



154 TURNPIKE ROAD SUITE 200, SOUTHBOROUGH MA 01772
WWW.CRCFIRE.COM

Burlington High School Accessibility Survey

July 30, 2021

Prepared for:
CBI Consulting
250 Dorchester Avenue
Boston, MA 02127

Prepared By:
Code Red Consultants
154 Turnpike Road, Suite 200
Southborough, MA 01772

A handwritten signature in blue ink, appearing to read "Anna Correia".

Anna Correia

A handwritten signature in blue ink, appearing to read "Paul J. Moan".

Paul J. Moan, P.E.

Table of Contents

1. Project Summary	3
2. Facility Description.....	4
3. Architectural Access Board Compliance Triggers.....	5
4. Americans with Disabilities Act Accessibility Guidelines	6
5. Variances	7
6. Survey Findings.....	8
6.1 General Items.....	8
6.2 Accessible Route.....	8
6.3 Parking.....	9
6.4 Exterior Route.....	11
6.5 Entrances	12
6.6 Doors and Doorways.....	13
6.7 Stairs.....	13
6.8 Elevators	14
6.9 Classrooms	14
6.9.1 Physics Room and Art Spaces	15
6.9.2 Choir Room, Band Room, and Lecture Hall.....	16
6.10 Auditorium	16
6.11 Cafeteria	18
6.12 Library	19
6.13 Health Examination Rooms.....	20
6.14 Toilet Rooms	20
6.15 Locker Rooms	22
6.16 Ramps	23
6.17 Alarms	23
6.18 Signage.....	24
Appendix A - Building Layout Plans	26
Appendix B - Deficiency Plans	27
Appendix C - Deficiency List.....	28

1. Project Summary

CBI Consulting retained Code Red Consultants to perform an accessibility assessment of Burlington High School in Burlington, MA. The assessment included evaluating all public portions of the building in accordance with 521 CMR, *Massachusetts Architectural Access Board*.

The accessibility study has been undertaken to prepare for a comprehensive mechanical, electrical, and plumbing update project planned at the school. The cost of this project is expected to exceed 30% of the full and fair cash value of the building, and as such all public portions of the building are required to comply with the requirements of 521 CMR (521 CMR 3.3.2).

The scope of the accessibility survey included a non-destructive visual inspection to identify deficiencies with existing public portions of the building. This report includes the following:

- Facility Description
- Deficiency Plans & List
- Deficiency Photographs
- Explanatory material on specific deficiencies that require a more detailed explanation.

The survey was conducted on June 16, 2021 by Paul Moan, P.E., Lea Dighello, and Anna Correia and June 29, 2021 by Lea Dighello, Caitlin Gamache, P.E., Matthew Nicastro, Matthew Penkala, and Jake Smith of Code Red Consultants (CRC).

The survey included a comprehensive field review of existing-to-remain conditions as they relate to the requirements of 521 CMR. The survey and report include major accessibility features and does not detail items such as outlet locations, thermostat control heights, door force requirements, fire alarm devices, etc.

2. Facility Description

Burlington High School is an existing 3-story building with an aggregate area of approximately 414,500 square feet and a maximum footprint of approximately 245,600 square feet. Building uses include a cafeteria, gymnasiums, auditorium, computer labs, library, classrooms, and non-public staff offices and lounges. There is also a daycare within the building and two playground areas outside the building.



FIGURE 1: EXISTING BUILDING

Annotated floor plans illustrating the different functional areas of the building are provided for explanatory purposes in Appendix A.

3. Architectural Access Board Compliance Triggers

The requirements of 521 CMR are limited to buildings or portions thereof that are open to the public. Employee-only spaces are exempt from these requirements.

521 CMR Section 3.3 contains the following scoping requirements for projects in existing buildings. The costs referred to in the scoping requirements below are cumulative for all projects to the building within a rolling 36-month period and are the cost recoded on permits:

1. If the work is less than \$100,000, then only the work being performed is required to comply with 521 CMR.
2. If the work costs more than \$100,000 but is less than 30% of the full and fair cash value of the building then in addition to the work being performed, the following accessible features are also required to be provided in the building:
 - a. Accessible entrance
 - b. Accessible toilet room
 - c. Accessible drinking fountain
 - d. Accessible public telephone (if provided)
3. If the work costs more than 30% of the full and fair cash value of the building, then all public portions of the building are subject to the requirements of 521 CMR.

The assessed building value is \$54,073,200¹, as shown on the Town of Burlington Assessor's website. The Massachusetts Department of Revenue has assigned Burlington an assessment ratio of 0.94². Thus, 30% of the full and fair cash value is $\$54,073,200 / 0.94 \times 30\% = \$17,257,404$. While the total cost of the proposed project is still in the process of being determined, it is expected that the cost of the project will exceed this 30% value.

¹ <http://burlington.patriotproperties.com/Summary.asp?AccountNumber=5740>

² <https://dls.gateway.dor.state.ma.us/gateway/DLSPublic/LA19>

4. Americans with Disabilities Act Accessibility Guidelines

Additionally, although not enforced by any authority having jurisdiction on the project, the requirements of ADA are also applicable and enforced through civil litigation only.

The Americans with Disabilities Act Accessibility Guidelines (ADAAG) requires that altered portions of an existing building must be readily accessible to and usable by individuals with disabilities to the maximum extent feasible (ADAAG 36.402(a)(1)). Further, alterations to primary function areas should be made such that the level of accessibility, including the path of travel to the space, is made accessible to the maximum extent feasible. When determining if the upgrade is feasible, the ADAAG requirements state that the upgrade to the path of travel is disproportionate to the project when the cost to perform the work exceeds 20% of the cost of the alteration to the primary function area.

In choosing which accessible elements to provide if the cost is disproportionate, priority should be given to those elements that will provide the greatest access, in the following order:

1. An accessible entrance
2. An accessible route to the altered area
3. At least one accessible restroom for each sex or a single unisex restroom
4. Accessible drinking fountains
5. Accessible telephones

When possible, additional accessible elements such as parking, storage, and alarms should be addressed if within the disproportionality criteria. It is understood that the improvements required via the AAB 30% FFCV trigger would likely account for the ADA requirement to remove barriers via 20% of the construction cost.

5. Variances

521 CMR permits projects to submit variance requests in order to receive a modification or substitution for the requirements of 521 CMR.

A variance request must demonstrate that compliance with 521 CMR is “impracticable”. Impracticable is defined as:

- *Compliance with 521 CMR would be technologically unfeasible; or*
- *Compliance with 521 CMR would result in excessive and unreasonable costs without any substantial benefit to persons with disabilities.*

There may be variance opportunities for the building based on future design teams demonstrating that compliance with 521 CMR would be impracticable. In general, demonstrating impracticability minimally requires planning studies with cost estimates to understand the potential loss of program, structural hardships and financial infeasibilities.

While 521 CMR permits the variance process, there is no variance process to ADA. ADA is a civil law and renovations are required remove barriers unless proven to be disproportionate.

6. Survey Findings

The following chapter provides a general description of the major function areas and systems within the building that were reviewed as part of the full building accessibility review. The survey was limited to public portions of the building. Non-public areas are identified on the plans in Appendix A.

Specific observed deficiencies are identified by number on the plans (Appendix B), deficiency description and recommended corrective action (Appendix C).

6.1 General Items

Throughout the building, there are numerous instances of inaccessible lockers and check-out/information counters. Most of the student lockers provided an upper compartment that is located above the 48-inch reach range as well as combination locks that require tight pinching which is noncompliant. Lockers are required to be within reach ranges specified in 521 CMR 6.5 and 6.6 and the controls are required to be compliant with 521 CMR 39.00

Check-out and information counters are required to provide a section of counter that is located at a maximum height of 36 inches above the floor and have a width of at least 36 inches (521 CMR 7.2.2).

Specific deficiencies have been noted in the Appendices.



FIGURE 2: LOCKER DEFICIENCIES

6.2 Accessible Route

The accessible route is required to provide a continuous unobstructed path connecting all accessible spaces and elements inside and outside a facility. While there generally was a route

connecting most pieces of the exterior, there were several occurrences of running and cross slope deficiencies as well as some uneven terrain and noncompliant steps.

Accessible routes are generally provided within each floor of the building, but fire extinguishers protrude more than 4 inches into the hallway. Objects protruding from walls with their leading edges between 27 and 80 inches are limited to 4" projections (521 CMR 20.6.1).



FIGURE 3: FIRE EXTINGUISHER PROJECTION

Adjacent to the open stairs which lead to the several gyms, both the stair run and the landing above provide less than adequate head room for occupants. Headroom is required to provide 80" of clear space. Where the headroom is reduced, a barrier (i.e. cane detection) is required to be provided to warn blind or visually impaired persons of the reduced headroom. Under the stair run, a railing or bench seating or the like could serve as this barrier. Options for alleviating the inadequate headroom at the stair landing should be explored as this is along an egress path.



FIGURE 4: STAIR HEADROOM REDUCTION MISSING CANE DETECTION

6.3 Parking

The number of accessible spots is required to comply with 521 CMR Chapter 23.2.1. The total number of spots within the parking lot was not confirmed during the survey. However, the minimum number of spaces is provided below.

23.2	NUMBER <i>Accessible spaces shall be provided as follows:</i>	
23.2.1	<u>Total Parking in Lot</u>	<u>Required Minimum Number of Accessible Spaces</u>
	15-25	1
	26-50	2
	51-75	3
	76- 100	4
	101-150	5
	151-200	6
	201-300	7
	301-400	8
	401-500	9
	501-1,000	2% of total
	1,001 and over	20 plus 1 for each 100 over 1000

An accessible route leads from most of the accessible parking spots to the public entrances of the building. In one parking area, the route to the building has too steep of a cross slope and therefore is not accessible.

The following major requirements were found to be noncompliant:

- Accessible parking spaces are required be at least 8' wide to comply with 521 CMR Chapter 23.4.1, generally less than 8' provided.
- Accessible parking spaces cannot have a slope exceeding 2% in accordance with 521 CMR 23.4.3, generally 3%-5% provided.
- Each accessible parking space is required to be provided with an accessible parking sign that complies with 521 CMR 23.6. Some accessible parking signs were missing, and many were not of the required height or distance from the parking space.

A complete list of requirements for the parking can be found in 521 CMR Section 23.00.



FIGURE 5: ACCESSIBLE PARKING SPOTS

6.4 Exterior Route

The exterior route around the building and leading to entrances contains many deficiencies. The following major deficiencies noted are:

- Along the exterior sidewalk route, a significant number of locations were identified where the running slope exceeded 5% and does not comply with any requirements to be considered a ramp. According to 521 CMR 20.9, An accessible route with a running slope greater than 5% shall comply with 521 CMR 24.00: Ramps.
- A significant number of locations provided a cross slope greater than 2%. 521 CMR 20.9 states that nowhere shall the cross slope of an accessible route exceed 2%.

Specific exterior route deficiencies are located in the Appendices.



FIGURE 6: EXTERIOR ROUTE DEFICIENCIES

6.5 Entrances

Multiple of the building entrances are currently inaccessible as they include steps leading up to them. All public entrances are required to be accessible and cannot include steps, stairs, or slopes greater than 8.3%. All public entrances must comply with 521 CMR Chapter 25.00. Exterior doors around the building were observed to have thresholds greater than 0.5 inches in height (521 CMR 26.10.1).

An option for resolution on these is to re-evaluate whether the doors are required to be entrances. Doors designated as staff-only entrances or "exit only" are not required to comply as an entrance.



FIGURE 7: PUBLIC BUILDING ENTRANCES

6.6 Doors and Doorways

Generally, the doors had adequate pull and push side clearance and compliant hardware. There were multiple instances of interconnecting doors between classrooms and staff offices having knobs which are noncompliant with 521 CMR 26.11.1 as they require twisting of the wrist. Areas where these doors are provided appear to be staff only and typically would not need to comply. However, if these rooms are used by students or the general public (such as the principals office), the hardware is required to comply.

Specific deficiencies are located in the Appendices.

6.7 Stairs

Stairs are required to comply with 521 CMR Chapter 27.00. Generally, the stairs are noncompliant. The following requirements were noted as noncompliant:

- Stair tread depth and riser height, required to comply with 521 CMR 27.2, are generally noncompliant as they are not uniform.
- Handrails, required to comply with 521 CMR Chapter 27.4, are generally noncompliant as they are not provided in some locations or have insufficient extensions. Handrails are also required to have a clear space of 1.5" between the handrail and adjacent side wall, which typically did not comply.

Additional general deficiencies are located in the Appendices.

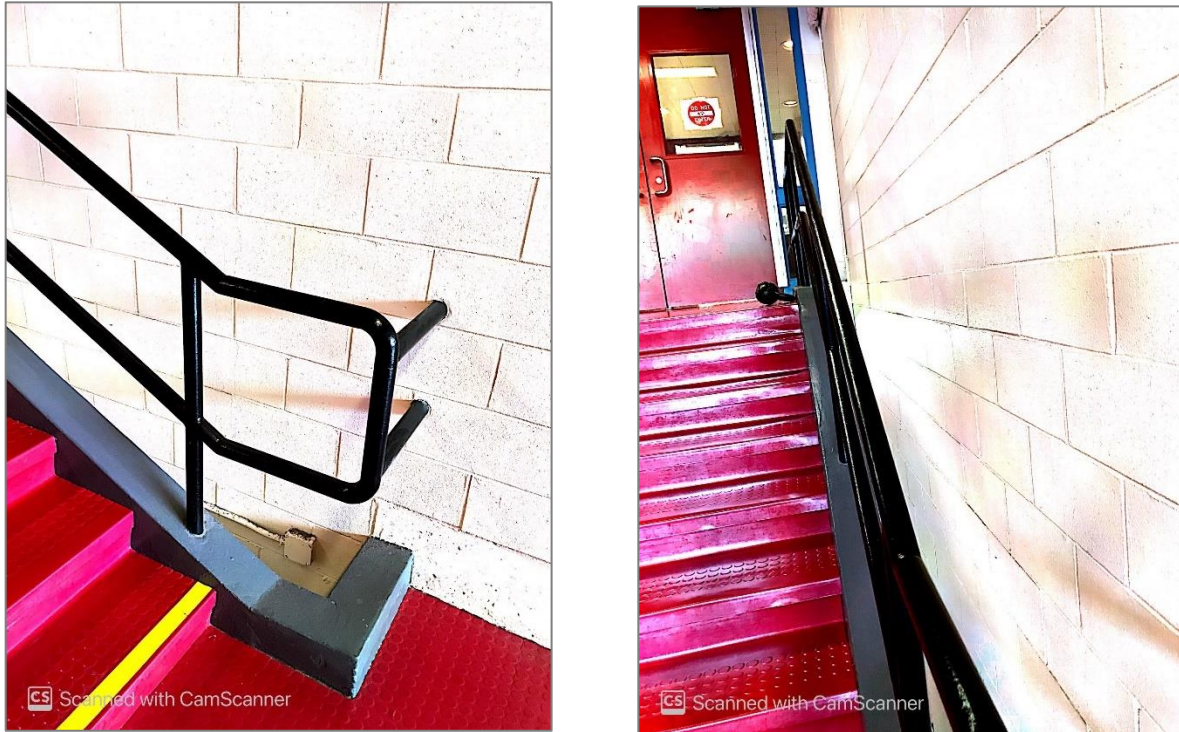


FIGURE 8: STAIR DEFICIENCIES

6.8 Elevators

The building is provided with four elevators, only one of which was observed to be generally accessible (outside of the emergency call button being mounted too low). The major following requirements apply:

- Elevator cab sizes were measured to be smaller than that required by 521 CMR 28.7. The elevator cab shall be a minimum of 54 inches by 68 inches measured wall to wall or door to door. In existing building this can be reduced to the maximum car size allowable for the existing shaft, but it cannot be less than 48 inches by 48 inches.
- Lantern indicators were not provided in accordance with 521 CMR 28.4.
- Handrail height was measured to be 38" whereas 521 CMR 28.7.2 requires handrail height to be between 32 and 36 inches.

It should be confirmed whether the public is provided access to these elevators or if they exist only as service elevators.

6.9 Classrooms

Classrooms are typical throughout the building and are generally compliant. There are some specific spaces with deficiencies outlined below. 521 CMR 12.2.2 requires that when tables, study carrels, computer workstations, or fixed seating is provided, 5% but not less than one of each type of element be accessible. Most of the classrooms did not have seating furniture during the survey. It should be confirmed that classrooms are provided with accessible seating options.

6.9.1 Physics Room and Art Spaces

The physics room located on the First Floor as shown in Appendix A contains a sink for laboratory purposes. The sink is inaccessible according to 521 CMR Chapter 12.2.2 including excessive height and improper knee clearance. The art spaces on the Second Floor contain sinks that are inaccessible according to 521 CMR Chapter 12.2.2 because no knee clearance is provided (graphics room and dark room). Additionally, workstations in the art spaces were measured to be above 34" in height and not provide knee and toe clearance. 5% with a minimum of one of each element are required to be accessible and comply with 521 CMR Section 12.2.2. Specific deficiencies associated with the physics room and art spaces are noted in the Appendices.



FIGURE 9: ART ROOM & DARK ROOM

6.9.2 Choir Room, Band Room, and Lecture Hall

The choir room, band room, and lecture hall all on the First Floor, as shown in Appendix A, contain tiered floors. The rooms do not provide an accessible route to the performing areas of the band room and choir room. Based on the length of the tiers in the band and choir rooms, there is potential for the room to accommodate more than 150 people, requiring accessible seating to be dispersed. Within the lecture hall, there are provided desks, none of which are accessible. Additionally, an assistive listening system was not observed for any of these rooms in accordance with 521 CMR 14.5.1. Specific deficiencies associated with these rooms are noted in the Appendices.

Alleviating these deficiencies would include studying an accessible route to the bottom of the tiers either via a ramp per 521 CMR 24.00 or lift per 521 CMR 28.00, installing an assistive listening system for assembly spaces in accordance with 521 CMR 14.5, and providing accessible seating options. If the choir and band room are fixed at 150 or less, the accessible seating would be permitted to be in one location rather than dispersed.

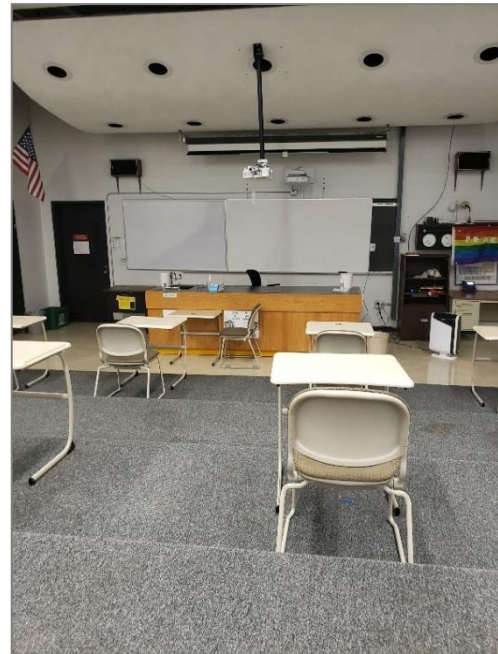


FIGURE 10: CHOIR ROOM & LECTURE HALL

6.10 Auditorium

The auditorium is located on the First Floor, as shown in Appendix A. Most of the deficiencies revolve around the seating and the accessible route within the room.

No accessible seating is provided for the space. Based on the 789 fixed seats that were observed, a total of 9 accessible spaces complying with 521 CMR 14.4 would be required (521 CMR 14.2).

NUMBER OF ACCESSIBLE SEATS

Wheelchair spaces: In places of assembly with fixed seating, the minimum number of *accessible spaces* shall be computed in accordance with the following table:

<u>Total Seating</u>	<u>Wheelchair Spaces</u>
4 to 25	1
26 to 50	2
51 to 300	4
301 to 500	6
over 500	6, one additional space for each total seating capacity increase of 100.

Additionally, 1% of the fixed seats are required to be aisle seats with no armrests on the aisle side or are required to have removable or folding armrests on the aisle side. These seats are required to be identified with a marker or sign. Note that these seats do not need to be on a level surface (521 CMR 14.2.1).

The accessible route throughout the space is noncompliant. There is no accessible route to the orchestra pit, stage, sound booth, or upper section of seating. Where stairs are provided to these spaces, they are not provided with handrails on both sides. In addition, the ramps provided down the aisles of the lower seating exceeded the maximum permitted slope of 8.3% by almost double. It should be studied whether a compliant set of ramps can be installed, noting that ramps are limited to a 30 foot run before a compliant landing is required. A lift to access these areas should also be considered.

Specific deficiencies associated with the auditorium are noted in the Appendices.

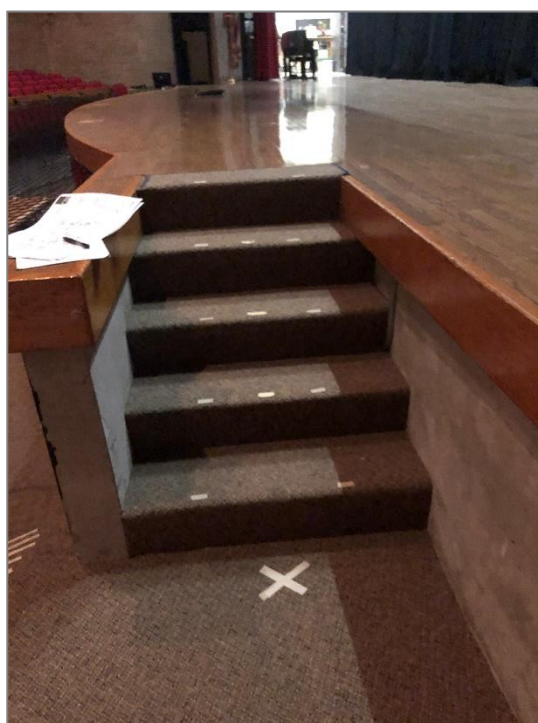
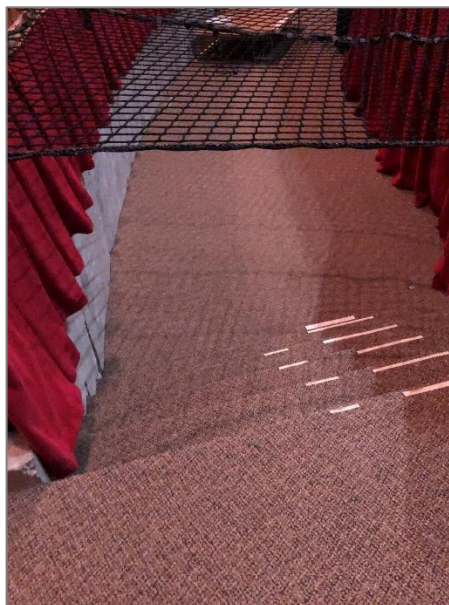
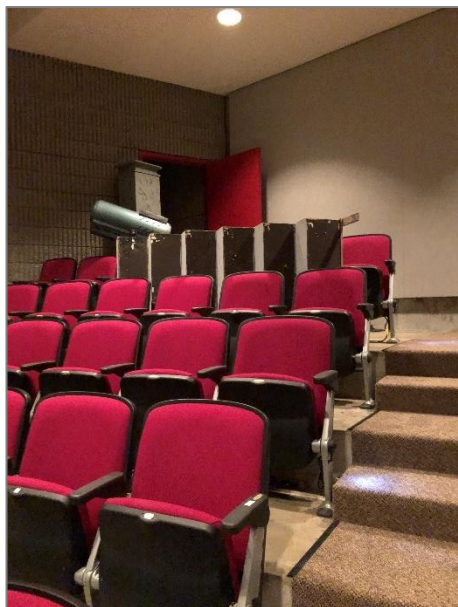


FIGURE 11: AUDITORIUM

6.11 Cafeteria

The school's cafeteria is located on the First Floor, as shown in Appendix A. No accessible route or accessible seating is provided in the outdoor dining area. Additionally, none of the indoor seating is compliant as it does not provide adequate knee clearance. Specific deficiencies are noted in the Appendices.

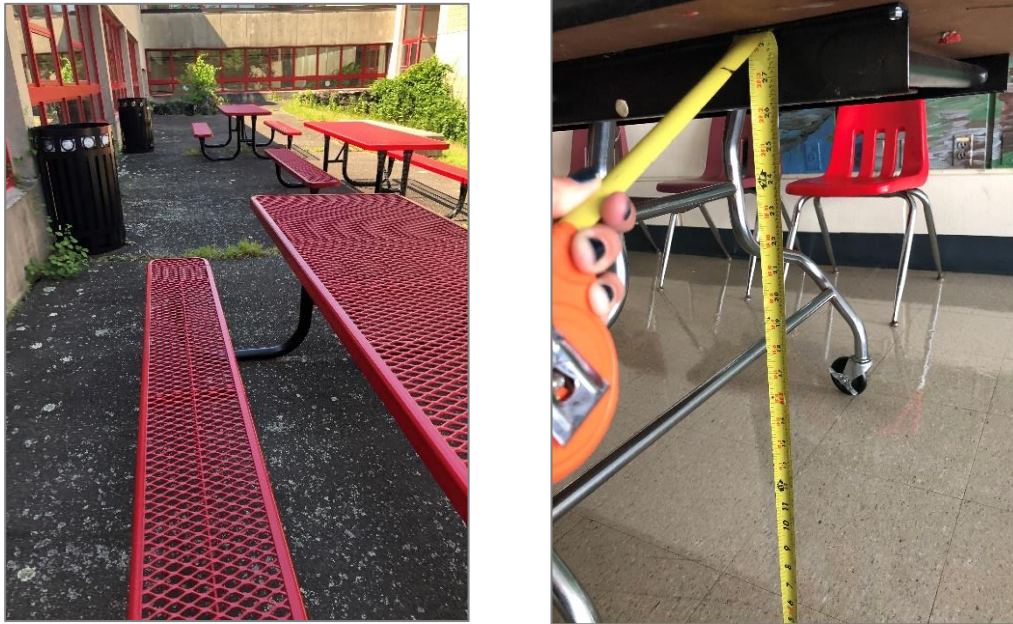


FIGURE 12: CAFETERIA SEATING

6.12 Library

The school's library is located on the First and Second Floors, as shown in Appendix A. The library tables and seating areas do not provide any accessible seating. According to 521 CMR 12.2.2, at least 5% of the seating must be accessible and on an accessible route. Additionally, the mezzanine level overlooking the library is only accessible by stairs and therefore is not located on an accessible route. It should be confirmed whether the mezzanine is intended to function solely as an employee-only space. Other specific deficiencies associated with the library are noted in the Appendices.



FIGURE 13: LIBRARY

6.13 Health Examination Rooms

The school contains a nurse's office suite on the First Floor, as shown in Appendix A. As this nurse's office will not contain overnight accommodations, it is subject to the requirements of 521 CMR Chapter 11 (521 CMR, 13.1). Specific deficiencies within the nurse's office are noted in the Appendices.

6.14 Toilet Rooms

The existing building is provided with nine boys' and nine girls' student bathrooms, multiple single user bathrooms, and multiple non-public bathrooms for the faculty. Six student bathrooms of each gender are located on the First Floor, and three of each gender is located on the Second Floor. The public toilet rooms include all toilet rooms made available to students and visitors or guests to the school. All public toilet rooms are required to be accessible and comply with 521 CMR Section 30.1.

For the sake of completeness, all bathrooms were reviewed on site even those that were signed "staff." Where these bathrooms are to be used by either 1) students or 2) the public during off hours assembly, they are required to be accessible and are subject to the deficiencies noted herein. If these are completely dedicated to school employees at all times, they are not required to be compliant with 521 CMR and are not subject to upgrades identified in this report.

Generally, the bathrooms are noncompliant. All of the single user toilet rooms, including the health's office single users, staff and student single users throughout, were found to not meet the minimum dimensions required per 521 CMR, 72" x 90".

For the multi-stall restrooms, the following major conditions were found to be noncompliant:

- Accessible stall sizes, required to comply with 521 CMR Chapter 30.6.1, generally were not 60 inches x 72 inches with the toilet on the 60-inch wall.
- Mirrors, required to comply with 521 CMR Chapter 30.18, generally exceed the maximum permitted height of 40 inches for the bottom edge of the mirror.
- Water closets, required to comply with 521 CMR Chapter 30.14.3, generally exceed the maximum permitted height of 17 inches to 19 inches for water closets and were located more than 18" from the interior corner.
- Grab bars were often not provided or provided at non-accessible heights. Two 42" long grab bars are required to be provided on the back and side walls of the water closet, mounted between 33-36" above the floor, with a 1-1/2" clearance to the wall (521 CMR 30.8).

Note that any renovation work to the toilet rooms that involves reducing the number of fixtures to facility new accessible clearances/features will require an updated plumbing fixture calculation to be completed. Additionally, any fixtures that are replaced must comply fully with 521 CMR including Chapter 6: Space Allowance and Reach Ranges and Chapter 39: Controls.

521 CMR 30.1.1 does permit a unisex toilet room in lieu of a fully accessible men and women's room, which may be a viable solution to providing accessible restrooms. Note that for the purposes of 248 CMR, Massachusetts Plumbing Code, unisex restrooms are required to be provided in pairs in order to contribute to the minimum number of fixtures required.

General comments applying to most student toilet rooms, and specific comments applying to individual toilet rooms are provided in the appendices.



FIGURE 14: MULTI-STALL BATHROOM DEFICIENCIES

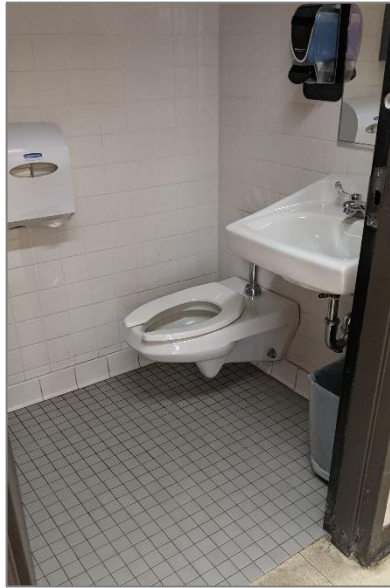


FIGURE 15: SINGLE USER BATHROOM EXAMPLE

6.15 Locker Rooms

The building contains locker rooms for each gender on the Ground Floor as shown in Appendix A. Locker rooms are required to comply with 521 CMR 19.4 and 521 CMR Chapter 30.00.

Generally, the locker rooms are noncompliant. The following major requirements apply:

- No accessible restroom stalls or showers are provided which is required by 521 CMR 30.1 and 31.1. Additionally, urinals and sinks were observed to be noncompliant.
- The aisle between benches and lockers is less than 36". There must be an aisle at least 36" wide according to 521 CMR 19.4.2.

Specific deficiencies are located in the Appendices.

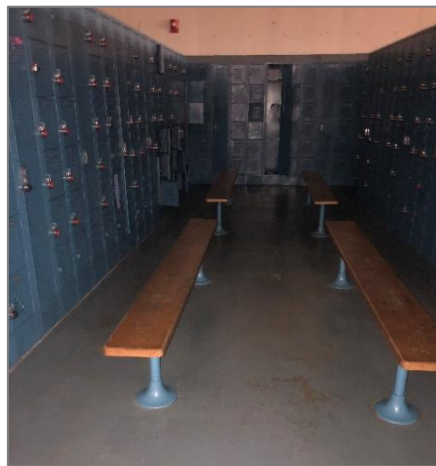


FIGURE 16: LOCKER ROOM DEFICIENCIES

6.16 Ramps

The existing building contains two main hallways that are sloped with many ramp segments as well as two other ramps within the rest of the building. All ramps are required to comply with 521 CMR Chapter 24.00.

Generally, the ramps are noncompliant. The following major requirements apply:

- Slopes were measured to be too steep in many locations. 521 CMR 24.2.1 limits ramp slopes to 8.3%.
- The lengths of the ramps were measured to be too long. 521 CMR 24.4 requires a ramp landing after every 30 feet of ramp run.
- Ramp handrails did not have compliant extensions at the tops and bottoms of ramps and were mounted too far from the wall. Handrails must extend at least 12 inches beyond the top and bottom of the ramp and must be parallel with the floor in accordance with 521 CMR 24.5.4. Additionally, 521 CMR 24.5.8 requires the clear space between the handrail and the wall to be 1.5 inches.

General comments applying to most ramps, and specific comments applying to individual ramps are provided in the appendices.

6.17 Alarms

While a full building design review of the audible and visual alarms was not completed, general coverage and presence of devices was noted during the survey. The existing building contains audible and visual alarm notification sporadically throughout the building. Audible and visual alarms are required to be installed in accordance with NFPA 72 (521 CMR 40). The following deficiencies were noted:

- Visual alarms, required to comply with 521 CMR Chapter 40.3, are not provided in all public use areas. Many of the classrooms, locker rooms, public spaces did not include any notification appliances or were provided in insufficient quantities. Two examples include:
 - Corridors often had notification appliances but were rarely noted to be within 15 feet of the end of the corridor and every 100 feet within the corridor as required.
 - The auditorium had two notification appliances visible to the seating area. The adequacy of the coverage of these appliances should be confirmed.
- Audible fire alarm notification devices are required to produce a sound that exceeds the prevailing equivalent sound level in the room/space by at least 15 dbA or exceeds any maximum sound level with a duration of 60 seconds by 5dbA, whichever is greater (521 CMR 40.2). The audible alarm levels were not able to be measured during site surveys.



FIGURE 17: VISUAL ALARM NOTIFICATION DEVICE IN RESTROOM

6.18 Signage

Signage throughout the building was observed to be noncompliant. Signage must be compliant with 521 CMR 41.00. The major following requirements apply:

- Tactile room signage and directional signage is required at the locations specified by 521 CMR Chapter 41.1 and all permanent rooms and spaces (521 CMR 41.00).
 - Room names/numbers
 - Toilet rooms
 - Stair signs
 - Designated accessible parking spaces
 - Accessible passenger loading zones
 - Emergency egress signs, which are required to be illuminated (including international symbol of accessibility)
- Signage is required to be provided at any entrance/exit of the building not accessible by persons in a wheelchair to clearly indicate the location of the accessible entrance/exit is (521 CMR 25.6).

Additionally, elements and spaces of accessible facilities including emergency egress signs are required to be provided with the International Sign of Accessibility. None of the exit signs within the building were provided with this signage.

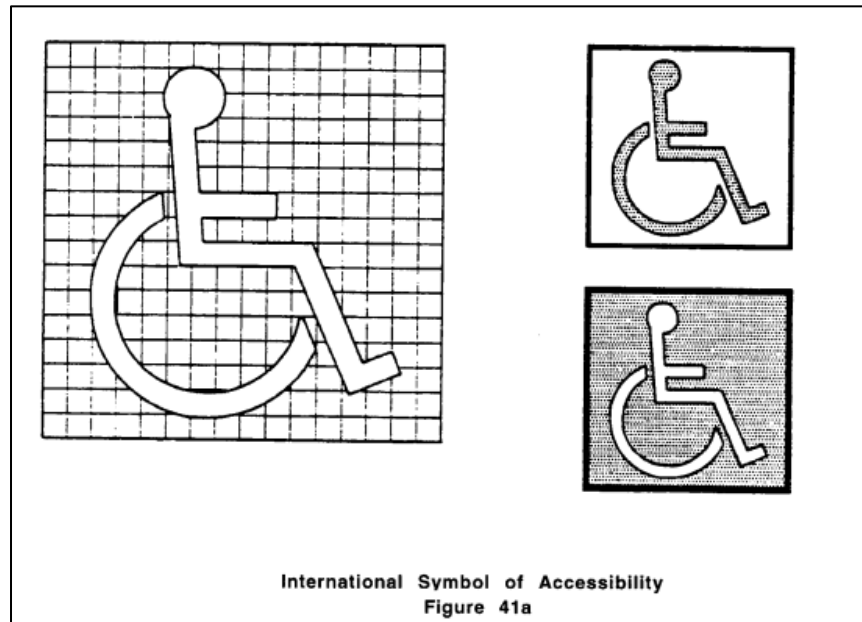
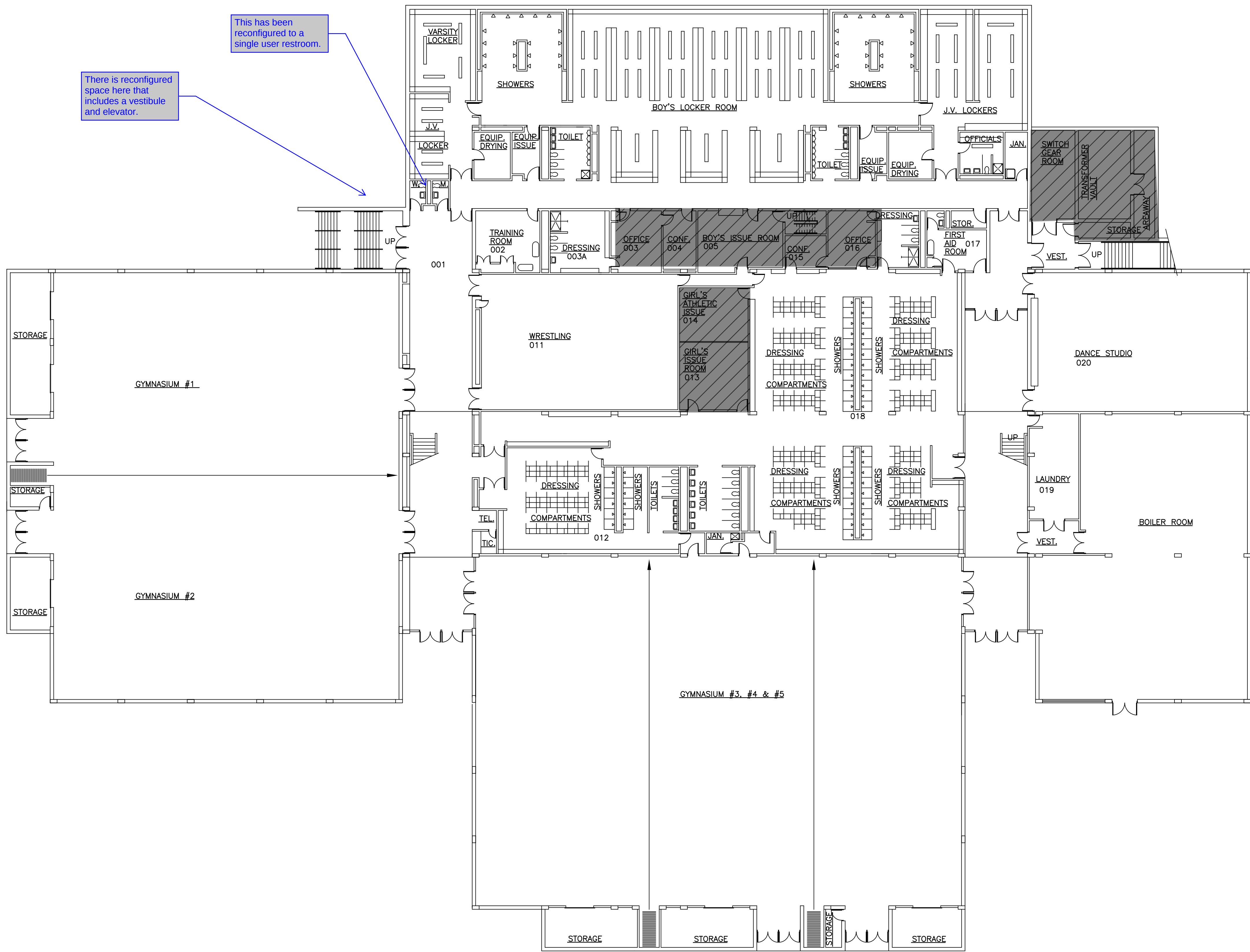


FIGURE 18: TYPICAL ROOM SIGNAGE

Appendix A – Building Layout Plans

P:\2020\CB200221.1 Burlington HS HVAC\AutoCAD\XREF\CB200221.1.dwg May 26, 2021 - 5:54 pm JPATEL



Note that while staff only offices are private, if they have the ability for students to enter, they are required to be accessible.

Staff only restrooms were surveyed such that if a staff only restroom proved accessible, it may be a candidate to be transformed to a public restroom if needed.



250 DORCHESTER AVENUE
BOSTON, MA 02127
P: (617) 268-8977
F: (617) 464-2971
cbi@cbiconsultingllc.com
www.cbiconsultingllc.com

BURLINGTON
HIGH SCHOOL
HVAC
EVALUATION

BURLINGTON
PUBLIC SCHOOL
123 CAMBRIDGE STREET
BURLINGTON, MA 01803

Drawing Title:

GROUND FLOOR
PLAN

Revisions:

PROGRESS SET
NOT FOR
CONSTRUCTION

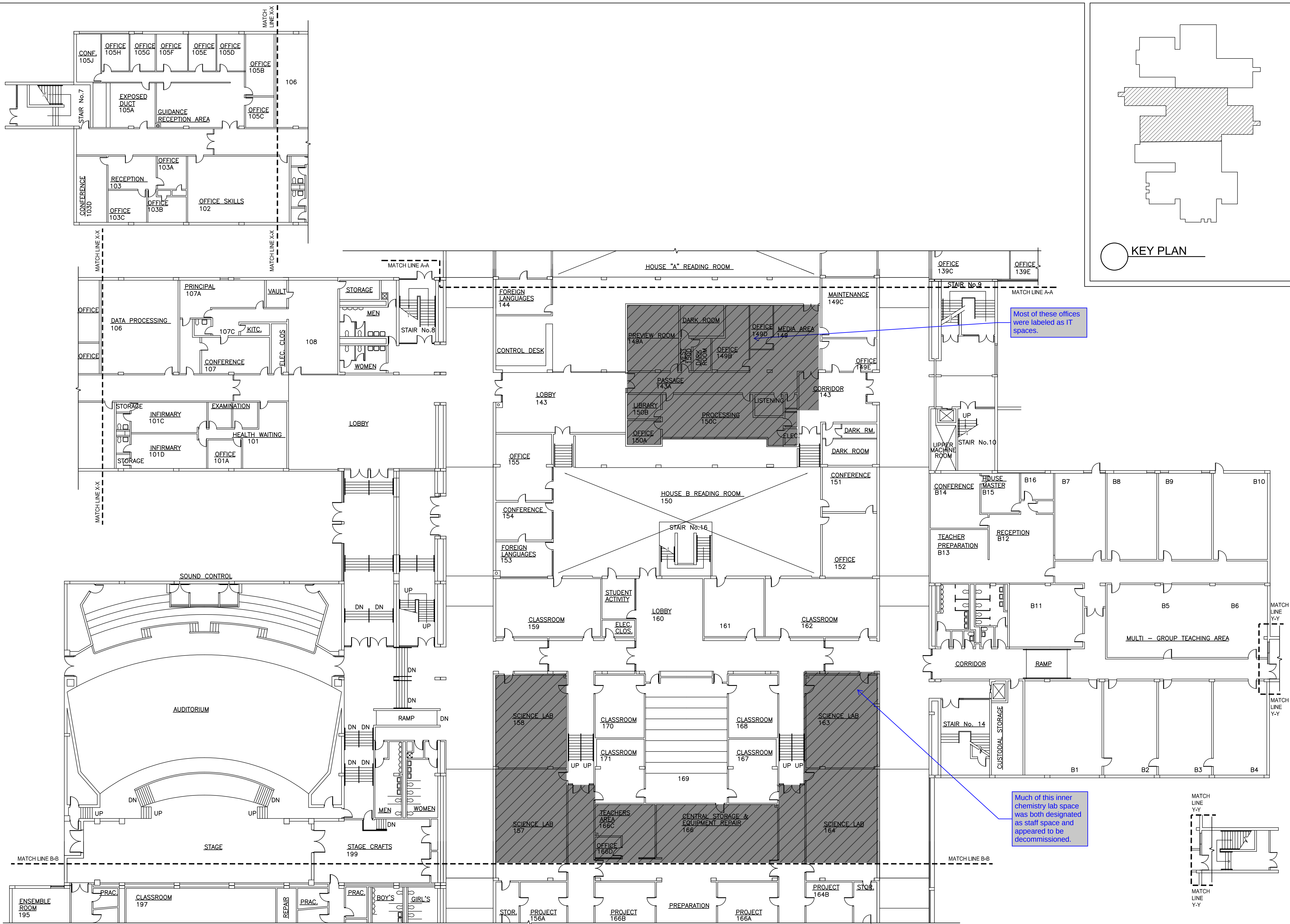
Submission:

SCHEMATIC
DESIGN

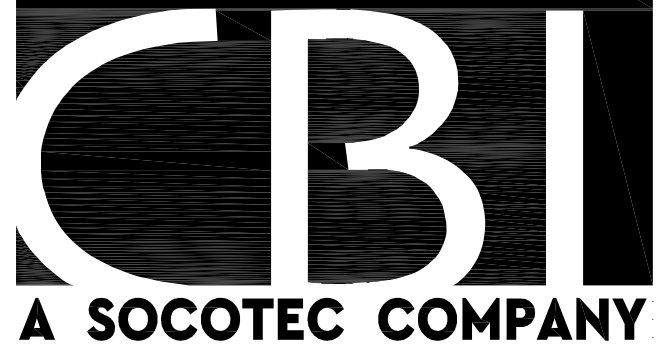
Date: 05-24-2021
Project Number: CB200221.1
Project Manager: RD
Drawn By: SAW
Scale: AS NOTED

A1-01

P:\2020\CB2002211 Burlington HS HVAC\AutoCAD\XREF\CB2002211.dwg May 24, 2021 4:18 pm JP/TEL



1 PARTIAL FIRST FLOOR PLAN
SCALE: 1/16"=1'-0"



250 DORCHESTER AVENUE
BOSTON, MA 02127
P: (617) 268-8977
F: (617) 464-2971
cbi@cbiconsultingllc.com
www.cbiconsultingllc.com

BURLINGTON HIGH SCHOOL HVAC EVALUATION

**BURLINGTON
PUBLIC SCHOOL**
123 CAMBRIDGE STREET
BURLINGTON, MA 01803

Drawing Title:

PARTIAL FIRST FLOOR PLAN

Revisions:

PROGRESS SET
NOT FOR
CONSTRUCTION

Submission:

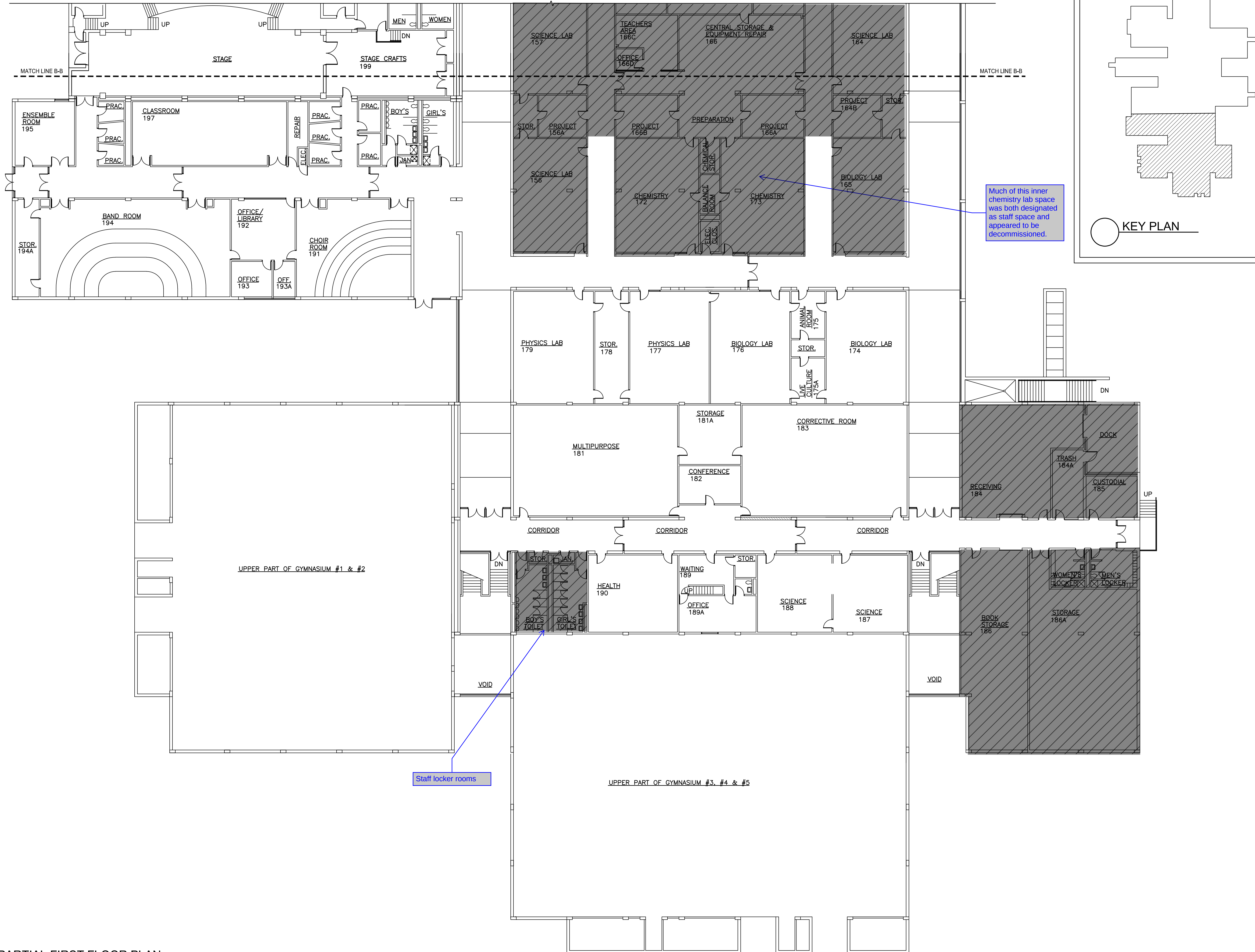
SCHEMATIC DESIGN

Date: 05-24-2021
Project Number: CB200221.1
Project Manager: RD
Drawn By: SAW
Scale: AS NOTED

A1-03

P:\2020\CB200221.1 Burlington HS HVAC\AutoCAD\XREF\CB200221.1.dwg May 24, 2021 4:21 pm JP/TEL

1 PARTIAL FIRST FLOOR PLAN
SCALE: 1/16"=1'-0"



250 DORCHESTER AVENUE
BOSTON, MA 02127
P: (617) 268-8977
F: (617) 464-2971
cbi@cbiconsultingllc.com
www.cbiconsultingllc.com

BURLINGTON HIGH SCHOOL HVAC EVALUATION

**BURLINGTON
PUBLIC SCHOOL**
123 CAMBRIDGE STREET
BURLINGTON, MA 01803

Drawing Title:

PARTIAL FIRST FLOOR PLAN

Revisions:

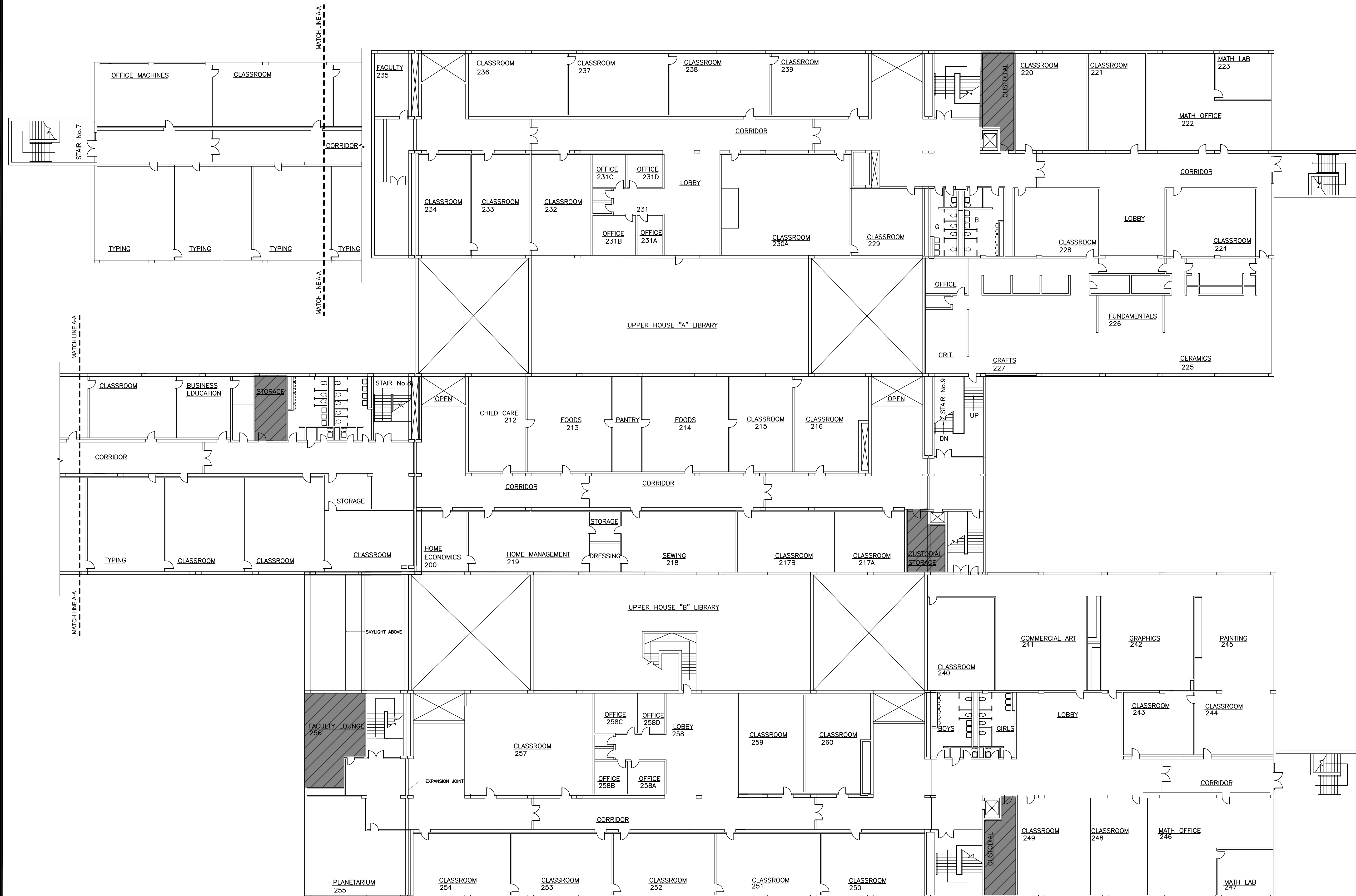
PROGRESS SET
NOT FOR
CONSTRUCTION

Submission:

SCHEMATIC DESIGN

Date: 05-24-2021
Project Number: CB200221.1
Project Manager: RD
Drawn By: SAW
Scale: AS NOTED

A1-04



250 DORCHESTER AVENUE
BOSTON, MA 02127

BURLINGTON HIGH SCHOOL HVAC EVALUATION

**123 CAMBRIDGE STREET
BURLINGTON, MA 01803**

SECOND FLOOR PLAN

PROGRESS SET
NOT FOR
CONSTRUCTION

Submission:

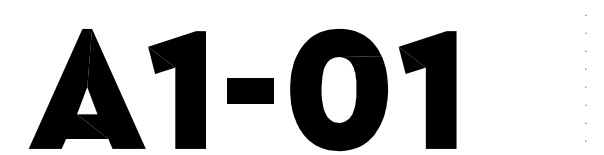
SCHEMATIC DESIGN

Date: 05-24-2021
Project Number: CB200221.1
Project Manager: RD
Drawn By: SAW
Scale: AS NOTED

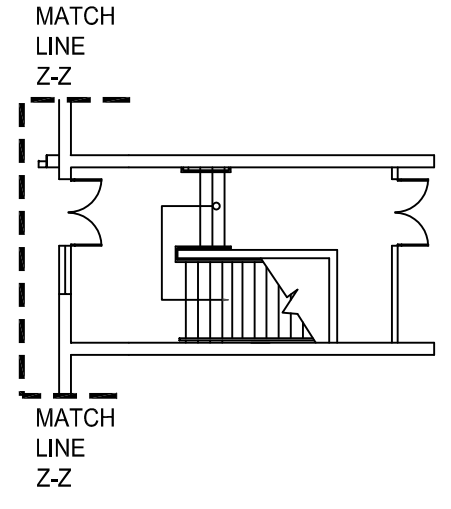
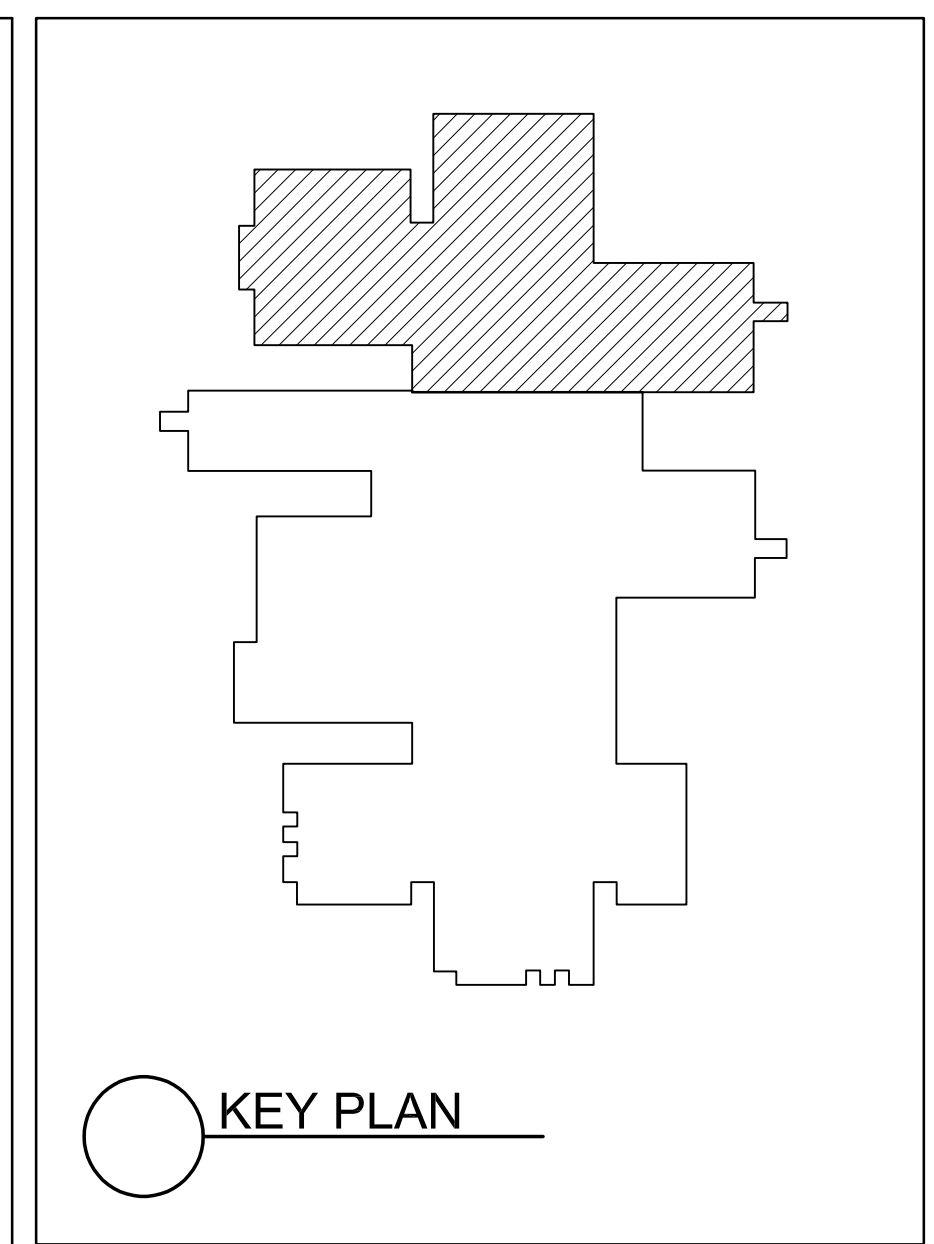
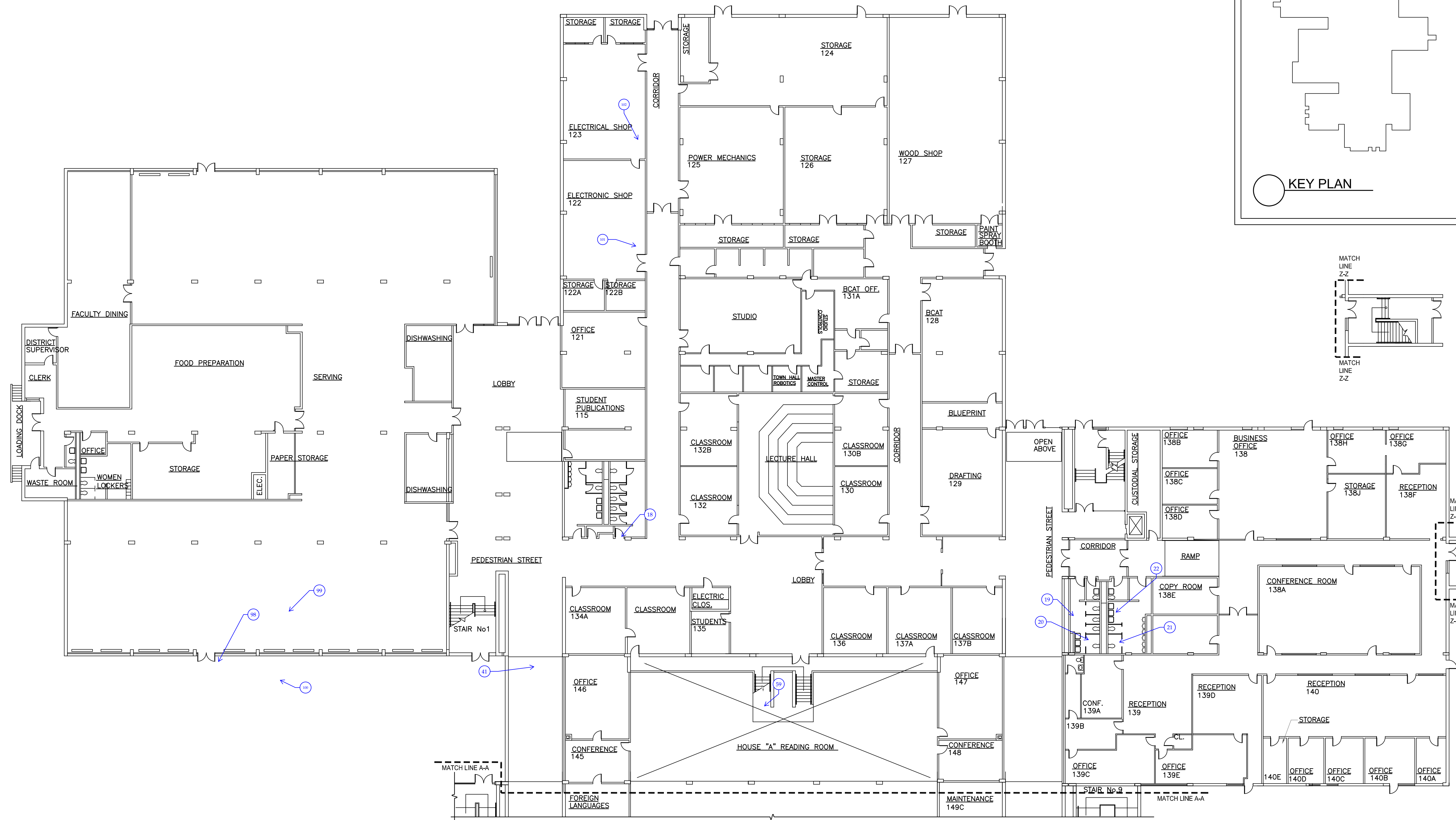
A1-05

Appendix B - Deficiency Plans

Diagram illustrating a sequence of nodes arranged in two rows. The top row contains nodes numbered 1 through 35. The bottom row contains nodes numbered 36 through 70. A vertical line is on the left, and a horizontal line is at the bottom. Nodes 1, 36, 70, and 35 are highlighted in light blue.



P:\2020\CB200221.1 Burlington HS HVAC\AutoCAD\XREF\CB200221.1.dwg May 24, 2021 4:13 pm JPATL



1 PARTIAL FIRST FLOOR PLAN
SCALE: 1/16"=1'-0"



250 DORCHESTER AVENUE
BOSTON, MA 02127
P: (617) 268-8977
F: (617) 464-2971
cbi@cbiconsultingllc.com
www.cbiconsultingllc.com

BURLINGTON HIGH SCHOOL HVAC EVALUATION

**BURLINGTON
PUBLIC SCHOOL**
123 CAMBRIDGE STREET
BURLINGTON, MA 01803

Drawing Title:

PARTIAL FIRST FLOOR PLAN

Revisions:

PROGRESS SET
NOT FOR
CONSTRUCTION

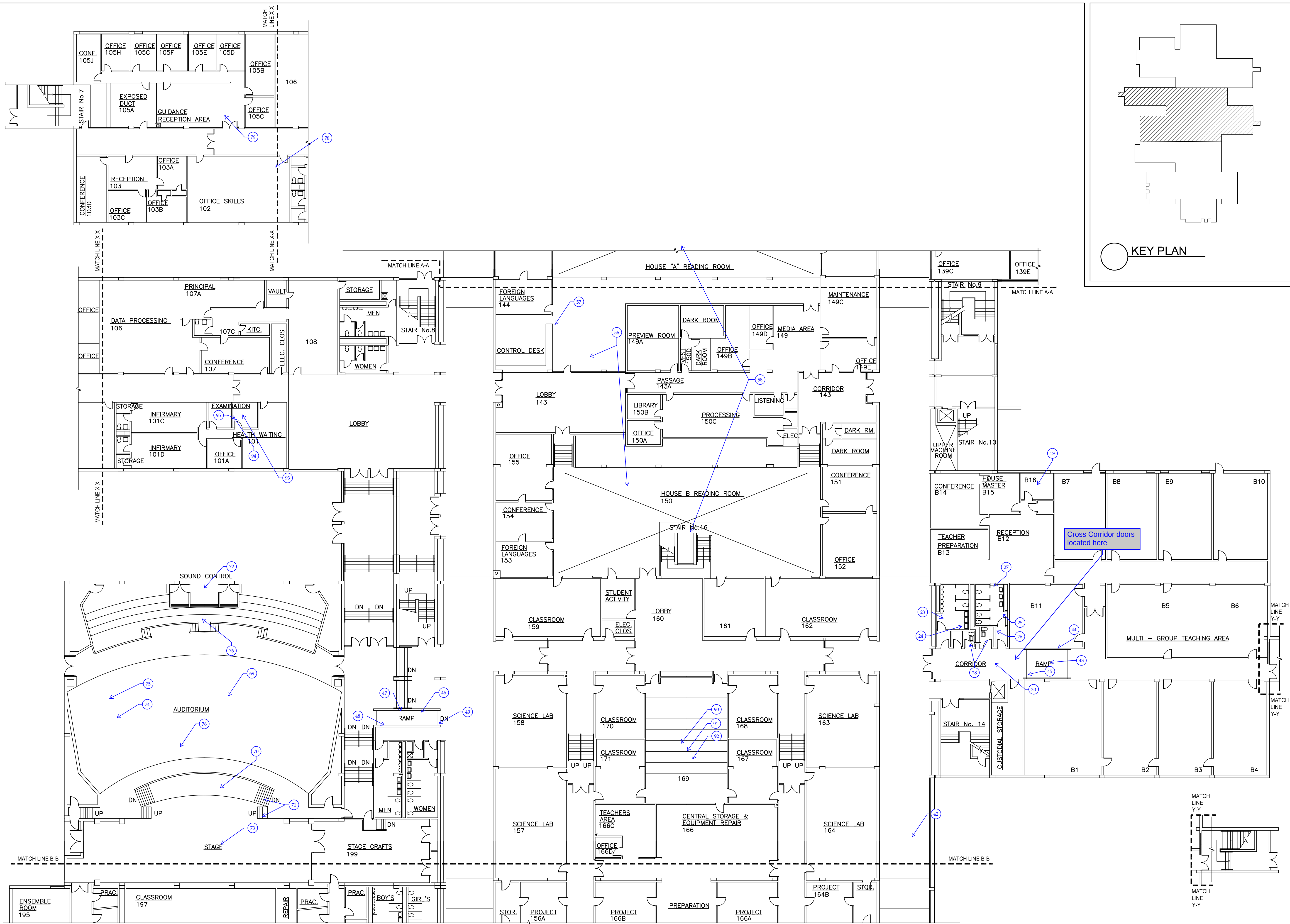
Submission:

SCHEMATIC DESIGN

Date: 05-24-2021
Project Number: CB200221.1
Project Manager: RD
Drawn By: SAW
Scale: AS NOTED

A1-02

P:\2020\CB2002211 Burlington HS HVAC\AutoCAD\XREF\CB2002211.dwg May 24, 2021 4:18 pm JP/TEL



P:\2020\CB200221.1 Burlington HS HVAC\AutoCAD\XREF\CB200221.1.dwg May 24, 2021 4:21 pm JP/TEL

1

PARTIAL FIRST FLOOR PLAN

SCALE: 1/16"=1'-0"



KEY PLAN



250 DORCHESTER AVENUE
BOSTON, MA 02127
P: (617) 268-8977
F: (617) 464-2971
cbi@cbiconsultingllc.com
www.cbiconsultingllc.com

BURLINGTON
HIGH SCHOOL
HVAC
EVALUATION

BURLINGTON
PUBLIC SCHOOL
123 CAMBRIDGE STREET
BURLINGTON, MA 01803

Drawing Title:
**PARTIAL FIRST
FLOOR PLAN**

Revisions:
**PROGRESS SET
NOT FOR
CONSTRUCTION**

Submission:
**SCHEMATIC
DESIGN**

Date: 05-24-2021
Project Number: CB200221.1
Project Manager: RD
Drawn By: SAW
Scale: AS NOTED

A1-04



BURLINGTON HIGH SCHOOL HVAC EVALUATION

Drawing Title:

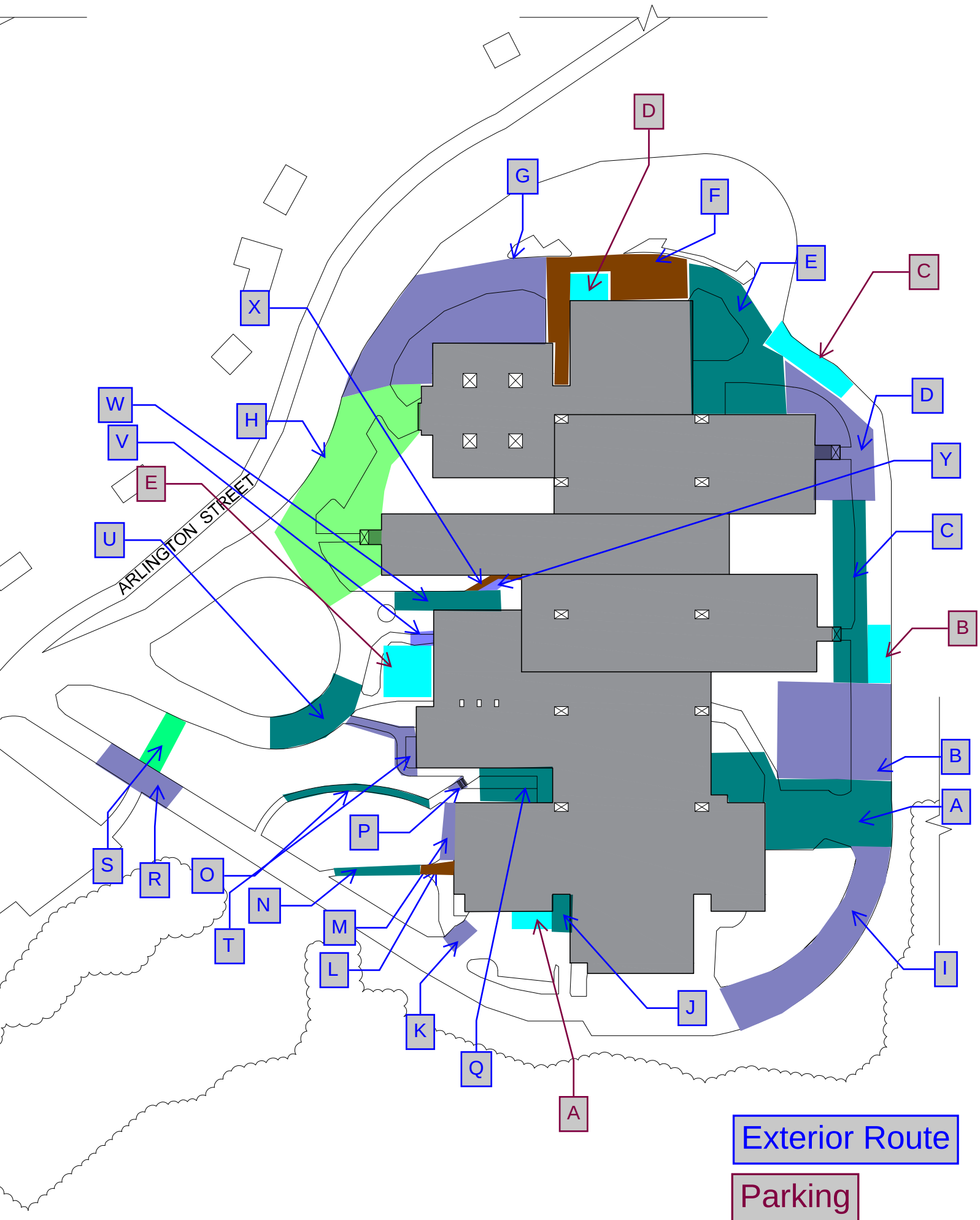
Revisions:

PROGRESS SET
NOT FOR
CONSTRUCTION

Submission:

Date: 05-24-2021
Project Number: CB200221.1
Project Manager: RD
Drawn By: SAW
Scale: AS NOTED

A1-05



Appendix C - Deficiency List

DEFICIENCY ID	LOCATION	APPROXIMATE NUMBER OF LOCATIONS	DEFICIENCY DESCRIPTION	CODE REQUIREMENT	521 CMR CODE REFERENCE	RECOMMENDED CORRECTIVE ACTION
1	General - Bathrooms	18	Accessible toilet heights are noncompliant throughout. Most range from 19.5" to 21.5" with one measuring at 16.5".	Water closets shall be 17 inches to 19 inches high measured to the top of the water closet seat. Tolerances are not permitted for this measurement.	30.7.3	Adjust or replace accessible toilet heights to be located within the range of 17" to 19" above the finished floor.
2	General - Bathrooms	18	In general, grab bars for accessible toilets are not provided or are non-compliant.	Each accessible water closet is required to have grab bars 42" long, with one located on the back wall of the water closet and one on the side wall closest to the water closet. They must be installed between 33 and 36 inches high and must have a clearance of 1.5 inches between the bar and the wall.	30.8	Grab bars should be installed for all accessible water closets in compliance with 521 CMR Section 30.8.
3	General - Bathrooms	17	All but one of the toilet stall doors throughout were not equipped with automatic self-closing hinge devices.	The stall door shall have an automatic self-closing hinge device.	30.6.1 (b)	Automatic self-closing devices should be installed for all accessible stall doors in compliance with 521 CMR Section 30.6.1
4	General - Bathrooms	18	The dimensions/arrangement for all accessible toilet stalls were non-compliant. The toilet was not provided on the correct wall, limiting maneuvering clearances.	Accessible toilet stalls must have a minimum dimension of 60 inches by 72 inches, with the toilet being provided on the 60 inch side.	30.6.1	Reconfigure toilet stalls to comply with the correct arrangement requirements discussed in 521 CMR 30.6.1.
5	General - Bathrooms	13	Over half of the accessible stalls either did not provide or had improperly placed coat hooks.	Coat hooks must be provided no more than 54 inches above the floor.	30.6.1(d)	Provide coat hooks for all accessible stalls at a height not exceeding 54 inches.
6	General - Bathrooms	11	The heights of more than half of the locks and latches in the bathrooms were found to be noncompliant.	A lock must be located 36 inches above the floor that does not require tight grasping, pinching, or twisting of the wrist to operate.	30.6.1(b)	Relocate or provide locking mechanisms on the accessible stall doors at 36 inches above the floor.
7	General - Bathrooms	7	Flush controls were found to be on the narrow side of the toilet on 7 of the accessible toilets.	Flush controls must be located on the wide side of the toilet no more than 44 inches above the floor.	30.7.5	Replace the flushing mechanisms or the toilets such that the flushing mechanism complies with 521 CMR 30.7.5.
8	General - Bathrooms	11	Push and pull-side clearances for bathroom doors were found to be insufficient in over half of the doors.	Pull side clearances must comply with 521 CMR Section 26.6.3. Push side clearances must comply with 521 CMR Section 26.6.4.	26.6.3 & 26.6.4	Reconfigure doors as necessary to allow for proper clearances around the doorways.
9	General - Bathrooms	7	Urinal rims were measured to be 17"-19" above the finish floor and flushing mechanisms were found to be 44" - 48.5" above the finish floor. None of the urinals were fully compliant.	The rim must be no more than 17 inches above the finish floor while flush controls must be mounted no more than 44 inches above the finish floor.	30.10.1 & 30.10.3	Reconfigure or replace the flushing mechanisms and rim heights on the noncompliant urinals such that they comply with 521 CMR 30.10.
10	General - Bathrooms	10	Sink pipes were found to be exposed or uninsulated in approximately half of the bathrooms.	Hot water and drain pipes exposed under the sink shall be recessed, insulated, or guarded.	30.9.5	Sink pipes should be insulated or guarded to comply with 521 CMR 30.9.5.
11	General - Bathrooms	13	Where mirrors are provided, they are located more than the maximum permitted height.	The bottom edge of the mirrors' reflecting surface has a maximum permitted height of 40".	30.11	Adjust the height of the mirrors such that they comply with 521 CMR Section 30.11.
12	General - Bathrooms	6	Toilet paper dispensers are generally located above the grab bar or above where the grab bar would be located.	Toilet paper dispensers shall be located at a minimum of 24 inches above the floor and shall not be mounted above grab bars.	30.7.6 & 30.8.5	Adjust the height of the toilet paper dispensers such that they comply with 521 CMR Section 30.7.6 & 30.8.5.
13	General - Bathrooms	18	Every toilet measured more than 18 inches from the interior corner.	The toilet centerline is required to be located 18 inches from the interior corner. A 1/2" tolerance is permitted for this measurement.	30.7.2	Relocate toilet to be located 18 inches from the interior corner.
14	General - Bathrooms	5	Knee clearance was measured to be less than 27 inches at 5 of the bathroom sinks.	Knee clearance shall be provided underneath the sink which is 27 inches minimum from the floor to the underside of the sink.	30.9.3	Replace or reconfigure the noncompliant sinks such that there is adequate knee clearances in accordance with 521 CMR 30.9.3.
15	General - Bathrooms	7	Paper towel dispensers in 5 of the bathrooms and soap dispensers in 2 of the bathrooms were measured to be located at a height greater than 48 inches above the floor.	The maximum high reach allowed is 48 inches.	6.5	Adjust the paper towel and soap dispensers such that they are located no greater than 48 inches from the floor.
16	General - Bathrooms	12	Clear space in front of the toilets are insufficient in most of the bathrooms and the doors are in line with 4 of the accessible toilets, limiting the ability to properly maneuver inside an accessible stall.	The clear space in front of the toilet must be at least 42" and the toilet must not be in line with the stall door.	30.7.2 & 30.6.1 (Figure 30a)	Reconfigure the noncompliant bathrooms to allow for proper allowances for maneuvering within the stall.

DEFICIENCY ID	LOCATION	APPROXIMATE NUMBER OF LOCATIONS	DEFICIENCY DESCRIPTION	CODE REQUIREMENT	521 CMR CODE REFERENCE	RECOMMENDED CORRECTIVE ACTION
17	Bathroom door	-	Door is located in a recess of 13 inches.	Doors located in a recess of greater than 6 inches are required to have proper clearances measured within 6 inches of the door.	26.6.2	Adjust the door arrangement such that each door is either not located within a recess of greater than 6 inches or he appropriate clearances are provided within the wall recess.
18	Bathroom Door	-	Door is located in a recess of 6.5 inches.	Doors located in a recess of greater than 6 inches are required to have proper clearances measured within 6 inches of the door.	26.6.2	Adjust the door arrangement such that each door is either not located within a recess of greater than 6 inches or he appropriate clearances are provided within the wall recess.
19	Women's Bathroom	-	Desk obstructs wheelchair turning circle.	An unobstructed turning space complying with 521 CMR 6.3 shall be provided within an accessible toilet room.	30.5, 6.3	Remove the obstruction from the room or relocate it such that the proper clearances are provided.
20	Women's Bathroom	-	There is a table in the accessible stall that limits maneuverability.	There shall be at least 42" clearance between the front edge of the water closet and the nearest wall of fixture.	30.7.2	Remove the obstruction from the stall such that the proper clearances are provided.
21	Men's Bathroom	-	There is a chair in the accessible stall that limits maneuverability.	There shall be at least 42" clearance between the front edge of the water closet and the nearest wall of fixture.	30.7.2	Remove the obstruction from the stall such that the proper clearances are provided.
22	Men's Bathroom	-	The sink height was measured to be 34.5 inches above the finish floor.	Sinks must be mounted with a rim no higher than 34 inches above the finish floor.	30.9.2	Lower the sink height to be no higher than 34 inches above the finish floor in order to comply with 521 CMR Section 30.9.2.
23	Daycare Men's Bathroom	-	Door pull clearances parallel to the wall are obstructed by furniture within the bathroom.	Pull side clearances must comply with 521 CMR Section 26.6.3.	26.6.3	Remove the obstructions to allow for compliant unobstructed door clearances.
24	Daycare Men's Bathroom	-	The soap dispenser at 27 inches high obstructs the required clear space in front of the sink.	Clear floor space free of any obstructions must be provided in front of a sink to allow for a forward approach.	30.9.1 & 6.4.1	Relocate the soap dispenser such that it is no longer obstructing the clear floor space in front of the sink.
25	Daycare Women's Bathroom	-	Furniture obstructs wheelchair turning circle.	An unobstructed turning space complying with 521 CMR 6.3 shall be provided within an accessible toilet room.	30.5, 6.3	Remove the obstruction from the room or relocate it such that the proper clearances are provided.
26	Daycare Women's Bathroom	-	Overhead cabinets are protruding objects that interfere with accessibility.	Objects projecting from walls shall protrude no more than 4 inches into walks, halls, corridors, passageways, or aisles.	20.6.1	Remove the cabinets or provide compliant cane detection.
27	Daycare Women's Bathroom	-	The stall door cant complete a full swing due to the wall and dispenser obstructing it's path.	Doorways and openings must have a clear opening measured from the face of the door open at 90 degrees.	26.5	Reconfigure the stall such that the door can open a full 90 degrees.
28	Daycare Single User Bathrooms	-	The room dimension is 78"x60" which is less than the required dimensions for a single user bathroom therefore the room is fully inaccessible.	Accessible single bathrooms must have a minimum dimension of 72 inches by 90 inches.	30.7.1 (Figure 30d)	Expand the bathroom to add enough floor space or provide an alternative accessible bathroom.
29	General - School Single User Bathrooms	13 (including health office)	The single user bathrooms generally do not comply with the minimum dimensions for single user bathrooms in order to be considered compliant.	Accessible single bathrooms must have a minimum dimension of 72 inches by 90 inches.	30.7.1 (Figure 30d)	Expand the bathroom to add enough floor space or provide an alternative accessible bathroom. All single user restrooms must be clear of obstructions and comply with 521 CMR Chapter 30.
30	Accessible Route - Corridor Doors	-	When this door is open, it blocks the accessible route to the bathroom	An accessible route shall be provided to all accessible spaces and elements inside a facility.	20.1	Adjust the door arrangement such that it does not block the accessible route to the bathrooms.
31	General Building/ Accessible Route	Almost all staff offices and interconnecting classroom doors. (30-70 approx.)	Doors throughout the building provided operating devices that were not accessible.	Door operating devices shall not require tight grasping, pinching, or twisting of the wrist to operate.	26.11.1	Replace the current door hardware with handles that are easy to operate with one hand and comply with 521 CMR 26.11. While some of these doors may be to private offices, if students visit staff/teachers in these offices, they are required to be accessible.
32	General Building/ Accessible Route	13	Fire Extinguishers provided in hallways project 4.5-8.25 inches into the hallway.	Objects projecting from walls shall protrude no more than 4 inches into walks, halls, corridors, passageways, or aisles.	20.6.1	Replace the fire extinguisher cabinets such that the project is less than 4 inches.
33	General - Signage	All	All exit signs lack the International Sign of Accessibility.	Emergency egress signs are required to be identified by the International Sign of Accessibility and comply with 521 CMR 41.7.	41.1.3	Replace exit signs will illuminated signs that contain the International Sign of Accessibility.
34	General - Signage	All	Signage throughout building was observed to be noncompliant.	Signage must be installed on the wall adjacent to the latch side of the door. Signage must be 60" high. Letters and/or numerals shall be accompanied with Grade 2 Braille.	41.00, 41.2, 41.2.2, 41.5.2	Replace all signage with accessible signage.
35	General - Main Hallways/Ramps	7	The slope on over half of the ramp segments were measured to be greater than 8.3%.	The maximum slope of a ramp shall be 8.3%.	24.2.1	Adjust all main hallway ramps such that they have a maximum slope of 8.3%.

DEFICIENCY ID	LOCATION	APPROXIMATE NUMBER OF LOCATIONS	DEFICIENCY DESCRIPTION	CODE REQUIREMENT	521 CMR CODE REFERENCE	RECOMMENDED CORRECTIVE ACTION
36	General - Main Hallways/Ramps	8	The lengths of the ramp segments between landings exceeded 30 feet.	The maximum length of a ramp run between landings shall not exceed 30 feet.	24.4	Provide level landings after every 30 feet of ramp.
37	General - Main Hallways/Ramps	1	One of the landings between ramp segments were not measured to have 60 inches of level floor space.	The landing length shall be a minimum of 60 inches clear and sloped no more than 2%	24.4.3 & Chapter 5 (Level Definition)	Provide level landings after every 30 feet of ramp and ensure that the landings comply with the requirements of 521 CMR 24.4.
38	General - Main Hallways/Ramps	12	The handrail clearance to the wall is inconsistent across the length of the ramps, ranging from 1.25 to 2.75 inches.	The clear space between the handrail and the wall must be 1.5 inches.	24.5.8	Adjust all handrails to be arranged such that there is a 1.5 inch clearance provided across the entire length of the handrail.
39	General - Main Hallways/Ramps	11	Most of the handrail extensions at the bottom of each ramp segment do not extend above the level landing.	Handrails shall extend at least 12 inches beyond the top and bottom of the ramp and must be parallel with the floor.	24.5.4	Provide level landings after every 30 feet of ramp and ensure that the floor below the handrails comply with the requirements of 521 CMR 24.4.
40	General - Main Hallways/Ramps	2	Handrails extensions were observed to not be provided or were provided without sufficient length on the top of the ramps	Handrails shall extend at least 12 inches beyond the top and bottom of the ramp and must be parallel with the floor.	24.5.4	Provide level landings after every 30 feet of ramp and ensure that the floor below the handrails comply with the requirements of 521 CMR 24.4.
41	Left Hallway/Ramp	1	The final upper handrail segment is not provided on one side of the hallway.	Handrails shall be provided at all ramps along both sides of ramp segments.	24.5.1	Provide a continuous handrail at the top of the ramp.
42	Right Hallway	2	Handrails are obstructed by storage and furniture.	Handrails shall be continuous without interruption, except by doorways and openings, so that a hand can move from end to end without interruption.	24.5.2	Remove obstructions and ensure the handrails are continuous without interruption.
43	Ramp in Daycare Center	1	The slope of the ramp was measured to be 12.3%.	The maximum slope of a ramp shall be 8.3%.	24.2.1	Adjust the daycare center ramp such that it has a maximum slope of 8.3%.
44	Ramp in Daycare Center	1	Handrail clearances were measured to range from 1.75 to 2.75 inches between the railing and the wall.	The clear space between the handrail and the wall must be 1.5 inches.	24.5.8	Adjust all handrails to be arranged such that there is a 1.5 inch clearance provided across the entire length of the handrail.
45	Ramp in Daycare Center	1	The handrail extensions at the top of the ramp were measured to be less than 12 inches.	Handrails shall extend at least 12 inches beyond the top and bottom of the ramp and must be parallel with the floor.	24.5.4	Provide a handrail extension complying with 521 CMR 24.5.4 at the top of the ramp unless it would create a hazard to do so.
46	Ramp towards auditorium entrance	1	Upper handrail is not provided on one side.	Handrails shall be provided at all ramps along both sides of ramp segments.	24.5.1	Provide a continuous upper handrail on the both sides of the ramp.
47	Ramp towards auditorium entrance	1	Handrail heights are not compliant.	Handrails shall be provided in pairs, one at a height between 34 and 38 inches and a lower one at a height between 18 and 20 inches.	24.5.2	Correct the heights for the handrails, replacing them if necessary.
48	Ramp towards auditorium entrance	1	The lower left side handrail curves towards the ground at the top of the ramp.	Handrails shall extend at least 12 inches beyond the top and bottom of the ramp and shall be parallel with the floor or ground surface.	24.5.4	Replace the handrail with one that complies with 521 CMR 24.5.
49	Ramp towards auditorium entrance	1	The handrails do not provide any extensions above a level landing at the top or bottom.	Handrails shall extend at least 12 inches beyond the top and bottom of the ramp and must be parallel with the floor.	24.5.4	Provide level landings after every 30 feet of ramp and ensure that the floor below the handrails comply with the requirements of 521 CMR 24.4.
50	General - Stairs	5 Flights of Stairs	Inconsistent tread and/or riser widths and heights were observed throughout.	All steps shall have uniform riser heights and uniform tread widths.	27.2	Reconfigure the stair to ensure that there will be uniform riser heights and tread widths.
51	General - Stairs	5 Flights of Stairs	Handrails were measured to be not within 34-38" in height.	Top of handrail gripping surface shall be mounted between 34 inches and 38 inches above stair nosings.	27.4.2	Adjust the height of these handrails such that they comply with 521 CMR Section 27.4.2
52	General - Stairs	29 Flights of Stairs	Insufficient handrail extension slopes, lengths, or missing extensions.	Handrails shall extend at least 12 inches beyond the top riser and 12" plus the width of one tread beyond the bottom riser.	27.4.3	Replace the handrail such that it has compliant extensions along the stair.
53	General - Stairs	8 Flights of Stairs	Missing handrails.	Stairways shall have continuous handrails at both sides of all stairs.	27.4.1	Install handrails that comply with 521 CMR Section 27.4.
54	General - Stairs	7 Flights of Stairs	Handrail clearance to wall is not 1.5", measuring typically 1-3/4 to 2 inches off the wall.	When a handrail is mounted adjacent to a wall, the clear space between the handrail and the wall shall be 1.5 inches.	27.4.7	Adjust all handrails to be arranged such that there is a 1.5-inch clearance provided across the entire length of the handrail.
55	General - Stairs	4 Flights of Stairs	Handrails are not continuous.	Stairways shall have continuous handrails at both sides of all stairs.	27.4.1	Relocate or replace handrails so that stairways have continuous handrails at both sides of stair in accordance with 521 CMR Section 27.4.1.
56	Library	5 distinct seating areas identified and evaluated. Lounge area excluded.	The library tables and seating areas do not provide any accessible seating.	Where seating or tables are provided, at least 5% with a minimum of one of each element shall be accessible and on an accessible route. Tables and desks must comply with the requirements of 521 CMR Section 12.2.2 to be considered accessible.	12.2.2	Provide 5% accessible seating and tables on an accessible route in the open areas of the library.

DEFICIENCY ID	LOCATION	APPROXIMATE NUMBER OF LOCATIONS	DEFICIENCY DESCRIPTION	CODE REQUIREMENT	521 CMR CODE REFERENCE	RECOMMENDED CORRECTIVE ACTION
57	Library	1	The checkout desk was measured to be at a height of 40.25 inches	At least one checkout area must have a counter at a maximum of 36 inches high for a minimum length of 36 inches.	12.2.3	Provide a counter or a section of a counter for checkout that is compliant with 521 CMR 12.2.3.
58	Library	2	The headroom below the stairs in both libraries was observed to be less than 80 inches with no permanent form of cane detection.	Circulation spaces must have a minimum of 80 inches clear headroom, otherwise, a barrier for cane detection must be provided.	20.7	Provide a way for visually impaired people to detect the headroom reduction below the stairways.
59	Library	-	The mezzanine level overlooking the library can only be reached by stairs.	An accessible route shall be provided to all accessible spaces and elements inside a facility. Accessible routes may not include stairs.	20.1	Provide an accessible route to the mezzanine level in the library.
60	Lockers	All daily lockers	The student lockers throughout the building provided an upper compartment out of reach range.	The maximum high reach allowed is 48 inches.	6.5	Provide an additional compartment within reach range.
61	Elevators	3	All but one of the elevators surveyed were considered inaccessible in this building.	In multi story buildings and facilities, each level including mezzanines, shall be served by a passenger elevator. If more than one elevator is provided, each passenger elevator shall comply with 521 CMR 28.	28.1	Make all elevators accessible, as detailed in 521 CMR Chapter 28. Confirm whether the elevators are staff only.
62	Elevators	3	Call buttons were not provided at all but one of the elevator entrances.	Call buttons in elevator lobbies and halls shall be centered at 42 inches above the floor.	28.3.1	Provide call buttons complying with 521 CMR Section 28.3 for these elevators.
63	Elevators	3	Handrails measured 38 inches above the floor of the cab.	Handrails shall be located 32 to 26 inches above the cab floor.	28.7.2	Relocate handrails to be mounted between 32 to 26 inches above the cab floor.
64	Elevators	1	One elevator had its emergency call button within the cab located at 33.5 inches above the floor.	The emergency call button is required to be mounted no less than 35 inches above the floor.	28.8.2	Relocate the cab controls such that all controls are compliant with 521 CMR Section 28.00.
65	Elevators	3	Lantern indicators were not provided at the entrance to all but one of the elevators.	A visible signal shall be provided at each hoistway entrance.	28.4	Provide a visible signal complying with 521 CMR Section 28.4
66	Elevators	3	Floor signs were not provided at the elevator entrances for all but one elevator.	A visual car position indicator shall be provided in compliance with 521 CMR Section 28.9.	28.9	Provide a visual car position indicator complying with 521 CMR Section 28.9
67	Elevators	3	All but one of the elevators do not play audible signals when the car arrives at a floor.	An audible signal shall be provided at each hoistway entrance.	28.4	Provide an audible signal complying with 521 CMR Section 28.4
68	Elevators	3	The dimensions all but one of the elevators were measured to be too small based on the new and existing building requirements outlined in 521 CMR Section 28.7.	The elevator cab shall be a minimum of 54 inches by 68 inches measured wall to wall or door to door. In existing building this can be reduced to the maximum car size allowable for the existing shaft, but it cannot be less than 48 inches by 48 inches.	28.7	Provide the largest elevator allowable for the existing elevator shafts or provide new accessible elevators with a compliant minimum size.
69	Auditorium	-	The ramps in the auditorium had slopes ranging from 14.5% to 17.5%	The maximum slope of a ramp shall be 8.3%	24.2.1; 20.1	Reconfigure ramps to comply with 521 CMR Section 24.2 in order to have an accessible route throughout the auditorium. An alternative may be providing a lift to traverse the level change per 521 CMR Section 28.12.1
70	Auditorium	-	No accessible route provided to the orchestra pit. (only stairs are provided)	An accessible route shall be provided to all accessible spaces and elements inside a facility. Accessible routes may not include stairs.	20.1	Provide an accessible route to the orchestra pit area.
71	Auditorium	-	Stairs to the orchestra pit and stairs to stair are both lacking handrails on both sides.	Stairs shall have continuous handrails on both sides of all stairs.	27.4.1	Add compliant handrails to both sides of every stair provided.
72	Auditorium	-	There is no accessible route provided to access the sound booth.	An accessible route shall be provided to all accessible spaces and elements inside a facility. Accessible routes may not include stairs.	20.1	Provide an accessible route to the sound booth.
73	Auditorium	-	The only accessible route onto the stage is from the back of the stage, which requires leaving the assembly area.	An accessible route within the assembly area shall be provided from the wheelchair seating locations to the stage.	14.6	Provide an accessible route to the stage from within the auditorium.
74	Auditorium	-	Accessible seating was not provided in the auditorium.	In places of assembly with fixed seating, accessible seating spaces must be provided in accordance with 521 CMR 14.2.	14.2	Based on 789 fixed auditorium seats, provide at least 8 accessible spaces complying with 521 CMR 14.3 and 14.4 for seating in the auditorium.
75	Auditorium	-	Armless seats or seats with removable arms were not provided in the auditorium.	In addition to wheelchair seating locations, 1% of all fixed seats shall have no armrest or a removable armrest.	14.2.1	Based on 789 fixed auditorium seats, provide at least 8 seats with no armrests or removable armrests in the auditorium.
76	Auditorium	-	All seating areas are not on an accessible route.	Accessible seating must be dispersed throughout all seating areas and must adjoin with an accessible route.	14.4.1, 14.4.2	Provide an accessible route to all seating areas.

DEFICIENCY ID	LOCATION	APPROXIMATE NUMBER OF LOCATIONS	DEFICIENCY DESCRIPTION	CODE REQUIREMENT	521 CMR CODE REFERENCE	RECOMMENDED CORRECTIVE ACTION
77	Auditorium	-	An assistive listening system is not provided.	An assembly area shall have a permanently installed assistive listening system if the area accommodates more than 50 people.	14.5.1	Provide an assistive listening system complying with 521 CMR Section 14.5 in the auditorium.
78	Student Information Center (near stair 7)	-	The counter heights were measured to be 41 1/8 inches and 44 3/8 inches in the student center.	There must be a counter or portion of a counter or desk that is located at a maximum height of 36 inches above the floor and have a width of at least 36 inches.	7.2.2	Provide additional counter space that provides a width of 36 inches at a maximum height of 36 inches.
79	Guidance Reception Area	-	The counter height was measured to be 42 inches.	There must be a counter or portion of a counter or desk that is located at a maximum height of 36 inches above the floor and have a width of at least 36 inches.	7.2.2	Provide additional counter space that provides a width of 36 inches at a maximum height of 36 inches.
80	General - Classrooms	-	Confirm that accessible seating is provided within classrooms. Most furniture was removed from the classrooms at time of survey.	Where seating or tables are provided, at least 5% with a minimum of one of each element shall be accessible and on an accessible route. Tables and desks must comply with the requirements of 521 CMR Section 12.2.2 to be considered accessible.	12.2.2	Provide 5% accessible seating and tables on an accessible route in the lecture hall.
81	Physics Room (177)	-	The counter with the sink was measured to be at a height of 37 inches	Sinks must be mounted with a rim no higher than 34 inches above the finish floor.	12.2.2	Adjust the counter and sink such that it complies with the height requirement specified in 521 CMR Section 12.2.2
82	Physics Room (177)	-	Knee clearance was not provided for the sink in the physics lab.	Knee clearance shall be provided underneath the sink which is 27 inches minimum from the floor to the underside of the sink.	12.2.2	Provide knee clearance under the sinks within the physics room.
83	Physics Room (177)	-	The hardware for the sink is not accessible.	Faucets should be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist.	39.5	Provide accessible hardware to operate the sink.
84	Choir Room (191)	-	There is no accessible route provided to access the performing area or the piano.	An accessible route within the assembly area shall be provided from the wheelchair seating locations to the performing area.	14.6	Confirm whether the bottom tier of the room provides space which students or guests may access, i.e. the piano. If this is true, provide an accessible route to the piano area at the bottom of the room.
85	Choir Room (191)	-	An assistive listening system is not provided.	An assembly areas including concert halls or meeting room shall have a permanently installed assistive listening system if the area accommodates more than 50 people.	14.5.1	Provide an assistive listening system complying with 521 CMR Section 14.5 in the band room.
86	Choir Room (191)	-	Wheelchair seating is not dispersed throughout the seating in the band room.	Whenever more than 150 seats are provided, wheelchair seating locations must be provided in more than one location and must be dispersed throughout all seating areas.	14.4.1	Unless this room has a fixed occupant load under 150, provide accessible wheelchair seating throughout the band room seating areas.
87	Band Room (194)	-	There is no accessible route provided to access the performing area or the piano.	An accessible route within the assembly area shall be provided from the wheelchair seating locations to the performing area.	14.6	Confirm whether the bottom tier of the room provides space which students or guests may access, i.e. the piano. If this is true, provide an accessible route to the piano area at the bottom of the room.
88	Band Room (194)	-	Wheelchair seating is not dispersed throughout the seating in the band room.	Whenever more than 150 seats are provided, wheelchair seating locations must be provided in more than one location and must be dispersed throughout all seating areas.	14.4.1	Unless this room has a fixed occupant load under 150, provide accessible wheelchair seating throughout the band room seating areas.
89	Band Room (194)	-	An assistive listening system is not provided.	An assembly areas including concert halls or meeting room shall have a permanently installed assistive listening system if the area accommodates more than 50 people.	14.5.1	Provide an assistive listening system complying with 521 CMR Section 14.5 in the band room.
90	Lecture Hall (169)	-	None of the seating provided within the lecture hall is accessible.	Where seating or tables are provided, at least 5% with a minimum of one of each element shall be accessible and on an accessible route. Tables and desks must comply with the requirements of 521 CMR Section 12.2.2 to be considered accessible.	12.2.2	Provide 5% accessible seating and tables on an accessible route in the lecture hall.
91	Lecture Hall (169)	-	There is no handrail provided on the sides of the room to assist with the stairs.	Stairways shall have continuous handrails at both sides of all stairs.	27.4.1	Provide handrails complying with 521 CMR Section 27.4.
92	Lecture Hall (169)	-	An assistive listening system is not provided.	An assembly area shall have a permanently installed assistive listening system if the area accommodates more than 50 people.	14.5.1	Confirm if this room accommodates more than 50 people. If so, provide an assistive listening system complying with 521 CMR Section 14.5 in the lecture hall.
93	Examination Rooms (health office area)	-	Examination rooms in the health office do not have the clear space a wheelchair turning circle.	The space required for a wheelchair to make a 180-degree turn is a clear space of 60 inches.	6.3	Adjust the arrangement or size of the examination rooms to provide enough clear space for a wheelchair to turn around.

DEFICIENCY ID	LOCATION	APPROXIMATE NUMBER OF LOCATIONS	DEFICIENCY DESCRIPTION	CODE REQUIREMENT	521 CMR CODE REFERENCE	RECOMMENDED CORRECTIVE ACTION
94	Examination Rooms (health office area)	-	The sinks in the examination room are located at a height of 37 inches.	Sinks must be mounted with a rim no higher than 34 inches above the finish floor.	30.9.2	Adjust the sink such that it complies with the height requirement specified in 521 CMR Section 30.9.2
95	Examination Rooms (health office area)	-	The sinks in the examination room do not provide any knee clearance.	Knee clearance shall be provided underneath the sink which is 27 inches minimum from the floor to the underside of the sink.	30.9.3	Provide knee clearance under the sinks within the examination rooms.
96	Alarms	-	Visual fire alarm/ occupant notification was typically not provided within the classrooms and provided sporadically/inadequately throughout the corridors and large assembly areas.	Visual fire alarm notification must comply with NFPA 72 Section 7.5.	40.3.2	Provide compliant and consistent spacing between visual notification devices mounted between 80"-96" above the finished floor (measured to the bottom of the lens).
97	Ground Floor Stairs	-	There are areas around the stairs (ceiling above the stair landing) where the head clearance is limited to less than 80 inches. The stairs also limit the head height and do not provide correct cane detection below the obstructions.	Accessible routes and spaces must have a minimum of 80 inches clear headroom, otherwise, a barrier for cane detection must be provided.	20.7	Provide a way for visually impaired people to detect the headroom reduction below the stairways.
98	Cafeteria Area	-	No accessible route is provided to the outdoor seating.	An accessible route shall be provided to all accessible spaces and elements inside a facility.	20.1	Provide an accessible route to the outdoor seating areas near the cafeteria.
99	Cafeteria Area	-	The indoor seating does not provide options for those in wheelchairs.	At least 5% but not less than one of the table shall be accessible and on an accessible route. Accessible tables shall be distributed by size and location throughout the space or facility.	17.2	Provide 5% accessible seating dispersed throughout all provided eating areas.
100	Cafeteria Area	-	No accessible seating is provided in the outdoor seating area.	At least 5% but not less than one of the table shall be accessible and on an accessible route. Accessible tables shall be distributed by size and location throughout the space or facility.	17.2	Provide 5% accessible seating dispersed throughout all provided eating areas.
101	Animal Classroom	-	The animal classroom contained a sink with no knee clearance provided.	Knee clearance shall be provided underneath the sink which is 27 inches minimum from the floor to the underside of the sink.	12.2.2	Provide knee clearance under the sinks within the animal classroom.
102	Accessible Route - Animal Classrooms (122 & 123)	-	The accessible route between the two classrooms is 35 inches.	An accessible route shall be provided to all accessible spaces and elements inside a facility.	20.1	Provide an accessible route to between the classrooms if students are intended to travel between rooms for class.
103	Fitness center	-	Accessible route not provided throughout room due to equipment placement. An occupant would have to leave the space and access the other half of the room via an alternate entrance.	An accessible route shall be provided to all accessible spaces and elements inside a facility.	20.1	Provide an accessible route to all areas of the fitness center without someone having to leave the space.
104	Lockers	All daily lockers	Combination locks on lockers are not accessible.	Controls and operating mechanisms shall not require tight pinching or twisting of the wrist.	39.5	Provide accessible locks and locking mechanisms throughout the building.
105	Gyms	All	Gym doors do not contain hardware on the pull side (into the corridor).	Doors in the means of egress shall be operable with one hand and with a single effort. Doors in the paths of ingress shall be able to be unlocked and opened with one hand.	26.11.3	Add compliant hardware to the pull sides of the gym doors.
106	Daycare - Child sink in B16	-	Child sink is provided with 18-1/2 inches of knee clearance.	A clearance of at least 25 inches above the finish floor to the bottom of the apron shall be provided.	30.16.2	Relocate the child sink to provide the adequate knee clearance underneath per 521 CMR Section 30.00.
107	General - Locker Room	Men and Women's	Aisle is less than 36 inches between benches and lockers.	If benches are provided, there shall be a 36 inch wide aisle between benches and lockers and a five foot turning diameter near the accessible lockers.	19.4.2	Arrange benches so that there is a 36 inch wide aisle between benches and lockers.
108	Bathroom - Locker Room	Men and Women's	No accessible showers were noted in any of the locker room shower areas.	If showers are provided, then at least one shall be accessible.	31.1	Reconfigure shower are to provide an accessible shower following the provisions in 521 CMR 31.00
109	Bathroom - Locker Room	Men and Women's	No accessible stalls were noted in any of the locker room restroom areas.	If toilet stalls are provided, then at least one shall be a standard accessible toilet stall.	30.1	Reconfigure the restroom to provide an accessible following the provisions in 521 CMR Section 30.6.1.
110	Bathroom - Locker Room	Men's	Urinal flush controls measure more than 44 inches above the floor.	Flush controls must be located on the wide site of the toilet no more than 44 inches above the floor.	30.10.3	Replace the flush mechanism such that it is a maximum of 44 inches above the floor.
111	Bathroom - Locker Room	Men's	Urinal rim measured 18 and 19 inches off the ground	Urinal rims are required to be mounted a maximum of 17 inches above the floor	30.10.1	Relocate the urinal such that the rim measures a maximum of 17 inches above the floor.
112	Bathroom - Locker Room	Men's and Women's	Knee clearance was measured to be less than 27 inches.	Knee clearance shall be provided underneath the sink which is 27 inches minimum from the floor to the underside of the sink.	30.9.3	Replace or reconfigure the noncompliant sinks such that there is adequate knee clearances in accordance with 521 CMR 30.9.3.

DEFICIENCY ID	LOCATION	APPROXIMATE NUMBER OF LOCATIONS	DEFICIENCY DESCRIPTION	CODE REQUIREMENT	521 CMR CODE REFERENCE	RECOMMENDED CORRECTIVE ACTION
113	Bathroom - Locker Room	Men's and Women's	No accessible sink hardware.	Sinks must be mounted with a rim no higher than 34 inches above the finish floor.	30.9.2	Lower the sink height to be less than 34 inches above the finish floor in order to comply with 521 CMR Section 30.9.2.
114	Bathroom - Locker Room	Men's	Sink depth exceeds 6.5 inches.	Sink depth shall not exceed 6.5 inches.	30.9.4	Replace or reconfigure the noncompliant sinks such that the sink depths do not exceed 6.5 inches.
115	Bathroom - Locker Room	Men's and Women's	No visual strobe fire alarm in bathroom.	Visual signal appliances shall be provided in buildings and facilities in restrooms. Visual alarm signals shall be installed in accordance to NFPA 72, Section 7.5, 2002.	40.3	Install a visual alarm signal in accordance with NFPA 72, Section 7.5, 2002.
116	General - Locker Room	Women's Locker Room	The women's locker area and restrooms appeared to be out of commission. Detailed measurements were not taken.	-	-	-
117	Graphics Room	-	There was no knee clearance at the sink.	Knee clearance must be at least 27 inches high, 30 inches wide, and 19 inches deep.	12.2.2	Replace sinks to provide proper knee clearance.
118	General - Art Spaces	-	In general the tables were not accessible. The counter height 36" or higher in some instances and did not provide compliant knee and toe clearance.	The tops of accessible shall be from 28 inches to 34 inches above the finished floor. If seating for disable person is provided at tables or counters, knee spaces of at least 27 inches, 30 inches wide, and 19 inches deep are required to be provided.	12.2.2	Provide accessible workstations compliant with 521 CMR 12.2.2.
119	General - Art Spaces	-	Most of the art rooms have shelving and cabinets that are higher than 48".	The maximum high reach allowed is 48 inches.	6.5	Lower the shelves and cabinets or provide additional accessible ones.
120	Art Darkroom	-	There was inadequate knee clearance the washing table and workstations.	Knee clearance must be at least 27 inches high, 30 inches wide, and 19 inches deep.	12.2.2	Replace or reconfigure workstations to provide proper knee clearance.
121	Drinking Fountain	1	The height of the spout was measured to be 41".	Spouts shall be no higher than 36" above the finished floor.	36.4	Remount the drinking fountain lower to achieve compliant spout height.
See Exterior Reference Sheet	Parking (By bottom of large parking lot)	2	The van accessible parking spots on the road leading towards the school had spaces with insufficient widths	Accessible parking spaces must be at least 8 feet wide.	23.4.1	Reconfigure parking spaces to allow for the correct sizes.
See Exterior Reference Sheet	Parking (A)	1	Access aisle is less than 5' wide.	Access aisles adjacent to accessible spaces shall be 5' wide minimum.	23.4.6	Adjust access aisle to ensure that it is at least 5' wide.
See Exterior Reference Sheet	Parking (A)	-	None of the accessible spaces measure 8' in width.	Accessible parking spaces shall be at least 8' wide, plus the access aisle.	23.4.1	Adjust accessible parking spaces to ensure that they are at least 8' wide.
See Exterior Reference Sheet	Parking (A)	-	Signs are less than 5' in height.	Signs shall be permanently located at a height of not less than 5 feet nor more than 8 feet to the top of the sign.	23.6.4	Adjust the height of the signs for accessible parking such that they comply with 521 CMR Section 23.6.4.
See Exterior Reference Sheet	Parking (A)	-	Signs are located more than 10' away from space.	A sign shall be located at the head of each space and no more than 10 feet away.	23.6.1	Move the accessible parking signs to be within 10 feet of their respective spaces.
See Exterior Reference Sheet	Parking (B)	2	Accessible spots outside the daycare center are located on a 5.3% slope.	Parking spaces shall be level with surface slopes not exceeding 2%	23.4.3	Level out the location where the parking spaces are located or change the location of the accessible parking spots.
See Exterior Reference Sheet	Parking (B)	2	Accessible spots outside the daycare center do not have sufficient access aisles or the access aisles are not provided	Access aisles adjacent to accessible spaces shall be 5 feet wide minimum and access aisles adjacent to van accessible spaces shall be 8 feet wide minimum.	23.4.6	Reconfigure parking spaces to allow for the adequately sized access aisles.
See Exterior Reference Sheet	Parking (C)	6	The accessible parking spots were located at a location with slope ranging from 2.3% to 3.7%	Parking spaces shall be level with surface slopes not exceeding 2%	23.4.3	Level out the location where the parking spaces are located or change the location of the accessible parking spots.
See Exterior Reference Sheet	Parking (C)	5	The accessible parking spots near the front of the building generally did not have sufficient widths (91-95 inches).	Accessible parking spaces must be at least 8 feet (96 inches) wide.	23.4.1	Reconfigure parking spaces to allow for the correct sizes.
See Exterior Reference Sheet	Parking (C)	2	Two of the three access aisles measured 59" in width.	Access aisles adjacent to accessible spaces shall be 5 feet wide minimum.	23.4.6	Reconfigure parking spaces to allow for the correctly sized access aisles.
See Exterior Reference Sheet	Parking (D)	2	Accessible spots outside science center are located on a 4-5% slope	Parking spaces shall be level with surface slopes not exceeding 2%	23.4.3	Level out the location where the parking spaces are located or change the location of the accessible parking spots.
See Exterior Reference Sheet	Parking (E)	2	One sign is greater than 8' in height one sign has fallen down.	Signs shall be permanently located at a height of not less than 5 feet nor more than 8 feet to the top of the sign.	23.6.4	Adjust the height of the signs for accessible parking such that they comply with 521 CMR Section 23.6.4.
See Exterior Reference Sheet	Parking (E)	2	Two of three accessible parking spaces are less than 8' wide.	Accessible parking spaces shall be at least 8' wide, plus the access aisle.	23.4.1	Adjust accessible parking spaces to ensure that they are at least 8' wide.

DEFICIENCY ID	LOCATION	APPROXIMATE NUMBER OF LOCATIONS	DEFICIENCY DESCRIPTION	CODE REQUIREMENT	521 CMR CODE REFERENCE	RECOMMENDED CORRECTIVE ACTION
See Exterior Reference Sheet	Parking (E)	1	Cross slope ranges from 3.0-4.2% at 1st red door.	Nowhere shall the cross slope of an accessible route exceed 2%.	20.9	Adjust the landing to ensure that the landing is level and has a cross slope of less than 2%.
See Exterior Reference Sheet	Exterior Section A	-	The stairway to the entrance next to the loading dock does not provide an accessible route to the entrance provided.	All public entrances shall be accessible. Accessible routes may not include stairs.	25.1, 25.2, 20.1	Provide a ramp or similar accessible arrangement to the public entrance.
See Exterior Reference Sheet	Exterior Section A	-	The slope of the curb leading to the sidewalk was measured to be 13%	The slope of the curb cut shall not exceed 8.3%	21.3	Adjust the slope of the curb cut such that it complies with 521 CMR 21.3.
See Exterior Reference Sheet	Exterior Section B	-	The slope of the sidewalk leading to the sidewalk in front of the playground entrance was measured to be 10%. The cross slope was measured to be 5.3%.	The slope of the curb cut shall not exceed 8.3%. The cross slope must not exceed 2%.	20.9	Adjust the slope of the curb cut such that it complies with 521 CMR 21.3.
See Exterior Reference Sheet	Exterior Section C	-	Along this segment of the exterior sidewalk, the running slope ranges from 5% to 7% and does not comply with any requirements to be considered a ramp.	An accessible route with a running slope greater than 5% shall comply with 521 CMR 24.00: Ramps	20.9	Adjust the exterior route to ensure that there is no point on the walkway where the running slope exceeds 5% or construct a ramp compliant with 521 CMR 24.00
See Exterior Reference Sheet	Exterior Section C	-	At points along this segment of the exterior sidewalk, the cross slope was measured to be 2.3%.	Nowhere shall the cross slope of an accessible route exceed 2%.	20.9	Adjust the exterior route outside to ensure that there is no point on the walkway where the cross slope exceeds 2%.
See Exterior Reference Sheet	Exterior Section D	-	The door located to the left of the admin office entrance is not on an accessible route due to the path leading up to it having a slope as high as 18%	An accessible route with a running slope greater than 5% shall comply with 521 CMR 24.00: Ramps	20.9	Adjust the exterior route to ensure that there is no point on the walkway where the running slope exceeds 5% or construct a ramp compliant with 521 CMR 24.00
See Exterior Reference Sheet	Exterior Section D	-	The entrance to the admin office has multiple steps leading up to it.	All public entrances shall be accessible. Accessible routes may not include steps.	25.1, 25.2, 20.1	Provide a ramp or similar accessible arrangement to the public entrance.
See Exterior Reference Sheet	Exterior Section D	-	The door to the admin offices is provided with 24 inches of landing adjacent to the door.	A minimum clear floor area (maneuvering clearance) shall be provided on both sides of doors.	26.6, 5.00	Provide the minimum clear floor space complying with 521 CMR in front of the doorway.
See Exterior Reference Sheet	Exterior Section E	-	The curb cut at the end of the sidewalk leading from Section D has a cross slope measured to be 2.6%.	The cross slope of the curb cut must not exceed 2%.	21.3	Adjust the slope of the curb cut such that it complies with 521 CMR 21.3.
See Exterior Reference Sheet	Exterior Section E	-	The threshold of the exterior doors measured 1 inch.	Thresholds shall not exceed 1/2 inch in height.	26.10.1	Reduce the door threshold heights and ensure that the adjusted door thresholds comply with 521 CMR Section 26.10.
See Exterior Reference Sheet	Exterior Section F	-	The walkway leading up to the LABBB entrance was measured to be 5.8%.	The floor area within the required door clearances shall be level (2%).	26.6.1	Adjust the door landing within the clearances such that it is a level surface.
See Exterior Reference Sheet	Exterior Section F	-	The entrance to the science center has a step directly in front of it.	All public entrances shall be accessible. Accessible routes may not include steps.	25.1, 25.2, 20.1	Provide a ramp or similar accessible arrangement to the public entrance.
See Exterior Reference Sheet	Exterior Section F	-	The pavement area in front of the door was measured to have a slope of 7.8%	An accessible route with a running slope greater than 5% shall comply with 521 CMR 24.00: Ramps	20.9	Adjust the exterior route to ensure that there is no point on the walkway where the running slope exceeds 5% or construct a ramp compliant with 521 CMR 24.00
See Exterior Reference Sheet	Exterior Section F	-	The threshold at the science center entry door measured 1 inch.	Thresholds shall not exceed 1/2 inch in height.	26.10.1	Reduce the door threshold heights and ensure that the adjusted door thresholds comply with 521 CMR Section 26.10.
See Exterior Reference Sheet	Exterior Section F	-	The threshold at the door measured 1 inch.	Thresholds shall not exceed 1/2 inch in height.	26.10.1	Reduce the door threshold heights and ensure that the adjusted door thresholds comply with 521 CMR Section 26.10.
See Exterior Reference Sheet	Exterior Section G	-	A cross slope of 5.5% measured on the sidewalks in this region.	Nowhere shall the cross slope of an accessible route exceed 2%.	20.9	Adjust the exterior route outside to ensure that there is no point on the walkway where the cross slope exceeds 2%.
See Exterior Reference Sheet	Exterior Section H	-	The sidewalk ends and there is no accessible route to the main entrance or stair 3 from this section of the exterior of the building.	All public entrances shall be accessible.	25.1	Create a connection for accessible routes to ensure that people travelling from this area would be able to safely access the main/front entrances of the building.
See Exterior Reference Sheet	Exterior Section I	-	Running slope for this section of the sidewalk ranges from 3.7-4.0%.	An accessible route with a running slope greater than 5% shall comply with 521 CMR 24.00: Ramps	20.9	Adjust the exterior route to ensure that there is no point on the walkway where the running slope exceeds 5% or construct a ramp compliant with 521 CMR 24.00
See Exterior Reference Sheet	Exterior Section I	-	This section of the sidewalk is warped.	Walkway surfaces shall be stable, and firm and shall lie generally in a continuous plane with a minimum of surface warping.	22.5	Remove the warp from the walkway to ensure a continuous plane with minimum warping.
See Exterior Reference Sheet	Exterior Section I	-	Cross slope of this section of the sidewalk is 4%.	Nowhere shall the cross slope of an accessible route exceed 2%.	20.9	Adjust the exterior route outside to ensure that there is no point on the walkway where the cross slope exceeds 2%.

DEFICIENCY ID	LOCATION	APPROXIMATE NUMBER OF LOCATIONS	DEFICIENCY DESCRIPTION	CODE REQUIREMENT	521 CMR CODE REFERENCE	RECOMMENDED CORRECTIVE ACTION
See Exterior Reference Sheet	Exterior Section J	-	Threshold is greater than 1/2" in height.	Thresholds shall not exceed 1/2 inch in height.	26.10.1	Reduce the door threshold height and ensure that the adjusted door thresholds comply with 521 CMR Section 26.10.
See Exterior Reference Sheet	Exterior Section J	-	1" gap at concrete and asphalt material change. This gap is also at a slope of 5%.	Walkway surfaces shall be stable, and firm and shall lie generally in a continuous plane with a minimum of surface warping.	22.5	Reduce the gap in between the concrete and asphalt to ensure a continuous plane. This repair should additionally reduce the running slope in this area.
See Exterior Reference Sheet	Exterior Section J	-	Cross slope at pull door ranges from 2.4-2.9%.	The floor area within the required door clearances shall be level (2%).	26.6.1	Adjust the door landing within the clearances such that it is a level surface.
See Exterior Reference Sheet	Exterior Section K	-	Running slope for the section of the sidewalk ranges from 9.1-9.9%.	An accessible route with a running slope greater than 5% shall comply with 521 CMR 24.00: Ramps	20.9	Adjust the exterior route to ensure that there is no point on the walkway where the running slope exceeds 5% or construct a ramp compliant with 521 CMR 24.00
See Exterior Reference Sheet	Exterior Section K	-	Cross slope for this section of the sidewalk is 2.3%.	Nowhere shall the cross slope of an accessible route exceed 2%.	20.9	Adjust the exterior route outside to ensure that there is no point on the walkway where the cross slope exceeds 2%.
See Exterior Reference Sheet	Exterior Section L	-	Running slope for this section of the sidewalk is 11%.	An accessible route with a running slope greater than 5% shall comply with 521 CMR 24.00: Ramps	20.9	Adjust the exterior route to ensure that there is no point on the walkway where the running slope exceeds 5% or construct a ramp compliant with 521 CMR 24.00
See Exterior Reference Sheet	Exterior Section L	-	Concrete is deteriorated and there is a 28 inch gap in between materials.	Walkway surfaces shall be stable, and firm and shall lie generally in a continuous plane with a minimum of surface warping.	22.5	Repair walkway to ensure that the surface is stable, and firm and lying in a generally continuous plane.
See Exterior Reference Sheet	Exterior Section M	-	Running slope for this section is 15%.	An accessible route with a running slope greater than 5% shall comply with 521 CMR 24.00: Ramps	20.9	Adjust the exterior route to ensure that there is no point on the walkway where the running slope exceeds 5% or construct a ramp compliant with 521 CMR 24.00
See Exterior Reference Sheet	Exterior Section N	-	Running slope for this section of the sidewalk ranges from 7.6-8.8%.	An accessible route with a running slope greater than 5% shall comply with 521 CMR 24.00: Ramps	20.9	Adjust the exterior route to ensure that there is no point on the walkway where the running slope exceeds 5% or construct a ramp compliant with 521 CMR 24.00
See Exterior Reference Sheet	Exterior Section N	-	Cross slope for this section of the sidewalk ranges from 3.9-5.7%.	Nowhere shall the cross slope of an accessible route exceed 2%.	20.9	Adjust the exterior route outside to ensure that there is no point on the walkway where the cross slope exceeds 2%.
See Exterior Reference Sheet	Exterior Section N	-	Surface of the sidewalk is very bumpy.	Walkway surfaces shall be stable, and firm and shall lie generally in a continuous plane with a minimum of surface warping.	22.5	Repair walkway to ensure that the surface is stable, and firm and lying in a generally continuous plane.
See Exterior Reference Sheet	Exterior Section O	-	Running slope for this section of the sidewalk is 6%.	An accessible route with a running slope greater than 5% shall comply with 521 CMR 24.00: Ramps	20.9	Adjust the exterior route to ensure that there is no point on the walkway where the running slope exceeds 5% or construct a ramp compliant with 521 CMR 24.00
See Exterior Reference Sheet	Exterior Section O	-	Cross slope for this section of the sidewalk ranges from 2.4-2.8%.	Nowhere shall the cross slope of an accessible route exceed 2%.	20.9	Adjust the exterior route outside to ensure that there is no point on the walkway where the cross slope exceeds 2%.
See Exterior Reference Sheet	Exterior Section P	-	Handrail is 39" in height.	Top of handrail gripping surface shall be mounted between 34 inches and 38 inches above stair nosings.	27.4.2	Adjust the height of these handrails such that they comply with 521 CMR Section 27.4.2.
See Exterior Reference Sheet	Exterior Section P	-	Cross slope at top of stair landing ranges from 2.4-3.1%.	Nowhere shall the cross slope of walkways exceed (2%).	22.3.1	Adjust the landing to ensure that the landing is level and has a cross slope of less than 2%.
See Exterior Reference Sheet	Exterior Section Q	-	Running slope at the entrance door is 4.3%.	The floor area within the required door clearances shall be level (2%).	26.6.1	Adjust the door landing within the clearances such that it is a level surface.
See Exterior Reference Sheet	Exterior Section Q	-	Running slope of this walkway is 5.7%.	An accessible route with a running slope greater than 5% shall comply with 521 CMR 24.00: Ramps	20.9	Adjust the exterior route to ensure that there is no point on the walkway where the running slope exceeds 5% or construct a ramp compliant with 521 CMR 24.00
See Exterior Reference Sheet	Exterior Section Q	-	Cross slope of this walkway is 2.4%.	Nowhere shall the cross slope of walkways exceed (2%).	22.3.1	Adjust the landing to ensure that the landing is level and has a cross slope of less than 2%.
See Exterior Reference Sheet	Exterior Section R	-	Running slope at this section of the sidewalk is greater than 5%.	An accessible route with a running slope greater than 5% shall comply with 521 CMR 24.00: Ramps	20.9	Adjust the exterior route to ensure that there is no point on the walkway where the running slope exceeds 5% or construct a ramp compliant with 521 CMR 24.00
See Exterior Reference Sheet	Exterior Section R	-	Cross slope at this section of the sidewalk is greater than 2%.	Nowhere shall the cross slope of an accessible route exceed 2%.	20.9	Adjust the exterior route outside to ensure that there is no point on the walkway where the cross slope exceeds 2%.
See Exterior Reference Sheet	Exterior Section S	-	Running slope of walkway at bottom of stair ranges from 17-20%	An accessible route with a running slope greater than 5% shall comply with 521 CMR 24.00: Ramps	20.9	Adjust the exterior route to ensure that there is no point on the walkway where the running slope exceeds 5% or construct a ramp compliant with 521 CMR 24.00
See Exterior Reference Sheet	Exterior Section S	-	No bottom handrail extensions.	Handrails shall extend at least 12 inches beyond the top riser and 12" plus the width of one tread beyond the bottom riser.	27.4.3	Extend bottom flat extension to be at least 12 inches plus the width of one tread unless it will be a safety hazard to do so.
See Exterior Reference Sheet	Exterior Section S	-	Running slope of walkway at top of stair is 8.4%.	An accessible route with a running slope greater than 5% shall comply with 521 CMR 24.00: Ramps	20.9	Adjust the exterior route to ensure that there is no point on the walkway where the running slope exceeds 5% or construct a ramp compliant with 521 CMR 24.00

DEFICIENCY ID	LOCATION	APPROXIMATE NUMBER OF LOCATIONS	DEFICIENCY DESCRIPTION	CODE REQUIREMENT	521 CMR CODE REFERENCE	RECOMMENDED CORRECTIVE ACTION
See Exterior Reference Sheet	Exterior Section S	-	Surface of the walkway is very bumpy and has tree roots growing through.	Walkway surfaces shall be stable, and firm and shall lie generally in a continuous plane with a minimum of surface warping.	22.5	Repair walkway to ensure that the surface is stable, and firm and lying in a generally continuous plane.
See Exterior Reference Sheet	Exterior Section T	-	Cross slope at this section of the sidewalk is greater than 2% (3.7%).	Nowhere shall the cross slope of an accessible route exceed 2%.	20.9	Adjust the exterior route outside to ensure that there is no point on the walkway where the cross slope exceeds 2%.
See Exterior Reference Sheet	Exterior Section T	-	Stair missing handrails.	Stairways shall have continuous handrails at both sides of all stairs.	27.4	Install handrails that comply with 521 CMR Section 27.4.
See Exterior Reference Sheet	Exterior Section U	-	Running slope at this section of the sidewalk is greater than 5% (6.3%).	An accessible route with a running slope greater than 5% shall comply with 521 CMR 24.00: Ramps	20.9	Adjust the exterior route to ensure that there is no point on the walkway where the running slope exceeds 5% or construct a ramp compliant with 521 CMR 24.00
See Exterior Reference Sheet	Exterior Section U	-	Cross slope at this section of the sidewalk is greater than 2% (3.4%).	Nowhere shall the cross slope of an accessible route exceed 2%.	20.9	Adjust the exterior route outside to ensure that there is no point on the walkway where the cross slope exceeds 2%.
See Exterior Reference Sheet	Exterior Section V	-	1.5" step up to accessible entrance.	Changes in level greater than 1/2 inch are not allowed unless a ramp, walkway, or means of vertical access complying with 521 CMR is provided.	29.2.3	Provide a ramp, walkway, or means of vertical access complying with 521 CMR or decrease the step height to less than a 1/2 inch and meet the provisions of 521 CMR Section 29.2.
See Exterior Reference Sheet	Exterior Section V	-	Accessible entrance push button does not work or door is locked.	The adjacent accessible door must have hardware that allows entrance into the buildings as well as egress.	26.2.2	Unlock accessible entrance or provide working accessible door hardware for accessible entrance.
See Exterior Reference Sheet	Exterior Section W	-	Running slope at this section of the walkway is greater than 5%.	An accessible route with a running slope greater than 5% shall comply with 521 CMR 24.00: Ramps	20.9	Adjust the exterior route to ensure that there is no point on the walkway where the running slope exceeds 5% or construct a ramp compliant with 521 CMR 24.00
See Exterior Reference Sheet	Exterior Section W	-	Cross slope at this section of the walkway is greater than 2%.	Nowhere shall the cross slope of an accessible route exceed 2%.	20.9	Adjust the exterior route outside to ensure that there is no point on the walkway where the cross slope exceeds 2%.
See Exterior Reference Sheet	Exterior Section X	-	Bottom ramp in this section had a slope of greater than 8.3%.	The maximum slope of a ramp shall be 8.3%	24.2.1	Adjust all main hallway ramps such that they have a maximum slope of 8.3%
See Exterior Reference Sheet	Exterior Section Y	-	Stair landing was not level as slope was greater than 2%.	Nowhere shall the cross slope of an accessible route exceed 2%.	20.9	Adjust the exterior route outside to ensure that there is no point on the walkway where the cross slope exceeds 2%.