

A D D E N D U M #02

DATE: 4/22/2022

TO: All bidders, Andrew Delany

FROM: Rob Kuhn, SOCOTEC

PROJECT: Salem Public Schools, Security & Hardware System Upgrades (phase 1B)

RE: Dr. Joseph Salerno Automotive Tech Center, Salem Public School, and Francis X Collins school

SOCOTEC JOB NO.: 182080.3.2

Bidders are hereby informed that Plans and Specifications for the above-referenced project are modified, corrected and/or supplemented by this Addendum, which shall become a part of the Contract Documents prepared by SOCOTEC AE Consulting, LLC (SOCOTEC), a SOCOTEC company. All General Bidders are required to acknowledge all the Addenda issued in paragraph A on the Form for General Bid. **Failure to do so shall may in the rejection of your bid.**

CLARIFICATIONS:

1. The bid date has been extended to **April 28, 2002 at 11am.**

QUESTIONS:

2. **Question:** *Please provide clarification if there are monetary damages per day if the project doesn't complete on time and if yes, what is the per day fine?*

Answer: See answer to question #2

3. **Question:** *Please provide clarification if damages/fines would be applied when there is known manufacturer product delays that could prevent this project from hitting milestones. Would a waiver be granted for this?*

Answer: SECTION 00 21 13, PARAGRAPH 1.16 (SCHEDULE), ITEM B: The Contractor is advised that because of the bidding schedule, there is more than enough time to order all the material in advance of the work so that all the construction can occur between **May 9, 2022** and **August 30, 2022**. Special notice is given that all the long lead time items can and must be ordered well in advance of site mobilization in order to meet the schedule. No exceptions will be made nor allowed if the contractor fails to properly plan the procurement of all items in advance of the work. Late fees will be imposed if the construction is not done on time.

4. **Question:** *Please verify tax status of this project.*

Answer: SECTION 00 21 13, PARAGRAPH 1.14 (SCHEDULE), ITEM A: The City of Salem has a tax exempt number (#E-04-6001413)

5. **Question:** *Who is to provide and install all plywood for head end equipment locations?*

Answer: The installing contractor shall provide any required mounting backboard.

6. **Question:** *Please verify cabling to all cameras.*

Answer: All new network cabling shall be CAT6. Where existing cameras being replaced, utilize existing network cabling.

7. **Question:** *Is CAT6 cable acceptable?*

Answer: Yes, CAT6 is acceptable.

8. **Question:** *Do any cameras require shielded cabling?*

Answer: No.

9. **Question:** *For camera cable runs that are over 300 feet, please advise for POE extending hardware.*

Answer: Specifications include Game Changer cabling (or approved equal) for the cameras that exceed 300 feet. If you prefer to utilize an Ethernet-over-UTP converter, the Nitek NV-EC1701U-KIT1 (or approved equal) may be used.

10. **Question:** *Please verify fiber optic cabling specification.# of Strands, Single mode, Multi mode, OS2, OM1-2-3-4, Armored Sheathing*

Answer: A minimum of 6-strand, 50-micron, OM3 cable shall be installed between the main head-end aggregation switch and each remote head-end. This cable shall be a Belden FL3D006A9 (or approved equal).

11. **Question:** *Sheet SEC.5, duplicate exterior C2, adjacent to stairwells 14 and 15, please advise.*

Answer: Refer to the attached revised equipment schedule.

12. **Question:** *Sheet SEC.5, camera C50 is tagged to remain, equipment schedule SEC.18 shows C50 as an Axis P3715, please advise.*

Answer: Refer to the attached revised equipment schedule.

13. **Question:** *Sheet SEC.7, please verify that C87 is incorrect and is to be deleted from drawing.*

Answer: Correct.

14. **Question:** *Sheet SEC.8, C13 is shown as a fisheye, symbol schedule states 12MP, Hanwha XNF-8010R is 6MP, please advise.*

Answer: Refer to the attached revised equipment schedule.

15. **Question:** *Sheet SEC.8, C73 is shown as a dual imager, equipment schedule SEC.22 shows C73 as a Hanwha QNV-6082R, please advise.*

Answer: Refer to the attached revised equipment schedule.

16. **Question:** *Sheet SEC.8, C75 is shown as a dual imager, equipment schedule SEC.22 shows C75 as a Hanwha QNV-6082R, please advise.*

Answer: Refer to the attached revised equipment schedule.

17. **Question:** *Sheet SEC.10, C81 is shown on drawing but not listed in equipment schedule SEC.22, please advise.*

Answer: Refer to the attached revised equipment schedule.

18. **Question:** *Sheet SEC.20, equipment schedule shows no patch panels listed for H2-H5, please advise.*

Answer: Refer to the attached revised equipment schedule.

19. **Question:** *Sheet SEC.22, equipment schedule show C62, please provide location.*

Answer: Refer to the attached revised equipment schedule.

20. **Question:** *Will there be a bid date extension for this project?*

Answer: See answer to Question #26.

21. **Question:** *With the labor need to be Union?*

Answer: No.

22. **Question:** *Has the asbestos areas been identified and will tents or abatement be supplied by others?*

Answer: Companies shall do their due diligence after they receive their AHERA3 report (3/2022); attached. Tents & abatement to be provided by the bidder. Owner has had similar work performed in the past without disturbing the existing "hot" items & we expect to not disturb these items.

23. **Question:** *Please confirm the start and end date of the project.*

Answer: See answer to question #2.

24. **Question:** *Due to the end date listed in the RFP of Aug. 15th and the issues surrounded by product delivery dates will there be an extension and removal of any late penalties?*

Answer: See answer to question #2.

25. **Question:** *Will all new Genetec license be transferred over to the new and if so are counts available per school?*

Answer: Contractor will be expected to buy new Genetec licenses as part of their scope of work Yes, counts are available.

26. **Question:** *Will the bids still need to be mailed or hand delivered to 93 Washington St. 2nd floor Salem, MA by 11AM on April 21st?*

Answer: Hard copies are to be received by the City of Salem, MA, no later than **April 28th, 2022 at 11am**

27. **Question:** *Will alternatives be allowed for long lead time items and if so please identify?*

Answer: Should lead times greatly affect the completion schedule, the awarded will be required to submit desired or approved equal manufacturers for review & approval prior to installation.

28. **Question:** *Some of the existing pipes are at more than 40% fill ratio. Will the winning bidder be responsible for coring new holes and installing additional pipework between floors?*

Answer: Yes. The newly installed cabling shall comply with all NEC, state and local codes. Contractor shall use the existing penetrations as much as they can. Any new holes shall be drilled as part of the contractor's scope of work.

29. **Question:** *If Coring the floor is needed, will the floors need to be X-rayed?*

Answer: No. If the contractor determines that new penetrations are required through the existing slab, they will be responsible for verifying the existing conditions.

30. **Question:** *Will an addendum be coming out to move the existing locations on the prints from electrical closets to the janitors closets for the panel ?*

Answer: Refer to the attached revised equipment schedule.

31. **Question:** *Will the automotive building need new fiber and switches?*

Answer: No; this building will require a new head end & a separate server, which is a stand-alone system from the high school.

32. **Question:** *If new fiber is needed for the automotive school will there be adequate pathways to allow for us already?*

Answer: New fiber cabling is not planned.

33. **Question:** *Does the school have additional spline and drop ceiling tiles for replacement should they be needed?*

Answer: No; provide new to match existing (USG "F" Fissured basic acoustical panels).

34. **Question:** *In areas were the ceiling both interior and exterior are currently damaged will that be fixed prior to camera installation?*

Answer: No; GC shall not mount equipment on damaged areas.

35. **Question:** *In solid ceiling areas where there are existing holes in solid ceiling or new ones that need to be created will these need to be patched and painted by others or will a hatch provided and installed by the winning bidder be expected?*

Answer: Installing access panels for future access and ease of future cabling

36. **Question:** *Is there a lift on site and if so will it be made available for use to the winning bidder?*

Answer: Yes; here are two, one man lifts on site (manufactured by Genie); the maximum extension for these lifts is 40'-0"

37. **Question:** *What are the hours of installation that we may work?*

Answer: During the current school year until June 18, 2022, the working hours are 3pm – 10pm, Monday through Friday. On June 19, 2022, the working hours are 6am – 10pm, Monday through Friday. Nights & weekend work is at the owner's discretion, as the school department staff (including a required custodian) needs to be on site while work is being done in the building. The contractor shall be responsible for costs associated with custodian presence during night & weekend work (\$47/hour) .

38. **Question:** *Are there any special policies that may delay our work day? (daily check in, Badging, training, etc)*

Answer: Daily sign-ins & sign-outs are required at the front desk. The awarded GC is to complete the attached CORI background check form for each worker that will be on site.

DRAWINGS:

39. SEC.1 through SEC.22 (dated 4/22/25, Addendum #2), by Safer Places, Inc.

ATTACHMENTS:

40. AHERA REINSPECTION REPORT - 2022-03-11.pdf

END ADDENDUM #2

O:\CBI PROJECTS\2018\CB182080.3.2 Salem Schools Security Upgrades Phase 1B\MSWORD\ADDENDA\2022-04-20



AHERA 3-YEAR REINSPECTION AND UPDATED ASBESTOS MANAGEMENT PLAN

SALEM HIGH
SCHOOL

40 Shattuck Road | Suite 110
Andover, Massachusetts 01810
866.702.6371

woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

231711.05
City of Salem
March 2022

Via Electronic Mail

March 11, 2022



[insert name here]
Salem High School
Inspectional Services Department
77 Willson Street
Salem, MA 01970

Re: AHERA – Re-Inspection and Asbestos Management Plan
Salem High School, Salem, Massachusetts
Woodard & Curran Project 231711.04

Dear [insert name here]:

Woodard & Curran, Inc. (Woodard & Curran) is pleased to submit the attached Asbestos Hazard Emergency Response Act (AHERA) Re-Inspection and Management Plan for the above-referenced school. These records must be maintained on file at the Local Education Agency's (LEA) administrative offices and at the school. The school's Designated Person has reviewed and signed the Statement of Responsibilities Form provided in Appendix C. The recommended response actions included in the report should be reviewed by the school's AHERA designated person and implemented as soon as feasible.

The following information is included in this report:

- Table 1. Facility and Accreditation Information
- Table 2. Recordkeeping Review
- Table 3. Inspection Results and Recommended Response Actions
- Table 4. Evaluation of Resources
- Appendix A. AHERA Schedule of Activities, 2020 - 2023
- Appendix B. Supplemental AHERA Information
- Appendix C. AHERA Designated Person Statement of Responsibilities
- Appendix D. Inspector and Management Planner Certifications

We have also enclosed a copy of the Designated Person's Self-Study Guide. This guide was developed by the U.S. EPA to help persons appointed as the Designated Person to understand their responsibilities under the EPA AHERA regulations.

If you have any questions regarding this information, please call us at 978-494-6537.

Sincerely,

WOODARD & CURRAN

Laura A. Stockfisch
Technical Manager

LAS/bp

Attachments

PN: 231711.05

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Appendix A:	AHERA SCHEDULE OF ACTIVITIES, 2020 - 2023
Appendix B:	SUPPLEMENTAL AHERA INFORMATION
Appendix C:	AHERA DESIGNATED PERSON STATEMENT OF RESPONSIBILITIES
Appendix D:	INSPECTOR AND MANAGEMENT PLANNER CERTIFICATION

1. TABLE 1: FACILITY AND ACCREDITATION INFORMATION
Salem High School, Salem, Massachusetts
June 22, 2021

School: Salem High School
 77 Willson Street, Salem, Massachusetts 01970

Principal: Samantha Meier
 978-745-9300

LEA Designated Person: [insert name here]
Phone Number: 978-766-3403

Inspection Date: June 22, 2021

Inspector Signature: 

Accredited Inspector: Robert M. Pelletier
Massachusetts DLS¹ Certification: AI-001843
Certification Expiration: February 15, 2023

Management Planner Signature 

Accredited Management Planner Laura A. Stockfisch
Massachusetts DLS¹ Certification: AP-900414
Certification Expiration: November 8, 2022

Company Woodard & Curran
 40 Shattuck Road, Suite 110
 Andover, Massachusetts 01810
 866.702.6371

1. Massachusetts Department of Labor Standards

2. TABLE 2: RECORDKEEPING REVIEW
Salem High School, Salem, Massachusetts
June 22, 2021

1. The LEA is required to perform periodic surveillance of all ACBM located within the school building(s) at least once every six months. Any changes in the condition of the ACBM must be noted. A written, dated record of the surveillance results must be maintained in the school's AHERA records.

Periodic inspection records present? No

Comment: No previous surveillance or abatement records were presented to Woodard & Curran for review.

2. The LEA is required to provide all currently employed custodial and maintenance staff and the LEA's Designated Person with appropriate asbestos-related training. Evidence of completion of training must be maintained with the school's AHERA records.

Custodial/maintenance training records present? No

Designated Person training records present? No

Although Woodard & Curran did not review the training records; Woodard & Curran conducted training for custodial and maintenance staff on July 2, 2018, October 31, 2018 and July 8, 2019.

3. A copy of the school's Asbestos Management Plan must be maintained at each school and be available for inspection by interested parties.

Management Plan present? No

Comment: Woodard & Curran reviewed the initial inspection report as part of this reinspection.

4. Annual written notification of the availability of the Asbestos Management Plan must be provided to parent, teacher, and employee organizations. A written, dated record of each yearly communication must be maintained with the school's AHERA records.

Annual communication records present? No

Comment:

5. The LEA must maintain with the school's AHERA records detailed written records of all removal, operations-and-maintenance, response-action and cleaning activities performed on any ACBM located within the school building(s).

Abatement records present? No

Comment: No previous AHERA records were presented to Woodard & Curran for review

6. The Management Plan must contain a Statement of Responsibility Form signed by the LEA's Designated Person. (A Statement of Responsibility Form is provided as Appendix C.)

Statement of Responsibility present? No

Comment:

7. Asbestos warning labels must be posted properly at each school building adjacent to friable and non-friable ACBM in routine maintenance areas such as boiler rooms.

Asbestos warning labels posted? No

Comment:



3. TABLE 3: RE-INSPECTION RESULTS AND RECOMMENDED RESPONSE ACTIONS

Salem High School, Salem, Massachusetts June 22, 2021									
Homogeneous Material Number	Material Description	Functional Space	Quantity	Sampled	Friability	Assessment Category	Comments	Recommended Response Action	Recommended Completion Date
01	1'x1' Square spine ceiling tiles with deep fissures	Basement - Room 091; Room 087; Basement rooms 056, 057, 058; Basement-Hallway (adjacent 087, 057, and gym(old construction)); Boys Locker Room & Team rooms; Girls Locker Room; Library 3rd floor; 3rd floor suite rooms (356-361); Library 2nd floor; Library 1st floor; Main office 158; 158G; 158C; 158 D-F; Bathroom s in main office (2); Director 162A, 158A, 158B; Hallway 5 near Art room; Stage Storage; Room 183; Stair 15; Room 171 / 172; Art Room; 2nd floor hallway (not addition); Room 285; Room 282 / 283; Storage 280, 281; Storage 279; 2nd floor Patio; Practice Music Rooms; School Store 250; 1st floor hallway between art room and library; 2nd floor hallway between art room and library Library 3rd floor; 3rd floor suite rooms (356-361)	86,275 sq ft	Yes - no asbestos detected	N/A	N/A	N/A - not asbestos	N/A	N/A
02	1'x2' Vinyl wood colored floor tile and associated adhesive		8,054 sq ft	Yes - no asbestos detected in either the tile or the associated adhesive	N/A - not asbestos	N/A	N/A - not asbestos	N/A	N/A
03	12" Floor tiles (various colors and patterns)	137 A-F; 158C; 158H; 1st floor hallway between art and library; 2nd floor hallway (not addition); 2nd floor hallway between art and library; 2nd floor Patio; 3rd floor projector s behind auditorium; Art ; Auditorium; Basement - Hallway (adjacent 087, 057, and gym(old construction)); Basement - 087; Basement - 091 storage closet; Basement - 091; Basement 018; Basement s 056, 057, 058; Cafeteria 143; Cafeteria 243; Cafeteria 343; Conference 153 and librarian office; Director 162A, 158A, 158B; Entry way - 1st floor; Hallway #6 (between 170 and 178); Hallway 1st floor - New Construction; Hallway 2nd floor - New Construction; Hallway 3rd floor - New Construction; Hallway 5 near Art; Hallway outside Library on 3rd floor; Health Suite 123; Librarian work; Library 1st floor; M309; Main office 158; Practice Music s; 101; 102; 103; 104; 105; 106; 107; 108 A-H; 109; 110; 111; 117, 118, 124; 119; 120, 121, 122 IDF; 125 Bath; 125, 128, 129; 130, 131, 132; 133, 141; 134; 135, 136, 139, 140; 152; 171 / 172; 178; 201, 202, 203, 204; 205, 211; 206, 207, 209, 210; 208A-G, 223 A-G; 212, 213, 214, 215; 217, 218, 224; 219; 225, 226; 228; 229, 330; 232; 233, 241; 234, 235, 236, 239, 240; 237 A-F; 282 / 283; 285; 301, 302, 303, 304; 307, 308, 309, 310; 308 A-G; 317, 318, 324; 325, 326; 327; 328, 329, 330, 332; 333, 341, 334, 335, 339, 340; 349 A-E; 352 & 354 storage closet in Library; School Store 250; Stage Storage; Stair 2; Storage 279; Teachers' Lounge 142; Teachers' lounge 242; Teacher lounge 342; Teacher's lounge 227; Tel / data 156;	223,985 sq ft	Yes - 2% Chrysotile asbestos (sampled prior to re-inspection)	NF	N/A	Damaged in Basement - Room 091; Basement - Room 087; Basement - Hallway (adjacent 087, 057, and gym(old construction)); Room 233, 241; Hallway outside Library on 3rd floor; Main office 158; 1st floor hallway between art room and library; 2nd floor hallway between art room and library; Hallway #6 (between 170 and 178); Tel / data 156	Remove damaged floor tiles and replace with non-asbestos flooring. Maintain intact asbestos floor tiles in accordance with OSHA Publication 3693	Remove damaged floor tiles as soon as feasible and complete prior to September 2022.



3. TABLE 3: RE-INSPECTION RESULTS AND RECOMMENDED RESPONSE ACTIONS

Salem High School, Salem, Massachusetts June 22, 2021									
Homogeneous Material Number	Material Description	Functional Space	Quantity	Sampled	Friability	Assessment Category	Comments	Recommended Response Action	Recommended Completion Date
04	Black adhesive associated with 12" floor tiles	137 A-F; 158C; 158H; 1st floor hallway between art and library; 2nd floor hallway (not addition); 2nd floor hallway between art and library; 2nd floor Patio; 3rd floor projector s behind auditorium; Art ; Auditorium; Basement - Hallway (adjacent 087, 057, and gym(fold construction)); Basement - 087; Basement - 091 storage closet; Basement - 091; Basement 018; Basement s 056, 057, 058; Cafeteria 143; Cafeteria 243; Cafeteria 343; Conference 153 and librarian office; Director 162A, 158A, 158B; Entry way - 1st floor; Hallway #6 (between 170 and 178); Hallway 1st floor - New Construction; Hallway 2nd floor - New Construction; Hallway 3rd floor - New Construction; Hallway 5 near Art; Hallway outside library on 3rd floor; Health Suite 123; Librarian work; Library 1st floor; M309; Main office 158; Practice Music s; 101; 102; 103; 104; 105; 106; 107; 108 A-H; 109; 110; 111; 117; 118, 124; 119; 120, 121, 122 IDF; 125 Bath; 125; 128, 129; 130, 131, 132; 133, 141; 134; 135; 136; 139, 140; 152; 171 / 172; 178; 201, 202, 203, 204; 205, 211; 206, 207, 209, 210; 208A-G, 223 A-G; 212, 213, 214, 215; 217, 218, 224; 219; 225, 226; 228; 229, 330; 232; 233, 241; 234, 235, 236, 239, 240; 237 A-F; 282 / 283; 285; 301, 302, 303, 304; 307, 308, 309, 310; 308 A-G; 317, 318, 324; 325, 326; 327; 328, 329, 330, 332; 333, 341; 334, 335; 339, 340; 349 A-E; 352 & 354 storage closet in Library; School Store 250; Stage Storage; Stair 2; Storage 279; Teachers' Lounge 142; Teachers' lounge 242; Teacher lounge 342; Teacher's lounge 227; Tel / data 156;	223,985	Yes - 10% Chrysotile asbestos (sampled prior to re-inspection)	NF	X	Damaged in Basement - Room 091; Basement - Room 087; Basement - Hallway (adjacent 087, 057, and gym(fold construction)); Room 233, 241; Hallway outside library on 3rd floor; Main office 158; 1st floor hallway between art room and library; 2nd floor hallway between art room and library; Hallway #6 (between 170 and 178); Tel / data 156	Cover damaged adhesive or remove floor tile	As soon as feasible and prior to September 2022
05	2x2 white ceiling tiles with small random fissures	Hallway (newly constructed area); Entry way - 1st floor; Hallway 1st floor - New Construction; Room 101; Room 102; Room 103; Room 104; Stair 2; Room 107; Room 106; Room 108 A-H; Room 109; Room 110; Room 105; Room 111; Room 113; Room 114; Room 112; Room 116; Room 118 Science prep; Room 117, 118, 124; Room 125; Room 125 Bathroom; Room 119; Room 120; 121, 122 IDF; Health Suite 123; Room 128, 129; Room 130, 131, 132; Room 135, 136, 139, 140; Room 134, Room 133, 141; Teachers' Lounge 142; Closet M107 and adjacent restroom; Cafeteria 143; 137 A-F; Slainwell 10; Room 217, 218, 224; Room 219; Room 225, 226; Teachers lounge 227; Hallway 2nd floor - New Construction; Room 228; Room 229, 330; Room 234, 235, 236, 239, 240; Room 232; Room 233, 241; Teachers' lounge 242; Closet M207 and adjacent restroom; Cafeteria 243; Room 237 A-F; Room 208A-G, 223 A-G; Room 212, 213, 214, 215; Room 206, 207, 209, 210; Room 205, 211; Room 201, 202, 203, 204; Hallway 3rd floor - New Construction; Utility M310; Room 301, 302, 303, 304; Room 308 A-G; Room 312, 313, 314, 315, 316; Room 307, 308, 309, 310; Room 317, 318, 324; Room 325, 326; Room 327; Room 328, 329, 330, 332; Room 334, 335, 339, 340; Room 333, 341; Teacher lounge 342; Custodian adjacent 342; Cafeteria 343; Conference 350A & 350B; Room 349 A-E; Storage 347; Stair 9 (every floor); Hallway outside library on 3rd floor; Room 352 & 354 storage closet in Library; Library 254; Bathroom next to library 254; Conference room 153 and librarian office; Room 152; Librarian work room; 158H; Room 179, 182; Room 178; Hallway #6 (between 170 and 178)	196,085	Yes - no asbestos detected	N/A	N/A - non-asbestos	N/A - non-asbestos	N/A (non-asbestos)	N/A (non-asbestos)



3. TABLE 3: RE-INSPECTION RESULTS AND RECOMMENDED RESPONSE ACTIONS

Salem High School, Salem, Massachusetts
June 22, 2021

Homogeneous Material Number	Material Description	Functional Space	Quantity	Sampled	Friability	Assessment Category	Comments	Recommended Response Action	Recommended Completion Date
06	2'x4' ceiling tiles with fissures parallel to 4'	Basement - Room 087; Basement - Hallway (adjacent 087, 057, and gym [old construction])	2,575 sq ft	No	F	5	Damaged Basement - Room 087; Basement - Hallway (adjacent 087, 057, and gym[old construction])	Sample ceiling tile determine asbestos content. Do not disturb ceiling tiles until asbestos content has been determined	Ongoing
07	2'x4' ceiling tiles with random fissures	Basement - Room 087; Basement - Hallway (adjacent 087, 057, and gym [old construction]); Mechanical room (near stair 24); Storage (including rooms 21 & 22); Basement 018; Maintenance office Main office 158 closet	-6,215 sq ft	Yes - no asbestos detected	N/A	N/A (non-asbestos)	N/A (non-asbestos)	N/A (non-asbestos)	N/A (non-asbestos)
08	2'x4' ceiling tiles with fissures parallel to 2'		20 sq ft	No	Friable	5	Good condition	Sample ceiling tile determine asbestos content. Do not disturb ceiling tiles until asbestos content has been determined	Ongoing
09	2'x4' ceiling tiles randomly perforated	Boys Locker Room & Team rooms; Girls Locker Room; Mechanical room (near stair 24); Storage (including rooms 21 & 22)	7,160 sq ft	No	Friable	5	Good condition	Sample ceiling tile determine asbestos content. Do not disturb ceiling tiles until asbestos content has been determined	Ongoing
10	Partition window glazing (interior)	Basement - Room 091; Basement - Room 091 storage closet; Basement - Room 091 office; Small Gym / Fitness center; Gymnasium; Boys Locker Room & Team rooms; Girls Locker Room; Hallway (newly constructed area); Maintenance office; Entry way - 1st floor; Hallway 1st floor - New Construction; Room 101; Room 102; Room 103; Room 104; Stair 2; Room 107; Room 106; Room 108 A-H; Room 109; Room 110; Room 105; Room 111; Room 113; Room 114; Room 112; Room 118 Science prep; Room 117, 118, 124; Room 133, 141; Cafeteria 143; 137 A-F; Room 217, 218, 224; Room 225, 226; Teachers' lounge 227; Hallway 2nd floor - New Construction; Room 228; Room 229; 330; Room 234, 235; 236, 239, 240; Room 232; Room 233, 241; Teachers' lounge 242; Cafeteria 243; Room 237 A-F; Room 208A-G, 223 A-G; Room 212, 213, 214, 215; Room 206, 207, 209, 210; Room 205, 211; Room 201, 202, 203, 204; Hallway 3rd floor - New Construction; Room 301, 302, 303, 304; Room 308 A-G; Room 312, 313, 314, 315; 316; Room 307, 308, 309, 310; Room 317, 318, 324; Room 325, 326; Room 327; Room 328, 329, 330, 332; Room 334, 335, 339, 340; Teachers' lounge 342; Cafeteria 343; M309; Hallway outside Library on 3rd floor; 3rd floor projector rooms behind auditorium; Room 352 & 354 storage closet in Library; Library 3rd floor; Library 2nd floor; Library 254; Library 1st floor; Main office 158; 158 D-F; Director 162A, 158A, 158B; 1st floor hallway between art room and library; 2nd floor hallway between art room and library; Hallway 5 near Art room; Stage Storage; Hallway #6 (between 170 and 178); Room 171 / 172; Art Room; Tel / data 196; 2nd floor hallway (not addition); Room 285; Storage 279; 2nd floor Patio; Practice Music Rooms; School Store 250	-23,853 ln ft	Yes - 2% Chrysotile asbestos (sampled prior to re-inspection)	NF	X	Damaged Basement - Room 091	Repair damage window glazing at window of room 091. Maintain all window glazing compound in good condition.	Repair damaged window glazing prior to September 2022



3. TABLE 3: RE-INSPECTION RESULTS AND RECOMMENDED RESPONSE ACTIONS

Salem High School, Salem, Massachusetts
June 22, 2021

Homogeneous Material Number	Material Description	Functional Space	Quantity	Sampled	Friability	Assessment Category	Comments	Recommended Response Action	Recommended Completion Date	
11	Joint compound / gypsum board	Basement 018; Men's & women's bathroom (including storage); Entry way - 1st floor; Stair 2; Room 107; Room 108 A-H; Room 113; Room 114; Room 112; Room 116; Room 118 Science prep; Room 125 Bathroom; Room 119; Room 120, 121, 122 IDF; Health Suite 123; Health Suite 123; Boys and girls bathroom adjacent 119; Room 130, 131, 132; Room 135, 136, 139, 140; Teachers' Lounge 142; Closet M107 and adjacent restroom; Room 225, 226; Restroom adjacent 227; Room 229, 330; Room 234, 235, 236, 239, 240; Closet M207 and adjacent restroom; Room 212, 213, 214, 215; Room 205, 211; Hallway 3rd floor - New Construction; Room 312, 313, 314, 315, 316; Room 307, 308, 309, 310; Room 325, 326; Restrooms adjacent 327; Custodian adjacent 342; 4 Bathrooms adjacent 349 A-E; Library 3rd floor suite rooms (356); Library 2nd floor; Library 1st floor; Main office 158; 158H; Room 183; Stair 15; Room 179, 182; Room 178; Hallway #6 (between 170 and 178); Art Room; Tel / data 156, 2nd floor boys room	20,830	20,830 sq ft	Yes - 2% Chrysotile asbestos (sampled prior to re-inspection)	F	5	Damaged Main office 158	Repair damaged joint compound located in main office and maintain all joint compound in good condition	Repair damaged joint compound in main office prior to September 2022.
12	Plaster (2 coat)	Small Gym / Fitness center; Gymnasium; Boys Locker Room & Team rooms; Girls Locker Room	3,200	3,200 sq ft	Yes - no asbestos detected	N/A	N/A	N/A	N/A	
13	Metal door & partition window frame to CMU wall	Small Gym / Fitness center; Gymnasium; Boys Locker Room & Team rooms; Girls Locker Room; Hallway (newly constructed area); Kitchen (including adjacent rooms); Maintenance office; Entry way - 1st floor; Auditorium; Hallway 1st floor - New Construction; Room 101; Room 102; Room 103; Room 104; Stair 2; Room 107; Room 106; Room 108 A-H; Room 109; Room 110; Room 105; Room 111; Room 113; Room 114; Room 112; Room 116; Room 118 Science prep; Room 117, 118, 124; Room 125; Room 125 Bathroom; Room 119; Room 120, 121, 122 IDF; Health Suite 123; Room 128, 129; Room 130, 131, 132; Room 135, 136, 139, 140; Room 134; Room 133, 141; Teachers' Lounge 142; Cafeteria 143; 137 A-F; Stairwell 10; Room 217, 218, 224; Room 219; Room 225, 226; Teachers lounge 227; Hallway 2nd floor - New Construction; Room 228; Room 229, 330; Room 234, 235, 236, 239, 240; Room 202; Room 203, 204; Room 201, 202, 203, 204; Hallway 3rd floor - New Construction; Room 301, 302, 303, 304; Room 308 A-G; Room 312, 313, 314, 315, 316; Room 307, 308, 309, 310; Room 317, 318, 324; Room 325, 326; Room 327; Room 328, 329, 330, 332; Room 334, 335, 339, 340; Teacher lounge 342; Cafeteria 343; M309; 4 Bathrooms adjacent 349 A-E; Hallway outside Library on 3rd floor; Room 352 & 354 storage closet in Library; Library 3rd floor; Library 2nd floor; Library 254; Library 1st floor; Conference room 153 and librarian office; Room 152; Librarian work room; Main office 158; 158 D-F; Director 162A, 158A, 158B; 1st floor hallway between art room and library; 2nd floor hallway between art room and library; Hallway 5 near Art room; Stage Storage; Room 179, 182; Hallway #6 (between 170 and 178); Wood shop; Room 171 / 172; Art Room; Tel / data 156; 2nd floor hallway (not addition); Room 285; Storage 280, 281; Storage 279; 2nd floor Patio; Practice Music Rooms; School Store 250	5,420	5,420 In ft	Yes - 2% Chrysotile asbestos	NF	X	Good condition	Material contains 2% Chrysotile asbestos. Maintain caulking in good condition	Ongoing

3. TABLE 3: RE-INSPECTION RESULTS AND RECOMMENDED RESPONSE ACTIONS

Salem High School, Salem, Massachusetts
June 22, 2021

Homogenous Material Number	Material Description	Functional Space	Quantity	Sampled	Friability	Assessment Category	Comments	Recommended Response Action	Recommended Completion Date
14	Fire door	Basement - Hallway (adjacent 087, 057, and gym[old construction]); Small Gym / Fitness center; Gymnasium; Hallway (newly constructed area); Maintenance office; Entry way - 1st floor; Hallway 1st floor - New Construction; Stair 2; Stairwell 10; Hallway 2nd floor - New Construction; Hallway 3rd floor - New Construction; Room 301, 302, 303, 304; Room 307, 308, 309, 310; 2nd floor hallway (not addition)	82 each	No	F	5	Good condition	Maintain fire doors in good condition and do not breach veneer of doors. Sample interior lining of doors prior to disturbance of the doors and assume lining within doors contains asbestos unless appropriate sampling and analysis indicates otherwise	Ongoing
15	Lab benches / desks	Room 112; Room 113; Room 114; Room 118 Science prep; Room 212, 213, 214, 215; Room 312, 313, 314, 315, 316	120 each	No	NF	X	Good condition	Maintain benches in good condition. Sample benches prior to disturbance of the benches and assume benches contain asbestos unless appropriate sampling and analysis indicates otherwise	Ongoing
16	Black Band of floor tiles (~2' wide)	Entry way - 1st floor	100 sq ft	No	NF	X	Good condition	Maintain floor tiles and associated adhesive in good condition in accordance with OSHA Publication 3693. Sample floor tile and adhesive material and determine asbestos content prior to any disturbance of floor tiles	Ongoing

3. TABLE 3: RE-INSPECTION RESULTS AND RECOMMENDED RESPONSE ACTIONS

Salem High School, Salem, Massachusetts June 22, 2021											
Homogeneous Material Number	Material Description	Functional Space	Quantity	Sampled	Friability	Assessment Category	Comments	Recommended Response Action	Recommended Completion Date		
17	Cove base with adhesive	Basement - Hallway (adjacent 087, 057, and gymfold construction); Entry way - 1st floor; Hallway outside Library on 3rd floor; Library 3rd floor; 3rd floor suite rooms (356-361); Room 183; Stair 15; Art Room; Basement - Room 091; Basement - Room 091 storage closet; Basement - Room 091 office; Basement - Room 087; Basement rooms 056, 057, 058; Basement - Hallway (adjacent 087, 057, and gymfold construction); M309; Library 2nd floor; Library 1st floor; Main office 158; 158H; 158G; 158C; 1st floor hallway between art room and library; 2nd floor hallway between art room and library; Hallway 5 near Art room; Stage Storage; Tel / data 156; 2nd floor hallway (not addition); Room 285; Room 282 / Locker Room; Hallway 1st floor - New Construction; Room 101; Room 102; Room 103; Room 104; Stair 2; Room 107; Room 106; Room 108 A-H; Room 109; Room 110; Room 105; Room 111; Room 113; Room 114; Room 112; Room 116; Room 118 Science prep; Room 117, 118, 124; Room 125; Room 125 Bathroom; Room 119; Room 120, 121, 122 IDF, Health Suite 123; Room 128, 129; Room 130, 131, 132; Room 135, 136, 139, 140; Room 134; Room 133, 141; Teachers' Lounge 142; Cafeteria 143; 137 A-F; Room 217, 218, 224; Room 219; Room 225, 226; Teachers lounge 227; Room 228; Room 229; 330; Room 234, 235, 236, 239, 240; Room 232; Room 233, 241; Teachers' lounge 242; Cafeteria 243; Room 205, 211; Room 201, 202, 203, 204; Room 301, 302, 303, 304; Room 308 A-G; Room 312, 313, 314, 315, 316; Room 307, 308, 309, 310; Room 317, 318, 324; Room 325, 326; Room 328; Room 329, 330, 332; Room 334, 335, 339, 340; Room 333, 341; Teacher lounge 342; Cafeteria 343; Conference 350A & 350B; Room 349 A-E; 4 Bathrooms adjacent 349 A-E; Storage 347; Room 352 & 354 storage closet in Library; Library 254; Conference room 153 and librarian office; Room 152; Librarian work room; 158 D-F; Director 162A, 158A, 158B; Room 179, 182; Room 178; Hallway #6 (between 170 and 178); Basement - Room 091; Basement - Room 087; Basement - Hallway (adjacent 087, 057, and gym fold construction); Library 1st floor; Hallway 5 near Art room; Tel / data 156; Room 282 / 283; Basement - Hallway (adjacent 087, 057, and gym fold construction); Hallway outside Library on 3rd floor; Library 3rd floor	25,000	In ft	Yes - no asbestos detected	N/A	N/A	N/A	N/A	N/A	N/A
18	Rubber stair tread with adhesive (Black and Grey)	Entry way - 1st floor; Library 3rd floor; Library 2nd floor; Library 1st floor; Stair 2	3,300	sq ft	No	NF	Good condition	Sample stair treads and associated adhesive to determine asbestos content when accessible. Do not disturb stair treads or adhesive until asbestos content has been determined.	Ongoing		
19	Sink Basin Coating (Black and Grey)	Art Room; Room 113; Room 114; Room 112; Room 118 Science prep, Room 270 Room 116; Health Suite 123; Teachers' Lounge 142; Teacher lounge 242; Room 212, 213, 214, 215; Hallway 3rd floor - New Construction; Room 312, 313, 314, 315, 316; Teachers' lounge 342; Librarian work room; Main office 158	50	each	Yes - 2% Chrysotile asbestos (sampled prior to re-inspection)	NF	Good condition	Maintain coatings in good condition	Ongoing		

3. TABLE 3: RE-INSPECTION RESULTS AND RECOMMENDED RESPONSE ACTIONS

Salem High School, Salem, Massachusetts
June 22, 2021

Homogeneous Material Number	Material Description	Functional Space	Quantity	Sampled	Friability	Assessment Category	Comments	Recommended Response Action	Recommended Completion Date
20	Building expansion joint	Hallway outside Library on 3rd floor; Library 3rd floor; Library 2nd floor; Library 1st floor	110 In ft	Yes - 2% Chrysotile asbestos	NF	X	Good condition	Material contains 2% asbestos. Maintain expansion joint caulking in good condition.	Ongoing
21	Carpet adhesive	Conference 350A & 350B; Library 2nd floor; 158G; 158C; 158 D-F	7,910 sq ft	Yes - no asbestos detected	NF		No action necessary - non-asbestos	N/A	N/A
22	Caulking on air handlers	Storage (including rooms 21 & 22); Mechanical room (near stair 24)	240 In ft	Yes - 6% Chrysotile asbestos	NF	X	Good condition	Material contains 6% asbestos. Maintain caulking in good condition.	Ongoing
23	Ceiling plaster	Auditorium	6,400 sq ft	No	Friable	5	Good condition	Assume material contains asbestos and maintain plaster in good condition. Sample material to determine asbestos content prior to disturbance	Ongoing
24	Ceramic tile, grout, mortar base	Boys Locker Room & Team rooms; Girls Locker Room; Men's & women's bathroom (including storage); Closet M107 and adjacent restroom	16,715 sq ft	No	NF	X	Good condition	Assume material contains asbestos and maintain these materials in good condition. Sample material to determine asbestos content prior to disturbance	Ongoing
25	CMU wall to CIP spandrel caulking	Basement rooms 056, 057, 058; Hallway 2nd floor - New Construction; Room 103; Room 104; Stair 2; Room 105; Room 111; Room 112; Room 118 Science prep; Room 117, 118, 124; Room 125; Room 126, 128, 129; Room 130, 131, 132; Room 133, 141; Teachers' Lounge 142; Cafeteria 143; Room 217, 218, 224; Room 225, 226; Teachers lounge 227; Hallway 2nd floor - New Construction; Room 228; Room 229, 330; Room 232; Room 233, 241; Cafeteria 243; Room 205, 211; Room 201, 202, 203, 204; Room 301, 302, 303, 304; Room 317, 318, 324; Room 325, 326; Room 327; Room 328, 329, 330, 332; Room 333, 341; Cafeteria 343; Room 349 A-E; Stair 9 (every floor); Library 3rd floor (Whole wall); Library 2nd floor; Library 1st floor; 158C; 158 D-F; Director 162A, 158A, 158B; Room 183; Stair 15; Room 182; Wood shop; Room 171 / 172; Art Room; Room 285; Room 282 / 283; 2nd floor Patio	4,346 In ft	Yes - 2% Chrysotile asbestos (sampled prior to re-inspection)	NF	X	Damaged Library 3rd floor (whole wall)	Repair or cover damaged caulking. Maintain in good condition	Repair or cover damaged caulking prior to September 2022
26	CMU wall to CMU wall and CIP spandrel caulking	3rd floor suite rooms (356-361)	100 In ft	Yes - 2% Chrysotile asbestos (sampled prior to re-inspection)	NF	X	Damaged 3rd floor suite rooms (356-361)	Repair or cover damaged caulking. Maintain in good condition	Repair or cover damaged caulking prior to September 2022
27	Concrete patch on CMU walls	Room 128, 129; Room 130, 131, 132	30 sq ft	Yes - no asbestos detected	N/A	N/A	N/A	N/A	N/A



3. TABLE 3: RE-INSPECTION RESULTS AND RECOMMENDED RESPONSE ACTIONS

Salem High School, Salem, Massachusetts
June 22, 2021

Homogeneous Material Number	Material Description	Functional Space	Quantity	Sampled	Friability	Assessment Category	Comments	Recommended Response Action	Recommended Completion Date	
28	Curtain wall caulking	Basement rooms 056, 057, 058; Maintenance office; Hallway 2nd floor - New Construction; Room 103; Room 104; Stair 2; Room 105; Room 111; Room 112; Room 118 Science prep; Room 117, 118, 124; Room 125; Room 128, 129; Room 130, 131, 132; Room 133, 141; Teachers' Lounge 142; Cafeteria 143; Room 217, 218, 224; Room 225, 226; Teachers' lounge 227; Hallway 2nd floor - New Construction; Room 228; Room 229, 330; Room 232; Room 233, 241; Cafeteria 243; Room 205, 211; Room 201, 202, 203, 204; Hallway 3rd floor - New Construction; Room 301, 302, 303, 304; Room 317, 318, 324, Room 325, 326; Room 327; Room 328, 329, 330, 332; Room 333, 341; Cafeteria 343; Conference 350B; Room 349 A-E; Stair 9 (every floor); Library 3rd floor (Whole wall); 3rd floor suite rooms (356-361); Library 2nd floor; Library 1st floor: 158C; 158 D-F; Director 162A, 158A, 158B; Room 183; Stair 15; Room 182; Wood shop; Room 171 / 172; Art Room; Room 285; Room 282 / 283; 2nd floor Patio	8,322	In ft	Yes - 2% Chrysotile asbestos (sampled prior to re-inspection)	NF	X	Good condition	Maintain caulking in good condition	Ongoing
29	Curtain wall glazing	Basement - Room 087; Basement - Hallway (adjacent 087, 057, and gym[old construction]); Entry way - 1st floor	320	No	NF		Good condition	Assume material contains asbestos and maintain these materials in good condition. Sample material to determine asbestos content prior to disturbance	Ongoing	
30	Door assembly caulking to CMU	Basement - Room 091; Basement - Room 091 storage closet; Basement - Room 091 office; Basement - Room 087; Basement rooms 056, 057, 058; Basement - Hallway (adjacent 087, 057, and gym[old construction])	724	Yes - 2% Chrysotile asbestos	NF	X	Good condition	Material contains 2% asbestos. Maintain these materials in good condition.	Ongoing	
31	Door assembly glazing	Basement - Room 087; Basement - Hallway (adjacent 087, 057, and gym[old construction])	-1,000	No	NF	X	Good condition	Assume material contains asbestos and maintain these materials in good condition. Sample material to determine asbestos content prior to disturbance	Ongoing	
32	Duct work red seam sealant	Wood shop	150	Yes 2% Chrysotile asbestos	NF	X	Good condition	Material is non-friable ACM. Maintain these materials in good condition.	Ongoing	
33	Ductwork stick pin adhesives	Boys Locker Room & Team rooms; Girls Locker Room; Mechanical room (near stair 24); Storage (including rooms 21 & 22)	-300	No	NF	X	Good condition	Assume material contains asbestos and maintain these materials in good condition. Sample material to determine asbestos content prior to disturbance	Ongoing	

3. TABLE 3: RE-INSPECTION RESULTS AND RECOMMENDED RESPONSE ACTIONS

Salem High School, Salem, Massachusetts June 22, 2021									
Homogenous Material Number	Material Description	Functional Space	Quantity	Sampled	Friability	Assessment Category	Comments	Recommended Response Action	Recommended Completion Date
34	End seam sealant	Small Gym / Fitness center, Gymnasium; Boys Locker Room & Team rooms; Girls Locker Room; Mechanical room (near stair 24); Storage (including rooms 21 & 22)	Unknown	Yes - no asbestos detected	N/A	N/A	N/A	N/A	N/A
35	Fire proofing	Basement - Room 091; Basement - Room 091 storage closet; Basement - Room 091 office; Basement - Room 087; Basement - Hallway (adjacent 087, 057, and gymfold construction); Boys Locker Room & Team rooms; Girls Locker Room; Mechanical room (near stair 24); Storage (including rooms 21 & 22); Kitchen (including adjacent rooms); Maintenance office; Room 113; Room 114; Room 112; Room 118 Science prep; Teachers' Lounge 142; Utility M310; M309; Library 2nd floor; Main office; 158 closet; Wood shop; Tel / data 156	sq ft -39,230	Yes - no asbestos detected	N/A	N/A	N/A	N/A	N/A
36	Gypsum board ceiling tiles	Kitchen (including adjacent rooms)	3,750 sq ft	Yes - no asbestos detected	N/A	N/A (non-asbestos)	N/A (non-asbestos)	N/A (non-asbestos)	N/A (non-asbestos)
37	Masonry joint caulking	Hallway (west wing)	80 in ft	Yes - 2% Chrysotile asbestos	NF	X	Good condition	Material contains 2% asbestos. Maintain these materials in good condition.	Ongoing
38	Metal column to CMU wall caulking	Basement - Room 091; Basement - Room 091 storage closet; Basement - Room 091 office; Basement - Room 087; Basement rooms 056, 057, 058; Basement - Hallway (adjacent 087, 057, and gymfold construction); Small Gym / Fitness center; Gymnasium; Mechanical room (near stair 24); Storage (including rooms 21 & 22); Kitchen (including adjacent rooms); Entry way - 1st floor; Auditorium; Hallway 1st floor - New Construction; Room 101; Room 102; Room 103; Room 104; Stair 2; Room 107; Room 106; Room 108 A-H; Room 109; Room 110; Room 105; Room 111; Room 113; Room 114; Room 112; Room 118 Science prep; Room 117, 118, 124; Room 125; Room 128, 129; Room 130, 131, 132; Room 135, 136, 139, 140; Room 134; Room 133, 141; Teacher Lounge 142; Closet M107 and adjacent restroom; Cafeteria 143; 137 A-F; Room 217, 218, 224; Room 219; Hallway 2nd floor - New Construction; Room 228; Room 229, 330; Room 234, 235, 236, 239, 240; Room 232; Room 233, 241; Teachers' lounge 242; Closet M207 and adjacent restroom; Cafeteria 243; Room 237 A-F; Room 208A-G, 223 A-G; Room 212, 213, 214, 215; Room 206, 207, 209, 210; Room 205, 211; Room 201, 202, 203, 204; Hallway 3rd floor - New Construction; Room 301, 302, 303, 304; Room 308 A-G; Room 312, 313, 314, 315, 316; Room 307, 308, 309, 310; Room 317, 318, 324; Room 325, 326; Room 327; Room 328, 329, 330, 332; Room 334, 335, 339, 340; Room 333, 341; Teachers' lounge 342; Cafeteria 343; Conference 350A & 350B; Room 349 A-E; Hallway outside library on 3rd floor; Library 3rd floor; 3rd floor suite rooms (356-361); Library 2nd floor; Library 1st floor; 158C; 158C; 1st floor hallway between art room and library; 2nd floor hallway between art room and library; Hallway 5 near Art room; Stage Storage; Room 183; Stair 15; Wood shop; Art Room; Tel / data 156; 2nd floor hallway (not addition); Room 282 / 283; 2nd floor Patio; Practice Music Rooms; 2nd floor hallway bathrooms; School Store 250	23,902 in ft	Yes - 2% Chrysotile asbestos (sampled prior to re-inspection)	NF	X	Damaged Basement - Hallway (adjacent 087, 057, and gym fold construction); Library 2nd floor; 1st floor hallway between art room and library; 2nd floor hallway between art room and library; 2nd floor hallway (not addition)	Repair or cover (damaged caulking). Maintain in good condition	Repair or cover damaged caulking prior to September 2022

3. TABLE 3: RE-INSPECTION RESULTS AND RECOMMENDED RESPONSE ACTIONS

Salem High School, Salem, Massachusetts June 22, 2021									
Homogeneous Material Number	Material Description	Functional Space	Quantity	Sampled	Friability	Assessment Category	Comments	Recommended Response Action	Recommended Completion Date
39	Miscellaneous repair floor tiles	Basement - Hallway (adjacent 087, 057, and gym(old construction)); Room 101; Room 102; Room 103; Room 104; Room 225, 226; Room 228; Room 234, 235, 236, 239, 240; Room 334, 335, 339, 340; Hallway 5 near Art room; Slage Storage	560 sq ft	No - Presumed asbestos	NF	X	Good condition	Assume material contains asbestos and maintain these materials in good condition.	Ongoing
40	Partition window glazing	Conference room 153 and librarian office; Room 152; Librarian work room; Wood shop	270 sq ft	Yes - 2% Chrysotile asbestos (sampled prior to re-inspection)	NF	X	Good condition	Maintain glazing in good condition	Ongoing
41	Pipe insulation	Wood shop	200 in ft	No - presumed asbestos	F	5	Good condition	Assume material contains asbestos and maintain these materials in good condition. Sample material to determine asbestos content prior to disturbance	Ongoing
42	Plaster ceiling	3rd floor projector rooms behind auditorium	800 in ft	No	Frangible	5	Good condition	Assume material contains asbestos and maintain these materials in good condition. Sample material to determine asbestos content prior to disturbance	Ongoing
43	Portico plaster ceiling	Portico next to room 087 (side A); Portico next to room 087 (side B)	550 sq ft	No	Frangible	5	Good condition	Assume material contains asbestos and maintain these materials in good condition. Sample material to determine asbestos content prior to disturbance	Ongoing
44	Red fire stop at wall penetrations	Mechanical room (near stair 24); Storage (including rooms 21 & 22)	9 sq ft	No	NF	X	Good condition	Assume material contains asbestos and maintain these materials in good condition. Sample material to determine asbestos content prior to disturbance	Ongoing



3. TABLE 3: RE-INSPECTION RESULTS AND RECOMMENDED RESPONSE ACTIONS

Salem High School, Salem, Massachusetts
June 22, 2021

Homogeneous Material Number	Material Description	Functional Space	Quantity	Sampled	Friability	Assessment Category	Comments	Recommended Response Action	Recommended Completion Date
45	Rubber floor adhesive	Small Gym / Fitness center; Gymnasium	12,800 sq ft	No	NF	X	Good condition	Assume material contains asbestos and maintain these materials in good condition. Sample material to determine asbestos content prior to disturbance	Ongoing
46	Tectum ceiling panels	Small Gym / Fitness center; Gymnasium	27,970 sq ft	No	Friable	5	Good condition	Assume material contains asbestos and maintain these materials in good condition. Sample material to determine asbestos content prior to disturbance	Ongoing
47	Textured paint on CIP walls	Hallway (west wing)	2,460 sq ft	No	NF	X	Good condition	Assume material contains asbestos and maintain these materials in good condition. Sample material to determine asbestos content prior to disturbance	Ongoing
48	Textured plaster ceiling	2nd floor hallway bathrooms	450 sq ft	No	Friable	5	Good condition	Assume material contains asbestos and maintain these materials in good condition. Sample material to determine asbestos content prior to disturbance	Ongoing
49	Thread sealant on sprinkler pipes	Basement - Room 091; Basement - Room 091 storage closet; Basement - Room 091 office; Basement - Room 087; Basement - Hallway (adjacent 087, 057, and gym[old construction]); Small Gym / Fitness center; Gymnasium; Boys Locker Room & Team rooms; Girls Locker Room; Mechanical room (near stair 24); Storage (including rooms 21 & 22); Kitchen (including adjacent rooms); Maintenance office; Entry way - 1st floor; Room 108 A-H; Room 133, 141; Utility M310; M309	~130 In R	Yes - no asbestos detected	N/A	N/A	N/A	N/A	N/A

3. TABLE 3: RE-INSPECTION RESULTS AND RECOMMENDED RESPONSE ACTIONS

Salem High School, Salem, Massachusetts
June 22, 2021

Homogenous Material Number	Material Description	Functional Space	Quantity	Sampled	Friability	Assessment Category	Comments	Recommended Response Action	Recommended Completion Date
50	Vinyl sheet flooring	Kitchen	Unable to quantify	Yes - 35% Chrysotile asbestos	Friable	5		Material contains 35% asbestos in the pad beneath the vinyl. Maintain vinyl in good condition and inspect periodically	Ongoing

AHERA ACBM assessment categories used in Table 3:

- 1 = Damaged or significantly damaged thermal system insulation (TSI) ACBM
- 2 = Damaged friable surfacing ACBM
- 3 = Significantly damaged friable surfacing ACBM
- 4 = Damaged or significantly damaged friable miscellaneous ACBM
- 5 = ACBM with potential for damage
- 6 = ACBM with potential for significant damage
- 7 = Any remaining friable ACBM or friable suspected ACBM
- X = Not categorized (material is non-ACBM or non-friable surfacing or miscellaneous material)
- N/A = Not applicable (material removed, could not be located or is not ACBM)

4. TABLE 4: EVALUATION OF RESOURCES

Salem High School, Salem, Massachusetts

June 22, 2021

A. Response Action Costs:

The following are order-of-magnitude budget costs for implementation of asbestos abatement response action recommendations as a result of the 2020 reinspection.

Asbestos Design	\$2,500
Air Monitoring	\$5,000
ACM Repair/Removal	\$30,000
Total	\$37,500

B. Equipment Costs (Optional):

Equipment to perform O&M activities will only be needed if the custodial/maintenance staff will be performing small scale short duration repair/removal activities. (Note that 16-hour asbestos associated worker training, medical surveillance, and a respiratory protection program is required). The equipment needed with estimated cost of items is as follows:

1. HEPA filtered vacuum	\$1,000
2. HEPA vacuum disposable bags – 5/pkg	\$25
3. 6-mil plastic waste disposal bags – 25/cs.	\$90
4. 6-mil plastic sheeting - roll of 12' x 100'	\$85
5. Asbestos warning sign – 20/pkg. \$5	\$50
6. Duct tape – 1 roll	\$10
7. Garden spray bottle	\$35
8. Wetting agent – 1 gallon	\$30
9. Half-mask-dual-cartridge respirator	\$35
10. HEPA filtered cartridges for respirators-6/pkg.	\$30
11. Tyvek disposable suits – 25/cs.	\$400
Total:	\$1,790

C. Asbestos Training Costs:

2-hour awareness training is required for the Designated Person and all custodial and maintenance personnel. The estimated cost for course attendance for two individuals is \$1,000.

The Designated Person can also receive additional training by reviewing the EPA's Designated Person Self Study Guide (a copy is enclosed).

D. Ongoing Management Costs:

The following are approximate costs for on-going management of the identified ACM:

Labeling	\$500
6-Month Surveillance	\$1,000/year
3-Year Re-inspection	\$5,250

APPENDIX A: AHERA SCHEDULE OF ACTIVITIES, 2020 - 2023

AHERA Schedule of Activities, 2020 - 2023

Date (not later than)	Action
May 4, 2022	Issue annual written notification of availability of the Management Plan
July 23, 2022	6-month periodic surveillance to be performed
January 23, 2023	3-year re-inspection to be performed
May 4, 2023	Issue annual written notification of availability of the Management Plan

APPENDIX B: SUPPLEMENTAL AHERA INFORMATION

Supplemental AHERA Information for the Education Agency

The asbestos re-inspection that was recently completed in your school building(s) by Woodard & Curran (W&C) was performed to comply with the AHERA regulation. It will be necessary to repeat the re-inspection(s) every three years until all known asbestos has been removed from the building or until the building is no longer used as a school.

AHERA stands for the Asbestos Hazard Emergency Response Act. This Act was signed into law on October 22, 1986 by President Reagan. It established the framework for a regulation which requires, among other things, that elementary and secondary schools identify asbestos containing materials in school buildings, institute programs aimed at minimizing the risk of asbestos exposure in those buildings, and re-inspect those materials every 3 years.

Asbestos is a naturally occurring fibrous mineral used in many building materials, primarily for fireproofing, thermal system insulation, sound insulation, flooring, and decoration. Materials that contain more than one percent asbestos are referred to as asbestos containing materials (Massachusetts regulations include materials that have one percent or greater asbestos in the description of asbestos-containing materials). Inhalation of airborne asbestos fibers, which can be released by damaged or deteriorated asbestos containing materials in school buildings has been shown to pose a health risk to building occupants.

The results of the most recent 3-year re-inspection have been presented in a written report. The report contains important information on the condition of all known or assumed asbestos containing materials in the school, and presents a list of recommendations, referred to as Response Actions, that the Local Education Agency should implement to ensure that asbestos containing materials do not present a health risk. A Local Education Agency is an agency at the local level that exists primarily to operate schools or to contract for educational services for elementary and secondary public and non-profit private schools.

AHERA requires each Local Education Agency to designate a person, referred to as the AHERA Designated Person, to ensure that the AHERA requirements are properly implemented. The Local Education Agency is required to provide the AHERA Designated Person with adequate training to perform the duties required by AHERA. One of the responsibilities of the AHERA Designated Person is to review the re-inspection findings, and to implement the Response Actions included in the findings. The name of the Designated Person is indicated in Table 1 of W&C's re-inspection report. Response Action recommendations and recommended completion dates are presented in Table 3 of W&C's re-inspection report.

The AHERA Designated Person is responsible for ensuring that the various AHERA related documents or records are maintained on file as part of each school's Management Plan. A Management Plan is a document(s) that each Local Education Agency is required to prepare for each school building under AHERA regulations. It describes all activities planned and undertaken by a school to comply with AHERA regulations, such as building inspections to identify asbestos containing materials, response actions, and operations and maintenance programs to minimize the risk of exposure to asbestos in school buildings. In practice, each school's Management Plan should consist of various documents, reports, letters, etc. organized into files that are kept at the Local Education Agency administrative offices with duplicates kept at each school building. Woodard & Curran inspectors perform a limited review of each school's records during each re-inspection. The results of the review are presented in Table 2 of Woodard & Curran's re-inspection report.

The following pages of this Appendix are copied from the United States Environmental Protection Agency Document "A Guide To Performing Re-inspections Under The Asbestos Hazard Emergency Response Act (AHERA)" dated February 1992. The information reproduced and included in this Appendix includes a sample re-inspection notification letter for parents and staff, and a glossary of terms. Also included is a guideline downloaded from the Massachusetts Department of Labor Standards website titled "Requirements for Asbestos Management in Schools".

Recommended Sample Re-Inspection Notification Letter

EASTSIDE COMMUNITY PUBLIC SCHOOLS

East Park Avenue
Eastside, CA 91005
(999) 922-3333

Bob Smith, Superintendent

Notification of Asbestos Re-Inspections

TO: Parents and Staff of Eastside Middle School

FROM: Bob Smith, Superintendent of Schools

DATE: December 15, 1991

In compliance with the U.S. Environmental Protection Agency (EPA) Asbestos Hazard Emergency Response Act (AHERA), in the fall of 1988 we performed inspections of each of our school buildings for asbestos-containing building materials. The inspection findings and asbestos management plans have been on file in each school administrative office since that time.

The EPA requires us to perform re-inspections of the asbestos materials every three years. During the months of September through November 1991, accredited asbestos Inspectors performed these re-inspections. An accredited Management planner reviewed the results of the re-inspections and recommended actions we should take to safely manage each asbestos material in our buildings.

Two significant findings were noted during the re-inspection of Eastside Middle School:

Asbestos-containing water pipe insulation in the kitchen over the dishwasher is slowly deteriorating due to high humidity. The material is scheduled for removal over the Christmas break.

Linoleum in all bathrooms was not included in the original AHERA Inspection. The backing (between the vinyl layer and the floor) is assumed to contain asbestos. The vinyl layer is in good condition and provides an effective barrier, preventing asbestos fiber release. This material has been added to our asbestos maintenance program and we will monitor it for any changes in condition.

All other asbestos materials in this school are in good condition and we will continue to manage them in place, as recommended by the accredited management planner.

The results of the re-inspection are on file in the management plan in the school's administrative office. Everyone is welcome to view these anytime during normal school hours (M-F, 5:00 a.m. - 4:30 p.m.). The Asbestos Program Manager, Jill Williams, is available to answer any questions you may have about asbestos in our buildings at (999) 922-3334.

GLOSSARY OF TERMS	
ACBM	Asbestos-Containing Building Material. Material which includes surfacing material, thermal system insulation, or miscellaneous material that is found in or on interior structural members or other parts of a building.
ACBM Condition	<p>Good: No visible damage or deterioration, or showing only very limited damage or deterioration.</p> <p>Damaged: Physical injury or deterioration such that the internal structure of the material is inadequate, material which has delaminated such that its bond to the substrate is inadequate, or which lacks fiber cohesion or adhesion properties for any other reason. Thermal system insulation (TSI) is considered damaged when it is lacking part or all of its covering. Such damage may be shown by the separation of ACM into layers; flaking, blistering, or crumbling; water damage or stains; scrapes, mars or gouges; exposed TSI beneath its covering.</p> <p>Significantly Damaged: Damage that is extensive and severe.</p>
Administrator (EPA)	The person appointed by the President to run the EPA.
AHERA	The Asbestos Hazard Emergency Response Act. This Act was signed into law on October 22, 1986 by President Reagan. It established the framework for a regulation which requires, among other things, that elementary and secondary schools identify asbestos-containing materials in school buildings, institute programs aimed at minimizing the risk of asbestos exposure in those buildings, and re-inspect those materials at least every 3 years.
AHERA/regulation/rule	40 CFR 763, Asbestos-Containing Materials in Schools: Final Rule and Notice, U.S. Environmental Protection Agency, February, 1987.
AHERA 1-7 Categories	<p>Seven categories defined in the AHERA regulations, one of which must be assigned to each friable surfacing and miscellaneous ACBM and each asbestos-containing TSI during an inspection or re-inspection.</p> <ol style="list-style-type: none"> 1. Damaged or significantly damaged TSI ACBM. 2. Damaged friable surfacing ACBM. 3. Significantly damaged friable surfacing ACBM. 4. Damaged or significantly damaged friable miscellaneous ACBM. 5. ACBM with potential for damage. 6. ACBM with potential for significant damage. 7. Any remaining friable ACBM or friable suspected ACBM.
AHERA Designated Person/Designated Person	Person designated by the Local Education Agency to ensure that the AHERA requirements are properly implemented.

GLOSSARY OF TERMS	
Asbestos	Naturally-occurring fibrous mineral used in many building materials, primarily for fireproofing, thermal system insulation, sound insulation, and decoration.
Asbestos-containing	Any material, when referring to school buildings, which contains more than one percent asbestos.
Assessment	Evaluation of the physical condition and potential for damage of all friable ACBM and asbestos-containing thermal system insulation. AHERA requires classification of each ACBM assessed into one of seven categories based on material type and damage/potential for damage.
Assumed ACBM	Suspect building material that has not been sampled and analyzed for asbestos content and must, therefore, be treated as an ACBM by the LEA.
Bulk Sample	A small portion (usually about thumbnail size) of a suspect asbestos-containing building material collected by the inspector for laboratory analysis to determine asbestos content.
Completed Re-inspection	The entire process of the visual examination and assessment of known and assumed ACBM in a school building; recommended response actions by the Management Planner; and submission of re-inspection findings and recommendations to the designated person. Re-inspections are required by AHERA every 3 years after Management Plan implementation.
Current Accreditation	Having successfully completed an EPA-approved accreditation or refresher course within 1 year of the re-inspection (for inspectors) or the management plan review (for Management Planners).
Encapsulation	Treatment of asbestos-containing material with a liquid that covers the surface with a protective coating or embeds fibers in an adhesive matrix to prevent the release of asbestos fibers.
Enclosure	An airtight, impermeable, permanent barrier around asbestos-containing material to prevent the release of fibers.
EPA	U.S. Environmental Protection Agency.
Evaluation Study	An EPA report entitled Evaluation of the Asbestos Hazard Emergency Response Act (AHERA).
Exclusion	One of several situations which permits the LEA to delete one or more of the items required by AHERA. For example, records of previous sample collection and analysis may be used by the accredited inspector in lieu of AHERA bulk sampling.

GLOSSARY OF TERMS	
Exterior Areas	Subdivision of areas of a building with one or more walls open to the outside, such as covered walkways or porticos.
Form	Any document the inspector uses to record information for the re-inspection, or for inspection of previously unidentified materials. Two forms were developed for this re-inspection guide: Sample Re-inspection Form 1. Original AHERA Inspection Information Abstracted from the Management Plan.
Friable	When referring to a school building, material that, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. Includes previously nonfriable material after it becomes damaged to the extent that, when dry, it may be crumbled, pulverized, or reduced to powder by hand pressure.
Functional Space	Under AHERA, a room, group of rooms, or homogeneous area designated by a person accredited to prepare Management Plans, design abatement projects, or conduct response actions.
HEPA	High Efficiency Particulate Air. A special type of filter used in equipment for removing asbestos fibers, e.g., vacuums, air filtration devices.
Homogeneous Sampling Area	In accordance with AHERA definitions, an area of surfacing material, TSI, or miscellaneous material that is uniform in color and texture.
HVAC	Heating, Ventilation and Air-Conditioning systems in a building.
Identified Material	Any AHERA-defined suspect material found during the original AHERA inspection that was also recorded in the Management Plan for the building.
Local Education Agency (LEA)	An educational agency at the local level that exists primarily to operate schools or to contract for educational services for elementary and secondary public and non-profit private schools. For non-profit private schools, this includes the building owner.
Management Plan	A document that each Local Education Agency is required to prepare under AHERA regulations. It describes all activities planned and undertaken by a school to comply with AHERA regulations, such as building inspections to identify asbestos-containing materials, response actions, and operations and maintenance programs to minimize the risk of exposure to asbestos in school buildings.
Material Category	Broad classification of suspect materials into TSI, surfacing material, and miscellaneous material.

GLOSSARY OF TERMS	
Miscellaneous Material	Interior building material on structural components, such as floor or ceiling tiles. Does not include TSI or surfacing material.
NESHAP	National Emission Standards for Hazardous Air Pollutants, EPA rules under the Clean Air Act.
Nonfriable	Material that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.
Operations and Maintenance Program (O&M)	Program of work practices to maintain friable ACBM in good condition, ensure cleanup of asbestos fibers previously released, and prevent future release by minimizing and controlling friable ACBM disturbance or damage.
Original AHERA Inspection/Original Inspection	Examination of school buildings arranged by Local Education Agency, pursuant to AHERA, to initially identify asbestos-containing materials, evaluate the condition of those materials, and take samples of materials suspected to contain asbestos. Inspections are performed by inspectors accredited by the EPA or by EPA-approved State accreditation programs.
Periodic Surveillance	A visual examination for any change in material condition of ACBM and assumed ACBM in a school building. AHERA requires a periodic surveillance at least once every 6 months.
Previously Unidentified Material	Any AHERA-defined suspect material present in a building at the time of the original AHERA inspection that is not reported in the Management Plan.
Recorded Location	An area in which a suspect material was present during the inspection, and which is indicated in the Management Plan as having the material present.
Re-inspection	The re-examination, by an accredited inspector, of a school building for which an original AHERA inspection was previously performed, including a re-evaluation and response action recommendations by an accredited Management Planner. Re-inspection of school buildings containing ACBM is required by AHERA regulations at least once every 3 years.
Removal	Taking out or stripping ACBM from an area, a functional space, or a homogeneous area.
Repair	Procedures used to patch or cover damaged asbestos-containing materials, other than enclosure or re-encapsulation. Examples include covering the damage with plastic sheeting, duct tape, or plaster.
Resilient Sheetting Flooring/Linoleum	A type of floor covering which is preformed in long sheets. Generally, the sheets are unrolled and secured to the floor with an adhesive. These commonly have a vinyl-based upper surface. The backing may contain asbestos.

GLOSSARY OF TERMS	
Response Actions	Methods, including removal, encapsulation, enclosure, repair, and operations and maintenance, that protect human health and the environment from friable ACBM.
Room/Area	A well-defined space within a building, generally a distinct room, but also a hall, crawlspace, or other distinct space. This term may refer to the entire homogeneous sampling area or to a functional space, but is generally a subset of these.
School Building	Any structure essential to the operation of a school and under the authority of the LEA, including classrooms, student housing, athletic facilities, administrative areas, garages, and maintenance areas. Several buildings may be present at one school.
Surfacing Material	Material sprayed or troweled onto structural members (beams, columns, or decking) for fire protection; or on ceilings or walls for fireproofing, acoustical or decorative purposes. Includes fireproofing, textured plaster, and other textured wall and ceiling surfaces.
Suspect Material	<p>Building material suspected to contain asbestos because of past practices in its manufacture and use.</p> <p>Includes surfacing material, gypsum wallboard (also called sheetrock or drywall), floor tile, ceiling tile, thermal system insulation, and miscellaneous other materials. Suspect materials are classified as ACBM or non-ACBM by analyzing bulk samples to determine asbestos content.</p>
Total Amount	Estimated amount (in square or linear feet) of suspect material in a building(s) at the time of the original AHERA inspection.
TSI	Thermal System Insulation. Material in a school building applied to pipes, fittings, boilers, breeching, tanks, ducts or other interior structural components to prevent heat loss or gain, or water condensation, or for other purposes.
Underestimated Quantity	The difference between the total amount of a suspect material found during the Evaluation Study and the amount of the same material recorded in the management plan, when the latter quantity is less than 80 percent of the former.
Vibration Dampening Cloth (VDC)	Cloth commonly found on ductwork where duct size changes, Cloth used to reduce noise.
Wallboard	Generic term for any wall surface installed as sheets, rather than applied wet. Includes gypsum wallboard (also called sheetrock or drywall), transite panels, etc.

**APPENDIX C: AHERA DESIGNATED PERSON STATEMENT OF
RESPONSIBILITIES**

AHERA Designated Person Statement of Responsibilities

Pursuant to Section 763.84 and Section 763.93 of the EPA Asbestos in Schools Regulation (40 CFR Part 763), each Management Plan must contain a true and correct statement, signed by the LEA designated person, that certifies that the general LEA responsibilities have been met. This form is provided to assist you in complying with this portion of AHERA regulations.

LEA Name: Salem Public Schools

LEA Address: 77 Willson Street, Salem, Massachusetts 01970

School: Salem High School, Salem, Massachusetts

Designated Person: [insert name here]

Phone Number: 781-766-3403

Assurances:

This AHERA Management Plan was developed and has been submitted pursuant to the Asbestos Hazard Emergency Response Act of 1986, Public Law 99-519; and the United States Environmental Protection Agency Rule: Asbestos-Containing Materials in Schools, 40 CFR Part 763; and the undersigned does hereby certify that the LEA has and will ensure the following:

- ✓ The activities of any persons who perform inspections, re-inspections, and periodic surveillance, develop and update Management Plans, and develop and implement response actions, including operations and maintenance, are carried out in accordance with Part 763.
- ✓ All custodial and maintenance employees are properly trained as required in Part 763 and all other applicable Federal and/or State regulations (e.g., the Occupational Safety and Health Administration Asbestos Standard for Construction, the EPA Worker Protection Rule, or applicable State regulations).
- ✓ All short-term workers (e.g., telephone repair workers, utility workers, or exterminators) who may come in contact with asbestos in a school are provided information regarding the locations of ACBM and suspected ACBM assumed to be ACM.
- ✓ All warning labels are posted in accordance with Section 763.95.
- ✓ All Management Plans are available for inspection and notification of such availability has been provided as specified in the Management Plan under Section 763.93(g).
- ✓ The undersigned person designated by the LEA pursuant to Section 763.84(g)(1) has received adequate training as stipulated in Section 763.84(g)(2).
- ✓ The LEA has and will consider whether any conflict of interest may arise from the interrelationship among accredited personnel and whether that should influence the selection of accredited personnel to perform activities under Part 763.

Signed: _____

Date: _____

APPENDIX D: INSPECTOR AND MANAGEMENT PLANNER CERTIFICATION



THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

Michael Flanagan
Director

Asbestos Inspector

ROBERT M. PELLETIER

Eff. Date 02/15/22

Exp. Date 02/15/23

AI001843

Member of C.O.N.E.S.

BOSR

BOS

23





THE COMMONWEALTH OF MASSACHUSETTS
 EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
 DEPARTMENT OF LABOR STANDARDS

Michael Flanagan
 Director

Asbestos Inspector

LAURA A. STOCKFISCH

Eff. Date 11/08/21

Exp. Date 11/08/22

AI060835

Member of C.O.N.E.S.

BOSR

BOS

22



THE COMMONWEALTH OF MASSACHUSETTS
 EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
 DEPARTMENT OF LABOR STANDARDS

Michael Flanagan
 Director

Asbestos Designer

LAURA A. STOCKFISCH

Eff. Date 11/08/21

Exp. Date 11/08/22

AD060946

Member of C.O.N.E.S.

BOSR

BOS

22



THE COMMONWEALTH OF MASSACHUSETTS
 EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
 DEPARTMENT OF LABOR STANDARDS

Michael Flanagan
 Director

Asbestos Management Planner

LAURA A. STOCKFISCH

Eff. Date 11/08/21

Exp. Date 11/08/22

AP900414

Member of C.O.N.E.S.

BOSR

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woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

INSTALL/COMMISSIONING NOTES

- 1.) Cable**
- All cable and conduit shall be provided and installed by the security integrator.
 - Camera Cabling under 326-feet shall consist of a CAT5E, 23AWG.
 - Camera cabling greater than 326-feet shall be a UTP CAT5E Cable with EoU converters.
 - All patch cables between head-end components such as switches, video servers, surge protection, etc. shall be CAT5E with the length sized accordingly.
 - All exposed cabling shall be concealed in EMT conduit and installed per NEC approved methods. All required weather proof junction boxes and fittings shall be provided.
 - All cabling shall be clearly labeled, identifying what component and port it is connected to.
 - All system components shall be labeled with their respective MAC address and IP address.
11. Patch Panels and network cabling shall be tested as part of the installed horizontal or backbone cabling system. Each link or channel in the horizontal or backbone cabling system shall be identified and tested individually, using an industry standard level III tester with proper settings, including the correct cable NVP value. Each backbone or horizontal link/channel shall be tested to Category 5E parameters listed in the table below. (Note: a level III tester will produce all results below automatically)
- Wire Map / Continuity, Length, Insertion Loss, NEXT, PSNEXT, ELNEXT, PSELFEXT, Delay and Delay Skew, and Return Loss
- A "PASS" indication shall be obtained for each channel or link, using a level III tester.
- Completed test reports shall be submitted to both Safer Places and THE CLIENT upon completion of the project.

- 2.) Quality**
- Testing Agency: Engage a qualified testing agency to perform tests and inspections.
 - Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections.
 - Perform tests and inspections.
 - Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
 - Include Manufacturer On-Site Field Engineering services for one day of system commissioning.
 - Tests and Inspections:
 - Inspection: Verify that units and controls are properly installed, connected, and labeled, and that interconnecting wires and terminals are identified.
 - Pretesting: Align and adjust system and pretest components, wiring, and functions to verify that they comply with specified requirements. Conduct tests at varying lighting levels, including day and night scenes as applicable. Prepare video-surveillance equipment for acceptance and operational testing as follows:
 - Prepare equipment list described in "Submittals" Article.
 - Verify operation of auto-iris lenses.
 - Set back-focus of fixed focal length lenses. At focus set to infinity, simulate nighttime lighting conditions by using a dark glass filter of a density that produces a clear image. Adjust until image is in focus with and without the filter.
 - Set back-focus of zoom lenses. At focus set to infinity, simulate nighttime lighting conditions by using a dark glass filter of a density that produces a clear image. Additionally, set zoom to full wide angle and aim camera at an object 50 to 75 feet (17 to 23 m) away. Adjust until image is in focus from full wide angle to full telephoto, with the filter in place.
 - Set and name all preset positions; consult Owner's personnel.
 - Set sensitivity of motion detection.
 - Set sensitivity of motion detection.
 - Verify operation of control-station equipment.
 - Test Schedule: Schedule tests after pre-testing has been successfully completed and system has been in normal functional operation for at least 14 days. Provide a minimum of 10 days' notice of test schedule.
 - Operational Tests: Perform operational system tests to verify that system complies with specifications. Test equipment for proper operation in all functional modes.
 - Video surveillance system will be considered defective if it does not pass tests and inspections.

INSTALL/COMMISSIONING NOTES

- 1.) Adjusting**
- Occupancy Adjustments: When requested, within 12 months of date of Substantial Completion, provide on-site assistance in adjusting system to suit actual occupied conditions. Provide up to three visits for this purpose. Tasks will include, but are not limited to, the following:
 - Check cable connections.
 - Check proper operation of cameras and lenses. Verify operation of auto-iris lenses and adjust back-focus as needed.
 - Adjust all preset positions; consult with appointed Owner's personnel.
 - Recommend changes to camera, lenses, and associated equipment to improve Owner's use of video surveillance system.
 - Provide a written report of adjustments and recommendations.
- 3.) As-Built and Operation and Maintenance Manuals**
- As-Built Drawings
 - At the conclusion of the project, the Contractor shall provide "as built" drawings. The "as built" drawings shall be a continuation of the Contractor shop drawings as modified, augmented, and reviewed during the installation, check out and acceptance phases of the project. All drawings shall be fully dimensioned and prepared in DWG format using the latest version of AutoCAD.
 - The as-built drawings shall incorporate all updated system riser diagrams prepared in DWG format using the latest version of AutoCAD.
 - Manuals
 - At the conclusion of the project, the Contractor shall provide copies of the manuals as described herein. Each manual's contents shall be identified on the cover. The manual shall include names, addresses, and telephone numbers of each system integrator installing equipment and systems and the nearest service representatives for each item of equipment for each system. The manuals shall have a table of contents and labeled sections. The manuals shall include all modifications made during installation, check-out, and acceptance. The manuals shall contain the following:
 - Hardware Manual
 - The hardware manual shall describe all equipment furnished including:
 - General description and specifications
 - Installation and check-out procedures
 - Equipment layout and electrical schematics to the component level
 - System layout drawings and schematics
 - Alignment and calibration procedures
 - Manufacturer repair parts list indicating sources of supply
 - Software Manual
 - The software manual shall describe the functions of all software and shall include all other information necessary to enable proper loading, testing, and operation. The manual shall include:
 - Definition of terms and functions
 - Use of system and applications software
 - Initialization, start up, and shut down
 - Alarm reports
 - Reports generation
 - Data base format and data entry requirements
 - Directory of all disk files
 - Operations Manual
 - The operations manual shall fully explain all procedures and instructions for the operation of the system including:
 - Computers and peripherals
 - System start-up and shut-down procedures
 - Use of system, command, and applications software
 - Recovery and restart procedures
 - Graphic alarm presentation
 - Use of report generator and generation of reports
 - Data entry
 - Operator commands
 - Alarm messages and reprinting formats
 - System access requirements
 - Maintenance Manual
 - The maintenance manual shall include descriptions of maintenance for all equipment including inspection, periodic preventive maintenance, fault diagnosis, and repair or replacement of defective components.

- 4.) Programming and Training**
- Coordinate and obtain a written approval of system functionality from the Owner prior to programming.
 - Perform a walk-through with the Owner and demonstrate the system functionality.
 - Make any adjustments to system functionality after initial programming; if necessary to achieve the desired functionality requested by the Owner.
- A. The security system integrator shall provide four (2) two hour training sessions for client personnel.
- 5.) Commissioning**
- Upon completion of the project, a site inspection shall be performed with the security integrator, THE CLIENT and Safer Places. The purpose will be to confirm that all equipment has been installed per the Scope of Work and in a neat professional manner. A punch list will be generated for any items that need to be addressed. Upon a successful site inspection or once all punch list items have been addressed, the integrator, owner and Safer Places will sign-off on the project.

CABLE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	PLENUM
A	CAT5E STRUCTURED NETWORK CABLE	BELDEN	1212003U1000
B	CAT6 STRUCTURED NETWORK CABLE	BELDEN	2412003A1000
C	CAT5E SHIELDED NETWORK CABLE	BELDEN	1212F003A1000
D	ACCESS COMPOSITE CABLE W/4 INNER CABLES	WINDY CITY	4461030-S
E	3-2PR #22AWG SHIELDED CABLE	WINDY CITY	444351-04S
F	2-CONDUCTOR #18AWG UNSHIELDED CABLE	WINDY CITY	442364-S
G	2-CONDUCTOR #22AWG UNSHIELDED CABLE	WINDY CITY	444366-S
H	4-CONDUCTOR #22AWG UNSHIELDED CABLE	WINDY CITY	444366-S
I	2-CONDUCTOR #18AWG UNSHIELDED PARALLEL CABLE	AIPHONE	871802
J	RG-59U COAXIAL CABLE, COPPER BRAD, COPPER CENTER	WINDY CITY	659211-04S
K	2-STRAND SINGLE-MODE FIBER OPTIC CABLE	BELDEN	B9W043T
L	2-STRAND MULTIMODE FIBER OPTIC CABLE	BELDEN	B9B043T
M	6-STRAND SINGLE-MODE FIBER OPTIC CABLE	BELDEN	B9W240T
N	6-STRAND MULTI-MODE FIBER OPTIC CABLE	BELDEN	B9B240T
K	12-STRAND SINGLE-MODE FIBER OPTIC CABLE	BELDEN	B9W241T
L	12-STRAND MULTIMODE FIBER OPTIC CABLE	BELDEN	B9B241T
M	CABLE INCLUDED WITH EQUIPMENT	TBD BY BIDDER	N/A
N	EXISTING CABLING TO BE REUSED	N/A	N/A
O	NETWORK PATCH CABLE	TBD BY BIDDER	N/A
P	FIBER JUMPER/PATCH CABLE	TBD BY BIDDER	N/A

NOTE:
THE SECURITY INTEGRATOR, BIDDER OR CONTRACTOR RESPONSIBLE FOR THE INSTALLATION OF THE SYSTEM CABLING SHALL ENSURE THAT ALL CABLING IS RATED AND DESIGNED FOR ITS INTENDED APPLICATION AND ENVIRONMENT. PLENUM RATED PART NUMBERS HAVE PROVIDED FOR REFERENCE PURPOSES ONLY.

RESPONSIBILITY MATRIX

	INTEGRATOR	THE CLIENT	GC	SITE ELECTRICIAN	CABLE PROVIDER	PHONE COMPANY	ELEVATOR COMP	FIRE ALARM COMP	GATE COMPANY
ELECTRICAL PERMITS (IF REQUIRED)	X	-	-	-	-	-	-	-	-
BUCKET TRUCK/LIFT FEES	X	-	-	-	-	-	-	-	-
EQUIPMENT INSTALLATION	X	-	-	-	-	-	-	-	-
EQUIPMENT TERMINATIONS	X	-	-	-	-	-	-	-	-
LOW VOLTAGE CABLE INSTALLATION	X	-	-	-	-	-	-	-	-
SURFACE RACEWAY/CONDUIT INSTALLATION	X	-	-	-	-	-	-	-	-
UNDERGROUND CONDUIT (LESS TRENCHING)	-	-	-	-	-	-	-	-	-
SITE EXCAVATION/TRENCHING	-	-	-	-	-	-	-	-	-
120VAC POWER (HARDWIRED & OUTLETS)	-	X	-	-	-	-	-	-	-
FIRE ALARM INTERFACE TERMINATIONS	-	X	-	-	-	-	-	-	-
FIRE ALARM INTERFACE CABLING	X	-	-	-	-	-	-	-	-
FLOOR CORING	X	-	-	-	-	-	-	-	-
ELECTRIC DOOR LOCKING HARDWARE	X	-	-	-	-	-	-	-	-
NETWORK DROPS FOR CLIENT CONNECTIVITY	-	X	-	-	-	-	-	-	-
CATV INTERFACE TERMINATION & MODULATOR	-	-	-	-	-	-	-	-	-
SECURITY ALARM TELEPHONE LINE	-	-	-	-	-	-	-	-	-
TELEPHONE ENTRY SYSTEM TELEPHONE LINE	-	-	-	-	-	-	-	-	-
ELEVATOR TRAVELER CABLE	-	-	-	-	-	-	-	-	-
GATE CONTROLLER	-	X	-	-	-	-	-	-	-
CONCRETE FOOTINGS/PADS	-	-	-	-	-	-	-	-	-
PROGRAMMING/TESTING/TRAINING	X	-	-	-	-	-	-	-	-
O&M MANUALS AND AS-BUILT DRAWINGS	X	-	-	-	-	-	-	-	-
FIBER OPTIC CABLING	-	-	-	-	-	-	-	-	-
PATCHING AND PAINTING	-	X	-	-	-	-	-	-	-
TESTING AND CERTIFICATION OF NETWORK DROPS	X	-	-	-	-	-	-	-	-

SYMBOL SCHEDULE

	HEAD-END EQUIPMENT RACK - VIDEO/ACCESS SERVER, NETWORK SWITCHES, UPS, ETC. SHALL BE LOCATED WITHIN THIS CABINET. REFER TO EQUIPMENT SCHEDULES FOR DETAILS.
	FIXED SINGLE IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS.
	FIXED 360° 4-IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS. F = INSTALL CABLE ONLY FOR FUTURE CAMERA
	FIXED DUAL IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS.
	FIXED 180° 3-IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS.
	FIXED 270° 3-IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS.
	12MP FISH-EYE CAMERA
	NEMA ENCLOSURE JUNCTION BOX WEATHERPROOF, 120 VAC
	VIDEO INTERCOM ENTRY PANEL - REFER TO EQUIPMENT SCHEDULES FOR DETAILS.
	INTERCOM PANEL- REFER TO EQUIPMENT SCHEDULES FOR DETAILS.
	WIRELESS POINT-TO-MULTIPOINT NETWORK RADIO - REFER TO EQUIPMENT SCHEDULES FOR DETAILS. (B = BASE UNIT, T = TERMINAL UNIT)

SYMBOL SCHEDULE

	SAFFIRE R-CR-2-1 CARD READER - REFER TO EQUIPMENT SCHEDULES FOR DETAILS
	KABA SAFFIRE LX SERIES SMARTLOCK. P = PANIC, M = MORTISE, D = DEADBOLT, I = INTERCONNECTED, L = LATCH. REFER TO EQUIPMENT SCHEDULES FOR DETAILS
	KABA SAFFIRE LX SERIES UNIT ENTRY LOCK. P = PANIC, M = MORTISE, D = DEADBOLT, I = INTERCONNECTED, L = LATCH. REFER TO EQUIPMENT SCHEDULES FOR DETAILS
	VOICE OVER IP TALK-DOWN SPEAKER - REFER TO EQUIPMENT SCHEDULES FOR DETAILS
	PANIC ALARM BUTTON - REFER TO EQUIPMENT SCHEDULES FOR DETAILS
	WIRELESS ALARM CONTACT - REFER TO EQUIPMENT SCHEDULES FOR DETAILS
	SECURITY KEYPAD/CONTROLLER - REFER TO EQUIPMENT SCHEDULES FOR DETAILS
	WIRELESS MOTION SENSOR - REFER TO EQUIPMENT SCHEDULES FOR DETAILS

SYMBOL SCHEDULE

	AERIAL CABLING
	POINT-TO-POINT/MULTIPOINT WIRELESS INFRASTRUCTURE
	UNDERGROUND CONDUIT

GENERAL NOTES

- ALL CABLING AND CONDUIT SHALL BE INSTALLED PER LOCAL AND NATIONAL ELECTRICAL CODE APPROVED METHODS.
- ALL EXTERIOR MOUNTED EQUIPMENT SUCH AS CAMERAS, INTERCOM STATIONS, ENCLOSURES, CARD READERS, ETC. SHALL BE PROPERLY MOUNTED AND WATER TIGHT. COMPRESSION FITTINGS SHALL BE USED FOR ALL CONDUIT ENTERING THE EQUIPMENT ENCLOSURES AND BACK BOXES.
- SURFACE MOUNT CONDUIT OR RACEWAYS SHALL BE INSTALLED FOR ALL CABLING THAT CANNOT BE CONCEALED ABOVE CEILINGS OR WALLS. THE INSTALLING CONTRACTOR SHALL CONFORM WITH THE CONDUIT FILL RATE PERCENTAGES OUTLINED IN THE NATIONAL ELECTRICAL CODE.
- EQUIPMENT SUCH AS CAMERAS, MOTIONS SENSORS AND TALK-DOWN SPEAKERS MOUNTED TO DROP-CEILING TILES SHALL BE RE-INFORCED WITH A BACKING PLATE TO MINIMIZE DAMAGE FROM VANDALISM.
- SHOULD THIS PROJECT INCLUDE FIBER OPTIC CABLING, THE INSTALLING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIBER TERMINATIONS, BREAK-OUT BOXES, PATCH CABLES AND TESTING. ALL INTERIOR FIBER CABLING MUST BE INSTALLED WITHIN ARMORED CABLE OR FIBER INNER DUCT. PRIOR TO INSTALLATION, THE INSTALLING CONTRACTOR SHALL CONFIRM THAT THE DISTANCE OF EACH CABLE RUN DOES NOT EXCEED THE LIMITATIONS OF THE FIBER CABLING. SHOULD THIS BE THE CASE, THE INSTALLING CONTRACTOR SHALL CONTACT SAFER PLACES FOR DIRECTION.
- ALL CABLING WITHIN EQUIPMENT RACKS, CONTROL PANELS, FIELD PANELS, ENCLOSURES, ETC SHALL BE PROPERLY DRESSED AND CLEARLY LABELED. ALL CABLES SHALL BE NEATLY BUNDLED AND SECURED. A SCHEDULE SHALL BE LEFT WITHIN EACH ENCLOSURE IDENTIFYING WHAT DEVICES ARE SERVICED BY THE RESPECTIVE PANEL/ENCLOSURE. THIS SCHEDULE SHALL INCLUDE ANY REQUIRED IP ADDRESSES, MAC ADDRESSES, LOGIN CREDENTIALS, ETC.
- SHOULD THIS PROJECT INCLUDE NEW POLES, CARD READER PEDESTALS, INTERCOM PEDESTALS, ETC. THE INSTALLING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED CONCRETE FOOTINGS OR PADS.
- ALL REQUIRED EXTERIOR CONDUIT SHALL BE INSTALLED PER LOCAL AND NATIONAL ELECTRICAL CODES. SHOULD EMT BE UTILIZED, PROPER COMPRESSION FITTINGS SHALL BE INSTALLED. PVC CONDUIT SHALL BE A SCHEDULE 80 AND UTILIZE PROPER EXPANSION FITTINGS TO PREVENT CRACKING.
- SHOULD WIRELESS NETWORK TRANSCEIVERS BE UTILIZED FOR THIS PROJECT, PROPER SHIELDED NETWORK CABLING SHALL BE INSTALLED. PRIOR TO INSTALLATION, THE INSTALLING CONTRACTOR SHALL CONFIRM LINE OF SIGHT BETWEEN TRANSCEIVERS EXISTS. IF LINE OF SIGHT DOES NOT EXIST, THE INSTALLING CONTRACTOR SHALL CONTACT SAFER PLACES FOR DIRECTION..
- ALL EQUIPMENT SHALL BE PROPERLY GROUNDED FOLLOWING MANUFACTURER SUGGESTED METHODS.
- UNLESS OTHERWISE NOTED, THE INSTALLING CONTRACTOR SHALL PROVIDE ALL REQUIRED CORING, SLEEVES AND APPROVED FIRE-STOPPING METHODS.
- THESE DRAWINGS ARE INTENDED FOR DIAGRAMATICAL PURPOSES ONLY AND OUTLINE THE INTENT OF THE DESIGNED SYSTEM(S). THE INSTALLING CONTRACTOR IS REQUIRED TO PROVIDE ALL EQUIPMENT NECESSARY FOR A COMPLETELY FUNCTIONAL SYSTEM. IF ADDITIONAL EQUIPMENT IS REQUIRED OR RECOMMENDED, PLEASE NOTIFY SAFER PLACES, PRIOR TO SUBMITTING A BID AND INCLUDE THIS EQUIPMENT WITH YOUR PROPOSAL.
- ALL EQUIPMENT AND DEVICES SHALL BE INSTALLED PER THE MANUFACTURER RECOMMENDATIONS AND INSTALLATION INSTRUCTIONS..
- ALL CABLING PASSING THROUGH FIRE WALLS OR SMOKE BARRIER SYSTEMS SHALL BE FIRE-STOPPED VIA AN APPROVED (UL CLASSIFIED) FIRE STOP MATERIAL.
- SOME SYMBOLS, ABBREVIATIONS, CABLE TYPES AND GENERAL NOTES CONTAINED WITHIN THESE DRAWINGS MAY NOT BE USED FOR THIS PROJECT.
- ALL EQUIPMENT SHALL BE AS OUTLINED IN THE SECURITY DRAWINGS. ACCEPTABLE SUBSTITUTIONS ARE LISTED ON DRAWING SEC.1. PROPOSALS/SUBMITTALS THAT DO NOT FOLLOW THESE GUIDELINES SHALL BE REJECTED. THE BIDDER WILL ALSO INCUR ALL COSTS ASSOCIATED WITH PROVIDING THE SPECIFIED EQUIPMENT
- THE INSTALLING CONTRACTOR SHALL CHANGE THE DEFAULT PASSWORDS AND USERNAMES ON ALL NETWORK CAMERAS, SYSTEM HARDWARE AND SOFTWARE PROGRAMS. ALL USER NAMES PASSWORDS SHALL BE PROPERLY DOCUMENTED ON THE AS-BUILT DRAWINGS.
- THE INSTALLING CONTRACTOR SHALL DISABLE THE "PHONE HOME FEATURE ON ALL VIDEO SURVEILLANCE CAMERAS.

NETWORK CABLING LABELING FORMAT

All network cables shall be labelled on both ends utilizing the following format. Labels shall be machine printed with a handheld printer. This allows for fast changes to the label scheme, reprinting on site if needed if a label is damaged or destroyed, and generally allows more flexibility in style (wire wrap, multi-line, color, etc.).

Device ID	Head-end Location Room Number	Patch Panel and Switch Identifier	Port Number
Example:			
C21	-	115	- A - 9

Revisions :	No. :	Date :	Remarks :
	1	4/22/22	ADDENDUM #2

Project :

SALEM SCHOOLS
(3 locations)

SALEM, MA

Date : 04/06/2022
Scale : NO TO SCALE
Project Number :
Drawn By : JSUSA
Checked By : BUKOSKI

Drawing Title :

Security Legends and Notes

PRELIMINARY

Submission :

RE-BIDDING DOCUMENTS

Sheet No. :

SEC.1

VIDEO MANAGEMENT SOFTWARE SPECIFICATIONS

1.01 Video Recording Server

A. The recording appliance shall be a server-class computer and shall meet the following minimum requirements:

1. The manufacturer of the security appliance must be a Certified Solution by the USP
2. The solution must be a turnkey video appliance with USP pre-installed
3. The solution must be extensively tested and hardened for cybersecurity
4. The solution must have machine-learning based antivirus native to the security appliance
5. The solution must have built in application to backup the USP software database and configuration settings
6. The manufacturer of the security appliance must make changes to the operating system to follow Microsoft Windows cybersecurity best practices
7. The solution must have Microsoft's native antivirus configured by default to work with the USP
8. The solution must have a single source for support for both the manufacture of the security appliance and the USP
9. The solution must require setting of custom password on first login
10. The solution must require use of complex password by default
11. The solution must have built in maintenance tool developed by the manufacturer of the USP
12. The solution must come with guaranteed performance by the manufacturer of the USP
13. The solution must come with a dedicated BIOS Management Port (for example iDRAC dedicated network port or iLO dedicated network port)
14. The solution must have a dedicated storage controller: high-performance RAID controller with a minimum of 2 GB cache optimized for writing intensive video applications. Controller must support RAID 0, 5, 6, and 10.
15. The solution must come with preconfigured with optimal RAID configuration for USP application
16. Warranty: The manufacturer must provide Level 1-3 Technical Support with 5-year global onsite warranty
17. Solution must come with option for user to keep hard drives upon failed
18. Safety approvals: The server must hold CSA or UL Listed Safety Approval

Genetec™ Specification Differentiators 5.10

Genetec Spec Differentiators

The security system shall be part of an all-encompassing unified security platform (USP) which shall support the seamless unification of IP automatic license plate recognition system (ALPR), IP access control system (ACS), and IP video management system (VMS) under a single software. The USP user interface (UI) applications shall present a unified security interface for the management, configuration, monitoring, and reporting of embedded ALPR, ACS, and VMS systems and associated edge devices.

Platform

Dashboards

The USP shall have the ability to create and customize dynamic live dashboards for system monitoring allowing data such as, but not limited to:

- Health diagnostics and reports with graphical representation of that data
- SDK reports
- Weather information
- Live video
- Access control events
- Alarms
- Cybersecurity score via an embedded hardening guide

Data ingestion

- The system must be able to import data from external sources and define custom data types as any combination of strings, numbers, timestamps, images, and components. The data must have the ability to be imported through a flat file, manually input on a map, or other approved method. The ingested data must have the ability to be used to trigger events, perform correlation analysis, and can be displayed on maps and dashboards.

Data correlation

- The system must be able to correlate internal and third-party data to be utilized in real-time dashboards and filtered reports.

Reporting

- The USP shall support comprehensive data filtering for most reports based on entity type, event type, event timestamp, custom fields, and more.
- The reporting task shall have the ability to display results through graphics, such as pie charts or bar graphs, without the need to have external reporting software.
- The USP shall have customizable reports for both criteria and layout built into the reporting engine.
- The USP shall be able to run a hardware inventory report which contains, but is not limited to:
 - Unit type, manufacturer, product type (such as camera, access control, and so on), firmware, role in the system, IP address, MAC address, time zone, user, password strength, authentication scheme, security protocol, upgrade status, next upgrade, propose firmware version, and state.

Intrusion

- The USP shall support DMP, DSC, BOSCH, and Honeywell Galaxy panels. They should be able to arm and disarm zones directly from the monitoring UI and the dynamic graphical map.
- The USP shall be able to trigger virtual inputs to a third-party intrusion panel via the third-party API.
- The USP shall be able to associate a camera to any unique entity brought into any individual input on an intrusion panel (glass break sensors, motion sensors, etc.).

USP Dynamic Graphical Maps (DGM)

- The DGM shall provide the ability to display any type of third-party entities integrated through an SDK.
- The DGM shall be able to select a floor through a built-in mapping floor selector.
- The DGM shall be able to natively use a smartphone to get images, video, and track the location of field operators through their phone's GPS.
- The DGM shall support CAD files, vector files, or GIS maps.
- The DGM shall support the use of ESI data within the mapping engine.
- The DGM must be able to bring in intrusion and arm/disarm zones directly from the map.
- The DGM must be able to push the base map to a mobile application and have it display the associated entities on that map.
- The DGM shall support geocoded searches for Google, Bing, and ESRI.

Languages

- The client software application shall support multiple languages, including but not limited to the following:
 - English, French, Arabic, Czech, Dutch, German, Hebrew, Hungarian, Italian, Japanese, Korean, Norwegian, Persian (Farsi), Polish, Portuguese (Brazilian), Simplified and Traditional Chinese, Russian, Spanish, Swedish, Thai, Turkish, and Vietnamese.
- The help menu must match the selected language pack.

Cybersecurity and certifications

- The USP shall support passive authentication using OpenID Connect and SAML 2.0.
- The USP must have the following cybersecurity certifications:
 - CSPN Certification from ANSSI
 - UL 2900-2-3 Level 3 Cybersecurity Readiness Certification
 - ISO/IEW 27001 Standard
 - FBI CJIS Compliance for cloud services
 - Microsoft Gold Certification
 - DHS Safety Act Certification

- A designation as a Qualified Anti-Terrorism Technology and certification as an Approved Product for Homeland Security from the United States Department of Homeland Security (DHS).

Cybersecurity requirements

- The USP shall be an IP-enabled solution. All communication between the SSM and CSA shall be based on standard TCP/IP protocol and shall use TLS encryption with digital certificates to secure the communication channel.
 - The USP shall support user authentication with claims-based authentication using external providers.

Failover and standby requirements

- The USP shall support native and off-the-shelf failover options: Directory failover, Access Manager failover, and Archiver failover. These failovers should all be software-based and not need any third-party hardware or software to work.

Unified threat level management

- The system shall be able to change the state of the entire security system (such as LPR, video, access control, SIP intercoms, and so on) based off any event. Threat level activation shall be able to initiate the sharing of entities (video, LPR, access, and so on) to a separate enterprise not related to the initiating enterprise.

Federation

- The Federation feature shall allow multiple independent USP systems (federated systems)

to be unified into a larger virtual system (the Federation feature). This shall facilitate the global monitoring of multiple independent USP systems. The Federation feature shall support the unification of multiple independent VMS, ACS, or ALPR systems.

Updates

- The USP shall be able to have the entire software (LPR, video, and access control) updated by a single installation package.
- The USP shall utilize a system update service and a system availability monitor to notify you of clients, workstations, and servers that are offline or need an upgrade. This service will utilize the latest information provided by the software manufacturer in an automated fashion. The update service should also notify you if there is a published critical update to firmware for IOT devices across the enterprise.
- Update service and system availability monitoring: The USP shall utilize a system update service and a system availability monitor to notify you of clients, workstations, and servers that are offline or need an upgrade. This service will utilize the latest information provided by the software manufacturer in an automated fashion. The update service should also notify you if there is a published critical update to firmware for IOT devices across the enterprise.

Hybrid cloud solutions

- The USP shall be able to be deployed in an all-cloud, local-only, or hybrid solution.
- For video, the system shall not require any on-site servers or appliances for its reverse tunnel.
- For access control, the appliance must be able to leverage open architecture controllers as well as leverage an embedded reverse tunnel/certificate to connect to Azure.
- The concept of Federation (listed above) must be able to be hosted in the cloud and connect multi-site unrelated or related systems. Must be able to leverage a 256-bit encryption, and be hosted, managed, and updated directly by the manufacturer.

Role-based architecture

- The USP shall consist of a role-based architecture, with each SSM hosting one or more roles. Each role shall execute a specific set of tasks related to either core system, ALPR, access control (ACS), or video (VMS) functionalities, among many others.
- The installation shall be streamlined through the ability of the USP to allow administrators to do the following:
 - Deploy one or several SSM across the network prior to activating roles
 - Activate and deactivate roles as needed on each and every SSM
 - Centralize role configuration and management
 - Support remote configuration
 - Move roles over from one SSM to another
- Roles without databases, such as the Federation feature, Active Directory, and Global Cardholder Management, shall support near real-time standby without any third-party failover software being required.

Access Control

Access control hardware

- The USP shall have an edge-based gateway which provides edge failover, peer to peer communications and global IO linking between the following hardware:
 - HID VertX, HID VertX EVO, HID Edge, HID Edge EVO, Mercury controllers and SIO modules, Mercury M5 Bridge, Mercury MS Bridge, Assa Ablox Aperio RS485 8-to-1 hub, Assa Ablox IP Locks (no DSR required); (Corbin Russwin, Sargent Passport, Sargent Profile, IN220), Salto Sallis RS485 and PoE routers, Schlage AD-300 and AD-400 electronic locks, Axis A1001, Axis A1601, STid RS485 readers, DDS AS34/TPL4, SimonsVoss Smart Intego locks.
- The ACS shall be able to support Medeco X and have the ability to:
 - Register those locks as doors and associate transactions with video, have a web portal for requesting access to locks/doors.
- OSDP Version 2 must be supported by the access control manufacturer and have the ability to change an OSDP HID reader from multi-class to high-frequency directly through that protocol.
- The USP shall be able to issue HID mobile, and/or STID, and/or Salto credentials directly from the UI, and these credentials shall be open architecture.
- The system must have the ability to use a vehicle license plate as a credential

- The access control systems must be capable of supporting unlimited card formats with Mercury controllers.
- The USP shall have a module for an embedded SIP server which can bring SIP intercom call-ups directly from the monitoring UI, the ability to call out to a remote door station from that monitoring UI, and communicate/transfer from operator to operator via a native SIP protocol. The SIP server must be able to Broadcast live and recorded audio over SIP device groups (public addressing).
- Security Center leverages the latest IT-standard technologies with the following features:
 - Digital certificates and digital signatures, third-party authentication (Microsoft Active Directory and single sign-on), claims-based authentication, latest encryption standards (TLS, AES, RSA, RTSP over TLS), end-to-end encryption (including AES and OSDPV2 for supporting devices only: Bosch, Axis, Mercury, and Assa Ablox), password strength (password strength and password renewal are customizable to customer needs).

Synergis™ Cloud Link clustering

- The system must optimize cardholder synchronization for large systems by synchronizing only active cardholders managed by the same Access Manager, based on access rules.

Video

Video decoding

- The Monitoring UI shall leverage the graphical processing unit (GPU) for video decoding. The following GPU technologies shall be supported:
 - Nvidia CUDA
 - Intel Quick Sync
- The Monitoring UI shall have the ability to decode video through the optimal simultaneous use of the GPU and central processing units (CPU).

Video evidence

- The system shall have the ability to export video evidence to a secure cloud-based digital evidence management system that has ISO27001 certification for information security management.

Video privacy

- The system shall have the capability to automatically obscures individuals so security operators can ensure the privacy of individuals recorded by video surveillance cameras while safeguarding potential evidence. This capability shall be certified with the European Privacy Seal (EuroPrise).

Video recording appliance

- The recording appliance must be a server-class computer and meet the following minimum requirements:
 - Cyber hardened following Microsoft's best practices pass regular third-party penetration tests.
 - Must have machine-learning based end point protection native to the appliance.
 - Built in application to backup USP data base and configuration data.
 - Manufacture support for both the appliance hardware and USP software must come from the same source.
 - Performance of the appliance must be certified and guaranteed by the USP manufacture.
 - Must come from the manufacturer preloaded and configured with USP software.

Video transmission

- The system must increment the port number for every multicast address.

Dynamic stream selection

- The VMS must automatically switch the video stream from a megapixel stream to a low-resolution stream, based on the size of the video tile, to minimize the demand on network resources.

Password history

- The system must show when a video unit's password was changed, what the previous password was, and what the password was changed to.
- The system must be able to resolve connectivity issues by retrying all previous passwords one after the other to recover an old password.

Visual tracking

- The USP shall support the ability to manually track a moving object with the single click of a button on a semi-transparent shape or overlay on the video tile. This capability shall be done within a single camera display tile. This feature shall be available with both live and recorded video and enable the export of the tracking to a single case report.

Camera Integrity Monitor

- The USP shall support a camera integrity monitor to identify when a camera is tampered with by way of masking, movement, or camera offline state. This feature must be able to scan the entire enterprise and handle 16 Archiver roles managing 300 cameras each, analyzing each camera once per day.

No.	Date	Remarks
1	4/22/22	ADDENDUM #2

Project :

SALEM SCHOOLS
(3 locations)

SALEM, MA

Date : 04/06/2022
Scale : NO TO SCALE
Project Number :
Drawn By : JSOUSA
Checked By : BUKOSKI

Drawing Title :

Video Management Software Specifications 1 of 1

Submission :

RE-BIDDING DOCUMENTS

Sheet No. :

SEC.2

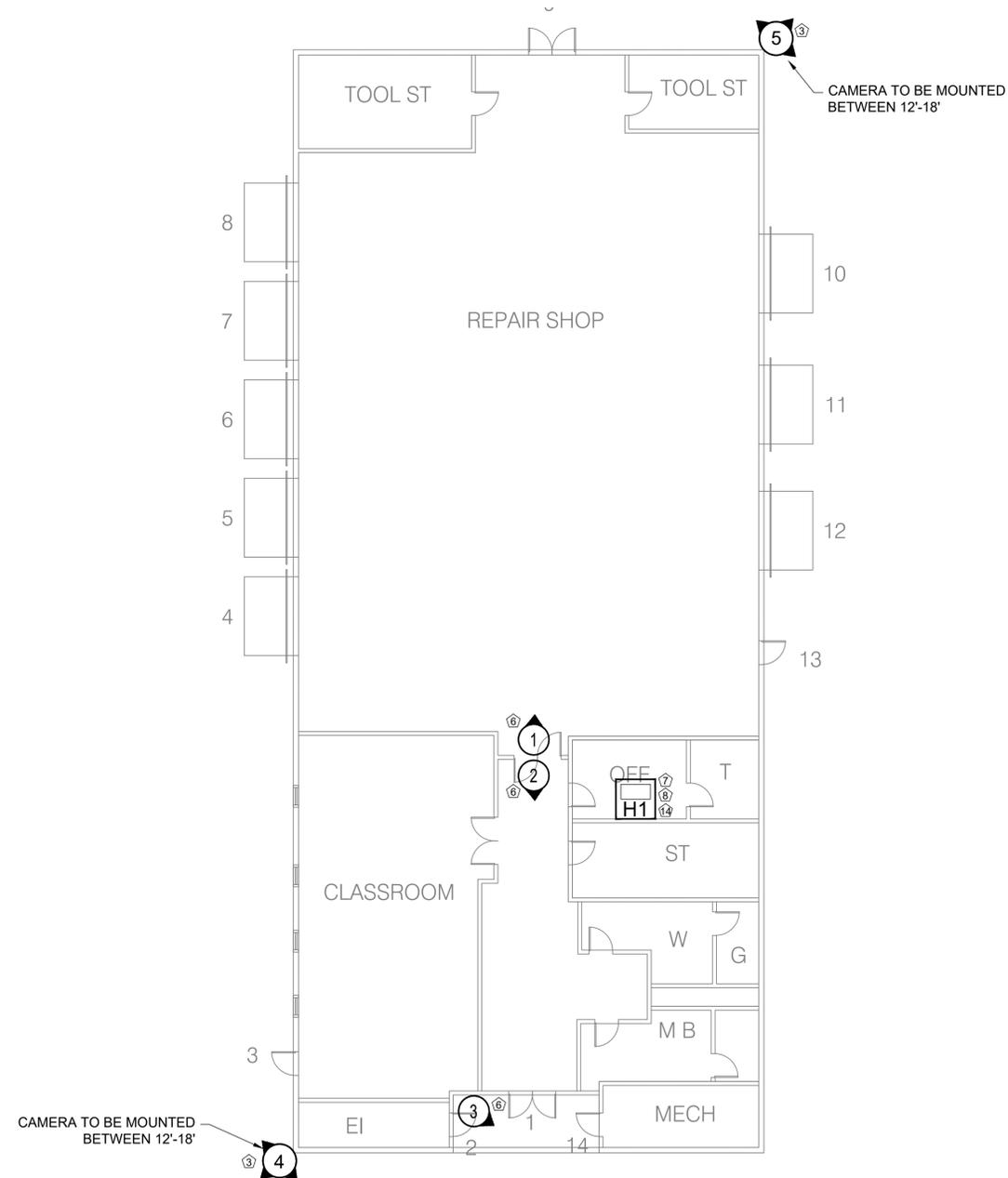
DRAWING NOTES:

- 1. SURFACE MOUNT TO FINISHED CEILING - SECURE TO STRUCTURAL CEILING. CABLE SHALL BE ROUTED THROUGH CEILING
- 2. EXTERIOR WALL MOUNT. HEIGHT SHALL BE CENTERED BETWEEN THE STRUCTURAL AND FINISHED CEILINGS. CABLING/CONDUIT SHALL ENTER THROUGH THE BACK OF THE CAMERA MOUNT.
- 3. EXTERIOR CORNER MOUNT. HEIGHT SHALL BE CENTERED BETWEEN STRUCTURAL & FINISHED CEILINGS. CABLING SHALL BE ROUTED TO AN EXTERIOR SINGLE-GANG ELECTRICAL BACK BOX AND THEN ROUTED INTO THE BOTTOM OF THE CAMERA MOUNT VIA A LIQUID-TIGHT FLEXIBLE DRIP LOOP.
- 4. FULL CARD READER PACKAGE - DOOR SHALL INCLUDE ELECTRIC LOCK, DOOR POSITION SWITCH(S), CARD READER & REQUEST TO EXIT DEVICE(S)
- 5. DOOR EGRESS PACKAGE - DOOR SHALL INCLUDE DOOR POSITION SWITCH AND REQUEST TO EXIT DEVICE.

- 6. INTERIOR SURFACE MOUNT - CAMERA SHALL INCLUDE MANUFACTURER SURFACE BACK BOX. CABLE/CONDUIT SHALL ENTER THROUGH APPROPRIATE CONDUIT KNOCK-OUT/THREADED INLET.
- 7. VMS/ACM HEAD-END EQUIPMENT AND RACK LOCATION. COORDINATE THE EXACT LOCATION WITH THE ARCHITECT, MEP ENGINEER AND GENERAL CONTRACTOR.
- 8. 110VAC, 20-AMP DEDICATED QUAD OUTLET BY THE GENERAL CONTRACTOR/SITE ELECTRICIAN.
- 9. FIRE ALARM RELAY/ADDRESSABLE CONTROL RELAY REQUIRED BY THE GENERAL CONTRACTOR.
- 10. READER "IN"/READER "OUT" LOCATION - DOOR SHALL INCLUDE TWO CARD READERS, DOOR STATUS CONTACT(S) AND ELECTRIC LOCKING HARDWARE.

- 11. APARTMENT UNIT ENTRY SCHLAGE "NO-TOUR" FUNCTION BATTERY OPERATED SMARTLOCK. COMPATIBLE FOBs TO BE PROGRAMMED THROUGH THE ACCESS CONTROL SOFTWARE.
- 12. 4-INCH CONDUIT SLEEVES PROVIDED BY THE GENERAL CONTRACTOR. THE EXACT QUANTITY SHALL BE DETERMINED AND COMPLY WITH ALL LOCAL & NEC ELECTRICAL CODES. COORDINATE LOCATION WITH ARCHITECT, ELECTRICAL ENGINEER AND GENERAL CONTRACTOR.
- 13. ELEVATOR CORNER MOUNT - THE ELEVATOR CONTRACTOR SHALL PROVIDE EITHER (1) RG-59U OR UNSHIELDED TWISTED PAIR (UTP) TRAVELERS CABLE BETWEEN THE ELEVATOR CAMERA AND MACHINE ROOM.
- 14. THE GENERAL CONTRACTOR SHALL INSTALL A 4'X8' 3/4-INCH PLYWOOD BACKBOARD AT THIS LOCATION FOR MOUNTING OF THE SECURITY HEAD-END RACKS AND ENCLOSURES.

SYMBOL SCHEDULE	
[H1]	HEAD-END EQUIPMENT RACK - VIDEO/ACCESS SERVER, NETWORK SWITCHES, UPS, ETC. SHALL BE LOCATED WITHIN THIS CABINET. REFER TO EQUIPMENT SCHEDULES FOR DETAILS.
[#]	FIXED SINGLE IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS.
[#]	FIXED 360° 4-IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS. F = INSTALL CABLE ONLY FOR FUTURE CAMERA
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1 DR. JOSEPH SALERNO AUTOMOTIVE TECH CENTER FLOOR PLAN
NOT TO SCALE

Revisions:		
No.	Date	Remarks
1	4/22/22	ADDENDUM #2

Project:
SALEM SCHOOLS
(3 locations)

SALEM, MA

Date: 04/06/2022
Scale: NO TO SCALE
Project Number:
Drawn By: JSOUSA
Checked By: BUKOSKI

Drawing Title:
**Dr. Joseph Salerno
Automotive
Technology Center
Floor Plan**

Submission:
**RE-BIDDING
DOCUMENTS**

Sheet No.:
SEC.3

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- 8. 110VAC, 20-AMP DEDICATED QUAD OUTLET BY THE GENERAL CONTRACTOR/SITE ELECTRICIAN.
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- 14. THE GENERAL CONTRACTOR SHALL INSTALL A 4'X8' 3/4-INCH PLYWOOD BACKBOARD AT THIS LOCATION FOR MOUNTING OF THE SECURITY HEAD-END RACKS AND ENCLOSURES.

SYMBOL SCHEDULE	
	HEAD-END EQUIPMENT RACK - VIDEO/ACCESS SERVER, NETWORK SWITCHES, UPS, ETC. SHALL BE LOCATED WITHIN THIS CABINET. REFER TO EQUIPMENT SCHEDULES FOR DETAILS.
	FIXED SINGLE IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS.
	FIXED 360° 4-IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS. F = INSTALL CABLE ONLY FOR FUTURE CAMERA
	FIXED DUAL IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS.
	FIXED 180° 3-IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS.
	FIXED 270° 3-IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS.
	12MP FISH-EYE CAMERA
	NEMA ENCLOSURE JUNCTION BOX WEATHERPROOF, 120 VAC
	VIDEO INTERCOM ENTRY PANEL - REFER TO EQUIPMENT SCHEDULES FOR DETAILS.
	INTERCOM PANEL - REFER TO EQUIPMENT SCHEDULES FOR DETAILS.
	WIRELESS POINT-TO-MULTIPOINT NETWORK RADIO - REFER TO EQUIPMENT SCHEDULES FOR DETAILS. (B = BASE UNIT, T = TERMINAL UNIT)

Revisions:		
No.:	Date:	Remarks:
1	4/22/22	ADDENDUM #2

Project:

SALEM SCHOOLS
(3 locations)

SALEM, MA

Date: 04/06/2022
Scale: NO TO SCALE
Project Number:
Drawn By: JSOUSA
Checked By: BUKOSKI

Drawing Title:

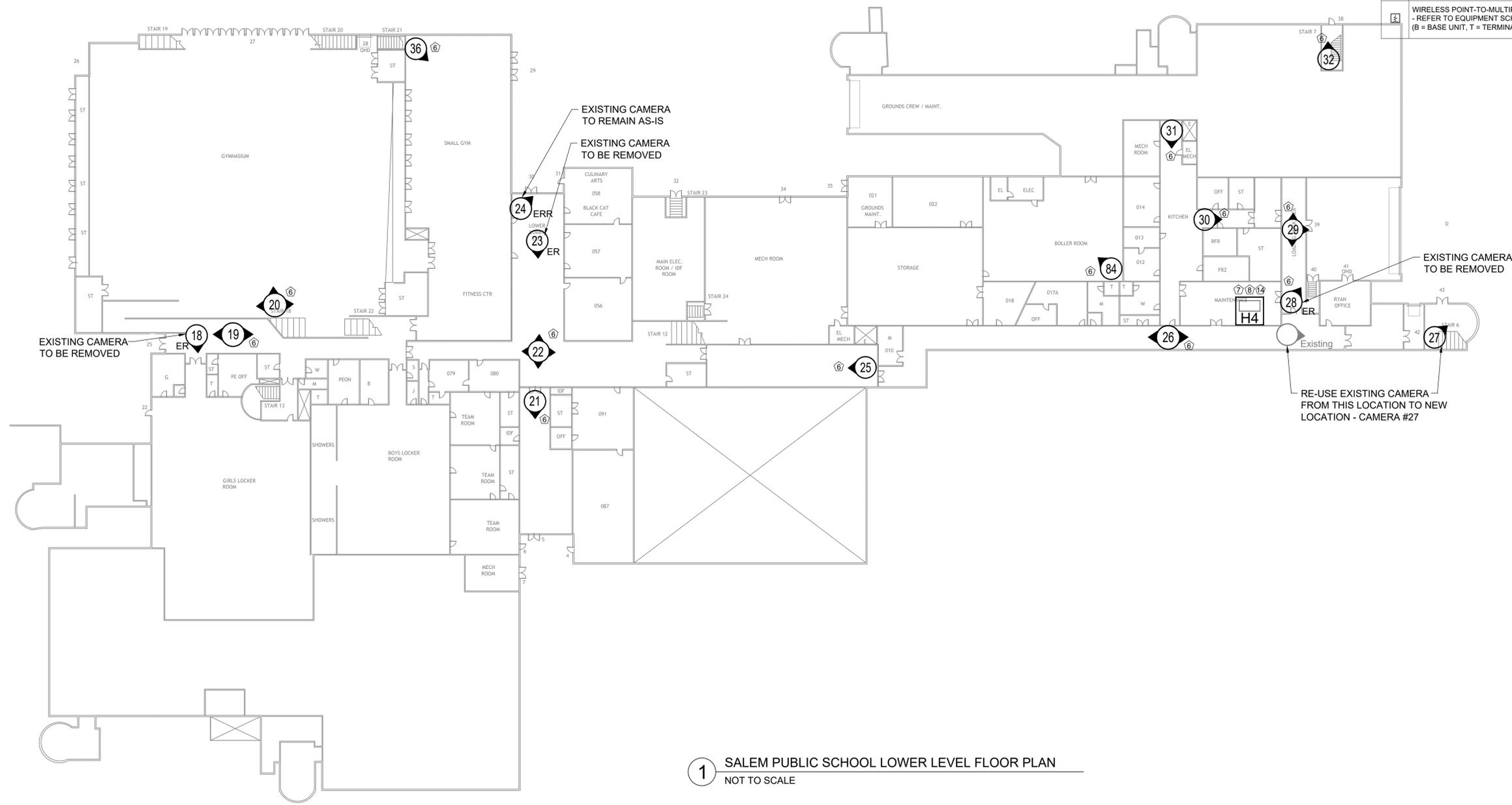
Salem Public School
Lower Level
Floor Plan
(2 of 5)

Submission:

RE-BIDDING DOCUMENTS

Sheet No.:

SEC.4



1 SALEM PUBLIC SCHOOL LOWER LEVEL FLOOR PLAN
NOT TO SCALE

DRAWING NOTES:

- ① SURFACE MOUNT TO FINISHED CEILING - SECURE TO STRUCTURAL CEILING. CABLE SHALL BE ROUTED THROUGH CEILING
- ② EXTERIOR WALL MOUNT. HEIGHT SHALL BE CENTERED BETWEEN THE STRUCTURAL AND FINISHED CEILINGS. CABLING/CONDUIT SHALL ENTER THROUGH THE BACK OF THE CAMERA MOUNT.
- ③ EXTERIOR CORNER MOUNT. HEIGHT SHALL BE CENTERED BETWEEN STRUCTURAL & FINISHED CEILINGS. CABLING SHALL BE ROUTED TO AN EXTERIOR SINGLE-GANG ELECTRICAL BACK BOX AND THEN ROUTED INTO THE BOTTOM OF THE CAMERA MOUNT VIA A LIQUID-TIGHT FLEXIBLE DRIP LOOP.
- ④ FULL CARD READER PACKAGE - DOOR SHALL INCLUDE ELECTRIC LOCK, DOOR POSITION SWITCH(S), CARD READER & REQUEST TO EXIT DEVICE(S)
- ⑤ DOOR EGRESS PACKAGE - DOOR SHALL INCLUDE DOOR POSITION SWITCH AND REQUEST TO EXIT DEVICE.
- ⑥ INTERIOR SURFACE MOUNT - CAMERA SHALL INCLUDE MANUFACTURER SURFACE BACK BOX. CABLE/CONDUIT SHALL ENTER THROUGH APPROPRIATE CONDUIT KNOCK-OUT/THREADED INLET.
- ⑦ VMS/ACM HEAD-END EQUIPMENT AND RACK LOCATION. COORDINATE THE EXACT LOCATION WITH THE ARCHITECT, MEP ENGINEER AND GENERAL CONTRACTOR.
- ⑧ 110VAC, 20-AMP DEDICATED QUAD OUTLET BY THE GENERAL CONTRACTOR/SITE ELECTRICIAN.
- ⑨ FIRE ALARM RELAY/ADDRESSABLE CONTROL RELAY REQUIRED BY THE GENERAL CONTRACTOR.
- ⑩ READER "IN"/READER "OUT" LOCATION - DOOR SHALL INCLUDE TWO CARD READERS, DOOR STATUS CONTACT(S) AND ELECTRIC LOCKING HARDWARE.
- ⑪ APARTMENT UNIT ENTRY SCHLAGE "NO-TOUR" FUNCTION BATTERY OPERATED SMARTLOCK. COMPATIBLE FOBs TO BE PROGRAMMED THROUGH THE ACCESS CONTROL SOFTWARE.
- ⑫ 4-INCH CONDUIT SLEEVES PROVIDED BY THE GENERAL CONTRACTOR. THE EXACT QUANTITY SHALL BE DETERMINED AND COMPLY WITH ALL LOCAL & NEC ELECTRICAL CODES. COORDINATE LOCATION WITH ARCHITECT, ELECTRICAL ENGINEER AND GENERAL CONTRACTOR.
- ⑬ ELEVATOR CORNER MOUNT - THE ELEVATOR CONTRACTOR SHALL PROVIDE EITHER (1) RG-59U OR UNSHIELDED TWISTED PAIR (UTP) TRAVELERS CABLE BETWEEN THE ELEVATOR CAMERA AND MACHINE ROOM.
- ⑭ THE GENERAL CONTRACTOR SHALL INSTALL A 4'X8' 3/4-INCH PLYWOOD BACKBOARD AT THIS LOCATION FOR MOUNTING OF THE SECURITY HEAD-END RACKS AND ENCLOSURES.

Revisions:	No.:	Date:	Remarks:
	1	4/22/22	ADDENDUM #2

Project:

SALEM SCHOOLS
(3 locations)

SALEM, MA

Date:	04/06/2022
Scale:	NO TO SCALE
Project Number:	
Drawn By:	JOSUISA
Checked By:	BUKOSKI

Drawing Title:

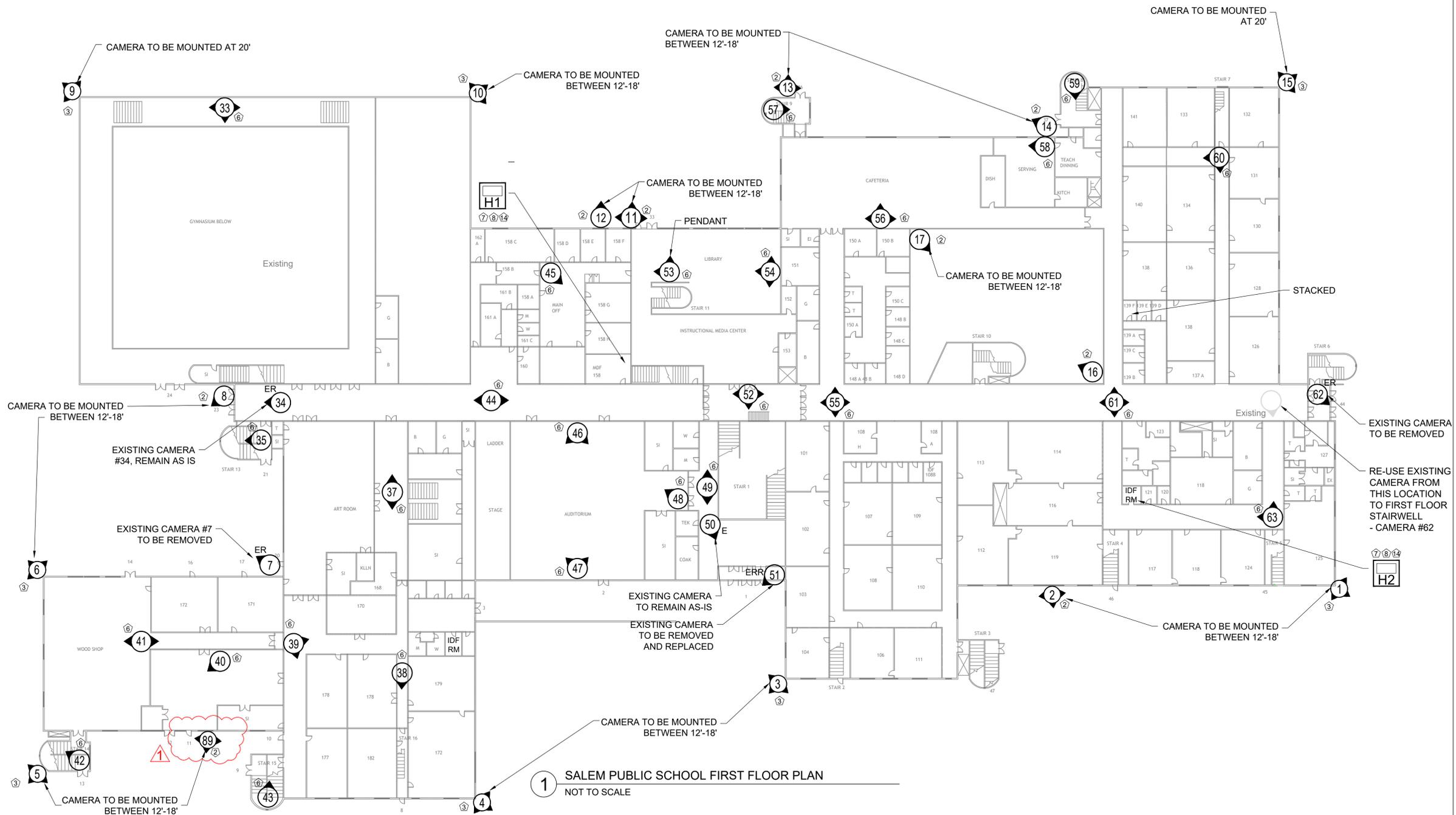
Salem Public School
First Floor Plan
(3 of 5)

Submission:

RE-BIDDING DOCUMENTS

Sheet No.:

SEC.5



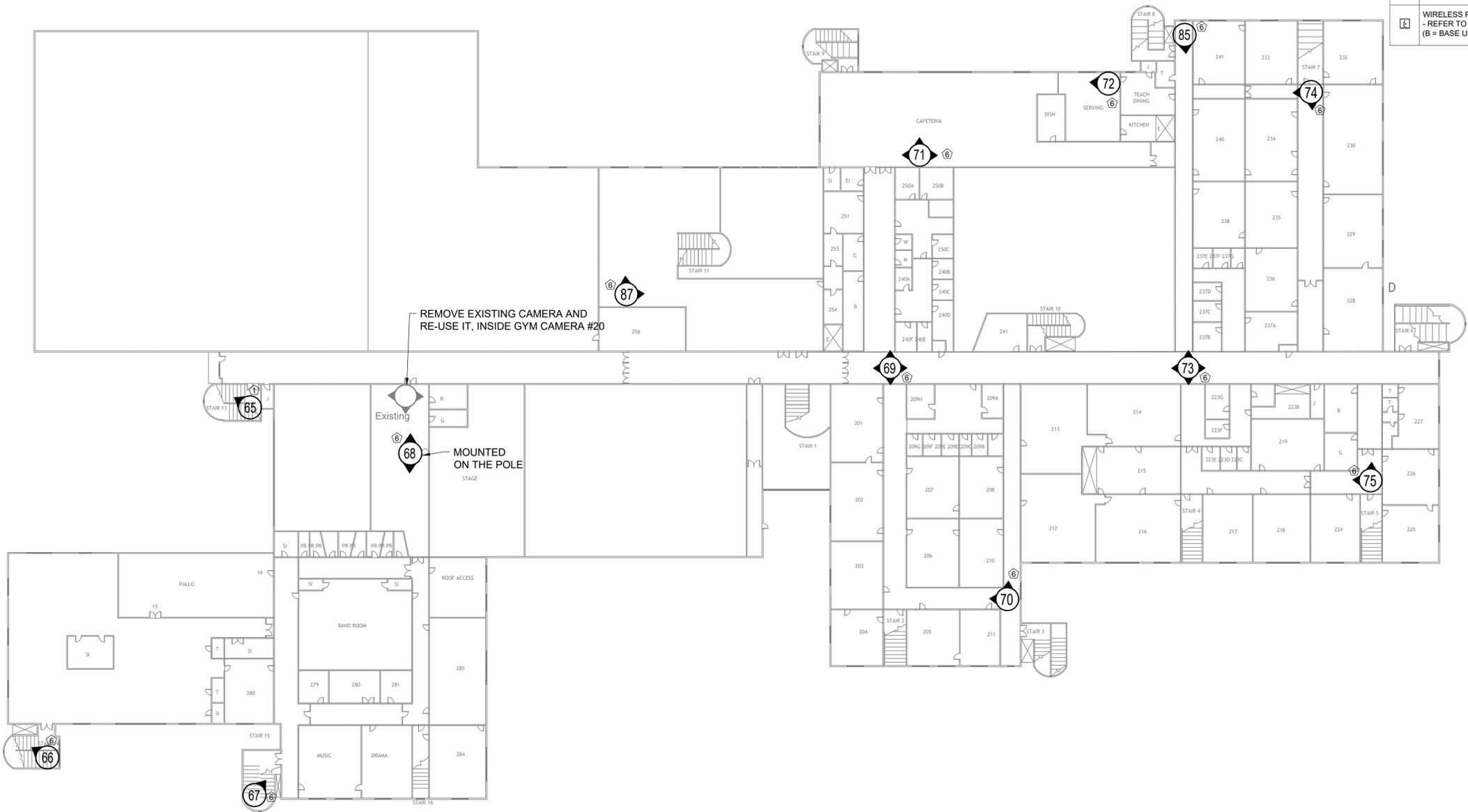
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[F]	12MP FISH-EYE CAMERA
[J]	NEMA ENCLOSURE JUNCTION BOX WEATHERPROOF, 120 VAC
[V#]	VIDEO INTERCOM ENTRY PANEL - REFER TO EQUIPMENT SCHEDULES FOR DETAILS.
[IP#]	INTERCOM PANEL - REFER TO EQUIPMENT SCHEDULES FOR DETAILS.
[W]	WIRELESS POINT-TO-MULTIPOINT NETWORK RADIO - REFER TO EQUIPMENT SCHEDULES FOR DETAILS. (B = BASE UNIT, T = TERMINAL UNIT)



1 SALEM PUBLIC SCHOOL SECOND FLOOR PLAN
NOT TO SCALE

Revisions:

No.	Date	Remarks
1	4/22/22	ADDENDUM #2

Project:

SALEM SCHOOLS
(3 locations)

SALEM, MA

Date: 04/06/2022
Scale: NO TO SCALE
Project Number:
Drawn By: JSOUSA
Checked By: BUKOSKI

Drawing Title:

Salem Public School Second Floor Plan (4 of 5)

Submission:

RE-BIDDING DOCUMENTS

Sheet No.:

SEC.6

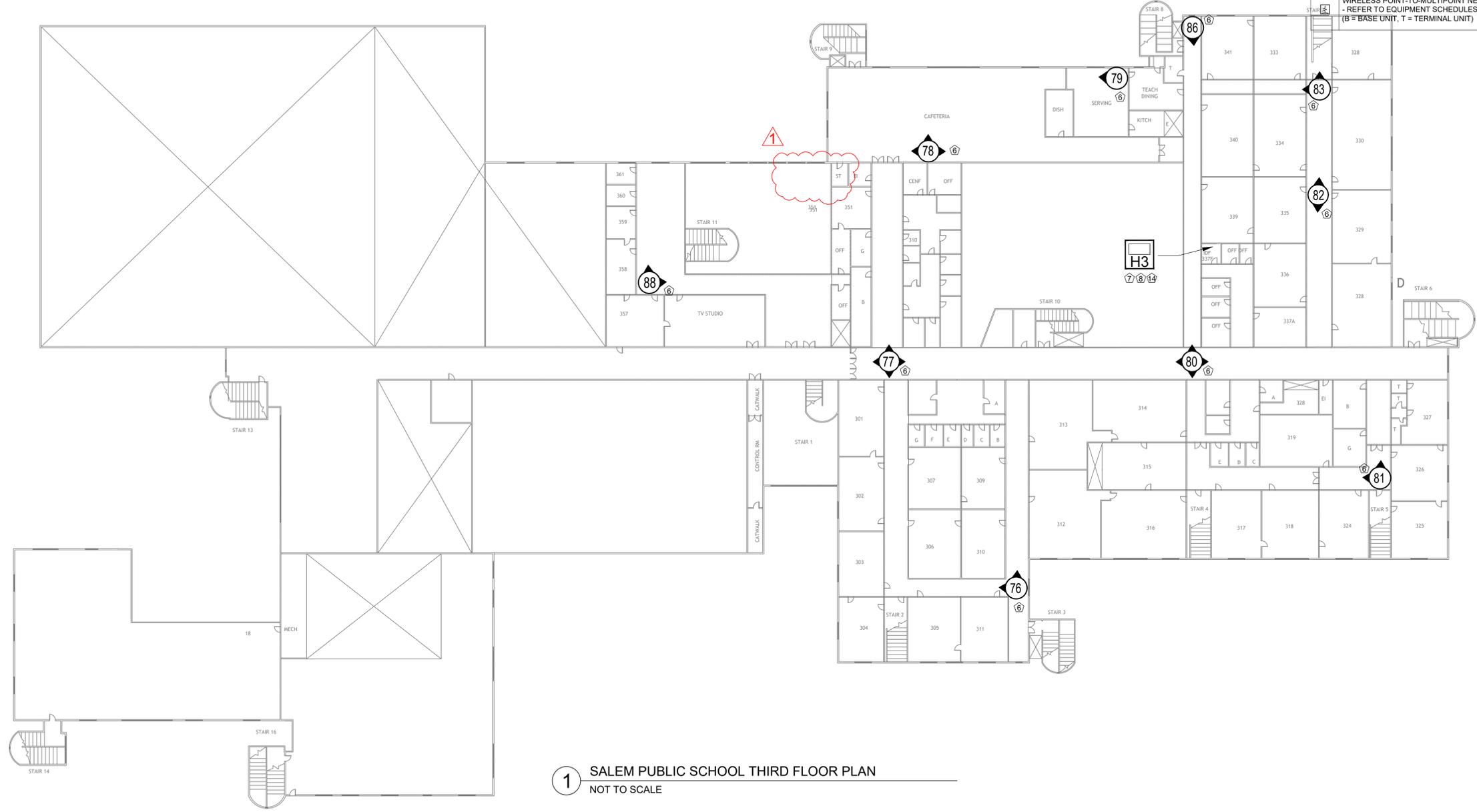
DRAWING NOTES:

- 1. SURFACE MOUNT TO FINISHED CEILING - SECURE TO STRUCTURAL CEILING. CABLE SHALL BE ROUTED THROUGH CEILING
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	INTERCOM PANEL - REFER TO EQUIPMENT SCHEDULES FOR DETAILS.
	WIRELESS POINT-TO-MULTIPOINT NETWORK RADIO - REFER TO EQUIPMENT SCHEDULES FOR DETAILS. (B = BASE UNIT, T = TERMINAL UNIT)



1 SALEM PUBLIC SCHOOL THIRD FLOOR PLAN
NOT TO SCALE

Revisions:	No.:	Date:	Remarks:
	1	4/22/22	ADDENDUM #2

Project:
SALEM SCHOOLS
(3 locations)
SALEM, MA

Date: 04/06/2022
Scale: NO TO SCALE
Project Number:
Drawn By: JSOUSA
Checked By: BUKOSKI

Drawing Title:
Salem Public School Third Floor Plan (5 of 5)

Submission:
RE-BIDDING DOCUMENTS

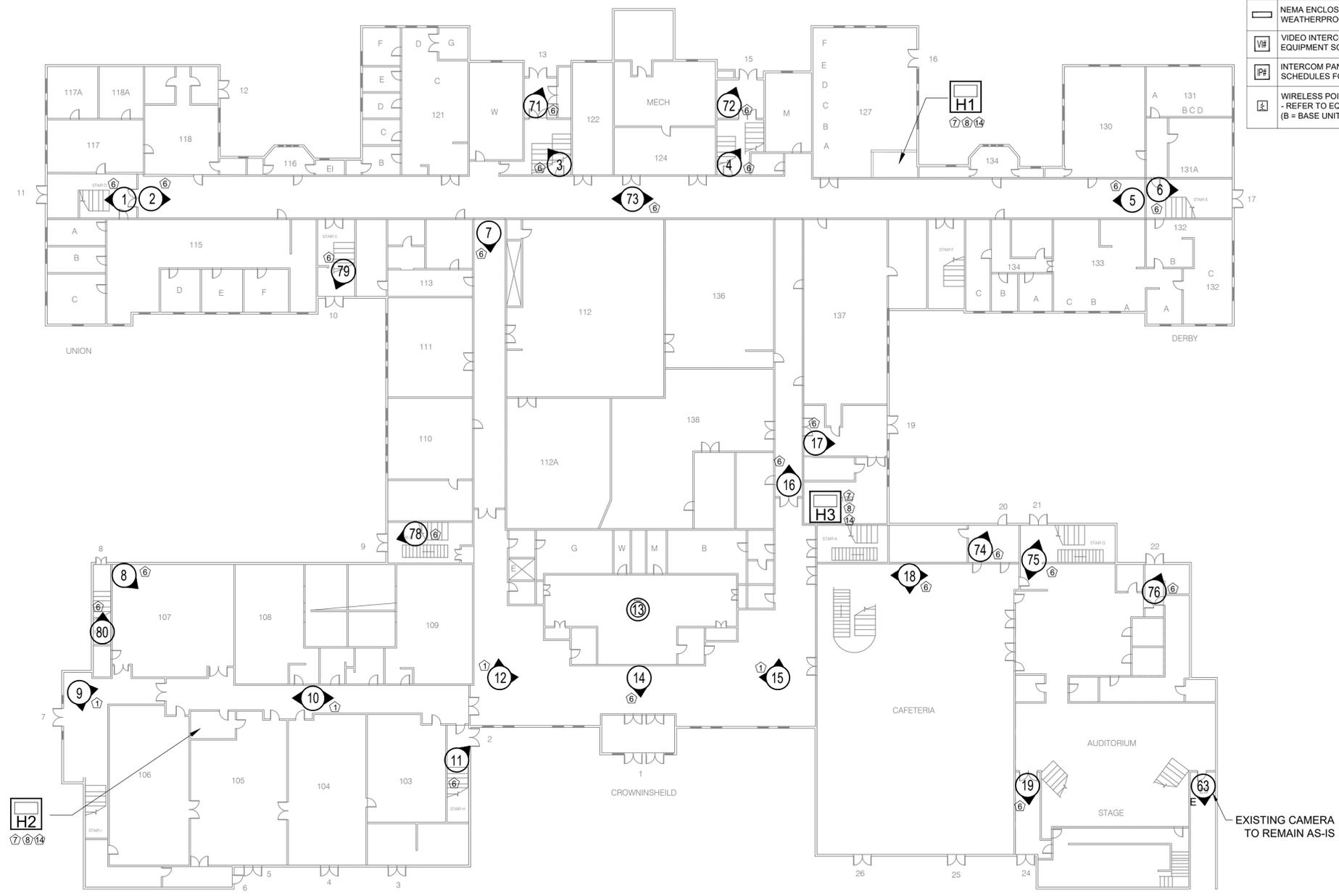
Sheet No.:
SEC.7

DRAWING NOTES:

- 1. SURFACE MOUNT TO FINISHED CEILING - SECURE TO STRUCTURAL CEILING. CABLE SHALL BE ROUTED THROUGH CEILING
- 2. EXTERIOR WALL MOUNT. HEIGHT SHALL BE CENTERED BETWEEN THE STRUCTURAL AND FINISHED CEILINGS. CABLING/CONDUIT SHALL ENTER THROUGH THE BACK OF THE CAMERA MOUNT.
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- 8. 110VAC, 20-AMP DEDICATED QUAD OUTLET BY THE GENERAL CONTRACTOR/SITE ELECTRICIAN.
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	NEMA ENCLOSURE JUNCTION BOX WEATHERPROOF, 120 VAC
	VIDEO INTERCOM ENTRY PANEL - REFER TO EQUIPMENT SCHEDULES FOR DETAILS.
	INTERCOM PANEL- REFER TO EQUIPMENT SCHEDULES FOR DETAILS.
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1 FRANCIS X. COLLINS MIDDLE SCHOOL FIRST FLOOR PLAN
NOT TO SCALE

Revisions:		
No.:	Date:	Remarks:
1	4/22/22	ADDENDUM #2

Project:
SALEM SCHOOLS
(3 locations)

SALEM, MA

Date: 04/06/2022
Scale: NO TO SCALE
Project Number:
Drawn By: JSOUSA
Checked By: BUKOSKI

Drawing Title:
Francis X.
Collins Middle
School First Floor
Plan (1 OF 4)

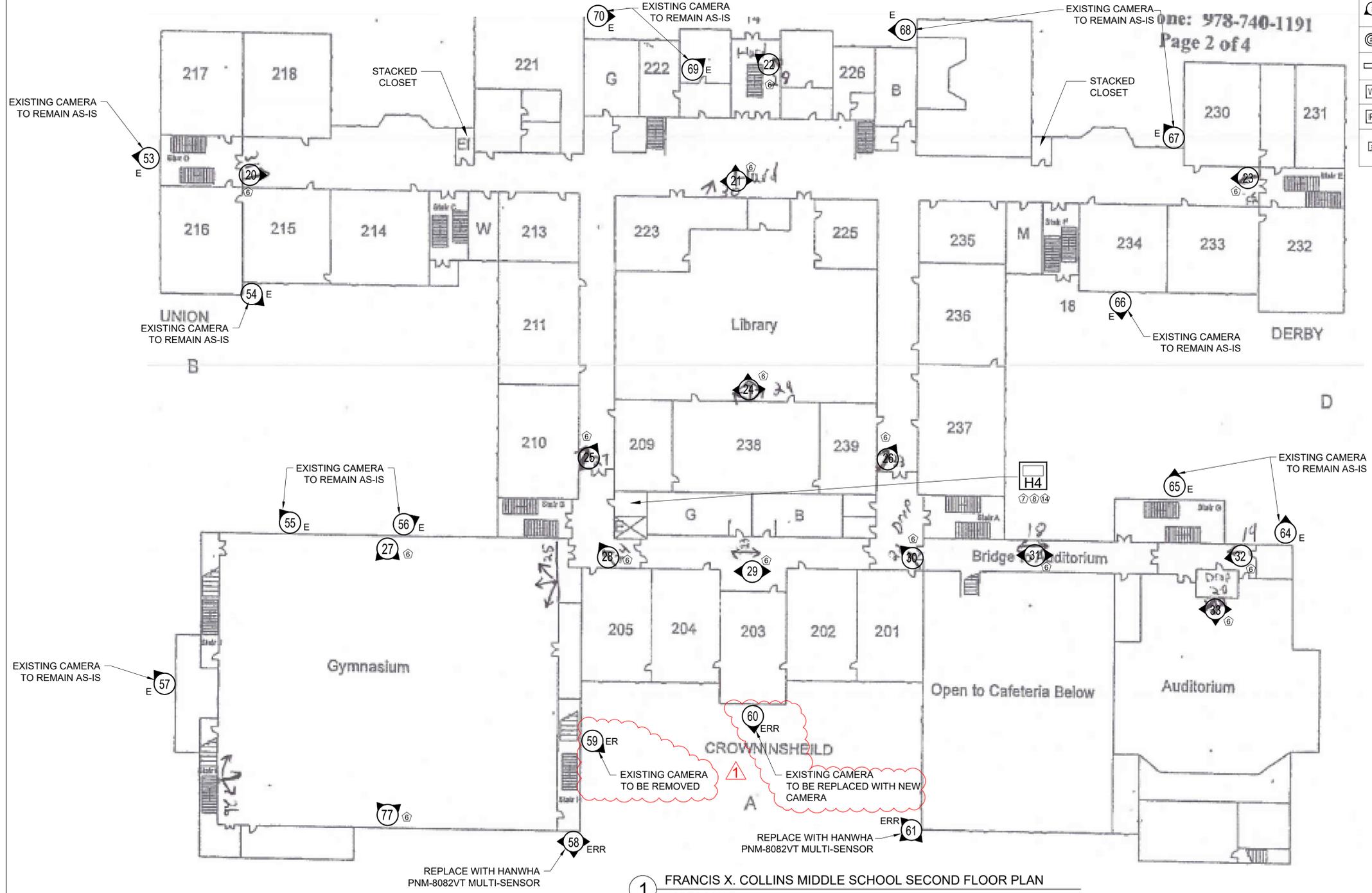
Submission:
RE-BIDDING
DOCUMENTS

Sheet No.:
SEC.8

DRAWING NOTES:

1. SURFACE MOUNT TO FINISHED CEILING - SECURE TO STRUCTURAL CEILING. CABLE SHALL BE ROUTED THROUGH CEILING
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1 FRANCIS X. COLLINS MIDDLE SCHOOL SECOND FLOOR PLAN
NOT TO SCALE

Revisions:

No.	Date	Remarks
1	4/22/22	ADDENDUM #2

SALEM SCHOOLS
(3 locations)

SALEM, MA

Date: 04/06/2022
Scale: NO TO SCALE
Project Number:
Drawn By: JSOUSA
Checked By: BUKOSKI

Francis X. Collins Middle School Second Floor Plan (2 OF 4)

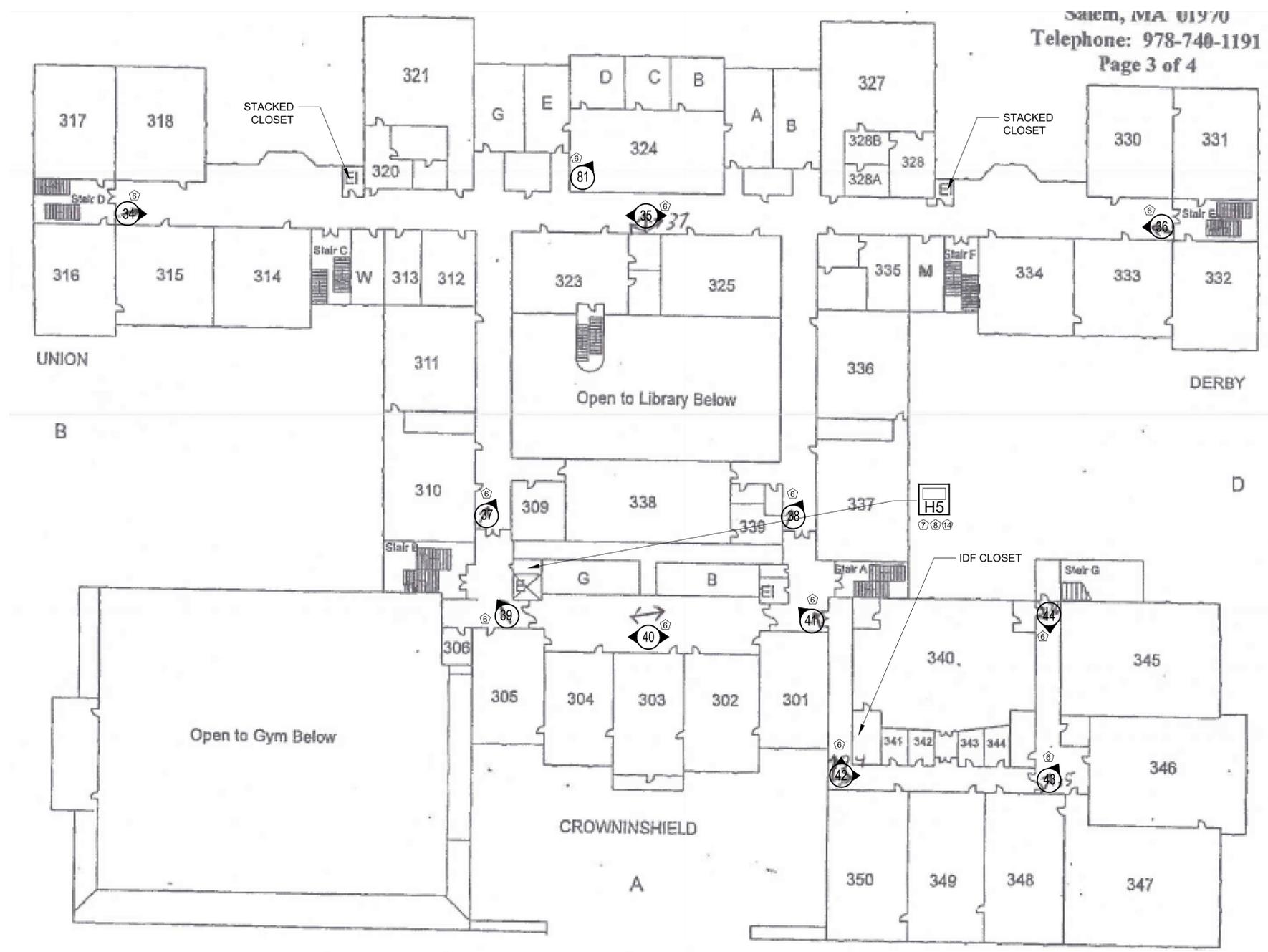
RE-BIDDING DOCUMENTS

Sheet No.: **SEC.9**

DRAWING NOTES:

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- 9. FIRE ALARM RELAY/ADDRESSABLE CONTROL RELAY REQUIRED BY THE GENERAL CONTRACTOR.
- 10. READER "IN"/READER "OUT" LOCATION - DOOR SHALL INCLUDE TWO CARD READERS, DOOR STATUS CONTACT(S) AND ELECTRIC LOCKING HARDWARE.
- 11. APARTMENT UNIT ENTRY SCHLAGE "NO-TOUR" FUNCTION BATTERY OPERATED SMARTLOCK. COMPATIBLE FOBs TO BE PROGRAMMED THROUGH THE ACCESS CONTROL SOFTWARE.
- 12. 4-INCH CONDUIT SLEEVES PROVIDED BY THE GENERAL CONTRACTOR. THE EXACT QUANTITY SHALL BE DETERMINED AND COMPLY WITH ALL LOCAL & NEC ELECTRICAL CODES. COORDINATE LOCATION WITH ARCHITECT, ELECTRICAL ENGINEER AND GENERAL CONTRACTOR.
- 13. ELEVATOR CORNER MOUNT - THE ELEVATOR CONTRACTOR SHALL PROVIDE EITHER (1) RG-59U OR UNSHIELDED TWISTED PAIR (UTP) TRAVELERS CABLE BETWEEN THE ELEVATOR CAMERA AND MACHINE ROOM.
- 14. THE GENERAL CONTRACTOR SHALL INSTALL A 4'X8' 3/4-INCH PLYWOOD BACKBOARD AT THIS LOCATION FOR MOUNTING OF THE SECURITY HEAD-END RACKS AND ENCLOSURES.

SYMBOL SCHEDULE	
[HT]	HEAD-END EQUIPMENT RACK - VIDEO/ACCESS SERVER, NETWORK SWITCHES, UPS, ETC. SHALL BE LOCATED WITHIN THIS CABINET. REFER TO EQUIPMENT SCHEDULES FOR DETAILS.
[#]	FIXED SINGLE IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS.
[#]	FIXED 360° 4-IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS. F = INSTALL CABLE ONLY FOR FUTURE CAMERA
[#]	FIXED DUAL IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS.
[#]	FIXED 180° 3-IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS.
[#]	FIXED 270° 3-IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS.
[C]	12MP FISH-EYE CAMERA
[]	NEMA ENCLOSURE JUNCTION BOX WEATHERPROOF, 120 VAC
[V#]	VIDEO INTERCOM ENTRY PANEL - REFER TO EQUIPMENT SCHEDULES FOR DETAILS.
[IP#]	INTERCOM PANEL - REFER TO EQUIPMENT SCHEDULES FOR DETAILS.
[]	WIRELESS POINT-TO-MULTIPOINT NETWORK RADIO - REFER TO EQUIPMENT SCHEDULES FOR DETAILS. (B = BASE UNIT, T = TERMINAL UNIT)



1 FRANCIS X. COLLINS MIDDLE SCHOOL THIRD FLOOR PLAN
NOT TO SCALE

Revisions:	No.:	Date:	Remarks:
	1	4/22/22	ADDENDUM #2

Project:
SALEM SCHOOLS
(3 locations)

SALEM, MA

Date: 04/06/2022
Scale: NO TO SCALE
Project Number:
Drawn By: JSOUSA
Checked By: BUKOSKI

Drawing Title:
Francis X.
Collins Middle
School Third Floor
Plan
(3 OF 4)

Submission:
RE-BIDDING DOCUMENTS

Sheet No.:
SEC.10

DRAWING NOTES:

- 1. SURFACE MOUNT TO FINISHED CEILING - SECURE TO STRUCTURAL CEILING. CABLE SHALL BE ROUTED THROUGH CEILING
- 2. EXTERIOR WALL MOUNT. HEIGHT SHALL BE CENTERED BETWEEN THE STRUCTURAL AND FINISHED CEILINGS. CABLING/CONDUIT SHALL ENTER THROUGH THE BACK OF THE CAMERA MOUNT.
- 3. EXTERIOR CORNER MOUNT. HEIGHT SHALL BE CENTERED BETWEEN STRUCTURAL & FINISHED CEILINGS. CABLING SHALL BE ROUTED TO AN EXTERIOR SINGLE-GANG ELECTRICAL BACK BOX AND THEN ROUTED INTO THE BOTTOM OF THE CAMERA MOUNT VIA A LIQUID-TIGHT FLEXIBLE DRIP LOOP.
- 4. FULL CARD READER PACKAGE - DOOR SHALL INCLUDE ELECTRIC LOCK, DOOR POSITION SWITCH(S), CARD READER & REQUEST TO EXIT DEVICE(S)
- 5. DOOR EGRESS PACKAGE - DOOR SHALL INCLUDE DOOR POSITION SWITCH AND REQUEST TO EXIT DEVICE.

- 6. INTERIOR SURFACE MOUNT - CAMERA SHALL INCLUDE MANUFACTURER SURFACE BACK BOX. CABLE/CONDUIT SHALL ENTER THROUGH APPROPRIATE CONDUIT KNOCK-OUT/THREADED INLET.
- 7. VMS/ACM HEAD-END EQUIPMENT AND RACK LOCATION. COORDINATE THE EXACT LOCATION WITH THE ARCHITECT, MEP ENGINEER AND GENERAL CONTRACTOR.
- 8. 110VAC, 20-AMP DEDICATED QUAD OUTLET BY THE GENERAL CONTRACTOR/SITE ELECTRICIAN.
- 9. FIRE ALARM RELAY/ADDRESSABLE CONTROL RELAY REQUIRED BY THE GENERAL CONTRACTOR.
- 10. READER "IN"/READER "OUT" LOCATION - DOOR SHALL INCLUDE TWO CARD READERS, DOOR STATUS CONTACT(S) AND ELECTRIC LOCKING HARDWARE.

- 11. APARTMENT UNIT ENTRY SCHLAGE "NO-TOUR" FUNCTION BATTERY OPERATED SMARTLOCK. COMPATIBLE FOBs TO BE PROGRAMMED THROUGH THE ACCESS CONTROL SOFTWARE.
- 12. 4-INCH CONDUIT SLEEVES PROVIDED BY THE GENERAL CONTRACTOR. THE EXACT QUANTITY SHALL BE DETERMINED AND COMPLY WITH ALL LOCAL & NEC ELECTRICAL CODES. COORDINATE LOCATION WITH ARCHITECT, ELECTRICAL ENGINEER AND GENERAL CONTRACTOR.
- 13. ELEVATOR CORNER MOUNT - THE ELEVATOR CONTRACTOR SHALL PROVIDE EITHER (1) RG-59U OR UNSHIELDED TWISTED PAIR (UTP) TRAVELERS CABLE BETWEEN THE ELEVATOR CAMERA AND MACHINE ROOM.
- 14. THE GENERAL CONTRACTOR SHALL INSTALL A 4'X8' 3/4-INCH PLYWOOD BACKBOARD AT THIS LOCATION FOR MOUNTING OF THE SECURITY HEAD-END RACKS AND ENCLOSURES.

SYMBOL SCHEDULE	
[H1]	HEAD-END EQUIPMENT RACK - VIDEO/ACCESS SERVER, NETWORK SWITCHES, UPS, ETC. SHALL BE LOCATED WITHIN THIS CABINET. REFER TO EQUIPMENT SCHEDULES FOR DETAILS.
[#]	FIXED SINGLE IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS.
[#]	FIXED 360° 4-IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS. F = INSTALL CABLE ONLY FOR FUTURE CAMERA
[#]	FIXED DUAL IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS.
[#]	FIXED 180° 3-IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS.
[#]	FIXED 270° 3-IMAGER NETWORK DOME - REFER TO EQUIPMENT SCHEDULES FOR MOUNTING AND CONFIGURATION DETAILS.
[C]	12MP FISH-EYE CAMERA
[J]	NEMA ENCLOSURE JUNCTION BOX WEATHERPROOF, 120 VAC
[V#]	VIDEO INTERCOM ENTRY PANEL - REFER TO EQUIPMENT SCHEDULES FOR DETAILS.
[IP#]	INTERCOM PANEL - REFER TO EQUIPMENT SCHEDULES FOR DETAILS.
[W]	WIRELESS POINT-TO-MULTIPOINT NETWORK RADIO - REFER TO EQUIPMENT SCHEDULES FOR DETAILS. (B = BASE UNIT, T = TERMINAL UNIT)



1 FRANCIS X. COLLINS MIDDLE SCHOOL FOURTH FLOOR PLAN
NOT TO SCALE

Revisions:		
No.	Date	Remarks
1	4/22/22	ADDENDUM #2

Project:
SALEM SCHOOLS
(3 locations)

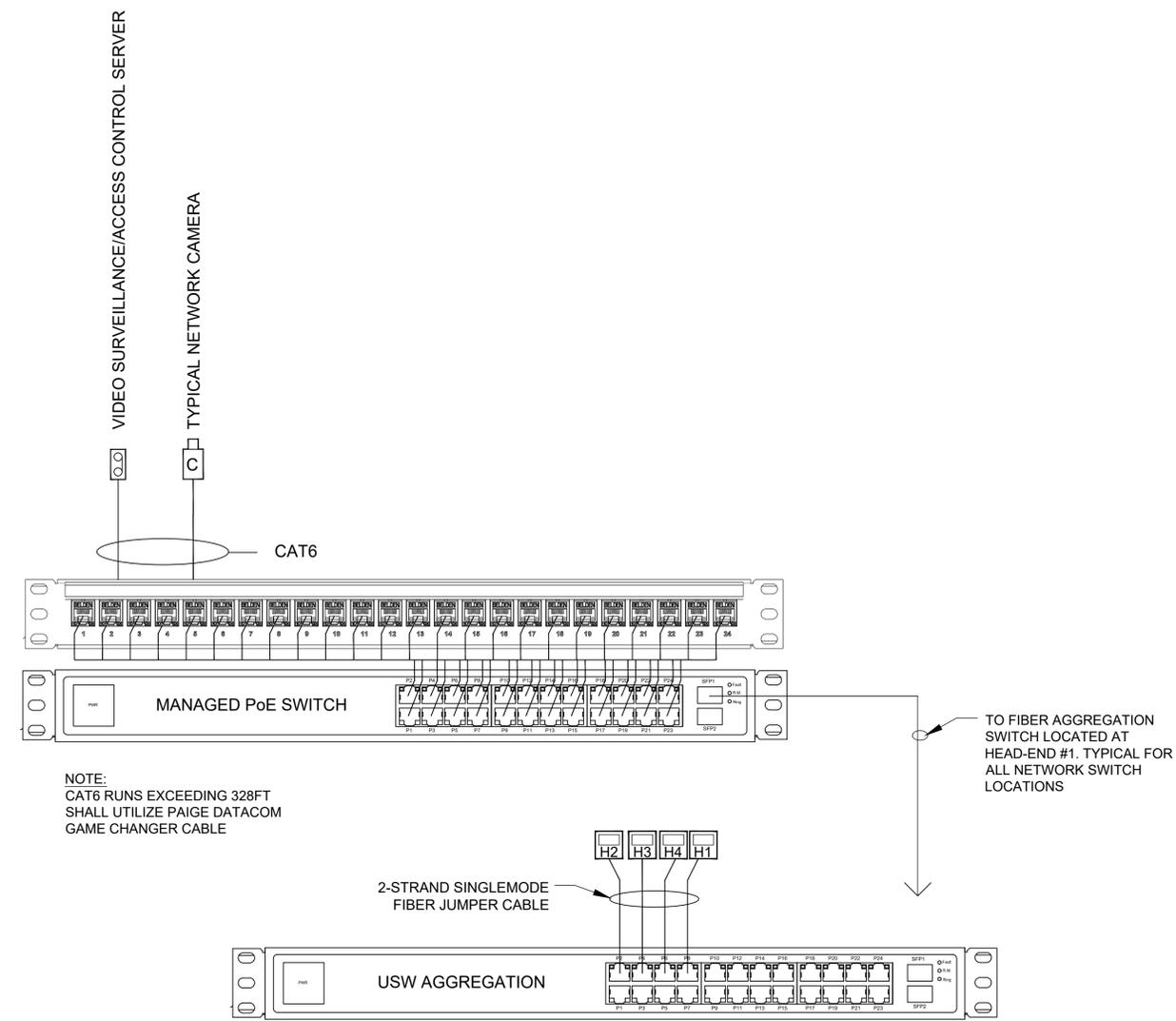
SALEM, MA

Date: 04/06/2022
Scale: NO TO SCALE
Project Number:
Drawn By: JSOUSA
Checked By: BUKOSKI

Drawing Title:
Francis X.
Collins Middle
School Fourth Floor
Plan
(4 OF 4)

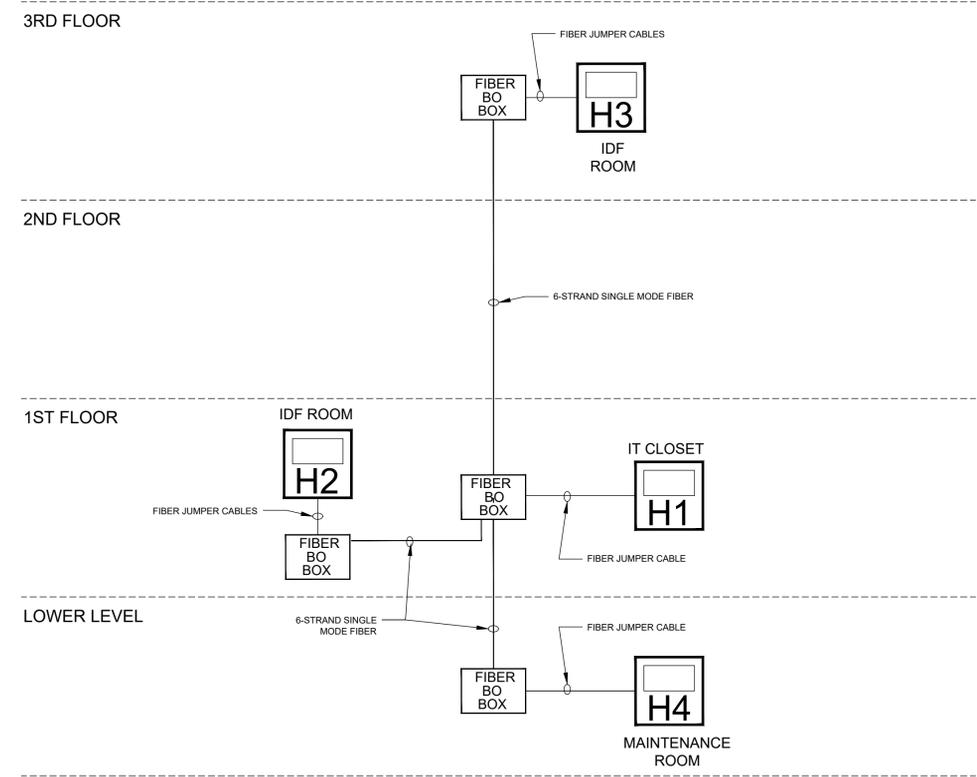
Submission:
RE-BIDDING DOCUMENTS

Sheet No.:
SEC.11



NOTE:
 CAT6 RUNS EXCEEDING 328FT
 SHALL UTILIZE PAIGE DATAKOM
 GAME CHANGER CABLE

SALEM PUBLIC SCHOOL RISER DIAGRAM AND FIBER INFRASTRUCTURE



Revisions:

No.	Date	Remarks
1	4/22/22	ADDENDUM #2

Project:

SALEM SCHOOLS
 (3 locations)

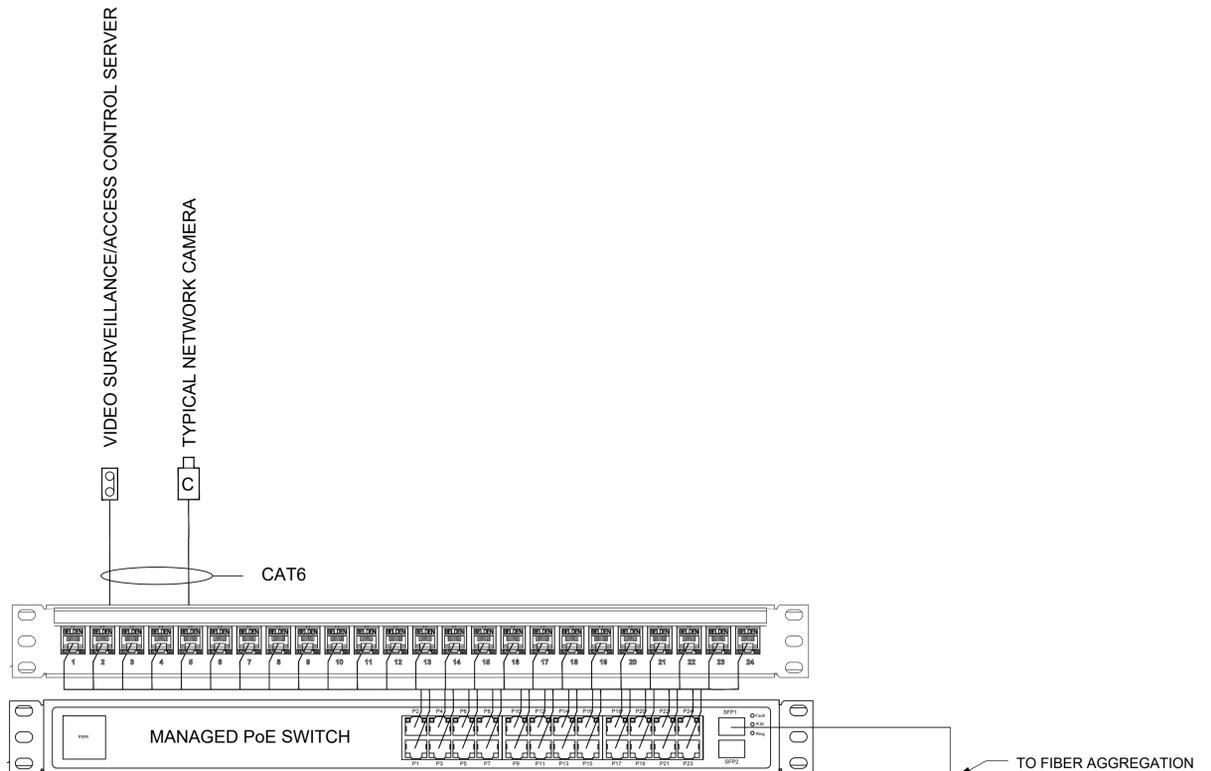
SALEM, MA

Date: 04/06/2022
 Scale: NO TO SCALE
 Project Number:
 Drawn By: JSOUSA
 Checked By: BUKOSKI

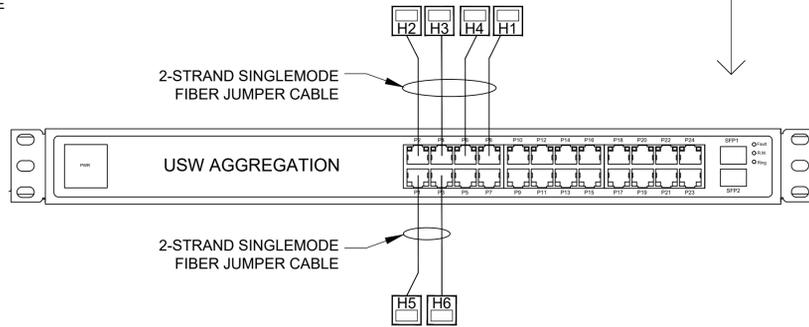
Drawing Title:
 Salem Public School Riser Diagram and Fiber Infrastructure

Submission:
 RE-BIDDING DOCUMENTS

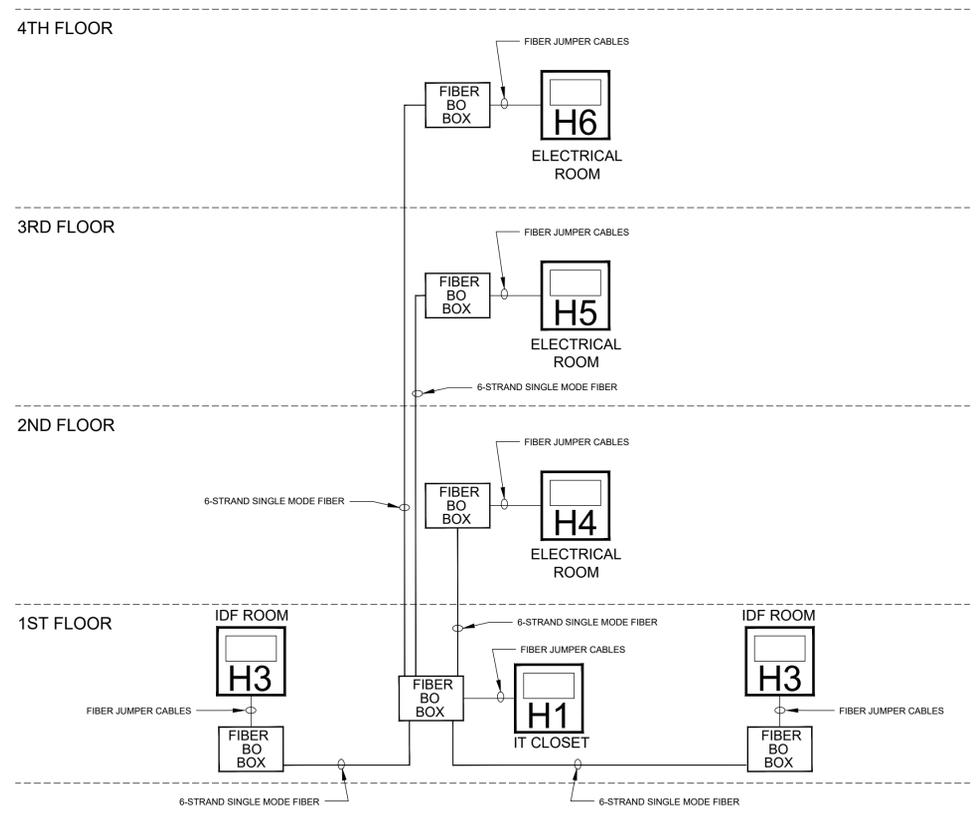
Sheet No.:
SEC.12



NOTE:
 CAT6 RUNS EXCEEDING 328FT
 SHALL UTILIZE PAIGE DATACOM
 GAME CHANGER CABLE



FRANCIS X. COLLINS MIDDLE SCHOOL RISER DIAGRAM AND FIBER INFRASTRUCTURE



Revisions:

No.	Date	Remarks
1	4/22/22	ADDENDUM #2

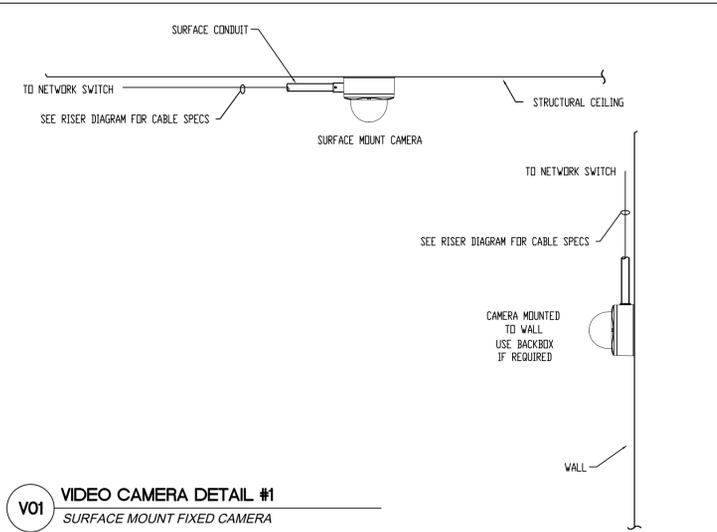
Project:
SALEM SCHOOLS
 (3 locations)
 SALEM, MA

Date: 04/06/2022
 Scale: NO TO SCALE
 Project Number:
 Drawn By: JSOUSA
 Checked By: BUKOSKI

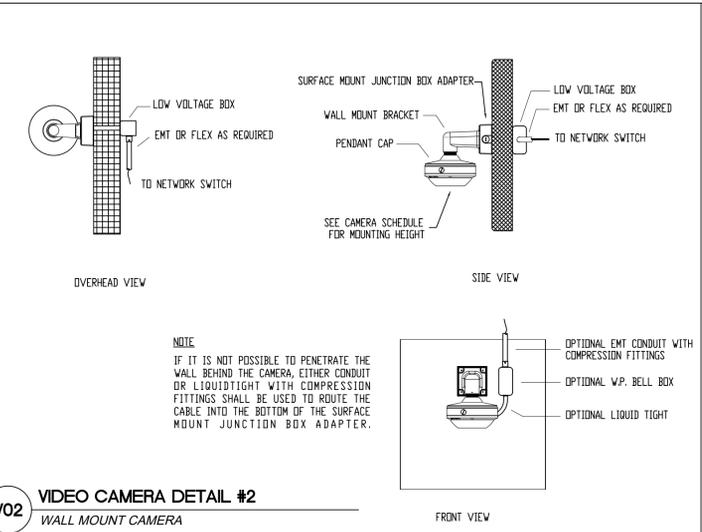
Drawing Title:
 Salem Public School Riser Diagram and Fiber Infrastructure

Submission:
 RE-BIDDING DOCUMENTS

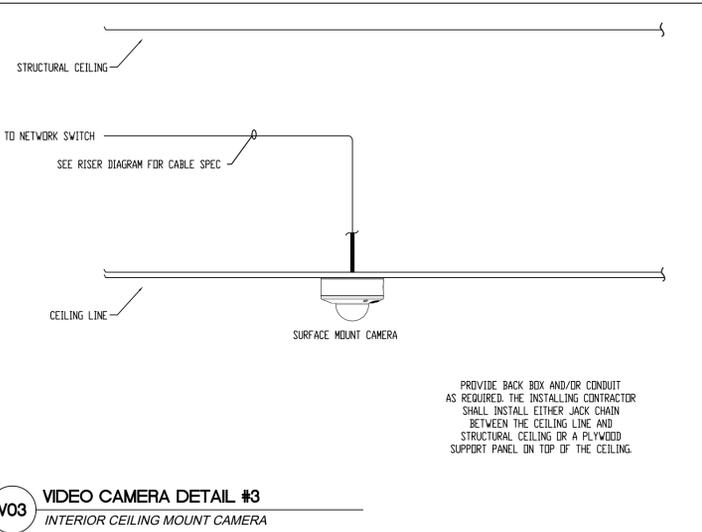
Sheet No.:
SEC.13



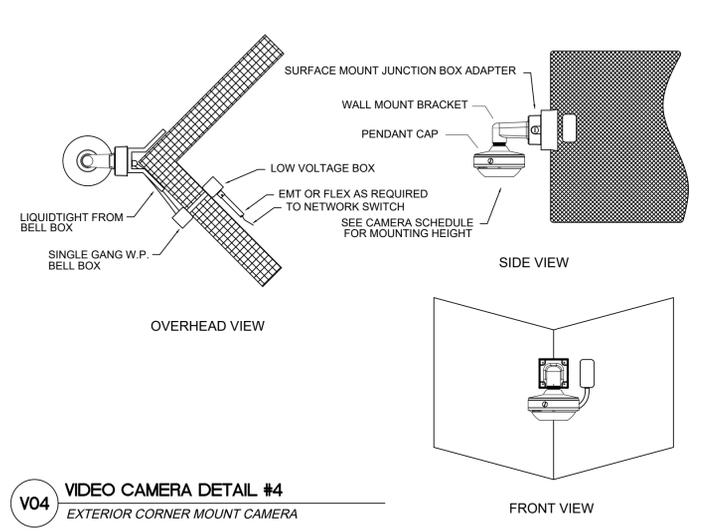
V01 VIDEO CAMERA DETAIL #1
SURFACE MOUNT FIXED CAMERA



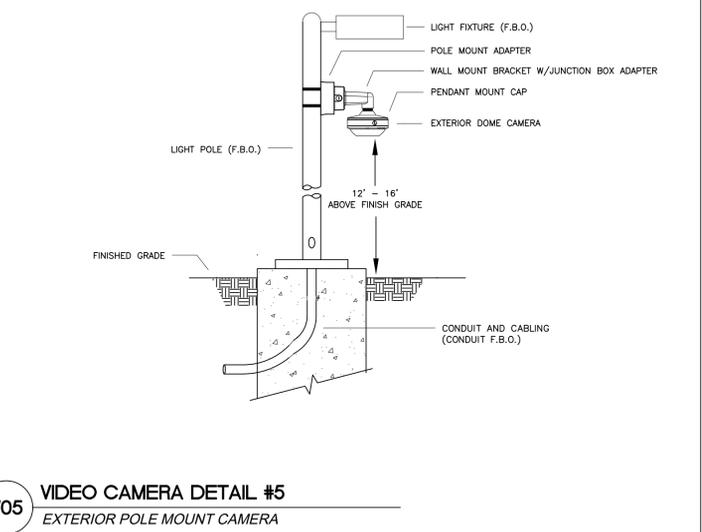
V02 VIDEO CAMERA DETAIL #2
WALL MOUNT CAMERA



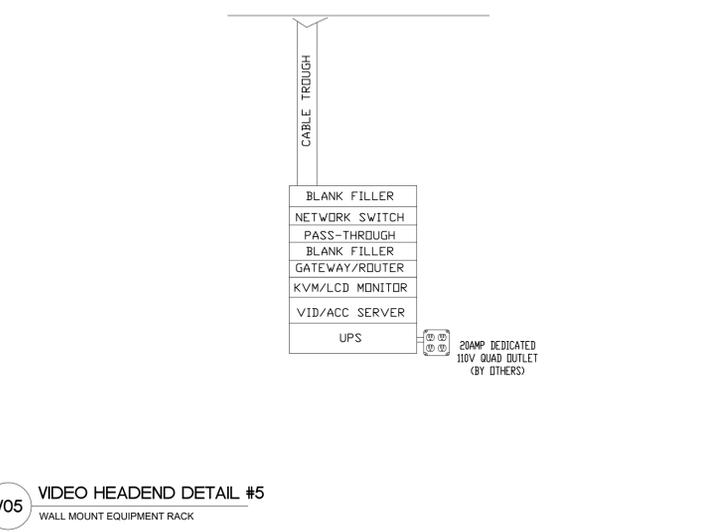
V03 VIDEO CAMERA DETAIL #3
INTERIOR CEILING MOUNT CAMERA



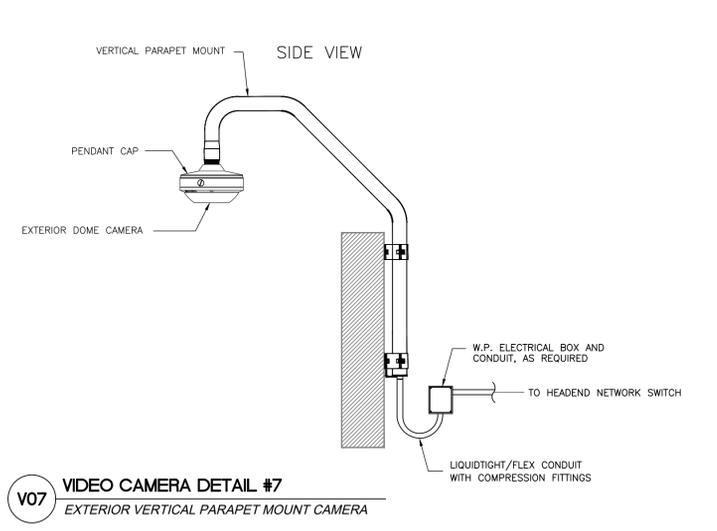
V04 VIDEO CAMERA DETAIL #4
EXTERIOR CORNER MOUNT CAMERA



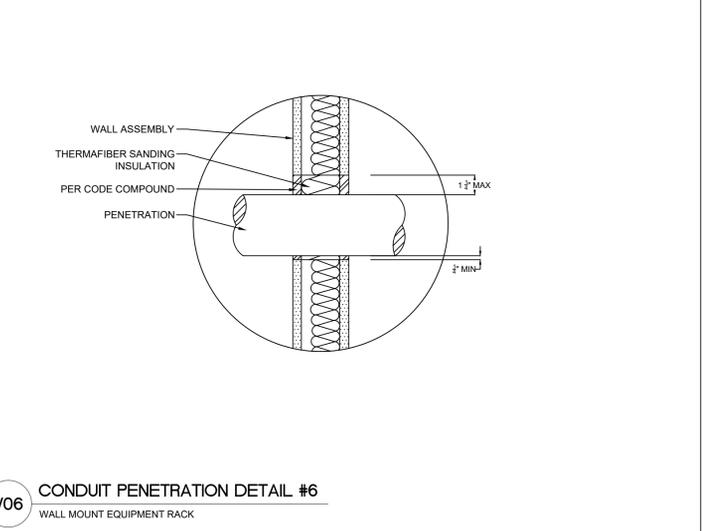
V05 VIDEO CAMERA DETAIL #5
EXTERIOR POLE MOUNT CAMERA



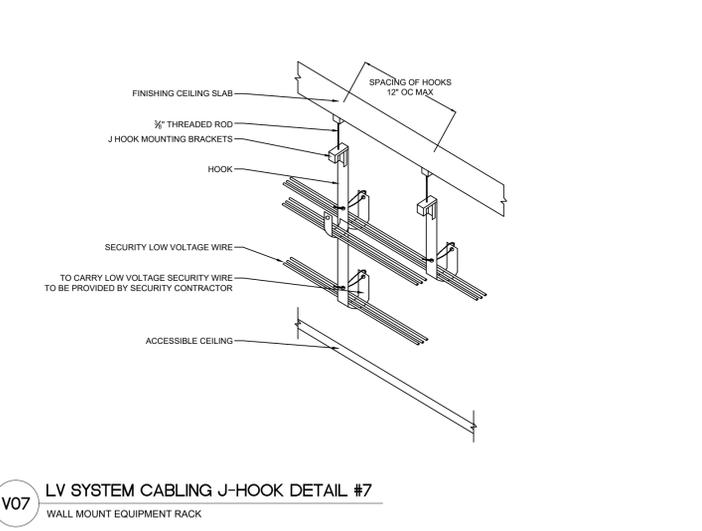
V05 VIDEO HEADEND DETAIL #5
WALL MOUNT EQUIPMENT RACK



V07 VIDEO CAMERA DETAIL #7
EXTERIOR VERTICAL PARAPET MOUNT CAMERA



V06 CONDUIT PENETRATION DETAIL #6
WALL MOUNT EQUIPMENT RACK



V07 LV SYSTEM CABLING J-HOOK DETAIL #7
WALL MOUNT EQUIPMENT RACK

Revisions:

No.	Date	Remarks
1	4/22/22	ADDENDUM #2

Project:

SALEM SCHOOLS
(3 locations)

SALEM, MA

Date: 04/06/2022
Scale: NO TO SCALE
Project Number:
Drawn By: JSOUSA
Checked By: BUKOSKI

Drawing Title:

Access Control Mounting Details

Submission:

RE-BIDDING DOCUMENTS

Sheet No.:

SEC.15

FRANCIS X. COLLINS MIDDLE SCHOOL EQUIPMENT SCHEDULE

VIDEO SURVEILLANCE HEAD-END EQUIPMENT SCHEDULE																
Device	Bid Option	Building	Location	Server/Client Workstation	Camera Licenses	Network Gateway	Network Switch	Wall Cabinet	Patch Panel	Fiber Break-out Box	UPS Power Supply	Slide-out KVM	Detail#	110vac Power	Remote Client Network	NOTES:
H1	Base	Collins	First Floor IDF	BCD44de/ EPS-206-206-60T-12	Genetec/ GSC-OME & GSC-EDU-OM-Base & GSC-OME-1C (Qty 65)	Ubiquiti/USG	Ubiquiti/ USW-Pro-24-PoE	Existing Rack to be used	Levinton/ 69270-D48	OCC/ WTC24 and OCC/ 618DLC (Qty 5)	APC/ SMT300RM2ULMC	Trigger/ B021-000-19	SEC 20 & SEC 21/06	110VAC power supplied by the client	Internet connection with static IP address provided by the client	Base has only the exterior camera's and the community building interior camera's.
H2	Base	Collins	First Floor IDF	n/a	n/a	n/a	Ubiquiti/ USW-Pro-24-PoE	GreatEas/ GL49WLP-B-SH00	Levinton/ 69266-LD4	OCC/ WTC12A OCC/ 618DLC	APC/ SMT1000RM2ULMC	n/a		110VAC power supplied by the client	n/a	
H3	Base	Collins	First Floor IDF	n/a	n/a	n/a	Ubiquiti/ USW-Pro-24-PoE	GreatEas/ GL49WLP-B-SH00	Levinton/ 69266-LD4	OCC/ WTC12A OCC/ 618DLC	APC/ SMT1000RM2ULMC	n/a		110VAC power supplied by the client	n/a	
H4	Base	Collins	Second Floor Storage Closet	n/a	n/a	n/a	Ubiquiti/ USW-Pro-24-PoE	GreatEas/ GL49WLP-B-SH00	Levinton/ 69266-LD4	OCC/ WTC12A OCC/ 618DLC	APC/ SMT1000RM2ULMC	n/a		110VAC power supplied by the client	n/a	
H5	Base	Collins	Third Floor Storage Closet	n/a	n/a	n/a	Ubiquiti/ USW-Pro-24-PoE	GreatEas/ GL49WLP-B-SH00	Levinton/ 69266-LD4	OCC/ WTC12A OCC/ 618DLC	APC/ SMT1000RM2ULMC	n/a		110VAC power supplied by the client	n/a	
H6	Base	Collins	Fourth Floor Storage Closet	n/a	n/a	n/a	Ubiquiti/ USW-Pro-24-PoE	GreatEas/ GL49WLP-B-SH00	Levinton/ 69266-LD4	OCC/ WTC12A OCC/ 618DLC	APC/ SMT1000RM2ULMC	n/a		110VAC power supplied by the client	n/a	

VIDEO SURVEILLANCE SYSTEM CAMERA SCHEDULE																				
Device ID	Bid Option	Bldg	Level	Location	IP Address	Camera	Mount	Adapter 1	Adapter 2	Adapter 3	Mount Type	Headend termination	Cabling	Detail#	Images per Second	Resolution	Comp.	Analytical Motion Enabled	Mounting Height	Camera View and/or General Notes
C1	Base	Collins	1	North West Stairwell	192.168.1.21	Hamwha/ QNV-602R	n/a	n/a	n/a	n/a	Wall	H1	A	V02	15	2MP	H.265	Motion	n/a	General activity outside the building
C2	Base	Collins	1	First Floor Corridor	192.168.1.22	Hamwha/ QNV-602R	n/a	n/a	n/a	n/a	Wall	H1	A	V02	15	2MP	H.265	Motion	n/a	General activity outside the building
C3	Base	Collins	1	First floor Stairwell	192.168.1.23	Hamwha/ QNV-602R	n/a	n/a	n/a	n/a	Wall	H1	A	V02	15	2MP	H.265	Motion	n/a	General activity outside the building
C4	Base	Collins	1	First floor Stairwell	192.168.1.24	Hamwha/ QNV-602R	n/a	n/a	n/a	n/a	Wall	H1	A	V01	15	2MP	H.265	Motion	n/a	General activity outside the building
C5	Base	Collins	1	First Floor Corridor	192.168.1.25	Hamwha/ QNV-602R	n/a	n/a	n/a	n/a	Wall	H1	A	V02	15	2MP	H.265	Motion	n/a	General activity outside the building
C6	Base	Collins	1	North East Stairwell	192.168.1.26	Hamwha/ QNV-602R	n/a	n/a	n/a	n/a	Wall	H1	A	V02	15	2MP	H.265	Motion	n/a	General activity outside the building
C7	Base	Collins	1	First Floor West Center Corridor	192.168.1.27	Hamwha/ QNV-602R	n/a	n/a	n/a	n/a	Wall	H1	A	V02	15	2MP	H.265	Motion	n/a	General activity outside the building
C8	Base	Collins	1	First Floor Fitness Room	192.168.1.28	Hamwha/ QNV-602R	n/a	n/a	n/a	n/a	Ceiling	H2	A	V03	15	2MP	H.265	Motion	n/a	General activity outside the building
C9	Base	Collins	1	First Floor South West Entrance	192.168.1.29	Axia/ P3715 PLVE	n/a	n/a	n/a	n/a	Ceiling	H2	A	V03	15	2x2MP	H.265	Motion	n/a	General activity outside the building
C10	Base	Collins	1	First Floor West Corridor	192.168.1.30	Axia/ P3715 PLVE	n/a	n/a	n/a	n/a	Ceiling	H2	A	V03	15	2x2MP	H.265	Motion	n/a	General activity outside the building
C11	Base	Collins	1	First Floor South Stairwell Entry	192.168.1.31	Hamwha/ QNV-602R	n/a	n/a	n/a	Hamwha/ SBV-136BW	Surface	H2	A	V01	15	2MP	H.265	Motion	n/a	General activity outside the building
C12	Base	Collins	1	Left Side Lobby	192.168.1.32	Axia/ P3715 PLVE	n/a	n/a	n/a	n/a	Ceiling	H2	A	V03	15	2x2MP	H.265	Motion	n/a	General activity outside the building
C13	Base	Collins	1	Main Office	192.168.1.33	Hamwha/ XNF-601DRV	n/a	n/a	n/a	n/a	Ceiling	H3	A	V03	15	1080P	H.265	Motion	n/a	General activity outside the building
C14	Base	Collins	1	Interior Main Entrance	192.168.1.34	Hamwha/ QNV-602R	n/a	n/a	n/a	n/a	Ceiling	H3	A	V03	15	2MP	H.265	Motion	n/a	General activity outside the building
C15	Base	Collins	1	Right Side Lobby	192.168.1.35	Axia/ P3715 PLVE	n/a	n/a	n/a	n/a	Ceiling	H3	A	V03	15	2x2MP	H.265	Motion	n/a	General activity outside the building
C16	Base	Collins	1	First Floor East Center Corridor	192.168.1.36	Hamwha/ QNV-602R	n/a	n/a	n/a	Hamwha/ SBV-136BW	Surface	H3	A	V01	15	2MP	H.265	Motion	n/a	General activity outside the building
C17	Base	Collins	1	East Side Entrance	192.168.1.37	Hamwha/ QNV-602R	n/a	n/a	n/a	n/a	Wall	H3	A	V02	15	2MP	H.265	Motion	n/a	General activity outside the building
C18	Base	Collins	1	Cafeteria	192.168.1.38	Hamwha/ PNM-802V/T	n/a	n/a	n/a	n/a	Ceiling	H3	A	V03	15	3x2MP	H.265	Motion	n/a	General activity outside the building
C19	Base	Collins	1	South East Entrance	192.168.1.39	Hamwha/ QNV-602R	n/a	n/a	n/a	Hamwha/ SBV-136BW	Surface	H3	A	V01	15	2MP	H.265	Motion	n/a	General activity outside the building
C20	Base	Collins	2	Second Floor Corridor	192.168.1.40	Hamwha/ QNV-602R	n/a	n/a	n/a	n/a	Wall	H1	A	V02	15	2MP	H.265	Motion	n/a	General activity outside the building
C21	Base	Collins	2	Second Floor Interior Entrance	192.168.1.41	Hamwha/ PNM-802V/T	Hamwha/ SBP-300MMW1	n/a	Hamwha/ SBP-276MMW	Hamwha/ SBP-300BW	Surface	H1	A	V01	15	3x2MP	H.265	Motion	n/a	General activity outside the building
C22	Base	Collins	2	Second Floor Entrance Vestibule	192.168.1.42	Hamwha/ QNV-602R	n/a	n/a	n/a	Hamwha/ SBV-136BW	Surface	H1	A	V01	15	2MP	H.265	Motion	n/a	General activity outside the building
C23	Base	Collins	2	Second Floor Corridor	192.168.1.43	Hamwha/ QNV-602R	n/a	n/a	n/a	n/a	Wall	H1	A	V02	15	2MP	H.265	Motion	n/a	General activity outside the building
C24	Base	Collins	2	Library	192.168.1.44	Hamwha/ PNM-802V/T	Hamwha/ SBP-300MMW1	n/a	Hamwha/ SBP-276MMW	Hamwha/ SBP-300BW	Surface	H4	A	V01	15	3x2MP	H.265	Motion	n/a	General activity outside the building
C25	Base	Collins	2	Second Floor West Center Corridor	192.168.1.45	Hamwha/ QNV-602R	n/a	n/a	n/a	Hamwha/ SBV-136BW	Surface	H4	A	V01	15	2MP	H.265	Motion	n/a	Capture license plates entering/leaving the site
C26	Base	Collins	2	Second Floor East Center Corridor	192.168.1.46	Hamwha/ QNV-602R	n/a	n/a	n/a	Hamwha/ SBV-136BW	Surface	H4	A	V01	15	2MP	H.265	Motion	n/a	General activity outside the building
C27	Base	Collins	2	Gymnasium	192.168.1.47	Axia/ P3715 PLVE	n/a	n/a	n/a	Axia/ A/CJ Conduit Adapter	Surface	H4	A	V01	15	2x2MP	H.265	Motion	n/a	General activity outside the building
C28	Base	Collins	2	Second Floor Corridor	192.168.1.48	Hamwha/ QNV-602R	n/a	n/a	n/a	n/a	Ceiling	H4	A	V03	15	2MP	H.265	Motion	n/a	Capture people entering/leaving the building
C29	Base	Collins	2	Second Floor Corridor	192.168.1.49	Axia/ P3715 PLVE	n/a	n/a	n/a	n/a	Ceiling	H4	A	V03	15	2x2MP	H.265	Motion	n/a	Capture people entering/leaving the building

Revisions :
No. : Date : Remarks :
1 4/22/22 ADDENDUM #2

Project :

SALEM SCHOOLS
(3 locations)

SALEM, MA

Date : 04/06/2022
Scale : NO TO SCALE
Project Number :
Drawn By : JSOUSA
Checked By : BUKOSKI

Drawing Title :

Francis X. Collins
Middle School
Equipment
Schedules
1 of 3

Submission :

RE-BIDDING DOCUMENTS

Sheet No. :

SEC.20

FRANCIS X. COLLINS MIDDLE SCHOOL EQUIPMENT SCHEDULE

VIDEO SURVEILLANCE SYSTEM CAMERA SCHEDULE

Device ID	Blid Option	Bldg	Level	Location	IP Address	Camera	Mount	Adapter 1	Adapter 2	Adapter 3	Mount Type	Headend termination	Cabling	Detail#	Images per Second	Resolution	Comp.	Analytics/Motion Enabled	Mounting Height	Camera View and/or General Notes	
C30	Base	Collins	2	Second Floor Corridor	192.168.1.50	Hanwha/ QNV-6082R	n/a	n/a	n/a	n/a	Ceiling	H4	A	V03	15	2MP	H.265	Motion	n/a	Capture people entering/leaving the building	
C31	Base	Collins	2	Second Floor Corridor	192.168.1.51	Axis/ P3715 PLVE	n/a	n/a	n/a	n/a	Ceiling	H4	A	V03	15	2x2MP	H.265	Motion	n/a	Capture people entering/leaving the building	
C32	Base	Collins	2	Second Floor Auditorium Entrance	192.168.1.52	Hanwha/ QNV-6082R	n/a	n/a	n/a	n/a	Ceiling	H4	A	V03	15	2MP	H.265	Motion	n/a	Capture people entering/leaving the building	
C33	Base	Collins	2	Auditorium	192.168.1.53	Hanwha/ PNM-8082VT	Hanwha/ SBP-300WMW1	n/a	Hanwha/ SBP-276HMW	Hanwha/ SBP-300BW	Wall	H4	A	V02	15	3x2MP	H.265	Motion	n/a	Capture people entering/leaving the building	
C34	Base	Collins	3	Third Floor Corridor	192.168.1.54	Hanwha/ QNV-6082R	n/a	n/a	n/a	n/a	Wall	H1	A	V02	15	2MP	H.265	Motion	n/a	Capture people entering/leaving the building	
C35	Base	Collins	3	Third Floor Corridor	192.168.1.55	Axis/ P3715 PLVE	n/a	n/a	n/a	Axis/ ACI Conduit Adapter	Surface	H1	A	V01	15	2x2MP	H.265	Motion	n/a	Capture people entering/leaving the building	
C36	Base	Collins	3	Third Floor Corridor	192.168.1.56	Hanwha/ QNV-6082R	n/a	n/a	n/a	n/a	Wall	H1	A	V02	15	2MP	H.265	Motion	n/a	Capture people entering/leaving the building	
C37	Base	Collins	3	Third Floor Corridor	192.168.1.57	Hanwha/ QNV-6082R	n/a	n/a	n/a	Hanwha/ SBV-136BW	Surface	H5	A	V01	15	2MP	H.265	Motion	n/a	Capture people entering/leaving the building	
C38	Base	Collins	3	Third Floor Corridor	192.168.1.58	Hanwha/ QNV-6082R	n/a	n/a	n/a	Hanwha/ SBV-136BW	Surface	H5	A	V02	15	2MP	H.265	Motion	n/a	Capture people entering/leaving the building	
C39	Base	Collins	3	Third Floor Corridor	192.168.1.59	Hanwha/ QNV-6082R	n/a	n/a	n/a	n/a	Ceiling	H5	A	V03	15	2MP	H.265	Motion	n/a	Capture people entering/leaving the building	
C40	Base	Collins	3	Third Floor Corridor	192.168.1.60	Axis/ P3715 PLVE	n/a	n/a	n/a	n/a	Ceiling	H5	A	V03	15	2x2MP	H.265	Motion	n/a	Capture people entering/leaving the building	
C41	Base	Collins	3	Third Floor Corridor	192.168.1.61	Hanwha/ QNV-6082R	n/a	n/a	n/a	n/a	Ceiling	H5	A	V03	15	2MP	H.265	Motion	n/a	Capture people entering/leaving the building	
C42	Base	Collins	3	Third Floor Corridor	192.168.1.62	Axis/ P3715 PLVE	n/a	n/a	n/a	n/a	Ceiling	H5	A	V03	15	2x2MP	H.265	Motion	n/a	General activity inside the building	
C43	Base	Collins	3	Third Floor Corridor	192.168.1.63	Hanwha/ QNV-6082R	n/a	n/a	n/a	n/a	Ceiling	H5	A	V03	15	2MP	H.265	Motion	n/a	General activity inside the building	
C44	Base	Collins	3	Third Floor Corridor	192.168.1.64	Hanwha/ QNV-6082R	n/a	n/a	n/a	n/a	Ceiling	H5	A	V03	15	2MP	H.265	Motion	n/a	General activity inside the building	
C45	Base	Collins	4	Fourth Floor Corridor	192.168.1.65	Hanwha/ QNV-6082R	n/a	n/a	n/a	n/a	Wall	H1	A	V02	15	2MP	H.265	Motion	n/a	General activity inside the building	
C46	Base	Collins	4	Fourth Floor Corridor	192.168.1.66	Axis/ P3715 PLVE	n/a	n/a	n/a	Axis/ ACI Conduit Adapter	Surface	H1	A	V01	15	2x2MP	H.265	Motion	n/a	General activity inside the building	
C47	Base	Collins	4	Fourth Floor Corridor	192.168.1.67	Hanwha/ QNV-6082R	n/a	n/a	n/a	n/a	Wall	H1	A	V02	15	2MP	H.265	Motion	n/a	General activity inside the building	
C48	Base	Collins	4	Fourth Floor Corridor	192.168.1.68	Axis/ P3715 PLVE	n/a	n/a	n/a	Axis/ ACI Conduit Adapter	Surface	H6	A	V01	15	2x2MP	H.265	Motion	n/a	General activity inside the building	
C49	Base	Collins	4	Fourth Floor Corridor	192.168.1.69	Axis/ P3715 PLVE	n/a	n/a	n/a	Axis/ ACI Conduit Adapter	Surface	H6	A	V01	15	2x2MP	H.265	Motion	n/a	General activity inside the building	
C50	Base	Collins	4	Fourth Floor Corridor	192.168.1.70	Hanwha/ QNV-6082R	n/a	n/a	n/a	n/a	Ceiling	H6	A	V03	15	2MP	H.265	Motion	n/a	General activity inside the building	
C51	Base	Collins	4	Fourth Floor Corridor	192.168.1.71	Axis/ P3715 PLVE	n/a	n/a	n/a	n/a	Ceiling	H6	A	V03	15	2x2MP	H.265	Motion	n/a	General activity inside the building	
C52	Base	Collins	4	Fourth Floor Corridor	192.168.1.72	Hanwha/ QNV-6082R	n/a	n/a	n/a	n/a	Ceiling	H6	A	V03	15	2MP	H.265	Motion	n/a	General activity inside the building	
C53	Base	Collins	1	Existing to Remain										A	n/a	15	2MP	H.265	Motion	n/a	General activity outside the building
C54	Base	Collins	1	Existing to Remain										A	n/a	15	2MP	H.265	Motion	n/a	General activity outside the building
C55	Base	Collins	1	Existing to Remain										A	n/a	15	2MP	H.265	Motion	n/a	General activity outside the building
C56	Base	Collins	1	Existing to Remain										A	n/a	15	2MP	H.265	Motion	n/a	General activity outside the building

Revisions :		
No. :	Date :	Remarks :
1	4/22/22	ADDENDUM #2

Project :

SALEM SCHOOLS
(3 locations)

SALEM, MA

Date :	04/06/2022
Scale :	NO TO SCALE
Project Number :	
Drawn By :	J.SOUSA
Checked By :	BUKOSKI

Drawing Title :

Francis X. Collins
Middle School
Equipment
Schedules
2 of 3

Submission :

RE-BIDDING
DOCUMENTS

Sheet No. :

SEC.21

