



Watertown Elementary Schools Building Project

Design **Watertown**



WPS Building Committee

**Ai3 Architects, LLC
Hill International, Inc**

December 4, 2019

Schools Project Website: www.watertownschooolsproject.com

Watertown Elementary Schools Building Project

SolarUpdate



LEED/Net Zero Progress

Hosmer Elementary: PV Update

Building Array:

994 Panels

Site Array:

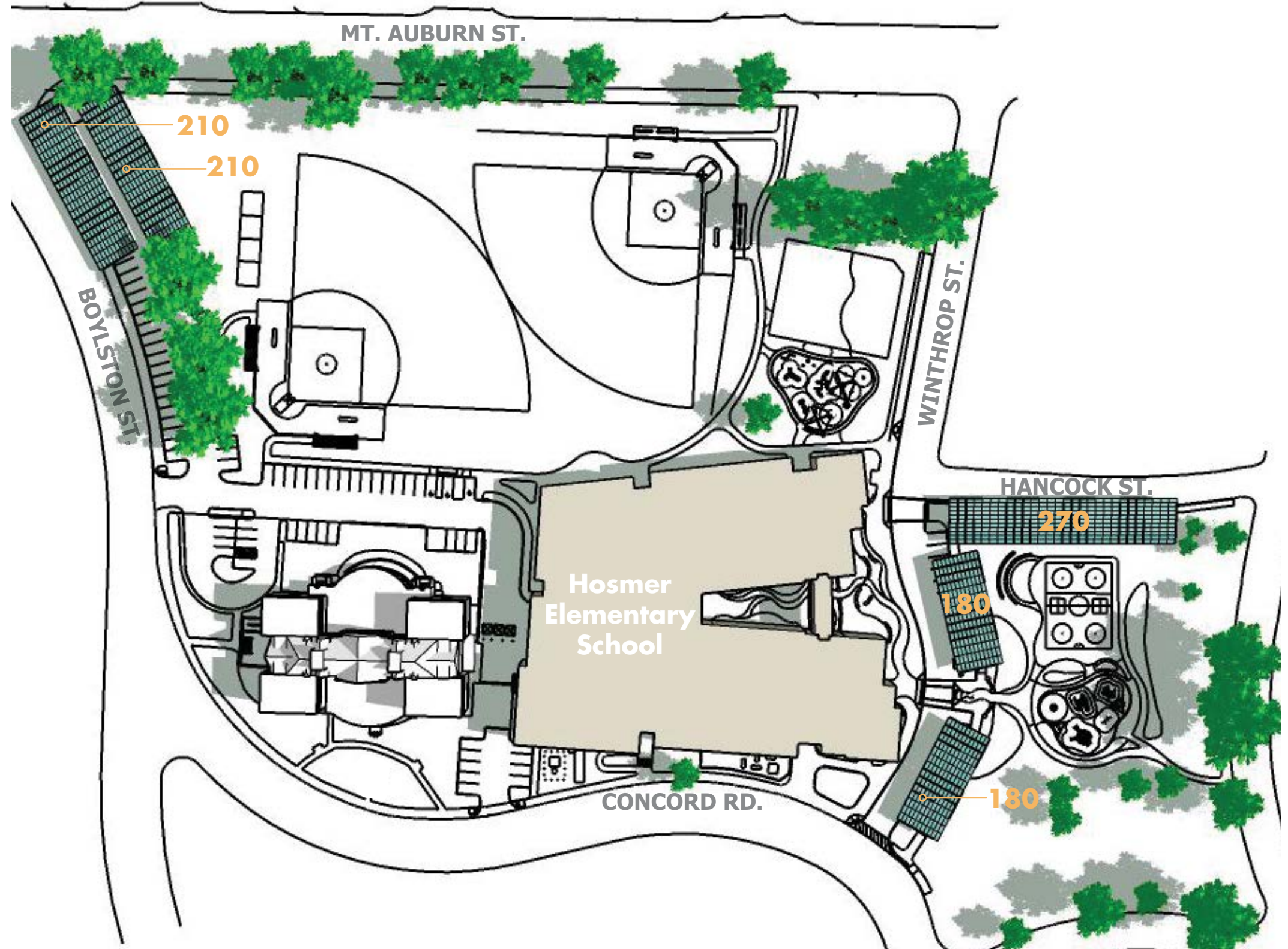
1,050 Panels

Total:

2,044 Panels = 958,000 KWh

Target:

2,027 Panels = 950,000 KWh



LEED/Net Zero Progress

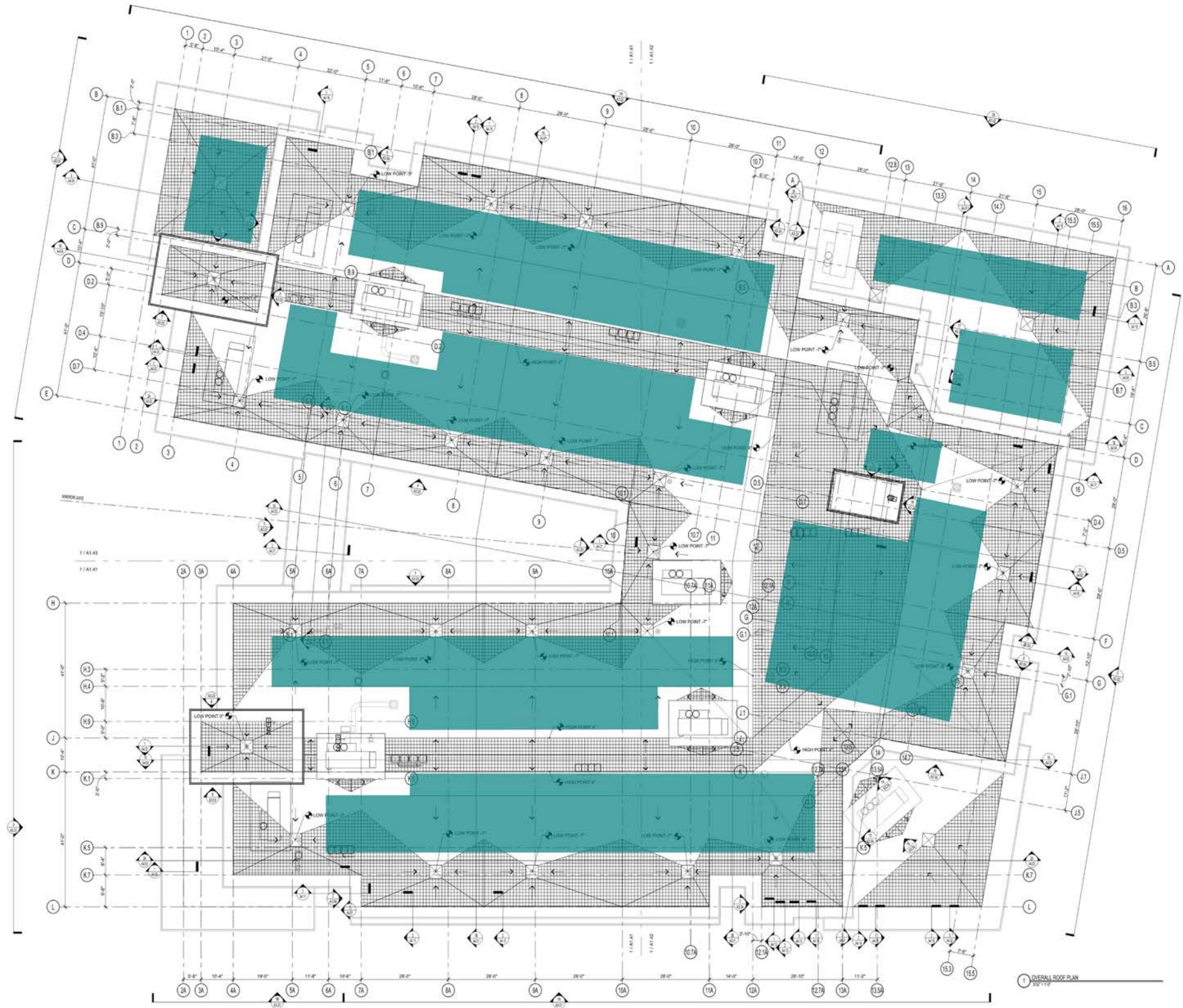
Hosmer Elementary: PV Update

Building Array:
944 Panels

Site Array:
1,050 Panels

Total:
2,044 Panels = 958,000 KWh

Target:
2,027 Panels = 950,000 KWh



LEED/Net Zero Progress

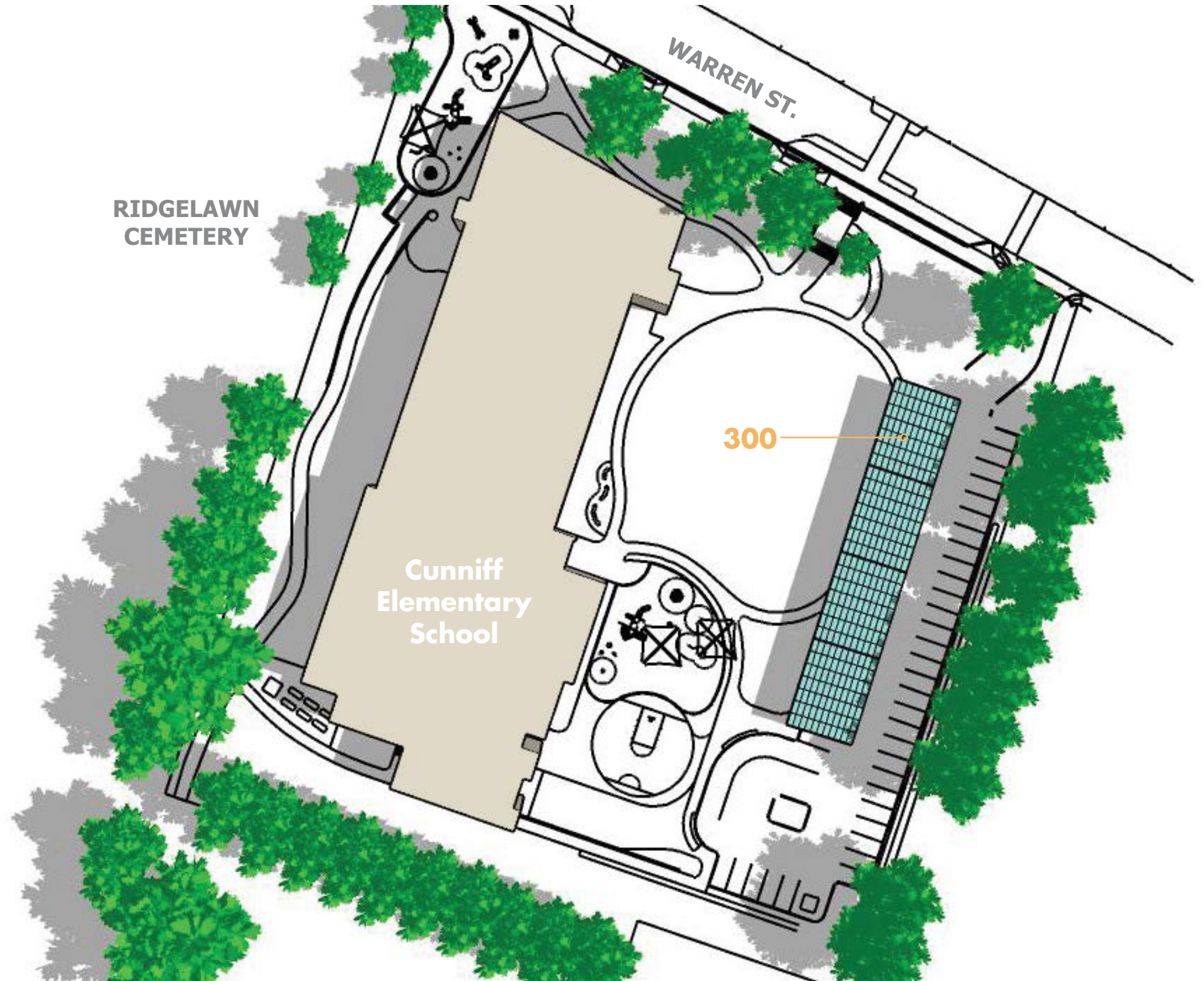
Cunniff Elementary: PV Update

Building Array
550 Panels

Site Array:
300 Panels

Total:
850 Panels = 400,000 KWh

Target Total:
1259 Panels = 590,000 KWh



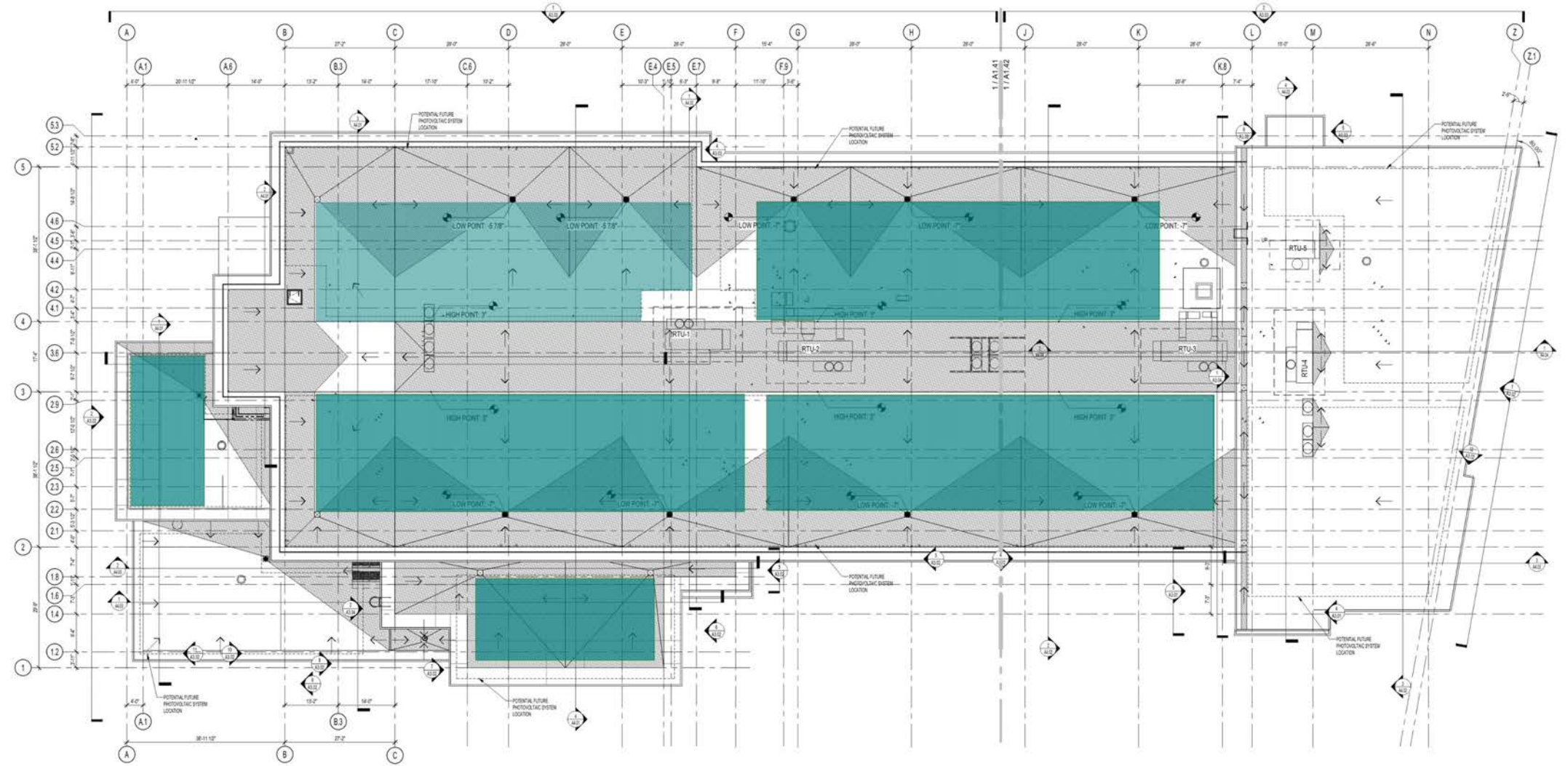
Cunniff Elementary: PV Update

Building Array
550 Panels

Site Array:
300 Panels

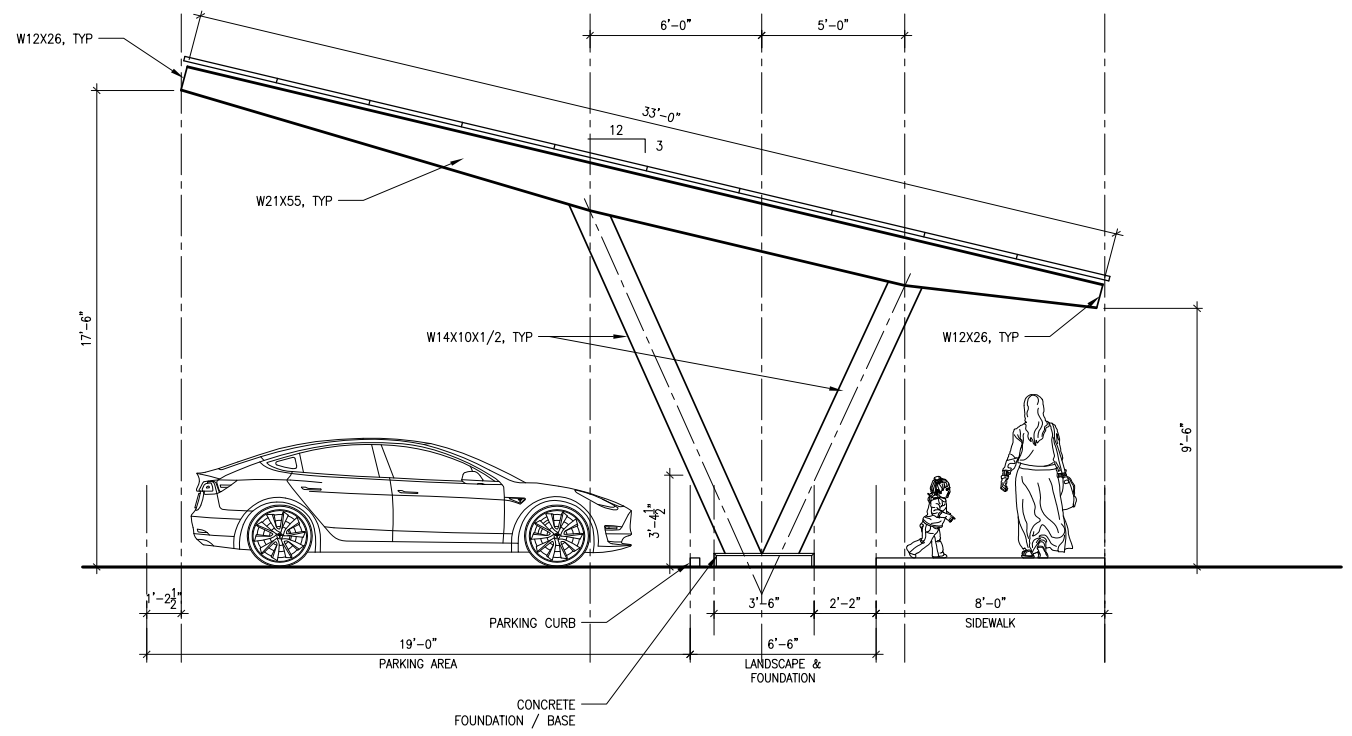
Total:
850 Panels = 400,000 KWh

Target Total:
1259 Panels = 590,000 KWh

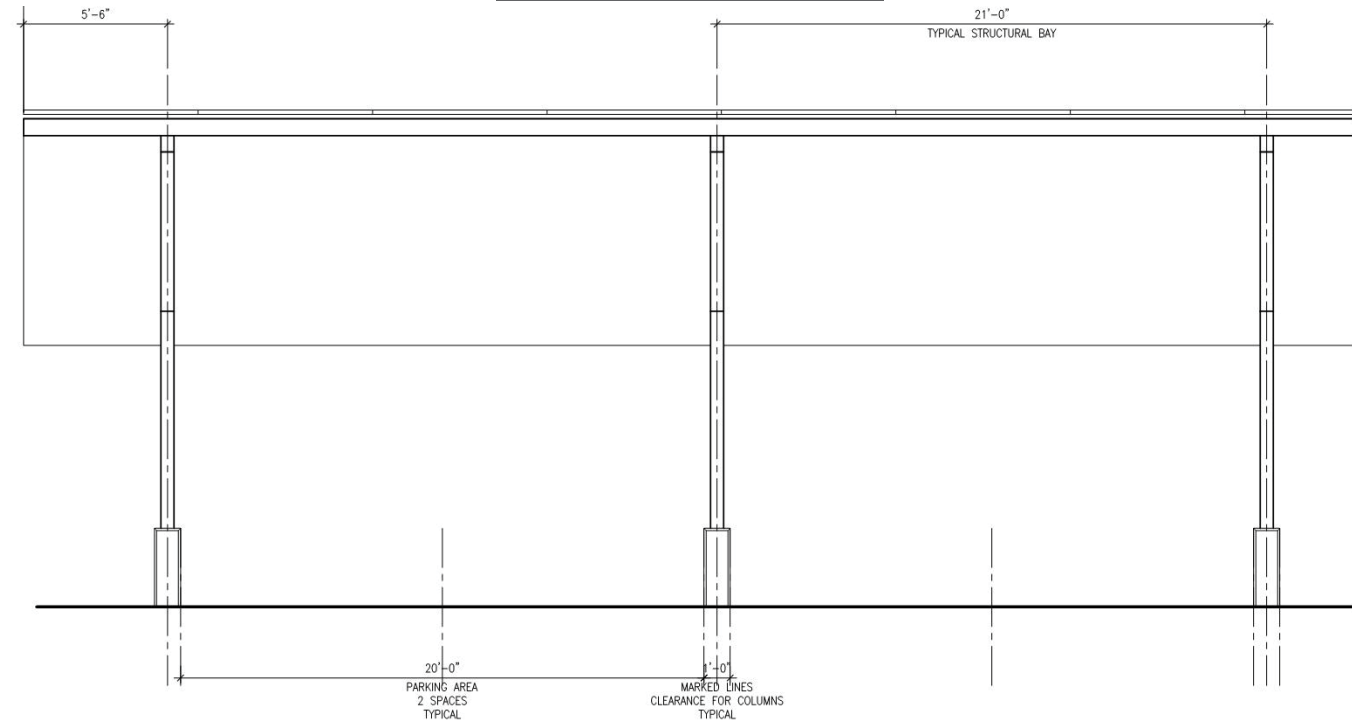


LEED/Net Zero Progress

Canopy Update:



CANOPY SECTION



CANOPY ELEVATION

Watertown Elementary Schools Building Project

DesignProgress



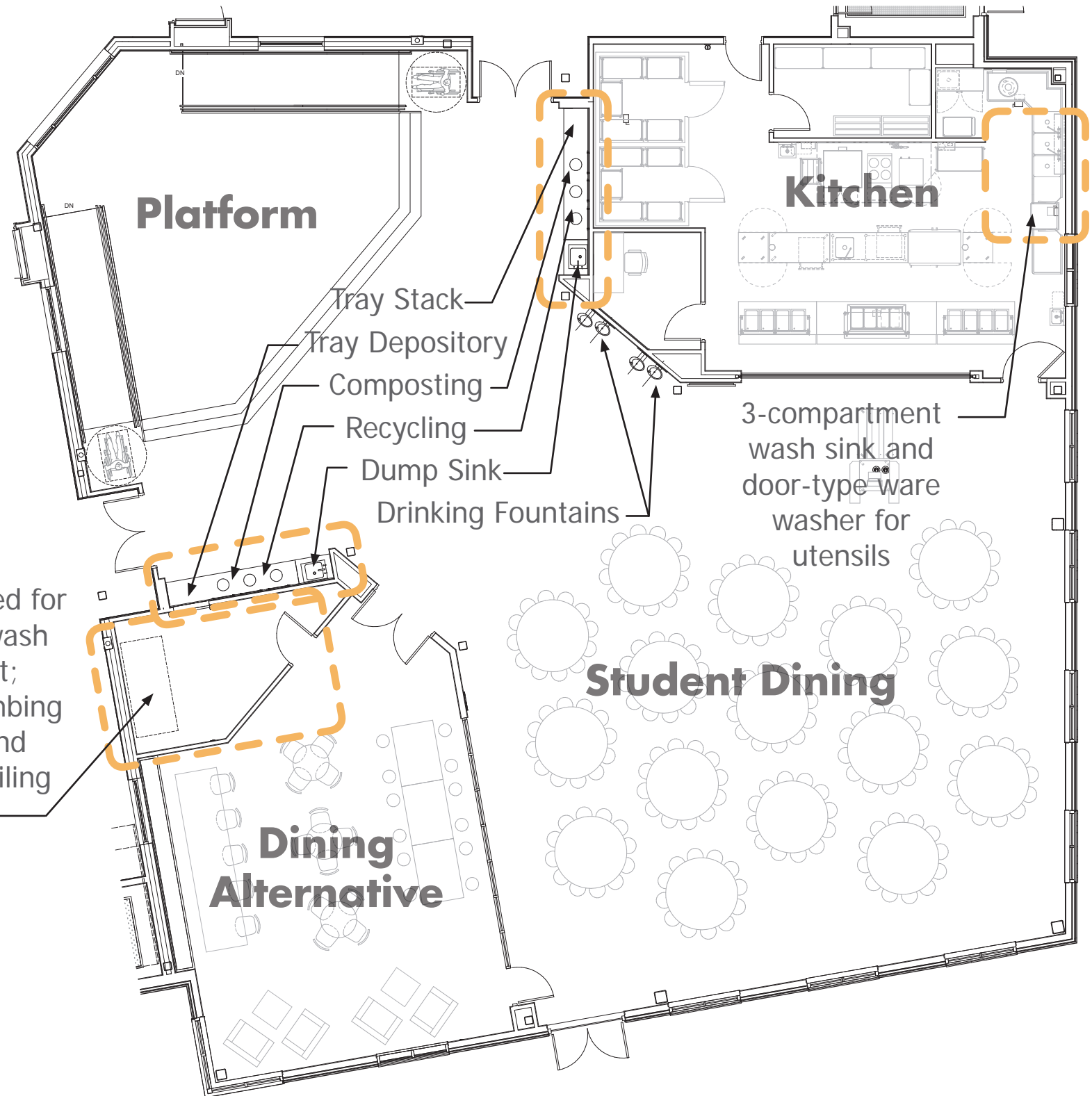
Hosmer: Composting & Future Tray Wash



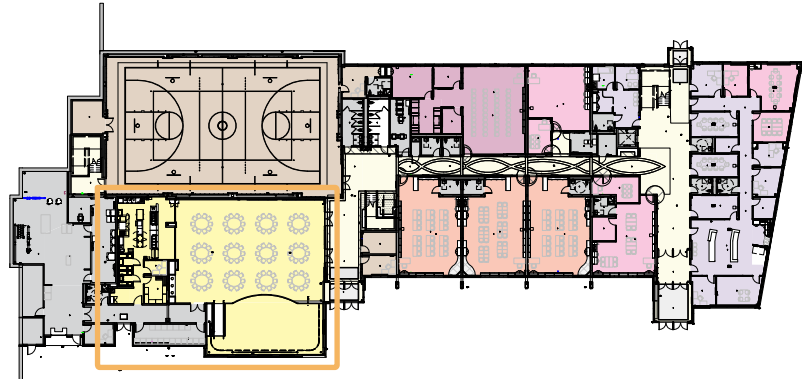
Thinking with the future in mind...

- Composting reduces the amount of organic waste in landfills, helping to reduce greenhouse gas emissions
- Managing a compost bin (or heap) is an excellent educational tool
- Composting would provide direct benefits to Watertown's garden program
- H/C water connections providing future installation of dish-wash area

Space reserved for future dishwash equipment; includes plumbing hook-up and overhead coiling door



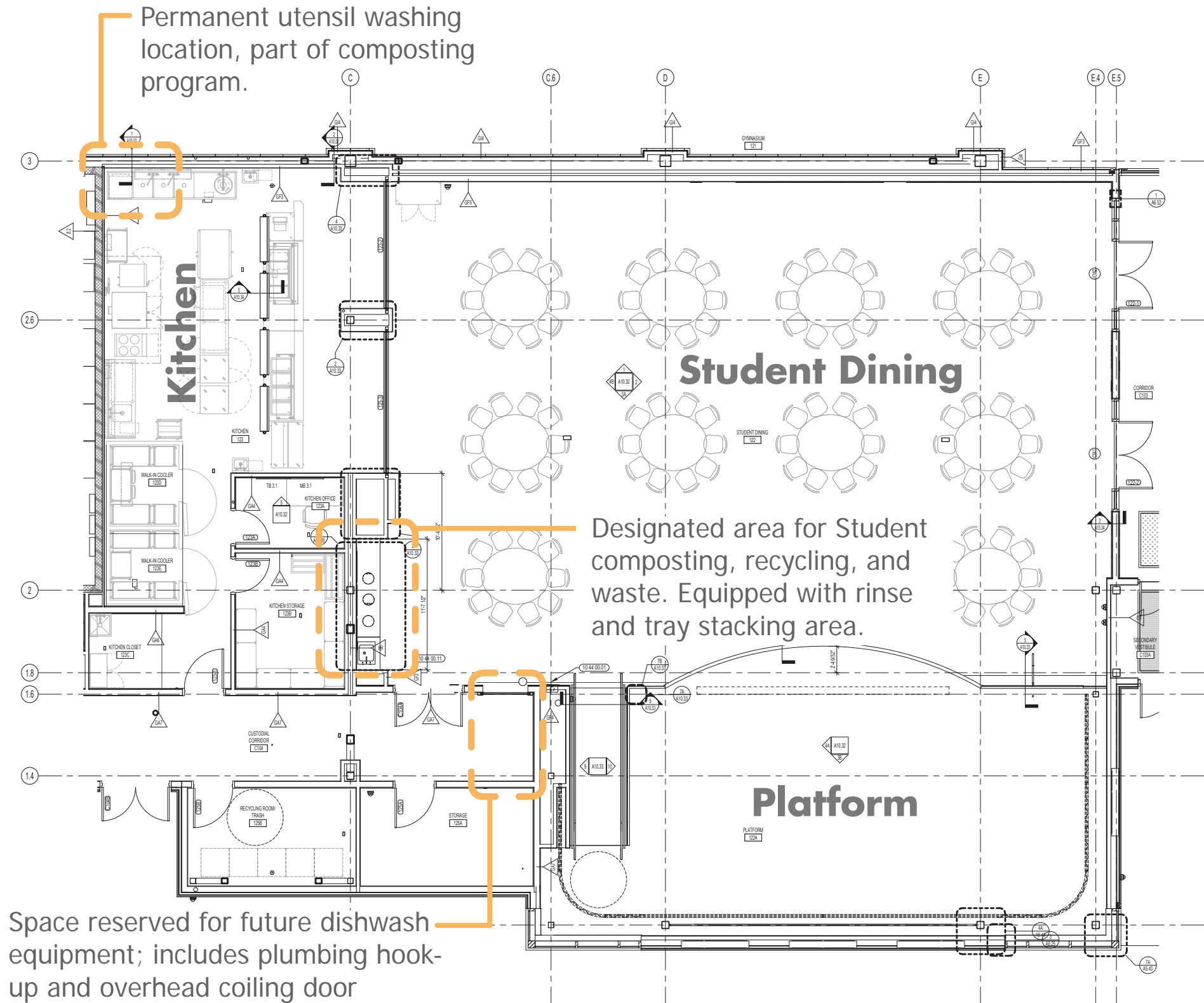
Cunniff: Composting & Future Tray Wash



1

Thinking with the future in mind...

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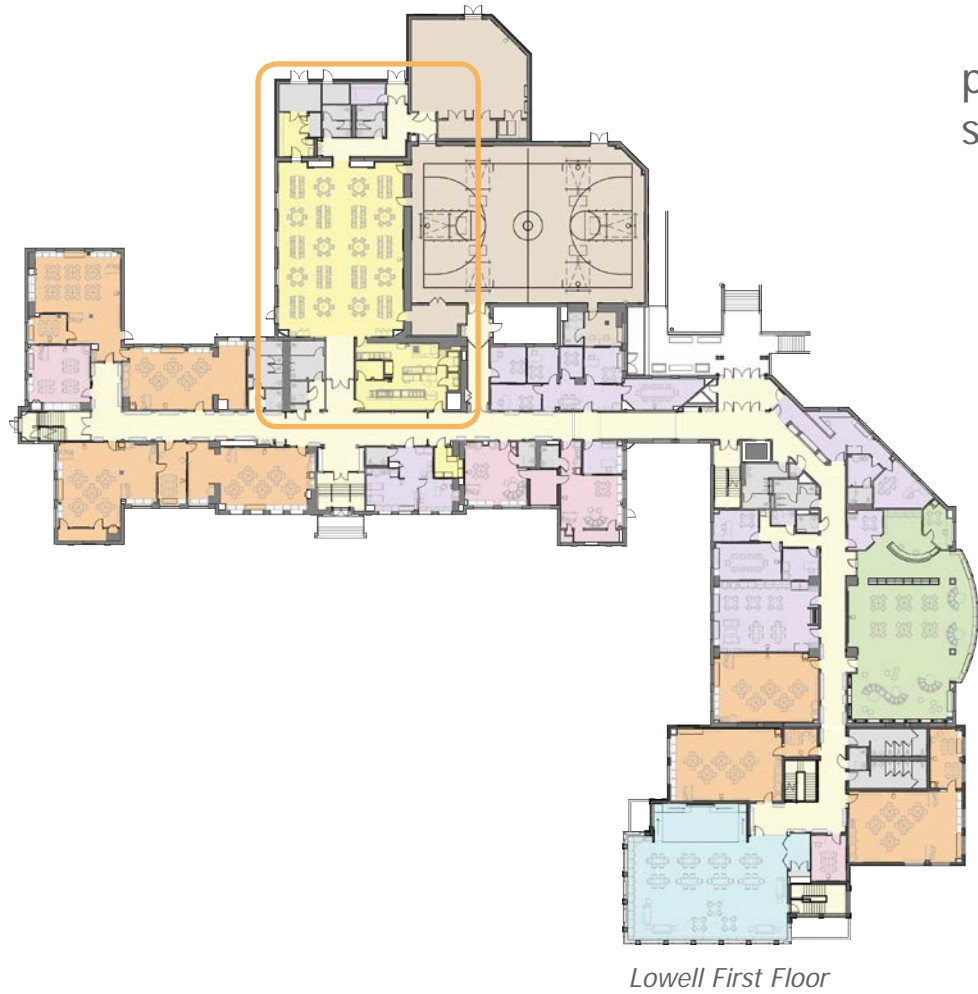
Permanent utensil washing location, part of composting program.

Designated area for Student composting, recycling, and waste. Equipped with rinse and tray stacking area.

Space reserved for future dishwasher equipment; includes plumbing hook-up and overhead coiling door

Design Progress

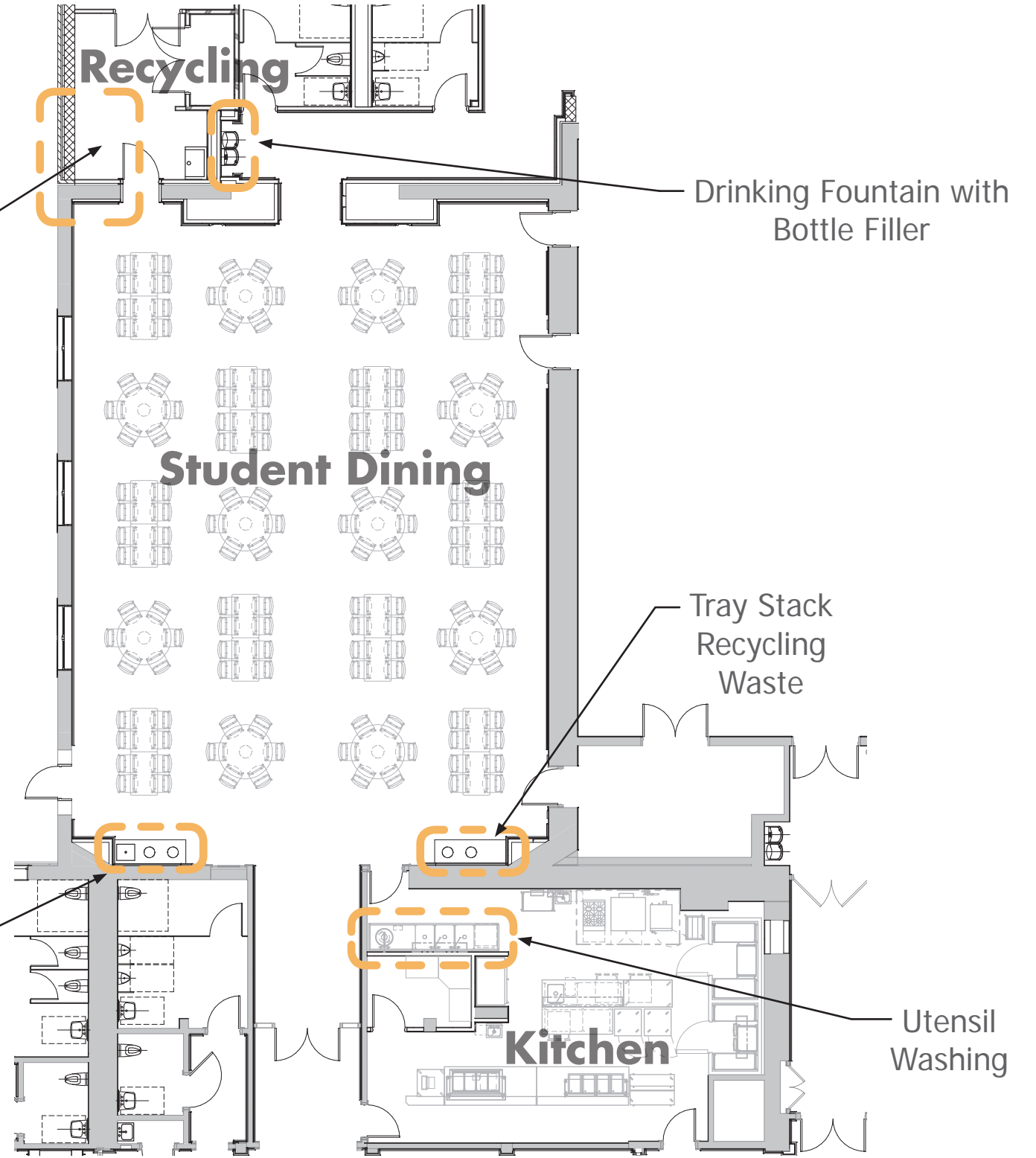
Lowell: Composting & Future Tray Wash



Thinking with the future in mind...

Space reserved for future dishwash equipment; includes plumbing hook-up and service window access

Composting Recycling Dump Sink

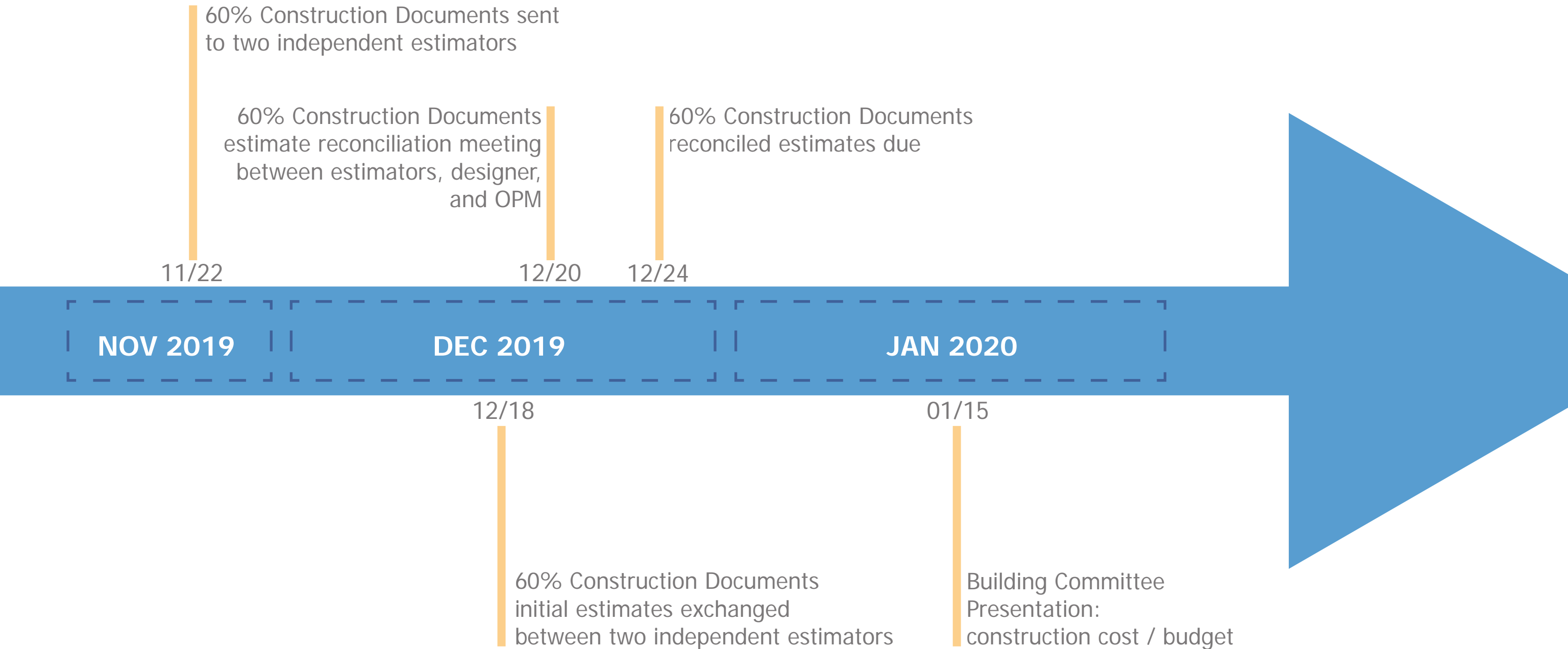


Watertown Elementary Schools Building Project

DesignSchedule



▶ Watertown Elementary Schools: December 2019 / January 2020 60% CD Cost Estimating Schedule

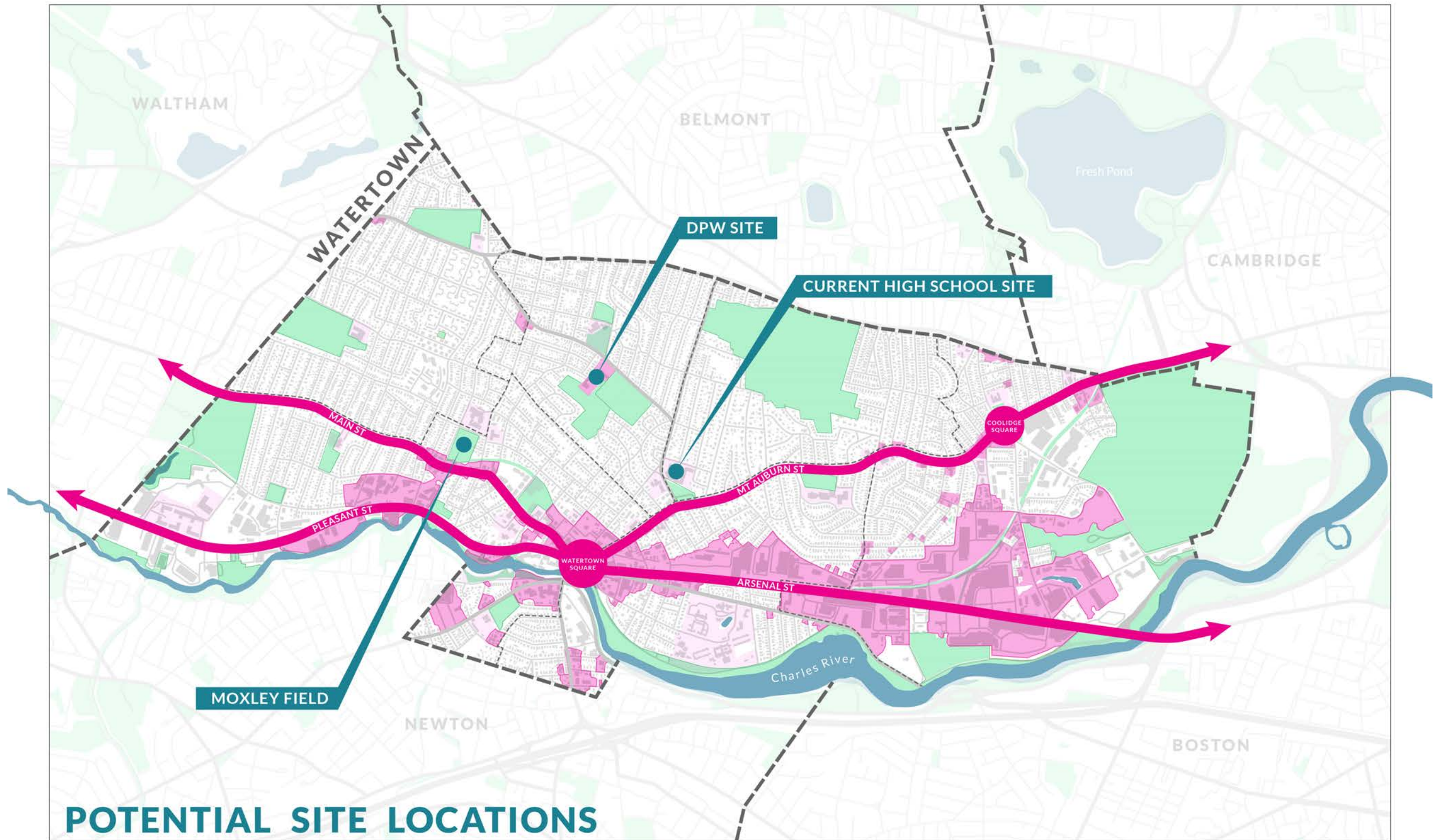


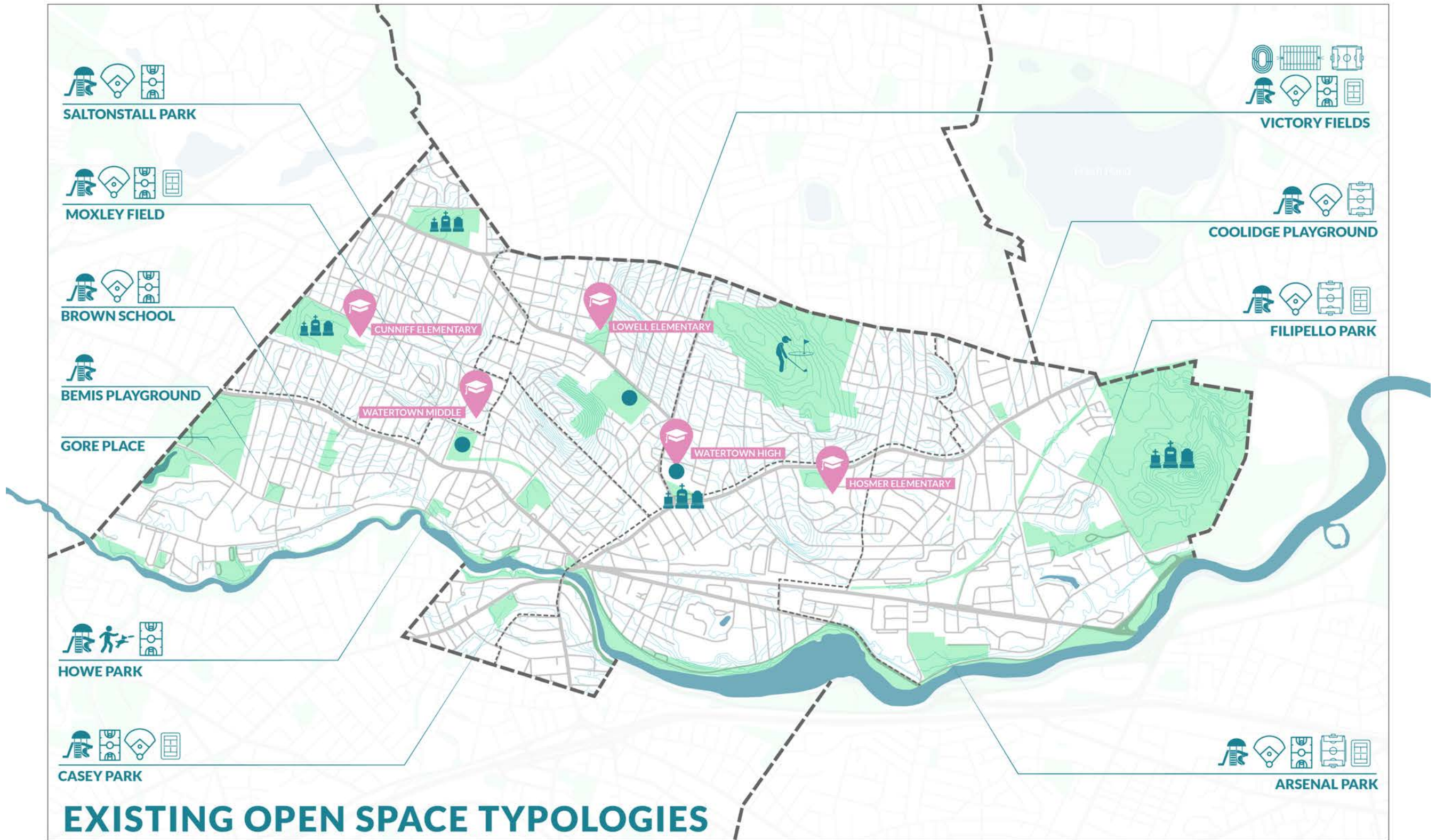


Watertown High School Building Project

Design **Watertown**

WPS Building Committee
Ai3 Architects, LLC
Compass Project Management, Inc
December 4, 2019





Initial Building Options & Impacts: Option 1

Construct a new Watertown High School on the existing site

- Locate the new building so that most of the existing building can be occupied during construction to minimize the need for relocation of students and staff
- Demolition of the 1950's and 1980's additions to provide sufficient space for construction
- Subsequent to the new high school building being completed and occupied, begin demolition of the existing high school building
- Phased / occupied construction is required
- The 1970's gymnasium addition, and a portion of the 1950's addition will be demolished - alternative program areas must be provided
- Green space will be added, but students will still need to travel to Victory Field for athletics and fitness
- Allows the high school to occupy a central location within the Town
- Avoids impact to any other Town or School sites or programs
- Avoids impact to any additional neighborhoods
- Allows expansion of parking on-site by utilizing site topography to incorporate an under-building parking area
- Keeps current locations and operations of high school activity in the same locations
- No impact on existing recreation/open space





Columbia St.

Barnard Ave.

Common St.

1950's

1980's

2004

1950's

1980's

Watertown High School

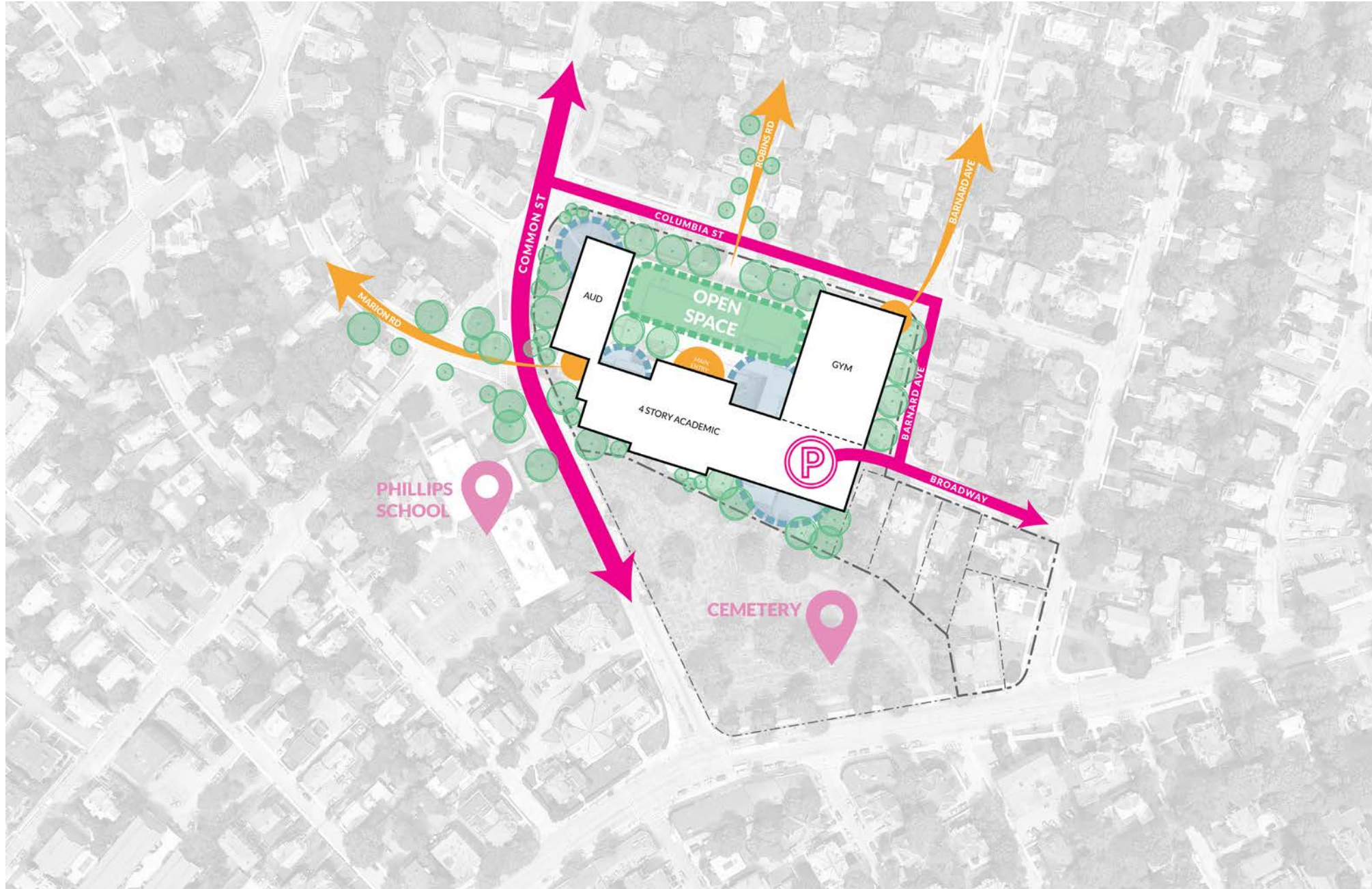
Watertown
Community Education

Boundary Constraints: Watertown High School



Watertown High School

Proposed Analytics: Watertown High School



Initial Building Options & Impacts: Option 2A

Renovate, Rebuild, and Expand the existing Watertown High School

- **Maintain as much of the existing building as possible for renovation**
- Requires significant demolition of existing building and new construction
- Requires multiple phases that involve moving staff and students, with some phases requiring them to be removed from campus
- Complex demolition, renovation, and construction
- Quantity of asbestos contained within the building creates significant challenges to maintain occupiable conditions
- Significant cost to relocate students and staff
- Would not improve site efficiency
- Significant costs that exceed the cost of an all-new building
- Students will continue to travel to/ from Victory Field for athletics and fitness
- Would not include expansion of parking on-site
- Allows the high school to occupy a central location within the Town
- Avoids impact to any other Town or School sites or programs, assuming an acceptable location can be found for relocation of staff and students
- Avoids impact to any additional neighborhoods, assuming an acceptable location can be found for relocation of staff and students
- Minimal impact on existing recreation/ open space



Initial Building Options & Impacts: Option 2B

Renovate, Rebuild, and Expand the existing Watertown High School

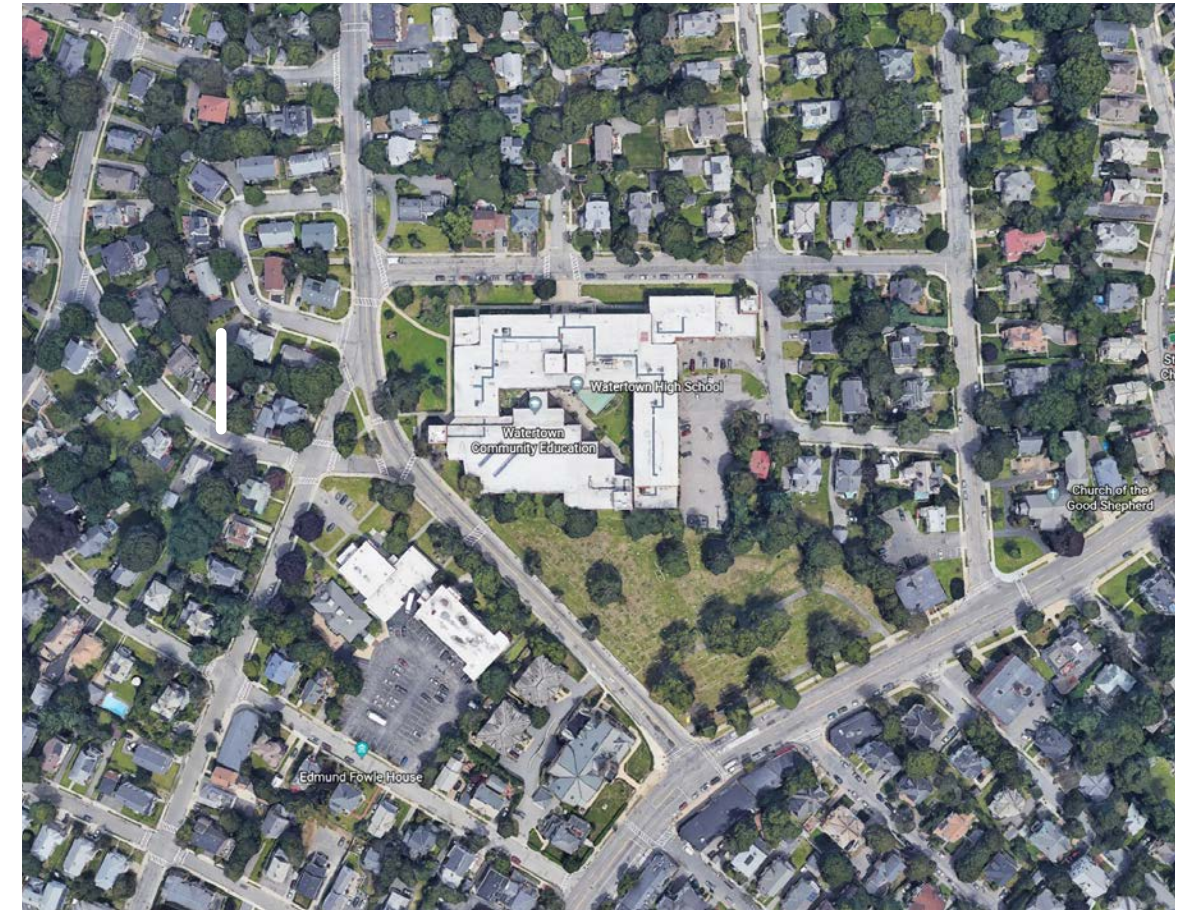
- Renovate and reuse a small portion of the existing building
- Requires significant demolition of existing building and new construction
- Requires multiple phases that involve moving staff and students, with some phases requiring them to be removed from campus
- Complex demolition, renovation, and construction
- Quantity of asbestos contained within the building creates significant challenges to maintain occupiable conditions
- Significant cost to relocate students and staff
- Would not improve site efficiency
- Significant costs that exceed the cost of an all-new building
- Would not include expansion of parking on-site
- Allows the high school to occupy a central location within the Town
- Avoids impact to any other Town or School sites or programs, assuming an acceptable location can be found for relocation of staff and students
- Avoids impact to any additional neighborhoods, assuming an acceptable location can be found for relocation of staff and students
- Keeps current locations and operations of the high school in the same place
- Minimal impact on existing recreation/ open space



Initial Building Options & Impacts: Option 3

Construct a new Watertown High School on both the existing site and the Phillips Site

- Creates a larger campus for Watertown High school
- Requires phased/occupied construction
- Demolition of the 1950's and 1980's additions to provide sufficient space for construction
- Requires relocation of programs currently serviced on the Phillips site
- Requires existing Phillips programs to be accommodated within the new high school building
- Allows the high school to occupy a central location within the Town
- Increases the overall size of the high school campus
- Avoids impact to any other neighborhoods
- Students would continue to travel to/from Victory Field for athletics and fitness
- Allows expansion of parking by utilizing site topography to incorporate under-building parking, as well as parking located on the Phillips site
- Minimal impact on existing recreation/open space
- Keeps current locations and operations of high school activity in essentially the same location





Columbia St.

Barnard Ave.

Watertown High School

Watertown Community Education

Stepping Stones Child Care Center

Church of the Good Shepherd

Common St.

Edmund Fowle House

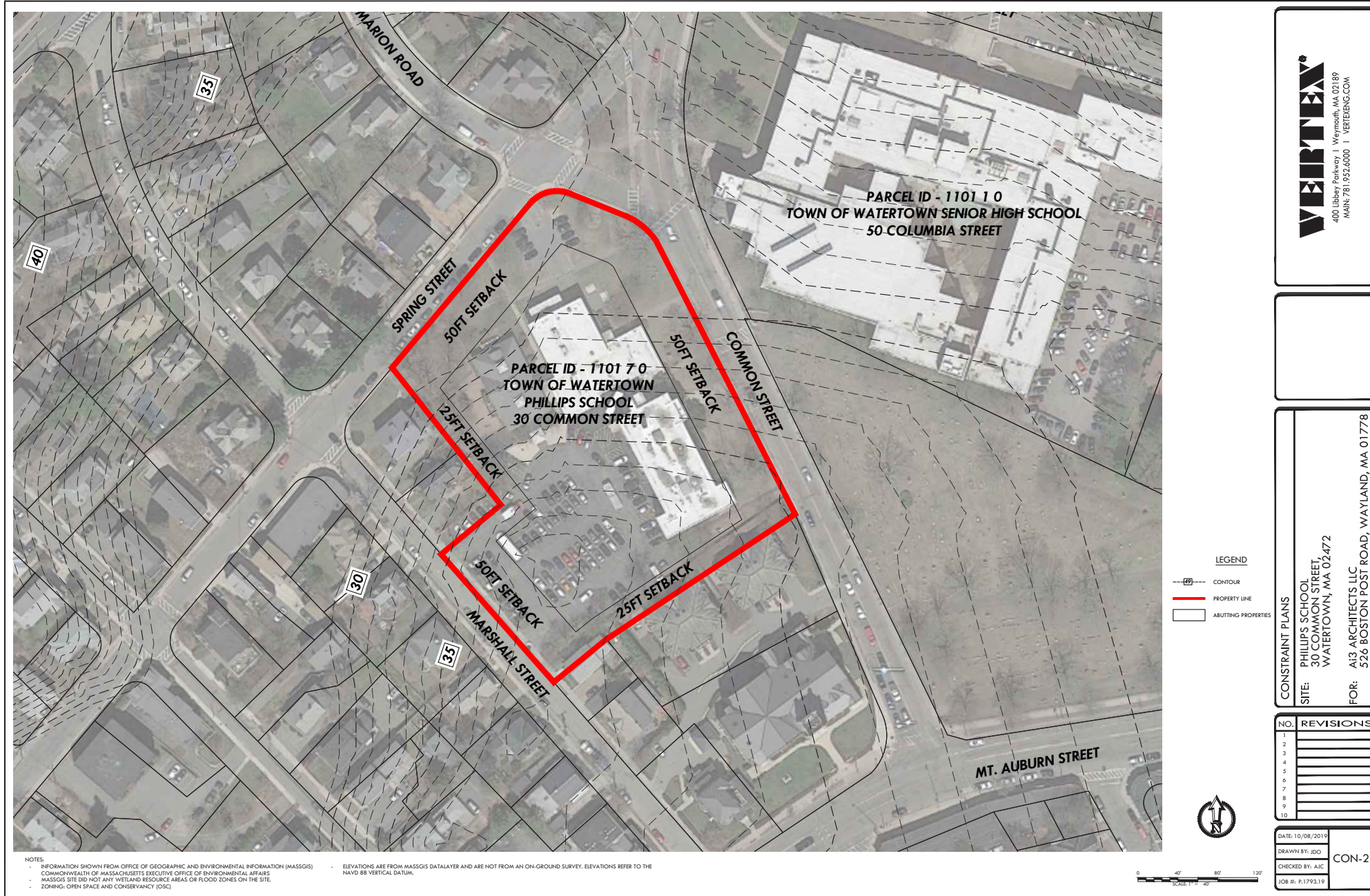
3D

+

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Boundary Constraints: Phillips Site



2:1 Shaded Topographic and Aerial Photography, 03/19/2019, Worcester MS-D1 - VERTEX Drawings High School Common Plans/Phillips Site - Worcester MA.dwg
 Copyright © 2019 Vertex Engineering, Inc.

NOTES:
 - INFORMATION SHOWN FROM OFFICE OF GEOGRAPHIC AND ENVIRONMENTAL INFORMATION (MASSGIS)
 - COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
 - MASSGIS SITE DID NOT ANY WETLAND RESOURCE AREAS OR FLOOD ZONES ON THE SITE.
 - ZONING: OPEN SPACE AND CONSERVANCY (OSC)
 - ELEVATIONS ARE FROM MASSGIS DATALAYER AND ARE NOT FROM AN ON-GROUND SURVEY. ELEVATIONS REFER TO THE
 - NAVD 88 VERTICAL DATUM.

LEGEND
 --- CONTOUR
 --- PROPERTY LINE
 --- ABUTTING PROPERTIES

VERTEX
 400 Liberty Parkway | Weymouth, MA 02189
 MAIN: 781.952.6000 | VERTXENGG.COM

PHILLIPS SCHOOL
 30 COMMON STREET
 WATERTOWN, MA 02472

FOR: A13 ARCHITECTS LLC
 526 BOSTON POST ROAD, WAYLAND, MA 01778

NO.	REVISIONS
1	
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DATE: 10/08/2019
 DRAWN BY: JDO
 CHECKED BY: AJC
 JOB #: P1795.19

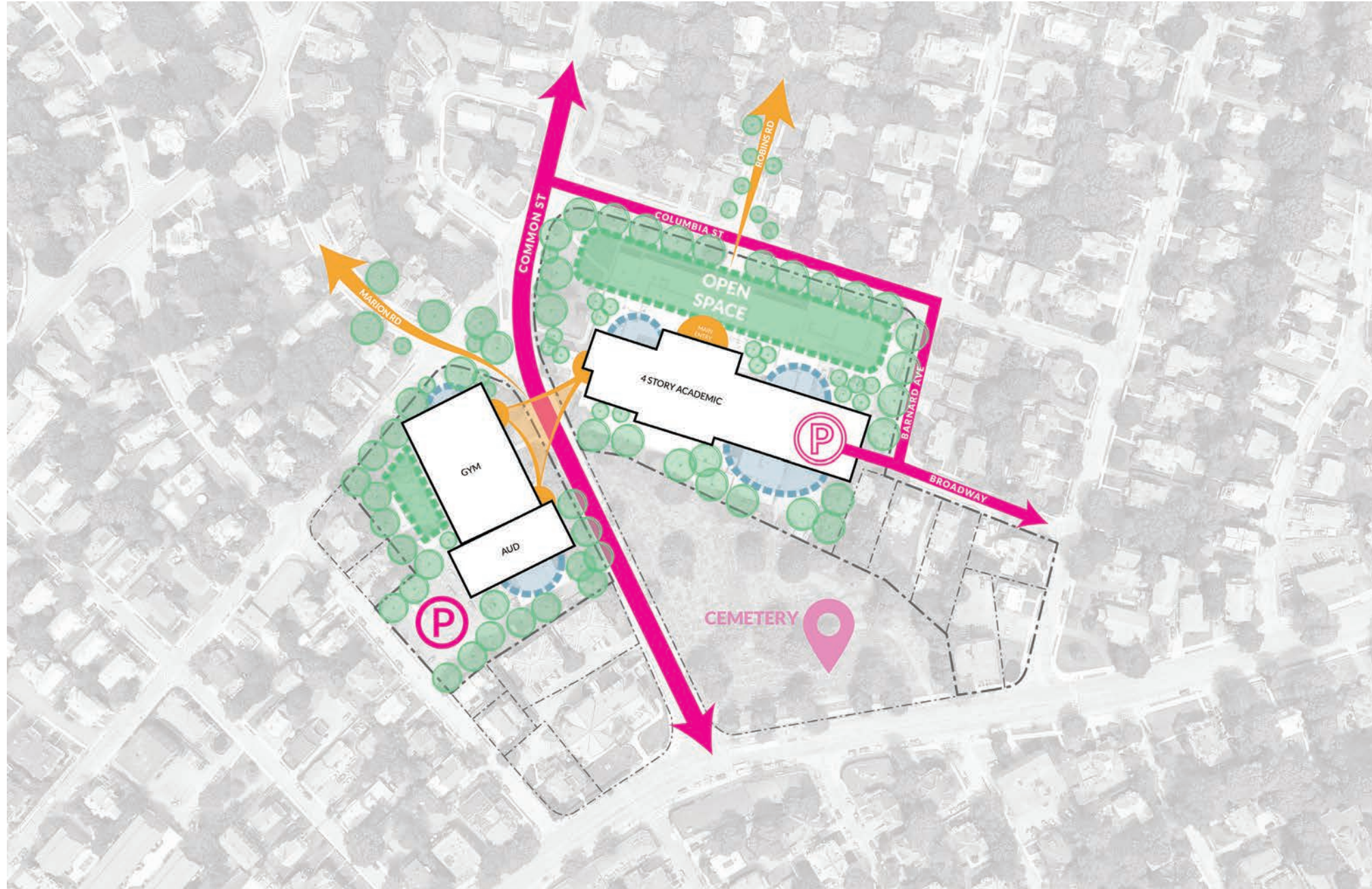


SCALE: 1" = 30'
 0 40' 80' 120'

CON-2

Watertown High School

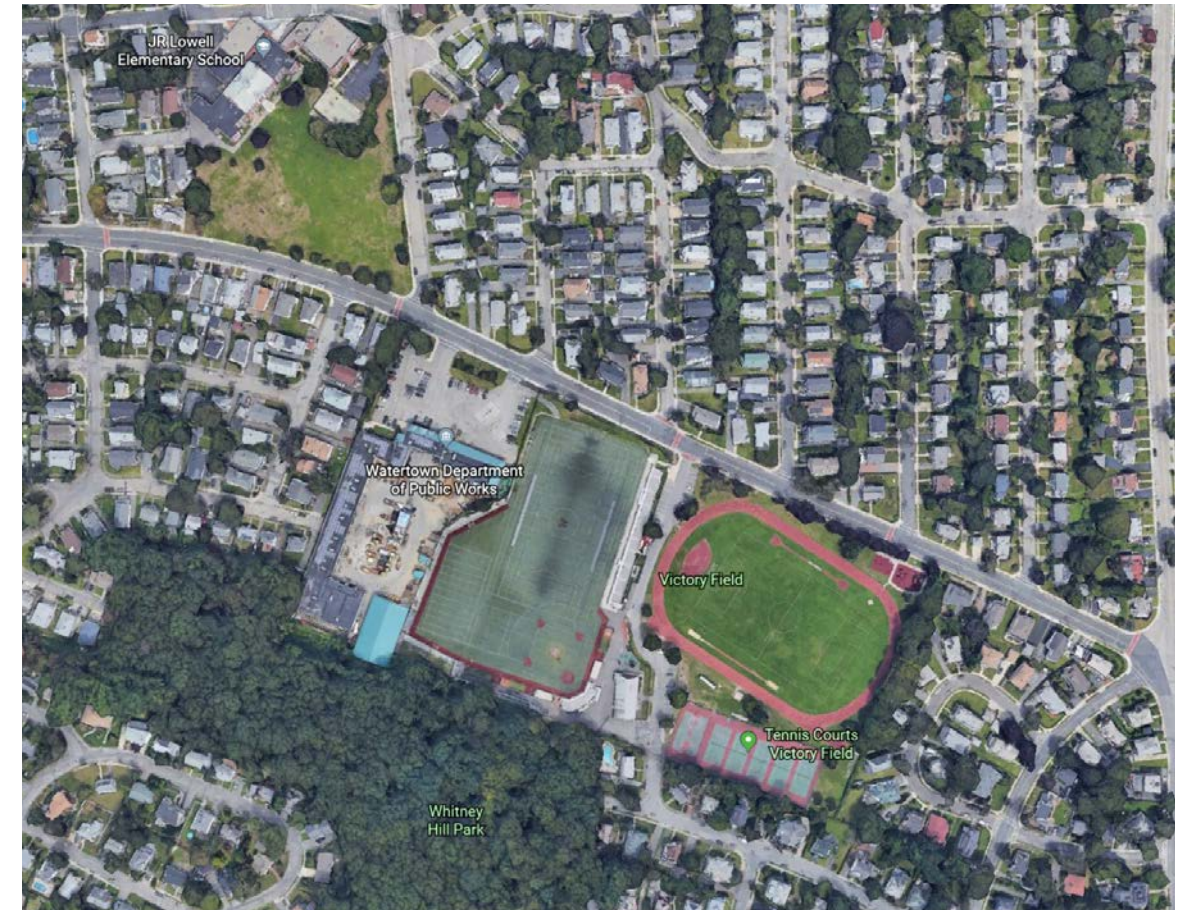
Proposed Analytics: Watertown High School + Phillips



Initial Building Options & Impacts: Option 4

Construct a new Watertown High School on the current DPW and Victory Field sites

- The current parcel occupied by the DPW is significantly smaller than the current high school site
- A portion of Victory Field will be impacted to meet the needs of the high school
- Permanent displacement of the Department of Public Works facility
- Significant cost to find a new location for the DPW
- Displacement of one of the full-sized recreational fields
- New location for the lost field, or a net loss of fields for Watertown as a whole
- This location places the Lowell School within close proximity of the high school
- Neighborhoods surrounding the existing high school site and the DPW/Victory Field site will be impacted
- The area chosen for the new DPW site will be impacted
- The demolition of the new site and the cost associated with a new field on the existing high school site is considered ineligible within the MSBA grant program
- The new high school will continue to occupy a central location within the Town
- Limits the impact to teachers and students who can continue to occupy the existing high school until the new high school is completed
- Victory Field is heavily utilized public recreation space - introduction of a high school may impact its use
- Provides connectivity between the high school and Whitney Hill Park



JR Lowell
Elementary School

Orchard St.

Watertown Department
of Public Works

Victory Field

Tennis Courts
Victory Field

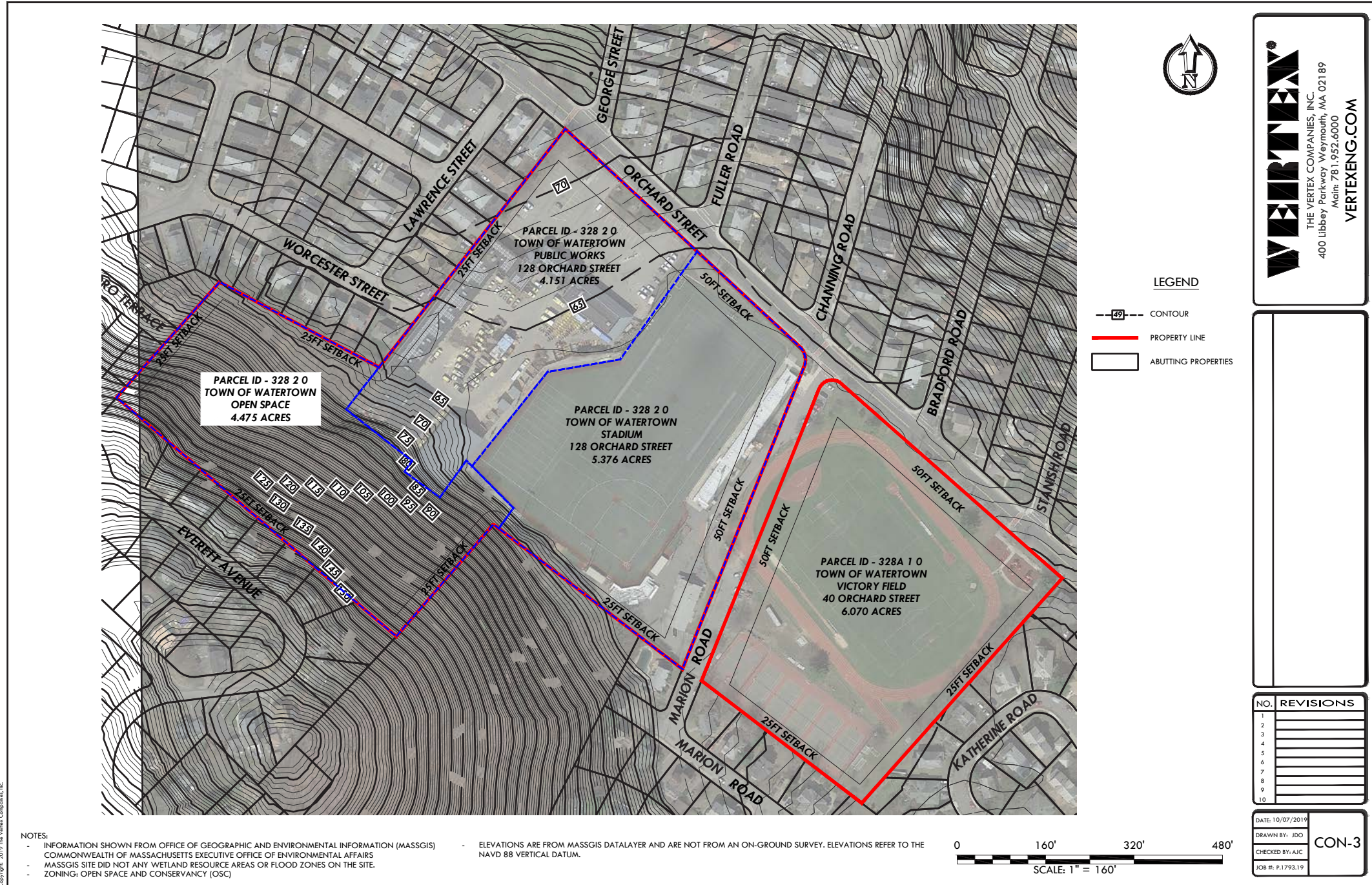
Whitney
Hill Park

Child
ter

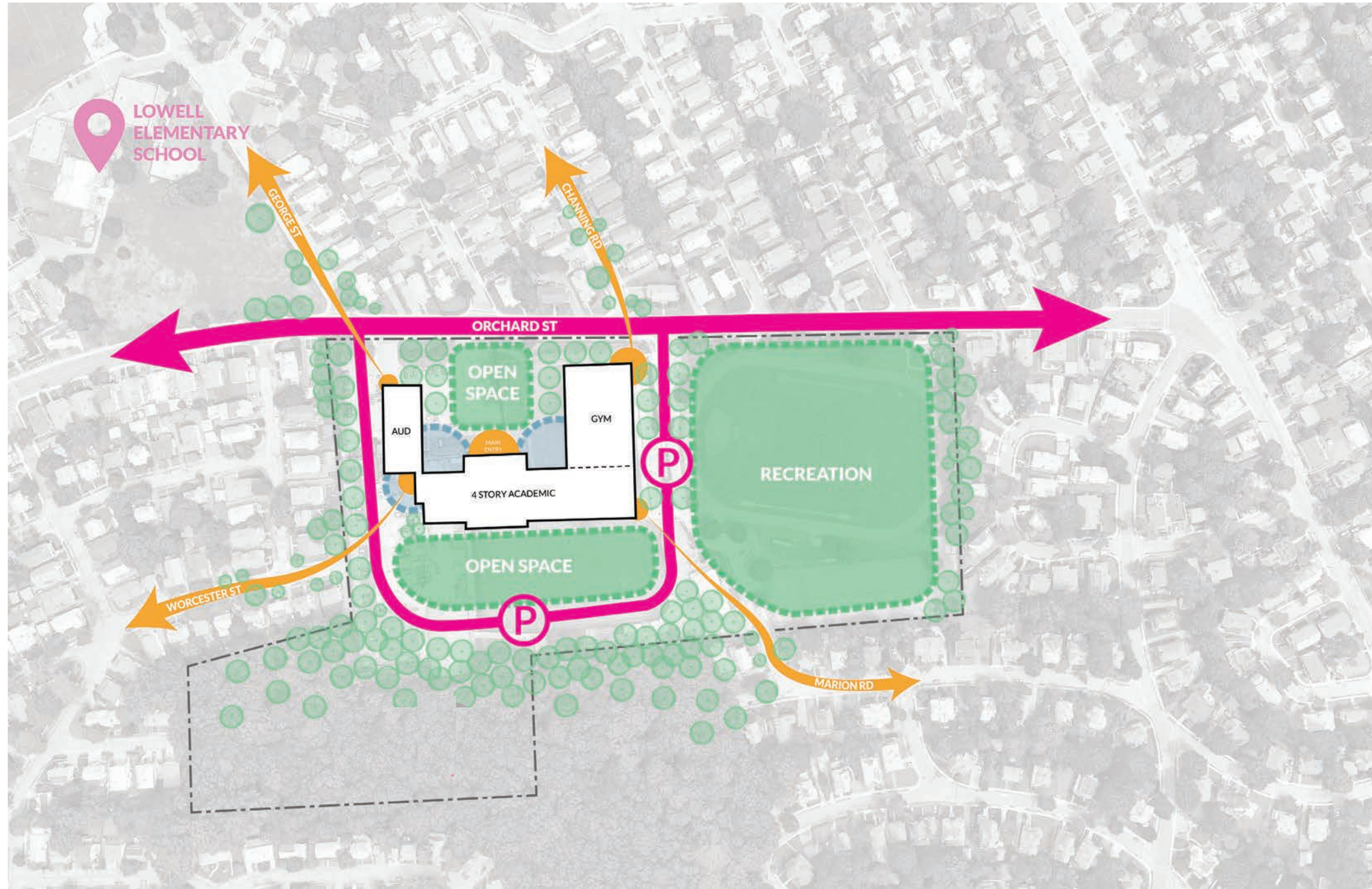
3D



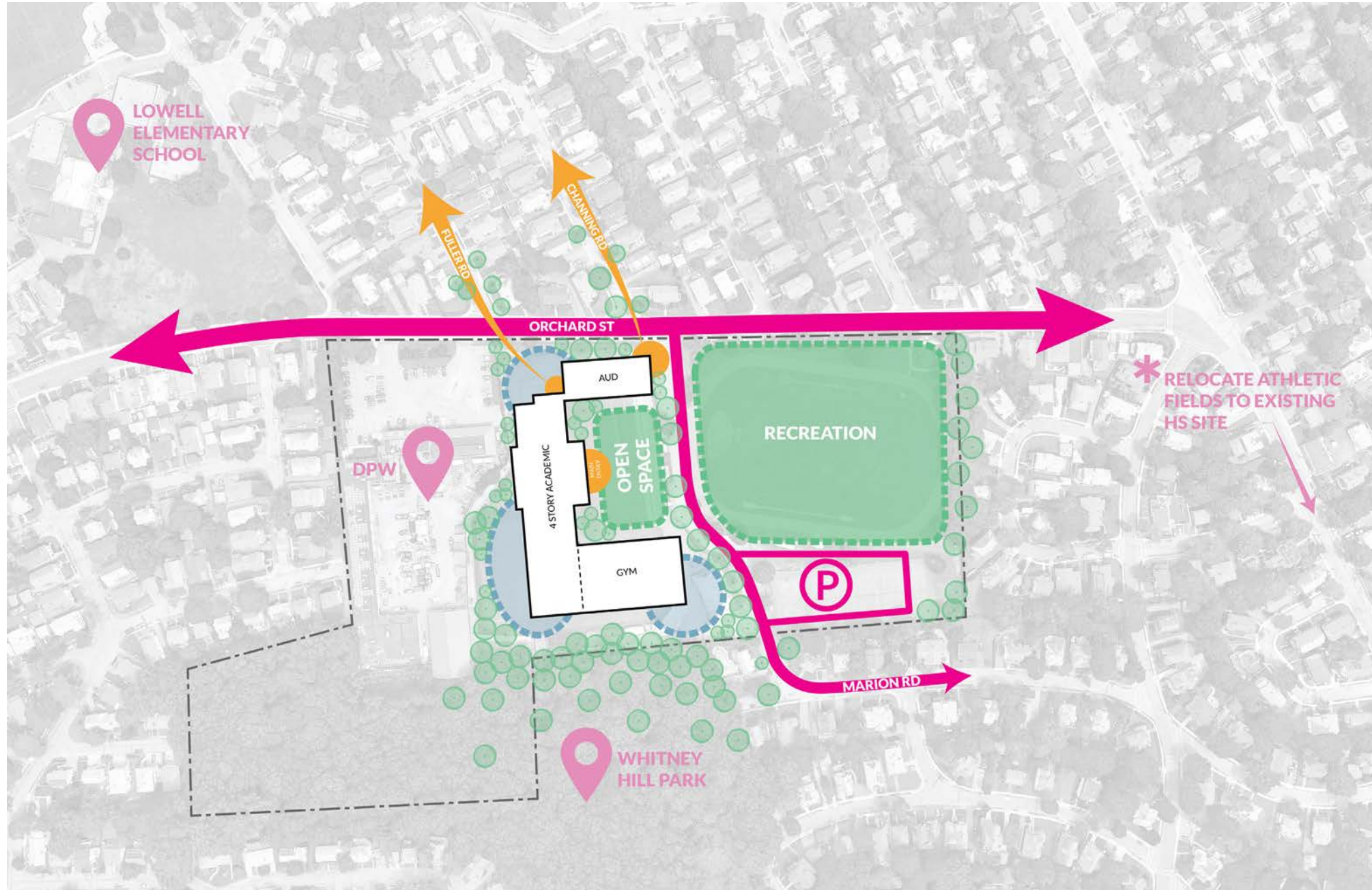
Boundary Constraints: DPW / Victory Field



Proposed Analytics: DPW / Victory Field



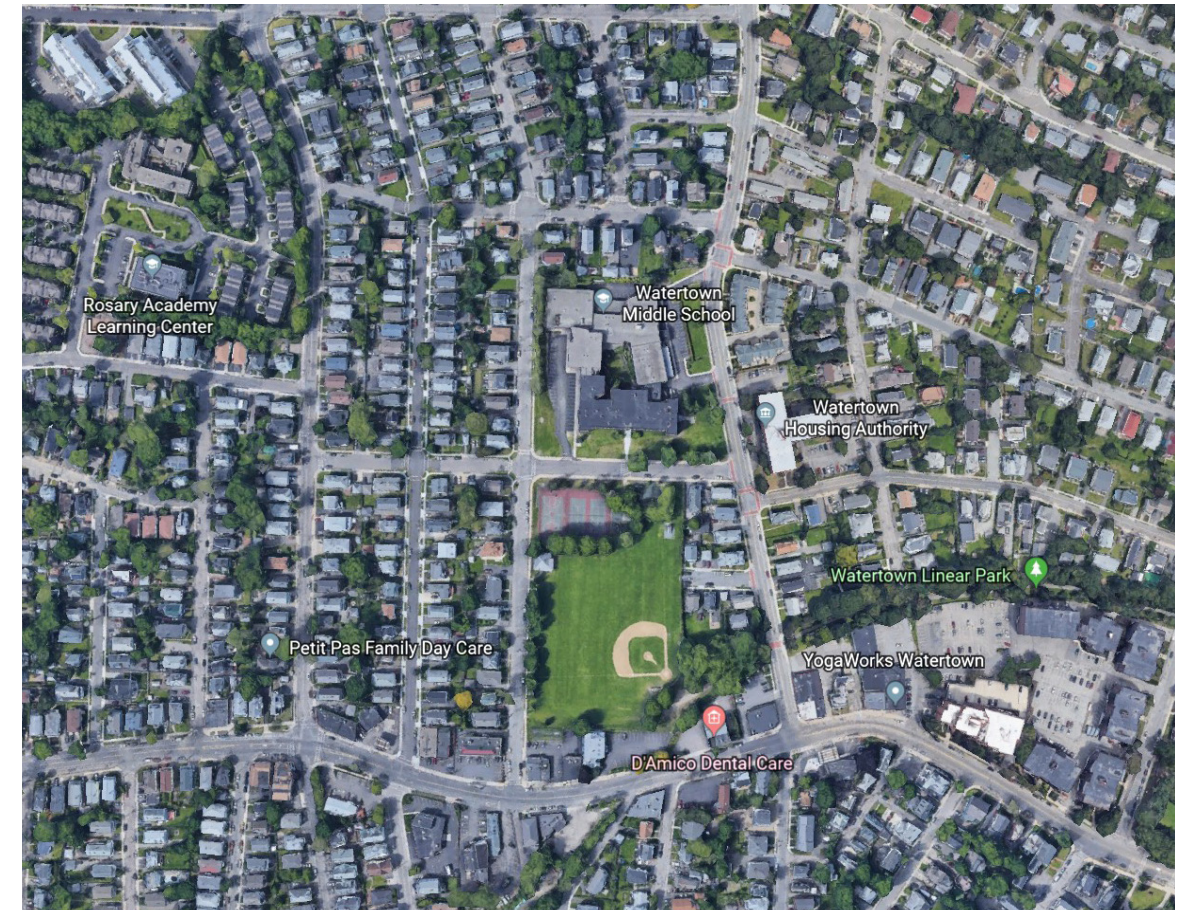
Proposed Analytics: Victory Field

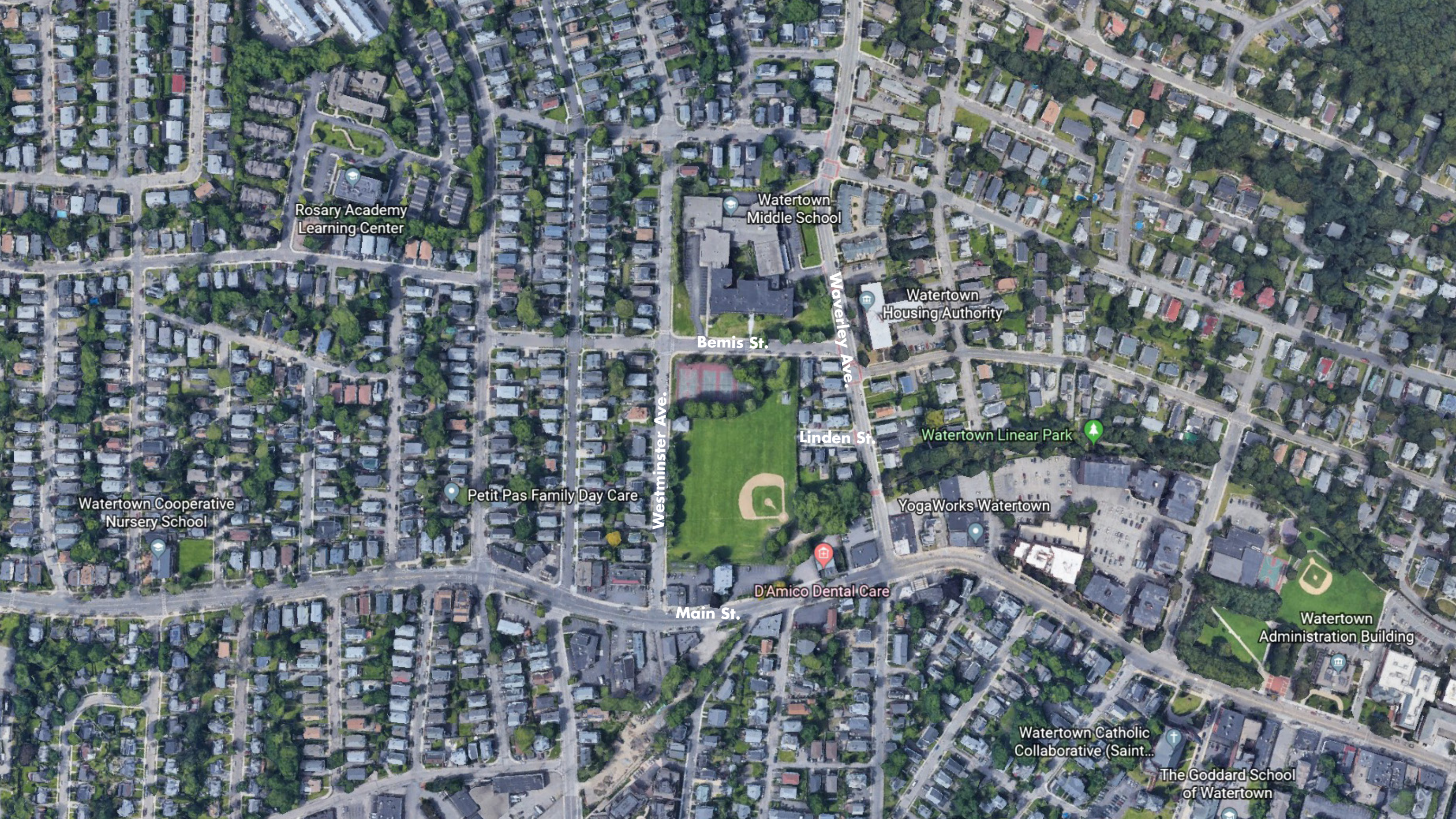


Initial Building Options & Impacts: Option 5

Construct a new Watertown High School on the current Moxley Field parcel

- If Moxley Field is displaced, an alternate location would need to be found
- Moves the high school out of its central location within Watertown
- Places students farther away from recreational fields including Victory Field
- Watertown Middle School would have its outdoor play area displaced
- This location places the high school and middle school within close proximity of each other, creating traffic impacts
- Both neighborhoods surrounding the existing high school site and the Moxley Field site will be impacted
- Open space in this section of Town is limited, and this section of neighborhood falls in an Environmental Justice Population
- There are some topography (slope) challenges on the east side of the property
- Demolition of the existing high school building/site and costs to replicate Moxley Field are ineligible within the MSBA grant program
- Students and teachers can continue to occupy the high school until the new high school is completed





Rosary Academy Learning Center

Watertown Middle School

Watertown Housing Authority

Bemis St.

Waverley Ave.

Linden St.

Watertown Linear Park

Watertown Cooperative Nursery School

Petit Pas Family Day Care

YogaWorks Watertown

D'Amico Dental Care

Main St.

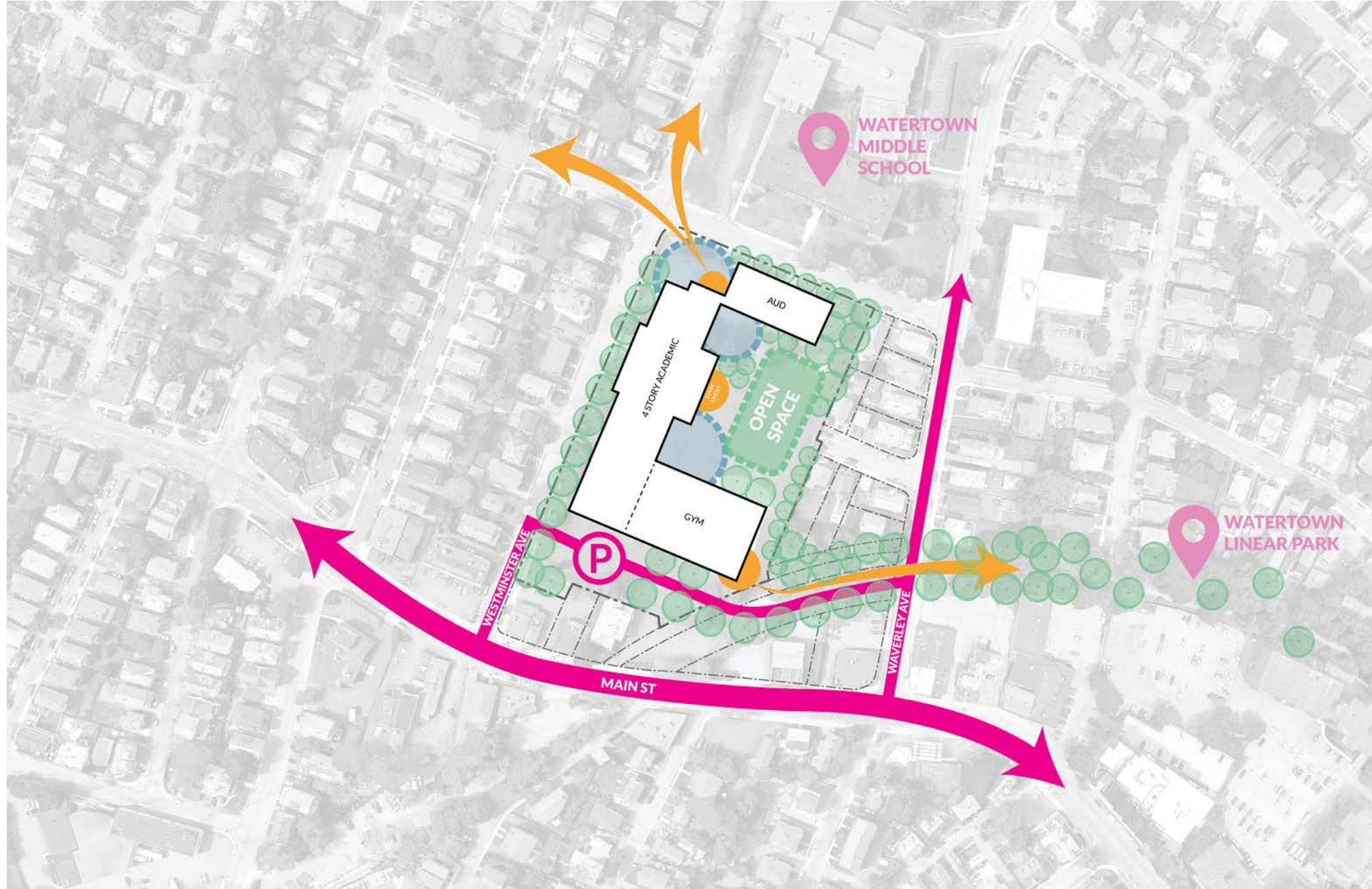
Watertown Administration Building

Watertown Catholic Collaborative (Saint...)

The Goddard School of Watertown

Watertown High School

Proposed Analytics: Moxley Field



Initial Building Options & Impacts: Option 6

Construct a new Watertown High School on an alternate site purchased by the Town

- Recent land parcel sales of 4.0 acres or greater in Watertown suggest market value can range from \$4 million - \$10 million per acre
- A search for parcels of this size that are centrally located within the Town reveals that no such parcel is currently known to exist
- Should any parcels fitting the criteria be found, an impact and potential advantages/disadvantages will be evaluated



Questions?
Thank you

