

ADDENDUM

Addendum #03
TO PLANS AND SPECIFICATIONS FOR
ELEMENTARY SCHOOL (ES-23)

March 02, 2020

NOTE: If you have questions about this project, please contact, John Oduroe
John.Oduroe@stantec.com.

This Addendum is generally separated into sections for convenience; however, all contractors, subcontractors, material suppliers and other involved parties shall be responsible for reading the entire Addendum. Failure to list an item(s) in all affected sections of this Addendum does not relieve any party affected from performing per instructions, provided the information is set forth one time anywhere in the Addendum.

This document shall become attached to and part of the Construction Documents for the aforementioned project.

BID DATE and TIME: March 6th, 2020 at 2:00pm.

DELIVER PROPOSALS TO:

Loudoun County Public Schools Administration Building, Room 211.
21000 Education Court
Ashburn, Virginia 20148

LIST OF ATTACHMENTS

1. Architectural
 - a. Narrative (8 pages)
 - b. Drawings (33 pages)
 - c. Specifications (2 sections – 9 pages)
 - d. Pre-Bid RFI & Responses (10 pages)
2. Civil
 - a. Narrative (2 page)
 - b. Drawings (5 pages)
3. Structural
 - a. Narrative (2 pages)
 - b. Drawings (1 page)
4. Fire Suppression, Fire Alarm
 - a. Narrative (2 pages)
 - b. Drawings (10 pages)



SPECIFICATIONS

ITEM	SECTION	DESCRIPTION
AS-4	00 01 10	<p>Add the following to Division 09 Finishes: "09 24 00 CEMENT PLASTERING (STUCCO)"</p> <p>Add the following to Division 27 Communications: "27 52 23 NURSE CALL SYSTEM"</p>
AS-5	09 24 00	Add new section in its entirety.
AS-6	11 52 13	<p>Replace Paragraph 3.2 in it's entirety with the following:</p> <p>1.1 PROJECTION SCREEN SCHEDULE</p> <p>A. Electrically Operated, Front-Projection, Recessed Screen Type PS-1:</p> <ol style="list-style-type: none"> 1. <i>Basis of Design: Da-Lite Wireline Advantage, Model Number 29239</i> 2. <i>Viewing Surface Size (Image Area): 13'-4" wide by 8'-4" high (189" Diagonal).</i> 3. <i>Projection Surface: HD Progressive 1.1 Gain/170 degree Viewing Angle</i> 4. <i>Extra Drop Length: As needed at top of screen for bottom of screen to be 36-inches above floor.</i> 5. <i>NTSC Video Format: 16:10.</i> 6. <i>Mounting: Screen to be mounted in acoustic ceiling at wall. Screen case to include built-in flange for ceiling opening.</i> 7. <i>Locations: Cafeteria Room E101.</i> <p>B. Electrically Operated, Rear-Projection, Recessed Screen Type PS-2:</p> <ol style="list-style-type: none"> 1. <i>Basis of Design: Da-Lite Tensioned Advantage Deluxe Electrol Model Number 24862</i> 2. <i>Viewing Surface Size (Image Area): 11'-8" wide by 7'-4" high (164" Diagonal).</i> 3. <i>Projection Surface: HD Progressive 1.3 Gain/150 degree Viewing Angle</i> 4. <i>Extra Drop Length: As needed at top of screen for bottom of screen to be 36 inches above floor.</i> 5. <i>NTSC Video Format: 16:10.</i> 6. <i>Mounting: Screen to be mounted in acoustic ceiling. Screen case to include built-in flange for ceiling opening</i> 7. <i>Locations: Platform Room D103</i>
AS-7	05 50 00	Replace paragraph 2.15.A.2 with the following:

		<i>"Basis of Design for interior stairs: Model# STSB-P3E by Nystrom, abrasive; color – black."</i>
AS-8	05 51 00	<p>Include the following to section 2.7.B:</p> <p><i>"6. Perforated Screen at Intermediate Landing / HM Glazing Intersection</i></p> <p><i>a. Basis-of-Design Product: McNICHOLS Perforated Metal Round, 11 Gauge or a comparable product.</i></p> <p><i>b. Material: Steel.</i></p> <p><i>c. Perforation Pattern: 3/16" Round on 5/16" Staggered Centers, 33% Open Area Pattern to be cut from a single metal sheet.</i></p> <p><i>d. Finish: Painted; match stair pans and stringers finish."</i></p>
AS-9	12 35 52	<p>Delete paragraph 2.4.D.</p> <p>Replace Paragraph 2.5.11.C in its entirety with the following:</p> <p>C. <i>M-08 – 36" High Double Face Mobile Bookshelf</i></p> <p>1) <i>50% of all M-08 double face mobile shelves shall have picture bookshelves with wood dividers. Provide maximum 1 adder unit per starter unit.</i></p> <p>a) <i>#4583 -137-233 Starter 36"W x 42"H x 24"D with standard dovetail base and 3" swivel caster</i></p> <p>b) <i>#4584 -137-233 Adder 36"W x 42"H x 24"D with standard dovetail base and 3" swivel caster</i></p> <p>2) <i>50% of all M-08 double face mobile shelves shall have flat shelves. Provide maximum 1 adder unit per starter unit.</i></p> <p>a) <i>#4583 -127-213 Starter 36"W x 42"H x 24"D with standard dovetail base and 3" swivel caster</i></p> <p>b) <i>#4584 -127-213 Adder 36"W x 42"H x 24"D with standard dovetail base and 3" swivel caster</i></p>
AS-10	07 53 23	<p>Include the following in section 2.3</p> <p><i>"F. Coverboard: Provide ½" thick High density Polyiso coverboard. Minimum R-value of R2/in. Panel Size: 48 inches by 96 inches. Compressive Strength: ASTM D 1621, > 100 psi."</i></p>

AS-11	07 53 23	<p>Replace paragraph 2.3.B in its entirety with the following:</p> <p><i>“B. Polyisocyanurate Board Insulation: ASTM C 1289-02, Type II, Class 1, Grade 2–20 psi minimum, or as required to provide the manufacturer’s thirty (30) year roof war-ranty. Provide two layers of polyisocyanurate insulation: base layer and the top layer to both be 2.5” in thick-ness mechanically fastened to the roof decking per manufacturer’s directions with all joints to be staggered. Adhere coverboard to top layer.”</i></p>
AS-12	01 32 33	<p>Include the following in section 2.2.B</p> <p><i>“3. A minimum of 2 cameras is required</i></p> <p><i>4. Maximum camera height is to be 40’-0” above ground.”</i></p>
AS-13	05 52 13	<p>Replace section 2.2.C in its entirety with the following:</p> <p><i>“C. All interior railings and handrails to be stainless steel, all exterior railings and handrails to be galvanized steel painted with a high performance coating.</i></p> <p><i>1. Provide type of bracket with flange tapped for concealed anchorage to threaded hanger bolt and that provides 1-1/2-inch clearance from inside face of handrail to finished wall surface. ”</i></p>
AS-14	11 40 00	<p>5.Item 44, Section B – Delete line 2 in its entirety</p>
AS-15	09 30 00	<p>Replace paragraph 2.3-B.2 with the following:</p> <p><i>“2. Face Size: 6 inches x 6 inches ”</i></p> <p>Replace paragraph 2.3-B.9.a with the following”</p> <p><i>“Base QTB: Covered with surface bullnose top edge, face size 6-inches by 6-inches. Used covered base in conjunction with quarry floor tile or as noted on drawings.”</i></p>

AS-16	07 53 23	<p>Replace paragraph 3.4-D with the following:</p> <p><i>“Bonding Adhesive: The roof membrane shall be adhered to the insulation with adhesive applied per Roofing Manufacturer’s recommendations. Apply to substrate and underside of membrane roofing at rate required by manufacturer and allow to partially dry before installing membrane roofing. Do not apply to splice area of membrane roofing.</i></p> <p><i>1) If the roof membrane adhesive is applied utilizing a spray rig. (Protect all mechanical roof equipment from over spray of adhesive.) The Owner reserves the right to have the General Contractor replace any roof top equipment (in whole or part of) that is not protected during the application of the adhesive resulting in damage to the roof top equipment.”</i></p>
AS-17	04 20 00	Remove paragraph 2.11 in its entirety
AS-18	06 20 00	<p>Replace paragraph 2.5-B with the following:</p> <p><i>“Color to be selected by the Architect from manufacturer’s 3rd most expensive price group (group 3 or C depending on manufacturer) and above.”</i></p>
AS-19	12 21 13	<p>Replace paragraph 2.2.C.3 with the following:</p> <p><i>“Spacing: 0.71 inch (18mm)”</i></p> <p>Replace paragraph 2.2.M with the following:</p> <p><i>“Hold-Down Brackets and Hooks or Pins: Manufacturer’s standard.</i></p> <p><i>1) hold brackets at window frames are not required</i></p> <p><i>2) All doors with glazing shall have hold down brackets “</i></p>
AS-20	27 52 23	Add new section in its entirety

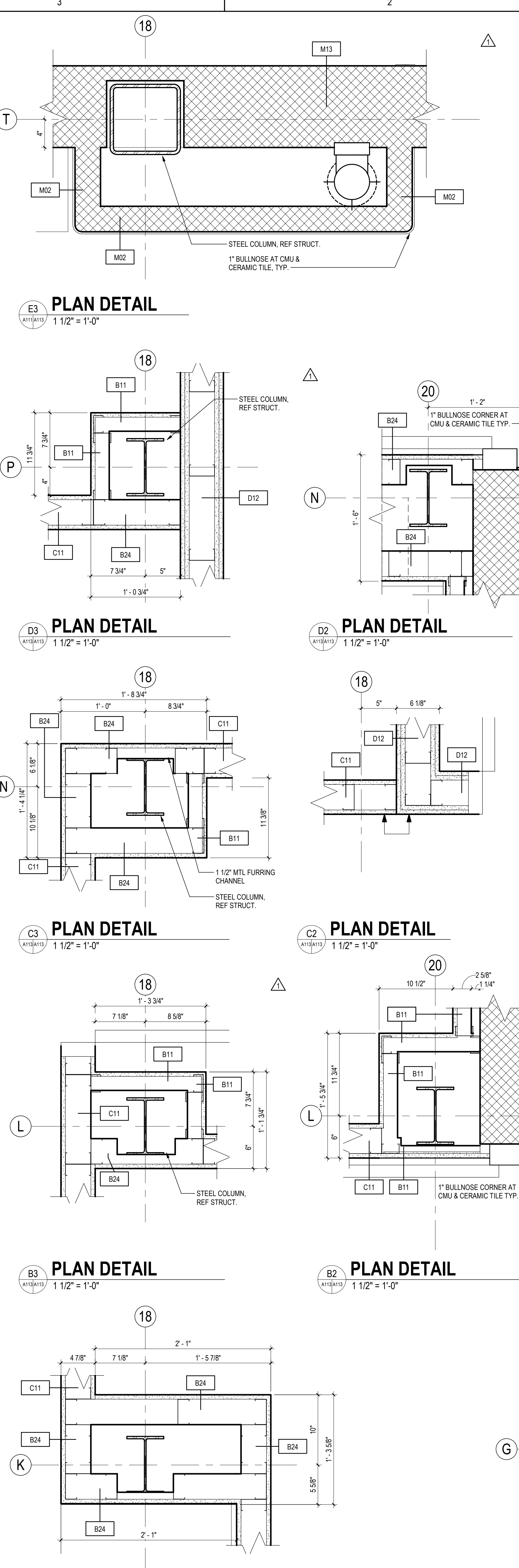
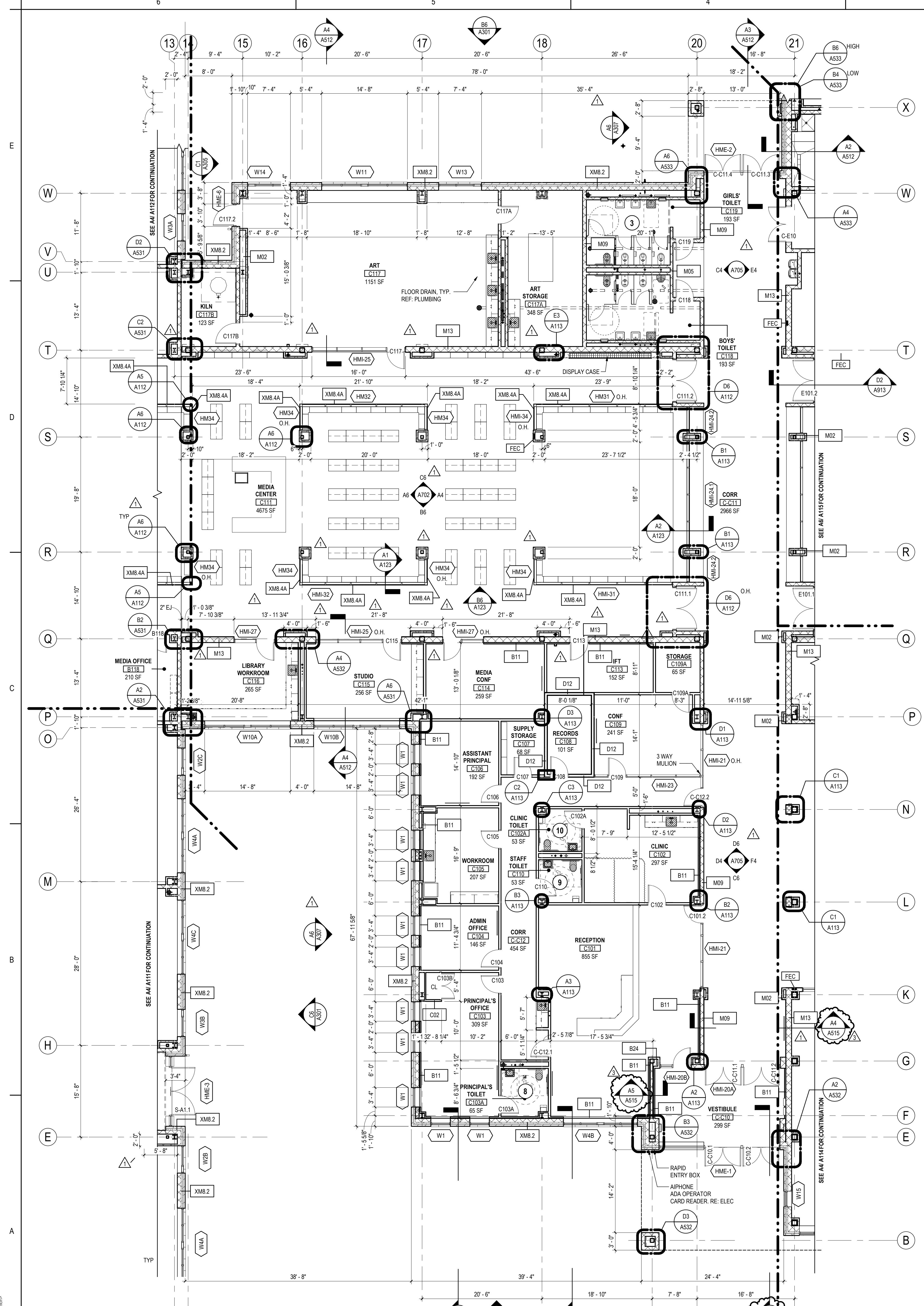
DRAWINGS

ITEM	SHEET NUMBER	DESCRIPTION
AD-25	A113	Replace sheet in its entirety. New wall section call-outs have been added.

AD-26	A114	Replace sheet in its entirety. New wall section call-outs have been added.
AD-27	A121	All references to window type "W5A" to be revised to "W5"
AD-28	A122	All references to window type "W5A" to be revised to "W5"
AD-29	A131	All references to window type "W5A" to be revised to "W5"
AD-30	A132	All references to window type "W5A" to be revised to "W5"
AD-31	A150	Replace sheet in its entirety. Sheet notes / legend have been updated. Additional detail callouts have been included.
AD-32	A201	Replace sheet in its entirety. Included missing details. Revised notes and details. Incorrect overall partition depths updated.
AD-33	A207	Replace sheet in its entirety. Included detail callouts
AD-34	A206	Replace sheet in its entirety. Included detail callouts
AD-35	A209	New Sheet added in its entirety
AD-36	A212	<p>A. Add the following notes to "SPECIFIC ROOM FINISH SCHEDULE REMARKS"</p> <ol style="list-style-type: none"> 4. <i>PROVIDE 3000 SF OF CARPET IN MEDIA CENTER, REMAINING FLOOR SHALL BE VCT</i> 5. <i>PROVIDE 700 SF OF CARPET IN EACH COLLABORATION POD, REMAINING FLOOR SHALL BE VCT.</i> <p>Note 5 to apply to rooms A101, B101, A201, B201, A301, & B301</p> <p>B. Add the following note to "GENERAL ROOM FINISH NOTES"</p> <p>15. <i>VCT COLORS TBD BY ARCHITECT. FOR ROOMS WITH MORE THAN ONE TYPE OF VCT LISTED, PROVIDE 60% VCT-1 (FIELD COLOR), REMAINING 40% TO BE DIVIDED EQUALLY AMONGST REMAINING VCT TYPES (ACCENT COLORS).</i></p>
AD-37	A208	Replace sheet in its entirety. Removed details. Revised details
AD-38	[unused]	[unused]
AD-39	A501	Revised "Glazed masonry on CMU back-up" detail – 4" high (NOM) glazed CMU units revised to be 8" high (NOM) units
AD-40	A511	Replace sheet in its entirety. Wall sections adjusted
AD-41	A512	Replace sheet in its entirety. Wall sections adjusted

AD-42	A513	Replace sheet in its entirety. Wall sections adjusted
AD-43	A514	Replace sheet in its entirety. Wall sections adjusted
AD-44	A515	New sheet added in its entirety
AD-45	A520	Replace sheet in its entirety. Details adjusted
AD-46	A521	Replace sheet in its entirety. Notes on Detail C5 amended.
AD-47	A522	Replace sheet in its entirety. Details adjusted and new details added. Motorized blinds at media center clerestories removed from details
AD-48	A523	Replace sheet in its entirety. Several details adjusted.
AD-49	A524	Replace sheet in its entirety. Coping details have been revised. Post supported canopy details provided.
AD-50	A531	Replace sheet in its entirety. Expansion joint details revised.
AD-51	A612	Replace sheet in its entirety. Included reception desk details
AD-52	A613	Replace sheet in its entirety. Revised bookshelf configuration
AD-53	A633	Revise bleacher configuration to show 6 tier, 3 aisle setup w/ 22" row spacing. Provide an additional 10'-0" of crash pads (w/ 4 outside corners) to cover (2) CMU pilasters behind plan East basketball hoop.
AD-54	A650	Replace all references to "STAIR #3" with "STAIR #2"
AD-55	A651	Replace all references to "STAIR #2" with "STAIR #3"
AD-56	A703	Delete detail B1/A703
AD-57	A911	Replace sheet in its entirety. Included Folding Glass Door head detail, Revised GWB bulkhead detail. Included detail callout
AD-58	A912	Replace sheet in its entirety. Added GWB bulkhead in elevator corridor. Revised ceiling details
AD-59	A921	Replace sheet in its entirety. Included detail callout
AD-60	A922	Replace sheet in its entirety. Included detail callout
AD-61	A931	Replace sheet in its entirety. Included detail callout
AD-62	A932	Replace sheet in its entirety. Included detail callout
AD-63	A202	Replace sheet in its entirety. Revised door schedule and notes

AD-64	A203	Replace sheet in its entirety. Revised door schedule and notes
AD-65	CS01	Replace sheet in its entirety. Sheet list updated.
AD-66	CS02	Replace sheet in its entirety. Sheet list updated.
AD-67	CS03	Replace sheet in its entirety. Sheet list updated.
AD-68	CS04	Replace sheet in its entirety. Sheet list updated.



REFER TO SHEET A101 FOR GENERAL PLAN NOTES

PLAN LEGEND

ENLARGED TOILET ROOM TYPE

OH INDICATES OPPOSITE HAND

REF A641 SERIES FOR ENLARGED TOILET ROOM DIMENSIONS. REFER TO SHEET SPECS FOR ALL ADA FIXTURE DIMENSIONS.

Stantec

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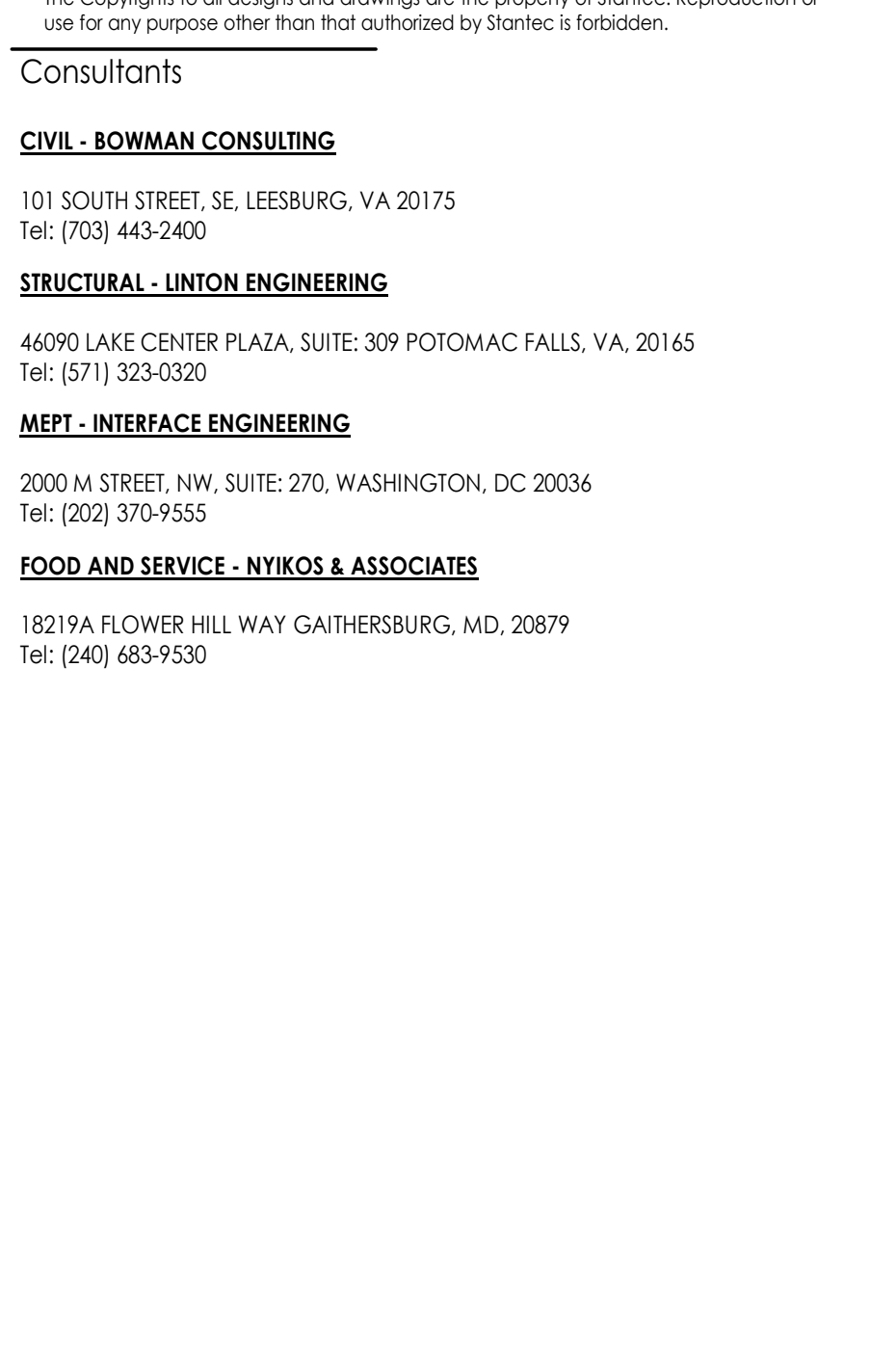
Consultants

CIVIL - BOWMAN CONSULTING
101 SOUTH STREET, SE, LEESBURG, VA 20175
Tel: (703) 443-2400

STRUCTURAL - LINTON ENGINEERING
46090 LAKE CENTER PLAZA, SUITE 309 POTOMAC FALLS, VA 20165
Tel: (571) 323-0320

MEPT - INTERFACE ENGINEERING
2000 M STREET, NW, SUITE 270, WASHINGTON, DC 20036
Tel: (202) 370-9555

FOOD AND SERVICE - NYIKOS & ASSOCIATES
18219A FLOWER HILL WAY GAITHERSBURG, MD 20879
Tel: (240) 683-9530



Issue/Revision	DATE	BY
3 - ADDENDUM #3	2020.03.02	
1 - ADDENDUM #1	2020.02.20	
BID & PERMIT SET	2020.02.06	
100% CONSTRUCTION DOCUMENTS	2020.01.26	
65% CONSTRUCTION DOCUMENTS	2019.12.03	
DESIGN DEVELOPMENT	2019.10.08	
SCHEMATIC DESIGN	2019.08.12	
	YYYY.MM.DD	



Client/Project

ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS

EVERGREEN MILLS ROAD, DULLES, VA 20166

Title

ENLARGED PLAN - LEVEL 1 - AREA C

Project No. 218320338
Revision VDOE # 3
Scale AS INDICATED
Drawing No. 053-115-01-100
A113

A6 ENLARGED PLAN - LEVEL 1 - AREA C
1/8" = 1'-0" ON THIS PLAN, WALL TYPE G11 IS TYPICAL AT INTERIOR WALLS, UNO

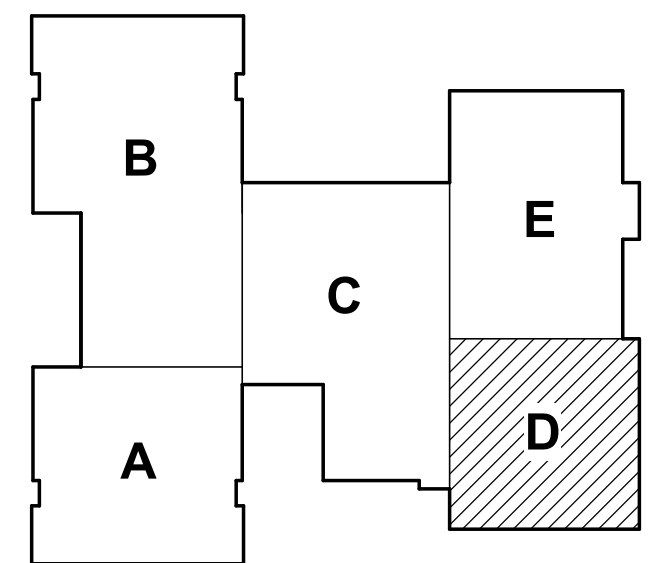
4824 Location of Project Information
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ORIGINAL SHEET - ARCH1

REFER TO SHEET A101 FOR GENERAL PLAN NOTES

PLAN LEGEND

- ENLARGED TOILET ROOM TYPE**
- OH INDICATES OPPOSITE HAND
 - #H REF A641 SERIES FOR ENLARGED TOILET ROOM PLANS & ELEVATIONS. REFER TO SHEET SPECS FOR ALL ADA FIXTURE DIMENSIONS.

Keyplan



3	ADDENDUM #3	2020.03.02
▲	ADDENDUM #1	2020.02.20
▲	BID & PERMIT SET	2020.02.06
	100% CONSTRUCTION DOCUMENTS	2020.01.26
	65% CONSTRUCTION DOCUMENTS	2019.12.03
	DESIGN DEVELOPMENT	2019.10.08
	SCHEMATIC DESIGN	2019.08.12
	Issue/Revision	YYYY.MM.DD

Permit/Seal



Client/Project Logo



Client/Project

ELEMENTARY SCHOOL (ES-23)

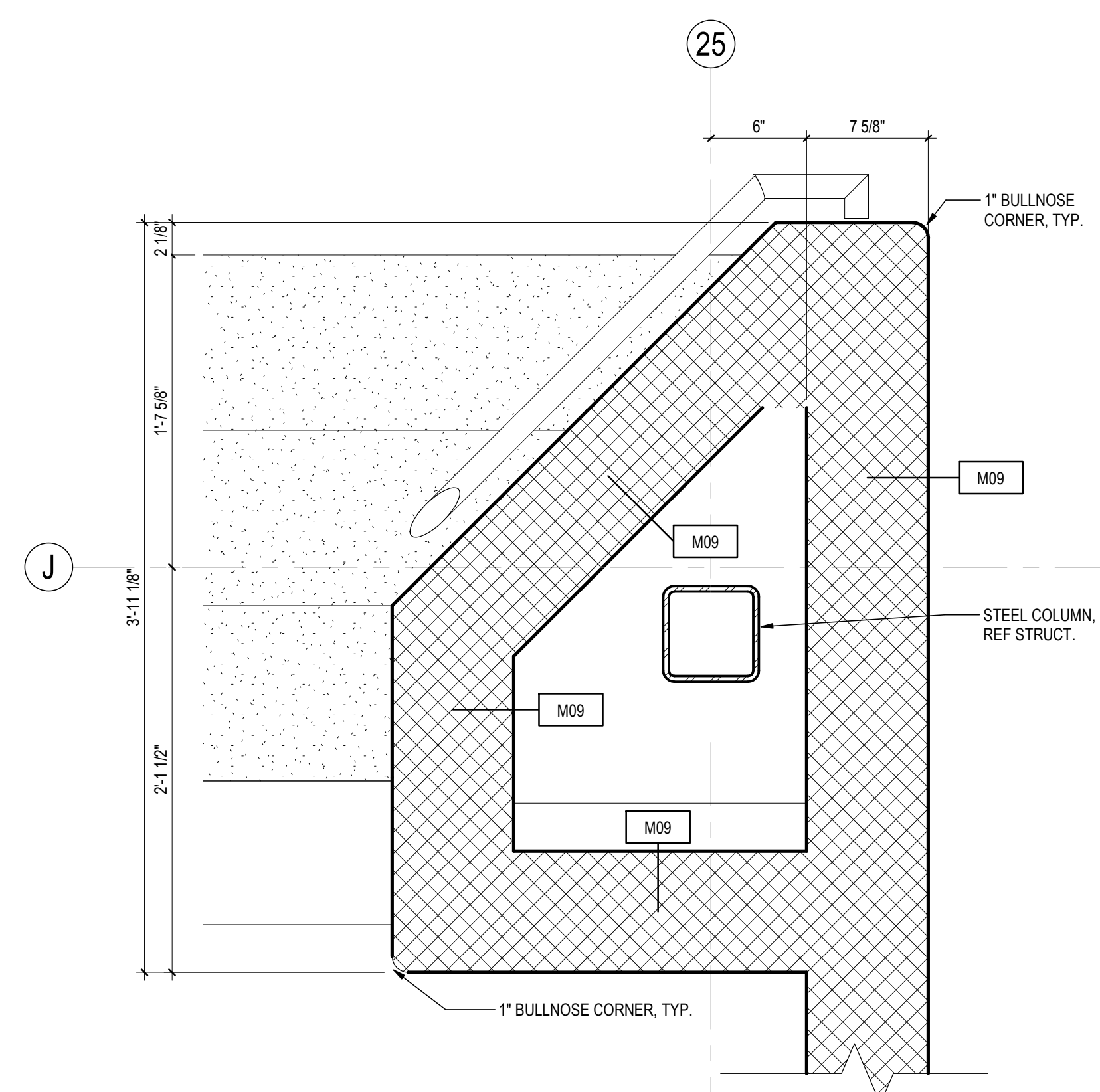
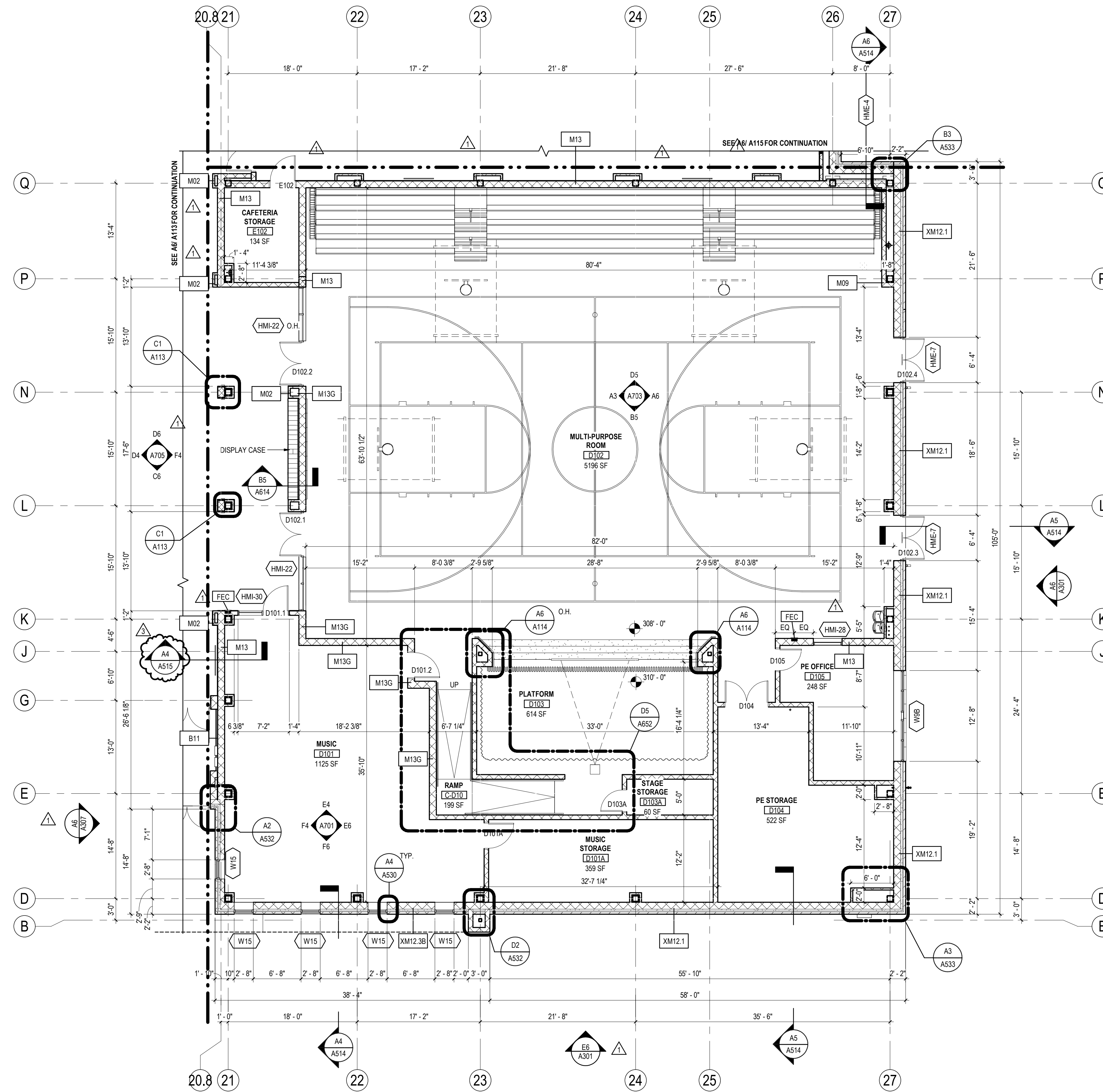
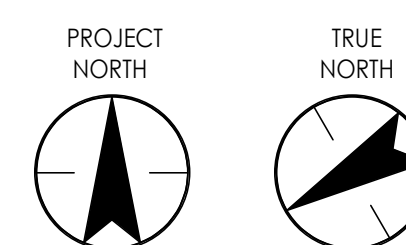
LOUDOUN COUNTY PUBLIC SCHOOLS

EVERGREEN MILLS ROAD, DULLES, VA 20166

Title
ENLARGED PLAN - LEVEL 1 - AREA D

Project No.
218320338
Revision
3

Scale
AS INDICATED
Drawing No.
A114



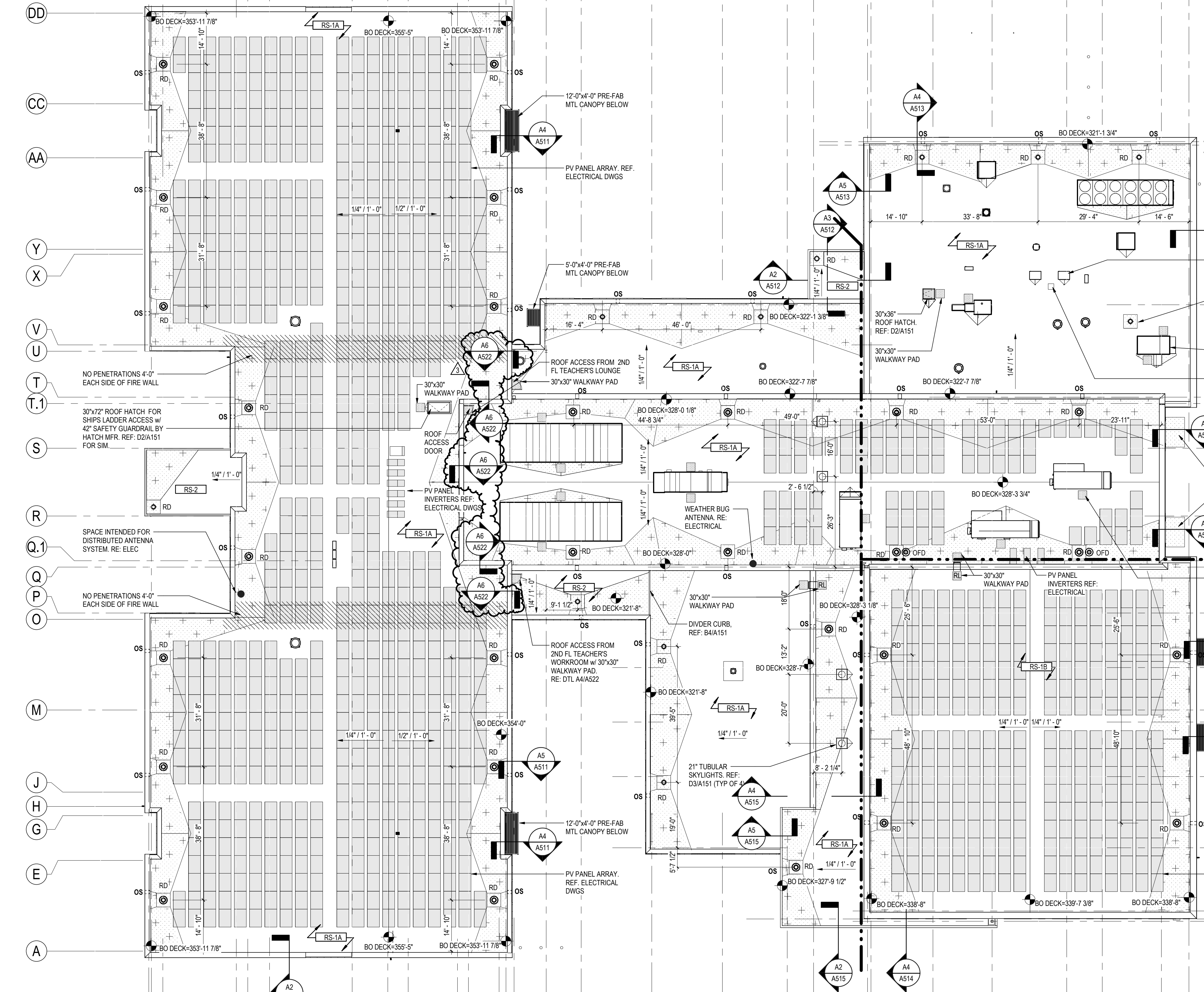
A6 PLAN DETAIL
1 1/2" = 1'-0"

A4 ENLARGED PLAN - LEVEL 1 - AREA D
1/8" = 1'-0"
ON THIS PLAN, WALL TYPE M09 IS TYPICAL AT INTERIOR WALLS. UNO

6 5 4 3 2 1

E D C B A

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20.8 21 22 23 24 25 26 27

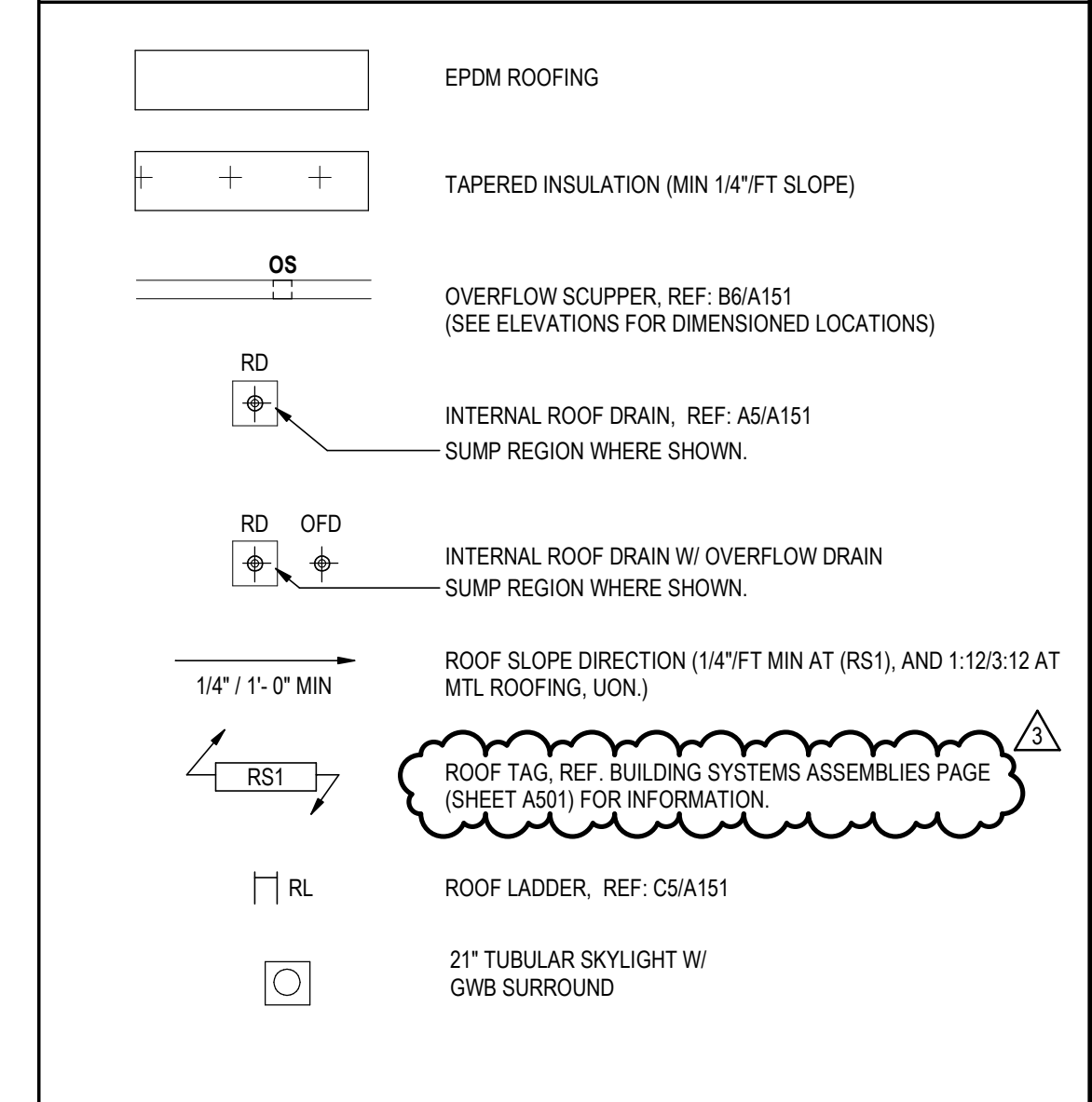


A6 ROOF LEVEL
A150 1/16" = 1'-0"

GENERAL ROOF NOTES

- REFER TO SHEETS A151 FOR TYPICAL ROOF DETAILS.
- ALL DIMENSIONS ARE FROM COLUMN / REFERENCE LINE TO CENTERLINE OF ROOF OPENING, UNO. ROOF OPENING SIZES INDICATED ARE BASED ON A SPECIFIC MANUFACTURER'S EQUIPMENT, GC TO COORDINATE OPENINGS AND SIZES WITH APPROVED EQUIPMENT'S MANUFACTURER REQUIREMENTS.
- REFER TO MEP DOCUMENTS FOR ROOFTOP EQUIPMENT NOT SHOWN. MECHANICAL, ELECTRICAL, & PLUMBING ROOF EQUIPMENT DEPICTED ON THIS SHEET IS FOR GENERAL ARCHITECTURAL INFORMATION ONLY. REFER TO MEP DOCUMENTS FOR ADDITIONAL REQUIREMENTS AND COORDINATION. REFER TO STRUCTURAL DOCUMENTS FOR EQUIPMENT SUPPORTS.
- [UNUSED]
- EXPOSED METAL FLASHING/TRIM PIECES ARE TO BE PREFINISHED STEEL, UNO. PAINT EXPOSED METAL FLASHING/TRIM PIECES THAT ARE NOT PREFINISHED, AS WELL AS ALL EXPOSED MISC STEEL PIECES. REFER TO FINISH SCHEDULE & NOTES IN A2 SERIES.
- UNLESS OTHERWISE NOTED, MINIMUM ROOF SLOPE SHALL BE 1/4" PER FOOT. PROVIDE TAPERED INSULATION (EVEN IF NOT SHOWN ON THIS PLAN) AS REQUIRED TO MAINTAIN MINIMUM REQUIRED SLOPE TO ROOF DRAINS & ELIMINATE ANY AREAS OF POTENTIAL STANDING WATER.
- PROVIDE TAPERED INSULATION CRICKETS (1/4" PER FOOT MIN SLOPE) AT HIGH SIDE OF ROOFTOP MECHANICAL EQUIPMENT, SKYLIGHTS, ROOF HATCHES, AND MISCELLANEOUS ROOF PENETRATIONS, TO SHED WATER AROUND, AND TO ENSURE ROOF DRAINAGE. ROOF PLAN SHOWS TAPERED INSULATION NOT TO SCALE AND IS FOR GRAPHIC REPRESENTATION ONLY. TO SHOW SLOPE AND APPROXIMATE LOCATION, VERIFY INSULATION REQUIRED TO MAINTAIN SLOPE, PRIOR TO INSTALLATION.
- WOOD BLOCKING AT ROOF EDGES, RIDGES, ETC. SHALL BE FABRICATED FROM CONT 2X6 MIN PAINTED WOOD BLOCKING. PROVIDE LARGER 2X PAINTED WOOD BLOCKING REQUIRED PER DETAIL DIMENSIONS. REFER TO ROOFING MANUFACTURER RECOMMENDATIONS.
- PROVIDE A MINIMUM 1/2" CLEARANCE ON ALL SIDES OF VENT STACKS AND OTHER PENETRATIONS FROM WALLS, CURBS, AND OTHER PROJECTIONS TO FACILITATE PROPER FLASHING.
- WHERE WOOD BLOCKING EXCEEDS 6" THICKNESS AT TAPERED INSULATION, PROVIDE STEM WALL CONSTRUCTION OF 6" GYPSUM AT 1" O/C W/ CONT TRACK, TOP AND BOTTOM, & WITH 3/4" PAINTED EXTERIOR GRADE PLYWOOD AT EACH SIDE, TOP TO SLOPE W/ TAPERED INSULATION.
- PROVIDE STEP FLASHING AND COVER PLATE AT SLOPED ROOF HIGH/LOW CONDITIONS.
- VERIFY ELEVATION OF ROOF DRAIN RELATIVE TO OVERFLOW SCUPPER PRIOR TO INSTALLATION OF SCUPPERS.
- LOCATE SCUPPERS AS INDICATED ON ELEVATIONS, EITHER CENTERED OVER WINDOW/OPENINGS, OR CENTERED BETWEEN WINDOW/OPENINGS, UNO. ADJUST PLACEMENT TO MEET MASONRY COURSEING MODULES.
- PROVIDE ROOF AREA DIVIDER WHERE REQUIRED AND AS INDICATED IN ROOF PLANS.
- STRUCTURAL SLOPES SHOWN ON PLAN ARE FOR GENERAL CONCEPT ONLY. REFER TO STRUCTURAL DRAWINGS FOR EXACT TOS/BOB ELEVATIONS.
- REFER TO PLUMBING DOCUMENTS FOR ROOF DRAIN LEADERS, CONNECTIONS TO STORM DRAIN, AND NOZZLES.
- FOR TYPICAL ROOF PENETRATION DETAILS, PROVIDE METAL ROOF MANUFACTURER'S STANDARD ROOF CURBS & PENETRATION DETAILS FOR LOCATIONS, WEIGHTS, AND ANY OTHER ADDITIONAL INFORMATION. REFER TO MEP DOCUMENTS, COORDINATE FINAL SIZE.
- PROVIDE CURBS AND ALL SUPPORTS NOT INDICATED IN STRUCTURAL DOCUMENTS FOR ROOF TOP MECHANICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO RTUS, CONDENSERS, & FANS. REFER TO TYPICAL CURB FLASHING DETAIL FOR BLOCKING AND FLASHING REQUIREMENTS. PROVIDE ALL BLOCKING NECESSARY TO ACHIEVE LEVEL MECHANICAL CURBS AT ALL LOCATIONS. MAINTAIN MINIMUM 6" FROM TOP OF CURB TO ADJACENT ROOF. REFER TO STRUCTURAL & MEP DOCUMENTS.
- PROVIDE SUPPORTS AND FLASHING AS REQUIRED AT NEW GAS PIPING ON THE ROOF.
- PROVIDE STANDARD EAVE CLOSURES, AND MISCELLANEOUS TRIM REQUIRED FOR COMPLETE ASSEMBLY.
- CONTRACTOR MAY DELETE WOOD BLOCKING SHOWN IN ROOFING DETAILS AS ALLOWED BY ROOFING MANUFACTURER RECOMMENDATIONS AND FACTORY MUTUAL WIND UPLIFT REQUIREMENTS.
- ALL ROOF PENETRATIONS AND ACCESSORIES (DRAINS, VENTS, ETC.) ARE TO BE INSTALLED AND FLASHED IN COMPLIANCE WITH THE SMACNA ARCHITECTURAL SHEET METAL MANUAL.
- REFER TO MEP PLANS FOR LOCATION OF PIPE AND DUCT SUPPORTS ON ROOF. COORDINATE WITH STRUCTURAL DOCUMENTS.
- NO PENETRATIONS SHALL OCCUR WITHIN 4'-0" HORIZONTALLY FROM 2 HOUR FIRE WALLS.
- [UNUSED]
- ALL ROOFTOP EQUIPMENT (EXCLUDING PREFINISHED ITEMS) SHALL BE FIELD PAINTED.
- ALL EQUIPMENT SHALL BE INSTALLED MINIMUM 11'-0" FROM ROOF EDGE OR PARAPET IF PARAPET IS BELOW 42" UNO.
- PROVIDE 50 ADDITIONAL WALKWAY PADS TO BE LOCATED BY OWNER.

ROOF LEGEND

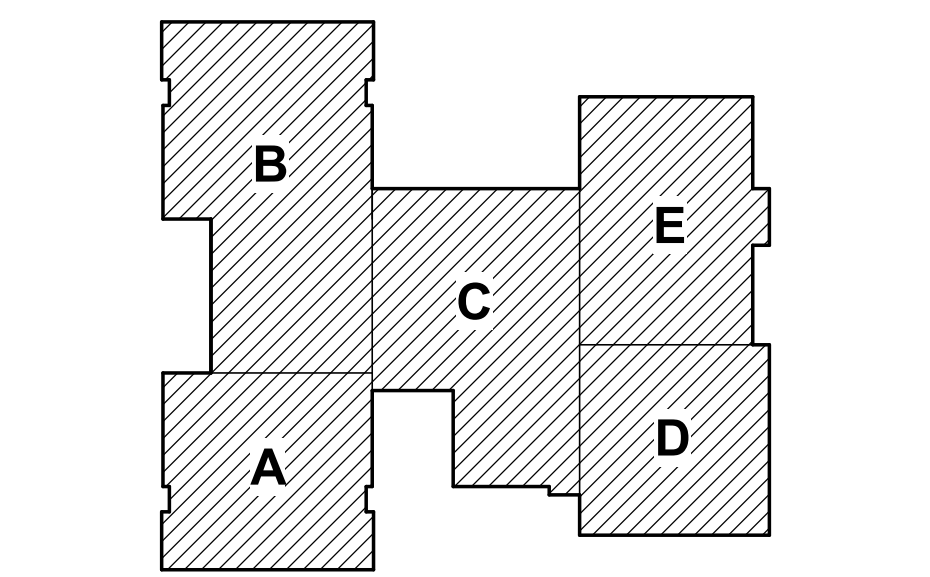


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Tel: (571) 323-0320
 - MEP - INTERFACE ENGINEERING**
2000 M STREET, NW, SUITE 270, WASHINGTON, DC 20036
Tel: (202) 370-9555
 - FOOD AND SERVICE - NIKOS & ASSOCIATES**
18219A FLOWER HILL WAY GAITHERSBURG, MD, 20879
Tel: (240) 683-9530

Keyplan



3	ADDENDUM #3	2020.03.02
	BID & PERMIT SET	2020.02.06
	100% CONSTRUCTION DOCUMENTS	2020.01.26
	65% CONSTRUCTION DOCUMENTS	2019.12.03
	DESIGN DEVELOPMENT	2019.10.08
	SCHEMATIC DESIGN	2019.08.12
	Issue/Revision	YYYY.MM.DD

Permit/Seal



Client/Project Logo



Client/Project

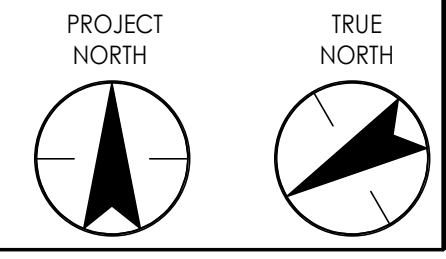
ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS

EVERGREEN MILLS ROAD, DULLES, VA 20166

Title
ROOF PLAN

Project No.	218320338	Scale	AS INDICATED
Revision	VDOE #	Drawing No.	
3	053-115-01-100	A150	



INTERIOR PARTITION SCHEDULE - GROUPS A - L (LIGHT GAUGE METAL FRAMING)

Table with columns: TYPE, CONSTRUCTION DATA, TOP TERMINATION, RATED PARTITIONS, ACOUSTICAL PERFORMANCE, NOTES. Includes rows for Group A (Material, Furring, Substrate), Group B (Material, Stud), Group C (Material, Stud, Material), and Group D (Material (2 Layers), Stud, Material (2 Layers)).

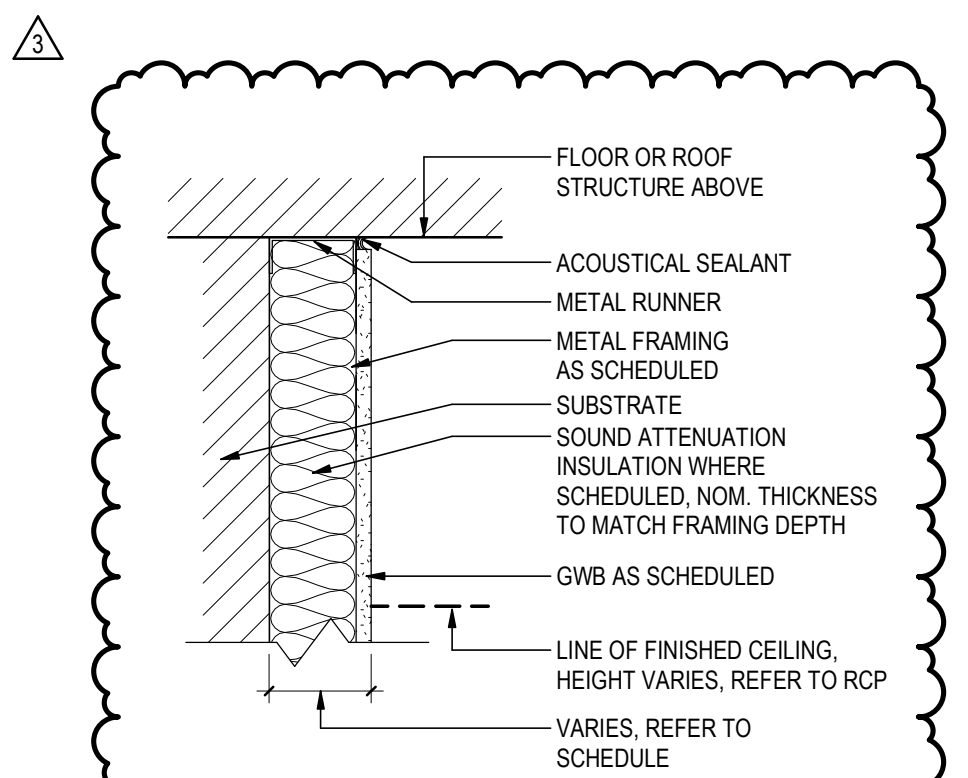
INTERIOR PARTITION SCHEDULE - GROUPS M - P (CMU FRAMING)

Table with columns: TYPE, CONSTRUCTION DATA, TOP TERMINATION, RATED PARTITIONS, ACOUSTICAL PERFORMANCE, NOTES. Includes rows for Group M (CMU), M02, M03, M05, M06G, M07, M09, M09G, M10, M11, M13, M13G, M14, XM12.6A, XM12.6B.

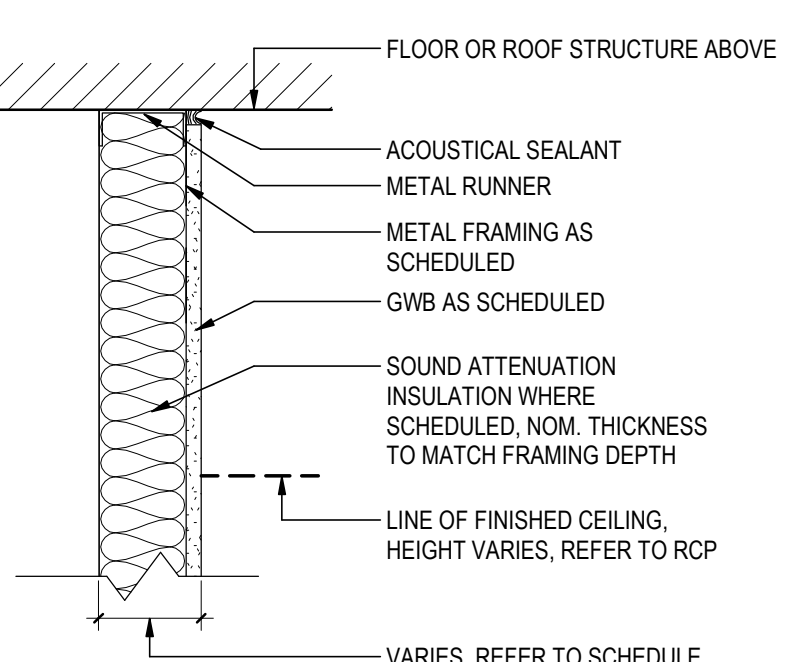
GENERAL PARTITION NOTES

- 1. REFER TO A601 FOR EXTERIOR WALL BUILDING ASSEMBLIES.
2. ALL ASSEMBLIES INDICATED ESTABLISH A BASIS OF PERFORMANCE. OTHER ASSEMBLIES MAY BE CONSIDERED AT THE SOLE DISCRETION OF THE ARCHITECT IF EQUIVALENT PERFORMANCE IS PROVIDED.
3. REFER TO CODE REVIEW (G SERIES) FOR LOCATIONS AND EXTENT OF RATED ASSEMBLIES.
4. PROVIDE INTERMEDIATE BRACING FOR FULL HEIGHT INTERIOR WALLS EXCEEDING MAXIMUM UNBRACED HEIGHTS.
5. ALL LOCATIONS OF RIGID INSULATION AT THE INTERIOR OF THE BUILDING MUST BE COVERED WITH GYPSUM WALL BOARD.
6. ALL WALLS GO TO DECK UNLESS OTHERWISE NOTED IN PARTITION SCHEDULES.
7. NOT ALL PARTITION GROUPS OR TYPES WITHIN GROUPS HAVE BEEN UTILIZED - RESULTING TYPE NUMBERS MAY NOT BE SEQUENTIAL.
8. FOR ALL PARTITION SYSTEMS THAT ARE INDICATED TO EXTEND FROM FLOOR SLAB TO UNDERSIDE OF STRUCTURE OR FLOOR SLAB ABOVE INCLUDING ALL FIRE RATED PARTITIONS AND ALL PARTITIONS INDICATED TO HAVE A SOUND TRANSMISSION CLASS (STC); PROVIDE ASSEMBLY AT HEAD OF PARTITION THAT WILL ACCOMMODATE A MINIMUM DEFLECTION OF THE STRUCTURE ABOVE THE PARTITION AS INDICATED ON THE STRUCTURAL DRAWINGS, BUT NOT LESS THAN L/260 (WHERE L = SPAN OF THE STRUCTURE) WITHOUT TRANSFERRING LOADS RESULTANT FROM THAT DEFLECTION TO THE PARTITION ASSEMBLY.
9. PROVIDE ASSEMBLY THAT WILL TRANSFER LATERAL LOADS APPLIED NORMALLY TO THE FACE OF THE PARTITION SYSTEM INTO THE STRUCTURE OR FLOOR SLAB ABOVE WHERE FIRE RATED PARTITIONS OCCUR.
10. [UNUSED]
11. ALL INTERIOR GYPSUM WALL BOARD TO BE 5/8" FIRE RESISTIVE, UNO.
12. PROVIDE CONTINUOUS ACOUSTICAL SEALANT ON BOTH SIDES OF ADJACENT WALLS AND AT TOP AND BOTTOM OF GYPSUM BOARD ASSEMBLY WALLS TO FLOOR/ROOF.
13. AT STUD WALLS, PROVIDE 1/2" CEMENTITIOUS TILE BACKER BOARD BEHIND TILE AT SHOWERS AND WET WALLS.
14. AT STUD WALLS, PROVIDE SOUND ATTENUATION AT ALL OFFICES, CLASSROOMS, RESTROOM WALLS AND MECHANICAL ROOM WALL(S) ADJACENT TO CLASSROOMS OR ADMINISTRATION.
15. MAXIMUM UNBRACED HEIGHT OF 3 5/8" INTERIOR STUD WALLS SHALL BE 15'-0".
16. MAXIMUM UNBRACED HEIGHT OF 6" INTERIOR STUD WALLS SHALL BE 20'-0".
17. ALL STC RATING REFERENCE THE "FIRE RESISTANCE DESIGN MANUAL" 17TH EDITION FOR DESIGN BASIS BY THE GYPSUM ASSOCIATION (GA).
18. [UNUSED]
19. TYPICAL STUD FRAMING AT NON-TILED WALLS TO BE SPACED AT 16" O.C. & SHALL BE 20 GA.
20. TYPICAL STUD FRAMING AT ALL WALLS TO RECEIVE TILE AT 12" O.C. & SHALL BE 20 GA.
21. [UNUSED]
22. [UNUSED]
23. MAXIMUM UNBRACED HEIGHT OF 4" INTERIOR CMU SHALL BE 12'-0".
24. MAXIMUM UNBRACED HEIGHT OF 6" INTERIOR CMU SHALL BE 16'-0".
25. MAXIMUM UNBRACED HEIGHT OF 8" INTERIOR CMU SHALL BE 24'-0".
26. ALL MASONRY WALLS ARE ASSUMED TO SPAN VERTICALLY, UNO.
27. PROVIDE MINIMUM VERTICAL REINFORCING OF #4 BARS AT 48" O.C. IN GROUDED CELLS AND HORIZONTAL JOINT REINFORCEMENT AT 16" O.C.
28. ALL ACOUSTIC PARTITION SYSTEMS SHALL BE AIR TIGHT.
29. DO NOT LOCATE ELECTRICAL, DATA, J-BOXES, ETC. BACK-TO-BACK. STAGGER PLACEMENT OF BOXES WITHIN THE WALL.
30. SEAL EACH OPENING WITHIN GYPSUM WALLS WITH ACOUSTICAL SEALANT, UNO.
31. PROVIDE FLEXIBLE SEALANT OR TAPE AT GYPSUM BOARD INTERSECTIONS TO PROVIDE AN AIRTIGHT JOINT.

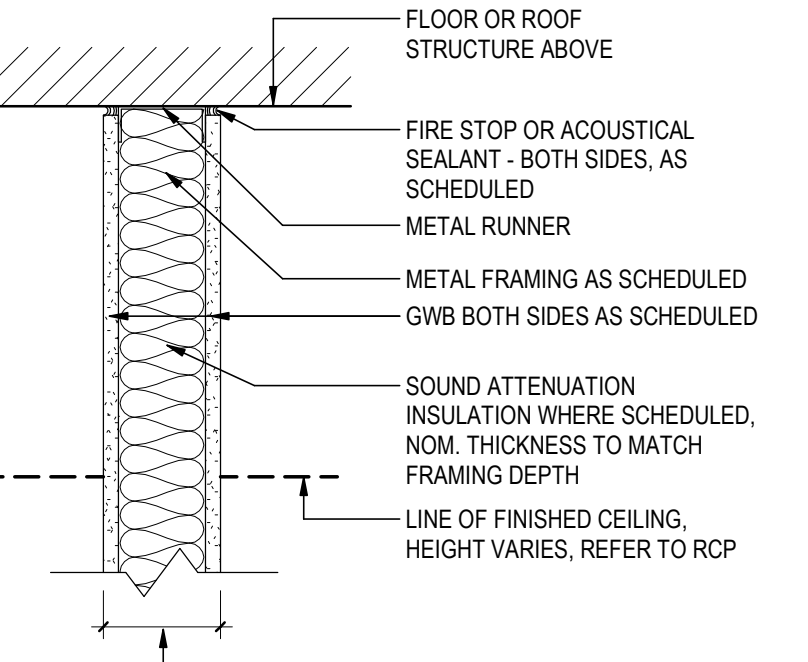
NOTE: SEE SHEET G101-G103 FOR LOCATIONS OF RATED WALLS WHERE THESE WALLS ARE INDICATED, COMPLY WITH THE FOLLOWING:
1 HR - UL #1008
2 HR - UL #1005 & #1041



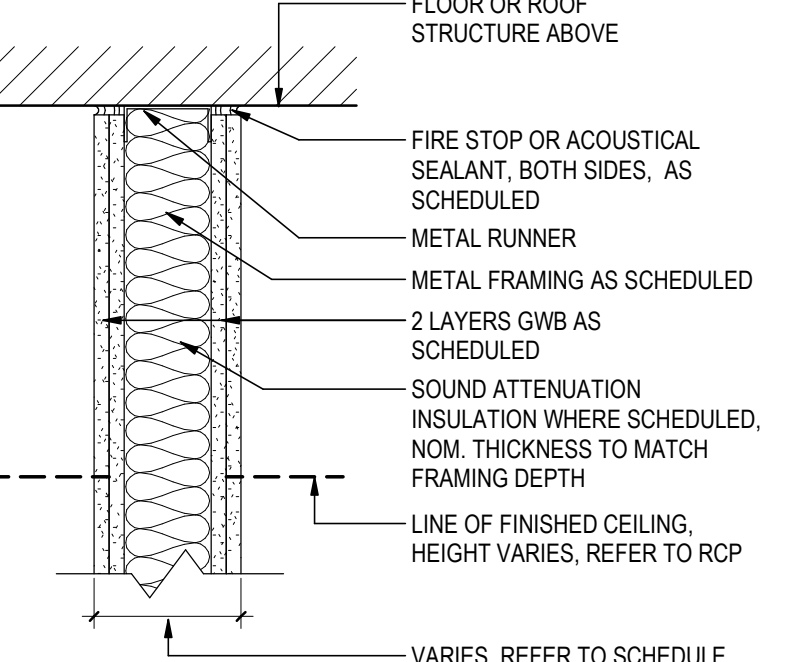
TOP TA4



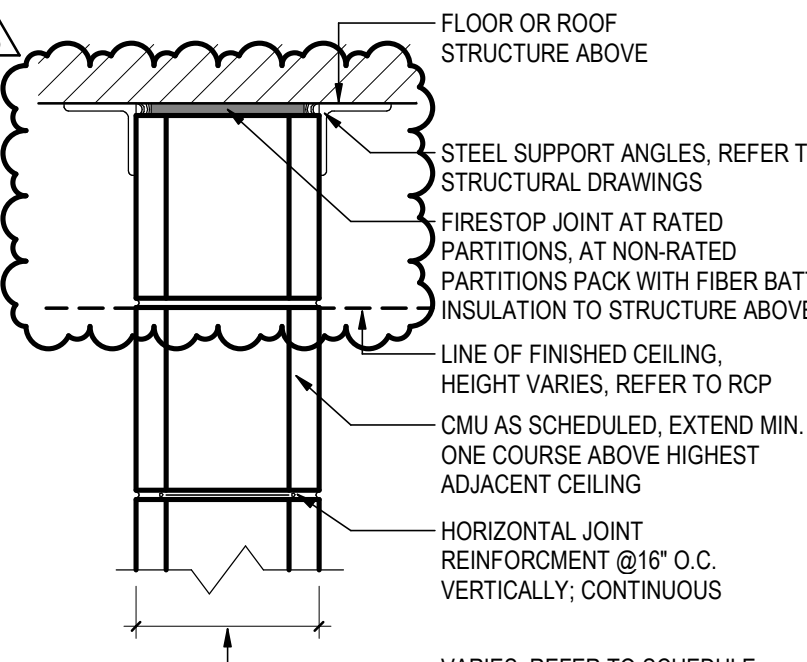
TOP TB1



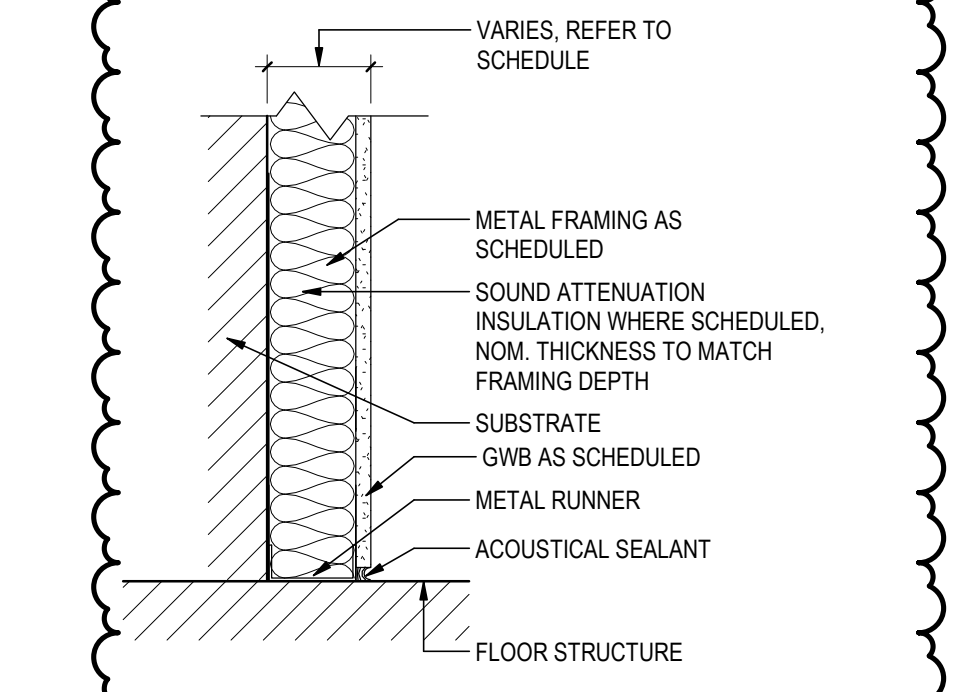
TOP TC1



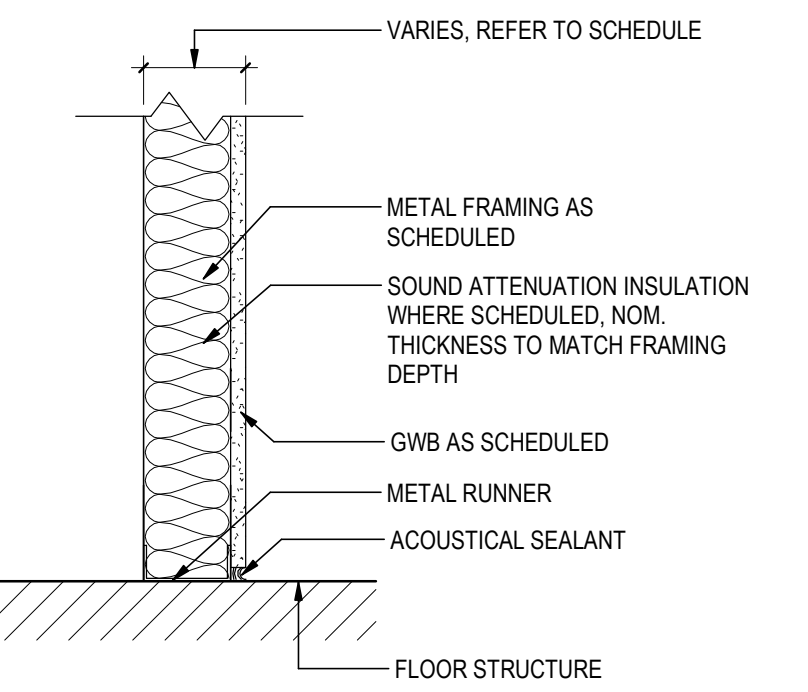
TOP TD1



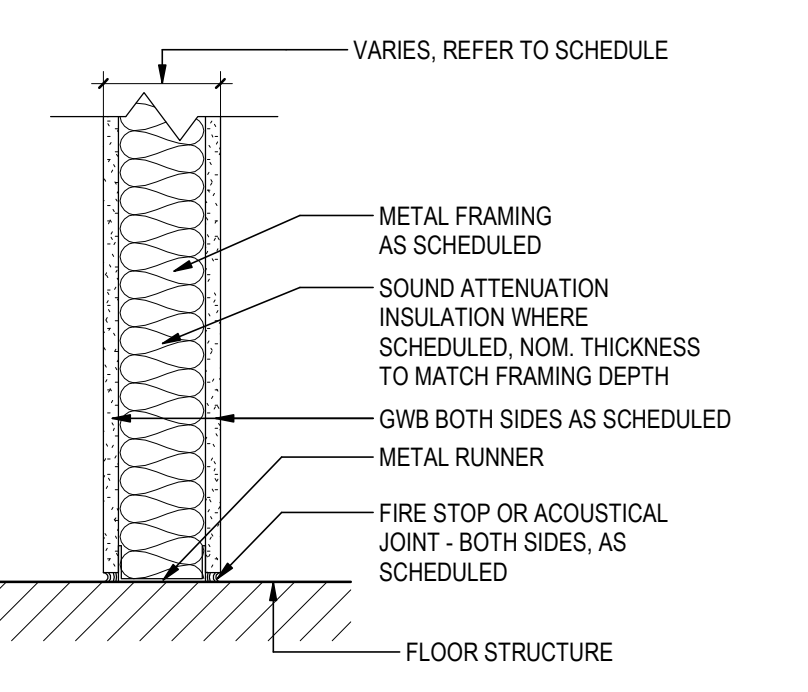
TOP TM2



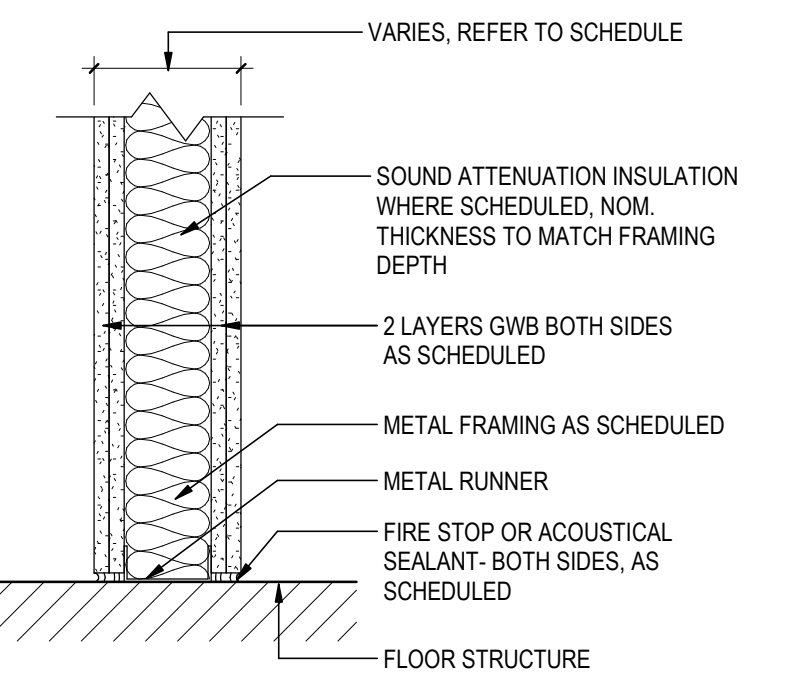
BASE BA2



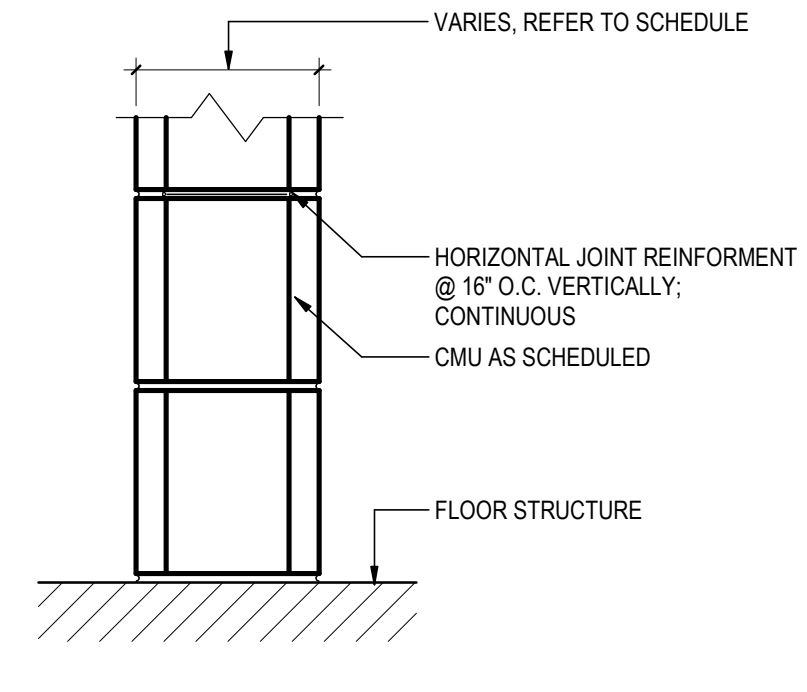
BASE BB1



BASE BC1



BASE BD1



BASE BM1

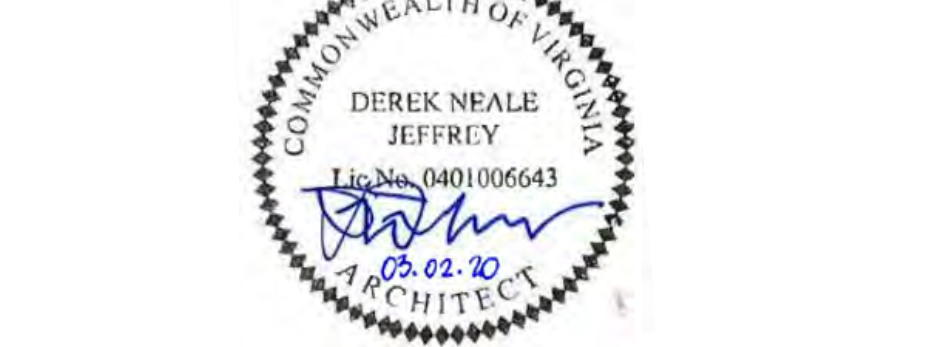


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Table with columns: Revision/Issue, Date. Includes entries for ADDENDUM #3, BID & PERMIT SET, 100% CONSTRUCTION DOCUMENTS, 65% CONSTRUCTION DOCUMENTS, DESIGN DEVELOPMENT, SCHEMATIC DESIGN.

Issue/Revision: YYYMM.DD



ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS
EVERGREEN MILLS ROAD, DULLES, VA 20166

Title: INTERIOR PARTITION TYPES & DETAILS

Project No. 218320338
Revision VDOE # 3
Scale AS INDICATED
Drawing No. A201

DOOR NUMBER	ROOM NAME	DOOR					FRAME				DOOR			COMMENTS
		CLEAR DIM		TYPE	MATERIAL	TYPE	MATERIAL	DETAILS		SILL	HW SET	OPENING		
		WIDTH	HEIGHT					HEAD	JAMB			FIRE LABEL	GLAZING	
A102	FIRST GRADE	3'-0"	7'-0"	NL	WD	HMI-14	HM	H12/A208	J12/A208	23	-	-	GL-3	
A102A	TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	38	-	-	-	
A103	FIRST GRADE	3'-0"	7'-0"	NL	WD	HMI-14	HM	H12/A208	J12/A208	22	-	-	GL-3	
A103A	TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	38	-	-	-	
A104	FIRST GRADE	3'-0"	7'-0"	NL	WD	HMI-12	HM	H12/A208	J12/A208	23	-	-	GL-3	
A104A	TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	38	-	-	-	
A105	REGIONAL CLASSROOM	3'-0"	7'-0"	NL	WD	HMI-12	HM	H12/A208	J12/A208	23	-	-	GL-3	
A105.2	REGIONAL CLASSROOM	20'-8"	9'-4"	FGS	AL		AL	C0A911	J16/A209	58	516A/209	-	GL-5	7 PANELS
A105A	TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	37	-	-	-	
A106	FIRST GRADE	3'-0"	7'-0"	NL	WD	HMI-14	HM	H12/A208	J12/A208	23	-	-	GL-3	
A106A	TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	38	-	-	-	
A107	WORKROOM	3'-0"	7'-0"	NL	WD	HMI-14	HM	H12/A208	J12/A208	23	-	-	GL-3	
A108	FIRST GRADE	3'-0"	7'-0"	NL	WD	HMI-14	HM	H12/A208	J12/A208	22	-	-	GL-3	
A108A	TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	38	-	-	-	
A109	FIRST GRADE	3'-0"	7'-0"	NL	WD	HMI-14	HM	H12/A208	J12/A208	23	-	-	GL-3	
A109A	TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	38	-	-	-	
A110	BOYS TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	31	-	-	-	
A111	GIRLS TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	31	-	-	-	
C-A11	CORR	7'-4"	7'-0"	F	HM	HMI-13	HM	H12/A208	J12/A208	18	-	90	-	1
S-A1.1	STAR #1	8'-2"	7'-0"	FLD	HM	HMI-3	HM	C3A521	C4A530	11A	-	-	GL-4	6
S-A1.2	STAR #1	3'-0"	7'-0"	F	HM	HMI-26	HM	H5A208	J14A209	19	-	45	-	1
S-A1.3	STAR #1	3'-0"	7'-0"	F	HM	HMI-26	HM	H5A208	J14A209	19	-	45	-	1

DOOR NUMBER	ROOM NAME	DOOR					FRAME				DOOR			COMMENTS
		CLEAR DIM		TYPE	MATERIAL	TYPE	MATERIAL	DETAILS		SILL	HW SET	OPENING		
		WIDTH	HEIGHT					HEAD	JAMB			FIRE LABEL	GLAZING	
B102	KINDERGARTEN	3'-0"	7'-0"	NL	WD	HMI-14	HM	H12/A208	J12/A208	23	-	-	GL-3	
B102A	TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	38	-	-	-	
B103	KINDERGARTEN	3'-0"	7'-0"	NL	WD	HMI-14	HM	H12/A208	J12/A208	22	-	-	GL-3	
B103A	TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	38	-	-	-	
B104	KINDERGARTEN	3'-0"	7'-0"	NL	WD	HMI-12	HM	H12/A208	J12/A208	22	-	-	GL-3	
B104A	TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	38	-	-	-	
B105	REGIONAL CLASSROOM	3'-0"	7'-0"	NL	WD	HMI-12	HM	H12/A208	J12/A208	27	-	-	GL-3	
B105.2	REGIONAL CLASSROOM	20'-8"	9'-4"	FGS	AL		AL	C0A911	J16/A209	58	516A/209	-	GL-6	7 PANELS
B105A	TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	37	-	-	-	
B106	KINDERGARTEN	3'-0"	7'-0"	NL	WD	HMI-14	HM	H12/A208	J12/A208	23	-	-	GL-3	
B106A	TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	38	-	-	-	
B107	WORKROOM	3'-0"	7'-0"	NL	WD	HMI-14	HM	H12/A208	J12/A208	22	-	-	GL-3	
B108	KINDERGARTEN	3'-0"	7'-0"	NL	WD	HMI-14	HM	H12/A208	J12/A208	22	-	-	GL-3	
B108A	TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	38	-	-	-	
B109	KINDERGARTEN	3'-0"	7'-0"	NL	WD	HMI-14	HM	H12/A208	J12/A208	23	-	-	GL-3	
B109A	TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	38	-	-	-	
B110	BOYS TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	31	-	-	-	
B111	GIRLS TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	31	-	-	-	
B112	ELEC	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	153	-	-	-	
B113	SPED CLASSROOM	3'-0"	7'-0"	NL	WD	HMI-12	HM	H12/A208	J12/A208	24	-	-	GL-3	
B113A	SPED TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	36	-	-	-	
B114	RESOURCE	3'-0"	7'-0"	NL	WD	HMI-12	HM	H12/A208	J12/A208	22	-	-	GL-3	
B115	DATA	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	50	-	-	-	
B116	STAFF TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	35	-	-	-	
B117	DDI	3'-0"	7'-0"	HL	WD	HMI-12	HM	H13A208	J13A208	22	-	-	GL-3	
B118	MEDIA OFFICE	3'-0"	7'-0"	HL	WD	HMI-25	HM	H13A208	J13A208	21	-	-	GL-3	
B119	WELLNESS RM	3'-0"	7'-0"	F	WD	HMI-12	HM	H13A208	J13A208	22	-	-	-	
B120	CLUS	3'-0"	7'-0"	F	WD	HMI-12	HM	H13A208	J13A208	33	-	-	-	
B121	BOOK STORAGE	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	44	-	-	-	
C-B11	CORR	7'-4"	7'-0"	F	HM	HMI-13	HM	H12/A208	J12/A208	18	-	90	-	1
S-B1.1	STAR #2	8'-2"	7'-0"	FLD	HM	HMI-3	HM	C3A521	C4A530	11A	-	-	GL-4	6
S-B1.2	STAR #2	3'-0"	7'-0"	F	HM	HMI-26	HM	H5A208	J14A209	19	-	45	-	1
S-B1.3	STAR #2	3'-0"	7'-0"	F	HM	HMI-26	HM	H5A208	J14A209	19	-	45	-	1
S-B2.1	STAR #3	8'-2"	7'-0"	FLD	HM	HMI-3	HM	C6A521	C4A530	15	-	-	GL-4	6
S-B2.2	STAR #3	6'-2"	7'-0"	FLD	HM	HMI-3	HM	C6A521	C4A530	12	-	-	GL-4	6

DOOR NUMBER	ROOM NAME	DOOR					FRAME				DOOR			COMMENTS
		CLEAR DIM		TYPE	MATERIAL	TYPE	MATERIAL	DETAILS		SILL	HW SET	OPENING		
		WIDTH	HEIGHT					HEAD	JAMB			FIRE LABEL	GLAZING	
C101.1	RECEPTION	3'-0"	7'-0"	FLD	WD	HMI-20	HM	H5A208	B3A532	5	-	-	GL-4	2, 3, 8
C101.2	RECEPTION	3'-0"	7'-0"	FLD	WD	HMI-21	HM	H5A208	B3A532	6	-	-	GL-3	
C102	CLINIC	3'-0"	7'-0"	HL	WD	HMI-10	HM	H5A208	J5A208	20	-	-	GL-3	
C102A	CLINIC TOILET	3'-0"	7'-0"	F	WD	HMI-10	HM	H5A208	J5A208	36	-	-	-	
C103	PRINCIPAL'S OFFICE	3'-0"	7'-0"	HL	WD	HMI-10	HM	H5A208	J5A208	21	-	-	GL-3	
C103A	PRINCIPAL'S TOILET	3'-0"	7'-0"	F	WD	HMI-10	HM	H5A208	J5A208	35	-	-	-	
C104	ADMIN OFFICE	3'-0"	7'-0"	HL	WD	HMI-10	HM	H5A208	J5A208	21	-	-	GL-3	
C105	WORKROOM	3'-0"	7'-0"	HL	WD	HMI-10	HM	H5A208	J5A208	23	-	-	GL-3	
C106	ASSISTANT PRINCIPAL	3'-0"	7'-0"	HL	WD	HMI-10	HM	H5A208	J5A208	21	-	-	GL-3	
C107	SUPPLY STORAGE	3'-0"	7'-0"	F	WD	HMI-10	HM	H5A208	J5A208	43	-	-	-	
C108	RECORDS	3'-0"	7'-0"	F	WD	HMI-10	HM	H5A208	J5A208	40	-	90	-	
C109	CONF	3'-0"	7'-0"	HL	WD	HMI-10	HM	H5A208	J5A208	20	-	-	GL-3	
C109A	STORAGE	3'-0"	7'-0"	F	WD	HMI-10	HM	H5A208	J5A208	41	-	-	-	
C110	STAFF TOILET	3'-0"	7'-0"	F	WD	HMI-10	HM	H5A208	J5A208	36	-	-	-	
C111.1	MEDIA CENTER	7'-0"	7'-0"	FLD	WD	HMI-13	HM	H12/A208	J12/A208	27	-	-	GL-3	1
C111.2	MEDIA CENTER	7'-0"	7'-0"	FLD	WD	HMI-13	HM	H12/A208	J12/A208	29	-	-	GL-3	1
C113	IFT	3'-0"	7'-0"	HL	WD	HMI-12	HM	H13A208	J13A208	21	-	-	GL-3	
C114	MEDIA CONF	3'-0"	7'-0"	HL	WD	HMI-12	HM	H13A208	J13A208	21	-	-	GL-3	
C115	STUDIO	3'-0"	7'-0"	HL	WD	HMI-12	HM	H13A208	J13A208	21	-	-	GL-3	
C116	LIBRARY WORKROOM	3'-0"	7'-0"	HL	WD	HMI-12	HM	H13A208	J13A208	21	-	-	GL-3	
C117	ART	3'-0"	7'-0"	HL	WD	HMI-25	HM	H13A208	J13A208	25B	-	-	GL-3	
C117.2	ART	3'-0"	7'-0"	FLD	WD	HMI-6	HM	E3A521	C4A530	16	-	90	-	GL-4
C117A	ART STORAGE	3'-0"	7'-0"	NL	WD	HMI-12	HM	H12/A208	J12/A208	42	-	-	GL-3	
C117B	KLN	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	22	-	-	GL-3	
C118	BOYS TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	32	-	-	-	
C119	GIRLS TOILET	3'-0"	7'-0"	F	WD	HMI-12	HM	H12/A208	J12/A208	32	-	-	-	
C120	PLAY STORAGE	6'-0"	7'-0"	F	HM	HMI-9	HM	E3A521	C4A530	9A	-	-	-	
C-C10.1	VESTIBULE	6'-2"	7'-0"	FLD	HM	HMI-1	HM	C8A521	C4A530	1	-	-	GL-4	2, 3, 6
C-C10.2	VESTIBULE	6'-2"	7'-0"	FLD	HM	HMI-1	HM	C8A521	C4A530	2	-	-	GL-4	2, 3, 4, 6
C-C11.1	VESTIBULE	6'-2"	7'-0"	FLD	HM	HMI-20A	HM	H5A208	M1M38A208	3	-	-	GL-4	4, 6
C-C11.2	VESTIBULE	6'-2"	7'-0"	FLD	HM	HMI-20A	HM	H5A208	M1M38A208	4	-	-	GL-4	4, 6
C-C11.3	CORR	6'-2"	7'-0"	FLD	HM	HMI-2	HM	C8A521	C4A530	13	-	-	GL-4	2, 3, 6
C-C11.4	CORR	6'-2"	7'-0"	FLD	HM	HMI-2	HM	C8A521	C4A530	14	-	-	GL-4	2, 3, 6
C-C12.1	CORR	3'-0"	7'-0"	FLD	WD	HMI-10	HM	H5A208	J5A208	5	-	-	GL-3	
C-C12.2	CORR	3'-0"	7'-0"	FLD	WD	HMI-21	HM	H15A208	J15A208	6	-	-	GL-3	

DOOR NUMBER	ROOM NAME	DOOR					FRAME				DOOR			COMMENTS
		CLEAR DIM		TYPE	MATERIAL	TYPE	MATERIAL	DETAILS		SILL	HW SET	OPENING		
		WIDTH	HEIGHT					HEAD	JAMB			FIRE LABEL	GLAZING	
D101.1	MUSIC	3'-6"	7'-0"	HL	HM	HMI-30	HM	H13A208	J13A208	25	-	-	GL-5	5
D101.2	MUSIC	3'-6"	7'-0"	NL	WD	HMI-12	HM	H12/A208	J12/A208	25A	-	-	GL-5	5
D101A	MUSIC STORAGE	3'-6"	7'-0"	F	WD	HMI-10	HM	H12/A208	J12/A208	43A	-	-	-	
D102	MUSIC STORAGE	6'-0"	7'-0"	HL	WD	HMI-22	HM	H13A208	J13A208	28	-	-	GL-3	
D102.2	CORR	6'-0"	7'-0"	HL	WD	HMI-22	HM	H13A208	J13A208	26	-	-	GL-3	
D102.3	MUSIC STORAGE	6'-0"	7'-0"	HL	WD	HMI-22								

DOOR SCHEDULE - LEVEL 1 - AREA E

Table with columns: DOOR NUMBER, ROOM NAME, CLEAR DIM (WIDTH, HEIGHT), DOOR (TYPE, MATERIAL), FRAME (HEAD, JAMB), SILL, DOOR (HW SET), OPENING (FIRE LABEL, GLAZING), COMMENTS. Includes handwritten notes and annotations.

DOOR SCHEDULE - LEVEL 2 - AREA A

Table with columns: DOOR NUMBER, ROOM NAME, CLEAR DIM (WIDTH, HEIGHT), DOOR (TYPE, MATERIAL), FRAME (HEAD, JAMB), SILL, DOOR (HW SET), OPENING (FIRE LABEL, GLAZING), COMMENTS.

DOOR SCHEDULE - LEVEL 2 - AREA B

Table with columns: DOOR NUMBER, ROOM NAME, CLEAR DIM (WIDTH, HEIGHT), DOOR (TYPE, MATERIAL), FRAME (HEAD, JAMB), SILL, DOOR (HW SET), OPENING (FIRE LABEL, GLAZING), COMMENTS.

DOOR SCHEDULE - LEVEL 3 - AREA A

Table with columns: DOOR NUMBER, ROOM NAME, CLEAR DIM (WIDTH, HEIGHT), DOOR (TYPE, MATERIAL), FRAME (HEAD, JAMB), SILL, DOOR (HW SET), OPENING (FIRE LABEL, GLAZING), COMMENTS.

DOOR SCHEDULE - LEVEL 3 - AREA B

Table with columns: DOOR NUMBER, ROOM NAME, CLEAR DIM (WIDTH, HEIGHT), DOOR (TYPE, MATERIAL), FRAME (HEAD, JAMB), SILL, DOOR (HW SET), OPENING (FIRE LABEL, GLAZING), COMMENTS.

GENERAL DOOR AND WINDOW NOTES

- 1. DOOR AND FRAME DETAILS INDICATE GENERAL CHARACTERISTICS OF DOOR, FRAME SIZES, AND COMPONENTS AND MAY NOT INDICATE EXACT FIELD CONDITIONS OR REQUIREMENTS...
2. WHEN EXPOSED CLEAR FINISHED WOOD DOORS ARE PAIRED, PROVIDE MATCHING GRAIN TYPE AND COLOR FOR EACH DOOR IN PAIR.
3. FILL ALL HOLLOW METAL (HM) FRAMES ABUTTING MASONRY WITH GROUT. FILL INTERMEDIATE MEMBERS AS SHOWN IN DETAILS (TYPICAL).
4. PROVIDE BRUSHED STAINLESS STEEL KICK PLATES ON PUSH SIDE OF DOORS WITH PUSH BARS AND/OR CLOSER DEVICES. KICK PLATE SHALL BE INSET 1/2" FROM EACH SIDE OF DOOR AND MAXIMUM 8" HIGH OR 1/2" BELOW EDGE OF GLASS LIGHT (IF PRESENT).
5. IF CONFLICT EXISTS BETWEEN DOOR RATING AS SCHEDULED AND WALL/PARTITION TYPE FIRE RATING AS SHOWN ON PLANS, PROVIDE DOOR(S) WITH THE GREATER FIRE RATING OF THE TWO.
6. VERIFY ALL DIMENSIONS AND CLEARANCES, AND COORDINATE UNDERCUTTING REQUIRED TO CLEAR ADJACENT FLOOR MATERIALS.
7. ALL EXTERIOR DOORS SHALL RECEIVE CONTINUOUS WEATHERSTRIPPING AND DOOR BOTTOM SEALS SEE SPEC.
8. ALL HOLLOW METAL FRAMES TO HAVE A 2" FACE DIMENSION UNON WITH A 5/8" STOP. 3/4" STOP REQUIRED FOR FIRE RATED FRAMES.
9. HOLLOW METAL FRAME DEPTHS INDICATED IN DETAILS ARE NOMINAL. PROVIDE THROAT OPENING SIZED TO FIT WALL THICKNESS PER DESIGNATED WALL TYPE.
10. FIELD VERIFY DIMENSION PRIOR TO FABRICATING FRAMES.
11. PROVIDE METAL STRAPPING BETWEEN STUDS IN GYP BOARD WALLS BEHIND DOORS SCHEDULED TO HAVE WALL MOUNTED DOOR STOPS.
12. FLOOR MATERIAL TRANSITIONS BETWEEN ROOMS TO BE CENTERED UNDER DOOR.
13. DOOR SWINGS ON FLOOR PLANS SHALL TAKE PRECEDENCE OVER SWINGS INDICATED ELSEWHERE (E.G. ELEVATIONS).
14. GLASS THICKNESS DESIGNATION INDICATED ARE MINIMUMS AND ARE FOR DETAILING ONLY. GLAZING TRADE CONTRACTOR TO DETERMINE SAFETY GLAZING REQUIREMENTS & TO CONFIRM GLASS THICKNESSES BY ANALYZING PROJECT LOADS, IN SERVICE CONDITIONS, AND GLASS LOCATIONS.
15. SEE FRAME ELEVATIONS FOR GLAZING TYPES.
16. PROVIDE LOCKDOWN SHADES AT ALL DOORS WITH VISION LIGHTS UNLESS OTHERWISE NOTED WITH SPECIFIC DOOR COMMENT OR NOTED ON FRAME TYPE. LOCKDOWN SHADES ARE NOT REQUIRED AT TYPING GLASS TOBEROOF DOORS.

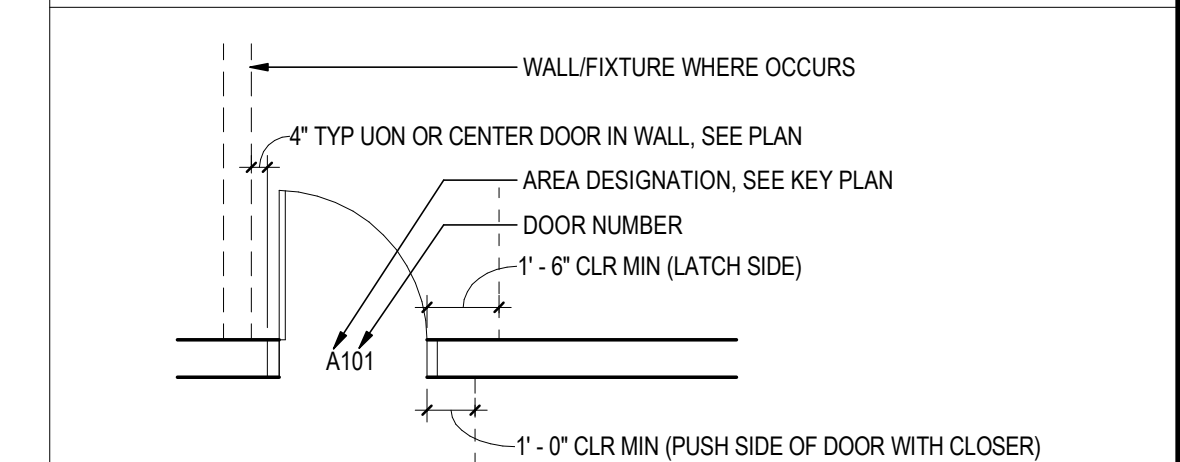
SPECIFIC DOOR SCHEDULE COMMENTS

- 1. PROVIDE ELECTRO-MAGNETIC HOLD OPEN DEVICE. CONNECT TO FIRE ALARM WHERE INDICATED ON ELEC.
2. PROVIDE AUTOMATIC DOOR OPERATOR SYSTEM, REF ELEC.
3. CARD READER CONNECTED TO SECURITY SYSTEM.
4. PROVIDE REMOVABLE MULLION.
5. PROVIDE ACOUSTIC SEAL AROUND DOOR.
6. LOCKDOWN SHADE NOT REQUIRED AT THIS DOOR.

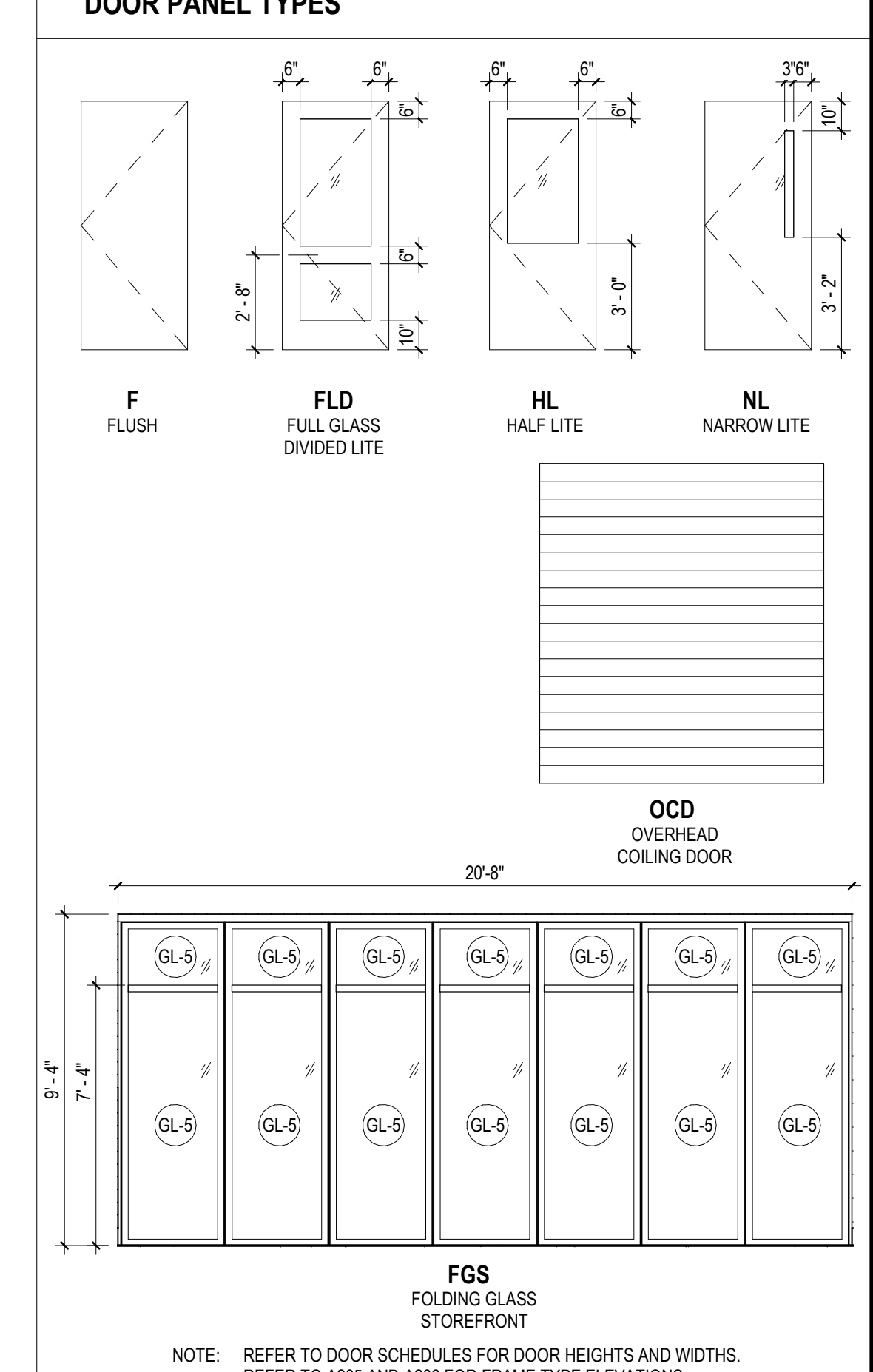
GLAZING SCHEDULE

- GL-1 - INSULATED GLASS
BOD: SOLARBAN 80, COLOR ATLANTICA
GL-2 - INSULATED GLASS WITH SECURITY FILM
GL-1 W/ SECURITY FILM BOD: ARMOURD ONE ACTSAF23. 23-MIL FILM W/SCRATCH RESISTANT COATING ON INSIDE FACE (SECURE SIDE) OF GLASS)
GL-3 - 1/4" TEMPERED FLOAT GLASS
GL-4 - 1/4" TEMPERED FLOAT GLASS WITH SECURITY FILM
GL-3 W/ SECURITY FILM BOD: ARMOURD ONE ACTSAF23. 23-MIL FILM W/SCRATCH RESISTANT COATING ON INSIDE FACE (SECURE SIDE) OF GLASS)
GL-5 - CLEAR ACOUSTIC GLASS
BOD: VIBRACON LAMINATED ACOUSTIC GLASS, OVERALL 1/4", MIN STC RATING OF 35
GL-6 - FIRE RATED, CLEAR ACOUSTIC GLASS
BOD: TOP FIRELIGHT PLUS
GL-7 - 1/4" TEMPERED FLOAT GLASS W/ FROSTED FILM
GL-3 W/ FROSTED FILM BOD: 3M PASKARA FILM

DOOR MARK KEY - LOCATION OF SECURITY FILM



DOOR PANEL TYPES



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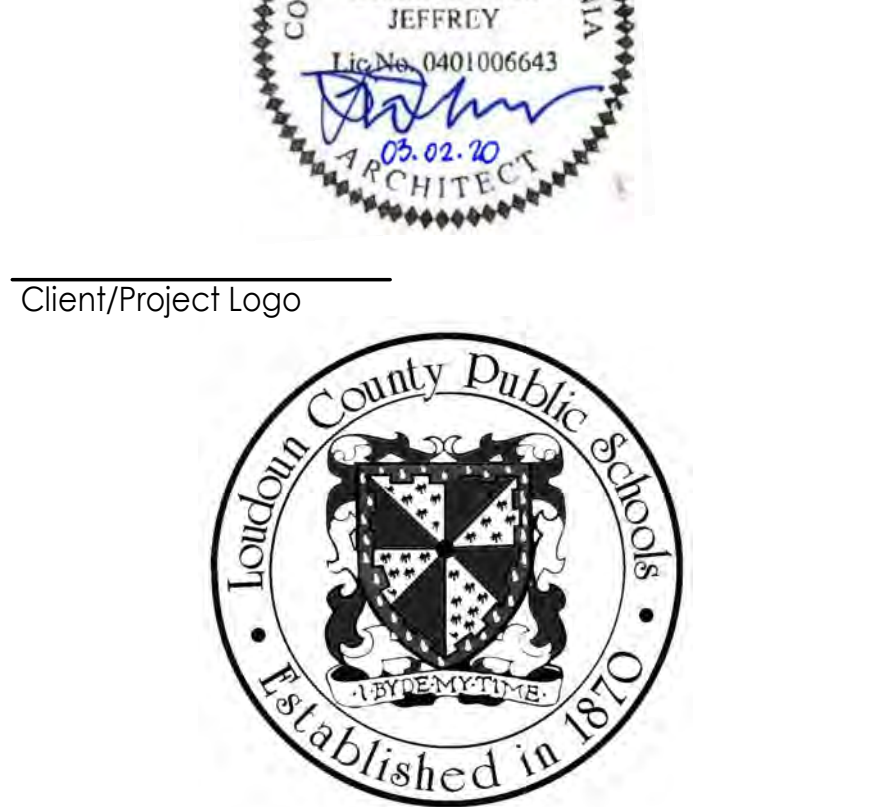
STRUCTURAL - LINTON ENGINEERING
46090 LAKE CENTER PLAZA, SUITE 309 POTOMAC FALLS, VA 20165
Tel: (571) 323-0320

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Tel: (240) 683-9530

3 ADDENDUM #3 2020.03.02
BID & PERMIT SET 2020.02.06
100% CONSTRUCTION DOCUMENTS 2020.01.26
65% CONSTRUCTION DOCUMENTS 2019.12.03
DESIGN DEVELOPMENT 2019.10.08
SCHEMATIC DESIGN 2019.08.12
Issue/Revision YYY.MM.DD

Permit/Seal
COMMONWEALTH OF VIRGINIA
DEREK NEALE
JEFFREY
10.26.20 0401006643
A PROFESSIONAL ARCHITECT



ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS
EVERGREEN MILLS ROAD, DULLES, VA 20166

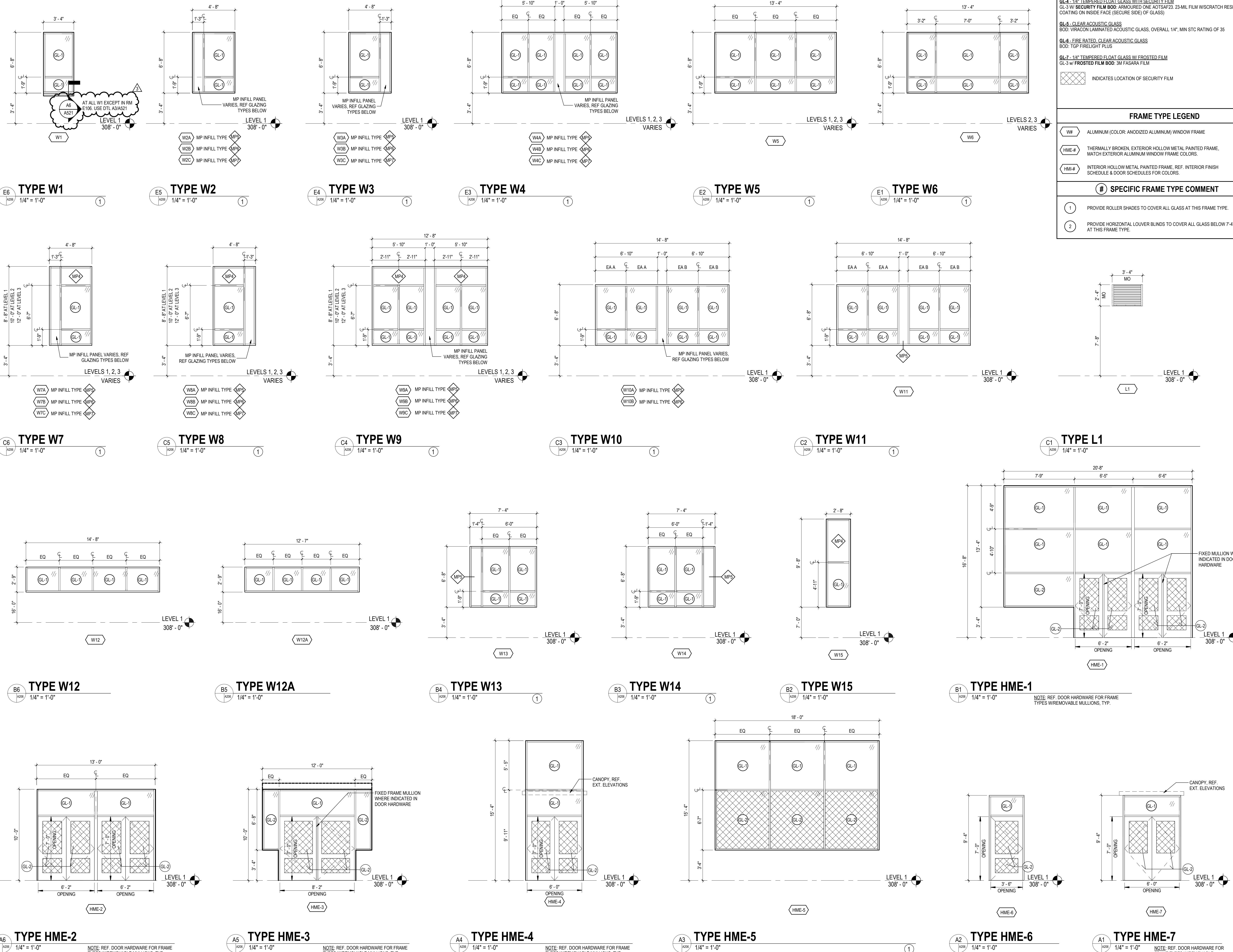
Title
DOOR SCHEDULES

Project No. 218320338 Scale AS INDICATED
Revision VDOE # Drawing No.
3 053-115-01-100 A203

4852 Loudoun Co Project Information
1/1/2020 10:03:15 AM

EXTERIOR FRAME TYPE ELEVATIONS

1/4" = 1'-0"



GLAZING SCHEDULE	
GL-1	INSULATED GLASS BOD: SOLARBAN 60, COLOR ATLANTICA
GL-2	INSULATED GLASS WITH SECURITY FILM GL-1 W/ SECURITY FILM BOD: ARMORED ONE AOTSAF23 23-MIL FILM W/SCRATCH RESISTANT COATING ON INSIDE FACE (SECURE SIDE) OF GLASS
GL-3	1/4" TEMPERED FLOAT GLASS
GL-4	1/4" TEMPERED FLOAT GLASS WITH SECURITY FILM GL-3 W/ SECURITY FILM BOD: ARMORED ONE AOTSAF23 23-MIL FILM W/SCRATCH RESISTANT COATING ON INSIDE FACE (SECURE SIDE) OF GLASS
GL-5	CLEAR ACOUSTIC GLASS BOD: VIRACON LAMINATED ACOUSTIC GLASS, OVERALL 1/4", MIN STC RATINGS OF 35
GL-6	FIRE RATED, CLEAR ACOUSTIC GLASS BOD: TGP FIRELIGHT PLUS
GL-7	1/4" TEMPERED FLOAT GLASS W/ FROSTED FILM GL-3 W/ FROSTED FILM BOD: 3M FASARA FILM
	INDICATES LOCATION OF SECURITY FILM
FRAME TYPE LEGEND	
W#	ALUMINUM (COLOR: ANODIZED ALUMINUM) WINDOW FRAME
HME-#	THERMALLY BROKEN, EXTERIOR HOLLOW METAL PAINTED FRAME, MATCH EXTERIOR ALUMINUM WINDOW FRAME COLORS.
HMI-#	INTERIOR HOLLOW METAL PAINTED FRAME, REF. INTERIOR FINISH SCHEDULE & DOOR SCHEDULES FOR COLORS.
# SPECIFIC FRAME TYPE COMMENT	
1	PROVIDE ROLLER SHADES TO COVER ALL GLASS AT THIS FRAME TYPE.
2	PROVIDE HORIZONTAL LOUVER BLINDS TO COVER ALL GLASS BELOW 7'-4" AT THIS FRAME TYPE.

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Tel: (240) 683-9530

REVISIONS	
3	ADDENDUM #3 2020.03.02
2	ADDENDUM #1 2020.02.20
1	BID & PERMIT SET 2020.02.06
	100% CONSTRUCTION DOCUMENTS 2020.01.26
	65% CONSTRUCTION DOCUMENTS 2019.12.03
	DESIGN DEVELOPMENT 2019.10.08
	SCHEMATIC DESIGN 2019.08.12
	Issue/Revision YYYJ.MM.DD

Client/Project Logo

Loudoun County Public Schools
Established in 1870

ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS
EVERGREEN MILLS ROAD, DULLES, VA 20166

Title
EXTERIOR FRAME TYPES

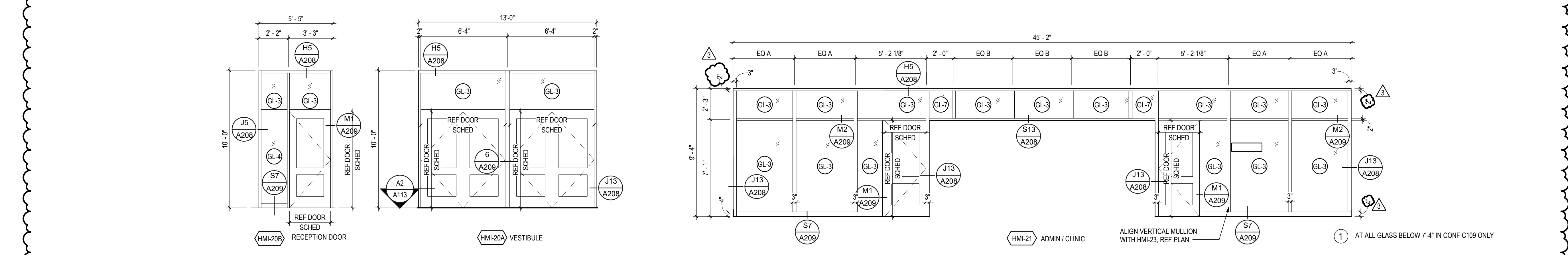
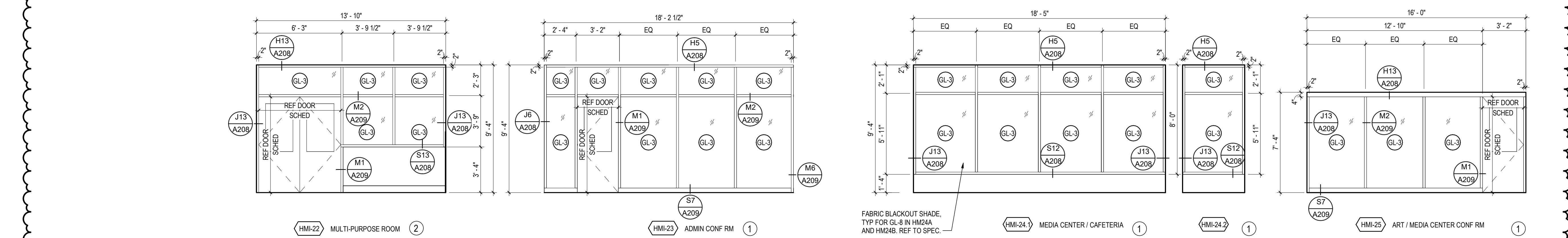
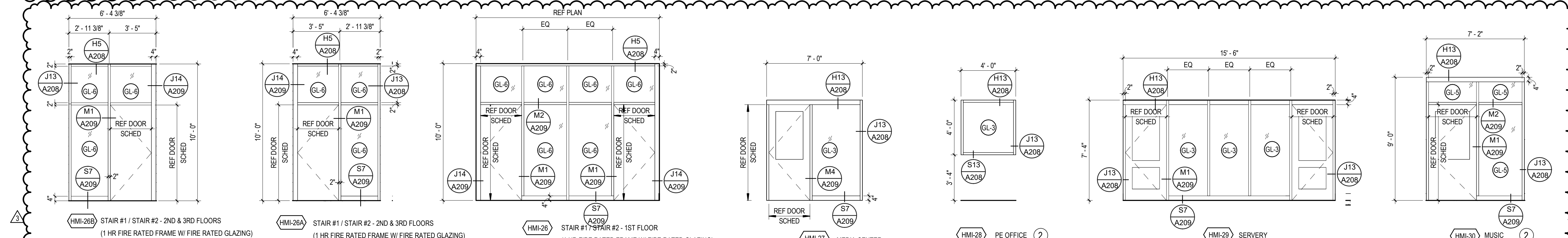
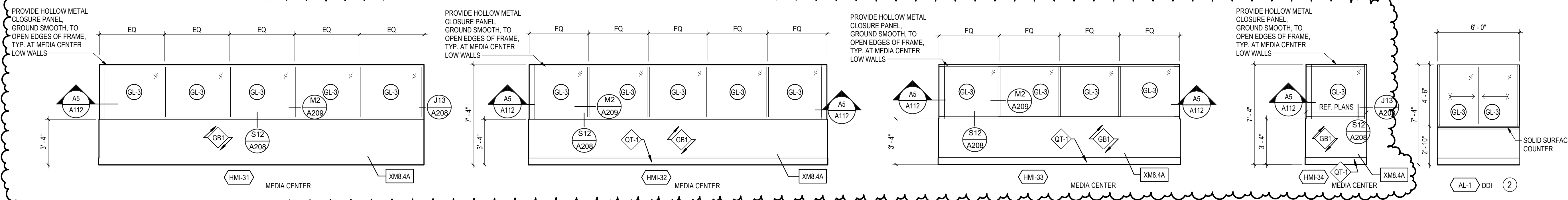
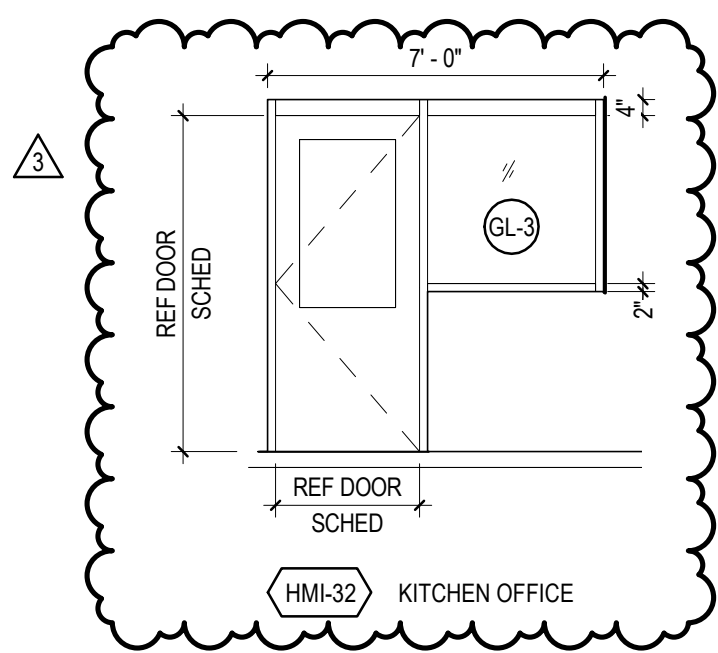
Project No. 218320338
Revision VDOE # 3

Scale AS INDICATED
Drawing No. A206

INTERIOR FRAME TYPE ELEVATIONS

1/4" = 1' - 0"

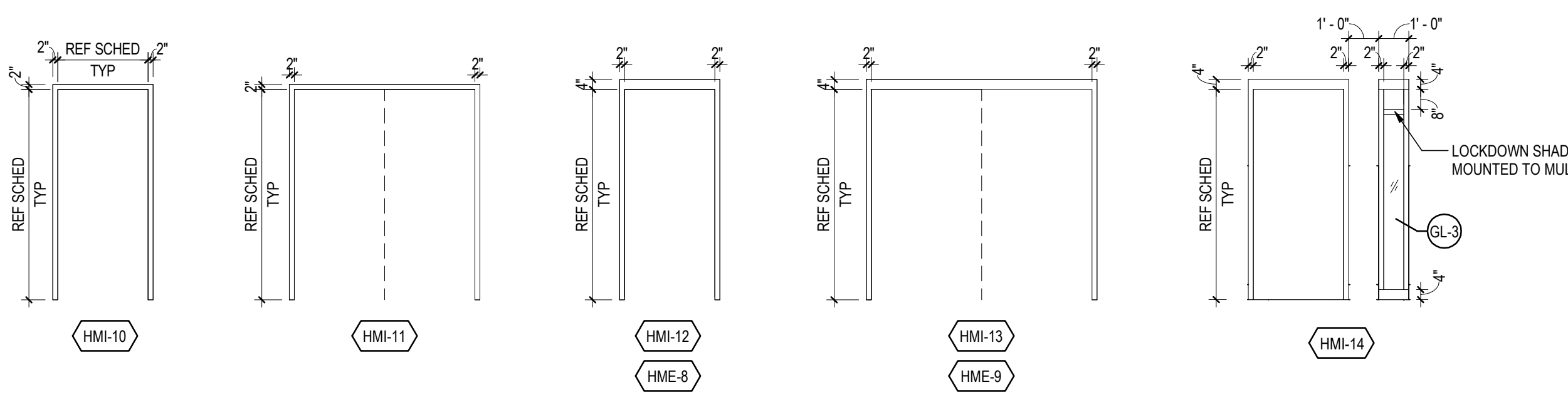
NOTE: REFER TO DOOR SCHEDULES FOR DOOR PANEL TYPES.
NOTE: REFER TO DOOR HARDWARE SCHEDULE FOR FRAME TYPES WITH REMOVABLE MULLIONS.



DOOR FRAME TYPES

1/4" = 1' - 0"

NOTE: REFER TO DOOR SCHEDULES FOR DOOR PANEL TYPES.
NOTE: REFER TO DOOR HARDWARE SCHEDULE FOR FRAME TYPES WITH REMOVABLE MULLIONS.



GLAZING SCHEDULE

- GL-1 - INSULATED GLASS
BOD: SOLARBAN 60, COLOR ATLANTICA
- GL-2 - INSULATED GLASS WITH SECURITY FILM
GL-1 W/ SECURITY FILM BOD: ARMORED ONE AOTSFAZ23, 23-MIL FILM W/ SCRATCH RESISTANT COATINGS ON INSIDE FACE (SECURE SIDE) OF GLASS
- GL-3 - 1/4" TEMPERED FLOAT GLASS
- GL-4 - 1/4" TEMPERED FLOAT GLASS WITH SECURITY FILM
GL-3 W/ SECURITY FILM BOD: ARMORED ONE AOTSFAZ23, 23-MIL FILM W/ SCRATCH RESISTANT COATINGS ON INSIDE FACE (SECURE SIDE) OF GLASS
- GL-5 - CLEAR ACOUSTIC GLASS
BOD: VIRACON LAMINATED ACOUSTIC GLASS, OVERALL 1/4", MIN STC RATING OF 35
- GL-6 - FIRE RATED, CLEAR ACOUSTIC GLASS
BOD: TGP FIRELIGHT PLUS
- GL-7 - 1/4" TEMPERED FLOAT GLASS W/ FROSTED FILM
GL-3 W/ FROSTED FILM BOD: 3M FASARA FILM

INDICATES LOCATION OF SECURITY FILM

FRAME TYPE LEGEND

- W# ALUMINUM (COLOR-ANODIZED ALUMINUM) WINDOW FRAME
 - HME# THERMALLY BROKEN, EXTERIOR HOLLOW METAL PAINTED FRAME, MATCH EXTERIOR ALUMINUM WINDOW FRAME COLORS.
 - HMI# INTERIOR HOLLOW METAL PAINTED FRAME, REF. INTERIOR FINISH SCHEDULE & DOOR SCHEDULES FOR COLORS.
- # SPECIFIC FRAME TYPE COMMENT
- 1 PROVIDE ROLLER SHADES TO COVER ALL GLASS AT THIS FRAME TYPE.
 - 2 PROVIDE HORIZONTAL LOUVER BLINDS TO COVER ALL GLASS BELOW 7'-4" AT THIS FRAME TYPE.



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ADDENDUM #3	2020.03.02
BID & PERMIT SET	2020.02.06
100% CONSTRUCTION DOCUMENTS	2020.01.26
65% CONSTRUCTION DOCUMENTS	2019.12.03
DESIGN DEVELOPMENT	2019.10.08
SCHEMATIC DESIGN	2019.08.12
Issue/Revision	YYYY.MM.DD



ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS
EVERGREEN MILLS ROAD, DULLES, VA 20166

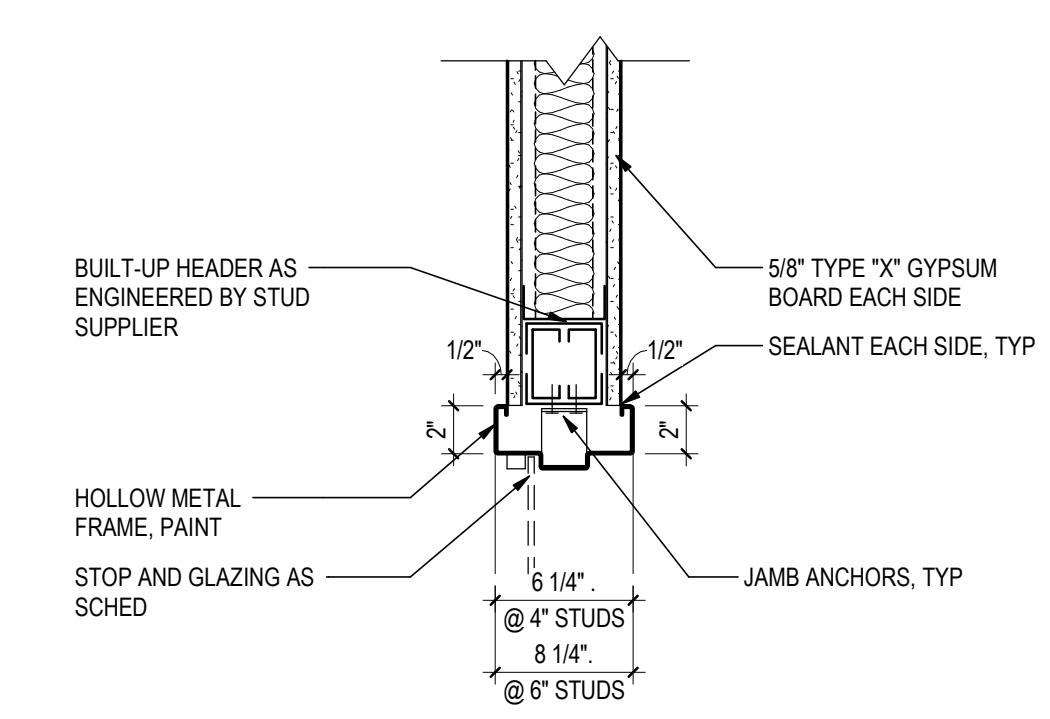
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INTERIOR FRAME TYPES

Project No. 218320338
Revision VDOE # 3
Scale AS INDICATED
Drawing No. 053-115-01-100
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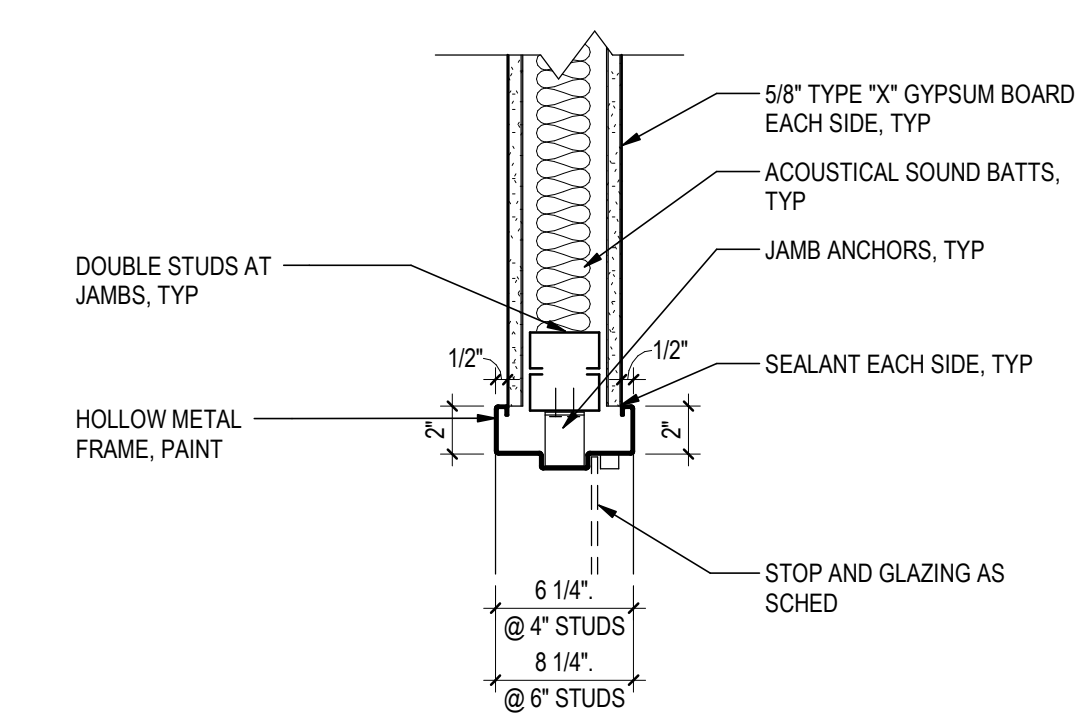
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ORIGINAL SHEET - ARCH E1



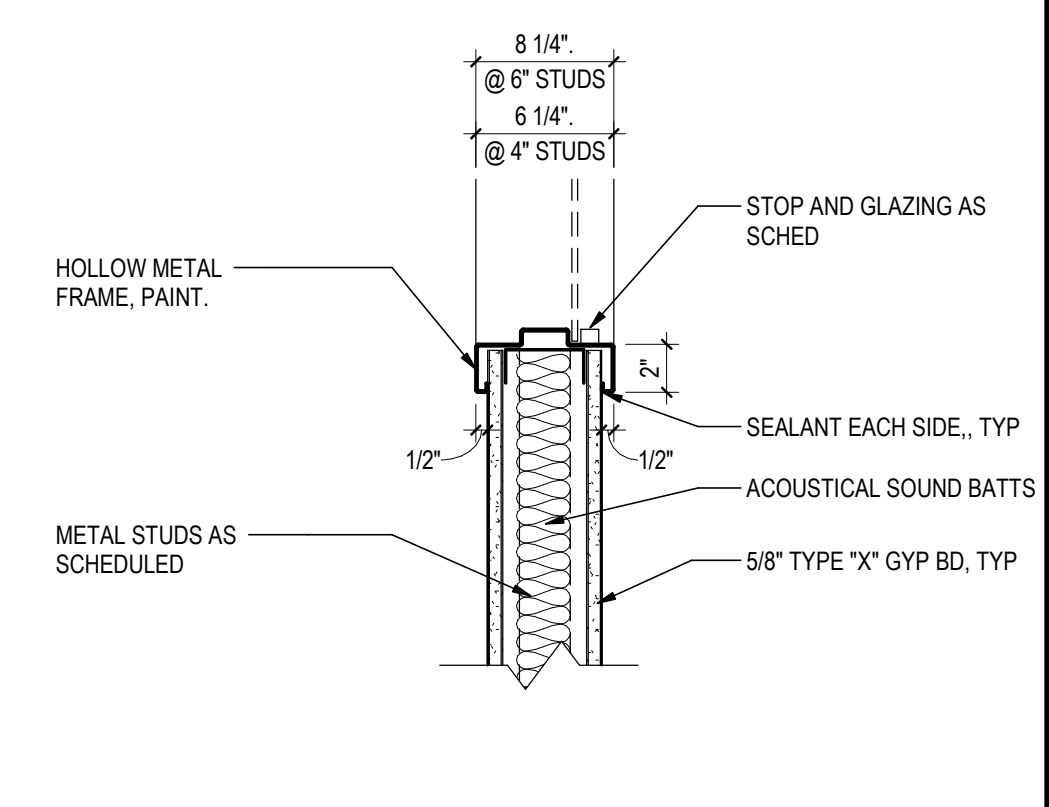
INTERIOR STUD HEAD, JAMB, SILL DETAILS - DOUBLE RABBET
SCALE: 1/2" = 1'-0"



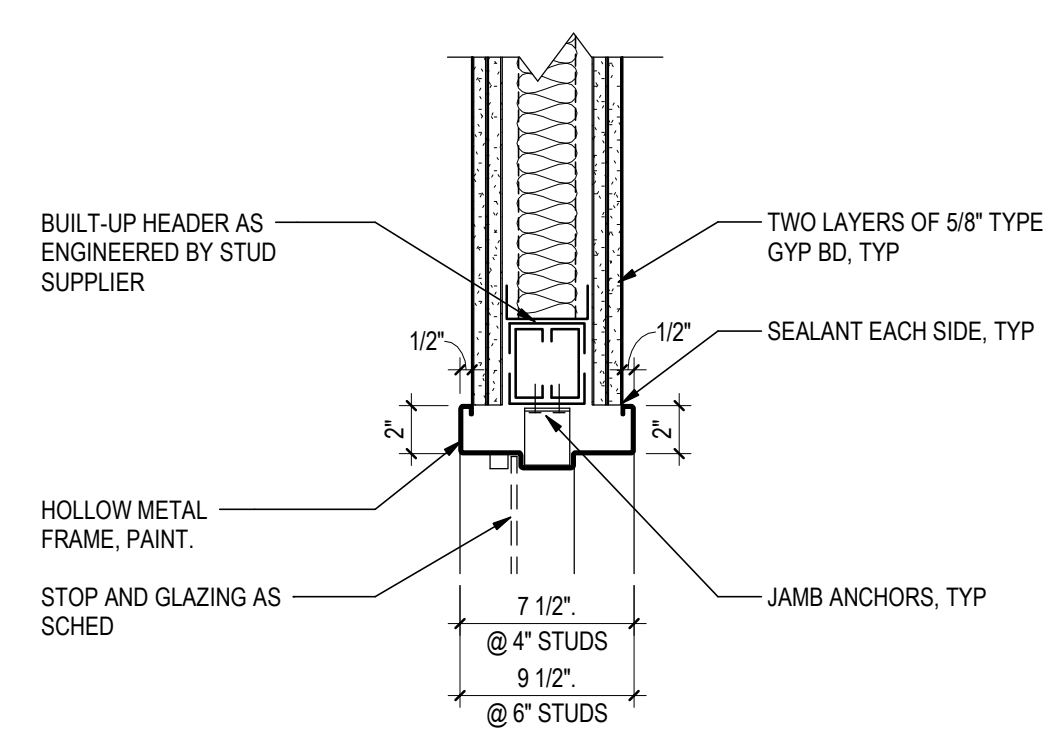
HOLLOW METAL HEAD DETAIL - H5



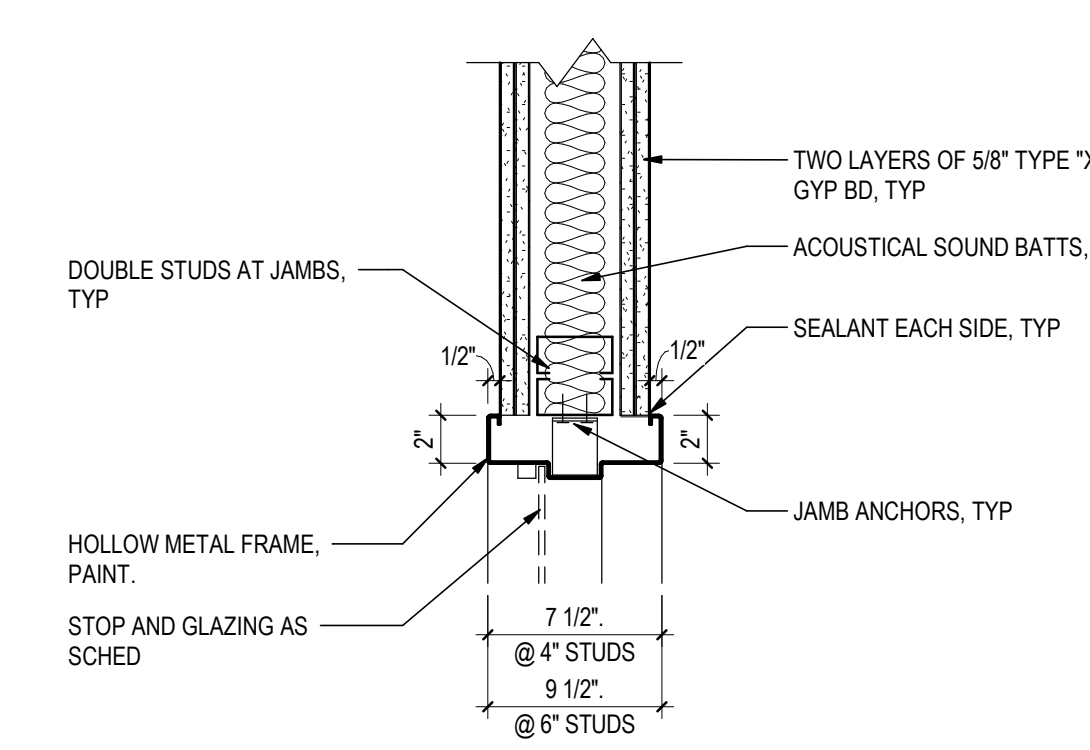
HOLLOW METAL JAMB DETAIL - J5



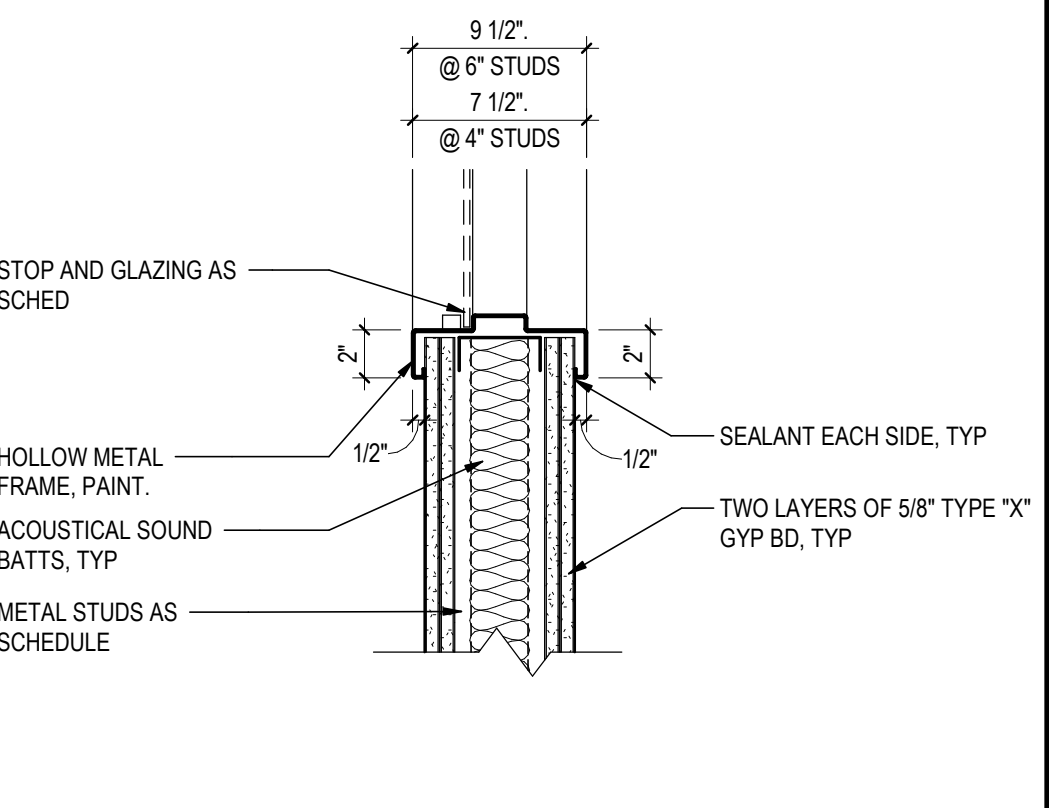
HOLLOW METAL SILL DETAIL - S5



HOLLOW METAL HEAD DETAIL - H6

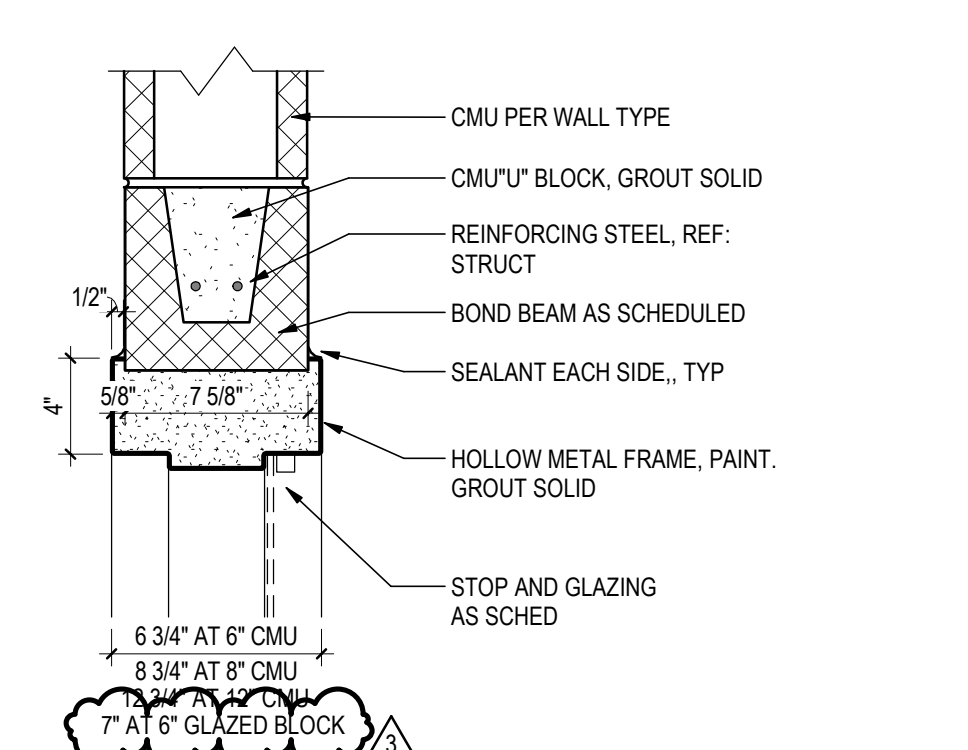


HOLLOW METAL JAMB DETAIL - J6

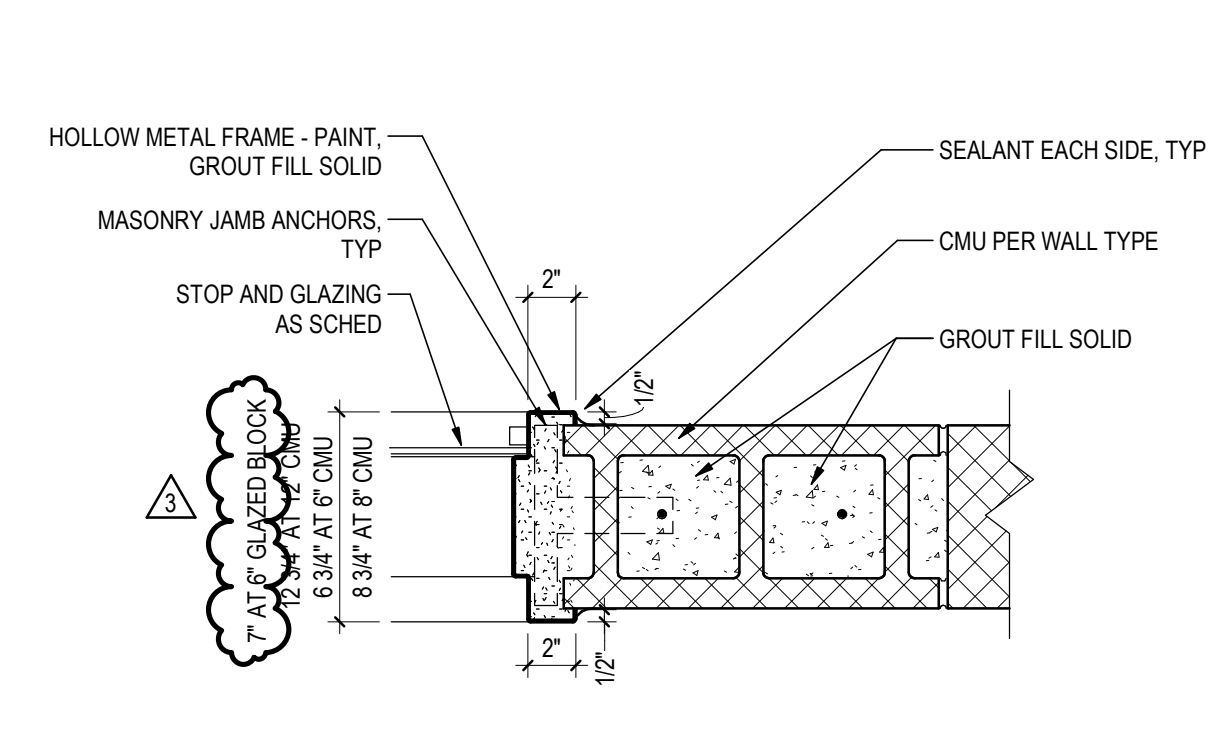


HOLLOW METAL SILL DETAIL - S6

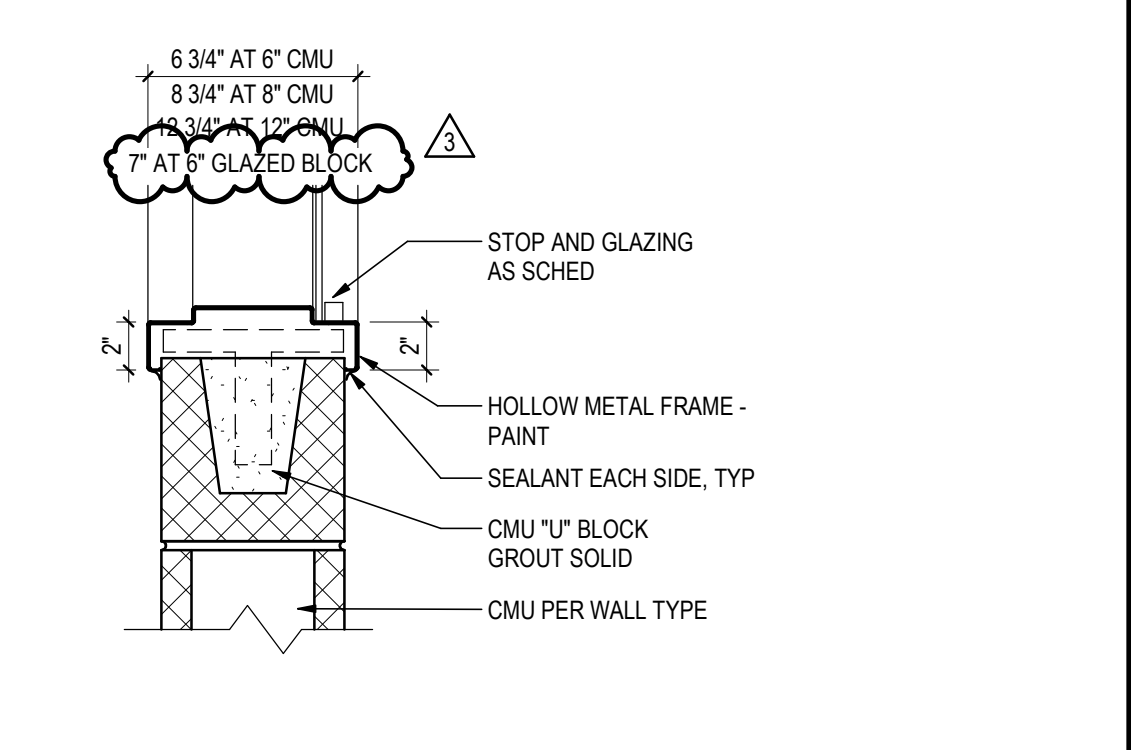
INTERIOR CMU HEAD, JAMB, SILL DETAILS - DOUBLE RABBET
SCALE: 1/2" = 1'-0"



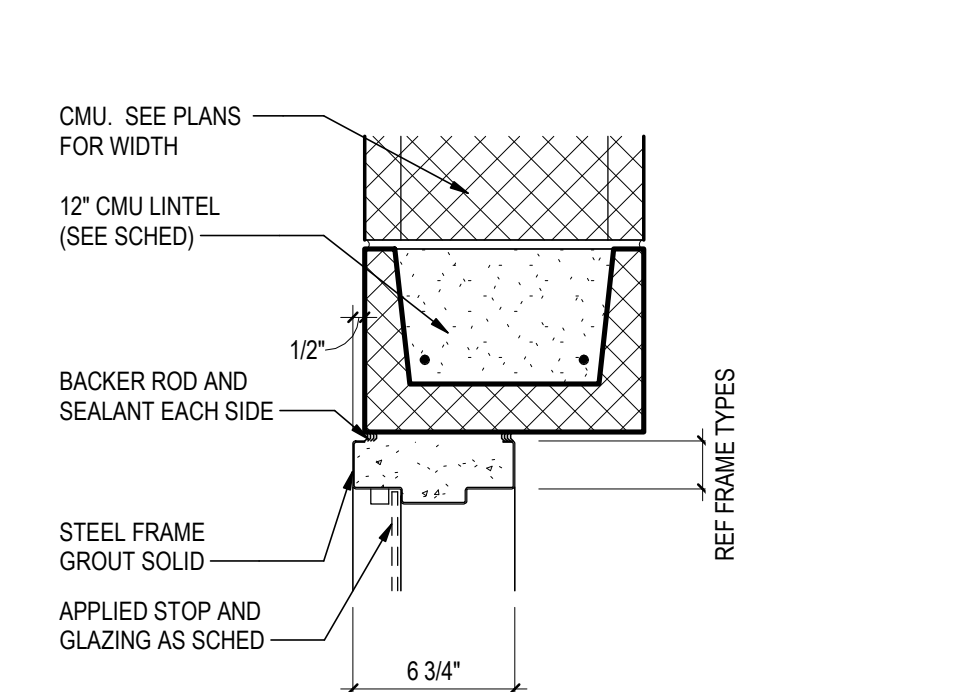
HOLLOW METAL HEAD DETAIL - H11



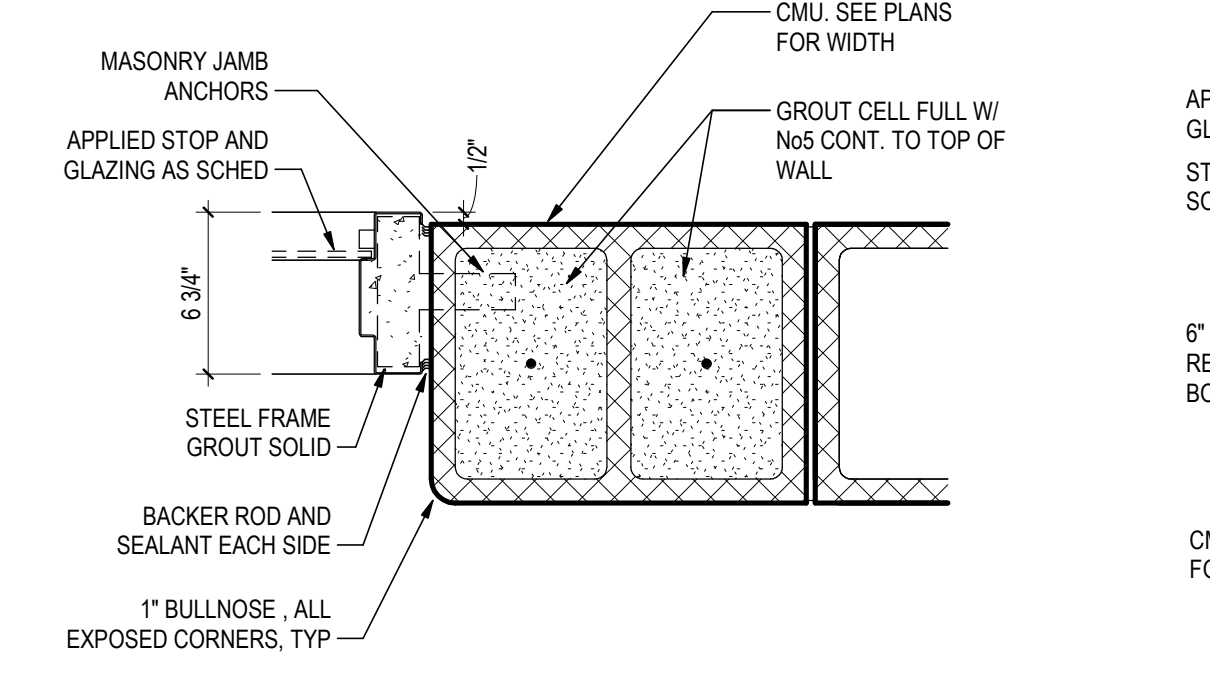
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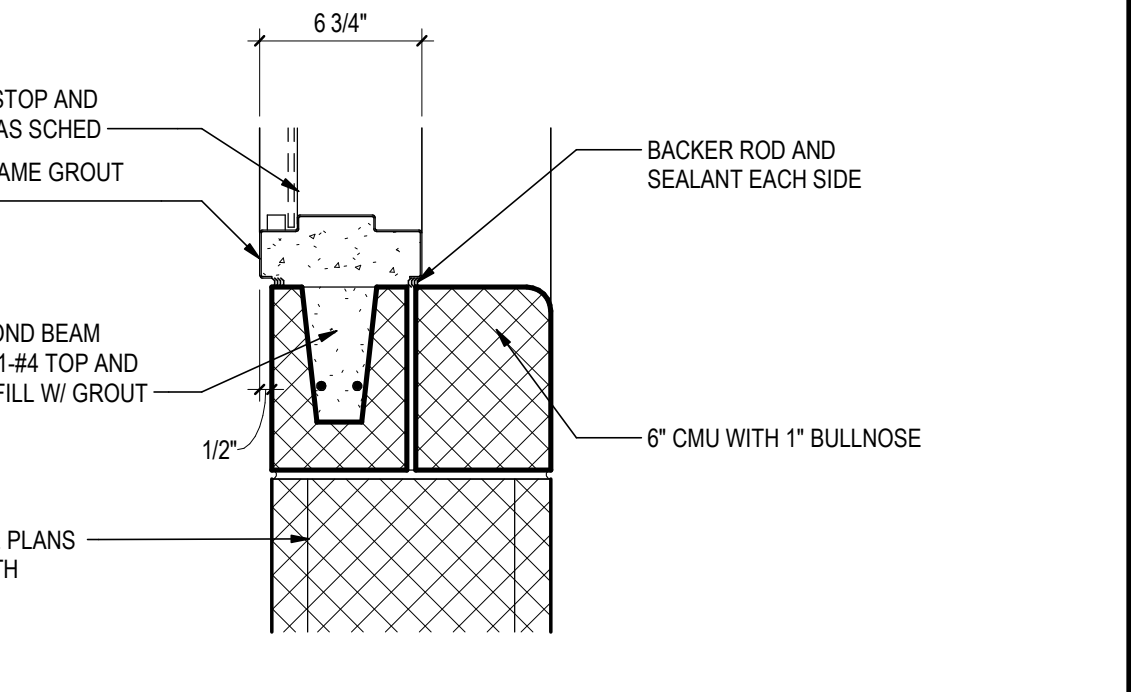
HOLLOW METAL SILL DETAIL - S11



HOLLOW METAL HEAD DETAIL - H13



HOLLOW METAL JAMB DETAIL - J13



HOLLOW METAL SILL DETAIL - S13



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Tel: (240) 683-9530

3	ADDENDUM #3 BID & PERMIT SET	2020.03.02 2020.02.06
	Issue/Revision	YYYY.MM.DD

Permit/Seal



Client/Project Logo



Client/Project

ELEMENTARY SCHOOL (ES-23)

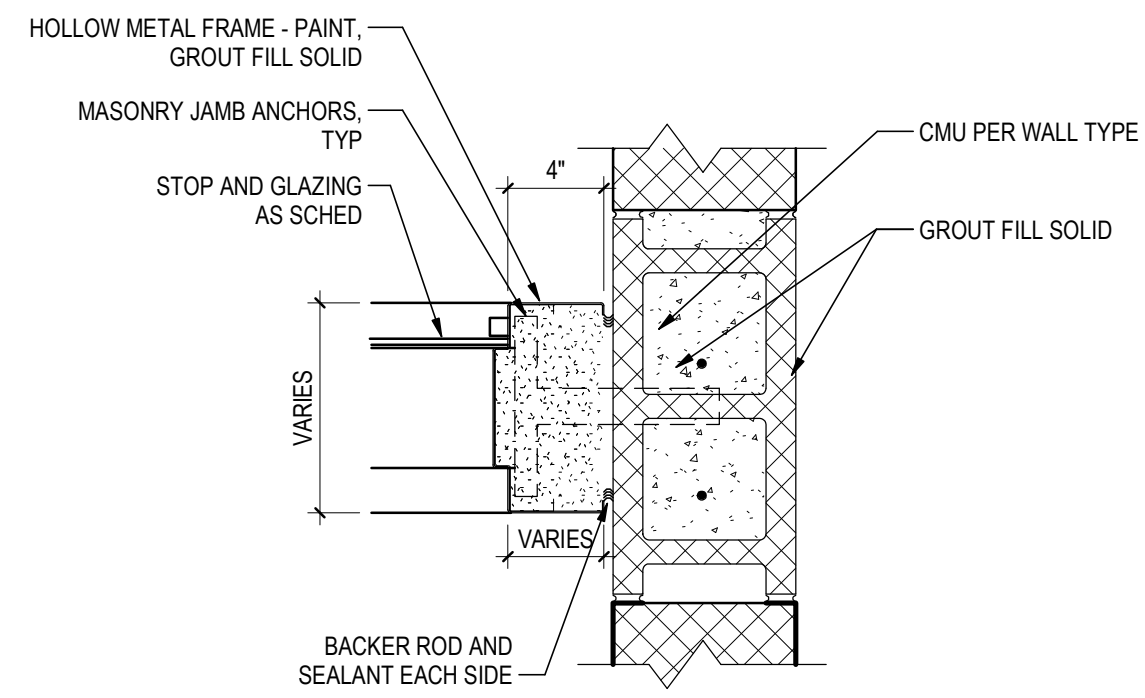
LOUDOUN COUNTY PUBLIC SCHOOLS
EVERGREEN MILLS ROAD, DULLES, VA 20166

Title
HEAD, JAMB & SILL DETAILS (INTERIOR)

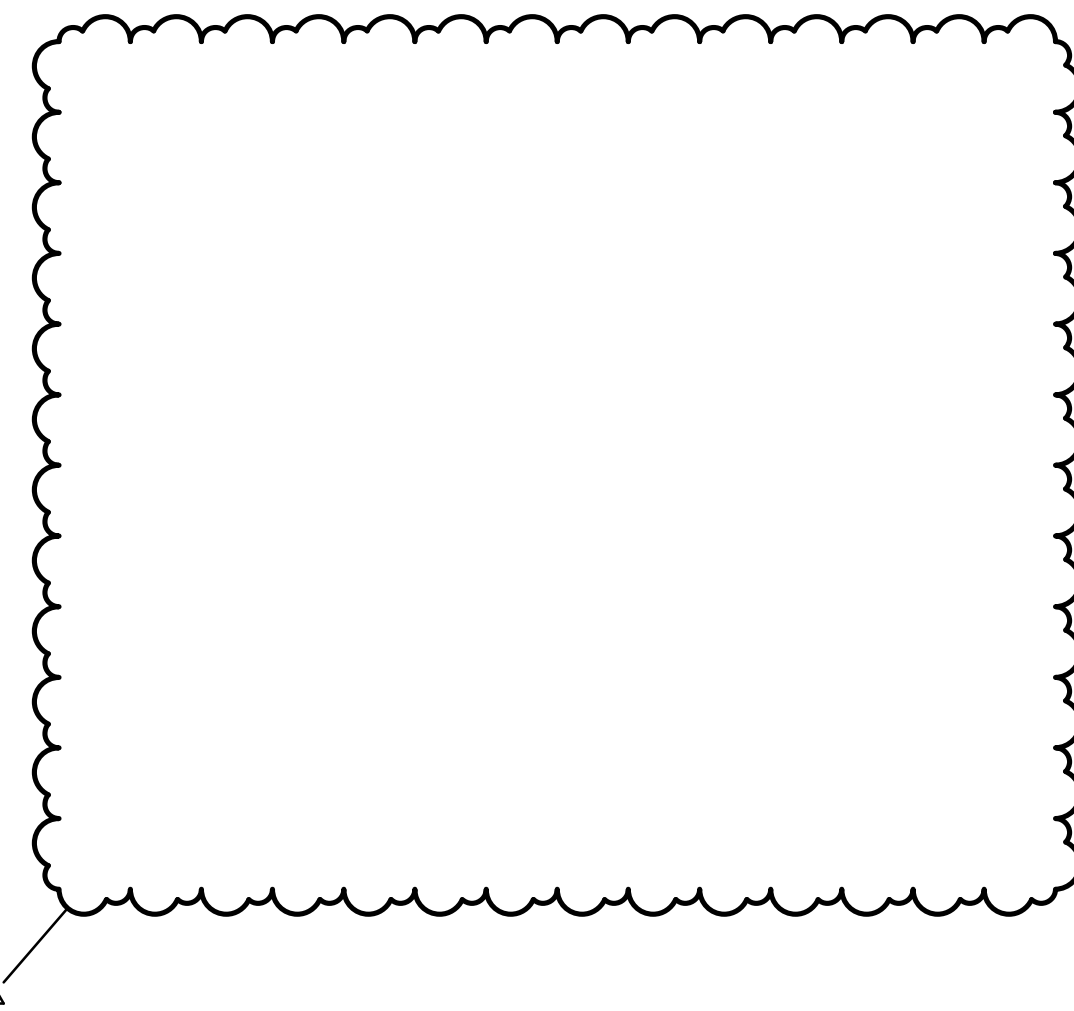
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Revision 3	VDQE # 053-115-01-100
A208	

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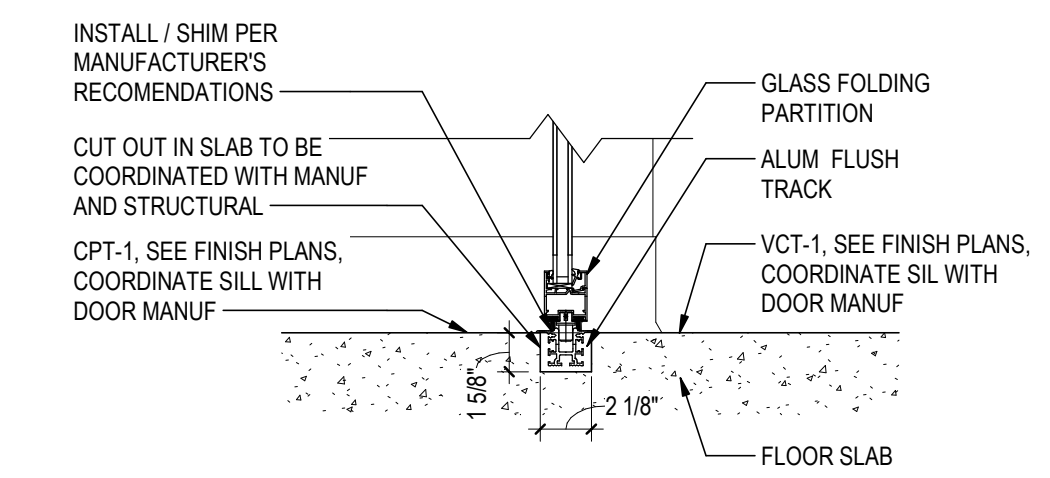
ORIGINAL SHEET - ARCH1



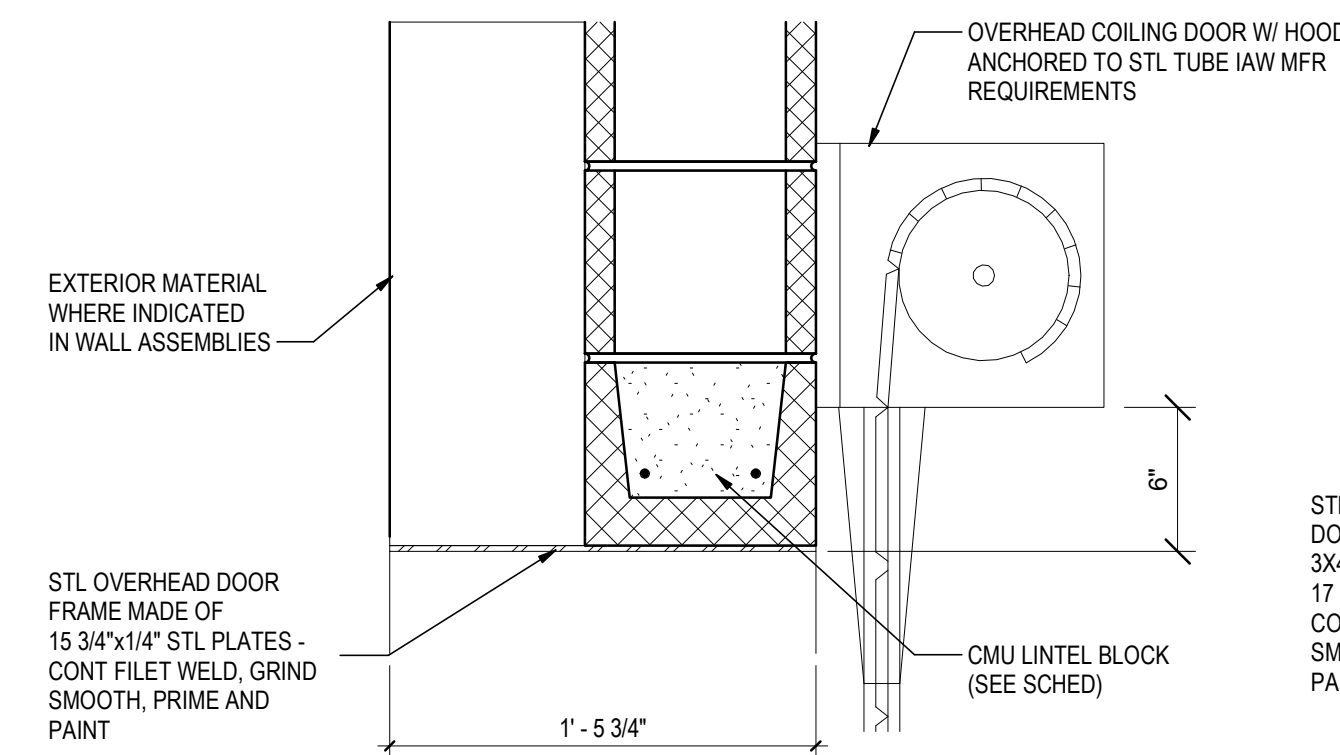
HOLLOW METAL JAMB DETAIL - J14



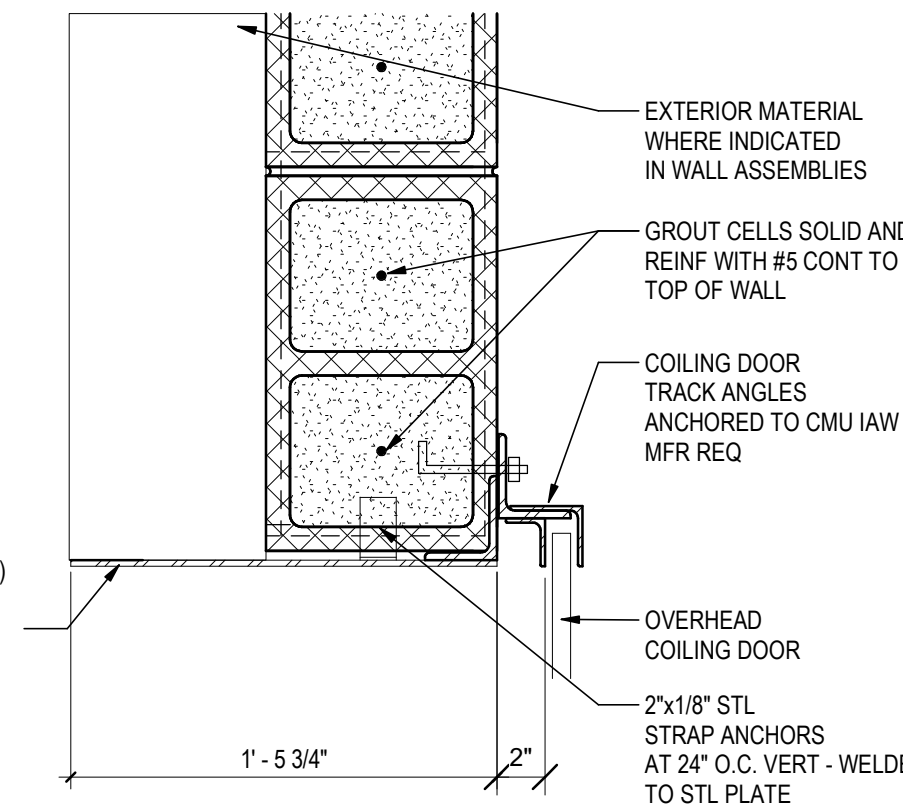
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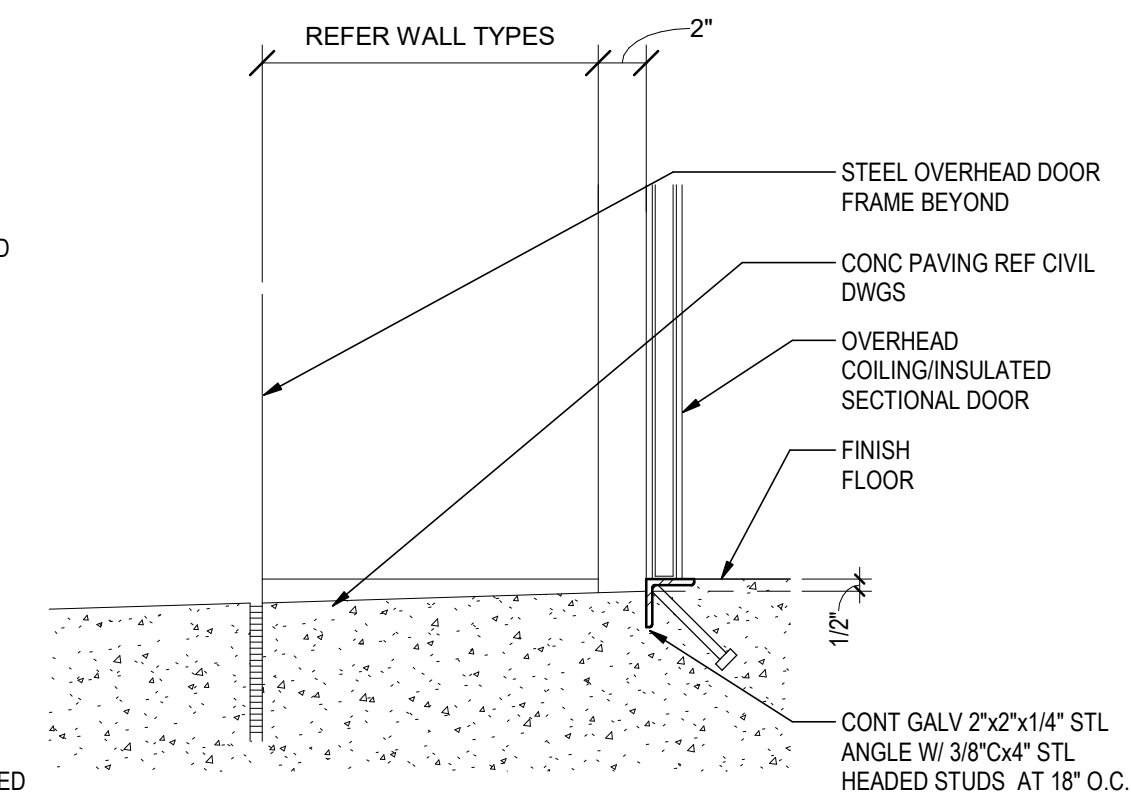
GFP SILL DETAIL - S16



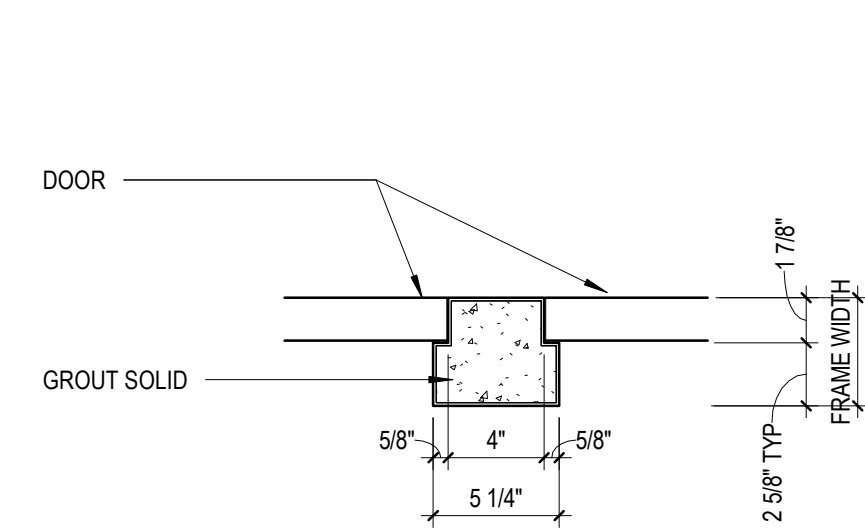
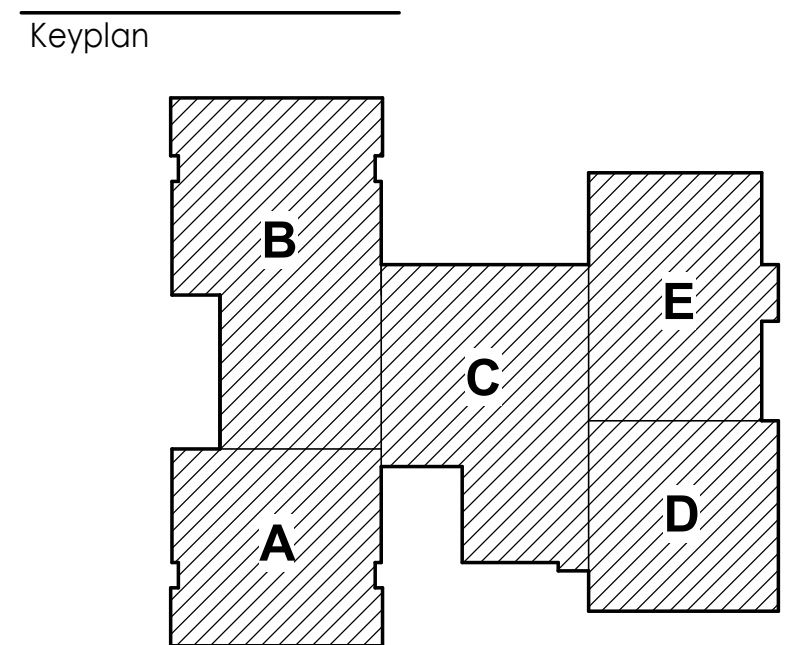
OCD HEAD DETAIL - H1



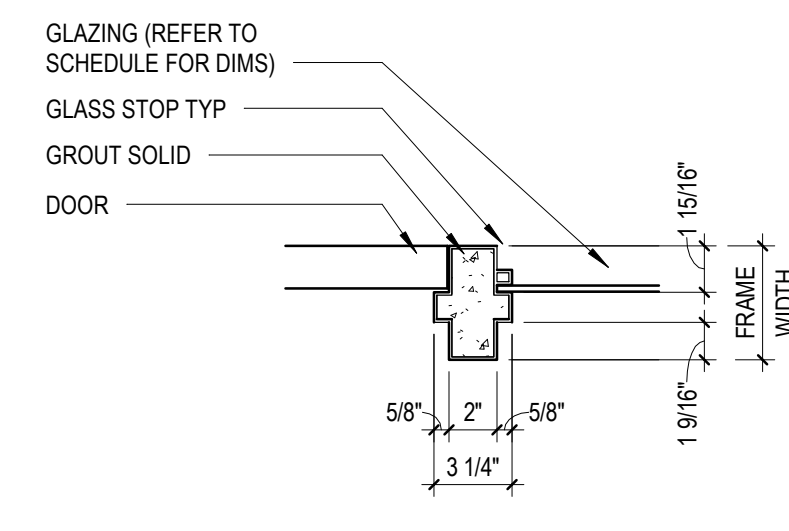
OCD JAMB DETAIL - J1



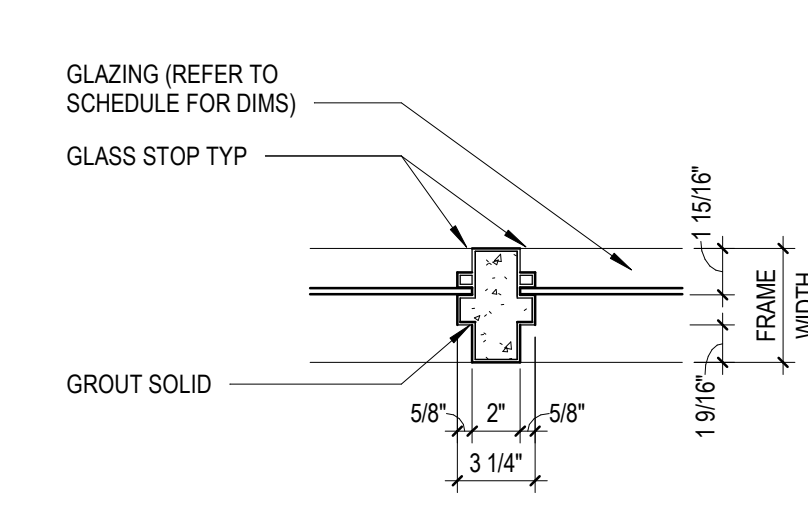
OCD SILL DETAIL - S1



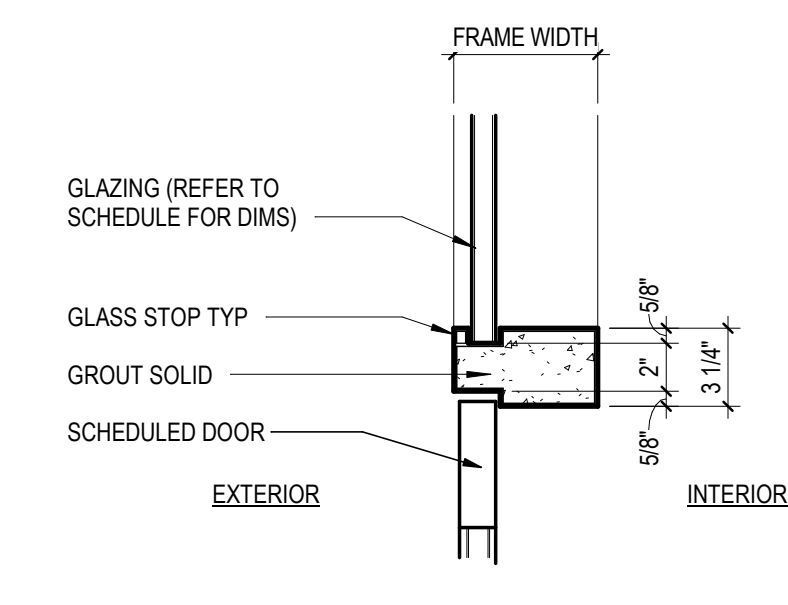
HM MULLION DETAIL - M3B



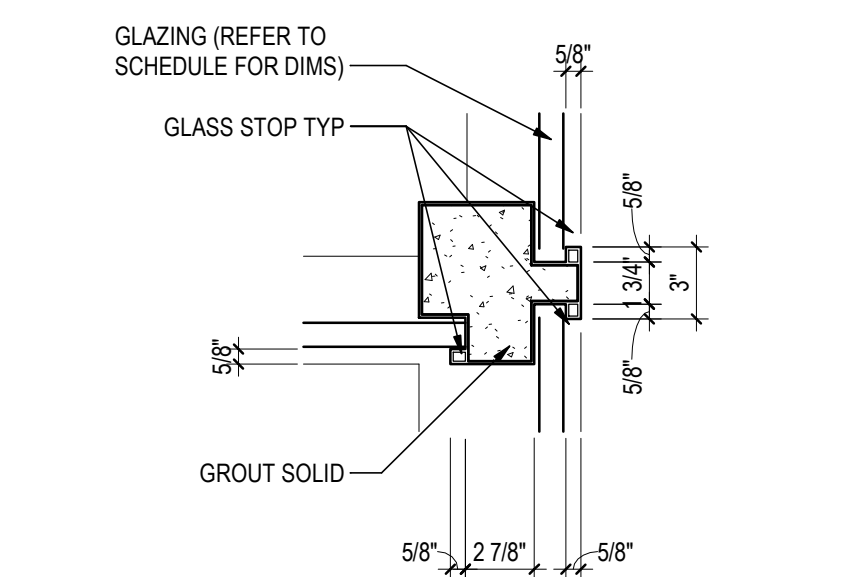
HM MULLION DETAIL - M1



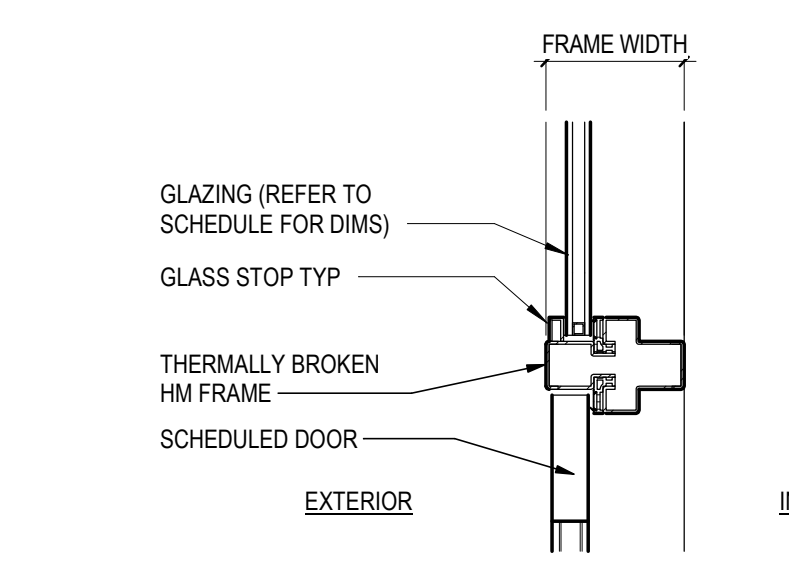
HM MULLION DETAIL - M2



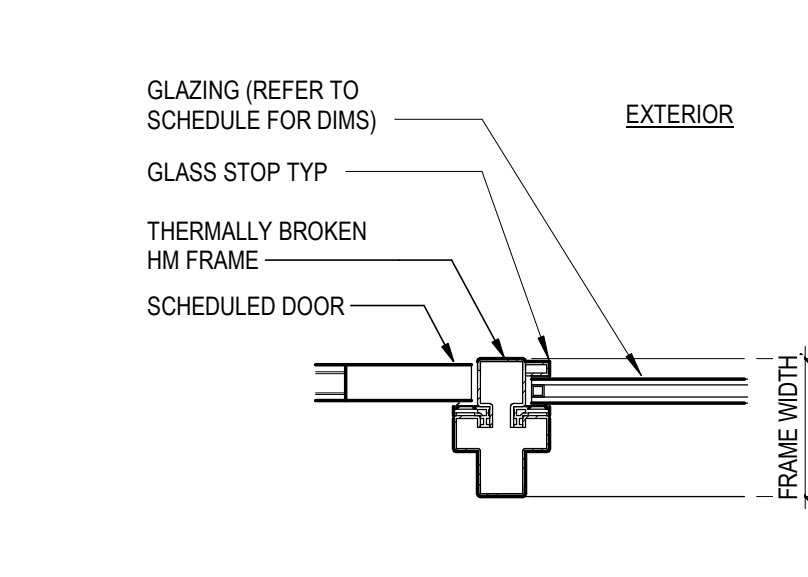
HM MULLION DETAIL - M4



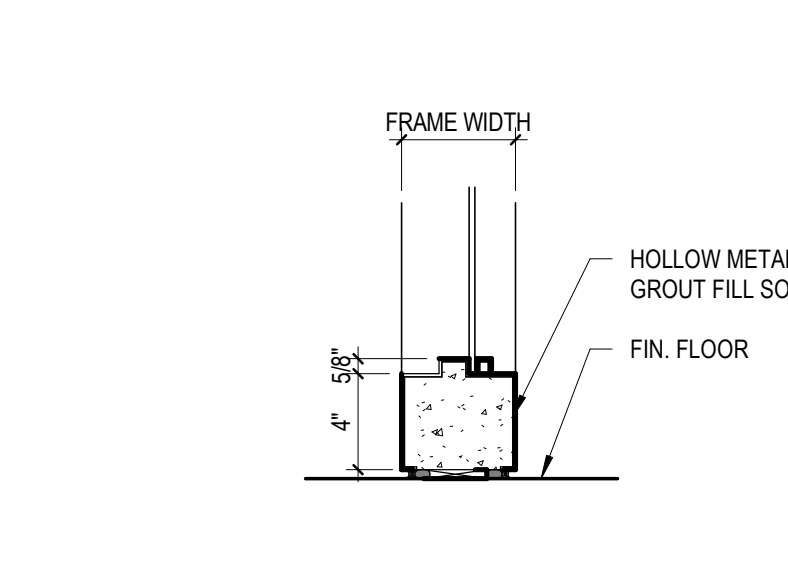
HM MULLION DETAIL - M6



HM MULLION DETAIL - M7



HM MULLION DETAIL - M8



HM SIDELITE SILL DETAIL - S7

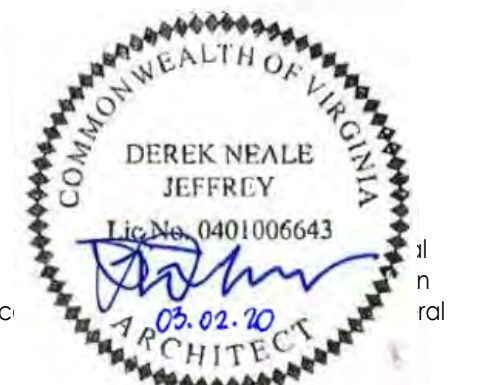
STANTEC ARCHITECTURE
3001 Washington Boulevard Suite 500
Arlington, VA 22201-2247
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Tel: (703) 443-2400
 - STRUCTURAL - LINTON ENGINEERING**
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Tel: (571) 323-0320
 - MEPT - INTERFACE ENGINEERING**
2000 M STREET, NW, SUITE 270, WASHINGTON, DC 20036
Tel: (202) 370-9555
 - FOOD AND SERVICE - NYIKOS & ASSOCIATES**
18219A FLOWER HILL WAY GAITHERSBURG, MD, 20879
Tel: (240) 683-9530

3 - ADDENDUM #3	2020.03.02
BID & PERMIT SET	2020.02.06
Issue/Revision	YYYY.MM.DD

Permit/Seal



Client/Project Logo



Client/Project

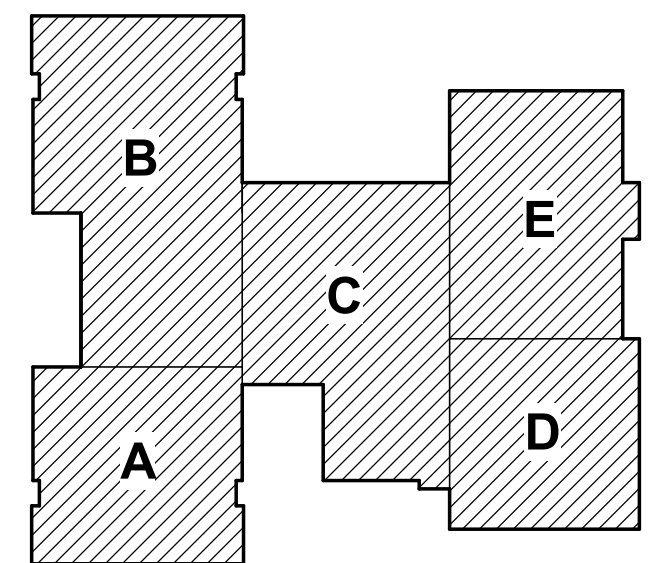
ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS
EVERGREEN MILLS ROAD, DULLES, VA 20166

Title
HEAD, JAMB & SILL DETAILS (INTERIOR)

Project No. 218320338	Scale AS INDICATED
Revision 3	VDQE # 053-115-01-100
A209	

Keyplan



3	ADDENDUM #3	2020.03.02
	BID & PERMIT SET	2020.02.06
	100% CONSTRUCTION DOCUMENTS	2020.01.26
	65% CONSTRUCTION DOCUMENTS	2019.12.03
	DESIGN DEVELOPMENT	2019.10.08
	SCHEMATIC DESIGN	2019.08.12
	Issue/Revision	YYYY.MM.DD

Permit/Seal



Client/Project Logo



Client/Project

ELEMENTARY SCHOOL (ES-23)

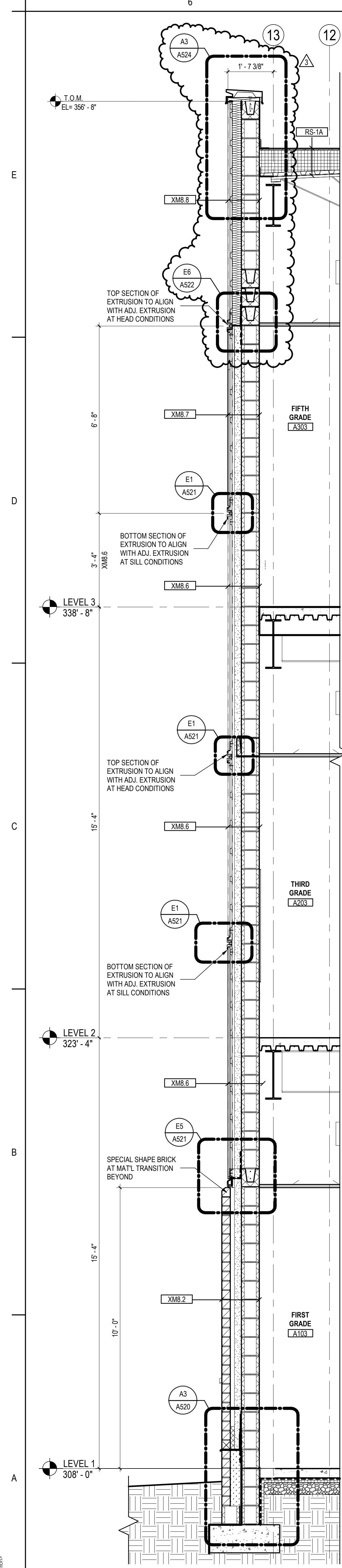
LOUDOUN COUNTY PUBLIC SCHOOLS

EVERGREEN MILLS ROAD, DULLES, VA 20166

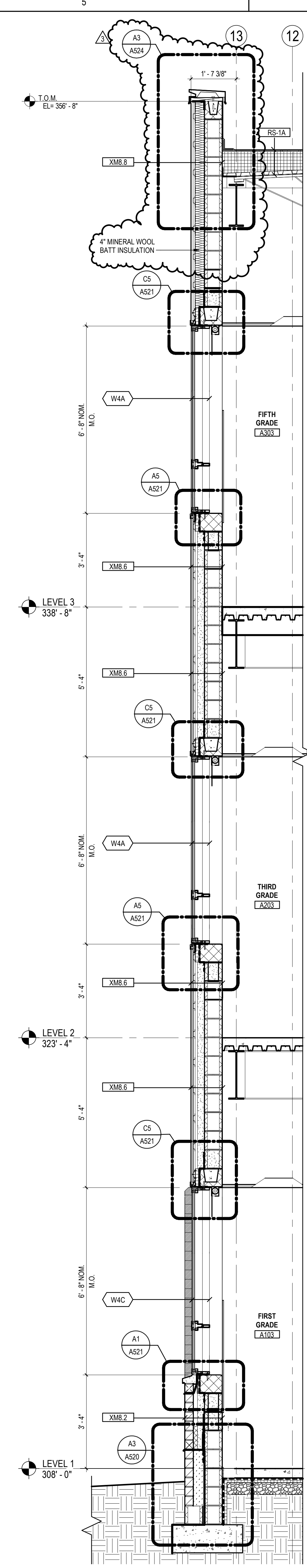
Title
EXTERIOR WALL SECTIONS

Project No.
218320338
Revision
VD0E #
3

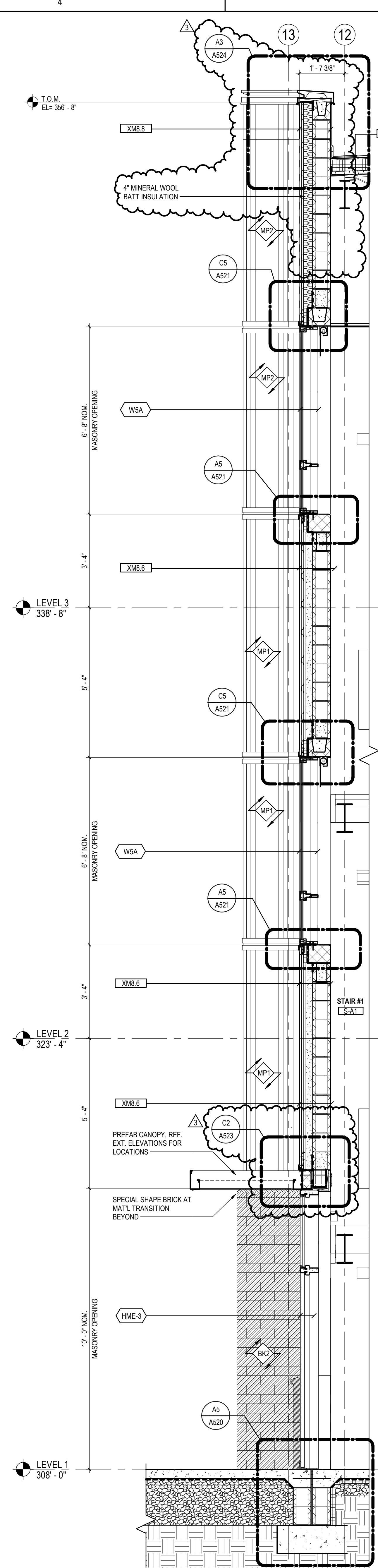
Scale
AS INDICATED
Drawing No.
A511



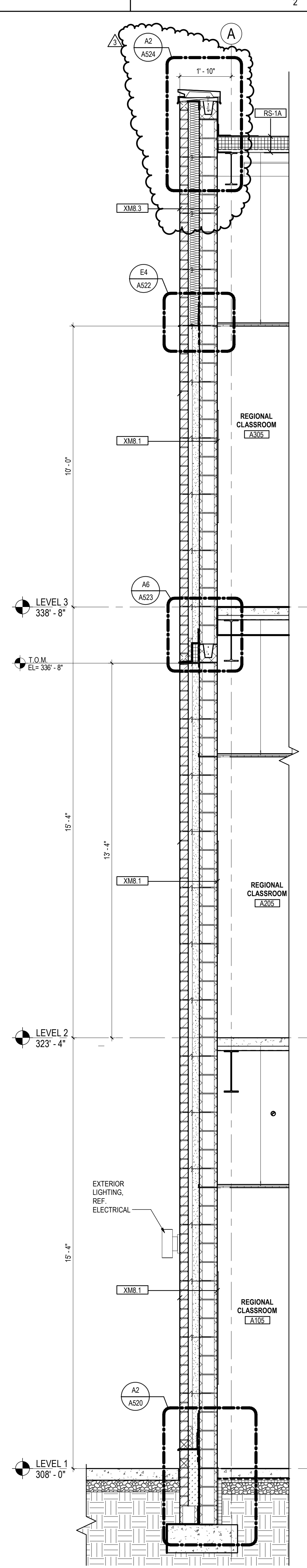
WALL SECTION
A6
ATT1/AS1
1/2" = 1'-0"



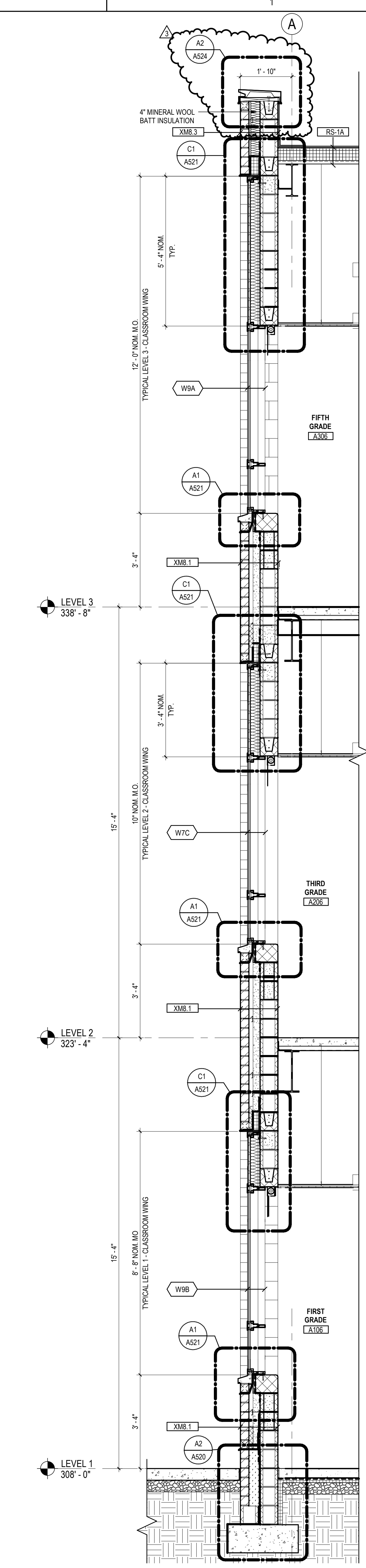
WALL SECTION
A5
ATT1/AS1
1/2" = 1'-0"



WALL SECTION
A4
ATT1/AS1
1/2" = 1'-0"

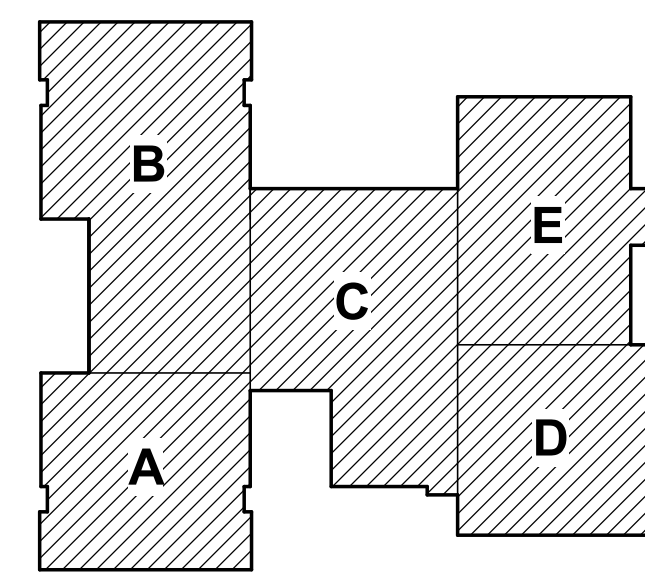


WALL SECTION
A2
ATT1/AS1
1/2" = 1'-0"



WALL SECTION
A1
ATT1/AS1
1/2" = 1'-0"

Keyplan



Issue/Revision	Permit/Seal	Client/Project Logo	Client/Project
3	ADDENDUM #3 BID & PERMIT SET 100% CONSTRUCTION DOCUMENTS 65% CONSTRUCTION DOCUMENTS DESIGN DEVELOPMENT SCHEMATIC DESIGN		

Issue/Revision	Permit/Seal	Client/Project Logo	Client/Project
2020.03.02 2020.02.06 2020.01.26 2019.12.03 2019.10.08 2019.08.12 YYYY.MM.DD			

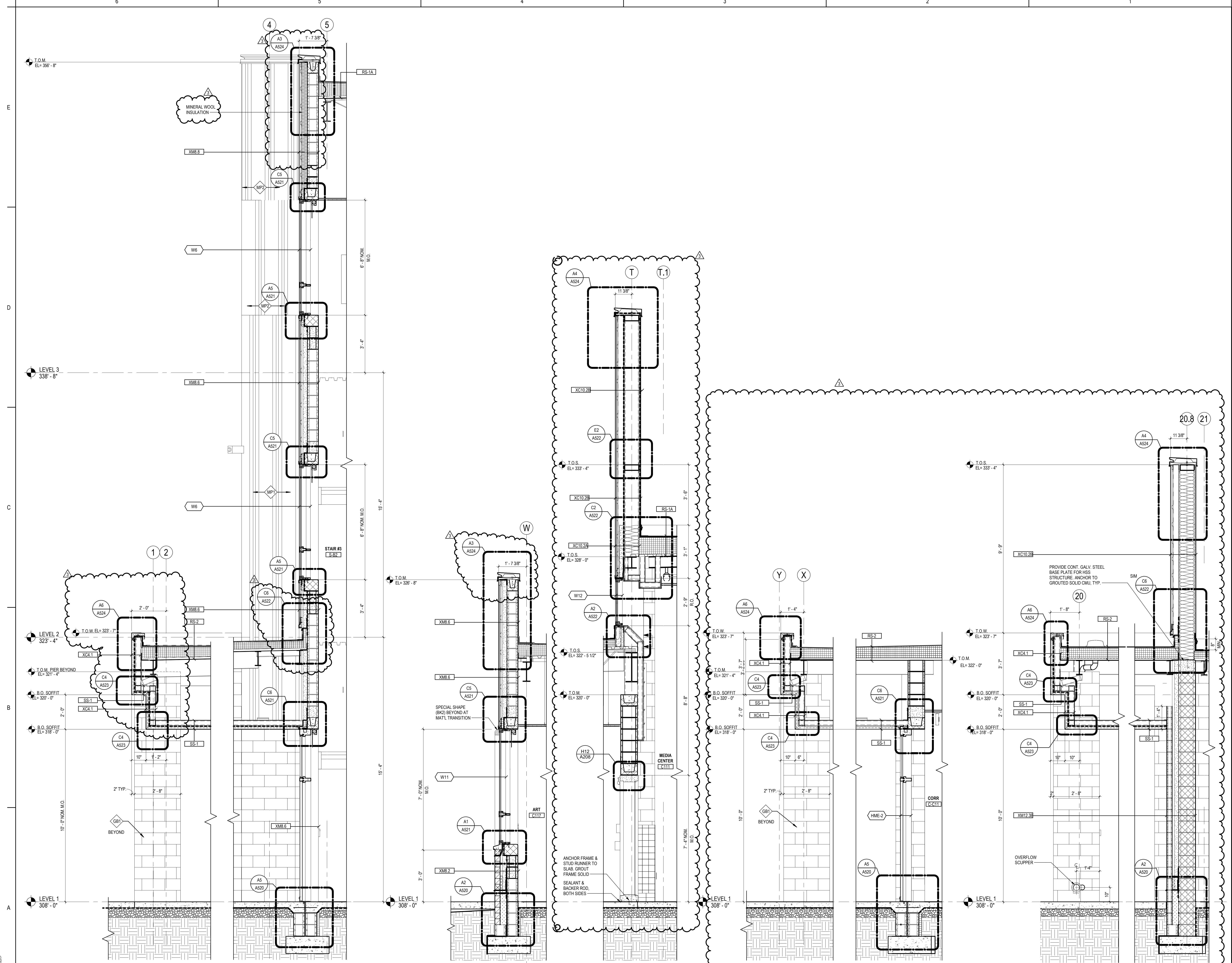
Issue/Revision	Permit/Seal	Client/Project Logo	Client/Project

ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS
EVERGREEN MILLS ROAD, DULLES, VA 20166

Title
EXTERIOR WALL SECTIONS

Project No.	Scale	
218320338	AS INDICATED	
Revision	VDQE #	Drawing No.
3	053-115-01-100	A512



WALL SECTION 1/2" = 1'-0" (A6, A4, A3, A2)

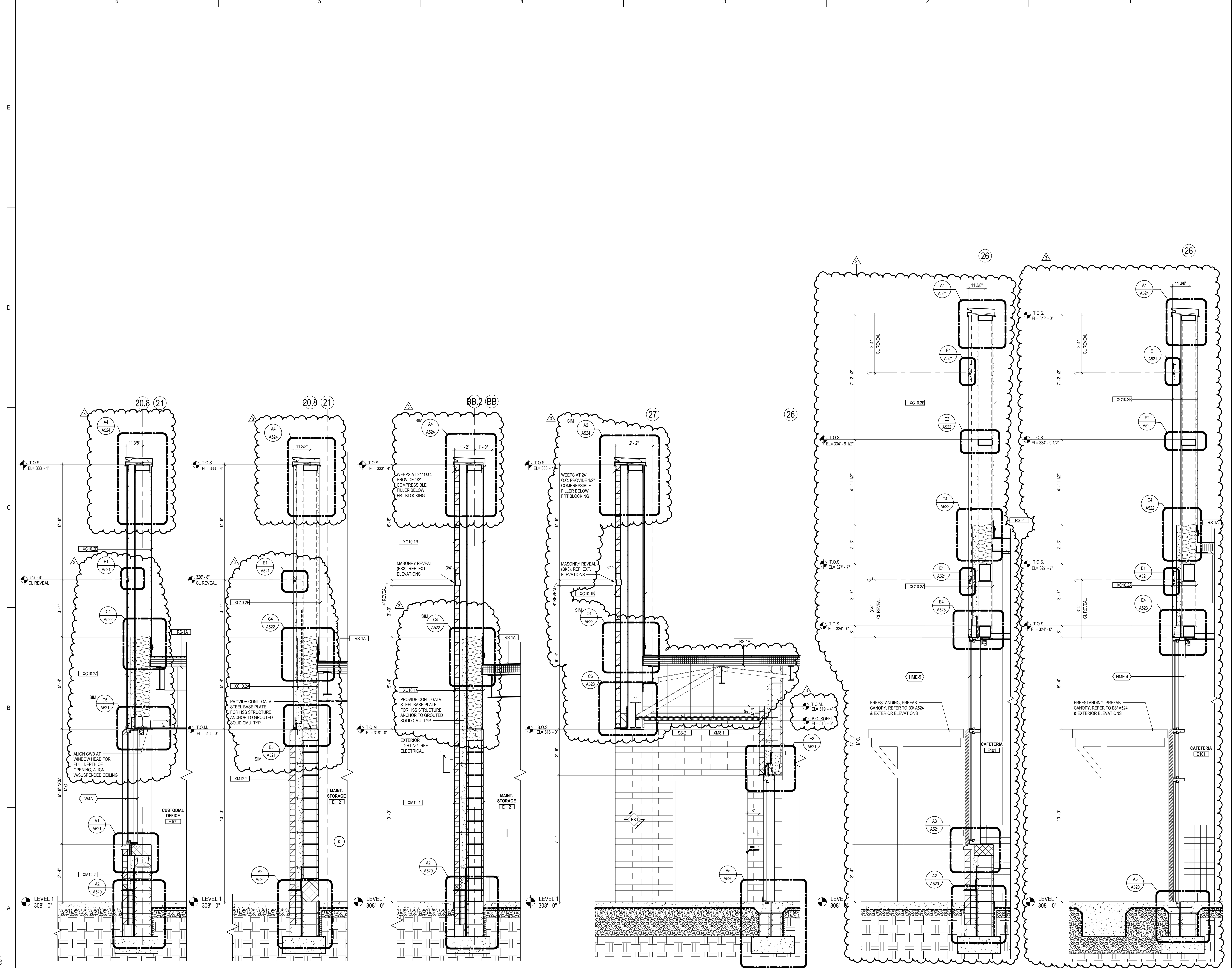
Consultants

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Tel: (703) 443-2400

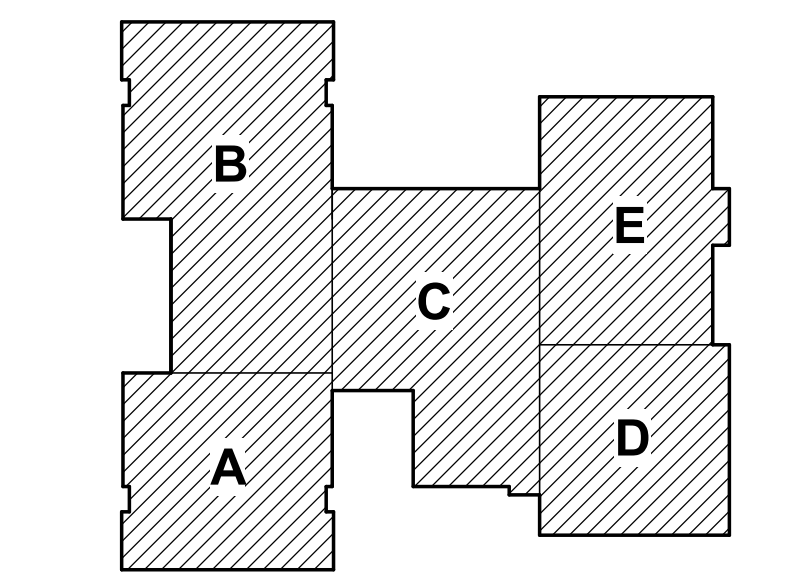
STRUCTURAL - LINTON ENGINEERING
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Tel: (571) 323-0320

MEPT - INTERFACE ENGINEERING
2000 M STREET, NW, SUITE 270, WASHINGTON, DC 20036
Tel: (202) 370-9555

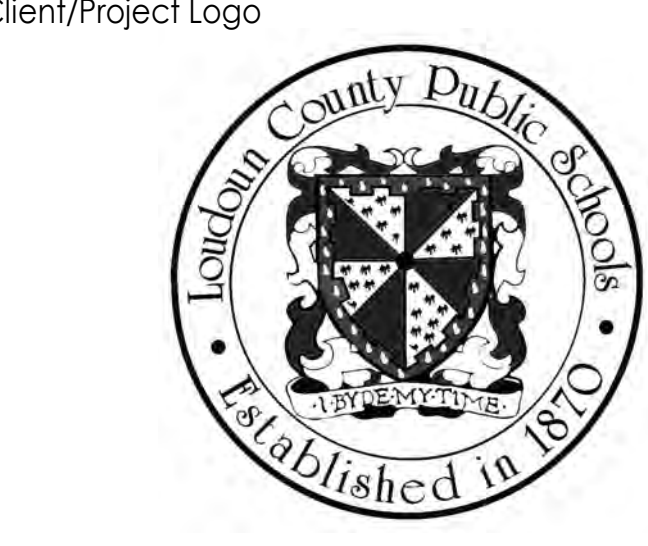
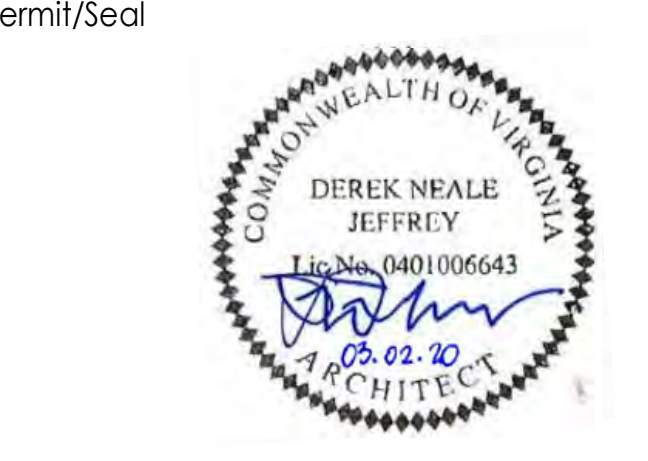
FOOD AND SERVICE - NYIKOS & ASSOCIATES
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Tel: (240) 683-9530



Keyplan



ADDENDUM #3	2020.03.02
BID & PERMIT SET	2020.02.06
100% CONSTRUCTION DOCUMENTS	2020.01.26
Issue/Revision	YYYY.MM.DD



Client/Project
ELEMENTARY SCHOOL (ES-23)

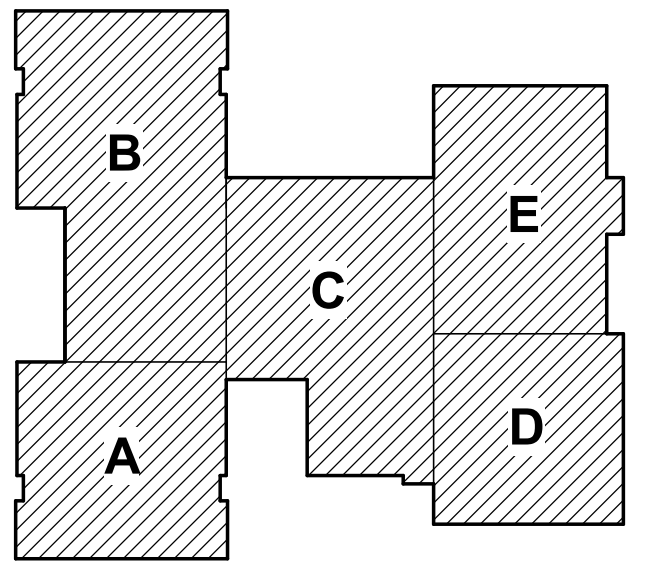
LOUDOUN COUNTY PUBLIC SCHOOLS
EVERGREEN MILLS ROAD, DULLES, VA 20166

Title
EXTERIOR WALL SECTIONS

Project No. 218320338
Revision VDOE # 3
Scale AS INDICATED
Drawing No. 053-115-01-100
A513

4825 Loudoun Hills Project Information
3/1/2020 01:00 PM
ORIGINAL SHEET - ARCH1

Keyplan



Issue/Revision	YYYY.MM.DD
3 ADDENDUM #3	2020.03.02
BID & PERMIT SET	2020.02.06
100% CONSTRUCTION DOCUMENTS	2020.01.26

Permit/Seal



Client/Project Logo



Client/Project

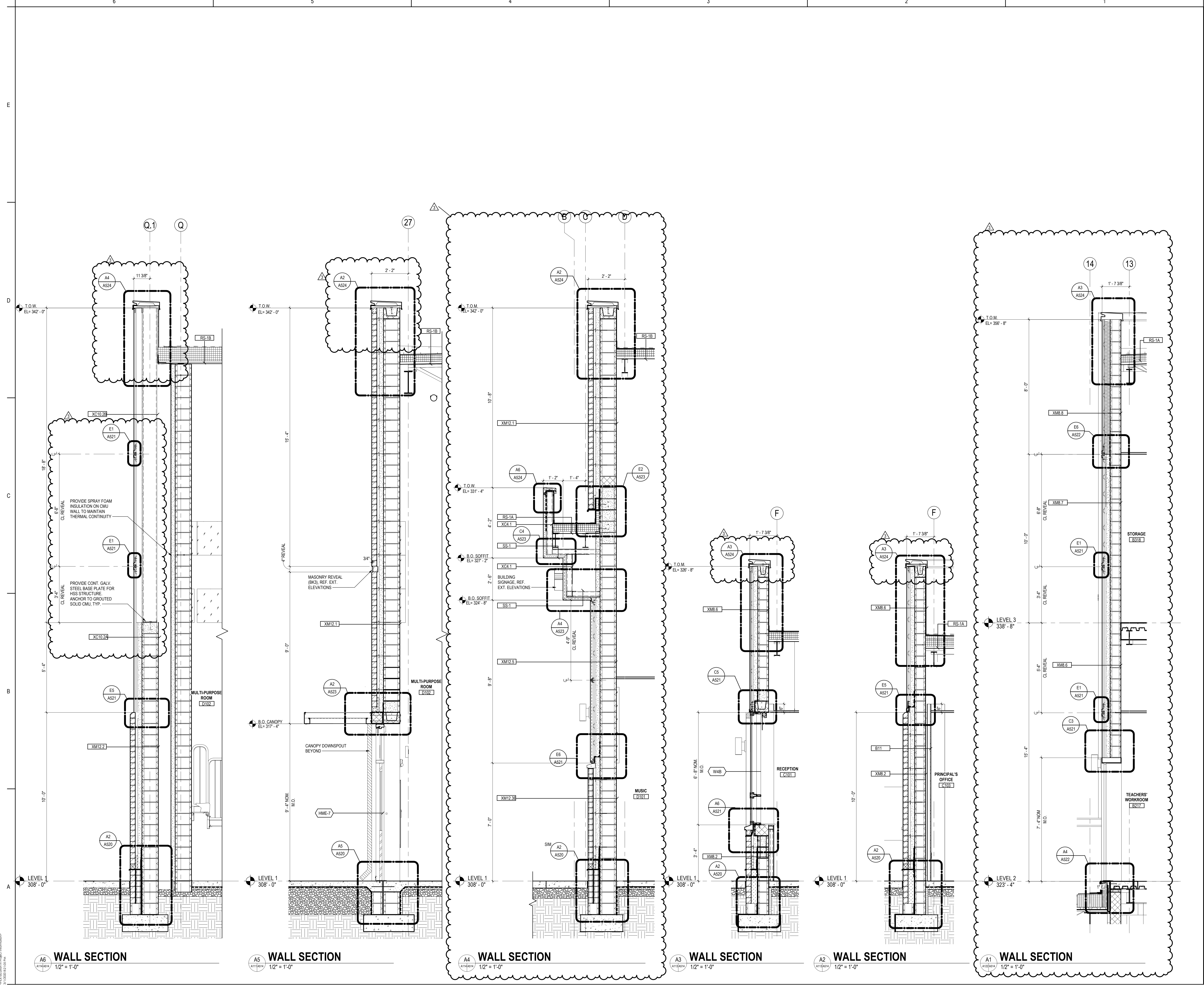
ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS
EVERGREEN MILLS ROAD, DULLES, VA 20166

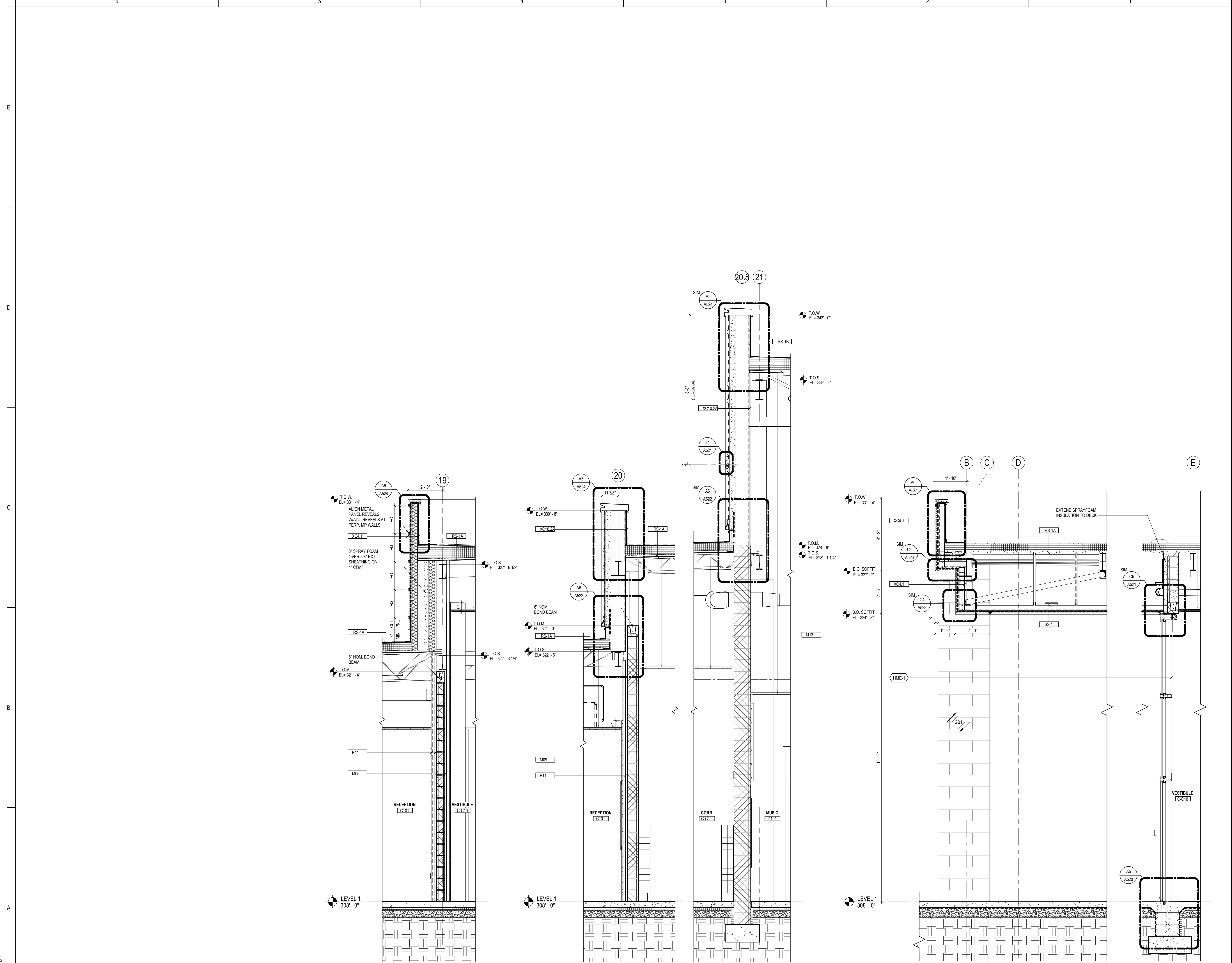
Title
EXTERIOR WALL SECTIONS

Project No.
218320338
Revision
VD0E #
3

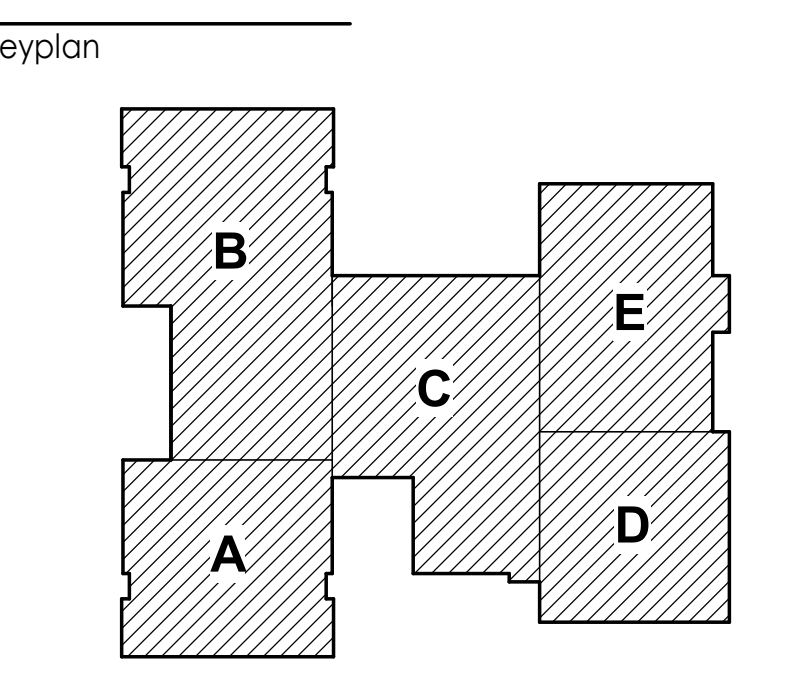
Scale
AS INDICATED
Drawing No.
A514



4853, located in Project Information
 3/1/2020 01:05:28 PM
 ORIGINAL SHEET - ARCH1



WALL SECTION 1/2" = 1'-0"
WALL SECTION 1/2" = 1'-0"
WALL SECTION 1/2" = 1'-0"



ADDENDUM #3 2020.03.02
Issue/Revision YYYY.MM.DD



Client/Project
ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS
EVERGREEN MILLS ROAD, DULLES, VA 20166

Title
EXTERIOR WALL SECTIONS

Project No. 218320338 Scale AS INDICATED
Revision VDOE # Drawing No.
3 053-115-01-100 **A515**

Consultants

CIVIL - BOWMAN CONSULTING
101 SOUTH STREET, SE, LEESBURG, VA 20175
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STRUCTURAL - LINTON ENGINEERING
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Tel: (240) 683-9530

3	ADDENDUM #3	2020.03.02
	BID & PERMIT SET	2020.02.06
	100% CONSTRUCTION DOCUMENTS	2020.01.26
	65% CONSTRUCTION DOCUMENTS	2019.12.03
	DESIGN DEVELOPMENT	2019.10.08
	SCHEMATIC DESIGN	2019.08.12

Issue/Revision YYY.MM.DD

Permit/Seal



Client/Project Logo



Client/Project

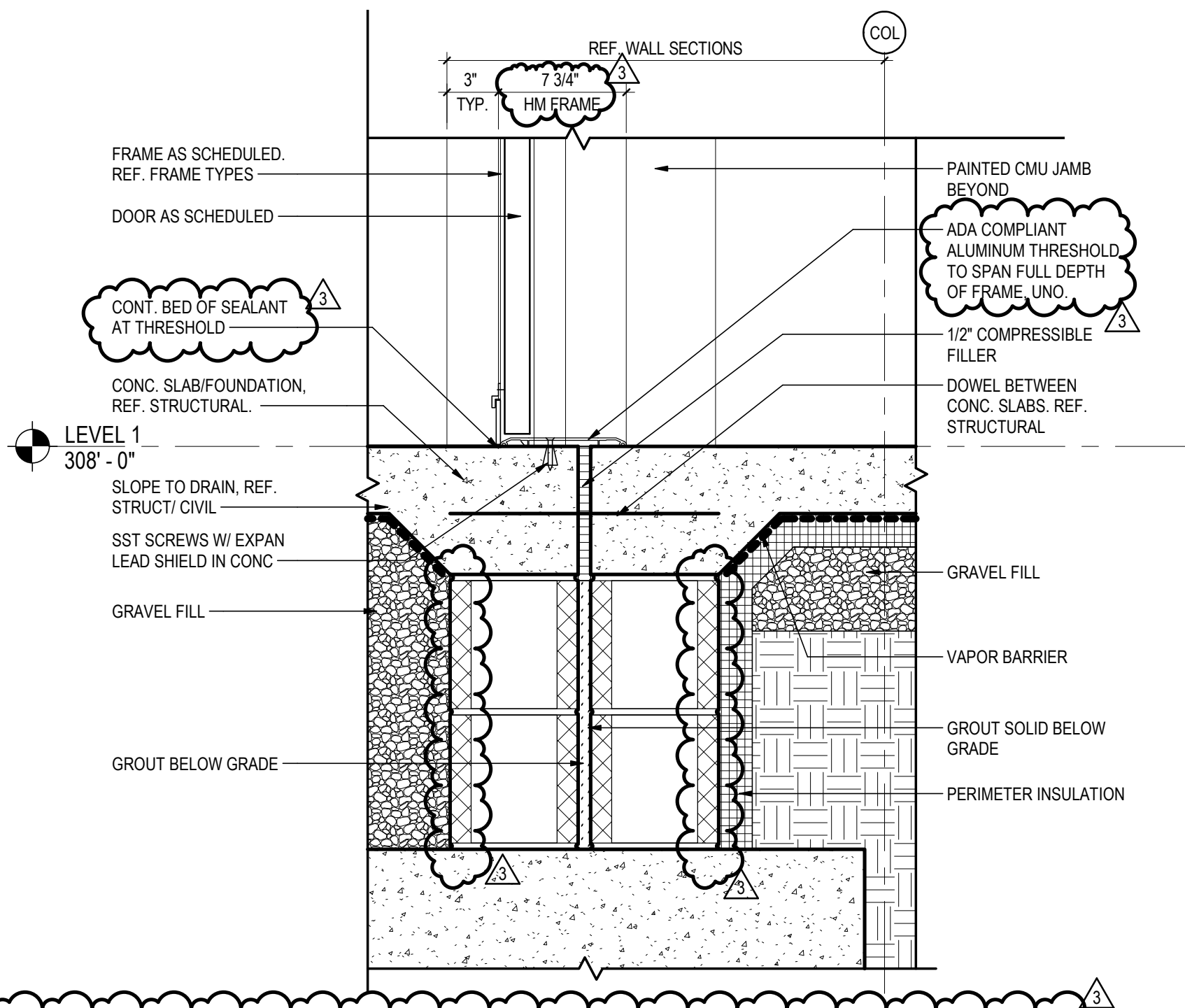
ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS

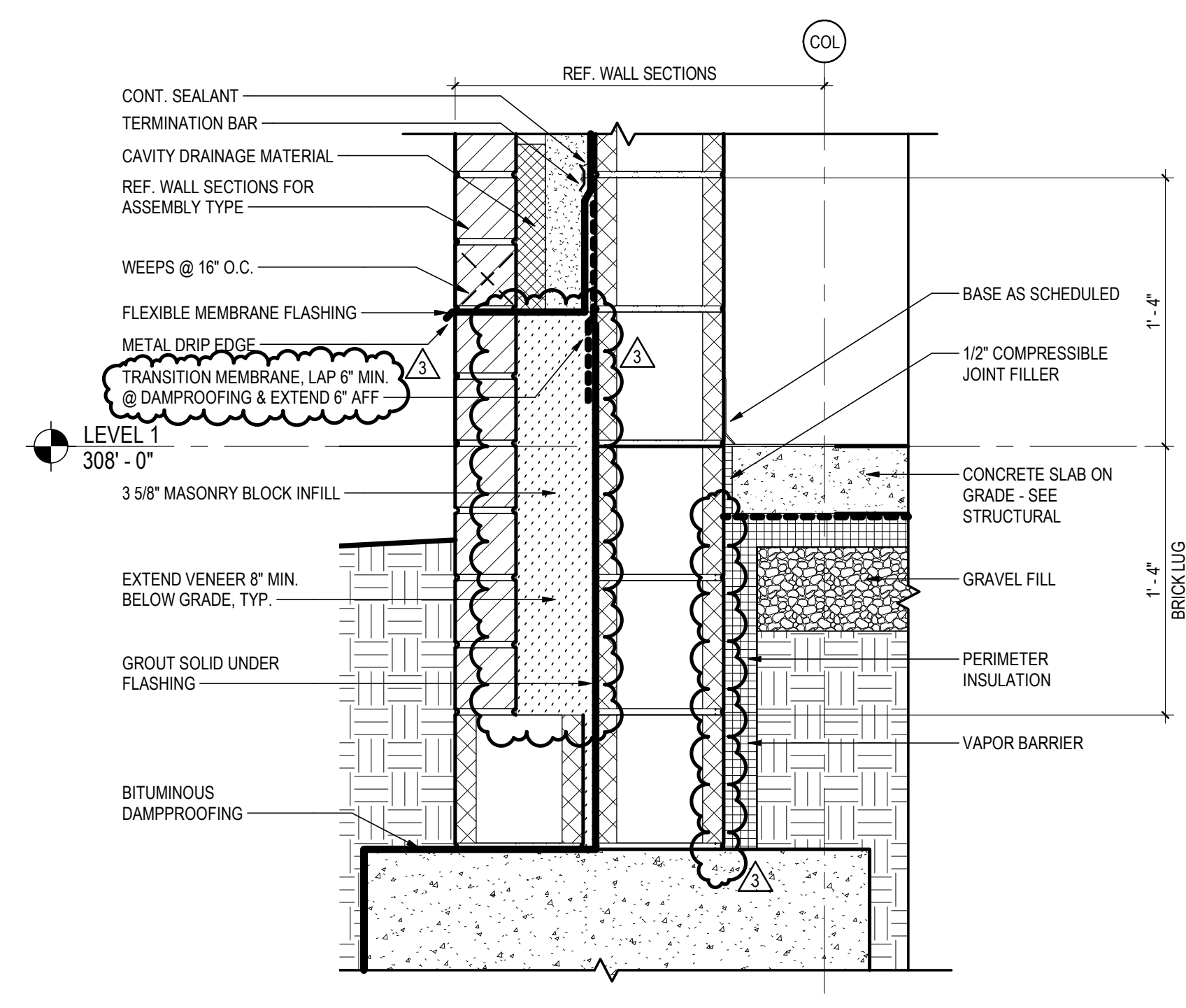
EVERGREEN MILLS ROAD, DULLES, VA 20166

Title
EXTERIOR SECTION DETAILS

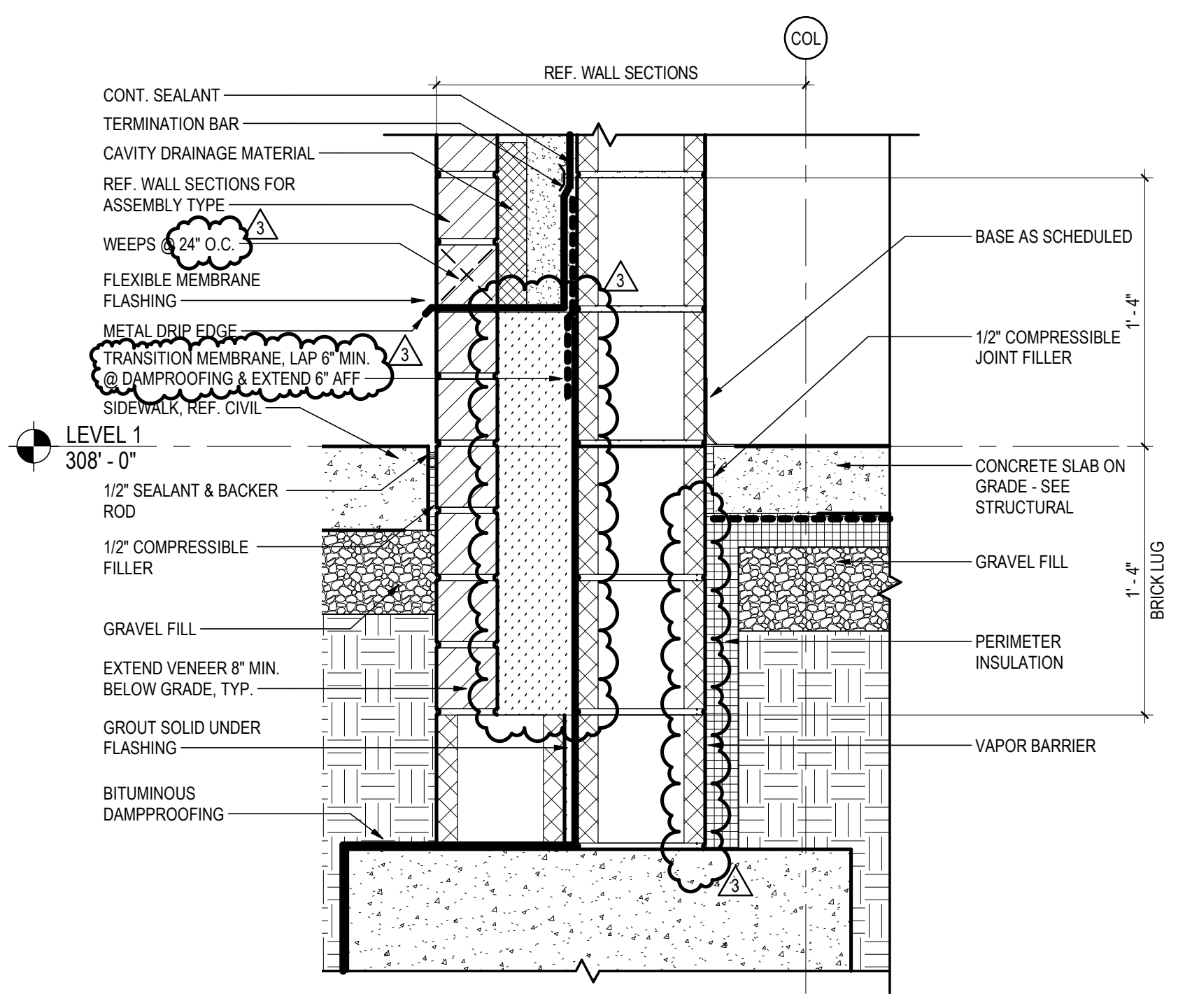
Project No. 218320338
Revision 3
Scale A5 INDICATED
Drawing No. A520



BASE DETAIL - FOUNDATION SECTION AT EXTERIOR DOOR
A5
1 1/2" = 1'-0"

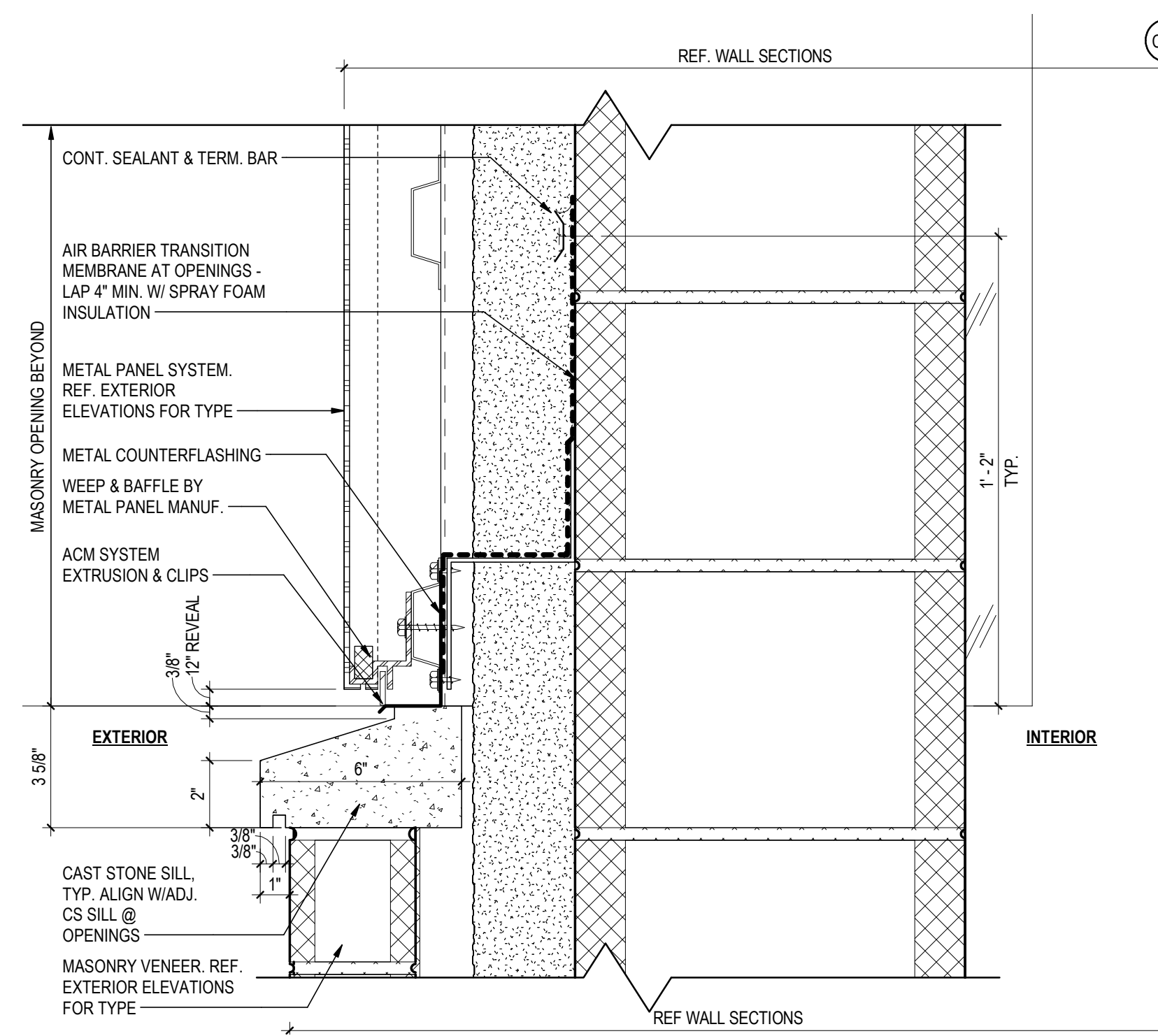


BASE DETAIL - MASONRY LEDGE AT EXTERIOR CMU WALL
A3
1 1/2" = 1'-0"



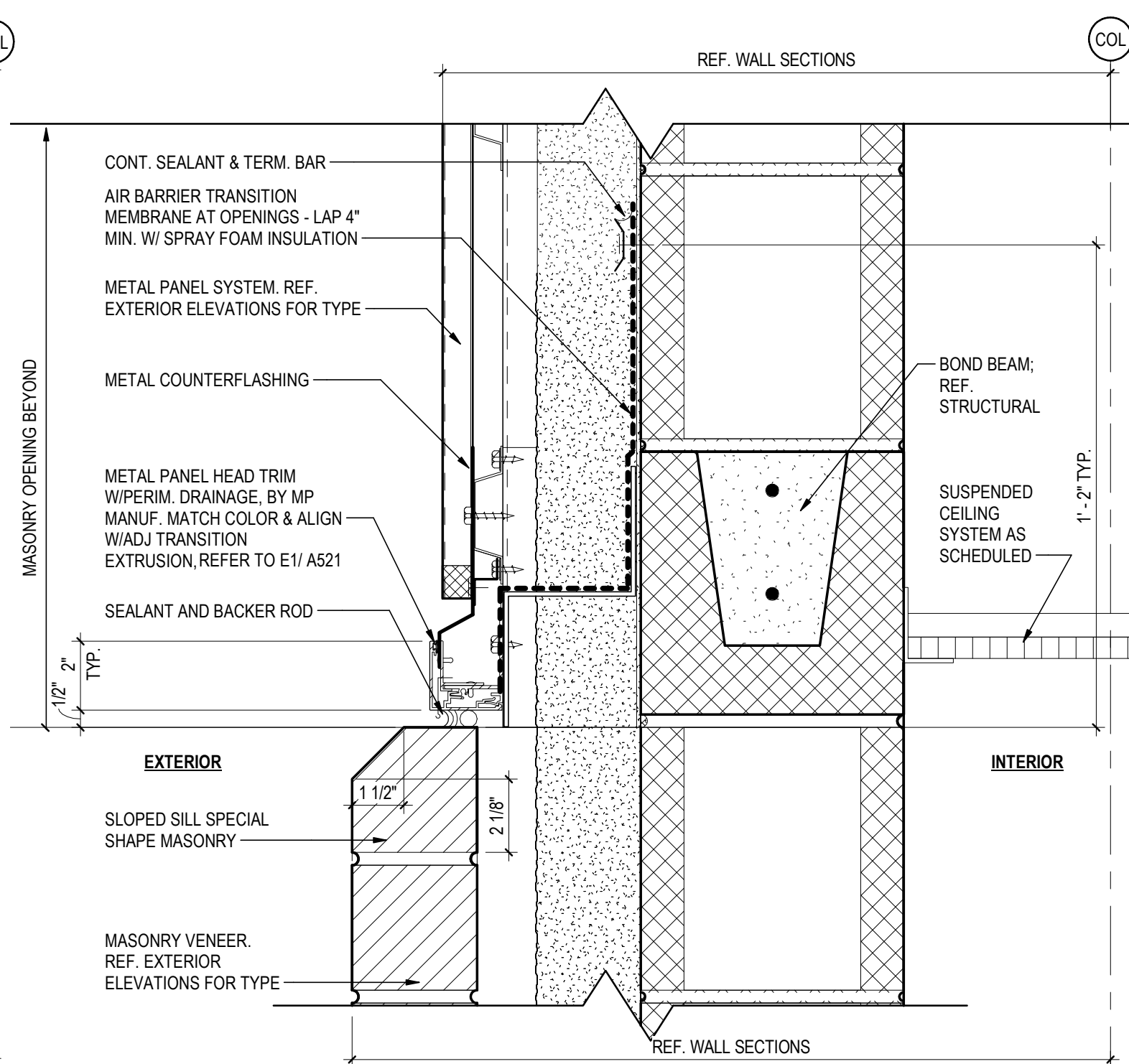
BASE DETAIL - MASONRY LEDGE AT EXTERIOR CMU WALL & SIDEWALK
A2
1 1/2" = 1'-0"

E
D
C
B
A



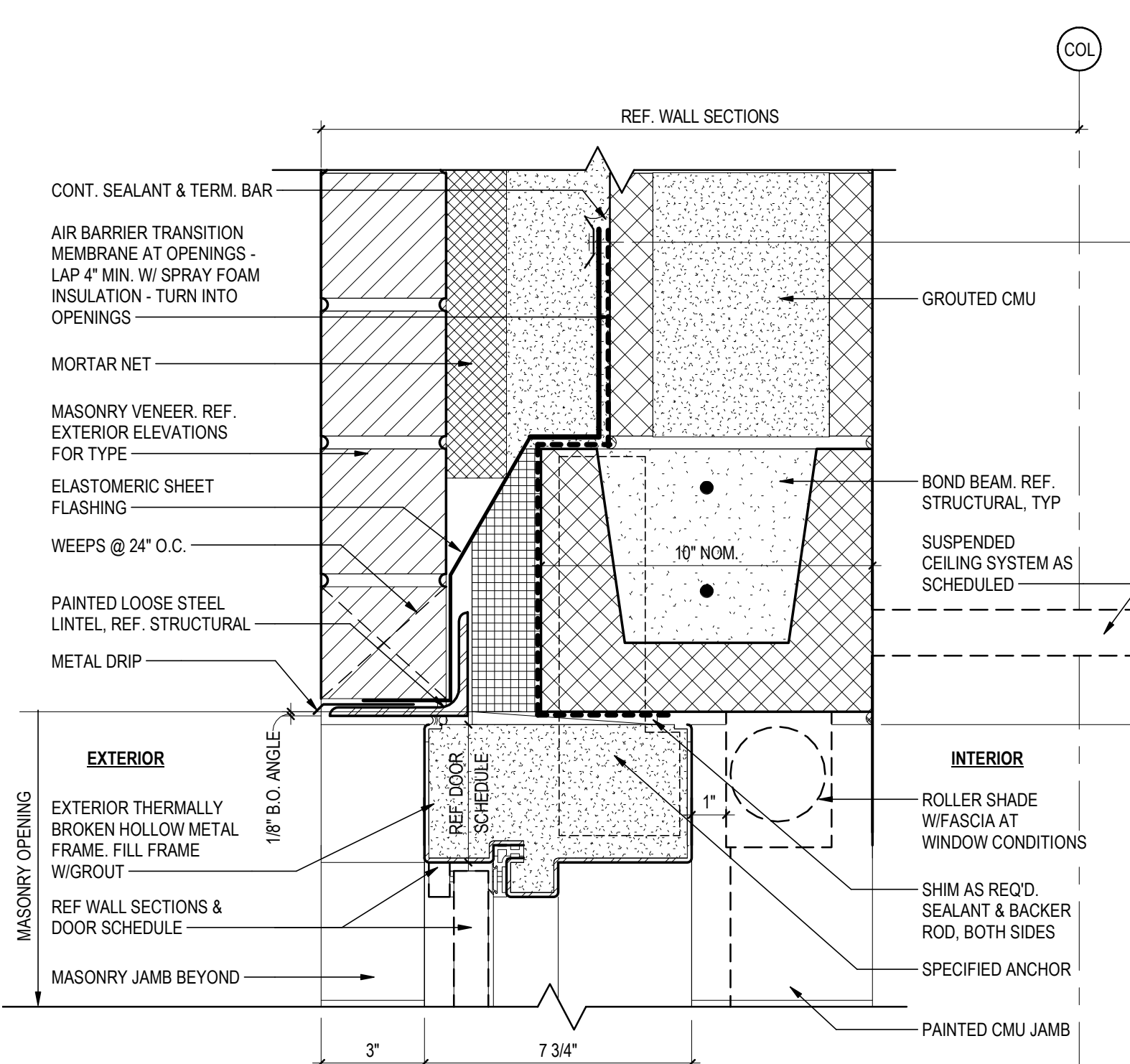
TRANSITION DETAIL - COMPOSITE METAL PANEL ABOVE MASONRY VENEER ON CMU BACKUP

E6
4/11/14/17
3" = 1'-0"



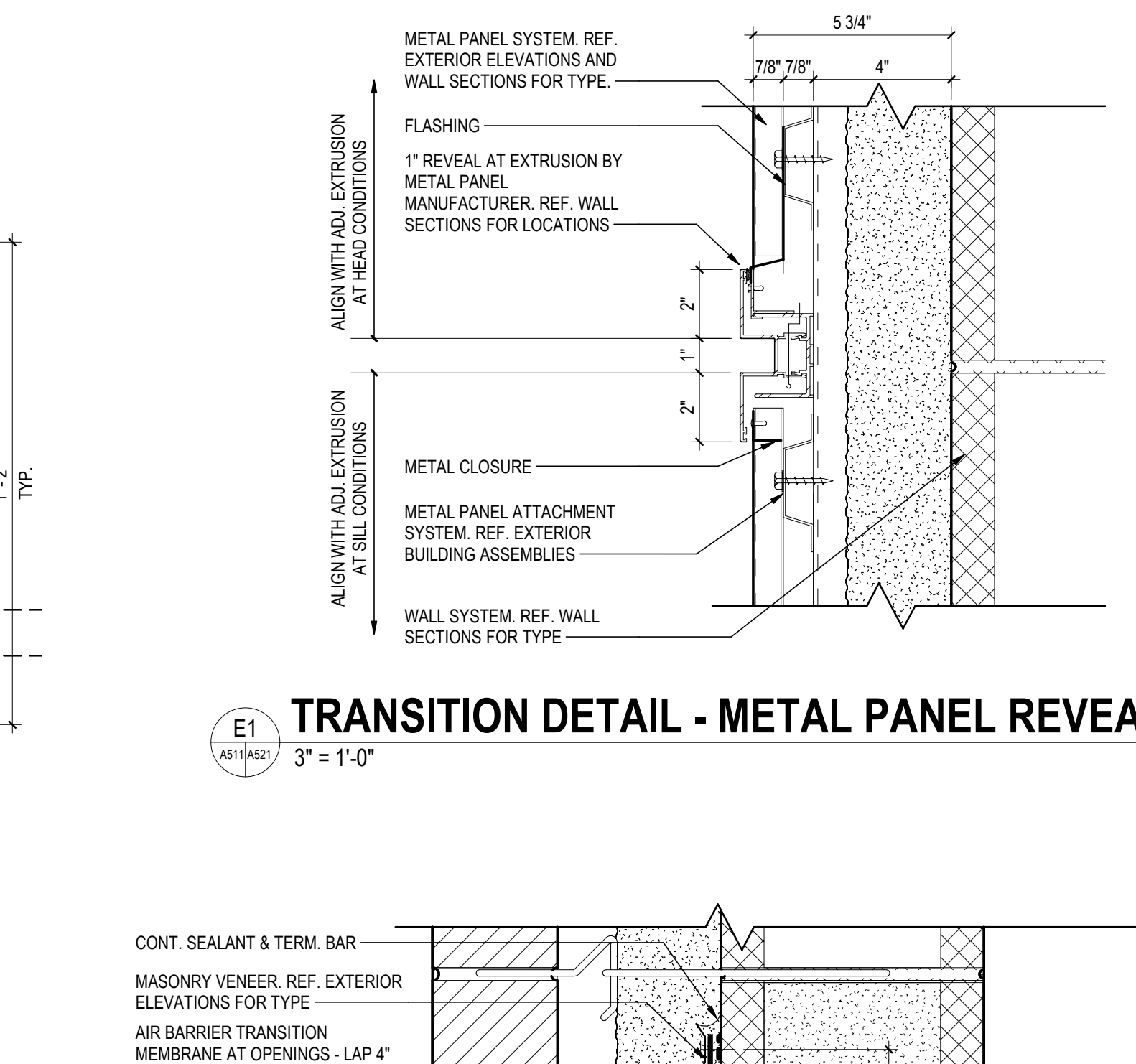
TRANSITION DETAIL - SINGLE SKIN METAL PANEL ABOVE MASONRY VENEER ON CMU BACKUP

E5
4/11/14/17
3" = 1'-0"



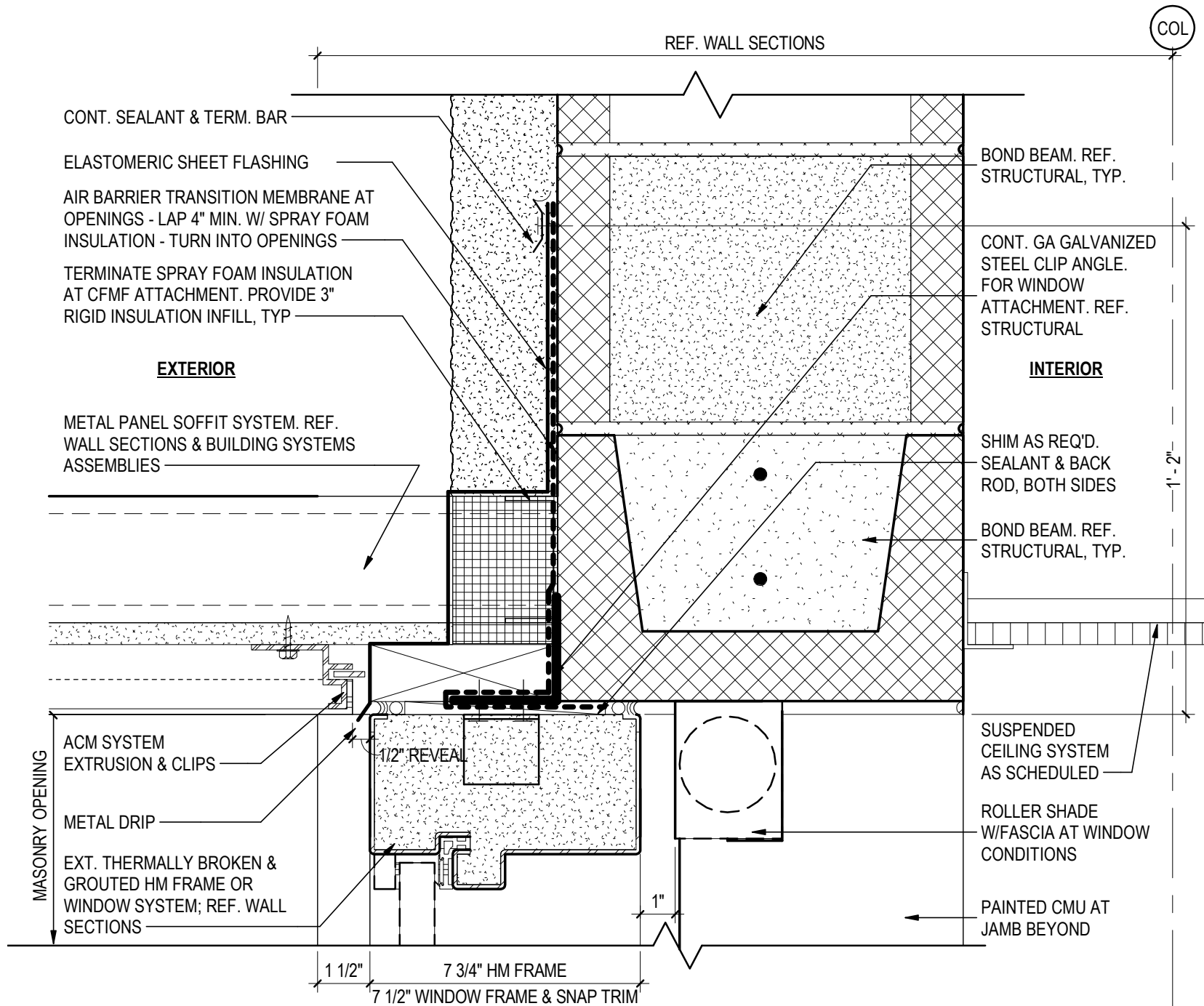
HEAD DETAIL - LOOSE LINTEL AT HOLLOW METAL & MASONRY VENEER ON CMU BACKUP

E3
4/11/14/17
3" = 1'-0"



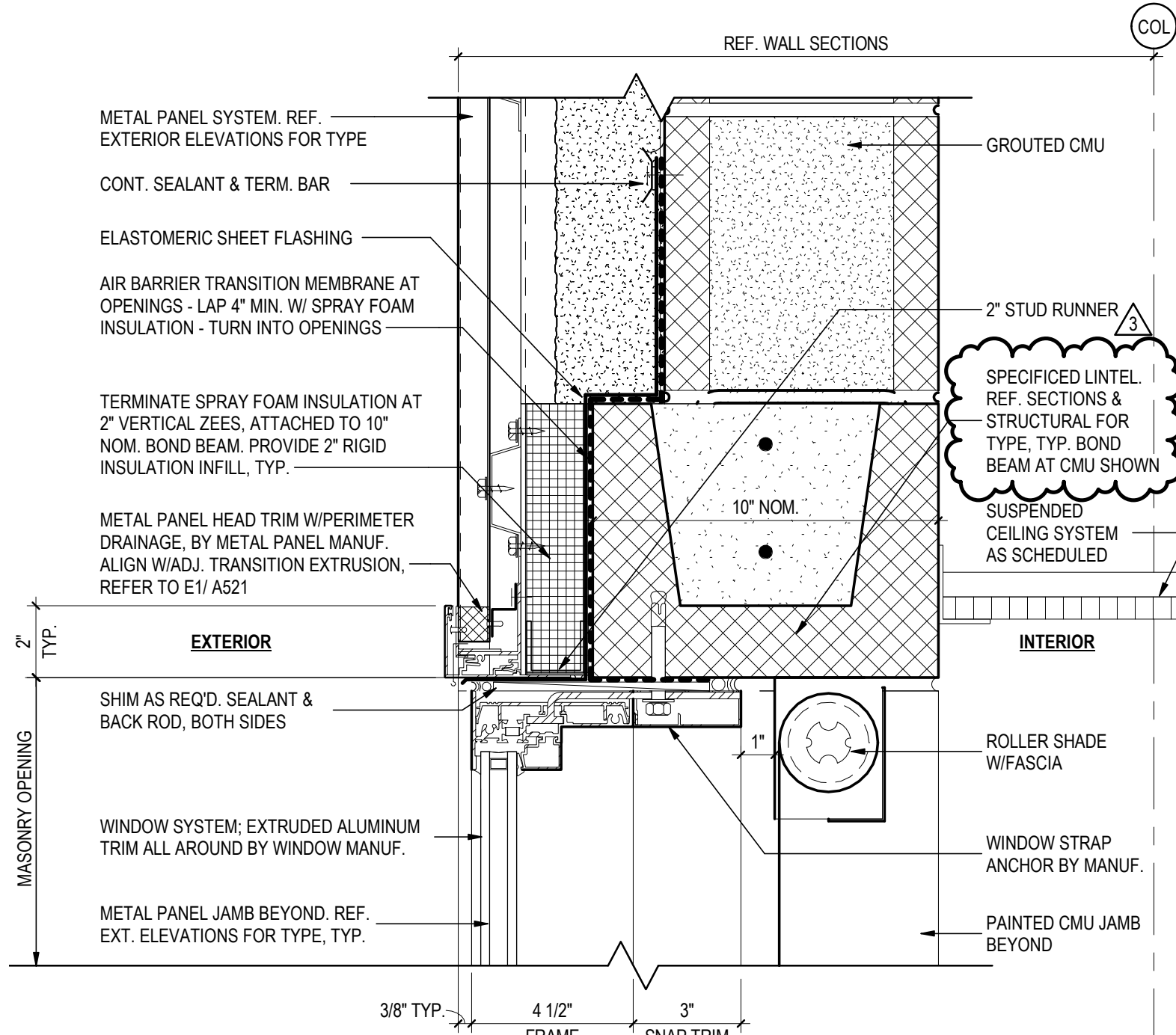
TRANSITION DETAIL - METAL PANEL REVEAL

E1
4/11/14/17
3" = 1'-0"



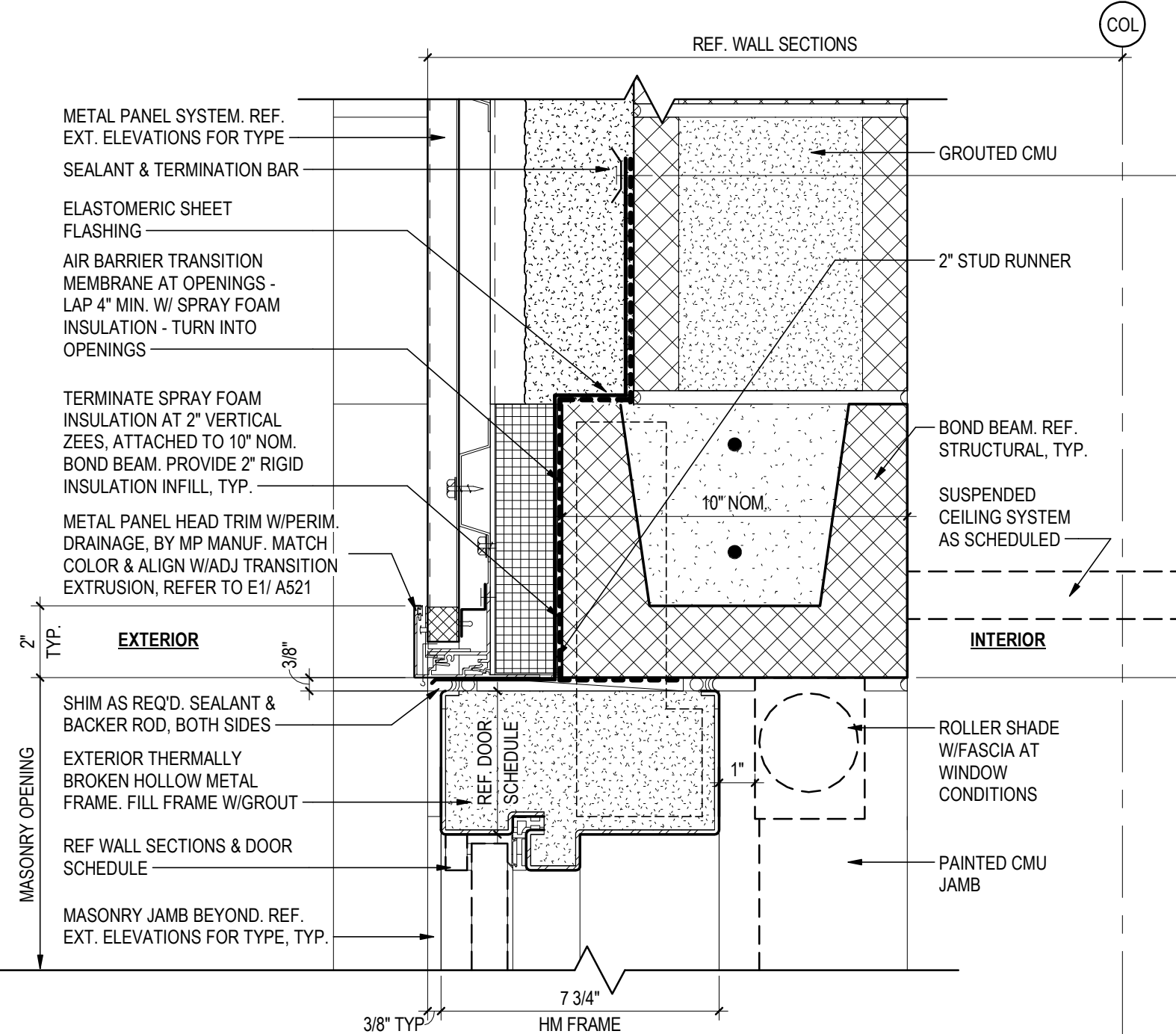
HEAD DETAIL - WINDOW AT COMPOSITE METAL PANEL ON CMU BACKUP

C6
4/11/14/17
3" = 1'-0"



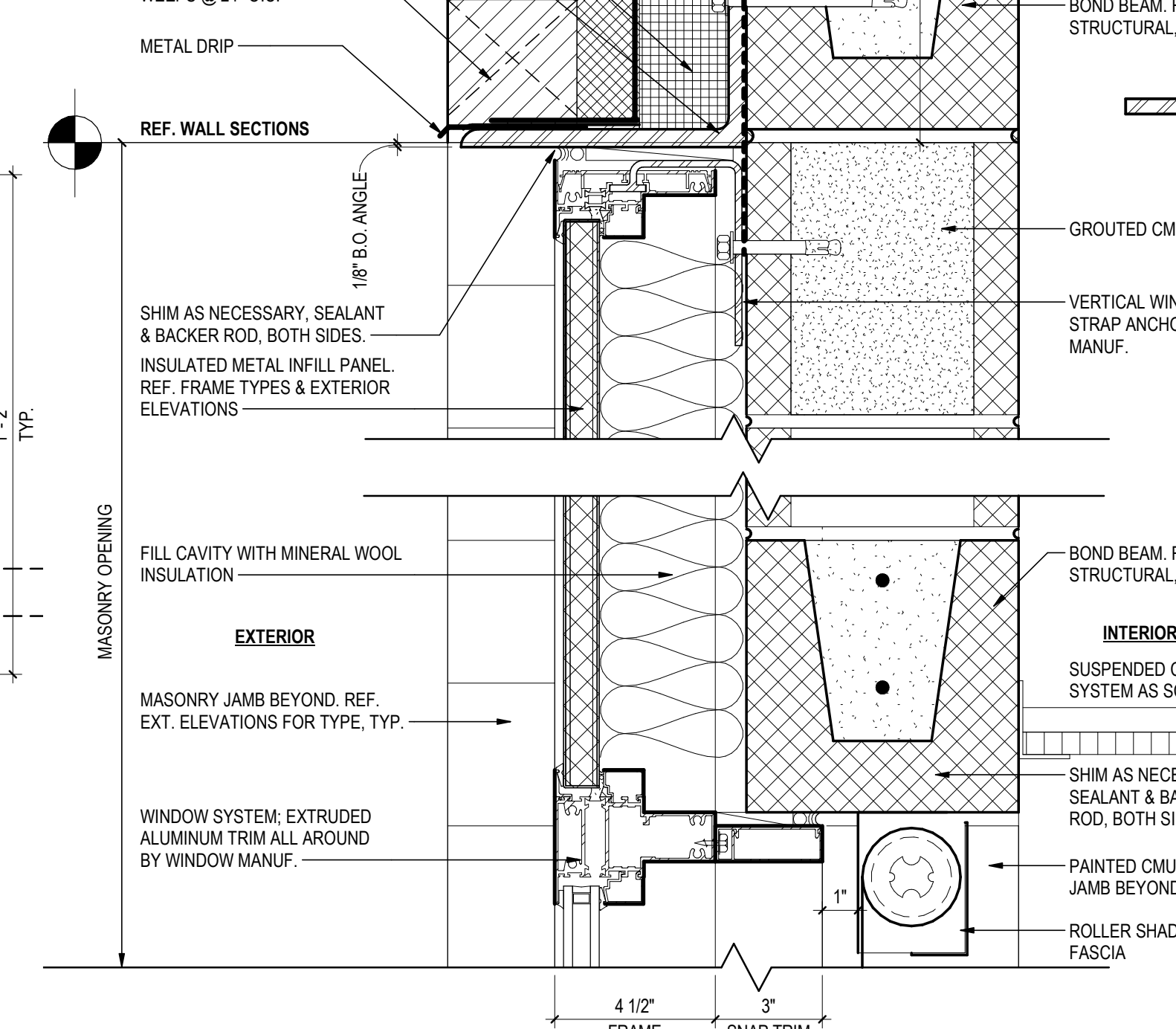
HEAD DETAIL - WINDOW AT SINGLE SKIN METAL PANEL ON CMU BACKUP

C5
4/11/14/17
3" = 1'-0"



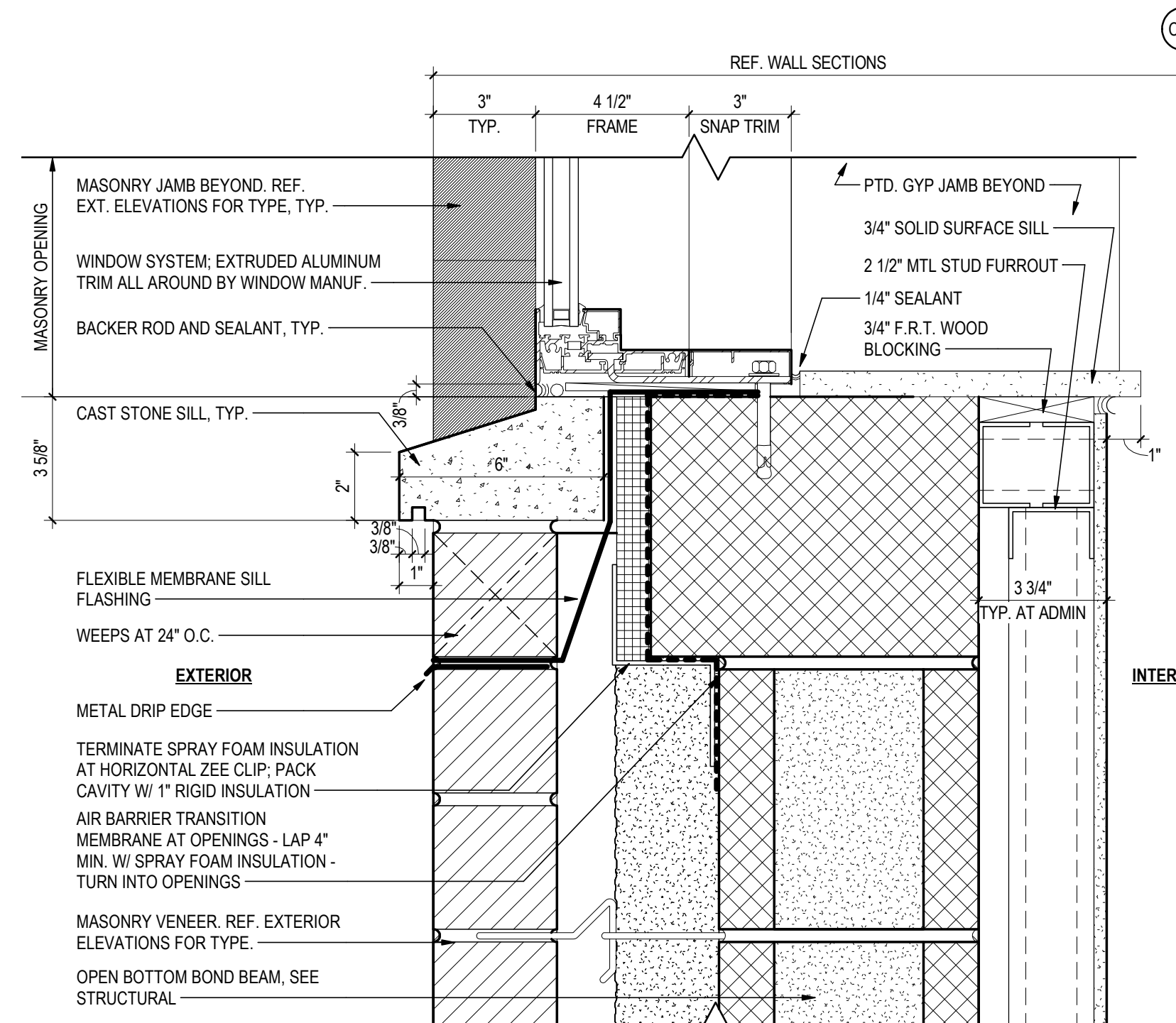
HEAD DETAIL - HM DOOR HEAD AT SINGLE SKIN METAL PANEL ON CMU BACKUP

C3
4/11/14/17
3" = 1'-0"



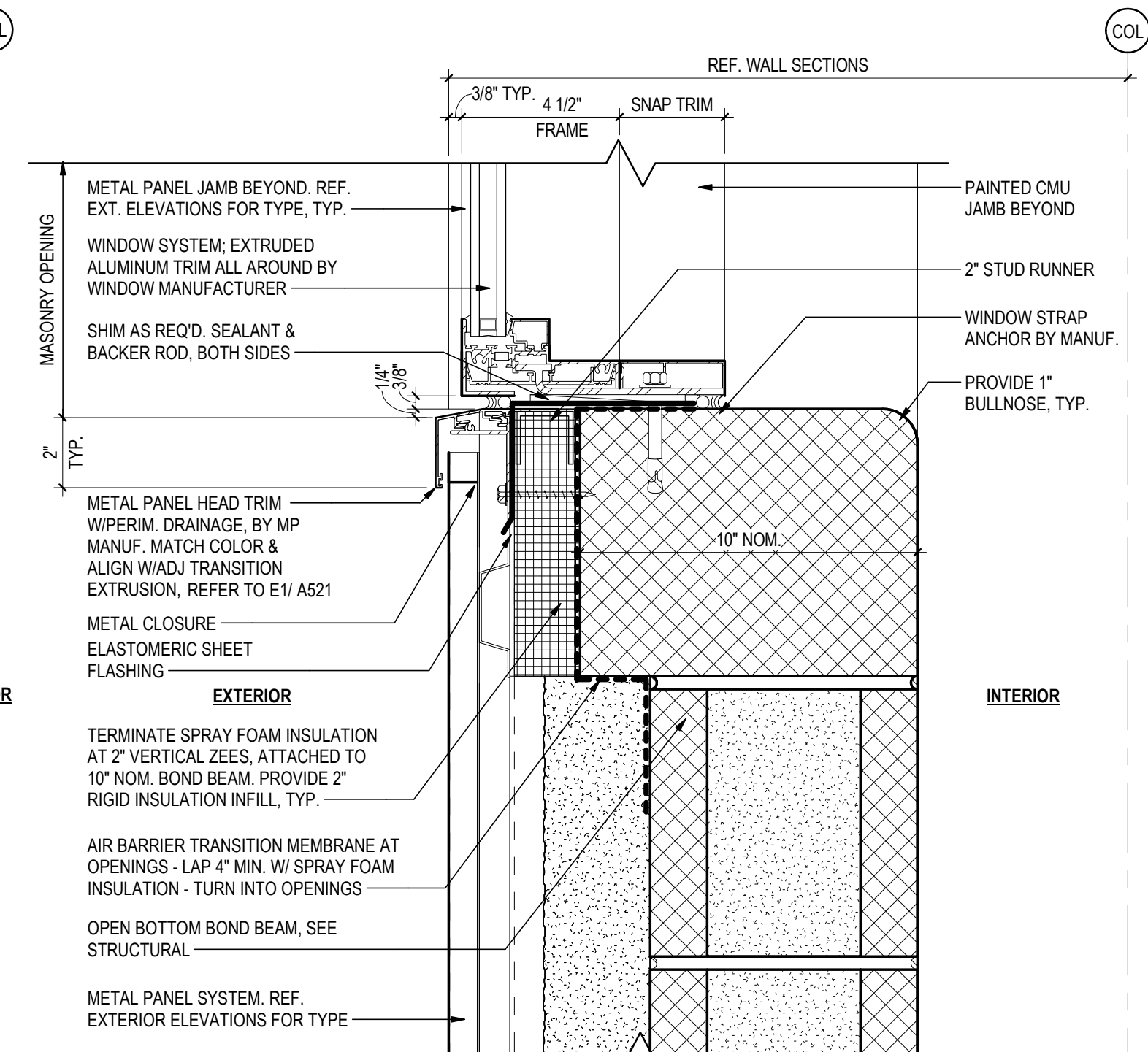
HEAD DETAIL - WINDOW HEAD AT STRUCTURAL LINTEL & METAL PANEL ON CMU BACKUP

C1
4/11/14/17
3" = 1'-0"



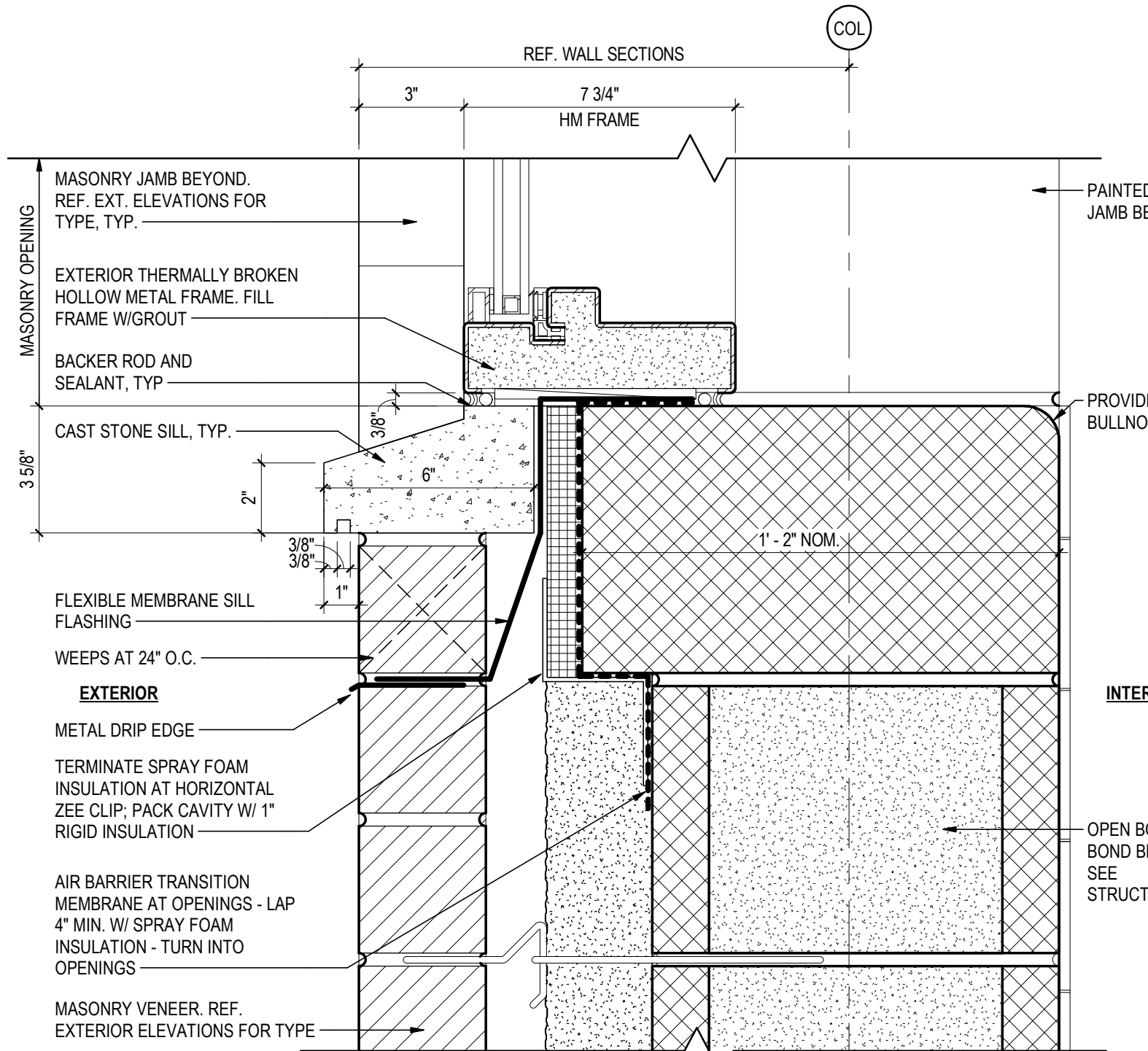
SILL DETAIL - WINDOW FRAME AT MASONRY VENEER & SOLID SURFACE SILL ON CMU BACKUP

A6
4/11/14/17
3" = 1'-0"



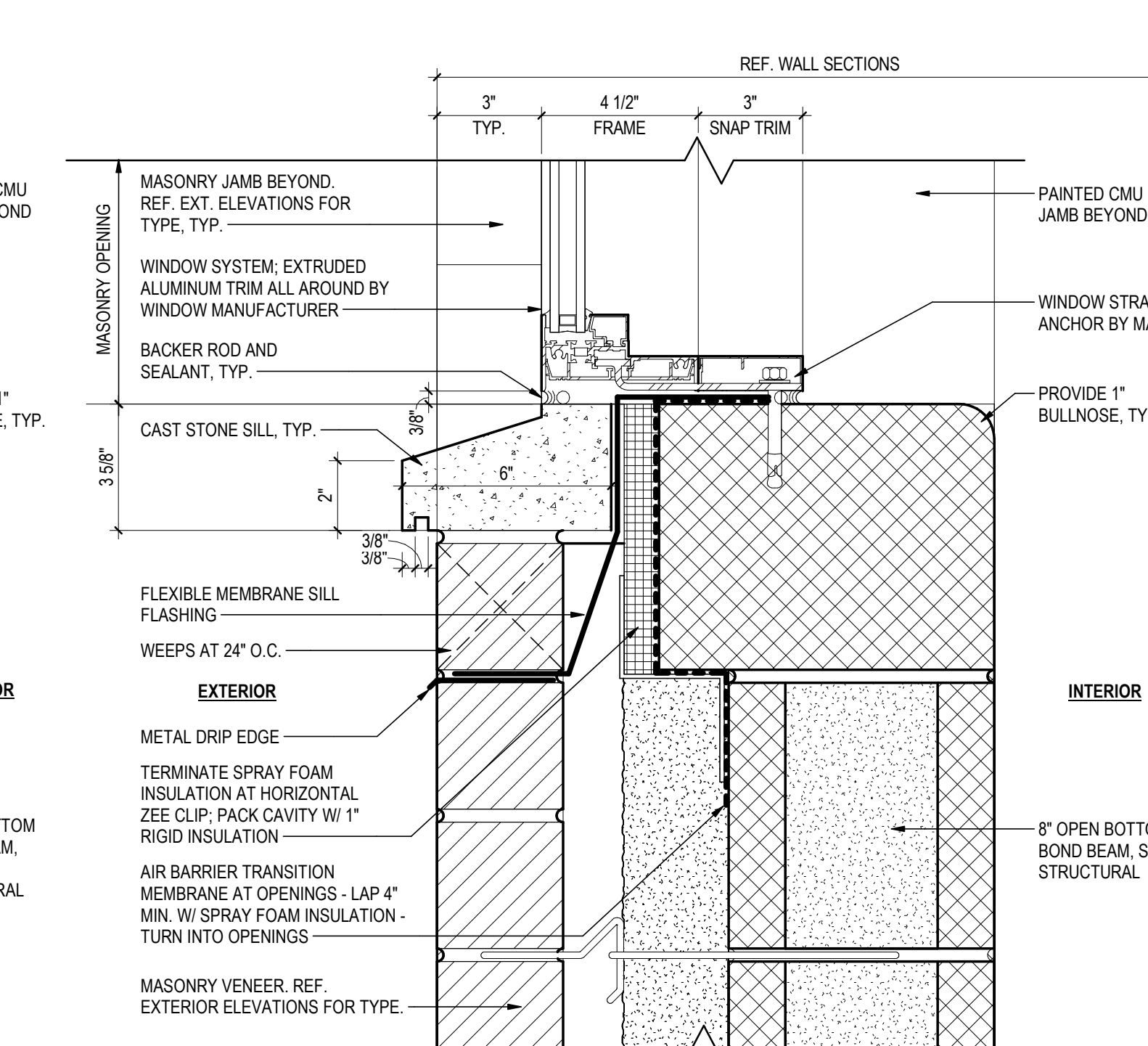
SILL DETAIL - WINDOW FRAME AT SINGLE SKIN METAL PANEL ON CMU BACKUP

A5
4/11/14/17
3" = 1'-0"



SILL DETAIL - HOLLOW METAL FRAME AT MASONRY VENEER ON CMU BACKUP

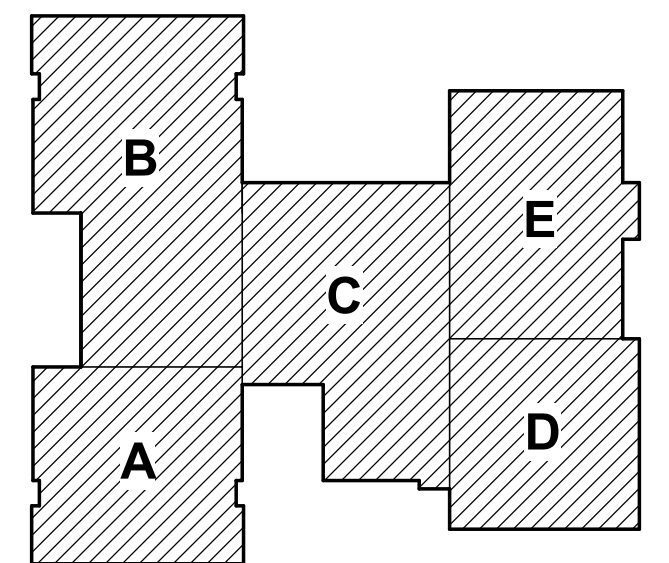
A3
4/11/14/17
3" = 1'-0"



SILL DETAIL - WINDOW FRAME AT MASONRY VENEER ON CMU BACKUP

A1
4/11/14/17
3" = 1'-0"

Keyplan



3	ADDENDUM #3	2020.03.02
4	BID & PERMIT SET	2020.02.06
5	100% CONSTRUCTION DOCUMENTS	2020.01.26
	Issue/Revision	YYYY.MM.DD

Permit/Seal



Client/Project Logo



Client/Project

ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS

EVERGREEN MILLS ROAD, DULLES, VA 20166

Title
EXTERIOR SECTION DETAILS

Project No.
218320338
Revision
VDOE #
3 053-115-01-100

Scale
AS INDICATED
Drawing No.
A521

Consultants

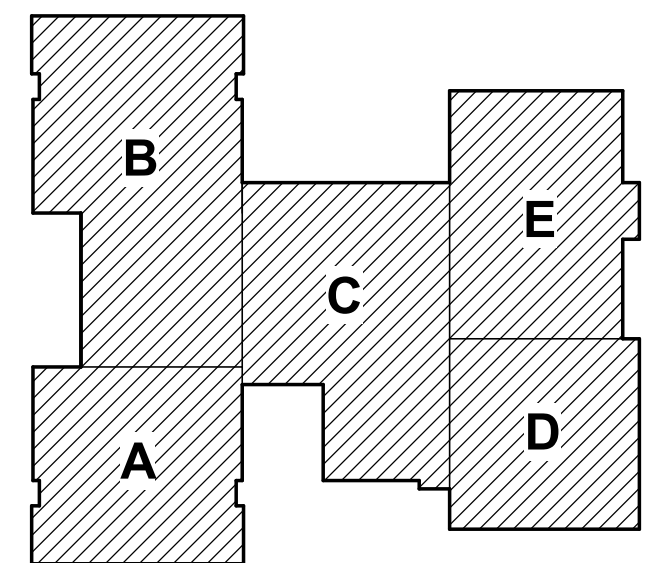
CIVIL - BOWMAN CONSULTING
101 SOUTH STREET, SE, LEESBURG, VA 20175
Tel: (703) 443-2400

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46090 LAKE CENTER PLAZA, SUITE 309 POTOMAC FALLS, VA 20165
Tel: (571) 323-0320

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Tel: (240) 683-9530

Keyplan



ADDENDUM #3	2020.03.02
BID & PERMIT SET	2020.02.26
100% CONSTRUCTION DOCUMENTS	2020.01.26
Issue/Revision	YYYY.MM.DD

Permit/Seal



Client/Project Logo



Client/Project

ELEMENTARY SCHOOL (ES-23)

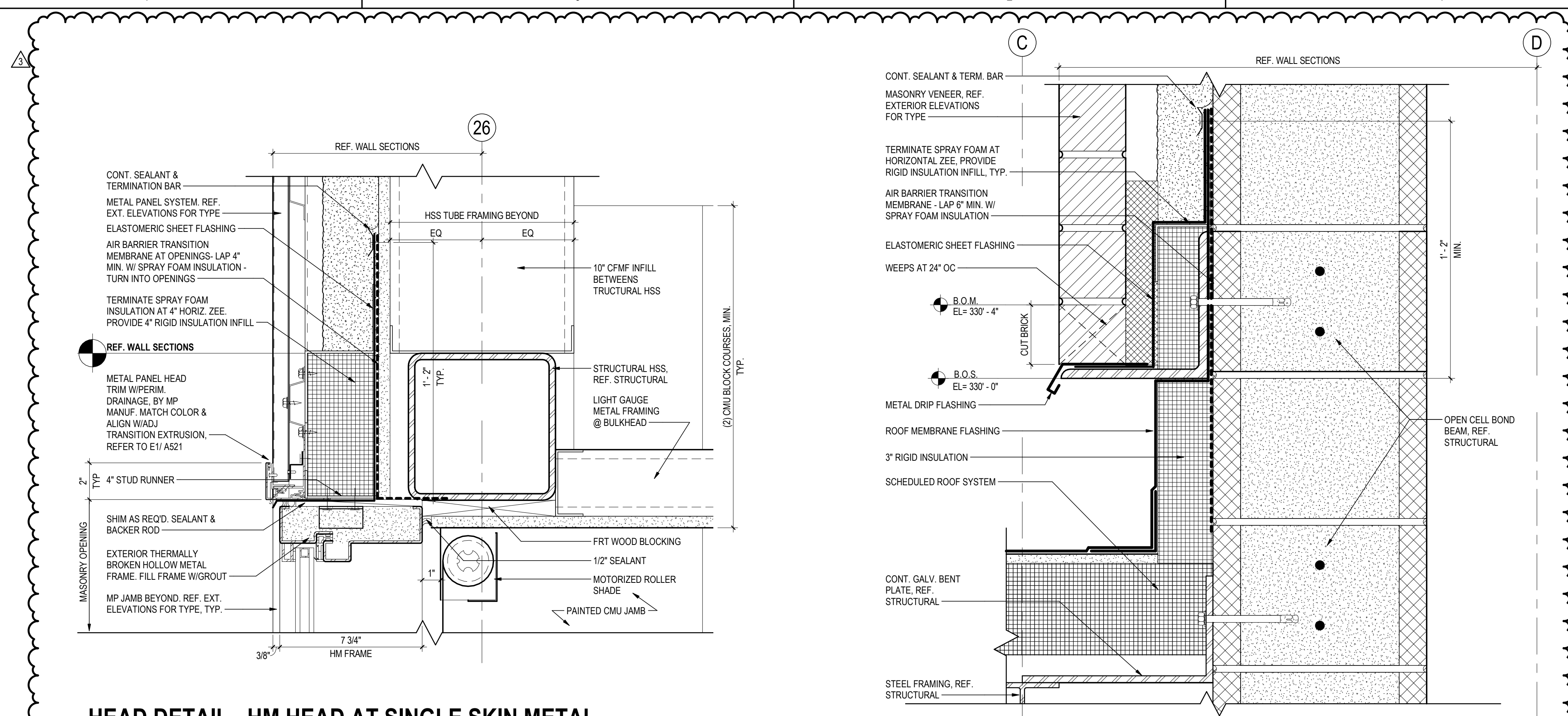
LOUDOUN COUNTY PUBLIC SCHOOLS

EVERGREEN MILLS ROAD, DULLES, VA 20166

Title
EXTERIOR SECTION DETAILS

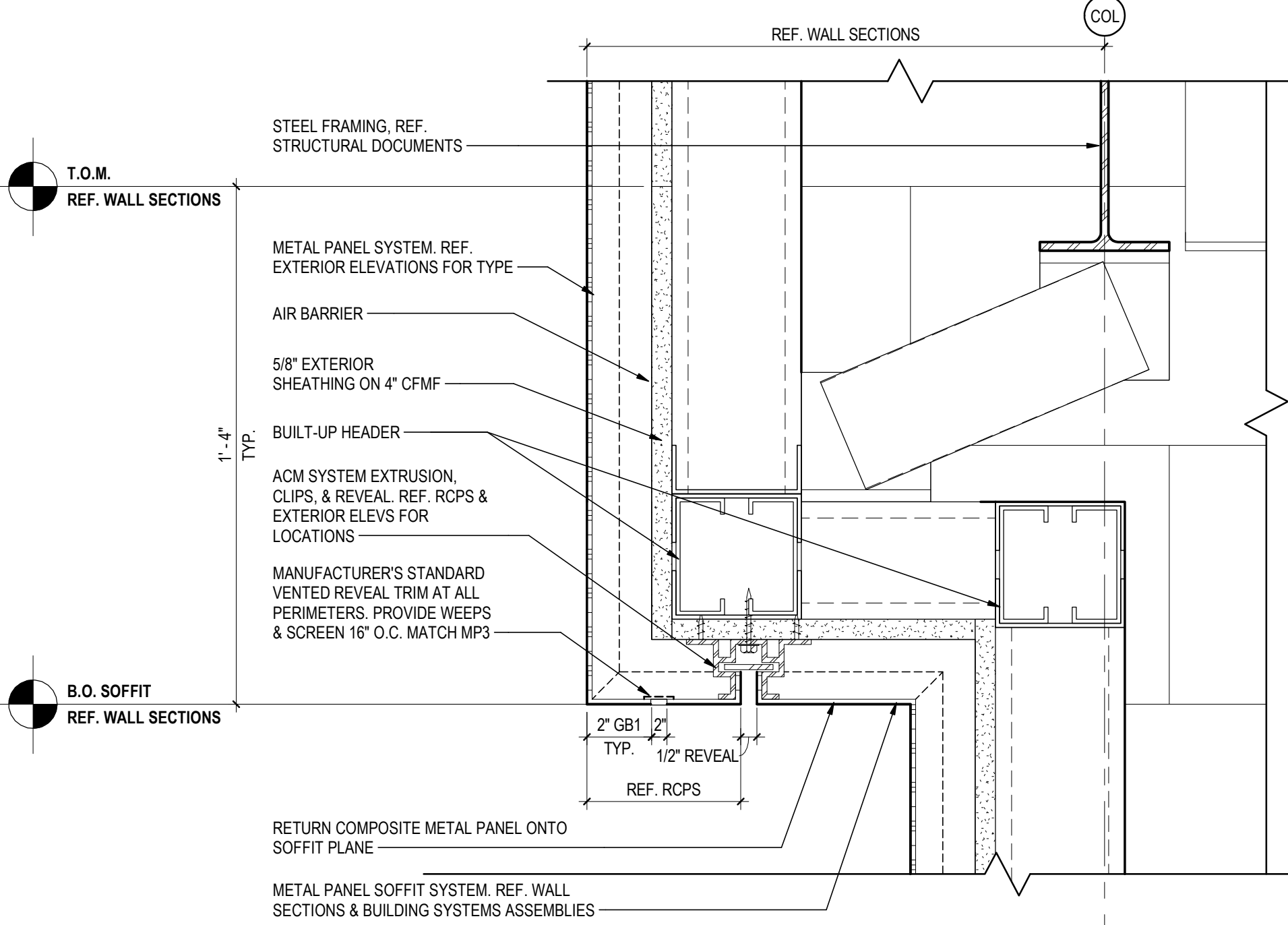
Project No.
218320338
Revision VDOE #
3 053-115-01-100

Scale
AS INDICATED
Drawing No.
A523

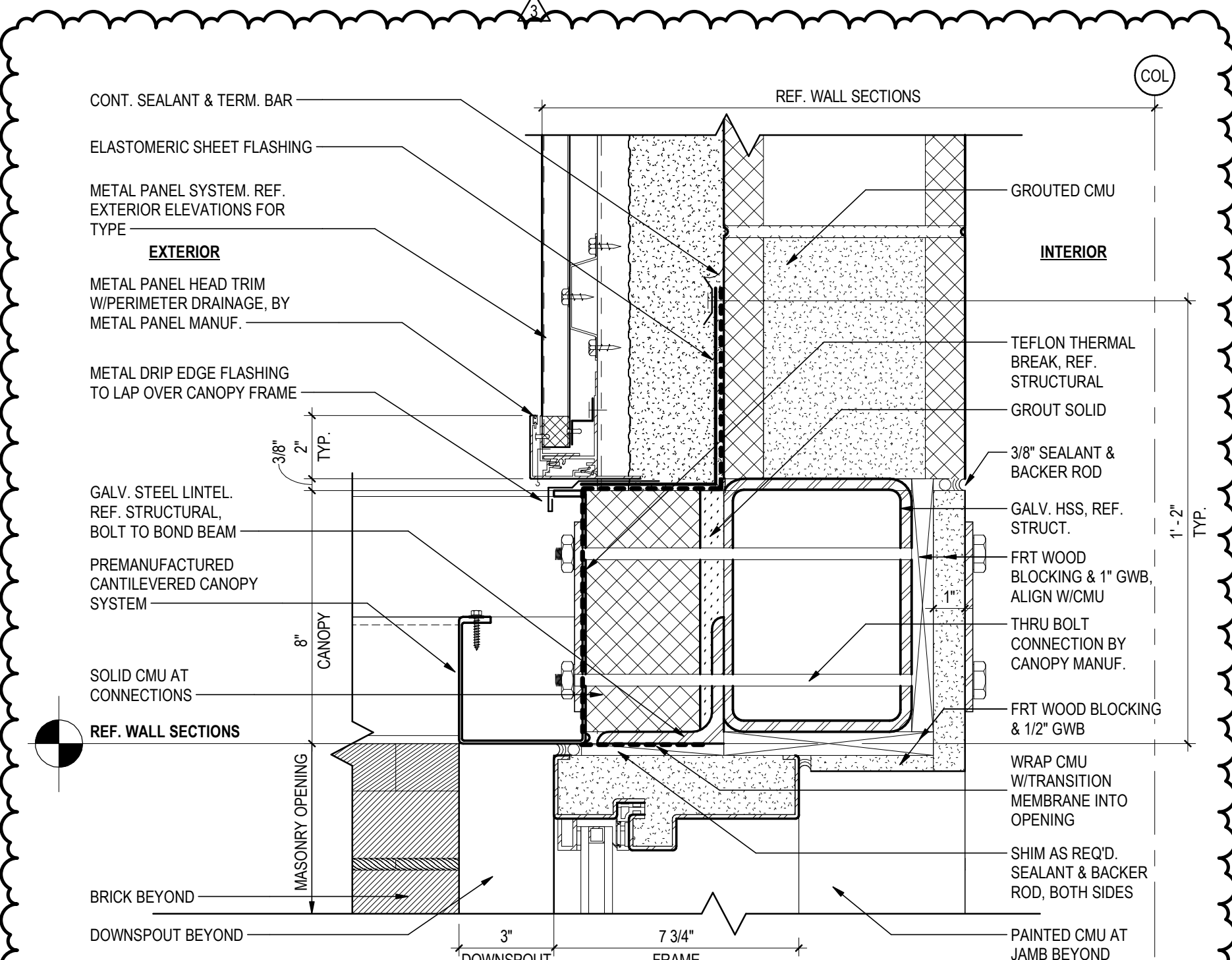


HEAD DETAIL - HM HEAD AT SINGLE SKIN METAL PANEL ON CFMF BACKUP
E4 (A511)A523 3" = 1'-0"

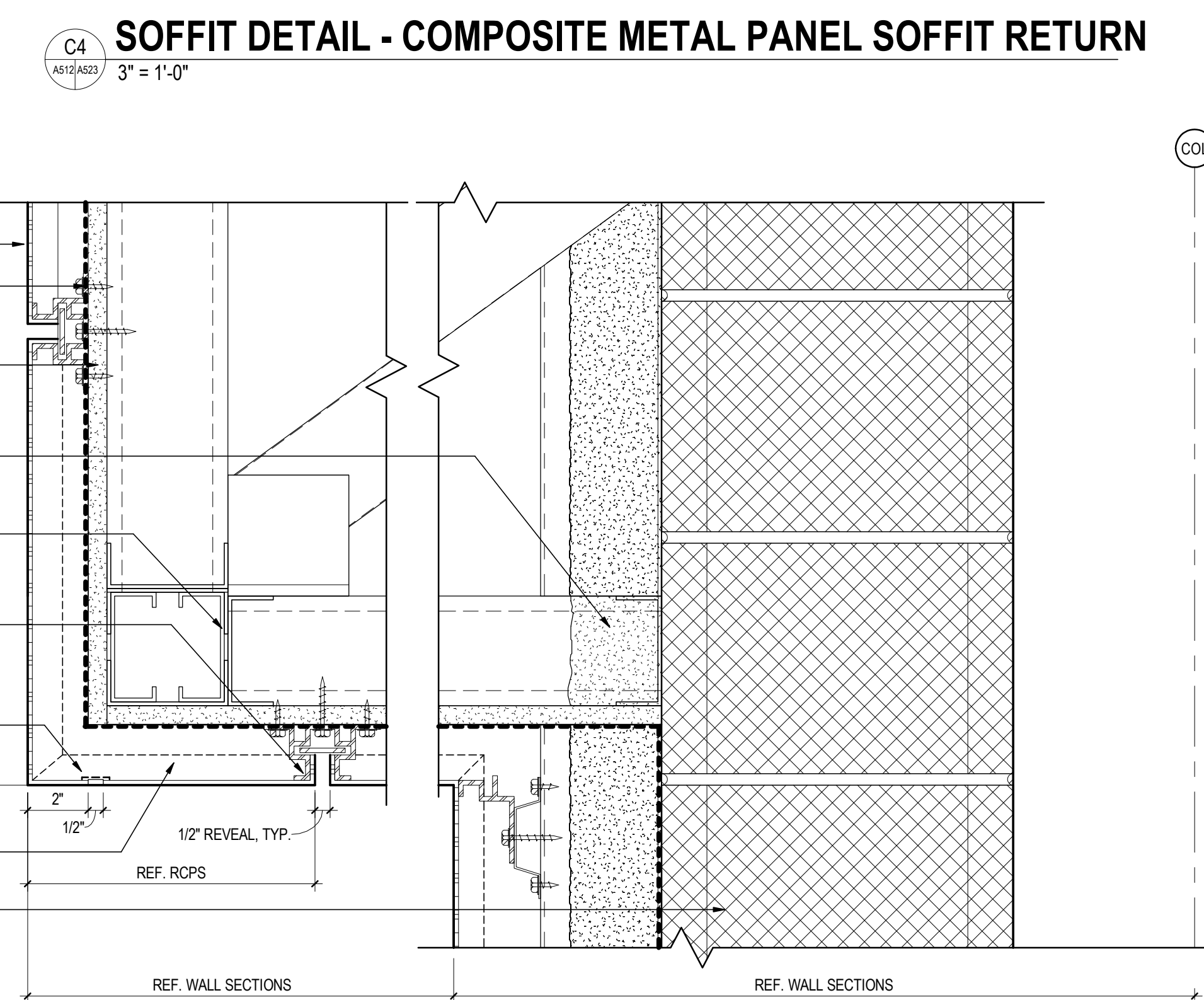
TRANSITION DETAIL - MASONRY RISE WALL AT RELIEF ANGLE
E2 (A511)A523 3" = 1'-0"



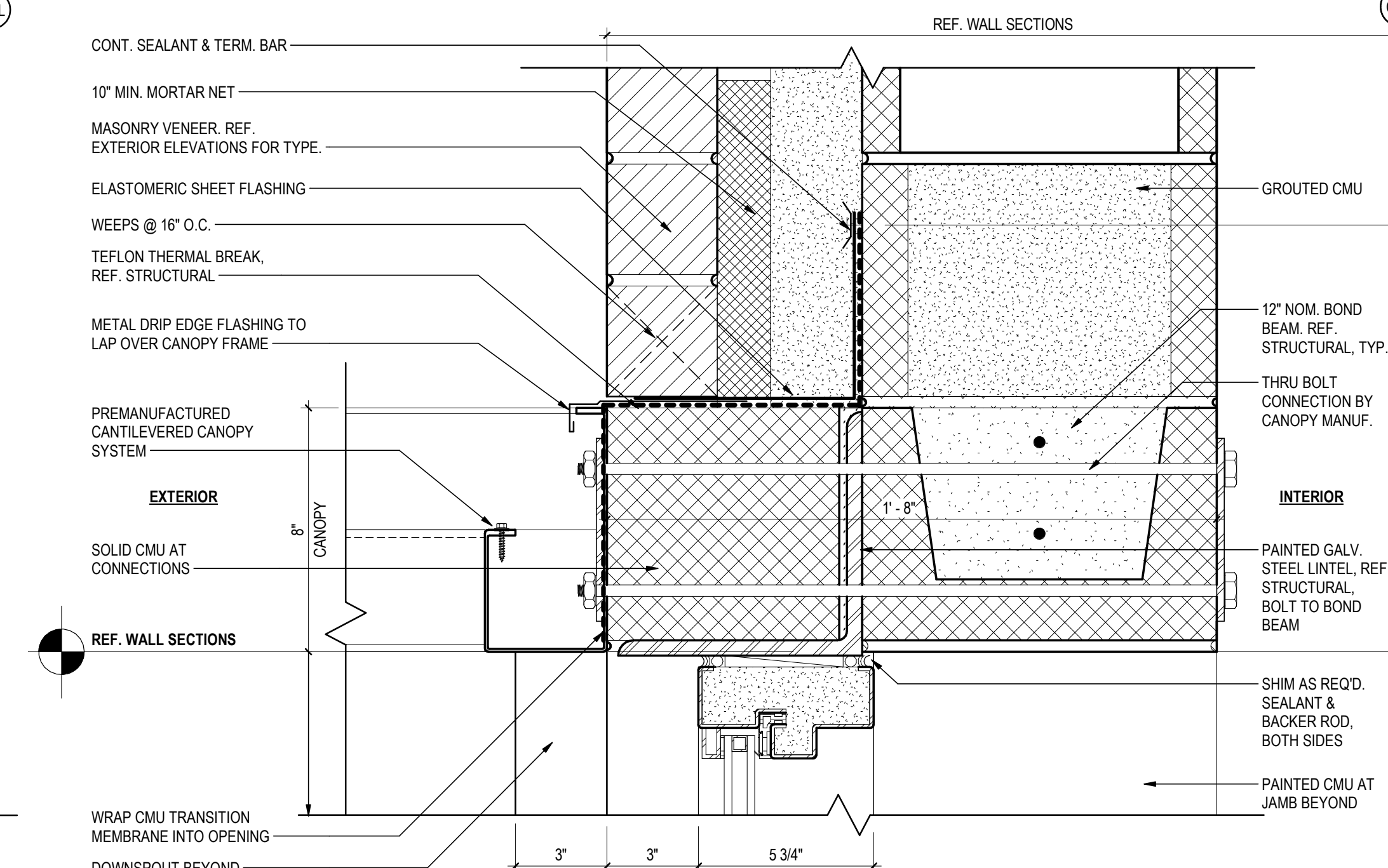
SOFFIT DETAIL - COMPOSITE METAL PANEL SOFFIT RETURN
C4 (A511)A523 3" = 1'-0"



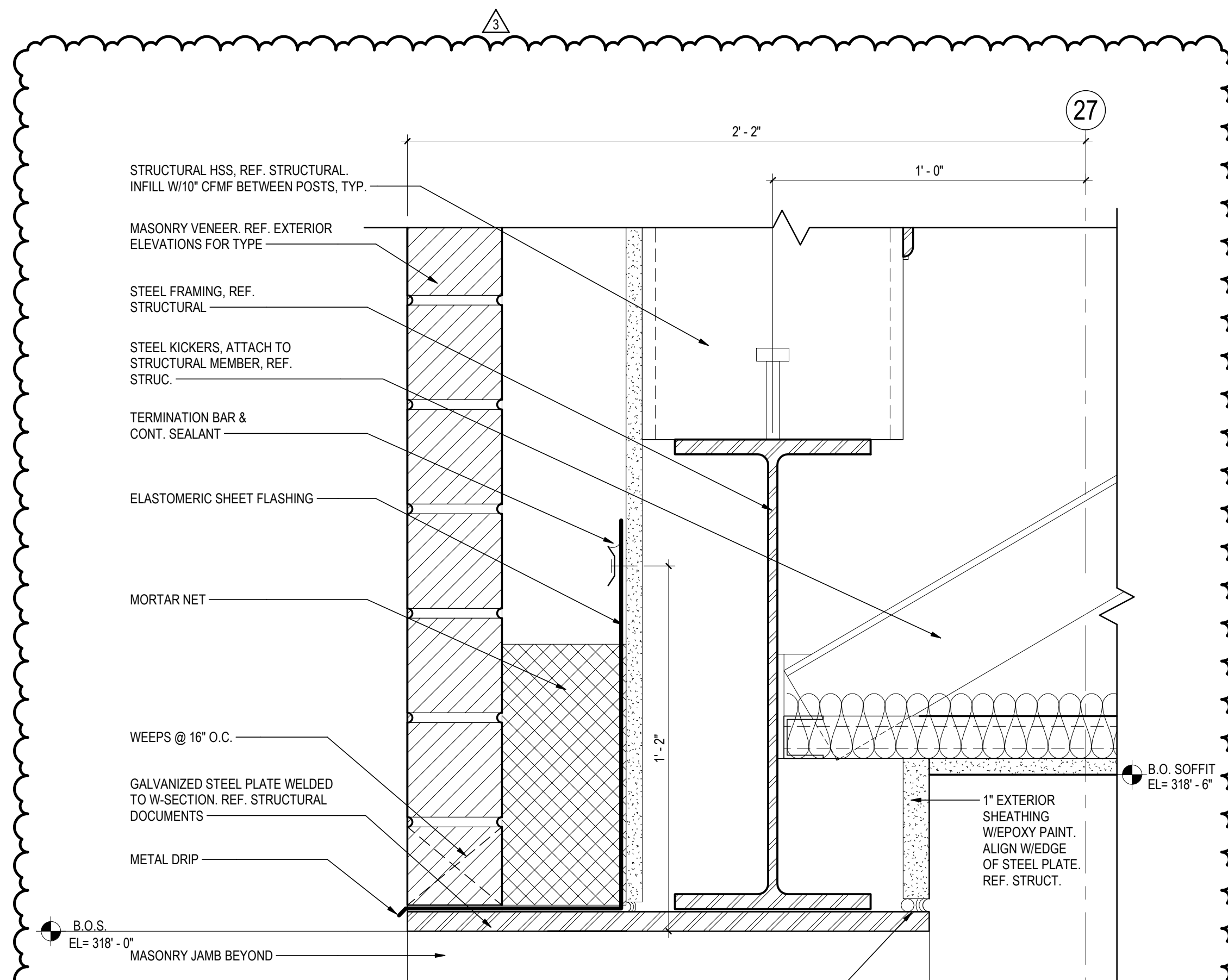
PREFAB CANOPY AT METAL PANEL ON CMU BACKUP
C2 (A511)A523 3" = 1'-0"



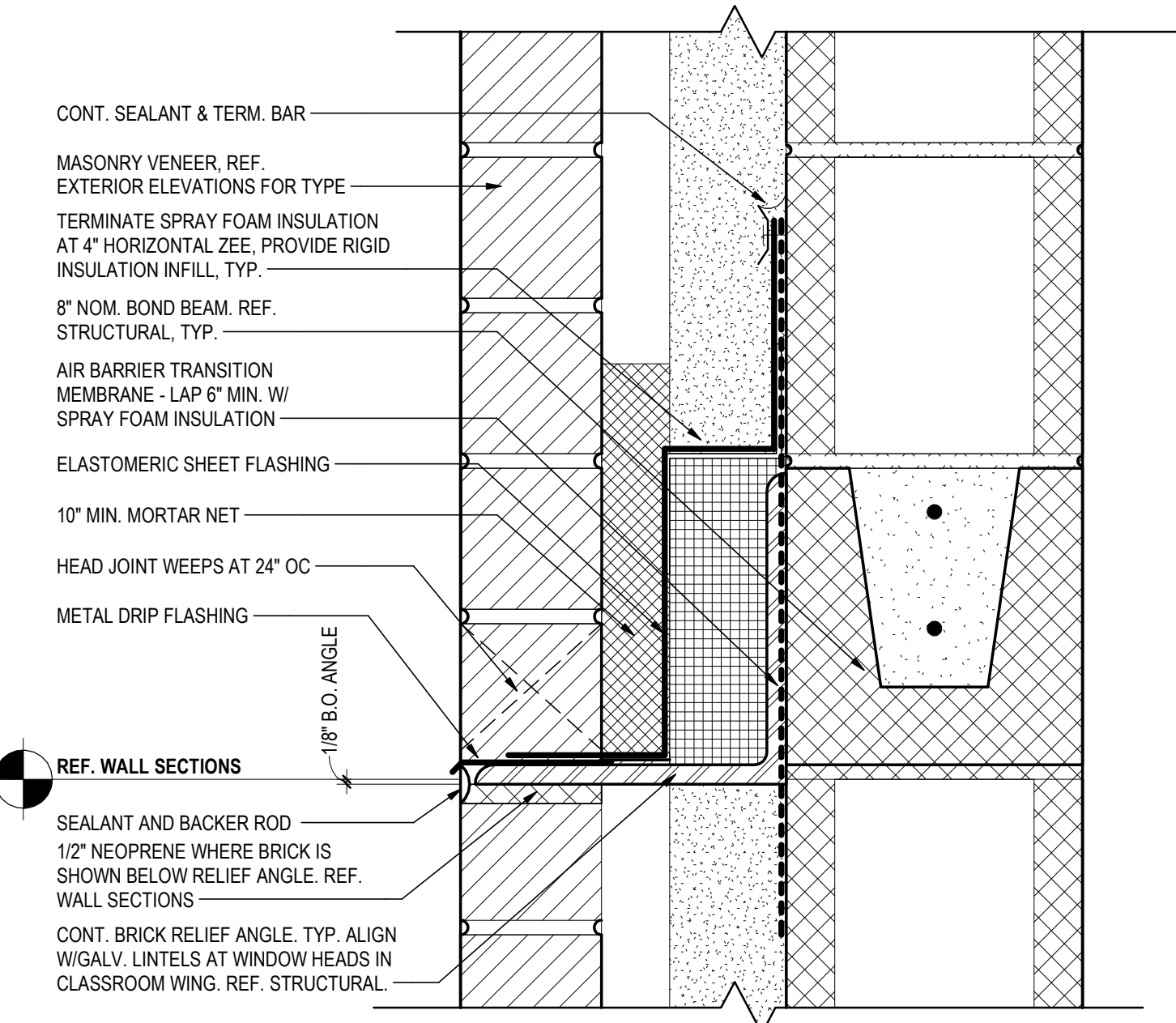
SOFFIT DETAIL - COMPOSITE METAL PANEL RETURN & ATTACHMENT
A4 (A511)A523 3" = 1'-0"



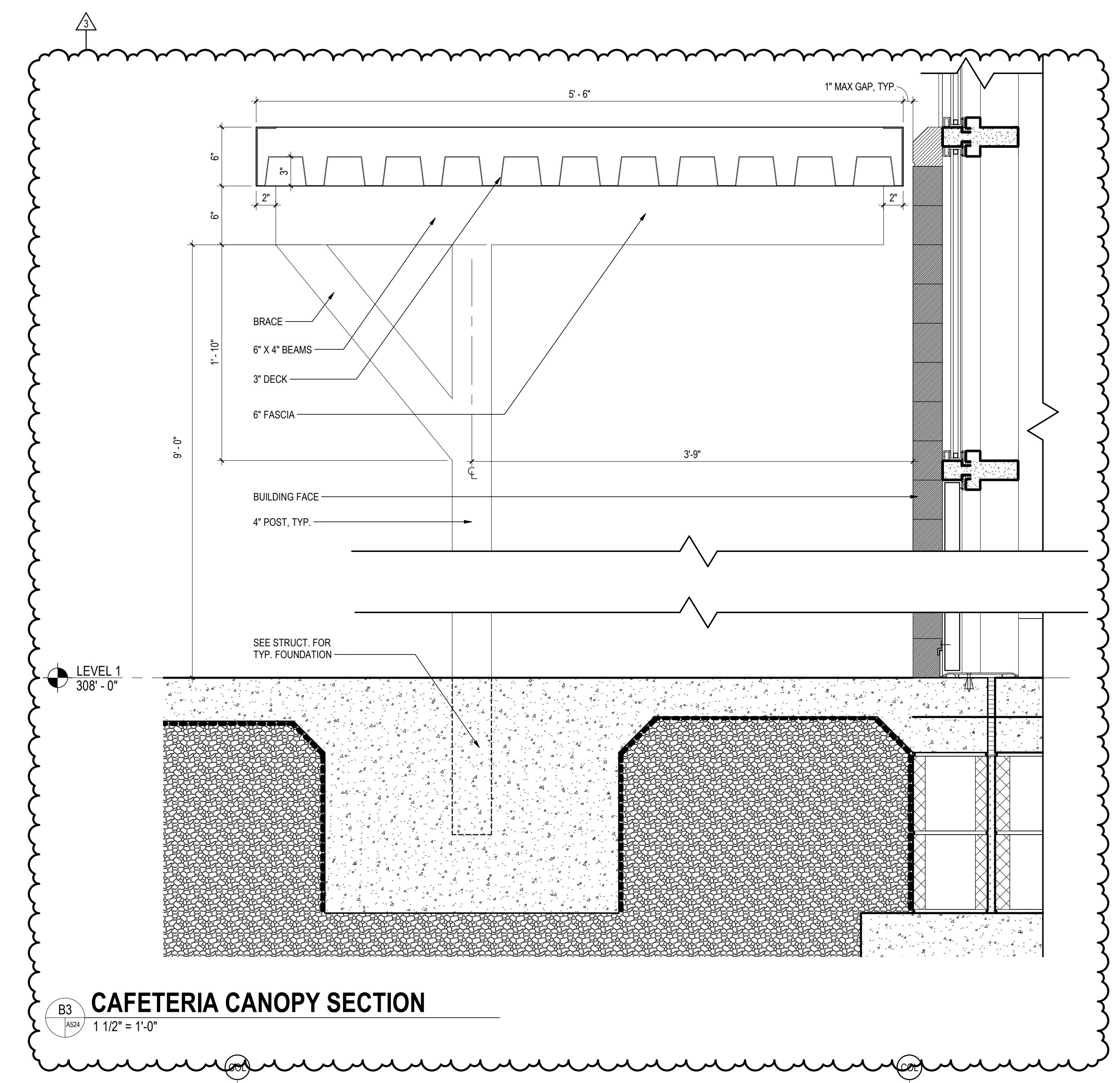
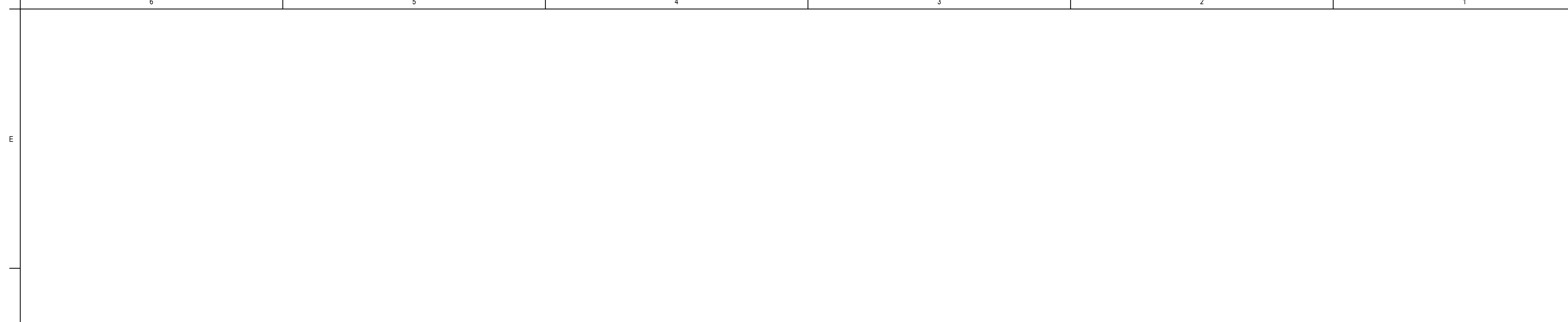
HEAD DETAIL - HM FRAME AT BRICK & PREFAB CANOPY ON CMU BACKUP
A2 (A511)A523 3" = 1'-0"



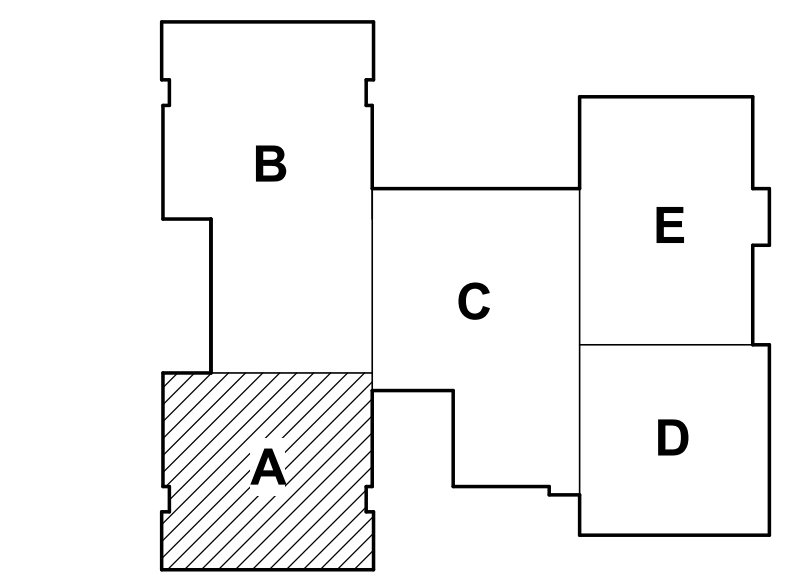
SOFFIT DETAIL - STEEL PLATE AT LOADING DOCK
C6 (A511)A523 3" = 1'-0"



TYPICAL MASONRY RELIEF ANGLE
A6 (A511)A523 3" = 1'-0"



Keyplan



ADDENDUM #	DATE
ADDENDUM #3	2020.03.02
BID & PERMIT SET	2020.02.06
100% CONSTRUCTION DOCUMENTS	2020.01.26
65% CONSTRUCTION DOCUMENTS	2019.12.03
DESIGN DEVELOPMENT	2019.10.08
SCHEMATIC DESIGN	2019.08.12
Issue/Revision	YYYY.MM.DD

Permit/Seal



Client/Project Logo



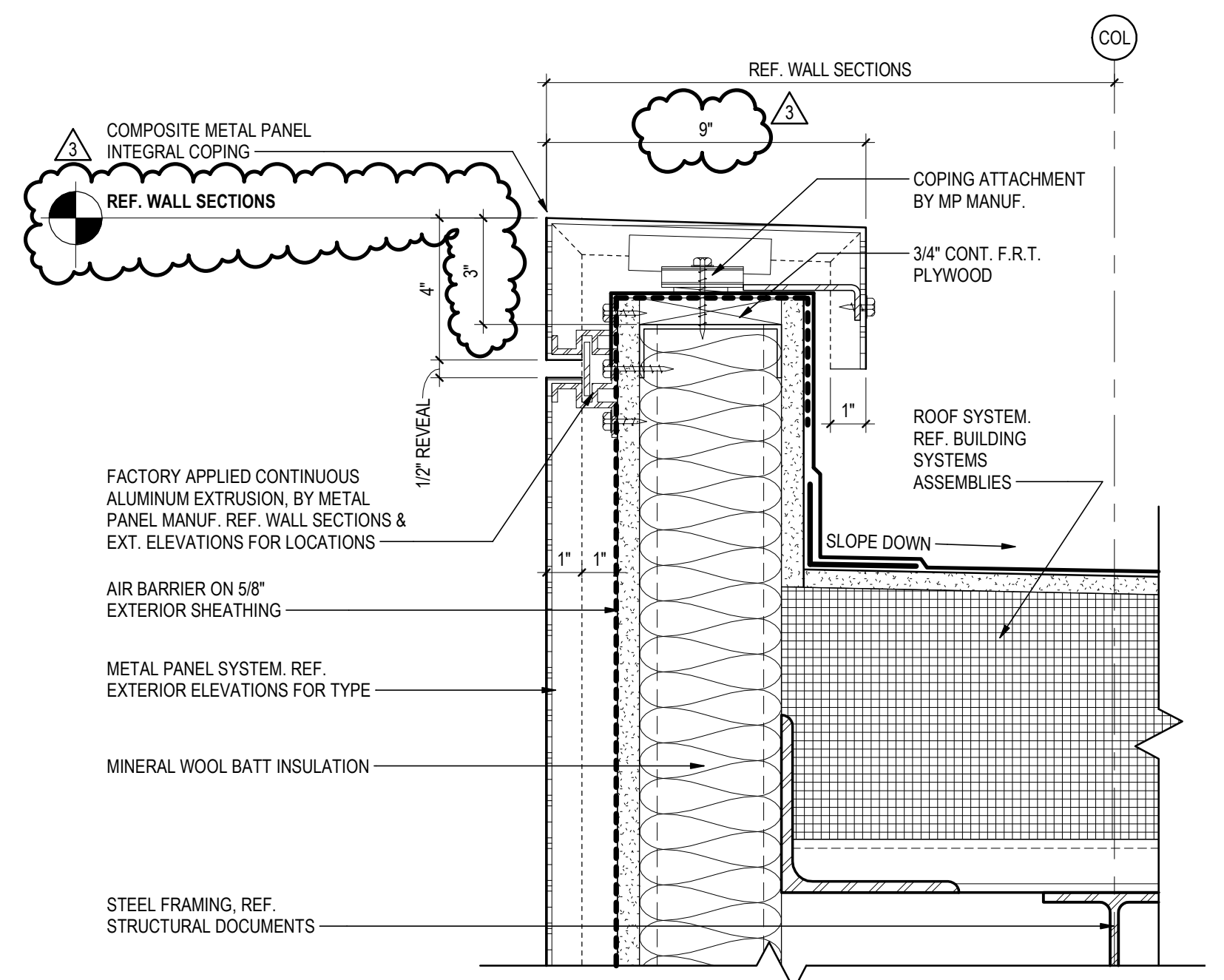
Client/Project

ELEMENTARY SCHOOL (ES-23)

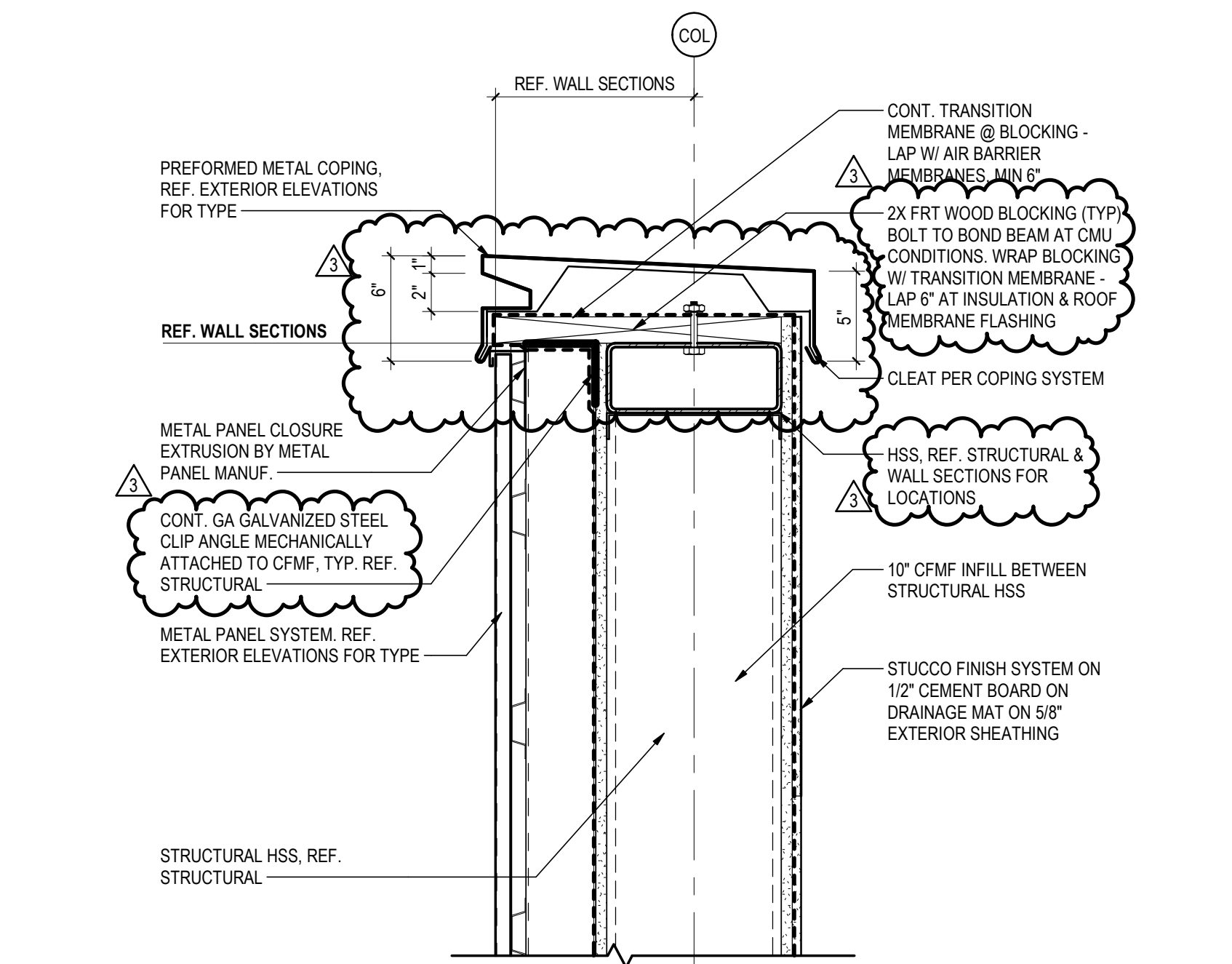
LOUDOUN COUNTY PUBLIC SCHOOLS

EVERGREEN MILLS ROAD, DULLES, VA 20166

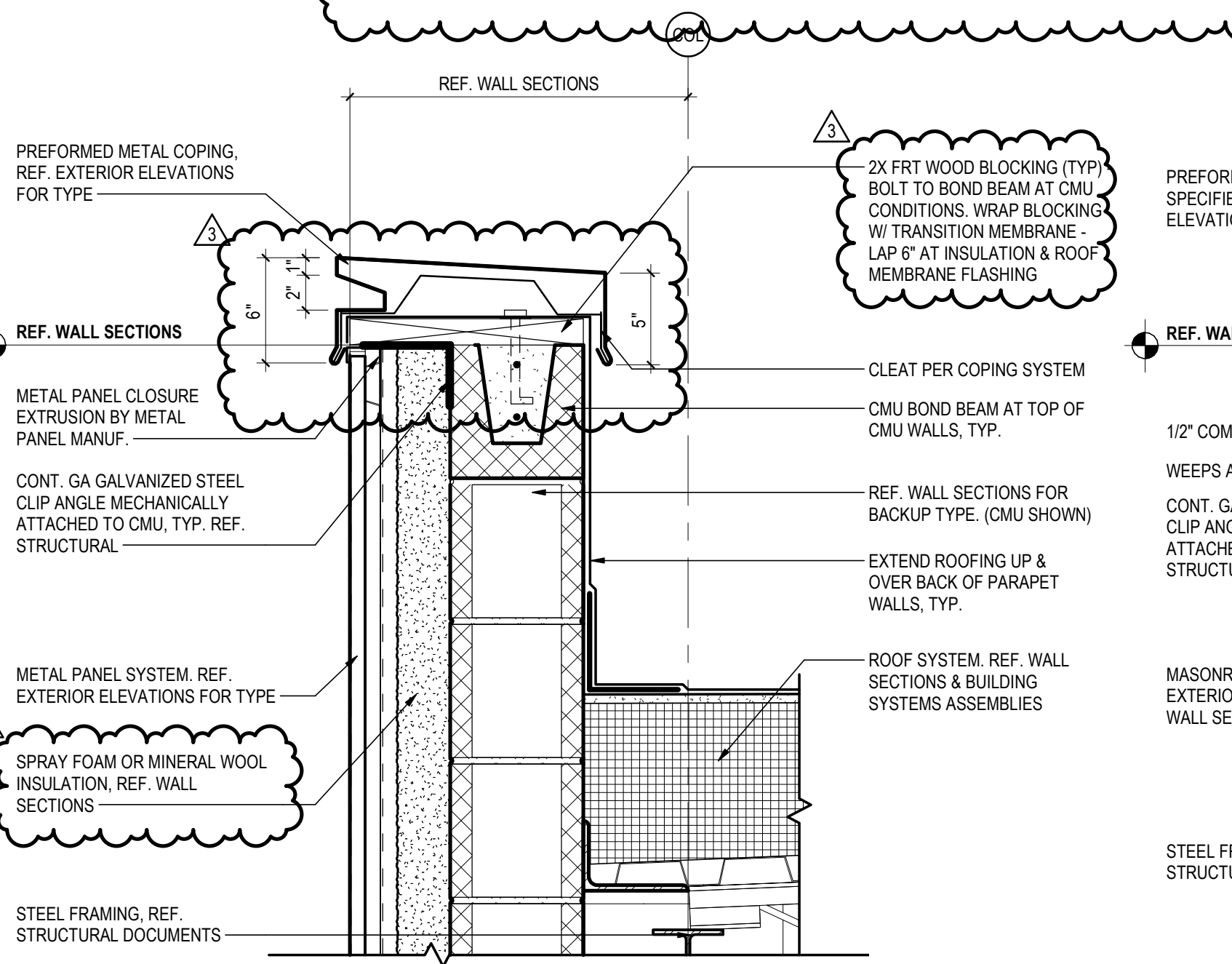
Title
EXTERIOR SECTION DETAILS



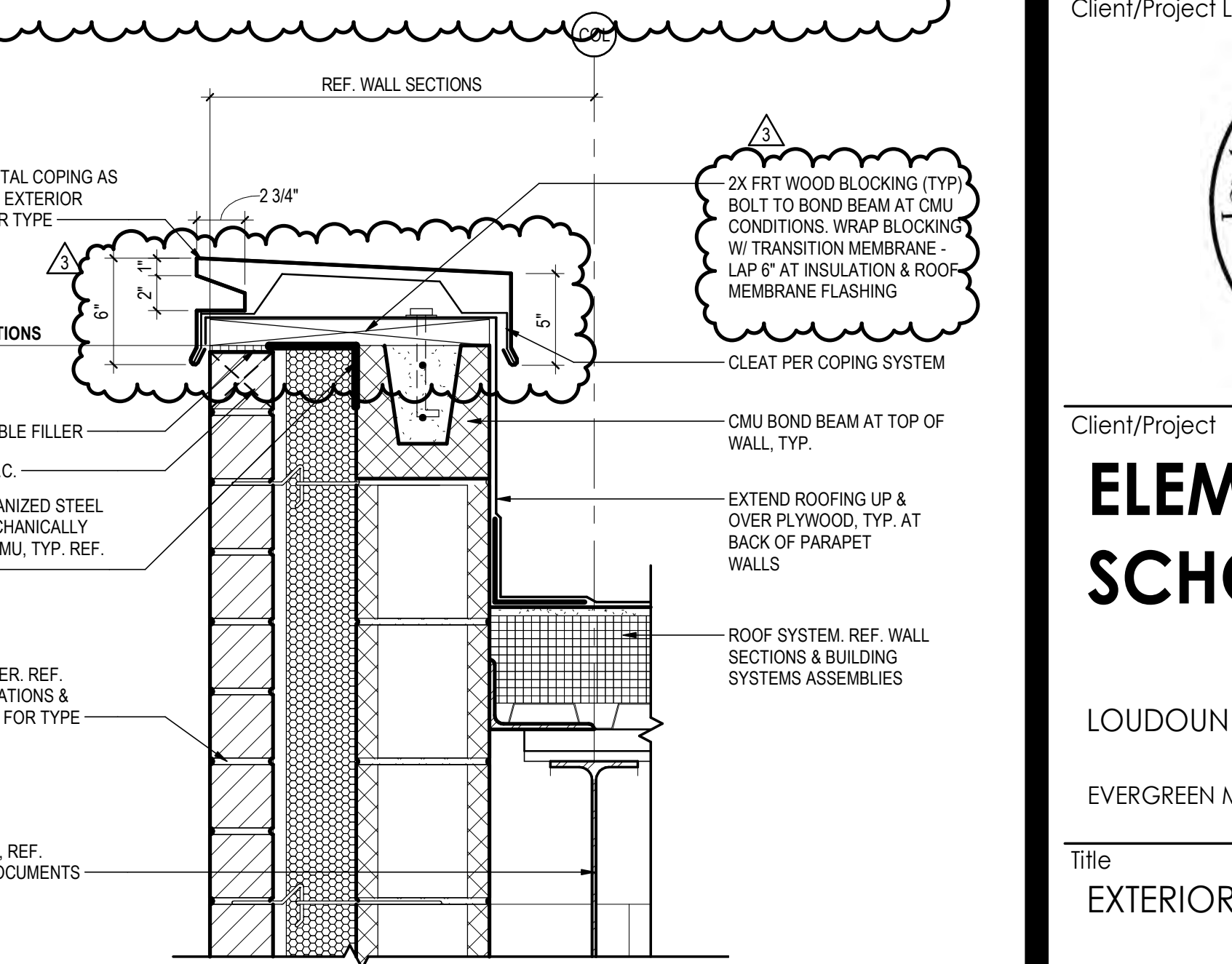
PARAPET DETAIL - COMPOSITE METAL PANEL ON STUD BACKUP
A6
1/8" = 1'-0"



PARAPET DETAIL - SINGLE SKIN METAL PANEL ON STUD BACKUP
A4
1 1/2" = 1'-0"



PARAPET DETAIL - SINGLE SKIN METAL PANEL ON CMU BACKUP
A3
1 1/2" = 1'-0"



PARAPET DETAIL - MASONRY VENEER ON CMU BACKUP
A2
1 1/2" = 1'-0"

Project No.
218320338

Scale
AS INDICATED

Revision
VDOE #

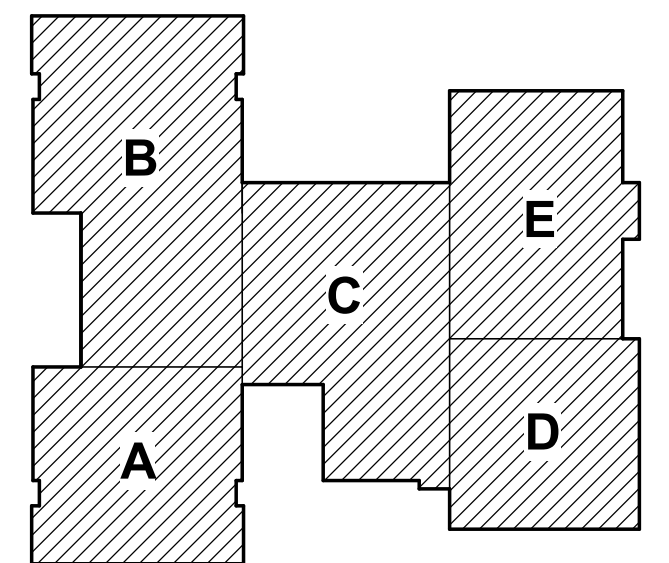
Drawing No.

3

053-115-01-100

A524

Keyplan



3. ADDENDUM #3	2020.03.02
1. ADDENDUM #1	2020.02.20
BID & PERMIT SET	2020.02.05
100% CONSTRUCTION DOCUMENTS	2020.01.26
Issue/Revision	YYYY.MM.DD

Permit/Seal



Client/Project Logo



Client/Project

ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS

EVERGREEN MILLS ROAD, DULLES, VA 20166

Title
EXTERIOR PLAN DETAILS

Project No.
218320338
Revision
3

Scale
AS INDICATED
Drawing No.
A531

D6 PLAN DETAIL
1 1/2" = 1'-0"

D4 PLAN DETAIL
1 1/2" = 1'-0"

D2 PLAN DETAIL
1 1/2" = 1'-0"

C6 PLAN DETAIL
1 1/2" = 1'-0"

C4 PLAN DETAIL
1 1/2" = 1'-0"

C2 PLAN DETAIL
1 1/2" = 1'-0"

B6 PLAN DETAIL
1 1/2" = 1'-0"

B4 PLAN DETAIL
1 1/2" = 1'-0"

B2 PLAN DETAIL
1 1/2" = 1'-0"

A6 PLAN DETAIL
1 1/2" = 1'-0"

S.1 PLAN DETAIL
1 1/2" = 1'-0"

SEE A611 FOR CASEWORK & EQUIPMENT GENERAL NOTES

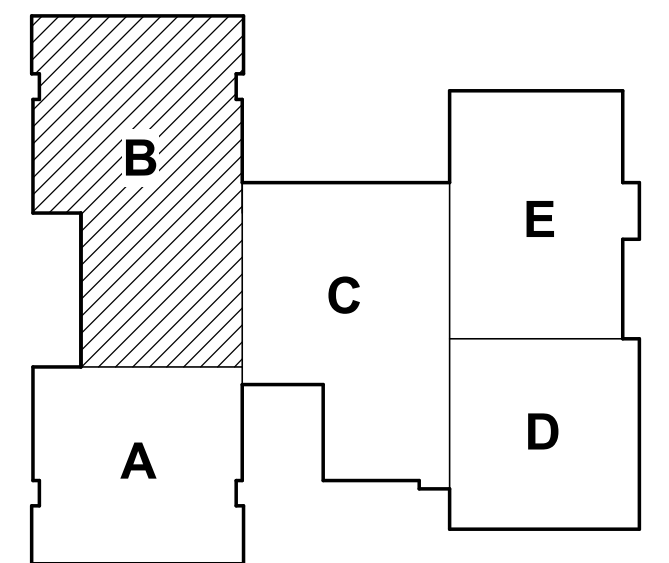
EQUIPMENT SCHEDULE

Type Mark	Description
AWP-1	ARMSTRONG TECTUM FINALE ACOUSTICAL WALL PANEL
AWP-2	
E-01	MOBILE INTERACTIVE TV (NIC)
E-02	FLAT PANEL MOUNT BRACKET - REF. SPEC SECTION 11 52 00
E-03	METAL SHELVING, 36"W x 18"D x 84"H
E-04	METAL SHELVING, 36"W x 24"D x 84"H
E-05	METAL SHELVING, 36"W x 12"D x 84"H
E-06	PENCIL SHARPENER BLOCK
E-07	REFRIGERATOR WITH ICE MAKER
E-08	WASHER/DRYER, STACKED
E-09	9"W x 12"D WALL RACK
E-10	10"W x 12"D WALL RACK
E-11	12"W x 15"D x 72"H LOCKER
E-13	WEATHER STATION LCD DISPLAY
E-16	VELOUR STAGE CURTAINS AND TRACKS-FRONT, PROCEINUM AND VALENCE
E-17	VELOUR STAGE CURTAINS AND TRACKS - SIDE & BACK
E-18	CUBICLE CURTAIN
E-19	METAL SHELF WITH MOP & BROOM HOLDER
E-20	ADA SENS-DI
E-24	REFRIGERATOR, UNDER COUNTER
FEC	FIRE EXTINGUISHER CABINET
MB-4	4"W x 4"H MARKER BOARD
MB-6	6"W x 4"H MARKER BOARD
MB-8	8"W x 4"H MARKER BOARD MOBILE (NIC)
MB-8	8"W x 4"H MARKER BOARD
PS-1	ELECTRICALLY OPERATED, FRONT PROJECTION, RECESSED SCREEN -139"W x 87"H
PS-2	ELECTRICALLY OPERATED, REAR PROJECTION, RECESSED SCREEN -139"W x 87"H
SK-1	SINK - CLASSROOMS, OFFICE, WORKROOM, LOUNGE, AV WORKROOM. REF SPEC 12 32 16
SK-2	SINK - CLINIC. REF SPEC 12 32 16
SK-3	SINK - ART ROOM. REF SPEC 12 32 16
SK-4	SINK - ART ROOM ADA. REF SPEC 12 32 16
T-06	ROLL PAPER TOWEL DISPENSE
T-08	CHANGING STATION
T-15	SOAP DISPENSER, O/F/C
TB-4	4"W x 4"H TACK BOARD
TB-6	6"W x 4"H TACK BOARD
TB-8	8"W x 4"H TACK BOARD
TB-10	10"W x 4"H TACK BOARD
TB-12	12"W x 4"H TACK BOARD
TS-6	Tack Strip
TS-8	Tack Strip
TS-10	Tack Strip
TS-12	Tack Strip

MEDIA CENTER CASEWORK AND EQUIPMENT SCHEDULE

Type Mark	Description
M-01	BOOKCASE, 36"W x 12"D x 72"H
M-02	BOOKCASE, 36"W x 12"D x 72"H
M-03	BOOKCASE, 36"W x 12"D x 36"H
M-04	BOOKCASE, 36"W x 12"D x 36"H
M-08	MOBILE BOOKCASE DOUBLE-FACED, 36"W x 24"D x 36"H
M-13	36"W ADA ACCESS OPEN STORAGE W/ 2 ADJ SHELVES, BOD. TESCO 6458
M-14	36"W ADA ACCESS OPEN STORAGE W/ FULL DRAWER AND 1 ADJ SHELF, BOD. TESCO 6453
M-15	30"W OPEN STORAGE W/ 1 ADJ SHELF AND 1 PD SHELF, BOD. TESCO 6430
M-16	80" SQUARE CLOSET CORNER, BOD. TESCO 6469
M-17	42"W RECESSED DESK W/ 3 BOX PED, BOD. TESCO 6462
M-18	36"W BOOK RETURN FRONT SLOT, BOD. TESCO 6444

Keyplan



Issue/Revision	DATE	BY
3	ADDENDUM #3	2020.03.02
1	ADDENDUM #1	2020.02.20
	BID & PERMIT SET	2020.02.06
	100% CONSTRUCTION DOCUMENTS	2020.01.26
	65% CONSTRUCTION DOCUMENTS	2019.12.03
	DESIGN DEVELOPMENT	2019.10.08
	SCHEMATIC DESIGN	2019.08.12

Issue/Revision: YYYY.MM.DD

Permit/Seal



Client/Project Logo



Client/Project

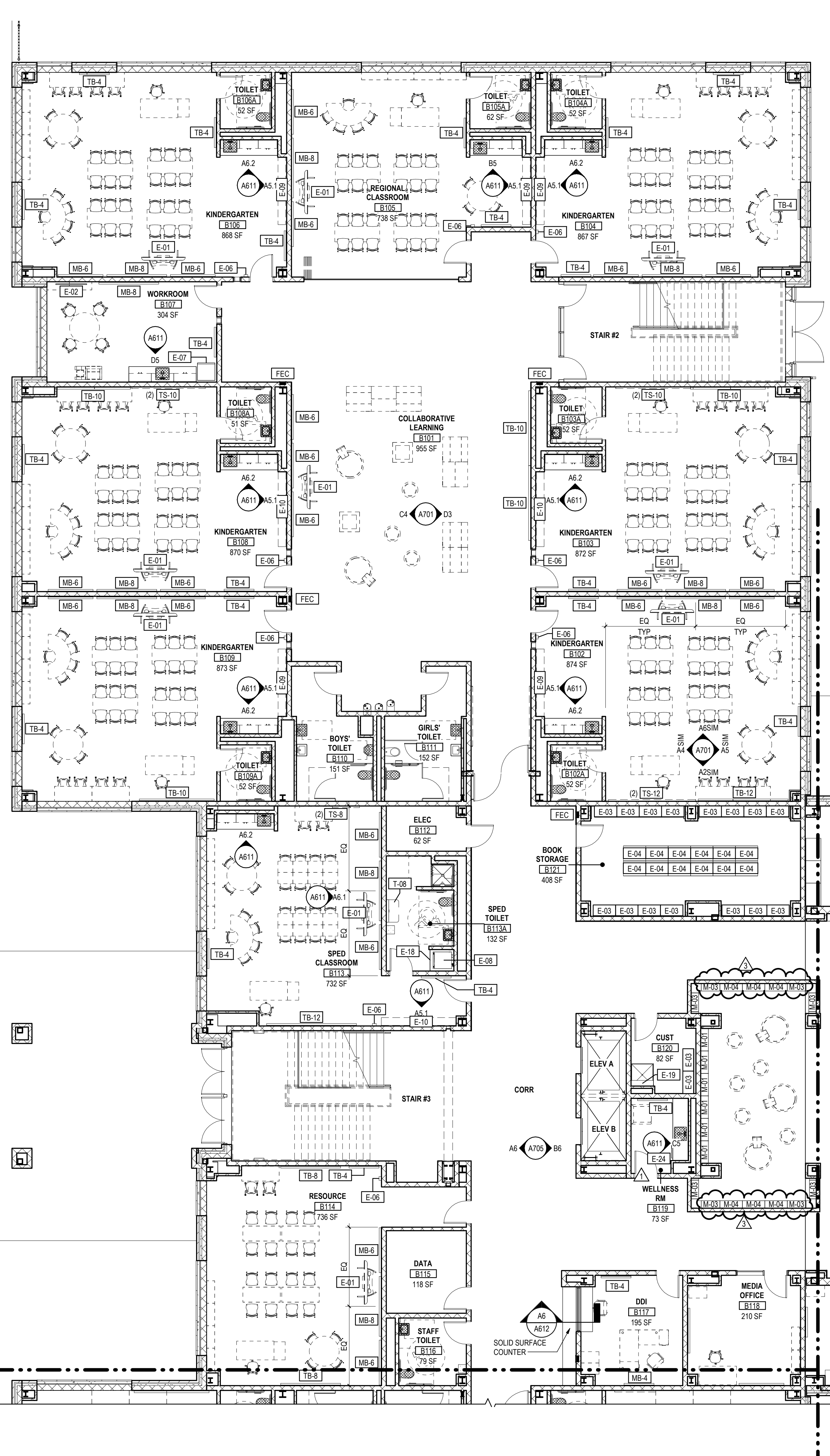
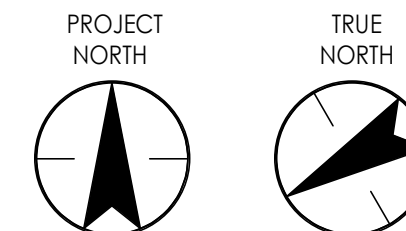
ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS

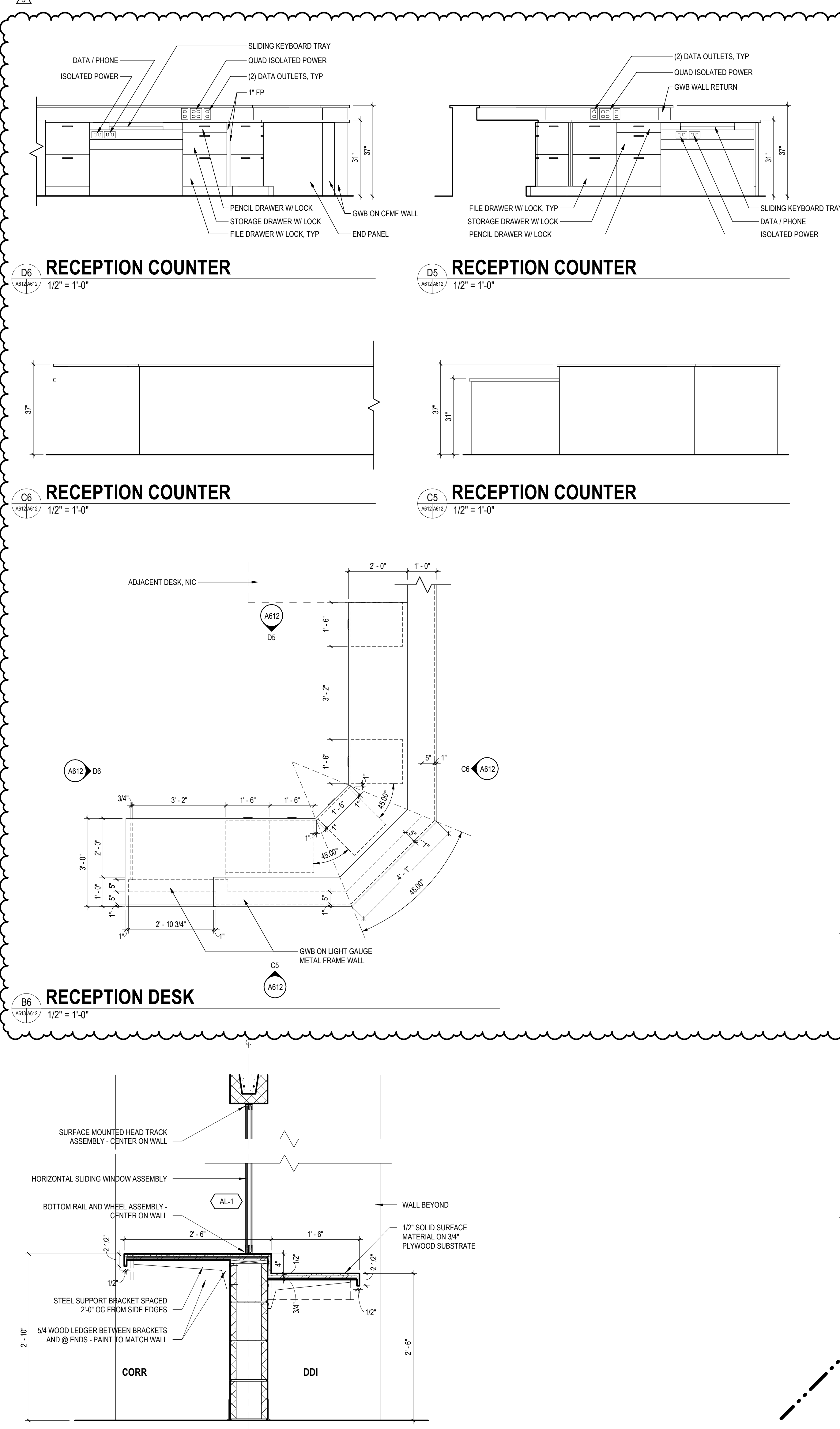
EVERGREEN MILLS ROAD, DULLES, VA 20166

Title
CASEWORK & EQUIPMENT PLANS - LEVEL 1 - AREA B

Project No. 218320338	Scale AS INDICATED
Revision VDOE # 3	Drawing No. A612



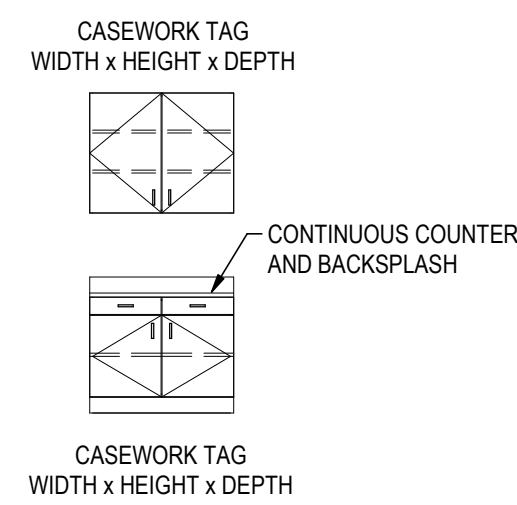
A4 CASEWORK & EQUIPMENT PLANS - LEVEL 1 - AREA B
1/8" = 1'-0"



A6 DDI HELP DESK DETAIL
1" = 1'-0"

SEE A611 FOR CASEWORK & EQUIPMENT GENERAL NOTES

CASEWORK KEY



COUNTERTOP SCHEDULE

CT-1: SOLID SURFACE COUNTERTOP W/ BACK & SIDE SPLASHES, UON

EQUIPMENT SCHEDULE

Type Mark	Description
AWP-1	ARMSTRONG TECTUM FINALE ACOUSTICAL WALL PANEL
AWP-2	FLAT PANEL MOUNT BRACKET - REF. SPEC SECTION 11 52 00
E-01	MOBILE INTERACTIVE TV (NIC)
E-02	METAL SHELVING, 36"W X 18"D X 84"H
E-03	METAL SHELVING, 36"W X 24"D X 84"H
E-04	METAL SHELVING, 36"W X 12"D X 84"H
E-05	PENCIL SHARPENER BLOCK
E-06	REFRIGERATOR WITH ICE MAKER
E-07	WASHER/DRYER, STACKED
E-08	9"W X 12"D WALL RACK
E-09	10"W X 12"D WALL RACK
E-10	12"W X 15" LOCKER
E-11	WEAR RESISTANT LCO DISPLAY
E-12	VELOUR STAGE CURTAINS AND TRACKS - FRONT, PROCENIUM AND VALENCE
E-13	VELOUR STAGE CURTAINS AND TRACKS - SIDE & BACK
E-14	CUBICLE CURTAIN
E-15	METAL SHELF WITH MOP & BROOM HOLDER
E-16	REFRIGERATOR, UNDER COUNTER
FEC	FIRE EXTINGUISHER CABINET
MB-4	4"W X 4"H MARKER BOARD
MB-5	6"W X 4"H MARKER BOARD
MB-6	8"W X 4"H MARKER BOARD MOBILE (NIC)
MB-7	8"W X 4"H MARKER BOARD
PS-1	ELECTRICALLY OPERATED, FRONT PROJECTION, RECESSED SCREEN - 139"W X 87"H
PS-2	ELECTRICALLY OPERATED, REAR PROJECTION, RECESSED SCREEN - 139"W X 87"H
SK-1	SINK - CLASSROOMS, OFFICE, WORKROOM, LOUNGE, AV WORKROOM. REF SPEC 12 32 16
SK-2	SINK - CLINIC. REF SPEC 12 32 16
SK-3	SINK - ART ROOM. REF SPEC 12 32 16
SK-4	SINK - ART ROOM ADA. REF SPEC 12 32 16
T-06	ROLL PAPER TOWEL DISPENSE
T-08	CHANGING STATION
T-15	SOAP DISPENSER, OFCI
TB-4	4"W X 4"H TACK BOARD
TB-6	6"W X 4"H TACK BOARD
TB-8	8"W X 4"H TACK BOARD
TB-10	10"W X 4"H TACK BOARD
TB-12	12"W X 4"H TACK BOARD
TS-6	Tack Strip
TS-8	Tack Strip
TS-10	Tack Strip

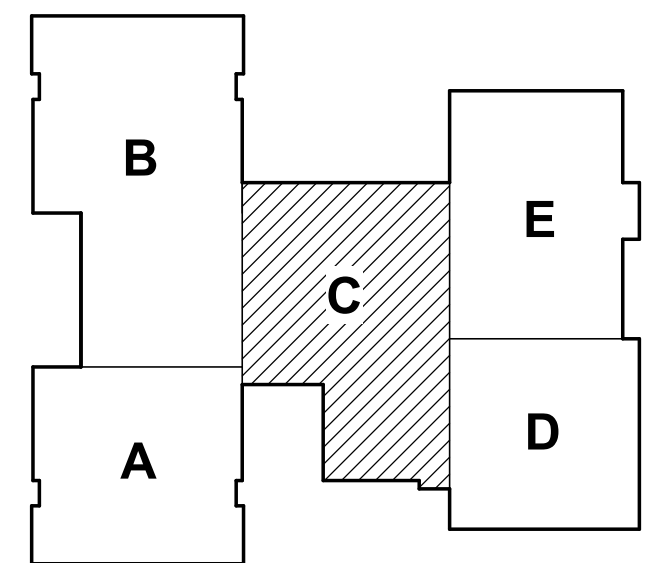
ART EQUIPMENT SCHEDULE

Type Mark	Description
A-01	STUDENT ART TABLE - 60"W X 42"D X 26"H, REF SPEC 11 94 00
A-02	KILN AND DOWN DRAFT VENT

MEDIA CENTER CASEWORK AND EQUIPMENT SCHEDULE

Type Mark	Description
M-01	BOOKCASE, 36"W X 12"D X 72"H
M-02	BOOKCASE, 33"W X 12"D X 72"H
M-03	BOOKCASE, 30"W X 12"D X 36"H
M-04	BOOKCASE, 36"W X 12"D X 36"H
M-08	MOBILE BOOKCASE DOUBLE-FACED, 36"W X 24"D X 36"H
M-13	36"W ADA ACCESS OPEN STORAGE W/ 2 ADJ SHELVES, BOO. TESCO 6458
M-14	36"W OPEN STORAGE W/ FULL DRAWER AND 1 PO SHELF, BOO. TESCO 6433
M-15	30"W OPEN STORAGE W/ 1 ADJ SHELF AND 1 PO SHELF, BOO. TESCO 6430
M-16	80" SQUARE CLOSED CORNER, BOO. TESCO 6460
M-17	42"W RECESSED DESK W/ 3 BOX PRD, BOO. TESCO 6462
M-18	36"W BOOK RETURN FRONT SLOT, BOO. TESCO 6444

Keyplan



ADDENDUM #3	DATE
BID & PERMIT SET	2020.03.02
100% CONSTRUCTION DOCUMENTS	2020.02.06
65% CONSTRUCTION DOCUMENTS	2019.12.03
DESIGN DEVELOPMENT	2019.10.08
SCHEMATIC DESIGN	2019.08.12

Issue/Revision

NO.	DESCRIPTION	DATE
1	ISSUE FOR PERMIT	02.02.20
2	ISSUE FOR CONSTRUCTION	02.02.20

Permit/Seal



Client/Project Logo



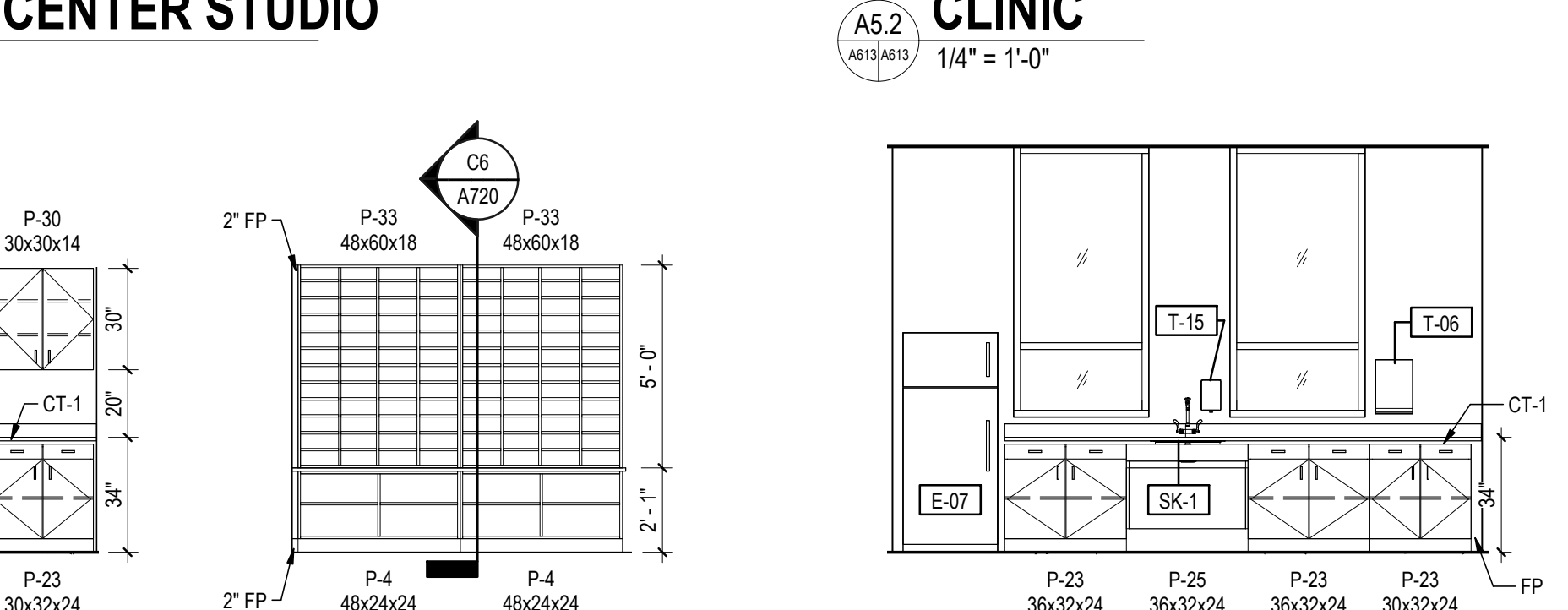
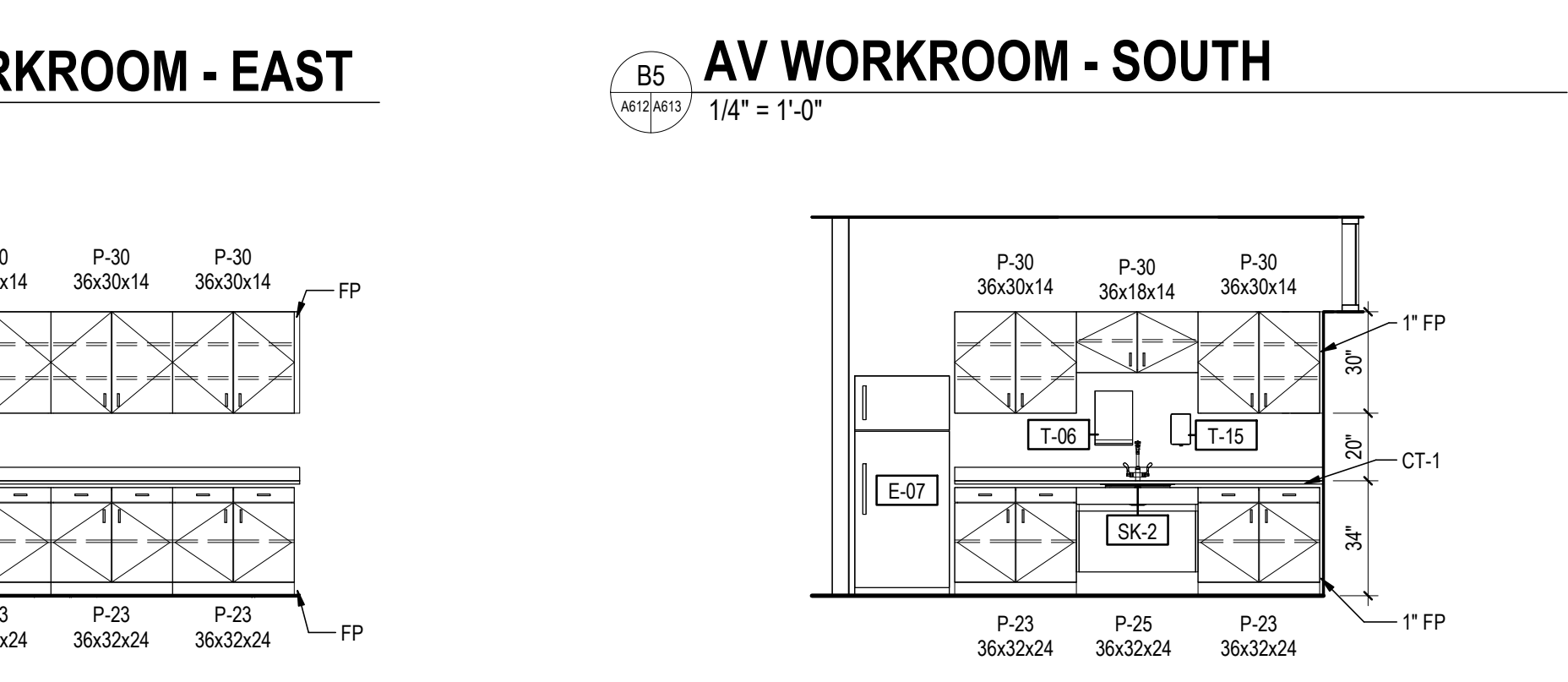
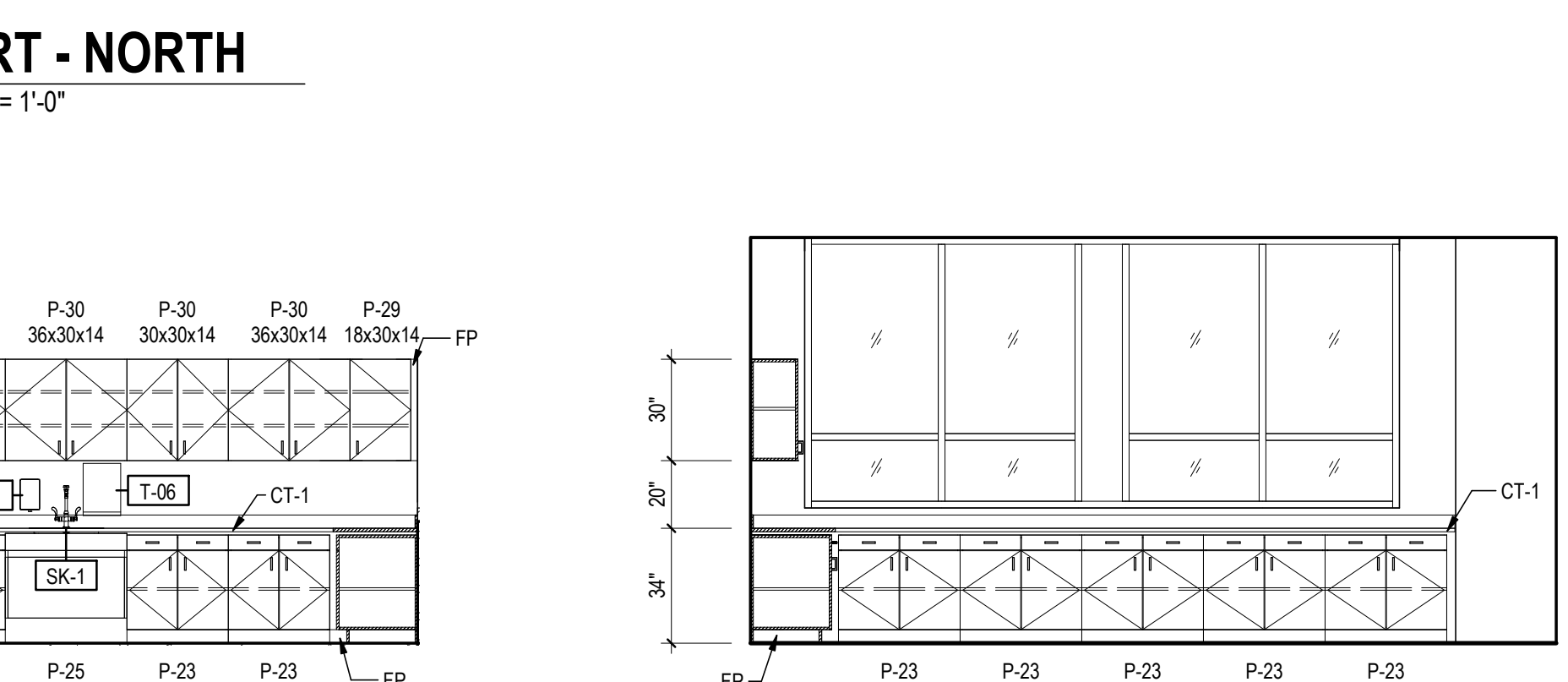
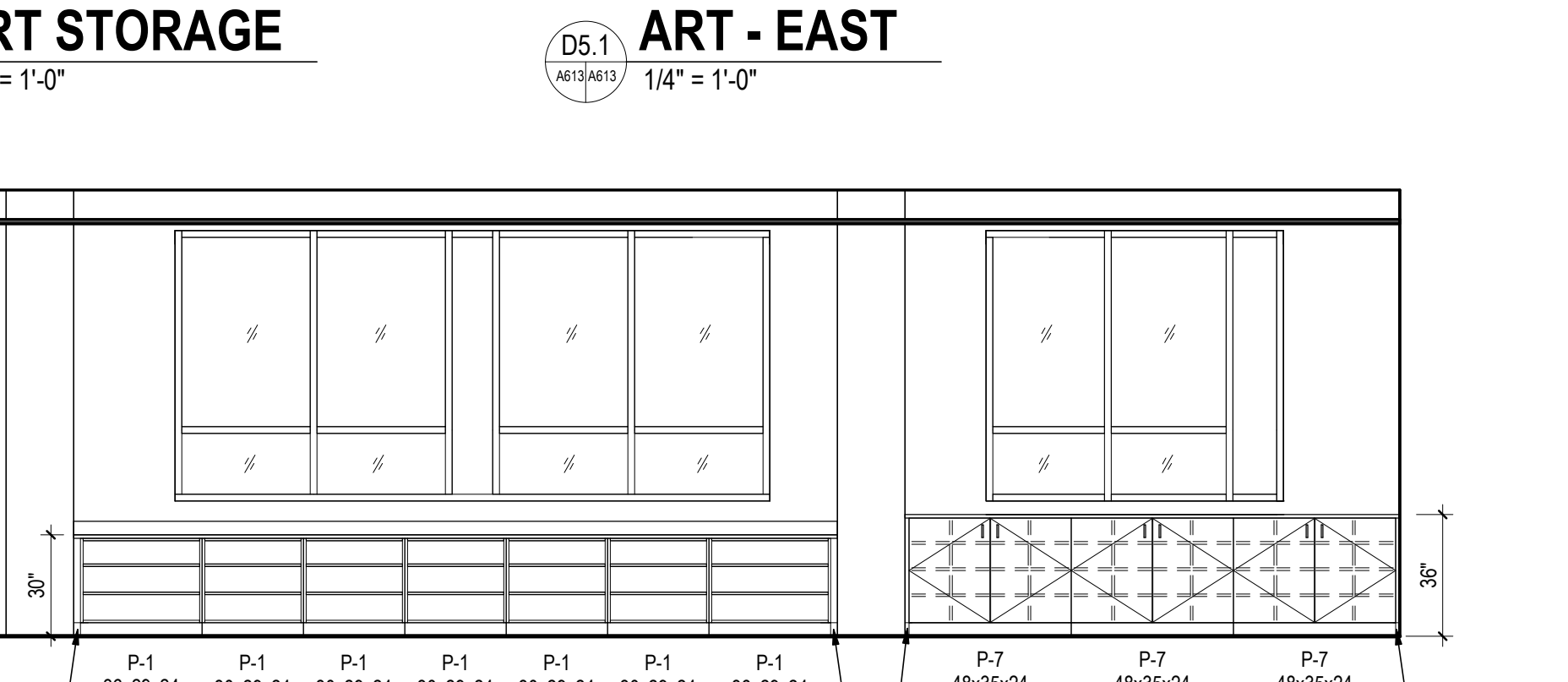
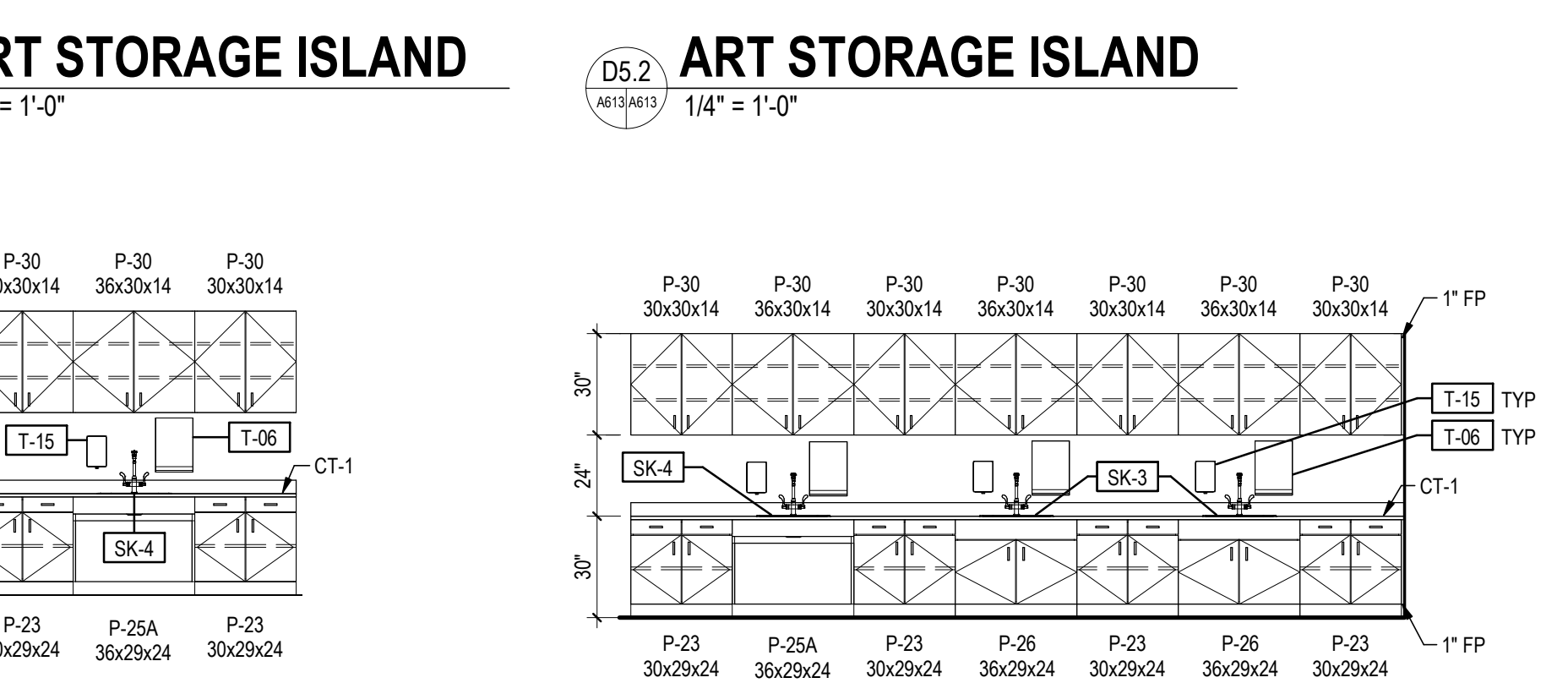
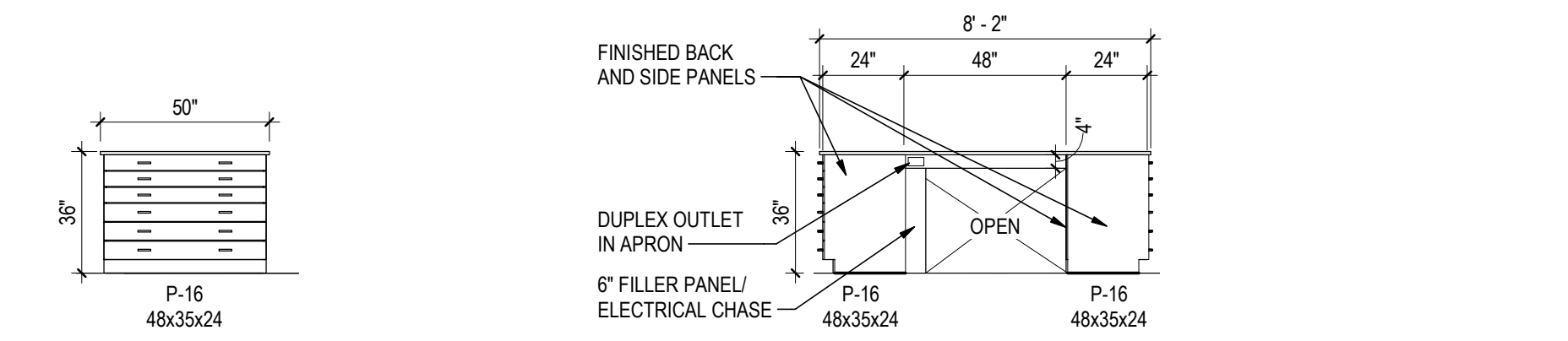
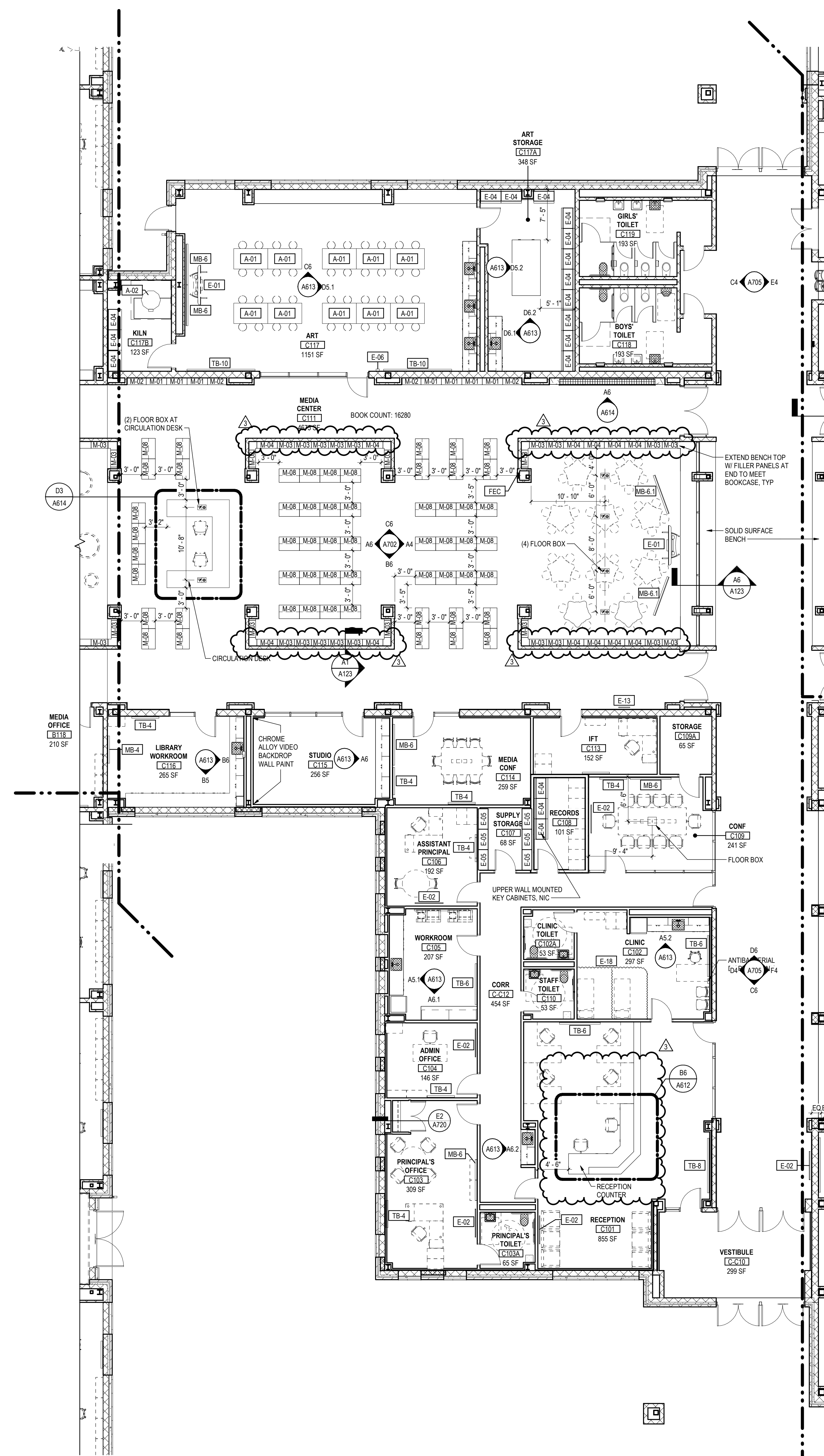
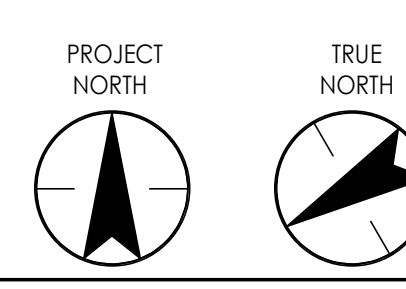
Client/Project

ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS
EVERGREEN MILLS ROAD, DULLES, VA 20166

Title
CASEWORK & EQUIPMENT PLANS - LEVEL 1 - AREA C

Project No.	Scale	
218320338	A5 INDICATED	
Revision	VDQE #	Drawing No.
3	053-115-01-100	A613



6
5
4
3
2
1
E
D
C
B
A

REFER TO SHEET A901 FOR GENERAL RCP NOTES

RCP LEGEND

CEILING TAGS	
	CEILING TYPE
	CEILING HEIGHT

CEILING PATTERNS	
	2x2 LAY-IN CEILING SYSTEM (ACP-1)
	2x2 HIGH NRC LAY-IN CEILING SYSTEM (MUSIC ROOM U.N.O.) (ACP-2)
	2x2 LAY-IN CEILING SYSTEM AT KITCHEN (ACP-3)
	GYPSUM BOARD CEILING (GWB-1)
	METAL PANEL SOFFIT

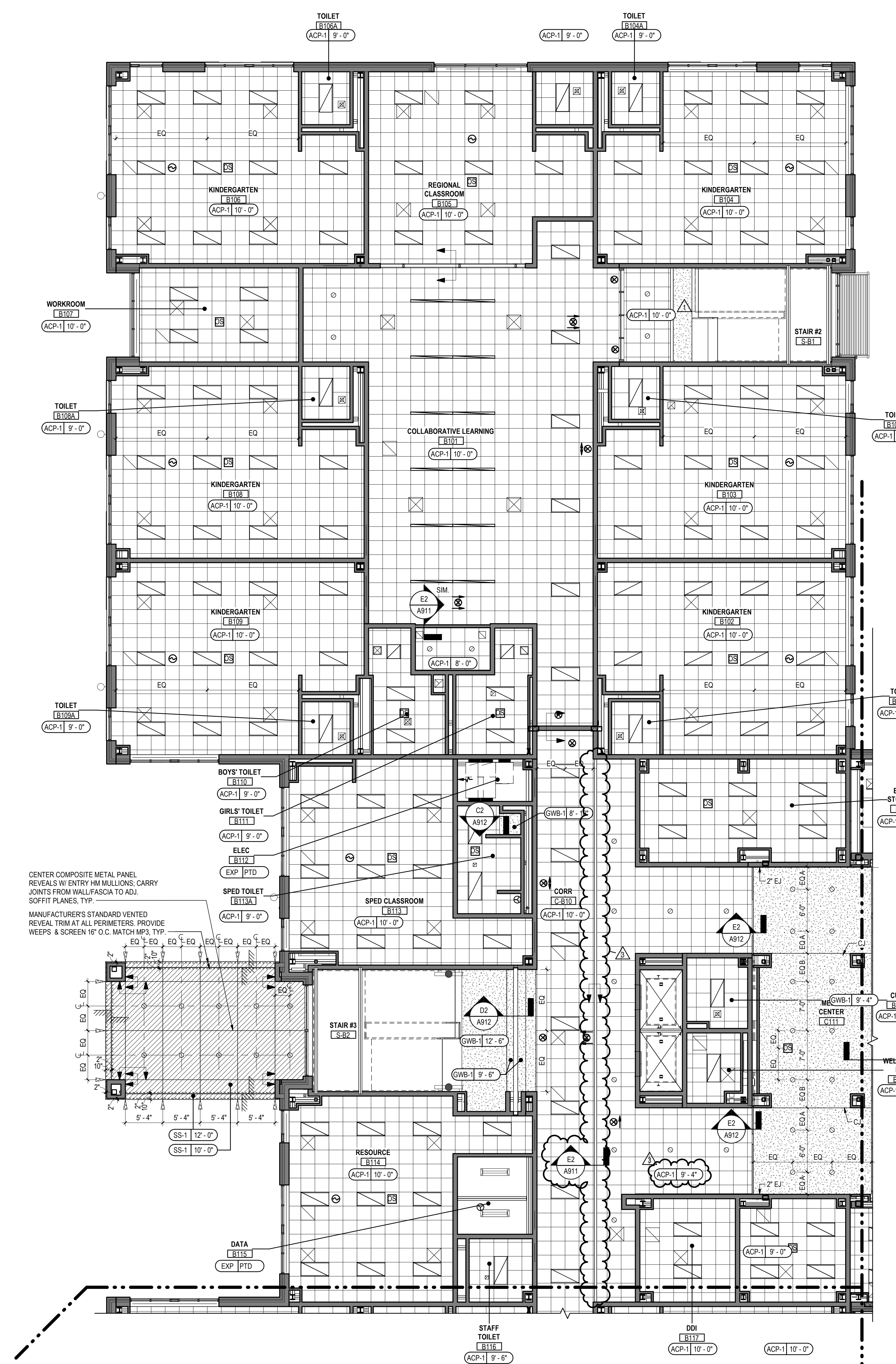
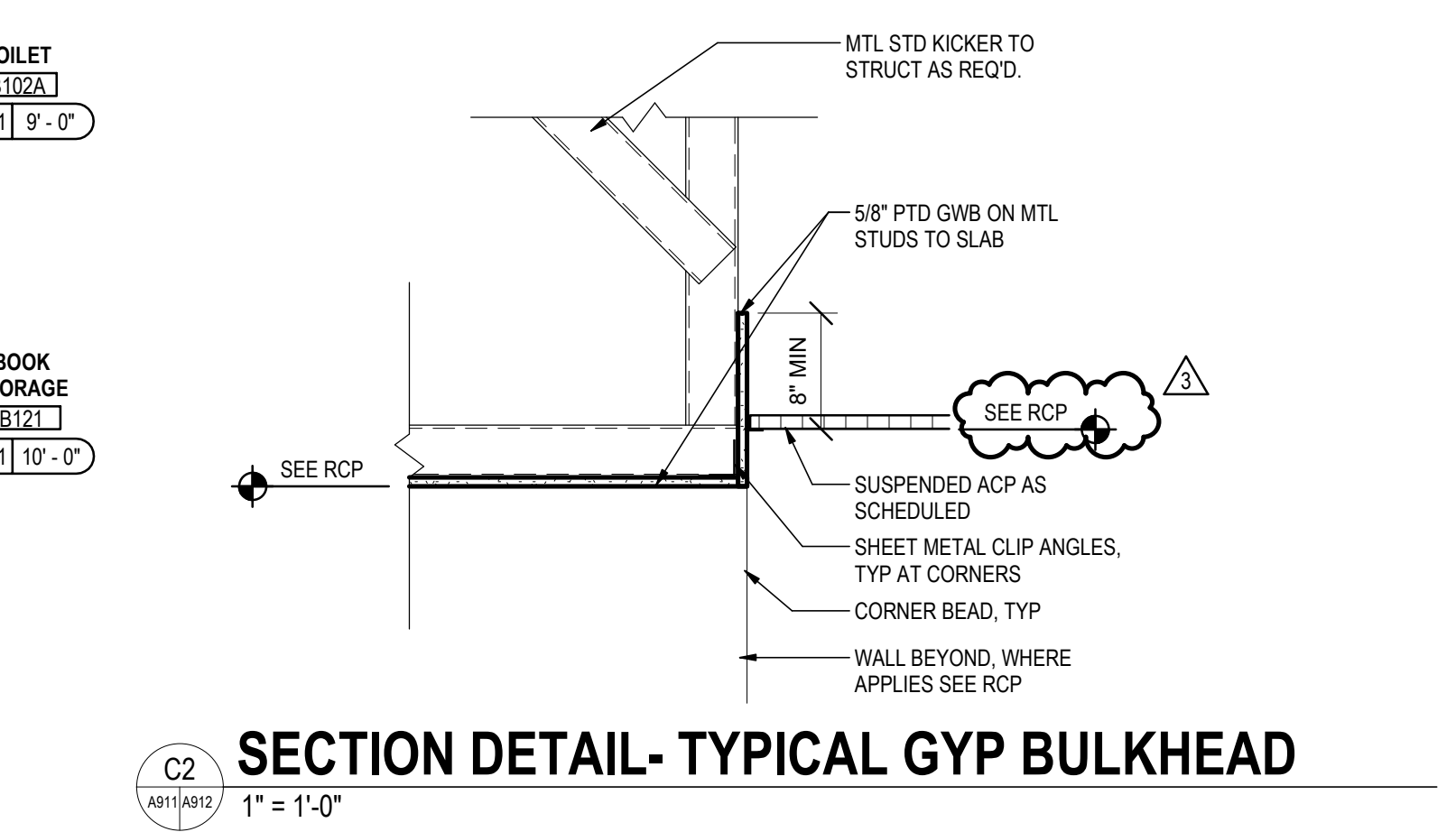
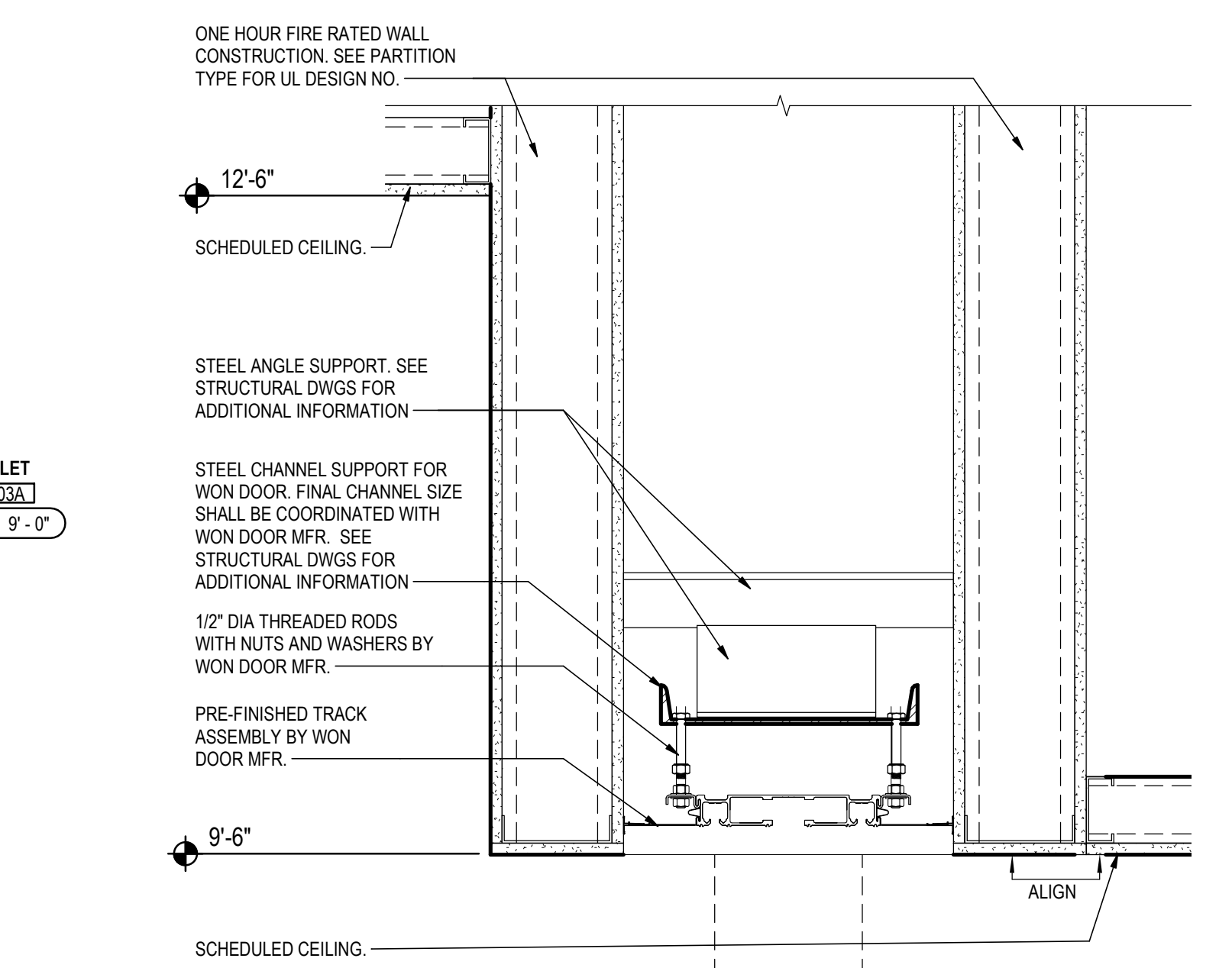
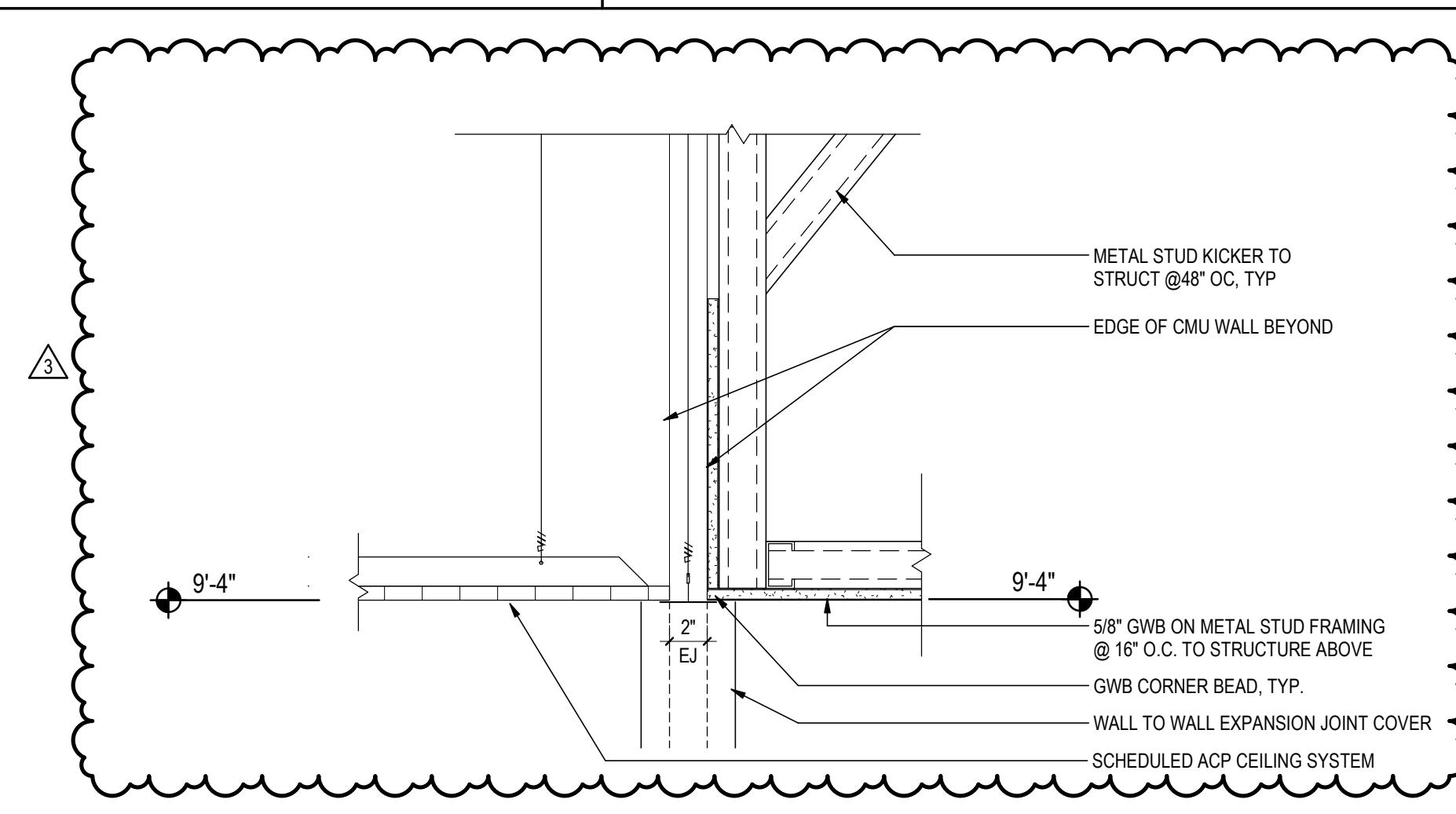
LIGHTING

CORRIDORS/STAIRWELLS/SPECIALTY:	
	RECESSED CAN DOWNLIGHT
	RECESSED DIRECT/INDIRECT
	LINEAR PENDANT
	LINEAR RECESSED
	21" TUBULAR SKYLIGHT W/ GWB SURROUND
	OCCUPANCY SENSOR
	PHOTO SENSOR

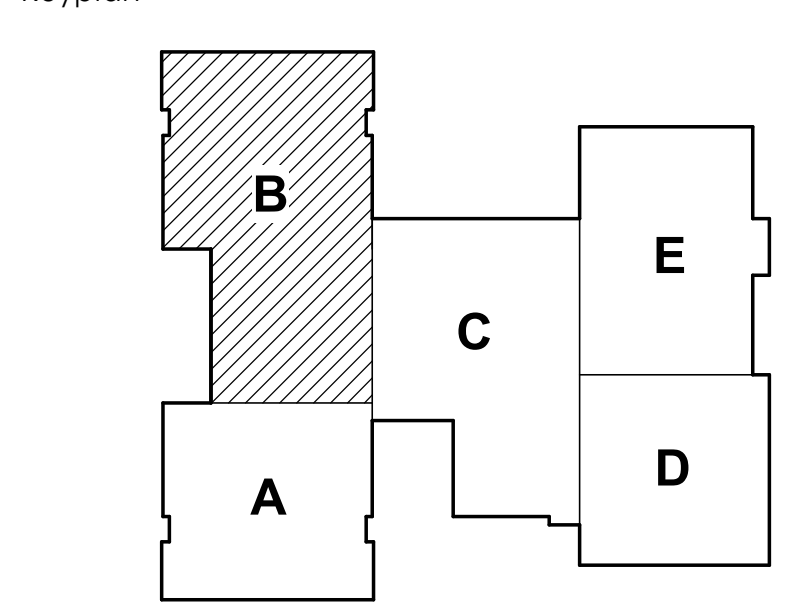
CLASSROOMS/ADMIN/RESTROOMS:	
	RECESSED CAN DOWNLIGHT
	RECESSED TROFFER
	RECESSED DIRECT/INDIRECT
	RECESSED DIRECT/INDIRECT
	LINEAR PENDANT

UTILITY SPACES:	
	RECESSED DIRECT/INDIRECT
	48" DIRECT / INDIRECT HEAVY DUTY PENDANT
	12" x 72" DIRECT / INDIRECT HEAVY DUTY PENDANT
	72" DIRECT / INDIRECT HEAVY DUTY PENDANT

ATHLETICS SPACES:	
	RECESSED CAN DOWNLIGHT
	HIGH BAY PENDANT
	72" DIRECT / INDIRECT HEAVY DUTY PENDANT



Keyplan



ADDENDUM #	DATE	DESCRIPTION
3	2020.03.02	ADDENDUM #3
2	2020.02.29	ADDENDUM #2
1	2020.02.26	ADDENDUM #1
	2020.02.26	BID & PERMIT SET
	2020.01.26	100% CONSTRUCTION DOCUMENTS

Issue/Revision

Permit/Seal

Client/Project Logo

Client/Project

ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS

EVERGREEN MILLS ROAD, DULLES, VA 20166

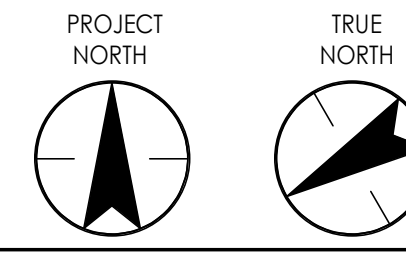
Title

ENLARGED REFLECTED CEILING PLAN - LEVEL 1 - AREA B

Project No.	Scale	
218320338	AS INDICATED	
Revision	VDQE #	Drawing No.
3	053-115-01-100	A912

REFLECTED CEILING PLAN - LEVEL 1 - AREA B

1/8" = 1'-0"



REFER TO SHEET A901 FOR GENERAL RCP NOTES



STANTEC ARCHITECTURE
3001 Washington Boulevard Suite 500
Arlington, VA 22201-2247
Tel: (703) 485-8555 • www.stantec.com

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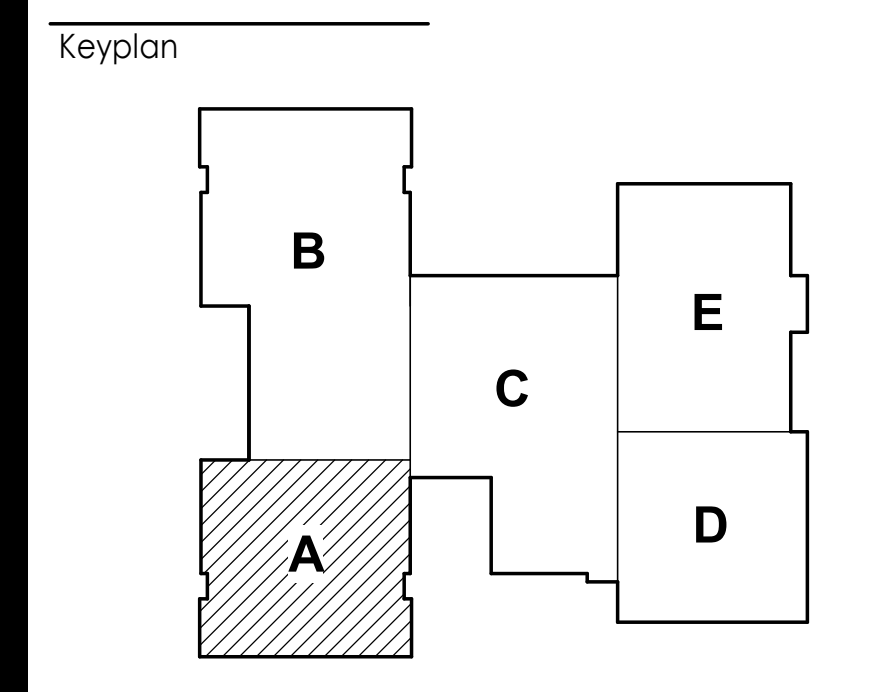
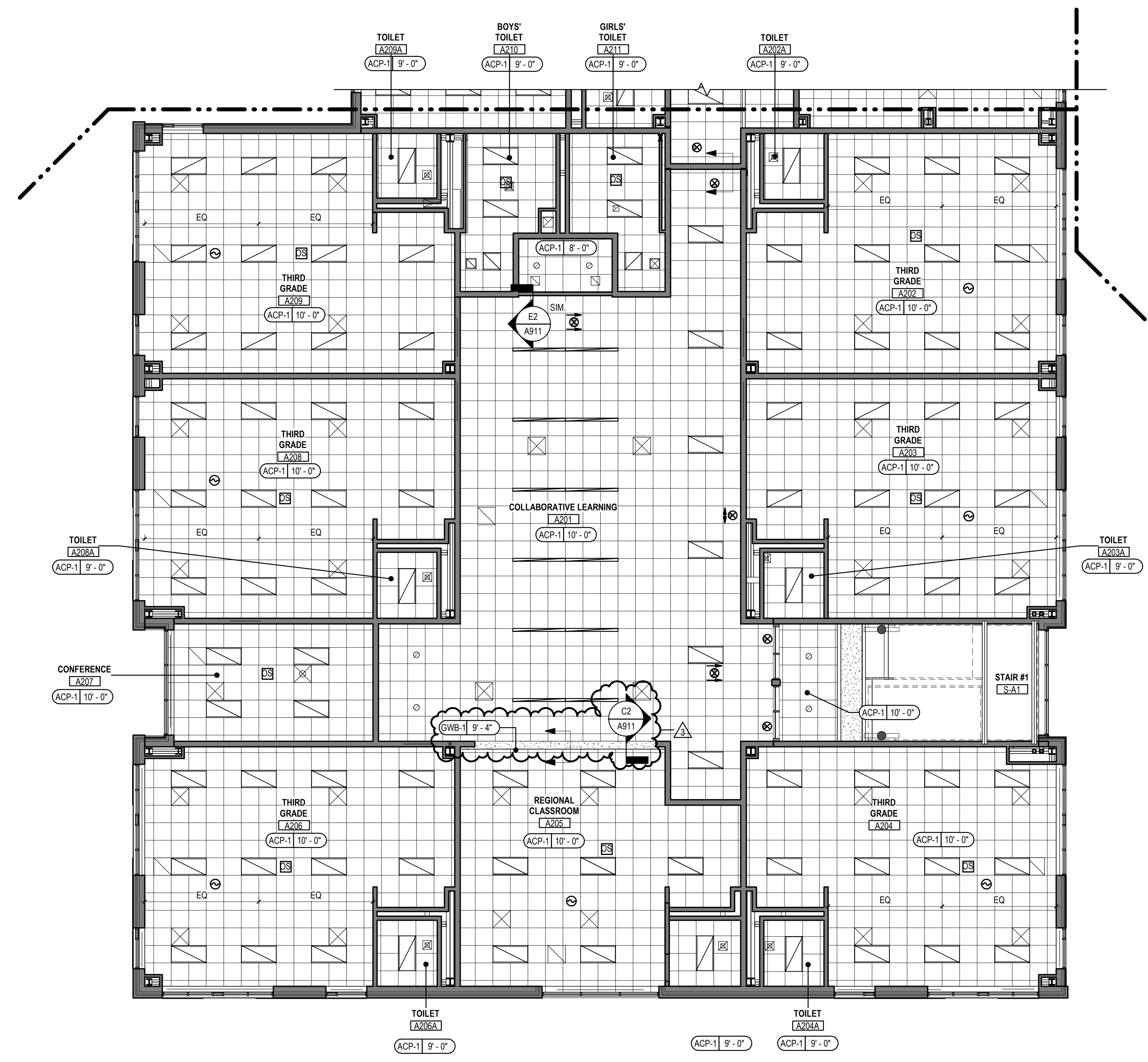
Consultants
CIVIL - BOWMAN CONSULTING
101 SOUTH STREET, SE, LEESBURG, VA 20175
Tel: (703) 443-2400
STRUCTURAL - LINTON ENGINEERING
46090 LAKE CENTER PLAZA, SUITE 309 POTOMAC FALLS, VA 20165
Tel: (571) 323-0320
MEPT - INTERFACE ENGINEERING
2000 M STREET, NW, SUITE 270, WASHINGTON, DC 20036
Tel: (202) 370-9555
FOOD AND SERVICE - NYIKOS & ASSOCIATES
18219A FLOWER HILL WAY GAITHERSBURG, MD, 20879
Tel: (240) 683-9530

RCP LEGEND

CEILING TAGS	
	CEILING TYPE
	CEILING HEIGHT

CEILING PATTERNS	
	2x2 LAY-IN CEILING SYSTEM (ACP-1)
	2x2 HIGH NRC LAY-IN CEILING SYSTEM (MUSIC ROOM U.N.O.) (ACP-2)
	2x2 LAY-IN CEILING SYSTEM AT KITCHEN (ACP-3)
	GYPSUM BOARD CEILING (GWB-1)
	METAL PANEL SOFFIT

LIGHTING	
CORRIDORS/STAIRWELLS/SPECIALTY:	
	RECESSED CAN DOWNLIGHT
	RECESSED DIRECT/INDIRECT
	LINEAR PENDANT
	LINEAR RECESSED
	21" TUBULAR SKYLIGHT W/ GWB SURROUND
	OCCUPANCY SENSOR
	PHOTO SENSOR
CLASSROOMS/ADMIN/RESTROOMS:	
	RECESSED CAN DOWNLIGHT
	RECESSED TROFFER
	RECESSED DIRECT/INDIRECT
	RECESSED DIRECT/INDIRECT
	LINEAR PENDANT
UTILITY SPACES:	
	RECESSED DIRECT/INDIRECT
	48" DIRECT / INDIRECT HEAVY DUTY PENDANT
	12" x 72" DIRECT / INDIRECT HEAVY DUTY PENDANT
	72" DIRECT / INDIRECT HEAVY DUTY PENDANT
ATHLETICS SPACES:	
	RECESSED CAN DOWNLIGHT
	HIGH BAY PENDANT
	72" DIRECT / INDIRECT HEAVY DUTY PENDANT



Issue/Revision	DATE	BY
3 ADDENDUM #3	2020.03.02	
BID & PERMIT SET	2020.02.06	
100% CONSTRUCTION DOCUMENTS	2020.01.26	



Client/Project Logo



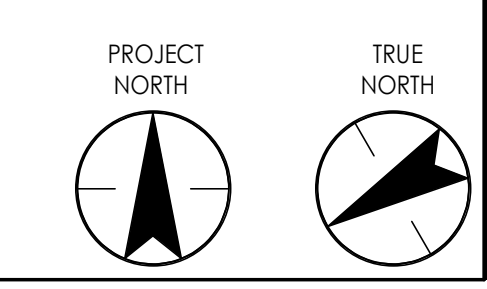
Client/Project

ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS
EVERGREEN MILLS ROAD, DULLES, VA 20166

Title
ENLARGED REFLECTED CEILING PLAN
- LEVEL 2 - AREA A

Project No.	Scale
218320338	AS INDICATED
Revision	Drawing No.
3 VDOE # 053-115-01-100	A921



REFLECTED CEILING PLAN - LEVEL 2 - AREA A

1/8" = 1'-0"

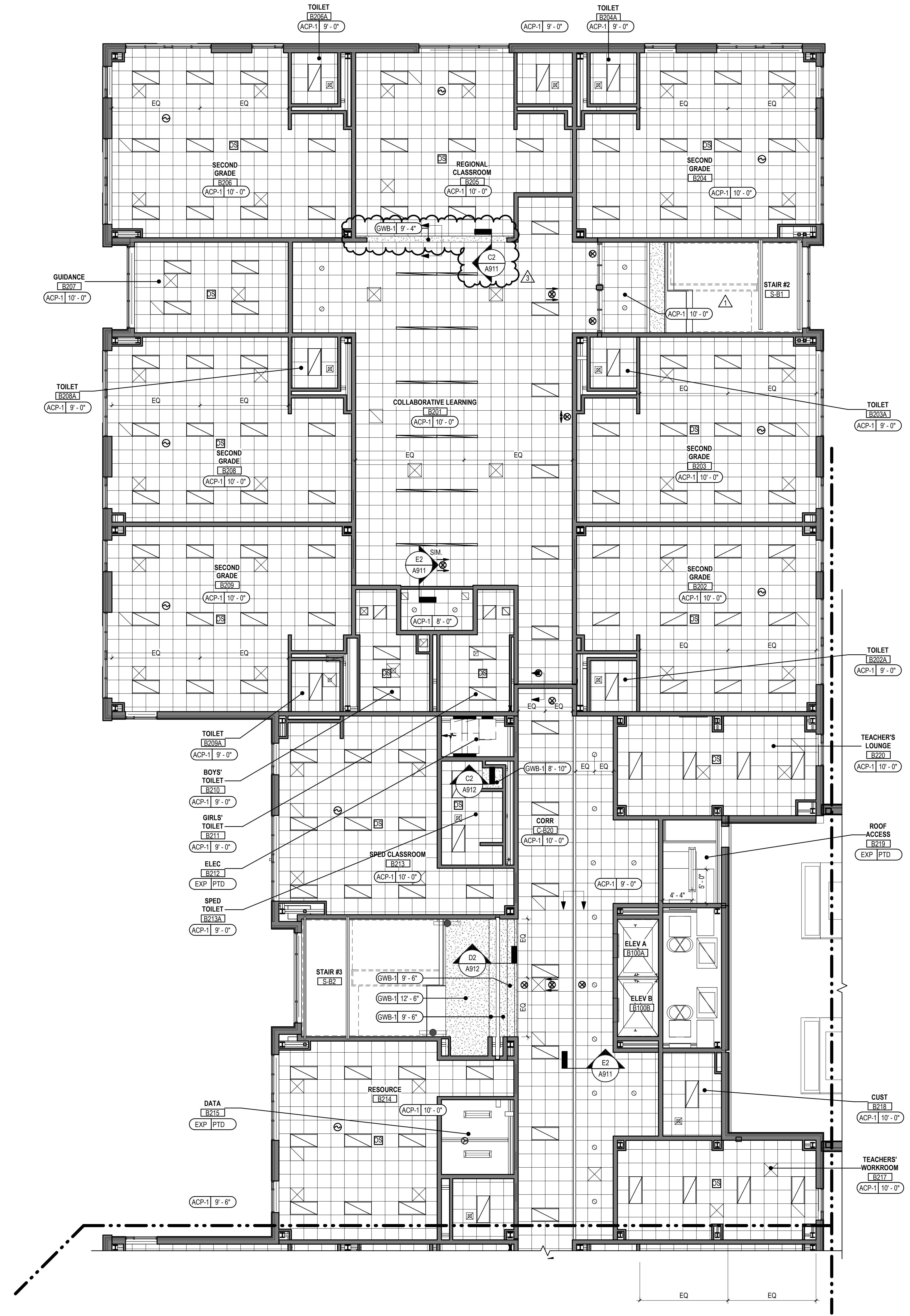
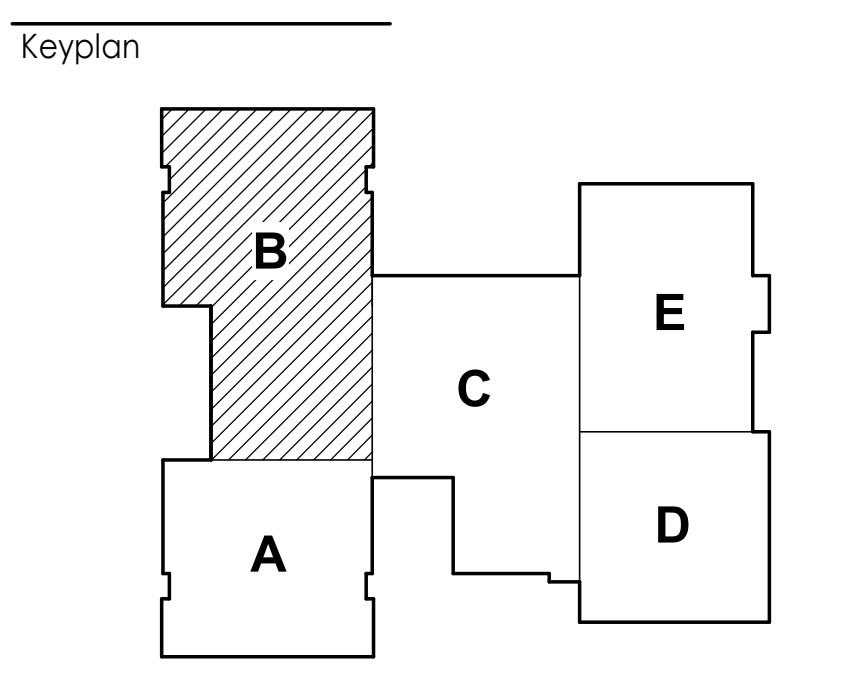


STANTEC ARCHITECTURE
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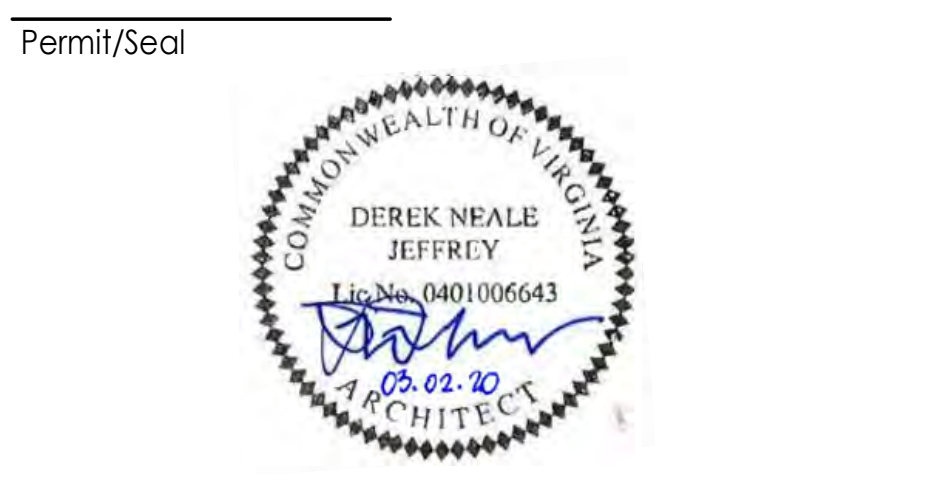
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Tel: (240) 683-9530

RCP LEGEND	
CEILING TAGS	
	CEILING TYPE
	CEILING HEIGHT
CEILING PATTERNS	
	2x2 LAY-IN CEILING SYSTEM (ACP-1)
	2x2 HIGH NRC LAY-IN CEILING SYSTEM (MUSIC ROOM U.N.O.) (ACP-2)
	2x2 LAY-IN CEILING SYSTEM AT KITCHEN (ACP-3)
	GYPSUM BOARD CEILING (GWB-1)
	METAL PANEL SOFFIT
LIGHTING	
CORRIDORS/STAIRWELLS/SPECIALTY:	
	RECESSED CAN DOWNLIGHT
	RECESSED DIRECT/INDIRECT
	LINEAR PENDANT
	LINEAR RECESSED
	21" TUBULAR SKYLIGHT W/ GWB SURROUND
	OCCUPANCY SENSOR
	PHOTO SENSOR
CLASSROOMS/ADMIN/RESTROOMS:	
	RECESSED CAN DOWNLIGHT
	RECESSED TROFFER
	RECESSED DIRECT/INDIRECT
	RECESSED DIRECT/INDIRECT
	LINEAR PENDANT
UTILITY SPACES:	
	RECESSED DIRECT/INDIRECT
	48" DIRECT / INDIRECT HEAVY DUTY PENDANT
	12" x 72" DIRECT / INDIRECT HEAVY DUTY PENDANT
	72" DIRECT / INDIRECT HEAVY DUTY PENDANT
ATHLETICS SPACES:	
	RECESSED CAN DOWNLIGHT
	HIGH BAY PENDANT
	72" DIRECT / INDIRECT HEAVY DUTY PENDANT



3	ADDENDUM #3	2020.03.02
1	ADDENDUM #1	2020.02.20
	BID & PERMIT SET	2020.02.06
	100% CONSTRUCTION DOCUMENTS	2020.01.26



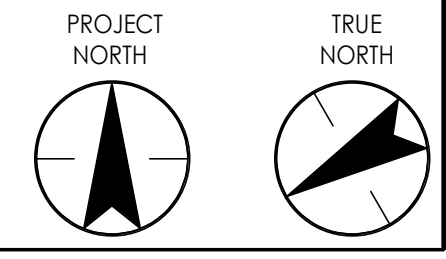
Client/Project
ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS
EVERGREEN MILLS ROAD, DULLES, VA 20166

Title
ENLARGED REFLECTED CEILING PLAN - LEVEL 2 - AREA B

Project No.	218320338	Scale	AS INDICATED
Revision	VDOE #	Drawing No.	
3	053-115-01-100	A922	

REFLECTED CEILING PLAN - LEVEL 2 - AREA B
1/8" = 1'-0"



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RCP LEGEND

CEILING TAGS	
	CEILING TYPE
	CEILING HEIGHT

CEILING PATTERNS	
	2x2 LAY-IN CEILING SYSTEM (ACP-1)
	2x2 HIGH NRC LAY-IN CEILING SYSTEM (MUSIC ROOM U.N.O.) (ACP-2)
	2x2 LAY-IN CEILING SYSTEM AT KITCHEN (ACP-3)
	GYPSUM BOARD CEILING (GWB-1)
	METAL PANEL SOFFIT

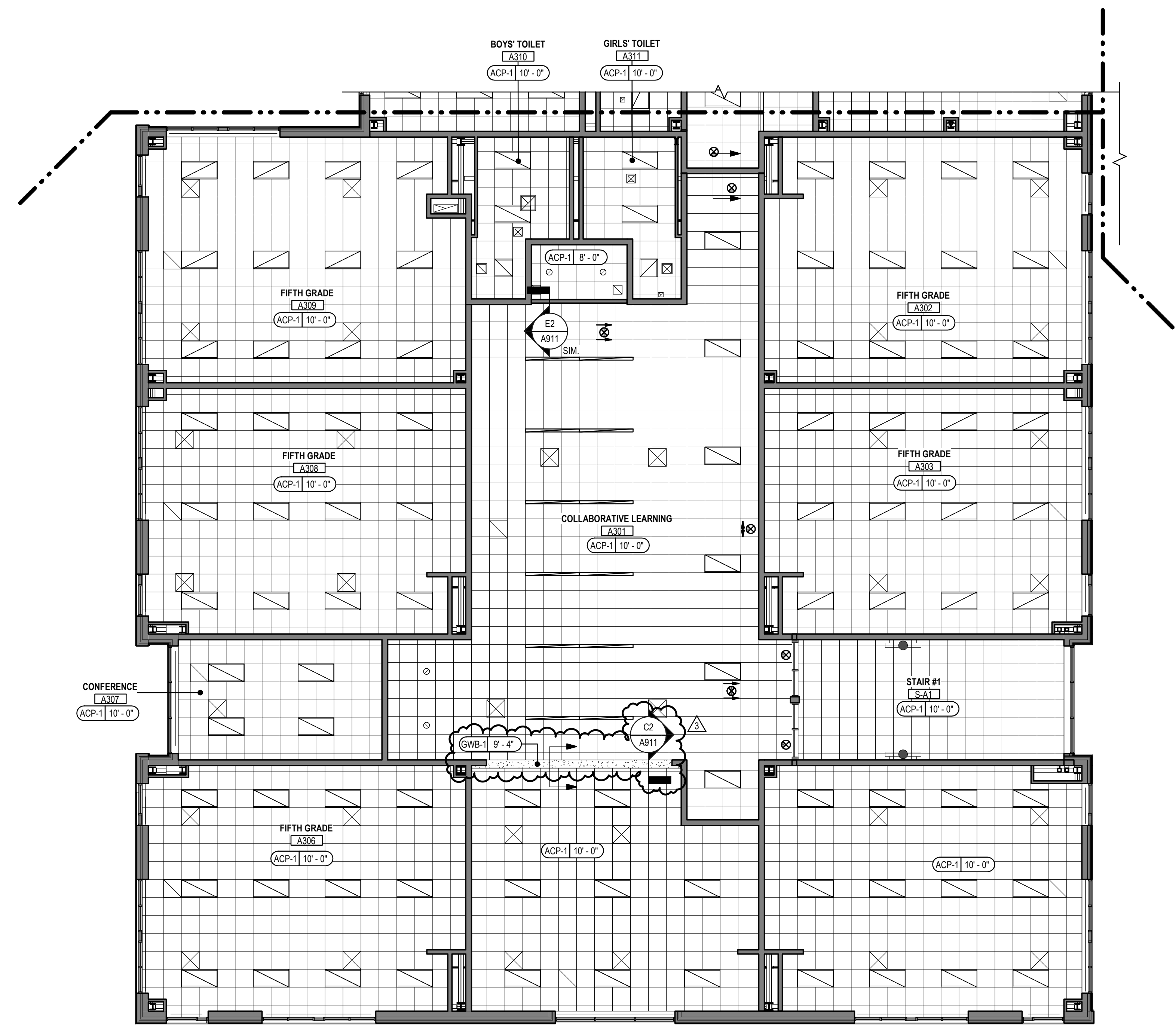
LIGHTING

CORRIDORS/STAIRWELLS/SPECIALTY:	
	RECESSED CAN DOWNLIGHT
	RECESSED DIRECT/INDIRECT
	LINEAR PENDANT
	LINEAR RECESSED
	21" TUBULAR SKYLIGHT W/ GWB SURROUND
	OCCUPANCY SENSOR
	PHOTO SENSOR

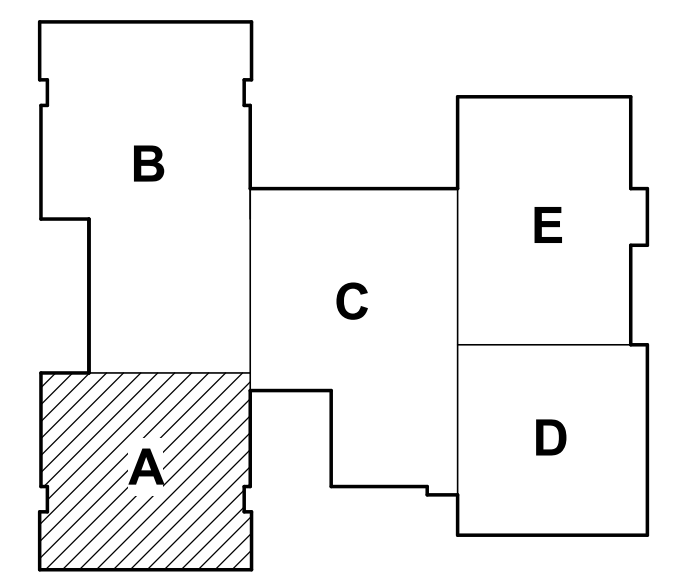
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ATHLETICS SPACES:	
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Keyplan



Issue/Revision	YYYY.MM.DD
3 - ADDENDUM #3	2020.03.02
BID & PERMIT SET	2020.02.06
100% CONSTRUCTION DOCUMENTS	2020.01.26

Permit/Seal



Client/Project Logo



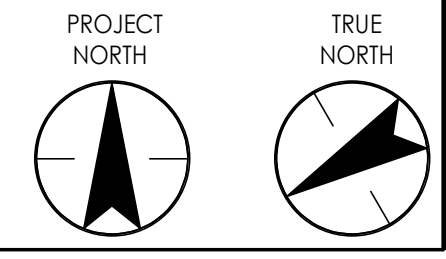
Client/Project

ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS
EVERGREEN MILLS ROAD, DULLES, VA 20166

Title
ENLARGED REFLECTED CEILING PLAN - LEVEL 3 - AREA A

Project No.	Scale
218320338	AS INDICATED
Revision	Drawing No.
3 - 053-115-01-100	A931



REFLECTED CEILING PLAN - LEVEL 3 - AREA A

1/8" = 1'-0"

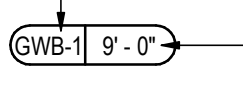


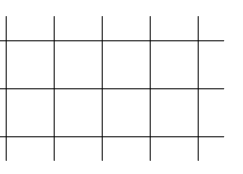
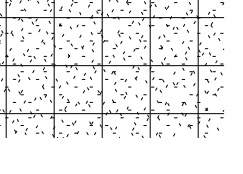
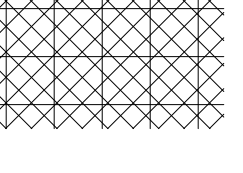
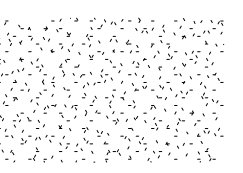
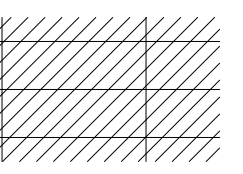
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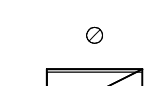




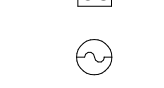

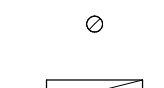
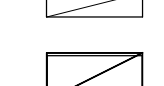
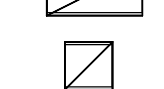


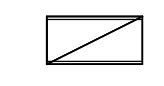
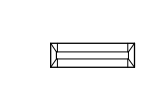
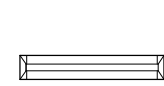




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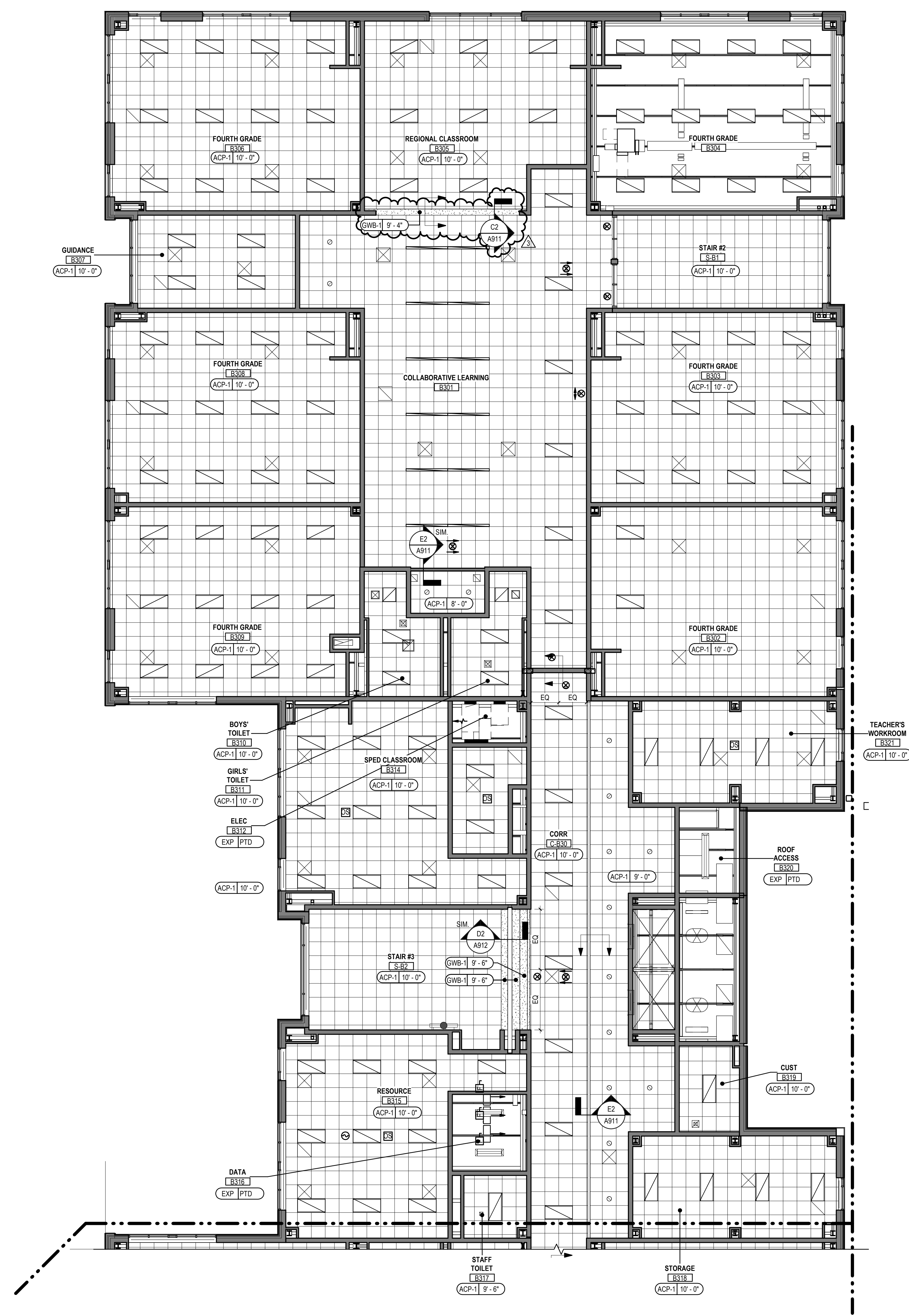
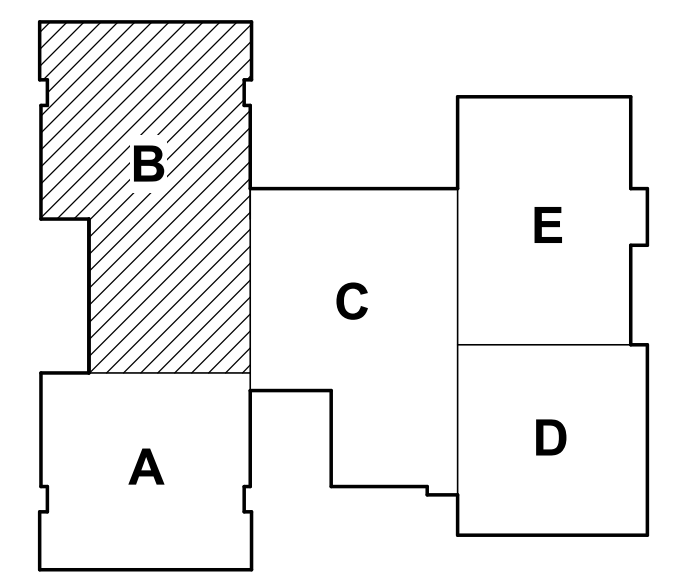
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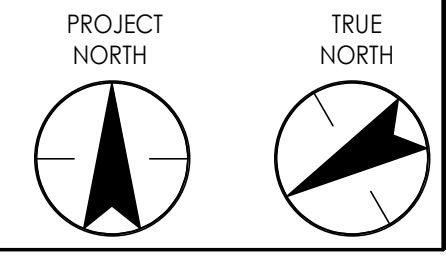
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Keyplan



E
D
C
B
A

REFLECTED CEILING PLAN - LEVEL 3 - AREA B
1/8" = 1'-0"



Issue/Revision	YYYY.MM.DD
3 - ADDENDUM #3	2020.03.02
BID & PERMIT SET	2020.02.06
100% CONSTRUCTION DOCUMENTS	2020.01.26



Client/Project
ELEMENTARY SCHOOL (ES-23)
LOUDOUN COUNTY PUBLIC SCHOOLS
EVERGREEN MILLS ROAD, DULLES, VA 20166
Title
ENLARGED REFLECTED CEILING PLAN - LEVEL 3 - AREA B

Project No.	Scale
218320338	A5 INDICATED
Revision	Drawing No.
3 - 053-115-01-100	A932

ELEMENTARY SCHOOL (ES-23)

EVERGREEN MILLS ROAD, DULLES, VA 20166

VOLUME 2 - GENERAL / ARCH / KITCHEN / STRUCTURAL

BID & PERMIT SET

ISSUED: FEBRUARY 6, 2020

PROJECT #: **218320338**

VDOE #: **053-115-01-100**

SHEET INDEX

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CI.12.16	ATHLETIC DETAILS	A316	ENLARGED EXTERIOR ELEVATIONS				TECHNOLOGY FLOOR PLAN - LEVEL 3 - AREA A
CI.12.17	ATHLETIC DETAILS	A317	ENLARGED EXTERIOR ELEVATIONS				TECHNOLOGY FLOOR PLAN - LEVEL 3 - AREA B
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CI.12.50	ATHLETIC DETAILS	A350	ENLARGED EXTERIOR ELEVATIONS				TECHNOLOGY FLOOR PLAN - LEVEL 3 - AREA E
CI.12.51	ATHLETIC DETAILS	A351	ENLARGED EXTERIOR ELEVATIONS				TECHNOLOGY FLOOR PLAN - LEVEL 3 - AREA A
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ELEMENTARY SCHOOL (ES-23)

EVERGREEN MILLS ROAD, DULLES, VA 20166

VOLUME 3 - FIRE SUPPRESSION / PLUMBING / MECHANICAL

BID & PERMIT SET

ISSUED: FEBRUARY 6, 2020

PROJECT #: 218320338

VDOE #: 053-115-01-100

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ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS
EVERGREEN MILLS ROAD, DULLES, VA 20166

NO.	DESCRIPTION	DATE
3	ADDENDUM #3	2020.03.02
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Issue/Revision YYY.MM.DD

Permit/Seal

Client/Project Logo



Client/Project

ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS
EVERGREEN MILLS ROAD, DULLES, VA 20166

Title
COVER SHEET - VOLUME 3

Project No. 218320338
Revision VDOE # 3
Scale AS INDICATED
Drawing No. 053-115-01-100
CS03

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ELEMENTARY SCHOOL (ES-23)

EVERGREEN MILLS ROAD, DULLES, VA 20166

ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS
EVERGREEN MILLS ROAD, DULLES, VA 20166

VOLUME 4 - ELECTRICAL / FIRE ALARM

BID & PERMIT SET

ISSUED: FEBRUARY 6, 2020

PROJECT #: **218320338**

VDOE #: **053-115-01-100**

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CI.04.01	GRADING PLAN	AR104		A650	ENLARGED STAIR PLANS & SECTIONS	S304		FA010	LIGHTING FLOOR PLAN - LEVEL 2 - AREA C
CI.04.02	GRADING PLAN	AR105		A651	ENLARGED STAIR PLANS & SECTIONS	S305		FA011	LIGHTING FLOOR PLAN - LEVEL 2 - AREA D
CI.04.03	CG-12 GRADING	AR106		A652	ENLARGED STAIR PLANS & SECTIONS	S306		FA012	LIGHTING FLOOR PLAN - LEVEL 2 - AREA E
CI.05.01	STORM SEWER PROFILES	A101	OVERALL FLOOR PLAN - LEVEL 1	A660	STAIR & RAIL DETAILS	S307		FA013	LIGHTING FLOOR PLAN - LEVEL 3 - AREA A
CI.05.02	STORM SEWER CALCULATIONS	A102	OVERALL FLOOR PLAN - LEVEL 2	A670	ELEVATOR PLANS, SECTIONS & DETAILS	S308		FA014	LIGHTING FLOOR PLAN - LEVEL 3 - AREA B
CI.05.03	STORM SEWER ROOF DRAIN SCHEDULE	A103	OVERALL FLOOR PLAN - LEVEL 3	A701	INTERIOR ELEVATIONS	S309		FA015	LIGHTING FLOOR PLAN - LEVEL 3 - AREA C
CI.05.04	STORM SEWER DETAILS	A111	ENLARGED PLAN - LEVEL 1 - AREA A	A702	INTERIOR ELEVATIONS	S310		FA016	LIGHTING FLOOR PLAN - LEVEL 3 - AREA D
CI.05.05	STORM SEWER DETAILS	A112	ENLARGED PLAN - LEVEL 1 - AREA B	A703	INTERIOR ELEVATIONS	S311		FA017	LIGHTING FLOOR PLAN - LEVEL 3 - AREA E
CI.05.06	STORM SEWER DETAILS	A113	ENLARGED PLAN - LEVEL 1 - AREA C	A704	INTERIOR ELEVATIONS	S312		FA018	POWER FLOOR PLAN - LEVEL 1 - AREA A
CI.05.07	STORM SEWER DETAILS	A114	ENLARGED PLAN - LEVEL 1 - AREA D	A705	INTERIOR ELEVATIONS	S313		FA019	POWER FLOOR PLAN - LEVEL 1 - AREA B
CI.06.01	WATERLINE PROFILES	A115	ENLARGED PLAN - LEVEL 1 - AREA E	A720	CASEWORK DETAILS	S314		FA020	POWER FLOOR PLAN - LEVEL 1 - AREA C
CI.06.02	PRIVATE SANITARY SEWER PROFILES	A122	ENLARGED PLAN - LEVEL 2 - AREA A	A901	OVERALL REFLECTED CEILING PLAN - LEVEL 1	S315		FA021	POWER FLOOR PLAN - LEVEL 1 - AREA D
CI.06.03	LOUDOUN WATER DETAILS	A123	ENLARGED PLAN - LEVEL 2 - AREA B	A902	OVERALL REFLECTED CEILING PLAN - LEVEL 2	S316		FA022	POWER FLOOR PLAN - LEVEL 1 - AREA E
CI.06.04	LOUDOUN WATER DETAILS	A124	ENLARGED PLAN - LEVEL 2 - AREA C	A903	OVERALL REFLECTED CEILING PLAN - LEVEL 3	S317		FA023	POWER FLOOR PLAN - LEVEL 2 - AREA A
CI.06.05	LOUDOUN WATER DETAILS	A125	ENLARGED PLAN - LEVEL 2 - AREA D	A904	OVERALL REFLECTED CEILING PLAN - LEVEL 3	S318		FA024	POWER FLOOR PLAN - LEVEL 2 - AREA B
CI.07.01	BMP AND ADEQUATE OUTFALL NARRATIVE & MAP	A131	ENLARGED PLAN - LEVEL 3 - AREA A	A911	ENLARGED REFLECTED CEILING PLAN - LEVEL 1 - AREA A	S319		FA025	POWER FLOOR PLAN - LEVEL 2 - AREA C
CI.07.02	BMP CALCULATIONS	A132	ENLARGED PLAN - LEVEL 3 - AREA B	A912	ENLARGED REFLECTED CEILING PLAN - LEVEL 1 - AREA B	S320		FA026	POWER FLOOR PLAN - LEVEL 2 - AREA D
CI.07.03	BMP DETAILS - BIOTENTIONS 1, 2, & 3	A133	ENLARGED PLAN - LEVEL 3 - AREA C	A913	ENLARGED REFLECTED CEILING PLAN - LEVEL 1 - AREA C	S321		FA027	POWER FLOOR PLAN - LEVEL 2 - AREA E
CI.07.04	BMP DETAILS	A134	ENLARGED PLAN - LEVEL 3 - AREA D	A914	ENLARGED REFLECTED CEILING PLAN - LEVEL 1 - AREA D	S322		FA028	POWER FLOOR PLAN - LEVEL 2 - AREA A
CI.08.01	EROSION & SEDIMENT CONTROL PLAN - PHASE I	A201	ROOF PLAN	A915	ENLARGED REFLECTED CEILING PLAN - LEVEL 2 - AREA A	S323		FA029	POWER FLOOR PLAN - LEVEL 2 - AREA B
CI.08.02	EROSION & SEDIMENT CONTROL PLAN - PHASE II	A202	ROOF DETAILS	A916	ENLARGED REFLECTED CEILING PLAN - LEVEL 2 - AREA B	S324		FA030	POWER FLOOR PLAN - LEVEL 2 - AREA C
CI.08.03	SEDIMENT BASIN 1 DETAILS & CALCULATIONS	A203	INTERIOR PARTITION TYPES & DETAILS	A921	ENLARGED REFLECTED CEILING PLAN - LEVEL 2 - AREA C	S325		FA031	POWER FLOOR PLAN - LEVEL 2 - AREA D
CI.08.04	SEDIMENT BASIN 2 DETAILS & CALCULATIONS	A204	DOOR SCHEDULES	A922	ENLARGED REFLECTED CEILING PLAN - LEVEL 2 - AREA D	S326		FA032	POWER FLOOR PLAN - LEVEL 2 - AREA E
CI.08.05	EROSION AND SEDIMENT CONTROL DETAILS	A205	DOOR HARDWARE SCHEDULES	A931	ENLARGED REFLECTED CEILING PLAN - LEVEL 3 - AREA A	S327		FA033	POWER FLOOR PLAN - LEVEL 3 - AREA A
CI.08.06	EROSION AND SEDIMENT CONTROL NARRATIVE	A206	DOOR HARDWARE SCHEDULES	A932	ENLARGED REFLECTED CEILING PLAN - LEVEL 3 - AREA B	S328		FA034	POWER FLOOR PLAN - LEVEL 3 - AREA B
CI.09.01	LANDSCAPE PLAN	A207	EXTERIOR FRAME TYPES			S329		FA035	POWER FLOOR PLAN - LEVEL 3 - AREA C
CI.09.02	LANDSCAPE PLAN NOTES & DETAILS	A208	INTERIOR FRAME TYPES			S330		FA036	POWER FLOOR PLAN - LEVEL 3 - AREA D
CI.09.03	LANDSCAPE PLAN COMPUTATIONS	A209	HEAD, JAMB & SILL DETAILS (INTERIOR)			S331		FA037	POWER FLOOR PLAN - LEVEL 3 - AREA E
CI.10.01	FIRE LANE, SIGNAGE AND PAVEMENT MARKING PLAN	A210	HEAD, JAMB & SILL DETAILS (INTERIOR)			S332		FA038	TECHNOLOGY FLOOR PLAN - LEVEL 1 - AREA A
CI.10.02	AUTO-TURN ANALYSIS (SU-4)	A211	INTERIOR MATERIALS SCHEDULE			S333		FA039	TECHNOLOGY FLOOR PLAN - LEVEL 1 - AREA B
CI.10.03	LPCS SIGNAGE AND STRIPING PLAN	A212	ROOM FINISH SCHEDULES			S334		FA040	TECHNOLOGY FLOOR PLAN - LEVEL 1 - AREA C
CI.10.04	PHOTOMETRIC PLAN AND DETAILS	A301	EXTERIOR ELEVATIONS			S335		FA041	TECHNOLOGY FLOOR PLAN - LEVEL 1 - AREA D
CI.12.01	ATHLETIC DETAILS	A302	ENLARGED EXTERIOR ELEVATIONS			S336		FA042	TECHNOLOGY FLOOR PLAN - LEVEL 1 - AREA E
CI.12.02	ATHLETIC DETAILS	A303	ENLARGED EXTERIOR ELEVATIONS			S337		FA043	TECHNOLOGY FLOOR PLAN - LEVEL 2 - AREA A
CI.13.01	DRY UTILITY PLAN	A304	ENLARGED EXTERIOR ELEVATIONS			S338		FA044	TECHNOLOGY FLOOR PLAN - LEVEL 2 - AREA B
CI.13.02	OVERALL BMP, SWM, AND ADEQUATE OUTFALL PLAN (FOR REFERENCE...)	A305	ENLARGED EXTERIOR ELEVATIONS			S339		FA045	TECHNOLOGY FLOOR PLAN - LEVEL 2 - AREA C
CI.13.03	CULVERT AND CHANNEL COMPUTATIONS (FOR REFERENCE ONLY)	A306	ENLARGED EXTERIOR ELEVATIONS			S340		FA046	TECHNOLOGY FLOOR PLAN - LEVEL 2 - AREA D
SHEET 1		A307	ENLARGED EXTERIOR ELEVATIONS			S341		FA047	TECHNOLOGY FLOOR PLAN - LEVEL 2 - AREA E
SHEET 2		A308	BUILDING SECTIONS			S342		FA048	TECHNOLOGY FLOOR PLAN - LEVEL 3 - AREA A
		A402	ENLARGED BUILDING SECTIONS			S343		FA049	TECHNOLOGY FLOOR PLAN - LEVEL 3 - AREA B
		A403	ENLARGED BUILDING SECTIONS			S344		FA050	TECHNOLOGY FLOOR PLAN - LEVEL 3 - AREA C
		A404	ENLARGED BUILDING SECTIONS			S345		FA051	TECHNOLOGY FLOOR PLAN - LEVEL 3 - AREA D
		A405	ENLARGED BUILDING SECTIONS			S346		FA052	TECHNOLOGY FLOOR PLAN - LEVEL 3 - AREA E
		A501	BUILDING SYSTEMS ASSEMBLIES			S347		FA053	PANEL SCHEDULES - MAIN PANELS - ELECTRICAL
		A502	INTERIOR WALL SPANS & DETAILS - CMU			S348		FA054	PANEL SCHEDULES - EMERGENCY PANELS - ELECTRICAL
		A503	INTERIOR WALL SPANS & DETAILS - CMU			S349		FA055	PANEL SCHEDULES - KITCHEN PANELS - ELECTRICAL
		A504	INTERIOR WALL SPANS & DETAILS - CMU			S350		FA056	PANEL SCHEDULES - MECHANICAL PANELS - ELECTRICAL
		A511	EXTERIOR WALL SECTIONS			S351		FA057	PANEL SCHEDULES - ELECTRICAL
		A512	EXTERIOR WALL SECTIONS			S352		FA058	PANEL SCHEDULES - ELECTRICAL
		A513	EXTERIOR WALL SECTIONS			S353		FA059	PANEL SCHEDULES - ELECTRICAL
		A520	EXTERIOR WALL SECTIONS			S354		FA060	SINGLE LINE DIAGRAMS - ELECTRICAL
		A521	EXTERIOR WALL SECTIONS			S355		FA061	SINGLE LINE DIAGRAMS - ELECTRICAL
		A522	EXTERIOR WALL SECTIONS			S356		FA062	SINGLE LINE DIAGRAMS - TECHNOLOGY
		A523	EXTERIOR WALL SECTIONS			S357		FA063	ENLARGED CLASSROOM CONTROL DETAILS - ELECTRICAL
		A524	EXTERIOR WALL SECTIONS			S358		FA064	ENLARGED KITCHEN PLANS - ELECTRICAL
		A530	EXTERIOR PLAN DETAILS			S359		FA065	ENLARGED PLANS - ELECTRICAL
		A531	EXTERIOR PLAN DETAILS			S360		FA066	MECHANICAL EQUIPMENT CONNECTION SCHEDULE
		A532	EXTERIOR PLAN DETAILS			S361		FA067	ELECTRICAL DETAILS
		A533	EXTERIOR PLAN DETAILS			S362		FA068	ELECTRICAL DETAILS
		A612	EXTERIOR MOCK-UP			S363		FA069	ELECTRICAL DETAILS
		A613	CASEWORK, FINISH & EQUIPMENT PLANS - LEVEL 1 - AREA A			S364		FA070	ELECTRICAL DETAILS
			CASEWORK, FINISH & EQUIPMENT PLANS - LEVEL 1 - AREA B			S365			ELECTRICAL LIGHTING CONTACTORS & WIRING DIAGRAMS
			CASEWORK, FINISH & EQUIPMENT PLANS - LEVEL 1 - AREA C			S366			PV SYSTEM
			CASEWORK, FINISH & EQUIPMENT PLANS - LEVEL 1 - AREA D			S367			STRING LAYOUT
						S368			PHOTOMETRIC CALCULATIONS - LEVEL 1
						S369			PHOTOMETRIC CALCULATIONS - LEVEL 2
						S370			PHOTOMETRIC CALCULATIONS - LEVEL 3
						S371			COMCHECK
						S372			EMERGENCY PHOTOMETRIC CALCULATIONS - LEVEL 1
						S373			ELECTRICAL OVERALL PLAN - SITE
						S374			SITE PHOTOMETRICS

PROJECT TEAM:

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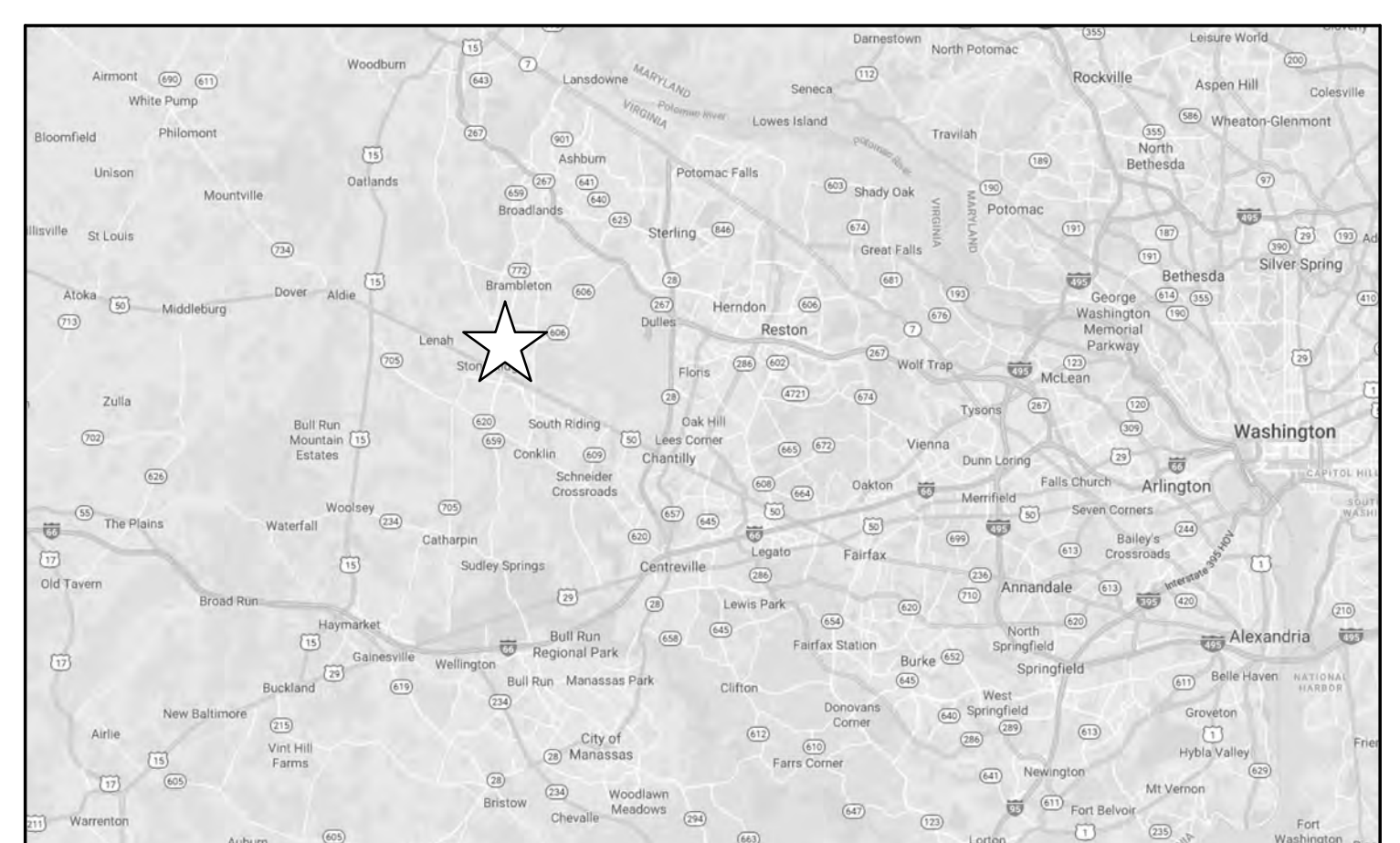
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LOCATION MAP:



VICINITY MAP:



Client/Project Logo



Client/Project

ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS
EVERGREEN MILLS ROAD, DULLES, VA 20166

Title
COVER SHEET - VOLUME 4

Project No. 218320338
Revision VDOE # 3
Scale AS INDICATED
Drawing No. 053-115-01-100
CS04

SECTION 09 24 00
CEMENT PLASTERING (STUCCO)

1.1 SUMMARY

A. Section Includes:

1. Exterior Stucco with integral color Acrylic textured finish.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Sustainable Design Submittals:

1. Recycled Content: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 25 percent.

C. Samples: For each type of factory-prepared finish coat and for each color and texture specified.

PART 2 - PRODUCTS

2.1 SURFACE REINFORCEMENT

A. Glass Fiber Fabric

1. Nominal 4.2 oz/yd² (142 g/m²) self-adhesive glass fiber reinforcing mesh treated for compatibility with cement plastering materials.

2.2 ACCESSORIES

A. General: Comply with ASTM D1784, and coordinate depth of trim and accessories with thicknesses and number of plaster coats required.

B. Metal Accessories:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Sto Corp.
 - b. Alabama Metal Industries Company; a Gibraltar Industries company.
 - c. CEMCO; California Expanded Metal Products Co.
 - d. ClarkDietrich.
 - e. Phillips Manufacturing Co.
2. External- (Outside-) Corner Reinforcement: Fabricated from metal lath with ASTM A653/A653M, G60 (Z180), hot-dip galvanized-zinc coating.
3. Cornerbeads: Fabricated from zinc or zinc-coated (galvanized) steel.
 - a. Smallnose cornerbead with expanded flanges; use unless otherwise indicated.
 - b. Smallnose cornerbead with perforated flanges; use on curved corners.
 - c. Smallnose cornerbead with expanded flanges reinforced by perforated stiffening rib; use on columns and for finishing unit masonry corners.
 - d. Bullnose cornerbead, radius 3/4 inch (19 mm) minimum, with expanded flanges; use at locations indicated on Drawings.
4. Casing Beads: Fabricated from zinc or zinc-coated (galvanized) steel; square-edged style; with expanded flanges.

5. Control Joints: Fabricated from zinc or zinc-coated (galvanized) steel; one-piece-type, folded pair of unperforated screeds in M-shaped configuration; with perforated flanges and removable protective tape on plaster face of control joint.
6. Expansion Joints: Fabricated from zinc or zinc-coated (galvanized) steel; folded pair of unperforated screeds in M-shaped configuration; with expanded flanges.

2.3 MISCELLANEOUS MATERIALS

- A. Water for Mixing and Finishing Plaster: Potable and free of substances capable of affecting plaster set or of damaging plaster, lath, or accessories.

2.4 PLASTER MATERIALS

- A. Portland Cement: ASTM C150/C150M, Type I.
 1. Color for Finish Coats: White.
- B. Colorants Finish Coats: Colorfast mineral pigments that produce finish plaster color to match Architect's sample.
 1. Color for Job-Mixed Finish Coats: In color matching Architect's sample.
- C. Acrylic-Based Finish Coatings: Factory-mixed acrylic-emulsion coating systems formulated with colorfast mineral pigments and fine aggregates; for use over cement plaster base coats. Include manufacturer's recommended primers and sealing topcoats for acrylic-based finishes.
 1. Manufacturers: Basis of Design; StoQuik® Gold Finish System for Soffits and Ceilings. Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Sto Corp.
 - b. Dryvit Systems, Inc.
 - c. Finestone; BASF Corp.
 2. Color: Match Architect's sample.

2.5 PLASTER MIXES

- A. Factory-Prepared Finish-Coat Mixes: For acrylic-based finish coatings, comply with manufacturer's written instructions.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Prepare smooth, solid substrates for plaster according to ASTM C1177 and ASTM D1784 .

3.2 INSTALLING ACCESSORIES

- A. Install according to ASTM D1784 and at locations indicated on Drawings.
 1. Reinforcement for External (Outside) Corners:
 - a. Install cornerbead at exterior locations.
 - b. Install cornerbead at interior locations.
- B. Control Joints: Locate as indicated on Drawings.

3.3 PLASTER APPLICATION

- A. General: Comply with ASTM D1784 .

- B. Substrate: Glass mat faced gypsum sheathing in compliance with ASTM C1177.
- C. Surface Reinforcement: Provide self-adhesive glass fiber reinforcing mesh
- D. Base-Coat Mixes for Use over Surface Reinforcement as follows:
 - 1. One component polymer modified Portland cement high build base coat.
- E. Primer: acrylic-based smooth primer, complies with SCAQMD Rule 1113 for primers
- F. Acrylic-Based Finish Coatings: Apply coating system, including primers, finish coats, and sealing topcoats, according to manufacturer's written instructions.
 - 1. High performance decorative and protective acrylic-based textured wall finish with integral color, complies with SCAQMD Rule 1113 for architectural finishes
 - 2. Apply to provide fine texture finish.
- G. Protection:
 - 1. Provide protection of installed materials from water infiltration into or behind them during and after construction.
 - 2. Provide protection of installed materials from dust, dirt, precipitation, freezing and continuous high humidity until they are fully dry.
 - 3. Seal penetrations through the finished surface with backer rod and sealant or other appropriate means.

3.4 PLASTER REPAIRS

- A. Repair or replace work to eliminate cracks, dents, blisters, buckles, crazing and check cracking, dry outs, efflorescence, sweat outs, and similar defects and where bond to substrate has failed.

END OF SECTION 09 24 00

SECTION 27 52 23
NURSE CALL SYSTEM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 WORK INCLUDED

- A. Complete Nurse Call System

1.3 RELATED WORK

- A. Division 26 – Electrical

1.4 DESCRIPTION, OPERATION AND FUNCTIONS OF SYSTEMS

- A. System Description: The Nurse Call System shall consist of Student Bedside Stations, Nurse Call Pull Stations, Nurse Call Pushbutton Station, Control Station, Power Supply, Nurse Call Intercom Stations, Corridor Dome-Lights, and any other accessory required to provide the specified operating system and associated control devices for completion of the system and interface with the entertainment system (provided under a separate contract).
- B. System Operations and Functions:
 - 1. Nurse Call Control Station (NCCS) shall provide the following:
 - a. Signaling between nursing unit locations and student bedside station or auxiliary staff locations.
 - b. The NCCS shall have a pre-announce tone to alert patients of incoming call.
 - c. All room numbering shall be user programmable.
 - d. Up to four (4) NCCS shall be capable of operating in parallel simultaneously.
 - e. All control graphics shall be organized in a logical left to right sequence.
 - f. All operations shall be initiated by activating a single (1) touch point. Systems requiring shift keys or simultaneous operation of two (2) buttons shall not be acceptable.
 - g. The NCCS shall have a solid state waterproof membrane touchpad and display, solid state modular construction with quick disconnect circuit, choice of instant two-way communication with handset or push-to-talk operation via built-in loudspeaker, with capacity for 64 room.
 - 2. Student bedside station / toilet shall provide the following:
 - a. "Call Placed/Service "Required" and "Monitor" indicators.
 - b. Momentary action "Cancel" button.
 - 3. Area Control Unit shall have the following:
 - a. Capacity for 68 beds.
 - b. Provide all the functions the Nurse Call Control Station.
 - c. Modular construction with quick disconnects.
 - d. Maintain full operation during time required to switch to auxiliary power.
 - e. Provide multiple area night coverage from a single NCCS.
 - f. Ability to control four (4) NCCS stations.
 - 4. Duty Station shall have the following:

- a. One combination "Normal Call/Call Placed" Indicator.
 - b. One "Emergency Call/Priority Call" Indicator.
 - c. One momentary-action "Call" button.
 - d. One momentary-action "Cancel" button.
 - e. The Duty Station shall be capable of controlling zone lights to indicate white steady for "Normal" calls and "Staff" calls within the specified zone, white flashing for "Priority" calls within the zone and red flashing for "Bath" calls within the zone.
 - f. Duty Stations which do not indicate the priority of the call shall not be acceptable.
 - g. An independent Tone Signal Generator shall be built into the Duty Station for emergency backup.
 - h. Shall be capable of installation so that calls are confined to its assigned nursing zone only.
 - i. The Duty Station shall incorporate all-solid-state circuitry. Plug-on connectors shall be provided.
5. The Staff Station shall provide the following facilities:
- a. "Call Placed" and "Monitor" indicators.
 - b. One Momentary-Action "Call" button.
 - c. One Momentary-Action "Cancel" button.
 - d. Shall incorporate all-solid-state circuitry. The Staff Station shall be of the plug-on connector type.
6. Wall Dome Light
7. Wall Chime

1.5 QUALITY ASSURANCE

- A. Source Quality Control: Materials and equipment shall be new, unused and UL listed.
- B. The system and components shall be supplied by one manufacturer of established reputation and experience who shall have produced similar apparatus for a period of at least ten (10) years and who shall be able to refer to similar installations rendering satisfactory service.
- C. The Nurse Call System shall be installed by Nurse Call System installation Contractor, hereinafter known as the "Nurse Call System (NCS) Trade". The NCS installation shall include wiring, components, connections, adjustment, testing and certification. The Electrical Trade shall provide conduit, junction boxes and pull boxes as indicated, and required by the Nurse Call System manufacturer drawings or NCS Trade instructions. The Nurse Call System Trade shall furnish any special back boxes, cabinets, enclosures and similar items to the Electrical Trade for installation by the electrical trade in accordance with the nurse call system manufacturer's drawings, NCS Trade instructions and as indicated.
- D. Materials and equipment: Materials and equipment shall be latest cataloged products of manufacturers regularly engaged in production and installation of telecommunications systems. Materials and equipment shall be manufacturer's latest standard design and comply with specification requirements.
- E. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturers or producer's nameplates or trademarks on exposed surfaces of products that will be exposed to view in occupied spaces or on the exterior.

1.6 REFERENCES

- A. The complete installation, including additions and modifications, shall be in accordance with:
 - 1. National Electrical Code Article 725.

1.7 SUBMITTALS

- A. Comply with Division 01 section "Submittals Procedures" and Division 27 section "Common Work Results for Communications".
- B. Product Data: For each type of product indicated. Submit application, technical, and installation data.
- C. Submit shop drawings in accordance with Division 01 and Division 27.
 - 1. Shop Drawings shall include:
 - a. One line system riser diagram.
 - b. Wiring schematic.
 - c. Roughing-in requirements.
 - d. Wiring Diagrams: For power, signal, and control wiring.
 - 2. Equipment List. Include each piece of equipment and include model number.
- B. Field quality control reports.
- C. Qualification Data: For factory qualify installer.
- D. Submit Operation and Maintenance Manuals in accordance with Division 01 Section "Operations & Maintenance Data".

1.8 WARRANTY, SERVICE

- A. The Nurse Call System manufacturer shall warrant the system for a minimum of one (1) year from date of acceptance by Owner against defective parts and/or workmanship and shall provide parts and labor to fulfill this warranty at no cost to Owner.
- B. Refer to Division 01 Section "Warranties" for submission of warranty.
- C. Qualified service and parts shall be available to call on within a 24 hour basis.

1.9 CONTRACTOR QUALIFICATIONS

- A. The contractor must be a Systems Contractor who has been regularly engaged in the furnishing and installation of nurse call systems for a period of at least the last two (2) years and who can show evidence of successfully completing at least five (5) projects. The Systems Contractor shall demonstrate to the satisfaction of the Architect/Engineer and Owner that he has:
 - 1. Adequate plant and equipment to pursue the work properly and expeditiously.
 - 2. Adequate staff and technical experience to implement the work.
 - 3. Suitable financial status to meet the obligations of the work.
 - 4. Technically capable and factory trained personnel to provide routine and emergency service for all products used in the project.

1.10 PROJECT CONDITIONS

- A. Deliver nurse call system equipment and components in factory-fabricated containers or wrappings, which properly protect the equipment from damage.
- B. Store nurse call system equipment and components in original packaging. Store inside a well-ventilated space protected from weather, moisture, soiling, humidity, and extreme temperatures.

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- C. Handle nurse call system equipment and components carefully to prevent damage, breaking, and scoring of finishes. Do not install damaged units or components, replace with new.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Each system shall be based on Rauland Responder 5000 whose numbers are used herein or accepted equal by Hill-Rom.

2.2 STANDARD PRODUCTS

- A. The equipment furnished under this specification shall be the standard product of one manufacturer. Catalog and model numbers are intended to indicate type and quality of design and material as well as exact operating features required. All items of equipment including wire and cable shall be designed by the manufacturer to operate as a complete system and shall be accompanied by the manufacturer's complete service notes and drawings detailing all interconnections.

2.3 SYSTEM COMPONENTS

- A. The following are the main components required for the system:
 - 1. Nurse Call Control Stations: (Two required) Model #R4KANNV2 Rauland Responder Series, with expansion capabilities.
 - 2. Patient Bedside Station: Model #R4KPC11 Slim Pull Cord Station, Rauland Responder Series.
 - 3. Nurse Call Duty Stations with speaker and control: Model #R5KSDTY , Rauland Responder Series.
 - 4. Corridor Dome Light: Model #R5KDC06, Rauland Responder Series.
 - 5. Wall Chime: Model #R4KMST
 - 6. Terminal Cabinets: Model #R5KMPR15.
 - 7. Miscellaneous: Terminal & Junction Blocks as required.
 - 8. Special back boxes and cabinets.
 - 9. Wiring - West Penn, Plenum Rated, Shielded, Multi pair.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Wiring:
 - 1. All wiring methods shall be in accordance with NFPA-70, Article 725 and all other codes specified herein.
 - 2. Provide proper number, shielding and size of wires as required for proper operation of the system in accordance with the Nurse Call manufacturer's drawings and instructions.
 - 3. The nurse call systems line side and above 100 volt wiring shall be installed in a conduit system.
 - 4. No wiring other than that directly associated with the nurse call system or auxiliary function shall be permitted in the nurse call system conduits.
 - 5. All the wiring on the nurse call systems load side shall be plenum rated shielded power limited cable type as specified in this section.

6. All plenum rated shielded power limited wiring shall be installed in a partial conduit system (conduit stubs). Each panel, cabinet and outlets shall have conduit stubbed out to the nearest accessible ceiling void. Provide a 3/4 -inch conduit from each nurses call outlet and dome light to nearest accessible ceiling void. Where two (2) nurse call outlets are in the same room or back to back in the same wall, provide a 3/4-inch conduit between outlets and 1-inch conduit stub to the nearest accessible ceiling void. Provide a 1" bushed conduit between corridor and each room ceiling void, it required. Each control cabinet shall have the minimum of two (2) 2-inch conduit stubs to the nearest accessible ceiling void. The minimum of one (1) 2-inch conduit(s) shall be provided across non-accessible ceiling voids between accessible ceiling voids.
 7. All cabinets, boxes, conduits and etc., shall be proper size, as determined by the Nurse Call System Trade, shall be clearly marked for easy identification, and continuously grounded together.
 8. The Nurse Call Trade shall furnish any special cabinets or boxes to the Electrical Trade for the installation by the Electrical Trade.
 9. Wiring splices are to be avoided to the extent possible, and if needed they must be made only in junction boxes and shall be crimp connected.
 10. Transposing or changing color coding of wires shall not be permitted.
 11. Wire nut-type connections are not acceptable.
 12. All conductors shall be labeled on each end with "E-Z markers" or equivalent.
 13. Conductors in cabinets shall be carefully formed and harnessed so that each drops off directly opposite to its terminal.
 14. Cabinet terminals shall be numbered and coded. All controls, function switches, etc., shall be clearly labeled on all equipment panels.
 15. All connections to control stations, dome lights, and patient stations shall be made with crimp type terminal connections, or method approved by Nurse Call manufacturer.
 16. All wiring shall be checked and tested to insure that there are no grounds, opens or shorts.
 17. A schematic diagram of the Nurses Call System is not indicated on the drawings. The actual routing of the nurse call system shall be by the Nurse Call Trade based on the location of the devices, circuit limitations and wire limitations.
- B. Provide all equipment, accessories and material complete in strict accordance with specifications and applicable drawings as required for an electronic intercommunication system. All material and/or equipment necessary for proper operation of the system not specified or described herein shall be deemed part of the specification.

3.2 TECHNICAL ASSISTANCE

- A. Service Facilities: Contractor shall make available to the Owner a local Service Department of a duly authorized distributor of the equipment manufacturer which shall stock the manufacturer's standard parts. On-the-premises maintenance shall be provided during normal working hours at no cost to the purchaser for a period of twelve (12) months from date of completion of installation unless damage is caused by misuse, abuse or accident. On-the-premises service furnished at other than normal working hours shall also be available and shall be charged for by the manufacturer's distributor at current labor rates.
- B. Training of Personnel: Operating staff of the Facility, as well as maintenance staff shall be thoroughly instructed in the use, adjust, and operation of the system by factory authorized service representative. Such service shall be provided in conjunction with the system equipment.

1. Provide two (2) hours of training.
- C. Inspections: Perform two (2) inspections of the system during the two (2) years subsequent to the installation. The Organization installing this equipment shall be prepared to offer the Owner a service contract after the guarantee period has ended. Upon completion of the installation, a factory-trained technician shall perform all necessary electrical tests and adjustments and who shall then submit a Letter of Certification to the Owner/Architect/Engineer that the system functions and conforms to all requirements of the manufacturer of the equipment and these specifications.

END OF SECTION 27 53 00

Pre-Bid RFI
2-Mar-20

	QUESTIONS	RESPONSES
1	<p>Conflict for stair nosings. See following comment from Nystrom: I read the specs and it sounds like it calls out for our no-nose nosing "STSB-N1.375E" . I notice there is conflicting details in the specs (basis of design is 1-3/8") but then it mentions 3" wide and drawing notes 4". What width would you like me to quote? Due to the conflicting details would you like us to quote our most "standard" profile (STSB-P3E series attached). This works with most stair styles/types due to the nosing type. Refer to attached details for both types of nosing mentioned above.</p>	<p>3" Nosing is acceptable. See See addendum item AS-7 for revised spec.</p>
2	<p>For stairs 1 to 3, drawings A650 and A651, have several questions: A) At intermediate landings, stainless steel perforated metal panels are noted. No details shown. Which trade provides, if by miscellaneous metals, need details or specification section. B) Are stairs mislabeled? Plan A650 should be stairs 1 & 2 and A651 should be stair 3? C) At stairs intermediate platforms, ref. A4/A650 and A4/A651, is there a vertical/horizontal steel framing grid or layout for standpipes?</p>	<p>2A. Stair MFR to provide. See Addendum 3, item AS-8 for perforated meta specs 2B. Stairs are mislabeled. See Addendum 3, items AD-54 & AD-55 for corrections. 2C. Standpipes have been relocated out of stairwells. See Addendum 3, Fire Suppression, items 1-3</p>
3	<p>Drawing A201, General Partition Note Item #27: Provide minimum vertical reinforcing of #4@48"o.c. in grouted cells...Drawing S200, Interior Non-Load Bearing Wall Reinforcing (All Areas) states if height of wall is less than 16'-0", no vertical wall reinforcing is required. Which is the binding precedent, Architectural or Structural?</p>	<p>Provide vertical reinforcement for interior non-load bearing CMU walls per the schedule on S200</p>
4	<p>Section 07 53 23 does not specify or call for a roof cover board, however the drawings do. See below from sheet A501. A) Is a cover board required? B) If yes, can the R value of the cover board be used to when calculating the total R value of 30? C) If the cover board is to be installed, can the first two layers of roof insulation be mechanically fastened to the steel deck as a single unit and only the cover board (top layer) set in adhesive?</p>	<p>A. Coverboard is required. See Addendum 3 item AS-10 for revised spec B. Coverboard is required to achieve minimum R-value of 30 C. Install cover board. It is permitted to Mechanically fastened the first tw layers of insulation to the steel deck as a single unit and adhere the cover board (top layer) . See Addendum 3, item AS-11 for revised spec.</p>
5	<p>The Section 07 53 23; Walkway Pad are not indicated on the drawing as noted in paragraph 1.3-C.4. Are we to price only the roof walkways as indicated on the roof plan (A150) or are we to price additional roof walkways to meet the requirements of this paragraph?</p>	<p>Price additional pads per revised note provided in Addendum 3, item AD-31</p>
6	<p>Section 263213, 1.6, A. specifies the generator is to be seismically certified. Please confirm if IBC Seismic certification is actually required on this generator as it is to be located in VA which is not an area of high seismic activity?</p>	<p>Provide as specified. Based on LCPS standard specification. Seismic certification is required per IBC 1705.</p>
7	<p>Section 263213, 1.8, N. 2. and 2.5, B. 5. Specifies generator sound level shall not exceed 55 dBA at any portion along the nearest property line but also specifies a Level II enclosure. Please confirm if factory level II sound enclosure is acceptable meeting 75 dBA at 23 feet similar to Loudoun County ES 29 RFI response?</p>	<p>The sound enclosure shall meet the requirements described in specification sections 263213, 1.8, N. 2. and 2.5, B. 5. If level 2 sound enclosure cannot meet the requirements, contractor shall provide sound attenuator enclosure that meets the requirements.</p>
8	<p>Section 263213, 2.10, A. 5. Specifies this 150-KW generator is to be provided with an enclosure space heater. This space heater is not an available accessory on units this small. The generator will be provided with an engine block heater and alternator strip heater to aid in starting and preventing condensation. So please confirm the enclosure space heater can be excluded for this unit?</p>	<p>Provide as specified.</p>

9	Section 263213, 2.10, C. 1. and 2. Has conflicting requirements on the louvers for this 150-KW unit. At this smaller size automatic dampers at the inlet and discharge are not available on this size generator enclosure. Please confirm that fixed inlet and fixed discharge are acceptable only for this 150-KW?	Coordinate with manufacturer recommendation for installation; however based on the information provided this can be excluded.
10	Section 263213, 2.10, D. and E. specifies this 150-KW is to be provided with GFCI outlets along with interior AC/DC lights and light switch. Are all these enclosure lights and receptacles accessories actually required for this small 150-kW as it is not a walk-in type enclosure?	Provide as specified
11	Section 263213, 2.12, A. specifies this generator is to be provided with spring type isolators. This unit is a diesel unit with a sub-base fuel tank so external spring type isolators are not recommended from the manufacturer. The unit will have integral isolators provided from the factory between the engine/alternator and mounting skid. Please confirm external spring type isolators can be excluded as the unit will already be integrally isolated by the manufacturer?	Provide as specified
12	Section 263213, 3.7, C. specifies load bank for testing generator on-site shall be capable of providing full load at 0.8 power factor. Per NFPA 110 as long as the generator is tested at 0.8 power factor at the factory and a report is provided the field load bank testing of the generator can be performed using resistive (1.0 pf) load banks only. Please confirm it is acceptable to perform the on-site load bank testing of the generator with resistive type load banks only? Per Loudoun County ES 29 bid RFI response testing was to be performed as specified in the generator section	Provide as specified
13	Section 263213, 3.6 Field Quality Control has on-site testing requirements for this 150-KW generator and then 3.7 Acceptance testing has more on-site tests specified for the generator. Please confirm both of these testing sections are required as there are some conflicting requirements as to what is required based on each individual section. As one section says to test generator at full load for four (4) hours and the other section mentions testing generator at various load steps such as 25%, 50%, 75%, and 100% for thirty minutes each? Based on Loudoun County ES 29 RFI responses it appeared as though both sections are required for testing.	Please follow both testing measures as outlined in the specifications. Please submit testing reports to LCPS for record.
14	Is seismic certification of each ATS required for this project per Section 263600, 1.2 K.?	Seismic is a generic specification section. This is not necessary for this are: unless directed by LCPS. Nevertheless, a submittal shall be provided for official review and confirmation of general compliance.
15	Section 263600, 2.3, F. specifies each ATS must be provided with a programmed neutral switch position. Is this third neutral position actually required on each ATS as the drawing E501 only shows each ATS EG and ATS ELS with two positions for emergency and normal side?	Electrical drawings are diagrammatic and the specifications should be followed in conjunction with the drawings, coordinate with LCPS if this ca be omitted.
16	Is bypass isolation function required on either ATS OS or ATS LS for this project? Section 263600 appears to not indicate bypass/isolation type transfer switches. Based on Loudoun County ES 29 bypass/isolation ATS's were required for that project.	Per LCPS standard specification provide bypass isolation on all ATS's.
17	Are the cleanouts designated in this drawing (P100) a wall cleanout, or a finished floor cleanout? (I looked at the Architectural and Structural drawings, and did not see a crawl space in these areas). These designations are mostly in Areas A, B, and C. Designations for cleanouts in Areas D and E appear differently. Question applies to both underground Sanitary as well as Storm.	All cleanouts designated as FCO and CO are floor cleanouts. Wall cleanout are designated as WCO.

18	Per the finish schedule, there are certain rooms that are to receive VCT and Carpet. Please provide a pattern or a percentage ratio for the rooms with multiple types of flooring.	Notes on A212 have been revised to provide approximate areas of carpet required. See Addendum 3, AD-36
19	Section 01 32 33 Photographic Documentation. The specifications are unclear as to the mounting height of the construction video camera (section 1.4.E.2). Please specify minimum mounting height for construction video cameras.	See Addendum 3 item, AS-12 for revised specifications
20	Loading dock rails are noted as painted steel, ref. plans AS102 and AS103. Section 055213, subsection 2.2.C states "all railings shall be stainless steel". Please confirm which is correct and also, if exterior rails should be galvanized	Exterior railings to be galvanized and painted with a high performance coating See Addendum 3 item, AS-13 for revised specifications
21	Reference sheet A201 (attached), concerning CMU bond beams for ALL CMU partitions; please confirm that a typical CMU partition, grouted or un-grouted, load bearing or non-load bearing, with a maximum height of 16'-8", would require a minimum of 3 continuous bond beams: A. CMU Bond Beam at Base of Wall - Per General Par. on Note 21, a bond beam is required 1 course above floor level Interior Partition Schedule refers to Detail at Base 'BM1' for all masonry partition types Detail BM1 does not indicate a CMU bond beam at the bottom of the wall B. CMU Bond Beam, Intermediate - Per General Partition Note 22, a continuous bond beam is required at 8'-0" o.c., max C. CMU Bond Beam at Top of Wall - Interior Partition Schedule refers to Detail at Top 'TM2' for all masonry partition types Detail TM2 does indicate a CMU bond beam at the top of the wall "	A minimum of 3 continuous bond beams are not required for CMU partition walls. A. A bond beam at the 1st course above the floor level is not required at interior CMU partition walls. B. Continuous bond beams spaced at 8'-0" o.c. maximum are not required in CMU partition walls. C. A continuous bond beam is not required at the top of CMU partition walls as shown in 'TM2'. Bond beams are only required at the top of CMU partition walls as shown in B5/A502, B6/A502 D2/A502, B6/A503. SEE ADDENDUM 3, ITEM AD-32 for revised notes
22	See 6 page attachment (Q-5); wall tagged as 8" on Structural drawings, 12" (M11) on Architectural drawings. Walls scale 8" on Architectural drawings. Which is correct 8" or 12" CMU?"	M11 & M7 overall partition depths were incorrectly listed. M11 overall depth should read "7 5/8" and M7 should read "5 5/8". See Addendum 3, item AD-32
23	See Section 11 40 00, Part 5 Item # 44 (CLEAN DISHTABLE) is specified to have an undershelf. The floor plans and/or elevations do not show an undershelf with item # 44 (CLEAN DISHTABLE). Please advise.	Undershelf not required. See Addendum 3 item, AS-14 for revised specifications
24	Category A Road (Private), "Pissarro Road" – C1.03.02 indicates a Category A Road with existing utilities indicated, during the prebid PowerPoint and included in Addendum 1 the road was identified as Pissarro Road. It was our understanding that the dates in the PowerPoint were incorrect and should be 2021 in lieu of 2020. Please advise of the following: a. The correct substantial completion dates for Pissarro Road and the Arcola Mills Drive frontage improvements and utility extensions b. Advise if the water and sanitary sewer that are noted as existing on Pissarro Road are in place and if not what dates will they be in place for the school contractor to connect to c. Advise of who the developer and/or contractor is that will be constructing the road/utilities	a. Substantial completion date of Pissarro Road per proffers is approximately April 24, 2021. b. The water and sanitary sewer shown on Pissarro Road are currently not in place. They will be installed by others for the School GC to connect to. c. The contractor that will be constructing the road/utilities has yet to be determined.
25	Electrical Primary Service for Permanent Power – C1.03.02, C1.03.03, ES100 do not appear to show the path/conduits/requirements for the permanent electrical service to the transformer. Please advise of where the primary service is coming from and requirements for the contractor versus the Power Company	The proposed permanent electrical service is now provided on Sheet C1.13.01 - Dry Utility Plan prepared by Davis Utility. See Addendum 3, Civi Drawings, item CD-2

26	<p>Drawing A113 – section A3/A514 is shown at the Reception Area (C101) window. Does this section apply to window sills for Rooms C103 through C106 as well? Does this cut section apply to other locations as well?</p>	<p>Use Detail A6/A521 for all W1 windows in Area C. See Addendum 3 item, AD-36 for revised drawing details</p>
27	<p>Some clarification is needed in areas that have more than one VCT and/or CPT type listed. Where does the VCT end and CPT start in these areas? Is there a certain floor pattern that will be required? Some area examples have been provided below, but there are many other rooms. Can finish floor plans that correspond to the finish schedule and show floor patterns be provided?</p> <p>a.A101 VCT 1 & 2 CPT 2 b.A201 VCT 1 & 2 CPT 3 c.A301 VCT 1 & 4 CPT 4 d.B101 VCT 1 & 2 CPT 2 e.B201 VCT 1 & 3 CPT 3 f.B301 VCT 1 & 4 CPT 4</p>	<p>Regarding Carpet in rooms w/ both carpet and VCT, See response to question 18.</p> <p>Additional notes have been included to clarify proportions of field tile (VC 1) versus accent tiles (VCT 2, 3, & 4). See Addendum 3, item AD-36</p>
28	<p>OMG, the manufacturer of the Shadowline Wall coping, as indicated in the Exterior Material Finish schedule has responded as following. In order to meet the specification (ANSI/SPRI ES-1) the Shadowline coping need to be fastened to 2x dimensional lumber as in attached detail. Please see attached, Q10. Therefore, the two layers of 3/4" plywood as indicated on details A2, 3, & 4/A524 are unacceptable and must be modified.</p>	<p>See Addendum 3 item, AD-49 for revised coping details</p>
29	<p>General Mechanical Equipment Connection Note C on drawing E701 indicates that EC is to provide a disconnecting means for each item of equipment listed on the schedule. The RTUs, ERUs, AHUs, MAUs, chiller and chilled & hot water pumps are indicated on the mechanical schedules on drawing M002 with a note to provide with non-fused disconnect or VFD. Please confirm that the disconnects for these units are to be furnished by the mechanical contractor as indicated on the mechanical equipment schedules on drawing M002.</p>	<p>To be coordinated by GC based on mech unit specifications. Contractor to price with all disconnects by EC.</p>
30	<p>Indicated throughout the power drawings there are symbols that appear to represent the low voltage systems (WAPs, Speakers, Clock/Call-in, Etc.). Please confirm that these symbols represent low voltage systems and should be removed from the electrical power drawings.</p>	<p>Symbols indicated are for low voltage systems and were directed by LCPS to include on power sheets.</p>
31	<p>Sheet Keynotes 8 & 10 on drawing ES100 indicates that a separate utility power source is to be provided for the athletic field irrigation system and for the well pump. Please provide an updated single line diagram and site electrical drawing indicating the locations of where the utility power is to be routed to as well as the conduits and cabling requirements.</p>	<p>No information has been provided to Interface for these items note is included as a pricing measure for the contractor. Once information is received Interface can update accordingly.</p>
32	<p>Please provide the dry utility drawings indicated by General Sheet Note 23 on ES100.</p>	<p>Provided on Sheet C1.13.01 - Dry Utility Plan prepared by Davis Utility. See Addendum 3, Civil Drawings, item CD-2</p>
33	<p>The civil drawings and the electrical site plan ES100 do not indicate the primary electric utility conduit routing. Please provide a revised drawing indicating the routing of the primary electric utility conduits as well as quantities and sizes.</p>	<p>The proposed permanent electrical service with proposed quantities and sizes is now provided on Sheet C1.13.01 - Dry Utility Plan prepared by Davis Utility. See Addendum 3, Civil Drawings, item CD-2</p>
34	<p>Specification 26 09 23 3.1 B. indicates to "Install wiring and cabling for control and signal transmission conductors in conduit between devices and system components." Please confirm that all lighting control cabling including CAT5e are to be installed in conduit and that plenum cabling supported by J-hooks is not acceptable.</p>	<p>Please include routing of lighting control cables in conduit from the location of the lighting control station (wall control panel/switch) to above the ceiling. When above ceiling, transition to plenum rated cable supported by J-hooks is acceptable per instruction from LCPS comments from DB Combs.</p>
35	<p>Request for Additional Roof Details - Please provide details or sections to the area circled in red.</p>	<p>See addendum 3, item AD-31 for additional roof details</p>
36	<p>The three bicycle racks called out on drawing AS101, is there a specification section?</p>	<p>Bike contracts are NIC. See addendum 2, Civil Drawings, item CD-2</p>

38	<p>Specification 122113 – Horizontal Blinds</p> <p>a.2.2.D.4 Tilt limiter with preselected degree settings – this is in conflict with Section 2.2.H.3 that calls out for tilt full. Do you want tilt full for the blinds?</p> <p>b.2.2.F Maximum Light-Blocking Blinds calls out for light-blocking for the blinds – this is not available with the 22mm slat spacing as called out in Section 2.2.C.3. We will provided this light-blocking for 18 mm slat spacing.</p> <p>c.2.2.M Hold Down Brackets are called out here, these are counter-productive on window frames, can we excluded these?</p> <p>d.2.2.N Side Channels and Light Gap Seals are called out here, these are problematic with use in horizontal blinds, may we exclude these?</p>	<p>a. Provide full tilt as specified</p> <p>b. 18mm slat spacing is acceptable. See Addendum 3, item AS-19, for spe revision.</p> <p>c. hold brackets at window frames can be excluded. All doors with glazing shall have hold down brackets as specified. See Addendum 3, item AS-19 for spec revision.</p> <p>d. Provide as specified</p>
39	<p>Drawing Volume 2 – Architectural Drawings</p> <p>a.A202 Door Schedules: The General Door Notes comments #16 calls out for Lockdown Shades for all doors glazing. For the FGS – Folding Glass Storefront door, Lockdown Shades are not available as this glazing exceeds the maximum size of these shades. Please specify what type of window treatments for this door type.</p>	<p>lockdown shades are not required for the folding glass storefront doors. See Addendum 3 items AD-63, & AD-64, for revised notes.</p>
40	<p>Section 116623, paragraph 2.2. specifies scoreboard that are hardwired. If wireless operation is provided it would delete the control conduit needed from the scoreboard location to the scorer’s table location. Can the scoreboards be changed to wireless operation in lieu of hardwired?</p>	<p>Provide scoreboard as specified</p>
41	<p>Section 116623, paragraph 2.3.D specifies a Porter #917 basketball hoop for the main court units but drawing A703 indicates a #950 basketball hoop. Which basketball hoop shall be provided for the main courts a #917 as specified or a #950 as shown on the drawing?</p>	<p>Provide Porter 917 basketball goals for main court units as specified.</p>
42	<p>Section 116623, paragraph 2.3.E specifies a Porter #955 basketball hoop for the side court units but drawing A703 does not indicate this type of basketball hoop. Should a #955 basketball hoop be provided for the side court units?</p>	<p>Provide Porter 955 basketball goals for side court units as specified.</p>
43	<p>Section 116623, paragraph 2.4.D.7. specifies corner wall safety pads but none are shown on the drawings. Should any of the columns or exposed corners in the gym receive corner pads?</p>	<p>Include additional padding for CMU pilasters described in Addendum 3, item AD-53.</p>
44	<p>Drawing A633 indicates a bleacher seating capacity of 241, which is not possible unless the bleacher is wall to wall, without end rails and 79’-8.25” long. Can you confirm if the bleacher should run wall to wall without end rails to achieve the 241 maximum net seat count desired?</p>	<p>See addendum 3, item AD-53 for revised bleacher configuration</p>
45	<p>Section 126600, paragraph 1.9.A.3. calls for a 10-year unconditional warranty for the bleachers with 10 annual inspections. Can this be changed to the manufacturer’s standard 5-year warranty?</p>	<p>Provide as specified.</p>
46	<p>Section 126600, paragraph 2.4.F. specifies 22” row spacing but the drawings indicate 24” row spacing. To achieve the 241 seats desired, 24” row spacing would be required. Can you confirm 24” row spacing is required?</p>	<p>Provide 22” row spacing. See addendum 3, item AD-28 for revised bleacher configuration</p>
47	<p>Section 126600, paragraph 2.4.I. specifies the wheelchair spaces to have removable railings at row two behind wheelchair spaces but these are not required by building code and are cumbersome to set up and take down. We would recommend not requiring rails at the recoverable ADA spaces. Will removable rails be required for the ADA spaces?</p>	<p>Provide as specified.</p>
48	<p>Section 126600, paragraph 2.4.M.3.b. specifies the color of the rails to match the seats. All manufacturers offer black as their standard color for rails. Will color match rails be required or will black be acceptable?</p>	<p>Provide as specified.</p>

49	Section 126600, paragraph 2.4.R.8.a & b specify row letters and seat numbers. These are generally not supplied for an elementary school. Will row letters and seat numbers be required?	Provide as specified.
50	OMG has informed the roofing subcontractors, that in order for the wall copings (shown on details A2, A3 & A4 on sheet A524) to be ES-1 compliant, the front face can't exceed 6" (7-3/4" indicated on the drawings) and the back leg can't exceed 5" (7" indicated on the drawings). The is front face can be manufactured with a minimum dimension of 5" and maximum dimension of 10", however the ES-1 compliance can only be achieved with a maximum face of 6". Please advise.	See Addendum 3 item AD-49 for revised coping details
51	General Partition Note 18 on sheet A201 states "Provide 3-1/2" glass-mat sheathing at base of all interior gypsum board walls. Refer to XX/AXXX." Does this note apply to this project? If so, please provide detail that this note references.	That note does not apply to this project. See Addendum 2, item AD-32
52	There are several details (A501,C4/A522, A4/A524) that reference a stucco finish, however, there doesn't appear to be a specification for this stucco finish. Please advise.	See spec section 09 24 00 provided via Addendum 3, item AS-5
53	It is understood that CT-1 is to go full height within the shower areas. However, based on the Accessible Transfer Shower Stall Control Wall Elevation on sheet A641, the measured shower height seems to be 6'6". Please confirm the correct height that CT-1 is to be stacked on the shower walls?	CT-1 is to go full height from floor to ceiling. See RCPs for shower ceiling heights
54	Specification section 093000 Tiling, paragraph 2.3-B calls out for Quarry Tile to be 4x8 and Quarry Tile Base to be 6x8. Quarry tile base is typically 6x6, and quarry tile is typically 6x6 or 8x8. Please advise	Provide 6x6 quarry tile base and 6x6 Quarry Tile. See Addendum 3, item A 15 for revised spec section.
55	Specification section 075323 EPDM Roofing, Paragraph 3.4-D Bonding Adhesive: On LCPS ES 31 (Wax Pool) Addendum 3 was issued allowing for manufacturer's standard application method for bonding adhesive in lieu of requiring an adhesive spray rig, See below. Will this also be acceptable on this project? The spray rig requirement eliminates a number of otherwise qualified roofers as they don't have the equipment necessary to apply the adhesive via spray rig.	Revision is accepted. See Addendum 3, Item AS-16 for revised spec
56	Specification 04 20 00 2.2.D.2 and Exterior Materials Finish Schedule on drawing A306 identify the Glazed CMU as being 8" nominal in height. Wall section for Glazed CMU on A501 depicts the units as 4" nominal in height. Please confirm which is the correct height for the Glazed CMU for interior and exterior applications.	Glazed CMU to be 8"Nom. See Addendum 3, item AD-39 for revised section.
57	There may be an issue with the Phase II E&S plan (C1.08.02). I don't believe their intended design layer printed.	Sheet C1.08.02 has been checked and verified to have all proposed layers on and printed.
58	Specification section 042000-6, 2.1, related to CMU Fire-Resistance Ratings - notes in the last sentence "Provide materials with classification markings as required by the assembly design". Stamped and/or labeled CMU units are not typically used in this region and are very expensive. All relevant building codes and the IBC (Section 721) typically reference the calculation method (equivalent thickness) in determining the specified fire-resistance ratings for CMU. Please confirm stamped/labeled CMU are not required and the calculation method (equivalent thickness) is acceptable	Per the spec, Classification markings are only required if called for by the assembly design. See sheet A501 for Building Systems Assemblies

69	<p>Specification section 042000-9, 2.5, F, Core Fill – notes to provide fully grouted cells in CMU...at wall locations where sound attenuation is required on the Architectural drawings. A201, notes STC ratings for the partitions, but does not appear to require any sound insulation. There are several wall types, M05G, M09G, M13G that indicate “Grouted CMU”. Is this what the note in the specification above is referring to, we assume it is not the intent to grout all the walls with an STC rating. Please confirm it is not the intent to fully grout these walls for sound attenuation and/or advise of any walls that are required to be fully grouted for sound attenuation</p>	<p>Per sheet A201, only types M05G, M09G, M13G are to be fully grouted</p>
60	<p>Specification 042000-13, 2.11, Masonry Cell Fill – we have not found any masonry partitions on A201 that require “Masonry Cell Fill” as specified. Please confirm the “Masonry Cell Fill” does not apply to this project or advise of where it is to be installed.</p>	<p>Masonry cell fill is not used in this project. CMU cells are either grouted or not grouted. See addendum 3, item AS-17 for amended spec</p>
61	<p>Specification 042000-7, 2.2, C – the unit compressive strength is listed as 2800 PSI. Should this be listed as 1900 PSI in lieu of 2800 PSI? Please advise.</p>	<p>2800 psi is correct per specifications and structural design notes (S001.VII A.)</p>
62	<p>Specification 042000, 2.7, D – this section notes anchoring CMU to structural steel, but the only detail we have found that is related is B2/S203. Is it the intent to anchor CMU to every steel column and beam it is within a few inches of? We assume it is not the intent to anchor to all the columns CMU is wrapping such as those indicated on A531, A532 and similar. Please advise of which steel columns/beams the CMU is to be connected to with anchors similar to B2/S203.</p>	<p>The intent is to anchor CMU to steel columns that are within a few inches of steel columns per B2/S203. Only beams that are embedded in CMU walls are required to have anchors.</p> <p>At CMU column enclosures, one side of the column that is within a few inches of a CMU enclosure wall is required to have anchors. The CMU enclosures are also required to be tied back to the main CMU walls with intersecting wall ties.</p>
63	<p>B6/S207 for example indicates post installed adhesive anchors and J bolt anchors that would need to be installed while the CMU is being laid. Post installed adhesive anchors would allow for a much better finished product installed exactly where needed. Please confirm post installed expansion anchors with fully grouted cells can be used in lieu of J bolts and/or headed studs at these details and similar.</p>	<p>It is acceptable to use ½” Ø Hilti HY 270 Adhesive Anchors at 2'-0” o.c. and embedded 5” into grouted cells in lieu of the J bolts.</p>
64	<p>Irrigation specification 331001 – the irrigation specification only notes to irrigate the soccer field. Please confirm this is correct.</p>	<p>This is correct. The soccer field is the only portion of the athletic fields that is to be irrigated (refer to the dashed line in Addendum 3, Civil Drawings, item CD-3)</p>
65	<p>Irrigation specification 331001 – please confirm the well is not part of this contract and is to be by others. In addition, please provide the termination point of the irrigation system for bidding purposes as the location of the new well is unknown.</p>	<p>It is verified that the wells are not a part of this contract. Final location has not been determined. 4 locations are to be drilled by EGGI and the location will be determined after receiving flow data. It is anticipated that the well will be located in one of the approximate locations shown in the attached exhibit (See Addendum 3, Civil Drawings, item CD-4)</p>
66	<p>Natural Athletic Field Turf 321823.26 – please provide a drawings/sketch indicating the limits of the athletic turf.</p>	<p>Please refer to the attached exhibit for the limits of the athletic turf which is to include everything inside of the track except for the skinned infield of the softball field (refer to the dashed line in Addendum 3, Civil Drawings, item CD-3)</p>
67	<p>Specification Section 053100 Steel Decking – Acoustical roof deck, paragraph 2.2, C, 8 indicates the sound absorbing insulation “shall be factory installed within the deck cells”, this statement leads us to believe it is a cellular deck, however it is not noted as cellular or non-cellular within the specification or S133 where it designates a 1 ½ acoustical metal deck. We have seen both cellular and non-cellular specified on the Loudoun County schools over the years. Please advise if it is the intent to have non-cellular acoustic decking or cellular acoustic decking as there is a substantial cost difference between the two</p>	<p>The intent is to have cellular acoustic decking</p>
68	<p>Please provide the asphalt detail for the side road Category A Road (private) that ties into Onsite Paving.</p>	<p>The design of Category A Road (Pissarro Road) is not in this contract.</p>

69	Please provide the detail for the Asphalt Play Area. Is it the same design as the Walking Track?	Yes, the Asphalt Play Area is the same design as the Walking Track.
70	Detail H16/A209 supposed to show header detail for folding glass storefront but page A209 does not exist. Please provide detail or clarify.	See addendum items AD-57, for missing detail
71	Please confirm that that tectum panels (AWP-1) will be installed per architectural detail B1/A703. Specs calls for Tectum finale, but detail is totally different. Tectum finale has a strip of its own tectum panel attached around panels, it is infilled with mineral wool and does not have any wood furring edges to be able to paint black.	Follow standard MFR installation procedure. See Addendum 3, item AD-3
72	Please confirm that tectum panels will be field painted. Specs are not clear and drawings only mention painting tag but no clear.	Tectum panels will be painted per sheet A703, provide at least 3 paint colors TBD by architect
73	Sheet A522-Detail C2 calls out for a motorized roller shade. This is the Clerestory Area C as shown on A123 for the W12 type windows over the Media Center. Please clarify if Motorized Roller Shades are needed on these window type W12. There is no specification for motorized roller shades.	Remove motorized roller shades. See addendum item 27 for revised detail
74	Please provide details TA4 and BA2 as called out on drawing A201 for the interior partition schedule	See addendum 3, item AD-32 for missing details
75	Please provide sheet A300 for roof tag details as indicated in the roof legend on A150.	"A300" is a typo and should read "A501" See Addendum 3, item AD-51 for revised legend notes
76	Door schedule calls for HMI-25 for doors C116 and C114 but floor plan shows HMI-27. Please clarify.	Doors C116 and C114 to have frames HMI-27. See addendum 3, item AD-6 for revised door schedule information
77	Please provide window type W5A as shown on the floor plans. There is no W5A type shown on the exterior frame schedule on drawing A206	"W5A" is a typo and should read "W5" See Addendum 3, items AD-27, AD 28, AD-29, & AD-30 for revised window tag information.
78	Please provide finish floor plans or floor and wall patterns for the rooms on the finish schedule that have more than one floor finished called out.	Floor finish drawings are not available at present. See responses to questions 18 & 27 to clarify floor material scope.
79	Need wall sections w/ siding materials and termination points (Section B6/A401 along gridlines Q & T)	Both sections are similar to wall section A4/A512 from roof deck and above
80	Clarification is needed as to what windows are to receive solid surface sills. The only reference found to solid surface sills is Section A3/514 and sill detail A6/A521. Cannot determine where these details are to apply. Exterior window types on dwg A206 provide no insight for sill requirements. Please Clarify	See Addendum 3, item AD-34 for clarifying detail callout
81	Can a solid surface color selection be provided – there is a wide range in price when it comes to color group selections. Please Clarify	Please price based products available in MFR Group 3 or Group C (depending on classification system used by MFR). See Addendum 3, item AS-18 for revised spec.
82	Reception Area C101 – there are no elevations, details, material clarifications for the Reception Counter Area. Please Clarify.	See Addendum 3, items AD-51 for reception desk details
83	Drawing FA001 indicates that all fire alarm conduit is to be rigid steel. Specification section 28 05 13 3.5.B indicates that all wiring is to be installed in EMT. Please confirm that EMT conduit is acceptable.	Yes, EMT conduit is acceptable.
84	Educational Intercommunications and Program Systems lists Cisco as the only approved manufacturer, with no substitutions permitted. The same specification states that intercom headend equipment shall be Rauland-Borg Telecenter U. If the contractor is to provide intercom headend equipment, please clarify which manufacturers are acceptable.	LCPS is currently undergoing a change in their approach to the Intercom/paging/clocks. Contractor should price providing, installing and testing the Rauland-Borg Telecenter U system including head-end with the Algo room intercom/clock devices and common area IP speakers as shown in the drawings.

85	<p>The System Responsibility Matrix on DWG E002 indicates that intercom system devices (speakers and clock/speakers) will be owner-furnished/contractor-installed and that intercom headend equipment will be owner-furnished/owner-installed. Please clarify owner/contractor responsibility, given that Section 275123.50 specifies a contractor-furnished/contractor-installed intercom system.</p>	<p>LCPS is currently undergoing a change in their approach to the Intercom/paging/clocks. Contractor should price providing, installing and testing the Rauland-Borg Telecenter U system including head-end with the Algo room intercom/clock devices and common area IP speakers as shown in the drawings.</p>
86	<p>Clock Systems requires a contractor-furnished/contractor installed Rauland-Borg clock system, with "EST audible devices." The drawings clearly and consistently indicate that clock/speakers will be Algo Model Number 8190S and that they will be owner-furnished/contractor-installed. Please clarify.</p>	<p>Rauland Borg Telecenter U is not required. Corridor and large spaces (e.g. Gym, cafeteria, kitchen, etc.) wall mounted clocks and intercom speakers each require a Cat 6A connection. Wall mounted clocks and intercom speakers are Owner Furnished/Contractor Installed (OFCI). Algo 8190 and Algo 1203 devices are Owner Furnished / Contractor Installed (OFCI).</p>
87	<p>Communication Data Network: Please clarify fiber backbone requirements for each IDF. The specification indicates that (2) 12-pair multimode and 12 fiber OM4 will be extended to each IDF. The drawings indicate that a 24-strand single mode will be extended to each IDF.</p>	<p>Provide two (2) 12-pair multimode. If distance between MDF and IDF exceeds norms, provide 24-strand single mode.</p>
88	<p>Copper backbone cabling is not shown or referenced on the Single Line Diagrams – Technology, on DWG E503. Copper backbone cabling is, however, included among the requirements of Section 272000 – Communications Data Network. Please clarify whether copper backbone is required.</p>	<p>Copper backbone cabling is not required.</p>
89	<p>CCTV Surveillance System lists cameras that are to be furnished and installed by the contractor. The System Responsibility Matrix on DWG E002 lists CCTV devices (cameras) as owner-furnished/contractor-installed. Please clarify whether the owner or the contractor will furnish CCTV cameras.</p>	<p>CCTV cameras will be owner furnished/contractor installed</p>
90	<p>The quantity of data racks shown on the electrical power drawings differs from the quantity of data racks shown on the technology drawings. Please confirm which data rack quantities are correct.</p>	<p>Install the quantity of racks as shown on the technology drawings.</p>
91	<p>On power DWG E215, the Enlarged Main Data/IT Room E110 plan shows cable tray installed in an "L" shape. On technology DWG E315, the Enlarged Data Room E110 plan shows ladder rack, rather than cable tray, and shows it in an entirely different configuration than shown on DWG E215. Is cable tray to be provided in this room or ladder rack? Is the configuration to be as shown on DWG E215 or DWG E315?</p>	<p>Install the ladder rack as shown on sheet E315.</p>
92	<p>The AV Equipment Schedule on DWG E002 lists Nurse Call devices. Nurse call devices are not shown on electrical floor plans, and there is no nurse call specification. Please clarify whether a nurse call system is required. If nurse call is required, please issue appropriate drawings and specifications.</p>	<p>Nurse call system is LCPS standard in the clinic. Refer to specification 27 5 23 'Nurse Call System', Addendum 3, item AD-20.</p>
93	<p>Paragraph 1.2.A.1.II, of Section 01 78 53 - Extra Materials, lists spare parts for the Division 27 Section "Intercommunications and Program Systems." Based on Technology drawing notes, intercom and clock systems for this project will be owner furnished. Please confirm whether the Rauland-Borg parts listed in Paragraph 1.2.A.1.II, including a Telecenter U Head-End controller, are to be furnished by the contractor as spare parts. Please confirm whether the contractor is required to provide spare speakers, as listed in the referenced paragraph, given that intercom speakers are to be owner furnished.</p>	<p>No spare parts are to be included.</p>
94	<p>Paragraphs 1.3.B.1.b and 3.3.J.2, of Section 27 20 00 Communication Data Network, specify 100-pair copper backbone cable for intercom. No backbone cable for intercom is shown on the Communications Riser on Drawing IT802. Given that intercom devices are connected, via Cat6A cables, directly into the owner's IT network, copper backbone cables would seem unnecessary. Please clarify.</p>	<p>100-pair cable is not required.</p>

95	<p>Paragraph 1.2.A.1.kk of Section 01 78 53 - Extra Materials lists spare parts for the Division 27 Section "IPTV Distribution Systems." The project specification does not include a section for IPTV distribution systems or any other kind of television distribution systems. Paragraph 1.2.A.1.kk lists splitters, amplifiers, taps, attenuators, and two types of coaxial cable. None of these items are specified in any Division 27 section. All TV outlets shown on the IT drawings consist of a single Cat6A data drop. Please clarify whether listed items not used in the construction must be provided as spare parts. If so, please specify, by quantity, manufacturer, and part number, the splitters, amplifiers, taps, and attenuators that are to be provided.</p>	<p>That section of the specifications was deleted - that portion of the spec ca be ignored.</p>
96	<p>Part 4 – Table of Contents of Section 27 08 00 – Commissioning of Communications indicates that 100% of the work of Section 27 53 00 – Distributed Systems (IPTV) (Including Headend) will be sampled during commissioning. There is no Section 27 53 00 in the specification. There is no IPTV or CATV or MATV section in the specification. Please clarify whether Section 27 53 00 will be added to the specification.</p>	<p>That section of the specifications was deleted - that portion of the spec ca be ignored.</p>
97	<p>Paragraph 1.8.I.2, of Section 280500 – Common Work Results for Electronic Safety and Security Systems, requires the Electronic Safety and Security contractor to provide a 25-year extended product. Would the word "warranty" at the end of the preceding sentence complete the sentence? If so, would the 25-year warranty apply to the structured cabling portion of the work or to all work of Division 28? We are not aware of fire-alarm, access control, or CCTV manufacturers who offer 25-year product warranties.</p>	<p>The 25-year warranty applies to the structured cabling system.</p>
98	<p>Specification Section 27 40 00 – Audio Video Distribution System, Paragraph 2.1.B.6 states that the projector will be controlled by an Extron media digital switcher. No media digital switcher is specified in Section 27 41 17 or shown on any drawing. Please clarify whether a media digital switcher is required. If one is required, please specify the Extron model number.</p>	<p>Include (1) Extron SW4 4K Plus switcher per projector location (#60-1604-01)</p>
99	<p>Stage Curtains: 11 64 13, Can the overall height of the valence be provided and what the overall width of the side and rear curtains be provided?</p>	<p>Bottom of Valence to be 2'-0" below top of proscenium opening. GC to ensure valence is properly sized to achieve this goal. The side are curtain are to be 14'-0" wide, the rear curtain is to be 32'-0" wide</p>

ADDENDUM

Addendum #03
 TO PLANS AND SPECIFICATIONS FOR
 ELEMENTARY SCHOOL (ES-23)

February 28, 2020

NOTE: If you have questions about this project, please contact, John Oduroe John.Oduroe@stantec.com.

This Addendum is generally separated into sections for convenience; however, all contractors, subcontractors, material suppliers and other involved parties shall be responsible for reading the entire Addendum. Failure to list an item(s) in all affected sections of this Addendum does not relieve any party affected from performing per instructions, provided the information is set forth one time anywhere in the Addendum.

This document shall become attached to and part of the Construction Documents for the aforementioned project.

BID DATE and TIME: March 6th, 2020 at 2:00pm.

DELIVER PROPOSALS TO:

Loudoun County Public Schools Administration Building, Room 211.
 21000 Education Court
 Ashburn, Virginia 20148

LIST OF ATTACHMENTS

1. Civil
 - a. Drawings (5 pages)



DRAWINGS

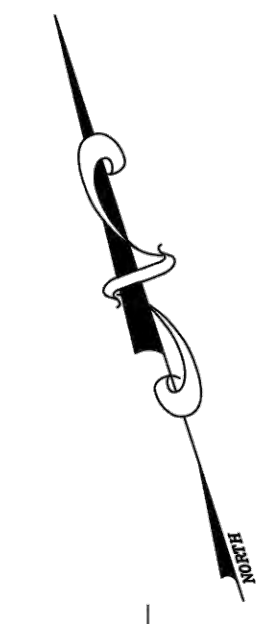
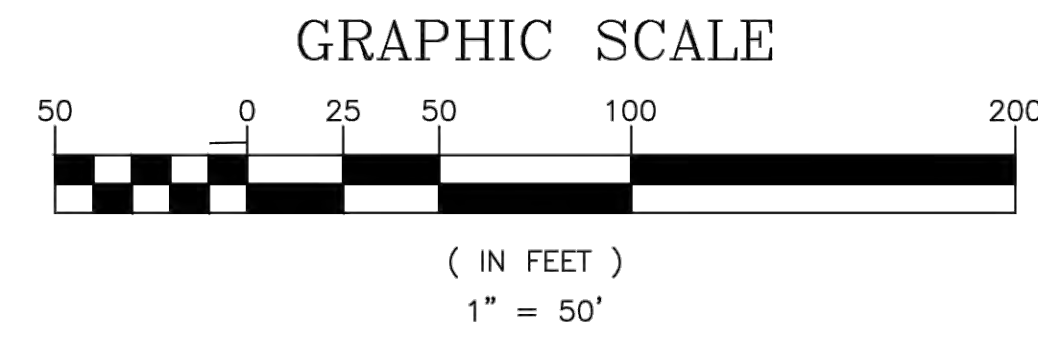
ITEM	SHEET NUMBER	DESCRIPTION
CD-1	C1.10.03	Inserted Sheet in its entirety to show LCPS Signage and Striping plan.
CD-2	C1.13.01	Inserted Sheet in its entirety to show Dry Utility Plan prepared by Davis Utility Consulting.
CD-3	Figure 1	Inserted exhibit in its entirety to show proposed field turf & irrigation plan

CD-4	Figure 2 – Draft	Inserted exhibit in its entirety to show proposed locations for exploratory test wells.
CD-5	C1.T1	Revised Sheet Index to include Sheets C1.10.03 & C1.13.01.

ARCOLA MILLS DRIVE
 VA STATE ROUTE 621
 (90' ULTIMATE RIGHT-OF-WAY WIDTH)
 INSTR. 20040301-0017666
 INSTR. 20080530-0033128
 (BY OTHERS - CPAP-2019-0010)

CATEGORY A ROAD (PRIVATE)
 (BY OTHERS - CPAP-2019-0010)

Bus lanes to be marked with painted numbers as shown.



20

1.5"R
 24 in

WELCOME TO LOUDOUN COUNTY PUBLIC SCHOOLS

- All visitors must sign in and out at the main office
- Prohibited on premises:
 - Trespassing during school hours, between dusk and dawn, or by unauthorized persons at any time
 - Unauthorized weapons
 - Drugs
 - Alcoholic beverages
 - Tobacco products or any smoking device
 - Gang activity
 - Pet waste
 - Littering
- Violators will be prosecuted
- Entry constitutes consent to surveillance, recording, and search of persons or property

Thank you for your cooperation in "empowering all students to make meaningful contributions to the world"

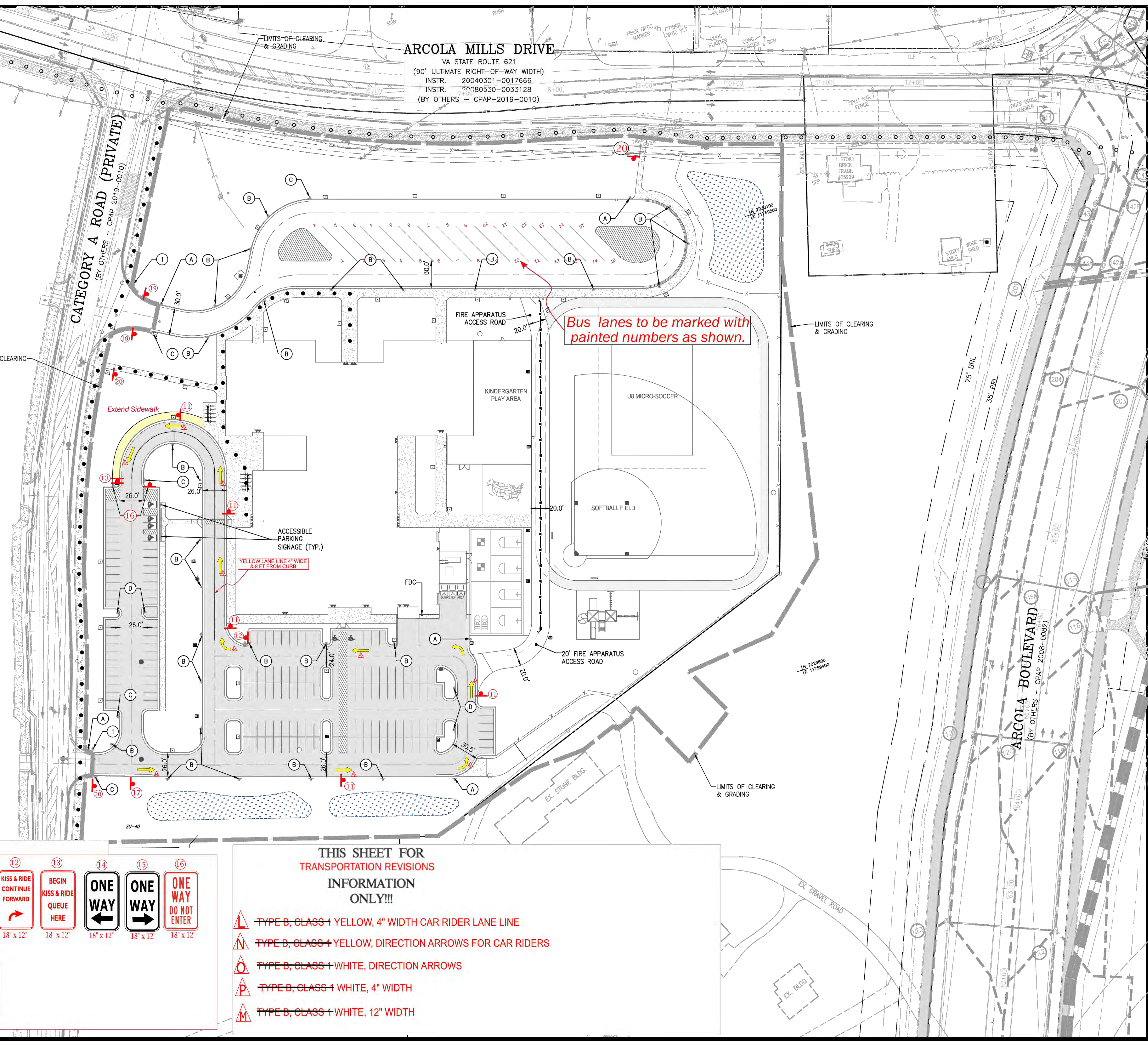
Detail

ADDITIONAL SIGNS & PAVEMENT MARKINGS REQUESTED BY LCPS TRANSPORTATION

5 RESERVED FOR FACULTY & STAFF 18" x 12"	6 RESERVED FOR FACULTY & STAFF 18" x 12"	7 RESERVED FOR FACULTY & STAFF 18" x 12"	8 VISITOR PARKING 18" x 12"	9 VISITOR PARKING 18" x 12"	10 VISITOR PARKING 18" x 12"	11 KISS & RIDE CONTINUE FORWARD 18" x 12"	12 KISS & RIDE CONTINUE FORWARD 18" x 12"	13 BEGIN KISS & RIDE QUEUE HERE 18" x 12"	14 ONE WAY 18" x 12"	15 ONE WAY 18" x 12"	16 ONE WAY DO NOT ENTER 18" x 12"
17 Kiss & Ride VISITOR PARKING STAFF PARKING 18" x 12"	18 Kiss & Ride STAFF PARKING 18" x 12"	19 BUSES ONLY 36" x 36"	20 WELCOME TO LOUDOUN COUNTY PUBLIC SCHOOLS See Detail Above	21 ONLY 18" x 12"							

THIS SHEET FOR TRANSPORTATION REVISIONS INFORMATION ONLY!!!

- A** TYPE B, CLASS 4 YELLOW, 4" WIDTH CAR RIDER LANE LINE
- B** TYPE B, CLASS 4 YELLOW, DIRECTION ARROWS FOR CAR RIDERS
- C** TYPE B, CLASS 4 WHITE, DIRECTION ARROWS
- P** TYPE B, CLASS 4 WHITE, 4" WIDTH
- M** TYPE B, CLASS 4 WHITE, 12" WIDTH



E
D
C
B
A

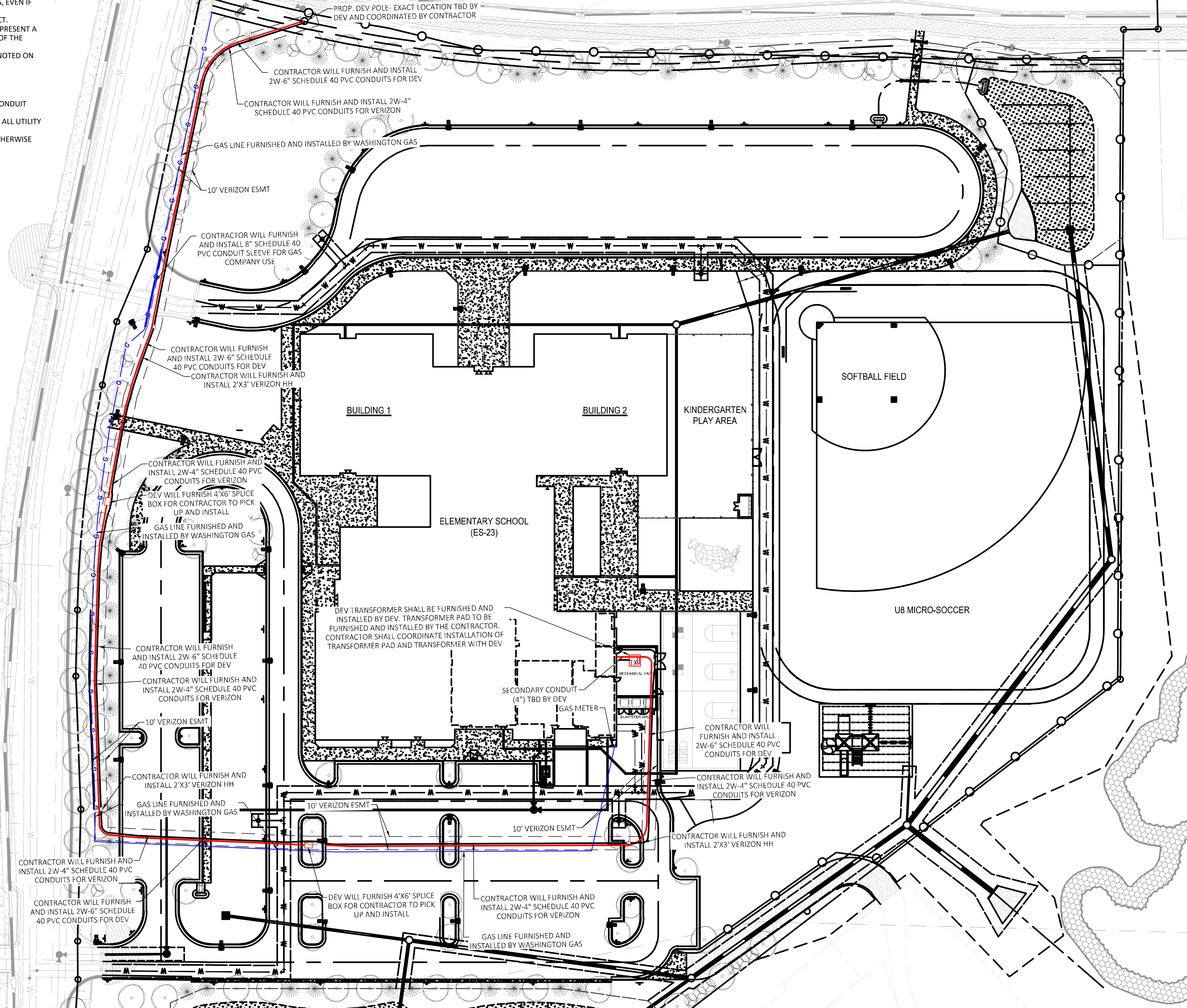
Code file name: PA-2018 - Arcola Center 2018-04-002 (E163) Engineering Plans/Sheet 2018-04-CP-001-SIG-03

GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATORY AGENCIES, INCLUDING BUT NOT LIMITED TO OSHA, NESC, DOT, RPA ETC. GENERAL NOTES WILL APPLY TO ALL DRAWINGS.
2. CONTRACTORS ARE RESPONSIBLE FOR INSTALLING UTILITY INFRASTRUCTURE PER EACH UTILITY COMPANY'S STANDARDS.
3. CONTRACTORS ARE RESPONSIBLE FOR COORDINATING ALL REQUIRED UTILITY COMPANY INSPECTIONS.
4. CONTRACTORS SHALL NOTIFY DAVIS UTILITY PERSONNEL PRIOR TO ANY DEVIATION FROM PLAN, OR UPON DISCOVERY OF POTENTIAL CONFLICT NOT INDICATED ON PLAN.
5. CONTRACTORS SHALL NOTIFY DAVIS UTILITY PERSONNEL IF ANY DIRECTION IS GIVEN TO DEVIATE FROM THIS PLAN BEFORE PROCEEDING WITH PROPOSED CHANGES, EVEN IF CHANGES ARE DIRECTED BY UTILITY PERSONNEL.
6. CONTRACTOR SHALL INSTALL PULL STRING IN EACH CONDUIT OR INNERDUCT.
7. CONTRACTOR SHALL MAINTAIN CONSTRUCTION AS-BUILT DRAWINGS AND PRESENT A COMPLETE SET OF RED-LINE DRAWINGS WITHIN 10 DAYS OF COMPLETION OF THE WORK.
8. ANY CONDUITS THAT ARE CAPPED BELOW GRADE SHALL BE MARKED AND NOTED ON RED-LINE DRAWINGS WITH DEPTH INFORMATION INDICATED.

ADDITIONAL NOTES:

1. ALL CONDUIT INFRASTRUCTURE SHALL BE FURNISHED AND INSTALLED BY CONDUIT CONTRACTOR UNLESS OTHERWISE NOTED.
2. CONDUIT CONTRACTOR SHALL COORDINATE CONDUIT STUB LOCATIONS AT ALL UTILITY POLES WITH UTILITY POLE OWNER.
3. ALL CONDUIT SHALL BE INSTALLED WITH 36" MINIMUM RADIUS UNLESS OTHERWISE NOTED.
4. ALL CONDUIT SHALL BE SCHEDULE 40 PVC UNLESS OTHERWISE NOTED.

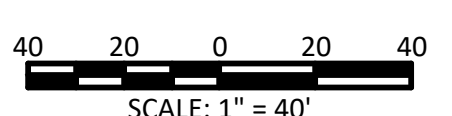


REFERENCE PLANS	DATE
5018-04-002-PHASE	12/09/2013
5018-11-003-RM-RBASE	07/27/2015
ES23 - Floor Plan LEVEL 1	12/09/2015

DRY UTILITY PLAN
ES-23
 EVERGREEN MILLS ROAD, DULLES, VA 20166

#	DATE	REVISION
3	07/28/2020	ADDENDUM #03

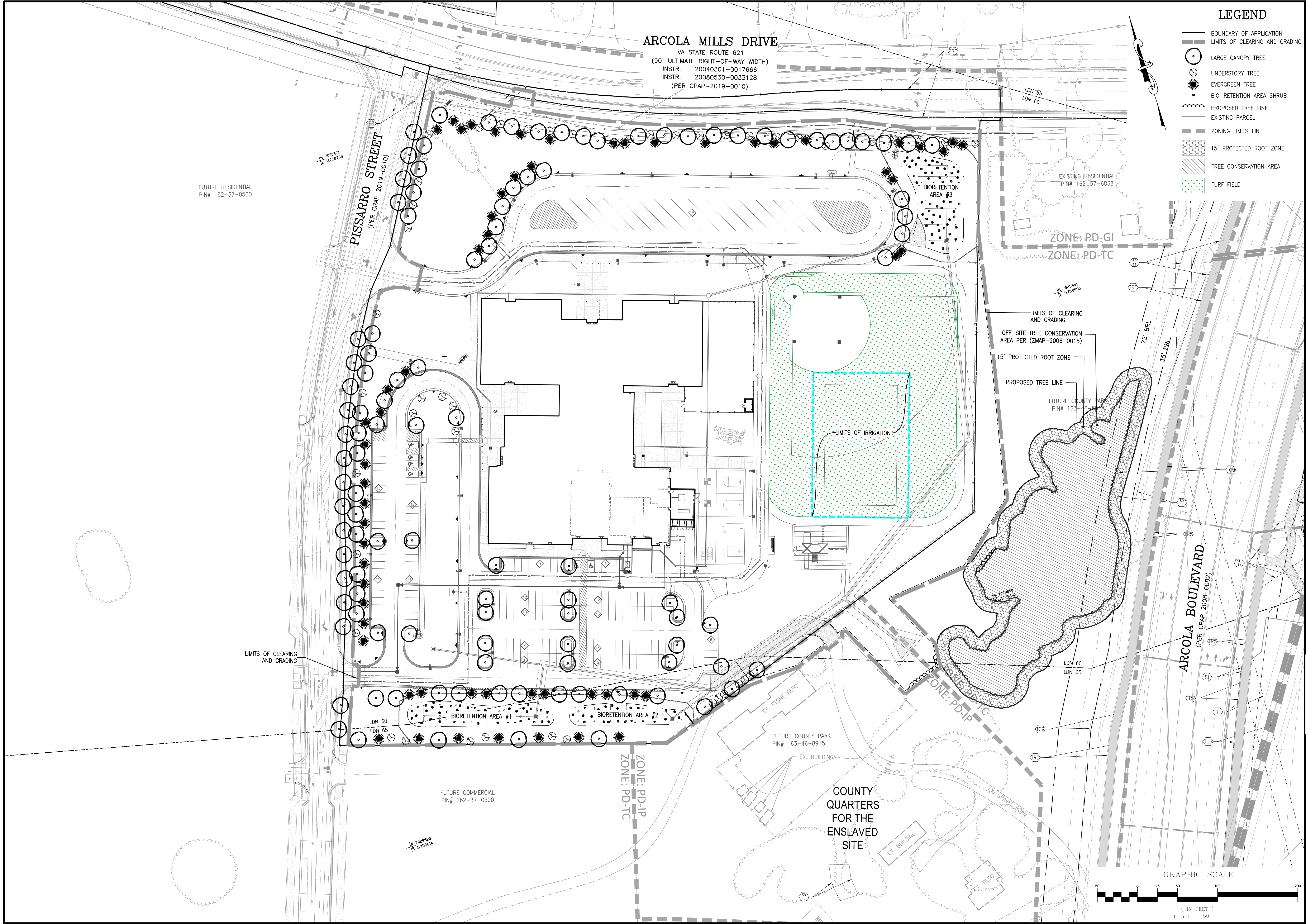
DATE: 12/19/2019
 DRAWN BY: R. REH
 PM: A. YOUNG
 PHONE #: 571 220-3475
 SCALE: 1"=40'



SHEET
C1.13.01

P:\5018 - Arcadia Center\5018-04-002-ENG\Engineering\Plans\Sheets\5018-04-002-001-DRY UTIL.dwg 2/28/2020 1:10 PM 24x36 - ARCH D

E
D
C
B
A



ARCOLA MILLS DRIVE
 VA STATE ROUTE 621
 (90' ULTIMATE RIGHT-OF-WAY WIDTH)
 INSTR. 20040301-0017666
 INSTR. 20080530-0033128
 (PER CPAP-2019-0010)

LEGEND

- BOUNDARY OF APPLICATION
- LIMITS OF CLEARING AND GRADING
- LARGE CANOPY TREE
- ⊗ UNDERSTORY TREE
- EVERGREEN TREE
- BIO-RETENTION AREA SHRUB
- PROPOSED TREE LINE
- EXISTING PARCEL
- ZONING LIMITS LINE
- ▨ 15' PROTECTED ROOT ZONE
- ▨ TREE CONSERVATION AREA
- ▨ TURF FIELD

Bowman
 CONSULTING

Bowman Consulting Group, Ltd.
 101 South Street, S.E.
 Leesburg, Virginia 20175
 Phone: (703) 443-2400
 Fax: (703) 443-2425
 www.bowmanconsulting.com

TURF FIELD & IRRIGATION EXHIBIT
LCPS ES-23
 SITE PLAN
 BLUE RIDGE ELECTION DISTRICT LOUDOUN COUNTY, VIRGINIA

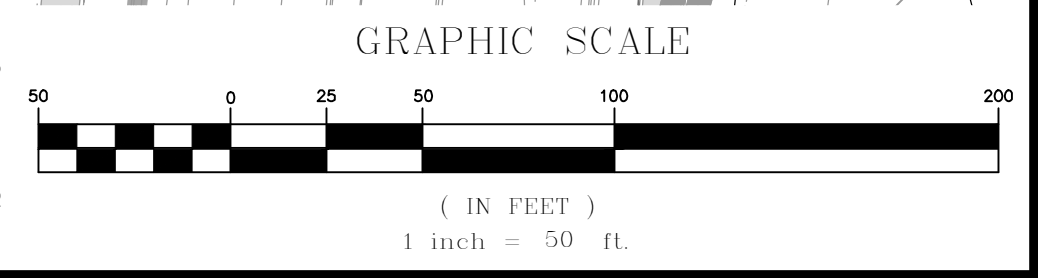
PROJECT NUMBER
 STPL - 2019 - 0005

FIGURE 1

PLAN STATUS	
10/11/19	LC & LW COMMENTS
01/27/20	LC & LW COMMENTS
02/19/20	LW COMMENTS
02/25/20	ADDENDUM #02
02/28/20	LC COMMENTS
02/28/20	ADDENDUM #03

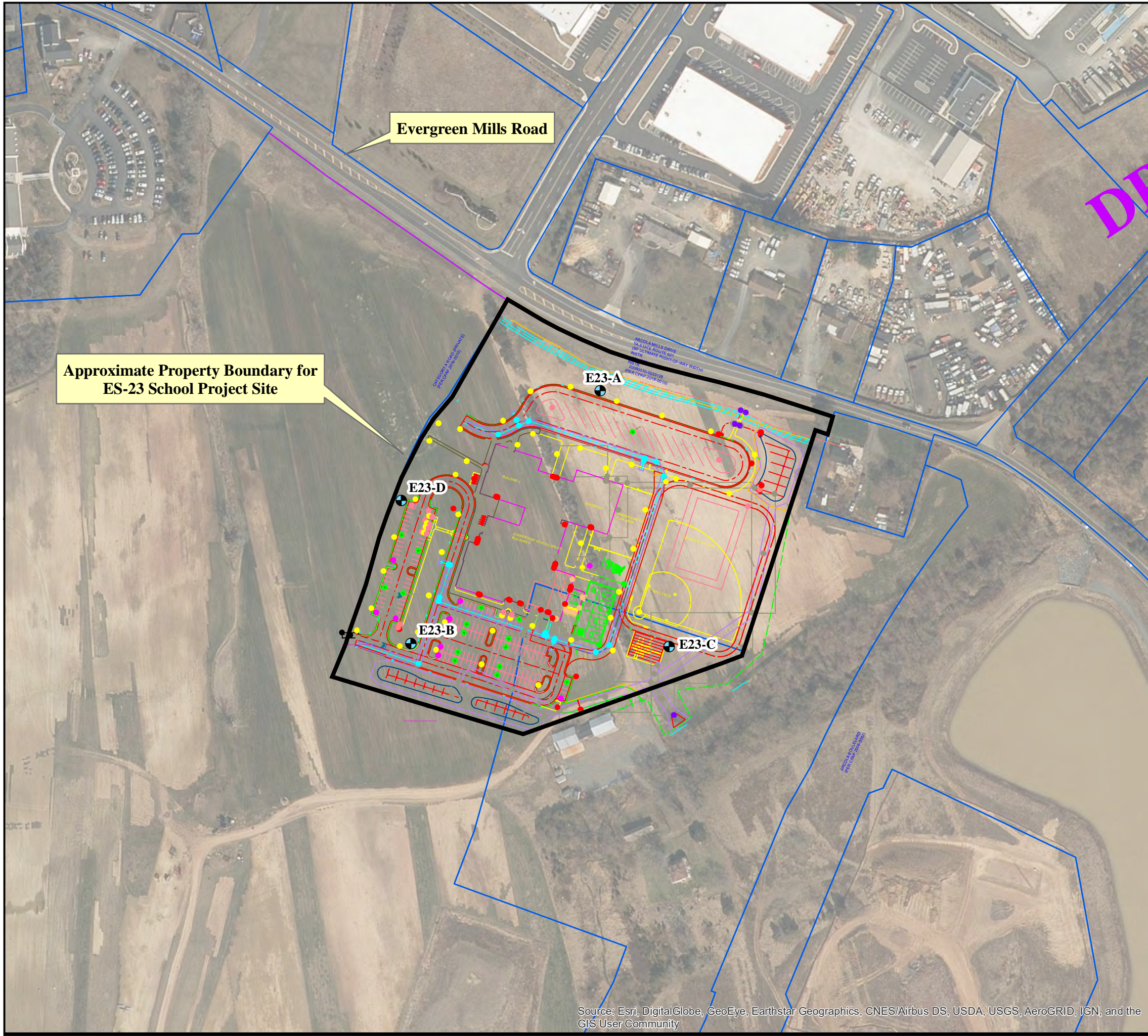
DATE	DESCRIPTION
CDJ	CDJ
DESIGN	DRAWN
SCALE	CHKD
	H: 1" = 50'
	V: 1" = 50'

JOB No. 5018-04-002
 DATE FEBRUARY 2020
 FILE No. 5018-D-CP-001



God file name: P:\2019 - Arcola Center\2019-04-02 (ENR)\Engineering\Submittals\2020-02-28 Field Turf & Irrigation\Figure1_Field Turf & Irrigation Exhibit.dwg

J:\33.0083100 to 33.0083199\33.0083135.00 LoudounCountyMSA\33.0083135.01 E23\Work\Ph\Working\GIS\E23_Figure_2_Site_Plan.mxd Last saved: 1/3/2020 1:07:36 PM by Peter.Foster



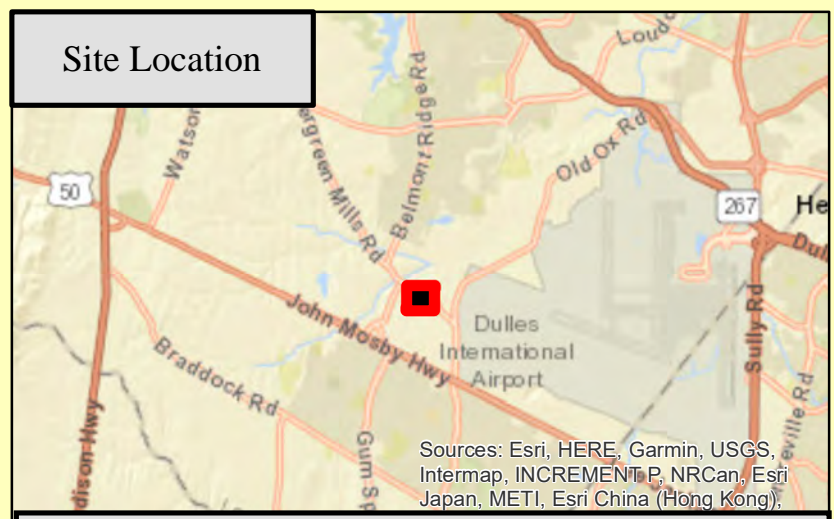
Evergreen Mills Road

Approximate Property Boundary for ES-23 School Project Site

FIGURE 2




Proposed Exploratory Test Wells and Site Plan Map for the ES-23 Elementary School Project Site
Loudoun County, Virginia

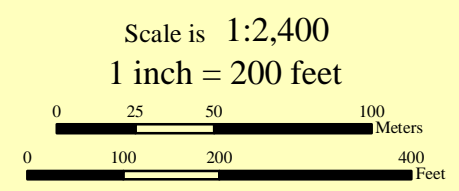
DRAFT



Red rectangle shows limits of detailed view.

Legend

-  Proposed Exploratory Test Well Location
-  ES-23 Property Boundary
-  Loudoun County Parcels



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

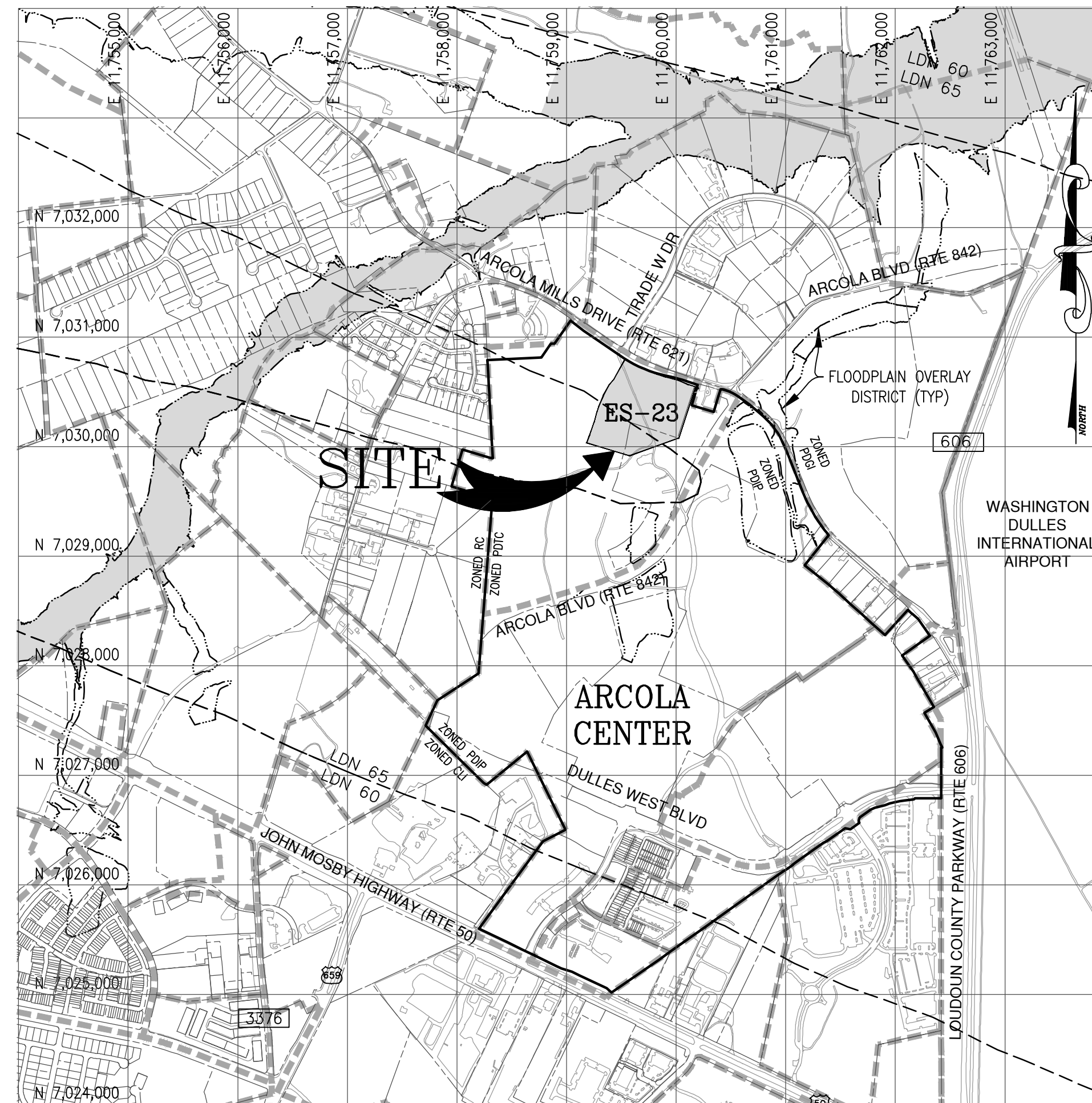
GENERAL NOTES

- BOUNDARY INFORMATION SHOWN HEREON WAS TAKEN FROM A SURVEY PREPARED BY BOWMAN CONSULTING GROUP DATED 7/31/17. TOPOGRAPHIC INFORMATION BASED UPON AERIAL TOPOGRAPHY DATED 8/3/17 & 8/24/17. THE CONTOUR INTERVAL IS 2 FEET. ALL ELEVATIONS ARE BASED ON NAVD 88, AND HORIZONTAL DATUM NAD 83.
- THIS PROPERTY IS DELINEATED ON:
MCP# 162-37-0500 INSTR # 201709290060749TAX MAP # 101/11/17/0001/C1/
MCP# 163-46-8915 INSTR # 201109300060171 TAX MAP # 101/11/17/0001/42A (PORTION)
- PROPERTIES IDENTIFIED ABOVE ARE SUBJECT TO SPMI-2017-0017, SPMI-2018-0001, ZMAP 2016-0013 & ZCPA 2016-0010.
- THE ZONING OF THE PROPERTY IS PD-TC FRINGE (PLANNED DEVELOPMENT - TOWN CENTER) UNDER THE REVISED 1993 LOUDOUN COUNTY ZONING ORDINANCE (SECTION 4-800).
- THE PROPOSED USE IS FOR A PUBLIC ELEMENTARY SCHOOL, WHICH IS SUBJECT TO THE ADDITIONAL REQUIREMENTS OF SECTION 5-666(A) THROUGH (K). REFER TO SHEET C1.01.02 FOR ADDITIONAL INFORMATION.
- SOILS INFORMATION SHOWN HEREON IS FROM LOUDOUN COUNTY GIS DATA.
- THE SITE WILL BE SUPPLIED WITH PUBLIC WATER AND SANITARY SEWER BY EXTENSION OF EXISTING SYSTEMS PROVIDED BY LOUDOUN WATER.
- ALL UTILITY DISTRIBUTION LINES SHALL BE PLACED UNDERGROUND.
- TREE PLANTING TO CONFORM TO THE LOUDOUN COUNTY FSM SECTION 7.400 AND SECTION 5-1300 OF THE REVISED 1993 LOUDOUN COUNTY ZONING ORDINANCE. A TREE CONSERVATION PLAN IS NOT REQUIRED SINCE THE TREES BEING PROPOSED TO BE SAVED ARE NOT REQUIRED TO MEET CANOPY OR BMP REQUIREMENTS (FSM 7.302).
- ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT LOUDOUN COUNTY, LOUDOUN WATER, AND VIRGINIA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.
- THERE ARE NO EXISTING WELLS AND DRAINFIELDS WITHIN PROPERTY BOUNDARY ASSOCIATED WITH THIS SITE PLAN.
- NO FEDERAL OR STATE PERMITS OR CONDITIONS DIRECTLY LIMIT DEVELOPMENT OF THIS PROPERTY.
- A WETLAND DELINEATION STUDY WAS CONDUCTED BY ACOEN ENVIRONMENTAL, INC. FOR THE OVERALL ARCOLA CENTER PROJECT BASED ON THE REQUIREMENTS OF THE CORPS OF ENGINEERS' WETLANDS DELINEATION MANUAL (1987) (REPORT AND MAP DATED JULY 18, 2005, REVISED OCTOBER 12, 2005) AND CONFIRMED BY THE U.S. ARMY CORPS OF ENGINEERS (USACE) UNDER JURISDICTIONAL DETERMINATION NO. 05-R2216 DATED NOVEMBER 8, 2005. IMPACTS TO WETLANDS AND STREAMS ARE CURRENTLY AUTHORIZED UNDER DEPARTMENT OF THE ARMY PERMIT NO. 2005-2583 AS ISSUED BY THE USACE, AND WVP INDIVIDUAL PERMIT NO. 06-2080, AS ISSUED BY THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ). THERE ARE NO WETLANDS WITHIN THE PROJECT AREA AND NO WETLAND IMPACTS ASSOCIATED WITH THIS PROJECT. EXPIRATION OF THE PERMITS ARE AS FOLLOWS:
* DEPARTMENT OF THE ARMY PERMIT NO. 2005-2583 EXPIRES DECEMBER 12, 2022
* WVP INDIVIDUAL PERMIT NO. 06-2080 EXPIRES DECEMBER 5, 2022
- ALL APPLICABLE STATE AND FEDERAL PERMITS SHALL BE OBTAINED PRIOR TO DISTURBANCES WITHIN JURISDICTIONAL WATERS AND WETLANDS.
- THE APPLICANT STATES THAT TO THE BEST OF THEIR KNOWLEDGE, THERE ARE NO TOXIC SUBSTANCES OR HAZARDOUS WASTE ON THE PROPERTY; AS DEFINED BY TITLE 40, CODE OF FEDERAL REGULATIONS PARTS 116.4, 302.4 AND 355 AND AS SET FORTH IN COMMONWEALTH OF VIRGINIA DEPARTMENT OF WASTE MANAGEMENT.
- UNLESS OTHERWISE NOTED, ALL PROPOSED ELEVATIONS AS SHOWN HEREIN ARE FINISHED GRADE.
- THE APPROVAL OF THIS PLAN SHALL IN NO WAY GRANT PERMISSION BY THE COUNTY FOR THE DEVELOPER TO TRESPASS ON OFF-SITE PROPERTIES.
- THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE OWNER OF COMPLYING WITH OTHER APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS.
- THE APPROXIMATE LOCATIONS OF PROPOSED ENTRANCES FROM STATE MAINTAINED ROADS WILL BE STAKED UPON REQUEST, AND A REPRESENTATIVE OF BOWMAN CONSULTING GROUP WILL RESPOND TO THE DIRECTOR'S REQUEST FOR FIELD ASSISTANCE, WHEN REQUIRED TO IDENTIFY SPECIFIC AREAS OF PROPOSED DEVELOPMENT AS RELATED TO EXISTING SITE CONDITIONS. CONTACT PERSON - MICHAEL SELL AT (703) 443-2400.
- EMERGENCY VEHICLE ACCESS SHALL BE PROVIDED DURING ALL PHASES OF CONSTRUCTION. PUBLIC ACCESS SHALL BE GRANTED TO ALL EMERGENCY VEHICLES AND PUBLIC BUSES OVER ALL PRIVATE ROADS.
- SUBBASE DEPTH IS BASED ON AN ASSUMED CBR VALUE OF 4. SOIL TESTS OF SUBGRADE MUST BE SUBMITTED FOR ACTUAL DETERMINATION OF REQUIRED SUBBASE THICKNESS PRIOR TO THE SUBBASE PLACEMENT.
- STANDARD GUARDRAIL AND/OR HANDRAILS SHALL BE INSTALLED AT HAZARDOUS LOCATIONS AS DESIGNED DURING FIELD REVIEW BY THE COUNTY INSPECTOR OR V.D.O.T.
- ALL OPEN SPACE TO BE OWNED AND TO BE THE MAINTENANCE RESPONSIBILITY OF LOUDOUN COUNTY PUBLIC SCHOOLS. LCPS SHALL BE RESPONSIBLE FOR MAINTENANCE OF PRIVATE STORM SEWER, SIDEWALKS, AND OPEN SPACES.
- THE BUS PARKING AREA LOCATED AT THE NORTH SIDE OF THE BUILDING HAS BEEN DEEMED A STORMWATER "HOT SPOT" PER LOUDOUN COUNTY REQUIREMENTS. A BIOTRETENTION FACILITY IS BEING PROVIDED ADJACENT TO THE BUS LOOP.
- STORMWATER MANAGEMENT (SWM) FOR THE SITE IS BEING PROVIDED BY AN OFFSITE POND PER CPAP-2019-0010. BMP FOR THE MAJORITY OF THIS SITE IS BEING PROVIDED BY 3 BIOTRETENTION FACILITIES.
- THIS SITE PROPOSES AN EMERGENCY GENERATOR WITH FUEL TANK. IN ACCORDANCE WITH THE TECHNICAL AND PROCEDURAL NEWSLETTER DATED FEBRUARY 22, 2012, THE FOLLOWING MEASURES ARE PROVIDED TO ADDRESS THE HOTSPOT REQUIREMENTS OF FSM 5.320.E:
A. SECONDARY CONTAINMENT IS PROVIDED WITH A DOUBLE WALLED FUEL TANK WHICH INCLUDES A MONITORING SYSTEM TO DETECT LEAKAGE.
B. THE OWNER SHALL FILE AN EMERGENCY RESPONSE PLAN WITH THE LOUDOUN COUNTY FIRE AND RESCUE DEPARTMENT PRIOR TO INITIAL OPERATION OF EMERGENCY GENERATOR.
C. AS PART OF THE EMERGENCY GENERATOR COMMISSIONING, CONTRACTOR SHALL FURNISH OWNER WITH A HYDROCARBON SPILL KIT WHICH SHALL BE KEPT ADJACENT TO THE FUEL STORAGE TANK.
D. THE OWNER SHALL PROVIDE FOR MONTHLY INSPECTIONS AND, WHEN NECESSARY, CLEANING OF OIL SLICK AND/OR OILY SLUDGE IN THE AREA AROUND THE GENERATOR.
- ALL STORM DRAINAGE INLET STRUCTURES SHALL BE MARKED TO INDICATE THAT THEY DRAIN TO THE DRINKING WATER SUPPLY AND THAT NO DUMPING INTO SUCH INLET STRUCTURES IS PERMITTED.
- THE SITE IS LOCATED NEAR THE WASHINGTON DULLES INTERNATIONAL AIRPORT AND WITHIN THE AIRPORT IMPACT OVERLAY DISTRICT (AI). IT FALLS WITHIN THE LDN 65 AND LDN 60 AIRCRAFT NOISE CONTOURS. NOISE WILL BE CONTROLLED TO CONFORM WITH ZONING ORDINANCE REQUIREMENTS, WHICH LIMITS NOISE LEVELS AT PROPERTY LINES TO A MAXIMUM OF 60 DBA.
- NO TITLE REPORT WAS FURNISHED FOR USE IN PREPARING THESE PLANS.
- THERE IS NO FLOODPLAIN ON THE PROPERTY THAT IS THE SUBJECT OF THIS APPLICATION. THE CURRENT FLOOD INSURANCE RATE MAP (FIRM) OF LOUDOUN COUNTY COMMUNITY PANEL NUMBER FOR THE PROPERTY THAT IS THE SUBJECT OF THIS APPLICATION IS 5110700360E, EFFECTIVE FEBRUARY 17, 2017. THE DEPICTED BOUNDARY OF THE EXISTING FLOODPLAIN IS BASED ON FPAL-2014-0002 ALTERATION #2 DATED NOVEMBER 20, 2018.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY DMV ENGINEERING CONSULTANTS, INC. DATED SEPTEMBER 20, 2019.
- VSPM CONSTRUCTION GENERAL PERMIT (CGP) APPLICATION, VSPM-2020-0006, HAS BEEN PREPARED AND COVERAGE MUST BE ISSUED PRIOR TO LAND DISTURBANCE.
- ARCHEOLOGICAL RESOURCES IN THE AREA IDENTIFIED AS #44LD1268 (ZMAP-2016-0010) - STUDIES:
• APRIL 2004 - STUDY PREPARED BY THUNDERBIRD ARCHEOLOGICAL ASSOCIATES, INC. FOR SPEX 2004-0025 (JADERS LC PROPERTY)
• MAY 2005 - STUDY PREPARED BY URS CORPORATION, INC. - A PHASE I ARCHEOLOGICAL SURVEY FOR ZMAP-2006-0015 ARCOLA CENTER
• MAY 21, 2018 (REVISED JULY 12, 2018) - STUDY PREPARED BY ECS - "ARCOLA CENTER ES-23 PROJECT" GEOPHYSICAL GROUND PENETRATING RADAR EXPLORATION FOR THE 2 ADDITIONAL ACRES ACQUIRED FROM COUNTY PIN: 163-46-8915, POTENTIAL GRAVEYARD.
• MAY 2019 - STUDY PREPARED BY THUNDERBIRD ARCHEOLOGICAL ASSOCIATES, INC. FOR SPEX 2004-0025 (JADERS LC PROPERTY) - FOR THE ADDITIONAL 1.5 ACRE PORTION THAT IS TO BE CONVEYED WITH BLAD-2019-0017
FROM THE STUDIES, IT WAS DETERMINED THAT "THE ARTIFACTS RECOVERED FROM STP 30 DO NOT CONSTITUTE AN ARCHEOLOGICAL SITE AND NOT FURTHER WORK IS RECOMMENDED."

LCPS ES-23

SITE PLAN

BLUE RIDGE ELECTION DISTRICT LOUDOUN COUNTY, VIRGINIA



VICINITY MAP
SCALE: 1" = 1000'

APPLICANT

LOUDOUN COUNTY SCHOOL BOARD
21000 EDUCATION COURT, SUITE 210
ASHBURN, VA 20148
PHONE: (571) 252-1161
CONTACT: CHRIS GLASSMOYER, P.E.

OWNERS

ARCOLA LIMITED PARTNERSHIP
44715 BRIMFIELD DRIVE, STE 210
ASHBURN, VA 20147-5926

LOUDOUN COUNTY BOARD OF SUPERVISORS

PO BOX 7000 MSC 01
LEESBURG, VA 20177-7000

NOTICE REQUIRED

CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION OR BLASTING AT LEAST TWO (2) WORKING DAYS, BUT NOT MORE THAN TEN (10) WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION. NAMES AND TELEPHONE NUMBERS OF THE OPERATORS OF UNDERGROUND UTILITY LINES APPEAR BELOW. THESE NUMBERS SHALL ALSO BE USED TO SERVE IN AN EMERGENCY CONDITION.

WASHINGTON GAS LIGHT CO.
TRANSCO GAS PIPELINE CO.
VERIZON
VIRGINIA POWER
NOVEC
COLUMBIA GAS OF VIRGINIA
AT & T CO.
PLANTATION PIPELINE CO.
CONTINENTAL TEL. OF VIRGINIA
COLONIAL PIPELINE CO.

MISS. UTILITY
811

DOMINION VIRGINIA POWER: CALL GARY DORMAN
(540) 341-3159

WASHINGTON GAS: CALL CHERIE RINKENBERG
(703) 750-4988

EMERGENCY
POLICE: 703-777-1021 OR 911
FIRE RESCUE: 703-777-2222 OR 911

LOUDOUN WATER
COLUMBIA GAS PIPELINE CO.
NORTHERN VIRGINIA ELECTRIC

571-291-7878
703-759-2115
703-777-2151

SHEET INDEX

C1 T1	COVER SHEET
C1.01.01	GENERAL NOTES AND DETAILS
C1.01.02	VDOT DETAILS
C1.01.03	VDOT & STANDARD CONSTRUCTION DETAILS
C1.01.04	SOILS MAP
C1.02.01	EXISTING CONDITIONS
C1.03.01	SCHEMATIC PLAN
C1.03.02	GEOMETRIC PLAN
C1.03.03	GEOMETRIC PLAN
C1.04.01	GRADING PLAN
C1.04.02	GRADING PLAN
C1.04.03	CG-12 GRADING
C1.05.01	STORM SEWER PROFILES
C1.05.02	STORM SEWER CALCULATIONS
C1.05.03	STORM SEWER ROOF DRAIN SCHEDULE
C1.05.04	STORM SEWER DETAILS
C1.06.01	WATERLINE PROFILES
C1.06.02	PRIVATE SANITARY SEWER PROFILES
C1.06.03	LOUDOUN WATER DETAILS
C1.06.04	LOUDOUN WATER DETAILS
C1.06.05	LOUDOUN WATER DETAILS
C1.07.01	BMP AND ADEQUATE OUTFALL NARRATIVE & MAP
C1.07.02	BMP CALCULATIONS & CHANNEL CROSS-SECTIONS
C1.07.03	BMP DETAILS - BIOTRETENTIONS 1, 2, & 3
C1.07.04	BMP DETAILS
C1.08.01	EROSION & SEDIMENT CONTROL PLAN - PHASE I
C1.08.02	EROSION & SEDIMENT CONTROL PLAN - PHASE II
C1.08.03	SEDIMENT BASIN 1 DETAILS & CALCULATIONS
C1.08.04	SEDIMENT BASIN 2 DETAILS & CALCULATIONS
C1.08.05	EROSION AND SEDIMENT CONTROL DETAILS
C1.08.06	EROSION AND SEDIMENT CONTROL NARRATIVE
C1.09.01	LANDSCAPE PLAN
C1.09.02	LANDSCAPE PLAN NOTES & DETAILS
C1.09.03	LANDSCAPE PLAN COMPUTATIONS
C1.10.01	FIRE LANE, SIGNAGE AND PAVEMENT MARKING PLAN
C1.10.02	AUTO-TURN ANALYSIS (SU-40)
C1.10.03	LCPS SIGNAGE AND STRIPING PLAN
C1.11.01	PHOTOMETRIC PLAN AND DETAILS
C1.12.01	ATHLETIC DETAILS
C1.12.02	ATHLETIC DETAILS
C1.13.01	DRY UTILITY PLAN
REFERENCE	
1	DRAINAGE AREA TO FACILITY A (CPAP-2002-0169)
2	CULVERT AND CHANNEL COMPUTATIONS (CPAP-2008-0082)

APPROVAL BLOCK

LAND DEVELOPMENT APPLICATION
NUMBER STPL-2019-0005

Department of Building & Development

REVISION BLOCK

NO.	SHEET NUMBER AND REVISION DESCRIPTION	DATE
1.	LOUDOUN COUNTY & LOUDOUN WATER COMMENTS - ALL SHEETS	10/11/19
2.	LOUDOUN COUNTY & LOUDOUN WATER COMMENTS - ALL SHEETS	01/27/20
3.	LOUDOUN WATER COMMENTS - C1.T1, C1.03.03, C1.04.02, C1.06.01 & C1.06.02	02/19/20
4.	ADDENDUM #02 - C1.03.02, C1.03.03, & C1.06.01	02/25/20
5.	LOUDOUN COUNTY COMMENTS - C1.T1, C1.04.01, C1.04.02, C1.05.01, C1.07.01-C1.07.04, C1.09.01, C1.09.03	02/28/20
6.	ADDENDUM #03 - C1.T1, C1.10.03 & C1.13.01	02/28/20

SWM FACILITIES (PROPOSED ONLY)

SWM/BMP FACILITY NAME	TYPE OF FACILITY	IMPERVIOUS AREA TREATED (ACRES)	AREA TREATED (ACRES)	LATITUDE (DECIMAL DEGREE)	LONGITUDE (DECIMAL DEGREE)	DESCRIPTION OF DISCHARGE POINT
BIOTRETENTION #1	LEVEL 1 BIOTRETENTION	0.95	1.41	38.947739	77.530181	THE DISCHARGE POINT (STR. 230) FOR ALL 3 BIOTRETENTION FACILITIES IS THROUGH A PROPOSED RIPRAP OUTLET PROTECTION APRON THAT DISCHARGES DIRECTLY TO A WELL-DEFINED, STABLE NATURAL CHANNEL APPROXIMATELY 75' DOWNSTREAM OF THE STORM OUTFALL.
BIOTRETENTION #2	LEVEL 1 BIOTRETENTION	0.73	1.02	38.947556	77.529494	
BIOTRETENTION #3	LEVEL 1 BIOTRETENTION	2.98	3.91	38.948917	77.527531	

Associated Land Development Applications - PIN# 162-37-0500					Associated Land Development Applications - PIN# 163-46-8915				
PLAN NO.	PLAN NAME	DATE	STATUS		PLAN NO.	PLAN NAME	DATE	STATUS	
BLAD-2018-0009	ARCOLA GROVE LTS & PARCEL G1	18/19 & 2018-03-08	APPROVED		BLAD-1995-0096	HAZOUT/WILLS(1)	1995-12-12	APPROVED	
BLAD-2018-0055	ARCOLA PCLS E1 & G1	2018-12-20	APPROVED		BLAD-1999-0021	HAZOUT	1999-03-09	APPROVED	
BLAD-2019-0017	ARCOLA LLC PARCELS G1 & G1B	2019-04-07	ACTIVE		BLAD-2002-0017	HAZOUT PROPERTY - FOR PROFFER B2	2002-01-28	APPROVED	
CPAP-2019-0010	EVERGREEN MILLS ROAD ROUTE 621	2019-04-22	ACTIVE		BLAD-2008-0048	ARCOLA CENTER SLAVE QUARTERS SITE	2008-05-07	APPROVED	
CPAP-2017-0031	ARCOLA CENTER SWM/BMP POND 1	2017-12-22	APPROVED		CPAP-2006-0169	ARCOLA STORMWATER MANAGEMENT POND	2007-01-09	APPROVED	
DEDI-2018-0004	DULLES WEST BLVD	2018-02-07	APPROVED		CPAP-2008-0082	ARCOLA BLVD		APPROVED	
DEDI-2019-0005	ARCOLA BLVD	2019-01-29	ACTIVE		CPAP-2019-0010	EVERGREEN MILLS ROAD ROUTE 621	2019-04-22	ACTIVE	
ESMT-2018-0050	ARCOLA CENTER PCL F1 & G1	2018-12-05	ACTIVE		DEDI-2019-0005	ARCOLA BLVD	2019-01-29	APPROVED	
SBWV-2019-0004	ARCOLA LLC PARCEL G1	2019-05-01	ACTIVE		ESMT-2008-0031	ARCOLA CENTER PARCEL 42A	2008-05-02	APPROVED	
SPMI-2017-0017	ARCOLA CENTER	2017-08-24	APPROVED		FPAL-2007-0001	ARCOLA CENTER	2007-01-11	APPROVED	
SPMI-2018-0001	ARCOLA CENTER	2018-01-25	APPROVED		FPAL-2012-0009	ARCOLA CENTER	2012-08-17	APPROVED	
WAIV-2018-0016	ARCOLA CENTER POND 1	2018-03-05	APPROVED		FPST-2001-0002	HUTCHINSON FARM INDUSTRIAL PARK	2001-02-27	APPROVED	
ZCPA-2016-0010	ARCOLA CENTER	2016-06-29	APPROVED		SBPL-2000-0023	HUTCHINSON FARM INDUSTRIAL PARK	2000-04-12	APPROVED	
ZMAP-2016-0013	ARCOLA CENTER	2016-06-29	APPROVED		SBPL-2001-0028	ARCOLA CENTER AT HUTCHINSON FARM	2001-04-30	APPROVED	
ZMOD-2016-0013	ARCOLA CENTER	2016-06-30	APPROVED		SPMI-2017-0017	ARCOLA CENTER	2017-08-24	APPROVED	
WAIV-2020-0006	LCPS ES-23 BIOTRETENTION	2020-02-14	UNDER REVIEW		SPMI-2018-0001	ARCOLA CENTER	2018-01-25	APPROVED	
WAIV-2020-0007	LCPS ES-23 BEDROCK BIOTRETENTION	2020-02-14	ACTIVE		WAIV-2012-0042	ARCOLA CENTER	2012-07-26	APPROVED	
WAIZ-2019-0010	LCPS ES-23 ARCOLA	2016-06-30	APPROVED		ZCOR-2008-0214	BRABBLE ARCOLA CENTER BIAD PUBLIS USE	2008-08-05	COMPLETE	
					ZCPA-2016-0010	ARCOLA CENTER	2016-06-29	APPROVED	
					ZMAP-1997-0004	HAZOUT SA HUTCHINSON FARM	1997-03-12	APPROVED	
					ZMAP-1998-0004	ARCOLA CENTER AT HUTCHINSON FARM	1998-06-05	APPROVED	
					ZMAP-2016-0013	ARCOLA CENTER	2016-06-29	APPROVED	

LOUDOUN WATER PROJECT ID# 20190029

COVER SHEET

LCPS ES-23

SITE PLAN

BLUE RIDGE ELECTION DISTRICT LOUDOUN COUNTY, VIRGINIA

Bowman Consulting Group, Ltd.
101 South Street, S. E.
Leesburg, Virginia 20175
Phone: (703) 443-2400
Fax: (703) 443-2425
www.bowmanconsulting.com
Bowman Consulting Group, Ltd.

PROJECT NUMBER
STPL-2019-0005

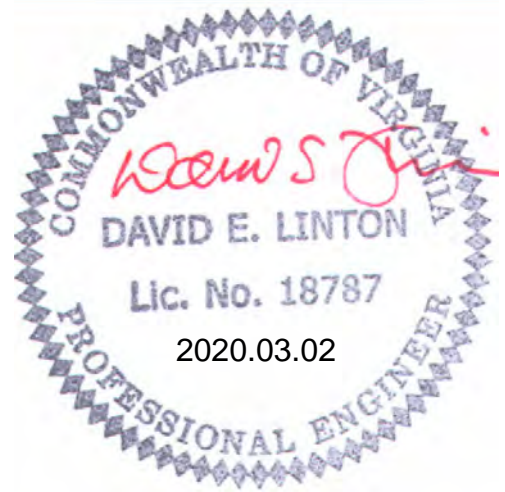


PLAN STATUS

10/11/19	LC & LW COMMENTS
01/27/20	LC & LW COMMENTS
02/19/20	LW COMMENTS
02/25/20	ADDENDUM #02
02/28/20	LC COMMENTS
02/28/20	ADDENDUM #03

DATE	DESCRIPTION
CDJ	CDJ
DESIGN	DRAWN
SCALE	AS NOTED
	CHKD
JOB No.	5018-04-0020
DATE	FEBRUARY 2020
FILE No.	5018-D-CP-001
	C1 T1
	SHEET

Doc file name: P:\2018 - Arcola Center\2018-04-002 (E16)\Engineering\Engineering Plans\Sheets\018-D-CP-001-COV.dwg



ADDENDUM

Addendum #03
TO PLANS AND SPECIFICATIONS FOR
ELEMENTARY SCHOOL (ES-23)

March 2, 2020

NOTE: If you have questions about this project, please contact, John Oduro John.Oduro@stantec.com.

This Addendum is generally separated into sections for convenience; however, all contractors, subcontractors, material suppliers and other involved parties shall be responsible for reading the entire Addendum. Failure to list an item(s) in all affected sections of this Addendum does not relieve any party affected from performing per instructions, provided the information is set forth one time anywhere in the Addendum.

This document shall become attached to and part of the Construction Documents for the aforementioned project.

BID DATE and TIME: March 6th, 2020 at 2:00pm.

DELIVER PROPOSALS TO:
Loudoun County Public Schools Administration Building, Room 211.
21000 Education Court
Ashburn, Virginia 20148

LIST OF ATTACHMENTS

S405

No attachments for Addendum #03.

DRAWINGS

ITEM	SHEET NUMBER	DESCRIPTION
SD-1	S132	In E2/S132, revise section label from A3/S410 to A1/S405. In A6/S132, revise the following: Revise the W10x15 beam along column line T and between column lines 9 and 10 to a W12x19 beam with 14 shear studs. Revise the W10x15 directly plan south of the beam along column line T and between column lines 9 and 10 to a W12x19 beam with 14 shear studs. Label the beam framing between the two beams mentioned above to a W12x19.

		<p>Add a W12x19 beam with 14 shear studs between column lines 9 and 10, 4'-6" plan north of column line S.</p> <p>Add a W10x15 with 14 shear studs between column lines 9 and 10 and between column lines R and Q. Provide 3 equally spaces between the beams in this area.</p>
SD-2	S152	<p>Add section label "B2/S405" along column line 2 between column lines V and W, between the windows.</p> <p>Add section label "B2/S405" along column line 2 between column lines CC and DD, between the windows.</p>
SD-3	S405	<p>See enclosed drawing S405 for revisions.</p> <p>Sections B4/S405 and A4/S405 have been revised. The support steel framing for the folding glass storefront have been revised.</p> <p>Sections D3/S405, D2/S405, B2/S405, A3/S405, A1/S405 have been revised.</p>
SD-4	S410	Delete section A3/S410 from sheet.

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The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing. Any errors or omissions shall be reported to Stantec without delay. The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

Consultants

CIVIL - BOWMAN CONSULTING

101 SOUTH STREET, SE, LEESBURG, VA 20175
Tel: (571) 323-0320

STRUCTURAL - LINTON ENGINEERING

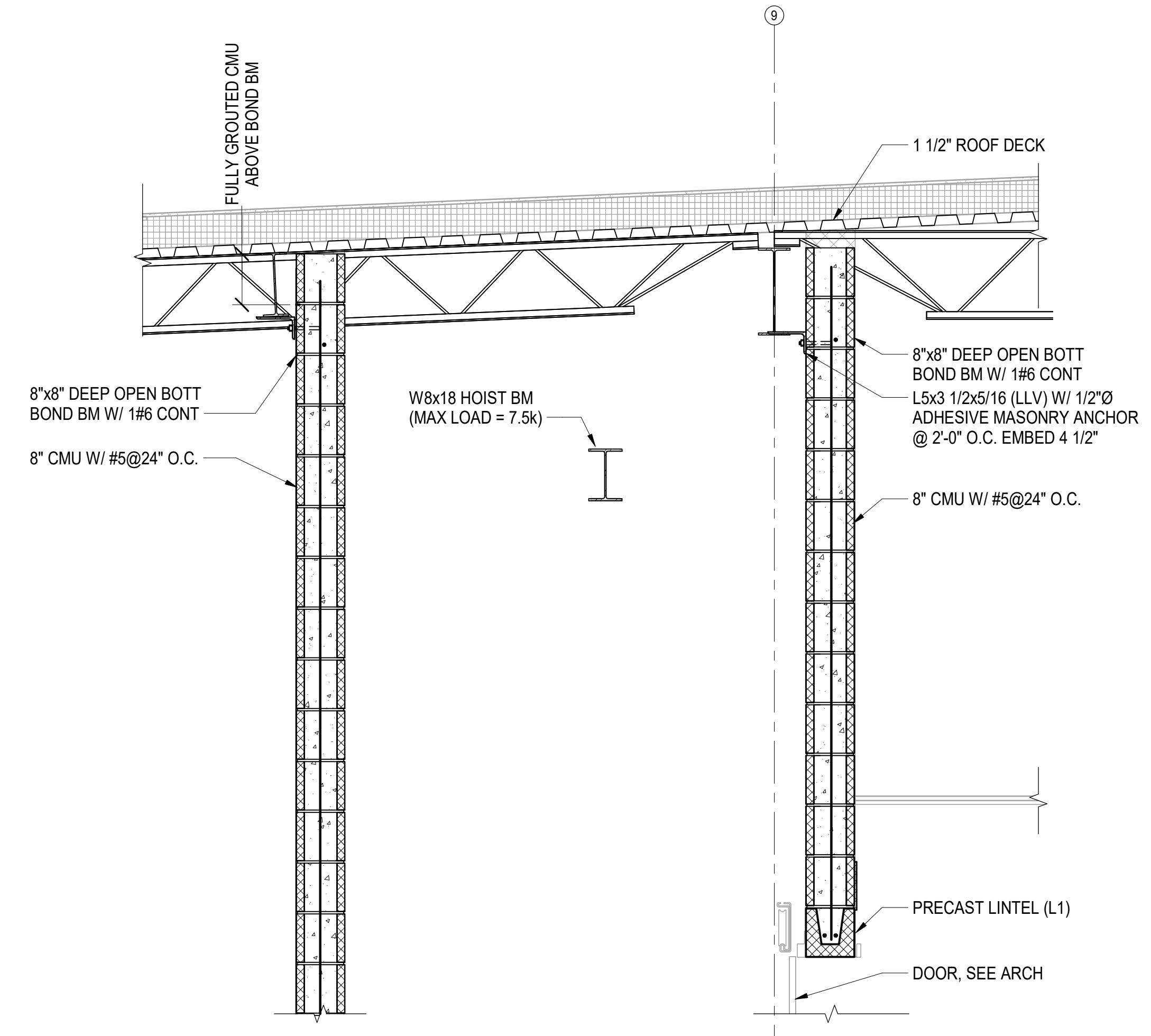
46090 LAKE CENTER PLAZA, SUITE 309 POTOMAC FALLS, VA 20165
Tel: (571) 323-0320

MEPT - INTERFACE ENGINEERING

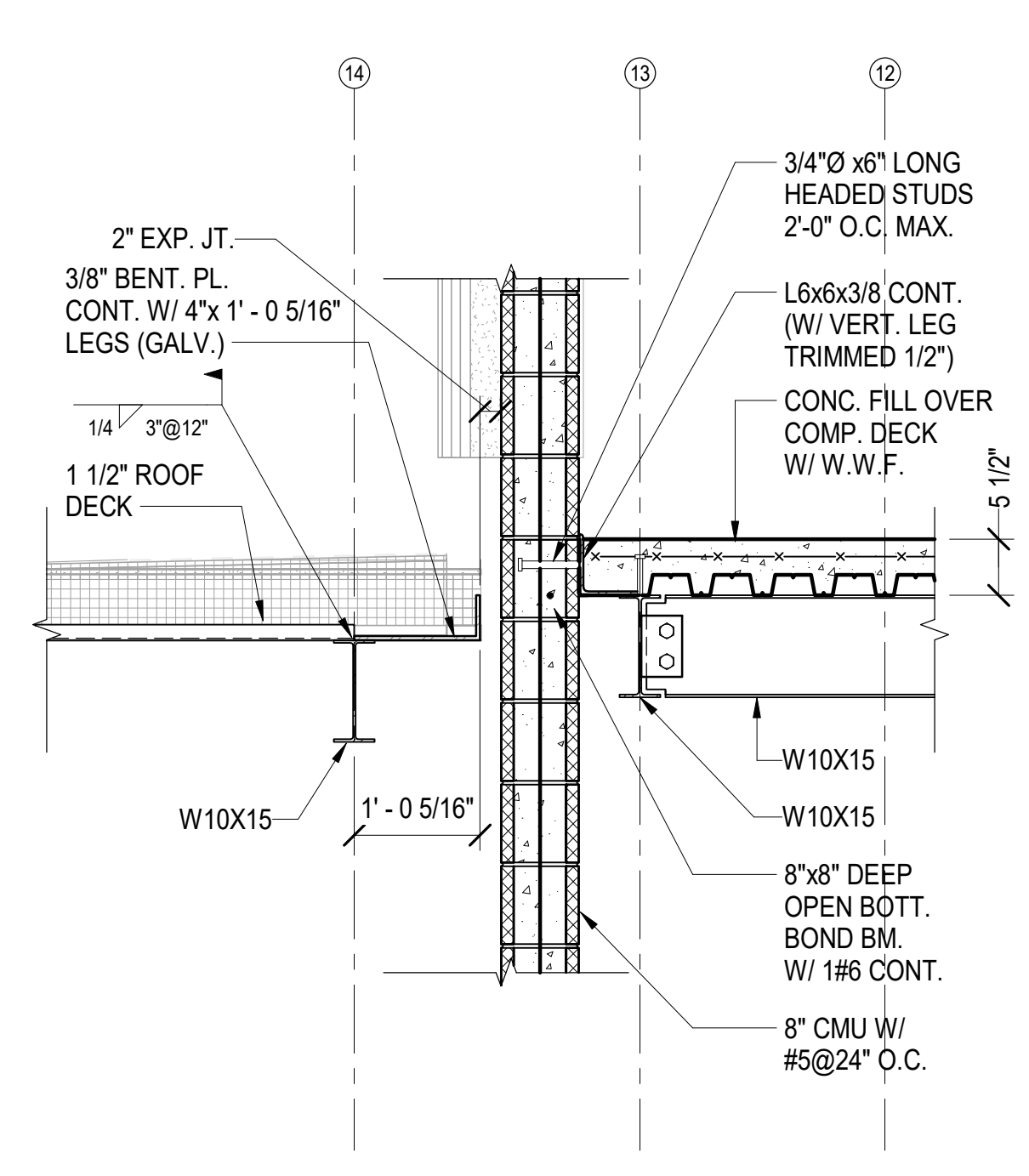
2000 M STREET, NW, SUITE 270, WASHINGTON, DC 20036
Tel: (202) 370-9555

FOOD AND SERVICE - NYIKOS & ASSOCIATES

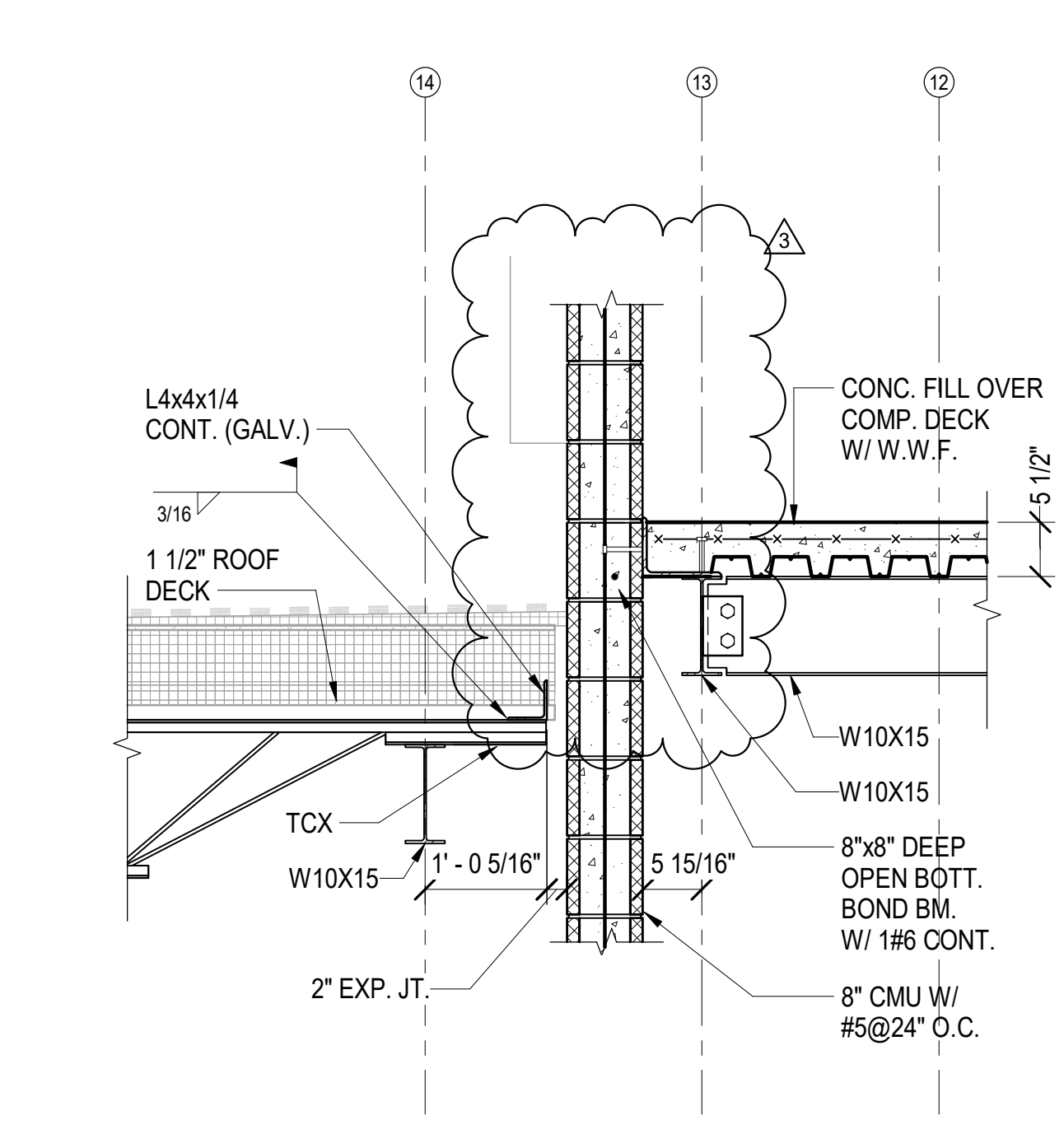
18219A FLOWER HILL WAY GAITHERSBURG, MD 20879
Tel: (240) 683-5530



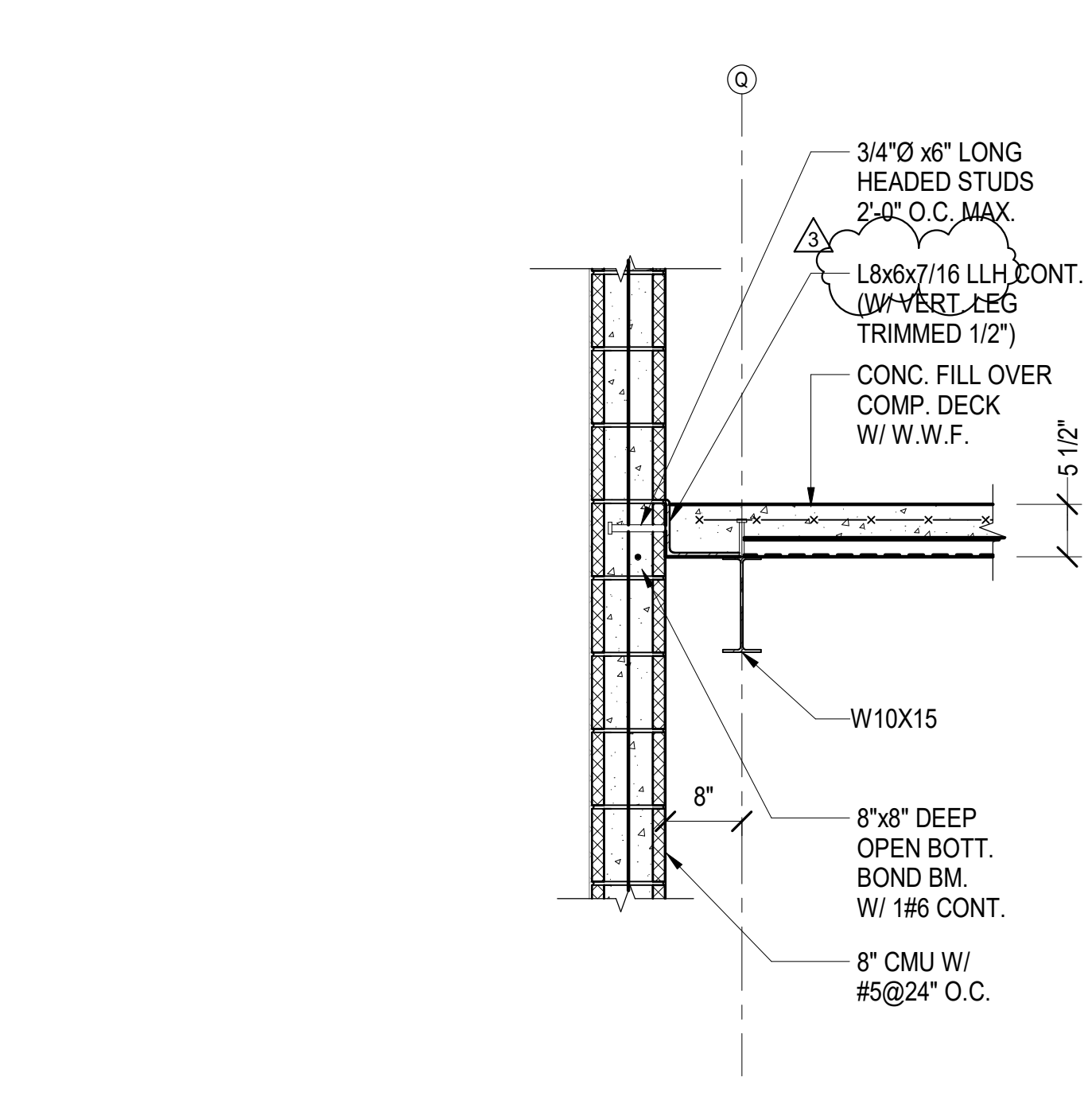
D6 SECTION
S151 | S405 SCALE: 3/4" = 1'-0"



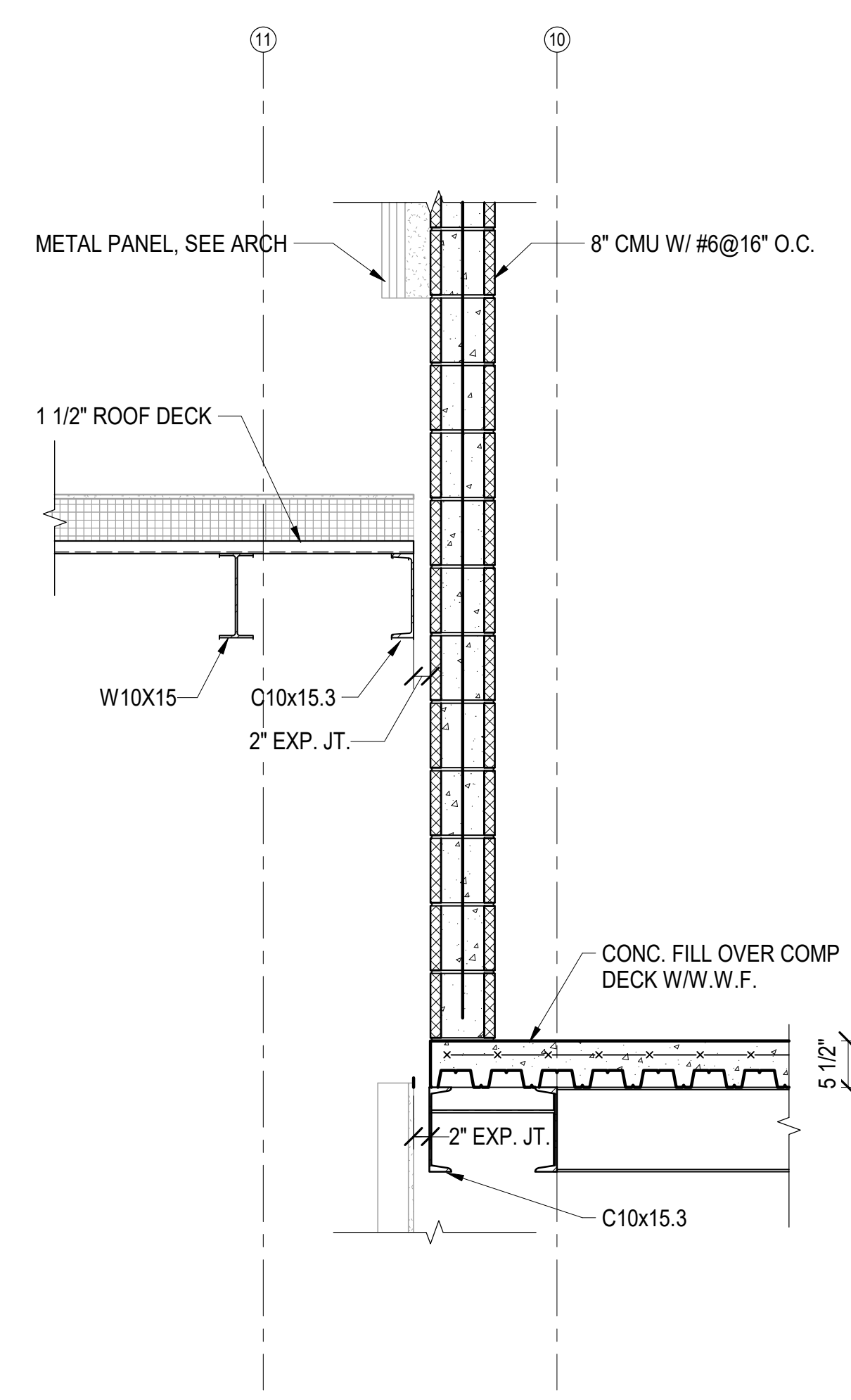
D4 SECTION
S122 | S405 SCALE: 3/4" = 1'-0"



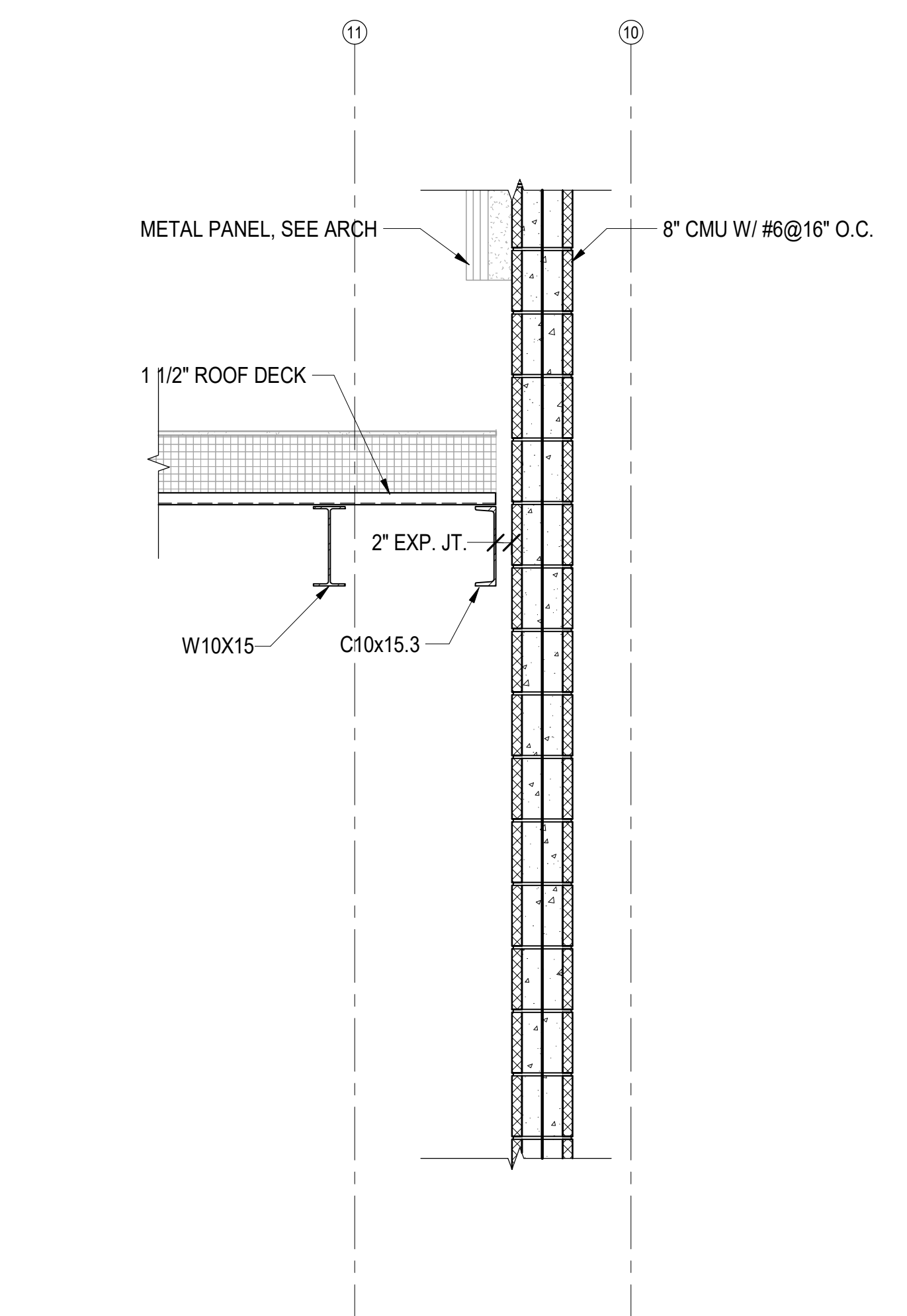
D3 SECTION
S122 | S405 SCALE: 3/4" = 1'-0"



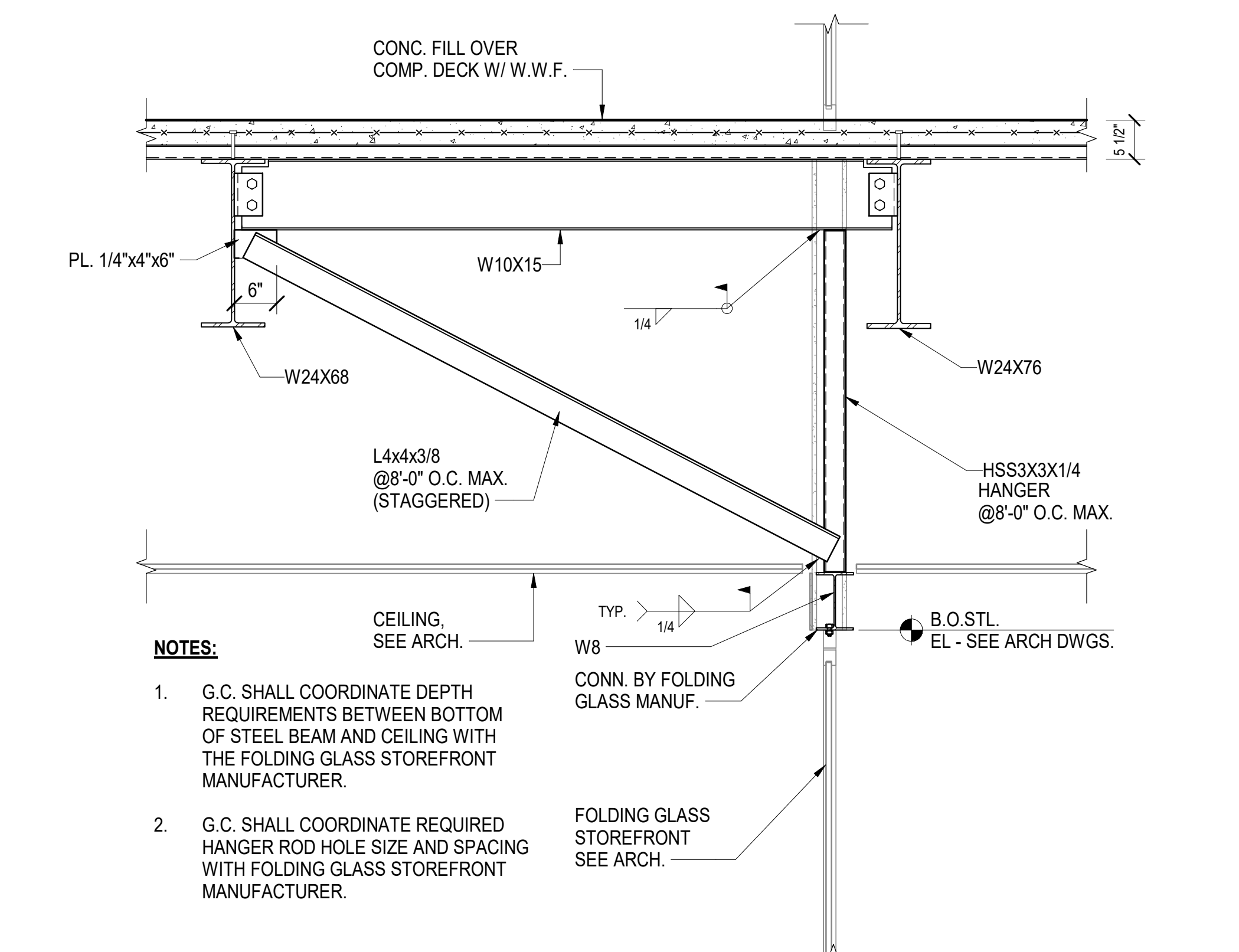
D2 SECTION
S121 | S405 SCALE: 3/4" = 1'-0"



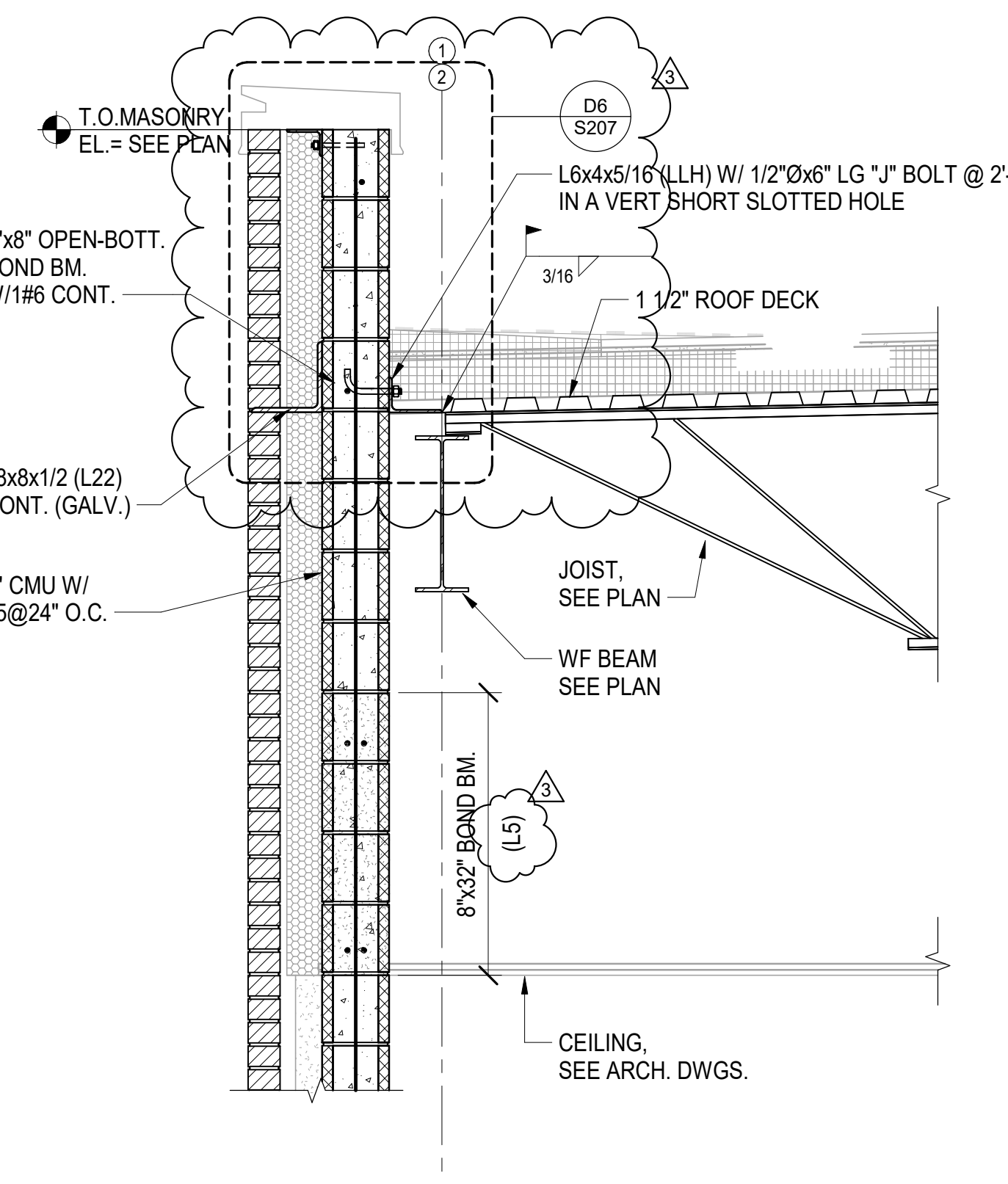
B6 SECTION
S121 | S405 SCALE: 3/4" = 1'-0"



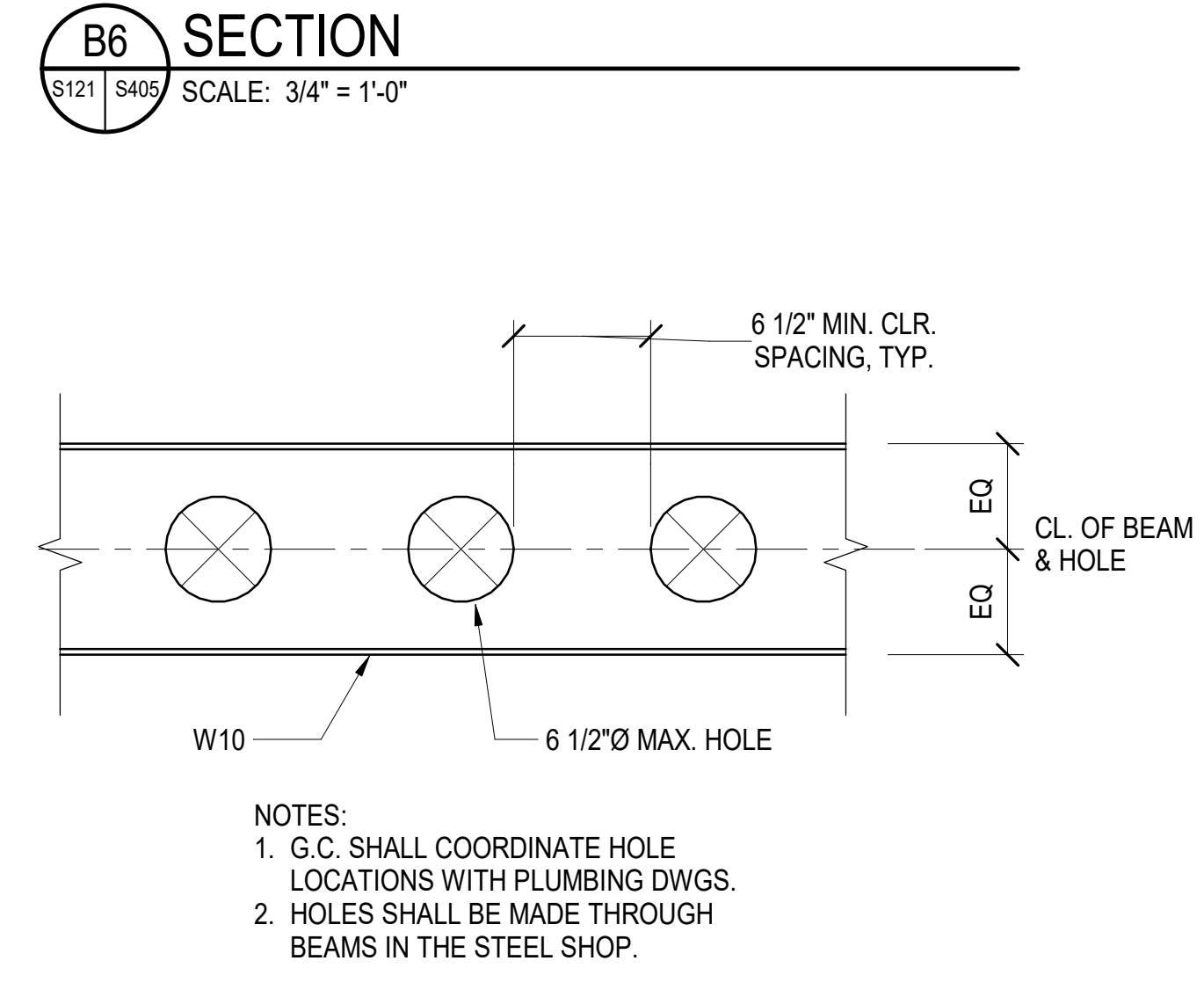
B5 SECTION
S122 | S405 SCALE: 3/4" = 1'-0"



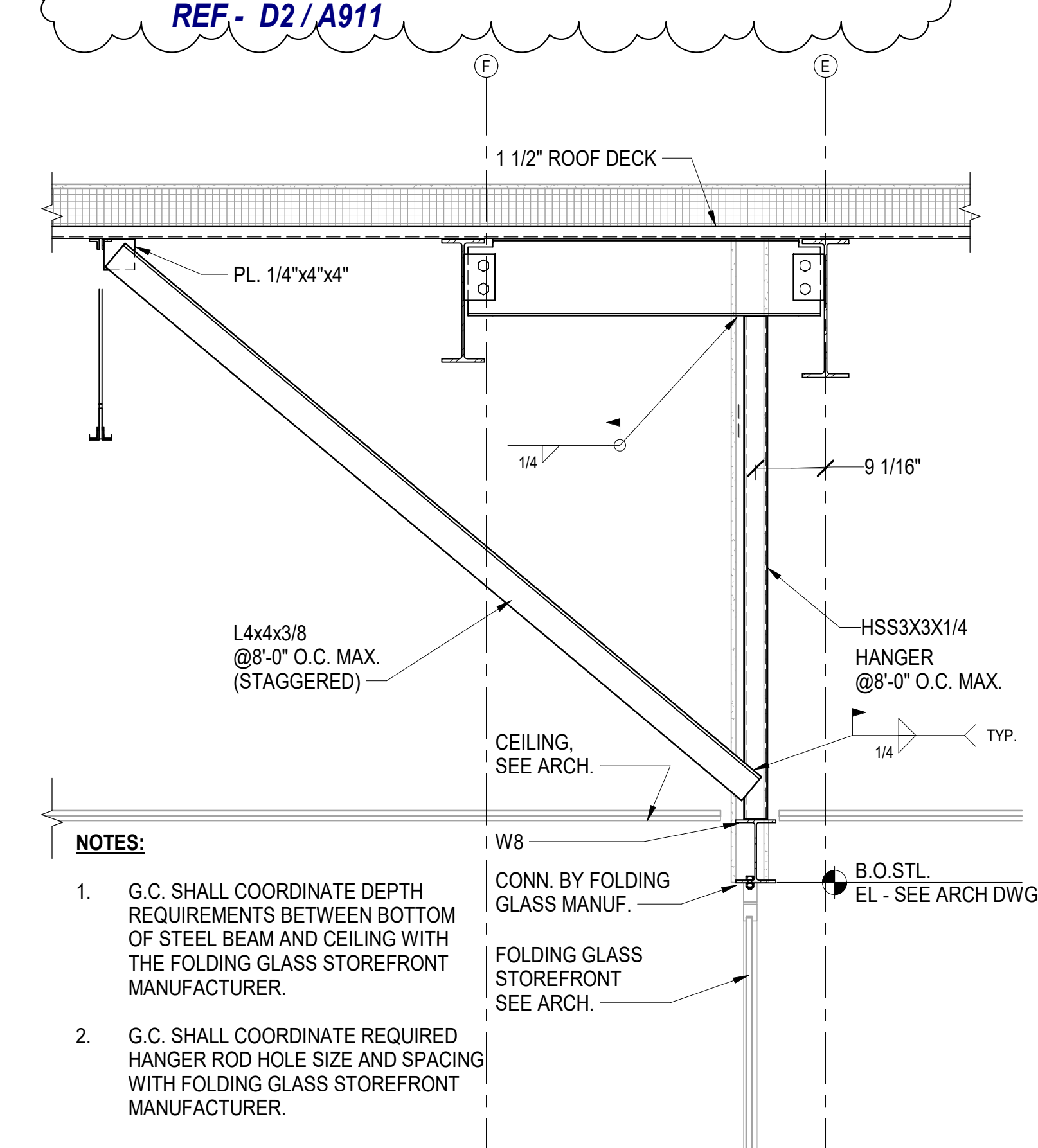
B4 TYP. SECTION @ FOLDING GLASS DOOR
S121 | S405 SCALE: 3/4" = 1'-0"
REF - D2/A911



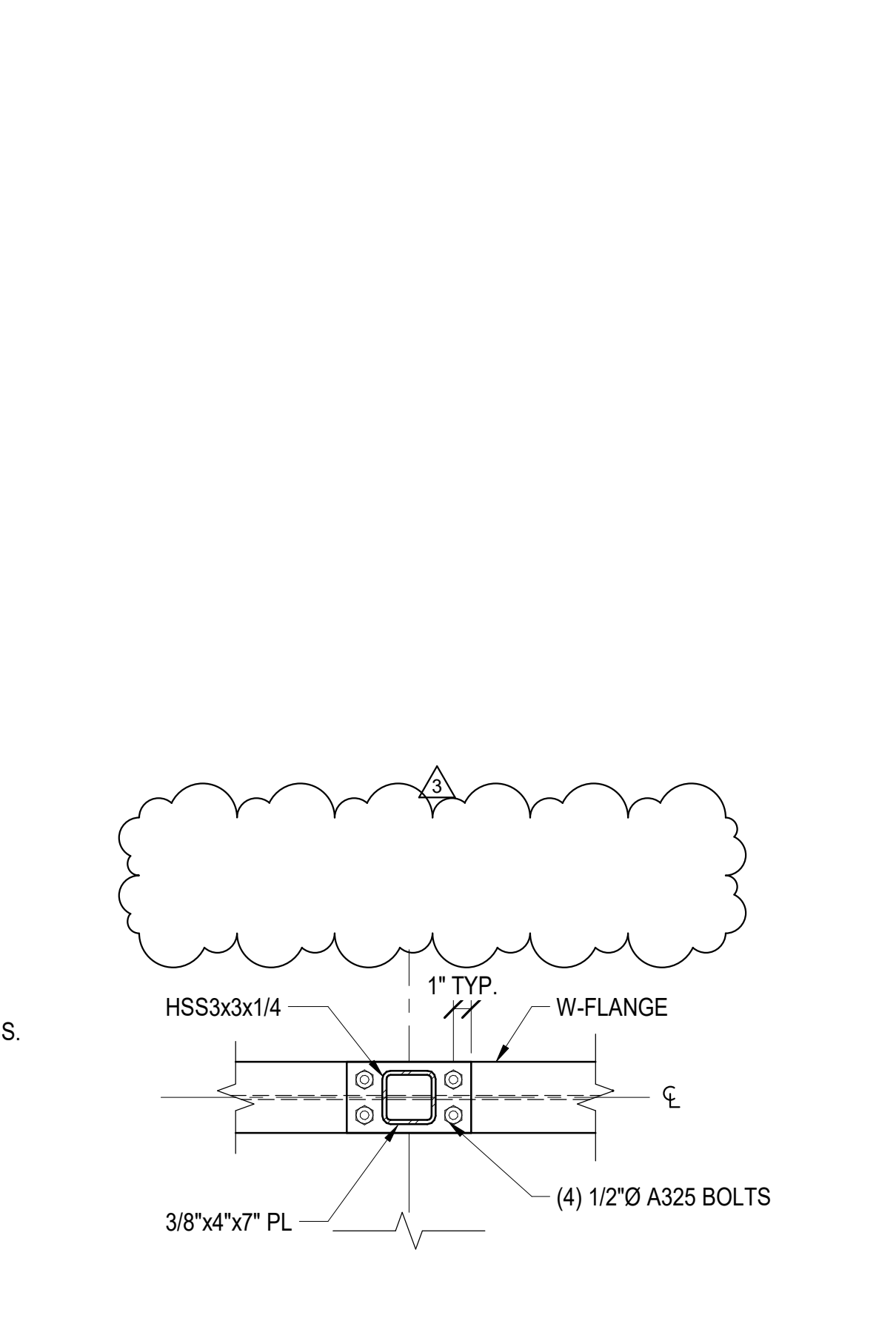
B2 SECTION
S151 | S405 SCALE: 3/4" = 1'-0"



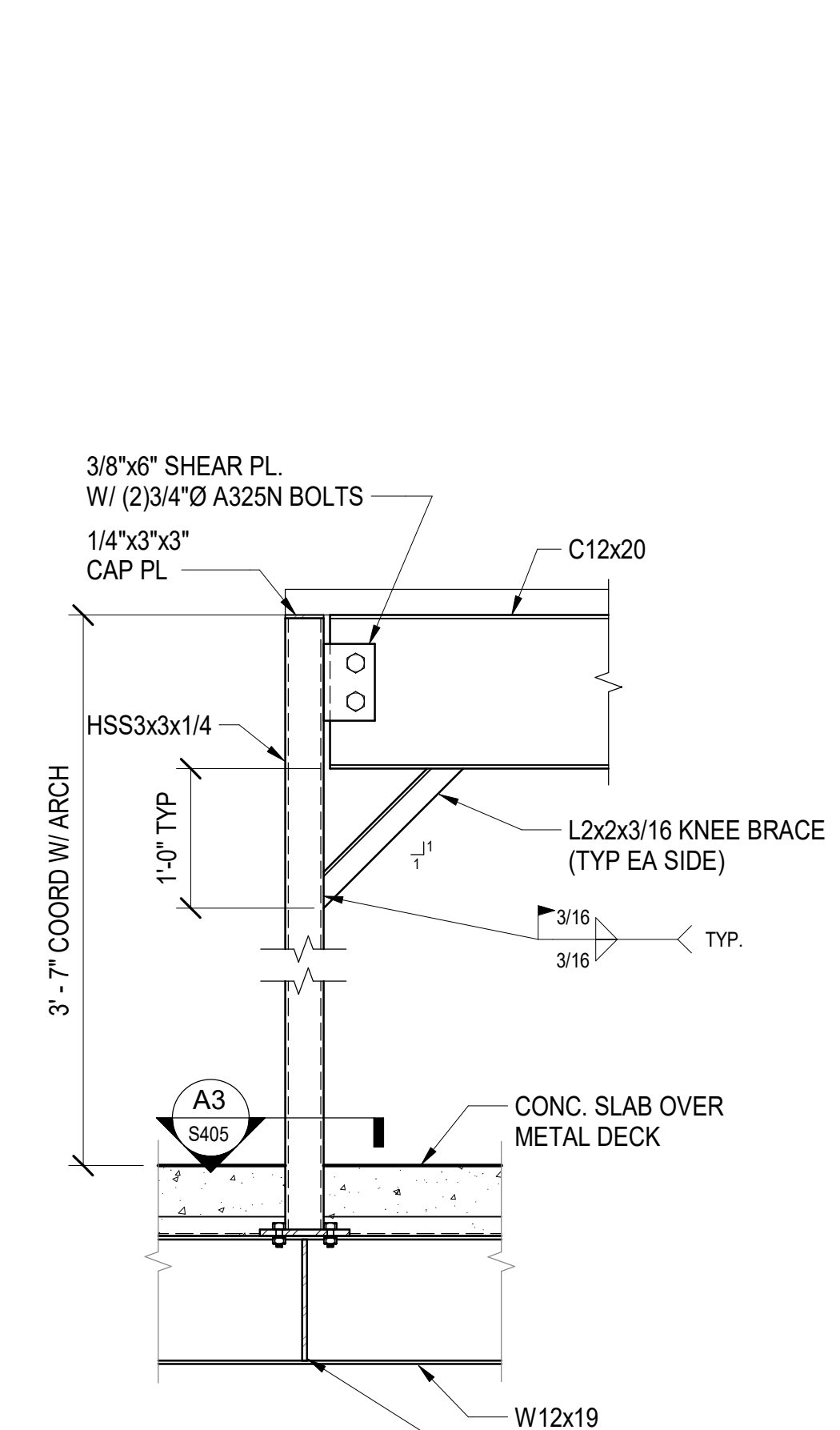
A6 DETAIL AT BEAM PENETRATIONS
S405 SCALE: 1 1/2" = 1'-0"



A4 SECTION
S151 | S405 SCALE: 3/4" = 1'-0"

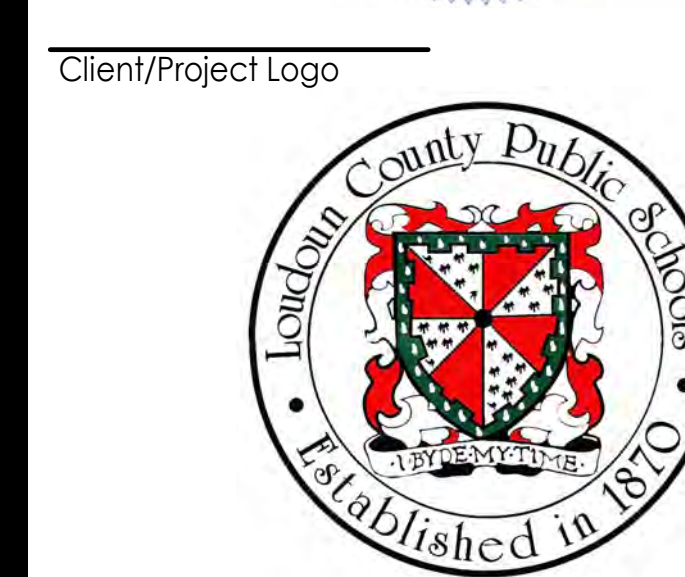
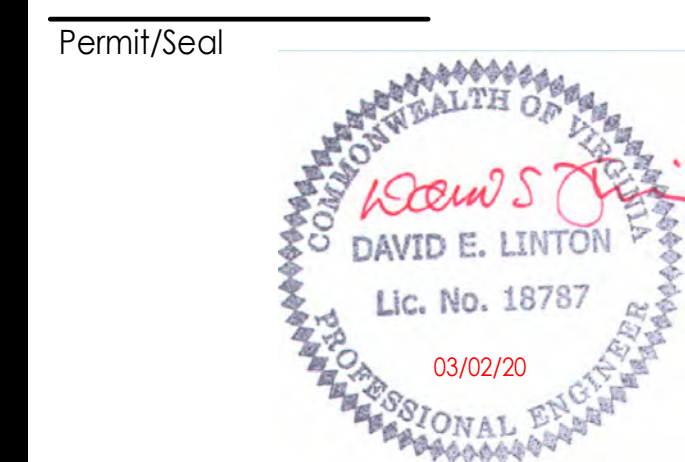


A3 TYP. BASE PLATE TO ANGLE DET.
S405 | S405 SCALE: 1 1/2" = 1'-0"



A1 SECTION
S132 | S405 SCALE: 1" = 1'-0"

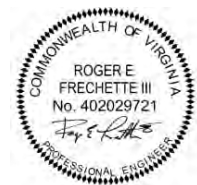
NO.	DESCRIPTION	DATE
3	ADDENDUM #3	2020.03.02
	BID & PERMIT SET	2020.02.06
	100% CONSTRUCTION DOCUMENTS	2020.01.26
	65% CONSTRUCTION DOCUMENTS	2019.12.03
	DESIGN DEVELOPMENT	2019.10.08
	SCHEMATIC DESIGN	2019.08.12
	Issue/Revision	YYYY.MM.DD



Client/Project
ELEMENTARY SCHOOL (ES-23)
LOUDOUN COUNTY PUBLIC SCHOOLS
EVERGREEN MILLS ROAD, DULLES, VA 20166
Title
SECTIONS AND DETAILS

Project No. 218320338
Revision VDOE # 3
Scale
Drawing No. S405

Addendum #3



Project Number	2019-0122	Date	February 28, 2020
Project Name	Loudoun County Public Schools (LCPS) - New Elementary School		
To	John Oduroe	Phone	703.485.8563
	Stantec (Virginia)		
	3001 Washington Boulevard		
	Suite 500		
	Arlington, VA 22201		
From	Kyle Rives, PE, LEED AP BD+C	@	Interface Engineering, Inc.
Distribution			

Applies To **Mechanical; Electrical; Plumbing; Building Technologies; Fire/Life Safety**

FIRE SUPPRESSION

1. Sheet FS101:
 - Revised standpipe piping to be located outside of stair.
 - Revised Keynote.
2. Sheet FS102:
 - Revised standpipe piping to be located outside of stair.
 - Revised Keynote.
3. Sheet FS103:
 - Revised standpipe piping to be located outside of stair.
 - Revised Keynote.

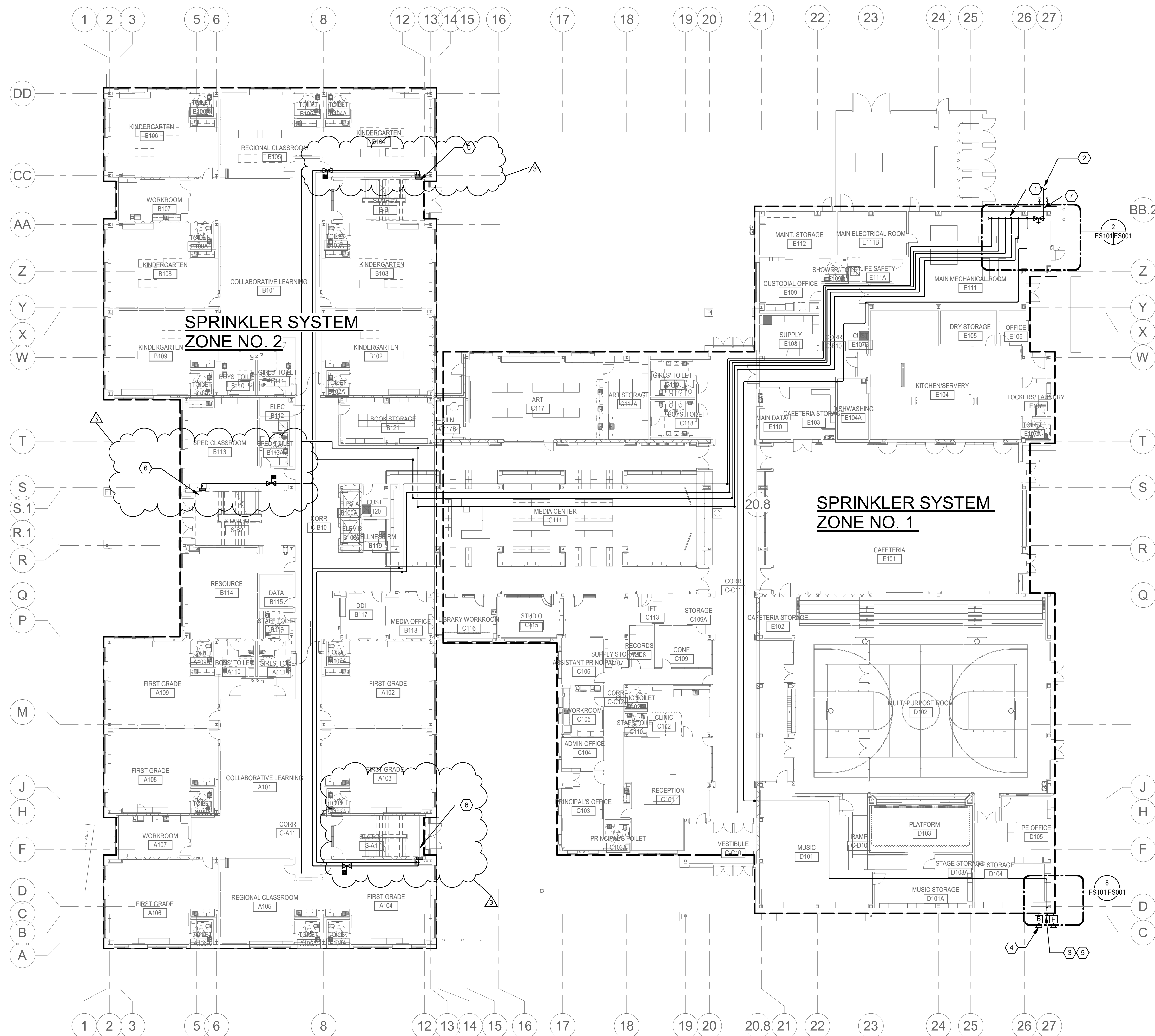
FIRE ALARM

1. Sheet FA111:
 - Relocate speaker/strobe in A107 due to model change
2. Sheet FA112:
 - Relocate speaker/strobe in B107 due to model change
3. Sheet FA113:
 - Relocate speaker/strobe outside supply storage due to model change
4. Sheet FA121:
 - Relocate AORA call box and wheelchair outline in stair #1
 - Update keyed note
5. Sheet FA122:
 - Relocate AORA call box and wheelchair outline in stair #2
 - Update keyed note
6. Sheet FA131:
 - Relocate AORA call box and wheelchair outline in stair #1
 - Update keyed note

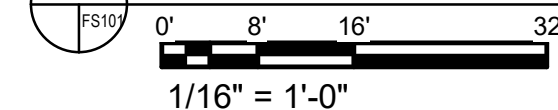
- Remove device from Fifth Grade A302 due to model change
7. Sheet FA132:
- Relocate AORA call box and wheelchair outline in stair #2
 - Update keyed note
 - Relocate device in Fourth Grade B303 due to model change
 - Relocate device in Fourth Grade B302 due to model change
 - Relocate devices in Corr C-B30 due to model changes

SHEET KEYNOTES

- 1 RISER MANIFOLD, CONTAINING SPRINKLER ZONE (1-4) CONTROL VALVES AND STANDPIPE SYSTEM FEED LINE.
- 2 6" INCOMING FIRE MAIN
- 3 FDC
- 4 ALARM BELL, MOUNT AT 9'-0" AFG.
- 5 REMOTE SPRINKLER ANNUNCIATOR MOUNTED ABOVE FDC WITH BOTTOM OF PANEL AT 9'-0" AFG.
- 6 CLASS I STANDPIPE WITH 2-1/2" HOSE VALVE CABINET TO BE LOCATED ON INTERMEDIATE LANDING.
- 7 BACKFLOW PREVENTER TEST CONNECTION.



FIRE SUPPRESSION OVERALL PLAN - LEVEL 1

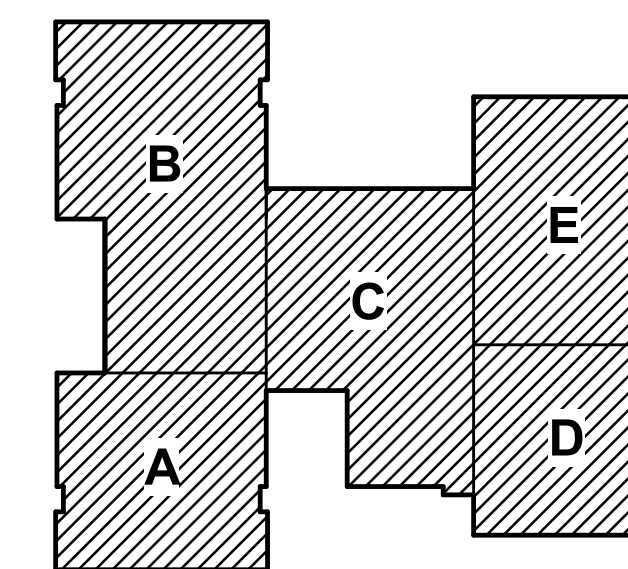


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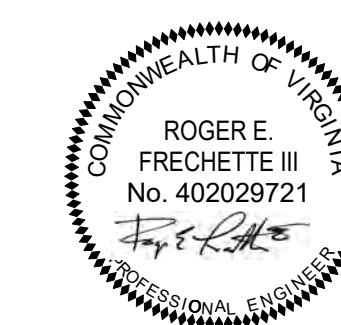
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Tel: (240) 683-9530

Keyplan

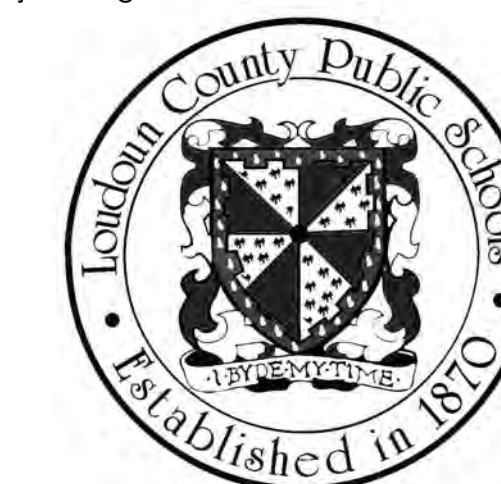


Issue/Revision	YYYY.MM.DD
3 ADDENDUM #3	2020.02.28
BID & PERMIT SET	2020.02.06
100% CONSTRUCTION DOCUMENTS	2020.01.26
65% CONSTRUCTION DOCUMENTS	2019.12.03
DESIGN DEVELOPMENT	2019.10.08
SCHEMATIC DESIGN	2019.08.12

Permit/Seal



Client/Project Logo



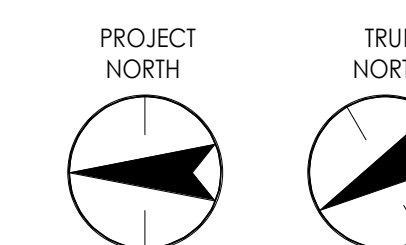
Client/Project

ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS

Title
FIRE SUPPRESSION OVERALL PLAN - LEVEL 1

Project No.	Scale	
2019-0122		
Revision	VDQE #	Drawing No.
3	053-115-01-100	FS101



SHEET KEYNOTES
 ① CLASS I STANDPIPE WITH 2-1/2" HOSE VALVE CABINET TO BE LOCATED ON INTERMEDIATE LANDING.

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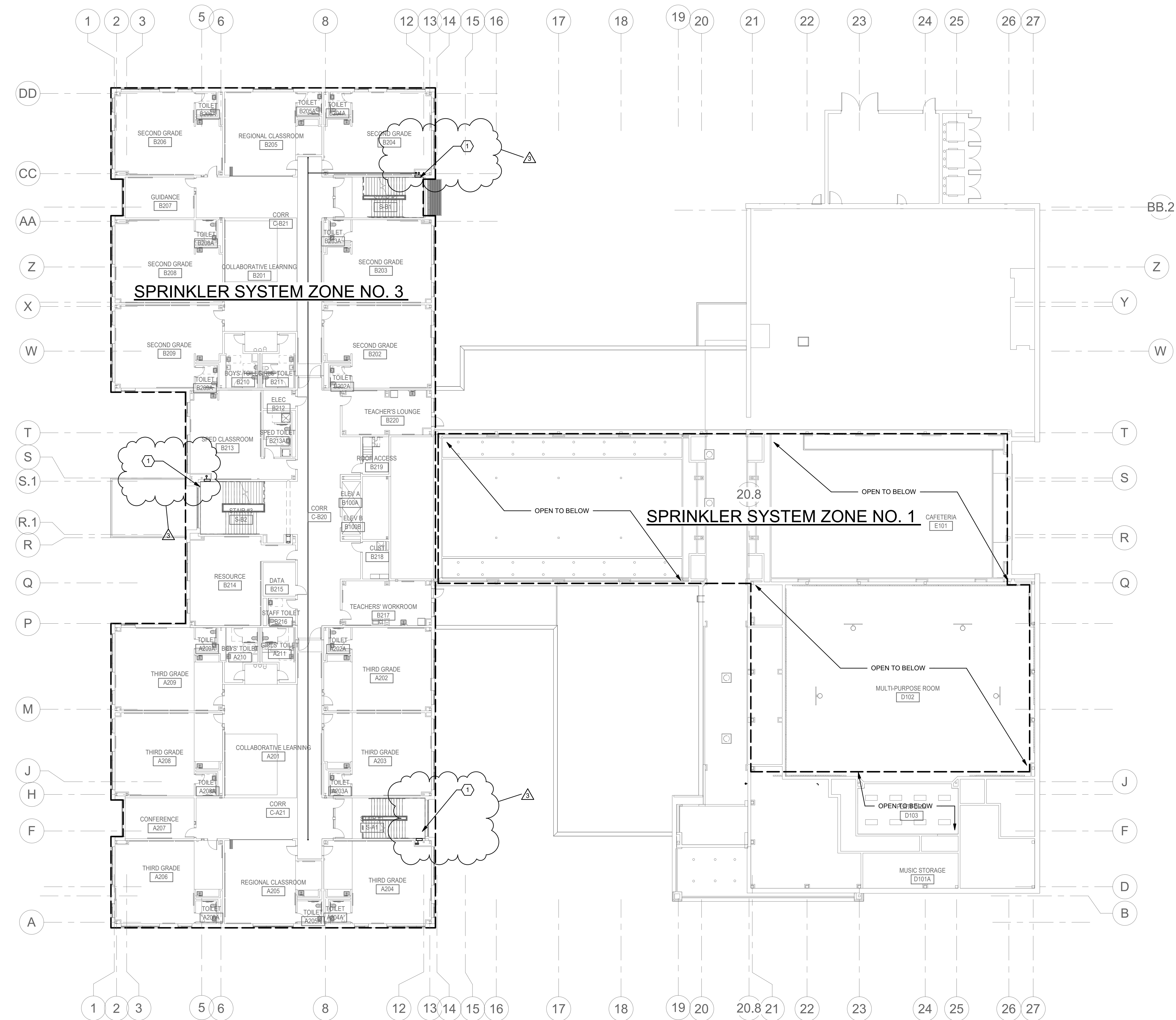
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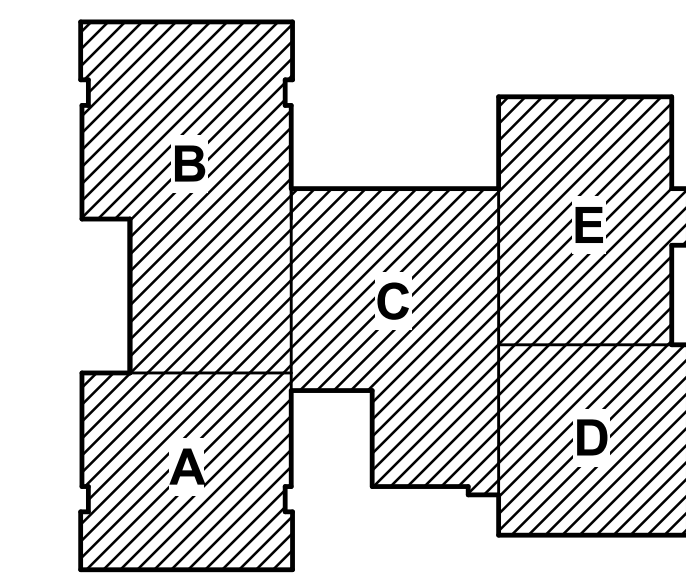
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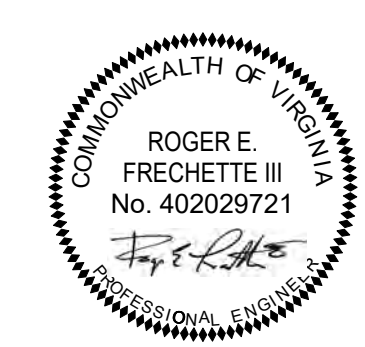


Keyplan



Issue/Revision	YYYY.MM.DD
3 - ADDENDUM #3	2020.02.28
BID & PERMIT SET	2020.02.06
100% CONSTRUCTION DOCUMENTS	2020.01.26
65% CONSTRUCTION DOCUMENTS	2019.12.03
DESIGN DEVELOPMENT	2019.10.08
SCHEMATIC DESIGN	2019.08.12

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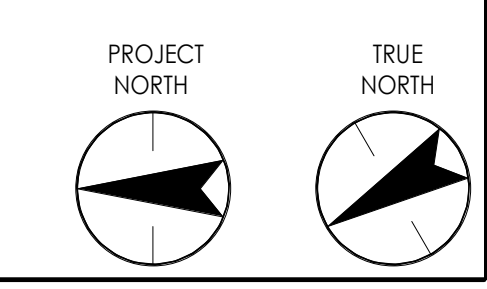
ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS

Title
FIRE SUPPRESSION OVERALL PLAN - LEVEL 2

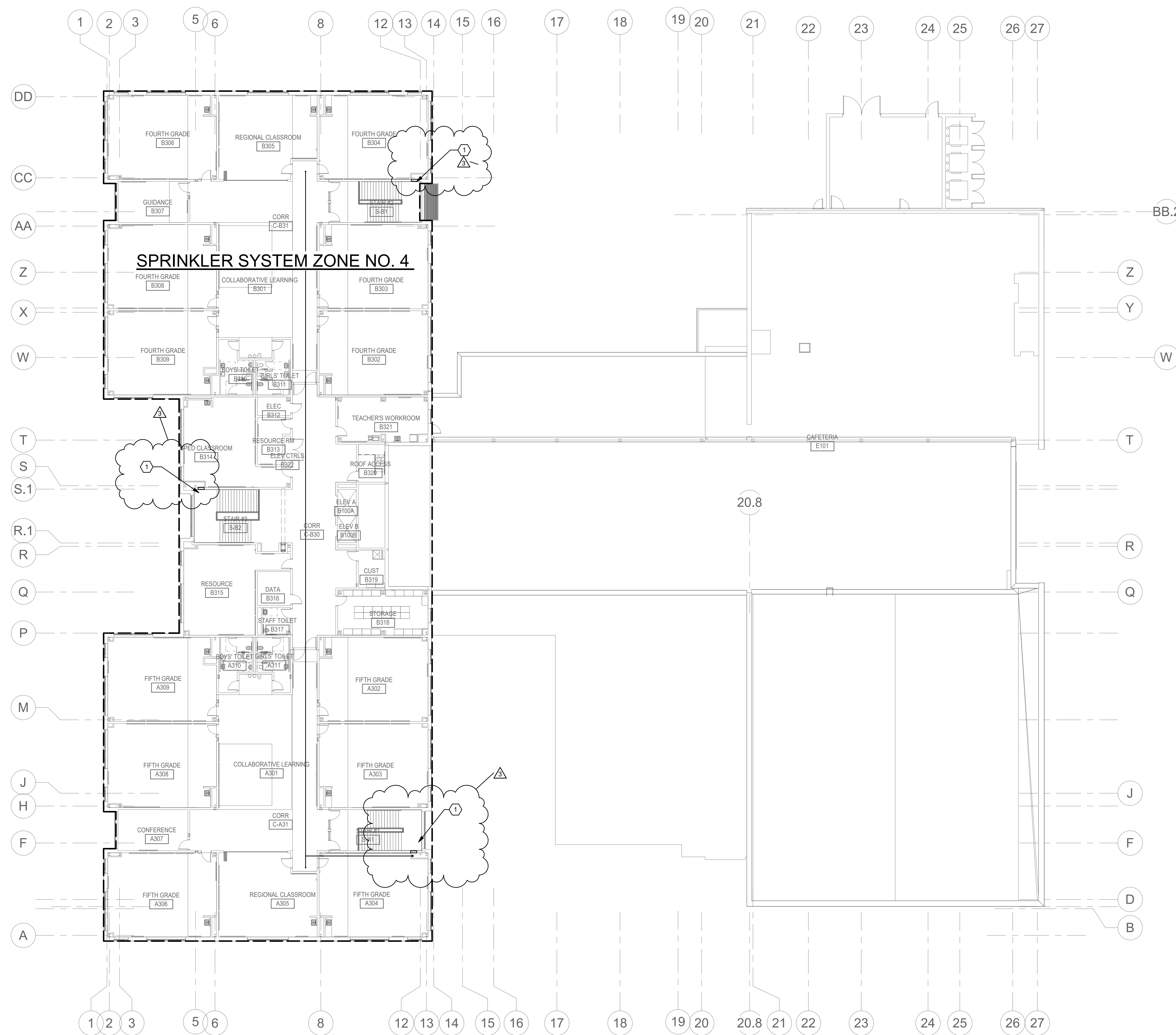
Project No. 2019-0122
 Revision 3
 VDOE # 053-115-01-100
 Scale
 Drawing No. **FS102**

FIRE PROTECTION OVERALL PLAN - LEVEL 2
 1" = 16'-0"

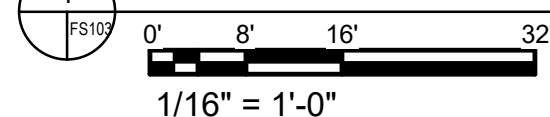


SHEET KEYNOTES

1 CLASS 1 STANDPIPE WITH 2-1/2" HOSE VALVE CABINET TO BE LOCATED ON INTERMEDIATE LANDING.



FIRE SUPPRESSION OVERALL PLAN - LEVEL 3



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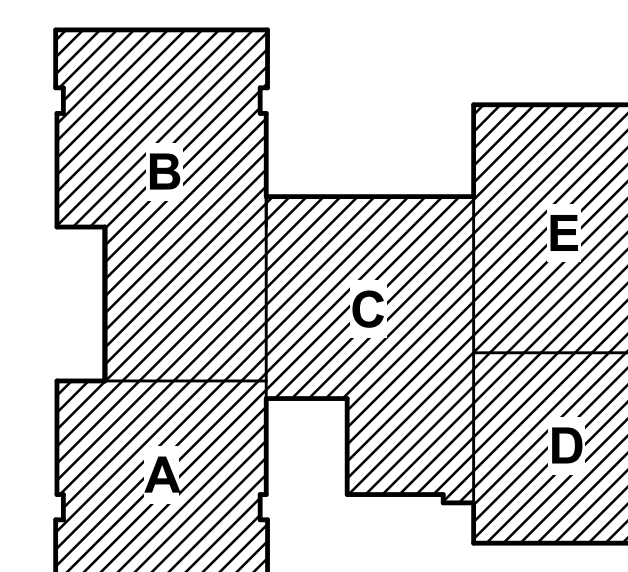
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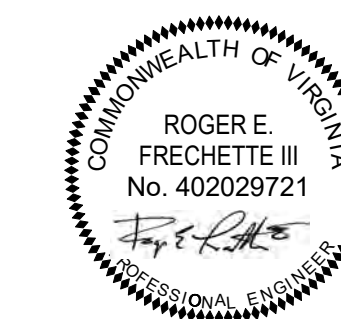
Keyplan



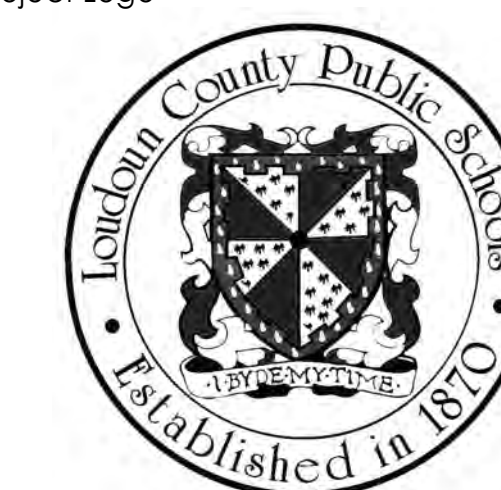
3	ADDENDUM #3	2020.02.28
	BID & PERMIT SET	2020.02.06
	100% CONSTRUCTION DOCUMENTS	2020.01.26
	65% CONSTRUCTION DOCUMENTS	2019.12.03
	DESIGN DEVELOPMENT	2019.10.08
	SCHEMATIC DESIGN	2019.08.12

Issue/Revision YYY.MM.DD

Permit/Seal



Client/Project Logo



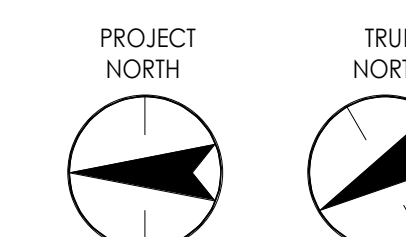
Client/Project

ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS

Title
FIRE SUPPRESSION OVERALL PLAN - LEVEL 3

Project No. 2019-0122
Revision VDOE # 3
Scale
Drawing No. **FS103**



SHEET KEYNOTES

- 1 CONNECT DOOR MAGNETIC RELEASE TO FIRE ALARM SYSTEM.

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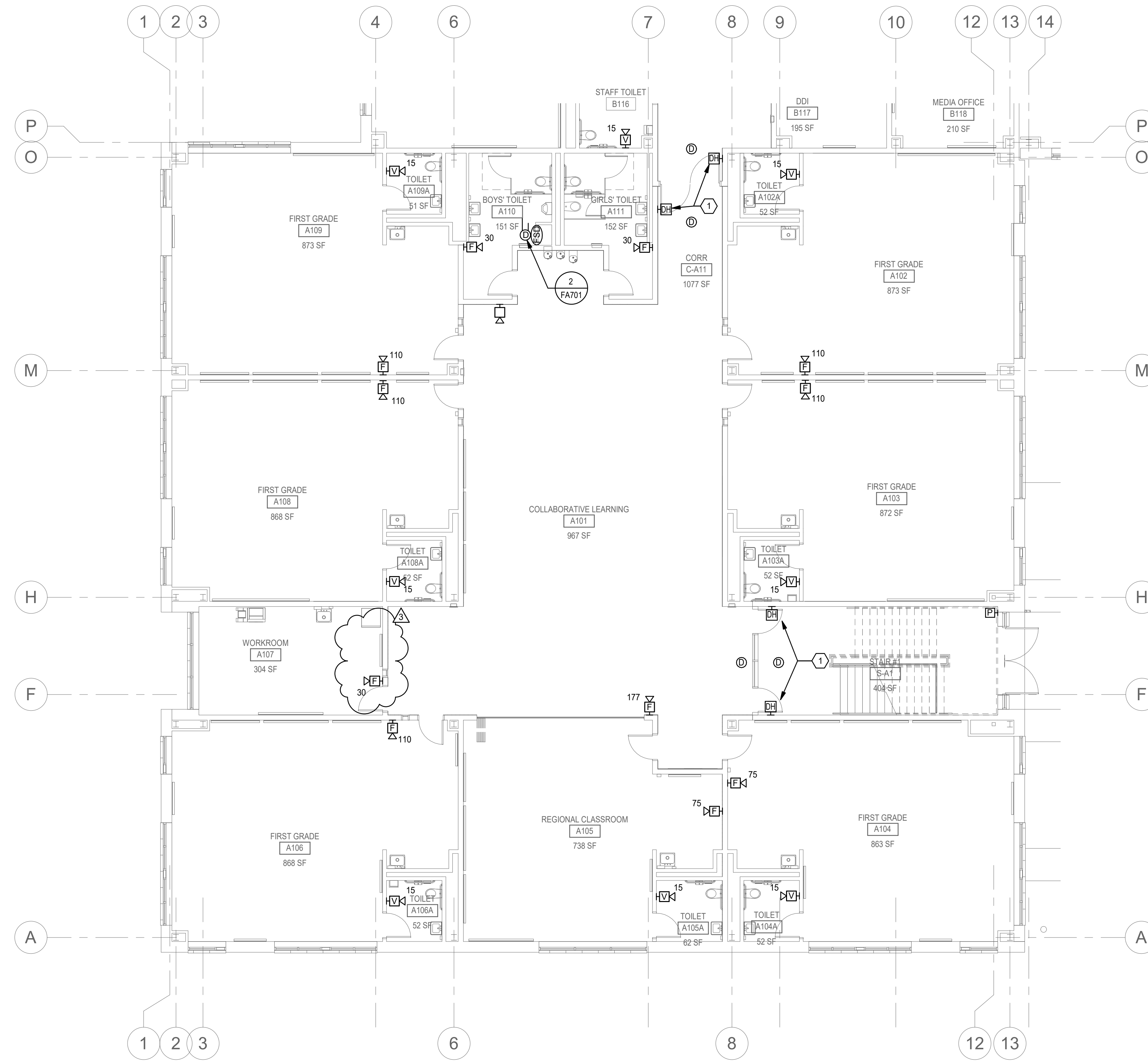
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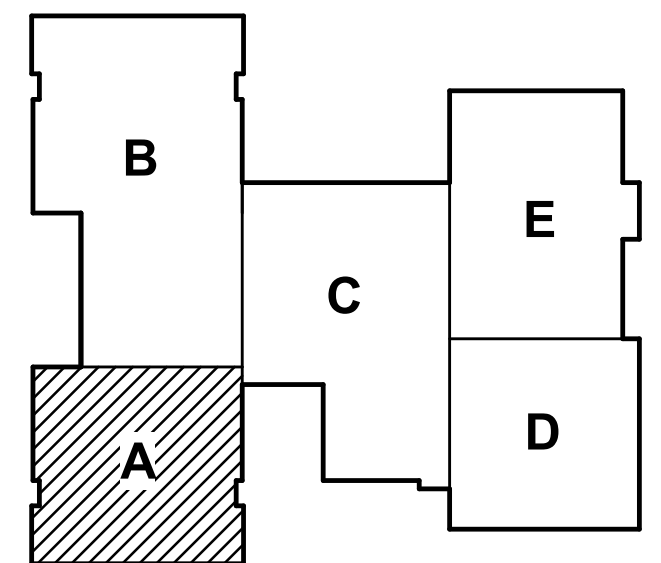
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3 ADDENDUM #3	2020.02.28
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65% CONSTRUCTION DOCUMENTS	2019.12.03
DESIGN DEVELOPMENT	2019.10.08
SCHEMATIC DESIGN	2019.08.12

Permit/Seal



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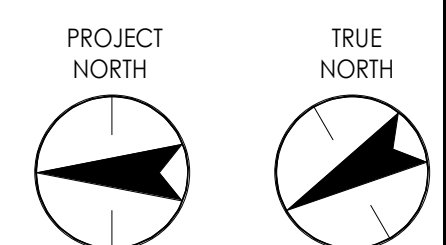
Client/Project

ELEMENTARY SCHOOL (ES-23)

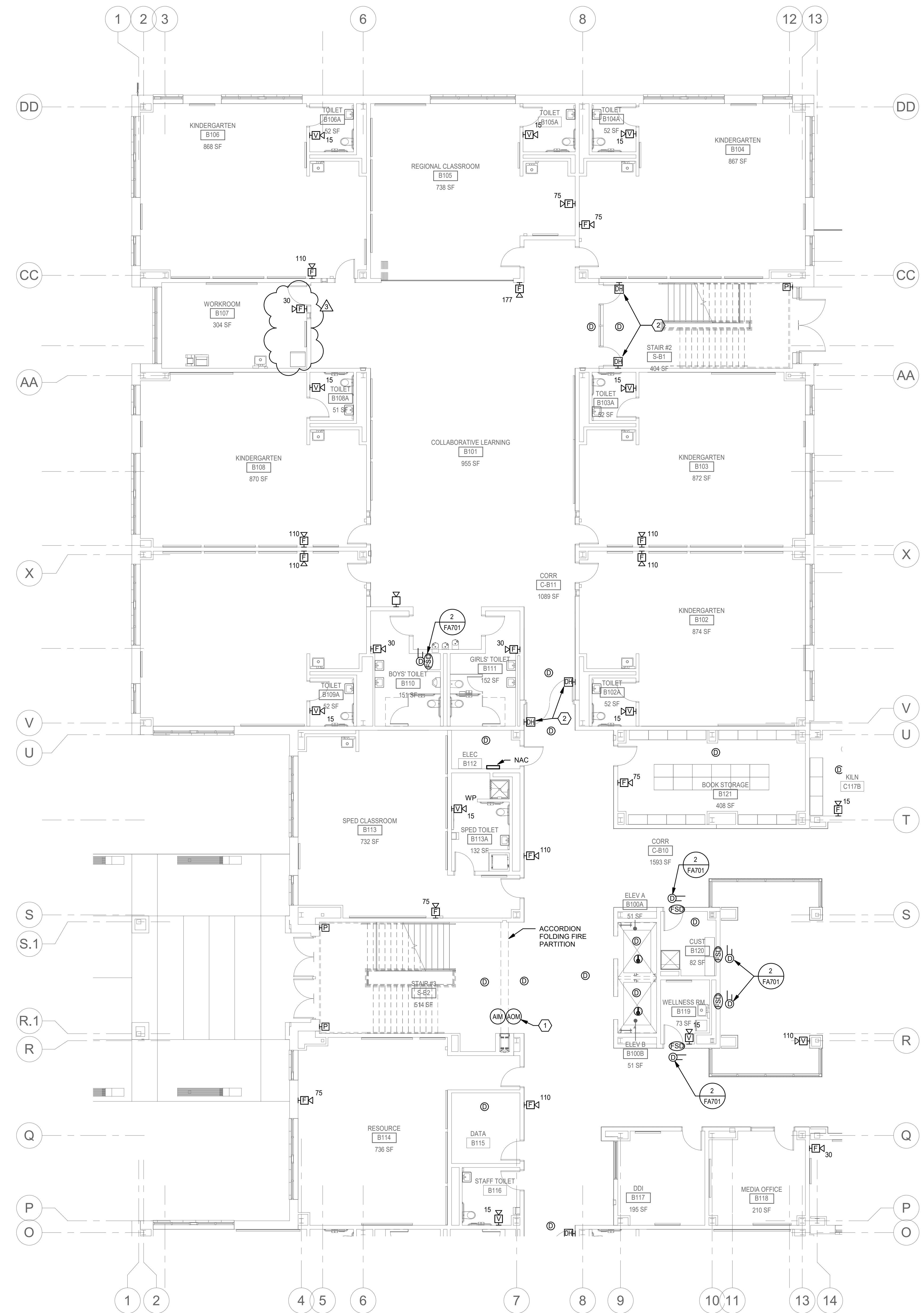
LOUDOUN COUNTY PUBLIC SCHOOLS

Title
FIRE ALARM FLOOR PLAN - LEVEL 1 - AREA A

1 FIRE ALARM FLOOR PLAN - LEVEL 1 - AREA A
 0' 4' 8' 16'
 1/8" = 1'-0"



Project No.	Scale	
2019-0122		
Revision	VDQE #	Drawing No.
3	053-115-01-100	FA111

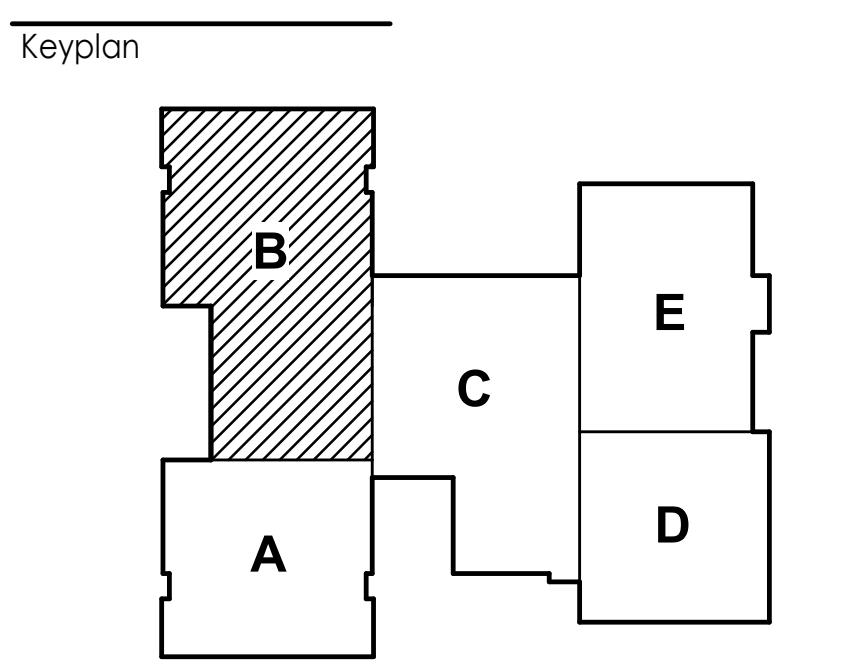


SHEET KEYNOTES

- ① CONTROL RELAY FOR WON DOOR CONTROL, MONITOR MODULE TO MONITOR WON DOOR FOR TROUBLE.
- ② CONNECT DOOR MAGNETIC RELEASE TO FIRE ALARM SYSTEM.

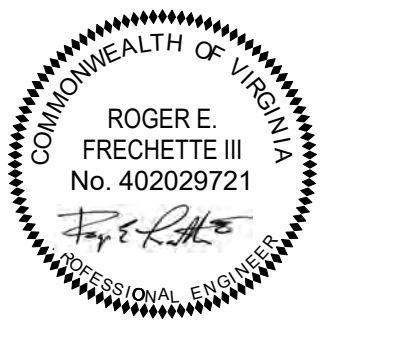
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Issue/Revision	YYYY.MM.DD
3 ADDENDUM #3	2020.02.28
BID & PERMIT SET	2020.02.06
100% CONSTRUCTION DOCUMENTS	2020.01.26
65% CONSTRUCTION DOCUMENTS	2019.12.03
DESIGN DEVELOPMENT	2019.10.08
SCHEMATIC DESIGN	2019.08.12

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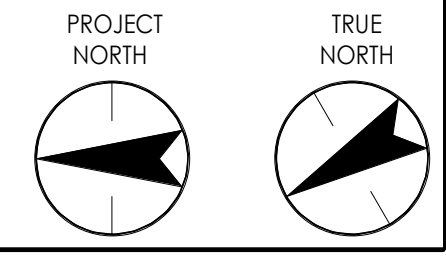
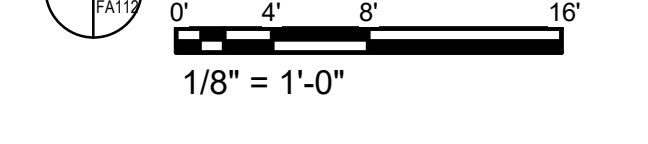


Client/Project
ELEMENTARY SCHOOL (ES-23)

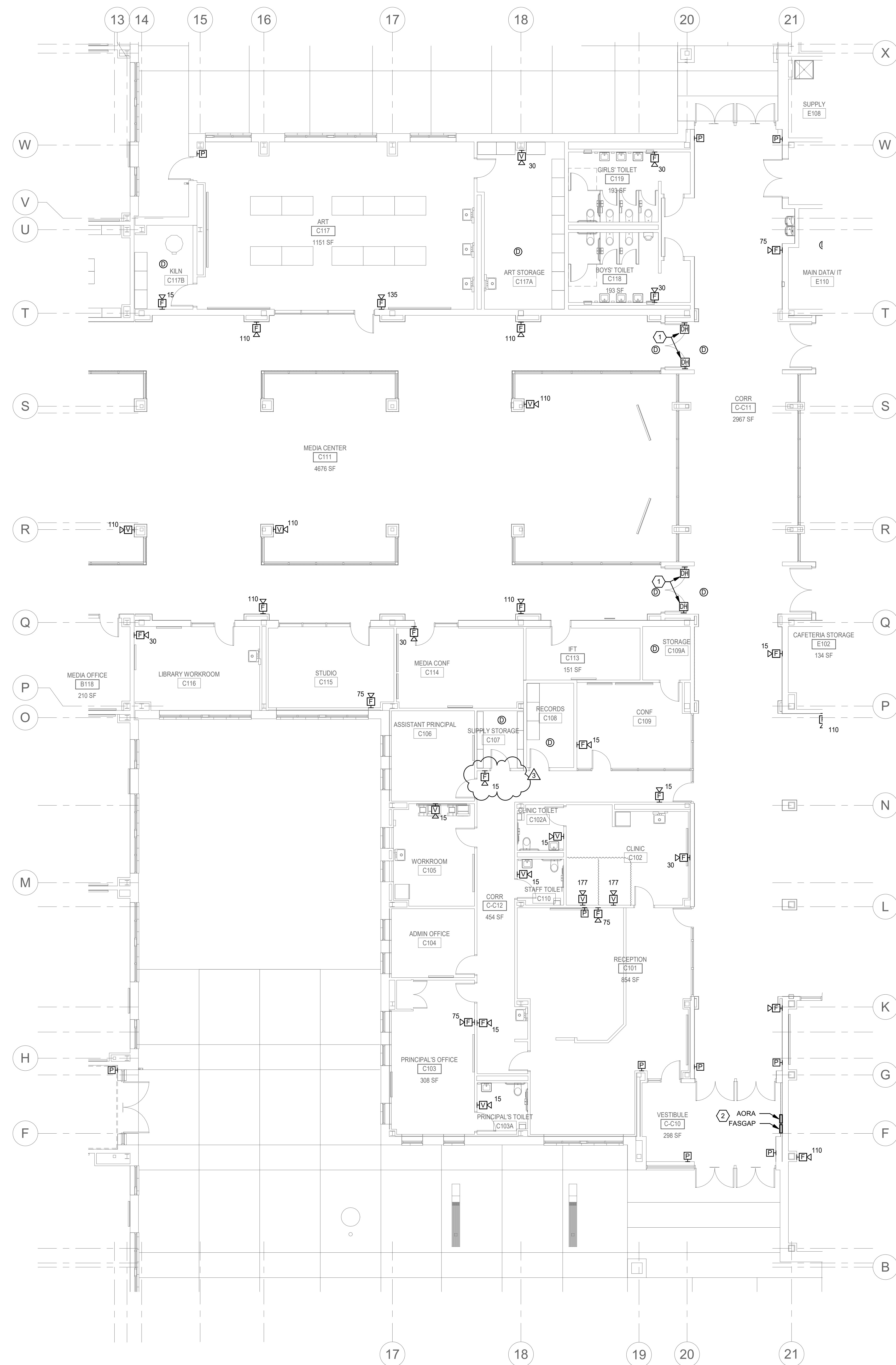
LOUDOUN COUNTY PUBLIC SCHOOLS

Title
FIRE ALARM FLOOR PLAN - LEVEL 1 - AREA B

FIRE ALARM FLOOR PLAN - LEVEL 1 - AREA B



Project No.	Scale	
2019-0122		
Revision	VD0E #	Drawing No.
3	053-115-01-100	FA112



SHEET KEYNOTES

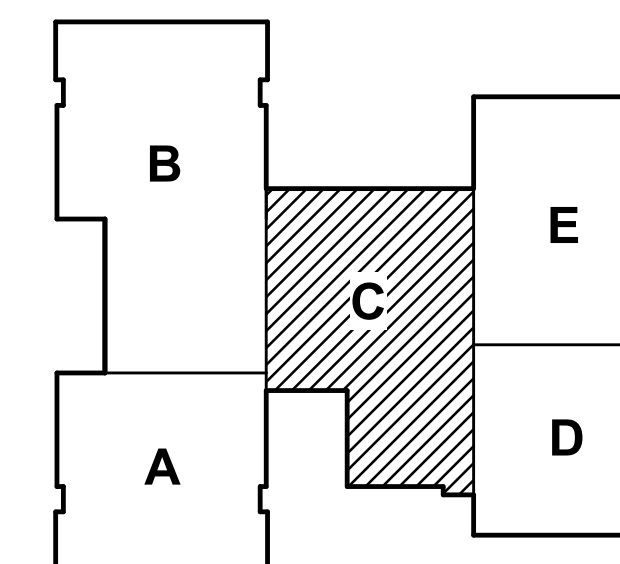
- 1 CONNECT DOOR MAGNETIC RELEASE TO FIRE ALARM SYSTEM.
- 2 MOUNT AORA & FASGAP AT 60" TO CENTER OF PANEL (SEE FA701 FOR DETAILS).

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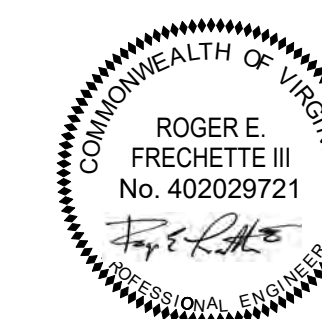
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Keyplan

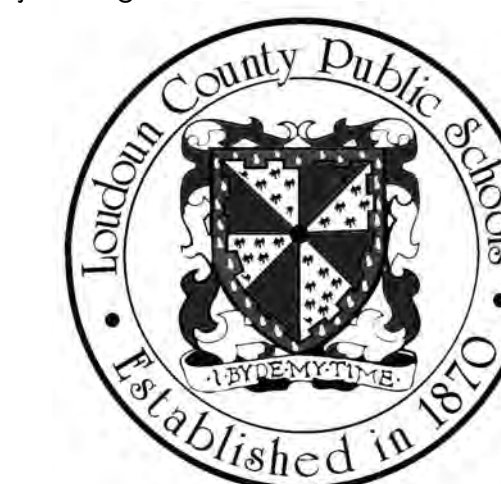


Issue/Revision	YYYY.MM.DD
3 - ADDENDUM #3	2020.02.28
BID & PERMIT SET	2020.02.06
100% CONSTRUCTION DOCUMENTS	2020.01.26
65% CONSTRUCTION DOCUMENTS	2019.12.03
DESIGN DEVELOPMENT	2019.10.08
SCHEMATIC DESIGN	2019.08.12

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Client/Project Logo



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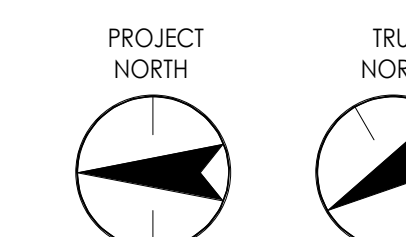
ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS

Title
FIRE ALARM FLOOR PLAN - LEVEL 1 - AREA C

Project No. 2019-0122
 Revision 3
 Scale
 VDOE # 053-115-01-100
 Drawing No. **FA113**

1 FIRE ALARM FLOOR PLAN - LEVEL 1 - AREA C
 0' 4' 8' 16'
 1/8" = 1'-0"



SHEET KEYNOTES

- 1 CONNECT DOOR MAGNETIC RELEASE TO FIRE ALARM SYSTEM.
- 2 SECTION 28 71 73 AREA OF RESCUE ASSISTANCE (AORA) CALL-IN STATION, MOUNTED AT 48-INCHES TO TOP (MOUNT TO 8" GUN PIER), EXTEND CAT6A CABLE IN 3/4-INCH CONDUIT TO AREA OF RESCUE ASSISTANCE ANNUNCIATOR PANEL IN VESTIBULE G-C10. PROVIDE A CLEAR OPENING LEXAN (STI STOPPER) TYPE) FOR CALL-IN STATION TO PREVENT INADVERTANT ACTIVATION OF SYSTEM.
- 3 PROVIDE SECTION 28 71 71 AREA OF RESCUE ASSISTANCE (AORA) SIGNAGE PER SPECIFICATIONS AND CONNECT CIRCUIT SERVING EXIT SIGNS THIS AREA.

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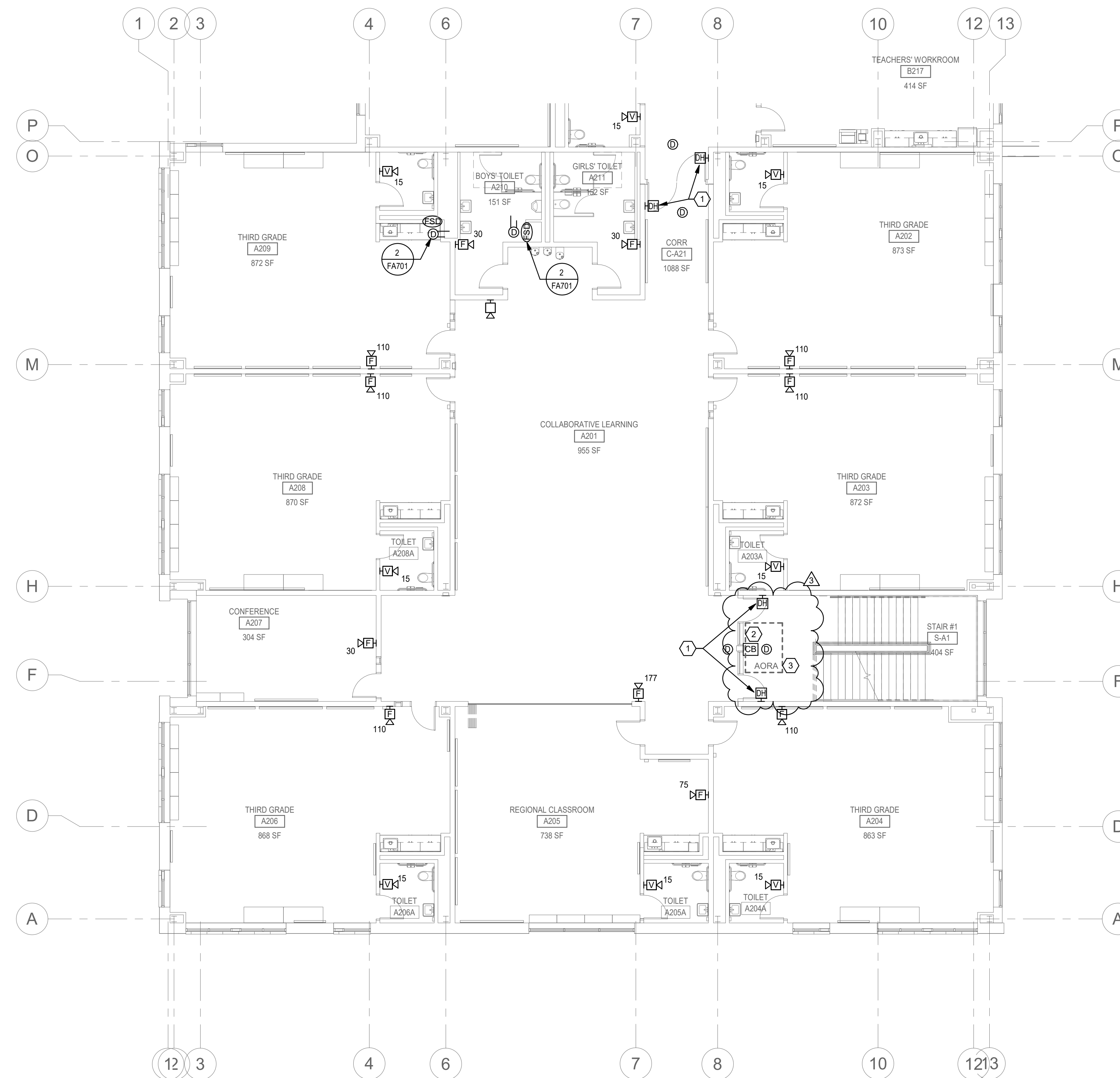
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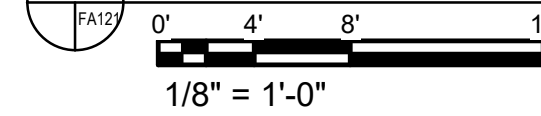
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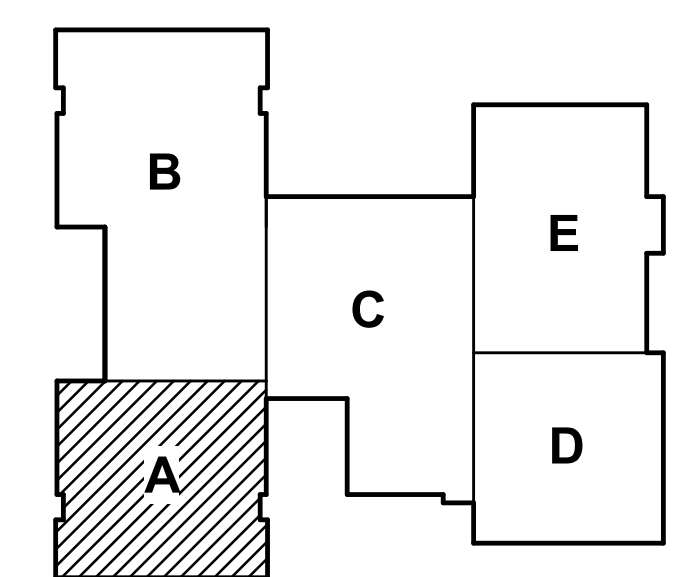
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FIRE ALARM FLOOR PLAN - LEVEL 2 - AREA A



Keyplan



Issue/Revision	YYYY.MM.DD
3 - ADDENDUM #3	2020.02.28
BID & PERMIT SET	2020.02.06
100% CONSTRUCTION DOCUMENTS	2020.01.26
65% CONSTRUCTION DOCUMENTS	2019.12.03
DESIGN DEVELOPMENT	2019.10.08
SCHEMATIC DESIGN	2019.08.12

Permit/Seal



Client/Project Logo



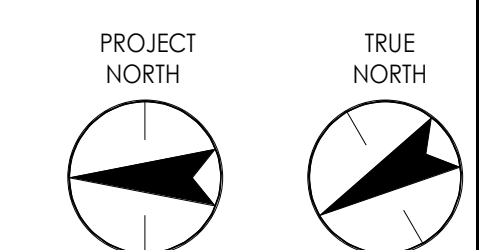
Client/Project

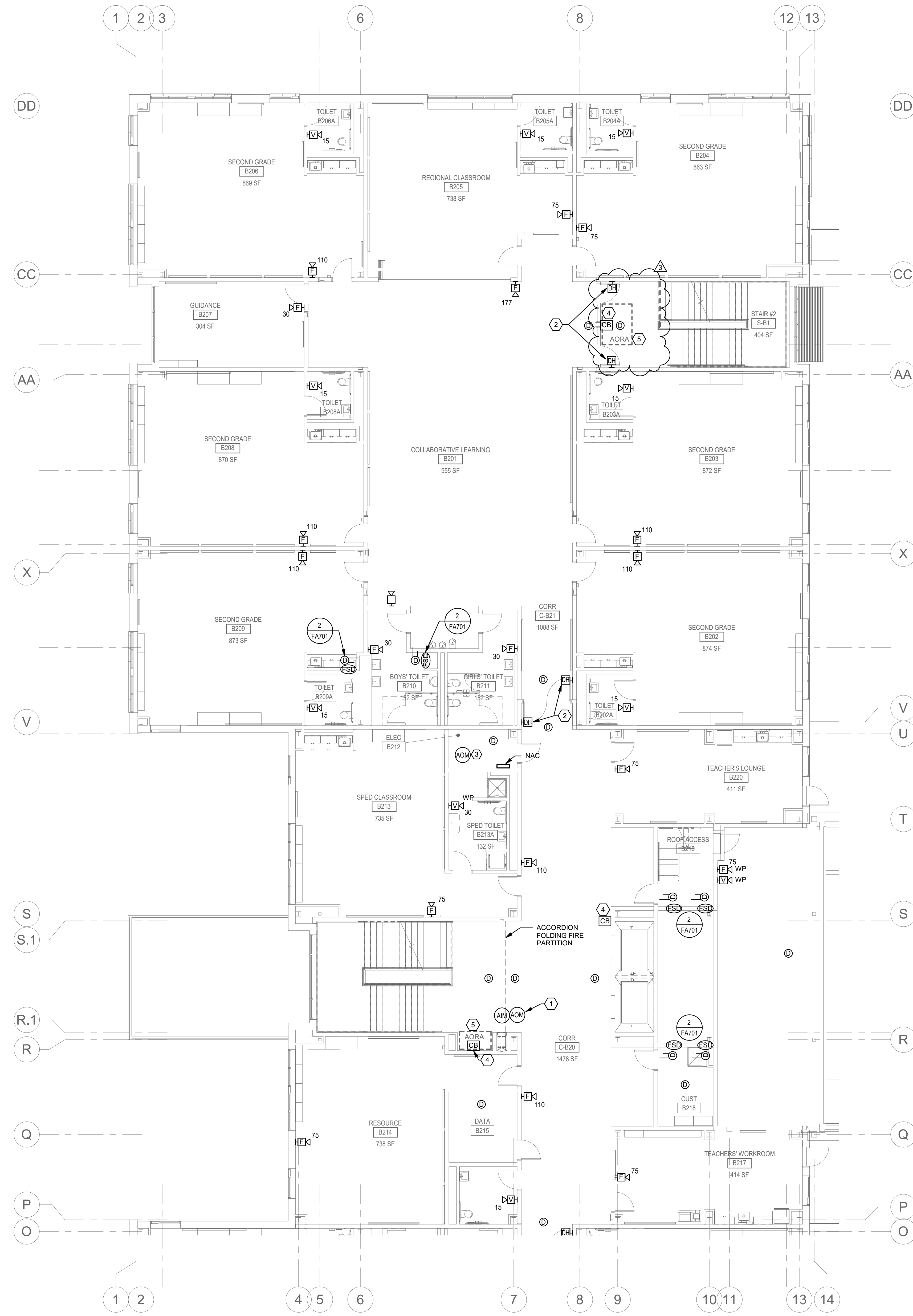
ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS

Title
FIRE ALARM FLOOR PLAN - LEVEL 2 - AREA A

Project No. 2019-0122
 Revision 3
 VDOE # 053-115-01-100
 Scale
 Drawing No. **FA121**





- SHEET KEYNOTES**
- 1 CONTROL RELAY FOR WON DOOR CONTROL, MONITOR MODULE TO MONITOR WON DOOR FOR TROUBLE.
 - 2 CONNECT DOOR MAGNETIC RELEASE TO FIRE ALARM SYSTEM.
 - 3 CONTROL RELAY FOR DAMPER CONTROL.
 - 4 SECTION 28 71 73 AREA OF RESCUE ASSISTANCE (AORA) CALL-IN STATION, MOUNTED AT 48-INCHES TO TOP (MOUNT TO 9' CMU PIER) EXTEND CAT5A CABLE IN 3/4-INCH CONDUIT TO AREA OF RESCUE ASSISTANCE ANNUNCIATOR PANEL IN VESTIBULE C-C10. PROVIDE A CLEAR OPERABLE LEXAN (STI STOPPER) TYPE FOR CALL-IN STATION TO PREVENT INADVERTANT ACTIVATION OF SYSTEM.
 - 5 PROVIDE SECTION 28 71 71 AREA OF RESCUE ASSISTANCE (AORA) SIGNAGE PER SPECIFICATIONS AND CONNECT CIRCUIT SERVING EXIT SIGNS THIS AREA.

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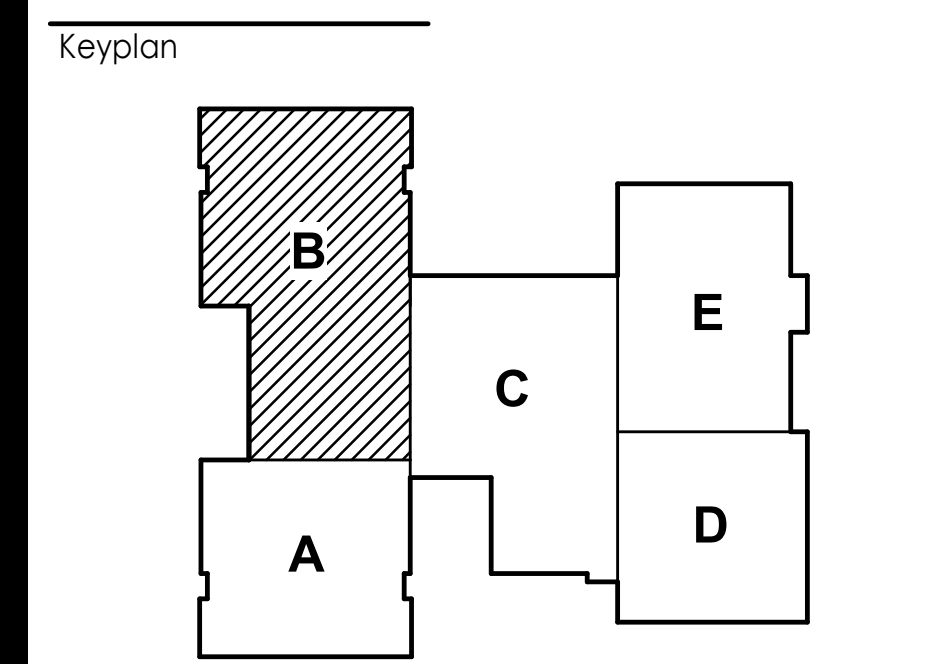
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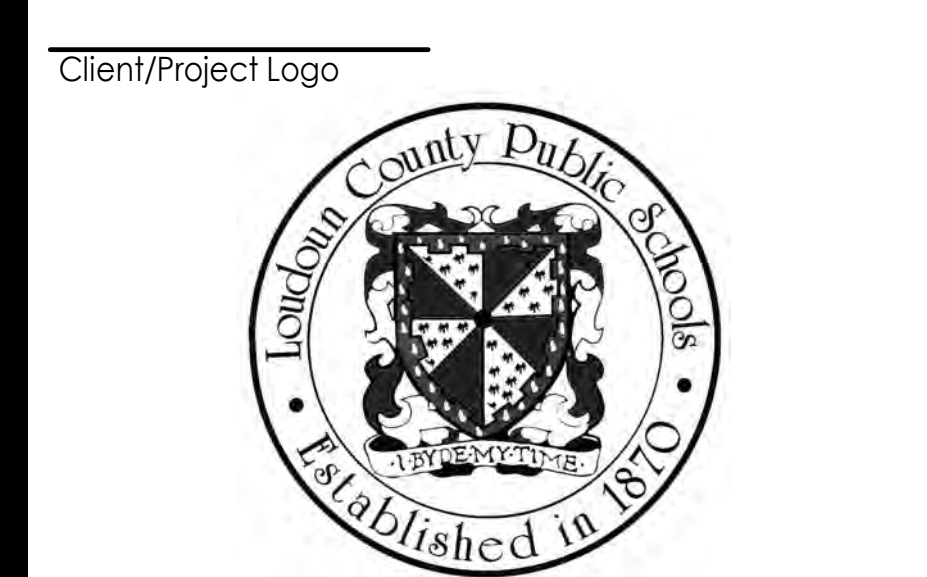
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FOOD AND SERVICE - NYIKOS & ASSOCIATES
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Issue/Revision	YYYY.MM.DD
3 ADDENDUM #3	2020.02.28
BID & PERMIT SET	2020.02.06
100% CONSTRUCTION DOCUMENTS	2020.01.26
65% CONSTRUCTION DOCUMENTS	2019.12.03
DESIGN DEVELOPMENT	2019.10.08
SCHEMATIC DESIGN	2019.08.12

Permit/Seal



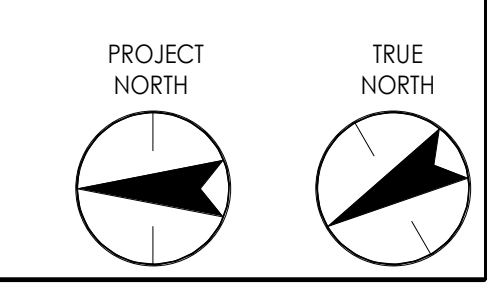
Client/Project
ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS

Title
FIRE ALARM FLOOR PLAN - LEVEL 2 - AREA B

Project No. 2019-0122
 Revision VDOE # 3
 Scale
 Drawing No. **FA122**

FIRE ALARM FLOOR PLAN - LEVEL 2 - AREA B



SHEET KEYNOTES

- 1 CONNECT DOOR MAGNETIC RELEASE TO FIRE ALARM SYSTEM.
- 2 SECTION 28 71 73 AREA OF RESCUE ASSISTANCE (AORA) CALL-IN STATION, MOUNTED AT 48-INCHES TO TOP (MOUNT TO 8" CMU PIER) EXTEND CAT6A CABLING IN 3/4-INCH CONDUIT TO AREA OF RESCUE ASSISTANCE ANNUNCIATOR PANEL IN VESTIBULE C-C10. PROVIDE A CLEAR OPENABLE LEXAN (STI STOPPER-II TYPE) FOR CALL-IN STATION TO PREVENT INADVERTANT ACTIVATION OF SYSTEM.
- 3 PROVIDE SECTION 28 71 71 AREA OF RESCUE ASSISTANCE (AORA) SIGNAGE PER SPECIFICATIONS AND CONNECT CIRCUIT SERVING EXIT SIGNS THIS AREA.

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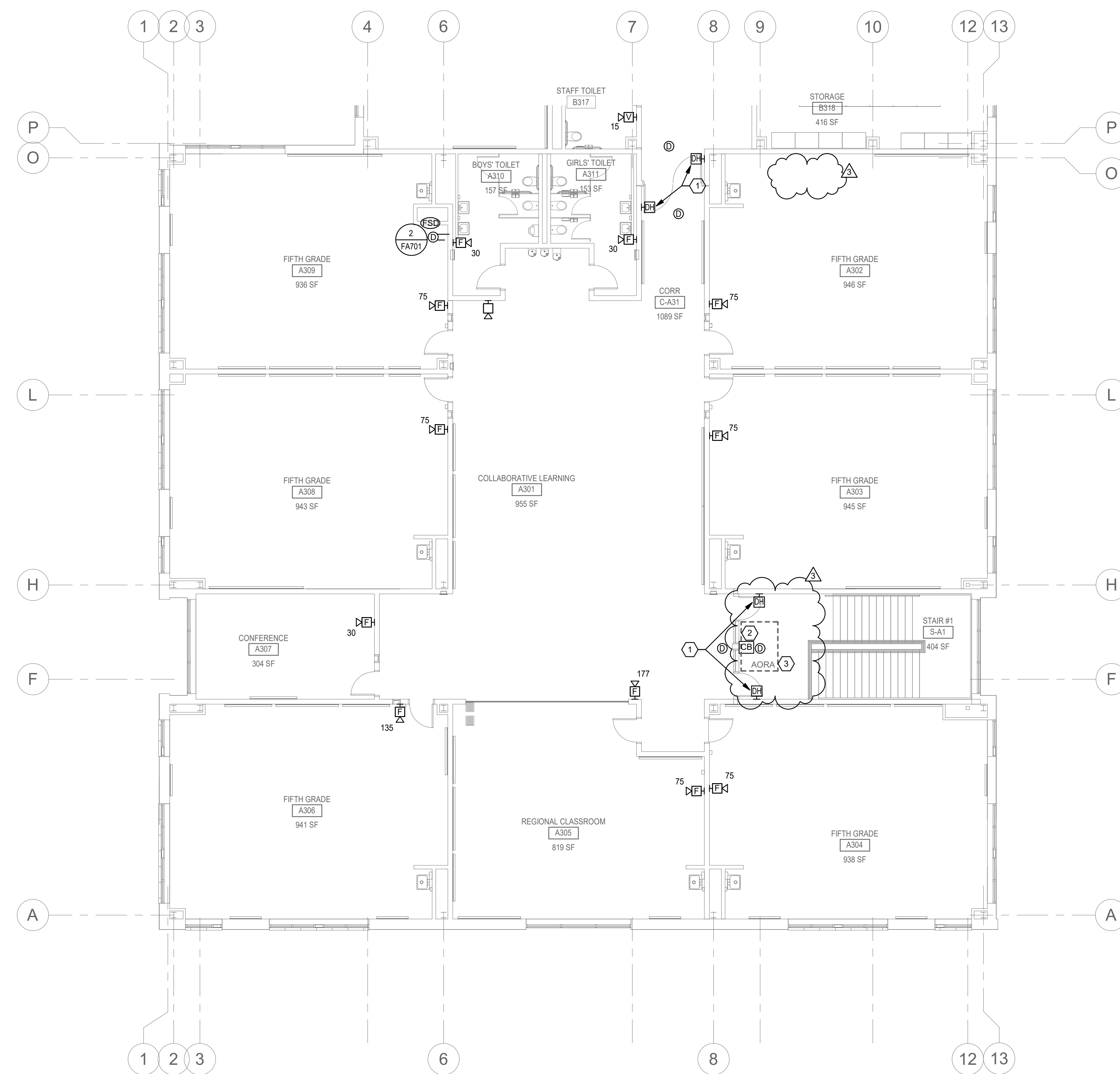
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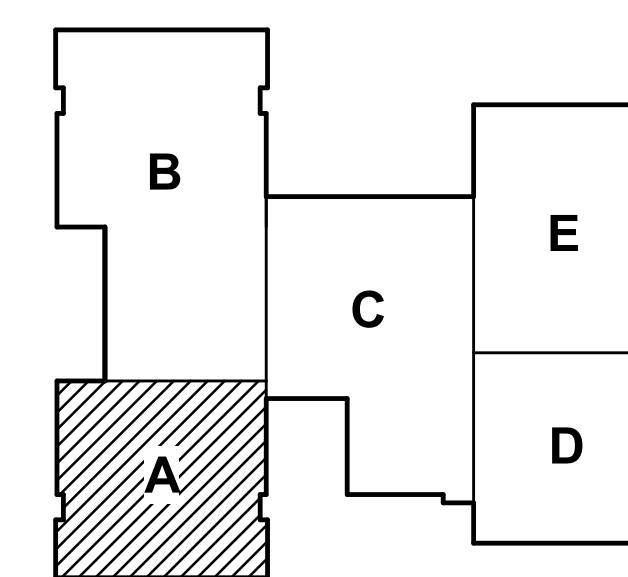
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FIRE ALARM FLOOR PLAN - LEVEL 3 - AREA A
 1/8" = 1'-0"

Keyplan

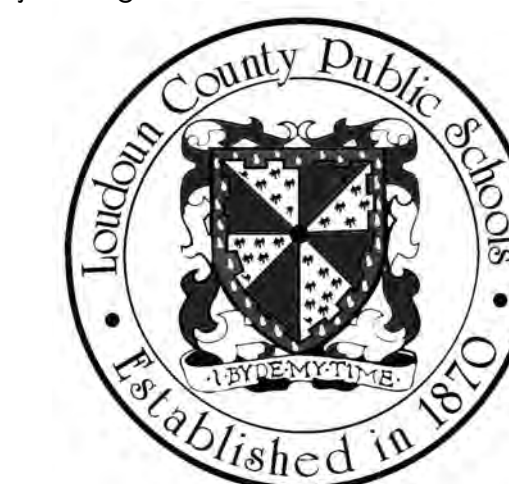


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SCHEMATIC DESIGN	2019.08.12

Permit/Seal



Client/Project Logo



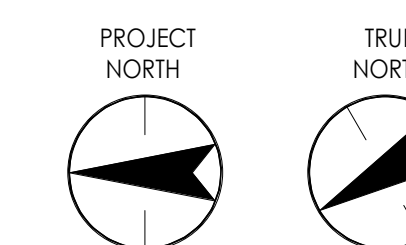
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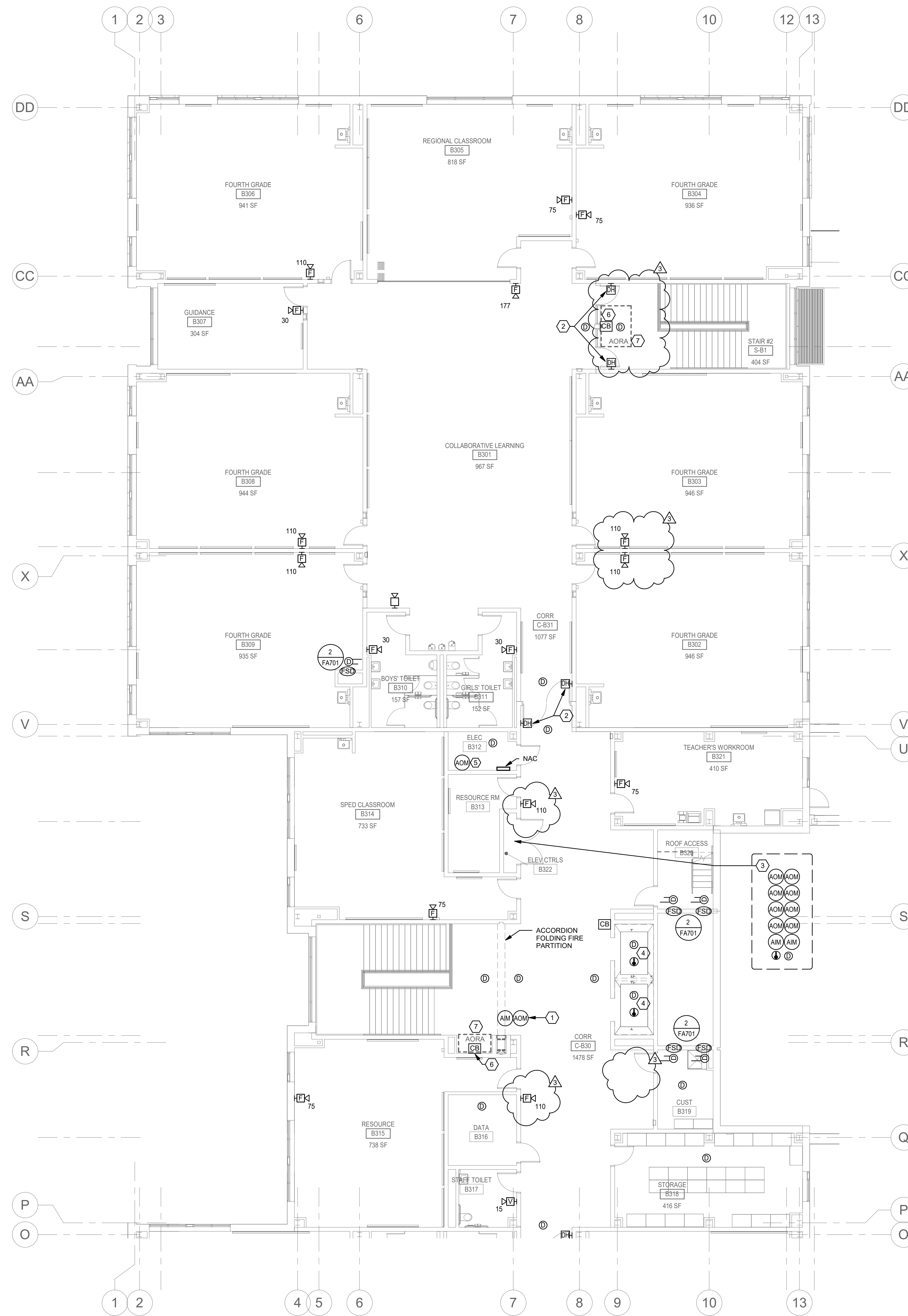
ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS

Title
 FIRE ALARM FLOOR PLAN - LEVEL 3 - AREA A

Project No. 2019-0122
 Revision 3
 VDOE # 053-115-01-100
 Drawing No. **FA131**





SHEET KEYNOTES

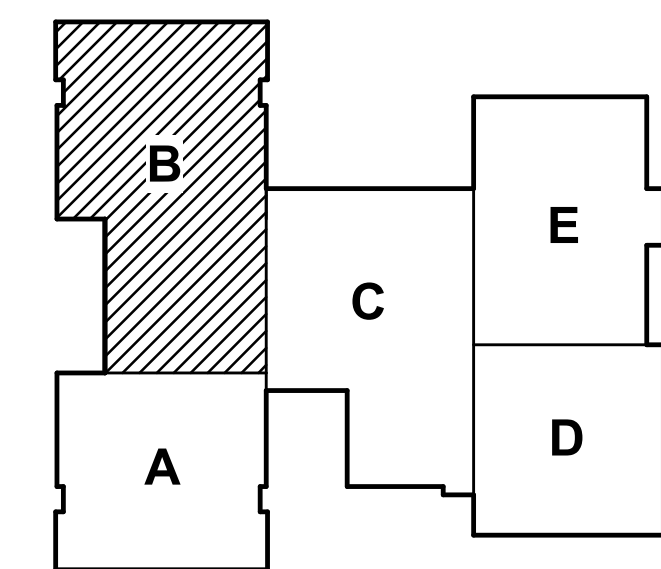
- 1 CONTROL RELAY FOR WON DOOR CONTROL, MONITOR MODULE TO MONITOR WON DOOR FOR TROUBLE.
- 2 CONNECT DOOR MAGNETIC RELEASE TO FIRE ALARM SYSTEM.
- 3 MODULES FOR ELEVATOR RECALL (CONTROLLER #1 & #2).
- 4 DEVICES LOCATED AT TOP OF SHAFT. MOUNT HEAT DETECTOR WITHIN 24" OF SPRINKLER HEAD.
- 5 CONTROL RELAY FOR DAMPER CONTROL.
- 6 SECTION 28 71 75 AREA OF RESCUE ASSISTANCE (AORA) HALL-IN STATION, MOUNTED AT 48-INCHES TO TOP (MOUNT TO 8" CMU PIER) EXTEND CAT6A CABLING IN 3/4-INCH CONDUIT TO AREA OF RESCUE ASSIST ANNUNCIATOR PANEL IN VESTIBULE C-610. PROVIDE A CLEAR OPERABLE LEXAN (STI STOPPER) TYPE FOR CALL-IN STATION TO PREVENT INADVERTANT ACTIVATION OF SYSTEM.
- 7 PROVIDE SECTION 28 71 71 AREA OF RESCUE ASSISTANCE (AORA) SIGNAGE PER SPECIFICATIONS AND CONNECT CIRCUIT SERVING EXIT SIGNS THIS AREA.

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Keyplan



Issue/Revision	YYYY.MM.DD
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Permit/Seal



Client/Project Logo



Client/Project

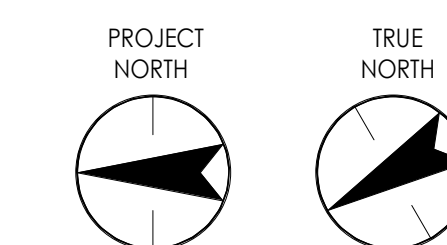
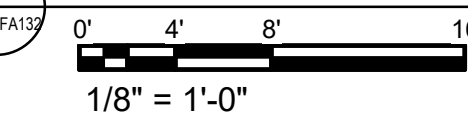
ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS

Title
FIRE ALARM FLOOR PLAN - LEVEL 3 - AREA B

Project No. 2019-0122
 Revision VDOE # 3
 Scale
 Drawing No. **FA132**

FIRE ALARM FLOOR PLAN - LEVEL 3 - AREA B



ADDENDUM

Addendum #03
TO PLANS AND SPECIFICATIONS FOR
ELEMENTARY SCHOOL (ES-23)

March 04, 2020

NOTE: If you have questions about this project, please contact, John Oduroe
John.Oduroe@stantec.com.

This Addendum is generally separated into sections for convenience; however, all contractors, subcontractors, material suppliers and other involved parties shall be responsible for reading the entire Addendum. Failure to list an item(s) in all affected sections of this Addendum does not relieve any party affected from performing per instructions, provided the information is set forth one time anywhere in the Addendum.

This document shall become attached to and part of the Construction Documents for the aforementioned project.

BID DATE and TIME: March 6th, 2020 at 2:00pm.

DELIVER PROPOSALS TO:

Loudoun County Public Schools Administration Building, Room 211.
21000 Education Court
Ashburn, Virginia 20148

LIST OF ATTACHMENTS

1. Architectural
 - a. Narrative (2 page)
 - b. Pre-Bid RFI & Responses (revised) (10 pages)
2. Electrical - Technology
 - a. Narrative (1 pages)
 - b. Drawings (3 pages)
 - c. Specifications (1 section – 24 pages)



SPECIFICATIONS

ITEM	SECTION	DESCRIPTION
AS-21	07 21 00	<p>Include the following under paragraph 2.4.A: "4. Johns Manville"</p> <p>Include the following under paragraph 2.6.A: "6. Johns Manville"</p>

PRE-BID RFI & RESPONSES (revised)

ITEM	QUESTION	DESCRIPTION
AR-01	84	Response revised
AR-02	85	Response revised
AR-03	86	Response revised
AR-03	92	Response revised

Pre-Bid RFI (revised)

4-Mar-20

	QUESTIONS	RESPONSES
1	<p>Conflict for stair nosings. See following comment from Nystrom: I read the specs and it sounds like it calls out for our no-nose nosing "STSB-N1.375E" . I notice there is conflicting details in the specs (basis of design is 1-3/8") but then it mentions 3" wide and drawing notes 4". What width would you like me to quote? Due to the conflicting details would you like us to quote our most "standard" profile (STSB-P3E series attached). This works with most stair styles/types due to the nosing type. Refer to attached details for both types of nosing mentioned above.</p>	<p>3" Nosing is acceptable. See See addendum item AS-7 for revised spec.</p>
2	<p>For stairs 1 to 3, drawings A650 and A651, have several questions: A) At intermediate landings, stainless steel perforated metal panels are noted. No details shown. Which trade provides, if by miscellaneous metals, need details or specification section. B) Are stairs mislabeled? Plan A650 should be stairs 1 & 2 and A651 should be stair 3? C) At stairs intermediate platforms, ref. A4/A650 and A4/A651, is there a vertical/horizontal steel framing grid or layout for standpipes?</p>	<p>2A. Stair MFR to provide. See Addendum 3, item AS-8 for perforated meta specs 2B. Stairs are mislabeled. See Addendum 3, items AD-54 & AD-55 for corrections. 2C. Standpipes have been relocated out of stairwells. See Addendum 3, Fire Suppression, items 1-3</p>
3	<p>Drawing A201, General Partition Note Item #27: Provide minimum vertical reinforcing of #4@48"o.c. in grouted cells...Drawing S200, Interior Non-Load Bearing Wall Reinforcing (All Areas) states if height of wall is less than 16'-0", no vertical wall reinforcing is required. Which is the binding precedent, Architectural or Structural?</p>	<p>Provide vertical reinforcement for interior non-load bearing CMU walls per the schedule on S200</p>
4	<p>Section 07 53 23 does not specify or call for a roof cover board, however the drawings do. See below from sheet A501. A) Is a cover board required? B) If yes, can the R value of the cover board be used to when calculating the total R value of 30? C) If the cover board is to be installed, can the first two layers of roof insulation be mechanically fastened to the steel deck as a single unit and only the cover board (top layer) set in adhesive?</p>	<p>A. Coverboard is required. See Addendum 3 item AS-10 for revised spec B. Coverboard is required to achieve minimum R-value of 30 C. Install cover board. It is permitted to Mechanically fastened the first tw layers of insulation to the steel deck as a single unit and adhere the cover board (top layer) . See Addendum 3, item AS-11 for revised spec.</p>
5	<p>The Section 07 53 23; Walkway Pad are not indicated on the drawing as noted in paragraph 1.3-C.4. Are we to price only the roof walkways as indicated on the roof plan (A150) or are we to price additional roof walkways to meet the requirements of this paragraph?</p>	<p>Price additional pads per revised note provided in Addendum 3, item AD-31</p>
6	<p>Section 263213, 1.6, A. specifies the generator is to be seismically certified. Please confirm if IBC Seismic certification is actually required on this generator as it is to be located in VA which is not an area of high seismic activity?</p>	<p>Provide as specified. Based on LCPS standard specification. Seismic certification is required per IBC 1705.</p>
7	<p>Section 263213, 1.8, N. 2. and 2.5, B. 5. Specifies generator sound level shall not exceed 55 dBA at any portion along the nearest property line but also specifies a Level II enclosure. Please confirm if factory level II sound enclosure is acceptable meeting 75 dBA at 23 feet similar to Loudoun County ES 29 RFI response?</p>	<p>The sound enclosure shall meet the requirements described in specification sections 263213, 1.8, N. 2. and 2.5, B. 5. If level 2 sound enclosure cannot meet the requirements, contractor shall provide sound attenuator enclosure that meets the requirements.</p>
8	<p>Section 263213, 2.10, A. 5. Specifies this 150-KW generator is to be provided with an enclosure space heater. This space heater is not an available accessory on units this small. The generator will be provided with an engine block heater and alternator strip heater to aid in starting and preventing condensation. So please confirm the enclosure space heater can be excluded for this unit?</p>	<p>Provide as specified.</p>

9	Section 263213, 2.10, C. 1. and 2. Has conflicting requirements on the louvers for this 150-KW unit. At this smaller size automatic dampers at the inlet and discharge are not available on this size generator enclosure. Please confirm that fixed inlet and fixed discharge are acceptable only for this 150-KW?	Coordinate with manufacturer recommendation for installation; however based on the information provided this can be excluded.
10	Section 263213, 2.10, D. and E. specifies this 150-KW is to be provided with GFCI outlets along with interior AC/DC lights and light switch. Are all these enclosure lights and receptacles accessories actually required for this small 150-kW as it is not a walk-in type enclosure?	Provide as specified
11	Section 263213, 2.12, A. specifies this generator is to be provided with spring type isolators. This unit is a diesel unit with a sub-base fuel tank so external spring type isolators are not recommended from the manufacturer. The unit will have integral isolators provided from the factory between the engine/alternator and mounting skid. Please confirm external spring type isolators can be excluded as the unit will already be integrally isolated by the manufacturer?	Provide as specified
12	Section 263213, 3.7, C. specifies load bank for testing generator on-site shall be capable of providing full load at 0.8 power factor. Per NFPA 110 as long as the generator is tested at 0.8 power factor at the factory and a report is provided the field load bank testing of the generator can be performed using resistive (1.0 pf) load banks only. Please confirm it is acceptable to perform the on-site load bank testing of the generator with resistive type load banks only? Per Loudoun County ES 29 bid RFI response testing was to be performed as specified in the generator section	Provide as specified
13	Section 263213, 3.6 Field Quality Control has on-site testing requirements for this 150-KW generator and then 3.7 Acceptance testing has more on-site tests specified for the generator. Please confirm both of these testing sections are required as there are some conflicting requirements as to what is required based on each individual section. As one section says to test generator at full load for four (4) hours and the other section mentions testing generator at various load steps such as 25%, 50%, 75%, and 100% for thirty minutes each? Based on Loudoun County ES 29 RFI responses it appeared as though both sections are required for testing.	Please follow both testing measures as outlined in the specifications. Please submit testing reports to LCPS for record.
14	Is seismic certification of each ATS required for this project per Section 263600, 1.2 K.?	Seismic is a generic specification section. This is not necessary for this are: unless directed by LCPS. Nevertheless, a submittal shall be provided for official review and confirmation of general compliance.
15	Section 263600, 2.3, F. specifies each ATS must be provided with a programmed neutral switch position. Is this third neutral position actually required on each ATS as the drawing E501 only shows each ATS EG and ATS ELS with two positions for emergency and normal side?	Electrical drawings are diagrammatic and the specifications should be followed in conjunction with the drawings, coordinate with LCPS if this ca be omitted.
16	Is bypass isolation function required on either ATS OS or ATS LS for this project? Section 263600 appears to not indicate bypass/isolation type transfer switches. Based on Loudoun County ES 29 bypass/isolation ATS's were required for that project.	Per LCPS standard specification provide bypass isolation on all ATS's.
17	Are the cleanouts designated in this drawing (P100) a wall cleanout, or a finished floor cleanout? (I looked at the Architectural and Structural drawings, and did not see a crawl space in these areas). These designations are mostly in Areas A, B, and C. Designations for cleanouts in Areas D and E appear differently. Question applies to both underground Sanitary as well as Storm.	All cleanouts designated as FCO and CO are floor cleanouts. Wall cleanout are designated as WCO.

18	Per the finish schedule, there are certain rooms that are to receive VCT and Carpet. Please provide a pattern or a percentage ratio for the rooms with multiple types of flooring.	Notes on A212 have been revised to provide approximate areas of carpet required. See Addendum 3, AD-36
19	Section 01 32 33 Photographic Documentation. The specifications are unclear as to the mounting height of the construction video camera (section 1.4.E.2). Please specify minimum mounting height for construction video cameras.	See Addendum 3 item, AS-12 for revised specifications
20	Loading dock rails are noted as painted steel, ref. plans AS102 and AS103. Section 055213, subsection 2.2.C states "all railings shall be stainless steel". Please confirm which is correct and also, if exterior rails should be galvanized	Exterior railings to be galvanized and painted with a high performance coating See Addendum 3 item, AS-13 for revised specifications
21	<p>Reference sheet A201 (attached), concerning CMU bond beams for ALL CMU partitions; please confirm that a typical CMU partition, grouted or un-grouted, load bearing or non-load bearing, with a maximum height of 16'-8", would require a minimum of 3 continuous bond beams:</p> <p>A. CMU Bond Beam at Base of Wall - Per General Partition Note 21, a bond beam is required 1 course above floor level Interior Partition Schedule refers to Detail at Base 'BM1' for all masonry partition types Detail BM1 does not indicate a CMU bond beam at the bottom of the wall</p> <p>B. CMU Bond Beam, Intermediate - Per General Partition Note 22, a continuous bond beam is required at 8'-0" o.c., max</p> <p>C. CMU Bond Beam at Top of Wall - Interior Partition Schedule refers to Detail at Top 'TM2' for all masonry partition types Detail TM2 does indicate a CMU bond beam at the top of the wall "</p>	<p>A minimum of 3 continuous bond beams are not required for CMU partition walls.</p> <p>A. A bond beam at the 1st course above the floor level is not required at interior CMU partition walls.</p> <p>B. Continuous bond beams spaced at 8'-0" o.c. maximum are not required in CMU partition walls.</p> <p>C. A continuous bond beam is not required at the top of CMU partition walls as shown in 'TM2'. Bond beams are only required at the top of CMU partition walls as shown in B5/A502, B6/A502 D2/A502, B6/A503.</p> <p>SEE ADDENDUM 3, ITEM AD-32 for revised notes</p>
22	See 6 page attachment (Q-5); wall tagged as 8" on Structural drawings, 12" (M11) on Architectural drawings. Walls scale 8" on Architectural drawings. Which is correct 8" or 12" CMU?"	M11 & M7 overall partition depths were incorrectly listed. M11 overall depth should read "7 5/8" and M7 should read "5 5/8". See Addendum 3, item AD-32
23	See Section 11 40 00, Part 5 Item # 44 (CLEAN DISHTABLE) is specified to have an undershelf. The floor plans and/or elevations do not show an undershelf with item # 44 (CLEAN DISHTABLE). Please advise.	Undershelf not required. See Addendum 3 item, AS-14 for revised specifications
24	<p>Category A Road (Private), "Pissarro Road" – C1.03.02 indicates a Category A Road with existing utilities indicated, during the prebid PowerPoint and included in Addendum 1 the road was identified as Pissarro Road. It was our understanding that the dates in the PowerPoint were incorrect and should be 2021 in lieu of 2020.</p> <p>Please advise of the following:</p> <p>a. The correct substantial completion dates for Pissarro Road and the Arcola Mills Drive frontage improvements and utility extensions</p> <p>b. Advise if the water and sanitary sewer that are noted as existing on Pissarro Road are in place and if not what dates will they be in place for the school contractor to connect to</p> <p>c. Advise of who the developer and/or contractor is that will be constructing the road/utilities</p>	<p>a. Substantial completion date of Pissarro Road per proffers is approximately April 24, 2021.</p> <p>b. The water and sanitary sewer shown on Pissarro Road are currently not in place. They will be installed by others for the School GC to connect to.</p> <p>c. The contractor that will be constructing the road/utilities has yet to be determined.</p>
25	Electrical Primary Service for Permanent Power – C1.03.02, C1.03.03, ES100 do not appear to show the path/conduits/requirements for the permanent electrical service to the transformer. Please advise of where the primary service is coming from and requirements for the contractor versus the Power Company	The proposed permanent electrical service is now provided on Sheet C1.13.01 - Dry Utility Plan prepared by Davis Utility. See Addendum 3, Civi Drawings, item CD-2

26	<p>Drawing A113 – section A3/A514 is shown at the Reception Area (C101) window. Does this section apply to window sills for Rooms C103 through C106 as well? Does this cut section apply to other locations as well?</p>	<p>Use Detail A6/A521 for all W1 windows in Area C. See Addendum 3 item, AD-36 for revised drawing details</p>
27	<p>Some clarification is needed in areas that have more than one VCT and/or CPT type listed. Where does the VCT end and CPT start in these areas? Is there a certain floor pattern that will be required? Some area examples have been provided below, but there are many other rooms. Can finish floor plans that correspond to the finish schedule and show floor patterns be provided?</p> <p>a.A101 VCT 1 & 2 CPT 2 b.A201 VCT 1 & 2 CPT 3 c.A301 VCT 1 & 4 CPT 4 d.B101 VCT 1 & 2 CPT 2 e.B201 VCT 1 & 3 CPT 3 f.B301 VCT 1 & 4 CPT 4</p>	<p>Regarding Carpet in rooms w/ both carpet and VCT, See response to question 18.</p> <p>Additional notes have been included to clarify proportions of field tile (VC 1) versus accent tiles (VCT 2, 3, & 4). See Addendum 3, item AD-36</p>
28	<p>OMG, the manufacturer of the Shadowline Wall coping, as indicated in the Exterior Material Finish schedule has responded as following. In order to meet the specification (ANSI/SPRI ES-1) the Shadowline coping need to be fastened to 2x dimensional lumber as in attached detail. Please see attached, Q10. Therefore, the two layers of 3/4" plywood as indicated on details A2, 3, & 4/A524 are unacceptable and must be modified.</p>	<p>See Addendum 3 item, AD-49 for revised coping details</p>
29	<p>General Mechanical Equipment Connection Note C on drawing E701 indicates that EC is to provide a disconnecting means for each item of equipment listed on the schedule. The RTUs, ERUs, AHUs, MAUs, chiller and chilled & hot water pumps are indicated on the mechanical schedules on drawing M002 with a note to provide with non-fused disconnect or VFD. Please confirm that the disconnects for these units are to be furnished by the mechanical contractor as indicated on the mechanical equipment schedules on drawing M002.</p>	<p>To be coordinated by GC based on mech unit specifications. Contractor to price with all disconnects by EC.</p>
30	<p>Indicated throughout the power drawings there are symbols that appear to represent the low voltage systems (WAPs, Speakers, Clock/Call-in, Etc.). Please confirm that these symbols represent low voltage systems and should be removed from the electrical power drawings.</p>	<p>Symbols indicated are for low voltage systems and were directed by LCPS to include on power sheets.</p>
31	<p>Sheet Keynotes 8 & 10 on drawing ES100 indicates that a separate utility power source is to be provided for the athletic field irrigation system and for the well pump. Please provide an updated single line diagram and site electrical drawing indicating the locations of where the utility power is to be routed to as well as the conduits and cabling requirements.</p>	<p>No information has been provided to Interface for these items note is included as a pricing measure for the contractor. Once information is received Interface can update accordingly.</p>
32	<p>Please provide the dry utility drawings indicated by General Sheet Note 23 on ES100.</p>	<p>Provided on Sheet C1.13.01 - Dry Utility Plan prepared by Davis Utility. See Addendum 3, Civil Drawings, item CD-2</p>
33	<p>The civil drawings and the electrical site plan ES100 do not indicate the primary electric utility conduit routing. Please provide a revised drawing indicating the routing of the primary electric utility conduits as well as quantities and sizes.</p>	<p>The proposed permanent electrical service with proposed quantities and sizes is now provided on Sheet C1.13.01 - Dry Utility Plan prepared by Davis Utility. See Addendum 3, Civil Drawings, item CD-2</p>
34	<p>Specification 26 09 23 3.1 B. indicates to "Install wiring and cabling for control and signal transmission conductors in conduit between devices and system components." Please confirm that all lighting control cabling including CAT5e are to be installed in conduit and that plenum cabling supported by J-hooks is not acceptable.</p>	<p>Please include routing of lighting control cables in conduit from the location of the lighting control station (wall control panel/switch) to above the ceiling. When above ceiling, transition to plenum rated cable supported by J-hooks is acceptable per instruction from LCPS comments from DB Combs.</p>
35	<p>Request for Additional Roof Details - Please provide details or sections to the area circled in red.</p>	<p>See addendum 3, item AD-31 for additional roof details</p>
36	<p>The three bicycle racks called out on drawing AS101, is there a specification section?</p>	<p>Bike contracts are NIC. See addendum 2, Civil Drawings, item CD-2</p>

38	<p>Specification 122113 – Horizontal Blinds</p> <p>a.2.2.D.4 Tilt limiter with preselected degree settings – this is in conflict with Section 2.2.H.3 that calls out for tilt full. Do you want tilt full for the blinds?</p> <p>b.2.2.F Maximum Light-Blocking Blinds calls out for light-blocking for the blinds – this is not available with the 22mm slat spacing as called out in Section 2.2.C.3. We will provided this light-blocking for 18 mm slat spacing.</p> <p>c.2.2.M Hold Down Brackets are called out here, these are counter-productive on window frames, can we excluded these?</p> <p>d.2.2.N Side Channels and Light Gap Seals are called out here, these are problematic with use in horizontal blinds, may we exclude these?</p>	<p>a. Provide full tilt as specified</p> <p>b. 18mm slat spacing is acceptable. See Addendum 3, item AS-19, for spe revision.</p> <p>c. hold brackets at window frames can be excluded. All doors with glazing shall have hold down brackets as specified. See Addendum 3, item AS-19 for spec revision.</p> <p>d. Provide as specified</p>
39	<p>Drawing Volume 2 – Architectural Drawings</p> <p>a.A202 Door Schedules: The General Door Notes comments #16 calls out for Lockdown Shades for all doors glazing. For the FGS – Folding Glass Storefront door, Lockdown Shades are not available as this glazing exceeds the maximum size of these shades. Please specify what type of window treatments for this door type.</p>	<p>lockdown shades are not required for the folding glass storefront doors. See Addendum 3 items AD-63, & AD-64, for revised notes.</p>
40	<p>Section 116623, paragraph 2.2. specifies scoreboard that are hardwired. If wireless operation is provided it would delete the control conduit needed from the scoreboard location to the scorer’s table location. Can the scoreboards be changed to wireless operation in lieu of hardwired?</p>	<p>Provide scoreboard as specified</p>
41	<p>Section 116623, paragraph 2.3.D specifies a Porter #917 basketball hoop for the main court units but drawing A703 indicates a #950 basketball hoop. Which basketball hoop shall be provided for the main courts a #917 as specified or a #950 as shown on the drawing?</p>	<p>Provide Porter 917 basketball goals for main court units as specified.</p>
42	<p>Section 116623, paragraph 2.3.E specifies a Porter #955 basketball hoop for the side court units but drawing A703 does not indicate this type of basketball hoop. Should a #955 basketball hoop be provided for the side court units?</p>	<p>Provide Porter 955 basketball goals for side court units as specified.</p>
43	<p>Section 116623, paragraph 2.4.D.7. specifies corner wall safety pads but none are shown on the drawings. Should any of the columns or exposed corners in the gym receive corner pads?</p>	<p>Include additional padding for CMU pilasters described in Addendum 3, item AD-53.</p>
44	<p>Drawing A633 indicates a bleacher seating capacity of 241, which is not possible unless the bleacher is wall to wall, without end rails and 79’-8.25” long. Can you confirm if the bleacher should run wall to wall without end rails to achieve the 241 maximum net seat count desired?</p>	<p>See addendum 3, item AD-53 for revised bleacher configuration</p>
45	<p>Section 126600, paragraph 1.9.A.3. calls for a 10-year unconditional warranty for the bleachers with 10 annual inspections. Can this be changed to the manufacturer’s standard 5-year warranty?</p>	<p>Provide as specified.</p>
46	<p>Section 126600, paragraph 2.4.F. specifies 22” row spacing but the drawings indicate 24” row spacing. To achieve the 241 seats desired, 24” row spacing would be required. Can you confirm 24” row spacing is required?</p>	<p>Provide 22” row spacing. See addendum 3, item AD-28 for revised bleacher configuration</p>
47	<p>Section 126600, paragraph 2.4.I. specifies the wheelchair spaces to have removable railings at row two behind wheelchair spaces but these are not required by building code and are cumbersome to set up and take down. We would recommend not requiring rails at the recoverable ADA spaces. Will removable rails be required for the ADA spaces?</p>	<p>Provide as specified.</p>
48	<p>Section 126600, paragraph 2.4.M.3.b. specifies the color of the rails to match the seats. All manufacturers offer black as their standard color for rails. Will color match rails be required or will black be acceptable?</p>	<p>Provide as specified.</p>

49	Section 126600, paragraph 2.4.R.8.a & b specify row letters and seat numbers. These are generally not supplied for an elementary school. Will row letters and seat numbers be required?	Provide as specified.
50	OMG has informed the roofing subcontractors, that in order for the wall copings (shown on details A2, A3 & A4 on sheet A524) to be ES-1 compliant, the front face can't exceed 6" (7-3/4" indicated on the drawings) and the back leg can't exceed 5" (7" indicated on the drawings). The is front face can be manufactured with a minimum dimension of 5" and maximum dimension of 10", however the ES-1 compliance can only be achieved with a maximum face of 6". Please advise.	See Addendum 3 item AD-49 for revised coping details
51	General Partition Note 18 on sheet A201 states "Provide 3-1/2" glass-mat sheathing at base of all interior gypsum board walls. Refer to XX/AXXX." Does this note apply to this project? If so, please provide detail that this note references.	That note does not apply to this project. See Addendum 2, item AD-32
52	There are several details (A501,C4/A522, A4/A524) that reference a stucco finish, however, there doesn't appear to be a specification for this stucco finish. Please advise.	See spec section 09 24 00 provided via Addendum 3, item AS-5
53	It is understood that CT-1 is to go full height within the shower areas. However, based on the Accessible Transfer Shower Stall Control Wall Elevation on sheet A641, the measured shower height seems to be 6'6". Please confirm the correct height that CT-1 is to be stacked on the shower walls?	CT-1 is to go full height from floor to ceiling. See RCPs for shower ceiling heights
54	Specification section 093000 Tiling, paragraph 2.3-B calls out for Quarry Tile to be 4x8 and Quarry Tile Base to be 6x8. Quarry tile base is typically 6x6, and quarry tile is typically 6x6 or 8x8. Please advise	Provide 6x6 quarry tile base and 6x6 Quarry Tile. See Addendum 3, item A 15 for revised spec section.
55	Specification section 075323 EPDM Roofing, Paragraph 3.4-D Bonding Adhesive: On LCPS ES 31 (Wax Pool) Addendum 3 was issued allowing for manufacturer's standard application method for bonding adhesive in lieu of requiring an adhesive spray rig, See below. Will this also be acceptable on this project? The spray rig requirement eliminates a number of otherwise qualified roofers as they don't have the equipment necessary to apply the adhesive via spray rig.	Revision is accepted. See Addendum 3, Item AS-16 for revised spec
56	Specification 04 20 00 2.2.D.2 and Exterior Materials Finish Schedule on drawing A306 identify the Glazed CMU as being 8" nominal in height. Wall section for Glazed CMU on A501 depicts the units as 4" nominal in height. Please confirm which is the correct height for the Glazed CMU for interior and exterior applications.	Glazed CMU to be 8"Nom. See Addendum 3, item AD-39 for revised section.
57	There may be an issue with the Phase II E&S plan (C1.08.02). I don't believe their intended design layer printed.	Sheet C1.08.02 has been checked and verified to have all proposed layers on and printed.
58	Specification section 042000-6, 2.1, related to CMU Fire-Resistance Ratings - notes in the last sentence "Provide materials with classification markings as required by the assembly design". Stamped and/or labeled CMU units are not typically used in this region and are very expensive. All relevant building codes and the IBC (Section 721) typically reference the calculation method (equivalent thickness) in determining the specified fire-resistance ratings for CMU. Please confirm stamped/labeled CMU are not required and the calculation method (equivalent thickness) is acceptable	Per the spec, Classification markings are only required if called for by the assembly design. See sheet A501 for Building Systems Assemblies

59	Specification section 042000-9, 2.5, F, Core Fill – notes to provide fully grouted cells in CMU...at wall locations where sound attenuation is required on the Architectural drawings. A201, notes STC ratings for the partitions, but does not appear to require any sound insulation. There are several wall types, M05G, M09G, M13G that indicate “Grouted CMU”. Is this what the note in the specification above is referring to, we assume it is not the intent to grout all the walls with an STC rating. Please confirm it is not the intent to fully grout these walls for sound attenuation and/or advise of any walls that are required to be fully grouted for sound attenuation	Per sheet A201, only types M05G, M09G, M13G are to be fully grouted
60	Specification 042000-13, 2.11, Masonry Cell Fill – we have not found any masonry partitions on A201 that require “Masonry Cell Fill” as specified. Please confirm the “Masonry Cell Fill” does not apply to this project or advise of where it is to be installed.	Masonry cell fill is not used in this project. CMU cells are either grouted or not grouted. See addendum 3, item AS-17 for amended spec
61	Specification 042000-7, 2.2, C – the unit compressive strength is listed as 2800 PSI. Should this be listed as 1900 PSI in lieu of 2800 PSI? Please advise.	2800 psi is correct per specifications and structural design notes (S001.VII A.)
62	Specification 042000, 2.7, D – this section notes anchoring CMU to structural steel, but the only detail we have found that is related is B2/S203. Is it the intent to anchor CMU to every steel column and beam it is within a few inches of? We assume it is not the intent to anchor to all the columns CMU is wrapping such as those indicated on A531, A532 and similar. Please advise of which steel columns/beams the CMU is to be connected to with anchors similar to B2/S203.	The intent is to anchor CMU to steel columns that are within a few inches of steel columns per B2/S203. Only beams that are embedded in CMU walls are required to have anchors. At CMU column enclosures, one side of the column that is within a few inches of a CMU enclosure wall is required to have anchors. The CMU enclosures are also required to be tied back to the main CMU walls with intersecting wall ties.
63	B6/S207 for example indicates post installed adhesive anchors and J bolt anchors that would need to be installed while the CMU is being laid. Post installed adhesive anchors would allow for a much better finished product installed exactly where needed. Please confirm post installed expansion anchors with fully grouted cells can be used in lieu of J bolts and/or headed studs at these details and similar.	It is acceptable to use ½” Ø Hilti HY 270 Adhesive Anchors at 2'-0” o.c. and embedded 5” into grouted cells in lieu of the J bolts.
64	Irrigation specification 331001 – the irrigation specification only notes to irrigate the soccer field. Please confirm this is correct.	This is correct. The soccer field is the only portion of the athletic fields that is to be irrigated (refer to the dashed line in Addendum 3, Civil Drawings, item CD-3)
65	Irrigation specification 331001 – please confirm the well is not part of this contract and is to be by others. In addition, please provide the termination point of the irrigation system for bidding purposes as the location of the new well is unknown.	It is verified that the wells are not a part of this contract. Final location has not been determined. 4 locations are to be drilled by EGGI and the location will be determined after receiving flow data. It is anticipated that the well will be located in one of the approximate locations shown in the attached exhibit (See Addendum 3, Civil Drawings, item CD-4)
66	Natural Athletic Field Turf 321823.26 – please provide a drawings/sketch indicating the limits of the athletic turf.	Please refer to the attached exhibit for the limits of the athletic turf which is to include everything inside of the track except for the skinned infield of the softball field (refer to the dashed line in Addendum 3, Civil Drawings, item CD-3)
67	Specification Section 053100 Steel Decking – Acoustical roof deck, paragraph 2.2, C, 8 indicates the sound absorbing insulation “shall be factory installed within the deck cells”, this statement leads us to believe it is a cellular deck, however it is not noted as cellular or non-cellular within the specification or S133 where it designates a 1 ½ acoustic metal deck. We have seen both cellular and non-cellular specified on the Loudoun County schools over the years. Please advise if it is the intent to have non-cellular acoustic decking or cellular acoustic decking as there is a substantial cost difference between the two	The intent is to have cellular acoustic decking
68	Please provide the asphalt detail for the side road Category A Road (private) that ties into Onsite Paving.	The design of Category A Road (Pissarro Road) is not in this contract.

69	Please provide the detail for the Asphalt Play Area. Is it the same design as the Walking Track?	Yes, the Asphalt Play Area is the same design as the Walking Track.
70	Detail H16/A209 supposed to show header detail for folding glass storefront but page A209 does not exist. Please provide detail or clarify.	See addendum items AD-57, for missing detail
71	Please confirm that that tectum panels (AWP-1) will be installed per architectural detail B1/A703. Specs calls for Tectum finale, but detail is totally different. Tectum finale has a strip of its own tectum panel attached around panels, it is infilled with mineral wool and does not have any wood furring edges to be able to paint black.	Follow standard MFR installation procedure. See Addendum 3, item AD-3'
72	Please confirm that tectum panels will be field painted. Specs are not clear and drawings only mention painting tag but no clear.	Tectum panels will be painted per sheet A703, provide at least 3 paint colors TBD by architect
73	Sheet A522-Detail C2 calls out for a motorized roller shade. This is the Clerestory Area C as shown on A123 for the W12 type windows over the Media Center. Please clarify if Motorized Roller Shades are needed on these window type W12. There is no specification for motorized roller shades.	Remove motorized roller shades. See addendum item 27 for revised detail
74	Please provide details TA4 and BA2 as called out on drawing A201 for the interior partition schedule	See addendum 3, item AD-32 for missing details
75	Please provide sheet A300 for roof tag details as indicated in the roof legend on A150.	"A300" is a typo and should read "A501" See Addendum 3, item AD-51 for revised legend notes
76	Door schedule calls for HMI-25 for doors C116 and C114 but floor plan shows HMI-27. Please clarify.	Doors C116 and C114 to have frames HMI-27. See addendum 3, item AD-4 for revised door schedule information
77	Please provide window type W5A as shown on the floor plans. There is no W5A type shown on the exterior frame schedule on drawing A206	"W5A" is a typo and should read "W5" See Addendum 3, items AD-27, AD 28, AD-29, & AD-30 for revised window tag information.
78	Please provide finish floor plans or floor and wall patterns for the rooms on the finish schedule that have more than one floor finished called out.	Floor finish drawings are not available at present. See responses to questions 18 & 27 to clarify floor material scope.
79	Need wall sections w/ siding materials and termination points (Section B6/A401 along gridlines Q & T)	Both sections are similar to wall section A4/A512 from roof deck and above
80	Clarification is needed as to what windows are to receive solid surface sills. The only reference found to solid surface sills is Section A3/514 and sill detail A6/A521. Cannot determine where these details are to apply. Exterior window types on dwg A206 provide no insight for sill requirements. Please Clarify	See Addendum 3, item AD-34 for clarifying detail callout
81	Can a solid surface color selection be provided – there is a wide range in price when it comes to color group selections. Please Clarify	Please price based products available in MFR Group 3 or Group C (depending on classification system used by MFR). See Addendum 3, item AS-18 for revised spec.
82	Reception Area C101 – there are no elevations, details, material clarifications for the Reception Counter Area. Please Clarify.	See Addendum 3, items AD-51 for reception desk details
83	Drawing FA001 indicates that all fire alarm conduit is to be rigid steel. Specification section 28 05 13 3.5.B indicates that all wiring is to be installed in EMT. Please confirm that EMT conduit is acceptable.	Yes, EMT conduit is acceptable.
84	Educational Intercommunications and Program Systems lists Cisco as the only approved manufacturer, with no substitutions permitted. The same specification states that intercom headend equipment shall be Rauland-Borg Telecenter U. If the contractor is to provide intercom headend equipment, please clarify which manufacturers are acceptable.	Rauland Borg Telecenter U is not required. Corridor and large spaces (e.g. Gym, cafeteria, kitchen, etc.) wall mounted clocks and intercom speakers each require a Cat 6A connection. Wall mounted clocks and intercom speakers are Owner Furnished/Contractor Installed (OFICI). Algo 8190 and Algo 1203 devices are Owner Furnished / Contractor Installed (OFICI). See Addendum 4, Electrical - Technology Specifications, item 1

85	The System Responsibility Matrix on DWG E002 indicates that intercom system devices (speakers and clock/speakers) will be owner-furnished/contractor-installed and that intercom headend equipment will be owner-furnished/owner-installed. Please clarify owner/contractor responsibility, given that Section 275123.50 specifies a contractor-furnished/contractor-installed intercom system.	Rauland Borg Telecenter U is not required. Corridor and large spaces (e.g. Gym, cafeteria, kitchen, etc.) wall mounted clocks and intercom speakers each require a Cat 6A connection. Wall mounted clocks and intercom speakers are Owner Furnished/Contractor Installed (OFCI). Algo 8190 and Algo 1203 devices are Owner Furnished / Contractor Installed (OFCI). See Addendum 4, Electrical - Technology Specifications, item 1
86	Clock Systems requires a contractor-furnished/contractor installed Rauland-Borg clock system, with "EST audible devices." The drawings clearly and consistently indicate that clock/speakers will be Algo Model Number 8190S and that they will be owner-furnished/contractor-installed. Please clarify.	Rauland Borg Telecenter U is not required. Corridor and large spaces (e.g. Gym, cafeteria, kitchen, etc.) wall mounted clocks and intercom speakers each require a Cat 6A connection. Wall mounted clocks and intercom speakers are Owner Furnished/Contractor Installed (OFCI). Algo 8190 and Algo 1203 devices are Owner Furnished / Contractor Installed (OFCI). See Addendum 4, Electrical - Technology Specifications, item 1
87	Communication Data Network: Please clarify fiber backbone requirements for each IDF. The specification indicates that (2) 12-pair multimode and 12 fiber OM4 will be extended to each IDF. The drawings indicate that a 24-strand single mode will be extended to each IDF.	Provide two (2) 12-pair multimode. If distance between MDF and IDF exceeds norms, provide 24-strand single mode.
88	Copper backbone cabling is not shown or referenced on the Single Line Diagrams – Technology, on DWG E503. Copper backbone cabling is, however, included among the requirements of Section 272000 – Communications Data Network. Please clarify whether copper backbone is required.	Copper backbone cabling is not required.
89	CCTV Surveillance System lists cameras that are to be furnished and installed by the contractor. The System Responsibility Matrix on DWG E002 lists CCTV devices (cameras) as owner-furnished/contractor-installed. Please clarify whether the owner or the contractor will furnish CCTV cameras.	CCTV cameras will be owner furnished/contractor installed
90	The quantity of data racks shown on the electrical power drawings differs from the quantity of data racks shown on the technology drawings. Please confirm which data rack quantities are correct.	Install the quantity of racks as shown on the technology drawings.
91	On power DWG E215, the Enlarged Main Data/IT Room E110 plan shows cable tray installed in an "L" shape. On technology DWG E315, the Enlarged Data Room E110 plan shows ladder rack, rather than cable tray, and shows it in an entirely different configuration than shown on DWG E215. Is cable tray to be provided in this room or ladder rack? Is the configuration to be as shown on DWG E215 or DWG E315?	Install the ladder rack as shown on sheet E315.
92	The AV Equipment Schedule on DWG E002 lists Nurse Call devices. Nurse call devices are not shown on electrical floor plans, and there is no nurse call specification. Please clarify whether a nurse call system is required. If nurse call is required, please issue appropriate drawings and specifications.	Nurse call system is LCPS standard in the clinic. Refer to specification 27 5 23 'Nurse Call System', Addendum 3, item AD-20 & Addendum 4, Electrical Technology, items 1, 2, & 3
93	Paragraph 1.2.A.1.II, of Section 01 78 53 - Extra Materials, lists spare parts for the Division 27 Section "Intercommunications and Program Systems." Based on Technology drawing notes, intercom and clock systems for this project will be owner furnished. Please confirm whether the Rauland-Borg parts listed in Paragraph 1.2.A.1.II, including a Telecenter U Head-End controller, are to be furnished by the contractor as spare parts. Please confirm whether the contractor is required to provide spare speakers, as listed in the referenced paragraph, given that intercom speakers are to be owner furnished.	No spare parts are to be included.
94	Paragraphs 1.3.B.1.b and 3.3.J.2, of Section 27 20 00 Communication Data Network, specify 100-pair copper backbone cable for intercom. No backbone cable for intercom is shown on the Communications Riser on Drawing IT802. Given that intercom devices are connected, via Cat6A cables, directly into the owner's IT network, copper backbone cables would seem unnecessary. Please clarify.	100-pair cable is not required.

95	<p>Paragraph 1.2.A.1.kk of Section 01 78 53 - Extra Materials lists spare parts for the Division 27 Section "IPTV Distribution Systems." The project specification does not include a section for IPTV distribution systems or any other kind of television distribution systems. Paragraph 1.2.A.1.kk lists splitters, amplifiers, taps, attenuators, and two types of coaxial cable. None of these items are specified in any Division 27 section. All TV outlets shown on the IT drawings consist of a single Cat6A data drop. Please clarify whether listed items not used in the construction must be provided as spare parts. If so, please specify, by quantity, manufacturer, and part number, the splitters, amplifiers, taps, and attenuators that are to be provided.</p>	<p>That section of the specifications was deleted - that portion of the spec ca be ignored.</p>
96	<p>Part 4 – Table of Contents of Section 27 08 00 – Commissioning of Communications indicates that 100% of the work of Section 27 53 00 – Distributed Systems (IPTV) (Including Headend) will be sampled during commissioning. There is no Section 27 53 00 in the specification. There is no IPTV or CATV or MATV section in the specification. Please clarify whether Section 27 53 00 will be added to the specification.</p>	<p>That section of the specifications was deleted - that portion of the spec ca be ignored.</p>
97	<p>Paragraph 1.8.I.2, of Section 280500 – Common Work Results for Electronic Safety and Security Systems, requires the Electronic Safety and Security contractor to provide a 25-year extended product. Would the word "warranty" at the end of the preceding sentence complete the sentence? If so, would the 25-year warranty apply to the structured cabling portion of the work or to all work of Division 28? We are not aware of fire-alarm, access control, or CCTV manufacturers who offer 25-year product warranties.</p>	<p>The 25-year warranty applies to the structured cabling system.</p>
98	<p>Specification Section 27 40 00 – Audio Video Distribution System, Paragraph 2.1.B.6 states that the projector will be controlled by an Extron media digital switcher. No media digital switcher is specified in Section 27 41 17 or shown on any drawing. Please clarify whether a media digital switcher is required. If one is required, please specify the Extron model number.</p>	<p>Include (1) Extron SW4 4K Plus switcher per projector location (#60-1604-01)</p>
99	<p>Stage Curtains: 11 64 13, Can the overall height of the valence be provided and what the overall width of the side and rear curtains be provided?</p>	<p>Bottom of Valence to be 2'-0" below top of proscenium opening. GC to ensure valence is properly sized to achieve this goal. The side are curtain are to be 14'-0" wide, the rear curtain is to be 32'-0" wide</p>

Addendum #4



Project Number	2019-0122	Date	March 4, 2020
Project Name	Loudoun County Public Schools (LCPS) - New Elementary School		
To	John Oduroe	Phone	703.485.8563
	Stantec (Virginia)		
	3001 Washington Boulevard		
	Suite 500		
	Arlington, VA 22201		
From	Michael Troyer, PMP, RCDD, CTS, LEED AP	@	Interface Engineering, Inc.
Distribution			

Applies To **Electrical - Technologies**

ELECTRICAL-TECHNOLOGY

1. Sheet E002:
 - Add nurse call device symbols and descriptions to symbol list.
 - Update responsibility matrix to include nurse call.
 - Update AV equipment list with Nurse call products from specifications.
2. Sheet E313:
 - Add nurse call devices to office area
 - 1) Duty station and Annunciator at nurse desk.
 - 2) Patient station at bed locations
 - 3) Pull cord in bathroom
 - 4) Domeless controller above ceiling
3. Sheet E315:
 - Added nurse call head end in Main telecom room E110.

ELECTRICAL-TECHNOLOGY SPECIFICATIONS

1. Spec section 27 51 23.50:
 - Removed Rauland-Borg as system basis of design (these are very extensive changes because the spec seems to be from the manufacturer.

TECHNOLOGY SYMBOL LIST

NOTE: This is a standard symbol list and not all items listed may be used.

Abbreviations

(E)	EXISTING
AFF	ABOVE FINISHED FLOOR
ANMW	GEL-FILLED UNDERGROUND CABLE
C	CONDUIT
CAT	CATEGORY
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CFOI	CONTRACTOR FURNISHED OWNER INSTALLED
COAX	COAXIAL
EA	EACH
FDU	FIBER OPTIC DISTRIBUTION UNIT
FT	FOOT, FEET
HH	HANDHOLE
IDF	INTERMEDIATE DISTRIBUTION FRAME
IN	INCH, INCHES
IT	INFORMATION TECHNOLOGY
LAN	LOCAL AREA NETWORK
LC	FIBER OPTIC CONNECTOR
LV	LOW VOLTAGE
MDF	MAIN DISTRIBUTION FRAME
MISC	MISCELLANEOUS
N/A	NOT APPLICABLE
NTS	NOT TO SCALE
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFIO	OWNER FURNISHED, OWNER INSTALLED
OSP	OUTSIDE PLANT
PBX	PRIVATE BRANCH EXCHANGE
POE	POWER OVER ETHERNET
PTZ	PAN, TILT, ZOOM
QTY	QUANTITY
RFI	REQUEST FOR INFORMATION
RM	ROOM
SC	FIBER OPTIC CONNECTOR
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TGB	TELECOMMUNICATIONS GROUNDING BUS BAR
TTB	TELEPHONE TERMINAL BOARD
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
W	WITH
W/O	WITHOUT
WAN	WIDE AREA NETWORK
WAO	WORK AREA OUTLET
WAP	WIRELESS ACCESS POINT
WI-FI	WIRELESS FIDELITY
WP	WEATHERPROOF

Audio/Video

	POWERED REARFRONT PROJECTION SCREEN
	AUDIO-VIDEO OUTLET IN FLOOR BOX WITH SINGLE-GANG ADAPTER PLATE AND 1-1/4" CONDUIT UNDER SLAB TO LOCATION SHOWN ON FLOOR PLANS.
	SECTION 27 40 00 OUTLET ABOVE WALL MOUNTED VIDEO MONITOR IN EXTRON PLENUM VAULT ENCLOSURE. COMPLETE WITH ONE (1) EXTRON IPVS 40SD DIGITAL SWITCHER, ONE (1) POWER SUPPLY, ONE (1) EXTRON IPVM20 ENCLOSURE (WITH CEILING TILE INSERT), ONE (1) CAT 6A DATA DROP CABLE TO NEAREST IT ROOM FOR WALL MOUNTED CLOCK. CLOCK WILL BE OWNER FURNISHED AND CONTRACTOR INSTALLED (OFCI).
	SECTION 27 53 00 CATV OUTLET, SINGLE GANG, WALL, FOR IP/CATV CABLE DROP. PROVIDE ONE (1) 1-1/4" CONDUIT TO THE ACCESSIBLE CEILING VOID, BUSHED AND GROUNDED. INSTALL (1) CAT6 CABLE THROUGH CONDUIT INTO CEILING AND THEN TO NEAREST TELECOM ROOM. REFER TO SECTION 27 53 00 FOR CABLE, JACK AND INSTALLATION INSTRUCTIONS.
	55" FLAT PANEL DISPLAY MOUNTED TO WALL BOX - INSTALL AT HEIGHT INDICATED ON ARCHITECTURAL FLOOR PLANS
	75" FLAT PANEL DISPLAY MOUNTED TO WALL BOX - INSTALL AT HEIGHT INDICATED ON ARCHITECTURAL FLOOR PLANS
	SOUND SYSTEM SPEAKER - MOUNT AS INDICATED ON FLOOR PLANS
	CEILING MOUNTED MICROPHONE
	FLOOR OR WALL MOUNTED MICROPHONE INPUT - SEE NOTES ON FLOOR PLANS FOR MOUNTING OPTION
	CEILING MOUNTED PROJECTOR
	WALL MOUNTED ANTENNA FOR WIRELESS MICROPHONE
	WALL MOUNTED INPUT PLATE FOR AV SYSTEM
	PANIC BUTTON LOCATION - INSTALL AS NOTED ON SHEET
	CEILING MOUNTED GLASS BREAK SENSOR
	DOOR POSITION SWITCH/CONTACT - INSTALL DEVICE AT LOCATION INDICATED - ROUTE CABLING TO SECURITY EQUIPMENT LOCATION ON THE WALL
	ELECTRIC LATCH CONNECTION - INSTALL 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING
	ELECTRIC STRIKE DOOR LOCKS
	ADA ACCUATOR BUTTON
	MAGNETIC DOOR LOCKS
	JUNCTION BOX
	CEILING MOUNT IP VIDEO SURVEILLANCE CAMERA LOCATION - INSTALL (2) CAT 6 CABLES TO THE TELECOM ROOM LOCATION
	WALL MOUNT IP VIDEO SURVEILLANCE CAMERA LOCATION - INSTALL (2) CAT 6 CABLES TO THE TELECOM ROOM LOCATION
	CORNER MOUNT IP VIDEO SURVEILLANCE CAMERA LOCATION - INSTALL (2) CAT 6 CABLES TO THE TELECOM ROOM LOCATION
	WALL MOUNTED ACCESS CONTROL CARD READER - INSTALL 3/4" CONDUIT FROM DEVICE LOCATION TO ACCESSIBLE CEILING
	WALL MOUNTED KEYPAD - INSTALL 3/4" CONDUIT FROM DEVICE LOCATION TO ACCESSIBLE CEILING
	AIPHONE MASTER STATION - AT RECEPTION DESK
	AIPHONE DOOR STATION - WALL MOUNTED AT 48" AFF

Clock/Sound

	WALL MOUNTED ROOM CALL-IN SWITCH (ALGO 1203) - PROVIDE 3/4" C. TO ACCESSIBLE CEILING. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS. INSTALLED IN CONJUNCTION WITH IP CLOCKS.
	SURFACE MOUNTED CLOCK (ALGO 8190S). COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS. PROVIDE (1) CAT 6A DATA DROP CABLE TO NEAREST IT ROOM FOR WALL MOUNTED CLOCK. CLOCK WILL BE OWNER FURNISHED AND CONTRACTOR INSTALLED (OFCI).
	IP SPEAKER OUTLET - PROVIDE (1) CAT6A CABLE TO EACH LOCATION FROM THE NEAREST TELECOM ROOM
	MAIN NURSE CALL SYSTEM HEADEND - RSKMCS WITH 15V POWER SUPPLY - RSKMPR15. MOUNT IN MAIN TELECOM ROOM USING 3/4" WALL MOUNTING CABINET
	NURSE CALL CONTROL STATION ANNUNCIATOR - R4KANV2
	PATIENT BED-SIDE STATION - RSKPS1A
	NURSE CALL DUTY STATION - RSKSD1A
	DOMELESS ROOM CONTROLLER MOUNTED ABOVE THE CEILING - RSKDC16
	NURSE CALL BATHROOM EMERGENCY PULLCORD STATION - R4KPC11
	WALL CHIME - R4KMC1. CONNECTED TO A MARQUEE CONTROLLER MOUNTED ABOVE THE CEILING - R4KMCV2

Raceways

	STI EZ-PATH 22+ (FOR 2" CONDUITS) AND 44+ (FOR 4" CONDUITS). PROVIDE AS INDICATED ON FLOOR PLANS AS A MINIMUM (NOT ALL REQUIRED PATHWAYS MAY BE SHOWN). PROVIDE WITH MULTI-GANG INSTALLATION BRACKET AND SECURE TO WALL STUDS. INSTALL PER MANUFACTURER'S RECOMMENDATIONS FOR FIRE RATING AS REQUIRED.
	CABLE RUNWAY, WIDTH AS INDICATED
	CONDUIT AND CONDUCTORS ABOVE GRADE
	CONDUIT AND CONDUCTORS BELOW GRADE OR SLAB
	CONDUIT DOWN
	CONDUIT STUB WITH GROMET
	CONDUIT UP
	CONDUIT/WIRING CONTINUATION
	FLEXIBLE CONDUIT
	GROUNDING POINT
	HANDHOLE
	PULL BOX
	SURFACE RACEWAY
	TELECOMMUNICATIONS VAULT
	TELEPHONE BACKBOARD
	TELEPHONE UTILITY POLE
	TELEPHONE/DATA POWER POLE

Reference Symbols

	DETAIL NUMBER AND SHEET LOCATION
	KEYED NOTES
	SECTION NUMBER AND SHEET LOCATION

Telecommunications

	WALL MOUNT TELEPHONE OUTLET WITH (1) CAT6A CABLE TO NEAREST TELECOM ROOM THROUGH 3/4" C TO ACCESSIBLE CEILING SPACE.
	STANDARD COMMUNICATIONS OUTLET WITH (1) VOICE, (2) DATA CABLE(S) TO NEAREST TELECOM ROOM THROUGH 1" TO ACCESSIBLE CEILING SPACE.
	ALTERNATE COMMUNICATIONS OUTLET (X); (TO NEAREST TELECOM ROOM THROUGH 1" CONDUIT.)
	A= ABOVE COUNTER WITH (2) CAT6A CABLE(S)
	C= CEILING OUTLET WITH (2) CAT6A CABLES FOR SPARE CONNECTION.
	1V= (1) VOICE CABLE ONLY
	1D= (1) DATA CABLE ONLY
	2D= (2) DATA CABLES ONLY
	FLUSH FLOOR COMBINATION COMMUNICATIONS OUTLET WITH CABLES AS NOTED AT EACH LOCATION - INSTALL THROUGH 1 1/4" CONDUIT TO NEAREST ACCESSIBLE CEILING SPACE FOR ROUTING TO THE NEAREST TELECOM ROOM - FOR SLAB ON GRADE APPLICATIONS THE CABLING IS TO BE INDOOR/OUTDOOR RATED AND ROUTE TO THE TELECOM ROOM.
	LOCATION FOR WIRELESS ACCESS POINT ROUGH-IN. PROVIDE COMMUNICATIONS BACKBOX MOUNTED AT AN ACCESSIBLE HEIGHT NO MORE THAN 24" ABOVE THE CEILING. PROVIDE WIRELESS TRANSMITTER (DATA) OUTLET COMPLETE WITH WIRELESS ACCESS POINT MODULE IN THE CEILING. EACH WIRELESS ACCESS POINT SHALL BE COMPLETE WITH (2) CAT6A DATA OUTLETS. WHERE OUTLET IS IN AN IN-ACCESSIBLE CEILING, PROVIDE (1) 1" CONDUIT TO NEAREST ACCESSIBLE CEILING VOID BUSHED AND GROUNDED. SEE SPECIFICATIONS SECTION 27 20 00 FOR CABLE, JACK AND INSTALLATION REQUIREMENTS. DEVICE TO BE SERVED WITH YELLOW CAT6A CABLES. LEAVE 20' OF SLACK LOOP AT EACH DEVICE LOCATION. CONTRACTOR SHALL COORDINATE THE EXACT LOCATION WITH THE OWNER AND ADJUST WAP LOCATIONS AT FINAL COMPLETION TO MEET OWNER REQUIREMENTS. FURNISHED BY LCPIS-INSTALLED BY CONTRACTOR. (OFCI)
	2-POST EQUIPMENT RACK
	4-POST EQUIPMENT RACK
	DOUBLE-SIDED VERTICAL WIRE MANAGEMENT
	MAJOR EQUIPMENT, CABINETS OR PANELS
	SINGLE-SIDED VERTICAL WIRE MANAGEMENT

Equipment

GENERAL TECHNOLOGY NOTES:

- COMMUNICATIONS RACEWAYS, TRAYS, AND OUTLETS ARE SHOWN DIAGRAMMATICALLY. LOCATIONS ARE APPROXIMATE UNLESS SPECIFICALLY DIMENSIONED. FIELD COORDINATE ALL WORK WITH OTHER TRADES.
- CONSTRUCTION DETAILS SHOW TYPICAL INSTALLATION, UON, AND APPLY TO ALL COMMUNICATIONS WORK INCLUDED IN THE SUMMARY OF WORK FOR THIS PACKAGE EVEN THOUGH NOT SPECIFICALLY REFERENCED ON THE PLAN DRAWINGS.
- THE TECHNOLOGY DRAWINGS ARE PART OF A LARGER SET OF DRAWINGS WHICH, WHEN THE DRAWING SET IS COMPLETE, CONSISTS OF DRAWINGS LISTED BY THE "INDEX OF DRAWINGS". PARTIAL SETS OF DRAWINGS NOT INCLUSIVE OF ALL DISCIPLINES ARE TO BE CONSIDERED AN INCOMPLETE SET OF DRAWINGS AND SHOULD NOT BE DISTRIBUTED OR UTILIZED.
- INSTALL PULL STRINGS IN ALL CONDUITS AT THE TIME OF CONDUIT AND CABLE INSTALLATION.
- COORDINATE ALL DOOR ACCESS CONTROL FUNCTIONS WITH ADA DOOR ACTUATOR FUNCTION SUCH THAT DOOR MOTOR WILL NOT OPERATE WITHOUT PRIOR VALID CARD READ DURING SECURE MODE OPERATION.

SYSTEM RESPONSIBILITY MATRIX	ITEM USED ON PROJECT	DEVICES - OFCI	DEVICES - CFCI	CABLING/CONDUCTORS - OFCI	CABLING/CONDUCTORS - CFCI
OVERHEAD PAGING					
CLASSROOM CLOCK/PAGING					
FIRE ALARM					
SECURITY - INTERCOM					
SECURITY - ACCESS CONTROL					
SECURITY - CCTV					
SECURITY - IDS					
VOICE/DATA CABLING					
AUDIO AND VIDEO SYSTEMS					
NURSE CALL SYSTEM					

SYSTEM RESPONSIBILITY GENERAL NOTES:

- REFER TO VENDOR DRAWINGS FOR COMPLETE SCOPE OF WORK RELATING TO VENDOR-FURNISHED EQUIPMENT. ALL WORK INDICATED ON VENDOR DRAWINGS SHALL BE INCLUDED BY THE CONTRACTOR.
- REFER TO ARCHITECTURAL DOOR HARDWARE SPECIFICATIONS FOR ACCESS CONTROL DEVICE SPECIFICATIONS AND REQUIREMENTS.
- PROVIDE BACKBOXES AND CONDUIT WITH PULL-STRINGS FOR ALL SYSTEMS. CONTRACTOR SHALL VERIFY BACKBOX AND CONDUIT SIZES AND EXACT INSTALLATION LOCATIONS/REQUIREMENTS WITH VENDORS OF ALL SYSTEMS PRIOR TO CONSTRUCTION.
- AT ALL SYSTEM CABINET/TERMINAL BOARD LOCATIONS CONTRACTOR SHALL PROVIDE SIZE AND NUMBER OF CONDUIT STUBS OUT TO CABLE PATHWAYS AS REQUIRED BY SYSTEM VENDORS AND TERMINATE CONDUITS AT CABINETS OR ON BACKBOARDS AS REQUIRED. COORDINATE EXACT REQUIREMENTS WITH VENDORS PRIOR TO CONSTRUCTION.
- REFER TO SPECIFICATIONS FOR REQUIREMENTS APPLICABLE TO ALL SYSTEMS INCLUDING CABLING, CABLE MANAGEMENT, INSTALLATION, GROUNDING, TESTING, LABELING, ETC.
- WHERE INDICATED AS OFCI, THE CONTRACTOR SHALL PROVIDE THE SYSTEM COMPLETE, INCLUDING ALL ROUGH-IN, CABLING, DEVICES, POWER, ETC. THE CONTRACTOR SHALL CONTACT THE VENDOR FOR PRICING PRIOR TO BID. ALL SYSTEM SHALL MATCH LCPIS STANDARDS AND BE FULLY COMPATIBLE WITH LCPIS SYSTEMS. ALL SYSTEM VENDORS SHALL COORDINATE EXACT SYSTEM REQUIREMENTS WITH OWNER PRIOR TO BID. ALL NEW SYSTEM DESIGNS AND PROGRAMMING SHALL BE COORDINATED WITH THE OWNER PRIOR TO ORDERING. ALL PROGRAMMING SHALL BE INCLUDED AS REQUIRED BY THE OWNER. PROVIDE 4 HOURS OF TRAINING FOR EACH SYSTEM UNLESS NOTED OTHERWISE IN THE SPECIFICATIONS.

TAG	DESCRIPTION	MOUNT MODEL	QUANTITY
CP-1	AV CONTROL PANEL	WALL	1
NO TAG	NURSE CALL DOME LIGHT	ABOVE CEILING	1
FM-2	FLUSH MOUNTED MICROPHONE	FLOOR	2
FPD-43	43" 4K COMMERCIAL FLAT PANEL DISPLAY WITH RS-232 AND CEC CONTROL	CEILING	5
FPD-55	55" 4K COMMERCIAL FLAT PANEL DISPLAY WITH RS-232 AND CEC CONTROL	CHIEF FUSION	3
FPD-65	65" 4K COMMERCIAL FLAT PANEL DISPLAY WITH RS-232 AND CEC CONTROL	CHIEF FUSION	6
FPD-75	75" 4K COMMERCIAL FLAT PANEL DISPLAY WITH RS-232 AND CEC CONTROL	CHIEF FUSION	2
FPD-85	85" 4K COMMERCIAL FLAT PANEL DISPLAY WITH RS-232 AND CEC CONTROL	CHIEF FUSION	1
IP-1	AUDIO INPUT PLATE	WALL	1
MFPB-1	TOUCHSCREEN FLAT PANEL DISPLAY ON WHEELS OWNER FURNISHED, OWNER INSTALLED		52
MIC-1	CEILING MOUNTED MICROPHONE	CEILING	6
NCS	NURSE CALL MAIN CONTROL PANEL	WALL	1
A	NURSE CALL ANNUNCIATOR	WALL	2
P	NURSE ROOM CALL-IN	WALL	2
W	NURSE CALL WALL CHIME	WALL	1
D	NURSE CALL DUTY STATION WITH AUDIO	WALL	2
P-1	PROJECTOR	CEILING	2
E	NURSE CALL PULL STRING	WALL	1
PS-164	MOTORIZED PROJECTION SCREEN	CEILING	1
PS-184	MOTORIZED PROJECTION SCREEN	CEILING	1
SLX28	PROJECTOR SCISSOR LIFT	CEILING	1
SP-1	CEILING MOUNTED SOUND SYSTEM SPEAKER	CEILING	6
SPK-1	CEILING MOUNTED INTERCOM SPEAKER	CEILING	226
SPK-3	WALL-MOUNTED INTERCOM SPEAKER	WALL	2
V	WALL-MOUNTED VOLUME CONTROL	WALL	2
W-1	SUBWOOFER	WALL	1
WB-1	FLAT PANEL DISPLAY WALL BOX	N/A	15

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4 - ADDENDUM #4 2020.03.03

BID & PERMIT SET 2020.02.06

100% CONSTRUCTION DOCUMENTS 2020.01.26

65% CONSTRUCTION DOCUMENTS 2019.12.03

DESIGN DEVELOPMENT 2019.10.08

Issue/Revision YYY.MM.DD

Permit/Seal



Client/Project Logo



Client/Project

ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS

Title
SYMBOL LIST AND GENERAL NOTES - TECHNOLOGY

Project No. 2019-0122
Revision VDOE # 4
Scale
Drawing No. E002

GENERAL SHEET NOTES

- A. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING E002.
- B. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT DATA MOUNTING HEIGHTS FOR ALL SYSTEMS THAT REQUIRE DATA CONNECTIONS. PROVIDE ALL NECESSARY CABLING, CONNECTIONS, AND DEVICES FOR A COMPLETE AND OPERABLE SYSTEM.

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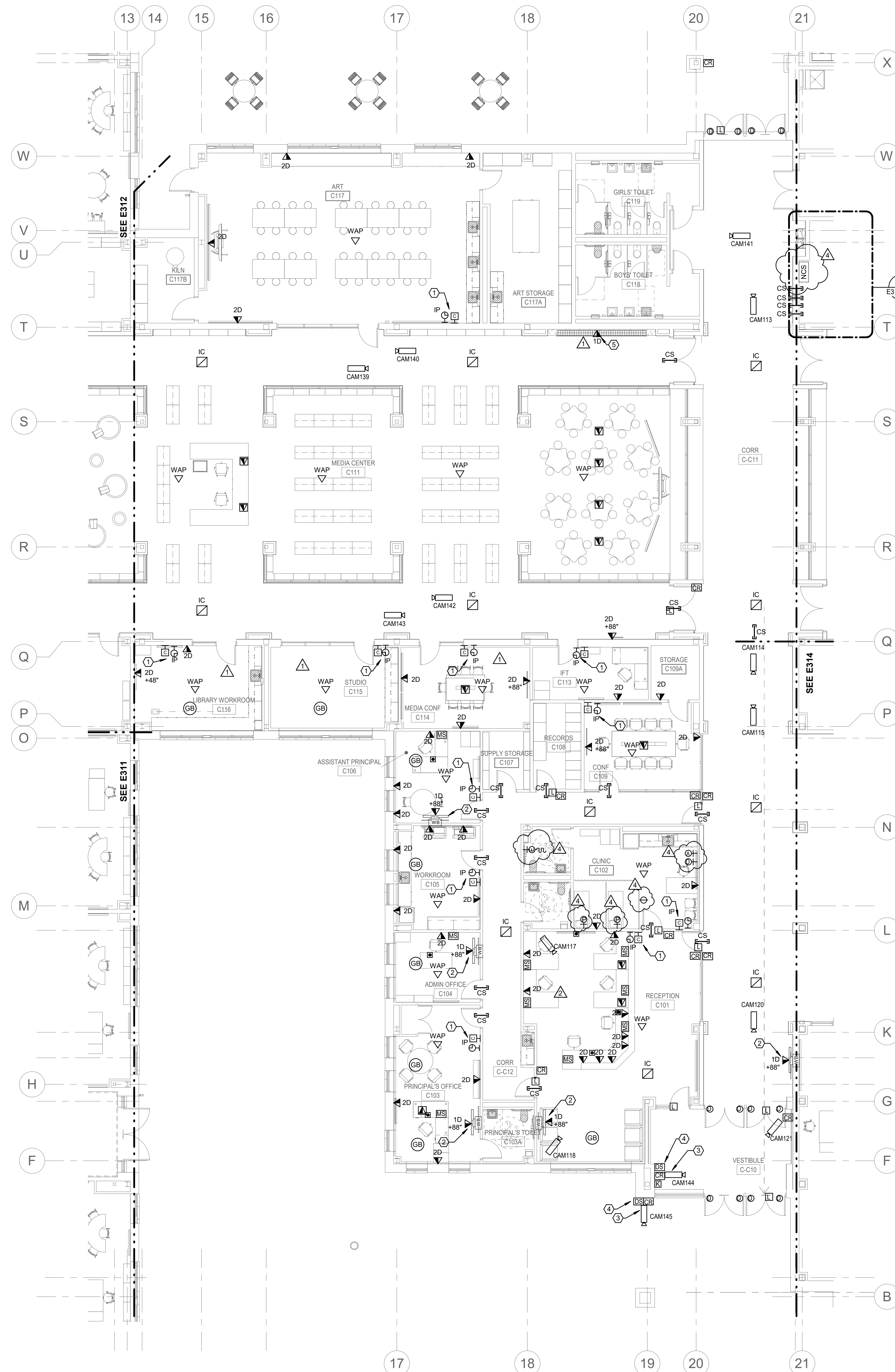
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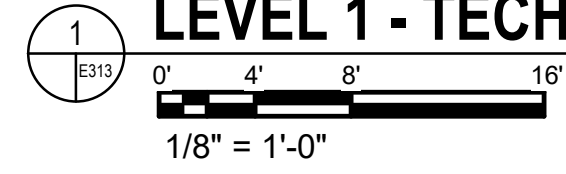
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SHEET KEYNOTES

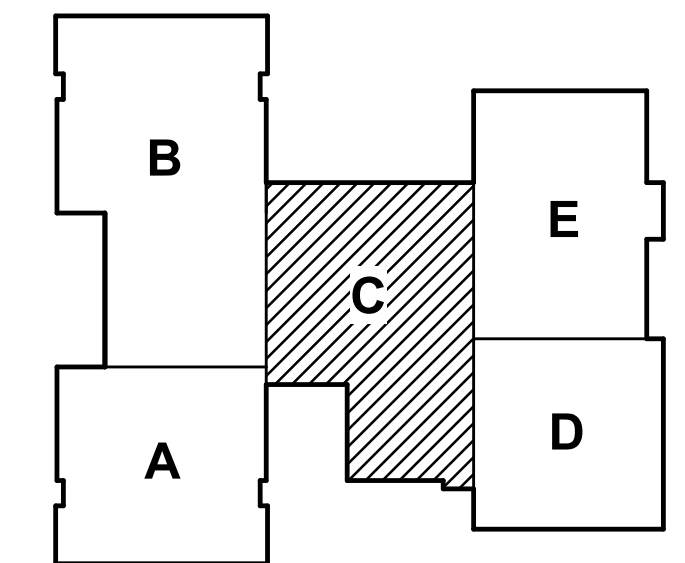
- ① IP CLOCK/CALL-IN SYSTEM LOCATION - SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS AND SPECIFIC LOCATIONS.
- ② 55" FLAT PANEL DISPLAY WITH WALL MOUNTING BRACKET - MOUNT AT 60" - INSTALL (1) CAT6A DATA OUTLET BEHIND MONITOR FLUSH IN THE WALL.
- ③ FIXED WALL MOUNTED CAMERA AT AIPHONE DOOR STATION TO VIEW GUEST.
- ④ SEE ARCHITECTURAL INTERIOR DRAWINGS FOR EQUIPMENT LAYOUT AT MAIN ENTRY DOOR.
- ⑤ COORDINATE OUTLET IN DISPLAY CASE WITH ARCHITECT PRIOR TO ROUGH-IN. MOUNT AT 4" ABOVE BOTTOM OF DISPLAY CASE TO BOTTOM OF OUTLET.



LEVEL 1 - TECHNOLOGY - AREA C



Keyplan



4	ADDENDUM #4	2020.03.03
2	ADDENDUM #2	2020.02.25
1	ADDENDUM #1	2020.02.20
	BID & PERMIT SET	2020.02.06
	100% CONSTRUCTION DOCUMENTS	2020.01.26
	65% CONSTRUCTION DOCUMENTS	2019.12.03
	DESIGN DEVELOPMENT	2019.10.08

Issue/Revision: YYYY.MM.DD

Permit/Seal



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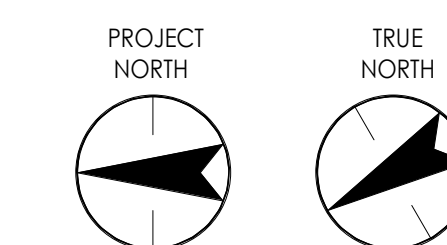
Client/Project

ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS

Title
TECHNOLOGY FLOOR PLAN - LEVEL 1 - AREA C

Project No.	2019-0122	Scale
Revision	VDOE # 4	Drawing No. E313



GENERAL SHEET NOTES

- A. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING E002.
- B. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT DATA MOUNTING HEIGHTS FOR ALL SYSTEMS THAT REQUIRE DATA CONNECTIONS. PROVIDE ALL NECESSARY CABLING, CONNECTIONS, AND DEVICES FOR A COMPLETE AND OPERABLE SYSTEM.

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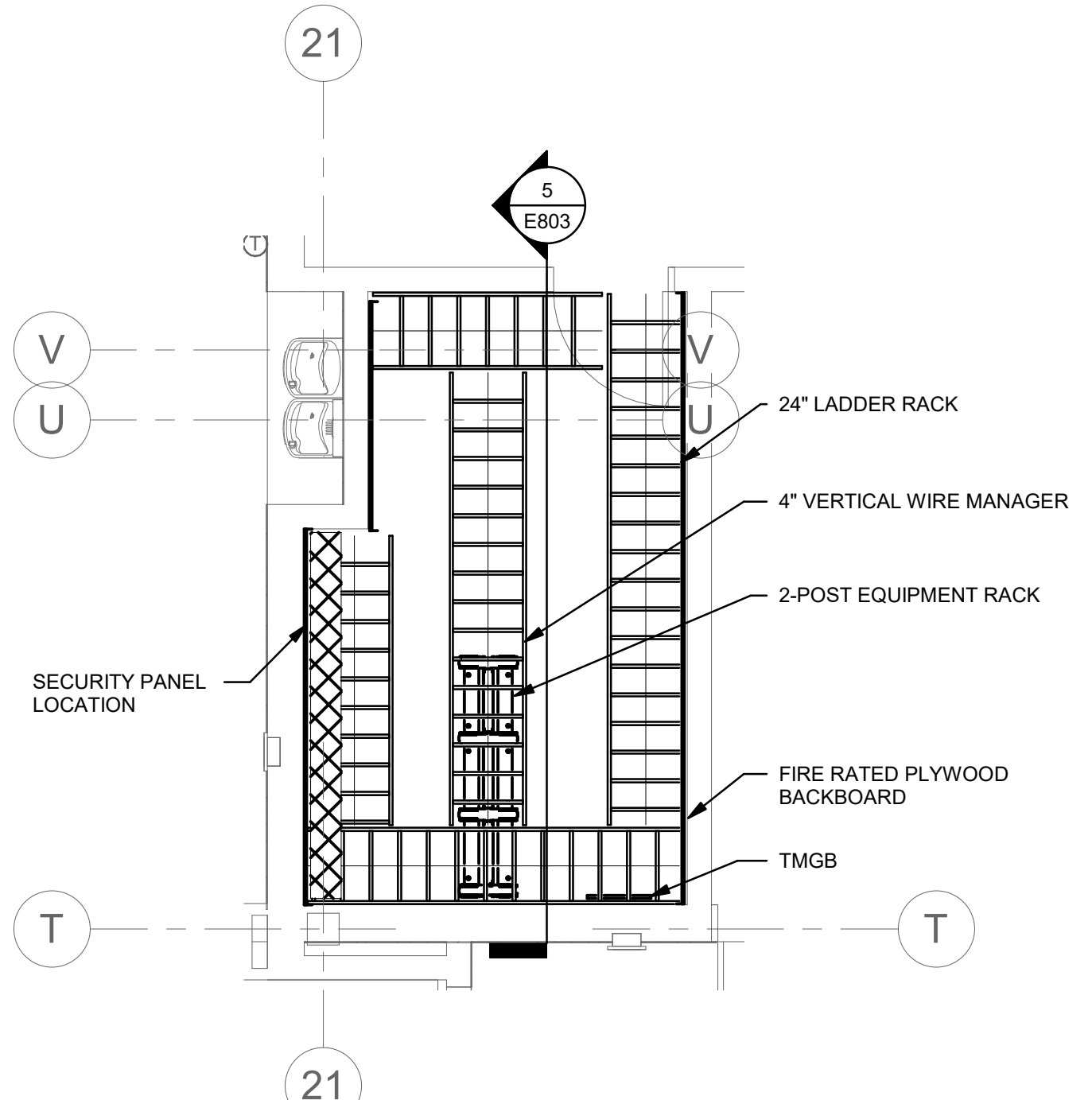
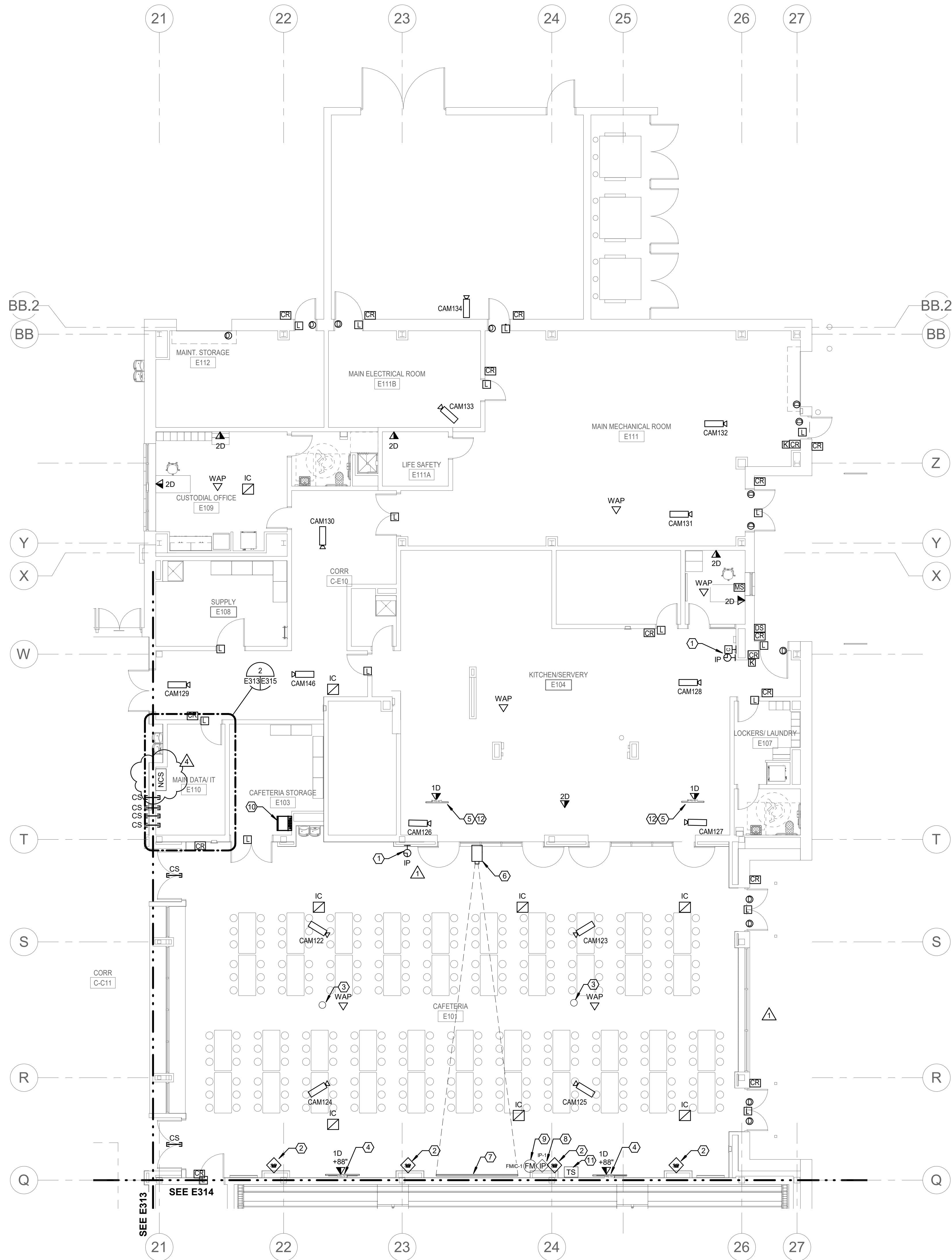
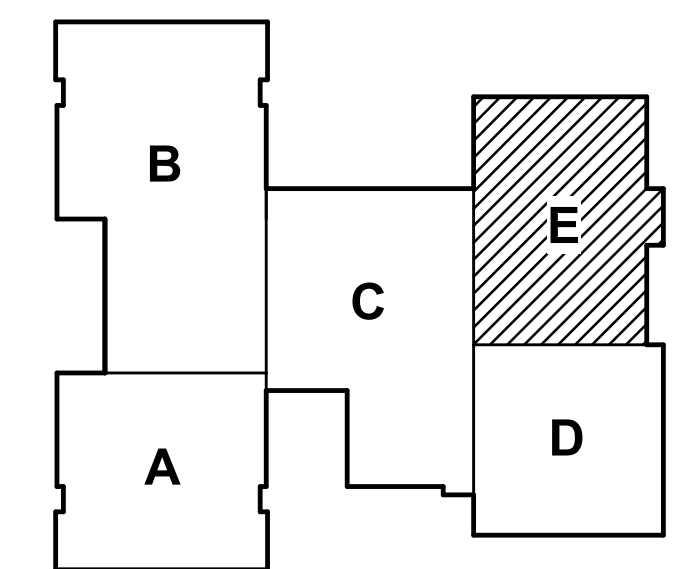
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SHEET KEYNOTES

- 1 IP CLOCK/CALL-IN SYSTEM LOCATION - SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS AND SPECIFIC LOCATIONS.
- 2 WALL MOUNTED INTERCOM SPEAKERS - OFCI. INSTALL (1) CAT6A CABLE TO EACH LOCATION FROM THE NEAREST TELECOM ROOM.
- 3 PROVIDE CEILING MOUNTED SOUND SPEAKER IN THESE LOCATIONS. MODEL SS-Q-12AWR-WLT, ROUTE SPEAKER CABLING TO SOUND RACK IN MUSIC ROOM.
- 4 75" FLAT PANEL DISPLAY WITH MOUNTING BRACKET- INSTALL DATA OUTLET BEHIND THE MONITOR.
- 5 43" FLAT PANEL DISPLAY CEILING MOUNTED FROM POLE- INSTALL DATA OUTLET AT THE CEILING.
- 6 WALL MOUNTED PROJECTOR WITH LONG THROW LENS. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION. CABLING ROUTES TO WALL MOUNTED AV CABINET IN STORAGE ROOM.
- 7 MOTORIZED PROJECTOR SCREEN.
- 8 WALL MOUNTED INSTRUCTOR/TEACHER INPUT PLATE.
- 9 WALL MOUNTED MICROPHONE INPUT. CABLING ROUTES TO AV CABINET IN STORAGE ROOM.
- 10 WALL MOUNTED AV CABINET.
- 11 WALL MOUNTED TOUCH SCREEN CONTROLLER FOR CAFETERIA AUDIO AND VIDEO SYSTEM.
- 12 PROVIDE CHIEF FUSION OR EQUAL WITH HDMI CONNECTION TO KITCHEN MANAGER'S OFFICE. PROVIDE DISTRIBUTION AMPLIFIER TO SUPPLY IMAGE TO BOTH MONITORS.

Keyplan



1 LEVEL 1 - TECHNOLOGY - AREA E
 0' 4' 8' 16'
 1/8" = 1'-0"

2 ENLARGED DATA ROOM E111
 0' 2' 4' 8'
 1/4" = 1'-0"

4	ADDENDUM #4	2020.03.03
1	ADDENDUM #1	2020.02.20
	BID & PERMIT SET	2020.02.06
	100% CONSTRUCTION DOCUMENTS	2020.01.26
	65% CONSTRUCTION DOCUMENTS	2019.12.03
	DESIGN DEVELOPMENT	2019.10.08
	Issue/Revision	YYYY.MM.DD

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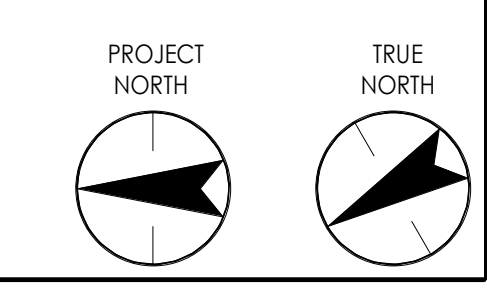
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ELEMENTARY SCHOOL (ES-23)

LOUDOUN COUNTY PUBLIC SCHOOLS

Title
TECHNOLOGY FLOOR PLAN - LEVEL 1 - AREA E

Project No.	2019-0122	Scale
Revision	VDOE #	Drawing No.
4	053-115-01-100	E315



SECTION 27 51 23.50
EDUCATIONAL INTERCOMMUNICATIONS AND PROGRAM SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

- A. Install a fully operational IP platform for a district-wide internal and school Critical Communications Solution, VoIP telephone system, classroom general notification, and wireless clocks, incorporating school general communications and school safety notifications.
- B. The contractor shall furnish and install outlet boxes, connections to speakers, cabling, and status lights, as required to connect to Owner's Unified Communications System. Provide all necessary wall plates, specialty boxes, etc. not provided by Owner.
 - 1. Additionally, contractor is to install all system components that are being provided by the owner. See drawings for information related to owner provided items.
- C. Cisco Unified Communication System is district standard for communications – this system shall tie seamlessly into the UCS.
- D. The intent of this specification is to maximize communications between the classroom and school based administration as well as district wide communications between LCPS administration and school buildings while enhancing school safety and reducing operation and maintenance cost.
- E. The system shall provide a complete Unified Communication System (UCS) distribution of intercom, overhead paging, emergency paging, emergency tones, program material, and district wide emergency communications.
 - 1. (Compliance with NEMA Standard SB-40 for emergency communications in K-12 Schools).
- F. The Unified Communication System shall be interfaced with the Owner's VoIP telephone system to insure full access to the UCS speakers. Coordinate all work with Owner's DDI Network Engineering Team.
- G. One Unified Communications System as indicated, including but not limited to the following:
 - 1. Speakers
 - 2. UPS System
 - 3. Conductors and cables
 - 4. Raceways
 - 5. Local Area Network (LAN).
- H. Installation shall include cabling, j-hooks, cable tray (where indicated), speakers, connections, adjustment, testing, and certification. The Division 26 contractor shall provide j-hooks, conduit, rough-in boxes, junction boxes and pull boxes as indicated and required by the Document, manufacturer drawings or Trade instructions. The contractor shall furnish any special back boxes, cabinets, enclosures and similar items to the Division 26 contractor for installation by the Division 26 contractor in accordance with the manufacturer's drawings, Division 27 contractor instructions, and as indicated.
- I. If indicated on the drawings, this Contractor shall furnish and install all fiber optic cable in conduit for the entire run. Minimum conduit size for fiber optic cable shall be 3/4-inch.
- J. The contractor shall assume total responsibility in coordinating all intra- building wiring, common carrier provided network facilities, and Owner provided equipment.

- K. Requirements are indicated herein and elsewhere in these specifications for work including, but not limited to cable riser closets, equipment rooms, lateral cable distribution systems, required with the installation of the intercommunication system.

1.2 GENERAL OPERATION AND DESCRIPTION

A. General:

- 1. All centrally located equipment shall be housed in manufacturer's standard vertical rack(s), providing vertical panel space with locking rear doors and install as indicated. The rack(s) shall house the Cisco switch, class change signals, power amplifier interface for administrative telephones.
- 2. The intercom portion of the system shall be reinforcement for the pickup, amplification and reproduction of voice and music. The intercom portion of the system shall consist of a pre-amplifier console, room selector switches power amplifier, speakers, and microphones. The equipment and components shall be interconnected to provide the operating characteristics as specified herein and indicated on the drawings.

a. ELEMENTARY School

Classroom Example:

Room 1400	14000
Room 1400A	14001
Room L400	24000
Room L400A	24001

et cetera

- 1. All Page
 - 2. Hallways only
 - 3. Math and Workroom
 - 4. Media Center
 - 5. Computer Lab
 - 6. Media Center and Computer/Keyboarding Lab
 - 7. Gymnasium/Aux Gym, PE Offices. Locker Rooms
 - 8. Cafeteria/Kitchen
 - 9. Common Areas
 - 10. Administrative Areas
 - 11. Art
 - 12. Music
 - 13. Technology Education
 - 14. Special Education
 - 15. Corridors
- 3. Message Board/Display (Main Administration Office): Information to display:
 - a. School Name.
 - b. Date and Time.
 - c. Extension that is calling office for assistance.
 - d. Caller ID for external calls.
 - 4. Classrooms / Offices to include Speakers only.
 - a. All Administrative Offices.
 - b. Main Office.
 - c. Deans / Guidance / Athletic Director / Cafeteria Manager / Librarian Office.

- d. Closets / Storage Rooms.
 - e. Rest Rooms
 - f. MDF / IDF Rooms
 - g. Electrical Closets
5. Classrooms / other spaces to include rough-in for VoIP and Speakers:
- a. All classrooms
 - b. Resource Rooms
 - c. Split Rooms
 - 1) Provide one call-in switch and speaker for each space
 - d. Cafeteria
 - 1) Include kitchen
 - e. Gymnasium
 - f. Clinic/Nurse
 - 1) Provide one call-in switch for each room.
 - g. Media Center / Library
 - h. Workrooms / Teacher Lounges
 - i. Main Mechanical Room
 - j. Main Electric Room / Life Safety Electrical Room
 - k. Assignment of each speaker to any combination of sixteen (16) paging zones or time-tone zones.
 - l. Assignment of loudspeaker intercom access to a group of one or more administrative telephones.
 - m. Assignment of “executive override” to authorized administrative instruments.
 - n. Assignment of an instrument to a “circular hunt” group.
 - o. Allow for software option of canceling call for call-originating future staff station.
 - p. Hotline ringing of a programmed telephone station automatically to a designated location that does not have digital readout capability.
 - q. Allow/disallow paging, emergency tones, zone page, outside (trunks) line access, long-distance.
 - r. Assignment of numbering system (three-or-four digit and selected one-digit access codes).
6. The integrated communications system shall be capable for the direct connection to central office lines (outside trunks). Initially the system shall be wired for four (4) station ports to the Owner’s telephone system. These ports shall be programmed as “Administrative Telephone” status by this system.
7. The system shall be capable to offer routing of outside trunks for Attendant Answer Incoming (AAI) and Direct Inward Line (DIL). The system shall also provide all standard Telco signaling to interface with other special services such as off-premise extensions (OPX), WATS and CENTREX™.
8. The system shall be capable of operating with either loop start or ground start trunks for compatibility with existing and future utility services.
9. The system shall offer full flexibility of software restrictions to station lines for external calling capabilities. Each station may be programmed as:
- a. Totally unrestricted.
 - b. Restricted access
 - c. No access to outside lines.

10. System restrictions may be programmed to allow/disallow local prefixes (exchange number) and authorize access for up to three (3) area codes.
11. Software updates to the program shall be accomplished via the serial port or by any authorized administrative telephone. Training shall be given to a person designated by the Owner in making these updates to the restriction tables.
12. The system shall be equipped with discriminating ringing to enable the party receiving a call to distinguish the difference between an internal call (long ring) and an outside call (two short rings).
13. The system shall provide automatic hunting for first available trunk for an outside line request. System shall also provide a “disallowed beep” for unauthorized telephones attempting to select an outside trunk.
14. The system shall provide Circular Hunting for DIL programmed trunks. This shall distribute outside traffic evenly and prevent any one trunk for excess usage.
15. It shall be possible to connect a telephone trunk to the system, which will directly ring a designated phone without the assistance of an operator, as used for private line service. This call may be automatically routed to the attendant if not answered within a predetermined time.
16. The system shall provide “Call Park” with remote pick-up. This shall enable attendant to park call and permit paged party to remotely pick-up outside call from any administrative telephone.
17. The system shall enable any administrative telephone to remotely pick-up a call from any other ringing telephone.
18. It shall be possible for any authorized telephone to remotely answer any outside call on an AAI programmed trunk by dialing a pre-determined code.
19. The system shall maintain statistics providing internal and external traffic data.
20. The system shall be capable of providing “night answer”. When placing the system in “night answer” mode, it shall be possible for an incoming call on any AAI trunk to be directed to a pre-determined extension. Night mode shall also provide a tone over system speakers signaling key personnel to answer the incoming call at any administrative telephone. It shall also be possible during night mode, to provide dial tone to all classroom staff telephones. This shall provide the ability to answer calls throughout the facility.
21. The system shall be capable of directly accessing all the system capabilities from a remote location via a dedicated trunk. Only authorized individuals may use this feature by dialing the dedicated trunk number and then dialing the system function.
22. The system shall be compatible with standard PBX signaling for direct connection to any existing or future PBX.
23. The system shall be capable of providing a future micro-processor-based Call Control Console. Systems using electromechanical switching will not be acceptable. The Call Control Console shall provide the following features and functions:
 - a. The ability to identify, answer and route the incoming outside calls.
 - b. The ability to directly access any outside trunk, if programmed.
 - c. All incoming calls shall be annunciated and rung to the Call Control Console. The Call Control shall mute incoming tones while calls are being processed. Calls may be held, parked, transferred or released.
 - d. Serve as a fast, efficient answering instrument capable of processing calls at a rate of up to 360 per hour.

- e. Any transferred call shall “Recall” Console after a pre-determined time if the call is unanswered. An indication shall be given to the Attendant that this is a “Recall”.
- f. The Call Control Console shall provide a “hold reminder” feature. A “Reminder” tone shall be transmitted every 30 seconds while a call is on Hold.
- g. When a call is being processed, all invalid keys shall be disabled. This shall prevent calls from being accidentally lost.
- h. The Call Control Console shall have the ability to pre-screen outside calls.
- i. Transferred calls to busy extensions shall automatically return to the Call Control Console. A “Busy” message shall appear on the display.
- j. The Call Control Console shall provide a 20-character alpha-numeric display. Display shall provide prompting messages to assist and simplify operation of the system.
- k. All internal operator calls shall appear on designated operator key(s).
- l. The Call Control Console shall provide the ability to direct call pre-determined extensions. This shall be user-programmable and shall not require the use of dial pad to either call or transfer a call to a monitored extension.
- m. The Call Control operator shall not wait for a receiver to access system. Receiver blocking probability shall be 0% at the Call Control Console.
- n. The Control Console shall provide twenty (20) keys programmable as trunk lines, operator lines, direct select telephone or direct select speaker. Each key shall provide two status LED’s to indicate ringing/busy, incoming call and answered call.

1.3 QUALITY ASSURANCE

- A. Intercommunications and Program Systems: The General Contractor will submit to the Owner for review, selection, and approval the names of several firms with at least five (5) years of successful installation experience with projects similar to the requirements for this project. Submit qualification documentation prior to pre-submittal meeting. Any firm, which has been determined to have provided unsatisfactory past installations, will not be acceptable.
- B. The agency providing equipment shall be responsible for providing all specified equipment and mentioned services for all equipment as specified herein. The agency must be a local authorized distributor of all specified equipment for single source of responsibility and shall provide documents proving such. The agency must provide written proof that the agency is adequately staffed with factory-trained technicians for all of the specified equipment. The agency must have established business for and currently be providing all services for the equipment to be provided for a minimum of five (5) years.
- C. Installer Qualifications: Engage a manufacturer's authorized representative of equipment manufacturer for both installation and maintenance of equipment required for this specification who is trained and approved for installation of units required for this Project.
 - 1. Factory trained Technicians to install the proposed system.
 - 2. Proof of compliance with manufacturer’s system installation certification program must be included with submittal.

3. Hold all legally required state and local contractor's licenses necessary to accomplish the installation and activation of the described system. Copies of required licenses shall be submitted prior to start of work.
 4. Maintain current stock of all spare parts at local service organization.
 5. Provide local maintenance and service with location less than 50 miles from project site.
 6. Provide list of technical support staff, project experience, training, etc. as requested. Staff must be factory trained or have received on-site training from manufacturer.
 7. Make all final connections, adjustments and system supervision testing.
 - a. Provide all initial system programming.
 8. Provide references:
 - a. Names of six (6) similar projects in size and scope.
 - b. Contact person and phone number for each project.
 9. Maintenance contract.
- D. Testing Agency Qualifications: Qualified agency, with the experience and capability to conduct testing indicated.
1. Testing Agency's Field Supervisor: Shall have five (5) years of experience in the testing field and also be certified by NICET as Audio Systems Level II Technician.
- E. The contractor shall show satisfactory evidence, upon request, that the supplier maintains a fully equipped service organization capable of furnishing adequate inspection and service to the system. The supplier shall maintain at his facility the necessary spare parts in the proper proportion as recommended by the manufacturer to maintain and service the equipment being supplied.
- F. Source Quality Control: Materials and equipment shall be new, unused and UL listed (UL Standard 1459).
- G. Source Limitations: The system and components shall be supplied by a single source from a single manufacturer of established reputation and experience who shall have produced similar apparatus for a period of at least ten (10) years and who shall be able to refer to similar installations rendering satisfactory service.
- H. The Communication System shall be installed by the manufacturer's local authorized installation contractor for the specified system, hereinafter known as the "Intercom System Trade". The installation shall include wiring, components, connections, adjustment, testing, and certification. The Electrical Trade shall provide j-hooks, conduit, junction boxes and pull boxes as indicated and required by the Intercom System manufacturer's drawings or Trade instructions. The Intercom Trade shall furnish any special boxes, cabinets, enclosures and similar items to the Electrical Trade for installation by the Electrical Trade in accordance with the manufacturer's drawings, Trade instructions, and as indicated.
- I. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for location and application. Comply with NFPA 70, including but not limited to:
1. Article 250, Grounding.
 2. Article 300, Part A. Wiring Method.
 3. Article 310, Conductors for General Wiring.
 4. Article 725, Remote Control, Signaling Circuits.

5. Article 800, Communication Systems.
- J. Comply with UL 60950.
- K. Codes and Standards
1. Electrical Code Compliance: Comply with applicable local code requirements of the Authority Having Jurisdiction (AHJ) and NEC, including 800 Series articles as applicable to installation, and construction of Intercommunications Systems.
 2. FCC Compliance: Comply with Part 68 and Subpart J of Part 15, Federal Communications Commission (FCC) Rules, pertaining to intercommunication equipment and Class A computer registration by the manufacturer. The supplier of the system shall provide an FCC number with the submittal.
 3. Provide intercommunication and computer equipment with FCC labels indicating applicable FCC registration and numbering.
 4. IEEE Compliance: Comply with standard 241, "IEEE Recommended Practice for Electrical Power Systems in Commercial Buildings".
 5. NEMA Compliance: Comply with NEMA's Pub No. 250, "Enclosures for Electrical Equipment".
 6. EIA Compliance: Comply with EIA standards RD-453, 455, and 464 pertaining to installation of intercommunications systems.
 - a. Sound Systems, EIA-160.
 - b. Loudspeakers, Dynamic Magnetic Structures, and Impedance, EIA-299-A.
 - c. Racks, Panels, and Associated Equipment, EIA-310-A.
 - d. Amplifiers for Sound Equipment, SE-101-A.
 - e. Speakers for Sound Equipment, SE-103.
- L. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products that will be exposed to view in occupied spaces or on the exterior.

1.4 COORDINATION

- A. BIM Coordination Drawings: Coordinate layout and installation of ceiling-mounted speakers, microphones and suspension system with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, fire-suppression system, and partition assemblies. Provide with submittals for review.
- B. Sequence installation of the intercommunications systems with other work to minimize possibility of damage and soiling during the remainder of construction.

1.5 REFERENCES

- A. The complete installation, including additions and modifications, shall be in accordance with the following:
 1. National Electrical Code Article 800.
 2. Standards of Electronics Industries Association (EIA).
 3. Meet Part 68 of FCC rules and regulations for direct interconnect to the utility systems.

1.6 SUBMITTALS

- A. Comply with Division 01 section "Submittals Procedures" and Division 27 section "Common Work Results for Communications".
- B. Prior to the formal submittal, there shall be a mandatory pre-submittal meeting, to review and discuss the submittal data. Attendees shall include the General Contractor, Architect,

Engineer, Intercommunications System Contractor, Owner’s representative, and Owner’s Department of Digital Innovation (DDI). The meeting shall be initiated by the General Contractor.

- C. Product Data: For each type of product indicated:
 - 1. Submit application, technical and installation data.
 - 2. Submit complete operating instructions.
 - 3. Submit full electronic wiring diagrams for each item.

- D. Bill of materials: Complete detailed list of components (equipment, modules, devices, and cabling) to include manufacturer's catalog or model numbers and quantity listings.

- E. Shop Drawings: For intercommunication and program systems. Include plans, elevations, sections, details, and attachments to other work. Include this information and analysis in accordance with Division 27 section “Common Work Results for Communications”.
 - 1. Shop Drawings:
 - a. Detail equipment assemblies and indicate dimensions, weights, required clearances, method of field assembly, components, and location and size of each field connection.
 - b. Include scaled drawings for administrative console, microphone station, and station arrangement of built-in equipment and equipment cabinet arrangement.
 - c. Wiring Diagrams: For power, signal, and control wiring.
 - 1. Identify terminals to facilitate installation, operation, and maintenance.
 - 2. Cabling diagram showing cable routing.
 - 3. One-line riser diagram indicating route and j-hooks, conduit size, external wiring and connections of system proposed.
 - 4. Submit wiring diagrams showing typical connections for all equipment.
 - d. Provide 1/8-inch scale floor plans showing all equipment, cables, and devices.
 - e. Provide schematic and wiring diagrams of the system, engineering data sheets on each component and complete servicing data including part numbers of the various components. A schematic diagram of the complete system is not shown on the contract documents.
 - 2. Submit antenna mounting details.

- F. BIM Coordination Drawings: Reflected ceiling plans, drawn to scale, on which ceiling-mounted items including lighting fixtures, diffusers, grilles, speakers, sprinklers, access panels, and special moldings are shown and coordinated with each other, using input from installers of the items involved.

- G. Operation and Maintenance Data: In addition to items in Division 01 section “Operation and Maintenance Data” include the following:
 - 1. A record of final matching transformer-tap settings and signal ground-resistance measurement certified by Installer.
 - 2. A record of Owner's equipment-programming option decisions.
 - 3. Typed written sound system zone legend. Legend shall include the following:
 - a. Zone card numbers.

- b. Default numbers.
 - c. Dial numbers.
 - d. Room locations.
 - e. Master Station.
 - f. Paging zone numbers.
 - g. Microphone cable numbers.
 - h. Zone cable numbers.
 - i. Comments.
- 4. Replacement parts list.
 - 5. Complete servicing data including part numbers of various components.
 - 6. Furnish three (3) bound copies and three (3) flash drives of complete operating and maintenance instructions, factory service manuals, system programming data (include program disks) complete with component schematics, circuit diagrams, and as-built wiring diagrams.
- H. Product Certificates: Signed by manufacturers of equipment certifying that products furnished comply with specified requirements.
 - I. Installer Certificates: Signed by manufacturer certifying that installers comply with requirements.
 - J. Manufacturer Certificates: Signed by manufacturers certifying that they comply with requirements.
 - K. Qualification Data: For qualified installer.
 - L. Field quality-control reports.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver intercommunications equipment and components in factory-fabricated containers or wrappings, which properly protect the equipment from damage.
- B. Store intercommunications equipment and components in original packaging. Store inside a well-ventilated space protected from weather, moisture, soiling, humidity, and extreme temperatures.
- C. Handle intercommunications equipment and components carefully to prevent damage, breaking, and scoring of finishes. Do not install damaged units or components, replace with new.

1.8 WARRANTY

- A. Provide a manufacturer's five-year written warranty for the complete intercommunications system installation, as described in these specifications and drawings, free from all mechanical and electrical defects for the period of two (2) years for the installation and five (5) years for the electronic equipment, as well as speakers and call switches, beginning from the date of substantial completion or final acceptance of the work, whichever is the later. The Contractor shall, during this warranty period, be responsible to repair or replace equipment and apparatus installed by him and do all work necessary to ensure efficient and proper function of the system. No charges shall be made by the contractor for any labor, equipment, or transportation during period to maintain this system. The contractor shall provide with the written warranty statement, telephone listing and the name of the person(s) to be contacted for warranty repairs. Manufacturer's who circumvent the five-year warranty by offering special "extended warranties" that are not part of their normal published warranty will not be accepted.
- B. Contractor shall stock necessary parts to facilitate any emergency service required to maintain the intercommunications system. This service shall be done within twelve hours

from time of notification at no additional cost to the owner. Refer to Division 01 section "Warranties". If equipment cannot be repaired with 24 hours of service visit, the contractor shall provide "loaner" equipment to the facility at no charge.

- C. Refer to Division 27 section "Common Work Results for Communications" for submission of warranty.
- D. Qualified service and parts shall be available to call on within a 75-mile basis.
- E. The Communication System Trade shall include in his quotation the cost of three (3) inspections of the system during the two (2) years subsequent to the installation. The Trade installing this equipment shall be prepared to offer the Owner a service contract after the guarantee period has ended. On-the-premises service furnished at other than normal working hours shall also be available and shall be charged at current labor rates. Sub-letting of this service shall disqualify the bidder.

1.9 EXTRA MATERIALS

- A. Refer to Division 01 section "Extra Materials".

1.10 ADDITIONAL DEVICES

- A. In addition to quantity indicated on the drawings, this Contractor shall provide additional intercommunications devices:
 - 1. Ten (10) classroom speakers.
 - 2. Five (5) classroom telephones.
 - 3. Ten (10) call-in switches,
- B. Provide up to 200-feet of communication cabling and associated labor and parts required for complete installation for each device listed above.
- C. If these additional devices are not installed, the Contractor shall provide a credit back to the Owner.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS:

- A. System manufacturer shall be as indicated in the drawings and constitute type, level of quality, and operation characteristics of the equipment to be furnished. All equipment and installation material, to meet the intention of this specification, shall be furnished whether or not enumerated herein, or shown on the drawings.
- B. Accessory equipment shall be based on:
 - 1. Soundolier
 - 2. Electro-Voice
 - 3. Quam
 - 4. Belden
 - 5. Telex
 - 6. West Penn
 - 7. Switchcraft
 - 8. Wheelock

whose numbers are used herein.

2.2 SYSTEM REQUIREMENTS

- A. It shall be the responsibility of this Contractor to ensure that all features, functions, and performance requirements meet or exceed that which have been specified. Failure of the

Architect/Engineer and/or Owner to identify during the product review and acceptance that the submitted product does not provide all features, functions, and performance requirements will in “no way” relieve the Contractor from providing these features, functions and performance requirements as specified.

- B. The platform shall be a single electronic system consisting of a minimum of 10 intercom channels for classroom IP speaker modules and call-in switches, IP Zone modules connection corridor speakers, interior horns, IP Administrative Consoles, SIP enabled PBX integration and district wide integration for paging, emergency notifications, calendar scheduling and configuration.
- C. Each classroom shall be provided with an IP Speaker module interface and call-in switch, each with its own annunciation path and priority.
- D. Call-ins shall automatically annunciated (display of priority and location) to administrative consoles, SIP enabled phones, and outside phones.
- E. Call-ins shall be programmed to automatically change priority and annunciation route based on age of the call-in and original priority.
- F. Call-ins may have priority and annunciation routing changed by user action from a console or SIP enabled phone.
- G. The platform shall lend itself to expansion by simple addition of hardware modules.
- H. The platform shall directly connect to the WAN / LAN without the need for a separate server at each school location. Configuration, including bell schedules, calendars, and emergency sequences can remotely be created, changed, stored, and downloaded to the system by an authorized user from a browser-based interface.
- I. The platform shall provide the ability to initiate school safety paging announcements, evacuation tones, and take cover tones from any telephone or connected web-browser within the facility or outside the facility to any other location within the facility or school district.
- J. The platform shall provide the ability to selectively communicate or monitor individual classrooms in emergency situations from any telephone within the facility or outside the facility to any other location within the facility. All communication within the classroom shall be hands free and will not require any interaction by the classroom user.
- K. The platform shall provide classroom users the ability to confirm that they have safely secured their classroom during lockdown with a single button press.
- L. IP-addressable and POE powered speaker module for individual rooms shall be system programmable and may be assigned any five (5) digit number as well as name and description. Any extension may be reassigned at any time.
- M. IP-enabled two-way voice communication shall be available from any provided telephone or administrative console through any IP speaker in the school. This shall allow hands-free communication to any classroom or any individual IP loudspeaker unit. A programmable pre-announce tone shall sound immediately before the intercom path is opened and supervisory tone shall continue to sound at regular intervals when speaker monitoring is active. Pre-announce tone and supervisory tones shall be disabled during designated emergencies, such as lockdowns, automatically.
- N. The platform shall allow users to configure multiple schedules per school, with a minimum of 500 unique events per schedule and automatic Daylight Savings Time adjustment. A minimum of five (5) schedules may be active on any given day. Users shall be able to select from 25 standard included tones as well as unlimited user created and uploaded audio files for call change signaling and messaging. In addition, scheduled events include relay actions, e-mail notifications, and paging exclusions as system configuration changes. The platform shall allow control of the bell schedules via district WAN / LAN without the need for a separate server at each school. Bell schedules can be

remotely created, changed, stored, and assigned to calendar days for the school by an authorized user from a browser-based interface.

- O. Manufacturers/Suppliers/Installers, which have provided unsatisfactory past installations, shall not be considered.

2.3 MATERIALS AND EQUIPMENT

- A. General: All materials, equipment, accessories, devices and appurtenances shall be new, best suited for its intended use, and shall conform to applicable and recognized standards for their use. All equipment shall be the standard cataloged products of the manufacturers shown.

- B. Equipment: Provide quantities as required for a complete and fully functional system.

- 1. Amplifiers:

- a. Ashly TRA-4075: Power Amplifier 4 X 75W @ 4 Ohms With Xfmr Isolated 25V, 70V, & 100V Outputs
 - 1) 2 RU.
 - 2) 4 Channels.
 - 3) 4 Ohms.
 - 4) 75 Watts.
 - 5) Signal to Noise: >100dB.

- 2. Displays:

- a. Chief FTRV Small Display Mount
- b. Planar PLL2210W 22-inch monitor, widescreen 1,000:1, 5ms VGA / DVI LED LCD monitor, speakers (black)
- c. Meego Meegopad T09 Windows 10 mini PC media player
- d. CallerID POS-2 Ether link Basic Caller ID
- e. Rii Rii Mini K12 Wireless Keyboard with Touchpad
- f. HP 1MV59UT#ABA 260 G2 - mini desktop - Pentium 4405U 2.1 GHz - 4 GB - 500 GB
- g. HP G1K22AA Desktop Mini Security/Dual VESA Sleeve

- 3. Call Stations:

- a. Algo 1203 push button call switch (Owner provided – connected to Algo 8190 clock/speaker)

- 4. Switches:

- a. Netgear GSM5212-100NES Prosafe M4100-D12G Mgd Switch
 - 1) 12-port gigabit managed switch with fiber SFP (GSM5212)
- b. Netgear 420-10043-01 Rack Mount Kit for above.
- c. Netgear AGM731F-AOK 1000Base-Sx Transceiver Netgear Compatible

- 5. IP Addressable Modules:

- a. The system shall provide multiple IP addressable modules for intercom, paging and relay activation.
 - 1) All modules are POE 802.3af compliant.
 - 2) All Modules support DHCP.
 - 3) All Modules connect to the network with a single RJ-45 connector.

6. Connection Blocks:
 - a. ICC IC066SFT25 Punchblocks with Female Telco Connector
 - b. 3/4-inch x 4-feet' x 8-feet' Fire Retardant Plywood Sheathing
 - c. Cat5e Amphenol Telco Trunk Cable Male-to-Male # 15-255-010
 - 1) Data and VoIP.
 - 2) 90 degree Centronics 50 (CN50) Connectors.
 - 3) 25 pair.
 - 4) 10-foot.
 - 5) Screw down connections.
7. Cable:
 - a. West Penn 4246F 4 Pair Cat 6 F/UTP CMR Cable.
 - b. West Penn 25293B 18 awg shielded pair loudspeaker cable (kft)
 - c. West Penn 25841 RG6 Coax AM/FM Antenna Cable (kft)
 - d. Berk Tek 6P4P24-BL-P1.5K LER-AP-N LANmark-6™ Plenum 4-Pair UTP Cable, Blue, SMARTPAK
8. Room Cable:
 - a. C2G 15281 QS 1FT Cat6 non booted plenum cable
 - b. C2G 15285 QS 25FT Cat6 non booted plenum cable
 - c. C2G 15287 QS 50FT Cat6 non booted plenum cable
 - d. ICC IC066SFT25 Punchblocks with female telco connector
9. Battery Back-up Units: APC Smart-UPS SMX1500RM2U
Provide one for each; Gateways, and Switches. Increase capacity and / or quantity as required.
 1. Output Power Capacity: 1200 W 1500 VA
 2. Voltage: 120
 3. Interface Ports: SmartSlot, USB
 4. Output Connections: 8 NEMA5-15R
 5. Cord Length: 6-feet
 6. Battery Type: Maintenance-free sealed Lead acid leak proof
 7. Typical Backup Time/Half Load: 22 minutes (500W)
 8. Typical Backup Time/Full Load: 8 minutes (1000W)
 9. Alarm: Audible
 10. Control Panel: Multi-function LCD status and control console
 11. Warranty: 3 years repair or replace (excluding battery) and 2 years for battery
 12. RoHS: Compliant
 13. Emergency Power Off (EPO): Yes
10. Owner's telephone system will serve as administrative telephones.
11. Station lines shall be installed under Division 27 section "Communication Data Network" complete with trunk cabling to this system's terminals at the console.

12. Antenna System: Furnish and install a long wire AM antenna and double dipole FM antenna, complete with cables, lightning arrestor(s), and antenna matching transformers as detailed. Mount antenna on roof near sound rack and provide necessary conduit for antenna cable. Antenna mounting height approximately five (5) feet above roof. Minimum mast diameter of 2-inches. Provide pitch pocket for conduit penetrating roof. Provide conduit protected cable entrance to building at base of mast (minimum 16-inches above roof line). AM and FM element must be electrically grounded to approved NEC ground with approved connectors. Pixel AFHD-4 AM / FM HD Radio Antenna with the following:
 - 1) 1 - AM /FM Antenna.
 - 2) 1 - L-mounting bracket.
 - 3) 1 - Weather boot.
 - 4) 1 - Surge protector.
 - 5) 2 – 20dB attenuator.
 - 6) 2 – 10dB attenuator.
 - 7) 2 – 3-feet RG6 Cables.
 - 8) 1 – AM / FM band separator.
 - 9) 2 – U-bolts with washers and nuts.
 - 10) 2 – Pole mount saddle bracket.
 - 11) 4 – Mounting screws.
 - 12) 1 – F-female to twin adapter.
 - 13) Pico-Macom GRB-1 ground lug 900 MHz ground block1 port coaxial Cable F connector coax adapter lightning power surge.
 - 14) 1 – Antenna Craft FMSS Omnidirectional M dipole antenna
13. Interface to VoIP Admin Telephone System: Provide four (4) of the appropriate type of CO trunk lines or modules to interface with the Owner’s VoIP Administrative Telephone System. One CO interface module shall be for normal room call-in to a selective speaker, the other module shall be for allowing system override for emergency all-calls over all speakers via a unique dialing access code from the VoIP telephone system.
14. Microphone:
 - a. Desktop paging microphone at the Communications Console complete with seven (7) feet of heavy duty 4 conductor two shielded cable and Switchcraft A3M connector. Cable shall plug into Switchcraft D3F microphone receptacle at rear of console.
 1. Type: Omni-directional dynamic
 2. Frequency Response: 50 to 12,000 Hz
 3. Impedance: HiZ: 40,000 ohms, matches 1000K ohms or greater LoZ: 400 ohms, matches 125 to 1000 ohms
 4. Output Level: HiZ: -55db LoZ: -58 db
 5. Switches: Standard Press-to-Talk with “Lock” feature
 6. Lift-to-Talk with enable/disable switch
 7. Slide switch to select impedance
 8. Case: Durable molded black Cicolac with zinc die-cast matching base
15. Speakers (Quantities as indicated herein or on the drawings):
 - a. Speaker modules shall interface classroom devices, such as speakers and call-in switches, to provide a reliable communications link to the

administrative consoles and connected phones utilizing the school's data network. Capable of delivering a full 2 Watts of audio power to an 8 Ohm speaker, the speaker module provides excellent audio coverage for all classrooms. The speaker module can be easily programmed through the web browser's volume slider interface to adjust the audio power (0.25W, 0.5W, 1W, 1.5W and 2W) to each 8 Ohm speaker.

- b. IP Addressable Zone Paging Module
 - 1) Zone paging modules convert the IP-based audio to an analog line-level audio signal to drive the Audio/Program Amplifiers specified herein.
 - 2) Zone paging modules shall connect multiple speakers for district all page, all page, zone paging, bells, audio events and, emergency notifications.
 - 3) Zone paging modules shall be able to belong to one or more of 100 independent zones for live paging, bells, pre-recorded audio and emergency notifications.
 - c. Gymnasium. Provide indoor horn type loudspeaker assemblies in gymnasium and auxiliary gymnasium locations as shown on drawings. Loudspeaker shall be wall mounted re-entrant type horn loudspeaker and contain a high efficiency 32-watt horn, 70V/25V multi-tap transformer. Dispersion shall be 100 degrees. Loudspeaker shall be surface mounted with tilt and swivel base. Loudspeaker shall include a self-aligning, field-replaceable diaphragm. Units shall be equipped with intercom microphone and accessories as required for a hands-free reply. Include mounting brackets and accessories as required.
 - 1) Speaker volume set at 50%. Never maxed.
 - d. Mechanical Rooms: Provide indoor horn type loudspeaker assemblies in mechanical and electrical rooms and other locations as shown on drawings. Loudspeaker shall be ceiling or wall mounted re-entrant type horn loudspeaker and contain a high efficiency 32-watt horn, 70V/25V multi-tap transformer. Dispersion shall be 100 degrees. Loudspeaker shall be surface mounted with tilt and swivel base. Loudspeaker shall include a self-aligning, field-replaceable diaphragm. Units shall be equipped with intercom microphone and accessories as required for a hands-free reply. Include mounting brackets and accessories as required. Coordinate installation with mechanical and electrical equipment.
 - 1) Speaker volume set at 50%. Never maxed.
16. Speaker Backboxes (Quantities as required for speakers).
 17. Remote Sound Systems Interlock: The public address system shall be muted by a relay during an emergency transmission from the Division 27 section "Intercommunication and Program Systems" to allow the paging speakers to transmit to the audience. Provide circuits, as required, to include loudspeakers connected to remote sound systems in the telecommunication system. Remote loudspeakers shall be temporarily "seized" during paging, two-way intercom, any transmitted tone sets and program distribution, which includes the remote systems area. After completion of the transmission, the remote sound system shall be returned to normal local operation. Furnish and install the appropriate hardware/relay/sensing devices such that any incoming "Emergency Intercom

- Page” from the “Intercommunications and Program Systems” shall feed/mute the independent sound systems in the, cafeteria, gymnasium, commons, , music rooms.
18. Speaker-Microphone Stations
 - a. Mounting: Flush unless otherwise indicated, and suitable for mounting conditions indicated.
 - b. Faceplate: Stainless steel or anodized aluminum with tamperproof mounting screws.
 - c. Back Box: Two-gang galvanized steel with 2-1/2-inch minimum depth.
 - d. Speaker: Minimum axial sensitivity shall be 91 dB at one meter, with 1-W input. Voice coil shall be not less than 3 inches, 2.3 oz. minimum; permanent magnet.
 - e. Tone Annunciation: Recurring momentary tone indicates incoming calls.
 - f. Call Switch: Mount on faceplate. Permits calls to master station.
 - g. Privacy Switch: Mount on faceplate. When in on position, switch prevents transmission of sound from remote station to system; when in off position, without further switch manipulation, response can be made to incoming calls.
 19. Wires and cables in metal raceways or plenums above ceiling.
 - a. For connecting Owner’s (outside) telephone system interconnect to this console: Plenum rated CAT 6 UTP four (4) pair 22 AWG solid copper with jacket.
 - b. For connecting Owner’s (outside) telephone system interconnect to this console: Utilize Division 27 section “Communication Data Network” specified backbone telecommunications homerun cables between the head-end locations of the two systems.
 - c. Fiber Optic Cable: Fiber optic cable is the designated media cabling for school backbone intra-building wiring. This includes all MDF to IDF or IDF to IDF and vertical riser applications.
 - d. All cable from field devices and appearing at the main rack junction box shall be without splices and with no less than 20-feet of extra cable length.
 - e. All cabling being installed for intercommunication system must be installed in accordance with the manufacturer’s specification and installed by manufacturer’s representatives.
 - f. Cabling routed in underground pathways shall be rated for wet environments.
 20. Station Wires: Wiring shall be provided by Division 27 section “Communication Data Network” as specified.
 21. Miscellaneous: Conduits, boxes, plates, etc., as specified hereinbefore. All boxes, etc., shall be of proper size, as determined by the Communication System Trade.
 22. Cable ties shall be plenum rated per NEC Sec. 300.22 (C) and (D).
 - a. Manufacturer: Panduit #PLT2S-C702 or equivalent.
 - b. Color = Maroon.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions under which intercommunication systems are to be installed. Notify architect in writing of conditions detrimental to proper completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the installer.

3.2 INSTALLATION

- A. General: Provide the integrated telephone communication system with all wire, j-hooks, conduit, outlets and equipment as on the drawings and as specified herein. All material and/or equipment necessary for the proper operation of the system, even though not specifically mentioned in the Contract Documents, shall be deemed part of this Contract. All equipment shall be installed and connected in strict accordance with the manufacturer's recommended instructions, NFPA 70 and other applicable codes. So as to provide for matched systems for service maintenance from one source, all equipment shall be furnished by one equipment supplier.
- B. Wiring:
 - 1. Partial Conduit Raceway System Option: All wiring methods shall be in accordance with NFPA-70, Article 800, and all other codes specified herein. Provide proper number, size of wires and conduit as required for operation of the system in accordance with the manufacturer's instructions. J-hooks, conduit and boxes shall be provided by Division 26.
 - 2. Plenum Rated Shielded Power Limited Cable System Option: All wiring methods on the system's load side shall be shielded power limited type as specified in NEC Article 800 and Division 26 section "Control-Voltage Electrical Power Cables".
 - 3. Conceal conductors and cables in accessible ceilings, wall, and floors where possible.
 - 4. No wiring other than that directly associated with the system shall be permitted in these conduits.
 - 5. Wiring within Enclosures: Bundle, lace, and train cables to terminal points with no excess and without exceeding manufacturer's limitations on bending radii. Provide and use lacing bars and distribution spools.
 - 6. Wiring splices are to be avoided to the extent possible, and if needed they must be made only in junction boxes and shall be soldered and crimp connected.
 - 7. Transporting or changing color coding of wires shall not be permitted.
 - 8. Wire nut-type connections are not acceptable.
 - 9. All conductors shall be labeled on each end with "E-Z markers" or equivalent.
 - 10. Conductors in cabinets shall be carefully formed and harnessed so that each drops off directly opposite to its termination.
 - 11. Cabinet terminals shall be numbered and coded. All controls, function switches, etc., shall be clearly labeled on all equipment panels.
 - 12. All connections to panels, devices and equipment shall be made with crimp type terminal connections, or resin core solder method approved by manufacturer.
 - 13. All wiring shall be checked and tested to insure that there are no grounds, opens or shorts.
 - 14. Microphone line shields are to be grounded only at the microphone connector and at the mixer-preamp input connectors. Shields on cables between accessory items of equipment are to be grounded at one end only. All cable shields are to be insulated at the "floating" end. Continuity of shield is to be preserved at all connecting points. All audio grounds in any equipment rack, as well as the racks themselves, are to be earth grounded.

15. All wiring shall be executed in strict adherence to standard telephone and broadcast practices. Lines for microphone level circuits (level below -20 dBm), line level circuits (up to +30 dBm), loudspeaker circuits (above +30 dBm), and power circuits are installed in separate conduits. All conduits shall be well spaced from power conduits and shall be properly grounded to the power system ground. Lines in conduit are not be spliced.
- C. Raceways
1. Comply with requirements in Division 26 section "Raceway and Boxes for Electrical Systems" for installation of conduits and wireways.
 2. This Contractor shall furnish and install all fiber optic cable in conduit for the entire run. Minimum conduit size for fiber optic cable shall be 3/4-inch.
 3. Install manufactured conduit sweeps and long-radius elbows whenever possible.
- D. All boxes, j-hooks, conduits, etc., shall be of proper size, as determined by the Intercom System Trade, shall be clearly marked for easy identification, and continuously bonded to building electrode grounding system (BGES).
- E. All equipment except portable equipment shall be firmly held in place. Fastenings and supports shall be adequate to support their loads with a safety factor of at least three.
- F. The Intercom System Trade shall take such precautions as are necessary to prevent and guard against E.M.I., to supply adequate ventilation, and to install the equipment so as to provide reasonable safety for the operator.
- G. The actual circuit routing of the Intercom System shall be by the installing trade based on the location of the devices, circuit limitations and wire limitations.
- H. Coordinate recessed ceiling speaker enclosures with structural and mechanical systems.
- I. The Division 27 section "Wireless Clock and Tone Generation System" clock master control unit shall be installed in this system's rack.
- J. Interconnect the Owner's outside telephone system four (4) station ports to this system with specified cable.
- K. Interconnect Division 27 section "Communication Data Network" station line's trunk cable to this system for staff telephone function. Trunk cable provided by Division 27 section "Communication Data Network".
- L. Separation of Wires: Separate low-voltage and power wiring runs. Install in separate raceways or, where exposed or in same enclosure, separate conductors at least 12-inches adjacent parallel power and low-voltage wiring. Separate other intercommunication equipment conductors as recommended by equipment manufacturer.
- M. Match input and output impedances and signal levels at signal interfaces. Provide matching networks where required.
- N. Identification of Conductors and Cables: Color-code conductors and apply wire and cable marking tape to designate wires and cables so they identify media in coordination with system wiring diagrams.
- O. Terminate conductors; no cable shall contain unterminated elements. Make terminations only at outlets and terminals.
- P. Splices, Taps, and Terminations: Arrange on numbered terminal strips in junction, pull, and outlet boxes; terminal cabinets; and equipment enclosures. Cables may not be spliced.
- Q. Secure and support cables at intervals not exceeding 30 inches and not more than 6 (six) inches from cabinets, boxes, fittings, outlets, racks, frames, and terminals.
- R. Bundle, lace, and train conductors to terminal points without exceeding manufacturer's limitations on bending radii. Install lacing bars and distribution spools.

- S. Do not install bruised, kinked, scored, deformed, or abraded cable. Do not splice cable between termination, tap, or junction points. Remove and discard cable if damaged during installation and replace it with new cable.
- T. Cold-Weather Installation: Bring cable to room temperature before dereeling. Heat lamps shall not be used.
- U. Install cabling with horizontal and vertical cable guides in telecommunication spaces with terminating hardware and interconnection equipment.
- V. Suspend speaker cable not in a wireway or pathway a minimum of 8 inches above ceiling by cable supports not more than 36-inches apart.
- W. Cable shall not be run through structural members or be in contact with pipes, ducts, or other potentially damaging items.
- X. Weatherproof Equipment: For units that are mounted outdoors, in damp locations, or where exposed to weather, install consistent with requirements of weatherproof rating.
- Y. Connect wiring according to Division 26 section "Low-Voltage Electrical Power Conductors and Cables."
- Z. Provide wire guards over surface mounted speakers where indicated on the drawings. At a minimum, wire guards shall be provided for all wall mounted speakers in the gymnasium, , and main mechanical room.

3.3 GROUNDING

- A. Provide equipment grounding connections for Intercommunications and Program System systems as indicated. Tighten connections to comply with tightening torques specified in UL Standard 486A to assure permanent and effective grounds.
- B. Ground equipment, conductor, and cable shields to eliminate shock hazard and to minimize to the greatest extent possible, ground loops, common mode returns, noise pickup, cross talk, and other impairments. Provide 5-ohm ground at main equipment location. Measure, record, and report ground resistance.
- C. Install grounding electrodes as specified in Division 26 section "Grounding and Bonding for Electrical Systems".
- D. The contractor shall provide all necessary transient protection on the AC power feed and on all station lines leaving or entering the building.
- E. The contractor shall note in his system drawings, the type and location of these protection devices as well as all wiring information.
- F. The contractor shall furnish and install a dedicated, isolated earth ground from the central equipment rack and bond to the incoming electrical service ground buss bar.
- G. Ground cable shields and equipment to eliminate shock hazard and to minimize ground loops, common-mode returns, noise pickup, cross talk, and other impairments.
- H. Signal Ground Terminal: Locate at main equipment cabinet. Isolate from power system and equipment grounding.

3.4 SYSTEM PROGRAMMING

- A. Programming: Fully brief Owner on available programming options. Record Owner's decisions and set up initial system program. Prepare a written record of decisions, implementation methodology, and final results.

3.5 TECHNICAL ASSISTANCE

- A. Instruction: The installation-supervising technician for the Communication System Trade shall instruct the proper designated authority on the correct operation of the system after the installation is completed.

3.6 FIELD QUALITY CONTROL

- A. General: Upon completion of the installation, the Communication System Trade's factory-trained technician shall have performed all necessary electrical tests and adjustments and who shall then submit a Letter of Certification to the Owner/Architect/Engineer that the system functions and conforms to all requirements of the manufacturer of the equipment, these specifications, and all requirements of Uniform Statewide Building Code for type of building in which the system is installed.
- B. The factory-trained technician shall perform all electrical and mechanical tests, measurements and adjustments required below. All test costs shall be in the Contract price. A checkout report shall be prepared by the installation technicians and submitted in triplicate. The report shall include, but not be limited to:
 - 1. A complete list of equipment installed and wired.
 - 2. Indication that all equipment is properly installed and functions and conforms to these specifications.
 - 3. Technician's name, certificate number and date.
 - 4. Schedule tests with at least seven days' advance notice of test performance.
 - 5. After installing intercommunication and program systems and after electrical circuitry has been energized, test for compliance with requirements.
 - 6. Operational Test: Test originating station-to-station, all-call, and page messages at each intercommunication station. Verify proper routing and volume levels and that system is free of noise and distortion. Test each available message path from each station on system.
 - 7. Frequency Response Test: Determine frequency response to two transmission paths, including all-call and paging, by transmitting and recording audio tones. Minimum acceptable performance is within 3 dB from 150 to 2500 Hz.
 - 8. Signal-to-Noise Ratio Test: Measure signal-to-noise ratio of complete system at normal gain settings as follows:
 - a. Disconnect speaker microphone and replace it in the circuit with a signal generator using a 1000-Hz signal. Measure signal-to-noise ratio at paging speakers.
 - b. Repeat test for three speaker microphones, and one master station microphone, and for each separately controlled zone of paging loudspeakers.
 - c. Minimum acceptable ratio is 45 dB.
 - 9. Distortion Test: Measure distortion at normal gain settings and rated power. Feed signals at frequencies of 150, 200, 400, 1000, and 2500 Hz into each intercom, paging, and all-call amplifier. For each frequency, measure distortion in the paging and all-call amplifier outputs. Maximum acceptable distortion at any frequency is 5 percent total harmonics.
 - 10. Acoustic Coverage Test: Feed pink noise into system using octaves centered at 500 and 4000 Hz. Use sound-level meter with octave-band filters to measure level at five locations in each paging zone. Maximum permissible variation in level is plus or minus 3 dB; in levels between adjacent zones, plus or minus 5 dB.
 - 11. Power Output Test: Measure electrical power output of each paging amplifier at normal gain settings of 150, 1000, and 2500 Hz. Maximum variation in power output as these frequencies is plus or minus 3 dB.
 - 12. Signal Ground Test: Measure and report ground resistance at system signal ground. Comply with testing requirements in Division 26 section "Grounding and Bonding for Electrical Systems."

- C. After completion of all tests, measurements and adjustments listed above, the Communication System Trade shall submit the following information to the Architect/Engineer.
 - 1. “As-built” partial conduit system layout diagrams including wire color code and/or tag number.
 - 2. Complete “as-built” wiring diagrams.
 - 3. Complete operating instructions, including engineering data sheets on each major component and complete servicing data including part numbers of the various components.
- D. Final tests and inspection shall be held in the presence of Architect/Engineer’s representatives and to their satisfaction. The Communication System Trade shall supply personnel and required auxiliary equipment for this test without additional cost.
- E. The completed Intercom System shall be tested to ensure that it is operating properly. Acceptance of the system shall also require a demonstration of the stability of the system. This shall be adequately demonstrated if the system operates for a ninety (90) day test period without any problems. Should a problem occur, the Intercom System Trade shall readjust or replace the defective components and begin another ninety (90) day test period. This test shall not start until the Owner has obtained beneficial use of the building under tests.
- F. If the requirements provided in the paragraph above are not completed within one (1) year after beginning the tests described therein, the Intercom System Trade shall replace the system with another acceptable manufacturer and the process repeated until acceptance of the equipment by the Architect/Engineer.
- G. After completion of all tests and adjustments listed above, the Intercom System Trade shall turn over all data disks and other information, including passwords, used in configuring the Intercom System. All such information shall be the property of the Owner upon the acceptance of the system by the Project Manager.

3.7 STARTUP SERVICE

- A. Engage a factory-authorized service representative to perform startup service and initial system programming.
 - 1. Verify that electrical wiring installation complies with manufacturer’s submittal and installation requirements.
 - 2. Complete installation and startup checks according to manufacturer’s written instructions.

3.8 ADJUSTING

- A. On-Site Assistance: Engage a factory-authorized service representative to provide on-site assistance in adjusting sound levels, resetting transformer taps, and adjusting controls to meet occupancy conditions.
- B. Occupancy Adjustments: Within 12 months of date of Substantial Completion, provide on-site assistance in adjusting system to suit actual occupied conditions. Provide up to two visits to Project during other-than-normal occupancy hours for this purpose.

3.9 TRAINING

- A. The intercommunications system contractor and supplier shall provide forty (40) hours factory training.

1. Two (2) separate in-service training sessions of the system operation to the school operating personnel, i.e., principal, assistant principals, deans, administrative intern, office secretary, and others who have requirements for operating the intercommunications system. The training classes shall be conducted at the school site.
 2. Two (2) separate training classes for the Owner's Department of Digital Innovation (DDI) in the programming and servicing of the systems being supplied under these specifications. The training classes shall be conducted at the school site.
 3. An additional eight (8) hour training segment shall be conducted during the last month of the warranty period.
 4. Provide a printed directory, indicating the school assigned room numbers (not construction room numbers) and dial telephone number extensions for all locations to the Owner prior to substantial completion of this project.
 5. Training shall include the following:
 - a. Schedules
 - b. Phones with extensions
 - c. Consoles (emergency vs. paging)
 - d. Music
 - e. Zones
 - f. Attachments
 - g. MAC / IP by phone
- B. Engage a factory-authorized service representative to train Owner's personnel to adjust, operate, and maintain the intercommunication and program systems.
1. Training shall include but not be limited to programming equipment for start-up and shutdown, troubleshooting, servicing, and maintaining the system and equipment.
 2. Include a preliminary staff development training program in outline form for review and approval by the owner's representative.
 3. Include a current copy of the trainer's certification from the manufacturer that certifies and identifies the trainer(s) who are eligible to provide training and support for the project.
 4. Include a current copy of trainer's need's assessment form which will be reviewed with the owner's designated representative for the system's preliminary system programming and configuration.
 5. Include copies of all documentation used to identify for the owner those participants attending and completing the training programs.
 6. All staff development training is to be coordinated through the owner's designated representative. As training sessions are completed, the trainer will provide the school's administrative staff and school district's staff a document listing all of the staff and faculty members who attended, received and completed the training program.
- C. No training shall occur until all testing is complete and system is fully operational.

3.10 CLOSEOUT

- A. General: Upon completion of the installation, the Intercom System Trade's factory-trained technician shall perform all necessary electrical tests and adjustments and who shall then submit a Letter of Certification to the Owner/Architect/Engineer that the

system functions and conforms to all requirements of the manufacturer of the equipment, these specifications, and all requirements of Uniform Statewide Building Code for type of building in which the system is installed.

- B. A two (2) year maintenance contract by the installer shall be included as part of this contract.
- C. The factory trained technician shall perform all electrical and mechanical tests, measurements and adjustments required below. All test costs shall be in the Contract price. A checkout report shall be prepared by the installation technicians and submitted in triplicate. The report shall include, but not be limited to:
 - 1. Indication that all equipment is properly installed and functions and conforms to these specifications.
 - 2. A complete list of equipment installed and wired.
 - 3. Technician's name, certificate number and date.
- D. Final tests and inspection shall be held in the presence of Architect/Engineers' representatives and to their satisfaction. The System Trade shall supply personnel and required auxiliary equipment for this test without additional cost.
- E. The completed System shall be tested to ensure that it is operating properly. Acceptance of the system shall also require a demonstration of the stability of the system. This shall be adequately demonstrated if the system operates for a ninety (90) day test period without any problems. Should a problem occur, the Intercom System Trade shall readjust or replace the defective components and begin another ninety (90) day test period. This test shall not start until the Owner has obtained beneficial use of the building under tests.
- F. If the requirements provided in the paragraph above are not completed within one (1) year after beginning the tests described therein, the Intercom System Trade shall replace the system with another acceptable manufacturer and the process repeated until acceptance of the equipment by the Architect/Engineer.
- G. After completion of all tests and adjustments listed above, the System Trade shall turn over all data disks and other information, including passwords, used in configuring the system. All such information shall be the property of the Owner upon the acceptance of the system by the Project Manager.

3.11 CLEANING AND PROTECTION

- A. Prior to final acceptance, the contractor shall vacuum and clean all system components and protect them from damage and deterioration. All general areas within and around all equipment racks / cabinets in the school will be swept, vacuumed, and debris removed.

3.12 CERTIFICATION

- A. The system supplier's factory representative shall be on hand for final hook-up and test, and shall certify, in writing, that the system is fully operational and meets the requirements of this section and all service training is complete. This letter shall be included in the final documents required for acceptance by the Owner.

END OF SECTION 27 51 23.50

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ES 23- Substitution Request Review (03-04-2020)

#	Spec Section	Title	Description	Yes	No	Notes
1	12 32 16	Manufactured Plastic Laminate Clad Casework & Relative Equipment	List paragon as an approved bidder	x		approved by LCPS for ES-29 Bid process
2	10 51 13	Metal Lockers	HDPE plastic lockers (Tuftec Lockers by Scranton Products) in lieu of Metal lockers		x	metal lockers is LCPS standard
3	07 21 00	Insulation Board	List SLAG-WOOL-FIBERROCK-WOOL-FIBER BOARD INSULATION by John Manville as an approved equal	x		John Manville is listed as an approved MFR for other insulation types throughout spec
4	07 21 00	Insulation Blanket	SLAG-WOOL-FIBER/ROCK-WOOL-FIBER BLANKET INSULATION by John Manville as an approved equal	x		John Manville is listed as an approved MFR for other insulation types throughout spec
5	07 42 13	Metal Wall Panel	Metal wall panel by Metal Roofing Systems Inc in lieu of panels by Centria		x	A substitution was provided for only one of the two metal wall panel profiles used in the project. Website suggests MSR does not produce the missing metal panel profile.
6	09 65 66	Resilient Athletic Flooring	Substitute w/ Omnisports HPL 7+2 by Tarkett Sports		x	2.0 mm wear later vs 2.1 mm listed in sepc.
7	09 65 66	Resilient Athletic Flooring	Substitute w/ Omnisports 9.4 Sheet Vinyl Athletic Flooring by Tarkett Sports		x	2.0 mm wear later vs 2.1 mm listed in sepc.