



Greenwich High School

Remedial Planning Update

January 27, 2021

Agenda

- Introductions
- Phase I Remediation Status
- Phase II Remedial Plan Overview
- Remedial implementation schedule considerations
- Questions and answers and opportunity for public comment

Town and Agency Representatives

- Toni Jones, Superintendent, Greenwich Public Schools
- Amy Siebert, Town of Greenwich Department of Public Works
- Patrick Haskell, Licensed Environmental Professional, AECOM

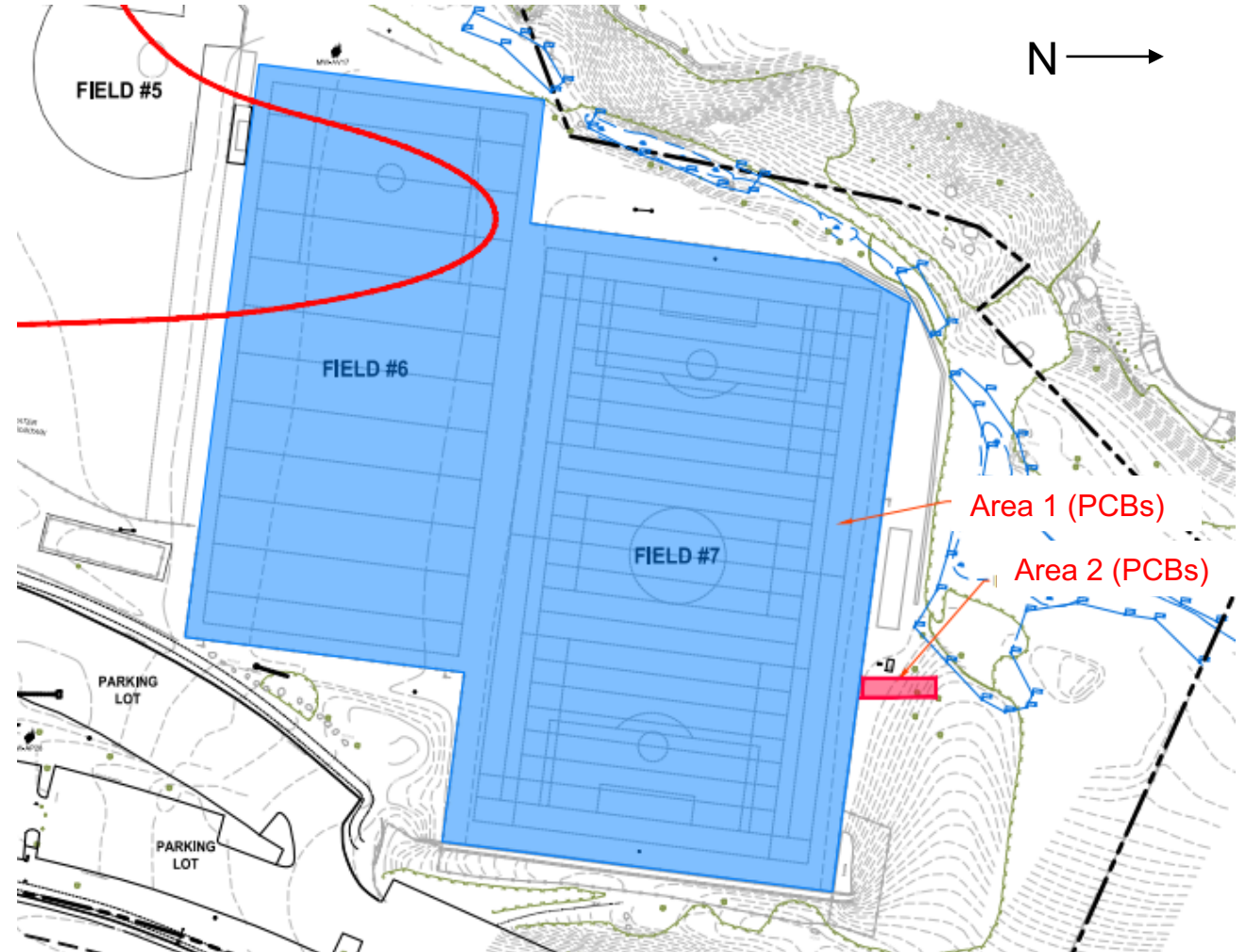
- Kimberly Tisa, PCB Coordinator, USEPA Region 1
- Jeffrey Wilcox, Remediation Project Manager, CT DEEP
- Peter Hill, Remediation Division Supervisor, SW Region, CT DEEP
- Ray Frigon, Assistant Director, Remediation Division, CT DEEP

- Gary Trombly, Storage Tank and PCB Enforcement, CT DEEP
- Amber Trahan, PCB Program, CT DEEP
- Jane Warren, Outside Legal Counsel for Town of Greenwich, McCarter & English

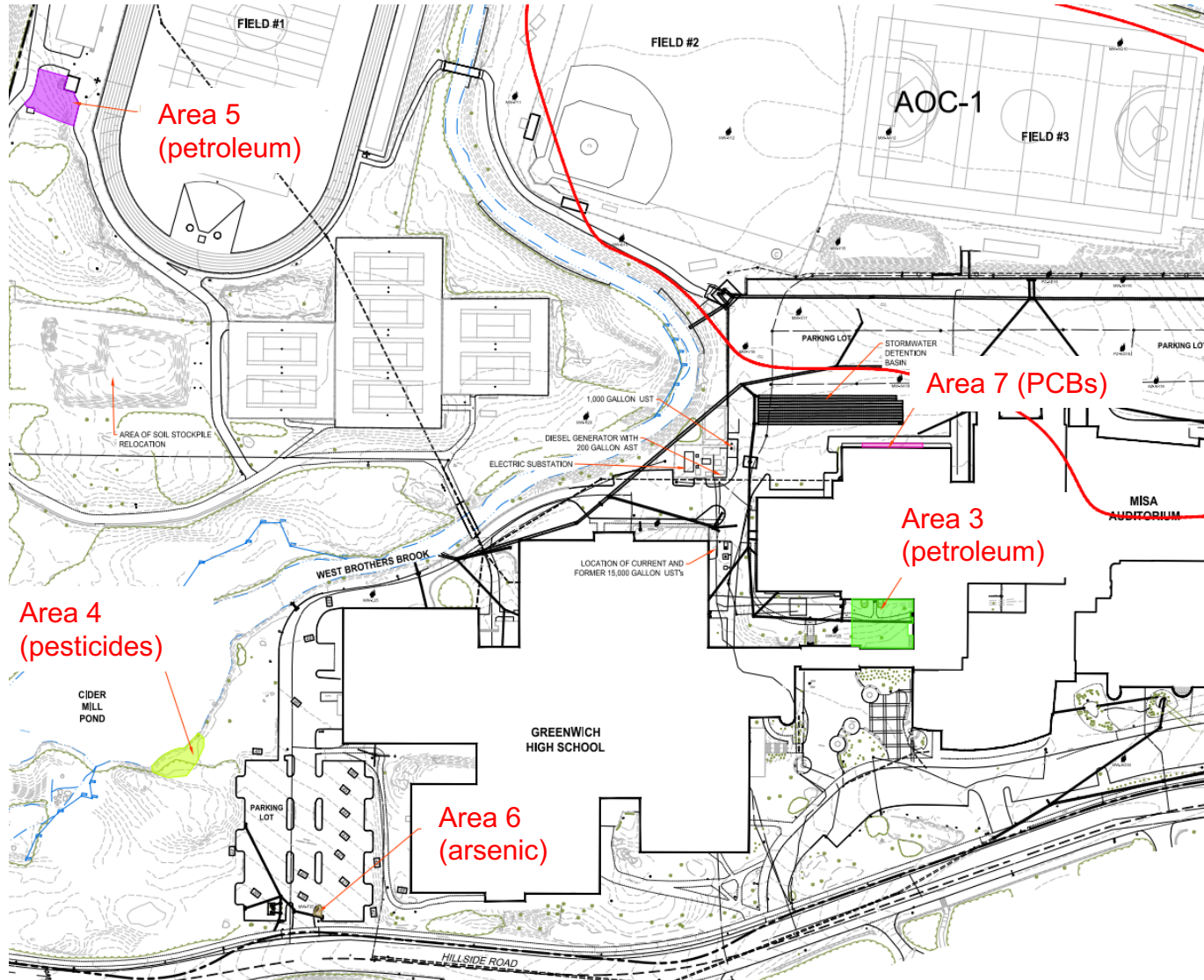
Phase I Remediation Status

Phase I Remediation Status

- Area 1 Engineered Control construction completed at Fields 6 & 7
- Area 2 excavation partially complete north of Field 7
 - Additional subsurface soil contamination found further up the hill to the north
 - Will complete excavation of this additional area concurrent to Phase II remediation



Phase I Remediation Status



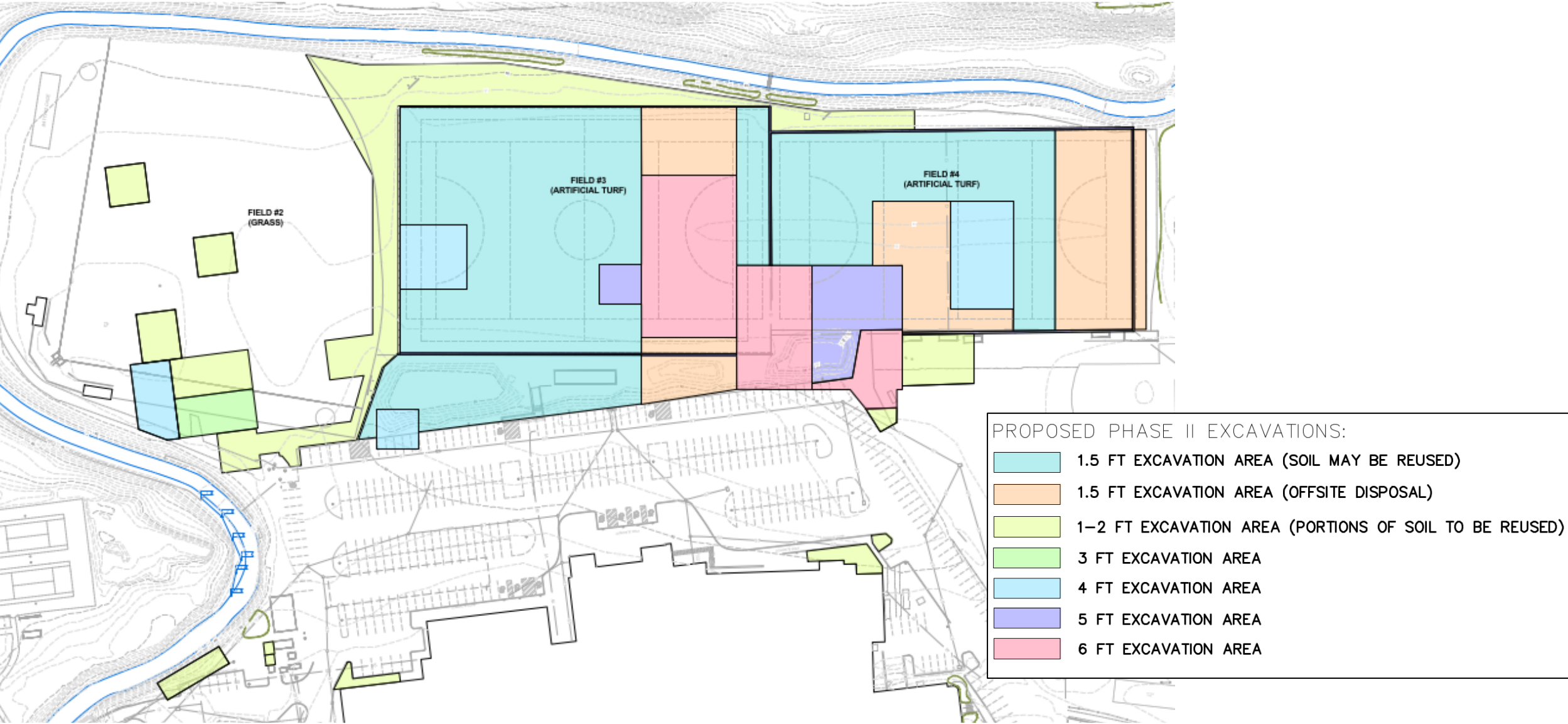
- Area 3, 5, 6 & 7 excavations completed
- Area 4 excavation completed to remove highest concentrations of pesticides

Phase II Remedial Planning

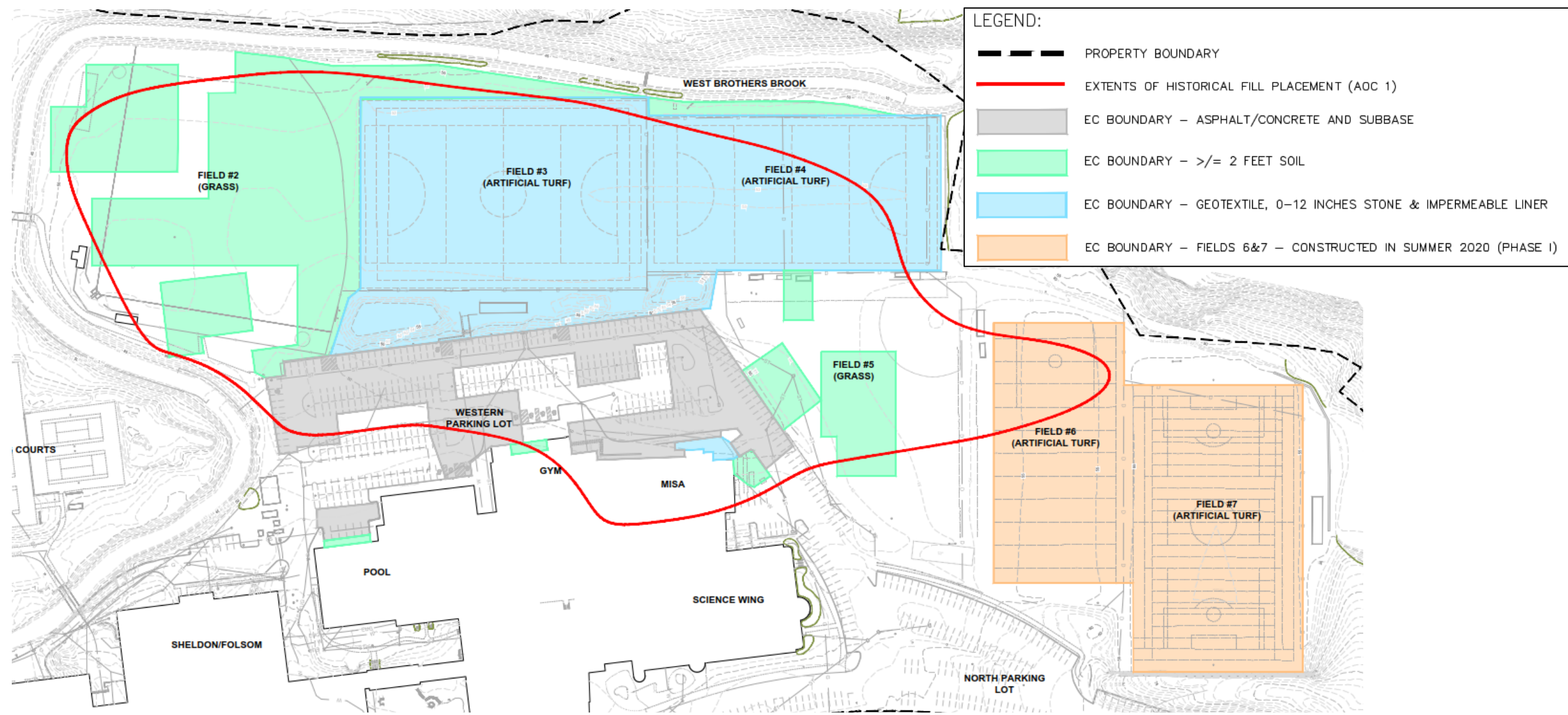
Phase II Remediation Plan

- Submitted to the Agencies January 8, 2021
- Primarily addresses area of historic fill material west of school building
 - Fill contains PCBs, petroleum and other contaminants
 - Soil remediation required to prevent direct contact and reduce potential for soil to contaminate groundwater by preventing stormwater infiltration
- Risk-based remediation, which incorporates:
 - Excavation to most stringent cleanup criteria in top 1.5 to 2 feet below ground surface
 - Excavation of soil with highest PCB concentrations in top 6 feet beneath fields
 - Engineered Control (EC) to prevent contact with deeper contaminated soil
 - Impermeable liner below Fields 3 & 4 to prevent rainwater infiltration to polluted soil
 - Asphalt and clean subgrade in parking lot
 - Two feet of clean soil at Fields 2 & 5
 - Environmental Land Use Restriction to ensure EC is not disturbed in the future

Phase II Remedial Excavation Plan



Phase II Engineered Control Areas

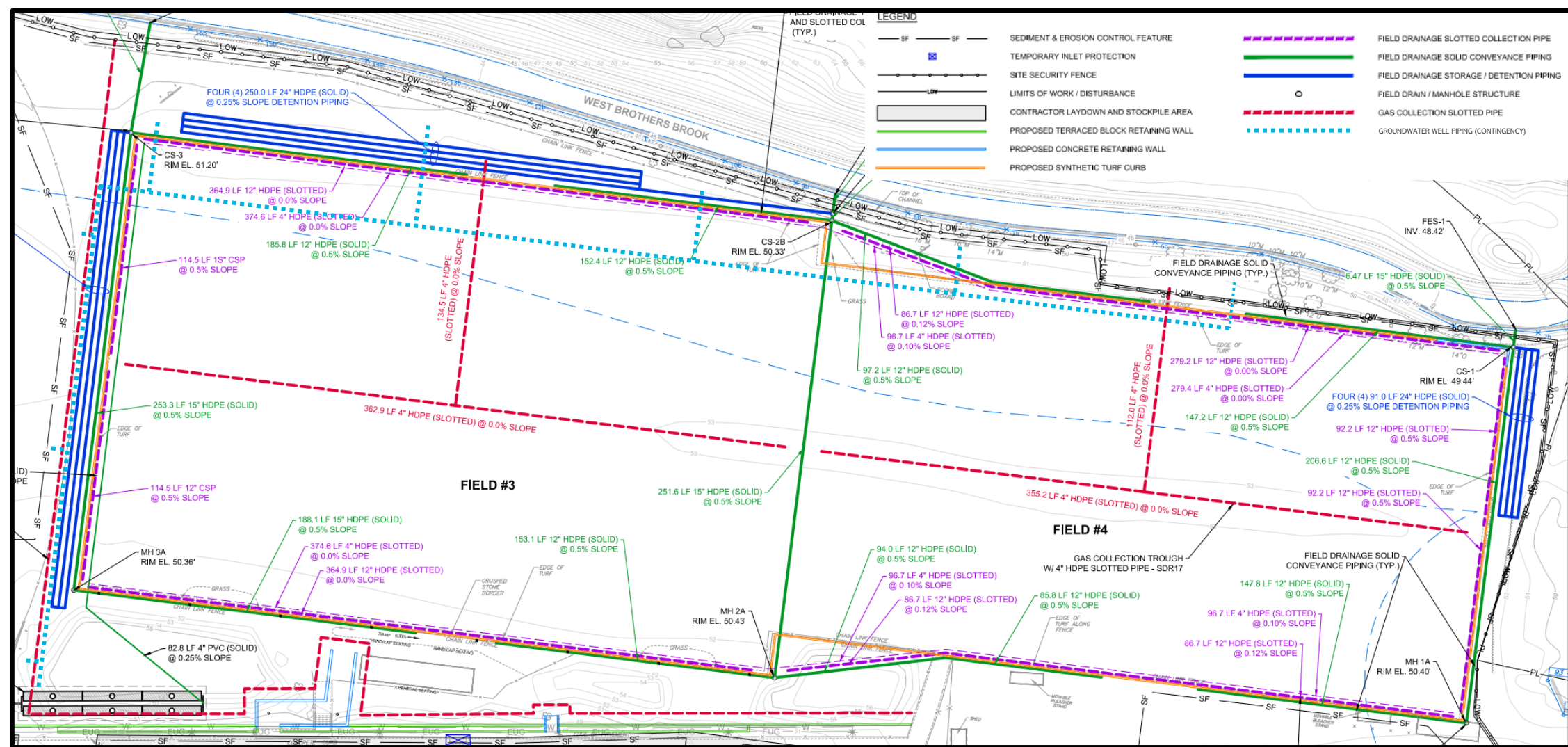


Evaluation of Remedial Alternatives

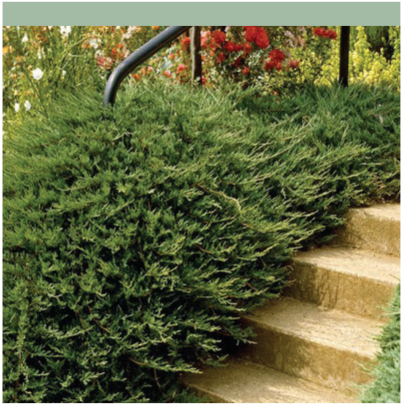
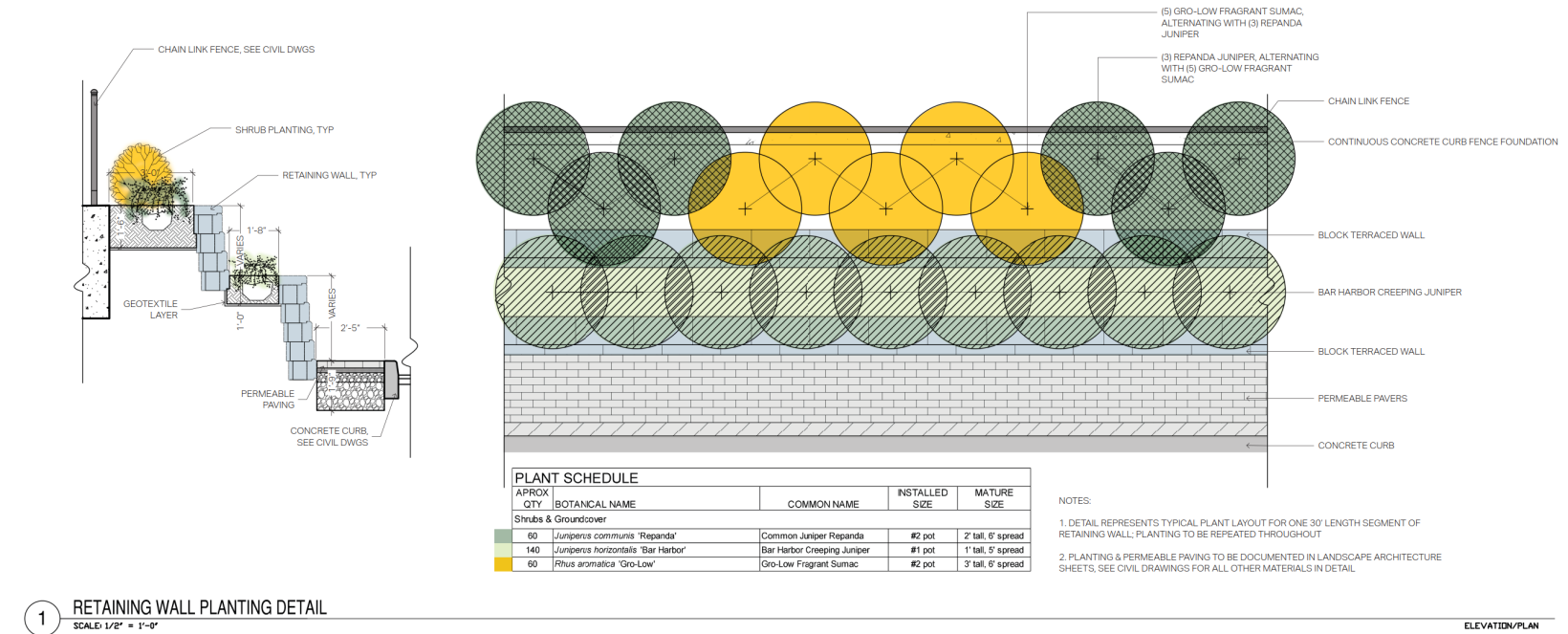
Description	Alternative 1	Alternative 2	Selected Alternative 3
Total Excavation (cy)	85,000	39,000	30,000
Earthwork days	591	284	167
Estimated Schedule	15+ years	5 - 7 years	3 – 4 years
Total Estimated Cost	\$108 MM	\$48 MM	\$25 MM

- Compared multiple remediation alternatives that protect human health and the environment
 - **Alternative 1** (not selected) – Clean-up to default criteria
 - **Alternative 2** (not selected) – Clean-up to default criteria in top 1.5 to 2 feet; remove PCBs ≥ 500 ppm elsewhere; impermeable cap below fields
 - **Selected Alternative 3** – Clean-up to default criteria in top 1.5 to 2 feet, Remove PCBs ≥ 500 ppm in underlying soil to 6 feet bgs, impermeable cap below fields

Fields 3 & 4 - Groundwater & Stormwater Recovery Piping



Engineered Control Details – Field 3 Retaining Wall



REPANDA JUNIPER



BAR HARBOR CREEPING JUNIPER



GRO-LOW FRAGRANT SUMAC



PERMEABLE PAVERS

Phase II Remediation Sequencing and Schedule

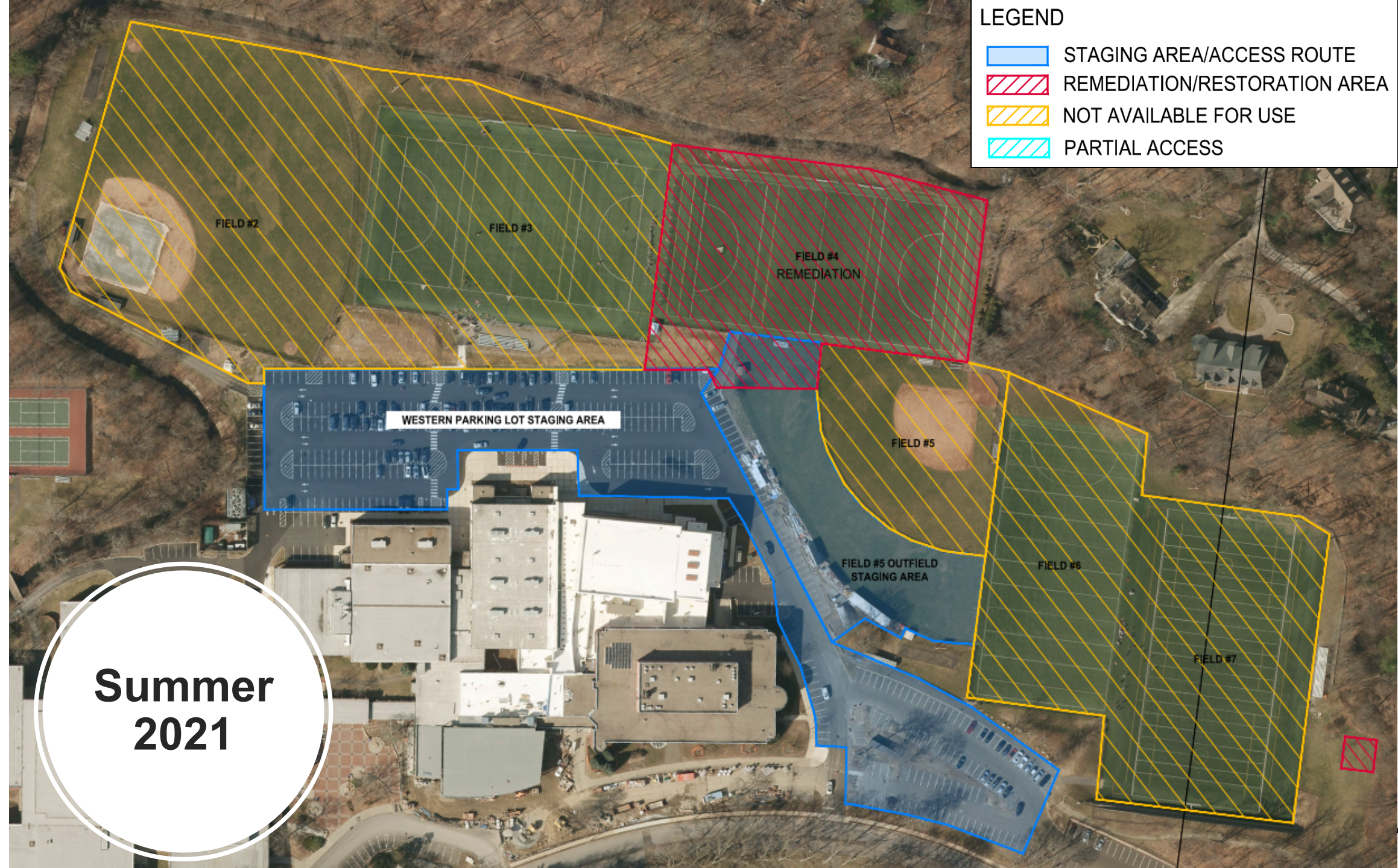
Conceptual Remediation Schedule

Proposed Scenario - Clean Work During School - Field #4 First - Field #5 as Staging Area																
	Year 2021-2022				Year 2022-2023				Year 2023-2024				Year 2024-2025			
	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer	Fall	Winter	
Field #2									Excavation	Restoration						
Field #3					Excavation	Liner Install	Liner Install	Restoration								
Field #4	Excavation	Liner Install	Restoration	Restoration												
Field #5 Outfield	Excavation	Staging	Staging	Staging	Staging	Staging	Staging	Staging	Restoration							
Western Parking Lot	Staging	One row of parking lost			Staging	Two rows of parking lost			Staging							

- Developed in coordination with GPS, Parks & Rec and DPW
- Excavation work performed during summer recess
- Restoration of fields performed during the school year, primarily in Fall
- Intended to minimize loss of field use while maintaining health and safety





LEGEND

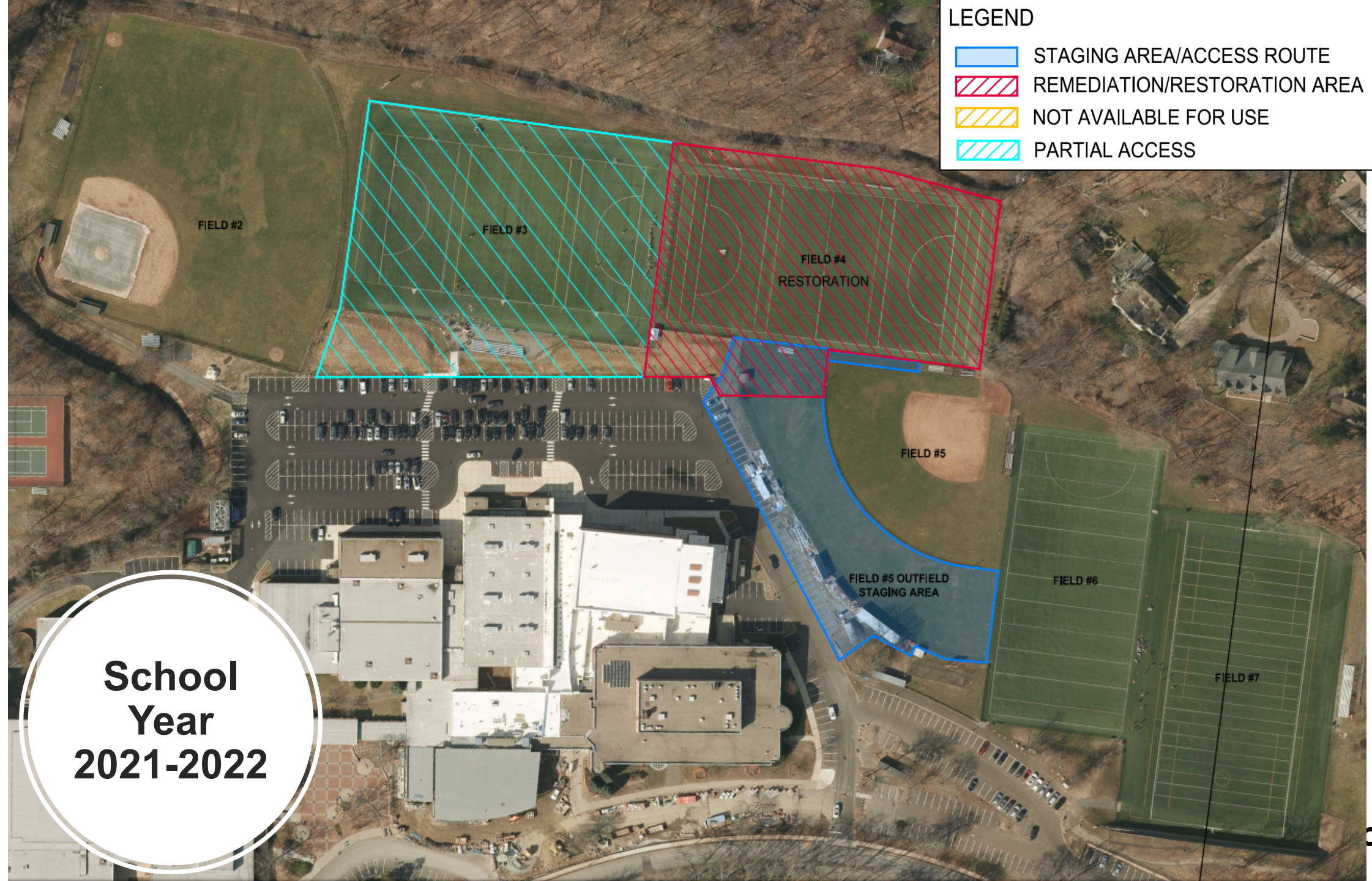
- STAGING AREA/ACCESS ROUTE
- REMEDIATION/RESTORATION AREA
- NOT AVAILABLE FOR USE
- PARTIAL ACCESS



**Summer
2021**

LEGEND

-  STAGING AREA/ACCESS ROUTE
-  REMEDIATION/RESTORATION AREA
-  NOT AVAILABLE FOR USE
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**School
Year
2021-2022**

LEGEND

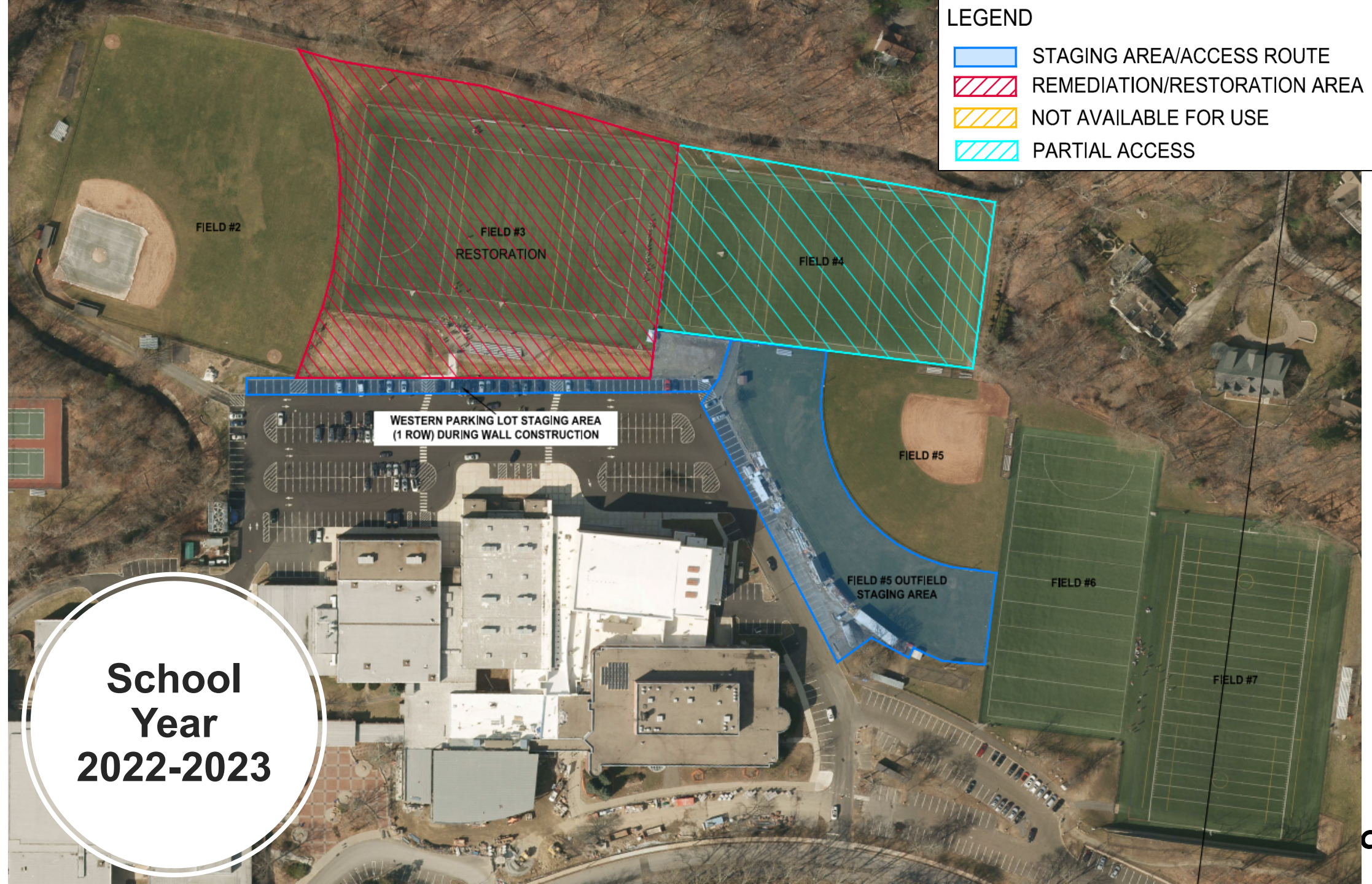
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Summer
2022

LEGEND

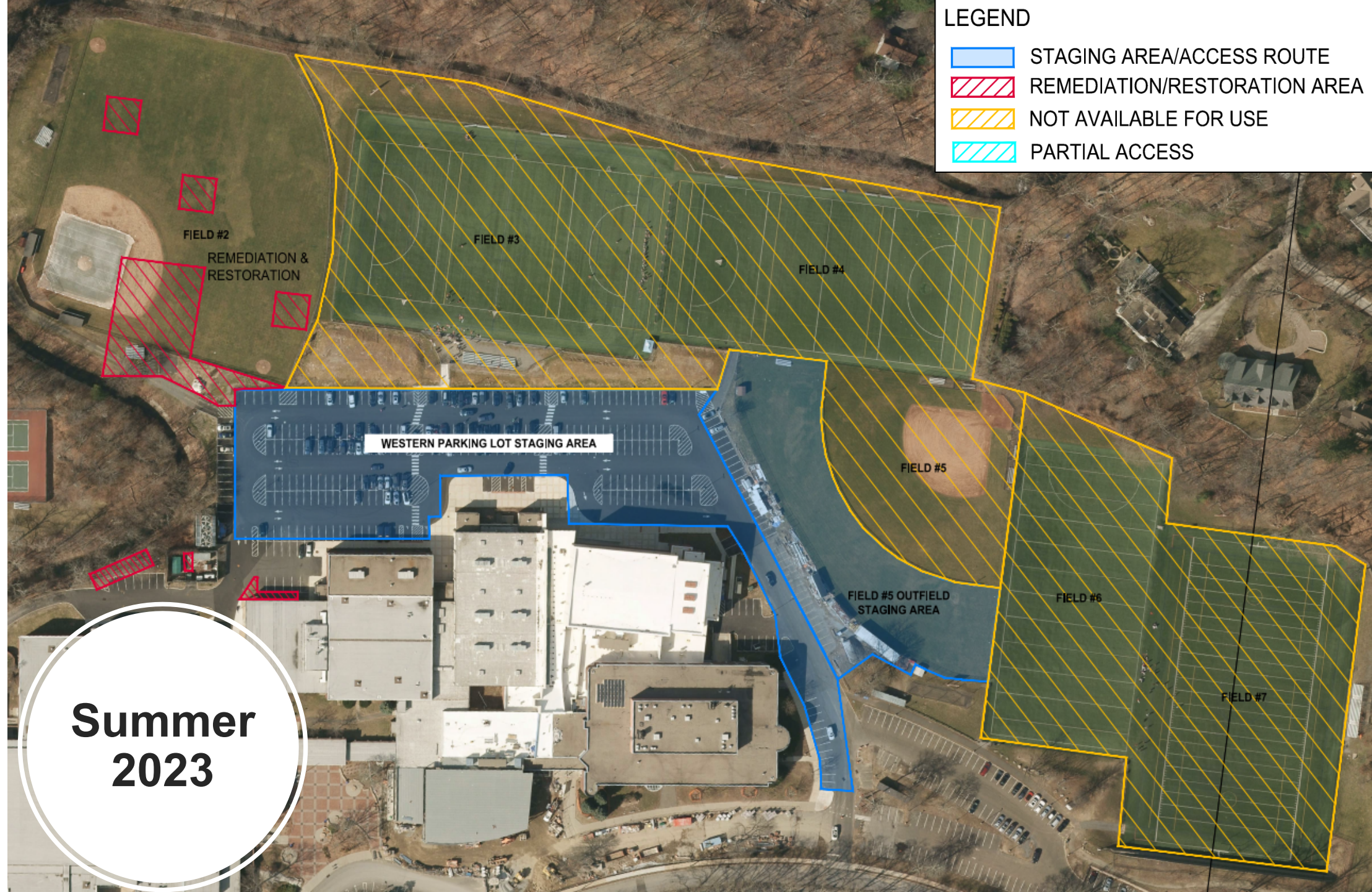
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**School
Year
2022-2023**

LEGEND

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**Summer
2023**

Questions & Answers and Opportunity for Public Comment

Questions & Public Comments

– Tonight:

- To make a public comment or question verbally:
 - Choose the “Raise a Hand” feature
 - You will be called on and unmuted
 - Once your comments or questions are completed, you will be placed on mute
- To submit a public comment or question in writing:
 - Enter comments / questions into Zoom “Q&A” feature
 - Please provide your name and email with your question or comment.
- All your questions and comments are maintained as part of this meeting’s record

– Written comments can also be submitted to:

Jeffrey Wilcox
CT DEEP
79 Elm Street
Hartford, CT 06106
Jeff.wilcox@ct.gov

- Public comment period runs through February 27, 2021
- All materials and this meeting are posted on the BOE’s website at <https://www.greenwichschools.org/departments/facilities-rentals/building-grounds-projects/ghs-fields-remediation-project>

AECOM Imagine it.
Delivered.