



# TESD CHS Expansion

PRELIMINARY PROGRAMMING



January 28, 2019





## INSTRUCTIONAL NEEDS RECAP

TESD CHS EXPANSION | PRELIMINARY PROGRAMMING

## Conestoga Current Backdrop

- Access, Options and Choice
- Maximization of Current Footprint
- Enrollment Projections Increasing



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Years 2017 – 2021

Enrollment	2017 - 2018				2018 - 2019				2019 - 2020				2020 - 2021			
	Actual 2205				Projected 2237				Projected 2295				Projected 2391			
	Avail Rooms	Avail Pds	Pds Used	% utilized	Avail Rooms	Avail Pds	Pds Used	% utilized	Avail Rooms	Avail Pds	Pds Used	% utilized	Avail Rooms	Avail Pds	Pds Used	% utilized
Regular Classrooms	70	560	511	91%	73	584	518	89%	73	584	532	91%	73	584	554	95%
Special Classrooms	33	264	229	87%	33	264	232	88%	33	264	238	90%	33	264	248	94%
Science Labs	18	144	133	92%	18	144	135	94%	18	144	138	96%	18	144	144	100%
FCS Rooms	3	24	20	83%	3	24	20	84%	3	24	21	86%	3	24	22	90%
Art Rooms	6	48	39	81%	6	48	39	82%	6	48	40	84%	6	48	42	88%
Music	3	24	16	67%	3	24	16	68%	3	24	17	69%	3	24	17	72%
BT Room	3	24	21	88%	3	24	21	89%	3	24	22	91%	3	24	23	95%
Small Rooms	9	72	63	88%	9	72	64	89%	9	72	66	92%	9	72	69	96%
Total	112	896	803	90%	115	920	815	89%	115	920	836	91%	115	920	871	95%
Study Hall	70	560	34	6%	73	584	34	6%	73	584	34	6%	73	584	34	6%
Reg Classroom w/ SH	70	560	545	97%	73	584	552	95%	73	584	566	97%	73	584	588	101%
Total RM Use	112	896	837	93%	115	920	849	92%	115	920	870	95%	115	920	905	98%



Years 2021-2024

Enrollment	2021 - 2022				2022 - 2023				2023-2024			
	Projected		2456		Projected		2458		Projected		2512	
	Avail Rooms	Avail Pds	Pds Used	% utilized	Avail Rooms	Avail Pds	Pds Used	% utilized	Avail Rooms	Avail Pds	Pds Used	% utilized
Regular Classrooms	73	584	569	97%	73	584	569	97%	73	584	582	100%
Special Classrooms	33	264	255	97%	33	264	255	97%	33	264	261	99%
<i>Science Labs</i>	18	144	148	103%	18	144	148	103%	18	144	151	105%
<i>FCS Rooms</i>	3	24	22	92%	3	24	22	92%	3	24	23	95%
<i>Art Rooms</i>	6	48	43	90%	6	48	43	90%	6	48	44	92%
<i>Music</i>	3	24	18	74%	3	24	18	74%	3	24	18	76%
<i>BT Room</i>	3	24	23	98%	3	24	23	98%	3	24	24	100%
Small Rooms	9	72	71	98%	9	72	71	98%	9	72	72	100%
Total	115	920	894	97%	115	920	895	97%	115	920	915	99%
	Avail Rooms	Avail Pds	Pds Used	% Utilized	Avail Rooms	Avail Pds	Pds Used	% Utilized	Avail Rooms	Avail Pds	Pds Used	% Utilized
Study Hall	73	584	34	6%	73	584	34	6%	73	584	34	6%
Reg Classroom w/ SH	73	584	603	103%	73	584	603	103%	73	584	616	105%
Total RM Use	115	920	928	101%	115	920	929	101%	115	920	949	103%



What are  
Possible  
Actions  
Moving  
Forward?

- Build a New School
- Grade Level Realignment and Construction
- Expand Current Facilities

DECISION MADE IN MAY 2018



## *CHS Needs: Additional Space*

- 8 Additional Regular Classrooms
- 2 Additional Special Education Classrooms
- 4 Additional Science Labs
- 1 Additional Art Room
- 1 Additional Kitchen
- Fabrication Lab
- 1 Large Flexible Learning Space
- Additional Smaller Spaces for Meetings, Offices, Small Group Instruction

PRESENTED TO THE EDUCATION COMMITTEE, NOVEMBER 2018





## *CHS Needs: Expanded Space*

- Expanded Nurse Suite
- Expanded Library
- Expanded Cafeteria
- Expanded Student Services Suite
- Expanded Health and Fitness Room

PRESENTED TO THE EDUCATION COMMITTEE, NOVEMBER 2018







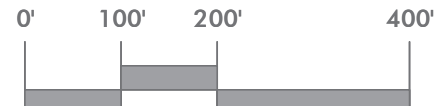
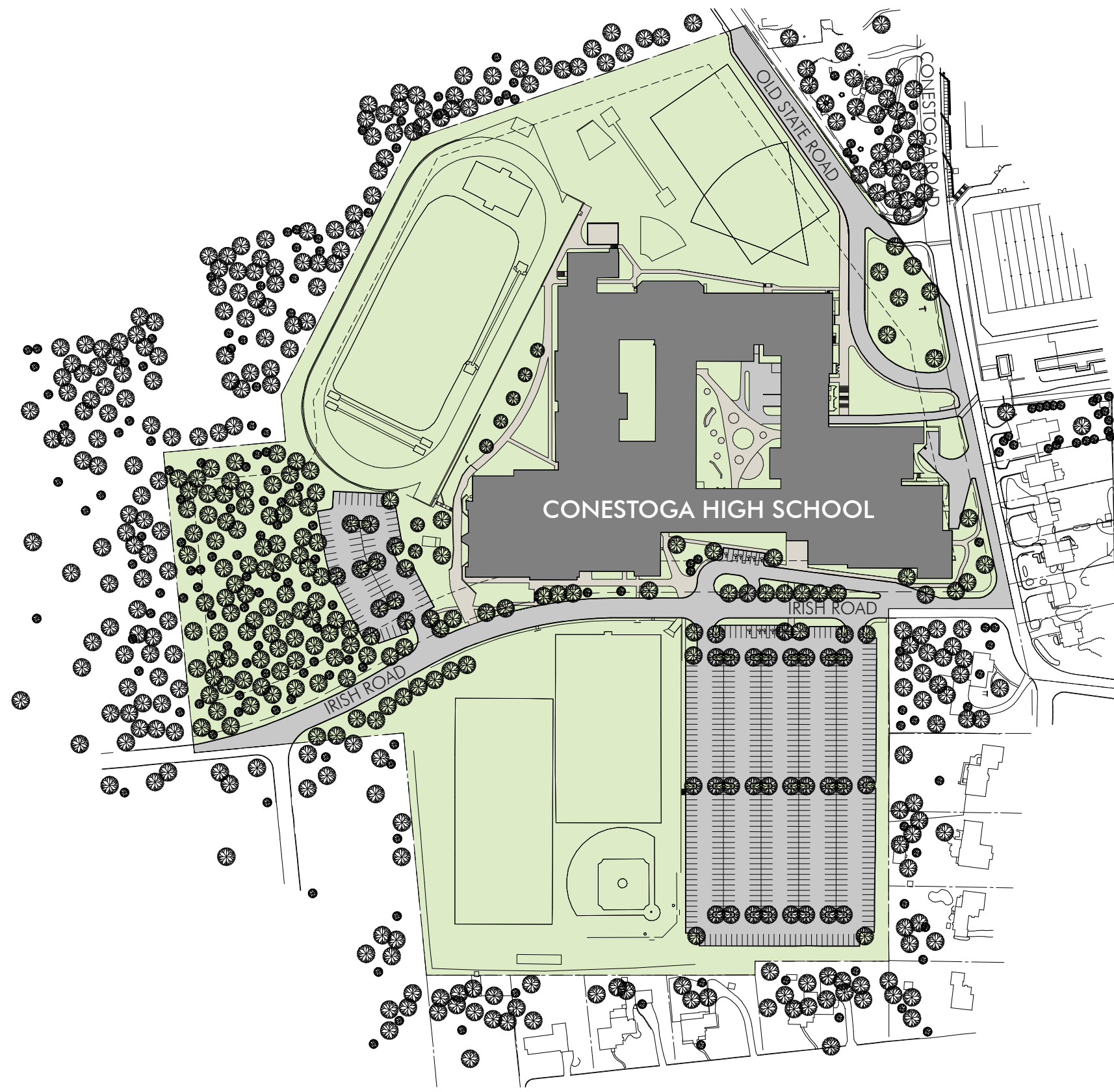
# EXISTING FACILITY ANALYSIS

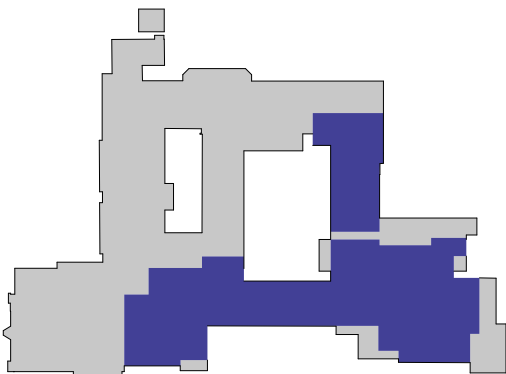
TESD CHS EXPANSION | PRELIMINARY PROGRAMMING





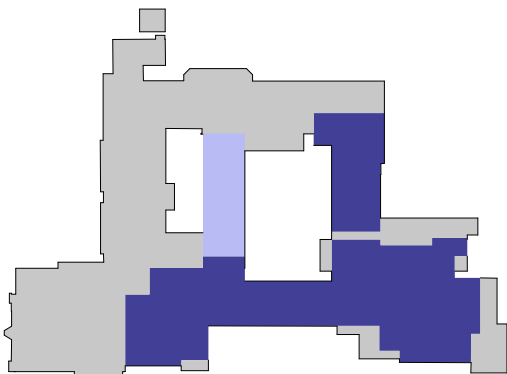






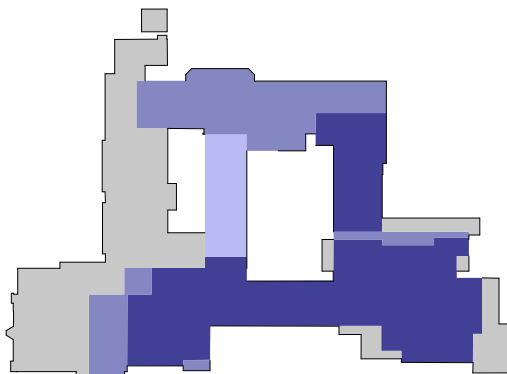
1954 BUILDING

The original building from 1954 included common areas still in generally the same location today; the auditorium, cafeteria, main office and gymnasium.



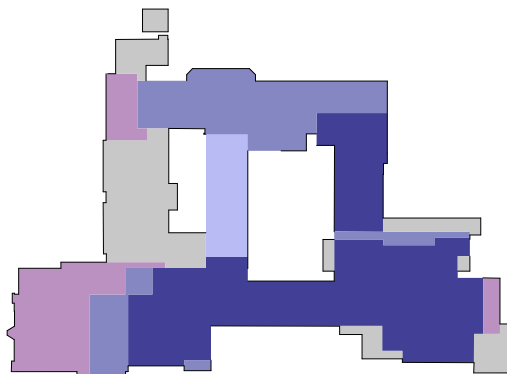
1958 ADDITIONS

In 1958 a two-story classroom wing was added. This currently houses 18 classrooms, 3 seminar rooms, an art classroom, and support spaces.



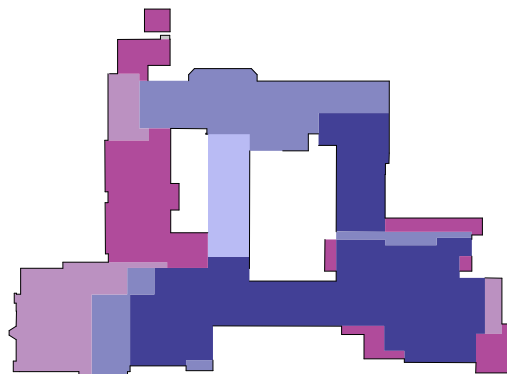
1966 ADDITIONS + RENOVATIONS

In 1966, five additions included a two-story classroom wing with new lecture space, science labs and library, as well as separate expansions of the cafeteria and gym lockers. A new auxiliary gym was added at this time as well.



1989 ADDITIONS + RENOVATIONS

A significant 2-phase additions and renovations project in 1989 provided utility upgrades throughout the building, while also adding a two-story science lab addition, a new dance studio, expanding the gymnasium lockers by 60% and adding a new competition-size basketball gym.



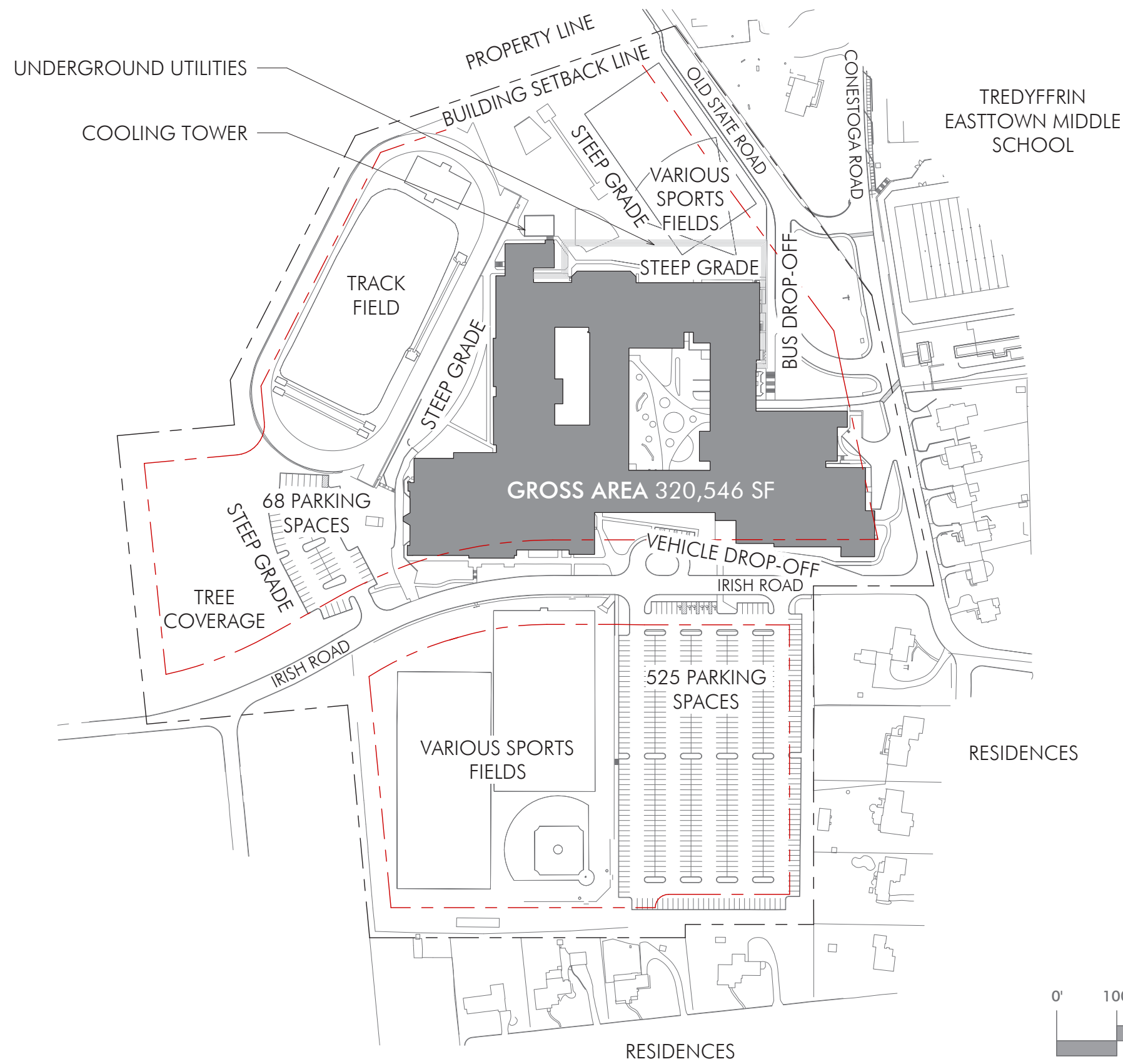
2004 ADDITIONS + RENOVATIONS

This major project provided 6 separate building additions, renovations throughout the school and pervasive site improvements. Additions provided a two-story wing with 10 chemistry labs and 14 general classrooms; expansion and full renovation of the kitchen cafeteria; expansion of the music wing; an expanded and renovated building entrance and administration suite; and a new central chiller plant. Renovations addressed code and accessibility compliance, systems improvements, and provided building-wide air conditioning.

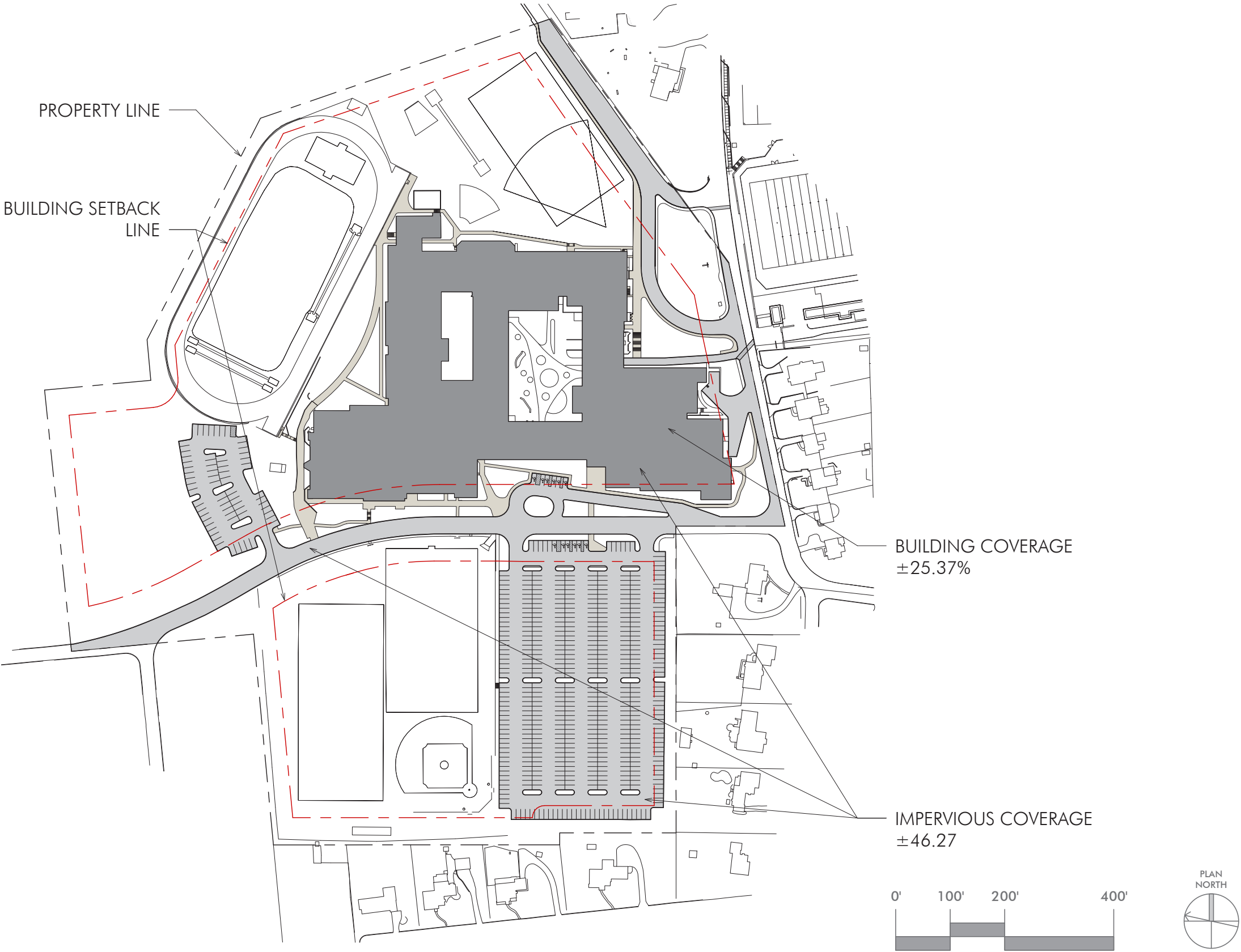
CHRONOLOGY	
	PRESENT BUILDING FOOTPRINT
	1954 BUILDING
	1958 ADDITIONS
	1966 ADDITIONS
	1989 ADDITIONS
	2004 ADDITIONS

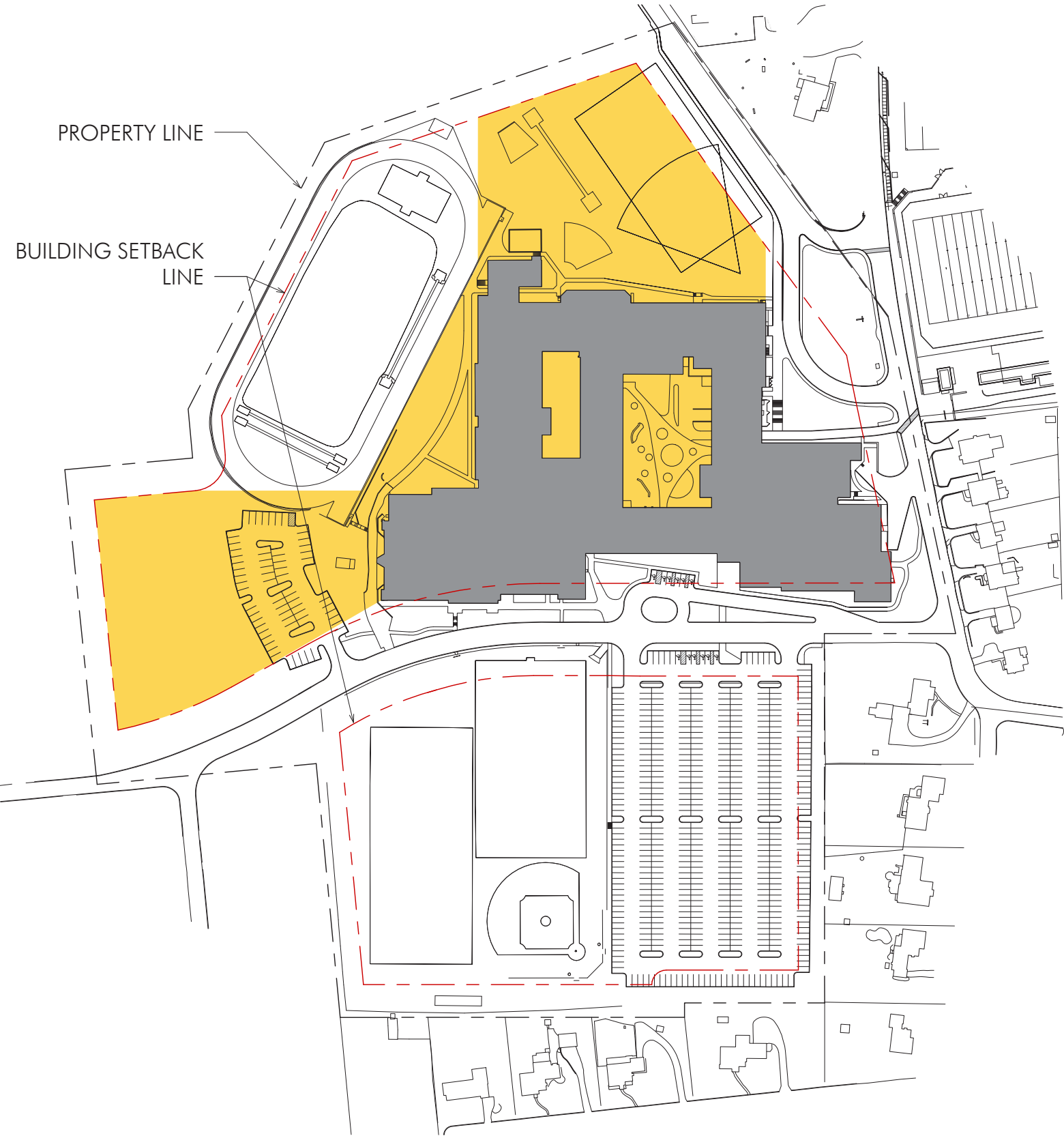






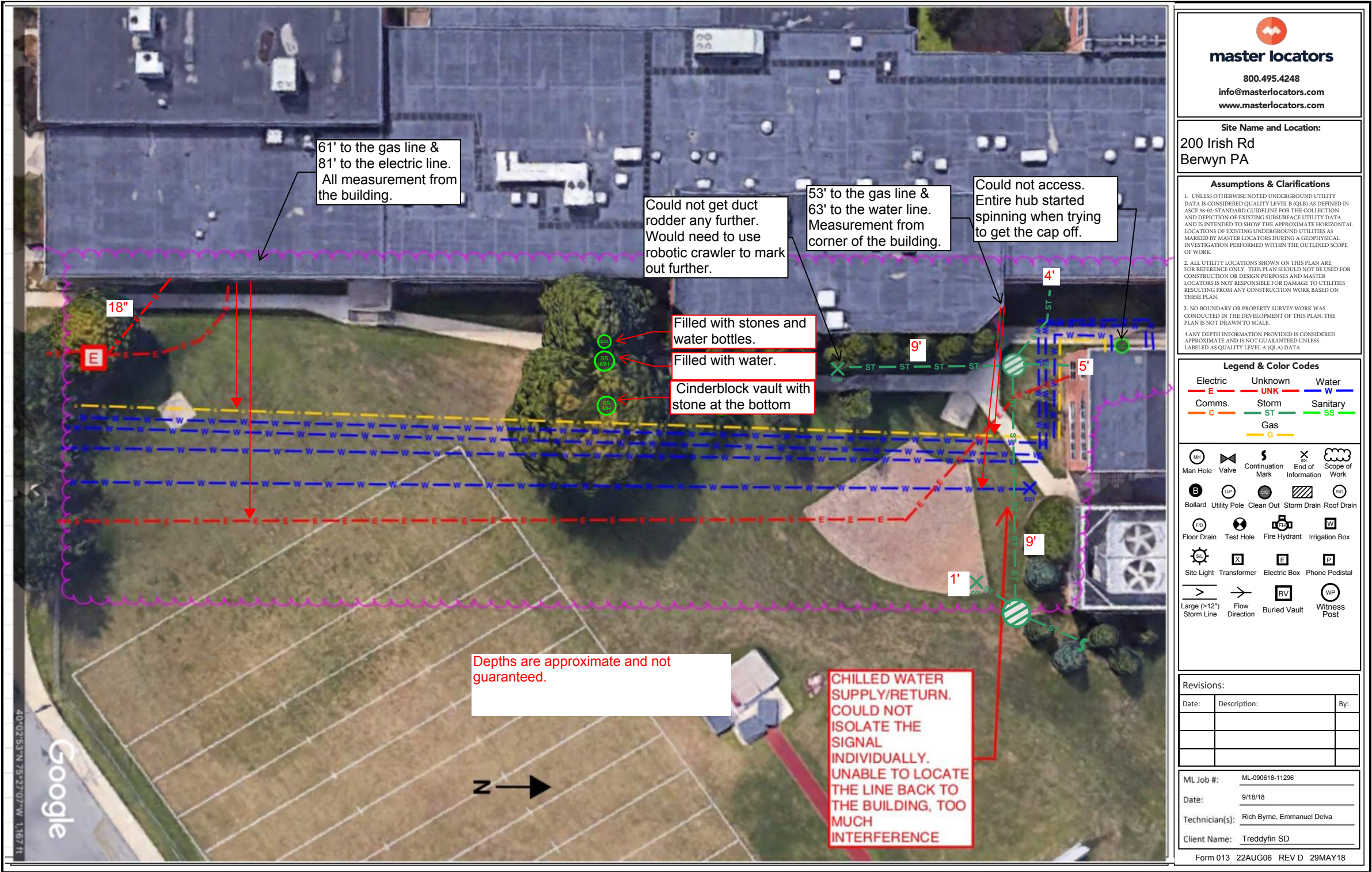
Conestoga High School Zoning Summary			
Tredyffrin Township			
Zoning District: R1 - Residential			
Site Area			
	Acres	Square Feet	
Lot Area	19.90	866844	
Description	Current Ordinance Section	Ordinance Required	Existing
Use Regulations	208-21(B)	Public Agency (School)	School
Min. Lot Area	208-23(A)	80,000 SF	>80000 SF
Min. Lot Width	208-23(A)	200 FT	> 200 FT
Max. Building Coverage	208-23(B)	10%	25.37%
Max Impervious Coverage	208-23(C)	25%	46.27%
Min. Front Yard	208-23(D)	50 FT	Non-Conf.
Min. Side Yard, 2 Req.	208-23(E)	40 FT	> 40 FT
Min. Rear Yard	208-23(F)	50 FT	Non-Conf.
Max. Height	208-23(G)	35 FT	-
Min. Buffer to Residential	208-23(H)	25 FT	Non-Conf.
Buffer Use	208-102(B)(2)	No Sidewalk	Non-Conf.
One Entrance/ Exit in Buffer	208-102(B)(4)	More than one *	Non-Conf.
No More Than Two Accesses	208-102(C)(1)	300 FT Separation Req'd	-
Off-Street Loading Space	208-104	Provided on the Lot	Yes
Add'l On-Site Impervious			
Add'l Off-Site Impervious			
Basin Footprint (5:1)			







DRAWING BY MASTER LOCATORS, 2018

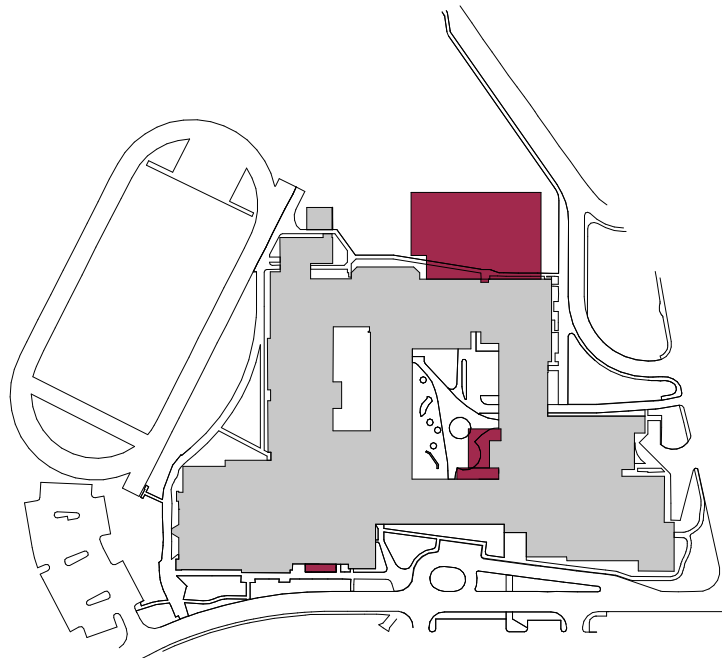






## ADDITION DESIGN

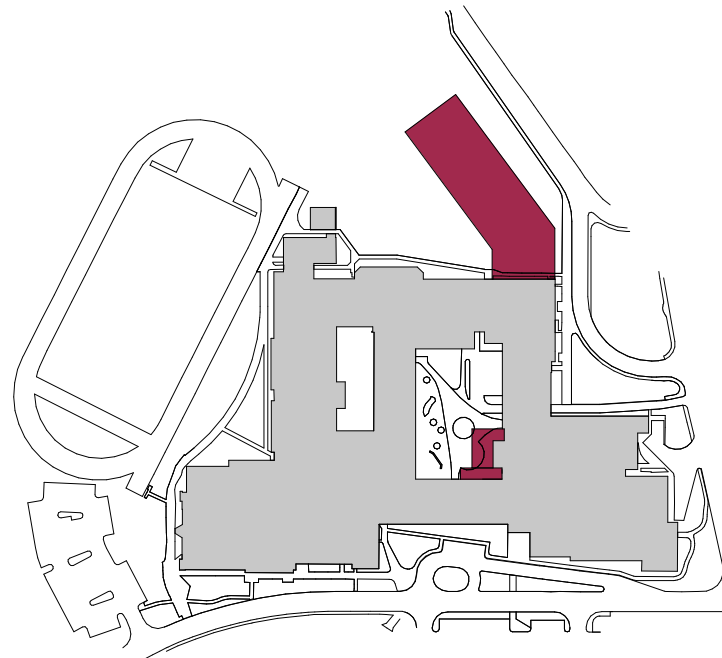
TESD CHS EXPANSION | PRELIMINARY PROGRAMMING



"The Cul-de-sac"

#### DISADVANTAGES:

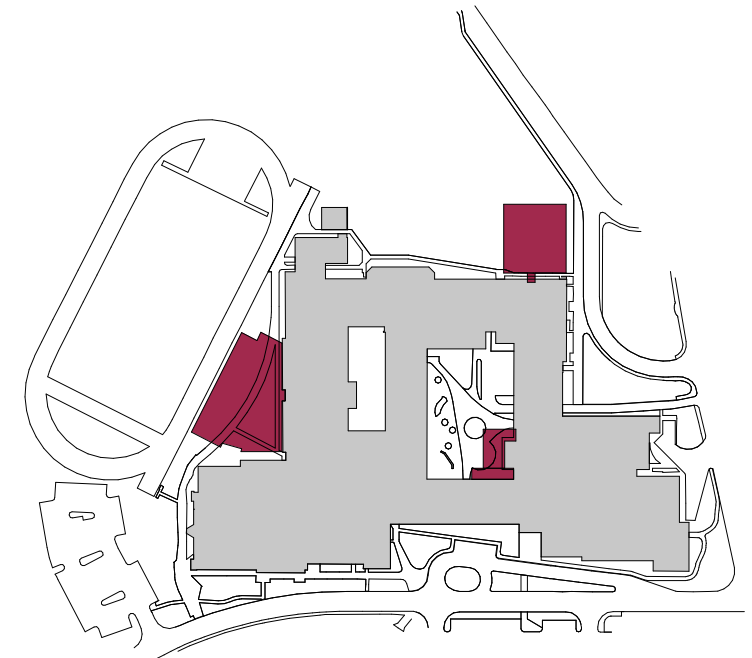
- Did not meet educational space programming needs
- Created challenging connection to existing building with split level circulation
- New labs lack adjacency to existing labs
- Infill addition for student services creates less desirable space
- Creates an addition for Gym storage, judged too costly



"The Spur"

#### DISADVANTAGES:

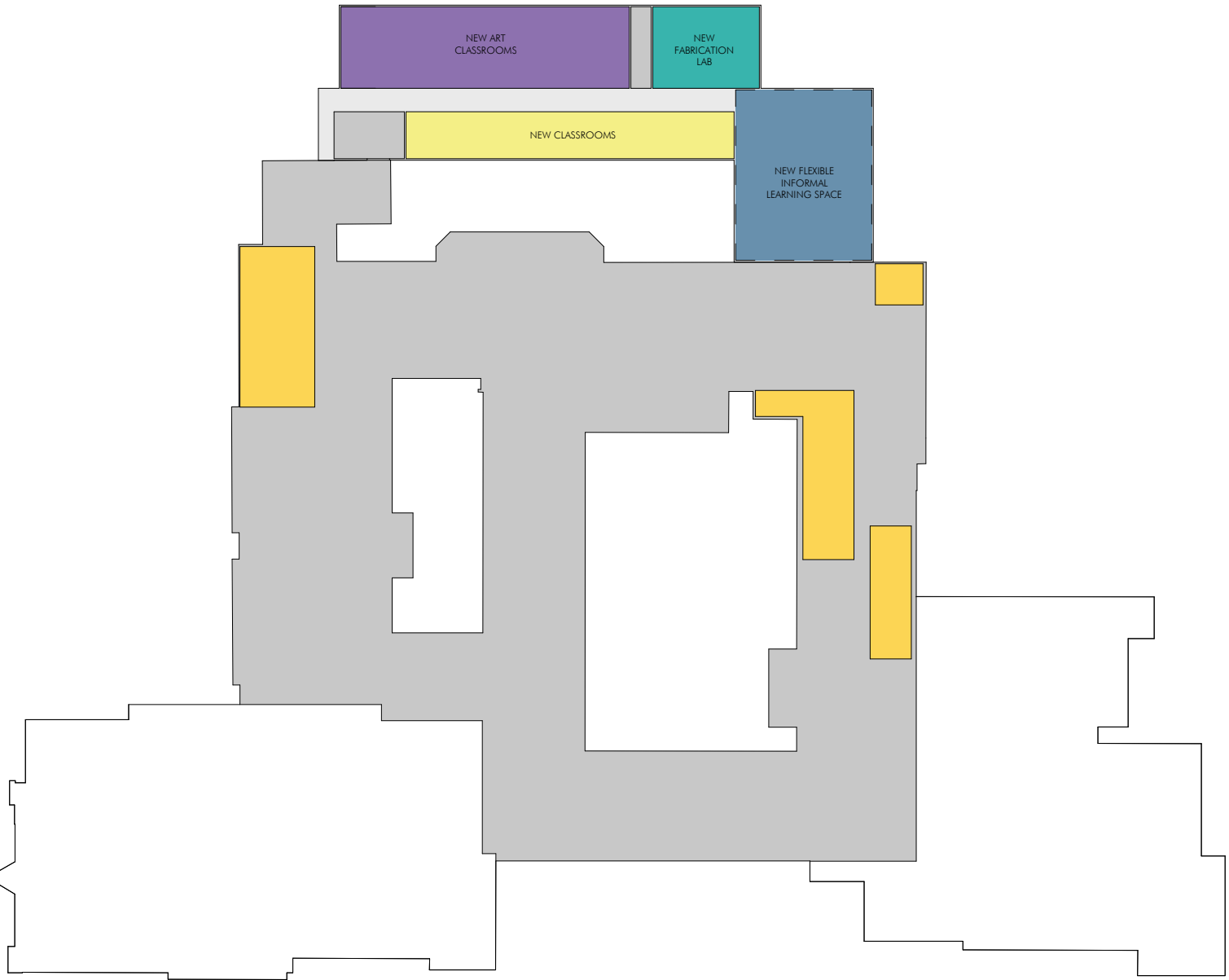
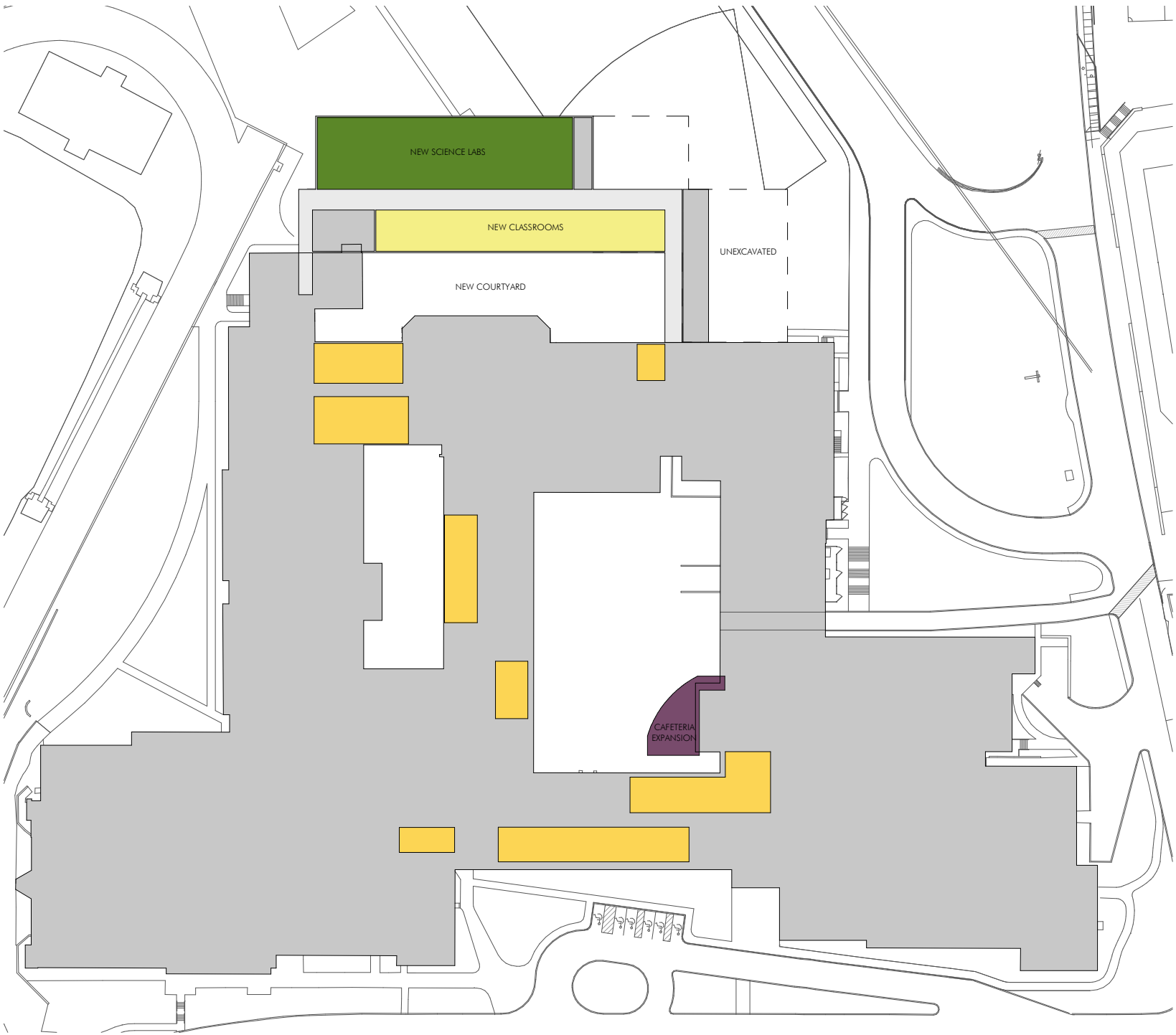
- Did not meet educational space programming needs
- Elongated two-story addition at Old State Road; building scale would be challenge for neighborhood and remote classrooms would create instructional challenges
- Only one connection to existing school at second floor bus lobby
- New labs lack adjacency to existing labs
- Extremely long distance from end of corridor at second (third) level of new addition all the way back to first level core classroom spaces in existing building
- Infill addition for student services creates less desirable space
- Additional costs associated with providing accessibility to new level(s)



"The Triangle"

#### DISADVANTAGES:

- Did not meet educational space programming needs
- Created challenging triangular infill, disrupting existing science wing
- Creates two areas of construction on the site
- Two-story addition at Old State Road; building scale would be a challenge for neighborhood
- Infill addition for student services creates less desirable space
- Additional costs associated with providing accessibility to new level(s)
- Cost premium to infill existing 'pockets' of available footprint



RENOVATED SPACES

PROPOSED FIRST FLOOR PLAN

PROPOSED SECOND FLOOR PLAN



HIGH SCHOOL EXPANSION ADDITION: 62,500 SF  
CAFETERIA EXPANSION ADDITION: 1,800 SF  
RENOVATED AREA: 27,700 SF

ADDITIONAL SPACE PROGRAM

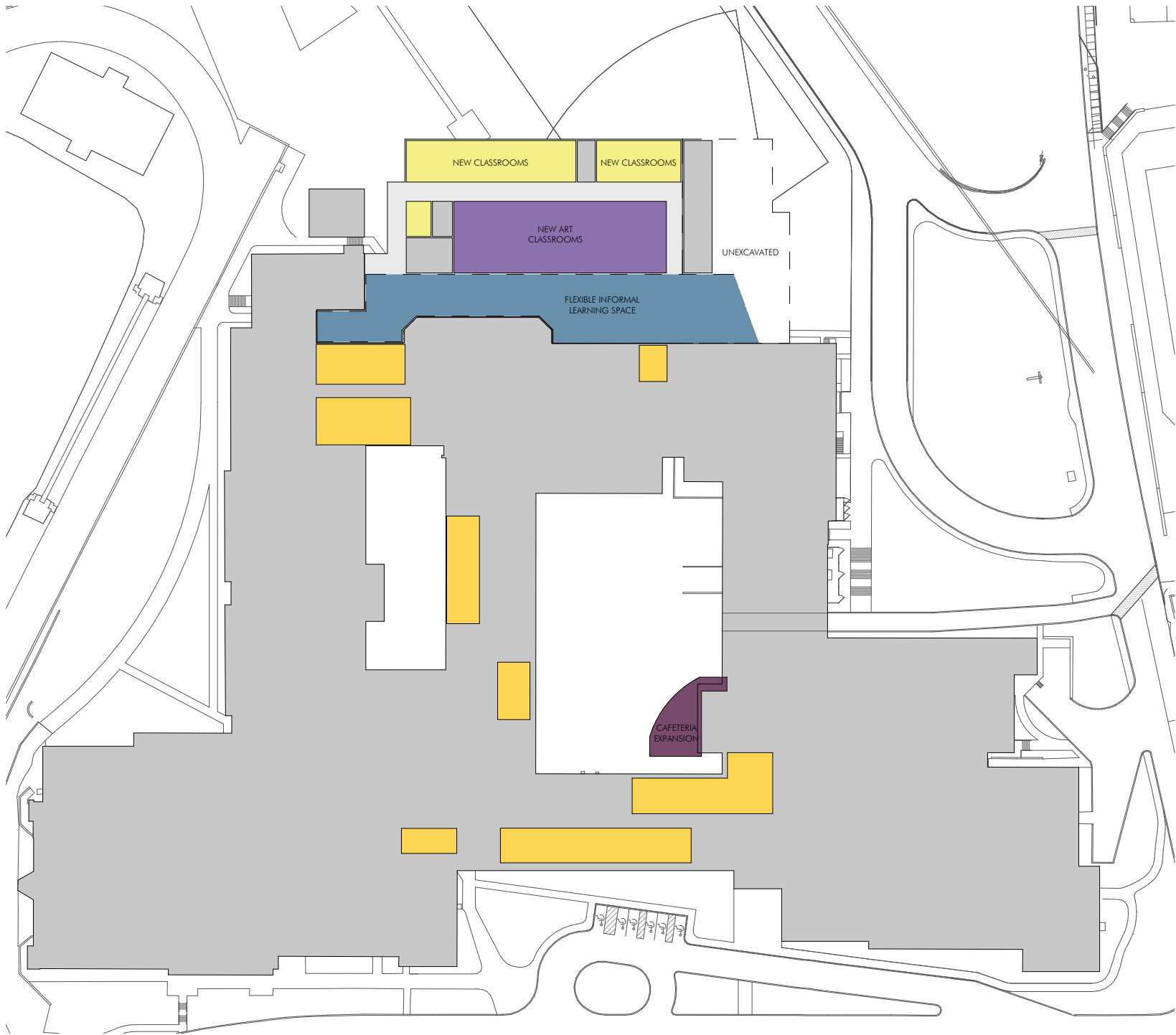
- 8 ADDITIONAL REGULAR CLASSROOMS
- 2 ADDITIONAL SPECIAL EDUCATION CLASSROOMS
- 4 ADDITIONAL SCIENCE LABS
- 1 ADDITIONAL ART ROOM
- 1 ADDITIONAL KITCHEN CLASSROOM
- 3500 SF FABRICATION LAB
- 4 SMALL FLEXIBLE ROOMS
- 2 MEDIUM FLEXIBLE ROOMS
- 1 LARGE FLEXIBLE ROOM
- 9500 SF FLEXIBLE INFORMAL LEARNING SPACE

EXPANDED SPACE PROGRAM

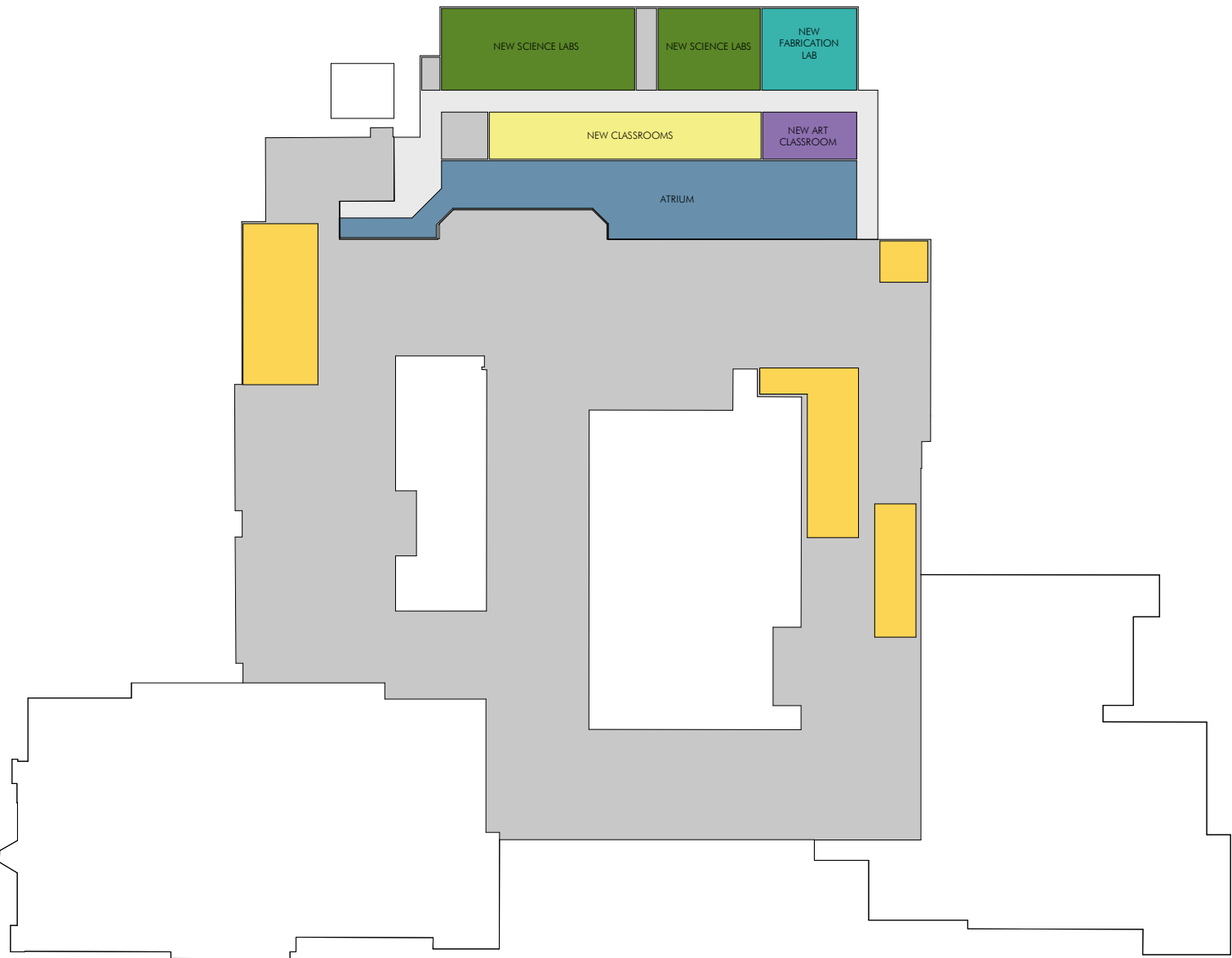
- 750 SF FITNESS ROOM EXPANSION
- 1000 SF LIBRARY EXPANSION
- 1800 SF CAFETERIA EXPANSION
- 2200 SF STUDENT SERVICES EXPANSION
- 500 SF NURSE'S OFFICE EXPANSION







PROPOSED FIRST FLOOR PLAN



PROPOSED SECOND FLOOR PLAN

RENOVATED SPACES



HIGH SCHOOL EXPANSION ADDITION: 66,200 SF  
CAFETERIA EXPANSION ADDITION: 1,800 SF  
RENOVATED AREA: 27,000 SF

ADDITIONAL SPACE PROGRAM

- 9 ADDITIONAL REGULAR CLASSROOMS
- 2 ADDITIONAL SPECIAL EDUCATION CLASSROOMS
- 4 ADDITIONAL SCIENCE LABS
- 1 ADDITIONAL ART ROOM
- 1 ADDITIONAL KITCHEN CLASSROOM
- 3200 SF FABRICATION LAB
- 4 SMALL FLEXIBLE ROOMS
- 2 MEDIUM FLEXIBLE ROOMS
- 1 LARGE FLEXIBLE ROOM
- 12500 SF FLEXIBLE INFORMAL LEARNING SPACE

EXPANDED SPACE PROGRAM

- 750 SF FITNESS ROOM EXPANSION
- 1000 SF LIBRARY EXPANSION
- 1800 SF CAFETERIA EXPANSION
- 2200 SF STUDENT SERVICES EXPANSION
- 500 SF NURSE'S OFFICE EXPANSION





# INITIAL BUILDING CONCEPTS

TESD CHS EXPANSION | PRELIMINARY PROGRAMMING

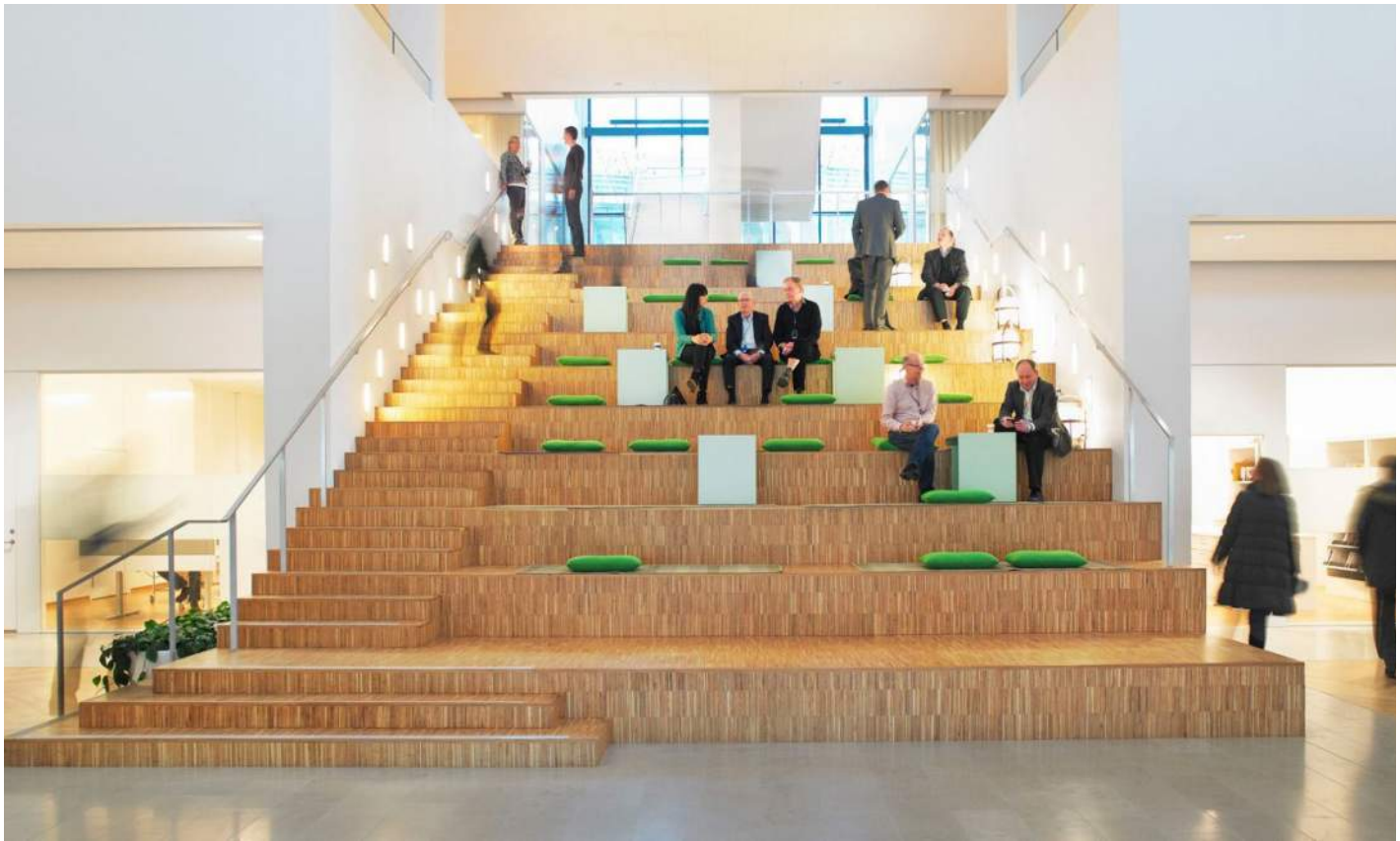








































## PARKING CONSIDERATIONS

TESD CHS EXPANSION | PRELIMINARY PROGRAMMING

Daily Needs	Existing	Future
Staff / Contracted Employees	282	317
Students	300	345
Visitors / Volunteers	12	37
TOTAL	594	699

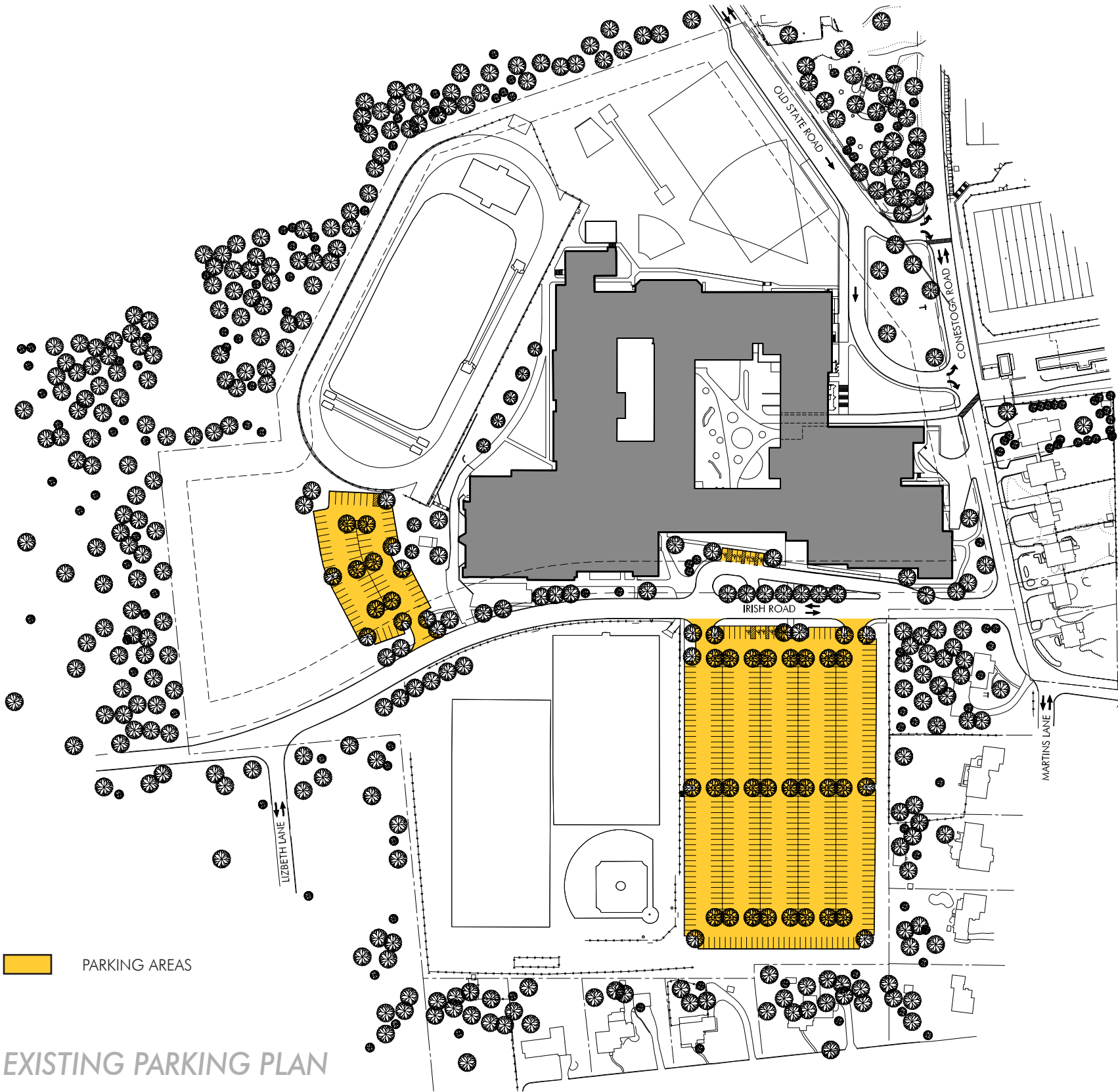
**Tredyffrin Township Zoning Ordinance**  
208-103 C (11) Off-street parking and loading requirements  
School, senior or secondary: at least 10 off-street parking spaces for each classroom, plus one space for each three seats in the auditorium or gymnasium, plus off-street loading space for at least seven school buses.

Existing Parking Requirements

Conestoga HS (100 Classrooms, 840 seats)	
Required spaces	1,280
Existing spaces	593

Proposed Parking Requirements with New Expansion

Conestoga HS (124 Classrooms, 840 seats)	
Required spaces	1,520
Existing spaces	593

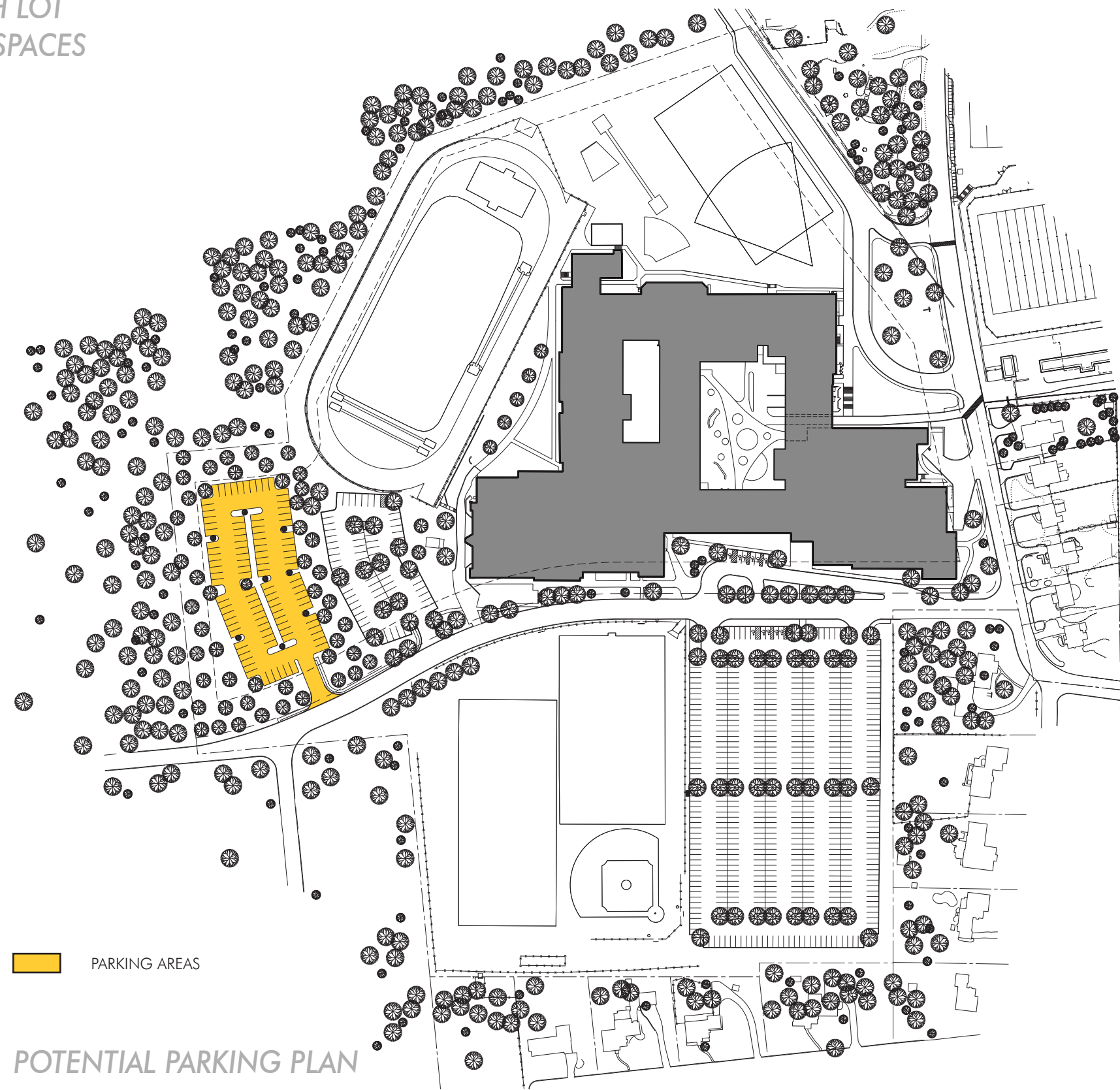


EXISTING PARKING PLAN

# POTENTIAL FUTURE PARKING

DRAFT

ADDITIONAL PARKING AT NORTH LOT  
PROVIDES AN ADDITIONAL 106 SPACES  
TO THE 593 EXISTING SPACES



PARKING AREAS

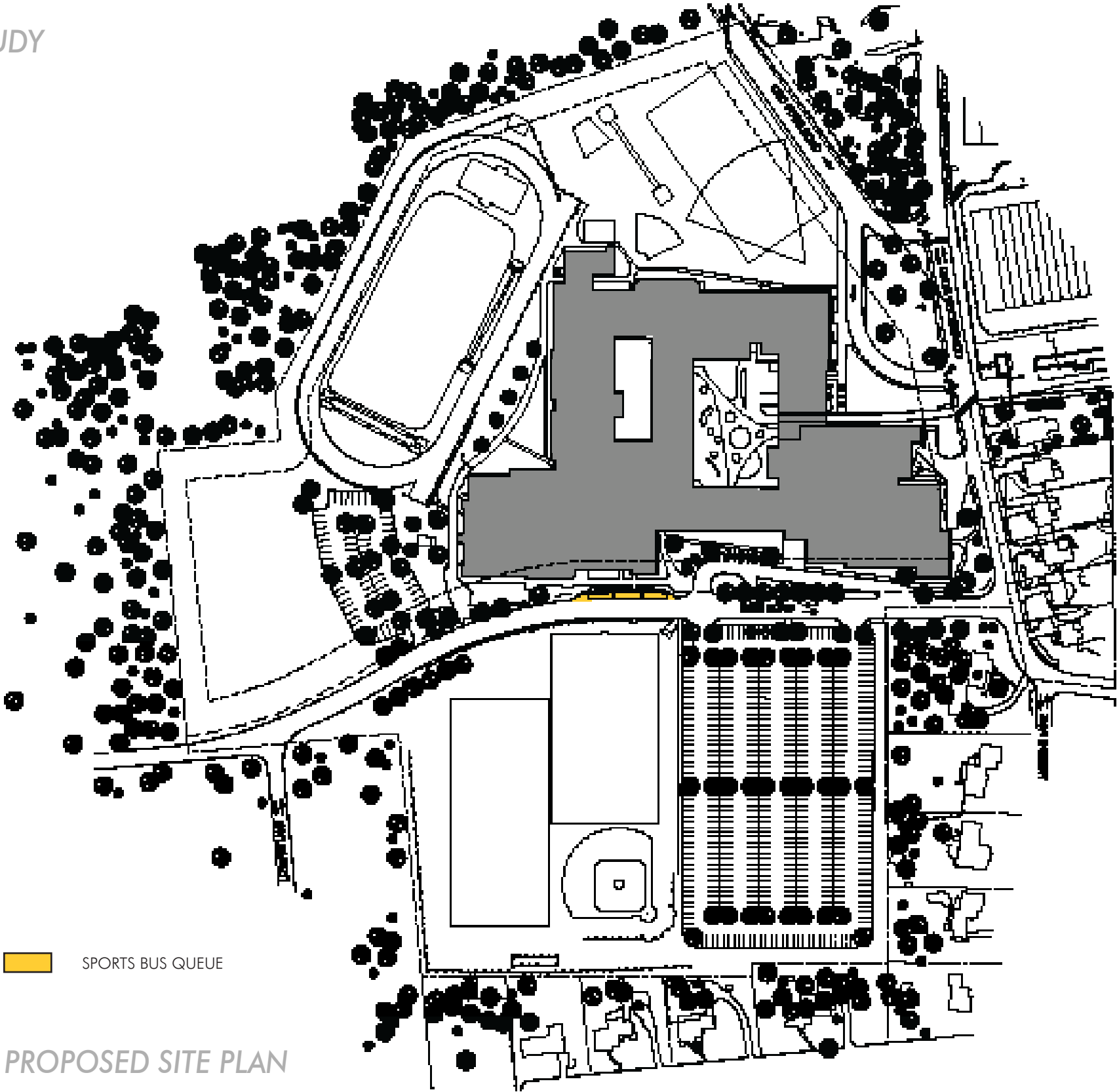
POTENTIAL PARKING PLAN





SPORTS BUS QUEUE  
FROM TE TRAFFIC FEASIBILITY STUDY  
AUGUST 2018

The Sports Bus Queue will create a lay-by area off of Irish Road in front of the Gym entrance to allow for the teams to load players and equipment on the buses in the afternoon, while allowing traffic to still move freely along Irish Road. This option requires grading for the lay-by and new sidewalk. A stormwater management system would need to be constructed to manage the additional impervious coverage. It will also require modifications to existing light standards, and trees.



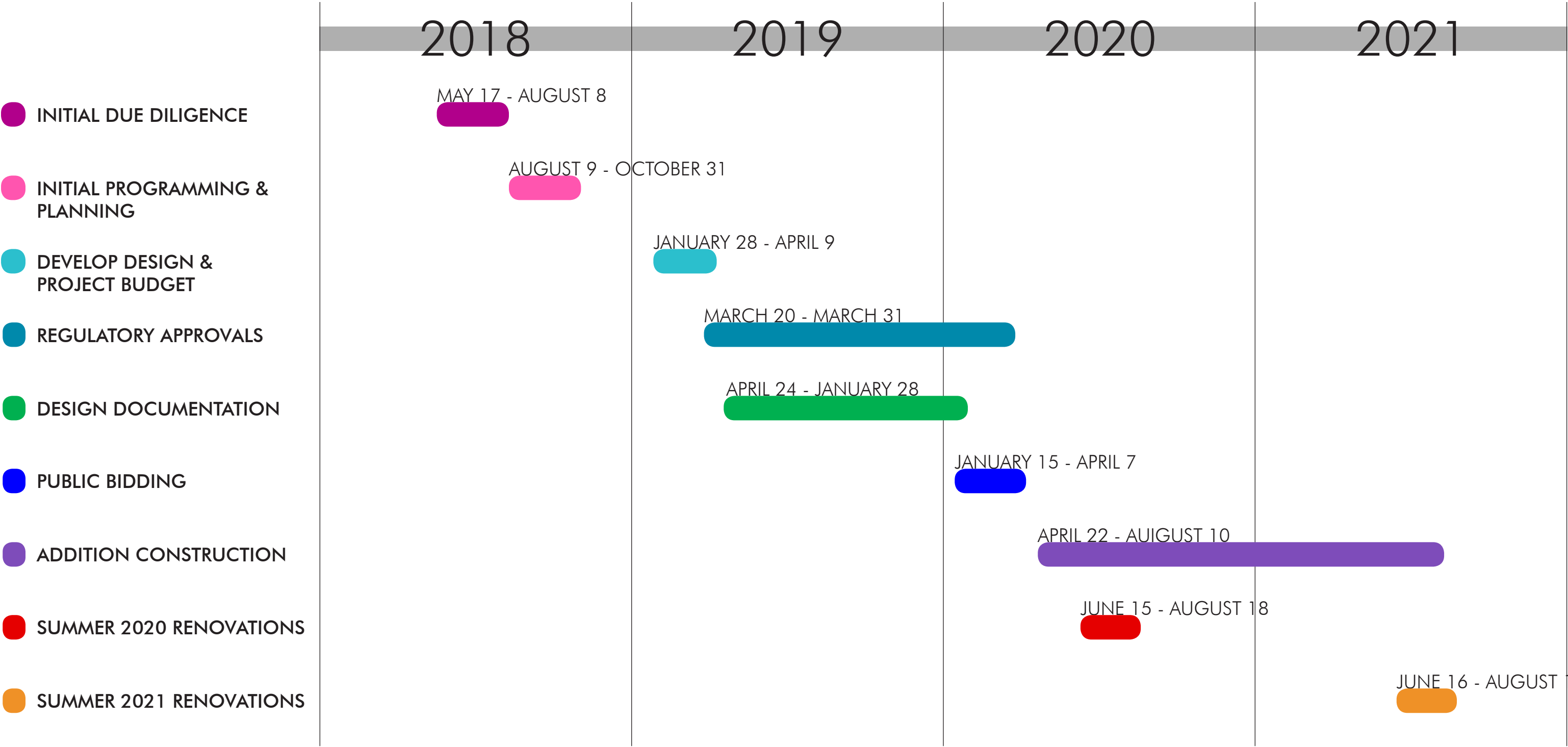
PROPOSED SITE PLAN





# PROJECT LOGISTICS

TESD CHS EXPANSION | PRELIMINARY PROGRAMMING





- CHS030 - Gym B: Weight Room expansion into storage
- CHS107 - Biology: Renovate Biology Labs in rooms 134, 138
- CHS158 - Physics: Renovate Lab rooms 281, 282 and 283
- CHS224 - Library reorganization, replace ACT assembly, new demountable partitions, clean ductwork, additional power & data drops, light fixtures
- CHS230 - Replace underground waste lines at Gym Lobby
- CHS232 - Heating system primary/secondary system and P10/P11/P12 upgrades
- CHS233 - Eliminate glycol system and add freeze protection safety upgrades
- CHS234 - Add (3) automated valves to the boilers
- CHS243 - Replace HVAC in Pottery Room (124) and adjacent UV 126
- CHS250 - Replace electric hand dryers in gym locker rooms and toilet rooms
- CHS273 - Replace Boilers
- CHS278 - Renovate Locker room bathrooms
- CHS281 - Refurbish FCS countertops, cabinets, remove dishwashers, replace flooring
- CHS287 - Classroom Renovations (rooms 202-210)
- CHS288 - Classroom Renovations (rooms 134-136)
- CHS291 - Renovate 1 set of Ganged Restrooms

These projects would be included in the renovation work and are estimated to cost a total of \$4,526,703.00.

