

BELMONT MIDDLE AND HIGH SCHOOL BUILDING COMMITTEE

SEPTEMBER 19, 2019

Perkins&Will

AGENDA

- **SCHEDULE** (DPI)
- **UPDATED VE TARGETS** (SKANSKA)
 - **VE Cost Summaries**
- **UPDATED EXTERIOR VE ITEMS** (PERKINS AND WILL)
- **UPDATED INTERIOR VE ITEMS** (PERKINS AND WILL)
- **UPDATED SYSTEM VE ITEMS** (PERKINS AND WILL)
- **UPDATED SITE AND STRUCTURE VE ITEMS** (PERKINS AND WILL)
- **PHASING AND LOGISTICS** (SKANSKA)
- **GENERAL CONDITIONS** (SKANSKA)
- **WRAP UP**

SCHEDULE / VE ROADMAP

	9/4 (Wed PM)	9/11 (Wed AM)	9/19 (Thu PM)
EXTERIOR	○ Update \$	○ Update \$	○ Update \$
INTERIOR	● Presentation \$	○ Update \$	○ Update \$
SYSTEMS		● Presentation \$	○ Update \$
SITE / STRUCTURE		● Presentation \$	○ Update \$
PHASING AND LOGISTICS			● Presentation \$
GENERAL CONDITIONS			● Presentation \$
WRAP UP			● Presentation \$

○ Update \$ ● Presentation \$

VE COST SUMMARY

	ACCEPTED	DISCUSSION	BID ALTERNATES
EXTERIOR	\$3,521,356	\$207,828	-
INTERIOR	\$5,396,864	\$1,246,526	\$1,218,781
SYSTEMS	\$2,771,423	-	\$2,920,580
SITE / STRUCTURE	\$3,595,441	\$432,471	\$2,246,600
PHASING AND LOGISTICS	\$1,201,762	-	-
GENERAL CONDITIONS	\$1,123,300	-	-
TOTAL POTENTIAL SAVINGS	\$17,610,145	\$1,886,825	\$6,385,961
POTENTIAL GRAND TOTAL SAVINGS	\$19,496,970		\$6,385,961

UPDATED EXTERIOR VE ITEMS

1. REDUCE CW AT STAIR ENDS AND ADD BRICK/SIMPLIFY CANTILEVERED PLANES
2. CHANGE BUILDING BASE FROM FIBER CEMENT PANELS TO MASONRY
3. REMOVE OUTDOOR POND TERRACE (2ND LEVEL) AT CENTRAL DINING AREA
4. SIMPLIFY ALL CURTAINWALL (5' MODULE). MINIMIZE NUMBER OF LITES
5. REVISE VERTICAL SUNSCREEN CW AT HIGH SCHOOL DROP-OFF AREA
6. REMOVE ALL HORIZONTAL SUNSCREENS EXCEPT FOR SOUTH FACING
7. REDUCE GLAZING AREA AT CLASSROOM WINDOWS
8. REMOVE MIDDLE SCHOOL CANOPY
9. REDUCE FIRST FLOOR WINDOWS AT MUSIC / BAND FACADE (AREA B)
10. REMOVE ROOF TERRACE ON FOURTH FLOOR
11. ELIMINATE REMAINING MS SKYLIGHT AND ELIMINATE HS SKYLIGHT
12. NO REPLACEMENT OF KALWALL AT EXISTING FIELDHOUSE
13. REDUCE CURTAIN WALL AT HIGH SCHOOL ENTRY
14. REMOVE POND TERRACE CANOPY

EXTERIOR DESIGN - HIGH SCHOOL ENTRANCE

VE PROPOSAL



EXTERIOR DESIGN - HIGH SCHOOL ENTRANCE

VE PROPOSAL



EXTERIOR DESIGN - HIGH SCHOOL ENTRANCE

VE PROPOSAL



BELMONT HIGH SCHOOL

EXTERIOR DESIGN - MIDDLE SCHOOL ENTRANCE

VE PROPOSAL



EXTERIOR DESIGN - MIDDLE SCHOOL ENTRANCE

VE PROPOSAL



EXTERIOR DESIGN - POND TERRACE FACADE

VE PROPOSAL



EXTERIOR DESIGN - POND TERRACE FACADE

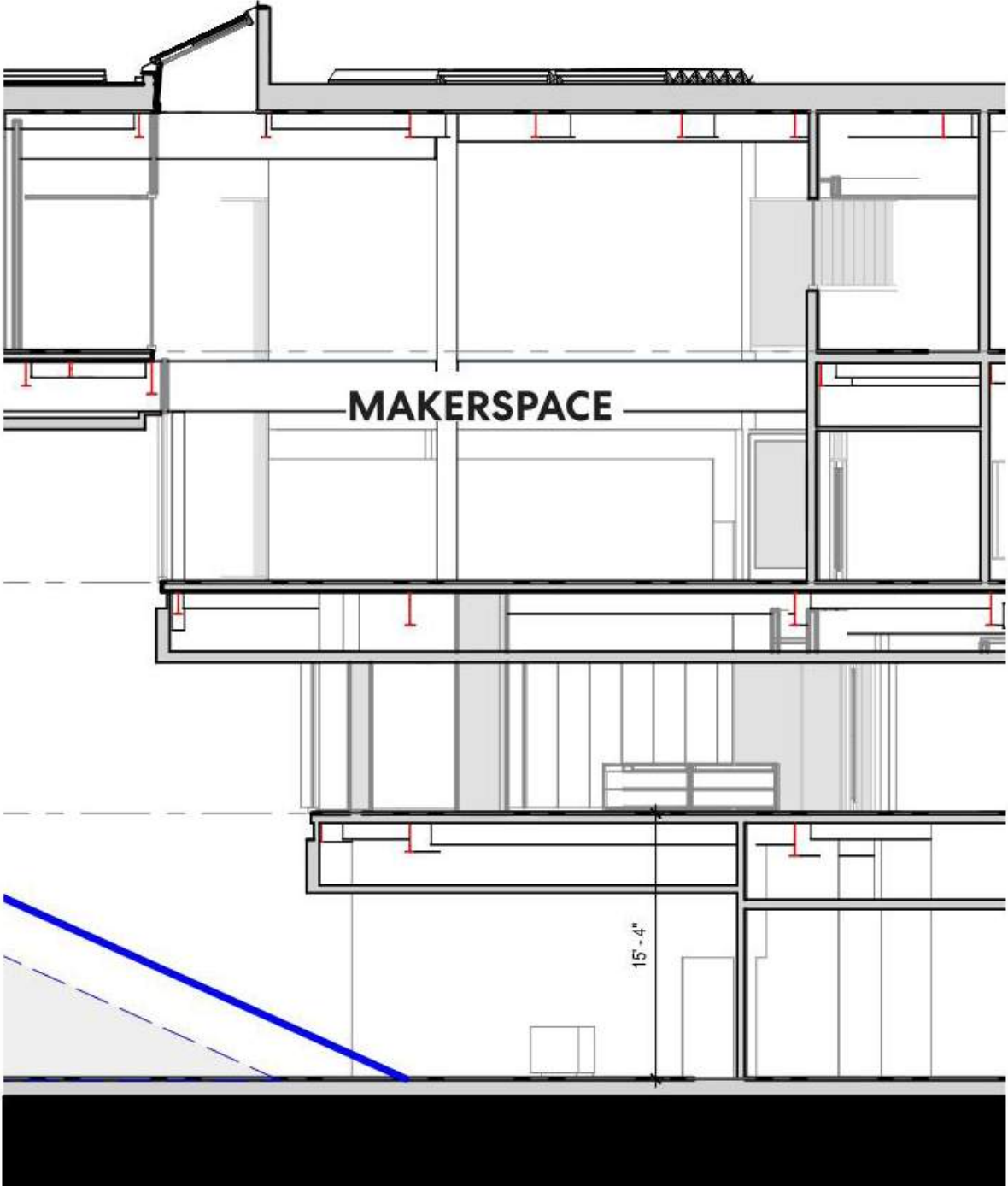
VE PROPOSAL



EXTERIOR DESIGN - ELIMINATE REMAINING MS SKYLIGHT



EXTERIOR DESIGN - ELIMINATE HS SKYLIGHT



COST SUMMARY - EXTERIOR SUMMARY

VE Categories / Items	Target Savings	RECOMMENDED	DISCUSSION	BID ALTERNATE
		Recommended Value Engineering Items	Proposed Savings	Possible Savings
EXTERIOR	\$3.5-4M	(\$3,521,356)	(\$207,828)	
Exterior Closure Reductions		(239,263)		
Reduce Curtain Wall & Wing Wall at Stairs		(300,615)		
Change Building Base from GFRC to masonry		(722,562)		
Remove Horizontal Sunscreens Except at South-facing Façade		(328,942)		
Engineered Horizontal Sunshades (4" Frame)		(109,265)		
Reduce Glazing Count & Areas at Classroom Windows		(206,149)		
Remove Middle School Canopy		(267,037)		
Replace MCM trim detail with 3/8" plate		(92,855)		
Remove Roof Terrace on 4th Floor		(250,000)		
Pre-insulated Panels at Mechanical Well		(245,479)		
Replace Exterior MC-1 Soffit Panels to Morin Rolled Panels		(181,441)		
Remove 2nd Floor Outdoor Pond Terrace		(443,997)		
NO Replacement of Existing Kalwall at Field House		(553,848)		
Elevation Design Clarifications		(473,288)		
Revise High School Entry		(383,060)		
Remove Pond Terrace Canopy		(700,000)		
Eliminate Half of MS Skylight		(17,000)		
Eliminate Remaining Half of MS Skylight			(17,000)	
Eliminate HS Skylight			(190,828)	
Design Assist Budget		1,993,445		

UPDATED INTERIOR VE ITEMS

1. CEILING

- REDUCE METAL
- SIMPLIFY BAFFLE
- LOWER SQFT COST ACT
- LOWER COST AUD. BALCONY
- LOWER COST AUD. HOUSE

2. FLOORING

- REDUCE PORCELAIN TILE (LEVEL 01)

3. LIGHTING

- REDUCE FIXTURE COSTS

4. WALL CONST. & FINISHES

- LOWER COST ACOUSTIC PANELING
- REDUCE ACOUSTIC WOOD PANELING
- REDUCE CORRIDOR TILE HEIGHT TO 4'6" H
- REMOVE MAGNETIC PAINT AT CLASSROOM WALL
- REDUCE MARKERBOARDS IN CLASSROOMS
- VE UNDER REVIEW: ALT WOOD PANEL
- VE UNDER REVIEW: LOCKER ROOM WALL FINISH

5. GLASS WALLS & RAILS

- REDUCE FULL HEIGHT GLASS
- MS STAIR TO METAL POST RAILING
- REPLACE GLASS RAILINGS WITH PERFORATED METAL PANELS OR PICKET RAIL

6. CASEWORK

- REDUCE GENERAL & SPED CLASSROOMS
- REDUCE LABS
- REDUCE ART
- CLASSROOM CASEWORK REVISION

7. FIRE CONTROL DOORS

- SIMPLIFY & REDUCE SCOPE

8. MISC. SCOPE ADJUSTMENTS

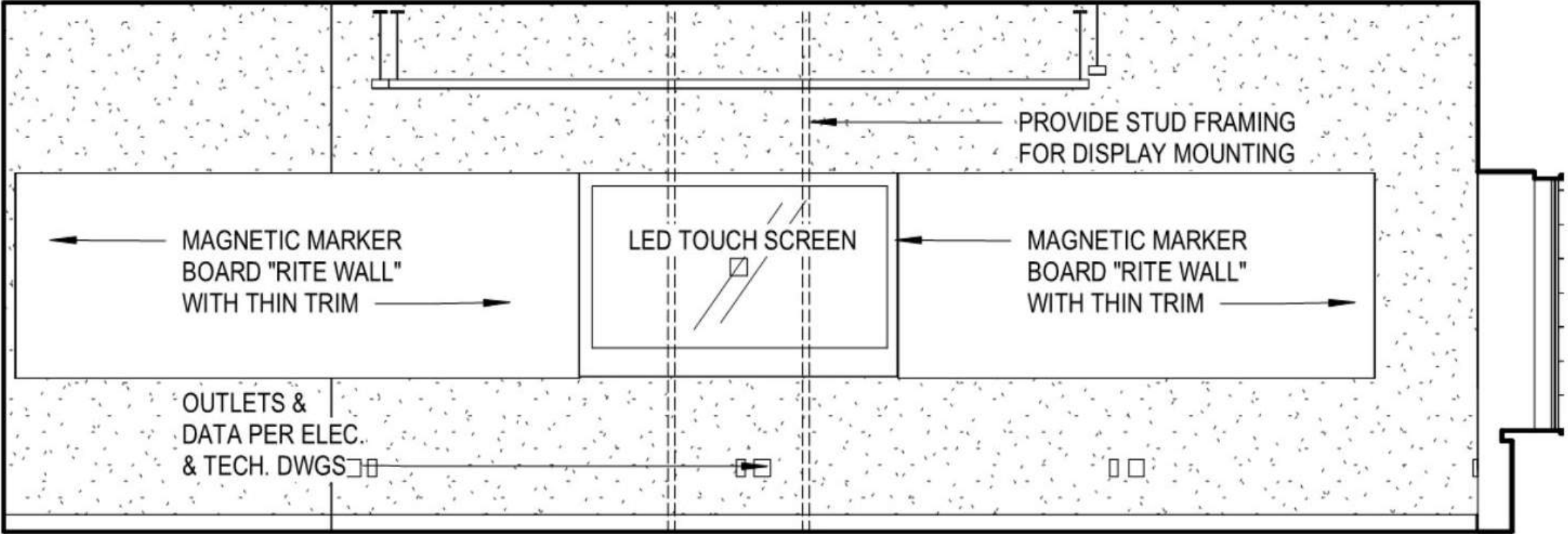
- REDUCE AUDITORIUM CATWALK
- REMOVE CLASSROOM HOLD-OPENS; SECURITY WIRING REMOVED

UPDATED INTERIOR - REDUCE CORRIDOR TILE HEIGHT TO 4' - 6" H

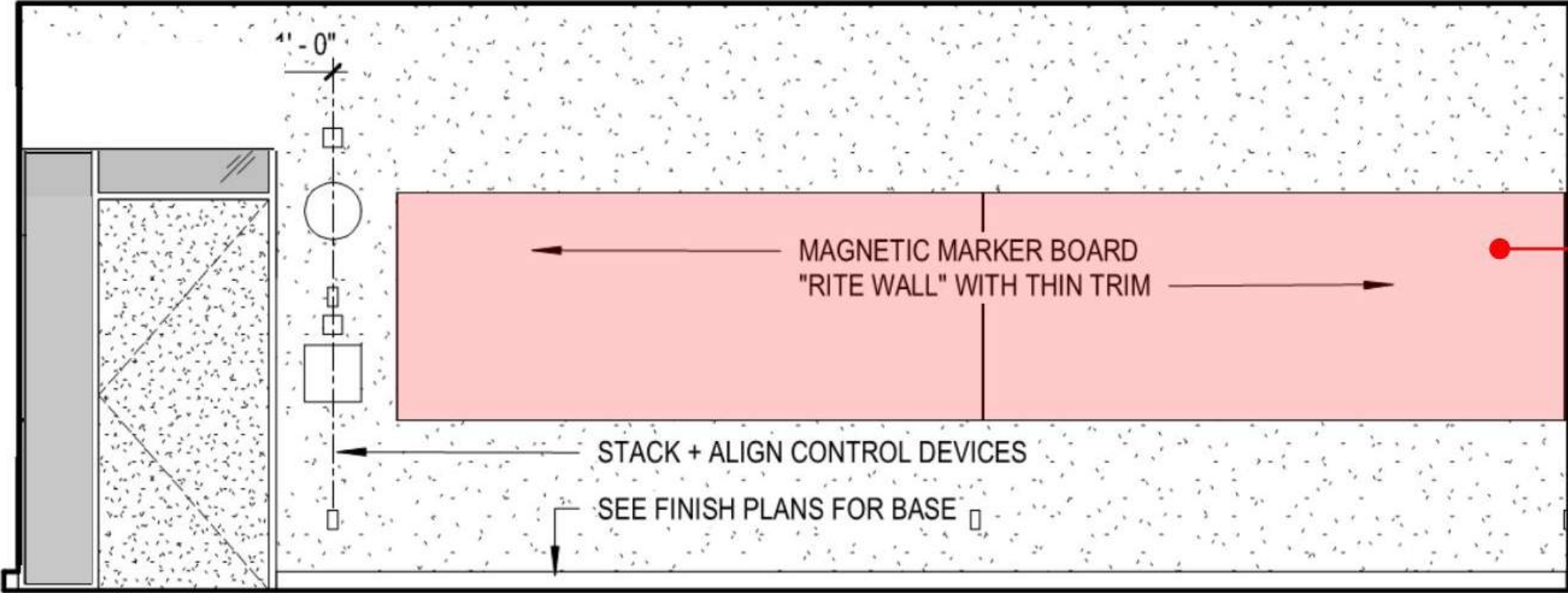


UPDATED INTERIOR - REDUCE MARKERBOARDS IN CLASSROOMS

Primary Teaching Wall



Corridor Wall

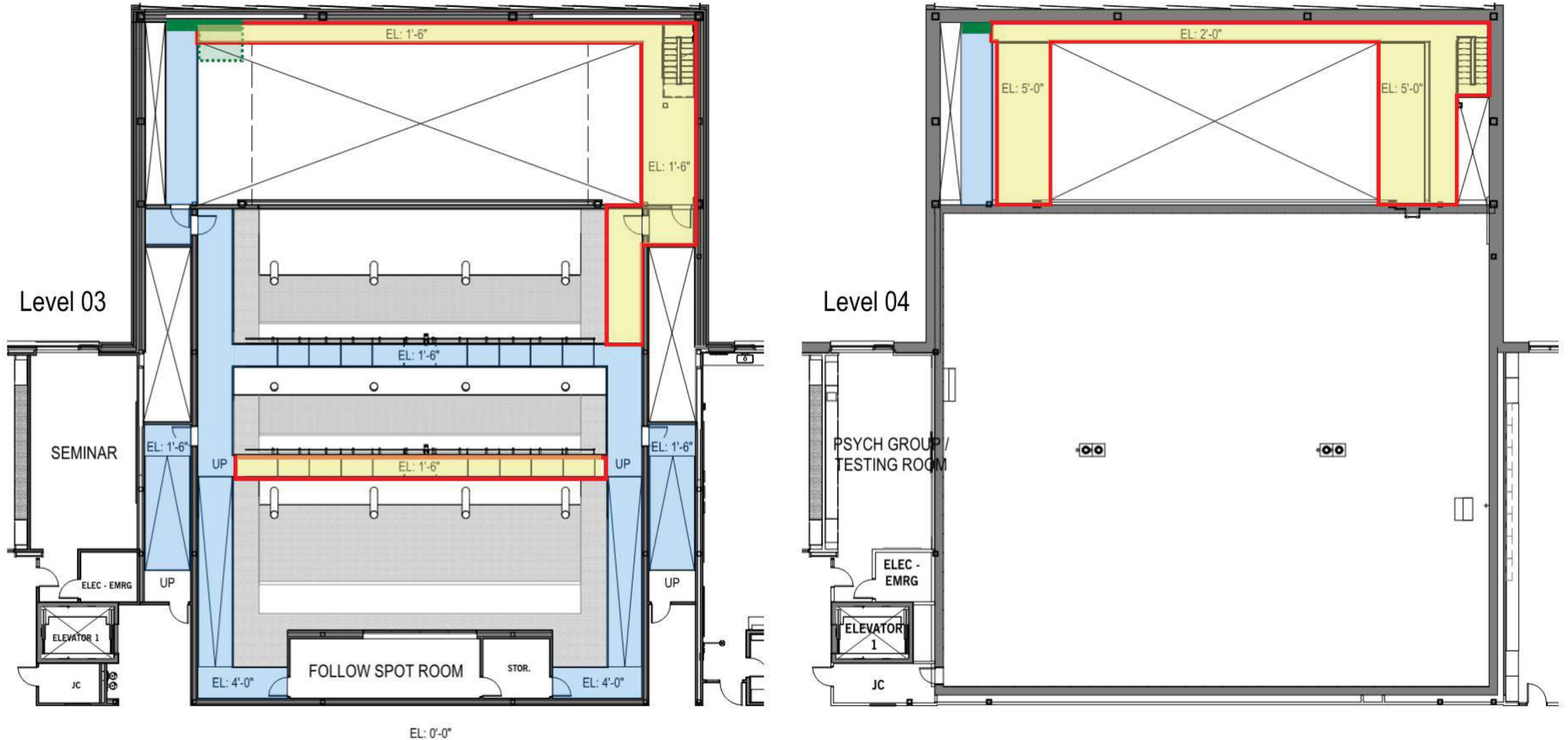


VE: Eliminate this wall of markerboard in all typical classrooms and SPED classrooms

UPDATED INTERIOR - REDUCE AUDITORIUM CATWALK

Proposed C10.23 | Estimated Savings = \$202,194

- Catwalks - Student-Accessible
- Added Ladders Location
- Added Ladder Platform Below
- Eliminate Stage Stair + Replace with Ladders
- Reduce Student-Accessible Catwalk Area
- Eliminate Maintenance Catwalks (Maintenance will require a lift)



COST SUMMARY - INTERIOR SUMMARY

VE Categories / Items	Target Savings	RECOMMENDED	DISCUSSION	BID ALTERNATE
		Recommended Value Engineering Items	Proposed Savings	Possible Savings
INTERIOR	\$6.5-8M	(\$5,396,864)	(\$1,246,526)	(\$1,218,781)
Reduce Wall Finishes & Simplify Wall Construction		(1,659,096)		
Reduce Ceiling Finishes		(1,353,015)		
Reduce Casework		(735,788)		
Reduce Classroom Casework		(308,908)		
Reduce Glass Walls & Rails		(410,173)		
Simplify Stairs		(256,465)		
Reduce Equipment & Hardware		(180,290)		
Eliminate All Operable Partitions in Middle School		(213,427)		
Reduce Overhead Fire Doors & Shutters		(106,714)		
Reduce Floor Finishes & Simplify Floor Construction		(77,508)		
Reduce Black Box Catwalks		(95,481)		
Reduce Auditorium Catwalks & Replace Stage Stair w. Ladder			(202,194)	
Reduce Corridor Tile Height to 4'-6" high			(348,223)	
Classroom Hold-Opens: Keep Hardware, Eliminate Secur. Wiring			(55,828)	
Remove Magnetic Paint at Classroom Casework Wall			(44,932)	
VE Under Review: Alternate Wood Panel; Waiting on Sample			(224,660)	
VE Under Review: Replace Wall Tile w. Scuffmaster @ Locker Rms.			(157,262)	
Reduce 2 Walls of Markerboard in Classrooms to 1 Wall			(213,427)	
Eliminate all Operable Partitions in High School				(78,631)
Bathroom Wall Tile on Wet Walls Only; Scuffmaster other walls				(432,471)
Replace All Level 1 Porcelain Floor Tile w. Resilient Linoleum				(707,679)

UPDATED SYSTEMS VE ITEMS

1. SIMPLIFY DOMESTIC WATER PRE-HEAT & STORAGE SYSTEM
2. SIMPLIFY POOL HEATING SYSTEM
3. RELOCATE TCHW PUMPS P-8A&B AND TCHW PUMPS P-9A&9B FROM ROOF TO MECHANICAL AND PLUMBING ROOMS ON LEVEL 1
4. UTILIZE DUCTLESS CEILING CASSETTE VRF FAN COIL UNITS IN LIEU OF DUCTED AT L1 ADMIN SUITES IN MIDDLE AND HIGH SCHOOLS
5. ~~REPLACING DUCTWORK WITH DUCTSOX IN FIELDHOUSE AND SMALL GYM~~

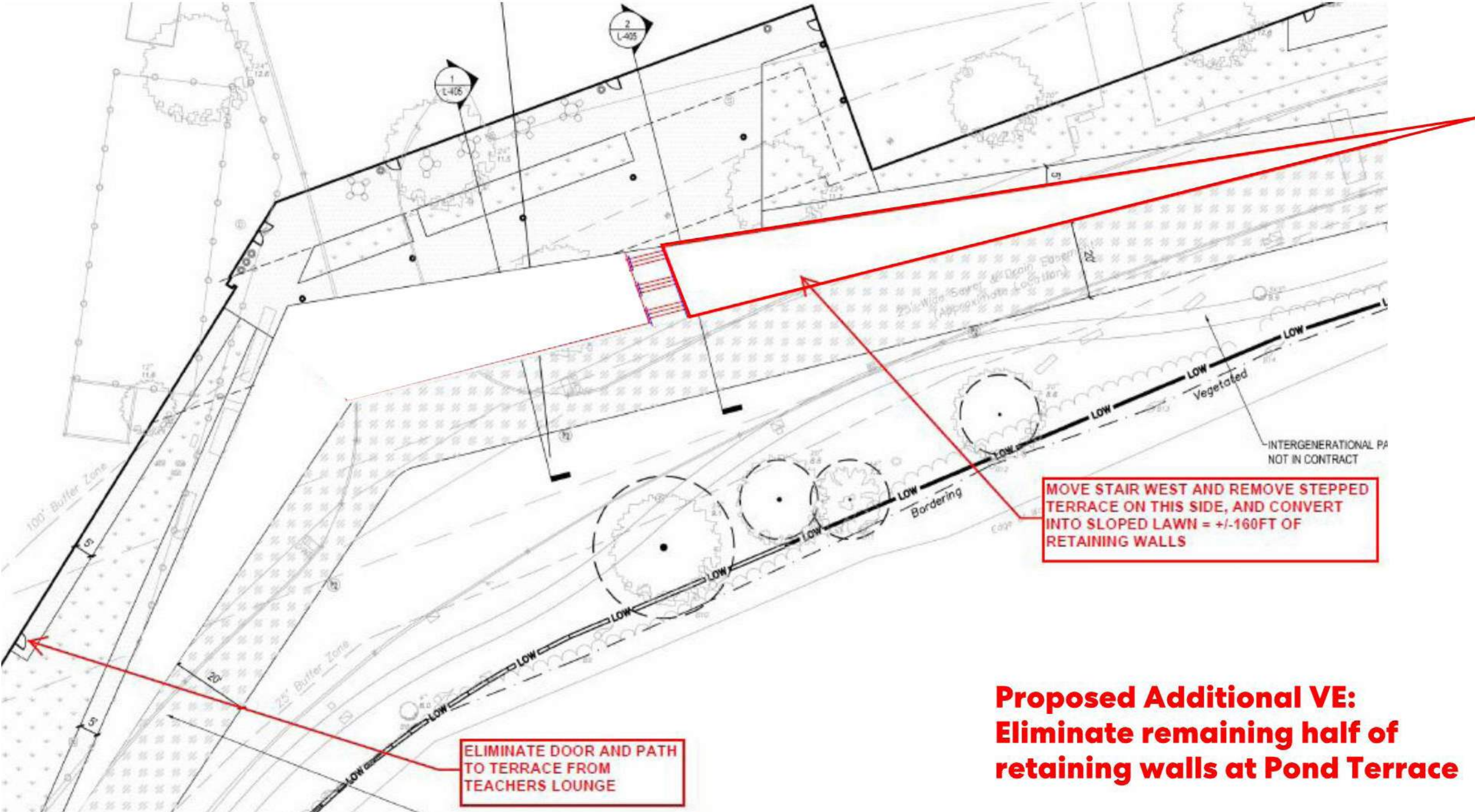
COST SUMMARY - SYSTEMS SUMMARY

VE Categories / Items		Target Savings	RECOMMENDED	DISCUSSION	BID ALTERNATE
			Recommended Value Engineering Items	Proposed Savings	Possible Savings
SYSTEM		\$2.5-3.5M	(\$2,771,423)		(\$2,920,580)
	AV & Tech		(464,822)		
	AV & Tech: Move Tele-com Active WAPs & Switches to FF&E		(449,320)		
	Mechanical		(149,399)		
	Electrical		(104,961)		
	Lighting		(96,154)		
	Lighting: Target \$1.25/SF reduction (Analysis in-process)		(624,976)		
	Plumbing		(269,592)		
	Fire Protection		(28,083)		
	PV Market Cost Adjustment		(584,116)		
	Change 100% PV Panel System to Bid-Alternate				(2,920,580)

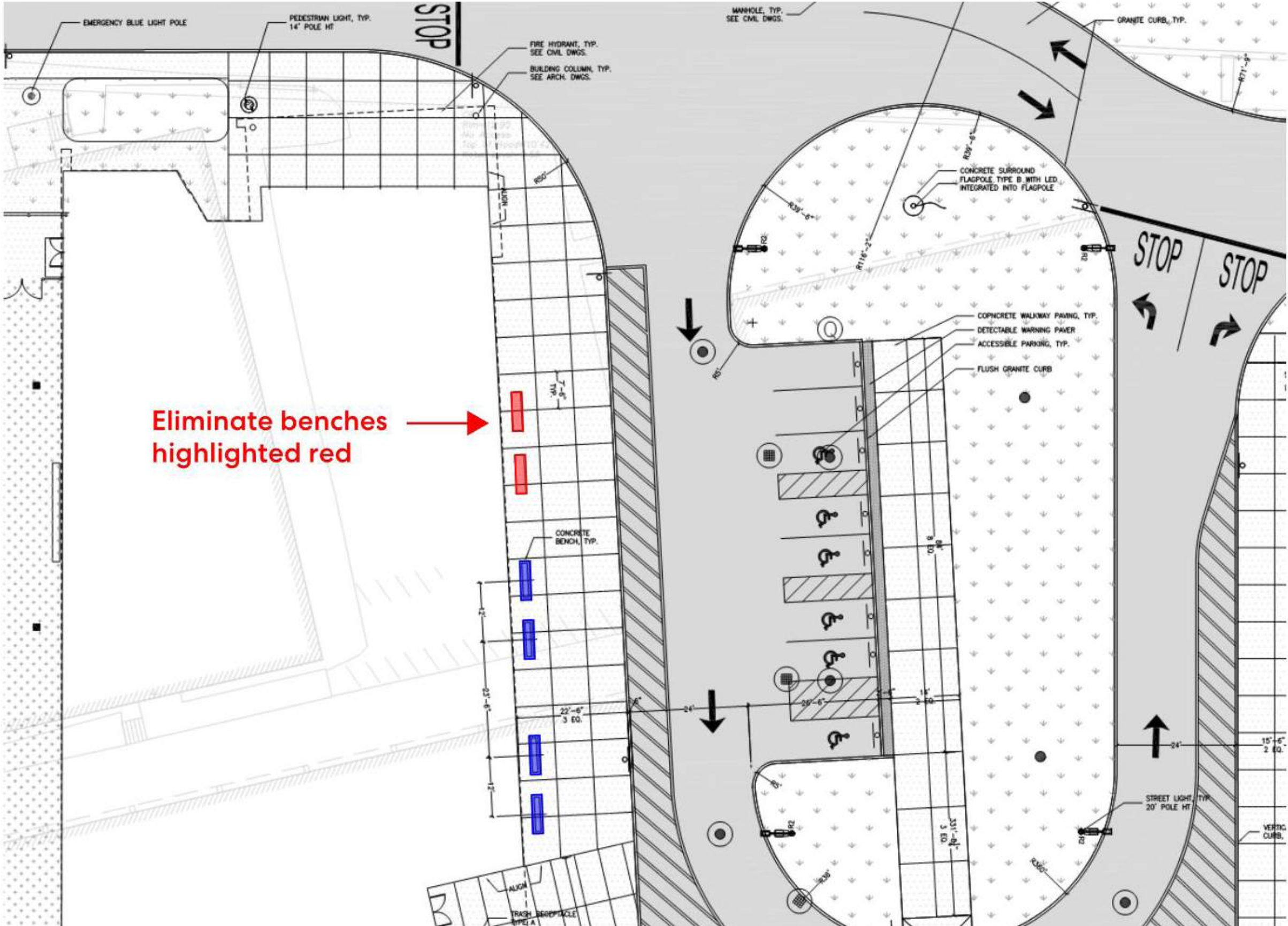
UPDATED SITE & STRUCTURE VE ITEMS

1. SIMPLIFY / REDUCE STRUCTURE NEEDED FOR AHU AT LEVEL 2 MECHANICAL SPACE
2. REDUCE EXCESS SOIL DISPOSALS BY RAISING GRADES
3. REDUCE IRRIGATION SCOPE
4. PROVIDE ALUMINUM BENCHING
5. REDUCE TREE COUNT (WEST OF HARRIS FIELD)
6. PROVIDE STANDARD NYLON SPORTS NETTING
7. ELIMINATE RETAINING WALLS / WALKWAY AREA AT POND TERRACE
8. REDUCE GRANITE CURBS TO ONLY AT ENTRANCES AND DROP-OFFS
9. REDUCE TREE CALIBER SIZE FROM 4" TO 3"
10. REDUCE CONCRETE BENCHES

UPDATED SITE / STRUCTURE - ELIMINATE RETAINING WALLS



UPDATED SITE / STRUCTURE - REDUCE CONCRETE BENCHES

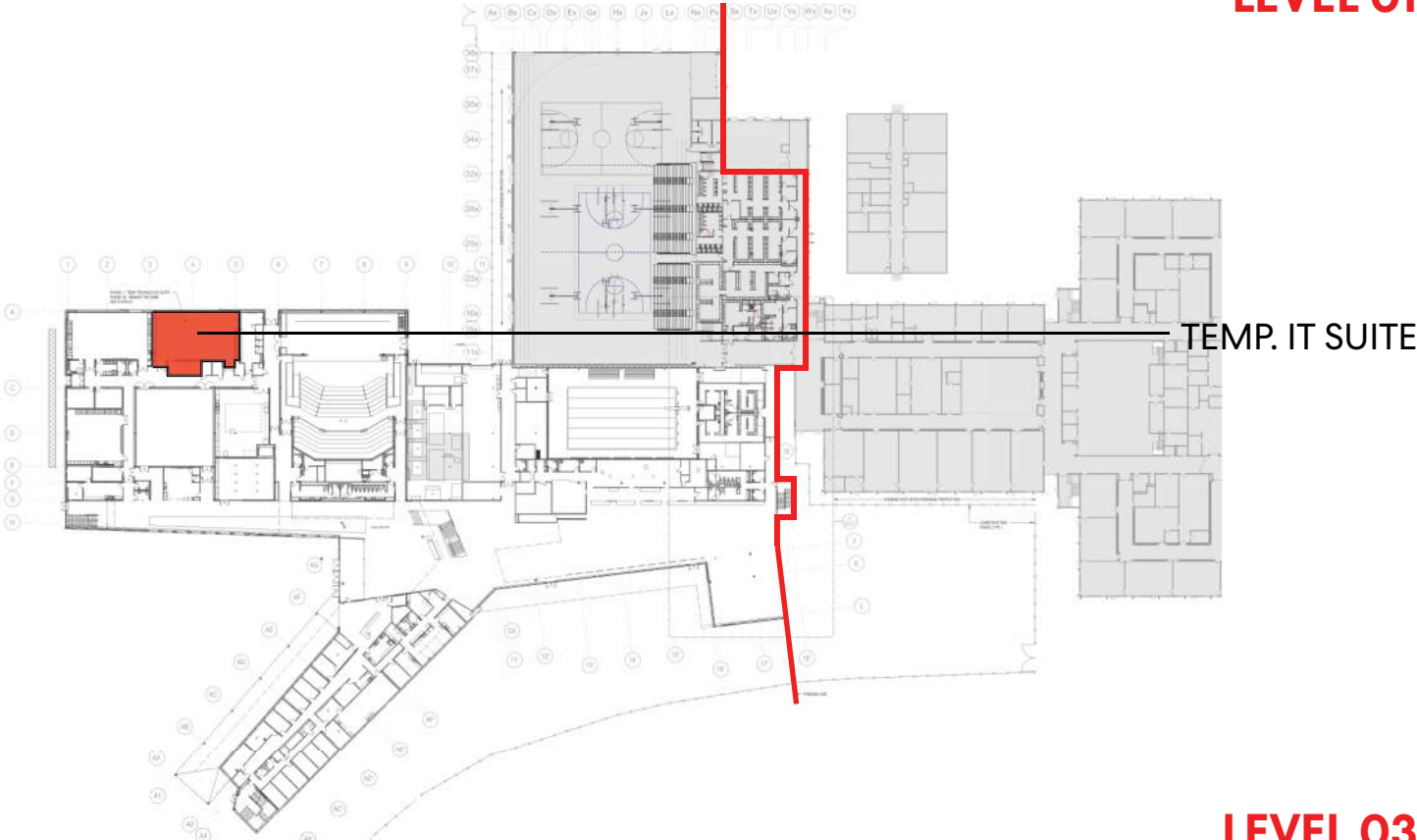


COST SUMMARY - SITE & STRUCTURE SUMMARY

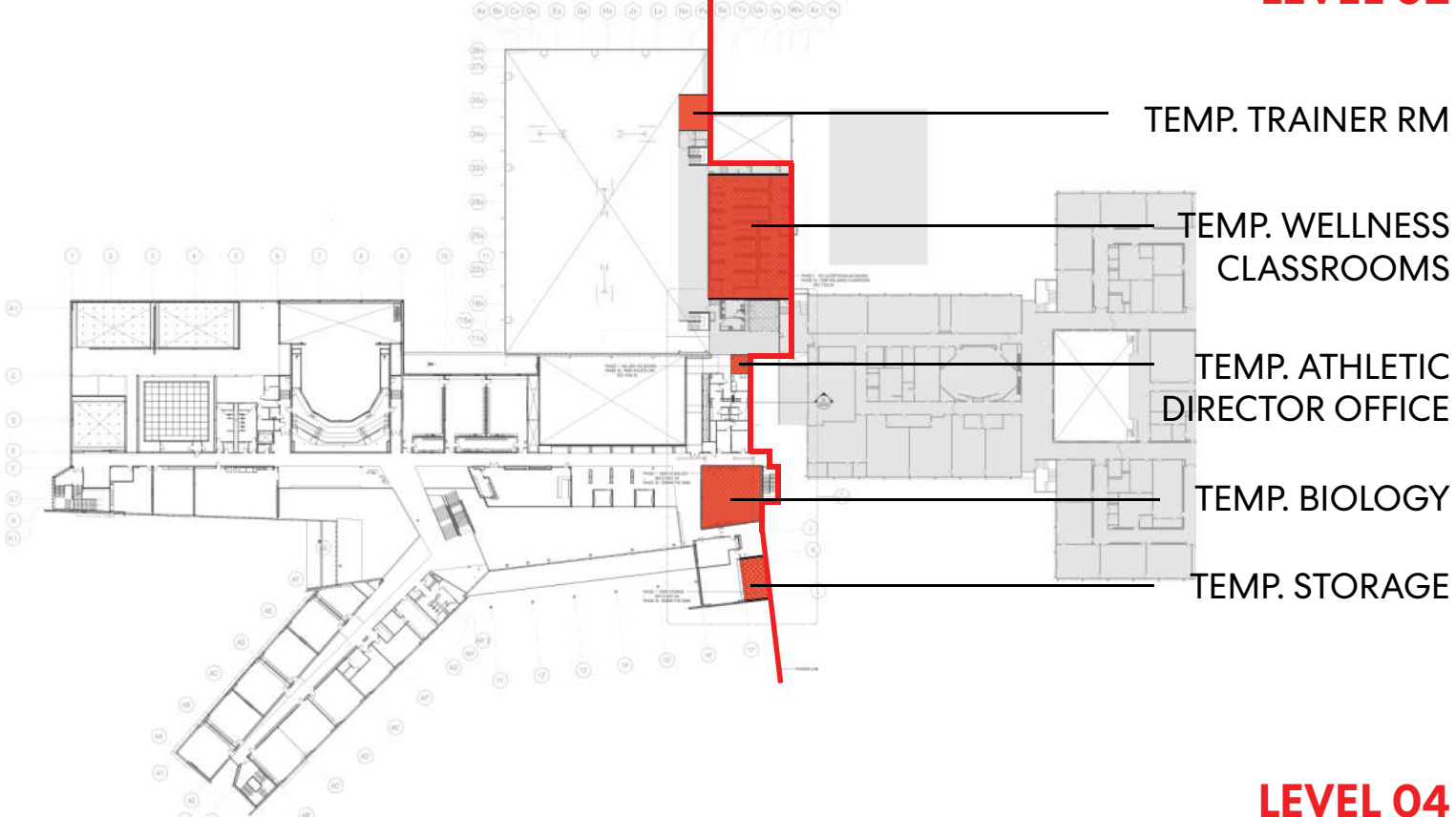
VE Categories / Items	Target Savings	RECOMMENDED	DISCUSSION	BID ALTERNATE
		Recommended Value Engineering Items	Proposed Savings	Possible Savings
SITE / STRUCTURE	\$2-3M	(\$3,595,441)	(\$432,471)	(\$2,246,600)
Reduce Hazardous Abatement Allowance for Future Phases		(1,235,630)		
Reduce Hazardous Abatement Allowance: Summer Credit		(300,000)		
Reduce Excess Soil Disposals by Raising Grades		(561,650)		
Confirm Strip Material is RSC-1 Reduce Unit Cost		(348,223)		
Reduce Number of Columns & Reduce Intumescent Paint		(112,358)		
Reduce Level 2 Area B Mechanical Space Structural Framing		(111,768)		
Eliminate 5" Exterior Slabs at Arcade		(61,782)		
Delete Concrete Mowing Curb		(22,466)		
Provide Aluminum Benches in lieu of Concrete at Baseball		(61,782)		
Provide Standard Nylon Netting vs. Dynema Netting		(33,699)		
Eliminate Teachers' Lounge Walkway & Door to Exterior Terrace		(22,466)		
Projected Concrete Buy-Out Savings		(336,603)		
Eliminate Pre-Augured Piles		(114,000)		
Soil Disposal Reallocation		(200,000)		
Eliminate Half of Outdoor Pond Terrace Retaining Walls		(73,015)		
Eliminate Remaining Half of Pond Terrace Retaining Walls			(73,015)	
Reduce Trees West of Harris to 7 Total			(61,782)	
Reduce Granite Curbs to Only at Entrances & Drop-Offs			(101,097)	
Reduce Tree Caliber Size from 4" to 3"			(168,495)	
Reduce Concrete Benches			(28,083)	
Provide Grass Rugby Field in lieu of Turf				(673,980)
Change Landscaping of Phase 3 (West Fields) to Bid-Alternate				(1,572,620)

PHASING, LOGISTICS, & GENERAL CONDITIONS

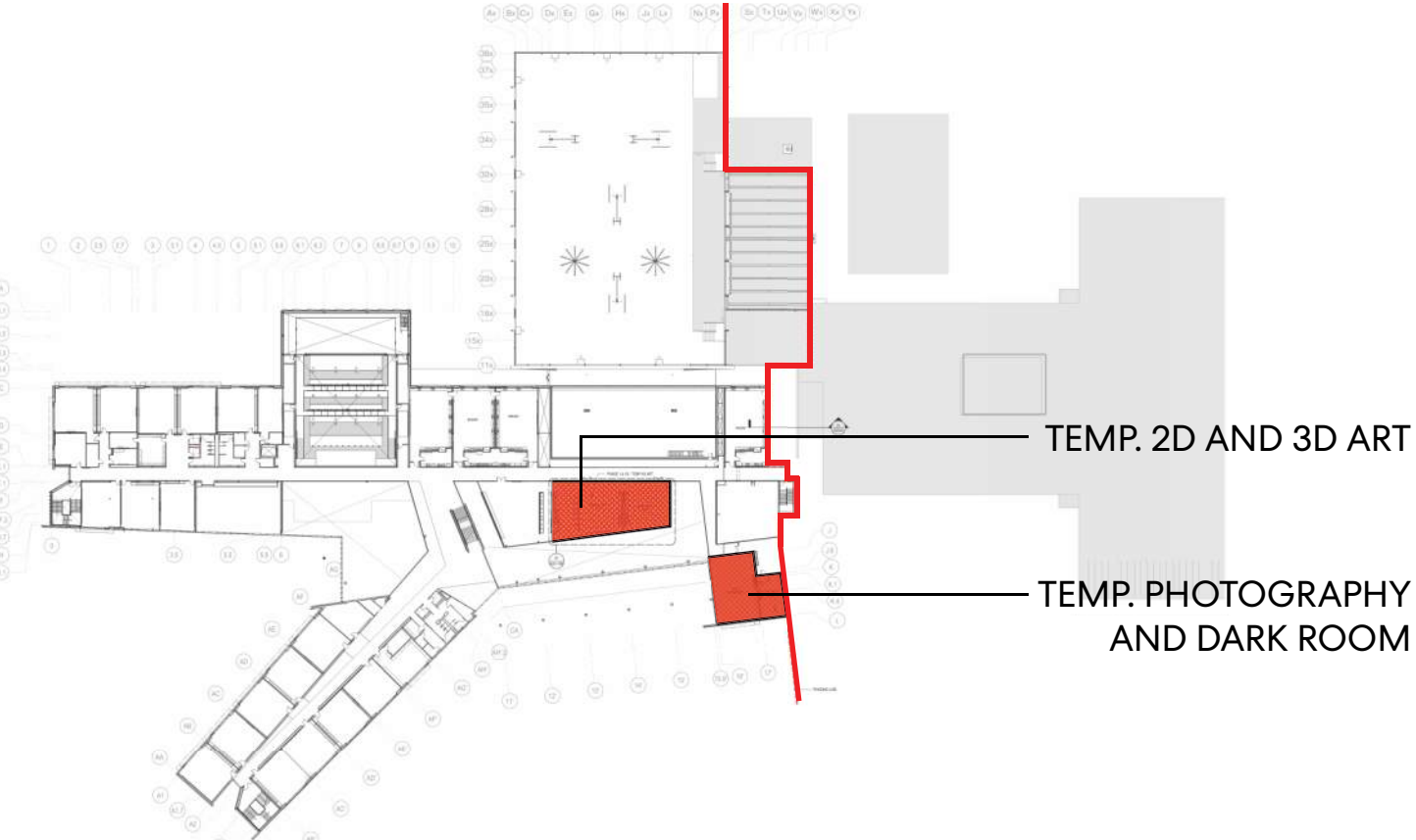
LEVEL 01



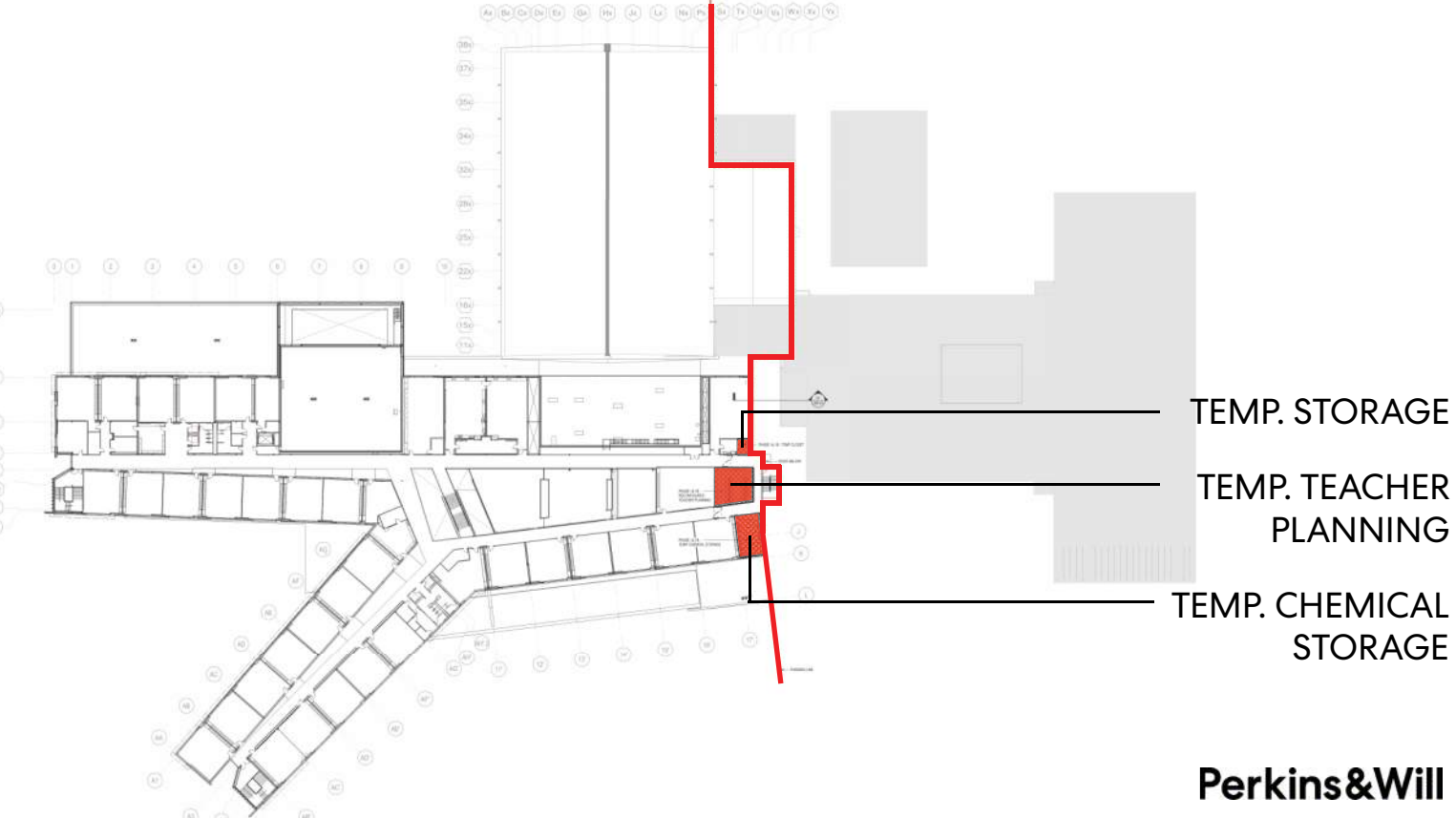
LEVEL 02



LEVEL 03



LEVEL 04



COST SUMMARY - PHASING, LOGISTICS, & GENERAL CONDITIONS

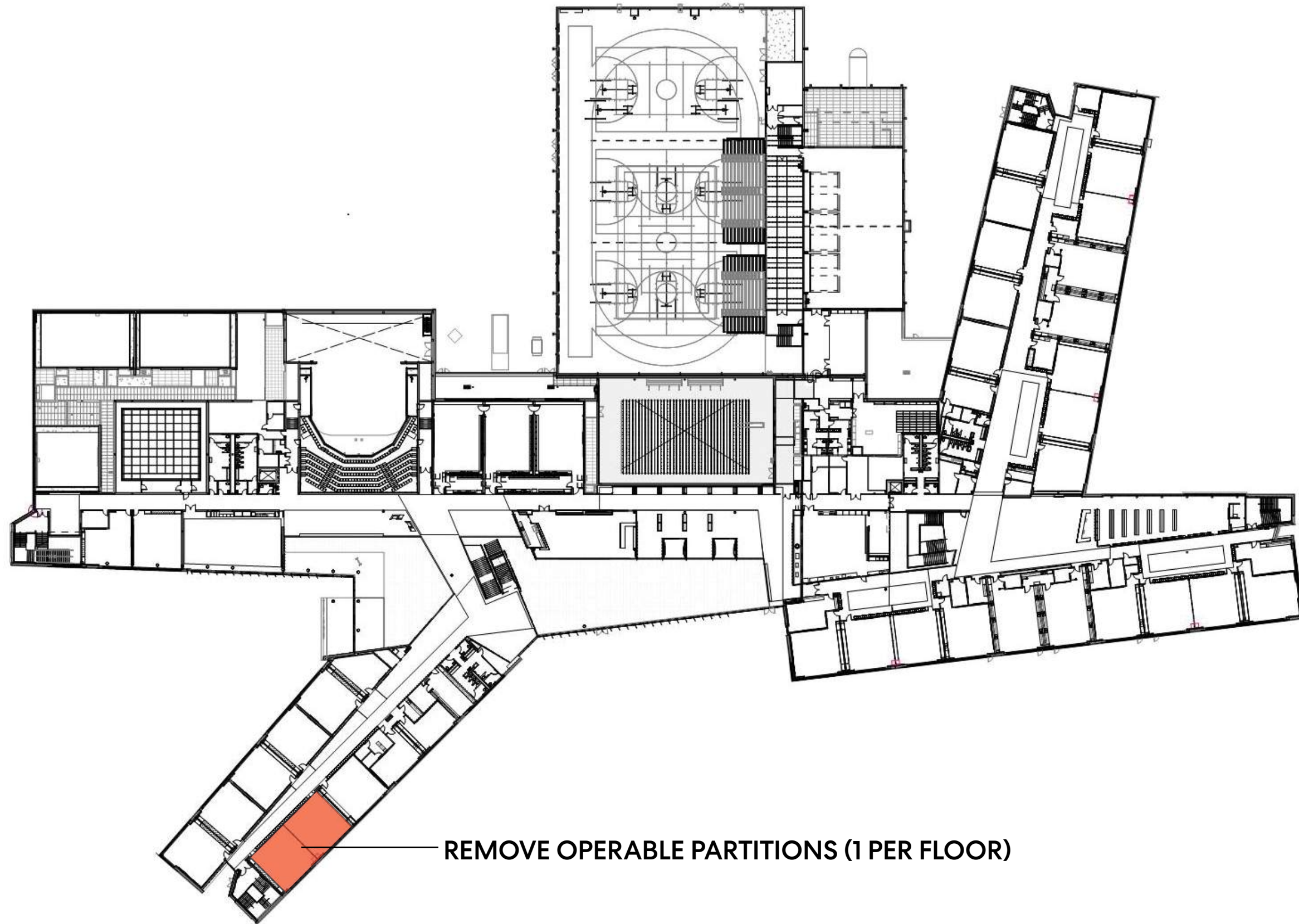
VE Categories / Items	Target Savings	RECOMMENDED	DISCUSSION	BID ALTERNATE
		Recommended Value Engineering Items	Proposed Savings	Possible Savings
PHASING & LOGISTICS	\$.25-.75M	(\$1,201,762)		
Eliminate Ceiling Work Above Pool Not Feasible w. Boom Lift		(393,155)		
Reduce MEP Phase Scope		(424,607)		
EBP2 Allowance		(300,000)		
EBP2 Waterline Allowance		(84,000)		
GENERAL CONDITIONS	\$.1-.1.5M	(\$1,123,300)		
Target Reduction to be Reviewed w. Detailed Staffing Plan		(1,123,300)		

BID ALTERNATES

	PROPOSED SAVINGS
EXTERIOR	-
INTERIOR	
• ELIMINATE ALL OPERABLE PARTITIONS IN HIGH SCHOOL	\$78,631
• TILE ONLY ON WET WALLS IN BATHROOMS; SCUFFMASTER ON ALL OTHER WALLS	\$432,471
• REPLACE ALL LEVEL 01 PORCELAIN TILE WITH LINOLEUM	\$707,679
SYSTEMS	
• CHANGE 100% PV PANEL SYSTEM TO BID-ALT	\$2,920,580
SITE / STRUCTURE	
• PROVIDE GRASS RUGBY FIELD IN LIEU OF TURF	\$673,980
• CHANGE LANDSCAPING OF PHASE 3 (WEST FIELDS) TO BID - ALT	\$1,572,620
PHASING AND LOGISTICS	-
GENERAL CONDITIONS	-
	\$6,385,961

BID ALTERNATES - INTERIOR

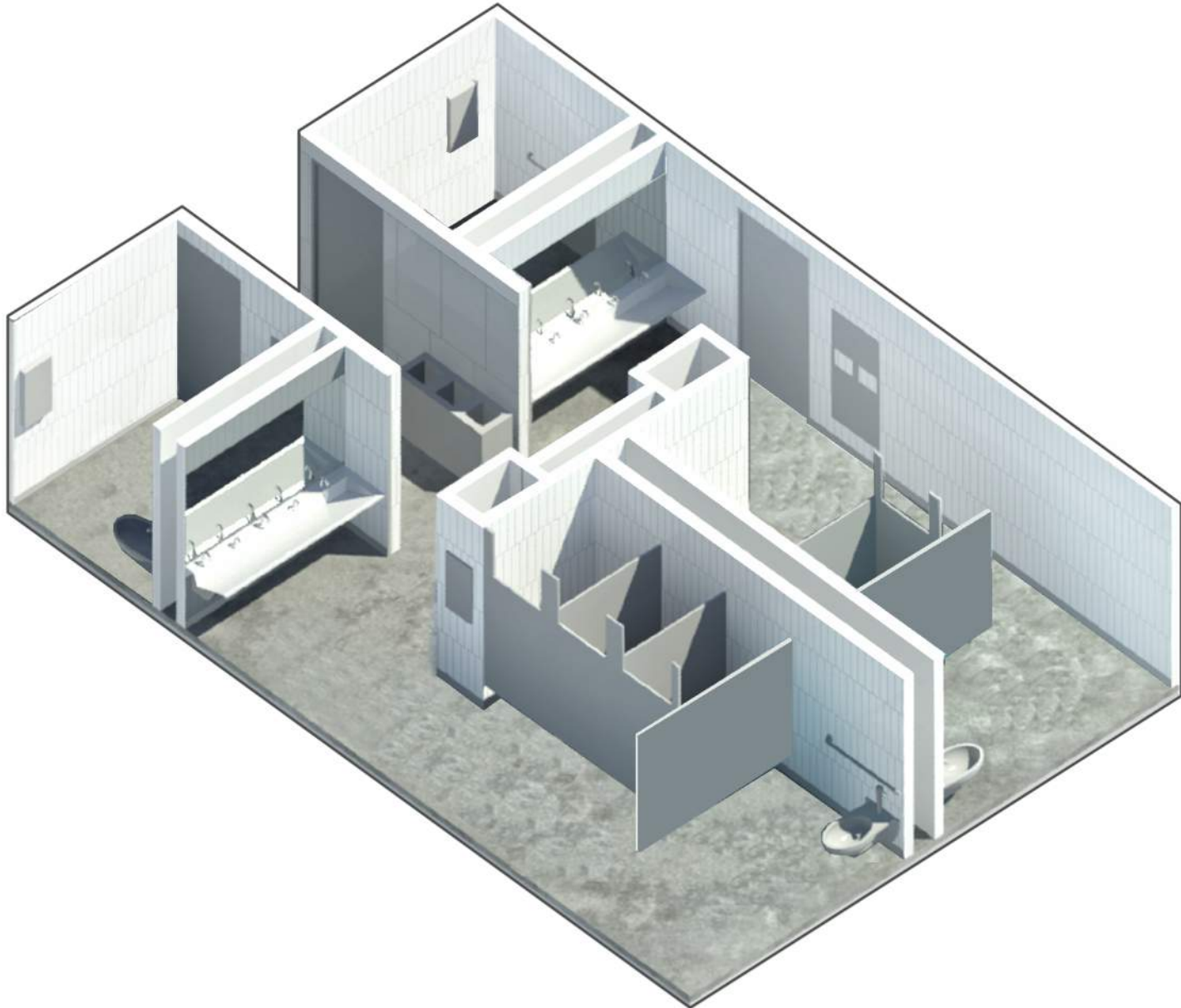
ELIMINATE OPERABLE PARTITIONS IN HIGH SCHOOL



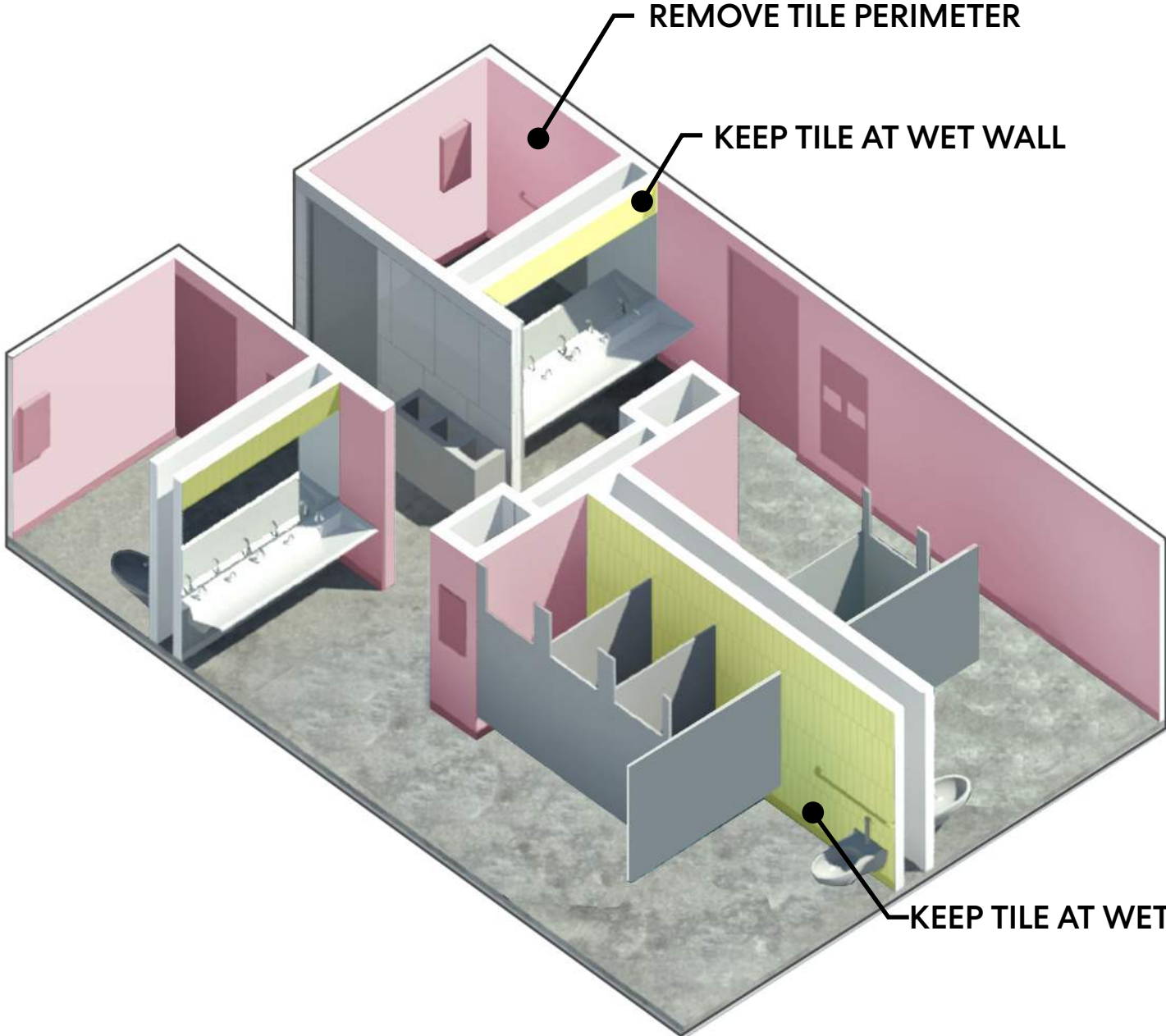
REMOVE OPERABLE PARTITIONS (1 PER FLOOR)

BID ALTERNATES - INTERIOR

TILE ONLY ON WET WALLS IN BATHROOMS



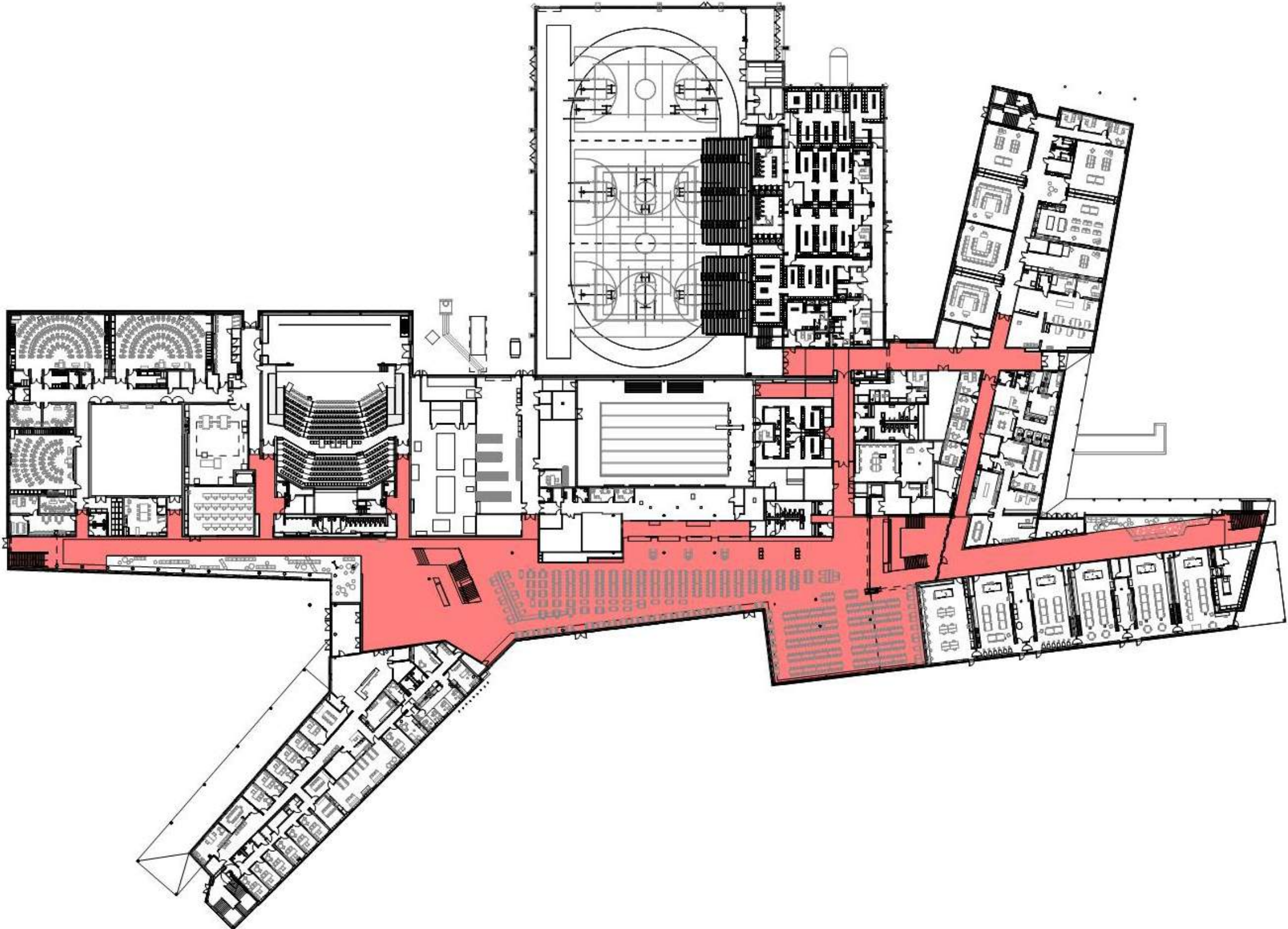
60% PRICING SET



VE STRATEGY

BID ALTERNATES - INTERIOR

REPLACE ALL LEVEL 01 PORCELAIN TILE WITH LINOLEUM



BID ALTERNATES - INTERIOR

CORRIDOR TILE AT 7 FEET HIGH

CORK BOARD ONLY AT CLASSROOM ENTRY



BID ALTERNATES - SITE / STRUCTURE

CHANGE LANDSCAPING OF PHASE 3 (WEST FIELDS) TO BID-ALT

