

Lexington High School

School Building Committee Meeting

04/14/2025



smma dw **Turner**
DORE + WHITTIER

- 1 Call to Order
- 2 Vote on Previous Meeting Minutes 12:00 – 12:05
- 3 Public Comment 12:05 – 12:10
- 4 Introduce Off-Site Improvements 12:10 – 12:20
- 5 Discuss Lighted Fields & Field Materials 12:20 – 12:30
- 6 Discuss Exterior Design & Building Entrances 12:30 – 1:10
- 7 Confirm Space Layouts, Circulation & Future Expansion 1:10 – 1:40
- 8 Confirm Spaces to be Air Conditioned 1:40 - 1:50
- 9 Reflections & Action Items 1:50 – 2:00
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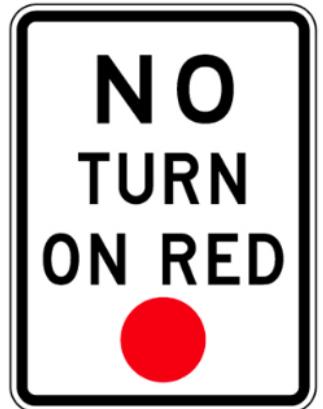
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Off-Site Improvements



Off-Site Improvements

- Traffic Impact Report (draft) is anticipated by 4/18, which will include recommendations
- Off-Site Improvements will include safety recommendations and may include opportunities to improve roadway and intersection operation (Level of Service, LOS)
 - Signage
 - Traffic Calming
 - Sight Distance
 - Shared-Use Paths



Signage



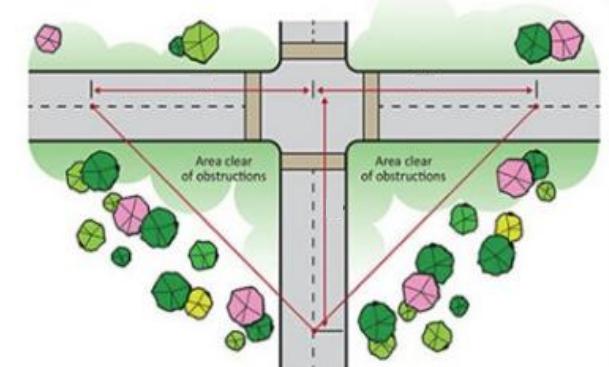
Speed Feedback Sign



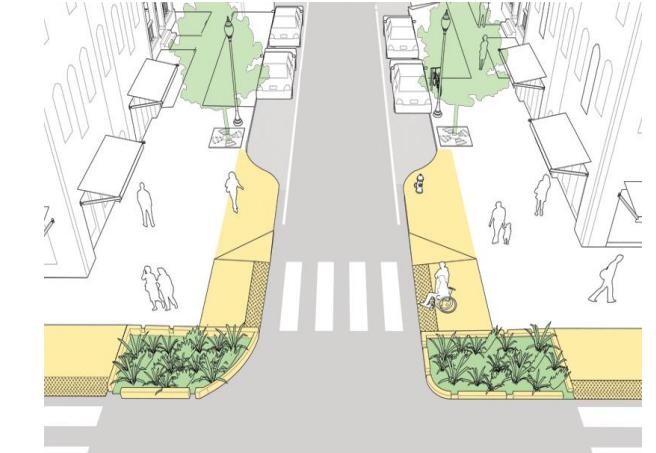
High-Intensity Activated Crosswalk (HAWK)



Rapid Rectangular Flashing Beacon (RRFB)



Sight Distance at Intersections

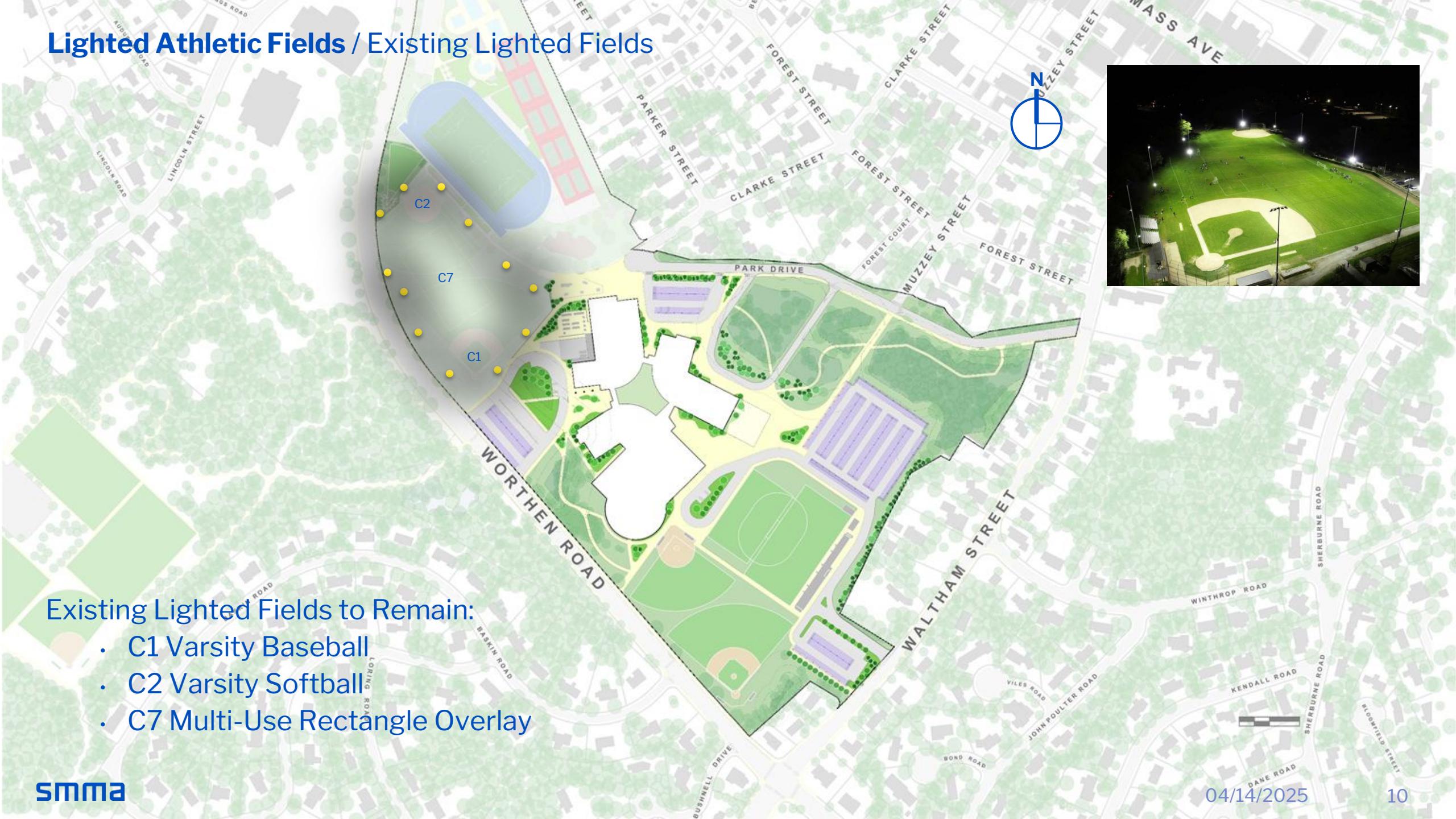


Curb Bump-Outs

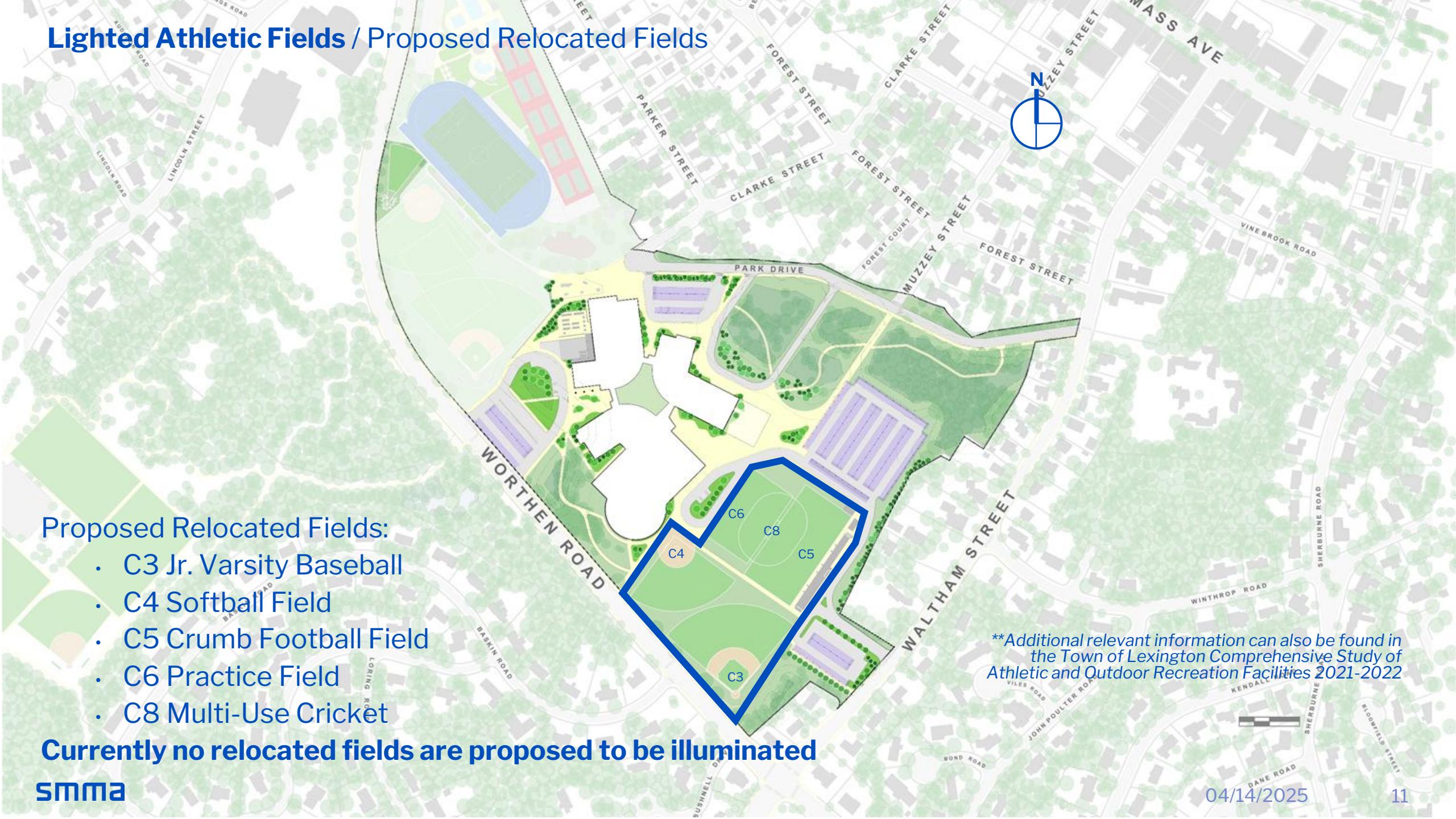
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Lighted Athletic Fields / Existing Lighted Fields



Lighted Athletic Fields / Proposed Relocated Fields



Athletic Field Surfacing

Natural Turf (Seed or Sod)

Pros

- Natural Aesthetics
- Cooler Surface
- Environmental Benefits
 - Carbon sequestration, reduce excess stormwater runoff
- Cost Effective to Install
- **Sod Requires a Minimum of 2-3 Weeks for Root Establishment Prior To Use**

Cons

- High Maintenance
- Water Usage
- Durability Issues
 - Overuse and excessive traffic lead to compaction and bare spots; saturated soils/standing water limit playability
- Inconsistent Surface
- Pesticide and Fertilizer Use
- **Seed Requires 2 Full Growing Seasons Before Use**



Note: Sod was priced at PSR, and the intent is to proceed with sod upon confirmation by the SBC on 5/12.

Synthetic Turf

Pros

- Low Maintenance
- Durability
- Consistent Appearance
- Long-Term Cost Effectiveness
- **Able to Use Field Immediately**

Cons

- High Initial Cost
- Heat Retention
- Several Environmental Impacts

**Additional relevant information can also be found in the Town of Lexington Comprehensive Study of Athletic and Outdoor Recreation Facilities 2021-2022

Athletic Field Surfacing

Comparative Cost Analysis - Installation

Seed

- Seed: \$0.50 – \$0.75/sf
- Topsoil: \$85.00/cy
- Amendment & Place: \$25.00/cy
- Crushed Stone Base: \$55.00/cy
- Geotextile Fabric: \$0.75/sf
- Irrigation: \$1.50/sf

Sod

- Sod: \$2.50 - \$3.00/sf
- Topsoil: \$85.00/cy
- Amend & Place: \$25.00/cy
- Crushed Stone Base: \$55.00/cy
- Geotextile Fabric: \$0.75/sf
- Irrigation: \$1.50/sf

Synthetic

- Synthetic: \$6.00 - \$6.50/sf
- Field Top Stone: \$48.00/tn
- Field Base Stone: \$40.00/tn
- Geotextile Fabric: \$0.75/sf
- Turf Anchor: \$80.00/lf
- Water Cannon

Comparative Cost Analysis - Maintenance

Seed

- Weekly Mowing
- Aeration (3X/yr)
- Fertilizer
- Soil Amendments/Topdressing
- Overseeding
- Irrigation shut down/start up
- Game Field Prep
- Water

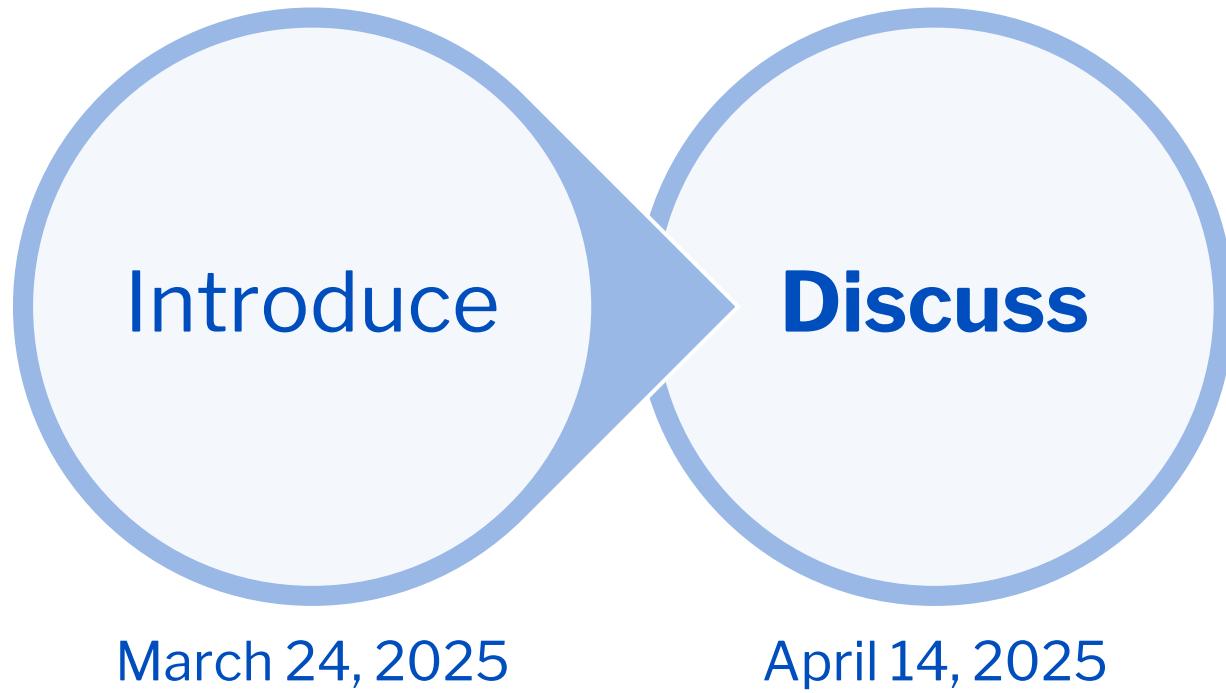
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- Fertilizer
- Soil Amendments/Topdressing
- Overseeding
- Irrigation shut down/start up
- Game Field Prep
- Water

Synthetic

- Top Dressing/Infill
- Brushing/Sweeping
- Water Cooling
- Typical Lifespan of 8-10 yrs.

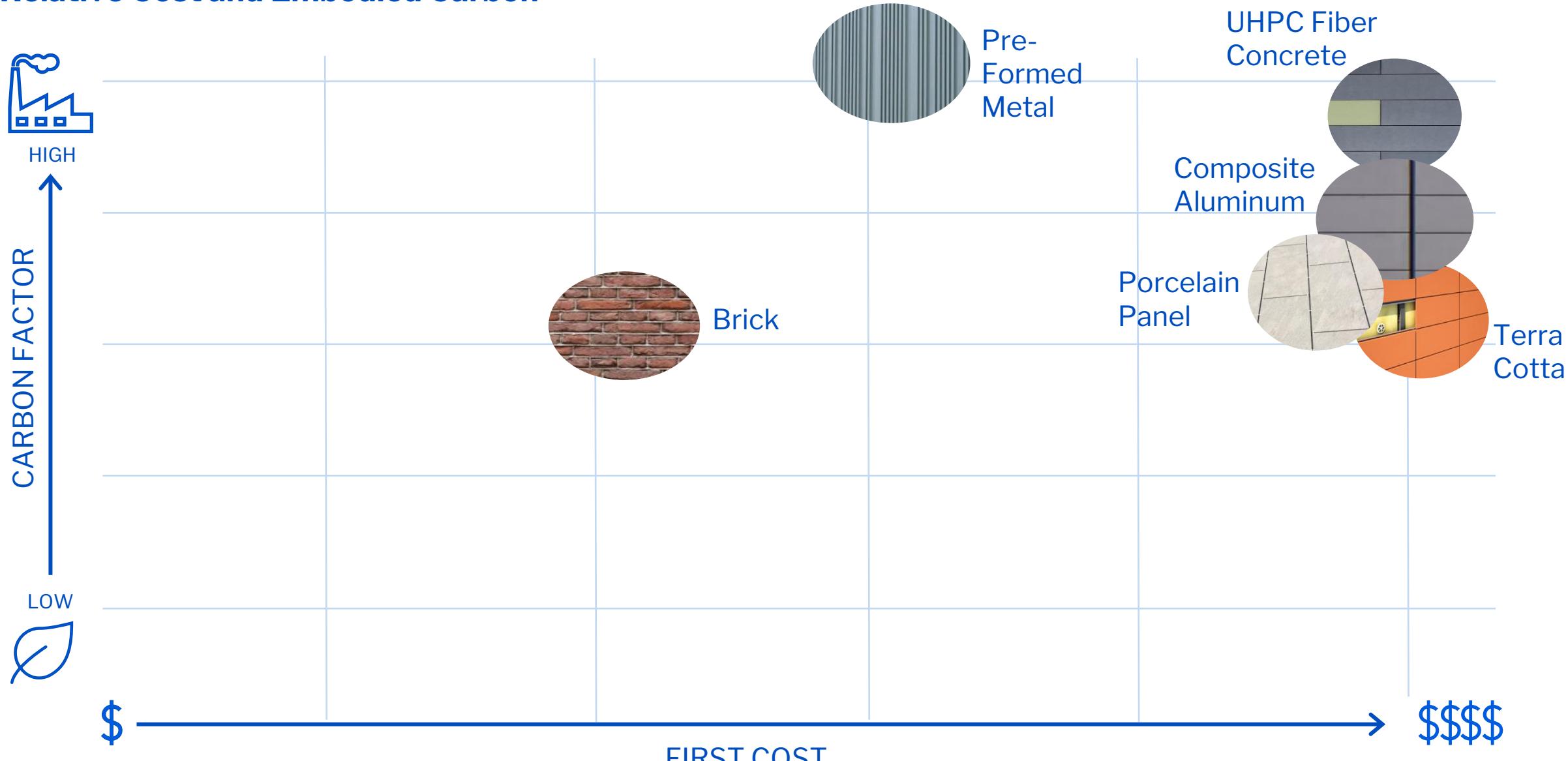
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Potential Materials & Systems / Scope Assumptions – No Change from PSR Estimates

Opaque Masonry Walls (~60% of solid wall area)	Brick Masonry, Precast Accents, Stone Base	<ul style="list-style-type: none"> 75% of Wall Enclosure High Insulation Value Proportion of Masonry to Rainscreen may be increased to reduce cost
Rainscreen Accent Walls (~40% of solid wall area)	Pre-finished Metal Panel Spandrels and Fascias; Accents in Porcelain, Terra Cotta, Pre-formed Metal or Fiber Cement	
Windows (~50% of glazed area)	Triple Insulated-Glazed, Aluminum Frame	<ul style="list-style-type: none"> 25% of Wall Enclosure Utilizes Low-emissivity glass
Curtain Walls and Storefront (~50% of glazed area)	Triple Insulated-Glazed, Aluminum Frame	
Roof Edges & Canopies	Pre-finished Metal	
Soffits	Pre-finished Metal, Phenolic or DEFS (stucco)	
Roof Screens	Pre-finished Metal	
Roofing	PVC Membrane	

Relative Cost and Embodied Carbon



Potential Materials & Systems

Brick Masonry

- 60% of Opaque Walls at PSR
- Timeless and reliable
- Wide range of colors and textures available
- Inexpensive
- **Carbon Factor: 6.52
(not including steel support)**



Exterior Design – Option A



Exterior Design – Option B



Exterior Design – Option C



Building Entrances

West Entrance

- Highly visible from Worthen Road
- good civic presence
 - Connected to bus drop-off/pickup
 - Visitor and accessible parking nearby
 - Main Office / main security check-in for visitors
 - Close to Guidance and Student Support hub
 - Access to Central Office elevator/stair lobby in Wing A
 - Entrance Plaza Pedestrian Zones should be large enough for mass groupings of students
 - Plaza Design to frame entrance and develop scale transition
 - Limited Program



North Entrance

- LABBB entrance close to drop-off/pickup loop
 - Limited parking nearby
 - Smallest Entrance Plaza- potential for intimate gathering space
 - North facing – more limited planting opportunities

East Entrance

- Connected to car drop-off/pickup
 - Visitor and accessible parking nearby
 - May be used for after-hours events
 - Should it be used for primary Gym access?
 - Largest Entrance Plaza – design to frame entrance and develop scale transition
 - Program Flexibility

Field House Entrance

- Lobby connected to both Field House and Gym
 - Visitor and accessible parking nearby
 - May be used for after-hours events
 - Should it be used for primary Gym access?

Building Entrances – East (Option A)



Building Entrances – East (Option B)



Building Entrances – East (Option C)



Building Entrances – North (Option A)



Building Entrances – North (Option B)



Building Entrances – North (Option C)

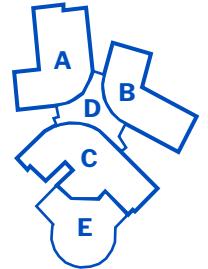


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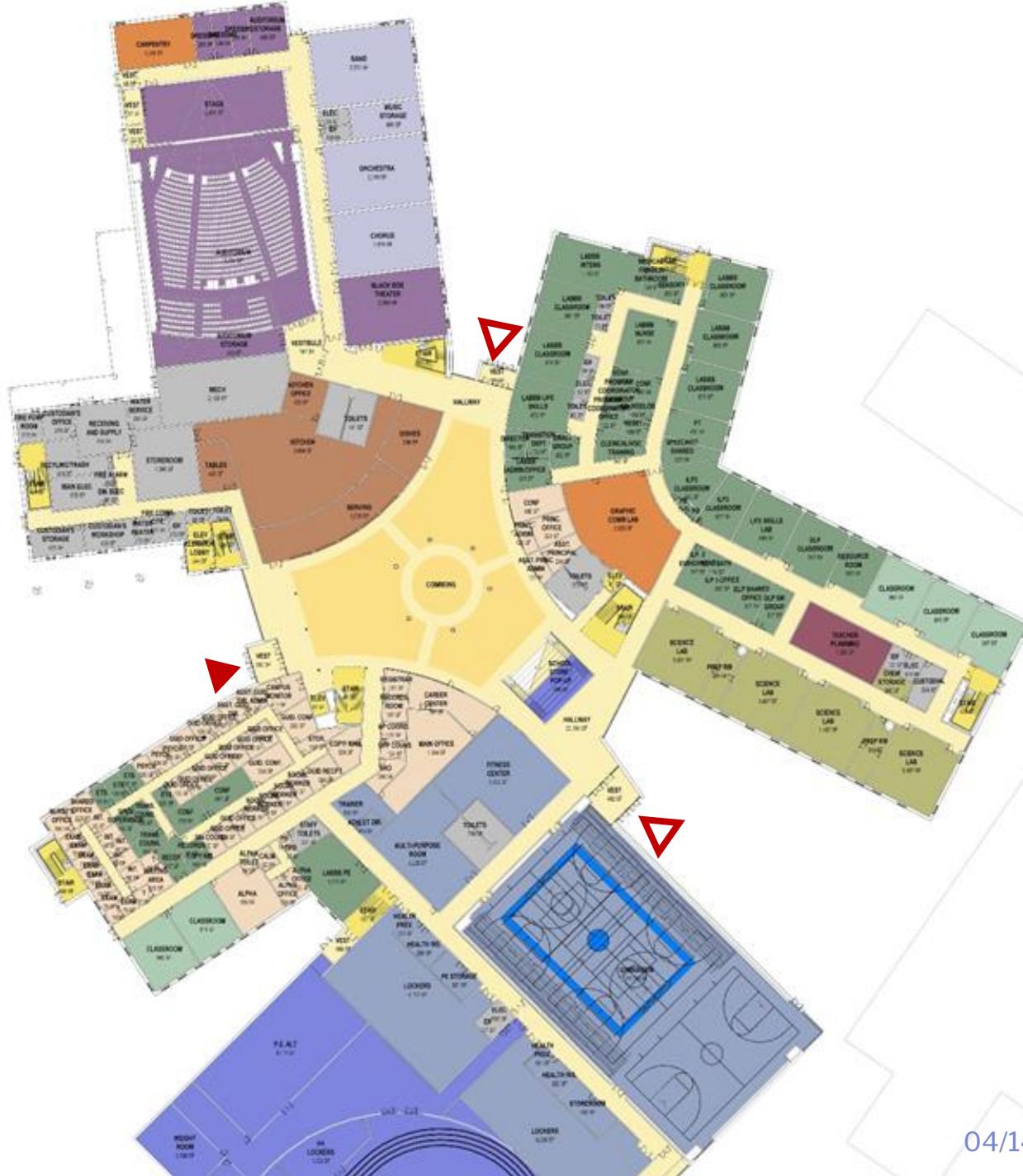


Building Floor Plans

Level 1



KEY PLAN

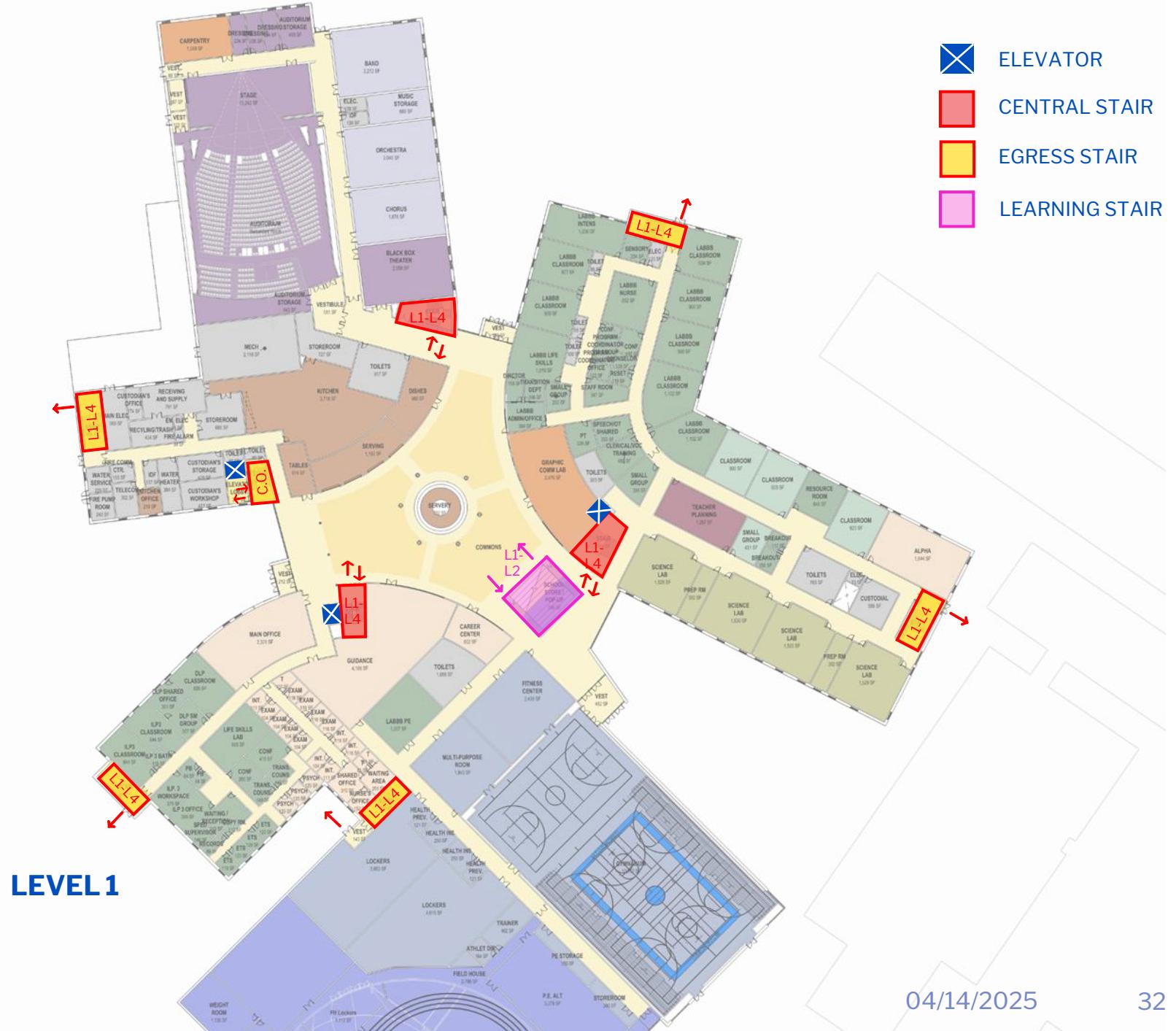


- Core Academic
- Science
- Teacher Planning & Small Group
- Admin, Guidance, ALPHA, METCO,
- Central Offices
- Auditorium / Drama
- Art & Music
- Media Center
- Vocation & Technology
- Physical Education
- Special Education
- Medical
- Restrooms, Custodial
- Kitchen
- Commons
- Circulation
- Vertical Circulation
- Rooftop Open Space
- Other
- Expansion

Building Floor Plans

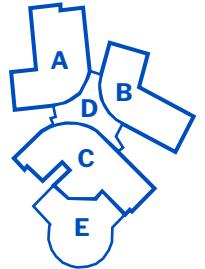
Vertical Circulation

- Open stairs and elevators adjacent to the Dining Commons are the primary vertical circulation in the central part of the school
 - The Learning Stair provides additional access between Levels 1 & 2
 - Additional communicating stairs may be considered
 - Egress stairs are located at the ends of each wing. These also act as local communicating stairs.
 - (3) Elevators shall be traction type, sized for stretcher with 5,000lb capacity @ 200fpm
 - One elevator will serve Central Office on Level 4, but also programmed to serve students with accessibility needs



Building Floor Plans

Level 2



KEY PLAN

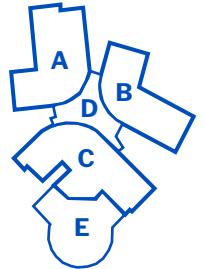
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Building Floor Plans

Level 3

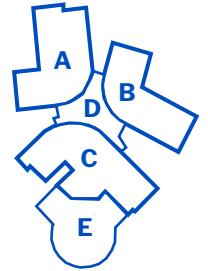
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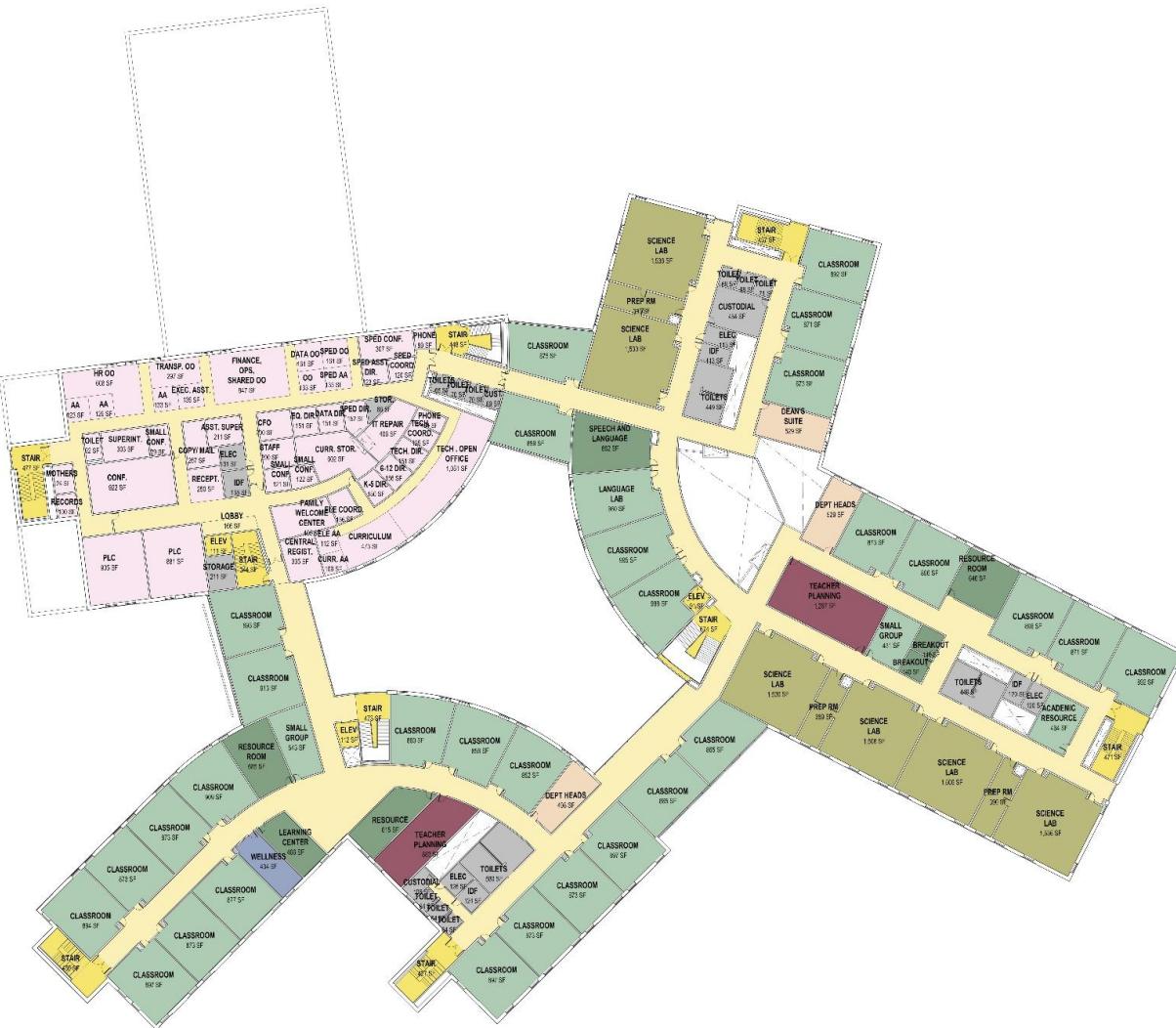
Level 4



KEY PLAN

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Central Office / Expansion



Student Enrollment Considerations

Increase #of Students per Class and Classroom Utilization Rates		
# of Students per Class	Classroom Utilization Rate	Total # of Students
23	85%	2395
24	85%	2491
25	85%	2587
25	90%	2738

Increased Class Size: This would be across the board except in rooms that have identified capacities. E.g. special education, science labs where safety is a concern; science lecture/labs. In each of these cases, additional rooms would need to be added.

Utilization: It is industry standard to program a High School at 85%. One cannot simply translate an increased utilization rate to an increased number of students. Utilization is the percentage of time a room is used. The higher the rate, the more reduced opportunity for students to be accepted into the desired classes. The higher the rate the more difficult it is for Administration to schedule the spaces.

Student Enrollment Considerations

Plus Expansion into Central Office Space		
# of Students per Class	Classroom Utilization Rate	Total # of Students
23	85%	299

Central Office Retrofit: At this level of analysis this space has been calculated as general education classrooms only, although some of that space may need to be SPED or Admin space.

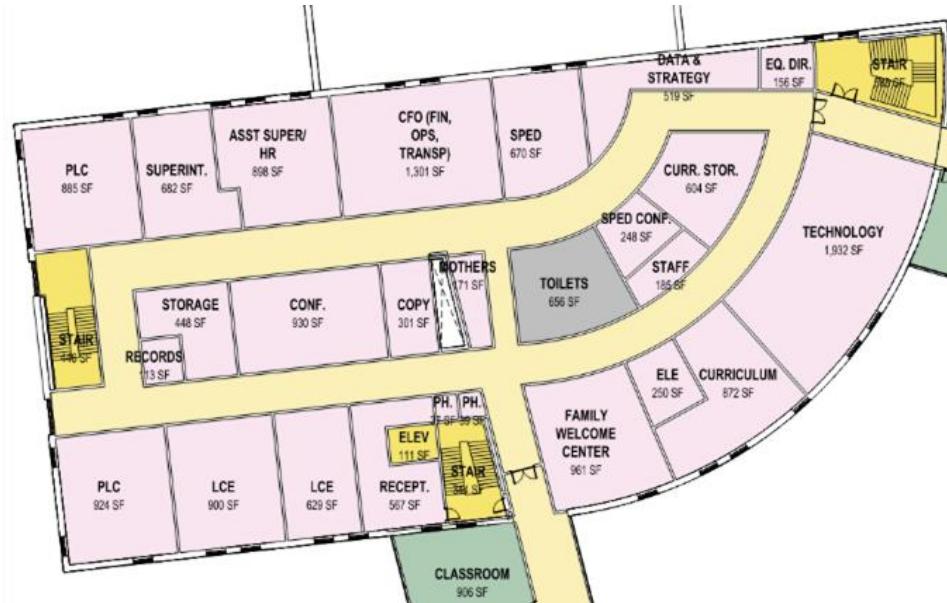
Plus Additional Expansion		
# of Students per Class	Classroom Utilization Rate	Total # of Students
23	85%	Option 1: 552
23	85%	Option 2: 460

Expansion Space: At this level of analysis this space has been calculated as general education classrooms only, although some of that space will most likely need to include SPED classrooms, Additional Dining and Media Center capacity and Admin space. Field House addition may allow future flexibility for Health/PE program overcrowding.

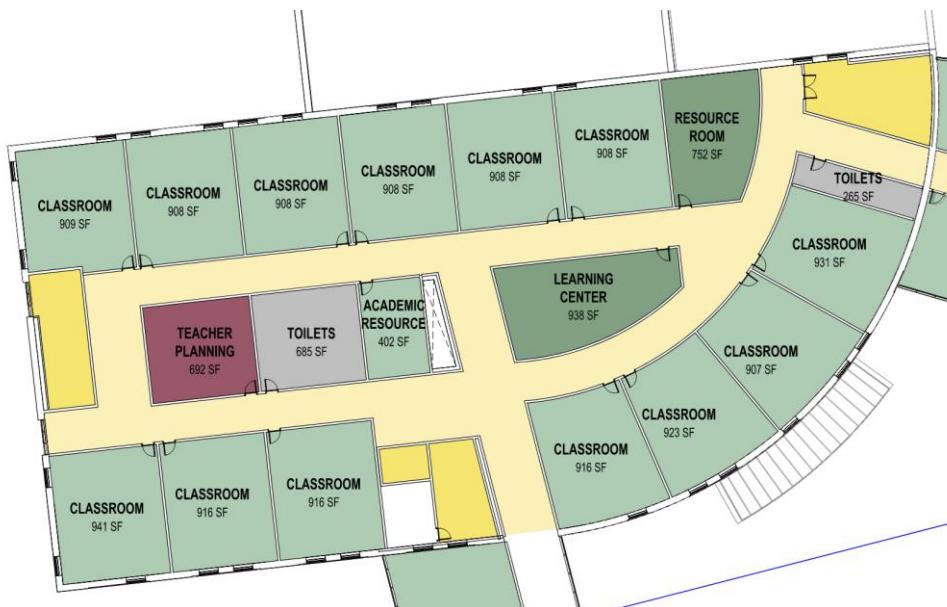
Student Enrollment Considerations – Prior to 4/10/2025

Level 4 Central Office Expansion Space

- Office spaces are being planned within classroom bay dimensions for ease of future conversion to educational space
- Additional Capacity based on Gen Ed classroom layout: **299 students**
(conversion to science classrooms or other lab space may reduce total)



Schematic Design with Central Office



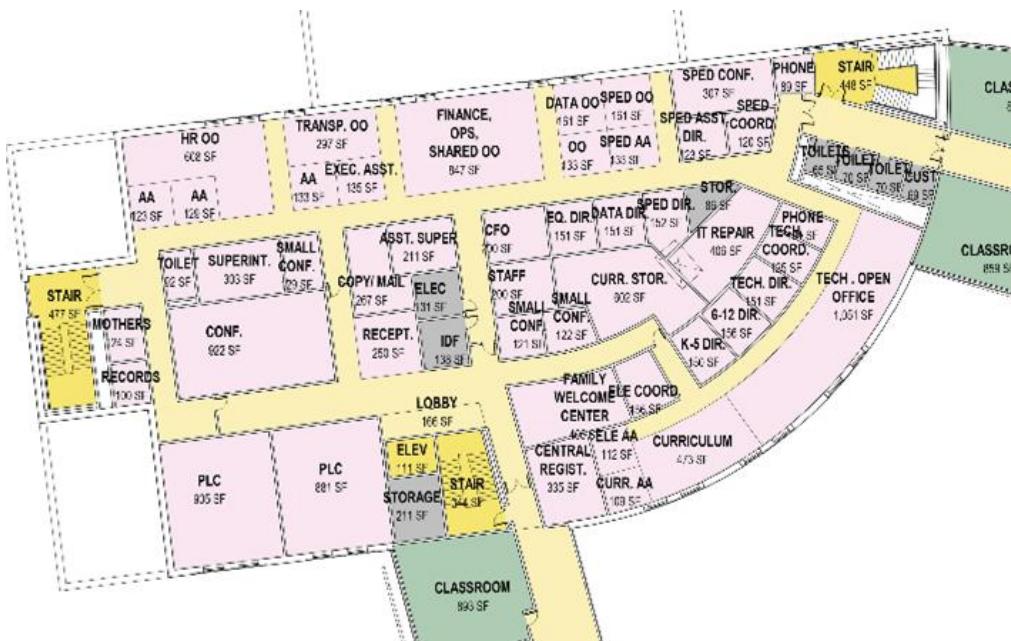
Future Classroom Wing Conversion

Student Enrollment Considerations - Current

Level 4 Central Office Expansion Space

- Office spaces are being planned within classroom bay dimensions for ease of future conversion to educational space
 - Additional Capacity based on Gen Ed classroom layout: **253 students**
 - **Two additional classrooms (46 students) are possible with exterior enclosure additions as part of future renovation**

(conversion to science classrooms or other lab space may reduce total)



Schematic Design with optimized Central Office

Updated
4/10



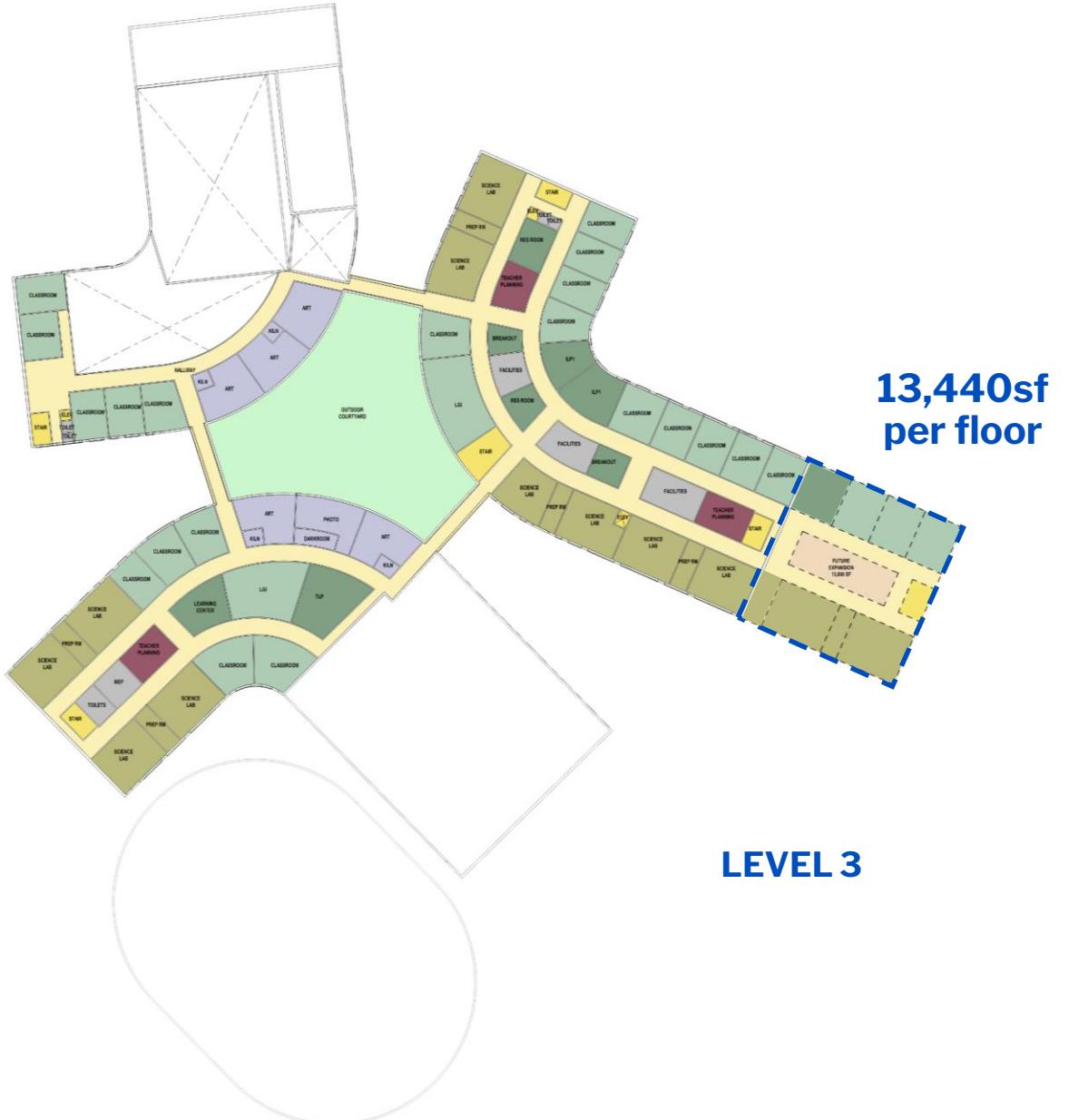
Future Classroom Wing Conversion

**Updated
4/10**

Student Enrollment Considerations

Option 1 – 53,760 GSF

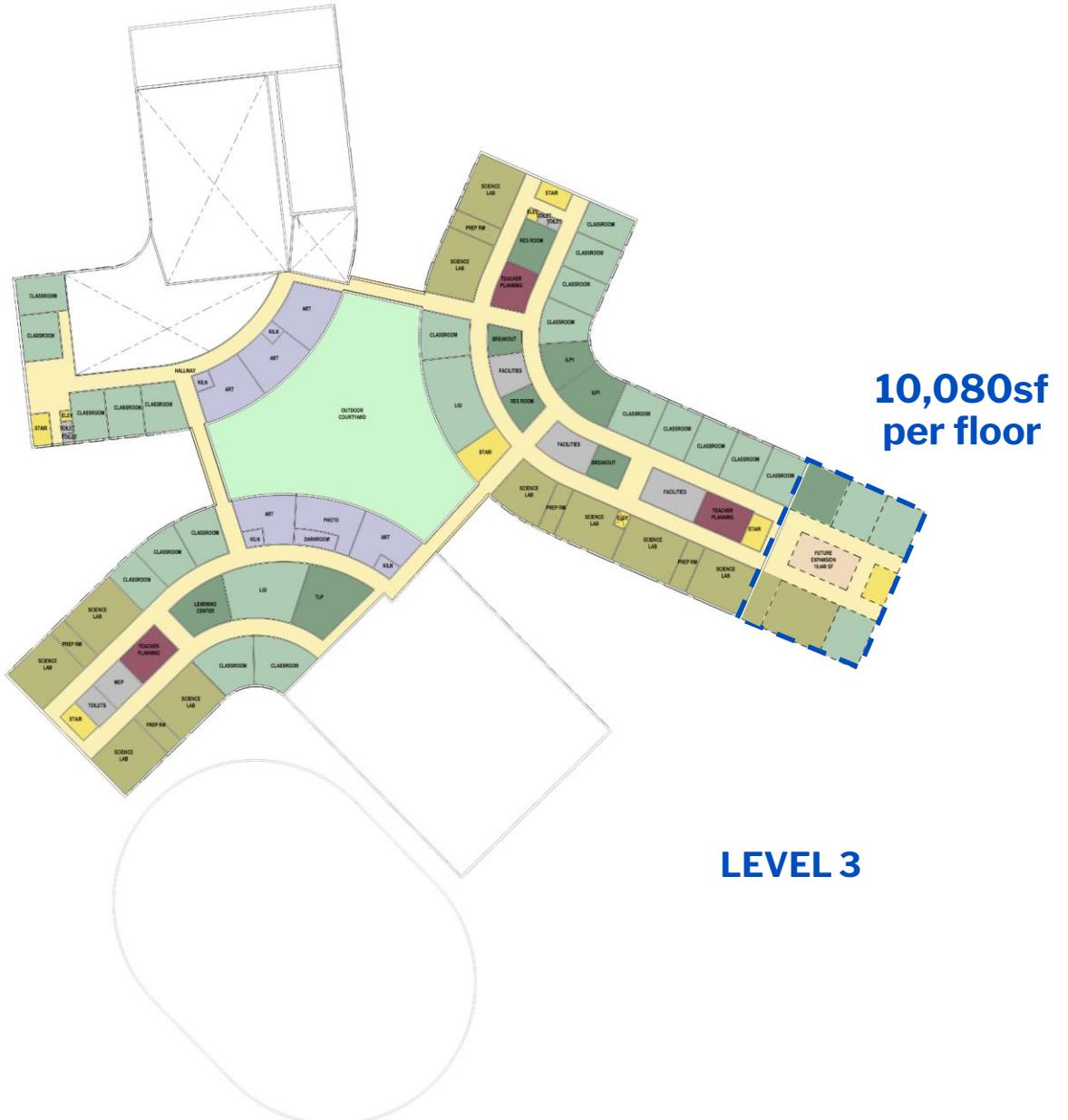
- Adds (4) full Gen Ed Classroom bays floors 1-4: Total 16
- Adds (2) Science Labs and (1) Prep Room floors 1-4: Total 8/4
- Adds an egress stair at end of wing
- Allows space for exit from internal egress stair
- Includes internal zone for support space, toilets
- Additional Capacity: **552 students**
- Total Capacity at 85% Utilization: **3,200 students (enrollment + CO + Larger Addition)**



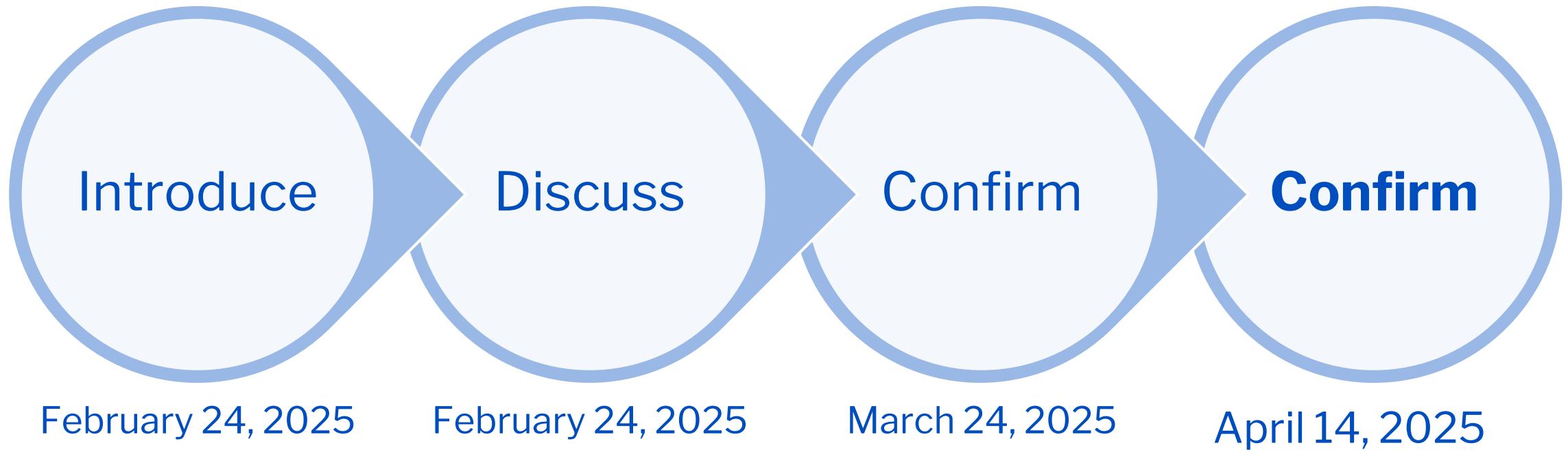
Student Enrollment Considerations

Option 2 – 40,320 GSF

- Adds (4) full Gen Ed Classroom bays floors 1-4: Total: 16
 - Adds (1) Science Lab and (1) Prep Room floors 1-4: Total: 4/4
 - Adds an egress stair at end of wing
 - Allows space for exit from internal egress stair
 - Includes internal zone for support space, toilets
-
- Additional Capacity: **460 students**
 - Total Capacity at 85% Utilization: **3,108 students (enrollment + CO + Smaller Addition)**



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Spaces to be Air Conditioned

CONFIRM



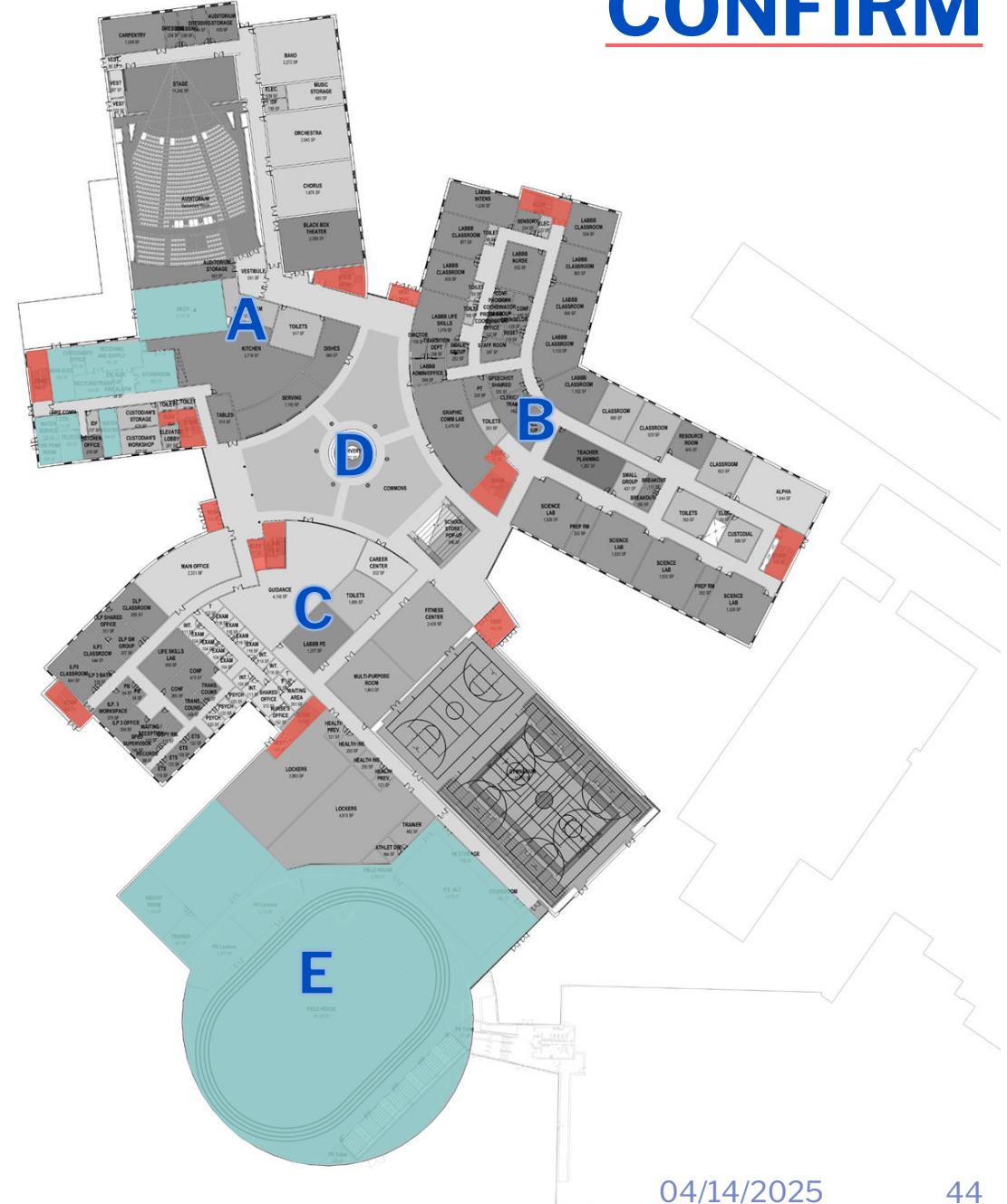
Not Air Conditioned



May Be Air Conditioned

SBC confirmed no AC in stair wells on 3/24

SBC to confirm AC in Field House today



Field House Air Conditioning

Partial Air Conditioning

Condition the minimum airflow required for heating and ventilation

Temperature control: 78-83°F in summer

Energy Impact: less than 1% reduction of overall building energy use

Cost Value: \$2.7 Million

Full Air Conditioning

Fully air condition the field house

Temperature control: 75°F in summer

Energy Impact: included in energy model

Cost Value: \$4.0 Million

***Currently included in PSR cost estimate

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Cost Estimating Timeline

6/4 - SMMA issues Drawings, specs and Cost Assumption memo to AMF & Turner

6/5 - 7/3 - AMF & Turner develop estimates

7/3 - AMF & Turner issue Cost Estimates including VE matrix with costs

7/8 - Reconciliation meeting

7/15 - AMF & Turner issue reconciled estimates for review

7/16 – Distribute reconciled cost estimate to the SBC & PBC

Round 1 Estimates & VE List Review

- **7/17** - PBC
- **7/21** – SBC

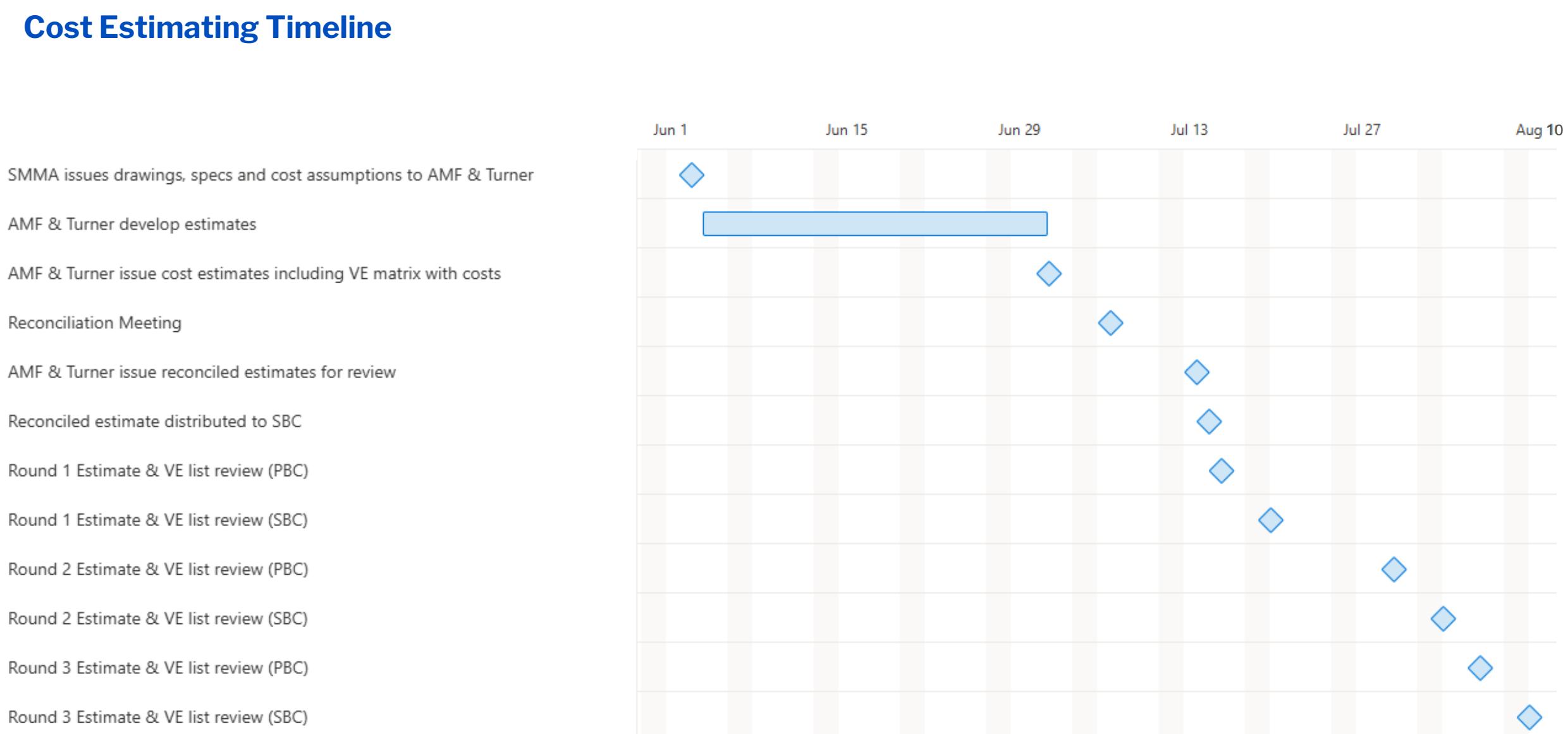
Round 2 Estimates & VE List Review

- **7/31** - PBC
- **8/4** – SBC

Round 3 Estimates & VE List Review (if necessary)

- **8/7** - PBC
- **8/11** – SBC

Cost Estimating Timeline



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