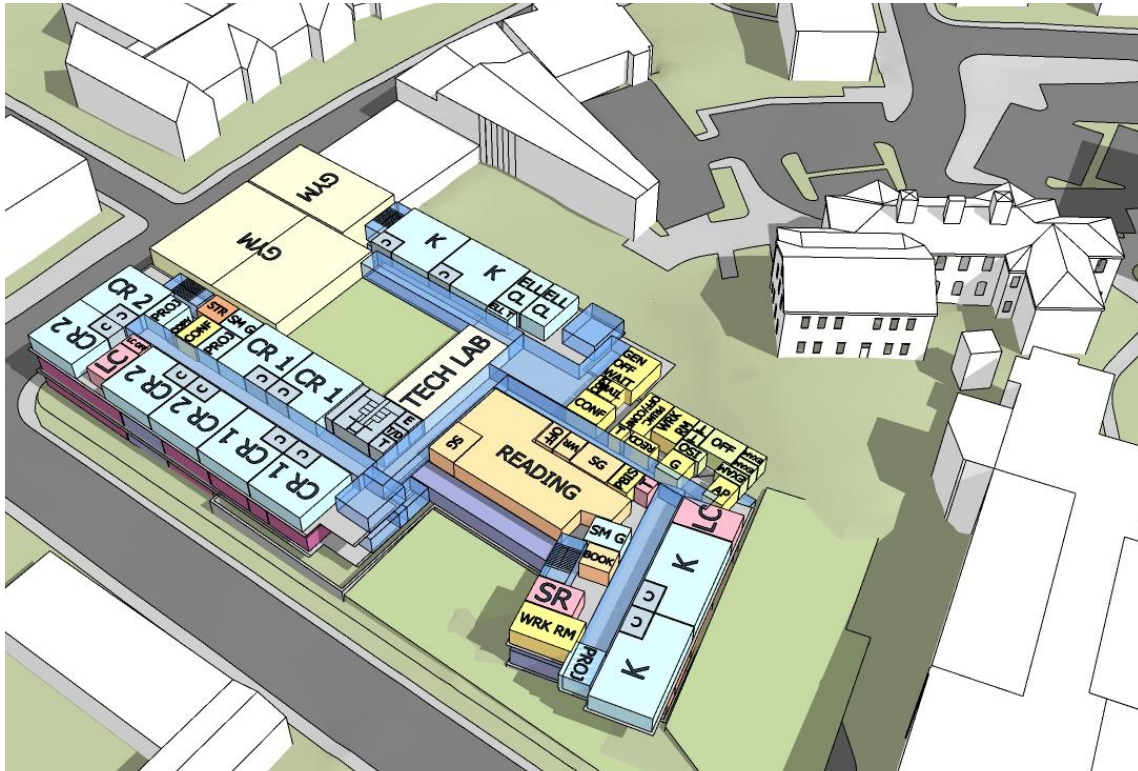
- Educational Plan
- Urban design and landscape
- Sustainability
- Cost

# Educational Plan



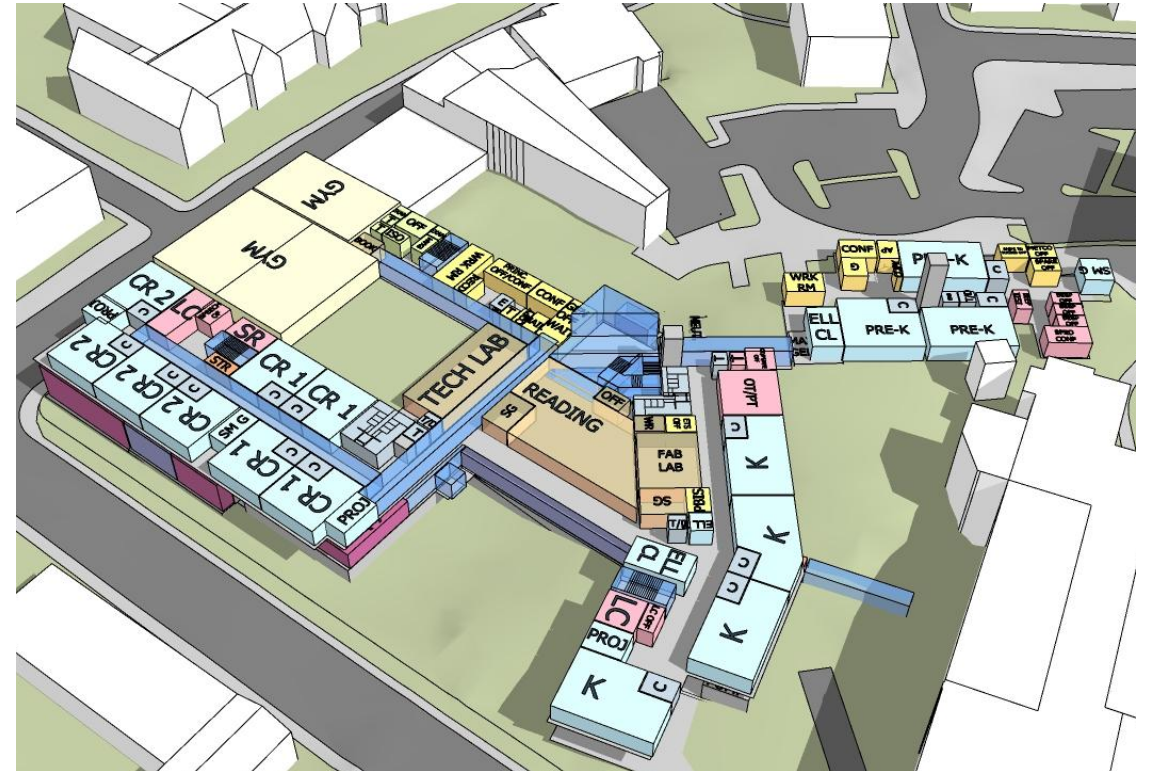
# 1. Educational Plan

## Option 3b



Level 2

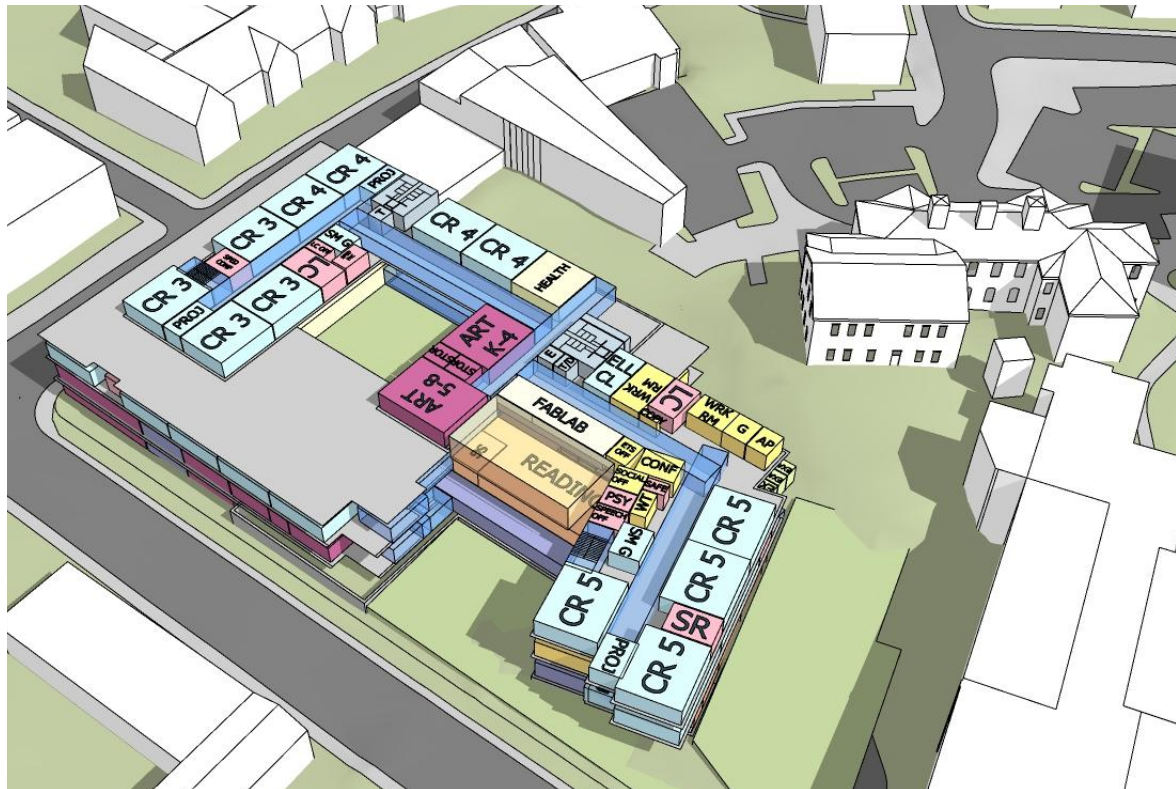
## Option 3b-H



Level 2

# 11. Educational Plan

## Option 3b



Level 3

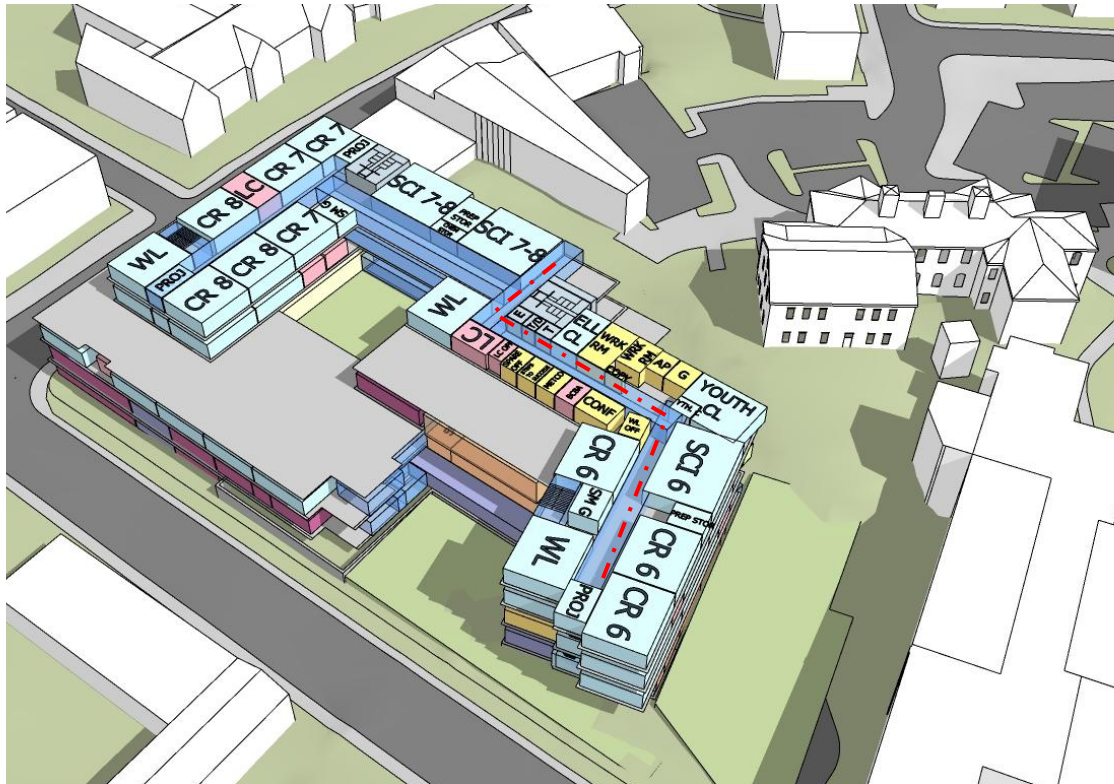
## Option 3b-H



Level 3

# 1. Educational Plan

## Option 3b



Level 4

## Option 3b-H

# Urban Design and Landscape

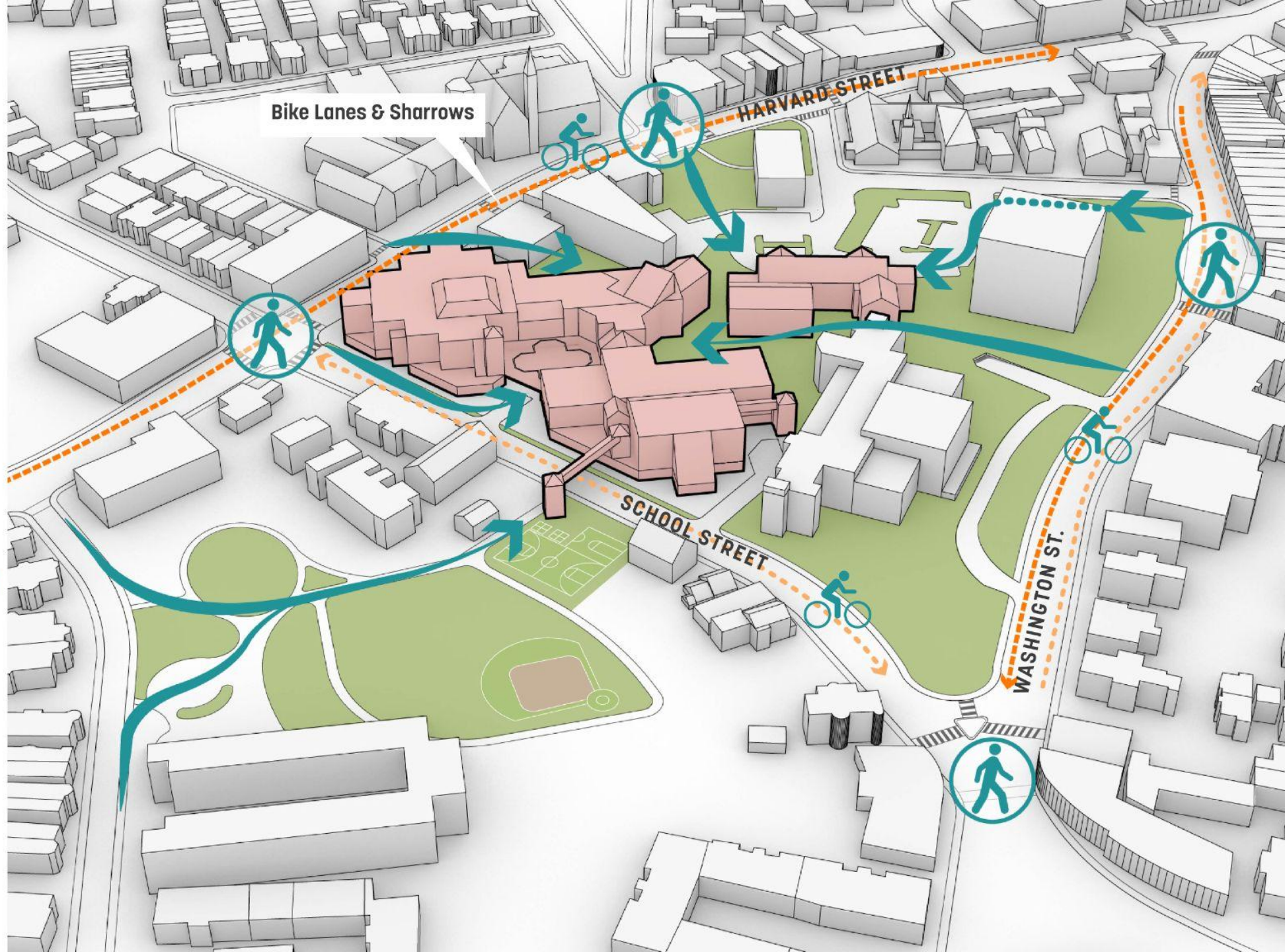


# CURRENT PEDESTRIAN ARRIVAL

 **840**  
students

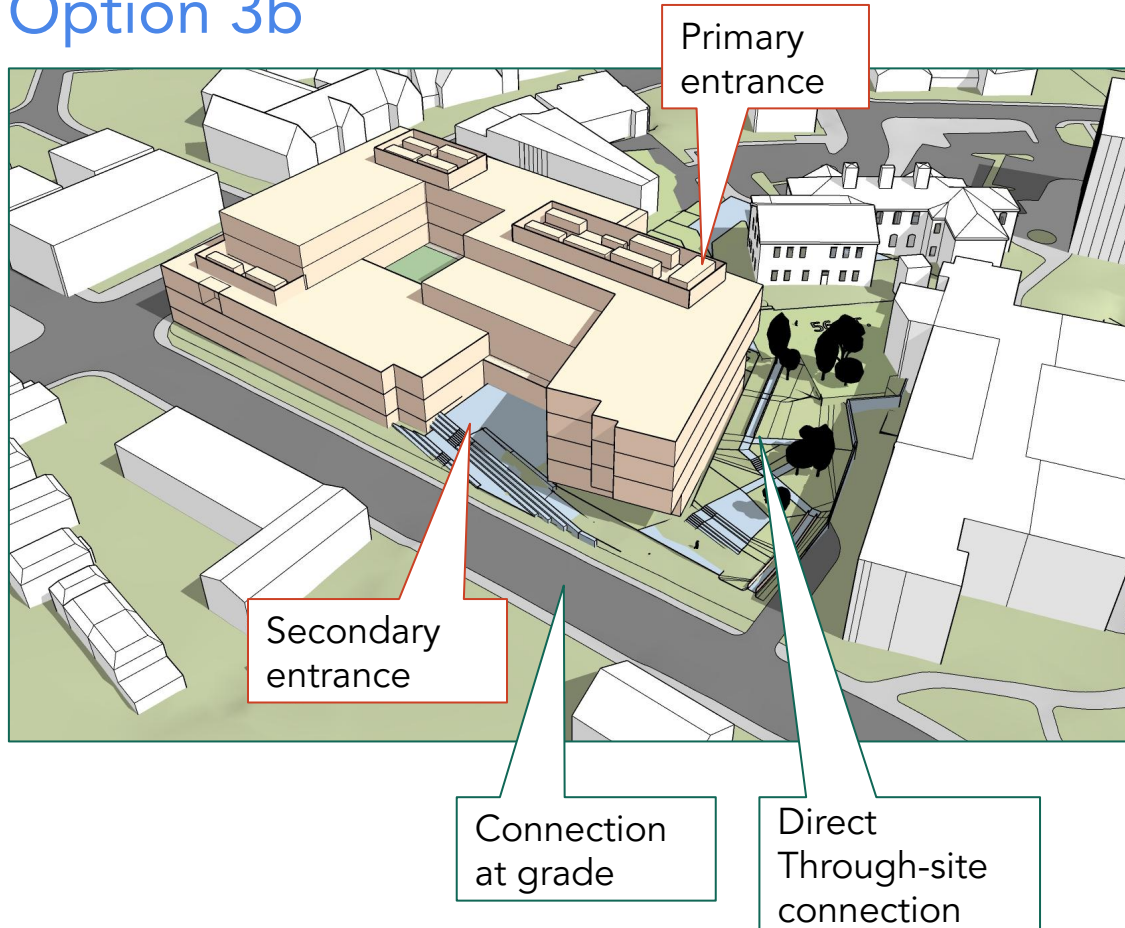
**81%**  
walk/bike  

 **0.6mi**  
average walk

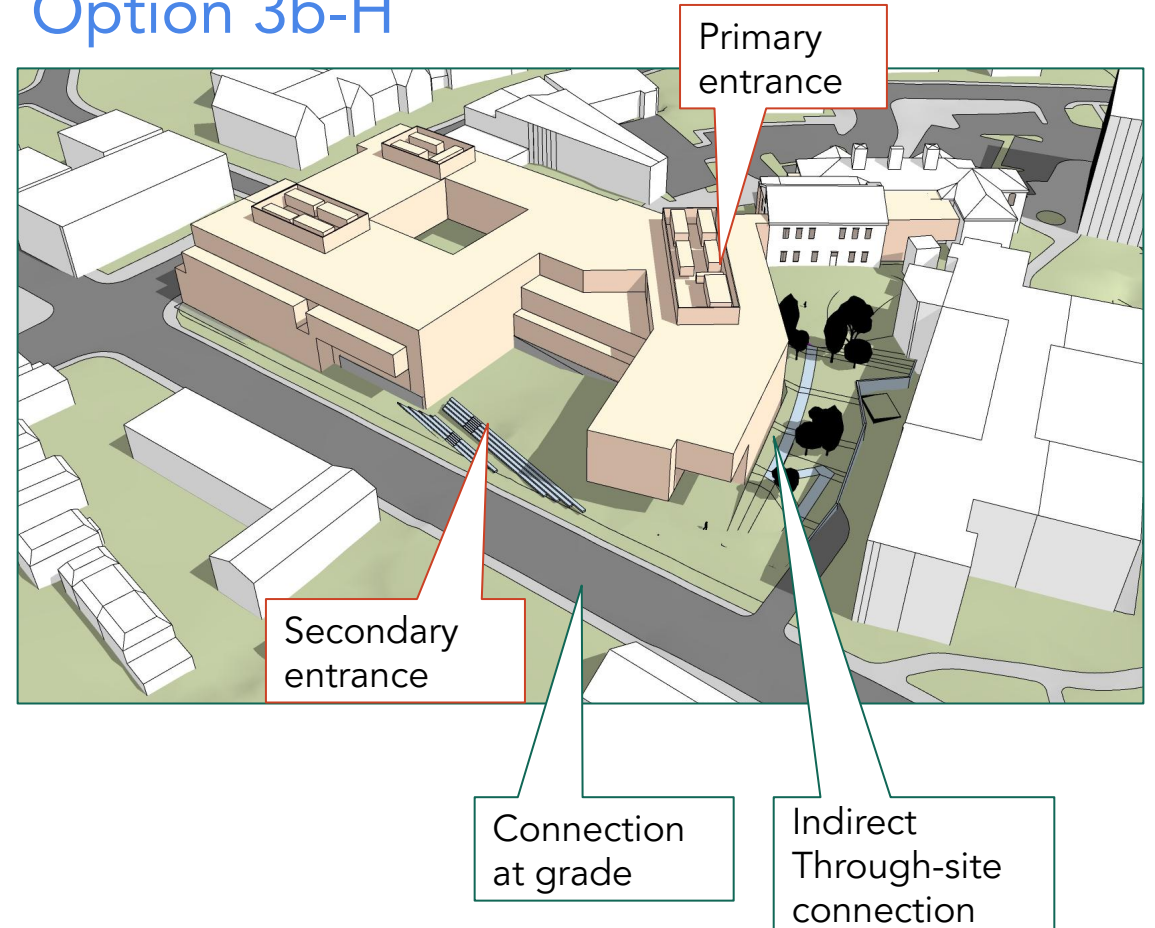


## 2. Urban Design and Landscape

### Option 3b

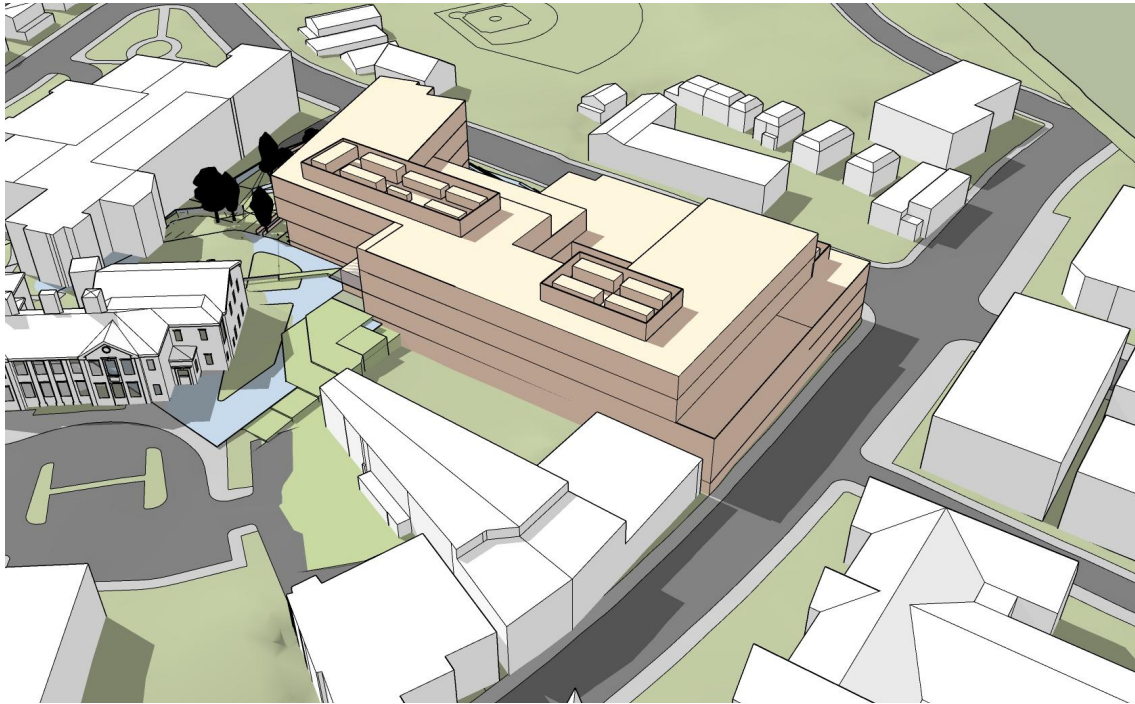


### Option 3b-H

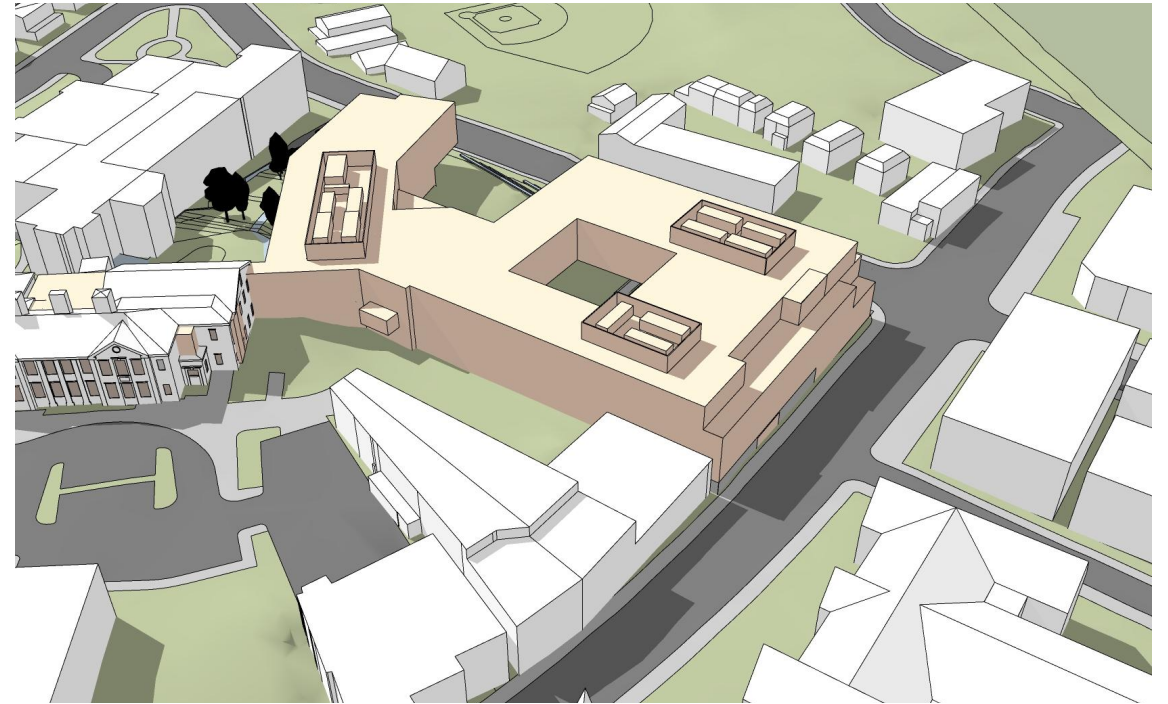


## 2. Urban Design and Landscape

Option 3b

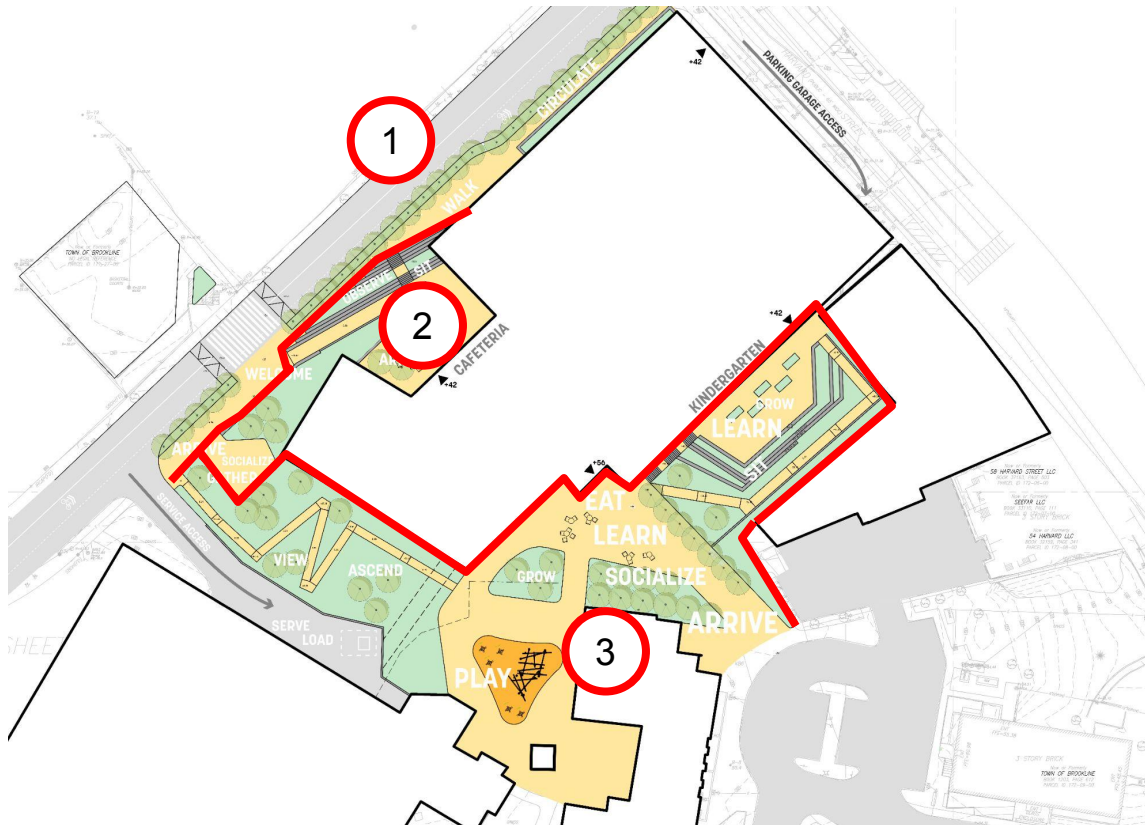


Option 3b-H



## 2. Urban Design and Landscape

### Option 3b



- ① Widened Sidewalk & Tree Lawn = ~8,000 sf
  - ② Landscape along School St (courtyards, seating) = ~9,000 sf
  - ③ Interior Landscape = ~43,000 sf
- Total = 60,000 sf  
~40% planted areas, ~60% paved areas

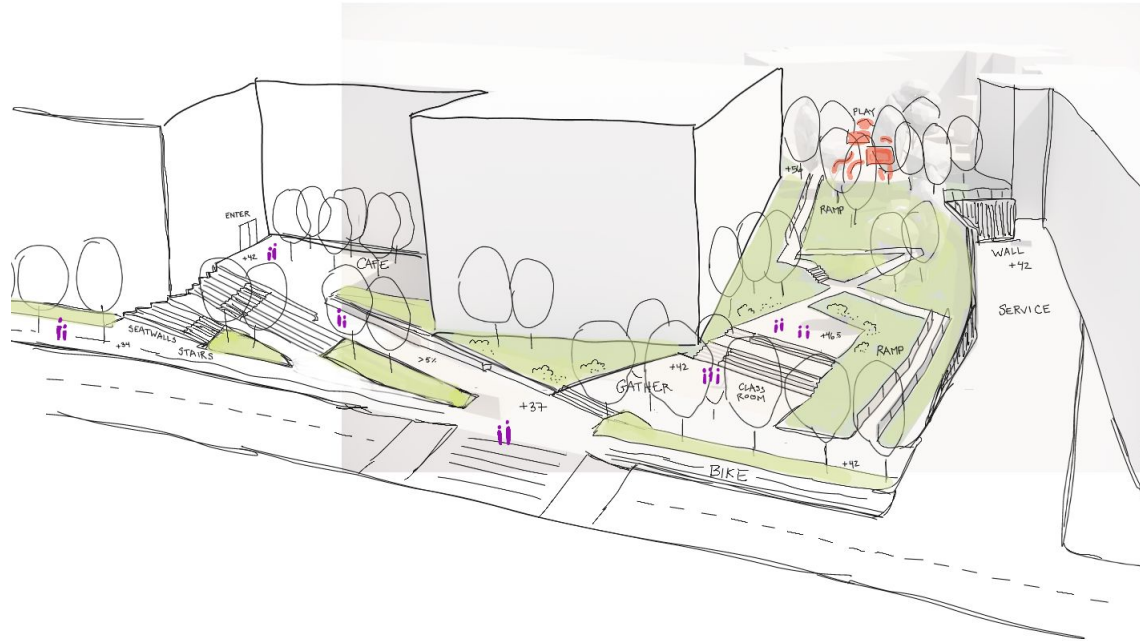
### Option 3b-H



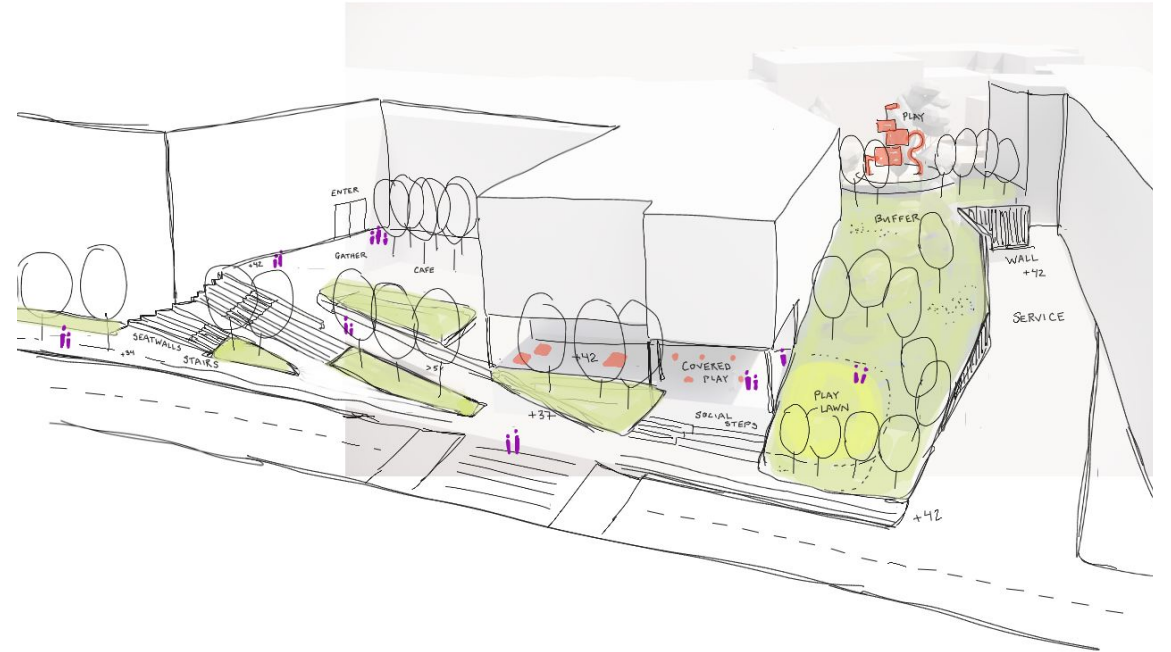
- ① Widened Sidewalk & Tree Lawn = ~9,000 sf
  - ② Landscape along School St (courtyards, seating) = ~12,000 sf
  - ③ Interior Landscape = ~36,000 sf
- Total = 57,000 sf

## 2. Urban Design and Landscape

### Option 3b



### Option 3b-H



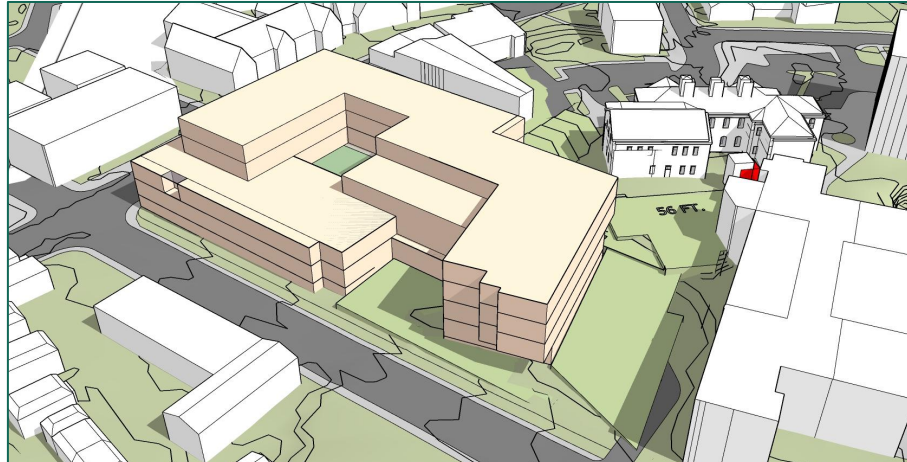
# Sustainability

# Total Annual Energy Use with PV

## Option 3b

Energy consumption per year  
Energy use does not include  
Garage SF

**Lower = better**



**3 kBtu/sf/yr x 151,359 SF = 0.5 M kBtu/yr**

## Option 3b-H



**7 kBtu/sf/yr x SF 180,672 = 1.3 M kBtu/yr**

# Energy Use Intensity (EUI) with PV

Energy consumption per  
square foot, per year

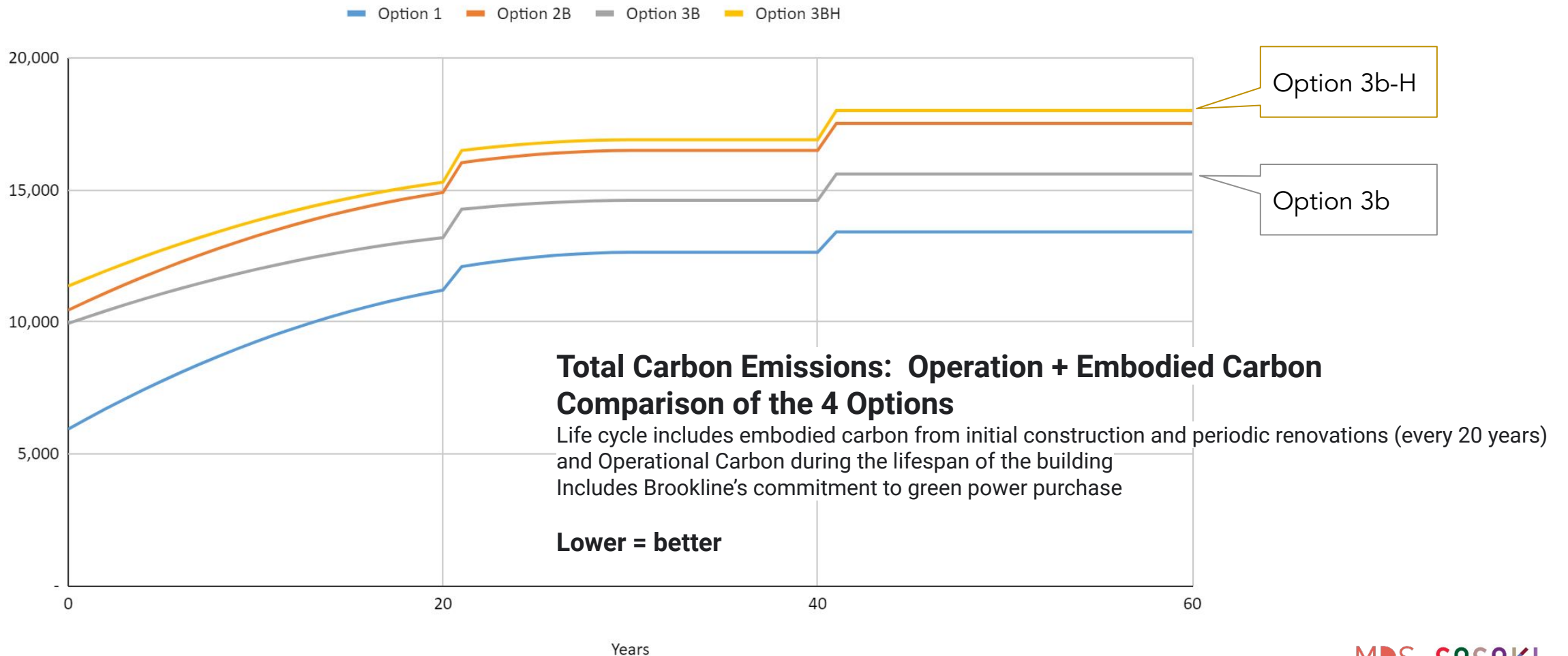
Lower = better; EUI 25 or below  
qualifies the project for  
MassSave incentives

**3 kBTU/sf/year**

**7 kBTU/sf/year**

# Total Carbon Emissions

Option 1, Option 2B, Option 3B and Option 3BH

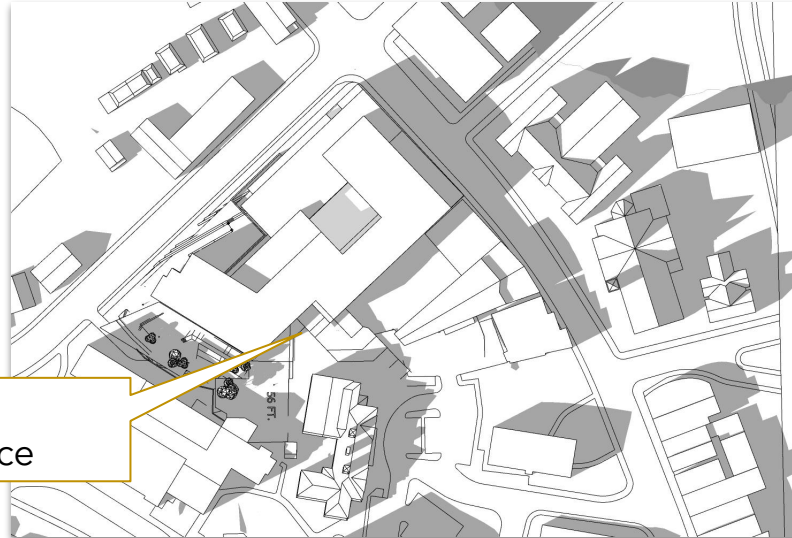




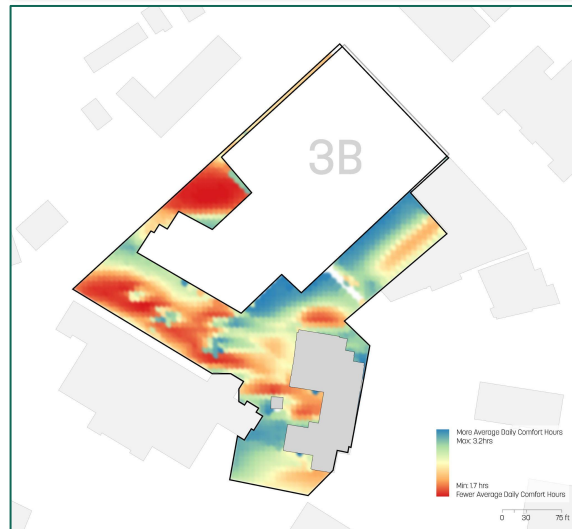
# Outdoor Thermal Comfort + Shading

## Option 3b

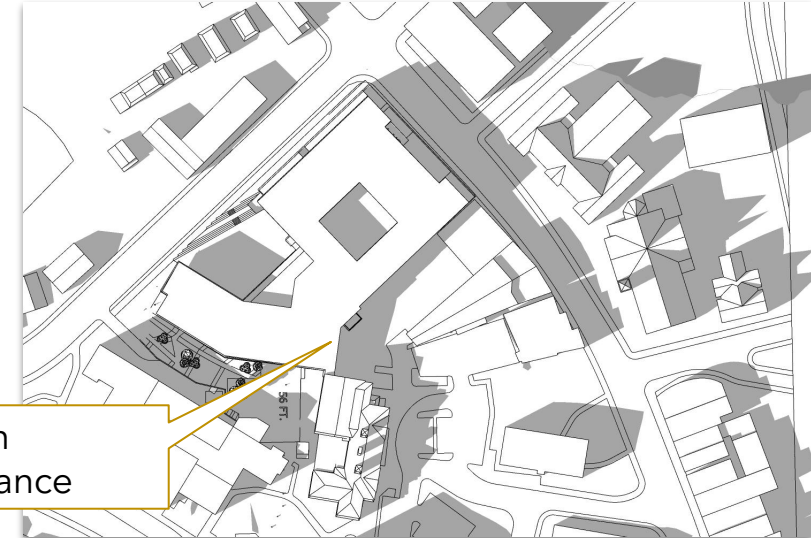
September 21, 2022  
3.00 p.m.



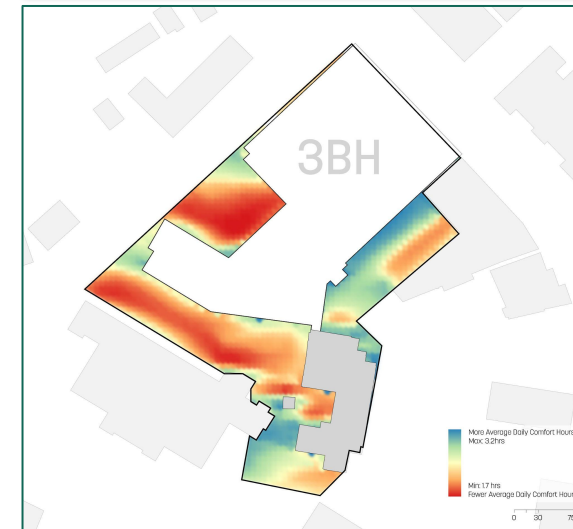
Main entrance



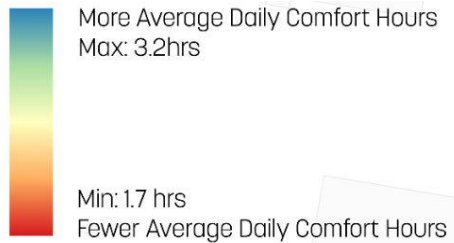
## Option 3b-H



Main entrance



**Blue = better**



Describes how many hours of the year (based on solar exposure and temperature) are comfortable to be outside

# Cost

## 4. Cost

### Option 3b

Construction Cost

**\$144,468,835**

Project Cost

**\$180,586,044**

### Option 3b-H

Construction Cost

**\$155,397,415**

Project Cost

**\$194,246,768**

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### Cost of Renovating Historic Building for Other use

Construction Cost

**\$10,000,000**

Project Cost

**\$12,500,000**

# Analysis

## CRITERIA

3b

3b-H

- Educational Plan
- Urban design and landscape
- Sustainability
- Cost