

CPA PROJECT APPLICATION

Community Preservation Committee
66 Westford Street
Carlisle, MA 01741
TEL: 978-369-6136

Please type your responses to the following questions:

1. Project Overview, Contact Information, Signatures

Project Name: CCHS Amenities Building

Project Applicant: Concord-Carlisle Regional School District

Amount Requested: \$250,000 (Option 1) / \$432,345 (Option 2)

Sponsoring Board or other organization(s) (as applicable): Concord-Carlisle Regional School Committee

Primary Contact Person:

 Name: Dr. Laurie Hunter, Superintendent

 Address: 120 Meriam Road / Concord, MA 01742

 Phone Number: 978-318-1500

 Email Address: lhunter@concordps.org

Purpose: (please select all that apply)

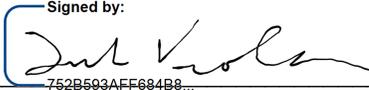
- Community Housing
- Historic Preservation
- Open Space
- Recreation

Secondary Contact:
 Brian Waterson
 Chair, Campus Completion Subcommittee
 401-588-1981
 bwaterson@concordcarlisle.org

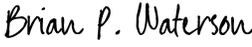
Project location or address: 500 Walden Street / Concord, MA 01742

Signature of Applicant:  DCC1832796E74BA...

Print name: Laurie Hunter Date: 1/28/2025

Signature of Chair of Sponsoring Board or other organization (as applicable):  752B593AFF684B8...

Print name: Julie Viola Date: 1/28/2025

Signed by:

11A7056435BD4C1...
 Brian P. Waterson

1/27/2025

2. Project Summary Provide a summary of the project.

The Concord-Carlisle Regional School District is seeking to build a community use bathroom facility at CCHS with proximity to multiple tennis courts, football stadium (inclusive of where games, competitions, and graduation take place), soccer fields, and large-scale events like Mighty Moose, Kicks for Cancer, and other multi-generational community events. Also referred to as an amenities building, this structure was not built as part of the campus in 2015 and is one of the key missing components on the school's campus completion plan. Because the fields are used by both the high school as well as for youth recreation and other community events, this building will serve not only high school students and coaches but also recreation league participants and community spectators.

To clarify the amount requested above, there are two potential funding routes from the Carlisle CPC. This will be determined based on whether or not any Carlisle funding goes towards the overall project cost or towards Carlisle's assessment. As Concord currently has an application with their CPC for \$750,000, Option 1 of \$250,000 reflects an approximately proportionate request to the Carlisle CPC. Alternatively, Option 2 reflects a full ask for the maximum Carlisle share, meaning a capital request does not need to be made of the town. The Campus Completion Subcommittee could not get a definitive answer on how funds are applied prior to submitting this application but hope to have clarity in the near future.

3. Project Description Provide a complete description of the project.

The Concord Carlisle Regional School District (CCRS) feels it is important to build an amenities building to provide a permanent structure for bathrooms, concessions, a small space for athletic trainers, and storage. This is particularly important because in addition to being out of compliance with MA building codes, the portable restrooms are not fully ADA compliant and as a result are not accessible to all members of the community.

When CCHS opened in 2015, upgrades to the existing fields were not part of the original budget. A non-profit organization raised \$5M to complete the fields, part of which came from Carlisle Community Preservation Act funds at the time. However, not enough funds were raised for bathroom and concession facilities, and a decade later the campus continues to use three portable restrooms.

In 2018, when Gale Associates completed a campus feasibility study, they highlighted that "when permanent grandstands are constructed, the Massachusetts Building Code requires that permanent bathroom facilities be installed within 500 feet of the grandstands. Per the Massachusetts State Plumbing Code and assuming a waiver for a 50 percent reduction, which is typically granted by the plumbing board there are 15 toilets required for women, and 4 toilets and 4 urinals required for men." It should be noted since this time that the code has changed for the number of toilets but not for sinks.

The CCRSD contracted Gale Associates to assess the requirements for an amenities building, and they presented their recommendations in Fall 2024. They explored the feasibility of modular trailer restrooms, pre-fab modular buildings, and a traditional build. Exploring the options including both the build costs and the lifetime of the structures, the Regional School Committee voted to move forward with a CMU build with an estimated cost of \$1,550,000 to \$1,850,000. Using the current assessment ratio of 76.63% / 23.37%, the Carlisle share would be \$362,235 to \$432,345. The CCRSD plans to add a capital warrant article to both the Concord and Carlisle Town Meetings for the amenities building, but at the same time we are reaching out to the Community Preservation Committees in both towns with the hopes of offsetting the cost.

Attached to this application is the full interim report from Gale Associates as well as additional information we have received since then. To summarize the building will include:

- 1,800 square feet made of concrete block walls
- Seasonal building with no heat or AC
- Concession space consisting of counters, electricity and a sink
- Women's, men's and single-user restroom as dictated by the MA State Plumbing Code
- Storage
- Small trainer's room

4. Responsible Parties: Who will implement the project? Is there a project manager? Please list the name and contact information of these persons and any additional responsible parties – i.e. property owner, consultant (if applicable).

The CCRSD administration will oversee the project with project oversight provided by Gale Associates

Dr. Laurie Hunter
Superintendent of Schools
978-318-1500
lhunter@concordps.org

Gale Associates
300 LedgeWood Place, Suite 300
Rockland, MA 02370

5. Timeline: When will the project begin? When will it be completed? Are there multiple stages for the project? CPA Project Application

Assuming the project is approved at both Town Meetings, it is expected that bidding and permitting will take place Summer 2025 and construction will begin in Fall 2025. The actual build is estimated to take six months. The expectation is the project will be complete by Spring 2026.

6. Project Purpose: State the purpose of the project and indicate how the project meets the general and specific criteria for funding CPA projects (see “Community Preservation Fund Allowable Spending Purposes” from the Community Preservation Coalition). How will the project: 1) benefit the Town of Carlisle? 2) address current and/or future community needs, including recommendations in the Carlisle Master Plan? 3) impact Carlisle citizens of various ages? 4) preserve Carlisle’s character? If approved, is the project ready to be implemented? Why should this project be funded this year?

The CCRSD feels it is important to build an amenities building to provide a permanent structure for true ADA compliant bathrooms, concessions, and storage. This is particularly important because the portable restrooms are not fully ADA compliant and as a result are not accessible to all members of the community, which stands in stark contrast to the values articulated in the District Strategic Plan. Moreover, we are also in violation of MA Plumbing Code requirements. The Plumbing Inspector in Concord could cite CCRSD at any time but has not to date.

While the building would be located on the campus of the high school, the fields are also used by Concord Rec and Concord-Carlisle Youth Sports for baseball, softball, lacrosse and football. The use of the building is most likely to be used evenly by adult spectators/rec league participants and young athletes.

While the project has been discussed before, the CCRSD feels this is a time-sensitive project because of an influx in concerns around ADA accessibility at the CCHS campus, specifically related to accessible bathrooms by the fields.

7. Community Support: What is the nature and level of community support for this project? Describe the outreach completed to town boards, committees and other organizations and the results.

The CCRSD has had many conversations over the past year with the Concord Recreation Commission, the Concord Disability Commission, as well as youth sports organizations from both Concord and Carlisle. We have received numerous letters from the community supporting this project.

The RSC has also highlighted this project in conversations with the FinComs in both communities. Now that the RSC has voted to move forward with a warrant article, the RSC has also requested time with the Carlisle Select Board in an upcoming meeting.

8. Jurisdiction or Ownership of Project Site: Indicate if the applicant has jurisdiction or ownership of the project site. If applicable, attach a copy of the deed or purchase agreement for the property.

The CCRSD manages the Concord-Carlisle High School Campus including the fields where the amenities building will be located.

9. Permitting Requirements and Endorsements: List permits or endorsements needed for completion of project, including any special permit, variance or other approval required by any Town of Carlisle Board or Committee.

As the site is located completely in Concord, no special permits are required by any Carlisle Board or Committee. That said the project will require both a building permit and occupancy permit from Concord.

It should be noted that this project will require a variance on the number of required sinks. While a recent change to the plumbing code reduced the required number of toilets, the same reduction was not applied to sinks. Gale Associates has had success in obtaining this waiver for other projects and is confident it can be done for Concord Carlisle.

10. Project Budget: Attach a project budget. Expenditures and estimate of costs must be clearly identified and back-up documentation provided. If the project is expected to last more than one year, delineate the budget for each year. Distinguish between hard and soft costs. List any additional or alternate funding sources for the project. CPA funds cannot be used for maintenance. If ongoing maintenance is required, who will be responsible and how will it be funded? Indicate anticipated annual income (if any). Grant funds are paid out upon the submission to the Carlisle Town Accountant of the appropriate documentation, such as receipts for reimbursement, or invoices to be paid. CPA funds are not released to the grantee for general start up expenses.

The estimated cost of the project is \$1,550,000 to \$1,850,000. Now that the RSC has selected a preferred design approach, Gale Associates is currently working on a more detailed design and budget. This will be available in March 2025, and the RSC will ensure the Carlisle CPA receives the updated figures.

11. Attachments List all attachments, including, but not limited to, photos, plans, maps, quotes, costs, estimates, and letters of endorsement.

- Additional Drawings and Charts from January 22, 2025 meeting with Gale Associates
- Gale Associates CCHS Amenities Interim Report November 2024
- Gales Associates CCRHS Feasibility Study January 2019

Additional Drawings and Charts from January 22, 2025 meeting with Gale Associates

The Site

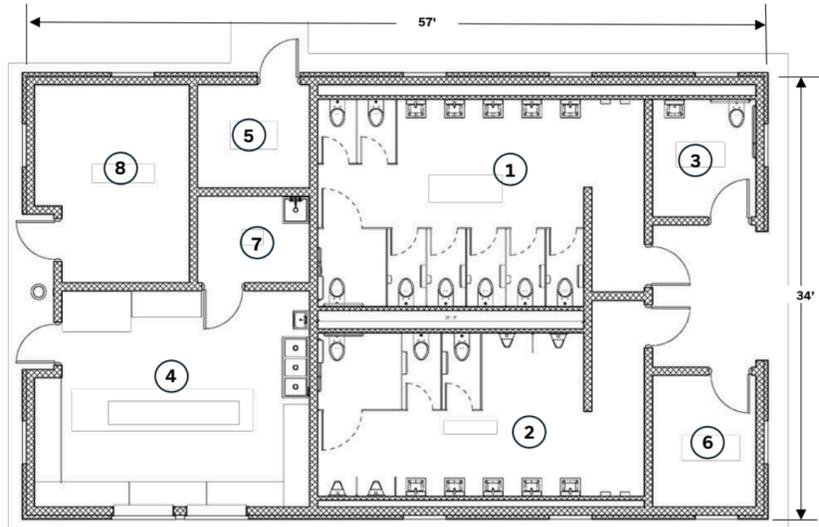


Refined - OPTION 3A Program Confirmation

PROGRAM

- ① WOMEN'S RESTROOM
- ② MEN'S RESTROOM
- ③ SINGLE-USER RESTROOM
- ④ CONCESSIONS
- ⑤ WATER SERVICE ROOM
- ⑥ ELECTRICAL ROOM
- ⑦ JAN CLOSET
- ⑧ TRAINER'S ROOM

TOTAL AREA: 1,836 GSF



Note from Laurie Hunter: This is not a final drawing but the draft now includes a trainer's room. We asked them to reduce concessions a bit and eliminate any kitchen infrastructure since we do not want to be ServeSafe involved.

CCHS Amentities Building - Fixture Count NEW CODE

Plumbing Fixture requirements

248 CMR 10 - Uniform State Plumbing Code

Mass. Register #1510, effective 12/8/2023)

Reference:	10.10 Table 1: Minimum Facilities for Building Occupancy	Toilets				Lavatories	
		Females		Males		Female	Male
Secondary School		up to 300	1 per 60	up to 360	1 per 120	1 per 75	1 per 75
Outdoor Stadiums		over 300	1 per 150	over 360	1 per 150	1 per 75	1 per 75

Occupancy	Toilets						Lavatories			
	Females			Males*			Female		Male	
1800 Total										
		CALCULATION	ROUND UP		CALCULATION	ROUND UP	CALC.	ROUND UP	CALC.	ROUND UP
900 Each Gender	300	5	5	360	3	3	12	12	12	12
	600	4	4	540	3.6	4				
REQUIRED TOTALS		9		7		12		12		

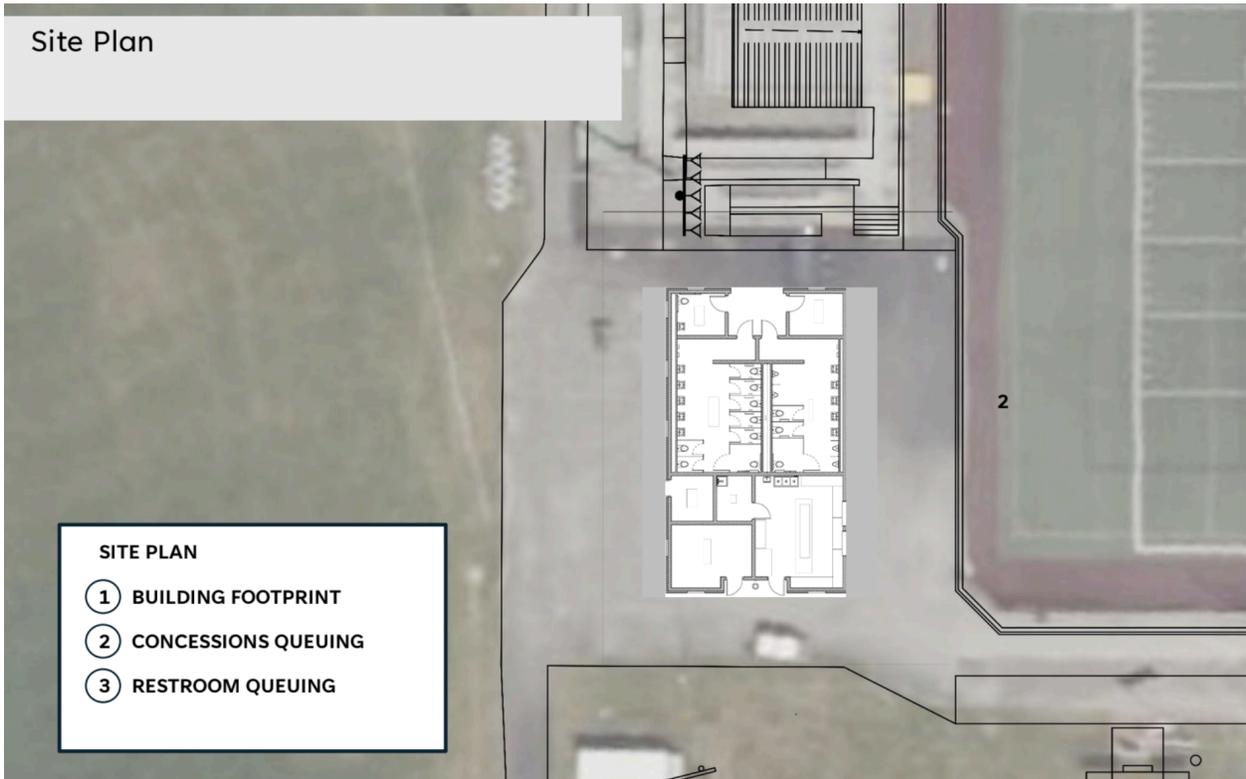
Recommended Plumbing Code Waiver
(sinks 2/3 of toilet count)

Toilets	Lavatories
no waiver	no waiver
	6
	5

PREVIOUS CODE REQUIRED TOTAL
Plumbing Code Waiver
(50% of Toilets)

Toilets	Lavatories
30	15
15	8
	5
	5

Site Plan



- SITE PLAN**
- ① BUILDING FOOTPRINT
 - ② CONCESSIONS QUEUING
 - ③ RESTROOM QUEUING



Color scheme will complement CCHS

Massing – Option 2

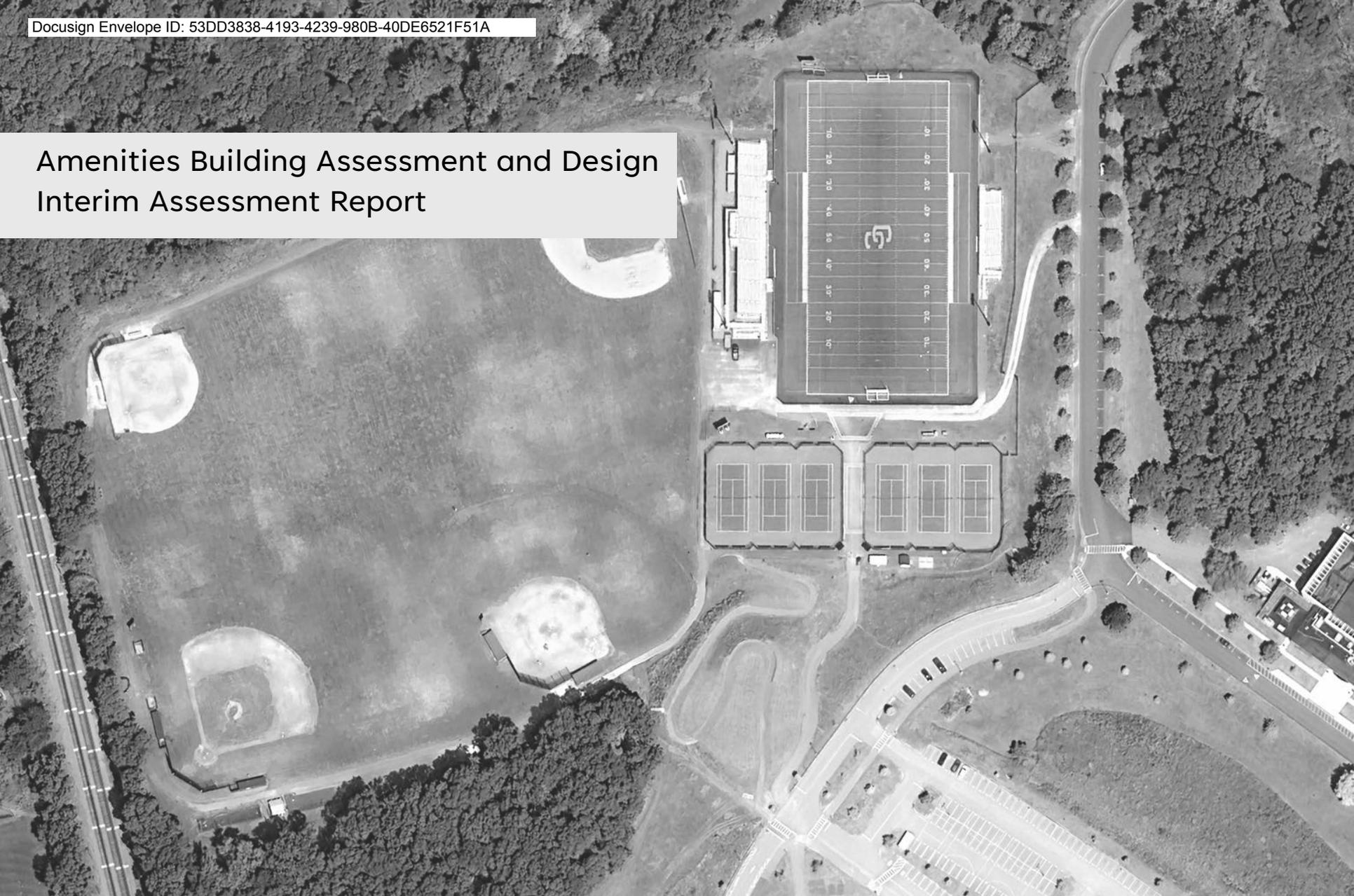


This is not exact but the general concept of the building structure.

Schedule

TODAY –DD Kick-Off.....	January 22, 2025
• Meet with CCRHS stakeholders to review the selected option	
• Confirm Program	
25% Construction Set.....	February 7, 2025
• Building Floor Plan	
• Preliminary Exterior Elevations/Massing	
• Preliminary Design Narrative	
Workshop 3 / 50% Construction Set.....	February 28, 2025
• Building Floor Plan	
• Building Elevations	
• Building Interior Elevations	
• Finish/Fixtures Schedules	
• One (1) 3-D rendered view	
50% Cost Estimate Review (virtual meeting).....	March 14, 2025
75% Construction Set.....	March 28, 2025
• Progress Construction Set	
• Draft Specifications	
Workshop 4 / 95% Construction Set.....	April 11, 2025
• Approval of Construction Set and Specifications	
• Establish Bid Schedule and coordinate Bidder’s Instructions/Front end Specs	
100% Final Construction / Bid Documents.....	April 25, 2025

Amenities Building Assessment and Design Interim Assessment Report



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Executive Summary

This report outlines considerations, recommendations, and alternative options for a stand-alone amenities building at the Concord-Carlisle Regional High School.

To meet the expressed program goals, the Gale team recommends that a version of Option 3 (traditional design, bid, build) procurement/construction method be used for realizing the building. There are still several decisions to be made within this overall Option, however we feel it balances the program, cost, and quality to provide the best long-term value.

Options 1A and 1B investigated skid-type trailer modular restrooms. While this option does present a lower cost, it does not provide a concession stand, and it presents challenges for meeting code for permanent restrooms.

Option 2 investigated a pre-fab modular approach to the building. Based on the information we gathered it does not provide a lower cost. Combined with the fact that this process presents some procurement and customization challenges it does not seem like there are any tangible advantages over one of the Option 3 approaches.

Prepared by:

Architecture



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Civil Engineering



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MEP Engineering



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Boston, MA 02111

The Site



Project Discovery

During the discovery phase of the project, the needs, goals, and desired outcomes were further defined by the District's building-based staff.

The previously completed feasibility study was used as the starting point of the discussion, from which the following goals were confirmed.

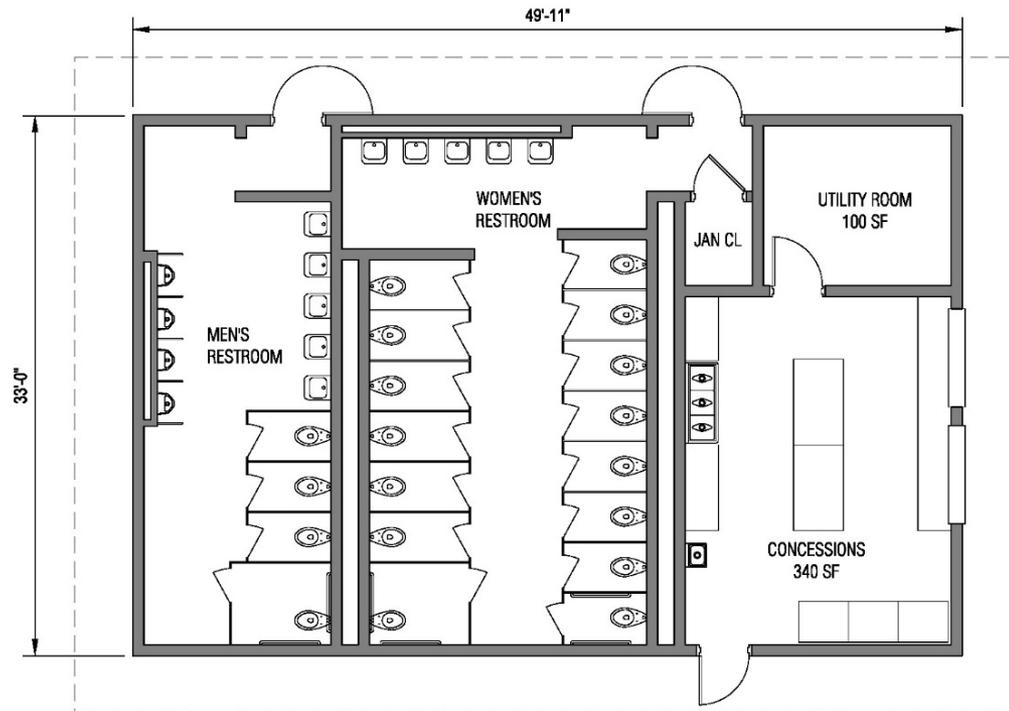
PROJECT GOALS:

- One option should be based on the schematic design developed during the feasibility study of the CCHS campus.
- All options to meet the definition of 'permanent restrooms' as required by MA building code and provide code-required number of restroom fixture counts.
- All options are to have code-required accessible restrooms.
- One option should test the possibility of a lower-cost alternative.

PREVIOUSLY COMPLETED FEASIBILITY STUDY

Floor Plan

Area: 1,650 SF



Code Changes/Requirements

Since the feasibility study was completed, an update to the Uniform MA State Plumbing Code (248 CMR 10.00) became effective on December 8, 2023, and compliance with the new Tenth Edition of the MA State Building Code (CMR 780) will be required for all permit applications received after January 1, 2025.

While most of the code updates do not have a significant impact on the design of the building, the updated Plumbing Code includes significant changes to the restroom fixture quantities required for this type of facility.

The previous version of the Plumbing Code required: 30 WC's and 9 sinks for women, 15 WC's (50% urinals allowed) and 9 sinks for men. Understanding that this requirement was excessive for a high school facility, MA Board of State Examiners of Plumbers and Gas Fitters typically would approve a 50% reduction waiver. This was the approach recommended in the study which resulted in the building being planned to have 15 WC's and 5 sinks for women, 8 WC's (50% urinals allowed) and 5 sinks for men.

The new Plumbing Code assigns different fixture count requirements based on the level of competition of the facility. This recognizes a reduced need for restrooms at the high school level and is consistent with previous waivers that the MA Board of State Examiners of Plumbers and Gas Fitters typically would approve.

One issue is that the sink count requirements were not reduced in the code update, however, we have received a waiver for reducing the sink count in another similar project under the new code and are recommending the same approach for this project.

The requirements and calculations for the required restrooms under the current Uniform MA State Plumbing Code (248 CMR 10.00), and our recommendation for pursuing a waiver for the quantity of sinks are on the following page.

Code Changes/Requirements

The total fixed-seat spectator capacity for Stadium Field is 1,800 people. For this capacity, the code requires; 9 WC's and 12 sinks for women, 7 WC's (67% urinals allowed) and 12 sinks for men. For WC's the building is sized to meet the code having 8 WC's for women, 1 WC single-user restroom, 3 WC's and 4 urinals for men.

The code requirement for more sinks than toilets has been recognized as a code issue through approval of recent waivers granting a reduction. The waiver proposed in this study is for a reduction to 5 sinks for women, 1 sink in single-user restroom, and 5 sinks for men. This puts the sink count at 2/3 of the toilet/urinal count, which is a more typical ratio.

CCHS Amenities Building - Fixture Count NEW CODE

Plumbing Fixture requirements

248 CMR 10 - Uniform State Plumbing Code

Mass. Register #1510, effective 12/8/2023)

Reference: 10.10 Table 1: Minimum Facilities for Building Occupancy		Toilets				Lavatories			
		Females		Males		Female		Male	
Secondary School		up to 300	1 per 60	up to 360	1 per 120	1 per 75	1 per 75	1 per 75	1 per 75
Outdoor Stadiums		over 300	1 per 150	over 360	1 per 150	1 per 75	1 per 75	1 per 75	1 per 75

Occupancy		Toilets						Lavatories			
		Females			Males* <small>up to 67% can be urinals</small>			Female		Male	
		CALCULATION	ROUND UP	CALCULATION	ROUND UP	CALC.	ROUND UP	CALC.	ROUND UP		
1800 Total											
900 Each Gender		300	5	360	3	12	12	12	12		
		600	4	540	3.6	12	12	12	12		
REQUIRED TOTALS		9			7		12		12		
Recommended Plumbing Code Waiver (sinks 2/3 of toilet count)		no waiver			no waiver		6		5		

Program Confirmation

Once the overall project goals, and code implications were reviewed, the team confirmed the building program needs. A base program was defined that included the minimum program spaces that all options should include. Additional program elements were identified that would be needed to meet the primary goals that were defined for the project.

BASE PROGRAM:

Women's Restroom: Compliant accessible restroom with code required number of fixtures modified by appropriate waiver request.

Men's Restroom: Compliant accessible restroom with code required number of fixtures modified by appropriate waiver request.

Single-User Restroom: Compliant accessible gender-neutral/family single fixture restroom. This restroom will count towards the code fixture count required for women.

Utility Rooms: Water service/electrical rooms as required.

FULL PROGRAM:

Outdoor Water Fountain: Compliant accessible water fountain/bottle filler.

Concessions: Warming kitchen to heat/serve/sell pre-prepared and packaged food and drinks

Options Tested

OPTION 1

Semi-Permanent, Skid pre-fab units



Portable and trailer restrooms were investigated, but these solutions do not meet the code requirement for permanent restrooms.

Skid pre-fab units, if mounted to a foundation and connected to a sanitary waste system are acceptable to the MA Plumbing Board as 'permanent' if the local building inspector gives approval. An accessible walkway/deck system will be needed, and screening can improve the aesthetics.

OPTION 2

Modular Construction



Modular construction would need to follow the alternate procurement process in M.G.L. c. 149, § 44E(4).

Modular construction can meet the program and code requirements of the project. For this delivery process, typically a GC acquires the permit, builds the foundation, slab, and makes the final utility connections. The modular building company builds, delivers, and places the building. There are some material choices and options that can be customized.

OPTION 3

Traditional design/bid/build



This option is based on the previously completed feasibility study, and can provide the full program needs, and be fully code compliant.

This option has the most design customization possible to meet the aesthetic needs of the project.

OPTION 1

Semi-Permanent, skid pre-fab units

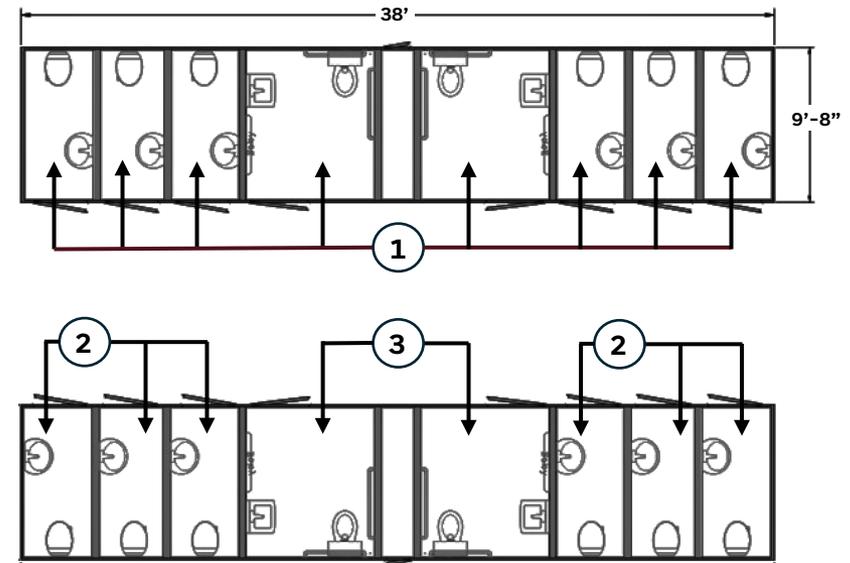
This option investigates the potential to have a lower cost than traditional construction but does have some trade-offs. Modular skid-type restroom units can be permanently mounted to a foundation.

For this study, the option does not include a concessions area. Concession trailers are common, but skid-type 'permanent' units would need to be custom manufactured, and present challenges in meeting the more stringent Health Department requirements for permanent food service kitchens. The team discussed that if this option moved forward, the current concessions would be continued with the option of bringing in a food truck for larger events.

To meet the restroom count, two eight (8) fixture units are recommended. These units each include two (2) accessible restrooms which could be designated as shown to meet the restroom count required for each gender.

Floor Plan

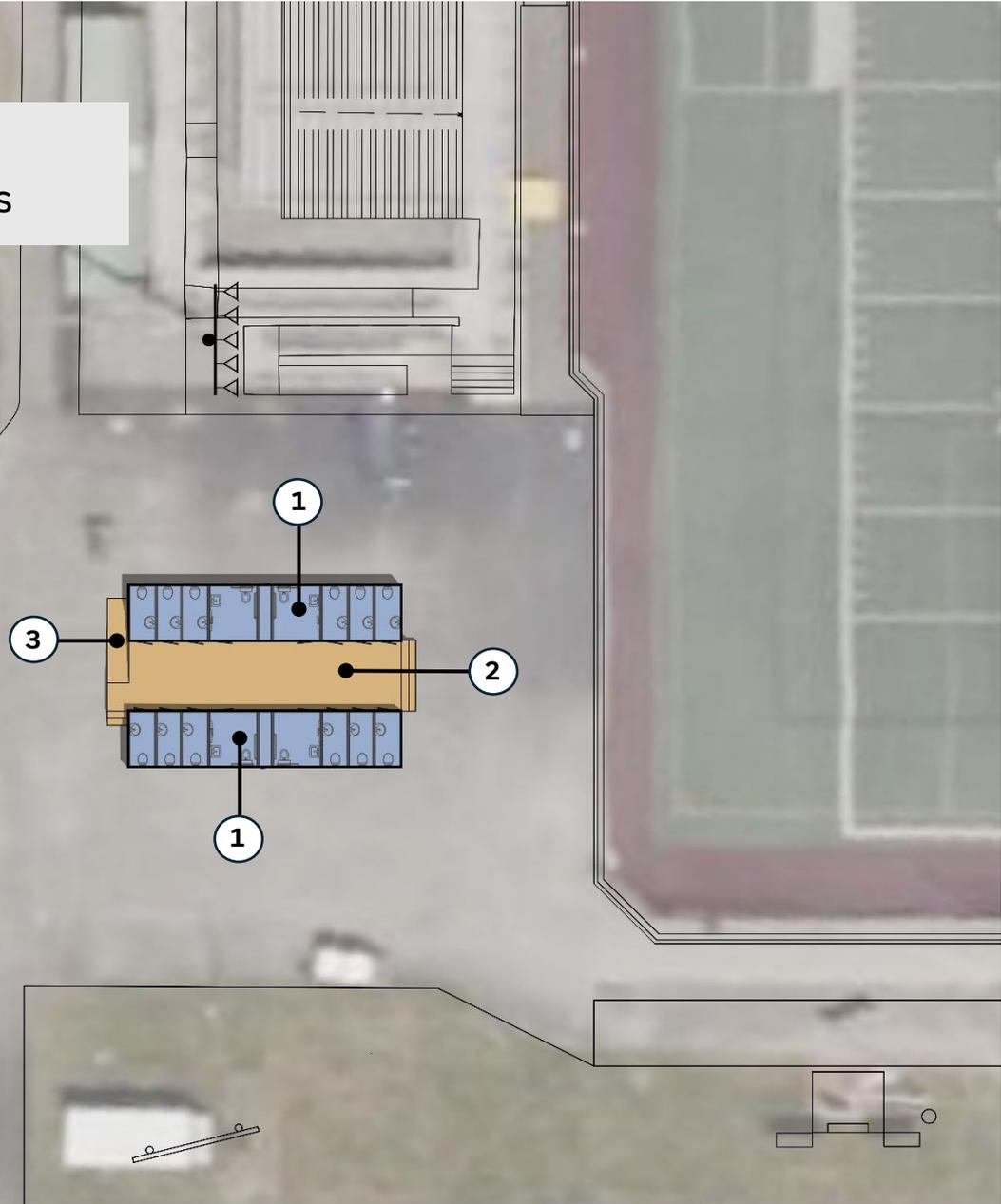
Interior Area: 754 SF



- ① WOMEN'S RESTROOM
- ② MEN'S RESTROOM
- ③ SINGLE-USER/FAMILY RESTROOM

OPTION 1

Semi-Permanent, skid pre-fab units



SITE PLAN

- ① RESTROOM SKID UNITS
- ② ELEVATED DECK/PATIO
- ③ RAMP

OPTION 1

Skid pre-fab units – on foundation

While the aesthetic look of this option presents a challenge, there are things that can be done to improve the design. These examples show some ideas of how these skid-type trailer units can be made to look more permanent.

OPTION 1A – Vinyl Wrap Graphics

- School branding could be used
- Ramp makes access feel more permanent

OPTION 1B – Deck and screen walls

- Use the need for an elevated walkway to bring natural materials
- Screen units to create a sense of place



Basic skid-unit (not on foundation)



Permanent foundation / vinyl wrap



Deck and wood screens

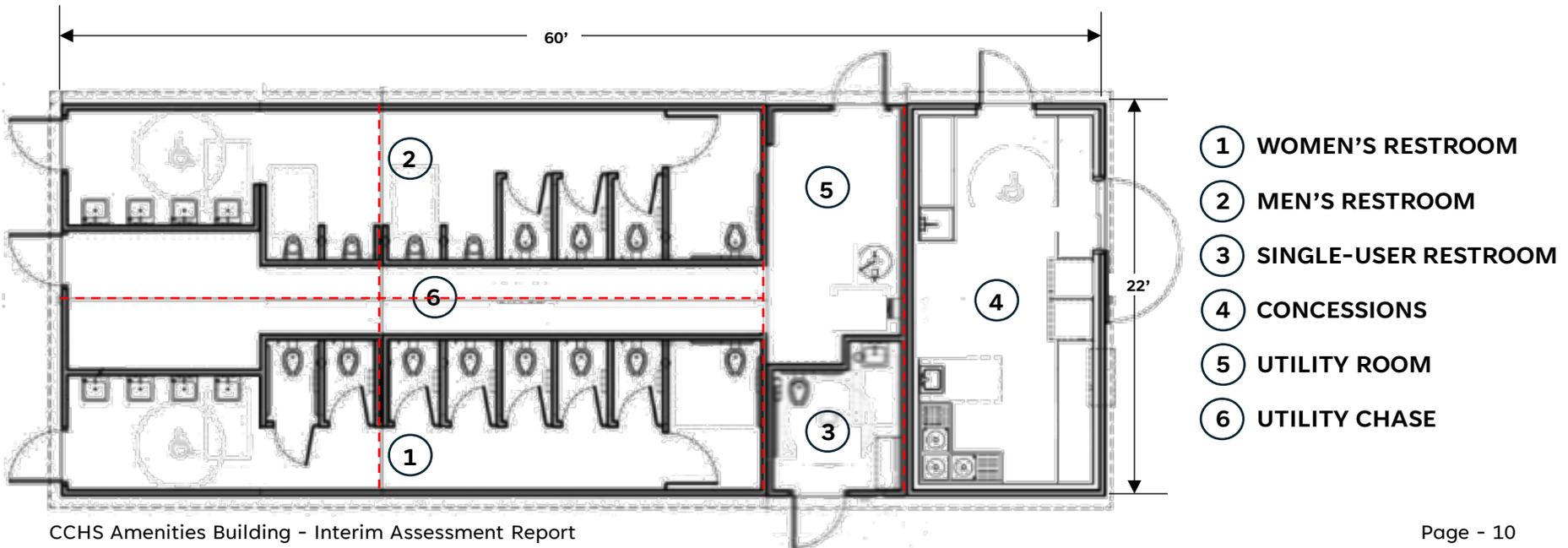
OPTION 2 Modular Construction

Modular construction is an option that can provide the full program. Depending on the manufacturer, this approach can be highly customized, however this will impact the cost. For this study, we assembled a floor plan based on standard units to provide the program at the lowest cost. The red dashed lines indicate each module. As stated earlier this approach would need to be procured under M.G.L. c. 149, § 44E(4). These procedures apply to

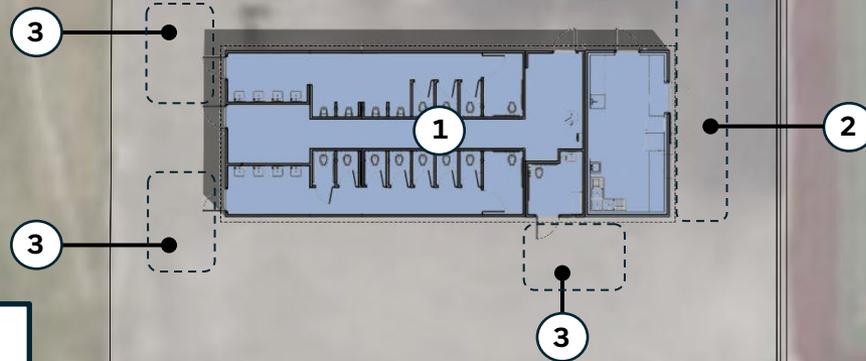
the acquisition and installation of modular buildings, including the solicitation and evaluation of proposals, the award of contracts, and the installation of modular units. Site preparation work, construction of foundations and attachment of modular buildings to utilities can be included as part of the modular building procurement or can be bid separately through the conventional construction bidding procedures.

Floor Plan

Interior Area: 1,320 SF



OPTION 2 Modular Construction



SITE PLAN

- ① MODULAR BUILDING
- ② CONCESSIONS QUEUING
- ③ RESTROOM QUEUING

OPTION 2 Modular Construction

The size and number of modules needed to achieve this project's program will likely impact the cost savings typically seen in this type of construction. In addition, the fixtures inside the building will need to be listed for use in Massachusetts, which also adds cost.

There are several customizations that can enhance the appearance over the standard modular building. While these customizations will also increase the cost, some examples have been provided for reference.

The cost range provided for Option 2 represents the cost range to be expected with the low-end representing a standard configuration and the upper range some level of customization. The manufacturer that assisted in providing costs noted that the pricing would need to be confirmed with the level of customizations that were requested.



Standard Concrete Block



Porch, some added materials/details



Porch, with additional added materials/detail

OPTION 3

Traditional design/bid/build

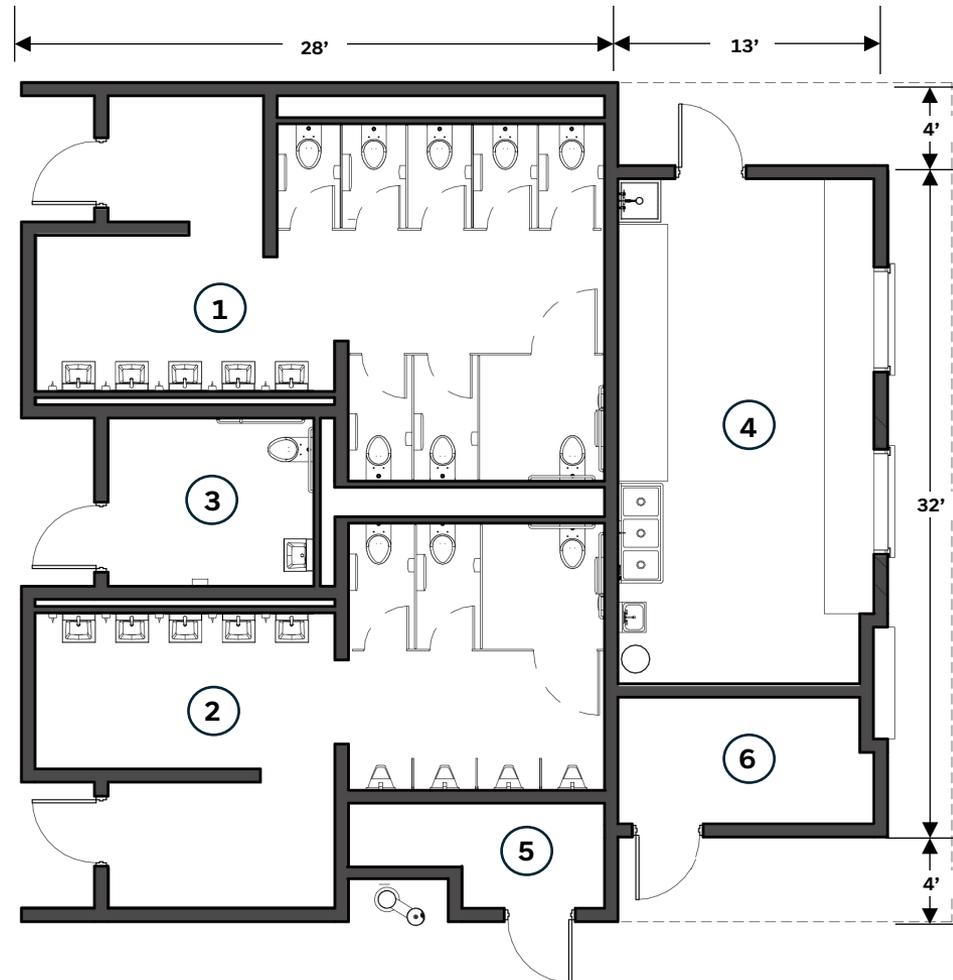
This design option modifies the feasibility study plan with the reduced number of plumbing fixtures per updated code. The program has not significantly changed. However, the updated configuration of the building creates better spectator access, allows views of the field from the concessions area, and provides ample space for service vehicle access around the perimeter.

- ① WOMEN'S RESTROOM
- ② MEN'S RESTROOM
- ③ SINGLE-USER RESTROOM
- ④ CONCESSIONS
- ⑤ WATER SERVICE ROOM
- ⑥ ELECTRICAL ROOM

TOTAL AREA: 1,450 GSF

Floor Plan

Interior Area: 1,450 SF

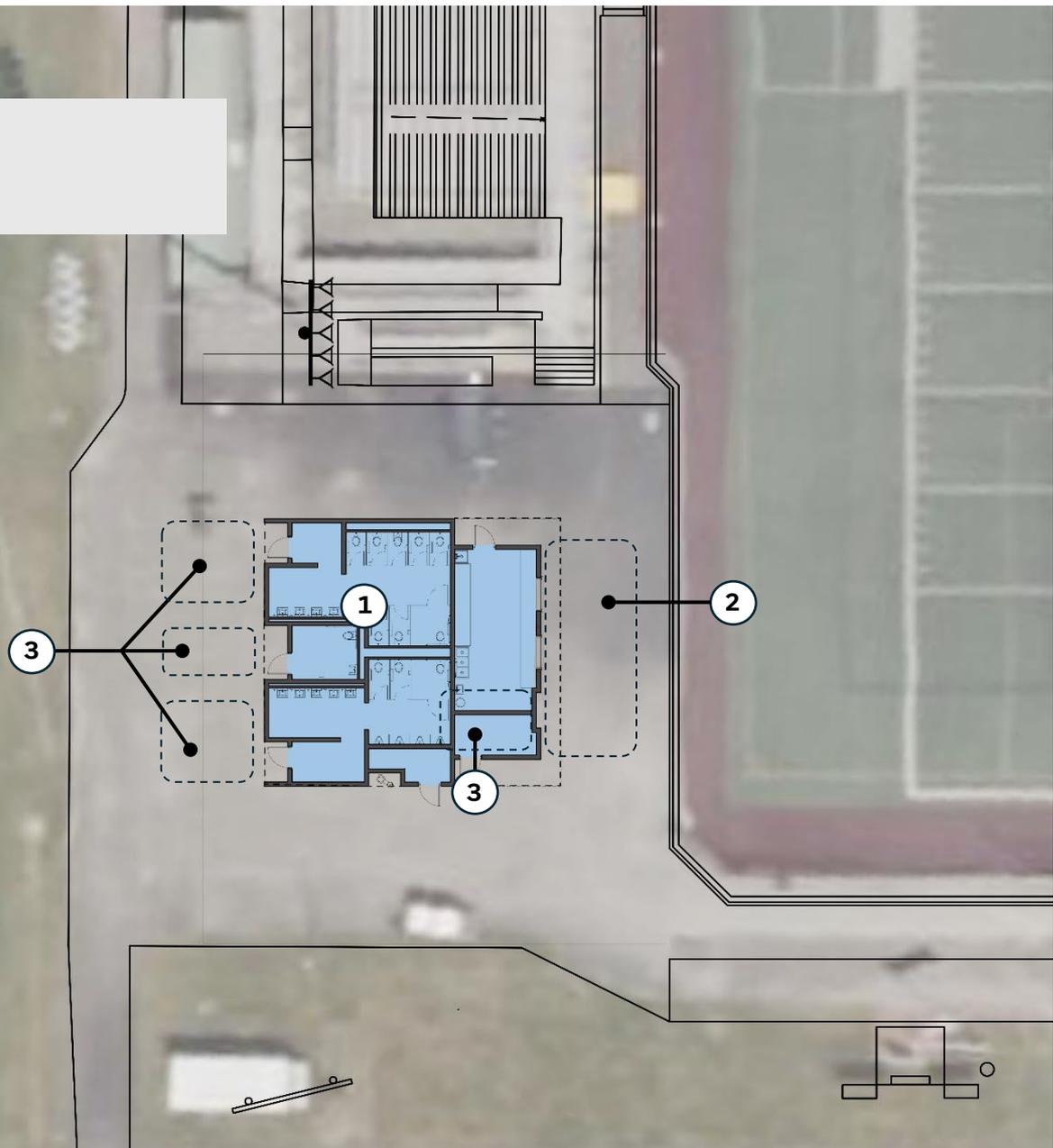


OPTION 3

Traditional design/bid/build

SITE PLAN

- ① BUILDING FOOTPRINT
- ② CONCESSIONS QUEUING
- ③ RESTROOM QUEUING



OPTION 3

Traditional design/bid/build

If this option is selected, the building look, materials and details will be developed and refined in the next design phase. As part of the interim study, the design team was asked to investigate the following alternates for Option 3.

OPTION 3A – Architectural Concrete Block, seasonal

- Single wythe concrete block walls
 - Decorative CMU exterior
 - Painted CMU interior
- Seasonal building
- Ventilation, no heat or AC

OPTION 3B – Wood Frame, seasonal

- Wood frame stud walls
 - Siding exterior
 - Tile / FRP panel /painted GWB interior
- Seasonal building
- Ventilation, no heat or AC

OPTION 3C – Wood Frame, year round

- Wood frame stud walls
 - Siding exterior
 - Tile / FRP panel /painted GWB interior
- Heat and AC – fully insulated (energy code)
 - **3C-1** Add Heating Only
 - **3C-2** Add Heating and Cooling



Architectural Concrete Block



Wood Frame / Siding



Wood Frame / Board + Batten

HVAC System Considerations

Seasonal Building:

The majority of secondary school amenities buildings are seasonal, designed with a plumbing system that can be drained and winterized. Late November games can be a challenge, however portable heaters are typically used to keep the building temperature from falling below freezing in late November.

Providing heat triggers the requirements of the stretch energy code. The primary challenge this presents is that it eliminates a single wythe CMU for the exterior wall. This simple system is commonly used due to its ability to provide a low-maintenance structure that can provide a durable interior and exterior wall finish in one system. The energy code's insulation requirements require a more complex wall system which increases the cost of these buildings. While heat certainly can make the building more comfortable, it is only needed for a short time during the outdoor sports season. Winterizing these buildings is still more energy efficient than conditioning year-round, even with the most efficient systems and thermal envelope.

In a seasonal building, a small heater is used to maintain 50°F in the water utility room. If conditioning the spaces is desired, and within the budget, CCHS can either provide heating alone or both heating and cooling as described here:

Seasonal Building:

- Exhaust ductwork from each space to a rooftop exhaust fan – 2,350 cfm.
- Louvers at each room to provide ventilation air and makeup the exhaust air.
- 3 kW unit heater for the utility room.
- Temporary space heaters can be used in November.
- Building drained down and winterized.

Add Heating Only:

- 2,350 cfm ERV with outside air and exhaust air ductwork to each space. Unit shall have a 50 kW heating coil.
- Supplemental 8 kW coil for the Concessions area.
- 3 kW unit heater for the utility room.
- Option to winterize or keep open.

Add Heating/Cooling:

- 2,350 cfm ERV with outside air and exhaust air ductwork to each space. Unit shall have a 35 kW heating coil.
- 3 kW unit heater for the utility room.
- 2 Ton Heat Pump type split unit for Concessions.
- 1.5 Ton Heat Pump type split unit for Men's Room.
- 1.5 Ton Heat Pump type split unit for Women's Room.
- Alternate to individual splits – 5 Ton Heat Pump type VRF system with 3 terminal units.
- Option to winterize or keep open.

Budgetary Cost Comparison



Option 1A:
Skid pre-fab units with graphics

Estimated Cost:
\$445,000 – \$534,000

Advantages:

- Lower cost
- Shorter schedule
- Small upcharge for heat/AC
- Simple to winterize

Disadvantages:

- Requires AHJ approval as ‘permanent bldg.’
- +/- 10-year life-span
- MA plumbing code requires customization
- Look and feel
- No Concessions stand
- Multiple procurements /contractors



Option 1B:
Skid pre-fab units with screening

Estimated Cost:
\$538,000 – \$646,000

Advantages:

- Lower cost
- Shorter schedule
- Small upcharge for heat/AC
- Simple to winterize
- Aesthetics can be improved through simple screening

Disadvantages:

- Requires AHJ approval as ‘permanent bldg.’
- +/- 10-year life-span
- MA plumbing code requires customization
- Look and feel
- No Concessions stand
- Multiple procurements /contractors



Option 2:
Modular Construction

Estimated Cost:
\$1,600,000 – \$1,900,000

Advantages:

- Provides full program
- Durability/Maintenance
- Duration of on-site construction shorter
- Many customization options

Disadvantages:

- MA plumbing code requires customization
- Multiple procurements /contractors
- Does not appear less expensive
- Long lead times possible
- Seasonal building (Thanksgiving game)



Option 3A:
CMU design/bid/build

Estimated Cost:
\$1,550,000 – \$1,850,000

Advantages:

- Provides full program
- Overall design flexibility/aesthetics
- Durability/Maintenance
- Single source GC procurement/responsibility
- All elements will meet MA code/school standards

Disadvantages:

- Longer on-site construction schedule
- Seasonal building (Thanksgiving game)
- Can feel utilitarian



Option 3B:
Frame design/bid/build

Estimated Cost:
\$1,420,000 – \$1,700,000

Advantages:

- Provides full program
- Overall design flexibility/aesthetics
- Less utilitarian feel
- Single source GC procurement/responsibility
- All elements will meet MA code/school standard

Disadvantages:

- Longer on-site construction schedule
- Seasonal building (Thanksgiving game)
- Less durable



Option 1A:
Skid pre-fab units with graphics

Estimated Cost:
\$445,000 - \$534,000

Advantages:

- Lower cost
- Shorter schedule
- Small upcharge for heat/AC
- Simple to winterize

Disadvantages:

- Requires AHJ approval as 'permanent bldg.'
- +/- 10 year life-span
- MA plumbing code requires customization
- Look and feel
- No Concession stand
- Multiple procurements /contractors



Option 1B:
Skid pre-fab units with screening

Estimated Cost:
\$538,000 - 646,000

Advantages:

- Lower cost
- Shorter schedule
- Small upcharge for heat/AC
- Simple to winterize
- Aesthetics can be improved through simple screening

Disadvantages:

- Requires AHJ approval as 'permanent bldg.'
- +/- 10 year life-span
- MA plumbing code requires customization
- Look and feel
- No Concession stand
- Multiple procurements /contractors



Option 2:
Modular Construction

Estimated Cost:
\$1,600,000 - \$1,900,000

Advantages:

- Provides full program
- Durability/Maintenance
- Duration of on-site construction shorter
- Many customization options

Disadvantages:

- MA plumbing code requires customization
- Multiple procurements /contractors
- Does not appear less expensive
- Long lead times possible
- Seasonal building (Thanksgiving game)



Option 3A:
CMU design/bid/build

Estimated Cost:
\$1,550,000 - \$1,850,000

Advantages:

- Provides full program
- Overall design flexibility/aesthetics
- Durability/Maintenance
- Single source GC procurement/responsibility
- All elements will meet MA code/school standards

Disadvantages:

- Longer on-site construction schedule
- Seasonal building (Thanksgiving game)
- Can feel utilitarian



Option 3B:
Frame design/bid/build

Estimated Cost:
\$1,450,000 - \$1,750,000

Advantages:

- Provides full program
- Overall design flexibility/aesthetics
- Less utilitarian feel
- Single source GC procurement/responsibility
- All elements will meet MA code/school standard

Disadvantages:

- Longer on-site construction schedule
- Seasonal building (Thanksgiving game)
- Less durable

3C-1 heating add:
+ \$55,000 - \$65,000
3C-2 heating/AC add:
+ \$90,000 - \$105,000

Draft Schedule Comparison

Option 1A: SKID/TRAILER RESTROOMS with graphics/branding		2024					2025								
		duration	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov
Foundation/site design - documentation	30 days														
Deck and screen design - documentation	30 days														
Bidding/foundation - Bidding/Procuring units	30 days														
Permitting	30 days														
Unit Manufacture worst case (lead time can vary significantly)	60-120 days														
Foundation Construction/utilities:	45 days														
Unit Delivery install (includes utility connections)	15 days														
Deck, ramp, stair construction	30 days														

Option 1B: SKID/TRAILER RESTROOMS with graphics/branding + screens		2024					2025								
		duration	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov
Foundation/site design - documentation	30 days														
Deck and screen design - documentation	30 days														
Bidding/foundation - Bidding/Procuring units	30 days														
Permitting	30 days														
Unit Manufacture worst case (lead time)	200 days														
Foundation Construction/utilities:	45 days														
Unit Delivery install (includes utility connections)	15 days														
Deck, ramp, stair, screen construction	45 days														

Option 2: MODULAR RESTROOMS		2024					2025								
		duration	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov
Bidding/Procurement Modular building Manufacturer	30 days														
Modular Building design customization	30 days														
Foundation/site design (owners engineers)	45 days														
Permitting	30 days														
Modular Building Manufacture (NTP + approved architectural submittal)	240 days														
Bidding: site/foundations contractor	30 days														
Foundation Construction/utilities	45 days														
Modular Delivery Install	15 days														
Final utility connections	15 days														

Option 3A + 3B: DESIGN/BID/BUILD CMU or frame w/ siding		2024					2025								
		duration	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov
Building/Site Design	90 days														
Bidding	30 days														
Permitting	30 days														
Construction	180 days														

Option 3C-1 + 3C-2: DESIGN/BID/BUILD frame w/ siding - heat, cooling		2024					2025								
		duration	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov
Building/Site Design	90 days														
Bidding	30 days														
Permitting	30 days														
Construction	210 days														

Composting Toilet Analysis

Under the Title 5 Regulations (310 CMR 15.000), MassDEP must approve an innovative/alternative septic-system technology before it can be used in Massachusetts. General Use systems must provide a level of environmental protection at least equivalent to that of a conventional on-site system designed in accordance with Title 5. Since a composting toilet is a plumbing fixture, the Board of Registration of Plumbers and Gas Fitters must also approve the units.

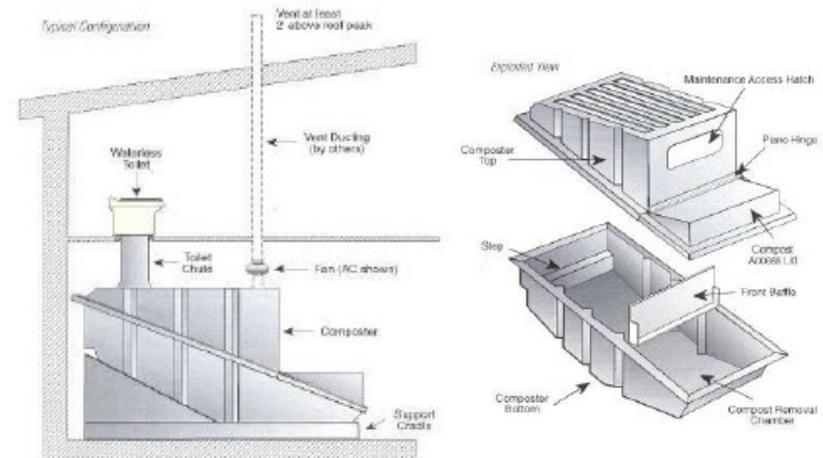
Based on our team's research and experience, the list of approved units only includes one system (Clivus Multrum) that would be appropriate for this application. Our team has experience with a successful installation of this system. However, it was only used on two second-floor toilets, due to the way in which the system works.

This system uses gravity to drain toilets to a tank below. The tank processes the waste, and the treated effluent is then pumped into the sanitary system. The tanks would require a full basement with an access bulkhead under the building to house the area needed for the tanks. The largest tanks available would likely only serve 2-3 toilets and have a footprint of 6'x9'.

The composting system is fairly low maintenance but additional building systems are needed to keep it operating efficiently. These include:

- A moistening system feeding the tanks
- Effluent removal pump system
- Dedicated ventilation system
- Fire suppression system (ABC dry chemical)

System diagram:



Composting Toilet Analysis

Budgetary Cost:

Additional cost for basement: \$90,000

Additional cost for composting system: \$190,000

Total estimated added cost: \$280,000



Basement for Composting Tanks



Campus Feasibility Study Concord Carlisle Regional High School Concord, Massachusetts

January 31, 2019

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- Appendix C - Permitted Impervious Area Plan
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- Appendix I - Conceptual Impervious Area Quantification

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SECTION 1.0 – BACKGROUND AND OBJECTIVES

Gale Associates, Inc. (Gale) is pleased to provide this site evaluation and feasibility report to the Concord Carlisle Regional School District (CCRSd). As outlined in our September 11, 2018 proposal response to the CCRSD's RFP, Gale was hired to complete an evaluation of the site that focused on the following areas:

- *Adding to and optimizing campus parking and circulation.*
- *Roadway, sidewalk, and lighting improvements from Walden street to Thoreau Street including repaving, repair/replacement of utility structures, replacement of granite curbing, sidewalks and new roadway lighting infrastructure.*
- *ADA Accessibility review of the site walkways and parking.*
- *A new irrigation well at the lower fields behind the bleachers to improve irrigation at the natural grass fields and for landscaping around the campus.*
- *Potential uses for the capped landfill area.*
- *Location and planning for a concession and restroom building at the stadium field.*
- *Consideration of an outdoor track and field, athletic field house/recreation building, indoor ice rink, outdoor learning spaces, garden/greenhouse space, shade structure/pavilion.*

The intent of this study is to provide the CCRSD with options for recommended improvements as well as preliminary cost estimates for initial planning purposes.

The evaluation process included coordination with the CCRSD, School Committee and various Town officials. A summary of various meetings and coordination efforts are outlined in Section 4.0.

SECTION 2.0 – SITE EVALUATION

Section 2.1 - Existing Conditions

Gale compiled an existing condition map of the site utilizing the construction drawings of the recently completed new High School which were provided to Gale by CCRSD, as well as record design drawings and as built plans from the recently completed athletic campus projects that were designed by Gale. The available record drawings were supplemented with aerial imagery from MassGIS and Google Earth. The mapping was completed to gain an understanding of the site as it relates to location, environmental constraints, and adjacencies and to provide a basemap for our initial site evaluation documentation. The information shown in the base plans are not adequate for detailed design and a survey will be required before proceeding with Construction Documents. Refer to Appendix A for Existing Conditions Plan and the Site Aerial Plan.



Section 2.2 – Access Road Pavement Evaluation

On October 24, 2018, Gale completed a site evaluation of the campus access road extending from Walden Street to Thoreau Street. The weather was raining with temperatures at approximately 45°F. The evaluation included visual observations as it relates to serviceability, maintenance, accessibility, standards conformity, and aesthetics. The observations generally included the assessment of pavement conditions, walkways, curbs, guardrails, signage, parking provisions, and pedestrian access. For the complete evaluation documentation, please refer to Appendix B for the Site Evaluation Key Plan and corresponding Photo Log. The following is a summary of our access road evaluation:

The lower access road is a two (2) way road that provides access to the campus, extending nearly 2,330 feet from Walden Street to Thoreau Street. At the entrance at Thoreau Street, the apron is in poor condition with cracks and patches throughout the extent of the apron (Photo 17). The electrical boxes at this entrance are unsightly and are not screened. At the Walden Street Entrance, there was significant ponding and the bituminous curbing at the edge of road is damaged, cracked and/or uneven (Photo 29, 30). Generally, the entire length of the lower access road has alligator cracks, patches, and potholes, suggesting that the pavement tensile strength is failing and there may be a substandard base material. Note that Gale did not perform pavement test cuts or soil testing as part of this evaluation. Test cuts and soil testing is recommended prior to proceeding with engineering design. The lower access road also has a sidewalk that extends along the entire length from the Walden Street Entrance to the Thoreau Street Entrance. The sidewalk and curbing are cracked and in



need of replacement (Photos 9, 11, 13, 14, 16). The lower access road is also the only location on site that has not upgraded the site lighting to include new poles and LED fixtures.

Recommendations:

The lower access road is in generally poor condition and Gale recommends the following:

- Full depth pulverization and reclamation of pavement (3” – 5” existing pavement)
- Remove curbing
- Remove old light poles and fixtures
- Protect and reuse newer granite curbing along detention pond
- Install additional aggregate base to supplement and blend with reclaimed material
- Regrade subbase
- Install new 2 ½” binder and 1 ½” top course of pavement
- Install new speedbumps
- Remove curbing and sidewalk along entire length of drive, except for the areas directly in front of the Beede Center
- Replace sidewalk with new paved sidewalks.
- Clean and jet wash drainage system
- Install new conduit and electric service along roadway and install LED light fixtures spaced every 100 feet

Section 2.3 – Impervious Area Quantification

We understand that the Concord Groundwater Conservancy District allows, by right 15 percent impervious cover over the entire parcel, which may govern and limit future development within the site. However, the former high school site consisted of 22 percent impervious cover and the new high school site was permitted to have approximately 19 percent impervious cover. Based on Gale’s compiled base mapping, we have estimated the existing impervious area to be 20.2 percent. See the following calculation and related mapping in Appendix C.

Impervious Area Calculations:

Total Parcel Area (SF)	4,114,474
Concord Bylaw Allowed Impervious	15%

	Impervious (SF)	Impervious (ac)	Impervious (%)
Permitted July 9, 2012*	778,842	17.88	18.93%
Existing November 29, 2018*	832,298	19.11	20.23%

**Note that the old parking lot under the landfill counts as impervious. This is discussed further in Section 2.4*



Based on our conversations with CCRSD and the Town of Concord, we understand that the addition of any further impervious area would need to be permitted through the planning and zoning board. Impervious area coverage is discussed further in Section 3.0 of this report.

Section 2.4 – Landfill Limitations

The school campus includes a closed and capped ash landfill located within the northeast portion of the campus property. The capped landfill is an approximate 4.13-acre area located to the south side of the CCRHS access drive. In 1959, a parking lot was constructed on the landfill. When the new high school was constructed, this parking lot was covered. The parking lot remains below the existing grade and is considered a part of the landfill cap.

The CCRSD requested Gale to evaluate potential uses for the capped ash landfill area, which is limited to the following:

1. Paved parking lot
2. Natural turf athletic/practice fields
3. Outdoor track and natural turf field
4. Building/Structural Expansion (i.e. athletic field house, ice rink, etc.)

Nobis Engineering Inc., the Geotechnical and Environmental Consultant, reviewed available historical documents and drawings as well as the Notice of Activity Use and Limitation (AUL), which is enclosed in Appendix D. Based on their review, all options were generally acceptable uses for the landfill area; however, they offered the following recommendations for each of the proposed uses:

Parking Lot	<ul style="list-style-type: none"> • Settlement may be observed • Drainage systems can be incorporated but subsurface infiltration systems will not be permitted within the limits of the AUL
Natural Turf Fields	<ul style="list-style-type: none"> • Settlement may be observed, minor grading/filling of depressions may be required periodically • A Licensed Site Professional (LSP) will need to be consulted should an irrigation system be desired within the AUL
Track & Natural Turf Fields	<ul style="list-style-type: none"> • A track is more sensitive to differential settlement and may require additional design measures to help improve long term performance and limit settlement.
Building/Structural Expansion	<ul style="list-style-type: none"> • Landfill is subject to expansion and settlement which is difficult to estimate; however, it would likely be greater than 1 inch which exceeds typical building tolerances. The structure would require specialty foundations which would result in premium costs. • MADEP prefers to limit building construction over the waste material due to the potential risk factors, exposure limits and general environmental concerns associated with the student population.



All options will need to be designed to maintain the landfill's minimum cap/cover thickness to protect potential exposure to impacted soil and meet the design requirements defined by the AUL/MADEP. Impacted soils due to drainage structures, light pole foundations, etc. needs to remain within the limits of the AUL or disposed of properly off site. The complete Preliminary Geotechnical Engineering report is enclosed within Appendix D.

Section 2.5 – Site Irrigation

Gale's consultant, Irrigation Consulting, Inc. prepared an overview of site irrigation needs, and site hydrology which is included in Appendix E. The information was compiled to assess the feasibility of constructing a new well to supplement the existing well at the lower baseball fields and irrigate the landscaped areas around the perimeter of the high school. The report for Irrigation Consulting is summarized below:

- The peak irrigation demand occurs in July.
- The CCRHS site requires 229,943 gallons in the month of July for the proposed irrigated areas, which would require a well yielding 26 gallons per minute (GPM).
- There are (3) three wells located on the CCRHS site. Two (2) are shallow observation wells and the third is a 42-ft. deep sand and gravel well yielding 75 GPM from a pump placed 24-feet below ground surface.
- The site is located with a Massachusetts Zone II groundwater protection district (GWPD). Water withdrawals are regulated through the Massachusetts Water Management Act (WMA) which states that groundwater withdrawals over a consecutive 90-day period cannot exceed 9,000,000 gallons. The anticipated total groundwater withdrawal from irrigation wells on the site should not exceed this threshold and therefore will not trigger a WMA permit.
- The Eastern portion of the site is underlain by medium yield aquifer, which is within the GWPD. Based on the requirement of 26 gallons per minute to irrigate the landscaping at the school. It is likely that the required yield will be achieved.
- If the Town does not allow construction of a well within the Groundwater Protection District, the other location would be within deep bedrock outside of the Zone II boundary. We recommend a fracture trace analysis for the site to identify any prospective drilling locations.

Section 2.6 – Amenities Building

In 2015 a new multipurpose synthetic turf field was constructed at CCRHS. It also included the construction of an 1,800-seat grandstand. When permanent grandstands are constructed, the Massachusetts Building Code requires that permanent bathroom facilities be installed within 500 feet of the grandstands. Per the Massachusetts State Plumbing Code and assuming a waiver for a 50 percent reduction, which is typically granted by the plumbing board. There are 15 toilets required for women, and 4 toilets and 4 urinals required for men. Please refer to the table below for the calculations and code references. The amenities building also contains a family restroom, a concessions room, a utility room and a janitor's closet. The building floor plan proposed for the amenities building was prepared by Gale's architectural consultant, S3 Design, and is enclosed in Appendix G.



Concord-Carlise High School						
Plumbing Fixture requirements						
248 CMR 10 - Uniform State Plumbing Code						
		Toilets			Urinals	Lavatories
Building Classification	Use Group	Females		Males	Males	Each Gender
Stadiums	A-5	1 per 30		1 per 60	50%	1 per 100
Occupancy						
	1800 Total					
	900 Each Gender	30		15	7	9 each
		Females		Males		
		Required	50 % reduction	Required	50 % reduction	
	Toilets	30	15	8	4	
	Urinals			7	4	
	Sinks	9	5	9	5	

Section 2.7 – Other Proposed Structures

Gale was also asked to consider the feasibility of constructing an ice arena on site. Gale determined that the only location that a building of this magnitude could fit on the property would be within the limits of the landfill. There were two (2) buildings with ice arenas proposed:

- A 51,000SF fieldhouse that includes a full sheet of ice, a multipurpose court, locker rooms and all the building support spaces required to run an ice rink.
- A 55,000 SF ice arena that includes two (2) full sheets of ice, team locker rooms and support spaces for the ice rink.

Please refer to Section 2.4 regarding the limitations of the landfill in regard to structures. Building descriptions and floor plans are included within Appendix G.

SECTION 3.0 CONCEPTUAL OPTIONS

Following our site evaluation and coordination with the CCRSD, Gale proposed three (3) conceptual options for site improvements, A, B and C. Site layout plans for each option are enclosed in Appendix F.

Below is a summary of the options including a description of the proposed scope and the total approximate resulting impervious area on site, assuming all scope options will be constructed at some point. Conceptual plans showing the scope, floor plans of the buildings and building descriptions are enclosed in Appendix G. Itemized quantifications of impervious area for each option are also enclosed in Appendix I. Each concept plan shown contains greater than existing impervious cover but less than the 22 percent impervious at the “old” school.



Option	Description	Total Impervious Area
A	Option A includes the renovation of the access drive, a 115' radius 6 lane track with an 8-lane straightaway, the construction of an 1800SF amenities building and a 104-space parking lot. This option also requires relocating the skatepark to another location on campus. A new irrigation well and irrigation of the lower fields and green space around school perimeter is also included with this option.	21.99%
B	Option B includes the renovation of the access drive, the construction of an amenities building, one (1) sheet of ice rink with multipurpose fieldhouse and an 80-space parking lot. This option maintains the skatepark in its existing location on campus. A new irrigation well and irrigation of green space around school perimeter is also included with this option.	20.92%
C	Option C includes the renovation of the access drive, the construction of an amenities building, an ice arena with two (2) sheets of ice and an 80-space parking lot. This option maintains the skatepark in its existing location on campus. A new irrigation well and irrigation of green space around school perimeter is also included with this option.	21.04%

Below is the preliminary cost estimate for each individual scope item included in the various options. A more detailed itemized cost estimate for each of the scope options is enclosed in Appendix H. These estimates include soft costs for engineering and a 15 percent contingency due to this being the conceptual, pre-design phase. It should be noted that the cost estimates provided are based on our experience with previous similar projects, they are not based on engineering design documents and could be subject to change upon final design.

Scope Options		Cost
1	Access Road Reconstruction (Included in Option A, B, C)	\$ 1,224,812.92
2	Amenities Building (Included in Option A, B, C)	\$ 1,297,927.26
3	6/8 Lane Track with Natural Turf Field (Included in Option A)	\$ 1,981,082.86
4a	Parking Lot- 104 Space Lot (Included in Option A)	\$ 790,903.30
4b	Parking Lot- 80 Space Lot (Included in Options B, C)	\$ 627,652.52
5	Site Irrigation (Included in Options A, B, C)	\$ 295,377.50
6	Field House (1 sheet of ice and field house,Included in Option B)	\$ 22,245,489.89
7	Field House (2 sheets of ice, Included in Option C)	\$ 25,930,216.68
8	Outdoor Learning Center	\$ 316,250.00



SECTION 4.0 SUMMARY

Section 4.1 Project Meeting Summaries

October 16, 2018 – Meeting with Town Departments, 11:00 a.m.

Attendees: Gale Associates, S3 Design, VAD Engineering, Nobis Engineering, Irrigation Consultants, Inc., Representatives from the Concord Water/Sewer, Concord Public Works, Planning Board, Natural Resources Committee, and Building Commissioner were all in attendance.

Gale and the CCRSD met with representatives from the above referenced Town Departments to gain a general understanding of site restrictions and specific concerns that each department may have. The following was noted:

- There are wastewater treatment capacity challenges, Town wide. Any additional flow that is generated from the athletic field amenities building will need to be further vetted through the Department of Public Works. It was discussed that a dedicated septic system is technically allowed but this would not be ideal for seasonal use.
- There is a public drinking water well in close proximity to the high school. Any new irrigation well will need to consider its proximity to the drinking water well as the Town is concerned about drawing water away from the public drinking source.
- Any new parking areas must have a strong snow management plan, with specific consideration to requirements within the Zone II aquifer supply.
- Any increase in impervious area would require an amended Special Permit and we would need to demonstrate that the increase is not “substantially detrimental to the neighborhood” and has no impact to the Town water supply.
- The Zoning Board representative recommended looking further into the school’s parking needs as the Town’s comprehensive plan focuses on sustainability, which includes reducing parking. CCRSD stated that parking is a considerable challenge at the high school.

October 16, 2018 – Meeting with School Subcommittee, 1:00 p.m.

Gale and the CCRSD School Subcommittee met to discuss the evaluation goals and initial ideas for site improvements. The following was noted:

- It was stated by CCRSD that parking is a challenge on site. The old high school had more parking and students could park anywhere they wanted. Now, with the new school, there are fewer parking spaces. Currently only seniors are permitted to park on site and visitor parking is limited to 12 parking stalls. CCRSD stated that parking creates a lot of stress on students who need to have a vehicle on campus due to sports or other extracurricular activities. Occasionally, students will come to school early in the morning to get a parking space and rest in their vehicles until school starts.



- The athletic field amenities building should be designed with the minimal number of restrooms required by code, taking into account a 50% reduction which is typically allowed by the State Plumbing Board. CCRSD desires to limit the building generally to restrooms and concessions only.
- CCRSD is interested in determining if a sports field house is feasible. Initial ideas include a building with multipurpose flooring for squash courts, basketball courts, a small indoor track, etc. Another initial idea is a skating rink with one (1) or two (2) sheets of ice, or a combination of a skating rink with a field house.

November 20, 2018 - CCRSD School Subcommittee Progress Update 2:00 p.m.

Gale provided an update on the feasibility study including the completion of the roadway and site evaluation, preliminary site layout options, building options, irrigation options and a schedule update. The following was noted:

- Gale presented a layout with a 90' radius track within the landfill area. A 90' radius track would make for a more narrow than ideal playing field. Gale stated that the track geometry is limited due to the presence of the skate park. CCRSD stated that the skate park could be relocated to another location on site in order to create more ideal track and field geometry.
- CCRSD would like to consider a family/gender neutral restroom at the athletic field amenities building.
- Gale will check the current impervious area of the high school site.
- Gale will modify the track and parking lot layout and attempt to make more efficient use of the existing impervious area (old buried parking lot) that exists within the landfill area.
- CCRSD stated that their main priorities for the site are; reconstruction of the entrance road with lighting, increased parking, restroom/concessions amenities building at the athletic field, running track and irrigation of the lower fields and green spaces around the school. It was determined that the field house and skating rink buildings are not top priorities but CCRSD would still like to investigate their feasibility.
- CCRSD requested that Gale prepare initial cost estimates by December 11, 2018 and attend their upcoming meetings on December 11, 2018 and December 18, 2018.

December 11, 2018 - Concord-Carlisle Joint School Committee Meeting, 6:30 PM

Gale reviewed the three (3) conceptual site layouts identified in Section 3.0 and the building layouts specific to each, which are included in Appendix G, and also provided conceptual cost estimates. Each site layout presented also included resulting impervious area calculations. CCRSD requested Gale to refine the preliminary cost estimates and to add an estimate for engineering soft costs.



December 18, 2018 - Concord-Carlisle Joint School Committee Meeting

Gale presented updated preliminary cost estimates and the layout options as requested during the December 11, 2018 meeting, refer to Appendix H of this report for the final preliminary cost estimates. The School Committee discussed all proposed options for site improvements and ultimately decided to focus on the access road reconstruction and additional parking as the main priorities for immediate site improvements. Other improvements, such as the athletic field amenities building and running track will be considered as a future phase. The Committee voted to bring a warrant article request of \$2,000,000 to the Town Meeting for the roadway and parking lot improvements.

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