

INSPECTIONS FOR FALL HAZARDS AT BUILDING INTERIOR AND FACADE

Winter Hill Community Innovation School

115 Sycamore Street

Somerville, MA

3 October 2023

SGH Project 230889



PREPARED FOR

Capital Projects and Planning

City of Somerville

1 Franey Road

Somerville, MA 02145

PREPARED BY

Simpson Gumpertz & Heger Inc.

480 Totten Pond Road

Waltham, MA 02451

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3 October 2023

Ms. Debora Mitrano
Capital Projects and Planning City of Somerville
1 Franey Road
Somerville, MA 02145

Project 230889 – Inspections for Fall Hazards at Winter Hill Community School,
Somerville, MA

Dear Ms. Mitrano:

Attached are our field reports and daily updates summarizing our findings and recommendations from our inspections of the interior of the Winter Hill Community School, staffing reports, and potential fall hazard and inspection plans.

During our inspections, we identified several locations representing fall hazards and areas of unsound concrete, as described in our field reports. These locations are localized and not widespread. Based on our findings, from a structural perspective, the building can be occupied after removal of the fall hazards and repair of unsound concrete identified in our reports.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Sal A. Capobianco', is positioned above the printed name.

Sal A. Capobianco, P.E.
Senior Principal
MA License No. 34343

A handwritten signature in black ink, appearing to read 'Gustavo Tumialan', is positioned above the printed name.

Gustavo Tumialan, P.E.
Associate Principal
MA License No. 51044

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Executive Summary

The Winter Hill Community School in Somerville, Massachusetts was built in the mid-1970s. The school is a four-story structure with penthouse structures. The floor and roof structural systems consist of hollow-core precast concrete planks supported on cast-in-place concrete beams and columns. Concrete beams and columns support the planks. The underside of the floors above the classrooms, offices, hallways, library, restrooms, and portions of the Gymnasium are concealed by ceiling tiles.

In May 2023, a small section of concrete fell through the ceiling of Stair 1. Following this event, the City of Somerville closed the school and started planning for an inspection for fall hazards. Simpson Gumpertz & Heger, Inc. perform visual and hands-on inspections throughout the school between July and September 2023. The objective of our inspections was to identify areas that represented fall hazards or that required repairs. SPS New England (SPS) assisted us with our inspections.

Appendix A includes our Field Reports 1 to 6 that summarize our findings and recommendations. During July and August 2023, we inspected approximately 65% of the interior areas and 100% of the Gymnasium, stair towers, and façade. Field Reports 1 through 5, issued between 24 July and 17 August 2023, summarize the findings from these inspections. We returned to the site in September 2023 to inspect areas of the building interior that were not inspected in July and August. Field Report 6, issued 29 September 2023, summarizes the findings from our additional inspections.

Appendix B includes our daily reports to the City of Somerville summarizing our findings after a day of inspections.

Appendix C includes an inspection log and associated plans showing the inspection activity each day.

Appendix D includes plans showing locations of potential fall hazards and the extent of our inspections.

During our inspections, we identified several locations representing fall hazards and localized areas of unsound concrete. These locations are localized and not widespread. Our general findings are as follows:


- At the building interior and stair towers:
 - Existing concrete spalls at the building interior, stair towers. The concrete surrounding these spalls is generally sound.
 - Extensive corrosion staining across Levels 3 and 4. We did not discover any evidence of active leaking in these areas.

- Widespread efflorescence along concrete panels, beams, and columns. The efflorescence generally appears aged. There is no evidence of active leaks in these areas.
- Several non-structural concerns, including cracked CMU and tripping hazards.
- At the facade:
 - A few minor existing concrete spalls exist along the facade, observed from the ground using binoculars. We did not sound the facade.

Based on our findings, from a structural perspective, the building can be occupied after removal of the fall hazards and repair of unsound concrete identified in our field reports.

APPENDIX A

FIELD REPORTS

FIELD REPORT NO. 1		
Report By:	Kasey Mearls, Giuliana Stovall, and Gustavo Tumialan	
Date of Site Visit:	19-21 July 2023	
Date Report Issued:	24 July 2023	
Project No./Keyword:	230889	WINT
Project Name:	Inspections for Fall Hazards at Winter Hill Community School, Somerville, MA	
Purpose:		Inspections for Fall Hazards at Kitchen and Cafeteria
Meeting/Work Location:	Site	Time – from: 7:00 a.m. to: 4:00 p.m.
Weather:	Sunny	Ambient Temperature: 90°F
Persons Contacted:	Debora Mitrano (City of Somerville) Jared Brewer (SPS New England, Inc.)	
Distribution:	Debora Mitrano (City of Somerville)	
<i>This report is limited. The following items are based on brief and limited observations of certain selected locations; all similar locations may not have been observed. Other issues of equal or greater importance may not be addressed in this report. Recommendations included in this report are for consideration by the project team and are not construction change directives.</i>		

Simpson Gumpertz & Heger Inc. (SGH) visited the Winter Hill Community School between 19 and 21 July 2023 to perform inspections of the underside of the floors above the kitchen and cafeteria. These inspections are part of an ongoing inspection program at other areas of the school, including classroom, gymnasium, stairways, etc.

This field report summarizes our findings and recommendations from our inspections of the kitchen and cafeteria. The inspection team was comprised of the following individuals:

- Giuliana Stovall
- Kasey Mearls
- Sylvia Costa
- Gustavo Tumialan

1. BACKGROUND AND OBJECTIVE

The Winter Hill Community School was built in mid-1970s. The school is a four-story structure with penthouse structures. At the kitchen and cafeteria, the floor structural system consists of hollow-core precast concrete planks supported on cast-in-place concrete beams and columns. Concrete beams and columns support the planks. The underside of the floors above the kitchen and cafeteria are concealed by ceiling tiles.

The objective of our inspections is to identify areas that represent fall hazards or that require repairs.

2. FIELD INSPECTION

SPS New England, Inc. (SPS) assisted us with our inspection. At our direction, SPS removed ceiling tiles as required to expose the underside of the floors above the kitchen and cafeteria and provided staging for our visual and hands-on inspections. Our hands-on inspections involved close-up examinations and tapping with hammers to detect unsound concrete. The extent of our inspections included the following:

- Kitchen: All ceiling tiles were removed to perform our inspections. We performed hands-on inspections of approximately 80% of the underside of the concrete floor above. Existing mechanical equipment and ducts prevented us from performing hands-on inspections at the remaining 20% of the underside. However, we were able to perform visual surveys at these areas. Photo 1 shows an overall view of a kitchen area after removal of ceiling tiles.
- Cafeteria: Twenty-five ceiling tiles were removed to perform our inspections. We inspected the underside of the concrete floor above from seventeen inspection points. We performed a visual survey of approximately 90% and a hands-on survey of approximately 10% of the underside of the concrete floor above. Photo 2 shows an overall view of a cafeteria area after removal of selected ceiling tiles.

Below is a summary of our field observations.

- The structure above the kitchen and cafeteria is in generally good condition.
- There are two locations with cracked concrete representing potential fall hazards, one at the cafeteria and one at the kitchen (Photos 3 and 4). Their size is approximately 3 in. by 6 in. Figure 1 shows the approximate locations of these areas. There is no indication of corrosion-induced damage at these locations.
- There are three small areas of unsound concrete above the kitchen (Photo 5). Their size is approximately 6 in. by 6 in. We sounded the adjacent concrete and did not find loose or deteriorated concrete posing a potential fall hazard risk. Figure 1 shows the approximate locations of these areas.
- There are multiple existing spalls in the concrete, typically at the joints between floor planks above the kitchen and cafeteria (Photos 6 and 7). Their sizes vary from 2 in. by 2 in. to 9 in. by 9 in. There is no indication of corrosion-induced damage at these locations. We sounded the adjacent concrete and did not find loose or deteriorated concrete posing a potential fall hazard.
- There is efflorescence at several joints between floor planks and beams within the cafeteria and kitchen (Photo 8). There were no signs of active leakage. We sounded the adjacent concrete and did not find loose or deteriorated concrete posing a potential fall hazard.

- The grout between the CMU partition wall and beam separating the kitchen and cafeteria is cracked and loose at several locations (Photo 9). The loose grout poses a potential fall hazard.

3. SUMMARY AND RECOMMENDATIONS

Below is a summary of our findings:

- The floor structure above the kitchen and cafeteria is generally sound.
- There are two locations at the floor underside above the kitchen and cafeteria that represent potential fall hazards, one at the kitchen and one at the cafeteria.
- The concrete adjacent to potential fall hazards and existing spalls is sound.
- The small areas of unsound concrete that we found are not loose and do not pose a potential fall hazard at this time.
- There are several existing spalls, typically at the joints between floor planks. These small areas are not related to a widespread structural issue.
- The efflorescence found along joints between floor planks and beams is evidence of past moisture penetration. We did not find unsound concrete along areas with efflorescence.
- The cracked and loose grout at the top of the partition CMU wall poses a potential fall hazard.

Based on our inspections of the underside of the floors above the kitchen and cafeteria, we recommend the following:

- Remove concrete identified as a potential fall hazard at the underside of the floors above the kitchen and cafeteria. Removal of unsound concrete at these locations does not compromise the floor's structural integrity and, therefore, does not require immediate repairs.
- Remove grout identified as a potential fall hazard at the top of the partition CMU wall. Removed grout will need to be repaired to restore fire separation between the kitchen and cafeteria. This item requires further verification.

SGH will prepare a plan showing potential fall hazards and coordinate the removal of potential fall hazards with SPS while on site.



Photo 1

Overall view of a kitchen area after removal of ceiling tiles.



Photo 2

Overall view of a cafeteria area after removal of ceiling tiles.



Photo 3

Cracked concrete at kitchen representing fall hazard.



Photo 4

Cracked concrete at cafeteria representing fall hazard.

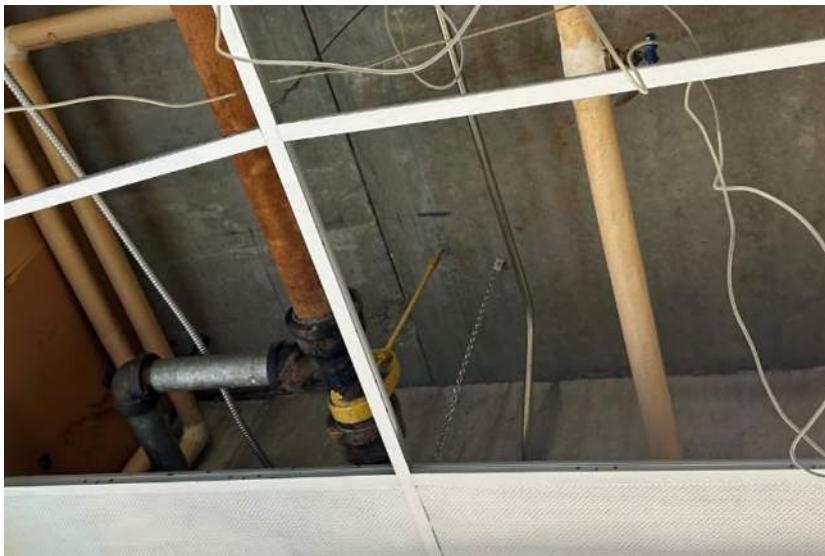


Photo 5

Small area with unsound concrete above the kitchen.



Photo 6

Existing small spall above kitchen.

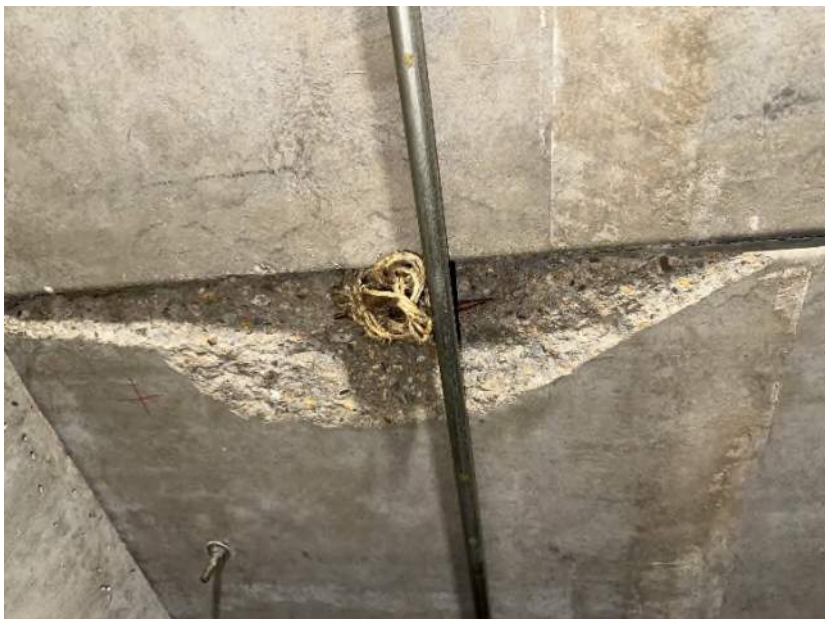


Photo 7

Existing spall above cafeteria.



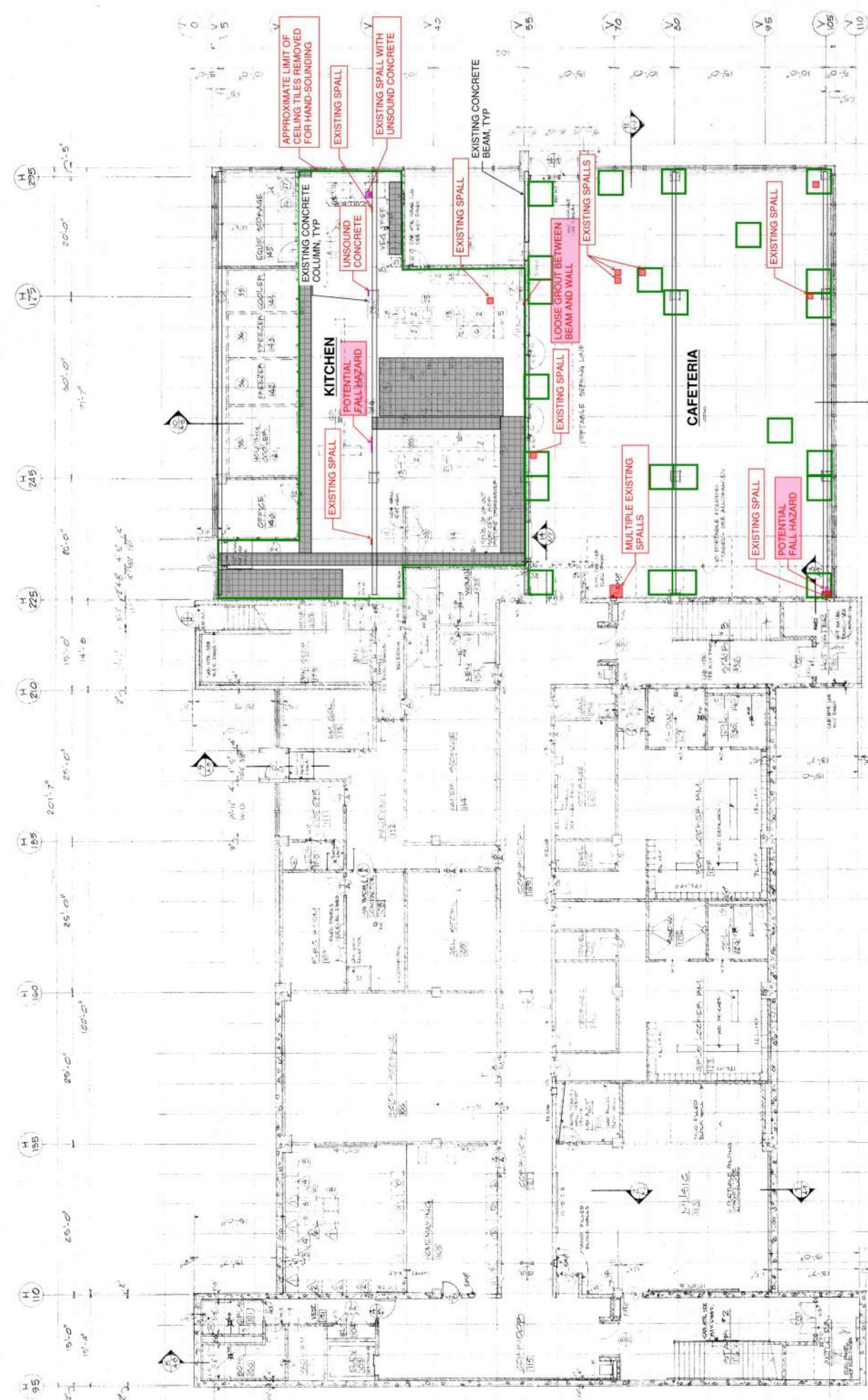
Photo 8

Efflorescence at joint between floor planks and beams.



Photo 9

Cracked and loose grout at top of CMU partition wall representing potential fall hazard.



TYP. ACOUSTICALLY
TREATED WALLS

SGH MARKUP
FIGURE 1
24 JULY 2023

[illegible]



9 August 2023

Ms. Debora Mitrano
Capital Projects and Planning
City of Somerville
1 Franey Road
Somerville, MA 02145


Project 230889 – Inspections for Fall Hazards at Winter Hill Community School,
Somerville, MA

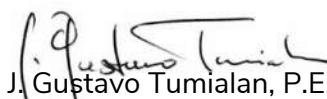
Dear Ms. Mitrano:

Attached is our field report summarizing our findings and recommendations from our inspections of the interior of the Winter Hill Community School.

During our inspections, we identified a few locations representing fall hazards and localized areas of unsound concrete, as described in the report. These locations are localized and not widespread. Based on our findings, from a structural perspective, the classrooms, offices, gymnasium, library, and hallways can be occupied after removal of the fall hazards and repair of unsound concrete identified in the report.


Sincerely yours,


Sal A. Capobianco, P.E.
Senior Principal
MA License No. 34343


J. Gustavo Tumialan, P.E.
Associate Principal
MA License No. 51044

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FIELD REPORT NO. 2		
Report By:	Kasey E. Mearls, Giuliana R. Stovall, and Gustavo Tumialan	
Date of Site Visit: Date Report Issued:	18-27 July 2023 9 August 2023	
Project No./Keyword:	230889 WINT	Purpose: Inspections for Fall Hazards at Interior
Project Name:	Inspections for Fall Hazards at Winter Hill Community School, Somerville, MA	
Meeting/Work Location:	Site	Time – from: 7:00 a.m. to: 4:00 p.m.
Weather:	Sunny	Ambient Temperature: 90°F
Persons Contacted:	Debora Mitrano (City of Somerville) Jared Brewer (SPS New England, Inc.)	
Distribution:	Debora Mitrano (City of Somerville)	
<i>This report is limited. The following items are based on brief and limited observations of certain selected locations; all similar locations may not have been observed. Other issues of equal or greater importance may not be addressed in this report. Recommendations included in this report are for consideration by the project team and are not construction change directives.</i>		

Simpson Gumpertz & Heger Inc. (SGH) visited the Winter Hill Community School between 18 and 27 July 2023 to perform inspections of the underside of the floors above the classrooms, offices, and hallways. These inspections are part of an ongoing inspection program at the school.

This field report summarizes our findings and recommendations from our inspections of the areas above. The inspection team included the following individuals:

- Giuliana R. Stovall
- Kasey E. Mearls
- Sylvia P. Costa
- Brandin W. Harvey
- Gustavo Tumialan

1. BACKGROUND AND OBJECTIVE

The Winter Hill Community School was built in the mid-1970s. The school is a four-story structure with penthouse structures. The floor and roof structural systems consist of hollow-core precast concrete planks supported on cast-in-place concrete beams and columns. Concrete beams and columns support the planks. The underside of the floors above the classrooms, offices, hallways, library, and portions of the Gymnasium are concealed by ceiling tiles.

The objective of our inspections is to identify areas that represent fall hazards or that require repairs.

2. FIELD INSPECTION

SPS New England, Inc. (SPS) assisted us with our inspection. At our direction, SPS removed ceiling tiles to expose the underside of the floors above and provided staging for our visual and hands-on inspections. Our hands-on inspections involved close-up examinations and tapping with hammers to detect unsound concrete. The attached Figures 1-4 show the extent of our visual (yellow shaded areas) and hands-on surveys (green shaded areas). The extent of our inspections included the following:

- **Level 1** includes the kitchen, cafeteria, and five classrooms.
 - Classrooms: We visually surveyed areas that were accessible and not concealed by ceiling tiles, which represent approximately 15% of the underside of the concrete floor above. We performed hands-on surveys at suspect areas.
 - Kitchen and Cafeteria: Our Field Report No. 1, dated 24 July 2023, summarizes our findings and recommendations on our inspections of the kitchen and cafeteria.
- **Level 2** includes twelve classrooms, fifteen offices or other rooms, hallways, and the Gymnasium. The Gymnasium and eight classrooms are in the southern wing of the building. The offices and four classrooms are in the northern wing of the building.
 - Classrooms: We performed inspections within eight classrooms. Five ceiling tiles were removed within each classroom; one tile at each corner of each room and one at the center. From these five inspection points, we performed a visual survey above the entirety of the classroom and approximately one-third of each adjacent classroom and a hands-on survey of the area above each removed tile. We performed a visual survey of approximately 65% and a hands-on survey of approximately 10% of the underside of the concrete floor above the classrooms.
 - Hallways: Approximately 10% of the ceiling tiles were removed in each hallway to perform our inspections. Existing mechanical equipment and ducts prevented us from performing hands-on surveys at several points along the underside. However, we were able to perform visual surveys in these areas. We performed a visual survey of approximately 50% and a hands-on survey of approximately 5% of the underside of the concrete floor above the hallways.
 - Offices: We performed inspections within seven offices. One to two ceiling tiles were removed in half of the offices to perform our inspections. We performed a visual survey of approximately 55% and a hands-on survey of approximately 5% of the underside of the concrete floor above the offices.
 - Gymnasium: The concrete roof above the Gymnasium consists of prestressed single-tee concrete panels with steel sub-framing supporting the folding partition wall at the center of the Gymnasium. Ceiling tiles conceal the steel sub-framing;

SPS removed tiles at four locations for our inspections. We performed a visual and hands-on survey of approximately 90% of the underside of the concrete roof above the Gymnasium.

- **Level 3** includes hallways and thirteen classrooms; eight classrooms are in the southern wing of the building, and five are in the northern wing.
 - Classrooms: We performed inspections within eight classrooms. Five ceiling tiles were removed within each classroom to perform our inspections; one tile at each corner of each room and one at the center. From these five inspection points we performed a visual survey of the entirety of the ceiling in the selected classrooms and approximately one-third of each adjacent classroom and a hands-on survey of the area above each removed tile. We performed a visual survey of approximately 65% and a hands-on survey of approximately 10% of the underside of the concrete floor above the classrooms.
 - Hallways: Approximately 15% of the ceiling tiles were removed in each hallway to perform our inspections. Existing mechanical equipment and ducts prevented us from performing hands-on surveys at several points along the underside. However, we were able to perform visual surveys in these areas. We performed a visual survey of approximately 80% and a hands-on survey of approximately 10% of the underside of the concrete floor above the hallways.
- **Level 4** includes eight classrooms, hallways, and the library. Eight classrooms are in the southern wing of the building. The library is in the northern wing of the building and includes offices, smaller classrooms, and the art studio. The roof directly above the reading area is framed with precast concrete beams with skylights. The roof above the rest of the library and surrounding rooms consists of hollow-core precast concrete planks supported on cast-in-place concrete beams and columns concealed by ceiling tiles.
 - Classrooms: We performed inspections within four classrooms. Five ceiling tiles were removed within each classroom to perform our inspections; one tile at each corner of each room and one at the center. From these five inspection points we performed a visual survey above the entirety of the classroom and approximately one-third of each adjacent classroom and a hands-on survey of the area above each removed tile. We performed a visual survey of approximately 65% and a hands-on survey of approximately 10% of the underside of the concrete floor above the classrooms.
 - Library: Ceiling tiles were removed at each column and at several locations between columns within the library and surrounding rooms; approximately 5% of ceiling tiles were removed. We performed a visual survey of approximately 65% and a hands-on survey of approximately 5% of the underside of the concrete roof above. We performed a visual survey of 100% of the precast concrete beams above the reading area.

- Hallways: Approximately 20% of the ceiling tiles were removed in each hallway to perform our inspections. Existing mechanical equipment and ducts prevented us from performing hands-on surveys at several points along the underside. However, we were able to perform visual surveys in these areas. We performed a visual survey of approximately 70% and a hands-on survey of approximately 15% of the underside of the concrete floor above the hallways.

3. FIELD OBSERVATIONS

Below is a summary of our field observations:

General Observations:

- The underside of the floor and roof structures are generally sound.
- There are small cracks with efflorescence at several locations throughout the underside of the floor and roof (Photo 1). The concrete surrounding these cracks is generally sound.
- There are small spalls, measuring less than 2 in. by 2 in., are at several locations throughout the classrooms, offices, and hallways (Photo 2). The spalls are typically located adjacent to mechanical hangers and appear to be abandoned attachment locations. There are additional spalls at other locations, such as panel joints, beams, and columns. The concrete surrounding the spalls is sound.
- There is heavy corrosion staining along beams, corbels, and mechanical ducts throughout Levels 3 and 4 (Photo 3). No active leaks were observed.

Level 1 Observations:

- Classrooms: there are seven potential fall hazards at three classrooms that we inspected, as described below:
 - Two potential fall hazards in Room 105. One potential fall hazard is located along a beam measuring approximately 1 in. by 6 in. (Photo 4). The second potential fall hazard is located at a corbel and measures approximately 3 in. by 3 in.
 - Two potential fall hazards in Storage Room 105. One potential fall hazard is along a panel joint measuring approximately 1 in. by 2 in. The second potential fall hazard is located adjacent to a column and measures 2 in. by 2 in.
 - Three potential fall hazards in Room 106. The three fall hazards are adjacent to columns and measure between 4 in. by 4 in. and 4 in. by 8 in.

In addition, we observed the following conditions that do not pose fall hazards:

- Several cracks with efflorescence above Room 105.
- Loose grout at a column in Room 106.

- An existing 4 in. by 12 in. spall is adjacent to a column in Room 106 with exposed and corroded reinforcement (Photo 5).

Level 2 Observations:

- Classrooms: there is one potential fall hazard at one classroom that we inspected, as described below:
 - One potential fall hazard is along a panel joint in Room 214, measuring approximately 1 in. by 6 in.

In addition, we observed the following conditions that do not pose fall hazards:

- One area of unsound concrete, measuring less than 1 sq ft, along with a crack showing corrosion staining in Room 216 (Photo 6).
 - Two existing spalls along panel joints and one existing spall at a beam in Room 219, each measuring 2 in. by 2 in.
 - Two existing spalls in Room 220, at a panel joint and a column. Both spalls measure 3 in. by 3 in.
 - One existing spall located along a panel joint in Room 212, measuring 2 in. x 3 in.
 - One existing spall located along a panel joint in Room 206, measuring 2 in. x 3 in.
 - Three existing spalls along panel joints in Room 203, measuring 4 in. by 5 in.
- Hallways: there two potential fall hazard at the hallways areas that we inspected, as described below:
 - One potential fall hazard between two utility hangers in the hallway outside the Gymnasium, measuring 2 in. by 6 in.
 - One potential fall hazard above a beam adjacent to the hallway, measuring 3 in. by 6 in. (Photo 7).

In addition, we observed the following conditions that do not pose fall hazards:

- Loose grout at two joints between beams and columns in the hallway outside the Gymnasium.
 - An existing spall, measuring 3 in. by 6 in., is in the hallway outside the Gymnasium.
- Offices: there are no potential fall hazards at the office areas that we inspected.

In addition, we observed the following conditions that do not pose fall hazards:

- Two existing spalls, measuring 6 in. by 6 in., in Office 209.
- Significant efflorescence and corrosion staining along a beam and corbel in Office 205 (Photo 8).
- An existing spall along a panel joint in Room 210, measuring 2 in. by 4 in.

- Gymnasium: there are two potential fall hazards in the Gymnasium, as described below:
 - Two potential fall hazards at panel ends in the Gymnasium, measuring 1 sq ft and 2 sq ft.

In addition, we observed the following conditions that do not pose fall hazards:

- Moisture staining along the wood panels under the Gymnasium windows. There is evidence of active leaking at window joints throughout (Photo 9).
- One area of unsound concrete at a column is adjacent to the mechanism used to raise and lower a basketball hoop.

Level 3 Observations:

- Classrooms: there are three potential fall hazards at two classrooms that we inspected, as described below:
 - Two potential fall hazards from loose grout along a CMU partition wall in Room 312.
 - One potential fall hazard at a previous repair along a panel joint in Room 314, measuring 3 in. by 6 in. (Photo 10).

In addition, we observed the following conditions that do not pose fall hazards:

- An existing spall at a corbel in Room 318, measuring 3 in. by 4 in.
 - Four existing spalls in Room 312. One is located along a panel joint and measures 2 in. by 3 in. The second and third spalls are located at mechanical openings and measure 2 in. by 6 in. and 1 in. by 4 in. The fourth spall is adjacent to a column and measures 2 in. by 6 in.
 - One existing spall at a column in Room 314, measuring 1 sq ft.
 - One existing spall along a joint in Room 305, measuring 3 in. by 4 in.
 - Loose grout along the top of a CMU partition wall in Room 304.
- Hallways: there are no potential fall hazards at the hallway areas that we inspected.

In addition, we observed the following conditions that do not pose fall hazards:

- Three existing spalls along panel joints and beams in the northern wing's hallway, measuring between 2 in. by 2 in. and 6 in. by 6 in.
- Two existing spalls, measuring 2 in. by 2 in. and 2 in. by 4 in., in the southern wing's hallway.

Level 4 Observations:

- Classrooms: there are two potential fall hazards at one classroom that we inspected, as described below:
 - Two potential fall hazards in Room 413, located at a column and a panel joint, both measuring approximately 1 sq ft (Photo 11).

In addition, we observed the following conditions that do not pose fall hazards:

- An area of unsound concrete at a column in Room 413 that measures approximately 2 sq ft.
- An existing spall at a corbel in Room 418, measuring 6 in. by 6 in.
- An existing spall at a panel joint in Room 405, measuring 4 in. by 6 in.
- Hallways: there are no potential fall hazards at the hallway areas that we inspected.

In addition, we observed the following conditions that do not pose fall hazards:

- An existing spall measuring 2 in. by 6 in. between a panel and beam in the southern hallway.
- Library: there are no potential fall hazards at the hallway areas that we inspected.

In addition, we observed the following conditions that do not pose fall hazards:

- Loose grout along a joint between beams in Room 411 (Photo 12).
- An existing spall at a beam above the reading area, measuring 2 in. by 6 in.
- An existing spall is adjacent to a mechanical hanger in Room 408, measuring 4 in. by 6 in.
- An existing spall at a column in Room 403, measuring 1 in. by 6 in.

4. SUMMARY AND RECOMMENDATIONS

The extent of inspections included a large percentage of classroom and administrative areas. However, we did not inspect all areas in the school interior. During our inspections, we identified locations representing fall hazards and localized areas of unsound concrete. The observed potential fall hazards are localized and not widespread. Based on our findings, it is likely that potential fall hazards are present in areas that we did not inspect.

The table below summarizes the extent of our inspection and potential fall hazards:

Area	Approximate % of Visually Inspected Areas	Potential Fall Hazards
Classrooms	65%	13
Hallways	65%	2
Offices	55%	None
Library	65%	None
Gymnasium	100%	2

Based on our inspections of the underside of the floors and roof, we recommend the following:

- Perform additional inspections at remaining areas in the classrooms, hallways, offices, and library and identify any potential fall hazards.
- Remove concrete identified as a potential fall hazard at the underside of the floors and roof structures. Removal of unsound concrete at these locations does not compromise the floor's structural integrity and, therefore, does not require immediate repairs.
- The small areas of unsound concrete that we found are not loose and do not pose a potential fall hazard at this time. We recommend that areas of unsound concrete be repaired if the building is fully reoccupied.
- Remove grout identified as a potential fall hazard at the top of the partition CMU walls and beam and column joints at locations identified in this report. Removed grout may need to be repaired to restore fire separation between rooms. This item requires further verification.

SGH will prepare a plan showing potential fall hazards and coordinate the removal of potential fall hazards with SPS while on site.



Photo 1

Crack with efflorescence at the underside of the floor.



Photo 2

Small spalls adjacent to mechanical hangers.



Photo 3

Heavy corrosion staining at underside of roof.



Photo 4

Potential fall hazard in Room 105.



Photo 5

Existing spall with exposed reinforcement in Room 106.



Photo 6

Unsound concrete at crack with corrosion staining in Room 216.



Photo 7

Potential fall hazards in Level 2 hallway outside of the gymnasium.



Photo 8

Corrosion staining at beam in Office 205.



Photo 9

Moisture staining at wood panels below windows in Gymnasium.

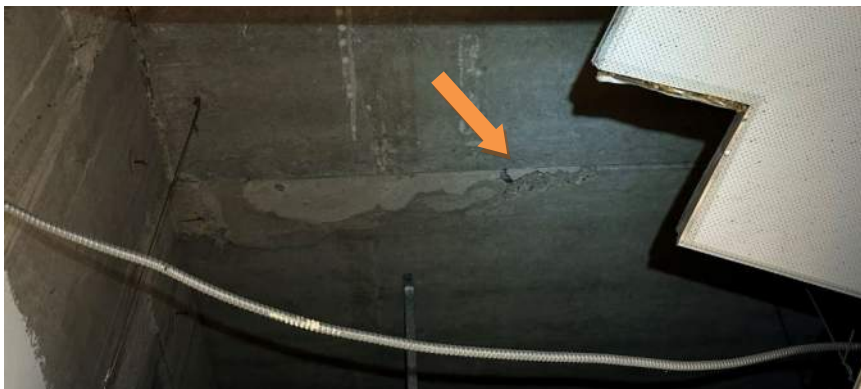


Photo 10

Potential fall hazard at previous repair in Room 314.



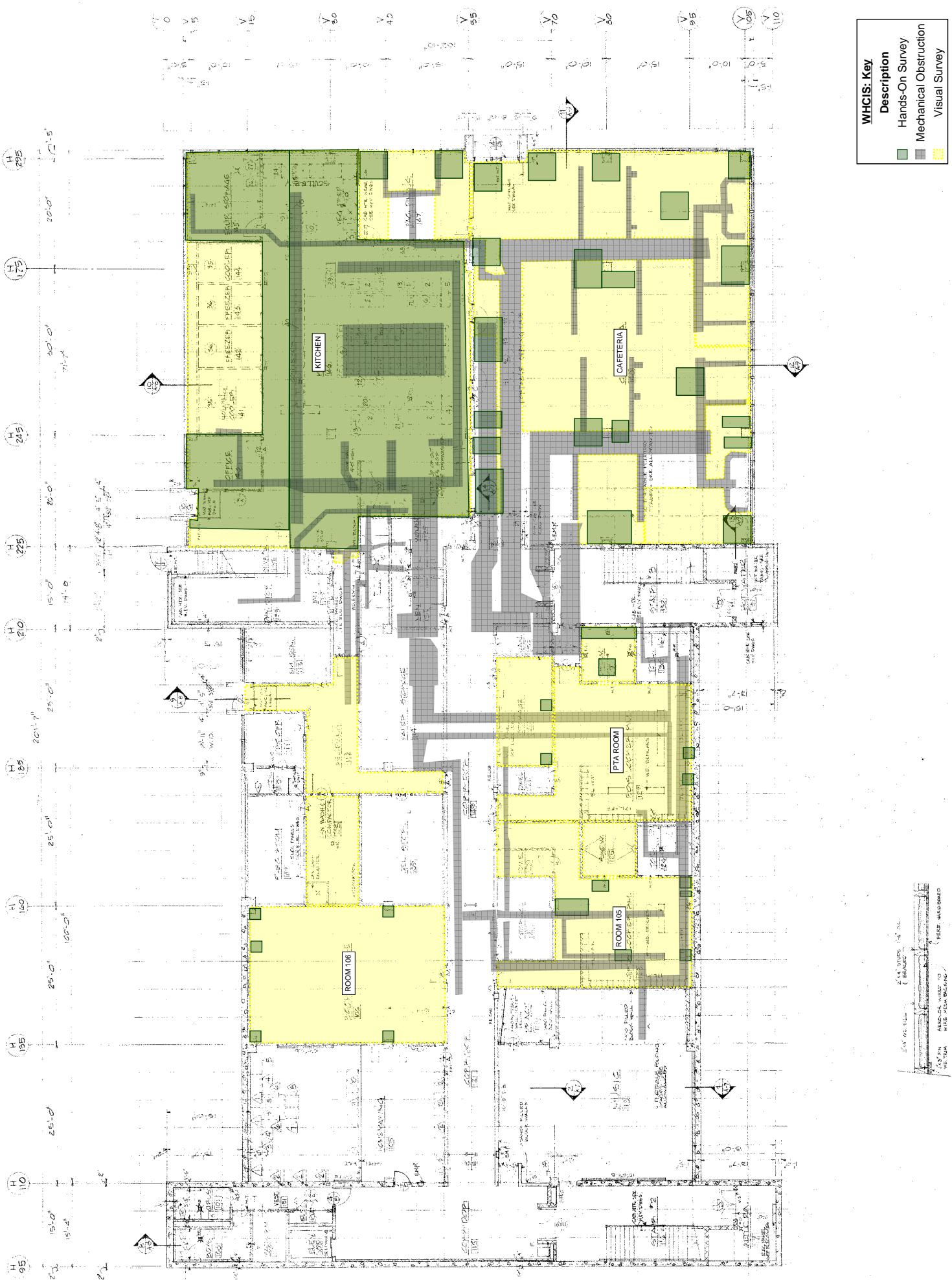
Photo 11

Potential fall hazard in Room 413.



Photo 12

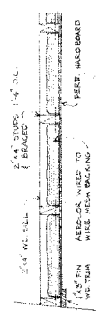
Loose grout along a beam joint in the computer lab.



WHCIS: Key

Description	Symbol
Hands-On Survey	Green square
Mechanical Obstruction	Grey square
Visual Survey	Yellow square

Figure 1:
 Level 1 Visual and Hands-On Survey Locations
 (Level 2 Underside, observed from Level 1)



**TYP. ACOUSTICALLY
 TREATED WALL'S**
 SCALE: 1/8" = 1'-0"



16 August 2023

Ms. Debora Mitrano
Capital Projects and Planning City
of Somerville
1 Franey Road
Somerville, MA 02145


Project 230889 – Inspections for Fall Hazards at Winter Hill Community School,
Somerville, MA

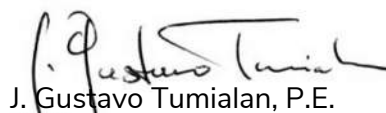
Dear Ms. Mitrano:

Attached is our field report summarizing our findings and recommendations from our inspections of the stair towers of the Winter Hill Community School.


During our inspections, we identified a few locations representing fall hazards and localized areas of unsound concrete, as described in the report. These locations are localized and not widespread. Based on our findings, from a structural perspective, the stairs can be occupied after removal of the fall hazards and repair of unsound concrete identified in the report. However, we understand that recent environmental testing revealed the presence of hazardous materials on concrete elements throughout the school. We further understand that access and occupancy of the school will be restricted until the extent and scope of remedial environmental work is defined.

Sincerely yours,


Sal A. Capobianco, P.E.
Senior Principal
MA License No. 34343


J. Gustavo Tumialan, P.E.
Associate Principal
MA License No. 51044

Encls.

FIELD REPORT NO. 3		
Report By:	Kasey E. Mearls, Giuliana R. Stovall, and Gustavo Tumialan	
Date of Site Visit:	26 July – 4 August 2023	
Date Report Issued:	16 August 2023	
Project No./Keyword:	230889	WINT
Project Name:	Inspections for Fall Hazards at Winter Hill Community School, Somerville, MA	
		Purpose: Inspections for Fall Hazards at Stair Towers
Meeting/Work Location:	Site	Time – from: 7:00 a.m. to: 4:00 p.m.
Weather:	Sunny	Ambient Temperature: 90°F
Persons Contacted:	Debora Mitrano (City of Somerville) Jared Brewer (SPS New England, Inc.)	
Distribution:	Debora Mitrano (City of Somerville)	
<i>This report is limited. The following items are based on brief and limited observations of certain selected locations; all similar locations may not have been observed. Other issues of equal or greater importance may not be addressed in this report. Recommendations included in this report are for consideration by the project team and are not construction change directives.</i>		

Simpson Gumpertz & Heger Inc. (SGH) visited the Winter Hill Community School between 26 July 2023 and 4 August 2023 to perform inspections of the walls, landings, and stairs at the four stair towers. These inspections are part of an ongoing inspection program at other areas of the school, including the kitchen, cafeteria, classrooms, offices, etc.

This field report summarizes our findings and recommendations from our inspections at the stair towers. The inspection team included the following individuals:

- Giuliana R. Stovall
- Kasey E. Mearls
- Sylvia P. Costa
- Brandin W. Harvey
- Gustavo Tumialan

1. BACKGROUND AND OBJECTIVE

The stair tower structural systems consist of hollow-core precast concrete planks and precast concrete stairs supported on precast concrete wall panels. The underside of the stair landings is concealed by ceiling tiles.

The objective of our inspections is to identify areas that represent fall hazards or that require repairs.

2. FIELD INSPECTION

SPS New England, Inc. (SPS) assisted us with our inspection. At our direction, SPS removed ceiling tiles to expose the underside of the landings above and provided staging for our visual and hands-on inspections. Our hands-on inspections involved close-up examinations and tapping with hammers to detect unsound concrete. The extent of our inspections included the following:

- Stair 1 is located at the northern side of the building and provides access to the library wing at Level 4. The stair spans from Level 2 to Level 4 and includes four landings and four stair runs.
- Stair 2 is located at the center of the building, between the classroom and office wings. The stair spans from Level 1 to Level 4 and includes nine landings and eight stair runs.
- Stair 3 is located at the southern side of the building, adjacent to the cafeteria. The stair spans from Level 1 to Level 4 and includes nine landings and eight stair runs.
- Stair 4 is located next to the Gymnasium and provides access from Level 2 to an exterior exit at Level 1. The stair includes two landings, and two stair runs. Our observation at this stair included the walls and underside of the floor above; the underside of the stair runs and landings was not accessible.

We performed visual and hands-on surveys at the undersides of the landings and stair runs and the interior wall faces. Our survey included all surfaces accessible from the floor and staging provided by SPS that were not concealed by ceiling tiles; approximately ten percent of the landing undersides were concealed by tiles that were attached to light fixtures and could not be removed. The remaining ceiling tiles are tight to the underside of the ceiling and prevented visual and hands-on inspections.

3. FIELD OBSERVATIONS

Below is a summary of our field observations, shown in the attached Figures 5-7:

General Observations:

- The underside of the landings and stair runs is generally sound.
- The grout at the connections between the precast wall panels is generally unsound. The grout poses a potential fall hazard in multiple locations, described below (Photo 1).
- There is heavy efflorescence at the panel joints and walls of Stairs 1, 2, and 3 at the roof level (Photo 2).
- There are several existing spalls and potential fall hazards, measuring approximately 2 in. by 4 in., along wood furring strips at the underside of the landings and roofs (Photo 3). Multiple furring strips were wet at the time of inspection. The furring strips appear abandoned.

- There are existing spalls adjacent to mechanical hangers throughout the stair towers, measuring approximately 2 in. by 2 in. (Photo 4).
- The steel bearing plates supporting the precast concrete landing panels are typically corroded (Photo 5).

Stair 1 Observations:

- There are thirteen potential fall hazards at the areas that we inspected, as described below:
 - Two potential fall hazards at connections at the western edge of the northern-facing wall between Levels 2 and 3, measuring 8 in. by 8 in. and 10 in. by 10 in.
 - Two potential fall hazards at the underside of the landing at Level 3, measuring 2 in. by 2 in. and 3 in. by 3 in.
 - Two potential fall hazards at connections at the southern-facing wall on Level 3, measuring 8 in. by 8 in. and 10 in. by 12 in.
 - One potential fall hazard at a connection at the top of the western-facing wall between Levels 3 and 4, measuring 8 in. by 8 in.
 - Two potential falls hazard at connections along the western-facing wall at the landing between Levels 3 and 4, each measuring 10 in. by 10 in.
 - Three potential fall hazards at connections at the top of the southern-facing wall at Level 4, each measuring 6 in. by 8 in.
 - One potential fall hazard at the joint between the stairs and landing at Level 4, measuring 2 in. by 4 in.

In addition, we observed the following conditions:

- Three existing spalls, measuring between 2 in. by 2 in. and 1 in. by 6 in., with efflorescence at the underside of the landing at Level 2.
- One area of unsound concrete along a joint at the underside of the landing at Level 2, measuring 12 in. by 8 ft – 0 in.
- One existing spall, measuring 4 in. by 4 in. at the base of the northern-facing wall at Level 3.
- Three areas of unsound concrete at the base of the southern-facing wall on Level 3, measuring 2 in. by 12 in., 6 in. by 14 in., and 4 in. by 14 in..
- One area of deteriorating cementitious coating at the southern-facing wall at Level 4, measuring 14 in. by 14 in. (Photo 6).
- Four existing spalls at the underside of the roof, measuring between 2 in. by 4 in. and 3 in. by 24 in. (Photo 7).

Stair 2 Observations:

- There are thirty-eight potential fall hazards at the areas that we inspected, as described below:

- One potential fall hazard at a connection at the top of the western-facing wall at Level 1, measuring 8 in. by 8 in. (Photo 8).
- One potential fall hazard below the landing between Levels 1 and 2, measuring 4 in. by 8 in.
- One potential fall hazard at a connection at the top of the northern-facing wall at Level 2, measuring 8 in. by 8 in.
- Four potential fall hazards at the underside of the landing at Level 2, measuring between 2 in. by 2 in. and 4 in. by 4 in.
- Two potential fall hazards at the underside of the landing between Levels 2 and 3, measuring 2 in. by 2 in. and 3 in. by 3 in.
- A potential fall hazard posed by loose grout along the panel bearing plate at the western wall at the underside of the landing between Levels 2 and 3.
- Two potential fall hazards at connections at the southern-facing wall between Levels 3 and 4, measuring 8 in. by 8 in. and 12 in. by 12 in.
- Two potential fall hazards at connections at the western-facing wall between Levels 3 and 4, each measuring 8 in. by 8 in.
- One potential fall hazard at a connection at the northern-facing wall between Levels 3 and 4, measuring 8 in. by 10 in.
- One potential fall hazard at the underside of the landing at Level 4, measuring 2 in. by 4 in.
- Three potential fall hazards at connections at the western-facing wall between Level 4 and the roof, each measuring 10 in. by 12 in.
- Three potential fall hazards the southern-facing wall between Level 4 and the roof, measuring between 6 in. by 6 in. and 8 in. by 8 in.
- Four potential fall hazards at the northern-facing wall between Level 4 and the roof, two at the mid-height of the wall, measuring 10 in. by 12 in. and 12 in. by 14 in., and two at connections, measuring 12 in. by 15 in.
- A potential fall hazard posed by loose grout at the bearing plates at Level 4 and the roof.
- Three potential fall hazards at the southern-facing wall at the penthouse, one at the top of the wall, measuring 2 in. by 3 in., and two at connections, each measuring 10 in. by 12 in.
- Eight potential fall hazards at the underside of the roof, each measuring 2 in. by 2 in.

In addition, we observed the following conditions:

- Two areas of unsound concrete at the northern-facing wall between Levels 1 and 2, measuring 5 in. by 10 in. and 10 in. by 10 in.
- One area of unsound concrete at the northern-facing wall at Level 2, measuring 10 in. by 36 in.
- One existing spall at the top of the southern-facing wall at Level 3, measuring 2 in. by 6 in.

- One area of unsound concrete at the southern-facing wall at Level 3, measuring 2 in. by 6 in.
- Two areas of unsound concrete at the northern-facing wall at Level 3, measuring 6 in. by 13 in. and 13 in. by 16 in.
- One area of unsound concrete at the northern-facing wall between Level 4 and the roof, measuring 12 in. by 30 in.
- Two existing spalls at the underside of the landing between Level 4 and the roof, measuring 2 in. by 2 in..
- Two existing spalls at the underside of the stair run from Level 4 to the roof, measuring 2 in. by 2 in. and 4 in. by 6 in. (Photo 9).

Stair 3 Observations:

- There are fifty-three potential fall hazards at the areas that we inspected, as described below:
 - One potential fall hazard at the base of the northern-facing wall at Level 1, measuring 6 in. by 9 in.
 - One potential fall hazard at a connection at the top of the southern-facing wall at the landing between Levels 1 and 2, measuring 8 in. by 8 in.
 - Two potential fall hazards at the northern-facing wall at the landing between Levels 1 and 2, each measuring 4 in. by 8 in.
 - Two potential fall hazards posed by loose grout at the bearing plate on the northern and western sides of the landing between Levels 1 and 2.
 - Two potential fall hazards at connections at the southern-facing wall at the landing between Levels 2 and 3, measuring 8 in. by 10 in. and 12 in. by 12 in.
 - Five potential fall hazards at connections at the western-facing wall at the landing between Levels 2 and 3, each measuring 8 in. by 8 in.
 - Three potential fall hazards at connections at the northern-facing wall at the landing between Levels 2 and 3, measuring between 6 in. by 18 in. and 12 in. by 12 in.
 - Two potential fall hazards posed by loose grout at the bearing plates on the northern and southern sides of the landing between Levels 2 and 3.
 - Two potential fall hazards at the underside of the landing between Levels 3 and 4.
 - Four potential fall hazards at connections at the southern-facing wall at the landing between Levels 3 and 4, measuring between 6 in. by 9 in. and 9 in. by 12 in.
 - Three potential fall hazards at connections at the western-facing wall at the landing between Levels 3 and 4, measuring between 6 in. by 9 in. and 8 in. by 8 in.
 - Three potential fall hazards at connections at the northern-facing wall at the landing between Levels 3 and 4, measuring between 2 in. by 2 in. and 9 in. by 12 in.
 - Two potential fall hazards at connections at the southern-facing wall at the landing between Level 4 and the roof, measuring between 6 in. and 9 in. and 8 in. by 14 in.

- Six potential fall hazards at connections at the western-facing wall at the landing between Level 4 and the roof, measuring between 6 in. and 9 in. and 12 in. by 12 in.
- Three potential fall hazards at connections at the northern-facing wall at the landing between Level 4 and the roof, measuring between 12 in. and 12 in. and 6 in. by 16 in.
- One potential fall hazard at a connection at the eastern-facing wall between Level 4 and the roof, measuring 6 in. by 18 in.
- One potential fall hazard at the vertical face of the landing at the roof level, measuring 4 in. by 4 in.
- Ten potential fall hazards along wood furring strips at the underside of the roof, each measuring 2 in. by 2 in.

In addition, we observed the following conditions:

- One area of unsound concrete at the base of the southern-facing wall at the landing between Levels 1 and 2, measuring 6 in. by 6 in.
- One area of unsound concrete at the base of the northern-facing wall at Level 1, measuring 6 in. by 16 in.
- The steel bearing plate at the northern edge of the landing between Levels 1 and 2 is severely corroded and actively crumbling.
- The steel bearing plate at the southern and northern edges of the landing between Levels 2 and 3 is concealed by plywood; the plywood is wet at the southern edge (Photo 10).
- There are four existing spalls on the underside of the landings between Levels 3 and 4, each measuring 2 in. by 4 in.
- One existing spall at the northern-facing wall between Level 4 and the roof, measuring 12 in. by 12 in.
- The paint at the northern-facing wall between Levels 1 and 2 and Level 4 and the roof is peeling. There is evidence of active leaks along the wall (Photo 11).

Stair 4 Observations:

- There are four potential fall hazards at the areas that we inspected, as described below:
 - The grout at the four connections above the exterior door on Level 1 is loose (Photo 12).

In addition, we observed the following conditions:

- A 6 in. by 6 in. area of unsound concrete along the south-facing wall, adjacent to the landing at Level 2.
- There is heavy efflorescence along the south-facing wall.
- There are two existing 1 in. by 4 in. spalls along a panel joint above the stair.

4. SUMMARY & RECOMMENDATIONS

The extent of our inspections included a large percentage of each stair tower. However, we were unable to inspect areas concealed by the remaining ceiling tiles. During our inspections, we identified locations representing potential fall hazards and localized areas of unsound concrete. Based on our findings, it is likely that potential fall hazards are present in the areas that we did not inspect.

The table below summarizes the extent of our inspection and potential fall hazards:

Level	Stair 1		Stair 2		Stair 3		Stair 4	
	% of Inspected Areas	Potential Fall Hazards	% of Inspected Areas	Potential Fall Hazards	% of Inspected Areas	Potential Fall Hazards	% of Inspected Areas	Potential Fall Hazards
1	-	-	100%	1	100%	1	100%	4
2	100%	0	90%	6	80%	5	100%	0
3	100%	6	90%	3	100%	12	-	-
4	100%	6	90%	6	90%	12	-	-
Roof	100%	1	85%	22	80%	23	-	-
Total	100%	13	91%	38	90%	53	100%	4

Based on our inspections of the underside of the floors and roof, we recommend the following:

- Remove concrete identified as a potential fall hazard at the underside of the landings, stair runs, and wall faces. Removal of unsound concrete at these locations does not compromise the stairs' structural integrity and, therefore, does not require immediate repairs.
- Repair areas of unsound concrete, primarily located at connections between panels.
- Remove the abandoned wood furring strips at each landing underside and remove loose concrete along or concealed by the furring.
- Clean and coat the corroded steel bearing plates at each landing. Notify the engineer if the section loss exceeds 25% of the original thickness. Bearing plates with significant section loss require replacement or strengthening. Remove the plywood concealing the steel bearing plates at Stair 3 and notify the engineer for further inspection.

SGH will prepare a plan showing potential fall hazards and coordinate the removal of potential fall hazards with SPS while on site.

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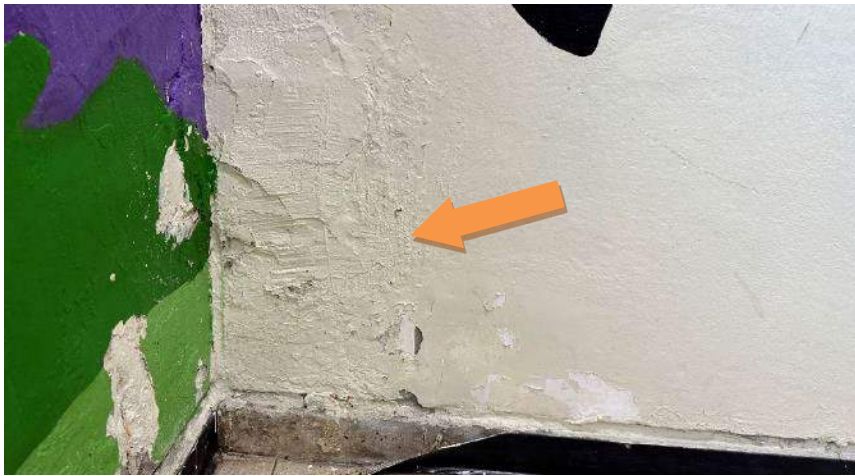


Photo 1

Loose grout at connection.



Photo 2

Heavy efflorescence at panel joints at the roof level.



Photo 3

Potential fall hazard at wood furring.

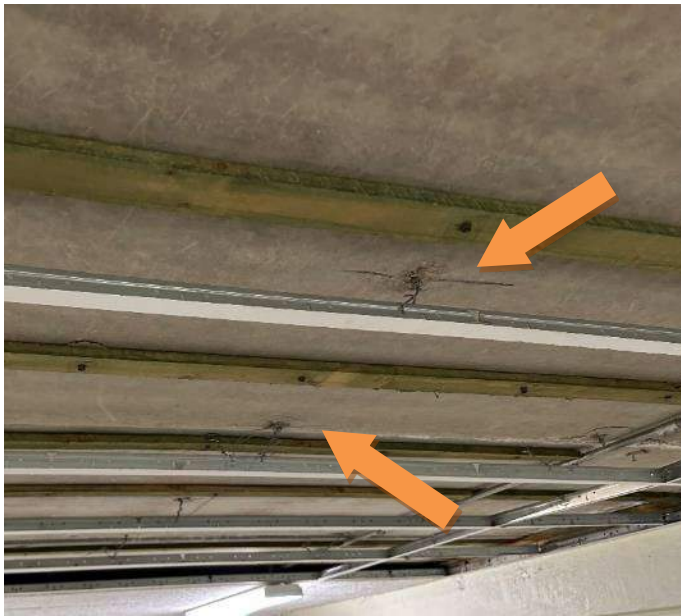


Photo 4

Existing spalls adjacent to mechanical hangers.



Photo 5

Corroded steel bearing plate at landing and wall connection.



Photo 6

Deteriorating cementitious coating at Stair 1 wall.



Photo 7

Existing spall at Stair 1 roof.



Photo 8

Potential fall hazard at Stair 1 with exposed bar.

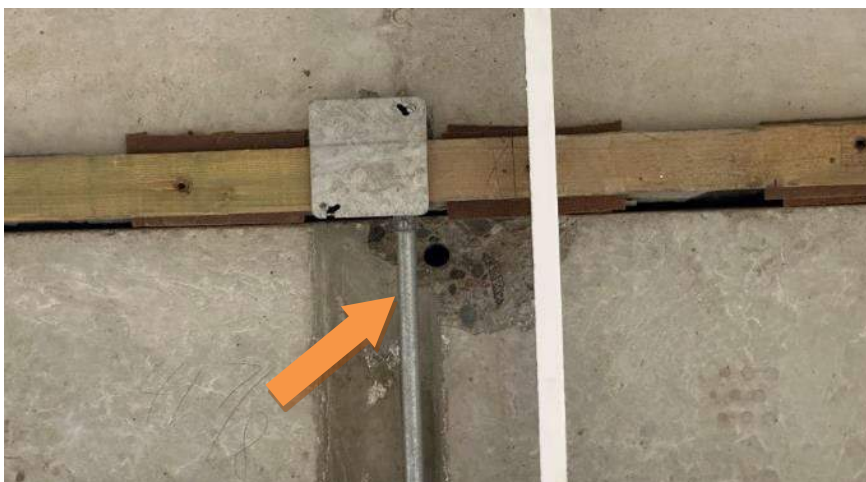


Photo 9

Existing spall at the underside of the landing between Level 4 and the roof.



Photo 10

Wet plywood covering bearing plate at the Stair 3 landing between Levels 2 and 3.



Photo 11

Peeling paint at Stair 3.



Photo 12

Loose grout above exterior door at Stair 4.

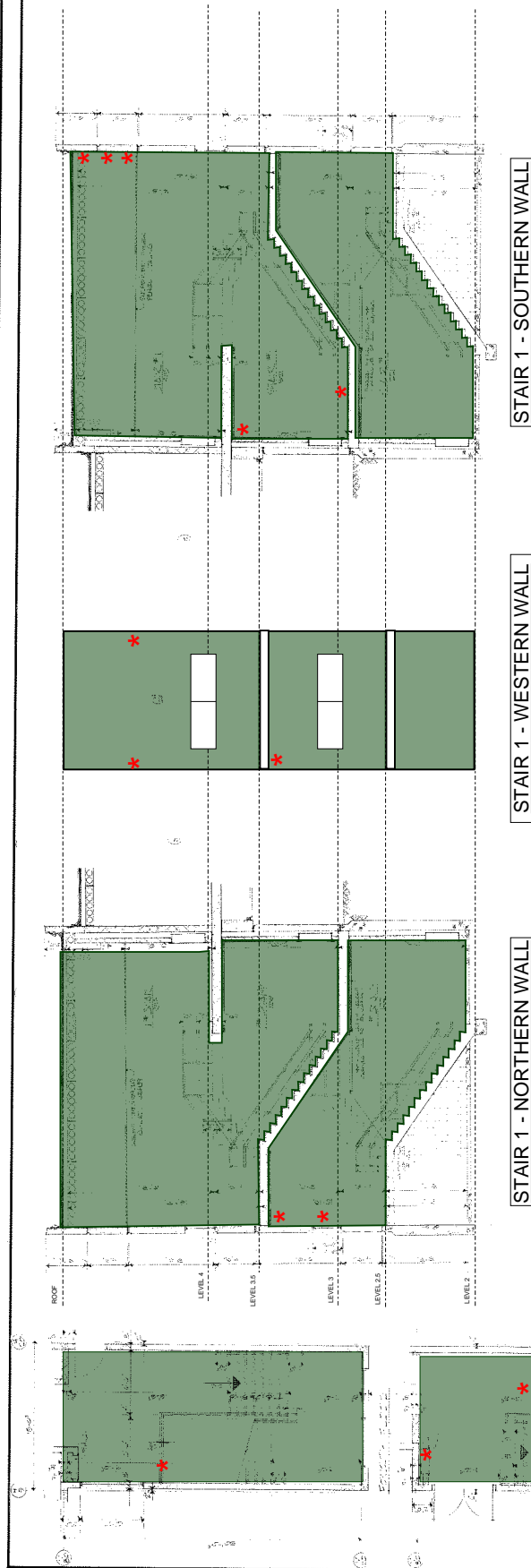
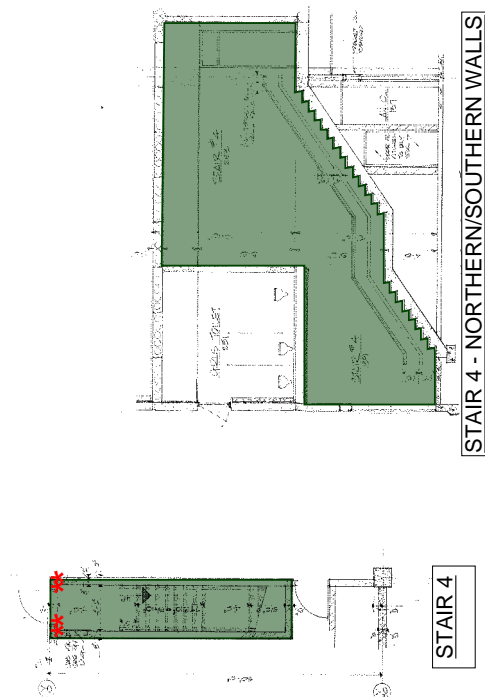
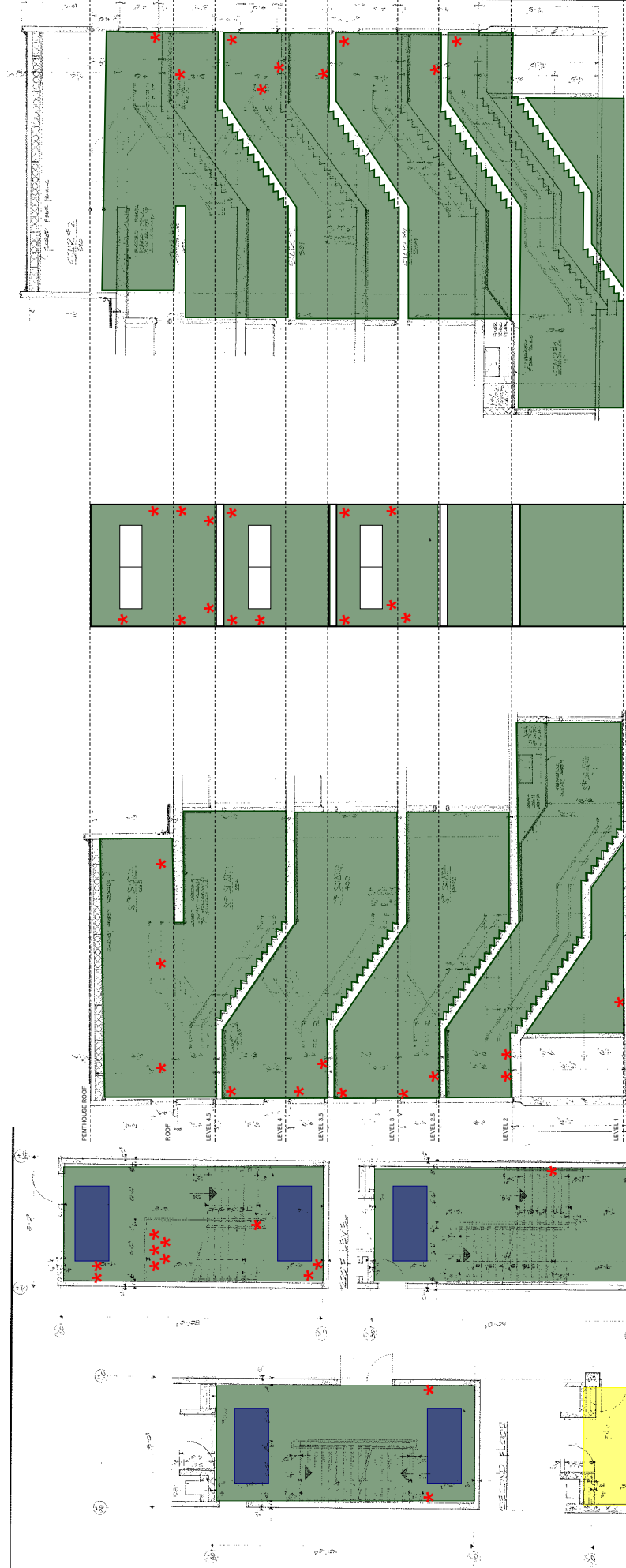


Figure 5:
Stair 1 & 4 Visual and Hands-On Survey Locations

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STAIR 3 - SOUTHERN WALL

STAIR 3 - WESTERN WALL

STAIR 3 - NORTHERN WALL

WHICS: KEY

- Areas Not Inspected
- Hands-On Sounding / Ceiling Tiles Removed
- Visual Survey
- Ceiling Tiles Not Removed
- Potential Fall Hazard

Figure 7:
Stair 3 Visual and Hands-On Survey Locations

STAIR PLANS & SECTIONS

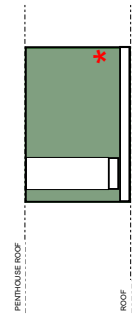
WARD FOUR
ELEMENTARY SCHOOL
STUDYING AREA

RICH LANG & CO., INC.
ARCHITECTS

DATE: 10/1/10
SCALE: 1/2" = 1'-0"
CHECKED BY: [Signature]
REV: [Signature]

A-13

STAIR 3 - EASTERN PENTHOUSE WALL



STAIR 3



17 August 2023

Ms. Debora Mitrano
Capital Projects and Planning
City of Somerville
1 Franey Road
Somerville, MA 01245

Project 230889 – Inspections for Fall Hazards at Building Facade, Winter Hill
Community School, Somerville, MA

Dear Ms. Mitrano:

Attached is our field report summarizing our findings and recommendations from our inspection of the facade of the Winter Hill Community School.

During our inspections, we identified a few locations representing fall hazards, as described in the report. These locations are localized and not widespread. Based on our findings, from a structural perspective, the outdoor areas surrounding the facade can be used and occupied, after removal of the fall hazards identified in the report. However, we understand that recent environmental testing revealed the presence of hazardous materials on concrete elements throughout the interior of the school. We further understand that access and occupancy of the school will be restricted until the extent and scope of remedial environmental work is defined.


Sincerely yours,

Sal A. Capobianco, P.E.
Senior Principal
MA License No. 34343

Gustavo Tumialan, P.E.
Associate Principal
MA License No. 51044

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FIELD REPORT NO. 4		
Report By:	Kasey E. Mearls, Giuliana R. Stovall, and J. Gustavo Tumialan	
Dates of Site Visits: Date Report Issued:	18 – 27 July 2023 17 August 2023	
Project No./Keyword:	230889	WINT
Project Name:	Inspections for Fall Hazards at Winter Hill Community School, Somerville, MA	
Purpose:	Inspections for fall hazards at building concrete facade.	
Meeting/Work Location:	Site	Time – from: 7:00 a.m. to: 4:00 p.m.
Weather:	Sunny	Ambient Temperature: 90°F
Persons Contacted:	Debora Mitrano (City of Somerville) Jared Brewer (SPS New England, Inc.)	
Distribution:	Debora Mitrano (City of Somerville)	
<i>This report is limited. The following items are based on brief and limited observations of certain selected locations; all similar locations may not have been observed. Other issues of equal or greater importance may not be addressed in this report. Recommendations included in this report are for consideration by the project team and are not construction change directives.</i>		

Simpson Gumpertz & Heger Inc. (SGH) visited the Winter Hill Community School between 18 and 26 July 2023 to perform inspections of the exterior building facade. These inspections are part of an ongoing inspection program at other areas of the school, including the kitchen, cafeteria, stairways, etc.

This field report summarizes our findings and recommendations from our inspections of the concrete panels in the building facade. We did not inspect windows. The inspection team included the following individuals:

- Giuliana Stovall
- Kasey Mearls
- Sylvia Costa
- Brandin Harvey
- Gustavo Tumialan

1. BACKGROUND AND OBJECTIVE

The Winter Hill Community School was built in the mid1970s. The school is a four-story structure with penthouse structures. The building facade includes precast concrete panels.

The objective of our inspection is to identify areas that represent fall hazards or that require repairs in the facade.

2. FIELD INSPECTION

We visually surveyed most of the facade from the ground, utilizing binoculars as necessary and from the building roof. Our visual survey included approx. 95% of the facade, as shown in the attached Fig. 8. We did not perform hands-on inspections.

3. FIELD OBSERVATIONS

Below is a summary of our field observations:

General Observations:

- There is corrosion staining present throughout the east facade (Thurston Street), typically located below windows, and continuing vertically in line with the mullions (Photo 1).
- There are horizontal hairline cracks at several locations throughout the facade.
- Multiple fixtures, including bells and speakers, attached to the facade panels appear loose (Photo 2).
- There are several existing repairs along the facade, ranging from 1 sq ft to 5 sq ft.

North Facade:

- There are three potential fall hazards at the north facade, two measuring approx. 1 sq ft each, and one measuring 2 sq ft.

In addition, we observed the following conditions:

- There are small cracks at the beam joints above the north entry (Photo 3).
- The bell at Stair 1 and the speaker on the east face of the entry appear loose.

South Facade:

- There are five potential fall hazards at the south facade, approx. 1 sq ft each (Photo 4).

In addition, we observed the following conditions:

- There is an existing spall at the base of the wall, approx. 1 sq ft.

East Facade:

- There are six potential fall hazards at the east facade, approx. 1 sq ft each.

In addition, we observed the following conditions:

- There are several existing spalls, less than 1 sq ft each (Photo 5).
- The bell on the northern tower appears loose.

West Facade:

- There is one potential fall hazard at the west facade, measuring approx. 2 sq ft, at the northern stair tower.

In addition, we observed the following conditions:

- There are multiple small diagonal cracks at the corners of door openings.
- The steel frames supporting the mechanical ducts at the northern stair tower are corroded (Photo 6).
- There are several small spalls along the northern stair tower.

4. SUMMARY & RECOMMENDATIONS

The extent of our inspections included most of the facade. However, we were unable to perform a hands-on inspection of suspect areas to verify presence of additional fall hazards, such as fixtures attached to the facade. During our inspection, we identified fifteen locations representing potential fall hazards. The table below summarizes the potential fall hazards that we observed from ground level:

Building Side	Potential Fall Hazards
North Facade	3
South Facade	5
East Facade	6
West Facade	1
Total	15

Based on our inspections of the building facade, we recommend the following:

- Remove concrete identified as a potential fall hazard. Removal of unsound concrete at these locations does not compromise the facade's structural integrity, and therefore, does not require immediate repairs.
- Inspect and resecure loose fixtures.
- Perform a hands-on inspection of representative and suspect areas.

The attached Fig. 8 shows the potential fall hazards found during our inspection. SGH will coordinate the removal of potential fall hazards with SPS while on site.



Photo 1

Corrosion staining along East facade.



Photo 2

Potentially loose fixture at East facade.



Photo 3

Crack at beam joint above north entry.



Photo 4

Potential fall hazard at facade.



Photo 5

Existing spall at east facade.



Photo 6

Corroded steel frames at
Stair 1.

17 August 2023

Ms. Debora Mitrano
Capital Projects and Planning
City of Somerville
1 Franey Road
Somerville, MA 02145

Project 230889 – Inspections for Fall Hazards at Winter Hill Community School,
Somerville, MA

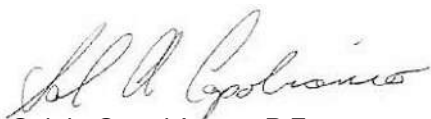
Dear Ms. Mitrano:

Attached is our field report summarizing our findings and recommendations from our inspections of the Winter Hill Community School other observations from our inspections that are not related to the building structure and facade. These observations do not pose fall hazards. Our findings include environmental concerns, aesthetic conditions, tripping hazards, etc.

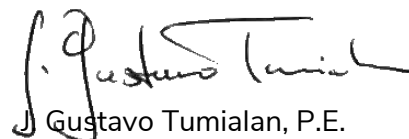
We recommend that the City review the conditions described in the field report and address them as required.

We understand that recent environmental testing revealed the presence of hazardous materials on concrete elements throughout the interior of the school. We further understand that access and occupancy of the school will be restricted until the extent and scope of remedial environmental work is defined.

Sincerely yours,




Sal A. Capobianco, P.E.
Senior Principal
MA License No. 34343



Gustavo Tumialan, P.E.
Associate Principal
MA License No. 51044

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FIELD REPORT NO. 5			
Report By:	Kasey E. Mearls, Giuliana R. Stovall, and J. Gustavo Tumialan		
Dates of Site Visits: Date Report Issued:	18 July – 4 August 2023 17 August 2023		
Project No./Keyword:	230889	WINT	Purpose: Observations not related to building structure and facade (non-structural conditions).
Project Name:	Inspections for Fall Hazards at Winter Hill Community School, Somerville, MA		
Meeting/Work Location:	Site		Time – from: 7:00 a.m. to: 4:00 p.m.
Weather:	Sunny		Ambient Temperature: 90°F
Persons Contacted:	Debora Mitrano (City of Somerville) Jared Brewer (SPS New England, Inc.)		
Distribution:	Debora Mitrano (City of Somerville)		
<i>This report is limited. The following items are based on brief and limited observations of certain selected locations; all similar locations may not have been observed. Other issues of equal or greater importance may not be addressed in this report. Recommendations included in this report are for consideration by the project team and are not construction change directives.</i>			

Simpson Gumpertz & Heger Inc. (SGH) visited the Winter Hill Community School between 18 July and 4 August 2023 to perform inspections in the building interior and building facade. These inspections are part of an ongoing inspection program at the school. Field Reports 1 – 4 summarize our findings.

This field report summarizes other observations from our inspections that are not related to the building structure and facade. These findings include environmental concerns, aesthetic conditions, tripping hazards, etc. The inspection team included the following individuals:

- Giuliana Stovall
- Kasey Mearls
- Sylvia Costa
- Brandin Harvey
- Kevin Misaro
- Gustavo Tumialan

1. BACKGROUND AND OBJECTIVE

Field Reports 1 – 4 provide a description of the building structure and facade as well as the objectives of our inspections.

2. FIELD INSPECTION

Field Reports 1 – 4 summarize the extents and methodology of our inspections.

3. FIELD OBSERVATIONS

Below is a summary of our observations:

Level 1:

- There are multiple cracked mortar joints in the CMU partition walls at Level 1 (Photo 1).
- The rubber grating at an exterior door at Level 1 is damaged and presents a tripping hazard (Photo 2).
- There were several deceased mice and mouse droppings in the ceiling above the kitchen (Photo 3). The City of Somerville directed the Contractor to remove the mice during the replacement of the kitchen ceiling,

Level 2:

- There are multiple deceased mice in the ceiling above the hallway in the office wing.

Level 3:

- There is mold along the insulation above the ceiling at the exterior wall in Classroom 314 (Photo 4).

Stairs:

- The paint at the northern-facing wall between Levels 1 and 2 and Level 4 and the roof of Stair 3 is peeling. There is evidence of active leaks along the wall (Photo 5).
- There is water damage at the exterior doors at Level 2 of Stair 2 and Level 1 of Stair 3.

Facade:

- The sidewalk outside the exit on the southern face of the building is cracked and spalled and presents a tripping hazard (Photo 6).
- The stairs down to Thurston Street are moderately worn, and the metal nosing is corroded (Photo 7).

- The curb at the north entry is spalled (Photo 8).
- Approx. 8 sq ft of the loading dock is spalled, with exposed and corroded reinforcement (Photo 9).
- The curb along the concrete ramp to the west entrance platform is cracked and spalling (Photo 10).
- Sealant is cracked and debonded from many panel joints and windows throughout the facade (Photo 11).

4. SUMMARY & RECOMMENDATIONS

The extent of our inspections included a large percentage of the school. The non-structural findings were generally localized. It is possible that additional non-structural hazards exist in areas we did not inspect. We recommend that the City review the conditions described above and address them as required.



Photo 1

Cracked CMU partition walls at Level 1.



Photo 2

Tripping hazard at exterior door.



Photo 3

Mouse droppings in kitchen ceiling.



Photo 4

Mold along insulation at exterior wall.



Photo 5

Peeling paint at Stair 3.



Photo 6

Damaged sidewalk at southern entrance.



Photo 7

Worn and corroded exterior stairs to Thurston Street.



Photo 8

Spalled curb at north entry.



Photo 9

Spalling at edge of loading dock.



Photo 10

Cracked and spalled curb along the ramp to the west entrance.



Photo 11

Cracked joint sealant at concrete panels.



29 September 2023

Ms. Debora Mitrano
Capital Projects and Planning City of Somerville
1 Franey Road
Somerville, MA 02145

Project 230889 – Inspections for Fall Hazards at Winter Hill Community School,
Somerville, MA

Dear Ms. Mitrano:

Attached is our field report summarizing our findings and recommendations from our additional inspections of the interior of the Winter Hill Community School.

During July and August 2023, we performed inspections at selective areas of the building's interior and facade. The findings from these inspections are summarized in our Field Reports 1 through 5, issued between 24 July and 17 August 2023.

We returned to the site in September 2023 to inspect areas of the building interior that were not inspected in July and August. Our Field Report No. 2, dated 24 July 2023, summarizes our findings and recommendations for the building interior areas including classrooms, offices, and hallways. The following field report supplements Field Report No. 2.

During our inspections, we identified a few locations representing fall hazards and localized areas of unsound concrete, as described in the report. These locations are localized and not widespread. Based on our findings, from a structural perspective, the classrooms, offices, library, restrooms, mechanical and storage rooms, and hallways can be occupied after removal of the fall hazards and repair of unsound concrete identified in the report.


Sincerely yours,

Sal A. Capobianco, P.E.
Senior Principal
MA License No. 34343

J. Gustavo Tumialan, P.E.
Associate Principal
MA License No. 51044

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Encls.

FIELD REPORT NO. 6			
Report By:	Kasey Mearls and Gustavo Tumialan		
Date of Site Visit: Date Report Issued:	18-20 September 2023 29 September 2023		
Project No./Keyword:	230889	WINT	Purpose: Additional Inspections for Fall Hazards at the Interior
Project Name:	Inspections for Fall Hazards at Winter Hill Community School, Somerville, MA		
Meeting/Work Location:	Site		Time – from: 7:00 a.m. to: 2:00 p.m.
Weather:	Sunny		Ambient Temperature: 70°F
Persons Contacted:	Debora Mitrano (City of Somerville)		
Distribution:	Debora Mitrano (City of Somerville)		
<i>This report is limited. The following items are based on brief and limited observations of certain selected locations; all similar locations may not have been observed. Other issues of equal or greater importance may not be addressed in this report. Recommendations included in this report are for consideration by the project team and are not construction change directives.</i>			

Simpson Gumpertz & Heger Inc. (SGH) visited the Winter Hill Community School between 18 and 20 September 2023 to perform inspections of the underside of the floors above the classrooms, offices, and hallways. These inspections are part of an ongoing inspection program at the school.

This field report summarizes our findings and recommendations from our inspections of the areas above. The inspection team included the following individuals:

- Kasey Mearls
- Brandin Harvey
- Kevin Misaro

1. BACKGROUND AND OBJECTIVE

The Winter Hill Community School was built in the mid-1970s. The school is a four-story structure with penthouse structures. The floor and roof structural systems consist of hollow-core precast concrete planks supported on cast-in-place concrete beams and columns. Concrete beams and columns support the planks. The underside of the floors above the classrooms, offices, hallways, library, and portions of the Gymnasium are concealed by ceiling tiles.

The objective of our inspections is to identify areas that represent fall hazards or that require repairs. During July and August 2023, we inspected approximately 65% of the interior areas and 100% of the Gymnasium, stair towers, and facade. The findings from these inspections are summarized in our Field Reports 1 through 5, issued between 24 July and 17 August 2023.

We returned to the site in September 2023 to inspect areas of the building interior that were not inspected in July and August. Our Field Report No. 2, dated 24 July 2023, summarizes our findings and recommendations for the building interior areas including classrooms, offices, and hallways. This field report supplements Field Report No. 2.

2. FIELD INSPECTION

SPS New England, Inc. (SPS) assisted us with our inspection. At our direction, SPS removed ceiling tiles to expose the underside of the floors above and provided staging for our visual and hands-on inspections. Our hands-on inspections involved close-up examinations and tapping with hammers to detect unsound concrete. The attached Figures 9-12 show the extent of our visual (blue shaded areas) and hands-on surveys (purple shaded areas) during the second inspection phase and the extent of our visual (yellow shaded areas) and hands-on (green shaded areas) from our initial inspections. The extent of our inspections included the following:

- **Level 1** includes the kitchen, cafeteria, five classrooms, hallways, restrooms, custodial rooms, and storage rooms.
 - Kitchen and Cafeteria: Our Field Report No. 1, dated 24 July 2023, summarizes our findings and recommendations on our inspections of the kitchen and cafeteria.
 - Classrooms: We performed inspections in the remaining classrooms. SPS removed four ceiling tiles within each classroom: one tile at the center of the room and three at the columns. From these four inspection points, we performed a visual survey above the entirety of the classroom and a hands-on survey of the area above each removed tile. We performed a visual survey of approximately 100% and a hands-on survey of approximately 15% of the underside of the concrete floor above the classrooms.
 - Hallways: Approximately 20% of the ceiling tiles were removed in each hallway to perform our inspections. Existing mechanical equipment and ducts prevented us from performing hands-on surveys at several points along the underside. However, we were able to perform visual surveys in these areas. We performed a visual survey of approximately 100% and a hands-on survey of approximately 10% of the underside of the concrete floor above the hallways.
 - Restrooms: We inspected five of the six restrooms; the restroom within Suite 106 was locked and could not be accessed. SPS removed one ceiling tile within each restroom. From each inspection point, we performed a visual survey above the entirety of the restroom and a hands-on survey of the area above each removed tile. We performed a visual survey of approximately 100% and a hands-on survey of approximately 15% of the underside of the concrete floor above the restrooms.
 - Custodial and Storage Rooms: We inspected eight of the ten custodial and storage rooms. Two rooms within Suite 106 were locked and could not be accessed: the food service room and Mechanical Room M-103. SPS removed one ceiling tile in Rooms CC-101 108 and the storage rooms within Rooms 105 and 109. Ceiling tiles did not conceal the structure above the remaining storage rooms. From each

inspection point, we performed a visual survey above the entirety of the room and a hands-on survey of the area above each removed tile and suspect areas in rooms without tiles. We performed a visual survey of approximately 70% and a hands-on survey of approximately 5% of the underside of the concrete floor above the custodial and storage rooms.

- **Level 2** includes twelve classrooms, fifteen offices or other rooms, hallways, restrooms, and the Gymnasium. The Gymnasium and eight classrooms are in the southern wing of the building. The offices and four classrooms are in the northern wing of the building.
 - **Classrooms:** We performed inspections within the remaining classrooms. SPS removed five ceiling tiles within each classroom: one tile at each corner and one at the center. From these five inspection points, we performed a visual survey above the entirety of the classroom and a hands-on survey of the area above each removed tile. We performed a visual survey of approximately 100% and a hands-on survey of approximately 10% of the underside of the concrete floor above the classrooms.
 - **Hallways:** Approximately 20% of the ceiling tiles were removed in each remaining hallway area to perform our inspections. Existing mechanical equipment and ducts prevented us from performing hands-on surveys at several points along the underside. However, we were able to perform visual surveys in these areas. We performed a visual survey of approximately 100% and a hands-on survey of approximately 10% of the underside of the concrete floor above the hallways.
 - **Offices:** We performed inspections within the six remaining offices. SPS removed one to two ceiling tiles in each office to perform our inspections. We performed a visual survey of approximately 100% and a hands-on survey of approximately 10% of the underside of the concrete floor above the offices.
 - **Restrooms:** SPS removed one ceiling tile within three of the four multi-stall restrooms; the men's room in the northern wing was locked and could not be accessed. We visually inspected the three private restrooms between classrooms and offices in the northern wing from the removed tiles within adjacent classrooms. From each inspection point, we performed a visual survey above the entirety of the restroom and a hands-on survey of the area above each removed tile. We performed a visual survey of approximately 90% and a hands-on survey of approximately 10% of the underside of the concrete floor above the restrooms.
 - **Gymnasium:** Our Field Report No. 2, dated 8 August 2023, summarizes our findings and recommendations on our inspection of the Gymnasium.
- **Level 3** includes thirteen classrooms, two offices, restrooms, storage and mechanical rooms, and hallways. Eight classrooms are in the southern wing of the building, and five classrooms and two offices are in the northern wing.
 - **Classrooms:** We performed inspections within the remaining classrooms. SPS removed five ceiling tiles within each classroom to perform our inspections: one tile

at each corner of each room and one at the center. From these five inspection points, we performed a visual survey of the entirety of the ceiling in the selected classrooms and approximately one-third of each adjacent classroom and a hands-on survey of the area above each removed tile. We performed a visual survey of approximately 100% and a hands-on survey of approximately 10% of the underside of the concrete floor above the classrooms.

- **Offices:** We performed inspections within the two offices. SPS removed one to two office ceiling tiles to perform our inspections. We performed a visual survey of approximately 100% and a hands-on survey of approximately 15% of the underside of the concrete floor above the offices.
- **Restrooms:** SPS removed one ceiling tile within the four multi-stall restrooms. We visually inspected the two private restrooms between classrooms and offices in the northern wing from the removed tiles within adjacent classrooms. From each inspection point, we performed a visual survey above the entirety of the restroom and a hands-on survey of the area above each removed tile. We performed a visual survey of approximately 90% and a hands-on survey of approximately 10% of the underside of the concrete floor above the restrooms.
- **Storage and Mechanical Rooms:** Ceiling tiles do not conceal the structure above the storage and mechanical rooms. We performed a visual survey of the entirety of the storage and mechanical rooms and a hands-on survey of select areas.
- **Hallways:** Approximately 20% of the ceiling tiles were removed in each remaining hallway area to perform our inspections. Existing mechanical equipment and ducts prevented us from performing hands-on surveys at several points along the underside. However, we were able to perform visual surveys in these areas. We performed a visual survey of approximately 100% and a hands-on survey of approximately 10% of the underside of the concrete floor above the hallways.
- **Level 4** includes eight classrooms, hallways, restrooms, storage and mechanical rooms, and the library. Eight classrooms are in the southern wing of the building. The library is in the northern wing of the building and includes offices, smaller classrooms, restrooms, and the art studio. The roof directly above the reading area is framed with precast concrete beams with skylights. The roof above the rest of the library and surrounding rooms consists of hollow-core precast concrete planks supported on cast-in-place concrete beams and columns concealed by ceiling tiles.
- **Classrooms:** We performed inspections within the remaining classrooms. SPS removed five ceiling tiles within each classroom to perform our inspections: one tile at each corner of each room and one at the center. From these five inspection points, we performed a visual survey above the entirety of the classroom and a hands-on survey of the area above each removed tile. We performed a visual survey of approximately 100% and a hands-on survey of approximately 10% of the underside of the concrete floor above the classrooms.

- Hallways: Approximately 15% of the ceiling tiles were removed in each remaining hallway for our inspections. Existing mechanical equipment and ducts prevented us from performing hands-on surveys at several points along the underside. However, we were able to perform visual surveys in these areas. We performed a visual survey of approximately 100% and a hands-on survey of approximately 10% of the underside of the concrete floor above the hallways.
- Restrooms: SPS removed one ceiling tile within the four multi-stall restrooms. From each inspection point, we performed a visual survey above the entirety of the restroom and a hands-on survey of the area above each removed tile. We performed a visual survey of approximately 100% and a hands-on survey of approximately 15% of the underside of the concrete floor above the restrooms.
- Storage and Mechanical Rooms: Ceiling tiles do not conceal the structure above the storage and mechanical rooms. We performed a visual survey of the entirety of the storage and mechanical rooms and a hands-on survey of select areas.
- Library: SPS removed ceiling tiles at five additional locations within the library and two locations in three surrounding rooms. From these inspection points, we performed a visual survey above each room and a hands-on survey of the area above each removed tile. We performed a visual survey of approximately 100% and a hands-on survey of approximately 10% of the underside of the concrete roof above.

3. FIELD OBSERVATIONS

Below is a summary of our field observations:

General Observations:

- The underside of the floor and roof structures are generally sound.
- There are small cracks with efflorescence at several locations throughout the underside of the floor and roof. The concrete surrounding these cracks is generally sound.
- There are small spalls measuring less than 2 in. by 2 in. at several locations throughout the classrooms, offices, and hallways. The spalls are typically located adjacent to mechanical hangers and appear to be abandoned attachment locations. Additional spalls exist at other locations, such as panel joints, beams, and columns. The concrete surrounding the spalls is generally sound.
- There is heavy corrosion staining along beams, corbels, and mechanical ducts throughout Levels 3 and 4. No active leaks were observed.

Level 1 Observations:

- Classrooms: there are two additional potential fall hazards at the additional locations that we inspected (eight total, including those detailed in Field Report No. 2), as described below:
 - One potential fall hazard at a column in Room 104, measuring approximately 12 in. by 12 in. (Photo 1).
 - One potential fall hazard at a previous repair on a column in Room 103, measuring approximately 16 in. by 16 in. (Photo 2).
 - Loose grout posing a potential fall hazard along a beam and column joint in Room 103 (Photo 3).

In addition, we observed the following conditions that do not pose fall hazards:

- There is an existing 3 in. by 6 in. spall along a panel joint in Room 103. The surrounding concrete is sound.
- Heavy efflorescence is present along a panel joint at a column in Room 104. Approximately 6 in. of joint sealant is missing between the column and panel (Photo 4).
- Custodial and Storage Rooms: there are three additional potential fall hazards at the additional locations that we inspected (four total, including those detailed in Field Report No. 2), as described below:
 - One potential fall hazard at a column in Room 108, measuring approximately 3 in. by 6 in. (Photo 5).
 - Two potential fall hazards on a column in Room ST-108, measuring approximately 2 in. by 3 in. and 2 in. by 6 in. (Photo 6).

In addition, we observed the following conditions that do not pose fall hazards:

- There is a crack along a panel, roughly aligned with a column, and cracks at a beam and column joint in Room 107 (Photo 7). The concrete in this area is sound.
- There is an existing spall, measuring approximately 2 sq ft, along a beam in Room CC-101. The surrounding concrete is sound.
- Hallways: there is one potential fall hazard at the additional locations that we inspected, as described below:
 - Loose grout along the top of the CMU wall at the elevator posing a potential fall hazard (Photo 8).

In addition, we observed the following conditions that do not pose fall hazards:

- Grout debris is on the ceiling tiles in multiple locations in the hallway between the classrooms (Photo 9). No active spalling was observed.

Level 2 Observations:

- Classrooms: there are nine additional potential fall hazards at the additional locations that we inspected (ten total, including those detailed in Field Report No. 2), as described below:
 - One potential fall hazard at a column in Room ST-202, measuring approximately 6 in. by 12 in. (Photo 10).
 - One potential fall hazard around three sides of a column between Rooms 216 and 218, measuring approximately 2 in. wide (Photo 11). There is a previous repair in this column that is unsound.
 - One potential fall hazard at a column in Room ST-203, measuring approximately 12 in. by 12 in. (Photo 12).
 - Two potential fall hazards at a column and a beam between Rooms 215 and 217, measuring approximately 8 in. by 8 in. and 6 in. by 6 in., respectively (Photo 13).
 - One potential fall hazard at a previous repair next to a column in Room 215, measuring approximately 18 in. by 18 in. (Photo 14).
 - One potential fall hazard is adjacent to a column in Room 217, measuring approximately 3 in. by 10 in. (Photo 15).
 - Loose grout at the top of the CMU wall in Room 208 posing a potential fall hazard.
 - Loose concrete is present along a panel joint in Room 220.

In addition, we observed the following conditions that do not pose fall hazards:

- An existing spall is adjacent to a column in Room 215, measuring approximately 4 in. by 6 in. The surrounding concrete is sound.
 - There is an existing spall along the top of a beam in Room 215, measuring approximately 3 in. by 12 in. The surrounding concrete is sound.
 - There is an existing spall along a panel joint in Room 215, measuring approximately 4 in. by 6 in. The surrounding concrete is sound.
 - There is a corrosion stain along a panel between Rooms 218 and 220, measuring approximately 6 in. by 6 in. The surrounding concrete is sound.
 - An existing spall, measuring approximately 3 in. by 3 in., is adjacent to a column in Room 216. The surrounding concrete is sound.
 - There are two existing spalls along panel joints in Room 208, measuring approximately 4 in. by 6 in. and 2 in. by 3 in. The surrounding concrete is sound.
- Hallways: there are two potential fall hazards at the additional locations that we inspected, as described below:

- One potential fall hazard, measuring approximately 2 in. by 3 in. at the column outside of the elevator shaft.
- Loose joint filler along the exterior wall in the northern hallway posing a potential fall hazard.

In addition, we observed the following conditions that do not pose fall hazards:

- There is an existing spall, measuring approximately 4 in. by 8 in., with corrosion staining, along a joint in the hallway outside of the Gymnasium (Photo 16). The surrounding concrete is sound.
- Offices: no potential fall hazards exist in the office areas we inspected.
- Restrooms: no potential fall hazards exist in the restrooms we inspected.

Level 3 Observations:

- Classrooms: there are seven additional potential fall hazards at the additional locations that we inspected (ten total, including those detailed in Field Report No. 2), as described below:
 - There are two potential fall hazards at a column in Room 320, measuring approximately 2 in. by 3 in. and 1 in. by 4 in. (Photo 17).
 - One potential fall hazard is at a column in Room 320, measuring approximately 3 in. by 6 in. (Photo 18).
 - There is one potential fall hazard at a previous repair between Rooms 317 and 319, measuring approximately 8 in. by 36 in. (Photo 19).
 - One potential fall hazard along a joint in Room 315 measures approximately 2 in. by 3 in. (Photo 20).
 - One potential fall hazard is at a column in Room 315, measuring approximately 3 in. by 6 in. (Photo 21).
 - There is one potential fall hazard at the column in the workroom between Rooms 315 and 317, measuring approximately 8 in. by 8 in.

In addition, we observed the following conditions that do not pose fall hazards:

- There is an existing spall, measuring approximately 1 in. by 2 in., along a panel joint in Room 317. The surrounding concrete is sound.
- A 16 in. long crack exists in a panel at a mechanical hanger in the workroom between Rooms 315 and 317 (Photo 22). The surrounding concrete is sound.
- The parge coat at a column in Room 317 is debonded.
- A 1 in. by 6 in. spall exists along a panel joint in Room 315. The surrounding concrete is sound.

- There is a 24 in. long crack with corrosion staining between Rooms 316 and 318 (Photo 23). The surrounding concrete is sound.
- Offices: There is one potential fall hazard in the office areas that we inspected, as described below:
 - A potential fall hazard is at a joint along the wall between Room 306 and the northern hallway, measuring approximately 3 in. by 6 in. (Photo 24).

In addition, we observed the following conditions that do not pose fall hazards:

- There is an existing spall at the column between Room 306 and the northern hallway, measuring approximately 3 in. by 6 in. (Photo 25). The surrounding concrete is sound.
- Restrooms: there are no potential fall hazards at the restrooms we inspected.
- Storage and Mechanical Rooms: There is one potential fall hazard in one of the storage rooms, as described below:
 - There is a potential fall hazard along the entire length of a crack above Room ST-306, measuring approximately 3 in. wide (Photo 26).

In addition, we observed the following conditions that do not pose fall hazards:

- A crack runs parallel to the panel span above Room ST-306, extending the entire length. Four existing spalls are along the crack, each measuring approximately 1 in. by 3 in. The crack appears to run along a joint between two panels that has been previously infilled with grout. The surrounding concrete is sound, except for the potential fall hazards described above. A raised area in the floor above aligns with the crack (Photo 27).
- Hallways: there are no potential fall hazards in the hallway areas that we inspected.

Level 4 Observations:

- Classrooms: there are two additional potential fall hazards at the additional locations that we inspected (four total, including those detailed in Field Report No. 2), as described below:
 - One potential fall hazard at the joint between a column and wall, measuring approximately 3 in. by 24 in., in Room 417 (Photo 28).
 - One potential fall hazard, measuring approximately 12 in. by 12 in. at a wall in Room 420 (Photo 29). There is also a non-structural potential fall hazard in the area, posed by loose ductwork (Photo 30).

In addition, we observed the following conditions that do not pose fall hazards:

- There is minor cracking and approximately 1 sq ft of unsound concrete at a panel joint in Room 416.
- There is approximately 1 sq ft of unsound concrete and corrosion staining at a beam and column joint in Room 417.
- Hallways: there are no potential fall hazards at the additional locations we inspected.

We observed the following conditions that do not pose fall hazards:

- A 4 ft-0 in. long crack with corrosion staining exists in the hallway between the classrooms and the Library (Photo 31).
- Restrooms: there are no potential fall hazards at the restrooms we inspected.
- Storage and Mechanical Rooms: there is one potential fall hazard in the storage rooms that we inspected, as described below:
 - There is one potential fall hazard at the top of a CMU wall in the storage room in the southern wing of the building, measuring approximately 12 in. by 12 in. (Photo 32).

In addition, we observed the following conditions that do not pose fall hazards:

- An existing spall with exposed reinforcing bar, measuring approximately 12 in. by 12 in., is in the storage room in the southern wing of the building, adjacent to the potential fall hazard described above.
- Library: There are no potential fall hazards at the additional locations we inspected.

4. SUMMARY AND RECOMMENDATIONS

The extent of our inspections included all interior areas except for a few restrooms and some storage and mechanical rooms as described above. During our inspections, we identified locations representing fall hazards and localized areas of unsound concrete. The observed potential fall hazards are localized and not widespread.

The table below summarizes the extent of our inspection and potential fall hazards:

Area	Approximate % of Visually Inspected Areas	Potential Fall Hazards
Classrooms	100%	32
Hallways	100%	3
Offices	100%	1

Area	Approximate % of Visually Inspected Areas	Potential Fall Hazards
Library	100%	0
Restrooms	90%	0
Storage & Mechanical Rooms	70%	6

Based on our inspections of the underside of the floors and roof, we recommend the following:

- Remove concrete identified as a potential fall hazard at the underside of the floors and roof structures. Removal of unsound concrete at these locations does not compromise the floor's structural integrity and, therefore, does not require immediate repairs.
- The small areas of unsound concrete that we found are not loose and do not pose a potential fall hazard at this time. We recommend repairing unsound concrete areas before reoccupation of the building.
- Remove grout and joint filler identified as a potential fall hazard at the top of the partition CMU walls and beam and column joints at locations identified in this report. Removed grout may need to be repaired to restore fire separation between rooms. This item requires further verification.
- The conditions at the crack above the Level 3 storage room do not currently pose a risk of structural failure. Notify the engineer after the potential fall hazards are removed for additional inspection if corroded reinforcement is present. In addition, we recommend that a tile be removed at the raised area in the floor above for additional inspection.

Figures 9 through 12, attached, show all potential fall hazards discovered during our inspections.



Photo 1

Potential fall hazard at column in Room 104.



Photo 2

Potential fall hazard above a column in Room 103.



Photo 3

Loose grout at a joint in Room 103.



Photo 4

Efflorescence at panel joint
in Room 104.



Photo 5

Potential fall hazard at
column in Room 108.



Photo 6

Potential fall hazard in
Room ST-108.

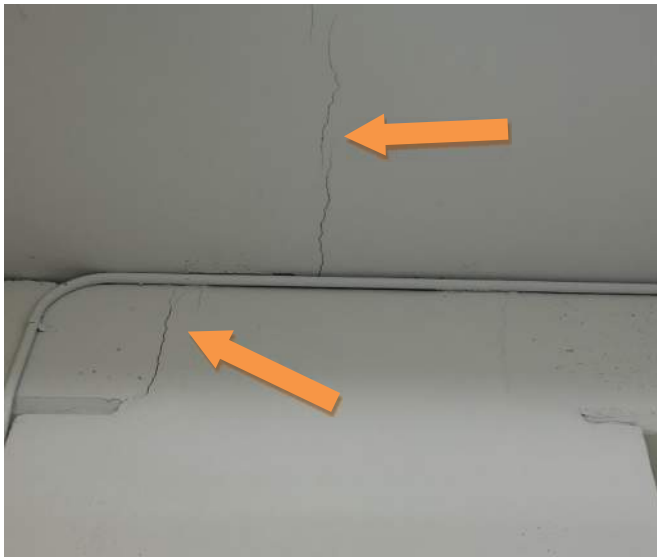


Photo 7

Crack along panel and at beam and column joint in Room 107.



Photo 8

Loose grout at top of CMU wall.



Photo 9

Grout debris on ceiling tiles.



Photo 10

Potential fall hazard at column in Room ST-202.



Photo 11

Potential fall hazard in Rooms 216 and 218.



Photo 12

Potential fall hazard at column in Room ST-203.



Photo 13

Potential fall hazards between Rooms 215 and 217.



Photo 14

Potential fall hazard with exposed reinforcement at a previous repair in Room 215.



Photo 15

Potential fall hazard at column in Room 217.



Photo 16

Existing spall with corrosion staining in hallway adjacent to gymnasium.



Photo 17

Potential fall hazards at column in Room 320.



Photo 18

Potential fall hazard above column in Room 320.



Photo 19

Potential fall hazard at previous repair between Rooms 317 and 319.



Photo 20

Potential fall hazard at a column joint in Room 315.



Photo 21

Potential fall hazard at a column in Room 315.



Photo 22

Crack along panel span in workshop.



Photo 23

Crack with corrosion stains between Rooms 316 and 318.



Photo 24

Potential fall hazard between Room 306 and the northern hallway.



Photo 25

Existing spall between Room 306 and the northern hallway.



Photo 26

Potential fall hazards along a crack in Room ST-306.



Photo 27

Raised floor above crack in Level 4 storage room.



Photo 28

Potential fall hazard at column in Room 417.



Photo 29

Potential fall hazard in Room 420.



Photo 30

Loose ductwork in Room 420.



Photo 31

Crack with corrosion staining above the hallway outside of the library.



Photo 32

Potential fall hazard and exposed reinforcement at wall in Level 4 storage room.

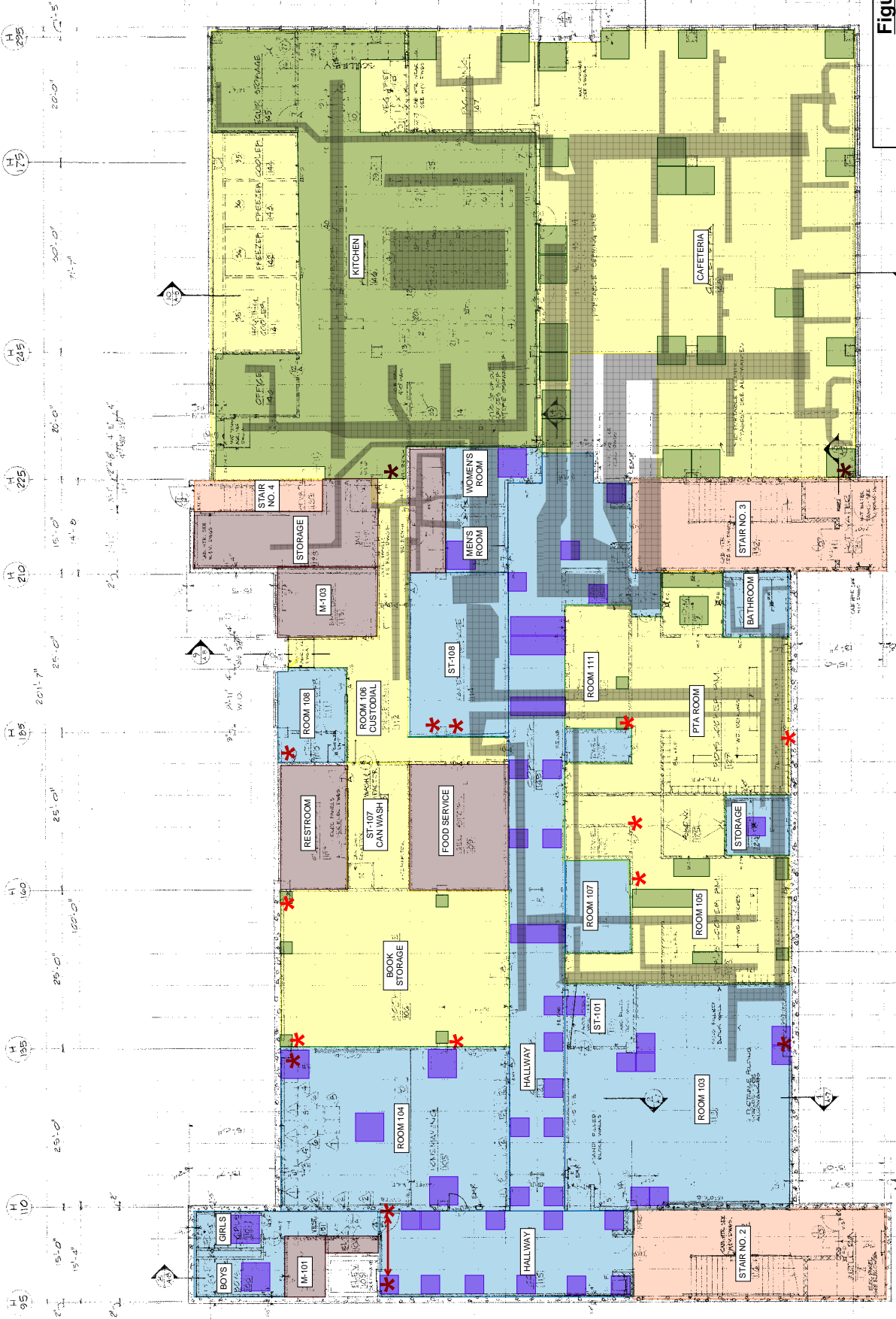


Figure 9
Level 1

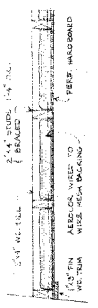
Visual and Hands-On Survey Locations
(Level 2 Underside, observed from Level 1)

Notes:

1. This plan includes surveys performed and potential fall hazards noted during the Phase 1 inspections.
2. See Figures 5-7 from Field Report No. 3, dated 16 August 2023, for surveys performed and potential fall hazards at the stairs.
3. See Figure 8 from Field Report No. 4, dated 17 August 2023, for surveys performed and potential fall hazards at the facade.

WHCIS: KEY

- Areas Not Accessible
- Areas Not Inspected
- Mechanical Obstruction
- Phase 1: Hands-On Sounding/Ceiling Tiles Removed
- Phase 1: Visual Survey
- Phase 2: Hands-On Sounding/Ceiling Tiles Removed
- Phase 2: Visual Survey
- Stair Survey - See Field Report 3
- Potential Fall Hazard
- Potential Fall Hazard - Removed



TYP. ACOUSTICALLY
TREATED WALLS
SCALE: 1/8"=1'-0"

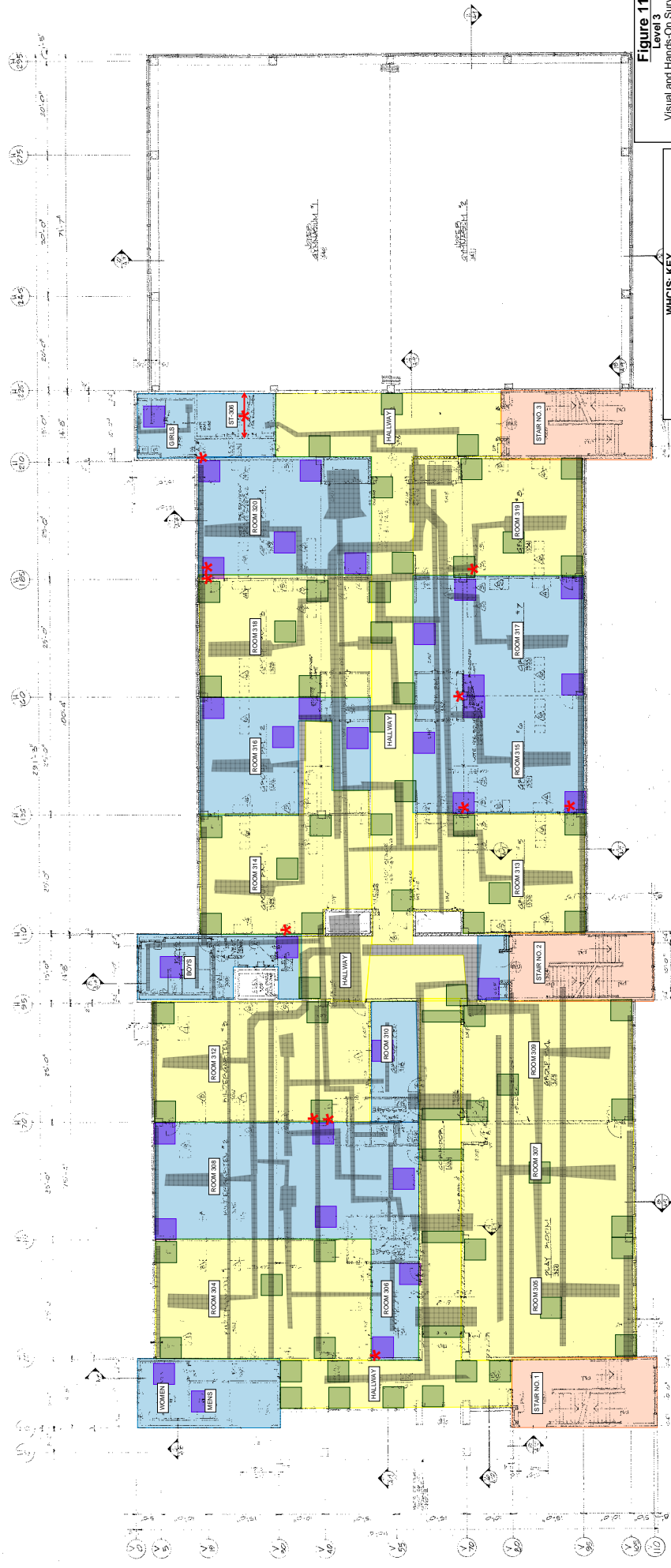


Figure 11
Level 3
Visual and Hands-On Survey Locations
(Level 4 Underside, observed from Level 3)

- WHICIS KEY**
- Areas Not Accessible
 - Areas Not Inspected
 - Mechanical Obstruction
 - Phase 1: Hands-On Sounding/Ceiling Tiles Removed
 - Phase 1: Visual Survey
 - Phase 2: Hands-On Sounding/Ceiling Tiles Removed
 - Phase 2: Visual Survey
 - Stair Survey - See Field Report 3
 - Potential Fall Hazard
 - Potential Fall Hazard - Removed

Notes:

- This plan includes surveys performed and potential fall hazards noted during the Phase 1 inspections.
- See Figures 5-7 from Field Report No. 3, dated 16 August 2023, for surveys performed and potential fall hazards at the stairs.
- See Figure 8 from Field Report No. 4, dated 17 August 2023, for surveys performed and potential fall hazards at the facade.

GENERAL NOTES

- All areas shown on this plan were inspected during the Phase 1 inspection.
- Areas not inspected are shown in yellow.
- Areas not accessible are shown in blue.
- Areas with mechanical obstructions are shown in green.
- Areas with potential fall hazards are shown with red stars.
- Areas with potential fall hazards that have been removed are shown with red stars and a diagonal line.
- Areas with potential fall hazards that have been removed are shown with red stars and a diagonal line.
- Areas with potential fall hazards that have been removed are shown with red stars and a diagonal line.
- Areas with potential fall hazards that have been removed are shown with red stars and a diagonal line.
- Areas with potential fall hazards that have been removed are shown with red stars and a diagonal line.

NO.	FLOR.	PHASE	ROOM	USE	FLOOR	PHASE	VALU	CELING	LOT	REMARKS
1	3	1	ROOM 301	CLASS	1	1	1	1	1	1
2	3	1	ROOM 302	CLASS	1	1	1	1	1	1
3	3	1	ROOM 303	CLASS	1	1	1	1	1	1
4	3	1	ROOM 304	CLASS	1	1	1	1	1	1
5	3	1	ROOM 305	CLASS	1	1	1	1	1	1
6	3	1	ROOM 306	CLASS	1	1	1	1	1	1
7	3	1	ROOM 307	CLASS	1	1	1	1	1	1
8	3	1	ROOM 308	CLASS	1	1	1	1	1	1
9	3	1	ROOM 309	CLASS	1	1	1	1	1	1
10	3	1	ROOM 310	CLASS	1	1	1	1	1	1
11	3	1	ROOM 311	CLASS	1	1	1	1	1	1
12	3	1	ROOM 312	CLASS	1	1	1	1	1	1
13	3	1	ROOM 313	CLASS	1	1	1	1	1	1
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15	3	1	ROOM 315	CLASS	1	1	1	1	1	1
16	3	1	ROOM 316	CLASS	1	1	1	1	1	1
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28	3	1	ROOM 328	CLASS	1	1	1	1	1	1
29	3	1	ROOM 329	CLASS	1	1	1	1	1	1
30	3	1	ROOM 330	CLASS	1	1	1	1	1	1
31	3	1	ROOM 331	CLASS	1	1	1	1	1	1
32	3	1	ROOM 332	CLASS	1	1	1	1	1	1
33	3	1	ROOM 333	CLASS	1	1	1	1	1	1
34	3	1	ROOM 334	CLASS	1	1	1	1	1	1
35	3	1	ROOM 335	CLASS	1	1	1	1	1	1
36	3	1	ROOM 336	CLASS	1	1	1	1	1	1
37	3	1	ROOM 337	CLASS	1	1	1	1	1	1
38	3	1	ROOM 338	CLASS	1	1	1	1	1	1
39	3	1	ROOM 339	CLASS	1	1	1	1	1	1
40	3	1	ROOM 340	CLASS	1	1	1	1	1	1
41	3	1	ROOM 341	CLASS	1	1	1	1	1	1
42	3	1	ROOM 342	CLASS	1	1	1	1	1	1
43	3	1	ROOM 343	CLASS	1	1	1	1	1	1
44	3	1	ROOM 344	CLASS	1	1	1	1	1	1
45	3	1	ROOM 345	CLASS	1	1	1	1	1	1
46	3	1	ROOM 346	CLASS	1	1	1	1	1	1
47	3	1	ROOM 347	CLASS	1	1	1	1	1	1
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53	3	1	ROOM 353	CLASS	1	1	1	1	1	1
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57	3	1	ROOM 357	CLASS	1	1	1	1	1	1
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59	3	1	ROOM 359	CLASS	1	1	1	1	1	1
60	3	1	ROOM 360	CLASS	1	1	1	1	1	1
61	3	1	ROOM 361	CLASS	1	1	1	1	1	1
62	3	1	ROOM 362	CLASS	1	1	1	1	1	1
63	3	1	ROOM 363	CLASS	1	1	1	1	1	1
64	3	1	ROOM 364	CLASS	1	1	1	1	1	1
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66	3	1	ROOM 366	CLASS	1	1	1	1	1	1
67	3	1	ROOM 367	CLASS	1	1	1	1	1	1
68	3	1	ROOM 368	CLASS	1	1	1	1	1	1
69	3	1	ROOM 369	CLASS	1	1	1	1	1	1
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81	3	1	ROOM 381	CLASS	1	1	1	1	1	1
82	3	1	ROOM 382	CLASS	1	1	1	1	1	1
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85	3	1	ROOM 385	CLASS	1	1	1	1	1	1
86	3	1	ROOM 386	CLASS	1	1	1	1	1	1
87	3	1	ROOM 387	CLASS	1	1	1	1	1	1
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98	3	1	ROOM 398	CLASS	1	1	1	1	1	1
99	3	1	ROOM 399	CLASS	1	1	1	1	1	1
100	3	1	ROOM 400	CLASS	1	1	1	1	1	1

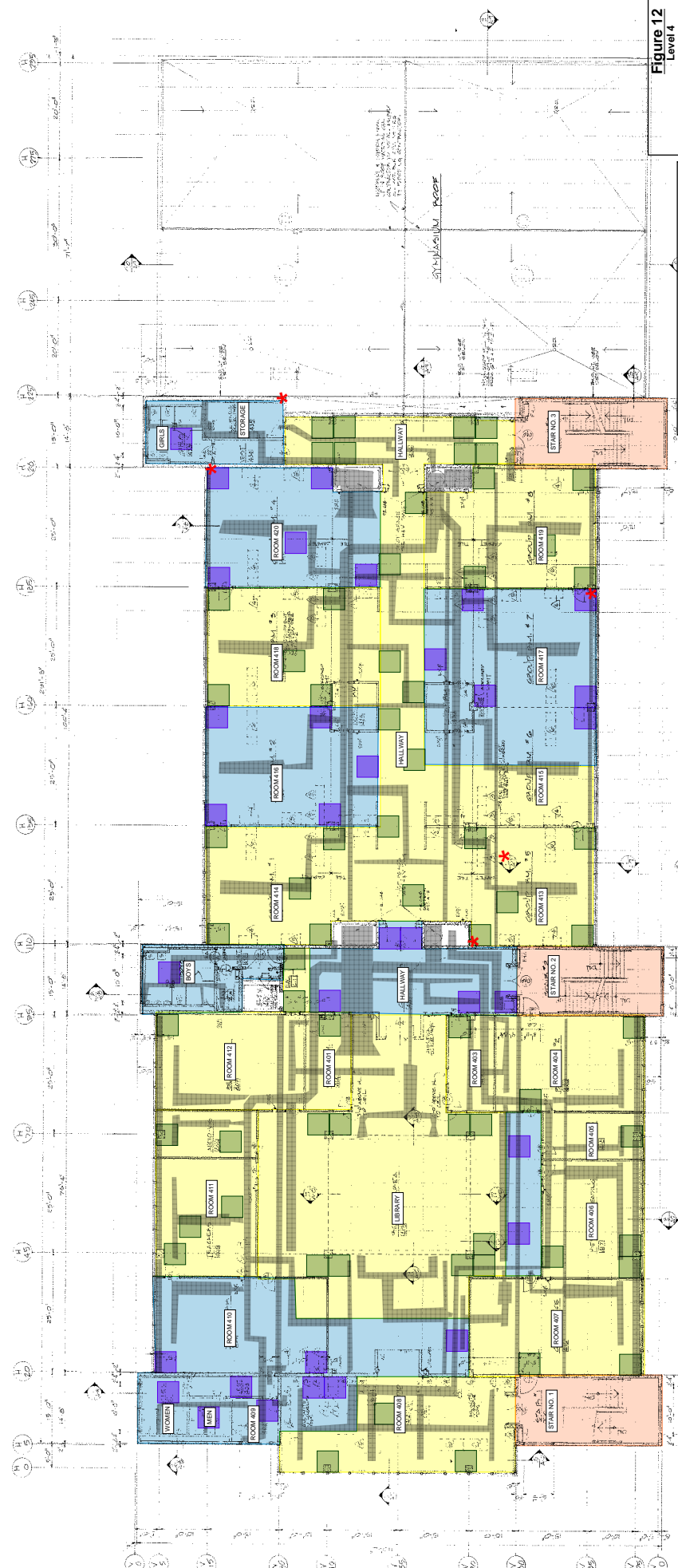
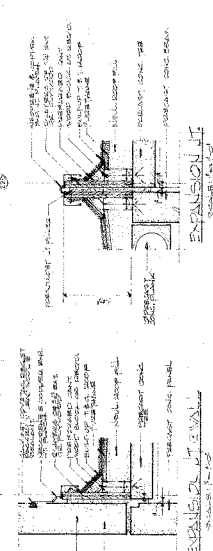


Figure 12
Level 4
Visual and Hands-On Survey Locations
(Roof Underside, observed from Level 4)

- Notes:**
1. This plan includes surveys performed and potential fall hazards noted during the Phase 1 inspections.
 2. See Figures 5-7 from Field Report No. 3, dated 16 August 2023, for surveys performed and potential fall hazards at the stairs.
 3. See Figure 8 from Field Report No. 4, dated 17 August 2023, for surveys performed and potential fall hazards at the facade.

- WHGIS KEY**
- Areas Not Accessible
 - Areas Not Inspected
 - Mechanical Obstruction
 - Phase 1: Hands-On Sounding/Ceiling Tiles Removed
 - Phase 1: Visual Survey
 - Phase 2: Hands-On Sounding/Ceiling Tiles Removed
 - Phase 2: Visual Survey
 - Stair Survey - See Field Report 3
 - Potential Fall Hazard
 - Potential Fall Hazard - Removed



GENERAL NOTES

1. THIS PLAN SHOWS THE LOCATION OF THE SURVEY AREA ON THE ROOF UNDERSIDE OF THE BUILDING. THE SURVEY AREA IS SHOWN IN YELLOW. THE SURVEY AREA IS NOT TO BE USED FOR ANY OTHER PURPOSES.

2. THE SURVEY AREA IS NOT TO BE USED FOR ANY OTHER PURPOSES.

3. THE SURVEY AREA IS NOT TO BE USED FOR ANY OTHER PURPOSES.

4. THE SURVEY AREA IS NOT TO BE USED FOR ANY OTHER PURPOSES.

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9. THE SURVEY AREA IS NOT TO BE USED FOR ANY OTHER PURPOSES.

10. THE SURVEY AREA IS NOT TO BE USED FOR ANY OTHER PURPOSES.

ART STUDIO EQUIPMENT

ITEM	QUANTITY	LOCATION
ART SUPPLIES	100	ROOM 401
ART SUPPLIES	100	ROOM 402
ART SUPPLIES	100	ROOM 403
ART SUPPLIES	100	ROOM 404
ART SUPPLIES	100	ROOM 405
ART SUPPLIES	100	ROOM 406
ART SUPPLIES	100	ROOM 407
ART SUPPLIES	100	ROOM 408
ART SUPPLIES	100	ROOM 409
ART SUPPLIES	100	ROOM 410
ART SUPPLIES	100	ROOM 411
ART SUPPLIES	100	ROOM 412
ART SUPPLIES	100	ROOM 413
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ART SUPPLIES	100	ROOM 500

ITEM	QUANTITY	LOCATION
ART SUPPLIES	100	ROOM 401
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ART SUPPLIES	100	ROOM 499
ART SUPPLIES	100	ROOM 500

APPENDIX B

DAILY REPORTS



Memorandum

Date: 21 August 2023

To: Debora Mitrano, City of Somerville, Capital Projects and Planning

From: Simpson Gumpertz & Heger Inc.

Project: 230889 -WINT - Inspections for Fall Hazards at Winter Hill Community School,
Somerville, MA

Subject: Summary of SGH Daily Inspection Reports

Simpson Gumpertz & Heger Inc. (SGH) visited the Winter Hill Community School as part of an ongoing inspection program between 26 July 2023 and 4 August 2023 to perform inspections of the kitchen, cafeteria, classrooms, offices, stairs, facade, etc. We reported the findings of our daily inspections by e-mail throughout the inspection period. At your request we prepared this memorandum to compile our daily inspection reports. Field reports 1 to 5 provide a more detailed summary and recommendations from our inspections.

The daily reports are organized in chronological order and state the number of engineers on site, the work performed, the areas occupied, and a summary of our observations for each day.

18 July 2023

The SGH team included three engineers. We performed the following tasks:

- Visual survey of the facade.
- Walkthrough of interior areas as preparation for our inspections.

Below is a summary of our observations:

Facade:

We performed a visual survey of approximately 95% of the facade from the ground, utilizing binoculars as necessary. We did not survey the south facade from Level 4 to the roof as this area is stepped back from the rest of the building. We also did not survey the roof penthouse. We plan to perform these surveys next week. We will coordinate roof access with you.

- The facade is generally in good condition.
- There are some areas with localized unsound concrete representing potential fall hazards. The unsound concrete areas are typically small, in the order of 4 in. by 4 in. The maximum size is approximately 24 in. by 12 in. We recommend performing close-up inspections at these areas. Access will require a lift (boom or scissor). We will coordinate with SPS to sound these areas and remove loose concrete.
- The sealant is deteriorated at most of the joints. Sealant is cracked or pulling away from the sides.

19 July 2023

The SGH team included two engineers. We performed the following tasks:

- Visual survey and representative hands-on survey of the kitchen and cafeteria.

Below is a summary of our observations:

Cafeteria

We performed a visual survey of approximately 90% of the cafeteria ceiling and a hands-on inspection of approximately 10% of the ceiling. SPS removed ceiling tiles at each of the column locations and at four locations between the columns (~15% of the tiles), and we used baker staging to access the area.

- The cafeteria ceiling is generally in good condition.
- We noted one potential fall hazard. We will coordinate with SPS to remove the loose concrete.
- At the CMU block wall separating the cafeteria from the kitchen/faculty dining, the grout between the top of the CMU wall and the underside of the beam is loose along the length of the wall. This is not a structural issue but does pose a potential fall hazard. We will further review this condition with you at our meeting tomorrow.
- We noted efflorescence at a couple panel joints and one location at the spandrel beam above the exterior entrance to the cafeteria. We sounded representative areas of concrete around the efflorescence and did not find any further concrete deterioration.

Kitchen & Faculty Dining

We performed a visual survey of approximately 80% of the kitchen ceiling, and a hands-on inspection of approximately 5% of the ceiling. SPS removed ceiling tiles at each of the column locations and between four and six tiles between each column gridline (~10% of the tiles, there were several large pieces of equipment where there the tiles were not accessible). We used baker staging to survey the area. There are many mechanical ducts tight to the ceiling in this area that blocked the view of the ceiling, especially near large equipment. SPS will remove additional ceiling tiles so we can perform more hands-on inspections.

- The kitchen ceiling is generally in good condition.

- We noted one potential fall hazard. We will coordinate with SPS to remove any loose concrete.
- We noted efflorescence at a couple panel joints. We sounded representative areas of concrete around the efflorescence and did not find any further concrete deterioration.

20 July 2023

The SGH team included four engineers. We performed the following tasks:

- Visual and hands-on survey of the gymnasium.
- Visual survey and representative hands-on survey of the Level 1 rooms with no ceiling tiles.
- Visual survey and representative hands-on survey of the Level 2 classrooms and hallways on the classroom side of the building.
- Visual survey and representative hands-on survey of the Level 3 hallways on the classroom side of the building.

Below is a summary of our observations today:

Gymnasium

We performed a visual survey of approximately 90% of the gymnasium ceiling and a hands-on inspection of approximately 90% of the ceiling. SPS removed ceiling tiles at four locations (approximately 20% of the tiles), and we used a scissor lift to access the area.

- The gymnasium ceiling is generally in good condition.
- We noted two potential fall hazards. We will coordinate with SPS to remove the loose concrete.
- We noted one concrete repair location. The mechanism used to raise and lower the basketball hoop is anchored directly adjacent to the repair location. We will review the condition and advise accordingly.
- We noted moisture staining on the panels and attached wood members. The staining was caused by failed sealant at the bottom of the window panels. We can discuss means to mitigate this condition.

Level 1

We performed a visual survey of approximately 95% of the Level 1 ceiling where there were no ceiling tiles (~50% of the Level 1, not including the kitchen/cafeteria). We performed a hands-on inspection of suspect areas, utilizing a ladder to access the area.

- The Level 1 ceiling is generally in good condition.
- We noted seven potential fall hazards (one in the Custodian Office; one in what is labeled as the "Boy's Locker Room" on the original plan but is now the PTA room; two in Room 105; three in Room 106). We will coordinate with SPS to remove the loose concrete. A small piece of concrete fell when hammer sounded at three locations (one in Room 105; two in Room 106). See attached photos.

Level 2: Classrooms & Hallways

We performed a visual survey of approximately 50% of the Level 2 ceiling and a hands-on inspection of approximately 10% of the ceiling. SPS removed ceiling tiles in the classrooms at the columns and at one location in the center of the room between columns, typically. SPS removed approximately 30% of the ceiling tiles in the hallways. We directed SPS to remove additional tiles to access suspect areas as necessary.

- The Level 2 ceiling on the classroom side of the building is generally in good condition.
- We noted one potential fall hazard in Room 214. We will coordinate with SPS to remove the loose concrete.

Level 3: Hallways

We performed a visual survey of approximately 50% of the Level 3 ceiling in the hallways. SPS removed approximately 30% of the ceiling tiles in the hallways.

- The Level 3 ceiling in the hallways is generally in good condition.

21 July 2023

The SGH team included three engineers. We performed the following tasks:

- Hands-on survey of the kitchen.
- Visual survey and representative hands-on survey of the Level 3 classrooms.
- Visual survey and representative hands-on survey of the Level 4 classrooms and hallways on the classroom side of the building.
- Visual survey and representative hands-on survey of the lobby between the classrooms and offices on Levels 2, 3, and 4.

Below is a summary of our observations today:

Kitchen

We performed a hands-on inspection of approximately 80% of the kitchen ceiling. SPS removed 95% of the ceiling tiles. Areas not surveyed are obscured by MEP (ducts, exhaust hoods, etc.).

- The kitchen ceiling is generally in good condition.
- We noted one potential fall hazard. We will coordinate with SPS to remove the loose concrete.
- We noted three small existing spalls; there is no additional loose concrete at these areas.
- We noted three small areas of unsound concrete; there is no loose concrete at these areas.
- We noted efflorescence at panel joints and beams throughout the space, but no active leaks.

Level 3: Classrooms

We performed a visual survey of approximately 50% of the Level 3 ceiling and a hands-on inspection of approximately 10% of the ceiling. SPS removed ceiling tiles in the classrooms at the columns and at one location in the center of the room between columns, typically.

- The Level 3 ceiling on the classroom side of the building is generally in good condition.
- We noted one potential fall hazard within classroom 314. We will coordinate with SPS to remove the loose concrete.

Level 4: Classrooms and Hallways

We performed a visual survey of approximately 50% of the Level 4 ceiling and a hands-on inspection of approximately 10% of the ceiling. SPS removed ceiling tiles in the classrooms at the columns and at one location in the center of the room between columns, typically. SPS removed approximately 30% of the ceiling tiles in the hallways. We directed SPS to remove additional tiles to access suspect areas as necessary.

- The Level 4 ceiling on the classroom side of the building is generally in good condition.
- We noted two potential fall hazards in Room 413. We will coordinate with SPS to remove the loose concrete.

Elevator Lobby: Levels 2, 3, and 4

We performed a visual survey of approximately 90% of the ceiling in these areas and a hands-on inspection of approximately 10% of the ceiling. SPS removed ceiling tiles at the corners of the lobbies.

- The ceiling in these areas is generally in good condition.

22-23 July 2023

SGH was not on site on these dates.

24 July 2023

The SGH team included two engineers. We performed the following tasks:

- Visual survey and representative hands-on survey of two Level 3 offices.
- Visual survey and representative hands-on survey of the Level 2, 3 and 4 hallways between the classrooms and gymnasium.
- Visual survey and representative hands-on survey of the Level 2 hallway at the office side of the building.

Below is a summary of our observations today:

Level 3: Offices (Rooms 309 and 312)

- We performed a visual survey of approximately 95% of the ceiling and a hands-on survey of approximately 10% in two offices.
- The ceiling in both offices is generally in good condition. We noted no spalls, cracks, or potential fall hazards in Room 309.
- We noted four existing spalls in the ceiling of Room 312. The concrete around the spalls is sound.
- We noted two potential fall hazards; the grout along two columns are loose in Room 312.

Gymnasium Hallway: Levels 2, 3 and 4

- We performed a visual survey of approximately 90% of the ceiling and a hands-on survey of approximately 10%.
- The hallway ceiling is generally in good condition.
- We noted one spall between a panel and beam at the Level 4 ceiling, one spall on a corbel at the Level 3 ceiling, and one spall along a joint at the Level 2 ceiling.
- We noted three potential fall hazards at the Level 2 ceiling.

Office Hallway: Level 2

- We performed a visual survey of approximately 80% of the ceiling and a hands-on survey of approximately 10%.
- The hallway ceiling is generally in good condition.
- We noted one existing spall at a hanger supporting a mechanical unit.
- We noted one sagging ceiling panel, which we discussed on-site.

25 July 2023

The SGH team included three engineers. We performed the following tasks:

- Visual and representative hands-on survey of the Level 2 and 3 offices and hallways.

Below is a summary of our observations today:

Level 2 and 3: Offices

- We performed a visual survey of approximately 45% and a hands-on survey of approximately 8% of the ceiling above offices and classrooms in the North wing.
- The ceiling in the offices is generally in good condition.
- We noted efflorescence at several panel joints, beams, and columns, similar to that found in other areas of the school.
- We noted several small spalls (less than 6 in. x 6 in.). The concrete surrounding the spalls is sound.
- We noted one potential fall hazard at the Level 3 ceiling.
- We noted two potential fall hazards at the Level 2 ceiling.

Level 3: Hallway

- We performed a visual survey of approximately 80% and a hands-on survey of approximately 10% of the ceiling above the Level 3 hallway on the office side of the building.
- The ceiling in the hallway is generally in good condition.
- We noted efflorescence at several panel joints, beams, and columns, similar to that found in other areas of the school.
- We noted several small spalls (less than 6 in. x 6 in.). The concrete surrounding the spalls is sound.

We plan to have three engineers on site tomorrow, working in the library, the remaining Level 3 classrooms, and any miscellaneous interior areas within our scope. Our interior inspection, excluding the stair towers, should be complete by EOD tomorrow. SPS has informed us that the stair staging will be delivered Thursday but will not be constructed until early next week.

Once the staging is installed, we plan to have three to four engineers on site each day to complete a 100% hands-on survey of the stair tower walls and ceilings. We will also coordinate a day to perform a hands-on inspection of select locations along the facade.

26 July 2023

The SGH team included three engineers. We performed the following tasks:

- Visual survey and representative hands-on survey of two Level 3 offices.
- Visual survey and representative hands-on survey of the Level 4 library and adjoining rooms.
- Visual survey and hands-on survey of walls accessible without staging at all levels of Stair 2.
- Visual survey and hands-on survey of walls accessible without staging at Level 4 and the roof level of Stair 3.
- Visual survey of penthouse facade and facade of south elevation from Level 4 to the roof level.

Below is a summary of our observations today:

Level 3: Offices (Rooms 304 and 305)

- We performed a visual survey of approximately 80% of the ceiling and a hands-on survey of approximately 10% in the rooms.
- The ceiling in both rooms is generally in good condition. We noted several small spalls and some areas of efflorescence at cracks and panels joints.
- We noted one potential fall hazard in Room 304.

Level 4: Library and Adjoining Rooms

- We performed a visual survey of approximately 60% of the library ceiling and a hands-on survey of approximately 10%. We performed a visual survey of approximately 25% of the adjoining rooms and a hands-on survey of approximately 5%. We will return to survey the remaining adjoining rooms tomorrow.
- The library ceiling and the ceilings in the adjoining rooms are generally in good condition. We noted several small spalls and some areas of efflorescence at cracks and panels joints.
- We noted one potential fall hazard at the library ceiling.

Stair 2: Walls accessible without staging, All Levels

- We performed a visual survey and hands on survey of approximately 50% of the walls at all levels. We will return to complete the visual and hands-on survey of the remaining walls utilizing staging.
- The walls are generally in good condition, with the exception of the panel lift pockets (also called grout pockets). The lift pockets are deteriorated, typically, and many pose potential fall hazards, especially at the upper levels. There are also some areas of delaminated concrete at certain panels. We will review these areas with you.
- We noted ten potential fall hazards at the walls thus far.

Stair 3: Walls accessible without staging, Levels 4 and Roof

- We performed a visual survey and hands on survey of approximately 50% of the walls at Levels 4 and the roof level. We will return to complete the visual and hands-on survey of the other levels from the ground and the remaining areas of the walls utilizing staging.
- The walls are generally in good condition, with the exception of the panel lift pockets (also called grout pockets). The lift pockets are deteriorated, typically, and many pose potential fall hazards.
- We noted fifteen potential fall hazards at the walls thus far.

Facade: Penthouse and Level 4 to Roof South Elevation

- We performed a visual survey of approximately 95% of the remaining facade.
- The facade is generally in good condition.
- There is one section at the Level 4 South elevation where sealant is missing.
- We noted one potential fall hazard at the penthouse South elevation. We noted one potential fall hazard at the Level 4 South elevation.

We plan to have three engineers on site tomorrow, working in the remaining adjoining rooms to the Library on Level 4. We will also continue to work in the stairs to sound walls accessible without staging.

27 July 2023

The SGH team included three engineers. We performed the following tasks:

- Visual survey and representative hands-on survey of the remaining adjoining rooms to the Library at Level 4.
- Visual survey and hands-on survey of walls accessible without staging at all levels of Stair 1.
- Visual survey and hands-on survey of walls accessible without staging at Levels 1 through 3 of Stair 3.
- Visual survey and hands-on survey of walls accessible without staging at Stair 4.

Below is a summary of our observations today:

Level 4: Remaining Adjoining Rooms to Library

- We performed a visual survey of approximately 50% of the adjoining rooms to the library to date and a hands-on survey of approximately 10%.
- The library ceiling and the ceilings in the adjoining rooms are generally in good condition. We noted several small spalls and some areas of efflorescence at cracks and panel joints.
- We did not note any potential fall hazards.

Stair 1: Walls accessible without staging, All Levels

- We performed a visual survey and hands on survey of approximately 50% of the walls at all levels. We will return to complete the visual and hands-on survey of the remaining walls utilizing staging.
- The walls are generally in good condition, with the exception of the panel lift pockets (also called grout pockets). The lift pockets are deteriorated, typically, and many pose potential fall hazards, especially at the upper levels.
- We noted four potential fall hazards at the walls thus far.

Stair 3: Walls accessible without staging, Levels 1 through 3

- We performed a visual survey and hands on survey of approximately 50% of the walls at Levels 1 through 3. We will return to complete the visual and hands-on survey of the remaining areas of the walls utilizing staging.
- The walls are generally in good condition, with the exception of the panel lift pockets (also called grout pockets). The lift pockets are deteriorated, typically, and many pose potential fall hazards.
- We noted thirteen additional potential fall hazards at the walls (for a total of twenty-eight potential fall hazards at this stair thus far).

Stair 4: Walls accessible without staging

- We performed a visual survey and hands on survey of approximately 50% of the walls. We will return to complete the visual and hands-on survey of the remaining areas of the walls utilizing staging.
- The walls are generally in good condition, with the exception of the panel lift pockets (also called grout pockets). The lift pockets are deteriorated, typically.
- We did not note any potential fall hazards thus far.

Unless otherwise directed by you, we do not plan to have engineers on site 28 July 2023 through 1 August 2023. We plan to resume work at the stairs utilizing staging on 2 August 2023, dependent on staging assembly schedule.

28 July - 1 August 2023

SGH was not on site on these dates while SPS installed staging at the stairs.

2 August 2023

The SGH team included three engineers. We performed the following tasks:

- Visual survey and hands-on survey of walls accessible with staging at all levels, except Level 4 to the roof, of Stairs 1, 2, and 3.
- Visual survey and hands-on survey of the undersides of the roof of Stair 1.
- Visual survey and hands-on survey of the undersides of landings at Levels 3 through 5 of Stair 2.

Below is a summary of our observations:

Stair 1: Walls, Roof Underside

- To date, we have performed a visual survey and hands on survey of approximately 80% of the walls at all levels. We will return to complete the visual and hands-on survey of the remaining areas. We performed a visual survey and hands on survey of approximately 95% of the stair tower roof.
- The walls are generally in good condition, with the exception of the panel lift pockets (also called grout pockets). The lift pockets are deteriorated, typically, and many pose potential fall hazards, especially at the upper levels.
- The roof is generally in good condition. We noted several spalls and some areas of efflorescence at cracks and panel joints.
- At the walls, we noted eight additional fall hazards (for a total of 12 potential fall hazards at this stair thus far). We did not note any potential fall hazards at the roof underside.

Stair 2: Walls, Landing Undersides at Levels 3-5

- To date, we have performed a visual survey and hands on survey of approximately 80% of the walls at all levels. We will return to complete the visual and hands-on survey of the remaining areas. We performed a visual survey and hands on survey of approximately 50% of the landing undersides at Levels 3-5. The lighting prevented the removal of the remaining 50% of ceiling tiles, so we are unable to observe the remaining areas.

- The walls are generally in good condition, with the exception of the panel lift pockets (also called grout pockets). The lift pockets are deteriorated, typically, and many pose potential fall hazards, especially at the upper levels.
- The landing undersides are generally in good condition. We noted several small spalls.
- At the walls, we noted eleven additional fall hazards (for a total of twenty-one potential fall hazards at this stair thus far). We noted two potential fall hazards at the landing undersides.

Stair 3: Walls

- To date, we have performed a visual survey and hands on survey of approximately 80% of the walls at all levels. We will return to complete the visual and hands-on survey of the remaining areas.
- The walls are generally in good condition, with the exception of the panel lift pockets (also called grout pockets). The lift pockets are deteriorated, typically, and many pose potential fall hazards, especially at the upper levels.
- The landing undersides are generally in good condition. We noted several small spalls.
- We noted five additional fall hazards (for a total of thirty-three potential fall hazards at this stair thus far).

3 August 2023

The SGH team included three engineers. We performed the following tasks:

- Visual and hands-on survey of the remaining landing and roof undersides at Stairs 1, 2, 3, and 4.

Below is a summary of our observations:

Stairs 1-4: Landing Undersides

- We have performed a visual and hands-on survey of approximately 90% of the landing undersides at all levels. We will return to complete the visual and hands-on survey of the stair undersides.
- The landings are typically in good condition; we noted small spalls (approximately 2 in. by 2 in.) throughout the landing undersides, typically at existing furring strips and hangers. We observed typical efflorescence along panel joints at the roof level of each stair tower and along the exterior walls of Stair 3. Several small spalls are along furring strips, ceiling hangers, and panel joints.
- At the landing undersides, we noted the following potential fall hazards:
 - Stair 1: We noted two additional potential fall hazards at Level 3, for a total of fourteen potential fall hazards at this stair thus far.
 - Stair 2: We noted fifteen additional potential fall hazards across Level 2 and the roof, for a total of thirty-six potential fall hazards at this stair thus far.
 - Stair 3: We noted six additional potential fall hazards across Levels 2-5, for a total of thirty-nine potential fall hazards at this stair thus far.
 - Stair 4: We noted four potential fall hazards at the lift pockets above the exterior door.
- Additionally, we noted that the steel bearing plates at the exterior walls at each level of Stair 3 are corroded; the corrosion is severe at Level 2 and moderate at other levels.
- At Level 2 of Stair 2, the bearing plates typically observed on each floor are concealed by plywood – we noted that one corner of the plywood adjacent to the exterior door is wet.

4 August 2023

The SGH team included two engineers. We performed the following tasks:

- Visual and hands-on survey of the stair tread undersides and remaining walls at Stairs 1, 2, 3, and 4.

Stairs 1-3 – Stair Tread Undersides

- We have performed a visual and hands-on survey of approximately 95% of the stair tread undersides at all levels.
- The stair tread undersides are typically in good condition.
- At the stair tread undersides and walls, we noted the following potential fall hazards:
 - Stair 1: We noted no additional potential fall hazards, for a total of fourteen potential fall hazards at this stair.
 - Stair 2: We noted no additional potential fall hazards, for a total of thirty-six potential fall hazards at this stair.
 - Stair 3: We noted two additional potential fall hazards at the stair tread undersides and two additional potential fall hazards at the walls at Levels 4 and 5, for a total of forty-three potential fall hazards at this stair.
 - Stair 4: We noted no additional potential fall hazards, for a total of four potential fall hazards at this stair.
- Additionally, we noted some potentially loose grout between the wall and stairs at Levels 4 and 5 of Stair 2 and 3.

Memorandum

Date: 3 October 2023

To: Debora Mitrano, City of Somerville, Capital Projects and Planning

From: Simpson Gumpertz & Heger Inc.

Project: 230889.00-WINT - Inspections for Fall Hazards at Winter Hill Community School,
Somerville, MA

Subject: Summary of SGH Daily Inspection Reports

Simpson Gumpertz & Heger Inc. (SGH) visited the Winter Hill Community School as part of an ongoing inspection program between 18 and 20 September 2023 to perform additional inspections of the classrooms, offices, restrooms, hallways, etc. We reported the findings of our daily inspections by e-mail throughout the inspection period. At your request we prepared this memorandum to compile our daily inspection reports. Field report 6 provides a more detailed summary and recommendations from our inspections.

The daily reports are organized in chronological order and state the number of engineers on site, the work performed, the areas occupied, and a summary of our observations for each day.

18 September 2023

We visited the site on 9/18. The SGH team included two engineers. We performed the following tasks:

- Visual and hands-on inspection of Level 1 classrooms, offices, hallways, and storage rooms.
- Visual and hands-on inspection of Level 2 offices.

Below is a summary of our observations:

Level 1:

We performed a visual survey of approximately 80% of the remaining rooms and hands-on surveys at locations where tiles were removed. Three rooms in the 106 custodial suite were locked. We can return to those rooms if access can be coordinated.

- The floor above Level 1 is generally in good condition.
- We noted seven potential fall hazards throughout Level 1. Our next field report will include these areas on a mark-up plan.
- We noted loose grout at the top of multiple non-load-bearing CMU walls, similar to the condition between the kitchen and cafeteria we discussed previously.
- We discovered approximately ten deceased mice on glue traps in the ceiling above room ST-101 (between classrooms 103 and 105). The mice have not yet been removed.
- We noted localized areas of efflorescence at four locations, primarily around columns.
- There is a crack along a concrete panel above room 107. The surrounding concrete is sound.

Level 2:

We performed a visual survey of 100% of the remaining Level 2 offices and hands-on surveys where tiles were removed.

- The floor above the offices is generally in good condition.

We noted localized corrosion staining along a beam above the "Rest Room" by the nurse's office. The beam and surrounding concrete are sound.

19 September 2023

We visited the site on 9/19. The SGH team included two engineers. We performed the following tasks:

- Visual and hands-on inspection of Level 2 classrooms, hallways and storage rooms.
- Visual and hands-on inspection of Level 3 classrooms.

Below is a summary of our observations:

Level 2:

We performed a visual survey of approximately 95% of the remaining rooms and hands-on surveys at locations where tiles were removed. We have not yet inspected the restrooms.

- The floor above Level 2 is generally in good condition.
- We noted nine potential fall hazards throughout Level 2.
- We noted four small existing spalls above room 215. The surrounding concrete is sound.
- We noted an exposed prestressing strand at the end of a panel above Room 215.
- We noted corrosion staining along multiple beams.
- We noted a deceased mouse in the ceiling above Room 217, and mouse droppings in the ceiling above Rooms 216 and ST-202.
- We noted two cracks above Room 216; the surrounding concrete is sound and does not pose a potential fall hazard.

Level 3:

We performed a visual survey of four of the remaining classrooms and a storage room and hands-on surveys at locations where tiles were removed.

- The floor above Level 3 is generally in good condition.
- We noted eight potential fall hazards throughout the four classrooms on Level 3.

- There is a crack spanning across the storage room adjacent to the girls' room, across from stair 3. There is some loose concrete along the crack, but the surrounding concrete is otherwise sound.
- There are several existing small spalls above the classrooms. The surrounding concrete is sound.
- We noted two cracks above classrooms; the concrete surrounding these cracks is sound.

20 September 2023

We visited the site on 9/20. The SGH team included two engineers. We performed the following tasks:

- Visual and hands-on inspection of Level 3 classrooms, hallways and restrooms.
- Visual and hands-on inspection of Level 4 classrooms, restrooms and library.

Below is a summary of our observations:

Level 3:

We performed a visual survey of approximately 95% of the remaining rooms and hands-on surveys at locations where tiles were removed. We have not yet inspected the restrooms.

- The floor above Level 3 is generally in good condition.
- We noted one potential fall hazard throughout Level 3 today, in addition to the 8 noted yesterday (9 total).
- The ceiling tiles above the boys' room behind the elevator are sagging.
- We noted two small existing spalls, above Rooms 306 and 310.
- We noted one previously leaking crack above the girls room on the gymnasium side of the building, along with some corroded steel debris in the ceiling. The concrete surrounding the crack is sound.

Level 4:

We performed a visual survey of the remaining classrooms and a library rooms and hands-on surveys at locations where tiles were removed.

- The roof above Level 4 is generally in good condition.
- We noted two potential fall hazards throughout Level 4.
- There is a section of ductwork above room 420 that is detached and poses a potential fall hazard.
- The floor within the storage room is bulging directly above the crack in the Level 3 storage room we noted yesterday.

We noted efflorescence and corrosion staining at multiple locations throughout the roof above. The concrete surrounding the stains is generally sound.

APPENDIX C

inspection logs



CLIENT Beyer Blinder Belle

SUBJECT Winter Hill Community School Inspection Log

SHEET NO. _____

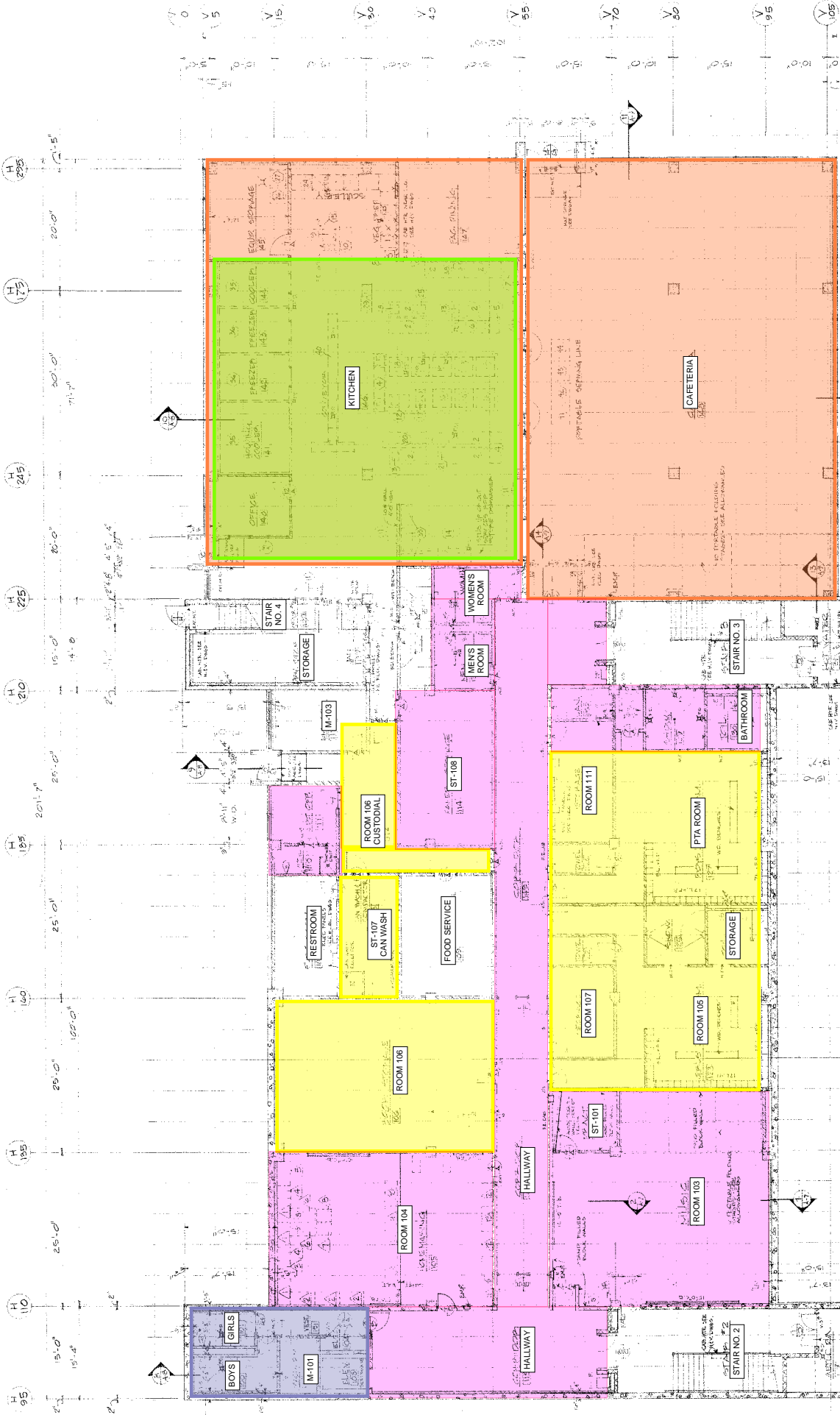
PROJECT NO. 230889.00

DATE 3 October 2023

BY KEM/BWH

CHECKED BY _____

Date	Key	SGH Staff	SGH Activity	SPS Activity
6/13/2023		J. Gustavo Tumialan Sal A. Capobianco	Initial Walkthrough	N/A
6/26/2023		J. Gustavo Tumialan	Follow-up Walthrough	N/A
7/18/2023		J. Gustavo Tumialan Giuliana R. Stovall Kasey E. Mearls Sylvia P. Costa	Exterior Façade	N/A
7/19/2023		Giuliana R. Stovall Sylvia P. Costa	Kitchen & Cafeteria	Kitchen & Cafeteria
7/20/2023		Giuliana R. Stovall Kasey E. Mearls Sylvia P. Costa Kevin A. Misaro	Level 1 Classrooms Level 2 Classrooms & Hallways Gymnasium	Level 2, 3 & 4 Classrooms & Hallways
7/21/2023		Kasey E. Mearls Sylvia P. Costa Brandin W. Harvey	Level 3 Classrooms & Hallways Level 4 Classrooms & Hallways Kitchen	Level 2, 3 & 4 Classrooms & Hallways Kitchen Tile Removal
7/24/2023		Kasey E. Mearls Sylvia P. Costa Brandin W. Harvey	Level 2 Hallways Level 3 Classrooms, Offices & Hallways Level 4 Classrooms & Hallways	Kitchen Tile Replacement Level 3 Offices
7/25/2023		Kasey E. Mearls Sylvia P. Costa Giuliana R. Stovall	Level 2 Classrooms & Offices Level 3 Classrooms & Offices Level 4 Hallways	Kitchen Tile Replacement Level 2 & 3 Offices
7/26/2023		Brandin W. Harvey Sylvia P. Costa Giuliana R. Stovall	Level 4 Offices & Library Stair 3 Walls - Level 4 to Roof Penthouse Façade	Level 4 Offices & Library
7/27/2023		Brandin W. Harvey Sylvia P. Costa Giuliana R. Stovall	Level 4 Library Stair 3 Walls Stair 4 Walls	Library
8/2/2023		Brandin W. Harvey Sylvia P. Costa Giuliana R. Stovall	Stair 1, 2, 3 & 4 Walls Stair 1 Level 2 Stair 2	Stair Staging Set-Up
8/3/2023		Brandin W. Harvey Sylvia P. Costa Kasey E. Mearls	Stair 1 Stair 2 Level 1 & 2 Stair 3 Stair 4	Stair Staging Set-Up
8/4/2023		J. Gustavo Tumialan Giuliana R. Stovall	Stairs 1, 2, 3 & 4	Level 4 Additional Tile Removal
9/18/2023		Kasey E. Mearls Kevin A. Misaro	Level 1 Level 2 Offices	Level 1 & 2 Tile Removal
9/19/2023		Kasey E. Mearls Brandin W. Harvey	Level 2 Level 3	Level 3 & 4 Tile Removal
9/20/2023		Kasey E. Mearls Kevin A. Misaro	Level 3 & 4 Levels 1-4 Restrooms	Level 1-4 Restroom Tile Removal



SGH Staffing Key

3 August 2023	█
4 August 2023	█
18 July 2023	█
18 September 2023	█
19 July 2023	█
20 July 2023	█
20 September 2023	█
20 September 2023	█
21 July 2023	█
24 July 2023	█
25 July 2023	█
26 July 2023	█
27 July 2023	█

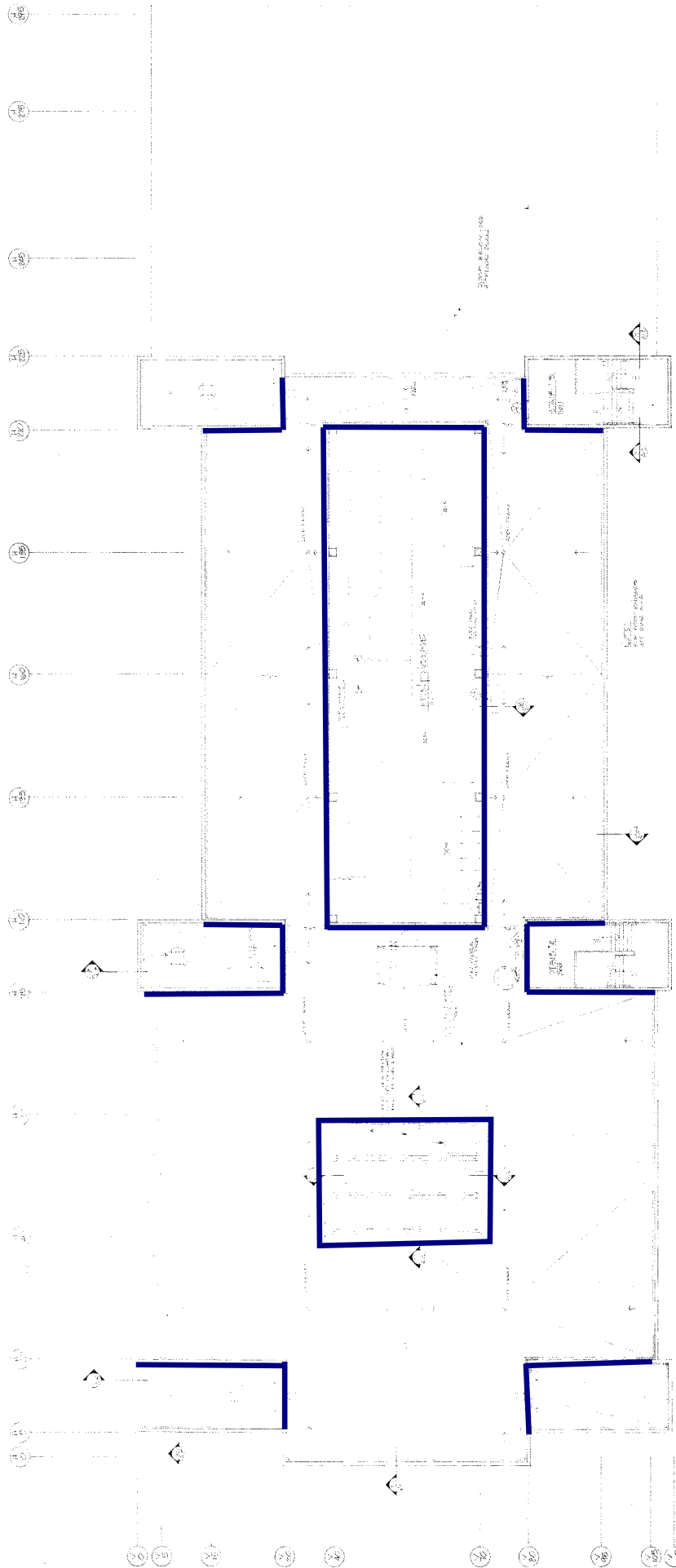
SGH MARKUP
Staffing Schedule
3 October 2023

Note: See sheet A-13 for work performed at stairs



TYP. ACOUSTICALLY
TREATED WALLS
SCALE: 1/8"=1'-0"

WALLS	DOORS	WINDOWS	CEILING	FLOOR	BASE	WALLS	CEILING	NOTES



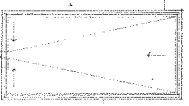
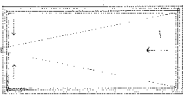
SGH Staffing Key

3 August 2023	18 September 2023
4 August 2023	19 July 2023
18 July 2023	20 July 2023
20 September 2023	21 July 2023
24 July 2023	25 July 2023
26 July 2023	27 July 2023

SGH MARKUP Staffing Schedule 9 August 2023



TYP. SCUPPER DETAILS SCALE: 1/8" = 1'-0"



WARD FOUR
ELEMENTARY SCHOOL
RICH, LANG & COTE, INC.
DATE: JULY 20, 2023
SCALE: AS NOTED
DRAWN BY: [Name]
CHECKED BY: [Name]

ROOF PLAN



SGH Staffing Key

3 August 2023	4 August 2023	18 July 2023	18 September 2023	19 July 2023	20 July 2023	20 September 2023	21 July 2023	24 July 2023	25 July 2023	26 July 2023	27 July 2023
[Color swatches]	[Color swatches]	[Color swatches]	[Color swatches]	[Color swatches]	[Color swatches]	[Color swatches]	[Color swatches]	[Color swatches]	[Color swatches]	[Color swatches]	[Color swatches]

SGH MARKUP
Staffing Schedule
9 August 2023

**WARD FOUR
ELEMENTARY SCHOOL**
RICH LANG & COTE, INC.
SCALE: 1/8" = 1'-0"
DATE: 08/09/23
CHECKED BY: [Signature]
REV: [Signature]

ELEVATIONS

A-6



SGH Staffing Key

3 August 2023	4 August 2023	18 July 2023	18 September 2023	19 July 2023	20 July 2023	20 September 2023	21 July 2023	24 July 2023	25 July 2023	26 July 2023	27 July 2023
█	█	█	█	█	█	█	█	█	█	█	█

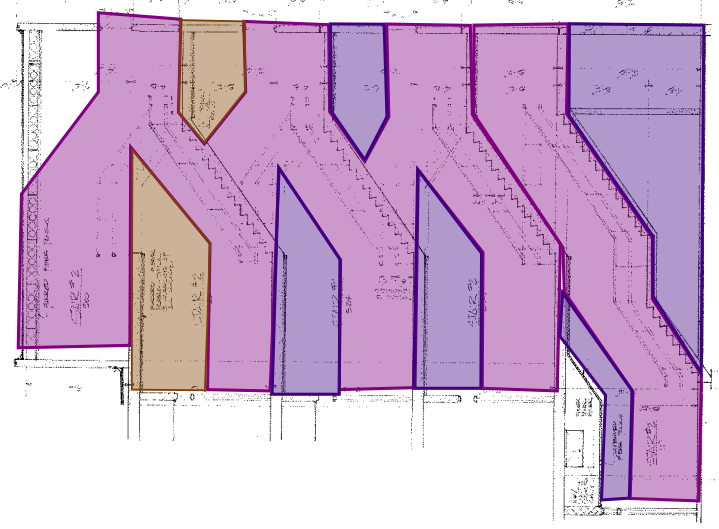
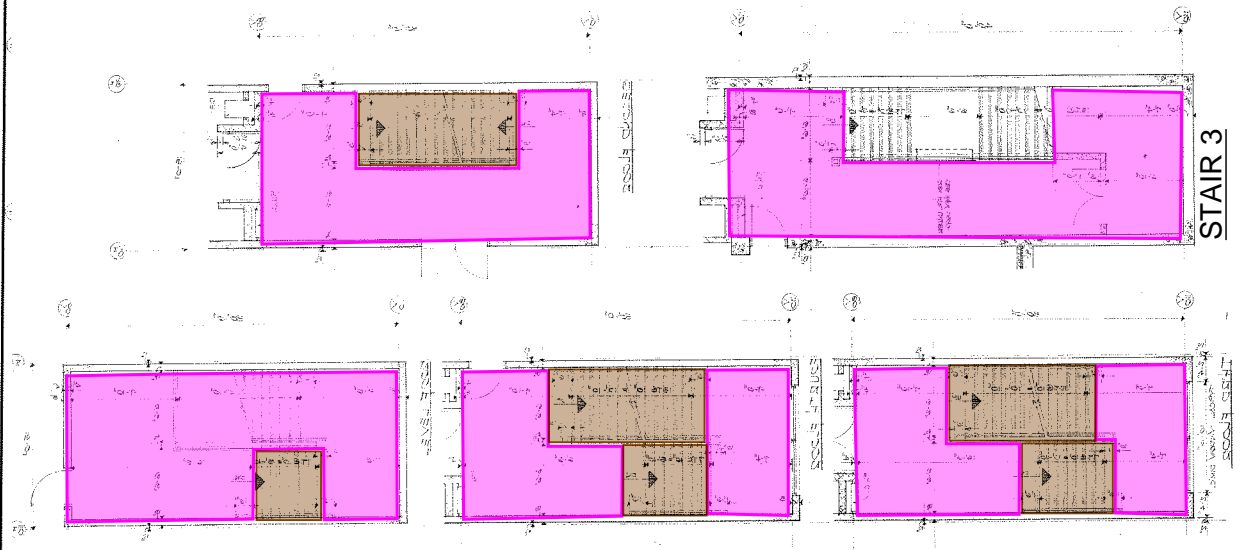
SGH MARKUP
Staffing Schedule
9 August 2023

WARD FOUR
ELBOW STREET - BIRMINGHAM, ALABAMA 35203

RICH LANG & COLE, INC.
ARCHITECTS

DATE: 08/09/23
DRAWN BY: [Signature]
CHECKED BY: [Signature]

A-13



STAIR 3

SGH Staffing Key

3 August 2023	3 August 2023
4 August 2023	4 August 2023
18 July 2023	18 July 2023
18 September 2023	18 September 2023
19 July 2023	19 July 2023
20 July 2023	20 July 2023
20 September 2023	20 September 2023
21 July 2023	21 July 2023
24 July 2023	24 July 2023
25 July 2023	25 July 2023
26 July 2023	26 July 2023
27 July 2023	27 July 2023

SGH MARKUP
Staffing Schedule
9 August 2023

WARD FOUR
ELDER CARE
STAIRCASE STAIR - RICHMOND, MASS. 01880

RICH LANG & COLE, INC.
ARCHITECTS
100 WASHINGTON STREET, SUITE 100
ROSLINDALE, MASS. 01968
SCALE: 1/8" = 1'-0"
DATE: 08/09/23
DRAWN BY: [Signature]
CHECKED BY: [Signature]

A-13

APPENDIX D

FIGURES

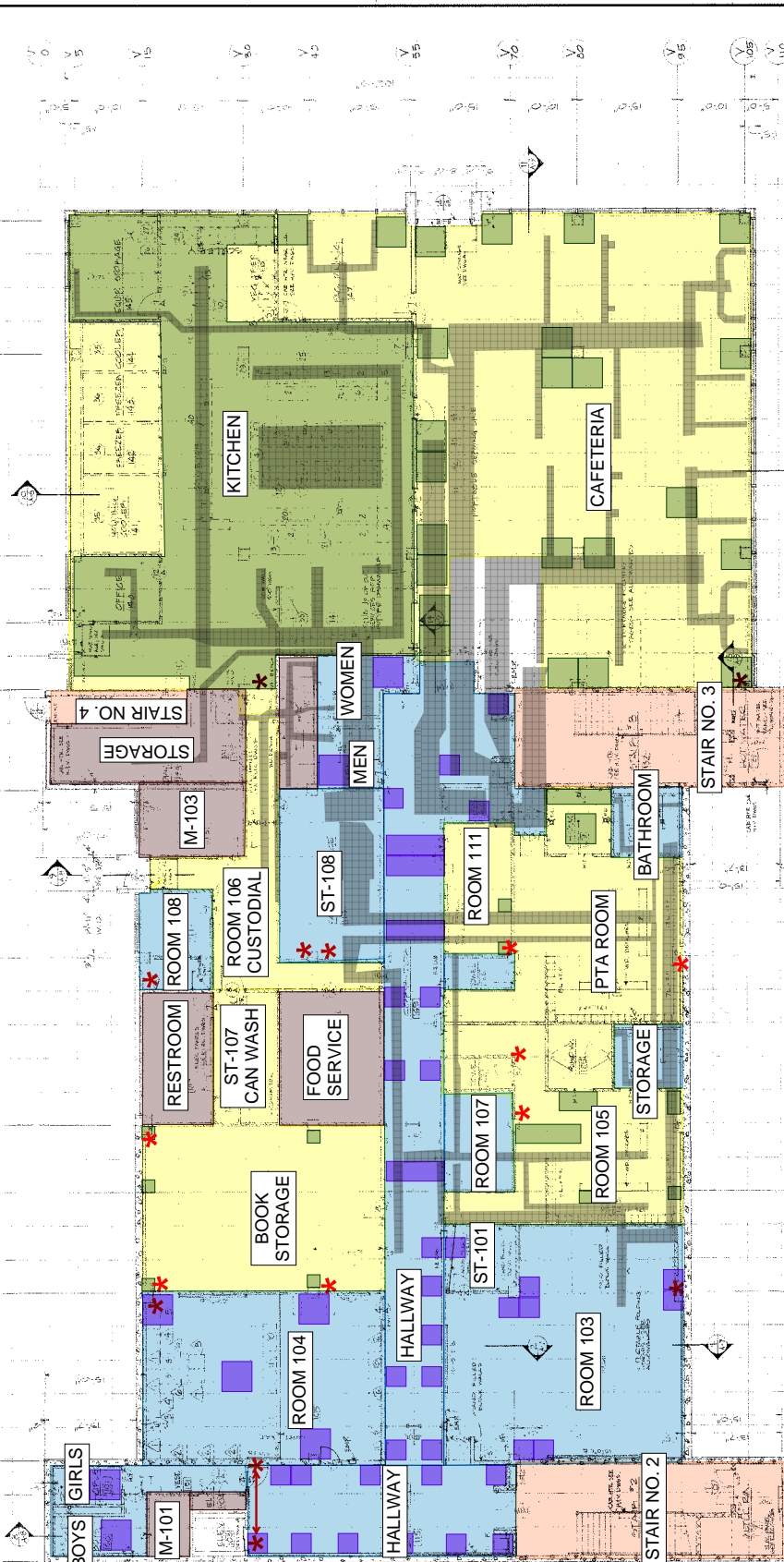
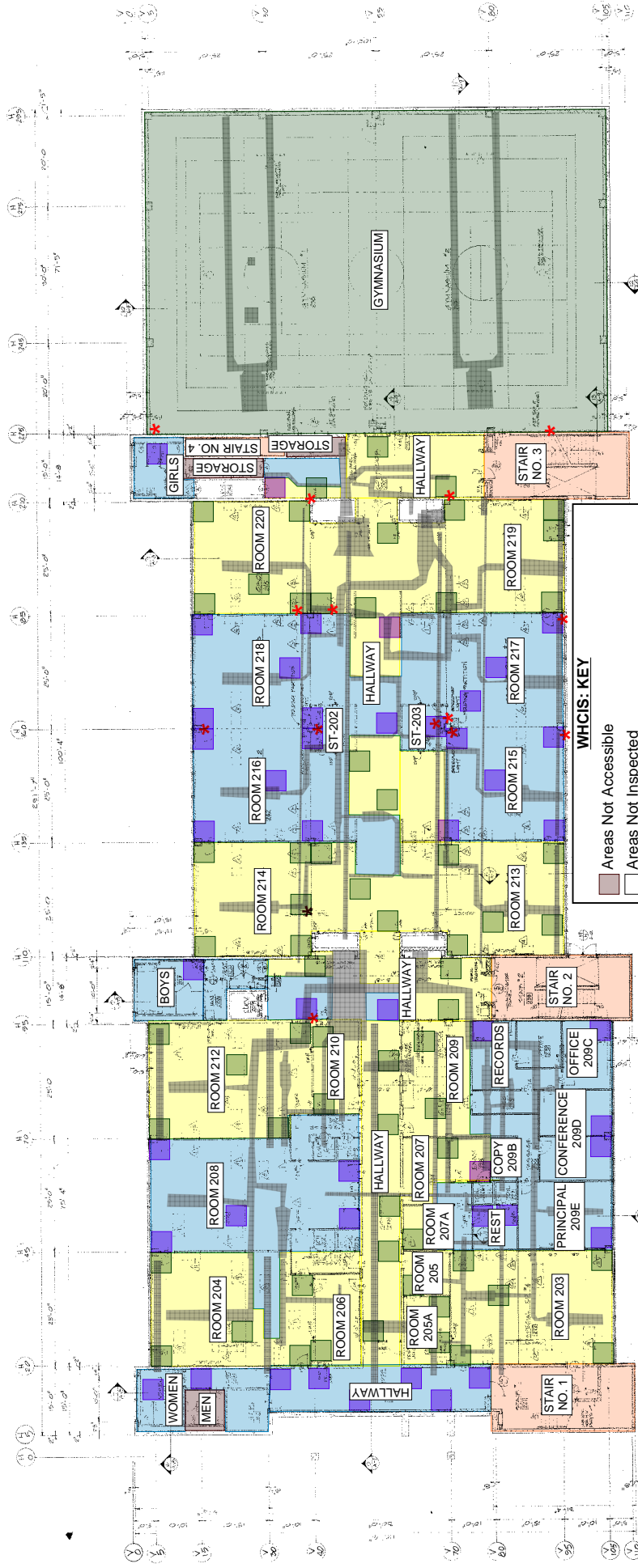


Figure 9
Level 1
 Visual and Hands-On Survey Locations
 (Level 2 Underside, observed from Level 1)

WHCIS: KEY

- Areas Not Accessible
- Areas Not Inspected
- Mechanical Obstruction
- Phase 1: Hands-On Sounding/Ceiling Tiles Removed
- Phase 1: Visual Survey
- Phase 2: Hands-On Sounding/Ceiling Tiles Removed
- Phase 2: Visual Survey
- Stair Survey - See Field Report 3
- Potential Fall Hazard
- Potential Fall Hazard - Removed

- Notes:**
1. This plan includes surveys performed and potential fall hazards noted during the Phase 1 inspections.
 2. See Figures 5-7 from Field Report No. 3, dated 16 August 2023, for surveys performed and potential fall hazards at the stairs.
 3. See Figure 8 from Field Report No. 4, dated 17 August 2023, for surveys performed and potential fall hazards at the facade.



- Notes:**
1. This plan includes surveys performed and potential fall hazards noted during the Phase 1 inspections.
 2. See Figures 5-7 from Field Report No. 3, dated 16 August 2023, for surveys performed and potential fall hazards at the stairs.
 3. See Figure 8 from Field Report No. 4, dated 17 August 2023, for surveys performed and potential fall hazards at the facade.

Figure 10
Level 2
Visual and Hands-On Survey Locations
(Level 3 Underside, observed from Level 2)

WARD FOUR ELEMENTARY SCHOOL		RICH LANG & COTE INC.	
ARCHITECT		ARCHITECT	
DATE: 10/1/2023		DATE: 10/1/2023	
DRAWN BY: J. L. COTE		CHECKED BY: J. L. COTE	
REV: 1		REV: 1	
A-2		A-2	
SECOND FLOOR PLAN		SECOND FLOOR PLAN	
ROOM NO.	ROOM NAME	ROOM NO.	ROOM NAME
203	ROOM 203	204	ROOM 204
205	ROOM 205	206	ROOM 206
207	ROOM 207	208	ROOM 208
209	ROOM 209	210	ROOM 210
211	ROOM 211	212	ROOM 212
213	ROOM 213	214	ROOM 214
215	ROOM 215	216	ROOM 216
217	ROOM 217	218	ROOM 218
219	ROOM 219	220	ROOM 220
221	ROOM 221	222	ROOM 222
223	ROOM 223	224	ROOM 224
225	ROOM 225	226	ROOM 226
227	ROOM 227	228	ROOM 228
229	ROOM 229	230	ROOM 230
231	ROOM 231	232	ROOM 232
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237	ROOM 237	238	ROOM 238
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253	ROOM 253	254	ROOM 254
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259	ROOM 259	260	ROOM 260
261	ROOM 261	262	ROOM 262
263	ROOM 263	264	ROOM 264
265	ROOM 265	266	ROOM 266
267	ROOM 267	268	ROOM 268
269	ROOM 269	270	ROOM 270
271	ROOM 271	272	ROOM 272
273	ROOM 273	274	ROOM 274
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395	ROOM 395	396	ROOM 396
397	ROOM 397	398	ROOM 398
399	ROOM 399	400	ROOM 400

