

An aerial photograph of the Arrowhead Elementary School campus. The main school building is a large, multi-winged structure with a flat roof, situated in the center. To its right is a large, paved parking lot with several cars parked. The campus is surrounded by lush green trees and grass. In the upper left, there is a baseball field and two large white water towers. The overall scene is a well-maintained educational facility in a suburban setting.

ARROWHEAD FORWARD

New Elementary School at Arrowhead

May 26th, 2020 Board Update



TONIGHT'S AGENDA

1. Land Development Recap
2. Review of site phasing/safety
3. Review of building improvements
4. Project Schedule
 - Land Development Schedule
5. Budget update
6. Next steps

LAND DEVELOPMENT RECAP

1. Kick-off Township Meeting (December 20, 2019)
2. Met with Fire Marshal (March 3, 2020)
3. Prelim/Final Plan Submission Submitted (March 13, 2020)
4. NPDES Submitted (March 30, 2020)
5. Planning Commission Meeting (April 22, 2020)
6. **Prelim/Final Plan Submission #2 (May 2020)**
7. Planning Commission Meeting (July 22, 2020)
8. Anticipated NPDES Approval (September 2020)

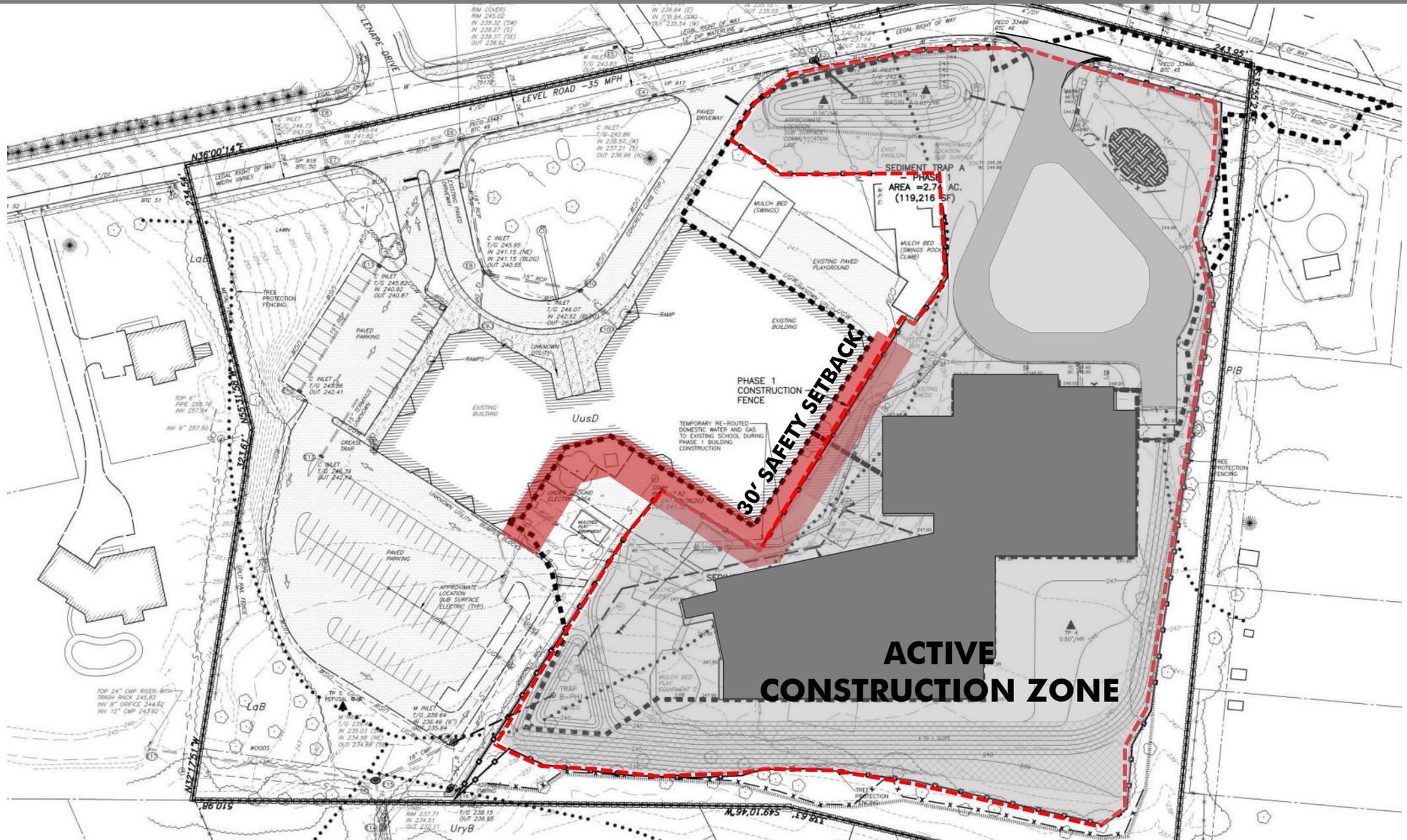


SITE PHASING

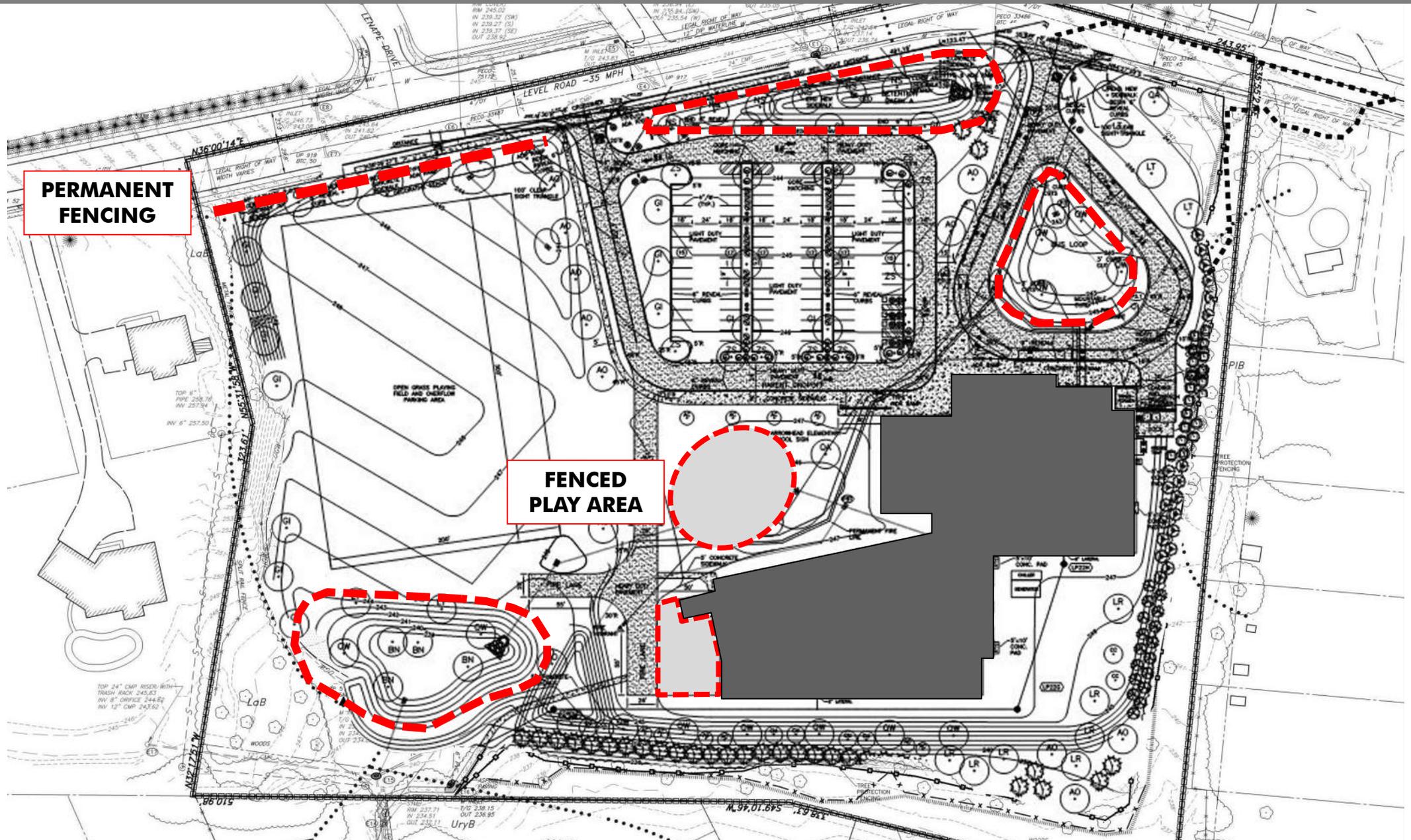
SITE VISITS (4/28/2020 WITH LOCAL REPRESENTATIVE)



SITE PLAN: PHASE 2



SITE PLAN: PHASE 3



PERMANENT FENCING

FENCED PLAY AREA



BUILDING DESIGN



ARROWHEAD ELEMENTARY EXISTING

K-4 ELEMENTARY

4 CLASSROOMS PER GRADE

TOTAL CAPACITY: 450

FIRST FLOOR: 58,000 SF

TOTAL: 58,000 SF

ACADEMIC:

18 CLASSROOMS, 850 SF, NO TOILETS

8 SPECIAL EDUCATION, 750-900 SF



ARROWHEAD ELEMENTARY CONSTRUCTION DOCUMENTS

K-4 ELEMENTARY

5 CLASSROOMS PER GRADE

TOTAL CAPACITY: 625

FIRST FLOOR: 58,135 SF

SECOND FLOOR: 27,945 SF

TOTAL: 86,080 SF

ACADEMIC:

15 CLASSROOMS, 900 SF, NO TOILETS

10 CLASSROOMS, 835 SF, SINGLE-USE TOILET IN
CLASSROOM

8 SPECIAL EDUCATION, 660-900 SF

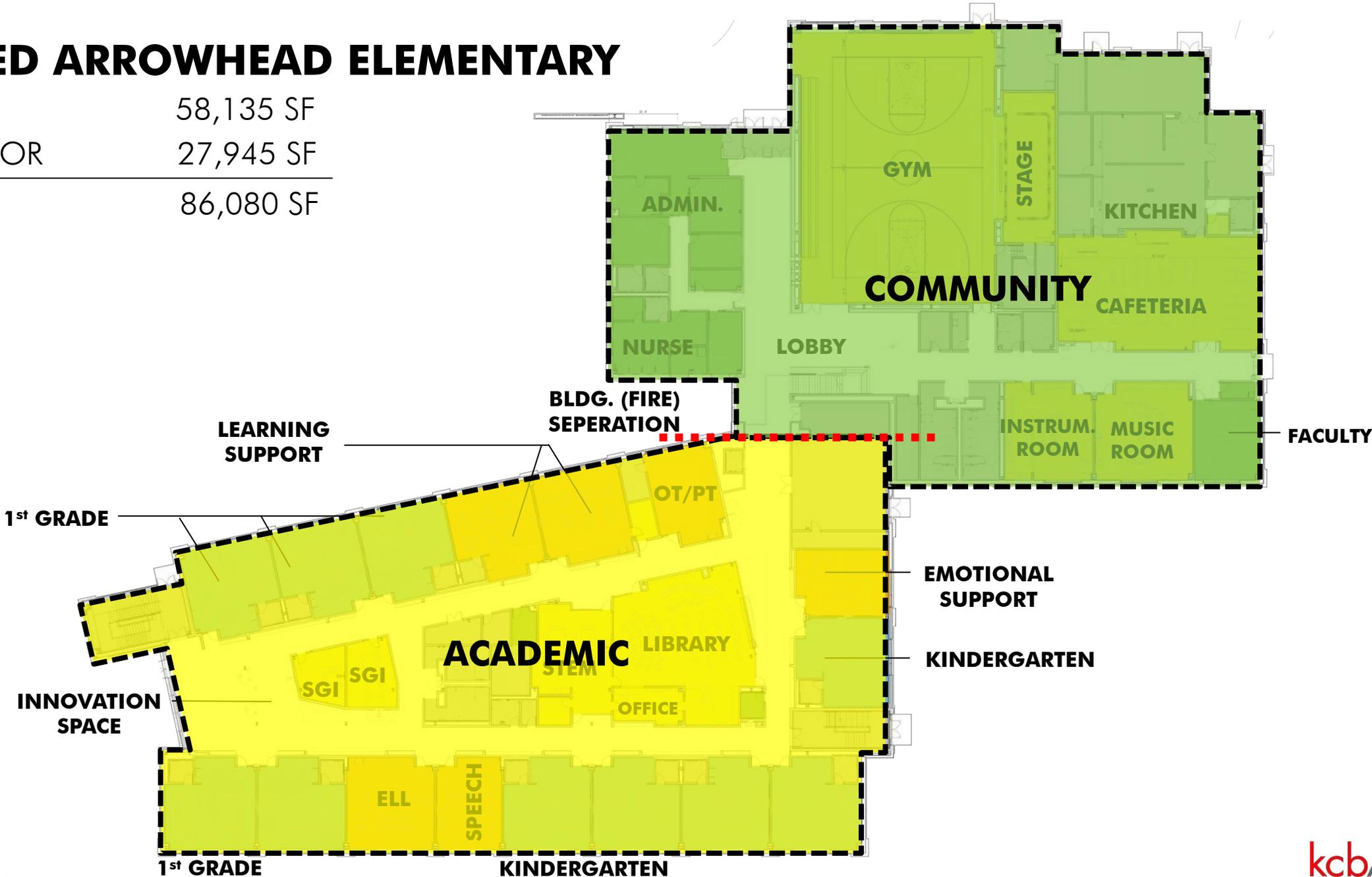


ARROWHEAD ELEMENTARY

	<u>EXISTING</u>	<u>NEW</u>	
LIBRARY/STEM	1880 SF	3200 SF	+1320 SF
CAFETERIA	2192 SF	2400SF	+208 SF
GYM	2383 SF	5800 SF	+3417 SF
STAGE	650 SF	950 SF	+300 SF

PROPOSED ARROWHEAD ELEMENTARY

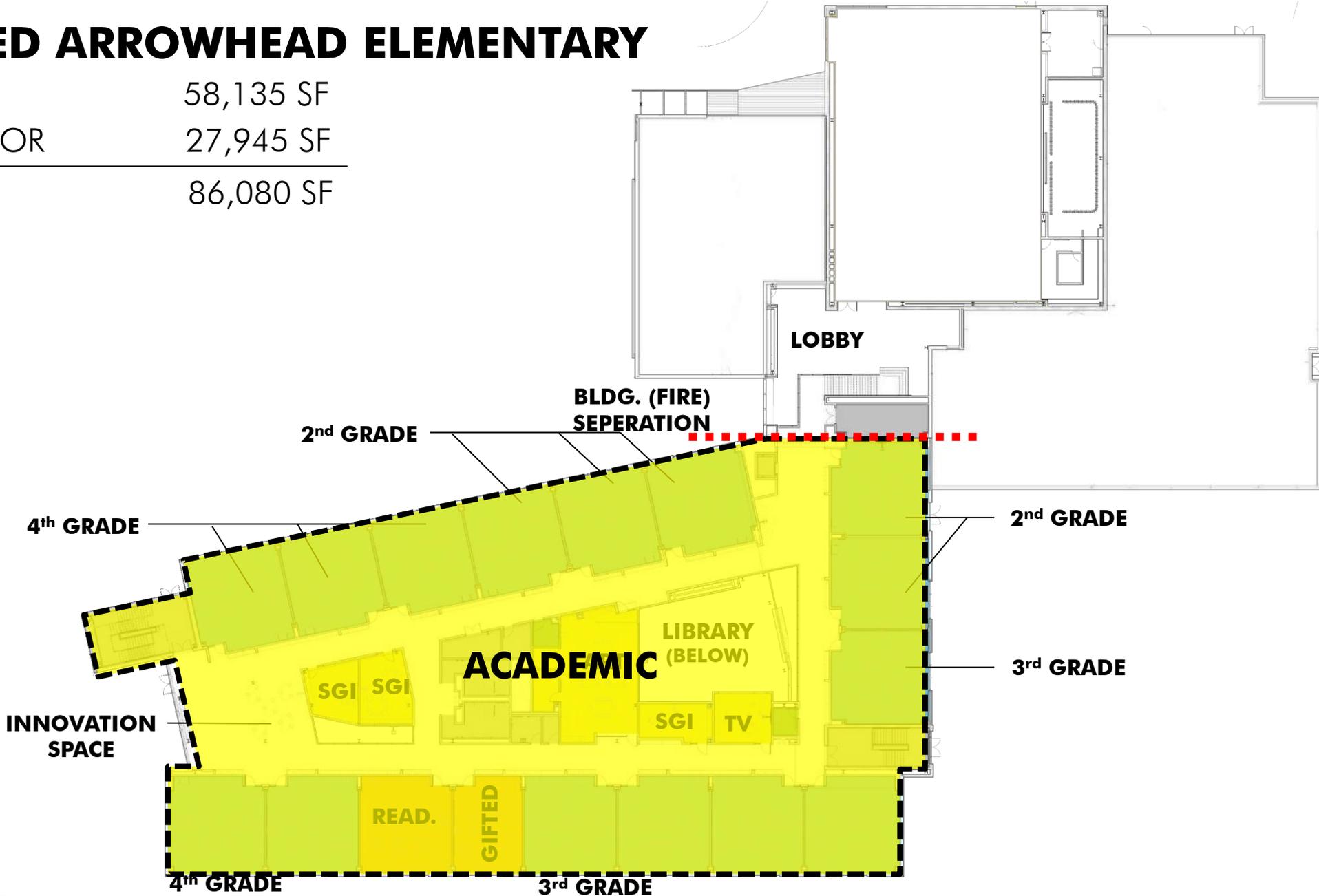
FIRST FLOOR	58,135 SF
SECOND FLOOR	27,945 SF
TOTAL	86,080 SF



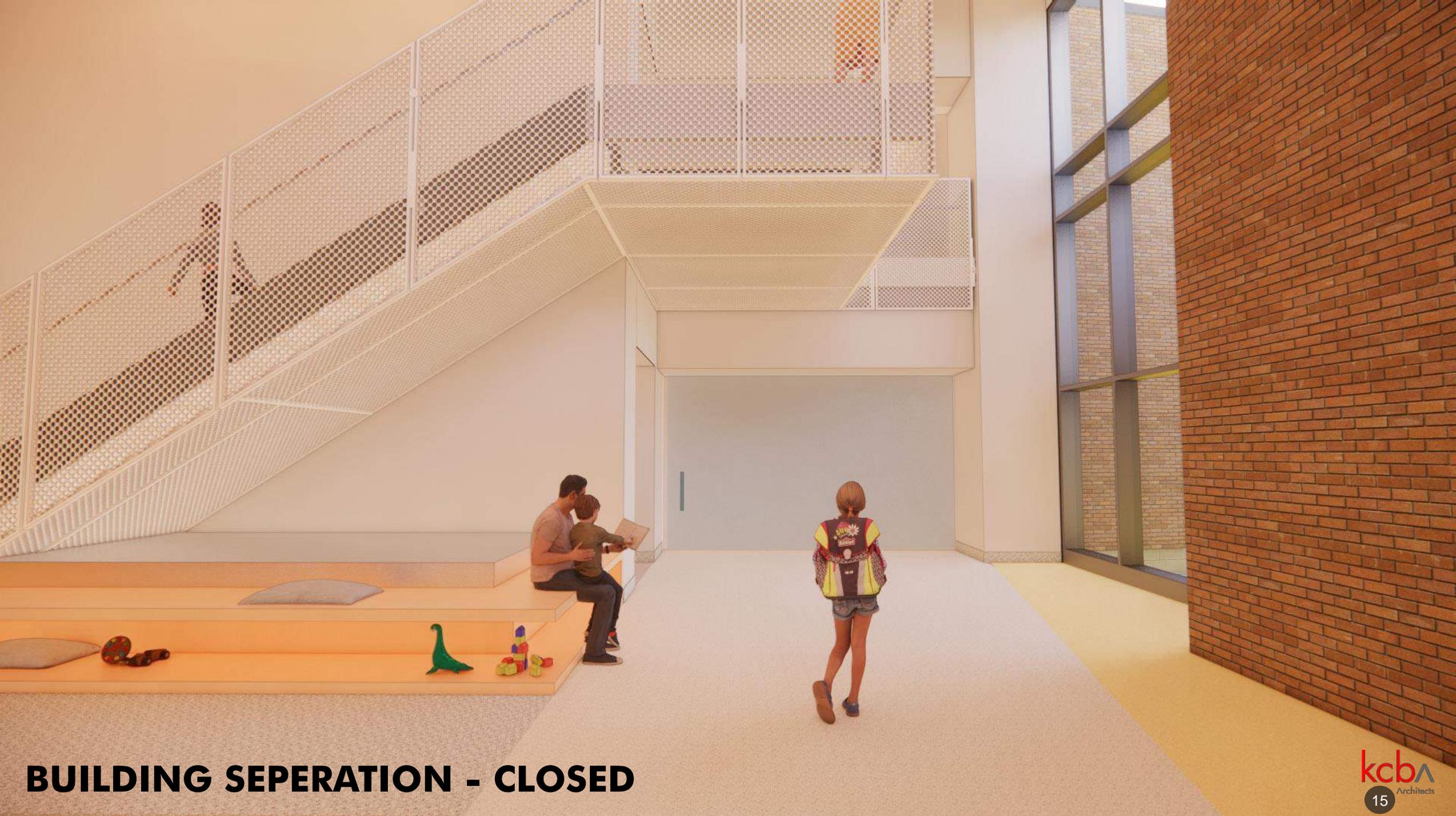
FIRST FLOOR PLAN

PROPOSED ARROWHEAD ELEMENTARY

FIRST FLOOR	58,135 SF
SECOND FLOOR	27,945 SF
TOTAL	86,080 SF



SECOND FLOOR PLAN



BUILDING SEPERATION - CLOSED

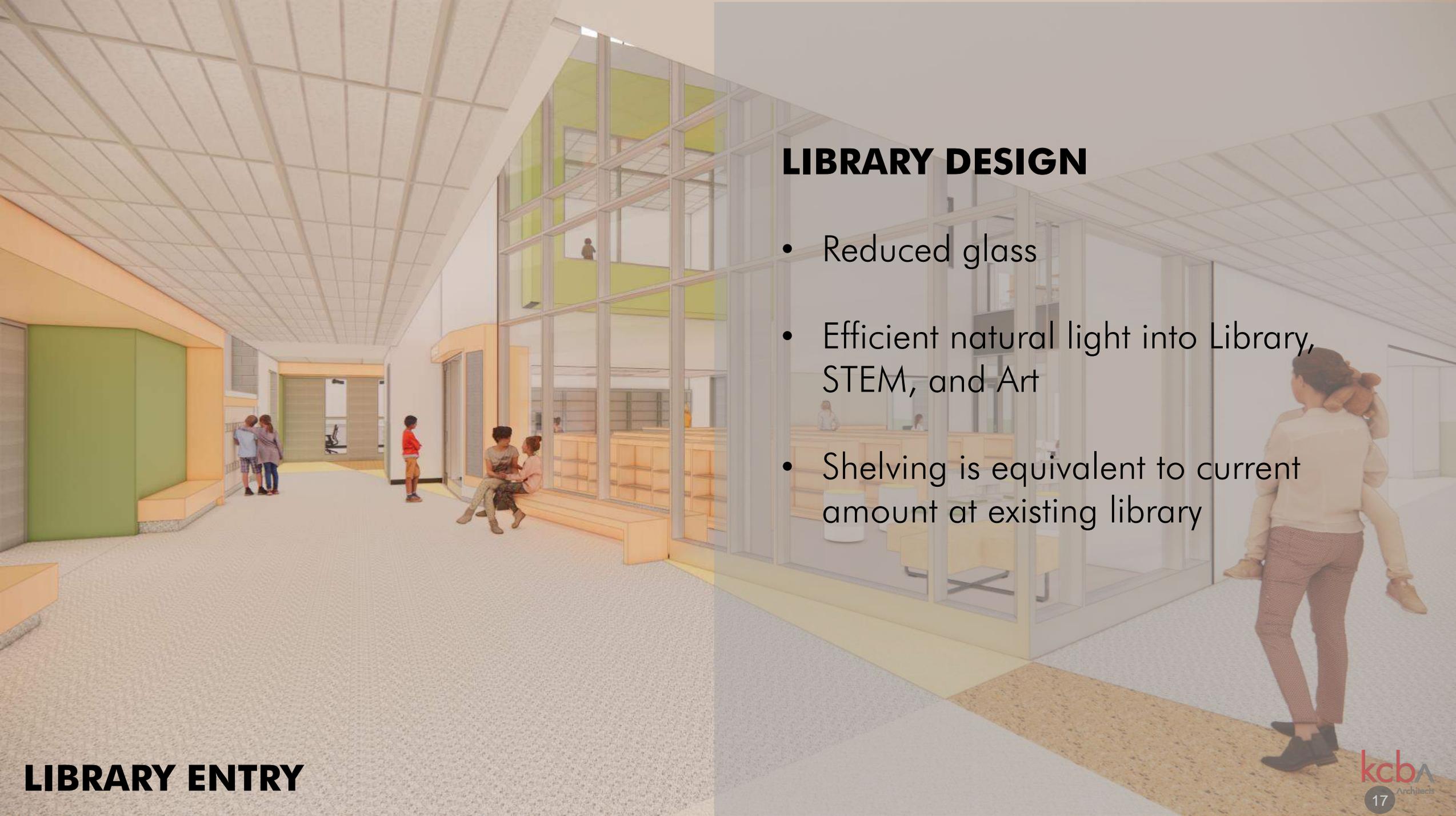


RECEPTION

ENTRY AND ADMINISTRATION

- Visitor entry directly into secured vestibule
- Security sign-in within vestibule
- Sweeping windows for full view of drop-off, bus loop, and entrance doors





LIBRARY DESIGN

- Reduced glass
- Efficient natural light into Library, STEM, and Art
- Shelving is equivalent to current amount at existing library

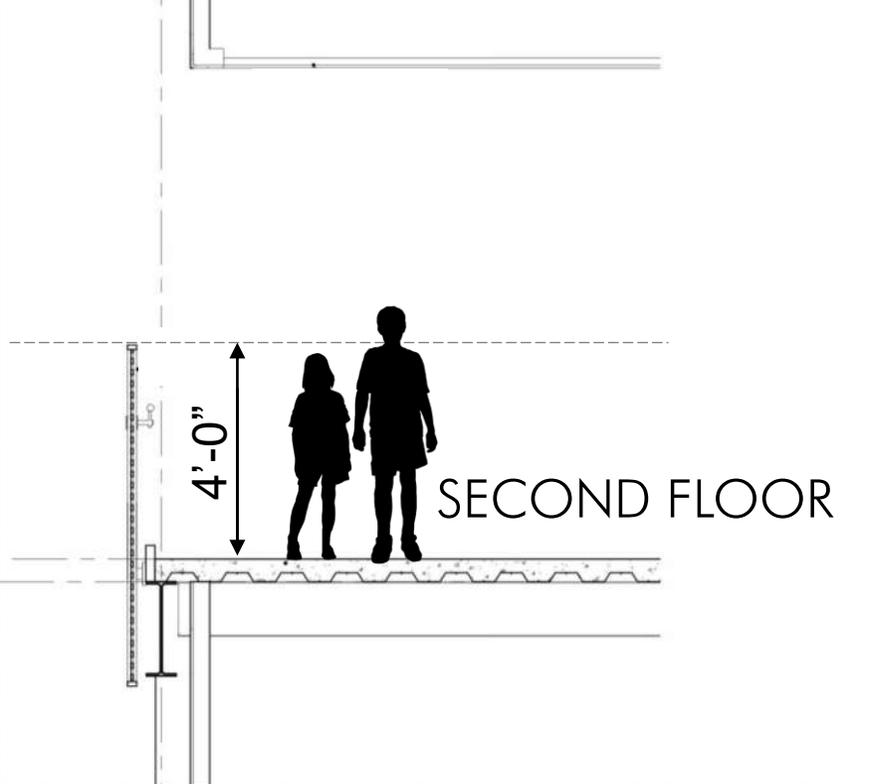
LIBRARY ENTRY



AFTER

SECOND FLOOR

- Low maintenance, high visibility railing above code minimum height



SECOND FLOOR CORRIDOR



FLEXIBLE SPACE

- Cost effective option for acoustic performance
- Smooth monolithic finish for ease of cleaning
- No exposed equipment above ceiling



CORRIDOR FEATURES

- Student cubbies with doors in corridors
- Built-in seating and tack boards
- Contained classroom personalization

CLASSROOM ENTRY

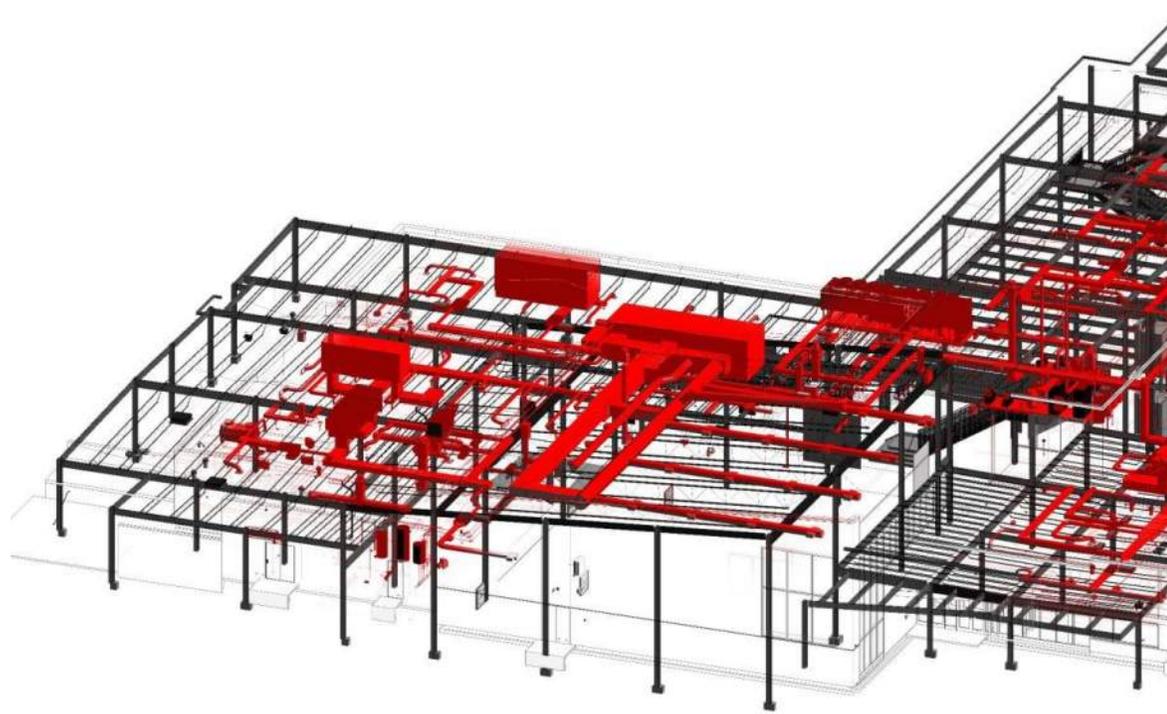


TYPICAL CLASSROOM

CLASSROOM FINISHES

- Durability
- Standard color selections
- Standard LED light fixtures
- Quality, performance, and cost





MEP SYSTEMS

M.E.P. SYSTEMS

- All items Open Specifications (built in savings)
- ATC Systems – Open Specifications (built in savings)
- Battery Flushometers in Toilets (reduces electric wiring)
- Use Pex-Piping where appropriate as part of base bid design (less material cost and faster construction)



BUDGET SUMMARY

ARROWHEAD COST ESTIMATE

Project: Arrowhead Elementary School
Number: 20043E1R3
Client: KCBA
Date: April 17, 2020; Rev. May 12, 2020
Phase: DD

BECKER & FRONDORF
 Construction Cost Consulting • Project Management



ESTIMATE SUMMARY

CODE	DESCRIPTION	86,080	SF		COST
<u>GC Prime</u>					
A	General Conditions			\$16	\$1,358,250
B	Foundation & Structure			\$46	\$3,992,510
C	Exterior Envelope			\$52	\$4,501,310
D	Fitout			\$22	\$1,864,670
E	Finishes			\$28	\$2,437,220
F	Millwork/Casework			\$7	\$576,350
G	Accessories/Specialties & Equipment			\$10	\$883,560
H	Sitework				\$3,653,260
	Overhead & Profit	3.0%			\$578,010
	Escalation to Jan 2021	2.0%			\$396,900
	Subtotal - GC Prime			\$235	\$20,242,040
<u>MEP Primes</u>					
I	Fire Protection			\$5	\$465,840
J	Plumbing			\$13	\$1,134,700
K	HVAC			\$43	\$3,658,710
L	Electrical			\$38	\$3,282,300
	General Conditions/Overhead & Profit	0.0%			w/ Trades
	Escalation to Jan 2021	2.0%			\$170,830
	Subtotal - MEP Primes			\$101	\$8,712,380
Total - Construction Cost				\$336	\$28,954,420

MIKE ZAIDEL
 Partner of Cost Estimating



Professional Experience

Becker & Frondorf, Philadelphia, PA
 2006 – Present

Trained as a structural engineer in Israel, Mike Zaidel's approach to estimating is systematic and disciplined. He has produced Estimates for projects such as:

- **Third party estimate of project costs**
- **Breaks down each product, finish, quality, and overhead for various components of the building**

ARROWHEAD COST ESTIMATE

ESTIMATE

Proj: Arrowhead Elementary School
Date: April 17, 2020; Rev. May 12, 2020



CODE	DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST
B	Foundation & Structure/Continue				
B49	<u>Framing</u>				
B50	Bldg Framing - Structural Steel/2nd Flr & Roof	220	TN	4,750.00	1,045,000
B51	- Columns	90	TN	4,750.00	427,500
B52	- Moment Connections/Bracing Frames/Etc	1	LS	-	NIC
B53	- Misc. Metal Allowance/Plates/Lintels/Etc.	86,080	SF	2.00	172,160
B54	- AESS/Columns/Premium	17	Ton	1,000.00	17,000
B55	- AESS/Beams & Joists	27	Ton	1,000.00	27,000
B56	Dunnage - Assume Needed/Allowance	1,540	SF	20.00	30,800
B57	Roof Screen Framing - Structural Steel/Galv.	2	TN	5,500.00	11,000
B58	Theater Lighting - Metal Support Allowance	1	LS	15,000.00	15,000
B59	Decking - F1/Floors/Composite/7.5"	27,940	SF	10.00	279,400
B60	- R1/Roof/Open/1½"/22 GA	13,090	SF	4.50	58,910
B61	- R2/Roof/Acoustic/Cellular Roof Deck/1½"/Typ	36,130	SF	12.50	451,630
B62	- R3/Roof/Acoustic/Cellular Roof Deck/3"	8,920	SF	15.00	133,800
B63	- R4/Roof/Open/3"/Not Shown/Assume Sim. R-1	1	LS	-	w/ R1 Type
B64	- Bent Plate/"L" Member/2nd Floor	930	LF	17.50	16,280
B65	- Roof Edge Detail/"L" Member	1,470	LF	21.00	30,870
B66	Stairs & Railings - Stair #1/Risers-6' L	20	R	1,500.00	30,000
B67	- Stair #1/Risers-14' L	4	R	2,500.00	10,000
B68	- Stair #2/Risers-6' L	20	R	1,500.00	30,000
B69	- Stair #3/7' L	24	R	1,750.00	42,000
B70	- Stair #3/Roof Access/4' L	27	R	1,250.00	33,750
B71	Railing @ Open to Below	160	LF	250.00	40,000
B72	Stage - Platform Framing	1,000	SF	15.00	15,000
B73	- Stairs & Railings	4	EA	750.00	3,000
B74	- Ramp to Stage/Framing	180	SF	15.00	2,700
B75	- Ramp to Stage/Railing/Free Standing	44	LF	125.00	5,500
B76	Fireproofing - Building/Spray-on	86,060	SF	-	NIC

- Allows design team to analyze each component of building for most cost effective selection
- Review quality versus costs
- Assists in considering bidding alternates for further cost saving oppertunities

ARROWHEAD COST ESTIMATE

	<u>August 2019</u>	<u>January 2020</u>	<u>March 2020</u>	<u>May 2020</u>
Total Construction Cost	\$27,998,152	\$27,998,152	\$28,423,445	\$28,954,420
	84,000sf	84,000sf	85,296sf	86,060sf
5% Contingency	\$1,399,908	\$1,399,908	\$1,421,172	\$1,447,720
Soft Costs	\$4,199,723	\$3,639,760	\$3,695,048	\$3,686,222
Furniture Budget	\$750,000	\$750,000	\$750,000	\$750,000
TOTAL PROJECT	\$34,347,783	\$33,787,820	\$34,289,665	\$34,838,362

As size of building has increased, reductions on other costs kept project on budget

- Increased Size of gym by 1200 square feet**
- Expanded one 660sf classroom on each floor to full 900 sf for learning support (+480sf)**

BIDDING ALTERNATES

Alternates

Alt. 1	Additional Classroom Casework as Noted Add	\$124,000
Alt. 2	Additional Classroom Casework as Noted Add	\$92,000
Alt. 3	Flooring - Quartz Tile ILO Terrazzo @ 2nd Flr Corrid. Deduct	(\$135,000)
Alt. 4	Flooring - VCT ILO Quartz Tile @ Classrooms Deduct	(\$102,000)
Alt. 5	LM -1 ILO ACB -1 Ceiling Baffles @ Cafeteria Deduct	(\$30,000)
Alt. 6	Roof Clerestory at Second Floor SGI's Deduct	(\$77,890)
Alt. 7	Roof Screen @ Clerestory Bays Deduct	(\$27,000)
Alt. 8	Electrical - Lightning Protection Add	\$28,000

Total potential deduct alternates = \$371,890

Total potential additional alternates = \$124,000

Total potential savings = \$247,890

Total potential savings = \$642,140

*Additional Terrazzo Deduct to Quartz = \$265,500

*Additional Exterior Envelope Deduct = \$128,750

* Potential additional savings = \$394,250

ARROWHEAD COST ESTIMATE

	<u>August 2019</u>	<u>January 2020</u>	<u>March 2020</u>	<u>May 2020</u>	<u>May 2020*</u>
Total Construction Cost	\$27,998,152	\$27,998,152	\$28,423,445	\$28,954,420	\$28,312,280
	84,000sf	84,000sf	85,296sf	86,060sf	(*\$642,140 savings)
5% Contingency	\$1,399,908	\$1,399,908	\$1,421,172	\$1,447,720	\$1,415,614
Soft Costs	\$4,199,723	\$3,639,760	\$3,695,048	\$3,686,222	\$3,604,470
Furniture Budget	\$750,000	\$750,000	\$750,000	\$750,000	\$750,000
TOTAL PROJECT	\$34,347,783	\$33,787,820	\$34,289,665	\$34,838,362	\$34,082,364

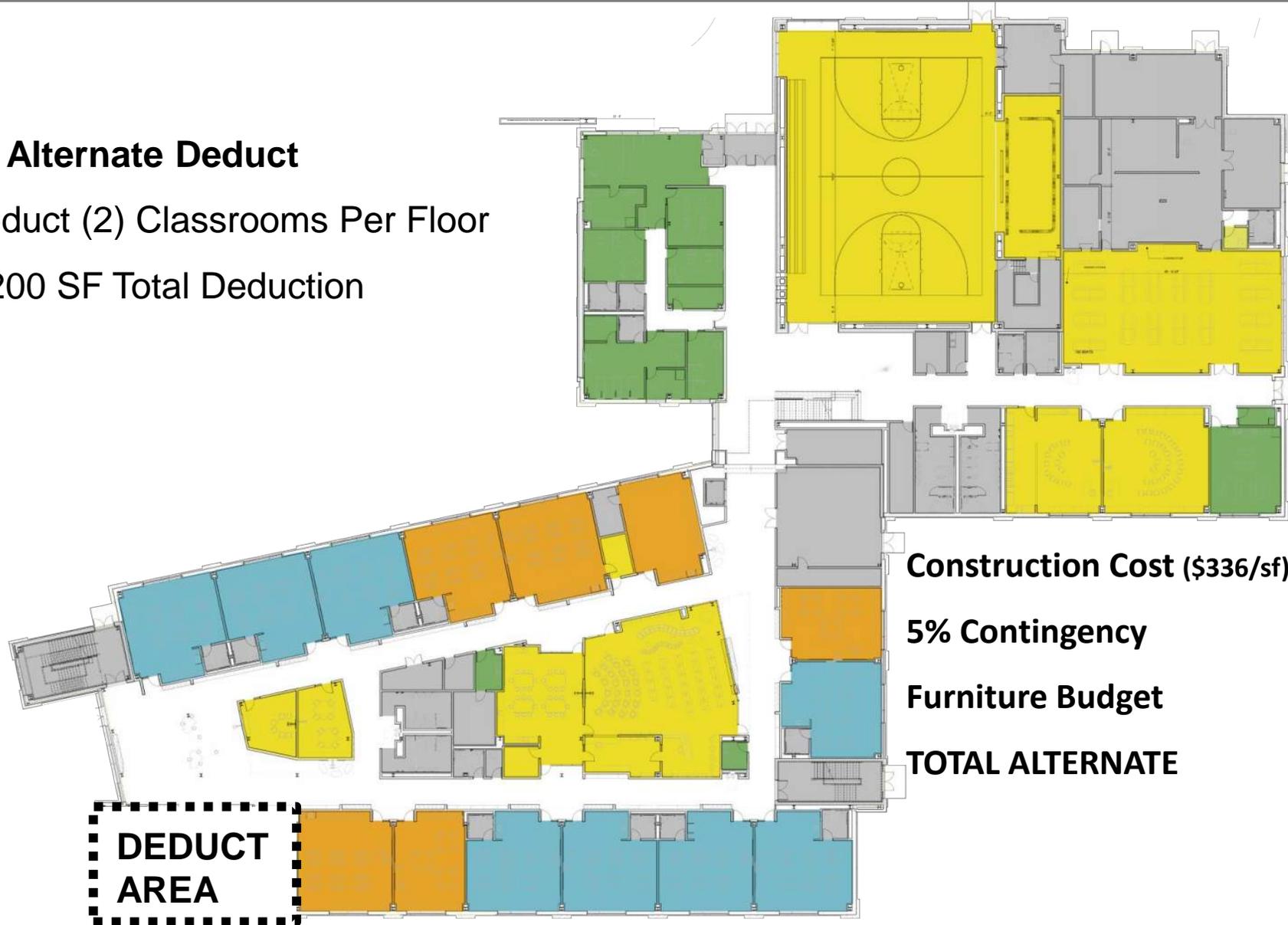
***Includes selected alternate deducts and additions**

BIDDING ALTERNATES

Classroom Alternate Deduct

Deduct (2) Classrooms Per Floor

4,200 SF Total Deduction



Construction Cost (\$336/sf)	\$1,411,200
5% Contingency	\$70,560
Furniture Budget	\$10,000
TOTAL ALTERNATE	\$1,491,760

ARROWHEAD COST ESTIMATE



Additional “Value Management” Items to Consider

- Roofing options
- Standard interior finishes
- Flooring material options (VCT, Quartz Tile, ect...)
- Mechanical systems from various vendors
- Basic stage lighting and sound design
- Open specifications for many products (lighting, door hardware, mechanical controls, ect...)

“Quality, Performance, and Cost”

NEXT STEPS

- BOARD APPROVAL OF DESIGN DEVELOPMENT and PROCEDURE TO FINAL CONSTRUCTION DRAWINGS
- CONTINUED COLLABORATION WITH DESIGN TEAM
 - CONSIDER ADDITIONAL ALTERNATES
 - FINALIZE STATE and LOCAL APPROVALS
- JULY BOARD UPDATE
- ACT 34 HEARING SEPTEMBER 8TH
- SEPTEMBER BOARD UPDATE (OUT TO BID)

Timeline.....



- **BOARD PRESENTATION MAY**
 - APPROVAL TO COMPLETE CONSTRUCTION DOCUMENTATION
- **BOARD REVIEW ACT 34 IN JULY**
 - TO ADVERTISE HEARING
- **BOARD VOTES TO AWARD CONSTRUCTION BIDS NOV. '20**
- **START CONSTRUCTION DEC. '20**
- **OPEN SCHOOL AUGUST 2022**



DISCUSSION