

**GREENWICH BOARD OF EDUCATION
GREENWICH PUBLIC SCHOOLS
Greenwich, CT**

Board of Education Meeting Agenda Document Cover Sheet

Meeting Date:	Information Only _____
	First Read _____
Policy #:	Action Requested _____
	Consent _____
	Written _____

Last Reported (if applicable) MM/DD/YYYY Format:

Agenda Item Title:

Submitted by:
Name:
Title:

Document Purpose/Highlights:

Recommended Motion (if applicable):

October 9, 2019

Greenwich Public Schools
290 Greenwich Avenue
Greenwich, CT 06830

Attn: Lorianne O'Donnell, Chief Operating Officer

Re: GHS Campus / Cardinal Stadium Redevelopment –
Design Development Progress Report



Greetings:

We are writing to provide a progress report including a review of budgets and estimates after completing design development documents for portions of the project. This work was completed for the purpose of providing enough information so that an independent cost estimate could be completed. With that information available the Board of Education can make better informed decisions about what portions of the project will be selected to move forward.

All aspects of the project that are currently being considered were designed in more detail and estimated including:

- Home side bleachers and press box
- Elevator to serve the new bleachers
- Visitor side bleachers
- New lights on existing poles
- Utilities required to serve the new areas
- Site Development
- New buildings under the bleachers

We have assembled a comparative summary of the budgets and estimates that have been generated for the project (see attachment). The markups and categories that are applied during the estimating process vary depending upon how the estimate was generated so we adjusted some of the numbers to present a fair and accurate comparison. We have also attached the independent estimate completed by your cost estimator Nasco which contains the same figures that are on the summary sheet.

The design development phase of design represents approximately 60% complete documentation of a project. At this phase it is reasonable to obtain accurate representations of the scope and cost of a project. In some project delivery methods contractors are willing to set a guaranteed maximum price based on these documents. It is also the appropriate stage to assess whether aspects of the design are cost-effective and if not make the necessary adjustments during the construction documents phase.

Based on the development of the design and the independent estimate we feel a number of issues have been clarified:

- The site development work required to install the bleachers is far more comprehensive than originally anticipated. While some of this is related to the option of placing buildings below the bleachers the increased scope and budgets are also driven by the cost of grading and retaining walls to create the food

Kaeyer, Garment + Davidson Architects, PC

285 Main Street, Mount Kisco, New York 10549

914.666.5900 kgdarchitects.com

truck plaza and the required storm water measures for this portion of the project. The full original project, prior to being divided into three phases, contained almost \$5 Million in site development expense. What we have learned after developing the design is that more of this work needs to be completed as part of the first phase of the project.

- The elevator costs have increased due to the refinement of the design. Given the overall height a full hydraulic elevator needs to be used with a larger shaft and elevator vestibules at both levels. Initial estimates were based on a limited use limited access (LULA) type elevator which is considerably less costly. LULA elevators cannot travel the full 30’ height required as they are limited in travel distance to approximately 27’.
- The option for placing buildings under the bleachers is even more costly than originally anticipated by our budgets. If this is to be pursued later the cost of the foundation and utility work is approximately \$175,000.

There are a lot of options and budgets at this point and many possible permutations of how best to move forward. We share some of our thoughts and analysis below to assist the Board’s review:

1. The location of the buildings is in large part dependent upon the probability of completing the overall plan adopted by the Board (Site Option B) at the conclusion of the feasibility study. If the belief is that this will not occur then provisions for the buildings or the entire buildings themselves should be included under the home side bleachers in this initial phase.
2. If there is consensus on not moving forward with the remainder of the plan as quickly as possible then the project costs for the design and approvals of the next phase need not be included in the current funding request. This reduces the costs by approximately \$500,000.
3. If the funding available in 2019/2020 is to remain limited to the \$3.8 Million that was conditionally approved by the BET then the current project needs to be reduced in scale. This could involve; redesign of site development work to reduce costs, elimination of the visitor bleachers from this phase, elimination of the replacement of the lights from this phase as well as potentially removing the project costs related to the future phases of the project or some combination of the above measures.
4. If the project is reduced in scope the items removed could be designed and bid as “alternates” to allow bidders to price them if the base project bids are lower than the current estimates.

With the information now available the design team will certainly work to reduce scope and cost wherever possible and appropriate during the development of construction documents. We hope that this information is helpful and look forward to moving ahead to assist GPS in completing a quality and cost-effective improvement to the High School campus.

Sincerely:

KG+D Architects, PC

Russell A. Davidson, FAIA – President

Cc: Dr. Toni Jones, Dan Watson

Enc.

Greenwich Public Schools

Cardinal Stadium Budgets Design Development

	A	B	C	D	E	F	G
1	Date	Mar-19	Sep-19	May-19	May - 19	Sep-19	Sep-19
2	Version / Option	Phase One submission to BET based on BOE approved Plan	Phase One submission to BET based on BOE approved Plan	GAF alternative to Phase One	Concept Design - Buildings under bleachers	Design Development with buildings under bleacher	Design Development with buildings under bleacher
3		KG+D Feasibility Study Design / Budgets	KG+D Design Development / Independent Estimate - NASCO	GAF Concept Design / Budget	KG+D Design / Budgets (building only)	KG+D Design / Independent Estimate - NASCO	KG+D Design / Independent Estimate - NASCO
4						Building - Complete	Foundations Only - Building later
5	Site and Bleacher Demolition	\$ 120,175	\$ 247,327	\$ 50,000		\$ 247,327	\$ 247,327
6	Bleacher Foundations	\$ 139,150		\$ 137,000		included in bleacher figures	included in bleacher figures
7	New Homeside Bleachers and Press Box	\$ 793,104	\$ 1,018,704	\$ 875,000		\$ 1,018,704	\$ 1,018,704
8	New Elevator and Shaft	\$ 189,750	\$ 382,683	\$ 180,000		\$ 382,683	\$ 382,683
9	New Visitor Bleachers	\$ 250,000	\$ 226,166	\$ 220,000		\$ 226,166	\$ 226,166
10	Site Development	\$ 158,125	\$ 651,652	\$ 297,500		\$ 651,652	\$ 651,652
11	Utilities	\$ 94,875	\$ 141,594	\$ 189,000		\$ 141,594	\$ 141,594
12	Subsurface work for New Buildings only	not included in this option	not included in this option	included below	included below	included below	\$ 164,639
13	New Buildings below Bleachers - subtotal	not included in this option	not included in this option	\$ 500,000	\$ 2,217,703	\$ 2,266,492	
14	New scoreboard on home bleachers	not included in this option	not included in this option	\$ 55,000			
15	New Lights on Existing Poles	\$ 556,600	\$ 514,323	not included in this option		\$ 514,323	\$ 514,323
16	Temp. facilities (in lieu of buildings)	\$ 94,875	\$ 94,875	not necessary in this option	not necessary in this option	not necessary in this option	\$ 94,875
17	Contingency	\$ 239,665	\$ 133,406	\$ 375,000	\$ 221,770	\$ 246,731	\$ 163,866
18	Cost Escalation	\$ 216,300	\$ 102,322	not itemized in budget	\$ 146,368	\$ 170,870	\$ 103,236
19	Project Subtotal	\$ 2,852,619	\$ 3,513,053	\$ 2,878,500	\$ 2,585,841	\$ 5,619,811	\$ 3,614,191
20	Project Costs for work above	\$ 474,537	\$ 474,537	\$ 288,500		\$ 474,537	\$ 474,537
21	Project Costs for development of phase II	\$ 494,136	\$ 494,136	not included		\$ 494,136	\$ 494,136
22	Grand Total	\$ 3,821,292	\$ 4,481,726	\$ 3,167,000		\$ 6,588,484	\$ 4,582,864
23	Round to	\$ 3,800,000	\$ 4,500,000	\$ 3,200,000	-	\$ 6,600,000	\$ 4,600,000
24	If there is to be no Phase II revised total -	\$ 3,300,000	\$ 4,000,000	\$ 3,200,000	-	\$ 6,100,000	\$ 4,100,000
25							
26	Size of New Buildings (gross square feet)	not included	not included	5,000	4,675	4,720	foundation only - 4,720
27	Square Foot Cost of New Buildings below bleachers	NA	NA	\$ 100	\$ 474	\$ 480	\$ 35
28							
29	Bleacher Subtotals	\$ 1,182,254	\$ 1,244,870	\$ 1,232,000	-	\$ 1,244,870	
30						Cost of Remainder of Building in 2021	\$ 2,101,852

**NASCO
CONSTRUCTION SERVICES INC.**

SUBJECT: GENERAL NOTES & QUALIFICATIONS
PROJECT: CARDINAL STADIUM
LOCATION: GREENWICH, CT
TYPE EST.: DESIGN DEVELOPMENT
CLIENT: GREENWICH SCHOOLS

EST. NO: 9-0263
EST. BY: AH/MMAK
CHKD. BY: EH
DATE: 9/13/2019
REV. DATE: 10/9/2019

NASCO Estimate	BASE COST	w/MARKUPS FOR GEN. COND (8%) , GC O&P (10%) AND INSURANCE (2%)
Demo	204,106	247,327
Home Bleacher w. Press Box	897,815	1,018,704
Visitor Bleacher	199,327	226,166
Elevator	337,270	382,682
Field Lighting	453,289	514,323
Sitework	537,773	651,652
Site Utilities	116,850	141,594
Building Complete	1,851,497	2,243,571
Foundations Only	135,868	164,639
Building Later on	1,715,629	2,078,931

NASCO
CONSTRUCTION SERVICES INC.

SUBJECT: SUMMARY - OPTION 1
PROJECT: CARDINAL STADIUM
LOCATION: GREENWICH, CT
TYPE EST.: DESIGN DEVELOPMENT
CLIENT: GREENWICH SCHOOLS

EST. NO: 9-0263
EST. BY: AH/MMAK
CHKD. BY: EH
DATE: 9/13/2019
REV. DATE: 10/9/2019
GSF: 4,720

ITEM	DESCRIPTION	AMOUNT	\$/SF
	EXISTING CONDITIONS/ DEMO		
	- Demolition (Site and Bleachers)	\$204,106	\$43.24
	NEW WORK		
	TEAM BUILDING UNDER HOME BLEACHER	\$1,851,497	\$392.27
	SITWORK	\$537,773	\$113.93
	SITE UTILITIES	\$116,850	\$24.76
	SUBTOTAL	\$2,710,226	\$574.20
	GENERAL CONDITIONS - 8.0%	\$216,774	\$45.93
	SUBTOTAL	\$2,927,000	\$620.13
	GEN.CONTRACTORS OH & P - 10.0%	\$292,700	\$62.01
	SUBTOTAL	\$3,219,700	\$682.14
	DESIGN CONTINGENCY - 5.0%	\$161,000	\$34.11
	SUBTOTAL	\$3,380,700	\$716.25
	ESCALATION - 3.0%	\$101,400	\$21.48
	SUBTOTAL	\$3,482,100	\$737.73
	INSURANCE - 2.0%	\$69,600	\$14.75
	TOTAL COST	\$3,551,700	\$752.48
	NEW WORK		
	HOME BLEACHER	\$897,815	\$190.22
	- Incl. Press Box. Installed Cost		
	VISITOR BLEACHER	\$199,327	\$42.23
	- Installed Cost		
	ELEVATOR	\$337,270	\$71.46
	FIELD LIGHTING	\$453,289	\$96.04
	SUBTOTAL	\$1,887,700	\$399.94
	GENERAL CONDITIONS - 8.0%	\$151,000	\$31.99
	SUBTOTAL	\$2,038,700	\$431.93
	GEN.CONTRACTORS OH & P ON MAJOR TRADES - 3.0%	\$61,200	\$12.97
	SUBTOTAL	\$2,099,900	\$444.89
	DESIGN CONTINGENCY - 5.0%	\$105,000	\$22.25
	SUBTOTAL	\$2,204,900	\$467.14
	ESCALATION - 3.0%	\$66,100	\$14.00
	SUBTOTAL	\$2,271,000	\$481.14
	INSURANCE - 2.0%	\$45,400	\$9.62
	TOTAL COST	\$2,316,400	\$490.76

NASCO
CONSTRUCTION SERVICES INC.

SUBJECT: SUMMARY - OPTION 1
PROJECT: CARDINAL STADIUM
LOCATION: GREENWICH, CT
TYPE EST.: DESIGN DEVELOPMENT
CLIENT: GREENWICH SCHOOLS

EST. NO: 9-0263
EST. BY: AH/MMAK
CHKD. BY: EH
DATE: 9/13/2019
REV. DATE: 10/9/2019
GSF: 4,720

ITEM	DESCRIPTION	AMOUNT	\$/SF
	EXISTING CONDITIONS/ DEMO		
	- Demolition (Site and Bleachers)	\$204,106	\$43.24
	NEW WORK		
	TEAM BUILDING UNDER HOME BLEACHER	\$1,851,497	\$392.27
	SITWORK	\$537,773	\$113.93
	SITE UTILITIES	\$116,850	\$24.76
	SUBTOTAL	\$2,710,226	\$574.20
	GENERAL CONDITIONS - 8.0%	\$216,774	\$45.93
	SUBTOTAL	\$2,927,000	\$620.13
	GEN.CONTRACTORS OH & P - 10.0%	\$292,700	\$62.01
	SUBTOTAL	\$3,219,700	\$682.14
	DESIGN CONTINGENCY - 5.0%	\$161,000	\$34.11
	SUBTOTAL	\$3,380,700	\$716.25
	ESCALATION - 3.0%	\$101,400	\$21.48
	SUBTOTAL	\$3,482,100	\$737.73
	INSURANCE - 2.0%	\$69,600	\$14.75
	TOTAL COST	\$3,551,700	\$752.48
	NEW WORK		
	HOME BLEACHER	\$897,815	\$190.22
	- Incl. Press Box. Installed Cost		
	VISITOR BLEACHER	\$199,327	\$42.23
	- Installed Cost		
	ELEVATOR	\$337,270	\$71.46
	FIELD LIGHTING	\$453,289	\$96.04
	SUBTOTAL	\$1,887,700	\$399.94
	GENERAL CONDITIONS - 8.0%	\$151,000	\$31.99
	SUBTOTAL	\$2,038,700	\$431.93
	GEN.CONTRACTORS OH & P ON MAJOR TRADES - 3.0%	\$61,200	\$12.97
	SUBTOTAL	\$2,099,900	\$444.89
	DESIGN CONTINGENCY - 5.0%	\$105,000	\$22.25
	SUBTOTAL	\$2,204,900	\$467.14
	ESCALATION - 3.0%	\$66,100	\$14.00
	SUBTOTAL	\$2,271,000	\$481.14
	INSURANCE - 2.0%	\$45,400	\$9.62
	TOTAL COST	\$2,316,400	\$490.76

Cardinal Stadium Project

Review of Design Development

Review of Cost Estimates

Key Issues Summary

Goal – Develop Design with a portion of the building program underneath the bleachers so that a detailed, reliable pricing can be provided to the BOE.

Elements included in Design:

- Home Bleachers with press box and elevator.
- Building below bleachers with Team Rooms, Public Toilet Rooms, Storage, Concession and Referee room.
- Visitor side bleachers.
- Replacement of light fixtures on current poles.
- Site work as required to complete the above (no additional parking in this phase).

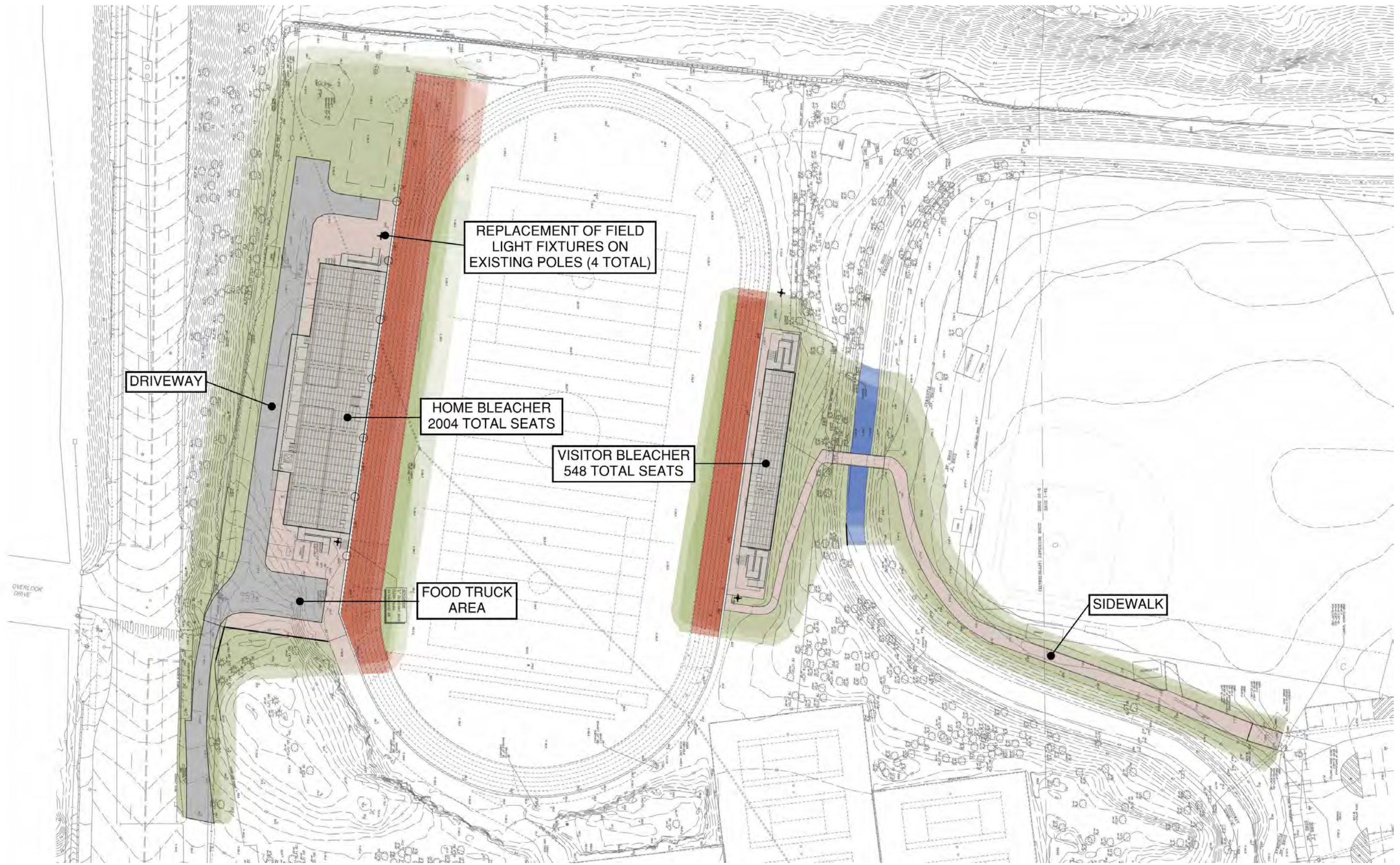
Program Comparison - This Option has 48% less space than the approved program (Ed. Specs.) and 35% less space than other earlier proposed options.

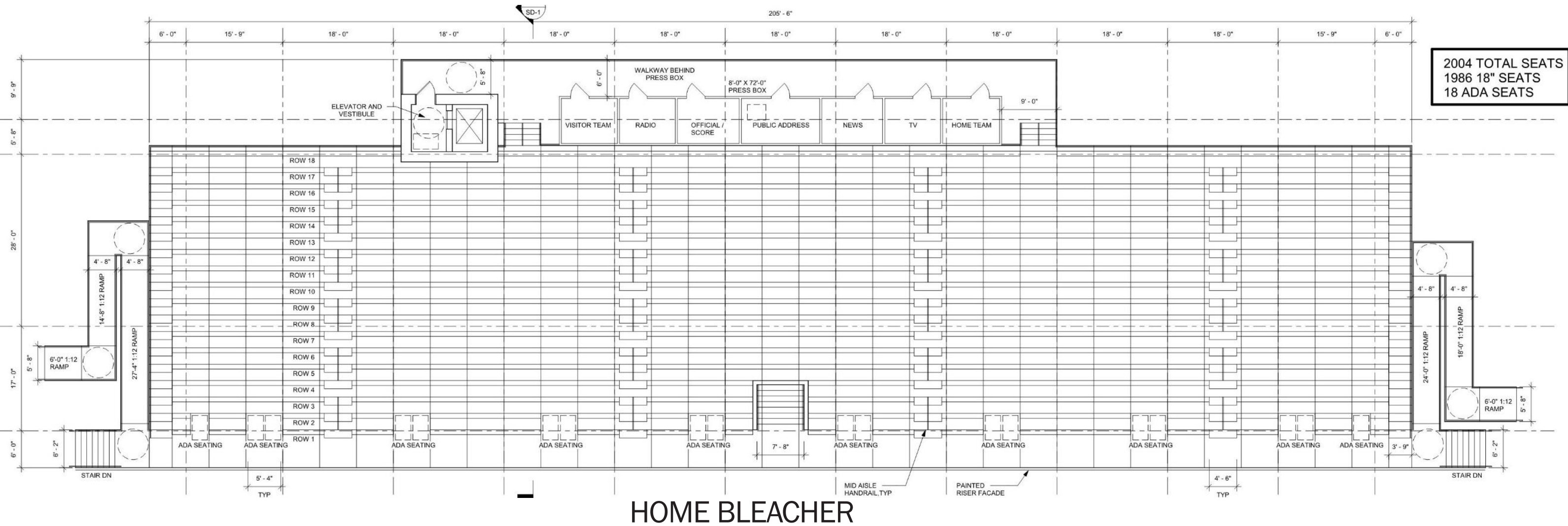
SPACE DESCRIPTION	FIELD HOUSE (SEPT 2018)	BUILDING UNDER HOME BLEACHER	
		OPTION B (MAY 2019)	OPTION (AUGUST 2019)
TEAM ROOM 1	1090 SF	930 SF	920 SF
TEAM ROOM 1 COACH AREA	170 SF	-SF	-SF
TEAM ROOM 1 TOILET	245 SF	130 SF	135 SF
TEAM ROOM 2	1090 SF	930 SF	920 SF
TEAM ROOM 2 COACH AREA	170 SF	-SF	-SF
TEAM ROOM 2 TOILET	245 SF	130 SF	135 SF
LARGE TOILET - MENS	460 SF	260 SF	280 SF
LARGE TOILET - WOMENS	460 SF	260 SF	280 SF
FAMILY TOILET	120 SF	85 SF	95 SF
CONCESSION	110 SF	130 SF	175 SF
TICKETS	105 SF	-SF	-SF
FIRST AID	145 SF	120 SF	125 SF
REFEREE 1	145 SF	250 SF	155 SF
REFEREE 2	165 SF	-SF	-SF
MECHANICAL ROOM	345 SF	185 SF	80 SF
JANITOR CLOS	55 SF	-SF	25 SF
STORAGE	460 SF	390 SF	380 SF
TOTAL BUILDING SQ. FT	7210 GSF	4675 GSF	4715 GSF

Revised Overall Site Plan if buildings are under the bleachers.

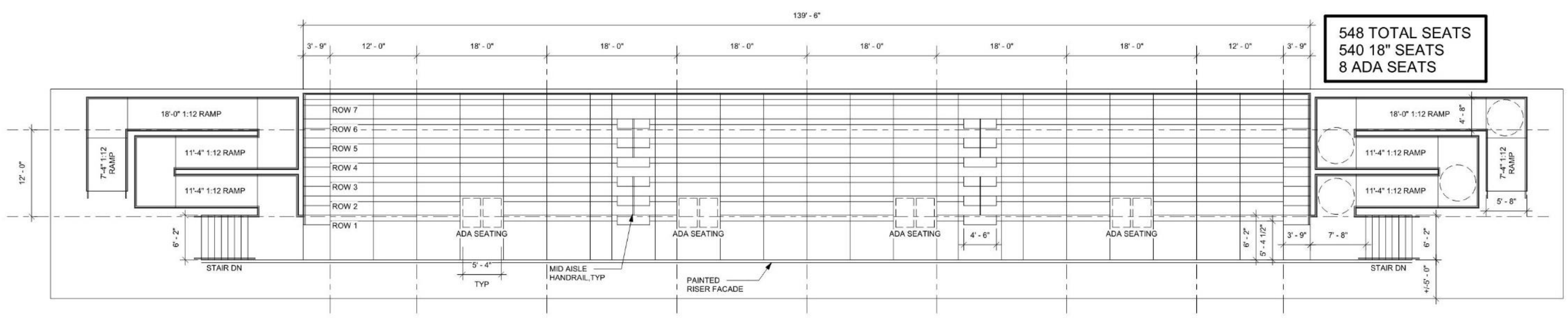
Relocation of tennis courts, new roads and parking and additional buildings to be in future phases if approved.



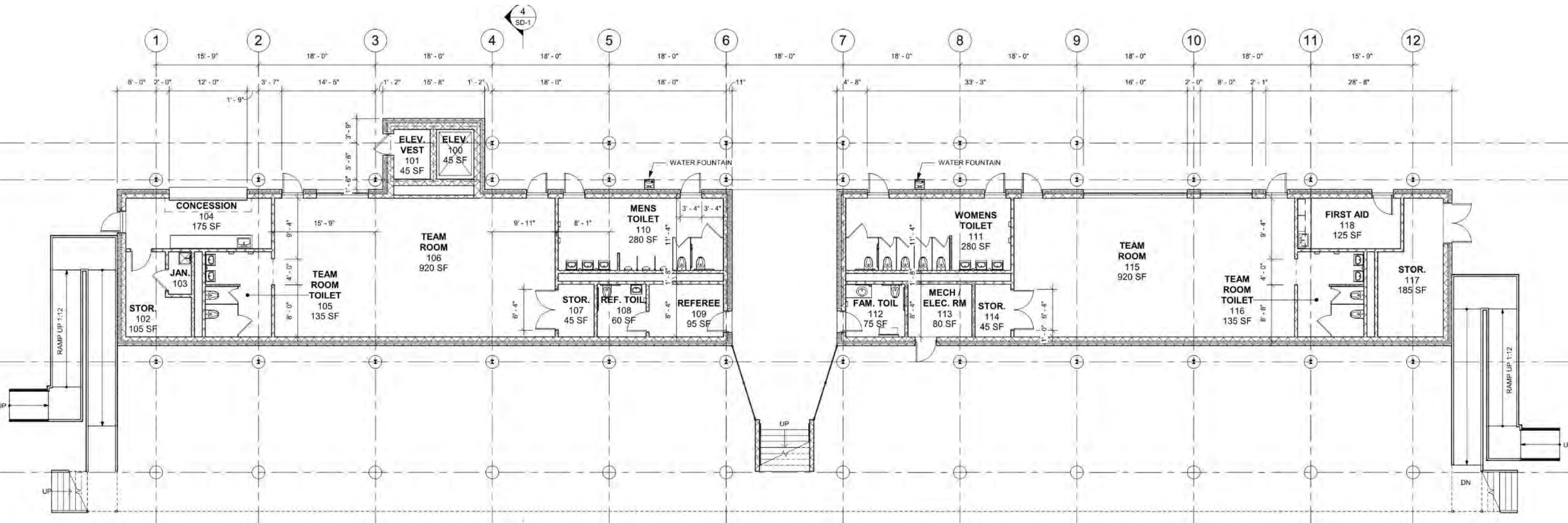




HOME BLEACHER



VISITOR BLEACHER







Project Summary

- Home Bleacher – 2004 Seats with Elevator and Press Box
- Visitor Bleacher – 548 Seats
- Team Building underneath Home Bleacher
 - Exterior Wall – Load bearing concrete block walls, continuous exterior insulation and ground face block veneer (1-Hour Fire Rating)
 - Roof – Steel bar joists, metal roof deck, insulation, EPDM roof membrane (1-Hour Fire Rating)
 - Interiors – Painted concrete block, polished concrete floors, ceramic tile walls and tile flooring at toilet rooms
 - Team Building to be heated with mechanical ventilation/exhaust throughout. No air conditioning at team building
 - Upgraded electrical service to the area and new fire alarm
- Associated Sitework including underground utilities, stormwater management, driveways, walkways, and general site lighting

Budgets / Estimates

- Initial phase one budgeted at \$3.8 Million (total project +/- \$17 Million).
- Independent Estimator now estimates this phase at \$4.5 Million.
- Key differences are that additional site development is required and a more costly elevator is needed.
- The independent estimate for the buildings under the bleachers is \$2.2 Million or approximately \$474 per square foot.
- The cost to complete the sub-surface work only for the buildings under the bleachers as part of the initial phase is approximately \$165,000.
- The budget to do all of the work shown in the Design Development documents including the buildings under the bleachers is \$6.6 Million.
- If the scope is to include all of the work shown in the Design Development documents but only the sub-surface work for the buildings the cost is \$4.6 Million.
- If there is no Phase II planned for the following year deduct \$500,000 from each figure above.

Key Issues Summary

- Does the Board want to proceed as quickly as possible with a multi phase plan that includes the relocation of the tennis courts and a new access road to the High School Campus?
- What is the best location and size for the new building or buildings that contain the team rooms, toilet facilities and ancillary functions?
- If the Board wants to reduce the overall scope and cost of the project and limit it to one phase it seems that proceeding with the buildings under the bleachers is the most economical way to reach some of the original project goals in the least amount of time.
- If the Board does not want to decide at this time on the construction of the buildings they could opt to move forward with all of the other scope and the sub-surface prep. work only – thus leaving all options open.



KGD

listen

imagine

build
