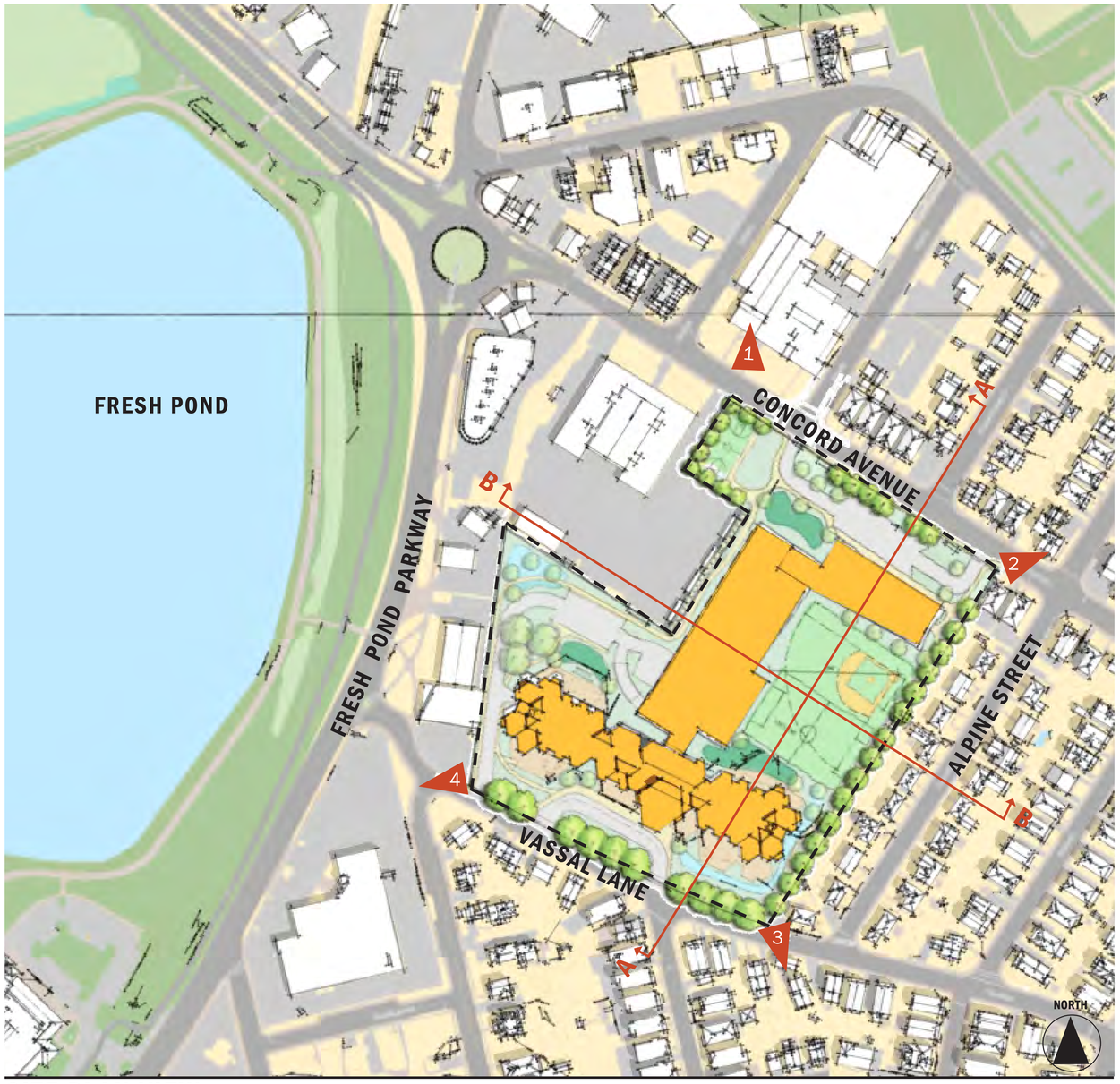
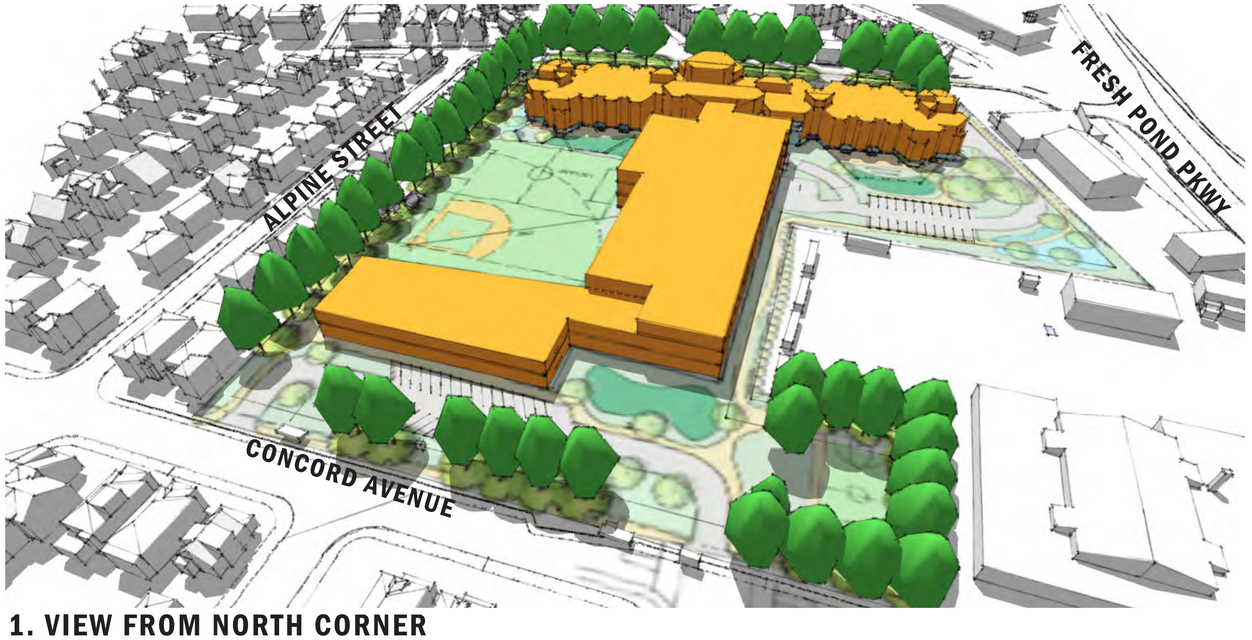
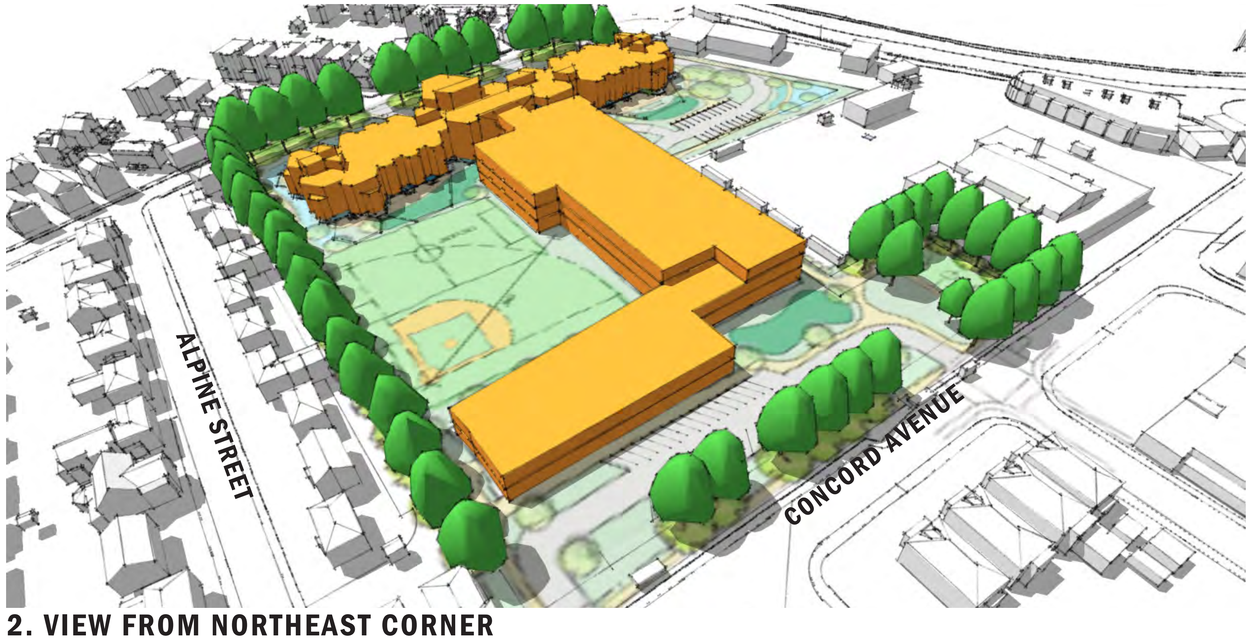


SITE PLAN VIEW

FIRST LEVEL



1. VIEW FROM NORTH CORNER

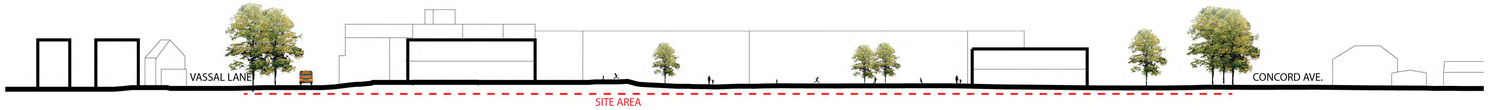


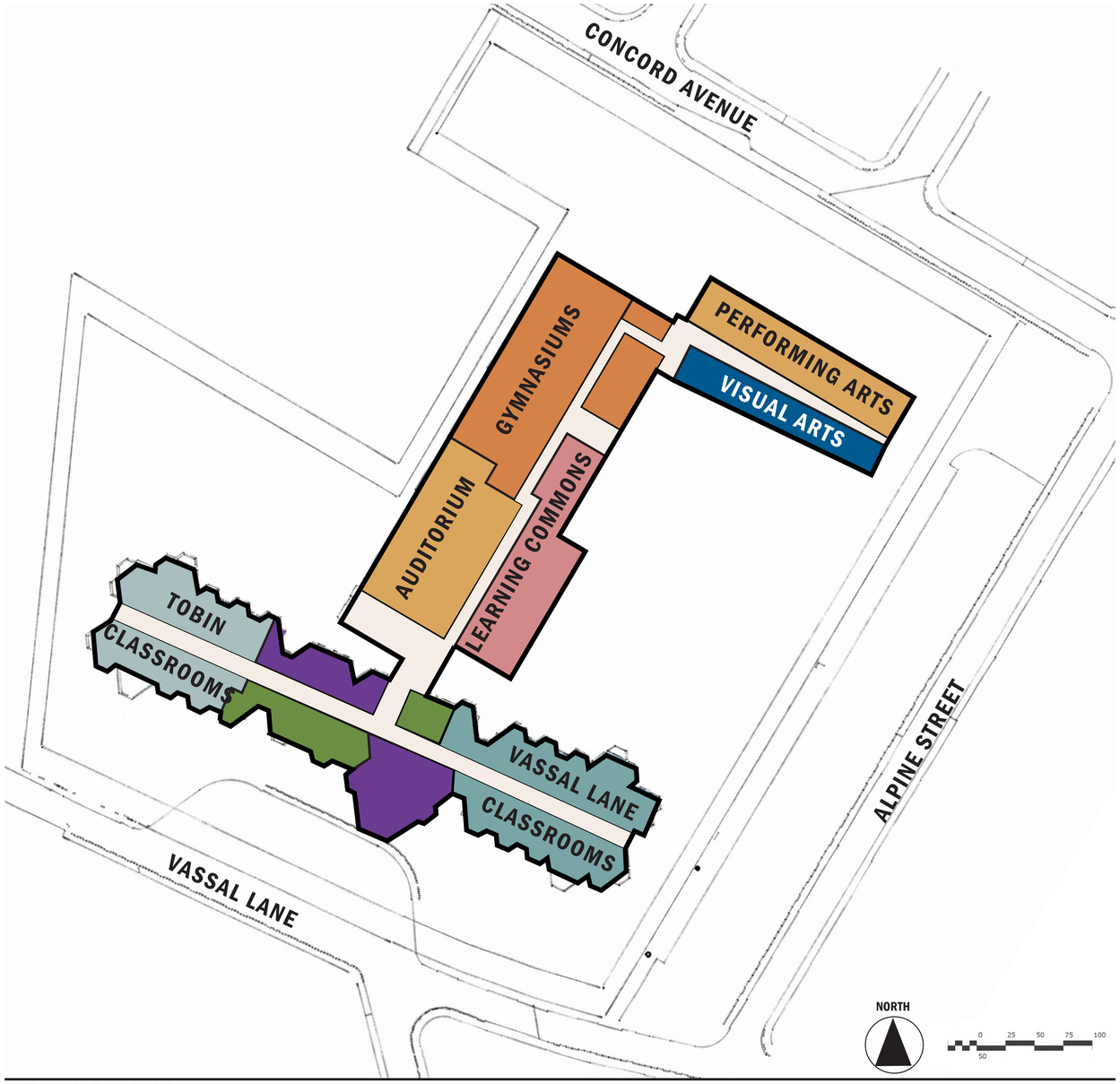
2. VIEW FROM NORTHEAST CORNER

OPTION 1: RENOVATION / ADDITION

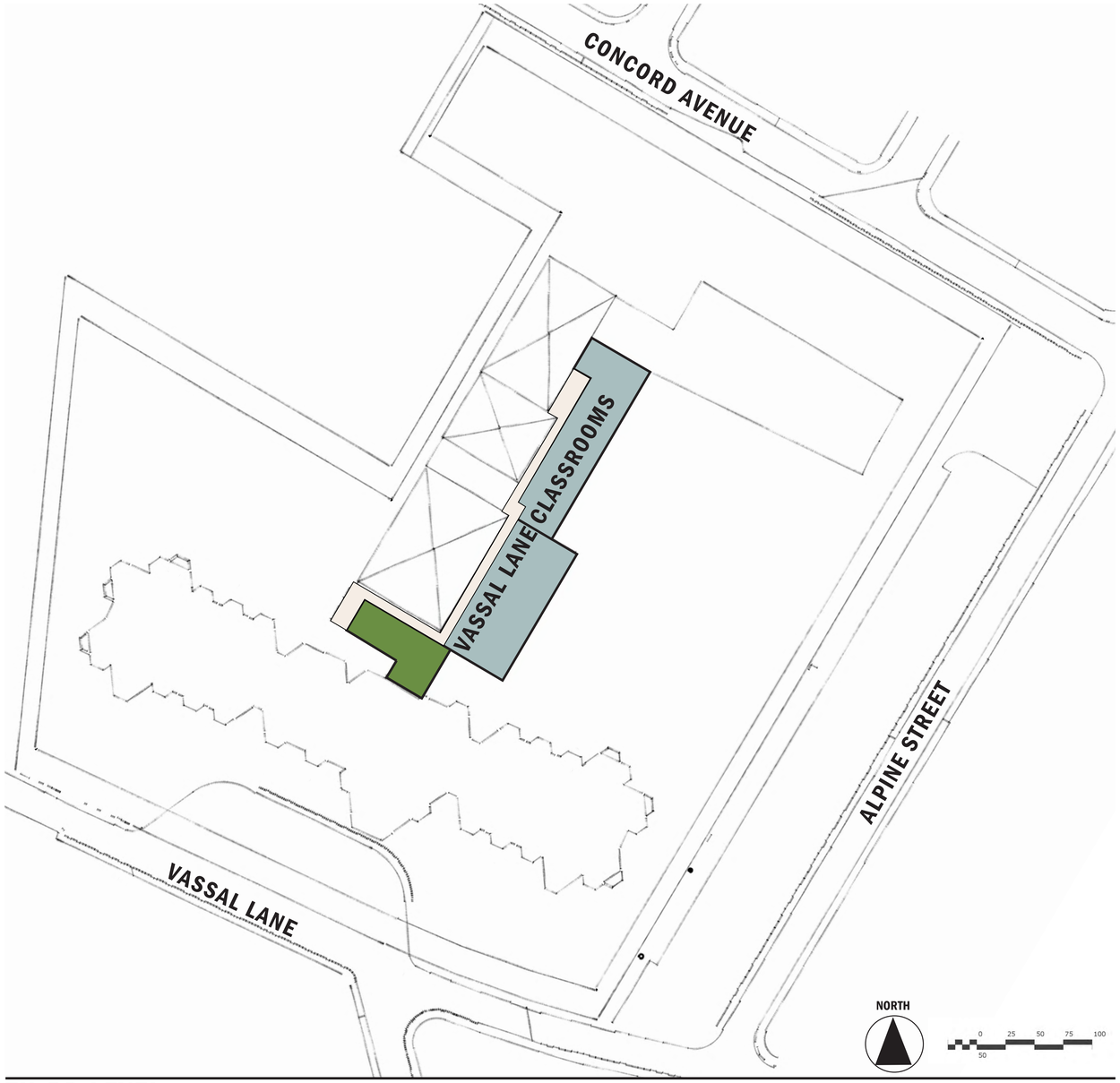
TOBIN MONTESSORI VASSAL LANE SCHOOL

SECTION A

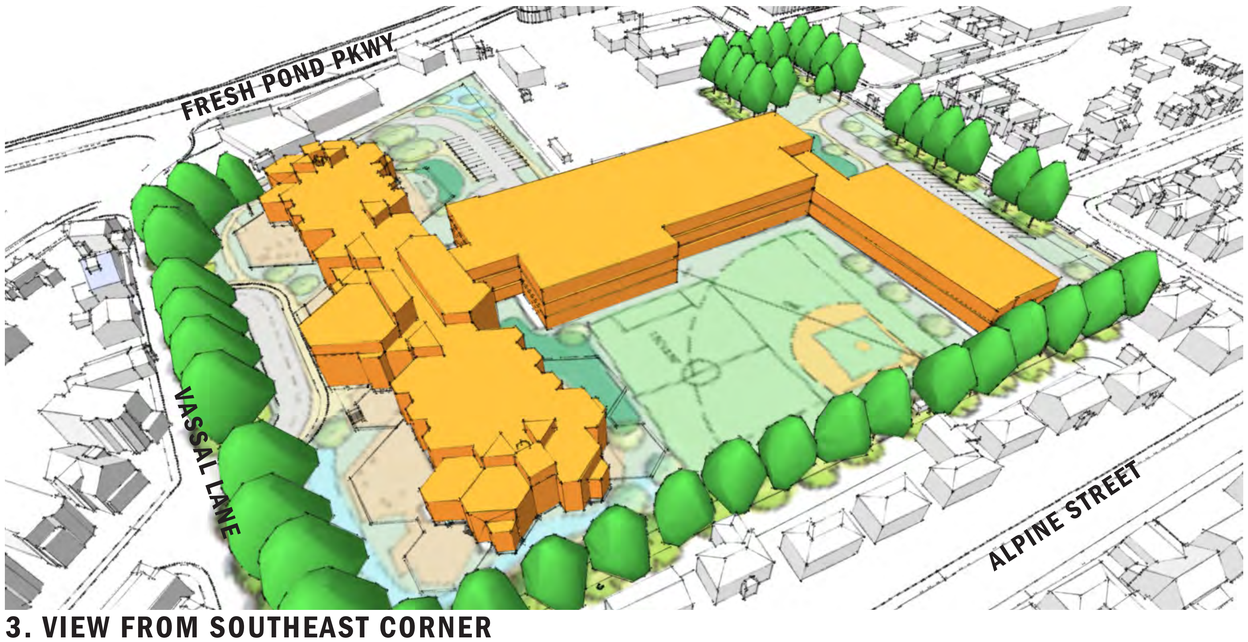




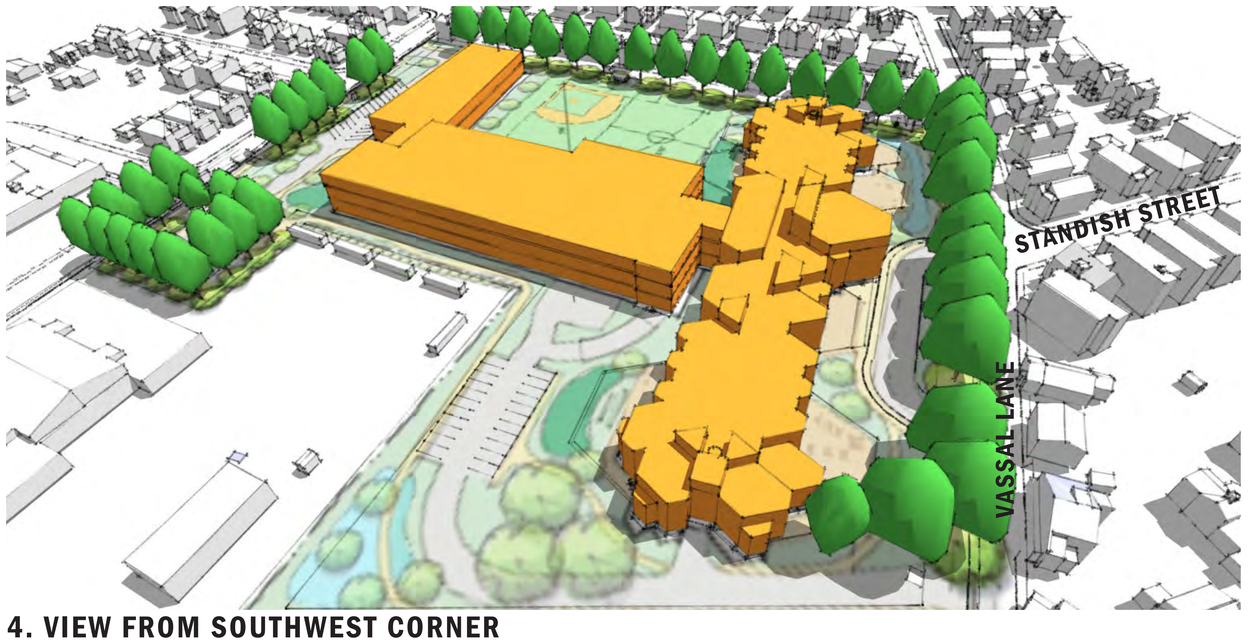
SECOND LEVEL



THIRD LEVEL



3. VIEW FROM SOUTHEAST CORNER

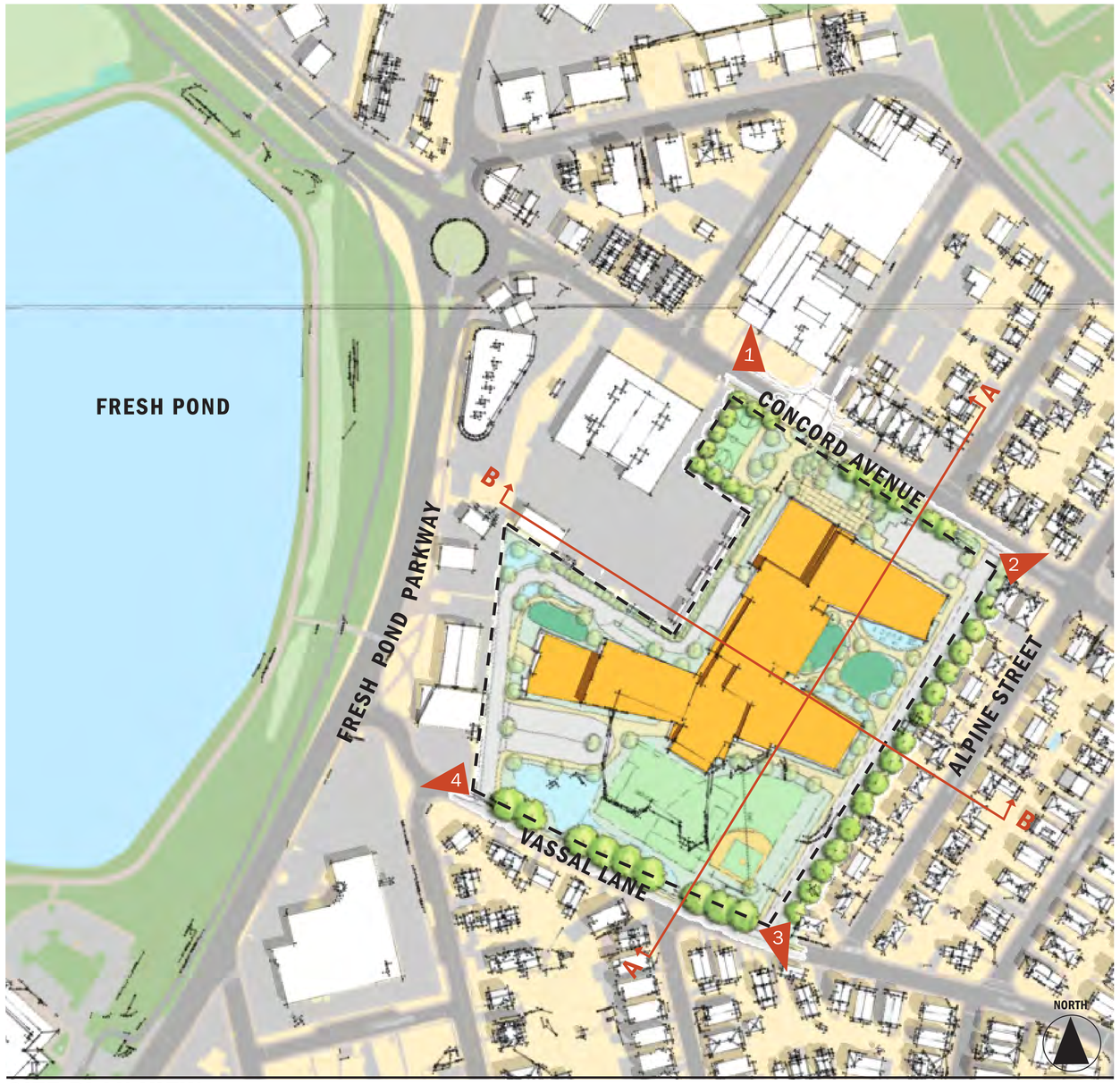


4. VIEW FROM SOUTHWEST CORNER

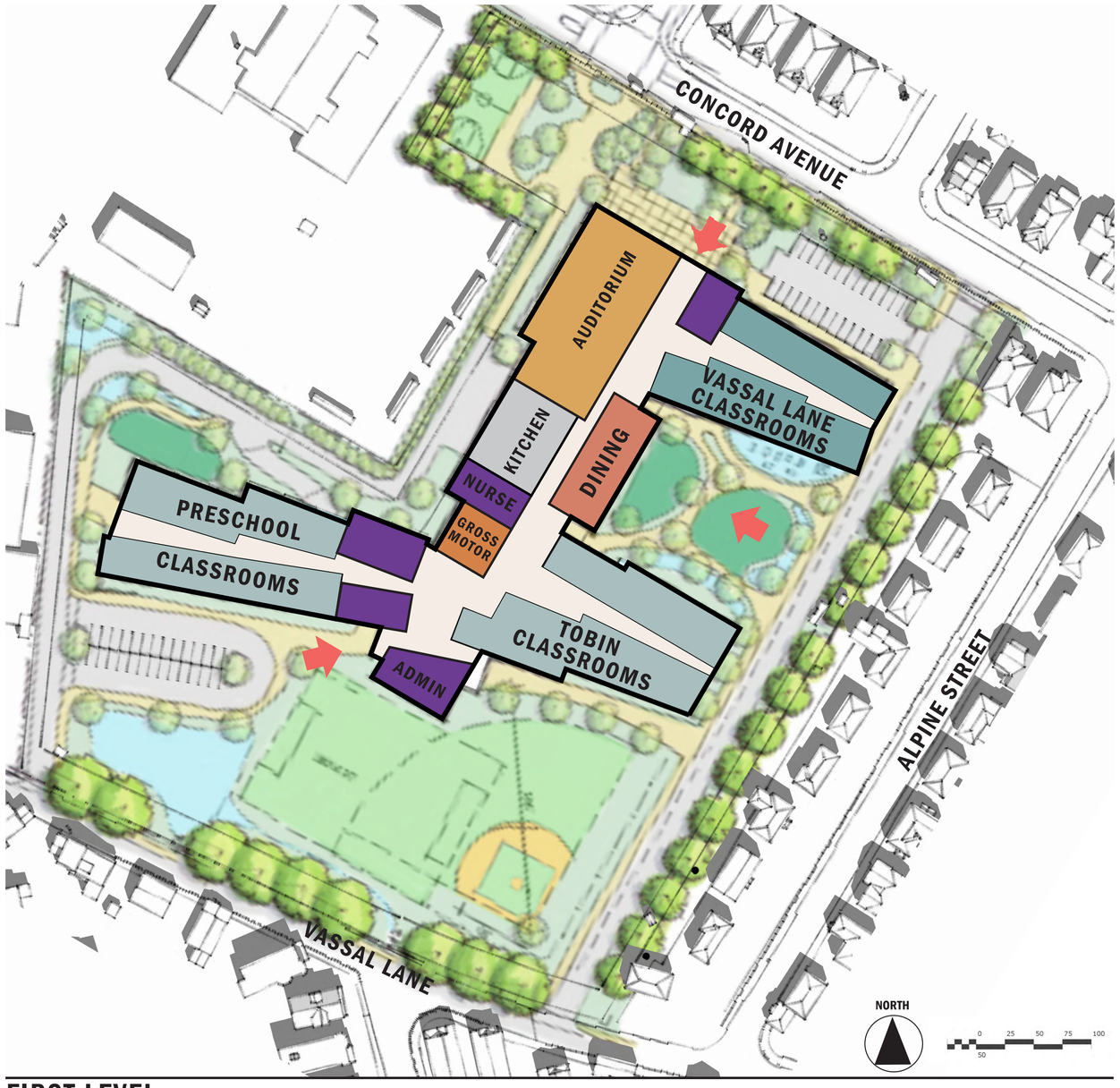
SECTION B

PERKINS EASTMAN

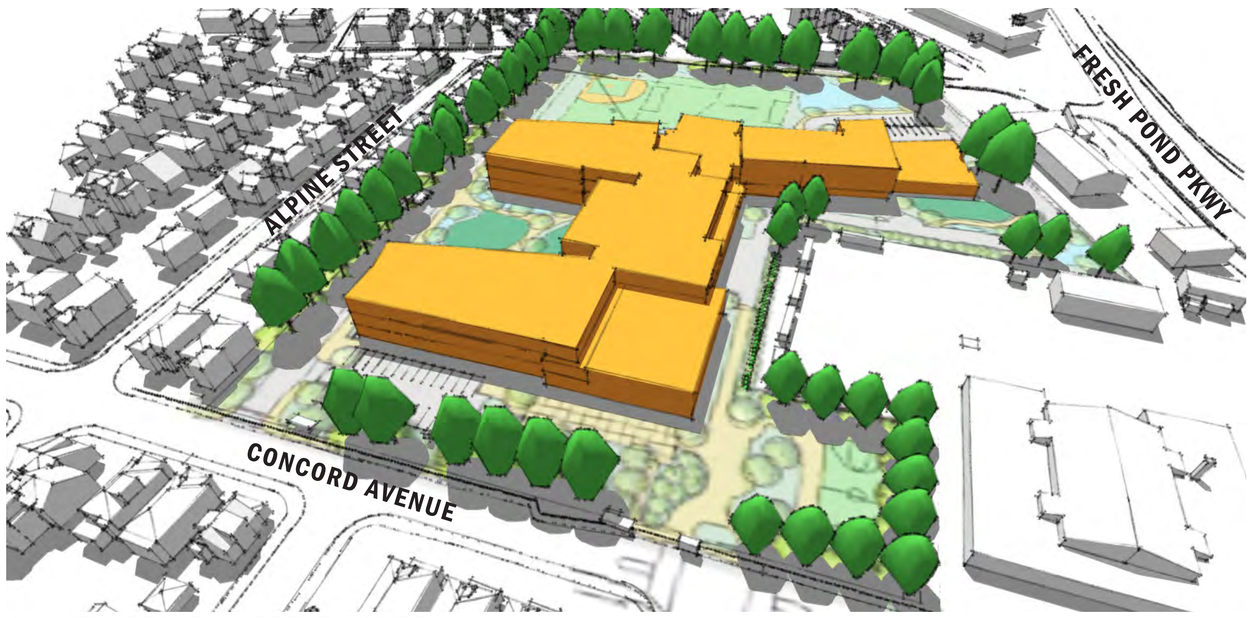
NOVEMBER.13.2019



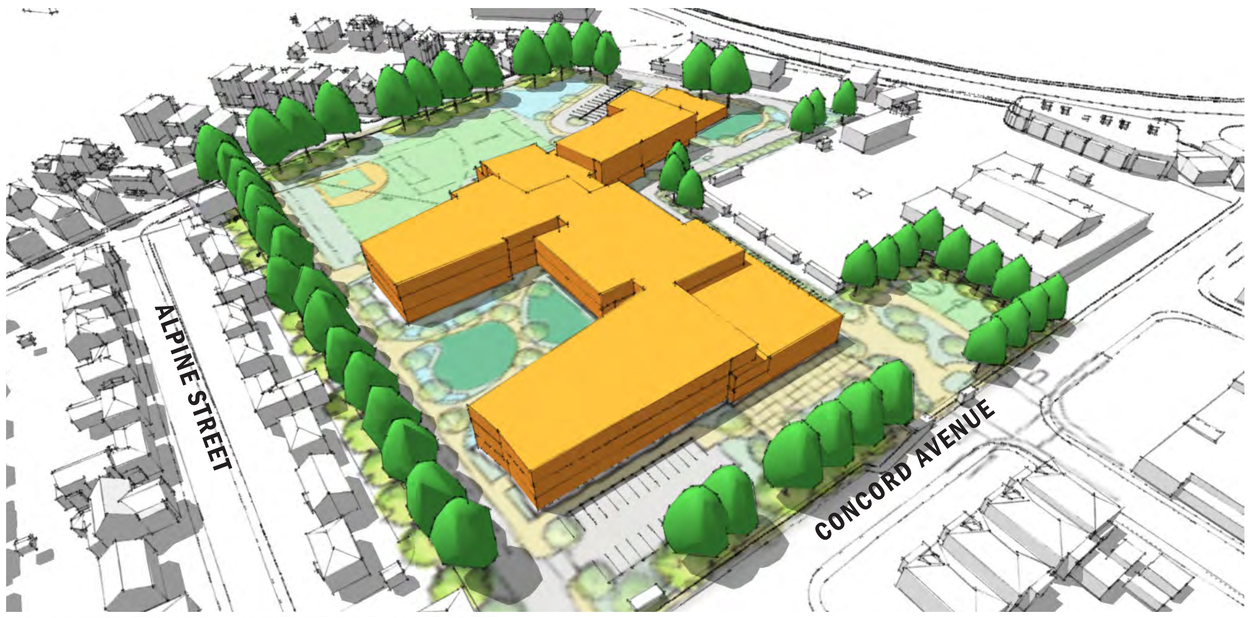
SITE PLAN VIEW



FIRST LEVEL



1. VIEW FROM NORTH CORNER

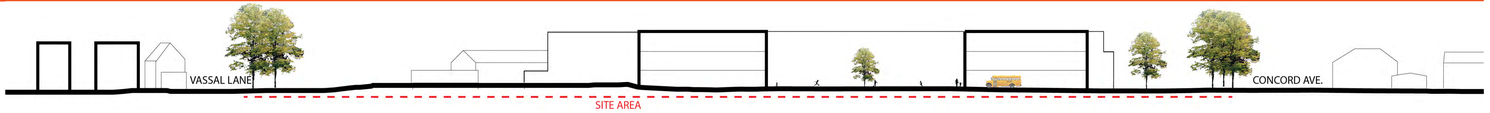


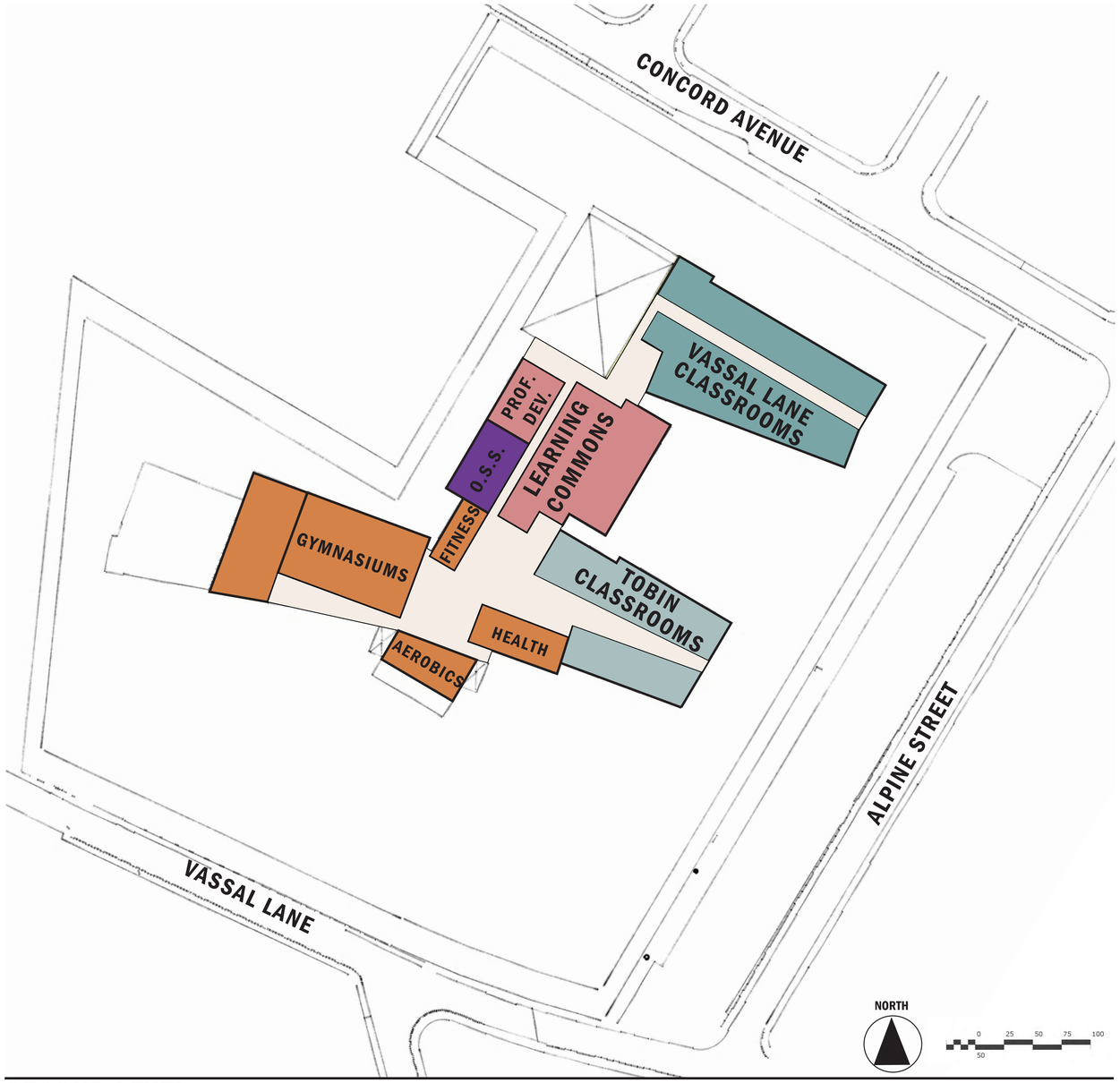
2. VIEW FROM NORTHEAST CORNER

OPTION 2: WINGS

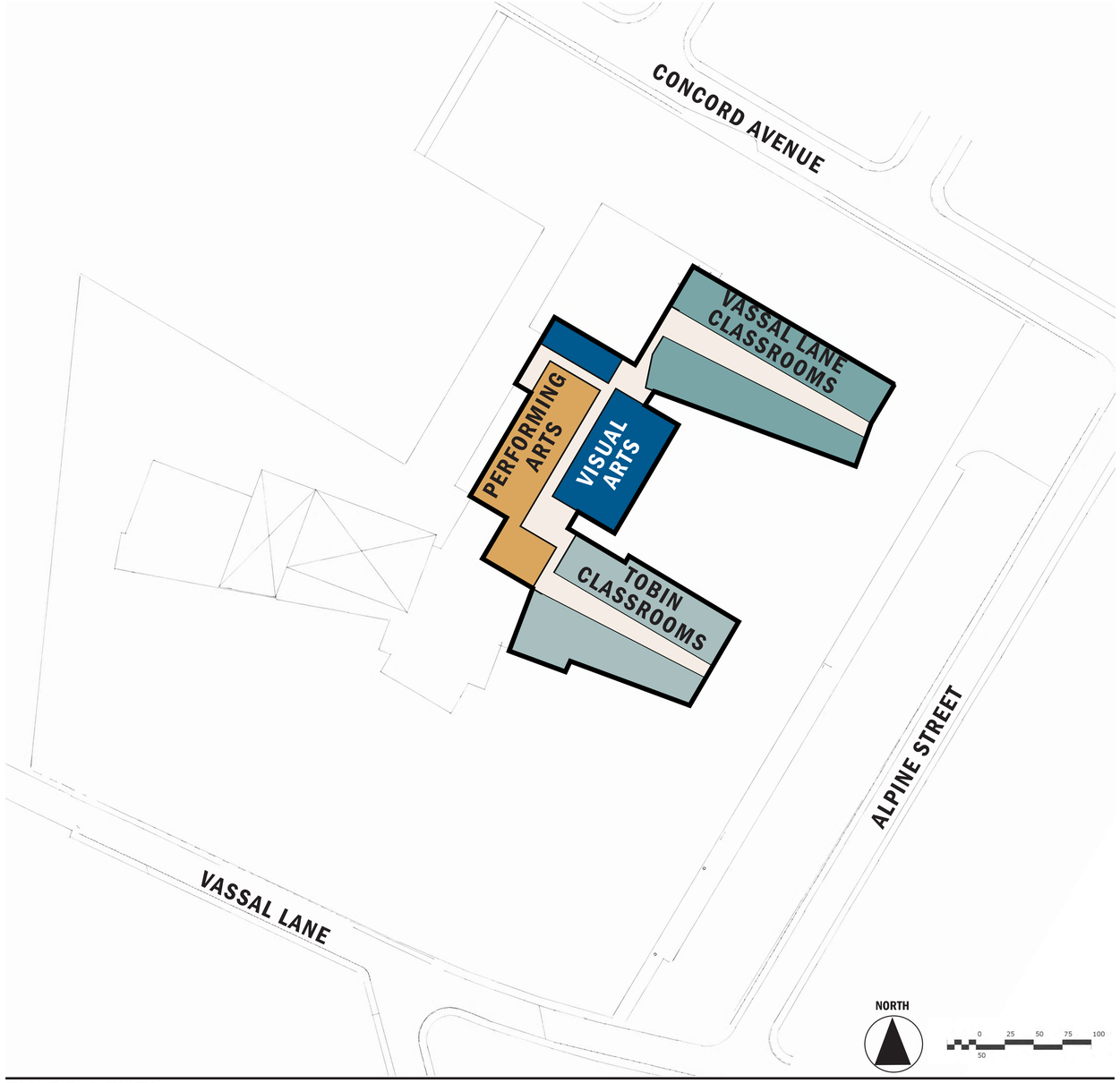
TOBIN MONTESSORI VASSAL LANE SCHOOL

SECTION A

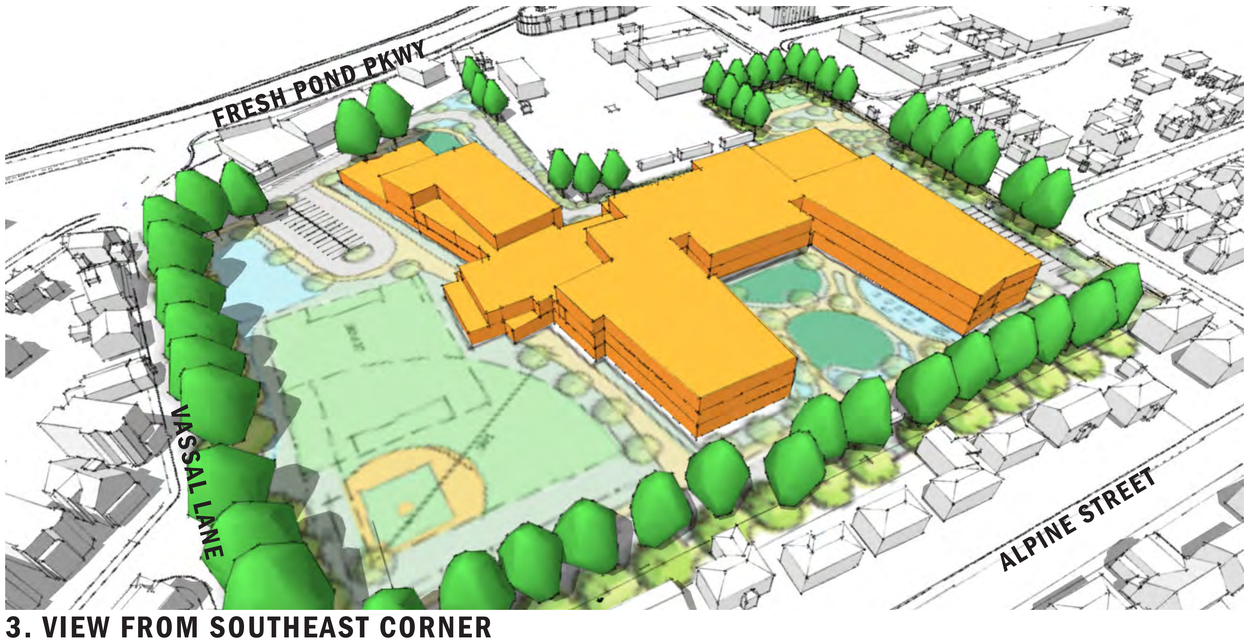




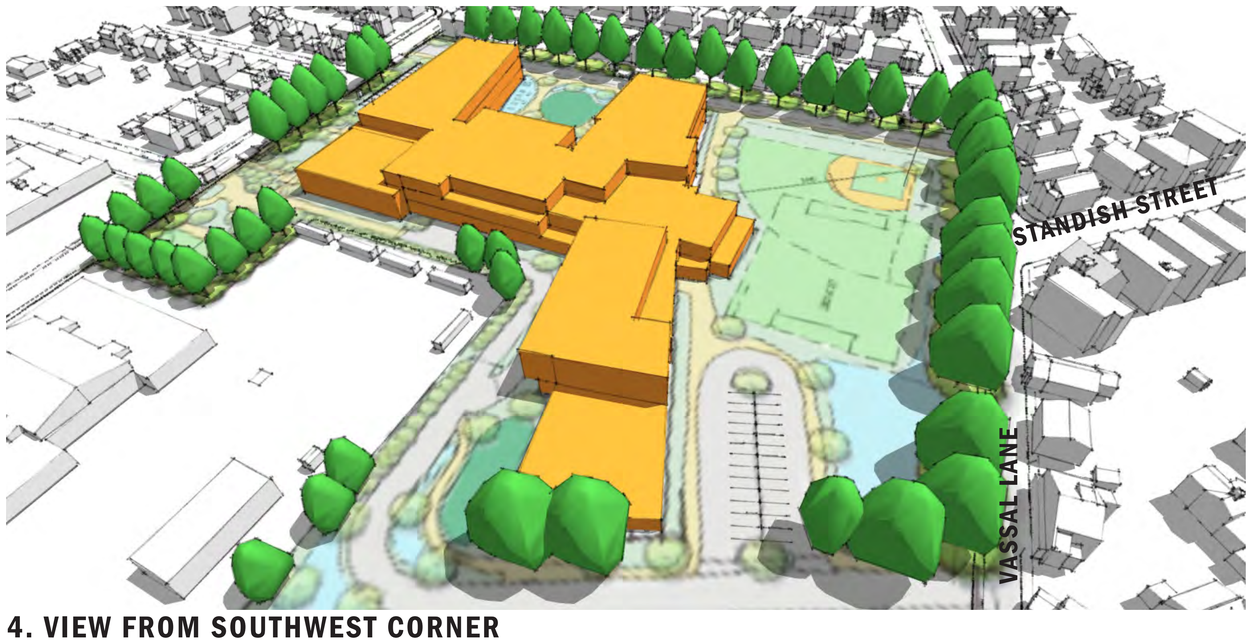
SECOND LEVEL



THIRD LEVEL



3. VIEW FROM SOUTHEAST CORNER

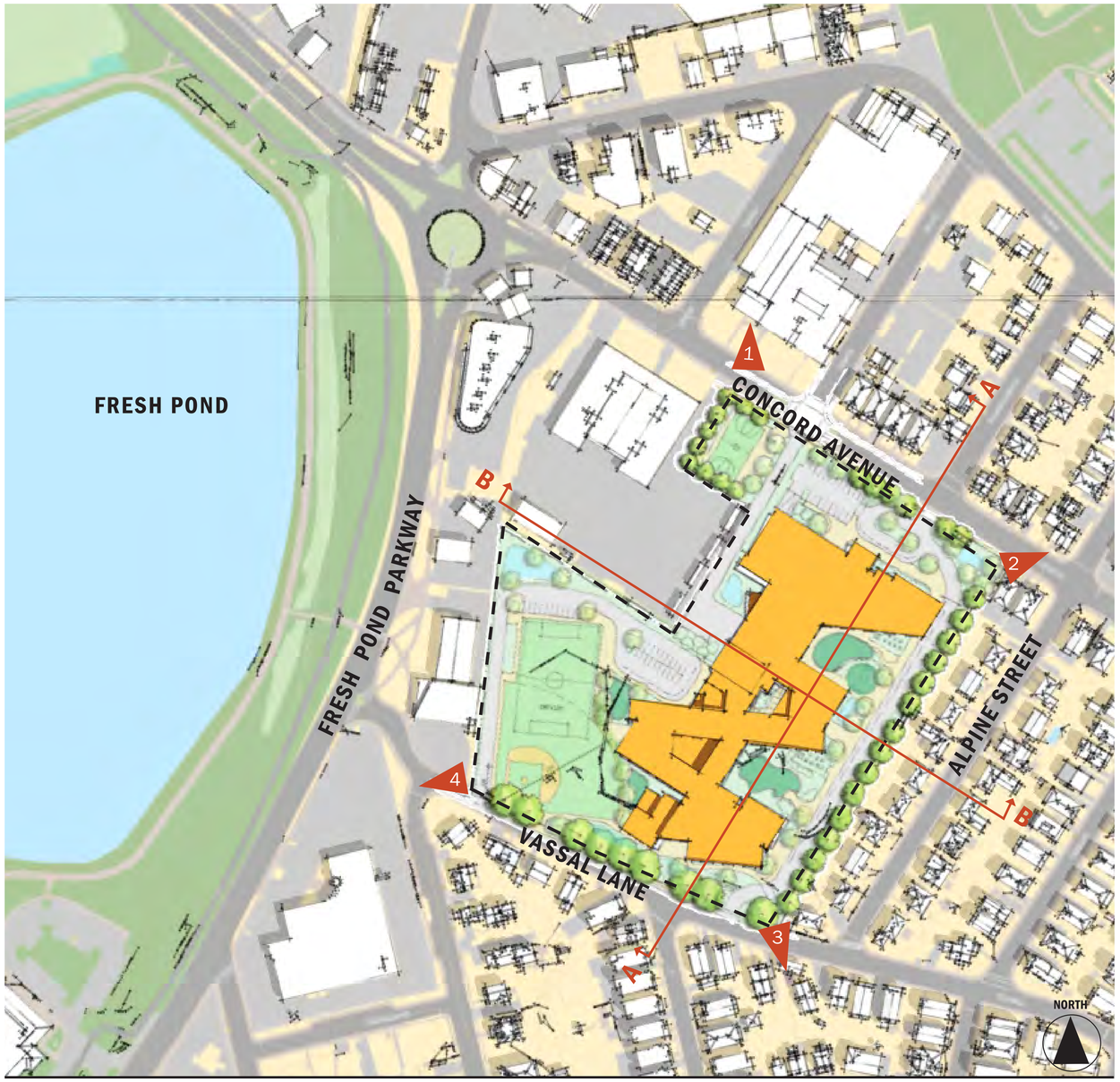


4. VIEW FROM SOUTHWEST CORNER

SECTION B

PERKINS EASTMAN

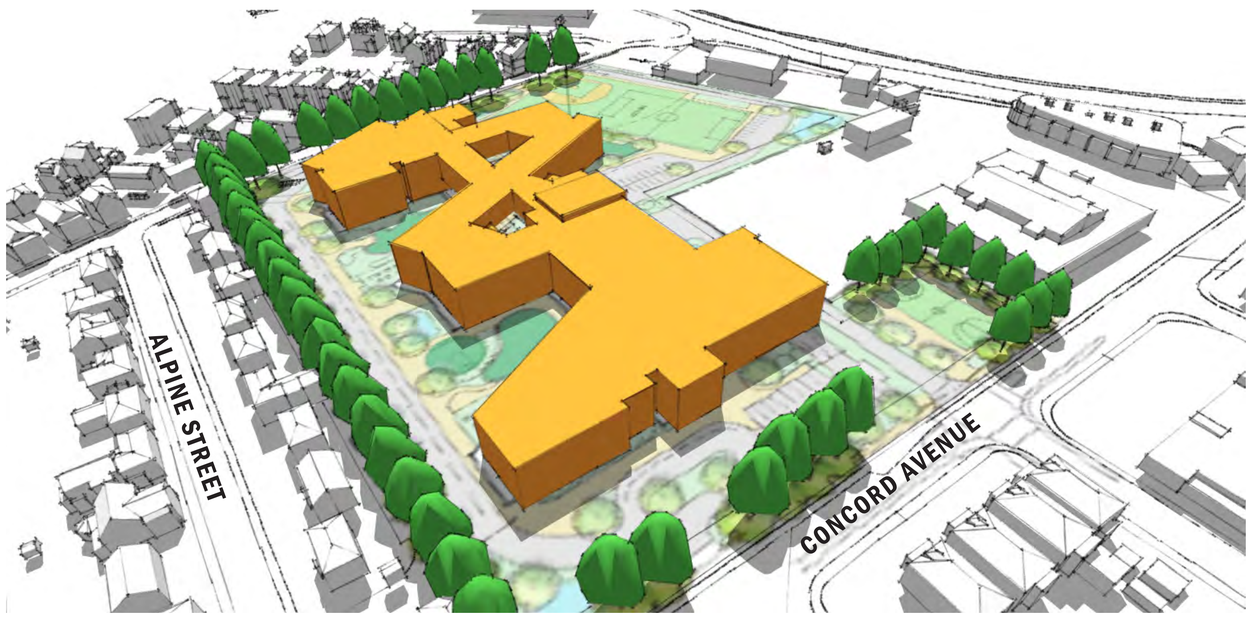
NOVEMBER.13.2019



SITE PLAN VIEW

FIRST LEVEL

1. VIEW FROM NORTH CORNER

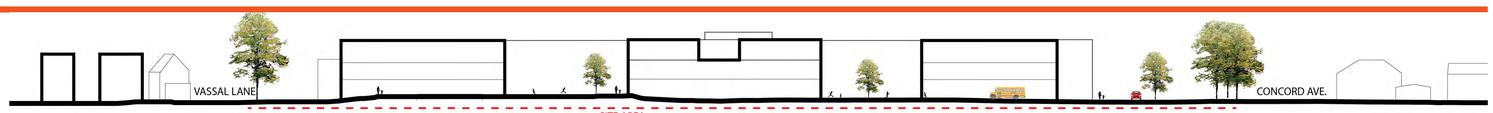


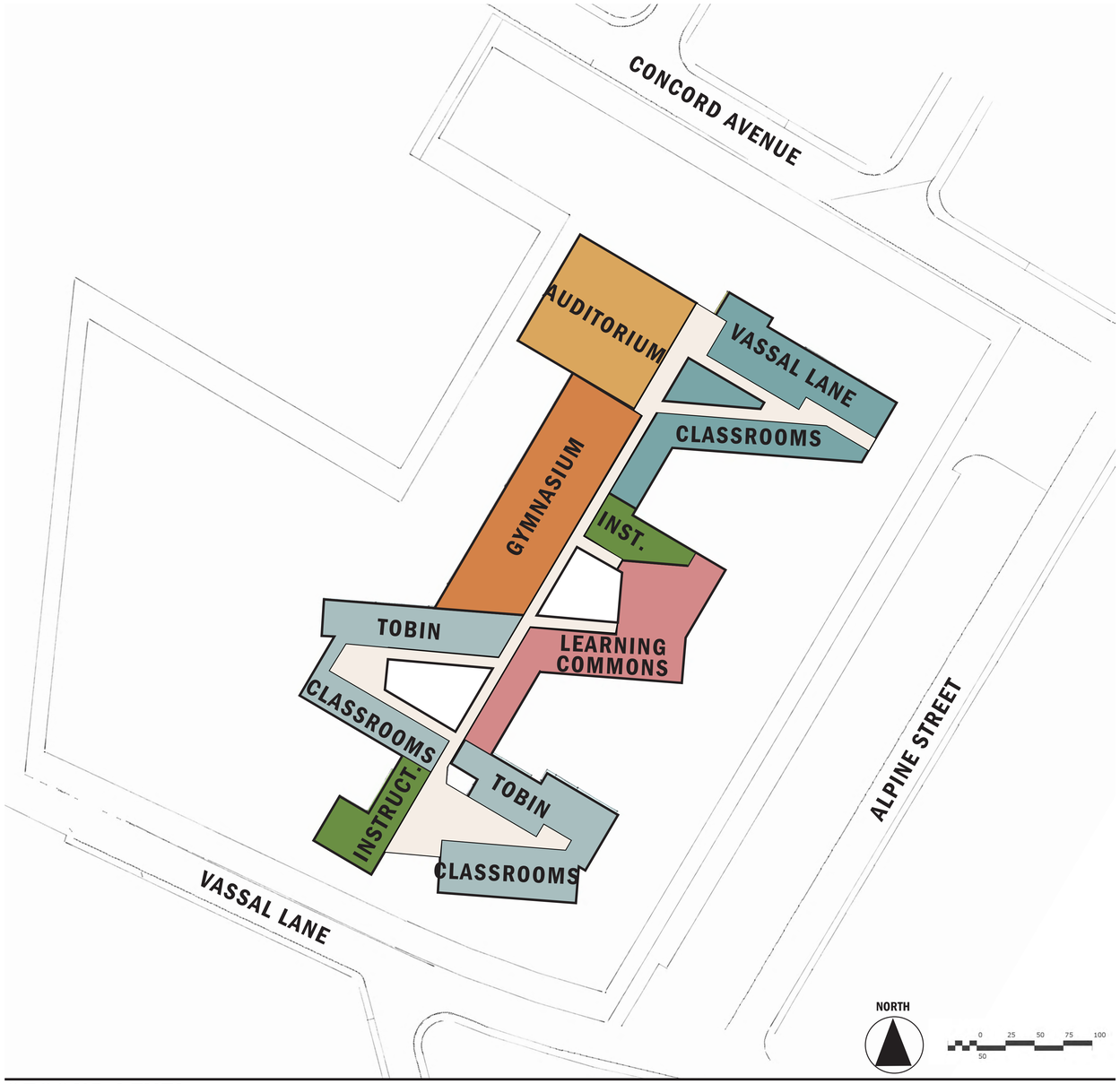
2. VIEW FROM NORTHEAST CORNER

OPTION 3: PAVILIONS

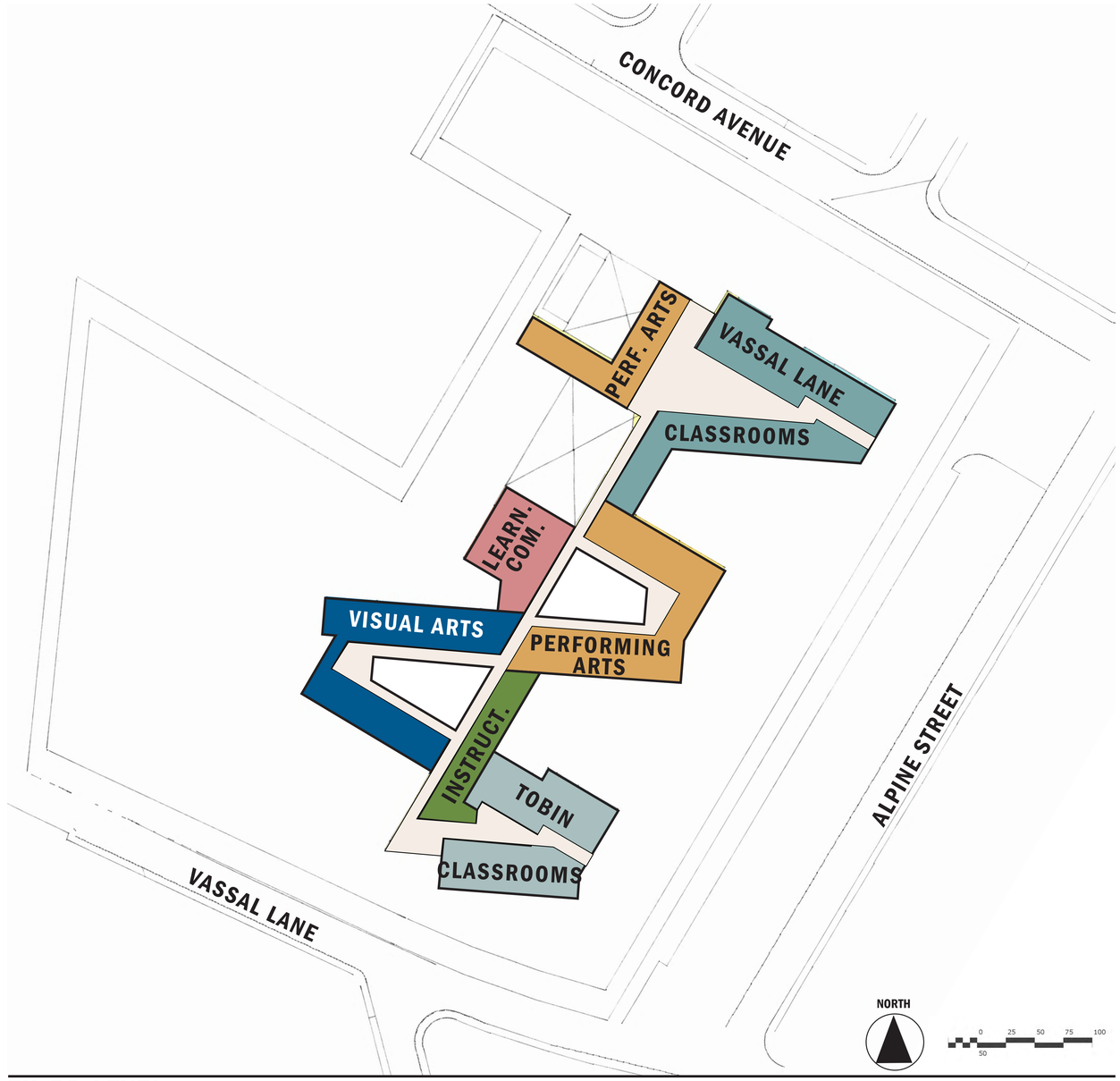
TOBIN MONTESSORI VASSAL LANE SCHOOL

SECTION A

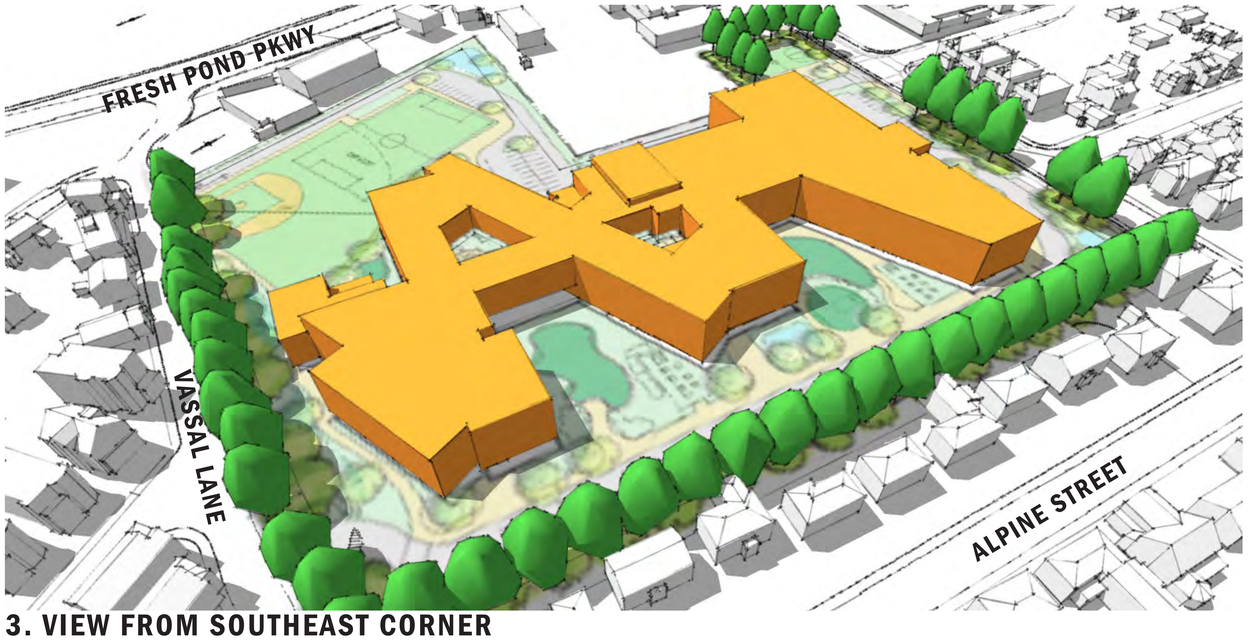




SECOND LEVEL



THIRD LEVEL



3. VIEW FROM SOUTHEAST CORNER

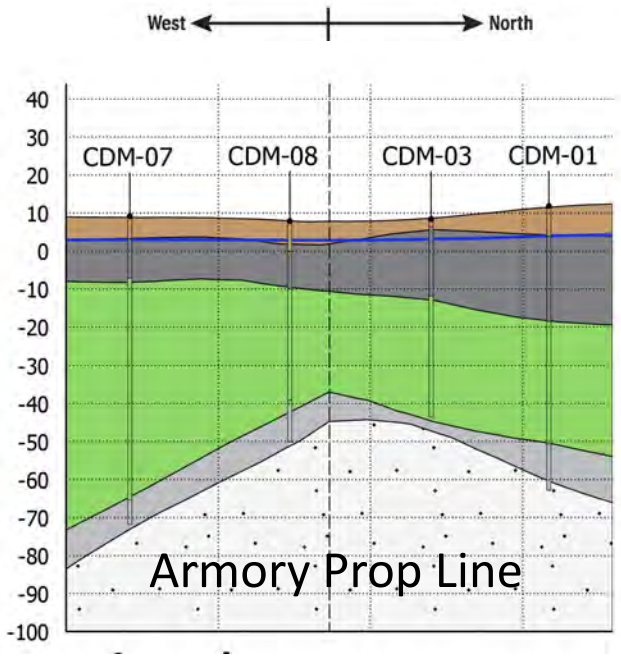
4. VIEW FROM SOUTHWEST CORNER

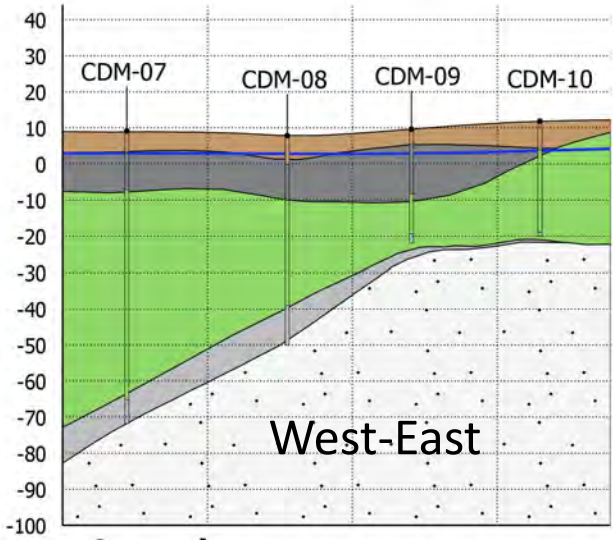
SECTION B

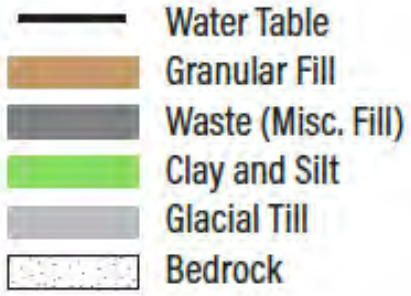
PERKINS EASTMAN

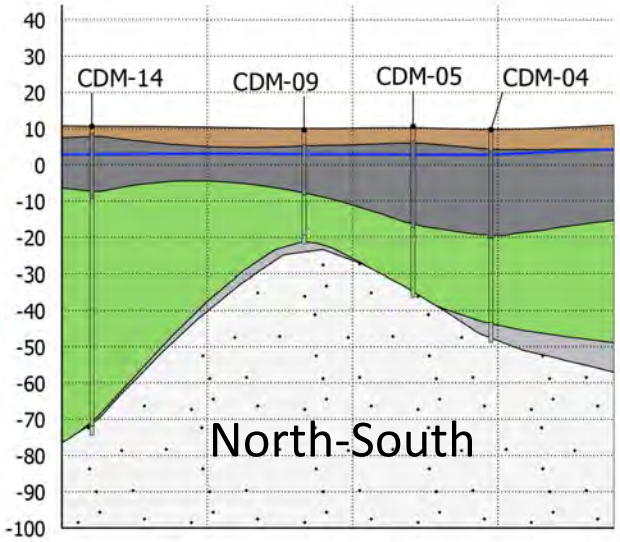
NOVEMBER.13.2019

Subsurface Conditions - Strata Cross Section









Legend

- Gas Probe Location (August 2017)
- Test Pit Location (December 2017 and February 2018)
- Geotechnical/Environmental Boring Location (Jan-Feb 2018)
- Geotechnical/Environmental Boring Location (July-August 2017)
- Groundwater Monitoring Well Couplet Installation Location (July-August 2017)
- Approximate Boundary of Former Clay Pit/Edge of Waste (updated April 2018 for Tobin School Property Only)

Tobin School
197 Vassal Lane
Cambridge, MA

0 45 90
Feet
1 " = 90 '

Environmental Site Investigation Locations 2017-2018

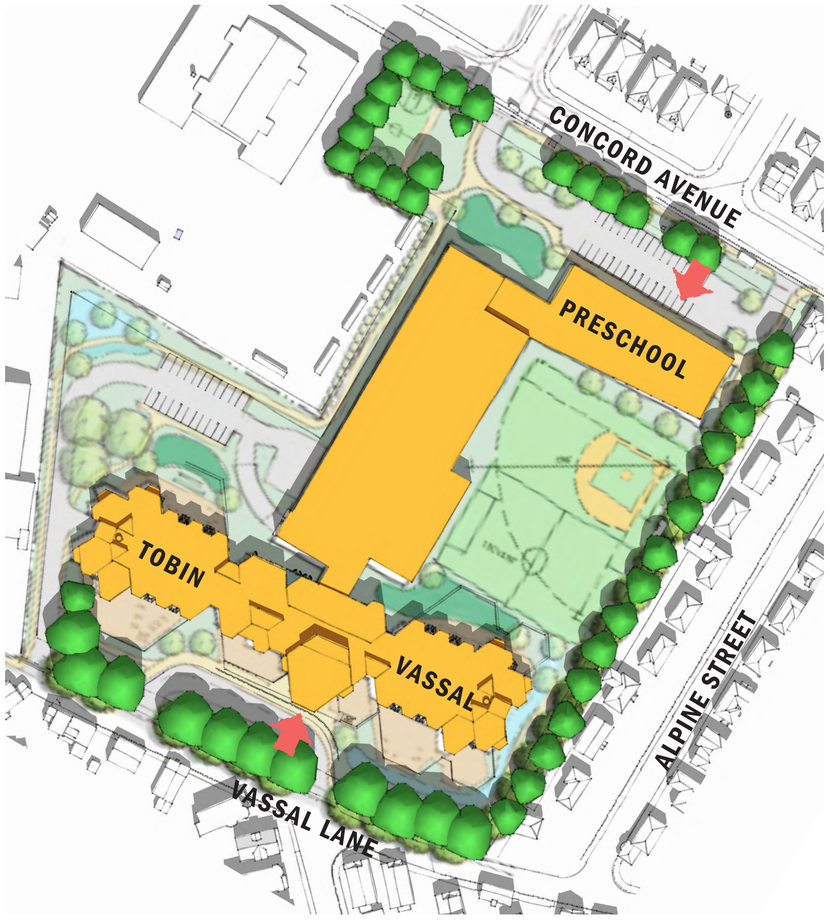
Basemap: Google Earth Pro Imagery (April 2017)
Source: Google, MassGIS, and ESRI ArcGIS Online
Coordinate Sys: NAD83 Mass. State Plane Mainland (feet)

CDM Smith

F:\Projects\Project_data\Cambridge\TobinSchool\MXD\TobinSchool_EnvSiteInvestigationLocations.mxd BillingsMC February-2019

OPTIONS

OTHER IDEAS & CONCERNS



RENOVATION / ADDITION

TOTAL BUILDING AREA (GROSS SQ. FT.) = 316,900
BUILDING FOOTPRINT (SQ. FT.) = 116,700
VEHICULAR CIRCULATION (SQ. FT.)= 46,600
OPEN SPACE (ACRES)= 5.4

WINGS

TOTAL BUILDING AREA (GROSS SQ. FT.) = 278,000
BUILDING FOOTPRINT (SQ. FT.) = 106,500
VEHICULAR CIRCULATION (SQ. FT.)= 58,400
OPEN SPACE (ACRES)= 5.4

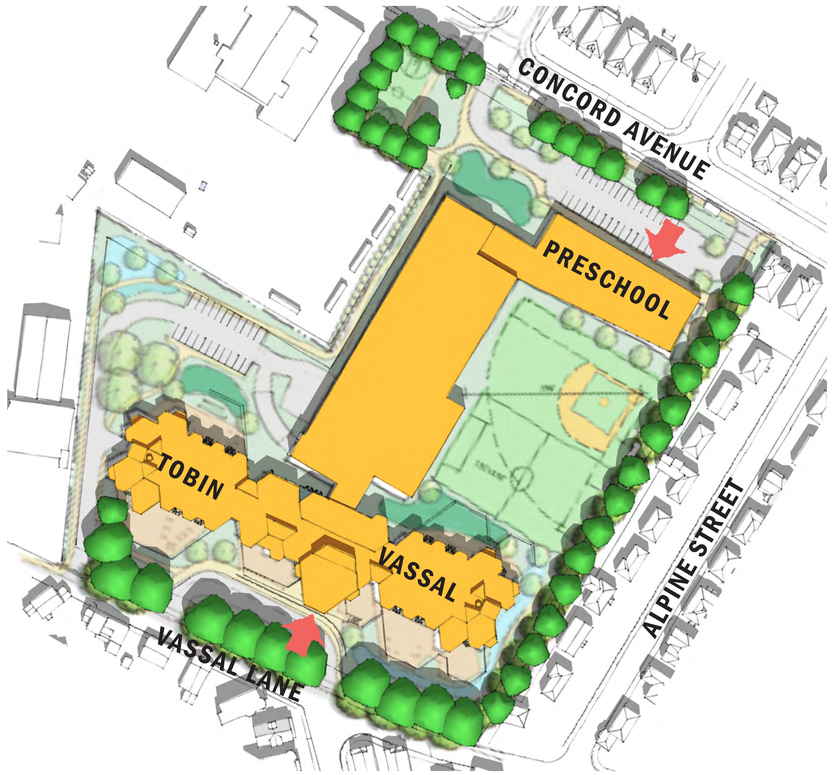
PAVILIONS

TOTAL BUILDING AREA (GROSS SQ. FT.) = 297,400
BUILDING FOOTPRINT (SQ. FT.) = 108,800
VEHICULAR CIRCULATION (SQ. FT.)= 62,600
OPEN SPACE (ACRES)= 5.2

STRUCTURED PLAY

LEARNING GARDEN

SPORTS



RENOVATION / ADDITION OPTION

WINGS OPTION

PAVILIONS OPTION

NORTH

MAIN ENTRANCE

BIOSWALES

PEDESTRIAN PAVING

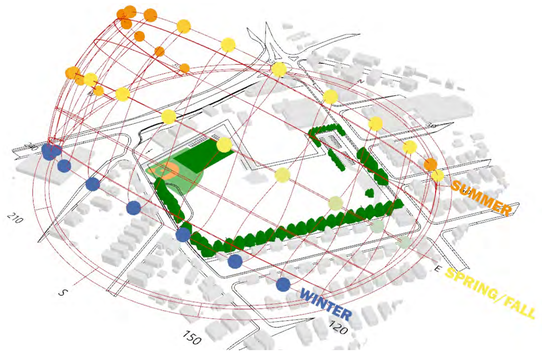
COURTYARDS

PARKS, PLAYGROUNDS, AND LANDSCAPING
TOBIN MONTESSORI VASSAL LANE SCHOOL

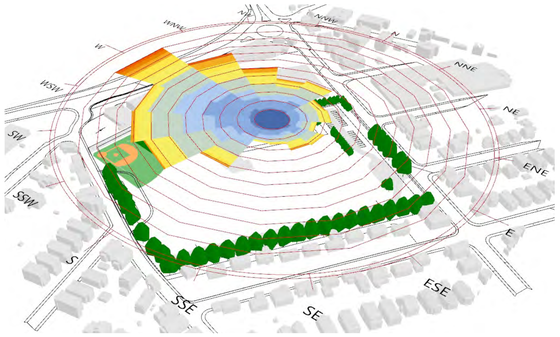
PERKINS EASTMAN

NOVEMBER.13.2019

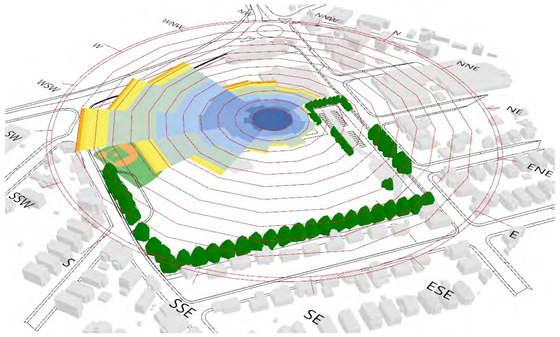
WEATHER ANALYSIS



SOLAR PATHS

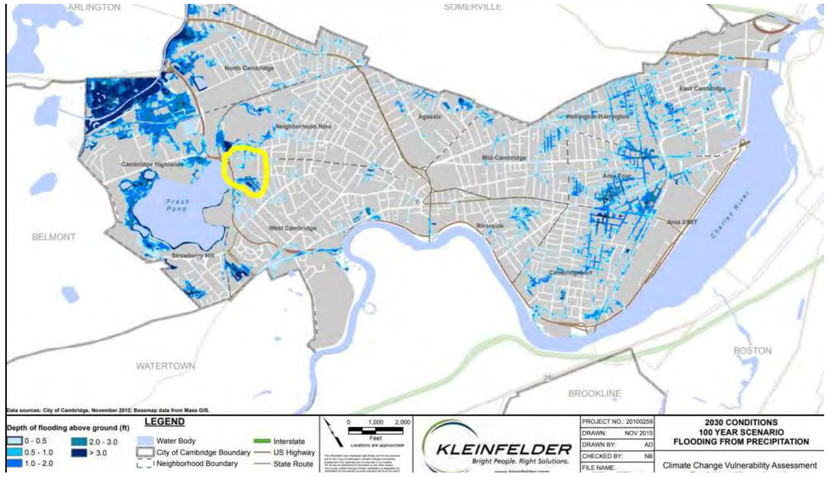


WIND ANALYSIS IN COLD WEATHER



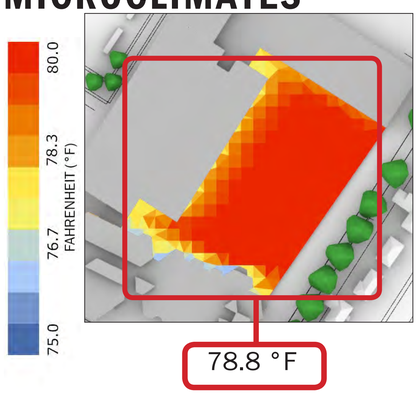
WIND ANALYSIS IN HOT WEATHER

CLIMATE CHANGE VULNERABILITY ASSESSMENT

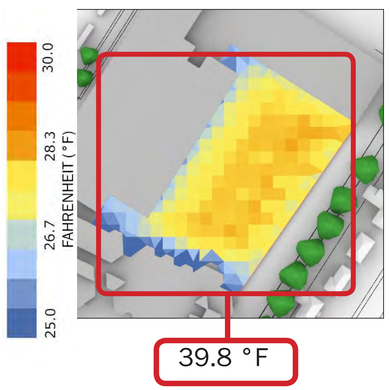


CLIMATE CHANGE VULNERABILITY ASSESSMENT FOR 100-YEAR 2030 CONDITIONS

MICROCLIMATES

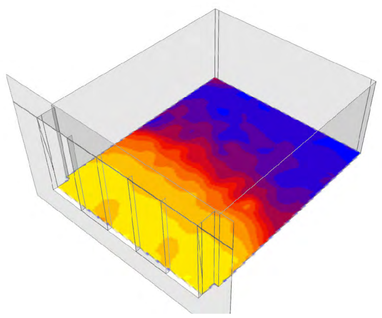


THERMAL SENSATION IN THE SUMMER

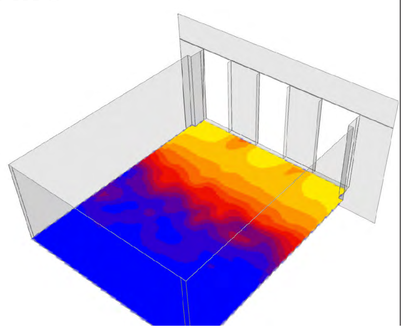


THERMAL SENSATION IN THE WINTER

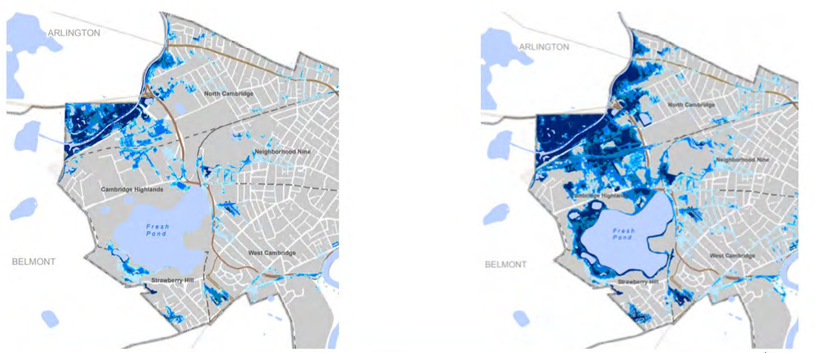
DAYLIGHT IN CLASSROOMS



DAYLIGHT LEVELS IN SOUTH FACING CLASSROOMS

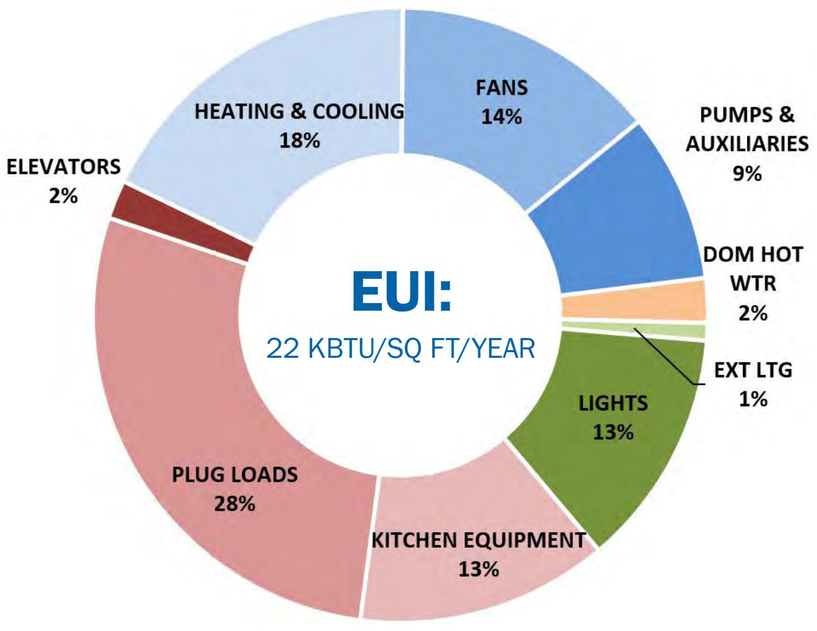


DAYLIGHT LEVELS IN NORTH FACING CLASSROOMS

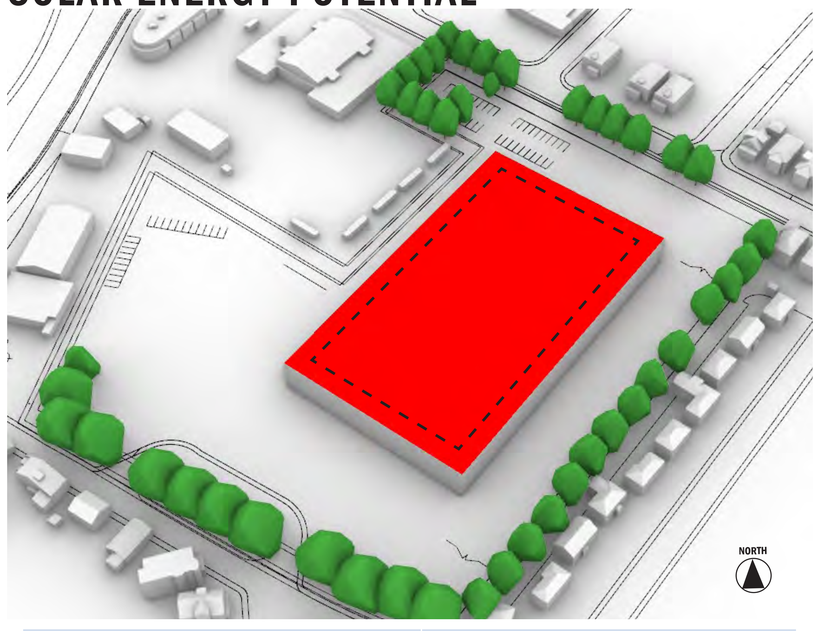


CLIMATE CHANGE VULNERABILITY ASSESSMENT FROM 100-YEAR 2030 CONDITIONS TO 100-YEAR 2070 CONDITIONS

ENERGY USE INTENSITY

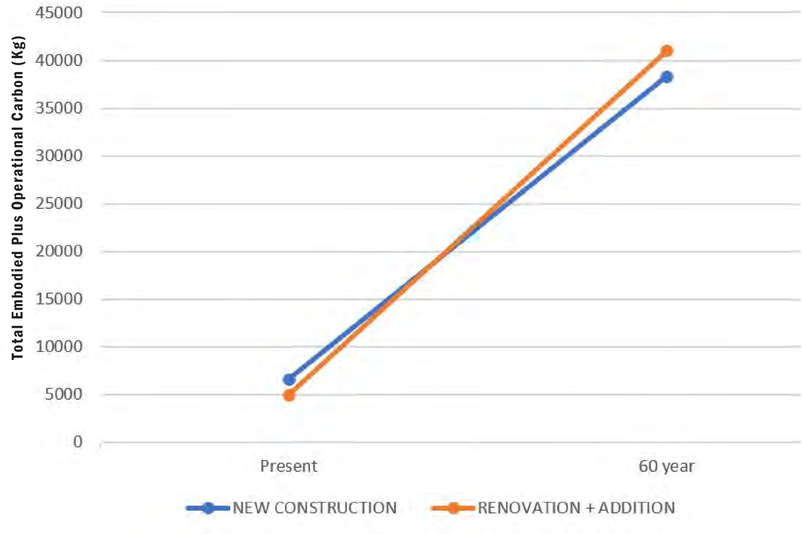


SOLAR ENERGY POTENTIAL



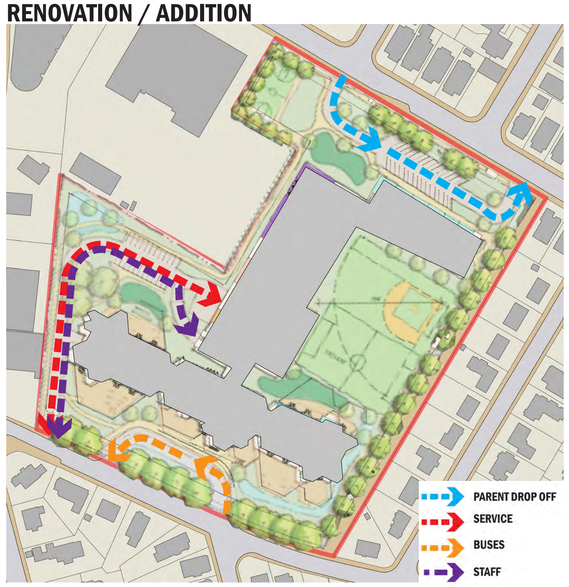
PANEL AREA FOR NET-ZERO ENERGY	90,000 SQFT
AVERAGE ROOF AREA	110,000 SQFT
ENERGY GENERATION	2,900,000 kWh/YEAR
TOTAL PV CAPACITY	1,300 kW

CARBON ANALYSIS

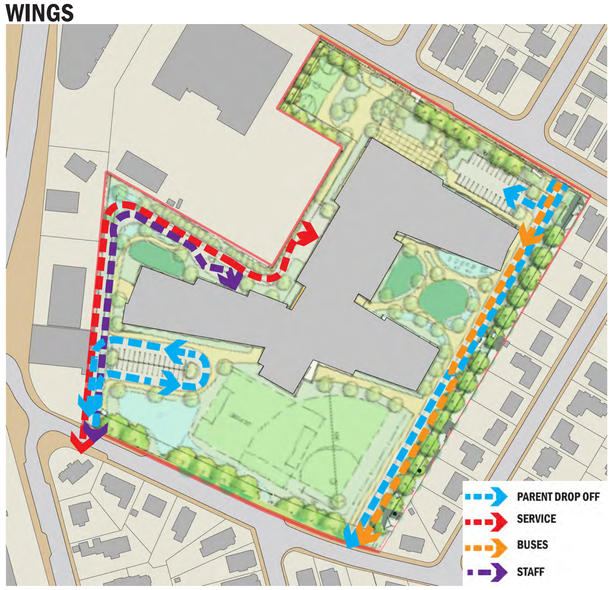


TRAFFIC FLOW

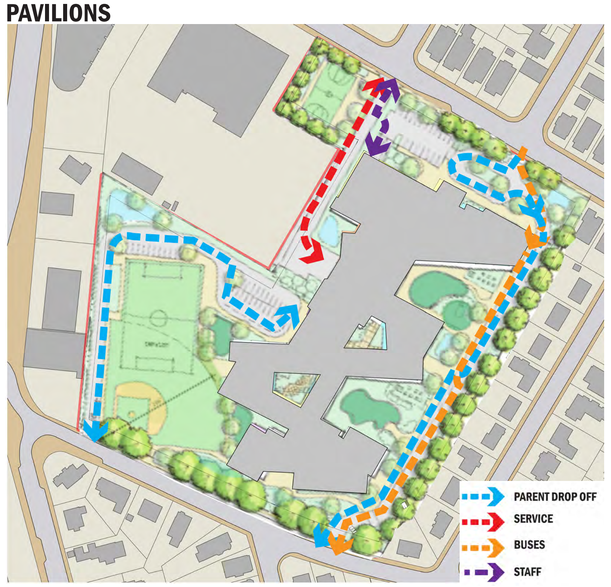
RENOVATION / ADDITION



WINGS



PAVILIONS

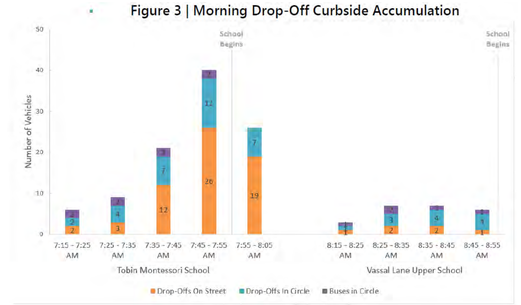


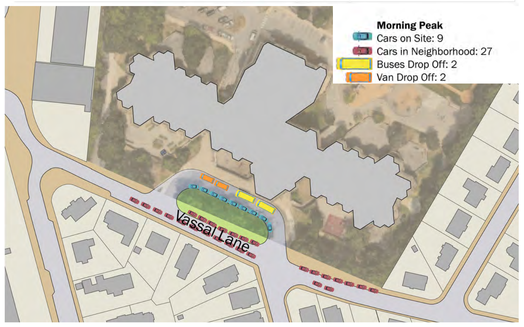
	Infrastructure Type	Existing Condition	Incremental Change	Proposed Condition
Morning Peak Period	Parent Drop-Off/Pick-Up	Up to 12 vehicles	11 Additional Spaces	Up to 23 vehicles
	Parent Drop-Off/Pick-Up (Short-Term Parking)	Up to 24 vehicles	15 Additional Spaces	Up to 39 vehicles
	School Bus Staging	Up to 2 Buses	No Expected Increases	Up to 2 Buses
	Van Staging	Up to 2 Vans	No Expected Increases	Up to 2 Vans
Afternoon Peak Period	Parent Drop-Off/Pick-Up	Up to 20 vehicles	6 Additional Spaces	Up to 26 vehicles
	Parent Drop-Off/Pick-Up (Short-Term Parking)	Up to 20 vehicles	6 Additional Spaces	Up to 26 vehicles
	School Bus Staging	Up to 6 Buses	No Expected Increases	Up to 6 Buses
	Van Staging	Up to 3 Vans	No Expected Increases	Up to 3 Vans
Pedestrian Amenities		Pedestrians dispersed throughout and from the neighborhood during arrival/dismissal times	No Change	Suggest maintaining similar pedestrian circulation and accommodating pedestrians in a safe environment separate from vehicular activity
Staff Parking		Approximately 80 Vehicles Parked	20 Additional Vehicles Parked	100 Parking Spaces to Serve Staff

PEAK MORNING DROP-OFF

EXISTING

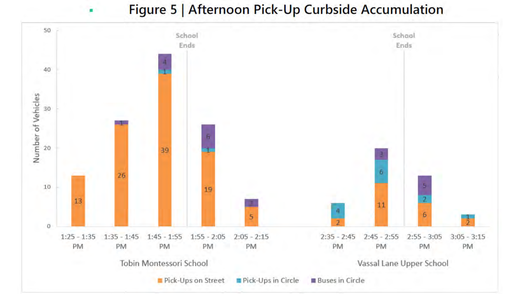
Figure 3 | Morning Drop-Off Curbside Accumulation

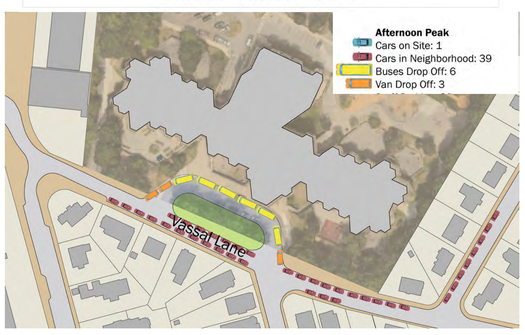




PEAK AFTERNOON PICK-UP

Figure 5 | Afternoon Pick-Up Curbside Accumulation





TRAFFIC AND PARKING

TOBIN MONTESSORI VASSAL LANE SCHOOL

PERKINS EASTMAN

NOVEMBER 13, 2019