ADDENDUM

Public Building Commission of Chicago | Richard J. Daley Center | 50 West Washington Street, Room 200 | Chicago, Illinois 60602 | (312) 744-3090 | pbcchicago.com

ADDENDUM NO.: **01**

PROJECT NAME: **Lake View High School Renovation Project**

PROJECT NO.: **05095**

CONTRACT NO.: **C1583**

DATE OF ISSUE: **April 19, 2017**

NOTICE OF CHANGES, MODIFICATIONS, OR CLARIFICATIONS TO CONTRACT DOCUMENTS

The following changes, modifications, or clarifications are hereby incorporated and made an integral part of the Contract Documents. Unless clearly expressed otherwise by this Addendum, all terms and conditions defined in the original Contract Documents shall continue in full force and effect and shall have the same meaning in this Addendum.

ITEM NO. 1: CHANGE TO KEY DATES

None.

ITEM NO. 2: REVISIONS TO BOOK 1 – PBC INSTRUCTIONS TO BIDDERS

None.

ITEM NO. 3: REVISIONS TO BOOK 2 – PBC STANDARD TERMS AND CONDITIONS

Change 1. **REMOVE** Article 23 MBE/WBE Special Conditions, Section 23.012.b. in its entirety and **REPLACE WITH** "The contract specific goals for this project are 26% for MBE and 6% for WBE respectively'. (Page 127 of 163)

CHANGES TO BUILDING RENOVATION (MCR)

ITEM NO. 4: REVISIONS TO BOOK 3 – TECHNICAL SPECIFICATIONS – BUILDING RENOVATIONS (MCR)

Change 1. The following Building Renovation Specifications are issued herewith:
a. **ISSUED** Section #23 09 21: Building Automation System – Basic Materials and **REVISED** Section #00 01 10: Table of Contents.

Change 2. The following Building Renovation Specifications are issued herewith:
a. **ISSUED** Section #09 67 25: Resinous Epoxy Flooring and **REVISED** Section #00 01 10: Table of Contents.

Change 3. The following Building Renovation Specifications are revised and issued herewith:
a. **REVISED** Section #26 43 00: Gutter Heat Tracing.

ITEM NO. 5: REVISIONS TO DRAWINGS – BUILDING RENOVATIONS (MCR)

Change 1. The following Building Renovation Drawings are issued herewith, dated April 12, 2017:
a. **ISSUED** Drawing No. M3.3, Mechanical Schedules.
b. **ISSUED** Drawing No. M3.4, Mechanical Schedules.

Change 2. The following Building Renovation Drawings are revised and issued herewith, dated April 12, 2017:

a. **REVISED** Drawing No. A4.0, ROOF DEMOLITION PLAN: Details 1 and 2 revised to clarify roof hatch types.
b. **REVISED** Drawing No. A5.1, BUILDING ELEVATIONS: Details revised to show all window types (for reference for manual shades, window trim refinishing, etc.). Existing window A/C unit removal / reinstallation scope also clarified.
c. **REVISED** Drawing No. A5.2, BUILDING ELEVATIONS: Details revised to show all window types (for reference). Existing window A/C unit removal / reinstallation scope also clarified.
d. **REVISED** Drawing No. A5.3, BUILDING ELEVATIONS: Details revised to show all window types (for reference). Existing window A/C unit removal / reinstallation scope also clarified.
e. **REVISED** Drawing No. A5.4, BUILDING ELEVATIONS: Details revised to show all window types (for reference).
f. **REVISED** Drawing No. A11.1, INTERIOR ELEVATIONS: Details revised to clarify interior trim painting / staining scope of work.
g. **REVISED** Drawing No. A11.2, INTERIOR ELEVATIONS: Details revised to clarify interior trim painting / staining scope of work, as well as scope of work in Classroom #209.
h. **REVISED** Drawing No. A11.3, INTERIOR ELEVATIONS: Details revised to clarify interior trim painting / staining scope of work, as well as TYPICAL WOOD TRIM FINISH NOTE describing typical wood trim finish conditions in corridors and rooms (unless noted otherwise).
i. **REVISED** Drawing No. A11.4, INTERIOR ELEVATIONS: Details revised to clarify interior trim painting / staining scope of work.
j. **REVISED** Drawing No. A11.5, INTERIOR ELEVATIONS: Details revised to clarify interior trim painting / staining scope of work, as well as scope of work in Classroom #428.
k. **REVISED** Drawing No. A11.6, INTERIOR ELEVATIONS: Details revised to clarify interior trim painting / staining scope of work. Also, detail 17 detail title "FLOOR DRAIN DETAIL AT CLAY TILE CONSTRUCTION" to be removed. Detail was relocated to 6/A12.2.
l. **REVISED** Drawing No. M0.0, MECHANICAL ABBREVIATIONS, SYMBOLS AND NOTES: Notes revised on general notes on steam traps, dampers, radiators, & insulations. Additionally, notes changed on general notes on controls.
m. **REVISED** Drawing No. M1.0, BASEMENT MECHANICAL REFERENCE PLAN: Changed duct run to Rooms 030A & 030B.
n. **REVISED** Drawing No. M1.2, SECOND FLOOR MECHANICAL REFERENCE PLAN: Changed ductwork in Room 200F from rectangular to round.
o. **REVISED** Drawing No. MD2.1, BASEMENT ENLARGED MECHANICAL DEMOLITION PLAN: Changed Notes 2 & 10.
p. **REVISED** Drawing No. MD2.2, BASEMENT ENLARGED MECHANICAL DEMOLITION PLANS: Changed Notes 3, 4A, & 14.
q. **REVISED** Drawing No. MD2.3, BASEMENT ENLARGED MECHANICAL DEMOLITION PLANS: Changed Notes 3, 4A, & 14.
r. **REVISED** Drawing No. M2.1, BASEMENT ENLARGED MECHANICAL PLAN: Changed Notes 2 & 9.
s. **REVISED** Drawing No. M2.2, BASEMENT ENLARGED MECHANICAL PLANS: Changes in Notes 2, 7, & 8.
t. **REVISED** Drawing No. M2.3, ENLARGED MECHANICAL PLANS: Added removal of existing fan in Room 100I and added grille type in Room 100E.
u. **REVISED** Drawing No. M3.1, MECHANICAL SCHEDULES: Changed Fans EF-6 & EF-7 locations in Fan Schedule.
v. **REVISED** Drawing No. M4.1, MECHANICAL DETAILS: Condensate Tank System detail 6 revised.
w. **REVISED** Drawing No. M4.2, STEAM BOILER SYSTEM SYMBOLS: Sheet title revised and boiler riser added.

x. **REVISED** Drawing No. P3.2, PLUMBING PIPING RISER DIAGRAMS: Detail 1 – Plumbing Piping Riser Diagrams modified.
y. **REVISED** Drawing No. E0.0, ELECTRICAL SYMBOLS LIST: Added symbols.
z. **REVISED** Drawing No. E0.1, ELECTRICAL SYMBOLS LIST: Revised DEMO note # 5.
aa. **REVISED** Drawing No. E1.0, BASEMENT FLOOR ELECTRICAL PLAN: Added and revised notes. Revised location of public address system head end equipment.
bb. **REVISED** Drawing No. E1.1, FIRST FLOOR ELECTRICAL PLAN: Added and revised notes.
cc. **REVISED** Drawing No. E1.2, SECOND FLOOR ELECTRICAL PLAN: Revised notes.
dd. **REVISED** Drawing No. E1.3, THIRD FLOOR ELECTRICAL PLAN: Revised notes.
ee. **REVISED** Drawing No. E1.4, FOURTH FLOOR ELECTRICAL PLAN: Revised notes.
ff. **REVISED** Drawing No. E1.5, ROOF PLAN NEW EQUIPMENT LAYOUT: Revised notes. Added Heat Trace Notes.
gg. **REVISED** Drawing No. E2.1, ENLARGED PLANS LIGHTING: Revised switches.
hh. **REVISED** Drawing No. E2.4, ENLARGED PLANS POWER AND LOW VOLTAGE: Added circuit numbers for equipment.
ii. **REVISED** Drawing No. E3.1, ELECTRICAL SINGLE LINE DIAGRAM: Revised Single Line Diagram.
jj. **REVISED** Drawing No. E4.1, ELECTRICAL LIGHTING FIXTURE SCHEDULE: Revised Lighting Fixture Schedule.
kk. **REVISED** Drawing No. E4.3, PANEL SCHEDULES: Revised Panel Board loading.
ll. **REVISED** Drawing No. E4.4, PANEL SCHEDULES: Revised Panel Board loading. Added circuits for motorized shades. Added circuits for heat tracing.
mm. **REVISED** Drawing No. ED1.5, ROOF ELECTRICAL DEMOLITION PLAN: Revised Notes.
nn. **REVISED** Drawing No. ED2.1, ENLARGED BASEMENT FLOOR – ELECTRICAL DEMOLITION PLAN: Revised Notes.
oo. **REVISED** Drawing No. ED2.3, ENLARGED SECOND FLOOR - ELECTRICAL DEMOLITION PLAN: Added notes.
pp. **REVISED** Drawing No. ED2.4, ENLARGED THIRD FLOOR - ELECTRICAL DEMOLITION PLAN: Added notes.

Change 3. The following Building Renovation Drawings are to be revised as follows:

a. **REVISED** Drawing No. T1.0, TITLE SHEET: Revise Code Matrix, line 303 Remarks to "Partially Sprinklered".
b. **REVISED** Drawing No. T1.1, SHEET INDEX, ABBREVIATIONS AND PROJECT INFO., to be revised as follows: Add drawing sheets M3.3 and M3.4, both titled "MECHANICAL SCHEDULES". Sheet M4.2 title is to be changed to "STEAM BOILER SYSTEM SYMBOLS".
c. **REVISED** Drawing No. T2.0, GENERAL NOTES AND BASEMENT EGRESS PLAN: Delete 'as part of base scope' text in GENERAL WINDOW REPLACEMENT NOTE #1. Additionally, add note #13 to the GENERAL NOTES: "Contractor to protect any existing sprinkler heads during entirety of construction duration. Contractor will be required to replace any inoperable sprinkler heads make inoperable during construction activities."
d. **REVISED** Drawing No. A1.1, FIRST FLOOR DEMOLITION REFERENCE PLAN to be revised as follows: Add additional note "PATCH / INFILL PLASTER DUE TO DAMAGE THIS AREA" to note regarding removal of the 5'-0"x10'-0" wall-mounted mural in Corridor #100J.
e. **REVISED** Drawing No. A1.3, THIRD FLOOR DEMOLITION REFERENCE PLAN: Detail 4 "SECTION DETAIL AT GYMNASIUM DUCTWORK" to be eliminated in its entirety (gymnasium ductwork revised to round ductwork instead of rectangular – see revised mechanical drawings).
f. **REVISED** Drawing No. A8.13, ENLARGED FLOOR PLANS: Delete reference to "Alternate #1" at detail titles – typ. of details 1, 2 & 3.

g. **REVISED** Drawing No. A11.9, INTERIOR ELEVATIONS: Graphic depiction of ductwork in gymnasium at details 1, 2, 3 & 4 to show round duct instead of rectangular duct. Eliminate references to ductwork cap detail 4/A1.3.

h. **REVISED** Drawing No. A13.3, WINDOW SCHEDULE: Delete reference to Alternate #4 at window schedule note - revise second sentence of note at top of Window Schedule from ". . . See sheet T1.2 for Alternate #4 window replacement scope of work." to ", as well as window guard scope of work." Also, at GENERAL WINDOW NOTES revise note #4 to indicate perforated security '. . .panels at all basement and first floor windows. . .' See exterior elevations sheets A5.x series. Additionally, note #6 to be changed to the following: "Remove existing manual window shades and provide new manual window shades at all windows that are identified to be replaced in the exterior elevations sheets A5.x series and at all windows in classrooms and office areas where work is scheduled to occur as part of this project. See A8.x series sheets for classrooms and offices where work is to occur. Provide motorized window shades where indicated." Further, delete note #9 in its entirety; there is no art glass in scope of work for this project.

i. **REVISED** Drawing Sheets A6.0 through A6.4: Revise Corridor Key Note #C14 to read "Not used". " Corridor Key Note #C10 height of lockers to be changed to 72" instead of 60". On details 1/A6.2, 2/A6.2, 1/A6.3, 2/A6.3 remove keynote target #C14 at locker type D.

CHANGES TO SITE DEVELOPMENT (SIT)

ITEM NO. 6: REVISIONS TO BOOK 3 – TECHNICAL SPECIFICATIONS – SITE DEVELOPMENT(SIT)

Change 1. The following Site Development Specifications are issued herewith:

a. **ISSUED** Section #11 68 00: Playground Equipment and Structures and **REVISED** Section #00 01 10: Table of Contents.

ITEM NO. 7: REVISIONS TO DRAWINGS – SITE DEVELOPMENT (SIT)

Change 1. The following Site Development Drawings are revised and issued herewith, dated April 12, 2017

a. **REVISED** Drawing No. C2.0, Demolition Plan. Note 3 revised.
b. **REVISED** Drawing No. C3.0, Site Plan. Detail 2/C7.7 removed.
c. **REVISED** Drawing No. C3.1, Enlarged Site Plan. Detail 5/C3.1 revised.
d. **REVISED** Drawing No. C7.4, Details. Detail 6/C7.4 removed.
e. **REVISED** Drawing No. C7.7, Details. Details 2/C7.7, 3/C7.7, and 4/C7.7 removed.

REQUESTS FOR INFORMATION

ITEM NO. 8: REQUESTS FOR INFORMATION
RFI-1.

Question: I noticed that Lake View High School will be having a renovation project coming up. Maybe you can assist or direct me. Will this project require moving services? Ace Relocation has been working with schools in assisting inventory and diagram classrooms, relocate items to another location or gym, then reset the furniture after the renovation project has been completed. We would love the opportunity to be considered if this or other projects require commercial moving services.

Response: The successful General Contractor will be responsible for any/all moving and relocation work, in accordance with the Contract Documents (plans and specifications). Copies of the Contract Documents may be found on the designated printer's online platform at https://www/bhfxplanroom.com/.

RFI-2.

Question: Are the only people welcome to bid on the prequalified list? If so, how can I become prequalified for future projects.

Response: Correct, only firms previously prequalified by the PBC may submit a bid as a General Contractor (GCs) on this Project. You can find the list of prequalified GCs here: http://www.pbcchicago.com/content/working/opening_display.asp?BID_ID=486. There are currently no opportunities open to become prequalified. However, as new opportunities become available, they will be submitted via PBC Alerts. Please be sure to sign up for the Alerts at http://www.pbcchicago.com/content/working/pbc_sub_contractor_alerts.asp.

RFI-3.

Question: I saw this particular project online and noted that a play-lot is included in the scope of work. Can you please tell me if any rubber playground surfacing is needed? Our company, No Fault Sport Group, would work as a subcontractor to provide any poured-in-place rubber surfacing, rubber safety tiles or rubber mulch (bonded or loose-fill), so that is our interest.

Response: Proposed play-lot to have a unitary synthetic poured rubber seamless surface (Styrene-butadiene rubber). Refer to Issue For Bid Sheet C7.3, details 6/C7.3 and 7/C7.3, as well as, specifications Section 321816.

RFI-4.

Question: Where do we access plans and specs for this project?

Response: Plans and specifications for the above-referenced project may be found on the designated printer's online planroom for this Project at https://www.bhfxplanroom.com/.

RFI-5.

Question: How does a General Contractor or Masonry Restoration firm become prequalified for PBC projects. Any help you can give will be greatly appreciated. I signed us up for PBC alerts.

Response: Firms become prequalified as a PBC General Contractor by responding to the PBC's Request for Qualifications (RFQ). PBC typically evaluates firms on the following: demonstrated breadth and depth of firm project experience; experience of personnel; financial capability; bonding capacity; and licensing. The best way to learn about upcoming opportunities to become prequalified as a General Contractor with PBC is to monitor the PBC Alerts—the PBC's email notification system. At this time, PBC does not prequalify specific trades—only General Contractors.

RFI-6.

Statement: We are an irrigation company and received an invitation to bid on Lake View High School, 4015 N. Ashland Ave, Contract C1583. We cannot seem to access the plans, and I was just wondering if you knew whether or not this project called for irrigation as part of its exterior improvements. I would appreciate it if you could let me know.

Response: The project includes a proposed 1" copper water line to be connected to watermain with hose bibs and drinking fountain installation along N. Greenview Ave. Refer to Issue For Bid Sheet C5.0 Utility Plan.

RFI-7.

Statement: I recently came across this request for bids: Lake View High School Renovation; I am hoping you can email me a copy of any specifications and/or documents associated with this bid. If it can't be emailed, please let me know. Please do not send them if a fee is required.

Response: Documents are available at BHFX (https://www.bhfxplanroom.com/public.php) and there is a cost associated.

RFI-8.

Statement: Another day/time that subcontractors can visit the site is needed - preferably later this week.

Response: PBC held a Site Visit on Friday, April 14, 2017. Additionally, PBC conducted a second Site Visit on Tuesday, April 18th between 6:30am and 7:30am.

RFI-9.

Statement: An indication of which trim is to be painted and which is to be stripped/stained/varnished is needed.

Response: Please refer to Sheets A11.1 through A11.6 of this Addendum No. 01.

RFI-10.

Statement: An indication of where multiple layers of flooring/carpeting exists that is to be removed. As in the case of the Library where carpet tile covers asbestos tile – both must be removed. Also, confirm that the removal of the carpet tile is not hazardous because of its contact with the asbestos tile.

Response: All flooring materials (carpet, floor tile, mastics, underlayment) shall be removed down to substrate. In the case of the Library, all flooring materials (carpet, floor tile, mastics, underlayment) shall be considered and removed as asbestos containing material. Please refer to Book 3 Volume II of IV, environmental scope sheet number 88 of 162.

RFI-11.

Question: Please provide more information on asphalt flooring in corridors to be removed. I'm not familiar with this type of material being used as a floor finish. Is it sheet material or like shingles? How many layers exist? What gives it the glossy finish? Does it contain asbestos?

Response: From visual inspection, it appears that the black flooring in the corridors may either be large format asphalt tile or asphalt sheet material. The floors are likely buffed with a black wax, which gives it a glossy appearance. The black flooring in the corridors was previously sampled and is NON-ACM. Please refer to Issue For Bid specifications Book 3, Volume II of IV.

RFI-12.

Statement: Please provide available time and date to inspect: roof, parapet walls; copping and other related masonry not visible from ground level.

Response: Refer to RFI-8 Response above.

RFI-13.

Question: We are a first time bidding GC on Lake View High School Renovation project 05095 and have questions regarding the OCDM: 1) Are there license fees or any other use-related fees relating to using the system and 2) Is there a reference source that we could look up that explains how to use the system.

Response: 1) There are no fees to General Contractors (or subcontactors) associated with the usage of the PBC's Online Construction Documentation Management System (OCDM). 2) After award, the successful General Contractor will be required to attend training (at no cost); associated manuals, regarding the usage of the system, will be issued during the training.

RFI-14.

Statements: Regarding Site Demolition - Drawing No. C2.0: Will the Decorative Benches be removed and disposed of or removed and salvaged?

Response: Existing precast benches, and tables w/benches, to be removed and salvaged. Refer to Sheet C2.0 Demolition Plan, Note 3 of this Addendum No. 01.

List of Attachments and Drawings:

(Available at BHFX, LLC online plan room: http://www.bhfxplanroom.com/)

This Addendum includes the following attached Documents related to **Building Renovations (MCR)**:

1. Specification section #00 01 10: "TABLE OF CONTENTS"
2. Specification Section #23 09 21: "BUILDING AUTOMATION SYSTEM – BASIC MATERIALS".
3. Specification Section #09 67 25: "RESINOUS EXPOXY FLOORING"
4. Specification section #26 43 00: "GUTTER HEAT TRACING".

This Addendum includes the following attached Drawings related to **Building Renovations (MCR)**:

1. Drawing No. A4.0, “ROOF DEMOLITION PLAN”, dated 4/12/2017.
2. Drawing No. A5.1, “BUILDING ELEVATIONS”, dated 4/12/2017.
3. Drawing No. A5.2, “BUILDING ELEVATIONS”, dated 4/12/2017.
4. Drawing No. A5.3, “BUILDING ELEVATIONS”, dated 4/12/2017.
5. Drawing No. A5.4, “BUILDING ELEVATIONS”, dated 4/12/2017.
6. Drawing No. A11.1, “INTERIOR ELEVATIONS”, dated 4/12/2017.
7. Drawing No. A11.2, “INTERIOR ELEVATIONS”, dated 4/12/2017.
8. Drawing No. A11.3, “INTERIOR ELEVATIONS”, dated 4/12/2017.
9. Drawing No. A11.4, “INTERIOR ELEVATIONS”, dated 4/12/2017.
10. Drawing No. A11.5, “INTERIOR ELEVATIONS”, dated 4/12/2017.
11. Drawing No. A11.6, “INTERIOR ELEVATIONS”, dated 4/12/2017.
12. Drawing No. M0.0, "MECHANICAL ABBREVIATIONS, SYMBOLS AND NOTES", dated 4/12/2017.
13. Drawing No. M1.0, "BASEMENT MECHANICAL REFERENCE PLAN", dated 4/12/2017.
14. Drawing No. M1.2, "SECOND FLOOR MECHANICAL REFERENCE PLAN", dated 4/12/2017.
15. Drawing No. MD2.1, "BASEMENT ENLARGED MECHANICAL DEMOLITION PLAN", dated 4/12/2017.
16. Drawing No. MD2.2, "BASEMENT ENLARGED MECHANICAL DEMOLITION PLANS", dated 4/12/2017.
17. Drawing No. MD2.3, "BASEMENT ENLARGED MECHANICAL DEMOLITION PLANS", dated 4/12/2017.
18. Drawing No. M2.1, "BASEMENT ENLARGED MECHANICAL PLAN", dated 4/12/2017.
19. Drawing No. M2.2, "BASEMENT ENLARGED MECHANICAL PLANS", dated 4/12/2017.
20. Drawing No. M2.3, "ENLARGED MECHANICAL PLANS", dated 4/12/2017.
21. Drawing No. M3.1, "MECHANICAL SCHEDULES", dated 4/12/2017.
22. Drawing No. M3.3, "MECHANICAL SCHEDULES", dated 4/12/2017.
23. Drawing No. M3.4, "MECHANICAL SCHEDULES", dated 4/12/2017.
24. Drawing No. M4.1, "MECHANICAL DETAILS", dated 4/12/2017.
25. Drawing No. M4.2, "STEAM BOILER SYSTEM SYMBOLS", dated 4/12/2017.
26. Drawing No. P3.2, "PLUMBING PIPING RISER DIAGRAMS", dated 4/12/2017.
27. Drawing No. E0.0, "ELECTRICAL SYMBOLS LIST", dated 4/12/2017.
28. Drawing No. E0.1, "ELECTRICAL SYMBOLS LIST", dated 4/12/2017.
29. Drawing No. E1.0, "BASEMENT FLOOR ELECTRICAL PLAN", dated 4/12/2017.
30. Drawing No. E1.1, "FIRST FLOOR ELECTRICAL PLAN", dated 4/12/2017.
31. Drawing No. E1.2, "SECOND FLOOR ELECTRICAL PLAN", dated 4/12/2017.
32. Drawing No. E1.3, "THIRD FLOOR ELECTRICAL PLAN", dated 4/12/2017.
33. Drawing No. E1.4, "FOURTH FLOOR ELECTRICAL PLAN", dated 4/12/2017.
34. Drawing No. E1.5, "ROOF PLAN NEW EQUIPMENT LAYOUT", dated 4/12/2017.
35. Drawing No. E2.1, "ENLARGED PLANS LIGHTING", dated 4/12/2017.
36. Drawing No. E2.4, "ENLARGED PLANS POWER AND LOW VOLTAGE", dated 4/12/2017.
37. Drawing No. E3.1, "ELECTRICAL SINGLE LINE DIAGRAM", dated 4/12/2017.
38. Drawing No. E4.1, "ELECTRICAL LIGHTING FIXTURE SCHEDULE", dated 4/12/2017.
39. Drawing No. E4.3, "PANEL SCHEDULES", dated 4/12/2017.
40. Drawing No. E4.4, "PANEL SCHEDULES", dated 4/12/2017.
41. Drawing No. ED1.5, "ROOF ELECTRICAL DEMOLITION PLAN", dated 4/12/2017.
42. Drawing No. ED2.1, “ENLARGED BASEMENT FLOOR – ELECTRICAL DEMOLITION PLAN”, dated 4/12/2017.
43. Drawing No. ED2.3, "ENLARGED SECOND FLOOR - ELECTRICAL DEMOLITION PLAN", dated 4/12/2017.
44. Drawing No. ED2.4, "ENLARGED THIRD FLOOR - ELECTRICAL DEMOLITION PLAN", dated 4/12/2017.

This Addendum includes the following attached Documents related to **Site Development (SIT)**:

1. Specification section #00 01 10: "TABLE OF CONTENTS"
2. Specification Section #11 68 00: "PLAYGROUND EQUIPMENT AND STRUCTURES".

This Addendum includes the following attached Drawings related to **Site Development (SIT)**:

1. Drawing No. C2.0, Demolition Plan, dated 4/12/2017
2. Drawing No. C3.0, Site Plan, dated 4/12/2017
3. Drawing No. C3.1, Enlarged Site Plan, dated 4/12/2017
4. Drawing No. C7.4, Details, dated 4/12/2017
5. Drawing No. C7.7, Details, dated 4/12/2017

END OF ADDENDUM NO. 01

SECTION 00 01 10

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SECTION 23 09 21

BUILDING AUTOMATION SYSTEM (BAS) - BASIC MATERIALS, INTERFACE DEVICES, AND SENSORS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes the following:

1. Pneumatic Tubing.
2. Wiring.
3. Control Valves and Actuators.
4. Control Dampers and Actuators.
5. Field Panels.
6. Sensors.
7. Pneumatic Control Components (Gauges, switches, relays, etc.).
8. Electric Control Components (Switches, EP Valves, Thermostats, Relays, Smoke Detectors, etc.).
9. Transducers.
10. Nameplates.
11. Testing Equipment.

1.2 DESCRIPTION OF WORK

A. Refer to Division 23 Section "Building Automation System (BAS)" for general requirements.

B. Refer to other Division 23 Sections for installation of instrument wells, valve bodies, and dampers in mechanical systems; not work of this Section.

C. Provide the following electrical work as work of this Section, complying with requirements of Division 26 Sections:

1. Control wiring between field-installed controls, indicating devices, and unit control panels.
2. Interlock wiring between electrically interlocked devices, sensors, and between a hand or auto position of motor starters as indicated for all mechanical and controls.
3. Wiring associated with indicating and alarm panels (remote alarm panels) and connections to their associated field devices.
4. All other necessary wiring for fully complete and functional control system as specified.
5. Power wiring from spare circuits in electrical panels to Digital Control System Field Panels.

1.3 WORK BY OTHERS

A. Control Valves furnished under this Section shall be installed under the applicable piping Section under the direction of the Digital Control System Contractor who will be fully responsible for the proper operation of the valve.

B. Control Dampers furnished under this Section shall be installed under the applicable air distribution or air handling equipment Section under the direction of the Digital Control System Contractor who will be fully responsible for the proper operation of the damper

C. Water Pressure Taps, Thermal Wells, Flow Switches, Flow Meters, etc. that will have wet surfaces, shall be installed under the applicable piping Section under the direction of the Digital Control System Contractor who will be fully responsible for the proper installation and application.

D. Controlled Equipment Power Wiring shall be furnished and installed under Division 26. Where control involves 120V control devices controlling 120V equipment, Division 26 Contractor shall extend power wiring to the equipment. Digital Control System Contractor shall extend it from the equipment to the control device.

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

A. General: Provide electronic control products in sizes and capacities indicated, consisting of valves, dampers, thermostats, clocks, controllers, sensors, and other components as required for complete installation. Except as otherwise indicated, provide manufacturer's standard materials and components as published in their product information; designed and constructed as recommended by manufacturer, and as required for application indicated.

B. Instrument Pipe and Tube

1. Hydronic and Instruments

a. Connection to Main Piping: Provide ½ inch minimum size threadolet, ½" x 2 inch brass nipple, and ½" ball valve for connection to welded steel piping. Provide tee fitting for other types of piping.
b. Remote Instruments: Adapt from ball valve to specified tubing and extend to remote instruments. Provide a union or otherwise removable fitting at ball valve so that connection to main can be cleaned with straight rod. Where manifolds with test ports are not provided for instrument, provide tees with ¼" FPT branch with plug for use as test port. Adapt from tubing size to instrument connection.
c. Line Mounted Instruments: Extend rigid piping from ball valve to instrument. Do not use close or running thread nipples. Adapt from ball valve outlet to instrument connection size. Provide a plugged tee if pipe makes 90 degree bend at outlet of valve to allow cleaning of connection to main with straight rod without removing instrument.
d. Instrument Tubing: Seamless copper tubing, Type K or L, ASTM B 88; with cast-bronze solder joint fittings, ANSI B1.18; or wrought-copper solder-joint fittings, ANSI B16.22; or brass compression-type fittings. Solder shall be 95/5 tin antimony, or other suitable lead free composition solder. Tubing OD size shall be not less than the larger of ¼" or the instrument connection size.
e. Rigid Piping for Line Mounted Instruments: Schedule 40 threaded brass, with threaded brass fittings.

2. Low Pressure Air Instrument Sensing Lines

a. Connections: Use suitable bulkhead type fitting and static sensing tip for static pressure connections. Adapt tubing to instrument connection.
b. Tubing: Virgin polyethylene non-metallic tubing type FR, ASTM D 2737, and with flame-retardant harness for multiple tubing. Use compression or push-on brass fittings.

C. Communication Wiring: All wiring shall be in accordance with National Electrical Codes and Division 26 of this specification.

1. Contractor shall supply all communication wiring between Building Controllers (BC), Routers, Gateways, Advanced Application Controllers (AAC), Application Specific Controllers (ASC) and local and remote peripherals (e.g., operator workstations, printers, and modems).
2. Local Supervisory LAN: For any portions of this network required under this Section of the specification, contractor shall use Fiber or Category 5 of standard TIA/EIA 68 (10BaseT). Network shall be run with no splices and separate from any wiring over thirty (30) volts.
3. Primary and Secondary Controller LANs: Communication wiring shall be individually 100% shielded pairs per manufacturers recommendations for distances installed, with overall PVC cover, Class 2, plenum-rated run with no splices and separate from any wiring over thirty (30) volts. Shield shall be terminated and wiring shall be grounded as recommended by BC manufacturer.

D. Signal Wiring: Contractor shall run all signal wiring in accordance with National Electric Codes and Division 26 of this Specification.

1. Signal wiring to all field devices, including, but not limited to, all sensors, transducers, transmitters, switches, etc. shall be twisted, 100% shielded pair, minimum 18-gauge wire, with PVC cover. Signal wiring shall be run with no splices and separate from any wiring above thirty (30) volts.
2. Signal wiring shield shall be grounded at controller end only unless otherwise recommended by the controller manufacturer.

E. Low Voltage Analog Output Wiring: Contractor shall run all low voltage control wiring in accordance with National Electric Codes and Division 26 of this Specification.

1. Low voltage control wiring shall be minimum 16-gauge, twisted pair, 100% shielded, with PVC cover, Class 2 plenum-rated. Low voltage control wiring shall be run with no splices separate from any wiring above thirty (30) volts.

F. Control Panels: Provide control panels with suitable brackets for wall mounting for each control system. Locate panel adjacent to systems served.

1. Fabricate panels of 16-gage furniture-grade steel, or 6063-T5 extruded aluminum alloy, totally enclosed on four sides, with hinged door and keyed lock, with manufacturer's standard shop- painted finish and color.
2. Provide UL-listed cabinets for use with line voltage devices.
3. All gauges and control components shall be identified by means of nameplates.
4. All control tubing and wiring shall be run neatly and orderly in open slot wiring duct with cover.

5. Complete wiring and tubing termination drawings shall be mounted in or adjacent to panel.

2.2 CONTROL VALVES

A. General: Provide factory fabricated control valves of type, body material and pressure class indicated. Where type or body material is not indicated, provide selection as determined by manufacturer for installation requirements and pressure class, based on maximum pressure and temperature in piping system. Provide valve size in accordance with scheduled or specified maximum pressure drop across control valve. Control valves shall be equipped with heavy-duty actuators, and with proper close-off rating for each individual application. Minimum close-off rating shall be as scheduled and adequate for each application, and shall generally be considered at dead head rating of the pump.

B. Plug-Type Globe Pattern for Water Service:

1. Valve Sizing: Where not specifically indicated on the control drawings, modulating valves shall be sized for maximum full flow pressure drop between 50% and 100% of the branch circuit it is controlling unless scheduled otherwise. Two-position valves shall be same size as connecting piping.
2. Single Seated (Two-way) Valves: Valves shall have equal-percentage characteristic for typical heat exchanger service and linear characteristic for building loop connections to campus systems unless otherwise scheduled on the drawings. Valves shall have cage-type trim, providing seating and guiding surfaces for plug on ‘top-and-bottom’ guided plugs.
3. Double Seated (Three-way) Valves: Valves shall have linear characteristic. Valves shall be balanced-plug type, with cage-type trim providing seating and guiding surfaces on ‘top-and-bottom’ guided plugs.
4. Temperature Rating: 25°F minimum, 250°F maximum
5. Body: Bronze, screwed, 250 psi maximum working pressure for 1/2” to 2”; Cast Iron, flanged, 125 psi maximum working pressure for 2-1/2” and larger.
6. Valve Trim: Bronze; Stem: Polished stainless steel.
7. Packing: Spring Loaded Teflon or Synthetic Elastomer U-cups, self-adjusting.
8. Plug: Brass, bronze or stainless steel, Seat: Brass
9. Disc: Replaceable Composition or Stainless Steel Filled PTFE.
10. Ambient Operating Temperature Limits: -10 to 150°F
11. Acceptable Manufacturers: Subject to compliance with requirements approved manufacturers are as follows:

    a. Johnson Controls
    b. Invensys
    c. Warren
    d. Delta
    e. Belimo

C. Plug-Type Globe Pattern for Steam Service:

1. Valve Sizing: Where valve size is not specifically indicated on the drawings, size modulating valves for applications of 15 psig or less for 80% of inlet gage pressure unless scheduled otherwise. Modulating valves for applications of greater than 15 psig

shall be sized for 42% of inlet absolute pressure unless scheduled otherwise. Two-position valves shall be same size as connecting piping.

2. Characteristics: Modified equal-percentage characteristics. Cage-type trim, providing seating and guiding surfaces for plug on "top and bottom" guided plugs.

    a. Working Temperature: 250°F minimum for saturated steam applications of 15 psig or less; 366°F minimum for saturated steam applications of greater than 15 psig up to 150 psig.

3. Body: Bronze, screwed, 250 psig steam working pressure for 1/2" to 2"; Cast Iron, flanged, 100 psig steam working pressure for 2-1/2" and larger for applications of 50 psig or less.
4. Valve Trim, Plug, Seat and Stem: Polished stainless steel.
5. Packing: Spring Loaded Teflon.
6. Disc: Replaceable Composition or Stainless Steel Filled PTFE.
7. Acceptable Manufacturers: Subject to compliance with requirements approved manufacturers are as follows:

    a. Johnson Controls
    b. Invensys
    c. Warren
    d. Delta
    e. Belimo

D. Butterfly Type: Valve will be sized for 50 to 100% of branch pressure drop. For valves sized at 3way less than 90 degree position for pressure drop are to have the linkage for full closed when the open port is at the design point.

1. Body: Extended neck epoxy coated cast or ductile iron with full lug pattern, ANSI Class 125 or 250 bolt pattern to match specified flanges.
2. Seat: EPDM, except in loop bypass applications where seat shall be metal to metal
3. Disc: Bronze or stainless steel, pinned or mechanically locked to shaft
4. Bearings: Bronze or stainless steel
5. Shaft: 416 stainless steel
6. Cold Service Pressure: 175 psi
7. Close Off: Bubble-tight shutoff to 150 psi
8. Operation: Valve and actuator operation shall be smooth both seating and unseating. Should more that 2 psi deadband be required to seat/unseat the valve, valve shall be replaced at no cost to the Government.
9. Acceptable Manufacturers: Subject to compliance with requirements approved manufacturers are as follows:

    a. Jamesbury WS815
    b. Bray Series 31
    c. Belimo

E. Ball Type: Valve will be sized for 50 to 100% of branch pressure drop.

1. Body: Brass or bronze; one-, two-, or three-piece design; threaded ends.
2. Seat: Reinforced Teflon
3. Ball: Stainless steel.

4. Port: Standard or 'V' style.
5. Stem: Stainless steel, blow-out proof design, extended to match thickness of insulation.
6. Cold Service Pressure: 600 psi WOG
7. Steam working Pressure: 150 psi
8. Acceptable Manufacturers: Subject to compliance with requirements approved manufacturers are as follows:

    a. Belimo
    b. Jamesbury
    c. Delta

F. Segmented or Characterized Ball Type

1. Body: Carbon Steel (ASTM 216), one-piece design with wafer style ends.
2. Seat: Reinforced Teflon (PTFE).
3. Ball: Stainless steel ASTM A351
4. Port: Segmented design with equal-percentage characteristic.
5. Stem: Stainless steel.
6. Cold Service Pressure: 200 psi WOG
7. Cavitation Trim: Provide cavitation trim where indicated and/or required, designed to eliminate cavitation and noise while maintaining an equal percentage characteristic. Trim shall be a series of plates with orifices to break the pressure drop into multi-stages.
8. Acceptable Manufacturers: Subject to compliance with requirements approved manufacturers are as follows:

    a. Jamesbury R-Series
    b. Fisher
    c. Belimo

2.3 CONTROL DAMPERS

A. General: Provide factory fabricated automatic control dampers of sizes, velocity and pressure classes as required for smooth, stable, and controllable air flow. Provide parallel or opposed blade dampers as recommended by manufacturers sizing techniques. Provide parallel blade dampers for dampers providing two-position control (for multi zone dampers a parallel blade application with lower torque requirements should be submitted as an alternate). For dampers located near fan outlets, provide dampers rated for fan outlet velocity and close-off pressure, and recommended by damper manufacturer for fan discharge damper service.

B. For zone dampers and other applications with duct or opening areas less that 5 square feet that do not provide isolation to out doors and function in a general isolation and modulating control service in rectangular ducts at velocities not greater than 1500 fpm , differential pressure not greater than 2.5" w.c.:

1. Performance: Test in accordance with AMCA 500.
2. Frames: Galvanized steel, 16-gauge minimum thickness, welded or riveted with corner reinforcement.
3. Blades: Stainless steel in lab exhausts and galvanized steel elsewhere, maximum blade size 8 inches wide by 48 inches long, attached to minimum 1/2 inch shafts with set screws, 16 gauge minimum thickness.
4. Blade Seals: Synthetic elastomer, mechanically attached, field replaceable.

5. Jamb Seals: None.
6. Shaft Bearings: Oil impregnated sintered bronze, graphite impregnated nylon sleeve or other molded synthetic sleeve, with thrust washers at bearings.
7. Linkage: Concealed in frame if parallel.
8. Linkage Bearings: Oil impregnated sintered bronze or graphite impregnated nylon.
9. Leakage: Less than one percent based on approach velocity of 1500 ft./min. and 1 inch wg.
10. Maximum Pressure Differential: 2.5 inches wg.
11. Temperature Limits: -40 to 200 °F.
12. Where two dampers are to be mechanically interlocked such as a face and bypass arrangement, the manufacturer will provide required torque values for the combined damper assembly.
13. Acceptable Manufacturers: Subject to compliance with requirements approved manufacturers are as follows:

    a. Johnson Controls D-1100
    b. Ruskin CD36
    c. Vent Products 5800

C. For applications with duct or opening areas greater than 5 square feet that do not provide isolation to out doors and function in a general isolation and modulating control service in rectangular ducts at velocities exceeding 1500 fpm , differential pressure greater than 2.5" w.c.:

1. Performance: Test in accordance with AMCA 500.
2. Frames: Galvanized steel, 16-gauge minimum thickness, welded or riveted with corner reinforcement.
3. Blades: Galvanized steel or extruded aluminum hollow airfoil shape, maximum blade size 8 inches wide by 48 inches long, attached to minimum 1/2 inch shafts, 14 gauge minimum extrusion thickness.
4. Blade Seals: Synthetic elastomeric, mechanically attached, field replaceable.
5. Jamb Seals: Stainless steel.
6. Shaft Bearings: Oil impregnated sintered bronze sleeve, graphite impregnated nylon sleeve, molded synthetic sleeve, or stainless steel sleeve, with thrust washers at bearings.
7. Linkage: Concealed in frame if parallel.
8. Linkage Bearings: Oil impregnated sintered bronze or graphite impregnated nylon.
9. Leakage: Less than 0.1 percent based on approach velocity of 4000 ft./min. and 1 inch wg. .
10. Maximum Pressure Differential: 6 inches wg.
11. Temperature Limits: -40 to 200 °F.
12. Where opening size is larger than 48 inches wide, or 72 inches high, provide dampers in multiple sections, with appropriately intermediate frames, and jackshafts. For multiple dampers driven by a jackshaft the shaft will rigid in torsion and driven by at least two actuators located at either end of the shaft.
13. Acceptable Manufacturers: Subject to compliance with requirements approved manufacturers are as follows:

    a. TAMCO 1000
    b. Ruskin CD60
    c. CESCO Products AGA or AGB

D. For all outside air intake or exhaust control dampers that provide isolation to out doors or otherwise need to provide thermal isolation:

1. Performance: Test in accordance with AMCA 500.
2. Frames: Galvanized steel, 16-gauge minimum thickness, welded or riveted with corner reinforcement.
3. Blades: Extruded aluminum hollow airfoil shape, maximum blade size 8 inches wide by 48 inches long, attached to minimum 1/2 inch shafts, 14 gauge minimum extrusion thickness.
4. Blade Seals: Synthetic elastomeric, mechanically attached, field replaceable.
5. Jamb Seals: Non-metallic seal.
6. Shaft Bearings: Oil impregnated sintered bronze sleeve, graphite impregnated nylon sleeve, molded synthetic sleeve, or stainless steel sleeve, with thrust washers at bearings.
7. Linkage: Concealed in frame if parallel.
8. Linkage Bearings: Oil impregnated sintered bronze or graphite impregnated nylon.
9. Leakage: Less than 0.1 percent based on approach velocity of 4000 ft./min. and 1 inch wg. .
10. Maximum Pressure Differential: 6 inches wg.
11. Temperature Limits: -40 to 200 °F.
12. Where opening size is larger than 48 inches wide, or 72 inches high, provide dampers in multiple sections, with appropriately intermediate frames, and jackshafts. For multiple dampers driven by a jackshaft the shaft will rigid in torsion and driven by at least two actuators located at either end of the shaft.
13. Acceptable Manufacturers: Subject to compliance with requirements approved manufacturers are as follows:

    a. TAMCO 9000
    b. Ruskin CDTI50

14. For general isolation and modulating control service in round ducts up to 40 inches in size at velocities not greater than 2500 fpm , differential pressure not greater than 4” w.c.:
15. Performance: Test in accordance with AMCA 500.
16. Frames: rolled 12 gauge steel strip for sizes 6 inch and smaller, rolled 14 gauge steel channel for larger sizes, galvanized or aluminum finish.
17. Blades: Steel construction, 12 gauge minimum thickness for dampers less than 18 inches in size, 10 gauge minimum thickness for larger dampers.
18. Blade Seals: Full circumference neoprene.
19. Shaft: ½ inch diameter zinc or cadmium plated steel.
20. Shaft Bearings: Oil impregnated sintered bronze or stainless steel, pressed into frame, with thrust washers at bearings.
21. Leakage: Less than 0.2 percent based on approach velocity of 4000 ft./min. and 1 inch wg. differential pressure.
22. Maximum Pressure Differential: 4 inches wg.
23. Temperature Limits: -40 to 300 °F.

E. For general isolation and modulating control service in round ducts up to 60 inches in size at velocities not greater than 4000 fpm (20.3 m/s), differential pressure not greater than 6” w.c. (1492 Pa):

1. Performance: Test in accordance with AMCA 500.

2. Frames: rolled 10-gauge steel channel for sizes 48 inch and smaller, rolled 3/16 inch thick steel channel for larger sizes, galvanized or aluminum finish.
3. Blades: Steel construction, 10-gauge minimum thickness for dampers not greater than 48 inches in size, ¼ inch minimum thickness for larger dampers.
4. Blade stops: ½ inch x ¼ inch full circumference steel bar.
5. Blade Seals: Full circumference neoprene.
6. Shaft: zinc or cadmium plated steel, angle reinforcing as necessary.
7. Shaft Bearings: Oil impregnated sintered bronze or stainless steel, pressed into frame, with thrust washers at bearings.
8. Leakage: Less than 0.4 percent based on approach velocity of 4000 ft./min. and 1 inch wg. differential pressure.
9. Maximum Pressure Differential: 6 inches wg.
10. Temperature Limits: -40 to 250 °F.

2.4 ACTUATORS

A. General: Size actuators and linkages to operate their appropriate dampers or valves with sufficient reserve torque or force to provide smooth modulating action or 2-position action as specified. Select spring-return actuators with manual override to provide positive shut-off of devices as they are applied.

B. Damper Actuators

1. Ambient Operating Temperature Limits: -10 to 122°F
2. Two Position Electric Actuators: Line voltage with spring return
3. Electronic Actuators: Provide actuators with spring return for two-position (24v), 0-5 Vdc, 0-10 Vdc, 2-10Vdc, 4-20 mA, as required. Actuators shall travel full stroke in less than 90 seconds, unless prior approval is obtained. Actuators shall be designed for a minimum of 60,000 full cycles at full torque and be UL 873 listed. Provide stroke indicator. Actuators shall have positive positioning circuit. Where two actuators are required in parallel, or in sequence, provide an auxiliary actuator driver. Actuators shall have current limiting motor protection. Actuators shall have manual override . Modulating actuators for valves shall have minimum rangeability of 40 to 1.

    a. Close-Off Pressure: Provide the minimum torque required, and spring return for fail positioning (unless otherwise specifically indicated) sized for required close-off pressure. Required close-off rating of air damper applications shall be shutoff pressure of associated fan, plus 10 percent. When shutoff does not apply the actuator will be sized based on the manufactures required torque plus 30%.
    b. Acceptable Manufacturers: Subject to compliance with requirements approved manufacturers are as follows:

        1) Belimo
        2) Delta
        3) Invensys

C. Quarter-Turn Actuators (for ball and butterfly valves):

1. Electric

a. Motor: Suitable for 120 or 240 Volt single-phase power supply. Insulation shall be NEMA Class F or better. Motor shall be rated for 100 percent duty cycle. Motors shall have inherent overload protection.
b. Gear Train. Motor output shall be directed to a self locking gear drive mechanism. Gears shall be rated for torque input exceeding motor locked rotor torque.
c. Wiring: Power and control wiring shall be wired to a terminal strip in the actuator enclosure
d. Failsafe Positioning: Actuators shall be spring return type for failsafe positioning.
e. Enclosure: Actuator enclosure shall be NEMA-4 rated, and shall have a minimum of two threaded conduit entries. Provide an enclosure heater for actuators located outside of buildings.
f. Limit Switches: Travel limit switches shall be UL and CSA approved. Switches shall limit actuator in both open and closed positions.
g. Mechanical Travel Stops: The actuator shall include mechanical travel stops of stainless steel construction to limit actuator to specific degrees of rotation.
h. Manual Override: Actuators shall have manual actuator override to allow operation of the valve when power is off. For valves 4 inches and smaller the override may be a removable wrench or lever or geared handwheel type. For larger valves, the override shall be a fixed geared handwheel type. An automatic power cut-off switch shall be provided to disconnect power from the motor when the handwheel is engaged for manual operation.
i. Valve Position Indicator: A valve position indicator with arrow and open and closed position marks shall be provided to indicate valve position.
j. Torque Limit Switches: Provide torque limit switches to interrupt motor power when torque limit is exceeded in either direction of rotation.
k. Position Controller: For valves used for modulating control, provide an electronic positioner capable of accepting 4-20 mA, 0-10 Vdc, 2-10 Vdc, and 135 Ohm potentiometer.
l. Ambient Conditions: Actuator shall be designed for operation from –10 to 150 °F ambient temperature with 0 to 100 percent relative humidity.

2.5 GENERAL FIELD DEVICES

A. Provide field devices for input and output of digital (binary) and analog signals into controllers (BCs, AACs, ASCs). Provide signal conditioning for all field devices as recommended by field device manufacturers, and as required for proper operation in the system.

B. It shall be the Contractor's responsibility to assure that all field devices are compatible with controller hardware and software.

C. Field devices specified herein are generally ‘two-wire’ type transmitters, with power for the device to be supplied from the respective controller. If the controller provided is not equipped to provide this power, or is not designed to work with ‘two-wire’ type transmitters, or if field device is to serve as input to more than one controller, or where the length of wire to the controller will unacceptably affect the accuracy, the Contractor shall provide ‘four-wire’ type equal transmitter and necessary regulated DC power supply or 120 VAC power supply, as required.

D. For field devices specified hereinafter that require signal conditioners, signal boosters, signal repeaters, or other devices for proper interface to controllers, Contractor shall furnish and install

proper device, including 120V power as required. Such devices shall have accuracy equal to, or better than, the accuracy listed for respective field devices.

E. Accuracy: As stated in this Section, accuracy shall include combined effects of nonlinearity, non-repeatability and hysteresis.

2.6 TEMPERATURE SENSORS (TS)

A. Sensor range: When matched with A/D converter of BC, AAC/ASC, or Smart Sensor (SS), sensor range shall provide a resolution of no worse than 0.3°F (unless noted otherwise). Where thermistors are used, the stability shall be better than 0.25°F over 5 years.

B. Matched Sensors: The following applications shall require matched sensors:

1. Building Loop Connections: Provide matched loop and building supply sensors where control sequence requires controlling to a temperature rise (differential).
2. Hydronic Temperature Difference Calculations: Provide matched supply and return temperature sensors where the pair is used for calculating temperature difference for use in load calculations or sequencing such as across chillers and plants.
3. Air Handling Unit Sequencing: Provide matched pair for the cooling and heating coil leaving sensors where the sequence includes calculating an offset from the supply air setpoint to maintain a leaving heating coil temperature.

C. Room Temperature Sensor: Shall be a stainless steel wall plate sensor. An electronic thermostat with manual override will be provided in the principal and main office areas and in select administrative areas as approved by CPS. Provide ¼" medical grade closed cell foam insulating material. The following sensing elements are acceptable:

1. Sensing element shall be platinum RTD, thermistor, or integrated circuit, +/- 0.3°F accuracy at calibration point.

D. Single-Point Duct Temperature Sensor: Shall consist of sensing element, junction box for wiring connections and gasket to prevent air leakage or vibration noise. Temperature range as required for resolution indicated in paragraph A. Sensor probe shall be 316 stainless steel.

1. Sensing element shall be platinum RTD, thermistor, or integrated circuit, +/- 0.3°F accuracy at calibration point

E. Averaging Duct Temperature Sensor: Shall consist of an averaging element, junction box for wiring connections and gasket to prevent air leakage. Provide sensor lengths and quantities to result in one lineal foot of sensing element for each three square feet of cooling coil/duct face area. Temperature range as required for resolution indicated in paragraph A.

1. Sensing element shall be platinum RTD, or thermistor, +/- 0.3°F accuracy at calibration point.

F. Liquid immersion temperature sensor shall include thermowell, sensor and connection head for wiring connections. Provide thermally conductive paste in well to ensure good contact with the well. Temperature range shall be as required for resolution of 0.15°F.

1. Sensing element (chilled water/glycol systems) shall be platinum RTD +/- 0.2°F accuracy at calibration point. Temperature range shall be as required for resolution of 0.15°F.
2. Sensing element (other systems) shall be platinum RTD, thermistor, or integrated circuit, +/- 0.4°F accuracy at calibration point. Temperature range shall be as required for resolution of 0.3°F.

G. Pipe Surface-Mount Temperature Sensor: Sensor are only for use in applications specifically identified on the drawings. Normally only used on condensate return piping for steam systems. Shall include metal junction box and clamps and shall be suitable for sensing pipe surface temperature and installation under insulation. Provide thermally conductive paste at pipe contact point. Temperature range shall be as required for resolution indicated in paragraph A.

1. Sensing element shall be platinum RTD, thermistor, or integrated circuit, +/- 0.4°F accuracy at calibration point.

H. Outside air sensors shall consist of a sensor, an aspirated enclosure, utility box, and watertight gasket to prevent water seepage. Temperature range shall be as required for resolution indicated in Paragraph A

1. Sensing element shall be platinum RTD, thermistor, or integrated circuit, +/- 0.4°F accuracy at calibration point.
2. Acceptable Manufacturers: Kele A21 or equal

2.7 TEMPERATURE TRANSMITTERS

A. Where required by Controller, or where wiring runs are over 50 feet, sensors as specified above may be matched with transmitters outputting 4-20 mA linearly across the specified temperature range. Transmitters shall have zero and span adjustments, an accuracy of 0.1°F when applied to the sensor range.

2.8 PRESSURE AND DIFFERENTIAL PRESSURE TRANSMITTERS (DP)

A. General Purpose - Water: Two-wire transmitter, 4-20 mA output with zero and span adjustments. Plus or minus 0.5% overall accuracy, 450 psig maximum static pressure rating, 200 psid maximum overpressure rating for 6 through 60 psid range, 450 psid for 100 through 300 psid range.

1. Acceptable units shall be Kele & Associates Model 360 C

B. Liquid, Steam and Gas:

1. General: Two-wire smart DP cell type transmitter, 4-20 mA or 1-5 Vdc user-selectable linear or square root output, adjustable span and zero, stainless steel wetted parts.
2. Environmental limits: –40 to 250 °F , 0 to 100% RH..
3. Accuracy: less than 0.1 percent of span.
4. Output Damping: Time constant user selectable from 0 to 36 seconds.
5. Vibration Effect: Less than ±0.1% of upper range limit from 15 to 2000 Hz in any axis relative to pipe mounted process conditions.
6. Electrical Enclosure: NEMA-4, -4X, -7, -9.
7. Approvals: FM, CSA.

8. Acceptable Manufacturers: Rosemount Inc. 3051 Series, Foxboro, Johnson-Yokagawa, Setra, or Mamac.

C. General Purpose Low Pressure Air: Generally for use in static measurement of duct pressure or constant volume air velocity pressure measurement where the range is applicable.

1. General: Loop powered two-wire differential capacitance cell-type transmitter.
2. Output: two wire 4-20 mA output with zero adjustment.
3. Overall Accuracy: Plus or minus 1% of reading.
4. Minimum Range: 0.1 in. w.c.
5. Maximum Range: 10 inches w.c.
6. Housing: Polymer housing suitable for surface mounting.
7. Acceptable Manufacturers: Modus T30.
8. Static Sensing Element: Pitot-type static pressure sensing tips similar to Dwyer model A-301 and connecting tubing.
9. Range: Select for specified setpoint to be between 25% and 75% full-scale.

D. General Purpose Low Pressure/Low Differential Air: Generally for use in static measurement of space pressure or constant volume air velocity pressure measurement where the range is applicable.

1. General: Loop powered, two-wire differential capacitance cell type transmitter.
2. Output: Two-wire 4-20 mA output with zero adjustment.
3. Overall Accuracy: Plus or minus 1% of reading.
4. Minimum Range: 0 in. w.c.
5. Maximum Range: 0.1, 0.25, or 0.5 inches w.c.
6. Housing: Polymer housing suitable for surface mounting.
7. Acceptable Manufacturers: Modus T30 or Setra.
8. Static Sensing Element: Pitot-type static pressure sensing tips similar to Dwyer model A-301 and connecting tubing.
9. Range: Select for specified setpoint to be between 25% and 75% full-scale.

E. Velocity Pressure: Generally for use in air velocity pressure measurement where the range is applicable.

1. General: Loop powered two-wire differential capacitance cell type transmitter.
2. Output: Two-wire, 4-20 mA output with zero adjustment.
3. Overall Accuracy: Plus or minus 0.25%
4. Minimum Range: 0 in. w.c.
5. Maximum Range: 1 inch w.c.
6. Housing: Polymer housing suitable for surface mounting.
7. Acceptable Manufacturers: Setra 264 with optional FS accuracy above or equal. .
8. Range: Select for minimum range that will accept the maximum velocity pressure expected.

2.9 VALVE BYPASS FOR DIFFERENTIAL PRESSURE SENSORS

A. Provide a five valve bypass kit for protection of DP sensors where the static on the pipe can cause on over pressure when connected to one port with the other at atmospheric pressure. Kit shall include high and low pressure isolation valves, high and low pressure vent valves, and a bypass valve contained in a NEMA-1 enclosure.

2.10 DIFFERENTIAL PRESSURE SWITCHES (DPS)

A. General Service - Air: Diaphragm with adjustable setpoint and differential and snap acting form C contacts rated for the application. Provide manufacturer's recommended static pressure sensing tips and connecting tubing

B. General Service - Water: Diaphragm with adjustable setpoint, 2 psig or adjustable differential, and snap-acting Form C contacts rated for the application. 60 psid minimum pressure differential range. 0°F to 160°F operating temperature range.

2.11 PRESSURE SWITCHES (PS)

A. Diaphragm or bourdon tube with adjustable setpoint and differential and snap-acting Form C contacts rated for the application. Pressure switches shall be capable of withstanding 150% of rated pressure.

B. Acceptable Manufacturers: Square D, ITT Neo-Dyn, ASCO, Penn, Honeywell, and Johnson Controls.

2.12 TRANSDUCERS

A. Standard Capacity Electronic-to-Pneumatic (E-P) Transducers: E-P transducers shall be Voltage-to-Pneumatic (V-P) type, Current-to-Pneumatic (I-P) type,:

1. Electrical Power Supply: 24 Vac or 24 Vdc.
2. Pneumatic Air Supply: 30 psig (2.07 bar) maximum.
3. Air Capacity: 1100 scim @ 20 psig (300 cm^3/sec @ 1.4 bar).
4. Air Consumption: Zero at steady state.
5. Output Span: 0-20 psig (0-1.4 bar).
6. Input: 4-20 mA, 0-5 Vdc, 1-5 Vdc, 0-10 Vdc, 2-10 Vdc, 0-15 Vdc, or 3-15 Vdc input.
7. Enclosure: Polymer designed for surface or panel mount.
8. Air Connections: ¼" (6.35 mm) barbed.
9. Failure Mode on Power Loss: Non-failsafe transducers shall have no output air loss. Failsafe transducers shall exhaust output upon power loss.
10. Acceptable Manufacturers: RE Technologies Model UCP-522.

B. Binary to Analog Transducers or Tri-State-to-Voltage or -Current:

1. Adjustable zero and span.
2. Failure Mode on Power Loss: Shall be provided with memory feature to allow the transducer to return to last value on power failure.
3. Accuracy: ± 1% of span
4. Output Span: 4-20 mA, 0-5 Vdc, 1-5 Vdc, 0-10Vdc, 2-10Vdc, 0-15Vdc, 3-15Vdc
5. Input: 4-20 mA, pulse width modulated or tri-state input.
6. Tri-state Input Time Base: Dip switch selectable.
7. Enclosure: Polymer designed for surface or panel mount.
8. Failure Mode on Power Loss: Non-failsafe transducers shall have no output air loss. Failsafe transducers shall exhaust output upon power loss.
9. Acceptable Manufacturers: RE Technologies Model PWA Series.

C. Electronic-to Electronic (Voltage or Current to Current or Voltage):

1. Adjustable zero and span.
2. Failure Mode on Power Loss: Memory feature to allow the transducer to return to last value on power failure.
3. Accuracy: ± 1% of span.
4. Output Span: 4-20 mA, 0-5 Vdc, 1-5 Vdc, 0-10 Vdc, 2-10 Vdc, 0-15 Vdc, 3-15 Vdc.
5. Input: 0-20 Vdc, 0-20 ma, 0-10 kOhm.
6. Enclosure: Polymer enclosure designed for surface or panel mount.
7. Acceptable Manufacturers: RE Technologies Model PWA Series.

2.13 CO_2 SENSORS/TRANSMITTERS (CARBON DIOXIDE)

A. CO_2 sensors shall use silicon based, diffusion aspirated, infrared single beam, dual-wavelength sensor.

B. Range: 0-2000 ppm

C. Accuracy: ±36ppm at 800 ppm and 68°F.

D. Stability: 5% over 5 years.

E. Output: 4-20 mA, 0-10 Vdc or relay.

F. Mounting: Duct as indicated

G. Acceptable Manufacturer: Vaisala, Inc. GMD20 (duct) or GMW20 (wall), MSA, Inc, Kele 8000 series.

2.14 CO SENSORS/TRANSMITTERS (CARBON MONOXIDE)

A. CO sensors shall use electrochemical sensor.

B. Accuracy: 3% at 0-250 ppm

C. Display & Horn: Progressive or digital display and audible alarm, 65dBA @ 3’.

D. Output: 4-20 mA, 0-10 Vdc .

E. Mounting: Wall mounted between 3’ and 5’ above the floor in the boiler room.

F. Acceptable Manufacturer: Kele GMT-CO-S1A, MSA, Inc.

2.15 PNEUMATIC CONTROL COMPONENTS

A. Analog Pressure Gauges: Gauges shall be pneumatic type, minimum 1-1/2" in (38 mm) diameter, with white face and black numerals. Surface-mounted gauges shall have chrome plated trim and be a minimum of 2-1/2" in (64 mm) diameter.

B. Pneumatic Actuated Pressure Switches (PE) (for 30 psig max pressure control systems): Pressure ranges and sensitivity of PEs shall match control system sequence of operation. Switch operation shall be externally adjustable over the operating pressure range (nominal 0-20 psig, 0 to 138 KPa). PE switches shall be SPDT type, rated for the particular application, and

shall be UL listed. PE shall be as manufactured by Penn. Substitutions shall be allowed as per Division 01.

C. Pilot Positioners: Operating span adjustment range is from 3 to 13 psi (21 to 91 kPa). Positioner shall be furnished with a mounting bracket for attachment directly to the actuator.

2.16 ELECTRIC CONTROL COMPONENTS

A. Limit Switches (LS): Limit switches shall be UL listed, SPDT or DPDT type, with adjustable trim arm. Limit switches shall be as manufactured by Square D, Allen Bradley.

B. Electric Solenoid-Operated Pneumatic Valves (EP): EP valves shall be rated for a minimum of 1.5 times their maximum operating static and differential pressure.. Valves shall be ported 2-way, 3-way, or 4-way and shall be normally closed or open as required by the application. EPs shall be sized for minimum pressure drop, and shall be UL and CSA listed. Furnish and install gauges on all inputs of EPs. Furnish an adjustable air pressure regulator on input side of solenoid valves serving actuators operating at greater than 30 psig.

1. Coil Enclosure: Indoors shall be NEMA-1, Outdoors and NEMA-3, 4, 7, 9.
2. Fluid Temperature Rating: Valves for compressed air and cold water service shall have 150 °F (66 °C) minimum rating. Valves for hot water or steam service shall have fluid temperature rating higher than the maximum expected fluid temperature.
3. Acceptable Manufacturers: EP valves shall be as manufactured by ASCO or Parker.
4. Coil Rating: EP valves shall have appropriate voltage coil rated for the application (i.e., 24 VAC, 120 VAC, 24 VDC, etc.).

C. Low Temperature Detector (‘Freezestat’) (FZ): Low temperature detector shall consist of a ‘cold spot’ element which responds only to the lowest temperature along any one foot of entire element, minimum bulb size of 1/8" x 20', junction box for wiring connections and gasket to prevent air leakage or vibration noise, DPST (4 wire, 2 circuit) with manual reset. Temperature range 15 to 55°F , factory set at 38°F.

D. High Temperature Detectors (‘Firestat’) (FS): High temperature detector shall consist of 3-pole contacts, a single point sensor, junction box for wiring connections and gasket to prevent air leakage of vibration noise, triple-pole, with manual reset. Temperature range 25 to 215°F.

E. Surface-Mounted Thermostat: Surface-mounted thermostat shall consist of SPDT contacts, operating temperature range of 50 to 150°F , and a minimum 10°F fixed setpoint differential.

F. Low Voltage Wall Thermostat: Wall-mounted thermostat shall consist of SPDT sealed mercury contacts, operating temperature range of 50 to 90°F , switch rating of 24 Vac (30 Vac max.), and both manual and automatic fan operation in both the heat and cool modes.

G. Control Relays: All control relays shall be UL listed, with contacts rated for the application, and mounted in minimum NEMA-1 enclosure for indoor locations, NEMA-4 for outdoor locations.

1. Control relays for use on electrical systems of 120 volts or less shall have, as a minimum, the following:

a. AC coil pull-in voltage range of +10%, -15% or nominal voltage.

b. Coil sealed volt-amperes (VA) not greater than four (4) VA.
c. Silver cadmium Form C (SPDT) contacts in a dustproof enclosure, with 8 or 11 pin type plug.
d. Pilot light indication of power-to-coil and coil retainer clips.
e. Coil rated for 50 and 60 Hz service.
f. Acceptable Manufacturers: Relays shall be Potter Brumfield, Model KRPA.

2. Relays used for across-the-line control (start/stop) of 120V motors, 1/4 HP, and 1/3 HP, shall be rated to break minimum 10 Amps inductive load. Relays shall be IDEC.
3. Relays used for stop/start control shall have low voltage coils (30 VAC or less), and shall be provided with transient and surge suppression devices at the controller interface.

H. General Purpose Power Contactors: NEMA ICS 2, AC general-purpose magnetic contactor. ANSI/NEMA ICS 6, NEMA type 1enclosure. Manufacturer shall be Square 'D', Cutler-Hammer or Westinghouse.

I. Control Transformers: Furnish and install control transformers as required. Control transformers shall be machine tool type, and shall be US and CSA listed. Primary and secondary sides shall be fused in accordance with the NEC. Transformer shall be proper size for application, and mounted in minimum NEMA-1 enclosure.

1. Transformers shall be manufactured by Westinghouse, Square ‘D’, or Jefferson.

J. Time Delay Relays (TDR): TDRs shall be capable of on or off delayed functions, with adjustable timing periods, and cycle timing light. Contacts shall be rated for the application with a minimum of two (2) sets of Form C contacts, enclosed in a dustproof enclosure.

1. TDRs shall have silver cadmium contacts with a minimum life span rating of one million operations. TDRs shall have solid state, plug-in type coils with transient suppression devices.
2. TDRs shall be UL and CSA listed, Crouzet type.

K. Electric Push Button Switch: Switch shall be momentary contact, oil tight, push button, with number of N.O. and/or N.C. contacts as required. Contacts shall be snap-action type, and rated for minimum 120 Vac operation. Switch shall be 800T type, as manufactured by Allen Bradley.

L. Pilot Light: Panel-mounted pilot light shall be NEMA ICS 2 oil tight, transformer type, with screw terminals, push-to-test unit, LED type, rated for 120 VAC. Unit shall be 800T type, as manufactured by Allen-Bradley.

M. Alarm Horn: Panel-mounted audible alarm horn shall be continuous tone, 120 Vac Sonalert solid-state electronic signal, as manufactured by Mallory.

N. Electric Selector Switch (SS): Switch shall be maintained contact, NEMA ICS 2, oil-tight selector switch with contact arrangement, as required. Contacts shall be rated for minimum 120 Vac operation. Switch shall be 800T type, as manufactured by Allen-Bradley.

2.17 DUCT SMOKE DETECTOR

A. Photoelectric detector with sampling tube that spans the entire width of duct. .

B. Velocity Rating : 100 to 4000 fpm or 500 to 4000fpm depending on the minimum velocity in the duct. Provide the 100 to 4000 fpm detector if the min duct velocity is below 550 fpm.

C. Output Contact: . Alarm, two sets form "C" rated at 10amps 115V resistive. One set of alarm contacts for BAS monitoring and fan shutdown. Trouble, one set of contacts.

D. Temperature & RH limits: 32 to 120°F and 10 to 85% relative humidity.

E. Acceptable Manufacturer:

1. Invensys FIREX model 2650
2. Sensor Systems DH100ACDCLP
3. Air Products and Controls SL-2000

2.18 NAMEPLATES

A. Provide engraved phenolic or micarta nameplates for all equipment, components, and field devices furnished. Nameplates shall be 1/8 thick, black, with white center core, and shall be minimum 1" x 3", with minimum 1/4" high block lettering. Nameplates for devices smaller than 1" x 3" shall be attached to adjacent surface.

B. Each nameplate shall identify the function for each device.

2.19 TESTING EQUIPMENT

A. Contractor shall test and calibrate all signaling circuits of all field devices to ascertain that required digital and accurate analog signals are transmitted, received, and displayed at system operator terminals, and make all repairs and recalibrations required to complete test. Contractor shall be responsible for test equipment required to perform these tests and calibrations. Test equipment used for testing and calibration of field devices shall be at least twice as accurate as respective field device (e.g., if field device is +/-0.5% accurate, test equipment shall be +/-0.25% accurate over same range).

PART 3 - EXECUTION

3.1 INSPECTION

A. Examine areas and conditions under which control systems are to be installed. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Contractor.

3.2 INSTALLATION OF CONTROL SYSTEMS

A. General: Install systems and materials in accordance with manufacturer's instructions, roughing-in drawings and details shown on drawings. Install electrical components and use electrical products complying with requirements of National Electric Code and all local codes.

B. Main Control Air Piping: All main air piping between the compressors and the control panels shall be copper, run per ASTM B88

C. Branch Control Air Piping: Accessible tubing is defined as that tubing run in mechanical equipment rooms; inside mechanical equipment enclosures, such as heating and cooling units, instrument panels; across roofs, in pipe chases, etc. Inaccessible tubing is defined as that tubing run in concrete slabs; furred walls; or ceilings with no access.

1. Provide copper tubing with maximum unsupported length of 3'-0", for accessible tubing run exposed to view. Polyethylene tubing may be used in lieu of above, when run within adequately supported, rigid enclosure, such as metallic raceways, or EMT. Terminal single-line connections less than 18 in length may be copper tubing, or polyethylene tubing run inside flexible steel protection. Accessible tubing run in concealed locations, such as pipe chases, suspended ceilings with easy access, etc. may be copper or polyethylene bundled and sheathed tubing.
2. Provide copper or polyethylene tubing for inaccessible tubing, other than in concrete pour. If polyethylene tubing is used, install in EMT or vinyl-jacketed polyethylene tubing.
3. Polyethylene piping may be used above suspended ceiling without conduit provided it is run in a neat and orderly fashion, bundled where applicable, and completely suspended (strapped to rigid elements or routed through wiring rings) away from areas of normal access. Tubing shall not be laid on the ceiling or duct.
4. Pressure test control air piping at 30 psi (207 kPa) for 24 hours. Test fails if more than 2 psi loss occurs.
5. Fasten flexible connections bridging cabinets and doors, neatly along hinge side, and protect against abrasion. Tie and support tubing neatly.
6. Number-code or color-code tubing, except local individual room control tubing, for future identification and servicing of control system. Code shall be as indicated on approved installation drawings.

D. Control Wiring: The term "control wiring" is defined to include providing of wire, conduit and miscellaneous materials as required for mounting and connection of electric control devices.

1. Wiring System: Install complete wiring system for electric control systems. Install all control wiring external to panels in electric metallic tubing or raceway. On Renovation projects, wiring in finished areas shall be routed in wire mold. The routing of wiring in finished areas must be specifically approved by the AOR/EOR. Installation of wiring shall generally follow building lines. Install in accordance with National Electrical Code and Division 26 of this Specification. Fasten flexible conductors bridging cabinets and doors, neatly along hinge side, and protect against abrasion. Tie and support conductors neatly.
2. Control Wiring Conductors: Install control wiring conductors, without splices between terminal points, color-coded. Install in neat workmanlike manner, securely fastened. Install in accordance with National Electrical Code and Division 26 of this Specification.
3. Communication wiring, signal wiring and low voltage control wiring shall be installed separate from any wiring over thirty (30) volts. Signal wiring shield shall be grounded at controller end only, unless otherwise recommended by the controller manufacturer.
4. All WAN and LAN Communication wiring shield shall be terminated as recommended by controller manufacturer. All WAN and LAN Communication wiring shall be labeled with a network number, device ID at each termination and shall correspond with the WAN and LAN system architecture and floor plan submittals. All WAN and LAN cabling shall comply with applicable Division 26 requirements.

5. Number-code or color-code conductors appropriately for future identification and servicing of control system. Code shall be as indicated on approved installation drawings.

E. Control Valves: Install so that actuators, wiring, and tubing connections are accessible for maintenance. Where possible, install with valve stem axis vertical, with operator side up. Where vertical stem position is not possible, or would result in poor access, valves may be installed with stem horizontal. Do not install valves with stem below horizontal, or down.

F. Freezestats: Install freezestats in a serpentine fashion where shown on drawing. Provide one foot of element for each square foot of coil face area. The length of element not just down stream of the coil will not be included in the coverage calculation. Where coil face area exceeds required length of element, provide multiple devices, wired in parallel for normally open close on trip application, wired in series for normally closed, open on trip application. Adequately support with coil clips such that sensor is not in direct contact with equipment. Coordinate the location of the switch such that it is normally accessible.

G. Averaging Temperature Sensors: Cover no more than three square feet per linear foot of sensor length except where indicated. Generally the sensor will be located where flow is sufficiently homogeneous/adequately mixed, consult AE for requirements.

H. Differential Pressure Transmitters: Provide valve bypass arrangement to protect against over pressure damaging the transmitter.

I. Flow Switches: Where possible, install in a straight run of pipe at least 15 diameters in length to minimize false indications.

J. Current Switches for Motor Status Monitoring: Adjust so that setpoint is below minimum operating current and above motor no load current.

K. Cutting and Patching Insulation: Repair insulation to maintain integrity of insulation and vapor barrier jacket. Use hydraulic insulating cement to fill voids and finish with material matching or compatible with adjacent jacket material.

END OF SECTION

SECTION 09 67 25

RESINOUS EPOXY FLOORING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes epoxy flooring in Kitchen, Kitchen Storage and Kitchen Office as indicated and as specified.

1.2 SUBMITTALS

A. Product Data: Submit manufacturer's technical information and installation instructions for each type of special flooring and accessory items. Include certification indicating compliance of materials with requirements.

B. Shop Drawings: Submit detailed shop drawings showing edge, joint, and penetration details, details for treatment of cracks, and overall plan layout.

C. Submit the following samples for approval before commencing operations or ordering construction materials:

1. Epoxy Flooring: Three samples of each finish and color combination, 12" x 12" each.
2. Stop Strips: Three inch lengths of each type of strip.

D. Maintenance Literature: Written recommended maintenance procedures.

1.3 QUALITY ASSURANCE

A. Manufacturer Qualifications: Manufacturer shall have produced the types of flooring systems required for not less than 10 years, with not less than 5 similar projects that have been in successful use for not less than 5 years. Manufacturer shall have the capacity to produce the quantities required without causing delays.

1. Single Source Responsibility: Obtain primary flooring materials including primers, resins, hardening agents, finish or sealing coats from a single manufacturer with not less than 5 years of successful experience in supplying principal materials for work of type required. Provide secondary materials only of type and from source recommended by manufacturer of primary materials.

B. Installer Qualifications: Minimum of 5 years experience installing plastic matrix or epoxy flooring on comparable projects. All work shall be performed by an installer trained, approved and authorized (in writing) by the epoxy flooring manufacturer, and has had experience in the actual application of the specified material.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Materials shall be delivered to the job in original containers or bundles with seals unbroken and labels intact, and stored in a place protected from damage, moisture, and exposure to the elements.

B. In the event of damage, immediately make all repairs and replacements necessary to the satisfaction of the Architect and at no additional cost to the Owner.

1.5 PROJECT CONDITIONS

A. In cold weather, the building shall be heated during the installation of epoxy flooring to maintain a uniform temperature in the range of 55 deg F to 75 deg F. Ventilation shall also be provided. Do not apply flooring when subfloor or air temperature is below 55 deg F.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturer: Subject to compliance with requirements provide one of the following:

1. Crossfield Products; Dex-o tex; Cheminert K.
2. HB Fuller; Tech Products Epoxy Flooring.
3. General Polymers; TPM 115 U-4.
4. Stonhard; Stonclad, Stonkote GS4.
5. Selby/Ucrete; Selbaclad 415.

2.2 MATERIALS

A. Flooring shall be epoxy flooring consisting of a 100% solids pigmented epoxy resin base and epoxy curing agent:

B. Matrix color shall be as selected by Architect.

C. Acceptable aggregates shall be granite, traprock, or silica quartz in special sizes. Marble dust or Pool mix shall not be used as a filler.

D. Primer for concrete subfloor shall be as recommended by the epoxy flooring manufacturer, two-part epoxy primer.

2.3 ACCESSORIES

A. Sealants: As recommended by flooring manufacturer for type of service and joint condition indicated.

B. Stop and Divider Strips: Strips shall be stainless steel and shall be installed in accordance with instructions supplied by the manufacturer of epoxy flooring.

PART 3 - EXECUTION

3.1 INSPECTION

A. Examine the areas and conditions under which flooring is be applied. Do not proceed with the work until unsatisfactory conditions have been corrected.

B. Starting of work will be construed as acceptance of the surfaces within any particular area.

3.2 PREPARATION

A. Surfaces which are to be covered with epoxy flooring shall be clean and dry, reasonably smooth and free from loose and foreign materials, and any holes and cracks in subfloor shall be pointed flush in accordance with epoxy flooring manufacturer's instructions.

B. Before applying flooring, concrete subfloor shall be swept to remove all loose materials, dirt and dust. Prepare concrete by mechanical means including use of a scabbler, scarifier or shot blast machine for removal of bond inhibiting materials such as curing compounds or laitance.

C. Method of application and quantities of materials shall be in strict accordance with the instructions of the manufacturer whose materials are used, by an applicator certified by such manufacturer and under his supervision.

D. Prime concrete surfaces in accordance with epoxy flooring manufacturer's recommendations:

1. Mix and apply primer over properly prepared substrate with strict adherence to manufacturer's installation procedures and coverage rates.
2. Coordinate timing of primer application with application of troweled mortar to ensure optimum adhesion between resinous flooring materials and substrate.

E. Carefully mix and prepare materials for flooring systems in compliance with manufacturer's instructions.

F. Perform bond tests for epoxy flooring in accordance with manufacturer's instruction and record results. Do not install flooring until adequate bond has been demonstrated.

3.3 INSTALLATION

A. Install stop strips at doorways and at top of wall be in accordance with instructions supplied by the manufacturer of epoxy flooring.

B. Provide divider strips at cove base set in epoxy flooring, parallel to all cove base sections. Extend divider strips on the floor into adjacent cove base. Provide or extend divider strip through internal corners of floor.

C. Set stop strips and divider strips straight, true, without kinks or distortions, fitted tightly and square at all intersections.

D. Epoxy flooring shall be installed at a minimum thickness of 3/16 inch in strict accordance with the manufacturer's application directions.

E. Form wall base with cove base at floor of 1/4 inch radius and square top neatly metered at corners, and with intersections with floor straight and flush. Finish shall match floor. Wall base shall be 6" high.

F. The finished surfaces shall be smooth and uniform in texture and appearance, the same color and texture as approved samples, and free of pitting, bubbles, trowel marks, separation between adjacent floor mix by the Architect, shall be repaired or replaced to the Architect's satisfaction at no additional cost to the Owner.

3.4 PROTECTION OF EPOXY FLOORING

A. Close areas to traffic during installation of epoxy flooring.

B. Cure resinous flooring in compliance with manufacturer's directions, taking care to prevent contamination during stages of application and prior to completion of curing.

C. Clean flooring after installation and finishing operations are completed, complying with manufacturer's instructions.

D. Cover floor with heavy reinforced Kraft paper after epoxy flooring has cured sufficiently and maintain in position.

E. Clean flooring as recommended by manufacturer when building is ready for occupancy.

END OF SECTION

SECTION 26 43 00

GUTTER HEAT TRACING

PART 1 - GENERAL

1.1 SUMMARY

A. A.This Section includes a UL Listed, CSA Certified and FM Approved roof and gutter de-icing heat-tracing system consisting of self-regulating heating cable, connection kits and electronic controller. A. System for roof and gutter de-icing with ambient and moisture sensing control, monitoring, integrated ground- fault circuit protection and Building Management System (BMS) communication capabilities.

1.2 SUBMITTALS

A. Product Data

1. Heating cable data sheet
2. UL, CSA, FM approval certificates for roof and gutter de-icing
3. Roof and gutter de-icing design guide
4. System installation and operation manual
5. System installation details
6. Connection kits and accessories data sheet
7. Controller/Power Panel data sheet
8. Controller/Power Panel wiring diagram

1.3 QUALITY ASSURANCE

A. Manufacturers' Qualifications

1. Manufacturer to show minimum of thirty (30) years experience in manufacturing electric self- regulating heating cables.
2. Manufacturer will be ISO-9001 registered.
3. Manufacturer to provide products consistent with IEEE 515.1 and CSA 22.2 No 130-03 requirements.

B. Installer Qualifications

1. System installer shall have complete understanding of product and product literature from manufacturer or authorized representative prior to installation. Electrical connections shall be performed by a licensed electrician.

C. Regulatory Requirements and Approvals

1. The system (heating cable, connection kits, and controller) shall be UL Listed, CSA Certified and FM Approved for roof and gutter de-icing

D. Electrical Components, Devices, and Accessories: Listed and labelled as defined in Chicago Electrical Code, Article 100, by a Nationally Recognized Testing Laboratory (NRTL), and marked for intended use.

1.4 DELIVERY, STORAGE AND HANDLING

A. General Requirements: Deliver, store and handle products to prevent their deterioration or damage due to moisture, temperature changes, contaminates or other causes.

B. Delivery and Acceptance Requirements: Deliver products to site in original, unopened containers or packages with intact and legible manufacturers' labels identifying the following:

1. Product and Manufacturer
2. Length/Quantity
3. Lot Number
4. Installation and Operation Manual
5. MSDS (if applicable)

C. Storage and Handling Requirements

1. Store the heating cable in a clean, dry location with a temperature range 0oF (-18oC) to 140oF (60oC).
2. Protect the heating cable from mechanical damage.

1.5 WARRANTY

A. Extended Warranty

1. Manufacturer shall provide ten (10) year limited warranty for GM-1XT OR GM-2XT heating cables and components. Provide one (1) year warranty for all heat trace controllers.
2. Contractor shall submit to owner results of installation tests required by the manufacturer.

PART 2 - PRODUCTS

2.1 APPROVED MANUFACTURERS

A. Contract Documents are based on manufacturer and products named below to establish a standard of quality.

B. Basis of Design

1. Basis of Design Product Selections

a. Manufacturer

1) Manufacturers shall have more than thirty (30) years' experience with manufacture & installation self-regulating heating cables.
2) Manufacturer shall provide UL, CSA, FM approval certificates for roof and gutter de-icing

b. Roof and Gutter De-icing System

1) Raychem IceStop self-regulating heating cable with fluoropolymer (-XT) outer jacket
2) Raychem FTC connection kits and accessories
3) DigiTrace SMPG1 control panel
4) DigiTrace ProtoNode multi-protocol device server

2.2 PRODUCTS, GENERAL

A. Single Source Responsibility: Furnish heat tracing system for roof and gutter de-icing from a single manufacturer.

B. The system (heating cable, connection kits, and controller) shall be UL Listed, CSA Certified and FM Approved for roof and gutter de-icing. No parts of the system may be substituted or exchanged.

2.3 PRODUCTS

A. Self-Regulating Heating Cable

1. The heating cable shall consist of a continuous core of conductive polymer that is radiation cross- linked, extruded between two (2) 16 AWG nickel-plated copper bus wires that varies its power output in response to temperature changes.
2. The heating cable shall have a modified polyolefin inner jacket and a tinned-copper braid to provide a ground path and enhance the cables ruggedness.
3. The heating cable shall have a fluoropolymer (XT) outer jacket for enhanced mechanical and chemical protection.
4. The heating cable shall have an inherently UV-resistant outer jacket (fluoropolymer).
5. The heating cable shall have a self-regulating factor of at least 75 percent. The self-regulating factor is defined as the percent reduction of the heating cable power output going from a 0°F to 80°F roof temperature.
6. The heating cable shall operate on line voltages of 120, 208, 240 OR 277 volts without the use of transformers.
7. The heating cable power output shall be 12 W/ft at 32°F in ice or snow.
8. The heating cable shall be part of a UL Listed, CSA Certified and FM Approved system.
9. The outer jacket of the heating cable shall have the following markings:

a. Heating cable model number
b. Agency listings
c. Meter mark
d. Lot/Batch ID

B. Heating Cable Connection Kits

1. Manufacturer shall provide power connection, splice/tee and end seal kits compatible with selected heating cable.
2. Installation shall not require the installing contractor to cut into the heating-cable core to expose the bus wires.
3. Connection kits shall be rated NEMA 4X to prevent water ingress and corrosion. All components shall be UV stabilized.

4. Connection kits shall be UL Listed, CSA Certified and FM Approved.

C. Heating Cable Installation Accessories

1. Roof clips – Used to secure heating cables to roofs and gutters. The clips may be attached with mechanical fasteners (screws or nails) on shake roofs or using adhesive on metal, slate or composite roofing.
2. Downspout Hangers - Used to provide mechanical protection and strain relief to the heating cable as it goes over sharp edges and to hold the heating cable in place at the top of downspouts.

D. Control Methodology

1. Group Control

a. Heating cable manufacturer shall provide a group snow/ice melting controller with built-in GFPD compatible with selected heating cable.
b. Group snow/ice melting controller shall have an integrated 30-mA ground-fault circuit breaker.
c. Group snow/ice melting controller shall have 18 ground-fault circuit breakers rated up to 30 A.
d. Group snow/ice melting controller shall have a main circuit breaker.
e. Group snow/ice melting controller shall be capable of operating with supply voltage of 208 V.
f. Group snow/ice melting controller shall be capable of supporting up to six (6) aerial or gutter mounted temperature/moisture sensors.
g. Group snow/ice melting controller enclosure shall be NEMA 3R.
h. Group snow/ice melting controller shall have an adjustable hold-on timer (0 – 10 hours).
i. Group snow/ice melting controller shall have an integrated high-limit temperature sensor.
j. Electronic snow/ice melting controller shall have contacts to interface with an Energy Management Computer (EMC).
k. Digital controller shall have c-UL-us approvals

2.4 SYSTEM LISTING

A. The system (heating cable, connection kits, and controller) shall be UL Listed, CSA Certified and FM Approved for roof and gutter de-icing.

B. The roof and gutter de-icing system shall have a design, installation and operating manual.

PART 3 - EXECUTION

3.1 INSTALLERS

A. Acceptable Installers

1. Subject to compliance with requirements of Contract Documents, installer shall be familiar with installing heat-trace cable and equipment.

3.2 INSTALLATION

A. Comply with manufacturer’s recommendations.

B. Install and secure the heating cable in accordance with and Operation Manual.

C. Install electric heating cable according to the drawings and the manufacturer’s instructions. The installer shall be responsible for providing a complete functional system, installed in accordance with applicable national and local requirements.

D. Provide ambient and moisture sensor for each controller.

E. Provide heat tracing in gutters as shown on plans. Provide heat tracing 15” above gutter on roof. Provide heat tracing in downspouts, length per manufacturer’s recommendations.

F. Grounding of controller shall be equipment according to Section 26 05 26 "Grounding and Bonding for Electrical Systems."

G. Connection of all electrical wiring shall be according to Section 26 05 11 "Conductors and Cables for Electrical Systems."

3.3 FIELD QUALITY CONTROL

A. Start-up of system shall be performed by factory technician or factory representative per the owner’s requirements.

B. Field Testing and Inspections

1. The system shall be commissioned in accordance to the Manufacturer’s Installation and Operation manual.
2. The heating cable circuit integrity shall be tested using a 2500 Vdc megohmmeter at the following intervals below. Minimum acceptable insulation resistance shall be 1000 megohms or greater.

    a. Before installing the heating cable
    b. After heating cable has been installed onto the pipe
    c. After installing connection kits
    d. After the thermal insulation is installed onto the pipe
    e. Prior to initial start-up (commissioning)
    f. As part of the regular system maintenance

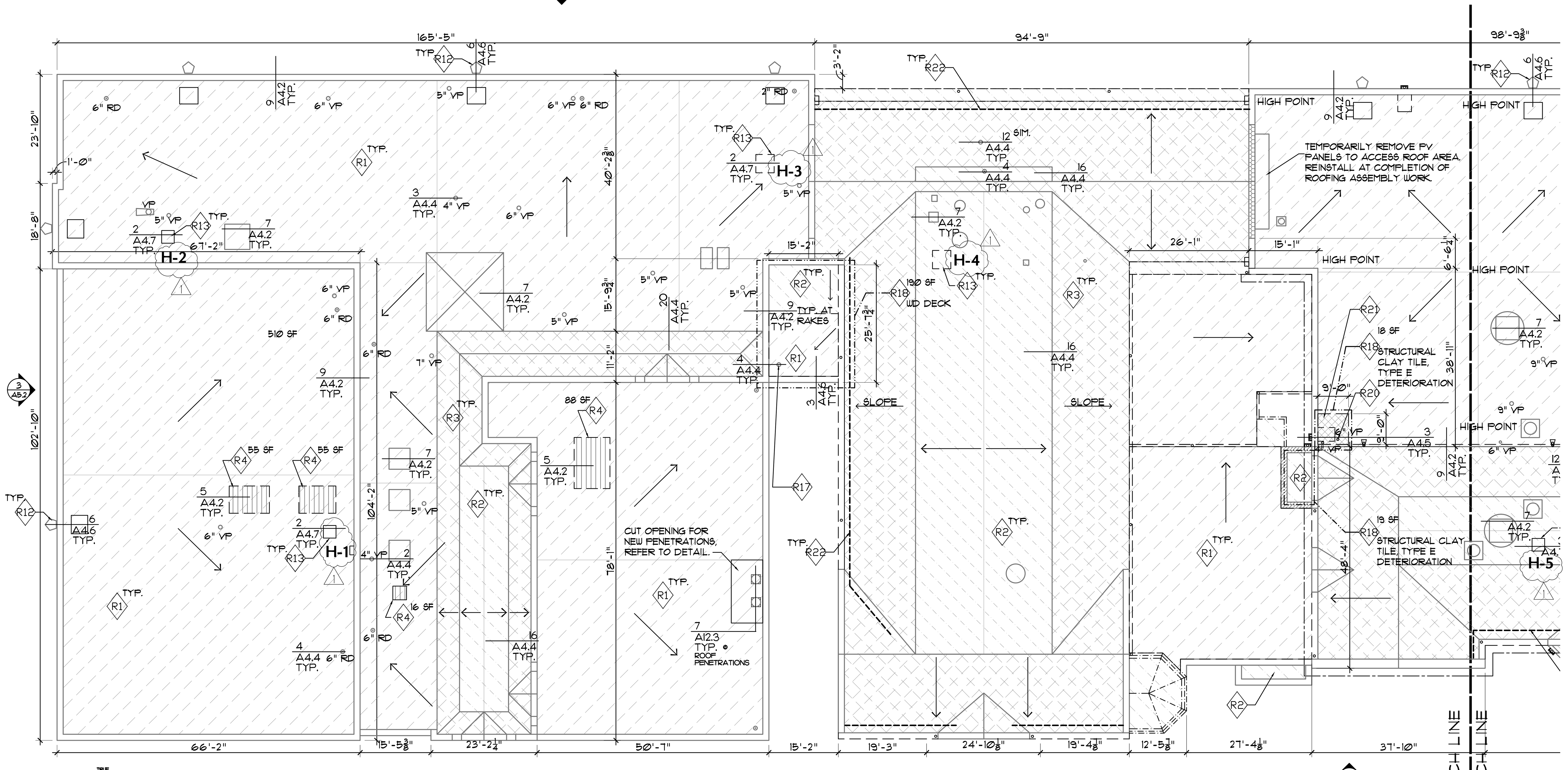
3. The technician shall verify that the snow/icing melting controller and control parameters are set to the application requirements.
4. The technician shall verify that the snow/icing melting controller and alarm contacts are corrected and connected properly.
5. All commissioning results will be recorded and presented to the owner.

3.4 MAINTENANCE

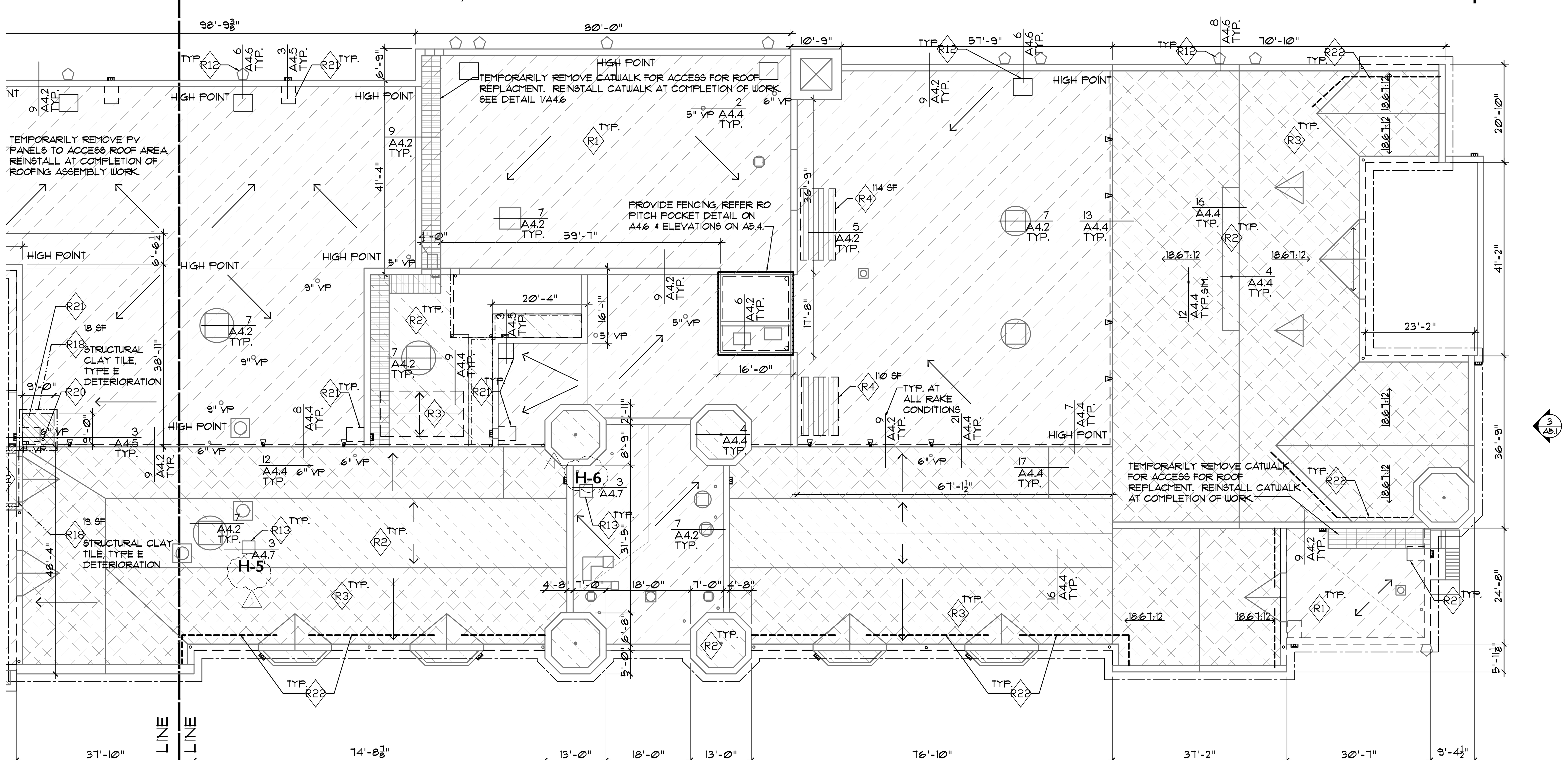
A. Maintenance Service

1. Comply with manufacturer’s recommendations for Installation and Operation Manual.

END OF SECTION



ROOF PLAN - NORTH
1/16" = 1'-0"



ROOF PLAN - SOUTH
1/16" = 1'-0"

GENERAL ROOF NOTES

1. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING EXISTING CONDITIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, ROOF PENETRATION TYPES AND QUANTITIES, DIMENSIONS, ROOF DRAINAGE, ETC. DRAWINGS ARE DIAGRAMMATIC. DIMENSIONS SHOWN ON DRAWINGS ARE BASED UPON ARCHIVAL DRAWINGS AND MAY VARY IN THE FIELD.
2. GRIND AND TUCKPOINT ALL EXTERIOR MASONRY FACADES INCLUDING EXPOSED ROOF SIDE FACES OF PARAPET WALLS TO REMAIN, 100% OF BUILDING. ALL GRINDING AND TUCKPOINTING WORK TO FOLLOW CONTRACT DOCUMENT REQUIREMENTS. PROVIDE TOOLED CONCAVE JOINT
3. REFER TO BUILDING ELEVATIONS FOR ADDITIONAL INFORMATION FOR WORK RELATED TO COPINGS AND MASONRY WALL WORK TO BE COORDINATED WITH ROOF RELATED WORK.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY REMOVAL AND REINSTALLATION OF ALL DOWNSPOUTS, AND SCUPPERS TO PROPERLY PERFORM MASONRY REPAIR AND TUCKPOINTING WORK. THE DRAWINGS ARE FOR REFERENCE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTE ALL DOWNSPOUT LOCATIONS ON THE BUILDING PRIOR TO SUBMITTING BID.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SURFACE MOUNTED EQUIPMENT AND UTILITIES THAT REMAIN IN PLACE AROUND AREAS OF WORK INCLUDING BUT NOT LIMITED TO ELECTRICAL CABLES, LIGHTING, EQUIPMENT SUPPORT STRUCTURES AND WINDOW MOUNTED AIR CONDITIONING UNITS.
6. DIMENSIONS, QUANTITIES AND NUMERIC NOTATIONS INDICATE APPROXIMATE VALUES/QUANTITIES OF REQUIRED WORK FOR BIDDING PURPOSES. CONTRACTOR SHALL VERIFY EXACT LOCATIONS AND QUANTITIES IN THE FIELD.
7. NOT ALL ELEVATIONS ARE SHOWN BUT ALL MASONRY WORK IDENTIFIED IN THESE DRAWINGS SHALL INCLUDE ASSOCIATED CORNERS AND RETURNS ADJACENT TO WALLS SHOWN ON THE ELEVATIONS AND SHALL BE CONSIDERED PART OF SAME SCOPE.
8. WASH AND SCRUB ALL MASONRY AND STONE FACADE SURFACES AFTER TUCKPOINTING WORK IS COMPLETE
9. EXISTING MECHANICAL EQUIPMENT, CURBS, EXHAUST FANS, VENTS, ETC. ARE TO REMAIN UNLESS NOTED OTHERWISE.
10. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS NOT TO DISRUPT EXISTING BUILDING SYSTEMS WHICH MAY BE AFFECTED BY THE WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ANY EXISTING SYSTEMS.
11. CONTRACTOR SHALL PROCEED WITH CARE IN REMOVING THE EXISTING ROOF. CONTRACTOR ASSUMES RESPONSIBILITY FOR MAINTAINING INTEGRITY OF EXISTING ROOF DECK. ANY REPAIRS TO DAMAGED DECK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
12. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION REGARDING ROOF TOP EQUIPMENT, CURB EXTENSIONS, EQUIPMENT CONNECTIONS, ETC. TO BE REMOVED AND REPLACED.
13. REFER TO ELEVATION DRAWINGS FOR MASONRY REPAIR AND TUCKPOINTING WORK THAT IS TO BE COORDINATED WITH ROOF WORK.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A WEATHERTIGHT BARRIER DURING CONSTRUCTION ACTIVITIES AND PROTECTING ALL EXISTING SURFACE MOUNTED EQUIPMENT AND UTILITIES THAT REMAIN IN PLACE AROUND AREAS OF WORK INCLUDING BUT NOT LIMITED TO ELECTRICAL CABLES, LIGHTING, EQUIPMENT SUPPORT STRUCTURES AND WINDOW MOUNTED AIR CONDITIONING UNITS.
15. REPAIR, REPLACEMENT & PATCHING WORK RELATED TO THE ROOFS SHALL PROVIDE POSITIVE SLOPE DRAINAGE TO DRAINS, SCUPPERS AND/OR GUTTERS.
16. REFER TO A4.2 FOR TYPICAL ROOFING ASSEMBLY DETAILS.

DRAIN LINE RODDING NOTES

1. ROD AND TELEVISE ALL ROOF DRAINS AND HARDPIPED DRAIN LINES THAT ARE CONNECTED TO DOWNSPOUTS, FROM DRAIN SYSTEM OPENING AT ROOF LEVEL AND AT HARDPIPE CONNECTIONS FOR DOWNSPOUTS, TO CONNECTION TO MUNICIPAL SEWER. THIS SHALL BE COMPLETED IN TWO (2) PHASES AS FOLLOWS:
   PHASE 1: BY GENERAL CONTRACTOR - PRIOR TO START OF WORK
   PHASE 2: BY GENERAL CONTRACTOR - AFTER COMPLETION OF CONSTRUCTION WORK, PRIOR TO SUBSTANTIAL COMPLETION.

ALL PIPES SHALL BE INSPECTED WITH A CAMERA FOR SIGNS OF BLOCKAGE, DETERIORATION, OR CRACKS PER CITY OF CHICAGO GUIDELINES, WITH THE INTENT BEING TO UNCOVER ANY ADDITIONAL PROBLEMS BEFORE CONSTRUCTION BEGINS AND TO VERIFY AFTER CONSTRUCTION THAT THE STORM SYSTEM IS FULLY FUNCTIONAL AND OPERATIONAL AND WAS NOT DAMAGED DURING CONSTRUCTION.

ROOF KEY NOTES

R1 — DEMOLISH BALLASTED, BUILT UP ROOF SYSTEM IN THEIR ENTIRETY DOWN TO ROOF DECK (APPROX. 38,015 S.F. - V.I.F.). REPAIR / REPLACE EXIST. DECK AS REQ'D. DUE TO DAMAGE. PROVIDE ROOFING SYSTEM OVER EXISTING DECK AS FOLLOWS: 4.4" POLYISO INSULATION, 5/8" GYP. COVERBOARD, MODIFIED BITUMEN ROOFING SYSTEM. PROVIDE ALL SHEET METAL DETAILS INCLUDING COPPER COPINGS, SCUPPERS, GUTTERS AND DOWNSPOUTS, ETC. COORDINATE WITH MASONRY WORK ON ELEVATIONS.

R2 — DEMOLISH FLAT SEAM COPPER ROOF SYSTEM IN THEIR ENTIRETY DOWN TO ROOF DECK (APPROX. 8,765 S.F. - V.I.F.). REPAIR / REPLACE EXIST. DECK AS REQ'D. DUE TO DAMAGE. PROVIDE ROOFING SYSTEM OVER EXISTING DECK AS FOLLOWS: 4.4" POLYISO INSULATION, 5/8" GYP. COVERBOARD, MODIFIED BITUMEN ROOFING SYSTEM. PROVIDE ALL SHEET METAL DETAILS INCLUDING COPPER COPINGS, SCUPPERS, GUTTERS AND DOWNSPOUTS, ETC. COORDINATE WITH MASONRY WORK ON ELEVATIONS.

R3 — DEMOLISH EXISTING ASPHALT SHINGLE ROOFING SYSTEM AND ACCESSORIES IN THEIR ENTIRETY DOWN TO ROOF DECK, (APPROX. 25,200 SF) PROVIDE ROOF SYSTEM OVER EXISTING DECK AS FOLLOWS: LAMINATED ASPHALT ARCHITECTURAL SHINGLES OVER ICE AND WATER SHIELD AND UNDERLAYMENT. PROVIDE ALL SHEET METAL DETAILS INCLUDING INLAID COPPER GUTTER SYSTEM, COPINGS, SCUPPERS AND DOWNSPOUTS, ETC. COORDINATE WITH MASONRY WORK ON ELEVATIONS. REFER TO TYPICAL SHINGLE DETAILS ON A4.4

R4 — DEMOLISH CAPPED OPENING DOWN TO BELOW EXIST. ROOF DECK AS REQ'D. TO ACCOMMODATE PROPOSED SCOPE OF WORK. PROVIDE STEEL FRAMING, METAL DECK AND ROOFING SYSTEM, SLOPED TO MATCH ADJACENT ROOF LEVEL. COORDINATE WITH ROOFING SYSTEM WORK. REFER TO DETAIL 5/A4.2 AND STRUCTURAL DRAWINGS.

R5 — REMOVE ENTIRE PARAPET WALL DOWN TO ROOF DECK AND REMOVE VENEER WYTHE TO CORNICE. PROVIDE MULTI-WYTHE MASONRY PARAPET WALL AND STONE COPING. MATCH HEIGHT OF ORIGINAL PARAPET WALL. TOOTH-IN MASONRY WYTHES TO ADJACENT MASONRY WALL. PROVIDE FLASHING/COUNTERFLASHING SYSTEMS, COORDINATE WITH ROOF REPLACEMENT WORK ON A4.0 AND MASONRY WORK ON ELEVATIONS FOR FULL EXTENT OF WORK.

R6 — REMOVE AND RESET EXISTING STONE COPING ON A FULL BED OF MORTAR WITH CONTINUOUS STAINLESS STEEL THROUGH-WALL FLASHING. PROVIDE FULL HEAD JOINTS RAKED BACK AND PROVIDE SEALANT. PROVIDE TWO STAINLESS STEEL PINS PER COPING PIECE. PROVIDE FOR REPAIR OR REPLACEMENT OF DAMAGED STONE COPING AS FOLLOWS:
REPAIR: PROVIDE FOR 150 LF OF REPAIR OF DAMAGED STONE COPING, EXACT LOCATIONS TO BE DETERMINED IN THE FIELD. LOCALLY PATCH AND EPOXY REPAIR EXISTING STONE COPING. ROUT AND EPOXY INJECT CRACKED STONE COPING. SET COPING AS NOTED ABOVE.
REPLACE: PROVIDE FOR 150 LF OF REPLACEMENT OF DAMAGED STONE COPING, EXACT LOCATIONS TO BE DETERMINED IN THE FIELD. MATCH THICKNESS, PROFILE AND COLOR OF EXISTING COPING . SET COPING AS NOTED ABOVE.

R7 — REMOVE AND REPLACE COPPER COPING INCLUDING ASSOCIATED BRACKETS. REPLACE WITH COPPER ASSEMBLIES THAT MATCH PROFILE OF ORIGINAL COMPONENTS. PROVIDE COMPATIBLE SEALANT FOR ALL JOINTS. PROVIDE FOR APPROX. 300 LF OF WOOD BLOCKING TO REPLACED TO SUPPORT NEW ASSEMBLIES. LOCATIONS TO BE VERIFIED IN THE FIELD.

R8 — CLAY TILE COPING TO BE REPLACED WITH STONE COPING. REMOVE EXISTING CLAY TILE COPING AND PROVIDE STONE COPING THAT MATCHES DIMENSIONS, STYLE AND PROFILE OF TYPICAL STONE COPING UNIT. STONE COPINGS TO BE SET ON A FULL BED OF MORTAR WITH CONTINUOUS STAINLESS STEEL THROUGH-WALL FLASHING. PROVIDE FULL HEAD JOINTS RAKED BACK AND PROVIDE SEALANT. PROVIDE TWO STAINLESS STEEL PINS PER COPING PIECE.

R9 — DEMOLISH AND REPLACE EXISTING STONE BALUSTRADE. PROVIDE STONE BALLUSTRADE TO MATCH PROFILE, DIMENSIONS AND FINISH OF EXISTING BALLUSTRADES. STONE BALLUSTRADES TO BE SET ON A FULL BED OF MORTAR WITH CONTINUOUS STAINLESS STEEL THROUGH-WALL FLASHING. PROVIDE FULL HEAD JOINTS RAKED BACK AND PROVIDE SEALANT. .PROVIDE STAINLESS STEEL ANCHORS TO EXISTING MASONRY WALL BELOW. COORDINATE WITH COPPER CORNICE AND ROOFING REPLACEMENT.

R10 — LOCALLY DEMOLISH 3 COURSES OF MASONRY, 2 WYTHES DEEP, ABOVE EXPOSED STEEL BEAM (FULL WIDTH OF W12 BEAM. APPROX. 24'-0" AT EA.). SCRAPE, PRIME AND PAINT ALL EXPOSED SURFACES OF STEEL BEAM USING TYPICAL EXTERIOR STEEL COATING SYSTEM. PROVIDE MULTI-WYTHE MASONRY INFILL TO REPLACE MASONRY REMOVED FOR ACCESS TO BEAM AND TIE INTO EXISTING MASONRY WITH STAINLESS STEEL TIES. PROVIDE FLASHING WITH END DAMS, DRIP EDGE AND CELL VENTS AT MASONRY/BEAM INTERFACE. PROVIDE PRE-FINISHED METAL COVER OVER FACE OF BEAM AND FLASH INTO MASONRY BELOW DRIP EDGE.

R11 — REPLACE COPPER SCUPPER, FLASHING AND DOWNSPOUT AND REBUILD ARCHED MASONRY SCUPPER OPENING. APPROX. 1'-0" X 2'-0" OPENING AT PARAPET WITH STAINLESS STEEL SUPPORT ANGLES (1 PER WYTHE, 3 WYTHES TOTAL) COORDINATE WITH PARAPET WALL REBUILDING WORK, SCUPPER/DOWNSPOUT REPLACEMENT AND ROOFING SYSTEM WORK.

R12 — EXIST. LIGHT FIXTURES TO BE REMOVED, SALVAGED AND TURNED OVER TO OWNER - STORE IN LOCATION AS DIRECTED BY OWNER. DEMO. EXISTING WIRING, CONDUIT, J BOXES, ETC. BACK TO PANEL. REPLACE WITH CPS STANDARD ROOF MOUNTED SECURITY LIGHTING ON NEW ROOF CURB WITH NEW CONDUIT AND WIRING. RUN FROM PANEL THROUGH ATTIC AND EXTEND THROUGH ROOF AT EACH FIXTURE LOCATION. PROVIDE 1" EXTERIOR GRADE CONDUITS, J-BOXES AND ALL NECESSARY MOUNTING BRACKETS FOR A COMPLETE INSTALLATION. REFER TO TYP. LIGHT MOUNTING DETAIL, ROOF PLANS AND ELECTRICAL DRAWINGS FOR ADD'L. REQ'S.

R13 — REMOVE EXISTING ROOF HATCH AND PROVIDE 36"x36" PREFINISHED METAL ROOF HATCH ON ROOF CURB WITH LADDER, APPROX. 12'-0" VERTICAL. INCREASE ROOF OPENING SIZE TO ACCOMODATE PROPOSED HATCH ASSEMBLY. PROVIDE BLOCKING AND FRAMING TO SUPPORT LADDER CONSTRUCTION.

R14 — REMOVE EXISTING LADDER AND PROVIDE 10'-0" HIGH WALL MOUNTED SAFETY LADDER WITH FALL PROTECTION CAGE, PAINTED TO MATCH EXIST. PAINTED STEEL - PROVIDE TYPICAL EXTERIOR COATING SYSTEM FOR LADDER.

R15 — REMOVE AND REPLACE ALL COPPER CORNICES AND COPPER ORNAMENTAL MEDALLIONS AT ALL DENTALS (TYPE 'A' AND 'B') INCLUDING ASSOCIATED BRACKETS. REPLACE WITH COPPER ASSEMBLIES THAT MATCH PROFILE OF ORIGINAL COMPONENTS. PROVIDE COMPATIBLE SEALANT FOR ALL JOINTS. PROVIDE FOR APPROX. 400 LF OF WOOD BLOCKING TO BE REPLACED TO SUPPORT NEW ASSEMBLIES. LOCATIONS TO BE VERIFIED IN THE FIELD. SHOWN DASHED. MEDALLIONS/DENTALS ARE SPACED AT APPROX. 30" O.C. ALONG ENTIRE CORNICE LINE. SOLDER AROUND ENTIRE PERIMETER OF MEDALLSIONS. REFER TO DETAILS ON A4.3 & A4.6 FOR ADDITIONAL INFORMATION.

R16 — REMOVE AND REPLACE ALL EXISTING COPPER SCUPPERS, DOWNSPOUTS AND GUTTERS INCLUDING ASSOCIATED BRACKETS AND SUPPORTS, SHOWN DASHED, TYPICAL. DOWNSPOUTS SHALL BE INSTALLED TO PROVIDE A COMPLETE DRAINAGE SYSTEM EITHER BY EXTENDING TO ROOF DRAINAGE SYSTEM BELOW WITH SPLASH PAD OR BY DIRECTLY CONNECTING INTO MUNICIPAL STORM WATER SYSTEM AT EXISTING STORM WATER LINES, TO MATCH PREVIOUS SYSTEM INTENT. COORDINATE WITH ROOF REPLACEMENT WORK NOTED IN KEYNOTES R1, R2 AND R3 AND WITH MASONRY WORK. DRAWINGS ARE FOR REFERENCE. VERIFY EXACT LOCATIONS FOR ALL SCUPPERS, DOWNSPOUTS AND GUTTERS IN THE FIELD.

R17 — REMOVE EXIST. ROOF DRAIN ASSEMBLY IN ITS ENTIRETY AND PROVIDE ROOF DRAIN ASSEMBLY (8", V.I.F.) W/ ALL RELATED ACCESSORIES AND PIPING TO TIE INTO ROOF CONSTRUCTION AND EXISTING DRAIN LINE.

R18 — REPAIR DAMAGED ROOF DECK SYSTEM IN AREA OUTLINED. APPROX. AREA AND ROOF TYPE NOTED AT KEYNOTE ON DRAWINGS. CONTRACTOR TO VERIFY EXACT AREA AND TYPE OF ROOF DECK SYSTEM. REPAIR / REPLACE SYSTEM AS REQ'D DUE TO DAMAGE.

R19 — REMOVE AND REPLACE ALL DOWNSPOUTS AND ASSOCIATED BRACKETS. REPLACE WITH COPPER DOWNSPOUT ASSEMBLIES THAT MATCH SIZE AND PROFILE OF ORIGINAL COMPONENTS. PROVIDE COMPATIBLE SEALANT FOR ALL JOINTS. LOCATIONS TO BE VERIFIED IN THE FIELD. SHOWN DASHED, TYPICAL. COORDINATE WITH WORK IDENTIFIED ON ROOF DRAWINGS AND WITH TUCKPOINT WORK INDICATED AT WALLS BEHIND DOWNSPOUTS.

R20 — REMOVE AND REPLACE PIPE PENETRATION FLASHING ASSEMBLY IN COORDINATION WITH ROOF REPAIR/PATCH WORK. REFER TO DETAILS

R21 — REPLACE COPPER SUMP, SCUPPER, FLASHING AND DOWNSPOUT. REBUILD MASONRY SCUPPER OPENING. APPROX. 1'-0" X 2'-0" OPENING AT PARAPET WITH STAINLESS STEEL SUPPORT ANGLES (1 PER WYTHE, 3 WYTHES TOTAL) FLASH NEW ROOF MEMBRANE PATCH UNDER EXISTING ROOF SYSTEM AND RETURN UP WALLS TO REGLET AND COUNTERFLASHING TO MAINTAIN POSITIVE DRAINAGE. COORDINATE WITH PARAPET WALL REBUILDING WORK, DOWNSPOUT REPLACEMENT AND EXISTING ROOFING SYSTEM. APPROX. AREA SHOWN DASHED, CONTRACTOR TO VERIFY FULL EXTENT OF WORK AREA.

R22 — PROVIDE THREE ROWS OF COPPER SNOW GUARDS, STAGGERED AT 24" O.C., MAX, WHERE INDICATED BY DASHED LINE ON ROOF PLAN. ZALESKI MODEL #4 COPPER SNOW GUARD OR APPROVED EQUIVALENT, UNLESS NOTED OTHERWISE IN THE SPECIFICATIONS.

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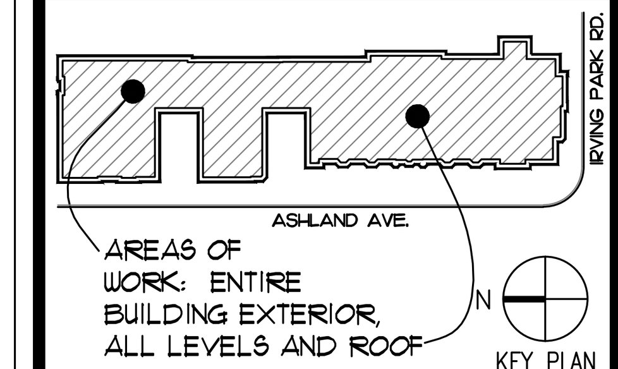
PBC PROJECT #05095
CPS PROJECT NO. 2016-46211-MCR

REVISIONS

NO.	DATE	DESCRIPTION
-	2016-04.19	30% SUBMITTAL
-	2016-05.17	60% SUBMITTAL
-	2016-06.14	60% RE-SUBMITTAL
-	2017-02.14	75% SUBMITTAL
-	2017-03.02	100% SUBMITTAL
-	2017-03.07	PERMIT SET
-	2017-03.23	PRELIMINARY OTB SET
-	2017-04.06	BID SET
1	2017-04.12	ADDENDUM #01

DRAWN BY: CCA
SCALE: VARIES
JOB:
FILE:



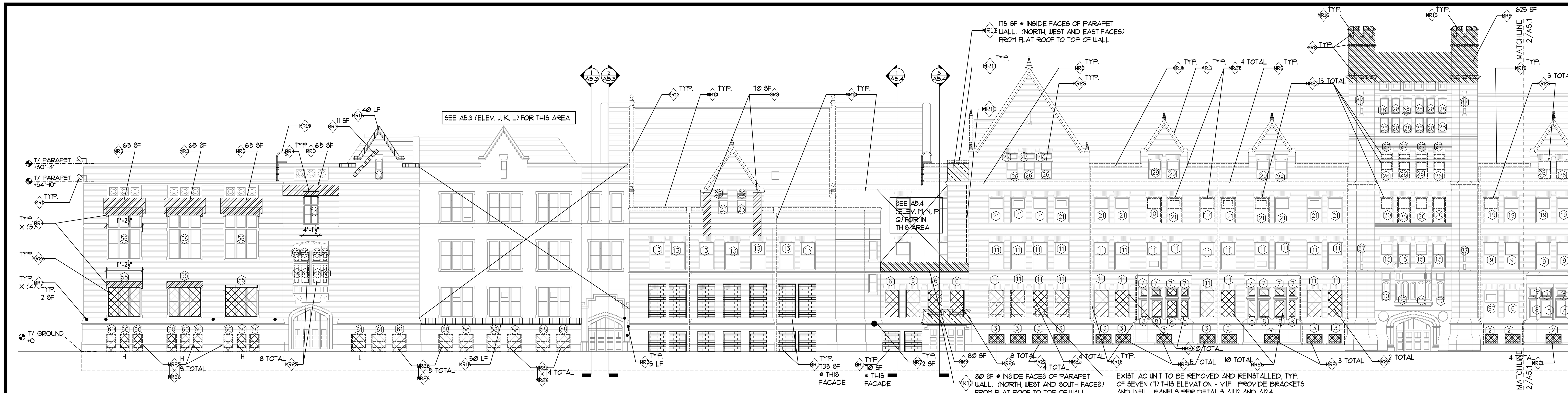
KEY PLAN

WARNING: ASBESTOS-CONTAINING BUILDING MATERIALS ARE OR MAY BE PRESENT IN THIS BUILDING. AN ASBESTOS MANAGEMENT PLAN IS AVAILABLE IN THE SCHOOL FOR REVIEW UPON REQUEST. NO PERSON MAY DISTURB ASBESTOS-CONTAINING MATERIALS UNLESS THAT PERSON IS A LICENSED ASBESTOS WORKER OR CONDUCTS SUCH WORK IN ACCORDANCE WITH SPECIFICATION(S) CONTAINED IN THE PROJECT DOCUMENTS AND IN COMPLIANCE WITH ILLINOIS DEPARTMENT OF HEALTH RULES AND REGULATIONS.

ROOF REPLACEMENT PLAN

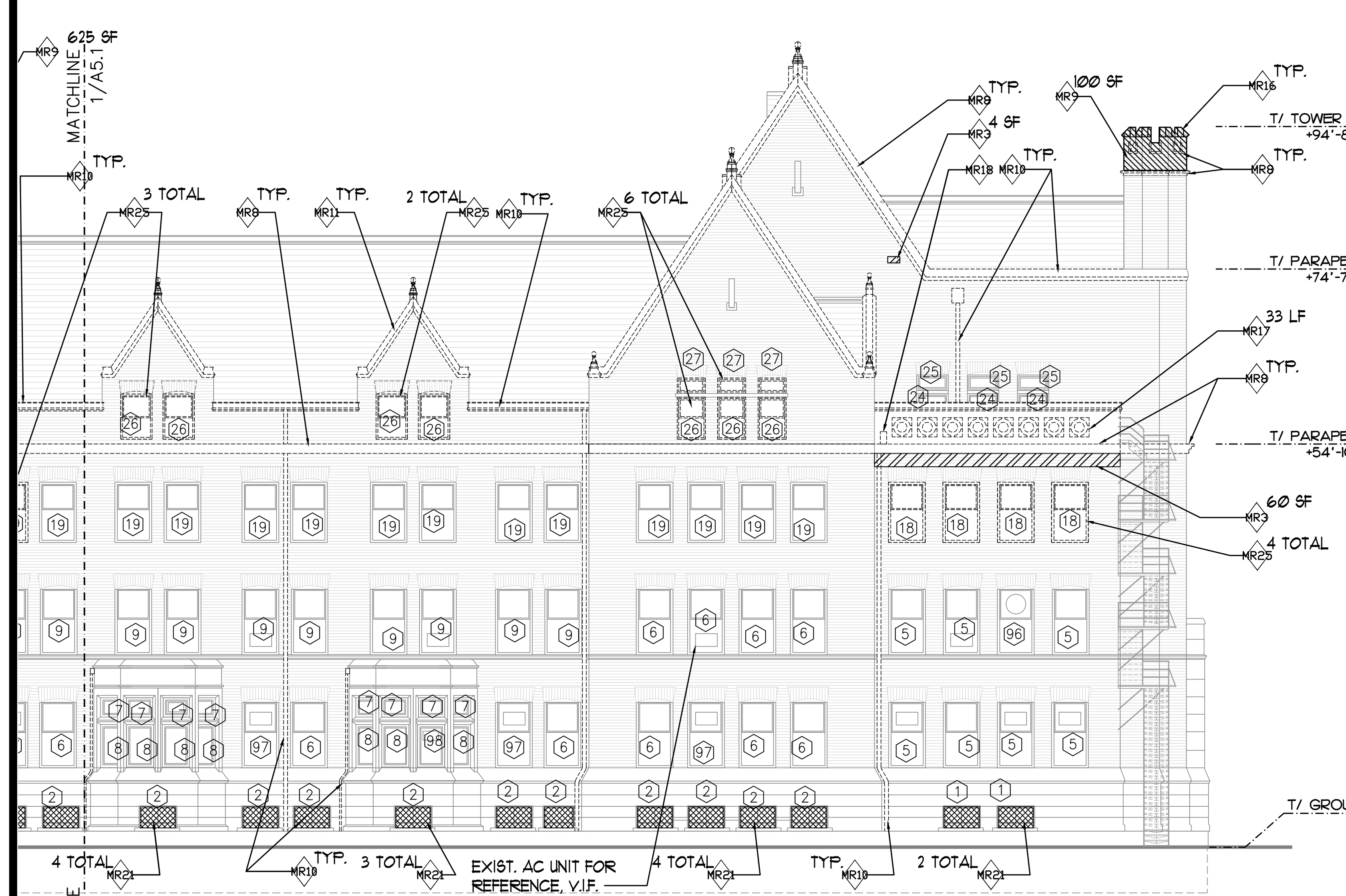
DRAWING NO.

A4.0



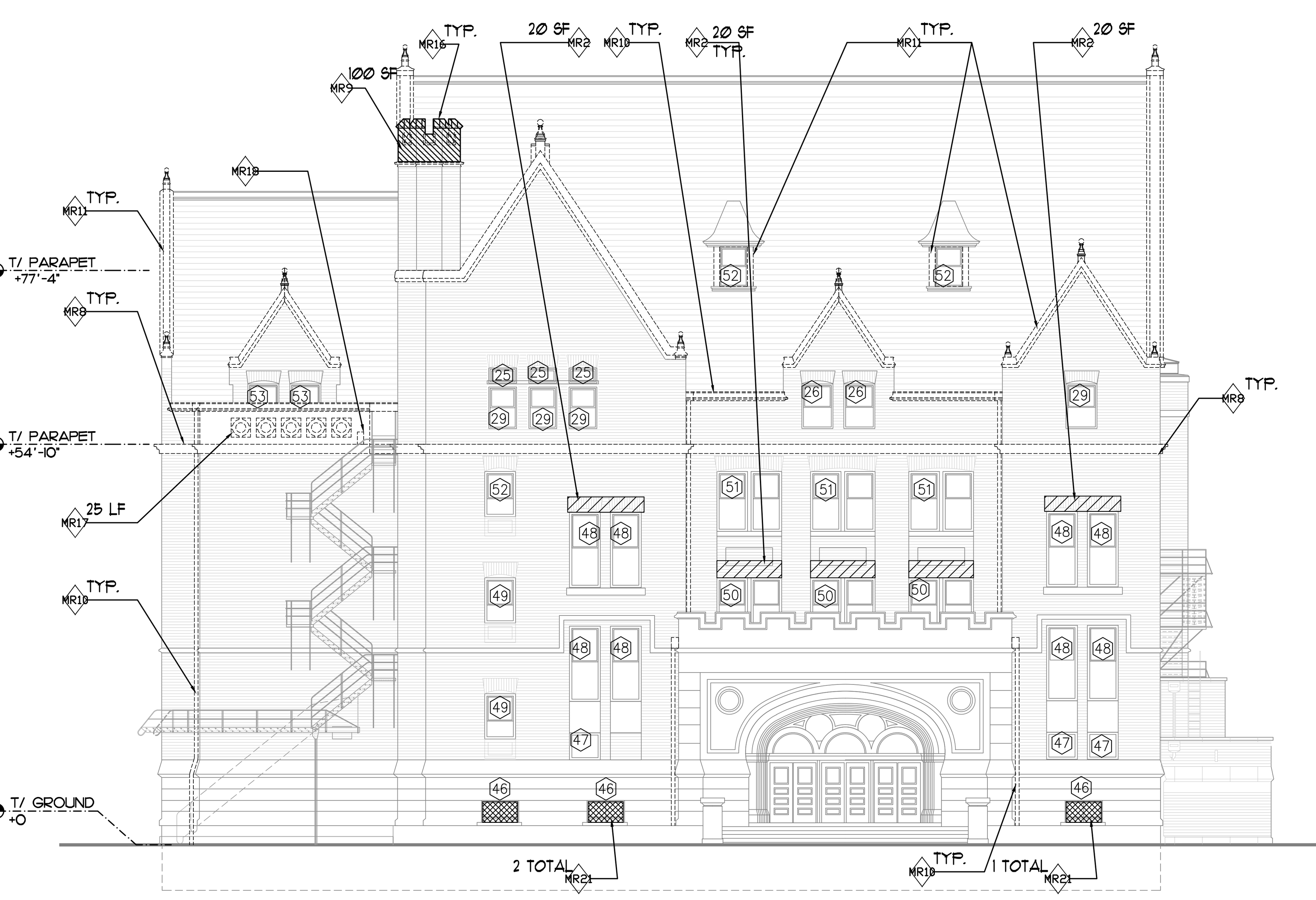
1 WEST ELEVATIONS B AND C
1/16" = 1'-0"

1/16" = 1'-0"



2 WEST ELEVATION D
1/16" = 1'-0"

1/16" = 1'-0"



3 SOUTH ELEVATION E
1/16" = 1'-0"

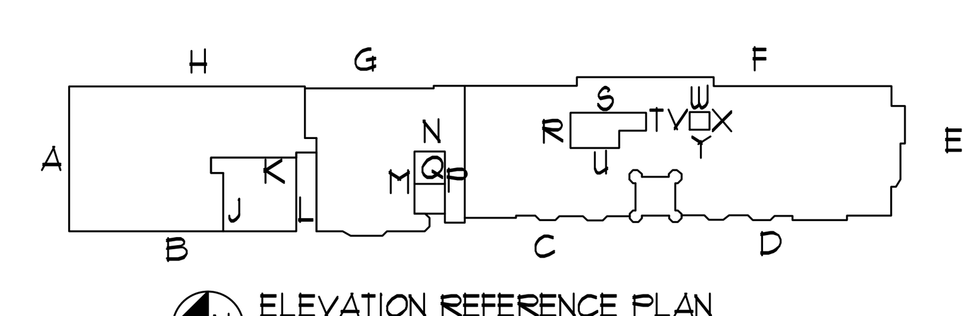
1/16" = 1'-0"

MASONRY REPAIR GENERAL NOTES

1. GRIND AND TUCKPOINT ALL EXTERIOR MASONRY FACADES INCLUDING MASONRY HEADERS, JAMBS & SILLS AND ROOF SIDE FACES OF PARAPET WALLS TO REMAIN, 100% OF BUILDING. ALL GRINDING AND TUCKPOINTING WORK TO FOLLOW CONTRACT DOCUMENT REQUIREMENTS. PROVIDE TOOLED CONCAVE JOINT
2. GRIND AND TUCKPOINT ALL EXTERIOR STONE ELEMENTS ON THE FACADES INCLUDING CORNICES, HEADERS, JAMBS, SILLS, AND ACCENT PIECES, 100% OF BUILDING FACADE. ALL GRINDING AND TUCKPOINTING WORK TO FOLLOW CONTRACT DOCUMENT REQUIREMENTS. PROVIDE TOOLED CONCAVE JOINT.
3. REFER TO ROOF PLANS FOR ADDITIONAL INFORMATION FOR WORK RELATED TO COPINGS AND MASONRY PARAPET WALLS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY REMOVAL AND REINSTALLATION OF ALL DOWNSPOUTS TO PROPERLY PERFORM MASONRY REPAIR AND TUCKPOINTING WORK. THE DRAWINGS ARE FOR REFERENCE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTE ALL DOWNSPOUT LOCATIONS ON THE BUILDING PRIOR TO SUBMITTING BID.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SURFACE MOUNTED EQUIPMENT AND UTILITIES THAT REMAIN IN PLACE AROUND AREAS OF WORK INCLUDING BUT NOT LIMITED TO ELECTRICAL CABLES, LIGHTING, EQUIPMENT SUPPORT STRUCTURES AND WINDOW MOUNTED AIR CONDITIONING UNITS.
6. DIMENSIONS AND NUMERIC NOTATIONS NEXT TO KEYNOTE INDICATES APPROXIMATE S.F. OF REQUIRED WORK FOR BIDDING PURPOSES. CONTRACTOR SHALL VERIFY EXACT LOCATION AND S.F. IN THE FIELD.
7. NOT ALL ELEVATIONS ARE SHOWN BUT ALL MASONRY WORK IDENTIFIED IN THESE DRAWINGS SHALL INCLUDE ASSOCIATED CORNERS AND RETURNS ADJACENT TO WALLS SHOWN ON THE ELEVATIONS AND SHALL BE CONSIDERED PART OF SAME SCOPE.
8. WASH ALL MASONRY AND STONE FACADE SURFACES AFTER TUCKPOINTING WORK IS COMPLETE
9. PROVIDE FOR 150 L.F. OF STEEL LINTEL REPLACEMENT, EXACT LENGTHS TO BE VERIFIED IN THE FIELD. COORDINATE WITH KEYNOTE MR-2. REPLACE REVEALED LINTELS THAT SHOW MORE THAN 25% SECTION LOSS W/ GALVANIZED STEEL LINTEL. REBUILD OPENING PER KEYNOTE MR-2. SEE DETAIL 13/A12.4
10. PROVIDE FOR 100 S.F. OF STONE HEADER PATCHING / EPOXY REPAIR. EXACT LOCATIONS TO BE DETERMINED IN THE FIELD. COORDINATE WITH KEYNOTE MR-4. REBUILD HEADER PER KEYNOTE MR-4
11. PROVIDE FOR APPROX. 200 S.F. OF STONE HEADER REPLACEMENT. EXACT LOCATIONS TO BE DETERMINED IN THE FIELD. PROFILE OF STONE HEADER TO MATCH EXISTING.. COORDINATE WITH KEYNOTE MR-4. REBUILD HEADER PER KEYNOTE MR-4
12. REMOVE AND REPLACE PERIMETER SEALANT AT ALL WINDOWS, 100% REPLACEMENT, FOLLOWING SEALANT MANUFACTURER'S RECOMMENDATIONS. DRAWINGS ARE FOR REFERENCE ONLY, NOT ALL WINDOWS ARE SHOWN ON ELEVATION DRAWINGS. CONTRACTOR TO VERIFY ALL WINDOW LOCATIONS.
13. ALL NEW MASONRY TO BE TOOTHED INTO EXISTING, TYPICAL.

MASONRY REPAIR KEY NOTES

MR1	REMOVE EXISTING LIGHT FIXTURE AND BRACKETS IN ITS ENTIRETY. PATCH EXPOSED MASONRY SURFACES. REFER TO ROOF PLANS AND ELECTRICAL DRAWINGS FOR REMOVAL AND NEW EXTERIOR LIGHTING WORK INFORMATION.
MR2	LOCALLY REMOVE EXTERIOR MASONRY AT BRICK WINDOW HEAD TO EXPOSE LINTEL. SCRAPE AND PAINT EXPOSED STEEL LINTELS WITH ANTI-RUST COATING. REFER TO TYP. EXTERIOR COATING SYSTEM NOTE ON SHEET A5.4. REBUILD MASONRY WALL WITH SALVAGED OR MATCHING BRICK AND MORTAR AND PROVIDE STAINLESS STEEL TIES TO BACKUP STRUCTURE. PROVIDE NEW FLASHING, TERMINATION BAR, DRIP EDGE, END DAMS AND CELL VENT WEEPS. APPROX. LOCATIONS HATCHED ON DRAWINGS. REFER TO DETAIL 10/A12.4 FOR TYPICAL REPAIR WORK. COORDINATE WITH GENERAL MASONRY NOTE #9 FOR LINTEL REPLACEMENT SCOPE.
MR3	LOCALLY DEMOLISH AND REBUILD DAMAGED MASONRY TO 2 WYTHES DEPTH. NEW BRICK AND MORTAR TO MATCH EXISTING. PROVIDE STAINLESS STEEL TIES TO BACK-UP STRUCTURE. APPROX. SF OF AREA SHOWN ON DRAWINGS.
MR4	REMOVE AND SALVAGE HUNG STONE AT WINDOW HEAD. DEMO MASONRY ABOVE STONE HEADER TO EXPOSE LINTEL. REPLACE EXISTING ANGLE SUPPORTING WINDOW FRAME HEAD WITH GALVANIZED STEEL LINTEL TO PROVIDE BEARING FOR WINDOW AND MATCH ELEVATION OF TOP OF EXISTING WINDOW HEAD. PROVIDE NEW FLASHING, TERMINATION BAR, DRIP EDGE, END DAMS AND CELL VENT WEEPS AT LINTEL. REBUILD MASONRY WITH SALVAGED OR MATCHING MATERIAL AND REINSTALL STONE HEADER. SAWCUT STONE HEADER AS NECESSARY TO FIT INTO NEW LINTEL. PROVIDE STAINLESS STEEL TIES TO BACKUP STRUCTURE AND MORTAR ALL JOINTS. CAREFULLY REMOVE AND SALVAGE WINDOW FOR REINSTALLATION OR FULLY REPLACE IF NOTED AS SUCH ON ELEVATIONS. REINSTALL/INSTALL WINDOW IN COMPLETED OPENING AND CAULK ALL JOINTS. COORDINATE WITH GENERAL MASONRY NOTES #10 AND #11 FOR STONE HEADER REPAIR AND REPLACEMENT SCOPES. REFER TO DETAIL 7/A12.4
MR5	LOCALLY REMOVE INFILL MASONRY. REBUILD WALL WITH CMU BACKUP AND MASONRY FACE BRICK TOOTHED INTO AND LAID FLUSH WITH ADJACENT MASONRY. PROVIDE STAINLESS STEEL MASONRY TIES TO BACK UP.
MR6	LOCALLY REMOVE ALL LOOSE CONCRETE. SCRAPE, PRIME AND PAINT ALL EXPOSED STEEL REINFORCEMENT WITH ANTI-CORROSION BONDING AGENT. PROVIDE ADDITIONAL REINFORCEMENT AS REQUIRED. PATCH SPALLED CONCRETE ACCORDING TO PATCH MATERIAL MANUFACTURER'S REPAIR INSTRUCTIONS. ROUT AND EPOXY REPAIR CONCRETE CRACKS. FINISH CONCRETE REPAIR WORK TO MATCH FINISH AND COLOR OF EXISTING CONCRETE SURFACES.



ELEVATION REFERENCE PLAN

MASONRY REPAIR KEY NOTES

MR7	ROUT AND EPOXY REPAIR STONE CRACKS AND HOLES. FINISH STONE REPAIR WORK TO MATCH FINISH AND COLOR OF EXISTING STONE SURFACES.
MR8	SALVAGE COPPER CORNICES INCLUDING ASSOCIATED BRACKETS. REINSTALL CORNICES AT COMPLETION OF MASONRY WORK. REPLACE ALL WOOD BLOCKING WITH TREATED WOOD BLOCKING TO SUPPORT REINSTALLED CORNICES AND PROVIDE COMPATIBLE SEALANT AT ALL JOINTS. EXACT LOCATION AND DIMENSIONS TO BE VERIFIED IN THE FIELD. CONTRACTOR TO PROVIDE ALLOWANCE TO REPLACE 30% OF COPPER CORNICE WITH NEW COPPER CORNICE ASSEMBLY IN MATCHING PROFILES AND GAUGE. SHOWN DASHED, TYP.
MR9	CAREFULLY REMOVE ENTIRE PARAPET WALL DOWN TO ROOF DECK AND REMOVE VENEER WYTHE TO CORNICE. PROVIDE NEW MASONRY PARAPET WALL AND STONE COPING. MATCH HEIGHT OF ORIGINAL PARAPET WALL. KEY-IN NEW WALL TO ADJACENT MASONRY WALL. PROVIDE NEW FLASHING/COUNTERFLASHING SYSTEM, COORDINATE WITH ROOF REPLACEMENT WORK AND MASONRY WORK. REPAIR/PATCH EXISTING ROOF SYSTEMS TO REMAIN AS NECESSARY AT AREAS OF NEW PARAPET WORK TO MAINTAIN WATERTIGHT CONSTRUCTION. REFER TO ROOF DRAWINGS FOR ADDITIONAL RAIN BASIN AND SCUPPER REPLACEMENT WORK RELATED TO THIS PARAPET WALL REBUILD.
MR10	REMOVE AND REPLACE ALL METAL GUTTERS, DOWNSPOUTS AND ASSOCIATED BRACKETS. REPLACE WITH COPPER ASSEMBLIES THAT MATCH PROFILE OF ORIGINAL COMPONENTS. PROVIDE COMPATIBLE SEALANT FOR ALL JOINTS. PROVIDE FOR THE REPLACEMENT OF APPROX. 400 LF OF TREATED WOOD BLOCKING TO SUPPORT NEW ASSEMBLIES. LOCATIONS TO BE VERIFIED IN THE FIELD. SHOWN DASHED, TYPICAL
MR11	SALVAGE COPPER COPING INCLUDING ASSOCIATED BRACKETS. REINSTALL COPING AT COMPLETION OF WALL AND ROOF WORK. REPLACE ALL WOOD BLOCKING WITH TREATED WOOD BLOCKING TO SUPPORT REINSTALLED COPING AND PROVIDE COMPATIBLE SEALANT AT ALL JOINTS. EXACT LOCATION AND DIMENSIONS TO BE VERIFIED IN THE FIELD. CONTRACTOR TO PROVIDE ALLOWANCE TO REPLACE 30% OF COPPER COPING WITH NEW COPPER COPING ASSEMBLY IN MATCHING PROFILE AND GAUGE. SHOWN DASHED, TYP.
MR12	SALVAGE STONE HEADER PIECES AT DOORWAY OPENING. LOCALLY DEMOLISH EXTERIOR MASONRY TO EXPOSE LINTEL. REMOVE EXISTING LINTEL AND REPLACE WITH GALVANIZED STEEL LINTEL ASSEMBLY. REBUILD MASONRY WALL WITH SALVAGED OR MATCHING BRICK AND MORTAR, REINSTALL SALVAGED STONE AND PROVIDE STAINLESS STEEL TIES TO BACKUP STRUCTURE. PROVIDE NEW FLASHING, TERMINATION BAR, DRIP EDGE, END DAMS AND CELL VENT WEEPS. PATCH AND EPOXY REPAIR STONE HEADER PIECES. REFER TO DETAIL 12/A12.4
MR13	LOCALLY DEMOLISH AND REBUILD DAMAGED MASONRY TO 1 WYTHE DEPTH ON THE INSIDE FACE OF PARAPET WALL. NEW BRICK AND MORTAR TO MATCH EXISTING. PROVIDE STAINLESS STEEL TIES TO BACK-UP STRUCTURE. APPROX. SF OF AREA SHOWN ON DRAWINGS.
MR14	NOT USED
MR15	CLAY TILE COPING TO BE REPLACED WITH STONE COPING - REFER TO ROOF PLANS FOR COMPLETE DESCRIPTION OF WORK.
MR16	STONE COPING TO BE SALVAGED, CLEANED AND REINSTALLED. PROVIDE NEW STONE COPING IN SAME SIZE, SHAPE, PROFILE, COLOR AND TEXTURE WHERE EXISTING CANNOT BE SALVAGED - ASSUME 10% STONE REPLACEMENT. REFER TO ROOF PLANS FOR COMPLETE DESCRIPTION OF WORK.
MR17	DEMOLISH AND REPLACE EXISTING STONE BALUSTRADE. COORDINATE WITH COPPER CORNICE AND ROOFING REPLACEMENT - REFER TO ROOF PLANS FOR COMPLETE DESCRIPTION OF WORK.
MR18	REBUILD MASONRY SCUPPER OPENING. COORDINATE WITH PARAPET WALL REBUILDING WORK - REFER TO ROOF PLANS FOR COMPLETE DESCRIPTION OF WORK.
MR19	REMOVE LADDER AND PATCH WALL. PROVIDE NEW SAFETY LADDER, REFER TO ROOF HATCH DETAILS FOR ADDITIONAL INFORMATION.
MR20	REMOVE AND REPLACE STONE BANDING. MATCH DIMENSIONS, PROFILE AND COLOR OF EXISTING STONE. POINT ALL JOINTS.
MR21	REMOVE EXISTING METAL WIRE SCREEN AND PATCH FRAME. PROVIDE CPS STANDARD PERFORATED METAL SECURITY PANEL, COORDINATE SIZES OF OPENINGS WITH WINDOW SCHEDULE. FINISH TO BE WHITE. FOR WINDOWS THAT HAVE AC UNITS, CUT THE NEW SECURITY PANEL TO FIT AROUND UNIT.
MR22	DEMOLISH EXISTING FENCE AND PICTH POCKETS AS PART OF ROOF DEMOLITION. REPLACE WITH SIMILAR 6'-0" , 2 RAIL FENCE SYSTEM WITH POSTS IN PITCH POCKET ASSEMBLY. PROVIDE 45 DEGREE LATERAL CROSS BRACING OF ENTIRE STRUCTURE TO MATCH EXISTING FENCING SUPPORT. COORDINATE WITH ROOF WORK.
MR23	RE-SET CAST IRON DRAIN LINE LATERAL RUN AT FIRST FIRST FLOOR TO CREATE POSITIVE SLOPE FOR DRAINAGE
MR24	NOT USED
MR25	REPLACE EXISTING WINDOW, SHOWN DASHED. SEE BUILDING ELEVATIONS FOR SPECIFIC NUMBER OF REPLACEMENT. NUMBER IN HEXAGON REFERS TO WINDOW MARK IN WINDOW SCHEDULE. WHERE THERE IS A WINDOW AC UNIT LOCATED IN A WINDOW TO BE REPLACED, SALVAGE THE AC UNIT AND PROVIDE NEW AC UNIT SUPPORT FRAME AND INSULATED PANEL IN NEW WINDOW FRAME TO REINSTALL AC UNIT IN SAME LOCATION.
MR26	PROVIDE STANDARD CPS METAL SECURITY PANEL, COORDINATE SIZES OF OPENINGS WITH WINDOW SCHEDULE. FINISH TO BE WHITEFOR WINDOWS THAT HAVE AC UNITS, CUT THE NEW SECURITY PANEL TO FIT AROUND UNIT.

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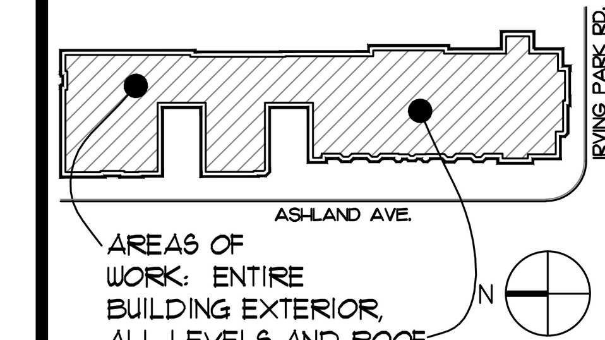
PBC PROJECT #05095
CPS PROJECT NO. 2016-46211-MCR

REVISIONS

NO.	DATE	DESCRIPTION
-	2016-04.19	30% SUBMITTAL
-	2016-05.17	60% SUBMITTAL
-	2016-06.14	60% RE-SUBMITTAL
-	2017-02.14	75% SUBMITTAL
-	2017-03.02	100% SUBMITTAL
-	2017-03.07	PERMIT SET
-	2017-03.23	PRELIMINARY OTB SET
-	2017-04.06	BID SET
1	2017-04.12	ADDENDUM #01

DRAWN BY: CCA
SCALE: VARIES
JOB:
FILE:



KEY PLAN

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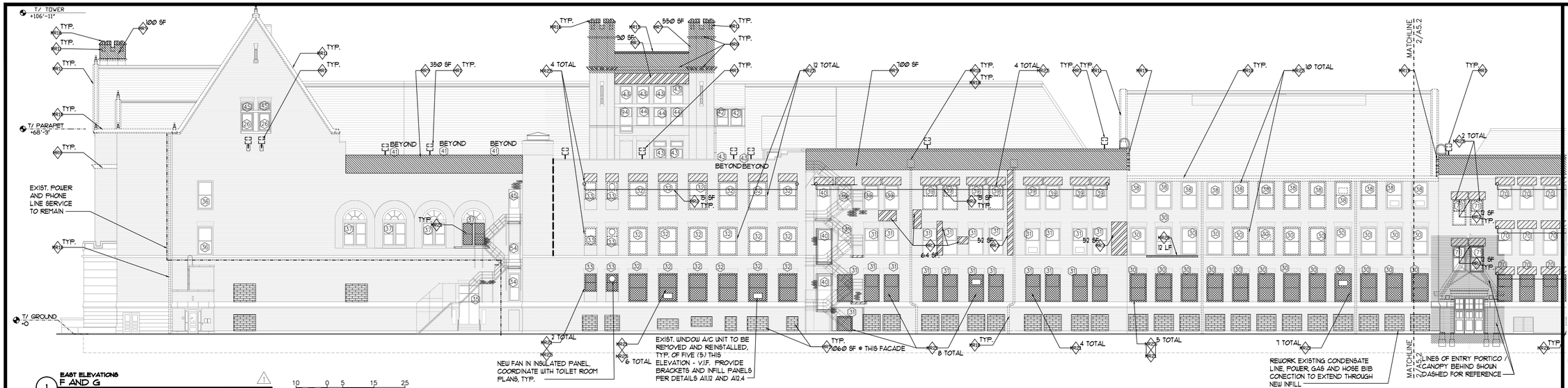
BUILDING
ELEVATIONS

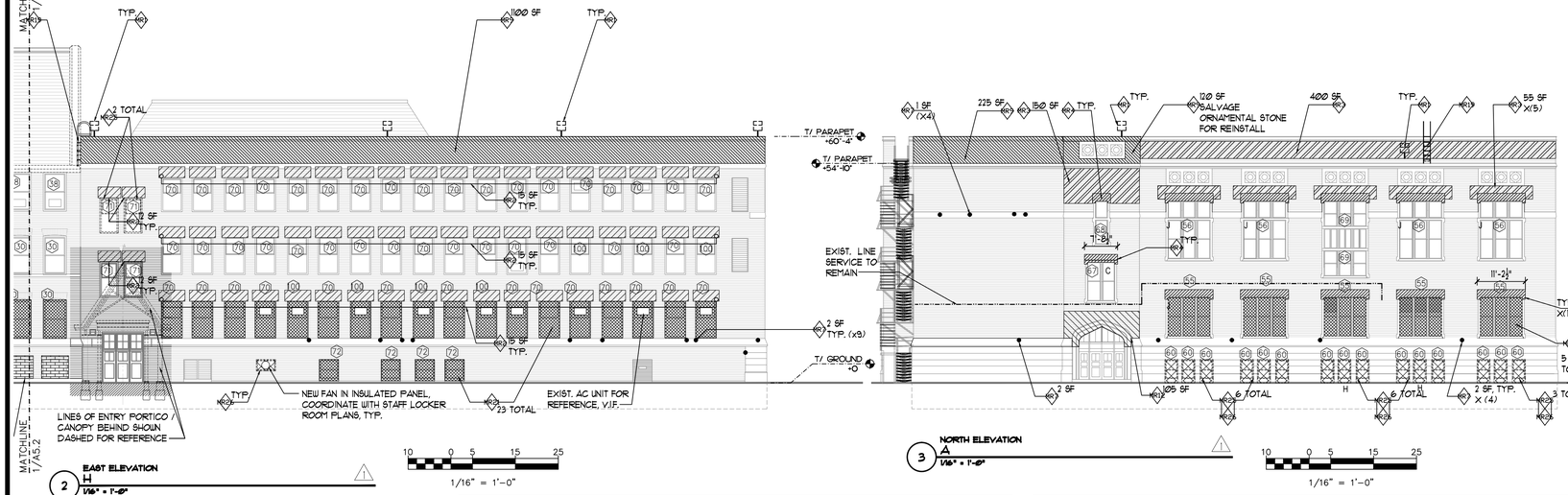
DRAWING NO.

A5.1



1 EAST ELEVATIONS F AND G
1/16" = 1'-0"

10 0 5 15 25
1/16" = 1'-0"



2 EAST ELEVATION H
1/16" = 1'-0"

3 NORTH ELEVATION A
1/16" = 1'-0"

10 0 5 15 25
1/16" = 1'-0"

MASONRY REPAIR GENERAL NOTES

1. GRIND AND TUCKPOINT ALL EXTERIOR MASONRY FACADES INCLUDING MASONRY HEADERS, JAMBS & SILLS AND ROOF SIDE FACES OF PARAPET WALLS TO REMAIN, U.O.N. OF BUILDING. ALL GRINDING AND TUCKPOINTING WORK TO FOLLOW CONTRACT DOCUMENT REQUIREMENTS. PROVIDE TOOLED CONCAVE JOINT
2. GRIND AND TUCKPOINT ALL EXTERIOR STONE ELEMENTS ON THE FACADES INCLUDING CORNICES, HEADERS, JAMBS, SILLS, AND ACCENT PIECES, U.O.N. OF BUILDING FACADE. ALL GRINDING AND TUCKPOINTING WORK TO FOLLOW CONTRACT DOCUMENT REQUIREMENTS. PROVIDE TOOLED CONCAVE JOINT.
3. REFER TO ROOF PLANS FOR ADDITIONAL INFORMATION FOR WORK RELATED TO COPINGS AND MASONRY PARAPET WALLS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY REMOVAL AND REINSTALLATION OF ALL DOWNSPOUTS TO PROPERLY PERFORM MASONRY REPAIR AND TUCKPOINTING WORK. THE DRAWINGS ARE FOR REFERENCE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTE ALL DOWNSPOUT LOCATIONS ON THE BUILDING PRIOR TO SUBMITTING BID.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SURFACE MOUNTED EQUIPMENT AND UTILITIES THAT REMAIN IN PLACE AROUND AREAS OF WORK INCLUDING BUT NOT LIMITED TO ELECTRICAL CABLES, LIGHTING, EQUIPMENT SUPPORT STRUCTURES AND WINDOW MOUNTED AIR CONDITIONING UNITS.
6. DIMENSIONS AND NUMERIC NOTATIONS NEXT TO KEYNOTE INDICATES APPROXIMATE SF. OF REQUIRED WORK FOR BIDDING PURPOSES. CONTRACTOR SHALL VERIFY EXACT LOCATION AND SF. IN THE FIELD.
7. NOT ALL ELEVATIONS ARE SHOWN BUT ALL MASONRY WORK IDENTIFIED IN THESE DRAWINGS SHALL INCLUDE ASSOCIATED CORNERS AND RETURNS ADJACENT TO WALLS SHOWN ON THE ELEVATIONS AND SHALL BE CONSIDERED PART OF SAME SCOPE.
8. WASH ALL MASONRY AND STONE FACADE SURFACES AFTER TUCKPOINTING WORK IS COMPLETE
9. PROVIDE FOR 150 L.F. OF STEEL LINTEL REPLACEMENT, EXACT LENGTHS TO BE VERIFIED IN THE FIELD. COORDINATE WITH KEYNOTE MR-2. REPLACE REVEALED LINTELS THAT SHOW MORE THAN 25% SECTION LOSS W/ GALVANIZED STEEL LINTEL. REBUILD OPENING PER KEYNOTE MR-2. SEE DETAIL 11/A12.4
10. PROVIDE FOR 100 SF. OF STONE HEADER PATCHING / EPOXY REPAIR. EXACT LOCATIONS TO BE DETERMINED IN THE FIELD. COORDINATE WITH KEYNOTE MR-4. REBUILD HEADER PER KEYNOTE MR-4
11. PROVIDE FOR APPROX. 200 SF. OF STONE HEADER REPLACEMENT. EXACT LOCATIONS TO BE DETERMINED IN THE FIELD. PROFILE OF STONE HEADER TO MATCH EXISTING. COORDINATE WITH KEYNOTE MR-4. REBUILD HEADER PER KEYNOTE MR-4
12. REMOVE AND REPLACE PERIMETER SEALANT AT ALL WINDOWS, 100% REPLACEMENT, FOLLOWING SEALANT MANUFACTURER'S RECOMMENDATIONS. DRAWINGS ARE FOR REFERENCE ONLY, NOT ALL WINDOWS ARE SHOWN ON ELEVATION DRAWINGS. CONTRACTOR TO VERIFY ALL WINDOW LOCATIONS.
13. ALL NEW MASONRY TO BE TOOTHED INTO EXISTING, TYPICAL.

MASONRY REPAIR KEY NOTES

MR1 REMOVE AND REPLACE ALL METAL GUTTERS, DOWNSPOUTS AND ASSOCIATED BRACKETS. REPLACE WITH COPPER ASSEMBLIES THAT MATCH PROFILE OF ORIGINAL COMPONENTS. PROVIDE COMPATIBLE SEALANT FOR ALL JOINTS. PROVIDE FOR THE REPLACEMENT OF APPROX. 400 LF OF TREATED WOOD BLOCKING TO SUPPORT NEW ASSEMBLIES. LOCATIONS TO BE VERIFIED IN THE FIELD. SHOWN DASHED, TYPICAL

MR1 SALVAGE COPPER COPING INCLUDING ASSOCIATED BRACKETS, REINSTALL COPING AT COMPLETION OF WALL AND ROOF WORK. REPLACE ALL WOOD BLOCKING WITH TREATED WOOD BLOCKING TO SUPPORT REINSTALLED COPING AND PROVIDE COMPATIBLE SEALANT AT ALL JOINTS. EXACT LOCATION AND DIMENSIONS TO BE VERIFIED IN THE FIELD. CONTRACTOR TO PROVIDE ALLOWANCE TO REPLACE 30% OF COPPER COPING WITH NEW COPPER COPING ASSEMBLY IN MATCHING PROFILE AND GAUGE. SHOWN DASHED, TYP.

MR1.2 SALVAGE STONE HEADER PIECES AT DOORWAY OPENING. LOCALLY DEMOLISH EXTERIOR MASONRY TO EXPOSE LINTEL. REMOVE EXISTING LINTEL AND REPLACE WITH GALVANIZED STEEL LINTEL ASSEMBLY. REBUILD MASONRY WALL WITH SALVAGED OR MATCHING BRICK AND MORTAR. REINSTALL SALVAGED STONE AND PROVIDE STAINLESS STEEL TIES TO BACKUP STRUCTURE. PROVIDE NEW FLASHING, TERMINATION BAR, DRIP EDGE, END DAMS AND CELL VENT WEEPS. PATCH AND EPOXY REPAIR STONE HEADER PIECES. REFER TO DETAIL 12/A12.4

MR1.2 LOCALLY DEMOLISH AND REBUILD DAMAGED MASONRY TO 1 WYTHE DEPTH ON THE INSIDE FACE OF PARAPET WALL. NEW BRICK AND MORTAR TO MATCH EXISTING. PROVIDE STAINLESS STEEL TIES TO BACK-UP STRUCTURE. APPROX. SF OF AREA SHOWN ON DRAWINGS.

MR1.4 NOT USED

MR1.5 CLAY TILE COPING TO BE REPLACED WITH STONE COPING - REFER TO ROOF PLANS FOR COMPLETE DESCRIPTION OF WORK.

MR1.6 STONE COPING TO BE SALVAGED, CLEANED AND REINSTALLED. PROVIDE NEW STONE COPING IN SAME SIZE, SHAPE, PROFILE, COLOR AND TEXTURE WHERE EXISTING CANNOT BE SALVAGED - ASSUME 10% STONE REPLACEMENT. REFER TO ROOF PLANS FOR COMPLETE DESCRIPTION OF WORK.

MR1.7 DEMOLISH AND REPLACE EXISTING STONE BALUSTRADE. COORDINATE WITH COPPER CORNICE AND ROOFING REPLACEMENT - REFER TO ROOF PLANS FOR COMPLETE DESCRIPTION OF WORK.

MR1.8 REBUILD MASONRY SCUPPER OPENING. COORDINATE WITH PARAPET WALL REBUILDING WORK - REFER TO ROOF PLANS FOR COMPLETE DESCRIPTION OF WORK.

MR1.9 REMOVE LADDER AND PATCH WALL. PROVIDE NEW SAFETY LADDER, REFER TO ROOF HATCH DETAILS FOR ADDITIONAL INFORMATION.

MR2.0 REMOVE AND REPLACE STONE BANDING. MATCH DIMENSIONS, PROFILE AND COLOR OF EXISTING STONE. POINT ALL JOINTS.

MR2.1 REMOVE EXISTING METAL WIRE SCREEN AND PATCH FRAME. PROVIDE CPS STANDARD PERFORATED METAL SECURITY PANEL, COORDINATE SIZES OF OPENINGS WITH WINDOW SCHEDULE. FINISH TO BE WHITE. FOR WINDOWS THAT HAVE AC UNITS, CUT THE NEW SECURITY PANEL TO FIT AROUND UNIT.

MR2.2 DEMOLISH EXISTING FENCE AND PICTH POCKETS AS PART OF ROOF DEMOLITION. REPLACE WITH SIMILAR 6'-0" , 2 RAIL FENCE SYSTEM WITH POSTS IN PITCH POCKET ASSEMBLY. PROVIDE 45 DEGREE LATERAL CROSS BRACING OF ENTIRE STRUCTURE TO MATCH EXISTING FENCING SUPPORT. COORDINATE WITH ROOF WORK.

MR2.3 RE-SET CAST IRON DRAIN LINE LATERAL RUN AT FIRST FIRST FLOOR TO CREATE POSITIVE SLOPE FOR DRAINAGE

MR2.4 NOT USED

MR2.5 REPLACE EXISTING WINDOW, SHOWN DASHED, SEE BUILDING ELEVATIONS FOR SPECIFIC NUMBER OF REPLACEMENT. NUMBER IN HEXAGON REFERS TO WINDOW MARK IN WINDOW SCHEDULE. WHERE THERE IS A WINDOW AC UNIT LOCATED IN A WINDOW TO BE REPLACED, SALVAGE THE AC UNIT AND PROVIDE NEW AC UNIT SUPPORT FRAME AND INSULATED PANEL IN NEW WINDOW FRAME TO REINSTALL AC UNIT IN SAME LOCATION.

MR2.6 PROVIDE STANDARD CPS METAL SECURITY PANEL, COORDINATE SIZES OF OPENINGS WITH WINDOW SCHEDULE. FINISH TO BE WHITE.FOR WINDOWS THAT HAVE AC UNITS, CUT THE NEW SECURITY PANEL TO FIT AROUND UNIT.

MASONRY REPAIR KEY NOTES

MR3 REMOVE EXISTING LIGHT FIXTURE AND BRACKETS IN ITS ENTIRETY. PATCH EXPOSED MASONRY SURFACES. REFER TO ROOF PLANS AND ELECTRICAL DRAWINGS FOR REMOVAL AND NEW EXTERIOR LIGHTING WORK INFORMATION.

MR3 LOCALLY REMOVE EXTERIOR MASONRY AT BRICK WINDOW HEAD TO EXPOSE LINTEL. SCRAPE AND PAINT EXPOSED STEEL LINTELS WITH ANTI-RUST COATING. REFER TO TYP. EXTERIOR COATING SYSTEM NOTE ON SHEET A5.4. REBUILD MASONRY WALL WITH SALVAGED OR MATCHING BRICK AND MORTAR AND PROVIDE STAINLESS STEEL TIES TO BACKUP STRUCTURE. PROVIDE NEW FLASHING, TERMINATION BAR, DRIP EDGE, END DAMS AND CELL VENT WEEPS. APPROX. LOCATIONS HATCHED ON DRAWINGS. REFER TO DETAIL 10/A12.4 FOR TYPICAL REPAIR WORK. COORDINATE WITH GENERAL MASONRY NOTE #3 FOR LINTEL REPLACEMENT SCOPE.

MR3 LOCALLY DEMOLISH AND REBUILD DAMAGED MASONRY TO 2 WYTHES DEPTH. NEW BRICK AND MORTAR TO MATCH EXISTING. PROVIDE STAINLESS STEEL TIES TO BACK-UP STRUCTURE. APPROX. SF OF AREA SHOWN ON DRAWINGS.

MR4 REMOVE AND SALVAGE HUNG STONE AT WINDOW HEAD. DEMO MASONRY ABOVE STONE HEADER TO EXPOSE LINTEL. REPLACE EXISTING ANGLE SUPPORTING WINDOW FRAME HEAD WITH GALVANIZED STEEL LINTEL TO PROVIDE BEARING FOR WINDOW AND MATCH ELEVATION OF TOP OF EXISTING WINDOW HEAD. PROVIDE NEW FLASHING, TERMINATION BAR, DRIP EDGE, END DAMS AND CELL VENT WEEPS AT LINTEL. REBUILD MASONRY WITH SALVAGED OR MATCHING MATERIAL AND REINSTALL STONE HEADER. SAUCUT STONE HEADER AS NECESSARY TO FIT INTO NEW LINTEL. PROVIDE STAINLESS STEEL TIES TO BACKUP STRUCTURE AND MORTAR ALL JOINTS. CAREFULLY REMOVE AND SALVAGE WINDOW FOR REINSTALLATION OR FULLY REPLACE IF NOTED AS SUCH ON ELEVATIONS. REINSTALL/INSTALL WINDOW IN COMPLETED OPENING AND CAULK ALL JOINTS. COORDINATE WITH GENERAL MASONRY NOTES #10 AND #11 FOR STONE HEADER REPAIR AND REPLACEMENT SCOPES. REFER TO DETAIL 1/A12.4

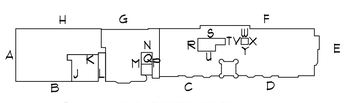
MR5 LOCALLY REMOVE INFILL MASONRY. REBUILD WALL WITH CMU BACKUP AND MASONRY FACE BRICK TOOTHED INTO AND LAID FLUSH WITH ADJACENT MASONRY. PROVIDE STAINLESS STEEL MASONRY TIES TO BACK UP.

MR6 LOCALLY REMOVE ALL LOOSE CONCRETE. SCRAPE, PRIME AND PAINT ALL EXPOSED STEEL REINFORCEMENT WITH ANTI-CORROSION BONDING AGENT. PROVIDE ADDITIONAL REINFORCEMENT AS REQUIRED. PATCH SPALLED CONCRETE ACCORDING TO PATCH MATERIAL MANUFACTURER'S REPAIR INSTRUCTIONS. ROUT AND EPOXY REPAIR CONCRETE CRACKS. FINISH CONCRETE REPAIR WORK TO MATCH FINISH AND COLOR OF EXISTING CONCRETE SURFACES.

MR7 ROUT AND EPOXY REPAIR STONE CRACKS AND HOLES. FINISH STONE REPAIR WORK TO MATCH FINISH AND COLOR OF EXISTING STONE SURFACES.

MR8 SALVAGE COPPER CORNICES INCLUDING ASSOCIATED BRACKETS, REINSTALL CORNICES AT COMPLETION OF MASONRY WORK. REPLACE ALL WOOD BLOCKING WITH TREATED WOOD BLOCKING TO SUPPORT REINSTALLED CORNICES AND PROVIDE COMPATIBLE SEALANT AT ALL JOINTS. EXACT LOCATION AND DIMENSIONS TO BE VERIFIED IN THE FIELD. CONTRACTOR TO PROVIDE ALLOWANCE TO REPLACE 30% OF COPPER CORNICE WITH NEW COPPER CORNICE ASSEMBLY IN MATCHING PROFILES AND GAUGE. SHOWN DASHED, TYP.

MR9 CAREFULLY REMOVE ENTIRE PARAPET WALL DOWN TO ROOF DECK AND REMOVE VENEER WYTHE TO CORNICE. PROVIDE NEW MASONRY PARAPET WALL AND STONE COPING. MATCH HEIGHT OF ORIGINAL PARAPET WALL. KEY-IN NEW WALL TO ADJACENT MASONRY WALL. PROVIDE NEW FLASHING/COUNTERFLASHING SYSTEM, COORDINATE WITH ROOF REPLACEMENT WORK AND MASONRY WORK. REPAIR/PATCH EXISTING ROOF SYSTEMS TO REMAIN AS NECESSARY AT AREAS OF NEW PARAPET WORK TO MAINTAIN WATERTIGHT CONSTRUCTION. REFER TO ROOF DRAWINGS FOR ADDITIONAL RAIN BASIN AND SCUPPER REPLACEMENT WORK RELATED TO THIS PARAPET WALL REBUILD.



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PBC PROJECT #05095
CPS PROJECT NO. 2016-46211-MCR

REVISIONS

NO.	DATE	DESCRIPTION
-	2016-04.19	30% SUBMITTAL
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1	2017-04.12	ADDENDUM #01

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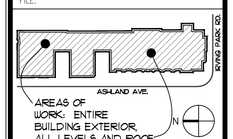

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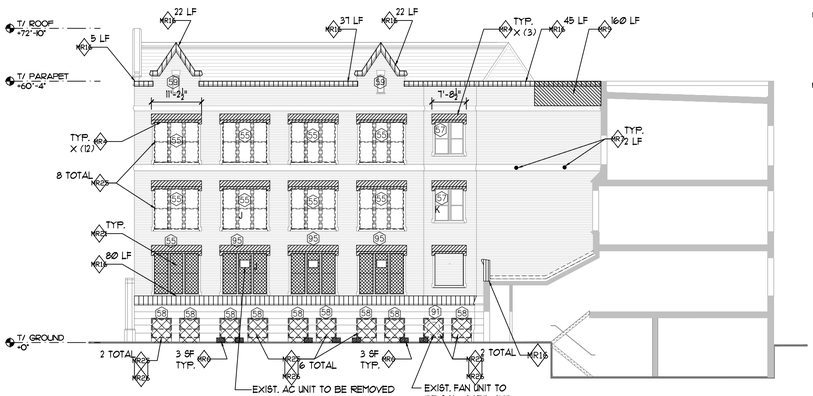
BUILDING ELEVATIONS

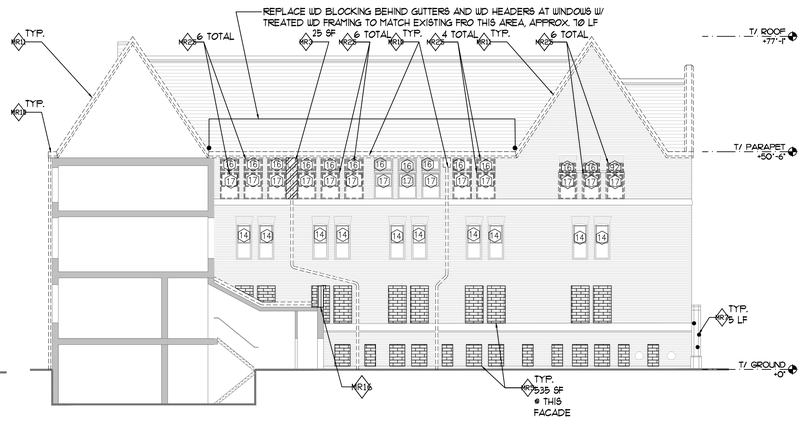
DRAWING NO.

A5.2



1 SOUTH ELEVATION J 1/16" = 1'-0"

1/16" = 1'-0"



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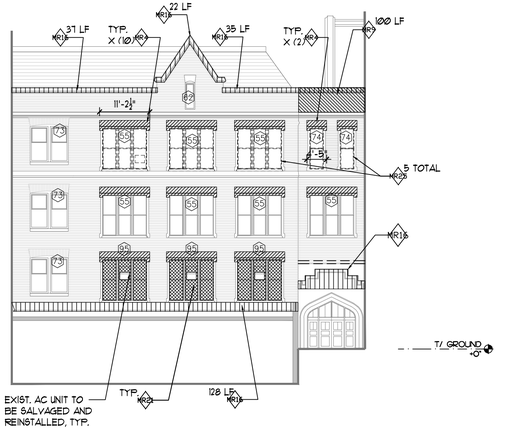
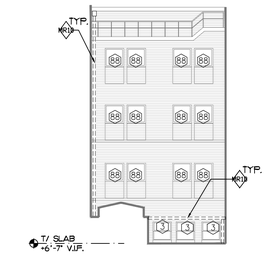
1/16" = 1'-0"



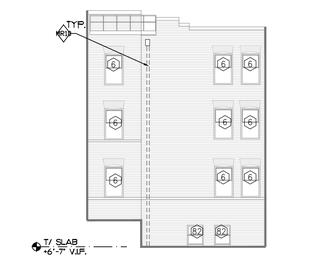
3 WEST ELEVATION K 1/16" = 1'-0"

1/16" = 1'-0"



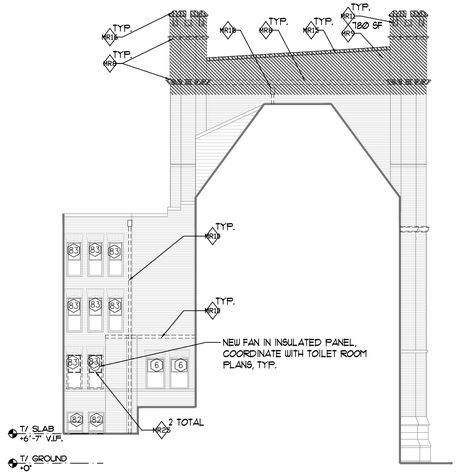
4 LIGHTWELL ELEVATION R 1/16" = 1'-0"

1/16" = 1'-0"



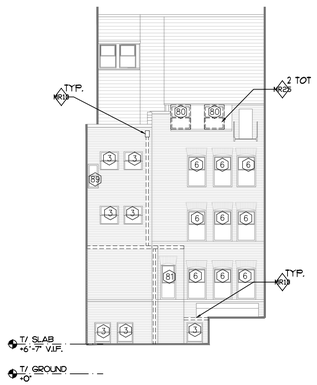
5 LIGHTWELL ELEVATION S 1/16" = 1'-0"

1/16" = 1'-0"



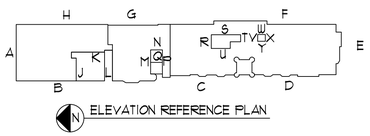
6 LIGHTWELL ELEVATION T 1/16" = 1'-0"

1/16" = 1'-0"



7 LIGHTWELL ELEVATION U 1/16" = 1'-0"

1/16" = 1'-0"



MASONRY REPAIR GENERAL NOTES

1. GRIND AND TUCKPOINT ALL EXTERIOR MASONRY FACADES INCLUDING MASONRY HEADERS, JAMBS & SILLS AND ROOF SIDE FACES OF PARAPET WALLS TO REMAIN, 100% OF BUILDING. ALL GRINDING AND TUCKPOINTING WORK TO FOLLOW CONTRACT DOCUMENT REQUIREMENTS. PROVIDE TOOLED CONCAVE JOINT
2. GRIND AND TUCKPOINT ALL EXTERIOR STONE ELEMENTS ON THE FACADES INCLUDING CORNICES, HEADERS, JAMBS, SILLS AND ACCENT PIECES, 100% OF BUILDING FACADE. ALL GRINDING AND TUCKPOINTING WORK TO FOLLOW CONTRACT DOCUMENT REQUIREMENTS. PROVIDE TOOLED CONCAVE JOINT.
3. REFER TO ROOF PLANS FOR ADDITIONAL INFORMATION FOR WORK RELATED TO COPINGS AND MASONRY PARAPET WALLS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY REMOVAL AND REINSTALLATION OF ALL DOWNSPOUTS TO PROPERLY PERFORM MASONRY REPAIR AND TUCKPOINTING WORK. THE DRAWINGS ARE FOR REFERENCE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTE ALL DOWNSPOUT LOCATIONS ON THE BUILDING PRIOR TO SUBMITTING BID.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SURFACE MOUNTED EQUIPMENT AND UTILITIES THAT REMAIN IN PLACE AROUND AREAS OF WORK INCLUDING BUT NOT LIMITED TO ELECTRICAL CABLES, LIGHTING, EQUIPMENT SUPPORT STRUCTURES AND WINDOW MOUNTED AIR CONDITIONING UNITS.
6. DIMENSIONS AND NUMERIC NOTATIONS NEXT TO KEYNOTE INDICATES APPROXIMATE SF. OF REQUIRED WORK FOR BIDDING PURPOSES. CONTRACTOR SHALL VERIFY EXACT LOCATION AND SF. IN THE FIELD.
7. NOT ALL ELEVATIONS ARE SHOWN BUT ALL MASONRY WORK IDENTIFIED IN THESE DRAWINGS SHALL INCLUDE ASSOCIATED CORNERS AND RETURNS ADJACENT TO WALLS SHOWN ON THE ELEVATIONS AND SHALL BE CONSIDERED PART OF SAME SCOPE.
8. WASH ALL MASONRY AND STONE FACADE SURFACES AFTER TUCKPOINTING WORK IS COMPLETE
9. PROVIDE FOR 150 L.F. OF STEEL LINTEL REPLACEMENT, EXACT LENGTHS TO BE VERIFIED IN THE FIELD. COORDINATE WITH KEYNOTE MR-2. REPLACE REVEALED LINTELS THAT SHOW MORE THAN 25% SECTION LOSS W/ GALVANIZED STEEL LINTEL. REBUILD OPENING PER KEYNOTE MR-2. SEE DETAIL 13/A12.4
10. PROVIDE FOR 100 SF. OF STONE HEADER REPLACEMENT. EXACT LOCATIONS TO BE DETERMINED IN THE FIELD. COORDINATE WITH KEYNOTE MR-4. REBUILD HEADER PER KEYNOTE MR-4
11. PROVIDE FOR APPROX. 200 SF. OF STONE HEADER REPLACEMENT. EXACT LOCATIONS TO BE DETERMINED IN THE FIELD. PROFILE OF STONE HEADER TO MATCH EXISTING. COORDINATE WITH KEYNOTE MR-4. REBUILD HEADER PER KEYNOTE MR-4
12. REMOVE AND REPLACE PERIMETER SEALANT AT ALL WINDOWS, 100% REPLACEMENT, FOLLOWING SEALANT MANUFACTURER'S RECOMMENDATIONS. DRAWINGS ARE FOR REFERENCE ONLY, NOT ALL WINDOWS ARE SHOWN ON ELEVATION DRAWINGS. CONTRACTOR TO VERIFY ALL WINDOW LOCATIONS.
13. ALL NEW MASONRY TO BE TOOTHED INTO EXISTING, TYPICAL.

MASONRY REPAIR KEY NOTES

MR1 — REMOVE EXISTING LIGHT FIXTURE AND BRACKETS IN ITS ENTIRETY. PATCH EXPOSED MASONRY SURFACES. REFER TO ROOF PLANS AND ELECTRICAL DRAWINGS FOR REMOVAL AND NEW EXTERIOR LIGHTING WORK INFORMATION.

MR2 — LOCALLY REMOVE EXTERIOR MASONRY AT BRICK WINDOW HEAD TO EXPOSE LINTEL. SCRAPE AND PAINT EXPOSED STEEL LINTELS WITH ANTI-RUST COATING. REFER TO TYP. EXTERIOR COATING SYSTEM NOTE ON SHEET A5.4. REBUILD MASONRY WALL WITH SALVAGED OR MATCHING BRICK AND MORTAR AND PROVIDE STAINLESS STEEL TIES TO BACKUP STRUCTURE. PROVIDE NEW FLASHING, TERMINATION BAR, DRIP EDGE, END DAMS AND CELL VENT WEEPS. APPROX. LOCATIONS HATCHED ON DRAWINGS. REFER TO DETAIL 10/A12.4 FOR TYPICAL REPAIR WORK. COORDINATE WITH GENERAL MASONRY NOTE #3 FOR LINTEL REPLACEMENT SCOPE.

MR3 — LOCALLY DEMOLISH AND REBUILD DAMAGED MASONRY TO 2 WYTHES DEPTH. NEW BRICK AND MORTAR TO MATCH EXISTING. PROVIDE STAINLESS STEEL TIES TO BACK-UP STRUCTURE. APPROX. 5F OF AREA SHOWN ON DRAWINGS.

MR4 — REMOVE AND SALVAGE HUNG STONE AT WINDOW HEAD. DEMO MASONRY ABOVE STONE HEADER TO EXPOSE LINTEL. REINFORCE EXISTING ANGLE SUPPORTING WINDOW FRAME HEAD WITH GALVANIZED STEEL LINTEL TO PROVIDE BEARING FOR WINDOW AND MATCH ELEVATION OF TOP OF EXISTING WINDOW HEAD. PROVIDE NEW FLASHING, TERMINATION BAR, DRIP EDGE, END DAMS AND CELL VENT WEEPS AT LINTEL. REBUILD MASONRY WITH SALVAGED OR MATCHING MATERIAL AND REINSTALL STONE HEADER. SAWCUT STONE HEADER AS NECESSARY TO FIT INTO NEW LINTEL. PROVIDE STAINLESS STEEL TIES TO BACKUP STRUCTURE AND MORTAR ALL JOINTS. CAREFULLY REMOVE AND SALVAGE WINDOW FOR REINSTALLATION OR FULLY REPLACE IF NOTED AS SUCH ON ELEVATIONS. REINSTALL/INSTALL WINDOW IN COMPLETED OPENING AND CAULK ALL JOINTS. COORDINATE WITH GENERAL MASONRY NOTES #10 AND #11 FOR STONE HEADER REPAIR AND REPLACEMENT SCOPES. REFER TO DETAIL 7/A12.4

MR5 — LOCALLY REMOVE INFILL MASONRY. REBUILD WALL WITH CMU BACKUP AND MASONRY FACE BRICK TOOTHED INTO AND LAID FLUSH WITH ADJACENT MASONRY. PROVIDE STAINLESS STEEL MASONRY TIES TO BACK UP.

MR6 — LOCALLY REMOVE ALL LOOSE CONCRETE. SCRAPE, PRIME AND PAINT ALL EXPOSED STEEL REINFORCEMENT WITH ANTI-CORROSION BONDING AGENT. PROVIDE ADDITIONAL REINFORCEMENT AS REQUIRED. PATCH SPALLED CONCRETE ACCORDING TO PATCH MATERIAL MANUFACTURER'S REPAIR INSTRUCTIONS. ROUT AND EPOXY REPAIR CONCRETE CRACKS. FINISH CONCRETE REPAIR WORK TO MATCH FINISH AND COLOR OF EXISTING CONCRETE SURFACES.

MR7 — ROUT AND EPOXY REPAIR STONE CRACKS AND HOLES. FINISH STONE REPAIR WORK TO MATCH FINISH AND COLOR OF EXISTING STONE SURFACES.

MR8 — SALVAGE COPPER CORNICES INCLUDING ASSOCIATED BRACKETS. REINSTALL CORNICES AT COMPLETION OF MASONRY WORK. REPLACE ALL WOOD BLOCKING WITH TREATED WOOD BLOCKING TO SUPPORT REINSTALLED CORNICES AND PROVIDE COMPATIBLE SEALANT AT ALL JOINTS. EXACT LOCATION AND DIMENSIONS TO BE VERIFIED IN THE FIELD. CONTRACTOR TO PROVIDE ALLOWANCE TO REPLACE 30% OF COPPER CORNICE WITH NEW COPPER CORNICE ASSEMBLY IN MATCHING PROFILES AND GAUGE. SHOWN DASHED, TYP.

MR9 — CAREFULLY REMOVE ENTIRE PARAPET WALL DOWN TO ROOF DECK AND REMOVE VENEER WYTHE TO CORNICE. PROVIDE NEW MASONRY PARAPET WALL AND STONE COPING. MATCH HEIGHT OF ORIGINAL PARAPET WALL. KEY-IN NEW WALL TO ADJACENT MASONRY WALL. PROVIDE NEW FLASHING/COUNTERFLASHING SYSTEM, COORDINATE WITH ROOF REPLACEMENT WORK AND MASONRY WORK. REPAIR/PATCH EXISTING ROOF SYSTEMS TO REMAIN AS NECESSARY AT AREAS OF NEW PARAPET WORK TO MAINTAIN WATERTIGHT CONSTRUCTION. REFER TO ROOF DRAWINGS FOR ADDITIONAL RAIN BASIN AND SCUPPER REPLACEMENT WORK RELATED TO THIS PARAPET WALL REBUILD.

MR10 — REMOVE AND REPLACE ALL METAL GUTTERS, DOWNSPOUTS AND ASSOCIATED BRACKETS. REPLACE WITH COPPER ASSEMBLIES THAT MATCH PROFILE OF ORIGINAL COMPONENTS. PROVIDE COMPATIBLE SEALANT FOR ALL JOINTS. PROVIDE FOR THE REPLACEMENT OF APPROX. 400 LF OF TREATED WOOD BLOCKING TO SUPPORT NEW ASSEMBLIES. LOCATIONS TO BE VERIFIED IN THE FIELD. SHOWN DASHED, TYPICAL

MR11 — SALVAGE COPPER COPING INCLUDING ASSOCIATED BRACKETS. REINSTALL COPING AT COMPLETION OF WALL AND ROOF WORK. REPLACE ALL WOOD BLOCKING WITH TREATED WOOD BLOCKING TO SUPPORT REINSTALLED COPING AND PROVIDE COMPATIBLE SEALANT AT ALL JOINTS. EXACT LOCATION AND DIMENSIONS TO BE VERIFIED IN THE FIELD. CONTRACTOR TO PROVIDE ALLOWANCE TO REPLACE 30% OF COPPER COPING WITH NEW COPPER COPING ASSEMBLY IN MATCHING PROFILE AND GAUGE. SHOWN DASHED, TYP.

MR12 — SALVAGE STONE HEADER PIECES AT DOORWAY OPENING. LOCALLY DEMOLISH EXTERIOR MASONRY TO EXPOSE LINTEL. REMOVE EXISTING LINTEL AND REPLACE WITH GALVANIZED STEEL LINTEL ASSEMBLY. REBUILD MASONRY WALL WITH SALVAGED OR MATCHING BRICK AND MORTAR, REINSTALL SALVAGED STONE AND PROVIDE STAINLESS STEEL TIES TO BACKUP STRUCTURE. PROVIDE NEW FLASHING, TERMINATION BAR, DRIP EDGE, END DAMS AND CELL VENT WEEPS. PATCH AND EPOXY REPAIR STONE HEADER PIECES. REFER TO DETAIL 7/A12.4

MR13 — LOCALLY DEMOLISH AND REBUILD DAMAGED MASONRY TO 1 WYTHE DEPTH ON THE INSIDE FACE OF PARAPET WALL. NEW BRICK AND MORTAR TO MATCH EXISTING. PROVIDE STAINLESS STEEL TIES TO BACK-UP STRUCTURE. APPROX. 5F OF AREA SHOWN ON DRAWINGS.

MR14 — NOT USED

MR15 — CLAY TILE COPING TO BE REPLACED WITH STONE COPING - REFER TO ROOF PLANS FOR COMPLETE DESCRIPTION OF WORK.

MR16 — STONE COPING TO BE SALVAGED, CLEANED AND REINSTALLED. PROVIDE NEW STONE COPING IN SAME SIZE, SHAPE, PROFILE, COLOR AND TEXTURE WHERE EXISTING CANNOT BE SALVAGED - ASSUME 10% STONE REPLACEMENT. REFER TO ROOF PLANS FOR COMPLETE DESCRIPTION OF WORK.

MR17 — DEMOLISH AND REPLACE EXISTING STONE BALUSTRADE. COORDINATE WITH COPPER CORNICE AND ROOFING REPLACEMENT - REFER TO ROOF PLANS FOR COMPLETE DESCRIPTION OF WORK.

MR18 — REBUILD MASONRY SCUPPER OPENING. COORDINATE WITH PARAPET WALL REBUILDING WORK - REFER TO ROOF PLANS FOR COMPLETE DESCRIPTION OF WORK.

MR19 — REMOVE LADDER AND PATCH WALL. PROVIDE NEW SAFETY LADDER, REFER TO ROOF HATCH DETAILS FOR ADDITIONAL INFORMATION.

MR20 — REMOVE AND REPLACE STONE BANDING. MATCH DIMENSIONS, PROFILE AND COLOR OF EXISTING STONE. POINT ALL JOINTS.

MR21 — REMOVE EXISTING METAL WIRE SCREEN AND PATCH FRAME. PROVIDE CPS STANDARD PERFORATED METAL SECURITY PANEL, COORDINATE SIZES OF OPENINGS WITH WINDOW SCHEDULE. FINISH TO BE WHITE. FOR WINDOWS THAT HAVE AC UNITS, CUT THE NEW SECURITY PANEL TO FIT AROUND UNIT.

MR22 — DEMOLISH EXISTING FENCE AND PICTH POCKETS AS PART OF ROOF DEMOLITION. REPLACE WITH SIMILAR 6'-0" , 2 RAIL FENCE SYSTEM WITH POSTS IN PITCH POCKET ASSEMBLY. PROVIDE 45 DEGREE LATERAL CROSS BRACING OF ENTIRE STRUCTURE TO MATCH EXISTING FENCING SUPPORT. COORDINATE WITH ROOF WORK.

MR23 — RE-SET CAST IRON DRAIN LINE LATERAL RUN AT FIRST FIRST FLOOR TO CREATE POSITIVE SLOPE FOR DRAINAGE

MR24 — NOT USED

MR25 — REPLACE EXISTING WINDOW SHOWN DASHED. SEE BUILDING ELEVATIONS FOR SPECIFIC NUMBER OF REPLACEMENT. NUMBER IN HEXAGON REFERS TO WINDOW MARK IN WINDOW SCHEDULE. WHERE THERE IS A WINDOW AC UNIT LOCATED IN A WINDOW TO BE REPLACED, SALVAGE THE AC UNIT AND PROVIDE NEW AC UNIT SUPPORT FRAME AND INSULATED PANEL IN NEW WINDOW FRAME TO REINSTALL AC UNIT IN SAME LOCATION.

MR26 — PROVIDE STANDARD CPS METAL SECURITY PANEL, COORDINATE SIZES OF OPENINGS WITH WINDOW SCHEDULE. FINISH TO BE WHITEFOR WINDOWS THAT HAVE AC UNITS, CUT THE NEW SECURITY PANEL TO FIT AROUND UNIT.

PUBLIC BUILDING COMMISSION — Chicago Public Schools

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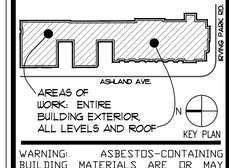
PBC PROJECT #05095
CPS PROJECT NO. 2016-46211-MCR

REVISIONS

NO.	DATE	DESCRIPTION
–	2016-04.19	30% SUBMITTAL
–	2016-05.17	60% SUBMITTAL
–	2016-06.14	60% RE-SUBMITTAL
–	2017-02.14	75% SUBMITTAL
–	2017-03.02	100% SUBMITTAL
–	2017-03.07	PERMIT SET
–	2017-03.23	PRELIMINARY OTB SET
–	2017-04.06	BID SET
1	2017-04.12	ADDENDUM #01

DRAWN BY: CCA
SCALE: VARIES
JOB:
FILE:

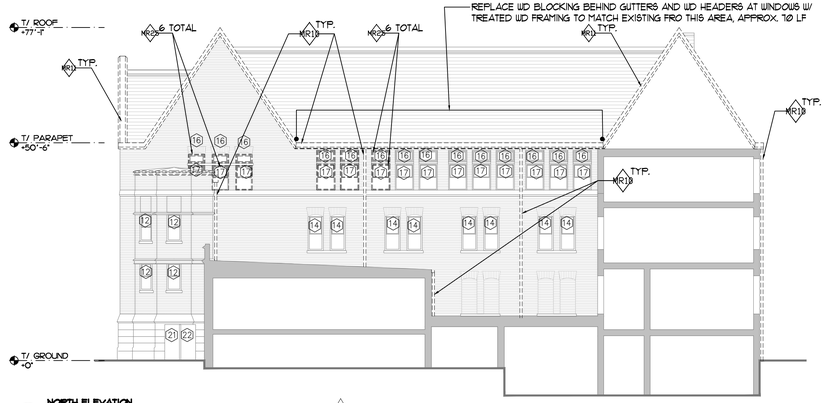


WARNING: ASBESTOS-CONTAINING BUILDING MATERIALS ARE OR MAY BE PRESENT IN THIS BUILDING. AN ASBESTOS MANAGEMENT PLAN IS AVAILABLE IN THE SCHOOL FOR REVIEW UPON REQUEST. NO PERSON MAY DISTURB ASBESTOS-CONTAINING MATERIALS UNLESS THAT PERSON IS A LICENSED ASBESTOS WORKER OR CONDUCTS SUCH WORK IN ACCORDANCE WITH SPECIFICATION(S) CONTAINED IN THE PROJECT DOCUMENTS AND IN COMPLIANCE WITH ILLINOIS DEPARTMENT OF HEALTH RULES AND REGULATIONS.

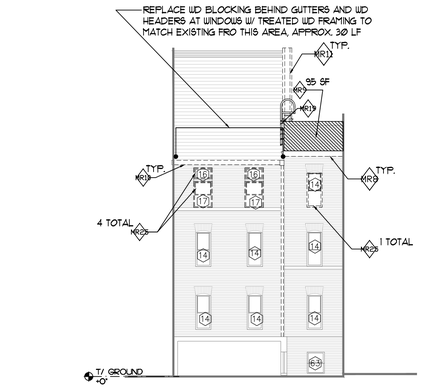
BUILDING ELEVATIONS

DRAWING NO.

A5.3

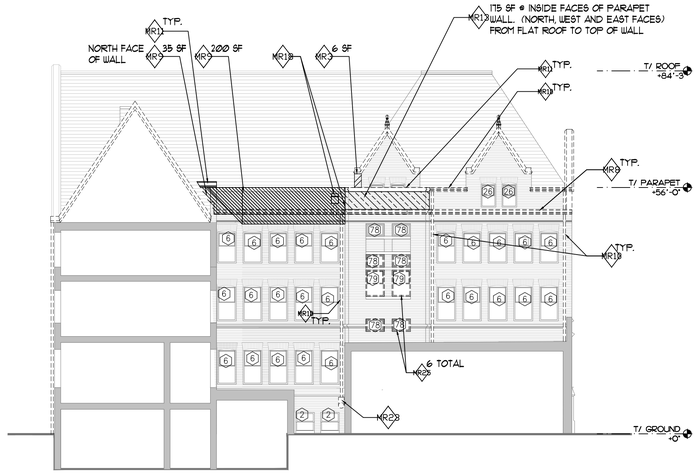


1 NORTH ELEVATION M 1/16" = 1'-0"

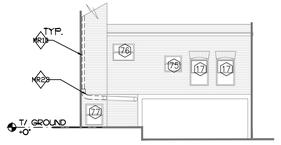


2 EAST ELEVATION N 1/16" = 1'-0"

1/16" = 1'-0"



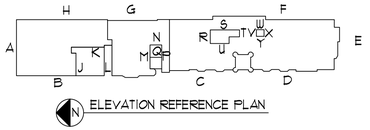
3 SOUTH ELEVATION P 1/16" = 1'-0"



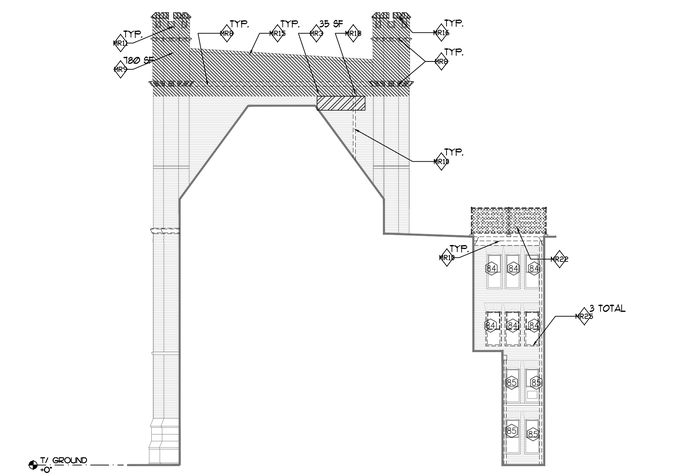
4 WEST ELEVATION Q 1/16" = 1'-0"

1/16" = 1'-0"

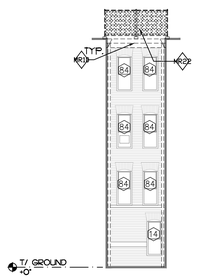
TYPICAL EXTERIOR COATING SYSTEM (SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS):
- SHOP PRIME STEEL W/ 2-3 MIL. ORGANIC ZINC (SIM. OR EQUAL TO "INTERNATIONAL PROTECTIVE COATINGS" INTERZINC 52).
- SHOP PAINT ONE 2-3 MIL. COAT WITH ACRYLIC POLYSILOXANE (SIM. OR EQUAL TO "INTERNATIONAL PROTECTIVE COATINGS" INTERFINE 878).
- FIELD PAINT ONE 3 MIL. COAT WITH ACRYLIC POLYSILOXANE (SIM. OR EQUAL TO "INTERNATIONAL PROTECTIVE COATINGS" INTERFINE 878).



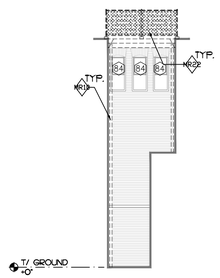
ELEVATION REFERENCE PLAN



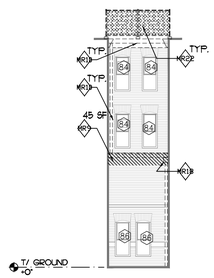
5 LIGHTWELL ELEVATION V 1/16" = 1'-0"



6 LIGHTWELL ELEVATION W 1/16" = 1'-0"



7 LIGHTWELL ELEVATION X 1/16" = 1'-0"



8 LIGHTWELL ELEVATION Y 1/16" = 1'-0"

MASONRY REPAIR GENERAL NOTES

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2. GRIND AND TUCKPOINT ALL EXTERIOR STONE ELEMENTS ON THE FACADES INCLUDING CORNICES, HEADERS, JAMBS, SILLS AND ACCENT PIECES, 100% OF BUILDING FACADE. ALL GRINDING AND TUCKPOINTING WORK TO FOLLOW CONTRACT DOCUMENT REQUIREMENTS. PROVIDE TOOLED CONCAVE JOINT.
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8. WASH ALL MASONRY AND STONE FACADE SURFACES AFTER TUCKPOINTING WORK IS COMPLETE
9. PROVIDE FOR 150 LF. OF STEEL LINTEL REPLACEMENT, EXACT LENGTHS TO BE VERIFIED IN THE FIELD. COORDINATE WITH KEYNOTE MR-2. REPLACE REVEALED LINTELS THAT SHOW MORE THAN 15% SECTION LOSS W/ GALVANIZED STEEL LINTEL. REBUILD OPENING PER KEYNOTE MR-2. SEE DETAIL 13/A12.4
10. PROVIDE FOR 100 SF. OF STONE HEADER PATCHING / EPOXY REPAIR. EXACT LOCATIONS TO BE DETERMINED IN THE FIELD. COORDINATE WITH KEYNOTE MR-4. REBUILD HEADER PER KEYNOTE MR-4
11. PROVIDE FOR APPROX. 200 SF. OF STONE HEADER REPLACEMENT. EXACT LOCATIONS TO BE DETERMINED IN THE FIELD. PROFILE OF STONE HEADER TO MATCH EXISTING. COORDINATE WITH KEYNOTE MR-4. REBUILD HEADER PER KEYNOTE MR-4
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MASONRY REPAIR KEY NOTES

MR1 REMOVE EXISTING LIGHT FIXTURE AND BRACKETS IN ITS ENTIRETY. PATCH EXPOSED MASONRY SURFACES. REFER TO ROOF PLANS AND ELECTRICAL DRAWINGS FOR REMOVAL AND NEW EXTERIOR LIGHTING WORK INFORMATION.

MR2 LOCALLY REMOVE EXTERIOR MASONRY AT BRICK WINDOW HEAD TO EXPOSE LINTEL. SCRAPE AND PAINT EXPOSED STEEL LINTELS WITH ANTI-RUST COATING. REFER TO TYP. EXTERIOR COATING SYSTEM NOTE ON SHEET A5.4. REBUILD MASONRY WALL WITH SALVAGED OR MATCHING BRICK AND MORTAR AND PROVIDE STAINLESS STEEL TIES TO BACKUP STRUCTURE. PROVIDE NEW FLASHING, TERMINATION BAR, DRIP EDGE, END DAMS AND CELL VENT WEEPS. APPROX. LOCATIONS HATCHED ON DRAWINGS. REFER TO DETAIL 10/A12.4 FOR TYPICAL REPAIR WORK. COORDINATE WITH GENERAL MASONRY NOTE #3 FOR LINTEL REPLACEMENT SCOPE.

MR3 LOCALLY DEMOLISH AND REBUILD DAMAGED MASONRY TO 2 WYTHES DEPTH. NEW BRICK AND MORTAR TO MATCH EXISTING. PROVIDE STAINLESS STEEL TIES TO BACK-UP STRUCTURE. APPROX. SF OF AREA SHOWN ON DRAWINGS.

MR4 REMOVE AND SALVAGE HUNG STONE AT WINDOW HEAD. DEMO MASONRY ABOVE STONE HEADER TO EXPOSE LINTEL. REPLACE EXISTING ANGLE SUPPORTING WINDOW FRAME HEAD WITH GALVANIZED STEEL LINTEL TO PROVIDE BEARING FOR WINDOW AND MATCH ELEVATION OF TOP OF EXISTING WINDOW HEAD. PROVIDE NEW FLASHING, TERMINATION BAR, DRIP EDGE, END DAMS AND CELL VENT WEEPS AT LINTEL. REBUILD MASONRY WITH SALVAGED OR MATCHING MATERIAL AND REINSTALL STONE HEADER. SAWCUT STONE HEADER AS NECESSARY TO FIT INTO NEW LINTEL. PROVIDE STAINLESS STEEL TIES TO BACKUP STRUCTURE AND MORTAR ALL JOINTS. CAREFULLY REMOVE AND SALVAGE WINDOW FOR REINSTALLATION OR FULLY REPLACE IF NOTED AS SUCH ON ELEVATIONS. REINSTALL/INSTALL WINDOW IN COMPLETED OPENING AND CAULK ALL JOINTS. COORDINATE WITH GENERAL MASONRY NOTES #10 AND #11 FOR STONE HEADER REPAIR AND REPLACEMENT SCOPES. REFER TO DETAIL 7/A12.4

MR5 LOCALLY REMOVE INFILL MASONRY. REBUILD WALL WITH CMU BACKUP AND MASONRY FACE BRICK TOOTHED INTO AND LAID FLUSH WITH ADJACENT MASONRY. PROVIDE STAINLESS STEEL MASONRY TIES TO BACK UP.

MR6 LOCALLY REMOVE ALL LOOSE CONCRETE. SCRAPE, PRIME AND PAINT ALL EXPOSED STEEL REINFORCEMENT WITH ANTI-CORROSION BONDING AGENT. PROVIDE ADDITIONAL REINFORCEMENT AS REQUIRED. PATCH SPALLED CONCRETE ACCORDING TO PATCH MATERIAL MANUFACTURER'S REPAIR INSTRUCTIONS. ROUT AND EPOXY REPAIR CONCRETE CRACKS. FINISH CONCRETE REPAIR WORK TO MATCH FINISH AND COLOR OF EXISTING CONCRETE SURFACES.

MR7 ROUT AND EPOXY REPAIR STONE CRACKS AND HOLES. FINISH STONE REPAIR WORK TO MATCH FINISH AND COLOR OF EXISTING STONE SURFACES.

MR8 SALVAGE COPPER CORNICES INCLUDING ASSOCIATED BRACKETS. REINSTALL CORNICES AT COMPLETION OF MASONRY WORK. REPLACE ALL WOOD BLOCKING WITH TREATED WOOD BLOCKING TO SUPPORT REINSTALLED CORNICES AND PROVIDE COMPATIBLE SEALANT AT ALL JOINTS. EXACT LOCATION AND DIMENSIONS TO BE VERIFIED IN THE FIELD. CONTRACTOR TO PROVIDE ALLOWANCE TO REPLACE 30% OF COPPER CORNICE WITH NEW COPPER CORNICE ASSEMBLY IN MATCHING PROFILES AND GAUGE. SHOWN DASHED, TYP.

MR9 CAREFULLY REMOVE ENTIRE PARAPET WALL DOWN TO ROOF DECK AND REMOVE VENEER WYTHE TO CORNICE. PROVIDE NEW MASONRY PARAPET WALL AND STONE COPING. MATCH HEIGHT OF ORIGINAL PARAPET WALL. KEY-IN NEW WALL TO ADJACENT MASONRY WALL. PROVIDE NEW FLASHING/COUNTERFLASHING SYSTEM, COORDINATE WITH ROOF REPLACEMENT WORK AND MASONRY WORK. REPAIR/PATCH EXISTING ROOF SYSTEMS TO REMAIN AS NECESSARY AT AREAS OF NEW PARAPET WORK TO MAINTAIN WATERTIGHT CONSTRUCTION. REFER TO ROOF DRAWINGS FOR ADDITIONAL RAIN BASIN AND SCUPPER REPLACEMENT WORK RELATED TO THIS PARAPET WALL REBUILD.

MR10 REMOVE AND REPLACE ALL METAL GUTTERS, DOWNSPOUTS AND ASSOCIATED BRACKETS. REPLACE WITH COPPER ASSEMBLIES THAT MATCH PROFILE OF ORIGINAL COMPONENTS. PROVIDE COMPATIBLE SEALANT FOR ALL JOINTS. PROVIDE FOR THE REPLACEMENT OF APPROX. 400 LF OF TREATED WOOD BLOCKING TO SUPPORT NEW ASSEMBLIES. LOCATIONS TO BE VERIFIED IN THE FIELD. SHOWN DASHED, TYPICAL

MR11 SALVAGE COPPER COPING INCLUDING ASSOCIATED BRACKETS. REINSTALL COPING AT COMPLETION OF WALL AND ROOF WORK. REPLACE ALL WOOD BLOCKINGS WITH TREATED WOOD BLOCKING TO SUPPORT REINSTALLED COPING AND PROVIDE COMPATIBLE SEALANT AT ALL JOINTS. EXACT LOCATION AND DIMENSIONS TO BE VERIFIED IN THE FIELD. CONTRACTOR TO PROVIDE ALLOWANCE TO REPLACE 30% OF COPPER COPING WITH NEW COPPER COPING ASSEMBLY IN MATCHING PROFILE AND GAUGE. SHOWN DASHED, TYP.

MR12 SALVAGE STONE HEADER PIECES AT DOORWAY OPENING. LOCALLY DEMOLISH EXTERIOR MASONRY TO EXPOSE LINTEL. REMOVE EXISTING LINTEL AND REPLACE WITH GALVANIZED STEEL LINTEL ASSEMBLY. REBUILD MASONRY WALL WITH SALVAGED OR MATCHING BRICK AND MORTAR, REINSTALL SALVAGED STONE AND PROVIDE STAINLESS STEEL TIES TO BACKUP STRUCTURE. PROVIDE NEW FLASHING, TERMINATION BAR, DRIP EDGE, END DAMS AND CELL VENT WEEPS. PATCH AND EPOXY REPAIR STONE HEADER PIECES. REFER TO DETAIL 7/A12.4

MR13 LOCALLY DEMOLISH AND REBUILD DAMAGED MASONRY TO 1 WYTHE DEPTH ON THE INSIDE FACE OF PARAPET WALL. NEW BRICK AND MORTAR TO MATCH EXISTING. PROVIDE STAINLESS STEEL TIES TO BACK-UP STRUCTURE. APPROX. SF OF AREA SHOWN ON DRAWINGS.

MR14 NOT USED

MR15 CLAY TILE COPING TO BE REPLACED WITH STONE COPING - REFER TO ROOF PLANS FOR COMPLETE DESCRIPTION OF WORK.

MR16 STONE COPING TO BE SALVAGED, CLEANED AND REINSTALLED. PROVIDE NEW STONE COPING IN SAME SIZE, SHAPE, PROFILE, COLOR AND TEXTURE WHERE EXISTING CANNOT BE SALVAGED - ASSUME 10% STONE REPLACEMENT. REFER TO ROOF PLANS FOR COMPLETE DESCRIPTION OF WORK.

MR17 DEMOLISH AND REPLACE EXISTING STONE BALUSTRADE. COORDINATE WITH COPPER CORNICE AND ROOFING REPLACEMENT - REFER TO ROOF PLANS FOR COMPLETE DESCRIPTION OF WORK.

MR18 REBUILD MASONRY SCUPPER OPENING. COORDINATE WITH PARAPET WALL REBUILDING WORK - REFER TO ROOF PLANS FOR COMPLETE DESCRIPTION OF WORK.

MR19 REMOVE LADDER AND PATCH WALL. PROVIDE NEW SAFETY LADDER, REFER TO ROOF HATCH DETAILS FOR ADDITIONAL INFORMATION.

MR20 REMOVE AND REPLACE STONE BANDING. MATCH DIMENSIONS, PROFILE AND COLOR OF EXISTING STONE. POINT ALL JOINTS.

MR21 REMOVE EXISTING METAL WIRE SCREEN AND PATCH FRAME. PROVIDE CPS STANDARD PERFORATED METAL SECURITY PANEL, COORDINATE SIZES OF OPENINGS WITH WINDOW SCHEDULE. FINISH TO BE WHITE. FOR WINDOWS THAT HAVE AC UNITS, CUT THE NEW SECURITY PANEL TO FIT AROUND UNIT.

MR22 DEMOLISH EXISTING FENCE AND PICTH POCKETS AS PART OF ROOF DEMOLITION. REPLACE WITH SIMILAR 6'-0" , 2 RAIL FENCE SYSTEM WITH POSTS IN PITCH POCKET ASSEMBLY. PROVIDE 45 DEGREE LATERAL CROSS BRACING OF ENTIRE STRUCTURE TO MATCH EXISTING FENCING SUPPORT. COORDINATE WITH ROOF WORK.

MR23 RE-SET CAST IRON DRAIN LINE LATERAL RUN AT FIRST FIRST FLOOR TO CREATE POSITIVE SLOPE FOR DRAINAGE

MR24 NOT USED

MR25 REPLACE EXISTING WINDOW, SHOWN DASHED. SEE BUILDING ELEVATIONS FOR SPECIFIC NUMBER OF REPLACEMENT. NUMBER IN HEXAGON REFERS TO WINDOW MARK IN WINDOW SCHEDULE. WHERE THERE IS A WINDOW AC UNIT LOCATED IN A WINDOW TO BE REPLACED, SALVAGE THE AC UNIT AND PROVIDE NEW AC UNIT SUPPORT FRAME AND INSULATED PANEL IN NEW WINDOW FRAME TO REINSTALL AC UNIT IN SAME LOCATION.

MR26 PROVIDE STANDARD CPS METAL SECURITY PANEL, COORDINATE SIZES OF OPENINGS WITH WINDOW SCHEDULE. FINISH TO BE WHITEFOR WINDOWS THAT HAVE AC UNITS, CUT THE NEW SECURITY PANEL TO FIT AROUND UNIT.

PUBLIC BUILDING COMMISSION — Chicago Public Schools

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PBC PROJECT #05095
CPS PROJECT NO. 2016-46211-MCR

REVISIONS

NO.	DATE	DESCRIPTION
-	2016-04.19	30% SUBMITTAL
-	2016-05.17	60% SUBMITTAL
-	2016-06.14	60% RE-SUBMITTAL
-	2017-02.14	75% SUBMITTAL
-	2017-03.02	100% SUBMITTAL
-	2017-03.07	PERMIT SET
-	2017-03.23	PRELIMINARY OTB SET
-	2017-04.06	BID SET
1	2017-04.12	ADDENDUM #01

DRAWN BY: CCA
SCALE: VARIES
JOB:
FILE:

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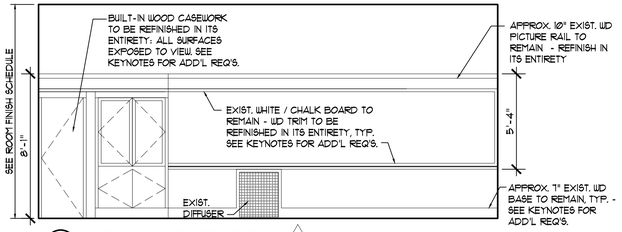
BUILDING ELEVATIONS

DRAWING NO.

A5.4



A 121 123 221 223 CLASS ROOM
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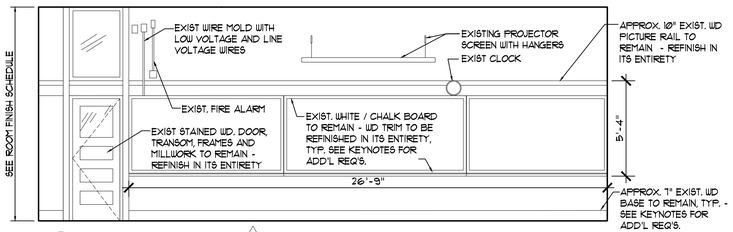

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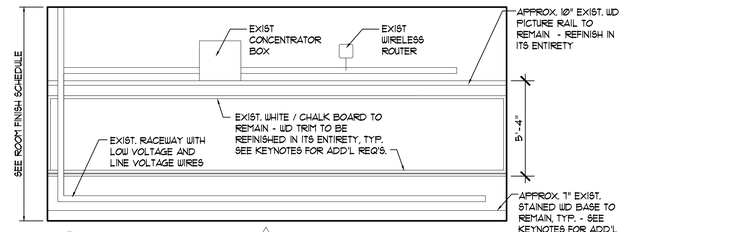

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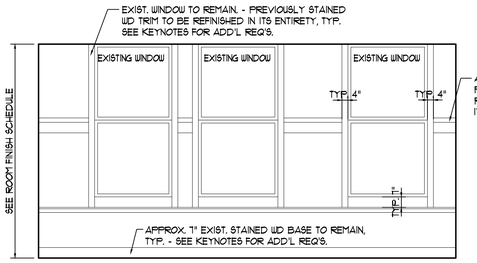

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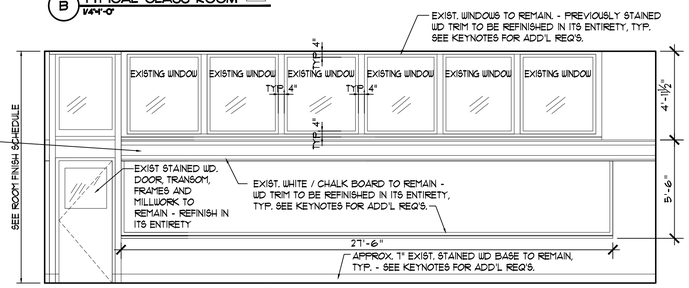

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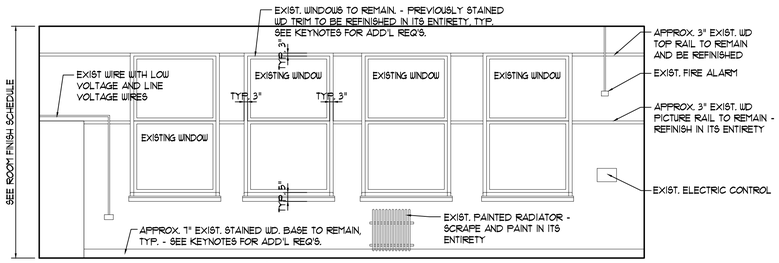

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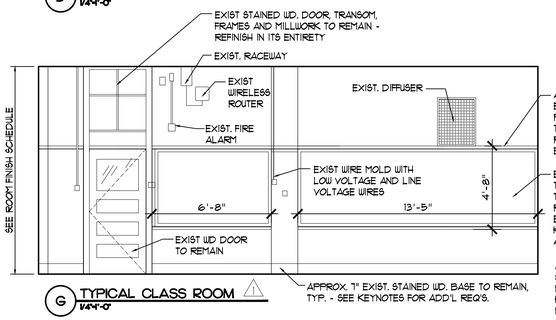

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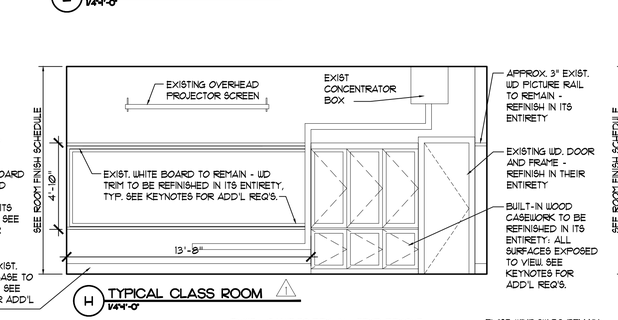

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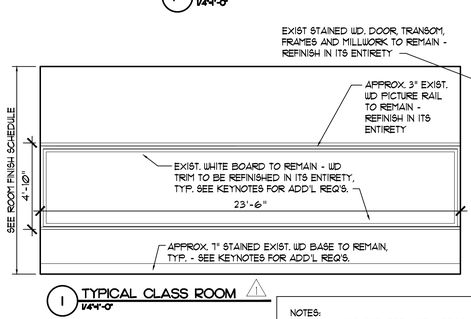

I TYPICAL CLASS ROOM
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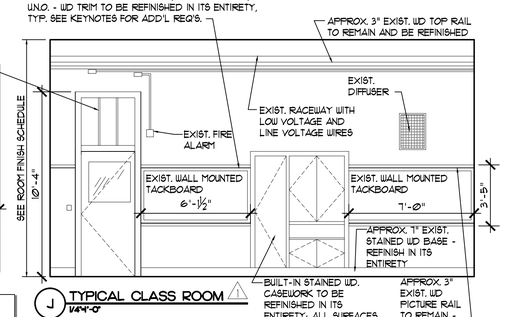
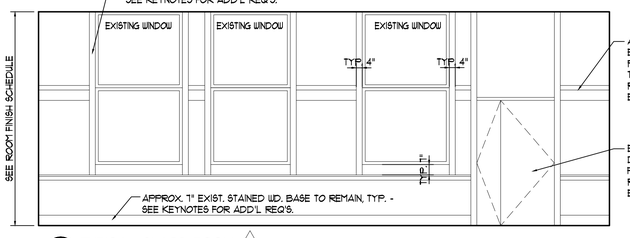


J TYPICAL CLASS ROOM
1/4"=1'-0"

NOTES:
SEE PLAN KEYNOTES FOR ADD'L REQ'S FOR SCOPE OF WORK.



D1 TYPICAL CLASS ROOM
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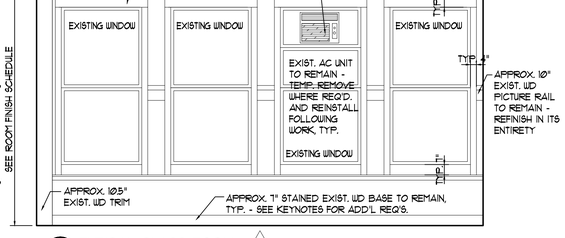

D2 TYPICAL CLASS ROOM
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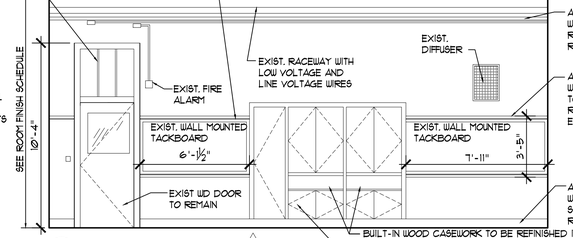
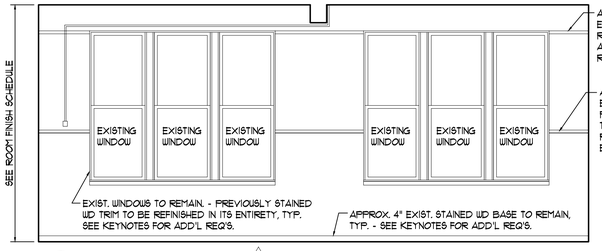


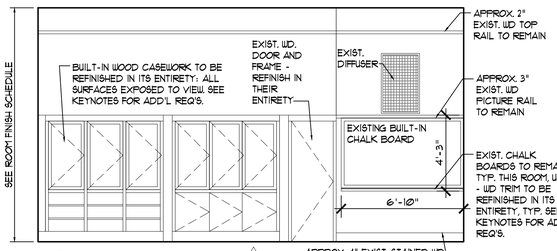
J1 TYPICAL CLASS ROOM
1/4"=1'-0"

NOTE:
- SEE NOTE SHEET A113 FOR DESCRIPTION OF TYP. TRIM FINISHES AT ROOMS AND CORRIDORS
- SEE EXTERIOR ELEVATIONS FOR WINDOW REPLACEMENT SCOPE, WINDOW TYPES AND WINDOW SCHEDULE SHEET A13.3 FOR WINDOW SIZES

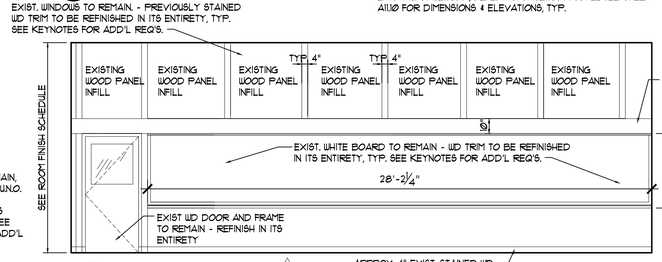
GENERAL ELEVATION NOTE:
WHERE EXISTING SURFACE CONDUIT FOR REGULAR AND/OR LOW VOLTAGE WIRING CROSSES AREAS WHERE PLASTER REMOVAL, PATCHING OR DRYWALL ENCAPSULATION ARE INDICATED TO OCCUR THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:
1. REMOVE EXIST. 'WIREMOLD' SERIES RACEWAY, WIRING, ETC. THIS WALL AS REQ'D. TO ACCOMMODATE PLASTER PATCHING AND/OR DRYWALL ENCAPSULATION SCOPE OF WORK. TEMP. TERMINATE CIRCUITING AND PREP. FOR PROPOSED CONNECTIONS AS REQ'D.
2. PROVIDE 'WIREMOLD' SERIES *4000 OR *4000 (MATCH WIREMOLD SERIES REMOVED) RACEWAY, WIRING, ETC. THIS WALL TO REPLACE REMOVED RACEWAY, WIRING, ETC. TO MATCH CONFIGURATION OF EXIST. RE-CONNECT TO BRANCH CIRCUITING AS REQUIRED.



K TYPICAL CLASS ROOM
1/4"=1'-0"



L TYPICAL CLASS ROOM
1/4"=1'-0"



E1 TYPICAL CLASS ROOM
1/4"=1'-0"

NOTE:
SEE ENLARGED PLANS FOR COMPLETE SCOPE OF WORK & ADD. INFO. / REQ.'S

NOTE:
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PBC PROJECT #05095
CPS PROJECT NO. 2016-46211-MCR

REVISIONS

NO.	DATE	DESCRIPTION
–	2016-04.19	30% SUBMITTAL
–	2016-05.17	60% SUBMITTAL
–	2016-06.14	60% RE-SUBMITTAL
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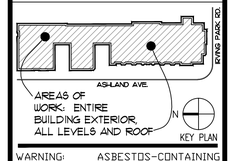
–	2017-03.07	PERMIT SET
–	2017-03.23	PRELIMINARY OTB SET
–	2017-04.06	BID SET
1	2017-04.12	ADDENDUM #01

DRAWN BY: CCA
SCALE: VARIES
JOB: 15355
FILE:



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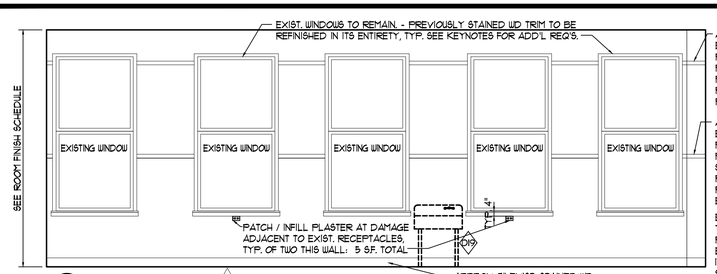
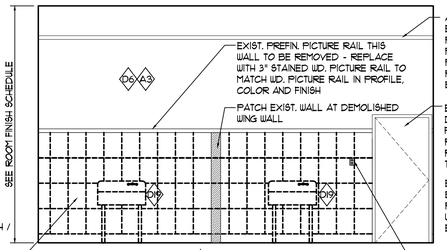
INTERIOR ELEVATIONS

DRAWING NO.

A11.1

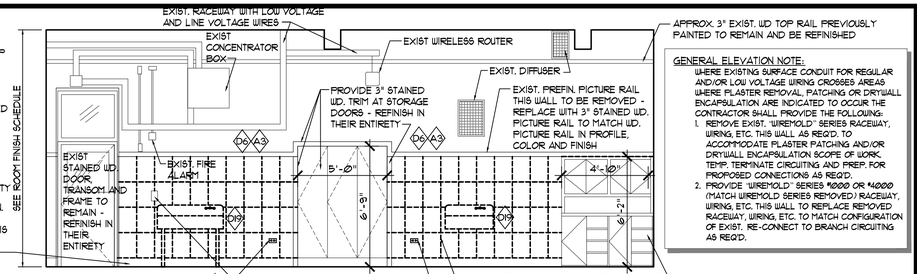


1 209 CLASSROOM 1/4"=1'-0"



2 209 CLASSROOM 1/4"=1'-0"

TEMP. REMOVE AND RESET EXIST. ELECT. DEVICE / THERMOSTAT COVERPLATES AND WALL-MOUNTED J-BOXES, TYP. OF TWO DEVICES THIS WALL



3 209 CLASSROOM 1/4"=1'-0"

TEMP. REMOVE AND RESET EXIST. ELECT. DEVICE / THERMOSTAT COVERPLATES AND WALL-MOUNTED J-BOXES, TYP. OF FOUR DEVICES THIS WALL

EXIST. CERAMIC TILE TO BE REMOVED IN ITS ENTIRETY - PATCH / INFILL PLASTER SUBSTRATE IN ITS ENTIRETY: 180 S.F.

WOOD CASEWORK TO BE REFINISHED IN ITS ENTIRETY: ALL SURFACES EXPOSED TO VIEW. SEE KEYNOTES FOR ADD'L REQ'S.

GENERAL ELEVATION NOTE:
WHERE EXISTING SURFACE CONDUIT FOR REGULAR AND/OR LOW VOLTAGE WIRING CROSSES AREAS WHERE PLASTER REMOVAL, PATCHING OR DRYWALL ENCAPSULATION ARE INDICATED TO OCCUR THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:
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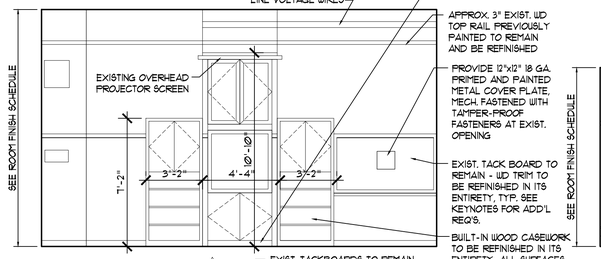
2. PROVIDE "WIREMOLD" SERIES "V4000 OR "V4000 (MATCH WIREMOLD SERIES REMOVED) RACEWAY, WIRING, ETC. THIS WALL TO REPLACE REMOVED RACEWAY, WIRING, ETC. TO MATCH CONFIGURATION OF EXIST. RE-CONNECT TO BRANCH CIRCUITING AS REQ'D.

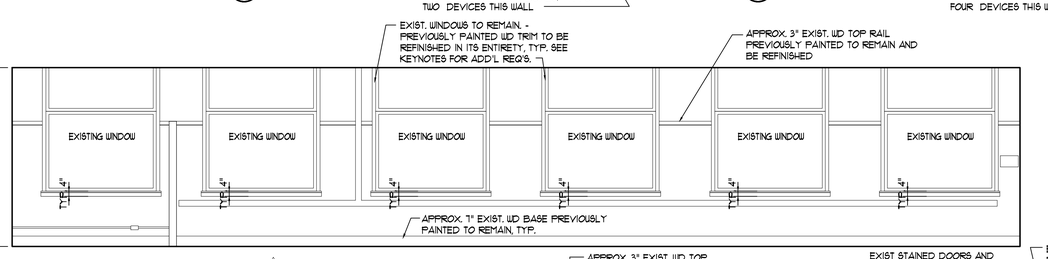


4 209 CLASSROOM 1/4"=1'-0"

APPROX. 3" EXIST. WD TOP RAIL PREVIOUSLY PAINTED TO REMAIN AND BE REFINISHED

APPROX. 7" EXIST. STAINED WD BASE TO REMAIN, TYP. - SEE KEYNOTES FOR ADD'L REQ'S.

EXIST. RACEWAY WITH LOW VOLTAGE AND LINE VOLTAGE WIRES



5 229 COLLEGE & CAREER LAB 1/4"=1'-0"

NOTE:
- SEE NOTE SHEET A11.3 FOR DESCRIPTION OF TYP. TRIM FINISHES AT ROOMS AND CORRIDORS
- SEE EXTERIOR ELEVATIONS FOR WINDOW REPLACEMENT SCOPE, WINDOW TYPES AND WINDOW SCHEDULE SHEET A13.3 FOR WINDOW SIZES

NOTES:
SEE PLAN KEYNOTES FOR ADD'L REQ'S FOR SCOPE OF WORK.

NOTE:
SEE ENLARGED PLANS FOR COMPLETE SCOPE OF WORK & ADD. INFO. / REQ.'S

NOTE:
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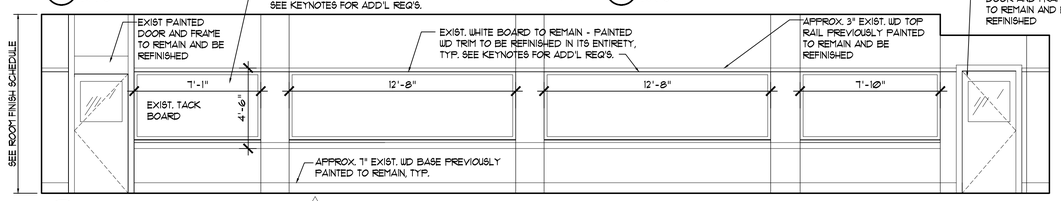
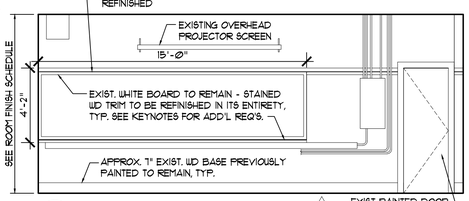


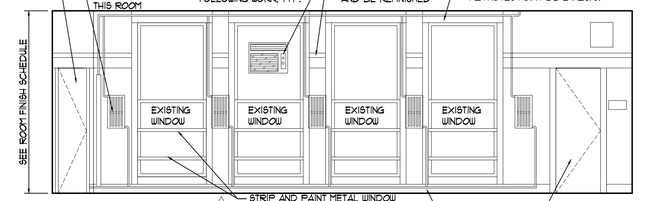
6 229 COLLEGE & CAREER LAB 1/4"=1'-0"



7 229 COLLEGE & CAREER LAB 1/4"=1'-0"

EXIST PAINTED DOOR AND FRAME TO REMAIN AND BE REFINISHED

EXIST STAINED DOORS AND FRAME TO REMAIN AND BE REFINISHED IN THEIR ENTIRETY



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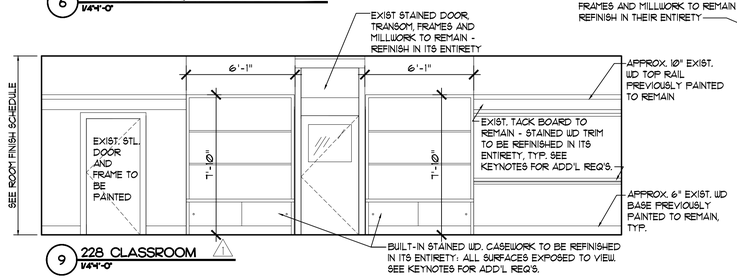

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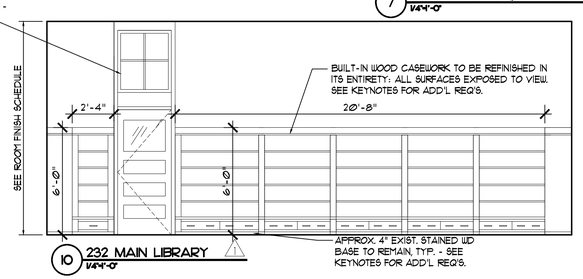
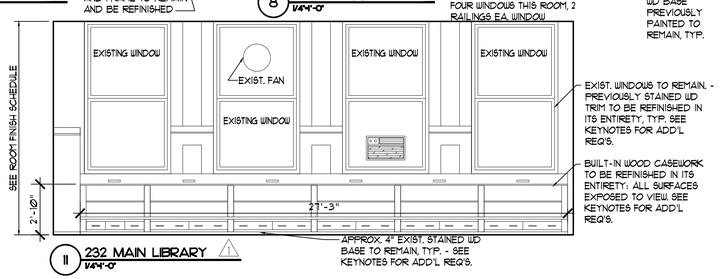
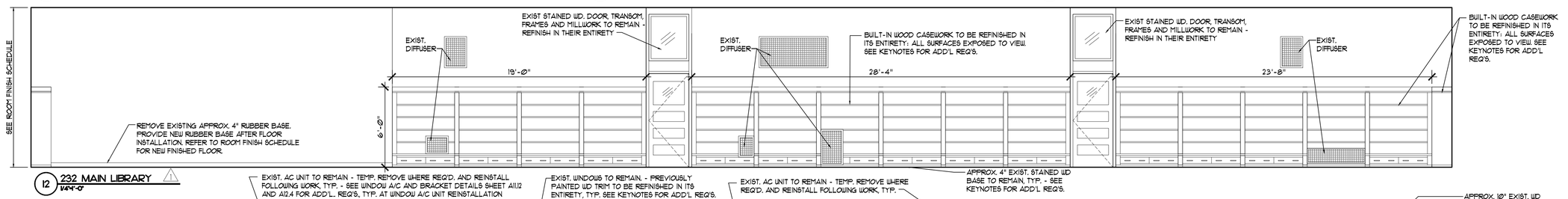


10 232 MAIN LIBRARY 1/4"=1'-0"



11 232 MAIN LIBRARY 1/4"=1'-0"



12 232 MAIN LIBRARY 1/4"=1'-0"

13 232 MAIN LIBRARY 1/4"=1'-0"

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CHICAGO
716 NORTH WELLS STREET
CHICAGO, ILLINOIS 60654
TEL 312.943.4300
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CONSULTING ENGINEERS

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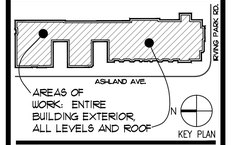
LAKE VIEW HIGH SCHOOL RENOVATION
4015 NORTH ASHLAND AVENUE
CHICAGO, ILLINOIS 60613

PBC PROJECT #05095
CPS PROJECT NO. 2016-46211-MCR

REVISIONS

NO.	DATE	DESCRIPTION
–	2016-04.19	30% SUBMITTAL
–	2016-05.17	60% SUBMITTAL
–	2016-06.14	60% RE-SUBMITTAL
–	2016-12.14	75% SUBMITTAL
–	2017-03.02	100% SUBMITTAL
–	2017-03.07	PERMIT SET
–	2017-03.23	PRELIMINARY OTB SET
–	2017-04.06	BID SET
1	2017-04.12	ADDENDUM #01

DRAWN BY: CCA
SCALE: VARIES
JOB: 15355
FILE:



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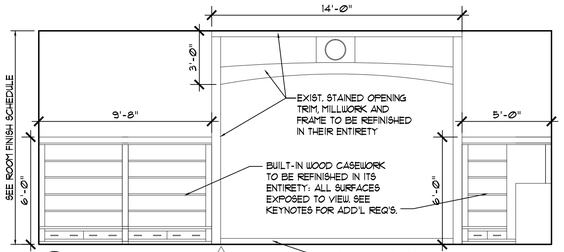
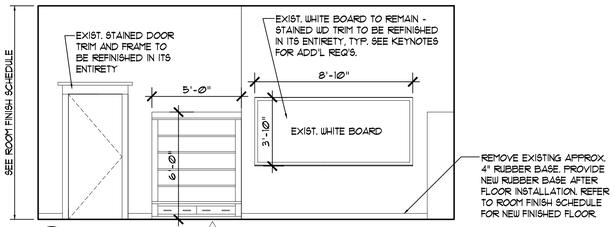
INTERIOR ELEVATIONS

DRAWING NO.

A11.2



1 232 MAIN LIBRARY
1/4"=1'-0"



2 232 MAIN LIBRARY
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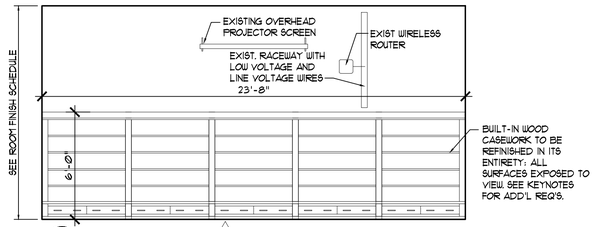

3 232 MAIN LIBRARY
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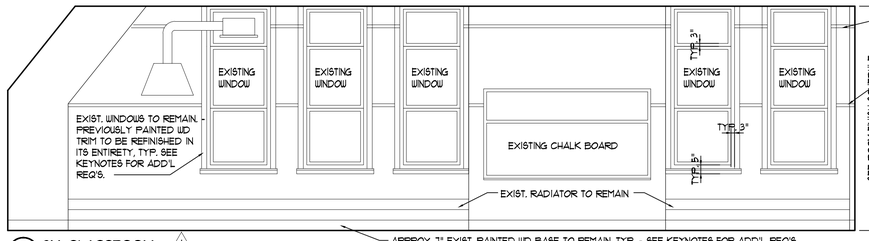
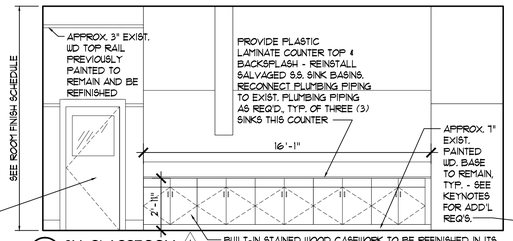


4 314 CLASSROOM
1/4"=1'-0"
APPROX. 1" EXIST. PAINTED WD BASE TO REMAIN, TYP. - SEE KEYNOTES FOR ADD'L REQ'S.



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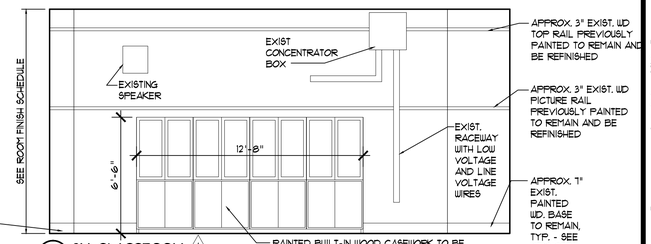

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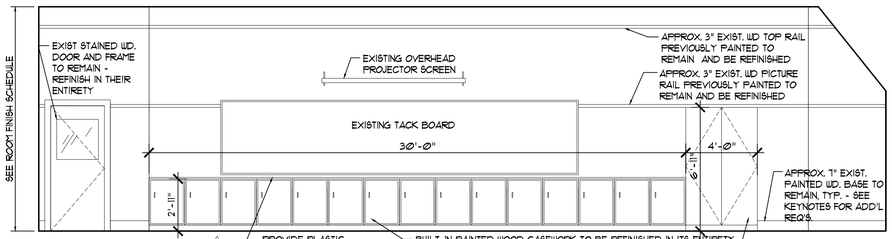

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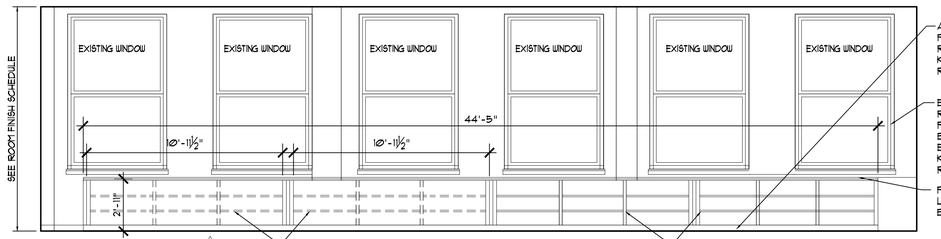
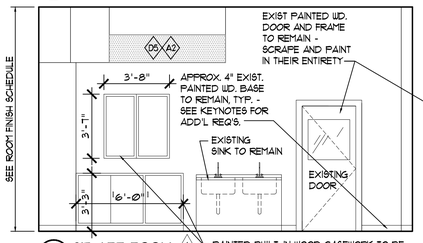


7A 317 ART ROOM
1/4"=1'-0"



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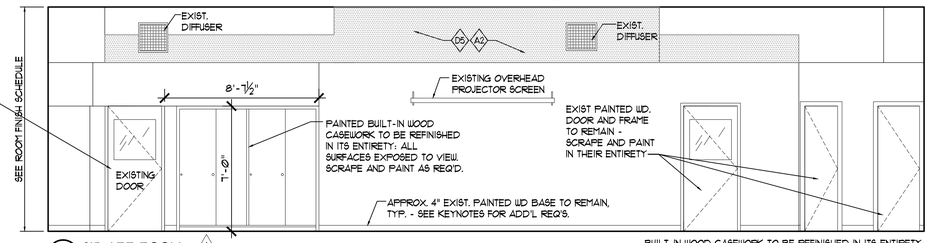
1/4"=1'-0"



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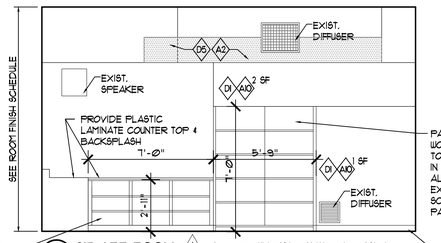

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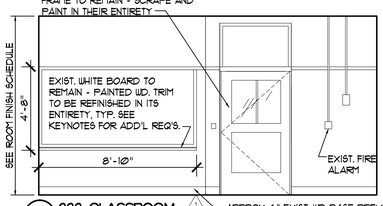

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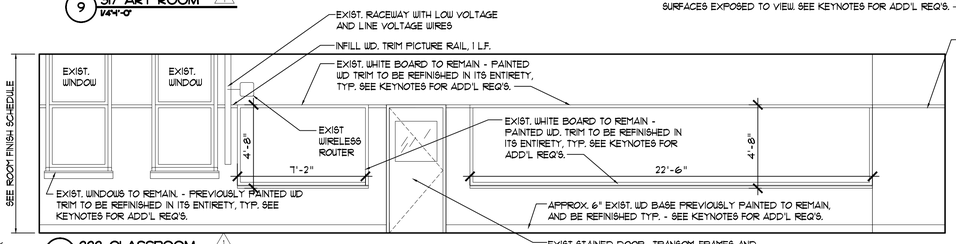
1/4"=1'-0"



12 333 CLASSROOM
1/4"=1'-0"
APPROX. 3" EXIST. WD PICTURE RAIL PREVIOUSLY PAINTED TO REMAIN AND BE REFINISHED

NOTE:
- SEE NOTE THIS SHEET FOR DESCRIPTION OF TYP. TRIM FINISHES AT ROOMS AND CORRIDORS
- SEE EXTERIOR ELEVATIONS FOR WINDOW REPLACEMENT SCOPE, WINDOW TYPES AND WINDOW SCHEDULE SHEET A13.3 FOR WINDOW SIZES

NOTES:
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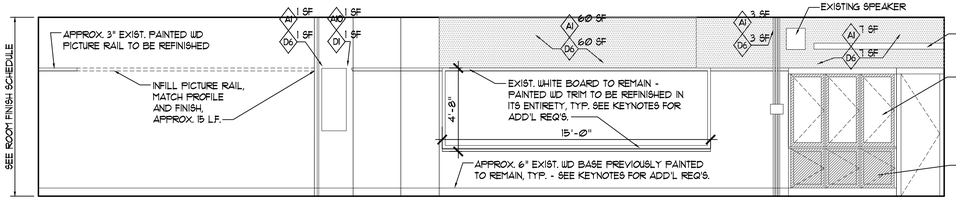
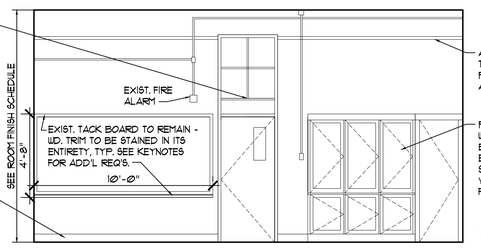


13 333 CLASSROOM
1/4"=1'-0"
APPROX. 6" EXIST. WD BASE PREVIOUSLY STAINED TO REMAIN, AND BE REFINISHED TYP. - SEE KEYNOTES FOR ADD'L REQ'S.



14 330 CLASSROOM
1/4"=1'-0"

TYP. INTERIOR WD. TRIM FINISH NOTE (VERIFY ALL TRIM FINISH CONDITIONS IN FIELD):
- ALL TRIM IN CORRIDORS IS PAINTED, TO BE SCRAPED AND PAINTED IN THEIR ENTIRETY, TYP. - U.N.O.
- ALL WD. TOP RAIL TRIM IN ROOMS IS PAINTED, TO BE REFINISHED, TYP. - U.N.O.
- ALL WD. PICTURE RAIL TRIM IN ROOMS IS STAINED - TO BE REFINISHED IN THEIR ENTIRETY, TYP. U.N.O.
- ALL WOOD BASE IN ROOMS IS STAINED - TO BE REFINISHED IN THEIR ENTIRETY, TYP. U.N.O.
- ALL WINDOW TRIM IN ROOMS AND CORRIDORS IS STAINED - TO BE REFINISHED IN ITS ENTIRETY, TYP. - U.N.O.

GENERAL ELEVATION NOTE:
WHERE EXISTING SURFACE CONDUIT FOR REGULAR AND/OR LOW VOLTAGE WIRING CROSSES AREAS WHERE PLASTER REMOVAL, PATCHING OR DRYWALL ENCAPSULATION ARE INDICATED TO OCCUR THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:
1. REMOVE EXIST. "WIREMOLD" SERIES RACEWAY, WIRING, ETC. THIS WALL AS REQ'D. TO ACCOMMODATE PLASTER PATCHING AND/OR DRYWALL ENCAPSULATION SCOPE OF WORK. TEMP. TERMINATE CIRCUITING AND PREP. FOR PROPOSED CONNECTIONS AS REQ'D.
2. PROVIDE "WIREMOLD" SERIES *4000 OR *4000 (MATCH WIREMOLD SERIES REMOVED) RACEWAY, WIRING, ETC. THIS WALL TO REPLACE REMOVED RACEWAY, WIRING, ETC. TO MATCH CONFIGURATION OF EXIST. RE-CONNECT TO BRANCH CIRCUITING AS REQUIRED.

NOTE:
SEE ENLARGED PLANS FOR COMPLETE SCOPE OF WORK & ADD. INFO. / REQ'S

NOTE:
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DRAWN BY: CCA
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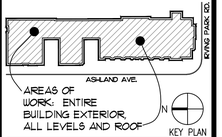

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INTERIOR ELEVATIONS

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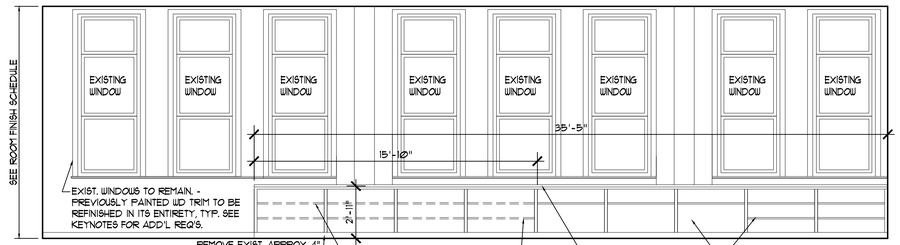
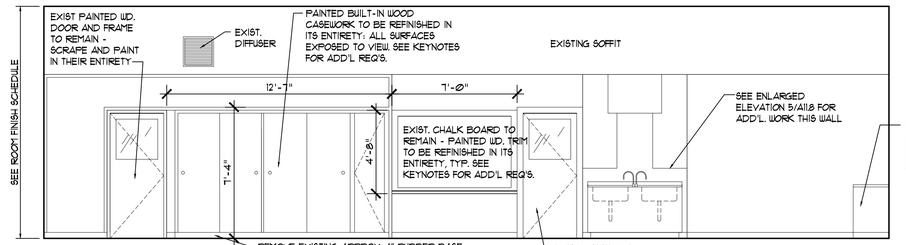
A11.3



1 318 ART ROOM 1/4"=1'-0"



2 318 ART ROOM 1/4"=1'-0"

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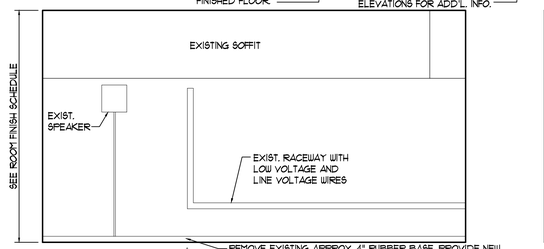
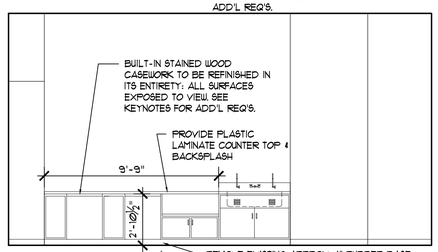


3 318 ART ROOM 1/4"=1'-0"



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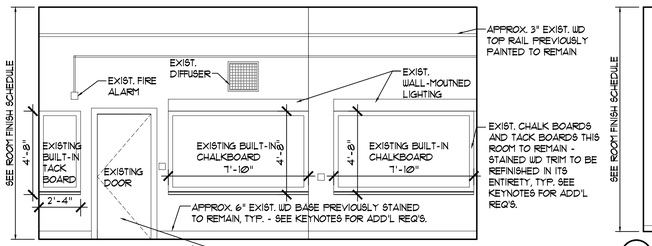
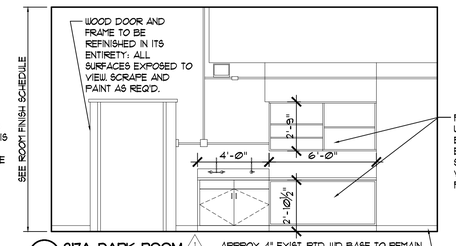


5 330 CLASSROOM 1/4"=1'-0"



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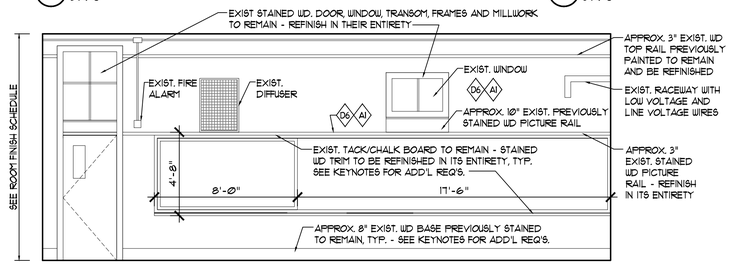

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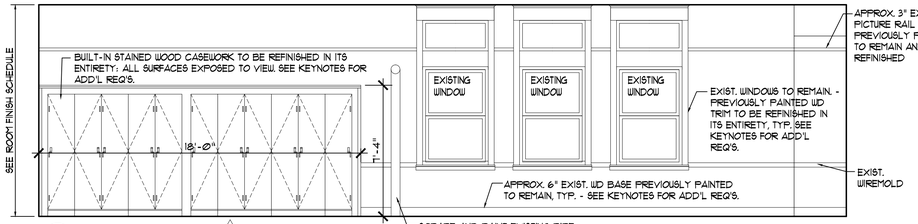

7 422 CLASSROOM 1/4"=1'-0"

NOTES:
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NOTE:
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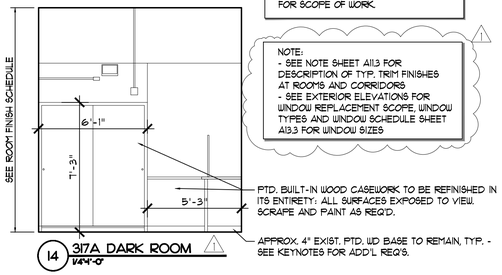

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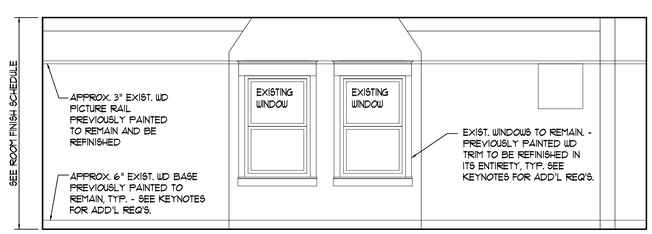

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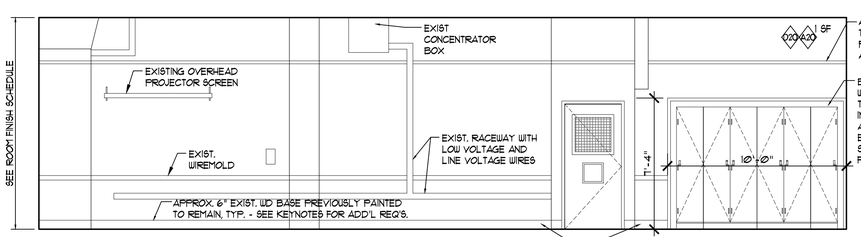

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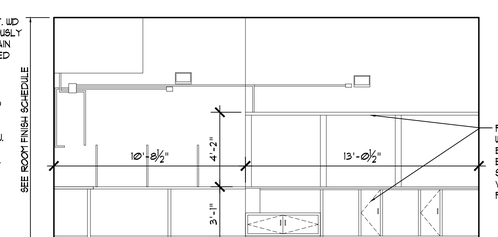

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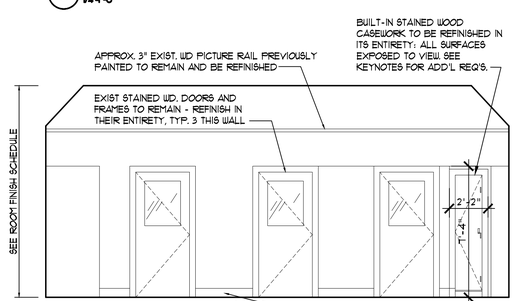

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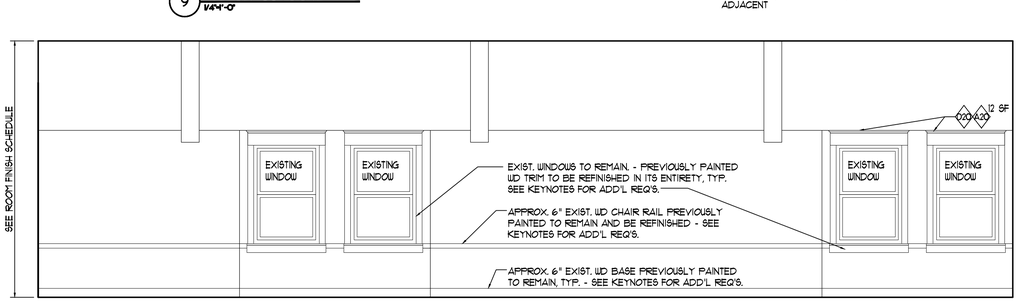

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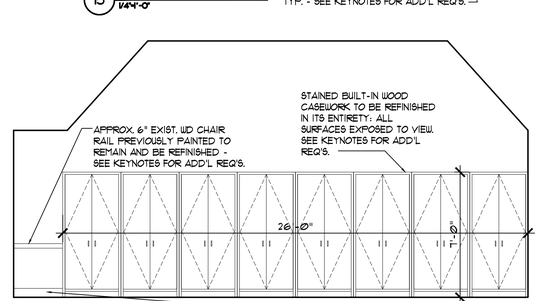

12 426 CLASSROOM 1/4"=1'-0"

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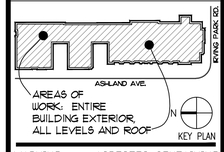

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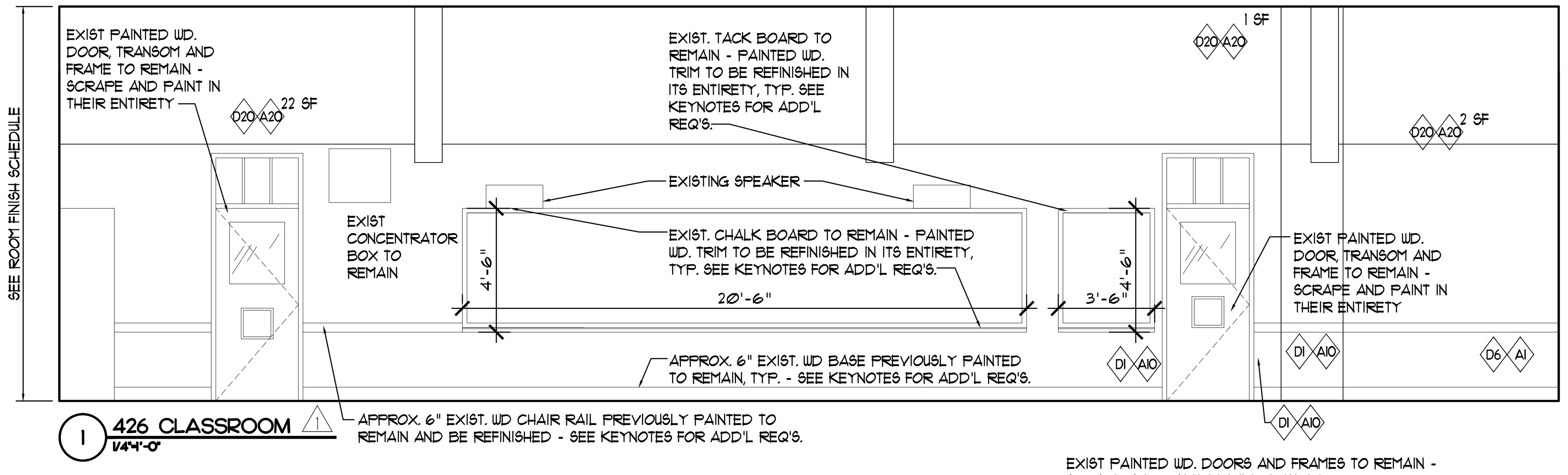
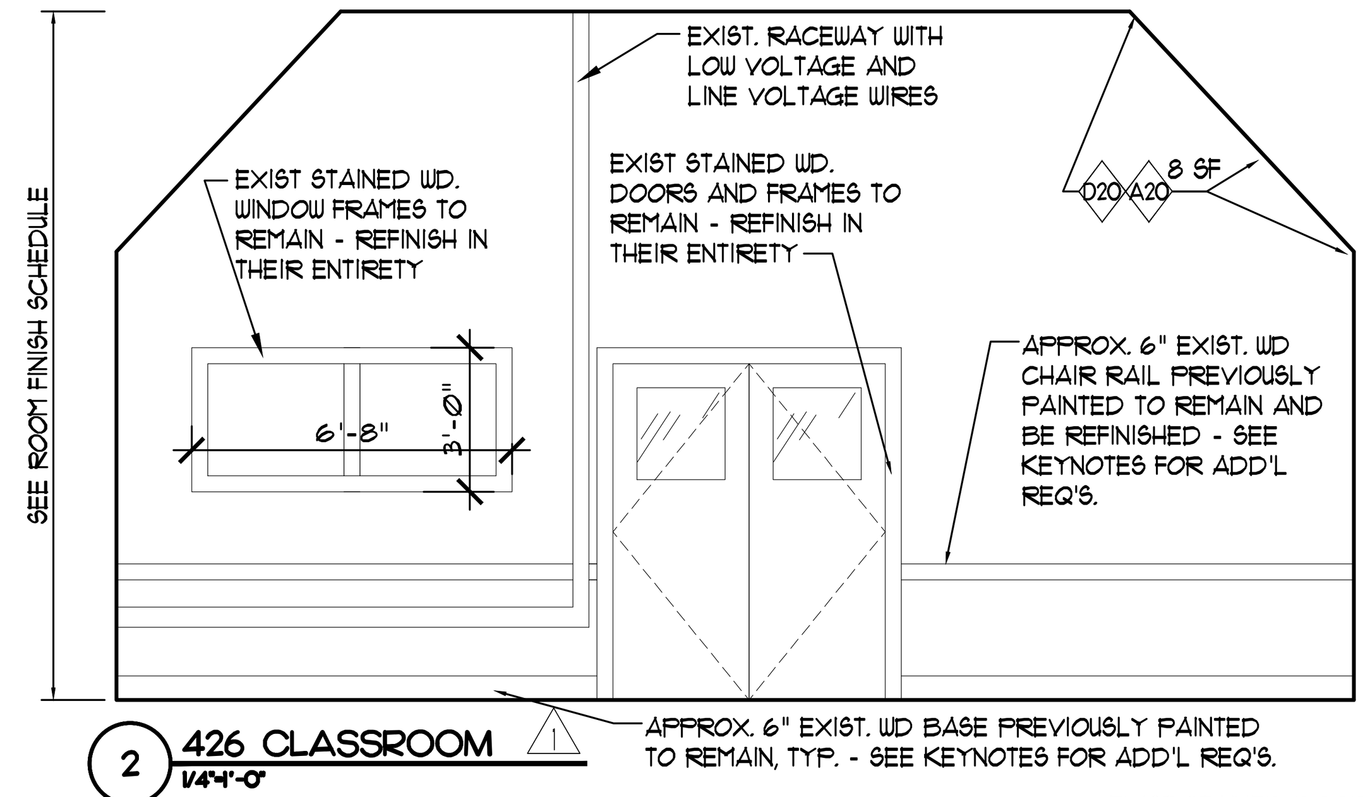
INTERIOR ELEVATIONS

DRAWING NO.

A11.4





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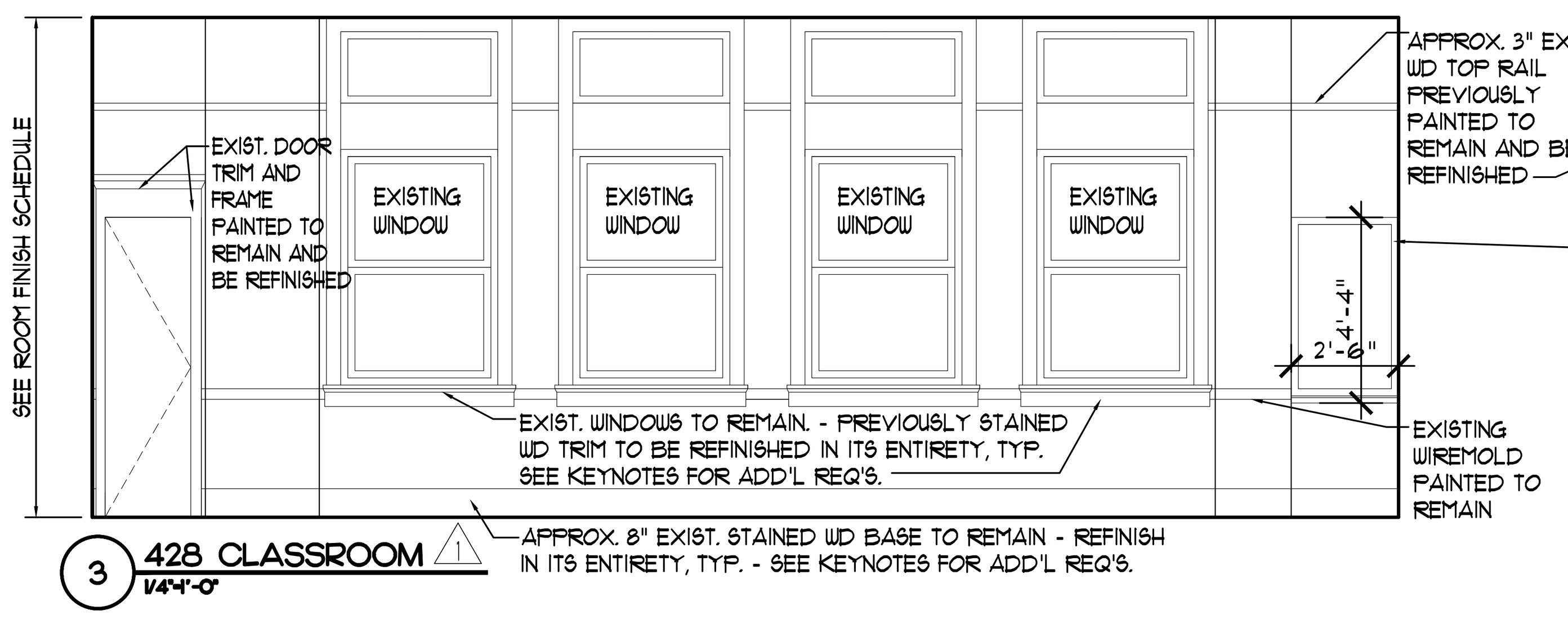
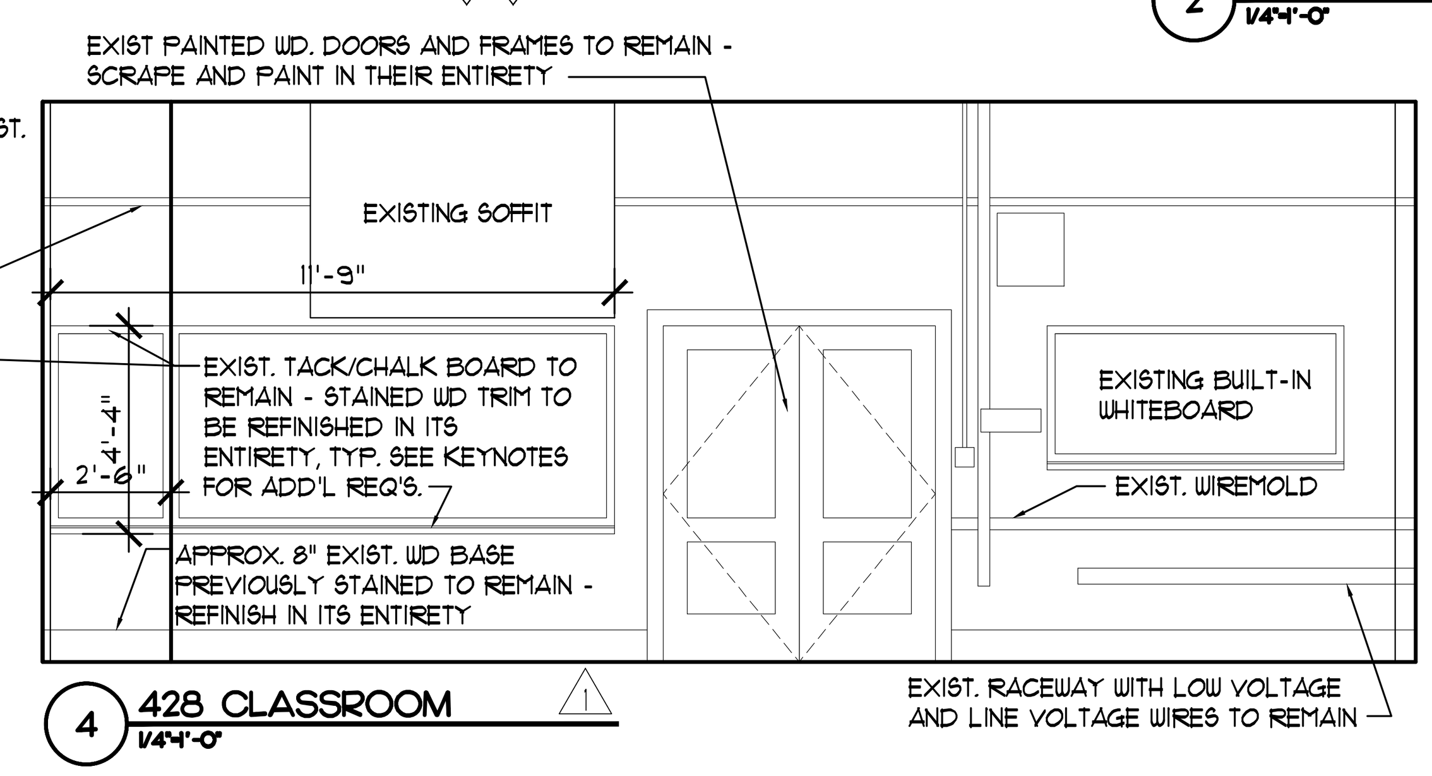
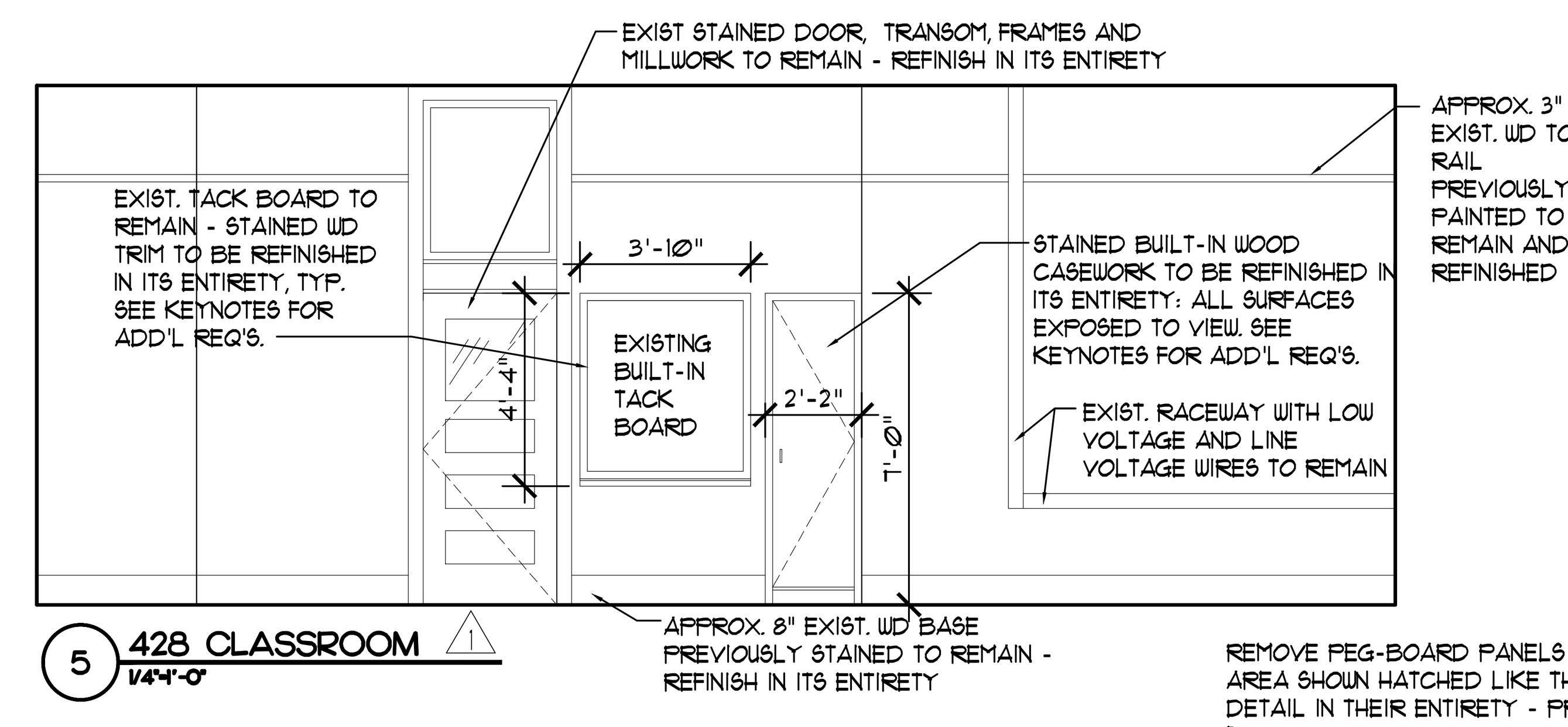
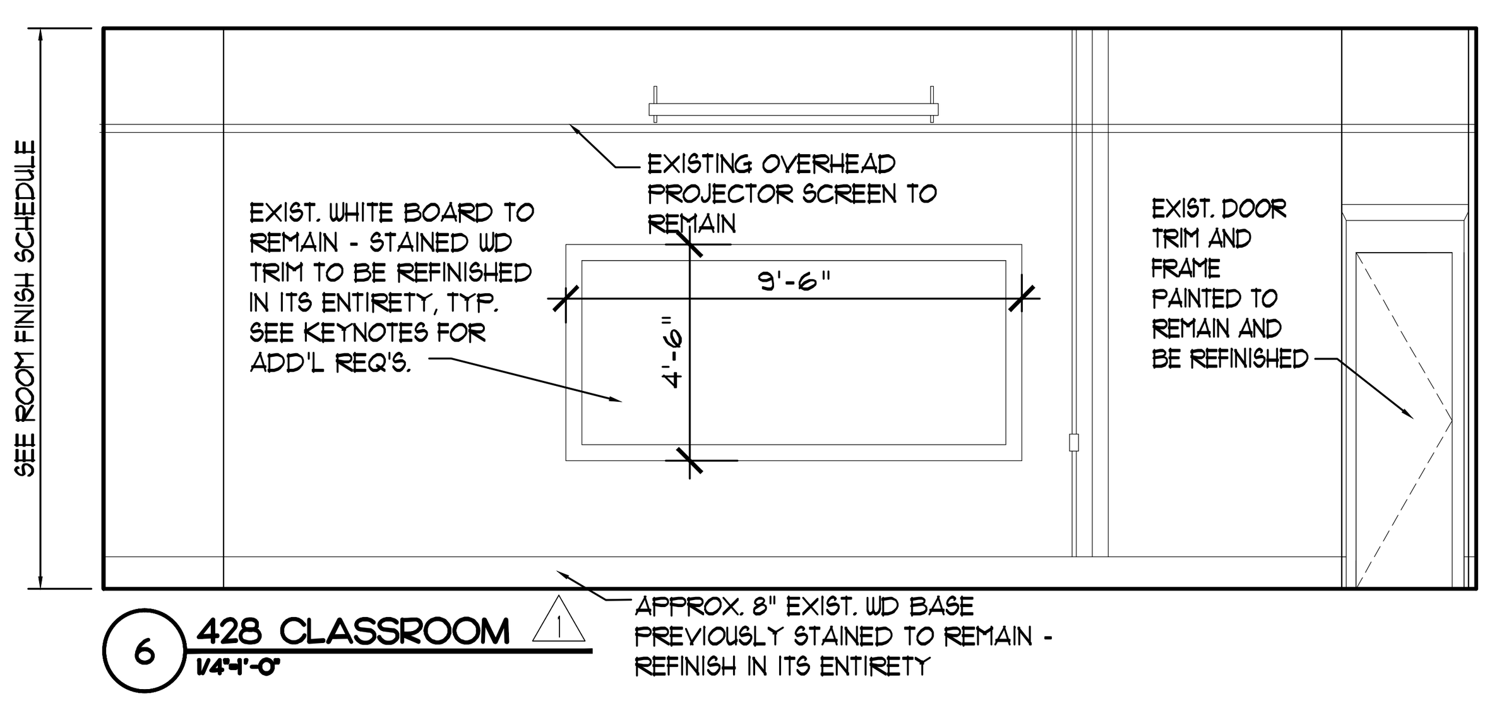
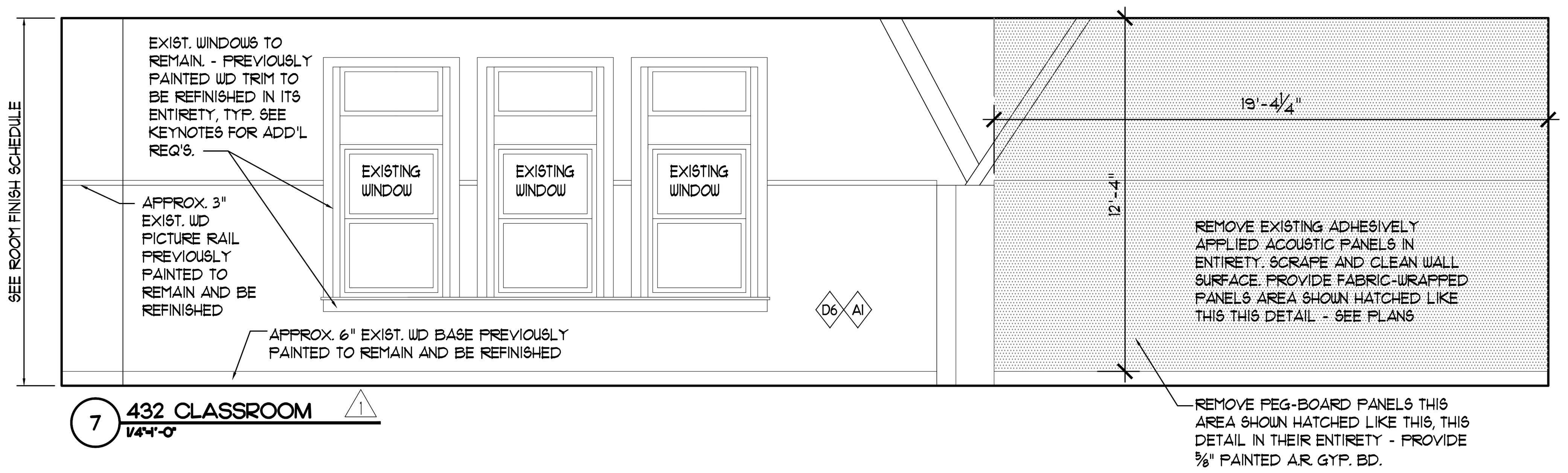
1

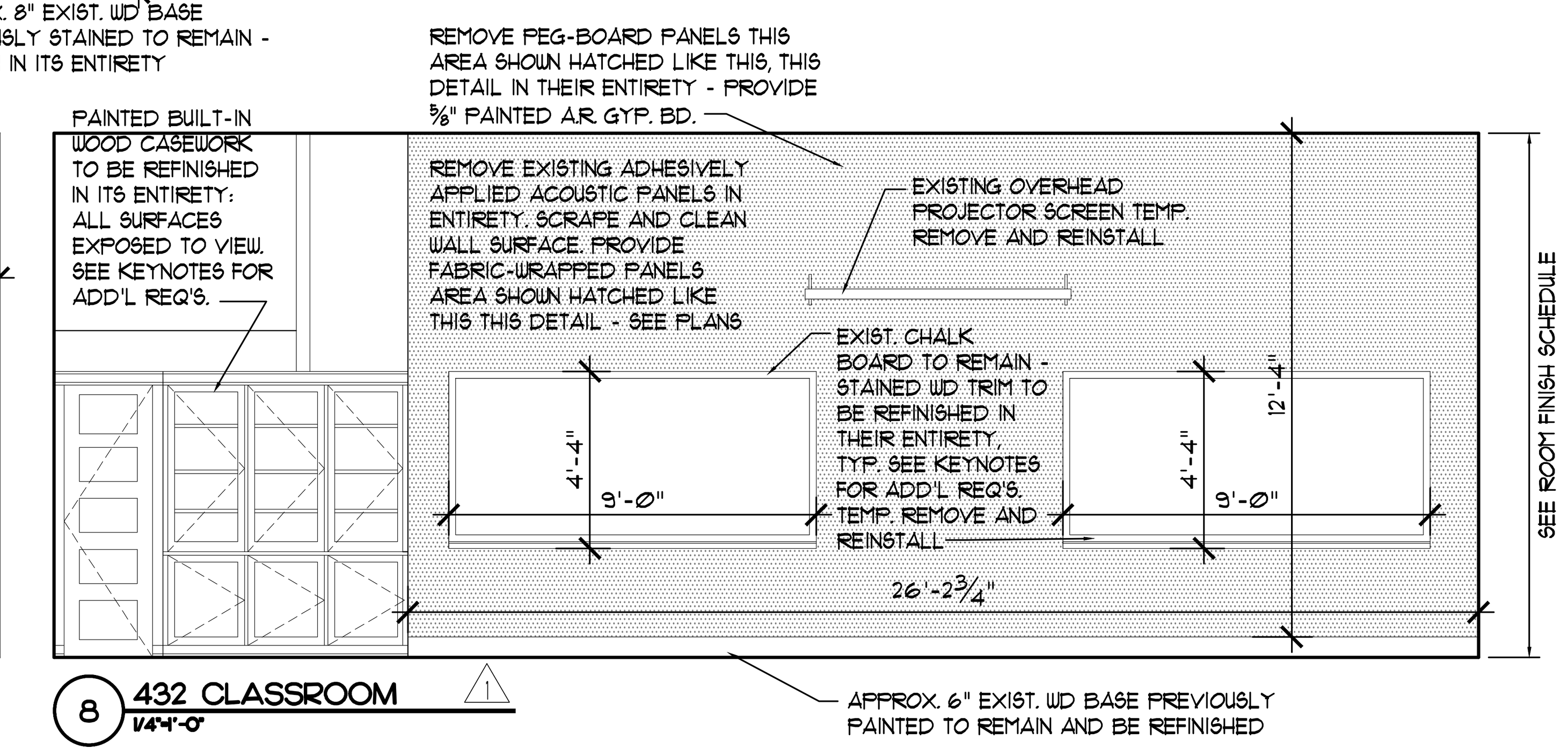


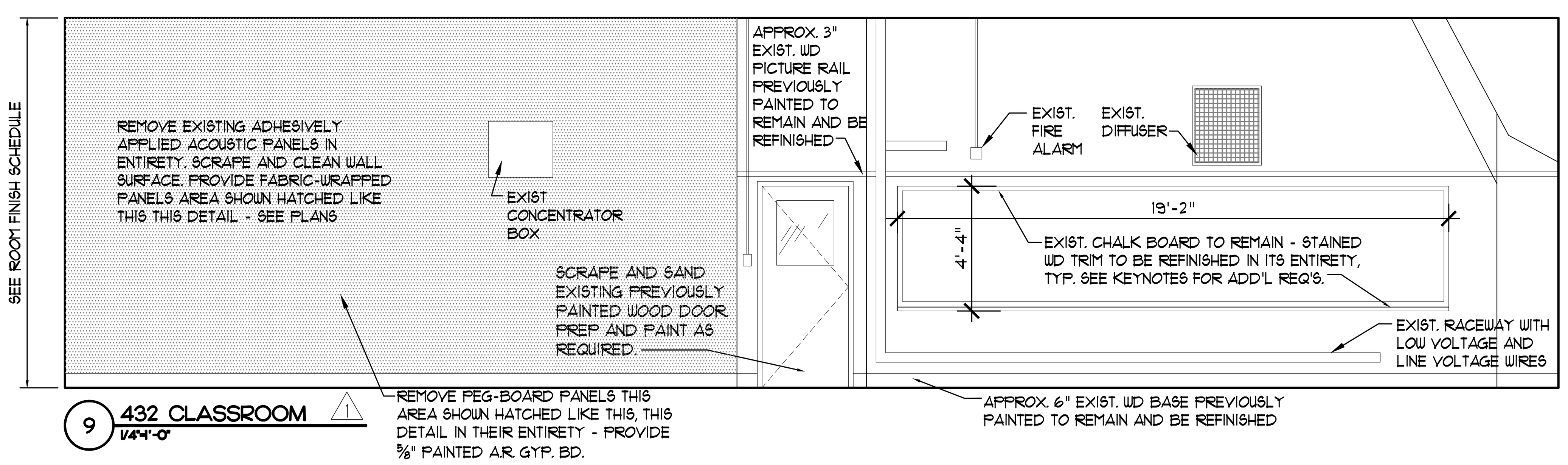


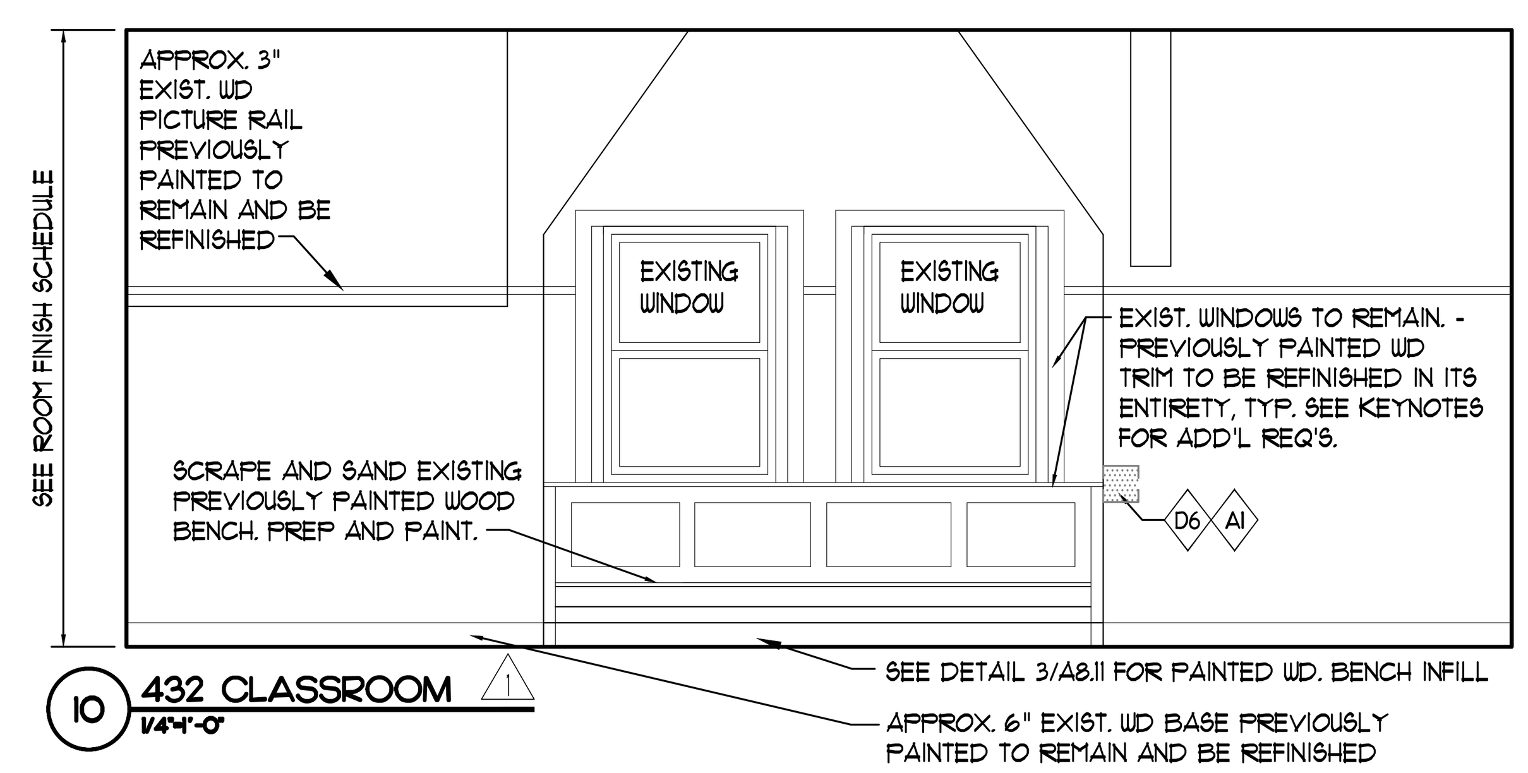


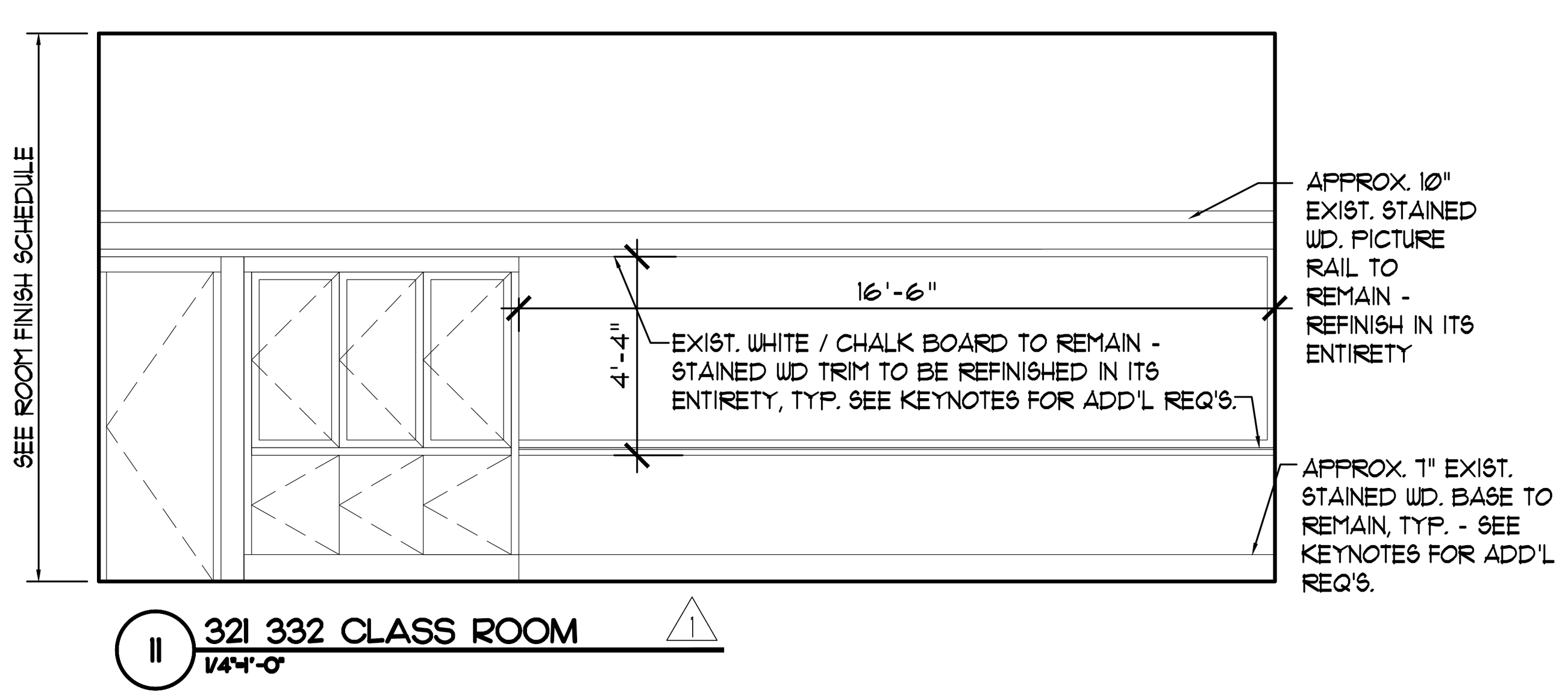


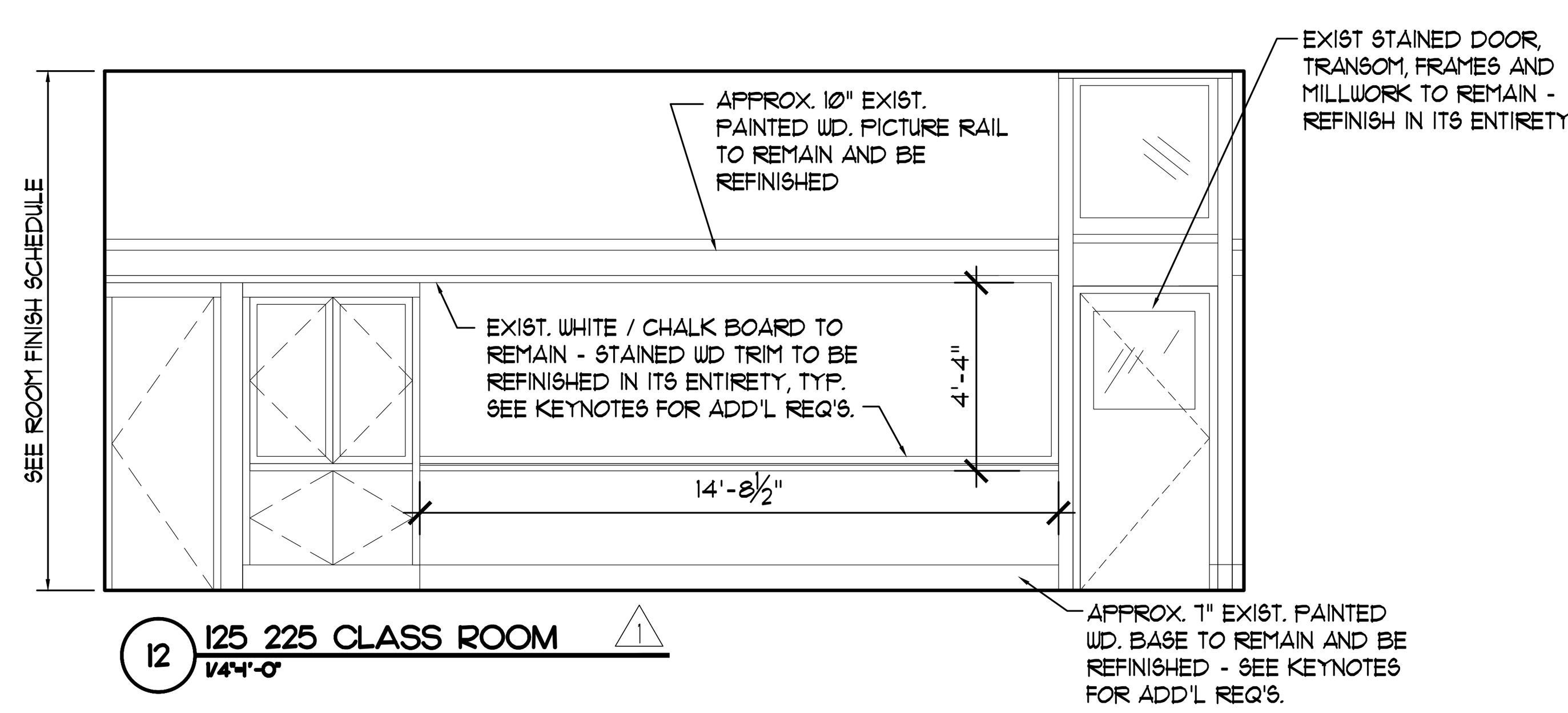












NOTE:
SEE PLAN KEYNOTES FOR ADD'L REQ'S FOR SCOPE OF WORK

GENERAL ELEVATION NOTE:
WHERE EXISTING SURFACE CONDUIT FOR REGULAR AND/OR LOW VOLTAGE WIRING CROSSES AREAS WHERE PLASTER REMOVAL, PATCHING OR DRYWALL ENCAPSULATION ARE INDICATED TO OCCUR THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:
1. REMOVE EXIST. "WIREMOLD" SERIES RACEWAY, WIRING, ETC. THIS WALL AS REQ'D. TO ACCOMMODATE PLASTER PATCHING AND/OR DRYWALL ENCAPSULATION SCOPE OF WORK. TEMP. TERMINATE CIRCUITING AND PREP. FOR PROPOSED CONNECTIONS AS REQ'D.
2. PROVIDE "WIREMOLD" SERIES #1000 OR #4000 (MATCH WIREMOLD SERIES REMOVED) RACEWAY, WIRING, ETC. THIS WALL TO REPLACE REMOVED RACEWAY, WIRING, ETC. TO MATCH CONFIGURATION OF EXIST. RE-CONNECT TO BRANCH CIRCUITING AS REQUIRED.

NOTE:
SEE ENLARGED PLANS FOR COMPLETE SCOPE OF WORK & ADD. INFO. / REQ.'S

NOTE:
ALL DIMENSIONS / ELEVATIONS INDICATED THIS SHEET ARE FOR REFERENCE AND ARE TO BE VERIFIED IN FIELD.

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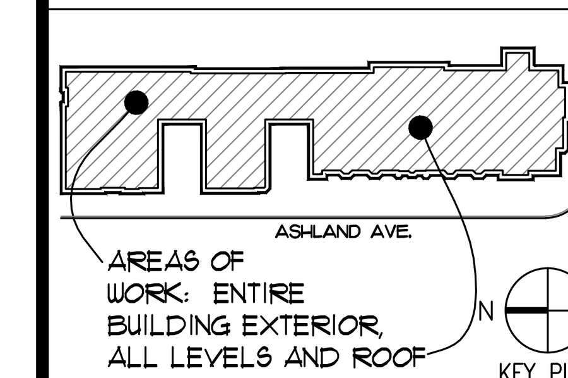
PBC PROJECT #05095
CPS PROJECT NO. 2016-46211-MCR

REVISIONS

NO.	DATE	DESCRIPTION
-	2016-04.19	30% SUBMITTAL
-	2016-05.17	60% SUBMITTAL
-	2016-06.14	60% RE-SUBMITTAL
-	2017-02.14	75% SUBMITTAL
-	2017-03.02	100% SUBMITTAL
-	2017-03.07	PERMIT SET
-	2017-03.23	PRELIMINARY OTB SET
-	2017-04.06	BID SET
1	2017-04.12	ADDENDUM #01

DRAWN BY: CCA
SCALE: VARIES
JOB: 15355
FILE:



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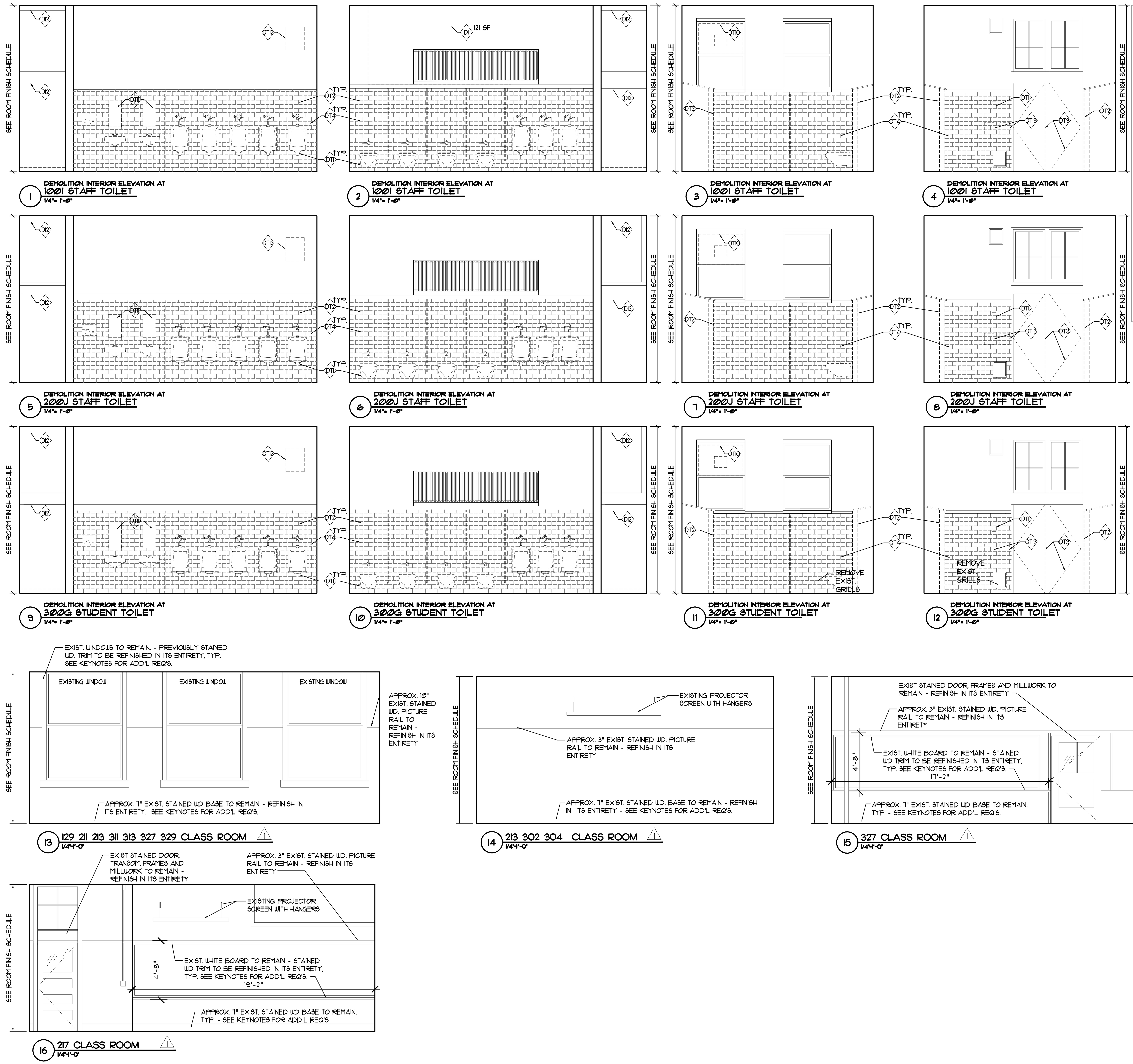
INTERIOR ELEVATIONS

DRAWING NO.

A11.5



TOILET DEMOLITION KEY NOTES

- DT1 DEMOLISH PLUMB. FIXTURES INCLUDING WATER CLOSETS AND LAVS, ALL EXISTING STALL PARTITIONS, FLOOR DRAIN AND ACCESSORIES, SHOWN DASHED - COORDINATE W/ PLUMBING DWGS.
- DT2 DEMOLISH EXISTING PLUMBING WALL.
- DT3 REMOVE EXISTING FIXED ENTRY SCREEN DOORS, FRAME/ AND TRANSOM IN THEIR ENTIRETY.
- DT4 DEMOLISH EXISTING TILES ON THE WALL UP TO WOOD TRIM. DEMOLISH WE TRIM. PREP FOR NEW INSTALLATIONS, ALL WALLS.
- DT5 REMOVE EXISTING DOOR HARDWARE.
- DT6 DEMOLISH EXISTING FLOORING AND SUBFLOOR. CAREFULLY PROTECT EXISTING WOOD BASE AND SALVAGE QUARTER ROUND SHOE FOR REINSTALLATION. DEMOLISH VINYL BASE, IF PRESENT.
- DT7 REMOVE AND CAREFULLY SALVAGE EXISTING FIXTURES TO ACCESS THE FLOOR FOR REQUIRED SCOPE OF WORK.
- DT8 DEMOLISH SHELVING & TRIM/ PATCH & PREP EXPOSED PLASTER SURFACE FOR NEW FINISH.
- DT9 DEMOLISH EXISTING CERAMIC TILE FLOORING & CERAMIC BASE IN ITS ENTIRETY.
- DT10 REPLACE TOP AND BASE SASH OF WINDOW W/ INSULATED PANEL CUT TO FIT AROUND NEW EXHAUST FAN. COORDINATE W/ MECHANICAL DWGS. DEMOLISH EXIST. EXHAUST FAN, IF PRESENT.
- DT11 SALVAGE MIRROR AND PATCH PLASTER WALL WHERE MIRROR IS REMOVED, MAKE FLUSH W/ ADJACENT WALL SURFACE AND PREP. FOR NEW FINISH.
- DT12 DEMOLISH EXIST. ELECT. HEATER AND PATCH & PREP PLASTER WALL - COORDINATE W/ ELECT. DWGS.
- DT13 DEMOLISH EXIST. ELECT. HAND DRYERS
- DT14 DEMOLISH ALL PLUMBING FIXTURES, BRACKETS, HARDWARE, ETC. IN ROOM BACK TO WALL OR FLOOR, CAP PLUMB. PIPING INSIDE WALL / BELOW FLOOR AS REQ'D. - SEE PLUMB. DRWG'S. AND SPEC'S. FOR ADD'L. REQ'S. PROVIDE WALL / FLOOR INFILL AS REQ'D. TO MATCH SURROUNDING CONSTRUCTION AND FINISHES

WALL LEGEND - CONSTRUCTION

——— (solid)	EXISTING CONSTRUCTION TO REMAIN
- - - - (dashed)	EXISTING CONSTRUCTION TO BE DEMOLISHED

NOTE:
ALL DIMENSIONS / ELEVATIONS INDICATED THIS SHEET ARE FOR REFERENCE AND ARE TO BE VERIFIED IN FIELD.

GENERAL ELEVATION NOTE:
WHERE EXISTING SURFACE CONDUIT FOR REGULAR AND/OR LOW VOLTAGE WIRING CROSSES AREAS WHERE PLASTER REMOVAL, PATCHING OR DRYWALL ENCAPSULATION ARE INDICATED TO OCCUR THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:

1. REMOVE EXIST. "WIREMOLD" SERIES RACEWAY, WIRING, ETC. THIS WALL AS REQ'D. TO ACCOMMODATE PLASTER PATCHING AND/OR DRYWALL ENCAPSULATION SCOPE OF WORK. TEMP. TERMINATE CIRCUITING AND PREP. FOR PROPOSED CONNECTIONS AS REQ'D.
2. PROVIDE "WIREMOLD" SERIES #1000 OR #4000 (MATCH WIREMOLD SERIES REMOVED) RACEWAY, WIRING, ETC. THIS WALL TO REPLACE REMOVED RACEWAY, WIRING, ETC. TO MATCH CONFIGURATION OF EXIST. RE-CONNECT TO BRANCH CIRCUITING AS REQUIRED.

NOTE:
SEE ENLARGED PLANS FOR COMPLETE SCOPE OF WORK & ADD. INFO. / REQ.'S

NOTE:
ALL DIMENSIONS / ELEVATIONS INDICATED THIS SHEET ARE FOR REFERENCE AND ARE TO BE VERIFIED IN FIELD.

DEMOLITION KEY NOTES:

- D1 SELECTIVELY DEMOLISH AREA OF DAMAGED EXIST. PLASTER FINISH @ WALL DOWN TO SOUND PLASTER BASE COAT AS REQ'D. TO ACCOMMODATE PLASTER PATCHING. AT 5% OF AREA INDICATED, WHERE PLASTER BASE COAT & METAL LATH CANNOT BE SALVAGED, SELECTIVELY DEMO. EXIST. PLASTER & EXIST. MTL. LATH DOWN TO SUBSTRATE, OUT TO SOUND PLASTER. SEE TARGET FOR APPROX. S.F. EXIST. WALL MTD. DUCTWORK & PIPING, THIS AREA, TO BE DETACHED FROM WALL, BUT TO REMAIN IN PLACE IN ORDER TO ACCOM. WORK. CONTRACTOR TO PROTECT & SUPPORT THESE ELEMENTS AS REQ'D DURING WORK. EXIST. WD. TRIM / BUILT-IN CHALK / TACK BD., THIS AREA, TO BE REMOVED & SALVAGED FOR RE-INSTALL. EXIST. WALL MTD. ELEC. CONDUIT / RACEWAY & ASSOC. WIRING, THIS AREA, TO BE REMOVED BACK TO NEAREST JUNCTION BOX. SEE INT. ELEVS. FOR ADD. INFO.
- D2 SELECTIVELY DEMOLISH AREA OF DAMAGED EXIST. PLASTER FINISH @ CEILING DOWN TO SOUND PLASTER BASE COAT AS REQ'D. TO ACCOM. PLASTER PATCHING. AT 5% OF AREA INDICATED, WHERE PLASTER BASE COAT & METAL LATH CANNOT BE SALVAGED, SELECTIVELY DEMO. EXIST. PLASTER & EXIST. MTL. LATH, DOWN TO SUBSTRATE, OUT TO SOUND PLASTER. SEE TARGET FOR APPROX. S.F. EXIST. WALL MTD. DUCTWORK & PIPING, THIS AREA, TO BE DETACHED FROM WALL, BUT TO REMAIN IN PLACE IN ORDER TO ACCOM. WORK. CONTRACTOR TO PROTECT & SUPPORT THESE ELEMENTS AS REQ'D DURING WORK. EXIST. WD. TRIM, THIS AREA, TO BE REMOVED & SALVAGED FOR RE-INSTALL. EXIST. WALL MTD. ELEC. CONDUIT / RACEWAY & ASSOC. WIRING, THIS AREA, TO BE REMOVED BACK TO NEAREST JUNCTION BOX. SEE INT. ELEVS. FOR ADD. INFO.
- D3 TEMPORARILY RELOCATE ALL FURNITURE, EQUIPMENT, BOOKSHELVES AND THEIR CONTENTS FROM ROOM, SECURELY STORE IN AN AREA AWAY FROM CONSTRUCTION.
- D4 EXIST. LOCKERS, RELATED TRIM, FILLER PANELS AND SURROUNDS TO BE REMOVED IN THEIR ENTIRETY
- D5 SELECTIVELY DEMOLISH AREA OF DAMAGED EXIST. PLASTER CEILING PER KEYNOTE 'D2' SPECIFICATIONS. PROVIDE PLASTER FINISH COAT AT THIS LOCATION PER KEYNOTE 'A11' SPECIFICATION ON A9.X SHEETS. SEE TARGET FOR APPROX. QUANTITY.
- D6 SELECTIVELY DEMOLISH AREA OF DAMAGED EXIST. PLASTER WALL PER KEYNOTE 'D1' SPECIFICATIONS. PROVIDE PLASTER FINISH COAT AT THIS LOCATION PER KEYNOTE 'A10' SPECIFICATION ON A9.X SHEETS. SEE TARGET FOR APPROX. QUANTITY.
- D7 DEMOLISH EXISTING DOOR, FRAME AND HARDWARE IN ENTIRETY.
- D8 REMOVE 2'-0"x4'-0" ACOUSTIC CEILING TILES IN THIS ROOM ENTIRELY. GRID, FIXTURES AND GRILLES TO REMAIN IN PLACE.
- D9 EXIST. 2'-0"x4'-0" SUSP. A.C.T. CEILING TILES AND GRID TO BE TEMP. REMOVED THIS AREA AS REQ'D. TO ACCOMMODATE PROPOSED SCOPE OF WORK, AND SALVAGED FOR REINSTALLATION - REMOVE GRID AND TILES AS NECESSARY BACK TO NEAREST CONT. SPLINE. REFER TO REFL. CL'G. PLANS FOR ADD'L. REQ'S.
- D10 REMOVE EXIST. QUARTER ROUND SHOE OR EXIST. VINYL BASE WHERE PRESENT (EXIST WD. BASE TO REMAIN), THIS ROOM IN ITS ENTIRETY. REFER TO ROOM FINISH SCHEDULE FOR NEW FINISHED FLOOR. WHERE SCOPE OF WORK INCLUDES PROVIDING NEW VCT FLOOR FIN OVER EXIST. VCT, PREPARE EXIST. FLOOR BY PROVIDING A MIN. OF 10 SF OF SELF LEVELING FLOOR PATCH TO RECEIVE NEW ENCAPSULATING UNDERLAYMENT. WHERE SCOPE OF WORK INCLUDES REFINISHING EXIST. WOOD FLOOR, PREPARE EXIST. WOOD FLOOR FOR REFINISHING, TYP. IN ROOMS WHERE EXISTING WOOD FLOOR IS ALREADY THE VISIBLE FINISH FLOOR SYSTEM.
- D11 SCRAPE PORTION OF PAINTED WOOD TRIM WHERE PAINT IS PEELING, AND SAND SMOOTH, THIS LOCATION. SEE TARGET FOR APPROX. QUANTITY.
- D12 WORK AT EXISTING, PREVIOUSLY STAINED WOOD WINDOW TRIM, PICTURE RAIL TRIM, DOOR TRIM, DOOR AND TACKBOARD/CHALKBOARD TRIM, WALL BASE, THIS ROOM IN THEIR ENTIRETY:
  - REMOVE ALL BRACKETS, SCREWS, STAPLES, TAPE, ETC.
  - STRIP TRIM FINISH, IN ITS ENTIRETY, W/ CHEMICAL OR SOLVENT STRIPPER APPROPRIATE TO EXIST. FINISH.
  - SEE INT. ELEVS. FOR TYPICAL CONFIGURATION
- D13 WORK AT EXISTING, PREVIOUSLY STAINED WOOD STORAGE CABINET:
  - REMOVE ALL BRACKETS, NAILS, SCREWS, STAPLES, TAPE ETC
  - STRIP FINISH @ ALL EXPOSED SURFACES, INCLUDING INSIDE FACE OF SHELVING UNIT, W/ CHEMICAL OR SOLVENT STRIPPER APPROPRIATE TO EXIST. FINISH. .
  - SEE A11.3 FOR CONFIGURATION & ADDITIONAL INFORMATION.
- D14 REMOVE AND REPLACE SECTION OF DAMAGED TRIM. SEE TARGET FOR QUANTITY.
- D15 DEMOLISH EXISTING LIGHT FIXTURES INCLUDING WIRING BACK TO NEAREST JUNCTION BOX AND CAP. DEMOLISH ALL RELATED CONDUIT AND JUNCTION BOXES. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL REQ'S.
- D16 REFER TO KEYNOTE "D10" ABOVE.
- D17 DEMOLISH EXISTING SOFFIT, REPAIR WALL AND CEILING. PREP AND PAINT CEILING.
- D18 DEMOLISH EXISTING GLAZED TILE HALF WALL AND PREP TO MAKE NEW FLOORING FLUSH
- D19 DEMOLISH AND CAP EXISTING FIXTURE. REFER TO PLUMBING DRAWINGS. PATCH PLASTER WALL WHERE FIXTURE WAS REMOVED
- D20 PATCH AND PAINT EXISTING 12" X 12" ADHERED TILE CEILING, ENTIRE CEILING.
- D21 PATCH AND PAINT EXISTING 12" X 12" ADHERED WALL TILE, IN THIS ROOM ENTIRELY
- D22 DEMOLISH EXISTING FLOORING AND SUBFLOOR / SUBSTRATE DOWN TO STRUCTURAL DECK / CONC. SLAB, AREA SHOWN HATCHED LIKE THIS, THIS DETAIL. REMOVE EXIST. QUARTER ROUND SHOE / 2" TALL WD. BASE OR EXIST. VINYL BASE WHERE PRESENT (EXIST WD. BASE TALLER THAN 2" TO REMAIN). REFER TO A6.X SERIES SHEETS, ROOM FINISH SCHEDULE FOR FINISH FLOORING MATERIAL AND DETAILS FOR ADD'L. REQ'S.
- D23 SCARIFY EXIST. CONC. REMOVE BASE WHERE PRESENT (EXIST WD. BASE TO REMAIN), THIS AREA IN ITS ENTIRETY SHOWN HATCHED LIKE THIS, THIS DETAIL. AT AREAS OF DAMAGED CONC. SLAB, REMOVE SECTION OF S.F. NOTED ON KEYNOTE TAG TO MIN. 1/2" DEPTH OR AS REQ'D. TO REACH SOUND CONC. PROVIDE "MAPEI" #ULTRA-TOP PC PATCHING INFILL AS REQ'D. DUE TO EXTENTS OF DEMO. SEE VAPOR BARRIER NOTE ON A1.1
- D24 SELECTIVELY DEMOLISH EXISTING CONC. SLAB / TERRAZZO FLOORING DOWN TO DEPTH AS REQ'D. TO ACCOMMODATE PROPOSED SCOPE OF WORK: DETECTABLE WARNING STRIP AT TOP OF STAIRS, TYP.
- D25 TEMP. REMOVE EXIST. RADIATOR AND METAL RADIATOR CABINET. TEMP. CAP PIPING IN FLOOR AS REQ'D. SALVAGE RADIATOR / RADIATOR CABINET AND REINSTALL FOLLOWING FLOOR REPLACEMENT WORK - TYP. OF "X" RADIATOR / RADIATOR CABINETS THIS AREA: "R-1", QUANTITY INDICATED AT KEYNOTE TAG
- D26 TEMP. REMOVE EXIST. LADDER CAGE, CAST IRON LADDER AND BRACKETS AND SALVAGE FOR REINSTALLATION. PATCH / INFILL PLASTER AS REQ'D. DUE TO DAMAGE. REINSTALL LADDER AND MESH CAGE FOLLOWING FLOORING INSTALLATION. MECH. ANCHOR TO WALL AND FLOOR. SAND WOOD FRAME AND HATCH AT CEILING AND PAINT IN THEIR ENTIRETY. PAINT PLASTER CEILING SCUTTLE IN ITS ENTIRETY
- D27 REMOVE EXIST. METAL LOCKERS WITH INTEGRAL METAL CURBS THIS AREA. TURN OVER TO OWNER AND STORE IN LOCATION AS DIRECTED BY OWNER. SEE KEYNOTE TAG FOR QUANTITY.
- D28 DEMOLISH EXISTING 12" X 12" ADHERED TILE CEILING & 8" TILE ARCHES DUE TO ROOF VENT PENETRATION.
- D29 DEMOLISH EXISTING WALL IN ITS ENTIRETY AT EXTENTS INDICATED, AND AS REQ'D. TO ACCOMMODATE PROPOSED SCOPE OF WORK. RE-ROUTE EXIST. CONDUIT / WIRING AND RELOCATE DEVICES AS NECESSARY. PROVIDE STEEL LINTELS AT MASONRY WALLS WHERE REQUIRED - SEE STRUCTURAL DRAWINGS FOR ADD'L. REQ'S.
- D30 REMOVE EXISTING CARPET FLOORING, CARPET PAD, NAILERS, ETC. IN THEIR ENTIRETY TO DECK BELOW. CAREFULLY SALVAGE EXISTING WOOD SHOE AND BASE FOR REINSTALLATION. RUBBER BASE IF PRESENT SHALL BE DEMOLISHED.
- D31 DEMOLISH EXISTING WINDOW SHADES, HARDWARE IN THEIR ENTIRETY - PATCH / INFILL DAMAGED SURFACES AS REQ'D.

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PBC PROJECT #05095
CPS PROJECT NO. 2016-46211-MCR

REVISIONS

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-	2016-04.19	30% SUBMITTAL
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1	2017-04.12	ADDENDUM #01

DRAWN BY:	CCA
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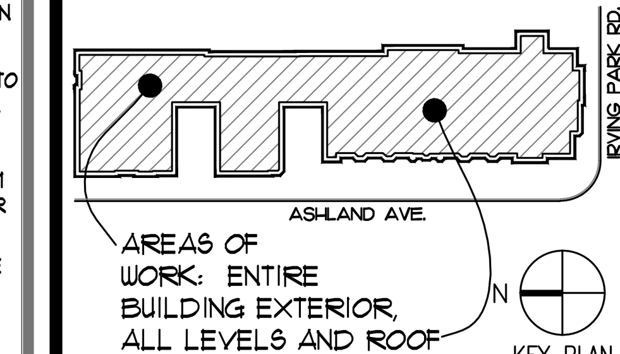

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INTERIOR ELEVATIONS

DRAWING NO.

A11.6

GENERAL SYMBOLS

- G — NATURAL GAS
- LINE ARROW INDICATES DIRECTION OF FLOW
- PIPE ELBOW (TURNED UP)
- PIPE ELBOW (TURNED DOWN)
- PIPE TEE HORIZONTAL
- SQUARE HEAD COCK
- T — WALL MOUNTED ELECTRIC THERMOSTAT
- SUPPLY DIFFUSER
- RETURN GRILLE
- ROOF EXHAUST FAN
- RIGID ROUND ELBOW WITH FLEXIBLE DUCT
- VOLUME DAMPER
- UC (DG) — DG: DOOR GRILLE; UC: DOOR UNDERCUT
- T — STEAM TRAP
- SD — SMOKE DETECTOR
- PIPE REDUCER
- GATE VALVE
- ANGLE VALVE
- SHUT OFF VALVE
- CHECK VALVE
- OS&Y
- UNION
- CONTROL VALVE
- SHUT OFF VALVE (N.C)

IDENTIFICATION SYMBOLS

- X — KEYED NOTE TAG
- X / X — EQUIPMENT TAG; EQUIPMENT TAG NO.
- X / M-X — SECTION NUMBER; DRAWING ON WHICH SECTION IS SHOWN
- X / M-X — DETAIL NUMBER; DRAWING ON WHICH DETAIL IS LOCATED
- NC — POINT OF NEW CONNECTION BETWEEN EXISTING & NEW WORK
- A 8"ø NK / 220 CFM — AIR DEVICE DATA; NECK SIZE; AIR FLOW QUANTITY (CFM); AIR DEVICE TAG

ABBREVIATIONS

AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
BHP	BRAKE HORSE POWER
BTUH	BRITISH THERMAL UNIT PER HOUR
BV	BALL VALVE
CFM	CUBIC FEET PER MINUTE
CO	CLEANOUT
CTP	COOLING TOWER PUMP
CTR	COOLING TOWER WATER RETURN
D	DRAIN LINE
DB	DRY BULB
DN	DOWN
[E]	EXISTING TO REMAIN
EAR	EXHAUST AIR REGISTER
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
EXD	EXHAUST DUCT
F	FAHRENHEIT
FC	FLEXIBLE CONNECTOR
FD	FIRE DAMPER
FPM	FEET PER MINUTE
G	GAS PIPING
G.C.	GENERAL CONTRACTOR
HP	HORSEPOWER
HPU	HEAT PUMP UNIT
LAT	LEAVING AIR TEMPERATURE
LPS	LOW PRESSURE STEAM
NC	NEW CONNECTION
N.I.C	NOT IN CONTRACT
NK	NECK
OS&Y	OUTSIDE STEM & YOKE GATE VALVE
P.C.	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PH	PHASE
PRV	PRESSURE REDUCING VALVE
PS	PIPE SLEEVE
PSI	POUNDS PER SQUARE INCH
[R]	EXISTING TO BE REMOVED
RAD	RETURN AIR DUCT
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT
SP	STATIC PRESSURE
SAD	SUPPLY AIR DUCT
SAR	SUPPLY AIR REGISTER
TFB	TO FLOOR BELOW
TSP	TOTAL STATIC PRESSURE
VD	VOLUME DAMPER
V.I.F.	VERIFY IN FIELD
UC	UNDERCUT DOOR
WB	WET BULB
WC	WATER COLUMN
WG	WATER GAUGE
WT	WEIGHT
EBH	ELECTRIC BASEBOARD HEATER
EWH	ELECTRIC WALL HEATER
GUH	GAS FIRED UNIT HEATER

NOTE:

1. THIS IS A GENERAL SYMBOL LIST THEREFORE SOME ITEMS MAY NOT DIRECTLY APPLY TO THIS PROJECT AND DRAWINGS.
2. DISREGARD SYMBOLS AND ABBREVIATIONS WHICH DO NOT APPLY TO THIS PROJECT.

CITY OF CHICAGO VENTILATION NOTES

1 NOISE LEVEL OF ALL HVAC EQUIPMENT SHALL NOT EXCEED 55 DECIBELS AT LOT LINE.
2 ALL DUCTS SHALL BE FABRICATED OF SHEET METAL, ACCORDING TO SMACNA STANDARDS.
3 FRESH AIR INTAKE SHALL BE A MINIMUM OF 15'-0" FROM CONTAMINANTS AND A MINIMUM OF 10'-0" ABOVE GRADE.
4 ALL FLEXIBLE DUCTWORK SHALL BE APPROVED BY THE CITY OF CHICAGO, SHALL BE INSULATED, SHALL ONLY BE USED FOR LOW PRESSURE SYSTEMS, AND SHALL NOT EXCEED 5'-0" IN LENGTH.
5 TRANSFER DUCTS SHALL NOT EXCEED 5'-0" IN LENGTH.
6 GAS PIPING AND CONTROLS MUST CONFORM TO INTERNATIONAL FUEL GAS CODE (IFGC) CHAPTER 4 WITH MODIFICATIONS AS NOTED IN ARTICLE 14.
7 GAS PIPES SHALL BE SLOPPED AT 1/4" EVERY 15 FEET.
8 LOCATIONS OF GAS OUTLETS MUST CONFORM TO IFGC 409.13.
9 APPLIANCES' SHUT OFF LOCATIONS MUST CONFORM TO IFGC 409.13.
10 VENTING OF ALL GAS FUELED EQUIPMENT MUST CONFORM TO THE INTERNATIONAL FUEL GAS CODE (IFGC).
11 THE MAXIMUM DESIGN OPERATING PRESSURE FOR GAS PIPING SYSTEMS LOCATED INSIDE BUILDINGS SHALL NOT EXCEED 5 PSIG.
12 GAS PIPING MATERIALS MUST CONFORM TO THE GAS PIPING AND TUBING MATERIALS MATRIX (IFGC 403 REQUIREMENTS).
13 ALL HVAC WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE CHICAGO BUILDING CODE.
14 EVAPORATIVE AND COOLING DEVICES THAT PRODUCE CONDENSATE MUST BE DRAINED. CONDENSATE SHALL BE COLLECTED TO AN APPROVED PLACE OF DISPOSAL.
15 INSTALL PRESSURE RELIEF VALVE ON THE HIGH SIDE OF THE REFRIGERATION SYSTEM, UPSTREAM OF ANY INTERVENING VALVES.
16 REMOVE EXPANSION VALVES, DEVICES AND CONNECTIONS FROM AIRSTREAM.
17 REFRIGERANT PIPING SHALL BE TYPE OR TYPE ACR. NO REFRIGERANT LINES SHALL BE LOCATED IN UNDER STAIRS, FIRE ESCAPES, HALLWAYS, ANY ELEVATORS, DUMBWAITER, OR SHAFT CONTAINING MOVING OBJECTS OR IN STAIRWELLS OR OTHER MEANS OF EXIT.
18 ALL REFRIGERANT CONNECTIONS AND DEVICES SHALL BE BRAZED.
19 CONDENSATION PROTECTION SHALL BE PROVIDED WHEREVER CONDENSATION MAYBE EXPECTED TO OCCUR ON PIPING WHICH COULD CAUSE A SAFETY HAZARD TO OCCUPANTS, STRUCTURE, EQUIPMENT, ETC.

MECHANICAL COORDINATION NOTES

MECHANICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES INCLUDING BUT NOT NECESSARILY LIMITED TO THE FOLLOWING:

1. INDICATE THE PROPOSED LOCATIONS OF PIPING, DUCTWORK, EQUIPMENT, AND MATERIALS. INCLUDE THE FOLLOWING:
   - A. DUCTWORK MAINS AND BRANCHES, SIZE AND LOCATION, FOR BOTH EXTERIOR AND INTERIOR; LOCATIONS OF DAMPERS AND OTHER CONTROL DEVICES; FILTERS, BOXES, AND TERMINAL UNITS REQUIRING PERIODIC MAINTENANCE OR REPAIR.
   - B. MAINS AND BRANCHES OF ALL PIPING SYSTEMS, WITH VALVES AND CONTROL DEVICES LOCATED AND NUMBERED, UNIONS LOCATED, AND WITH ITEMS REQUIRING MAINTENANCE. INDICATE ACTUAL INVERTS AND HORIZONTAL LOCATIONS OF UNDERGROUND PIPING.
   - C. EQUIPMENT LOCATIONS (EXPOSED AND CONCEALED), DIMENSIONED FROM PROMINENT BUILDING LINES.
   - D. CLEARANCES FOR INSTALLING AND MAINTAINING INSULATION.
   - E. CLEARANCES FOR SERVING AND MAINTAINING EQUIPMENT, INCLUDING TUBE REMOVAL, FILTER REMOVAL, ETC.
   - F. EQUIPMENT CONNECTIONS AND SUPPORT DETAILS.
   - G. EXTERIOR WALL AND FOUNDATION PENETRATIONS.
   - H. FIRE-RATED WALL AND FLOOR PENETRATIONS.
   - I. SIZES AND LOCATION OF REQUIRED CONCRETE PADS AND BASES.
   - J. VALVE STEM MOVEMENT.
   - K. INDICATE LOCATION OF ALL EQUIPMENT, DUCTWORK, PIPING, ETC., WITH DIMENSIONS FROM PROMINENT BUILDING LINES; AND ELEVATIONS ABOVE CORRESPONDING FLOORS, ROOFS OR GRADE AS APPLICABLE.
2. INDICATE SCHEDULING, SEQUENCING, MOVEMENT, AND POSITIONING OF LARGE EQUIPMENT INTO THE BUILDING DURING CONSTRUCTION.
3. PREPARE FLOOR PLANS, ELEVATIONS, AND DETAILS TO INDICATE PENETRATIONS IN FLOORS, WALLS, AND CEILINGS AND THEIR RELATIONSHIP TO OTHER PENETRATIONS AND INSTALLATIONS.
4. PREPARE REFLECTED CEILING PLANS TO COORDINATE AND INTEGRATE INSTALLATIONS, DUCTWORK, LIGHT FIXTURES, PIPING, AND OTHER CEILING-MOUNTED ITEMS. DIMENSION ALL ITEMS FROM PROMINENT BUILDING LINES.
5. SUBMIT ALL COORDINATION DRAWINGS AND/OR SHOP DRAWINGS PRIOR TO PURCHASE, FABRICATION, OR INSTALLATION OF ANY EQUIPMENT. ANY WORK STARTED OR EQUIPMENT PURCHASED PRIOR TO THE REVIEW OF SUBMITTED DRAWINGS BY THE ARCHITECT/ENGINEER IS DONE AT THE CONTRACTOR'S RISK. THE OFFENDING CONTRACTOR SHALL BE ENTIRELY RESPONSIBLE FOR ALL CHANGES, MODIFICATIONS, AND/OR EXTRA SERVICES REQUIRED RESULTING FROM THE IMPROPER COORDINATION AND/OR IMPROPER SUBMITTAL PROCESS.
6. ENCIRCLE OR BUBBLE ANY REVISIONS MADE ON DRAWINGS BEING SUBMITTED MORE THAN ONE TIME. INDICATE ALL REVISIONS OR CHANGES MADE SUBSEQUENT TO THE PREVIOUS SUBMITTAL REVIEWED BY THE ARCHITECT/ENGINEER.

GENERAL NOTES ON STEAM TRAPS, DAMPERS, RADIATORS, & INSULATIONS

1. TAG AND TEST ALL STEAM TRAPS. PROVIDE ALLOWANCE TO REPLACE 40 TRAPS ON A TOTAL OF APPROXIMATELY 150. REPLACEMENT SHALL INCLUDE ISOLATION VALVES, BYPASS, AND STRAINER.
2. ALL EXISTING DAMPERS (RETURN, BYPASS, OUTDOOR) SHALL BE CLEANED AND DEGREASED, SHAFTS AND LINKAGES LUBRICATED AND ADJUSTED. STRAIGHTEN BLADES AS REQUIRED AND EXERCISE DAMPERS TO OPERATE FROM FULL OPEN TO FULL CLOSE WITHOUT BINDING.
3. INSTALL TEMPERATURE STAND-ALONE CONTROL VALVES, UNIONS, AND ISOLATION VALVES ON RADIATORS WITHOUT CONTROLS. PROVIDE ALLOWANCE TO INSTALL 60 CONTROL VALVES CORRIDORS AND CLASSROOMS INCLUDING THOSE SHOWN ON M1.1 THRU M1.3.
4. PROVIDE INSULATIONS ON PIPES WITH DAMAGED INSULATIONS. PROVIDE ALLOWANCE TO REPLACE 400 LF OF 6" STEAM AND CONDENSATE LINES. PROVIDE SHOP DRAWINGS INDICATING WHICH PIPES WILL BE PROVIDED WITH NEW INSULATION.

1

SHEET INDEX

1

MECHANICAL NEW WORK GENERAL NOTES

1. DRAWINGS ARE GENERALLY DIAGRAMMATIC. ROUTING OF PIPING AND DUCTWORK AS SHOWN, DOES NOT INTEND TO SHOW EVERY RISE, DROP, OFFSET, FITTING NOR EVERY STRUCTURAL ELEMENT THAT MAY BE ENCOUNTERED DURING THE INSTALLATION OF THIS WORK. EACH CONTRACTOR SHALL MAKE ANY REQUIRED CHANGES FROM THE GENERAL ROUTING SHOWN ON THESE DRAWINGS, SUCH AS OFFSETS, BENDS OR CHANGES IN ELEVATION DUE TO COORDINATION WITH THE WORK OF OTHER TRADES AND BUILDING CONSTRUCTION. ALL CHANGES SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY IN COMPLETION DATE OF THE PROJECT.
2. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE LATEST CODES AND ORDINANCES OF THE CITY OF CHICAGO, AS WELL AS THE LATEST OSHA, AND STATE REQUIREMENTS. VERIFY ALL REQUIREMENTS OF ALL GOVERNING BODIES. ALL WORK ALSO SHALL BE COMPLIANCE WITH CHICAGO ENERGY CODE.
3. CONTRACTOR SHALL PROVIDE SLEEVES IN FLOORS AND WALLS AS SHOWN ON THE DRAWINGS, AS REQUIRED BY JOB SITE CONDITIONS, AND/OR AS SPECIFIED, WHEN INSTALLING THEIR WORK.
4. THE SEQUENCE FOR THE INSTALLATION OF ALL WORK SHALL BE COORDINATED BETWEEN ALL CONTRACTORS ON THE PROJECT AND IN STRICT ACCORDANCE WITH CONSTRUCTION MANAGER AND OWNERS STIPULATION AS CALLED FOR IN THE SPECIFICATION AND/OR AS DIRECTED.
5. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL, ELECTRICAL, PLUMBING, AND STRUCTURAL CONTRACT DOCUMENTS (BEFORE SUBMITTING THEIR BIDS) TO FAMILIARIZE THEMSELVES WITH THE EXTENT OF THE OTHER TRADES CONTRACTORS WORK, CEILING HEIGHTS AND CLEARANCE FOR INSTALLING THEIR WORK.
6. CONTRACTOR SHALL BE RESPONSIBLE AND PAY FOR ALL CORING, CUTTING, PATCHING, REPAIRING AND REFINISHING OF BUILDING CONSTRUCTION REQUIRED TO ACCOMMODATE THE INSTALLATION OF THEIR WORK. (NOTE: FLOOR CUTTING AND PATCHING FOR NEW DUCTWORK AND ALL ROOF CUTTING AND PATCHING TO BE BY GENERAL CONTRACTOR.) ALL PATCHING, REPAIRING AND REFINISHING WORK SHALL BE PERFORMED BY THOSE REGULARLY INVOLVED IN THAT TRADE AND SHALL MATCH THE NEW CONSTRUCTION AS CLOSELY AS POSSIBLE. CARE SHALL BE TAKEN SO AS NOT TO DAMAGE ANY EXISTING BUILDING CONSTRUCTION OR ITEMS THAT ARE TO REMAIN. ANY EXISTING FINISHES THAT ARE DAMAGED DURING THE INSTALLATION OF NEW WORK SHALL BE REPAIRED, REPLACED AND PAID FOR BY THE INSTALLING CONTRACTOR, TO THE SATISFACTION OF THE ARCHITECT AND OWNER. REFER TO ARCHITECTURAL DRAWINGS FOR EXISTING BUILDING CONSTRUCTION THAT IS TO REMAIN AND, THEREFORE, SUBJECT TO PATCHING, REPAIRING, AND REFINISHING.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN CLEAN-UP DURING CONSTRUCTION. IF CONTRACTOR FAILS TO PROVIDE SUCH CLEAN-UP, THE ARCHITECT/ENGINEER WILL DIRECT ANOTHER CONTRACTOR TO PERFORM THE CLEAN-UP AND THE NEGLIGENT CONTRACTOR SHALL PAY THE ASSOCIATED BACK-CHARGES AS DEEMED APPROPRIATE BY THE CONSTRUCTION MANAGER.
8. CONTRACTOR SHALL INSTALL ALL AUXILIARY SUPPORTING STEEL AS REQUIRED FOR THE SUPPORTING OF THEIR PIPING, DUCTWORK, CONDUIT, TANKS, EQUIPMENT, ETC. ALL SUPPORTING STEEL FOR ITEMS ABOVE A SUSPENDED CEILING SHALL BE FROM BUILDING STRUCTURAL MEMBERS ONLY.
9. ALL PIPING SHALL BE SUSPENDED WITH CLEVIS AND/OR TRAPEZE PIPE HANGERS. INSULATED PIPING SHALL REST ON STEEL OR WOOD. PIPE COVERING PROTECTION SADDLES OR SHEET METAL INSULATION SHIELDS AS CALLED FOR IN THE SPECIFICATIONS AND/OR DETAILED ON THE DRAWINGS.
10. BEFORE STARTING ANY SYSTEM INSTALLING CONTRACTOR SHALL CONTACT EQUIPMENT MANUFACTURER TO VERIFY THAT EACH PIECE OF EQUIPMENT OR SYSTEM HAS BEEN CHECKED FOR PROPER LUBRICATION, DRIVE ROTATION, BELT TENSION, CONTROL SEQUENCE OR OTHER CONDITIONS WHICH MAY CAUSE DAMAGE TO THE EQUIPMENT OR SYSTEM.
11. ALL PIPING PASSING THRU FLOOR CONSTRUCTION SHALL HAVE A SCHEDULE 40 STEEL PIPE SLEEVE INSTALLED AROUND PIPE ONLY. ALL PIPE PASSING THRU WALLS SHALL HAVE A GALVANIZED SHEET METAL OR SCHEDULE 40 STEEL PIPE SLEEVE INSTALLED AROUND THE PIPE AND PIPE INSULATION.
12. THE DRAWINGS, SCHEDULES AND SPECIFICATIONS HAVE BEEN PREPARED USING ONE MANUFACTURER FOR EACH PIECE OF EQUIPMENT AS THE BASIS FOR DIMENSIONAL DESIGN. IF THE CONTRACTOR PURCHASES EQUIPMENT LISTED AS A SPECIFIED ACCEPTABLE MANUFACTURER BUT IS NOT THE SCHEDULED MANUFACTURER USED FOR THE BASE DESIGN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING ALL THE DIMENSIONS OF THE EQUIPMENT TO VERIFY THAT IT WILL FIT IN THE SPACE SHOWN ON THE DRAWINGS. MINOR DEVIATIONS IN DIMENSIONS WILL BE PERMITTED, PROVIDED THE RATINGS MEET THOSE SHOWN ON THE DRAWINGS AND EQUIPMENT WILL PHYSICALLY FIT INTO THE SPACE ALLOCATED WITH REQUIRED ACCESS AROUND EQUIPMENT FOR OPERATION AND MAINTENANCE OF THE EQUIPMENT.
13. THE ACCESSORIES OR DEVICES REASONABLY INFERABLE AS NECESSARY, TO THE COMPLETE AND PROPER INSTALLATION AND OPERATION OF ANY SYSTEM SHALL BE PROVIDED BY CONTRACTOR WHETHER OR NOT THEY ARE SPECIFICALLY CALLED FOR IN THE CONTRACT DOCUMENTS.
14. ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED AS PER MANUFACTURER'S INSTRUCTIONS UNLESS NOTED OTHERWISE. ALL PIPING, VALVES, CONNECTIONS, DEVICES RECOMMENDED BY MANUFACTURER OR REQUIRED FOR PROPER OPERATION SHALL BE PROVIDED WITHOUT ADDITIONAL COST TO THE CONTRACT.
15. PROVIDE CONCRETE HOUSEKEEPING PADS FOR ALL FLOOR MOUNTED EQUIPMENT. PROVIDE ROOF CURBS (14 INCHES HIGH MIN.) FOR ALL ROOF MOUNTED EQUIPMENT.
16. PROVIDE FIRE DAMPERS IN ALL DUCTWORK CROSSING A FIRE RATED WALL/SLAB. PROVIDE DUCT ACCESS DOOR FOR RE-SETTING THE FIRE DAMPER.
17. CONTRACTOR SHALL PERFORM ALL CUTTING, PATCHING, AND PAINTING AS REQUIRED TO COMPLETE THE WORK.
18. CONTRACTOR SHALL PERFORM ALL CUTTING, PATCHING, AND PAINTING AS REQUIRED TO COMPLETE THE WORK. REFER TO DIVISION 09 OF THE SPECIFICATIONS FOR DETAILS.
19. PROVIDE SMOKE DETECTORS IN RETURN AIR DUCT OR PLENUM UPSTREAM OF ANY FILTERS, EXHAUST AIR CONNECTIONS, OUTDOOR AIR CONNECTIONS, OR DECONTAMINATION EQUIPMENT AND APPLIANCES.

GENERAL NOTES ON CONTROLS:

PNEUMATIC ACTUATORS:

A. TEST ALL THE PNEUMATIC ACTUATORS AND REPLACE THE ACTUATORS IF ACTUATORS FAIL TO STROKE OPEN OR CLOSE. PROVIDE ALLOWANCE TO TEST 120 ACTUATORS.

1

PNEUMATIC CONTROLS:

1. FLASH ALL THE PNEUMATIC LINES AND CLEAN WITH NITROGEN. PRESSURE TEST THE LINES. IDENTIFY AND FIX ALL PNEUMATIC LINE LEAKAGE. PROVIDE ALLOWANCE TO REPLACE 400 LINEAR FEET OF TUBING.
2. PROVIDE NEW SETPOINT CONTROLLER FOR ALL THE AIR-HANDLING UNITS. REPLACE COMPONENTS AS REQUIRED.
3. ADJUST START-STOP SETPOINTS IN EACH AIR-HANDLING UNIT CONTROL PANEL. CALIBRATE AS REQUIRED.

1

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REVISIONS

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-	2016.06.14	60% SUBMITTAL
-	2017.02.14	75% SUBMITTAL
-	2017.03.02	100% SUBMITTAL
-	2017.03.07	PERMIT SET
-	2017.03.23	PRELIMINARY OTB SET
-	2017.04.04	BID SET
1	2017.04.12	ADDENDUM #1

DRAWN BY: FT
SCALE: NTS
JOB:
FILE: M0.0

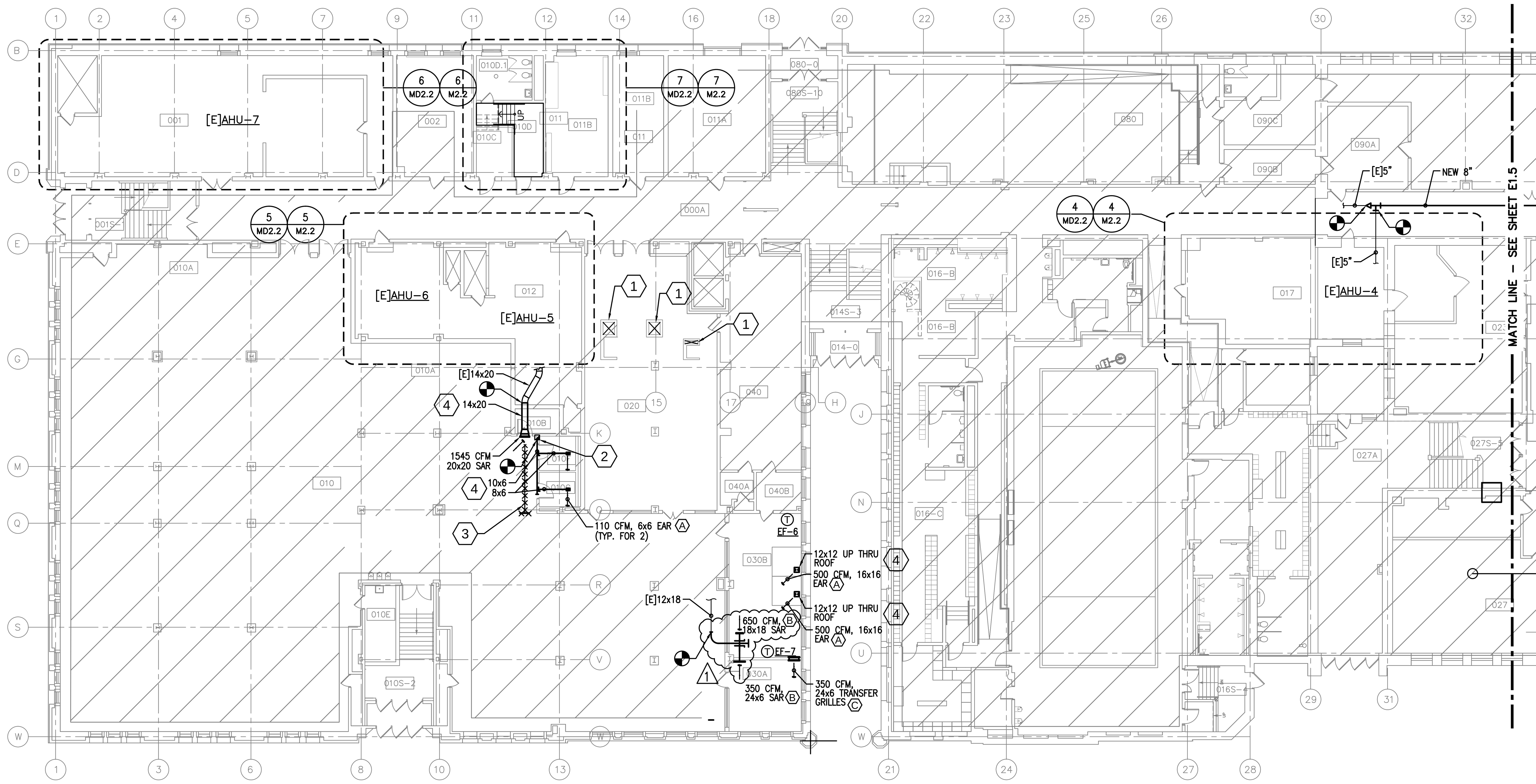
WARNING: ASBESTOS-CONTAINING BUILDING MATERIALS ARE OR MAY BE PRESENT IN THIS BUILDING. AN ASBESTOS MANAGEMENT PLAN IS AVAILABLE IN THE SCHOOL FOR REVIEW UPON REQUEST. NO PERSON MAY DISTURB ASBESTOS-CONTAINING MATERIALS UNLESS THAT PERSON IS A LICENSED ASBESTOS WORKER OR CONDUCTS SUCH WORK IN ACCORDANCE WITH SPECIFICATIONS CONTAINED IN THE PROJECT DOCUMENTS AND IN COMPLIANCE WITH ILLINOIS DEPARTMENT OF HEALTH RULES AND REGULATIONS.

MECHANICAL ABBREVIATIONS, SYMBOLS AND NOTES

DRAWING NO.

M0.0

PROPOSED BASEMENT FL ROOM SCHDULE	
ROOM NO.	ROOM NAME
000A	CORRIDOR
000B	CORRIDOR
000C	CORRIDOR
001	FAN ROOM-7
001A	CORRIDOR
001B	CORRIDOR
001C	CORRIDOR
001S	STAIR-1
002	DRY STORAGE
010	LUNCHROOM
010A	STORAGE
010B	DRY STORAGE
010C	DRY STORAGE
010D	DRY STORAGE
010D.1	WOMEN STAFF TOILET
010E	JANITOR CLOSET
010F	UNISEX TOILET
010G	UNISEX TOILET
010S	STAIR-2
011	STORAGE
011A	ELECTRICAL ROOM
011B	ELECTRICAL ROOM
012	FAN ROOM-5&6
014-0	VESTIBULE
014S	STAIR-3
016	BOYS LOCKER ROOM
016A	BOYS SHOWER ROOM
016B	BOYS DRYING AREA
016C	BOYS TOILET ROOM
016D	TEAM LOCKER ROOM
016S	STAIR-4
017	MECHANICAL ROOM
	CORRIDOR
020	SERVING
023	MECHANICAL ROOM
024	FAN ROOM-3
027	POOL TANK
027A	STAIR-5 CORRIDOR
027S	STAIR-5
029	ENGINEER OFFICE
029A	CUSTODIAL WORKROOM
029B	RECEIVING
029S	STAIR-6
029E	ELEVATOR
030A	STAFF LOUNGE
030B	COOLERS
031	STORAGE
031A	STORAGE
031B	FAN ROOM-1
031C	STORAGE
031D	STORAGE
032	STORAGE
033	STORAGE
034	STORAGE
035-0	VESTIBULE
035S	STAIR-8
037	PLENUM CHAMBER
040	KITCHEN
040A	STORAGE
040B	OFFICE
050	NATATORIUM
050A	CONS. EQUIP. STORAGE
060	GIRLS LOCKER ROOM
060A	GIRLS SHOWER ROOM
060B	GIRLS DRYING AREA
060C	GIRLS TOILET ROOM
060D	LAUNDRY ROOM
070	STAFF & UNISEX
	LOCKER ROOM
080	WEIGHT ROOM
080-0	VESTIBULE
080S	STAIR-10
090	ROTC CLASSROOM
090A	ROTC OFFICE
090B	ROTC STORAGE
090C	ROTC STORAGE
091	BOILER
091A	BOILER VESTIBULE
092	FAN ROOM-2

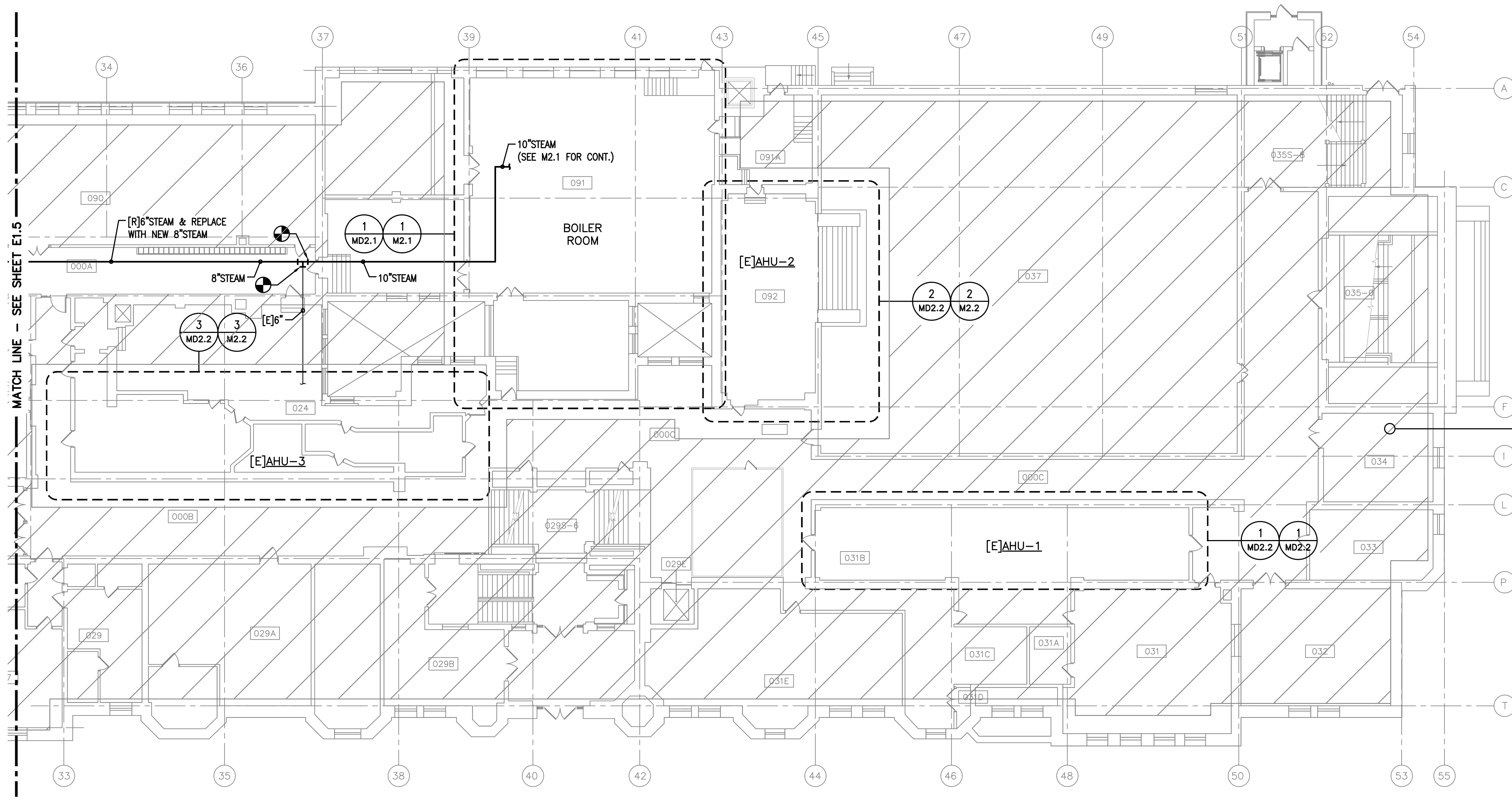


1 BASEMENT FLOOR MECHANICAL REFERENCE PLAN-NORTH
1/16"=1'-0"

1/16" = 1'-0"

KEYED NOTES:

1. DISCONNECT EXISTING GAS LINES TO [E]FOOD WARMERS, AND CAP NEAR CEILING.
2. DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING DUCT IN OLD DISHWASHING ROOM.
3. DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING SUPPLY AIR DUCT & REGISTER AT CEILING.
4. PROVIDE NEW DUCTWORK AND CONNECT TO EXISTING DUCTWORK. PRESSURE TEST ALL NEW DUCTS PER ASHRAE 90.1-2016, 6.4.4.2.



2 BASEMENT FLOOR MECHANICAL REFERENCE PLAN-SOUTH
1/16"=1'-0"

1/16" = 1'-0"

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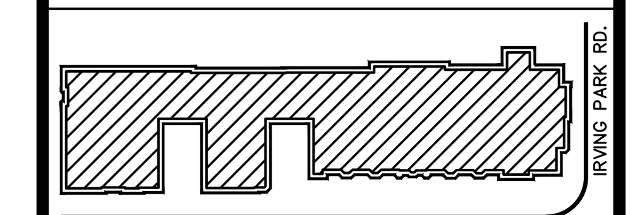

AREAS OF WORK: ENTIRE BUILDING EXTERIOR, ALL LEVELS AND ROOF

KEY PLAN

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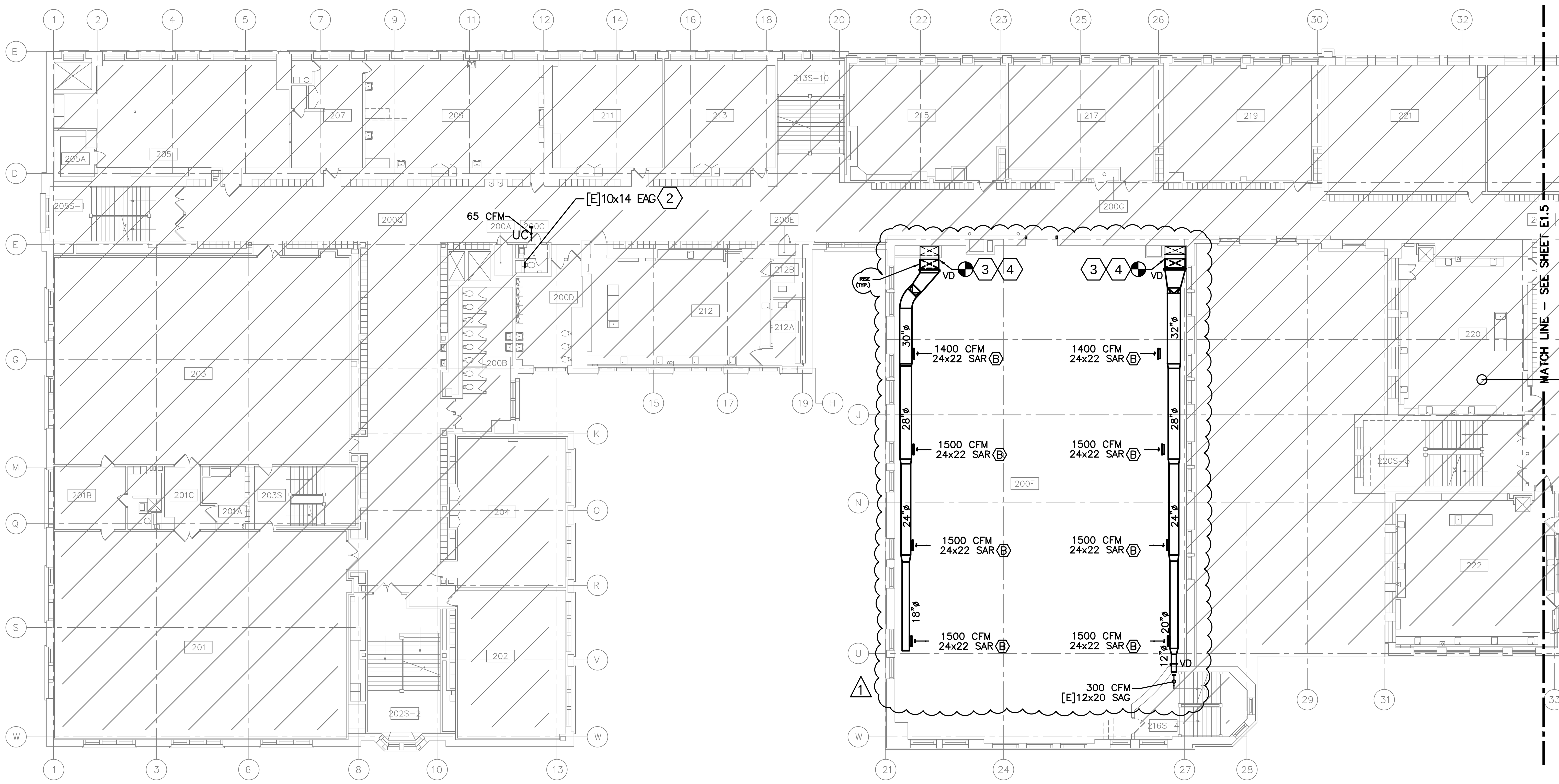
BASEMENT MECHANICAL REFERENCE PLAN

DRAWING NO.

M1.0

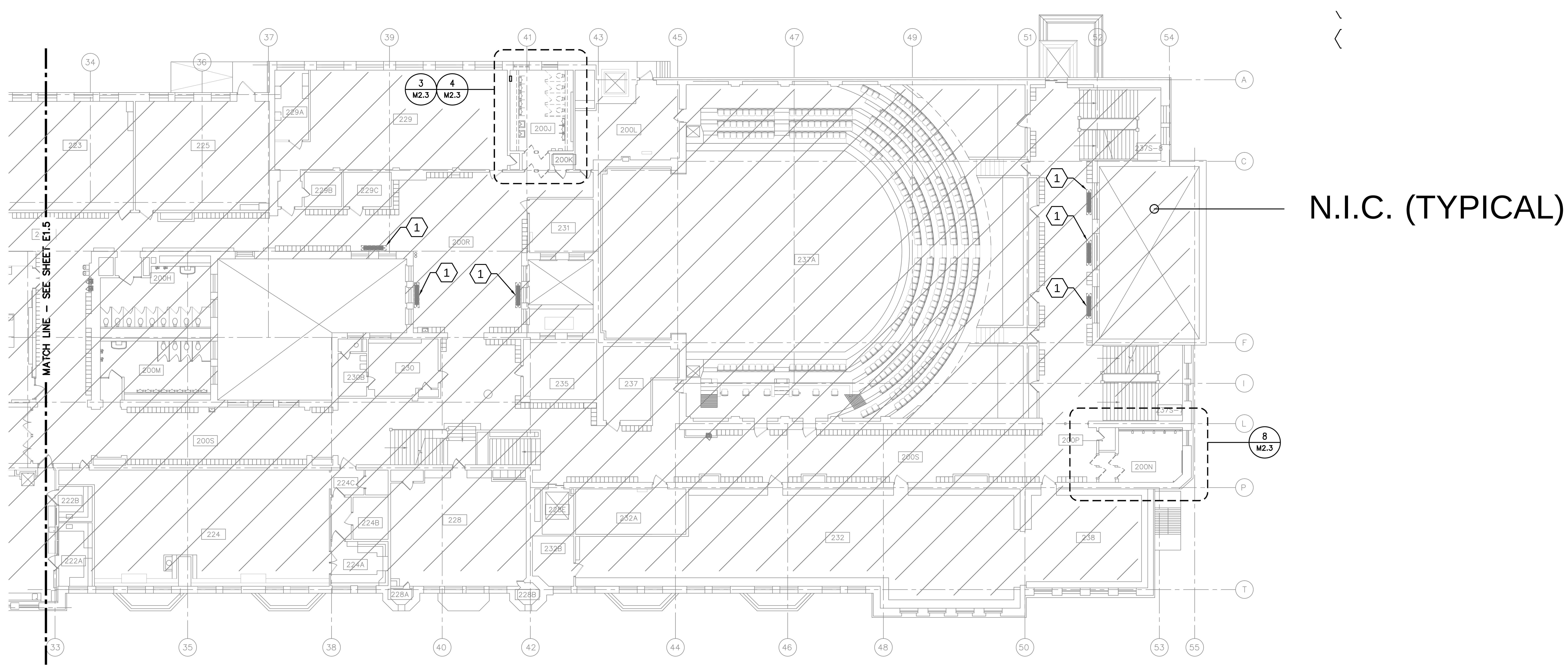
EXISTING SECOND FLOOR ROOM SCHDULE	
ROOM NO.	ROOM NAME
200A	JANITOR CLOSET
200B	TOILET
200C	STAFF TOILET
200D	TOILET
200E	STORAGE
200F	MAIN GYNASIUM-TRACK
200G	JANITOR CLOSET
200H	TOILET
200J	BOY'S STUDENT TOILET
200K	JANITOR CLOSET
200L	ELECTRICAL ROOM
200M	TOILET
200N	MEN STAFF TOILET
200P	JANITOR CLOSET
200Q	CORRIDOR
200R	CORRIDOR
200S	CORRIDOR
200T	CORRIDOR
201	SMALL GYMNASIUM-WEST
201A	STAFF AND UNISEX DRY LOCKER ROOM
201B	PE STORAGE
201C	CORRIDOR
203	SMALL GYMNASIUM-EAST
203S	STAIR-9
202	CLASSROOM
202S	STAIR-2
204	CLASSROOM
205	SUPPORT COMPUTER LAB
205S	STAIR-1
207	OFFICE
209	CLASSROOM
211	CLASSROOM
212	LEVEL 2 BIOLOGY LAB
212A	SCIENCE PREP ROOM
212B	STORAGE
213	CLASSROOM
213S	STAIR-10
215	CLASSROOM
216S	STAIR-4
217	CLASSROOM
219	CLASSROOM
220	LEVEL 1 BIOLOGY LAB
220S	STAIR-5
221	SOCIAL STUDIES OFFICE
222	LEVEL 1 BIOLOGY LAB
222A	PREP ROOM
222B	STORAGE
223	CLASSROOM
224	COMMUNITY ROOM
225	CLASSROOM
228	SCIENCE OFFICE
228A	STORAGE
228B	STORAGE
228E	ELEVATOR
228S	STAIR-6
229	COLLEGE & CAREER LAB
229A	TEACHER WORK AREA
229B	MDF
229C	STORAGE
230	TEACHER WORK AREA
231	OFFICE
232	LIBRARY-MAIN
232A	STORAGE
232B	CLASSROOM STORAGE
235	TEACHER WORK AREA
237	OFFICE
237A	AUDITORIUM BALCONY
237S-7	STAIR-7
237S-8	STAIR-8
238	LIBRARY WORKROOM



SECOND FLOOR MECHANICAL REFERENCE PLAN-NORTH
1/16"=1'-0"

KEYED NOTES:

1. DISCONNECT AND REMOVE EXISTING RADIATOR, INCLUDING ASSOCIATED CONTROLS AND STEAM TRAP TO ACCOMMODATE ARCHITECTURAL AND STRUCTURAL WORK. TEMPORARILY CAP ALL REMAINING PIPING. STORE RADIATOR IN SECURE LOCATION AND RE-INSTALL WHEN ARCHITECTURAL AND STRUCTURAL WORK IS DONE.
2. BALANCE EXHAUST AIR.
3. DISCONNECT, REMOVE AND DISPOSE OFFSITE EXISTING DUCTWORK BELOW TRACT.
4. PROVIDE NEW DUCTS WITH TOP OF DUCTS INSTALLED BELOW THE WINDOWS. SUSPEND NEW DUCTS FROM THE CEILING AND PROVIDE BRACING FROM THE WALL. SEAL & PRESSURE TEST ALL NEW DUCTS PER ASHRAE 90.1-2016, 6.4.4.2 REQUIREMENT. COORDINATE PAINTING WITH ARCHITECT. (1)



SECOND FLOOR MECHANICAL REFERENCE PLAN-SOUTH
1/16"=1'-0"

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1	2017.04.12	ADDENDUM #1

DRAWN BY: FT
SCALE: 1/16"=1'-0"
JOB:
FILE: MD.2

IRVING PARK RD.
ASHLAND AVE.
AREAS OF WORK: ENTIRE BUILDING EXTERIOR, ALL LEVELS AND ROOF
KEY PLAN

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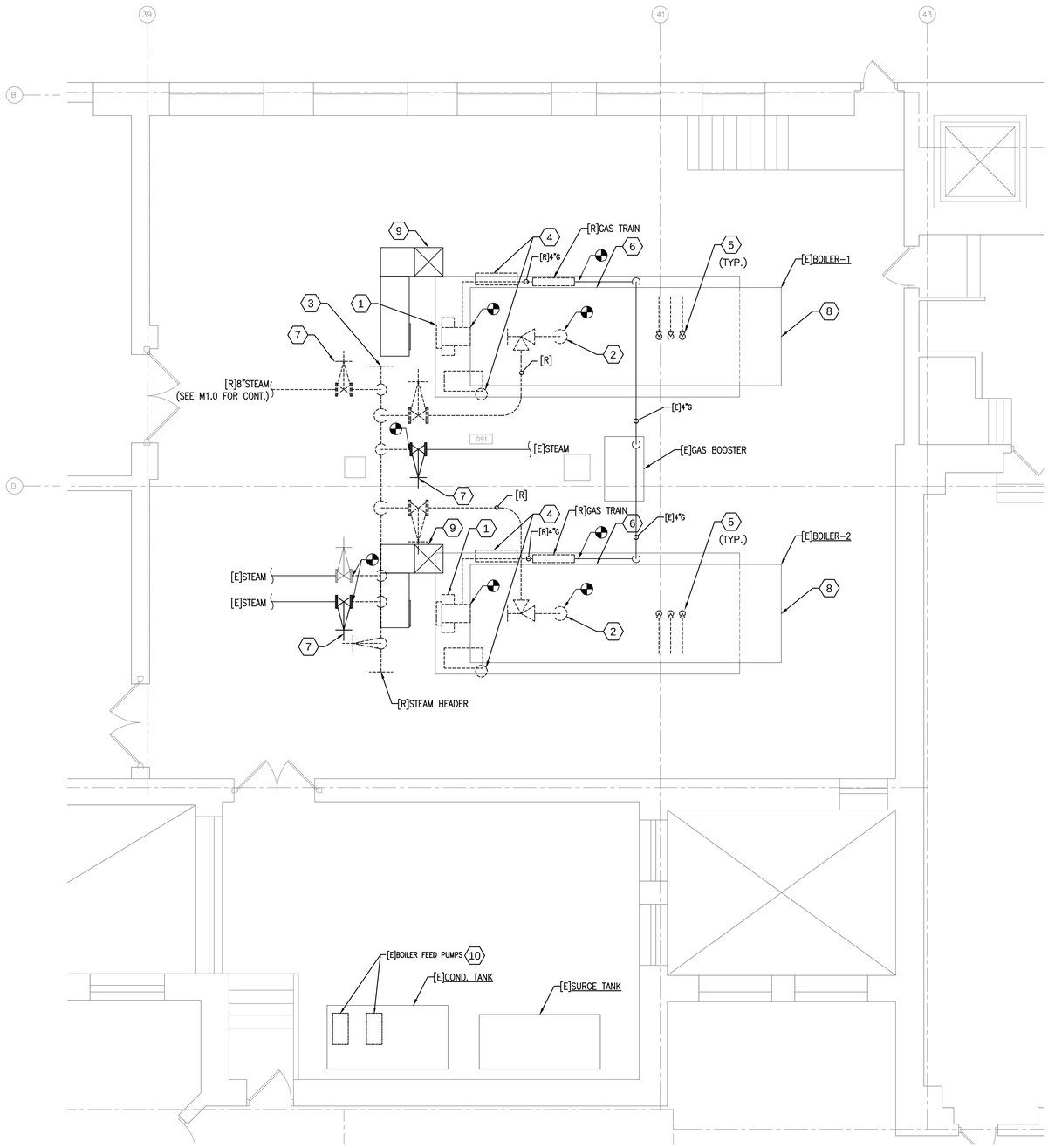
SECOND FLOOR MECHANICAL REFERENCE PLAN

DRAWING NO.

M1.2



1 091 BOILER & 092 FAN ROOM 2 MECHANICAL DEMOLITION PLAN
1/4"=1'-0"

GENERAL NOTES:

1. ALL DIMENSIONS ARE TO BE VERIFIED IN FIELD.

KEYED NOTES:

1. DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING GAS-FIRED BURNER INCLUDING ASSOCIATED AIR COMPRESSOR, GAS TRAIN, ALL CONTROLS, ELECTRICAL DEVICES, AND ELECTRICAL CONNECTIONS. EXISTING BOILERS SHALL REMAIN BUT STEAM OPERATING PRESSURE CURRENTLY AT 25 PSI WILL BE REDUCED TO 8 PSI.
2. DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING BOILER NOZZLE AND REPLACE WITH 12"ø BOILER NOZZLE. WORK SHALL BE DONE BY UNION BOILER MAKERS, CERTIFIED AND AUTHORIZED BY HARTFORD INSURANCE COMPANY TO WORK ON PRESSURE VESSELS. EXISTING BOILERS ARE 3-PASS DRYBACK SUPERIOR SCOTCH MARINE MODEL 4-5-1758. (PROVIDE HYDROSTATIC TEST UPON COMPLETION OF BOILER MODIFICATION.) 1
3. DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING STEAM HEADER INCLUDING ASSOCIATED STEAM TRAPS, VALVES, ACCESSORIES, AND INSULATION.
4. DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING BOILER TRIMS INCLUDING PUMP CONTROLLER, LOW AND HIGH WATER-LEVEL CUT OFF DEVICES, ASSOCIATED PIPING, CONTROL WIRING TO FIELD-MOUNTED ELECTRICAL DEVICES.
5. DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING BOILER PRESSURE SAFETY VALVES, INCLUDING ASSOCIATED PIPING.
6. DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING BOILER SHEET METAL JACKET AND INSULATION. EXISTING BOILERS ARE 3-PASS DRYBACK SUPERIOR SCOTCH MARINE MODEL 4-5-1758.
7. EXISTING ISOLATION VALVE ON STEAM HEADER SHALL REMAIN. REPACK GLAND PACKING. V.I.F. EXACT VALVE SIZES.
8. CLEAN BOILER TUBES, PRESSURE TEST THE TUBES AFTER CLEANING. REPLACE MINIMUM OF 6 TUBES PER BOILER. SEE NOTE4.
9. CLEAN EXISTING DAMPERS, LUBRICATE SHAFTS AND LINKAGES, ADJUST LINKAGES AND DAMPER BLADES. ALL DAMPERS SHALL BE EXERCISE TO OPERATE WITHOUT BINDING FROM FULL OPEN TO FULL CLOSE POSITION.
10. REFURBISH EXISTING BASE-MOUNTED END SUCTION, CLOSED-COUPLED BOILER FEEDWATER PUMPS BY REPLACEMENT OF SEALS. ADJUST PUMP DISCHARGE PRESSURE FOR LOW-PRESSURE (8 PSI) BOILER APPLICATION. (TYPICAL FOR 2) 1

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PROJECT NO. 2016-46211-MCR

REVISIONS

NO.	DATE	DESCRIPTION
-	2016.04.19	30% SUBMITTAL
-	2016.06.14	60% SUBMITTAL
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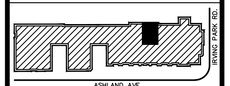
1	2017.04.12	ADDENDUM #1

DRAWN BY: FT
SCALE: 1/4"=1'-0"
JOB:
FILE: MD2.1



AREAS OF WORK: ENTIRE BUILDING EXTERIOR, ALL LEVELS AND ROOF

N

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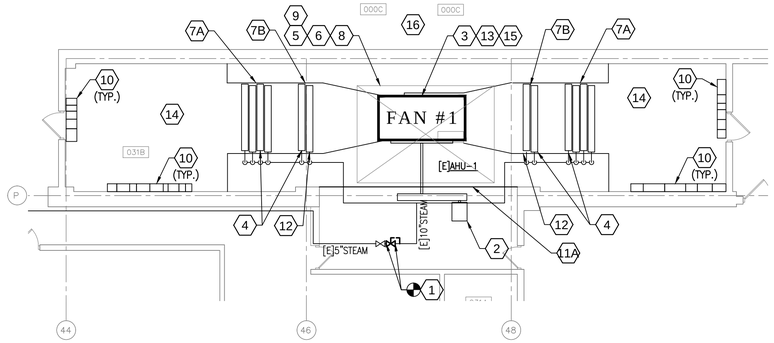
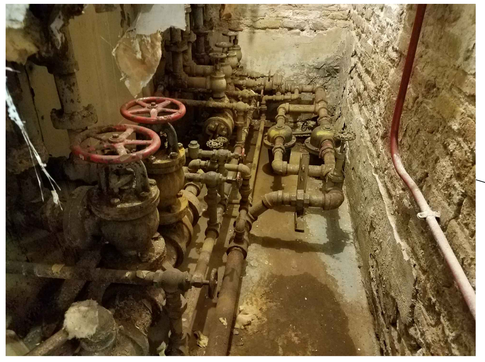
BASEMENT ENLARGED MECHANICAL DEMOLITION PLAN

DRAWING NO.

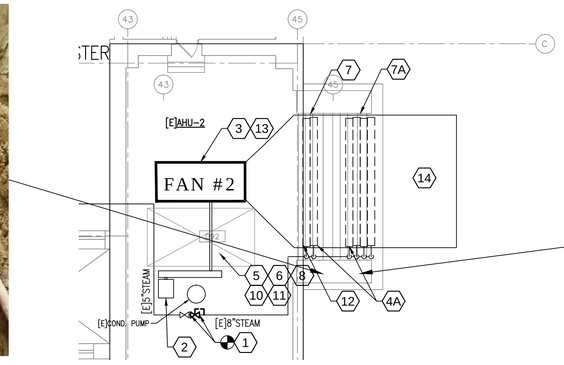
MD2.1



1 FAN ROOM 1 – MECHANICAL DEMOLITION PLAN
1/8"=1'-0"



4 [R]PREHEAT & REHEAT COILS INCL STEAM & CONDENSATE PIPING
NTS



2 FAN ROOM 2 – MECHANICAL DEMOLITION PLAN
1/8"=1'-0"

3 [R]PREHEAT & REHEAT COILS INCL STEAM & CONDENSATE PIPING
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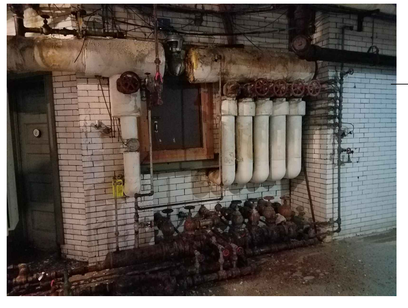

6 [R]PREHEAT & REHEAT COILS INCL STEAM & CONDENSATE PIPING
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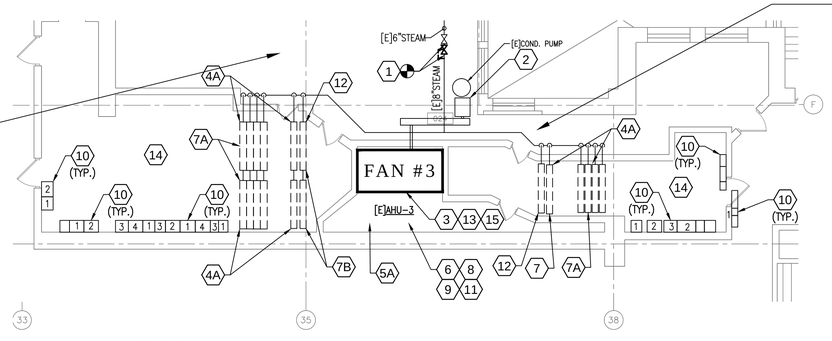
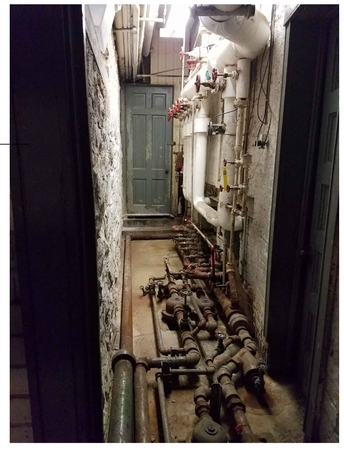


3 FAN ROOM 3 – MECHANICAL DEMOLITION PLAN
1/8"=1'-0"



5 [R]PREHEAT & REHEAT COILS INCL STEAM & CONDENSATE PIPING
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GENERAL NOTES:

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KEYED NOTES:

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2. CLEAN EXISTING MOTOR & BELT GUARD OF DIRT & GRIMES. OIL & GREASE MOTOR PER MANUFACTURER'S RECOMMENDED PROCEDURES.
3. STEAM CLEAN AND DEGREASE EXISTING FAN SCROLL, FAN BLADES, AND SHAFT. DEGREASE THE FAN BEARINGS, RE-GREASE, AND REPACK. STATICALLY AND DYNAMICALLY BALANCE FAN, TEST FOR VIBRATION BEFORE AND AFTER REFURBISHMENT OF FAN(S). SUBMIT RESULTS TO AOR. 1
4. PRESSURE WASH ALL EXISTING PREHEAT STEAM COILS AND REHEAT STEAM COILS. 1
- 4A. ISOLATE & HYROSTATICALLY PRESSURE TEST PREHEAT AND REHEAT COILS, AND SUBMIT RESULTS TO AOR. DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING PREHEAT AND REHEAT STEAM COILS THAT FAIL TEST, INCLUDING ASSOCIATED STEAM & CONDENSATE PIPING (FROM PRV TO CONDENSATE PUMP), VALVES, CONTROL VALVES, STEAM TRAPS, AND ACTUATORS. REUSE EXISTING COIL SUPPORTS. PRESSURE WASH COILS PASS TEST. INCLUDE REPLACEMENT OF ABOUT 30 SF. SHEET METAL & INSULATION PER COIL. SHEET METAL SHALL BE THE SAME GAUGE AS EXISTING.
5. STEAM CLEAN AND DEGREASE EXISTING OUTSIDE AIR DAMPERS AND REPAIR AS REQUIRED. LUBRICATE SHAFTS AND LINKAGES. EXERCISE DAMPERS TO OPERATE FROM FULL OPEN TO FULL CLOSE POSITIONS WITHOUT ANY BINDING.
- 5A. DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING OUTSIDE AIR DAMPERS INCLUDING ASSOCIATED ACTUATORS.
6. STEAM CLEAN AND DEGREASE EXISTING RETURN DAMPER AND REPAIR AS REQUIRED. LUBRICATE SHAFTS AND LINKAGES. E'RED
   XERCISE DAMPERS TO OPERATE FROM FULL OPEN TO FULL CLOSE POSITIONS WITHOUT ANY BINDING.
7. STEAM CLEAN AND DEGREASE EXISTING BYPASS DAMPERS AND REPAIR AS REQUIRED. TEST EXISTING ACTUATORS. LUBRICATE SHAFTS AND LINKAGES. EXERCISE DAMPERS TO OPERATE WITHOUT BINDING FROM FULL OPEN TO FULL CLOSE POSITION. IF NOT WORKING, DISCONNECT, REMOVE, DISPOSE OFFSITE, AND REPLACE.
- 7A. DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING BYPASS DAMPERS UNDER REHEAT COIL INCLUDING ASSOCIATED ACTUATOR. CAP ALL PNEUMATIC LINES.
- 7B. DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING BYPASS DAMPERS UNDER PREHEAT COIL INCLUDING ASSOCIATED ACTUATOR.
8. STEAM CLEAN AND DEGREASE EXISTING RELIEF DAMPERS AND REPAIR AS REQUIRED. LUBRICATE SHAFTS AND LINKAGES. ENSURE THAT ACTUATOR IS WORKING PROPERLY AND EXERCISE DAMPERS TO FULLY OPEN AND CLOSE POSITIONS WITHOUT ANY BINDING.
9. STEAM CLEAN AND DEGREASE EXISTING CEILING RETURN DAMPER AND REPAIR AS REQUIRED. LUBRICATE SHAFTS AND LINKAGES. EXERCISE DAMPERS TO OPERATE FROM FULL OPEN TO FULL CLOSE POSITIONS WITHOUT ANY BINDING.
10. STEAM CLEAN AND DEGREASE EXISTING ZONE DAMPERS. LUBRICATE SHAFTS AND LINKAGES. EXERCISE DAMPERS TO OPERATE FROM FULL OPEN TO FULL CLOSE POSITIONS WITHOUT ANY BINDING.
11. DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING AIR FILTERS.
- 11A. DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING AIR FILTERS INCLUDING EXISTING FILTER RACK.
12. DISCONNECT AND REMOVE OFFSITE EXISTING FREEZE-STATS, SMOKE DETECTORS AND AVERAGING THERMOSTATS IN EACH SIDE OF THE PLENUMS.
13. TEST FOR SYSTEM AIRFLOW, STATIC PRESSURE, AND VIBRATION AT ALL MOTOR SPEEDS BEFORE START OF PROJECT. PROVIDE TEST REPORT TO AOR.
14. CLEAN EXISTING AIR PLENUMS. SCRAPE/REPAIR ALL PLASTER PLENUM. SEAL ALL PENETRATIONS, GAPS, AND VOIDS WITH CAULKING COMPOUNDS. REPAIR DAMAGED WALL AND PLASTER. COORDINATE WITH ARCHITECTURAL DRAWINGS. PERFORM BLOWER DOOR TEST ON PLENUMS AND SUBMIT RESULTS TO AOR. 1
15. REMOVE DEBRIS FROM THE BOTTOM OF THE DOUBLE DELIVERY FAN. REPAIR FAN CASING USING THE SAME MATERIAL AND GAUGES AS THE EXISTING FAN.
16. REMOVE INSULATION AND PROVIDE NEW INSULATION ON EXISTING STEAM AND CONDENSATE LINES OUTSIDE OF THE MECHANICAL ROOM. PROVIDE ALLOWANCE TO RE-INSULATE 150 FEET OF 3" (AVERAGED SIZE) OF EXISTING STEAM AND CONDENSATE LINES.
17. DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING END-OF-DRIP TRAP & AIR VENT, AND REPLACE WITH NEW.

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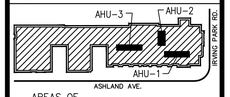

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BASEMENT ENLARGED MECHANICAL DEMOLITION PLANS

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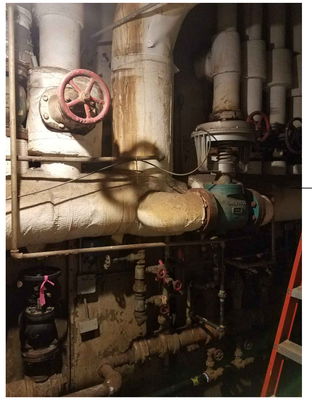
MD2.2



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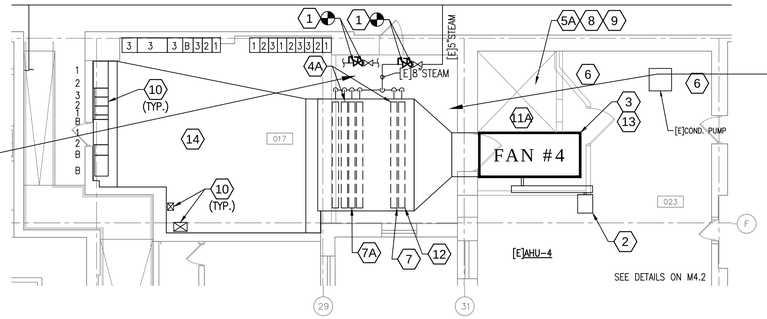

4 017 FAN ROOM 4 – MECHANICAL DEMOLITION PLAN
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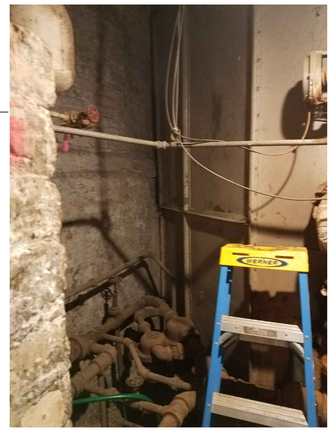

8 [R]PREHEAT & REHEAT COILS INCL STEAM & CONDENSATE PIPING
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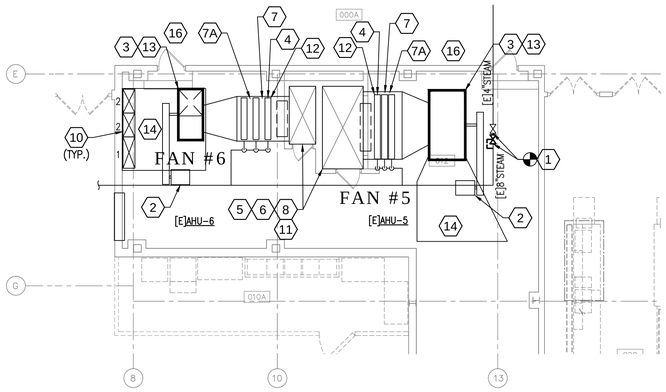

5 012 FAN ROOMS –5&6 MECHANICAL DEMOLITION PLAN
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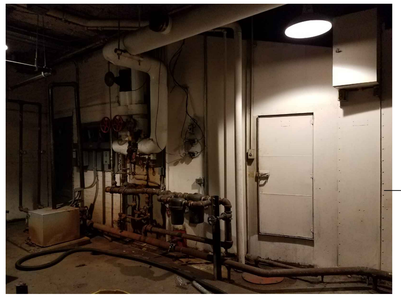

9 [R]PREHEAT & REHEAT COILS INCL STEAM & CONDENSATE PIPING
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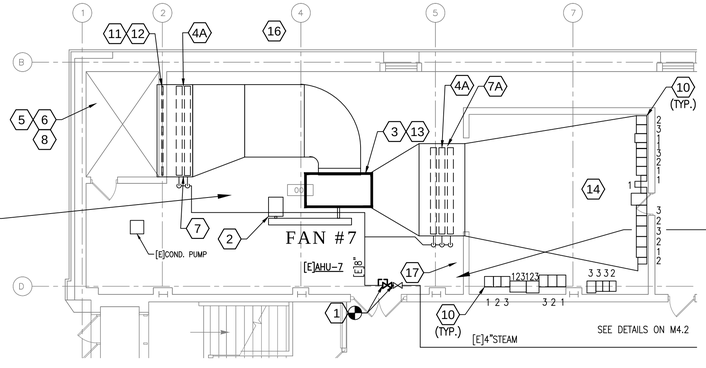
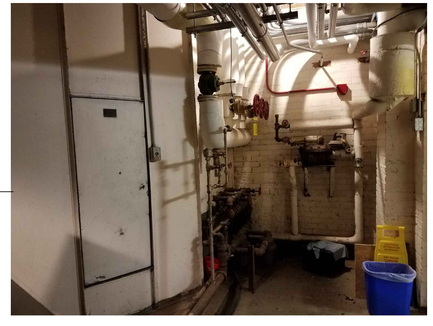


6 001 FAN ROOM –7 MECHANICAL DEMOLITION PLAN
1/8"=1'-0"



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4 PRESSURE WASH ALL EXISTING PREHEAT STEAM COILS AND REHEAT STEAM COILS. 1

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6 STEAM CLEAN AND DEGREASE EXISTING RETURN DAMPER AND REPAIR AS REQUIRED. LUBRICATE SHAFTS AND LINKAGES. EXERCISE DAMPERS TO OPERATE FROM FULL OPEN TO FULL CLOSE POSITIONS WITHOUT ANY BINDING.

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11 DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING AIR FILTERS.

11A DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING AIR FILTERS INCLUDING EXISTING FILTER RACK.

12 DISCONNECT AND REMOVE OFFSITE EXISTING FREEZE-STATS, SMOKE DETECTORS AND AVERAGING THERMOSTATS IN EACH SIDE OF THE PLENUMS.

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14 CLEAN EXISTING AIR PLENUMS. SCRAPE/REPAIR ALL PLASTER PLENUM. SEAL ALL PENETRATIONS, GAPS, AND VOIDS WITH CAULKING COMPOUNDS. REPAIR DAMAGED WALL AND PLASTER. COORDINATE WITH ARCHITECTURAL DRAWINGS. PERFORM BLOWER DOOR TEST ON PLENUMS AND SUBMIT RESULTS TO AOR. 1

15 REMOVE DEBRIS FROM THE BOTTOM OF THE DOUBLE DELIVERY FAN. REPAIR FAN CASING USING THE SAME MATERIAL AND GAUGES AS THE EXISTING FAN.

16 REMOVE INSULATION AND PROVIDE NEW INSULATION ON EXISTING STEAM AND CONDENSATE LINES OUTSIDE OF THE MECHANICAL ROOM. PROVIDE ALLOWANCE TO RE-INSULATE 150 FEET OF 3" (AVERAGED SIZE) OF EXISTING STEAM AND CONDENSATE LINES.

17 DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING END-OF-DRIP TRAP & AIR VENT, AND REPLACE WITH NEW.

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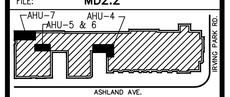

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KEY PLAN

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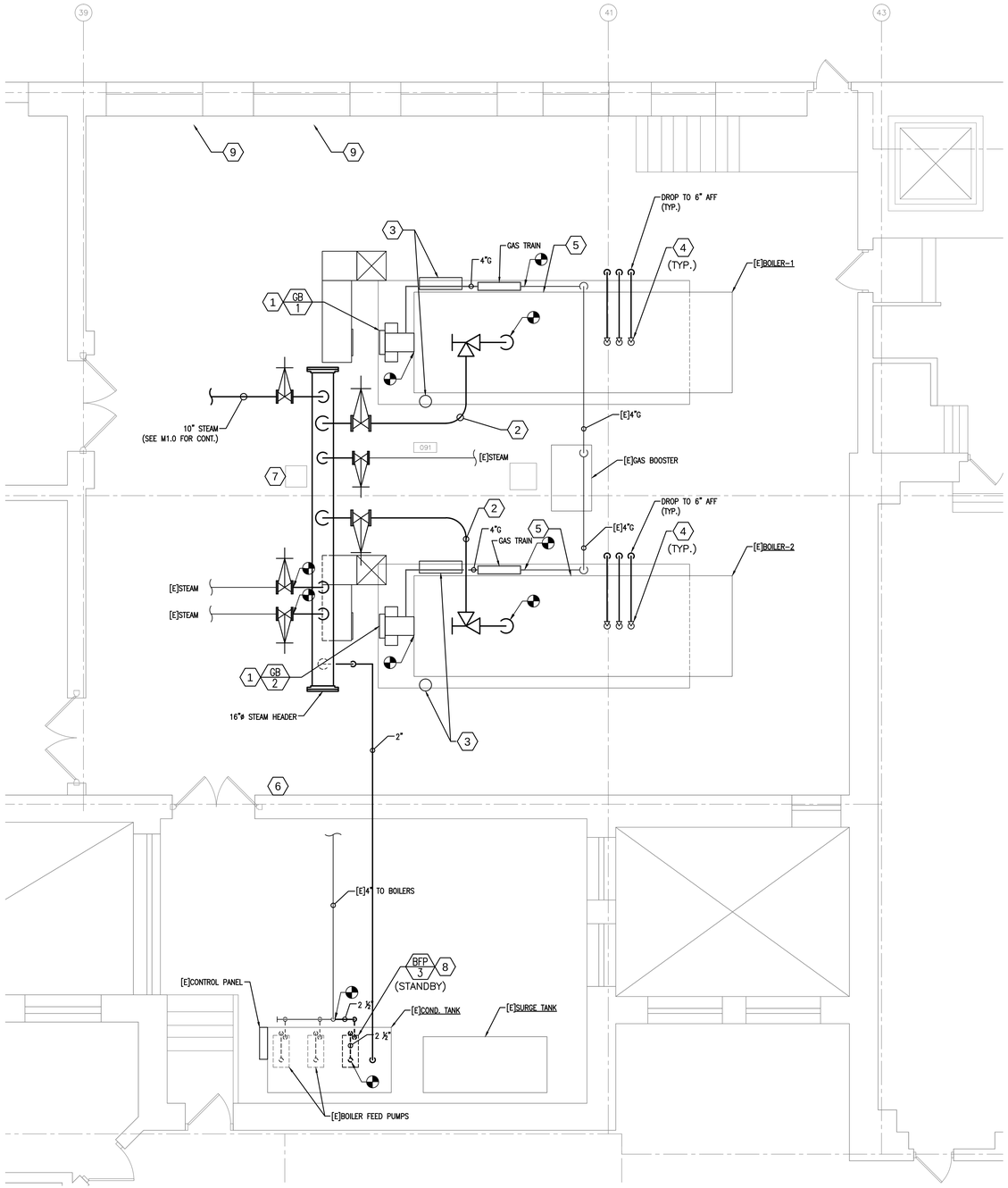
BASEMENT ENLARGED MECHANICAL DEMOLITION PLANS

DRAWING NO.

MD2.3



1 091 BOILER & 092 FAN ROOM 2 MECHANICAL PLAN
1/4"=1'-0"

GENERAL NOTES:

1. ALL DIMENSIONS ARE TO BE VERIFIED IN FIELD.
2. REFER TO M02.1 FOR ALL EQUIPMENT-REFURBISHMENT WORK.

KEYED NOTES:

1. PROVIDE NEW 350-BHP GAS-FIRED BURNER INCLUDING ASSOCIATED GAS TRAIN, ALL CONTROLS, ELECTRICAL DEVICES, AND ELECTRICAL CONNECTIONS. (TYPICAL FOR 2 BOILERS). CONNECT NEW GAS TRAIN TO GAS PIPES FROM EXISTING GAS BOOSTER. NEW BOILERS SHALL OPERATE AT 8 PSI. PROVIDE NEW HEAT-TIMER BOILER CONTROLLERS. SEE M4.2. 1
2. PROVIDE NEW STEAM PIPING FROM BOILER OUTLETS INCLUDING NEW 16"ø STEAM HEADER TO EXISTING DISTRIBUTION LINE SHUT-OFF VALVES, PROVIDE STEAM HEADER WITH 8"ø DRIP LEGS, STEAM TRAPS, INSULATION, AND ACCESSORIES. PROVIDE PIPING FROM TRAPS AND ROUTE TO [E]CONDENSATE TANK. 1
3. PROVIDE NEW BOILER TRIMS INCLUDING PUMP CONTROLLER, LOW AND HIGH WATER-LEVEL CUT OFF DEVICES, GASKETS, AND ASSOCIATED PIPING, CONTROL WIRING TO FIELD-MOUNTED ELECTRICAL DEVICES. (TYPICAL FOR 2 BOILERS).
4. PROVIDE NEW BOILER PRESSURE SAFETY VALVES FOR EACH BOILER AND RUN NEW PIPING (FULL SIZE) TO DRAIN. (TYPICAL FOR 2 BOILERS).
5. PROVIDE NEW BOILER SHEET METAL JACKET AND INSULATION. (TYPICAL FOR 2 BOILERS).
6. RUN NEW WIRING FROM EMERGENCY SHUT-OFF SWITCHES TO NEW BOILERS. PROVIDE NEW CEILING-MOUNTED HEAT DETECTORS AND WIRE TO NEW CONTROL CIRCUITS TO BOILERS. – 2017.04.12
7. PROVIDE CARBON MONOXIDE DETECTOR, NIGHTHAWK MODEL 5U747 OR APPROVED EQUAL, 120V AC PLUG-IN TYPE WITH 9V DC BATTERY BACKUP.
8. PROVIDE NEW BASE-MOUNTED, END SUCTION, CLOSED-COUPLED FEEDWATER PUMP IN PARALLEL WITH EXISTING PUMPS, INCLUDING ALL ASSOCIATED PIPES, FITTINGS, AND ACCESSORIES, AND CONTROL PANEL. PUMP AND VALVES SHALL BE OPERATED MANUALLY.
9. EXISTING COMBUSTION AIR DAMPER SHALL BE CLEANED AND DEGREASED. BLADES AND LINKAGES SHALL BE LUBRICATED AND ADJUSTED. EXERCISE DAMPERS TO OPERATE WITHOUT BINDING FROM FULL OPEN TO FULL CLOSE, RE-CONNECT ACTUATOR TO BOILER CONTROLS. 1

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CHICAGO OFFICE: 215 NORTH WELLS STREET, CHICAGO, ILLINOIS 60654, TEL 312.943.7300, FAX 312.943.4771

ADDENDUM #1

SINGH
SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

PROVIDE AOR/EOR STAMP HERE

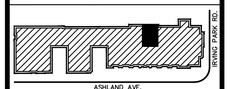
LAKE VIEW
HIGH SCHOOL
4015 NORTH ASHLAND AVENUE
CHICAGO, ILLINOIS 60613

PROJECT NO. 2016-46211-MCR

REVISIONS

NO.	DATE	DESCRIPTION
–	2016.04.19	30% SUBMITTAL
–	2016.06.14	60% SUBMITTAL
–	2017.02.14	75% SUBMITTAL
–	2017.03.02	100% SUBMITTAL
–	2017.03.07	PERMIT SET
–	2017.03.23	PRELIMINARY OTB SET
–	2017.04.04	BID SET
1	2017.04.12	ADDENDUM #1

DRAWN BY: FT
SCALE: 1/4"=1'-0"
JOB:
FILE: M2.1



AREAS OF WORK: ENTIRE BUILDING EXTERIOR, ALL LEVELS AND ROOF

N

KEY PLAN

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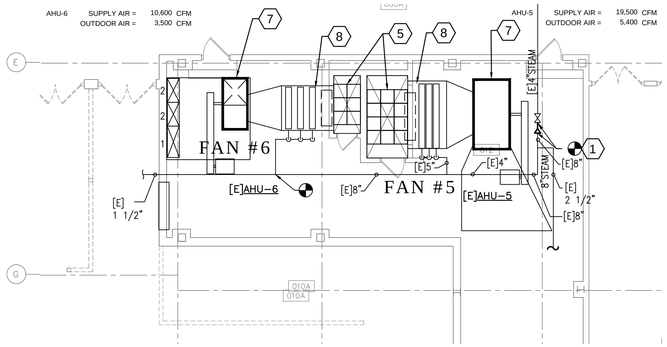
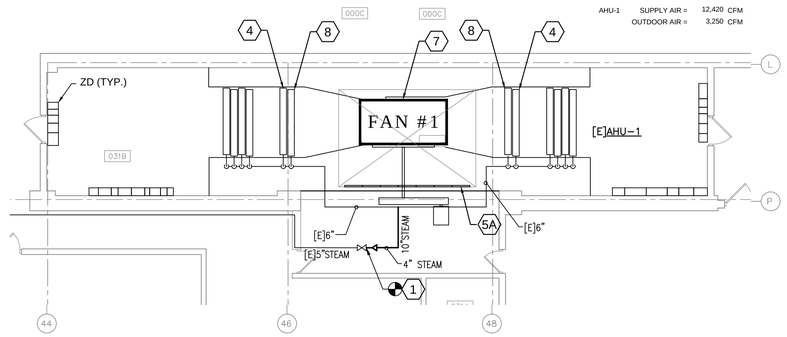
BASEMENT ENLARGED MECHANICAL PLAN

DRAWING NO.

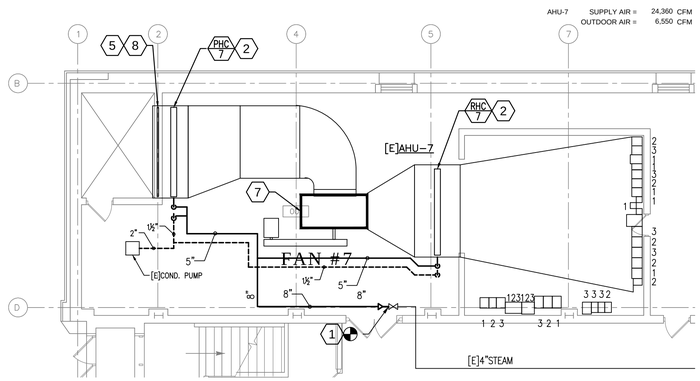
M2.1



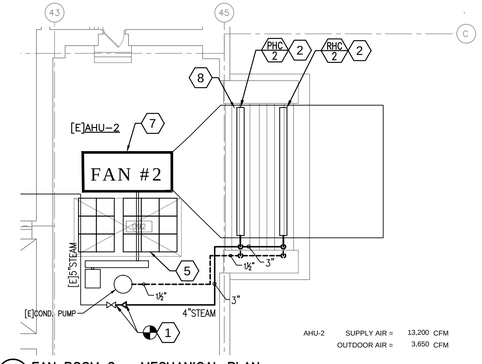
5 012 FAN ROOMS –5&6 MECHANICAL PLAN
1/8"=1'-0"



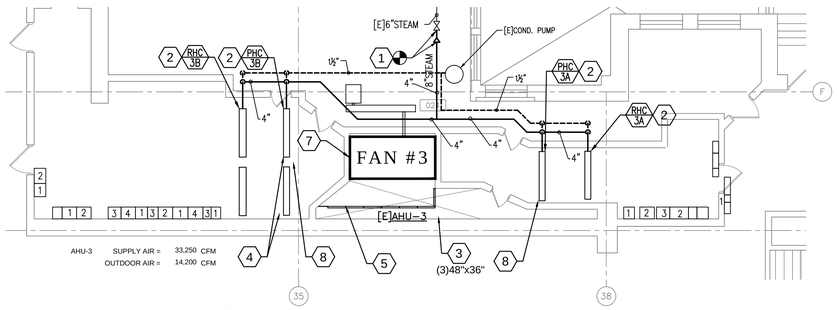
1 FAN ROOM 1 – MECHANICAL PLAN
1/8"=1'-0"



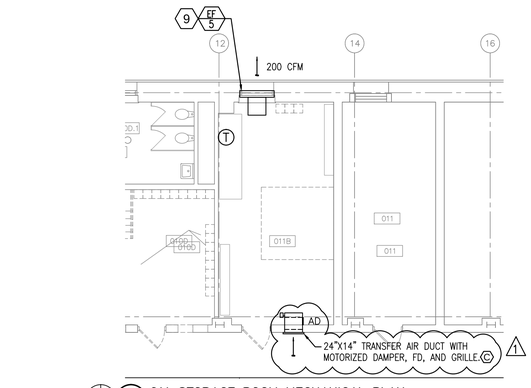
6 001 FAN ROOM –7 MECHANICAL PLAN
1/8"=1'-0"



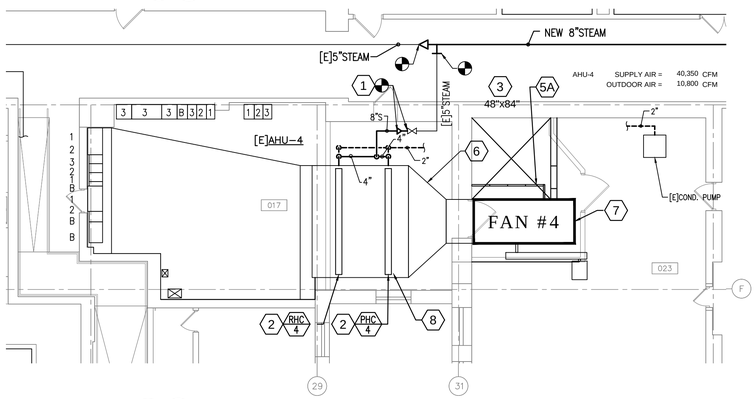
2 FAN ROOM 2 – MECHANICAL PLAN
1/8"=1'-0"



3 FAN ROOM 3 – MECHANICAL PLAN
1/8"=1'-0"



7 011 STORAGE ROOM MECHANICAL PLAN
1/8"=1'-0"



4 017 FAN ROOM 4 – MECHANICAL PLAN
1/8"=1'-0"

GENERAL NOTES:

1. ALL DIMENSIONS ARE TO BE VERIFIED IN FIELD.
2. REFER TO M2.2 AND M2.3 FOR ALL EQUIPMENT–REFURBISHMENT WORK.

KEYED NOTES:

1. PROVIDE NEW STEAM LINE TO RECONNECT THE EXISTING STEAM LINES DUE TO REMOVED STEAM PRESSURE REDUCING VALVE. PROVIDE ALL ASSOCIATED PIPES, FITTINGS, ACCESSORIES, AND INSULATION.
2. PROVIDE NEW NON–FREEZE PREHEAT STEAM COILS AND REHEAT STEAM COILS, INCLUDING ALL ASSOCIATED STEAM AND CONDENSATE PIPES (TO EXISTING CONDENSATE PUMP), FITTINGS, VALVES, TRAPS, ACCESSORIES, CONTROLS, (PNEUMATIC MODULATING) CONTROL VALVES, HANGERS, AND SUPPORTS. RECONFIGURE STEAM AND CONDENSATE LINES AND TRAPS AS REQUIRED FROM REMOVED PRV TO EXISTING CONDENSATE PUMP. ALL COILS SHALL BE OF COPPER TUBE AND ALUMINUM FIN TYPE, AND CONTROL VALVES SHALL BE OF MODULATING, NORMALLY–OPEN TYPE, PNEUMATIC ACTUATORS (WITH TRANSDUCERS). CONNECT TO BAS. REUSE EXISTING COIL SUPPORT. 1
3. PROVIDE NEW OUTDOOR AIR DAMPER, INCLUDING ALL ASSOCIATED DAMPER ACTUATORS.
4. PROVIDE NEW BYPASS DAMPERS INCLUDING ASSOCIATED DAMPER ACTUATORS. CONNECT TO EXISTING CONTROLS.
5. PROVIDE NEW 2 INCH THICK AIR FILTERS.
5A. PROVIDE NEW FILTER RACK FOR 2 INCH THICK AIR FILTERS. NEW RACK SHALL BE FLOOR–MOUNTED LOCATED UPSTREAM OF FAN(S).
6. REPLACE BOTTOM 12" OF AHU CASING WITH SAME THICKNESS METAL AS EXISTING CASING.
7. TEST AND BALANCE AIR HANDLING UNIT AFTER INSTALLATION OF NEW COILS AND FILTERS. PROVIDE RESULTS TO AOR. 1
8. PROVIDE NEW FREEZE–STATS HARDWIRED TO SHUT OFF AHU FAN AND CLOSE OA DAMPERS WHEN MIXED AIR TEMPERATURE DROPS TO 35°F (ADJ.). PROVIDE SMOKE DETECTORS IN EACH SUPPLY PLENUM HARDWIRED TO SHUT OFF AHU FAN AND SEND SIGNAL TO FIRE ALARM PANEL. COORDINATE WITH E.C.
9. PROVIDE NEW EXHAUST FAN ON WINDOW. FAN SHALL BE CONTROLLED BY A COOLING–TYPE THERMOSTAT AND INTERLOCKED WITH A DAMPER AT LOWER HALF OF CORRIDOR DOOR. DAMPER SHALL BE INSTALLED DOWNSTREAM OF DOOR GRILLE EQUIPPED WITH INTEGRAL FIRE DAMPER.

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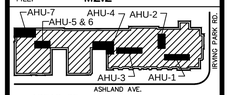
1	2017.04.12	ADDENDUM #1

DRAWN BY: FT
SCALE: 1/8"=1'-0"
JOB:
FILE: M2.2



AREAS OF WORK: ENTIRE BUILDING EXTERIOR, ALL LEVELS AND ROOF

N
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BASEMENT ENLARGED MECHANICAL PLANS

DRAWING NO.

M2.2

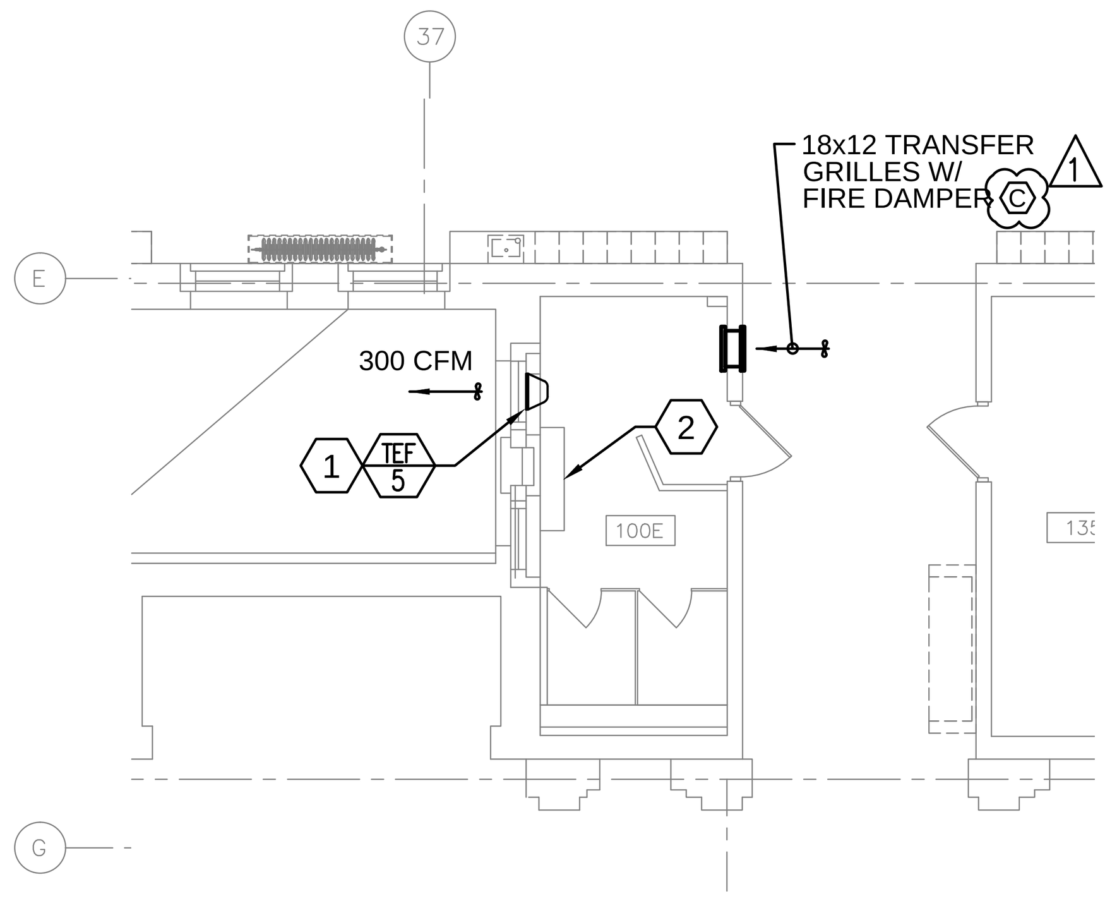
GENERAL NOTES:

1. ALL DIMENSIONS ARE TO BE VERIFIED IN FIELD.

KEYED NEW WORK NOTES:

(1) PROVIDE NEW WALL-MOUNTED EXHAUST FAN WITH GRAVITY DAMPER. ENLARGE EXISTING OPENING TO ACCOMMODATE NEW FAN AND PROVIDE NEW STAINLESS LINTEL AS REQUIRED. PROVIDE ALL FLASHINGS, WEEPS, AND REBUILT BRICK MASONRY AS REQUIRED.

(2) PROVIDE NEW STEAM RADIATOR TEMPERATURE CONTROL VALVE, INCLUDING ASSOCIATED ISOLATION VALVE AND UNIONS ON THE RADIATOR.



7 ROOM 100E – MECHANICAL PLAN
1/8"=1'-0"

GENERAL NOTES:

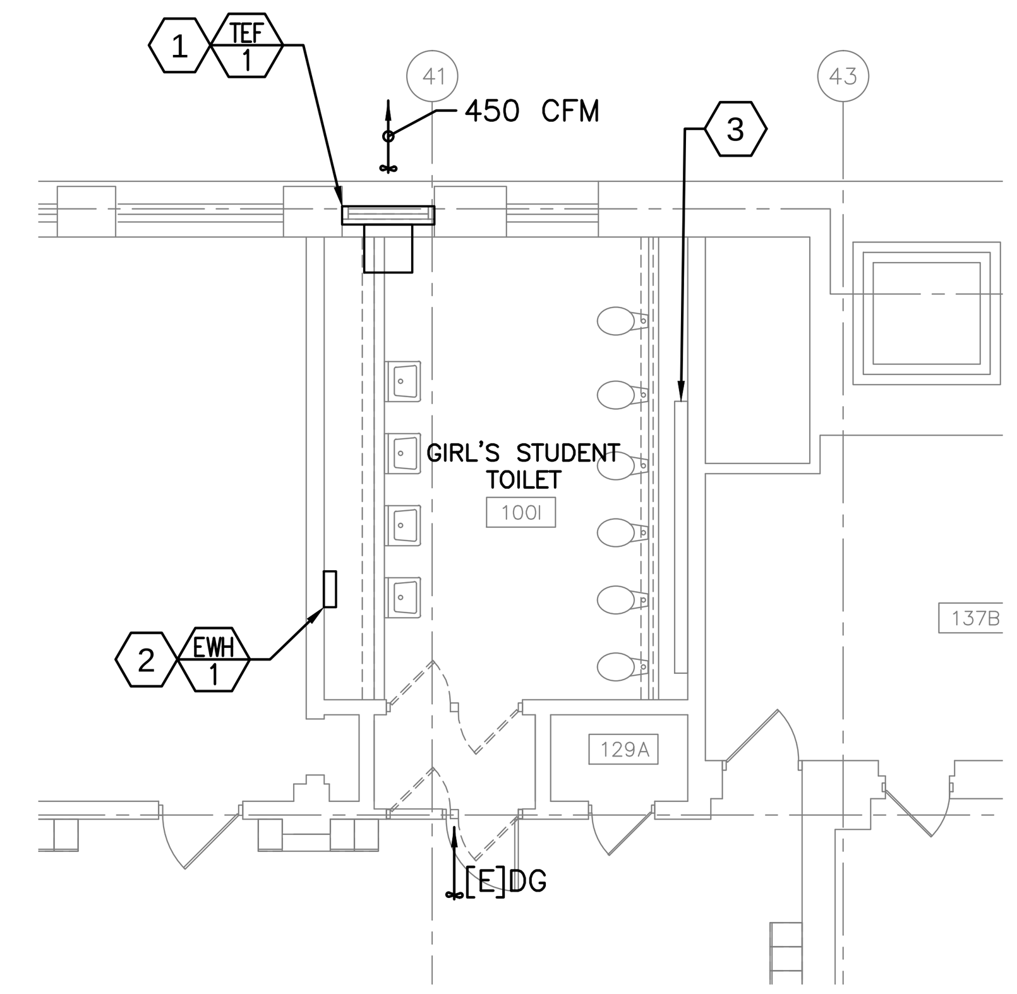
1. ALL DIMENSIONS ARE TO BE VERIFIED IN FIELD.

KEYED NEW WORK NOTES:

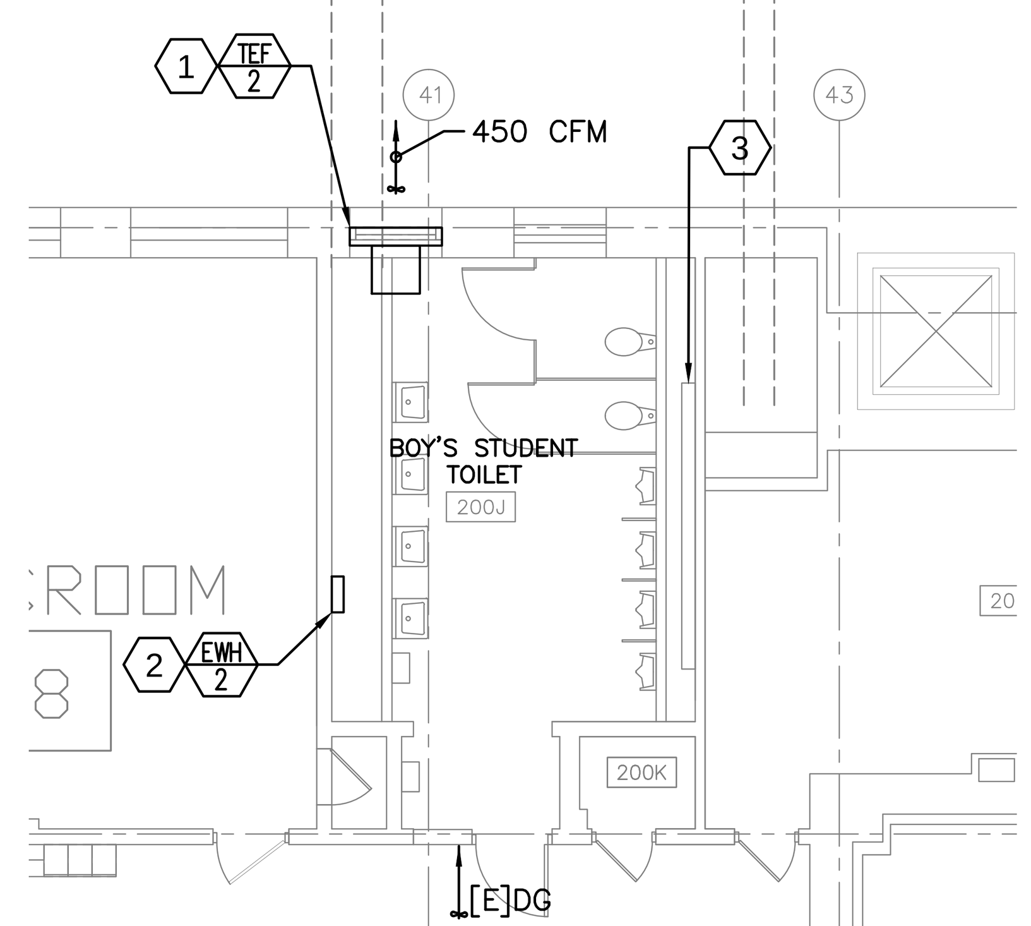
(1) PROVIDE NEW WALL-MOUNTED EXHAUST FAN WITH GRAVITY DAMPER. ENLARGE EXISTING OPENING TO ACCOMMODATE NEW FAN AND PROVIDE NEW STAINLESS LINTEL AS REQUIRED. PROVIDE ALL FLASHINGS, WEEPS, AND REBUILT BRICK MASONRY AS REQUIRED.

(2) PROVIDE NEW 1 KW ELECTRIC UNIT HEATER WITH INTEGRAL THERMOSTAT.

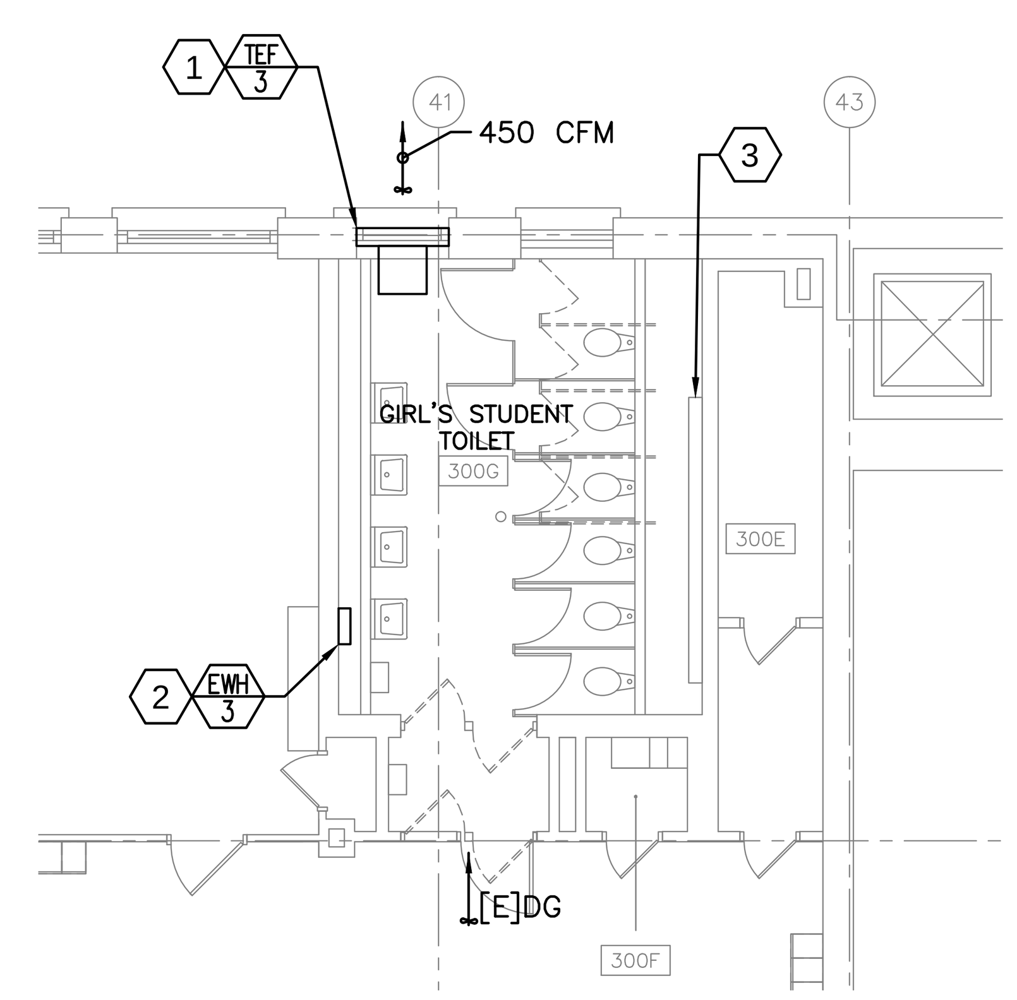
(3) PROVIDE NEW STEAM RADIATOR TEMPERATURE CONTROL VALVE, INCLUDING ASSOCIATED ISOLATION VALVE AND UNIONS ON THE RADIATOR.



2 ROOM 100I – MECHANICAL PLAN
1/8"=1'-0"



4 ROOM 200J – MECHANICAL PLAN
1/8"=1'-0"



6 ROOM 300G – MECHANICAL PLAN
1/8"=1'-0"

GENERAL NOTES:

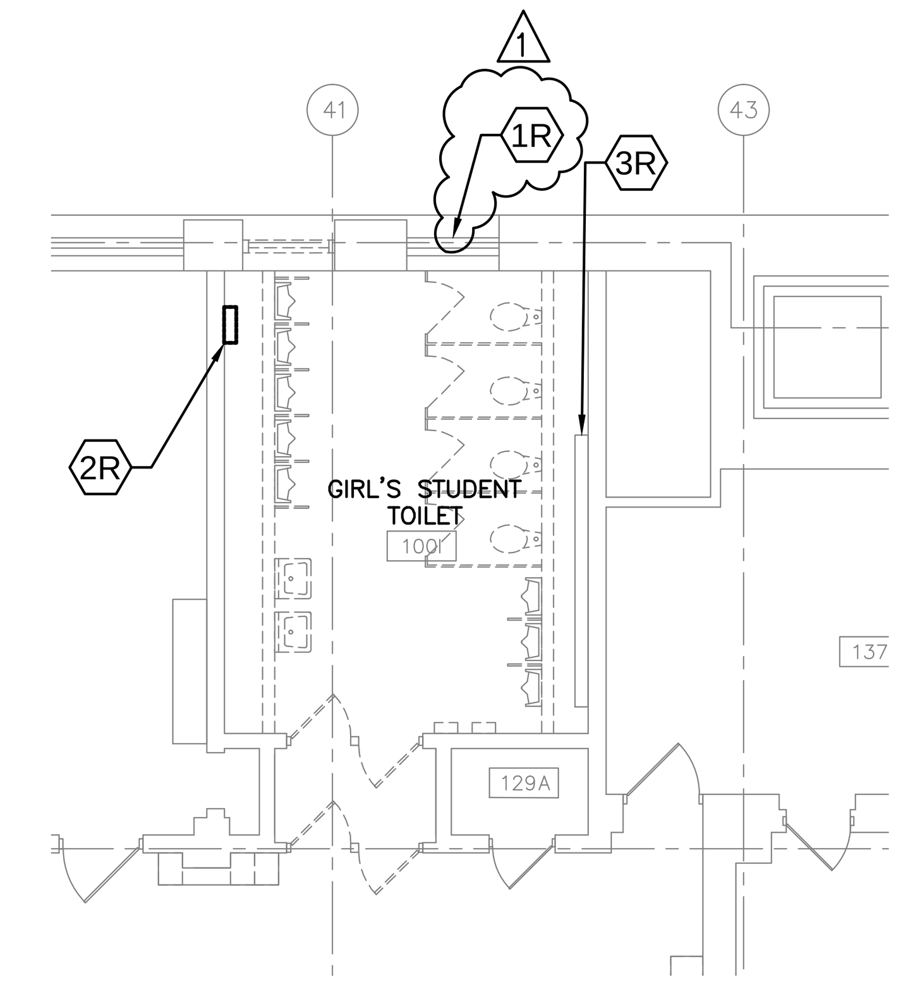
1. ALL DIMENSIONS ARE TO BE VERIFIED IN FIELD.

KEYED DEMOLITION NOTES:

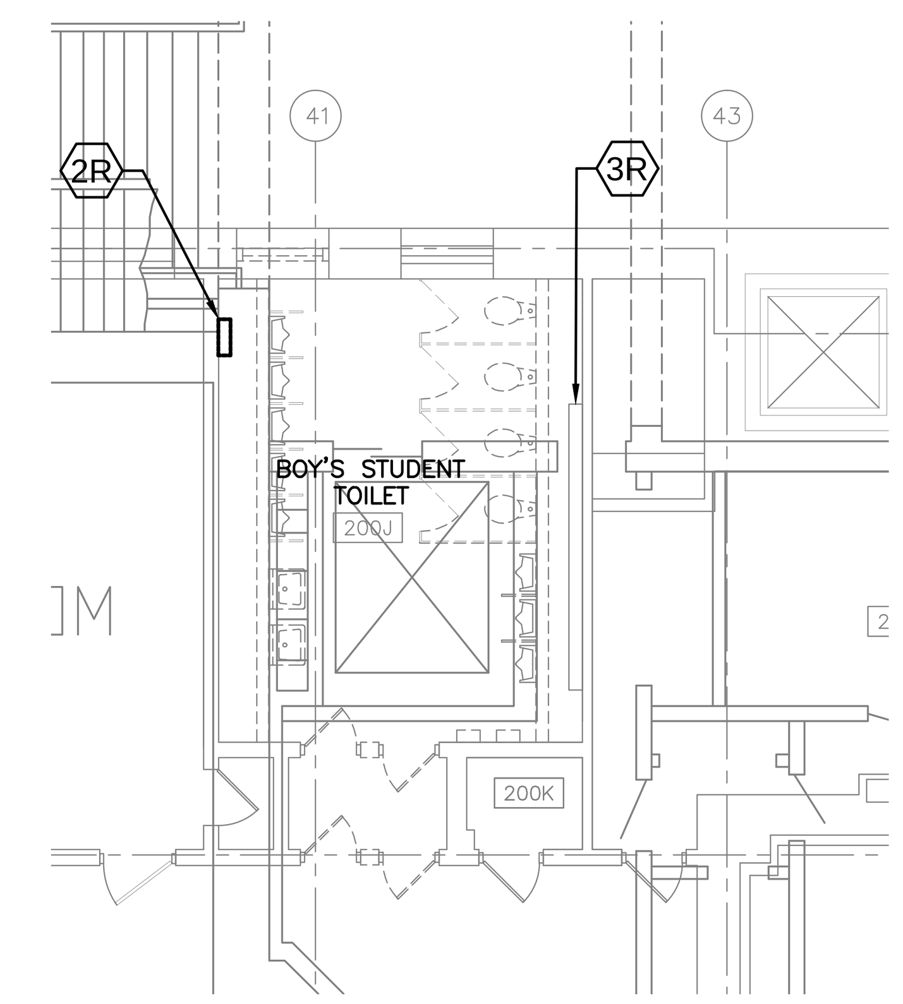
(1R) DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING EXHAUST FAN INCLUDING GRAVITY DAMPER.

(2R) DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING ELECTRIC WALL-MOUNTED UNIT HEATER.

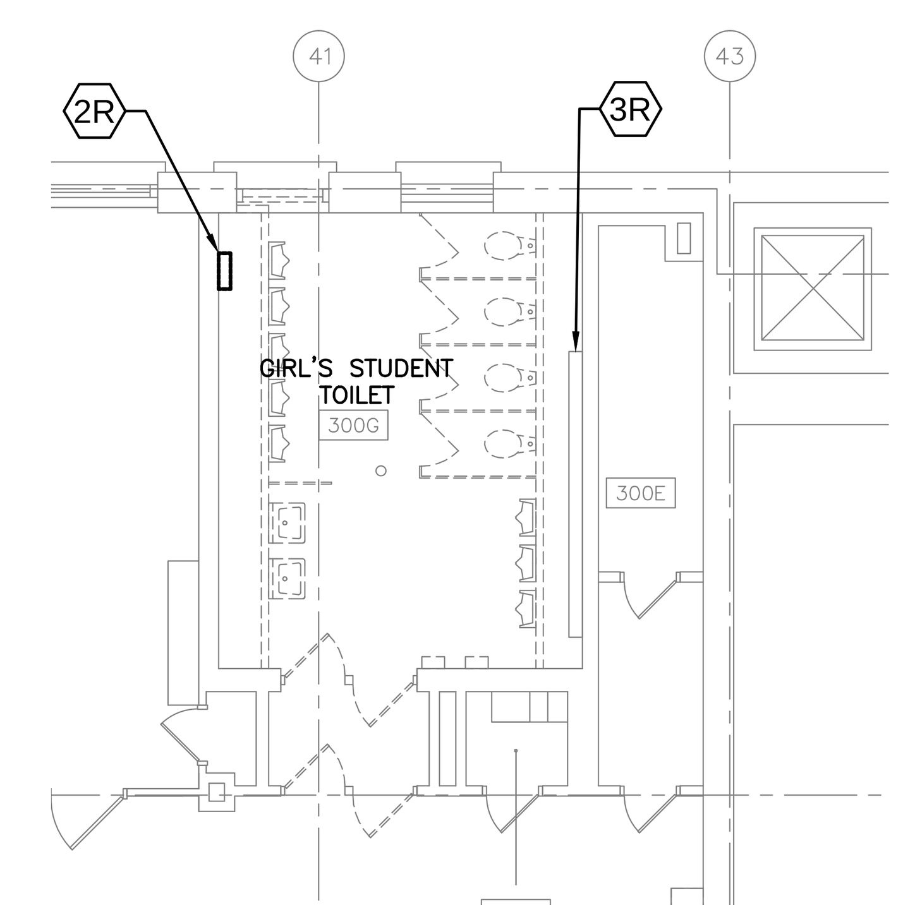
(3R) DISCONNECT, REMOVE, AND DISPOSE OFFSITE EXISTING STEAM RADIATOR TEMPERATURE CONTROL VALVE, INCLUDING ASSOCIATED ISOLATION VALVE AND UNIONS ON THE RADIATOR.



1 ROOM 100I – MECHANICAL DEMOLITION PLAN
1/8"=1'-0"



3 ROOM 200J – MECHANICAL DEMOLITION PLAN
1/8"=1'-0"



5 ROOM 300G – MECHANICAL DEMOLITION PLAN
1/8"=1'-0"

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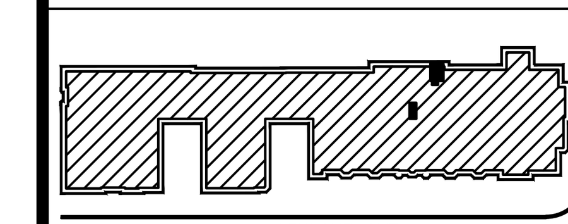
1	2017.04.12	ADDENDUM #1

DRAWN BY: FT
SCALE: 1/8"=1'-0"
JOB:
FILE: M2.2



AREAS OF WORK: ENTIRE BUILDING EXTERIOR, ALL LEVELS AND ROOF

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ENLARGED MECHANICAL PLANS

DRAWING NO.

M2.3

COMcheck Software Version 4.0.5.5

Mechanical Compliance Certificate

Project Information

Energy Code:	2015 IECC
Project Title:	Lake View High School
Location:	Chicago, Illinois
Climate Zone:	5a
Project Type:	Alteration

Construction Site:
4015 N. Ashland Avenue
Chicago, IL 60613

Owner/Agent:
Chicago Public Schools

Designer/Contractor:

Mechanical Systems List

Quantity — System Type & Description

1 HVAC System 1 (Multiple-Zone):
Heating: 1 each - Hydronic or Steam Coil, Steam, Capacity = 969 kBtu/h
No minimum efficiency requirement applies
Fan System: HVAC SYSTEM 1 | Classrooms -- Compliance (Motor nameplate HP method) : Passes

Fans:
FAN 1 Supply, Constant Volume, 12420 CFM, 10.0 motor nameplate hp, 93.0 fan efficiency

1 HVAC System 2 (Single Zone):
Heating: 1 each - Hydronic or Steam Coil, Steam, Capacity = 1047 kBtu/h
No minimum efficiency requirement applies
Fan System: HVAC SYSTEM 2 | Auditorium -- Compliance (Motor nameplate HP method) : Passes

Fans:
FAN 2 Supply, Constant Volume, 13200 CFM, 20.0 motor nameplate hp, 93.0 fan efficiency
FAN 3 Supply, Constant Volume, 33250 CFM, 20.0 motor nameplate hp, 93.0 fan efficiency

1 HVAC System 3 (Multiple-Zone):
Heating: 1 each - Hydronic or Steam Coil, Steam, Capacity = 2935 kBtu/h
No minimum efficiency requirement applies
Fan System: HVAC SYSTEM 3 | Classrooms -- Compliance (Motor nameplate HP method) : Passes

Fans:
FAN 3 Supply, Constant Volume, 33250 CFM, 20.0 motor nameplate hp, 93.0 fan efficiency

1 HVAC System 4 (Multiple-Zone):
Heating: 1 each - Hydronic or Steam Coil, Steam, Capacity = 3615 kBtu/h
No minimum efficiency requirement applies
Fan System: HVAC SYSTEM 4 | Classrooms -- Compliance (Motor nameplate HP method) : Passes

Fans:
FAN 4 Supply, Constant Volume, 40350 CFM, 20.0 motor nameplate hp, 93.0 fan efficiency

1 HVAC System 5 (Multiple-Zone):
Heating: 1 each - Hydronic or Steam Coil, Steam, Capacity = 1562 kBtu/h
No minimum efficiency requirement applies
Fan System: HVAC SYSTEM 5 | Classrooms -- Compliance (Motor nameplate HP method) : Passes

Fans:
FAN 5 Supply, Constant Volume, 19500 CFM, 7.5 motor nameplate hp, 91.7 fan efficiency

1 HVAC System 6 (Multiple-Zone):
Heating: 1 each - Hydronic or Steam Coil, Steam, Capacity = 1008 kBtu/h

Quantity — System Type & Description

No minimum efficiency requirement applies
Fan System: HVAC SYSTEM 5 | Classrooms -- Compliance (Motor nameplate HP method) : Passes

Fans:
FAN 5 Supply, Constant Volume, 19500 CFM, 7.5 motor nameplate hp, 91.7 fan efficiency

1 HVAC System 7 (Multiple-Zone):
Heating: 1 each - Hydronic or Steam Coil, Steam, Capacity = 1916 kBtu/h
No minimum efficiency requirement applies
Fan System: HVAC SYSTEM 7 | Classrooms -- Compliance (Motor nameplate HP method) : Passes

Fans:
FAN 7 Supply, Constant Volume, 24360 CFM, 20.0 motor nameplate hp, 93.0 fan efficiency

1 Plant 1:
Heating: Steam Boiler, Capacity 23622 kBtu/h, Gas
Proposed Efficiency: 82.00 % Ec, Required Efficiency: 79.00 % Ec

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.0.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

FERNANDO TONGSY, MECH. ENGR — Signature — 3/31/2017

Name - Title — Signature — Date

BOILER BURNER SCHEDULE

TAG	LOCATION	SERVICE	DRAFT	FUEL	BOILER CAPACITY (BHP)	BURNER CAPACITY (MBH)	GAS PRESSURE (IN.WG.)	ELECTRICAL HP	VOLTS	PHASE	HZ	WEIGHT LBS	MANUFACTURER / MODEL	REMARKS
GB-1	BASEMENT	SCOTCH MARINE BOILER	FORCED	NATURAL GAS	350.0	14,780	20	3	208	3	60	1,200	POWER FLAME / CM9-G-30	NOTES 1-7
GB-2	BASEMENT	SCOTCH MARINE BOILER	FORCED	NATURAL GAS	350.0	14,780	20	3	208	3	60	1,200	POWER FLAME / CM9-G-30	NOTES 1-7

NOTES:
1. BURNER SHALL BE FULLY MODULATING.
2. BURNER SHALL BE CAPABLE OF RECEIVING 4-20 MA SIGNAL FOR MODULATION CONTROL.
3. PROVIDE COMMUNICATION INTERFACE PER CONTROLS AND BOILER SPECIFICATIONS.
4. PROVIDE UL/FM GAS TRAIN.
5. PROVIDE WITH REMOTE/LOCAL SWITCH AND MANUAL CAPACITY CONTROL.
6. PROVIDE COMBUSTION DAMPER AND ACTUATOR INTEGRATED TO BOILER CONTROLS
7. PROVIDE SEPARATE HIGH LIMIT, LOW WATER FLAME FAILURE ALARM, HIGH LEVEL ALARM INDICATION AT BOILER PANEL

BOILER FEEDWATER PUMP SCHEDULE

TAG	LOCATION	SERVICE	FLUID	TYPE	GPM	HEAD (PSI)	HP	RPM	ELECTRICAL DATA VOLT / PH / HZ	ELECTRICAL DATA STARTER	OPER. WEIGHT (LBS)	MANUFACTURER/ MODEL	REMARKS
BFP-3	BASEMENT	STEAM BOILER -1	WATER	CLOSE-COUPLED END-SUCTION	75	40	5	3500	208/3/60	ACROSS THE LINE	100	SHIPCO / MODEL 113-P	1

NOTES:
1. BASEPLATE-MOUNTED PUMP & MOTOR.

FAN SCHEDULE

TAG	SERVICE	LOCATION	CFM	ESP (IN)	TYPE	DRIVE B: BELT D: DIRECT	FAN SPEED RPM	SOUND LEVEL (SONES)	MOTOR OPER. BHP	MOTOR HP	MOTOR RPM	MOTOR VOLT	MOTOR HZ	MOTOR PH	WT (LBS)	MANUFACTURER / MODEL	REMARKS
TEF-1	TOILET ROOMS	GIRL'S STUDENTS TOILET 100I	500	0.3	SIDEWALL PROPELLER	D	1725	6.0	0.08	1/4	1725	115	60	1	38	GREENHECK / SE1-12-432-VG	1-4, 6
TEF-2	TOILET ROOMS	TOILET 200J	500	0.3	SIDEWALL PROPELLER	D	1725	6.0	0.08	1/4	1725	115	60	1	38	GREENHECK / SE1-12-432-VG	1-4, 6
TEF-3	TOILET ROOMS	TOILET 300G	500	0.3	SIDEWALL PROPELLER	D	1725	6.0	0.08	1/4	1725	115	60	1	38	GREENHECK / SE1-12-432-VG	1-4, 6
TEF-4	TOILET ROOMS	ROOF	1,350	0.5	ROOF VENTILATOR	B	1033	7.8	0.25	1/4	1750	115	60	1	62	GREENHECK / GB-141-4	1-3, & 5, 6
TEF-5	TOILET ROOMS	WOMEN STAFF TOILET 100E	300	0.25	SIDEWALL PROPELLER	D	1050	4.8	0.06	1/20	1050	115	60	1	20	GREENHECK / SE1-12-432-E	1-4, 6
EF-1	-	ROOF	1,250	1.0	UPBLAST	B	1550	14.9	0.37	1/2	1725	115	60	1	69	GREENHECK / CUBE-121-7	1-3, & 5, 6
EF-2	-	ROOF	4,460	1.0	ROOF VENTILATOR	B	846	15.0	1.30	1	1725	208	60	3	127	GREENHECK / GB-220-15	1-3, & 5, 6
EF-3	SCIENCE LAB 324	ROOF	1,965	1.0	UTILITY	B	1725	12.7	0.64	3/4	1725	208	60	3	203	GREENHECK / SWB-115-7	1-3, & 5, 6
EF-4	CHEM LAB 126	ROOF	1,500	1.0	UTILITY	B	1620	12.3	0.48	1/2	1725	115	60	1	181	GREENHECK / SWB-113-5	1-3, & 5, 6
EF-5	ROOM 011B	ROOM 011B	1,000	1.0	SIDEWALL PROPELLER	D	750	8.8	0.08	1/4	1222	115	60	1	58	GREENHECK / SBE-1H20-4	1-4, 6
EF-6	ROOM 003B	ROOF (1)	500	1/8	ROOF VENTILATOR	B	1408	3.3	0.05	1/4	1725	115	60	1	51	GREENHECK / GB-101-4	1-3, & 5, 6
EF-7	ROOM 003B	ROOF	500	1/8	ROOF VENTILATOR	B	1408	3.3	0.05	1/4	1725	115	60	1	51	GREENHECK / GB-101-4	1-3, & 5, 6

NOTES:
1. GRAVITY BACKDRAFT DAMPER.
2. ALUMINUM BIRDSCEEN.
3. DISCONNECT SWITCH.
4. WALL HOUSING.
5. 14" ROOF CURB.
6. PROVIDE 7-DAY PROGRAMMABLE TIME CLOCK. FAN SHALL OPERATE BASED ON OCCUPANCY SCHEDULE. (1)

DIFFUSERS, REGISTERS, GRILLES, AND LOUVERS

TAG	TYPE	TITUS MODEL AND NECK	FRAME	DAMPER	FINISH	REMARKS
A	EXHAUST AIR REGISTER	TITUS / 350RL	SURFACE MOUNTED	OBD	BAKED WHITE ENAMEL	
B	SUPPLY AIR REGISTER	TITUS / 300RS	SURFACE MOUNTED	OBD	BAKED WHITE ENAMEL	
C	TRANSFER AIR GRILLE	TITUS / 350RL	SURFACE MOUNTED	-	BAKED WHITE ENAMEL	

OBD - OPPOSED BLADE DAMPER

DAMPER SCHEDULE

TAG	LOCATION	SERVICE	QTY	SIZE	ACTUATOR	REMARKS
-	AHU-1	BYPASS	2	68x38	PNEUMATIC	1 - 3
-	AHU-3	BYPASS	2	48x28	PNEUMATIC	1 - 3
-	AHU-3	OUTDOOR	3	48x36	PNEUMATIC	1 - 3
-	AHU-4	OUTDOOR	2	34x68	PNEUMATIC	1 - 3

NOTES:
1. DAMPERS SHALL BE SIZED IN COORDINATION WITH THE BUILDING AUTOMATION SYSTEM CONTRACTOR TO ENSURE PROPER CONTROLABILITY.
2. DAMPERS CONTROLLED BY THE BUILDING AUTOMATION SYSTEM SHALL FOLLOW THE REQUIREMENTS OF SPECIFICATION 15951.
3. DAMPERS WITH VERTICAL BLADES SHALL HAVE THRUST BEARINGS.

PUBLIC BUILDING COMMISSION — Chicago Public Schools

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CONSULTING ENGINEERS

PROVIDE AOR/EOR STAMP HERE

LAKE VIEW
HIGH SCHOOL
4015 NORTH ASHLAND AVENUE
CHICAGO, ILLINOIS 60613

PROJECT NO. 2016-46211-MCR

REVISIONS

NO.	DATE	DESCRIPTION
-	2016.04.19	30% SUBMITTAL
-	2016.06.14	60% SUBMITTAL
-	2017.02.14	75% SUBMITTAL
-	2017.03.02	100% SUBMITTAL
-	2017.03.07	PERMIT SET
-	2017.03.23	PRELIMINARY OTB SET
-	2017.04.04	BID SET
1	2017.04.12	ADDENDUM #1

DRAWN BY: FT
SCALE: NTS
JOB:
FILE: M3.1

AREAS OF WORK: ENTIRE BUILDING EXTERIOR, ALL LEVELS AND ROOF

N

KEY PLAN

WARNING: ASBESTOS-CONTAINING BUILDING MATERIALS ARE OR MAY BE PRESENT IN THIS BUILDING. AN ASBESTOS MANAGEMENT PLAN IS AVAILABLE IN THE SCHOOL FOR REVIEW UPON REQUEST. NO PERSON MAY DISTURB ASBESTOS-CONTAINING MATERIALS UNLESS THAT PERSON IS A LICENSED ASBESTOS WORKER OR CONDUCTS SUCH WORK IN ACCORDANCE WITH SPECIFICATIONS CONTAINED IN THE PROJECT DOCUMENTS AND IN COMPLIANCE WITH ILLINOIS DEPARTMENT OF HEALTH RULES AND REGULATIONS.

MECHANICAL SCHEDULES

DRAWING NO.

M3.1

VENTILATION SCHEDULE

ROOM No.	ROOM NAME (Plan)	ROOM PURPOSE (per Table 403.3)	AREA sq.ft.	ORDINANCE REQUIREMENTS						ACTUAL PROVIDED						EQUIPMENT		REMARKS
				NATURAL LIGHT & VENTILATION		MECHANICAL VENTILATION		(RO) Relief Openings		NATURAL LIGHT & VENTILATION		MECHANICAL VENTILATION		(RO) Relief Openings		SUPPLY FAN	EXHAUST FAN	
				Glass sq.ft.	Vent sq.ft.	Supply CFM	Exhaust CFM	Volume (CFM)	Area of Duct (SF)	Glass sq.ft.	Vent sq.ft.	Supply CFM	Exhaust CFM	Volume (CFM)	Area of Duct (SF)			
302	MDF	COMPUTER ROOM	302	12	6	181	91	0	0	0	0	200	200	0	0	AHU-1	EF-1	
232	LIBRARY	LIBRARY	2,063	83	42	2,476	1,238	0	0	0	0	2,500	2,500	0	0	AHU-1	EF-1	
238	WORK ROOM	WORKSHOPS NOT OTHERWISE CLASSIFIED	643	26	13	772	772	0	0	0	0	800	800	0	0	AHU-1	EF-1	
330	CLASSROOM	CLASSROOM	540	22	11	810	405	0	0	0	0	850	850	0	0	AHU-1	EF-1	
332	CLASSROOM	CLASSROOM	734	29	15	1,101	551	0	0	0	0	1,200	1,200	0	0	AHU-1	EF-1	
334	CLASSROOM	CLASSROOM	364	15	8	546	273	0	0	0	0	600	600	0	0	AHU-1	EF-1	
336	CLASSROOM	CLASSROOM	892	36	18	1,338	669	0	0	0	0	1,400	1,400	0	0	AHU-1	EF-1	
338	CLASSROOM	CLASSROOM	718	29	15	1,077	539	0	0	0	0	1,100	1,100	0	0	AHU-1	EF-1	
100	MAIN OFFICE	OFFICES AND COMPUTER ROOMS	834	33	17	500	250	0	0	0	0	500	500	0	0	AHU-1	EF-1	
136	OFFICE	OFFICES AND COMPUTER ROOMS	406	16	8	244	122	0	0	0	0	250	250	0	0	AHU-1	EF-1	
138H	OFFICE	OFFICES AND COMPUTER ROOMS	88	4	2	53	50	0	0	0	0	100	100	0	0	AHU-1	EF-1	
138G	OFFICE	OFFICES AND COMPUTER ROOMS	87	3	2	52	50	0	0	0	0	100	100	0	0	AHU-1	EF-1	
136A	OFFICE	OFFICES AND COMPUTER ROOMS	128	5	3	77	50	0	0	0	0	100	100	0	0	AHU-1	EF-1	
138I	OFFICE	WAITING ROOM	126	5	3	126	126	0	0	0	0	150	150	0	0	AHU-1	EF-1	
138E	OFFICE	OFFICES AND COMPUTER ROOMS	65	3	2	50	50	0	0	0	0	100	100	0	0	AHU-1	EF-1	
138D	OFFICE	OFFICES AND COMPUTER ROOMS	78	3	2	50	50	0	0	0	0	100	100	0	0	AHU-1	EF-1	
138A	OFFICE	OFFICES AND COMPUTER ROOMS	111	4	2	67	50	0	0	0	0	100	100	0	0	AHU-1	EF-1	
138B	OFFICE	OFFICES AND COMPUTER ROOMS	65	3	2	50	50	0	0	0	0	100	100	0	0	AHU-1	EF-1	
138C	OFFICE	OFFICES AND COMPUTER ROOMS	75	3	2	50	50	0	0	0	0	100	100	0	0	AHU-1	EF-1	

VENTILATION SCHEDULE

ROOM No.	ROOM NAME (Plan)	ROOM PURPOSE (per Table 403.3)	AREA sq.ft.	ORDINANCE REQUIREMENTS						ACTUAL PROVIDED						EQUIPMENT		REMARKS
				NATURAL LIGHT & VENTILATION		MECHANICAL VENTILATION		(RO) Relief Openings		NATURAL LIGHT & VENTILATION		MECHANICAL VENTILATION		(RO) Relief Openings		SUPPLY FAN	EXHAUST FAN	
				Glass sq.ft.	Vent sq.ft.	Supply CFM	Exhaust CFM	Volume (CFM)	Area of Duct (SF)	Glass sq.ft.	Vent sq.ft.	Supply CFM	Exhaust CFM	Volume (CFM)	Area of Duct (SF)			
080	WEIGHT ROOM	STORAGE - INACTIVE	1,834	0	0	NR	NR	0	0	0	0	0	0	0	0	AHU-4		
090A	OFFICE	STORAGE - INACTIVE	282	0	0	NR	NR	0	0	0	0	0	0	0	0	AHU-4		
	SHOWER	SHOWER ROOM	362	14	7	NR	NR	0	0	0	0	0	0	0	0	AHU-4		
	TOILET	TOILET ROOM	123	5	3	NR	246	0	0	0	0	0	250	0	0	AHU-4		
	LOCKER	LOCKER ROOM	950	38	19	285	1,140	0	0	0	0	300	4,050	0	0	AHU-4		
	POOL	NATATORIUM	1,407	56	28	2,814	2,111	0	0	0	0	2,850	2,150	0	0	AHU-4		
	SHOWER	SHOWER ROOM	158	6	3	NR	NR	0	0	0	0	0	0	0	0	AHU-4		
	TOILET	TOILET ROOM	164	7	4	NR	328	0	0	0	0	0	350	0	0	AHU-4		
	LOCKER	LOCKER ROOM	434	17	9	130	521	0	0	0	0	150	550	0	0	AHU-4		
090	ROTC CLASSROOM	CLASSROOM	2,171	87	44	3,257	1,628	0	0	0	0	3,300	3,300	0	0	AHU-4		
116	MAIN GYM	GYMNASIUM	5,859	234	117	11,718	8,789	0	0	0	0	11,750	11,750	0	0	AHU-4		
115	LAB	LABORATORIES	770	39	20	924	924	0	0	0	0	950	950	0	0	AHU-4		
117	PREP ROOM	LABORATORIES	179	9	5	215	215	0	0	0	0	250	250	0	0	AHU-4		
119	LAB	LABORATORIES	375	19	10	450	450	0	0	0	0	450	450	0	0	AHU-4		
121	CLASSROOM	CLASSROOM	813	33	17	1,220	610	0	0	0	0	1,250	1,250	0	0	AHU-4		
123	CLASSROOM	CLASSROOM	755	30	15	1,133	566	0	0	0	0	1,150	1,150	0	0	AHU-4		
215	CLASSROOM	CLASSROOM	749	30	15	1,124	562	0	0	0	0	1,150	1,150	0	0	AHU-4		
217	CLASSROOM	CLASSROOM	642	26	13	963	482	0	0	0	0	1,000	1,000	0	0	AHU-4		
219	CLASSROOM	CLASSROOM	681	27	14	1,022	511	0	0	0	0	1,050	1,050	0	0	AHU-4		
221	COMPUTER ROOM	CLASSROOM	851	34	17	1,277	638	0	0	0	0	1,300	1,300	0	0	AHU-4		
223	CLASSROOM	CLASSROOM	839	34	17	1,259	629	0	0	0	0	1,300	1,300	0	0	AHU-4		
317A	DARK ROOM	PHOTO MATERIALS AND ENGRAVING	363	15	8	363	363	0	0	0	0	400	400	0	0	AHU-4		
935	ART LAB	CLASSROOM	935	37	19	1,403	701	0	0	0	0	1,450	1,450	0	0	AHU-4		
319	CLASSROOM	CLASSROOM	729	29	15	1,094	547	0	0	0	0	1,100	1,100	0	0	AHU-4		
321	CLASSROOM	CLASSROOM	846	34	17	1,269	635	0	0	0	0	1,300	1,300	0	0	AHU-4		
340	CLASSROOM	CLASSROOM	393	16	8	590	295	0	0	0	0	600	600	0	0	AHU-4		
342	CLASSROOM	CLASSROOM	367	15	8	551	275	0	0	0	0	560	560	0	0	AHU-4		
344	CLASSROOM	CLASSROOM	395	16	8	593	296	0	0	0	0	600	600	0	0	AHU-4		
314	CLASSROOM	CLASSROOM	1,002	40	20	1,503	752	0	0	0	0	1,550	1,550	0	0	AHU-4		
	ART LAB	CLASSROOM	2,211	88	44	3,317	1,658	0	0	0	0	3,350	3,350	0	0	AHU-4		
323	CLASSROOM	CLASSROOM	790	32	16	1,185	593	0	0	0	0	1,200	1,200	0	0	AHU-4		

VENTILATION SCHEDULE

ROOM No.	ROOM NAME (Plan)	ROOM PURPOSE (per Table 403.3)	AREA sq.ft.	ORDINANCE REQUIREMENTS						ACTUAL PROVIDED						EQUIPMENT		REMARKS
				NATURAL LIGHT & VENTILATION		MECHANICAL VENTILATION		(RO) Relief Openings		NATURAL LIGHT & VENTILATION		MECHANICAL VENTILATION		(RO) Relief Openings		SUPPLY FAN	EXHAUST FAN	
				Glass sq.ft.	Vent sq.ft.	Supply CFM	Exhaust CFM	Volume (CFM)	Area of Duct (SF)	Glass sq.ft.	Vent sq.ft.	Supply CFM	Exhaust CFM	Volume (CFM)	Area of Duct (SF)			
237A	AUDITORIUM	AUDITORIUM	7,274	291	146	10,911	5,456	0	0	0	0	11,000	11,000	0	0	AHU-2		

VENTILATION SCHEDULE

ROOM No.	ROOM NAME (Plan)	ROOM PURPOSE (per Table 403.3)	AREA sq.ft.	ORDINANCE REQUIREMENTS						ACTUAL PROVIDED						EQUIPMENT		REMARKS
				NATURAL LIGHT & VENTILATION		MECHANICAL VENTILATION		(RO) Relief Openings		NATURAL LIGHT & VENTILATION		MECHANICAL VENTILATION		(RO) Relief Openings		SUPPLY FAN	EXHAUST FAN	
				Glass sq.ft.	Vent sq.ft.	Supply CFM	Exhaust CFM	Volume (CFM)	Area of Duct (SF)	Glass sq.ft.	Vent sq.ft.	Supply CFM	Exhaust CFM	Volume (CFM)	Area of Duct (SF)			
027A	CORRIDOR	CORRIDOR	956	0	0	NR	NR	0	0	0	0	0	0	0	0	AHU-4		
029	ENGR OFFICE	OFFICES AND COMPUTER ROOMS	253	10	5	152	76	0	0	0	0	200	200	0	0	AHU-4		
029A	WORKOUT ROOM	GYMNASIUM	738	30	15	1,476	1,107	0	0	0	0	1,500	1,500	0	0	AHU-4		
029B	RECEIVING	STORAGE - INACTIVE	472	0	0	NR	NR	0	0	0	0	150	150	0	0	AHU-4		
120	CLASSROOM	CLASSROOM	118	5	3	177	89	0	0	0	0	200	200	0	0	AHU-4		
120	CLASSROOM	CLASSROOM	760	30	15	1,140	570	0	0	0	0	1,150	1,150	0	0	AHU-4		
116A	OFFICE	OFFICES AND COMPUTER ROOMS	1,059	42	21	635	318	0	0	0	0	650	650	0	0	AHU-4		
122	LAB	LABORATORIES	1,180	59	30	1,416	1,416	0	0	0	0	1,450	1,450	0	0	AHU-4		
125	CLASSROOM	CLASSROOM	821	33	17	1,232	616	0	0	0	0	1,250	1,250	0	0	AHU-4		
127	OFFICE	OFFICES AND COMPUTER ROOMS	633	25	13	380	190	0	0	0	0	400	400	0	0	AHU-4		
129	CLASSROOM	CLASSROOM	653	26	13	980	490	0	0	0	0	1,000	1,000	0	0	AHU-4		
124	PREP ROOM	LABORATORIES	417	21	11	500	500	0	0	0	0	500	500	0	0	AHU-4		
126	LAB	LABORATORIES	1,115	56	28	1,338	1,338	0	0	0	0	1,350	1,350	0	0	AHU-4		
128	STUDENT SERVICE	OFFICES AND COMPUTER ROOMS	736	29	15	442	221	0	0	0	0	450	450	0	0	AHU-4		
220	LAB	LABORATORIES	776	39	20	931	931	0	0	0	0	950	950	0	0	AHU-4		
222	LAB	LABORATORIES	983	49	25	1,180	1,180	0	0	0	0	1,200	1,200	0	0	AHU-4		
225	CLASSROOM	CLASSROOM	819	33	17	1,229	614	0	0	0	0	1,250	1,250	0	0	AHU-4		
229	LAB	LABORATORIES	1,203	60	30	1,444	1,444	0	0	0	0	1,450	1,450	0	0	AHU-4		
229A	PREP ROOM	LABORATORIES	126	6	3	151	151	0	0	0	0	200	200	0	0	AHU-4		
228	CLASSROOM	CLASSROOM	922	37	19	1,383	692	0	0	0	0	1,400	1,400	0	0	AHU-4		
224	COMMUNITY ROOM	LODGE HALLS	1,441	0	0	2,162	1,081	0	0	0	0	2,200	2,200	0	0	AHU-4		
222A	PREP ROOM	LABORATORIES	111	6	3	133	133	0	0	0	0	150	150	0	0	AHU-4		
320	LAB	LABORATORIES	919	46	23	1,103	1,103	0	0	0	0	1,150	1,150	0	0	AHU-4		
322	COMPUTER LAB	CLASSROOM	951	38	19	1,427	713	0	0	0	0	1,450	1,450	0	0	AHU-4		
325	CLASSROOM	CLASSROOM	788	32	16	1,182	591	0	0	0	0	1,200	1,200	0	0	AHU-3		
327	CLASSROOM	CLASSROOM	672	27	14	1,008	504	0	0	0	0	1,050	1,050	0	0	AHU-3		
329	CLASSROOM	CLASSROOM	663	27	14	995	497	0	0	0	0	1,000	1,000	0	0	AHU-3		
324	LAB	LABORATORIES	1,083	54	27	1,300	1,300	0	0	0	0	1,300	1,300	0	0	AHU-3		
324A	OFFICE	OFFICES AND COMPUTER ROOMS	346	14	7	208	104	0	0	0	0	250	250	0	0	AHU-3		
328	LAB	LABORATORIES	1,042	52	26	1,250	1,250	0	0	0	0	1,250	1,250	0	0	AHU-3		
333	CLASSROOM	CLASSROOM	882	35	18	1,323	662	0	0	0	0	1,350	1,350	0	0	AHU-3		
337	CLASSROOM	CLASSROOM	476	19	10	714	357	0	0	0	0	750	750	0	0	AHU-3		
422	MUSIC ROOM	MUSIC ROOM	1,300	52	26	1,950	975	0	0	0	0	1,950	1,950	0	0	AHU-3		
422A	PRACTICE ROOM	MUSIC ROOM	46	2	1	69	50	0	0	0	0	100	100	0	0	AHU-3		
422B	PRACTICE ROOM	MUSIC ROOM	57	2	1	86	50	0	0	0	0	100	100	0	0	AHU-3		
422C	PRACTICE ROOM	MUSIC ROOM	56	2	1	84	50	0	0	0	0	100	100	0	0	AHU-3		
428	CLASSROOM	CLASSROOM	783	31	16	1,175	587	0	0	0	0	1,200	1,200	0	0	AHU-3		

1

PUBLIC BUILDING COMMISSION
Chicago Public Schools

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PROJECT NO. 2016-46211-MCR

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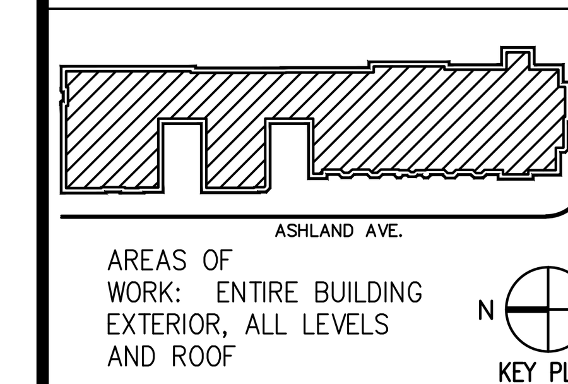
1	2017.04.12	ADDENDUM #1

DRAWN BY: FT
SCALE: NTS
JOB:
FILE: M3.3



AREAS OF WORK: ENTIRE BUILDING EXTERIOR, ALL LEVELS AND ROOF

KEY PLAN

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MECHANICAL SCHEDULES

DRAWING NO.

M3.3

VENTILATION SCHEDULE

ROOM No.	ROOM NAME (Plan)	ROOM PURPOSE (per Table 403.3)	AREA sq.ft.	ORDINANCE REQUIREMENTS						ACTUAL PROVIDED						EQUIPMENT	
				NATURAL LIGHT & VENTILATION		MECHANICAL VENTILATION		(RO) Relief Openings		NATURAL LIGHT & VENTILATION		MECHANICAL VENTILATION		(RO) Relief Openings		SUPPLY FAN	EXHAUST FAN
				Glass sq.ft.	Vent sq.ft.	Supply CFM	Exhaust CFM	Volume (CFM)	Area of Duct (SF)	Glass sq.ft.	Vent sq.ft.	Supply CFM	Exhaust CFM	Volume (CFM)	Area of Duct (SF)		
010	LUNCH ROOM	LUNCH ROOM (NO COOKING)	8,253	330	165	12,380	12,380	0	0	0	0	12,400	12,400	0	0	AHU-5	
010B	DISH WASHING	KITCHEN - PUBLIC	192	6	3	230	768	0	0	0	0	250	800	0	0	AHU-5	
020	SERVING	LUNCH ROOM (NO COOKING)	1,343	54	27	2,015	2,015	0	0	0	0	2,050	2,050	0	0	AHU-5	
040	KITCHEN	KITCHEN - PUBLIC	700	21	11	840	2,800	0	0	0	0	850	2,800	0	0	AHU-5	
030	STAFF LOUNGE	LOUNGE	662	26	13	662	993	0	0	0	0	700	1,000	0	0	AHU[illegible]	

VENTILATION SCHEDULE

ROOM No.	ROOM NAME (Plan)	ROOM PURPOSE (per Table 403.3)	AREA sq.ft.	ORDINANCE REQUIREMENTS						ACTUAL PROVIDED						EQUIPMENT		REMARKS
				NATURAL LIGHT & VENTILATION		MECHANICAL VENTILATION		(RO) Relief Openings		NATURAL LIGHT & VENTILATION		MECHANICAL VENTILATION		(RO) Relief Openings		SUPPLY FAN	EXHAUST FAN	
				Glass sq.ft.	Vent sq.ft.	Supply CFM	Exhaust CFM	Volume (CFM)	Area of Duct (SF)	Glass sq.ft.	Vent sq.ft.	Supply CFM	Exhaust CFM	Volume (CFM)	Area of Duct (SF)			
367	OFFICE	OFFICES AND COMPUTER ROOMS	196	8	4	118	59	0	0	0	0	150	150	0	0	AHU-6		
	OFFICE	OFFICES AND COMPUTER ROOMS	190	8	4	114	57	0	0	[illegible]	[illegible]	[illegible]	[illegible]	0	0	AHU-6		
203	SMALL GYM	GYMNASIUM	2,649	106	53	5,298	3,974	0	0	[illegible]	0	[illegible]	5,300	0	0	AHU-6		
201	SMALL GYM	GYMNASIUM	2,489	100	50	4,978	3,734	0	0	[illegible]	0	5,000	5,000	0	0	AHU-6		

VENTILATION SCHEDULE

ROOM No.	ROOM NAME (Plan)	ROOM PURPOSE (per Table 403.3)	AREA sq.ft.	ORDINANCE REQUIREMENTS						ACTUAL PROVIDED						EQUIPMENT		REMARKS
				NATURAL LIGHT & VENTILATION		MECHANICAL VENTILATION		(RO) Relief Openings		NATURAL LIGHT & VENTILATION		MECHANICAL VENTILATION		(RO) Relief Openings		SUPPLY FAN	EXHAUST FAN	
				Glass sq.ft.	Vent sq.ft.	Supply CFM	Exhaust CFM	Volume (CFM)	Area of Duct (SF)	Glass sq.ft.	Vent sq.ft.	Supply CFM	Exhaust CFM	Volume (CFM)	Area of Duct (SF)			
305	LAB	LABORATORIES	2,007	[illegible]	50	[illegible]	[illegible]	0	0	0	0	2,450	2,450	0	0	AHU-7		
311	CLASSROOM	CLASSROOM	504	20	10	756	378	0	0	0	0	800	800	0	0	AHU-7		
313	CLASSROOM	CLASSROOM	492	[illegible]	10	738	369	0	0	0	0	750	750	0	0	AHU-7		
310	WORK AREA	WORKSHOPS NOT OTHERWISE CLASSIFIED	306	[illegible]	6	367	367	0	0	0	0	400	400	0	0	AHU-7		
312	CLASSROOM	CLASSROOM	656	26	13	984	492	0	0	0	0	1,000	1,000	0	0	AHU-7		
304	CLASSROOM	CLASSROOM	[illegible]	27	14	1,017	509	0	0	0	0	1,050	1,050	0	0	AHU-7		
302	CLASSROOM	CLASSROOM	659	26	13	989	494	0	0	0	0	1,000	1,000	0	0	AHU-7		
205	COMPUTER LAB	CLASSROOM	219	9	5	329	164	0	0	0	0	350	350	0	0	AHU-7		
207	OFFICE	OFFICES AND COMPUTER ROOMS	317	13	7	190	95	0	0	0	0	200	200	0	0	AHU-7		
[illegible]	CLASSROOM	CLASSROOM	777	31	16	1,166	583	0	0	0	0	1,200	1,200	0	0	AHU-7		
487	CLASSROOM	CLASSROOM	487	19	10	731	365	0	0	0	0	750	750	0	0	AHU-7		
[illegible]	CLASSROOM	CLASSROOM	478	19	10	717	359	0	0	0	0	750	750	0	0	AHU-7		
200[illegible]	TOILET	TOILET ROOM	290	12	6	NR	580	0	0	0	0	0	600	0	0	AHU-7		
200D	TOILET	TOILET ROOM	235	9	5	NR	470	0	0	0	0	0	500	0	0	AHU-7		
212	LAB	LABORATORIES	764	38	19	917	917	0	0	0	0	950	950	0	0	AHU-7		
204	CLASSROOM	CLASSROOM	668	27	14	1,002	501	0	0	0	0	1,100	1,100	0	0	AHU-7		
202	CLASSROOM	CLASSROOM	626	25	13	939	470	0	0	0	0	950	950	0	0	AHU-7		
105	GAMING ROOM	GAME ROOMS / ARCADE	1,194	48	24	1,910	1,910	0	0	0	0	2,000	2,000	0	0	AHU-7		
109	ATTENDANCE OFFICE	OFFICES AND COMPUTER ROOMS	890	36	18	534	267	0	0	0	0	550	550	0	0	AHU-7		
111	SPECIAL ED OFFICE	OFFICES AND COMPUTER ROOMS	332	13	7	199	100	0	0	0	0	200	200	0	0	AHU-7		
113	OFFICE	OFFICES AND COMPUTER ROOMS	342	14	7	205	103	0	0	0	0	250	250	0	0	AHU-7		
112	COUNSELOR OFFICE	OFFICES AND COMPUTER ROOMS	977	39	20	586	293	0	0	0	0	600	600	0	0	AHU-7		
112B1	TOILET	TOILET ROOM	214	9	5	NR	428	0	0	0	0	0	450	0	0	AHU-7		
102	IT SUPPORT	OFFICES AND COMPUTER ROOMS	998	40	20	599	299	0	0	0	0	600	600	0	0	AHU-7		
102A	OFFICE	OFFICES AND COMPUTER ROOMS	152	6	3	91	50	0	0	0	0	100	100	0	0	AHU-7		
101	OFFICE	OFFICES AND COMPUTER ROOMS	1,258	50	25	755	377	0	0	0	0	800	800	0	0	AHU-7		
101A	HEALTH OFFICE	OFFICES AND COMPUTER ROOMS	1,360	54	27	816	408	0	0	0	0	850	850	0	0	AHU-7		
103	GIRLS LOCKER	LOCKER ROOM	2,144	86	43	643	2,573	0	0	0	0	650	2,600	0	0	AHU-7		
103C	TOILET	TOILET ROOM	98	4	2	NR	196	0	0	0	0	0	200	0	0	AHU-7		
103A	TOILET	TOILET ROOM	178	7	4	NR	356	0	0	0	0	0	400	0	0	AHU-7		

1

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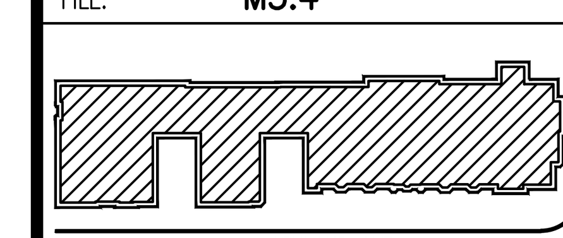
PROJECT NO. 2016-46211-MCR

REVISIONS

NO.	DATE	DESCRIPTION
–	2016.04.19	30% SUBMITTAL
–	2016.06.14	60% SUBMITTAL
–	2017.02.14	75% SUBMITTAL
–	2017.03.02	100% SUBMITTAL
–	2017.03.07	PERMIT SET
–	2017.03.23	PRELIMINARY OTB SET
–	2017.04.04	BID SET
1	2017.04.12	ADDENDUM #1

DRAWN BY: FT
SCALE: NTS
JOB:
FILE: M3.4



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MECHANICAL SCHEDULES

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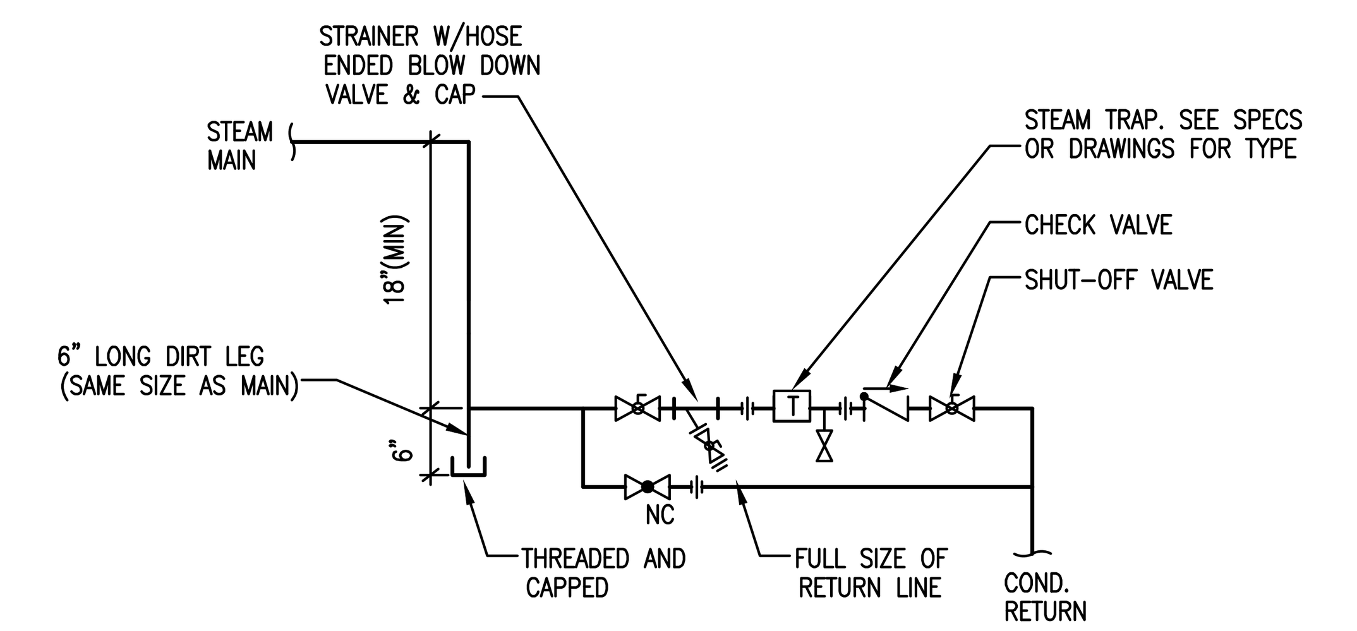
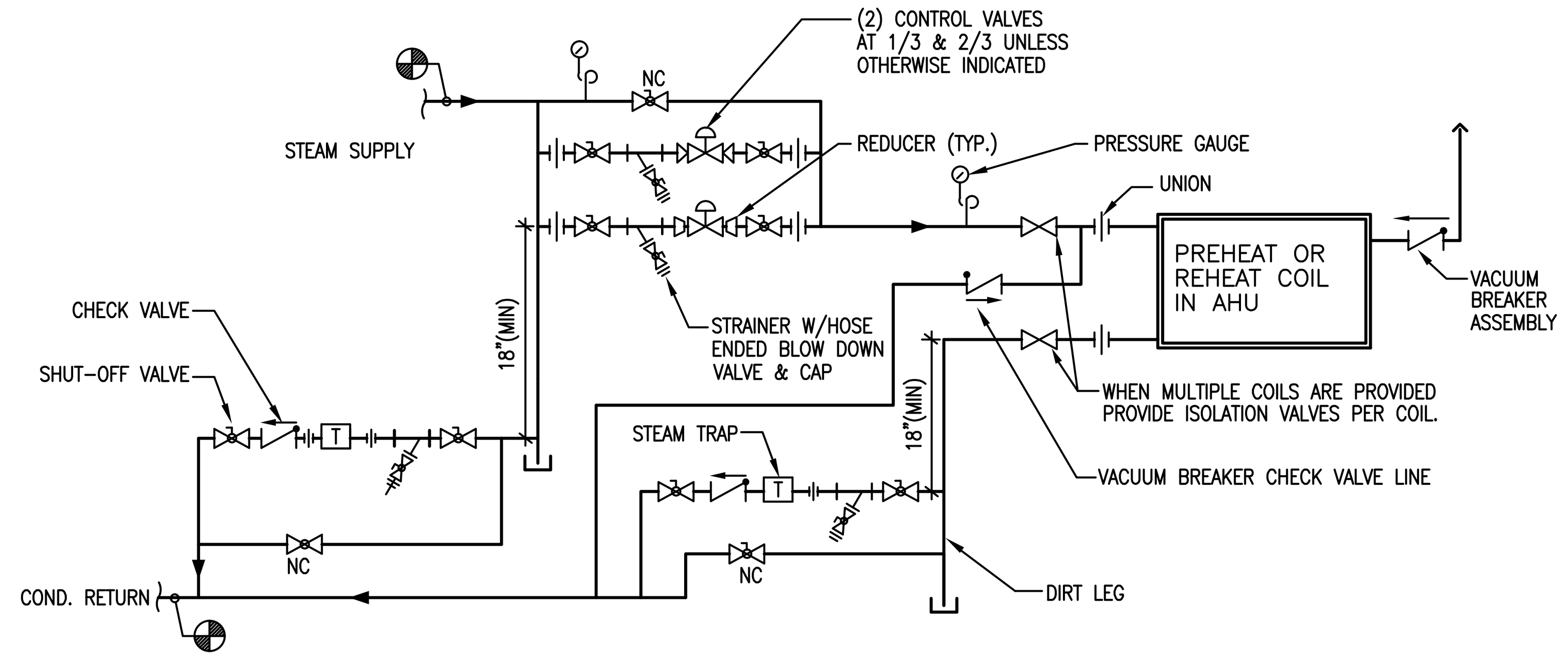


3 TYPICAL DRIP TRAP ASSEMBLY DETAIL

SCALE: NOT TO SCALE

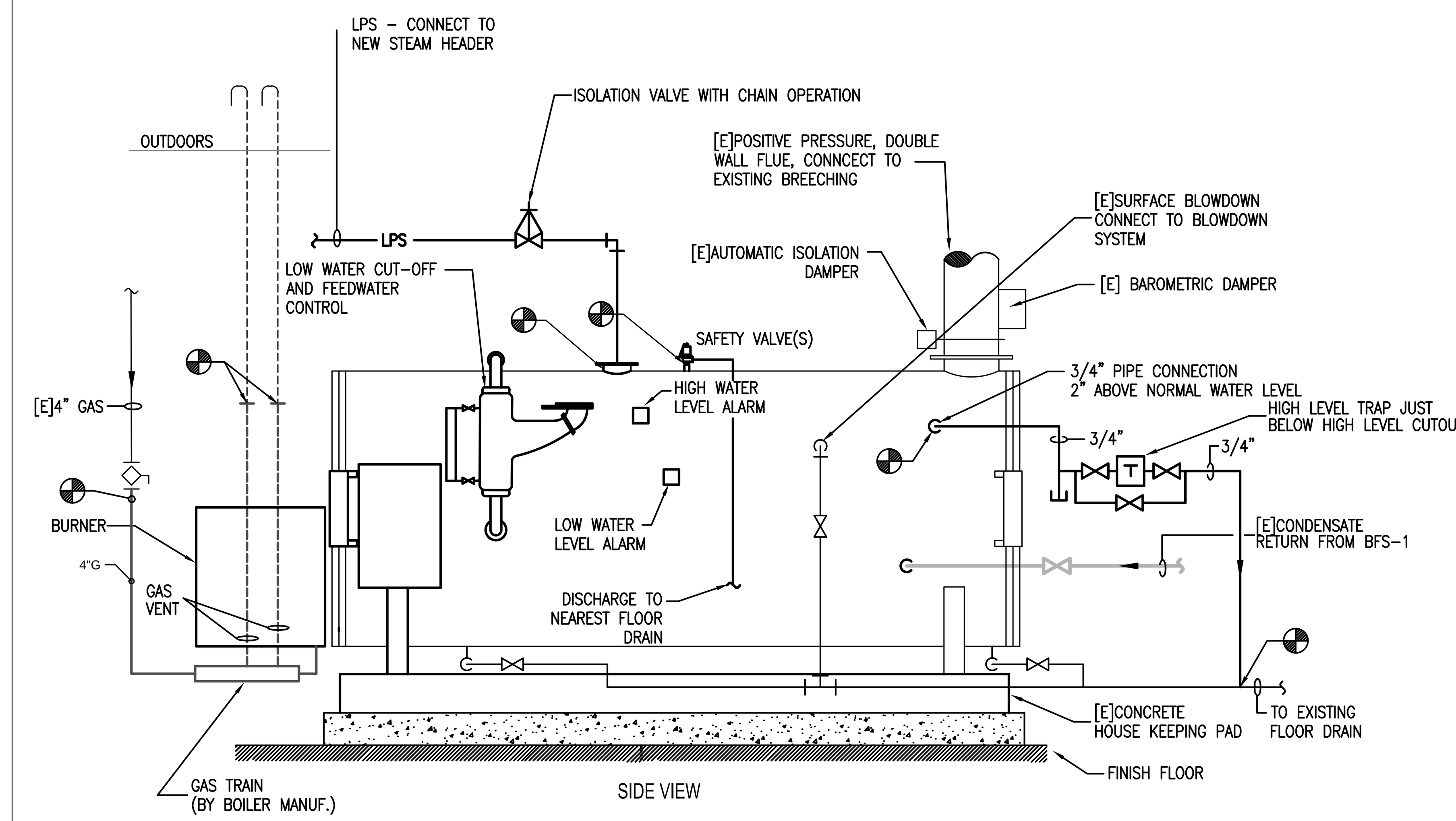


NOTES:

1. FOR MULTIPLE COIL ASSEMBLIES, PROVIDE ONE SET OF CONTROL VALVES W/ INDIVIDUAL TRAP ASSEMBLIES FOR EACH COIL
2. FOR SYSTEM LESS THAN 200 LBS/HR, PROVIDE ONLY (1) CONTROL VALVE.

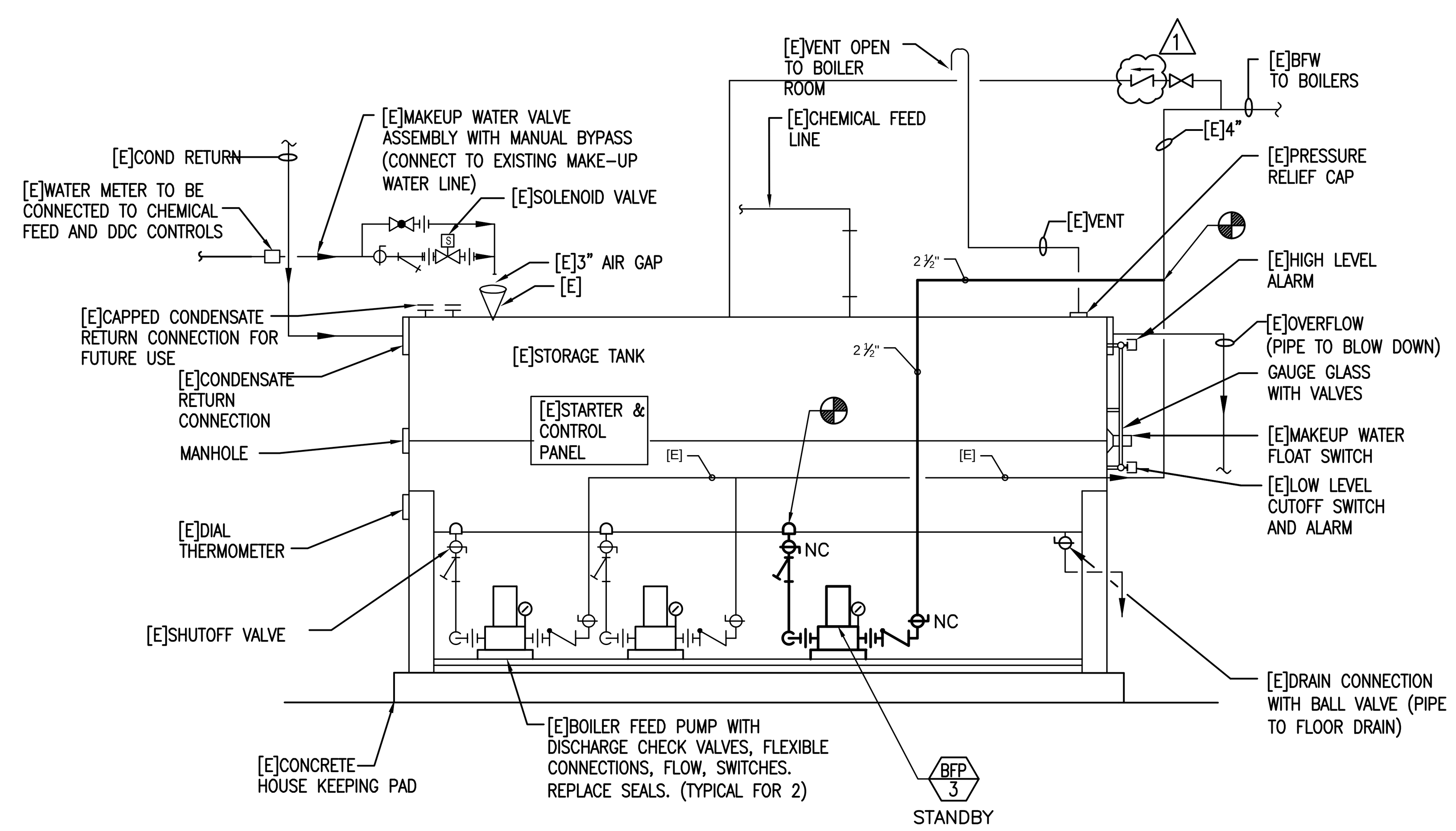
2 TYPICAL STEAM HEATING COIL PIPING DIAGRAM

SCALE: NOT TO SCALE



1 BOILER PIPING CONNECTION DIAGRAM

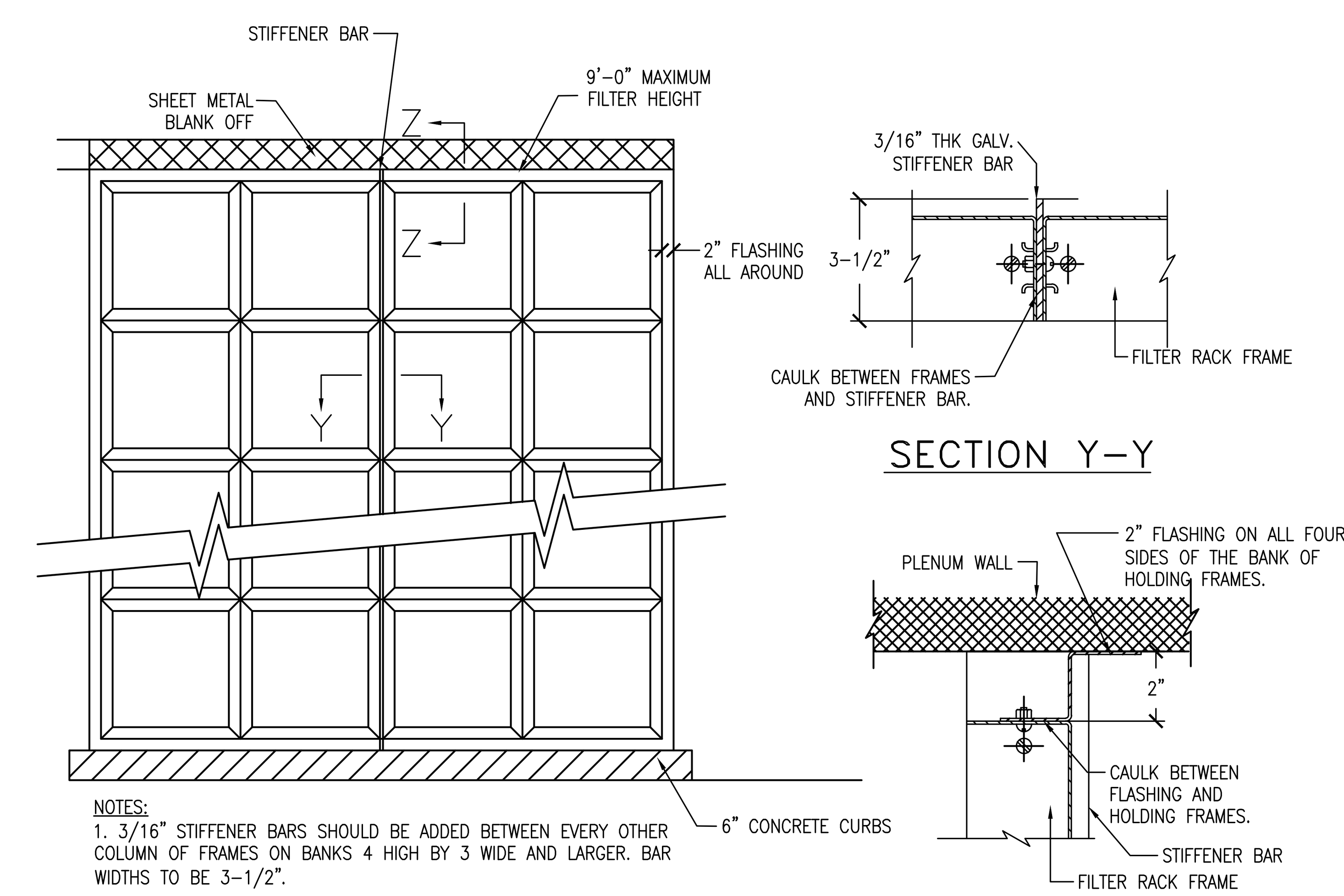
SCALE: NOT TO SCALE



6 BOILER PACKAGED FEED WATER CONDENSATE TANK SYSTEM DETAIL

SCALE: NOT TO SCALE

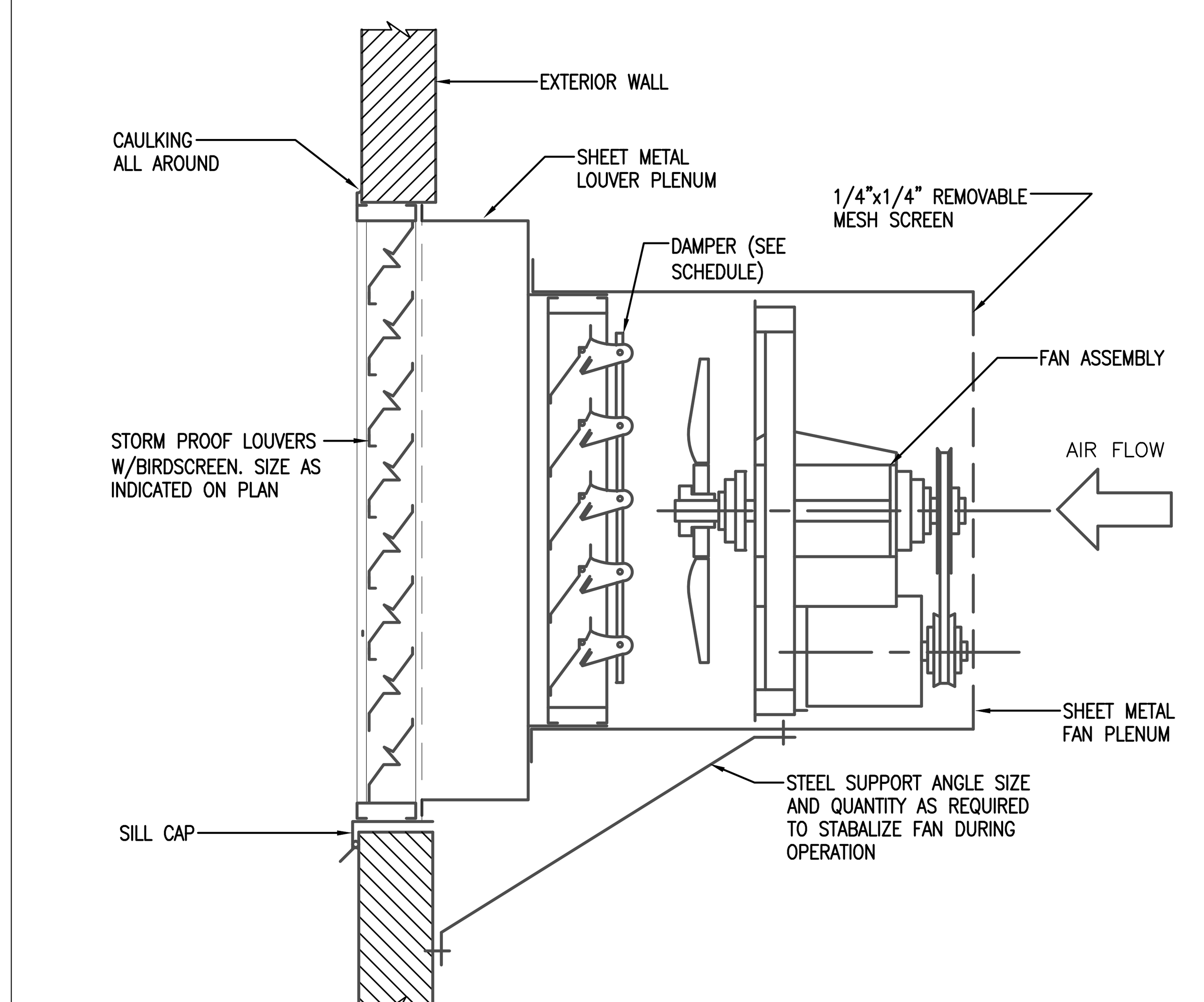
NOTE:
FILTER VELOCITY NOT TO EXCEED 400 FT/MIN OR AS LIMITED BY EXISTING FAN. STATIC PRESSURE PROVIDE ANGLE FILTERS WHEN REQUIRED.



NOTES:
1. 3/16" STIFFENER BARS SHOULD BE ADDED BETWEEN EVERY OTHER COLUMN OF FRAMES ON BANKS 4 HIGH BY 3 WIDE AND LARGER. BAR WIDTHS TO BE 3-1/2".

5 FILTER RACK INSTALLATION DETAIL

SCALE: NOT TO SCALE



4 TYPCAL SIDEWALL FAN DETAIL

SCALE: NOT TO SCALE

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DRAWN BY:	FT
SCALE:	NTS
JOB:	
FILE:	M4.1

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MECHANICAL DETAILS

DRAWING NO.

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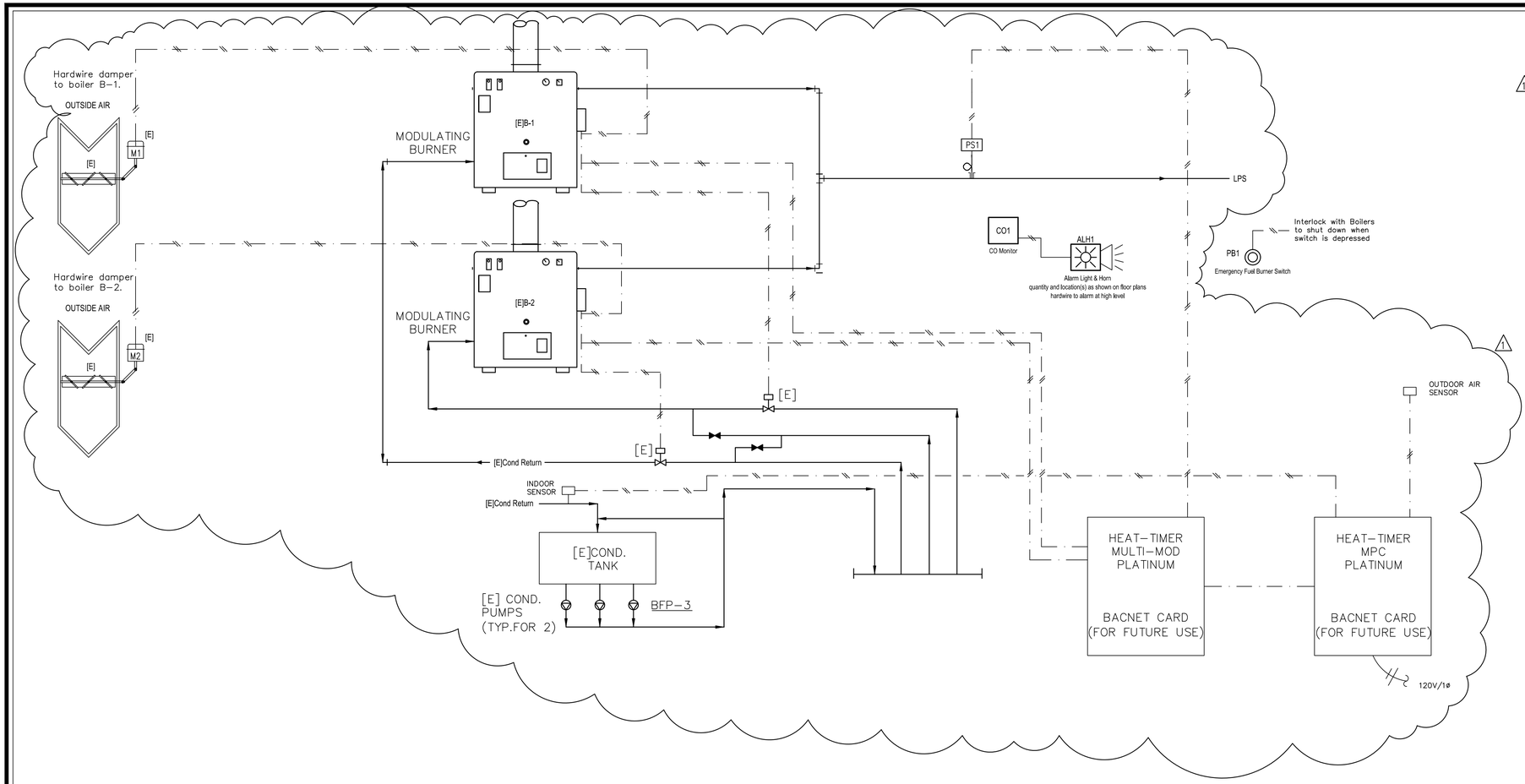

Steam Boilers

NOTES:

1. PROVIDE HEAT-TIMER CONTROLLERS TO ENABLE/DISABLE STEAM BOILERS, MODULATE BURNERS, AND CONTROL FIRING RATE TO MAINTAIN HEADER PRESSURE BASED ON SCHEDULED OCCUPANCY, AND OA TEMPERATURE WITH OA RESET. CONTROLLERS SHALL BE CAPABLE OF SEQUENCING THE BOILERS BASED ON LEAD/LAG AND AUTOMATIC ROTATION WITH FIELD ADJUSTABLE TIME CLOCK (DAILY OR WEEKLY BASIS).
2. COMBUSTION DAMPER ACTUATOR AND INDEPENDENT END SWITCH HARDWIRED TO ASSOCIATED BOILER.
3. CONDENSATE RETURN VALVES SHALL BE HARDWIRED TO ASSOCIATED BOILER PUMP CONTROLLER.
4. PROVIDE AN AUDIBLE ALARM TO SET OFF DURING LOW WATER LEVEL CONDITION. DO NOT INTERFACE WITH BAS.
5. COORDINATE WITH BUILDING ENGINEER FOR DESIRED SCHEDULE OF OPERATION AND STEAM PRESSURE SETPOINT.

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DRAWN BY: FT
SCALE: NTS
JOB:
FILE: **M4.2**

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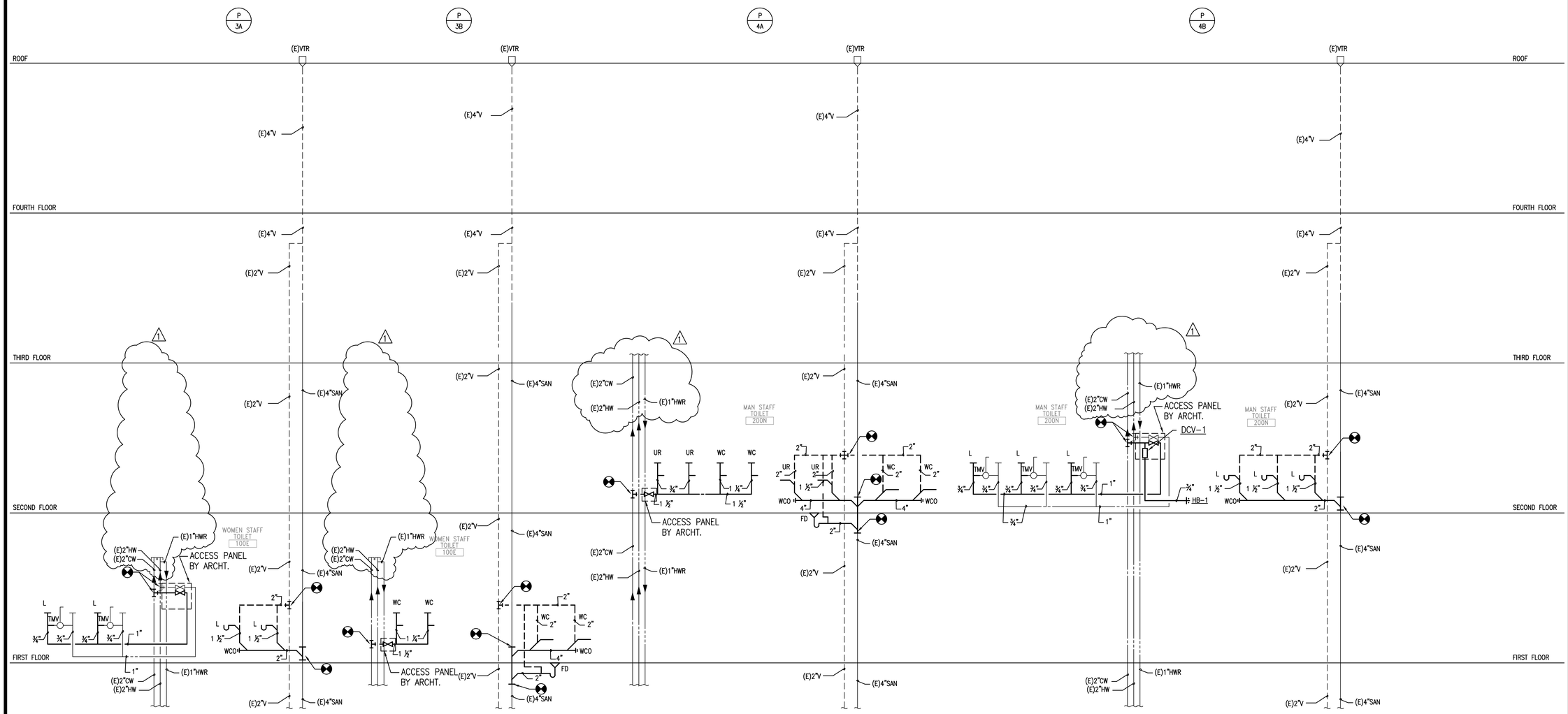
STEAM BOILER SYSTEM SYMBOLS

DRAWING NO.

M4.2



1 PLUMBING PIPING RISER DIAGRAMS
NTS

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DRAWN BY: MS
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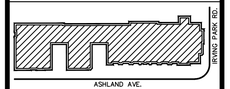
JOB:
FILE: P3.2



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N

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PLUMBING PIPING RISER DIAGRAMS

DRAWING NO.

P3.2

GENERAL SYMBOLS

- BRANCH CIRCUIT PANELBOARD
- DISTRIBUTION PANELBOARD
- IM — CUSTOMER OWNED DIGITAL METER
- TRANSFORMER
- (M) — ELECTRIC UTILITY (COMED) METER
- NON–FUSED DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- MAGNETIC MOTOR STARTER
- COMBINATION STARTER/DISCONNECT SWITCH
- (M) — MOTOR. SEE MOTOR/EQUIPMENT SCHEDULE ON DWG. E200 FOR HP RATINGS.
- MOTOR/EQUIPMENT TAG
- ^{T} — SINGLE POLE MANUAL STARTER WITH THERMAL OVERLOAD PROTECTION FOR FRACTIONAL SINGLE PHASE MOTORS.
- ___ A — CIRCUIT BREAKER "____ A" INDICATES TRIP RATING/SETTING (AMPS)
- (GFR) — GROUND FAULT PROTECTIVE RELAY
- ___ A — FUSIBLE SWITCH "___ A" INDICATES DISCONNECT TRIP RATING AND FUSE SIZE, RESPECTIVELY (AMPS)
- ATS — AUTOMATIC TRANSFER SWITCH
- GROUND
- SURGE ARRESTOR
- CURRENT TRANSFORMER
- WALL MTD LUMINAIRE
- (C) — WALL MOUNTED FLOODLIGHT
- BATTERY PACK
- (OCC) — OCCUPANCY SENSOR (TYPE AND QUANTITY PER MAN'R'S RECOMMENDATION
- (MS) — MOTION SENSOR
- (PH) — PHOTOELECTRIC SENSOR
- ^{MC} — TWO POLE DOUBLE THROW SWITCH FOR PROTECTION SCREEN
- (S) — SPEAKER
- (J) P — POWER FOR ALL PLUMBING FIXTURES IN STAFF TOILET SEE E0.1 DETAIL
- NUMBER DETAIL / DRAWING NUMBER
- ROOF MOUNTED LTG FIXTURE (SEE E1.5)
- GUTTER TO BE HEAT TRACED
- GUTTER DOWNSPOIT TO BE HEAT TRACED

PANELBOARD WIRING CONVENTION

NORTH OR SOUTH PORTION OF BLDG.
LEVEL
PANEL TYPE

e.i. – 'L2S' (LIGHTING PANEL, 2ND FLOOR, SOUTH)

TYPE

LM – LIGHTING/GENERAL MAINTENANCE PANELBOARD
PP – POWER PANELBOARD
ACP – AIR CONDITIONING PANELBOARD (BEING REUSED AS GENERAL PANELBOARD FOR FAN COIL BOXES)

RACEWAYS & WIRING

- CONDUIT HOMERUN
  - PHASE
  - NEUTRAL
  - GROUND
- CONDUIT – SURFACE MOUNTED OR CONCEALED
- CONDUIT UNDERFLOOR OR UNDERGROUND
- CONDUIT TURNED UP
- CONDUIT TURNED DOWN
- FLEXIBLE CONDUIT
- (J) — JUNCTION BOX
- (J) — JUNCTION BOX – WALL MOUNTED
- (J) — JUNCTION BOX UNDER FLOOR
- PB — PULLBOX

FIRE ALARM SYMBOLS LIST

- FA — CITY FIRE ALARM BOX
- S — PULL STATION
- D — HEAT DETECTOR
- A — AUDIO ALARM DEVICE
- V — VISUAL ALARM DEVICE WHERE: 75cd INDICATES 75 CANDELA STROBE
- AV — AUDIO/VISUAL ALARM DEVICE
- FACP — FIRE ALARM CONTROL PANEL
- FAA — FIRE ALARM ANNUNICIATOR PANEL
- (B) — TROUBLE BELL
- WF — WATER FLOW SWITCH
- VSS — SPRINKLER VALVE SUPERVISORY (TAMPER) SWITCH
- DD — DUCT SMOKE DETECTOR
- SSCP — SPRINKLER SUPERVISORY CONTROL PANEL
- SSA — SPRINKLER SUPERVISORY ANNUNICATOR PANEL
- PS — PRESSURE SWITCH

LIGHTING SYMBOLS LIST

$\$_{a}^{XX}$ — SINGLE POLE WALL SWITCH
WHERE: 'a' IS THE DESIGNATION INDICATING WHAT LIGHTS ARE CONTROLLED BY THAT SWITCH
WHERE: 'XX' IS
OS: OCCUPANCY SENSOR
K: KEYED SWITCH
D: DIMMER SWITCH

F / Na — 1' x 4' FIXTURE
WHERE: 'F' IS THE FIXTURE TAG
'N' IS THE CIRCUIT NUMBER
'a' IS THE SWITCH DESIGNATION

EM / N — 1' x 4' EMERGENCY FIXTURE
WHERE: 'EM' IS THE DESIGNATION FOR EMERGENCY PANEL
'N' IS THE CIRCUIT NUMBER IN THE EMERGENCY PANEL

⊗ # ⊗ — WALL MOUNTED EXIT OR DIRECTIONAL SIGN. PROVIDE ARROWS AS INDICATED ON PLANS. SHADED PORTION DENOTES VIEWING FACE. NUMBER ADJACENT TO SYMBOL DENOTES "CHICAGO CODE" INSCRIPTION.

CODE NUMBER		CHICAGO CODE DESCRIPTION
SINGLE FACE	DOUBLE FACE	
#2A	#17A	STAIRS NO ARROW
#3	#18	EXIT NO ARROW
#5A		STAIRS ARROW RIGHT
#6		EXIT ARROW RIGHT
#8A		STAIRS ARROW LEFT
#9		EXIT ARROW LEFT
#11A	#23A	STAIRS DOUBLE ARROW
#12	#24	EXIT DOUBLE ARROW
	#20A	STAIRS ARROW RIGHT AND LEFT
	#21	EXIT ARROW RIGHT AND LEFT

POWER SYMBOLS

WALL MOUNTED	FLOOR BOX	POKE–THROUGH	CEILING MOUNTED	
				DUPLEX RECEPTACLE
				QUAD RECEPTACLE
				SINGLE RECEPTACLE
IG	IG	IG	IG	ISOLATED GROUND DUPLEX RECEPTACLE
IG	IG	IG	IG	ISOLATED GROUND QUAD RECEPTACLE
IG	IG	IG	IG	COMBINATION IG DUPLEX RECEPTACLE, DUPLEX RECEPTACLE AND TELEPHONE/ DATA SYSTEMS OUTLET
				SPECIAL RECEPTACLE – REFER TO SPECIAL RECEPTACLE SCHEDULE
P (J)	P	P		JUNCTION BOX WITH FLEXIBLE CONDUIT AND FINAL EQUIPMENT OR FURNITURE SYSTEM POWER CONNECTION

WP / XX — ADJACENT LETTERS IN THE SYMBOLS ABOVE INDICATE THE FOLLOWING:
"CR" INDICATES CHILD RESISTANT (SAFETY TYPE)
"CS" INDICATES CHARGING STATION
"E" INDICATES RECEPTACLE FED BY EMERGENCY CIRCUIT
"EP" INDICATES RECEPTACLE IS EXPLOSION PROOF
"ewc" INDICATES RECEPTACLE SERVES ELECTRIC WATER COOLER
"GFI" INDICATES RECEPTACLE HAS GROUND FAULT CIRCUIT INTERRUPTER
"IG" INDICATES RECEPTACLE HAS ISOLATED GROUND–COMPUTER
"TVS" INDICATES RECEPTACLE HAS TRANSIENT VOLTAGE SURGE SUPPRESSION
"WP" INDICATES RECEPTACLE HAS WATERPROOF COVER
"XX" INDICATES RECEPTACLE CIRCUIT NUMBER
"S" INDICATES RECEPTACLE IS SAFETY TYPE

- DUPLEX RECEPTACLE – MOUNTING HEIGHT AS NOTED ABOVE COUNTER
- CLOCK OUTLET AND CLOCK FOR INTEGRATED CLOCK SYSTEM.
- DF — DUAL FACED CLOCK OUTLET AND CLOCK FOR INTEGRATED CLOCK SYSTEM

ABBREVIATIONS

A –	AMPS
AFF –	ABOVE FINISHED FLOOR
A/C –	AIR CONDITIONING
AHU –	AIR HANDLING UNIT
ATS –	AUTOMATIC TRANSFER SWITCH
BSMT –	BASEMENT
BPS –	BOLTED PRESSURE SWITCH
C –	CONDUIT
CCT –	CIRCUIT
C/B –	CIRCUIT BREAKER
CLG –	CEILING
CO –	CARBON MONOXIDE DETECTOR
CP –	CONTROL PANEL
CU –	COPPER
CT –	CURRENT TRANSFORMER
DIA –	DIAMETER
D/S –	DISCONNECT SWITCH
DIV –	DIVISION
DWG –	DRAWING
EC –	ELECTRICAL CONTRACTOR
EQUIP –	EQUIPMENT
ELECT –	ELECTRIC, ELECTRICAL
EM – EMERG –	EMERGENCY
EX	EXISTING TO BE REMAIN
EXR	EXISTING TO BE REMOVED
ETR	EXISTING TO BE RELOCATED
ERL	EXISTING RELOCATED
F&I –	FURNISH AND INSTALL
FCU –	FAN COIL UNIT
F –	FUSE
FDR –	FEEDER
FLA –	FULL LOAD AMPS
FLR –	FLOOR
FPC –	FIRE PUMP CONTROLLER
FIXT –	FIXTURE
FVNR –	FULL VOLTAGE, NON REVERSING (MAGNETIC STARTER)
GFI –	GROUND FAULT INTERRUPTER
GRD –	GROUND
HP –	HORSEPOWER
HOA –	HAND–OFF–AUTO
IG –	ISOLATED GROUND
J/B –	JUNCTION BOX
LTG –	LIGHTING
JPC –	JOCKEY PUMP CONTROLLER
M –	MOTOR
MCB –	MAIN CIRCUIT BREAKER
MCC –	MOTOR CONTROL CENTER
MCP –	MAXIMUM CIRCUIT PROTECTION
MLO –	MAIN LUGS ONLY
MECH –	MECHANICAL
MOCP –	MAIN OVERCURRENT PROTECTION
N –	NEUTRAL
N/A –	NOT APPLICABLE
NC –	NORMALLY CLOSED
NIC –	NOT IN CONTRACT
NO –	NORMALLY OPEN
NTS –	NOT TO SCALE
O/H –	OVERHEAD
OL –	OVERLOAD
PB –	PUSHBUTTON
PNL –	PANEL
PRI –	PRIMARY
PT –	POTENTIAL TRANSFORMER
S –	SWITCH
R –	RELOCATED
SEC –	SECONDARY
SW –	SWITCH
SWBD –	SWITCHBOARD
SWGR –	SWITCHGEAR
TR –	TRANSFORMER
TVSS –	TRANSIENT VOLTAGE SURGE SUPPRESSOR
UPS –	UNINTERRUPTIBLE POWER SUPPLY
V –	VOLTS
VFD –	VARIABLE FREQUENCY DRIVE
WP –	WEATHERPROOF
W –	WATTS
UH –	UNIT HEATER

SHEET INDEX

PUBLIC BUILDING COMMISSION — Chicago Public Schools

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PROJECT NO. 2016–46211–MCR

REVISIONS

NO.	DATE	DESCRIPTION
–	2016.04.19	30% SUBMITTAL
–	2016.06.14	60% SUBMITTAL
–	2017.02.14	75% SUBMITTAL
–	2017.03.02	100% SUBMITTAL
–	2017.03.07	PERMIT SET
–	2017.03.23	PRELIMINARY OTB SET
–	2017.04.04	BID SET
1	2017.04.12	ADDENDUM #1

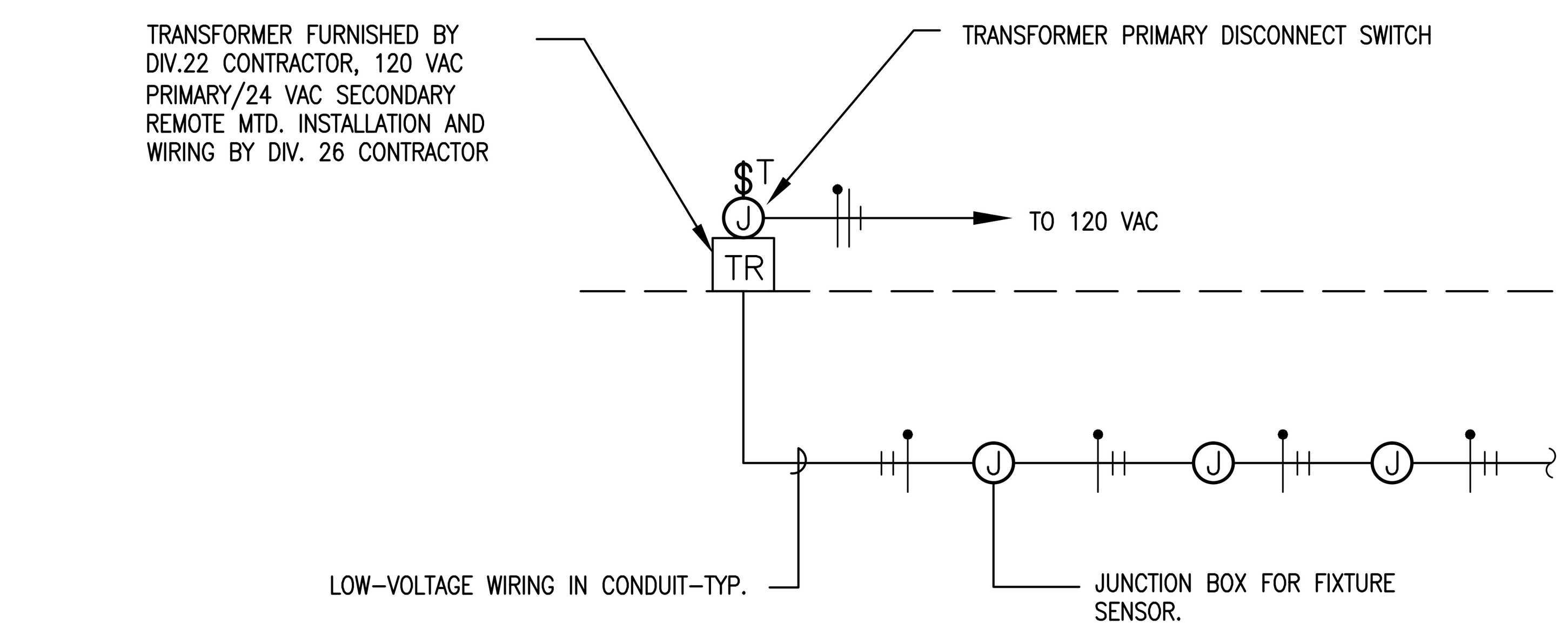
DRAWN BY: DS
SCALE: NTS
JOB:
FILE: E0.0

WARNING: ASBESTOS–CONTAINING BUILDING MATERIALS ARE OR MAY BE PRESENT IN THIS BUILDING. AN ASBESTOS MANAGEMENT PLAN IS AVAILABLE IN THE SCHOOL FOR REVIEW UPON REQUEST. NO PERSON MAY DISTURB ASBESTOS–CONTAINING MATERIALS UNLESS THAT PERSON IS A LICENSED ASBESTOS WORKER OR CONDUCTS SUCH WORK IN ACCORDANCE WITH SPECIFICATIONS CONTAINED IN THE PROJECT DOCUMENTS AND IN COMPLIANCE WITH ILLINOIS DEPARTMENT OF HEALTH RULES AND REGULATIONS.

ELECTRICAL SYMBOLS LIST

DRAWING NO.

E0.0



NOTES:

1. PLUMBING FIXTURE SENSOR SCHEMATIC WIRING DIAGRAM IS DIAGRAMMATIC ONLY.
2. ABOVE DIAGRAM APPLIED TO ALL VALVE SENSORS INCLUDING BUT NOT LIMITED TO, TOILET FLUSH VALVES AND SINK VALVES. SEE DRAWINGS FOR LOCATIONS.
3. PROVIDE ALL HARDWARE, WIRING AND FINAL CONNECTIONS AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM.
4. VERIFY EXACT REQUIRE,EMTS IN THE FIELD WITH THE PLUMBING CONTRACTOR.
5. ALL TRANSFORMERS SHALL BE ACCESSIBLE COORDINATE ACCESS PANELS, IF REQUIRED WITH THE GENERAL CONTRACTOR
6. COORDINATE MOUNTING AND LOCATION IN FIELD.

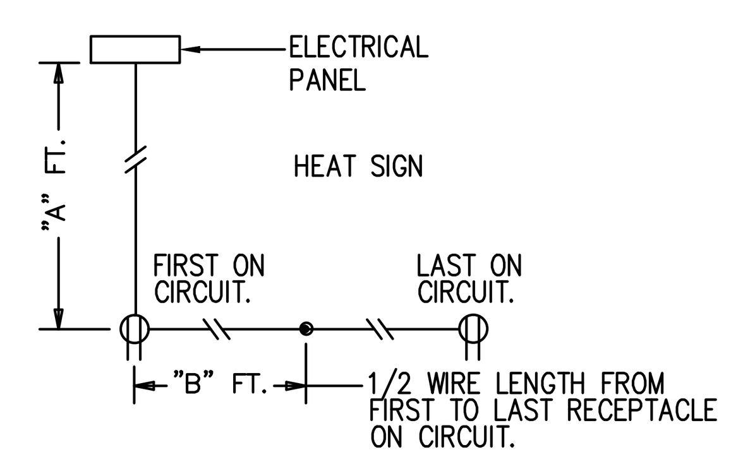
1 PLUMBING FIXTURE SENSOR WIRING DIAGRAM

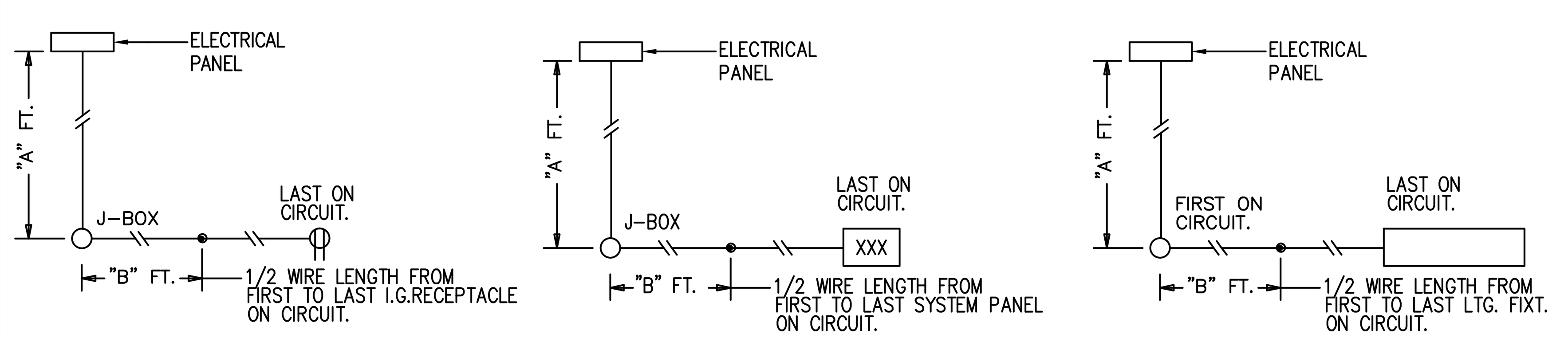
SCALE: NONE

RECEPTACLE/LIGHTING/EQUIPMENT BRANCH WIRE SIZING SCHEDULE

TABLES ARE BASED ON EVENLY DISTRIBUTIED LOAD ALLOWING A 3% VOLTAGE AT LAST OUTLET (APPLY ACCORDINGLY).

IF DISTANCE (A+B) IN FEET IS: (SEE DIAGRAMS)	BRANCH CONDUIT AND WIRE
0' TO 100'	1 #12, 1 #12 GC & 1 #12 EGC IN 3/4"C
100' TO 175'	1 #10, 1 #10 GC & 1 #10 EGC IN 3/4"C
175' TO 300'	1 #8, 1 #8 GC & 1 #8 EGC IN 1"C
300' TO 450'	1 #6, 1 #6 GC & 1 #8 EGC IN 1"C





NOTE: MAXIMUM CURRENT CARRYING CONDUCTOR PER RACEWAY SHALL BE NINE. ELECTRICAL CONTRACTOR SHALL INCREASE CONDUIT AND WIRING AS REQUIRED PER NEC CODES PER NUMBER OF CONDUCTORS IN A RACEWAY AND AMBIENT TEMPERATURE ABOVE 30'C.

GENERAL NOTES

1. EXISTING FIRE ALARM DEVICES AND OTHER LOW VOLTAGE EQUIPMENT SHALL REMAIN IN ROOMS WITH ELECTRICAL EQUIPMENT BEING DEMOLISHED. CONTRACTOR SHALL PROTECT AND/OR RELOCATE DEVICES IF REQUIRED BY DEMOLITION SCOPE.
2. IN AN AREA WHERE LIGHTING FIXTURES, UNIT HEATERS, MOTORS, ETC., ARE BEING REPLACED, DISCONNECT THE WIRING TO THE EXISTING EQUIPMENT, DEMOLISH THE FIXTURES AND EXTEND NEW WIRING TO THE NEW EQUIPMENT, KEEPING THE EXISTING 'HOME RUN'WIRING BACK TO THE PANELBOARD IF THE EXISTING WIRING IS OF SUITABLE CONDITION TO BE RE-USED. NOTE THAT EXISTING CLOTH WIRE IS NOT SUITABLE FOR RE-USE. IF THE EXISTING WIRING IS CLOTH INSULATED, THE CONTRACTOR SHALL NOT CONNECT TO IT, BUT ADVISE CPS OF THE DETAILS OF SUCH WIRING SO THAT PROPER ACTION OF REPLACING AND DEMOLISHING IT CAN BE UNDERTAKEN. PROVIDE AN ALLOWANCE OF 2000 FEET OF CONDUIT AND UP TO 5 WIRES IN THE CONDUIT FOR NEW HOME RUN WIRING. ALSO SUBMIT UNIT PRICES TO BE INCLUDED IN THE ELECTRICAL CONTRACT FOR # 12, #10 WIRE AND ¾" CONDUIT.
3. RE-USE EXISTING CIRCUITS FOR NEW EQUIPMENT REPLACING EXISTING.
4. WIRE NEW EQUIPMENT TO PANELS AC-1S, AC-2N, AC-2S AND AC-3S. SEE PANEL SCHEDULES ON DRAWING E4.3.
5. ALL ELECTRICAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND ALL OTHER DRAWINGS RELATED TO THE PERFORMANCE OF THE WORK.
6. THE CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THIS WORK SHALL BECOME THOROUGHLY FAMILIAR WITH THE PROJECT SPECIFICATIONS BEFORE COMMENCING ANY WORK. THE PROJECT SPECIFICATIONS AND DRAWINGS FORM THE BASIS OF THIS CONTRACT REQUIREMENTS AND INCLUDE THE TYPE AND GRADE OF MATERIALS TO BE INSTALLED, EQUIPMENT TO BE FURNISHED, THE MANNER BY WHICH TO BE INSTALLED AND WHERE TO BE LOCATED. IN THE EVENT OF A CONFLICT BETWEEN THE PROJECT SPECIFICATIONS AND DRAWINGS, SPECIFICATIONS GOVERN UNLESS THE ARCHITECT/ENGINEER DIRECTS OTHERWISE.
7. THE CONTRACTOR SHALL CHECK CAREFULLY ALL CONSTRUCTION DRAWINGS AND SPECIFICATIONS THAT ARE PART OF THIS PROJECT TO INSURE THAT NO FIXTURE, OUTLET, ALARM STATION OR CONTROL AND POWER WIRING IS OMITTED. THE CONTRACTOR SHALL CONSULT ALL TRADES FURNISHING EQUIPMENT AND OBTAIN FROM THEM ALL DATA. IN SOME CASES EQUIPMENT, FIXTURES AND DEVICES ARE SHOWN ONLY. ASCERTAIN AND PROVIDE THE WIRING AND CONTROL STATIONS REQUIRED FOR THE PROPER FUNCTION OF BUILDING EQUIPMENT.
8. EQUIPMENT LABELS AND INSTRUCTIONS REGARDING THE APPLICATION AND INSTALLATION OF THE LISTED EQUIPMENT SHALL BE FOLLOWED TO ENSURE THAT THE EQUIPMENT IS BEING INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LISTING INSTRUCTIONS. THE TEMPERATURE RATING OF THE EQUIPMENT TERMINATIONS MUST BE CAREFULLY CORRELATED WITH THE CONDUCTOR AMPACITY TO PREVENT OVERHEATING AND PREMATURE FAILURE.
9. COORDINATE WITH OTHER TRADES AND INSTALL CONDUIT AND BOXES TO CLEAR EMBEDDED DUCTS, OPENINGS AND OTHER STRUCTURAL FEATURES.
10. ALL LIGHTING FIXTURES ARE TO BE LOCATED AS REQUIRED ON THE JOB TO CLEAR DUCTS, PIPING, EQUIPMENT, AND/OR MECHANICAL UNITS. ALL WIRING SHALL BE ENCLOSED IN CONDUIT OR SURFACE METAL RACEWAY.
11. CONDUIT SHALL BE USED IN CONCEALED SPACES ONLY EXCEPT IN MECHANICAL AND ELECTRICAL SPACES. ALL OTHER SPACES SHALL USE SURFACE METAL RACEWAY. CONDUIT RUNS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC.
12. FURNISH AND INSTALL EQUIPMENT DISCONNECT SWITCHES IN STRICT COMPLIANCE WITH CODE REQUIREMENTS.
13. CONTRACTOR SHALL COORDINATE EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL DEVICES WITH THE ARCHITECTURAL PLANS, INCLUDING BUT NOT LIMITED TO ARCHITECTURAL DETAILS, ELEVATIONS AND MILLWORK/CASEWORK DETAILS.
14. REMOVE ALL CABLING, CONDUIT AND DEVICES IN THE BUILDING THAT ARE NOT BEING REUSED. MAKE SUFFICIENT ALLOWANCE IN PRICING. NO CHANGE ORDERS WILL BE APPROVED FOR REMOVAL OF THESE ITEMS.
15. ALL WORK SHALL CONFORM TO THE CHICAGO ELECTRICAL CODE.
16. PROVIDE A COMPETE ELECTRICAL SYSTEM INCLUDING ALL NEW REQUIRED ELECTRICAL DEVICES, CONDUIT AND WIRING AS GENERALLY OUTLINED ON THE PLANS. THE ELECTRICAL CONTRACTOR IS TO PROVIDE ALL MATERIALS AND WORK NORMALLY REQUIRED FOR A COMPLETE INSTALLATION AND SHOULD INCLUDE ALL ANTICIPATED COSTS IN HIS PRICING. IT IS REQUESTED THAT ANY SIGNIFICANT OMISSIONS, ADDITIONS OR DISCREPANCIES BE FULLY IDENTIFIED WHEN A BID IS SUBMITTED.
17. EC IS REQUIRED TO VERIFY ALL FIELD CONDITIONS PRIOR TO PERFORMING ANY WORK. ANY DISCREPANCIES OR OTHER ASPECTS OF CONSTRUCTION NOT ANTICIPATED BY THESE PLANS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTING OFFICER.
18. INSULATE AND SEAL CONDUIT PENETRATIONS BETWEEN SPACES AT DIFFERENT TEMPERATURES AND HUMIDITY LEVELS.
19. MINIMUM BRANCH CIRCUIT WIRING SHALL BE SIZED FOR A MAXIMUM OF 5% VOLTAGE DROP TO THE END OF CIRCUIT. FOR CLARITY NOT ALL JUNCTION BOXES, WHIP CONNECTIONS, FEEDERS, AND CABLES SHOWN ON THE DRAWINGS. FOR FEEDER SIZES REFER TO EQUIPMENT SCHEDULES.
20. EQUIPMENT LABELS AND INSTRUCTIONS REGARDING THE APPLICATION AND INSTALLATION OF THE LISTED EQUIPMENT SHALL BE FOLLOWED TO ENSURE THAT THE EQUIPMENT IS BEING INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LISTING INSTRUCTIONS. THE TEMPERATURE RATING OF THE EQUIPMENT TERMINATIONS SHALL BE CAREFULLY CORRELATED WITH THE CONDUCTOR AMPACITY TO PREVENT OVERHEATING AND PREMATURE FAILURE.
21. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC IN NATURE. NO DIMENSIONS SHALL BE SCALED OFF ELECTRICAL DRAWINGS. CONTRACTOR SHALL CONSULT ARCHITECTURAL FLOOR PLANS, ELEVATIONS AND REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF LIGHTING FIXTURES, MISCELLANEOUS DEVICES AND OUTLETS.

GENERAL NOTES (CONT.)

22. COORDINATE WITH OTHER TRADES AND INSTALL CONDUIT AND BOXES TO CLEAR EMBEDDED DUCTS, OPENINGS AND OTHER STRUCTURAL FEATURES. SCOPE.
23. ALL BRANCH CIRCUITS MUST BE GROUPED INTO PHASE BALANCED MULTIPLE CIRCUIT HOMERUNS. NOT MORE THAN 6 CIRCUITS ARE ALLOWED IN ONE HOMERUN CONDUIT.
24. SECURE AND PAY FOR ALL PERMITS, GOVERNMENTAL FEES, TAXES AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE ELECTRICAL WORK.
25. PREPARE AND SUBMIT TO GOVERNMENTAL AGENCIES BY UTILITY COMPANIES SHOP DRAWINGS, WHICH ARE REQUIRED BY THESE AGENCIES, FOR THEIR APPROVAL.
26. NOTIFY THE ARCHITECT/ENGINEER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, OR IN VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
27. ALL CUTTING, DRILLING, AND PATCHING OF MASONRY STEEL OR IRON WORK BELONGING TO THE BUILDING MUST BE DONE IN ORDER THAT WORK MAY BE PROPERLY INSTALLED. UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT EXCEPT AT THE DIRECTION OF THE ARCHITECT/ENGINEER OR THEIR REPRESENTATIVE.
28. PROVIDE "AS-BUILT" DRAWINGS AND SUBMIT FOR APPROVAL TO THE ARCHITECT/ENGINEER.
29. ALL MATERIAL, EQUIPMENT, WIRING DEVICES, ETC. SHALL BE NEW UNLESS SPECIFICALLY INDICATED AS EXISTING TO BE REUSED. USE EXISTING CONDUIT SYSTEM IF FOUND.
30. EXCEPT AS NOTED OTHERWISE, ALL WORK REQUIRED FOR THE INSTALLATION AS SHOWN ON DRAWINGS INCLUDING LABOR, EQUIPMENT AND MATERIALS SHALL BE IN STRICT COMPLIANCE WITH THE BUILDING STANDARDS.
31. PROVIDE CONDUIT FOR ALL LOW VOLTAGE SYSTEMS INCLUDING BUT NOT LIMITED TO, TEMPERATURE CONTROL, BUILDING AUTOMATION SYSTEMS ETC. REVIEW THESE DRAWINGS BEFORE BIDDING AND COORDINATE WITH THEM BEFORE CONSTRUCTION.
32. WHERE THERE IS A CEILING REMOVAL/REPLACEMENT, CONTRACTOR SHALL EXAMINE ELECTRICAL EQUIPMENT LOCATED ABOVE THE CEILING AND REATTACH THEM TO BUILDING STRUCTURE. ARCHITECTURAL CEILING GRIDS AND TILES SHALL NOT BE USED TO MOUNT AND/OR SUPPORT ELECTRICAL EQUIPMENT.
33. RECESS EXISTING SURFACE MOUNTED CONDUIT IN TOILET RMS.

DEMO NOTES

1. RE WORK OR RE ROUTE EXISTING CONDUIT, BOXES, ETC., AS REQUIRED FOR INSTALLATION OF NEW OR REPLACED DEVICES.
2. CONTRACTORS PERFORMING DEMOLITION ARE REQUIRED TO VERIFY FIELD CONDITIONS PRIOR TO BIDDING. PLANS MAY NOT INDICATE EACH DEVICE TO BE REMOVED, OR INDICATE NECESSARY RELOCATION OF EQUIPMENT OR CONDUIT SYSTEMS.
3. REMOVAL OF ELECTRICAL EQUIPMENT INCLUDES THE REMOVAL OF THE BRANCH CIRCUIT SERVING IT. CONDUIT SHALL BE REMOVED IN ACCESSIBLE SPACES. DEDICATED CIRCUIT CONDUCTORS SHALL BE REMOVED TO THE POINT OF ORIGIN. CONDUCTORS SERVING OTHER LOADS MAY BE REMOVED TO AN AREA JUNCTION BOX TO MAINTAIN CIRCUIT INTEGRITY.
4. SHUTDOWNS AND SERVICE INTERRUPTIONS SHALL BE COORDINATED WITH CONTRACTING OFFICER AND BE APPROVED PRIOR TO WORK BEING PERFORMED.
5. FOR ITEMS TO BE DEMO'D, COORDINATE WITH OWNER IF ITEMS ARE TO RETURNED TO OWNERS STOCK. ITEMS NOT RETURNED SHALL BE DISPOSED OF IN APROPER AND LAWFULL MANNER. (1)
6. SEE DRAWINGS OF OTHER DIVISIONS FOR ADDITIONAL DEMOLITION WORK.
7. EXISTING LOW VOLTAGE FIRE ALARM AND OTHER EQUIPMENT IN AREAS OF DEMOLITION SHALL REMAIN. MAKE MINOR LOCATION ADJUSTMENTS AS NECESSARY.
8. SEE A3 SERIES DRAWINGS FOR QUANTITY OF LIGHT FIXTURE TO BE DEMOED. DEMO EXISTING LIGHT SWITCHES.

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Chicago Public Schools

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PROJECT NO. 2016-46211-MCR

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-	2016.04.19	30% SUBMITTAL
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-	2017.04.04	BID SET
1	2017.04.12	ADDENDUM #1

DRAWN BY:	DS
SCALE:	NTS
JOB:	
FILE:	E0.0

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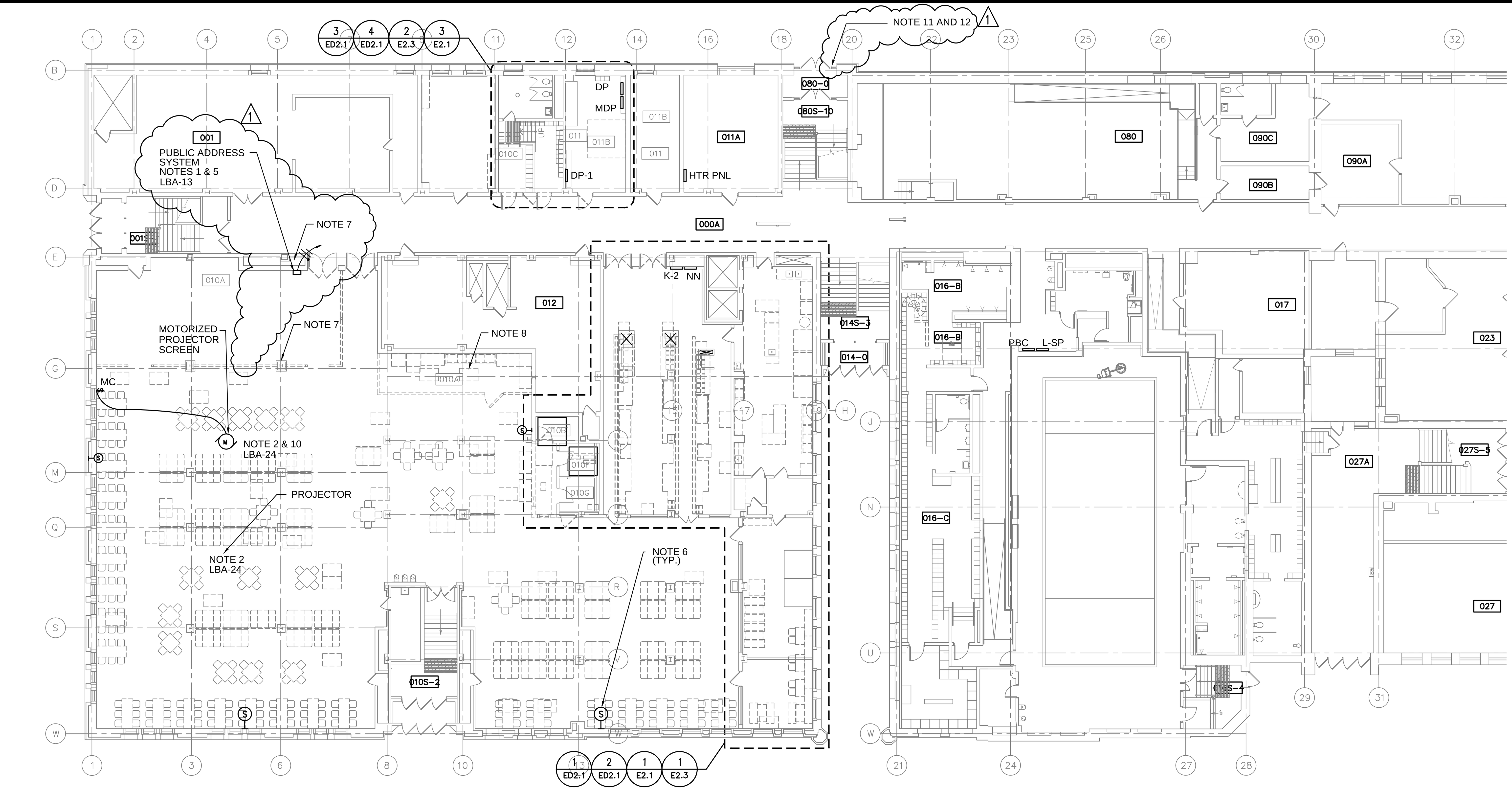
ELECTRICAL SYMBOLS LIST

DRAWING NO.

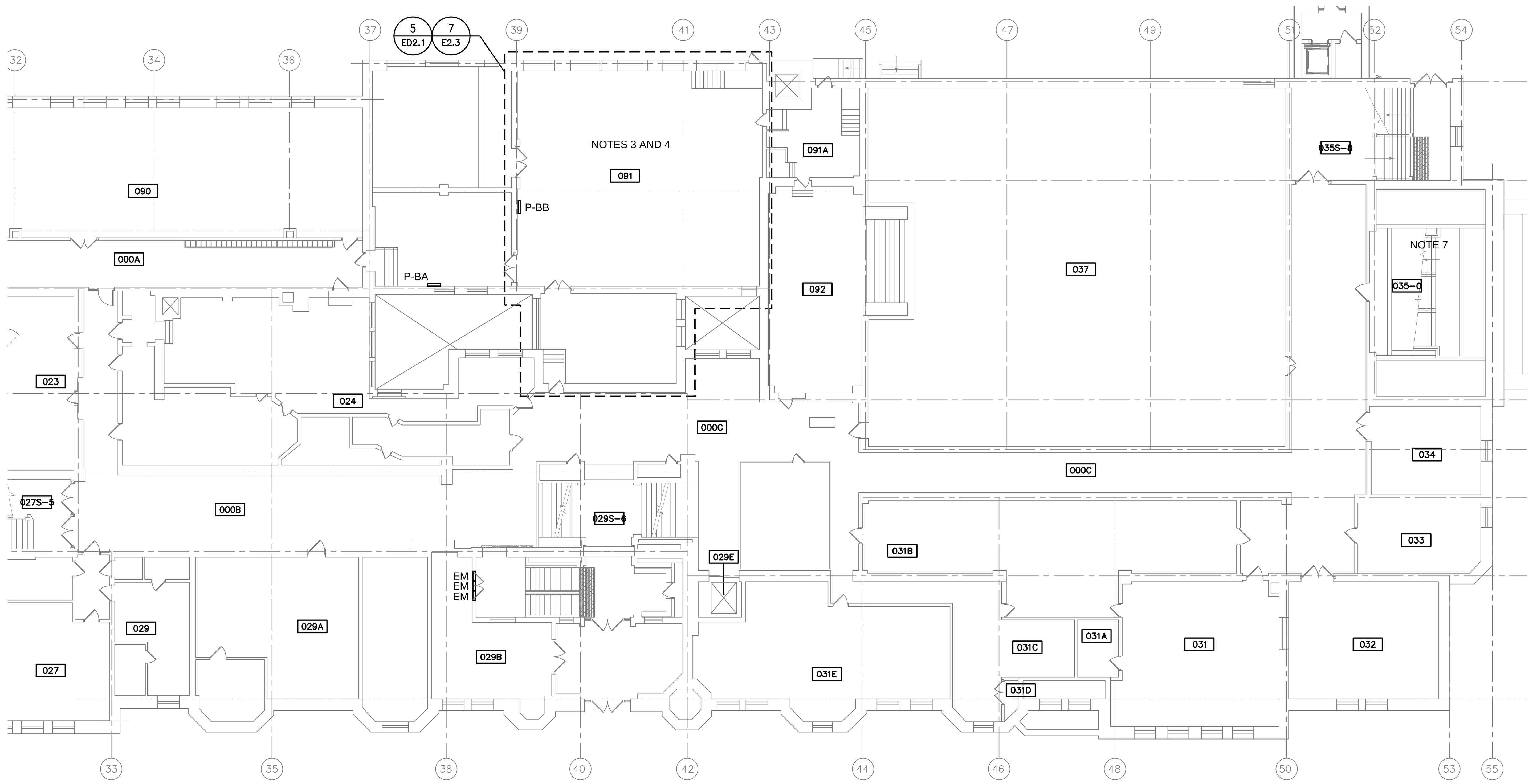
E0.1

PROPOSED
BASEMENT FL ROOM SCHDULE

ROOM NO.	ROOM NAME
000A	CORRIDOR
000B	CORRIDOR
000C	CORRIDOR
001	FAN ROOM–7
001A	CORRIDOR
001B	CORRIDOR
001C	CORRIDOR
001S	STAIR–1
002	DRY STORAGE
010	LUNCHROOM
010A	STORAGE
010B	DRY STORAGE
010C	DRY STORAGE
010D	DRY STORAGE
010D.1	WOMEN STAFF TOILET
010E	JANITOR CLOSET
010F	UNISEX TOILET
010G	UNISEX TOILET
010S	STAIR–2
011	STORAGE
011A	ELECTRICAL ROOM
011B	ELECTRICAL ROOM
012	FAN ROOM–5&6
014–0	VESTIBULE
014S	STAIR–3
016	BOYS LOCKER ROOM
016A	BOYS SHOWER ROOM
016B	BOYS DRYING AREA
016C	BOYS TOILET ROOM
016D	TEAM LOCKER ROOM
016S	STAIR–4
017	MECHANICAL ROOM
	CORRIDOR
020	SERVING
023	MECHANICAL ROOM
024	FAN ROOM–3
027	POOL TANK
027A	STAIR–5 CORRIDOR
027S	STAIR–5
029	ENGINEER OFFICE
029A	CUSTODIAL WORKROOM
029B	RECEIVING
029S	STAIR–6
029E	ELEVATOR
030A	STAFF LOUNGE
030B	COOLERS
031	STORAGE
031A	STORAGE
031B	FAN ROOM–1
031C	STORAGE
031D	STORAGE
032	STORAGE
033	STORAGE
034	STORAGE
035–0	VESTIBULE
035S	STAIR–8
037	PLENUM CHAMBER
040	KITCHEN
040A	STORAGE
040B	OFFICE
050	NATATORIUM
050A	CONS. EQUIP. STORAGE
060	GIRLS LOCKER ROOM
060A	GIRLS SHOWER ROOM
060B	GIRLS DRYING AREA
060C	GIRLS TOILET ROOM
060D	LAUNDRY ROOM
070	STAFF & UNISEX
	LOCKER ROOM
080	WEIGHT ROOM
080–0	VESTIBULE
080S	STAIR–10
090	ROTC CLASSROOM
090A	ROTC OFFICE
090B	ROTC STORAGE
090C	ROTC STORAGE
091	BOILER
091A	BOILER VESTIBULE
092	FAN ROOM–2



1 BASEMENT FLOOR PLAN–NORTH
1/16"=1'-0"



2 BASEMENT FLOOR PLAN–SOUTH
1/16"=1'-0"

NOTES:

1. PROVIDE A PUBLIC ADDRESS SYSTEM IN THE CAFETERIA, ROOM # 010. SYSTEM TO INCLUDE HEAD END EQUIPMENT, MIC JACK, MICROPHONE, AUX INPUTS, AND VOLUME CONTROL (LOCATED AT COLUMN G–4). PROVIDE 120 VOLT POWER. PROVIDE 4 SPEAKERS. SYSTEM TO BE PROVIDED COMPLETE.

2. PROVIDE THE FOLLOWING IN THE CAFETERIA, ROOM # 010. PROVIDE 120 VOLT POWER AT THE CEILING LINE FOR A PROJECTOR AND A MOTORIZED SCREEN. SYSTEM TO BE PROVIDED COMPLETE. PROVIDE HDMI CABLE IN 3/4"C FROM PROJECTOR TO NEW LOW VOLTAGE OUTLET LOCATED ON COLUMN 5–E.

3. DISCONNECT AND RECONNECT 2 FEED PUMPS. PUMPS REFURBISHED BY OTHERS.

4. PROVIDE NEW CIRCUIT BREAKER, STARTER, LOCAL DISCONNECT AND WIRING TO NEW FEED PUMP.

5. LOCATION OF PUBLIC ADDRESS SYSTEM CABINETS AND ALL OUTLETS

6. SPEAKERS TO BE WALL MOUNTED WITH CONCEALED SUPPORT BRACKETS.

7. REWORK EXISTING EQUIPMENT ON NEW COLUMN ENCLOSURE. LOCATION FOR MICROPHONE OUTLETS.

8. DEMOLISH RECEPTACLES CONDUIT AND WIRING.

9. DEMOLISH AND PROVIDE 2 LTG FIXTURES IN VESTIBULE.

10. PROVIDE 120V CCT FOR PROJECTOR SCREEN.

11. DOOR #10: RE–WORK POWER FOR LIGHTING AT SWISS CHALET ENTRY (SHEET A0.2)

12. DOOR #10: EXTERIOR: REPLACE WALL–PACKS AT DOOR #10 CANOPY DEMOLITION (SHEET A0.2)

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Chicago Public Schools

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HIGH SCHOOL
4015 NORTH ASHLAND AVENUE
CHICAGO, ILLINOIS 60613

PROJECT NO. 2016–46211–MCR

REVISIONS

NO.	DATE	DESCRIPTION
–	2016.04.19	30% SUBMITTAL
–	2016.06.14	60% SUBMITTAL
–	2017.02.14	75% SUBMITTAL
–	2017.03.02	100% SUBMITTAL
–	2017.03.07	PERMIT SET
–	2017.03.23	PRELIMINARY OTB SET
–	2017.04.04	BID SET
1	2017.04.12	ADDENDUM #1

DRAWN BY: DS
SCALE: 1/16"=1'-0"
JOB: 16326
FILE:

IRVING PARK RD.
ASHLAND AVE.
AREAS OF WORK: ENTIRE BUILDING EXTERIOR, ALL LEVELS AND ROOF
N
KEY PLAN

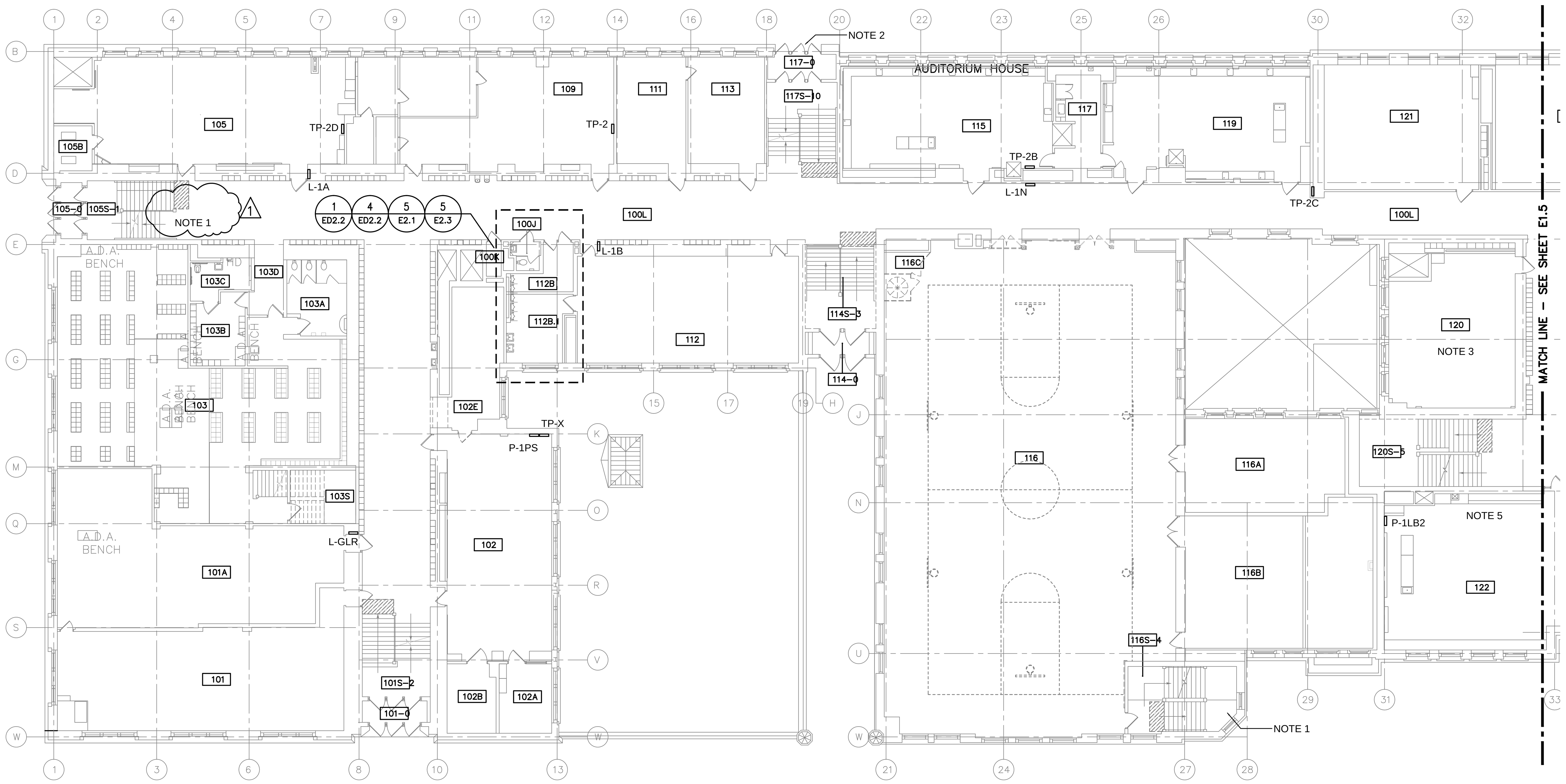
WARNING: ASBESTOS–CONTAINING BUILDING MATERIALS ARE OR MAY BE PRESENT IN THIS BUILDING. AN ASBESTOS MANAGEMENT PLAN IS AVAILABLE IN THE SCHOOL FOR REVIEW UPON REQUEST. NO PERSON MAY DISTURB ASBESTOS–CONTAINING MATERIALS UNLESS THAT PERSON IS A LICENSED ASBESTOS WORKER OR CONDUCTS SUCH WORK IN ACCORDANCE WITH SPECIFICATION(S) CONTAINED IN THE PROJECT DOCUMENTS AND IN COMPLIANCE WITH ILLINOIS DEPARTMENT OF HEALTH RULES AND REGULATIONS.

BASEMENT FLOOR
ELECTRICAL
PLAN

DRAWING NO.

E1.0

PROPOSED FIRST FLOOR ROOM SCHDULE	
ROOM NO.	ROOM NAME
100	MAIN OFFICE
100A	TOILET
100B	TOILET
100C	STAFF & UNISEX TOILET
100D	JANITOR CLOSET
100E	WOMEN STAFF TOILET
100F	TOILET
100G	TOILET
100I	GIRL'S STUDENT TOILET
100J	STAFF TOILET
100K	JANITOR CLOSET
100L	CORRIDOR
100M	CORRIDOR
100N	CORRIDOR
100S1	MAIN ENTRY STAIR
100S2	STAIR–7
101A	HEALTH OFFICE
101–0	VESTIBULE
101S	STAIR–2
102	IT STEM SUPPORT
102A	TEACHER OFFICE
102B	CLASSROOM STORAGE
102E	CLASSROOM STORAGE
103	GIRL'S LOCKER ROOM
103A	GIRL'S TOILET ROOM
103B	STAFF AND UNISEX
103C	STAFF & UNISEX TOILET
103D	CORRIDOR
103S	STAIR–9
105	GAMING ROOM
105–0	VESTIBULE
105S	STAIR–1
109	ATTENDANCE OFFICE
111	SPECIAL EDUCATION
	OFFICE
112	COUNSELOR OFFICE
112A	COUNSELOR RECEPTION
112B	STORAGE
112B.1	STORAGE
113	OFFICE
115	LEVEL 1 CHEM LAB
115B	CLASSROOM STORAGE
116	MAIN GYMNASIUM
116A	PE STORAGE
116B	PE OFFICE
116C	PE STORAGE
116–0	VESTIBULE
116S	STAIR–4
116S1	STAIR–10
117	PREP ROOM
117–0	VESTIBULE
117S	STAIR–3
119	LEVEL 2 BIOLOGY LAB
120	CLASSROOM
120S	STAIR–5
121	CLASSROOM
122	LEVEL 2 BIO LAB
122B	SCIENCE STORAGE
123	CLASSROOM
124	PREP ROOM
125	CLASSROOM
126	LEVEL 1 CHEM LAB
126A	SCIENCE STORAGE ROOM
127	OFFICE
127A	STORAGE
128	STUDENT SERVICE
128E	ELEVATOR
128S	STAIR–6
129	CLASSROOM
135	COPYWORK ROOM
136	PRINCIPAL OFFICE
136A	STORAGE
137	AUDITORIUM HOUSE
137A	AUDITORIUM STAGE
137B	AUDITORIUM SUPPORT
137S1	STAIR–8
138A	ASSISTANT PRINCIPAL
	OFFICE
138B	COUNSELOR OFFICE
138C	COUNSELOR OFFICE
138D	COUNSELOR OFFICE
138E	COUNSELOR OFFICE
138F	COUNSELOR RECEPTION
138G	NURSE OFFICE
138H	NURSE OFFICE
138I	NURSE OFFICE

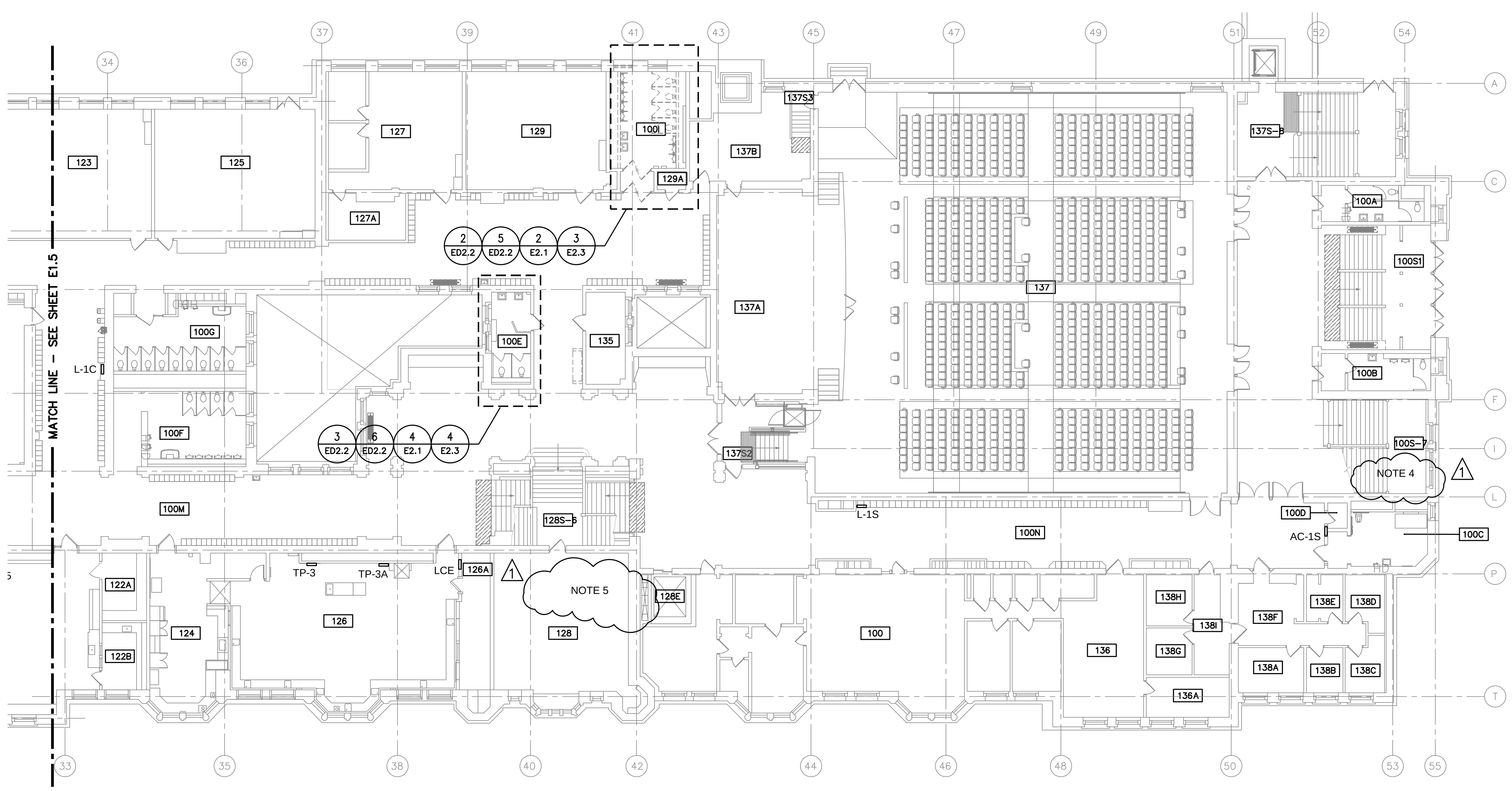


1 FIRST FLOOR ELECTRICAL PLAN–NORTH
1/16"=1'-0"

1/16" = 1'-0"

NOTES:

1. DISCONNECT AND RECONNECT EXISTING LIGHTING FIXTURES PER: 4/A3.2
2. DEMOLISH EXTERIOR LIGHTING FIXTURES AND WIRING. (APROX. TOTAL 10) PROVIDE NEW LIGHTING FIXTURES TO MATCH EXISTING. 1
3. REATTACH LOW VOLTAGE WIRE AND FASTEN BOX TO WALL.
4. DOOR #7: REPLACE 2 LIGHT FIXTURES IN ENTRANCE VESTIBULE TO AUDITORIUM.
5. DOOR #2: REPLACE 2 LIGHT FIXTURES AT STAR 2 MAIN ENTRANCE VESTIBULE.



2 FIRST FLOOR ELECTRICAL PLAN–SOUTH
1/16"=1'-0"

1/16" = 1'-0"

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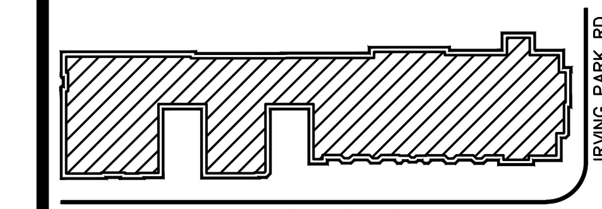
–	2017.04.04	BID SET
1	2017.04.12	ADDENDUM #1

DRAWN BY: DS
SCALE: 1/16"=1'-0"
JOB:
FILE: ED.1



AREAS OF WORK: ENTIRE BUILDING EXTERIOR, ALL LEVELS AND ROOF

N
KEY PLAN

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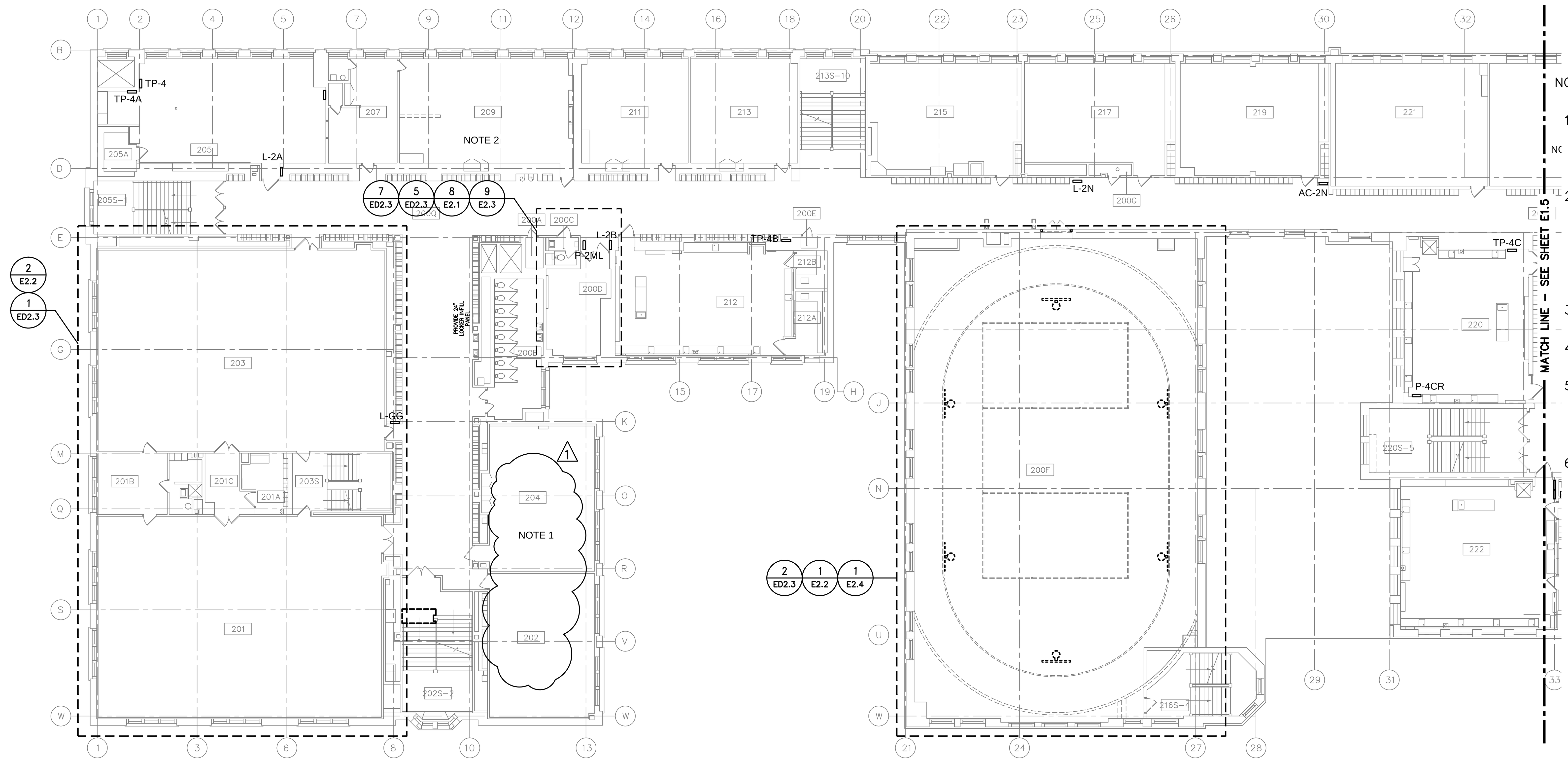
FIRST FLOOR
ELECTRICAL
PLAN

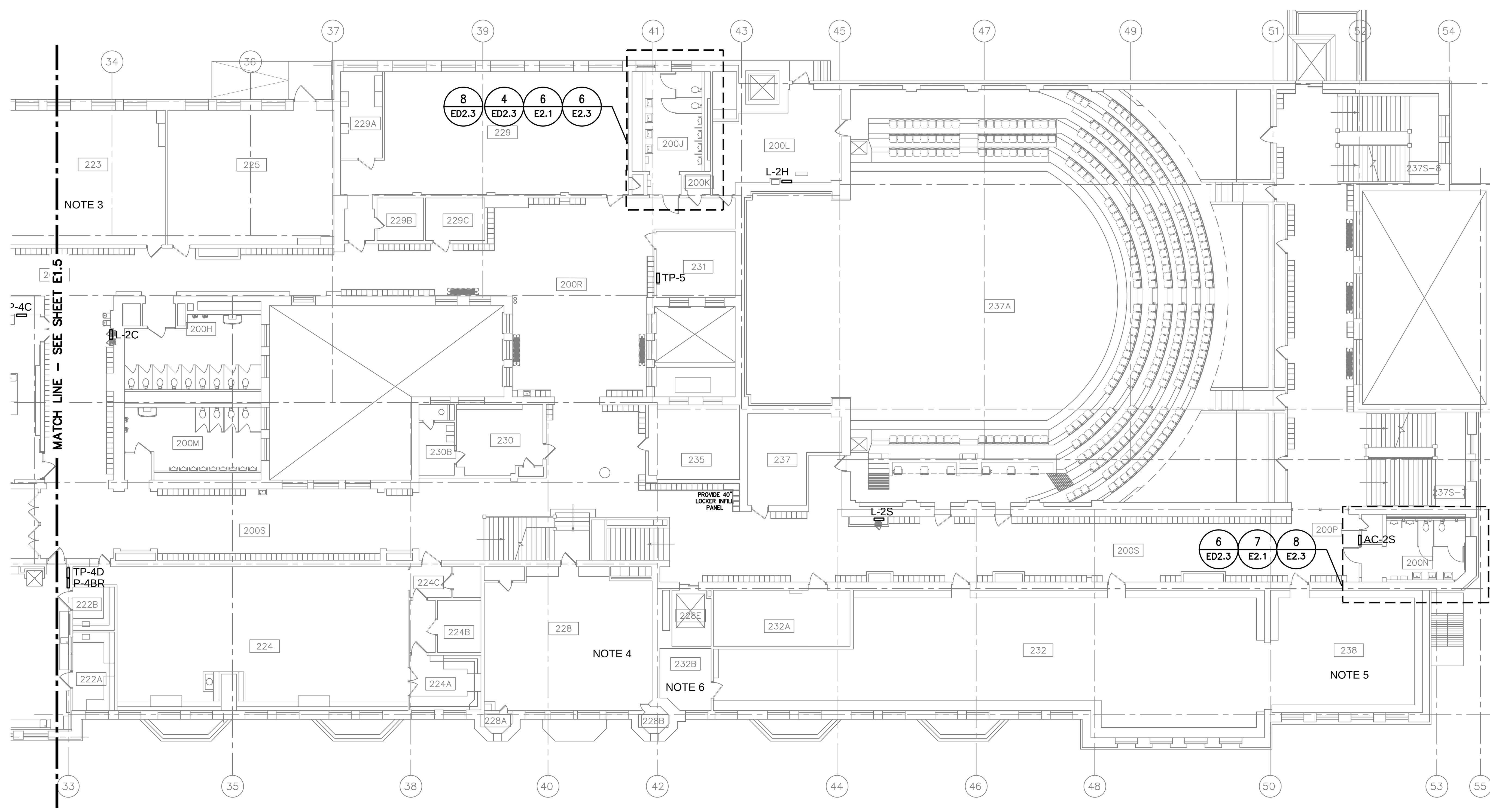
DRAWING NO.

E1.1

PROPOSED SECOND FLOOR ROOM SCHDULE	
ROOM NO.	ROOM NAME
200A	JANITOR CLOSET
200B	TOILET
200C	STAFF TOILET
200D	STORAGE
200E	STORAGE
200F	MAIN GYNASIUM-TRACK
200G	JANITOR CLOSET
200H	TOILET
200J	BOY'S STUDENT TOILET
200K	JANITOR CLOSET
200L	ELECTRICAL ROOM
200M	TOILET
200N	MEN STAFF TOILET
200P	JANITOR CLOSET
200Q	CORRIDOR
200R	CORRIDOR
200S	CORRIDOR
201	SMALL GYMNASIUM-WEST
201A	STAFF AND UNISEX DRY LOCKER ROOM
201B	PE STORAGE
201C	CORRIDOR
203	SMALL GYMNASIUM-EAST
203S	STAIR-9
202	CLASSROOM
202S	STAIR-2
204	CLASSROOM
205	SUPPORT COMPUTER LAB
205S	STAIR-1
207	OFFICE
209	CLASSROOM
211	CLASSROOM
212	LEVEL 2 BIOLOGY LAB
212A	SCIENCE PREP ROOM
212B	STORAGE
213	CLASSROOM
213S	STAIR-10
215	CLASSROOM
216S	STAIR-4
217	CLASSROOM
219	CLASSROOM
220	LEVEL 1 BIOLOGY LAB
220S	STAIR-5
221	SOCIAL STUDIES OFFICE
222	LEVEL 1 BIOLOGY LAB
222A	PREP ROOM
222B	STORAGE
223	CLASSROOM
224	COMMUNITY ROOM
225	CLASSROOM
228	SCIENCE OFFICE
228A	STORAGE
228B	STORAGE
228E	ELEVATOR
228S	STAIR-6
229	COLLEGE & CAREER LAB
229A	TEACHER WORK AREA
229B	MDF
229C	STORAGE
230	TEACHER WORK AREA
231	OFFICE
232	LIBRARY-MAIN
232A	STORAGE
232B	CLASSROOM STORAGE
235	TEACHER WORK AREA
237	OFFICE
237A	AUDITORIUM BALCONY
237S-7	STAIR-7
237S-8	STAIR-8
238	LIBRARY WORKROOM



1 SECOND FLOOR ELECTRICAL PLAN-NORTH
1/16"=1'-0"



2 SECOND FLOOR ELECTRICAL PLAN-SOUTH
1/16"=1'-0"

NOTES:

1. PROVIDE 1 L.F. RACEWAY FOR LOW VOLTAGE WIRE TO MATCH THE EXISTING (AT ENTRY LOCATION). REATTACH OUTLET PANEL UNDERNEATH WHITE BOARD AND FASTEN TO EXISTING RACEWAY.
2. PROVIDE COVER PLATES FOR THE ELECTRICAL OUTLET AT THIS LOCATION (TO THE RIGHT OF PARTITION WALL). REROUTE THE WIRE EXPOSED DUE TO THE OUTLET PANEL DEMOLITION ON THE PARTITION WALL. PROVIDE COVER PLATE FOR THE J-BOX ON EXIST. TACK BOARD. REROUTE THE EXISTING BLUE INTERNET CABLE.
3. PROVIDE COVER PLATE FOR EXISTING J-BOX.
4. PROVIDE COVER PLATE FOR EXISTING J-BOX.
5. PROVIDE ACRYLIC LENS COVERS FOR EXISTING LIGHTING FIXTURES. SEE ARCHITECTURAL FLOOR PLAN FOR SPECIFIC LOCATION AND NUMBERS. REROUTE THE EXISTING INTERNET CABLE.
6. PROVIDE PAINTED 36"x36" 18 GA. GALV. METAL COVER PLATE. ANCHORED TO WALL W/TAMPER PROOF FASTENERS. PROVIDE WIRING AND EQUIPMENT IN A PROPER MANNER. ADD JUNCTION BOXES AS REQUIRED. PROVIDE ARCYLIC LENS COVERS FOR EXISTING LIGHTING FIXTURES. SEE ARCH FLOOR PLAN FOR SPECIFIC LOCATION AND NUMBERS.

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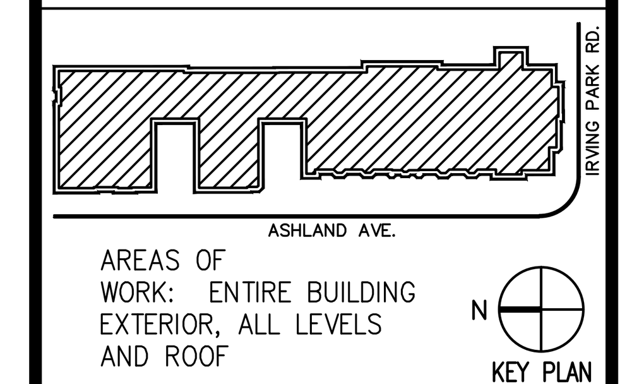
DRAWN BY: DS
SCALE: 1/16"=1'-0"
JOB:
FILE: E1.2



AREAS OF WORK: ENTIRE BUILDING EXTERIOR, ALL LEVELS AND ROOF

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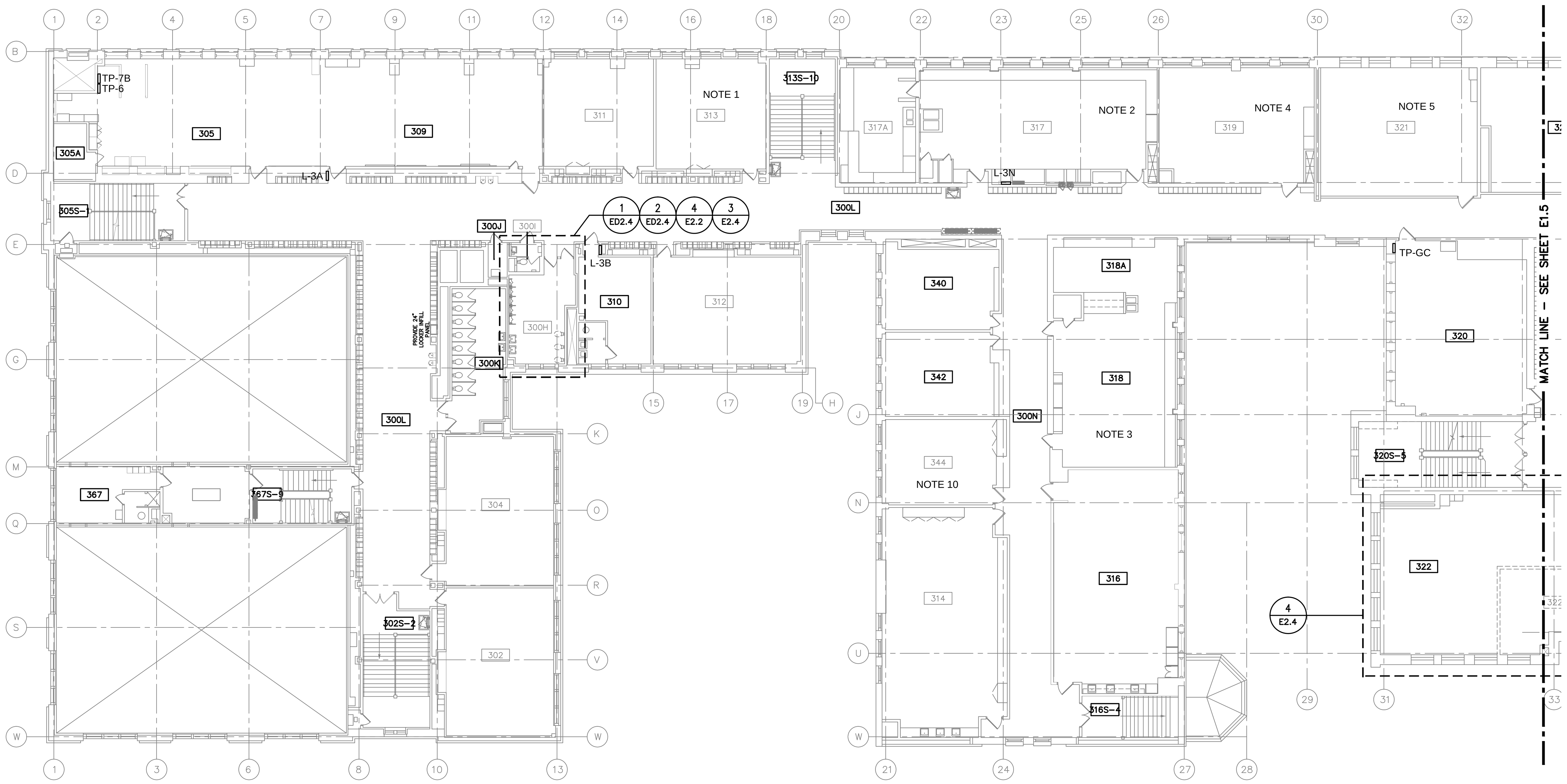
SECOND FLOOR ELECTRICAL PLAN

DRAWING NO.

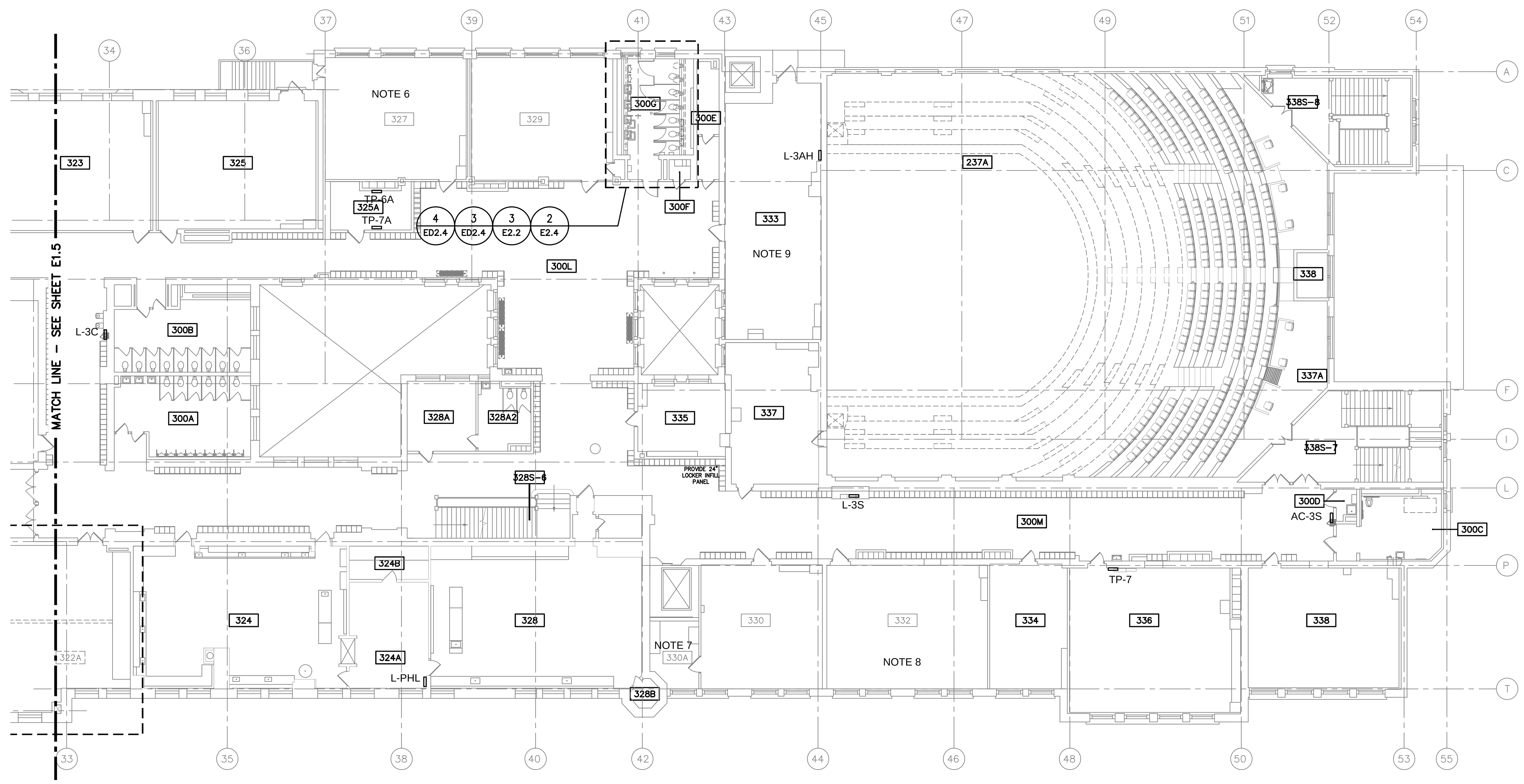
E1.2

PROPOSED
THIRD FLOOR ROOM SCHDULE

ROOM NO.	ROOM NAME
300A	TOILET
300B	TOILET
300C	STAFF & UNISEX TOLIET
300D	JANITOR CLOSET
300E	JANITOR CLOSET
300F	STORAGE
300G	GIRL'S STUDENT TOILET
300H	STORAGE
300I	STAFF TOILET
300J	JANITOR CLOSET
300K	GIRL'S STUDENT TOILET
300L	CORRIDOR
300M	CORRIDOR
300N	CORRIDOR
302	CLASSROOM
302S	STAIR-2
304	CLASSROOM
305	STEM NETWORKING LAB
305S	STAIR-1
310	TEACHER WORK AREA
311	CLASSROOM
312	CLASSROOM
313	CLASSROOM
313S	STAIR-10
314	CLASSROOM
316	ART LAB
316S	STAIR-4
317	ART LAB
317A	DARK ROOM
318	ART LAB
318A	ART STORAGE
319	CLASSROOM
320	LEVEL 2 SCIENCE LAB
320S	STAIR-5
321	CLASSROOM
322	COMPUTER LAB SR
322A	TECHNOLOGY STORAGE
323	CLASSROOM
324	SCIENCE LAB
324A	SCIENCE OFFICE
324B	SCIENCE STORAGE ROOM
325	CLASSROOM
325A	STORAGE
327	CLASSROOM
328	SCIENCE LAB
328A	TEACHER WORK AREA
328B	SCIENCE STORAGE ROOM
328S	STAIR-6
329	CLASSROOM
330	CLASSROOM
330A	CLASSROOM STORAGE
332	CLASSROOM
333	CLASSROOM
334	CLASSROOM
335	TEACHER OFFICE
336	CLASSROOM
337	CLASSROOM
337A	AUDITORIUM BALCONY
338	CLASSROOM
338S-7	STAIR-7
338S-8	STAIR-8
340	CLASSROOM
342	CLASSROOM
344	OFFICE
367	PE OFFICE
367S	STAIR-9



1 THIRD FLOOR ELECTRICAL PLAN-NORTH
1/16"=1'-0"



2 THIRD FLOOR ELECTRICAL PLAN-SOUTH
1/16"=1'-0"

NOTES:

1. PROVIDE REPLACEMENT METAL COVER FOR 4"x6" PHONE RECEPTACLE BOX. PROVIDE ACRYLIC LENS COVERS FOR EXISTING LIGHTING FIXTURES. SEE ARCHITECTURAL FLOOR PLAN FOR SPECIFIC LOCATION AND NUMBERS.
2. PROVIDE ACRYLIC LENS COVERS FOR EXISTING LIGHTING FIXTURES. (APPROXIMATE QUANTITY 10) 1
3. PROVIDE PAINTED 24"x24" 18 GA. GALV. METAL COVER PLATE MECH. ANCHORED TO WALL WITH TAMPER PROOF FASTENERS. TERMINATE WIRING AND EQUIPMENT IN A PROPER MANNER. ADD JUNCTION BOXES AS REQUIRED. PROVIDE COVER PLATE FOR EXISTING 4"x6" WALL MOUNTED JUNCTION BOX ABOVE DOOR. PROVIDE COVER PLATE FOR EXISTING 4" WIDE WALL MOUNTED RACEWAY.
4. PROVIDE PAINTED 24"x24" 18 GA. GALV. METAL COVER PLATE MECH. ANCHORED TO WALL WITH TAMPER PROOF FASTENERS. TERMINATE WIRING AND EQUIPMENT IN A PROPER MANNER. ADD JUNCTION BOXES AS REQUIRED.
5. PROVIDE 2"x4" COVER PLATE FOR EXISTING RACEWAY.
6. REATTACH EXISTING OUTLET COVER.
7. PROVIDE PAINTED 24"X24"18 GA. GALV. METAL COVER PLATE MECHANICAL ANCHORED TO WALL WITH TAMPER PROOF FASTENERS. TERMINATE WIRING AND EQUIPMENT IN A PROPER MANNER. ADD JUNCTION BOXES AS REQUIRED.
8. PROVIDE PAINTED 24"x24" 18 GA. GALV METAL COVER PLATE MECH. ANCHORED TO WALL WITH TAMPER PROOF FASTENERS.
9. PROVIDE PAINTED 36"x36" 18 GA. GALV. METAL COVER PLATE MECH. ANCHORED TO WALL WITH TAMPER PROOF FASTENERS. PROVIDE 4"x6" PLASTIC COVER PLATE FOR EXISTING PANEL.
10. PROVIDE PAINTED 24"x24" 18 GA. METAL COVER PLATE MECH. ANCHORED TO WALL WITH TAMPER PROOF FASTENERS. TERMINATE WIRING AND EQUIPMENT IN A PROPER MANNER. ADD JUNCTION BOXES AS REQUIRED.

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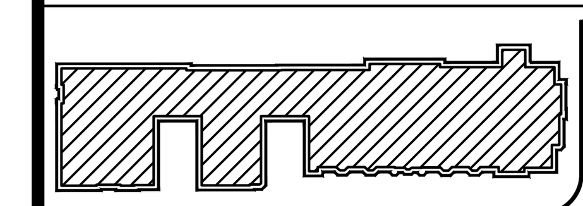
DRAWN BY: DS
SCALE: 1/16"=1'-0"
JOB:
FILE: ED.3



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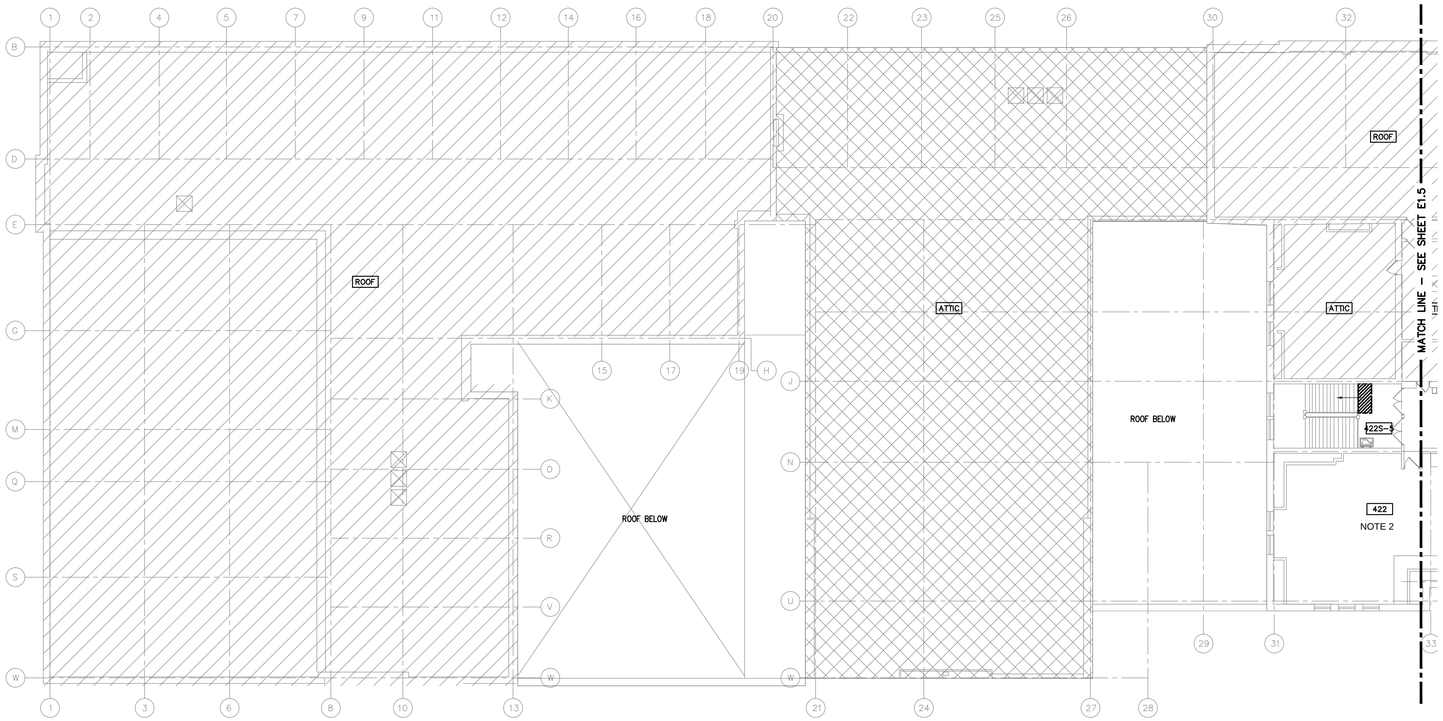
THIRD FLOOR
ELECTRICAL
PLAN

DRAWING NO.

E1.3

PROPOSED FOURTH FLOOR ROOM SCHDULE	
ROOM NO.	ROOM NAME
400A	CORRIDOR
400B	CORRIDOR
400C	CORRIDOR
422	INSTRUMENTAL MUSIC ROOM
422A	MUSIC PRACTICE ROOM
422B	MUSIC PRACTICE ROOM
422C	MUSIC STORAGE
422S	STAIR–5
426	GENERAL MUSIC ROOM
426A	MUSIC STORAGE
426B	CORRIDOR
426C	MUSIC STORAGE
426S	STAIR–6
428	CLASSROOM
428A	STORAGE
428B	CLASSROOM STORAGE
430	PE SUPPORT
432	INSTRUMENTAL MUSIC ROOM
432S	STAIR–7

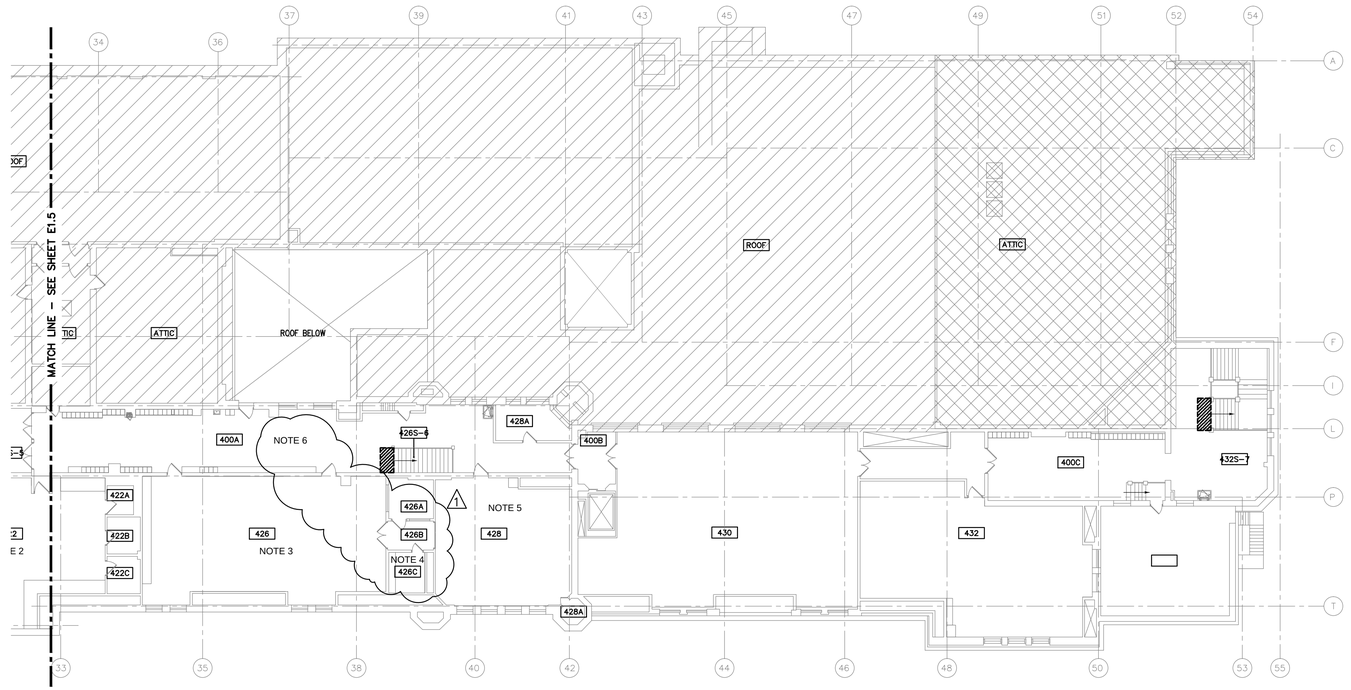


1 FOURTH FLOOR ELECTRICAL DEMOLITION PLAN–NORTH
1/16"=1'–0"

10 0 5 15 25
1/16" = 1'–0"

NOTES:

1. (DELETED)
2. PROVIDE COVER PLATE FOR EXISTING RACEWAY AND ELECTRICAL OUTLET PANEL. REWORK EXPOSED WIRES.
3. PROVIDE PAINTED 24x24" 18 GA. GALV. MENTAL COVER PLATE MECH. ANCHORED TO WALL W/TEAMPER PROOF FASTENERS. TERMINATE WIRING AND EQUIPMENT IN A PROPER MANNER. ADD JUNCTION BOXES AS REQUIRED.
4. PROVIDE ROUND FROSTED GLASS COVERS FOR EXISTING LIGHTING FIXTURES. (APPROXIMATE QUANTITY 2)
5. PROVIDE ACRYLIC LENS COVERS FOR EXISTING LIGHTING FIXTURES. SEE ARCHITECTURAL FLOOR PLAN FOR SPECIFIC LOCATION AND NUMBERS. (APPROXIMATE QUANTITY OF 20)
6. FOURTH FLOOR CORRIDOR: EXPOSED CEILING J–BOX: RE–WORK EXPOSED WIRING OUTSIDE OF ROOM 426. (APPROXIMATE QUANTITY 50 FEET)



2 FOURTH FLOOR ELECTRICAL DEMOLITION PLAN–SOUTH
1/16"=1'–0"

10 0 5 15 25
1/16" = 1'–0"

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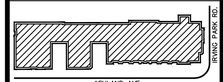
–	2017.03.23	PRELIMINARY OTB SET
–	2017.04.04	BID SET
1	2017.04.12	ADDENDUM #1

DRAWN BY: DS
SCALE: 1/16"=1'–0"
JOB:
FILE: ED.4



AREAS OF WORK: ENTIRE BUILDING EXTERIOR, ALL LEVELS AND ROOF

N

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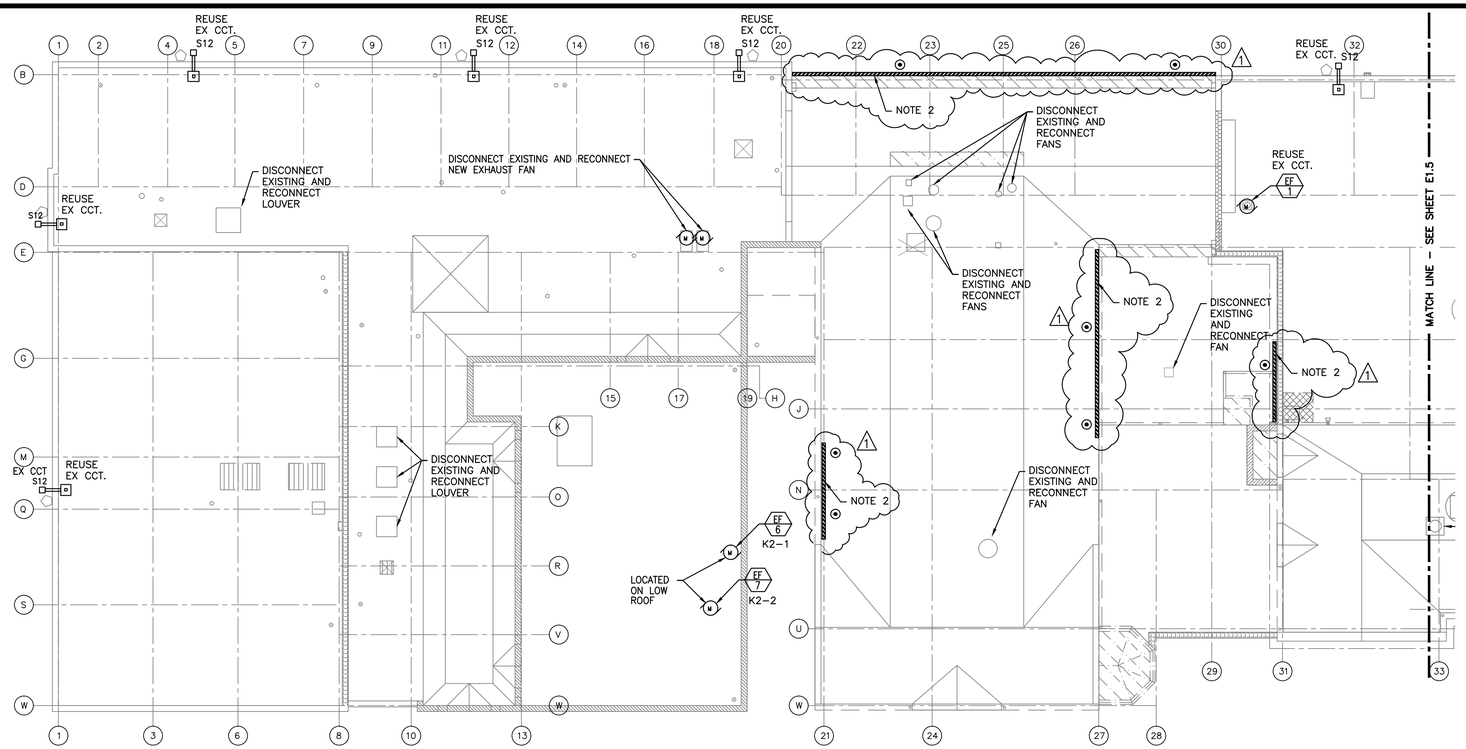
FOURTH FLOOR ELECTRICAL PLAN

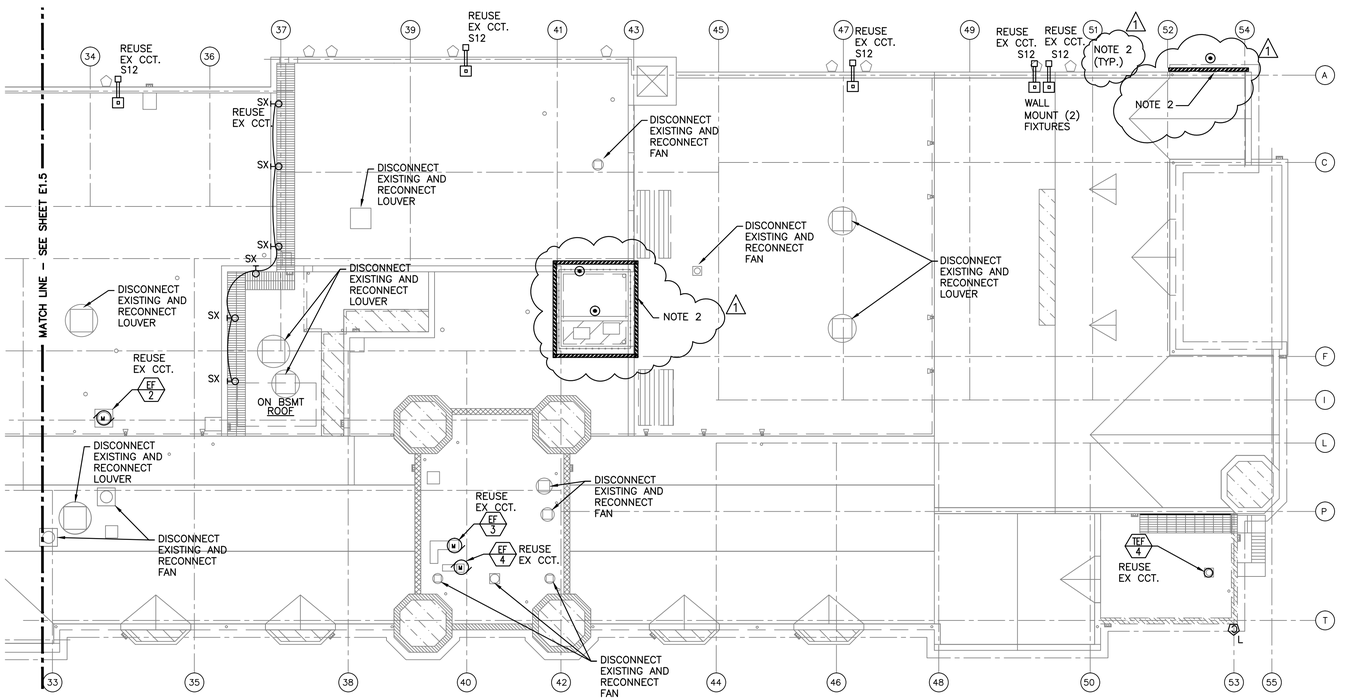
DRAWING NO.

E1.4



1 ROOF ELECTRICAL PLAN–NORTH
1/16"=1'-0"

10 0 5 15 25
1/16" = 1'-0"



2 ROOF ELECTRICAL PLAN–SOUTH
1/16"=1'-0"

10 0 5 15 25
1/16" = 1'-0"

NOTES:

1. ELECTRICAL CONTRACTOR (EC) SHALL:
   - a – REFER TO MECHANICAL DRAWINGS FOR EXACT EQUIPMENT LOCATION.
   - b – REFER TO ELECTRICAL SCHEDULE OF MECHANICAL EQUIPMENT FOR ELECTRICAL REQUIREMENTS.
   - c – REINSTALL EXISTING OR INSTALL NEW CONDUITS AND JB UP TO THE FAN TO CREATE NEW WIRE WAYS FOR EXISTING CIRCUITS (POWER AND CONTROL)
   - d – EC SHALL REUSE EXISTING CIRCUITS (POWER AND CONTROL) TO FEED NEW EXHAUST FANS. FOR EXCEPTIONS SEE "DEMOLITION SPECIFIC NOTES" ON ROOF DEMO PLAN.
   - e – WHEN NECESSARY, EC SHALL EXTEND EXISTING CIRCUIT(S) UP TO FAN INSTALL ADDITIONAL JUNCTION BOX OR REUSE EXISTING AND EXTEND WIRES AS REQUIRED.
   - f – INSTALL FOR EACH FAN, SAFETY DISCONNECT SWITCH IN WEATHERPROOF BOX
   - g – FOR EACH GROUP OF FANS, INSTALL CONVENIENCE RECEPTACLE – GFCI TYPE IN WEATHERPROOF BOX AND FEED IT FROM NEAREST PANEL.
   - h – VERIFY IF EXISTING CIRCUIT BREAKER IS SUITABLE FOR NEW FAN.
2. PROVIDE GUTTER HEAT TRACING SYSTEMS. PROVIDE WIRING AS REQUIRED.
3. NEW CONDUITS SHALL BE RUN IN THE ATTIC.
4. PROVIDE GUTTER, DOWNSPOUT AND ROOF HEAT TRACING FOR AREAS INDICATED. PROVIDE 4#10 AND 1#10 GRD TO FEED CONTROLLER. CONNECT TO PANEL AC–2N.

1

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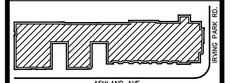
1	2017.04.12	ADDENDUM #1

DRAWN BY: DS
SCALE: 1/16"=1'-0"
JOB:
FILE: MD.5



AREAS OF WORK: ENTIRE BUILDING EXTERIOR, ALL LEVELS AND ROOF

N

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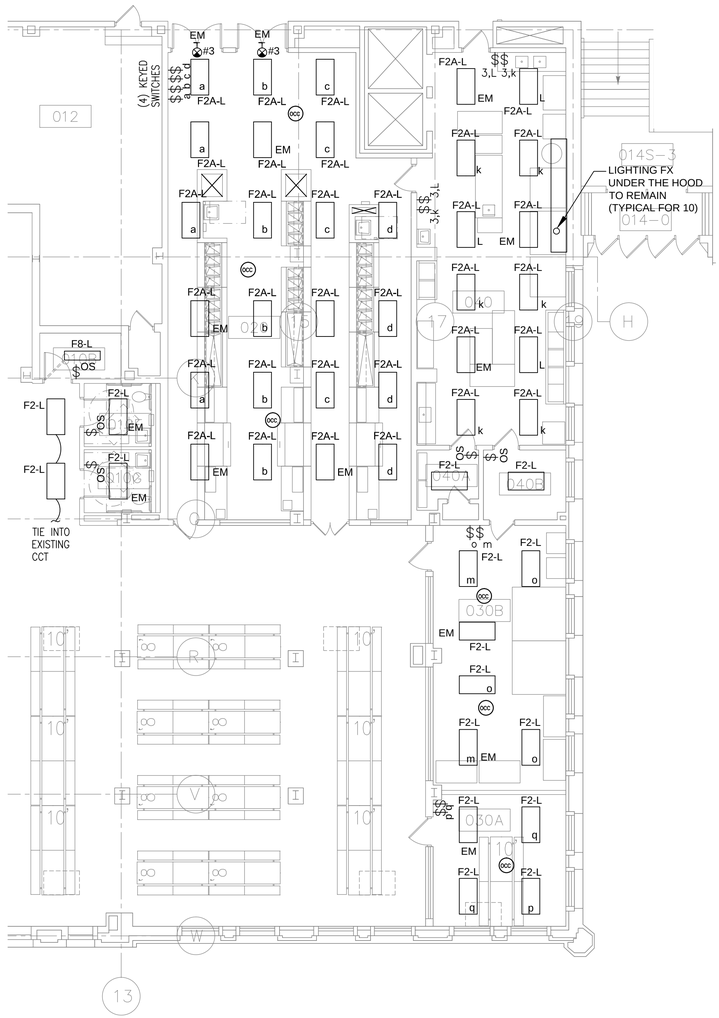
ROOF PLAN
NEW EQUIPMENT
LAYOUT

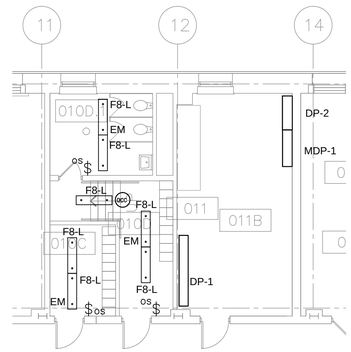
DRAWING NO.

E1.5

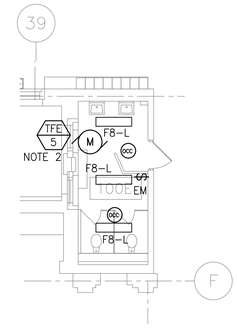
PROPOSED BASEMENT FL ROOM SCHDULE		PROPOSED FIRST FLOOR ROOM SCHDULE	
ROOM NO.	ROOM NAME	ROOM NO.	ROOM NAME
000A	CORRIDOR	100	MAIN OFFICE
000B	CORRIDOR	100A	TOILET
000C	CORRIDOR	100B	TOILET
001	FAN ROOM–7	100C	STAFF & UNISEX TOILET
001A	CORRIDOR	100D	JANITOR CLOSET
001B	CORRIDOR	100E	WOMEN STAFF TOILET
001C	CORRIDOR	100F	TOILET
001S	STAIR–1	100G	TOILET
002	DRY STORAGE	100I	GIRL'S STUDENT TOILET
010	LUNCHROOM	100J	STAFF TOILET
010A	STORAGE	100K	JANITOR CLOSET
010B	DRY STORAGE	100L	CORRIDOR
010C	DRY STORAGE	100M	CORRIDOR
010D	DRY STORAGE	100N	CORRIDOR
010D.1	WOMEN STAFF TOILET	100S1	MAIN ENTRY STAIR
010E	JANITOR CLOSET	100S2	STAIR–7
010F	UNISEX TOILET	101A	HEALTH OFFICE
010G	UNISEX TOILET	101–0	VESTIBULE
010S	STAIR–2	101S	STAIR–2
011	STORAGE	102	IT STEM SUPPORT
011A	ELECTRICAL ROOM	102A	TEACHER OFFICE
011B	ELECTRICAL ROOM	102B	CLASSROOM STORAGE
012	FAN ROOM–5&6	102E	CLASSROOM STORAGE
014–0	VESTIBULE	103	GIRL'S LOCKER ROOM
014S	STAIR–3	103A	GIRL'S TOILET ROOM
016	BOYS LOCKER ROOM	103B	STAFF AND UNISEX
016A	BOYS SHOWER ROOM	103C	STAFF & UNISEX TOILET
016B	BOYS DRYING AREA	103D	CORRIDOR
016C	BOYS TOILET ROOM	103S	STAIR–9
016D	TEAM LOCKER ROOM	105	GAMING ROOM
016S	STAIR–4	105–0	VESTIBULE
017	MECHANICAL ROOM	105S	STAIR–1
	CORRIDOR	109	ATTENDANCE OFFICE
020	SERVING	111	SPECIAL EDUCATION
023	MECHANICAL ROOM		OFFICE
024	FAN ROOM–3	112	COUNSELOR OFFICE
027	POOL TANK	112A	COUNSELOR RECEPTION
027A	STAIR–5 CORRIDOR	112B	STORAGE
027S	STAIR–5	112B.1	STORAGE
029	ENGINEER OFFICE	113	OFFICE
029A	CUSTODIAL WORKROOM	115	LEVEL 1 CHEM LAB
029B	RECEIVING	115B	CLASSROOM STORAGE
029S	STAIR–6	116	MAIN GYMNASIUM
029E	ELEVATOR	116A	PE STORAGE
030A	STAFF LOUNGE	116B	PE OFFICE
030B	COOLERS	116C	PE STORAGE
031	STORAGE	116–0	VESTIBULE
031A	STORAGE	116S	STAIR–4
031B	FAN ROOM–1	116S1	STAIR–10
031C	STORAGE	117	PREP ROOM
031D	STORAGE	117–0	VESTIBULE
032	STORAGE	117S	STAIR–3
033	STORAGE	119	LEVEL 2 BIOLOGY LAB
034	STORAGE	120	CLASSROOM
035–0	VESTIBULE	120S	STAIR–5
035S	STAIR–8	121	CLASSROOM
037	PLENUM CHAMBER	122	LEVEL 2 BIO LAB
040	KITCHEN	122B	SCIENCE STORAGE
040A	STORAGE	123	CLASSROOM
040B	OFFICE	124	PREP ROOM
050	NATATORIUM	125	CLASSROOM
050A	CONS. EQUIP. STORAGE	126	LEVEL 1 CHEM LAB
060	GIRLS LOCKER ROOM	126A	SCIENCE STORAGE ROOM
060A	GIRLS SHOWER ROOM	127	OFFICE
060B	GIRLS DRYING AREA	127A	STORAGE
060C	GIRLS TOILET ROOM	128	STUDENT SERVICE
060D	LAUNDRY ROOM	128E	ELEVATOR
070	STAFF & UNISEX	128S	STAIR–6
	LOCKER ROOM	129	CLASSROOM
080	WEIGHT ROOM	135	COPYWORK ROOM
080–0	VESTIBULE	136	PRINCIPAL OFFICE
080S	STAIR–10	136A	STORAGE
090	ROTC CLASSROOM	137	AUDITORIUM HOUSE
090A	ROTC OFFICE	137A	AUDITORIUM STAGE
090B	ROTC STORAGE	137B	AUDITORIUM SUPPORT
090C	ROTC STORAGE	137S1	STAIR–8
091	BOILER	138A	ASSISTANT PRINCIPAL
091A	BOILER VESTIBULE		OFFICE
092	FAN ROOM–2	138B	COUNSELOR OFFICE
		138C	COUNSELOR OFFICE
		138D	COUNSELOR OFFICE
		138E	COUNSELOR OFFICE
		138F	COUNSELOR RECEPTION
		138G	NURSE OFFICE
		138H	NURSE OFFICE
		138I	NURSE OFFICE



1 ENLARGED PLANS – LIGHTING
1/8"=1'-0"



3 ENLARGED PLANS – LIGHTING
1/8"=1'-0"



4 ENLARGED PLANS – LIGHTING
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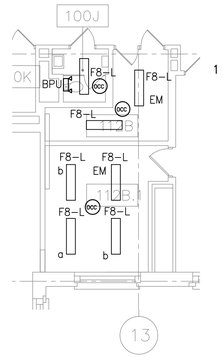
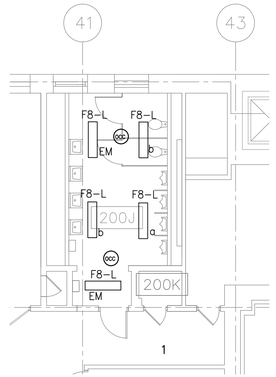
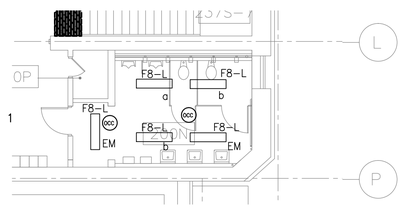


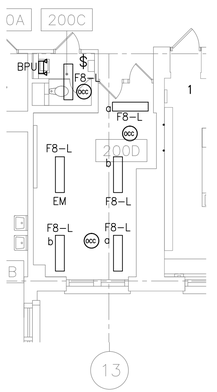


5 ENLARGED PLANS – LIGHTING
1/8"=1'-0"

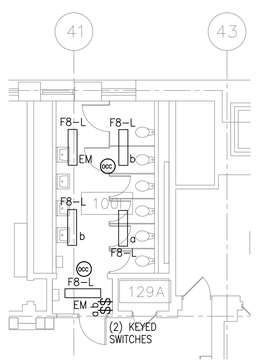
6 ENLARGED PLANS – LIGHTING
1/8"=1'-0"



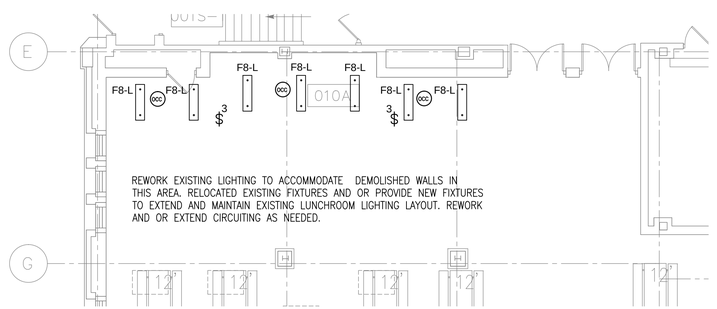
7 ENLARGED PLANS – LIGHTING
1/8"=1'-0"



8 ENLARGED PLANS – LIGHTING
1/8"=1'-0"



2 ENLARGED PLANS – LIGHTING
1/8"=1'-0"



9 ENLARGED PLANS – LIGHTING
1/8"=1'-0"

NOTES:

1. TYPICAL ALL PLANS – RE–UTILIZE EXISTING AND NORMAL EMERGENCY CIRCUITS.

2. TEF–5 SHALL BE CONTROLLED BY LIGHT SWITCH.

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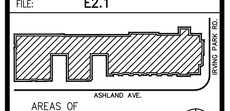
DRAWN BY: DS
SCALE: 1/8"=1'-0"
JOB:
FILE: E2.1



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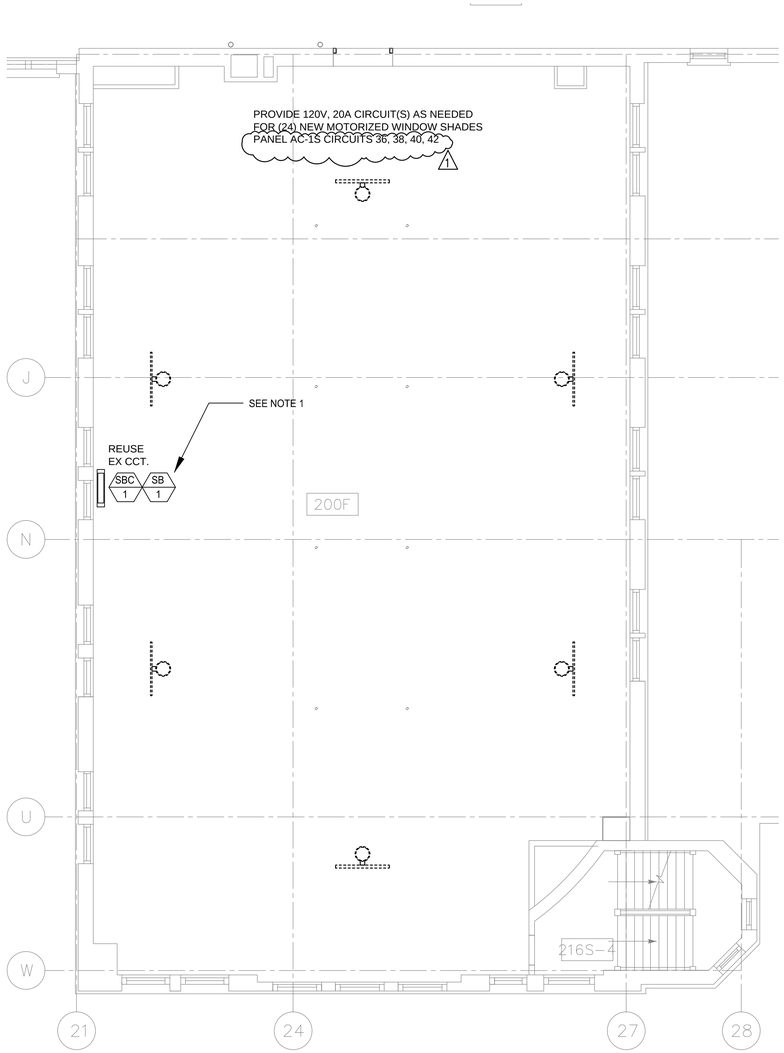
ENLARGED PLANS LIGHTING

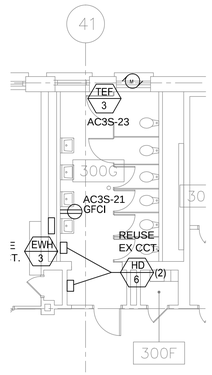
DRAWING NO.

E2.1

PROPOSED SECOND FLOOR ROOM SCHDULE		PROPOSED THIRD FLOOR ROOM SCHDULE	
ROOM NO.	ROOM NAME	ROOM NO.	ROOM NAME
200A	JANITOR CLOSET	300A	TOILET
200B	TOILET	300B	TOILET
200C	STAFF TOILET	300C	STAFF & UNISEX TOLIET
200D	STORAGE	300D	JANITOR CLOSET
200E	STORAGE	300E	JANITOR CLOSET
200F	MAIN GYNASIUM–TRACK	300F	STORAGE
200G	JANITOR CLOSET	300G	GIRL'S STUDENT TOILET
200H	TOILET	300H	STORAGE
200J	BOY'S STUDENT TOILET	300I	STAFF TOILET
200K	JANITOR CLOSET	300J	JANITOR CLOSET
200L	ELECTRICAL ROOM	300K	GIRL'S STUDENT TOILET
200M	TOILET	300L	CORRIDOR
200N	MEN STAFF TOILET	300M	CORRIDOR
200P	JANITOR CLOSET	300N	CORRIDOR
200Q	CORRIDOR	302	CLASSROOM
200R	CORRIDOR	302S	STAIR–2
200S	CORRIDOR	304	CLASSROOM
201	SMALL GYMNASIUM–WEST	305	STEM NETWORKING LAB
201A	STAFF AND UNISEX DRY	305S	STAIR–1
	LOCKER ROOM	310	TEACHER WORK AREA
201B	PE STORAGE	311	CLASSROOM
201C	CORRIDOR	312	CLASSROOM
203	SMALL GYMNASIUM–EAST	313	CLASSROOM
203S	STAIR–9	313S	STAIR–10
202	CLASSROOM	314	CLASSROOM
202S	STAIR–2	316	ART LAB
204	CLASSROOM	316S	STAIR–4
205	SUPPORT COMPUTER LAB	317	ART LAB
205S	STAIR–1	317A	DARK ROOM
207	OFFICE	318	ART LAB
209	CLASSROOM	318A	ART STORAGE
211	CLASSROOM	319	CLASSROOM
212	LEVEL 2 BIOLOGY LAB	320	LEVEL 2 SCIENCE LAB
212A	SCIENCE PREP ROOM	320S	STAIR–5
212B	STORAGE	321	CLASSROOM
213	CLASSROOM	322	COMPUTER LAB SR
213S	STAIR–10	322A	TECHNOLOGY STORAGE
215	CLASSROOM	323	CLASSROOM
216S	STAIR–4	324	SCIENCE LAB
217	CLASSROOM	324A	SCIENCE OFFICE
219	CLASSROOM	324B	SCIENCE STORAGE ROOM
220	LEVEL 1 BIOLOGY LAB	325	CLASSROOM
220S	STAIR–5	325A	STORAGE
221	SOCIAL STUDIES OFFICE	327	CLASSROOM
222	LEVEL 1 BIOLOGY LAB	328	SCIENCE LAB
222A	PREP ROOM	328A	TEACHER WORK AREA
222B	STORAGE	328B	SCIENCE STORAGE ROOM
223	CLASSROOM	328S	STAIR–6
224	COMMUNITY ROOM	329	CLASSROOM
225	CLASSROOM	330	CLASSROOM
228	SCIENCE OFFICE	330A	CLASSROOM STORAGE
228A	STORAGE	332	CLASSROOM
228B	STORAGE	333	CLASSROOM
228E	ELEVATOR	334	CLASSROOM
228S	STAIR–6	335	TEACHER OFFICE
229	COLLEGE & CAREER LAB	336	CLASSROOM
229A	TEACHER WORK AREA	337	CLASSROOM
229B	MDF	337A	AUDITORIUM BALCONY
229C	STORAGE	338	CLASSROOM
230	TEACHER WORK AREA	338S–7	STAIR–7
231	OFFICE	338S–8	STAIR–8
232	LIBRARY–MAIN	340	CLASSROOM
232A	STORAGE	342	CLASSROOM
232B	CLASSROOM STORAGE	344	OFFICE
235	TEACHER WORK AREA	367	PE OFFICE
237	OFFICE	367S	STAIR–9
237A	AUDITORIUM BALCONY		
237S–7	STAIR–7		
237S–8	STAIR–8		
238	LIBRARY WORKROOM		



1 ENLARGED PLANS – POWER AND LOW VOLTAGE
1/8"=1'-0"



2 ENLARGED PLAN – POWER AND LOW VOLTAGE
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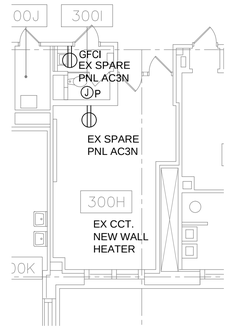
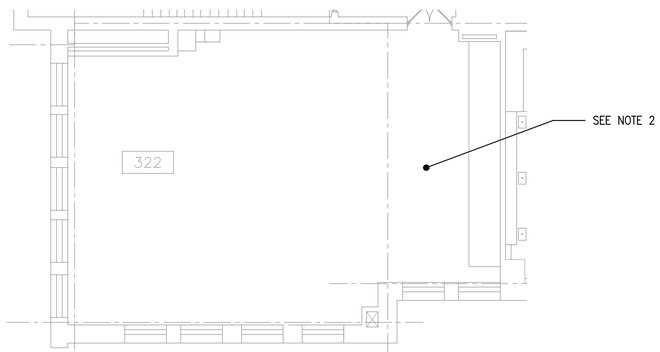


3 ENLARGED PLAN – POWER AND LOW VOLTAGE
1/8"=1'-0"



4 ENLARGED PLANS – POWER AND LOW VOLTAGE
1/8"=1'-0"

NOTES:

1. SEE SCOREBOARD DETAIL FOR CONNECTION DETAILS, SEE DRAWING E3.2. REUSE EXISTING 120V, 20A CIRCUIT FEED FROM PANEL L-1N CIRCUIT # 33. EXTENDING WIRING AS NEEDED TO NEW SCOREBOARD LOCATION.

2. DEMOLISH EXISTING WIRE FOR COMPUTER OUTLETS. PROVIDE NEW WIRING FOR ALL RECEPTACLE OUTLETS. WIRE SHALL BE #12 AWG MINIMUM. CIRCUITING LAYOUT SHALL MATCH EXISTING. REPLACE DAMAGED RECEPTACLES (5) AND DAMAGED WIREWAY (10 FEET). NEW WIRING SHALL INCLUDE GROUNDING CONDUCTORS (1 PER 3 PHASE NETWORK) PROVIDE ADDITIONAL RACEWAY CAPACITY FOR THE GROUNDING CONDUCTORS.

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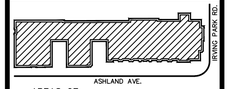
–	2017.03.23	PRELIMINARY OTB SET
–	2017.04.04	BID SET
1	2017.04.12	ADDENDUM #1

DRAWN BY: DS
SCALE: 1/8"=1'-0"
JOB:
FILE: E2.4



AREAS OF WORK: ENTIRE BUILDING EXTERIOR, ALL LEVELS AND ROOF

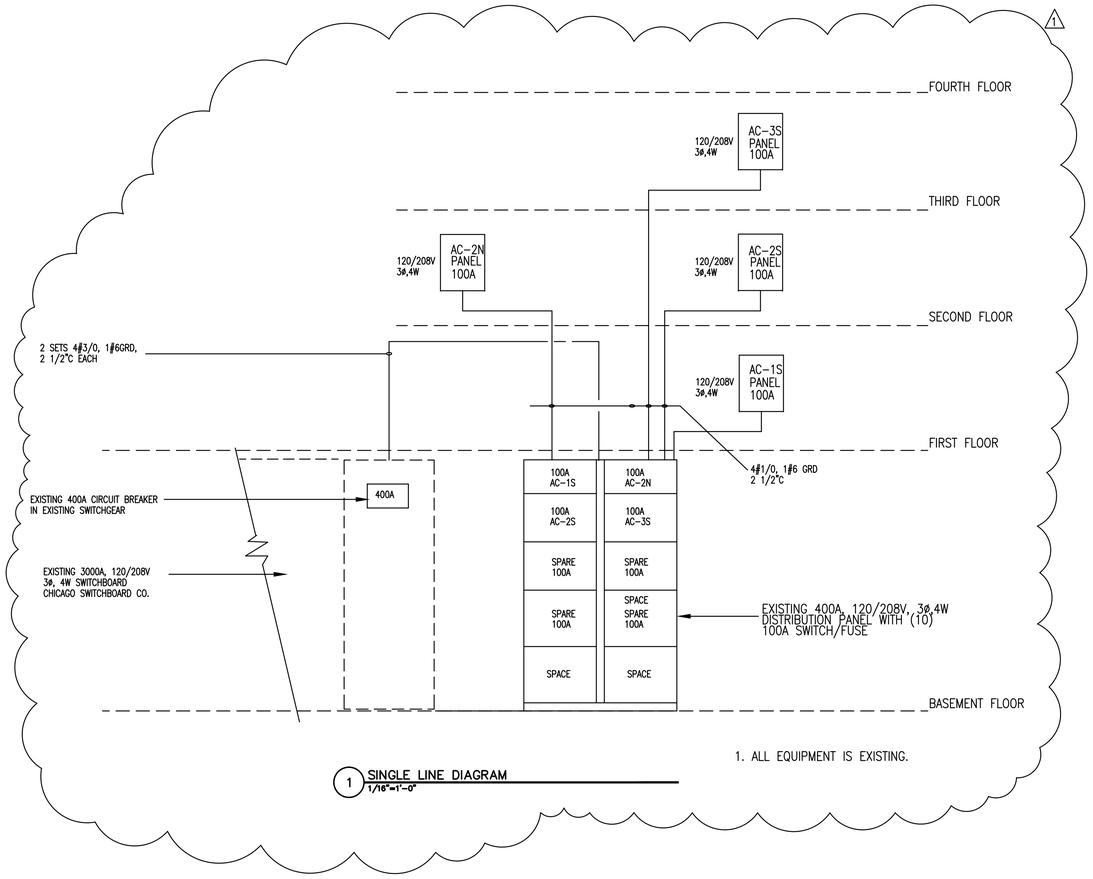
N
KEY PLAN

WARNING: ASBESTOS-CONTAINING BUILDING MATERIALS ARE OR MAY BE PRESENT IN THIS BUILDING. AN ASBESTOS MANAGEMENT PLAN IS AVAILABLE IN THE SCHOOL FOR REVIEW UPON REQUEST. NO PERSON MAY DISTURB ASBESTOS-CONTAINING MATERIALS UNLESS THAT PERSON IS A LICENSED ASBESTOS WORKER OR CONDUCTS SUCH WORK IN ACCORDANCE WITH SPECIFICATIONS CONTAINED IN THE PROJECT DOCUMENTS AND IN COMPLIANCE WITH ILLINOIS DEPARTMENT OF HEALTH RULES AND REGULATIONS.

ENLARGED PLANS POWER AND LOW VOLTAGE

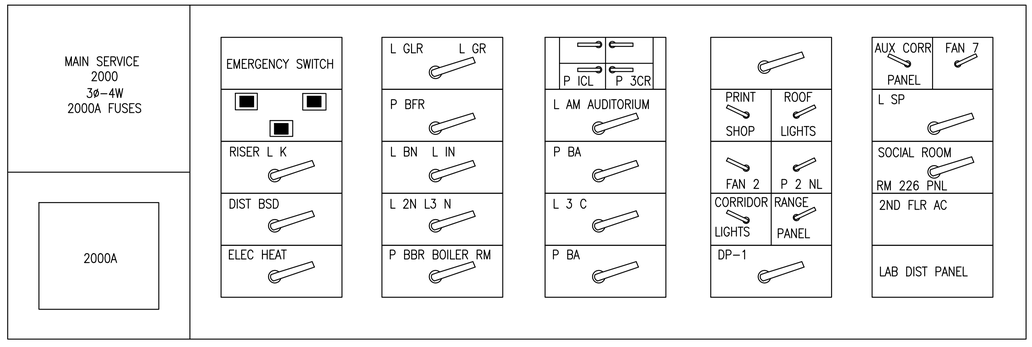
DRAWING NO.

E2.4



1. ALL EQUIPMENT IS EXISTING.

1 SINGLE LINE DIAGRAM
1/16"=1'-0"



2 SWITCHGEAR
1/16"=1'-0"

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CONSULTING ENGINEERS

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LAKE VIEW
HIGH SCHOOL
4015 NORTH ASHLAND AVENUE
CHICAGO, ILLINOIS 60613

PROJECT NO. 2016-46211-MCR

REVISIONS

NO.	DATE	DESCRIPTION
-	2016.04.19	30% SUBMITTAL
-	2016.06.14	60% SUBMITTAL
-	2017.02.14	75% SUBMITTAL
-	2017.03.02	100% SUBMITTAL
-	2017.03.07	PERMIT SET
-	2017.03.23	PRELIMINARY OTB SET
-	2017.04.04	BID SET
1	2017.04.12	ADDENDUM #1

DRAWN BY: DS
SCALE: NTS
JOB:
FILE: E5.0

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ELECTRICAL
SINGLE LINE DIAGRAM

DRAWING NO.

E3.1

LIGHTING FIXTURE SCHEDULE

TAG	SYMBOL	DESCRIPTION	MANUFACTURER & CATALOG NUMBER	TYPE	VOLTAGE	POWER	LUMENS	DRIVER	DIMMING	FIXTURE POWER	MOUNTING	NOTES
F2-L	▭	2'x4',LENSED TROFFER LED LIGHTING FIXTURE, RATED FOR DAMP LOCATION WITH LED MODULE AND DRIVER RATED FOR 120V/60HZ, DIMMING CAPABILITY, FUSED, WITH POLYCARBONATE LENS TO REDUCE GLARE, XXXX FINISHED CEILING SURFACE MOUNTED, WITH MINIMUM ILUMINANCE OUTPUT 7200 LUMENS, COLOR TEMPERATURE 3500K	LITHONIA TLX SERIES CAT# 2TLX4-72L-XX-MWS-EZ1-LP835-XX-XX H.E. WILLIAMS – SERIES 12 FINELITE – HPR-2x4 DCO-LED SM	LED MODULE 3500K	120V/60HZ	67 W	7200	YES	YES	67 W	SURFACE – –	 MATCH LITHONIA FIXTURE PROPERTIES MATCH LITHONIA FIXTURE PROPERTIES
F2A-L	▭	2'x4',LENSED TROFFER LED LIGHTING FIXTURE, RATED FOR DAMP LOCATION WITH LED MODULE AND DRIVER RATED FOR 120V/60HZ, DIMMING CAPABILITY, FUSED, WITH #12 LENS TO REDUCE GLARE, XXXX FINISHED CEILING SURFACE MOUNTED, WITH MINIMUM ILUMINANCE OUTPUT 7200 LUMENS, COLOR TEMPERATURE 3500K	LITHONIA TLX SERIES CAT# 2TLX4-72L-XX-A12-EZ1-LP835-XX-XX H.E. WILLIAMS – SERIES 12 FINELITE –	LED MODULE 3500K	120V/60HZ	67 W	7200	YES	YES	67 W	SURFACE – –	 MATCH LITHONIA FIXTURE PROPERTIES MATCH LITHONIA FIXTURE PROPERTIES
F8-L	▭	1'x4',LENSED TROFFER LED LIGHTING FIXTURE, RATED FOR DAMP LOCATION WITH LED MODULE AND DRIVER RATED FOR 120V/60HZ, DIMMING CAPABILITY, FUSED, WITH POLYCARBONATE LENS TO REDUCE GLARE, XXXX FINISHED CEILING SURFACE MOUNTED, WITH MINIMUM ILUMINANCE OUTPUT 4800 LUMENS, COLOR TEMPERATURE 3500K	LITHONIA TLX SERIES CAT# TLX4-48L-XX-MWS-EZ1-LP835-XX-XX METALUX – FINELITE –	LED MODULE 3500K	120V/60HZ	47 W	4800	YES	YES	47 W	SURFACE – –	 MATCH LITHONIA FIXTURE PROPERTIES MATCH LITHONIA FIXTURE PROPERTIES
F16-L	▭	LED LIGHTING FIXTURE, HIGH BAY TYPE, WITH LED MODULE AND DRIVER RATED FOR 120V/60HZ DIMMING CAPABILITY, FUSED, WITH POLYCARBONATE LENS TO REDUCE GLARE, WITH WIRE GUARD SUITABLE FOR GYM LOCATION, FINISHED CEILING MOUNTED WITH OPTIONS SURFACE OR STEM, WITH MINIMUM ILUMINANCE OUTPUT 30000 LUMENS, COLOR TEMPERATURE 3500K. (1)	LITHONIA IBL SERIES CAT# IBL 30L WD SD125 LP835 XX DAY-BRITE COLUMBIA LLHP SERIES CAT# LLHP3-40H-M-EDU-WG-XX	LED MODULE 3500K	120V/60HZ	245W	30000	YES	YES	245 W	SURFACE – –	NOTE 1 (1) MATCH LITHONIA FIXTURE PROPERTIES MATCH LITHONIA FIXTURE PROPERTIES
BPU	▽ ▽	BATTERY PACK UNIT WITH ATTACHED HEADS, NICKEL CADMIUM BATTERY	DUAL-LITES – AS-BX SERIES EMERGI-LITE-LSM SERIES LITHONIA – ELT SERIES SERIES-LITES-XR-0-C SERIES		120/60HZ	12W					SURFACE	2 HOUR BATTERY CHICAGO APPROVED
S12	⊡	LED EXTERIOR POLE COBRA, HEAD LUMIAIRE; FULL CUT OFF STANDARD FINISH AS SELECTED BY ARCHITECT – INTEGRAL LED DRIVER	PHYLIPS-HARDCO RX2-160 BETA LED-CREE-STR-LWY-10	20,000 LUMENTS 4000K	120/60HZ						POLE	EXTERIOR ROOF PARAPET OR POLE MOUNT, UL WET LOCATION. EQUIVALENT TO 400w HID. SEE DETAIL ON DRAWING E3.3
SX		ENCLOSED AND GASKETED COMPACT FLUORESCENT	GRAINGER 2PYAJ4		120/60HZ	12W		YES	NO		VARIES	
	⊗	EXIT SIGN LED CHICAGO APPROVED	COOPER CHX		120/60HZ					3 W	VARIES	

1. FIXTURE TO BE SUITABLE FOR HOOK OR CEILING TILE MOUNTING.
2. CATALOG NUMBERS INDICATE GENERAL SERIES INFO ONLY. (TYPICAL FOR ALL LIGHTING FIXTURES). (1)

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DRAWN BY: DS
SCALE: NTS
JOB:
FILE: E4.1

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ELECTRICAL
LIGHTING FIXTURE
SCHEDULE

DRAWING NO.

E4.1

PANELBOARD SCHEDULE

DESIGNATION	P-BA (EXISTING)				PANEL LOCATION	BOILER ROOM				
VOLTAGE SYSTEM TYPE	208Y/120V 3PH 4W SN				BUS AMPS	200			NEUTRAL % RATING	100				
MCB-MLO - MAIN AMPS, KAIC RATING	200	MLO	-		ENCLOSURE	NEMA-1	SURFACE		NEUTRAL BUS AMPS	200				TAG
TVSS ENC	N/A	N/A	N/A						PANEL FEEDER SIZE	EXISTING				
D=DIST E=EQUIP L=LIGHTS R=REC	VOLTAMPS			CB	CCT	L1	L2	L3	CCT	CB	VOLTAMPS			D=DIST E=EQUIP L=LIGHTS R=REC	
TYPE	DESCRIPTION	A	B	C	TR	NO	A	B	C	NO	TR	A	B	C	DESCRIPTION	TYPE
L	FAN #2	-			30	1	A			2	30	-			#2 FAN #2	L
L	|		-		30	3		B		4	30		-		|	L
L	|			-	30	5			C	6	30			-	|	L
L	COLD WATER AUX PUMP	-			30	7	A			8	30	-			SPARE	L
-	|		-		30	9		B		10	30		-		#2 AIR COMPRESSOR	L
-	|			-	30	11			C	12	30			-	#1 AIR COMPRESSOR	L
L	#1 COLD WATER HOUSE PUMP	-			30	13	A			14	100	-			PANEL P-BB	L
L	|		-		30	15		B		16	100		-		|	L
L	|			-	30	17			C	18	100			-	|	L
L	#2 COLDWATER HOUSE PUMP	-			30	19	A			20	30	-			TOILET EXHAUST FAN	L
L	|		-		30	21		B		22	30		-		|	L
L	|			-	30	23			C	24	30			-	|	L
L	TOWER EXHAUST FANS	-			30	25	A			26	20	-			BOOK ROOM SUMP	-
L	|		-		30	27		B		28	20		-		|	-
-	|			-	30	29			C	30	20			-	|	-
-	SPARE	-			20	31	A			32	20	-			AIR COMPRESSOR	-
-	SPARE		-		20	33		B		34	20		-		|	-
-	SPARE			-	20	35			C	36	20			-	|	-
-	HOT WATER CIRCULATION PUMP	-			20	37	A			38	20	-			ROTC EXHAUST FAN	-
-	|		-		20	39		B		40	20		-		|	-
-	|			-	20	41			C	42	20			-	|	-
	TOTAL PER PHASE	0	0	0		POWER SYSTEM TYPE NML						0	0	0	TOTAL PER PHASE	
										TOTAL VA PER PHASE		0	0	0	0	VA
NOTES: VERIFY SPARE AND SPACES PRIOR TO INSTALLATION VERIFY AVAILABLE BREAKERS DUE TO DEMOLITION										TOTAL AMPS PER PHASE		0.0	0.0	0.0	0.0	A

PANELBOARD SCHEDULE

DESIGNATION	P-BB2 (EXISTING)				PANEL LOCATION	BOILER ROOM				
VOLTAGE SYSTEM TYPE	208Y/120V 3PH 4W SN				BUS AMPS	100			NEUTRAL % RATING					
MCB-MLO - MAIN AMPS, KAIC RATING	400	MLO	-		ENCLOSURE	NEMA-1	SURFACE		NEUTRAL BUS AMPS					TAG
TVSS ENC	N/A	N/A	N/A						PANEL FEEDER SIZE	EXISTING				
D=DIST E=EQUIP L=LIGHTS R=REC	VOLTAMPS			CB	CCT	L1	L2	L3	CCT	CB	VOLTAMPS			D=DIST E=EQUIP L=LIGHTS R=REC	
TYPE	DESCRIPTION	A	B	C	TR	NO	A	B	C	NO	TR	A	B	C	DESCRIPTION	TYPE
	EX	-			100	1	A			2	100	-			EX	
	|		-		-	3		B		4	-		-		|	
	|			-	-	5			C	6	-			-	|	
	EX	-			100	7	A			8	50	-			EX	
	|		-		-	9		B		10	-		-		|	
	|			-	-	11			C	12	-			-	|	
	SPACE	-			-	13	A			14	30	-			EX	
	|		-		-	15		B		16	-		-		|	
	|			-	-	17			C	18	-			-	|	
	EX	-			100	19	A			20	50	-			EX	
	|		-		-	21		B		22	-		-		|	
	|			-	-	23			C	24	-			-	|	
	EX	-			50	25	A			26	50	-			EX	-
	|		-		-	27		B		28	-		-		|	-
-	|			-	-	29			C	30	-			-	|	-
-	EX	-			30	31	A			32	40	-			EX	-
-	|		-		-	33		B		34	-		-		|	-
-	|			-	-	35			C	36	-			-	|	-
-	SPACE	-			-	37	A			38	30	-			EX	-
-	|		-		-	39		B		40	-		-		|	-
-	|			-	-	41			C	42	-			-	|	-
	TOTAL PER PHASE	0	0	0		POWER SYSTEM TYPE NML						0	0	0	TOTAL PER PHASE	
										TOTAL VA PER PHASE		0	0	0	0	VA
NOTES: VERIFY SPARE AND SPACES PRIOR TO INSTALLATION VERIFY AVAILABLE BREAKERS DUE TO DEMOLITION										TOTAL AMPS PER PHASE		0.0	0.0	0.0	0.0	A

PANELBOARD SCHEDULE

DESIGNATION	L-BA (EXISTING)				PANEL LOCATION	HALLWAY				
VOLTAGE SYSTEM TYPE	208Y/120V 3PH 4W SN				BUS AMPS				NEUTRAL % RATING					
MCB-MLO - MAIN AMPS, KAIC RATING		MLO	-		ENCLOSURE	NEMA-1	SURFACE		NEUTRAL BUS AMPS					TAG
TVSS ENC	N/A	N/A	N/A						PANEL FEEDER SIZE	EXISTING				
D=DIST E=EQUIP L=LIGHTS R=REC	VOLTAMPS			CB	CCT	L1	L2	L3	CCT	CB	VOLTAMPS			D=DIST E=EQUIP L=LIGHTS R=REC	
TYPE	DESCRIPTION	A	B	C	TR	NO	A	B	C	NO	TR	A	B	C	DESCRIPTION	TYPE
L	EX LIGHTING - LUNCHROOM	-			20	1	A			2	20	-			EX LIGHTING - LUNCHROOM	L
L	EX LIGHTING - LUNCHROOM		-		20	3		B		4	20		-		EX LIGHTING - LUNCHROOM	L
L	EX LIGHTING - LUNCHROOM			-	20	5			C	6	20			-	EX LIGHTING - LUNCHROOM	L
L	EX LIGHTING - LUNCHROOM	-			20	7	A			8	20	-			EX LIGHTING - LUNCHROOM	L
L	EX LIGHTING - LUNCHROOM		-		20	9		B		10	20		-		EX LIGHTING - LUNCHROOM	L
L	EX LIGHTING - LUNCHROOM			-	20	11			C	12	20			-	EX LIGHTING - LUNCHROOM	L
L	NEW PA SYSTEM - LUNCHROOM	500			20	13	A			14	20	-			EX LIGHTING - LUNCHROOM	L
L	EX LIGHTING - LUNCHROOM		-		20	15		B		16	20		-		EX LIGHTING - FAN RM #5	L
L	EX LIGHTING - LUNCHROOM			-	20	17			C	18	20			-	EX LIGHTING - HALL & PLENUM #7	L
L	EX LIGHTING - EMPLY. LOCKER RM	-			20	19	A			20	20	-			EX LIGHTING - FAN RM #7	L
L	EX LIGHTING - STORAGE RM		-		20	21		B		22	20		-		EX RECEPT. - LUNCHROOM	R
R	EX RECEPT. - LUNCHROOM			-	20	23			C	24	20			1,500	NEW PROJECTOR AND SCREEN	E
R	EX RECEPT. - LUNCHRM & FREEZER	-			20	25	A			26	20	360			NEW RECEPT. BATHROOM	R
R	NEW RECEPT - BATHROOM		540		20	27		B		28	20		1,200		NEW HD-1, HAND DRYER	E
E	NEW EF-5 - RM 011			-	20	29			C	30	20			1,200	NEW HD-2, HAND DRYER	E
-		-				31	A			32		-				-
-			-			33		B		34			-			-
-				-		35			C	36				-		-
-		-				37	A			38		-				-
-			-			39		B		40			-			-
-				-		41			C	42				-		-
	TOTAL PER PHASE	500	540	0		POWER SYSTEM TYPE NML						360	1,200	2,700		
										TOTAL VA PER PHASE		860	1,740	2,700	5,300	VA
NOTES: VERIFY SPARE AND SPACES PRIOR TO INSTALLATION VERIFY AVAILABLE BREAKERS DUE TO DEMOLITION										TOTAL AMPS PER PHASE		7.2	14.5	22.5	14.7	A

1

PANELBOARD SCHEDULE

DESIGNATION	K-1 (EXISTING)				PANEL LOCATION	KITCHEN				
VOLTAGE SYSTEM TYPE	208Y/120V 3PH 4W SN				BUS AMPS	200			NEUTRAL % RATING	100				
MCB-MLO - MAIN AMPS, KAIC RATING	200	MLO	-		ENCLOSURE	NEMA-1	SURFACE		NEUTRAL BUS AMPS	200				TAG
TVSS ENC	N/A	N/A	N/A						PANEL FEEDER SIZE	EXISTING				
D=DIST E=EQUIP L=LIGHTS R=REC	VOLTAMPS			CB	CCT	L1	L2	L3	CCT	CB	VOLTAMPS			D=DIST E=EQUIP L=LIGHTS R=REC	
TYPE	DESCRIPTION	A	B	C	TR	NO	A	B	C	NO	TR	A	B	C	DESCRIPTION	TYPE
	EX LOAD	-			20	1	A			2	50	-			EX TOP STEAMER	L
	|		-		-	3		B		4	-		-		|	L
	|			-	-	5			C	6	-			-	|	L
	EX LOAD	-			20	7	A			8	20	-			EX LOAD	L
	|		-		-	9		B		10	-		-		|	L
	|			-	-	11			C	12	-			-	|	L
	EX LOAD	-			50	13	A			14	20	-			EX BOTTOM STEAMER	L
	|		-		-	15		B		16	20		-		|	L
	EX LOAD			-	50	17			C	18	20			-	|	L
	|	-			-	19	A			20	20	-			EX WALK IN FREEZER	L
	EX LOAD		-		30	21		B		22	-		-		|	L
	|			-	-	23			C	24	20			-	EX LOAD	L
	EX LOAD	-			20	25	A			26	20	-			EX WALK IN FREEZER	-
	|		-		-	27		B		28	-		-		|	-
	|			-	-	29			C	30	20			-	EX SPACE	-
-	EX LOAD	-			60	31	A			32	20	-			EX LOAD	-
-	|		-		-	33		B		34	-		-		|	-
-	|			-	-	35			C	36	-			-	|	-
-	EX LOAD	-			30	37	A			38	60	-			EX LOAD	-
-	|		-		-	39		B		40	-		-		|	-
-	|			-	-	41			C	42	-			-	|	-
	TOTAL PER PHASE	0	0	0		POWER SYSTEM TYPE NML						0	0	0	TOTAL PER PHASE	
										TOTAL VA PER PHASE		0	0	0	0	VA
NOTES: VERIFY SPARE AND SPACES PRIOR TO INSTALLATION VERIFY AVAILABLE BREAKERS DUE TO DEMOLITION										TOTAL AMPS PER PHASE		0.0	0.0	0.0	0.0	A

NOTES:

ALL PANELS ARE EXISTING.

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1	2017.04.12	ADDENDUM #1

DRAWN BY: DS
SCALE: NTS
JOB:
FILE: E-401

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PANEL SCHEDULES

DRAWING NO.

E4.3

PANELBOARD SCHEDULE — K-2 (EXISTING)

DESIGNATION: K-2 (EXISTING) | PANEL LOCATION: KITCHEN
VOLTAGE SYSTEM TYPE: 208Y/120V 3PH 4W SN | BUS AMPS: 200 | NEUTRAL % RATING: 100
MCB-MLO - MAIN AMPS, KAIC RATING: 200 MLO - | ENCLOSURE: NEMA-1 SURFACE | NEUTRAL BUS AMPS: 200 | TAG
TVSS ENC: N/A N/A N/A | PANEL FEEDER SIZE: EXISTING

D=DIST E=EQUIP L=LIGHTS R=REC

TYPE	DESCRIPTION	A	B	C	CB TR	CCT NO	L1 A	L2 B	L3 C	CCT NO	CB TR	A	B	C	DESCRIPTION	TYPE
L	NEW EF-6	696			20	1	A			2	20	696			NEW EF-7	L
L	EX KITCHEN LIGHTS		-		20	3		B		4	20		-		EX HOOD LIGHTS	L
L	EX KITCHEN LIGHTS			-	20	5			C	6	20			-	EX TEACHERS LUNCH ROOM LIGHTS	L
L	EX HOOD LIGHTS	-			20	7	A			8	20	-			EX MANAGER OFFICE LIGHTING	L
-	EX REACH IN FREEZER (MOVE CCT)		-		20	9		B		10	20		-		SOUTH SIDE RECEPTACLE	L
-	EX KITCHEN STOVE LIGHTS			-	20	11			C	12	20			-	EX SERVING LINE LIGHTS	L
L	EX EXHAUST FAN	-			20	13	A			14	20	-			EX SERVING LINE LIGHTS	L
L	EX KITCHEN - REACH IN COOLER		-		20	15		B		16	20		-		EX PLUG-IN MIXER	L
L	NEW HFD-1			1,500	20	17			C	18	20			-	SO. SIDE WALL RECEPTACLE	L
L	|	1,500			20	19	A			20	20	-			WEST SERVING RECEPTACLE	L
L	NEW HFD-2		1,500		20	21		B		22	20		-		GRILL	L
L	|			1,500	20	23			C	24	20			1,044	NEW CP-1 & MC-1	L
L	NEW HFD-3	1,500			20	25	A			26	20	1,044			NEW CP-2 & MC-2	-
L	|		1,500		20	27		B		28	20		-		ALLEY ENTRANCE	-
-	NEW HFD-4			1,500	20	29			C	30	20			1,044	NEW CP-2 & MC-2	-
-	|	1,500			20	31	A			32	20	1,200			NEW IM-1	-
-	NEW HFD-5		1,500		20	33		B		34	20		1,200		NEW IM-2	-
-	|			1,500	20	35			C	36	20			1,200	NEW FR-1	-
-	NEW HFD-6	1,500			20	37	A			38	20	1,200			NEW FR-2	-
-	|		1,500		20	39		B		40	20		1,200		NEW FR-3	-
-	SPARE			-	20	41			C	42	20			1,200	NEW FR-4	-
	TOTAL PER PHASE	6,696	6,000	6,000	POWER SYSTEM TYPE NML							4,140	8,400	4,488	TOTAL PER PHASE	
	NOTES: VERIFY SPARE AND SPACES PRIOR TO INSTALLATION				TOTAL VA PER PHASE							10,836	8,400	10,488	29,724	VA
	VERIFY AVAILABLE BREAKERS DUE TO DEMOLITION				TOTAL AMPS PER PHASE							90.3	70.0	87.4	82.6	A

PANELBOARD SCHEDULE — AC-1S (EXISTING)

DESIGNATION: AC-1S (EXISTING) | PANEL LOCATION:
VOLTAGE SYSTEM TYPE: 208Y/120V 3PH 4W SN | BUS AMPS: | NEUTRAL % RATING:
MCB-MLO - MAIN AMPS, KAIC RATING: MLO - | ENCLOSURE: NEMA-1 SURFACE | NEUTRAL BUS AMPS: | TAG
TVSS ENC: N/A N/A N/A | PANEL FEEDER SIZE: EXISTING

D=DIST E=EQUIP L=LIGHTS R=REC

TYPE	DESCRIPTION	A	B	C	CB TR	CCT NO	L1 A	L2 B	L3 C	CCT NO	CB TR	A	B	C	DESCRIPTION	TYPE
	EX AC UNIT RM 126 NORTH	-			20	1	A			2	20	-			EX AC UNIT RM 126 SOUTH	
	|		-		-	3		B		4	-		-		|	
	EX SPARE			-	20	5			C	6	20			-	EX AC UNIT RM 138	
	EX RECEPT. - BATHROOM	-			20	7	A			8	-	-			|	
	EX LOW VOLTAGE		-		20	9		B		10	20		-		EX SPARE	
	EX HAND DRYER			-	20	11			C	12	20			-	EX SPARE	
	EX A.C.N.O	-			20	13	A			14	20	-			EX SPARE	
	EX A.C.N.O		-		20	15		B		16	20		-		EX SPARE	
R	NEW RECEPT. BATHROOM			360	20	17			C	18	20			-	EX SPARE	
E	NEW TEF-1	696			20	19	A			20	20	-			EX SPARE	
E	NEW TEF-5		100		20	21		B		22	20		-		EX SPARE	
	EX SPARE			-	20	23			C	24	20			-	EX SPARE	
	EX SPARE	-			20	25	A			26	20	-			EX SPARE	
	EX SPARE		-		20	27		B		28	20		-		EX SPARE	
	EX SPARE			-	20	29			C	30	20			-	EX SPARE	
-	EX SPARE	-			20	31	A			32	20	-			EX SPARE	-
-	EX SPARE		-		20	33		B		34	20		-		EX SPARE	-
-	EX SPARE			-	20	35			C	36	20			600	SHADE MOTOR	-
-	EX SPARE	-			20	37	A			38	20	600			SHADE MOTOR	-
-	EX SPARE		-		20	39		B		40	20		600		SHADE MOTOR	-
-	EX SPARE			-	20	41			C	42	20			600	SHADE MOTOR	-
	TOTAL PER PHASE	696	100	360	POWER SYSTEM TYPE NML							600	600	1,200		
	NOTES: VERIFY SPARE AND SPACES PRIOR TO INSTALLATION				TOTAL VA PER PHASE							1,296	700	1,560	3,556	VA
	VERIFY AVAILABLE BREAKERS DUE TO DEMOLITION				TOTAL AMPS PER PHASE							10.8	5.8	13.0	9.9	A

PANELBOARD SCHEDULE — AC-2S (EXISTING)

DESIGNATION: AC-2S (EXISTING) | PANEL LOCATION:
VOLTAGE SYSTEM TYPE: 208Y/120V 3PH 4W SN | BUS AMPS: | NEUTRAL % RATING:
MCB-MLO - MAIN AMPS, KAIC RATING: MLO - | ENCLOSURE: NEMA-1 SURFACE | NEUTRAL BUS AMPS: | TAG
TVSS ENC: N/A N/A N/A | PANEL FEEDER SIZE: EXISTING

D=DIST E=EQUIP L=LIGHTS R=REC

TYPE	DESCRIPTION	A	B	C	CB TR	CCT NO	L1 A	L2 B	L3 C	CCT NO	CB TR	A	B	C	DESCRIPTION	TYPE
	EX AC UNIT - RM 222 SOUTH	-			30	1	A			2	20	-			EX AC UNIT - RM 222 NORTH	
	|		-		-	3		B		4	20		-		|	
R	NEW RECEPT BATHROOMS			360	20	5			C	6	20			-	EX SPARE	
E	NEW TEF-2	696			20	7	A			8	20	-			EX SPARE	
	EX SPARE		-		20	9		B		10	20		-		EX SPARE	
	EX SPARE			-	20	11			C	12	20			-	EX SPARE	
	EX SPARE	-			20	13	A			14	20	-			EX SPARE	
	EX SPARE		-		20	15		B		16	20		-		EX SPARE	
	EX SPARE			-	20	17			C	18	20			-	EX SPARE	
	EX SPARE	-			20	19	A			20	20	-			EX SPARE	
	EX SPARE		-		20	21		B		22	20		-		EX SPARE	
	EX SPARE			-	20	23			C	24	20			-	EX SPARE	
	EX SPARE	-			20	25	A			26	20	-			EX SPARE	
	EX SPARE		-		20	27		B		28	20		-		EX SPARE	
	EX INSIDE AC UNIT - MDF			-	20	29			C	30	20			-	EX SPARE	
-	|	-			-	31	A			32	20	-			EX EF 5	-
-	EX SPARE		-		20	33		B		34	-		-		|	-
-	EX OUTSIDE AC UNIT - MDF			-	20	35			C	36	-			-	|	-
-	|	-			-	37	A			38	20				EX LOW VOLTAGE CONTROL PNL	-
-	EX OUSIDE AC UNIT - MDF		-		20	39		B		40	20		-		EX SPARE	-
-	|			-	-	41			C	42	20			-	EX SPARE	-
	TOTAL PER PHASE	696	0	360	POWER SYSTEM TYPE NML							0	0	0		
	NOTES: VERIFY SPARE AND SPACES PRIOR TO INSTALLATION				TOTAL VA PER PHASE							696	0	360	1,056	VA
	VERIFY AVAILABLE BREAKERS DUE TO DEMOLITION				TOTAL AMPS PER PHASE							5.8	0.0	3.0	2.9	A

PANELBOARD SCHEDULE — AC-2N (EXISTING)

DESIGNATION: AC-2N (EXISTING) | PANEL LOCATION:
VOLTAGE SYSTEM TYPE: 208Y/120V 3PH 4W SN | BUS AMPS: | NEUTRAL % RATING:
MCB-MLO - MAIN AMPS, KAIC RATING: MLO - | ENCLOSURE: NEMA-1 SURFACE | NEUTRAL BUS AMPS: | TAG
TVSS ENC: N/A N/A N/A | PANEL FEEDER SIZE: EXISTING

D=DIST E=EQUIP L=LIGHTS R=REC

TYPE	DESCRIPTION	A	B	C	CB TR	CCT NO	L1 A	L2 B	L3 C	CCT NO	CB TR	A	B	C	DESCRIPTION	TYPE
	EX AC UNIT RM 209 SOUTH	-			20	1	A			2	20	-			EX AC UNIT RM 209 NORTH	
	|		-		-	3		B		4	-		-		|	
	EX AC UNIT RM 120			-	20	5			C	6	20			-	EX SPARE	
	|	-			-	7	A			8	20	-			EX SPARE	
	NEW RECEPT. BATHROOM		180		20	9		B		10	20		-		EX SPARE	
	EX SPARE			-	20	11			C	12	20			-	EX SPARE	
	EX SPARE	-			20	13	A			14	20	-			EX SPARE	
	EX SPARE		-		20	15		B		16	20		-		EX SPARE	
	EX SPARE			-	20	17			C	18	20			-	EX SPARE	
	EX SPARE	-			20	19	A			20	20	-			EX SPARE	
	EX SPARE		-		20	21		B		22	20		-		EX SPARE	
	EX SPARE			-	20	23			C	24	20			-	EX SPARE	
	EX SPARE	-			20	25	A			26	20	-			EX SPARE	
	EX SPARE		-		20	27		B		28	20		-		EX SPARE	
	EX SPARE			-	20	29			C	30	20			-	EX SPARE	
-	EX SPARE	-			20	31	A			32	20	-			EX SPARE	-
-	EX SPARE		-		20	33		B		34	20		-		EX SPARE	-
-	EX SPARE			-	20	35			C	36	20			-	EX SPARE	-
-	|	1,000			20	37	A			38	20	1,000			|	-
-	HEAT TRACING PANEL		1,000		20	39		B		40	20		1,000		HEAT TRACING PANEL	-
-	|			1,000	20	41			C	42	20			1,000	|	-
	TOTAL PER PHASE	1,000	1,180	1,000	POWER SYSTEM TYPE NML							1,000	1,000	1,000		
	NOTES: VERIFY SPARE AND SPACES PRIOR TO INSTALLATION				TOTAL VA PER PHASE							2,000	2,180	2,000	6,180	VA
	VERIFY AVAILABLE BREAKERS DUE TO DEMOLITION				TOTAL AMPS PER PHASE							16.7	18.2	16.7	17.2	A

PANELBOARD SCHEDULE — AC-3S (EXISTING)

DESIGNATION: AC-3S (EXISTING) | PANEL LOCATION:
VOLTAGE SYSTEM TYPE: 208Y/120V 3PH 4W SN | BUS AMPS: | NEUTRAL % RATING:
MCB-MLO - MAIN AMPS, KAIC RATING: MLO - | ENCLOSURE: NEMA-1 SURFACE | NEUTRAL BUS AMPS: | TAG
TVSS ENC: N/A N/A N/A | PANEL FEEDER SIZE: EXISTING

D=DIST E=EQUIP L=LIGHTS R=REC

TYPE	DESCRIPTION	A	B	C	CB TR	CCT NO	L1 A	L2 B	L3 C	CCT NO	CB TR	A	B	C	DESCRIPTION	TYPE
	EX AC UNIT - RM 328 SOUTH	-			20	1	A			2	20	-			EX AC UNIT - RM 328 NORTH	
	|		-		-	3		B		4	-		-		|	
	EX LOAD			-	20	5			C	6	20			-	EX CCTV	
	EX EF	-			20	7	A			8	20	-			EX RECEPT. - BATHROOM	
	|		-		-	9		B		10	20		-		EX HAND DRYER	
	|			-	-	11			C	12	20			-	EX LOW VOLTAGE	
	EX EF	-			20	13	A			14	20	-			EX SPARE	
	|		-		-	15		B		16	20		-		EX SPARE	
	|			-	-	17			C	18	20			-	EX SPARE	
	EX TEF-1	-			20	19	A			20	20	-			EX SPARE	
R	NEW RECEPT. BATHROOM		180		20	21		B		22	20		-		EX SPARE	
E	NEW TEF-3			696	20	23			C	24	20			-	EX SPARE	
	EX SPARE	-			20	25	A			26	20	-			EX SPARE	
	EX SPARE		-		20	27		B		28	20		-		EX SPARE	
	EX SPARE			-	20	29			C	30	20			-	EX SPARE	
-	EX SPARE	-			20	31	A			32	20	-			EX SPARE	-
-	EX SPARE		-		20	33		B		34	20		-		EX SPARE	-
-	EX SPARE			-	20	35			C	36	20			-	EX SPARE	-
-	EX SPARE	-			20	37	A			38	20	-			EX SPARE	-
-	EX SPARE		-		20	39		B		40	20		-		EX SPARE	-
-	EX SPARE			-	20	41			C	42	20			-	EX SPARE	-
	TOTAL PER PHASE	0	180	696	POWER SYSTEM TYPE NML							0	0	0		
	NOTES: VERIFY SPARE AND SPACES PRIOR TO INSTALLATION				TOTAL VA PER PHASE							0	180	696	876	VA
	VERIFY AVAILABLE BREAKERS DUE TO DEMOLITION				TOTAL AMPS PER PHASE							0.0	1.5	5.8	2.4	A

PANELBOARD SCHEDULE — P-BB1 (EXISTING)

DESIGNATION: P-BB1 (EXISTING) | PANEL LOCATION: BOILER ROOM
VOLTAGE SYSTEM TYPE: 208Y/120V 3PH 4W SN | BUS AMPS: 100 | NEUTRAL % RATING: 100
MCB-MLO - MAIN AMPS, KAIC RATING: 100 MLO - | ENCLOSURE: NEMA-1 SURFACE | NEUTRAL BUS AMPS: 100 | TAG
TVSS ENC: N/A N/A N/A | PANEL FEEDER SIZE: EXISTING

D=DIST E=EQUIP L=LIGHTS R=REC

TYPE	DESCRIPTION	A	B	C	CB TR	CCT NO	L1 A	L2 B	L3 C	CCT NO	CB TR	A	B	C	DESCRIPTION	TYPE
	EX SET #1 PUMP #1 OIL	-			20	1	A			2	20	-			EX SET #2 PUMP #1	
	|		-		-	3		B		4	-		-		|	
					-	5			C	6	-			-		
	EX SET #1 PUMP #2	-			20	7	A			8	20	-			EX SET #2 PUMP #2	
	|		-		-	9		B		10	-		-		|	
	|			-	-	11			C	12	-			-	|	
	EX FEED WATER CONT. TRANS.	-			20	13	A			14	20	-			EX HOT WATER CIRCULATION PUMP	
	|		-		-	15		B		16	-		-		|	
	|			-	-	17			C	18	-			-	|	
E	NEW BFP-3	2,000			30	19	A			20	60	-			EX SPARE	
E	|		2,000		-	21		B		22	-		-		EX SPARE	
E	|			2,000	-	23			C	24	-			-	EX SPARE	
	EX OIL PUMP CONT. TRANS	-			30	25	A			26	60	-			EX COLD WATER BOOSTER PUMP	-
-	|		-		-	27		B		28	-		-		|	-
-	|			-	-	29			C	30	-			-	|	-
-	NEW BFP-3	-			60	31	A			32	30	-			EX SPARE	-
-	|		-		-	33		B		34	-		-		EX SPARE	-
-	|			-	-	35			C	36	-			-	EX SPARE	-
E	NEW CO2 SENSOR	100			20	37	A			38	20	-			EX GAS BOOSTER	-
-	EX SPARE		-		20	39		B		40	-		-		|	-
-	EX SPARE			-	20	41			C	42	-			-	|	-
	TOTAL PER PHASE	2,100	2,000	2,000	POWER SYSTEM TYPE NML							0	0	0	TOTAL PER PHASE	
	NOTES: VERIFY SPARE AND SPACES PRIOR TO INSTALLATION				TOTAL VA PER PHASE							2,100	2,000	2,000	6,100	VA
	VERIFY AVAILABLE BREAKERS DUE TO DEMOLITION				TOTAL AMPS PER PHASE							17.5	16.7	16.7	16.9	A

CORDOGAN, CLARK & ASSOCIATES INC.
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SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

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LAKE VIEW HIGH SCHOOL
4015 NORTH ASHLAND AVENUE
CHICAGO, ILLINOIS 60613
PROJECT NO. 2016-46211-MCR

REVISIONS

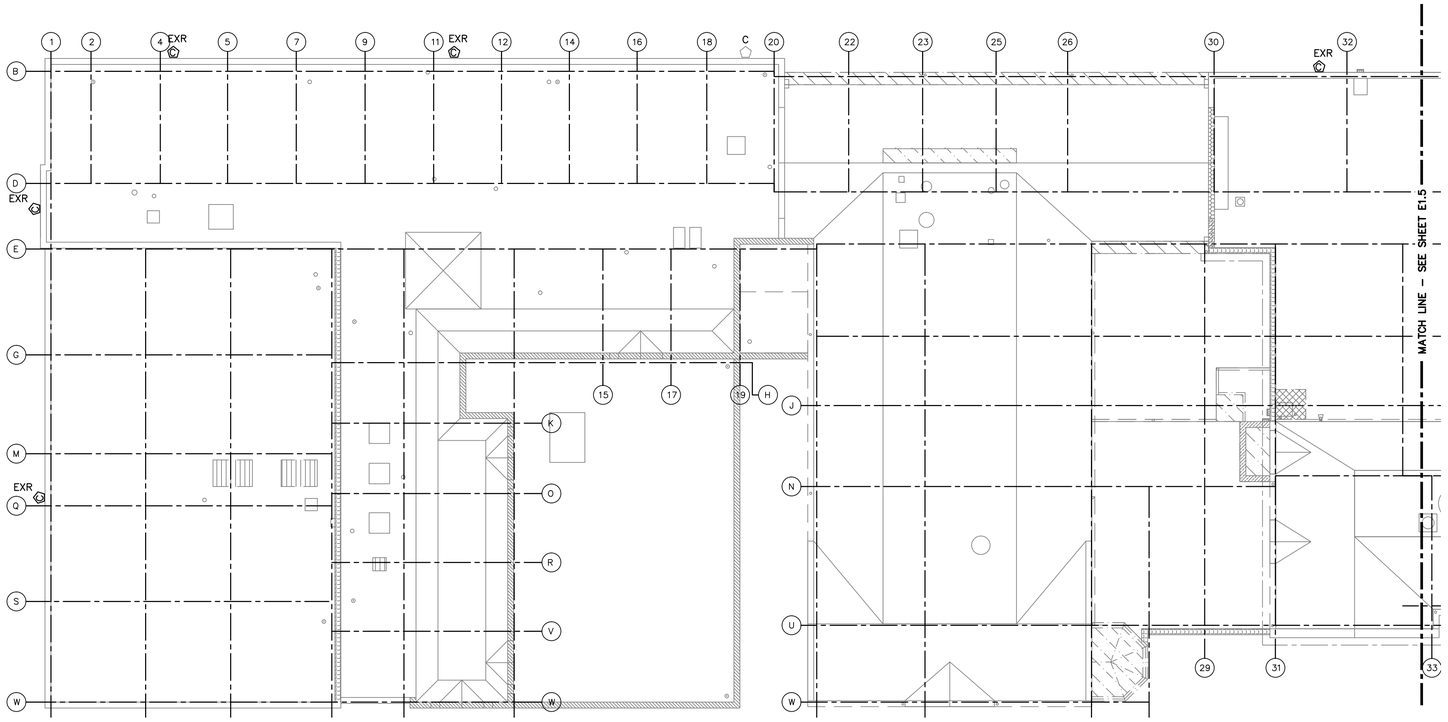
NO.	DATE	DESCRIPTION
–	2016.04.19	30% SUBMITTAL
–	2016.06.14	60% SUBMITTAL
–	2017.02.14	75% SUBMITTAL
–	2017.03.02	100% SUBMITTAL
–	2017.03.07	PERMIT SET
–	2017.03.23	PRELIMINARY OTB SET
–	2017.04.04	BID SET
1	2017.04.12	ADDENDUM #1

DRAWN BY: DS
SCALE: NTS
JOB:
FILE: E4.4

WARNING: ASBESTOS-CONTAINING BUILDING MATERIALS ARE OR MAY BE PRESENT IN THIS BUILDING. AN ASBESTOS MANAGEMENT PLAN IS AVAILABLE IN THE SCHOOL FOR REVIEW UPON REQUEST. NO PERSON MAY DISTURB ASBESTOS-CONTAINING MATERIALS UNLESS THAT PERSON IS A LICENSED ASBESTOS WORKER OR CONDUCTS SUCH WORK IN ACCORDANCE WITH SPECIFICATION(S) CONTAINED IN THE PROJECT DOCUMENTS AND IN COMPLIANCE WITH ILLINOIS DEPARTMENT OF HEALTH RULES AND REGULATIONS.

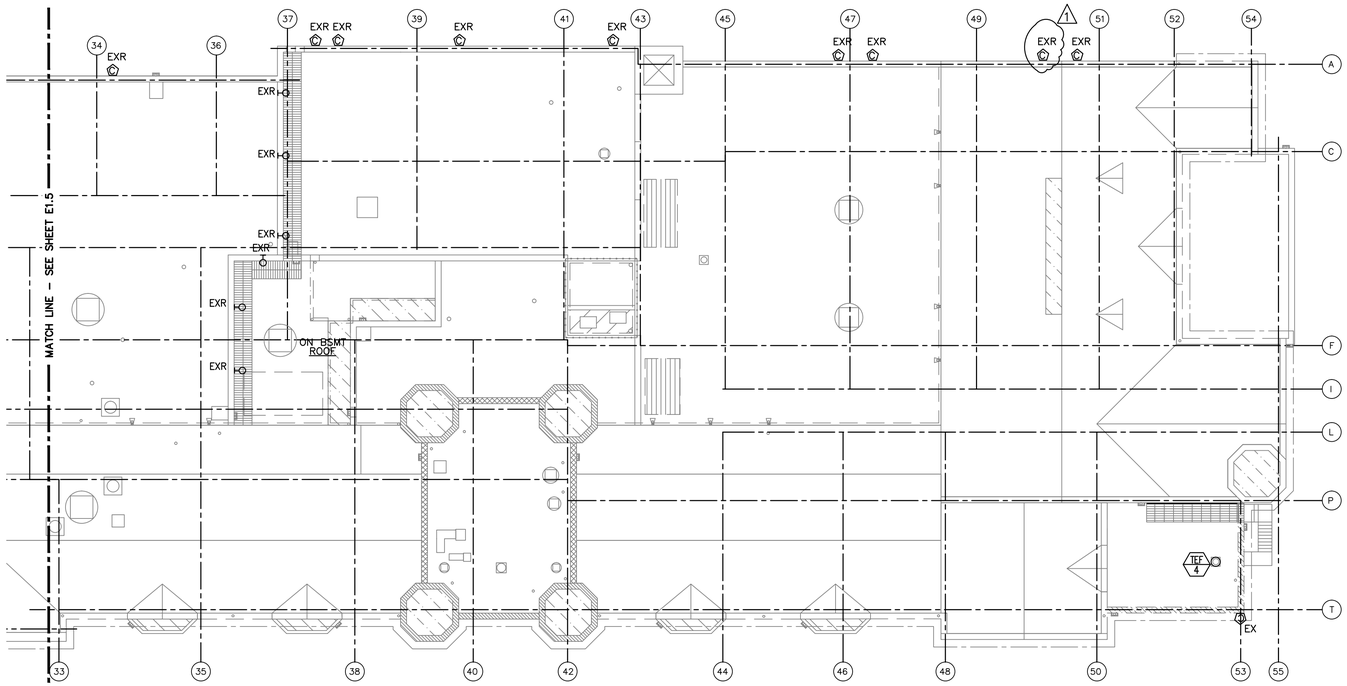
PANEL SCHEDULES

DRAWING NO.
E4.4



1 ROOF ELECTRICAL DEMOLITION PLAN-NORTH
1/16"=1'-0"

10 0 5 15 25
1/16" = 1'-0"



2 ROOF ELECTRICAL DEMOLITION PLAN-SOUTH
1/16"=1'-0"

10 0 5 15 25
1/16" = 1'-0"

DEMOLITION NOTES:

1. ELECTRICAL CONTRACTOR (EC) SHALL:

a – DISCONNECT POWER FOR EACH EXISTING FAN WHICH SHALL BE DEMO AND LOCK CIRCUIT BREAKER IN THE PANEL.

b – DISCONNECT FAN CONTROL FROM FAN AND ISOLATE IT FROM THE BUILDING CONTROL SYSTEM IN MAIN CONTROL PANEL.

c – SAFE AND SECURE POWER CIRCUITS FOR REUSE

d – RETREAT WIRE FROM FAN BOX TO NEAREST JUNCTION BOX(JB) OR PULL BOX

(PB), WHICH IS NOT IN CONFLICT WITH ROOF STRUCTURE REMODELING.

e – DEMO CONDUITS, JUNCTION AND PULL BOXES AND ALL OTHER FAN RELATED EQUIPMENT WHICH ARE IN CONFLICT WITH ROOF REMODELING.

f – ROOF REMODELING WILL BE PERFORMED IN FEW SEPARATE AREAS FOR EACH AREA OF WORK, COORDINATE RANGE OF AREA AFFECTED BY ROOF REMODELING, WITH GENERAL CONTRACTOR AND ROOFING CONTRACTOR.

g – IT IS POSSIBLE, THAT IN SOME LOCATIONS, RANGE OF AREA AFFECTED BY ROOF REMODELING WILL FORCE EC TO RETREAT CIRCUIT WIRES (POWER AND CONTROL) BACK TO PANELS.

h – ALL DEMO MATERIALS, WHICH WON'T BE REINSTALLED, SHALL BE RETURNED TO OWNER OR DISPOSED AS DIRECTED.

i – ALL POWER DISCONNECTION, EQUIPMENT DISCONNECTION, ACCESS TO PANELS, E.T.C. SHALL BE COORDINATED/ SCHEDULED WITH BUILDING ENGINEER.

EXTERIOR LIGHTING ROOF MOUNTED – (LTG DEMOLITION)

1. THERE ARE 2 TYPES OF LUMINAIRES.
MAIN GROUP CREATE LIGHTING FIXTURES MOUNTED ON BUILDING ELEVATION (WALL MOUNTED), WHICH MAIN PURPOSE IS TO LIGHT-UP PARKING AREA AT THE BACK OF SCHOOL BUILDING FOR SAFETY PURPOSES. FIXTURES ARE MOUNTED ON SUPPORT STRUCTURE AND ARE FED BY FLEXIBLE CONDUITS FROM JUNCTION BOXES INSTALLED ON THE ROOF'S PARAPET WALL ON ROOF SIDE. FIXTURES ARE FED FROM PANEL LOCATED ON THE 3RD FLOOR AND ARE CONTROLLED BY TIMER.

2. ELECTRICAL CONTRACTOR SHALL:

– DISCONNECT POWER FOR LIGHTING CIRCUITS AND LOCK BREAKER(S).
– DISCONNECT LIGHTING FIXTURES FROM CIRCUITS
– UNINSTALL FIXTURES ENTIRELY INCLUDING SUPPORT STRUCTURES
– UNINSTALL CONDUITS AND WIRES RUNNING ON PARAPET WALL/ROOF, BACK TO PANEL
– PATCH OPENINGS IN THE WALL OR ROOF
– RETURN ALL DEMO MATERIALS TO OWNER OR DISPOSE AS DIRECTED

3. SECOND GROUP (SMALL) CREATE LIGHTING FIXTURES WALL MOUNTED ALONG CATWALK. THIS GROUP IS FED FROM THE SAME PANEL AND CONTROLLED BY SWITCH. FIXTURES ARE USED BY MAINTENANCE CREW ONLY.

ELECTRICAL CONTRACTOR SHALL:
– DISCONNECT POWER FOR LIGHTING FIXTURES AND LOCK BREAKER
– FIXTURES AND RETURN THEM TO OWNER OR DISPOSE AS DIRECTED.

4. ALL DEMOLITION WORK SHALL BE FIELD COORDINATED WITH GENERAL CONTRACTOR AND OTHER TRADES BEFORE COMMENCING WITH ANY WORK

– ALL UNEXPECTED FIELD FINDINGS OR PROBLEMS SHALL BE REPORTED TO ARCHITECT/ENGINEER AND OWNER/BUILDING ENGINEER.

PUBLIC BUILDING COMMISSION
Chicago Public Schools

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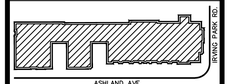
DRAWN BY: DS
SCALE: 1/16"=1'-0"
JOB:
FILE: ED.5



AREAS OF WORK: ENTIRE BUILDING EXTERIOR, ALL LEVELS AND ROOF

N

KEY PLAN

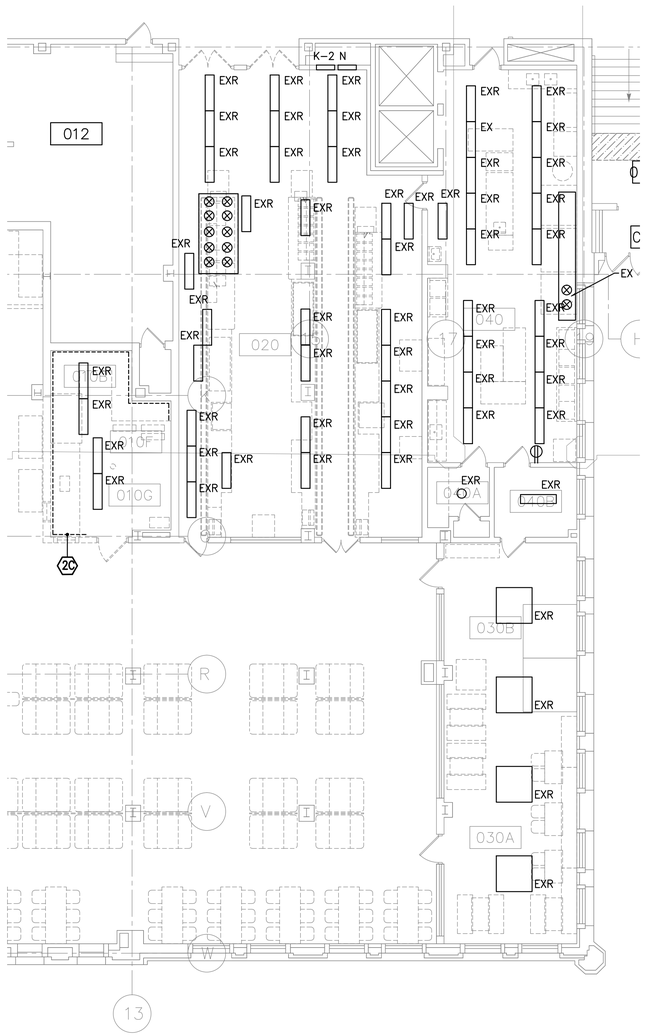
WARNING: ASBESTOS-CONTAINING BUILDING MATERIALS ARE OR MAY BE PRESENT IN THIS BUILDING. AN ASBESTOS MANAGEMENT PLAN IS AVAILABLE IN THE SCHOOL FOR REVIEW UPON REQUEST. NO PERSON MAY DISTURB ASBESTOS-CONTAINING MATERIALS UNLESS THAT PERSON IS A LICENSED ASBESTOS WORKER OR CONDUCTS SUCH WORK IN ACCORDANCE WITH SPECIFICATIONS) CONTAINED IN THE PROJECT DOCUMENTS AND IN COMPLIANCE WITH ILLINOIS DEPARTMENT OF HEALTH RULES AND REGULATIONS.

ROOF ELECTRICAL DEMOLITION PLAN

DRAWING NO.

ED1.5

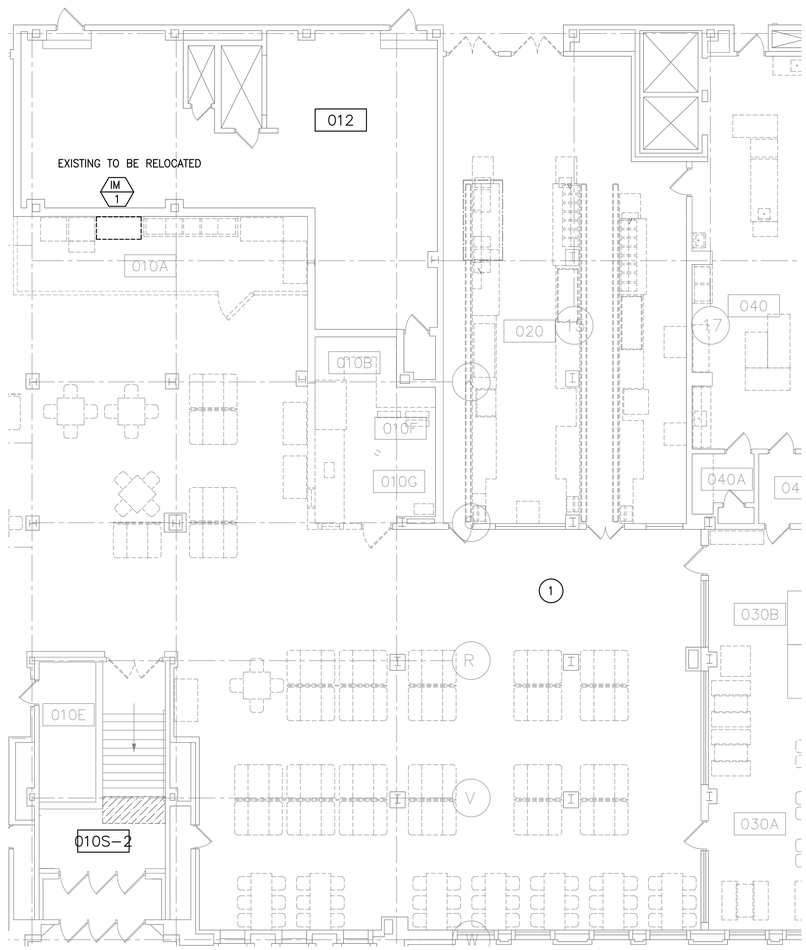
EXISTING BASEMENT FL ROOM SCHDULE	
ROOM NO.	ROOM NAME
000A	CORRIDOR
000B	CORRIDOR
000C	CORRIDOR
001	FAN ROOM–7
001A	CORRIDOR
001B	CORRIDOR
001C	CORRIDOR
001S	STAIR–1
002	DRY STORAGE
010	LUNCHROOM
010A	SNACK BAR/CANTEEN
010B	DISHWASHING ROOM
010D	WOMEN CHANGING
010D.1	STAFF TOILET
010E	JANITOR CLOSET
010S	STAIR–2
011	STORAGE
011A	ELECTRICAL ROOM
011B	ELECTRICAL ROOM
012	FAN ROOM–5&6
014–0	VESTIBULE
014S	STAIR–3
016	BOYS LOCKER ROOM
016A	BOYS SHOWER ROOM
016B	BOYS DRYING AREA
016C	BOYS TOILET ROOM
016D	TEAM LOCKER ROOM
016S	STAIR–4
017	MECHANICAL ROOM
	CORRIDOR
020	SERVING
023	MECHANICAL ROOM
024	FAN ROOM–3
027	POOL TANK
027A	STAIR–5 CORRIDOR
027S	STAIR–5
029	ENGINEER OFFICE
029A	CUSTODIAL WORKROOM
029B	RECEIVING
029S	STAIR–6
029E	ELEVATOR
030	STAFF LOUNGE
031	STORAGE
031A	STORAGE
031B	FAN ROOM–1
031C	STORAGE
031D	STORAGE
032	STORAGE
033	STORAGE
034	STORAGE
035–0	VESTIBULE
035S	STAIR–8
037	PLENUM CHAMBER
040	KITCHEN
040A	STORAGE
040B	OFFICE
050	NATATORIUM
050A	CONS. EQUIP. STORAGE
060	GIRLS LOCKER ROOM
060A	GIRLS SHOWER ROOM
060B	GIRLS DRYING AREA
060C	GIRLS TOILET ROOM
060D	LAUNDRY ROOM
070	STAFF & UNISEX
	LOCKER ROOM
080	WEIGHT ROOM
080–0	VESTIBULE
080S	STAIR–10
090	ROTC CLASSROOM
090A	ROTC OFFICE
090B	ROTC STORAGE
090C	ROTC STORAGE
091	BOILER
091A	BOILER VESTIBULE
092	FAN ROOM–2



1 BASEMENT ROOMS 010B, 020, 030, 040 – LIGHTING DEMOLITION
1/8"=1'–0"

KEY NOTE:

1 SEE NOTES ON SHEET E2.3.



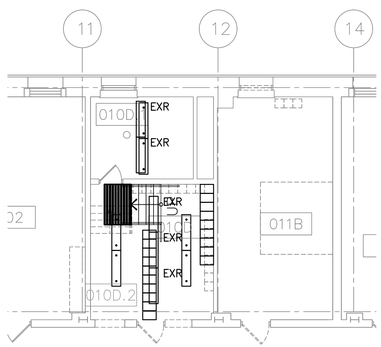
2 BASEMENT ROOMS 010B, 020, 030, 040 – POWER DEMOLITION
1/8"=1'–0"

NOTES:

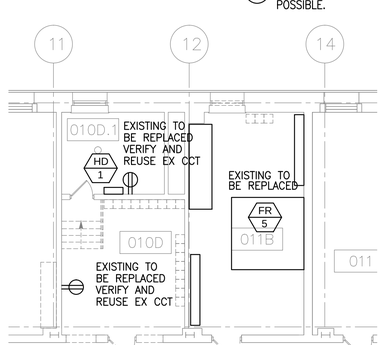
2 DEMO 5 LUMINAIRES IN RMS 010D AND 010D1.

3 TYPICAL ALL PLANS – RE–UTILIZE EXISTING NORMAL AND EMERGENCY CIRCUITS.

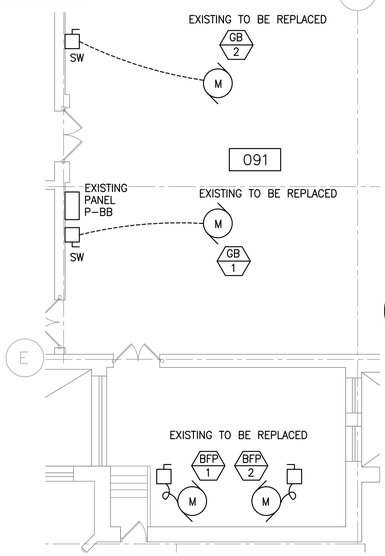
4 NEW LIGHTING FIXTURE LOCATIONS TO MATCH EXISTING IF POSSIBLE.



3 BSM ENLARGED PLAN CHANGING ROOM – LIGHTING DEMOLITION
1/8"=1'–0"



4 ENLARGED PLAN CHANGING AND FREEZER ROOMS – POWER DEMOLITION
1/8"=1'–0"



5 ENLARGED PLAN BOILER – POWER DEMO LAYOUT
1/8"=1'–0"

1 ROOM 020 SERVERY

(3) EXISTING SERVING LINES WILL BE DEMOLISHED.
EXISTING HOOD ON EAST SERVING LINE WILL BE DEMOLISHED.
LIGHTING FIXTURES IN SERVING ROOM WILL BE REPLACED WITH NEW.
ELECTRICAL CONTRACTOR SHALL:

- DISCONNECT POWER IN PANEL(S) FOR CIRCUITS WHICH FEED EXISTING SERVING LINES. LOCK CIRCUIT BREAKERS
- DISCONNECT EQUIPMENT AND REMOVE CIRCUITS WIRES BACK TO NEAREST PULL BOX (PB)/JUNCTION BOX (JB)
- CAP AND SEAL EXISTING CONDUITS FOR FUTURE REUSE
- DEMO LIGHTING FIXTURES UNDER EXISTING HOOD
- DISCONNECT EXHAUST FAN UNDER EXISTING HOOD AND REMOVE WIRE BACK TO PANEL.
- CAP AND SEAL CONDUIT.
- DISCONNECT AND DEMO FAN CONTROL
- DISCONNECT POWER FOR EXISTING LIGHTING FIXTURES IN SERVING ROOM AND REMOVE WIRES TO NEAREST PB/JB
- RETURN EXISTING LIGHTING FIXTURES FROM CEILING AND FROM UNDER THE HOOD TO OWNER OR DISPOSE AS DIRECTED.
- RETURN ALL DEMOLISHED EQUIPMENT, WIRE, CONDUITS TO OWNER OR DISPOSED AS DIRECTED.
- PROVIDE PRICE CONTINGENCY FOR UNEXPECTED DEMO WORK.

2 ROOM 010B EXISTING DISHWASHING ROOM

- EXISTING DISHWASHING LINE WILL BE DEMOLISHED AND REMOVED IN ITS ENTIRETY.
- EC SHALL:
- DISCONNECT POWER FOR ALL DISHWASHING LINE AT PANEL. LOCK CIRCUIT BREAKERS.
- REMOVE WIRES BACK TO PB/JB, WHICH DO NOT INTERFERE WITH NEW ROOM ARRANGEMENT
- DEMOLISH CONDUITS BACK TO PB/JB – SECURE BOXES FOR REUSE
- RETURN ALL DEMOLISHED MATERIALS (CONDUIT, DISCONNECT SWITCHES, WIRES ITC) TO OWNER OR DISPOSE AS DIRECTED
- LIGHTING LAYOUT WILL BE REARRANGED BASED ON ROOM USE.

3 ROOM 040 EXISTING KITCHEN

THERE ARE TWO STAGES OF DEMO WORK IN KITCHEN
A – TEMPORARY RELOCATION OF ALL EQUIPMENT TO PERMIT KITCHEN RENOVATION
B – PERMANENT EQUIPMENT DEMO AND CHANGES FOR NEW
STAGE A – EC SHALL:

- DISCONNECT POWER FOR ALL KITCHEN EQUIPMENT AT PANEL
- LOCK ALL CIRCUIT BREAKERS AT PANEL.
- SECURE ALL CIRCUITS FOR RECONNECTION BACK TO EQUIPMENT.
- PROVIDE MINOR CIRCUIT ADJUSTMENT/RELOCATION FOR EQUIPMENT RETURNING TO KITCHEN.

STAGE B – EC SHALL:

- DISCONNECT POWER TO EXISTING STOVE WHICH WILL BE REPLACED BY NEW.
- SECURE STOVE'S EXISTING CIRCUIT FOR REUSE FOR NEW.
- DISCONNECT AND SECURE EXISTING FIRE SUPPRESSION SYSTEM UNDER STOVE HOOD. SUPPRESSION SYSTEM SHALL BE ADJUSTED AND REUSED FOR NEW STOVE.
- LIGHTING FIXTURE UNDER THE HOOD SHALL BE EXCHANGED FOR NEW AND LOCATION SHALL BE ADJUSTED TO NEW STOVE LOCATION.
- DISCONNECT EXISTING CONVECTION OVEN AT PANEL AND LOCK CIRCUIT BREAKER.
- SECURE EXISTING CIRCUIT TO BE REUSED FOR OVEN – ADJUST CIRCUIT AS NECESSARY FOR NEW KITCHEN LAYOUT.

4 ROOM 030 STAFF LOUNGE

- DEMO EXISTING WALK IN FREEZER, DISCONNECT POWER FROM PANEL AND LOCK CIRCUIT BREAKER.
- FREEZER WILL BE REPLACED BY NEW.
- ALL EXISTING LIGHTING FIXTURES SHALL BE DEMOLISHED AND REPLACED BY NEW.
- EC SHALL DEMO EXISTING LIGHTING FIXTURES AND RETURN THEM TO OWNER. NEW LIGHTING FIXTURE LAYOUT WILL BE BASED ON FURNITURE LAYOUT.

5 ROOM 010E JANITOR CLOSET

- NEW FOUNTAIN INSTALLATION. NO DEMO WORK.

6 ROOM 010 WALK IN FREEZER

- DEMO EXISTING FREEZER – DISCONNECT POWER AND LOCK CIRCUIT BREAKER.
- LOCATION OF NEW WALK IN FREEZER WILL INFLUENCE LIGHTING FIXTURE LOCATIONS IN ROOM. FIXTURE LAYOUT SHALL BE ADJUSTED AS NECESSARY.

ROOM 010D STAFF CHANGING ROOM

- DEMO EXISTING LIGHTING FIXTURES, DISCONNECT POWER FROM FIXTURES AND REMOVE WIRE TO THE NEAREST PB/JB.
- LIGHTING FIXTURES WILL BE SUBSTITUTED BY NEW.
- PROVIDE FIRE ALARM ADJUSTMENT BASED ON NEW ROOM ARRANGEMENT. RELOCATE FIRE ALARM DEVICES AS NECESSARY, REMOVE EXISTING WIRE AS NECESSARY AND INSTALL NEW WIRE FOR RELOCATED DEVICES.

GENERAL NOTES:

BASEMENT – MECHANICAL EQUIPMENT(BOILER ROOM & AHU UNITS)

- ELECTRICAL CONTRACTOR SHALL MAKE ALL NECESSARY DISCONNECTIONS AND RECONNECTIONS AS REQUIRED BY MECHANICAL CHANGES. REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.

1

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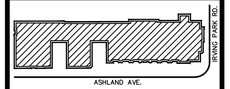
PROJECT NO. 2016–46211–MCR

REVISIONS

NO.	DATE	DESCRIPTION
–	2016.04.19	30% SUBMITTAL
–	2016.06.14	60% SUBMITTAL
–	2017.02.14	75% SUBMITTAL
–	2017.03.02	100% SUBMITTAL
–	2017.03.07	PERMIT SET
–	2017.03.23	PRELIMINARY OTB SET
–	2017.04.04	BID SET
1	2017.04.12	ADDENDUM #1

DRAWN BY: DS
SCALE: 1/8"=1'–0"
JOB:
FILE: E2.1



AREAS OF WORK: ENTIRE BUILDING EXTERIOR, ALL LEVELS AND ROOF

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KEY PLAN

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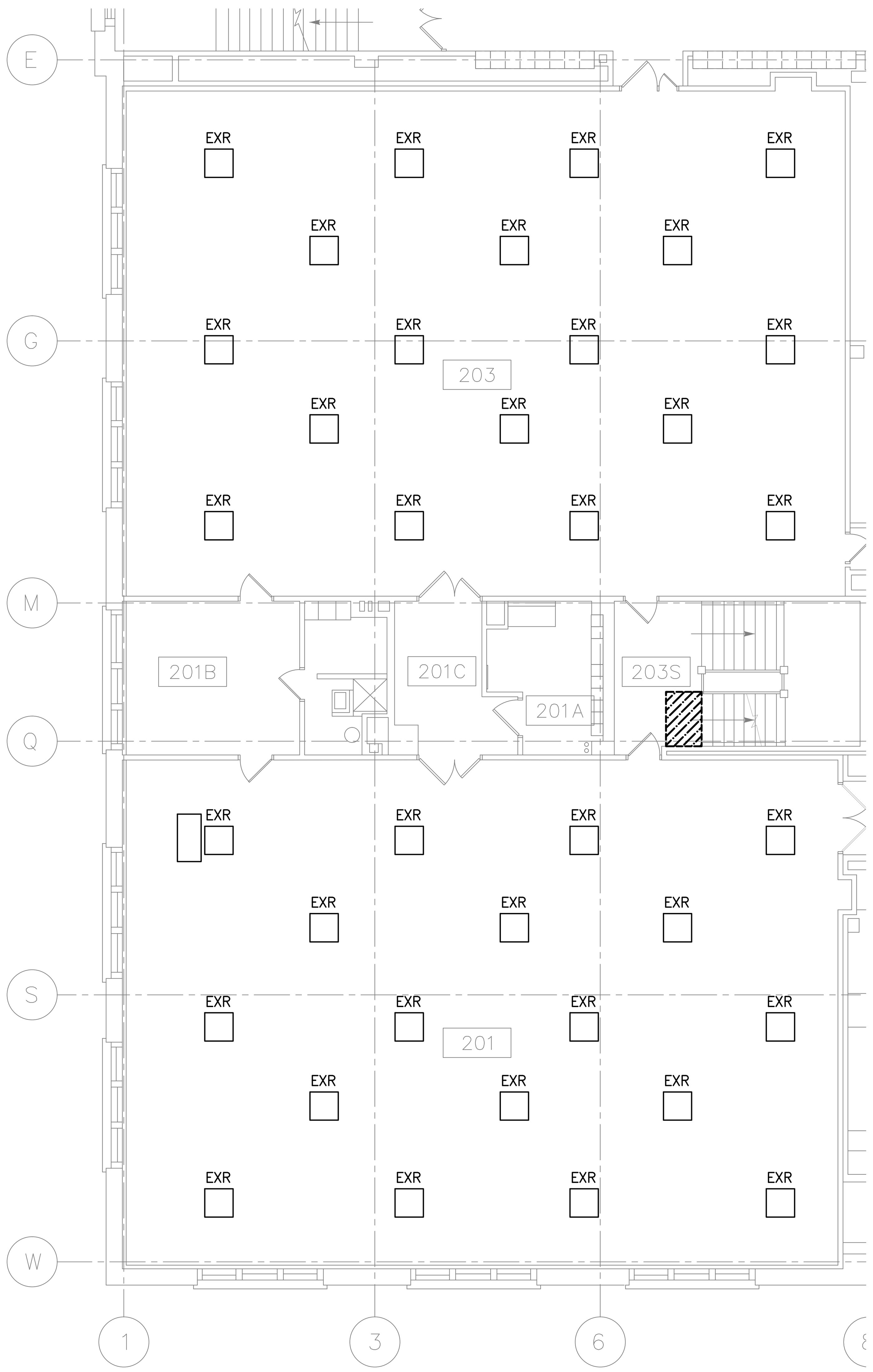
ENLARGED BASEMENT FLOOR – ELECTRICAL DEMOLITION PLAN

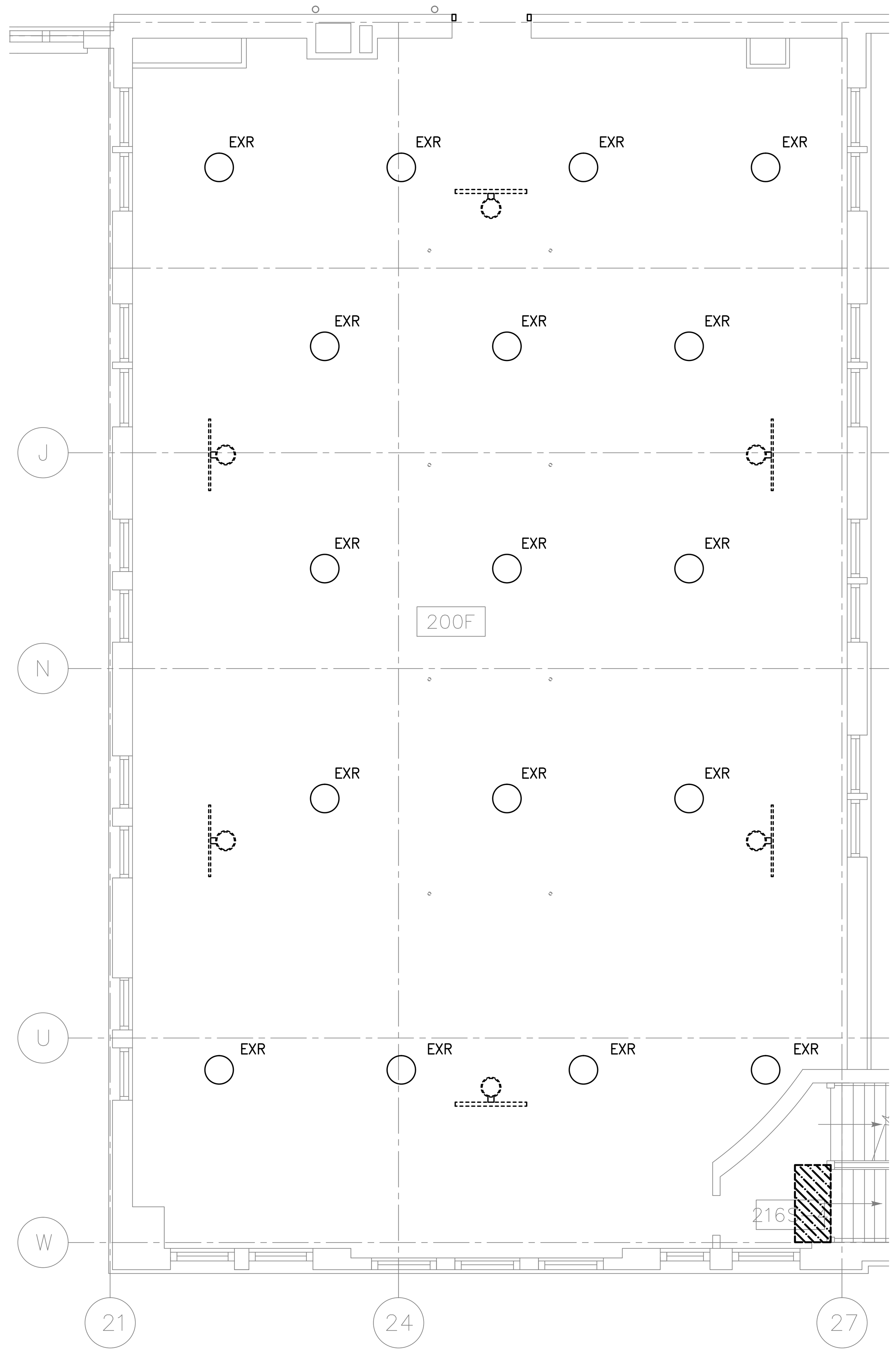
DRAWING NO.

ED2.1

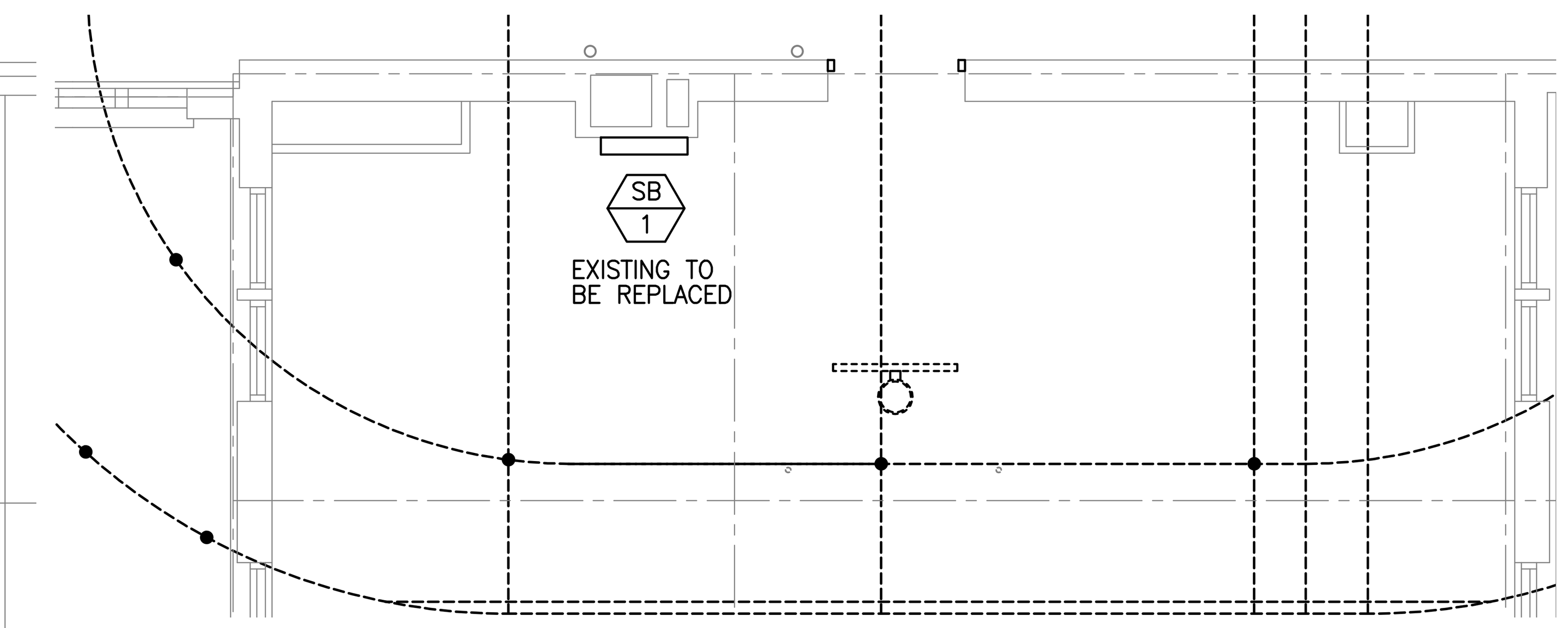
EXISTING SECOND FLOOR ROOM SCHDULE	
ROOM NO.	ROOM NAME
200A	JANITOR CLOSET
200B	TOILET
200C	STAFF TOILET
200D	TOILET
200E	STORAGE
200F	MAIN GYNASIUM-TRACK
200G	JANITOR CLOSET
200H	TOILET
200J	BOY'S STUDENT TOILET
200K	JANITOR CLOSET
200L	ELECTRICAL ROOM
200M	TOILET
200N	MEN STAFF TOILET
200P	JANITOR CLOSET
200Q	CORRIDOR
200R	CORRIDOR
200S	CORRIDOR
200T	CORRIDOR
201	SMALL GYMNASIUM-WEST
201A	STAFF AND UNISEX DRY LOCKER ROOM
201B	PE STORAGE
201C	CORRIDOR
203	SMALL GYMNASIUM-EAST
203S	STAIR-9
202	CLASSROOM
202S	STAIR-2
204	CLASSROOM
205	SUPPORT COMPUTER LAB
205S	STAIR-1
207	OFFICE
209	CLASSROOM
211	CLASSROOM
212	LEVEL 2 BIOLOGY LAB
212A	SCIENCE PREP ROOM
212B	STORAGE
213	CLASSROOM
213S	STAIR-10
215	CLASSROOM
216S	STAIR-4
217	CLASSROOM
219	CLASSROOM
220	LEVEL 1 BIOLOGY LAB
220S	STAIR-5
221	SOCIAL STUDIES OFFICE
222	LEVEL 1 BIOLOGY LAB
222A	PREP ROOM
222B	STORAGE
223	CLASSROOM
224	COMMUNITY ROOM
225	CLASSROOM
228	SCIENCE OFFICE
228A	STORAGE
228B	STORAGE
228E	ELEVATOR
228S	STAIR-6
229	COLLEGE & CAREER LAB
229A	TEACHER WORK AREA
229B	MDF
229C	STORAGE
230	TEACHER WORK AREA
231	OFFICE
232	LIBRARY-MAIN
232A	STORAGE
232B	CLASSROOM STORAGE
235	TEACHER WORK AREA
237	OFFICE
237A	AUDITORIUM BALCONY
237S-7	STAIR-7
237S-8	STAIR-8
238	LIBRARY WORKROOM



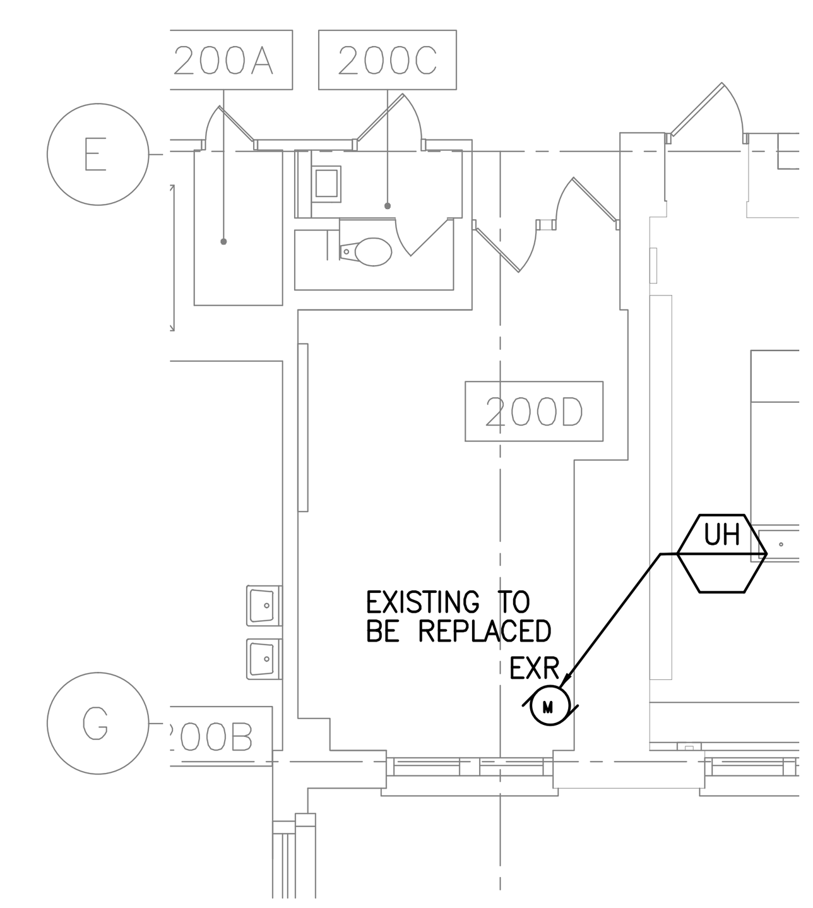
1 SECOND FLOOR ROOMS 201 AND 203 – LIGHTING DEMOLITION
1/8"=1'-0"



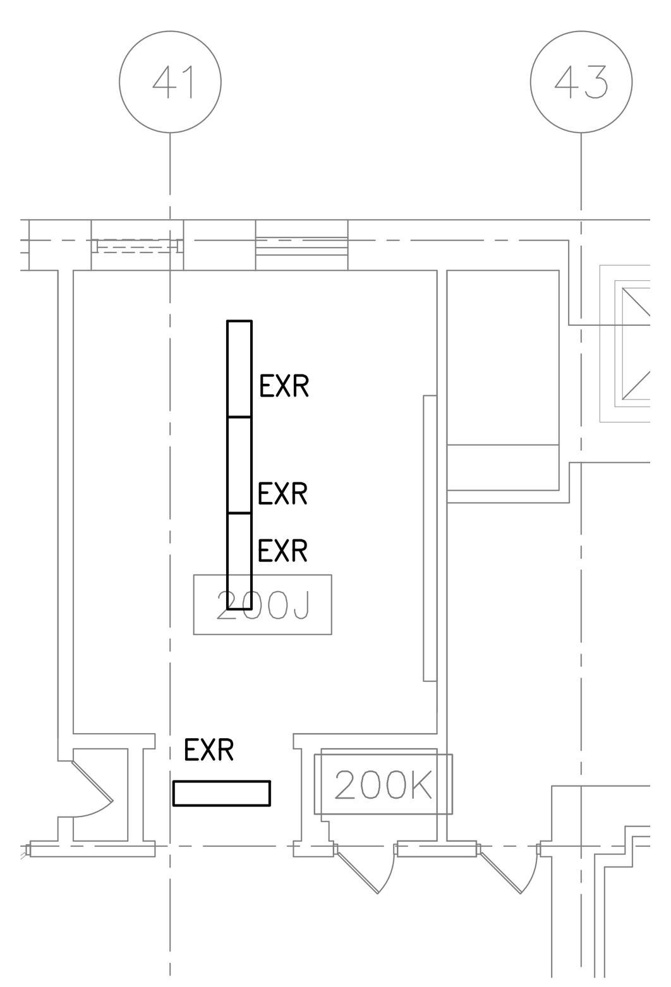
2 SECOND FLOOR ROOM 200F – LIGHTING DEMOLITION
1/8"=1'-0"



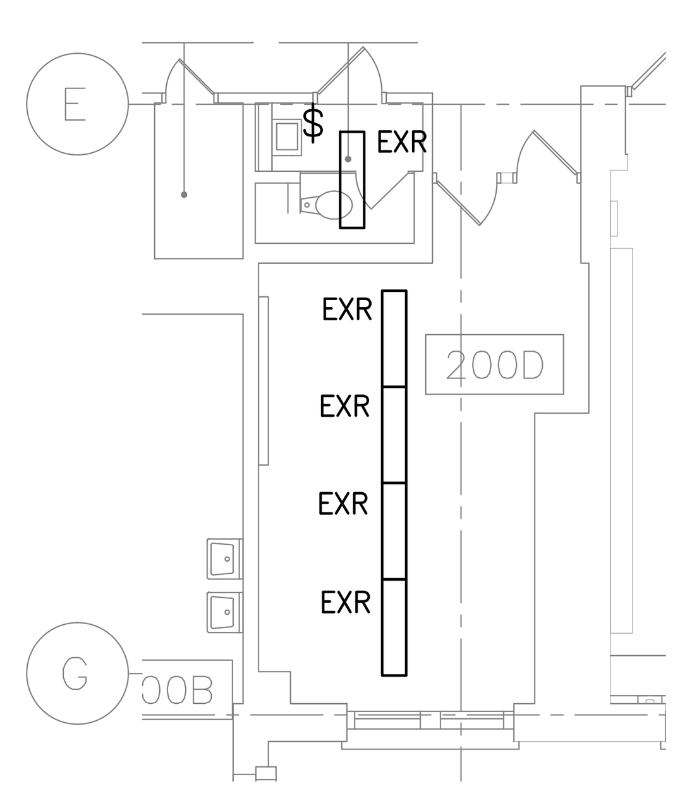
3 SECOND FLOOR ROOM 200F – EQUIPMENT DEMOLITION
1/8"=1'-0"



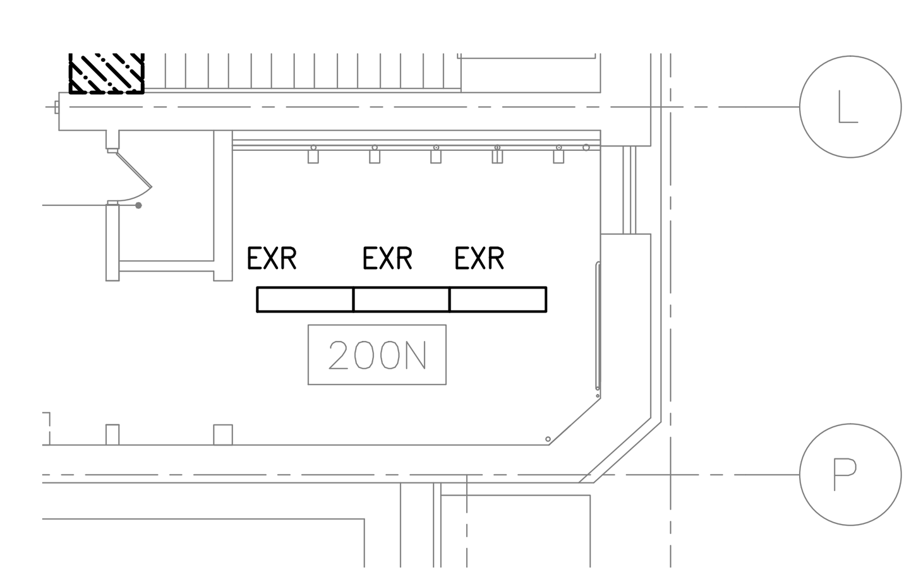
8 SECOND FLOOR ROOM 200D POWER DEMOLITION
1/8"=1'-0"



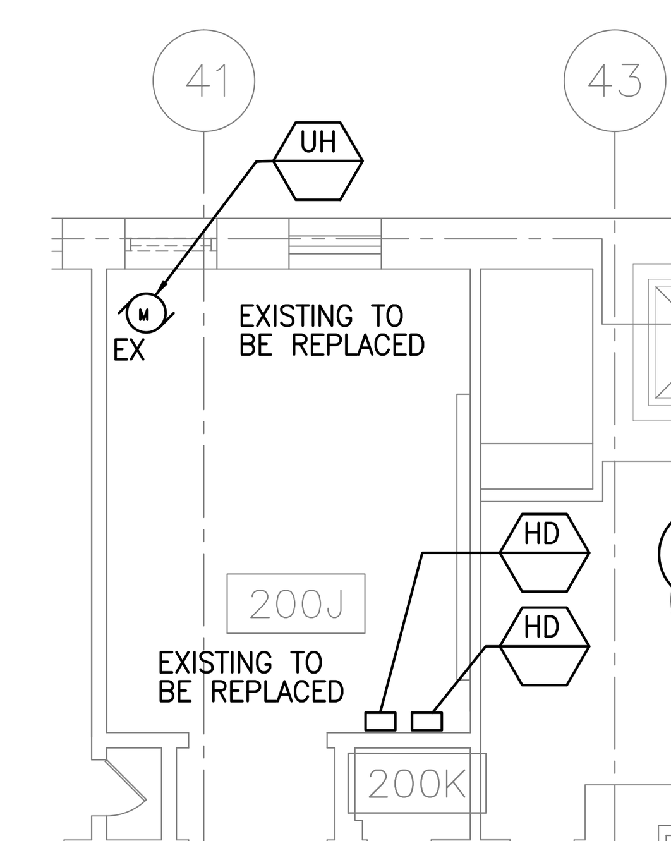
4 SECOND FLOOR ROOM 200J – LIGHTING DEMOLITION
1/8"=1'-0"



5 SECOND FLOOR ROOM 200D – LIGHTING DEMOLITION
1/8"=1'-0"



6 SECOND FLOOR ROOM 200N – LIGHTING DEMOLITION
1/8"=1'-0"



7 SECOND FLOOR ROOM 200J – POWER DEMOLITION
1/8"=1'-0"

⚠1 TYPICAL NOTES FOR DEMOLITION:

1. SEE DEMO NOTES ON DRAWING E0.1.

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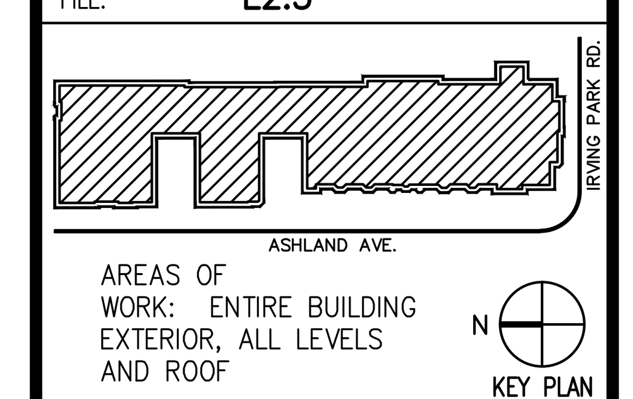
⚠1	2017.04.12	ADDENDUM #1

DRAWN BY: DS
SCALE: 1/8"=1'-0"
JOB:
FILE: E2.3



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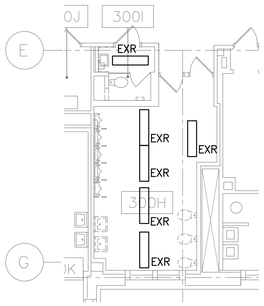
ENLARGED SECOND FLOOR – ELECTRICAL DEMOLITION PLAN

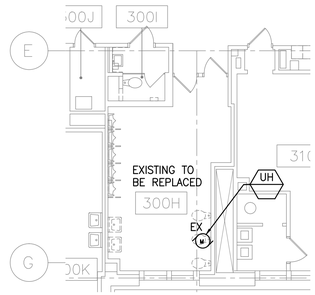
DRAWING NO.

ED2.3

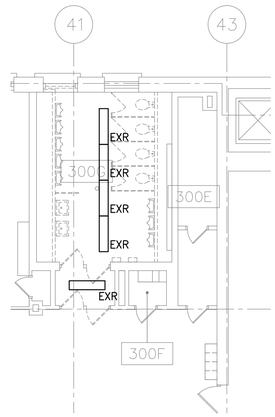
EXISTING THIRD FLOOR ROOM SCHDULE	
ROOM NO.	ROOM NAME
300A	TOILET
300B	TOILET
300C	STAFF & UNISEX TOLIET
300D	JANITOR CLOSET
300E	JANITOR CLOSET
300F	STORAGE
300G	GIRL'S STUDENT TOILET
300H	TOILET
300I	STAFF TOILET
300J	JANITOR CLOSET
300K	GIRL'S STUDENT TOILET
300L	CORRIDOR
300M	CORRIDOR
300N	CORRIDOR
300O	CORRIDOR
302	CLASSROOM
302S	STAIR-2
304	CLASSROOM
305	STEM NETWORKING LAB
305S	STAIR-1
310	TEACHER WORK AREA
311	CLASSROOM
312	CLASSROOM
313	CLASSROOM
313S	STAIR-10
314	CLASSROOM
316	ART LAB
316S	STAIR-4
317	ART LAB
317A	DARK ROOM
318	ART LAB
318A	ART STORAGE
319	CLASSROOM
320	LEVEL 2 SCIENCE LAB
320S	STAIR-5
321	CLASSROOM
322	COMPUTER LAB SR
322A	TECHNOLOGY STORAGE
323	CLASSROOM
324	SCIENCE LAB
324A	SCIENCE OFFICE
324B	SCIENCE STORAGE ROOM
325	CLASSROOM
325A	STORAGE
327	CLASSROOM
328	SCIENCE LAB
328A	TEACHER WORK AREA
328B	SCIENCE STORAGE ROOM
328S	STAIR-6
329	CLASSROOM
330	CLASSROOM
330A	CLASSROOM STORAGE
332	CLASSROOM
333	CLASSROOM
334	CLASSROOM
335	TEACHER OFFICE
336	CLASSROOM
337	CLASSROOM
337A	AUDITORIUM BALCONY
338	CLASSROOM
338S-7	STAIR-7
338S-8	STAIR-8
340	CLASSROOM
342	CLASSROOM
344	OFFICE
367	PE OFFICE
367S	STAIR-9



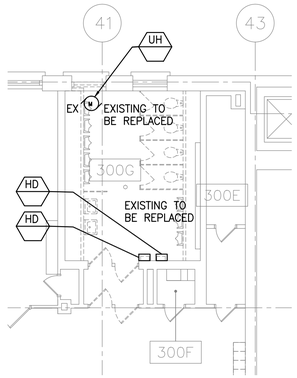
1 THIRD FLOOR ROOM 300I AND 300H – LIGHTING DEMOLITION
1/8"=1'-0"



2 THIRD FLOOR ROOM 300I AND 300H – POWER DEMOLITION
1/8"=1'-0"



3 THIRD FLOOR ROOM 300G – LIGHTING DEMOLITION
1/8"=1'-0"



4 THIRD FLOOR ROOM 300G – POWER DEMOLITION
1/8"=1'-0"

TYPICAL NOTES FOR DEMOLITION:

1. SEE DEMO NOTES ON DRAWING E0.1.

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4015 NORTH ASHLAND AVENUE
CHICAGO, ILLINOIS 60613

PROJECT NO. 2016-46211-MCR

REVISIONS

NO.	DATE	DESCRIPTION
–	2016.04.19	30% SUBMITTAL
–	2016.06.14	60% SUBMITTAL
–	2017.02.14	75% SUBMITTAL
–	2017.03.02	100% SUBMITTAL
–	2017.03.07	PERMIT SET
–	2017.03.23	PRELIMINARY OTB SET
–	2017.04.04	BID SET
1	2017.04.12	ADDENDUM #1

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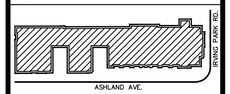
JOB:
FILE: ED2.4



AREAS OF WORK: ENTIRE BUILDING EXTERIOR, ALL LEVELS AND ROOF

N
KEY PLAN

WARNING: ASBESTOS-CONTAINING BUILDING MATERIALS ARE OR MAY BE PRESENT IN THIS BUILDING. AN ASBESTOS MANAGEMENT PLAN IS AVAILABLE IN THE SCHOOL FOR REVIEW UPON REQUEST. NO PERSON MAY DISTURB ASBESTOS-CONTAINING MATERIALS UNLESS THAT PERSON IS A LICENSED ASBESTOS WORKER OR CONDUCTS SUCH WORK IN ACCORDANCE WITH SPECIFICATIONS CONTAINED IN THE PROJECT DOCUMENTS AND IN COMPLIANCE WITH ILLINOIS DEPARTMENT OF HEALTH RULES AND REGULATIONS.

ENLARGED THIRD FLOOR – ELECTRICAL DEMOLITION PLAN

DRAWING NO.

ED2.4

SECTION 00 01 10

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SECTION 11 68 00

PLAYGROUND EQUIPMENT AND STRUCTURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes playground equipment and associated signage. Furnish all labor and materials and equipment required to install the play equipment as indicated on the drawings or specified herein. The work shall include any incidentals to provide a finished job.

1.2 DEFINITIONS

A. Use Zone: According to ASTM F1487-11, the "area beneath and immediately adjacent to a play structure or equipment that is designed for unrestricted circulation around the equipment and on whose surface it is predicted that a user would land when falling from or exiting the equipment."

B. IPEMA: International Play Equipment Manufacturers Association.

C. Fall Height: According to ASTM F 1487-11, "the vertical distance between a designated play surface and the protective surfacing beneath it."

1.3 DESIGN REQUIREMENTS

A. Compliance with current guidelines, standards, laws and building codes for safety and accessibility:

1. ASTM F1487-11 – Standard Consumer Safety Performance Specifications for Playgrounds for Public Use.
2. U.S. Consumer Products Safety Commission (CPSC) Guidelines (No. 325)– Handbook for Public Playground Safety
3. 2010 ADA Accessibility Guidelines (ADAAG) Section 15.6 Play Areas
4. Chicago Building Code: Chapter 18-11-1115 Play Areas

B. Site specificity of design – Equipment design/component selection is based on specific needs of the school/district, physical constraints of the site, and public input. Design requirements include:

1. Play value
2. Capacity
3. Footprint
4. Color availability
5. Visual density and appearance
6. Age appropriateness
7. Height/Size
8. Sensory stimulation
9. Accessibility/usability for those with special needs.

C. Products selected are durable and proven to withstand very high use environment.

1.4 PERFORMANCE REQUIREMENTS

A. Structural Performance Requirements:

1. PlayBooster Steel Posts: All steel PlayBooster posts are manufactured from 5" O.D. tubing with a wall thickness of .120" and shall be galvanized after rolling and shall have both the I.D. and the cut ends sprayed with a corrosion resistant coating. Top caps for posts shall be aluminum die cast from 369.1 alloy and ProShield finished to match the post color. All caps shall be factory installed and secured in place with (3) self-sealing rivets. A molded low-density polyethylene cap, with drain holes, shall be pressed onto the bottom end of the post to increase the footing area.
2. PlayBooster Steel Post Mechanical Properties:
   - Yield Strength (min): 50,000 PSI
   - Tensile Strength (min): 55,000 PSI
   - Elongation: 25% in 2 inches
   - Modulus of Elasticity: 29.5 x 10^6 PSI
3. PlayBooster Clamps: All PlayBooster clamps are ProShield finished and, unless otherwise noted, shall be die cast using a 369.1 aluminum alloy and have the following mechanical properties:
   - Ultimate Tensile: 47,000 PSI
   - Yield Strength: 28,000 PSI
   - Elongation: 7% in 2 inches
   - Shear Strength: 29,000 PSI
   - Endurance Limit: 20,000 PSI

   Each functional clamp assembly shall have an appropriate number of half clamps and shall be fastened to mating parts with (2) 3/8" x 1 1/8" pinned button head cap screws (SST) and (2) stainless-steel (SST) recessed "T" nuts. A 1/4" aluminum drive rivet with stainless steel pin is used to ensure a secure fit to the post. Clamps should allow for future maintenance/adjustment without effecting integrity of the posts.

1.5 SUBMITTALS

A. Product Data: For each type of product indicated.

B. LEED Submittals:

1. Percentage of recycled materials used.
2. Percentage of post-consumer recycled materials used.

C. Shop Drawings: For playground equipment and structures. Include plans, color renderings, elevations, and installation details.

D. Samples: Provide color charts. Provide material samples upon request or as required.

E. Qualifications: For qualified installer, manufacturer, and testing agency.

F. Test Reports: Provide evidence of IPEMA certification for playground products.

G. Certifications:

1. Manufacturer is ISO 9001:2008 certified (quality assurance processes)
2. Manufacturer is ISO 14001:2004 certified (environmentally responsible processes)
3. IPEMA (International Play Equipment Manufacturers Association) third party certification for conformance to ASTM F1487-11.
4. Statement from manufacturer that products meet current safety and accessibility requirements.

H. Closeout Submittals:

1. Maintenance Kit: An order-specific maintenance kit shall be provided for each structure order. The kit will include a notebook or packet with a second set of installation documents and order-specific maintenance documentation with recommendations on how often to inspect, what to look for and what to do to keep the equipment in like-new condition. The kit also includes touch-up primer, appropriate color touch-up paint, sandpaper, appropriate color touch-up PVC, graffiti remover and additional installation tools for the tamperproof fasteners.
2. Warranty Information.
3. Statement from manufacturer's representative identifying that installation has been performed in accordance with installation instructions.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. Manufacturer is ISO 9001:2008 certified (quality assurance processes)
2. Manufacturer is ISO 14001:2004 certified (environmentally responsible processes)
3. Standard products are IPEMA (International Play Equipment Manufacturers Association) third party certified for conformance to ASTM F1487-11.

B. Installer Qualifications: The Contractor installing the equipment must be experienced in the installation of play equipment with personnel, facilities, and equipment adequate for the work specified and shall, within 48 hours of a request, produce written proof of such.

C. Sample Installations: Contractor shall upon request produce a list of at least 20 other projects where similar work, from same manufacturer, has been performed and could be reviewed.

D. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Prior to the start of the playground equipment installation work, coordinate a conference at the Site to review the construction schedule, availability of materials, installers personnel qualifications, equipment and facilities needed to make progress and avoid delays, installation procedures, testing, inspecting, and certification procedures, and coordination with other work. Meeting shall include the Contractor, Board Authorized Representative, Architect, installer, and any other subcontractors or material technical service representatives whose work, or products, must be coordinated with the playground equipment installation work.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Packaging: PlayBooster posts shall be individually packaged in sturdy, water-resistant, mar-resistant cardboard boxes. Other components shall be individually wrapped or bulk wrapped to provide protection during shipment. Small parts and hardware packages will be placed in crates for shipment. The components and crates are then shrink wrapped to skids (pallets) to ensure secure shipping.

B. Delivery: Equipment will be on delivered F.O.B. curbside. Installer will be responsible for unloading, storage, and security of the equipment until accepted by the owner.

C. Packing List: All shipments shall include a packing list for each skid/container, specifying the part numbers and quantities on each skid or within each container.

1.8 WARRANTY

A. 100-Year Limited Warranty for all aluminum posts, stainless steel fasteners, clamps, beams and caps, against structural failure due to corrosion/natural deterioration or manufacturing defects. This warranty does not include any cosmetic issues or wear and tear from normal use.

B. 15-Year Limited Warranty for all plastic and steel components against structural failure due to corrosion/natural deterioration or manufacturing defects. This warranty does not include any cosmetic issues or wear and tear from normal use.

C. 15-Year Limited Warranty for TenderTuff coating against structural failure due to natural deterioration or manufacturing defects. This warranty does not include any cosmetic issues or wear and tear from normal use.

D. 8-Year Limited Warranty On Aeronet® climbers and climbing cables against defects in materials or manufacturing defects.

E. 3-Year Limited Warranty for all other parts, including CableCore Products, Swing seats and hangers; Trackride trolleys and bumpers; all rocking equipment, etc. against failure due to corrosion/natural deterioration or manufacturing defects. This warranty does not include any cosmetic issues or wear and tear from normal use.

F. Installers Guarantee: The Contractor shall provide information on the equipment manufacturer's guarantee. Contractor shall warranty installation and workmanship on all play equipment for a period of one year starting on the date of Physical Completion of the Project.

G. Installers Guarantee: The Contractor shall guarantee that all work performed under this section shall be free from any defects in materials and workmanship. Upon notice in writing from the Landscape Architect to the Contractor within one year of physical Completion of the project, the Contractor shall, at no additional cost to the Owner, make the necessary repairs or replacements of the defective work in question. During this period of guarantee, the Owner shall perform normal maintenance and cleaning of the play area equipment.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Manufacturer:

1. Landscape Structures, 601 7th Street South, Delano, MN 55328. Locally represented by NuToys Leisure Products, 915 Hillgrove, LaGrange, IL 60525, (708)579-9055 or (800) 526-6197.

2.2 PRODUCTS

A. The Drawings and Specifications are Landscape Structures, PlayBooster System.

2.3 MATERIALS:

A. All materials shall be structurally sound and suitable for safe play. Durability shall be ensured on all steel parts by the use of time-tested coatings such as zinc plating, galvanizing, ProShield® finish, TenderTuff™ coating, etc. Colors shall be specified.

B. Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless-steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications). All primary fasteners shall include a locking patch type material that will meet the minimum torque requirements of IFI-125. Manufacturer to provide special tools for pinned tamperproof fasteners.

C. Decks: All decks shall be of modular design and have 5/16" diameter holes on the standing surface. There shall be minimum of (4) slots in each face to accommodate face mounting of components. Decks shall be manufactured from a single piece of low carbon 12 GA (.105") sheet steel conforming to ASTM specification A-1011. The sheet shall be perforated with a return flange on the perimeter to provide the reinforcement necessary to ensure structural integrity. There shall be no unsupported area larger than 3.5 square feet. The unit shall then be TenderTuff-coated brown or gray only. Decks shall be designed so that all sides are flush with the outside edge of the supporting posts.

D. Rotationally Molded Polyethylene Parts: These parts shall be molded using prime compounded linear low-density polyethylene with a tensile strength of 2500 psi per ASTM D638 and with color and UV-stabilizing additives. Wall thickness varies by product from .187" (3/16") to .312" (5/16"). Eleven standard colors available.

E. Permalene® Parts: These parts shall be manufactured from 3/4" high-density polyethylene that has been specially formulated for optimum UV stability and color retention. Products shall meet or exceed density of .960 G/cc per ASTM D1505, tensile strength of 2400 PSI per ASTM D638. Five standard solid colors are available. Some Permalene® parts are available in a two-color product with (2) .100" thick exterior layers over a .550" interior core of black. Ten standard two-color options available.

F. Recycled Permalene® Parts: These parts shall be manufactured from 3/4" high-density polyethylene that has been specially formulated for optimum UV stability and color retention. Products shall meet or exceed density of .960 G/cc per ASTM D1505, tensile strength of 2400 PSI per ASTM D638. Available in a three-layer product with (2) .100" thick colored exterior layers over a .550" thick 100% recycled Black interior core. Eleven standard color options available.

G. Hardware Packages: All shipments shall include individual component-specific hardware packages. Each hardware package shall be labeled with the part number, description, a component diagram showing the appropriate component, package weight, a bar code linking the hardware package to the job number, assembler's name, date and time the package was assembled, work center number, and work order number.

H. Installation Documentation: All shipments shall include a notebook or packet of order-specific, step-by-step instructions for assembly of each component, including equipment assembly diagrams, estimated hours for assembly, footing dimensions, concrete quantity for direct bury components, fall height information, area required information and detailed material specifications.

2.4 COMPONENTS

QTY.	NO.	DESCRIPTION
		2-5 Year Olds Play Equipment
1	120325A	Ramp Berm Exit Plate Concrete Wall
1	152443A	Grid Walk w/Barriers
1	156232A	Ramp w/Guardrails w/Curbs Meets ASTM
1	152907B	Deck Link w/Barriers Steel end panels 2 Steps
1	179023A	Vertical Ladder w/Vibe Handholds 32"Dk DB
1	180090C	Wiggle Ladder w/Vibe Handholds 48"Dk DB
1	180092B	Cozy Climber w/Vibe Handholds 48"Dk DB
1	111228A	Square Tenderdeck
1	121948A	Kick Plate 8"Rise
2	178710A	Hexagon Tenderdeck
1	184354A	Curved Transfer Module Left 2-5yrs 32"Dk DB
1	127953A	Handhold Panel Set
1	179050A	Marble Vibe Panel Above Deck
1	179051A	Optigear Vibe Panel Above Deck
1	179052A	Rain Sound Wheel Vibe Panel Above Deck
1	180094A	Vibe Handhold Panel Set
1	111357D	Turning Bar Steel DB
1	139782A	2"Horizontal Ladder 4-5 Years Connected Between Decks
1	141887A	Access/Landing Assembly Seat Barrier Left 8"Dk
6	111403P	142"Steel Post For Roof DB
4	111403M	166"Steel Post For Roof DB
2	111404V	76"Steel Post DB
2	111404U	84"Steel Post DB
2	111404T	92"Steel Post DB
4	111404S	100"Steel Post DB

1	139375A	Square Roof w/o Flag SteelX
1	139376A	Hex Roof w/o Flag SteelX
1	122033D	SpyroSlide 56"w/Hanger Bracket DB
1	123331A	Double Poly Slide 32"Dk DB

5-12 Year Olds Play Equipment

1	156439A	Clamp No Faces (O-O)
2	156440A	Clamp One Face (A-A)
1	156441A	Clamp Two Faces 90* (A-B)
3	157585A	Clamp One Face (O-E)
1	156450A	Swiggle Stix DB Only
1	114665A	Arch Bridge (42")
1	152443A	Grid Walk w/Barriers
1	193171C	SwiggleKnots Bridge w/o Deck Connections DB Only
1	111812A	Headform Set
1	207581A	The Ascent Rock
1	207583A	The Chimney Rock
1	116247A	Vertical Ladder - Panel 24"
1	116249A	Vertical Ladder 32"Dk DB
2	145624D	Vertical Ascent 72"Dk
1	152907A	Deck Link w/Barriers Steel end panels 1 Step
1	200609A	Traveler Climber w/2 Hanger Brackets
1	202594A	Portal Climber w/Perm HH (Left) Eq Decks 72"Dk DB
1	204176A	Flex Climber w/Perm Handhold 8" Deck Diff att to 72"Dk
1	179011A	Mini Summit Climber w/Vibe Handholds 48"Dk DB
1	200610A	Crest Climber w/Vibe Handholds
8	111231A	Triangular Tenderdeck
5	119646A	Tri-Deck Extension
1	121948A	Kick Plate 8"Rise
1	152911A	Curved Transfer Module Right 32"Dk DB
1	116244B	Pipe Barrier w/Wheel Above Deck
1	173566A	Kaleidospin Panel Ground Level
1	179044A	Color Splash Vibe Panel Above Deck
1	201032A	Eclipse Net Plus w/3-5 Attach Points DB Only
1	193174A	Sol Spinner DB
1	202821A	Power Lifter w/o Post
1	119805A	Single Beam Loop Horiz Lad 84"Connected Between Decks
1	141886B	Access/Landing Assembly Rails Barrier Left 32"Dk
1	160254A	Overhead Trekker DB Only
2	111404Q	116"Steel Post DB
4	111404O	132"Steel Post DB
1	111404N	140"Steel Post DB
3	111404M	148"Steel Post DB

5	111404W	156"Steel Post DB
2	111404X	164"Steel Post DB
5	111404Z	182"Steel Post DB (44" Bury)
6	179595O	204"Steel Post For Vibe Roof DB

Freestanding Musical Instruments

1	214441A	Rhapsody Vivo Metallophone DB
1	214442A	Rhapsody Grandioso Chimes DB
1	214443A	Rhapsody Goblet Drum DB
1	214444A	Rhapsody Kundu Drum DB
1	214445A	Rhapsody Kettle Drum DB
1	214438A	Rhapsody Animato Metallophone DB

2.5 FINISHES

A. TenderTuff Coating: Metal components to be TenderTuff-coated shall be thoroughly cleaned in a hot phosphatizing pressure washer, then primed with a water-based thermosetting solution. Primed parts shall be preheated prior to dipping in UV stabilized, liquid polyvinyl chloride (PVC), then salt cured at approximately 400 degrees. The finished coating shall be approximately .080" thick at an 85 durometer with a minimum tensile strength of 1700 psi and a minimum tear strength of 250 lbs/inch. Five standard colors available, all with a matte finish.

B. ProShield Finish: All metal components with ProShield finish shall be thoroughly cleaned and phosphatized through a five-stage power washer. Parts are then thoroughly dried, preheated and processed through a set of automatic powder spray guns where a minimum .002" of epoxy primer is applied. A minimum .004" of architectural-grade Super Durable polyester TGIC powder is applied. The average ProShield film thickness is .006".

C. ProShield is formulated and tested per the following ASTM standards. Each color must meet or exceed the ratings listed below:

- Hardness (D3363) rating 2H
- Flexibility (D522) pass 1/8" mandrel
- Impact (D2794) rating minimum 80 inch-pounds
- Salt Fog Resistance (B117 and D1654) 4,000 hours and rating 6 or greater
- UV Exposure (G154, 340 bulb) 3,000 hours, rating delta E of 2, and 90 percent gloss retention
- Adhesion (D3359, Method B) rating 5B

The Paint Line shall employ a “checkered” adhesion test daily.
Twenty-six standard colors available.

2.6 CAST-IN-PLACE CONCRETE

A. Concrete Materials and Properties: Comply with requirements in Division 03 Section "Cast-in-Place Concrete".

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine the area and conditions of the site. Verify safety zones of all equipment before setting posts in concrete footing.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Verify that all equipment needed for installation has been sent correctly.

3.3 INSTALLATION:

A. Conform strictly to manufacturer's instructions. Use only experience personnel trained in play equipment installation.

B. Provide all concrete footings as required. It is the contractor's responsibility to adjust drainage pipe or other new utility locations to accommodate the equipment footings.

3.4 FIELD QUALITY CONTROL

A. Contractor shall contact manufacturer's representative to review playground installation for accuracy.

B. Contractor shall notify Architect to review installation for review of overall conformance to specifications and workmanship.

3.5 ADJUSTING

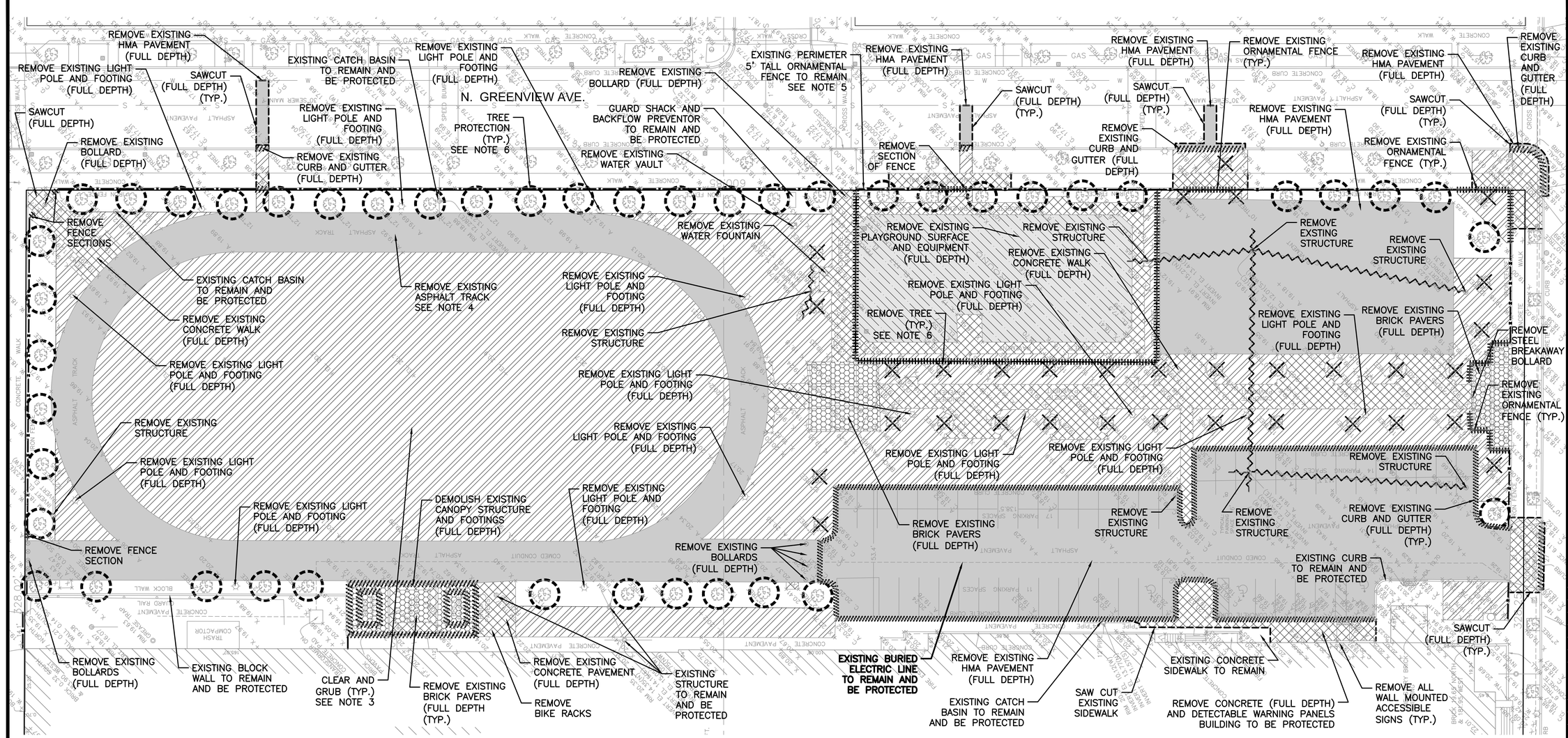
A. Ensure that adjustments required by inspections are corrected to owner's satisfaction.

3.6 CLEANING AND PROTECTION

A. Contractor is responsible to protect equipment until accepted by owner.

B. Consult manufacturer's cleaning instructions.

END OF SECTION



LEGEND – DEMOLITION

- HMA PAVEMENT REMOVAL (FULL DEPTH)
- CONCRETE PAVEMENT REMOVAL (FULL DEPTH)
- PLAYGROUND MULCH, EQUIPMENT, SUBSURFACE AND FULL DEPTH POST FOOTING REMOVAL
- REMOVE BRICK PAVERS (FULL DEPTH)
- CLEAR AND GRUB
- SAW CUT PAVEMENT/CURB (FULL DEPTH)
- REMOVE EXISTING FENCING
- REMOVE EXISTING CURB/GUTTER
- REMOVE EXISTING UTILITIES
- TREE PROTECTION
- REMOVE EXISTING TREE

NOTES:

1. ALL STEEL BENCHES TO BE REMOVED AND SALVAGED FOR REUSE.
2. EXISTING IRRIGATION SYSTEM BENEATH THE EXISTING FIELD TO BE REMOVED. PLANS WERE NOT FOUND/AVAILABLE DURING DESIGN COORDINATION. CONTRACTOR TO LOCATE SYSTEM AND SUBMIT AN RFI TO THE AOR/EOR FOR REVIEW AND APPROVAL, PRIOR TO REMOVAL.
3. ALL EXISTING PRECAST BENCHES AND TABLES & BENCHES TO BE REMOVED AND SALVAGED FOR REUSE. (1)
4. MINIMIZE EXCAVATION DEPTHS NEAR ALL EXISTING TREES TO REMAIN IN EFFORT TO PROTECT THEIR ROOTS. SPECIFICALLY ALONG THE EAST SIDE OF EXISTING ASPHALT TRACK, CONTRACTOR TO SAW CUT PAVEMENT FOR ADJACENT TREE DRIP LINES FOR ROOT PROTECTION. DO NOT EXCAVATE FULL DEPTH IN THIS LOCATION. REFERENCE LANDSCAPE PLANS AND PROVIDE AN RFI TO THE AOR/LANDSCAPE ARCHITECT TO REVIEW AND APPROVE PRIOR TO EXCAVATION ACTIVITIES.
5. UNLESS OTHERWISE NOTED, ALL PERIMETER 5 FOOT TALL ORNAMENTAL FENCING IS TO REMAIN IN PLACE AND BE PROTECTED.
6. REFERENCE LANDSCAPE PLANS FOR ADDITIONAL SIDEWALK, TREE REMOVAL AND TREE PROTECTION, IN THE CITY ROW'S OF ASHLAND AVENUE, BELLE PLAINE AVENUE, GREENVIEW AVENUE, AND IRVING PARK ROAD.

NORTH

GRAPHIC SCALE

20' 0 20' 40'

(IN FEET)
1 inch = 20 ft.

ALL DRAWINGS SHALL BE CHECKED FOR PROPER SCALE

PUBLIC BUILDING COMMISSION
Chicago Public Schools

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LICENSED PROFESSIONAL ENGINEER
SUZETTE M. EVANS
062-057376
STATE OF ILLINOIS
EXP. 11/30/2017

LAKE VIEW HIGH SCHOOL

4015 NORTH ASHLAND AVENUE
CHICAGO, ILLINOIS 60613

PBC PROJECT NO.: 05095
CPS PROJECT NO.: 2016-46211-SIT

REVISIONS

NO.	DATE	DESCRIPTION
–	03.22.16	60% SUBMITTAL
–	04.05.16	100% SUBMITTAL
–	04.06.17	OTB SUBMITTAL
1	04.12.17	ADDENDUM 01

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CHECKED BY: CAH
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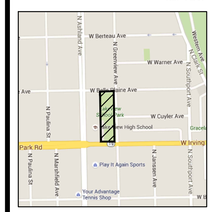
FILE: 2016007-01_C2.0_Demolition.dwg

NORTH
KEY PLAN



SHEET TITLE

DEMOLITION PLAN

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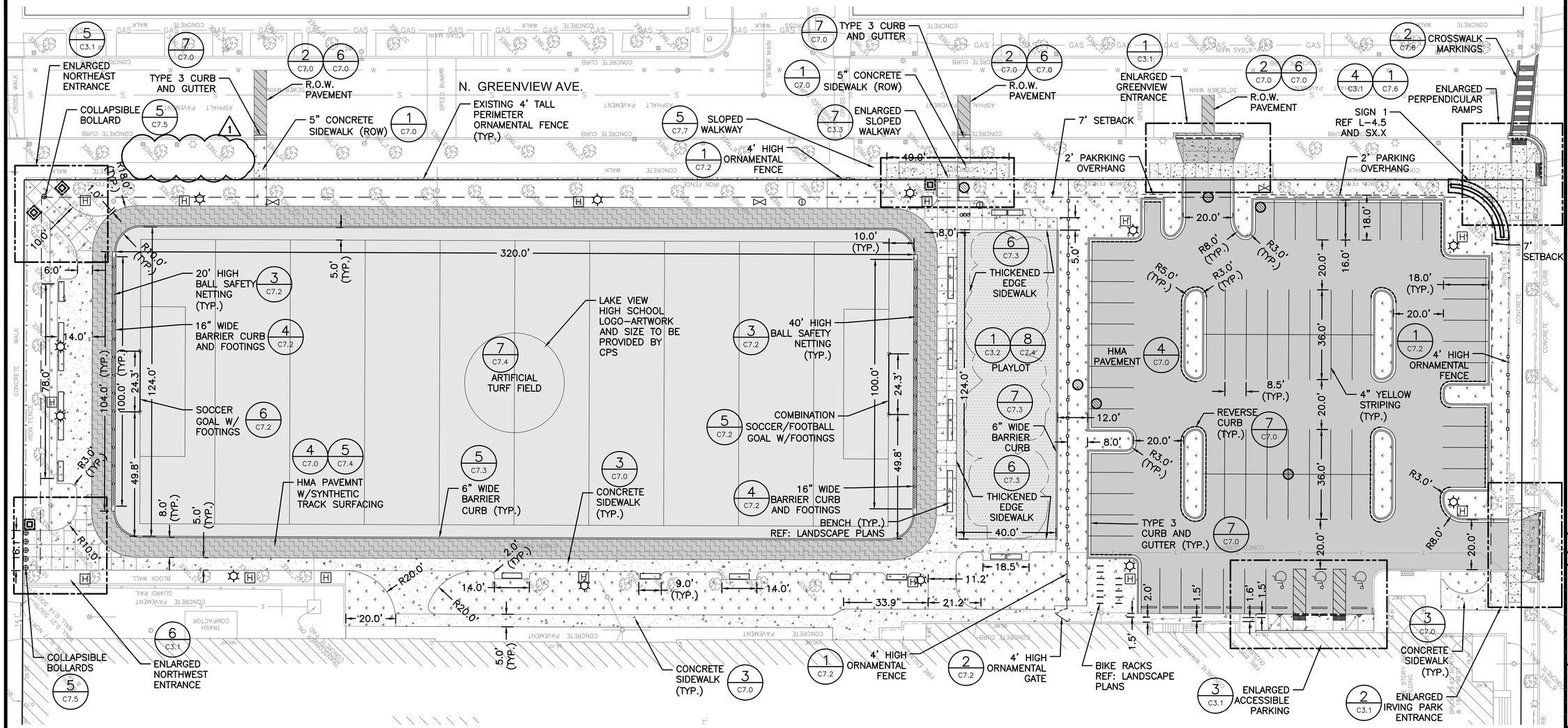

LEGEND – GEOMETRIC

- ARTIFICIAL TURF FIELD
- HMA PAVEMENT
- SYNTHETIC TRACK SURFACE OVER HMA
- POURED-IN-PLACE SAFETY SURFACING
- 5" CONCRETE SIDEWALK
- 5" CONCRETE SIDEWALK (ROW)
- 8" CONCRETE DRIVEWAY (ROW)
- PLANTING AREA/GRASS (REF LANDSCAPE PLANS)
- R.O.W. PAVEMENT
- 6"x12" PCC CURB
- TYPE 3 CURB & GUTTER
- DEPRESSED CURB AND GUTTER
- REVERSE CURB
- 4' TALL ORNAMENTAL FENCE/GATE
- 20' AND 40' TALL SAFETY NETTING
- ACCESSIBLE SIGNS AND POST
- CATCH BASIN
- CLEANOUT
- HOSE BIB

PARKING SPACE TABLE
PARKING SPACES PROVIDED = 72
ACCESSIBLE SPACES REQUIRED = 3
ACCESSIBLE SPACES PROVIDED = 3
TOTAL PROVIDED = 75

NOTES:

1. REFERENCE LANDSCAPE PLANS FOR NEW TREE PIT/SIDEWALK LOCATIONS, AND PERMEABLE PAVERS AT THE SOUTHWEST CORNER, IN THE CITY ROW'S OF ASHLAND AVENUE, BELLE PLAINE AVENUE, GREENVIEW AVENUE, AND IRVING PARK ROAD.

NORTH

GRAPHIC SCALE

20' 0 20' 40'

(IN FEET)
1 inch = 20 ft.

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062-057376
STATE OF ILLINOIS
EXP. 11/30/2017

LAKE VIEW HIGH SCHOOL

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PBC PROJECT NO.: 05095
CPS PROJECT NO.: 2016-46211-SIT

REVISIONS

NO.	DATE	DESCRIPTION
–	03.22.16	60% SUBMITTAL
–	04.05.16	100% SUBMITTAL
–	04.06.17	OTB SUBMITTAL
1	04.12.17	ADDENDUM 01

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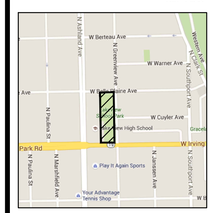
CHECKED BY: CAH
SCALE: 1"=20'
DMA JOB NO: 2016007-01
FILE: 2016007-01_C3.0_Geometric.dwg

NORTH
KEY PLAN



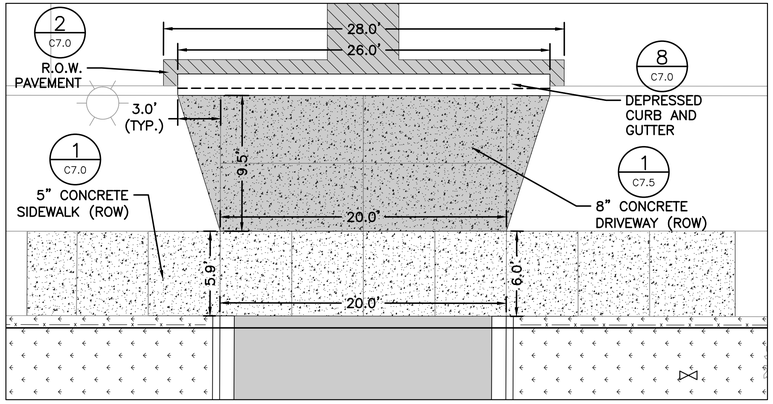
SHEET TITLE

SITE PLAN

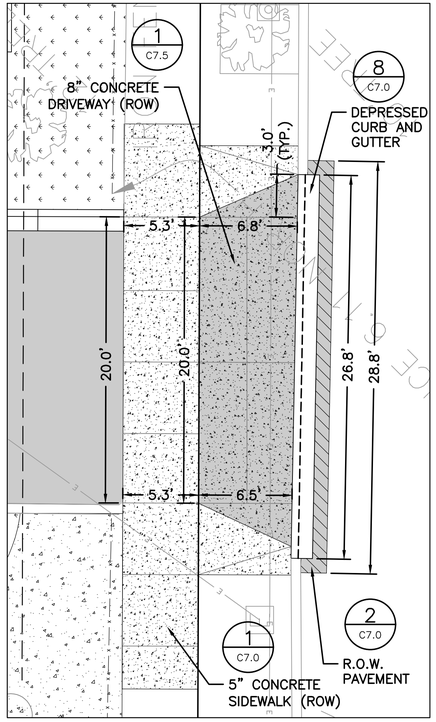
DRAWING NO.

C3.0

4/11/2017 11:32 AM



1 C3.1 GREENVIEW ENTRANCE
SCALE: 1" = 5'



2 C3.1 IRVING PARK ENTRANCE
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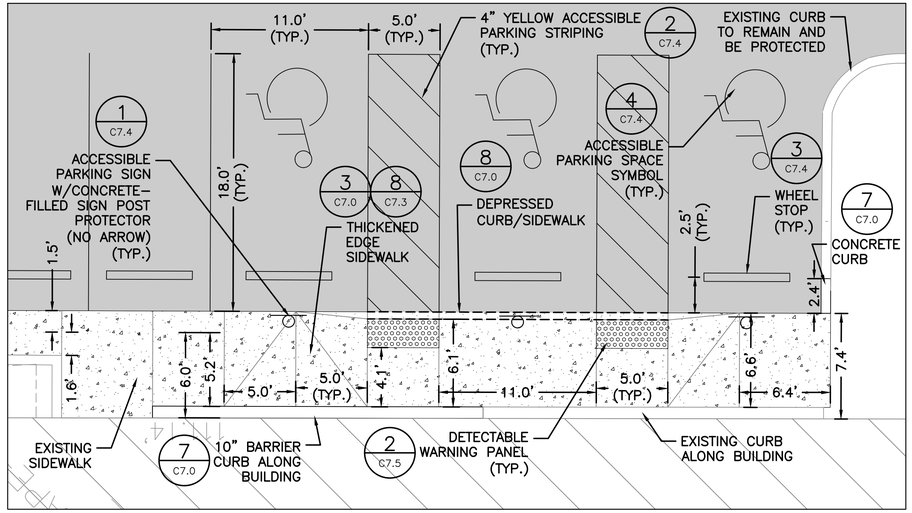

3 C3.1 ACCESSIBLE PARKING
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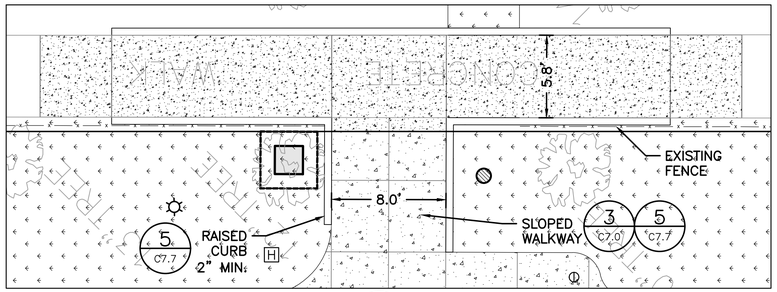
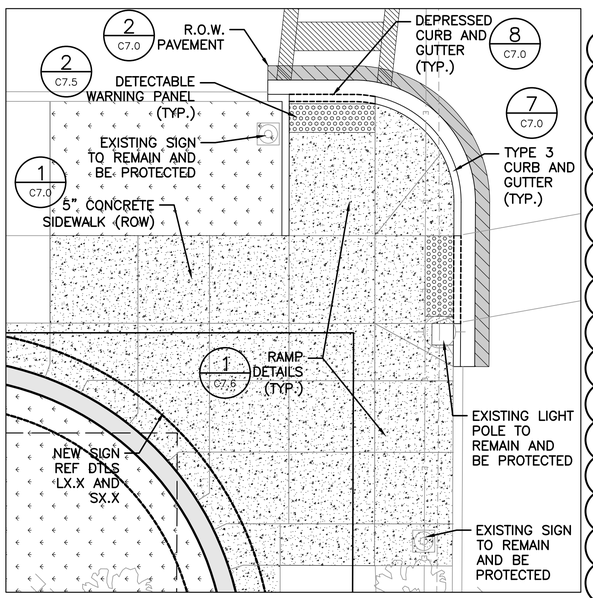


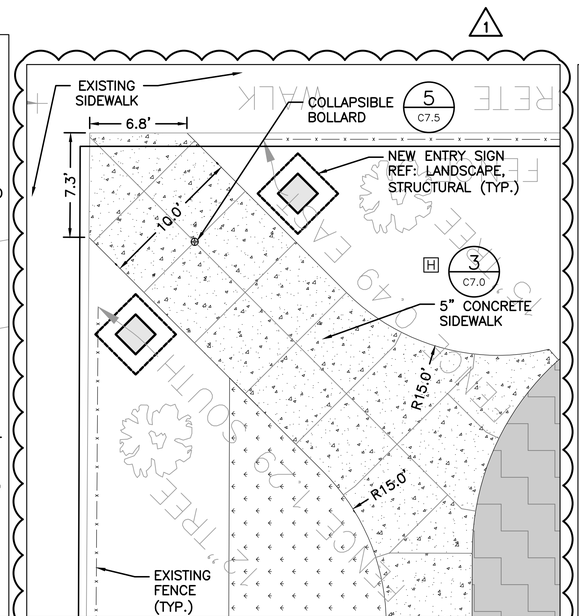
7 C3.1 GREENVIEW SLOPED WALKWAY
SCALE: 1" = 5'

NOTES:

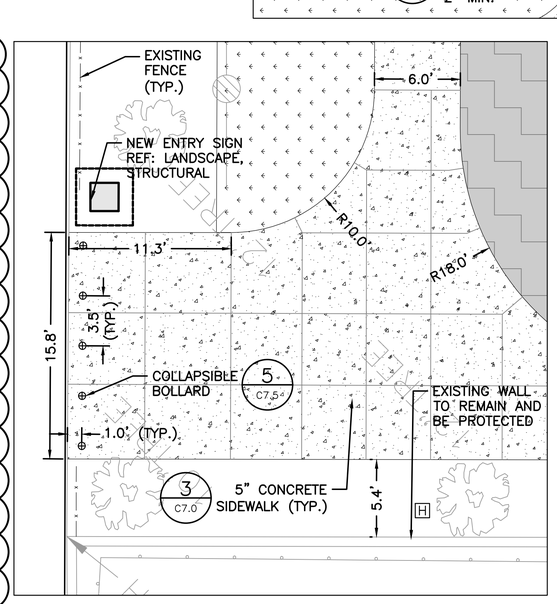
1. DIMENSIONS SHOWN ARE PROPOSED. CONTRACTOR TO VERIFY AND MATCH ALL EXISTING DIMENSIONS.



4 C3.1 PERPENDICULAR RAMPS AT CORNER OF IRVING PARK RD. AND GREENVIEW AVE.
SCALE: 1" = 5' | ALSO SEE DETAIL 1/C6.7



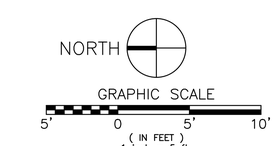
5 C3.1 BELLE PLAINE NORTHEAST ENTRANCE
SCALE: 1" = 5'



6 C3.1 BELLE PLAINE NORTHWEST ENTRANCE
SCALE: 1" = 5'

LEGEND – GEOMETRIC

- HMA PAVEMENT
- SYNTHETIC TRACK SURFACE OVER HMA
- 5" CONCRETE SIDEWALK
- 5" CONCRETE SIDEWALK (ROW)
- 8" CONCRETE DRIVEWAY (ROW)
- PLANTING AREA/GRASS (REF LANDSCAPE PLANS)
- R.O.W. PAVEMENT
- DEPRESSED CURB AND GUTTER
- ACCESSIBLE SIGNS AND POST



ALL DRAWINGS SHALL BE CHECKED FOR PROPER SCALE

PUBLIC BUILDING COMMISSION
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LICENSED PROFESSIONAL ENGINEER
SUZETTE M. EVANS
062-057376
STATE OF ILLINOIS
EXP. 11/30/2017

LAKE VIEW HIGH SCHOOL

4015 NORTH ASHLAND AVENUE
CHICAGO, ILLINOIS 60613

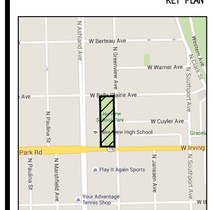
PBC PROJECT NO.: 05095
CPS PROJECT NO.: 2016-46211-SIT

REVISIONS

NO.	DATE	DESCRIPTION
–	03.22.16	60% SUBMITTAL
–	04.05.16	100% SUBMITTAL
–	04.06.17	OTB SUBMITTAL
1	04.12.17	ADDENDUM 01

DRAWN BY: CAH, CEM
CHECKED BY: CAH
SCALE: 1"=5'
DMA JOB NO: 2016007-01
FILE: 2016007-01_C3.0_Geometric.dwg

NORTH
KEY PLAN



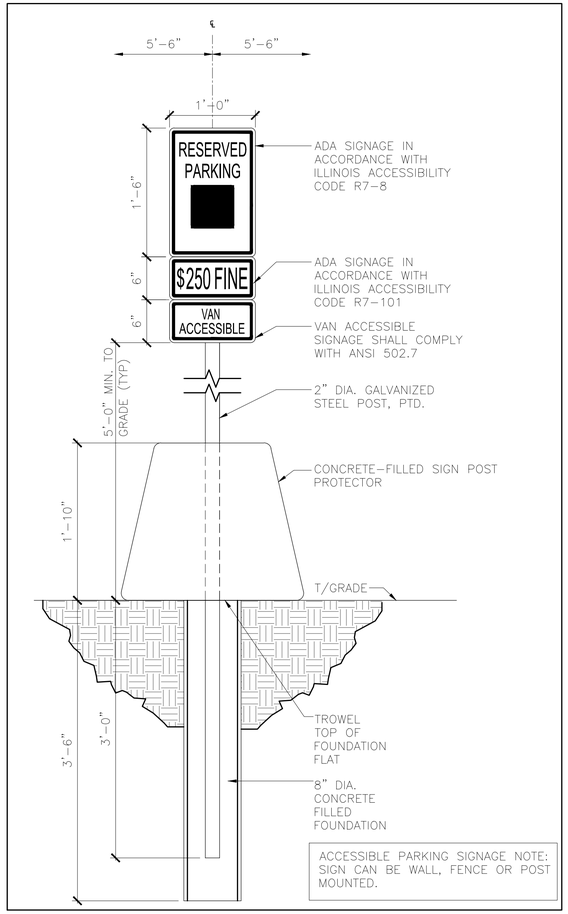
SHEET TITLE

ENLARGED SITE PLAN

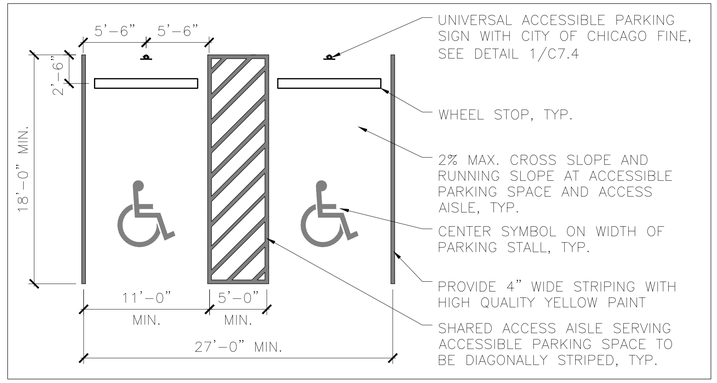
DRAWING NO.

C3.1

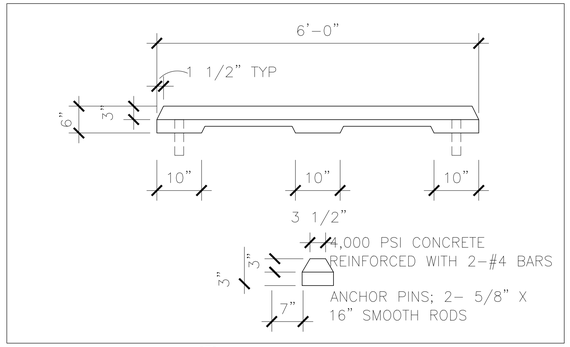
4/11/2017 11:33 AM



1 C7.4 ACCESSIBLE PARKING SIGNAGE DETAIL
SCALE: NOT TO SCALE | CPS DETAIL 4, ADA.01

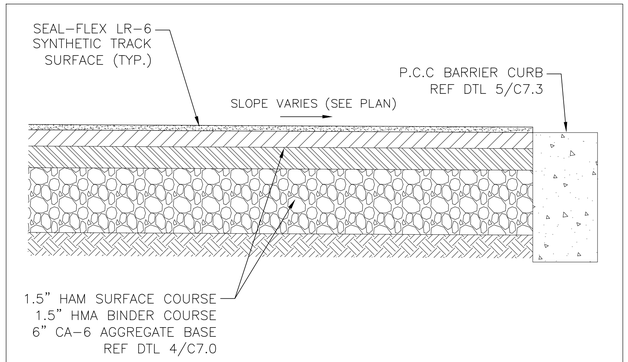


2 C7.4 ACCESSIBLE PARKING SPACE
SCALE: NOT TO SCALE
CPS DETAIL 4, ADA.04

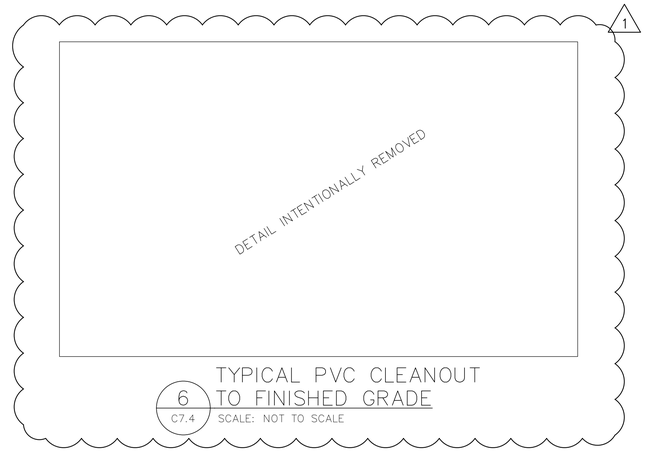


3 C7.4 WHEEL STOP
SCALE: NOT TO SCALE

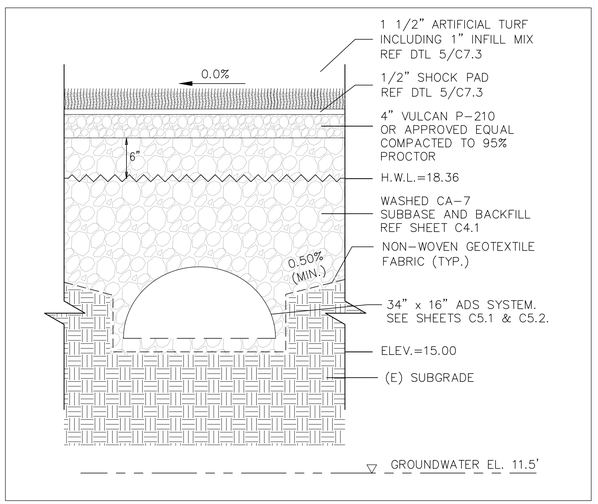
4 C7.4 ACCESSIBLE PARKING SPACE SYMBOL
NOT TO SCALE
CPS DETAIL 3, ADA.01



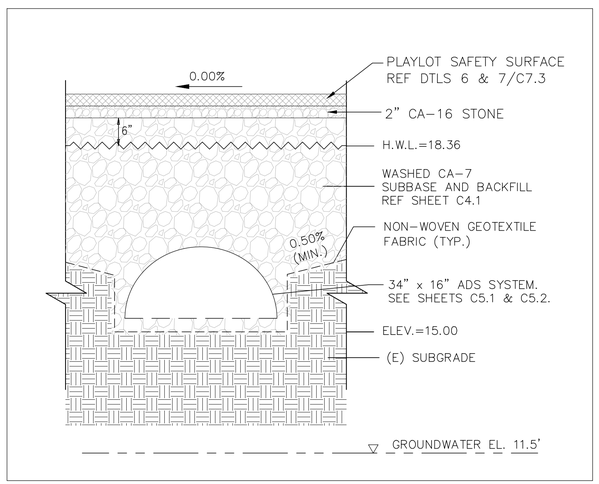
5 C7.4 SYNTHETIC TRACK SURFACE
SCALE: NOT TO SCALE



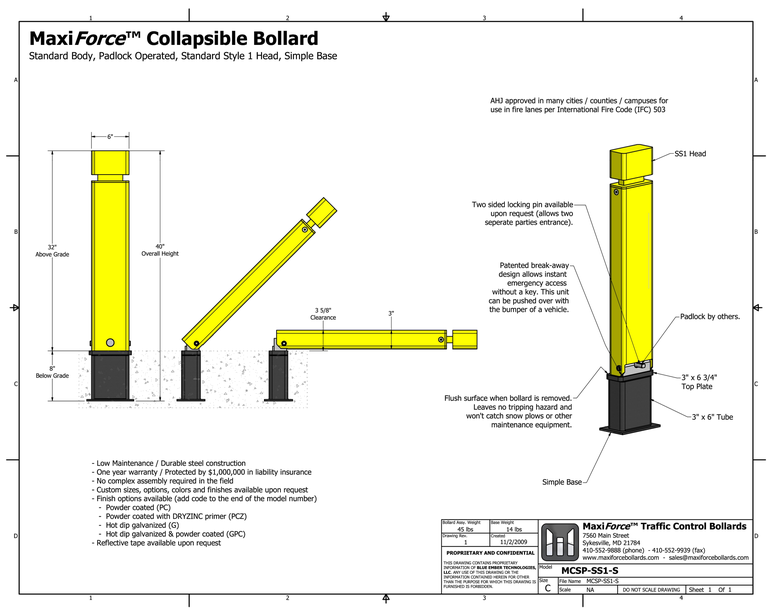
6 C7.4 TYPICAL PVC CLEANOUT TO FINISHED GRADE
SCALE: NOT TO SCALE



7 C7.4 STONE AGGREGATE STORAGE AT ARTIFICIAL TURF
SCALE: NOT TO SCALE



8 C7.4 STONE AGGREGATE STORAGE AT PLAYLOT
SCALE: NOT TO SCALE



9 C7.4 COLLAPSIBLE BOLLARD
SCALE: NOT TO SCALE

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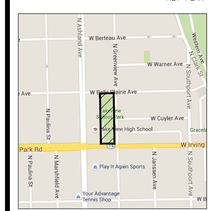
PBC PROJECT NO.: 05095
CPS PROJECT NO.: 2016-46211-SIT

REVISIONS

NO.	DATE	DESCRIPTION
–	03.22.16	60% SUBMITTAL
–	04.05.16	100% SUBMITTAL
–	04.06.17	OTB SUBMITTAL
1	04.12.17	ADDENDUM 01

DRAWN BY: CAH, CEM
CHECKED BY: CAH
SCALE: N.T.S.
DMA JOB NO: 2016007-01
FILE: 2016007-01_C7.0_Details.dwg

NORTH
KEY PLAN



SHEET TITLE

DETAILS

DRAWING NO.

C7.4

GENERAL NOTES:

1. THE DETECTABLE WARNING USED SHALL BE CHOSEN FROM THE CHICAGO DEPARTMENT OF TRANSPORTATION LIST OF APPROVED DETECTABLE WARNING PRODUCTS (AVAILABLE ON THE CITY OF CHICAGO WEBSITE). IT IS NOT ACCEPTABLE TO INSTALL TWO DIFFERENT DETECTABLE WARNING PRODUCTS ADJACENT TO ONE ANOTHER AT ANY LOCATION. IN THE CENTRAL BUSINESS DISTRICT, GRANITE OR OTHER SPECIALTY PAVING MATERIALS MAY BE SUBMITTED TO THE COMMISSIONER FOR APPROVAL.

2. THE DETECTABLE WARNING MUST BE INSTALLED A MAXIMUM OF 8" OR LESS FROM FACE OF CURB (SEE DETAIL SHEET B-4-2).

3. THE DETECTABLE WARNING MUST COVER FULL WIDTH OF RAMP EXCLUDING SIDE FLARES FOR A MINIMUM UNOBSTRUCTED DEPTH OF 24". THE DETECTABLE WARNING LOCATED ON THE SURFACES OF RAMPS IS TYPICALLY ORIENTED PERPENDICULAR TO THE RUN OF THE RAMP UNLESS SPECIAL CIRCUMSTANCES OCCUR (SEE DETAIL SHEET B-1-5). THE DETECTABLE WARNING MUST BE PROVIDED FOR A MINIMUM DEPTH OF 24" FOR THE ENTIRE LENGTH OF THE SIDEWALK WHERE THE SIDEWALK IS FLUSH WITH THE STREET (DEPRESSED CURB OR FLUSH TRANSITION). IF IT IS NECESSARY TO CUT A UNIT(S) IN THE PROVISION OF A COMPLIANT RAMP OR SIDEWALK WITH 24" MINIMUM DEPTH OF DETECTABLE WARNING, THE UNITS SHALL BE CUT IN A NEAT AND WORKMAN LIKE MANNER PER MANUFACTURER'S REQUIREMENTS WITH A MINIMUM OF THREE PINS OR ANCHOR POINTS (WHERE APPLICABLE). THE UNITS SHALL BE ARRANGED SO THAT THE CUT UNITS ARE LARGE ENOUGH TO BE PROPERLY AND ADEQUATELY SECURED. CUT UNITS SHALL NOT BE USED UNLESS ALL OTHER DESIGN OPTIONS HAVE BEEN EXHAUSTED. THE USE OF SALVAGE PIECES FROM UNITS THAT ARE CUT WILL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE COMMISSIONER. CUT UNIT SALVAGE PIECES NOT APPROVED FOR USE MUST BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.

4. WHERE APPLICABLE, A COMBINATION OF STRAIGHT AND RADIAL DETECTABLE WARNING UNITS MAY BE USED ON COMPOUND AND LARGE RADII. CONTRACTOR MUST MAKE THIS DETERMINATION AND VERIFY IN FIELD.

5. THE DETECTABLE WARNING MUST CONTRAST WITH ADJACENT PAVEMENT. IF LIGHT COLORED PAVEMENT IS USED THE DETECTABLE WARNING COLOR SHALL BE RED. IF A DARK COLORED PAVEMENT IS USED THE DETECTABLE WARNING COLOR SHALL BE YELLOW. CONTRACTOR TO VERIFY THAT PROPER CONTRAST IS OBTAINED.

6. PRIOR TO PLACING CONCRETE FOR DEPRESSED CURBS, RAMPS, OR SIDEWALKS THE CONTRACTOR SHALL VERIFY THAT LAYOUT OR DESIGN COMPLIES WITH THE REQUIREMENTS OF THE CDOT ADA STANDARDS.

7. RAMP WIDTH MUST BE A MINIMUM OF 6'-0" AND IN INCREMENTS OF 1'-0", EXCEPT WHEN USING THE PERPENDICULAR RAMP AT CORNER (OR OTHER SPECIAL CDOT APPROVED CONDITIONS), WHICH HAS A MINIMUM WIDTH OF 4'-0".

8. THE MAXIMUM ALLOWABLE RAMP RUNNING SLOPE IS 1:14, MEASURED AT ANY PORTION OF THE RAMP. IF POSSIBLE, A MORE GRADUAL SLOPE SHALL BE USED. GRADE BREAKS AT THE TOP AND BOTTOM OF RAMPS SHALL BE PERPENDICULAR TO THE DIRECTION OF RAMP RUN.

9. THE MAXIMUM ALLOWABLE RAMP CROSS SLOPE IS 1:64, MEASURED AT ANY PORTION OF THE RAMP. IF POSSIBLE, A MORE GRADUAL SLOPE SHALL BE USED.

10. THE MAXIMUM ALLOWABLE RAMP LANDING SLOPE IS 1:64, MEASURED AT ANY LOCATION AND IN ANY DIRECTION ON THE LANDING. THE RAMP LANDING WIDTH SHALL MATCH THE FULL WIDTH OF THE RAMP FOR A MINIMUM UNOBSTRUCTED DEPTH OF 4'-0". RAMP LANDINGS SHALL BE PROVIDED AT THE TOP AND/OR BOTTOM OF RAMPS WHERE TURNING IS REQUIRED.

11. RAMP SIDE FLARES SHALL BE INSTALLED AT ANY LOCATION WHERE THE SURFACE ADJACENT TO THE RAMP SURFACE IS INTENDED FOR PEDESTRIAN USE. TRIPPING HAZARDS, INCLUDING STEPS, DROP-OFFS, OR CURBS SHALL NOT BE LOCATED WITHIN THE LIMITS OF THE SIDEWALK. RAMP SIDE FLARES ARE NOT REQUIRED WHERE THE SURFACE ADJACENT TO THE RAMP SURFACE IS LANDSCAPED OR IS OCCUPIED BY A BARRIER THAT BLOCKS PEDESTRIAN ACCESS. EXCEPTIONS TO THIS RULE MAY BE SUBMITTED TO THE COMMISSIONER FOR APPROVAL.

City of Chicago Rahm Emanuel, Mayor — Department of Transportation — Division of Engineering — www.cityofchicago.org — CDOT Chicago Department of Transportation

DATE	REVISION
02/20/07	REVISION 1
11/15/07	REVISION 2
11/14/08	REVISION 3
11/02/09	REVISION 4
08/10/12	REVISION 5

CITY OF CHICAGO
GENERAL NOTES
SHEET B-3-2

SCALE: NOT TO SCALE
DATE: 10/23/2006

DRAWN BY: CDOT
CHECKED BY: LCM

GENERAL NOTES (CONTINUED):

12. UTILITIES, SUCH AS LIGHT POLES, TRAFFIC POLES AND HYDRANTS, MAY BE LOCATED IN THE FLARE OF THE RAMP BUT ARE NOT ALLOWED ON THE RAMP SURFACE OR LANDING AREAS. EXISTING UTILITY STRUCTURE LIDS MAY REMAIN WITHIN THE FLARE OR ON THE SURFACE OF THE RAMP IF THE REQUIREMENTS OF GENERAL NOTE #19 ARE MET.

13. ALL LOCATIONS WITH TYPE 4 OR TYPE B CURB (EXCEPT ALLEY APRONS) SHALL BE CONSTRUCTED AS CURB AND GUTTER TYPE BV.12 THROUGH THE LIMITS OF THE CORNER AND THE CURB RAMPS.

14. ALTERATIONS SHALL NOT DECREASE THE ACCESSIBILITY TO EXISTING FACILITIES, SIDEWALKS LEADING TO EXISTING FACILITIES, OR DOOR OR GATE ACCESS POINTS TO FACILITIES. THE ELEVATION AT THE EXISTING PROPERTY LINE OR FACILITY ACCESS POINT SHALL BE MAINTAINED AT A MINIMUM. ANY ALTERATIONS ADJACENT TO OR AFFECTING A FACILITY ACCESS POINT SHALL RESULT IN IMPROVED ACCESS OR AT A MINIMUM A REPLICATION OF EXISTING CONDITIONS, INCLUDING SIDEWALK SLOPES AND SURFACE CONDITIONS. FACILITIES INCLUDE, BUT ARE NOT LIMITED TO PRIVATE BUSINESSES, PUBLIC BUILDINGS, RESIDENCES, BUS STOPS, PUBLIC BENCHES, PAY PHONES, AND PARKING METERS.

15. THE MINIMUM CROSSWALK WIDTH IS 6'-0". CROSSWALKS SHALL BE LOCATED AS SHOWN IN THE PLAN SHEETS DEPENDING ON THE TYPE OF CURB RAMP USED. BEYOND THE CURB FACE AT THE BASE OF CURB RAMPS, A CLEAR SPACE OF 4'-0" BY 4'-0" MINIMUM SHALL BE PROVIDED WITHIN THE STRIPES OF THE CROSSWALK (WHERE PROVIDED).

16. IF SIDEWALK AND ALLEY ARE AT THE SAME GRADE, A RAMP IS NOT REQUIRED. IF SIDEWALK AND DRIVEWAY ARE AT THE SAME GRADE, A RAMP IS NOT REQUIRED BUT DETECTABLE WARNING UNITS ARE STILL REQUIRED IF THE DRIVEWAY HAS TRAFFIC CONTROL DEVICES (I.E. TRAFFIC SIGNALS).

17. MAIN LINE SIDEWALK SHALL HAVE A MAXIMUM CROSS SLOPE NOT TO EXCEED 1:64 FOR THE FULL WIDTH OF WALK UNLESS OTHERWISE APPROVED BY THE COMMISSIONER. WHERE TURNING IS REQUIRED AND WHERE SIDEWALKS INTERSECT, THE SLOPE OF THE SIDEWALK SHALL NOT EXCEED 1:64 IN ANY DIRECTION.

18. MAIN LINE SIDEWALK RUNNING SLOPES SHALL NOT EXCEED 1:24 OR THE GENERAL GRADE ESTABLISHED FOR THE ADJACENT STREET, WHICH EVER IS HIGHER.

19. THERE SHALL BE NO VERTICAL LEVEL DIFFERENCES BETWEEN SURFACES GREATER THAN 1/4" ON THE MAIN LINE SIDEWALK. THERE SHALL BE NO HORIZONTAL GAPS OR OPENINGS GREATER THAN 1/2" ON THE MAIN LINE SIDEWALK.

20. WHERE OBSTRUCTIONS EXIST ON THE MAINLINE SIDEWALK, THE CLEAR WIDTH OF USEABLE SIDEWALK SHALL NOT BE LESS THAN 4'-0". OBSTRUCTIONS INCLUDE, BUT ARE NOT LIMITED TO SIDEWALK BENCHES, FIRE HYDRANTS, SIGNAL OR LIGHT POLES, NEWSPAPER DISPENSERS, TRASH RECEPTACLES, AND UTILITY PEDESTALS.

21. CURB RAMPS AND LANDING (KEYSTONE) TO BE CONSTRUCTED WITH 8" THICK CONCRETE AT ALL TRAFFIC SIGNALIZED INTERSECTIONS AND INDUSTRIAL STREET INTERSECTIONS. AT ALL OTHER LOCATIONS, 5" THICK CONCRETE TO BE USED.

22. DEPRESSED CURB, RAMP, OR SIDEWALK DESIGNS OR LAYOUTS SHALL MAINTAIN OR IMPROVE EXISTING DRAINAGE AND THE EXISTING INTERSECTION GEOMETRY SHALL NOT BE MODIFIED WITHOUT CDOT APPROVAL.

23. ALL CONSTRUCTION DOCUMENTS MUST BE STAMPED BY A LICENSED ARCHITECT/LANDSCAPE ARCHITECT/ ENGINEER TO CERTIFY THAT THEY ARE IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND ALL CODES AND BUILDING ORDINANCES OF THE CITY OF CHICAGO AND THE STATE OF ILLINOIS.

24. NO DEVIATIONS FROM THESE STANDARDS ARE ALLOWED WITHOUT WRITTEN APPROVAL FROM THE COMMISSIONER.

City of Chicago Rahm Emanuel, Mayor — Department of Transportation — Division of Engineering — www.cityofchicago.org — CDOT Chicago Department of Transportation

DATE	REVISION
02/20/07	REVISION 1
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11/14/08	REVISION 3
11/02/09	REVISION 4
08/10/12	REVISION 5
01/01/14	REVISION 6

CITY OF CHICAGO
GENERAL NOTES (CONTINUED)
SHEET B-3-3

SCALE: NOT TO SCALE
DATE: 10/23/2006

DRAWN BY: CDOT
CHECKED BY: GK

ADA COMPLIANCE AND TRANSITION GUIDELINES

POLICY STATEMENT: ANY ALTERATION OF THE PUBLIC WAY MUST BE RESTORED IN AN ADA COMPLIANT MANNER

I. STREET/ALLEY RESTORATION

FOR ANY PROJECT WHERE, WITHIN THE PROJECT LIMITS, A CROSSWALK IS ENCOUNTERED OR WHERE THE PROJECT LIMITS TERMINATE WITHIN 4' OR LESS OF A CROSSWALK, THOSE CROSSWALKS AND THE ASSOCIATED CURB RAMPS MUST BE IMPROVED TO CURRENT ADA STANDARDS IF THEY ARE NOT COMPLIANT (SEE APPENDIX A.)

WHEN A PROJECT CALLS FOR ONLY AN INTERSECTION TO BE REPAVED, THE INTERSECTION LIMITS AS DEFINED BY THE AREA OUTLINED BY OUTERMOST CROSSWALK LINES AND ADJACENT CURB FACES AND ALL ADJOINING CROSSWALKS AND CURB RAMPS MUST BE IMPROVED TO CURRENT ADA STANDARDS IF THEY ARE NOT COMPLIANT (SEE APPENDIX A).

WHEN WORK IS LIMITED TO A SINGLE CORNER OF AN INTERSECTION, THE CURB RAMP MUST BE IMPROVED TO CURRENT ADA STANDARDS AND THE ADJACENT PAVEMENT MUST BE RESURFACED, AS NECESSARY TO PROVIDE FOR A FLUSH TRANSITION (SEE APPENDIX A).

WHEN ADA WORK IS LIMITED TO A SINGLE CORNER OF AN INTERSECTION, THE ADJACENT PAVEMENT MUST BE RESTORED (SEE APPENDIX A).

FOR ANY CONSTRUCTION WHERE, WITHIN THE PROJECT LIMITS, AN ALLEY APRON IS ENCOUNTERED, THE ASSOCIATED CURB RAMPS, ALLEY APRON, AND SIDEWALKS MUST BE IMPROVED TO CURRENT ADA STANDARDS IF THEY ARE NOT COMPLIANT (SEE APPENDIX A).

II. SIDEWALK INSTALLATION / REPAIRS / RECONSTRUCTION

THE LIMITS OF ANY MAINLINE SIDEWALK REPLACEMENT, GREATER THAN TEN FEET (10') IN LENGTH, THAT ABUT AN EXISTING RAMP, KEYSTONE, TRANSITION PANEL, AND/OR LANDING AREA (THIS TOTAL LENGTH INCLUDES THE PRIOR ELEMENTS), SHALL BE EXTENDED TO INCLUDE THE AFFECTED RAMPS AND THESE RAMPS SHALL BE RECONSTRUCTED TO CURRENT ADA STANDARDS. IN ADDITION, ALL NEWLY PLACED SIDEWALK TEN FEET (10') OR MORE IN LENGTH SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL CURRENT APPLICABLE STANDARDS WHICH INCLUDE PROVIDING A MINIMUM FOUR FEET (4') WIDTH ACCESSIBLE PATHWAY WITH A CROSS SLOPE NOT TO EXCEED 1:64 (SEE APPENDIX A).

III. GUIDELINES FOR TRANSITIONING TO EXISTING NON-COMPLIANT CONDITION

NEW SIDEWALK PLACEMENTS GREATER THAN TEN FEET IN CONTIGUOUS LENGTH:

THE LIMITS OF ANY MAINLINE SIDEWALK REPLACEMENT, GREATER THAN TEN FEET (10') IN LENGTH, MUST BE EXTENDED FOR A MINIMUM FIVE ADDITIONAL FEET (5') EITHER SIDE IN ORDER TO PROVIDE A TRANSITION TO MATCH THE EXISTING SIDEWALK. THE LENGTH OF TRANSITION SHALL BE LENGTHENED AS NECESSARY TO ENSURE THAT THE RUNNING SLOPE OF THE TRANSITION DOES NOT EXCEED A SLOPE OF 1:24 (PREFERRED) OR 1:14 (MAXIMUM) AT ANY POINT.

NEW SIDEWALK REPLACEMENTS TEN FEET OR LESS IN CONTIGUOUS LENGTH (REPAIRS):

IT IS ACCEPTABLE PRACTICE TO MATCH ADJACENT SIDEWALKS AT THE EXISTING SLOPE.

CURB RAMP REPLACEMENTS

WHEN REPLACING AN ADA RAMP, THE SIDEWALK REPLACEMENT MUST EXTEND BEYOND THE LIMITS OF THE LANDING AREA AND/OR THE "KEYSTONE" A MINIMUM OF AN ADDITIONAL FIVE FEET (5') ON EITHER SIDE IN ORDER TO PROVIDE A TRANSITION TO MATCH THE EXISTING SIDEWALK. THE TRANSITION PANEL SHALL BE LENGTHENED AS NECESSARY TO ENSURE THAT THE RUNNING SLOPE OF THE TRANSITION PANEL DOES NOT EXCEED A SLOPE OF 1:24 (PREFERRED) OR 1:14 (MAXIMUM) AT ANY POINT.

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01/01/14	REVISION 6

CITY OF CHICAGO
ADA COMPLIANCE AND TRANSITION GUIDELINES
SHEET B-3-4

SCALE: NOT TO SCALE
DATE: 10/23/2006

DRAWN BY: CDOT
CHECKED BY: GK

1 C7.7 CITY OF CHICAGO GENERAL NOTES
SCALE: NOT TO SCALE

DETAIL INTENTIONALLY REMOVED

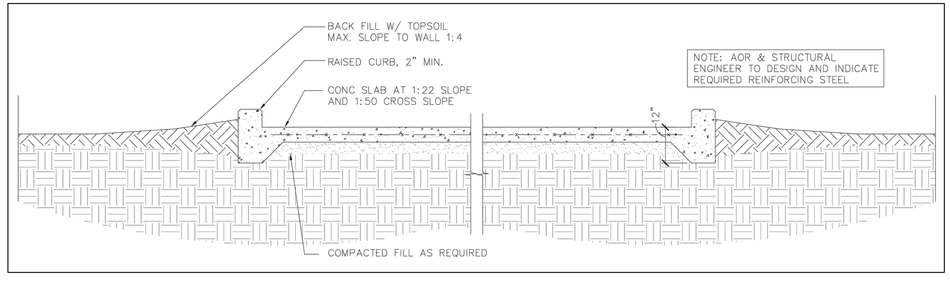
2 C7.7 EXTERIOR RAMP SECTION
SCALE: NOT TO SCALE | CPS DTL 7A/ADA.06

DETAIL INTENTIONALLY REMOVED

3 C7.7 CONCRETE SLAB DETAIL
SCALE: NOT TO SCALE

DETAIL INTENTIONALLY REMOVED

4 C7.7 RAMP POST DETAIL
SCALE: NOT TO SCALE



5 C7.7 SLOPED WALKWAY SECTION
SCALE: NOT TO SCALE | CPS DTL 2/ADA.06

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PBC: Lake View High School Renovation Project_C1583 - Addendum No. 1

PUBLIC BUILDING COMMISSION — Chicago Public Schools

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PBC PROJECT NO.: 05095
CPS PROJECT NO.: 2016-46211-SIT

REVISIONS

NO.	DATE	DESCRIPTION
–	03.22.16	60% SUBMITTAL
–	04.05.16	100% SUBMITTAL
–	04.06.17	OTB SUBMITTAL
1	04.12.17	ADDENDUM 01

DRAWN BY: CAH, CEM
CHECKED BY: CAH
SCALE: N.T.S.
DMA JOB NO: 2016007-01
FILE: 2016007-01_C7.0_Details.dwg

NORTH
KEY PLAN

SHEET TITLE

DETAILS

DRAWING NO.

C7.7

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