



City of Cambridge

Purchasing Department

Cynthia H. Griffin
Purchasing Agent

TO: All Bidders
FROM: City of Cambridge
DATE: January 24, 2014
RE: File No. 5849C –Dr. Martin Luther King Jr. School Construction
Project- Addendum NO. 5

The bid opening has been postponed from Thursday January 30, 2014 @ 2:00PM to Thursday February 6, 2014 @ 2:00PM. Please note that questions are closed.

Attached is Addendum No 5 which will be mailed out today.

An original and one copy of the bid forms must be submitted.

All other details remain the same.


CYNTHIA H. GRIFFIN
PURCHASING AGENT

Addendum No. 5



Project: Dr. Martin Luther King Jr. School Construction Project

PE Project No.: 47931.00

Cambridge No: 5849C

Regarding: Bid Addendum 5 – Volume 1

Date: January 24, 2014

This Addendum is hereby made a part of the Contract Documents to the same extent as though it were originally included therein.

#	DISCIPLINE	BID QUESTION NO.	RESPONSE
			CLARIFICATIONS TO ADDENDUM 4 FILED SUB BID QUESTIONS
23	Architecture	18_Chapman_03_#2	Q: Will a joint sealant bead by specification section 079200 occur at the interior perimeter of all frames at the heads, jambs and sills whether detailed or not? (Refer to drawings A617 and A618) R Addendum 4: Sheet A617, A618 reissued in Addendum 4.
			Revised R Addendum 5: Yes, a joint sealant bead by specification section 079200 at the interior perimeter of all frames at the heads, jambs and sills will be required whether detailed or not. Note: drawing A618 was deleted from the set in Addendum 4.
24	Architecture	18_Chapman_03_#3	Q: Refer to drawing A614 and note that there are three concealed beads of sealant at the perimeter of the curtain wall frames. Will all beads of joint sealant be installed by specification section 079200 Joint Sealant. R Addendum 4: Sheet A614 reissued in Addendum 4.
			Revised R: Refer to attached reissued A614.
25	Architecture	18_Chapman_03_#4	Q: Will joint sealant by specification section 079200 occur at the interior perimeter of frames to drywall at any locations at the curtain wall frames indicated on drawing A614? R Addendum 4: See Sheet A614 reissued in Addendum 4.
			Revised R Addendum 5: Yes. Refer to attached reissued A614 and SKA-001 through SKA-007.
26	Architecture	18_Chapman_03_#5	Q: Will one bead of joint sealant by specification section 079200 occur at the interior and exterior perimeter of all frames indicated on drawings A513 whether detailed or not? R Addendum 4: See Sheet A513 reissued in Addendum 5.
			Revised R Addendum 5: Refer to Typical Window details SKA-008, SKA-009 & SKA-010 for joint sealants.

36	Architecture	21_Ralph_04_04_#4	Q: Please confirm that the areaway for Mechanical 0058 does not require grating. Landscape drawing L100 & L203 show grating at this location. Architectural Dwgs. A101, A110.4 and Structural Dwgs S101 & S111.4 do not show grating at this location.
			R Addendum 4: Yes, see Add. 2, SKS-3 and Sheet A515 reissued in Addendum 4.
			Revised R Addendum 5: Delete reference to Sheet A515 and replace with "A514". Also, add the note "Metal Fabrications 055000" to the detail, before the "1" x 1" angle and 1" bar grill".
54	Architecture	25_NHSF_01_#2	Q: Spec section 055100 Metal Stairs seems to contradict whether this section 055100 or Division03 Cast in Place concrete is to provide the concrete fill for treads and landings. Please clarify and advise which section is to provide the concrete fill for the treads and landings.
			R Addendum 4: Section 055100, paragraphs 1.3B and 2.4E both indicate that concrete for treads and landings is furnished and installed by Division 03 Section Cast in Place Concrete. Notes on drawings to be revised in Addendum 4.
			Revised R Addendum 5: Reissued stair sheets deleted note regarding concrete in its entirety with no substitution. Concrete is by Division 03 per specifications.
59	Architecture	25_NHSF-01_#15	Q: Are abrasive nosings listed in spec 055000 required at exterior concrete stairs? Please advise.
			R Addendum 4: All cast-in-place concrete stairs will have abrasive metal cast-in nosings where concrete is the finish tread material. Sheets A316, A317 and A809 reissued in Addendum 4.
			Revised R Addendum 5: Delete reference to "A809" and replace with "A806".
64	Architecture	25_NHSF_01_#22	Q: Ref A408.2. Within section 1 there is an item called "misc steel support as required (typ. at rigging)". What section is to provide this item? Please advise of material sizes, spacing, and connections for what is needed?
			R Addendum 4: Included in Addendum 4 – Sheets A408.2 & A809 will be replaced / added clarifying scope of misc metals support for stage equipment.
			Revised R Addendum 5: Delete reference to "A809" in Addendum 4 and replace with "A806".
82	Architecture	25_NHSF_01_#40	Q: Ref A614 Curtain wall details. We assume there is NO miscellaneous metals 055000 on this drawing to provide since nothing is listed except the stair? Please confirm.
			R Addendum 4: Included in Addendum 4 – reissue sheet A614.
			Revised R Addendum 5: Refer to reissued A614.
106	Architecture	26_NHSF-02_#51	Q: What section provides the aluminum bases as shown in details 4, 8, 12/A807. We assume it is the responsibility of

			subcontractor supplying the wall finish in the specific sections. Please confirm.
			R Addendum 4: Aluminum base changed to stainless steel base furnished and installed by Section 064023 (as specified), in Addendum 4.
			Revised R Addendum 5: Note that A807 was deleted from the set in Addendum 4; the details in question were included on A804 in Addendum 4.
107	Architecture	26_NHSF-02_#52	Q: Ref detail 6 and 9/A808. Please advise sizing, connections and further details for the metal steel framing for rigging support. There is very limited information shown. R Addendum 4: Included in Addendum 4 – Sheets A408.2 and A809 will be replaced / added clarifying scope of misc metals support for stage equipment. Revised R Addendum 5: Delete reference to A808 and replace with “A806”.
115	Architecture	27_Carr_01_#4	Q: On A808 details note 098413D metal Z clip at areas of non-acoustical wall panel locations 098413 again is part of the acoustical FSB specifications. Please confirm that the vertical wood panels and back up support are not to be included in the acoustical proposal. R Addendum 4: The wood wall panels and Z clips to be included in acoustical proposal as specified in Section 098416 “Sound=Reflecting Ceiling and Wall Units”. Addendum 4 includes Sheet A808 reissued to clarify details. Revised R Addendum 5: Delete reference to A808 and replace with “A805”.
ADDENDUM 5 FSB QUESTIONS			
01	Architecture	100_NHSF_03	Q: The attached are the only sheets I have for Section 011300 CM PROJECT SCHEDULE. I NEED PAGES 1-4 PLEASE. This is very important for it advises milestone dates for materials to b on the site. R: All of the pages have been provided in the original document and supplemented by Addendum 2 (for pages 9 and 10).
02	Architecture	103_NHSF_04_#1	Q: Aluminum outriggers. They are now listed in specification 055000 Metal Fabrication but when looking at the drawings A513 it is still shown by the structural steel fabricator. R: Follow Structural drawings for delineation of scope of work. Everything outside the WT “bracket, as indicated on the attached reissued A513 is to be by 055000 Misc Metal.
03	Architecture	103_NHSF_04_#2	Q: Stainless Steel base cladding also no listed in our spec 055000 Metal Fabrications. Per drawing IN001 this is provided by 64023. Please take this out of section 055000 Metal Fabrications for this is an item NEVER supplied by Metal Fabrications. R: Stainless steel base cladding in Detail 2/A8.05 furnished

			and installed by 064023. Corrected in Addendum 5.
04	Architecture	103_NHSF_04_#3	<p>Q: We assume the addendum #4 drawings are a complete replacement of the Structural and Architectural drawings as advised in previous memos from WT Rich the Construction manager. Can you kindly confirm that I can roll up the old Architectural and Structural steel drawings and use these new ones as my Metal Fabrications Take Off Set. Please confirm.</p> <p>R: Yes. Refer to Addendum 4 - Summary Volumes 1 & 2.</p>
05	Architecture	104_NHSF_05_#4	<p>Q: I have received addendums #1 and #2 via email and I have picked up Addendum #2 but I have no addendum #3. Please advise.</p> <p>R: Per Summary Volumes 1 & 2, Addendum 3 drawings are included in Addendum 4. Also refer to City of Cambridge Purchasing Department Addendum No 3 memo to all bidders dated December 23, 2013. "The structural drawings including concrete and structural steel, have been issued to the Construction manager at Risk. These drawings shall be included in the January 13, 2014 bid package for the trade bidders.</p>
06	Architecture	104_NHSF_05_#5	<p>Q: After review of the addendum #4, I have noticed many of the questions were answered indirectly with the same paragraph for miscellaneous metals as follows: "All work indicated on the reissued Structural Drawings attached to this addendum shall be furnished and installed by the structural steel Subcontractor unless specifically noted otherwise, i.g. Loose Lintels (per schedule) all steel members inherently related to the metal stairs, elevator shaft, L angles, C channels, and area grates, all to be furnished and installed by the miscellaneous and ornamental iron field sub bid. Refer also to reissued architectural drawings". For me to take the time and write these 57 questions, it is disturbing this is the answer I get for most of the questions submitted. This is a very open gray area answer. This answer also inadvertently directs the miscellaneous metals filed sub bidders to review the revised new updated structural steel drawings to compare to architectural drawings to see whether the items will be provided by the structural steel fabricator or not. Because of this we are asking for additional time for the miscellaneous metal sub bidders to submit their bid in lieu of the January 30th set date. This comparison takes a lot of time since changes were not completely made within the new revised architectural drawings. We also as to further clarify your answer portion as follows: "L angles, C channels" is a most vague answer. Does this mean we own every L and C on the structural drawings? Or does the mean we only the L and C on structural drawings noted to be by the miscellaneous metals subcontractor? Please be clearer!</p>

			R: There is no grey area on the Structural Drawings. If the drawing states "By Misc Metals or Metal Fabrications" then it is owned by the Misc Metals Trade Bidder. If it does not then the Structural Steel subcontractor owns the work. In regards to the Architectural Drawings, those have been updated as well in Addendum 5 to reflect the latest Structural Drawings and again, if the keynote states by "055000 and/or Misc Metal or Metal Fabrications" then the Misc Metal sub owns that work. The bid schedule will not be extended.
07	Architecture	104_NHSF_05_#6	Q: Spec 055000 Metal Fabrications. Page 4 part 2.2 A and Spec 055100 Metal Stairs page 4 part 2.2A. Please be advised I don't believe stainless steel as any recycled content. Please advise.
			R: Internationally, the average recycled content of stainless steel is 60% and all stainless steel products have a minimum of 25% postconsumer per the following: Default Recycled Content (from LEED 2009): For steel products where no recycled content information is available, assume the recycled content to be 25% postconsumer. No other material has been recognized as having a similarly consistent minimum recycled content. Many steel products contain 90% or higher recycled content if manufactured by the electric arc furnace process, so it may be beneficial to obtain actual information from the manufacturer rather than relying on the default value.
08	Architecture	104_NHSF_05_#7	Q: Spec 055000 Metal Fabrication. Page 10 part 2.14 A.1. This line advises to supply exterior stainless steel bollards to be "surgical" stainless steel. Please be advised that schedule 40 stainless steel bollards to do not come in "surgical" stainless steel. Surgical stainless steel is actually stainless steel with metal alloys that are for actual surgical devices such as scalpel, forceps, etc. Please delete this requirement for these bollards.
			R: Delete the word "surgical" and provide Type 316 stainless steel. Specification revised in Addendum 5.
09	Architecture	104_NHSF_05_#8	Q: Spec 055000 Metal Fabrications. Page 11 part 2.17B. You advise to run grain with long dimension of piece for stainless steel #4 finish. Please be advised that most pipe comes with the grain running in the circular dimension do to the finishing equipment process. Please delete this requirement for #4 finish.
			R: Grain running circular on pipes is acceptable. Specification revised in Addendum 5.
10	Architecture	104_NHSF_05_#9	Q: Spec 055000 Metal Fabrication. Page 1 part 1.3A.3. Abrasive nosing are an embedded item. Could you kindly move this item to 1.3B as furnish only for installation by concrete subcontractor.
			R: Abrasive nosings furnished by Metals, installed by

			Concrete Contractor. Specification revised in Addendum 5.
11	Architecture	105_NHSF_06_#10	Q:Drawing S500 detail 16. Is this grating at the sumps by miscellaneous metals or are these sealed covers by the plumbing contractor. R: As indicated on the structural drawings, this grating is by 055000.
12	Architecture	105_NHSF_06_#11	Q:Drawing S600 detail 5. A miscellaneous metal provides the grating as indicated here. Please advise if we provide the L4x4 and TS5x5 support for grating. R: They are not indicated as 055000 Misc Metal, they are by 051200 Structural.
13	Architecture	105_NHSF_06_#12	Q:Drawing L202 at Water Play. There is a bollard activator indicated in this area. We assume this is a special bollard by electrical or landscape? Please advise. R: The bollard is not custom, the bollard and activation device can be found under specification section 323010-2.05-A, which refers to Exhibit F-2-2.3-activation devices. Footing similar to 3/L503.
14	Architecture	105_NHSF_06_#13	Q: Detail 6/A512 and 5/S500. These 2 details are supposed to be the same but 6/A512 appears to show an angle supporting the precast and not a plate per structural. Please clarify which detail we are to follow. R:Follow structural dwgs for plate, height of concrete to be lowered to allow for insulation and blocking.
15	Architecture	105_NHSF_06_#14	Q:Detail 5/A512 and 12/S602. These 2 details are supposed to be the same but 5/A512 appears to show an angle supporting the precast and not a plate per structural. Please clarify which detail we are to follow. R: Note there is no precast indicated on 5/A512. Delete angle on 5/A512 and replace with plate as indicated on 12/S602..
16	Architecture	105_NHSF_06_#15	Q: Detail 6/A513 shows "Structural steel framing 3/8" alum plate outrigger" by section 051200 Structural Steel Framing. Yet the Spec 055000 Metal Fabrications advises in scope of work list that this is by this section. Please advise what section is to provide the aluminum outrigger. R: Follow Structural drawings for delineation of scope of work. Everything outside the WT "bracket, as indicated on the attached reissued A513 is to be by 055000 Misc Metal.
17	Architecture	105_NHSF_06_#16	Q:Detail 6/A513 shows TS3x2 framing mounting to aluminum outrigger by the structural steel fabricator. But when referring to S601, we see none of this framing shown. We assume the structural steel fabricator is providing this since its labeled so per detail on A513. Please confirm. R: Follow Structural drawings for delineation of scope of work. Everything outside the WT "bracket, as indicated on

			the attached reissued A513 is to be by 055000 Misc Metal.
18	Architecture	105_NHSF_06_#17	Q:Detail 7, 8 / A513 shows outrigger steel and TS framing by the structural steel fabricator. Please confirm structural steel fabricator is in fact providing all these materials. There is no sizing or connections shown for all materials? Please clarify. R: Follow Structural drawings for delineation of scope of work. Everything outside the WT "bracket, as indicated on the attached reissued A513 is to be by 055000 Misc Metal.
19	Architecture	105_NHSF_06_#18	Q: Detail 8/A513 appears to show bent plate and angle supporting the wood blocking at XXXXXX(can't read RFI: text is over logo). Kindly advise what section provides all this material. R: See details 4 and 8/ A511 for parapet cap at corrugated metal. See 10/S703 for bent plate at edge of deck which is by structural; there is no bent plate supporting blocking at top of parapet wall. Wood blocking at parapet cap is by 075423 and blocking within stud wall is by 061053 (installed by 054000).
20	Architecture	105_NHSF_06_#19	Q: Detail 9 and 10/A513 shows the railing at parapet. There is no description and no connection detail of how this is being done. Please clarify and advise. R: Refer to attached reissued A513.
21	Architecture	105_NHSF_06_#20	Q: Detail 2/A514. There is an angle at the floor 1 st floor slab called out to be Structural Steel Framing. Please confirm this is provided by the structural steel fabricator. R: Angle not required to pick up the curtainwall, all structural steel required is shown on 5/S504.
22	Architecture	105_NHSF_06_#21	Q:Detail 3/A514 shows the railing at parapet. There is no description and no connection detail of how this is being done. Please clarify and advise? R: Refer to attached SKA-021 for railing detail.
23	Architecture	105_NHSF_06_#22	Q: Detail 8/A514. There is a stainless steel angle shown to support and attach to wood blocking. This appears to be 055000. What is it attaching to besides the wood blocking? Should this really be by miscellaneous metals? Please re visit and reconsider this as being miscellaneous metals? R: The angle shown on 8/A514 is by 054000 and should be galvanized and not stainless.
NON TRADE QUESTIONS			
01	Landscape	Landscape_600_Rich_Caulfield	Q L302 indicates detail 10/L411, but that detail does not exist on the dwgs. Please advise. R: Delete reference to 10/L411 and replace with detail "7/L411", Underdrainage in Plant Beds.

02	Architecture	PE_1_Nova Wood Products	<p>Q: Drawing A113.4 Partial Third Floor Plan 4 Corridor 3104 In Corridor 3104 on Grid Line G.1 & 3 the plan drawing would indicate that there is a row of six (6) B11 Base Cabinet-full height with shelves. There is no elevation for this detail. Should we include these cabinets in our bid for Section 064023 Interior Architectural Woodwork? Dwg does not exist in Addendum 4...(BS)</p> <p>R: Yes include base cabinets B11 in bid for section 064023. Quantity is seven (7) B11 Base cabinet-full height with shelves - six (6) 30" wide and one (1) 24" wide. Confirmed drawing A113.4 was included in Addendum 4.</p>
03	Architecture	PE_2_Nova Wood Products	<p>Q: Drawing A113.4 Partial Third Floor Plan 4 Laptop Cart Storage 3120. The plan drawing would indicate that this closet should have adjustable shelves. The Enlarged Plan Drawing 2/A413 does not have the shelves tagged. Should this storage room have adjustable shelves? Dwg does not exist in Addendum 4...(BS)</p> <p>R: Included in Addendum 4. Confirmed drawing A113.4 was included in Addendum 4.</p>
04	Architecture	PE_3_Nova Wood Products	<p>Q: Drawing A112.3 Partial Second Floor Plan 3 Laptop Cart Storage 2105 The plan drawing would indicate that this closet should have adjustable shelves. There is not an enlarged plan drawing of this room. Should this storage room have adjustable shelves?</p> <p>R: Included in Addendum 4.</p>
05	Architecture	PE_4_Nova Wood Products	<p>Q: Drawing A112.1 Partial Second Floor Plan 1 Laptop Cart Storage 2206 The plan drawing would indicate that this closet should have adjustable shelves. There is not an enlarged plan drawing of this room. Should this room have adjustable shelves?</p> <p>R: Included in Addendum 4.</p>
06	Architectural	PE_5_Nova Wood Products	<p>Q: Drawing A111.3 Partial First Floor Plan 3 Laptop Cart Storage 1005 The plan drawing would indicate that this closet should have adjustable shelves. There is not an enlarged plan drawing of this room. Should this room have adjustable shelves?</p> <p>R: Included in Addendum 4.</p>
07	Architecture	PE_6_Nova Wood Products	<p>Q: Drawing A111.1 Partial First Floor Plan 1 Laptop Cart Storage 1204 The plan drawing would indicate that his closet should have adjustable shelves. The Enlarged Plan Drawing 1/A429 does not have the shelves tagged. Should this storage room have adjustable shelves? Dwg does not exist in Addendum 4...(BS)</p> <p>R: Included in Addendum 4. Confirmed drawing A111.1 was included in Addendum 4.</p>

08	Architecture	PE_7_Nova Wood Products	<p>Q: Drawing A110.2 Partial Ground Floor Plan 2 Storage Room 0005C. The plan drawing would indicate that this storage closet should have adjustable shelves. The Enlarged Plan Drawing 1/A411 does not have the shelves tagged. Should this storage room have adjustable shelves?</p> <p>R: Adjustable shelving clarification/deletion of shelving was included in Addendum 4.</p>
09	Architecture	PE_8_Nova Wood Products	<p>Q: Drawing A832 Casework Details. The casework details do not match the specifications for the Plastic Laminate Cabinets as per 2.8 Plastic Laminate Cabinets, of Section 064023 Interior Architectural Woodwork. The (B12) Teacher Wardrobe Cabinet and the(B11) Base Cabinet – Full height with shelves have a note that reads “Melamine finish all exposed sides” and the other cabinets are noted as “P. Lam @ all exposed surfaces”. The specifications for Section 064023 have the cabinets as Plastic Laminate for Exposed and Semi exposed surfaces. Please confirm if the cabinets should be all Plastic Laminate or should they have Melamine interiors with Plastic Laminate for the doors, drawers and all exposed surfaces. Also some of the cabinets on Drawing A832 have adjustable shelf standards and some have holes and pins. Should the cabinets have shelf standards or holes and pins?</p> <p>R: Delete all references to melamine. Provide plam on all exposed surfaces per specifications. Delete holes and pins and replace with shelf standards.</p>
10	Architecture	PE_9_Nova Wood Products	<p>Q: Drawing A836 Interior Details – Dining The Banquette Seating in the Dining Area is to be supplied and installed as part of Section 119000 Miscellaneous Equipment. Does this include the P. Lam PL2 wall and ceiling panels?</p> <p>R: Plam wall and ceiling panels are field fabricated by 064023.</p>
11	Architecture	PE_10_Nova Wood Products	<p>Q: Drawing IN001 Finish Legend The Metal Base is noted as MB1 and MB2. The specification section is noted as 055000 Metal Fabrications. The specifications for Section 055000 Metal Fabrications, does not have these bases listed in the “This Section includes the following:”. Are the Metal Bases part of Section 064023 Interior Architectural Woodwork 2.12 Metal Base?</p> <p>R: Per Addendum 4 all metal base is furnished and installed by 064023.</p>
12	Architecture	PE_11_Nova Wood Products	<p>Q: Drawing A704 Ceiling Assemblies 15/A704 SWT Suspended Wood Trellis The Suspended Wood Trellis is noted in the specifications for Section 064023 Interior Architectural Woodwork on page 13 of the specifications 2.11 Suspended Wood Trellis (Shop Finished). I have also found the Wood Trellis in Section 090002 Acoustical Ceilings Filed Sub Bid. The following is noted in the <u>II. Supplemental Scope Requirements for Acoustical Tile Trade Contractors 2. Special attention is</u></p>

			directed to the Auditorium Wood Wall and Ceiling Finished and Classroom Suspended Wood Trellis Finishes, which are engineered, furnished and installed by the ACT Trade Contractor. Are the Suspended Wood Trellis ceiling panels to be supplied and installed by Section 064023 Interior Architectural Woodwork or by Section 090002 Acoustical Ceilings Filed Sub Bid?
			R: Per Addendum 4, Custom wood trellis is specified in 060423 and furnished and installed by 095100. Wood Trellis is custom millwork.
13	Architecture	PE_12_Nova Wood Products	Q: Drawing A832 Casework Details 6/A832 B6 – Bookshelf with Sliding Doors The channel track for sliding doors is not listed in 2.2 Cabinet Hardware and Accessories, in the specifications for Section 064023 Interior Architectural Woodwork. Do you have a model number or a manufacturer for this Sliding Door Hardware? How thick are the Plam Sliding Doors?
			R: Sliding door hardware included in Addendum 4. Sliding doors should be 3/4" thick per typical doors.
14	Architecture	PE_13_JC Clocks Co.	Q: We find in the specification that they are requiring the millwork to be a registered AWI Quality Certified project. At this time we are members of the AWI and strictly hold to their standards but we are not members of the AWI Quality Certification Program. The AWI has told us it takes appx 2 to 3 months to complete the application process. I am concerned that we might not have enough time to get this done before you need millwork. Question: when would you anticipate millwork on site?
			R: Early Start Fall 2014 , Late Start Spring of 2015 is the approximate start date for Millwork.
15	Architecture	PE_14_JC Clocks Co.	Q: The cabinet details On A832, A833 and A834 are calling out some of the cabinet interiors as plastic laminate and some as melamine finish. The specification is calling for the interiors to be vertical grade plastic laminate with melamine drawer boxes. A. What finish should the interior cabinet case parts be? B. What finish should the drawer boxes be? C. What finish should the cabinet shelves be?
			R: Delete all references to melamine. Provide plam on all exposed surfaces per specifications.
16	Architecture	PE_15_Baron Industries	Q: Door 0060C at the Garage Entrance is listed as an Overhead Coiling Grille on the Door Schedule. On Detail Drawings 1,2/A501 it is labeled as an 083323 coiling door and the jamb details shown are correct for a door, not a grille. Please clarify.
			R: Per Addendum 4 Door 0060C is a coiling grill.
17	Architecture	PE_16_Baron Industries	Q: Assuming Door 0060C is indeed a grille and not a door, Spec 083326 Para. 2.1F(7) requires, "...emergency egress

			release, and self-opening mechanism." These are mutually exclusive. Since the manufacturer's models listed in Para. 2.1A(1) are capable of including the emergency egress release, but not the self-opening mechanism, can we assume that the emergency egress is the desired feature? (Note that, for example, self-opening Models would be Cornell ERG and Cookson ACE.)
			R: Requirements for emergency egress and self-opening mechanism deleted in Addendum 5.
18	Architecture	PE_17_Baron Industries	Q: 083326 - Par. 2.2 Side Coiling Grilles. Para. 2.1G(7) requires, "...emergency egress release, and self-opening mechanism." These are mutually exclusive. Grilles with the self-openig feature will automatically open upon a signal from a fire alarm or security system or loss of power. These are typically specified at server areas as is the case here so that occupants can quickly exist in case of an emergency. Note that the manufacturers listed do not provide side coiling grilles with self-opening capability. The MacKeon Door Co.'s Model G4000 does have this capability and we would quote their product. Please provide guidance.
			R: Requirements for emergency egress and self-opening mechanism deleted in Addendum 5.
19	Architecture	PE_18_Baron Industries	Q: Overhead Coiling Door 063B at Outdoor Storage is to be fire-rated per the Door Schedule. Specification 083323 describes "service doors, exterior" with no descriptions pertaining to a fire-rated door., e.g., smoke seals, release device, etc. Please provide guidance.
			R: Section 083323 revised to include a fire rated coiling door in Addendum 5.
20	Architecture	PE_19_O'Connor Door	Q: 001C, 0012E, 0055, 2007 and 3117B are listed on hardware chart but aren't on door schedule.
			R: Included in Addendum 4.
21	Architecture	PE_20_O'Connor Door	Q: 0012F, 0012G, 0026C, 2020B, 2020C, 2032 are on door schedule but have no hardware listed.
			R: Included in Addendum 4.
22	Architecture	PE_21McDermott Metal	Q: Unable to find Louvers L1 & L4. Please advise to this scope of louver.
			R: Louver type L1 is deleted in Addendum 5. Louver type L4 is located in the NSTAR vault on A201.
23	Architecture	PE_22_McDermott Metal	Q: The only detail I have been able to locate on the sunshade is on A513 details 7 and 8 which show aluminum sunshade by metal panel installer. Do these fall under section 107113? Please advise to where I can gather more information on these sunshades or get info on the sunshades that are in section 107113.
			R: Refer to attached reissued A513 for sunshade panel by

			074213.16 and supports by 055000 for sunshades that occur at formed metal wall panels as shown on elevations at wall type B2. Refer to SKA-24 and SKA25 (Addendum 5) and A-617 (Addendum 4) for sunshades that occur as shown on elevations at wall type C.
24	Information Graphics	PE_23_Sunshine Sign	Q: Dimensions for F1 occupancy signage missing R: The width of the F1 occupancy sign is 1'-10".
25	Foodservice	PE_24_Kittredge Equip.	Q: Item # 8 – the written specifications say – no item – the schedule shows 2 each recycling stations , and there are 2 shown on the drawing – can you please advise what I need to provide? R: Responded to in Addendum 4.
26	Foodservice	PE_25_Kittredge Equip.	Q: Item # 8 – the written specifications say – no item – the schedule shows 2 each recycling stations , and there are 2 shown on the drawing – can you please advise what I need to provide? R: Responded to in Addendum 4.
27	Architecture	PE_26_Highland Seating	Q: 126100 Provide details and locations for the movable chair bases as specified in Section 126100, item 9F. R: Refer to Finish Legend IN002 and A408 included in Addendum 4 for moveable chair locations. Bid specifications include moveable chair base detail description for manufacturer's product.
28	Architecture	PE_27_J&J Construction	Q: 064023 Install only or furnish and install (need to solicit vendors not later than Monday)? R: Question is incomplete as submitted: response cannot be provided.
29	Architecture	PE_28_J&J Construction	Q: Is there shelving in STORAGE 007C? Ref A405 R: Included in Addendum 4.
30	Architecture	PE_29_J&J Construction	Q: Is there shelving in STORAGE 008C? Ref A405 R: Included in Addendum 4.
31	Architecture	PE_30_J&J Construction	Q: Install? - 05 5000 MB1 See Specifications Stainless Steel - Brushed Finish Wrapped Metal on Substrate King Street Levels Ground, 1, 2, 3; Academic Corridors Level 1; Cafeteria/Servery (includes at millwork), Stairs and as noted – Ref IN001. R: Per Addendum 4 all metal base is furnished and installed by 064023/
32	Architecture	PE_31_J&J Construction	Q: Install? - 05 5000 MB2 See Specifications Stainless Steel - Brushed Finish 4" high metal sheet, applied in field

			Cafeteria millwork as noted – Ref IN001
			R: Per Addendum 4 all metal base is furnished and installed by 064023.
33	Foodservice	PE_32 Kittredge Equip.	Q: Item # 30 – the manufacturer Blodgett is requesting verification of the model number as the model does not match the written specifications. Please confirm model number.
			R: A double combi-oven is required as specified and noted in addendum #4. The combi-ovens will be stacked. The elevation on sheet FS-104 is incorrect. Elevation revised in Addendum 5.
34	Architecture	PE_33_U.S. Drywall	Q: There is no roof plan for this project. Please have the Architect provide a roof plan indicating all walls sections, parapets, roof transitions, all required roof equipment and blocking details, etc. The 1/16" Roof Layout plan which does not contain any detailing is not adequate to properly bid any work at the roof level.
			A: Refer to attached reissued A104 for clarifications to roof scope.
35	Foodservice	PE_34_ Devin Food Equip., Inc.	Q: Item #30 States "Double Convection Oven" then the Model number is BCX-14G Single. Please clarify what is needed. (See PE Item #32 above)
			R: A double combi-oven is required as specified and noted in addendum #4. The combi-ovens will be stacked. The elevation on sheet FS-104 is incorrect. Elevation revised in Addendum 5.
36	Architecture	PE_35_DHF Associates	Q: Scope of Intumescent paint from plans appears to be only for special column shapes as indicated on S207, S208.
			R: Clarified with Addendum 4.
37	General	PE_36_DHF Associates	Q: Code Drawing calls for roof to be 1HR. Drawing A104 shows all Roof Deck fire rating as (N/A). Therefore should the steel framing supporting the roof deck be fireproofed excluding roof deck?
			R: Clarified with Addendum 4.
38	Structural	PE_37_DHF Associates	Q: Roof over auditorium as shown on S115.1 has Steel 20' from Floor below. Also it is acoustical deck, does this area need to be fireproofed?
			R: Clarified with Addendum 4.
39	Architecture	PE_38_BASS Associates	Q: Please clarify the finish on the Firestone Series 3200 Aluminum Plate Panel System and adjacent perforated aluminum plate panels. Specification references three finishes (074213.16-8, 2.7 A-C) "powder coat", "anodized", and "2-coat Kynar" finishes. These panels are typically finished with a 2-coat Kynar post-coat finish, making it easy to match the Series 3200 panels with the perforated panels

			and adjacent elements such as curtainwall components, etc. According to Firestone, the typical finish used is the Post-Painted 2-Coat Kynar Finish. Please clarify.
			R: All finishes for aluminum wall panels revised in Addendum 4.
40	Architecture	PE_39_Rich_Caulfield	Q: Intumescent Paint Scope of work?
			R: Clarified with Addendum 4.
41	Architecture	PE_40_Rich_Caulfield	Q: I do not recall nor see any details that indicate this blindsiding waterproofing...this is not in the budget and is new scope to add to the bid.
			R: Clarified with Addendum 4.
42	Architecture	PE_41_U.S. Drywall	Q: Spec 061600 3.1 G indicates sheathing cannot be left exposed at the end of the work day when rain is forecasted. It would be almost impossible to coordinate with the air barrier trade to meet this requirement, especially with a fast track project such as this. This would also slow production and increase labor costs. The Glass-Mat gypsum sheathings specified for this project have 6 – 12 month exposure warranties. Please confirm spec 061600 3.1 G will not be required.
			R: Paragraph 3.1G deleted in Addendum 5.
43	Architecture	PE_42_USDrywall	Q: Spec 061600 2.4 & 3.2 E requires joints and penetrations to be sealed according to sheathing manufacturer's recommendations. Sheathing manufacturers do not recommend joint treatments. It will be the responsibility of the air barrier system manufacturer to determine a compatible and acceptable joint treatment to comply with their system requirements in order to ultimately provide a complete warranted Air barrier System. Joint treatment of exterior sheathing is typically the responsibility of the air barrier sub (single source responsibility). Please advise. If 061600 is to own the joint treatment, please provide an acceptable product compatible to the specified air barrier system.
			R: Treatment of joints and penetrations in exterior sheathing is specified in Section 072713 Sheet Air Barriers. Section 061600 revised in Addendum 5.
44	Architecture	PE_43_USDrywall	Q: Spec 072100 2.5 A requires glass-fiber batt insulation to have 50% recycled content. Out of the three manufacturers listed, only one meets the 50% recycled content. This limits us to only one supplier. Please consider lowering the required recycled content to a minimum of 25%. I have attached manufacturers certifications. Below is the amount of recycled content each specified manufacturer provides: a. CertainTeed: 35% b. Johns Manville: 25% c. Owens Corning: 65%
			R: Specification revised in Addendum 5 to require 25%

			recycled content.
45	Architecture	PE_44_USDrywall	<p>Q: Spec 092116 1.4 C asks for Shop Drawings and calculations signed and sealed by a professional engineer. Typically shop drawings are only required for exterior metal stud framing, which on this project would fall under spec 054000. For interior framing 092116 manufacturers product data and literature would be submitting which identifies material properties and limiting height span tables for the required project Deflection limits. Please confirm manufacturers product literature and limiting height tables are sufficient.</p> <p>R: Submission of manufacturer's literature and limiting height tables will be permitted for interior non-loadbearing partitions only.</p>
46	Architecture	PE_45_USDrywall	<p>Q: Spec 092116 2.3 a. This hanger by Kinetics Noise AF-200 is not a "spring" hanger and does not look anything like the ones shown on A800. Is this the correct hanger? Also, this AF-200 is approximately 1/3 the cost of Mason Industries.</p> <p>R: Provide Mason Industries Model W30N or equal. Specification revised in Addendum 5.</p>
47	Architecture	PE_46_USDrywall	<p>Q: Spec 092116 2.3 b. lists Mason Industries 30NCC isolation hanger. This hanger utilizes threaded rod and cold rolled channels which would coincide with the ceiling system specified in paragraph 2.2 D and would also require the use of hat channels 2.2 E. Mason Industries also makes an hanger W30N which has identical properties. The only difference is it utilizes a Grid Suspension System and hanging wire which is also an approved ceiling system per 092116 2.2 F. Please see the attached product data for both the specified 30NCC and the proposed equal W30N. Please confirm W30N is an acceptable equal.</p> <p>Note: Resilient hangers are also specified for installation under the Grid Suspension System and for use with wire hangers. Per 092116 3.3F W30N hangers would be the correct type.</p> <p>R: Provide Mason Industries Model W30N or equal. Specification revised in Addendum 5.</p>
48	Architecture	PE_47_USDrywall	<p>Q: Per spec 061600 2.2 A Recycled content of Gypsum Sheathing is to be 45% min with 90% post-industrial. None of the Manufacturer's and products listed meet these requirements. Please advise.</p> <p>a) CertainTeed - 0% Pre / 0% Post b) GP - 30% Pre / 0% Post c) Lafarge - 93% Pre / 0% Post d) National - 95% Pre / 0% Post e) USG - .05% Pre / 3.9% Post</p> <p>R: Provide one of the products listed in Addendum 5 in revised Paragraph 2.2.C.1.</p>

49	Architecture	PE_48_USDrywall	<p>Q: There is 6" Mineral Board insulation installed on top of existing & partial new concrete slabs at the Parking Garage prior to new metal decks and slabs above. See 2,3/A320. Who owns this work?</p> <p>R: By drywall and framing subcontractor.</p>
50	Architecture	PE_49_USDrywall	<p>Q: Elev 6/A206 calls out detail 1/A518. This page does not exist. Please provide correct detail.</p> <p>R: Revised to "1/A516" in Addendum 5.</p>
51	Architecture	PE_50_USDrywall	<p>Q: Bldg Section 2/A300 at CL KS1 indicates detail 5/A330. This page does not exist. Please provide correct detail.</p> <p>R: Refer to attached reissued A300 for detail key clarifications.</p>
52	Architecture	PE_51_USDrywall	<p>Q: Bldg Section 1/A300 references page A330 at three locations. This page does not exist. Please provide correct details.</p> <p>R: Refer to attached reissued A300 for detail key clarifications</p>
53	Architecture	PE_52_USDrywall	<p>Q: Wall Sections 2,6&7/A301 reference details on page A330. This page does not exist. Please provide correct details.</p> <p>R: Refer to attached reissued A301 for detail key clarifications</p>
54	Architecture	PE_53_USDrywall	<p>Q: Wall Section 4/A302 at CL 10.6 indicates detail 12/A330. This page does not exist. Please provide correct detail.</p> <p>R: Refer to attached reissued A302 for detail key clarifications</p>
55	Architecture	PE_54_USDrywall	<p>Q: Spec 081113 3.3B.3 indicates to solidly pack mineral-fiber insulation behind frames at metal stud partitions. Door frame jamb & head details on A602 & A602 dot not show or call out this requirement. Please advise if mineral-fiber is required.</p> <p>R: Insulation is not required. Specification revised in Addendum 5.</p>
56	Architecture	PE_55_USDrywall	<p>Door frame details J1, J2, J6 & J8 on A602 indicate "5/8" Abuse-Resistant Gypsum Board". Please confirm that all frame details should refer to 5/8" GWB generically and that Note #11/A702 & 092116 3.6 A. 1, 2, 3 shall be followed for locations of required Gypsum Board types.</p> <p>R: All drywall to be 5/8" Type X unless noted otherwise in specifications. Keynotes revised in Addendum 5.</p>
57	Architecture	PE_56_USDrywall	<p>Q: Spec 092116 3.6 A.2.d indicates to carry Abuse-resistant GWB to 54" AFF at all Classrooms. It is not recommended to stop the ARGB at this height. This will create a butt joint just below eye level. Butt joints are very difficult to hide and</p>

			should be avoided whenever possible. This will also create additional labor by stopping one type of board and starting another as well as additional taping of the joint. I would recommend installing the ARGB to just above ceiling at locations with ceilings and 10' to 12' (standard sheet height) at locations exposed to deck. Please advise.
			R: Extend GWB to above ceiling. Specification 092116 revised in Addendum 5.
58	Architecture	PE_57_USDrywall	<p>Q: Wall Section 6/A321 calls out 6" XPS Insulation over existing slabs. All other details in this area e.g. 3,6/A320, 1&11/A510 call for 6" Mineral Wool Insulation Board. These are two completely different products. Please clarify which is correct.</p> <p>a) If insulation is to be Mineral Wool Insulation Board please confirm the correct product as there are two different Mineral Wool Insulation Boards in spec 072100. (2.3 & 2.4)</p> <p>b) If insulation is to be Mineral Wool Insulation Board, will joints need to be treated? If so, please specify required treatment.</p> <p>c) If insulation is to be XPS, confirm joints will be treated in accordance with 072100 3.5 B as this insulation is a foam-plastic insulation.</p>
			R: Provide mineral wool blanket insulation as specified in Section 072100 Paragraph 2.4.
59	Information Graphics	PE_58_Sunshine Sign	<p>Q: On drawing IG600 the type listing identifies only the medium transparent sign (IA.2) but the specs call for 2 large transparent signs as well. Please clarify.</p>
			R: The IA.1, IA.2, IA.3 signs are all unique sizes based on their site condition and nominal dimensions will be indicated in the message schedule and sheet IG600 Addendum 5. Before fabrication, the glass panels will need to be field measured for actual dimensions.
60	Information Graphics	PE_59_Sunshine Sign	<p>Q: Drawing IG600 identifies painted letters (PL) in the listing and shows ID and ID.1 Vinyl signs but the specs call for the painted letters. Please clarify.</p>
			R: A 16" cap ht to be used for mask and painted letters – refer to sheet IG600 Addendum 5 for layouts.
61	Architecture	PE_60_USDrywall	<p>Q: Per spec 061053 1.2 A.1 & 075423 1.3 A12. all wood nailers, blocking, curbs and plywood associated with roofing is by the roofer.</p> <p>a) Detail 4/A511 calls out a single row of wood blocking attached to LGMF by 061053 and a row of plywood above by 061053. The rest of the blocking and plywood is called out by 075423. Please confirm if the roofer owns the blocking & plywood called out as 061053?</p> <p>b) Detail 10/A510 calls out same plywood by roofer</p>
			R: The single row of blocking at the top of the wall is by Drywall and Framing (TYP). All other wood is by Roofer (TYP).

62	Architecture	PE_61_USDrywall	<p>Q: Refer to Plan 110.2. Curtainwall 09A has a 14'-6" High RO. The bottom of the W8 steel beam above this curtainwall is at 15'-9". This leaves a 1'-3" void between the CW and underside of beam. There is no wall section/detailing at this condition. Please provide construction type/detailing for this condition.</p> <p>a) Is there any structural steel support for this CW? b) Will the CW vertical mullions extend to the underside of beam? c) Is there LGMF above? If so, is it just an infill or will the LGMF need to be designed to take the loads imposed by the CW? d) There will not be any deflection at this condition. CW will need to accommodate for this.</p>
			<p>R: There is LGMF above that needs to be designed to take loads imposed by the C.W. See 6/A515 for similar condition @ CW9B. Delete note at bottom of detail stating "Light gage framing to support metal panel system" and replace with, "cold formed metal framing to support curtain wall system". Please note, cold formed metal framing to support similar conditions at: CW01, CW03, CW05, CW16, CW09A, CW17, CW18, CW11A, CW11B, CW19, SF06, SF07, SF10, SF14, SF15, and SF16.</p>
63	Architecture	PE_62_USDrywall	<p>Q: There is a free-standing low wall between Reception 0100 & Kitchen 0108. Who is responsible to provide structural support for this wall Misc Metals 055000 or Gypsum Board Assemblies 092116?</p>
			<p>R: The wall is LGF, with Blocking and Plywood Backup is by Drywall and Framing. The finish is by others. The wall will be supported with 054000 clips (to be engineered and detailed).</p>
64	Architecture	PE_63_USDrywall	<p>Q: Provide HM borrowed light frame type at the south wall of PE Office 0004.</p>
			<p>R: Office 0004 borrowed light frame types at Office 0004 are as follows: East – BL6, South- BL6, South between Office and Fitness – BL4.</p>
65	Architecture	PE_64_USDrywall	<p>Q: Provide HM frame types at the north & east walls of Office 0101.</p>
			<p>R: HM frame type at the north wall is "BL6" and east wall is "BL6".</p>
66	Architecture	PE_65_USDrywall	<p>Q: Refer to Interior elevation 3/A403. Provide window types at the north wall of Vest 0022A.</p>
			<p>R: Refer to SKA-027 included in Addendum 5.</p>
67	Architecture	PE_66_USDrywall	<p>Q: Provide wall finishes at the north & south walls of Vest 0022A.</p>
			<p>R: Per Addendum 4 IN100.3 wall finish is P1.</p>
68	Architecture	PE_67_USDrywall	<p>Provide head detail for CW10 at Vest 0022A. Similar concerns</p>

			as question #61 above.
			R: CW10 will be supported by structural steel @ head dtl. Also, SF11 to be supported by structural steel @ head dtl.
69	Architecture	PE_68_USDrywall	Q: There are free-standing low walls at Dining 0021. Refer to 7&10/A834. Who is responsible to provide structural support for these walls, Misc Metals 055000 or Gypsum Board Assemblies 092116 ?
			R: The wall is LGF, with Blocking and Plywood Backup is by Drywall and Framing. The finish is by others. The wall will be supported with 054000 clips (to be engineered and detailed).
70	Architecture	PE_69_USDrywall	Q: Wall Type S6A Describes (2) layers of GWB on one side. The Image of wall type S6A only shows (1) layer each side. Should there be a second layer of GWB on one side per description? I believe the image is correct. If 2 layers is required on one side it would be the same as wall type S6B.
			Q: The image is correct, the description is incorrect. Description revised in Addendum 5.
#	DISCIPLINE	ISSUE	PROJECT MANUAL
1	Specification	Subject:	Miscellaneous metals scope
		References:	Specification 055000 Metal Fabrications dated Bid Addendum 4 – January 13, 2014
		Description:	Delete Paragraph 1.3A.8 in its entirety.
2	Specification	Subject:	Stainless steel bollards
		References:	Specification 055000 Metal Fabrications dated Bid Addendum 4 – January 13, 2014
		Description:	Paragraph 2.14A.1: Delete the word “surgical”. Add the following to the end of Paragraph 2.17B: “or running in the circular direction for pipe.”
3	Specification	Subject:	Abrasive metal nosings
		References:	Specification 055000 Metal Fabrications dated Bid Addendum 4 – January 13, 2014
		Description:	Delete Paragraph 1.3A.3. Add the following new Paragraph 5 to Paragraph 1.3B: 5. Abrasive metal nosings for concrete stairs, installed by Division 03 Section “Cast-in-Place Concrete.”
4	Specification	Subject:	Exterior guardrails
		References:	Specification 055213 Pipe and Tube Railings
		Description:	Add the following new Paragraph E to Paragraph 1.5: E. Samples for Verification: For each type of exposed finish required.

			<ol style="list-style-type: none"> 1. Sections of each distinctly different linear railing member, including handrails, top rails, posts, and balusters. 2. Fittings and brackets. 3. Welded connections. 4. Assembled Samples of railing systems, made from full-size components, including top rail, post, handrail, and infill. Show method of finishing members at intersections. Samples need not be full height.
5	Specification	Subject:	Exterior sheathing products
		References:	Specification 061600 Sheathing
		Description:	<p>Revise Paragraph 2.2A to read as follows:</p> <p>A. Recycled Content of Gypsum Panel Products: Gypsum shall have a minimum of 90% pre-consumer or post-industrial recycled content.</p> <p>Delete Paragraph 2.2C.1.a through e in its entirety and replace with the following:</p> <ol style="list-style-type: none"> a. CertainTeed; GlasRoc Sheathing. b. Lafarge North America Inc.; Weather Defense Platinum Sheathing. c. National Gypsum; Gold Bond Brand e²XP Sheathing.
6	Specification	Subject:	Exterior sheathing installation
		References:	Specification 061600 Sheathing
		Description:	<p>Delete Paragraph 2.4A in its entirety and replace with the following:</p> <p>B. Sheathing joint and penetration treatment materials furnished and installed by Division 07 Section "Sheet Air Barriers" as part of the Waterproofing, Dampproofing and Caulking Filed Sub Bid.</p> <p>Delete Paragraph 3.1G in its entirety.</p> <p>Delete Paragraph 3.2E in its entirety.</p>
7	Specification	Subject:	Recycled content of insulation
		References:	Specification 072100 Thermal Insulation
		Description:	Paragraph 2.5A: Change "50 percent" to "25 percent".
8	Specification	Subject:	Joint sealant scope
		References:	Specification 079200 Joint Sealants dated Bid Addendum 4 – January 13, 2014
		Description:	<p>Revise Paragraph 3.6F.1.b to read as follows:</p> <ol style="list-style-type: none"> b. Perimeter joints of exterior openings

			including hollow metal frames, storefront, curtainwall and louver framing.
9	Specification	Subject:	Hollow metal frame installation
		References:	Specification 081113 Hollow Metal Doors and Frames
		Description:	Delete Paragraph 3.3B.3 in its entirety.
10	Specification	Subject:	Overhead coiling door type
		References:	Specification 083323 Overhead Coiling Doors
		Description:	Delete Section 083323 Overhead Coiling Doors in its entirety and replace with new Section 083323 Overhead Coiling Doors attached to this Addendum.
11	Specification	Subject:	Coiling grille operation
		References:	Specification 083326 Coiling Grilles
		Description:	Revise Paragraph 2.1F.7 to read as follows: 7. Other Equipment: Audible and visual signals. Revise Paragraph 2.2G.7 to read as follows: 7. Other Equipment: Audible and visual signals.
12	Specification	Subject:	Curtain wall mockup
		References:	Specification 084413 Glazed Aluminum Curtain Walls
		Description:	Delete paragraph 1.5H in its entirety and replace with the following: H. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution. 1. Build mockup of typical wall area as directed by Construction Manager. a. Include one curtain wall unit, minimum 24 x 36 inches, with typical flashing installed at head, jamb and sill. b. Include exterior metal stud back up wall, complete with sheathing, sheet air barrier, transition strips, preformed sealant, and joint sealants. Extend back up wall construction a minimum of 12 inches on all sides of window unit to demonstrate all flashing details. c. Include typical bracket assembly for mounting perforated plate panels. 2. Approval of mockups does not constitute

			approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
13	Specification	Subject:	Wood window samples and mockups
		References:	Specification 085200 Wood Windows
		Description:	<p>Insert the following new Paragraph E to Paragraph 1.4 and renumber subsequent paragraphs accordingly.</p> <p>E. Samples for Verification: For wood windows and components required, provide one full size window unit.</p> <p>Add the following new Paragraph G to Paragraph 1.5:</p> <p>G. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.</p> <p>3. Build mockup of typical wall area as directed by Construction Manager.</p> <p>a. Include one window unit, minimum 24 x 36 inches, with typical flashing installed at head, jamb and sill.</p> <p>b. Include exterior metal stud back up wall, complete with sheathing, sheet air barrier, transition strips, preformed sealant, and joint sealants. Extend back up wall construction a minimum of 12 inches on all sides of window unit to demonstrate all flashing details.</p> <p>4. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.</p>
14	Specification	Subject:	Abuse resistant gypsum board location
		References:	Specification 092116 Gypsum Board Assemblies
		Description:	Revise Paragraph 3.6A.2.d to read as follows: d. Classrooms: Full height.
15	Specification	Subject:	Resilient sound isolation hangers
		References:	Specification 092116 Gypsum Board Assemblies
		Description:	Delete Paragraph 2.3 in its entirety and replace with the following: 2.3 RESILIENT SOUND ISOLATION HANGERS

			<p>C. Resilient Sound Isolation Hangers: Consist of a steel frame containing a neoprene isolation element at the top and a coil steel spring seated in a neoprene cup on the bottom. Both the element and the cup shall be molded with a neoprene bushing that passes through the steel frame.</p> <ol style="list-style-type: none"> 1. The neoprene element shall be capable of a minimum deflection of 0.23inch (6mm) and the steel springs selected from a 1 inch (25mm) static deflection series with a minimum additional travel to solid of 1/2 inch (12mm). 2. Spring diameters and hanger box lower hole size shall be large enough to permit the hanger rod to swing through a 30E arc before contacting the box and short circuiting the spring. 3. Hangers shall be selected for a minimum of 0.75-inch (20mm) spring deflection and factory pre-compressed 70 percent of the total deflection determined by the assigned load per hanger. Hangers shall be manufactured with provision for bolting or attaching to the ceiling flat iron straps, wire, rods or steel runners. Hangers shall be fail safe. 4. Vertical Load Capacity: Ceiling hangers shall have sufficient capacity to support ceiling weights as constructed. In a vertical load test comparable to a ceiling installation, the ceiling hanger shall have a minimum design load capacity of 160 lbs. Design Load capacity shall be based on a minimum safety factor of 5 as compared to load to failure. Anchors for attachment of the clips to the substructure shall be selected to support ceiling weights at each hanger. 5. Products: Subject to compliance with requirements, provide Mason Industries Inc.; Model W30N, comparable product by the following, or equal: <ol style="list-style-type: none"> a. Kinetics Noise Control.
16	Specification	Subject:	Stage floor stain
		References:	Specification 096466 Wood Athletic Flooring
		Description:	<p>Add the following new Paragraph D to Paragraph 2.5:</p> <p>D. Interior Wood Stain: Factory-formulated penetrating wood stain for interior application applied at spreading rate recommended by</p>

			<p>manufacturer (100 g/L).</p> <ol style="list-style-type: none"> 6. Fuhr; ZVOC Sap Stain 135. 7. Gemini; Stain Blending Station. 8. Sansin; Purity Interior Stain Zero VOC, in full range of colors selected from Naturals, Transluents, Saturated and Ultra-Saturated. <p>Revise Paragraph 3.4E.1 to read as follows:</p> <ol style="list-style-type: none"> 9. Matte Finish: Two finish coats of acrylic polyurethane-based clear matte varnish over a sanding sealer and interior wood stain. <ol style="list-style-type: none"> a. Stain Coat: Custom stain to match Architect's sample. b. Sealer Coat: Clear sanding sealer. c. Finish Coats: Interior polyurethane-based clear matte varnish.
17	Specification	Subject:	Painting for signage
		References:	Specification 099100 Painting
		Description:	<p>Add the following new Paragraph 10 to Paragraph 1.3A:</p> <ol style="list-style-type: none"> 10. Signage, including masked and painted letterforms. <p>Add the following new Paragraph 12 to Paragraph 1.3D:</p> <ol style="list-style-type: none"> 12. Division 10 Section "Signage" for masked and painted letterforms to be field finished by this Section.
18	Specification	Subject:	Field finishing signage
		References:	Specification 101400 Signage
		Description:	<p>Add the following new Paragraph 6 to Paragraph 1.3B:</p> <ol style="list-style-type: none"> 6. Division 09 Section "Painting" for field finishing masked and painted letterforms.
19	Specification	Subject:	Signage – bronze finishes
		References:	Specification 101400 Signage
		Description:	<p>Add the following new Paragraphs D and E to Paragraph 2.1:</p> <p>D. BRONZE</p> <ol style="list-style-type: none"> 10. Alloy shall be selected to meet the requirements of specific application and comply with AISI Type 302/304. 11. ASTM B103 / B103M - 10 Standard Specification for Phosphor Bronze Plate, Sheet, Strip, and Rolled Bar <p>E. BRONZE FINISHES</p>

			12. Statuary finish to meet NAAMM medium dark oxidized finish designation M42-C55-060.
20	Specification	Subject:	Message list revisions
		References:	Specification 101400 Signage Message List dated BID Addendum 4 – January 13, 2014
		Description:	<p>Heading "Interpretatives IG500: Ground Floor" (pg. 21 of 30) Add the following comment to IA.1: Transparent – Large: 8'-0" x 7'-0" (Final dimensions are to be field measured based on installed window/ glass panels)</p> <p>Heading "Interpretatives IG501: First Floor" (pg. 24 of 30) Add the following comment to IA.2: Transparent – Medium, Locations 1 and 2: 7'-0" x 5'-0" (Final dimensions are to be field measured based on installed window/ glass panels)</p> <p>Heading "Interpretatives IG503: Third Floor" (pg. 28 of 30) Add the following comment to IA.1: Transparent – Large: 8'-0" x 7'-0" (Final dimensions are to be field measured based on installed window/ glass panels)</p>
21	Specification	Subject:	Cubicle curtain mockup
		References:	Specification 102123 Cubicles
		Description:	Delete Paragraph 1.5 in its entirety.
#	DISCIPLINE	ISSUE	DRAWINGS
01	Civil	Subject:	Outlet Control Structures
		References:	Sheet C301 / SKC-005
		Description:	Modified steel plate orifice diameters for outlet control
02	Civil	Subject:	Roof Drain Discharge Line at Loading Dock
		References:	Sheet C100 / SKC-006
		Description:	Modified pipe size to 18" CPP and invert into DMH106 and outlet invert of plumbing connection at building.
03	Architecture	Subject:	Clarification of "King Street" Nomenclature
		References:	Drawing Set
		Description:	"King Street" refers to the Vestibules & Corridor spine between grid lines neA.1 and neB @ all roofs of the building.
04	Architecture	Subject:	Roof Plan Clarifications
		References:	A104
		Description:	<p>Refer to reissued A104 which includes to following clarifications:</p> <ul style="list-style-type: none"> • Turned off PV layer allow for clarity of roof information (PV's shown on electrical drawings) • Added wall section keys. • Added note to Roof Type R1, "Default roof type unless noted otherwise."

			Individual items not clouded on Roof Plan for graphic clarity.
05	Architecture	Subject:	Duplicate Sheets of Drawings Issued in Addendum 4
		References:	A110.2, A110.3, A111.4, A112.1, A112.3
		Description:	<p>Replace both drawing A110.3 (time stamped 1/10/2014 5:31:05 PM) and (time stamped 1/10/2014 5:43:17PM) with attached reissued drawing with Addendum 5 in Drawing History. Revisions as clouded.</p> <p>Delete second group of drawings A110.2 (time stamped 1/10/2014 5:14:51 PM), A111.4 (time stamped 1/10/2014 5:15:09 PM), A112.1 (time stamped 1/10/2014 5:18:17 PM) & A112.3 (time stamped 1/10/2014 5:18:31 PM) which follow drawing A113.4, and occur before A120 in the Addendum 4 set.</p> <p>Refer to far left-hand side at the bottom of the drawing for time stamp at bottom of sheet.</p>
06	Architecture	Subject:	HVAC Registers in Sloped Ceiling
		References:	A120 and A130 Series Drawings
		Description:	Refer to Mechanical Drawings for diffusers in sloped ceilings. Diffusers in sloped ceiling to be included in Architectural RCP's for Conformance Set.
07	Architecture	Subject:	Third Floor Stair Ceiling Detail
		References:	A133.1, A133.2. SKA-013
		Description:	Clarified ceiling details at stairs per attached sketch
08	Architecture	Subject:	Elevation Clarifications
		References:	A200, A201, A202, A203, A204
		Description:	Clarified control joints, panel joints, and keynotes and sunshades as indicated on attached reissued drawings.
09	Architecture	Subject:	L.S. South Elevation
		References:	2/A205, SKA-015
		Description:	Clarifications to elevation per attached sketch.
10	Architecture	Subject:	L.S. East Elevation
		References:	1/ A205, SKA-016
		Description:	Clarified roof scupper per attached sketch.
11	Architecture	Subject:	Detail clarification
		References:	6/A206
		Description:	Delete detail key "1/A518" replace with "1/A516".
12	Architecture	Subject:	Building Section Clarifications
		References:	A300, A301, A302
		Description:	Clarified detail keys as indicated on attached reissued drawings.
13	Architecture	Subject:	Stair Clarifications
		References:	Drawings A311, A312, A313, A314

		Description:	Reissued attached drawings include general clarifications including but not limited to; dimensions, finish floor elevation tags, detail keys, added note per A316 clarification noted below. Individual revisions are not tagged to allow for legibility of drawings.
14	Architecture	Subject:	Stair Railing Key Clarification
		References:	A316
		Description:	Add the following notes: "Notes: 1. Provide galv. steel 1 ¼" diameter railings at 3'-0" measured above stair nosing, typ. in configurations shown including, wall-mounted and guardrail mounted. See A617 and 5/A311 for details. 2. Provide a 1 ½" square galv steel 2-bar guardrail at 3'-6" and 1'-9" measured above finished floor or stair nosing in configurations shown. Provide floor sleeves set in concrete and removable sections as shown. See A317 for floor sleeve railing base details. 3. Provide abrasive galv. steel nosings on all cast-in-place concrete stair nosings as indicated on 9/A617."
15	Architecture	Subject:	Stair Railing and Metal Abrasive Nosing Details
		References:	A317
		Description:	Added railing and metal abrasive nosing details to attached reissued drawing. Revisions are clouded.
16	Architecture	Subject:	Parapet Detail Clarification
		References:	4/A320
		Description:	Add detail bubble and key "4/A511sim". Refer to attached SKA-019. Note: exterior material above curtainwall to be metal plate wall panel.
17	Architecture	Subject:	Detail Title Clarification
		References:	1/A323
		Description:	Add "Fitness Center" to the beginning of the detail title; full title to read "Fitness Center Loading Area – Corrugated Metal".
18	Architecture	Subject:	Detail Key Clarification
		References:	4/A323 & 6/A323
		Description:	Delete detail key at parapet "4/A511" and replace with "8/A5111".
19	Architecture	Subject:	Callout of Public Wing East Façade Elevation
		References:	1 / A324, SKA-024
		Description:	Clarified detail key exterior aluminum sunshade per attached sketch.
20	Architecture	Subject:	Callout of Public East Façade Wall Section
		References:	2 / A324, SKA-025

		Description:	Clarified detail key exterior aluminum sunshade per attached sketch.
21	Architecture	Subject:	Detail Key Clarification
		References:	3/A325
		Description:	Revise detail bubble at brick shelf, delete detail key "12/A511" and replace with "12/A511 sim. opp".
22	Architecture	Subject:	Detail Key Clarification
		References:	2/A326
		Description:	Add "opp" to detail keys 7/A511 & 8/A511.
23	Architecture	Subject:	Detail Key Clarification
		References:	2/A326
		Description:	Add "sim" to detail key 9/A513.
24	Architecture	Subject:	Detail Key Clarification
		References:	2/A326
		Description:	Add "sim" to detail key 4/A616.
25	Architecture	Subject:	Detail Key Clarification
		References:	2/A326
		Description:	Add "sim" to detail key 1/A513.
26	Architecture	Subject:	Detail Key Clarification
		References:	2/A326
		Description:	Add detail bubble and key "13/A510 sim. opp" to parapet.
27	Architecture	Subject:	Detail Key Clarification
		References:	2/A326
		Description:	Add "opp" to detail key 12/A510.
28	Architecture	Subject:	Detail Key Clarification
		References:	2/A327
		Description:	Add "opp" to detail keys 7/A511
29	Architecture	Subject:	Detail Key Clarification
		References:	2/A327
		Description:	Delete 8/A511 and replace with 8/A513
30	Architecture	Subject:	Detail Key Clarification
		References:	2/A327
		Description:	Delete "9/A513" and replace with "7 & 9 / A513".
31	Architecture	Subject:	Detail Key Clarification
		References:	2/A328
		Description:	Add "sim" to detail key 2/A514.
32	Architecture	Subject:	Detail Key Clarification
		References:	2/A329
		Description:	Delete detail key "7/A511" and replace with "9/A511 sim."

33	Architecture	Subject:	Detail Key Clarification
		References:	3/A329
		Description:	At sill of curtain wall add detail bubble and key for 9/A514 as indicated on attached SKA-028.
34	Architecture	Subject:	Detail Key Clarification
		References:	4/A329
		Description:	At sill of curtain wall add detail bubble and key for 9/A514 opp. hand as indicated on attached SKA-028 opp hand.
35	Architecture	Subject:	Detail Key Clarification
		References:	1/A401
		Description:	Delete detail key "1/A502" and replace with "2/A502 sim."
36	Architecture	Subject:	Detail Key Clarification
		References:	7/A401
		Description:	Delete detail key "9/A502" and replace with "7/A502"
37	Architecture	Subject:	Detail Key Clarification
		References:	7/A401
		Description:	Delete detail key "10/A502 and replace with "4/A502"
38	Architecture	Subject:	Detail Key Clarification
		References:	7/A401
		Description:	Delete detail key "12/A502 and replace with "8/A502"
39	Architecture	Subject:	Detail Key Clarification
		References:	10/A401
		Description:	Delete detail key " and replace with ""
40	Architecture	Subject:	Detail Key Clarification
		References:	10/A401
		Description:	Delete detail key "15/A502" and replace with "9/A502"
41	Architecture	Subject:	Detail Key Clarification
		References:	10/A401
		Description:	Delete detail key "14/A502" and replace with "6/A502"
42	Architecture	Subject:	Elevation Key Clarification
		References:	A402
		Description:	Delete elevation key numbers and replace with the following starting at the east: "1 & 2 /A402.1" and "1 & 2 / A402.2
43	Architecture	Subject:	General Clarification to Exit Sign Orientation
		References:	2/ A403.1 and all Exit Signs Typical
		Description:	Rotate exit signs for correct orientation of "EXIT".
44	Architecture	Subject:	0022A Entry – Enlarged Plan
		References:	2/A403, SKA-026
		Description:	Added elevation keys to plan per attached sketch.

45	Architecture	Subject:	0022A Entry Elevations
		References:	3 & 4/A403, SKA-027
		Description:	Clarified elevations per attached sketch.
46	Architecture	Subject:	Wall Clarification
		References:	2/A403.1
		Description:	Add horizontal line to continue wall / beyond at area of exit sign.
47	Architecture	Subject:	Elevation Key Clarification
		References:	1 / Dining Servery Casework Key below Grid 6.9
		Description:	Add "A406.2" to elevation key.
48	Architecture	Subject:	Auditorium Clarifications
		References:	A408, A408.1, A408.2
		Description:	Attached drawings reissued to clarify interior walls and panels that were missing from previous plot issued in Addendum 4.
49	Architecture	Subject:	Wall Visibility Clarification
		References:	A409.2
		Description:	Delete wall graphic at grid line M between grids ne1 and 8; wall is not full height and should not appear on RCP.
50	Architecture	Subject:	Detail Key Clarification
		References:	A409.2
		Description:	Add "sim" to detail key 1/A802 at Small Group Room 2019.
51	Architecture	Subject:	Wall Visibility Clarification
		References:	A409.2
		Description:	Delete wall graphic at grid line L between grids KS3 and KS2; wall is not full height and should not appear on RCP.
52	Architecture	Subject:	Elevation Key Clarification
		References:	8/A410
		Description:	Delete "SKA-017" in its entirety with no substitution.
53	Architecture	Subject:	Elevation Key Clarification
		References:	A411, Staff Toilet 0102
		Description:	Move detail key to clarify "2/A462" is the elevation being keyed.
54	Architecture	Subject:	Detail Key Clarification
		References:	2/A411
		Description:	Revise gate note: delete "6/A841" and replace with "2/A841"
55	Architecture	Subject:	Borrowed Light Clarification
		References:	A411
		Description:	Delete borrowed light frame type tags at Office 0004 and replace with tags as follows: East - "BL6", South - " BL6", South between Office and Fitness - "BL4".

56	Architecture	Subject:	Frame type Clarification
		References:	1/A411
		Description:	Delete frame tags at Office 0101 and replace with frame tags as follows: north wall - "BL6" and east wall - "BL6".
57	Architecture	Subject:	0022A-Enlarged Plan & Elevation Clarifications
		References:	A403, SKA-018
		Description:	Clarifications to plan & elevation per attached sketch.
58	Architecture	Subject:	Clarification of Corridor 3104 Casework
		References:	A113.4, 9/A419
		Description:	Added casework elevation for clarification – 9/A419. Casework includes seven (7) B11 Base cabinet-full height with shelves - six (6) 30" wide and one (1) 24" wide.
59	Architecture	Subject:	Casework Note Addition
		References:	A461-A464
		Description:	Added note, "Refer to A460 for notes".
60	Architecture	Subject:	Sealant at Casework
		References:	A460; A831-A834
		Description:	Add a note to the drawings: "Install joint sealant at all joints between counters and walls, counters and backsplashes, and between countertops and plumbing fixtures."
61	Architecture	Subject:	Parapet Details
		References:	6 & 10 / A510, SKA-018
		Description:	Clarified parapet details per attached sketch.
62	Architecture	Subject:	Detail Key Clarification
		References:	8 /A510
		Description:	Add "079100A" to "shim and compressed impregnated foam tape note?"
63	Architecture	Subject:	King Street Fiberglass Sandwich Panel
		References:	14/A511, SKA-017
		Description:	Clarified fiberglass sandwich panel per attached sketch.
64	Architecture	Subject:	Corrugated Metal – Parapet Enlarged
		References:	4/A511, SKA- 019
		Description:	Added parapet detail 14 per attached sketch.
65	Architecture	Subject:	Clarifications A513
		References:	A513
		Description:	Clarified details per attached reissued drawing.
66	Architecture	Subject:	Waterproofing at Lower School Areaway West
		References:	2/A514, SKA-020
		Description:	Clarified waterproofing at lower school areaway per attached sketch.

67	Architecture	Subject:	Waterproofing at Lower School Areaway West
		References:	3/A514, SKA-021
		Description:	Clarified waterproofing at lower school areaway and railing per attached sketch.
68	Architecture	Subject:	Waterproofing at Courtyard
		References:	4 & 6 /A514, SKA-023
		Description:	Clarified waterproofing at courtyard per attached sketch.
69	Architecture	Subject:	A514
		References:	1 / A514
		Description:	Add the note "Metal Fabrications 055000" to the detail, before the "1" x 1" angle and 1" bar grill.
70	Architecture	Subject:	Curtainwall Detail at Roof Curb Typical
		References:	9/A514, SKA-028
		Description:	Clarified curtainwall detail at typical roof curb detail per attached sketch.
71	Architecture	Subject:	Upper School Canopy
		References:	6/A516, SKA-011
		Description:	Clarified canopy construction per attached sketch.
72	Architecture	Subject:	Lower School Canopy
		References:	SKA-012, 7/A516
		Description:	Clarified canopy construction per attached sketch.
73	Architecture	Subject:	Drywall Clarification
		References:	A602, A603
		Description:	Delete "5/8" abuse resistant" keynotes at door details and replace with "5/8" type X". Refer to specifications for abuse resistant drywall locations.
74	Architecture	Subject:	Curtainwall Base
		References:	A610, SKA-014
		Description:	Clarified curtainwall base per attached sketch.
75	Architecture	Subject:	Clarifications A614
		References:	A614
		Description:	Clarified details per attached reissued drawing.
76	Architecture	Subject:	Louver Type L1
		References:	A614
		Description:	Delete louver type L1 in its entirety with no substitution.
77	Architecture	Subject:	C.W. Sill & Door Sill @ Vestibule (2/A617)
		References:	2/A617, SKA-001 and 3/A617 SKA-002
		Description:	Clarified detail per attached sketches.
78	Architecture	Subject:	Typ. Waterproofing @ Sill, Jamb and Heat of C.W. @ Masonry
		References:	1/A618, SKA-003 and 2/A618, SKA-004, and 3/A618, SKA-

			005
		Description:	Clarified details per attached sketches.
79	Architecture	Subject:	Typ. Waterproofing @ Sill and Head of C.W. @ Rainscreen
		References:	4/A618, SKA-006, and /A618, SKA-007
		Description:	Clarified detail per attached sketches.
80	Architecture	Subject:	Typ. Waterproofing @ Sill, Jamb and Head of Wood Windows
		References:	1/A619, SKA-008 and 2/A619, SKA-009, and 3/A619, SKA-010
		Description:	Clarified detail per attached sketch.
81	Architecture	Subject:	Storefront / Curtainwall Clarification
		References:	A630
		Description:	"SF08" and "SF09" should be curtainwall instead of storefront as tag indicates. Tags will be revised in Conformance Set.
82	Architecture	Subject:	Note Clarification
		References:	Exterior Wall Type G/ A701
		Description:	Add "Installed by 042000" to end of note: revised note to read "072100-G Spray polyurethane foam insulation installed by 042000".
83	Architecture	Subject:	Wall Type S6A
		References:	S6A / A702
		Description:	Delete the "2 layers of GWB on each side" and replace with "1 layer GWB on each side".
84	Architecture	Subject:	Detail at Top of Stair
		References:	10/A802, SKA-022
		Description:	Added detail at top of stairs 03 & 04 per attached sketch
85	Architecture	Subject:	Casework Material
		References:	A831-A833
		Description:	Delete all references to melamine. Replace with "plam" as indicated in specifications.
86	Architecture	Subject:	Casework Shelving
		References:	A831-A833
		Description:	Delete "holes and pins" and replace with "shelf standards".
87	Architecture	Subject:	Floor Finish Electrical Vault
		References:	IN100.1
		Description:	Delete floor finish code "SCF1" and replace with "EPF1" at Electrical Vault 0061
88	Information Graphics	Subject:	IG203
		References:	No. 2, 01.24.2014, ADDENDUM 5
		Description:	F1 Occupancy sign is to be 1'-10" wide.

89	Information Graphics	Subject:	IG201
		References:	IG201
		Description:	A2.1 Lower School pin mounted lettering (Dr. Martin Luther King Jr. School) increased in cap ht. to 14" (length adjusts to 25'-1"). A2.1 Upper School pin mounted lettering (Putnam Avenue School) increased in cap ht. to 16" (length adjusts to 20'-5"). Attached Stainless Steel U-channel increased to a 2" thick channel. Add 1/2" x 3" flat Stainless Steel bar below u-channel, fastened through roof into blocking (refer to sheet drawing number SKA-011 ref. 101400).
90	Signage	Subject:	Clarifications to IG600
		References:	No. 2, 01.24.2014, ADDENDUM 5
		Description:	Refer to attached reissued drawings for changes that include: Reference to sign type 1A.1 and 1A.3 added. All sign quantities revised to reflect amounts in message schedule. PL masked and painted letterforms sign type added.
91	Foodservice	Subject:	Item #30 – Double Combination Oven (stacked)
		References:	Elevation C/ FS104, SKFS-1
		Description:	Revise elevation C per SKSFS-1
			END OF BID ADDENDUM 5 – VOLUME 1

SECTION 083323 – OVERHEAD COILING DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 SUMMARY

- A. Section Includes:

- 1. **Fire-rated service** doors, exterior.

- B. Related Sections:

- 1. Division 01 Section “Sustainable Design Requirements.”
- 2. Division 01 Section “General Commissioning Requirements.”
- 3. Division 05 Section "Metal Fabrications" for miscellaneous steel supports.
- 4. Division 08 Section “Coiling Grilles.”
- 5. Division 08 Section “Door Hardware” for lock cylinders and keying.
- 6. Division 26 Sections for electrical service and connections for powered operators and accessories.

1.3 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Design overhead coiling doors, including comprehensive engineering analysis by a qualified professional structural engineer, licensed in the Commonwealth of Massachusetts, using performance requirements and design criteria indicated.
- B. Structural Performance, Exterior Doors: Exterior overhead coiling doors shall withstand the wind loads, the effects of gravity loads, and loads and stresses within limits and under conditions indicated according to SEI/ASCE 7 and the Connecticut State Building Code.
- C. Operation Cycles: Provide overhead coiling door components and operators capable of operating for not less than number of cycles indicated for each door. One operation cycle is complete when a door is opened from the closed position to the fully open position and returned to the closed position.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type and size of overhead coiling door and accessory. Include the following:
1. Include construction details, material descriptions, dimensions of individual components, profiles for slats, and finishes.
 2. Include rated capacities, operating characteristics, electrical characteristics, and furnished accessories.
 3. **Include description of automatic closing device and testing and resetting instructions.**
- B. LEED Submittals:
1. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content. Include statement indicating cost for each product having recycled content.
 2. Product Certificates for Credit MR 5: For products and materials required to comply with requirements for regional materials indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.
- C. Shop Drawings: For each installation and for special components not dimensioned or detailed in manufacturer's product data. Include plans, elevations, sections, details, and attachments to other work.
1. Include plans, elevations, sections, and mounting details.
 2. Include details of equipment assemblies, and indicate dimensions, required clearances, method of field assembly, components, and location and size of each field connection.
 3. Include points of attachment and their corresponding static and dynamic loads imposed on structure.
 4. For exterior components, include details of provisions for assembly expansion and contraction and for excluding and draining moisture to the exterior.
 5. Show locations of controls, locking devices, detectors or replaceable fusible links, and other accessories.
 6. Include diagrams for power, signal, and control wiring.
- D. Samples for Initial Selection: Manufacturer's finish charts showing full range of colors and textures available for units with factory-applied finishes.
1. Include similar Samples of accessories involving color selection.
- E. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below.
1. Curtain Slats: 12 inches long.
 2. Bottom Bar: 6 inches long, with sensor edge.

F. Delegated-Design Submittal: For overhead coiling doors indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional structural engineer responsible for their preparation.

1. Summary of forces and loads on walls and jambs.

G. Qualification Data: For qualified Installer.

H. Maintenance Data: For overhead coiling doors to include in maintenance manuals.

I. Warranty: Special warranty specified in this Section.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for both installation and maintenance of units required for this Project.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

C. Regulatory Requirements: Comply with applicable provisions in the 2010 ADA Standards and AAB.

D. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at as close to neutral pressure as possible according to NFPA 252.

1. Oversize Fire-Rated Door Assemblies: For units exceeding sizes of tested assemblies, provide certification by a qualified testing agency that doors comply with standard construction requirements for tested and labeled fire-rated door assemblies except for size.

1.6 WARRANTY

A. Special Warranty for Overhead Coiling Doors: Manufacturer's standard form in which manufacturer agrees to repair or replace components of overhead coiling doors that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Three years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS, GENERAL

- A. Source Limitations: Obtain overhead coiling doors from single source from single manufacturer.
1. Obtain operators and controls from overhead coiling door manufacturer.

2.2 FIRE-RATED SERVICE DOOR ASSEMBLY

- A. **Fire-Rated Service Door:** Overhead coiling door formed with curtain of interlocking metal slats.
1. Basis of Design Product: Subject to compliance with requirements, provide **Overhead Door Corporation; 630 Series** or one of the following:
 - a. Cornell Iron Works, Inc.; Model ERD10.
 - b. Raynor; FireCoil.
- B. Operation Cycles: Not less than 10,000.
1. Include tamperproof cycle counter.
- C. **Fire Rating: 1-1/2 hour, Class B.**
- D. Door Curtain Material: Galvanized steel.
- E. Door Curtain Slats: Flat profile slats of 1-1/2-inch center-to-center height.
- F. Curtain Jamb Guides: Galvanized steel with exposed finish matching curtain slats. Provide continuous integral wear strips to prevent metal-to-metal contact and to minimize operational noise.
- G. Hood: Galvanized steel.
1. Shape: Square.
 2. Mounting: Between jambs.
- H. Locking Devices: Equip door with locking device assembly.
1. Locking Device Assembly: Single-jamb side locking bars, operable from inside with cylinders.
- I. Electric Door Operator:
1. Usage Classification: Light duty, up to 10 cycles per hour.
 2. Operator Location: Top of hood.

3. Motor Exposure: Interior.
4. Emergency Manual Operation: Push-up type.
5. Obstruction Detection Device: Automatic electric sensor edge on bottom bar; self-monitoring type.
 - a. Sensor Edge Bulb Color: As selected by Architect from manufacturer's full range.
6. Remote-Control Station: Interior.
7. Other Equipment: Audible and visual signals.

J. Curtain Accessories: Equip door with automatic closing device.

K. Door Finish:

1. Powder-Coated Finish: Color as selected by Architect from manufacturer's full range.
2. Interior Curtain-Slat Facing: Match finish of exterior curtain-slat face.

2.3 DOOR CURTAIN MATERIALS AND CONSTRUCTION

- A. Recycled Content of Steel Products: Postconsumer recycled content of not less than 25 percent.
- B. Door Curtains: Fabricate overhead coiling-door curtain of interlocking metal slats, designed to withstand wind loading indicated, in a continuous length for width of door without splices. Unless otherwise indicated, provide slats of thickness and mechanical properties recommended by door manufacturer for performance, size, and type of door indicated, and as follows:
 1. Steel Door Curtain Slats: Zinc-coated (galvanized), cold-rolled structural steel sheet; complying with ASTM A 653/A 653M, with G90 zinc coating; nominal sheet thickness (coated) of 20 gauge and as required to meet requirements.
 2. Metal Interior Curtain-Slat Facing: Match metal of exterior curtain-slat face.
 3. Gasket Seal: Provide insulated slats with manufacturer's standard interior-to-exterior thermal break or with continuous gaskets between slats.
- C. Endlocks and Windlocks for Service Doors: Malleable-iron casings galvanized after fabrication, secured to curtain slats with galvanized rivets or high-strength nylon. Provide locks on not less than alternate curtain slats for curtain alignment and resistance against lateral movement.
- D. Bottom Bar for Service Doors: Consisting of two angles, each not less than 1-1/2 by 1-1/2 by 1/8 inch thick; fabricated from manufacturer's standard hot-dip galvanized steel, stainless steel, or aluminum extrusions to match curtain slats and finish.
- E. Curtain Jamb Guides: Manufacturer's standard angles or channels and angles of same material and finish as curtain slats unless otherwise indicated, with sufficient depth and strength to retain curtain, to allow curtain to operate smoothly, and to withstand loading. Slot bolt holes for guide adjustment. Provide removable stops on guides to prevent overtravel of curtain.

2.4 HOODS

- A. General: Form sheet metal hood to entirely enclose coiled curtain and operating mechanism at opening head. Contour to fit end brackets to which hood is attached. Roll and reinforce top and bottom edges for stiffness. Form closed ends for surface-mounted hoods and fascia for any portion of between-jamb mounting that projects beyond wall face. Equip hood with intermediate support brackets as required to prevent sagging.
 - 1. Galvanized Steel: Nominal 0.028-inch- thick, hot-dip galvanized steel sheet with G90 zinc coating, complying with ASTM A 653/A 653M.
 - 2. Include automatic drop baffle on fire-rated doors to guard against passage of smoke or flame.

2.5 LOCKING DEVICES

- A. Locking Device Assembly: Fabricate with cylinder lock, spring-loaded dead bolt, operating handle, cam plate, and adjustable locking bars to engage through slots in tracks.
 - 1. Lock Cylinders: Provide cylinders specified in Division 08 Section "Door Hardware."
 - 2. Keys: Provide two for each cylinder.
- B. Safety Interlock Switch: Equip power-operated doors with safety interlock switch to disengage power supply when door is locked.

2.6 CURTAIN ACCESSORIES

- A. Weatherseals: Equip each exterior door with weather-stripping gaskets fitted to entire perimeter of door for a weathertight installation, unless otherwise indicated.
 - 1. At door head, use 1/8-inch- thick, replaceable, continuous sheet secured to inside of hood.
 - 2. At door jambs, use replaceable, adjustable, continuous, flexible, 1/8-inch- thick seals of flexible vinyl, rubber, or neoprene.
- B. Push/Pull Handles: Equip each push-up-operated or emergency-operated door with lifting handles on each side of door, finished to match door.
 - 1. Provide pull-down straps or pole hooks for doors more than 84 inches high.
- C. **Automatic-Closing Device for Fire-Rated Doors: Equip each fire-rated door with an automatic-closing device or holder-release mechanism and governor unit complying with NFPA 80 and an easily tested and reset release mechanism. Testing for manually operated doors shall allow resetting by opening the door without retensioning the counterbalancing mechanism. Release mechanism for motor- operated doors shall allow testing without mechanical release of the door. Automatic-closing device shall be designed for activation by the following:**

1. **Replaceable fusible links with temperature rise and melting point of 165 deg F interconnected and mounted on both sides of door opening.**
 2. **Manufacturer's standard UL-labeled smoke detector and door-holder-release devices.**
 3. **Manufacturer's standard UL-labeled heat detector and door-holder-release devices.**
 4. **Building fire-detection, smoke-detection, and -alarm systems.**
- D. Doors to be equipped with floor resettable electric motor operation system, requiring only one sash chain to be routed to the operated side (sash chain not required to be routed to adjusting wheel side.)**
1. **Release mechanism includes planetary gear differential system.**
 2. **Door will close by a thermally actuated link rated at 165 degrees F, or by an optional listed releasing device, or by manually activating the release handle.**
 3. **All counterbalance spring tension shall be maintained when the release mechanism is activated.**
 4. **After closing by alarm activation with power on the electric motor, the door shall be able to be reset by resetting the alarm system without additional tools required.**

2.7 COUNTERBALANCING MECHANISM

- A. **General:** Counterbalance doors by means of manufacturer's standard mechanism with an adjustable-tension, steel helical torsion spring mounted around a steel shaft and contained in a spring barrel connected to top of curtain with barrel rings. Use grease-sealed bearings or self-lubricating graphite bearings for rotating members.
- B. **Counterbalance Barrel:** Fabricate spring barrel of manufacturer's standard hot-formed, structural-quality, welded or seamless carbon-steel pipe, of sufficient diameter and wall thickness to support rolled-up curtain without distortion of slats and to limit barrel deflection to not more than 0.03 in./ft. of span under full load.
- C. **Spring Balance:** One or more oil-tempered, heat-treated steel helical torsion springs. Size springs to counterbalance weight of curtain, with uniform adjustment accessible from outside barrel. Secure ends of springs to barrel and shaft with cast-steel barrel plugs.
- D. **Torsion Rod for Counterbalance Shaft:** Fabricate of manufacturer's standard cold-rolled steel, sized to hold fixed spring ends and carry torsional load.
- E. **Brackets:** Manufacturer's standard mounting brackets of either cast iron or cold-rolled steel plate.

2.8 ELECTRIC DOOR OPERATORS

- A. **General:** Electric door operator assembly of size and capacity recommended and provided by door manufacturer for door and operation-cycles requirement specified, with electric motor and factory-prewired motor controls, starter, gear-reduction unit, solenoid-operated brake, clutch,

remote-control stations, control devices, integral gearing for locking door, and accessories required for proper operation.

1. Comply with NFPA 70.
 2. Provide control equipment complying with NEMA ICS 1, NEMA ICS 2, and NEMA ICS 6, with NFPA 70 Class 2 control circuit, maximum 24 V, ac or dc.
- B. Usage Classification: Electric operator and components capable of operating for not less than number of cycles per hour indicated for each door.
- C. Door Operator Location: Operator location indicated for each door.
1. Wall Mounted: Operator is mounted to the inside front wall on the left or right side of door and connected to door drive shaft with drive chain and sprockets.
- D. Electric Motors: Comply with NEMA designation, temperature rating, service factor, enclosure type, and efficiency requirements.
1. Electrical Characteristics:
 - a. Phase: Single phase.
 - b. Volts: 115 V.
 - c. Hertz: 60.
 2. Motor Type and Controller: Reversible motor and controller (disconnect switch) for motor exposure indicated.
 3. Motor Size: Minimum size as indicated. If not indicated, large enough to start, accelerate, and operate door in either direction from any position, at a speed not less than 8 in./sec. and not more than 12 in./sec., without exceeding nameplate ratings or service factor.
 4. Operating Controls, Controllers (Disconnect Switches), Wiring Devices, and Wiring: Manufacturer's standard unless otherwise indicated.
 5. Coordinate wiring requirements and electrical characteristics of motors and other electrical devices with building electrical system and each location where installed.
- E. Limit Switches: Equip each motorized door with adjustable switches interlocked with motor controls and set to automatically stop door at fully opened and fully closed positions.
- F. Obstruction Detection Device: Equip motorized door with indicated external automatic safety sensor capable of protecting full width of door opening. For fire-rated doors, activation delays closing.
1. Photoelectric Sensor: Manufacturer's standard system designed to detect an obstruction in door opening without contact between door and obstruction.
 - a. Self-Monitoring Type: Designed to interface with door operator control circuit to detect damage to or disconnection of sensing device. When self-monitoring feature is activated, door closes only with sustained pressure on close button.

2. Sensor Edge: Automatic safety sensor edge, located within astragal or weather stripping mounted to bottom bar. Contact with sensor activates device. Connect to control circuit using manufacturer's standard take-up reel or self-coiling cable.
 - a. Self-Monitoring Type: Four-wire configured device designed to interface with door operator control circuit to detect damage to or disconnection of sensor edge.
- G. Remote-Control Station: Key operation control station with controls labeled "Open," "Close," and "Stop."
 1. Interior units, full-guarded, surface-mounted, heavy-duty type, with general-purpose NEMA ICS 6, Type 1 enclosure.
- H. Emergency Manual Operation: Equip each electrically powered door with capability for emergency manual operation. Design manual mechanism so required force for door operation does not exceed 25 lbf.
- I. Emergency Operation Disconnect Device: Equip operator with hand-operated disconnect mechanism for automatically engaging manual operator and releasing brake for emergency manual operation while disconnecting motor without affecting timing of limit switch. Mount mechanism so it is accessible from floor level. Include interlock device to automatically prevent motor from operating when emergency operator is engaged.
- J. Motor Removal: Design operator so motor may be removed without disturbing limit-switch adjustment and without affecting emergency manual operation.
- K. Audible and Visual Signals: Audible alarm and visual indicator lights in compliance with regulatory requirements for accessibility.

2.9 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.10 STEEL AND GALVANIZED-STEEL FINISHES

- A. Powder-Coat Finish: Manufacturer's standard baked-on finish consisting of prime coat and thermosetting topcoat. Comply with coating manufacturer's written instructions for cleaning, pretreatment, application, and minimum dry film thickness.
 1. Color: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrate areas and conditions, with Installer present, for compliance with requirements for substrate construction and other conditions affecting performance of the Work.
- B. Examine locations of electrical connections.
- C. Proceed with installation only after unsatisfactory conditions have been corrected. Commencement of work indicates acceptance of substrates.

3.2 INSTALLATION

- A. Install overhead coiling doors and operating equipment complete with necessary hardware, anchors, inserts, hangers, and equipment supports; according to manufacturer's written instructions and as specified.
- B. Install overhead coiling doors, hoods, and operators at the mounting locations indicated for each door.
- C. Accessibility: Install overhead coiling doors, switches, and controls along accessible routes in compliance with regulatory requirements for accessibility.

3.3 STARTUP SERVICE

- A. Engage a factory-authorized service representative to perform startup service.
 - 1. Perform installation and startup checks according to manufacturer's written instructions.
 - 2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

3.4 ADJUSTING

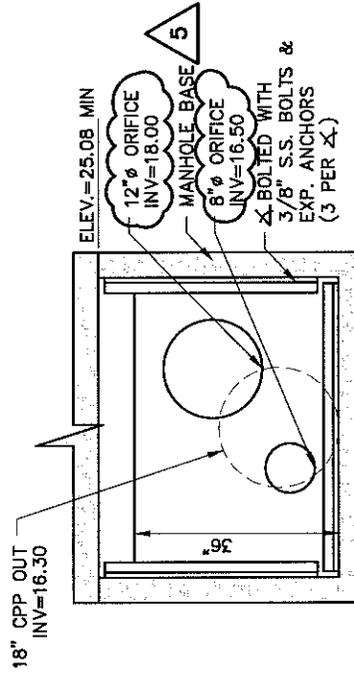
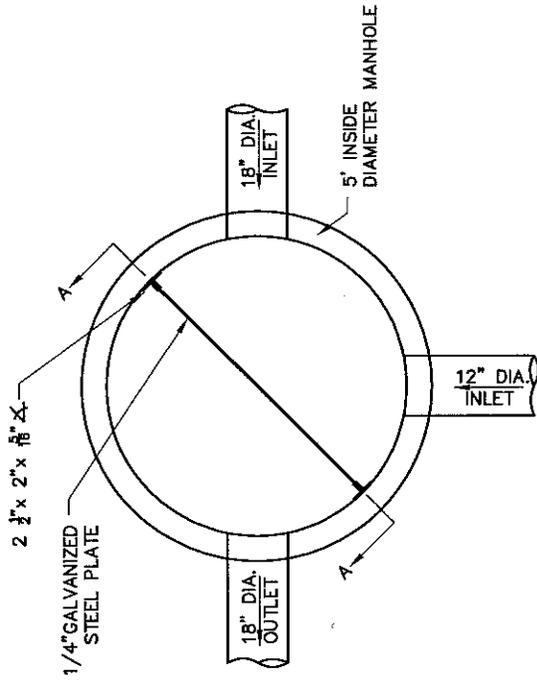
- A. Adjust hardware and moving parts to function smoothly so that doors operate easily, free of warp, twist, or distortion.
- B. Lubricate bearings and sliding parts as recommended by manufacturer.
- C. Adjust seals to provide weathertight fit around entire perimeter.

DR. MARTIN LUTHER KING JR. SCHOOL CONSTRUCTION PROJECT
CAMBRIDGE, MA
FILE NO. 5849C

3.5 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain overhead coiling doors.

END OF SECTION 083323



OCS101
SECTION A-A

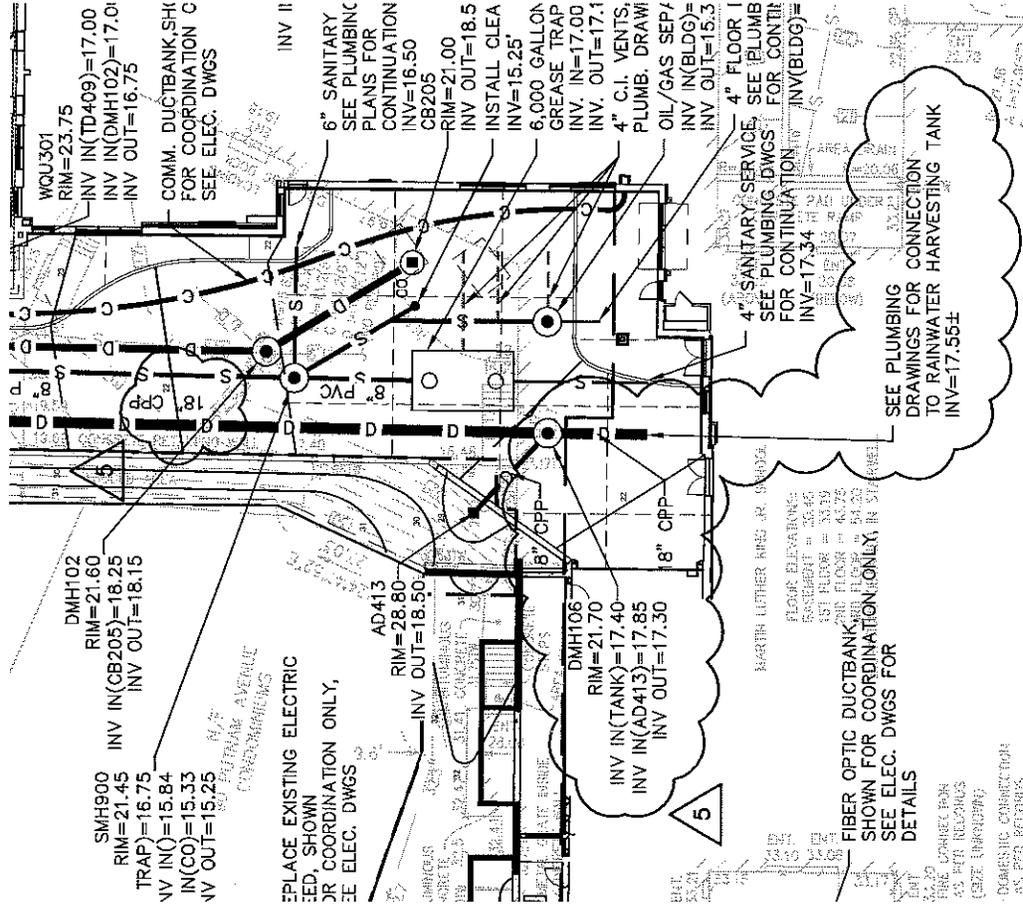
OUTLET CONTROL STRUCTURES (15)

NOT TO SCALE

Perkins Eastman
50 FRANKLIN STREET
SUITE 200
BOSTON, MA 02110
P. 617.448-4039

PROJECT: Martin Luther King, Jr. School Construction Project
DRAWING TITLE: REVISED OCS 101 DETAIL, SHEET C901
DATE: 01.24.2014 ADDENDUM 5

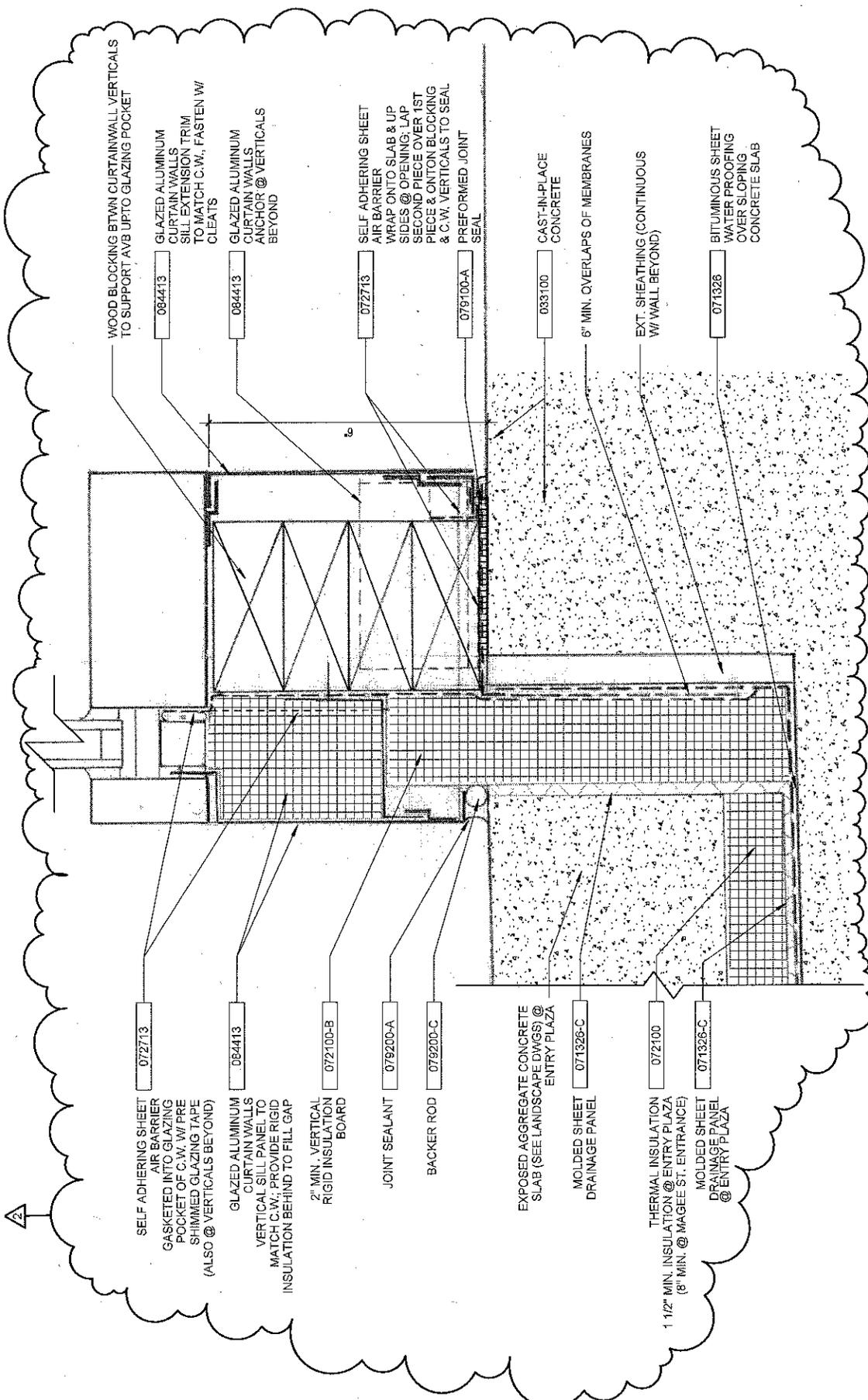
PROJECT NO. 47831.00
SCALE: NTS
DWG. NO.: SKC - 005



Perkins Eastman
 90 FRANKLIN STREET
 BOSTON, MA 02110
 T. 617.469.4000
 F. 617.469.4049

PROJECT: Martin Luther King, Jr. School Construction Project
 DRAWING TITLE: MODIFICATIONS TO ROOF DRAIN DISCHARGE LINE AT LOADING DOCK, SHEET C100
 DATE: 01.24.14 ADDENDUM 6

PROJECT NO. 47931.00
 SCALE: AS NOTED
 DWG. NO.: SKC - 006

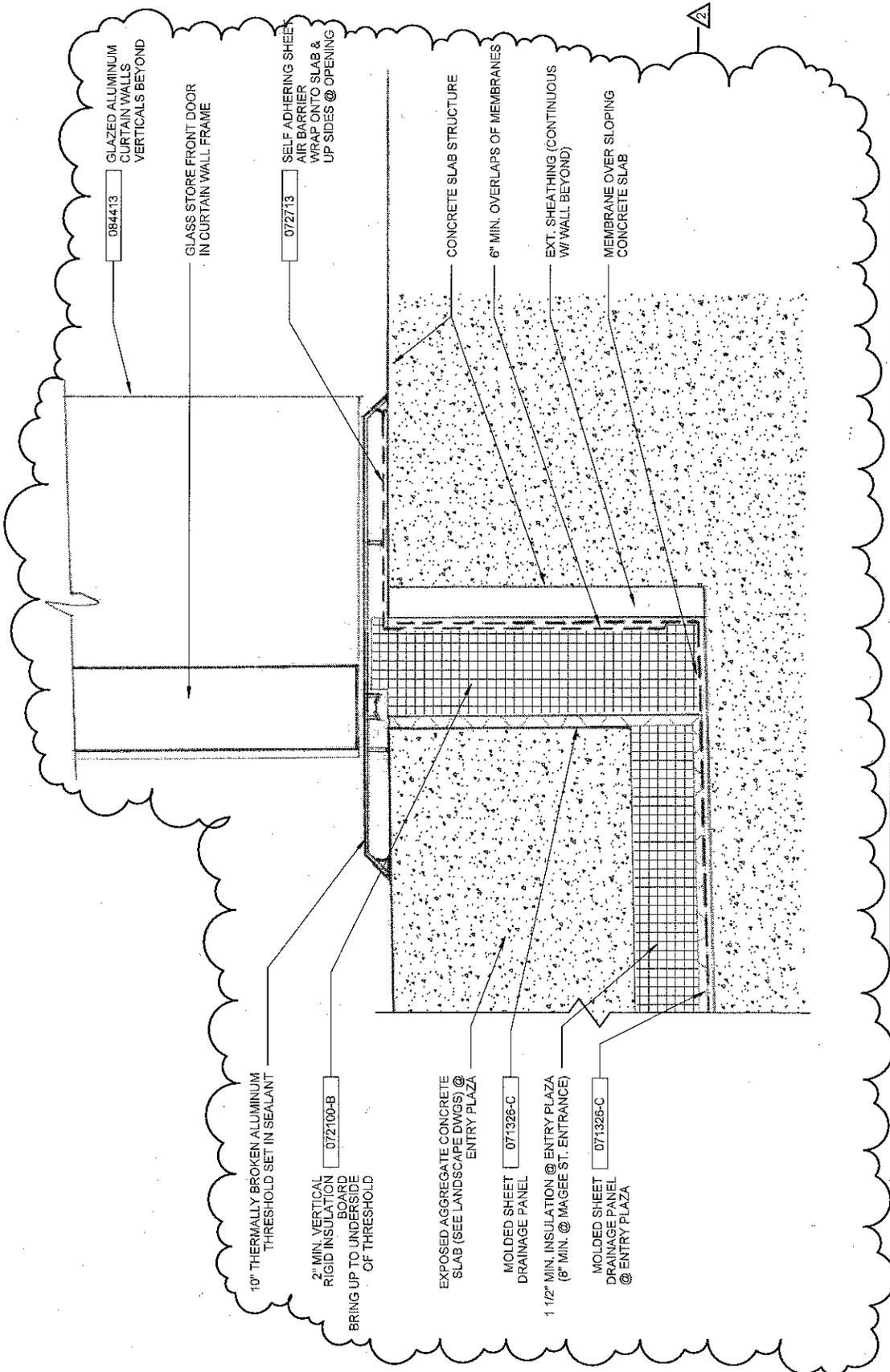


Perkins Eastman
 65 WASHINGTON STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.446.4000

PROJECT: Dr. Martin Luther King, Jr. School
Construction Project

PROJECT NO. 47931.00
SCALE: 8" = 1'-0"
SHEET: 2/A&17
REFERENCE:
DWG. NO.: SKA-001

DRAWING TITLE: C.W. SILL @ VESTIBULE
DATE: 1/24/2014

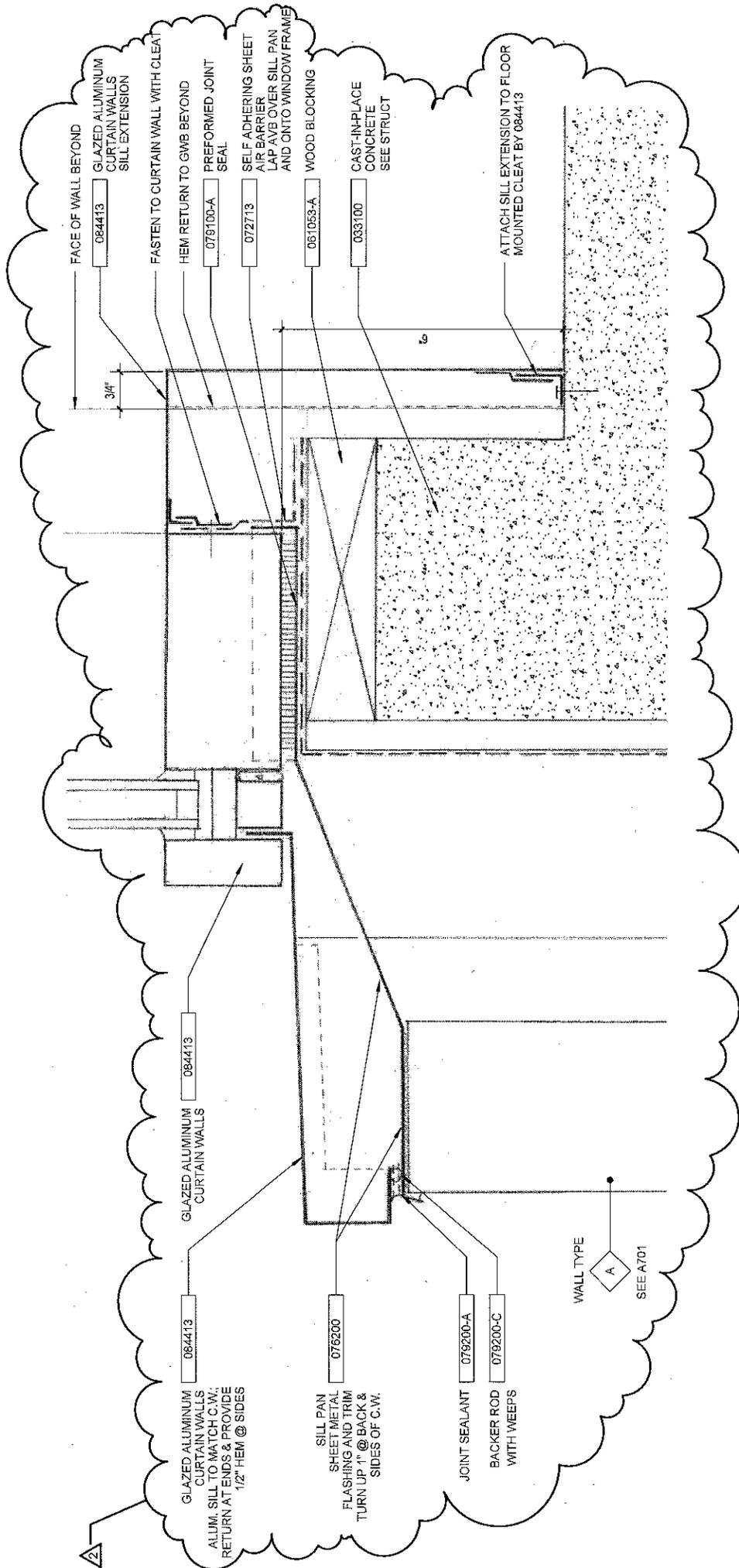


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 60 FIFTH STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.446.4000

PROJECT: **Dr. Martin Luther King, Jr. School Construction Project**

PROJECT NO. 4793100
 SCALE: 6" = 1'-0"
 SHEET 3/A617
 REFERENCE:
 DWG. NO. **SKA-002**

DRAWING TITLE: C.W. DOOR SILL @ VESTIBULE
 DATE: 1/24/2014

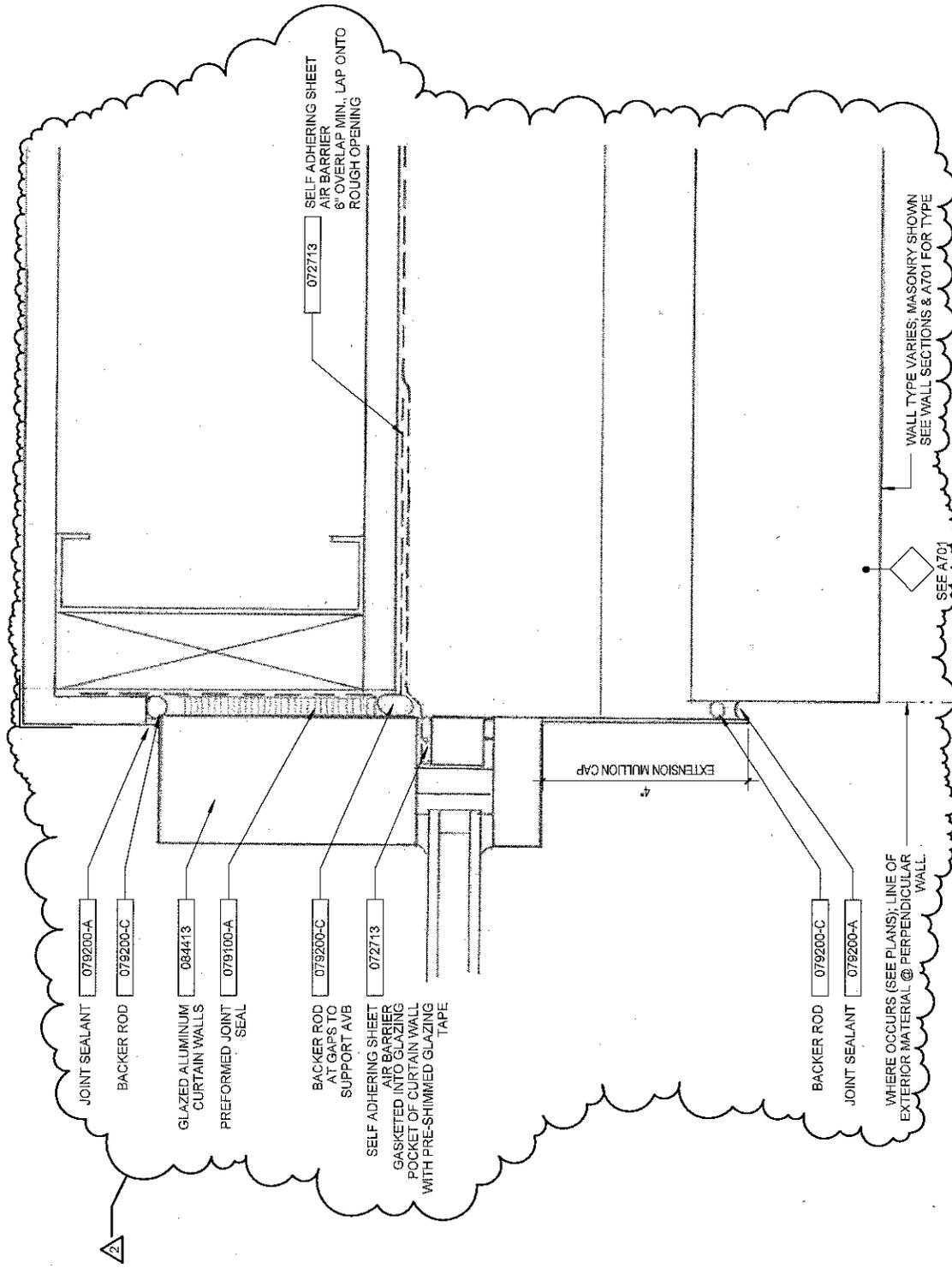


Perkins Eastman
 200 WASHINGTON STREET
 SUITE 203
 BOSTON, MA 02110
 1.617.486.4000

PROJECT: **Dr. Martin Luther King, Jr. School Construction Project**

PROJECT NO. 47891.00
 SCALE: 6" = 1'-0"
 SHEET 1/A&18
 REFERENCE:
 DWG. NO. **SKA-003**

DRAWING TITLE: TYP WATERPROOFING @ SILL OF C.W. @ MASONRY
 DATE: 1/24/2014

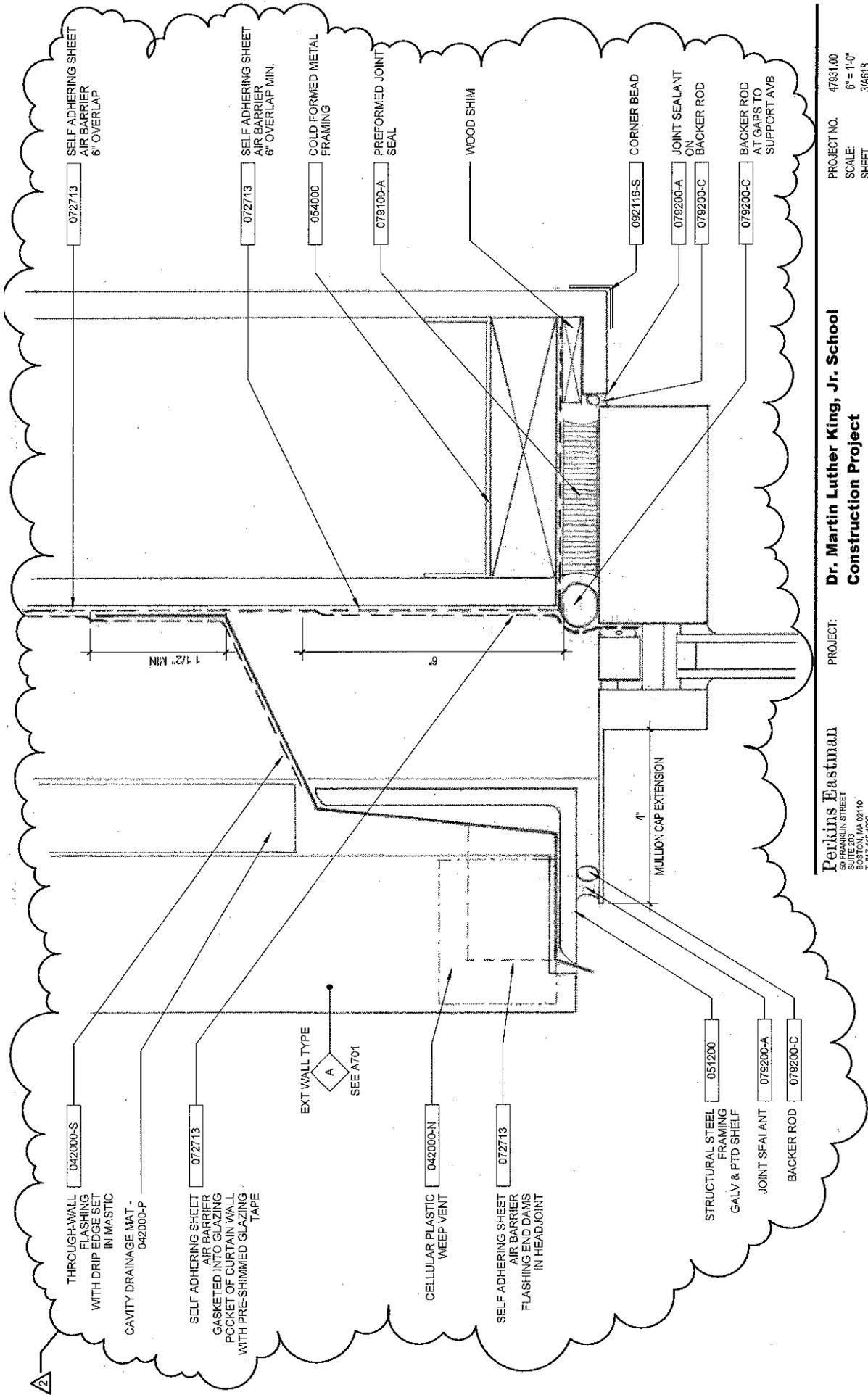


Perkins Eastman
 50 FRANKLIN STREET
 SUITE 233
 BOSTON, MA 02110
 T: 617/496-6000

PROJECT: **Dr. Martin Luther King, Jr. School Construction Project**

PROJECT NO. 4796100
 SCALE: 6" = 1'-0"
 SHEET 2/A618
 REFERENCE: DWG. NO. **SKA-004**

DRAWING TITLE: TYP WATERPROOFING @ JAMB OF C.W. @ MASONRY
 DATE: 1/24/2014



072713 SELF ADHERING SHEET AIR BARRIER 6" OVERLAP

072713 SELF ADHERING SHEET AIR BARRIER 6" OVERLAP MIN.

054000 COLD FORMED METAL FRAMING

079100-A PREFORMED JOINT SEAL

WOOD SHIM

092116-S CORNER BEAD

079200-A JOINT SEALANT ON

079200-C BACKER ROD

079200-C BACKER ROD AT GAPS TO SUPPORT AVB

042000-S THROUGH-WALL FLASHING WITH DRIP EDGE SET IN MASTIC

042000-P CAVITY DRAINAGE MAT

072713 SELF ADHERING SHEET AIR BARRIER GASKETED INTO GLAZING POCKET OF CURTAIN WALL WITH PRE-SHIMMED GLAZING TAPE

EXT WALL TYPE
A
SEE A701

042000-N CELLULAR PLASTIC WEEP VENT

072713 SELF ADHERING SHEET AIR BARRIER FLASHING END DAMS IN HEADJOINT

051200 STRUCTURAL STEEL FRAMING GALV & PTD SHELF

079200-A JOINT SEALANT

079200-C BACKER ROD

4" MULLION CAP EXTENSION

1 1/2" MIN

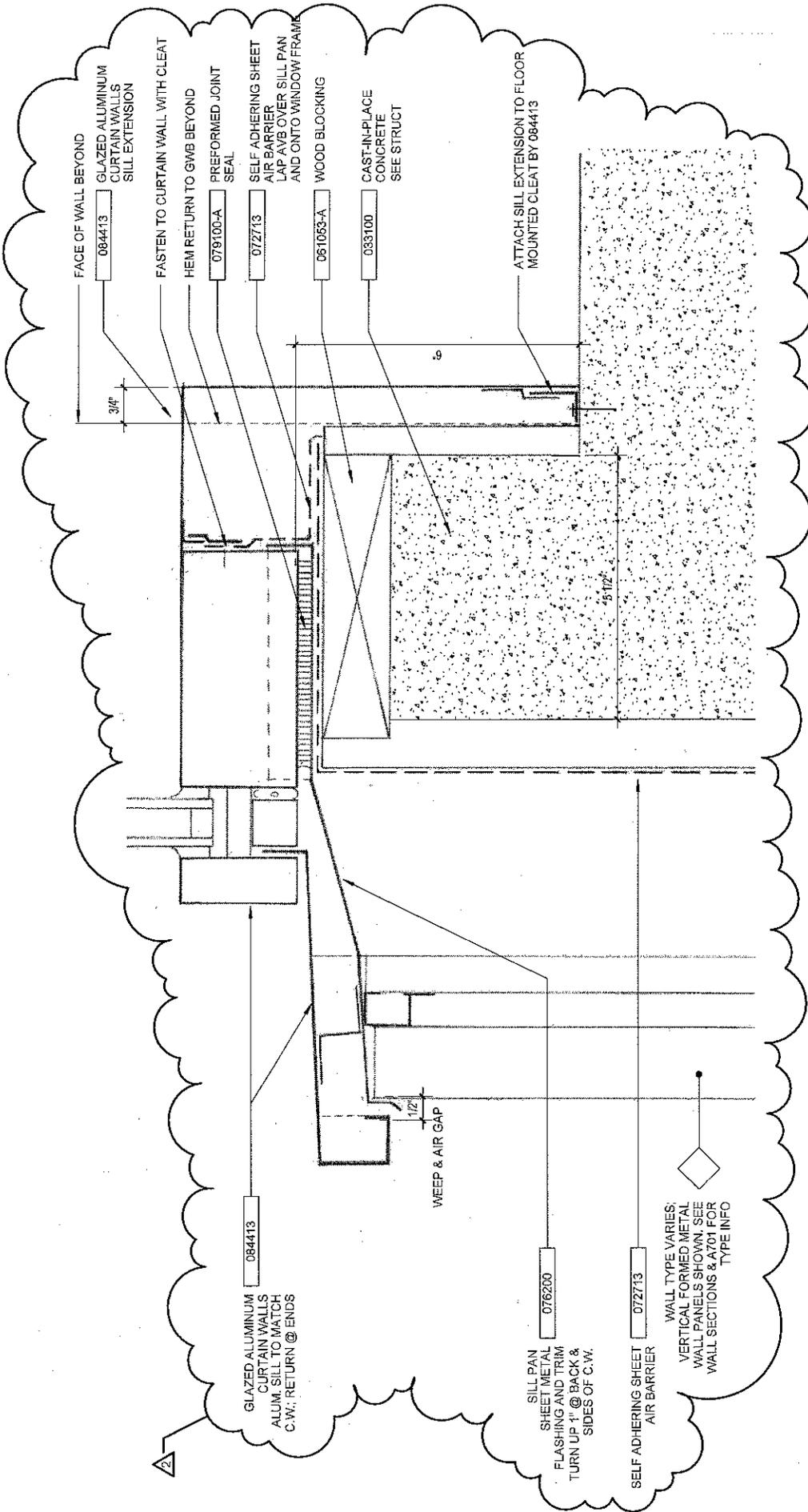
8"

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50 FRANKLIN STREET
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BOSTON, MA 02110
1.617.488.4000

PROJECT: Dr. Martin Luther King, Jr. School
Construction Project

PROJECT NO. 47931.00
SCALE: 6" = 1'-0"
SHEET 3/A&18
REFERENCE:
DWG. NO.: SKA-005

DRAWING TITLE: TYP WATERPROOFING @ HEAD OF C.W. @ MASONRY
DATE: 1/24/2014

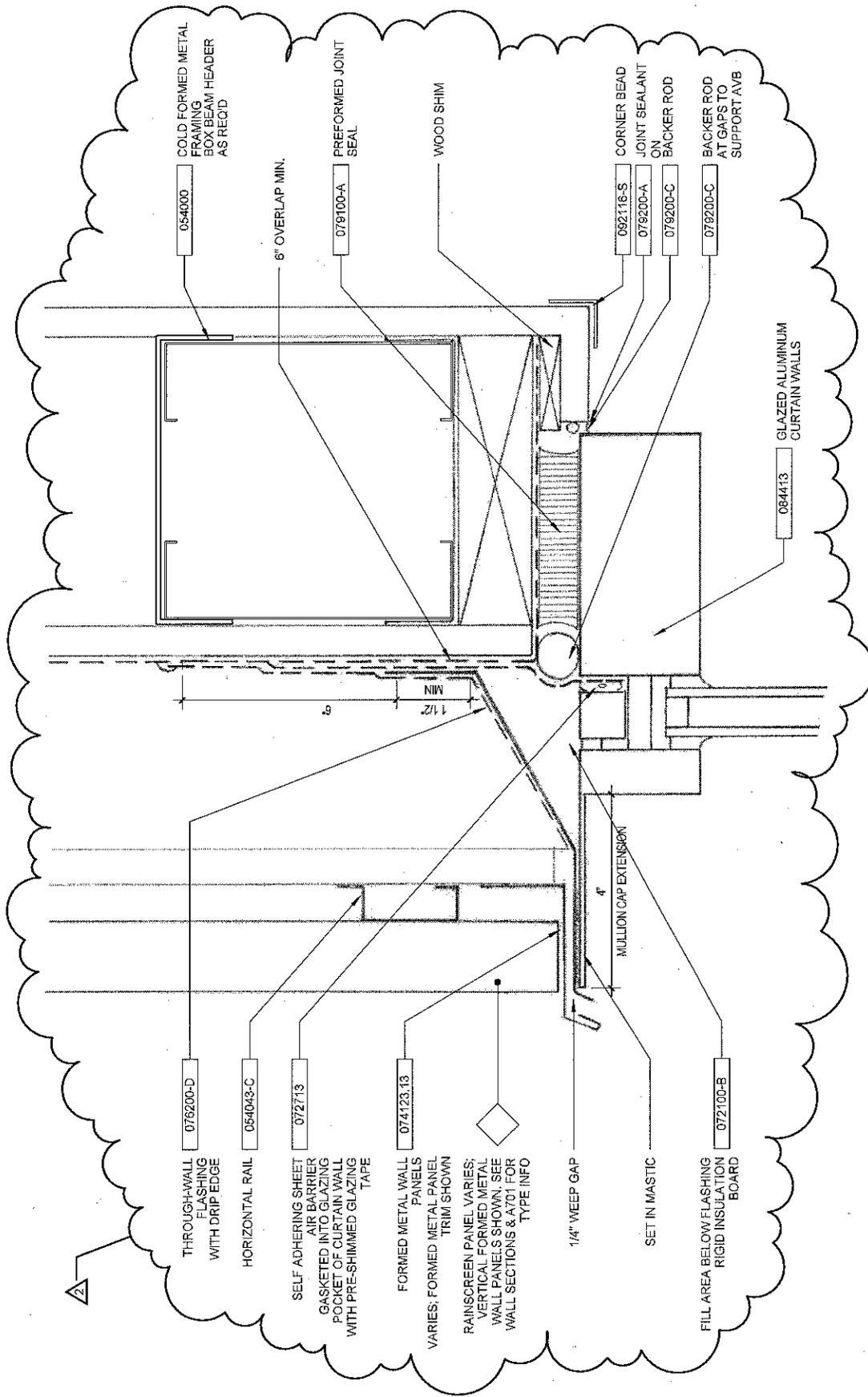


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 50 FRANKLIN STREET
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 T. 617.496.6600

PROJECT: **Dr. Martin Luther King, Jr. School Construction Project**

PROJECT NO. 47931.00
 SCALE: 6" = 1'-0"
 SHEET 4/A618
 REFERENCE: DWG. NO. **SKA-006**

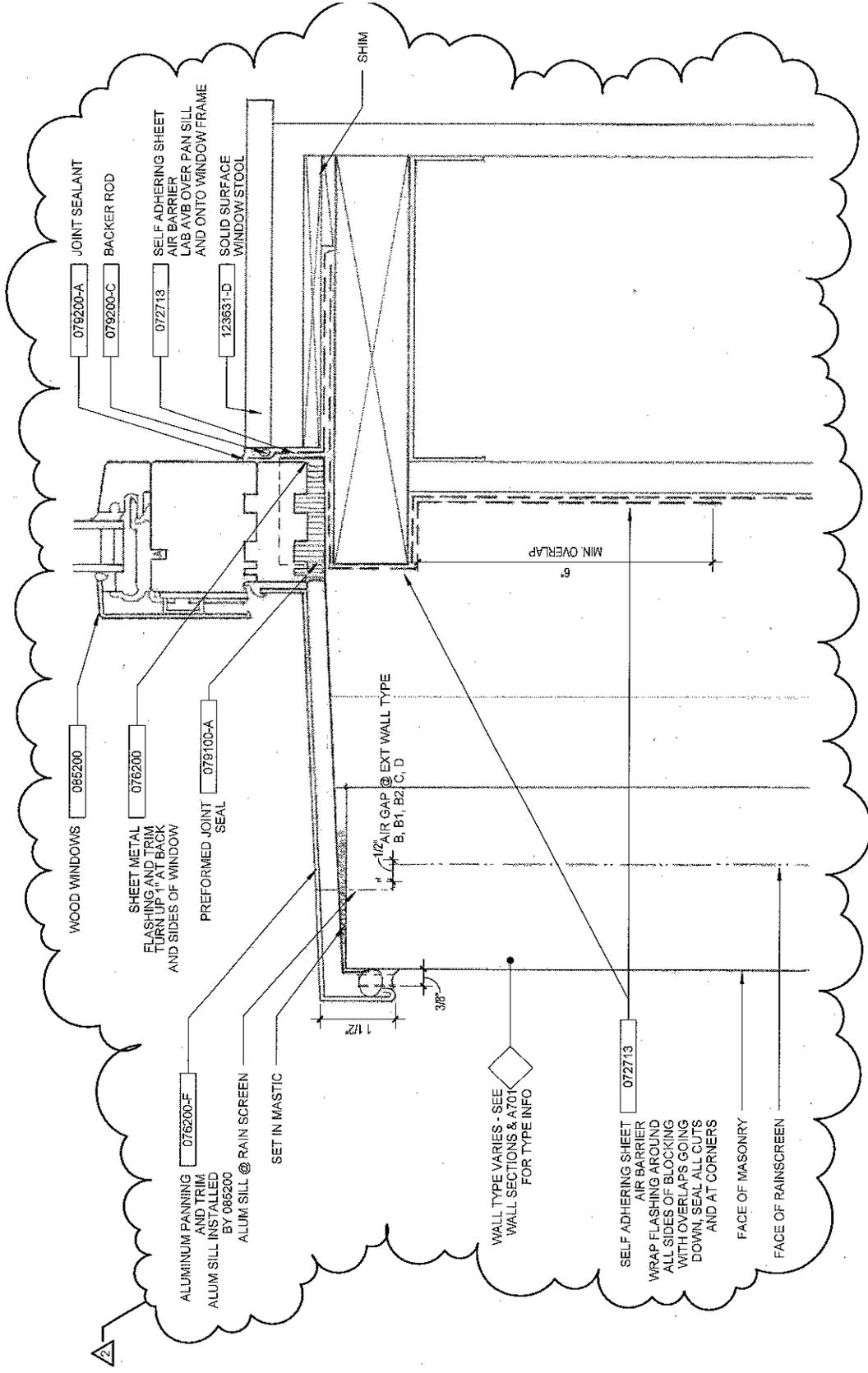
DRAWING TITLE: TYP WATERPROOFING @ SILL OF C.W. @ RAINSCREEN
 DATE: 1/24/2014



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 50 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T: 617.460.4600

PROJECT: Dr. Martin Luther King, Jr. School
 Construction Project
 PROJECT NO. 47931.00
 SCALE: 8" = 1'-0"
 SHEET: 5/A618
 REFERENCE: DWG. NO.: SKA-007

DRAWING TITLE: TYP WATERPROOFING @ HEAD OF C.W. @ RAINSCREEN
 DATE: 1/24/2014



WOOD WINDOWS

065200

SHEET METAL FLASHING AND TRIM TURN UP 1" AT BACK AND SIDES OF WINDOW

076200

ALUMINUM PANNING AND TRIM AND TRIM ALUM SILL INSTALLED BY 065200

076200-F

ALUM SILL @ RAIN SCREEN

076100-A

SET IN MASTIC

076100-A

1 1/2"

3/8"

1/2"

1/2" AIR GAP @ EXT WALL TYPE B, B1, B2, C, D

WALL TYPE VARIES - SEE WALL SECTIONS & A701 FOR TYPE INFO

SELF ADHERING SHEET AIR BARRIER WRAP FLASHING AROUND ALL SIDES OF BLOCKING WITH OVERLAPS GOING DOWN, SEAL ALL CUTS AND AT CORNERS

072713

FACE OF MASONRY

FACE OF RAINSCREEN

MIN OVERLAP 6"

JOINT SEALANT

076200-A

BACKER ROD

079200-C

SELF ADHERING SHEET AIR BARRIER LAB AVB OVER PAN SILL AND ONTO WINDOW FRAME

072713

SOLID SURFACE WINDOW STOOL

123631-D

SHIM

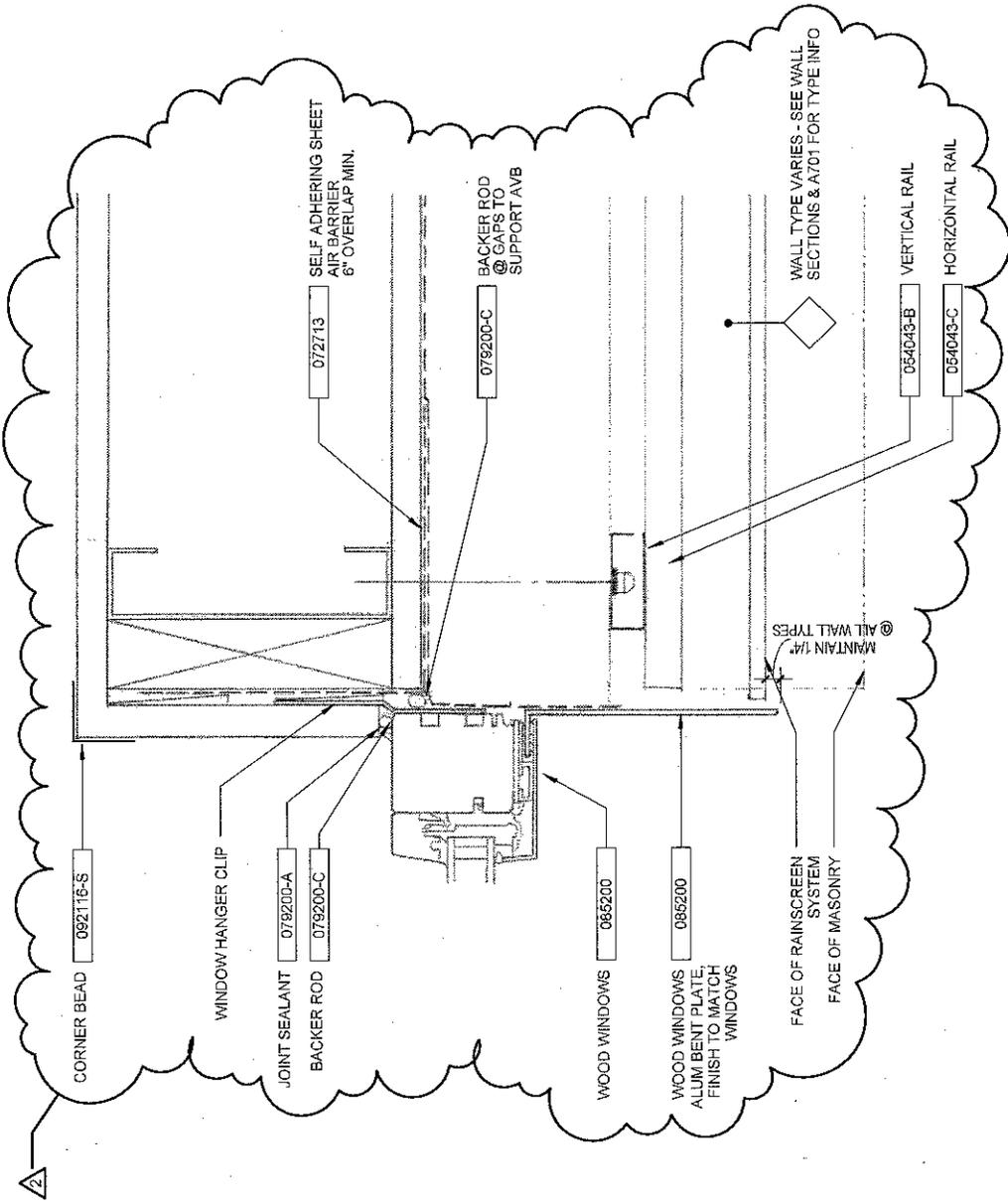
Perkins Eastman
50 FRANKLIN STREET
SUITE 233
BOSTON, MA 02110
T: 617.486.4650

PROJECT: **Dr. Martin Luther King, Jr. School Construction Project**

PROJECT NO. 47931.00
SCALE: 6" = 1'-0"
SHEET 1/A619
REFERENCE SHEET

DRAWING TITLE: TYP WATERPROOFING @ SILL OF WOOD WINDOWS
DATE: 1/24/2014

DWG. NO.: **SKA-008**



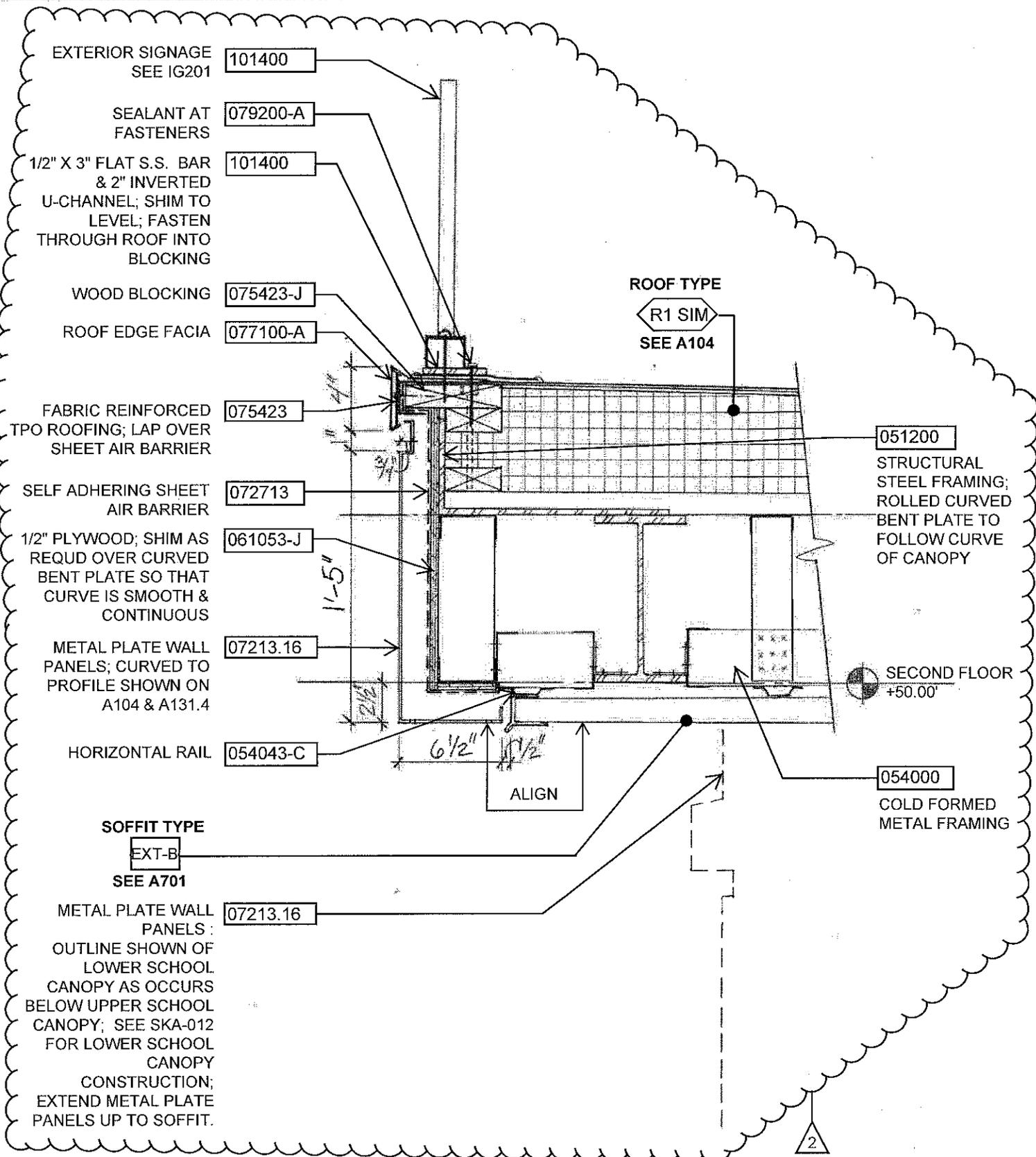
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 60 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.498.4000

PROJECT: **Dr. Martin Luther King, Jr. School Construction Project**

PROJECT NO. 47891.00
 SCALE 6" = 1'-0"
 SHEET 2/A619
 REFERENCE:
 DWG. NO. **SKA-009**

DRAWING TITLE: TYP WATERPROOFING @ JAMB OF WOOD WINDOWS
 DATE: 1/24/2014



EXTERIOR SIGNAGE
SEE IG201 **101400**

SEALANT AT
FASTENERS **079200-A**

1/2" X 3" FLAT S.S. BAR
& 2" INVERTED
U-CHANNEL; SHIM TO
LEVEL; FASTEN
THROUGH ROOF INTO
BLOCKING **101400**

WOOD BLOCKING **075423-J**

ROOF EDGE FACIA **077100-A**

FABRIC REINFORCED
TPO ROOFING; LAP OVER
SHEET AIR BARRIER **075423**

SELF ADHERING SHEET
AIR BARRIER **072713**

1/2" PLYWOOD; SHIM AS
REQUD OVER CURVED
BENT PLATE SO THAT
CURVE IS SMOOTH &
CONTINUOUS **061053-J**

METAL PLATE WALL
PANELS; CURVED TO
PROFILE SHOWN ON
A104 & A131.4 **07213.16**

HORIZONTAL RAIL **054043-C**

SOFFIT TYPE
EXT-B
SEE A701

METAL PLATE WALL
PANELS : **07213.16**
OUTLINE SHOWN OF
LOWER SCHOOL
CANOPY AS OCCURS
BELOW UPPER SCHOOL
CANOPY; SEE SKA-012
FOR LOWER SCHOOL
CANOPY
CONSTRUCTION;
EXTEND METAL PLATE
PANELS UP TO SOFFIT.

ROOF TYPE

R1 SIM
SEE A104

051200

STRUCTURAL
STEEL FRAMING;
ROLLED CURVED
BENT PLATE TO
FOLLOW CURVE
OF CANOPY

SECOND FLOOR
+50.00'

054000

COLD FORMED
METAL FRAMING

ALIGN

2

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SUITE 203
BOSTON, MA 02110
T. 617.449.4000

PROJECT: **Dr. Martin Luther King, Jr. School
Construction Project**

PROJECT NO. 47931.00

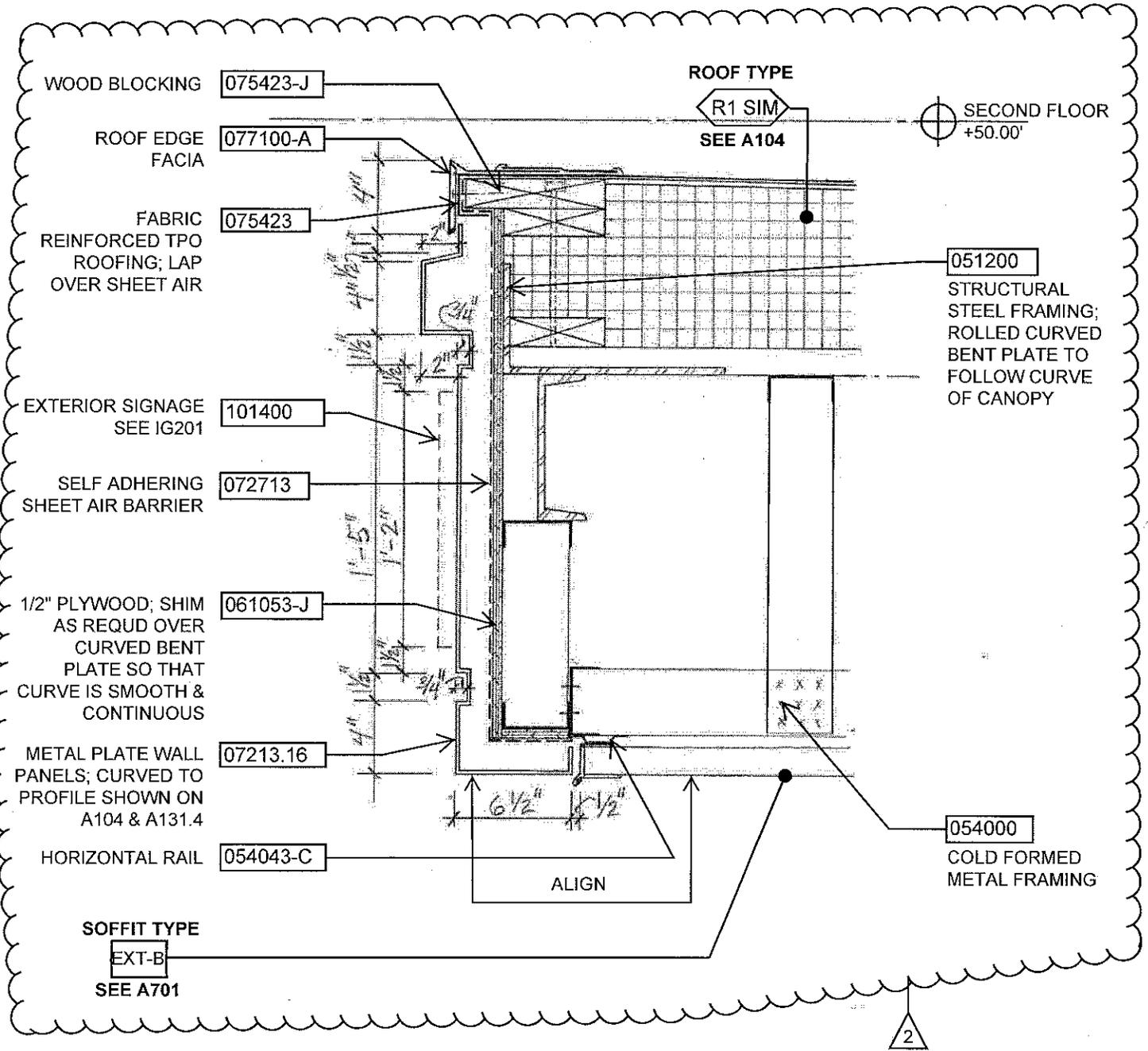
DRAWING
TITLE: Upper School Entry Canopy - Section

SCALE: 1 1/2" = 1'-0"

DATE: 1/24/2014

SHEET
REFERENCE: 6 / A516

DWG. NO.: **SKA-011**



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PROJECT: **Dr. Martin Luther King, Jr. School**
Construction Project

PROJECT NO. 47931.00

DRAWING TITLE: Lower School Entry Canopy - Section

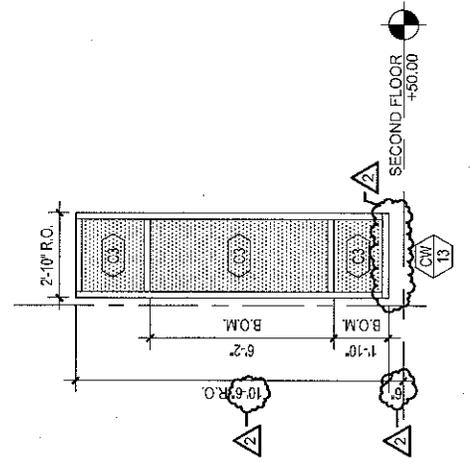
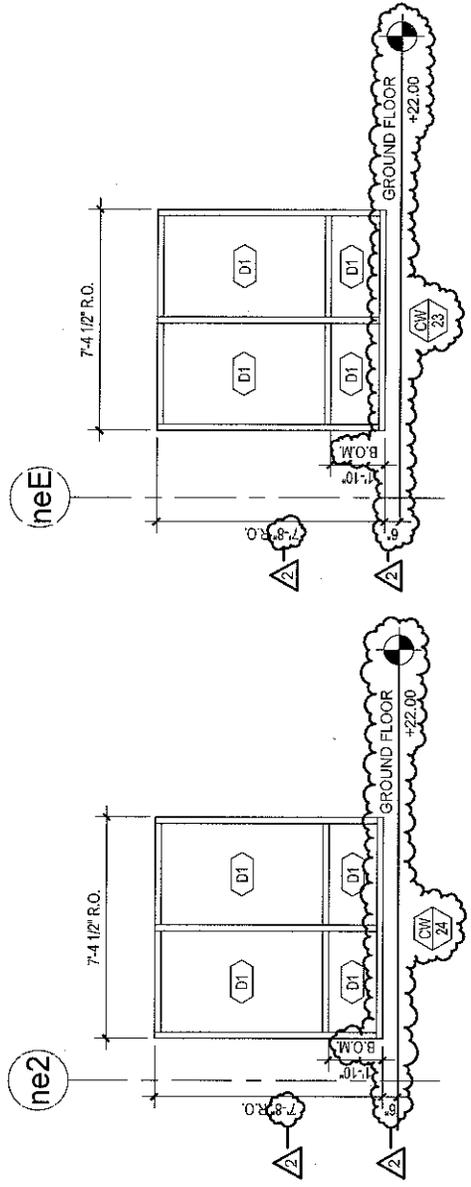
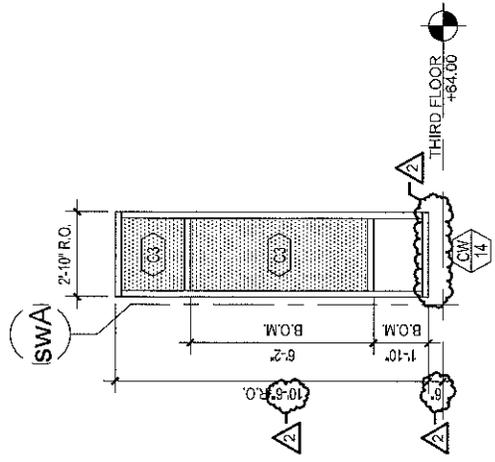
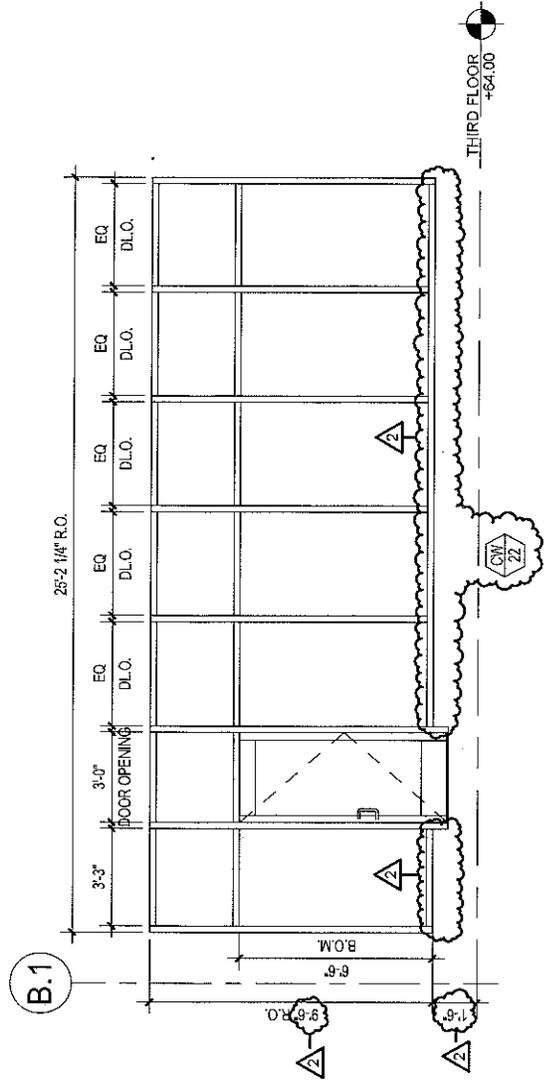
SCALE: 1 1/2" = 1'-0"

DATE: 1/24/2014

SHEET

REFERENCE: 7 / A516

DWG. NO.: **SKA-012**



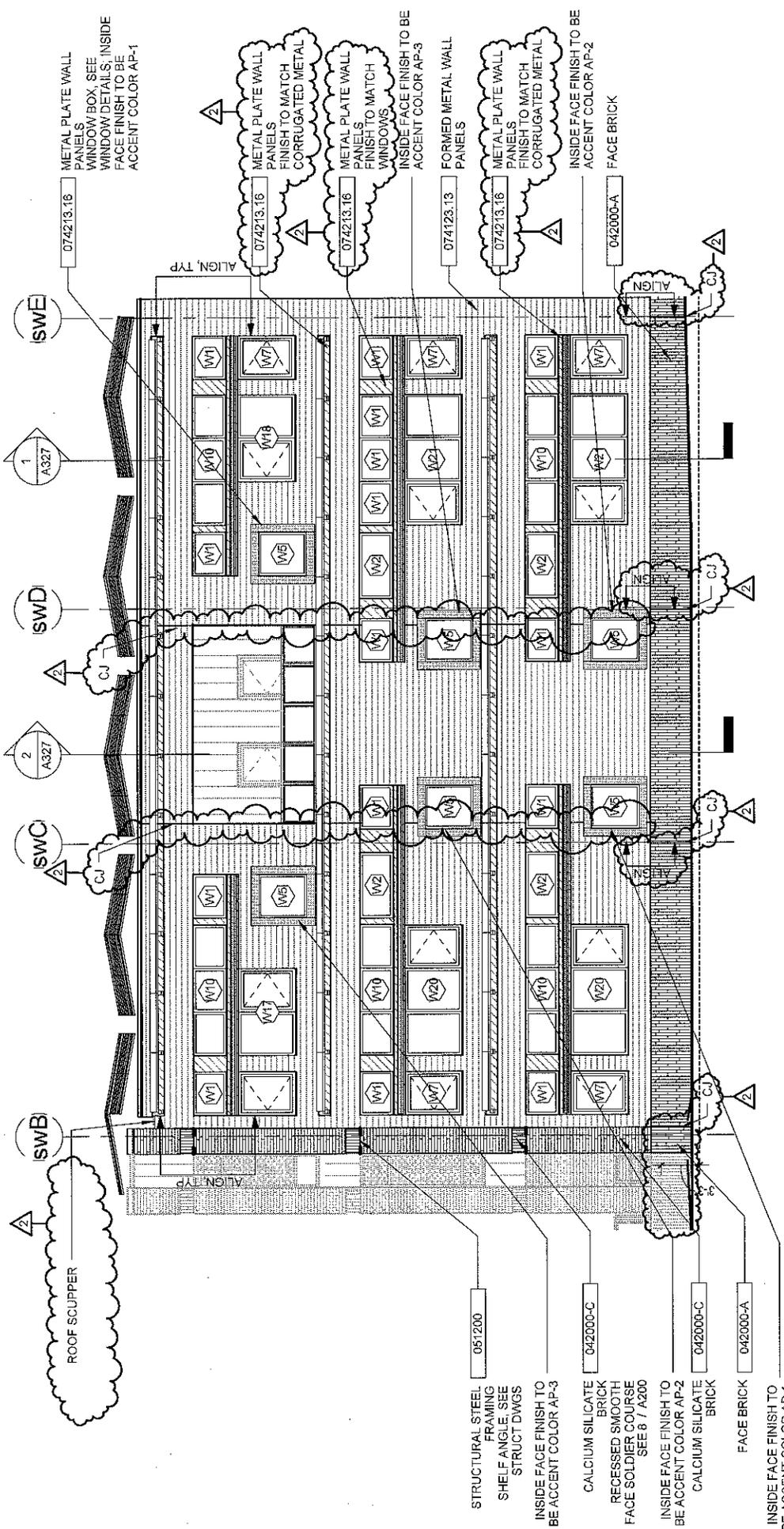
ADDENDUM #5

PROJECT NO. 47931.00
 SCALE: 1/4" = 1'-0"
 SHEET A610
 REFERENCE
 DWG. NO.: SKA-014

Dr. Martin Luther King, Jr. School
Construction Project

DRAWING TITLE: CURTAIN WALL BASE
 DATE: 1/24/2014

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 50 FRANKLIN STREET
 SUITE 205
 BOSTON, MA 02110
 T: 617.452.6600



074213.16

METAL PLATE WALL PANELS WINDOW BOX. SEE WINDOW DETAILS. INSIDE FACE FINISH TO BE ACCENT COLOR AP-1

(SWE)

1 A327

(SWD)

2 A327

(SWC)

(SWB)

ROOF SCUPPER

ALIGN. TYP

074213.16

METAL PLATE WALL PANELS FINISH TO MATCH CORRUGATED METAL

074213.16

METAL PLATE WALL PANELS FINISH TO MATCH WINDOWS

INSIDE FACE FINISH TO BE ACCENT COLOR AP-3

FORMED METAL WALL PANELS

074123.13

METAL PLATE WALL PANELS FINISH TO MATCH CORRUGATED METAL

INSIDE FACE FINISH TO BE ACCENT COLOR AP-2

042000-A

FACE BRICK

051200

STRUCTURAL STEEL FRAMING SHELF ANGLE. SEE STRUCT DWGS

INSIDE FACE FINISH TO BE ACCENT COLOR AP-3

CALCIUM SILICATE BRICK RECESSED SMOOTH FACE SOLDIER COURSE SEE 8 / A200

INSIDE FACE FINISH TO BE ACCENT COLOR AP-2

CALCIUM SILICATE BRICK

FACE BRICK

INSIDE FACE FINISH TO BE ACCENT COLOR AP-1

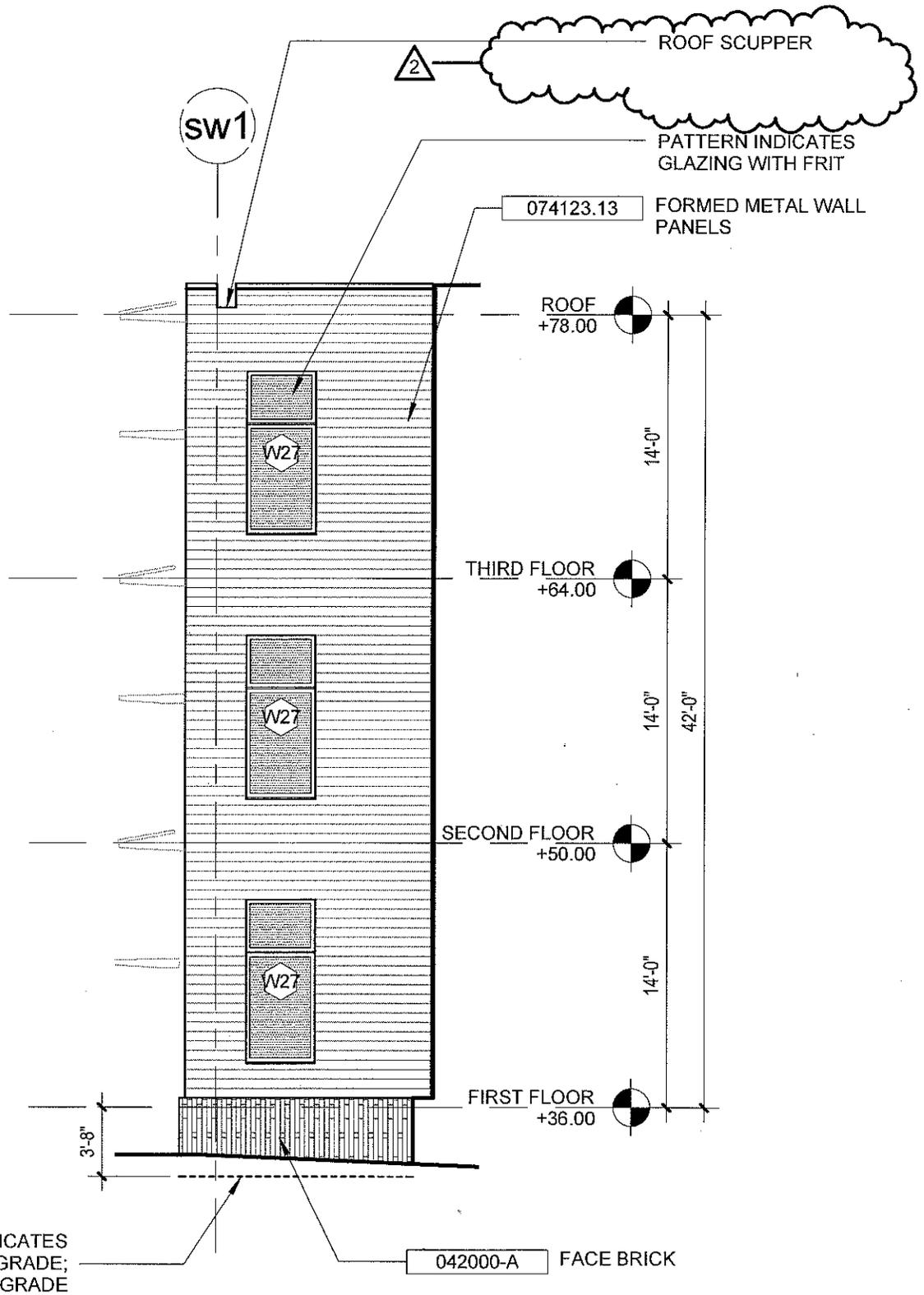
ADDENDUM #5

PROJECT NO. 47951.00
 SCALE: 1/8" = 1'-0"
 SHEET 2/A205
 REFERENCE:
 DWG. NO.: SKA-015

PROJECT: Dr. Martin Luther King, Jr. School
 Construction Project

Perkins Eastman
 30 FIFTH AVENUE
 BOSTON, MA 02110
 T. 617.449.4000

DRAWING TITLE: L.S. SOUTH ELEVATION
 DATE: 1/24/2014

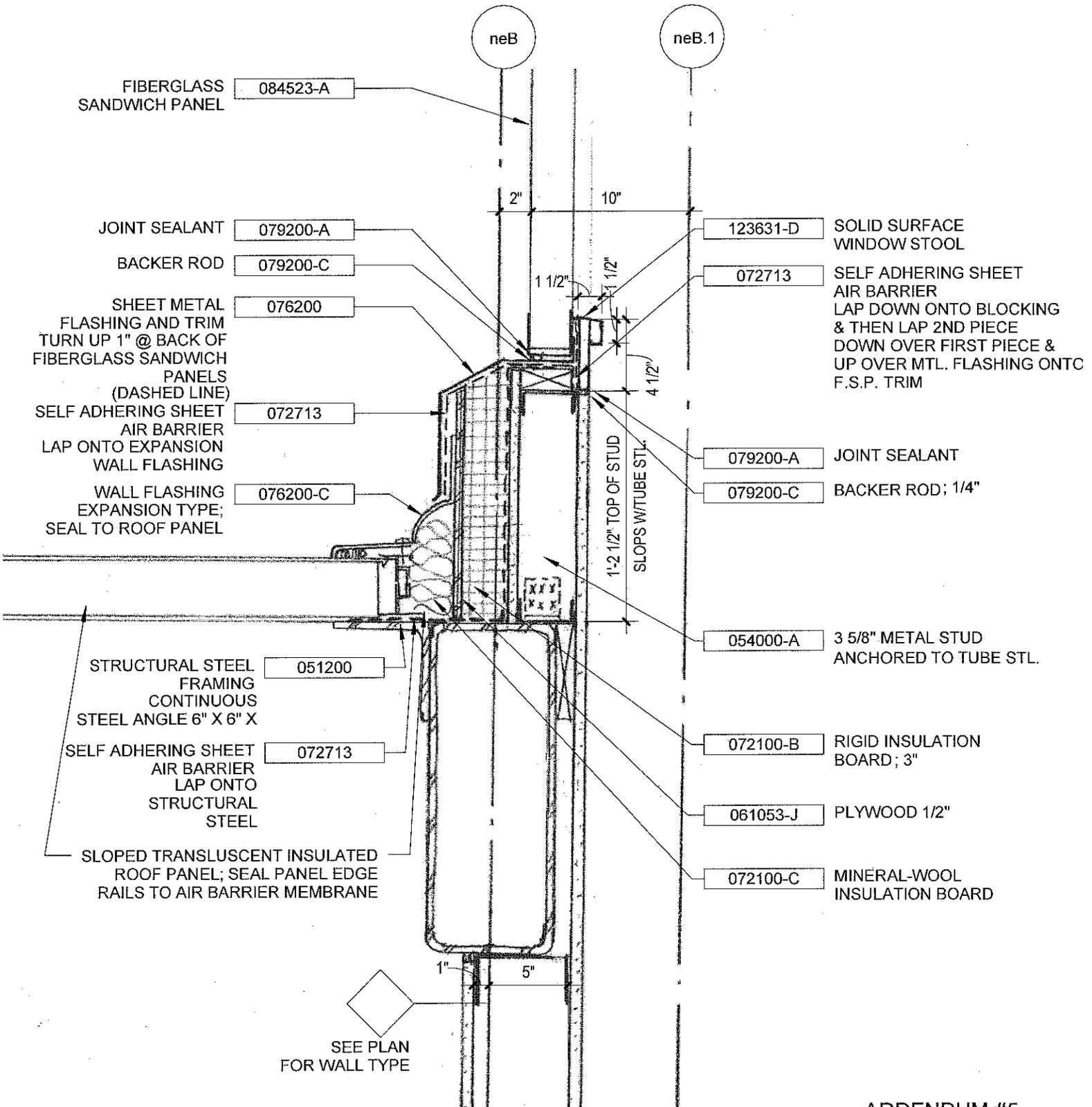


ADDENDUM #5

Perkins Eastman
 50 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.449.4000

PROJECT: **Dr. Martin Luther King, Jr. School**
Construction Project
 DRAWING TITLE: L.S. EAST ELEVATION
 DATE: 1/24/2014

PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET REFERENCE: 1/A205
 DWG. NO.: **SKA-016**



ADDENDUM #5

Perkins Eastman

50 FRANKLIN STREET
SUITE 203
BOSTON, MA 02110
T. 617.449.4000

PROJECT: **Dr. Martin Luther King, Jr. School**

Construction Project

DRAWING TITLE: KING STREET FIBERGLASS SANDWICH PANEL

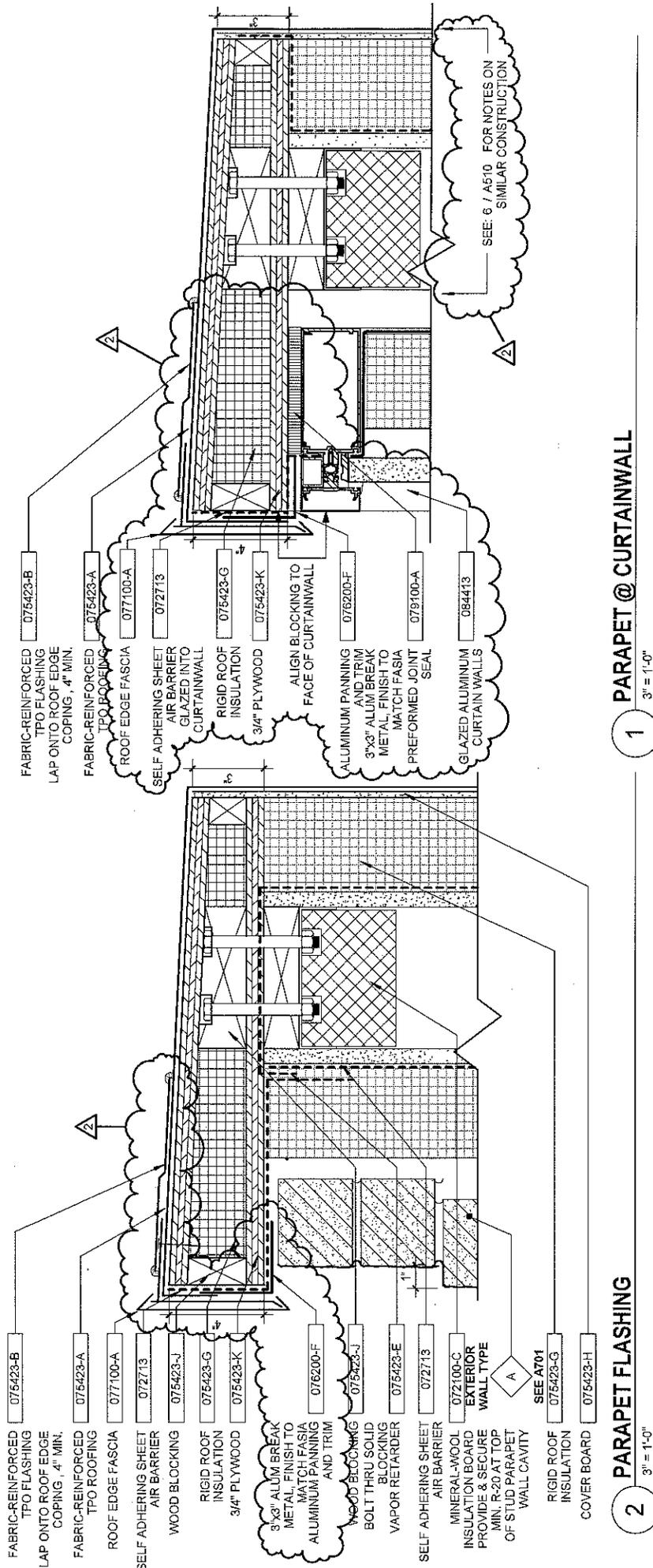
DATE: 1/24/2014

PROJECT NO. 47931.00

SCALE: 1 1/2" = 1'-0"

SHEET REFERENCE: 14/A511

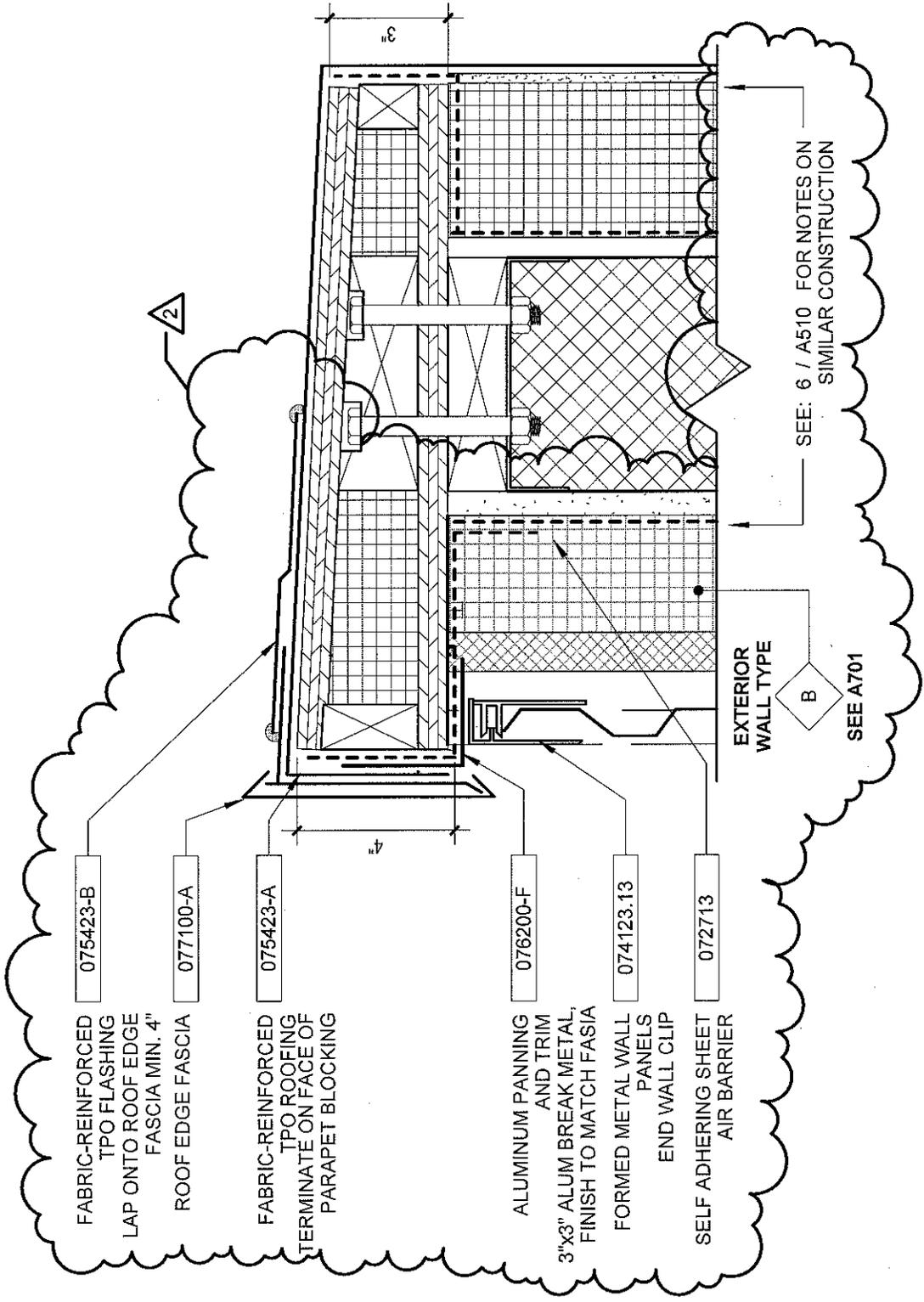
DWG. NO.: **SKA-017**



1 PARAPET @ CURTAINWALL

2 PARAPET FLASHING

Perkins Eastman		PROJECT: Dr. Martin Luther King, Jr. School		ADDENDUM #5
50 FRANKLIN STREET SUITE 203 BOSTON, MA 02110 T: 617.466.6000		PROJECT NO.: 47931-00	SCALE: 3" = 1'-0"	
		SHEET: 6/A510, 10/A510	REFERENCE:	
		DATE: 1/24/2014	DWG. NO.: SKA-018	
		DRAWING TITLE: PARAPET DETAILS		



075423-B

FABRIC-REINFORCED
TPO FLASHING
LAP ONTO ROOF EDGE
FASCIA MIN. 4"

077100-A

ROOF EDGE FASCIA

075423-A

FABRIC-REINFORCED
TPO ROOFING
TERMINATE ON FACE OF
PARAPET BLOCKING

076200-F

ALUMINUM PANNING
AND TRIM

074123.13

3"x3" ALUM BREAK METAL,
FINISH TO MATCH FASCIA

072713

FORMED METAL WALL
PANELS
END WALL CLIP
SELF ADHERING SHEET
AIR BARRIER

EXTERIOR
WALL TYPE

SEE: 6 / A510 FOR NOTES ON
SIMILAR CONSTRUCTION

SEE A701

ADDENDUM #5

Perkins Eastman
50 FRANKLIN STREET
SUITE 203
BOSTON, MA 02110
T. 617.449.4000

PROJECT: **Dr. Martin Luther King, Jr. School
Construction Project**

PROJECT NO. 47831.00

SCALE: 3" = 1'-0"

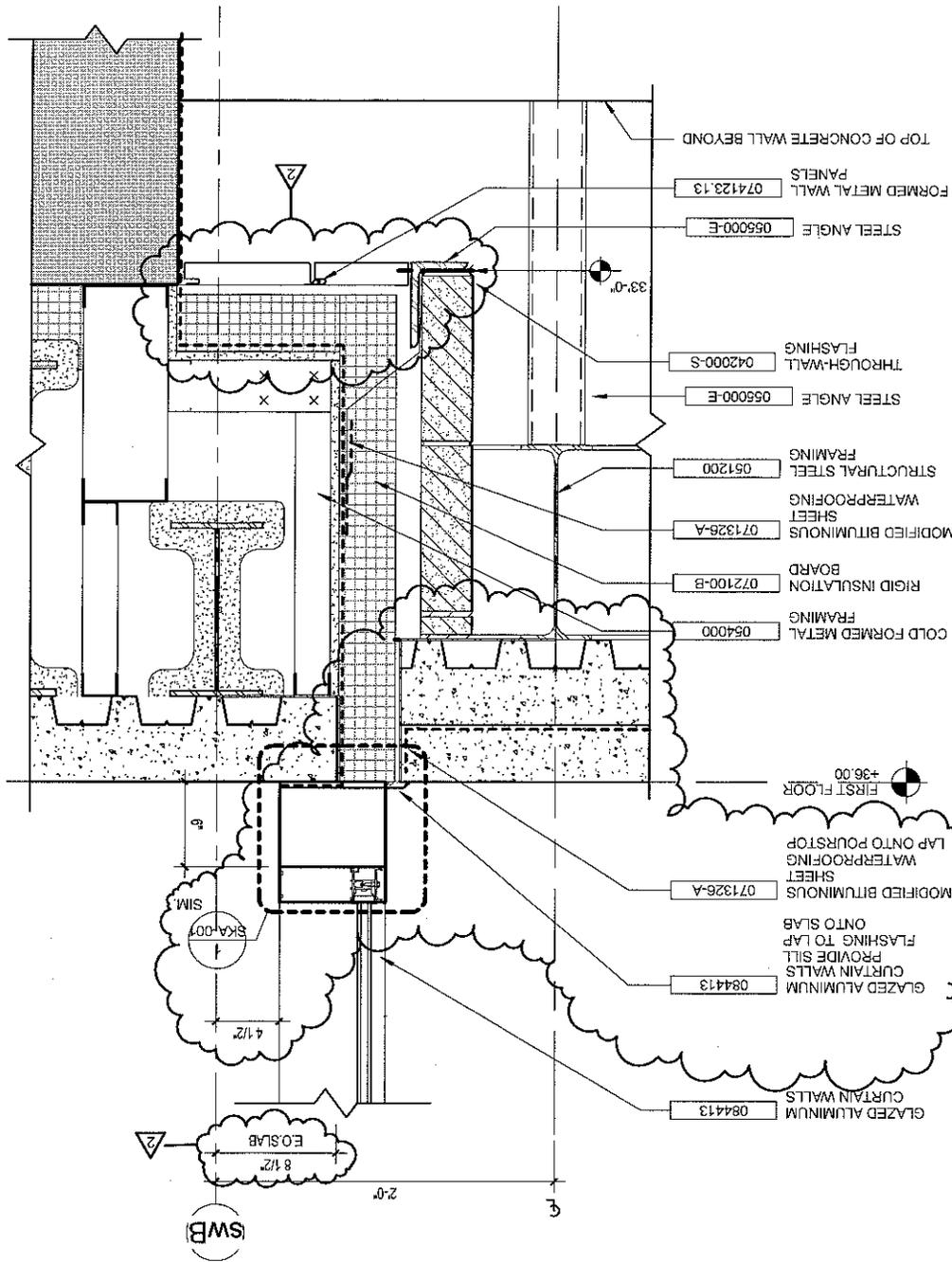
SHEET

REFERENCE: 4/A511

DWG. NO.: **SKA-019**

DRAWING TITLE: CORRUGATED METAL - PARAPET ENLARGED

DATE: 1/24/2014



ADDENDUM #5

PROJECT NO. 47931.00
 SCALE: 1 1/2" = 1'-0"
 SHEET 2/A514
 REFERENCE: DWG. NO.: SKA-020
 PROJECT: Dr. Martin Luther King, Jr. School Construction Project
 DRAWING TITLE: WATERPROOFING AT U.S. AREAWAY WEST
 DATE: 1/24/2014
 Perkins Eastman
 50 FRANKLIN STREET
 SUITE 200
 CHICAGO, IL 60610
 T: 312.465.4000

SITE WALL, REFER TO
LANDSCAPE DWGS.

MODIFIED BITUMINOUS
SHEET
WATERPROOFING

ARCHITECTURAL
PRECAST CONCRETE

FACE BRICK

071326-A

034500

042000-A

05 50 00 - STAINLESS STEEL
WOVEN WIRE FABRIC AND FRAME
GUARDRAIL, SEE 2, 3 & 4/L513 FOR
DETAILS. BOLT TO CAP OF SLEEVE

05 50 00 - HSS 3 1/2" x 3 1/2" GALV.
STEEL SLEEVE W/ WELDED CAP,
ATTACHED TO STRUCTURE

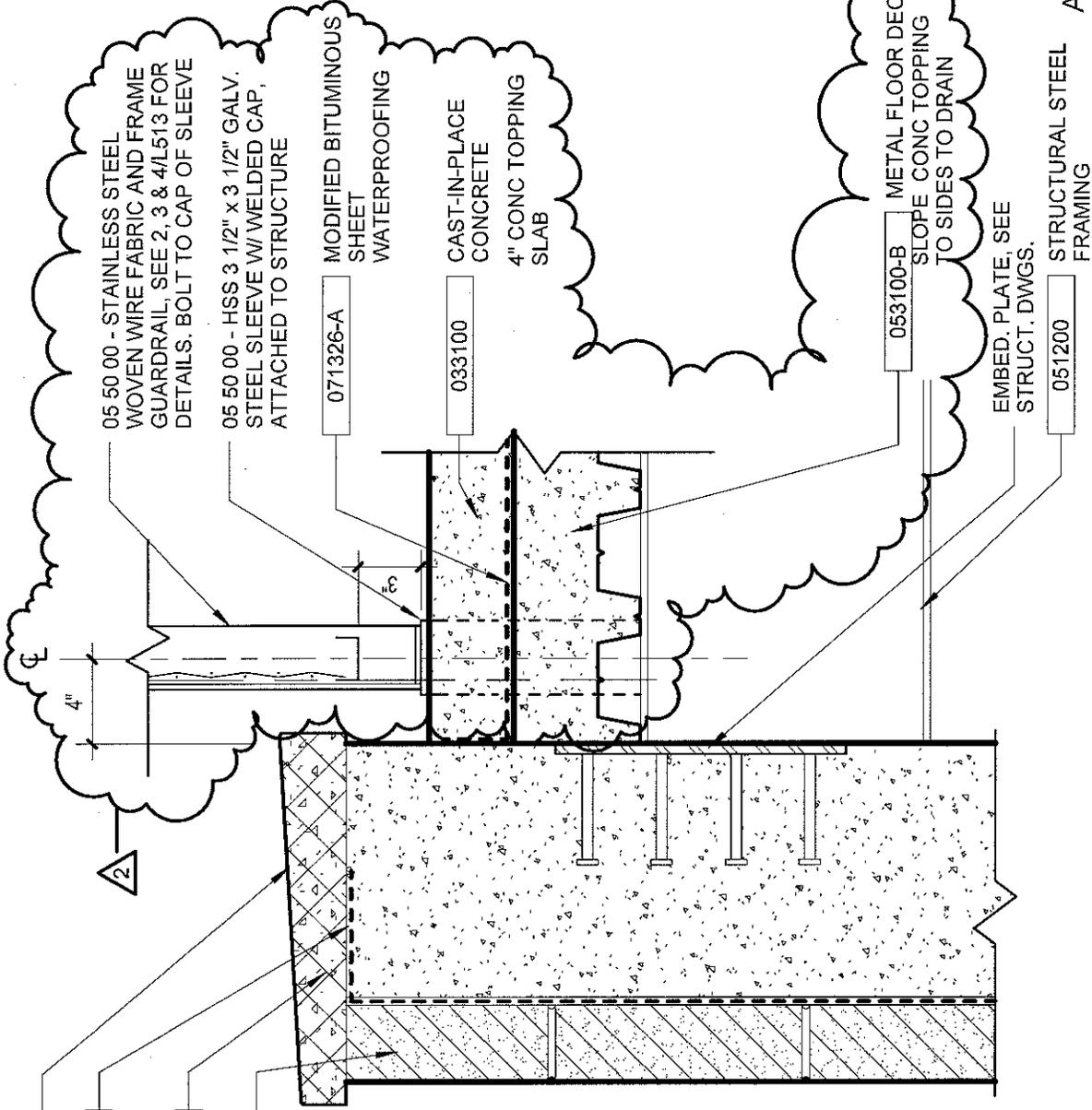
071326-A
MODIFIED BITUMINOUS
SHEET
WATERPROOFING

033100
CAST-IN-PLACE
CONCRETE
4" CONC TOPPING
SLAB

053100-B
METAL FLOOR DECKING
SLOPE CONC TOPPING
TO SIDES TO DRAIN

EMBED. PLATE, SEE
STRUCT. DWGS.

051200
STRUCTURAL STEEL
FRAMING



ADDENDUM #5

Perkins Eastman

50 FRANKLIN STREET
SUITE 203
BOSTON, MA 02110
T. 617.449.4000

PROJECT: **Dr. Martin Luther King, Jr. School
Construction Project**

DRAWING TITLE: WATERPROOFING AT L.S. AREAWAY WEST

DATE: 1/24/2014

PROJECT NO. 47931.00

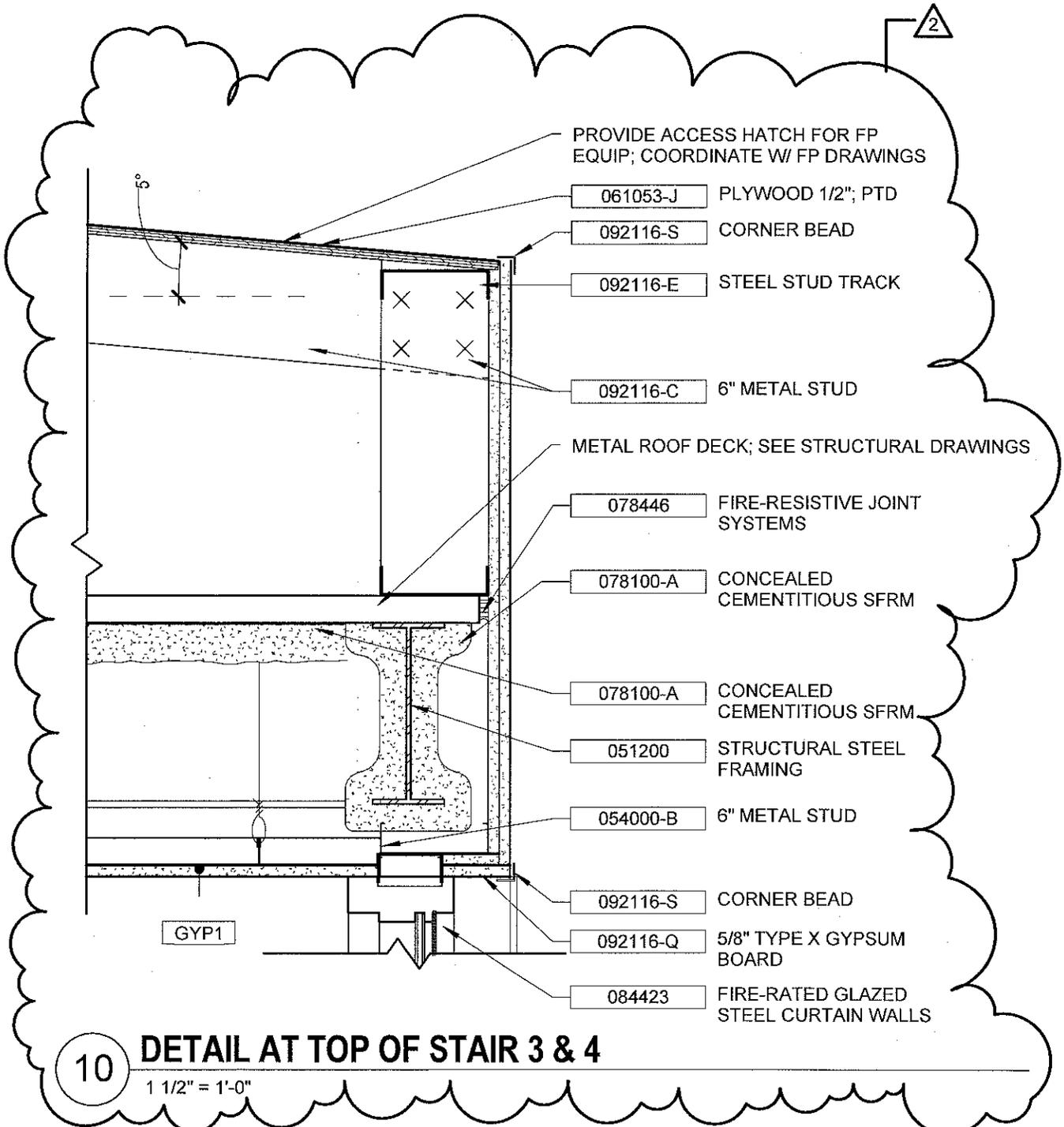
SCALE: 1 1/2" = 1'-0"

SHEET

REFERENCE: 3/A514

DWG. NO.:

SKA-021



Perkins Eastman
 50 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.449.4000

PROJECT: **Dr. Martin Luther King, Jr. School**
Construction Project
 DRAWING TITLE: DETAIL AT TOP OF STAIR 3 & 4
 DATE: 1/24/2014

PROJECT NO. 47931.00
 SCALE: 1 1/2" = 1'-0"
 SHEET REFERENCE: 10/A802
 DWG. NO.: **SKA-022**

EXTERIOR WALL TYPE
A

SW4

SEE A701

- 042000-P POLYMER MESH DRAINAGE MATERIAL
- 042000-C CALCULUM SILICATE BRICK
- 042000-N CELLULAR PLASTIC WEEP VENT THROUGH-WALL FLASHING

FIRST FLOOR
+36.00

FACE BRICK 042000-A

GROUT SOLID ALL BELOW GRADE CAVITIES

072713 SELF ADHERING SHEET AIR BARRIER LAP OVER WATERPROOFING

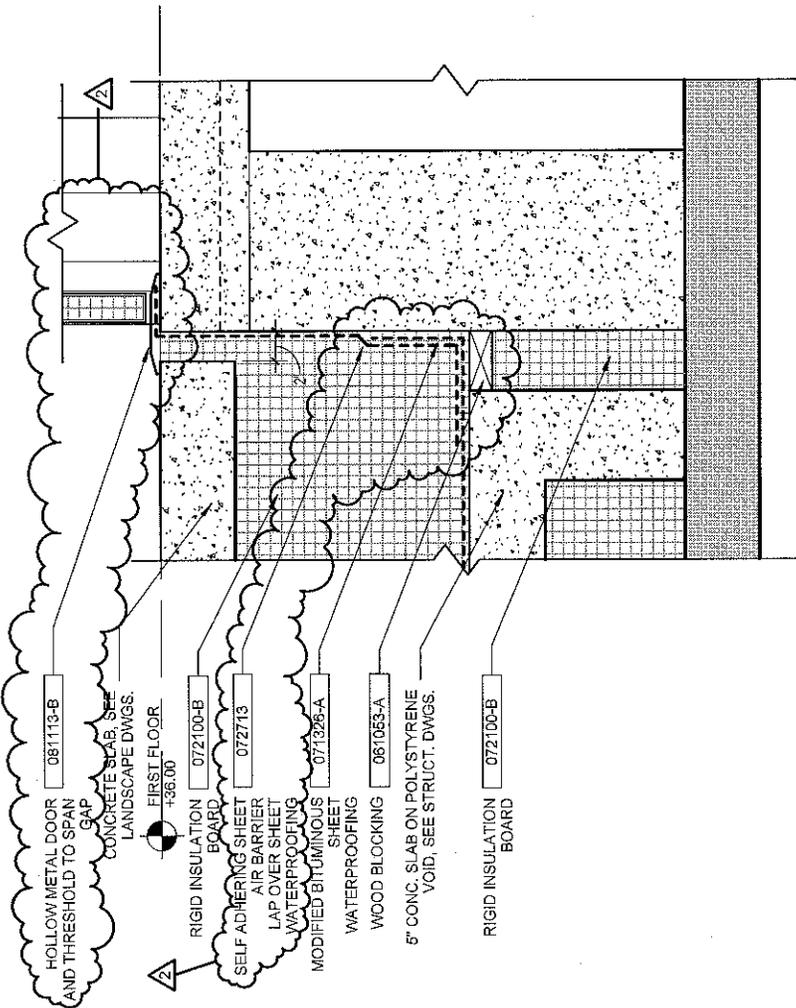
072713 SELF ADHERING SHEET AIR BARRIER

TOPPING SLAB, SEE LANDSCAPE DRAWINGS

033100 CAST-IN-PLACE CONCRETE SEE STRUCTURAL DWGS.

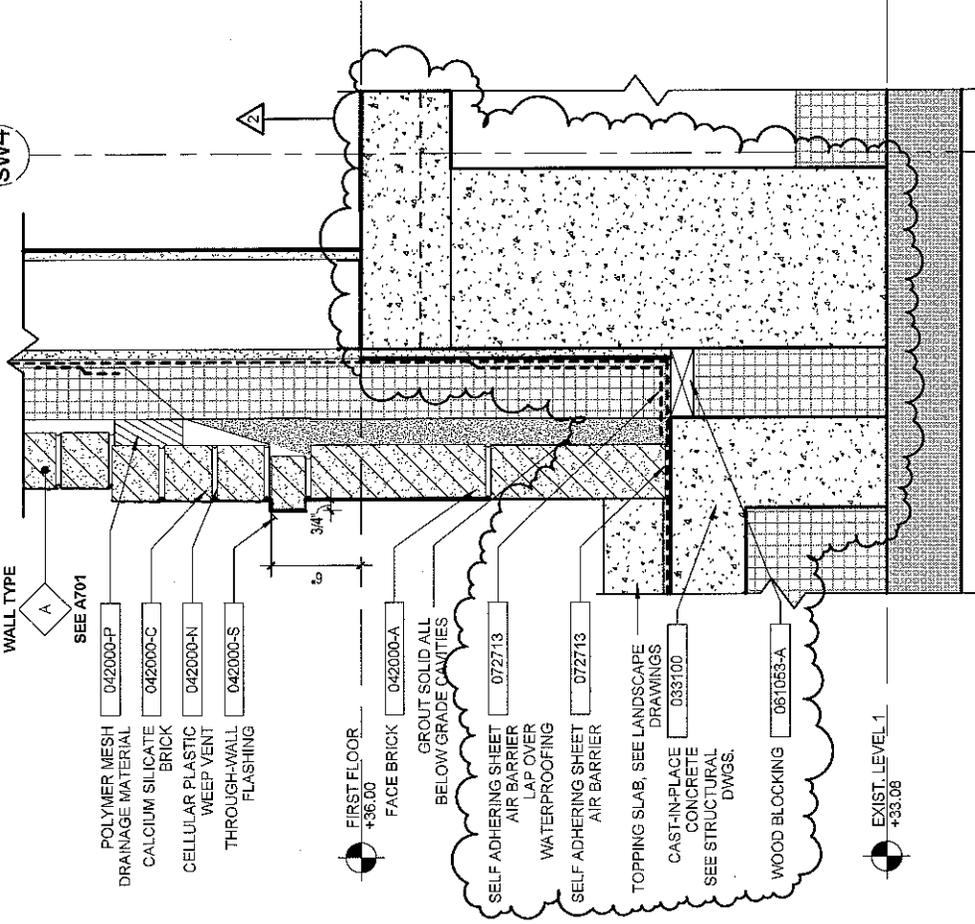
WOOD BLOCKING 087053-A

EXIST. LEVEL 1
+33.08



2 STAIR 1 - DOOR SILL & BASE - COURTYARD

1 1/2" = 1'-0"



1 FOUNDATION DETAIL AT LS NORTH FACADE MASONRY

1 1/2" = 1'-0"

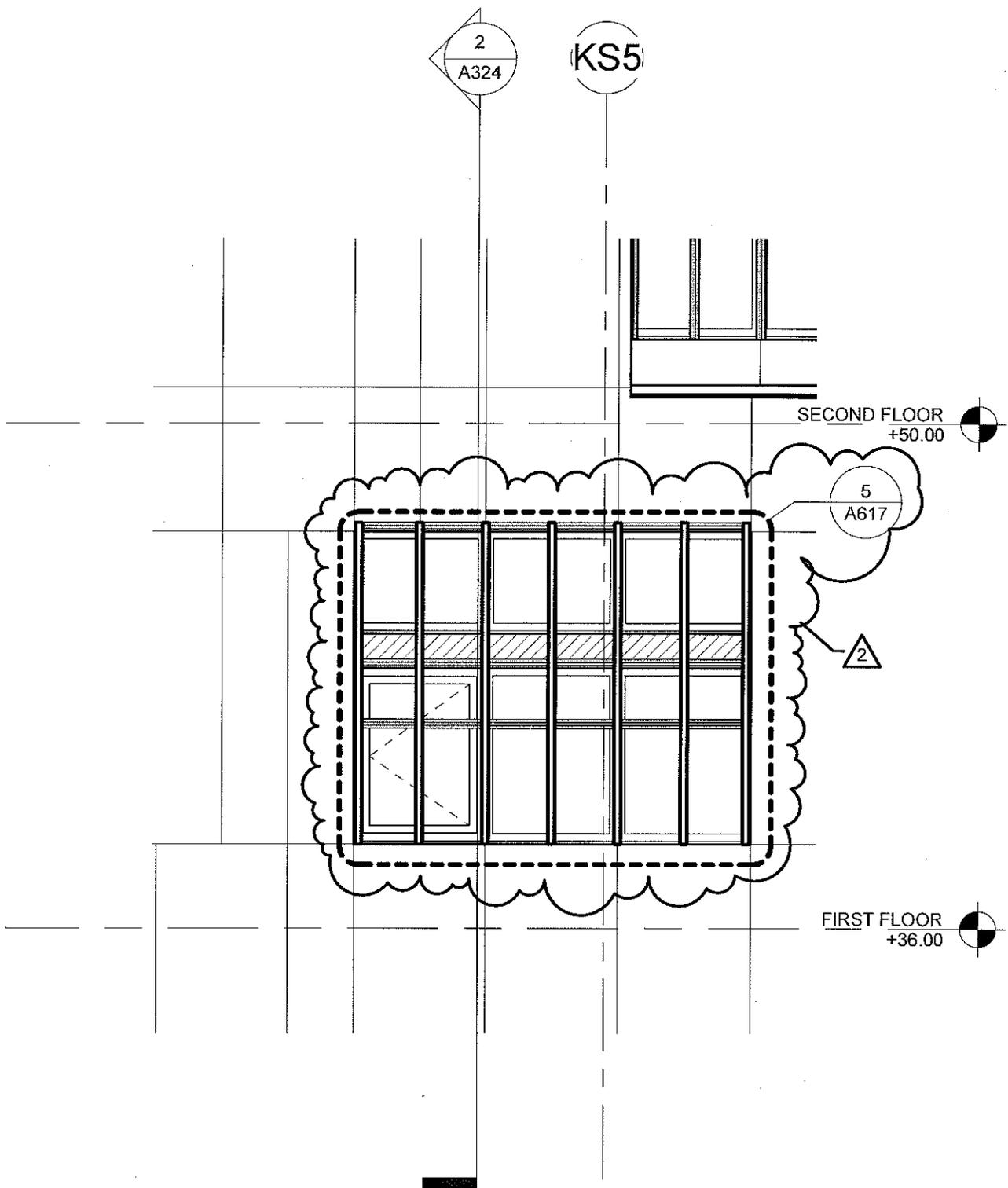
ADDENDUM #5

Perkins Eastman
 600 PENNSYLVANIA STREET
 SUITE 200
 BOSTON, MA 02110
 T. 617.469.4000

PROJECT: Dr. Martin Luther King, Jr. School
 Construction Project

PROJECT NO. 47891.00
 SCALE 1 1/2" = 1'-0"
 SHEET 4/A514, 6/A514
 REFERENCE:
 DWG. NO. SKA-023

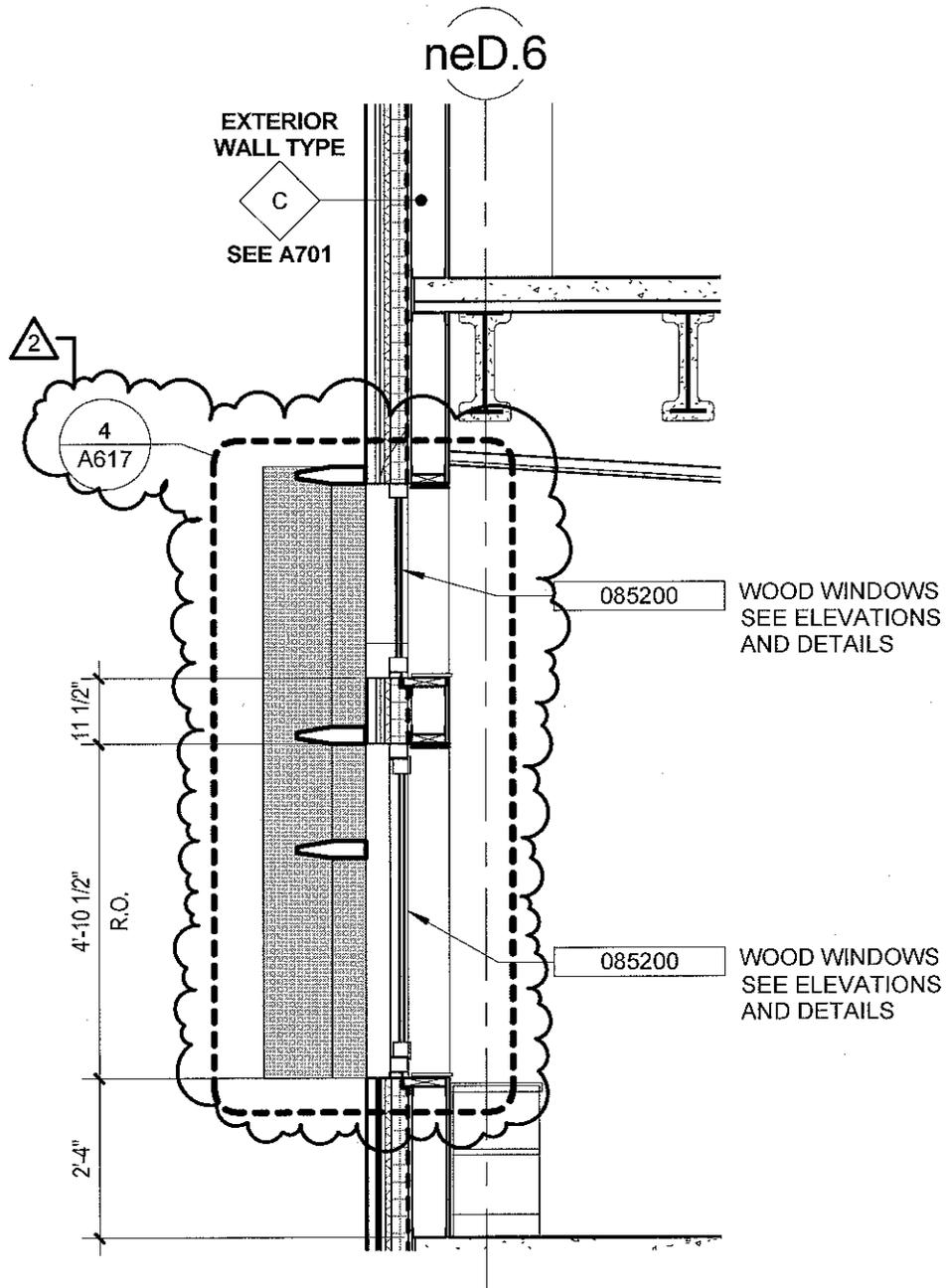
DRAWING TITLE: WATERPROOFING AT COURTYARD
 DATE: 1/24/2014



Perkins Eastman
 50 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.449.4000

PROJECT: **Dr. Martin Luther King, Jr. School
 Construction Project**
 DRAWING
 TITLE: CALLOUT OF PUBLIC WING EAST FACADE ELEVATION
 DATE: 1/24/2014

PROJECT NO. 47931.00
 SCALE: 1/4" = 1'-0"
 SHEET
 REFERENCE: 1/A324
 DWG. NO.: **SKA-024**



Perkins Eastman
50 FRANKLIN STREET
SUITE 203
BOSTON, MA 02110
T. 617.449.4000

PROJECT: **Dr. Martin Luther King, Jr. School
Construction Project**

DRAWING
TITLE: CALLOUT OF PUBLIC WING EAST FACADE WALL SECTION

DATE: 1/24/2014

PROJECT NO. 47931.00

SCALE: 3/8" = 1'-0"

SHEET
REFERENCE: 2/A324

DWG. NO.: **SKA-025**

KS2

KS3

STRUCTURAL STEEL
FRAMING
SEE STRUCT DWGS

FORMED METAL WALL
PANELS

CABINET UNIT HEATER,
SEE MECH DWGS

ARCHITECTURAL
PRECAST CONCRETE

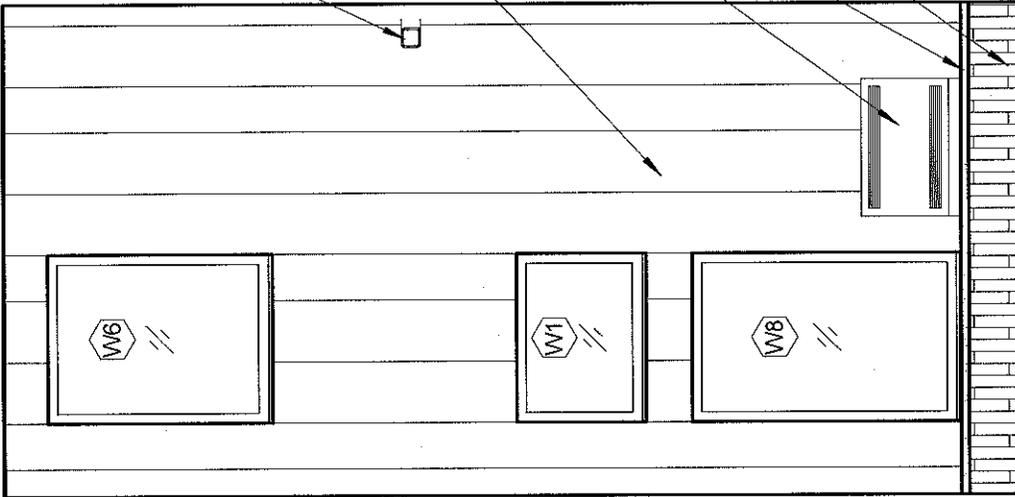
FACE BRICK

051200

074123.13

034500

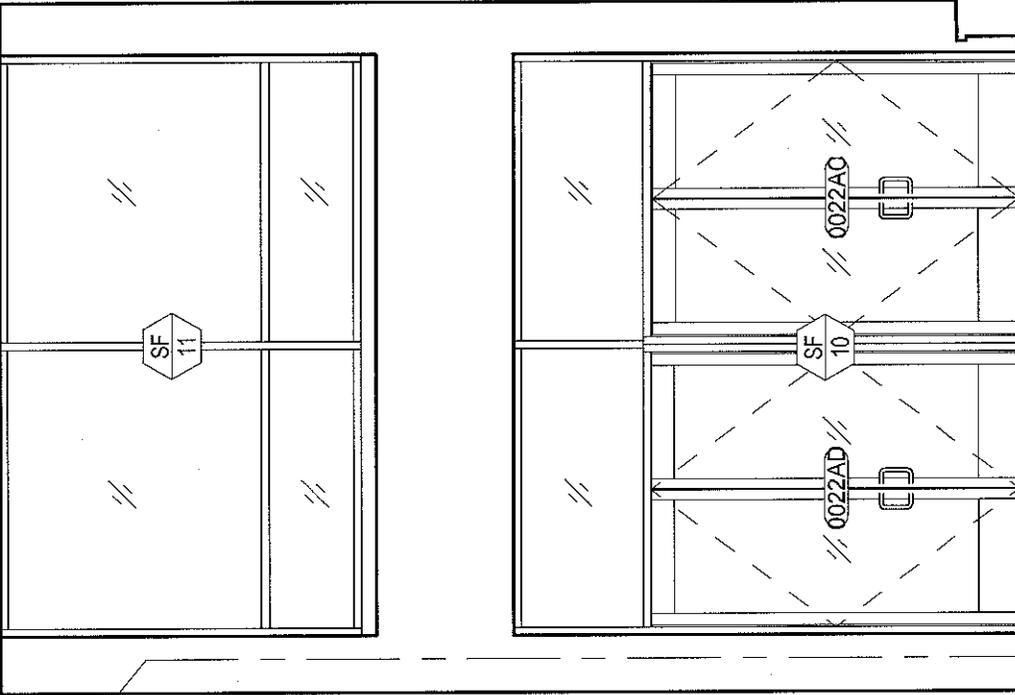
042000-A



SKA-018 - 0022A - NORTH ELEVATION

1/4" = 1'-0"

1



SKA-018 - 0022A - WEST ELEVATION

1/4" = 1'-0"

ADDENDUM #5

Perkins Eastman

50 FRANKLIN STREET
SUITE 203
BOSTON, MA 02110
T. 617.449.4000

PROJECT:

**Dr. Martin Luther King, Jr. School
Construction Project**

PROJECT NO.

47931.00

SCALE:

1/4" = 1'-0"

SHEET

3/A403, 4/A403

DRAWING TITLE: 0022A ENTRY - ELEVATIONS

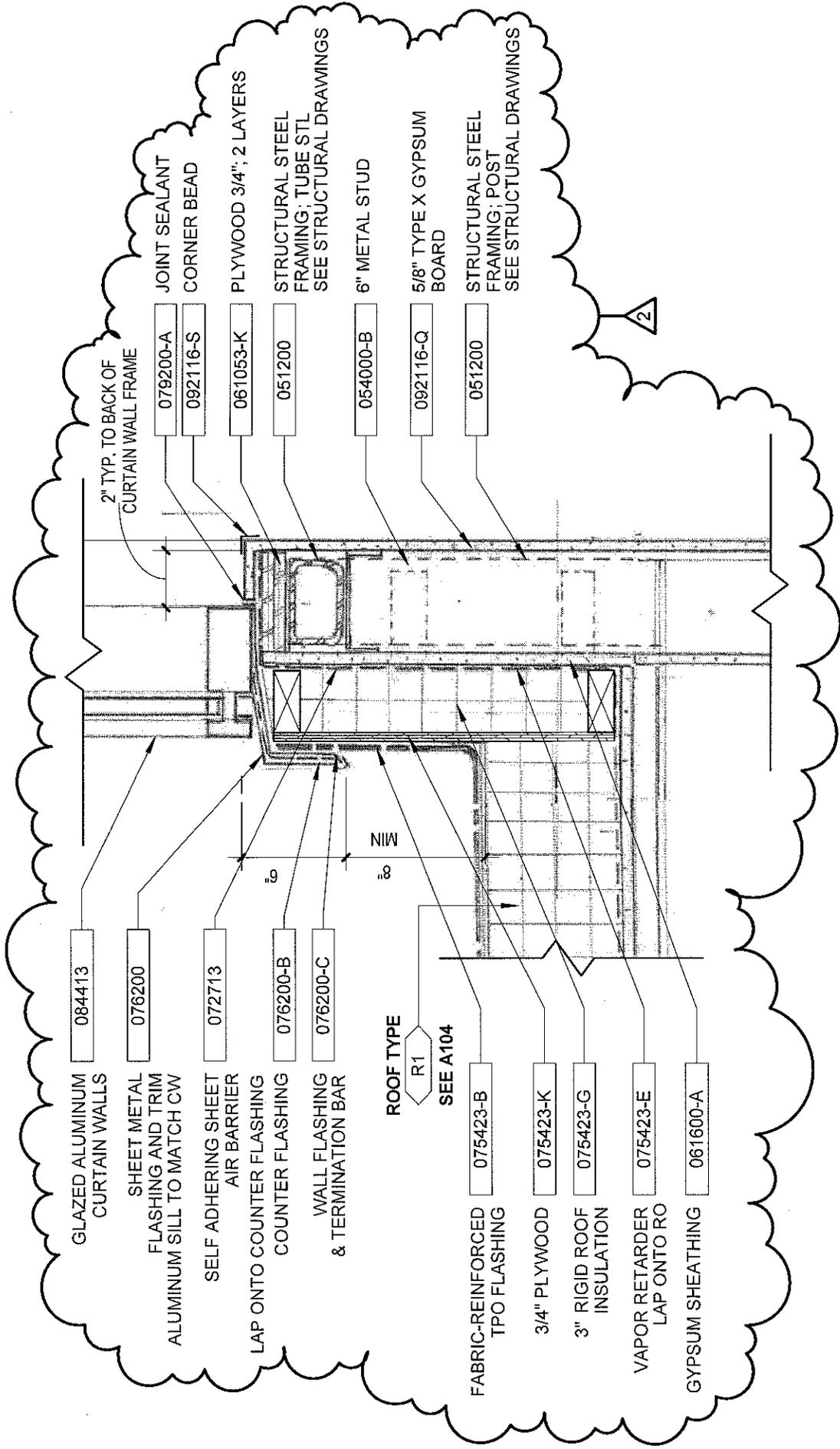
DATE:

1/24/2014

REFERENCE:

DWG. NO.:

SKA-027

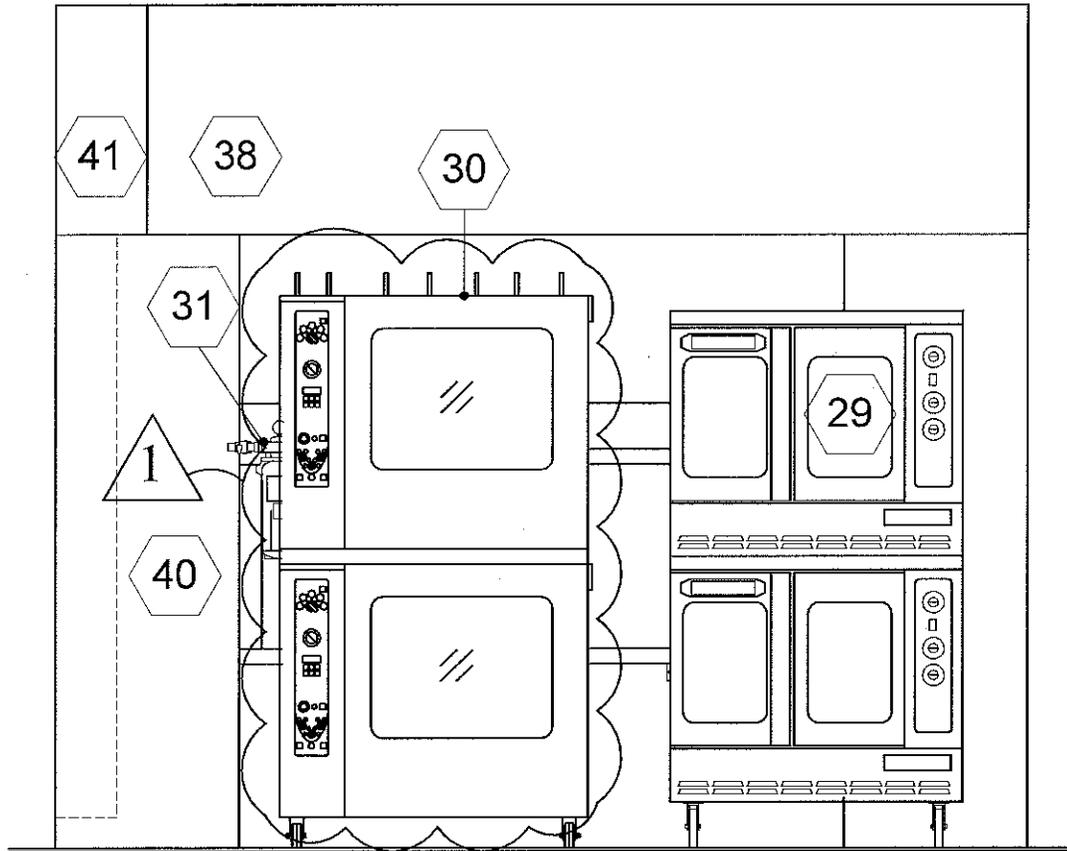


Perkins Eastman
 60 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.449.4000

PROJECT: Dr. Martin Luther King, Jr. School
Construction Project

PROJECT NO.: 47931.00
SCALE: 1 1/2" = 1'-0"
SHEET REFERENCE: 9/A514
DWG. NO.: SKA-028

DRAWING TITLE: CURTAIN WALL @ ROOF CURB, TYP.
DATE: 1/24/2014



Elevation Sketch - Cookline (Ovens)

1/2" = 1'-0"

Perkins Eastman
 50 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.449.4000

PROJECT: **Dr. Martin Luther King, Jr. School
 Construction Project**

DRAWING
 TITLE: Foodservice Elevation "C" Revision
 DATE: 01/22/2014

PROJECT NO. 47931.00

SCALE: 1/2" = 1'-0"

SHEET
 REFERENCE: FS104

DWG. NO.: **FSK-001**

Project: Dr. Martin Luther King Jr. School Construction Project

PE Project No.: 47931.00

Cambridge No: 5849C

Regarding: Bid Addendum 5 – Plumbing

Date: January 24, 2014

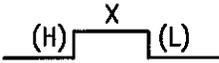
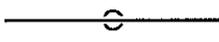
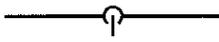
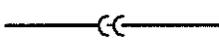
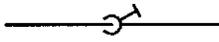
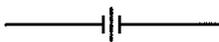
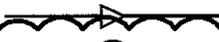
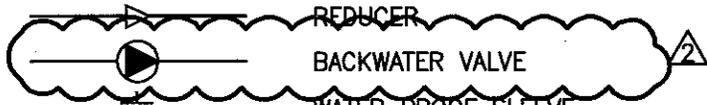
This Addendum is hereby made a part of the Contract Documents to the same extent as though it were originally included therein.

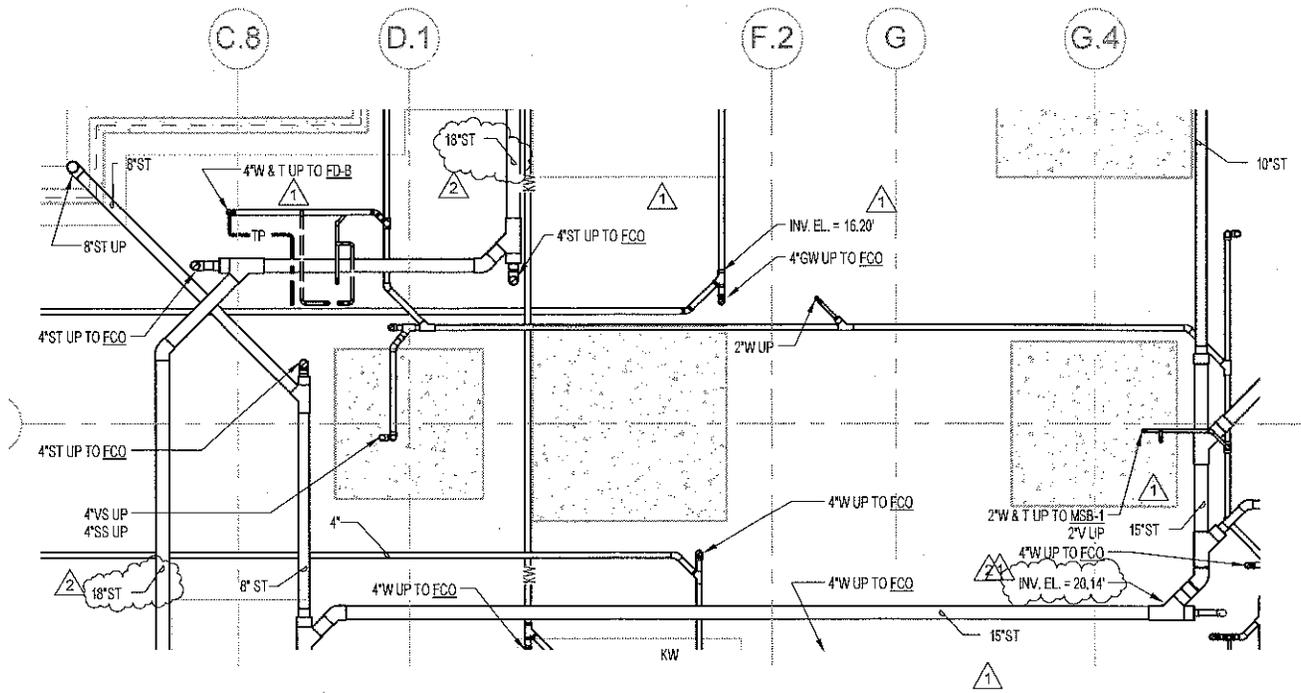
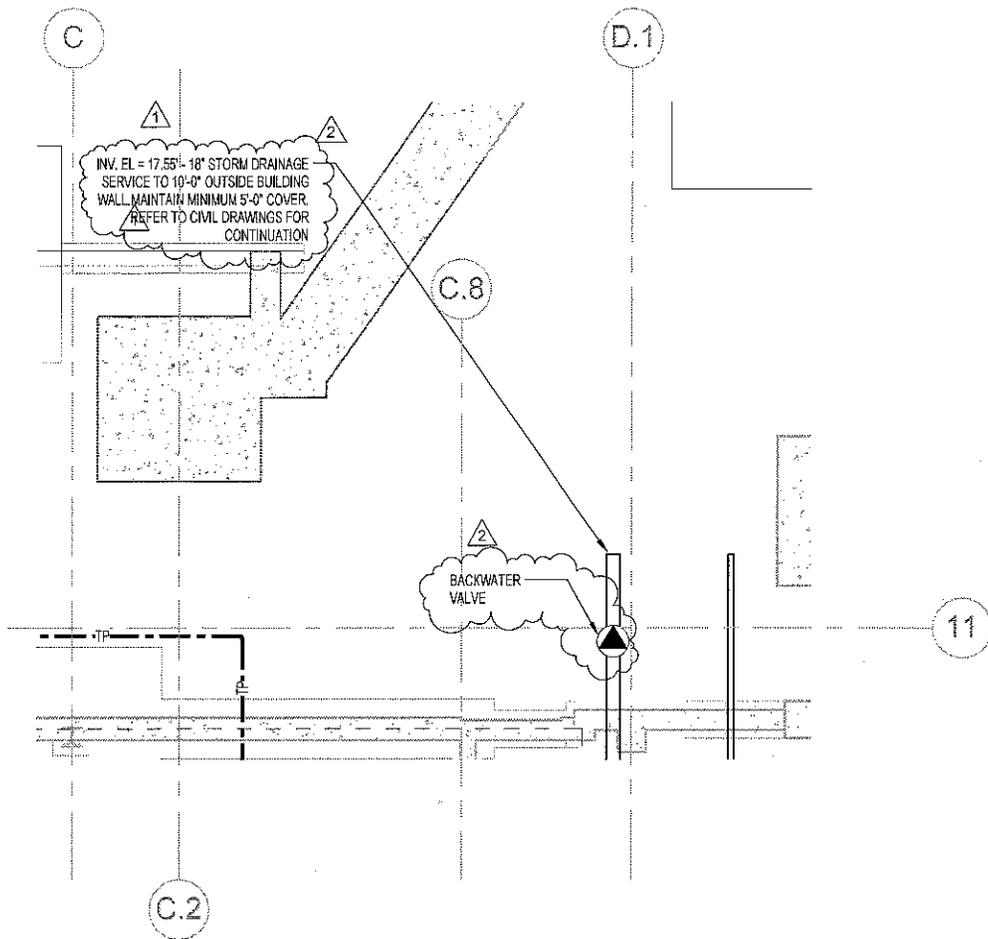
#	DISCIPLINE	BID QUESTION NO.	RESPONSE
01	Plumbing	#107 PJK-01	Q: Bid Addendum No. 4 – Volume 2 – Plumbing (Page 9 of 17) revised Aboveground Domestic Water Piping to Type K Hard Copper, please confirm that this revision is accurate. R: Above Ground domestic water piping shall be Type L. All below ground domestic water piping shall be Type K
02	Plumbing	#108 COMM-01	Q: Addendum #4 spec 221116 pg 20 letter G states above ground domestic water piping NPS 2" and smaller shall be Type K. In lieu of Type K will Type L be accepted R: Yes. Type L piping shall be used for all aboveground pipe. Type K shall be limited to below ground pipe.
#	DISCIPLINE	ISSUE	PROJECT MANUAL
1	Plumbing	None Submitted	None Provided
#	DISCIPLINE	ISSUE	DRAWINGS
01	Plumbing	Subject: References: Description:	Underground Storm P100.2 Clarified storm pipe sizes and inverts
02	Plumbing	Subject: References: Description:	Underground Storm P100.4 Clarified storm pipe routing. Added trap primer piping
03	Plumbing	Subject: References: Description:	Storm Piping P110.2 Clarified storm pipe routing, sizing. Coordinated open end drains for condensate.
04	Plumbing	Subject: References: Description:	Legend PSK001-2 Added symbol for backwater valve

05	Plumbing	Subject:	Underground Storm
		References:	PSK100.1-2
		Description:	Clarified storm pipe sizing and inverts. Added backwater valve
06	Plumbing	Subject:	Underground Storm
		References:	PSK100.3-1
		Description:	Clarified storm pipe inverts. Added trap primer piping
07	Plumbing	Subject:	Storm Piping
		References:	PSK110.1-1
		Description:	Clarified storm pipe sizing. Coordinated open end drains for condensate. Clarified waste piping with revised fixture locations
08	Plumbing	Subject:	Trap Primer Piping
		References:	PSK110.4-1
		Description:	Added trap primer piping
09	Plumbing	Subject:	Fixture Coordination
		References:	PSK111.1-2
		Description:	Clarified plumbing services to reflect revised fixture locations
10	Plumbing	Subject:	Roof Drains
		References:	PSK111.2-3
		Description:	Clarified roof drain sizing
11	Plumbing	Subject:	Storm Piping
		References:	PSK111.2-4
		Description:	Clarified storm pipe routing and sizing
12	Plumbing	Subject:	Storm Piping
		References:	PSK111.3-2
		Description:	Coordinated open end drains for condensate
13	Plumbing	Subject:	Fixture Coordination
		References:	PSK112.1-2
		Description:	Clarified plumbing services to reflect revised fixture locations
14	Plumbing	Subject:	Storm Piping
		References:	PSK112.2-2
		Description:	Coordinated open end drains for condensate
15	Plumbing	Subject:	Storm Piping
		References:	PSK112.4-2
		Description:	Coordinated open end drains for condensate
16	Plumbing	Subject:	Fixture Coordination
		References:	PSK113.1-2
		Description:	Clarified plumbing services to reflect revised fixture locations
17	Plumbing	Subject:	Storm Piping
		References:	PSK113.2-2
		Description:	coordinated open end drains for condensate

18	Plumbing	Subject:	Storm Piping
		References:	PSK113.4-2
		Description:	coordinated open end drains for condensate
19	Plumbing	Subject:	Grey Water Flow Diagram
		References:	PSK200-1
		Description:	Added note regarding pre-purchase of cisterns
20	Plumbing	Subject:	Roof Drains
		References:	PSK300-1
		Description:	Added Roof Drain Type C. Modified strainer materials.
21	Plumbing	Subject:	Grey Water Flow Detail
		References:	PSK401-1
		Description:	Added note regarding pre-purchase of cisterns

END OF BID ADDENDUM 5 – PLUMBING

	ST	STORM WATER DRAINAGE PIPING
	T	TEMPERED WATER PIPING
		DISCONNECT FROM EXISTING
		CONNECT TO EXISTING
		SHOCK ARRESTOR
		FLEXIBLE CONNECTION
	(H) X (L)	EXPANSION LOOP SIZE
		HOSE BIBB
		FRESH AIR INLET
		CLEAN OUT/PLUGGED OUTLET
		CAPPED OUTLET
		CLEAN-OUT DECK PLATE
		P-TRAP
		VACUUM BREAKER
		BOTTOM PIPE CONNECTION
		TOP PIPE CONNECTION
		SIDE CONNECTION
		PIPE DOWN/DROP
		PIPE RISE/UP
		PIPE SLOPE
		VALVE IN VERTICAL
		UNION
		REDUCER
		BACKWATER VALVE
		WATER PROOF SLEEVE
		SLEEVE
		PRESSURE GAUGE w/GAUGE COCK
		TEMPERATURE GAUGE

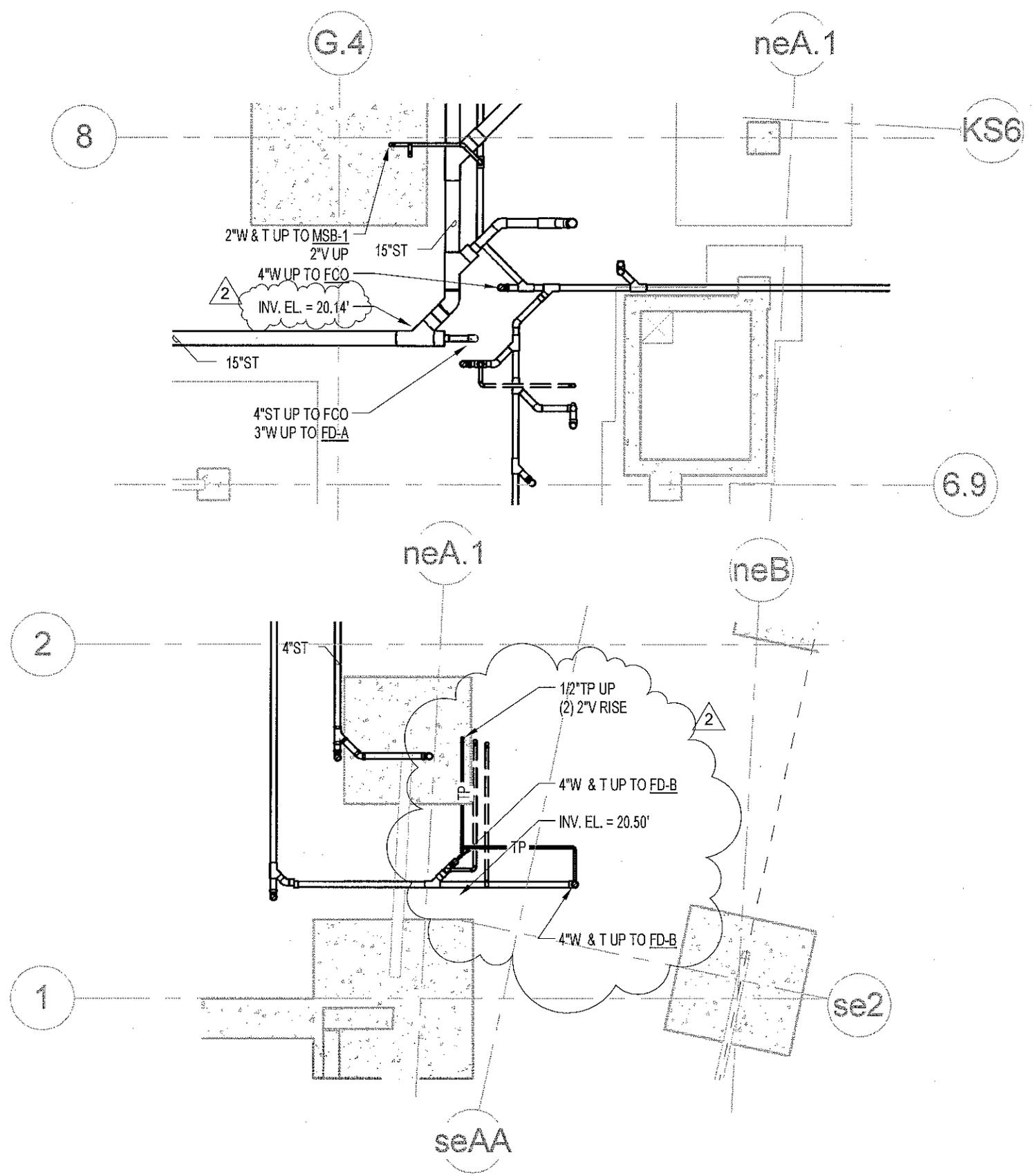


Perkins Eastman
 50 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.489.4000

PROJECT: *Dr. Martin Luther King, Jr. School
 Construction Project*

DRAWING TITLE: PLUMBING PARTIAL UNDERGROUND FLOOR PLAN 1
 DATE: 01/24/2014 ADDENDUM 5

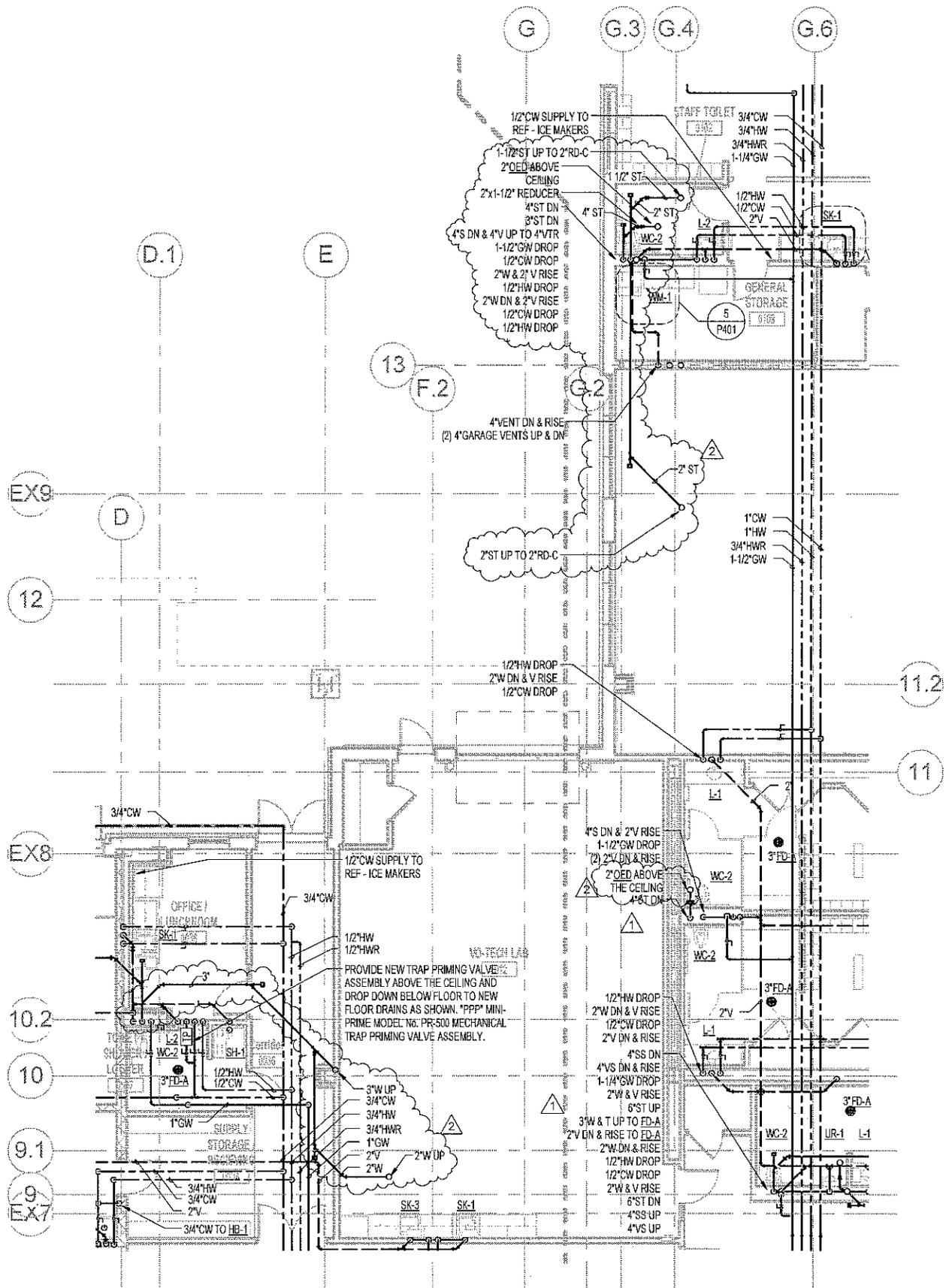
PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET: P100.1
 REFERENCE:
 DWG. NO.: *PSK100.1-1*



Perkins Eastman
 50 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.449.4000

PROJECT: *Dr. Martin Luther King, Jr. School Construction Project*
 DRAWING TITLE: PLUMBING PARTIAL UNDERGROUND FLOOR PLAN 3
 DATE: 01/24/2014 ADDENDUM 5

PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET REFERENCE: P100.3
 DWG. NO.: *PSK100.3-1*



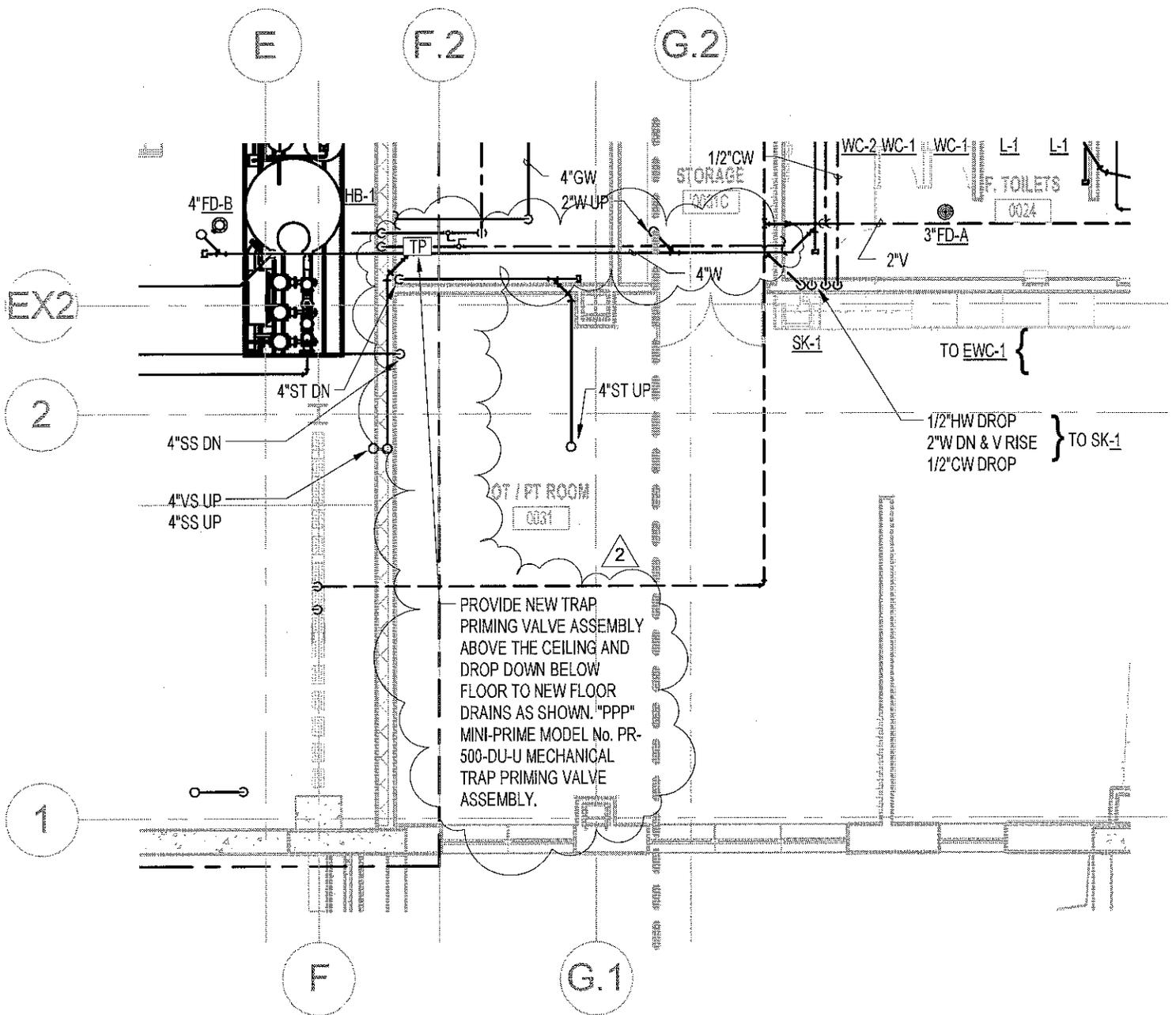
Perkins Eastman
 50 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.449.4000

PROJECT: *Dr. Martin Luther King, Jr. School
 Construction Project*

PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET P110.1

DRAWING TITLE: PLUMBING PARTIAL GROUND FLOOR PLAN 1
 DATE: 01/24/2014 ADDENDUM 5

DWG. NO.: *PSK110.1-1*

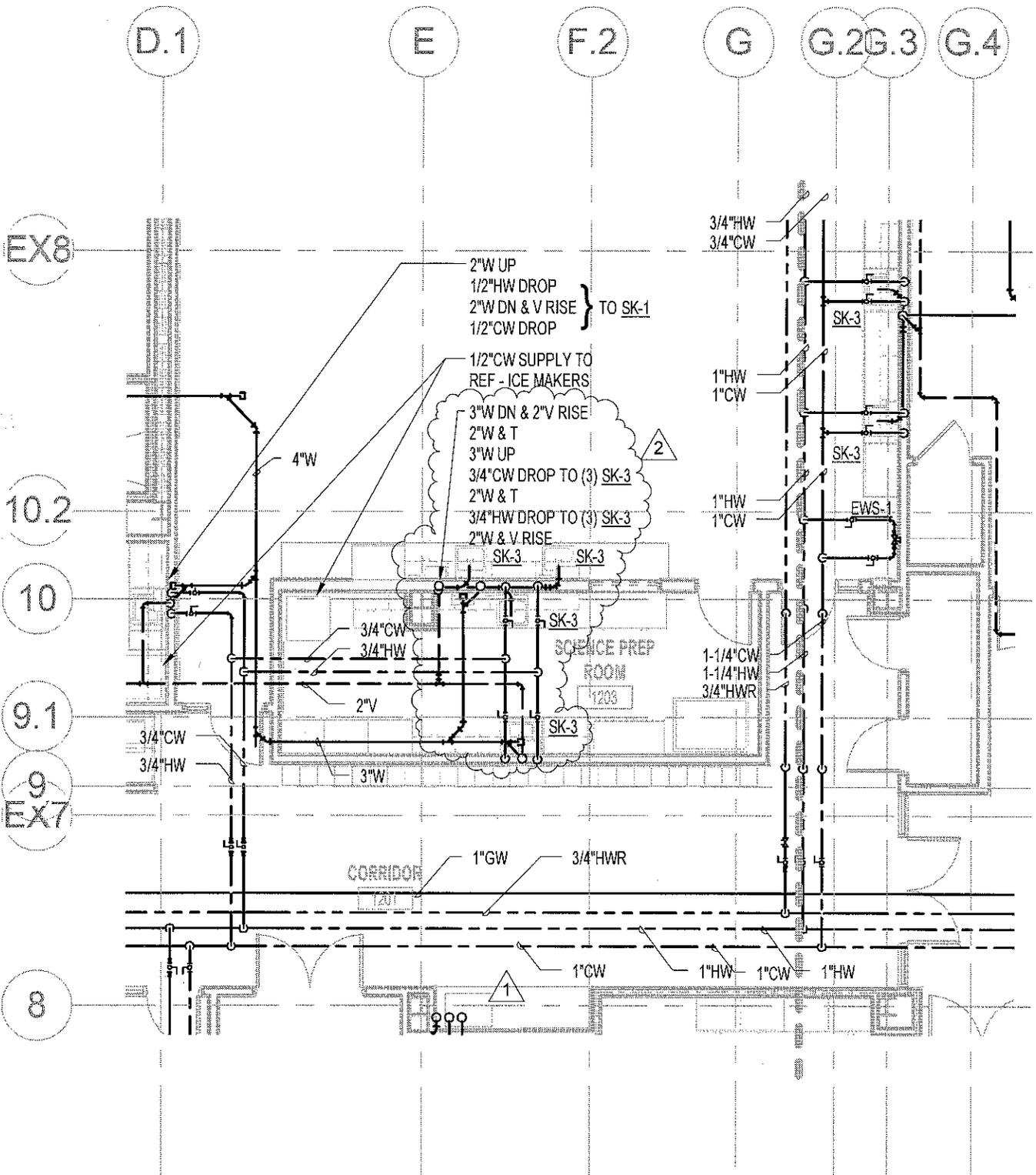


PROVIDE NEW TRAP
 PRIMING VALVE ASSEMBLY
 ABOVE THE CEILING AND
 DROP DOWN BELOW
 FLOOR TO NEW FLOOR
 DRAINS AS SHOWN. "PPP"
 MINI-PRIME MODEL No. PR-
 500-DU-U MECHANICAL
 TRAP PRIMING VALVE
 ASSEMBLY.

Perkins Eastman
 50 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.449.4000

PROJECT: *Dr. Martin Luther King, Jr. School*
Construction Project
 DRAWING
 TITLE: PLUMBING PARTIAL GROUND FLOOR PLAN 4
 DATE: 01/24/2014 ADDENDUM 5

PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET
 REFERENCE: P110.4
 DWG. NO.: *PSK110.4-1*



Perkins Eastman
 50 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.449.4000

PROJECT: *Dr. Martin Luther King, Jr. School*
Construction Project

PROJECT NO. 47931.00

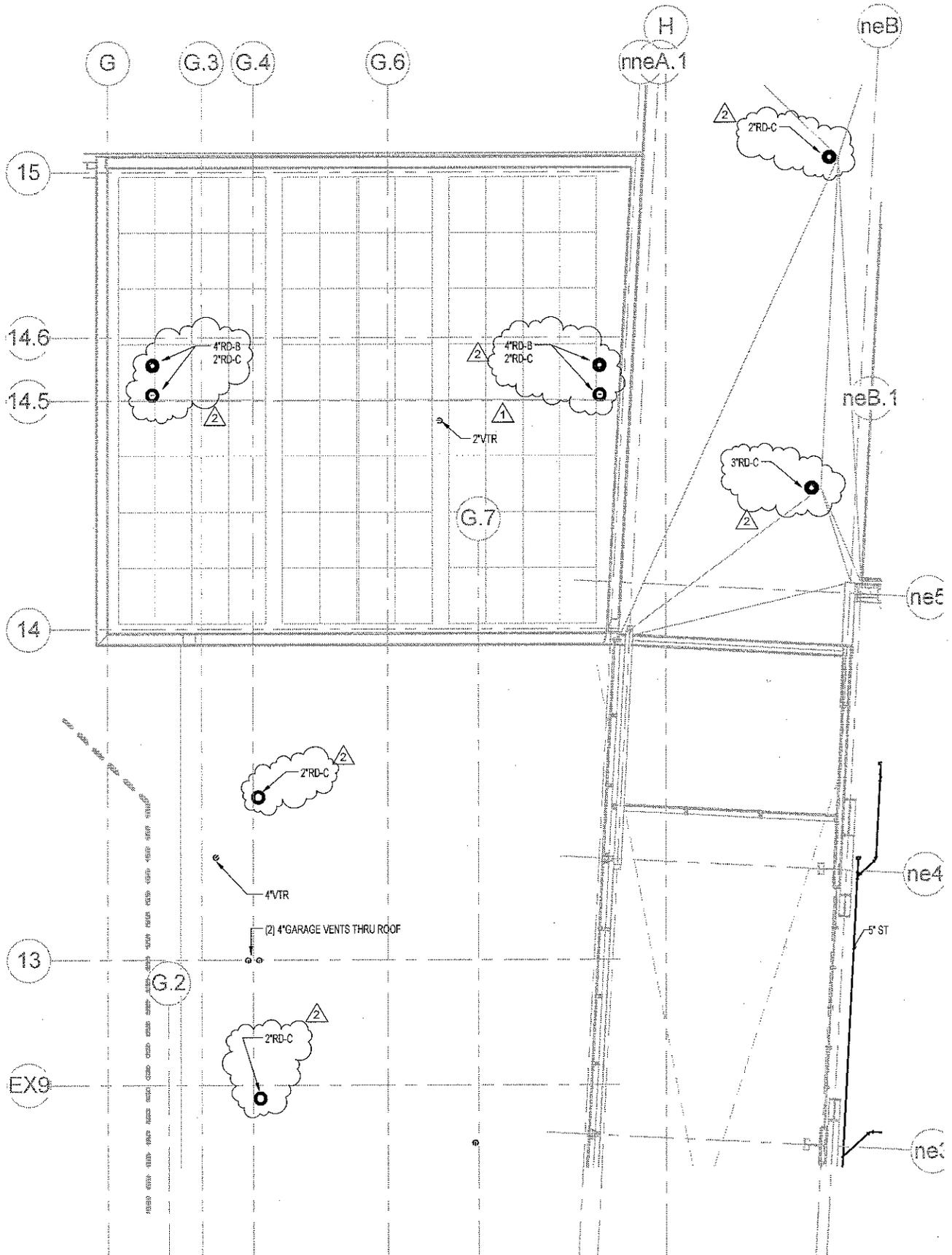
DRAWING
 TITLE: PLUMBING PARTIAL FIRST FLOOR PLAN 1

SCALE: 1/8" = 1'-0"

DATE: 01/24/2014 ADDENDUM 5

SHEET
 REFERENCE: P111.1

DWG. NO.: *PSK111.1-2*

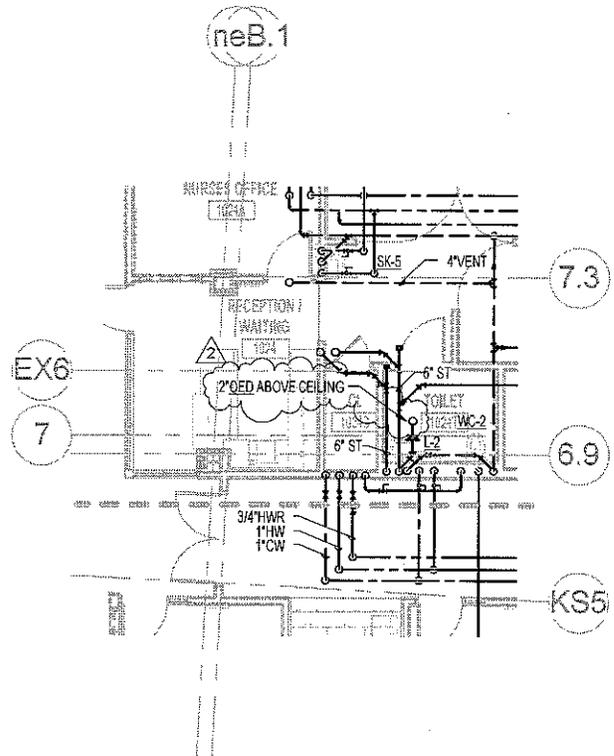
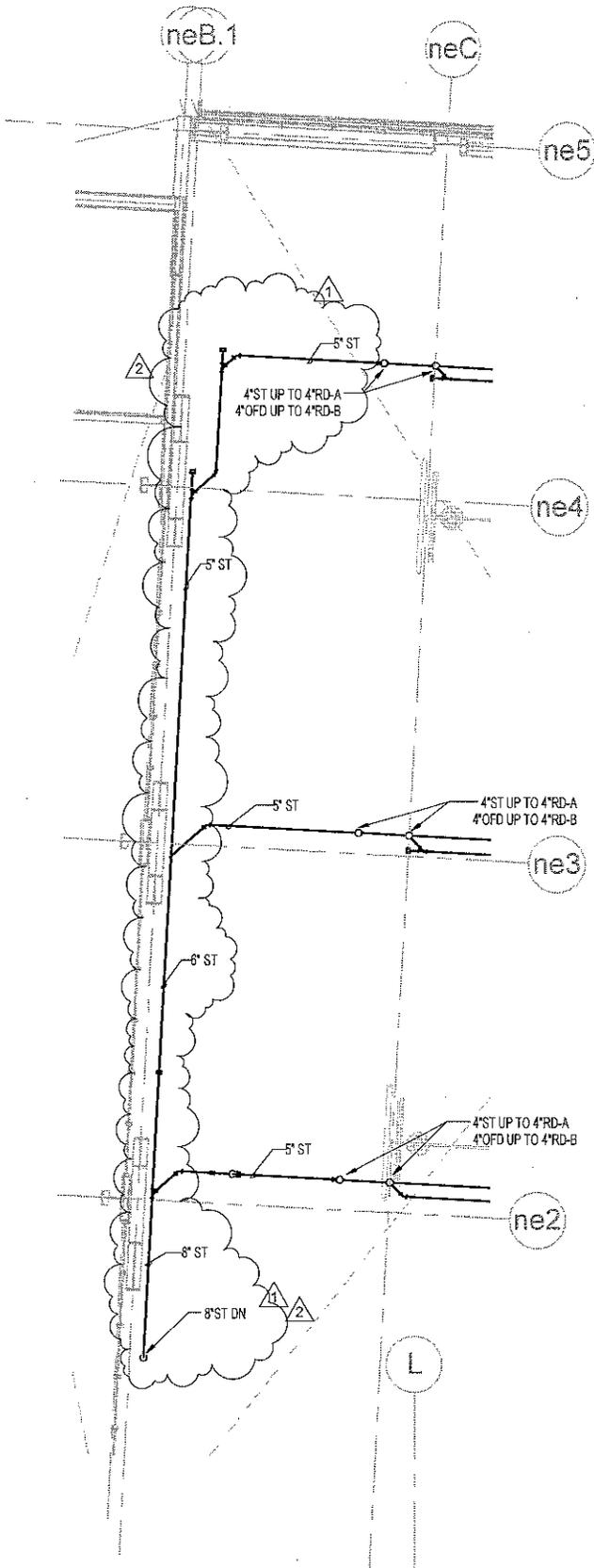


Perkins Eastman
 50 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T: 617-449-4000

PROJECT: *Dr. Martin Luther King, Jr. School
 Construction Project*

PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET: P111.2
 REFERENCE:
 DWG. NO.: *PSK111.2-3*

DRAWING TITLE: PLUMBING PARTIAL FIRST FLOOR PLAN 2
 DATE: 01/24/2014 ADDENDUM 5

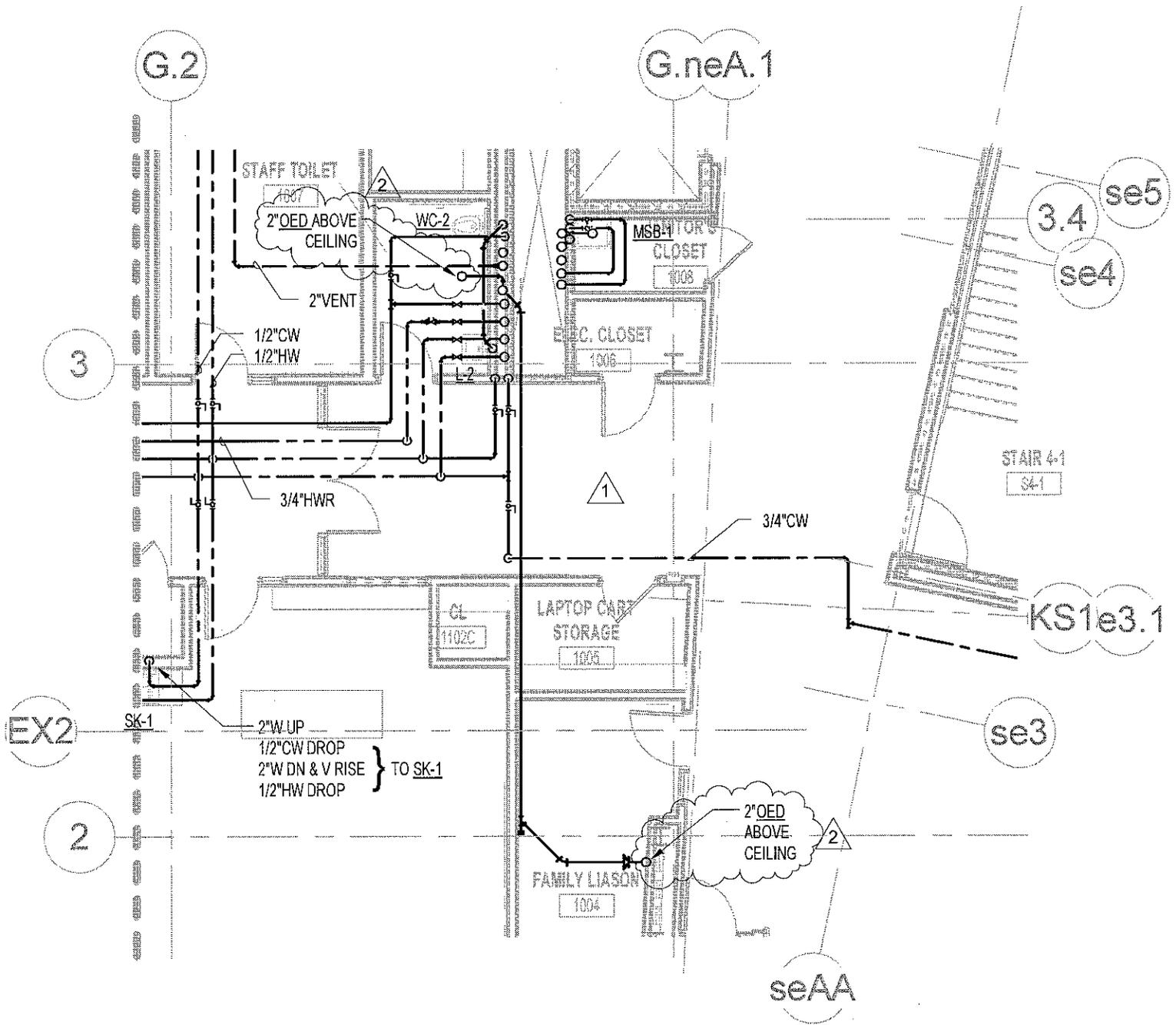


Perkins Eastman
 50 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.449.4000

PROJECT: *Dr. Martin Luther King, Jr. School
 Construction Project*

PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET: P111.2
 REFERENCE:
 DWG. NO.: *PSK111.2-4*

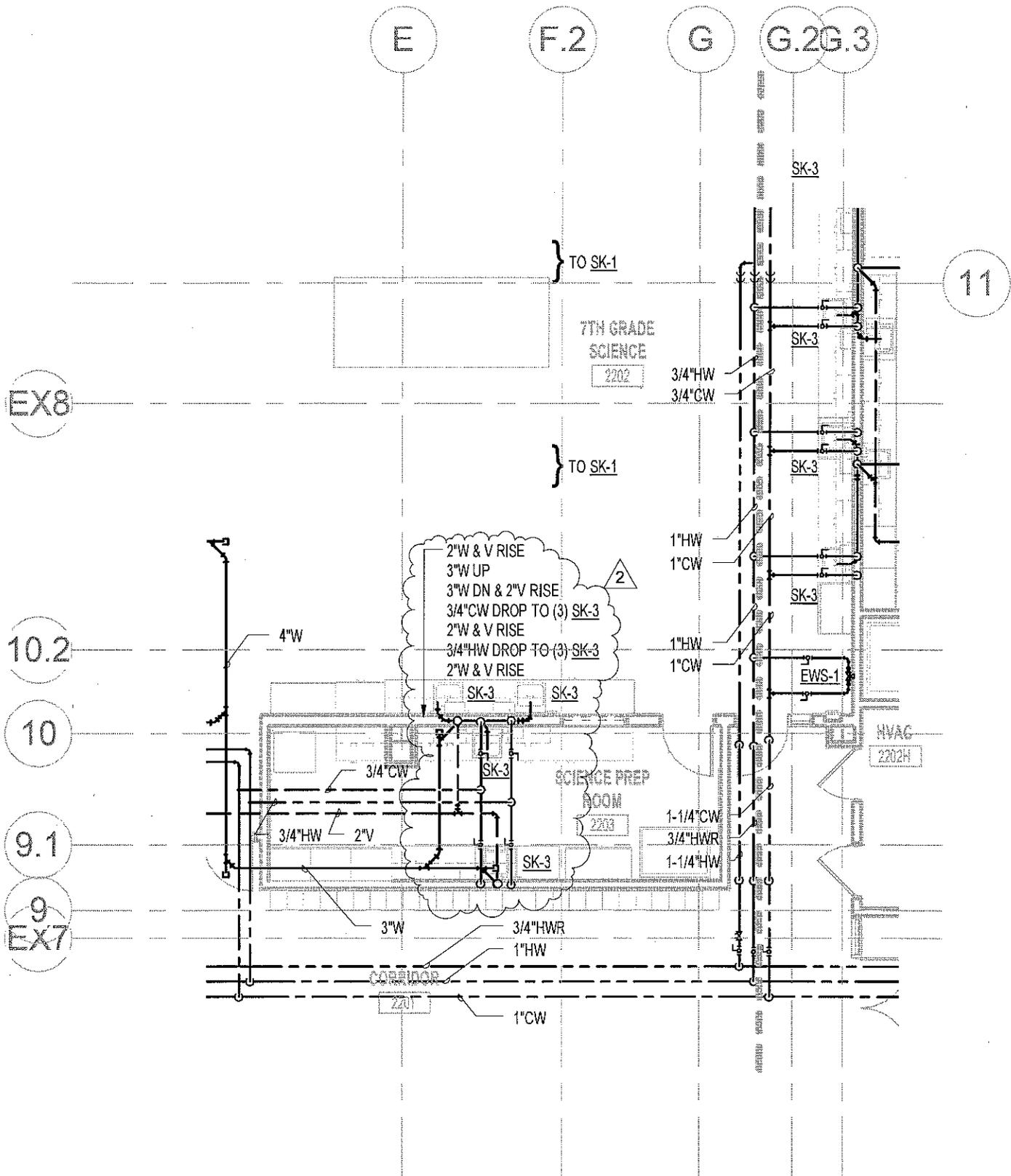
DRAWING TITLE: PLUMBING PARTIAL FIRST FLOOR PLAN 2
 DATE: 01/24/2014 ADDENDUM 5



Perkins Eastman
 50 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.449.4000

PROJECT: *Dr. Martin Luther King, Jr. School
 Construction Project*
 DRAWING
 TITLE: PLUMBING PARTIAL FIRST FLOOR PLAN 3
 DATE: 01/24/2014 ADDENDUM 5

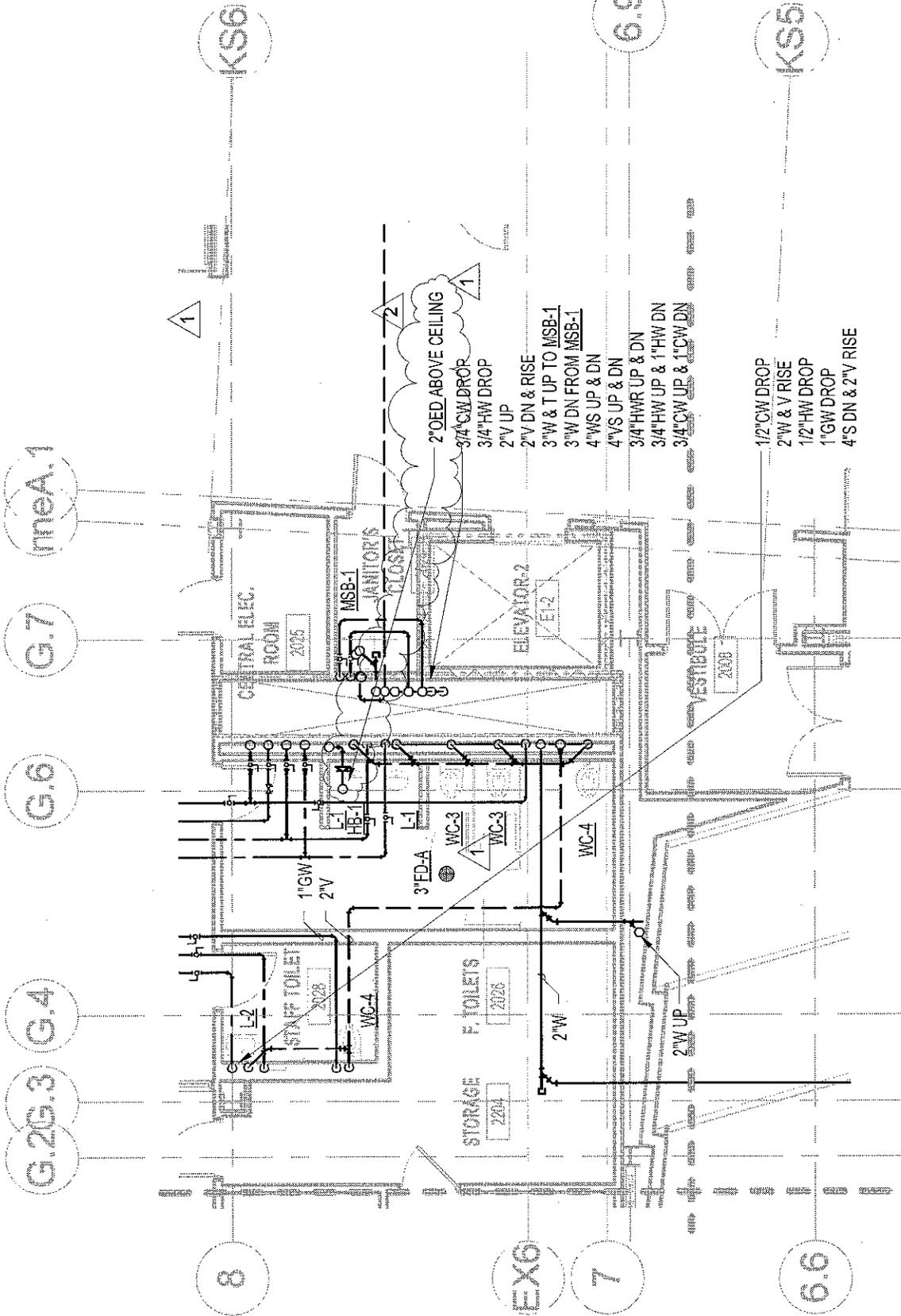
PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET
 REFERENCE: P111.3
 DWG. NO.: *PSK111.3-2*



Perkins Eastman
 50 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.449.4000

PROJECT: *Dr. Martin Luther King, Jr. School*
Construction Project
 DRAWING
 TITLE: PLUMBING PARTIAL SECOND FLOOR PLAN 1
 DATE: 01/24/2014 ADDENDUM 5

PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET
 REFERENCE: P112.1
 DWG. NO.: *PSK112.1-2*

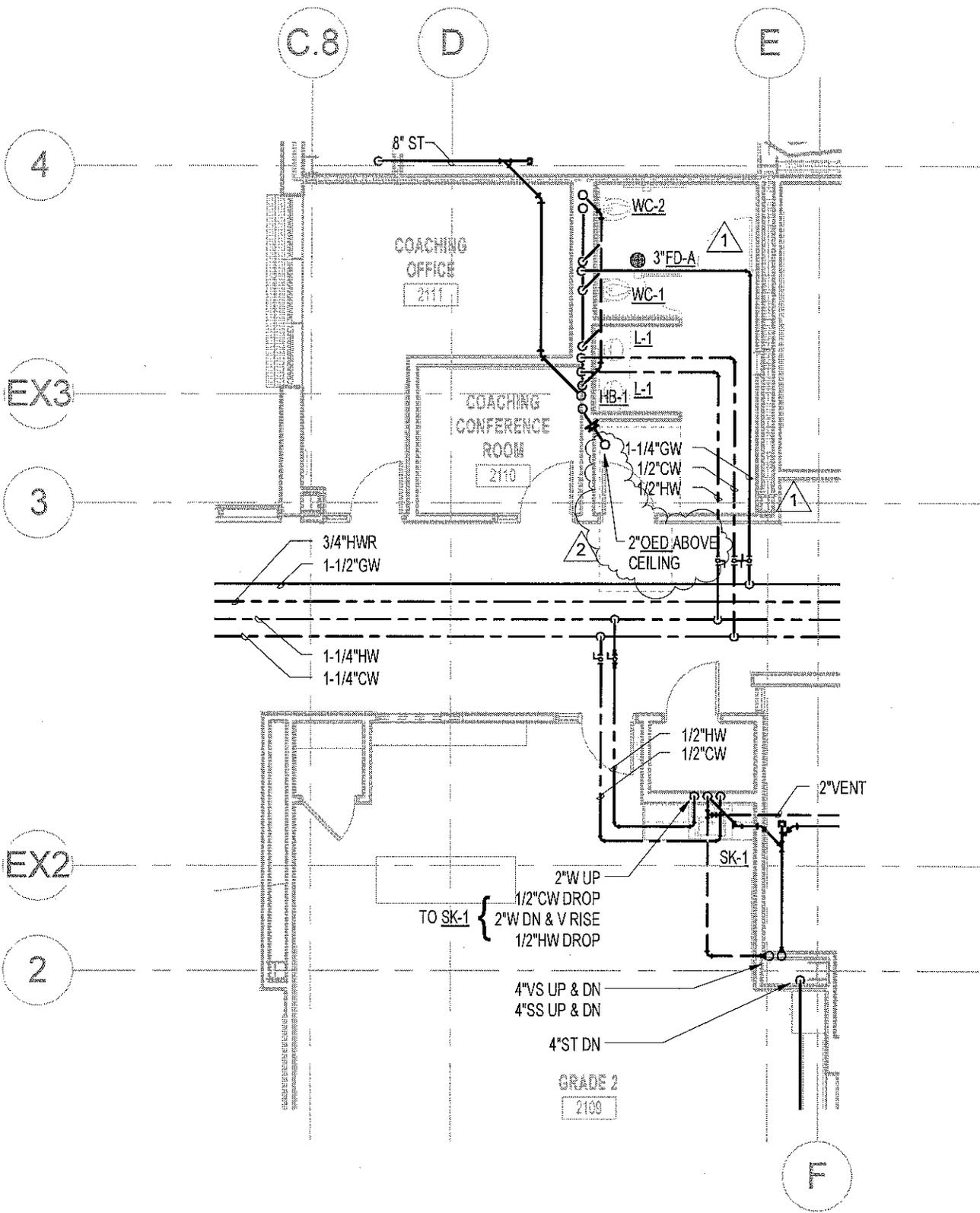


PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET P112.2
 REFERENCE:
 DWG. NO.: PSK112.2-2

PROJECT: Dr. Martin Luther King, Jr. School
 Construction Project

DRAWING TITLE: PLUMBING PARTIAL SECOND FLOOR PLAN 2
 DATE: 01/24/2014 ADDENDUM 5

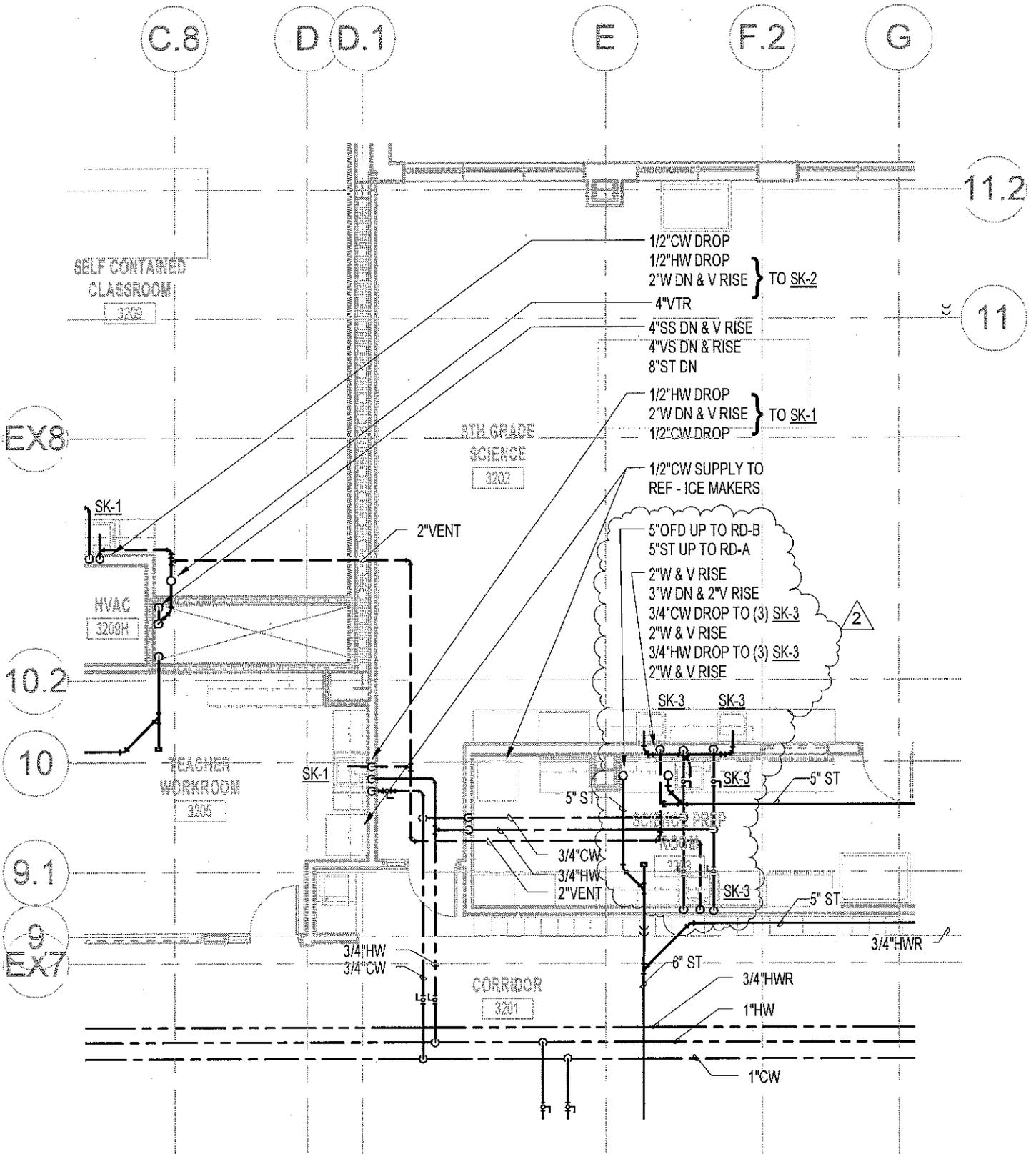
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PROJECT: *Dr. Martin Luther King, Jr. School*
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 DRAWING
 TITLE: PLUMBING PARTIAL SECOND FLOOR PLAN 4
 DATE: 01/24/2014 ADDENDUM 5

PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET
 REFERENCE: P112.4
 DWG. NO.: *PSK112.4-2*



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PROJECT: *Dr. Martin Luther King, Jr. School
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PROJECT NO. 47931.00

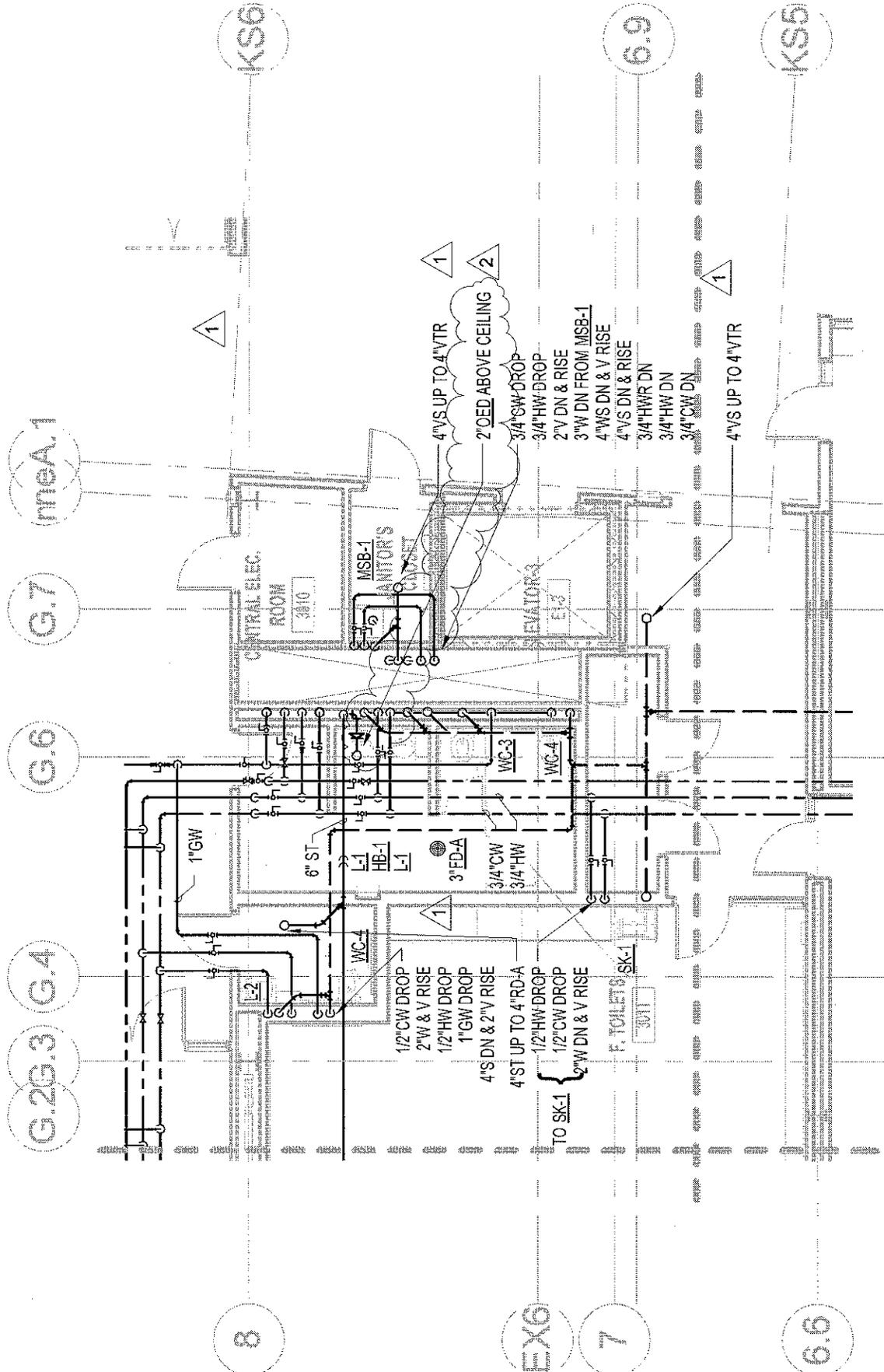
DRAWING
 TITLE: PLUMBING PARTIAL THIRD FLOOR PLAN 1

SCALE: 1/8" = 1'-0"

DATE: 01/24/2014 ADDENDUM 5

SHEET
 REFERENCE: P113.1

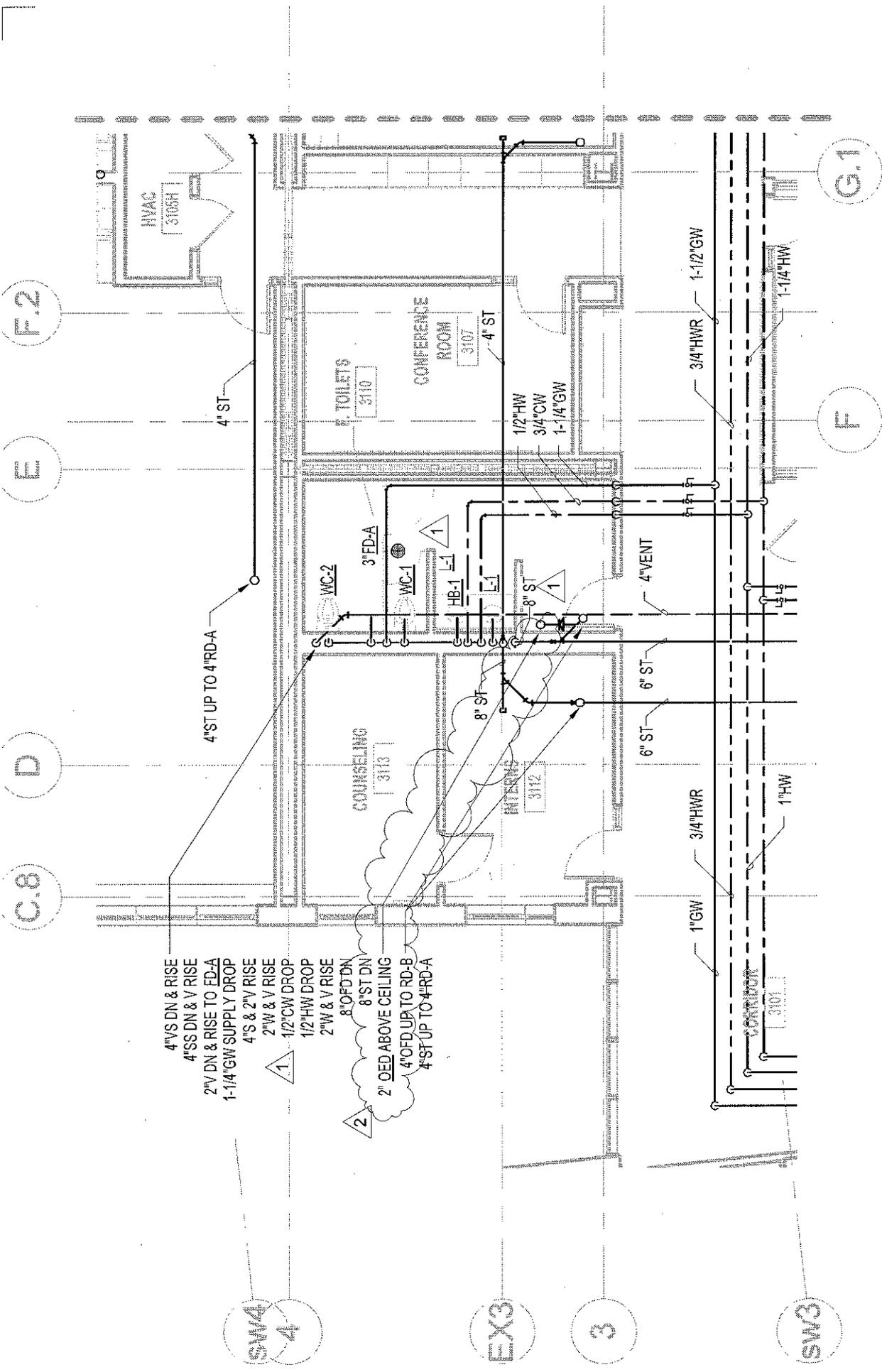
DWG. NO.: *PSK113.1-2*



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 DRAWING TITLE: **PLUMBING PARTIAL THIRD FLOOR PLAN 2
 ADDENDUM 5**
 DATE: **01/24/2014**

PROJECT NO. **47931.00**
 SCALE: **1/8" = 1'-0"**
 SHEET **P113.2**
 REFERENCE: **PSK113.2-2**
 DWG. NO. **PSK113.2-2**



- 4"VS DN & RISE
- 4"SS DN & V RISE
- 2"V DN & RISE TO ED-A
- 1-1/4"GW SUPPLY DROP
- 4"S & 2"V RISE
- 2"W & V RISE
- 1/2"CW DROP
- 1/2"HW DROP
- 2"W & V RISE
- 8"OFD DN
- 8"ST DN
- 2" OED ABOVE CEILING
- 4"OFD UP TO RD-B
- 4"ST UP TO 4"RD-A

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SHEET REFERENCE: P113.4
DWG. NO.: PSK113.4-2

LEVEL 2

REDUCED PRESSURE BACKFLOW PREVENTER ASSEMBLY, (TYP. FOR 2)

WATER METERS BY CAMBRIDGE WATER DEPARTMENT

LEVEL 1

6" DOMESTIC WATER SERVICE TO 10'-0" OUTSIDE EXTERIOR BUILDING WALL. REFER TO CIVIL DRAWINGS FOR CONTINUATION. MAINTAIN MIN. 5'-0" COVER.

LEVEL 0

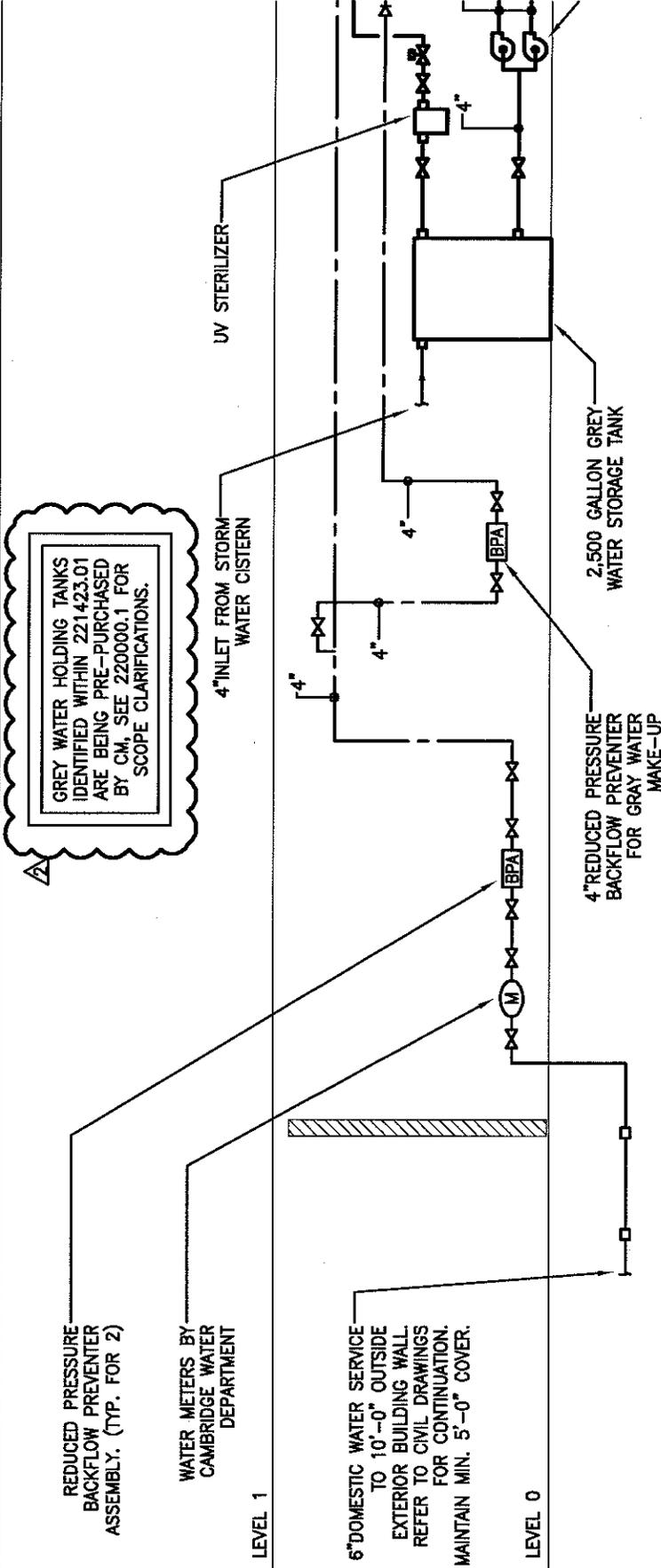
GREY WATER HOLDING TANKS IDENTIFIED WITHIN 221423.01 ARE BEING PRE-PURCHASED BY CM. SEE 220000.1 FOR SCOPE CLARIFICATIONS.

4" INLET FROM STORM WATER CISTERN

UV STERILIZER

4" REDUCED PRESSURE BACKFLOW PREVENTER FOR GRAY WATER MAKE-UP

2,500 GALLON GREY WATER STORAGE TANK



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PROJECT NO. 47931.00

SCALE: NTS

SHEET P200

REFERENCE:

DWG. NO.: **PSK200-1**

DRAWING TITLE: PLUMBING GREY WATER RISER DIAGRAM / FLOW SCHEMATIC

DATE: 01/24/2014 ADDENDUM 5

DRAIN SCHEDULE

LABEL	TYPE	BASIS OF DESIGN		DRAIN BODY	STRAINER	STRAINER SIZE	OUTLET	REMARKS
		MFG.	MODEL #					
ED-A	FLOOR DRAIN	JAY R SMITH	2330Y	DUCO-CAST IRON	NICKEL BRONZE	12" DIAMETER	4"	LOCATE IN MECH. AREAS AS SHOWN ON DRAWINGS. INCLUDE SUFFIX P050 FOR PRIMER CONNECTION
ED-B	FLOOR DRAIN	JAY R SMITH	2240-Y	DUCO-CAST IRON	BRONZE TOP	-	2"	PROVIDE "PROVENT SYSTEMS, INC" PROSET TRAP GUARD MODEL No. TG3H
ES-1	FLOOR SINK	JAY R SMITH	3100-Y	DUCO-CAST IRON	NICKEL BRONZE	12" SQUARE	VARIES	
RD-A	ROOF DRAIN	WATTS	RD-300-F	DUCO-CAST IRON	POLYETHYLENE	14" DIAMETER	VARIES	ROOF DRAINS WITH LOW-DOME
RD-B	OVERFLOW DRAIN	WATTS	RD-300-F	DUCO-CAST IRON	POLYETHYLENE	14" DIAMETER	VARIES	OVERFLOW DRAINS WITH LOW-DOME
RD-C	SIPHONIC ROOF DRAIN	JAY R SMITH	1005	DUCO-CAST IRON	POLYETHYLENE	15-1/4" DIAMETER	VARIES	SIPHONIC ROOF DRAINS WITH LOW PROFILE DOME
ET-1	FLOOR TROUGH	CUSTOM (REFER TO FOOD SERVICE CONSULTANTS DRAWINGS FOR CONTINUATION & CLARIFICATION)		STAINLESS	STAINLESS	33" x 23" x 4" DEEP	4"	KITCHEN FLOOR TROUGH DRAINS
AD-1	AREA WAY DRAIN	JAY R SMITH	1409	DUCO-CAST IRON	CAST IRON	14" GRID	4"	
TD-1	TRENCH DRAIN	JAY R SMITH	982B	POLYMERE CONCRETE	DUCTILE IRON	-	4"	PROVIDE TRENCH DRAIN SECTIONS TO MEET FIELD CONDITIONS

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PROJECT NO. 47981.00
 SCALE: NTS
 SHEET P300
 REFERENCE:
 DWG. NO.: PSK300-1

DRAWING TITLE: PLUMBING SCHEDULES
 DATE: 01/24/2014 ADDENDUM 5

Project: Dr. Martin Luther King Jr. School Construction Project

PE Project No.: 47931.00

Cambridge No: 5849C

Regarding: Bid Addendum 5 – Mechanical

Date: January 24, 2014

This Addendum is hereby made a part of the Contract Documents to the same extent as though it were originally included therein.

#	DISCIPLINE	BID QUESTION NO.	RESPONSE
01	Mechanical	110_ZBT_01	<p>Q: The ATC specification calls for a fully BACnet BMS system under section 1.7C. Zenergy is the local factory authorized representative for KMC Controls (www.kmcccontrols.com), a fully BACnet DDC controls product. We would like KMC Controls by Zenergy Building Technologies added to the current list of 8 ATC manufacturers under section 2.1...</p> <p>R: Zenergy Building Technologies, Inc. is not a listed manufacturer in Section 230900, Article 2.1. This manufacturer may be listed as a manufacturer if accepted by the City of Cambridge.</p>
#	DISCIPLINE	ISSUE	PROJECT MANUAL
1	Mechanical	<p>Subject:</p> <p>References:</p> <p>Description:</p>	<p>HVAC INSTRUMENTATION AND CONTROLS Specification Update</p> <p>SECTION 230900</p> <p>See Reissued Section for Addendum 5 Specification Updates</p>
2	Mechanical	<p>Subject:</p> <p>References:</p> <p>Description:</p>	<p>SEQUENCE OF OPERATIONS Specification Update</p> <p>SECTION 230993</p> <p>See Reissued Section for Addendum 5 Specification Updates</p>
#	DISCIPLINE	ISSUE	DRAWINGS
01	Mechanical	<p>Subject:</p> <p>References:</p> <p>Description:</p>	<p>Clarification - Revised Symbols for Air Devices</p> <p>MSK001-1</p> <p>Revised supply and return ceiling diffuser symbols.</p>
02	Mechanical	<p>Subject:</p> <p>References:</p> <p>Description:</p>	<p>Revised Ductwork Layout and Fan Location</p> <p>MSK110.1-3</p> <p>Revised exhaust ductwork layout and relocated EF-3 within Electrical Vault 0061.</p>
03	Mechanical	<p>Subject:</p>	<p>Clarification - Revised Ductwork Layout</p>

		References:	MSK110.1-4
		Description:	Revised ductwork layout within battery inverter closet.
04	Mechanical	Subject:	Revised Ductwork and Piping Layout and Added Beam
		References:	MSK110.3-3 / MSK210.2-1
		Description:	Revised layout of laminator exhaust ductwork and supply ductwork associated with HP 0-08. Revised GWS and GWR piping layout near laminator exhaust ductwork and GWS, GWR and Condensate piping associated with HP 0-08.
05	Mechanical	Subject:	Added Beam Penetrations
		References:	MSK110.3-3
		Description:	Added three beam penetrations above Dining 0021.
06	Mechanical	Subject:	Clarification - Revised Layout and Resized Ductwork
		References:	MSK110.3-4
		Description:	Revised layout and resized main supply and return outside air ductwork for ERU-8.
07	Mechanical	Subject:	Vents - Revised Layout and Relocated Riser
		References:	MSK110.4-1 / MSK112.4-1 / MSK113.4-2 / MSK114.4-2 MSK211.4-3 / MSK212.4-3 / MSK213.4-3
		Description:	Relocated vent riser from and within Geothermal Mechanical Room 0053 and routed ductwork and piping on upper floors around new riser location. Removed note at former vent riser location.
08	Mechanical	Subject:	Clarification - Revised Ductwork Layout and Plenum
		References:	MSK110.4-2
		Description:	Revised plenum for outside air for DOAS -2 and combustion air. Revised ductwork layout of outside air for DOAS-2.
09	Mechanical	Subject:	Clarification - Revised Airflow and Plenum Size
		References:	MSK111.2-1 / MSK302-3
		Description:	Revised outside air return plenum for Multi-Purpose Gym 0003. Reduced airflow of return grille and updated Diffuser, Register, and Grille Schedule accordingly.
10	Mechanical	Subject:	Clarification - Resized Ductwork and Airflow
		References:	MSK111.3-1 / MSK302-3
		Description:	Reduced size of outside air supply and return ductwork for Small Gym 0026. Reduced airflow of return grille and updated Diffuser, Register, and Grille Schedule accordingly.
11	Mechanical	Subject:	Added Heat Pump
		References:	MSK111.4-3 / MSK211.4-3
		Description:	Added HP 1-48 to serve Storage 1013. Coordinated associated ductwork and piping with ductwork and piping layout associated with HP 1-39.
12	Mechanical	Subject:	Clarification - Relocated Stove Vent Riser
		References:	MSK112.2-2

		Description:	Relocated After School stove vent riser.
13	Mechanical	Subject:	Resized Exhaust Plenum
		References:	MSK113.3-1
		Description:	Resized exhaust plenum associated with ERU-8 and specified exhaust louver free area requirement.
14	Mechanical	Subject:	Revised Exhaust Plenum Location
		References:	MSK114.1-2
		Description:	Revised EF-1 exhaust plenum location and size. Specified exhaust louver free area requirement.
15	Mechanical	Subject:	Elevator Vent - Revised Ductwork Layout Above Elevator-3
		References:	MSK113.4-4 / MSK114.4-2
		Description:	Revised supply ductwork layout above Elevator-3 E2-3. Revised elevator vent location and orientation. Added roof-mounted hoistway vent H-4 to floor plan and Gravity Intake/Relief Hood Schedule.
16	Mechanical	Subject:	Elevator Vent - Revised Elevator Vent Ductwork
		References:	MSK114.1-2
		Description:	Revised elevator vent location and orientation. Added roof-mounted hoistway vent H-3 to floor plan and Gravity Intake/Relief Hood Schedule.
17	Mechanical	Subject:	Elevator Vent - Revised Key Note
		References:	M114.1 / M114.2 / M114.3 / M114.4
		Description:	Revised Key Note 2 to read: 26" x 26" VENT DUCT UP FROM TOP OF HOISTWAY TO ROOF-MOUNTED HOISTWAY VENT.
18	Mechanical	Subject:	Elevator Vent - Revised Key Note
		References:	M114.1 / M114.2 / M114.3 / M114.4
		Description:	Revised Key Note 3 to read: ROOF-MOUNTED HOISTWAY VENT.
19	Mechanical	Subject:	Elevator Vent - Removed Key Note
		References:	M114.1 / M114.2 / M114.3 / M114.4
		Description:	Removed Key Note 4.
20	Mechanical	Subject:	Relocated Boilers
		References:	MSK500-2
		Description:	Increased distance between B-1 and B-2 to 24".
			END OF BID ADDENDUM 5 – MECHANICAL

UC →

UNDERCUT DOOR



CD
400 f

CEILING DIFFUSER ON FLAT CEILING
400 CFM SUPPLY AIR



CD
400 f

CEILING DIFFUSER ON SLOPED CEILING
400 CFM SUPPLY AIR



12x12 CD
400f

RECTANGULAR CEILING DIFFUSER WITH 12"x12" NECK
400 CFM SUPPLY AIR



CR
400 f

CEILING DIFFUSER ON FLAT CEILING
400 CFM RETURN AIR



CR
400 f

CEILING DIFFUSER ON SLOPED CEILING
400 CFM RETURN AIR



10x8 CR(CG)
300 f

10" BY 8" CEILING REGISTER (CEILING GRILLE)
300 CFM RETURN AIR



CD-B
300 f

TYPE B ROUND DIFFUSER
400 CFM SUPPLY AIR

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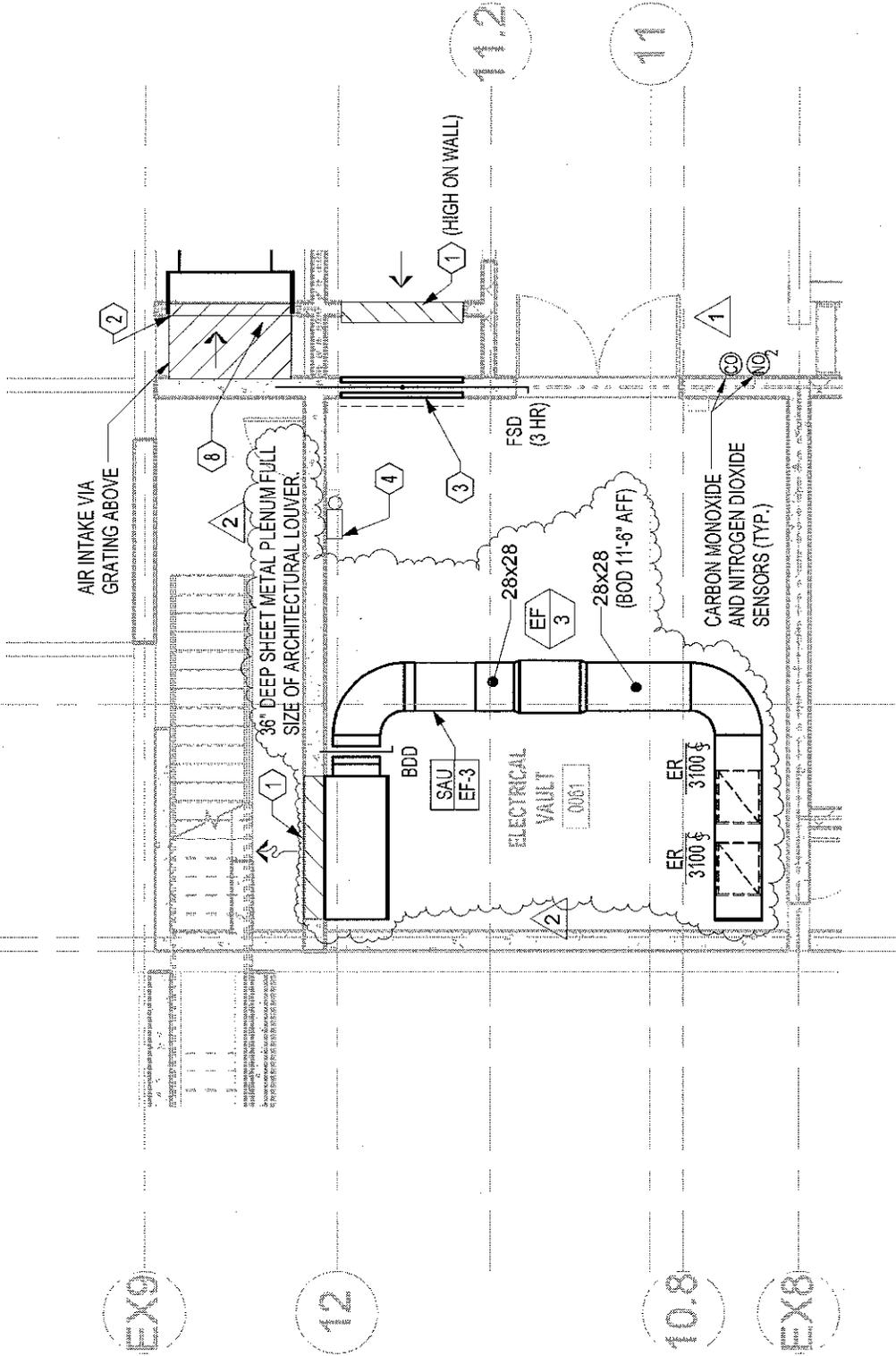
**PROJECT: Dr. Martin Luther King, Jr. School
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PROJECT NO. 47831.00
SCALE: NOT TO SCALE
SHEET M001
REFERENCE:

DRAWING TITLE: MECHANICAL LEGEND
DATE: 01/24/14 ADDENDUM 5

DWG. NO.: MSK001-1

EAGA A.2

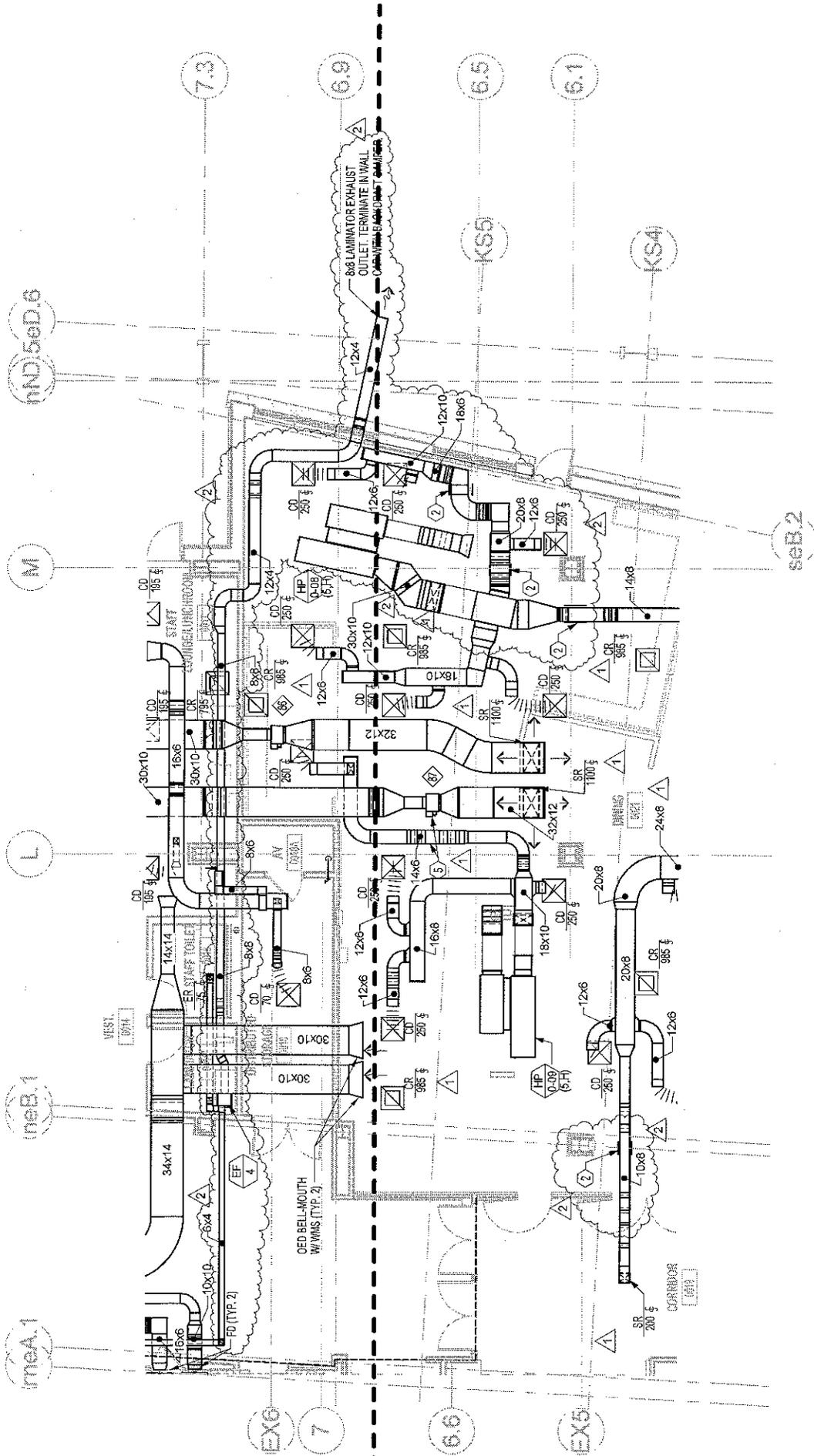


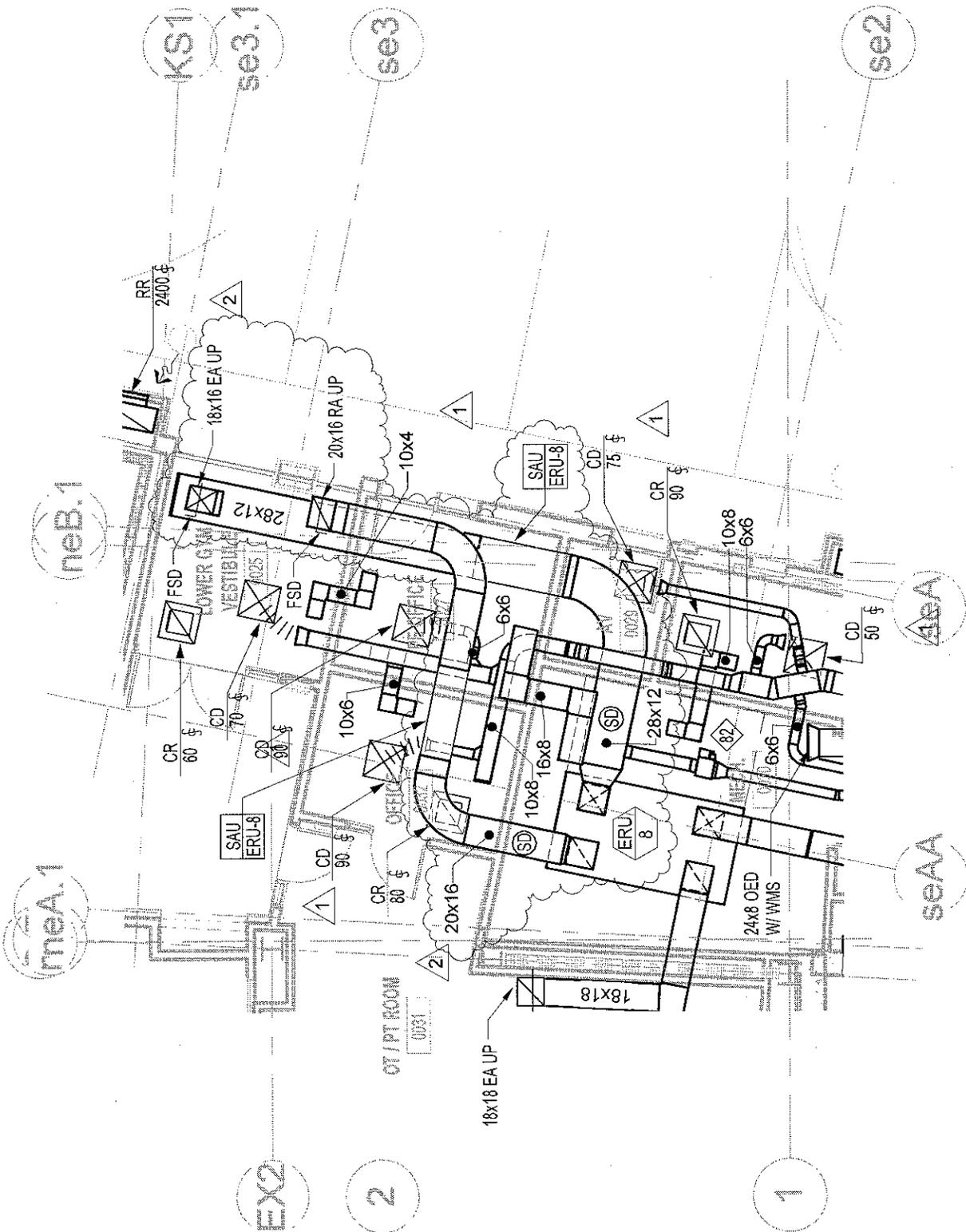
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PROJECT: **Dr. Martin Luther King, Jr. School Construction Project**

DRAWING TITLE: **MECHANICAL DUCTWORK PARTIAL GROUND FLOOR PLAN 1**
 DATE: **01/24/2014** ADDENDUM 5

PROJECT NO. **47931.00**
 SCALE: **1/8" = 1'-0"**
 SHEET **M110.1**
 REFERENCE:
 DWG. NO.: **MSK110.1-3**





PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET M110.3
 REFERENCE: MSK110.3-4
 DWG. NO.:

PROJECT: Dr. Martin Luther King, Jr. School
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DRAWING TITLE: MECHANICAL DUCTWORK PARTIAL GROUND FLOOR PLAN 3
 DATE: 01/24/2014 ADDENDUM 5

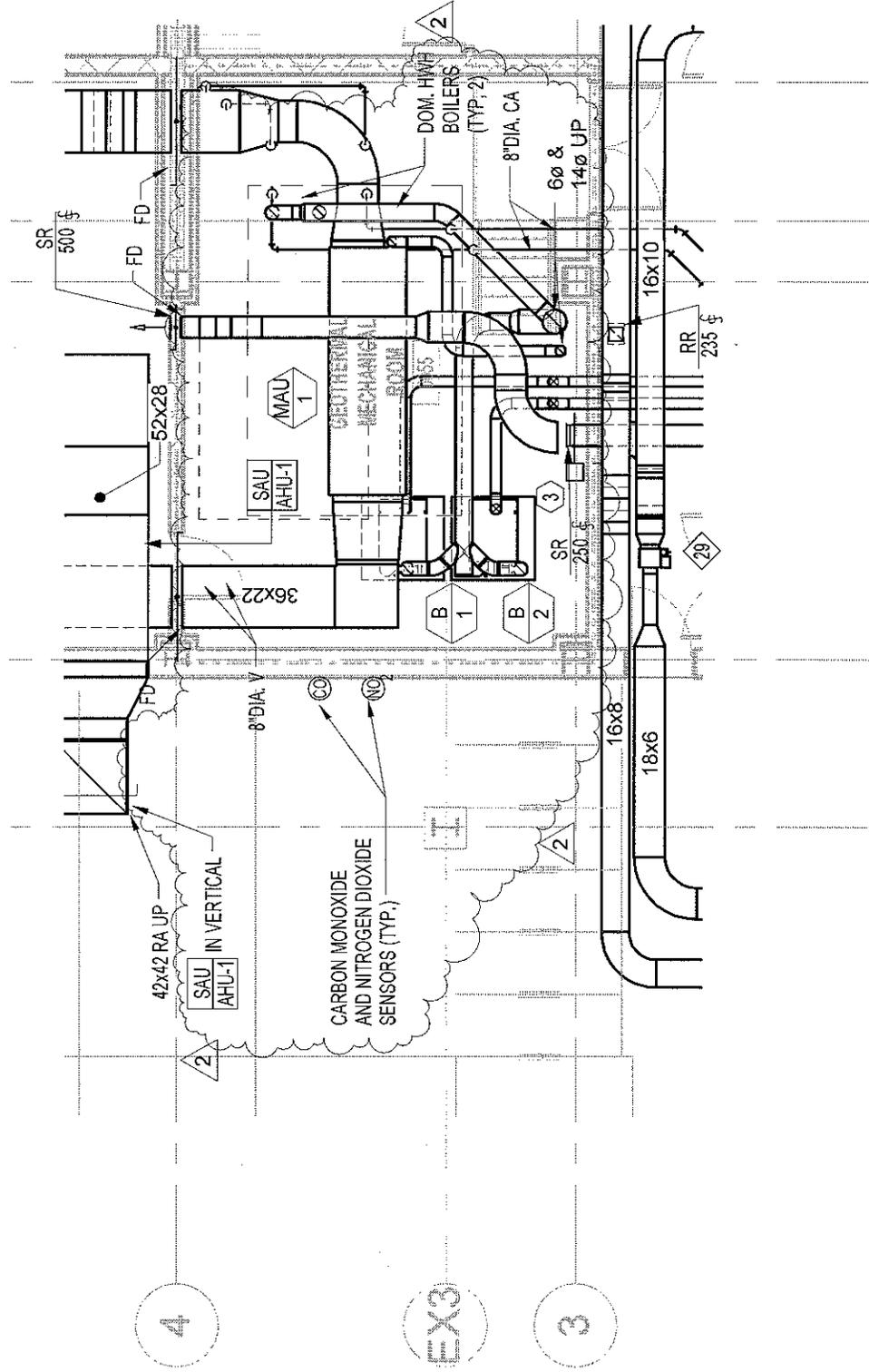
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C.8

F

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F.2

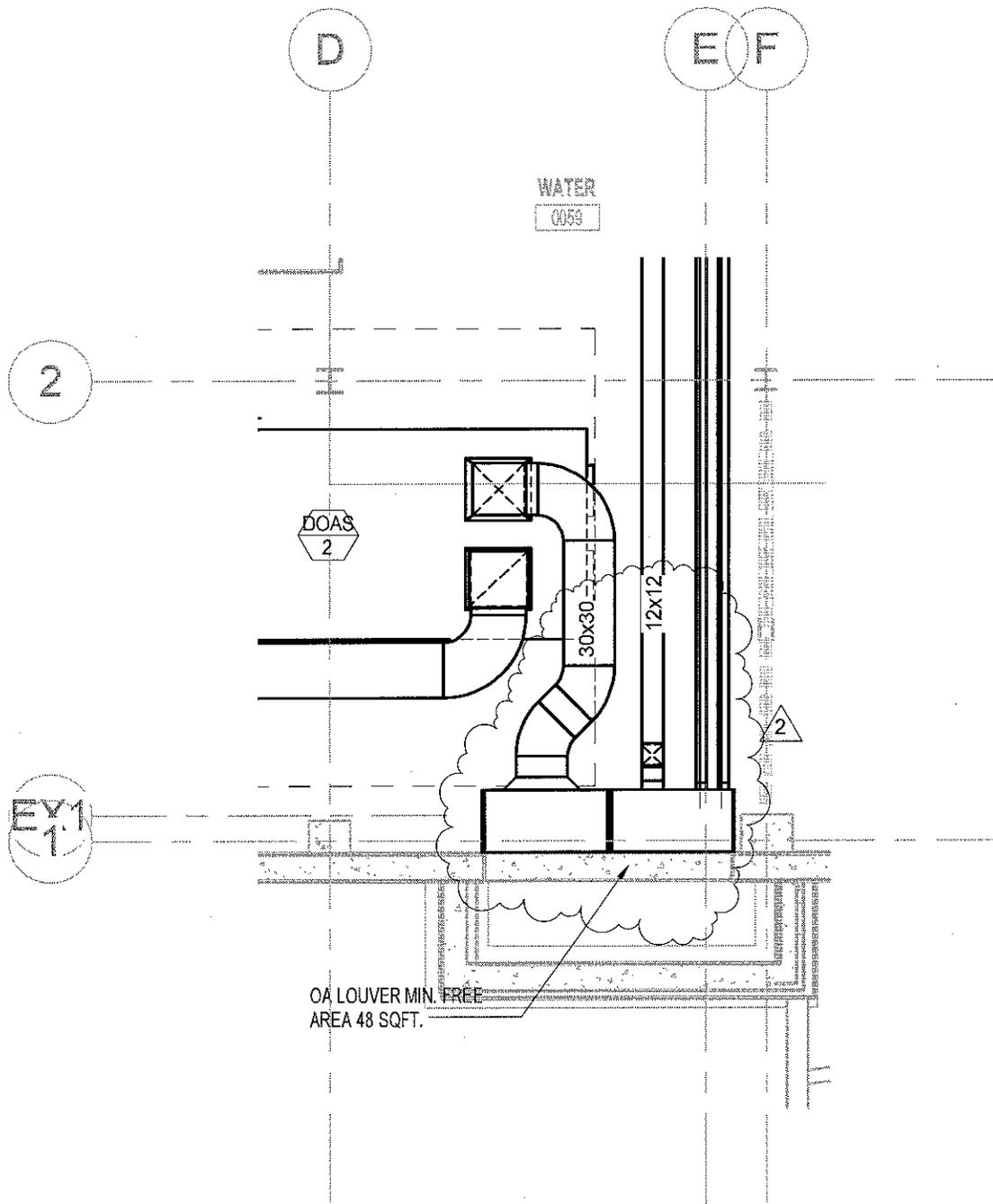


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PROJECT: **Dr. Martin Luther King, Jr. School Construction Project**

DRAWING TITLE: **MECHANICAL DUCTWORK PARTIAL GROUND FLOOR PLAN 4**
 DATE: **01/24/2014** APPENDUM 5

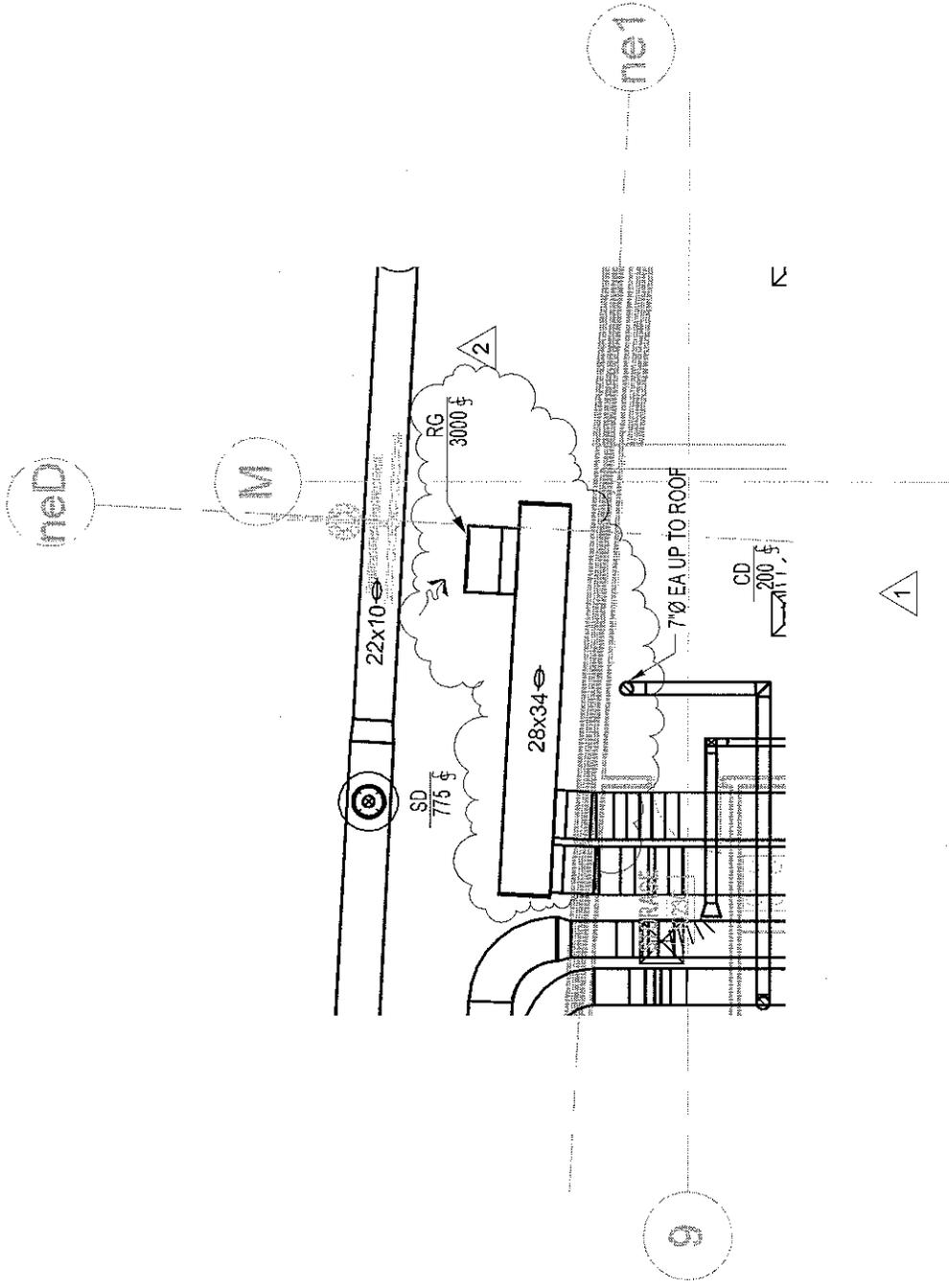
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 REFERENCE: **MSK110.4-1**
 DWG. NO. **MSK110.4-1**



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 PLAN 4
 DATE: 01/24/2014 ADDENDUM 5

PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET
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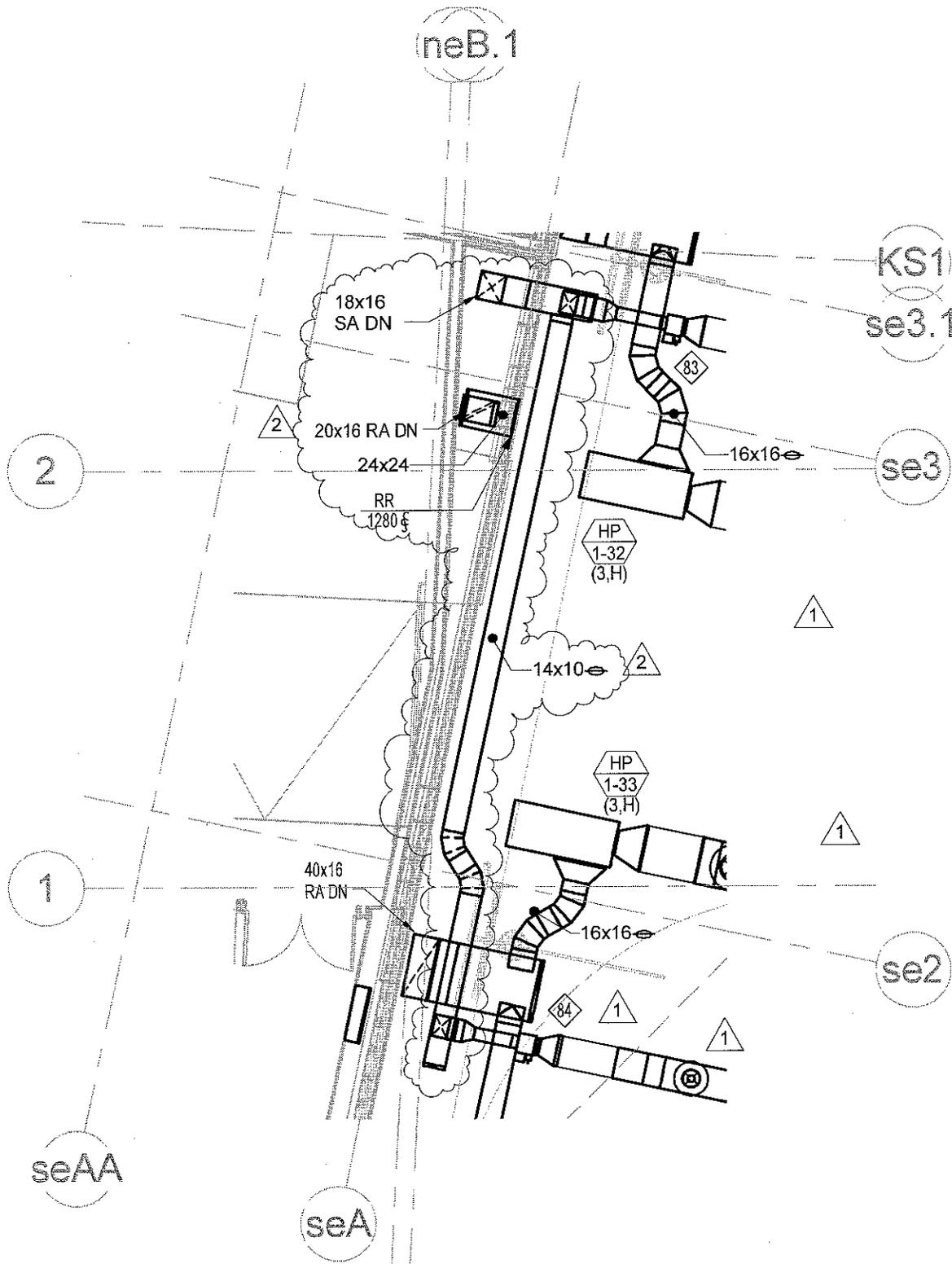


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PROJECT: **Dr. Martin Luther King, Jr. School
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DRAWING TITLE: **MECHANICAL DUCTWORK PARTIAL FIRST FLOOR PLAN 2**
 DATE: **01/24/2014 ADDENDUM 5**

PROJECT NO. **47931.00**
 SCALE: **1/8" = 1'-0"**
 SHEET **M111.2**
 REFERENCE: **M111.2**
 DWG. NO.: **MSK1117.2-1**



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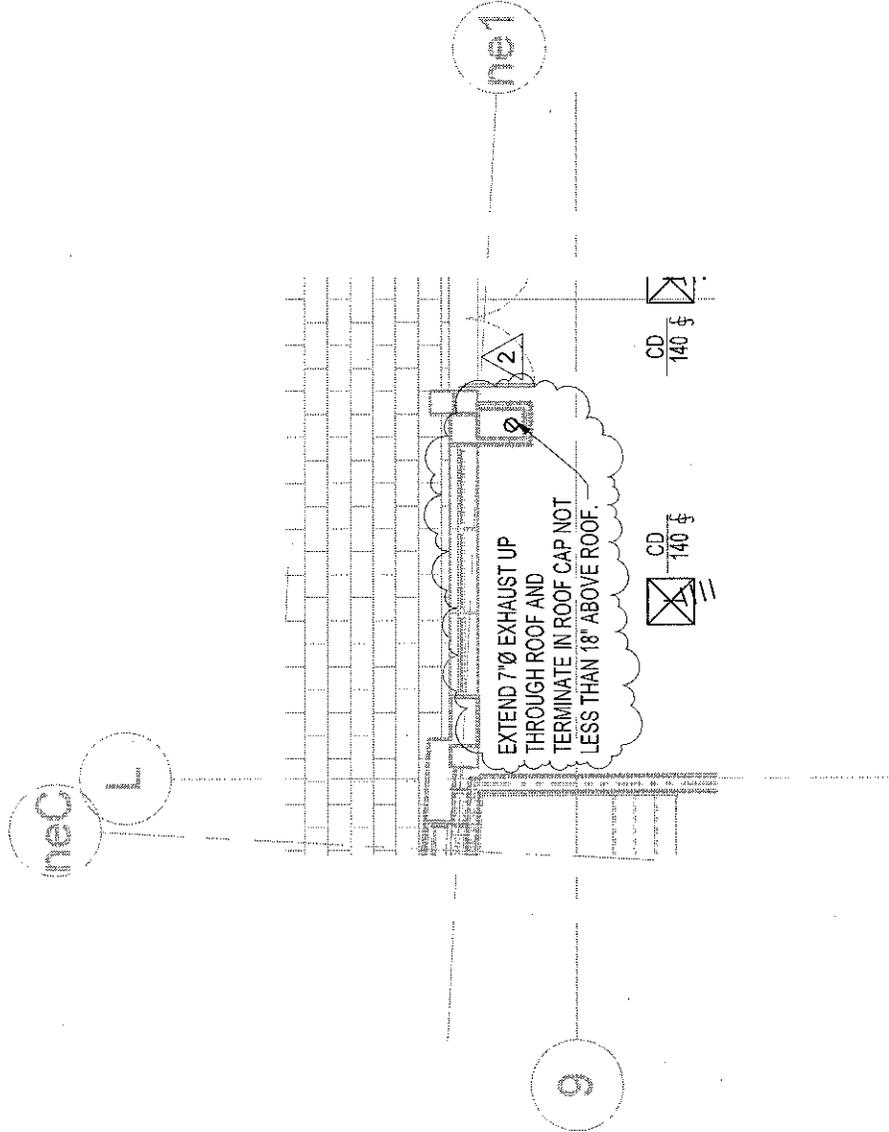
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SHEET
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DWG. NO.: *MSK111.3-1*



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E

D

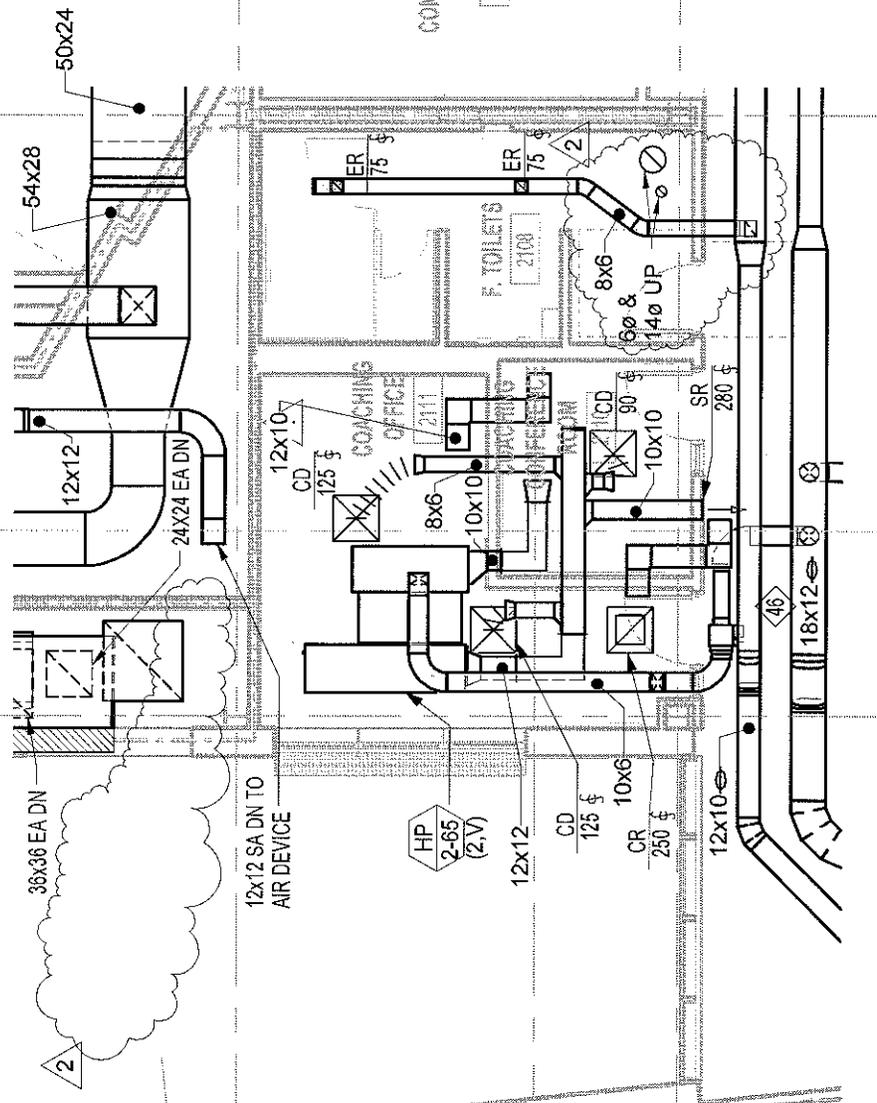
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SWF

SW4
4

EX3

3

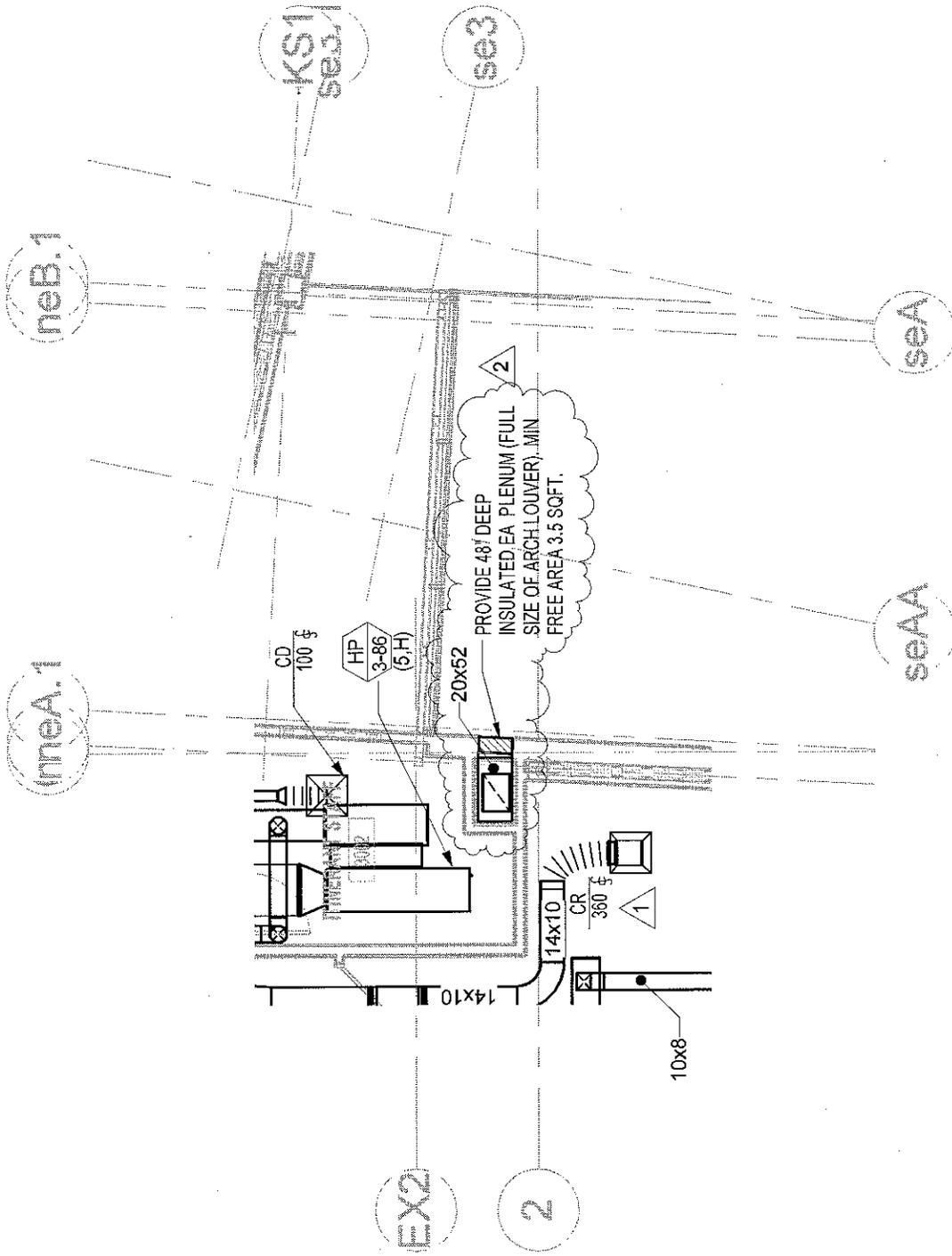


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PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET M112.4
 REFERENCE: M112.4
 DWG. NO.: MSK112.4-1



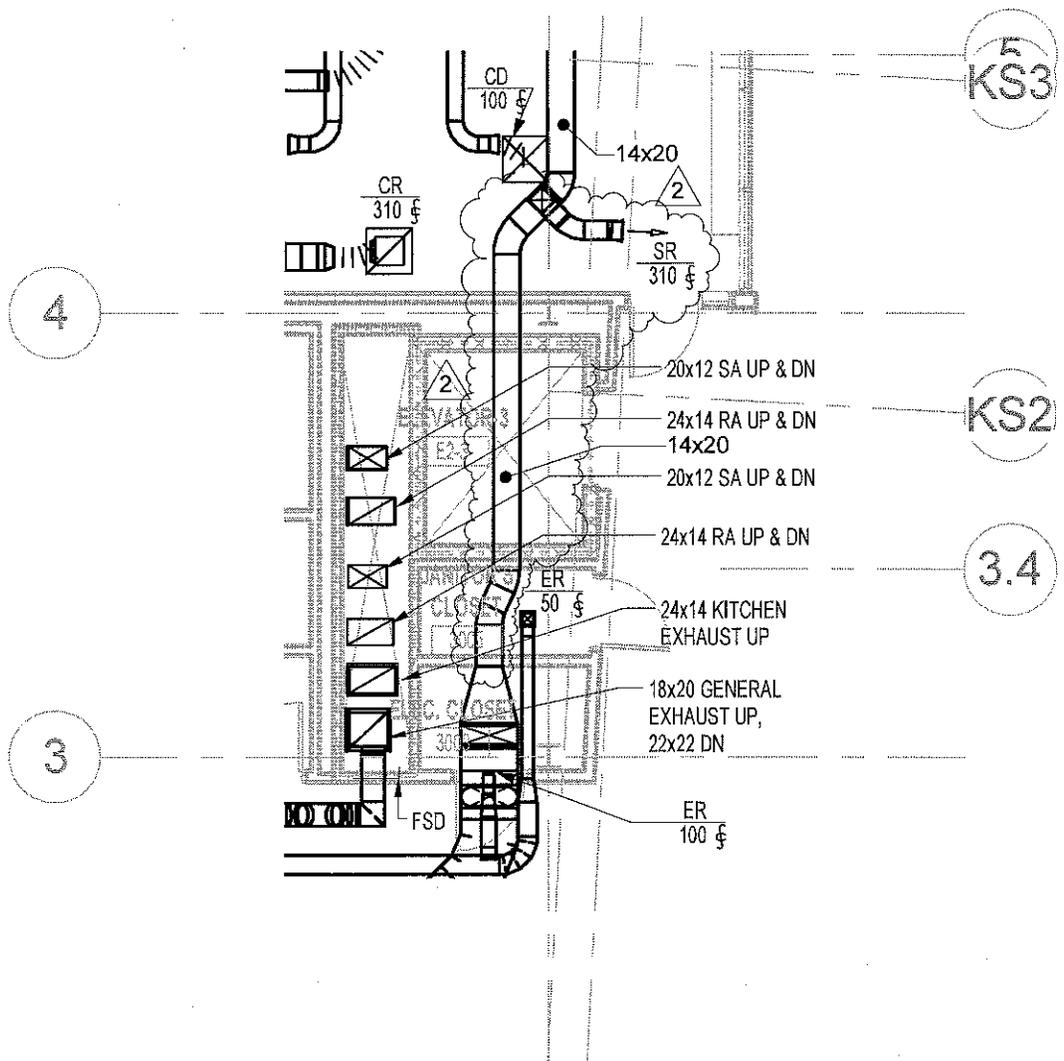
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PROJECT: **Dr. Martin Luther King, Jr. School
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 DATE: **01/24/2014** ADDENDUM 5

PROJECT NO. **47931.00**
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 SHEET **M113.3**
 REFERENCE: **M113.3**
 DWG. NO.: **MSK113.3-1**

G. InneA.1



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SCALE: 1/8" = 1'-0"

SHEET REFERENCE: M113.4

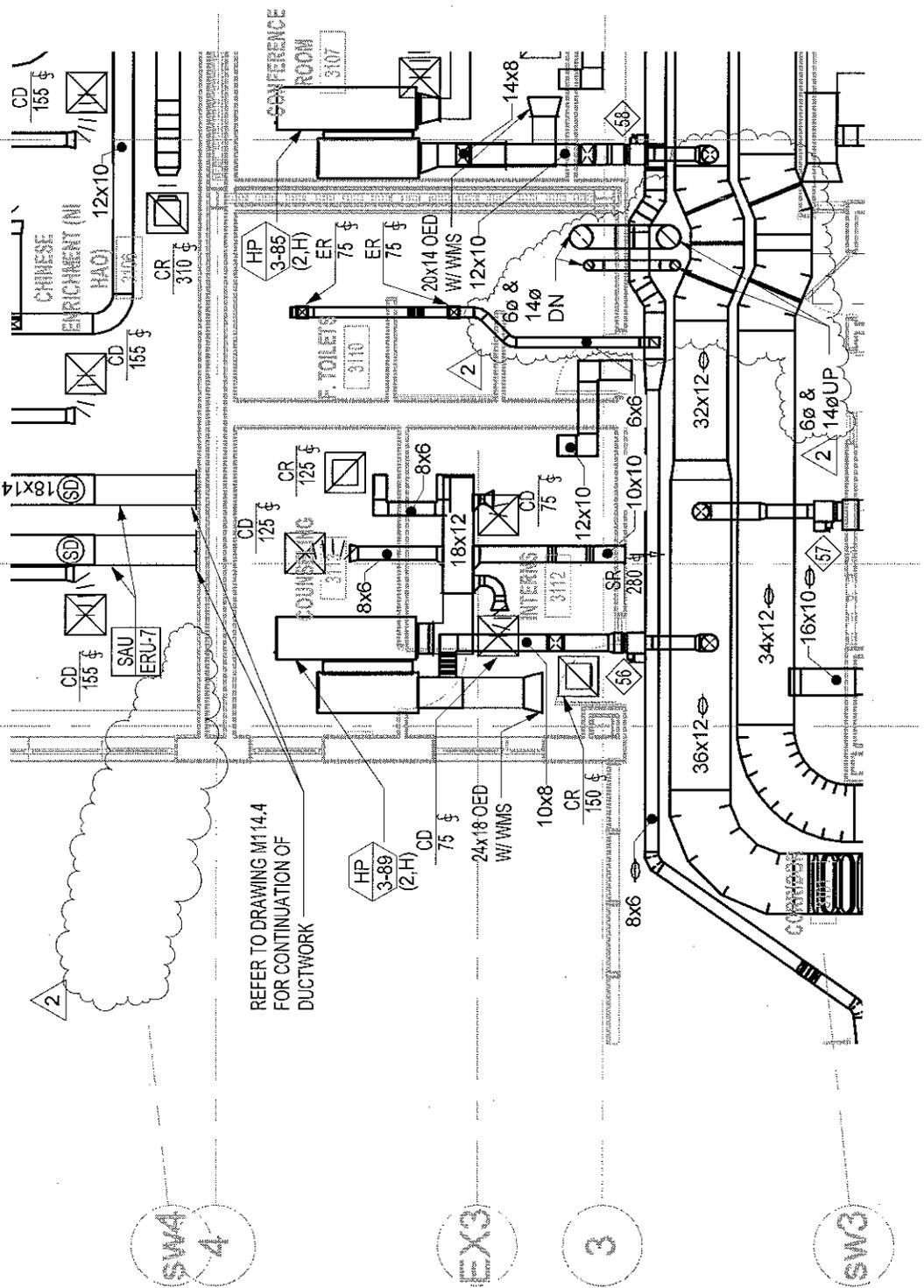
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SW4 4

EX3

3

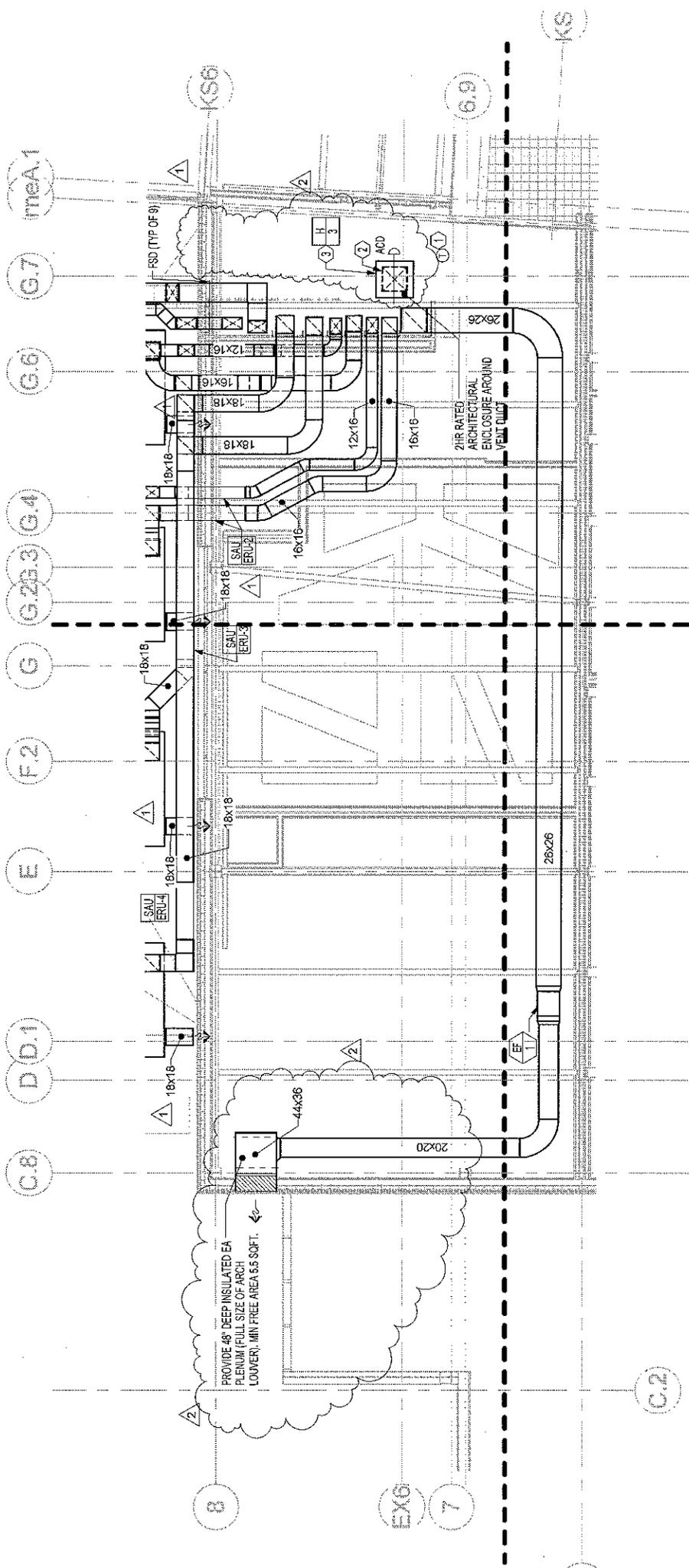
SW3

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DRAWING TITLE: MECHANICAL DUCTWORK PARTIAL THIRD FLOOR PLAN 4
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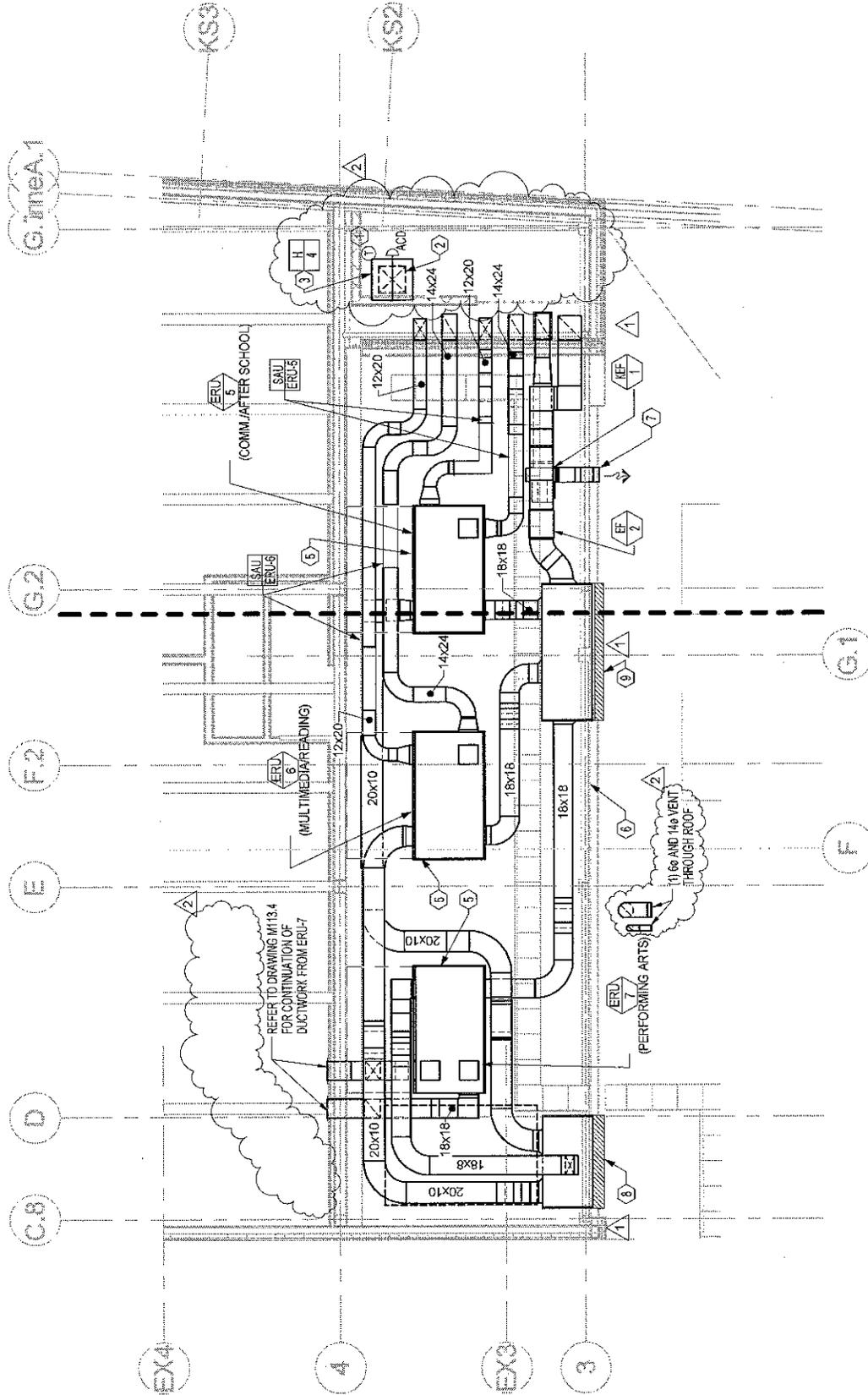


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PROJECT: **Dr. Martin Luther King, Jr. School
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DRAWING TITLE: **MECHANICAL DUCTWORK PARTIAL ROOF PLAN 1**
 DATE: 01/24/2014 ADDENDUM 5

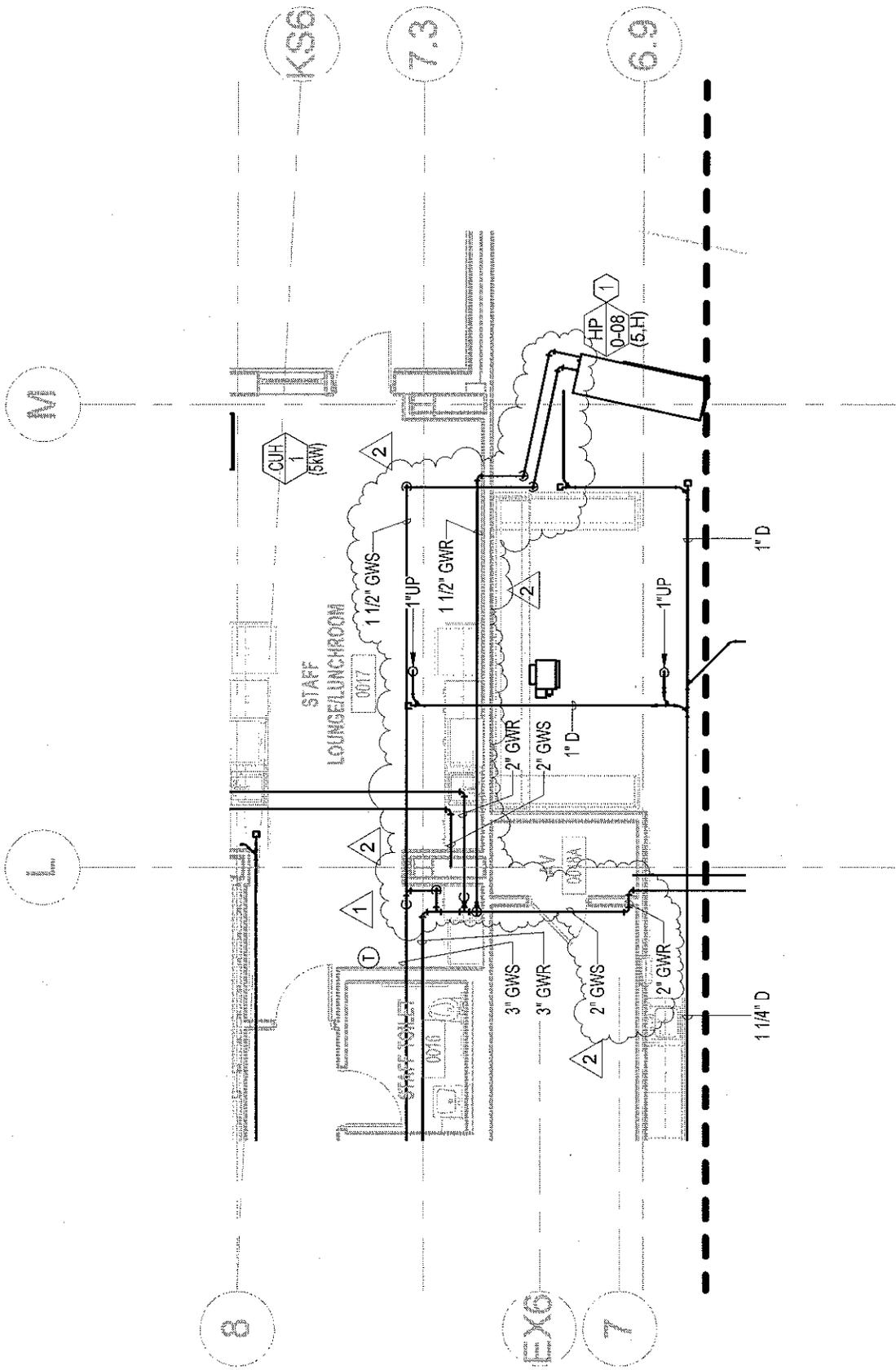
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 REFERENCE:
 DWG. NO.: **MSK114.1-2**



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PROJECT: Dr. Martin Luther King, Jr. School
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 DRAWING TITLE: MECHANICAL DUCTWORK PARTIAL ROOF PLAN 4
 DATE: 01/24/2014 ADDENDUM 5

PROJECT NO. 47851.00
 SCALE: 1/8" = 1'-0"
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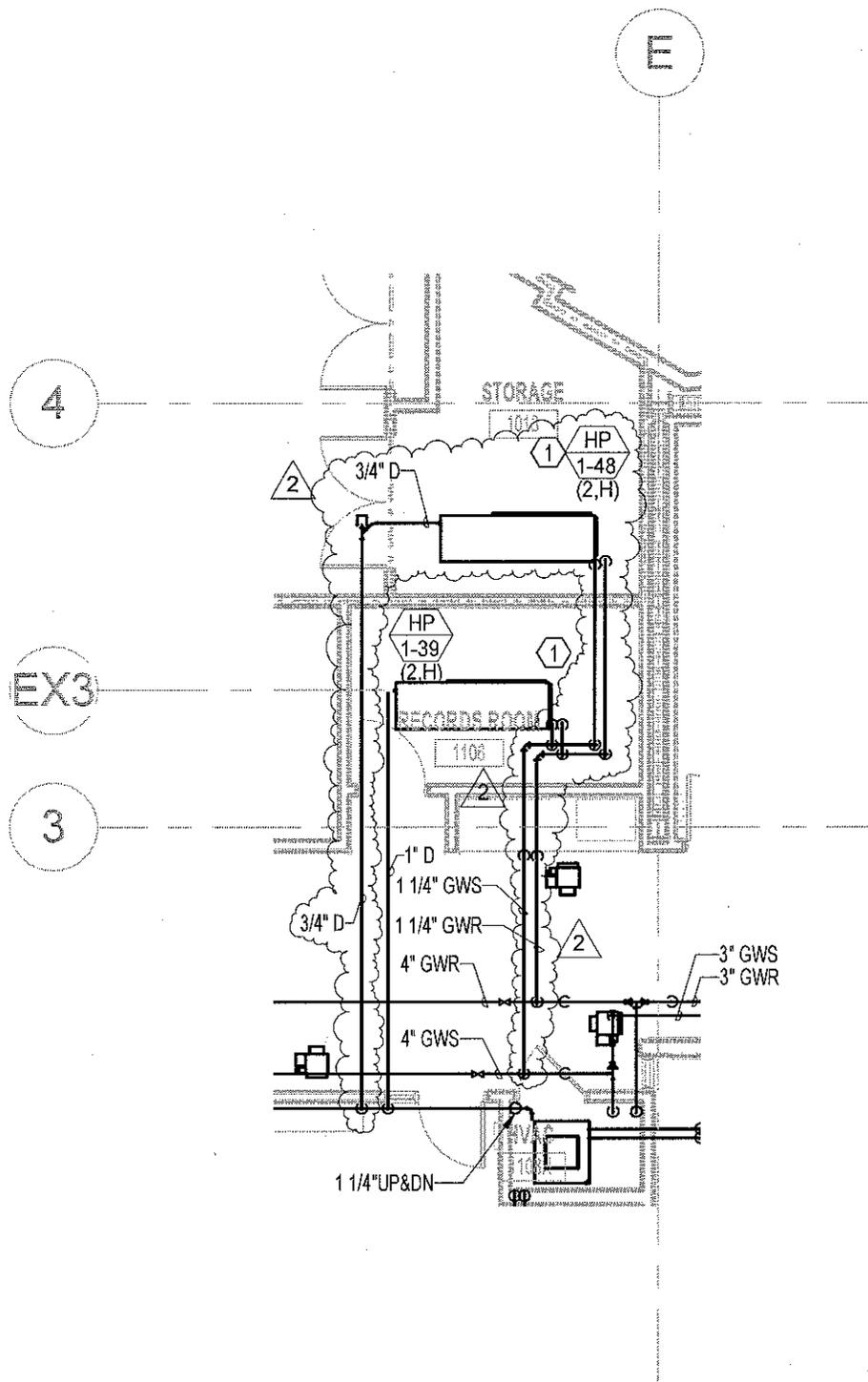


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PROJECT: **Dr. Martin Luther King, Jr. School
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DRAWING TITLE: **MECHANICAL PIPING PARTIAL GROUND FLOOR PLAN 2**
 DATE: **01/24/2014** ADDENDUM 5

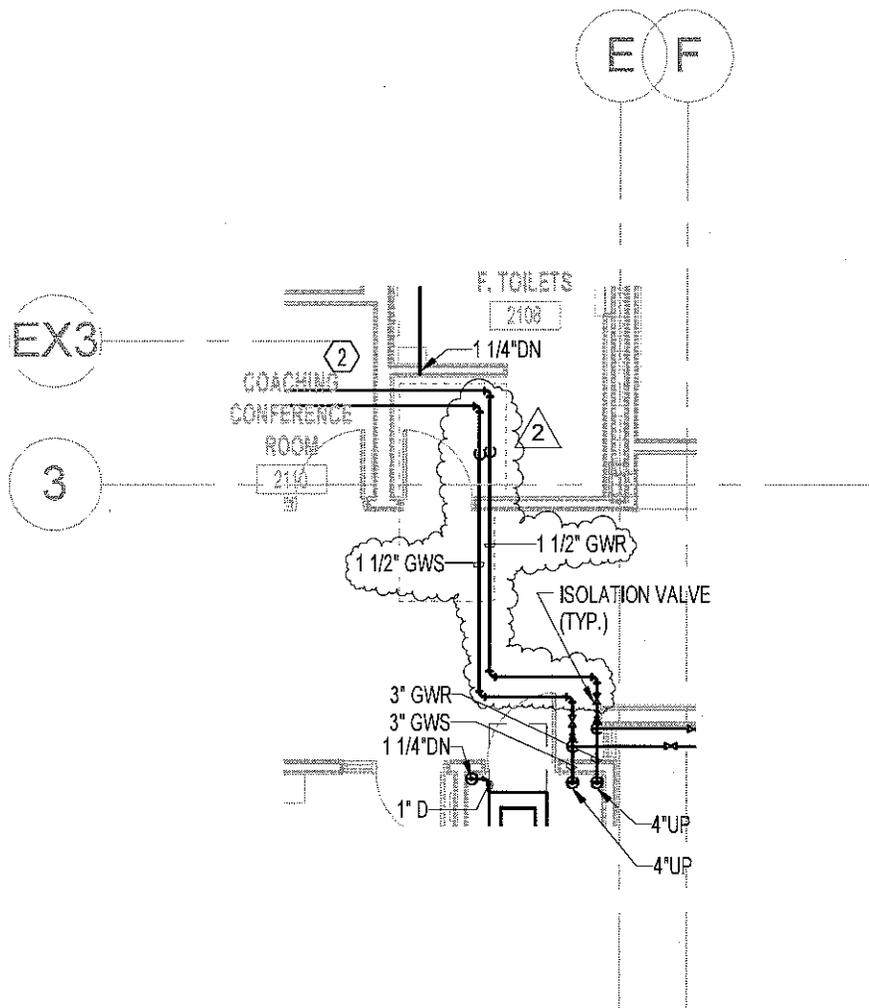
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 SCALE: **1/8" = 1'-0"**
 SHEET **M210.2**
 REFERENCE: **MSK210.2-1**
 DWG. NO. **MSK210.2-1**



Perkins Eastman
 50 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.449.4000

PROJECT: *Dr. Martin Luther King, Jr. School*
Construction Project
 DRAWING
 TITLE: MECHANICAL PIPING PARTIAL FIRST FLOOR PLAN 4
 DATE: 01/24/2014 ADDENDUM 5

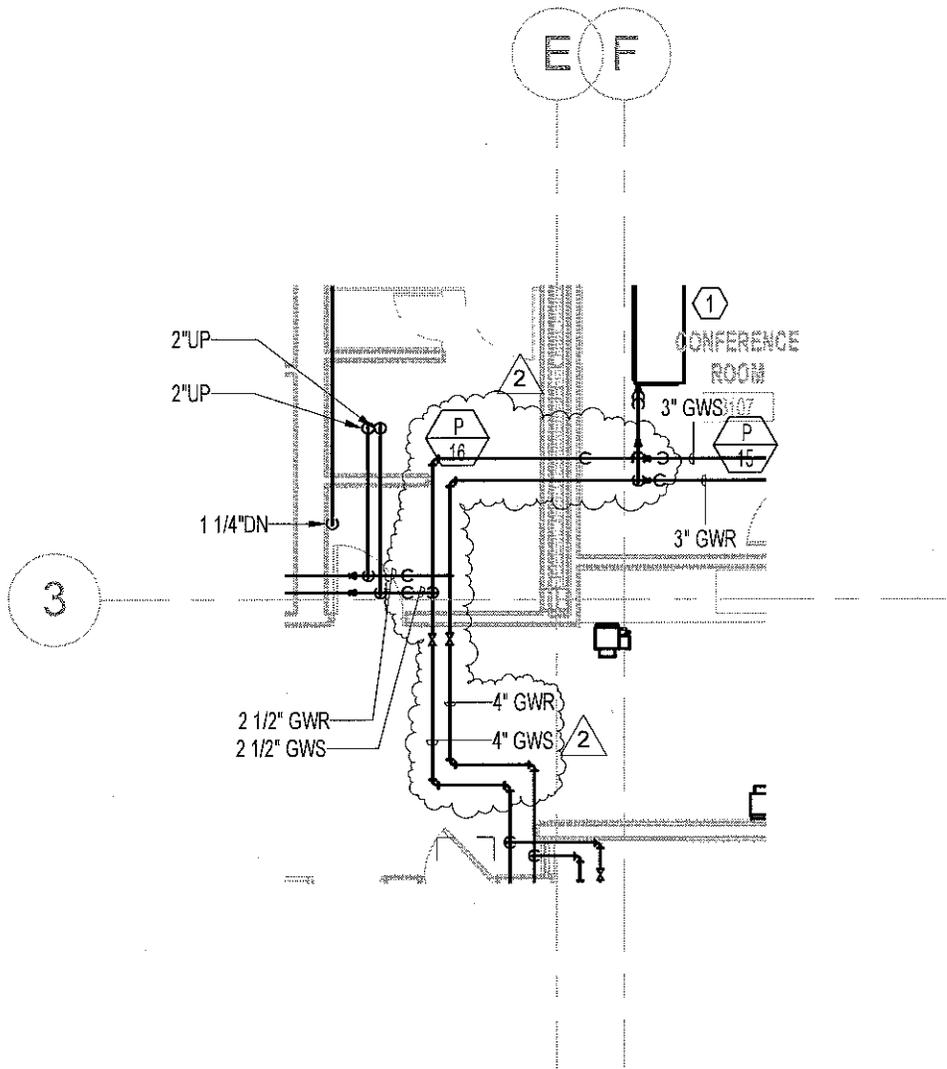
PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET
 REFERENCE: M211.4
 DWG. NO.: *MSK211.4-3*



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PROJECT: *Dr. Martin Luther King, Jr. School
 Construction Project*
 DRAWING
 TITLE: MECHANICAL PIPING PARTIAL SECOND FLOOR PLAN 4
 DATE: 01/24/2014 ADDENDUM 5

PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET
 REFERENCE: M212.4
 DWG. NO.: *MSK212.4-3*



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PROJECT: *Dr. Martin Luther King, Jr. School
 Construction Project*

DRAWING
 TITLE: MECHANICAL PIPING PARTIAL THIRD FLOOR PLAN 4

DATE: 01/24/2014 ADDENDUM 5

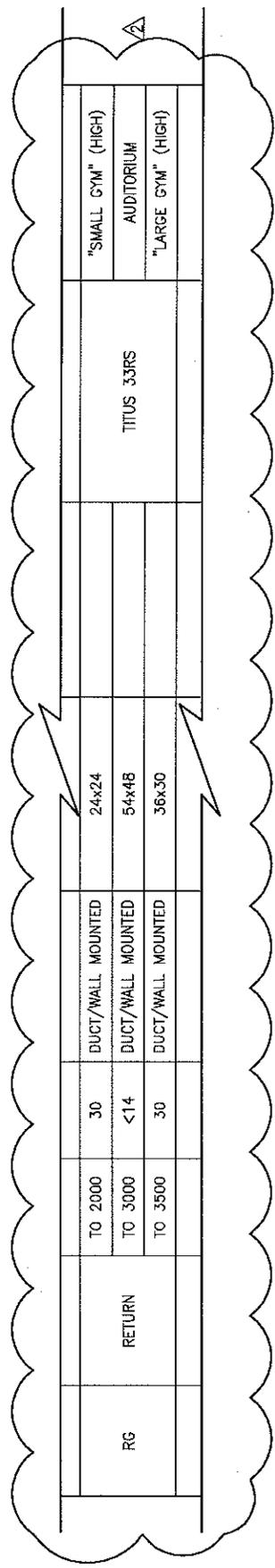
PROJECT NO. 47931.00

SCALE: 1/8" = 1'-0"

SHEET
 REFERENCE: M213.4

DWG. NO.: *MSK213.4-3*

DIFFUSER, REGISTER, AND GRILLE SCHEDULE								
DESIGNATION	SERVICE	CFM RANGE	MAX NC	TYPE	NECK SIZE (IN.)/SIZE & NO. OF SLOTS	NOMINAL OVERALL DIMENSION WxH (IN.)	MANUFACTURER & MODEL (AS BASIS OF DESIGN)	REMARKS
RG	RETURN	TO 2000 TO 3000 TO 3500	30 <14 30	DUCT/WALL MOUNTED DUCT/WALL MOUNTED DUCT/WALL MOUNTED	24x24 54x48 36x30		TITUS 33RS	"SMALL GYM" (HIGH) AUDITORIUM "LARGE GYM" (HIGH)



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PROJECT: **Dr. Martin Luther King, Jr. School**
Construction Project

DRAWING TITLE: MECHANICAL SCHEDULES (3 OF 5)
 DATE: 01/24/2014 ADDENDUM 5

PROJECT NO. 47931.00
 SCALE: NOT TO SCALE
 SHEET M302
 REFERENCE:
 DWG. NO.: **MSK302-3**

GRAVITY INTAKE / RELIEF HOOD SCHEDULE

UNIT NO.	LOCATION	SERVICE	CFM	MAX. HOOD AND THROAT VELOCITY (FPM)	MIN. THROAT AREA (SQ. FT.)	DIMENSIONAL DATA (INCHES)				MANUFACTURER & MODEL (AS BASIS OF DESIGN)	REMARKS
						THROAT WIDTH x LENGTH	CURB CAP WIDTH x LENGTH	DAMPER WIDTH x LENGTH	OVERALL WIDTH x LENGTH x HEIGHT		
H-1	ROOF (UPPER SCHOOL)	DOAS-1 RELIEF	DOAS-1 EA CFM	800	15	36 x 60	42 X 66	SAME AS THROAT SIZE	55 x 87 x 19	GREENHECK MODEL FGR	1, 2, 3
H-2	ROOF (LOWER SCHOOL)	DOAS-2 RELIEF	DOAS-2 EA CFM	800	15	36 x 60	42 x 66	SAME AS THROAT SIZE	55 x 87 x 19	GREENHECK MODEL FGR	1, 2, 3
H-3	ROOF (UPPER SCHOOL)	ELEVATOR VENT	N/A	N/A	N/A	38 x 38 (ROOF OPENING)	N/A	26 x 26	38 x 38 x 18	GREENHECK MODEL PEV-400	4
H-4	ROOF (LOWER SCHOOL)	ELEVATOR VENT	N/A	N/A	N/A	38 x 38 (ROOF OPENING)	N/A	26 x 26	38 x 38 x 18	GREENHECK MODEL PEV-400	4

NOTES:

1. REFER TO DEDICATED OUTDOOR AIR SYSTEM EQUIPMENT SCHEDULE FOR EXHAUST AIR FLOW RATE (EA) THROUGH HOOD THROAT AND NECK.
2. PROVIDE WITH HOOD MANUFACTURER'S INSULATED ROOF CURB (1.5" RIGID BOARD INSULATION; MAXIMUM 12" IN HEIGHT) CAPABLE OF ACCEPTING CONTROL ISOLATION DAMPER.
3. HOOD MANUFACTURER SHALL PROVIDE CONTROL ISOLATION DAMPER. DAMPER SHALL BE NCA CERTIFIED LOW LEAKAGE (CLASS 1A) AND INSULATED.
4. PROVIDE PENTHOUSE HOISTWAY WITH:
 - 36-INCH HIGH CURB TO MATCH PITCH OF ROOF
 - 3 LOUVERS (30"x18") HAVING NOT LESS THAN 4 SQUARE FEET FREE AREA.
 - LEAKAGE CLASS 1 CONTROL DAMPER HAVING NOT LESS THAN 3 SQUARE FEET FREE AREA.
 - PROVIDE KYNAR PAINT FINISH IN COLOR APPROVED BY ARCHITECT.

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PROJECT: Dr. Martin Luther King, Jr. School
Construction Project

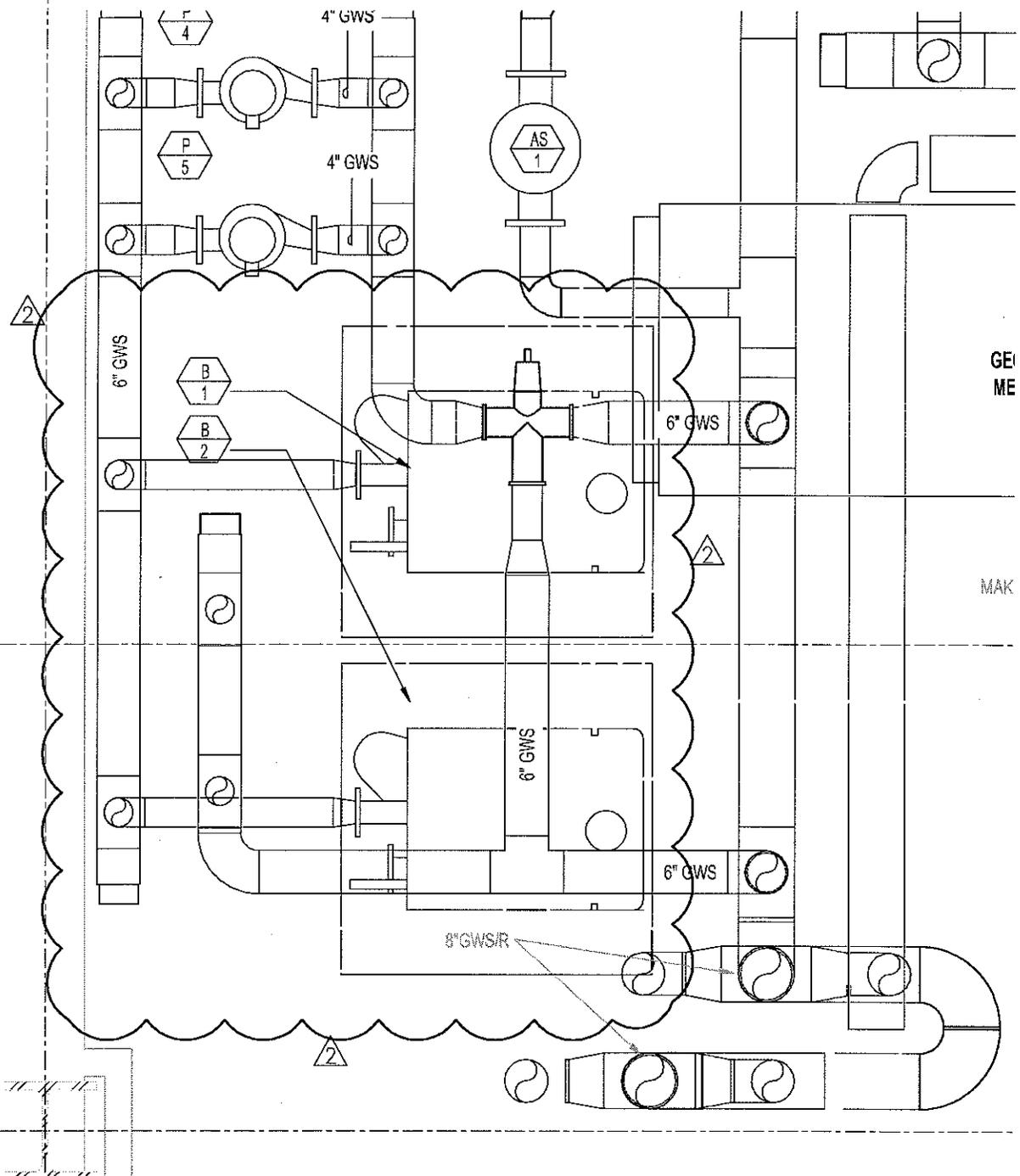
DRAWING TITLE: MECHANICAL SCHEDULES (3 OF 5)
DATE: 01/24/14 ADDENDUM 5

PROJECT NO.: 47931.00
SCALE: NOT TO SCALE
SHEET: M302
REFERENCE:
DWG. NO.: **MSK302-4**

D

EX3

3



Perkins Eastman
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 T. 617.449.4000

PROJECT: **Dr. Martin Luther King, Jr. School Construction Project**
 DRAWING TITLE: MECHANICAL ENLARGED PLANS AND DIAGRAMS
 DATE: 01/24/14 ADDENDUM 5

PROJECT NO. 47931.00
 SCALE: 1/2" = 1'-0"
 SHEET M500
 REFERENCE:
 DWG. NO.: **MSK500-2**

Project: Dr. Martin Luther King Jr. School Construction Project

PE Project No.: 47931.00

Cambridge No: 5849C

Regarding: Bid Addendum 5 – Electrical

Date: January 24, 2014

This Addendum is hereby made a part of the Contract Documents to the same extent as though it were originally included therein.

#	DISCIPLINE	BID QUESTION NO.	RESPONSE
01	Electrical	106_Griffin_01	Q1: MGL ch. 149 prohibits filed sub-bidders from subcontracting work, unless that work is subject to paragraph E. The office of the Attorney General issued a March 18, 2011 bid protest decision reinforcing this prohibition. Filed sub-bidders are therefore restricted by law in their ability to contract with MBE/WBE firms. Please advise if any additional information/documentation should be provided should a subbidder be unable to achieve the 10% MBE and 5% WBE goal.
			R1: To clarify the M/WBE compliance it is our intent to obtain Trade and Non-Trade contributions via the following examples, but not limited to: paragraph E sub-tier subcontractors, suppliers, specialty vendors, etc. It is not our intent to remove "core work" or "customarily performed work" by the direct employees of the trade bidders. This clarification does not modify the requirements that are listed within the Construction Manager Supplemental Conditions 007225 1.8 B. The apparent low bidders must submit required MBE/WBE supporting documentation (Exhibit L 11 - Minority Business Enterprise Requirements, schedule of MBE/WBE participation along with accompanying Letters) within five business days after the bid. No waivers, reductions or extensions will be considered after receipt of Trade Contractor bids.
			Q2: Division 260000, Page 17 of 19, under Execution Section includes excavation and backfill under the Electrical Trade Contractors scope of work. Typically this work is carried by the site contractor and is not included in the Electrical Trade Contractors scope of work. Please confirm part 3 – Execution on page 260000 17 and 18 is not included in the Electrical Trade contractor scope of work.
			R2: All Excavation and Back Fill operations will be completed by the Site Work Contractor.
			Q3: Please confirm that utilization of the fire alarm MC and or plenum rated FPLP cable is acceptable for fire alarm wiring.
			R3: All wiring shall be installed in conduit per Specification

			<p>section 283111, 3.2 A. and Note #3 on drawing E502.</p> <p>Q4: Under the Solar Energy Electrical Power Generation Equipment Installer qualifications – Is it acceptable to have completed projects of similar scope and size but utilizing different equipment manufacturers, therefore deleting the requirement for the installer to provide proof of a minimum (5) prior installations of PV array size 500KW or larger using the manufacturers product?</p> <p>Addendum #4 allows providing or equal products for the PV Equipment. For price competitiveness, it is critical to allow the installing contractor the utilization of the most cost effective products without the rigid compliance stated above regarding five (5) or more installations of a PV array size 500Kw or larger with the manufacturers product.</p>
			<p>R4: The specified PV panels are listed as proprietary or equal based on the panel's performance – specifically on a watts/sf basis and total PV layout power generation. The total predicted power generation for the system as specified must be met by any other "or equal" system proposed. Any or equal systems must be approved by the project design team PV designer as equal. It is the contractor's cost risk if an or equal solution is pursued and is unable to meet the watts/sf and total power generation of the specified system. Should the proprietary basis of design PV panel be pursued, all bidding should include a price from a Sunpower certified installer.</p>
			<p>Q5: General provisions for electrical work identify the following required sub-sub listings for Sections 264113 Lightning Protection, 283111 Fire Alarm, and 484100 Solar Energy Electrical. Section 270000 Page 1 states that this section must be listed as a sub-sub bid by the electrical trade contractor. Does this section need to be listed in the sub-sub listing of the electrical trade contractor bid form?</p>
			<p>R5: Yes, Section 270000 technology shall be a sub-sub bid to 260000.</p>
			<p>Q6: Page 1, Item 1.1 of Section 274100 Audio visual states that a trade sub bid is required for this section. Is the Audio visual Section 274100 to be included in the scope of work of the Section 260000 Electrical Trade Contractor? If so, is a sub-sub listing required on the electrical Trade Contractor Bid form?</p>
			<p>R6: Yes, Section 274100 Audio Visual shall be a sub-sub bid to 260000.</p>
			<p>Q7: Instructions to Bidders (Page 3 of 6) states to include the Sub-contractor's Certification (City of Cambridge form) and Cambridge Responsible Employer Plan Subcontractor's Certification (City of Cambridge form for projects over \$100,000 only), where filed sub-bid is over \$25,000 (see Page 3 of the instructions to bidders). Are these two different forms or is all the requested information included on the Subcontractor's Certification form?</p>
			<p>R7: Previously Answered in Addendum 2.</p>
			<p>Q8: Please confirm the Security Section 280000 is not part of the Electrical Trade Contractor's scope of work.</p>
			<p>R8: Refer to 28 00 00, 1.2, B. The electrical contractor is to</p>

			provide box, conduit and 120V provisions required for the integrated electronic security system. The integrated electronic security system is provided by the CM						
			Q9: Please confirm the fire alarm section 283111 is part of the Electrical Trade Contractors scope of work. Section 283111, Page 1, Item 1.1, states that a Trade Contractor Sub-Bid is required for this section. This contradicts the Electrical Trade Contractor scope of work requiring a Sub-sub listing for this section on the electrical trade contractor bid form.						
			R9: Yes, Section 283111 Fire Alarm shall be a sub-sub bid to 260000.						
			Q10: Please confirm Section 284111 Area of Rescue Intercom System is to be carried as part of the Electrical Trade Contractors Sub Bid. Section 284111, Page 1 Item 1.1 states that a Trade Sub bid is required for this section. Please also confirm a Trade Contractor Sub-sub listing is not required for this section.						
			R10: Section 284111 Area of Rescue shall be required to be included by Division 260000.						
#	DISCIPLINE	ISSUE	PROJECT MANUAL						
1		Subject:	GENERAL PROVISIONS FOR ELECTRICAL WORK						
		References:	SECTION 260000						
		Description:	<p>2.2 REQUIREMENTS FOR FILING SUB-BIDS</p> <p>3 Sub Sub-Bid Requirements:</p> <table border="0"> <tr> <td style="padding-right: 40px;">SECTION NUMBER</td> <td>SECTION TITLE</td> </tr> <tr> <td style="padding-right: 40px;">270000</td> <td>TECHNOLOGY</td> </tr> <tr> <td style="padding-right: 40px;">274100</td> <td>AUDIOVISUAL SYSTEMS</td> </tr> </table> <p>3.2 DESCRIPTION OF WORK</p> <p>E. Conflicting Information</p> <p>1. If a discrepancy exists between information contained in different parts of the project documentation, or with the applicable Codes, local regulations or utility company regulations, the higher cost shall be included in the bid. The Electrical Contractor shall notify the Project and/or Construction Manager of the discrepancy before proceeding with the work.</p>	SECTION NUMBER	SECTION TITLE	270000	TECHNOLOGY	274100	AUDIOVISUAL SYSTEMS
SECTION NUMBER	SECTION TITLE								
270000	TECHNOLOGY								
274100	AUDIOVISUAL SYSTEMS								

			<p>3.3 INSERTS AND SUPPORTS</p> <p>E. Do not exceed 1/4 of average valves value for a specific anchor size using 2000 psig (13,800 kpa) concrete only, for maximum working loads.</p>
2		Subject:	GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS
		References:	SECTION 260526
		Description:	<p>2.3 GROUNDING ELECTRODES</p> <p>B. Concrete Encase Electrode: Per NEC-2011 NEC-2014 Article 250.52 (A) (3).</p>
3		Subject:	NETWORK LIGHTING CONTROLS
		References:	SECTION 260943
		Description:	<p>2.1 MANUFACTURERS</p> <p>A. Manufacturer: Subject to compliance with requirements, provide products by one of the following:</p> <p>3. Watt Stopper Crestron</p>
3		Subject:	FIRE ALARM
		References:	SECTION 283111
		Description:	<p>3.2 WIRING INSTALLATION</p> <p>A. Wiring Method: Install wiring in metal raceway (EMT). Conceal raceway except in unfinished spaces and as indicated.</p> <p>E. Risers: Install at least two vertical cable risers to serve the fire alarm system. Separate risers in close proximity to each other with a minimum one-hour-rated two-hour-rated wall, so the loss of one riser does not prevent the receipt or transmission of signal from other floors or zones.</p>
#	DISCIPLINE	ISSUE	DRAWINGS
01	Electrical	Subject:	Clarified Fiber conduit/feeder tag
		References:	ESK002-2
		Description:	Indicated tag between existing manhole and new fiber manhole.
02	Electrical	Subject:	Clarified Lighting Controls
		References:	ESK110.1-2

		Description:	Additional lighting controls throughout as well as new fixture to inverter room.
03	Electrical	Subject:	NSTAR Vault
		References:	ESK110.1-3, ESK210.1-2
		Description:	Changed lights to fluorescent vapor tight per NSTAR requirements and revised vault layout.
04	Electrical	Subject:	Lighting Control Clarification
		References:	ESK110.2-3, ESK110.2-4, ESK110.3-3, ESK111.1-2, ESK111.1-3, ESK111.2-3, ESK111.3-3, ESK112.1-2, ESK112.4-2, ESK113.1-3, ESK113.3-3, ESK113.3-4,
		Description:	Updated lighting controls to provide additional clarification.
05	Electrical	Subject:	Emergency Circuit
		References:	ESK111.2-2, ESK111.3-4
		Description:	Added emergency circuit in gymnasium.
06	Electrical	Subject:	Railing Lighting
		References:	ESK112.2-1, ESK112.3-3, ESK601-2
		Description:	Added railing light and notation.
07	Electrical	Subject:	Revised Power Requirements/Receptacle Layouts
		References:	ESK210.1-3, ESK210.3-3, ESK210.4-1, ESK211.2-1, ESK212.2-2, ESK213.3-1,
		Description:	Revised layout due to new room sizes and updated circuits for clarification.
08	Electrical	Subject:	Emergency Closet
		References:	ESK211.4-3
		Description:	Revised emergency closet layout.
09	Electrical	Subject:	Roof power
		References:	ESK214-1
		Description:	Inverter power
10	Electrical	Subject:	Roof power
		References:	ESK214-2
		Description:	Clarified exterior disconnect to be WP.
11	Electrical	Subject:	Fire Alarm
		References:	ESK310.1-2, SKE310.3-1, ESK311.2-1, ESK311.4-1, ESK312.2-1, ESK313.1-1, ESK313.2-1, ESK313.3-1
		Description:	Additional fire alarm devices.
12	Electrical	Subject:	Fire Alarm
		References:	ESK311.1-1
		Description:	Revised master intercom location.
13	Electrical	Subject:	Fire Alarm
		References:	ESK312.3-1
		Description:	Removed fire alarm devices.

14	Electrical	Subject:	Riser Diagram
		References:	ESK500-3
		Description:	Revised one line diagram.
15	Electrical	Subject:	Schedule
		References:	ESK600-5
		Description:	Revised Switchboard Schedule.
16	Electrical	Subject:	PV Roof Plan
		References:	E414.1, E414.4
		Description:	Revised Drawing
			END OF BID ADDENDUM 5 – Electrical

C. Sub Sub-Bid Requirements:

SECTION NUMBER	SECTION TITLE
264113	LIGHTNING PROTECTION FOR STRUCTURES
283111	FIRE ALARM
484100	SOLAR ENERGY ELECTRICAL POWER GENERATION EQUIPMENT
270000	TECHNOLOGY
274100	AUDIOVISUAL SYSTEMS

1.4 DESCRIPTION OF WORK

A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including the following Specification Sections:

SECTION NUMBER	SECTION TITLE
260000	GENERAL PROVISIONS FOR ELECTRICAL WORK
260000.1	SUPPLEMENTAL SCOPE STATEMENT- ELECTRICAL
260002	ELECTRICAL UNIT PRICES
260500	COMMON WORK RESULTS FOR ELECTRICAL
260519	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES
260526	GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS
260529	HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS
260533	RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS
260543	UNDERGROUND DUCTS AND RACEWAYS FOR ELECTRICAL SYSTEMS
260548	VIBRATION AND SEISMIC CONTROLS FOR ELECTRICAL SYSTEMS
260553	IDENTIFICATION FOR ELECTRICAL SYSTEMS
260573	OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY
260800	COMMISSIONING FOR ELECTRICAL
260933	THEATRICAL DIMMING AND CONTROL SYSTEM
260943	NETWORK LIGHTING CONTROLS
262200	LOW-VOLTAGE TRANSFORMERS

T111.2	PARTIAL FIRST FLOOR TECHNOLOGY PLAN 2
T111.3	PARTIAL FIRST FLOOR TECHNOLOGY PLAN 3
T111.4	PARTIAL FIRST FLOOR TECHNOLOGY PLAN 4
T112.1	PARTIAL SECOND FLOOR TECHNOLOGY PLAN 1
T112.2	PARTIAL SECOND FLOOR TECHNOLOGY PLAN 2
T112.3	PARTIAL SECOND FLOOR TECHNOLOGY PLAN 3
T112.4	PARTIAL SECOND FLOOR TECHNOLOGY PLAN 4

C. The Trade Contractor shall also examine all other Drawings and all other Sections of the Specifications for requirements therein affecting the Work of this Section, not just those pertaining to this Sub-trade.

D. Alternates:

1. Alternate #3: Temporary Generator Docking Station

E. **Conflicting Information**

1. **If a discrepancy exists between information contained in different parts of the project documentation, or with the applicable Codes, local regulations or utility company regulations, the higher cost shall be included in the bid. The Electrical Contractor shall notify the Project and/or Construction Manager of the discrepancy before proceeding with the work.**

1.5 DESCRIPTION OF BID DOCUMENTS

- A. "Provide": to supply, install, and make complete, safe, and operable, the particular work referred to unless specifically indicated otherwise.
- B. "Install": to erect, mount, and make complete with all related accessories.
- C. "Furnish" or "supply": to purchase, procure, acquire, and deliver complete with related accessories.
- D. "Work": labor, materials, equipment, services, and all related accessories necessary for the proper and complete installation of complete systems.
- E. "Piping": pipe, tube, fittings, flanges, valves, controls, strainers, hangers, supports, unions, traps, drains, insulation and all related accessories.
- F. "Wiring": raceway, fittings, wire, boxes and all related accessories.

2.5 GUARDS AND RAILINGS

- A. Guards and railings will be provided under General Construction Work.
- B. Provide guards and railings as indicated and/or as required by OSHA and authorities having jurisdiction.
- C. Provide removable type guards with clearances for motor adjustments, for belt driven and rotating equipment, with No. 18 USSG steel frames and NO. 20 USSG galvanized perforated steel fronts with covered test opening to permit rpm readings without removal. Provide galvanized steel angle or channel supports braced to maintain clearances of moving parts.
- D. Provide removable type railings constructed of 1 1/4 in. pipe and rail fittings.

2.6 NAMEPLATES

- A. Provide nameplates with inscriptions, subject to review, indicating equipment and fasten with epoxy cement and engrave black Lamicoid sheet with white lettering.
- B. Provide nameplates for the following:
 - 1. Disconnect switches.
 - 2. Individual circuit breakers.
 - 3. Panels.
 - 4. Cabinets
 - 5. Switchboards.
 - 6. Transformers.
 - 7. Motor Controllers.
 - 8. Uninterruptible Power Supply Systems.

PART 3 - EXECUTION

3.1 EXCAVATION AND BACKFILL

- A. **Excavation and backfill will be provided under General Construction, division 31.**
- B. Excavate, backfill and restore surfaces inside building.
- C. Excavate, backfill and restore surfaces inside and outside building.
- D. Excavate, backfill and restore surfaces outside building.
- E. If rock is encountered, excavate to 6 inches below bottom of piping and refill with well tamped sand and gravel.
- F. Bank excavated materials adjacent to trench and properly support with sheet-pile and brace.

SECTION 260526 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 GENERAL PROVISIONS – TRADE SUB-BID REQUIRED

- A. Work of this Section requires Trade Sub-Bids and is governed by the provisions of the Massachusetts General Laws (MGL), Public Bidding Law Chapter 149A Section 8, Chapter 149 Section 44F, and applicable Section of the MGL, Public Contract Law Chapter 30 as amended.

1.2 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”
- B. Related Sections include the following:
 - 1. Division 01, Section 018113 – “Sustainable Design Requirements.”
 - 2. Division 26, Section 260800 – “Commissioning of Electrical” for commissioning requirements.

1.3 SUMMARY

- A. This Section includes methods and materials for grounding systems and equipment, plus the following special applications:
 - 1. Underground distribution grounding.
 - 2. Common ground bonding with lightning protection system.

1.4 SUBMITTALS

- A. Sustainable Design Submittals: Comply with Division 01 Section 018113 “Sustainable Design Requirements” and provide the following in addition to other action submittals:
 - 1. Product Data for Credit IEQ.4: For adhesives and sealants, documentation including printed statement of VOC content.
 - 2. Product Data for Credit IEQ 4: For paints and coatings, including printed statement of VOC content.
- B. Product Data: For each type of product indicated.

- C. Other Informational Submittals: Plans showing dimensioned as-built locations of grounding features specified in Part 3 "Field Quality Control" Article, including the following:
 - 1. Test wells.
 - 2. Ground rods.
 - 3. Ground rings.
 - 4. Grounding arrangements and connections for separately derived systems.
- D. Field quality-control test reports.
- E. Operation and Maintenance Data: For grounding to include the following in emergency, operation, and maintenance manuals:
 - 1. Instructions for periodic testing and inspection of grounding features at test wells, ground rings and grounding connections for separately derived systems based on NFPA 70B.
 - a. Tests shall be to determine if ground resistance or impedance values remain within specified maximums, and instructions shall recommend corrective action if they do not.
 - b. Include recommended testing intervals.

1.5 QUALITY ASSURANCE

- A. Testing Agency Qualifications: An independent agency, with the experience and capability to conduct the testing indicated, that is a member company of the InterNational Electrical Testing Association or is a nationally recognized testing laboratory (NRTL) as defined by OSHA in 29 CFR 1910.7, and that is acceptable to authorities having jurisdiction.
 - 1. Testing Agency's Field Supervisor: Person currently certified by the InterNational Electrical Testing Association to supervise on-site testing specified in Part 3.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- C. Comply with UL 467 for grounding and bonding materials and equipment.

PART 2 - PRODUCTS

2.1 CONDUCTORS

- A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.
- B. Bare Copper Conductors:
 - 1. Solid Conductors: ASTM B 3.

2. Stranded Conductors: ASTM B 8.
 3. Bonding Jumper: Copper tape, braided conductors, terminated with copper ferrules; 1-5/8 inches (41 mm) wide and 1/16 inch (1.6 mm) thick.
- C. Bare Grounding Conductor and Conductor Protector for Wood Poles:
1. No. 4 AWG minimum, soft-drawn copper.
 2. Conductor Protector: Half-round PVC
- D. Grounding Bus: Rectangular bars of annealed copper, 1/4 by 4 inches (6 by 100 mm) in cross section, unless otherwise indicated; with insulators.

2.2 CONNECTORS

- A. Listed and labeled by a nationally recognized testing laboratory acceptable to authorities having jurisdiction for applications in which used, and for specific types, sizes, and combinations of conductors and other items connected.
- B. Bolted Connectors for Conductors and Pipes: Copper or copper alloy, bolted pressure-type, with at least two bolts.
1. Pipe Connectors: Clamp type, sized for pipe.
- C. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions. Use for bonding to steel and as indicated.

2.3 GROUNDING ELECTRODES

- A. Ground Rods: Copper-clad steel; 3/4 inch by 10 feet (19 mm by 3 m) in diameter.
1. Backfill Material: Electrode manufacturer's recommended material.
- B. Concrete Encase Electrode: Per ~~NEC-2011~~ **NEC-2014** Article 250.52 (A) (3).

PART 3 - EXECUTION

3.1 APPLICATIONS

- A. Conductors: Install solid conductor for No. 10 AWG and smaller, and stranded conductors for No. 8 AWG and larger, unless otherwise indicated.
- B. Underground Grounding Conductors: Install bare copper conductor, No. 2/0 AWG minimum.
1. Bury at least 24 inches (600 mm) below grade.

- C. Isolated Grounding Conductors: Green-colored insulation with continuous yellow stripe. On feeders with isolated ground, identify grounding conductor where visible to normal inspection, with alternating bands of green and yellow tape, with at least three bands of green and two bands of yellow.
- D. Grounding Bus: Install in electrical and voice/data equipment rooms, in rooms housing service equipment, and elsewhere as indicated. Length 24" or as indicated in drawings.
 - 1. Install bus on insulated spacers 1 inch (25 mm), minimum, from wall 6 inches (150 mm) above finished floor, unless otherwise indicated.
 - 2. Where indicated on both sides of doorways, route bus up to top of door frame, across top of doorway, down to specified height above floor, and connect to horizontal bus.
- E. Conductor Terminations and Connections:
 - 1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
 - 2. Underground Connections: Welded connectors, except at test wells and as otherwise indicated.
 - 3. Connections to Ground Rods at Test Wells: Bolted connectors.
 - 4. Connections to Structural Steel: Welded connectors.

3.2 GROUNDING UNDERGROUND DISTRIBUTION SYSTEM COMPONENTS

- A. Comply with IEEE C2 grounding requirements.
- B. Grounding Manholes and Handholes: Install a driven ground rod through manhole or handhole floor, close to wall, and set rod depth so 4 inches (100 mm) will extend above finished floor. If necessary, install ground rod before manhole is placed and provide No. 1/0 AWG bare, tinned-copper conductor from ground rod into manhole through a waterproof sleeve in manhole wall. Protect ground rods passing through concrete floor with a double wrapping of pressure-sensitive insulating tape or heat-shrunk insulating sleeve from 2 inches (50 mm) above to 6 inches (150 mm) below concrete. Seal floor opening with waterproof, nonshrink grout.
- C. Grounding Connections to Manhole Components: Bond exposed-metal parts such as inserts, cable racks, pulling irons, ladders, and cable shields within each manhole or handhole, to ground rod or grounding conductor. Make connections with No. 4 AWG minimum, stranded, hard-drawn copper bonding conductor. Train conductors level or plumb around corners and fasten to manhole walls. Connect to cable armor and cable shields as recommended by manufacturer of splicing and termination kits.
- D. Pad-Mounted Transformers and Switches: Install two ground rods and ground ring around the pad. Ground pad-mounted equipment and noncurrent-carrying metal items associated with substations by connecting them to underground cable and grounding electrodes. Install tinned-copper conductor not less than No. 2 AWG for ground ring and for taps to equipment grounding terminals. Bury ground ring not less than 6 inches (150 mm) from the foundation.

3.3 EQUIPMENT GROUNDING

- A. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70:
1. Feeders and branch circuits.
 2. Lighting circuits.
 3. Receptacle circuits.
 4. Single-phase motor and appliance branch circuits.
 5. Three-phase motor and appliance branch circuits.
 6. Flexible raceway runs.
 7. Armored and metal-clad cable runs.
- B. Water Heater, Heat-Tracing, and Antifrost Heating Cables: Install a separate insulated equipment grounding conductor to each electric water heater and heat-tracing cable. Bond conductor to heater units, piping, connected equipment, and components.
- C. Signal and Communication Equipment: For telephone, alarm, voice and data, and other communication equipment, provide No. 4 AWG minimum insulated grounding conductor in raceway from grounding electrode system to each service location, terminal cabinet, wiring closet, and central equipment location.
1. Service and Central Equipment Locations and Wiring Closets: Terminate grounding conductor on a 1/4-by-2-by-24-inch (6-by-50-by-300-mm) grounding bus.
 2. Terminal Cabinets: Terminate grounding conductor on cabinet grounding terminal.
- D. Metal Poles Supporting Outdoor Lighting Fixtures: Install grounding electrode and a separate insulated equipment grounding conductor in addition to grounding conductor installed with branch-circuit conductors.

3.4 INSTALLATION

- A. Grounding Conductors: Route along shortest and straightest paths possible, unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.
- B. Common Ground Bonding with Lightning Protection System: Comply with NFPA 780 and UL 96A when interconnecting with lightning protection system. Bond electrical power system ground directly to lightning protection system grounding conductor at closest point to electrical service grounding electrode. Use bonding conductor sized same as system grounding electrode conductor, and install in conduit.

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- C. Ground Rods: Drive rods until tops are 2 inches (50 mm) below finished floor or final grade, unless otherwise indicated.
1. Interconnect ground rods with grounding electrode conductor below grade and as otherwise indicated. Make connections without exposing steel or damaging coating, if any.
 2. For grounding electrode system, install at least three rods spaced at least one-rod length from each other and located at least the same distance from other grounding electrodes, and connect to the service grounding electrode conductor.
- D. Test Wells: Ground rod driven through drilled hole in bottom of handhole. Handholes are specified in Division 26 Section "Underground Ducts and Raceways for Electrical Systems," and shall be at least 12 inches (300 mm) deep, with cover.
1. Test Wells: Install at least one test well for each service, unless otherwise indicated. Install at the ground rod electrically closest to service entrance. Set top of test well flush with finished grade or floor.
- E. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance, except where routed through short lengths of conduit.
1. Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.
 2. Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install so vibration is not transmitted to rigidly mounted equipment.
 3. Use exothermic-welded connectors for outdoor locations, but if a disconnect-type connection is required, use a bolted clamp.
- F. Grounding and Bonding for Piping:
1. Metal Water Service Pipe: Install insulated copper grounding conductors, in conduit, from building's main service equipment, or grounding bus, to main metal water service entrances to building. Connect grounding conductors to main metal water service pipes, using a bolted clamp connector or by bolting a lug-type connector to a pipe flange, using one of the lug bolts of the flange. Where a dielectric main water fitting is installed, connect grounding conductor on street side of fitting. Bond metal grounding conductor conduit or sleeve to conductor at each end.
 2. Water Meter Piping: Use braided-type bonding jumpers to electrically bypass water meters. Connect to pipe with a bolted connector.
 3. Bond each aboveground portion of gas piping system downstream from equipment shutoff valve.
- G. Bonding Interior Metal Ducts: Bond metal air ducts to equipment grounding conductors of associated fans, blowers, electric heaters, and air cleaners. Install bonding jumper to bond across flexible duct connections to achieve continuity.
- H. Grounding for Steel Building Structure: Install a driven ground rod at base of each corner column and at intermediate exterior columns at distances not more than 60 feet (18 m) apart.

- I. Ground Ring: Install a grounding conductor, electrically connected to each building structure ground rod and to each steel column, extending around the perimeter of building.
 - 1. Install copper conductor not less than No. 2/0 AWG for ground ring and for taps to building steel.
 - 2. Bury ground ring not less than 24 inches (600 mm) from building foundation.
- J. Ufer Ground (Concrete-Encased Grounding Electrode): Fabricate according to NFPA 70, using a minimum of 20 feet (6 m) of bare copper conductor not smaller than No. 2 AWG.
 - 1. If concrete foundation is less than 20 feet (6 m) long, coil excess conductor within base of foundation.
 - 2. Bond grounding conductor to reinforcing steel in at least four locations and to anchor bolts. Extend grounding conductor below grade and connect to building grounding grid or to grounding electrode external to concrete.

3.5 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing and inspecting agency to perform field tests and inspections and prepare test reports.
- B. Testing Agency: Engage a qualified testing and inspecting agency to perform the following field tests and inspections and prepare test reports:
- C. Perform the following tests and inspections and prepare test reports:
 - 1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.
 - 2. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal, at ground test wells, and at individual ground rods. Make tests at ground rods before any conductors are connected.
 - a. Measure ground resistance not less than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.
 - b. Perform tests by fall-of-potential method according to IEEE 81.
 - 3. Prepare dimensioned drawings locating each test well, ground rod and ground rod assembly, and other grounding electrodes. Identify each by letter in alphabetical order, and key to the record of tests and observations. Include the number of rods driven and their depth at each location, and include observations of weather and other phenomena that may affect test results. Describe measures taken to improve test results.
- D. Report measured ground resistances that exceed the following values:
 - 1. Power and Lighting Equipment or System with Capacity 500 kVA and Less: 10 ohms.
 - 2. Power and Lighting Equipment or System with Capacity 500 to 1000 kVA: 5 ohms.

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3. Power and Lighting Equipment or System with Capacity More Than 1000 kVA: 3 ohms.
 4. Power Distribution Units or Panelboards Serving Electronic Equipment: 3 ohm(s).
 5. Substations and Pad-Mounted Equipment: 5 ohms.
 6. Manhole Grounds: 10 ohms.
- E. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Architect promptly and include recommendations to reduce ground resistance.

END OF SECTION 260526

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer: Subject to compliance with requirements, provide products by one of the following:
1. Lutron Electronics Company, Inc.
 2. Sensor Switch
 3. ~~Watt Stopper Crestron~~

2.2 DIGITAL-NETWORK LIGHTING CONTROL SYSTEM - GENERAL REQUIREMENTS

- A. Include as part of the base bid additional costs for manufacturer's sensor layout and tuning services; Lutron LSC-SENS-LT:
1. Lighting control manufacturer to design wired daylight sensor layout that provides adequate coverage and performs according to required sequence of operations.
 2. Lighting control manufacturer to visit site for preinstallation meeting and system startup; lighting control manufacturer may direct Contractor regarding sensor relocation should conditions require a deviation from locations indicated.
 3. Any additional sensors or hardware required to meet sequence of operations to be furnished by lighting control manufacturer at no additional cost.
 4. Lighting control manufacturer to provide up to two additional post-startup on-site service visits for fine-tuning of sensor calibration.
- B. Electrostatic Discharge Tolerance: Design and test equipment to withstand electrostatic discharges without impairment when tested according to IEC 61000-4-2.
- C. Dimming and Switching (Relay) Equipment:
1. Inrush Tolerance:
 - a. Capable of withstanding repetitive inrush current of 50 times the operating current without impacting lifetime of the dimmer/relay.
 2. Surge Tolerance:
 - a. Panels: Designed and tested to withstand surges of 6,000 V, 3,000 amps according to IEEE C62.41.2 and IEC 61000-4-5 without impairment to performance.
 3. Power Failure Recovery: When power is interrupted and subsequently restored, within 3 seconds lights to automatically return to same levels (dimmed setting, full on, or full off) as prior to power interruption.
 4. Dimming Requirements:
 - a. Incorporate electronic "soft-start" default at initial turn-on that smoothly ramps lights up to the appropriate levels within 0.5 seconds.

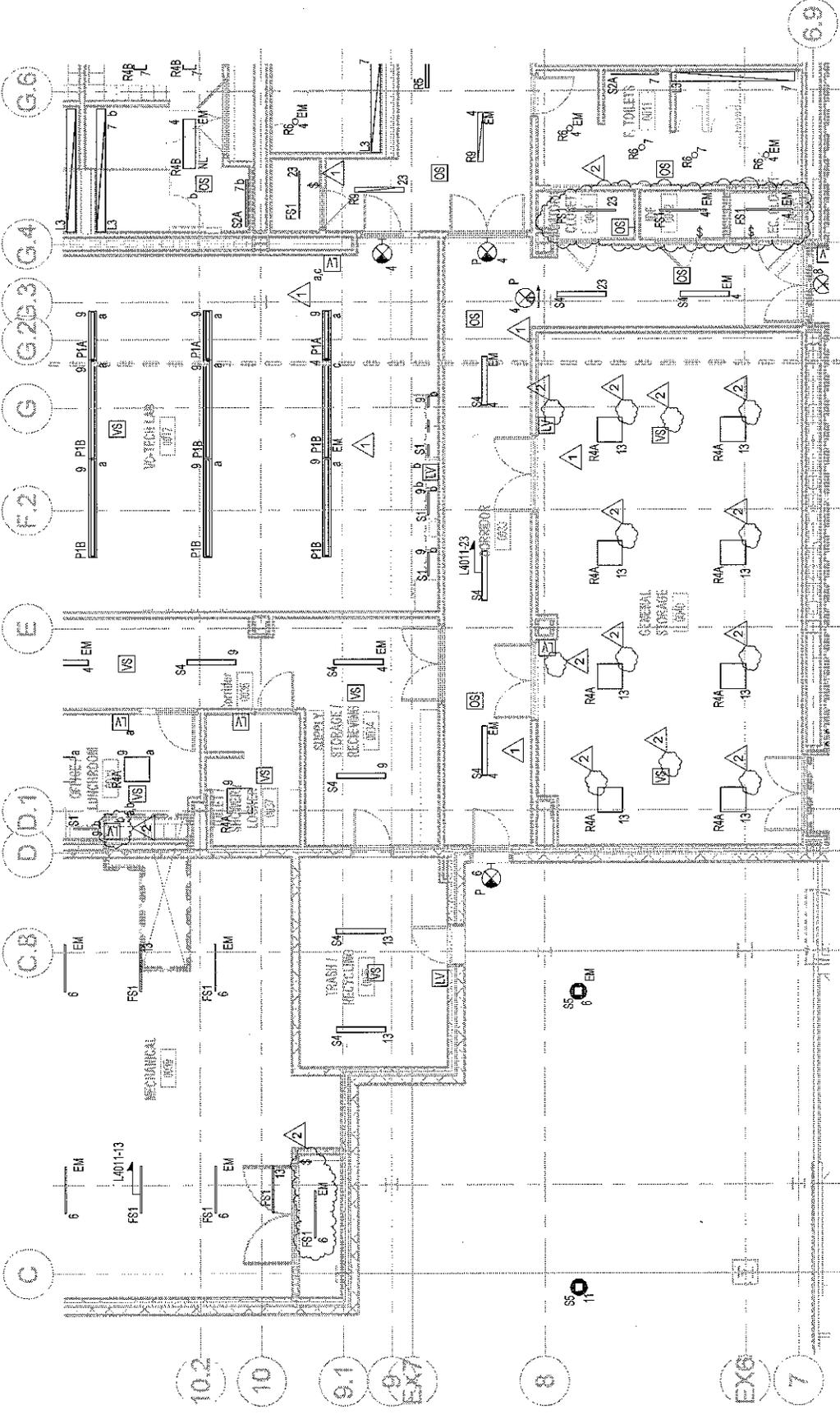
- L. FACP: Surface mount with tops of cabinets not more than 72 inches above the finished floor.
- M. Annunciator: Install with the top of the panel not more than 72 inches above the finished floor.
- N. Antenna for Radio Alarm Transmitter: Mount to building structure where indicated. Use mounting arrangement and substrate connection that will resist 100-mph wind load with a 1.3 gust factor without damage.

3.2 WIRING INSTALLATION

- A. Wiring Method: Install wiring in metal raceway (**EMT**). Conceal raceway except in unfinished spaces and as indicated.
- B. Wiring within Enclosures: Separate power-limited and non-power-limited conductors as recommended by the manufacturer. Install conductors parallel with or at right angles to sides and back of the enclosure. Bundle, lace, and train conductors to terminal points with no excess. Connect conductors that are terminated, spliced, or interrupted in any enclosure associated with the fire alarm system to terminal blocks. Mark each terminal according to the system's wiring diagrams. Make all connections with approved crimp-on terminal spade lugs, pressure-type terminal blocks, or plug connectors.
- C. Cable Taps: Use numbered terminal strips in junction, pull and outlet boxes, cabinets, or equipment enclosures where circuit connections are made.
- D. Color-Coding: Color-code fire alarm conductors differently from the normal building power wiring. Use one color-code for alarm circuit wiring and a different color-code for supervisory circuits. Color-code audible alarm-indicating circuits differently from alarm-initiating circuits. Use different colors for visible alarm-indicating devices. Paint fire alarm system junction boxes and covers red.
- E. Risers: Install at least two vertical cable risers to serve the fire alarm system. Separate risers in close proximity to each other with a minimum ~~one-hour-rated~~ **two-hour-rated** wall, so the loss of one riser does not prevent the receipt or transmission of signal from other floors or zones.
- F. Wiring to Remote Alarm Transmitting Device: 1-inch conduit between the FACP and the transmitter. Install number of conductors and electrical supervision for connecting wiring as needed to suit monitoring function.

3.3 IDENTIFICATION

- A. Identify all system components, wiring, cabling, and terminals.
- B. Identify all system components, wiring, cabling, and terminals.
- C. Install instructions frame in a location visible from the FACP.
- D. Paint power-supply disconnect switch red and label "FIRE ALARM."



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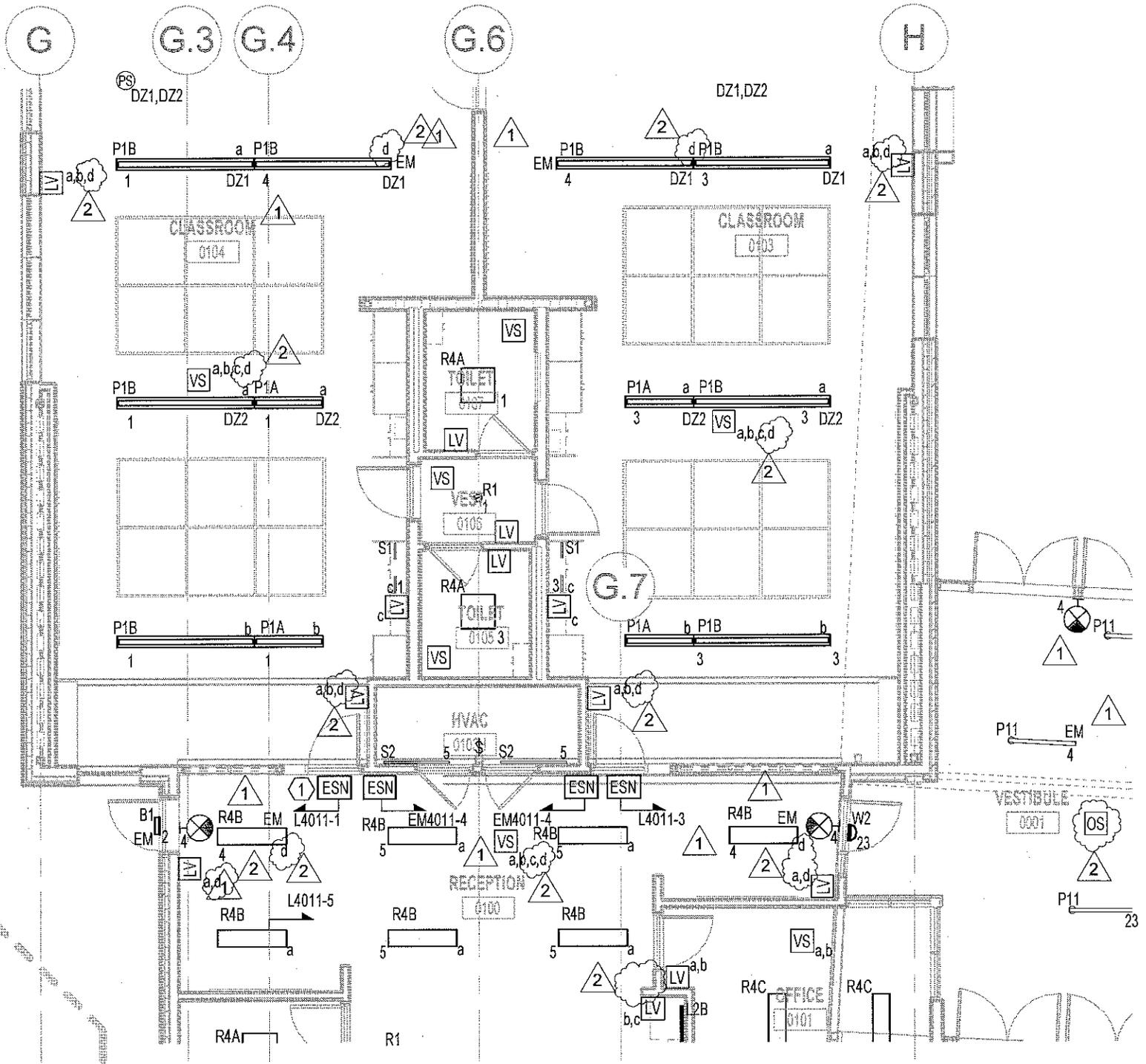
PROJECT: **Dr. Martin Luther King, Jr. School Construction Project**

DRAWING TITLE: **ELECTRICAL LIGHTING PARTIAL GROUND FLOOR PLAN 1**

DATE:

01/24/2014 ADDENDUM 5

PROJECT NO. **47931.00**
 SCALE **1/8" = 1'-0"**
 SHEET **E110.1**
 REFERENCE: **ESK110.1-2**
 DWG. NO. **ESK110.1-2**

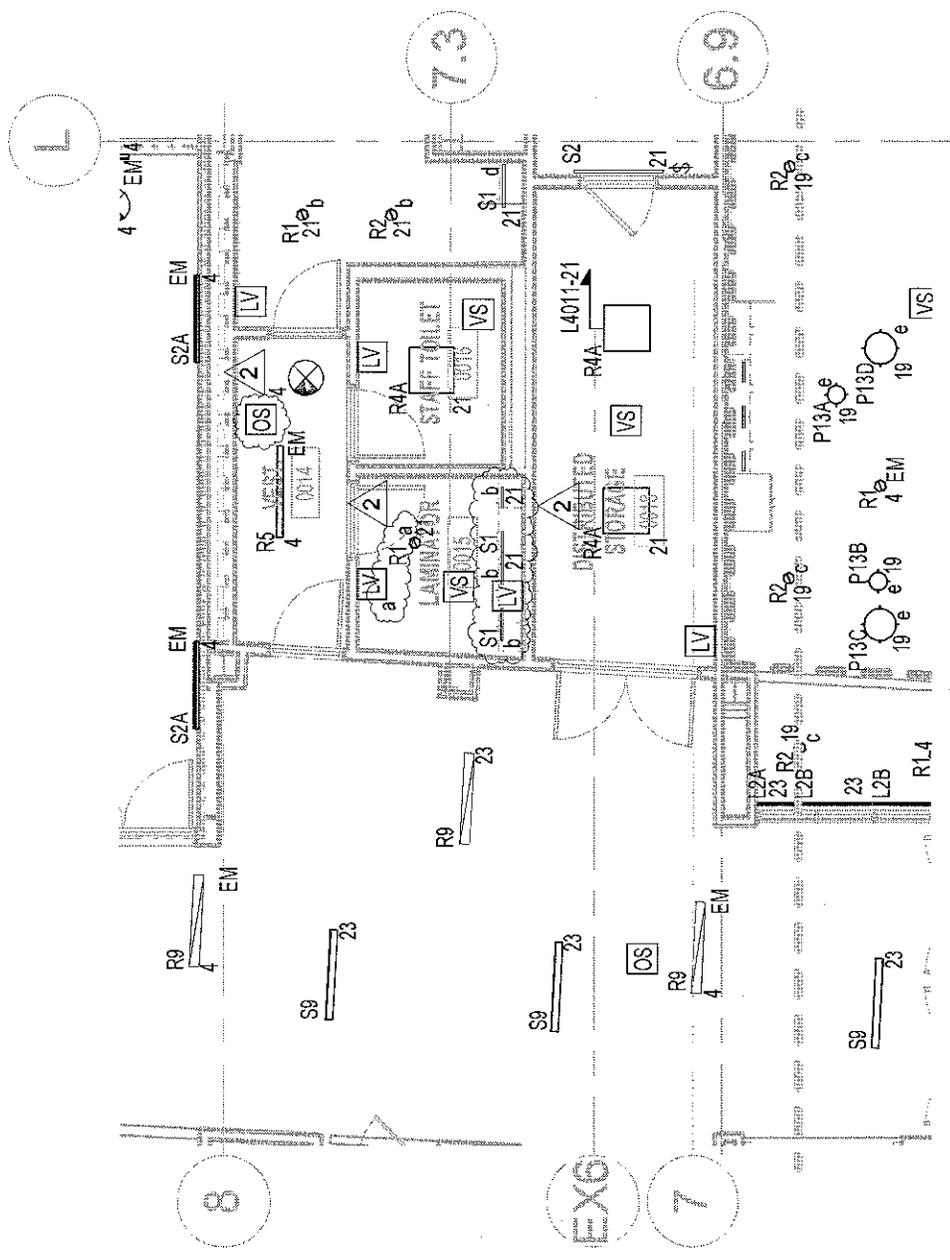


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 DATE: 01/24/2014 ADDENDUM 5

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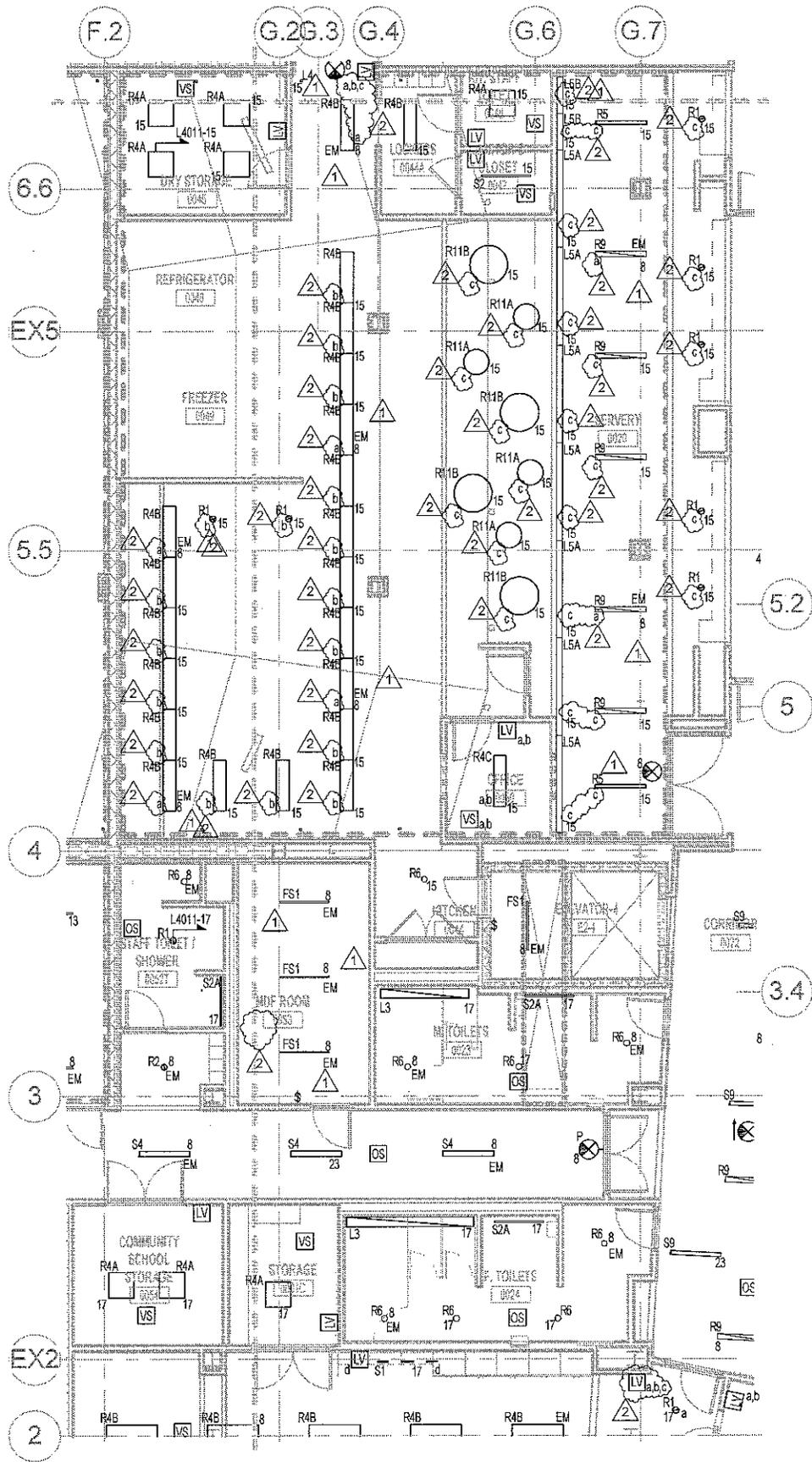


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PROJECT NO. **47931.00**
 SCALE: **1/8" = 1'-0"**
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 DWG. NO.: **ESK110.2-4**



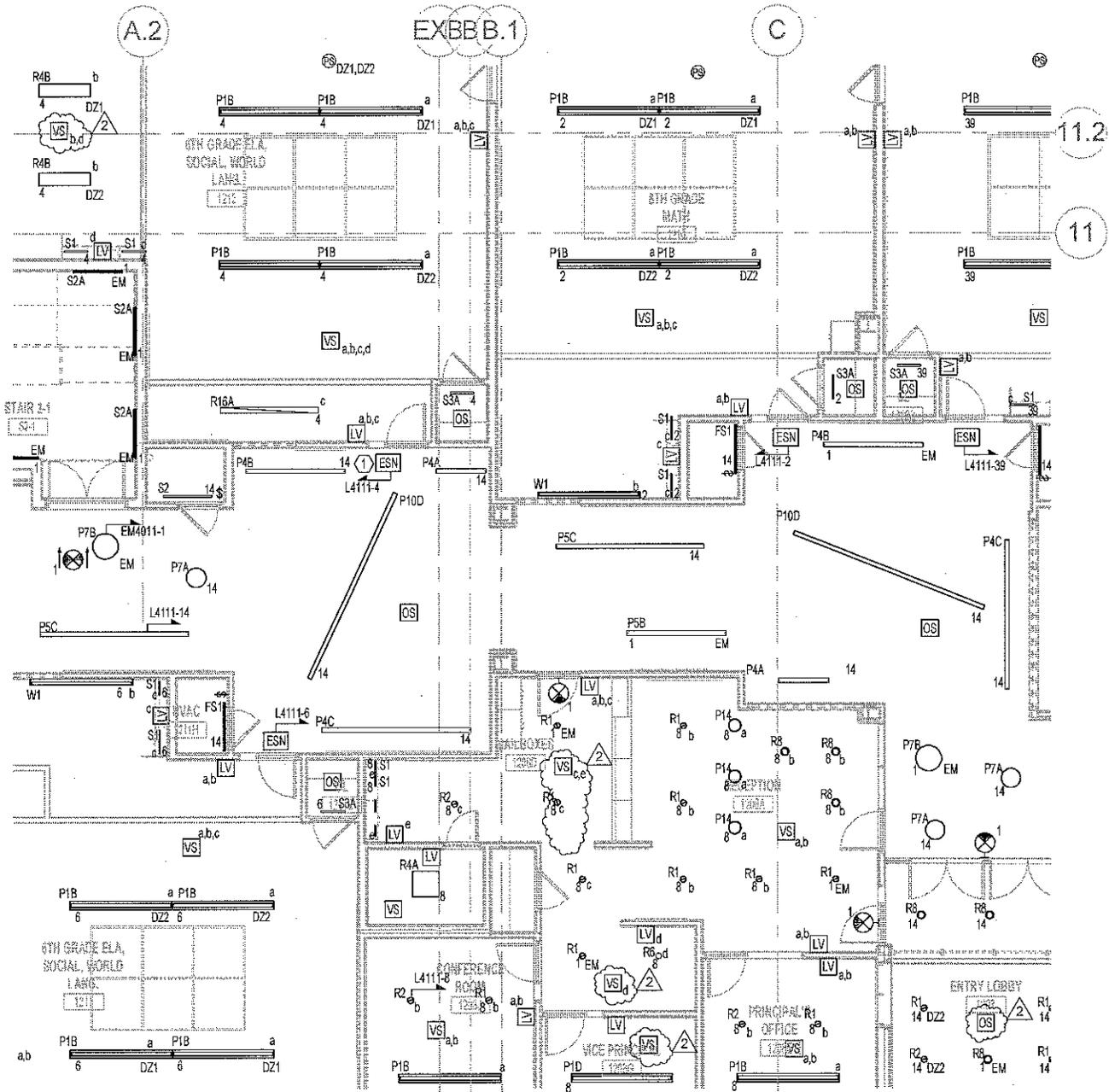
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PROJECT NO. 47831.00
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 SHEET E110.3

DRAWING TITLE: ELECTRICAL LIGHTING PARTIAL GROUND FLOOR PLAN 3
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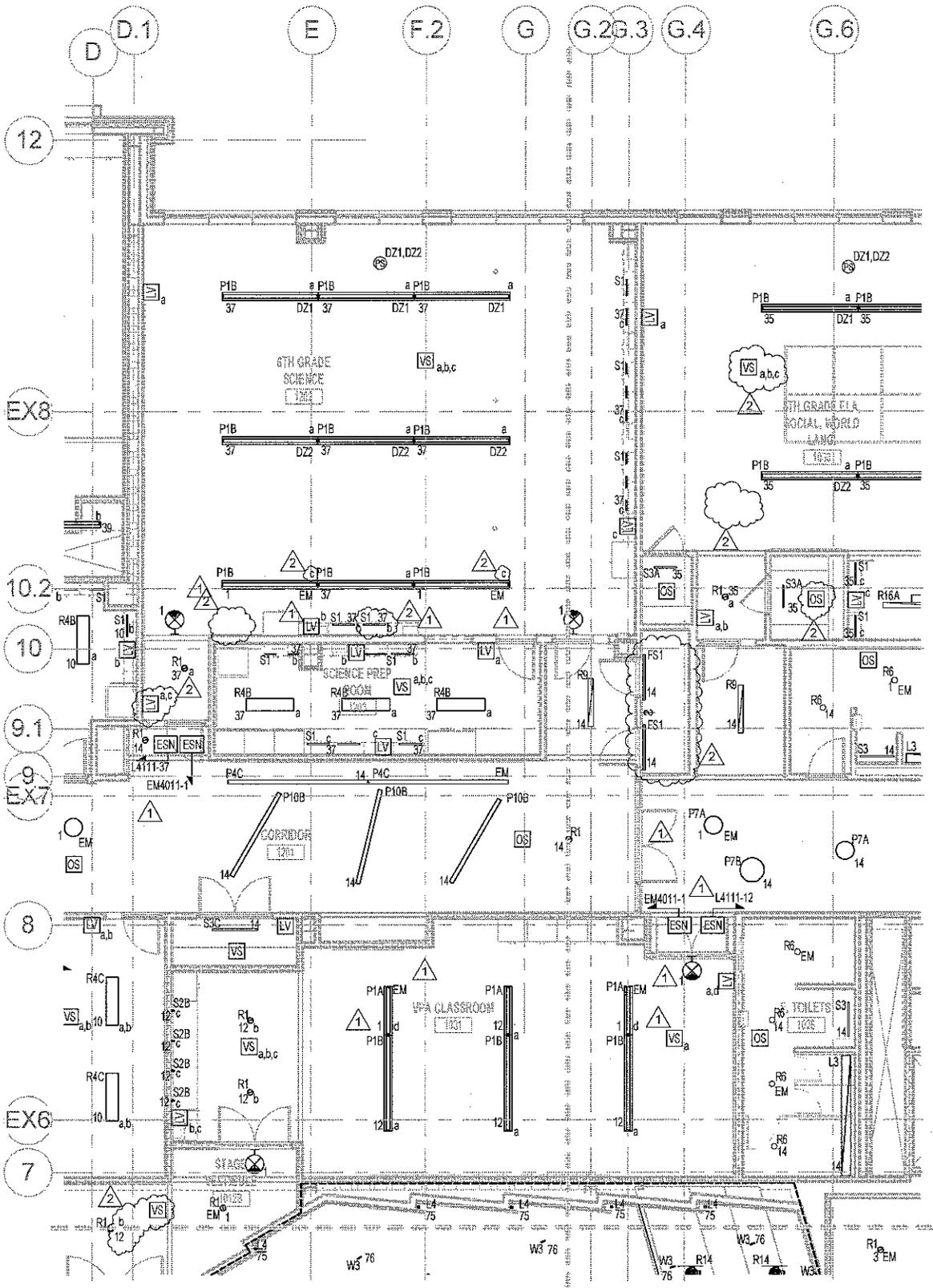


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 REFERENCE:
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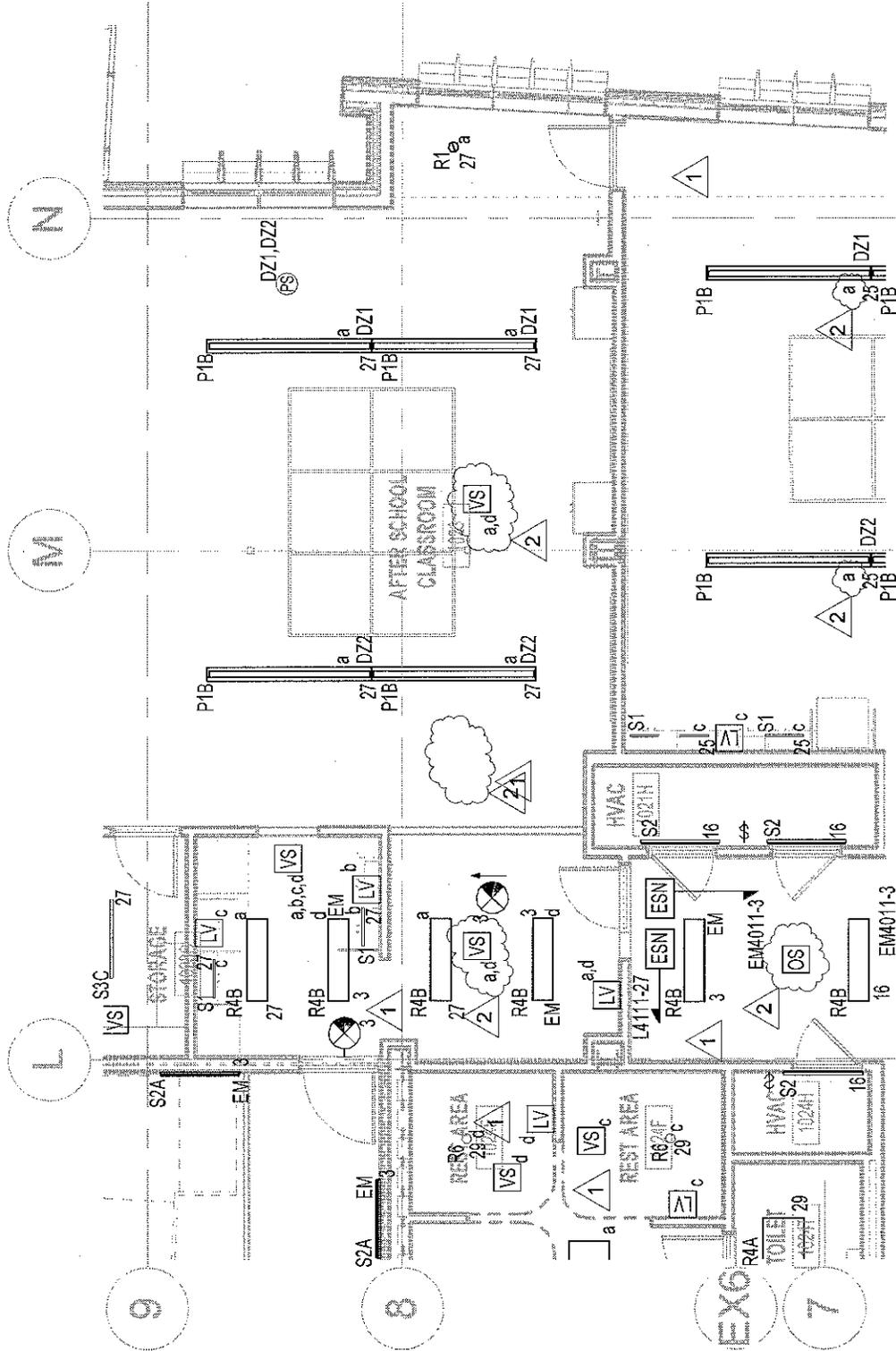


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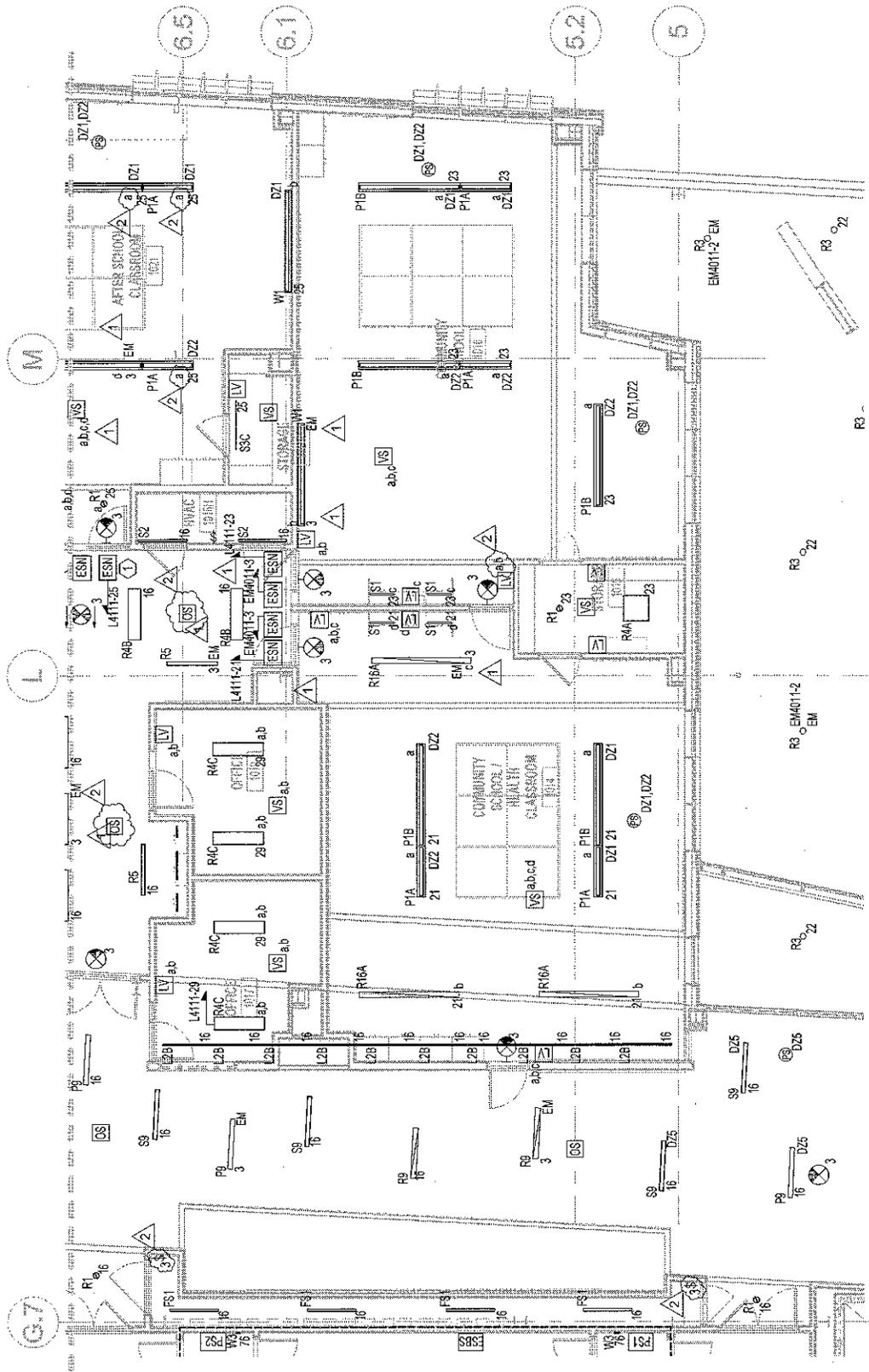
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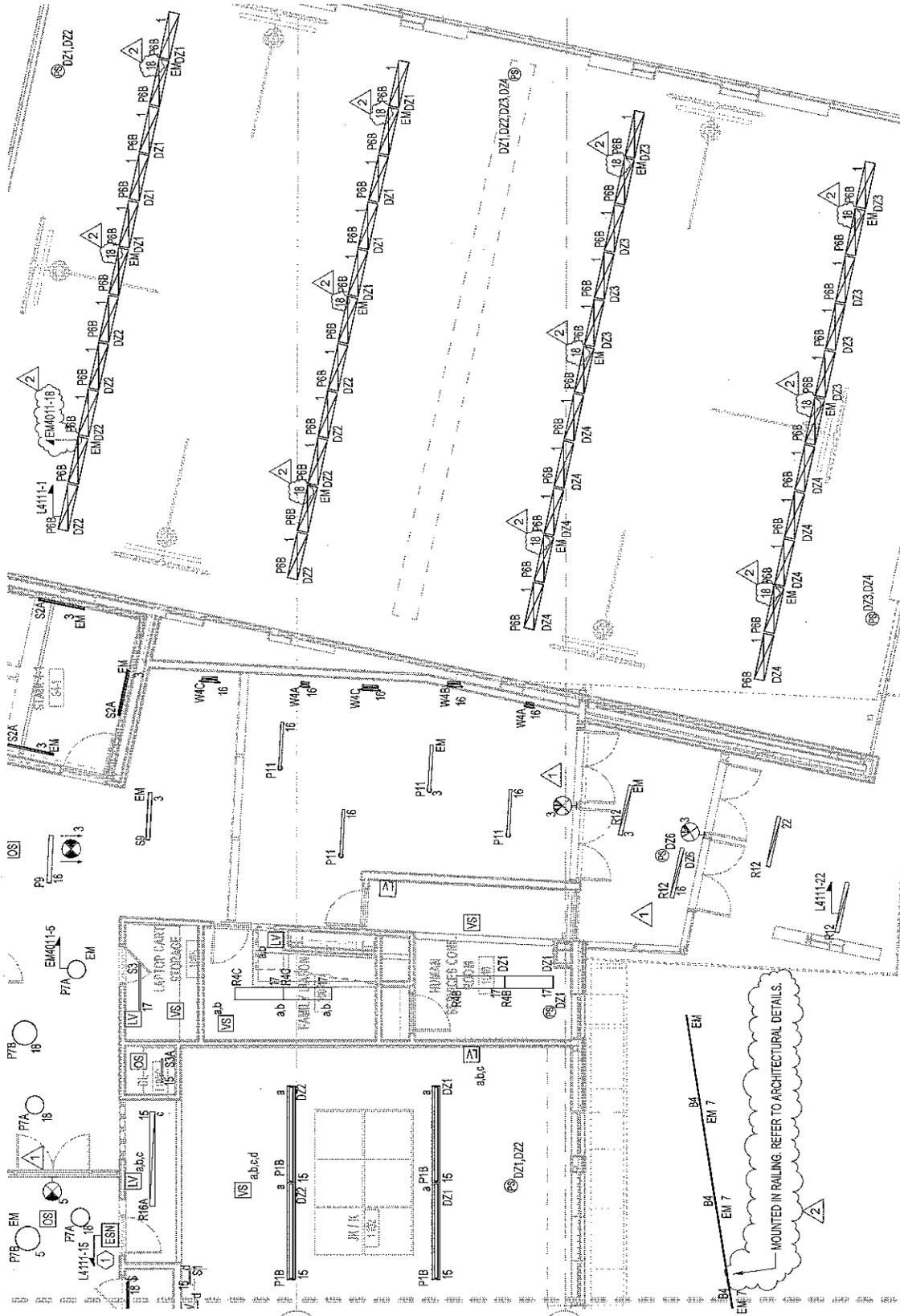
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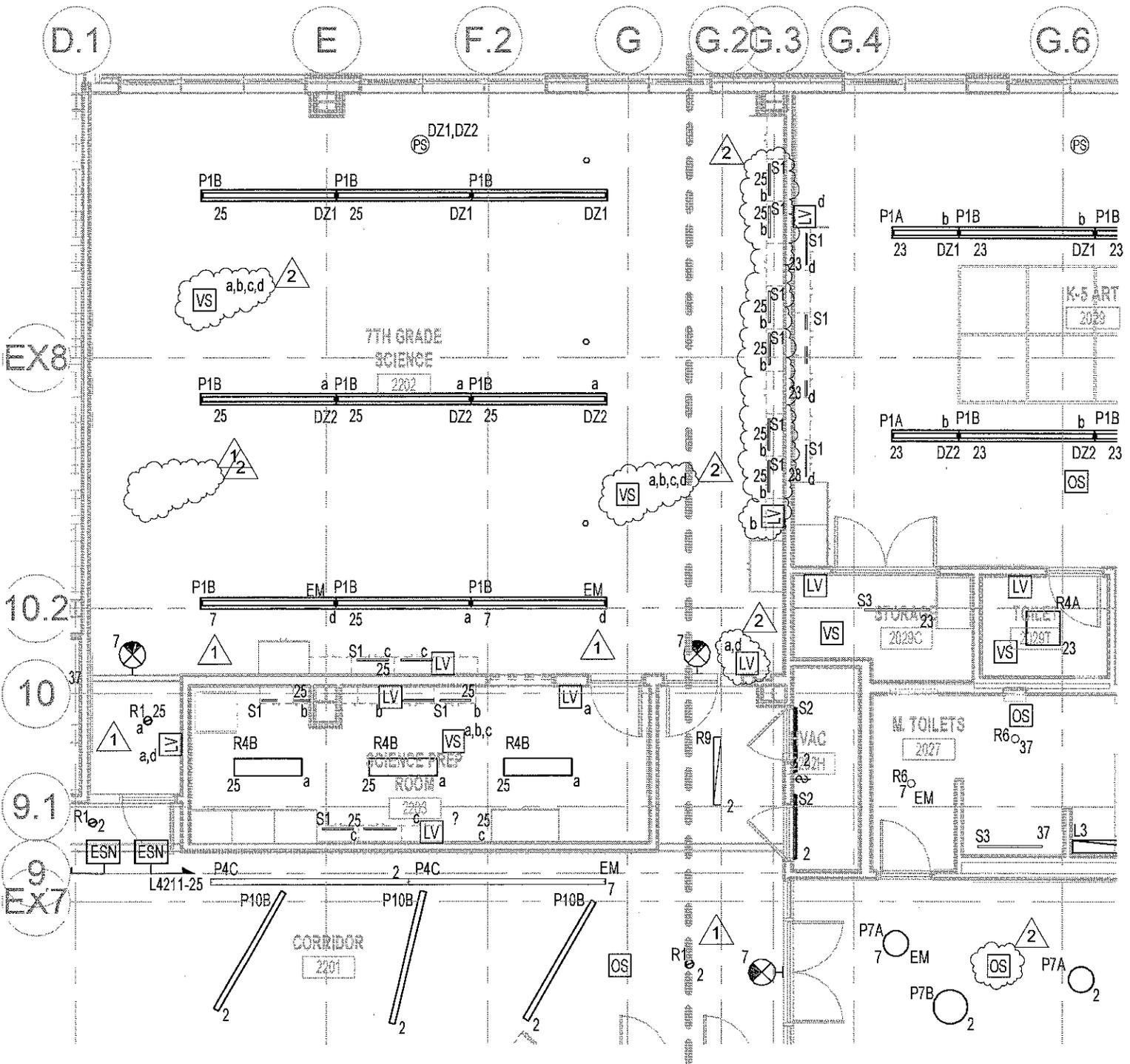
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DATE: 01/24/2014 ADDENDUM 5

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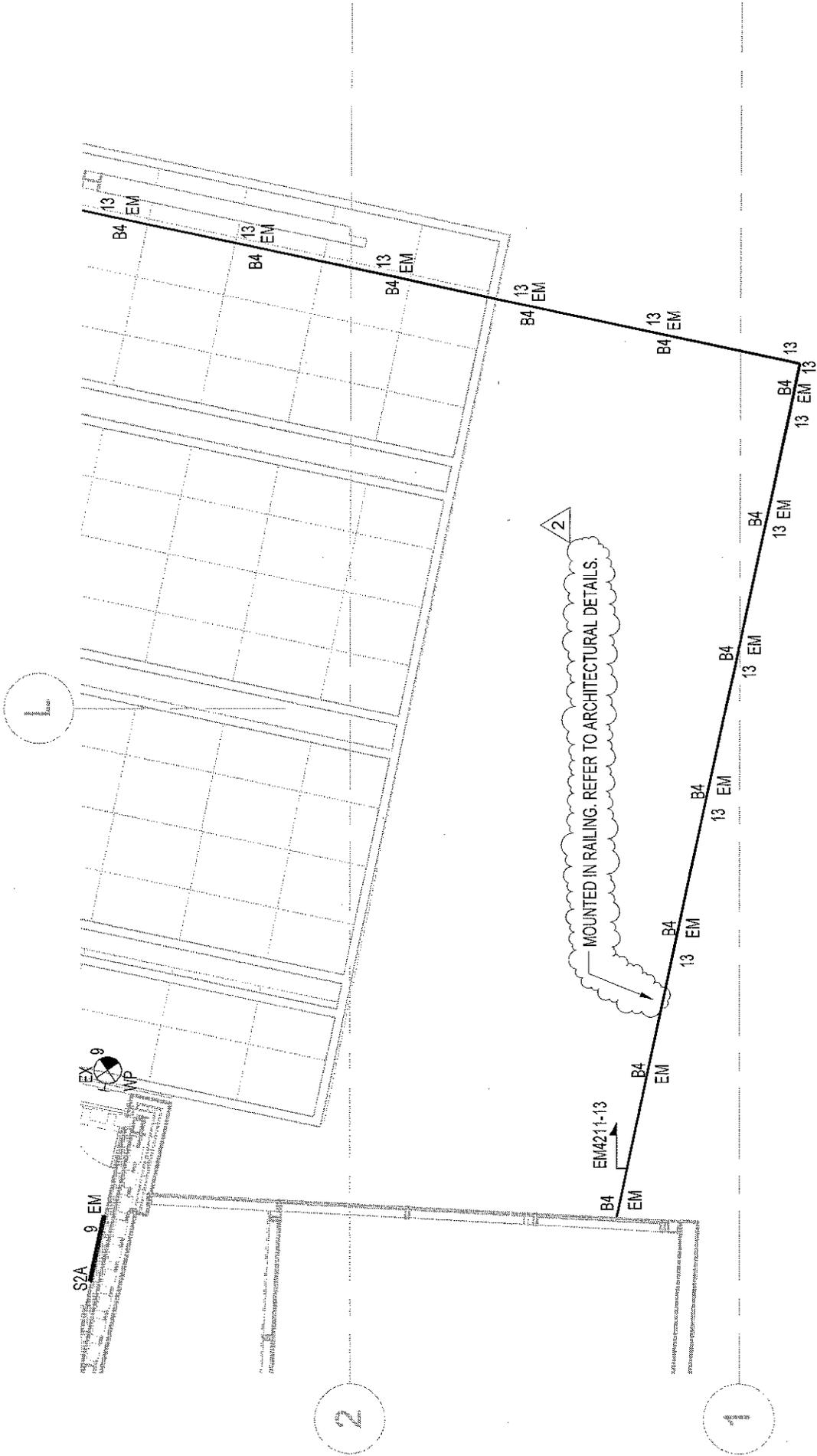
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Construction Project
 DRAWING TITLE: **ELECTRICAL LIGHTING PARTIAL FIRST FLOOR PLAN 3**
 DATE: **01/24/2014 ADDENDUM 5**



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 DATE: 01/24/2014 ADDENDUM 5

PROJECT NO. 47931.00
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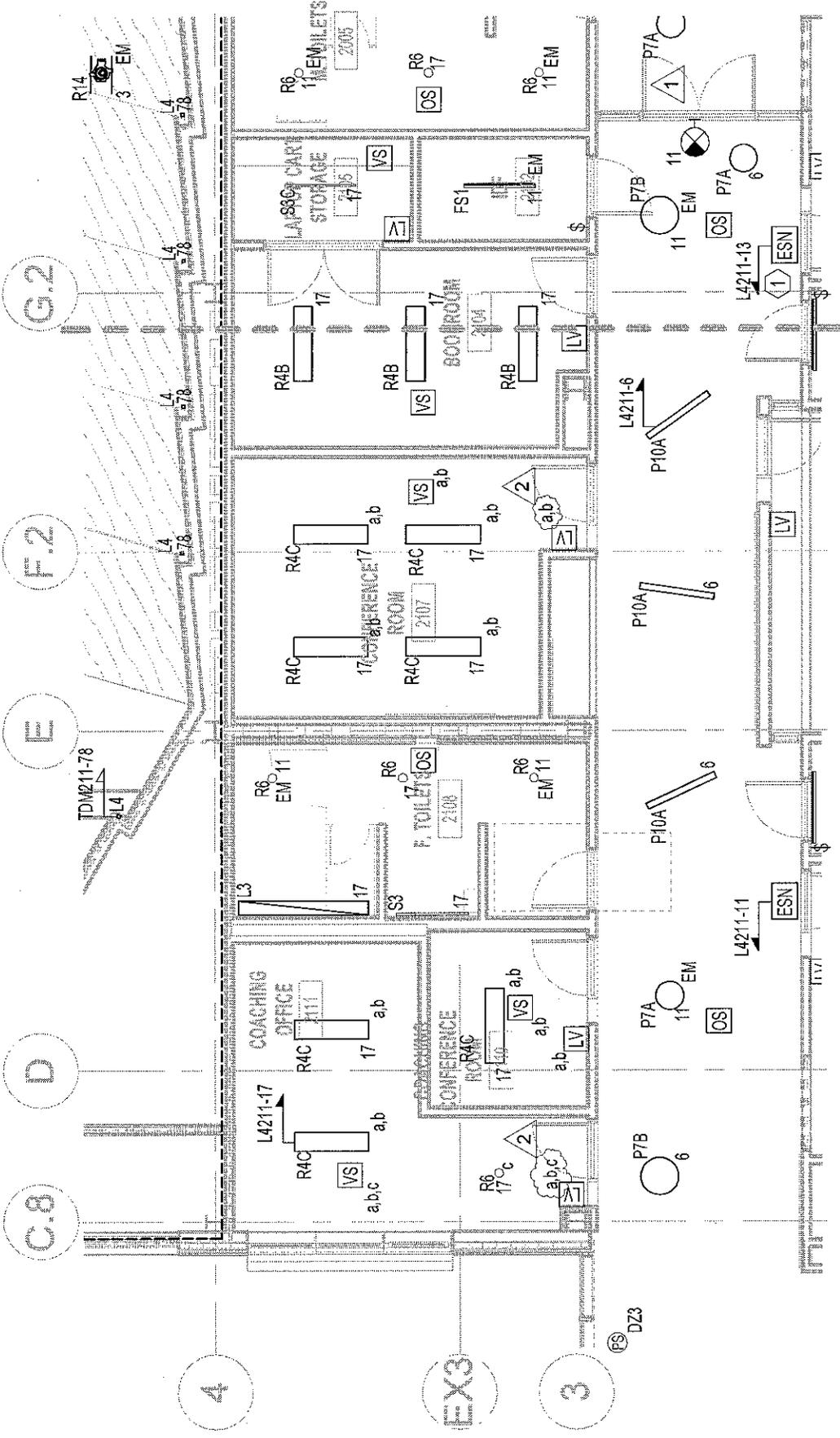


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DRAWING TITLE: **ELECTRICAL LIGHTING PARTIAL SECOND FLOOR PLAN 3**
 DATE: **01/24/2014 ADDENDUM 5**

PROJECT NO. **47931.00**
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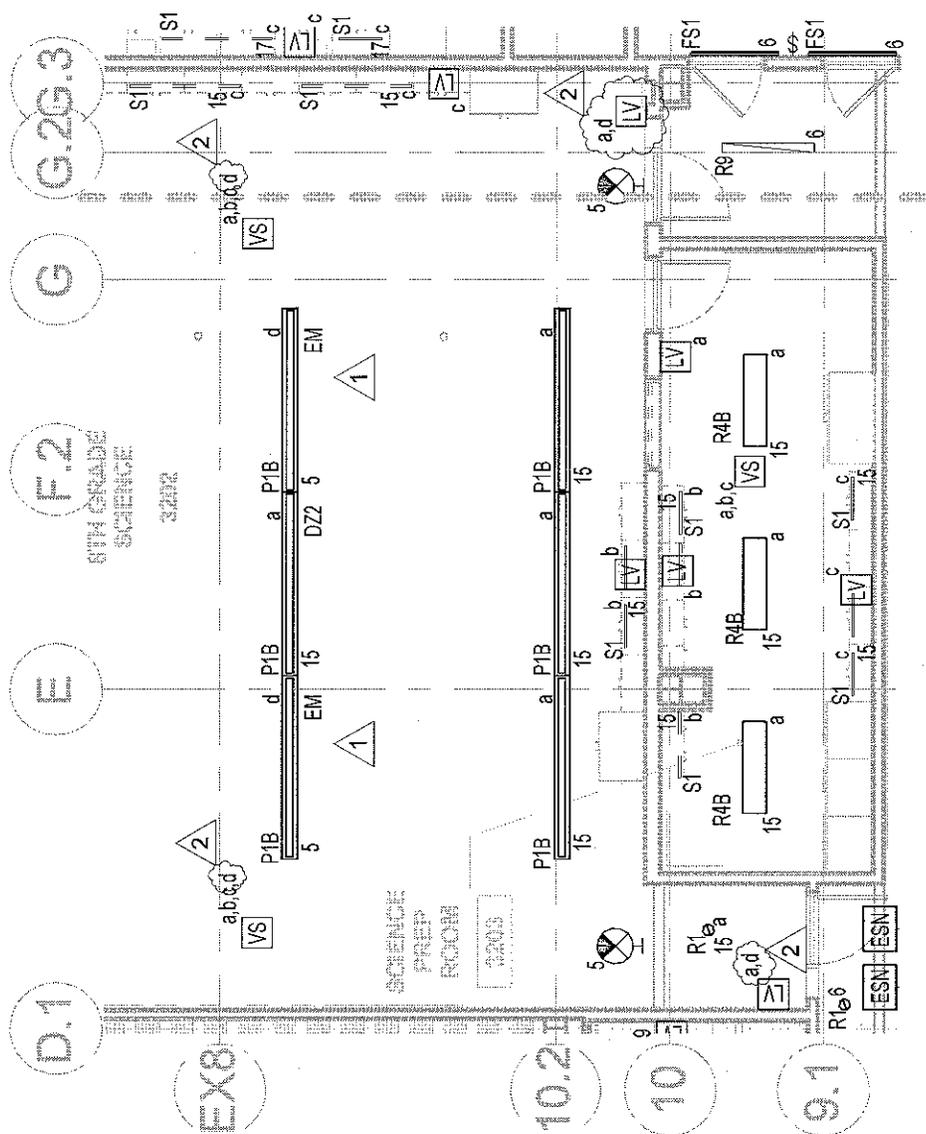


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DRAWING TITLE: ELECTRICAL LIGHTING PARTIAL SECOND FLOOR PLAN 4
 DATE: 01/24/2014 APPENDUM 5

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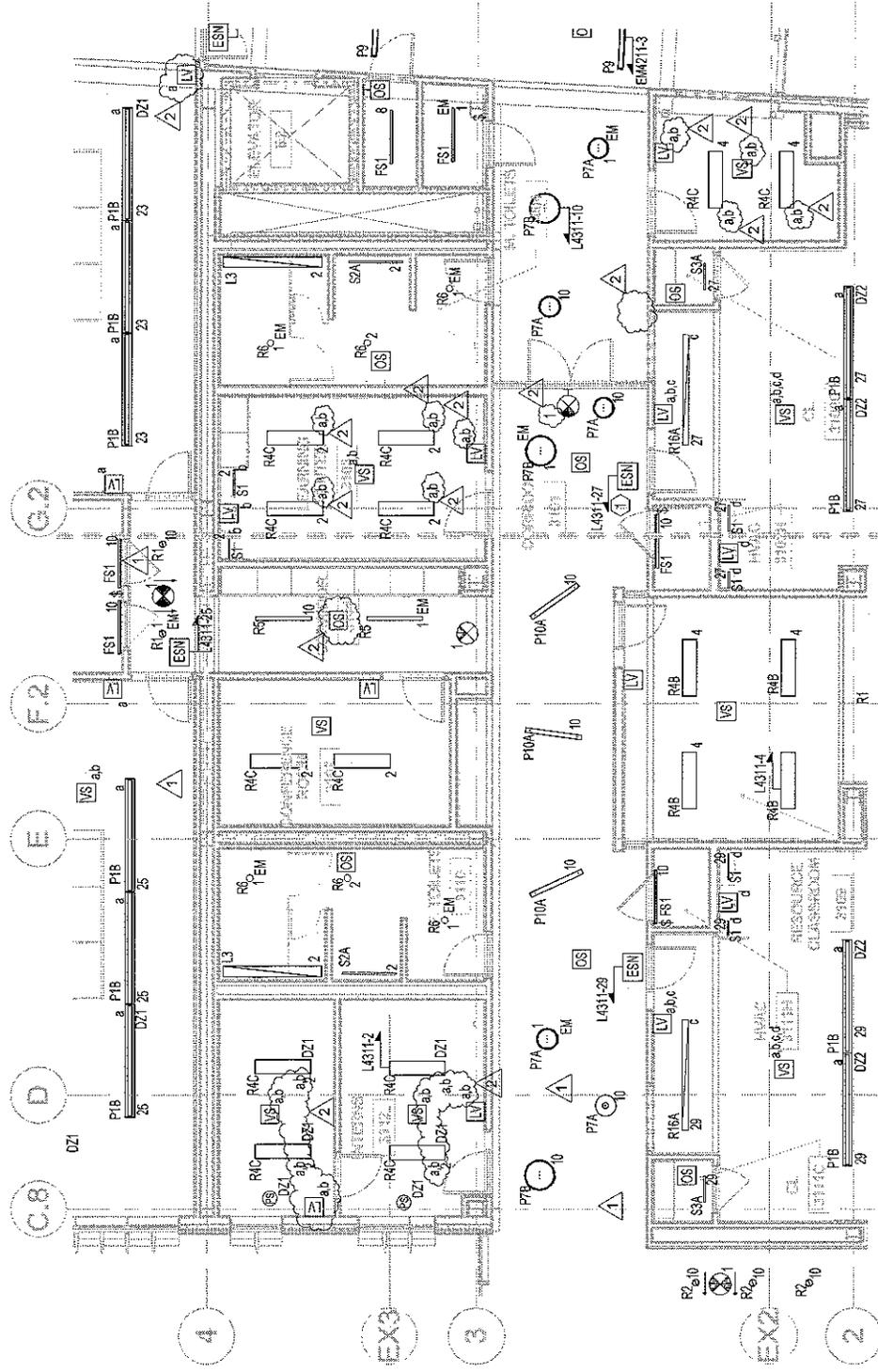


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PROJECT: **Dr. Martin Luther King, Jr. School
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DRAWING TITLE: **ELECTRICAL LIGHTING PARTIAL THIRD FLOOR PLAN 1**
 DATE: **01/24/2014** ADDENDUM 5

PROJECT NO. **47931.00**
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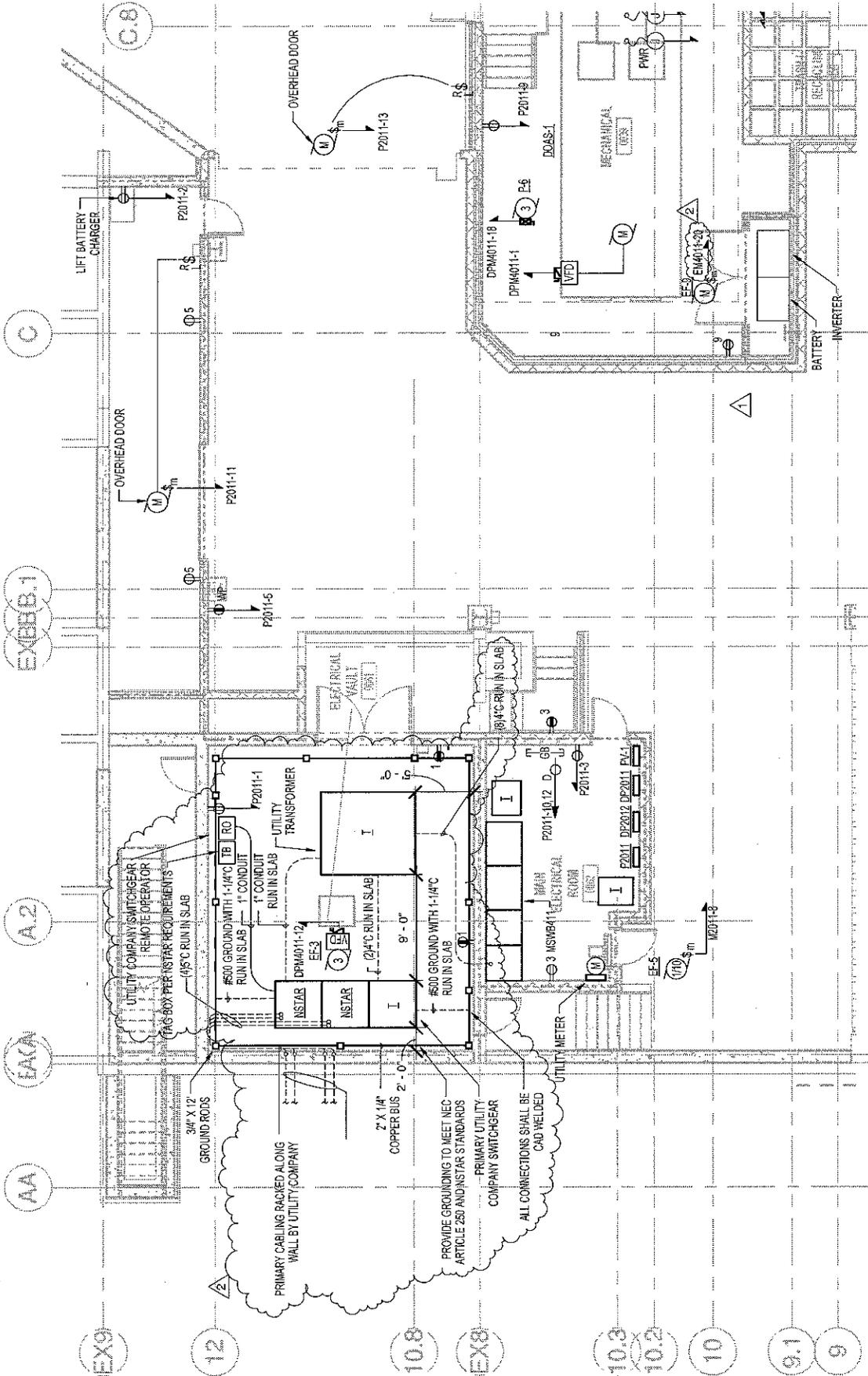


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PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
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DRAWING TITLE: ELECTRICAL LIGHTING PARTIAL THIRD FLOOR PLAN 3
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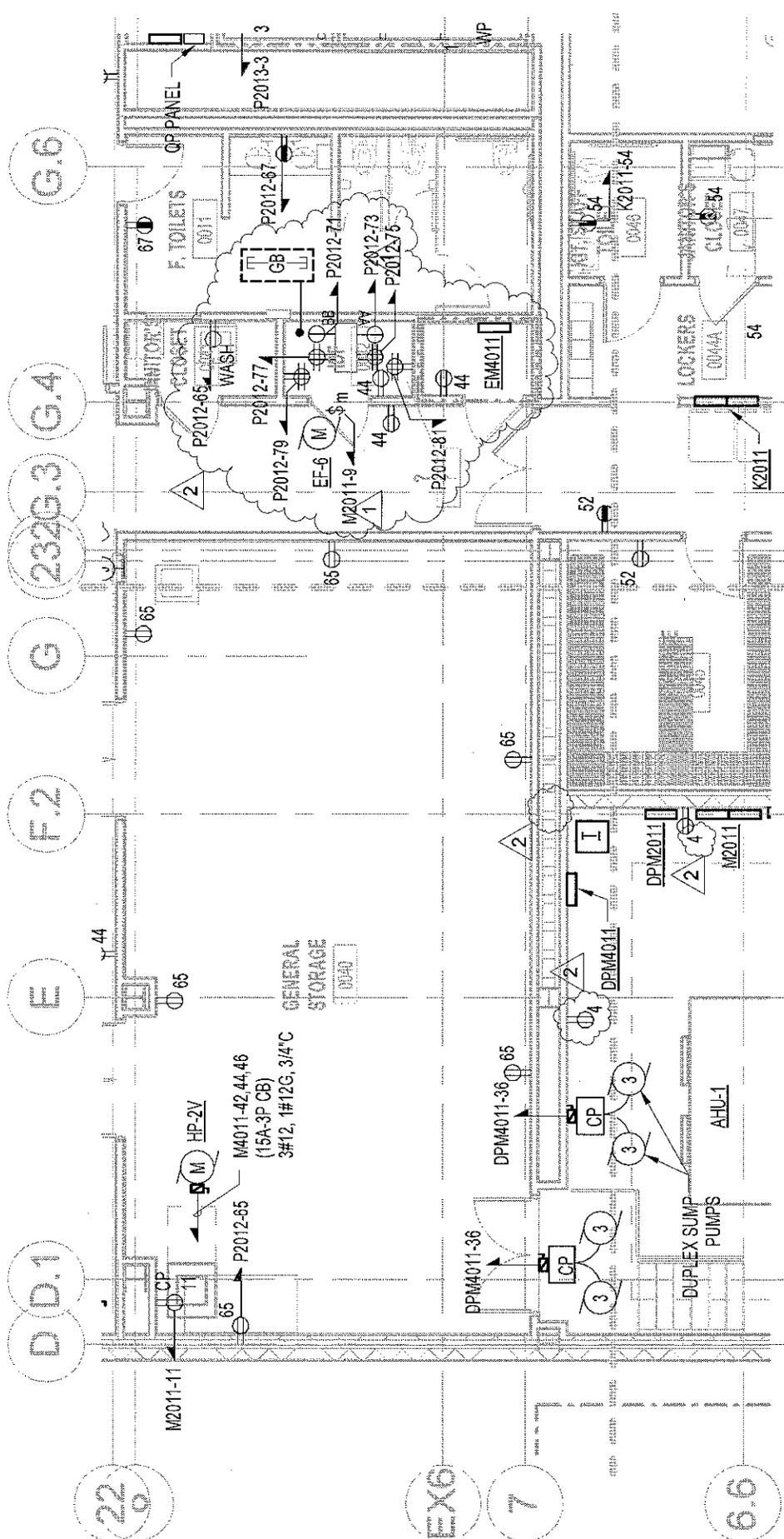


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PROJECT NO. 47931.00
 SCALE 1/8" = 1'-0"
 SHEET E210.1
 REFERENCE: E210.1
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DRAWING TITLE: ELECTRICAL POWER PARTIAL GROUND FLOOR PLAN 1
 DATE: 01/24/2014, ADDENDUM 5

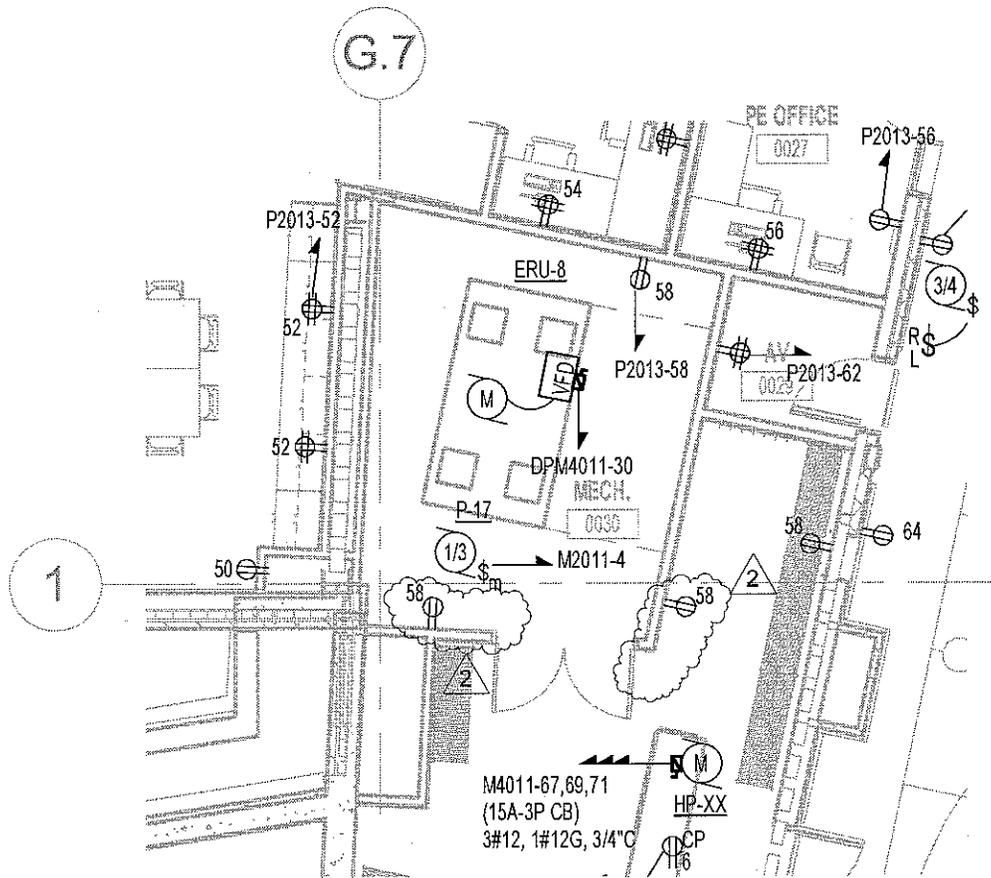


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DRAWING TITLE: **ELECTRICAL POWER PARTIAL GROUND FLOOR PLAN 1**
 DATE: **01/24/2014** ADDENDUM 5

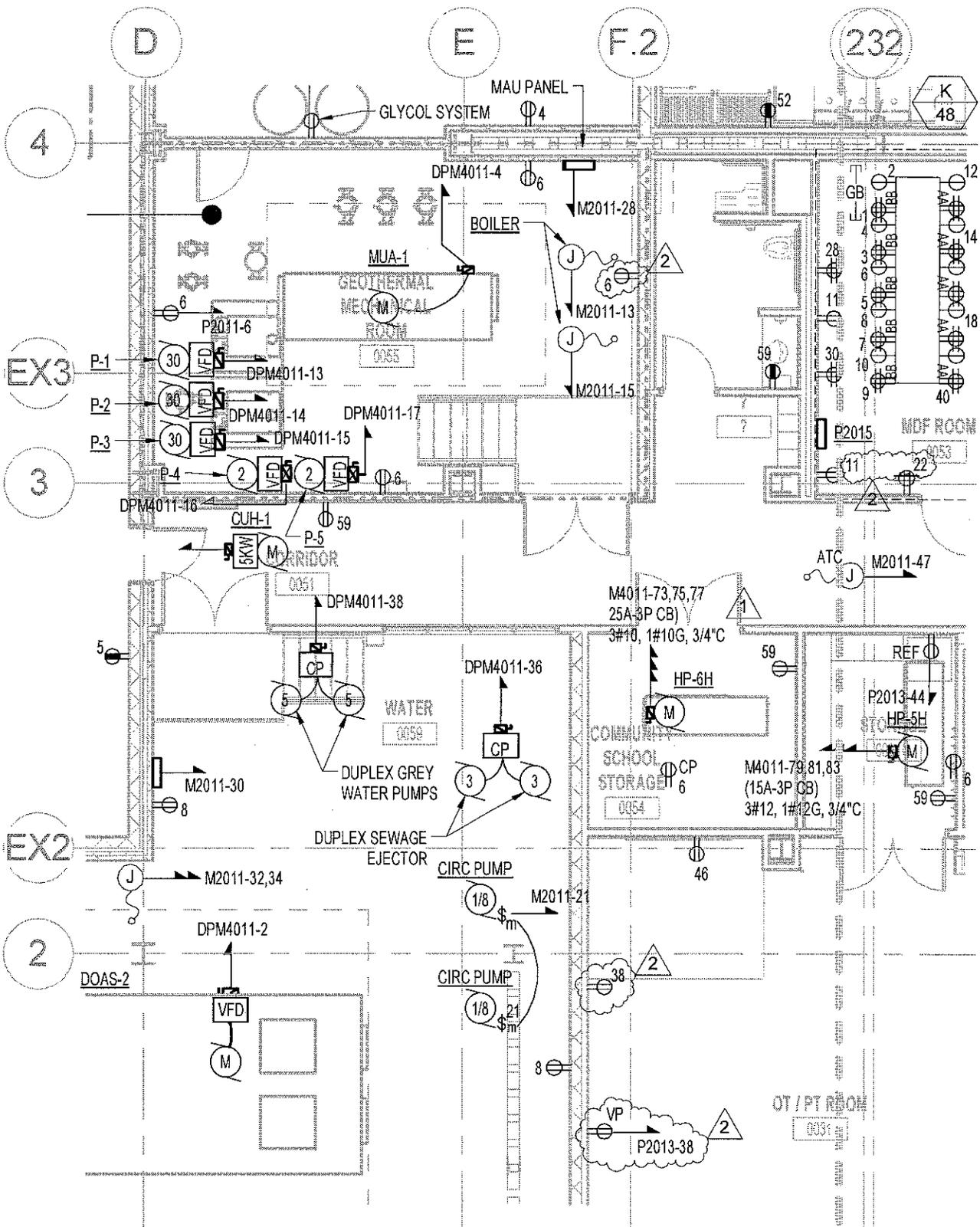
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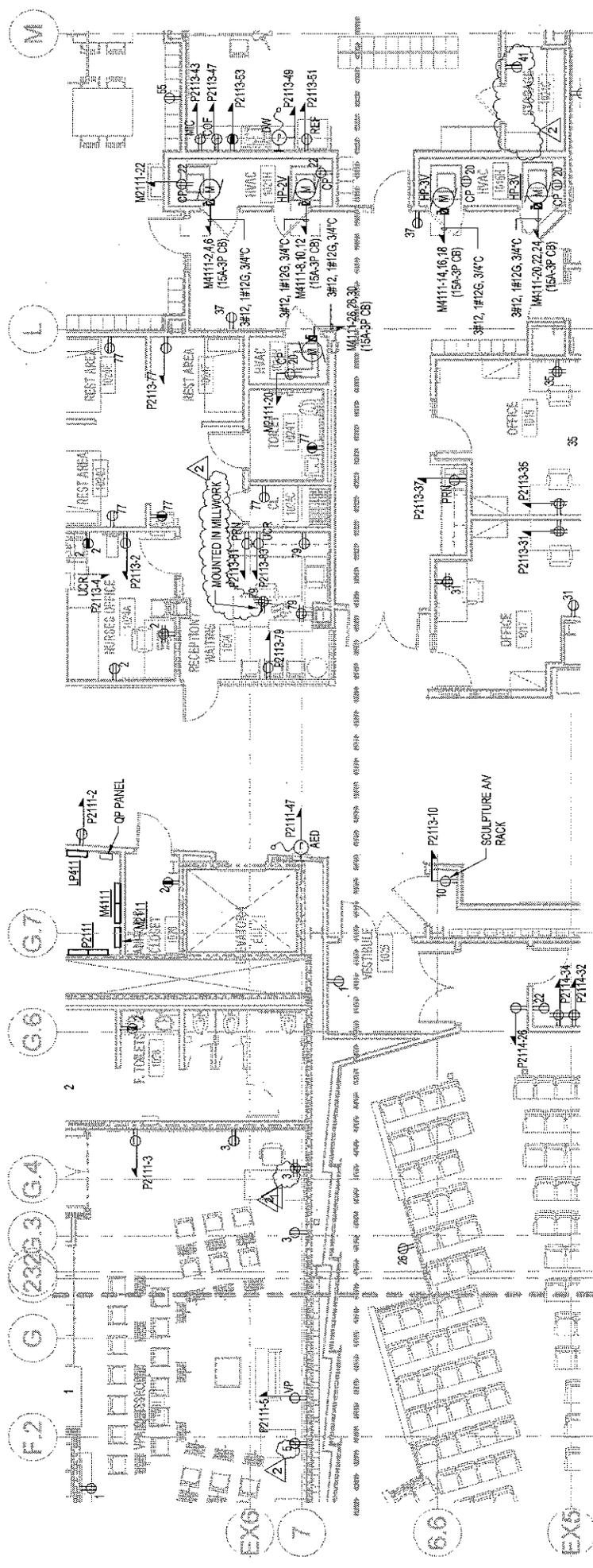
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 DRAWING
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 DATE: 01/24/2014 ADDENDUM 5

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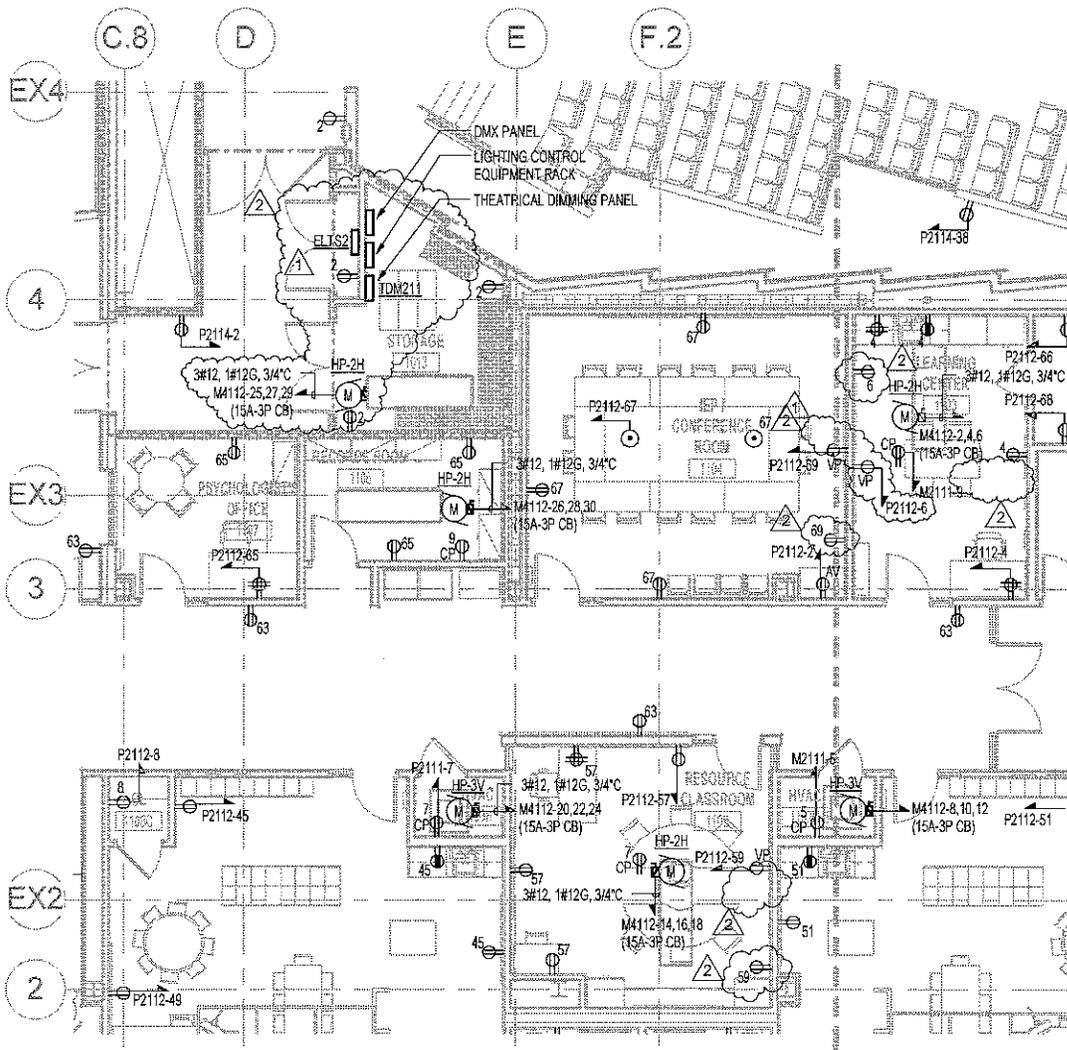


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CONSTRUCTION PROJECT

DRAWING TITLE: ELECTRICAL POWER PARTIAL FIRST FLOOR PLAN 2
DATE: 01/24/2014 ADDENDUM 5

PROJECT NO.: 47891.00
SCALE: 1/8" = 1'-0"
SHEET: E211.2
REFERENCE:
DWG. NO.: ESK211.2-1



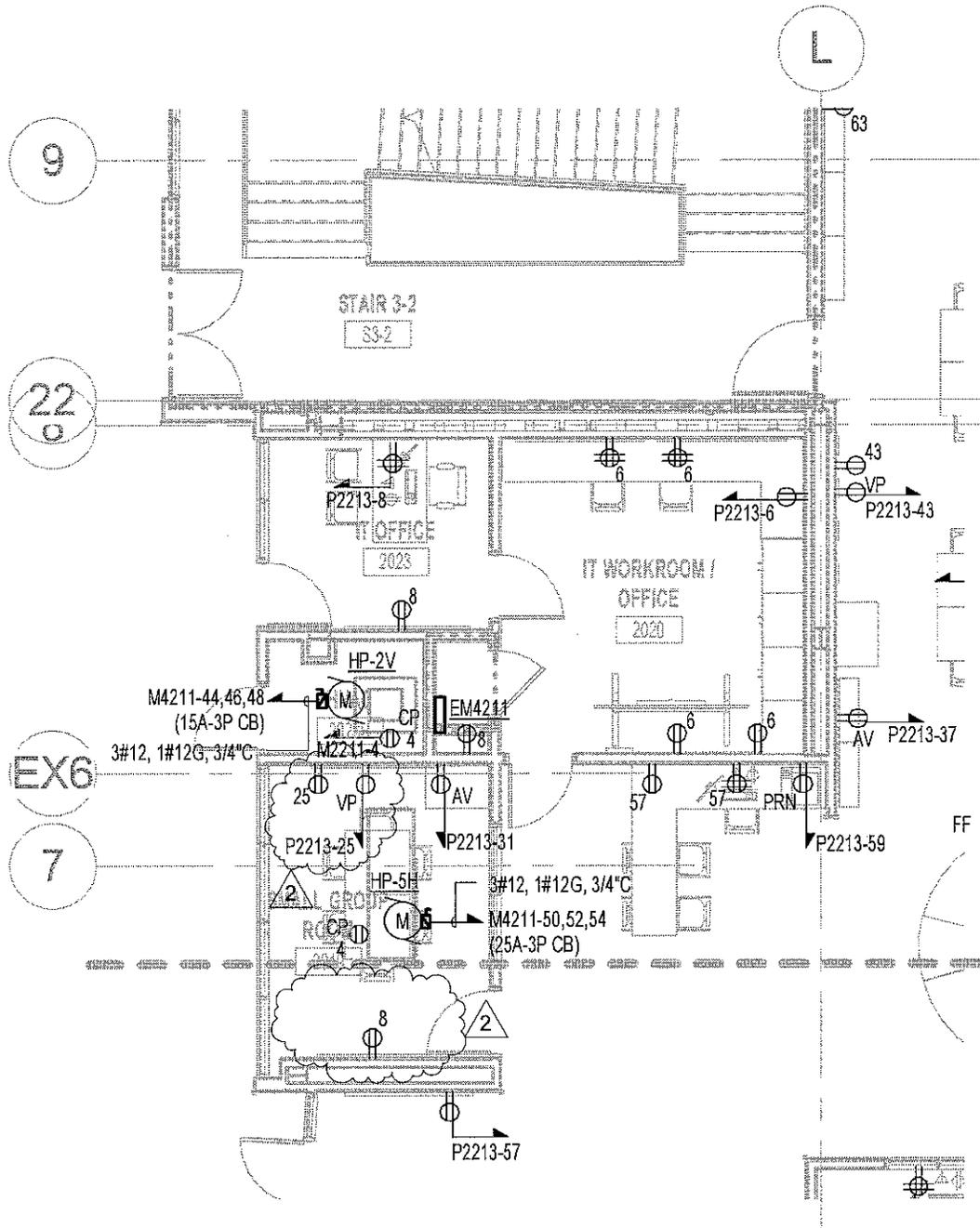
Perkins Eastman
 50 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.449.4000

PROJECT: *Dr. Martin Luther King, Jr. School
 Construction Project*

PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET E211.4
 REFERENCE:

DRAWING TITLE: ELECTRICAL POWER PARTIAL FIRST FLOOR PLAN 4
 DATE: 01/24/2014 ADDENDUM 5

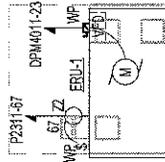
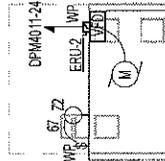
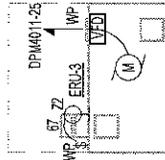
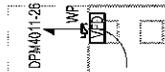
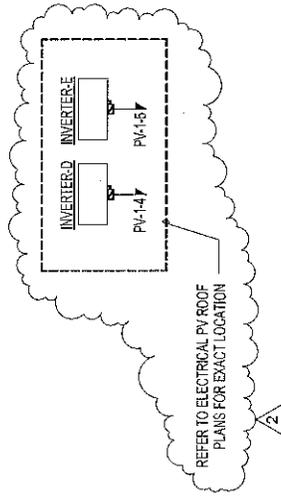
DWG. NO.: *ESK211.4-3*



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 SUITE 203
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 T. 617.449.4000

PROJECT: *Dr. Martin Luther King, Jr. School*
Construction Project
 DRAWING
 TITLE: ELECTRICAL POWER PARTIAL SECOND FLOOR PLAN 2
 DATE: 01/24/2014 ADDENDUM 5

PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET
 REFERENCE: E212.2
 DWG. NO.: *ESK212.2-2*



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677 WASHINGTON STREET
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BOSTON, MA 02110
T: 617.489.4000

PROJECT: **Dr. Martin Luther King, Jr. School
Construction Project**

DRAWING TITLE: **ELECTRICAL POWER ROOF PLAN**
DATE: **01/24/2014 ADDENDUM 5**

PROJECT NO. **47831.00**
SCALE: **1/8" = 1'-0"**
SHEET: **E214**
REFERENCE:
DWG. NO.: **ESK214-1**

232

F.2

E

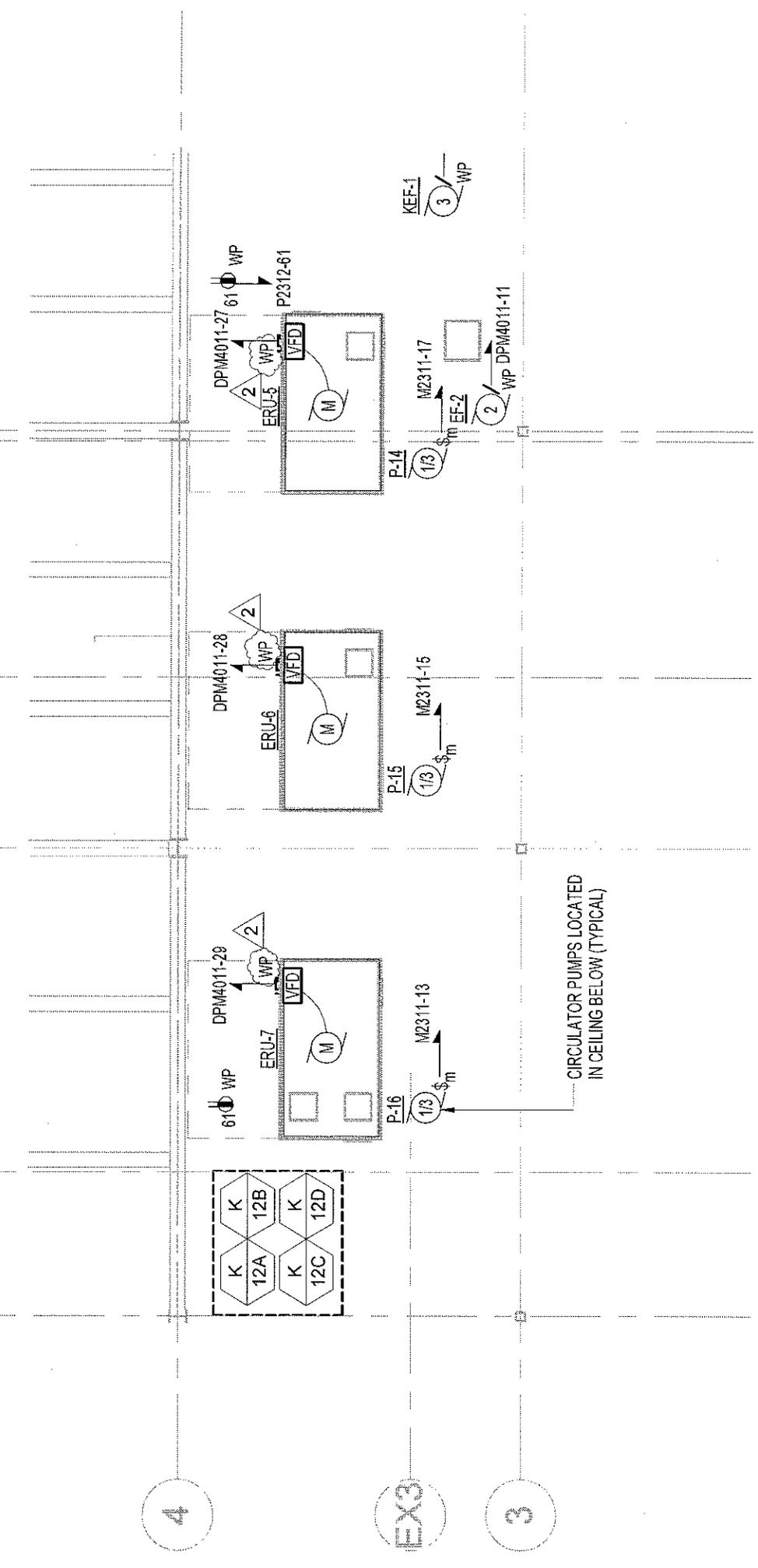
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C.8

4

EX3

3

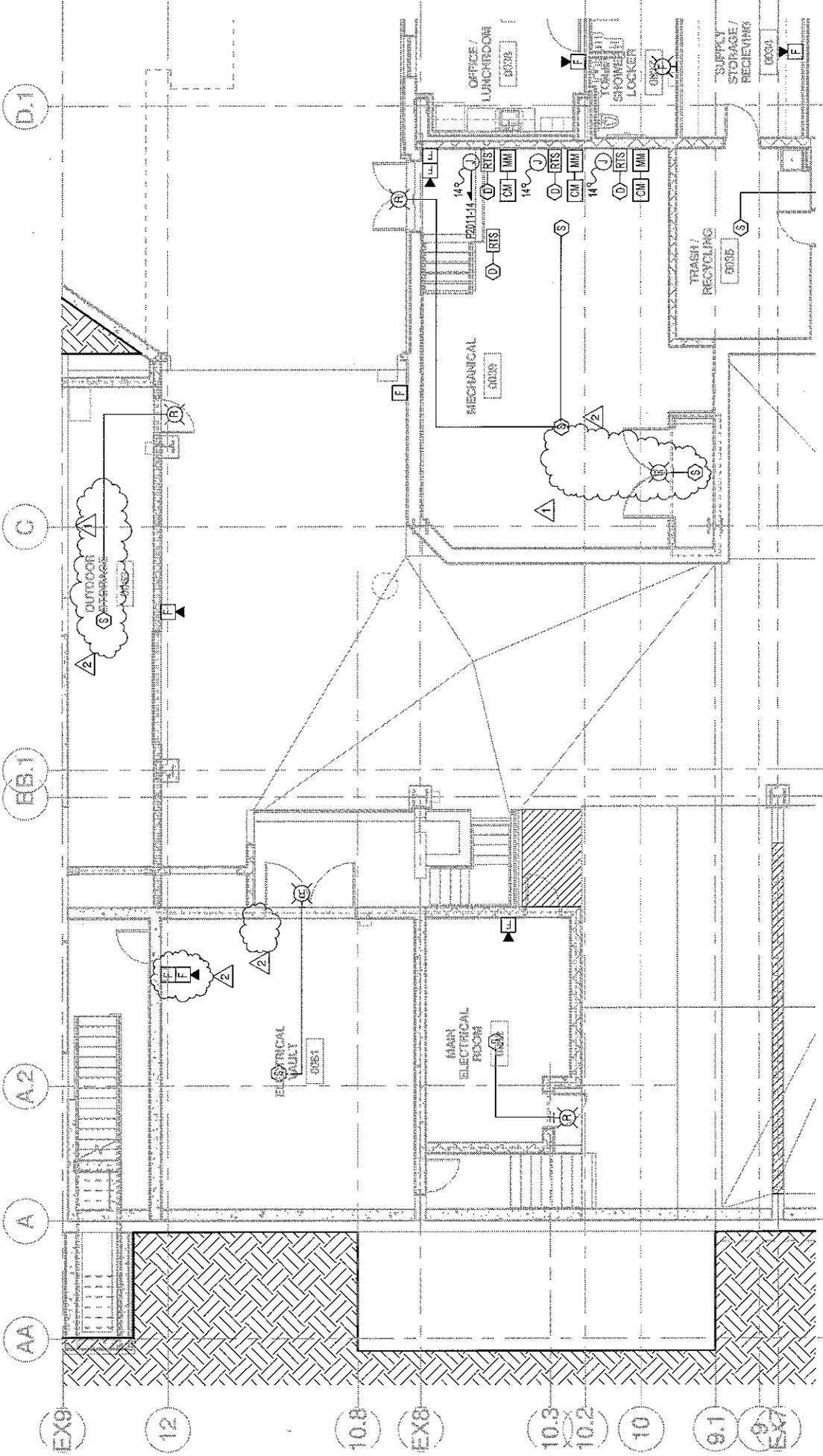


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 50 FRANKLIN STREET
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 T. 617.449.4000

PROJECT: **Dr. Martin Luther King, Jr. School
 Construction Project**

DRAWING TITLE: **ELECTRICAL POWER ROOF PLAN
 ADDENDUM 5**

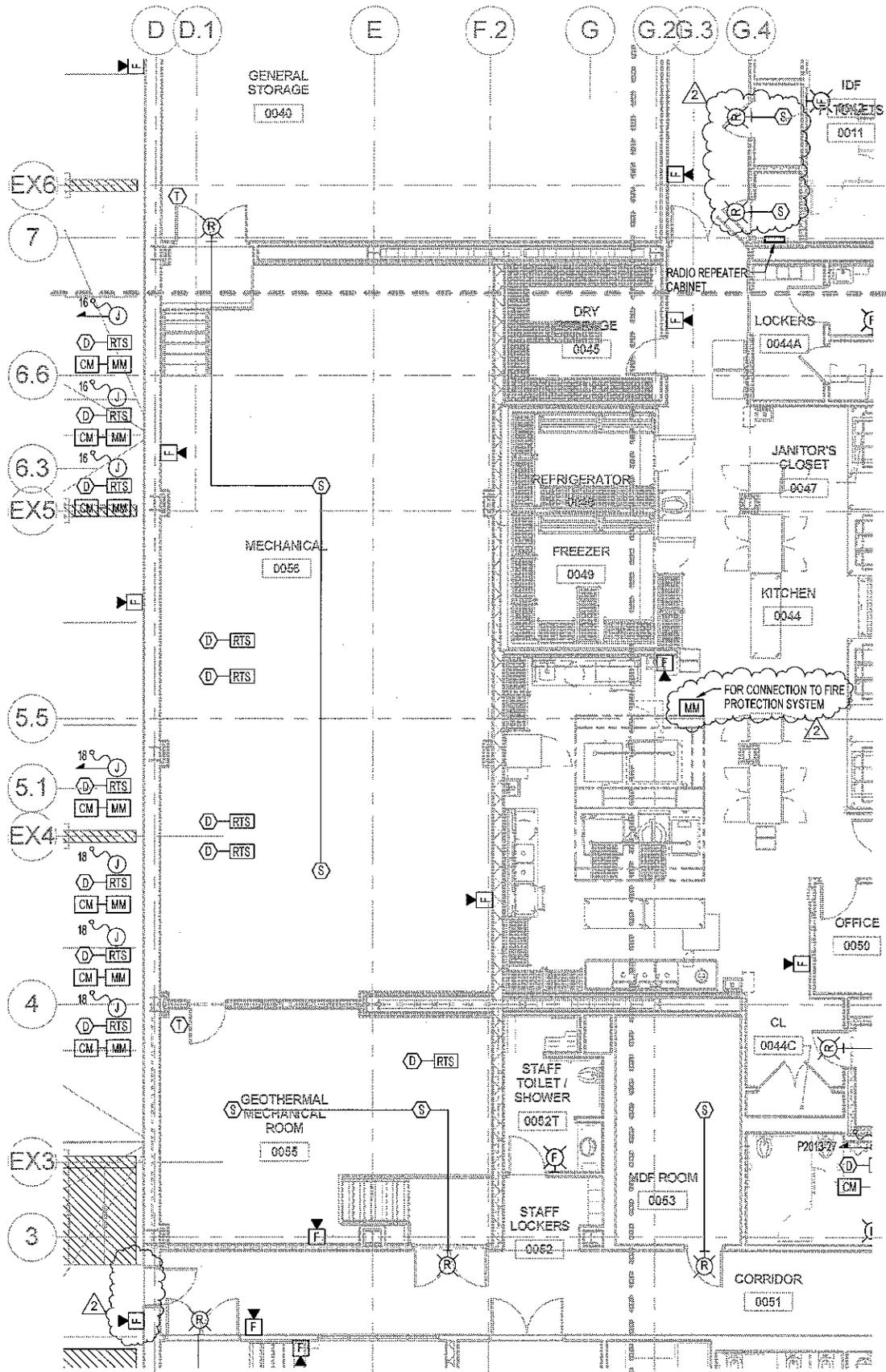
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 SCALE: 1/8" = 1'-0"
 SHEET E214
 REFERENCE: ESK214-2
 DWG. NO.: ESK214-2



Perkins Eastman
 500 WASHINGTON STREET
 SUITE 903
 BOSTON, MA 02110
 T. 617.499.4000

PROJECT: **Dr. Martin Luther King, Jr. School Construction Project**
 DRAWING TITLE: ELECTRICAL FIRE ALARM PARTIAL GROUND FLOOR PLAN 1
 DATE: 01/24/2014 ADDENDUM 5

PROJECT NO. 47831.00
 SCALE: 1/8" = 1'-0"
 SHEET: E310.1
 REFERENCE:
 DWG. NO.: **ESK310.1-2**



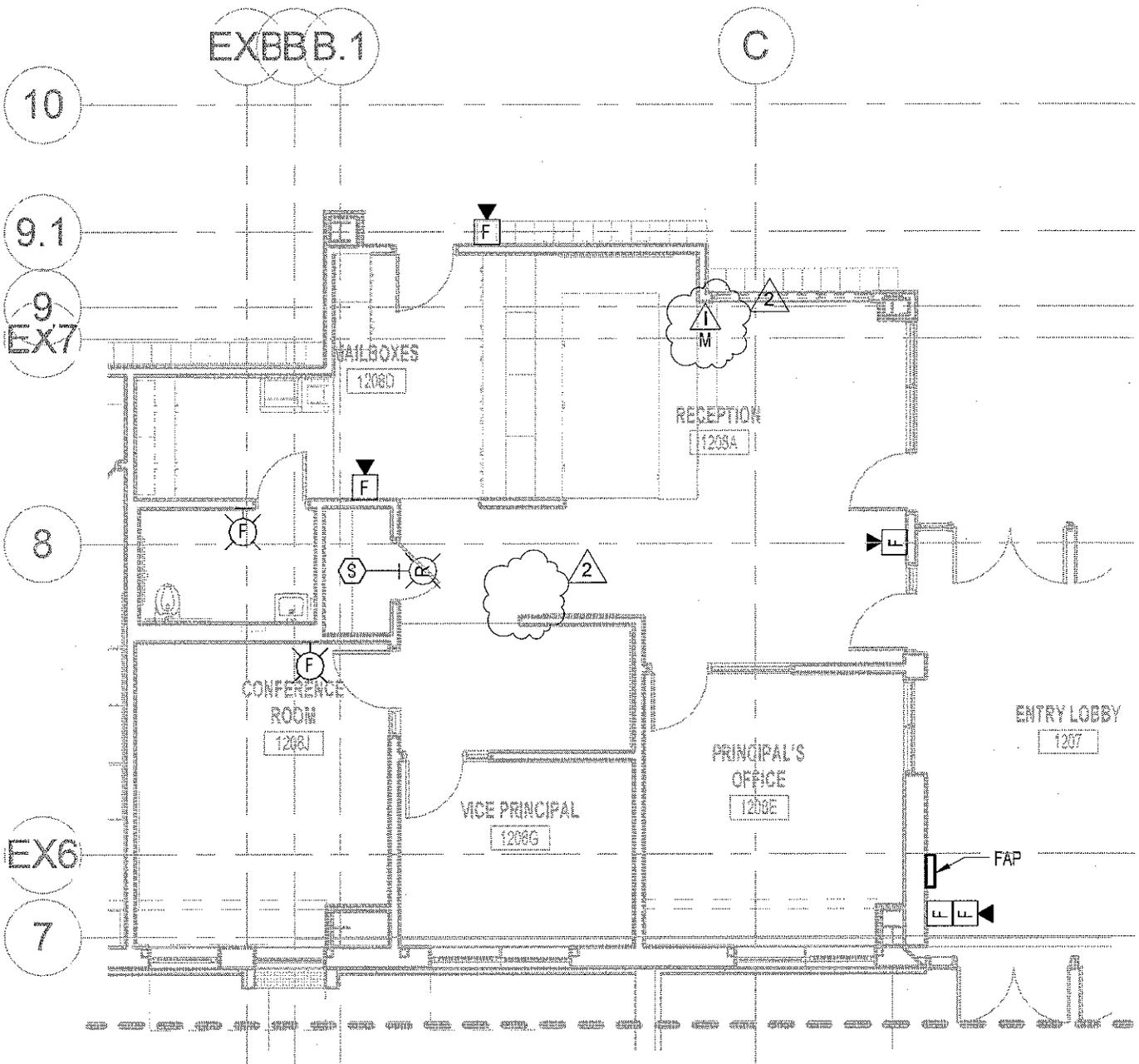
Perkins Eastman
 50 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.449.4000

PROJECT: *Dr. Martin Luther King, Jr. School
 Construction Project*

PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET: E310.3 & E310.4
 REFERENCE:

DRAWING TITLE: ELECTRICAL FIRE ALARM PARTIAL GROUND FLOOR PLAN 3
 DATE: 01/24/2014 ADDENDUM 5

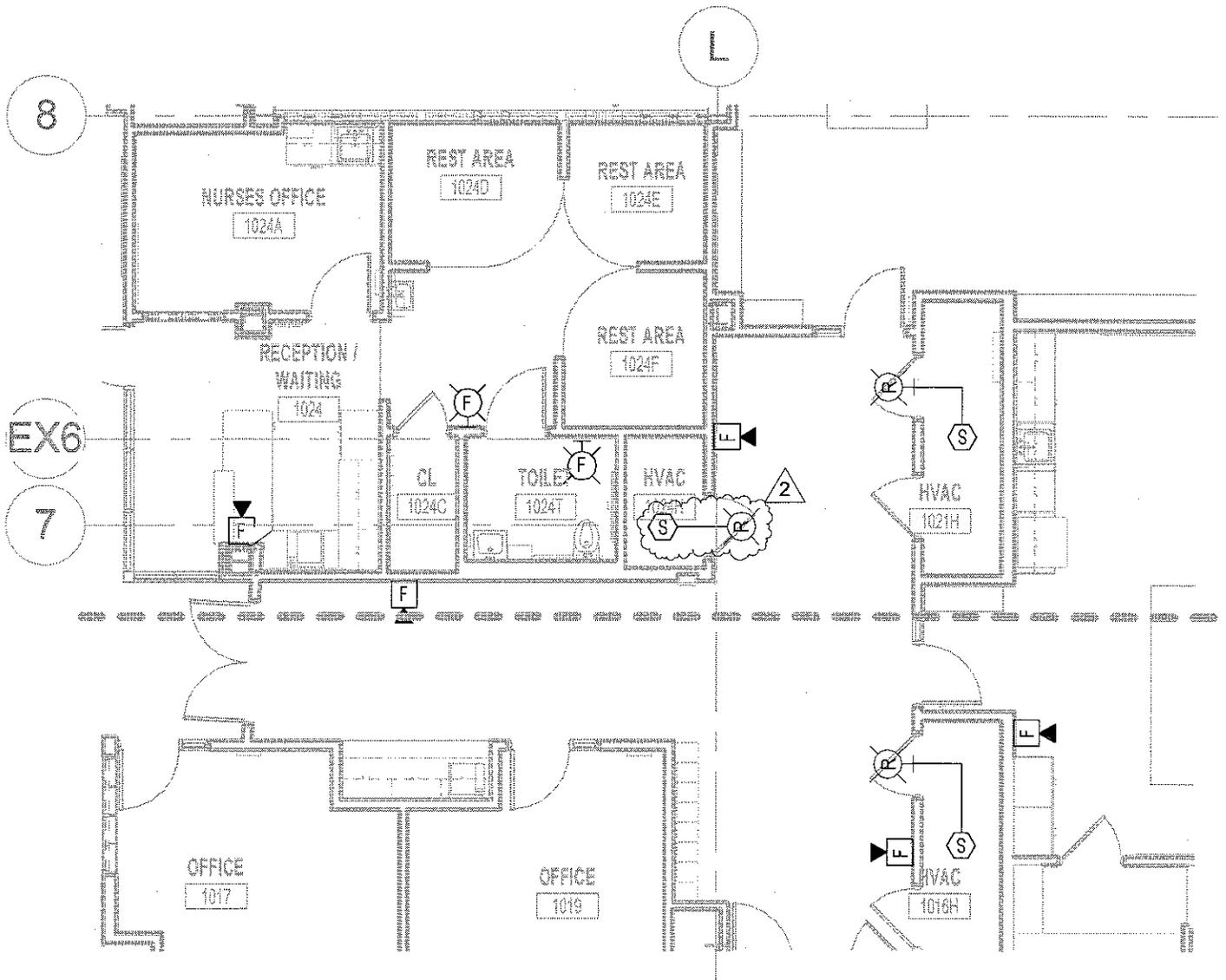
DWG. NO.: *ESK310.3-1*



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 SUITE 203
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 T. 617.449.4000

PROJECT: *Dr. Martin Luther King, Jr. School Construction Project*
 DRAWING TITLE: ELECTRICAL FIRE ALARM PARTIAL FIRST FLOOR PLAN 1
 DATE: 01/24/2014 ADDENDUM 5

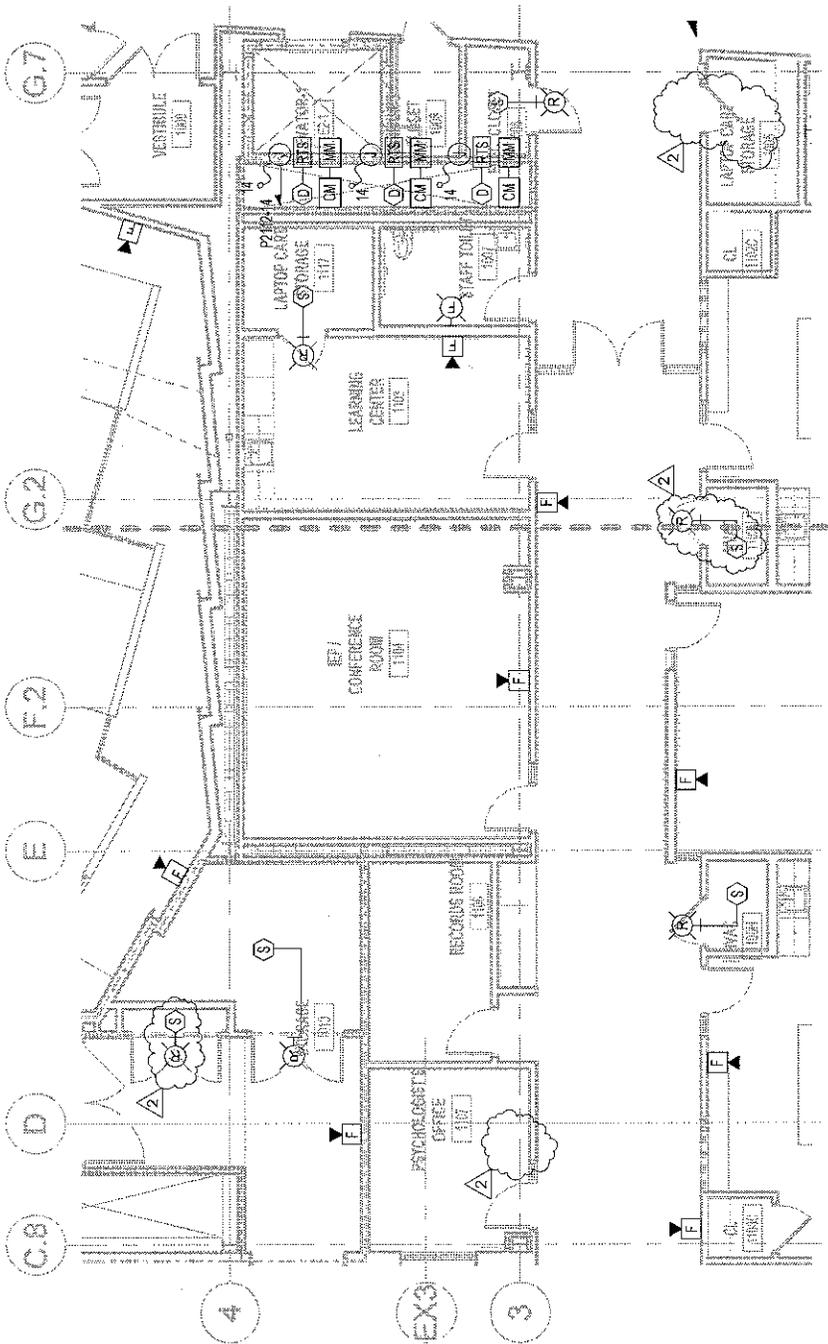
PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET REFERENCE: E311.1
 DWG. NO.: *ESK311.1-1*



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 T. 617.449.4000

PROJECT: *Dr. Martin Luther King, Jr. School
 Construction Project*
 DRAWING
 TITLE: ELECTRICAL FIRE ALARM PARTIAL FIRST FLOOR PLAN 2
 DATE: 01/24/2014 ADDENDUM 5

PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET
 REFERENCE: E311.2
 DWG. NO.: *ESK311.2-1*

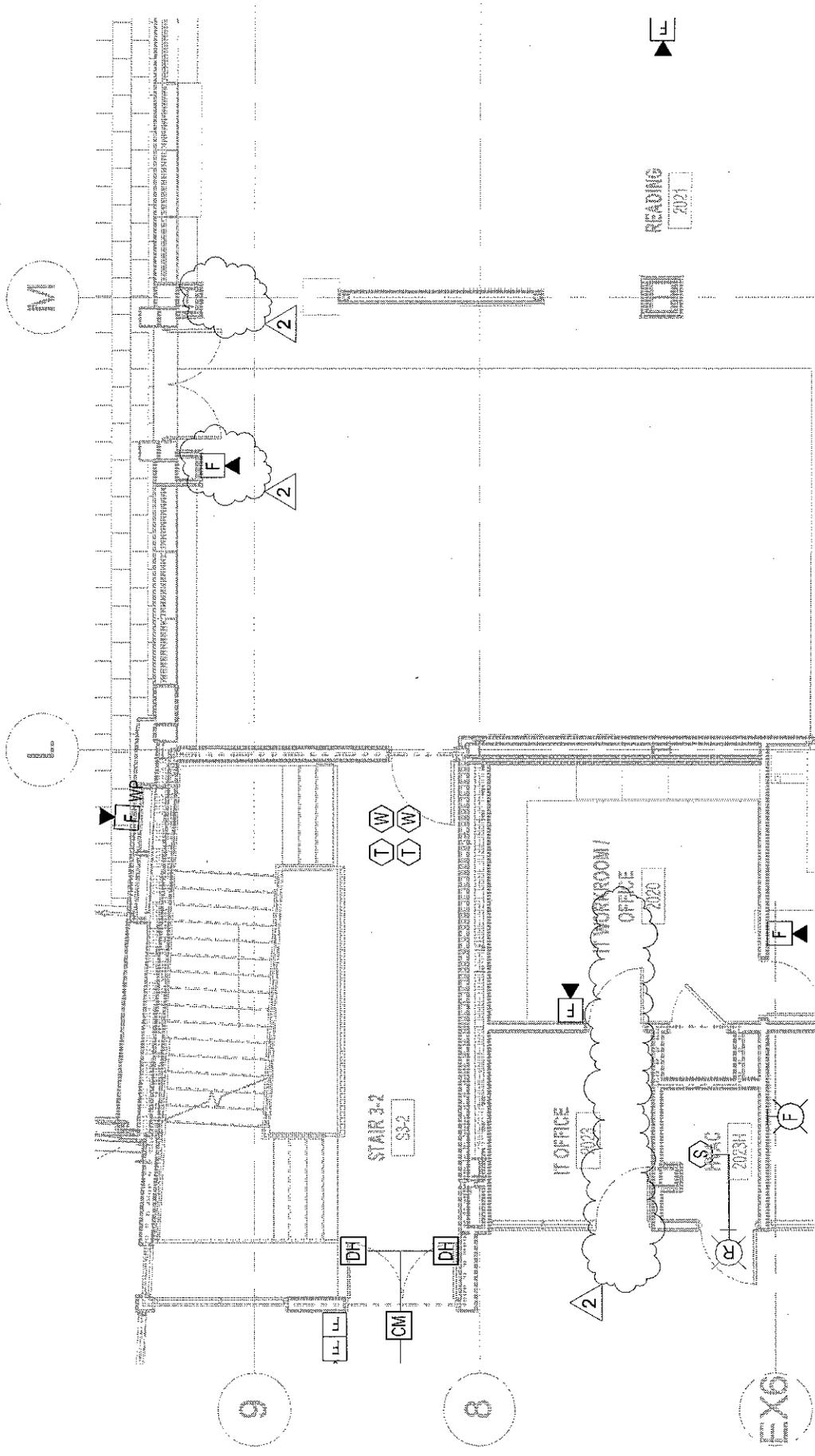


Perkins Eastman
 60 TRINITY STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.469.4000

PROJECT: *Dr. Martin Luther King, Jr. School Construction Project*

DRAWING TITLE: ELECTRICAL FIRE ALARM PARTIAL FIRST FLOOR PLAN 4
 DATE: 01/24/2014 ADDENDUM 5

PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET: E311.3 & E311.4
 REFERENCE:
 DWG. NO.: ESK311.4-7

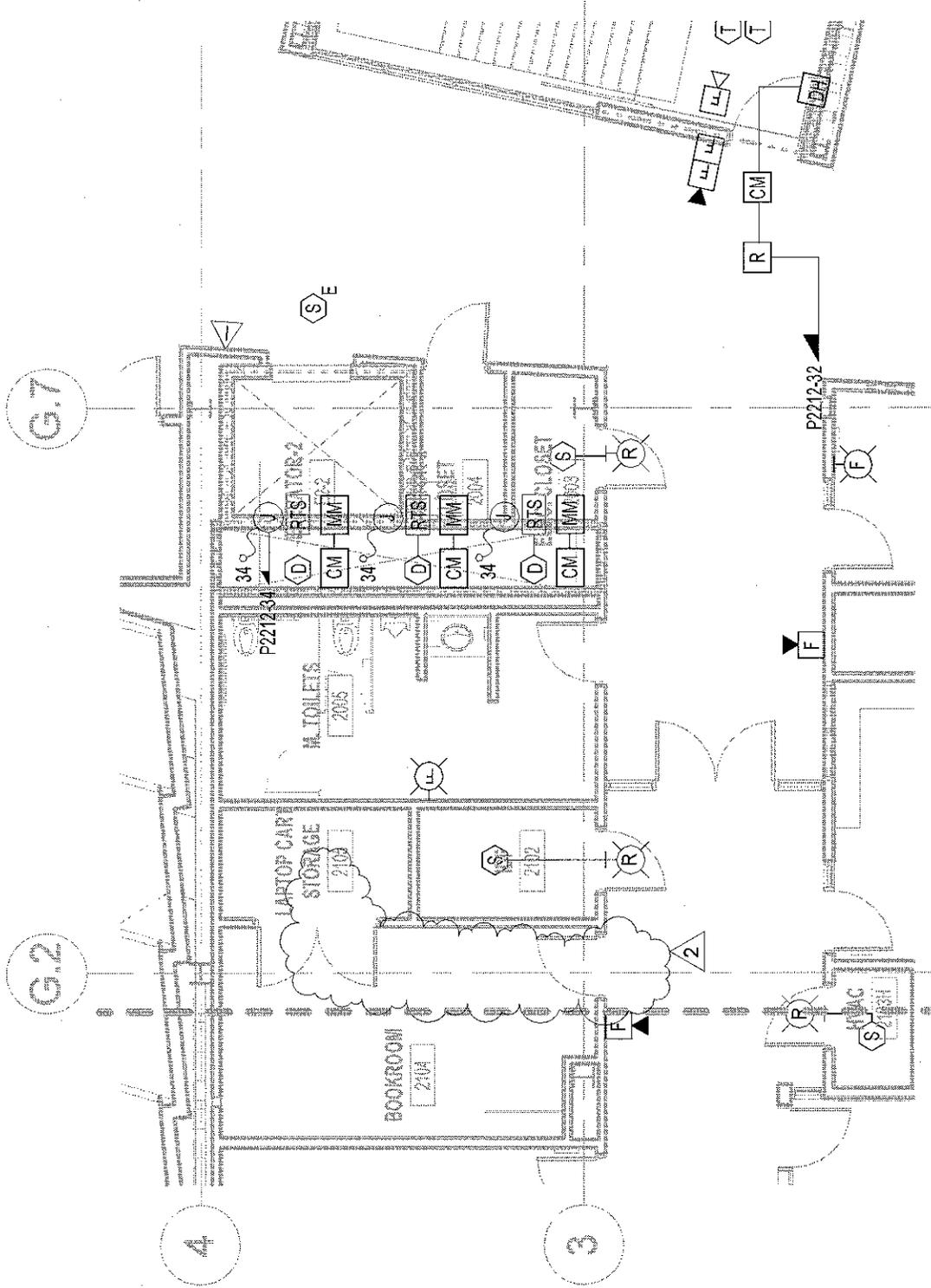


Perkins Eastman
 50 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.449.4000

PROJECT: *Dr. Martin Luther King, Jr. School
 Construction Project*

PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET REFERENCE: E312.2
 DWG. NO.: ESK312.2-1

DRAWING TITLE: ELECTRICAL FIRE ALARM PARTIAL SECOND FLOOR PLAN 2
 DATE: 01/24/2014 ADDENDUM 5



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 SUITE 203
 BOSTON, MA 02110
 T. 617.449.4000

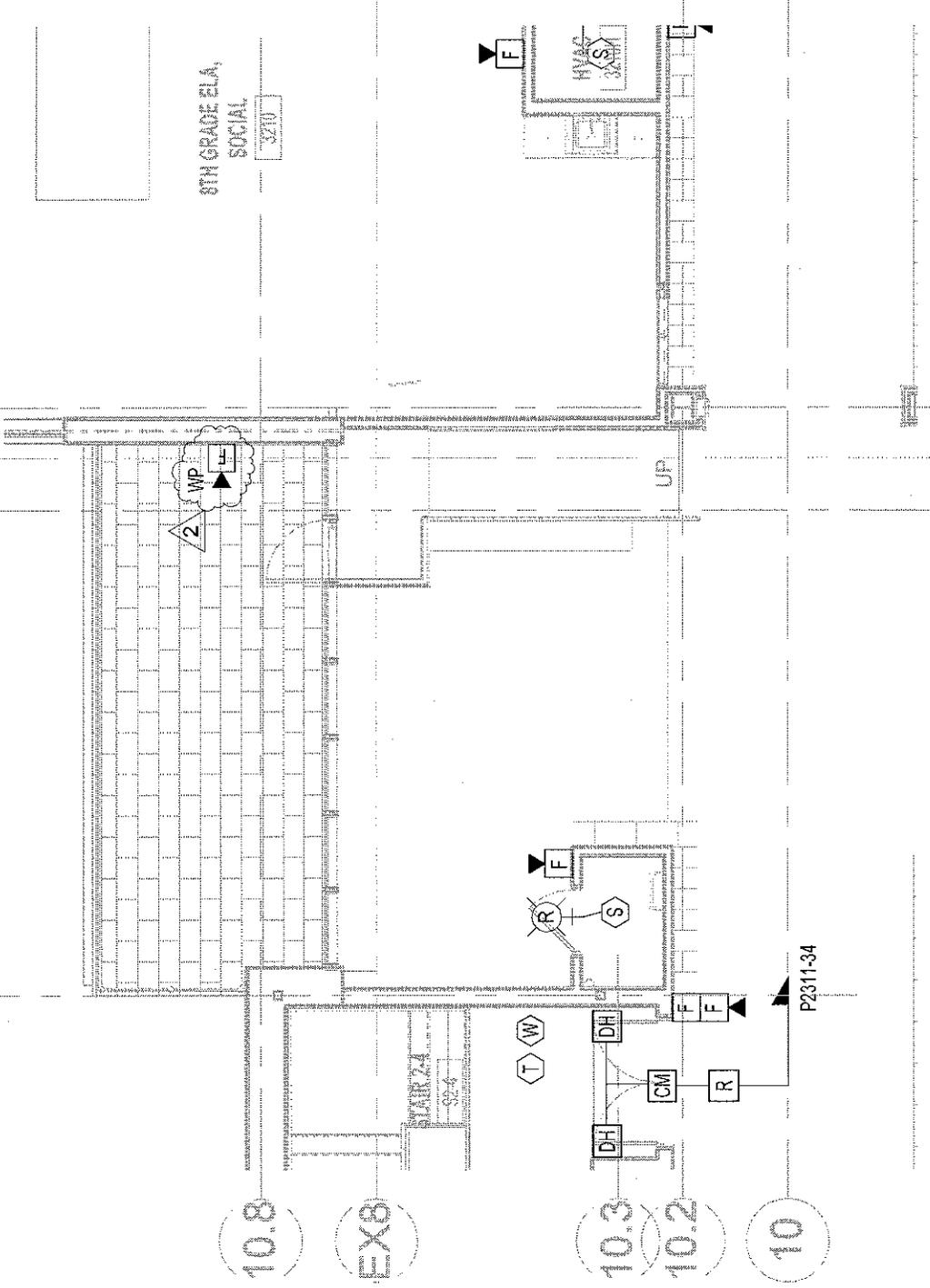
PROJECT: Dr. Martin Luther King, Jr. School
CONSTRUCTION PROJECT

DRAWING TITLE: ELECTRICAL FIRE ALARM PARTIAL SECOND FLOOR PLAN 3
DATE: 01/24/2014 ADDENDUM 5

PROJECT NO.: 47931.00
SCALE: 1/8" = 1'-0"
SHEET REFERENCE: E312.3
DWG. NO.: ESK312.3-1

A.2

EXBBB.1

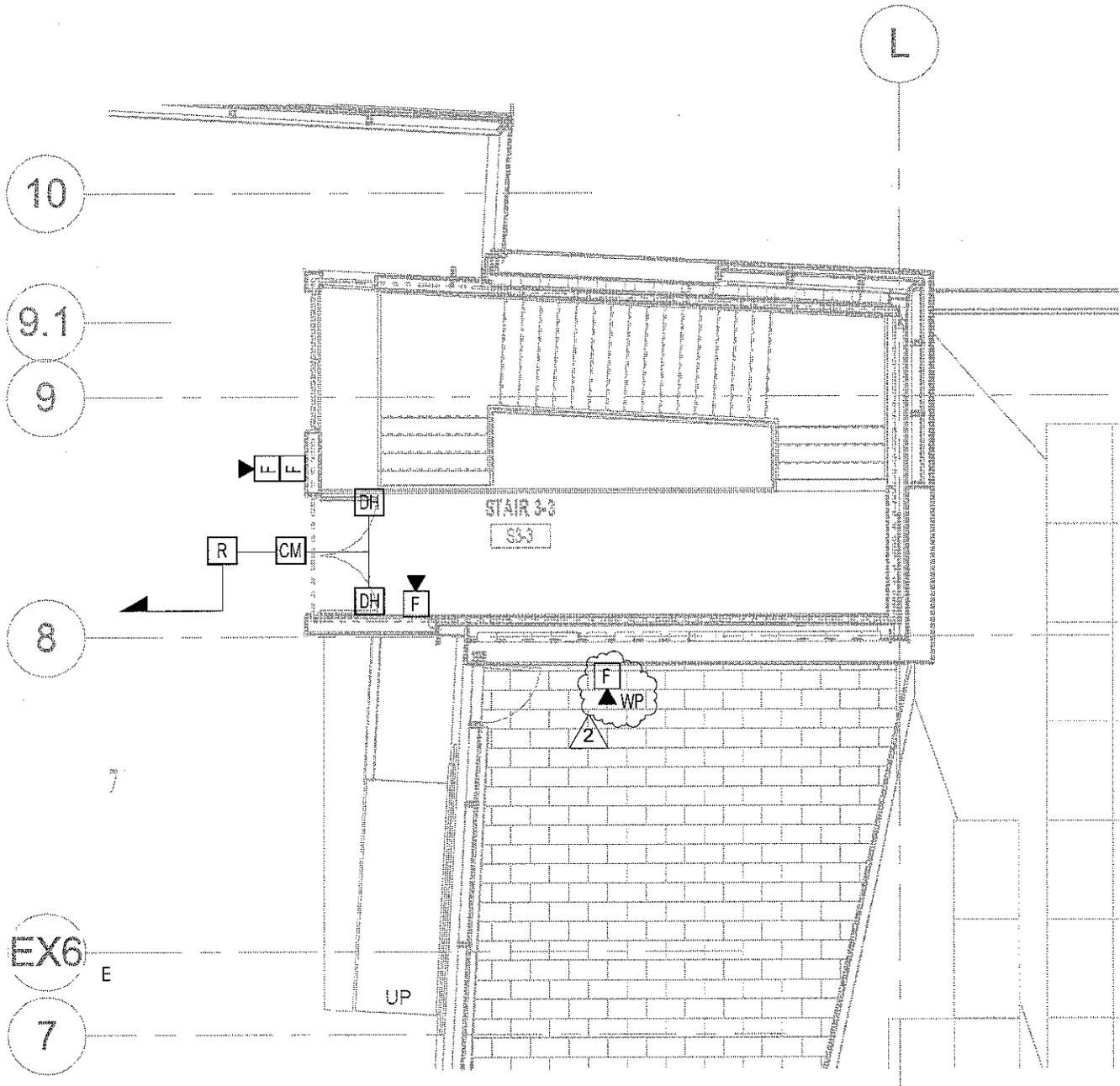


Perkins Eastman
 60 FRANKLIN STREET
 SUITE 203
 BOSTON, MA 02110
 T. 617.449.4000

PROJECT: **Dr. Martin Luther King, Jr. School
 Construction Project**

DRAWING TITLE: **ELECTRICAL FIRE ALARM PARTIAL THIRD FLOOR PLAN 1**
 DATE: **01/24/2014** ADDENDUM 5

PROJECT NO. **47931.00**
 SCALE: **1/8" = 1'-0"**
 SHEET **E313.1**
 REFERENCE: **E313.1**
 DWG. NO.: **ESK313.1-1**

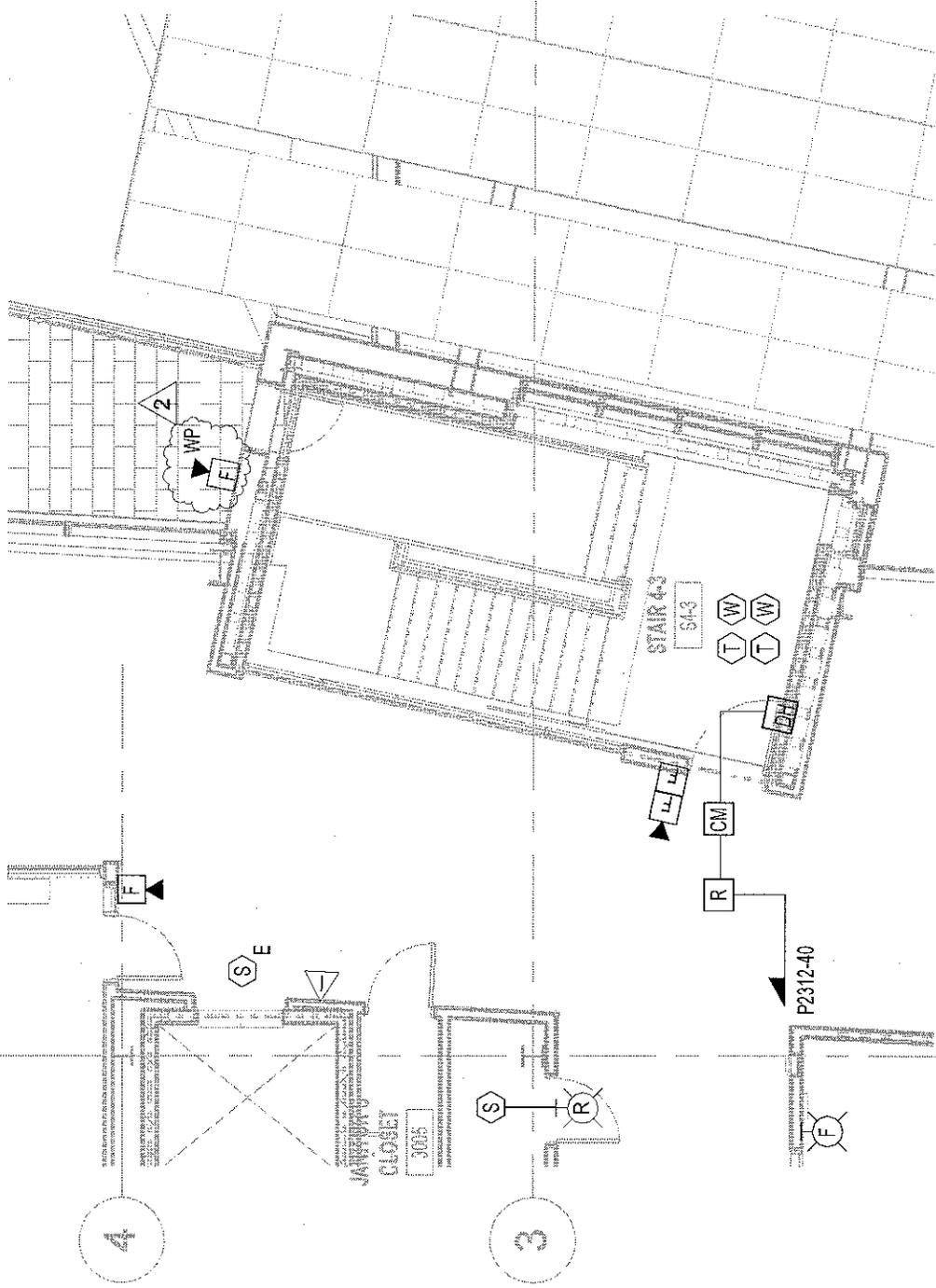


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 SUITE 203
 BOSTON, MA 02110
 T. 617.449.4000

PROJECT: *Dr. Martin Luther King, Jr. School*
Construction Project
 DRAWING
 TITLE: ELECTRICAL FIRE ALARM PARTIAL THIRD FLOOR PLAN 2
 DATE: 01/24/2014 ADDENDUM 5

PROJECT NO. 47931.00
 SCALE: 1/8" = 1'-0"
 SHEET
 REFERENCE: E313.2
 DWG. NO.: **ESK313.2-1**

G.7

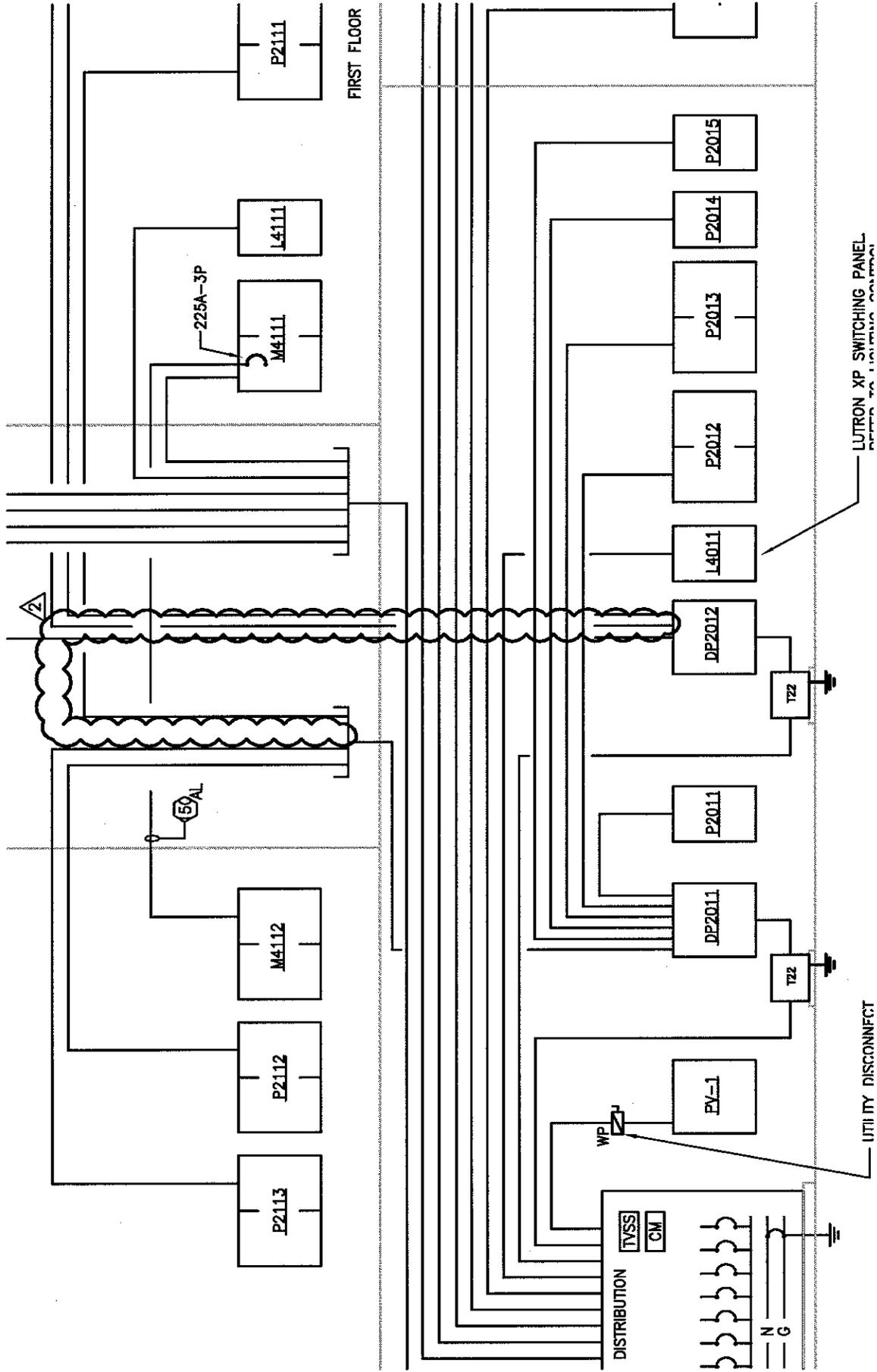


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 50 FRANKLIN STREET
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 BOSTON, MA 02110
 T. 617.449.4000

PROJECT: **Dr. Martin Luther King, Jr. School
 Construction Project**

DRAWING TITLE: **ELECTRICAL FIRE ALARM PARTIAL THIRD FLOOR PLAN 3**
 DATE: **01/24/2014** ADDENDUM 5

PROJECT NO. **47931.00**
 SCALE: **1/8" = 1'-0"**
 SHEET **E313.3**
 REFERENCE:
 DWG. NO.: **ESK313.3-1**



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 50 FRANKLIN STREET
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 BOSTON, MA 02110
 T. 617.448.4000

PROJECT: **Dr. Martin Luther King, Jr. School
 Construction Project**

PROJECT NO. 47931.00
 SCALE: NTS
 SHEET: E600
 REFERENCE:
 DWG. NO.: **ESK500-3**

DRAWING TITLE: POWER RISER DIAGRAM
 DATE: 01.24.2014 Addendum 5

MAIN SWITCHBOARD SCHEDULE "MSWB411"

MAIN BUS 3500 AMPS
 NEUTRAL BUS 100% AC 65K
 GROUND BUS 100%

277/480 VOLTS, 3 PHASE, 4 WIRE
 COPPER BUS ALUMINUM BUS
 FEED: TOP BOTTOM

MOUNTING: WALL STAND ALONE
 NEMA CLASS 250
 ENCLOSURE TYPE 1

SECTION NO.	EQUIPMENT	BRANCH DEVICE		FEEDER SIZE	NOTES
		FRAME (AMPS)	TRIP (AMPS)		
1	INCOMING MLO SECTION	-	-	-	
2	MAIN	3000	3000	3	8 SETS (4#700, 1#6000, 4°C) (AL)
3	CT METERING SECTION	-	-	-	
4	TVSS/CM	-	-	-	
5	DISTRIBUTION PANEL "DP2011" VIA XFMR	400	400	3	REFER TO XFMR SCHEDULE (M)
6	DISTRIBUTION PANEL "DP2012" VIA XFMR	400	400	3	REFER TO XFMR SCHEDULE (M)
7	PANEL "K2011" VIA XFMR	225	150	3	REFER TO XFMR SCHEDULE (M)
8	DISTRIBUTION PANEL "DPM4011"	800	800	3	(M) AL (M)
9	PANEL "L4011"	100	100	3	(M) AL (M)
10	PANEL "L4111"	100	100	3	(M) AL (M)
11	PANEL "L4211"	100	100	3	(M) AL (M)
12	PANEL "L4311"	100	100	3	(M) AL (M)
13	PANEL "M4011"	400	400	3	(M) AL (M)
14	PANEL "M4111"	400	400	3	(M) AL (M)
15	PANEL "M4211"	400	400	3	(M) AL (M)
16	PANEL "M4311"	400	400	3	(M) AL (M)
17	CENTRAL UPS INVERTER	100	45	3	(M) AL (M)
18	ELEVATOR #1	100	45	3	(M) AL (M)
19	ELEVATOR #2	100	45	3	(M) AL (M)
20	SPARE	100	100	3	(M) AL (M)
21	SPARE	100	60	3	(M) AL (M)
22	SPARE	100	100	3	(M) AL (M)
23	SPARE	100	100	3	(M) AL (M)
24	SPACE AND HARDWARE	-	-	3	(M) AL (M)
25	SPACE AND HARDWARE	-	-	3	(M) AL (M)
26	PHOTOVOLTAICS PANEL "PV-1"	1200	1200	3	(M) AL (M)

① CIRCUIT BREAKER IS TO BE LOCATED AT OPPOSITE END OF BUSBAR FROM MAIN UTILITY CIRCUIT BREAKER PER ARTICLE 705 OF NEC 2014

Perkins Eastman
 50 FEDERAL STREET
 SUITE 200
 BOSTON, MA 02110
 T: 617-489-6000

PROJECT: Dr. Martin Luther King, Jr. School
 Construction Project

DRAWING TITLE: ELECTRICAL SCHEDULES
 DATE: 01-24-2014 Addendum 5

PROJECT NO. 4753100
 SCALE: NTS
 SHEET E600
 REFERENCE:
 DWG. NO.: **ESK600-5**

PANEL	LEVEL
P2011	GROUND
P2012	GROUND
P2013	GROUND
P2014	GROUND
P2015	GROUND
K2011	GROUND
M2011	GROUND
EM4011	GROUND
M4011	GROUND
P2111	LEVEL 1
P2112	LEVEL 1
P2113	LEVEL 1
P2114	LEVEL 1
M2111	LEVEL 1
M4111	LEVEL 1
M4112	LEVEL 1
P2211	LEVEL 2
P2212	LEVEL 2
P2213	LEVEL 2
M2211	LEVEL 2
M4211	LEVEL 2
EM4211	LEVEL 2
M4212	LEVEL 2
P2311	LEVEL 3
P2312	LEVEL 3
M2311	LEVEL 3
M4311	LEVEL 3
M4312	LEVEL 3

1	BALCONY DOWNLIGHTS	20A-1P	D1	--	--	120
2	MAIN DOWNLIGHTS	20A-1P	D2	--	--	120
3	MAIN DOWNLIGHTS	20A-1P	D3	--	--	120
4	SPARE	20A-1P	D4	--	--	120
5	SPARE	20A-1P	D5	--	--	120
6	SPARE	20A-1P	D6	--	--	120
7	SPARE	20A-1P	D7	--	--	120
8	SPARE	20A-1P	D8	--	--	120

LIGHTING FIXTURE SCHEDULE										
FXT. TYPE	DESCRIPTION	LAMPS			BALLAST		VOLTAGE	MANUFACTURER	CATALOG NUMBER	
		NO.	WATTS	COLOR	NO.	INTEGRAL				
101/102	DOUBLE FACE LED EDGE-LIT EXIT SIGN	--	5	LED	--	--	277	SURE-LITES	ES8--RM-120/277	SEE NOTE #5
								LITHONIA	EDG--RMR	
								DUAL-LITE	LES--R--A--	
101/102	SINGLE FACE LED EDGE-LIT EXIT SIGN	--	5	LED	--	--	277	SURE-LITES	ES8--RM-120/277	SEE NOTE #5
								LITHONIA	EDG--RMR	
								DUAL-LITE	LES--R--A--	
EX 101/102	WEATHER PROOF EXTERIOR LED EXIT SIGN	--	5	LED	--	--	277	SURE-LITES	UX8-0-95-R--	SEE NOTE #5
								LITHONIA	LV-S-W-R-120/277--	
								DUAL-LITE	SEW--R-W-4X	
EX 101/102	THERMOPLASTIC LED EXIT SIGN	--	5	LED	--	--	277	SURE-LITES	CX-0--	SEE NOTE #5
								LITHONIA	EXR-LED-M5	
								DUAL-LITE	SE--R-W--	
FS1	4'-0" 2-LAMP FLUORESCENT STRIP LIGHT	2	28	T5	1	YES	120/277	METALLIX	SSF-2-14TS-LRN--EBT-1-N	-
								LITHONIA	MSS5214LP	
								LIGHTOLIER	SM5228--LPB	
Z2	INCANDESCENT JELLY JAR	1	150	A-LAMP	--	SELF	120	APPLETON	J6W106	
Z3	VAPOR TIGHT 4'-0" 2-LAMP FLUORESCENT STRIP LIGHT	2	44	T8HO	1	YES	120	METALLIX	VT2-2-48T8HO-120V-EBB2-WL	FIXTURES LOCATED IN NESTAR VAULT MUST MEET NESTAR STANDARDS

LIGHTING FIXTURE SCHEDULE NOTES:

- COORDINATE ALL FIXTURE FINISH COLORS WITH ARCHITECT.
- COORDINATE COLOR AND TEMPERATURE OF ALL LAMPS WITH ARCHITECT.
- COORDINATE FIXTURE LENGTHS WITH FLOOR PLAN.
- COORDINATE PENDANT MOUNTING TYPE WITH ARCHITECT PRIOR TO BID.
- PROVIDE NUMBER OF FACES, ARROWS AND DIRECTION AS SHOWN ON FLOOR PLANS.

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PROJECT: **Dr. Martin Luther King, Jr. School Construction Project**

DRAWING TITLE: ELECTRICAL SCHEDULES

DATE: 01.24.2014 Addendum 5

PROJECT NO. 47931.00

SCALE: NTS

SHEET E601

REFERENCE:

DWG. NO.: **ESK601-2**

Project: Dr. Martin Luther King Jr. School Construction Project

PE Project No.: 47931.00

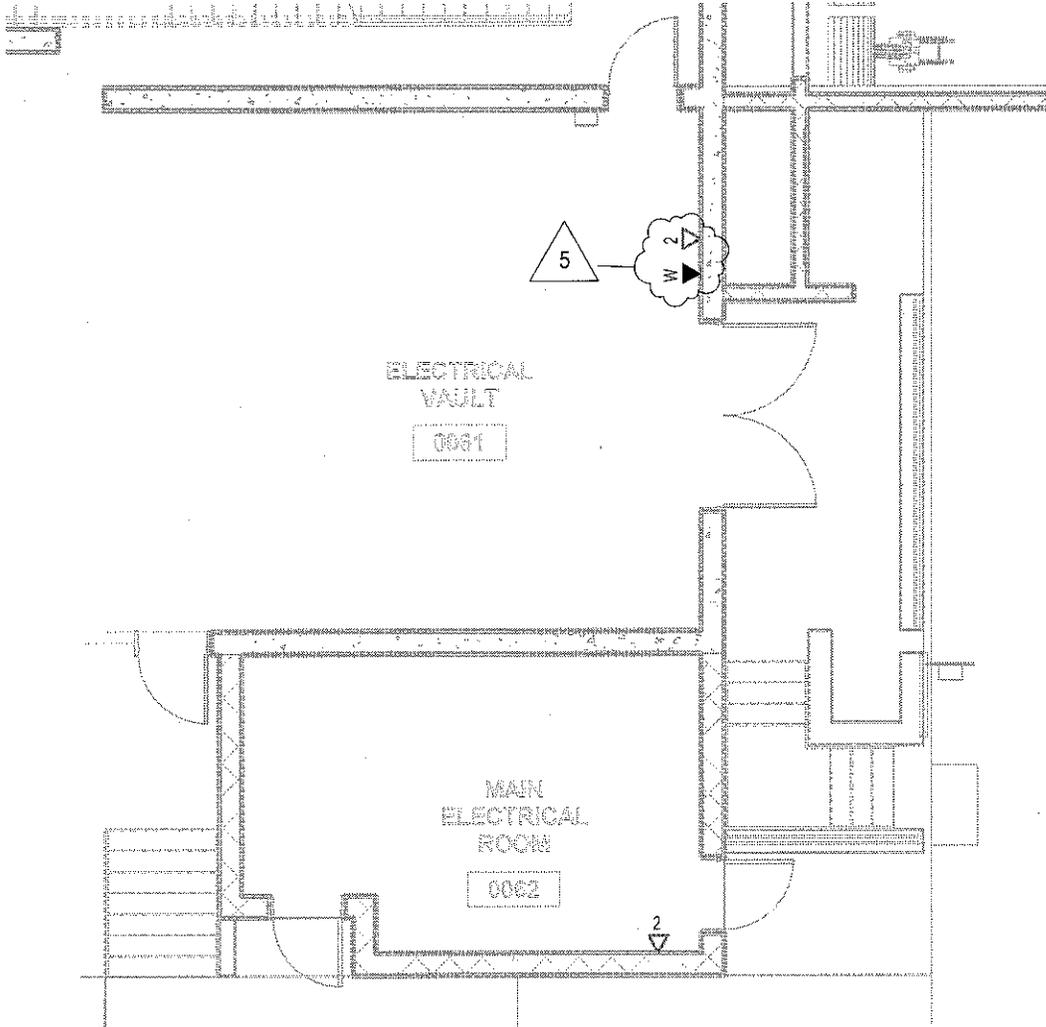
Cambridge No: 5849C

Regarding: Bid Addendum 5 –Technology

Date: January 24, 2014

This Addendum is hereby made a part of the Contract Documents to the same extent as though it were originally included therein.

#	DISCIPLINE	BID QUESTION NO.	RESPONSE
#	DISCIPLINE	ISSUE	PROJECT MANUAL
#	DISCIPLINE	ISSUE	DRAWINGS
01	Technology	Subject: References: Description:	Revision to Partial Ground Floor Technology Plan 1 DRAWING T110.1 - PARTIAL GROUND FLOOR TECHNOLOGY PLAN 1 / SKT-004 Incorporation the changes and/or clarifications indicated in sketch SKT-004
02	Technology	Subject: References: Description:	Revision to Technology Riser Diagram DRAWING T200 Technology Riser Diagram / SKT-005 Incorporation the changes and/or clarifications indicated in sketch SKT-005
03	Technology	Subject: References: Description:	Revision to Technology Schedules & Details DRAWING T400 Technology Schedules & Details / SKT-006 Incorporation the changes and/or clarifications indicated in sketch SKT-006
			END OF BID ADDENDUM 5 – TECHNOLOGY



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 BOSTON, MA 02110
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PROJECT: **Dr. Martin Luther King, Jr. School
 Construction Project**

PROJECT NO. 47931.00

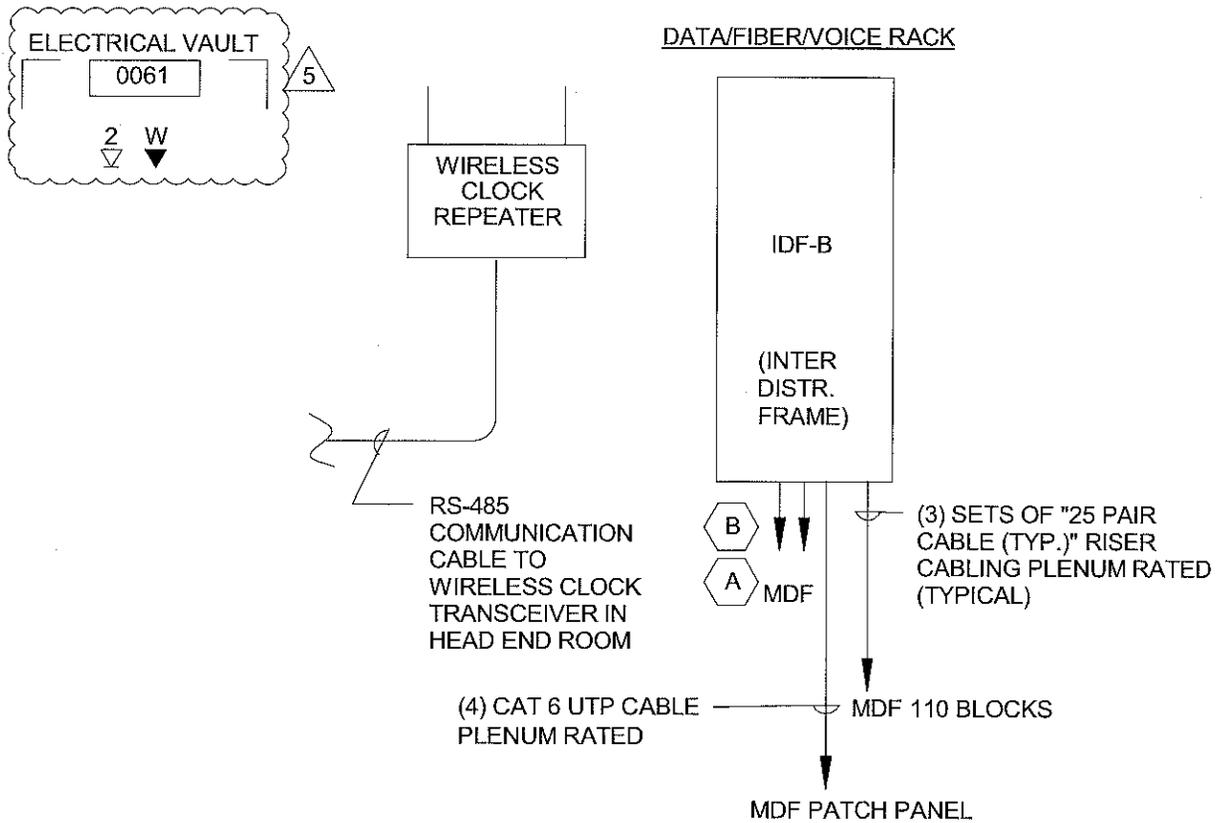
DRAWING
 TITLE: REVISION TO PARTIAL GROUND FLOOR TECHNOLOGY
 PLAN 1
 DATE: 01.24.2014 Addendum 5

SCALE: 1/8" = 1'-0"

SHEET
 REFERENCE: T110.1

DWG. NO.: **SKT-004**

IDF 0042 (IDF-B)



Perkins Eastman
50 FRANKLIN STREET
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T. 617.449.4000

PROJECT: **Dr. Martin Luther King, Jr. School**
Construction Project
DRAWING
TITLE: REVISION TO TECHNOLOGY RISER DIAGRAM
DATE: 01.24.2014 Addendum 5

PROJECT NO. 47931.00
SCALE: N.T.S.
SHEET
REFERENCE: T200
DWG. NO.: **SKT-005**

MAIN DISTRIBUTION FRAME MDF

LOCATION: MDF 0053

CAT 6 (RJ45) VOICE PORT				CAT 6 (RJ45) DATA PORTS			CAT 6A (RJ45) DATA PORTS		
USED	SPARE	PATCH PANEL SIZE		USED	SPARE	PATCH PANEL SIZE	USED	SPARE	PATCH PANEL SIZE
53	43	DISTRIBUTION WORKSTATION	(2) 48 PORT (2) 48 PORT	207	33	(5) 48 PORT	40	8	(1) 48 PORT

INTERMEDIATE DISTRIBUTION FRAME IDF

LOCATION: IDF 0042 (IDF-B)

56	40	DISTRIBUTION WORKSTATION	(2) 48 PORT (2) 48 PORT	244	44	(6) 48 PORT	38	10	(1) 48 PORT
----	----	-----------------------------	----------------------------	-----	----	-------------	----	----	-------------

QUANTITY OF DEVICES

IDF-B

		DATA (CAT 6)	VOICE (CAT 6)	DATA (CAT 6A)
▽	=	21	21	-
$\frac{2}{\nabla}$	=	37	74	-
$\frac{4}{\nabla}$	=	23	92	-
$\frac{AN}{\nabla}$	=	19	-	38
▽	=	15	15	-
$\frac{1V/2D}{\nabla}$	=	20	40	-
W	=	21	-	21
TVC	=	1	2	-
TOTAL		244	56	38

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50 FRANKLIN STREET
SUITE 203
BOSTON, MA 02110
T. 617.449.4000

PROJECT: **Dr. Martin Luther King, Jr. School
Construction Project**

DRAWING
TITLE: REVISION TECHNOLOGY SCHEDULES & DETAILS

DATE: 01.24.2014 Addendum 5

PROJECT NO. 47931.00

SCALE: N.T.S.

SHEET
REFERENCE: T400

DWG. NO.: **SKT-006**

Project: Dr. Martin Luther King Jr. School Construction Project

PE Project No.: 47931.00

Cambridge No: 5849C

Regarding: Bid Addendum 5 –Security

Date: January 24, 2014

This Addendum is hereby made a part of the Contract Documents to the same extent as though it were originally included therein.

#	DISCIPLINE	BID QUESTION NO.	RESPONSE
#	DISCIPLINE	ISSUE	PROJECT MANUAL
#	DISCIPLINE	ISSUE	DRAWINGS
01	Security	Subject:	Revision to Security Symbol List
		References:	DRAWING SEC001 Security Symbol List / SKSEC-1
		Description:	Incorporation the changes and/or clarifications indicated in sketch SKSEC-1
			END OF BID ADDENDUM 5 – SECURITY

SYMBOL LIST

SECURITY SYSTEM

DC

 DOOR POSITION SWITCH - GE/SENTROL 1076D DOUBLE POLE DEVICE ONE POLE TO ACCESS CONTROL, SECOND POLE TO INTRUSION, COORDINATE HOLE WITH DOOR HARDWARE. PROVIDE 3/4" CONDUIT w/ PULL STRING TO NEAREST ACCESSIBLE CEILING SPACE BY E.C.

EL

 ELECTRIC LOCK FURNISHED AND INSTALLED BY HARDWARE CONTRACTOR, WIRED BY C.M. 4"SQ.X2 1/2"DP. J.B. WITH 3/4" CONDUIT W/ PULL STRING TO NEAREST ACCESSIBLE CEILING SPACE BY E.C.

Perkins Eastman
50 FRANKLIN STREET
SUITE 203
BOSTON, MA 02110
T. 617.449.4000

PROJECT: **Dr. Martin Luther King, Jr. School**

PROJECT NO. 47931.00

Construction Project

SCALE: N.T.S.

DRAWING

TITLE: REVISION TO SECURITY SYMBOL LIST

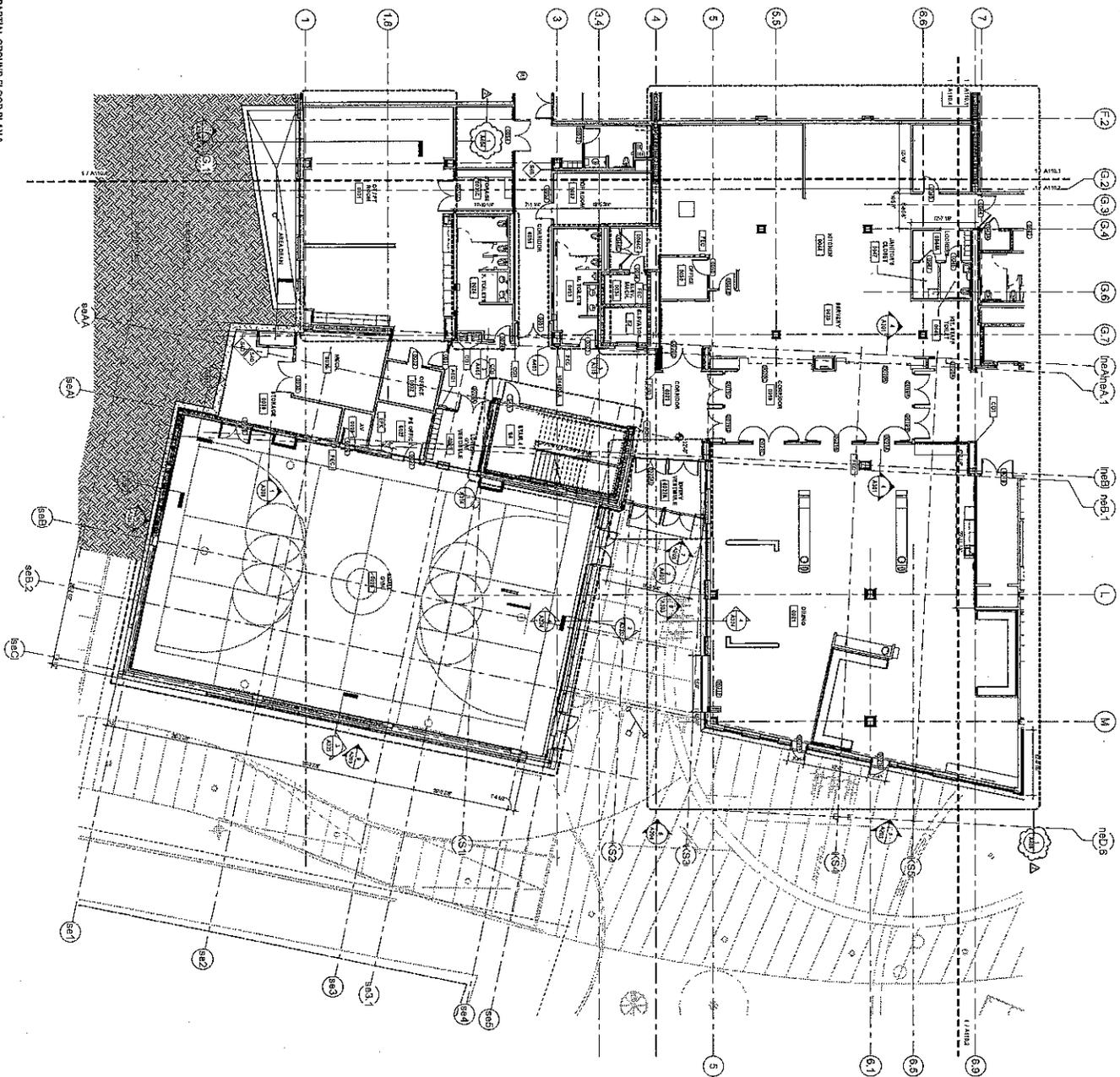
SHEET

REFERENCE: SEC001

DATE: 01.24.2014 Addendum 5

DWG. NO.: **SKSEC-1**

1 PARTIAL GROUND FLOOR PLAN 3



Perkins Eastman
 300 Madison Avenue, New York, NY 10017
 212.512.2000
 www.perkinseastman.com

PROJECT TEAM

- Principal: [Name]
- Senior Architect: [Name]
- Architect: [Name]
- Interior Architect: [Name]
- Structural Engineer: [Name]
- Mechanical Engineer: [Name]
- Electrical Engineer: [Name]
- Plumbing Engineer: [Name]
- Fire Protection Engineer: [Name]
- Acoustic Engineer: [Name]
- Lighting Designer: [Name]
- Historic Preservation Consultant: [Name]
- Construction Manager: [Name]
- General Contractor: [Name]

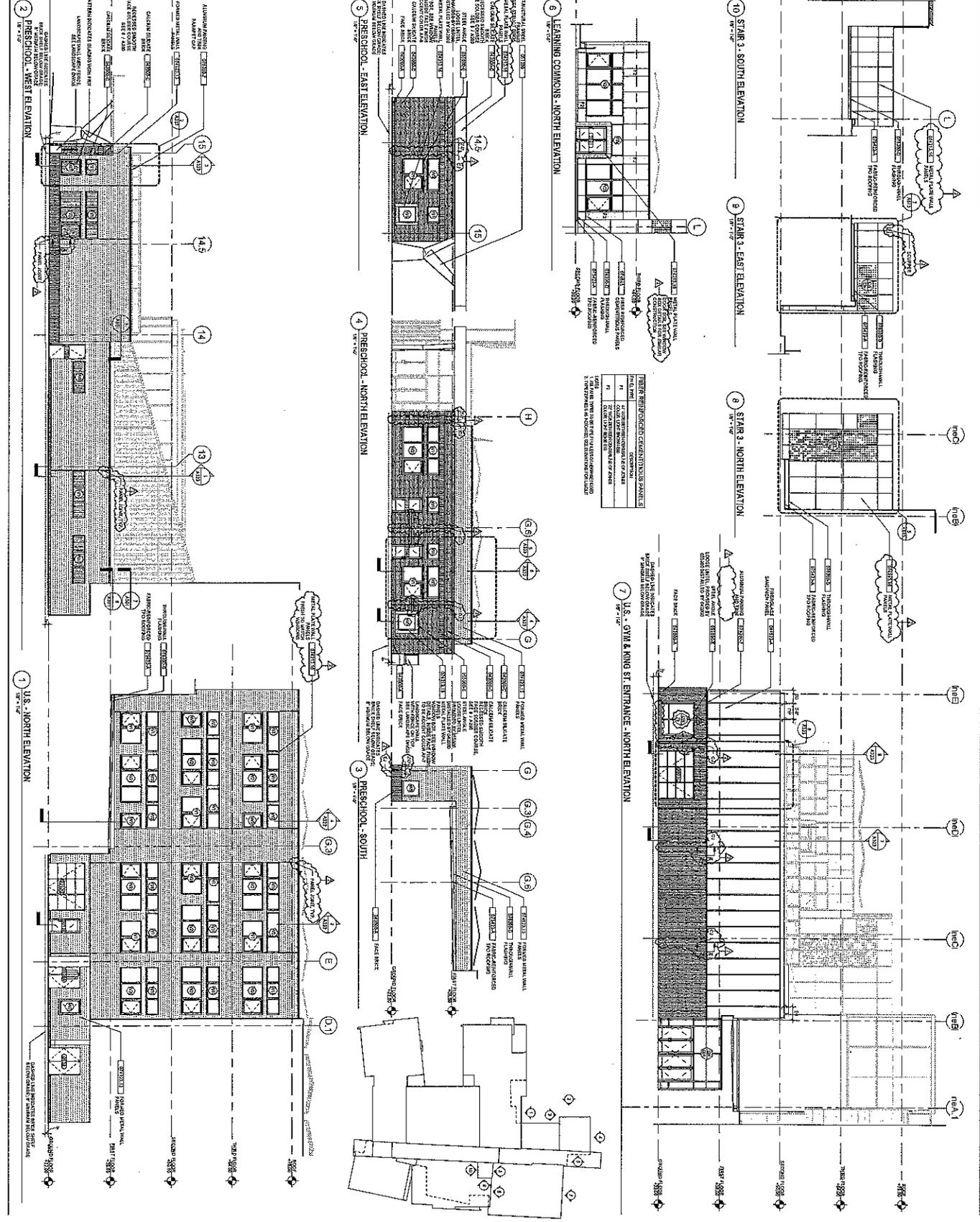


DR. MARTIN LUTHER KING, JR. SCHOOL
 Construction Project
 100 PULASKI AVE., CHICAGO, IL 60610

DATE: 1/22/2014
 PROJECT NO.: 7581.00
 SHEET NO.: A110.3

NO.	DATE	DESCRIPTION
1	1/22/2014	ISSUED FOR PERMITS
2	1/22/2014	ISSUED FOR PERMITS
3	1/22/2014	ISSUED FOR PERMITS
4	1/22/2014	ISSUED FOR PERMITS
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A110.3



Perkins Eastman
 1100 North Dearborn Street
 Chicago, IL 60610
 Tel: 312.329.4200
 Fax: 312.329.4201
 www.perkins-eastman.com

Architect
 Perkins Eastman
 1100 North Dearborn Street
 Chicago, IL 60610
 Tel: 312.329.4200
 Fax: 312.329.4201
 www.perkins-eastman.com

Client
 Dr. Martin Luther King, Jr. School
 Construction Project
 100 Parkway Ave. Cambridge, MA 02142

Project
 Dr. Martin Luther King, Jr. School
 Construction Project
 100 Parkway Ave. Cambridge, MA 02142

Phase
 Exterior Elevations

Date
 1/22/2014

Scale
 As Shown

Notes
 1. See General Notes for details.
 2. See Section Notes for details.
 3. See Schedule Notes for details.

Revisions

NO.	DATE	DESCRIPTION
1	1/22/2014	ISSUED FOR PERMIT
2	1/22/2014	REVISED PER PERMIT COMMENTS

Drawn by
 [Name]

Checked by
 [Name]

Approved by
 [Name]

Scale
 As Shown

Date
 1/22/2014

Project
 Dr. Martin Luther King, Jr. School
 Construction Project
 100 Parkway Ave. Cambridge, MA 02142

Phase
 Exterior Elevations

Date
 1/22/2014

Scale
 As Shown

Notes
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 [Name]

Checked by
 [Name]

Approved by
 [Name]

Scale
 As Shown

Date
 1/22/2014

Project
 Dr. Martin Luther King, Jr. School
 Construction Project
 100 Parkway Ave. Cambridge, MA 02142

Phase
 Exterior Elevations

Date
 1/22/2014

Scale
 As Shown

Notes
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Revisions

NO.	DATE	DESCRIPTION
1	1/22/2014	ISSUED FOR PERMIT
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Drawn by
 [Name]

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 [Name]

Approved by
 [Name]

Scale
 As Shown

Date
 1/22/2014

Project
 Dr. Martin Luther King, Jr. School
 Construction Project
 100 Parkway Ave. Cambridge, MA 02142

Phase
 Exterior Elevations

Date
 1/22/2014

Scale
 As Shown

Notes
 1. See General Notes for details.
 2. See Section Notes for details.
 3. See Schedule Notes for details.

Revisions

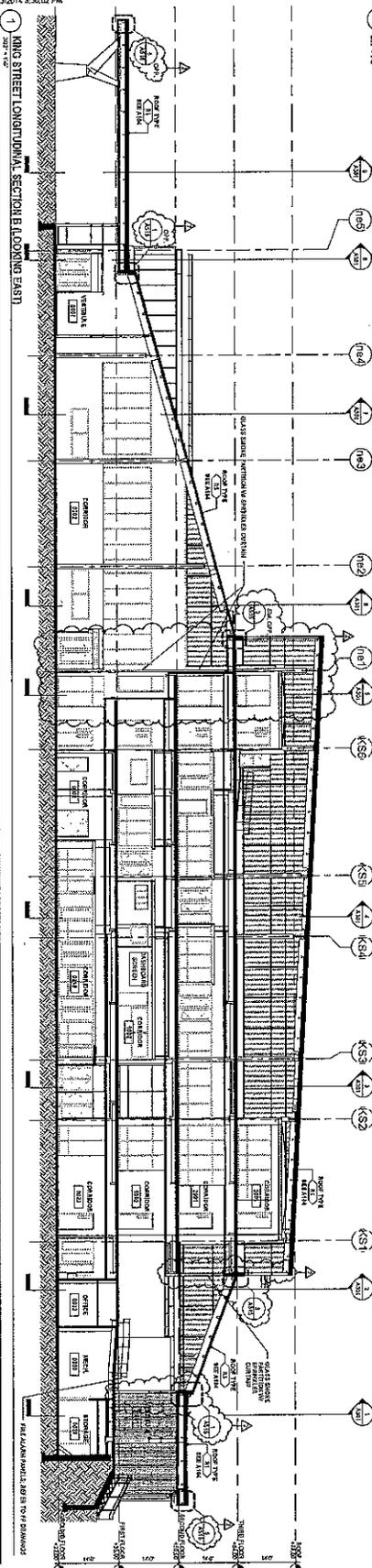
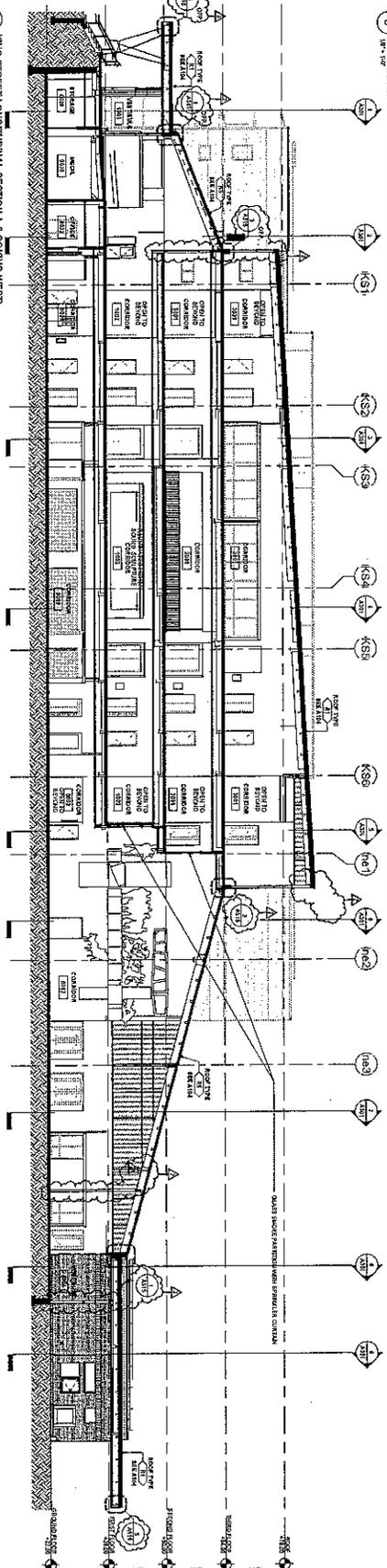
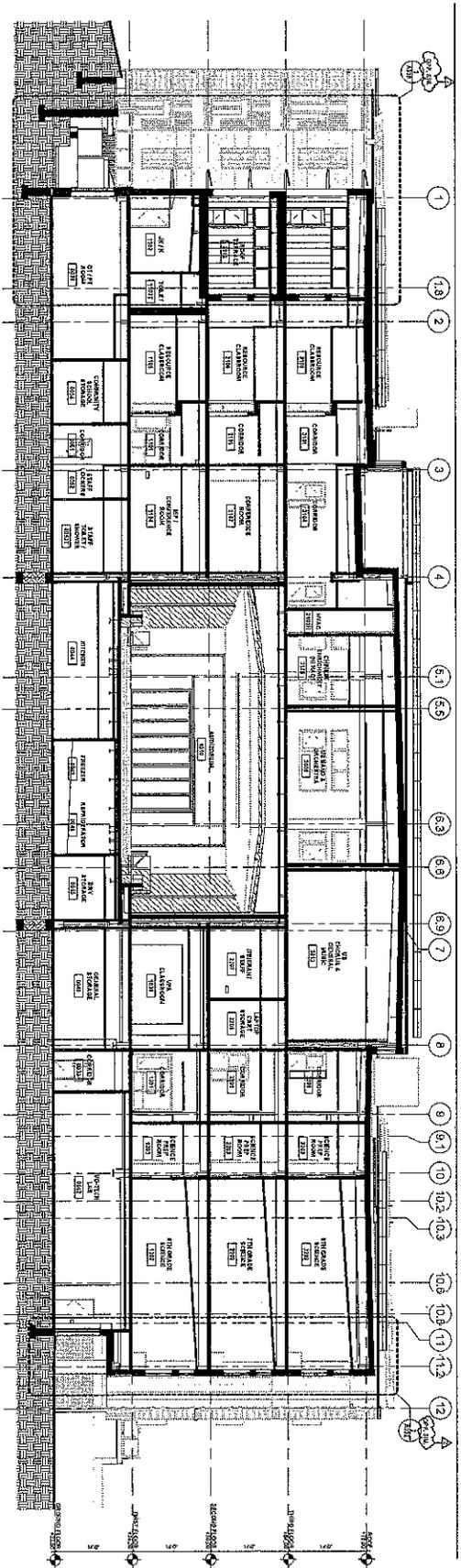
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2	1/22/2014	REVISED PER PERMIT COMMENTS

Drawn by
 [Name]

Checked by
 [Name]

Approved by
 [Name]

A202 - A



Pertuis Pastman
 ARCHITECT
 100 PULASKI AVENUE, SUITE 1000, BALTIMORE, MD 21202
 TEL: 410.528.0000 WWW.PERTUISPASTMAN.COM

DR. MARTIN LUTHER KING, JR. SCHOOL
 100 PULASKI AVENUE, BALTIMORE, MD 21202

PROJECT INFORMATION
 ARCHITECT: PERTUIS PASTMAN
 OWNER: BALTIMORE CITY DEPARTMENT OF EDUCATION
 PROJECT NUMBER: 17420214
 PROJECT TEAM: BID

DATE: 1/23/2014

SCALE: AS SHOWN

PROJECT LOCATION: 17420214

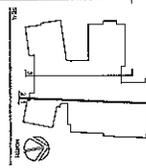
BUILDING SECTIONS

SECTION: 3 NORTH/SOUTH SECTION - LOOKING WEST

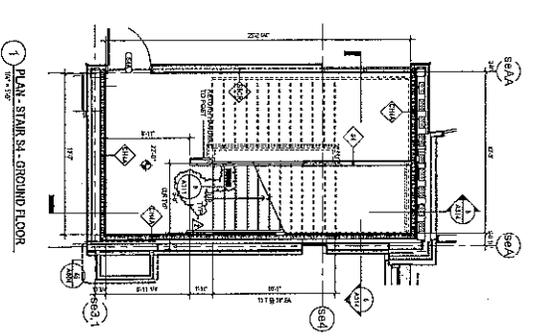
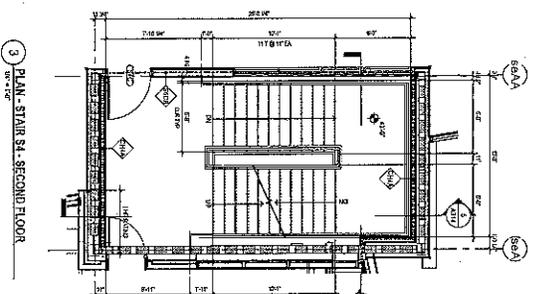
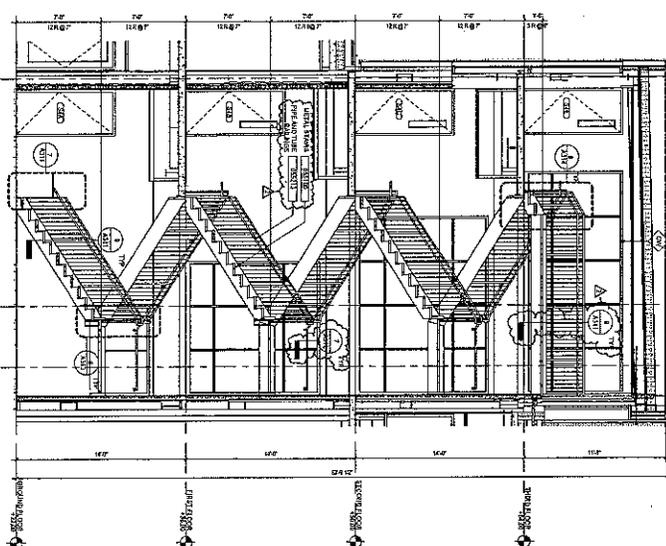
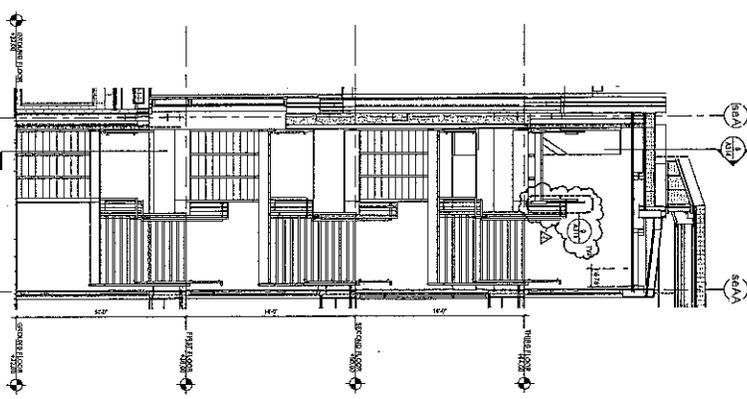
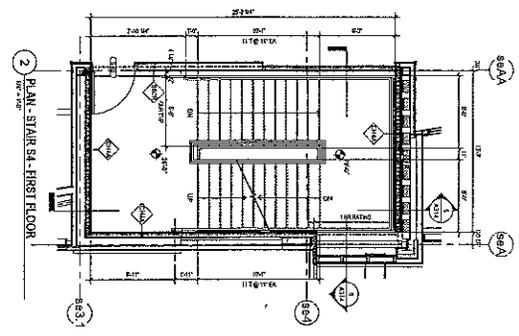
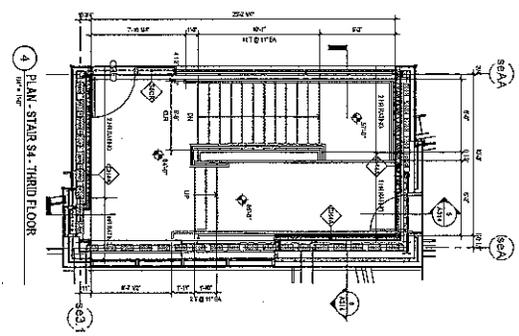
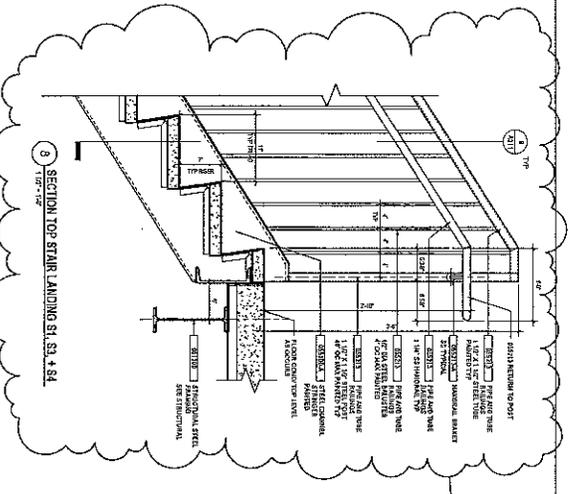
DATE: 1/23/2014

SCALE: AS SHOWN

PROJECT LOCATION: 17420214



A300 -A



NOTE: REFER TO RAILING DETAILS FOR HANDRAIL TRANSITIONS
 NOTE: PROVIDE BEAM AND BACK-UP AT ALL STRINGERS AT
 WALL CORNER TRANSITION

DATE	DESCRIPTION
1/23/2014	ISSUED FOR PERMIT
1/23/2014	ISSUED FOR PERMIT
1/23/2014	ISSUED FOR PERMIT

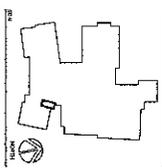


PERKINS EASTMAN
 500 N. LAKE STREET, SUITE 1000
 CHICAGO, IL 60611
 TEL: 312.427.4000
 FAX: 312.427.4001
 WWW.PERKINS-EASTMAN.COM

**DR. MARTIN LUTHER KING JR. SCHOOL
 CONSTRUCTION PROJECT**
 100 PULASKI AVE., CHICAGO, IL 60610

**55832
 47891.00
 02/23/14**

**STAIR S4
 ENLARGEMENTS**



PERKINS EASTMAN
 500 N. LAKE STREET, SUITE 1000
 CHICAGO, IL 60611
 TEL: 312.427.4000
 FAX: 312.427.4001
 WWW.PERKINS-EASTMAN.COM

**DR. MARTIN LUTHER KING JR. SCHOOL
 CONSTRUCTION PROJECT**
 100 PULASKI AVE., CHICAGO, IL 60610

**55832
 47891.00
 02/23/14**

**STAIR S4
 ENLARGEMENTS**

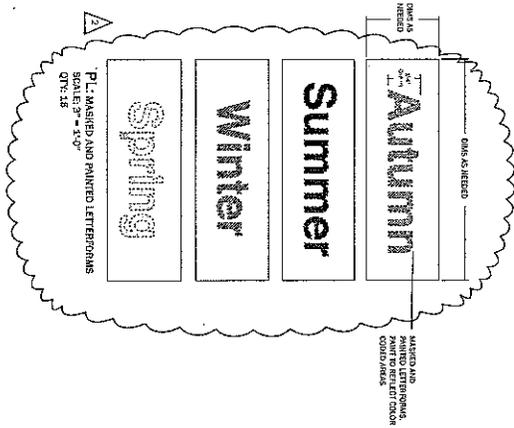
Sign type listing:

- Interpretive:**
- 1. Transparent - Large
 - 2. Transparent - Medium
 - 3. Transparent - Small
 - 4. Opaque - Large
 - 5. Opaque - Medium
 - 6. Opaque - Small
 - 7. Vinyl
 - 8. Painted Letters
 - 9. Exterior - Small
 - 10. Exterior - Medium
 - 11. Exterior - Large
 - 12. Veneer
 - 13. Painted Letters
 - 14. Opaque - Large

- Colors (TBD):**
- C1
 - C2
 - C3
 - C4

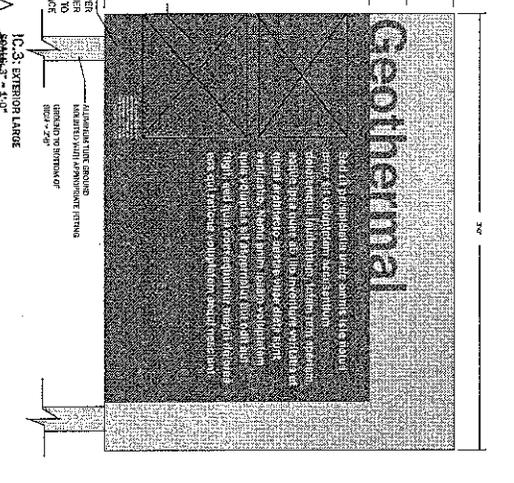
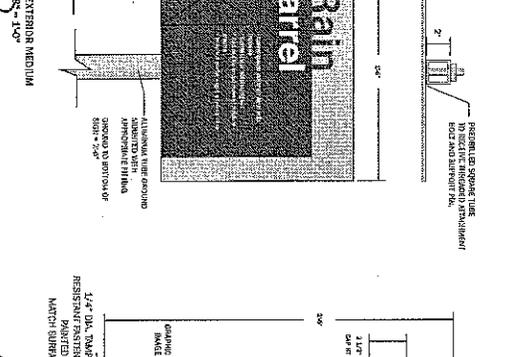
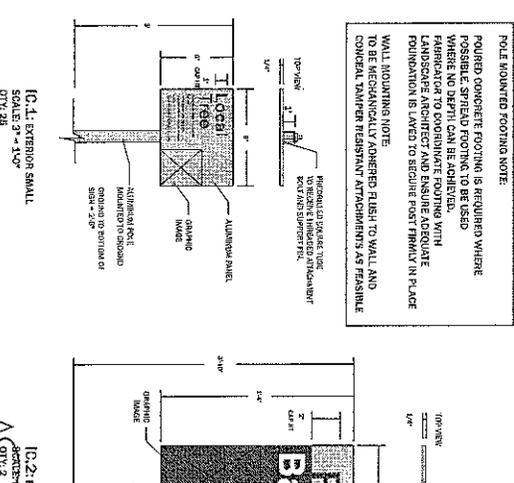
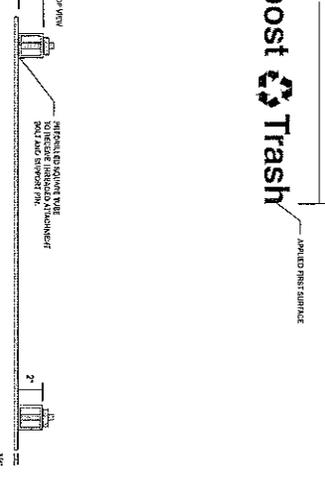
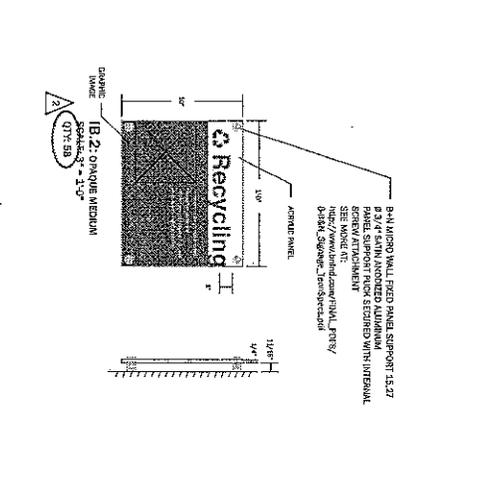
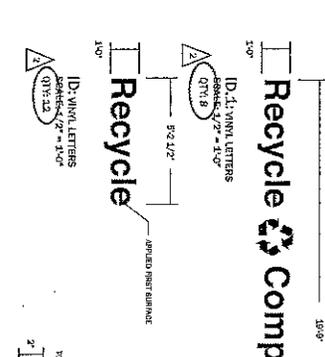
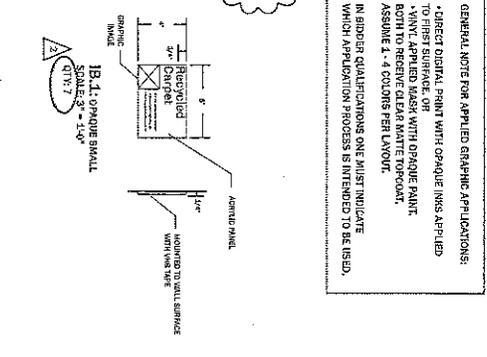
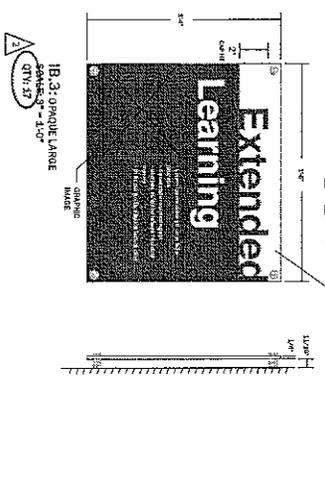
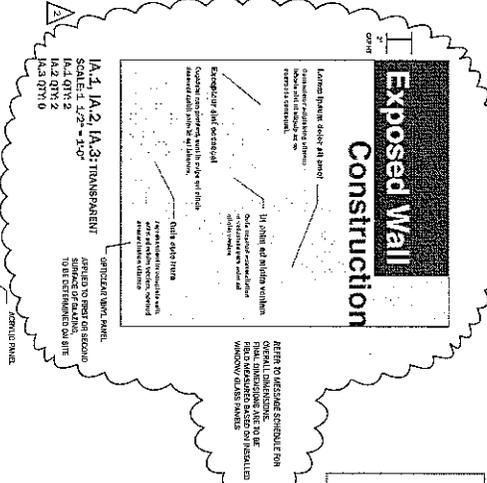
Base Materials Packages:

- White Vinyl
- Anodized Aluminum
- Coated Aluminum
- Polished Vinyl



GENERAL NOTE FOR APPLIED GRAPHIC APPLICATIONS:

- DIRECT DIGITAL PRINT WITH OPAQUE INKS APPLIED TO THE APPLIED MESH WITH OPAQUE PAINT BOTH TO RECEIVE CLEAR WHITE TOPCOAT ASSUME 1 - 4 COATERS PER LAYOUT.
- IN RIDDER QUALIFICATIONS ONE MUST INDICATE WHICH APPLICATION PROCESS IS INTENDED TO BE USED.



Parsons Eastman
 1000 Lakeside Drive, Suite 200, St. Louis, MO 63103
 Tel: 314.433.8000 Fax: 314.433.8001
 www.parsonseastman.com

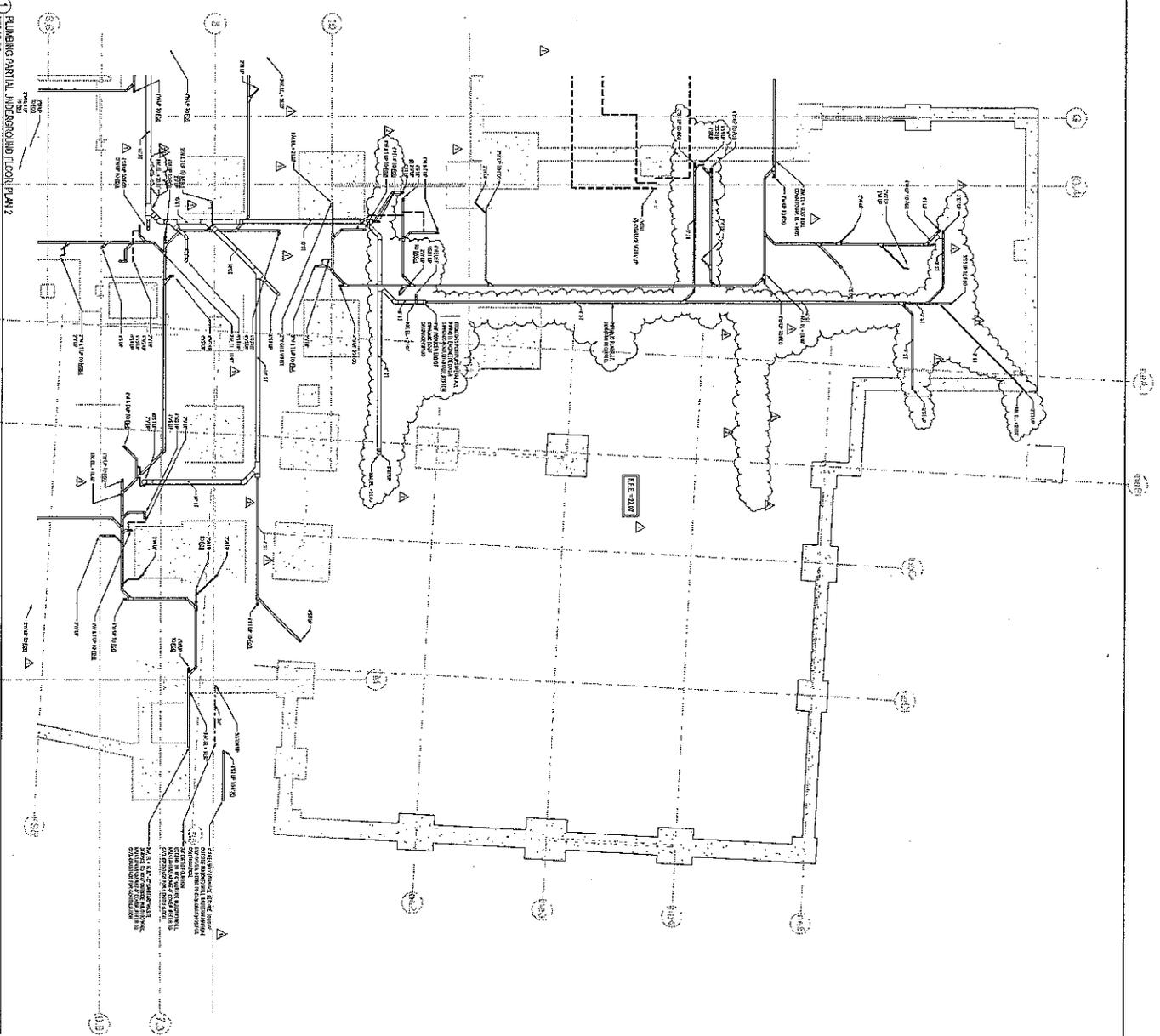
Dr. Martin Luther King Jr. School Construction Project
 100 Lakeside Ave, Charlotte, NC 28203

INTERPRETIVE SIGNAGE DETAILS, ELEVATIONS

Project No: IG600

Scale: 1/8\"/>

1 PLUMBING PARTIAL UNDERGROUND FLOOR PLAN 2
 Rev. 01-13-14



Perkins Eastman

1700 P STREET, N.W.
 WASHINGTON, D.C. 20004
 TEL: 202.293.7000
 WWW.PERKINS-EASTMAN.COM

PROJECT TEAM

Principal: [Name]
 Senior Architect: [Name]
 Project Architect: [Name]

CLIENT

Dr. Martin Luther King, Jr. School
 Construction Project
 100 Pilsbury Ave., Cambridge, MA 02138

DATE

08/02/14

PROJECT NO.

0120158

PROJECT NAME

DR. MARTIN LUTHER KING, JR. SCHOOL

PROJECT LOCATION

100 PILSBURY AVE., CAMBRIDGE, MA 02138

PROJECT OWNER

MASSACHUSETTS DEPARTMENT OF EDUCATION

PROJECT ARCHITECT

PERKINS EASTMAN

PROJECT ENGINEER

PERKINS EASTMAN

PROJECT CONTRACTOR

PERKINS EASTMAN

PROJECT CONSULTANT

PERKINS EASTMAN

PROJECT DATE

08/02/14

PROJECT NO.

0120158

PROJECT NAME

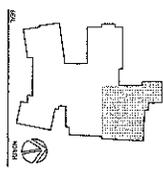
DR. MARTIN LUTHER KING, JR. SCHOOL

PROJECT LOCATION

100 PILSBURY AVE., CAMBRIDGE, MA 02138

PROJECT OWNER

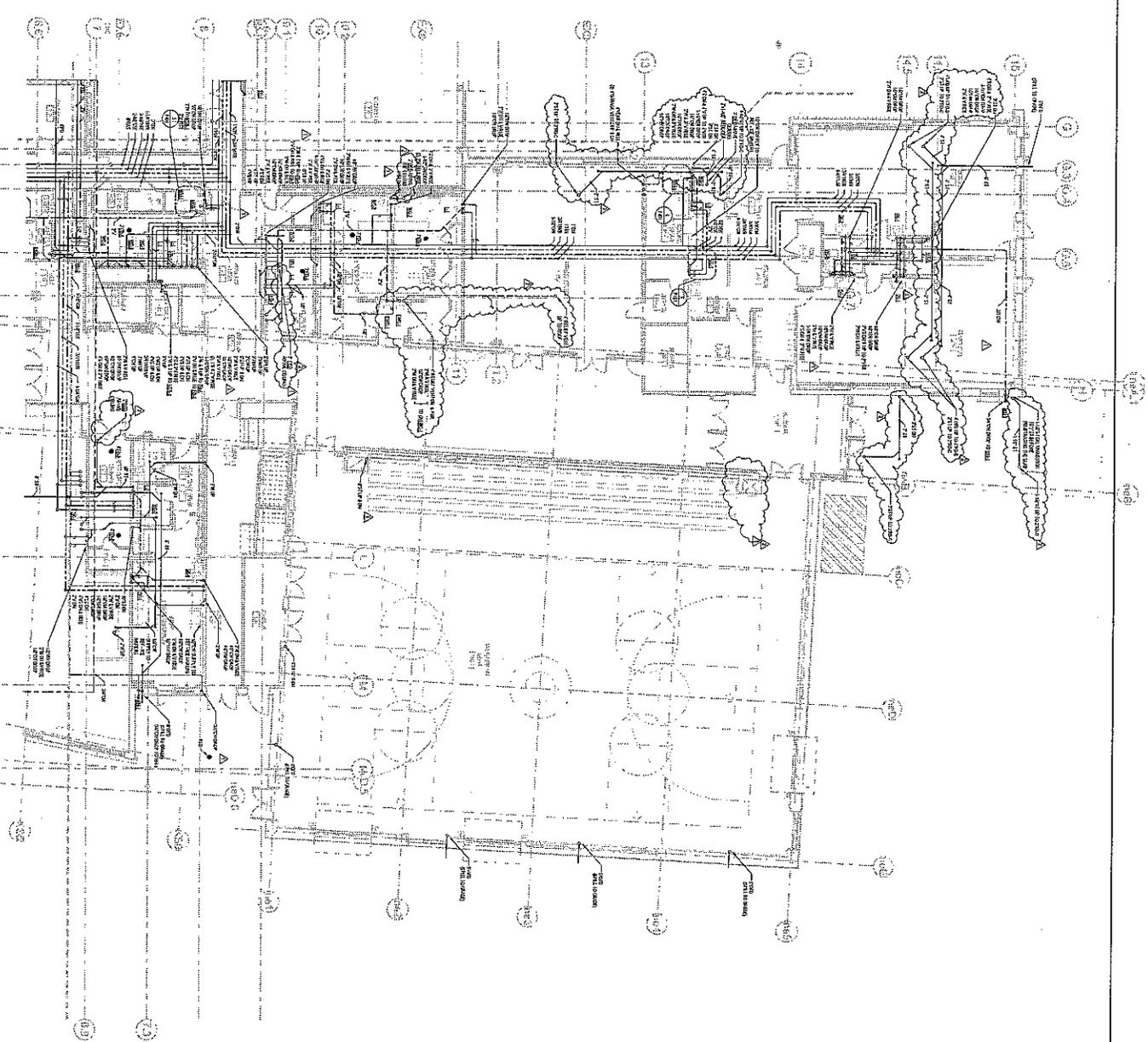
MASSACHUSETTS DEPARTMENT OF EDUCATION



P100.2

PLUMBING PARTIAL UNDERGROUND FLOOR PLAN 2

1 PLUMBING PARTIAL GROUND FLOOR PLAN 2



P110.2

PERKINS EASTMAN
 301 E. 14th Street
 New York, NY 10003
 212.512.2000
 www.perkinseastman.com

ARCHITECT
 PERKINS EASTMAN
 301 E. 14th Street
 New York, NY 10003
 212.512.2000
 www.perkinseastman.com

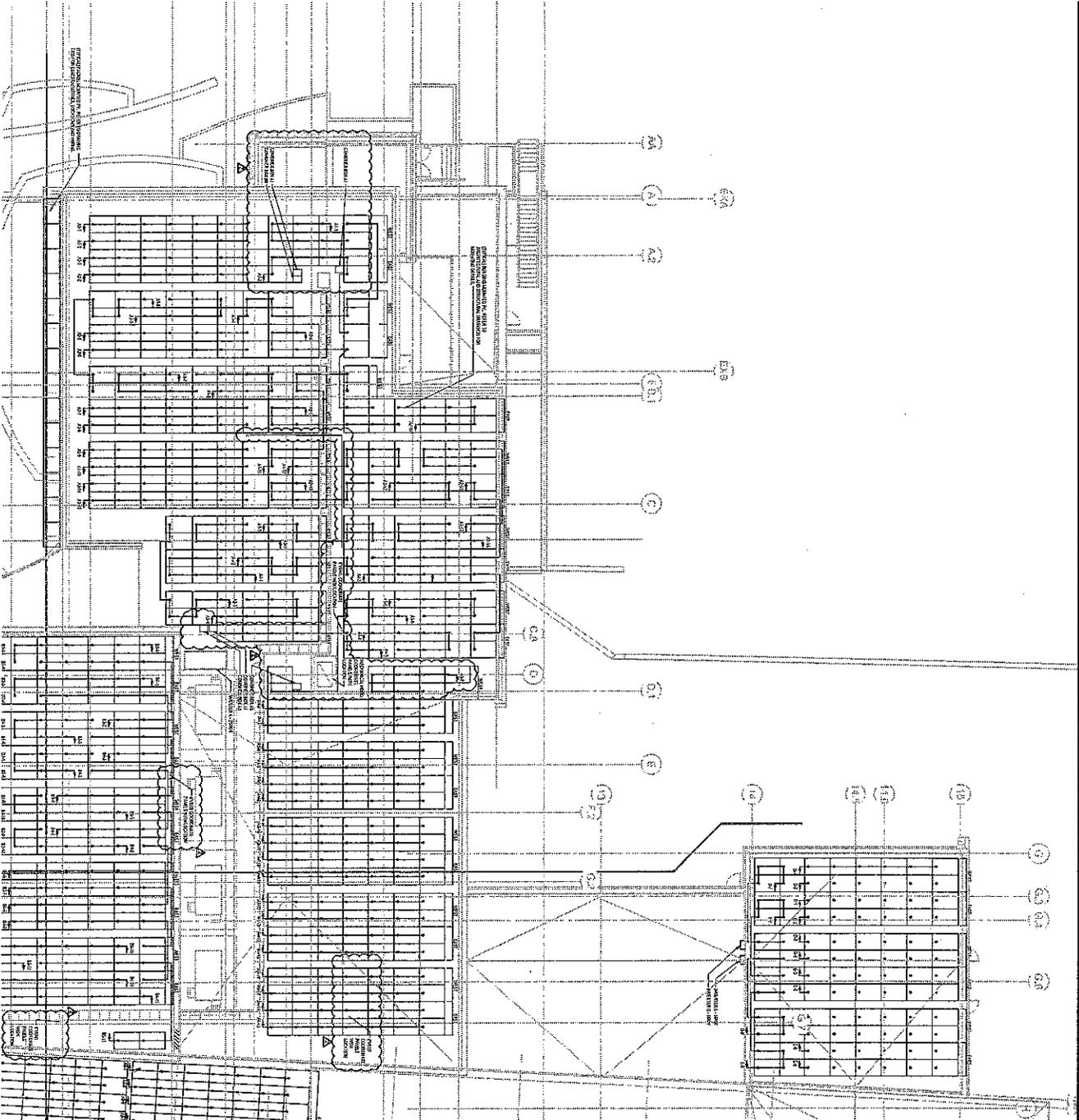
MECHANICAL ENGINEER
 PERKINS EASTMAN
 301 E. 14th Street
 New York, NY 10003
 212.512.2000
 www.perkinseastman.com

PLUMBING ENGINEER
 PERKINS EASTMAN
 301 E. 14th Street
 New York, NY 10003
 212.512.2000
 www.perkinseastman.com

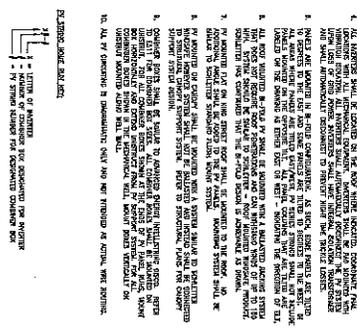
PROJECT: Dr. Martin Luther King, Jr. School Construction Project
LOCATION: 500 Fulton Ave., Cambridge, MA 02149
CLIENT: BLD
DATE: 09/30/10

DESIGN DEVELOPMENT
 PLUMBING PARTIAL GROUND FLOOR PLAN 2

DATE: 09/30/10
BY: [Signature]
CHECKED BY: [Signature]



- GENERAL NOTES:**
1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE INTERNATIONAL BUILDING CODE (IBC) AND THE NATIONAL ELECTRICAL CODE (NEC).
 2. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE APPROVED BY THE ARCHITECT.
 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITIES.
 4. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL EXISTING UTILITIES AND STRUCTURES AT ALL TIMES.
 5. ALL WORK SHALL BE COMPLETED WITHIN THE SPECIFIED TIME FRAME.
 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING STRUCTURES AND UTILITIES.
 7. ALL WORK SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE ARCHITECT.
 8. THE CONTRACTOR SHALL MAINTAIN A SAFE WORKING ENVIRONMENT AT ALL TIMES.
 9. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE APPROVED BY THE ARCHITECT.
 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITIES.
 11. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL EXISTING UTILITIES AND STRUCTURES AT ALL TIMES.
 12. ALL WORK SHALL BE COMPLETED WITHIN THE SPECIFIED TIME FRAME.



Perkins Eastman
 100 North LaSalle Street
 Chicago, IL 60602
 Tel: 312.309.4400
 Fax: 312.309.4401
 www.perkinseastman.com

Project Information
 Project Name: Dr. Martin Luther King, Jr. School Construction Project
 Project Location: 100 North LaSalle Street, Chicago, IL 60602
 Project Number: E414.1.1

Design Team
 Architect: Perkins Eastman
 Engineer: S&B
 Electrician: VTB
 Mechanical: VTB
 Structural: VTB

Project Schedule
 Design: 10/2010 - 03/2011
 Construction: 04/2011 - 08/2011

Project Status
 Construction Complete

Project Description
 Dr. Martin Luther King, Jr. School Construction Project
 100 North LaSalle Street, Chicago, IL 60602

Project Information
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 100 North LaSalle Street, Chicago, IL 60602

E414.1.1

