

Community Forum No. 11

March 5, 2019

Tewksbury Elementary Schools

Tewksbury, Massachusetts



PROJECT MANAGEMENT **CBRE|HEERY**
Massachusetts School Building Authority

Flansburgh Architects

MSBA

- **MSBA** is an independent public authority that administers and funds a program for grants to eligible cities, towns, and regional school districts for school construction and renovation projects.
- **MSBA** mandates a multi-step rigorous study and approval process.
- Current grant funding agreement with the MSBA is **58.77%**. The project has potential for increased reimbursement if accepted by the voters of Tewksbury.

Elementary School Building Committee

Dennis Francis	Chair, Elementary School Building Committee
Anne Marie Stronach	Vice Chair, Elementary School Building Committee
Christopher Malone	Superintendent of Schools, TPS
Brenda Theriault-Regan	Assistant Superintendent of Schools, TPS
Thomas L. Cooke	ESBC Member / Finance Committee
Christopher J. Modica	ESBC Member / Town Resident
Jonathan Ciampa	ESBC Member / Town Resident
Jay Harding	Prinicipal, Trahan Elementary School
Richard Montuori	Town Manager
James Cutelis	ESBC Member / School Committee
Shannon M. Demos	ESBC Member
Maria McLaughlin	Building Committee Project Administrator
Jacquelyn Mailey	Teacher
Eric Ryder	Community Member

Design Team

Kent Kovacs

Flansburgh Architects

Bill Beatrice

Flansburgh Architects

Betsy Farrell Garcia

Flansburgh Architects

Owner's Project Manager

Peter Collins

CBRE | HEERY Project Management

Why All District Grades 2- 4? - Key Considerations

- Shared Educational Experience
- Social Emotional Benefits
- Focus on Developmental Age
- More Streamline Curriculum
- Improved Support Network and Programs
- Student Transitions
- Impact on all Elementary Schools

Why All District Grades 2-4? - Key Considerations

Benefits

- Allows for more cross-grade interactions and alignment
- Equity of experience and access
- Greater mentoring opportunities
- Smaller neighborhood clusters
- Maximizes SPED and ELL resources
- Campus resources for grades 2-6
- Alleviates pressure & provides space at Dewing and Heath Brook
- Lowest construction cost per student

Grades Served

Grades:	PK	K	1	2	3	4
Dewing	●	●	●	●		
Heath Brook		●	●	●		
Trahan					●	●
North Street					●	●

Trahan School- Year Built: 1952 (67 years old)

- **Deteriorating asphalt around building perimeter**
- **Stage subdivided into room with no ventilation**
- Undersize Gym compared to MSBA guidelines. 1,800 sf compared to 6,000 sf
- **There are two original cast iron steam boilers that are in poor condition - Beyond their life expectancy.**
- This fire alarm panel is circa 1970's and does not include functionalities required today.
- Fire Protection Systems do not currently exist in the school.
- Toilets are not ADA accessible.
- Security - Limited camera coverage and other security security features



Stage partitioned in areas



Deteriorating asphalt



Corrosion at boilers

North Street School - Year Built: 1952 (67 years old)

- Stormwater runoff appear to discharge via sheet flow to the abutting properties or to the nearby wetland resource areas
- The stage is not ADA compliant for access
- Poor acoustics between the gym and library.
- **Corridors used as individual learning spaces and storage due to lack of proper space**
- **Exterior finish at 74 addition is deteriorating / peeling / rusting**
- Roof bubbling and pulling from edges.
- The second boiler is beyond its normal useful life expectancy. There are visible signs of corrosion and leaking.
- The fire alarm panel is circa 1970's and does not include functionalities required today.
- Fire Protection Systems do not currently exist in the school.
- Toilets are not ADA accessible.
- Security - Limited camera coverage and other security security features



Corridors used as break out spaces and storage

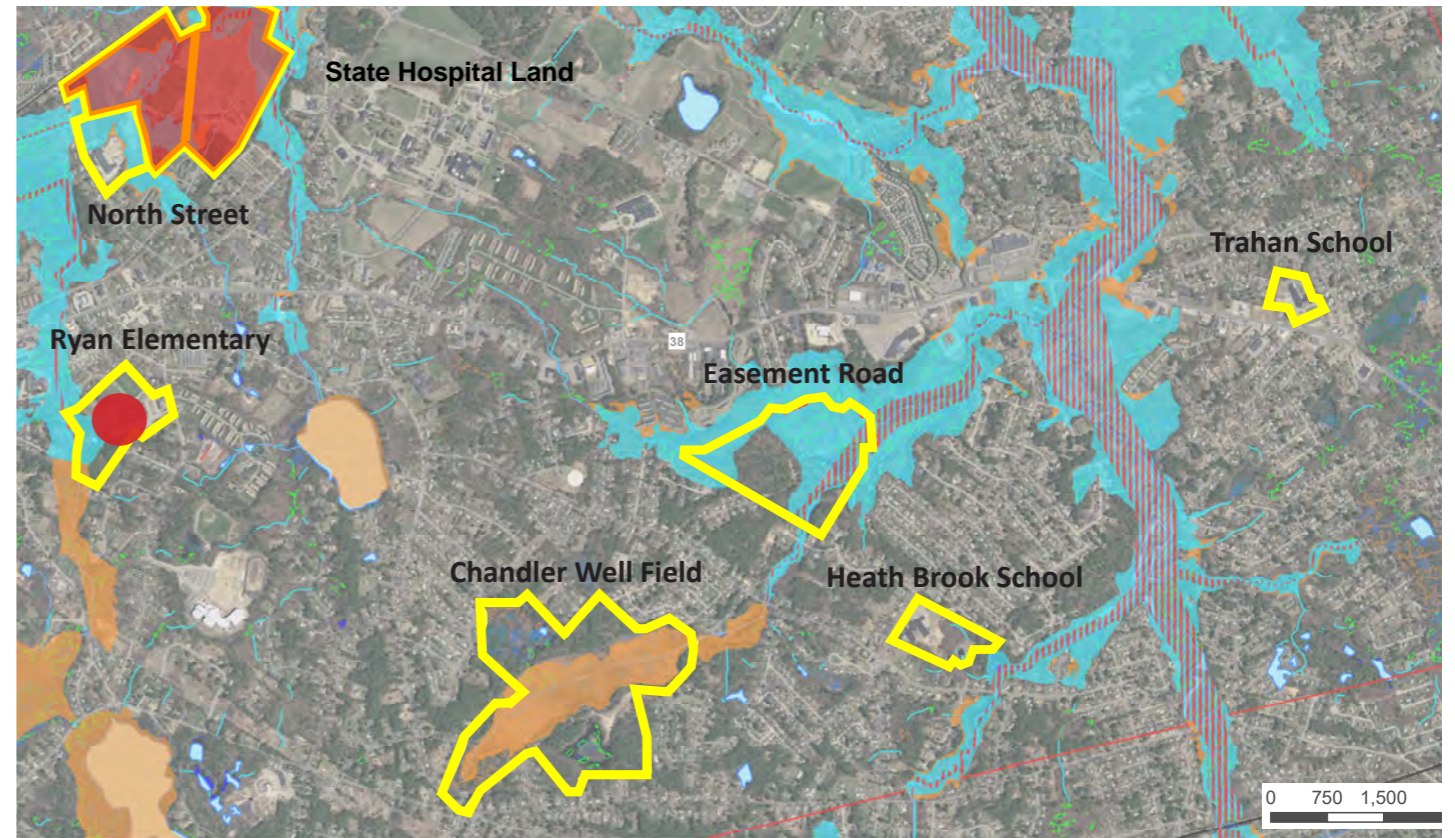


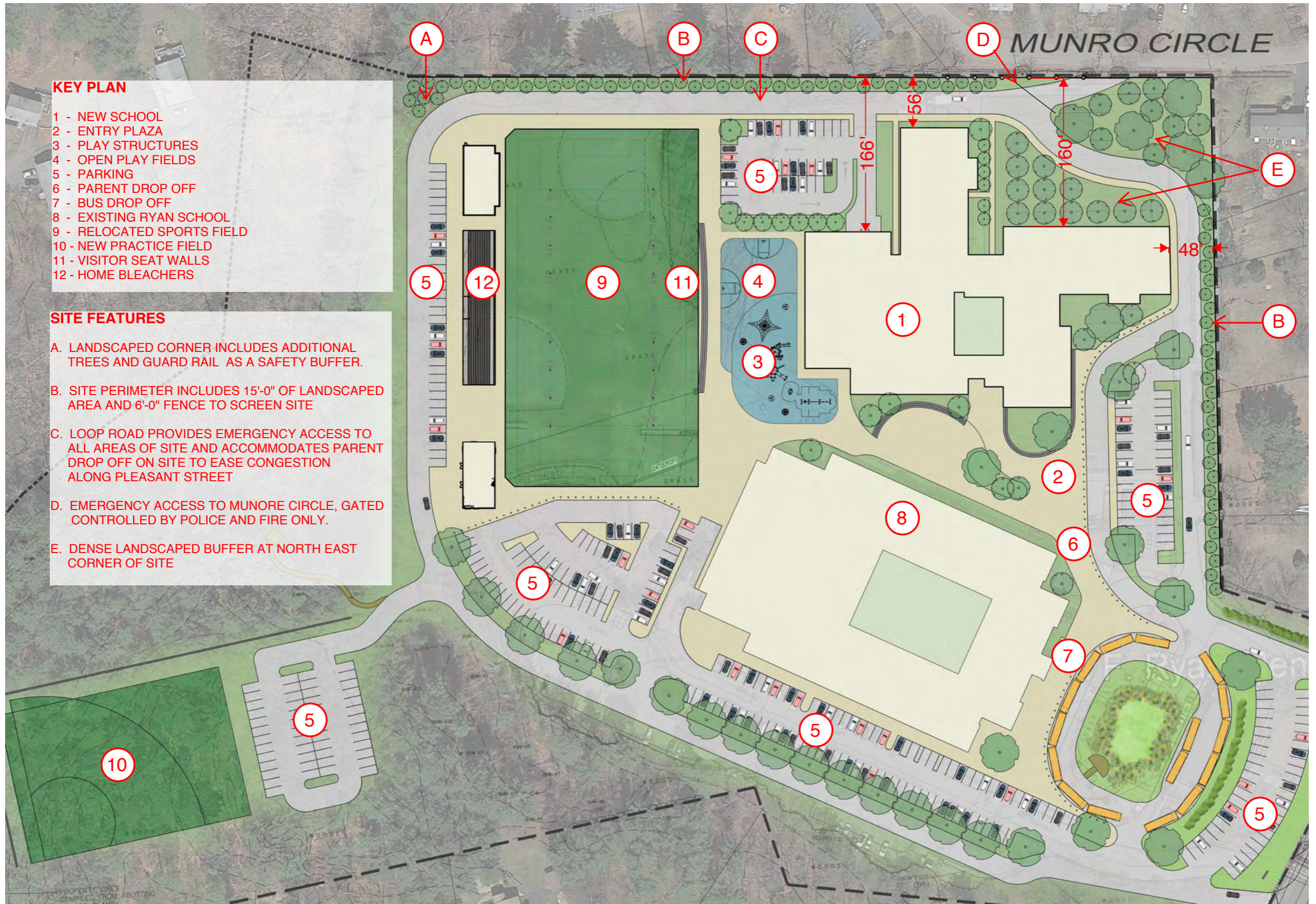
Rusting Panels at the 1974 Addition

Site Selection

The study began with the evaluation of six sites considered for the project. Geographic location, buildable area, natural features, disruption to student/staff during construction were some of the factors discussed.

The Ryan Elementary School site was selected for its close proximity to the town center, opportunity for enhanced resources as part of an academic campus with the Ryan School, and available open building area.







PROGRAM KEY

 ADMIN. / GUID.	 DINING
 ART / MUSIC	 PHYS. ED.
 CIRCULATION	 MEDIA CTR.
 CLASSROOMS	 SPECIAL ED.
 CUST. / MAINT.	 STEAM

FIRST FLOOR

SCALE: 1" = 30'-0"



PROGRAM KEY

 ADMIN. / GUID.	 DINING
 ART / MUSIC	 PHYS. ED.
 CIRCULATION	 MEDIA CTR.
 CLASSROOMS	 SPECIAL ED.
 CUST. / MAINT.	 STEAM

SECOND FLOOR
 SCALE: 1" = 30'-0"



PROGRAM KEY

 ADMIN. / GUID.	 DINING
 ART / MUSIC	 PHYS. ED.
 CIRCULATION	 MEDIA CTR.
 CLASSROOMS	 SPECIAL ED.
 CUST. / MAINT.	 STEAM

THIRD FLOOR

SCALE: 1" = 30'-0"

Concession Stand

Home Bleachers w/ Press box

Fieldhouse

Visitor Bleachers



Multipurpose Synthetic Field

Project Schedule

Louise Davy Trahan Elementary School
OPM Project Milestone Schedule (abbreviated)
Rev: January 08, 2019

a	b	c	d	e
1	Task Name	Days	Start	Finish
2	Forming the Project Team	258	03/29/17	12/12/17
3	OPM Selection	82	03/29/17	06/19/17
4	Designer Selection	113	08/21/17	12/12/17
5	Feasibility Study	331	10/02/17	08/29/18
6	Review Potential Site Selections Options	137	10/02/17	02/16/18
7	Review/Examine and Issue Report of Existing Conditions	46	01/15/18	03/02/18
8	MSBA Kick Off Meeting	0	02/28/18	02/28/18
9	Preliminary Design Plan (PDP)	67	02/26/18	05/04/18
10	Preferred Schematic Report (PSR)	70	04/30/18	07/09/18
11	MSBA Facilities Assessment Subcommittee (FAS)	1	07/25/18	07/25/18
12	MSBA Board of Directors Approval (BoD)	1	08/29/18	08/29/18
13	Community Informational/Building Committee Meetings	223	01/18/18	08/29/18
14	Schematic Design (SD)	249	08/30/18	05/06/19
15	Schematic Design	167	08/30/18	02/13/19
16	SD Cost Estimate	30	11/20/18	12/20/18
17	Assemble/Establish/Review Overall Project Scope and Budget Agreement (PSBA)	41	11/20/18	12/31/18
18	Submit Schematic Design Package for PSBA to MSBA	17	12/17/18	01/02/19
19	MSBA Facilities Assessment Subcommittee (FAS)	8	01/16/19	01/23/19
20	MSBA Board of Directors Approval (BoD)	1	02/13/19	02/13/19
21	District Ballot Question Due	1	02/05/19	02/05/19
22	District Warrant Article Due	1	02/08/19	02/08/19
23	District Election to Vote on Ballot	1	04/06/19	04/06/19
24	District Town Meeting to Vote on Warrant Article	1	05/06/19	05/06/19
25	Community Informational/Building Committee Meetings	238	09/06/18	05/02/19
26	Design Development	133	05/17/19	09/27/19
27	60% Design Development	49	05/17/19	07/05/19
28	90% Design Development	81	07/08/19	09/27/19
29	Contract Documents	130	09/30/19	02/07/20
30	60% Contract Documents	39	09/30/19	11/08/19
31	90% Contract Documents	60	11/11/19	01/10/20
32	100% Contract/Bid Documents	25	01/13/20	02/07/20
33	Bid Award	161	12/03/19	05/12/20
34	Prequalification	90	12/03/19	03/02/20
35	Bidding Period	59	03/02/20	04/30/20
36	Award & Notice to Proceed	8	05/04/20	05/12/20
37	Construction Phase	833	05/18/20	08/29/22
38	Construction Phase Kickoff Meeting	4	05/18/20	05/22/20
39	Construction Phase	758	05/18/20	06/15/22
40	Building Move In/Opens for School Year 2022-2023	74	06/16/22	08/29/22
41	Closeout / Audit	571	06/06/22	12/29/23
42	Punch List	60	06/06/22	08/05/22
43	10 Month Commissioning	60	04/17/23	06/16/23
44	MSBA Closeout & Audit	515	08/01/22	12/29/23



DONGIK LEE / 02/11/19

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Tewksbury, Massachusetts

Thank You,
Questions and Answers



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Tewksbury Elementary School Project Funding Narrative

The Massachusetts School Building Authority (MSBA) Board of Directors approved the Tewksbury Elementary School Project Scope and Budget on Wednesday February 13, 2019. MSBA approval is a key milestone towards advancing the project. The MSBA utilizes a rather complex prescribed formula to determine eligible project cost to school districts in an equitable manner throughout the state. For the Tewksbury Elementary School project, the reimbursement rate is 58.77%. It would be reasonable to assume that Tewksbury would be receiving 58.77% of the total cost of the project which is budgeted at \$98.5 million. The MSBA formula for reimbursement is multi-layered with limitations on eligible scope with cost thresholds both of which impact reimbursement funding to School Districts.

MSBA has determined a maximum eligible project cost for reimbursement to be \$55,733,272. Using a 58.77% reimbursement rate equates to a facility grant of \$32,754,444 less an incidental recovery cost of \$17,825 netting Tewksbury a maximum facility grant of \$32,736,619.

It is important to keep in mind that participation in the MSBA program is a highly competitive process among school districts throughout the state. Additionally, as the MSBA seeks to increase funding to more Massachusetts school districts for school buildings that have reached their maximum life cycle, reimbursement rates and available funding continues to decrease.

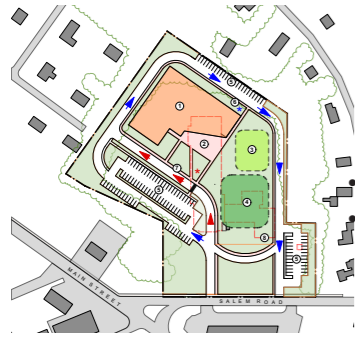
Based upon the Town borrowing its share of the cost totaling \$65,767,105 for 20 years at and interest rate of 4.25% and with all Town property values and percentages remaining the same (current FY19) and the split at 1.55 the tax impact is estimated to be \$445.46 per average home value of \$404,963 or \$1.10 per/1000 for Residential values and \$1.92 per/1000 value for commercial, Industrial and Personal (CIP) Property values.

Site Analysis

How will the storm water be managed on site?

Is there an impact on the floodplain and wetlands?

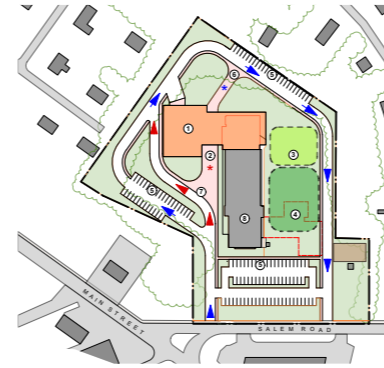
Design Options



OPTION 1A - NEW CONSTRUCTION Grades 3-4

Total Student Enrollment: 265 students (50% of 3-4)
Total Square Footage: 63,605 sf

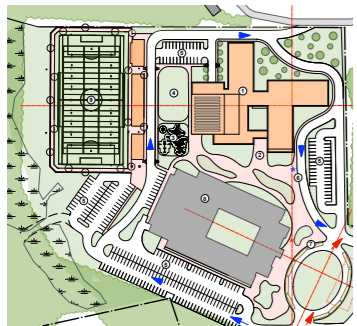
New school building on the Trahan Elementary School
Elementary schools remains within neighborhood



OPTION 1B - ADD/RENO Grades 3-4

Total Student Enrollment: 250 students (50% of 3-4)
Total Square Footage: 63,605 sf

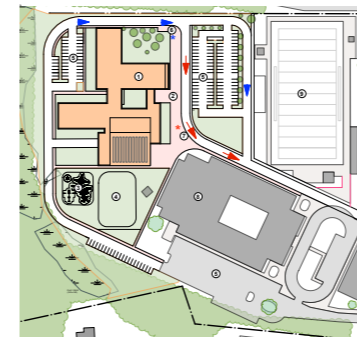
- New Addition to the existing Trahan Elementary School
- Existing to remain will require extensive renovations
- Elementary schools remains within neighborhood



OPTION 2A - ADDITION/RENOVATION Grades 3-4

Total Student Enrollment: 525 students (100% of 3-4)
Total Square Footage: 106,451 sf

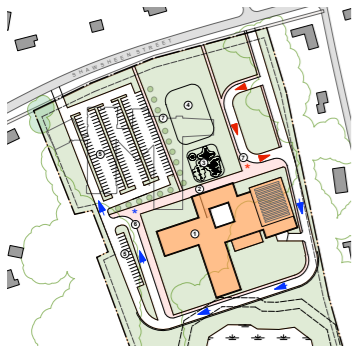
- One district-wide consolidated grades 3-4 elementary school
- New Elementary School on Ryan School campus
- 2nd grade remains at Dewing and Heath Brook



OPTION 2B - NEW CONSTRUCTION Grades 3-4

Total Student Enrollment: 525 students (100% of 3-4)
Total Square Footage: 106,451 sf

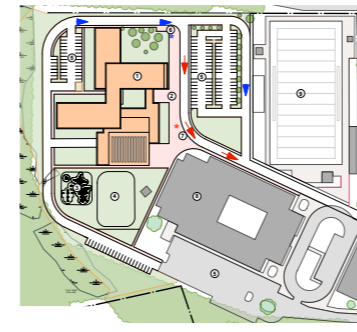
- One district-wide consolidated grades 3-4 elementary school
- New Elementary School on Ryan School campus
- 2nd grade remains at Dewing and Heath Brook



OPTION 2C - NEW CONSTRUCTION Grades 3-4

Total Student Enrollment: 525 students (100% of 3-4)
Total Square Footage: 106,451 sf

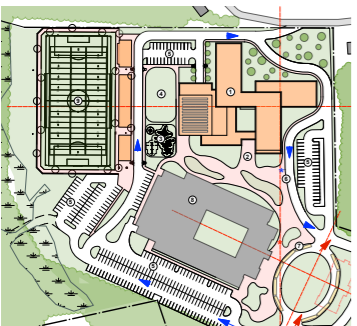
- One district-wide consolidated grades 2-4 elementary school
- New Elementary School at Heath Brook
- 2nd grade remains at Dewing
- 2nd grade must be relocated to North Street



OPTION 3B - NEW CONSTRUCTION Grades 2-4

Total Student Enrollment: 790 students (100% of 2-4)
Total Square Footage: 139,497 sf

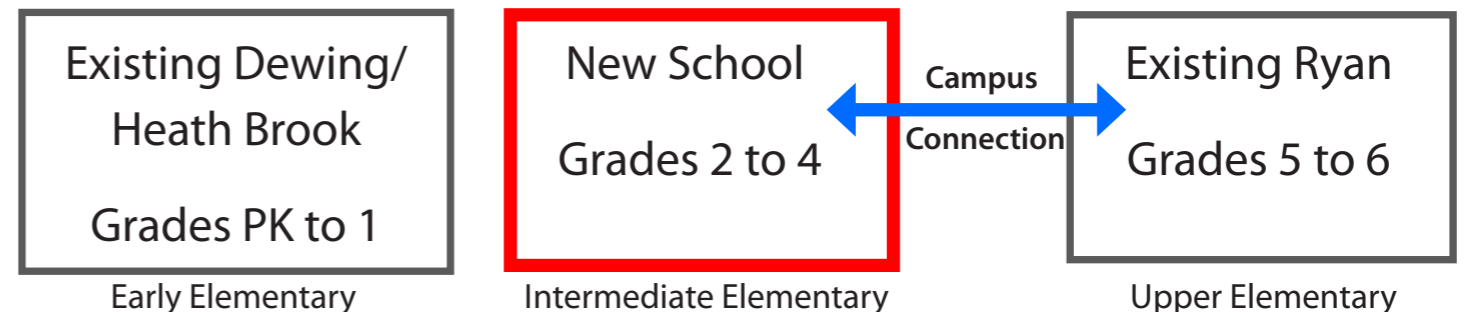
- One district-wide consolidated grades 2-4 elementary school
- New Elementary School on Ryan School campus
- Space alleviated at Dewing and Heath Brook



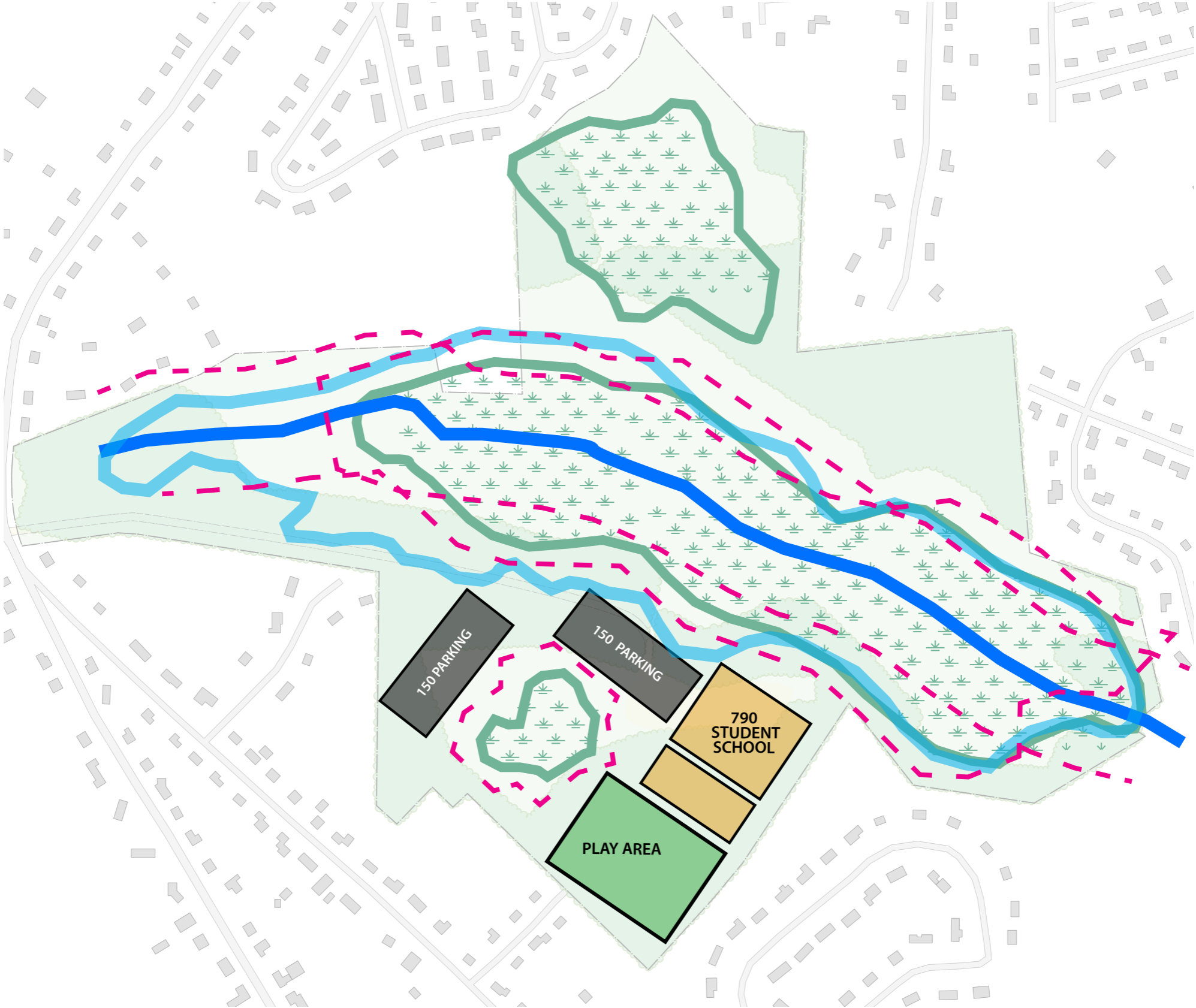
OPTION 3A - NEW CONSTRUCTION Grades 2-4

Total Student Enrollment: 790 students (100% of 2-4)
Total Square Footage: 139,497 sf

- One district-wide consolidated grades 2-4 elementary school
- New Elementary School on Ryan School campus
- Space alleviated at Dewing and Heath Brook



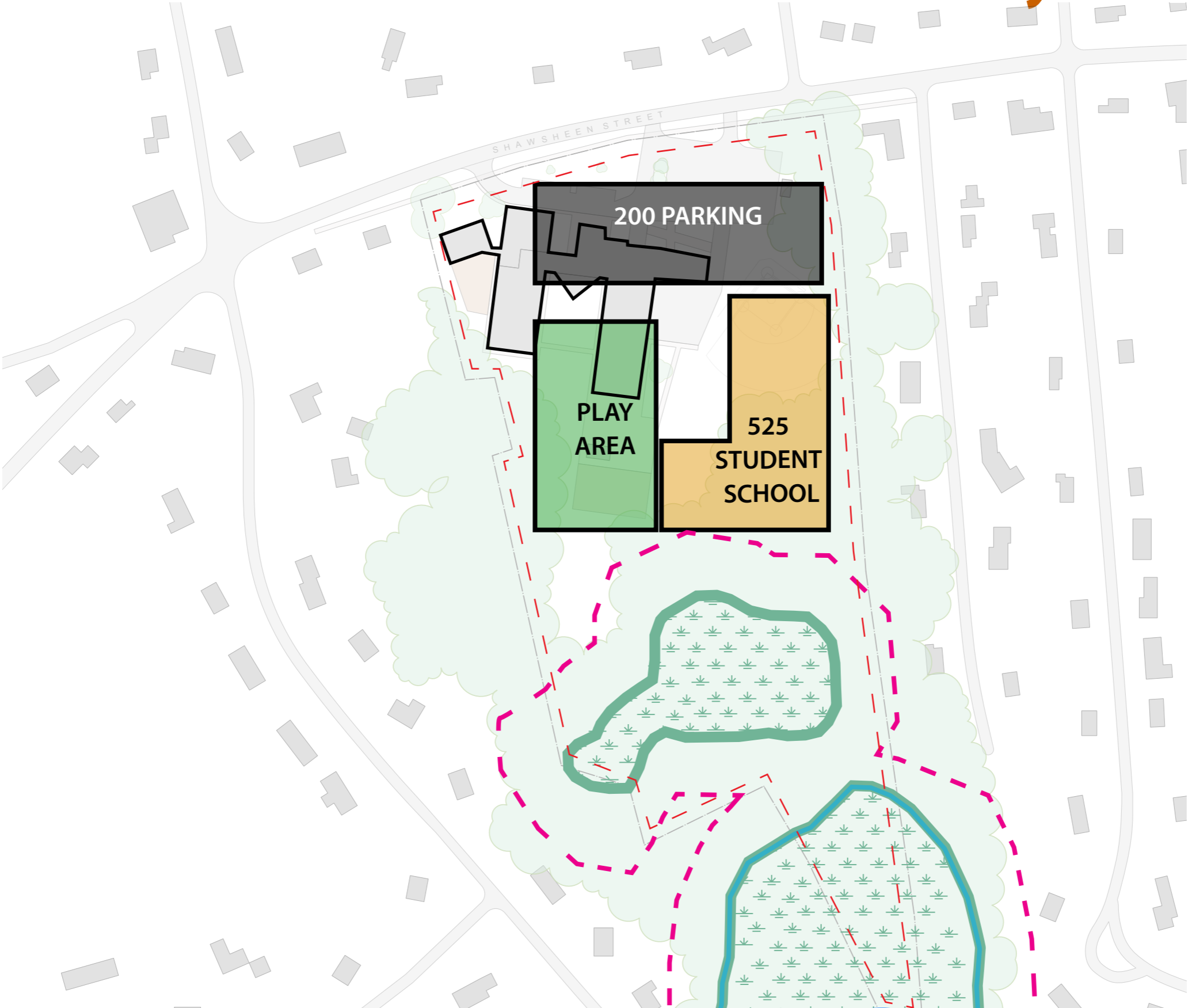
Site Selection - Chandler Well



Site Selection - Easement Road



Site Selection - Heath Brook Elementary



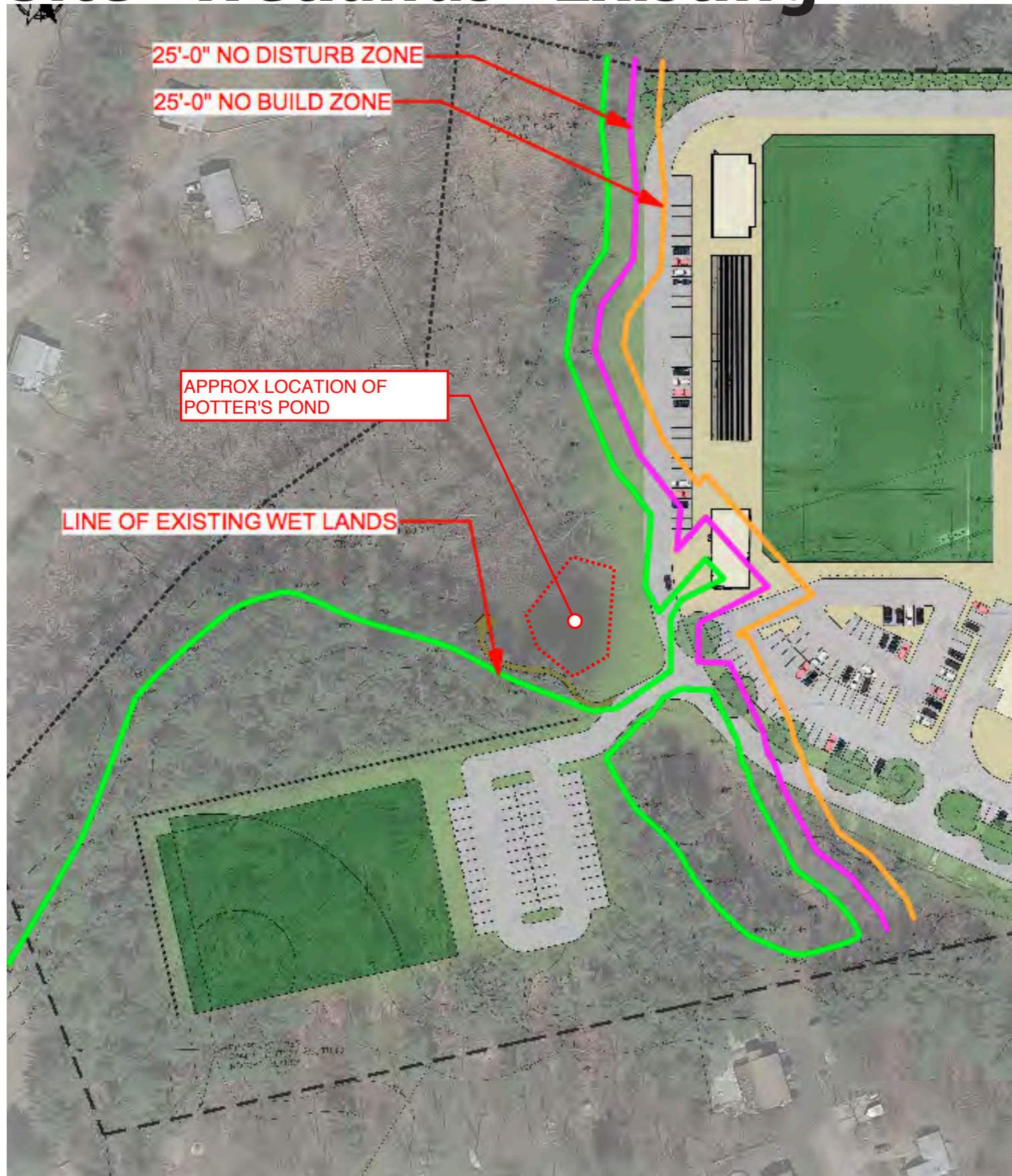
Site Selection - North Street



Site Selection - Trahan Elementary



Site - Wetlands - Existing



What are "Wetlands"?

Vegetated wetlands occur as transitional areas between uplands and water bodies, and thus seldom have clear edges. [Definitions are derived from the ecological concept that certain hydrologic (water) conditions during the growing season will result in characteristic hydrophytic (water-dependent or tolerant) plant communities and unique hydric (periodically) soils].

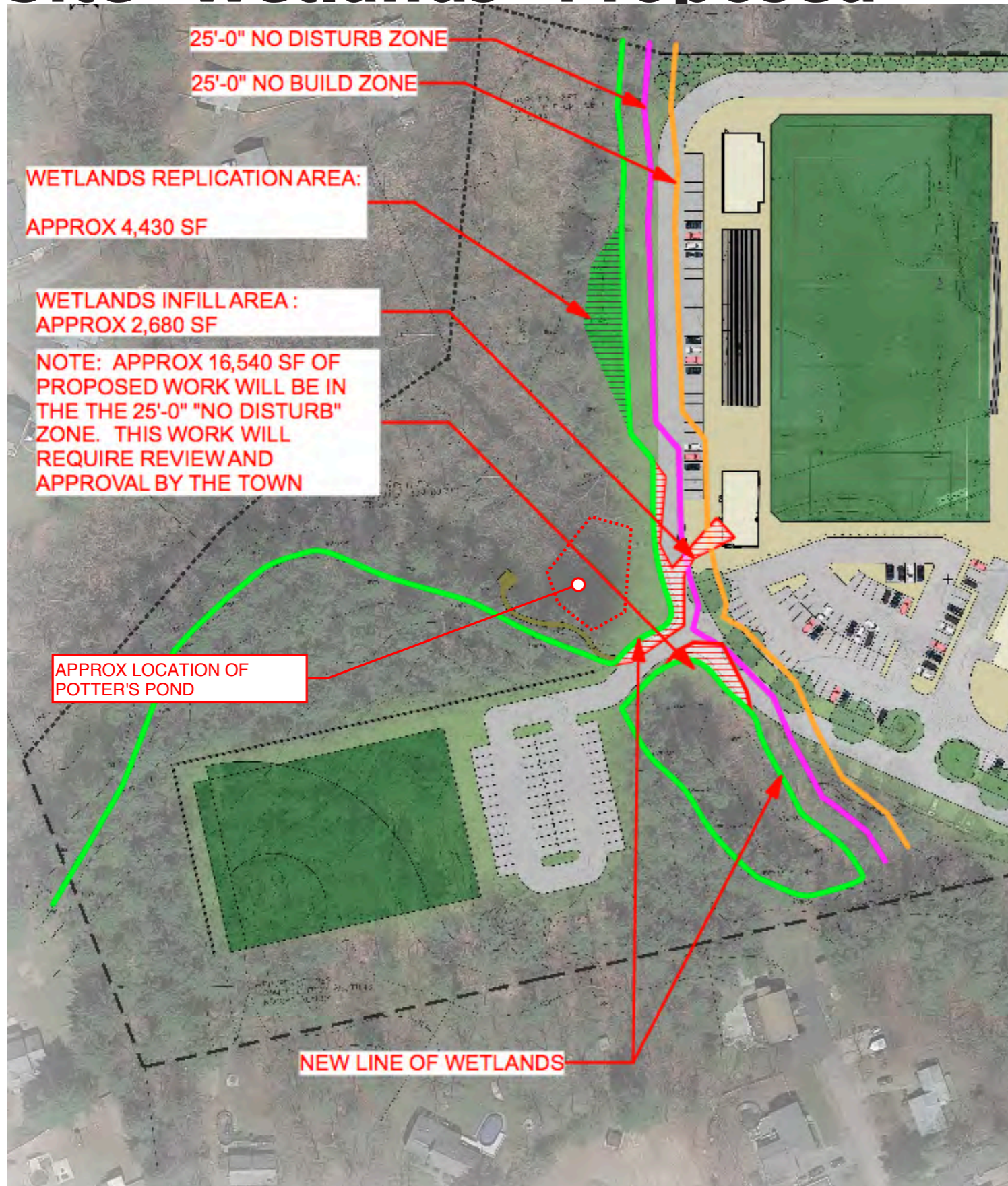
What is a "No Disturb Zone"?

"No Disturb Zone" means that portion of the Buffer Zone which extends twenty-five feet (25') from the edge of those Wetland Resources, contiguous or intermittent stream, with a defined dimension, subject to restriction, defined in this bylaw.

What is a "No Build Zone"?

"No Build Zone" means that portion of the Buffer Zone up gradient of the No Disturb Zone and extending to a line fifty feet (50') from the edge of those Wetland Resources, contiguous or intermittent, with a defined dimension, subject to restriction, defined in this bylaw.

Site - Wetlands - Proposed



What is a "Wetlands Infill Area"?

Wetlands infill area is the location of an existing area of wetlands that will be filled in during the proposed school construction.

What is a "Wetlands Replication Area"?

Wetland replication, provided as compensation for permitted wetland impacts, is the term used to describe the creation of a wetland site where none exists.

Site - Flood Plain - Existing



What is a “Flood Plain”?

A floodplain or flood plain is an area of land adjacent to a stream or river which stretches from the banks of its channel to the base of the enclosing valley walls, and which experiences flooding during periods of high discharge.

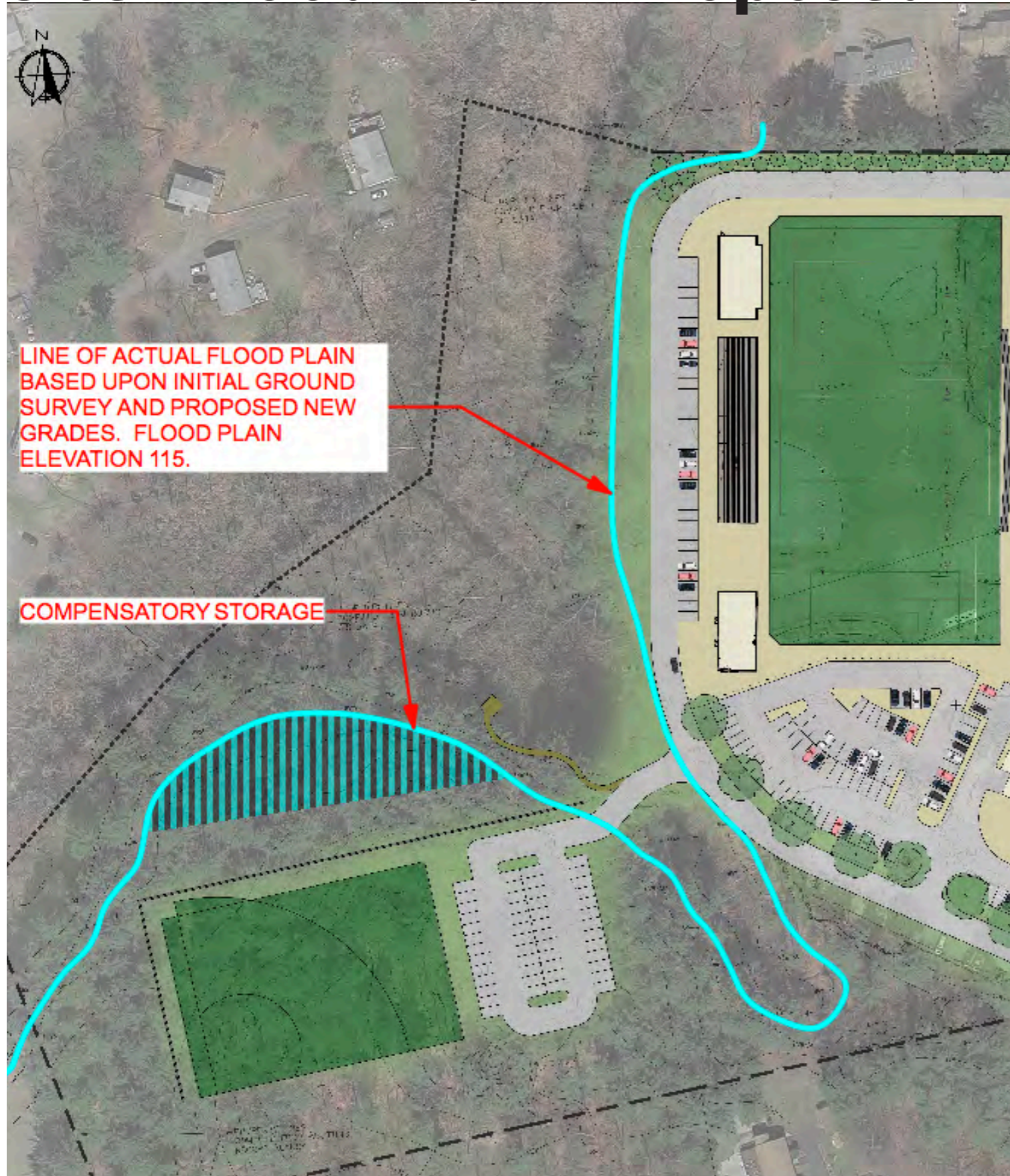
How are the boundaries determined?

Boundaries are established for regulatory purposes by FEMA (Federal Emergency Management Agency).

The flood plain line shown here is based upon the current FEMA maps.

The town has asked the design team to submit an application to FEMA to ammend the location of the flood plain line on the current map to reflect the acutal surevy data. This is not an uncommon situation.

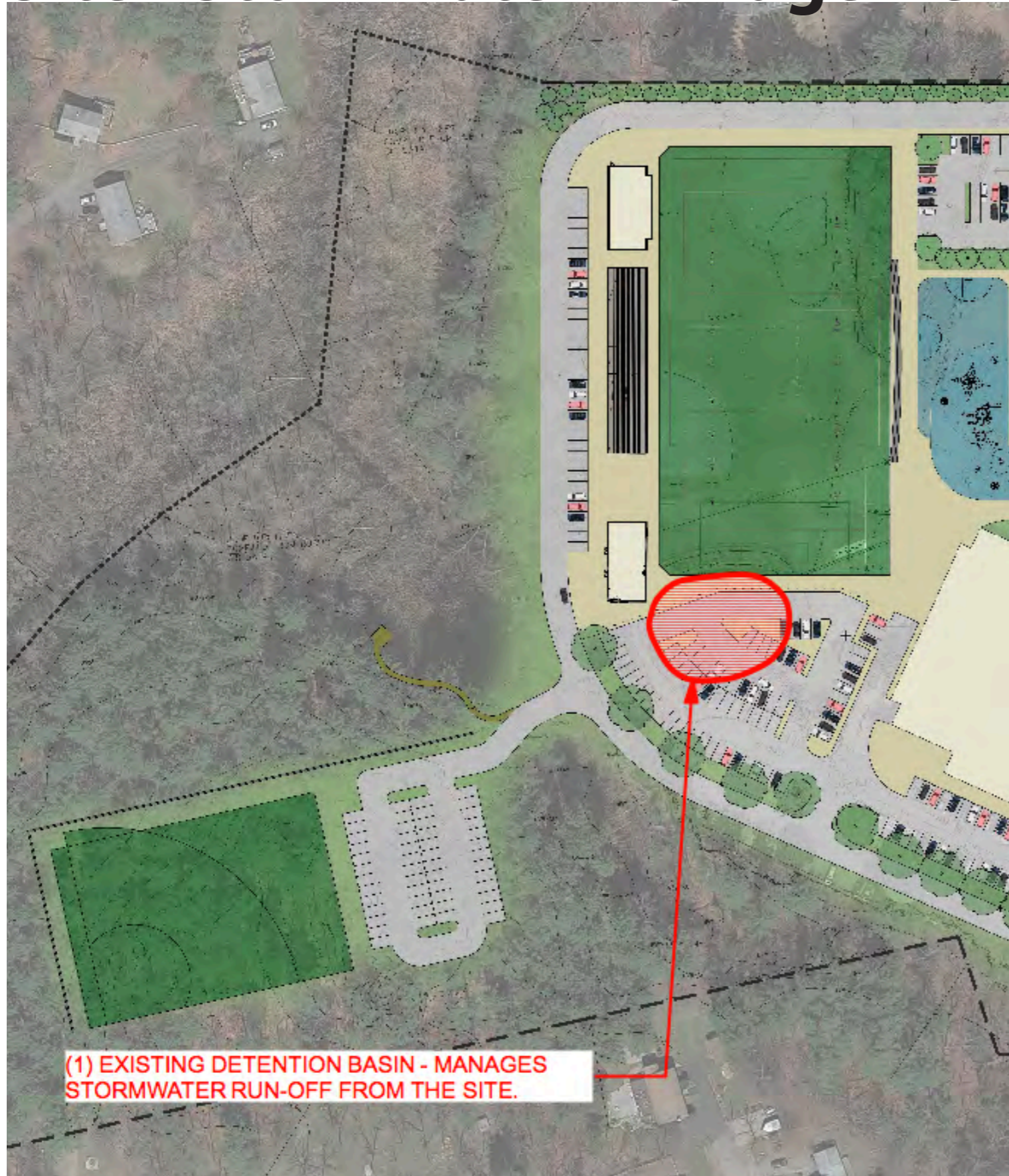
Site - Flood Plain - Proposed



What is a “Compensatory Storage”?

Compensatory storage means that loss of flood storage due to buildings or fill in the floodplain and is compensated for by providing an equal volume of storage to replace what is lost, adjacent to the flood plain.

Site - Stormwater Management - Existing



What is “Stormwater Management”?

Stormwater management is the effort to reduce runoff of rainwater or melted snow into streets, lawns and other sites and the improvement of water quality

How is Stormwater currently managed on the site?

Stormwater runoff is collected by a closed drainage system that consists of catch basins and drain manholes that collect the stormwater runoff, discharges to a man-made detention basin with an overflow to the brook.

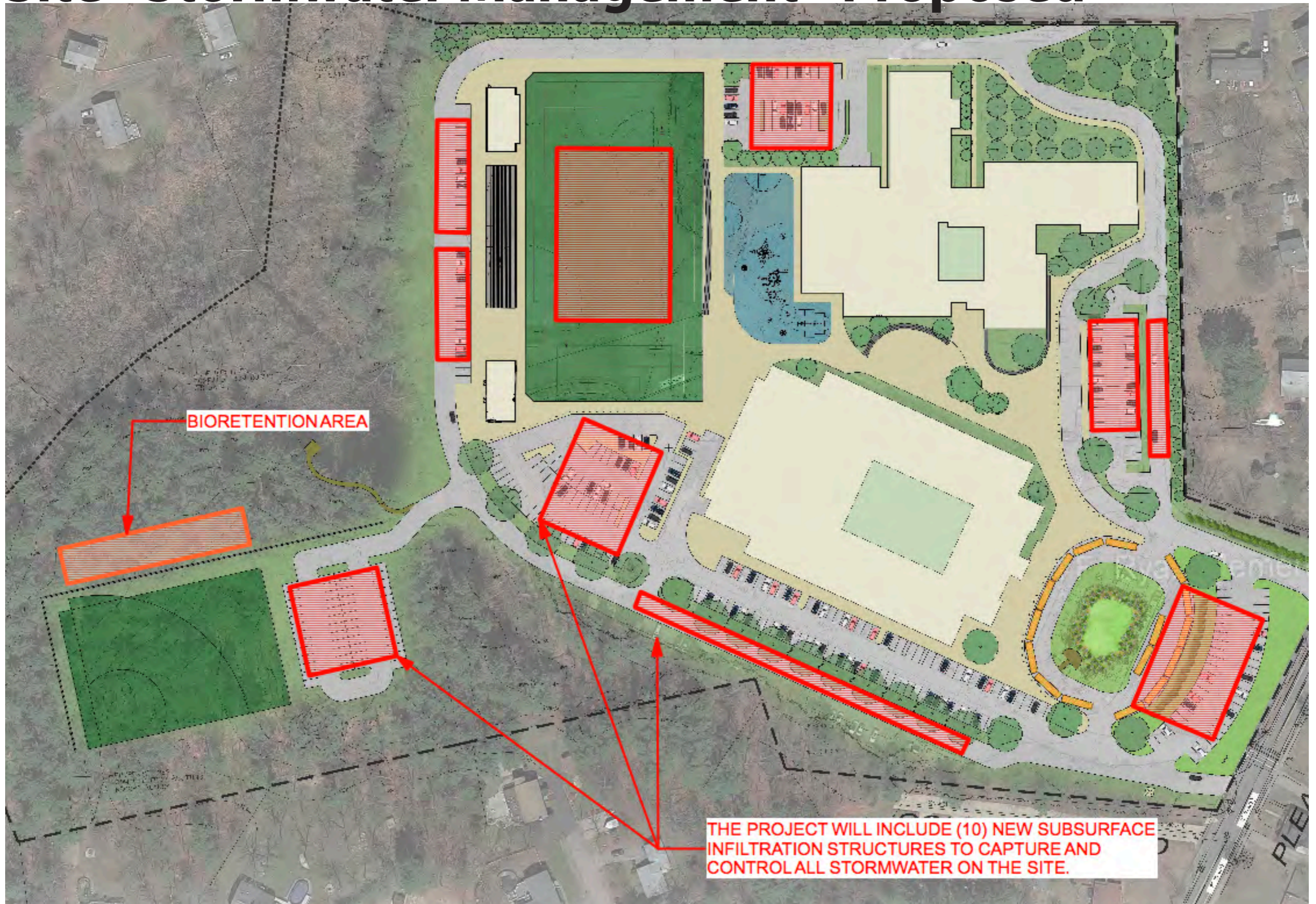
What are “Subsurface Infiltration Structures”?

Subsurface Infiltration Stormwater Systems as a LID Strategy. ... These systems can hold large volumes of runoff in the open-bottom chamber units and surrounding stone. The runoff then percolates through a filter fabric surrounding the chambers into the ground

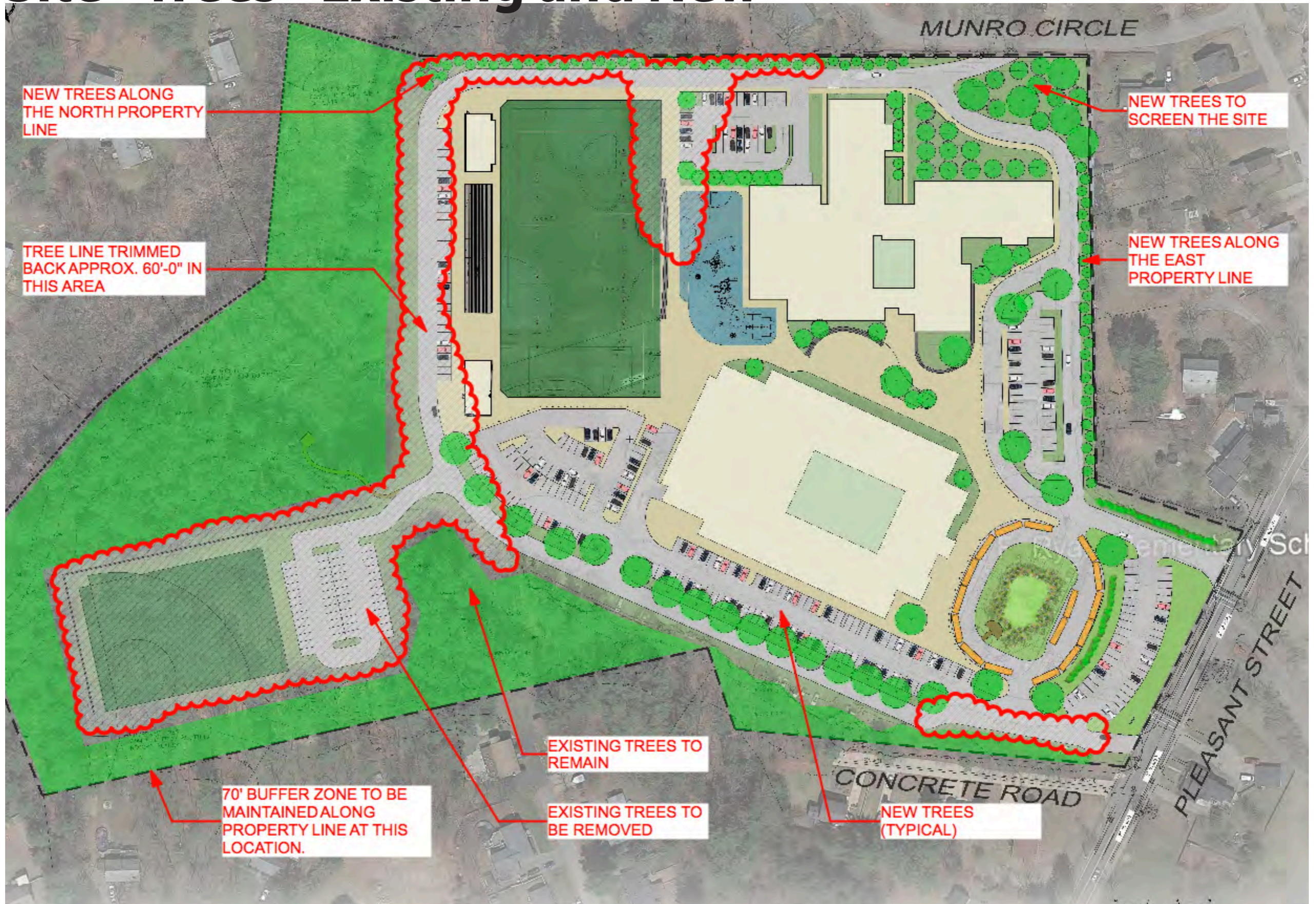
What is a “Bioretention Area”?

Bioretention is the process in which contaminants and sedimentation are removed from stormwater runoff. Stormwater is collected into the treatment area which consists of a grass buffer strip, sand bed, ponding area, organic layer or mulch layer, planting soil, and plants.

Site - Stormwater Management - Proposed



Site - Trees - Existing and New





1) PARKING LOTS



RED MAPLE



RED MAPLE (FALL)

SELECTED PLANTS



2) SCREENING PLANTING



ARBORVITAE



HOLLY



WHITE PINE



WITCH HAZEL



WITCH HAZEL (SPRING)



AMELANCHIER (SPRING)



AMELANCHIER (FALL)

SELECTED PLANTS



3) MIXED CANOPY



RED MAPLE



RED MAPLE (FALL)



SCARLET OAK



SCARLET OAK (FALL)



BIRCH



BIRCH (FALL)



AMELANCHIER (FALL)



WITCH HAZEL (SPRING)

SELECTED PLANTS



4) PLAZA PLANTERS



WITCH HAZEL (SPRING)



AMELANCHIER (SPRING)



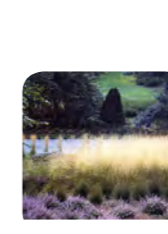
INKBERRY



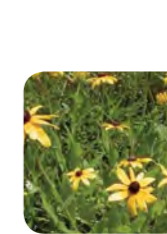
WINTER BERRY



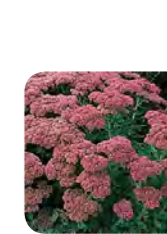
WINTER BERRY (WINTER)



TUFTED HAIRGRASS



BLACK EYED SUSAN



SEDUMS

SELECTED PLANTS



5) RAIN GARDENS



SEDGES



ANDROPOGON



BLUE CARDINAL FLOWER



BLACK EYED SUSAN

SELECTED PLANTS