ARROWHEAD ELEMENTARY SCHOOL FACILITIES STUDY

June 4, 2019

kcba Architects

KCBA – *Architecture/Interior Design/Structural Eng.*

Snyder Hoffman Associates – *MEP Engineering*

Fidevia Incorporated– *Construction Manager*

Methacton School District Administration

ENROLLMENT

SECURITY

CURRICULUM

CODE COMPLIANCE

EDUCATIONAL

OPERATIONAL

FLEXIBILITY

BUILDING SYSTEMS

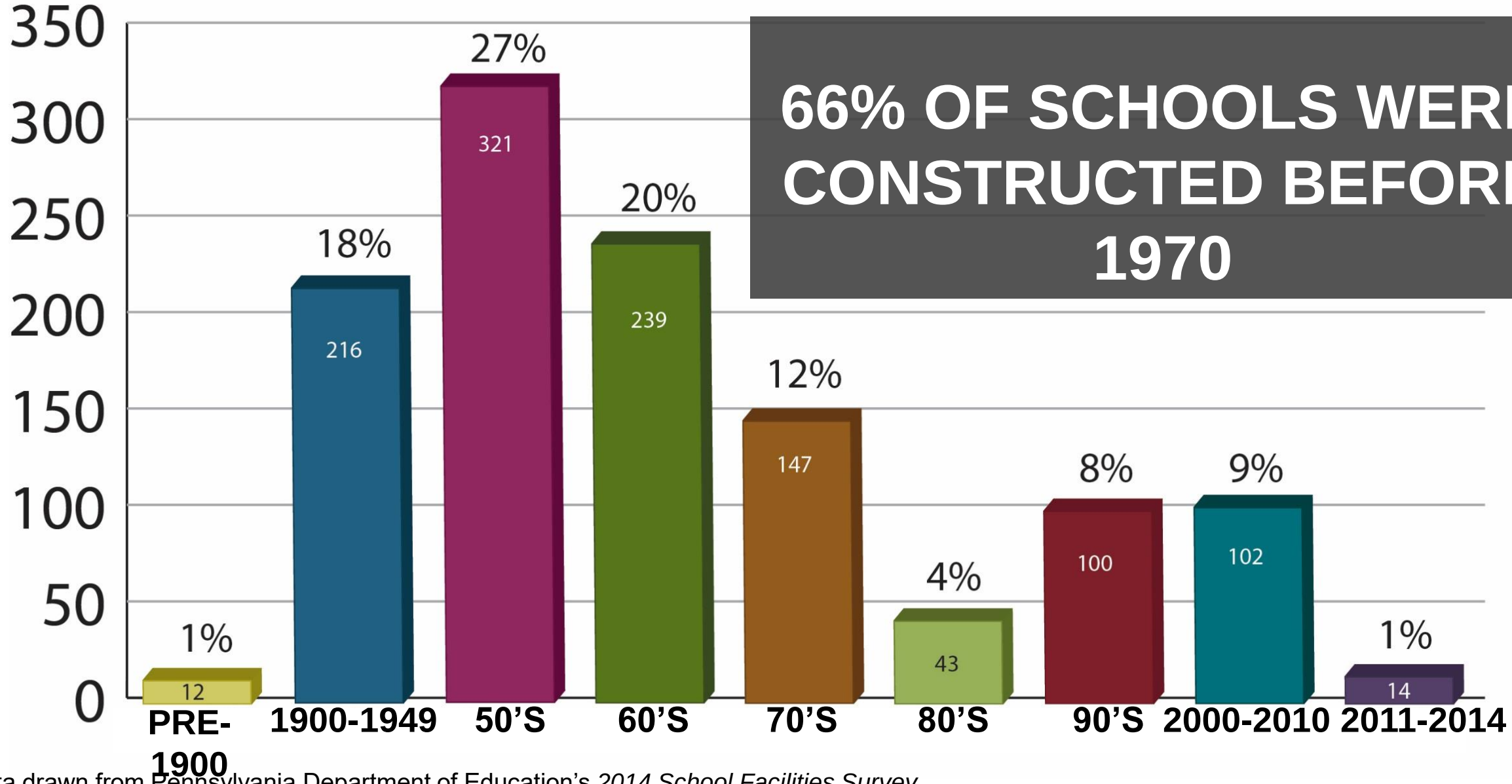
TECHNOLOGY

EFFICIENCY

kcba Architects


YOU’RE NOT ALONE

YEAR OF ORIGINAL CONSTRUCTION FOR 1,194 SCHOOL BUILDINGS IN PA



66% OF SCHOOLS WERE CONSTRUCTED BEFORE 1970

*Data drawn from Pennsylvania Department of Education’s *2014 School Facilities Survey*.

BUILDING SYSTEM PROBLEMS IN PENNSYLVANIA'S SCHOOLS

What is the biggest problem with school buildings?

	All School Districts	Rural	Urban	Suburban	CTCs	IUs
Mechanical/ Electrical /HVAC issues	43.0%	46.4%	37.5%	38.8%	30.0%	30.0%
Other	20.4%	25.6%	18.8%	12.5%	17.5%	20.0%
Not suited to modern teaching/ technology	14.9%	12.0%	12.5%	20.0%	10.0%	10.0%
Structural issues	11.3%	10.4%	12.5%	12.5%	5.0%	10.0%
Inadequate space	10.4%	5.6%	18.8%	16.3%	37.5%	20.0%

*Data drawn from 2016-17 study commissioned by the Pennsylvania Public Education Foundation

What's Changed?

- The **workforce** has changed
- The way we **teach** has changed
- Our school buildings need to be **adaptable** to these educational changes

Education of the Past

Current Educational Environments

Education of the Past

Current Educational Environments

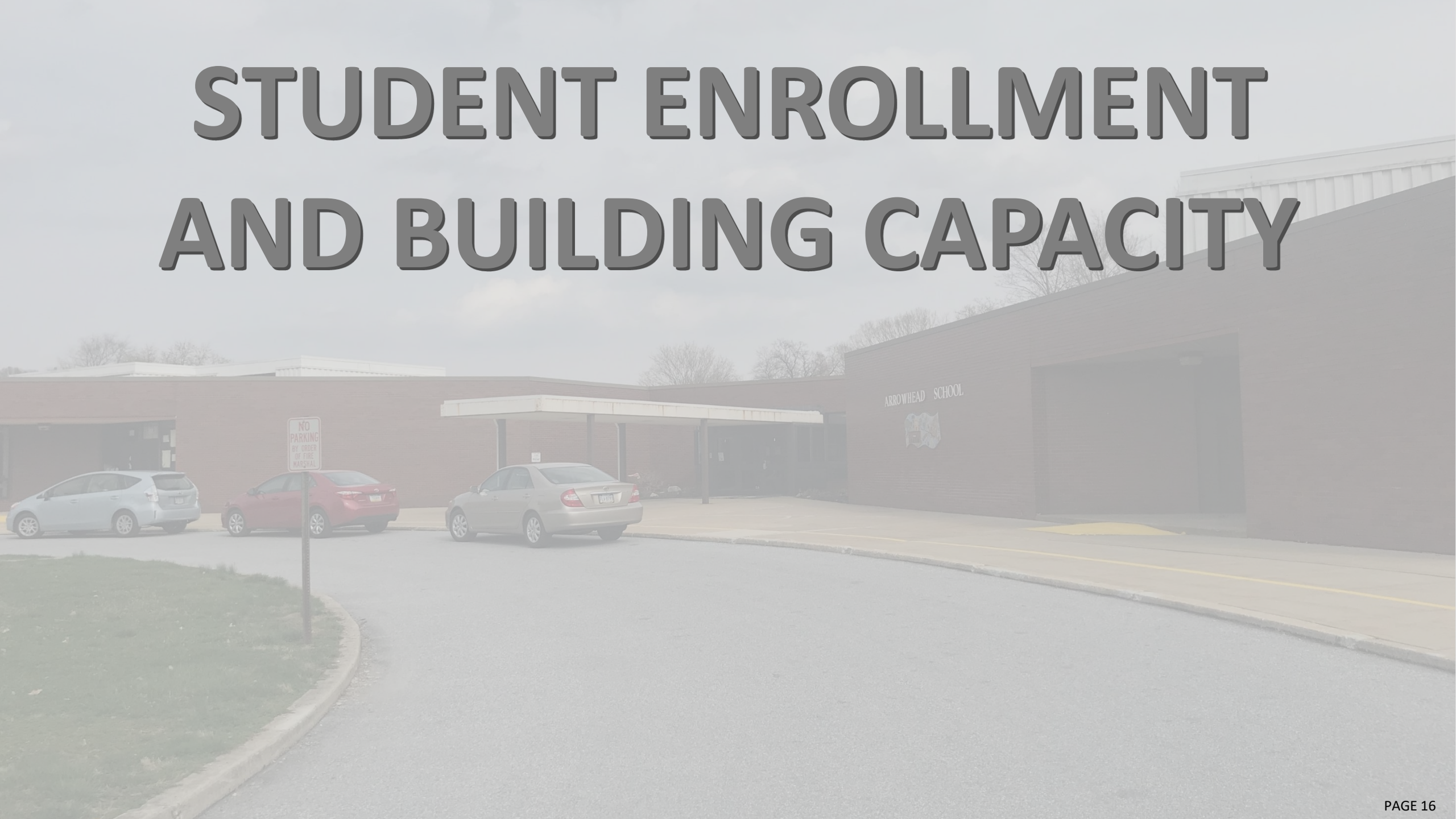
Workplace of the Past

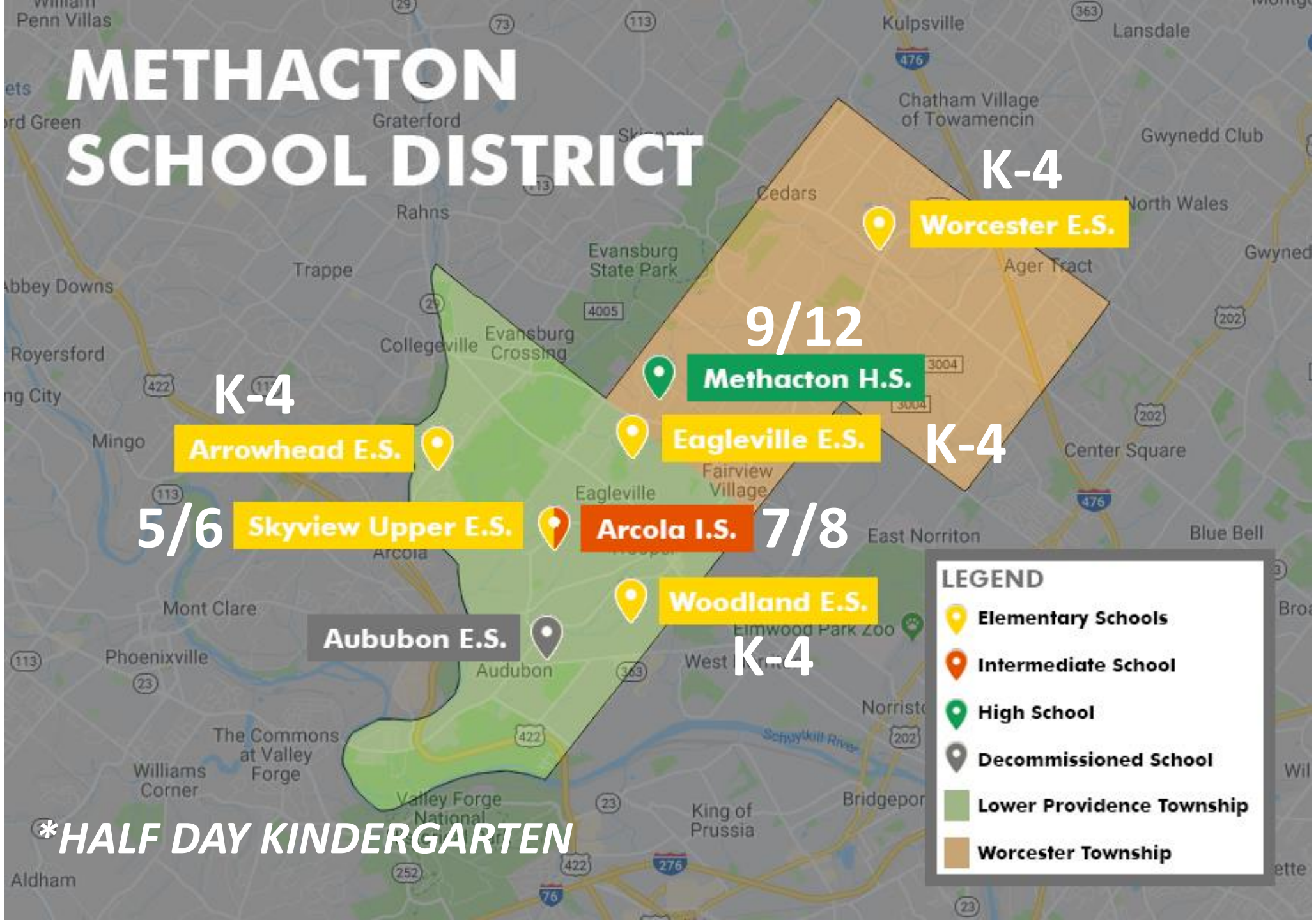
Today's Manufacturing

Current Educational Environments

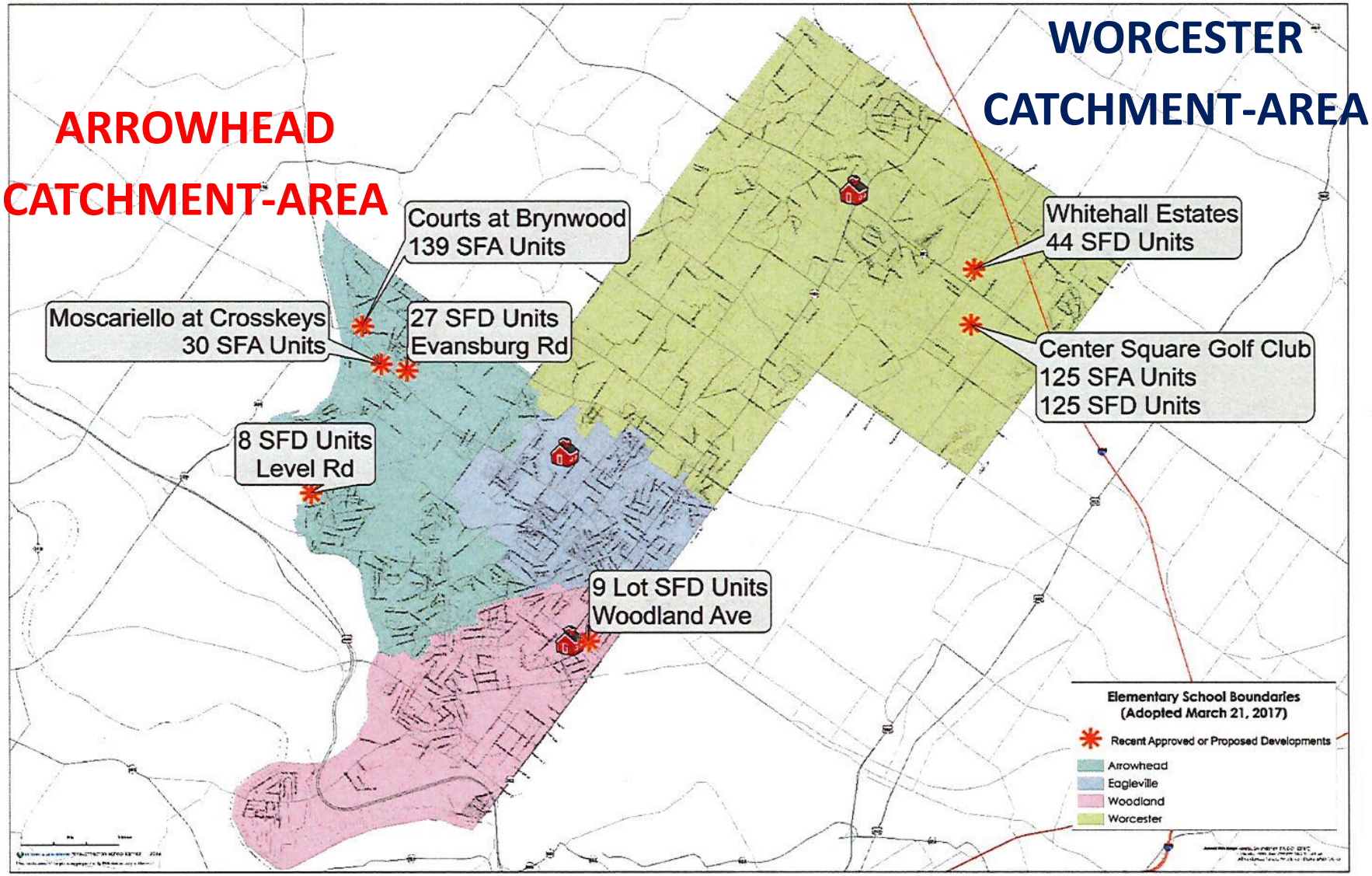
Current Educational Environments

STUDENT ENROLLMENT AND BUILDING CAPACITY




METHACTON
SCHOOL DISTRICT
K-4
Worcester E.S.
9/12
Methacton H.S.
K-4
Arrowhead E.S.
Eagleville E.S.
K-4
5/6
Skyview Upper E.S.
Arcola I.S.
7/8
Woodland E.S.
Aububon E.S.
K-4
*HALF DAY KINDERGARTEN
LEGEND
Elementary Schools
Intermediate School
High School
Decommissioned School
Lower Providence Township
Worcester Township

MSD Pipeline Residential Projects (2016 & 2017)



MILONE & MACBROOM

Methacton
SCHOOL DISTRICT

EFFECTS OF FULL DAY KINDERGARTEN

EFFECTS OF FULL DAY KINDERGARTEN

Capacity of one (1) Half Day Kindergarten = 44

- **22 in the AM**
- **22 in the PM**

EFFECTS OF FULL DAY KINDERGARTEN

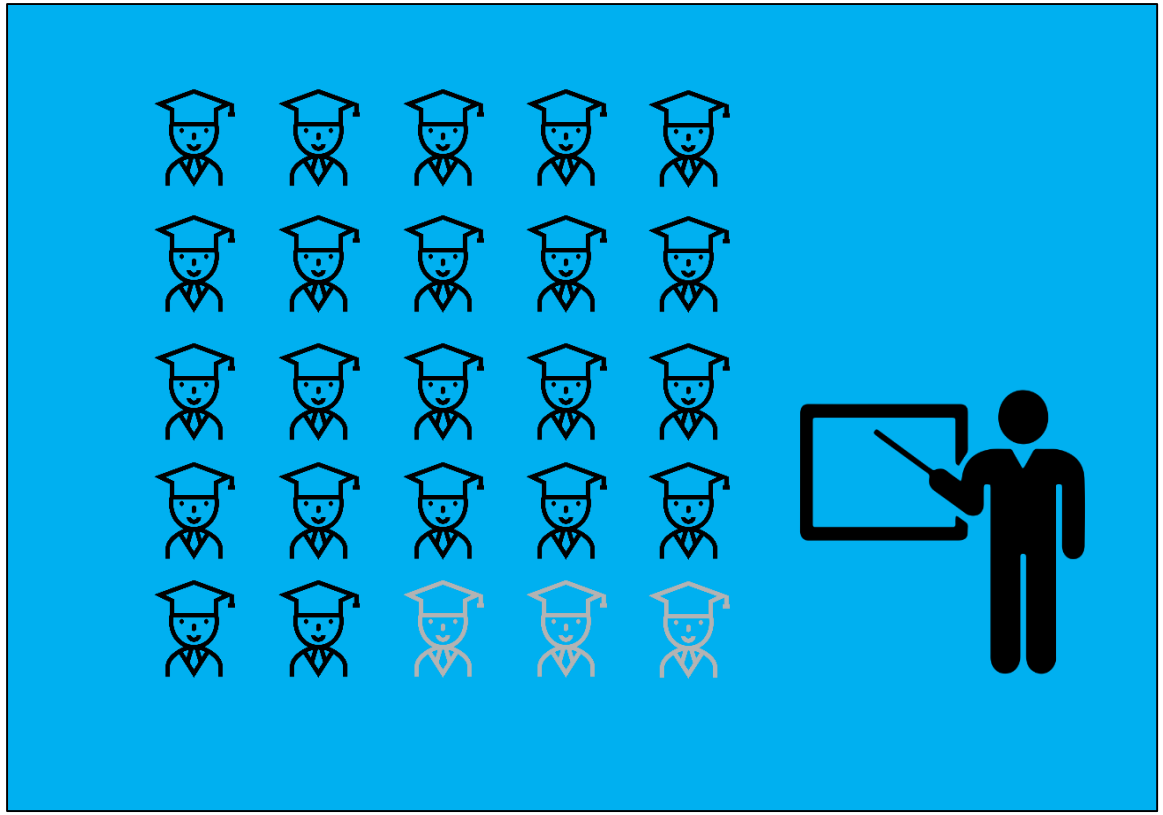
Capacity of one (1) Full Day Kindergarten = 22

22 all day….

***Classroom needed for each section of Kindergarten**

kcba Architects

PDE Recommended ES Capacity is 85%



PDE Capacity:

Capacity as calculated by the state.

Functional Capacity:

Capacity of the school based on how the space is actually used. Accounts for dedicated spaces for pupil services support. Also factors in district standards on class size.

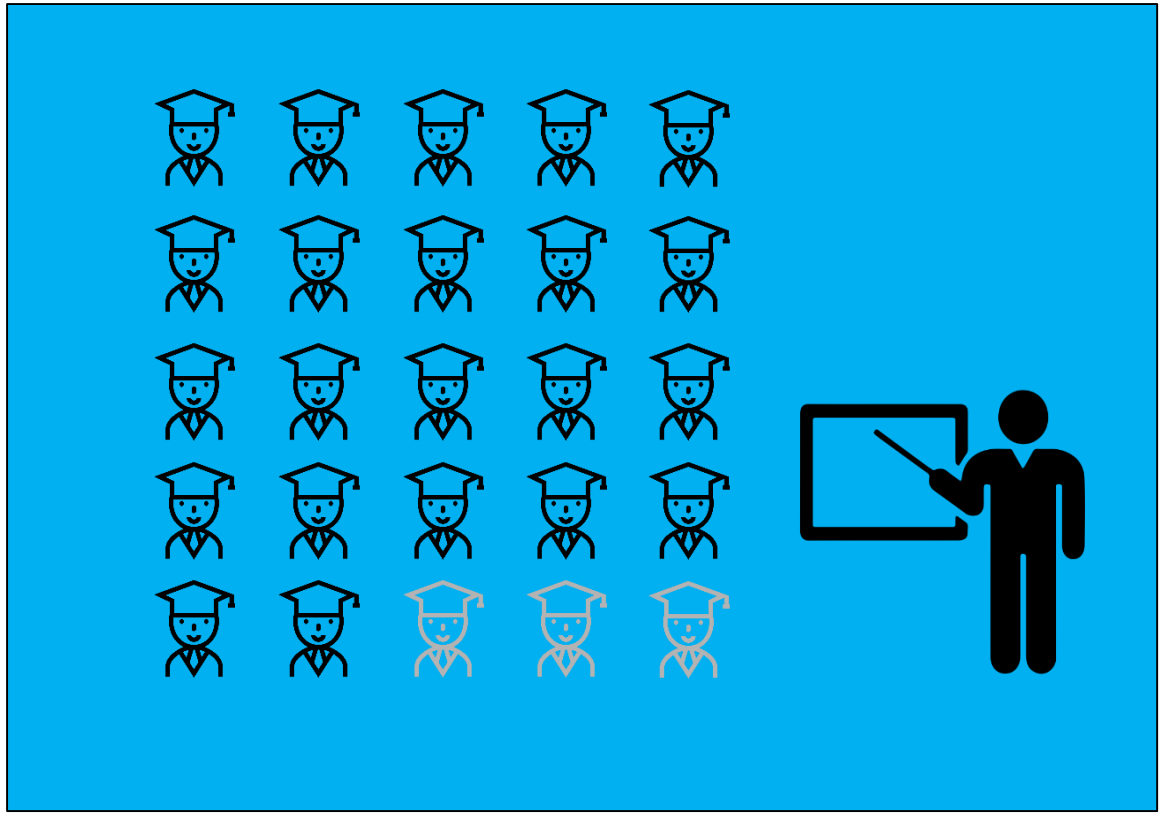
(22 students per classroom K-2)

(25 students per classroom 3-4)

Target Capacity:

85% of functional capacity. Leaves room for growth and unexpected bubble years. Provides flexibility.

Arrowhead Elementary School Current Capacity



PDE Capacity:

Arrowhead's PlanCon capacity is calculated at 525 (includes ½ day K)

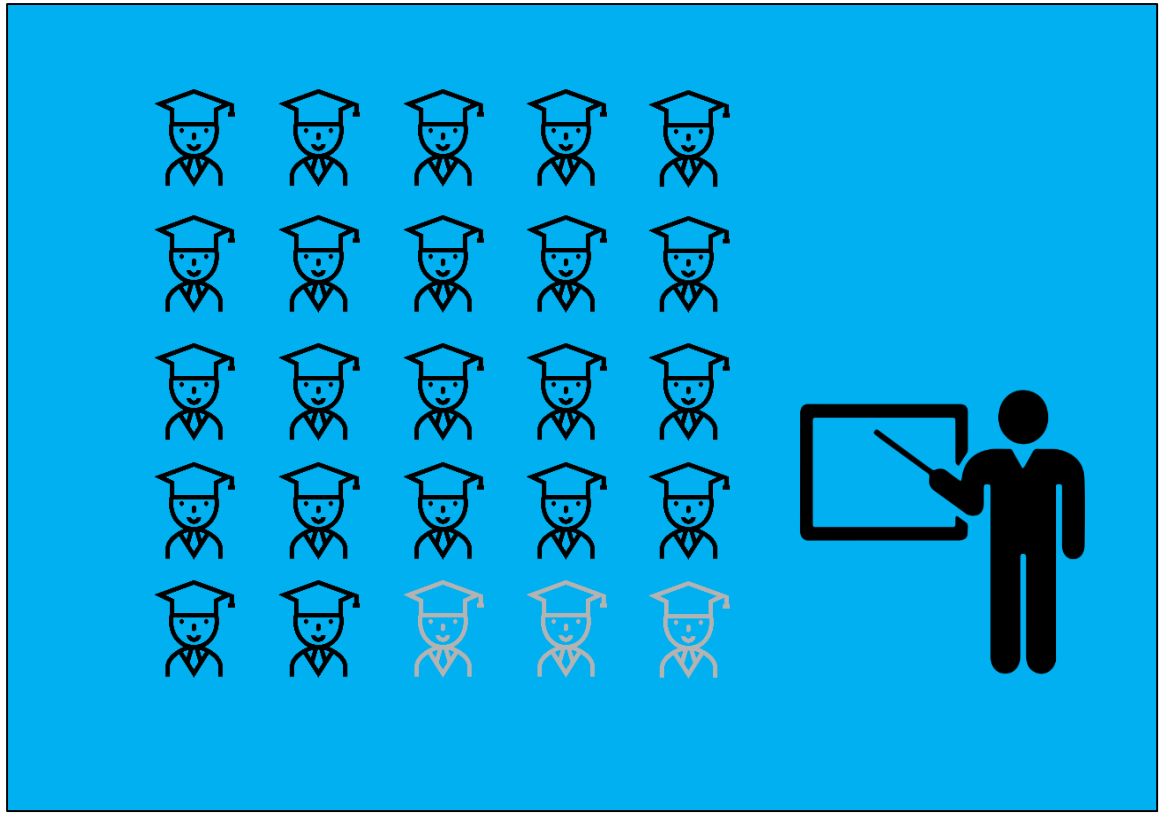
Functional Capacity:

Arrowhead's current functional capacity is 464
K-2 at 22 per classroom (88 each x 3)
3-4 at 25 per classroom (100 each x 2)

Target Capacity:

Arrowhead's current target capacity is 395 (85% of 464)

Arrowhead Elementary School Current Capacity



PDE Capacity:

Arrowhead's PlanCon capacity calculated at **475**
(assumes **FULL day kindergarten**)

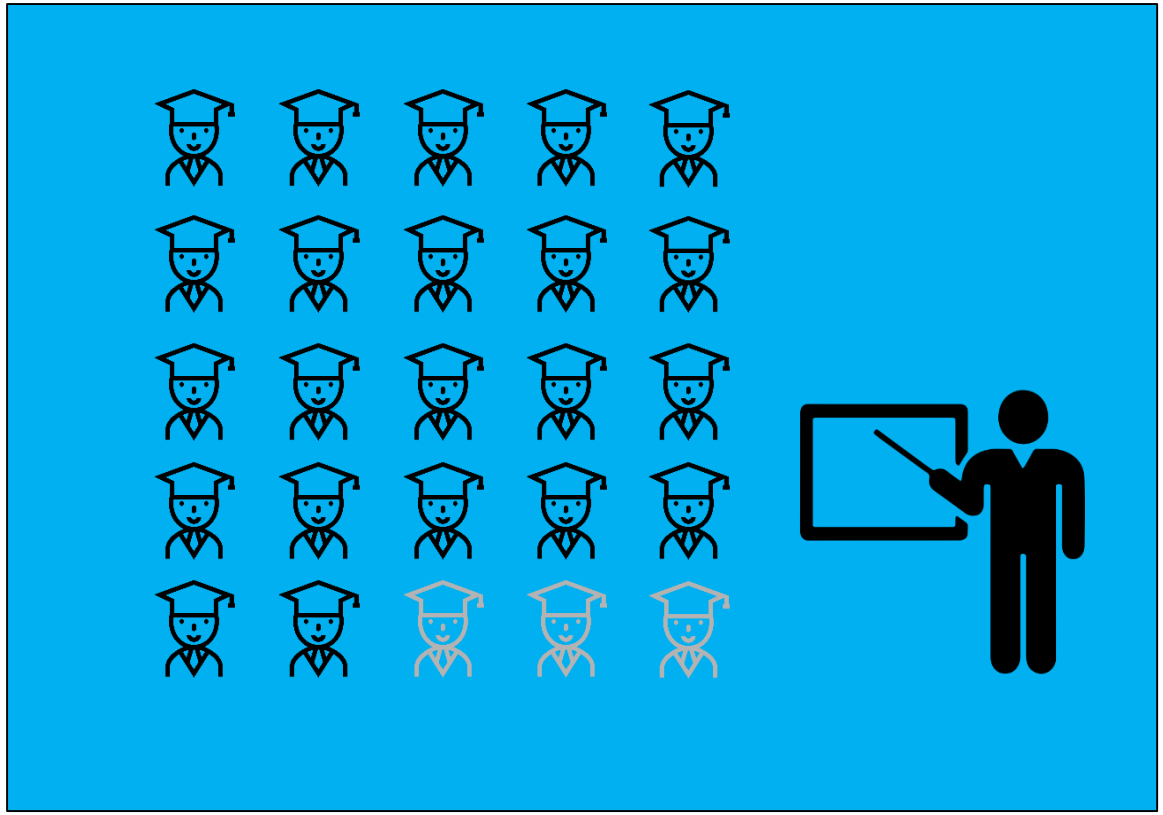
Functional Capacity:

Arrowhead's functional capacity with full day K is **420**
(Removes two kindergarten sections at 22 each)

Target Capacity:

Arrowhead's target capacity with full day K is **357**
(85% of 420)

Arrowhead Elementary School Current Capacity



PDE Capacity:

Arrowhead's PlanCon capacity calculated at **475** (assumes **FULL day kindergarten**)

Functional Capacity:

Arrowhead's functional capacity with full day K and without modular classrooms is **320** (excludes four modular classrooms at 25 each)

Target Capacity:

Arrowhead's target capacity with full day K and without modular classrooms is **272** (85% of 320)

Building Capacity and Student Enrollment

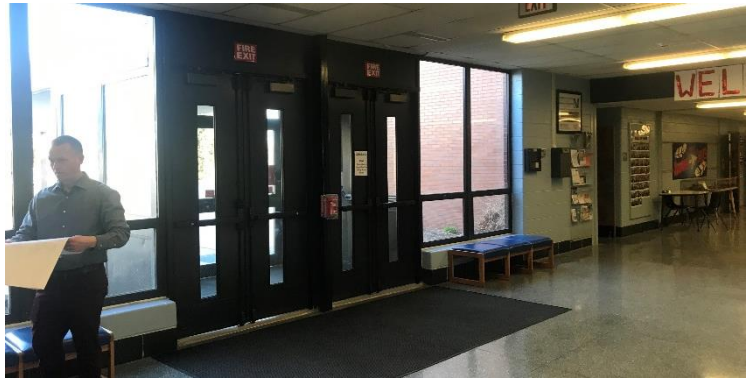
- Functional capacity is impacted by educational use and programming
- Moving from Half Day-K to Full Day-K *reduces* the functional capacity of an existing school
- District wide housing projects impact future growth within the district

EXISTING CONDITIONS

PROCESS

An architectural/engineering analysis of the existing school and campus was conducted that evaluated the following:

- Overall functionality
- General condition
- Building systems
- Code compliance
- Energy efficiency
- Security protocols



PROCESS

Design team met with district administrators and EVERY teacher from Arrowhead Elementary School to survey their thoughts on the existing building.

Toured three new elementary schools in area school districts:

- **Caley Elementary School (Upper Merion Area School District)**
- **Phoenixville Early Learning Center (Phoenixville Area School District)**
- **East Coventry Elementary School (Owen J Roberts School District)**

ARROWHEAD ELEMENTARY SCHOOL

Grades: K to 4

Current Enrollment: 401 Students

Building Capacity: 464 (86% capacity)

Size: 52,534 SF on approx. 14.27 acres
58,534 with modular classrooms

Original Construction: Built in 1974
Modular classrooms added in 1994

kcba Architects

ARROWHEAD ELEMENTARY SCHOOL

Exterior Building Analysis:

- **Substandard existing building elements.**
- Windows are aluminum frame with non-insulated (single pane) glass.
- Mortar is missing in multiple locations on each elevation.
- Brick is spalling off and missing in multiple locations on each elevation.

kcba Architects

ARROWHEAD ELEMENTARY SCHOOL

Exterior Building Analysis:

- **Overall roof is in poor condition.**
- **Roof has reached the end of its lifespan.**
- **Several leaks detected inside the school.**
- **Steel structure of entrance canopy is rusting.**

ARROWHEAD ELEMENTARY SCHOOL

Exterior Building Analysis:

- Play area in front of school close to main road.

ARROWHEAD ELEMENTARY SCHOOL

Interior Building Analysis:

- Secure entry vestibule does not link directly to the administration area.
- **Open plan limits options for security and safety protocols.**

ARROWHEAD ELEMENTARY SCHOOL

Interior Building Analysis:

- Many of the classrooms have doors direct to the exterior.
- Several classrooms without doors **preventing secured lockdown scenarios.**
- Some doors lack vision panels.

ARROWHEAD ELEMENTARY SCHOOL

Interior Building Analysis:

- **Library is open to corridor which creates disruptions.**
- **Many areas for small group instruction (SGI) in open corridor.**

Open Library

ARROWHEAD ELEMENTARY SCHOOL

Interior Building Analysis:

- Modular floors have recently experienced moisture issues.
- Acoustical ceiling tile throughout building is sagging, chipped, and mismatched.

ARROWHEAD ELEMENTARY SCHOOL

Interior Building Analysis:

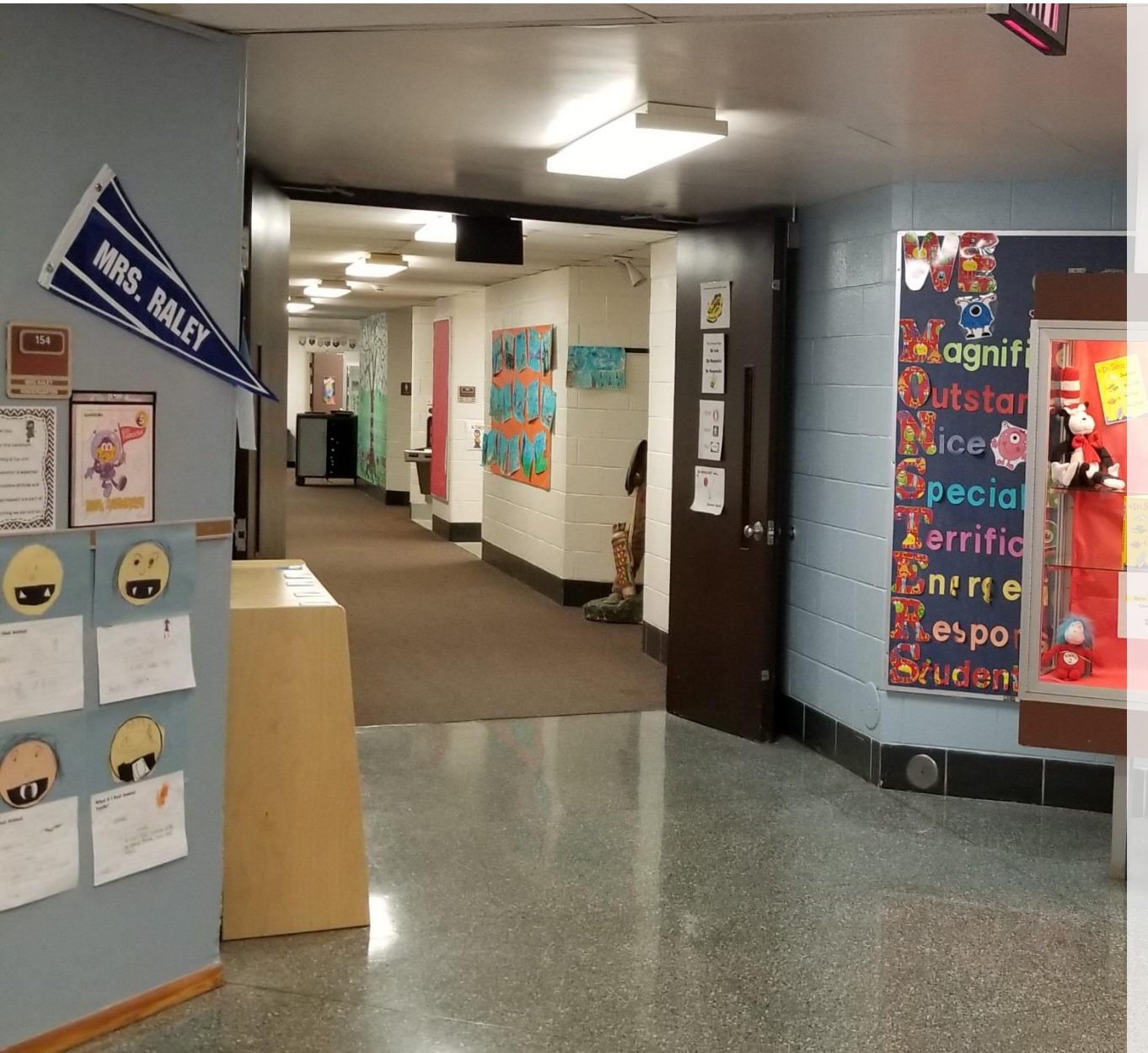
- General lack of storage.
- Teacher equipment in hallways.
- Undersized Gym (lack of storage).

ARROWHEAD ELEMENTARY SCHOOL

Building Systems Analysis:

- Majority of HVAC systems are **nearing the end of their useful life.**
- **No Fire Suppression System** (sprinklers).
- The return air system is no longer acceptable by governing fire codes.

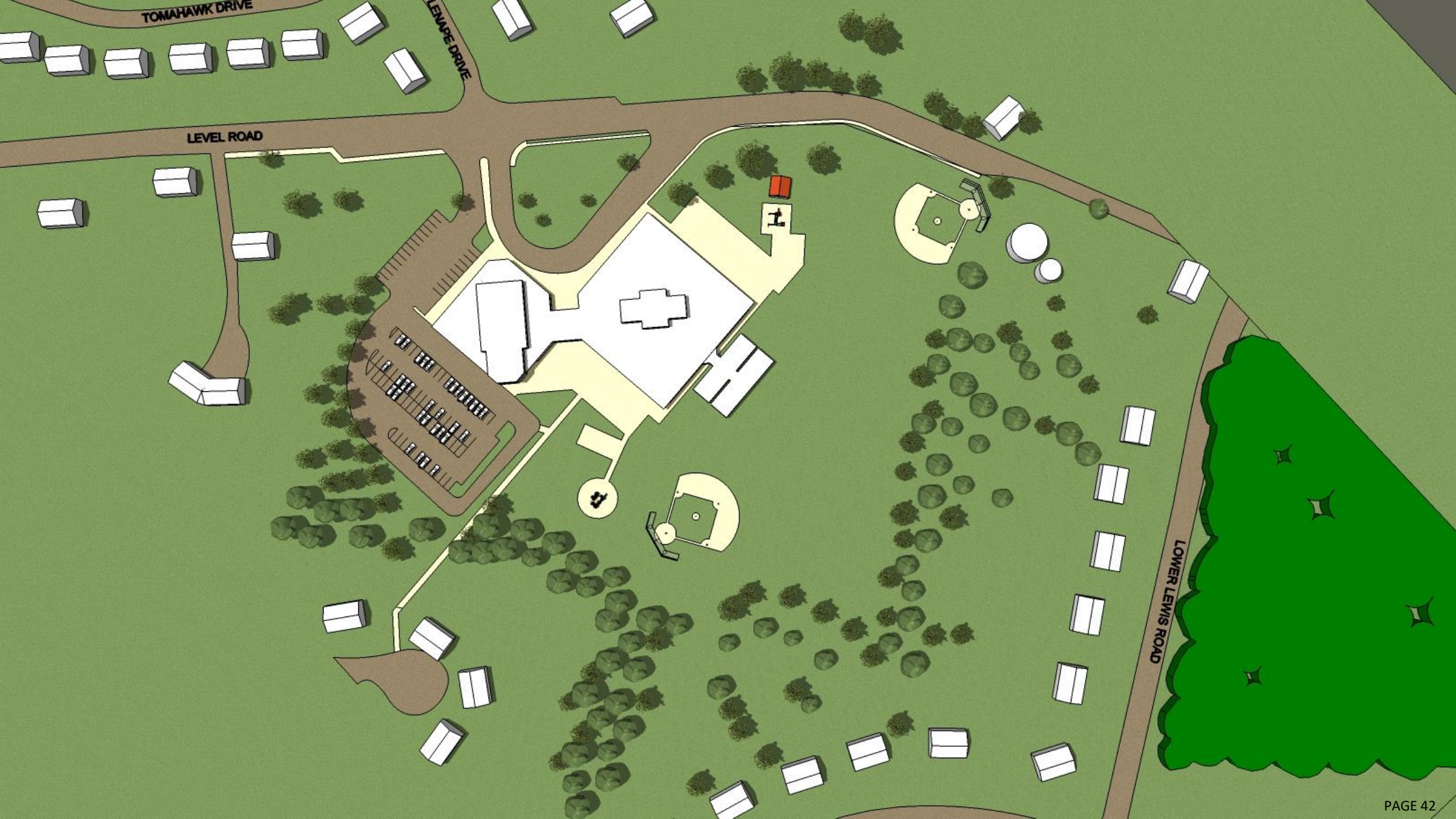
ARROWHEAD ELEMENTARY SCHOOL

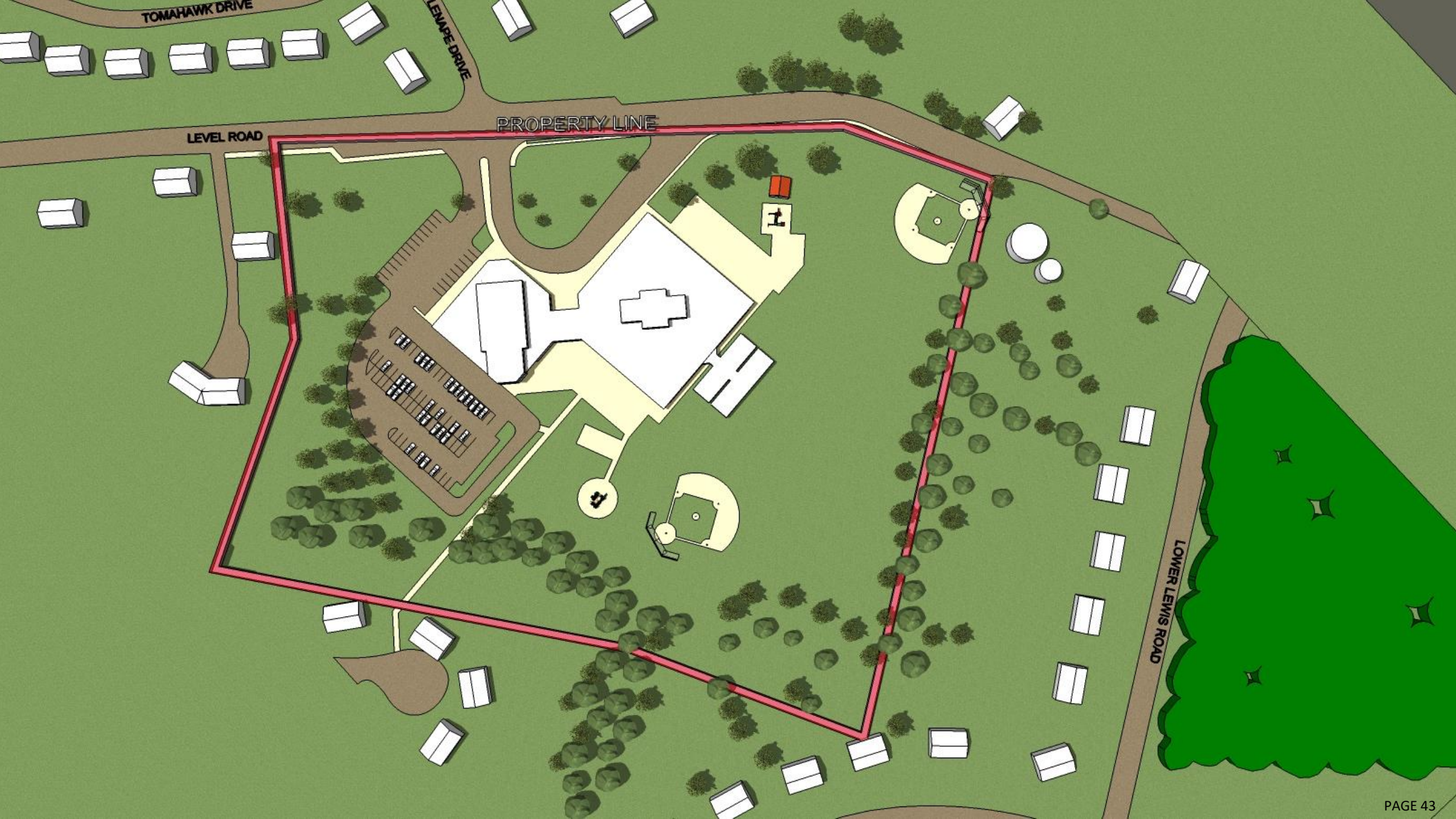


Summary:

1. **Numerous exterior repairs to roofing, bricks, and flashing needed.**
2. **Numerous interior repairs to building are needed.**
3. **All building systems need replacement and upgrade.**
4. **Educational environments and security protocol improvements needed throughout.**

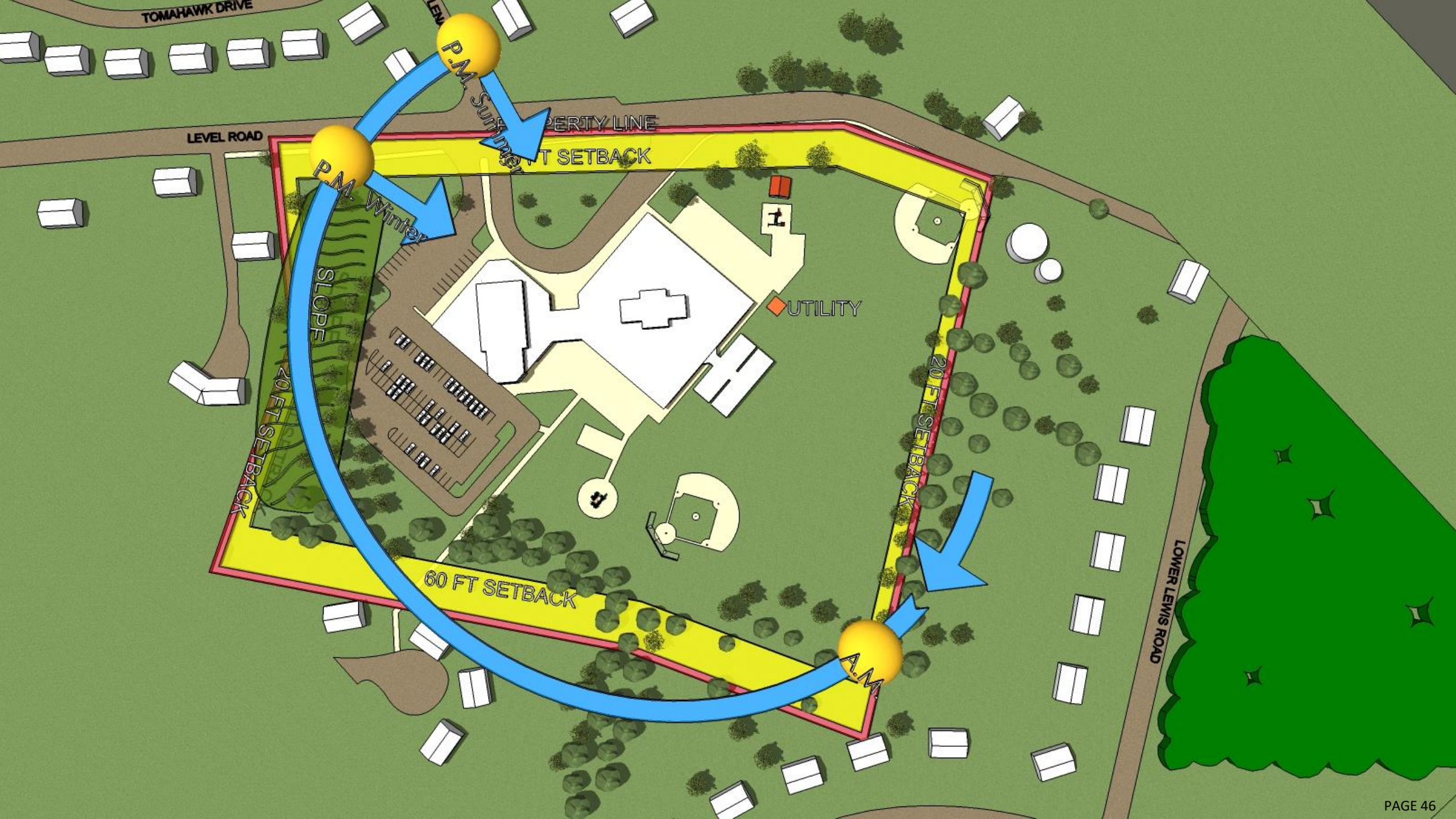
SITE AND TRAFFIC ANALYSIS

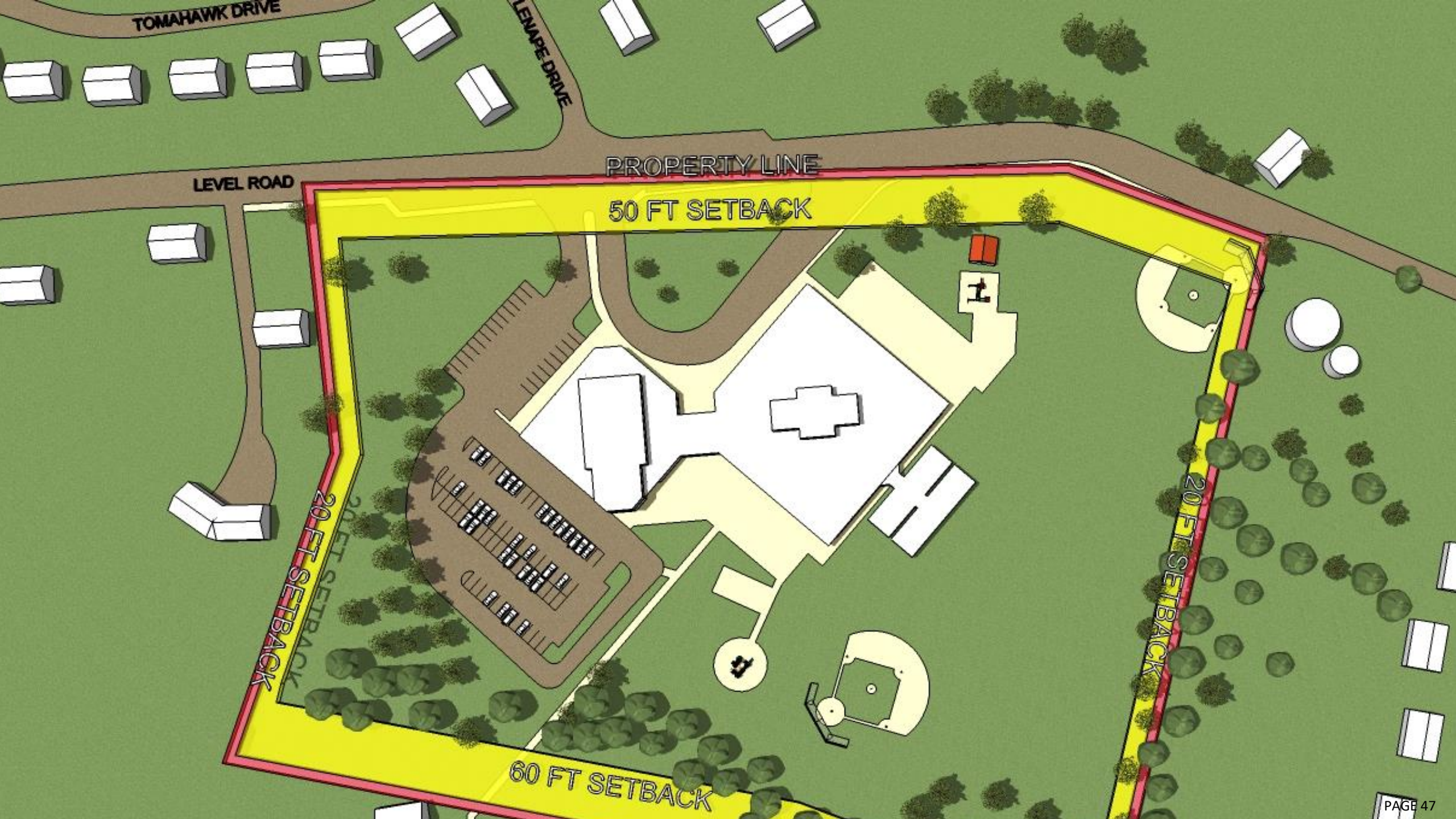

TOMAHAWK DRIVE
LENAPE DRIVE
LEVEL ROAD
LOWER LEWIS ROAD

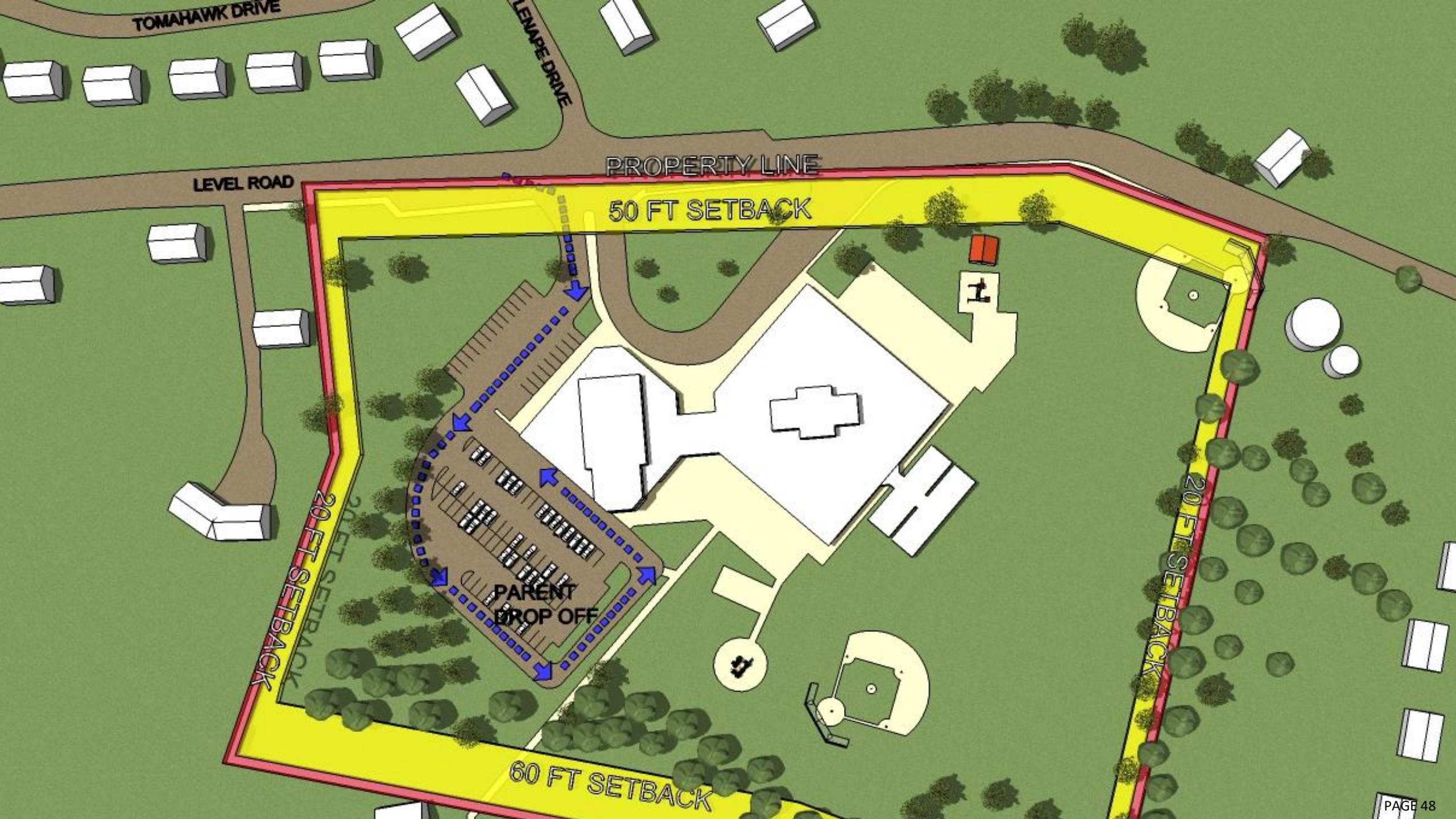

TOMAHAWK DRIVE
LENAPE DRIVE
PROPERTY LINE
LEVEL ROAD
LOWER LEWIS ROAD

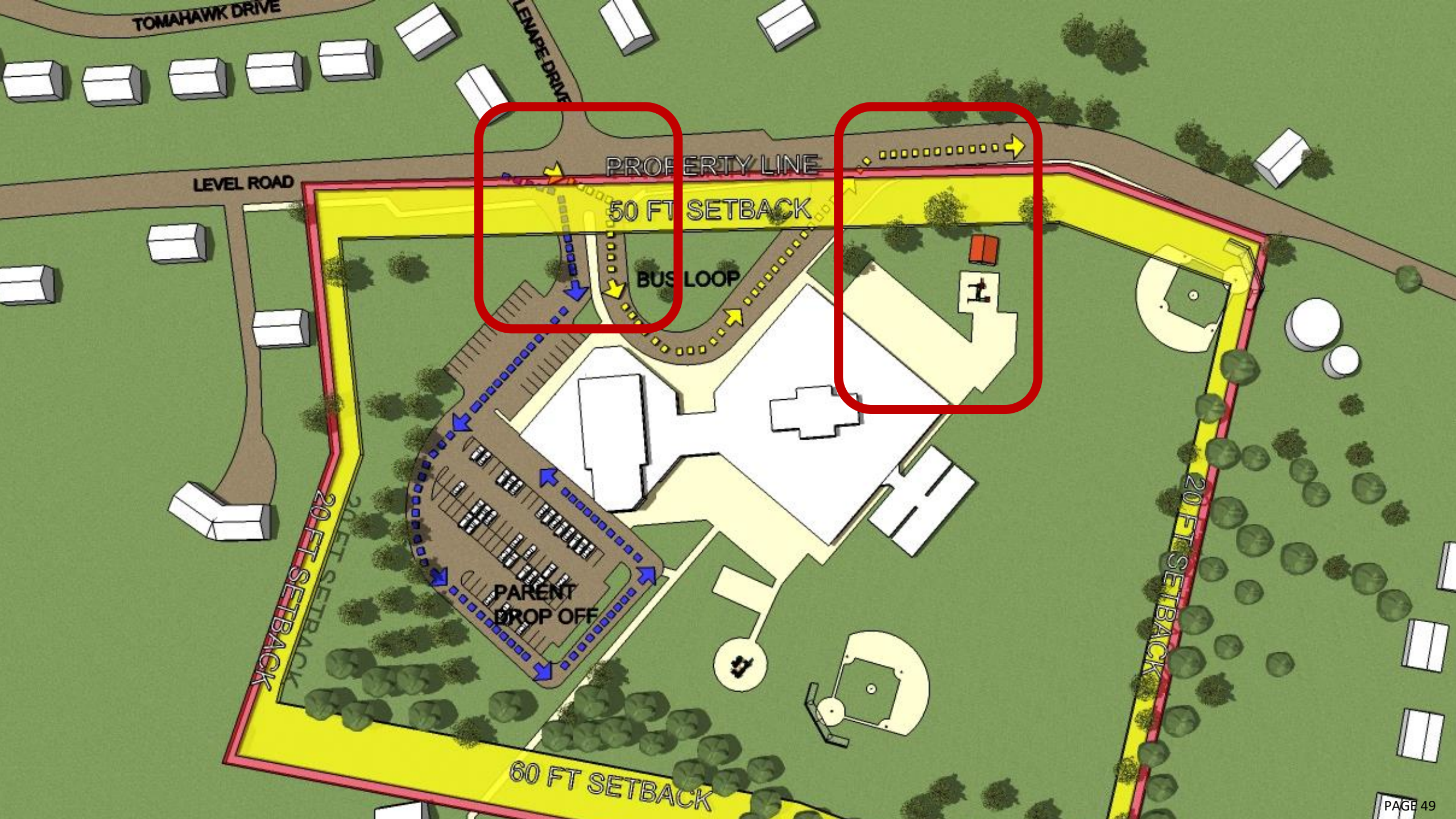

TOMAHAWK DRIVE
LENAPE DRIVE
LEVEL ROAD
PROPERTY LINE
50 FT SETBACK
20 FT SETBACK
20 FT SETBACK
60 FT SETBACK
LOWER LEWIS ROAD


TOMAHAWK DRIVE
LENAPE DRIVE
LEVEL ROAD
PROPERTY LINE
50 FT SETBACK
SLOPE
20 FT SETBACK
UTILITY
20 FT SETBACK
60 FT SETBACK
LOWER LEWIS ROAD


TOMAHAWK DRIVE
LEVEL ROAD
P.M. Summer
P.M. Winter
PROPERTY LINE
50 FT SETBACK
UTILITY
SLOPE
40 FT SETBACK
20 FT SETBACK
60 FT SETBACK
A.M.
LOWER LEWIS ROAD


TOMAHAWK DRIVE
LENAPE DRIVE
LEVEL ROAD
PROPERTY LINE
50 FT SETBACK
20 FT SETBACK
20 FT SETBACK
60 FT SETBACK


TOMAHAWK DRIVE
LENAPE DRIVE
LEVEL ROAD
PROPERTY LINE
50 FT SETBACK
20 FT SETBACK
20 FT SETBACK
PARENT
DROP OFF
60 FT SETBACK


TOMAHAWK DRIVE
LENAPE DRIVE
LEVEL ROAD
PROPERTY LINE
50 FT SETBACK
BUS LOOP
PARENT
DROP OFF
20 FT SETBACK
20 FT SETBACK
60 FT SETBACK

HOW DO WE MAKE THE CHANGE?

BUILDING SITE TOURS FEEDBACK - CALEY

PROS

WELCOMING ENVIRONMENT

NATURAL LIGHT

LEARNING STAIRS – OPEN LEARNING

STUDENT LOCKERS IN HALLWAYS

CONS

APPEARED GRAND

CLASSROOMS TOO SMALL

LACKED CLOSETS IN CLASSROOMS

KINDERGARTEN SEPARATE

BUILDING SITE TOURS FEEDBACK - CALEY

PROS

WELCOMING ENVIRONMENT

NATURAL LIGHT

LEARNING STAIRS – OPEN LEARNING

STUDENT LOCKERS IN HALLWAYS

CONS

APPEARED GRAND

CLASSROOMS TOO SMALL

LACKED CLOSETS IN CLASSROOMS

KINDERGARTEN SEPARATE

BUILDING SITE TOURS FEEDBACK - CALEY

PROS

WELCOMING ENVIRONMENT

NATURAL LIGHT

LEARNING STAIRS – OPEN LEARNING

STUDENT LOCKERS IN HALLWAYS

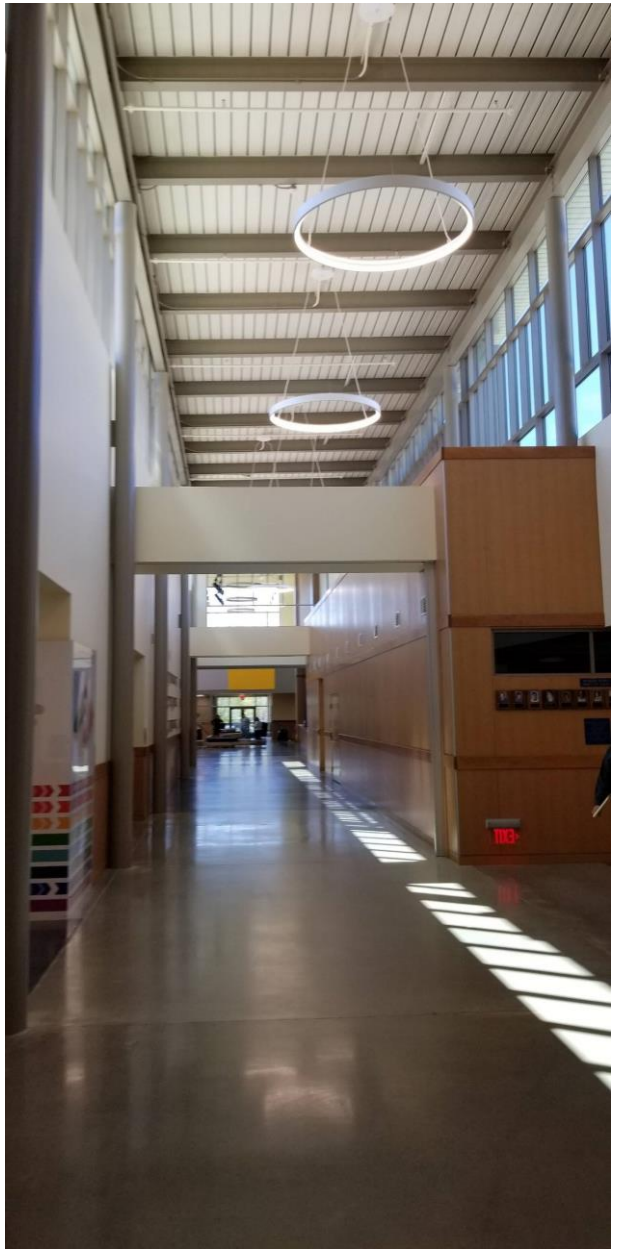
CONS

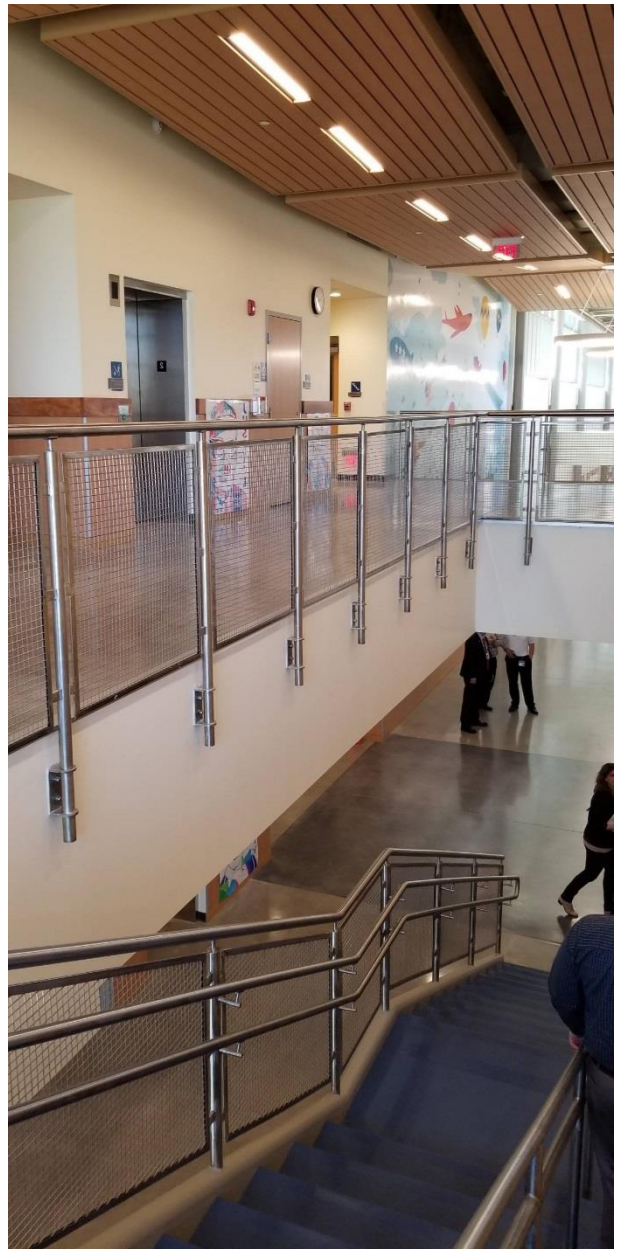
APPEARED GRAND

CLASSROOMS TOO SMALL

LACKED CLOSETS IN CLASSROOMS

KINDERGARTEN SEPARATE





BUILDING SITE TOURS FEEDBACK - PHOENIXVILLE

PROS

NATURAL LIGHT

LEARNING STAIRS – OPEN LEARNING AREA

WELCOMING ENVIRONMENT

STUDENT LOCKERS IN HALLWAYS

CONS

OPEN LIBRARY AT ENTRANCE

OPEN CAFÉ TO LIBRARY

EXPOSED WIRING THROUGHOUT

SMALL GROUP AREAS VERY LARGE

BUILDING SITE TOURS FEEDBACK - PHOENIXVILLE

PROS

NATURAL LIGHT

LEARNING STAIRS – OPEN LEARNING AREA

WELCOMING ENVIRONMENT

STUDENT LOCKERS IN HALLWAYS

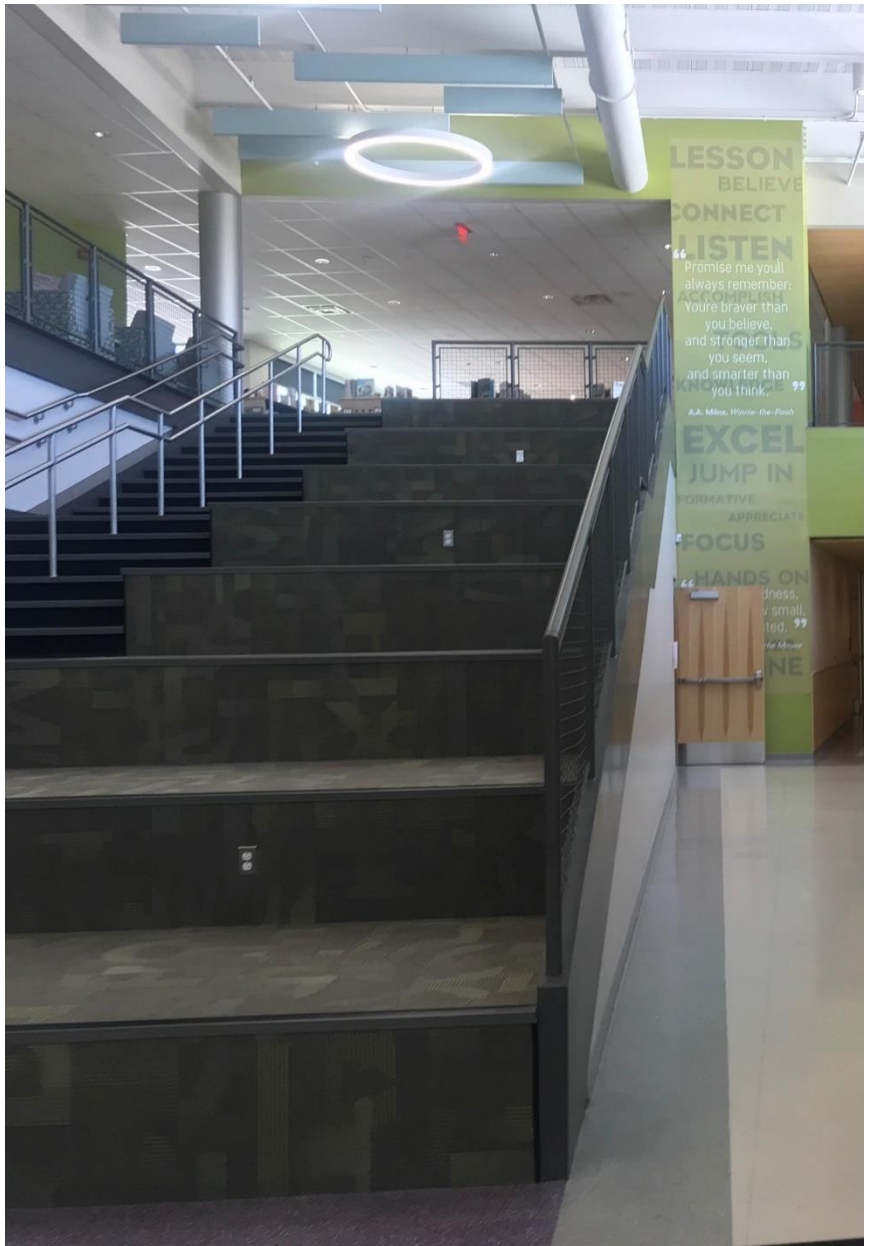
CONS

OPEN LIBRARY AT ENTRANCE

OPEN CAFÉ TO LIBRARY

EXPOSED WIRING THROUGHOUT

SMALL GROUP AREAS VERY LARGE



BUILDING SITE TOURS FEEDBACK - PHOENIXVILLE

PROS

NATURAL LIGHT

LEARNING STAIRS – OPEN LEARNING AREA

WELCOMING ENVIRONMENT

STUDENT LOCKERS IN HALLWAYS

CONS

OPEN LIBRARY AT ENTRANCE

OPEN CAFÉ TO LIBRARY

EXPOSED WIRING THROUGHOUT

SMALL GROUP AREAS VERY LARGE

BUILDING SITE TOURS FEEDBACK - PHOENIXVILLE

PROS

NATURAL LIGHT

LEARNING STAIRS – OPEN LEARNING AREA

WELCOMING ENVIRONMENT

STUDENT LOCKERS IN HALLWAYS

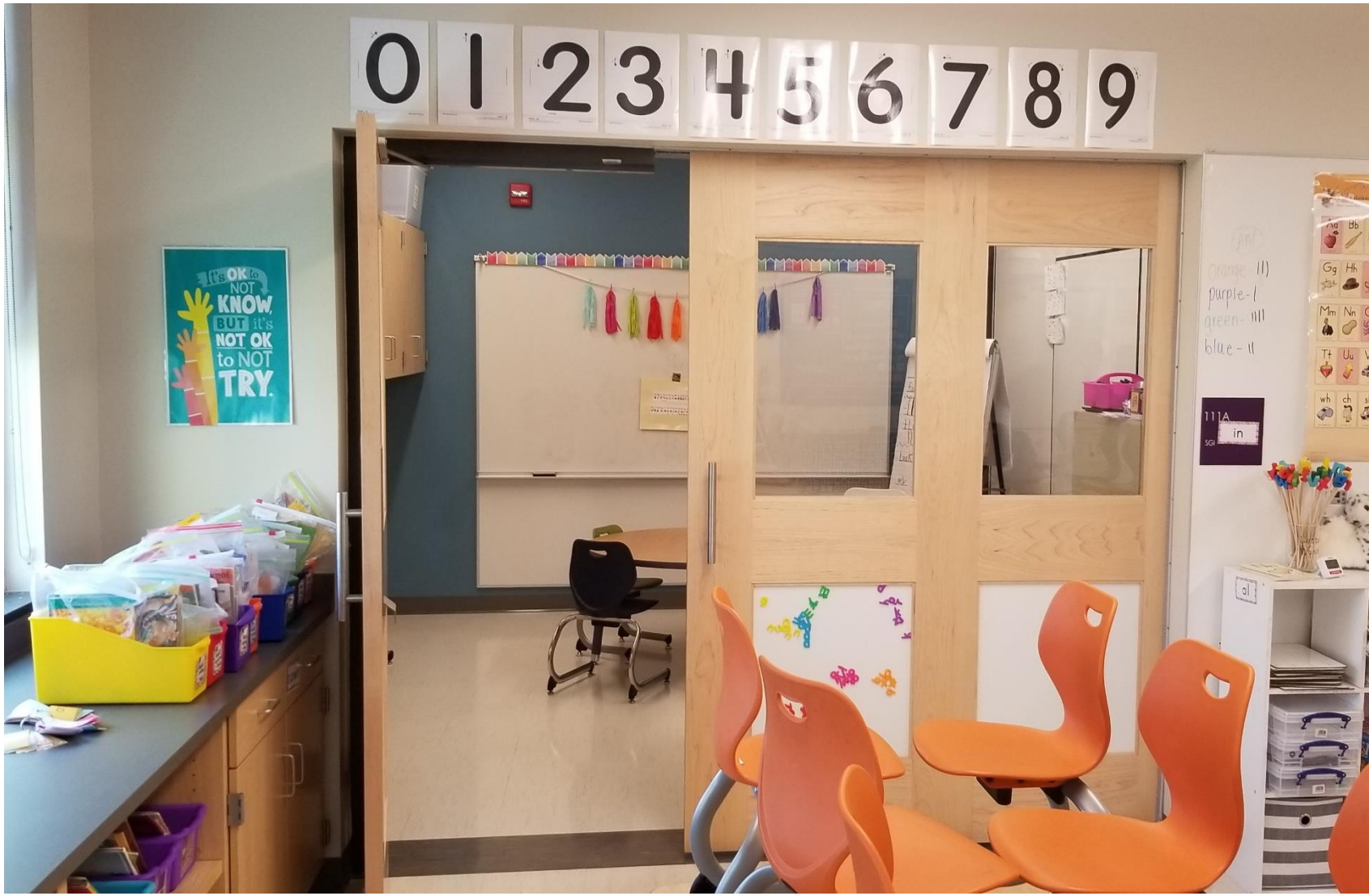
CONS

OPEN LIBRARY AT ENTRANCE

OPEN CAFÉ TO LIBRARY

EXPOSED WIRING THROUGHOUT

SMALL GROUP AREAS VERY LARGE



BUILDING SITE TOURS FEEDBACK – EAST COVENTRY ELEM.

PROS

FRONT VESTIBULE

DOUBLE SIDED STAGE

LARGE VIDEO SCREEN IN CAFETERIA

MUSICAL STORAGE BY FRONT ENTRY

CONS

INSTITUTIONAL FEEL

SMALL WINDOWS

LIMITED LIGHT

“OLD SCHOOL” DESIGN

kcba Architects

BUILDING SITE TOURS FEEDBACK – EAST COVENTRY ELEM.

PROS

FRONT VESTIBULE

DOUBLE SIDED STAGE

LARGE VIDEO SCREEN IN CAFETERIA

MUSICAL STORAGE BY FRONT ENTRY

CONS

INSTITUTIONAL FEEL

SMALL WINDOWS

LIMITED LIGHT

“OLD SCHOOL” DESIGN

kcba Architects

BUILDING SITE TOURS FEEDBACK – EAST COVENTRY ELEM.

PROS

FRONT VESTIBULE

DOUBLE SIDED STAGE

LARGE VIDEO SCREEN IN CAFETERIA

MUSICAL STORAGE BY FRONT ENTRY

CONS

INSTITUTIONAL FEEL

SMALL WINDOWS

LIMITED LIGHT

“OLD SCHOOL” DESIGN

kcba Architects

Comments most heard – QUALITITES

WELCOMING

NATURAL LIGHT

OPENNESS - CONNECTIONS

SECURE AND ORGANIZED

Music:

1. Two instructional areas
    1. Instrumental Music
    2. General Music Instruction
2. Ample storage needed
3. Separate storage area for student instruments
4. Appropriate acoustics

Pickering Valley Elementary School, Downingtown Area School District

Art:

1. Large flexible project area
2. Storage for art supplies
3. Area for drying student work
4. Secured kiln room
5. Lighting options

Library/Media Center:

1. Natural light in reading areas
2. Quiet places for reading
3. Active places for projects
4. Often includes computer lab
5. Maker Space
6. TV Studio

Hopewell Elementary School, Southern Lehigh School District

Slatington Elementary School, Northern Lehigh School District

Gymnasium:

1. Community attribute
2. Sized for competition basketball
3. Provide some seating for parents
4. Could be separated for indoor recess area

Renovation vs New Construction

Factors to Consider:

- **Educational disruptions during construction**
- **Educational compromises**
- **Return on investment/long term value of either option**
- **Cost of new vs renovation**

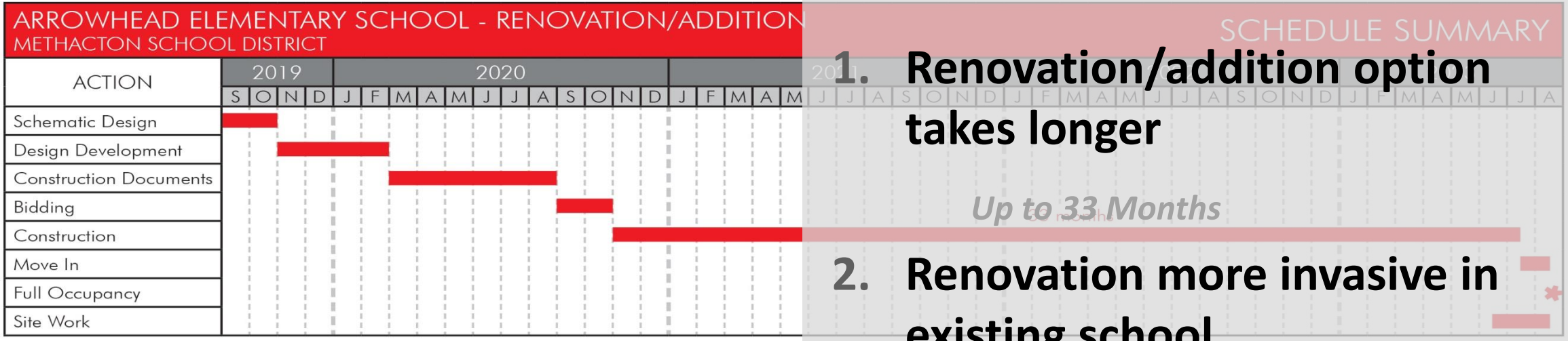
Items needed for proper renovation:

1. New roof
2. New windows
3. New interior partitions to create rectangular classrooms
4. Doors into classrooms
5. New technology in classrooms
6. New secure entry vestibule
7. New HVAC system
8. ADA compliant plumbing fixtures
9. New energy efficient lighting
10. Building expansion to meet needs
11. Include 2016 FAS items

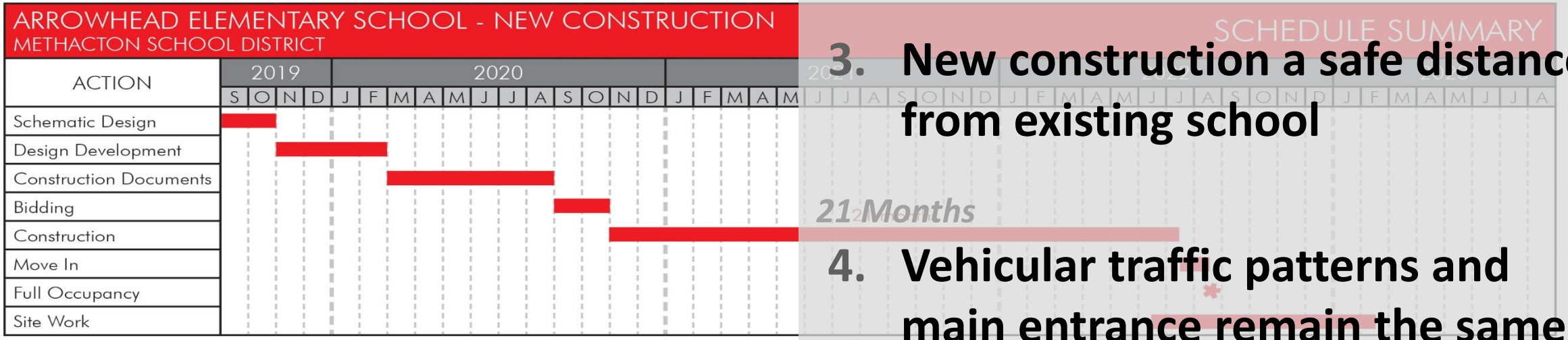
Energy Analysis Based on 58,534sf:

- **Annual energy costs for existing Arrowhead Elementary = $75,000**
  ($1.28 /square foot)
- **Typical renovated system = $70,241**
  ($1.20 /square foot) = $4,759 annual savings
- **New efficient school = $50,339**
  ($0.86 /square foot) = $19,902 annual savings

Potential Schedule for Building Improvements



Renovation Schedule



New Construction Schedule

Disruption During Construction:

1. **Renovation/addition option takes longer**
2. **Renovation more invasive in existing school**
3. **New construction a safe distance from existing school**
4. **Vehicular traffic patterns and main entrance remain the same during new construction**

Educational Program Analysis

	Existing Program					Developing Program			
	No.	NSF	Total	Remarks		No.	NSF	Total	Remarks
ACADEMIC CENTER									
Core Programs									
Kindergarten	1	800	800		1/2 Day K	4	1,000	4,000	Includes dedicated toilet room
Kindergarten	1	995	995		1/2 Day K				
First Grade	3	810	2,430	Avg. SF		4	850	3,400	
First Grade	1	940	940						
Second Grade	4	810	3,240	Avg. SF		4	850	3,400	
Third Grade	4	1,000	4,000	Avg. SF	in modular trailors	4	850	3,400	
Fourth Grade	3	810	2,430	Avg. SF		4	850	3,400	
Fourth Grade	1	940	940						
Subtotal	18		15,775		Subtotal	20		17,600	
Other Student Services									
K-2 Learning Support	1	815	815	next to K		1	850	850	
3-4 Learning Support	1	890	890	next to read'g		1	850	850	
Emotional Support	1	837	837	next to lib.	*NOT A HOMERM.*	1	1,000	1,000	included de-escalation space
K-2 Communications	1	856	856	next to admn		1	850	850	
3-4 Communications	1	790	790	next to 4th		1	850	850	
Reading Specialist	1	755	755	next to ELD		1	660	660	
English Learning Development	1	930	930	next to read'g		1	660	660	
K-4 Itinerant	1	935	935			1	660	660	
Gifted Math	1	931	931			1	660	660	
Small Group Instruction	0	550	0			3	550	1,650	
Subtotal	9		7,739		Subtotal	12		8,690	

2 Additional Classrooms

1,825sf Additional Area

3 Additional Spaces

951sf Additional Area

Educational Program Analysis

	Existing Program				Developing Program			
	No.	NSF	Total	Remarks	No.	NSF	Total	Remarks
ADDITIONAL EDUCATIONAL SPACES								
ART AND MUSIC CENTER								
General Art Classroom	1	1,110	1,110	includes stor.	1	1,250	1,250	Includes Kiln Area & Storage
General Music Classroom	1	1,041	1,041		1	900	900	
Instrumental Music Classroom	1	309	309	behind stage	1	1,100	1,100	Includes Shared Instrument Storage
TECHNOLOGY CENTER								
Library/Literacy Center	1	2,266	2,266	includes instruction room	1	1,800	1,800	Includes Office & Storage
STEM Lab	0	1,400	0		1	1,400	1,400	
STEM Classroom	0	850	0	currently in library space	1	850	850	
TV Studio	0	550	0		1	550	550	
SCHOOL COMMONS								
Gymnasium/Multi-purpose	1	2,383	2,383		1	6,000	6,000	
Gym Office	1	176	176		1	200	200	
Gym Storage	0	300	0	combined with office	1	300	300	
Stage	1	650	650		1	750	750	
Cafeteria	1	2,192	2,192		1	2,600	2,600	4 lunch periods
Kitchen and Storage	1	1,506	1,506		1	1,500	1,500	1 serving lines
Before/After Program/Storage	1	0	0		1	300	300	
Subtotal	**10**		**11,633**		**14**		**19,500**	

3 Additional Education spaces

7,867sf Additional Area

kcba Architects

Educational Program Analysis

Right Sizing the Box…

Existing Building = 52,534sf without modular classrooms

= 58,534sf with modular classrooms

Net Area Needed:

(2) Additional Classrooms = 1825sf

(3) Additional Small Group Instruction = 951sf

*some spaces reduced in size

(4) Additional Common Edu. Spaces = 7867sf

*includes new gymnasium

Additional Administration Spaces = 2194sf

Total = 12,837sf addition req'd to meet needs

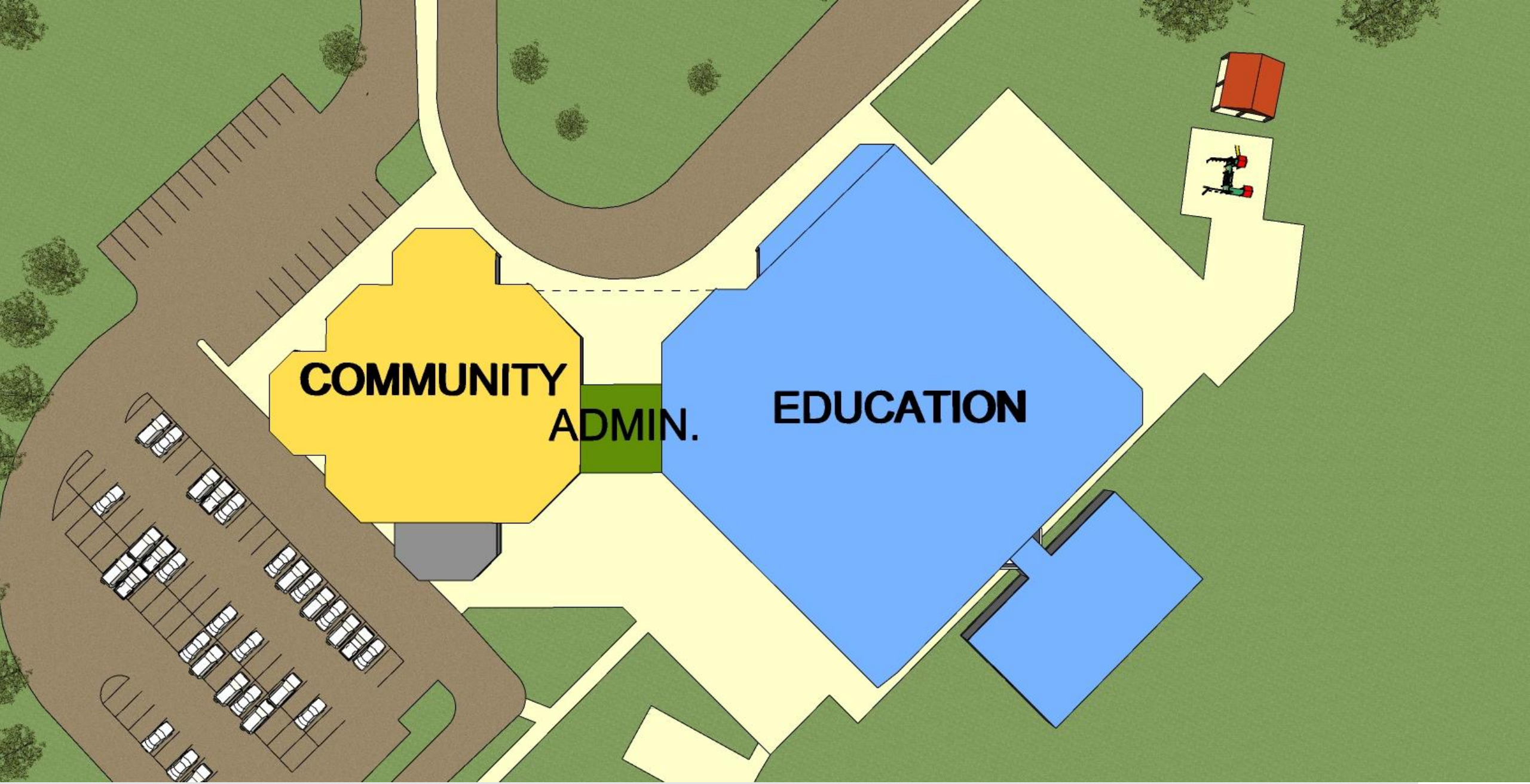
***81,664sf total gross area programmed for 464 students**

RENOVATION/ ADDITION OPTION

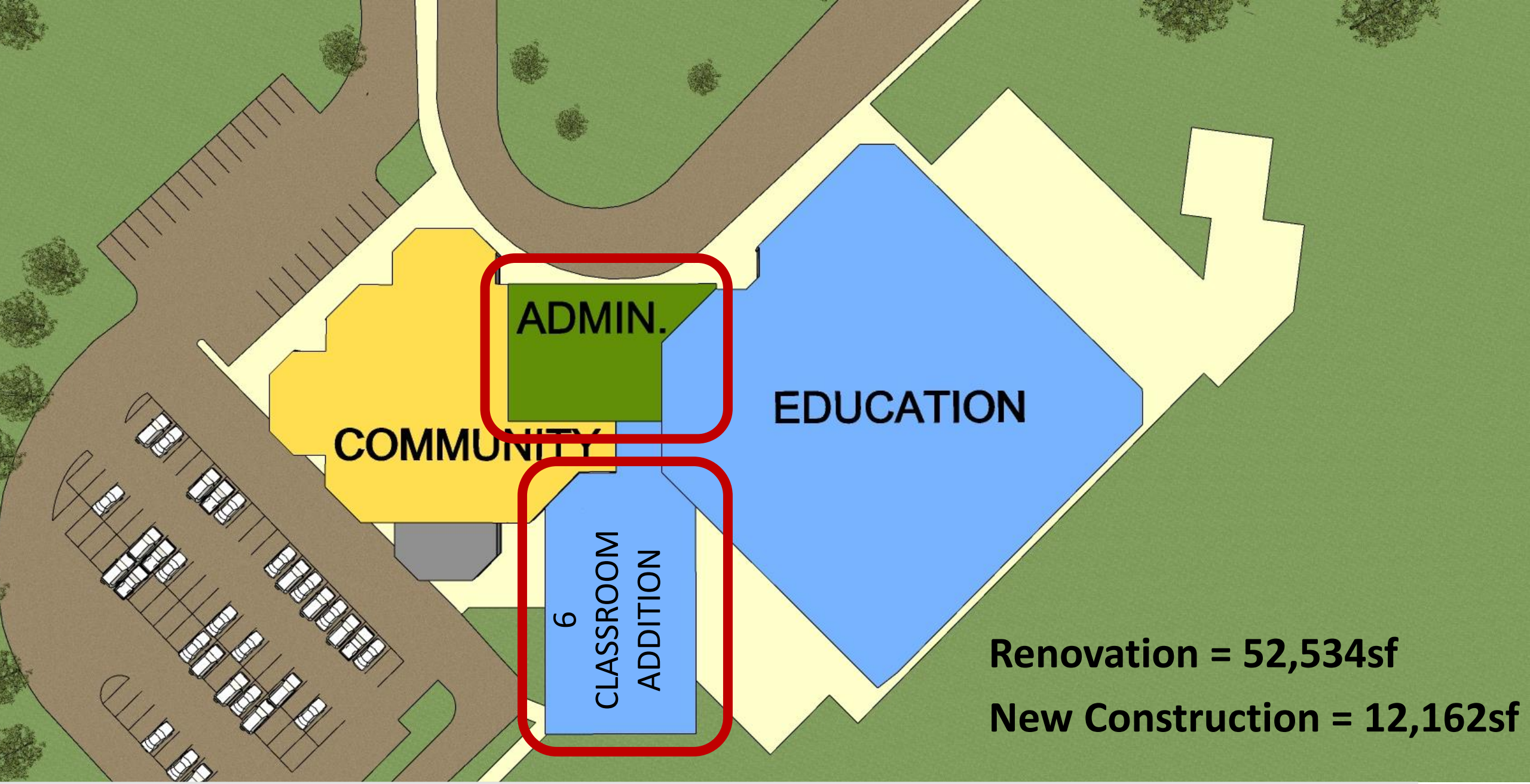
Concerns with existing layout:

- Classroom sizes too small
- Teachers struggle with room shape
- Lack of Small Group Instruction
- Lack of exterior access for windows
- Modulars past their anticipated life
- Administration area disconnected from secure entry vestibule
- Gym/Cafeteria combo too small
- Instrumental Music in storage room

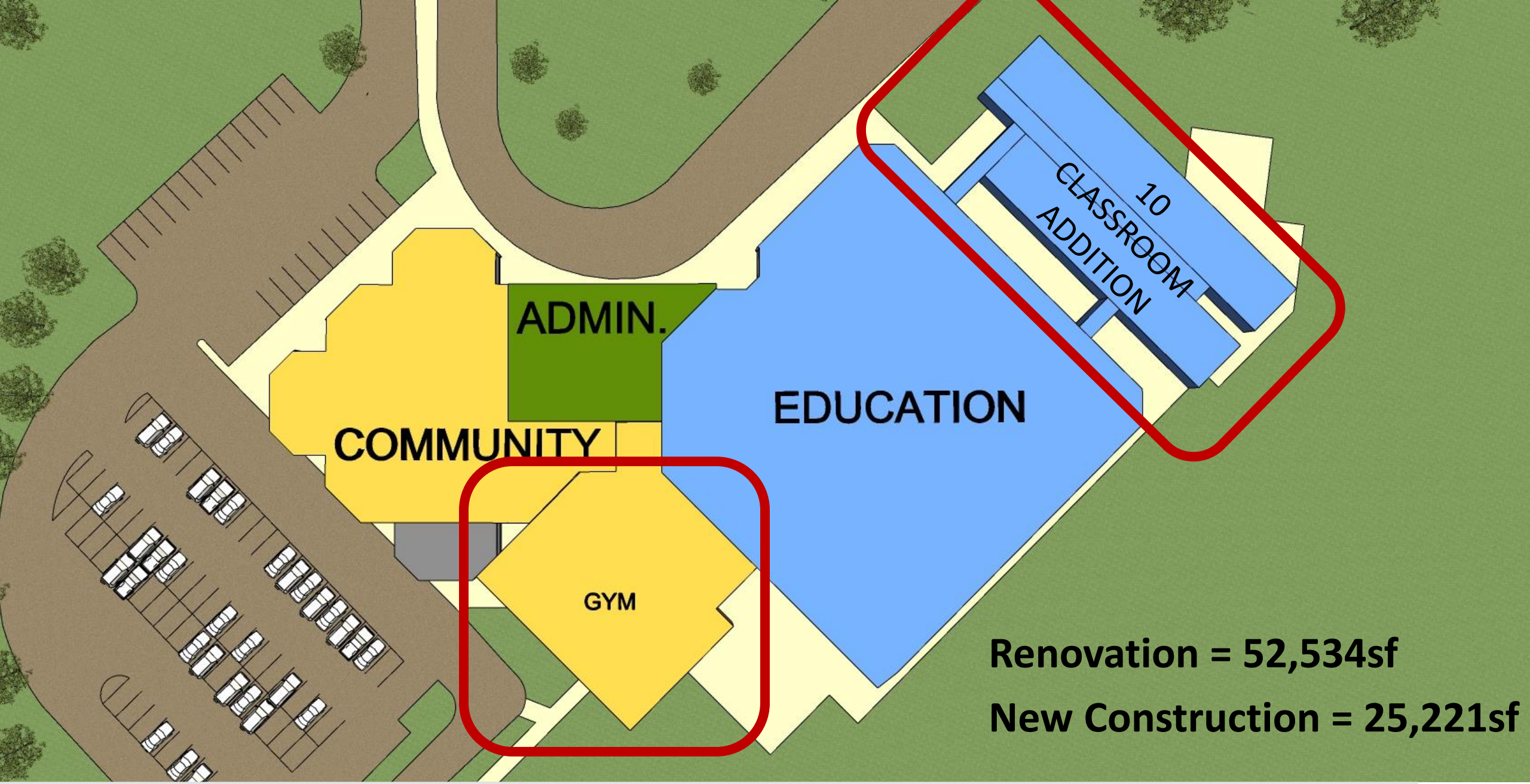
EXISTING FLOOR PLAN (58,534sf school with modulars)



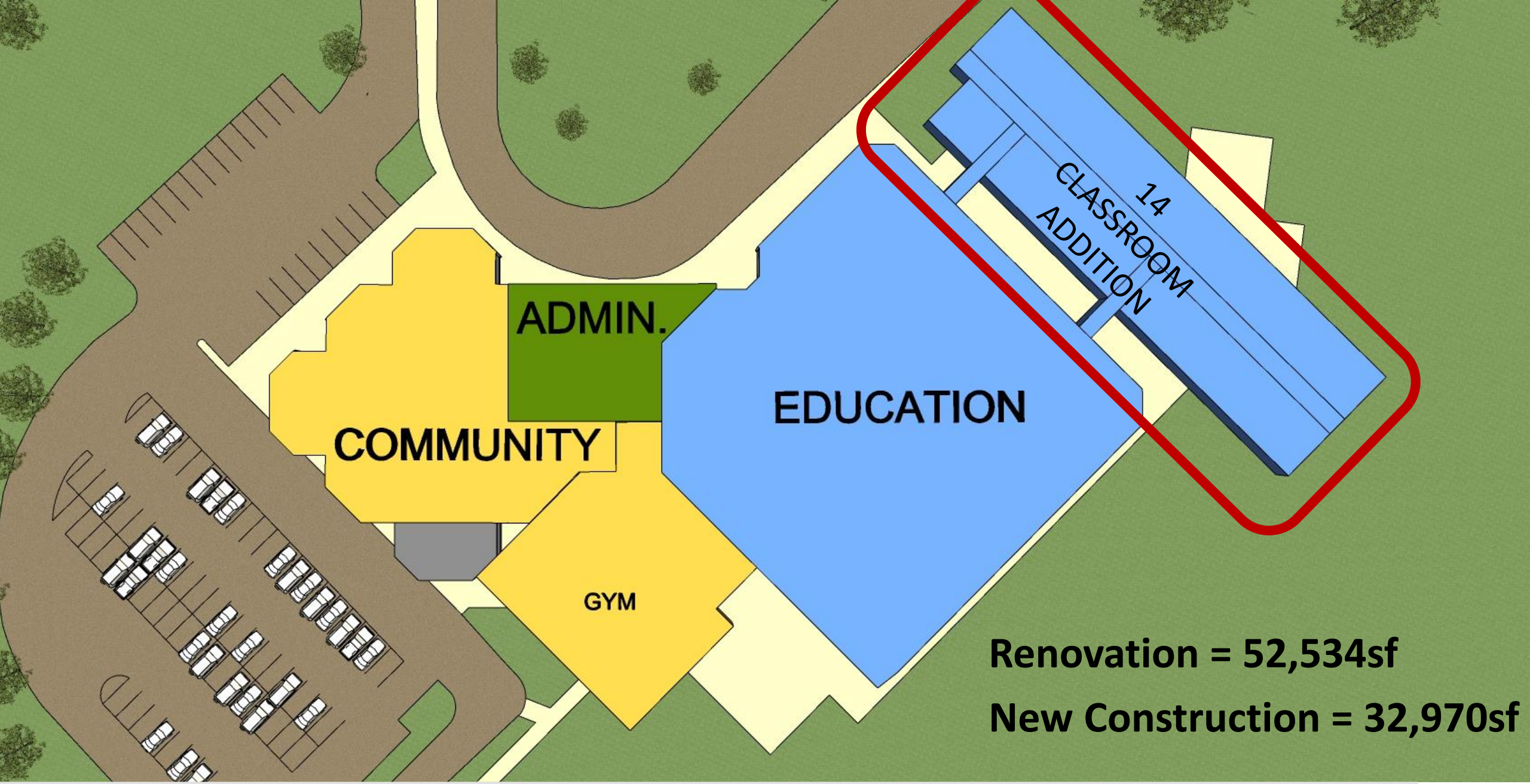
EXISTING FLOOR PLAN (58,534sf School with modulars)



RENO+ADD OPT. #1 FLOOR PLAN – 525 Students (64,696sf School)



RENO+ADD OPT. #2A FLOOR PLAN – 525 Students (77,755sf School)



RENO+ADD OPT. #2B FLOOR PLAN – 625 Students (85,504sf School)

Renovation Summary:

- Improved entry security
- New classrooms created
- 2A/2B Options - opportunity for community gym
- Existing classrooms still not ideal shape/proportion
- New classroom wing located away from core of school
- Not all spaces located or sized as desired
- Limited site improvements

RENO+ADD OPTION #1 – CAPACITY 525

NEW SECURE ENTRY, REPLACE MODULAR CLASSROOMS, FULL DAY K

Building Renovations ($141/sf)	$7,397,158
Building Systems Budget ($85/sf)	$4,465,390
Proposed New Construction (12,162sf @ $275/sf)	$3,344,550
Site Work associated with New Construction	$1,204,038
Design/Bidding Contingency - 5%	$820,557
TOTAL CONSTRUCTION COST	**$17,231,693**
Construction Contingency - 10%	$1,723,169
Soft Costs - 15% (Fees, Permits, etc.)	$2,584,754
Budget: FF&E Allowance ($1200/student)	$630,000
TOTAL PROJECT COST	**$22,169,616**

INCLUDES: ROOF REPLACEMENT, REPLACEMENT OF MOST BUILDING SYSTEMS (INCLUDING SPRINKLER SYSTEM) + SECURITY CAMERAS. ALONG WITH NEW SECURE FRONT ENTRANCE AND CLASSROOM ADDITION.

kcba Architects

RENO+ADD OPTION #2A – CAPACITY 525

OPTION #1 AS WELL AS GYMNASIUM AND LARGER EDUCATIONAL ADDITION

Building Renovations ($141/sf)	$7,397,158
Building Systems Budget ($85/sf)	$4,465,390
Proposed New Construction (25,221sf @ $275/sf)	$6,935,775
Site Work associated with New Construction	$2,496,879
Design/Bidding Contingency - 5%	$1,064,760
TOTAL CONSTRUCTION COST	**$22,359,962**
Construction Contingency - 10%	$2,235,996
Soft Costs - 15% (Fees, Permits, etc.)	$3,353,994
Budget: FF&E Allowance ($1200/student)	$630,000
TOTAL PROJECT COST	**$28,579,953**

INCLUDES: ROOF REPLACEMENT, REPLACEMENT OF MOST BUILDING SYSTEMS (INCLUDING SPRINKLER SYSTEM) + SECURITY CAMERAS. ALONG WITH NEW SECURE FRONT ENTRANCE, CLASSROOM ADDITION TO CLOSER MEET EDUCATIONAL PROGRAM, AND A NEW GYM.

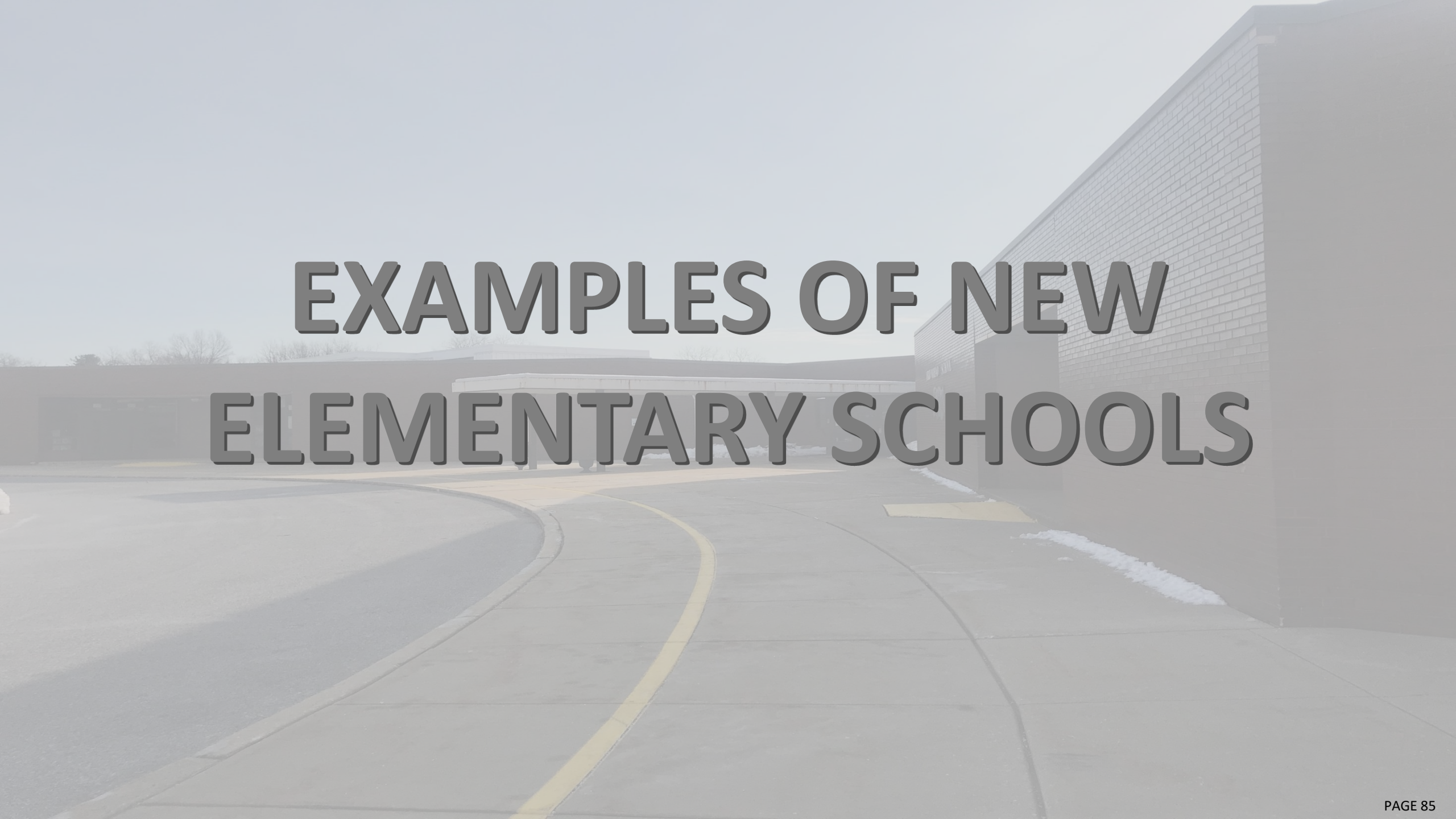
RENO+ADD OPTION #2B – CAPACITY 625

OPTION #1 AS WELL AS GYMNASIUM AND LARGER EDUCATIONAL ADDITION

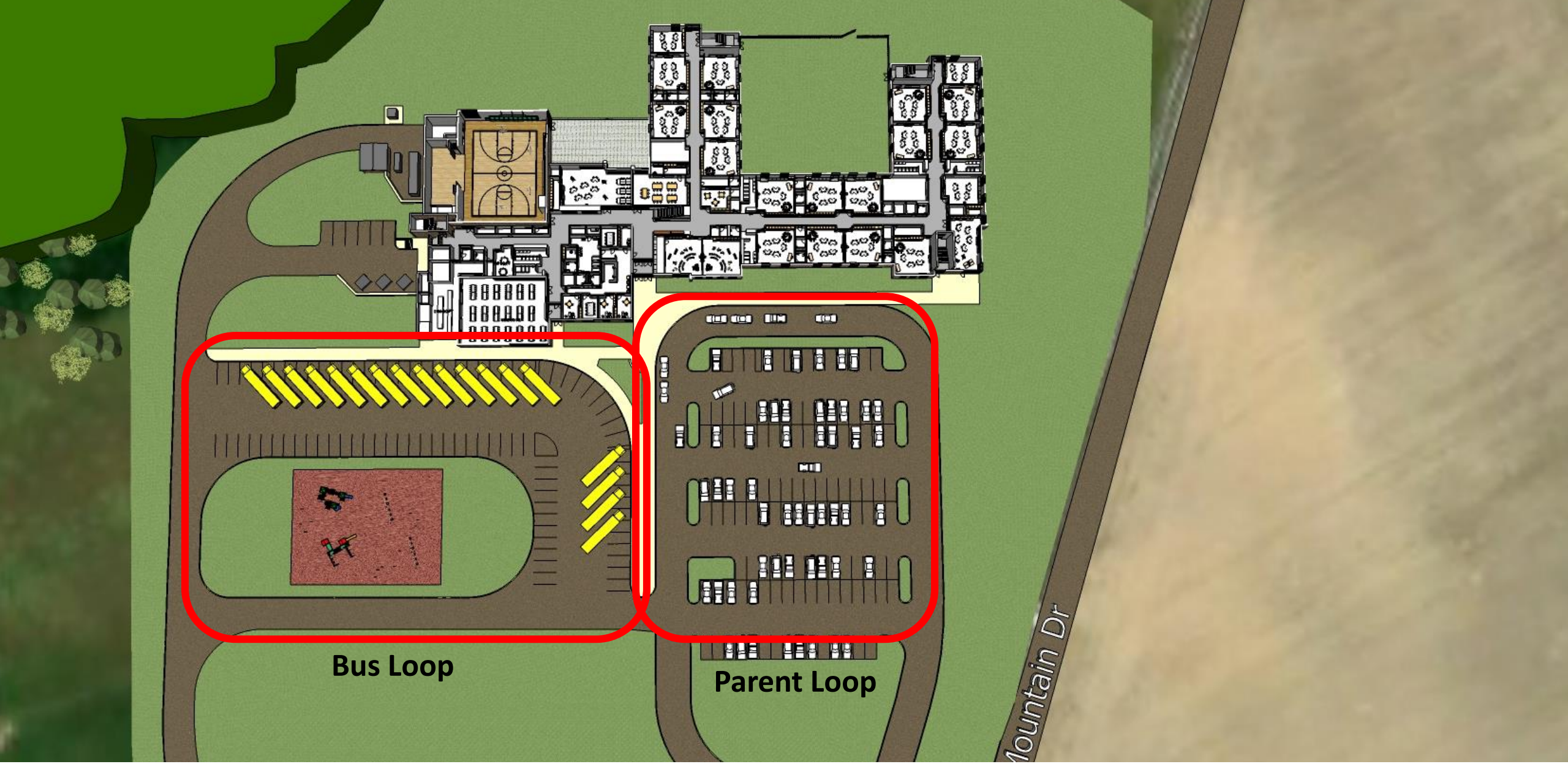
Building Renovations ($141/sf)	$7,397,158
Building Systems Budget ($85/sf)	$4,465,390
Proposed New Construction (32,970sf @ $275/sf)	$9,066,750
Site Work associated with New Construction	$3,264,030
Design/Bidding Contingency - 5%	$1,209,666
TOTAL CONSTRUCTION COST	**$25,402,994**
Construction Contingency - 10%	$2,540,299
Soft Costs - 15% (Fees, Permits, etc.)	$3,810,449
Budget: FF&E Allowance ($1200/student)	$750,000
TOTAL PROJECT COST	**$32,503,743**

INCLUDES: ROOF REPLACEMENT, REPLACEMENT OF MOST BUILDING SYSTEMS (INCLUDING SPRINKLER SYSTEM) + SECURITY CAMERAS. ALONG WITH NEW SECURE FRONT ENTRANCE, CLASSROOM ADDITION TO CLOSER MEET EDUCATIONAL PROGRAM, AND A NEW GYM.

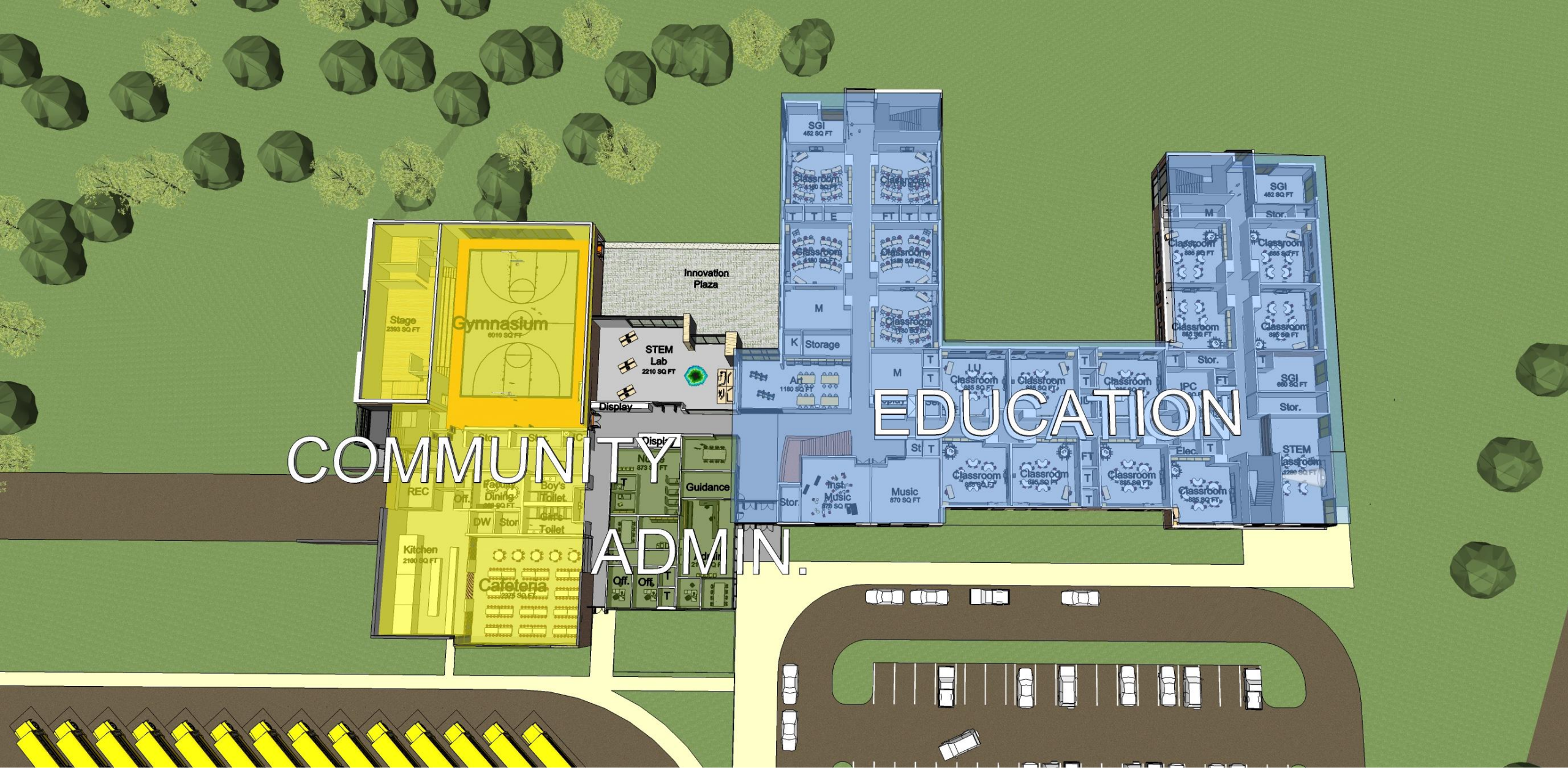
kcba Architects



EXAMPLES OF NEW ELEMENTARY SCHOOLS

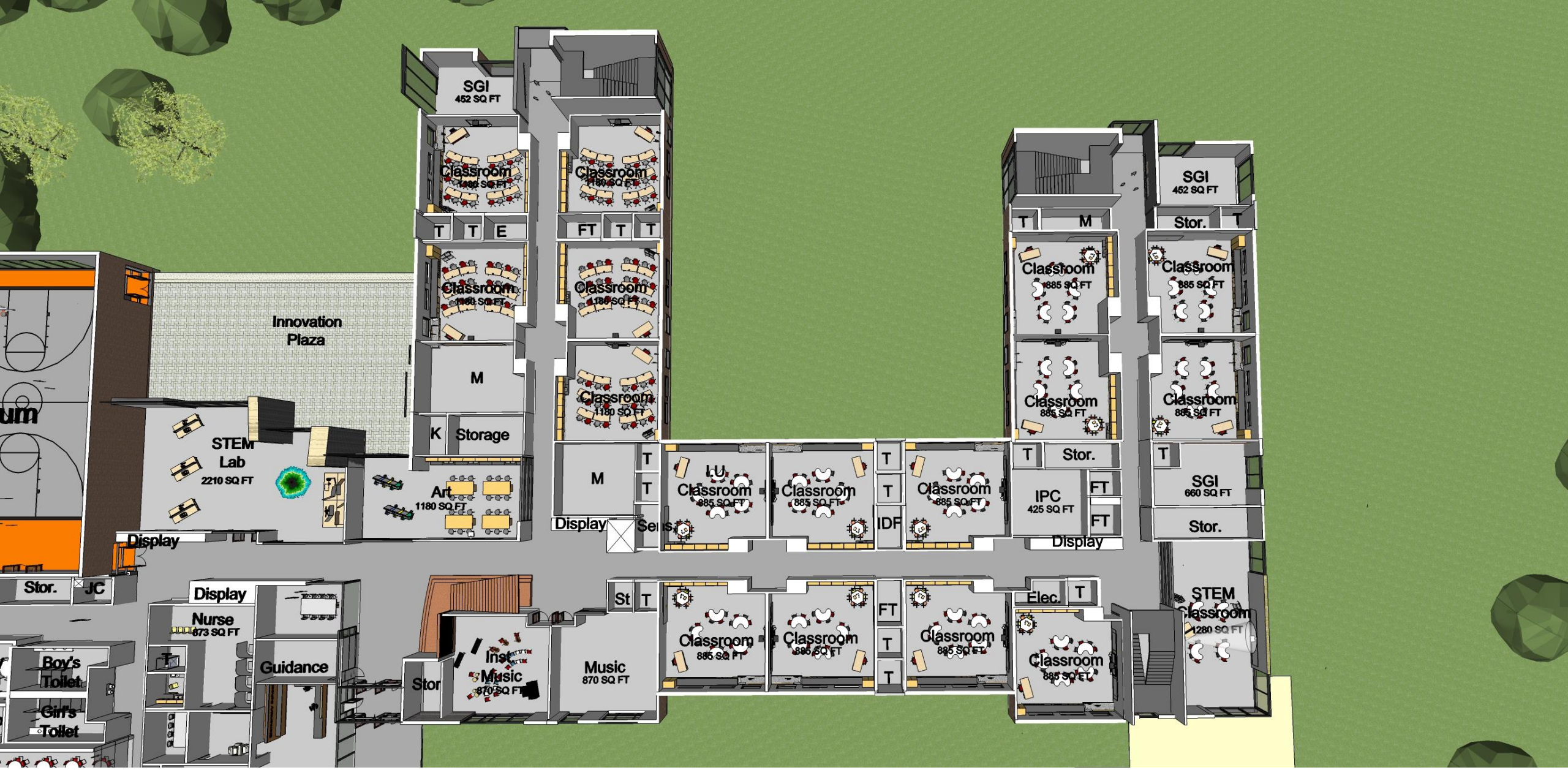


Example New Elementary School #1



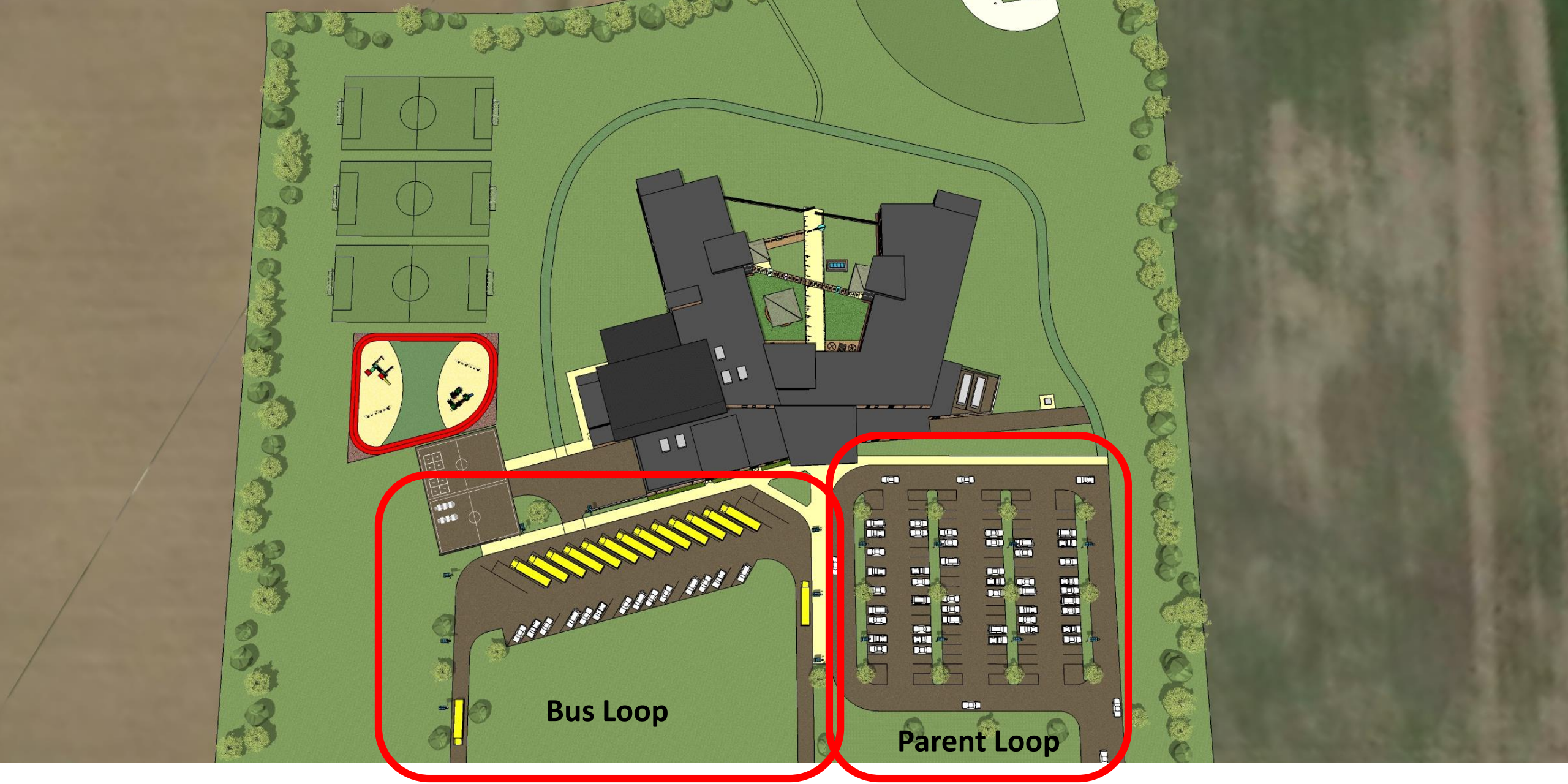
Example New Elementary School #1

Example New Elementary School #1



Example New Elementary School #1

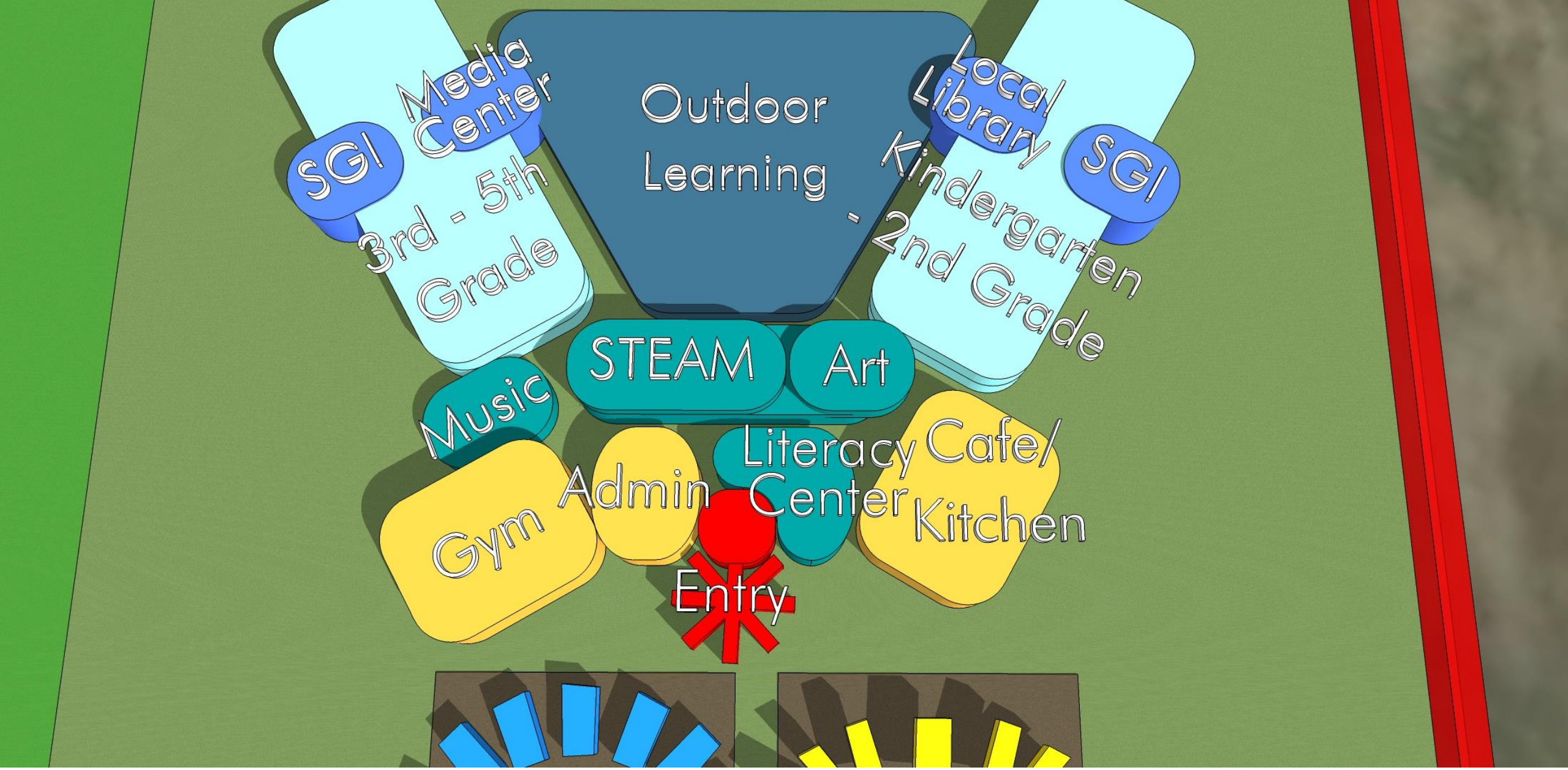
Example New Elementary School #1



Example New Elementary School #2

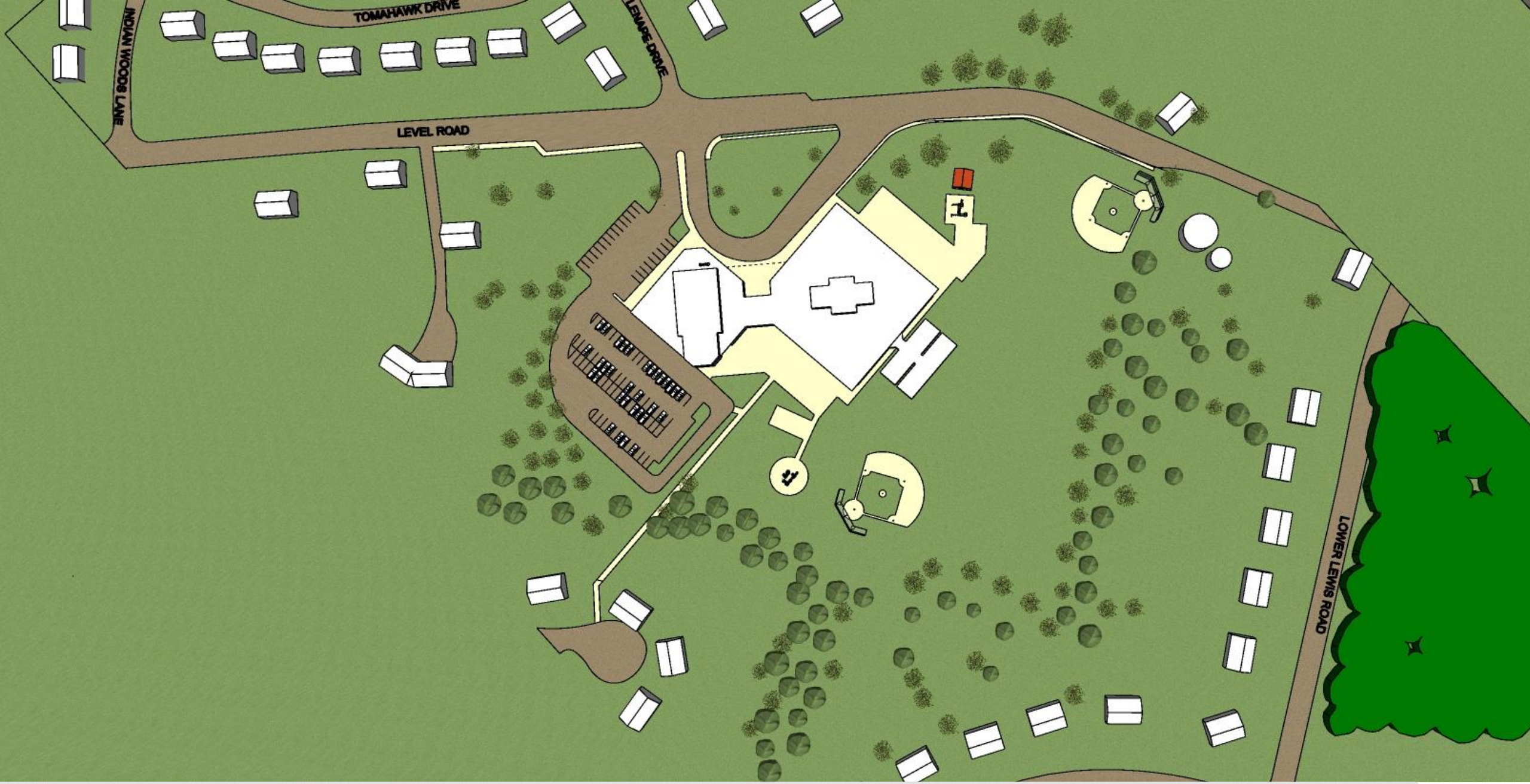
Example New Elementary School #2

Example New Elementary School #2

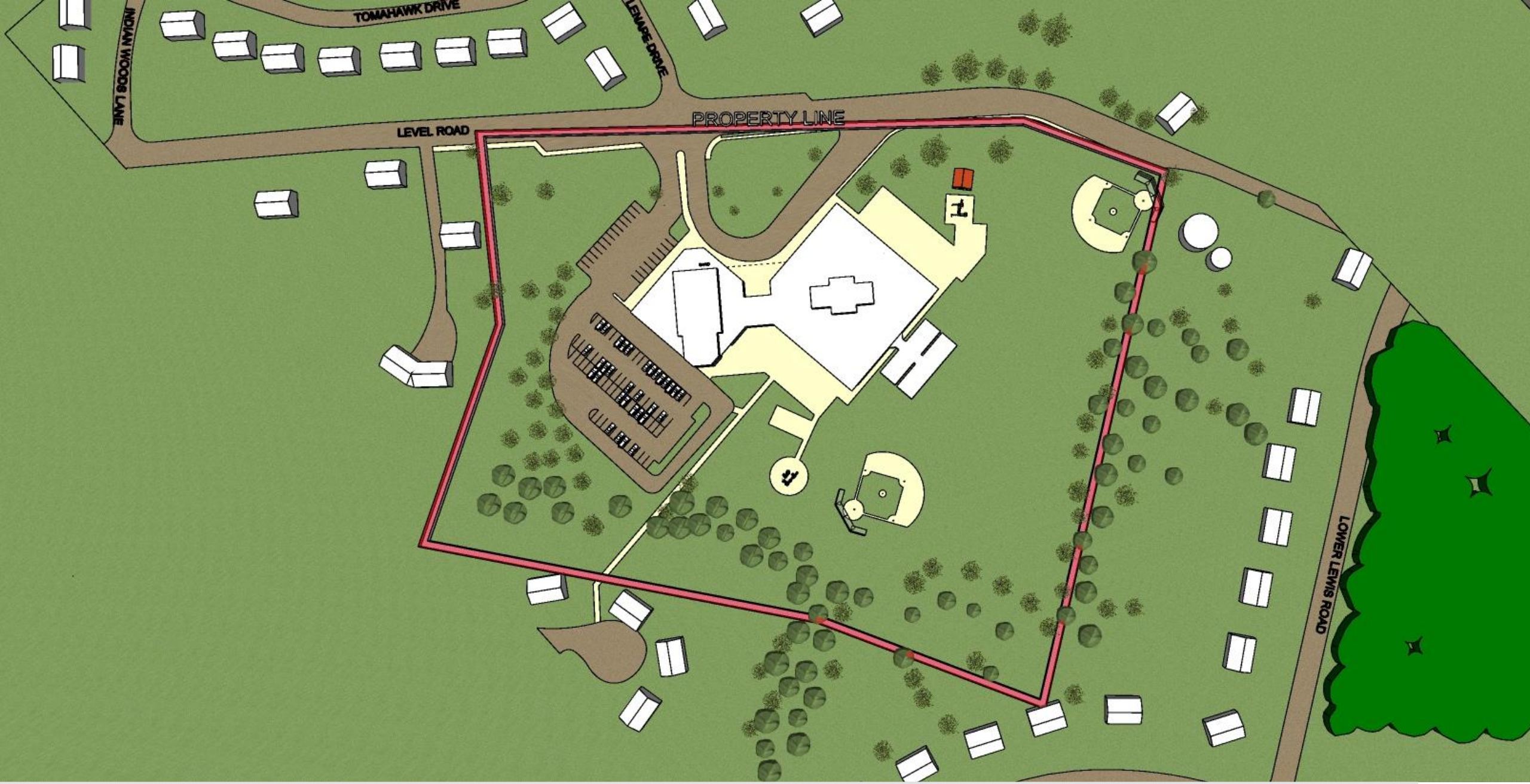


Example New Elementary School #2

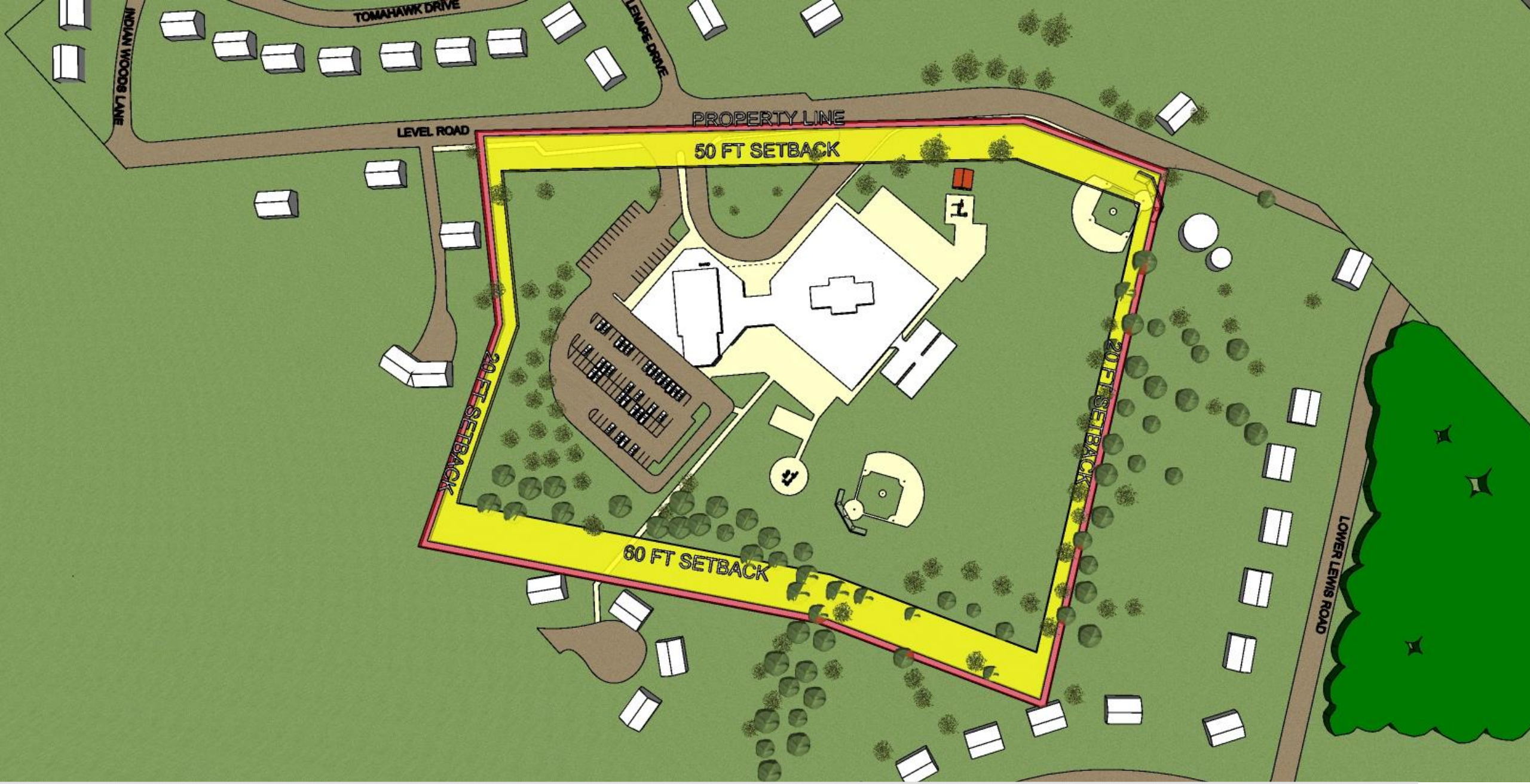
NEW BUILDING OPTION



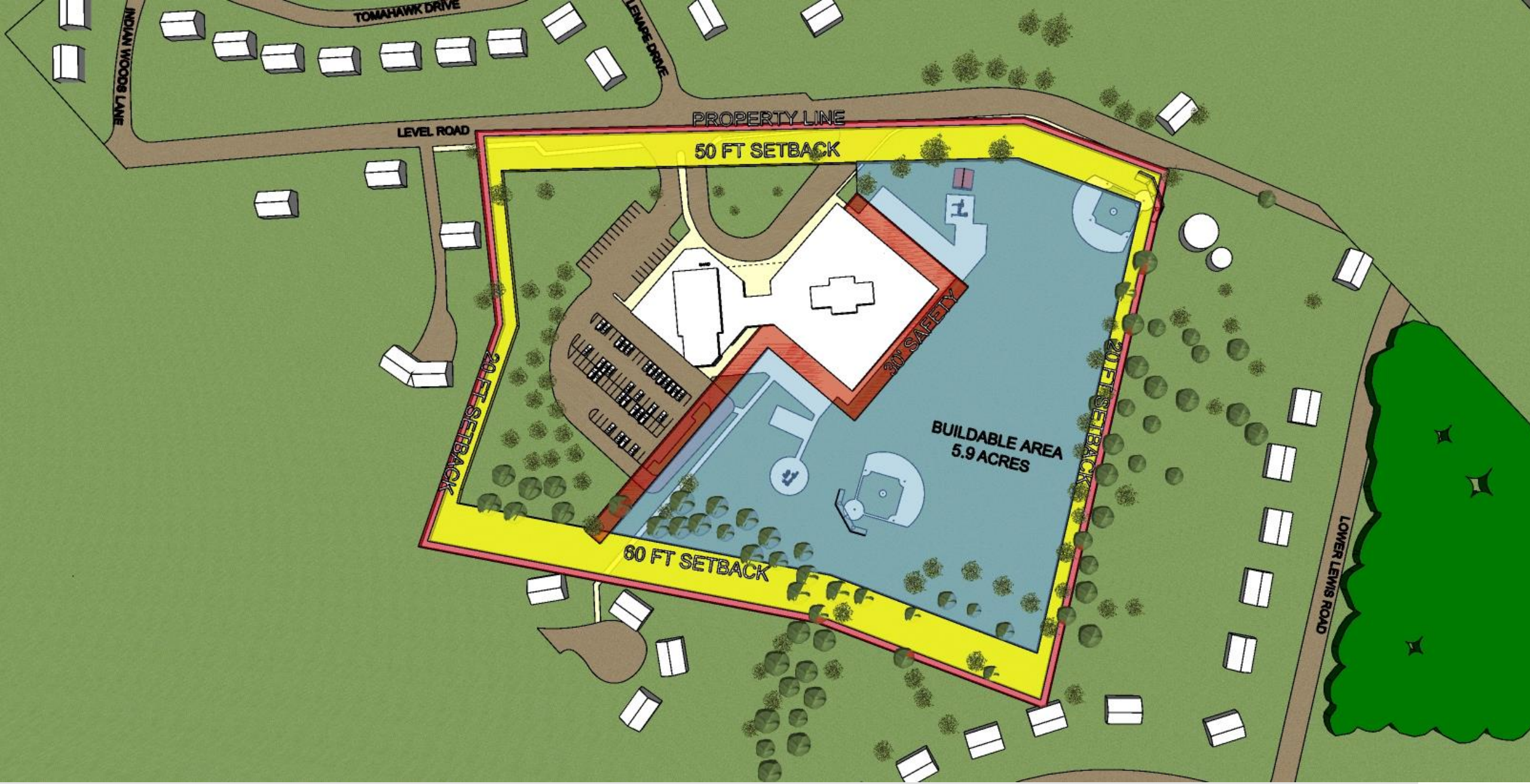
EXISTING SITE PLAN



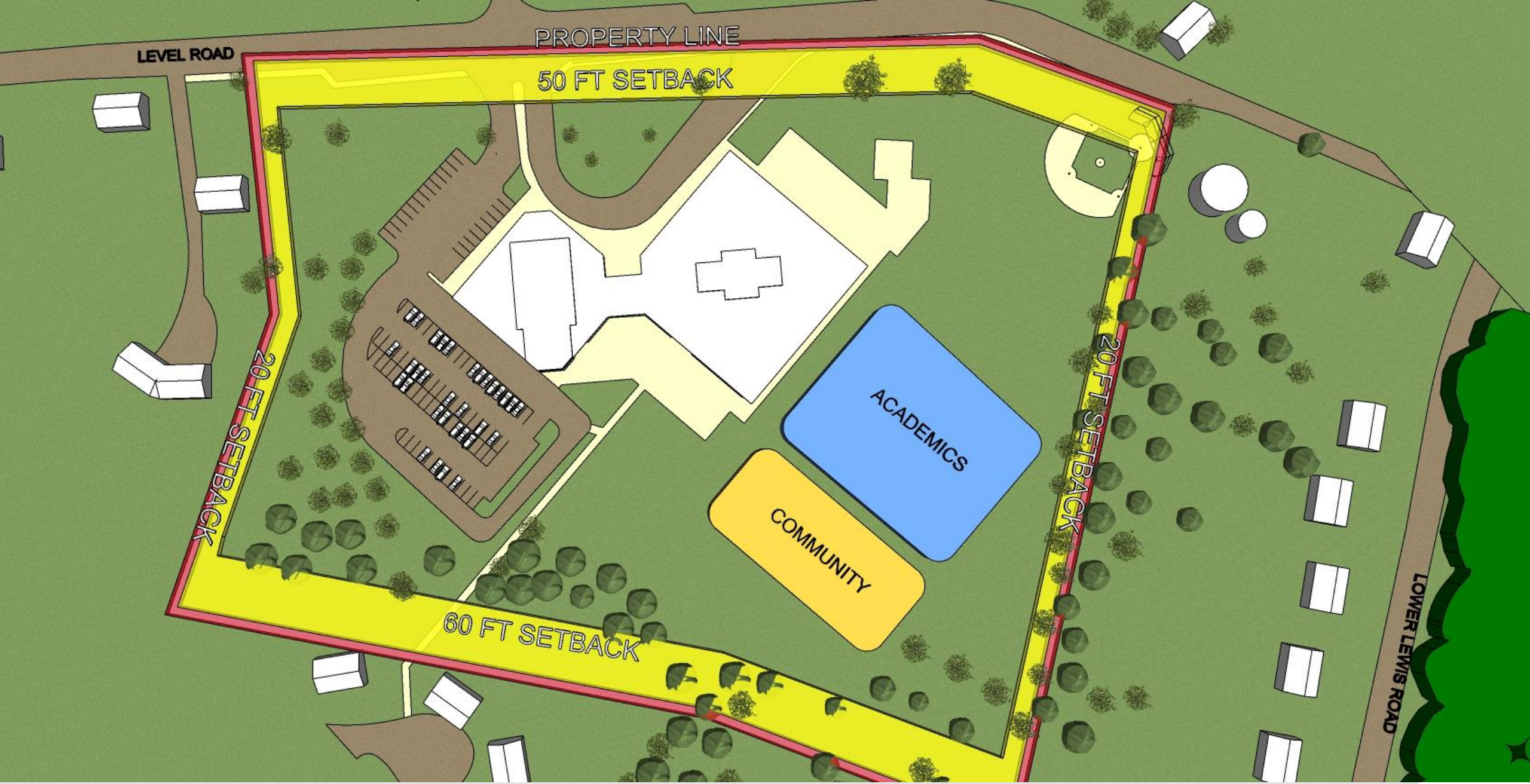
EXISTING SITE – PROPERTY LINE



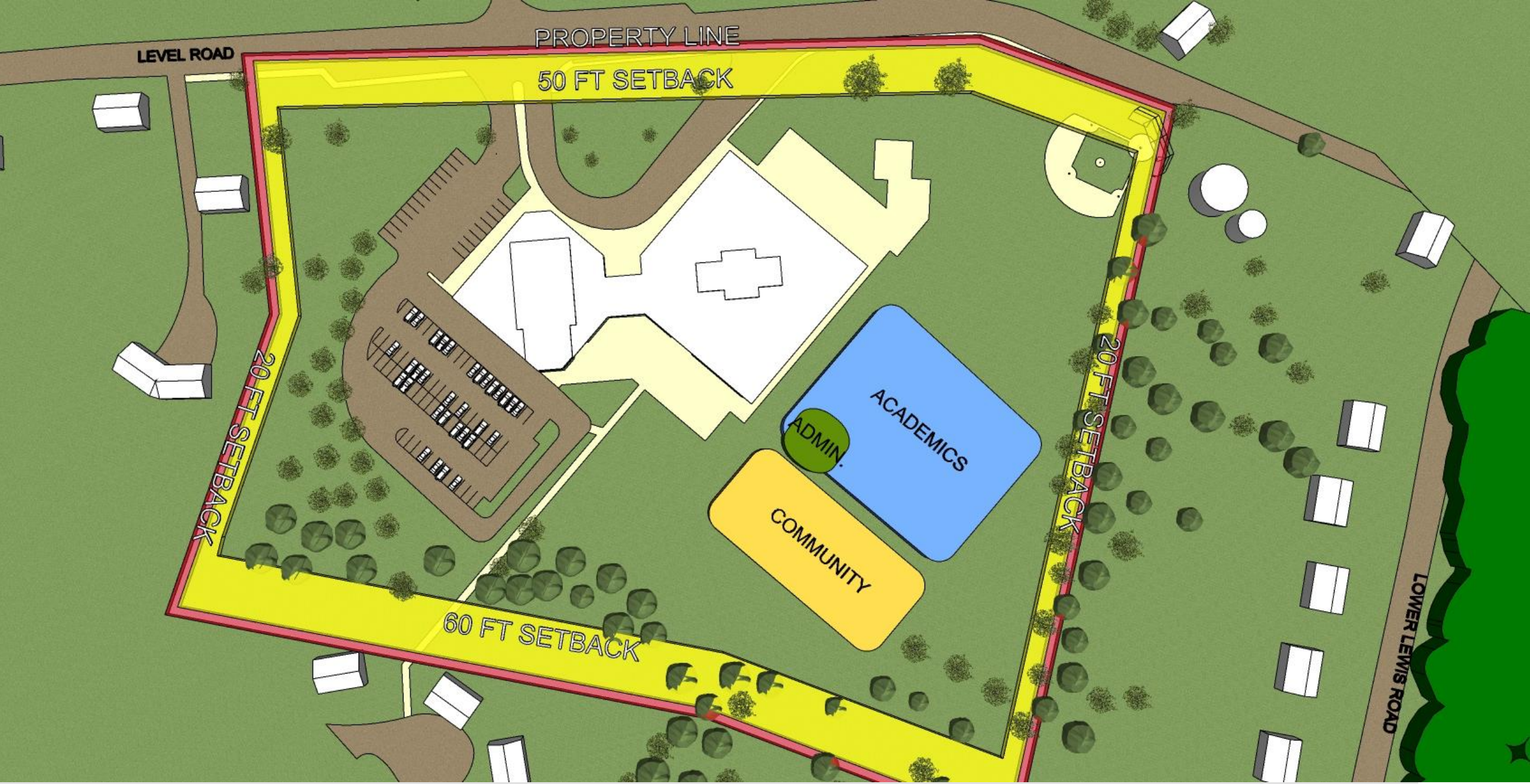
EXISTING SITE - SETBACKS



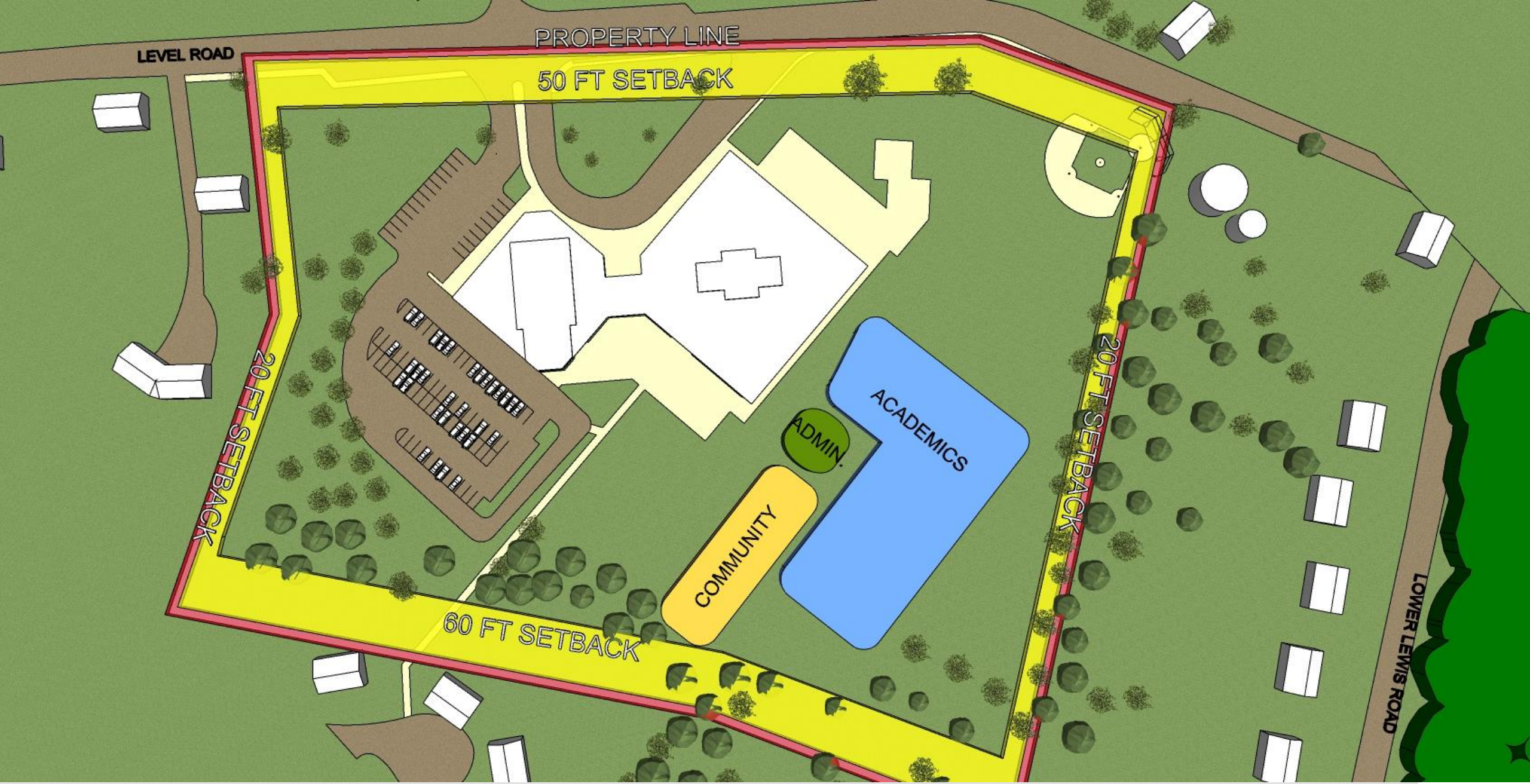
SITE BUILDABLE AREA



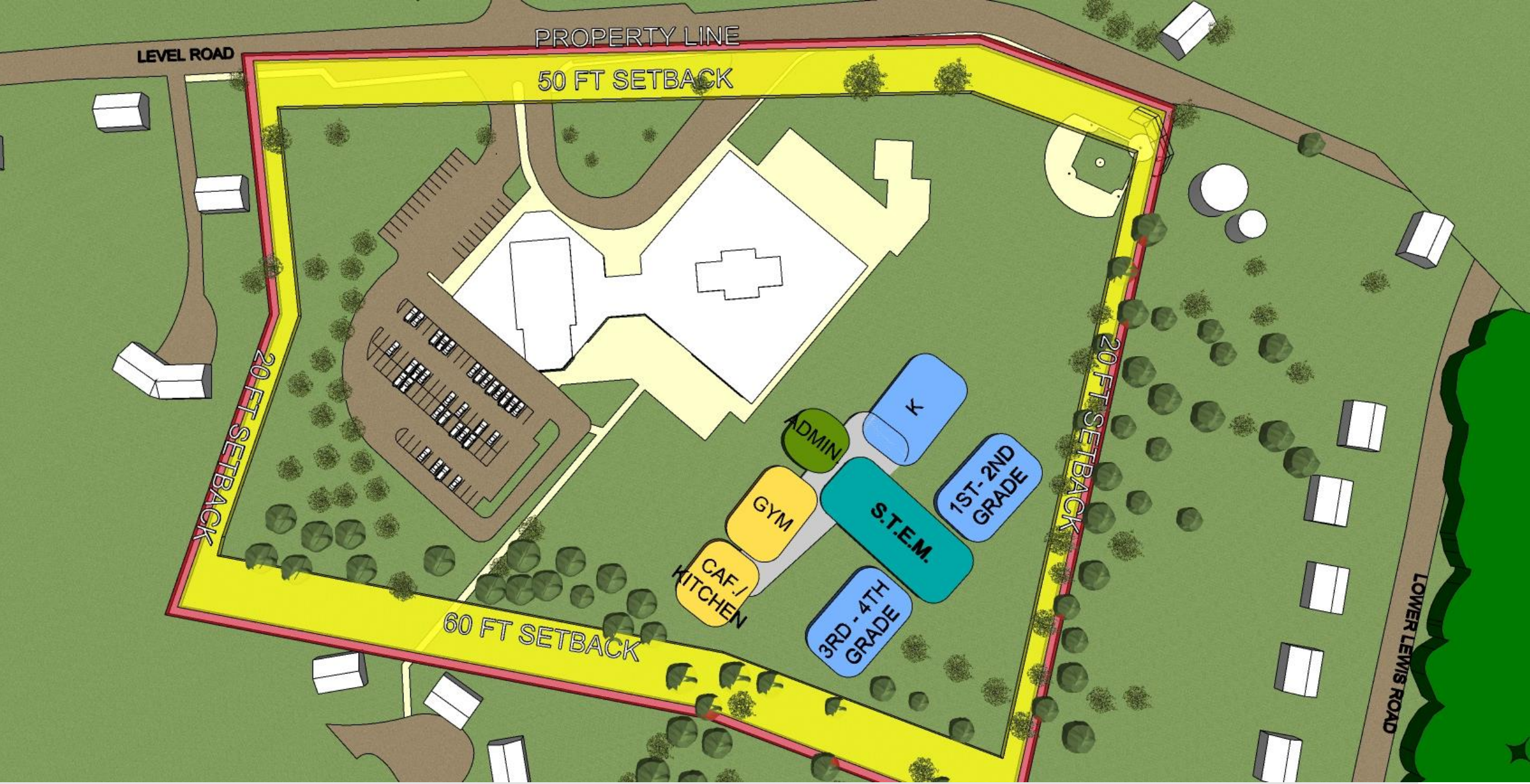
CONCEPTUAL NEW SCHOOL LAYOUT



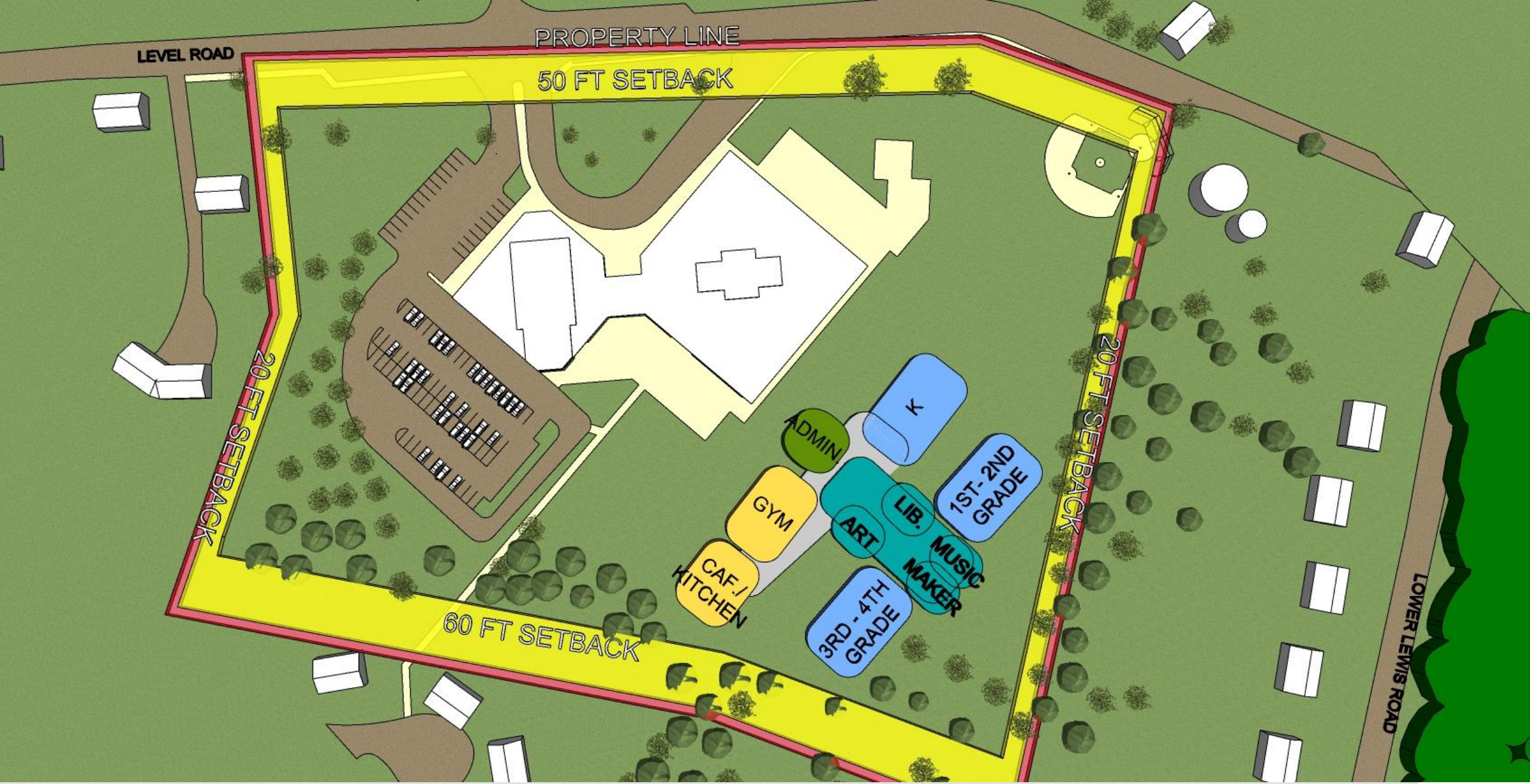
CONCEPTUAL NEW SCHOOL LAYOUT



CONCEPTUAL NEW SCHOOL LAYOUT



CONCEPTUAL NEW SCHOOL LAYOUT



CONCEPTUAL NEW SCHOOL LAYOUT

kcba Architects

CONCEPTUAL NEW SCHOOL LAYOUT

LEHIGH ELEMENTARY SCHOOL

School District
Northampton Area School District

Grades	*Size*	*Number of Students*
K-5	97,580 SF	750

Bid Date	*Building Bid Cost*	*Site Bid Cost*
March 12, 2019	$25,022,229	$4,287,697

- $256 per square foot

LYNNEWOOD ELEMENTARY SCHOOL

School District
School District of Haverford Township

Grades	*Size*	*Number of Students*
K-5	89,650 SF	700

Bid Date	*Building Bid Cost*	*Site Bid Cost*
March 29, 2019	$21,712,520	$4,844,980

- $242 per square foot

UWCHLAN HILLS ELEMENTARY SCHOOL

School District
Downingtown Area School District

Grades	*Size*	*Number of Students*
K-5	76,235 SF	600

Bid Date	*Building Bid Cost*	*Site Bid Cost*
February 21, 2019	$20,525,900	$3,700,000

- $269 per square foot

kcba Architects

NEW SCHOOL OPTION – CAPACITY 525

Proposed New Construction (81,664sf @ $270/sf)	$22,049,280
Site work required for new construction (18%)	$3,968,870
Demo of existing school building (52,534sf @ $8/sf)	$420,272
Design/Bidding Contingency - 3%	$793,153
TOTAL CONSTRUCTION COST	**$27,231,575**
Construction Contingency - 5%	$1,361, 579
Soft Costs - 13% (Fees, Permits, etc.)	$3,540,105
Budget: FF&E Allowance ($1200/student)	$630,000
TOTAL PROJECT COST	**$32,763,259**

NEW CONSTRUCTION $4,183,306 MORE EXPENSIVE THAN RENO+ADD OPTION #2A (14% DELTA)

kcba Architects

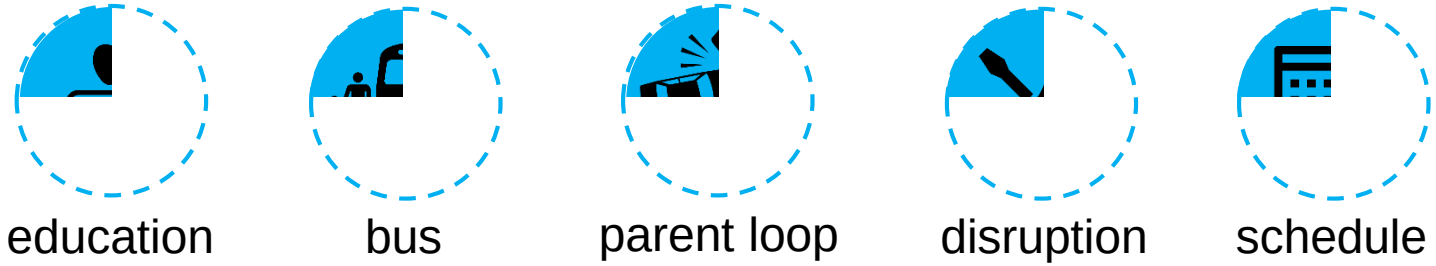
NEW SCHOOL OPTION – CAPACITY 625

Proposed New Construction (88,704sf @ $270/sf)	$23,950,080
Site work required for new construction (18%)	$4,311,014
Demo of existing school building (52,534sf @ $8/sf)	$420,272
Design/Bidding Contingency - 3%	$860441
TOTAL CONSTRUCTION COST	**$29,541,807**
Construction Contingency - 5%	$1,477,090
Soft Costs - 13% (Fees, Permits, etc.)	$3,840,435
Budget: FF&E Allowance ($1200/student)	$750,000
TOTAL PROJECT COST	**$35,609,333**

NEW CONSTRUCTION $3,105,590 MORE EXPENSIVE THAN RENO+ADD OPTION #2B (9.5% DELTA)

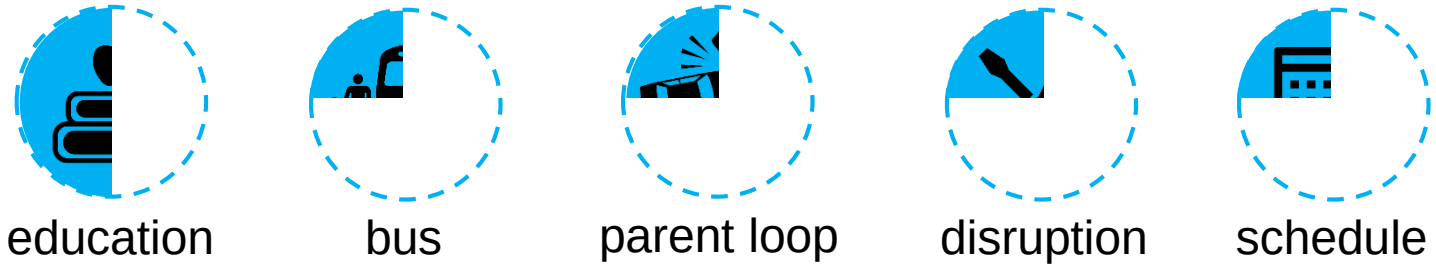
kcba Architects

Reno+Add Option #1 = $22.2 M



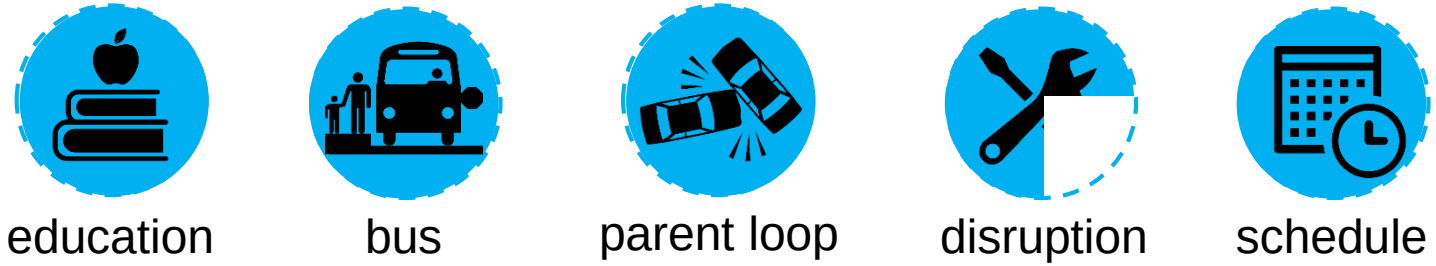
28 months

Reno+Add Option #2A = $28.6 M



33 months

New School Construction = $32.7 M



21 months

RENOVATION		NEW CONSTRUCTION
insufficient … ideal 	Educational Environments	insufficient … ideal 
insufficient … ideal 	Operational Priorities	insufficient … ideal 
negligible … sizable 	Impact During Construction	negligible … sizable 
low … high 	Project Cost	low … high 
25 years … 100 years 	Long Term Value	25 years … 100 years 

BALANCE


BALANCE
OUTCOME


BALANCE
OUTCOME
INVESTMENT

Recommendations

1. Not recommended to renovate or expand the existing school building
   - Far too many modifications needed to justify expenditures

2. Build a new school building behind existing school

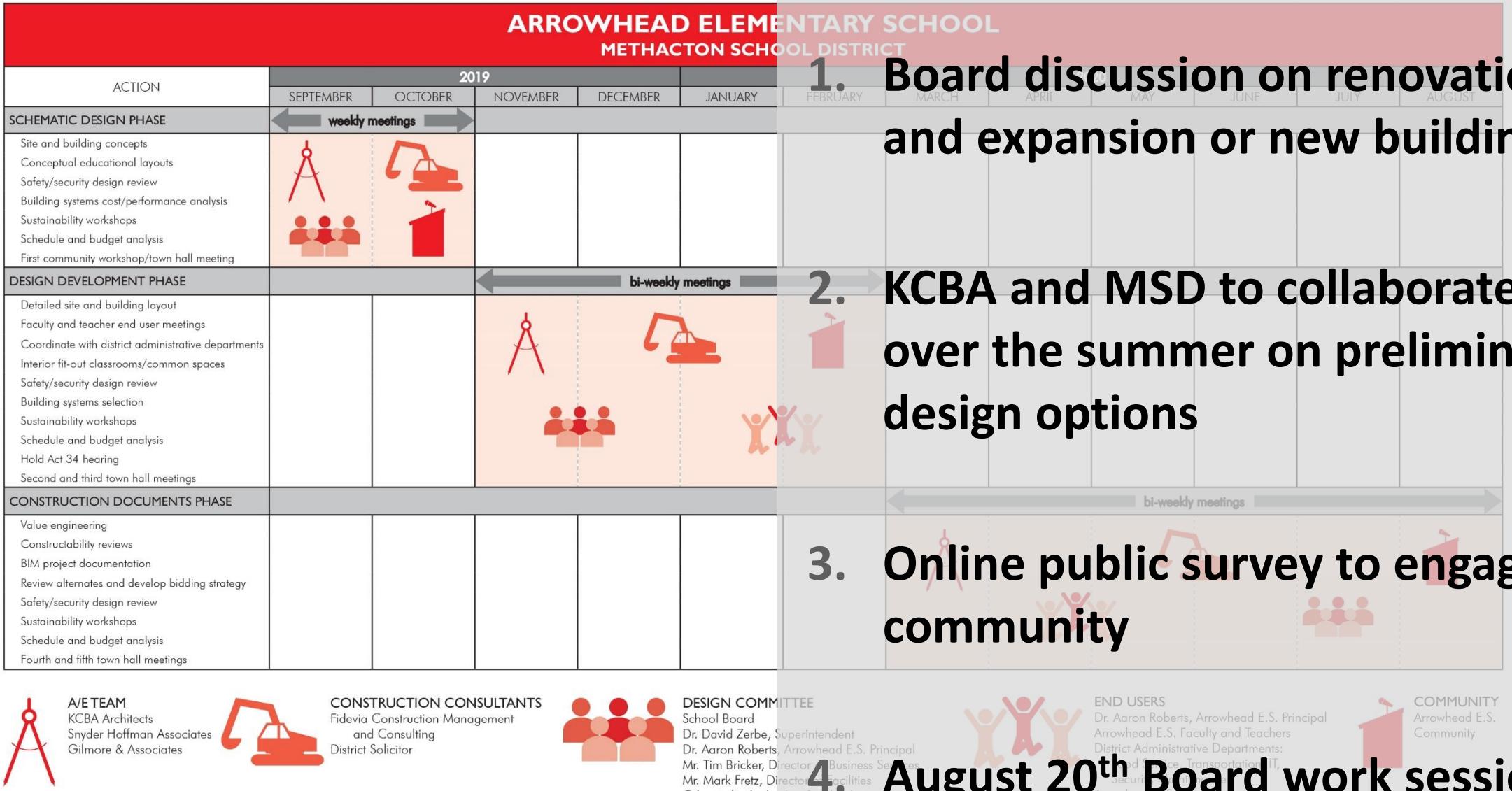
3. Design the school for a capacity of 625 to accommodate future growth
   - Bid the project with alternate to reduce 4 classrooms (525 capacity)

4. Release presentation and solicit feedback from the public

5. Continue with Preliminary Design of new school this summer for board review and approval in August 2019

COLLABORATIVE PROCESS

Potential Schedule for Collaborative Design Process



Next Steps

1. Board discussion on renovation and expansion or new building
2. KCBA and MSD to collaborate over the summer on preliminary design options
3. Online public survey to engage community
4. August 20th Board work session to review and consider project


DISCUSSION