

West Lafayette Community School Corporation

West Lafayette Jr. / Sr. High School



First Floor Renovations Study [Fall 2023]

Introduction

This design study has been developed to address the immediate needs of the West Lafayette Community School Corporation at the Junior / Senior High School. The administration desires to “reimagine” the first floor level of the facility, renovating the existing Athletics and Physical Education locker room and support spaces.

The West Lafayette Jr. / Sr. High School is located on Grant Street just east of the Purdue main campus. The building was originally built in 1939 and has received subsequent upgrades and additions throughout the years. The facility houses approximately 1,100 students, grades 7-12 and is the only High School in the city limits of West Lafayette.

The most recent renovations to the first floor spaces in 1995 were selective and concentrated in a few key locker rooms and existing spaces.

An initial site visit was convened in July of 2023 to walk the facility and understand the most important needs of the facility. Authorization to move forward with a high level facility study, of the first floor, was secured in August of 2023. Site visits and evaluation of existing documentation was performed by F/H staff to establish baseline layout and infrastructure for the spaces.

A Facility Assessment Study was contracted focusing on the noted renovations and needs to modernize and reorganize the first floor spaces. Observations and recommendations, as noted in this study framed the cost model and approach to the scope included in this study.

The study is organized from the high level observations, of the existing facility, to the proposed design work for this study. Steps below helped inform the design and costs presented.

1. Collection of high level information and observations of the existing facility and existing documentation.
 - a. Architectural / Interior layout and equipment.
 - b. Structural layout and building sectioning.
 - c. Mechanical Infrastructure and air delivery equipment
 - d. Electrical infrastructure and expandability.
 - e. Plumbing infrastructure and capacity.
 - f. Technology development and backbone.
 - g. Life Safety approach and Code related issues.
2. Recommendations and justifications for new design extents and approach.
3. Phasing plan approach and development
 - a. Sequencing of functions as projects progress thru phasing.
 - b. Scoping of work developed within sequential funding capabilities.
4. Cost Model development related to Phasing Plans.
5. Scheduling concepts and function variability.

Observations

Architectural

General:

The first floor of the Jr. / Sr. High facility is utilized as athletics and physical education locker, instruction and support spaces. These spaces include Locker Room facilities, Weight Room, Wrestling Room, Offices, Laundry and Training Rooms, classrooms, public restrooms and multi-purpose spaces. The pool facility is north of the renovation spaces and is not included in this analysis. The current locker room spaces are at the minimum capacity for the athletic and physical education programs provided by the school. A more modern approach to access, usability, supervision and organization is desired.

Exterior Envelope:

60% of the spaces on the First Floor level are subgrade, on the east and south faces. The north and west faces have exterior exposure. The exterior envelope of this level is a combination of brick cavity wall construction and insulated glazed storefront systems.

No deficiencies were observed in the exterior envelope or subterranean areas that border the renovations areas. Ongoing structural slab concerns at the adjacent pool space could affect phasing / development of the renovation areas. Coordination of ongoing phases will need to be taken into account.

Access / Circulation:

Circulation on the first floor of the facility is extensive and multiple means are available to exit the facility. Exit to grade is provided on the west and north side of the floor plate and multiple vertical circulation pathways are provided to access the floor above. An exiting analysis was performed of the first floor level and shows an excess of 12' of exit width in comparison to the occupancy load.

Exiting strategy of renovated areas will be fully analyzed, It is possible, that a couple of the existing vertical circulation routes can be eliminated.

Finishes:

Finishes throughout the first floor facility are considered "dated". Many of the walls and floors have very durable finishes and have been maintained well over the life of the spaces.

Durable floor surfaces could be strategically retained in some areas to reduce construction costs. All wall surfaces, new and those retained from the existing layout will receive new durable finishes. All ceilings will be removed and replaced to facilitate the updating of MEPT infrastructure.

Equipment / Furniture:

Equipment and Furniture is considered "worn" and are in need of updates.

Renovation of small select areas, in the recent past, has provided some updated equipment. All attempts will be made to recover layouts and provide new equipment

throughout. Accessibility in the new spaces and layouts will be required to comply with new code requirements and ADA recommendations.

Restroom / Shower Facilities:

Restroom facilities are included throughout the first floor spaces. Public restrooms are in good condition and include capacity to serve adjacent occupancy load. Locker Room toilet facilities are adequate to serve the current use but do not comply with modern access and privacy concerns. Shower and drying spaces are out-of-date and do not comply with current approaches to individual occupancy and personal privacy standards. Accessibility concerns / issues are evident throughout the existing spaces and will need to be addressed in the new design.

Use of shower facilities at this grade level is continually challenged, as students are less apt to shower at school. We will engage with the state to employ a strategy that reacts to the schools needs yet does not deploy shower facilities that will never be utilized. This will need to be developed through the variance process.

Infrastructure

Plumbing

General:

Multi-occupant public, restroom groups exist on this floor of the facility. The age of the restroom facilities is +20 years with all of the fixtures complying with current code with a few exceptions. The locker room facilities have fixtures and partitions in differing age ranges with many fixtures that comply with the code.

The building is served with city water, a gravity sanitary sewer which connects to city services at the street level and natural gas.

Major upgrades to the plumbing system infrastructure is not anticipated to be required with the first floor upgrades. Further in-depth analysis of the below floor sanitary piping will be required to inform the design of the future renovations.

Below grade infrastructure deficiencies could drastically impact costs and the renovation approach in some areas. Forensic investigation will be required to analyze existing below grade structures and piping prior to development of a renovation design.

All new toilet, lavatory and shower fixtures will be provided in the renovated spaces.

Mechanical System [Heating and Cooling]

General:

HVAC infrastructure is adequate to serve the existing spaces. The capacity to accommodate the newly renovated spaces will require further in-depth analysis but addition of new AHU units is not anticipated. Delivery of conditioned air to the new spaces will be completely replaced in the new construction. Humidity control and exhaust will be a major design approach and will require a new exhaust system changeover.

3 existing Air Handler units serve the anticipated renovated areas.

AHU's B1 and B2 are heat only units and were updated in 2019. It is anticipated that air conditioning modules will be added to these units to assist in tempering the air delivery to the new spaces. This will also assist in the humidity control.

AHU "VAV4" will need to be replaced in the new construction, existing unit was installed in 1996 and has heating and air conditioning capabilities. A new unit providing heat and AC will be installed with a recovery wheel is anticipated.

Due to long lead times for Mechanical equipment, replacement and upgrades to the existing units will be accommodated in the phasing and schedule of the affected renovation areas.

Electrical

General:

Existing electrical infrastructure panels and distribution system is adequate to serve the newly renovated spaces. All wiring / cabling will be upgraded to serve the new spaces, protected outlets and dedicated circuits will be provided to comply with the current electrical code.

Replacement of existing distribution electrical equipment could drastically impact project costs. Long lead times for Electrical equipment will be accommodated in the phasing and schedule of the affected renovation areas.

Life Safety

General:

Replacement of the existing fire alarm system devices is anticipated to be provided throughout the new spaces. Extension of the existing FA system will be expected, existing panels and infrastructure will have capacity for the upgrades.

Further analysis of the existing Fire Alarm system will be required to confirm code required upgrades can be accomplished without changing the backend equipment.

Programmed Renovations of First Floor Facilities

It is the intention of the administration that full replacement of the first floor spaces is required, providing the school with locker room upgrades and development of key spaces (Wrestling and Weight Lifting Programs) to serve the ever expanding athletics and physical education programs, of the school.

A high level programming effort was undertaken comparing existing spaces against the demands of the current programs and planning document developed. As the plan organization progresses further, each program that this floor serves will analyze the program against current deficiencies and anticipated program expansions.

The following space planning program was developed to address the needs of the programs they serve.

**West Lafayette Jr./Sr. High School
Addition and Renovation**

Program

Phase 1 - 600

Department/Area No. Each Capacity Area SF Subtotal SF

ATHLETICS

Team Meeting/Classroom	1			1,224	1,224
Laundry	1			320	320
Uniform Storage	1			60	60
Locker Rm. #1 - (20 lckrs)	1			700	700
Locker Rm. #2 - (20 lckrs)	1			700	700
Locker Rm. #3 - (20 lckrs)	1			700	700
Locker Rm. #4 - (20 lckrs)	1			700	700
Storage	1			340	340
Janitor Closet	1			54	54
Phys, Ed, Office	2			130	260
Phys. Ed. Toilet/Shwr	2			77	154
Phys, Ed Lockrm. - (204 lckr)	2			1,040	2080
Varsity Locker Rm 1 - (30 lckr)	1			1,000	1000
Varsity Locker Rm 2 - (30 lckr)	1			720	720
Coach's Office	2			170	340
Coach's Toilet/Shwr	2			70	140
Training Office - (2 people)	1			250	250
Training Toilet/Shower	1			85	85
Training Room + Storage	1			1,200	1200
Official's Locker Rm.	1			150	150
Official's Toilet/Shower	1			75	75

Total **11,252**

WRESTLING

Wrestling	1	4,285	4,285
Coach's Office	1	320	320
Varsity Locker Rm 1 - (30 lckr)	1	950	950
Janitor Closet	1	40	40
Coach's Office	1	320	320
Varsity Locker Rm 2 - (30 lckr)	1	950	950
Storage 1	1	336	336
Storage 2	1	110	110
Storage 3	1	250	250

Total			7,561
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WEIGHT LIFTING

Weight Room	1	5,450	5450
Weight Room Office	1	150	150
Weight Room Storage	1	150	150

Total			5,750
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Department/Area**PE/ ATHLETICS**

	1	60	45	12,200	12,200
Auxiliary Gym (P/E, Practice	2			1,200	2,400
P.E. Locker Rooms	2			500	1,000
Athletic Locker Rooms	4			250	1,000
Toilets/Showers/Drying	4			250	1,000
PE Office/Lockers/Coaches' C	1			200	200
Laundry	2			250	500
P.E. Storage	2			250	500
Athletic Storage	1			120	120
Concessions	1			250	250
Officials Locker Room	1			2,500	2,500
Fitness Room	1			250	250

Athletic Trainer (2 cross courts, 1 main court, minimal seating)

21,920

Total

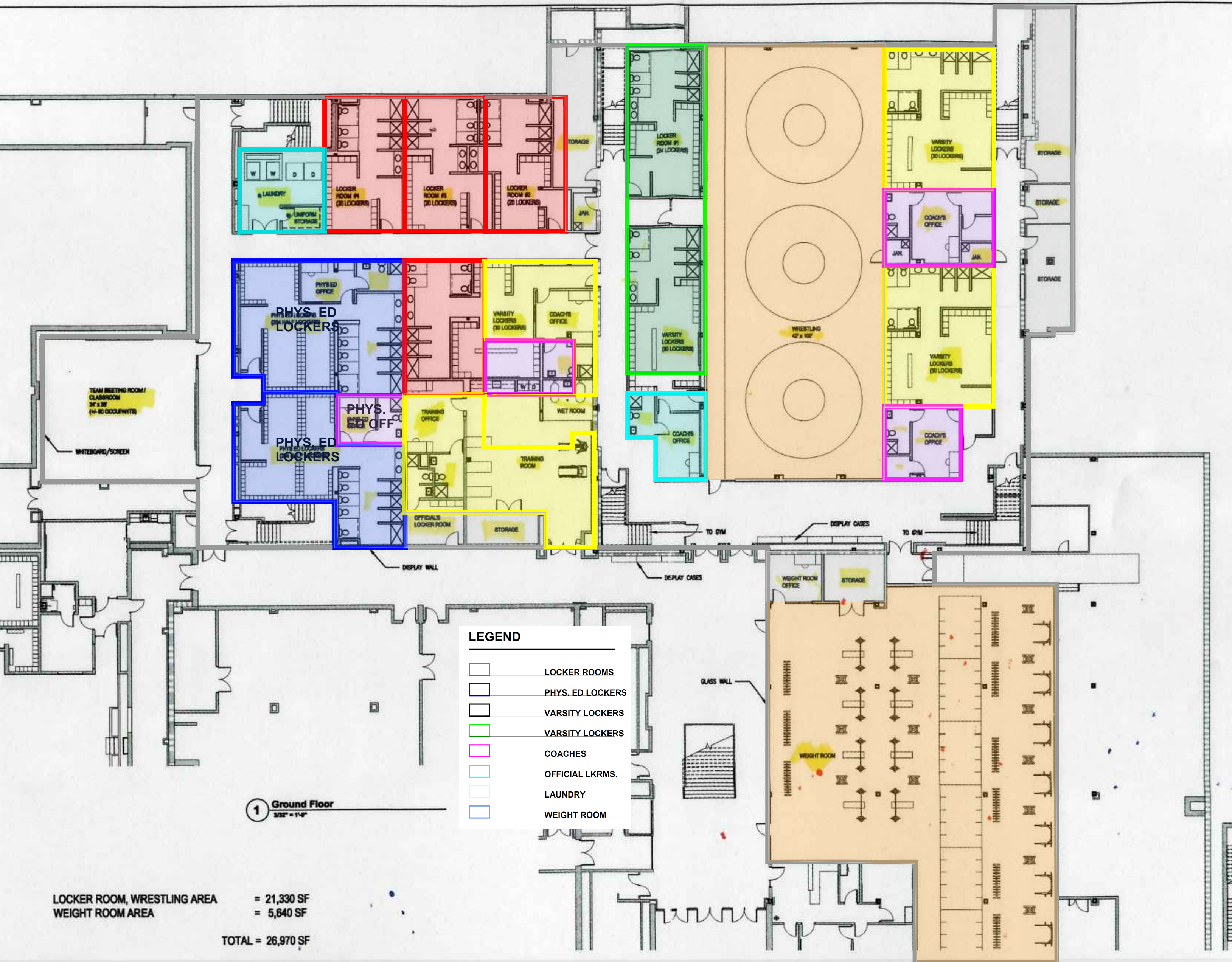
Architectural Design Considerations

The design intention and approach was determined during a programming effort that occurred earlier in the year. The design team was asked to provide full replacement of the first floor spaces which are to include existing locker room upgrades with the addition of new locker room spaces including P.E., Varsity and athletic locker rooms. The administration would also like to develop and provide new state of the art spaces for the Wrestling and Weight Lifting Programs.

The F/H team started with a program of all of the spaces that needed to be accommodated in the new first floor renovation. Some of the design considerations for the planning of these areas is noted below:

- It was important to plan for similar locker room entrances and locations to occur off of the same primary corridor if possible. For example “Locker Rooms” 1-4 are located along the same primary corridor with entrances to those spaces off of the same corridor. This aids in keeping circulation patterns simple and efficient.
- The Officials Locker Room is centrally located along on the perimeter of all of the locker rooms. This allows for ease in way-finding for officials and separates their space from student spaces.
- When we layout a variety of locker room types within one large area we look to layout those spaces so that plumbing walls have short runs and the layout of the plumbing fixtures within the adjacent spaces creates a common chase between plumbing walls with the adjacent rooms.
- The weight room is the “Gem” of the athletics area. The design team anticipates providing a fully glazed wall that provides a clean and contemporary feel with high grade finishes. This area will be fueled with an abundance of high energy from those using the area. The team would like to see the surrounding corridor flooring be high grade sports flooring that runs continuously into the Weight Room. This will be a heavy duty surface that will give the whole area a clean contemporary appearance.
- The weight room needs to be centrally located with a space that lends itself to providing several areas for differing therapeutic approaches. We will also need to provide a wet area for their use.

The attached plan development sheets begin to address layout, adjacencies and program requirements. Cost analysis was derived from these plans.



WEST LAFAYETTE NEW LOCKER ROOM LAYOUT

SCHEME ONE



WEST LAFAYETTE NEW LOCKER ROOM LAYOUT

SCHEME TWO



WEST LAFAYETTE NEW LOCKER ROOM LAYOUT

SCHEME THREE

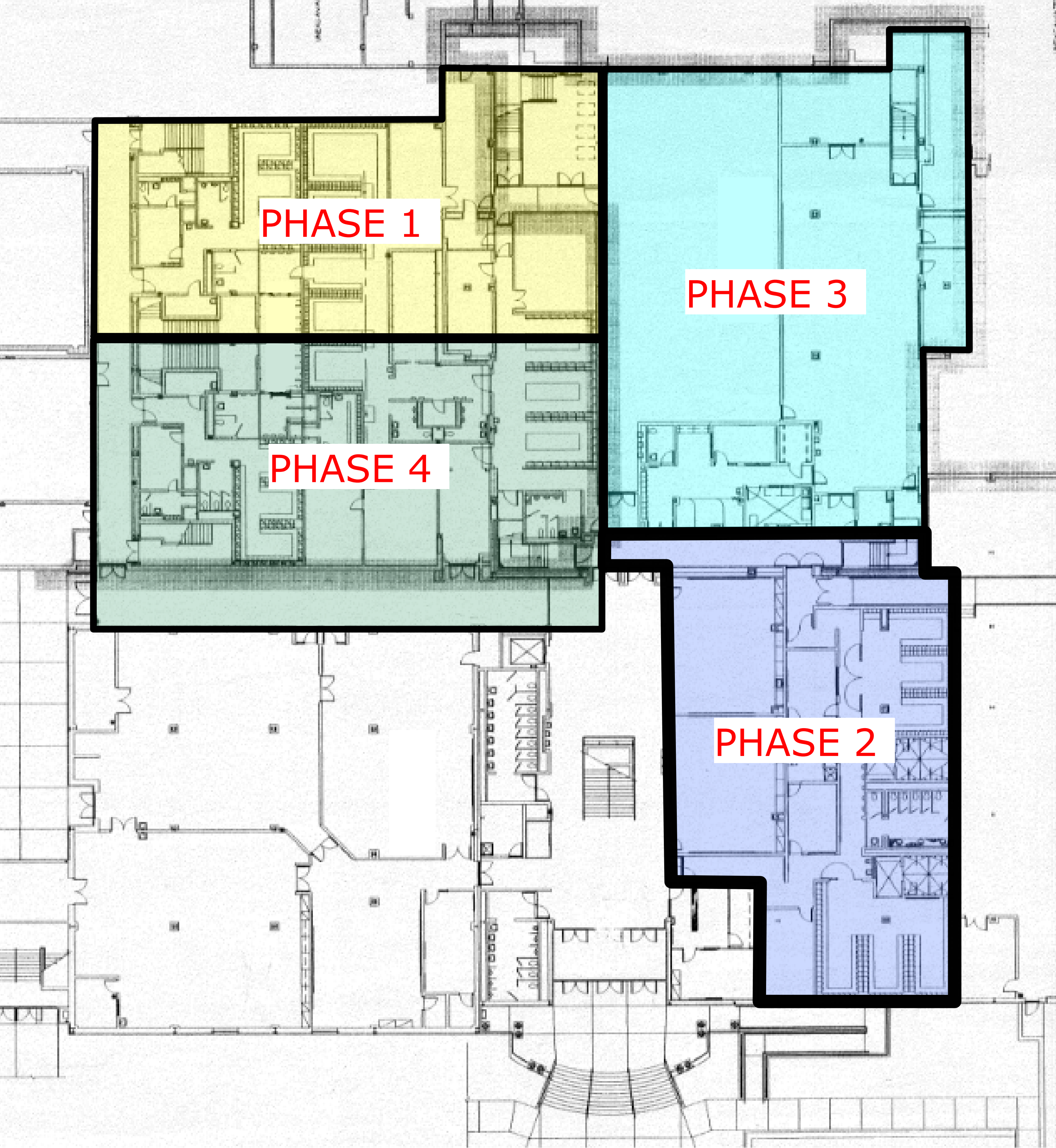
Phasing Plans

In order for first floor renovations to be completed, the scope of the work will need to be broken down into phases. A phased approach will allow the temporary movement of students around areas of renovations so construction can take place with the minimal impact to use of the locker room facilities.

A phased approach also allows for funding to be secured for subsequent phases as construction is on-going. Some phases will include infrastructure upgrades and will require non developed spaces to function during construction. Some temporary construction and the relocation of existing equipment will be required to accommodate on-going student use of the locker room facilities.

The existing floor plate was analyzed and overlaid with the programs that it will serve. It was determined that (4) phases will be required to accomplish the full scope of work in manageable divisions of work and costs that will need to be funded.

If further funding is acquired and areas of phasing can be combined, re-analysis will be required to plan for temporary facilities and subsequent movement of current activities / services.



OVERALL PHASING PLAN

Phase 1: [*+/- 7,000s.f.*]

Will include the development of (5) locker room spaces, a laundry facility, appropriate storage and infrastructure support spaces. Phase 1 will be located in the Northeast portion of the floor plate. Stair removal will be a key development feature of Phase 1. Temporary relocation of locker room functions from Phase 1 area to Phase 2 & 4 areas will be required to provide functions to both P.E. and Athletic programs.

Scope related to Electrical and Mechanical upgrades, included in this phase, will affect construction times.

Phase 2: [*+/- 6,500 a.f.*]

Will include the development of the southwest quadrant of the floor plate. The approach for this area is to develop spaces for the new weight room and a temporary wrestling room coordinating the development of the Phase 3 work. Locker room spaces will need to be relocated temporarily from Phase 2 area to Phase 1 & 4 spaces.

Scope related to replacement of the AHU serving this area, included in this phase will impact costs and construction time.

Phase 3: [*+/- 10,500 s.f.*]

Will include the development of the southeast portion of the first floor area. Renovations in this area will include the new wrestling room space, (4) locker room spaces and infrastructure support spaces.

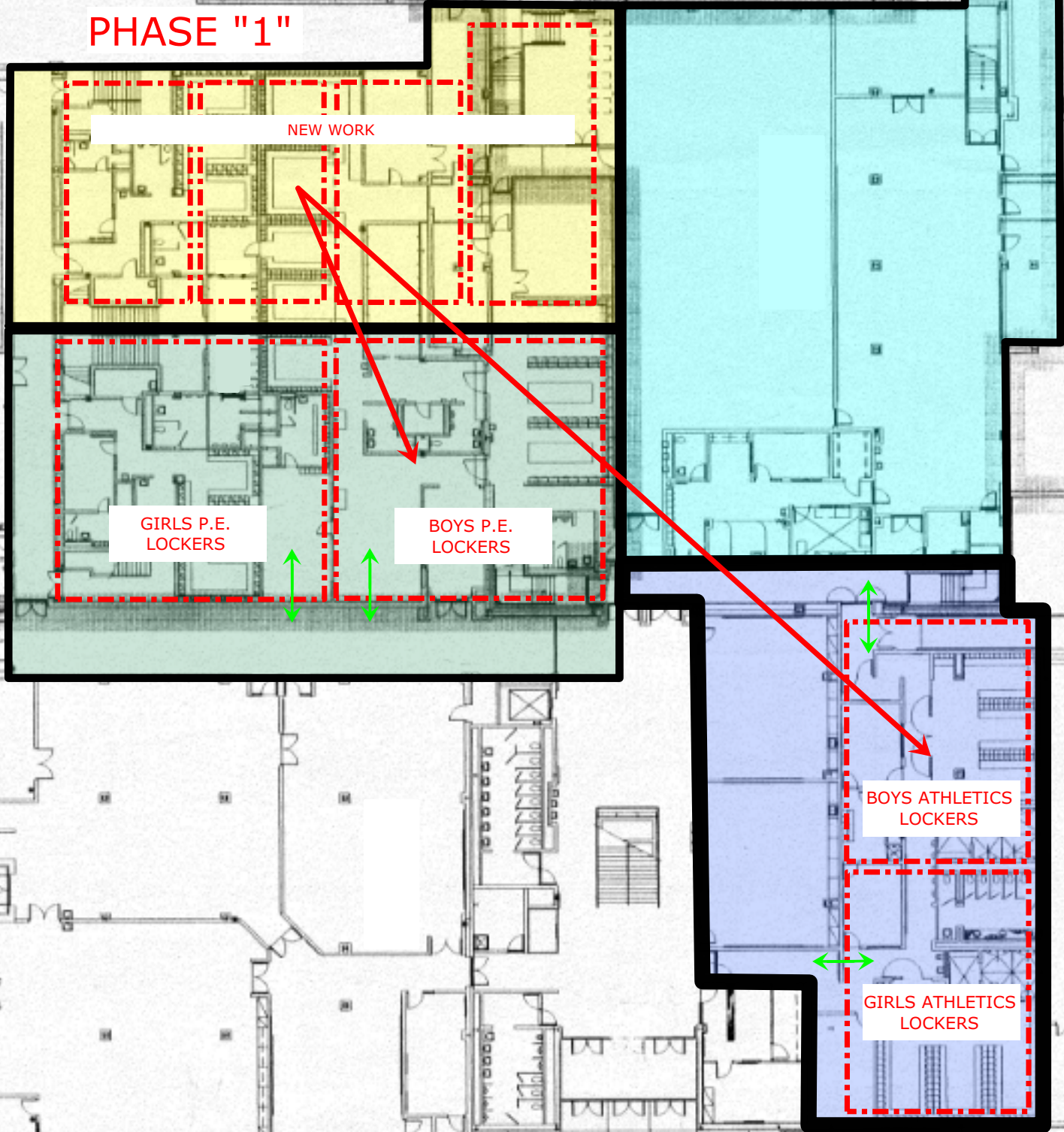
No deficiencies or long lead items are anticipated for the development of this area.

Phase 4: [*+/- 8,500 s.f.*]

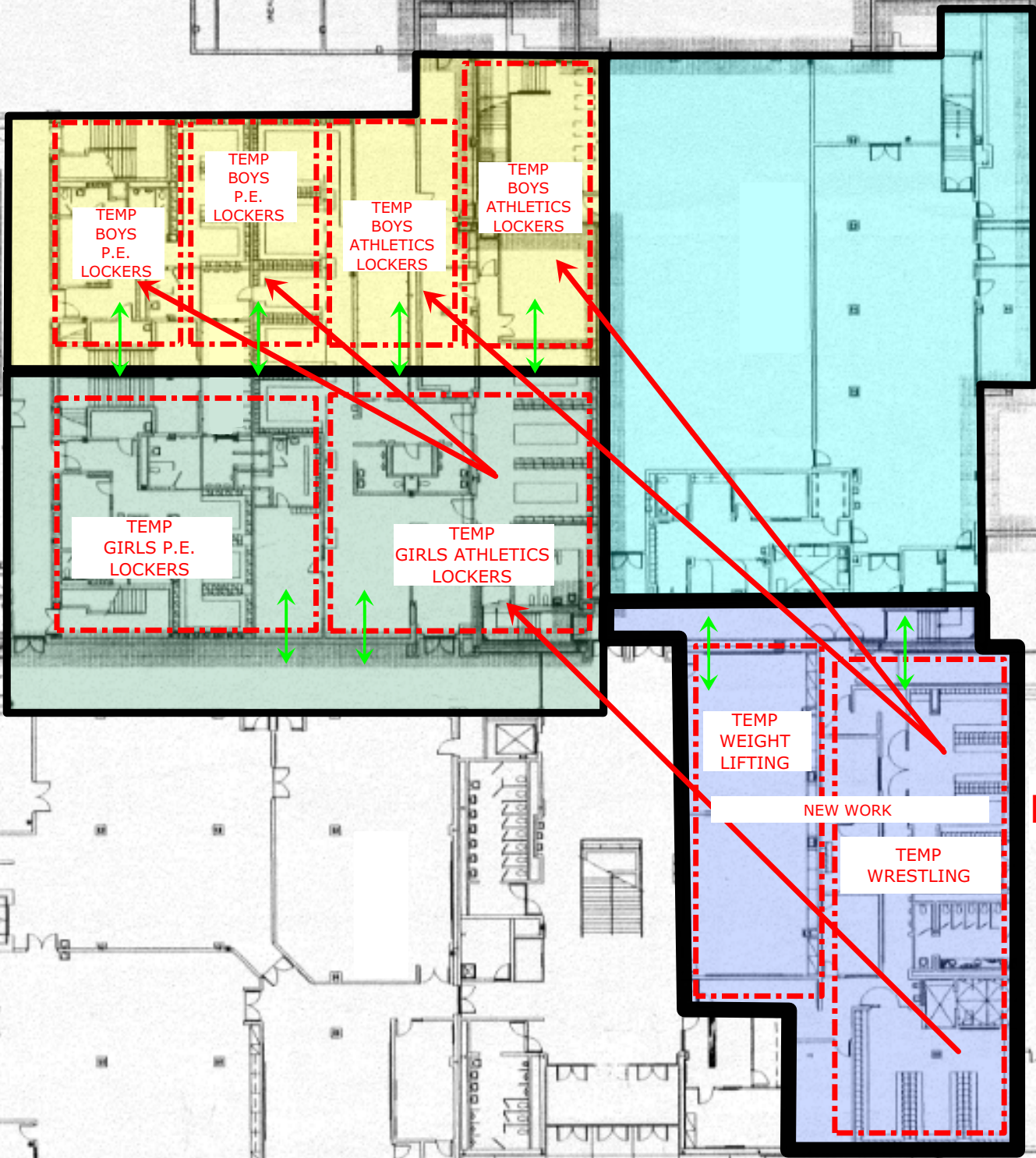
The final portion of renovations, in the northwest corner of the floor area will contain the largest capacity locker rooms. Physical Education locker rooms will be included in this phase as well as a collection of support spaces such as training and official dressing areas.

Similar to Phase 1, scope related to Electrical and Mechanical upgrades, included in this phase, will affect construction times.

PHASE "1"

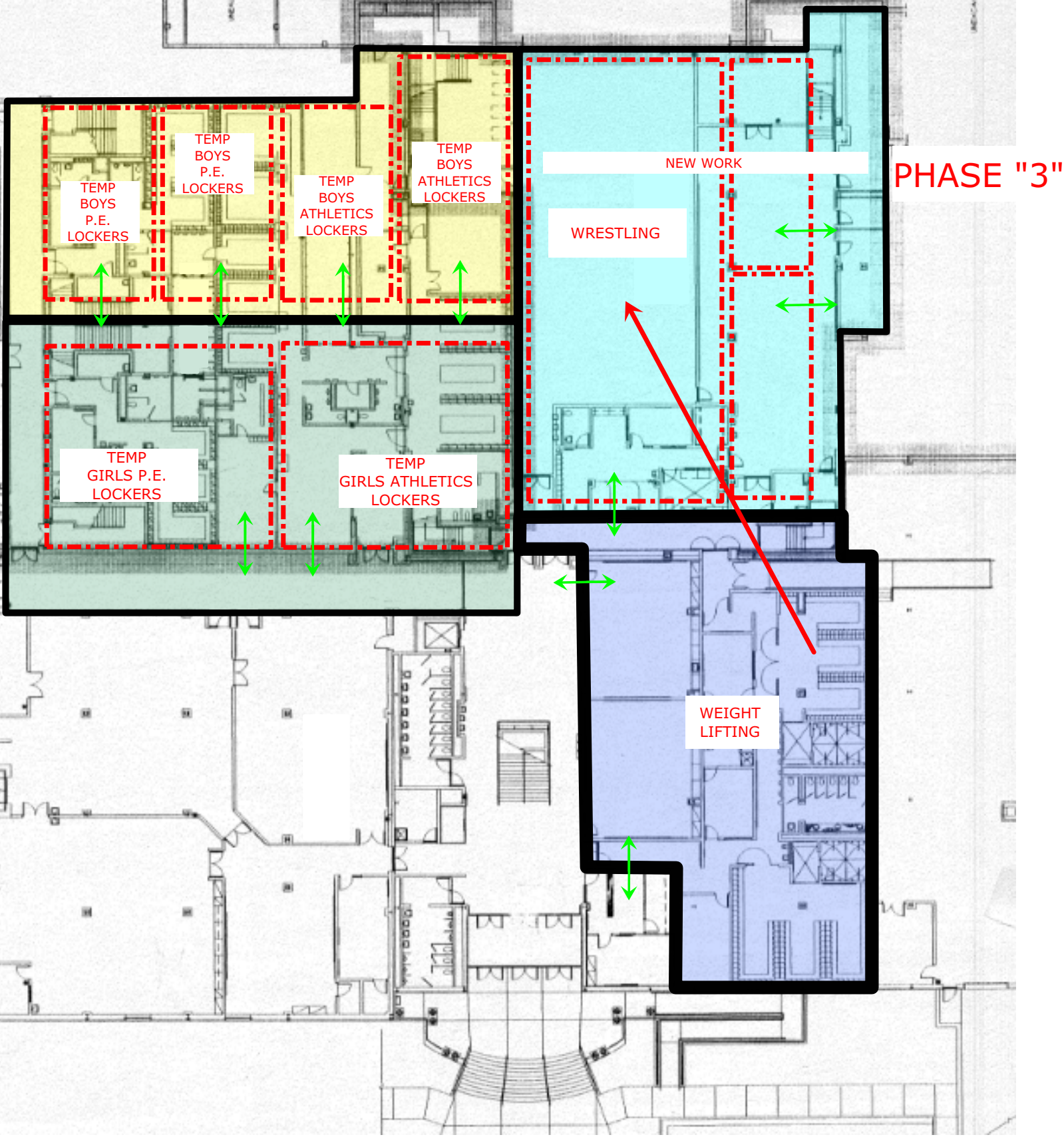


PHASE 1 - PHASING

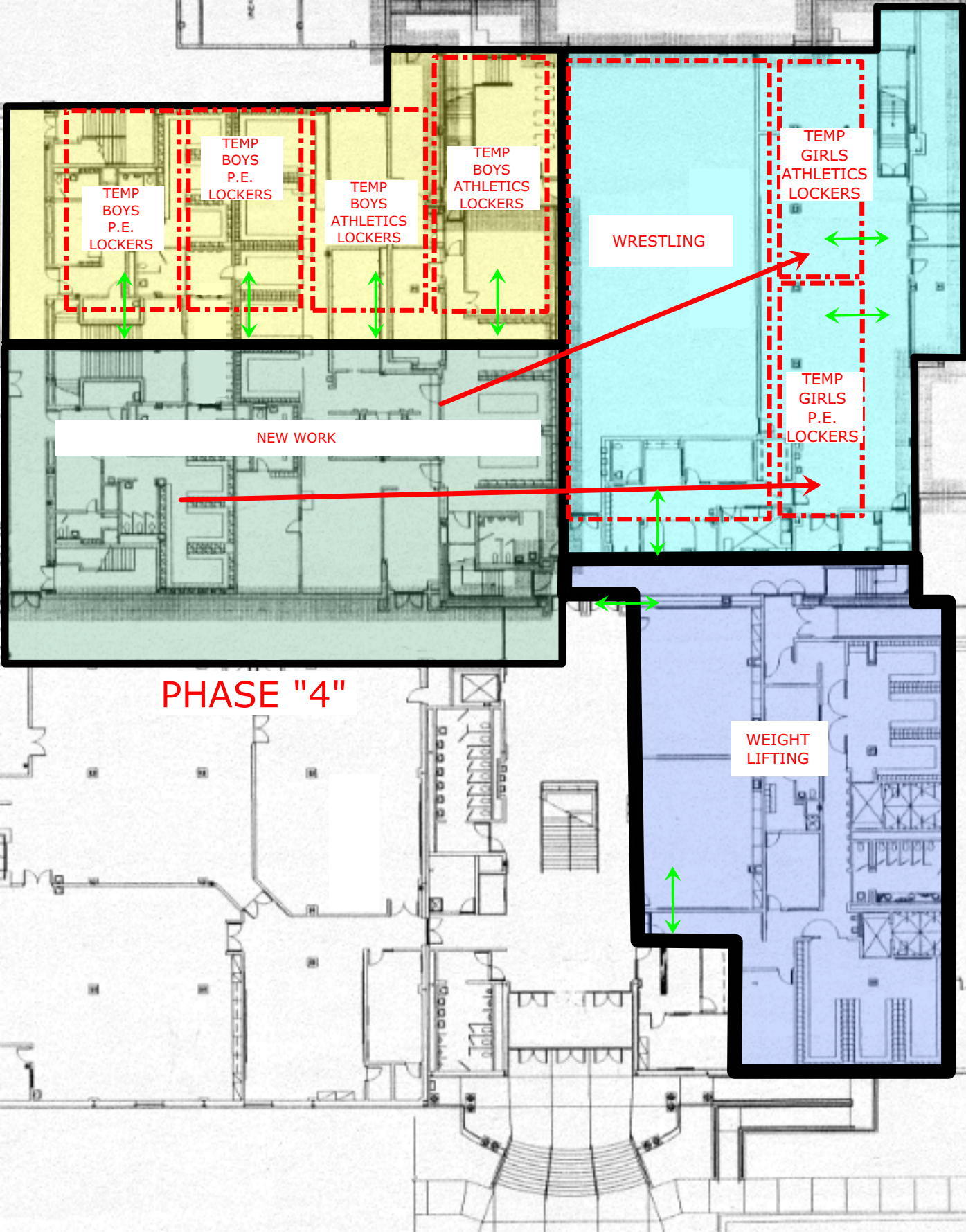


PHASE "2"

PHASE 2 - PHASING



PHASE 3 - PHASING



PHASE "4"

PHASE 4 - PHASING

Cost Model Analysis

The Cost Model below and attached is a high level interpretation of the phased construction. The costing information has been garnered working with local contractors and their interpretation of the work involved. The cost model indicates a design contingency for each phase. This contingency would cover design changes that will be discovered in early project design and by the detailed investigation of the existing infrastructure, not available for this study.

Detailed Cost Model Breakdown attached.

Phase 1 Costs

Material / Labor Costs	\$2,006,500
Design Contingency	\$300,975
<u>Gen Conditions / OHP</u>	<u>\$346,121</u>
Total	\$2,653,596

Phase 2 Costs

Material / Labor Costs	\$1,608,100
Design Contingency	\$241,215
<u>Gen Conditions / OHP</u>	<u>\$277,397</u>
Total	\$2,126,712

Phase 3 Costs

Material / Labor Costs	\$1,776,000
Design Contingency	\$266,400
<u>Gen Conditions / OHP</u>	<u>\$306,360</u>
Total	\$2,348,760

Phase 4 Costs

Material / Labor Costs	\$2,489,500
Design Contingency	\$373,425
<u>Gen Conditions / OHP</u>	<u>\$429,439</u>
Total	\$3,292,364

Total Construction Costs \$10,421,432

**West Lafayette High School
First Floor Renovations Study**

F/H #: [223104.00]

4 Phase Project - 32,500 s.f.

- Area #1 7,000 s.f.
- Area #2 6,500 s.f.
- Area #3 10,500 s.f.
- Area #4 8,500 s.f.

SD, Probable Costs Estimate

BB Scope Costs

Phase 1

Area "1" - Heavy Renovations with MEPT Upgrades

[28%] of overall construction scope

<u>Div</u>	<u>Work Scope</u>	<u>Est Costs BB</u>
02	Demolition <i>Demolition of existing walls and infrastructure</i>	\$76,000
03	Concrete <i>C.I.P Concrete, slabs, floor cuts, levelling agents</i>	\$71,000
04	Unit Masonry <i>CMU Walls</i>	\$145,000
05	Metals <i>Joist Replacement, gratings, railings, C.F. framing</i>	\$28,000
06	Carpentry <i>Countertops, carpentry</i>	\$70,000
07	Thermal / Moisture Protection <i>Water proofing, coatings, vapor retarders, fire proofing, insulation</i>	\$36,000
08	Openings <i>Doors, OH doors, Windows, louvers / vents</i>	\$125,000
09	Finishes <i>Tile, terrazzo, plaster, resilient flooring, ceilings, epoxy paint, base, epoxy flooring, VFWC, AWT</i>	\$170,000
10	Specialties <i>Display, signage, toilet compartments, shower pans, partitions, ext cabs, accessories, lockers, grilles, wall protection</i> <i>* Phasing will require temporarily moving ext lockers</i>	\$92,000
11	Equipment <i>Appliances, athletic eqpt, padding</i>	\$18,000
12	Furnishings <i>Blinds / shades, casework, loose furnishings</i>	\$22,000
13	Special Construction <i>Bleachers</i>	\$0
14	Conveying Equipment <i>Elevator, Lifts</i>	\$0
21	Fire Suppression <i>Sprinklers and piping</i>	\$218,000
22	Plumbing <i>Piping [dom water, waste, sanitary], fittings, valves, fixtures [toilets, lavs, urinals], gas piping</i>	\$283,000
23	HVAC <i>Piping, valves, meters, pumps, ducting, grilles, refrigerant, AHU alterations [add A/C to ext AHU], exhaust</i>	\$135,000
26	Electrical <i>Cabling, raceways, lighting, power systems, controls, switches</i>	\$316,000
28	Electronic Safety & Security <i>Access control, surveillance, cabling</i>	\$174,000
31	Exterior <i>Bldg access, laydown, material protection / staging</i>	\$27,500

	Material / Labor Cost Sub-Total	\$2,006,500	\$287 /s.f.
Gen	Scope / Des Contingency [SD]	\$300,975	
	Material / Labor + Contingency	\$2,307,475	
Gen	Gen Cond / OHP	\$346,121	
	SubTotal	\$2,653,596	
	Total	\$2,653,596	[1]

Phase 2

Area "2" - Heavy Renovations with MEPT Repl / Upgrades

[16%] of overall construction scope

Div	Work Scope	Est Costs BB
02	Demolition <i>Demolition of existing walls and infrastructure</i>	\$53,000
03	Concrete <i>C.I.P Concrete, slabs, floor cuts, levelling agents</i>	\$76,000
04	Unit Masonry <i>CMU Walls</i>	\$95,000
05	Metals <i>Railings, C.F. framing</i>	\$18,600
06	Carpentry <i>Countertops, carpentry</i>	\$55,000
07	Thermal / Moisture Protection <i>Water proofing, coatings, vapor retarders, fire proofing, insulation</i>	\$22,000
08	Openings <i>Doors, windows, louvers / vents</i>	\$78,000
09	Finishes <i>Tile, resilient flooring, ceilings, epoxy paint, base, epoxy flooring, AWT</i>	\$110,000
10	Specialties <i>Display, signage, toilet compartments, shower pans, partitions, ext cabs, accessories, lockers, grilles, wall protection</i> <i>* Phasing will require temporarily moving exst lockers</i>	\$92,000
11	Equipment <i>Padding</i>	\$8,500
12	Furnishings <i>Blinds / shades, casework, loose furnishings</i>	\$28,000
13	Special Construction <i>Bleachers</i>	\$0
14	Conveying Equipment <i>Elevator, Lifts</i>	\$0
21	Fire Suppression <i>Sprinklers and piping</i>	\$198,000
22	Plumbing <i>Piping [dom water, waste, sanitary], fittings, valves, fixtures [toilets, lavs, urinals], gas piping</i>	\$128,000
23	HVAC <i>Piping, valves, meters, pumps, ducting, grilles, refrigerant, AHU replacement</i>	\$295,000
26	Electrical <i>Cabling, raceways, lighting, power systems, controls, switches</i>	\$255,000
28	Electronic Safety & Security <i>Access control, surveillance, cabling</i>	\$78,000
31	Exterior <i>Bldg access, laydown, material protection / staging</i>	\$18,000

	Material / Labor Cost Sub-Total	\$1,608,100	\$230 /s.f.
Gen	Scope / Des Contingency [SD]	\$241,215	
	Material / Labor + Contingency	\$1,849,315	
Gen	Gen Cond / OHP	\$277,397	
	SubTotal	\$2,126,712	
	Total	\$2,126,712	[2]

Phase 3

Area "3" - Heavy Renovations with MEPT Upgrades

[21%] of overall construction scope

Div	Work Scope	Est Costs BB
02	Demolition <i>Demolition of existing walls and infrastructure</i>	\$81,000
03	Concrete <i>C.I.P Concrete, slabs, floor cuts, levelling agents</i>	\$77,000
04	Unit Masonry <i>CMU Walls</i>	\$89,000
05	Metals <i>Railings, C.F. framing</i>	\$27,500
06	Carpentry <i>Countertops, carpentry</i>	\$82,000
07	Thermal / Moisture Protection <i>Water proofing, coatings, vapor retarders, fire proofing, insulation</i>	\$32,000
08	Openings <i>Doors, windows, louvers / vents</i>	\$75,000
09	Finishes <i>Tile, resilient flooring, ceilings, epoxy paint, base, epoxy flooring, AWT</i>	\$132,000
10	Specialties <i>Display, signage, toilet compartments, shower pans, partitions, ext cabs, accessories, lockers, grilles, wall protection</i> <i>* Phasing will require temporarily moving exst lockers</i>	\$113,000
11	Equipment <i>Appliances, athletic eqpt, padding</i>	\$8,500
12	Furnishings <i>Blinds / shades, casework, loose furnishings</i>	\$33,500
13	Special Construction <i>Bleachers</i>	\$0
14	Conveying Equipment <i>Elevator, Lifts</i>	\$0
21	Fire Suppression <i>Sprinklers and piping</i>	\$275,000
22	Plumbing <i>Piping [dom water, waste, sanitary], fittings, valves, fixtures [toilets, lavs, urinals], gas piping</i>	\$128,000
23	HVAC <i>Piping, valves, meters, pumps, ducting, grilles, refrigerant, AHU replacement</i>	\$237,000
26	Electrical <i>Cabling, raceways, lighting, power systems, controls, switches</i>	\$267,000
28	Electronic Safety & Security <i>Access control, surveillance, cabling</i>	\$95,000
31	Exterior <i>Bldg access, laydown, material protection / staging</i>	\$23,500

	Material / Labor Cost Sub-Total	\$1,776,000	\$254 /s.f.
Gen	Scope / Des Contingency [SD]	\$266,400	
	Material / Labor + Contingency	\$2,042,400	
Gen	Gen Cond / OHP	\$306,360	
	SubTotal	\$2,348,760	
	Total	\$2,348,760	[2]

Phase 4

Area "4" - Heavy Renovations with MEPT Upgrades

[35%] of overall construction scope

Div	Work Scope	Est Costs BB
02	Demolition <i>Demolition of existing walls and infrastructure</i>	\$127,500
03	Concrete <i>C.I.P Concrete, slabs, floor cuts, levelling agents</i>	\$99,000
04	Unit Masonry <i>CMU Walls</i>	\$243,000
05	Metals <i>Joist Replacement, gratings, railings, C.F. framing</i>	\$36,000
06	Carpentry <i>Countertops, carpentry</i>	\$88,000
07	Thermal / Moisture Protection <i>Water proofing, coatings, vapor retarders, fire proofing, insulation</i>	\$49,000
08	Openings <i>Doors, OH doors, Windows, louvers / vents</i>	\$178,000
09	Finishes <i>Tile, terrazzo, plaster, resilient flooring, ceilings, epoxy paint, base, epoxy flooring, VFWC, AWT</i>	\$195,000
10	Specialties <i>Display, signage, toilet compartments, shower pans, partitions, ext cabs, accessories, lockers, grilles, wall protection</i> <i>* Phasing will require temporarily moving exst lockers</i>	\$110,000
11	Equipment <i>Appliances, athletic eqpt, padding</i>	\$33,000
12	Furnishings <i>Blinds / shades, casework, loose furnishings</i>	\$44,000
13	Special Construction <i>Bleachers</i>	\$0
14	Conveying Equipment <i>Elevator, Lifts</i>	\$0
21	Fire Suppression <i>Sprinklers and piping</i>	\$244,000
22	Plumbing <i>Piping [dom water, waste, sanitary], fittings, valves, fixtures [toilets, lavs, urinals], gas piping</i>	\$302,000
23	HVAC <i>Piping, valves, meters, pumps, ducting, grilles, refrigerant, AHU alterations [add A/C to exst AHU], exhaust</i>	\$200,000
26	Electrical <i>Cabling, raceways, lighting, power systems, controls, switches</i>	\$333,000
28	Electronic Safety & Security <i>Access control, surveillance, cabling</i>	\$179,000
31	Exterior <i>Bldg access, laydown, material protection / staging</i>	\$29,000

	Material / Labor Cost Sub-Total	\$2,489,500	\$356 /s.f.
Gen	Scope / Des Contingency [SD]	\$373,425	
	Material / Labor + Contingency	\$2,862,925	
Gen	Gen Cond / OHP	\$429,439	
	SubTotal	\$3,292,364	
	Total	\$3,292,364	[4]

Total Construction Costs

Phase 1:	Area "1" - Heavy Renovations with MEPT Upgrades	\$2,653,596
Phase 2:	Area "2" - Heavy Renovations with MEPT Repl / Upgrades	\$2,126,712
Phase 3:	Area "3" - Heavy Renovations with MEPT Upgrades	\$2,348,760
Phase 4:	Area "4" - Heavy Renovations with MEPT Upgrades	\$3,292,364
	Total Costs	\$10,421,432

Schedule Development

The development of an overall schedule, for this study, will prove difficult in the early stages of these projects. Because of the uncertainty associated with fundraising and securement of construction funds, project timing and schedule will have to be flexible to respond to the following factors.

- Properly funded Phases
- Timing of Athletic program schedules and shifting of temporary amenities.
- Proper bidding and lead times
- Working with school schedules, special events and athletic post season events.

The following project construction brackets are being provided to allow for timing with the above listed factors. As noted, many factors could influence the timing of these project phases.

If phases are able to run concurrently, all construction could be completed in 33-36 months. Condensing or combining phases, if possible could reduce the overall timeframe by 3-6 months.

Phase 1: Anticipated 7-9 month construction time. Because of the extensive infrastructure upgrades and long lead times for mechanical upgrades, it would be preferred if this project could be bid in typical spring / summer work timeframe to secure a contractor and good bids.

Design: Oct-Dec, Bid: Jan, Completion: Aug/September

Phase 2: Anticipated 5-6 month construction time. Because of the clear floor design in this area and accommodating temporary construction, the work could be accomplished in a shorter timeframe. Because of its remote location on the floor plate and easy material access this project could be completed during the academic year.

Design: May-Aug, Bid: Sept, Completion: Feb/March.

Phase 3: Anticipated 7-9 month construction time. Construction in Phase 3 is a combination of open space design, inclusion of plumbing intensive locker rooms and a mechanical equipment upgrade. Flexible timeframe will be the key to advancing this work and minimizing obstacles.

Design: Jan-Mar, Bid: April, Completion: December

Phase 4: Anticipated 8-10 months construction time. Phase 4 will be the most intensive of all phases. Extensive below grade improvements, density of the layouts and inclusion of some higher finish spaces will extend construction time.

Design: Oct-Dec, Bid: Jan, Completion: Aug/September

Conclusion

Heavy renovations and infrastructure upgrade work is a very messy endeavor. Costing uncertainty in the current construction environment also makes it difficult to forecast and schedule projects.

This study provides a high level approach to the renovations of the first floor of the Junior / High School facility. As the design process for these projects develop and forensic infrastructure analysis is procured, we anticipate schedule and costing pressures to reduce.

We appreciate the opportunity to provide this information to the school administration. We will make our team available for a more in-depth review if required.



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