



**ROCKFORD BOARD OF EDUCATION  
INVITATION FOR BID ON SUPPLIES, MATERIALS, EQUIPMENT OR SERVICES  
FOR SCHOOL DISTRICT NO. 205  
ROCKFORD, ILLINOIS**

IFB No.        **17-40 Rockford Public School District 205 School B, Zone 1**

DATE:        May 23, 2017

RE:        **ADDENDUM NO. 5**

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To All Bidders:

Attached are modifications, clarifications and/or corrections for the Project Manual and are hereby made a part of the contract documents. Please attach this addendum to the Project Manual(s) in your possession. Please note the receipt of this addendum on the bid form. Bidders shall review changes to all portions of this work as changes to one portion may affect the work of another.

**If you plan to hand deliver your IFB submission on the due date, please note you must check in on the 3rd floor prior to coming to the bid opening. Please allow time for this as late submission will not be accepted.**

Refer all questions relative to the business aspect, Instructions to Bidders, Special Conditions, and questions concerning the technical aspect of the documents to the Purchasing Department by email to Vicki Musa at [musav@rps205.com](mailto:musav@rps205.com).

**Date of Addendum: May 22, 2017**

**Original Date of Contract Documents: Issued for Bid: March 01, 2017**

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**Owner:**

Rockford Public School District 205  
School B, Zone 1  
Rockford, IL  
Cannon Project No. 005005.00

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**Architects and Engineers**

Cannon Design  
225 N. Michigan Ave, Suite 1100  
Chicago, Illinois 60601

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This Addendum amends Drawings and/or Specifications and/or Addenda for the above titled project, as indicated below, and is hereby incorporated into the Contract Documents as part thereof.

Bidders are required to acknowledge receipt of this Addendum in the space provided on the Proposal/Bid Form.

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**NARRATIVES –****SPECIFICATIONS (PROJECT MANUAL):**

1. 003133 – INFORMATION AVAILABLE TO BIDDERS

- A. Page 003133-1, Article 1.1, Paragraph A, Insert Sub-paragraph 3. to read as follows:

“3. Property Acquisition Map”

2. 012300 – ALTERNATES

- A. Page 012300-2, Article 3.1, Paragraph 8, Sub-paragraph a: Replace “May 23, 2017” with “June 13, 2017”

3. 015000 – TEMPORARY FACILITIES AND CONTROLS

- A. Page 015000-1, Article 1.2, Revise Paragraph A to read as follows:

“A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow all other entities to use temporary services and facilities without cost, including, but not limited to, Architect, occupants of Project, testing agencies, and authorities having jurisdiction. The Owner will pay directly, or reimburse the contractor, for any utility connection fees or permits.”

4. 033000 – CAST IN PLACE CONCRETE

- A. Page 033000-11, Article 2.13, Paragraph B, Insert Subparagraph 4, as follows:

“4. Spechard by SpecChem”

- B. Page 033000-12, Article 2.13, Paragraph F, Insert Subparagraph 4, as follows:

“4. Viper Vaporcheck II by Insulation Solutions Inc.”



5. 042000 – UNIT MASONRY

A. Page 042000-5, Article 2.4, Revise Paragraph C, to read as follows:

“C. Colored brick pattern “A” – 33% blend of the following:

1. Brick Type 3: Elgin-Butler; Glazed Series, Green #4505, modular size, standard color.
2. Brick type 4: Elgin-Butler; Glazed Series, Green #1353-5, modular size, custom color.
3. Brick Type 5: Elgin-Butler; Glazed Series, Green #1353-12, modular size, custom color.”

B. Page 042000-5, Article 2.4, Revise Paragraph D, to read as follows:

“D. Colored brick pattern “B” – 33% blend of the following:

1. Brick Type 6: Elgin Butler; Glazed series, Classic Red #8800, modular size, standard color.
2. Brick Type 7: Elgin-Butler; Glazed Series, Fiesta Red #8000, modular size, standard color.
3. Brick Type 8: Elgin-Butler; Glazed Series, Maroon #4124, modular size, standard color.”

C. Page 042000-5, Article 2.4, Revise Paragraph E, to read as follows:

“E. Colored brick pattern “C” – 33% blend of the following:

1. Brick Type 9: Elgin-Butler; Glazed Series, Blue #4889, modular size, standard color.
2. Brick Type 10: Elgin-Butler; Glazed Series, Blue #1354-5, modular size, custom color.
3. Brick Type 11: Elgin-Butler; Glazed Series, Blue #1354-11, modular size, custom color.”

D. Page 042000-5, Article 2.4, Revise Paragraph F, to read as follows:

“F. Colored brick pattern “D” – 33% blend of the following:

1. Brick Type 12: Elgin-Butler; Glazed Series, Yellow #7350, modular size, standard color.
2. Brick Type 13: Elgin-Butler; Glazed Series, Buttercup #4863, modular size, standard color.
3. Brick Type 14: Elgin-Butler; Glazed Series, Lemon Twist #2300A, modular size, standard color.”

6. 221323 – SANITARY WASTE INTERCEPTORS

A. Page 221323-2, Article 2.1, A, 1, a: Insert the following:

“or Crest Precast, Inc.”

B. Page 221323-2, Article 2.1, A, 4: insert the following:

“or concrete, 5,000 PSI.”

5. 237413 – PACKAGED, OUTDOOR, CENTRAL-STATION AIR-HANDLING UNITS

A. Page 237413-4, Article 2.1, Insert Subparagraph 6 as follows:

“6. Carrier, Inc.”

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**ATTACHMENTS –**

1. Bidding RFI Report

**Specifications:**

1. 004100 – BID FORM

A. Section 004100 is a revised section and being re-issued as an attachment to this Addendum.

2. 003133.3 – PROPERTY ACQUISITION MAP

A. Section 003133.3 is a new section and being issued as an attachment to this Addendum.

3. 087100 – DOOR HARDWARE SCHEDULE

A. Section 087100 is a revised section and being re-issued as an attachment to this Addendum.

4. 221323 – SANITARY WASTE INTERCEPTORS

A. Section 221323 is a revised section and being re-issued as an attachment to this Addendum.

5. 237413 – PACKAGED OUTDOOR CENTRAL STATION AHU

A. Section 237413 is a revised section and being re-issued as an attachment to this Addendum.

6. 281300 – ACCESS CONTROL/INTRUSION DETECTION SYSTEM

A. Section 281300 is a revised section and being re-issued as an attachment to this Addendum.

**Drawings:**

**Volume 1:**

1. G0201 - LEVEL 01 CODE COMPLIANCE

A. Drawing G0201 is being issued as an attachment to this Addendum.

2. C01 – GENERAL NOTES:
  - A. Revised General Notes section, note 20, to show the correct undercut quantity as shown on sheet C11 and information regarding the requirement of discing and drying.
3. C14 – UTILITY PLAN:
  - A. Revised note regarding water main flowable fill outside public R.O.W. per City of Rockford review comments.
4. C16 – WATERMAIN AND SANITARY PLAN AND PROFILE STA. 50+00 – 54+00:
  - A. Revised location of service valve and box per City of Rockford review comments.
5. C17 – WATERMAIN AND SANITARY PLAN AND PROFILE STA. 54+00 – 57+25:
  - A. Added watermain encasement where crossing gasketed storm sewer per City of Rockford review comments.
6. C19 – KISHWAUKEE STREET CORRIDOR PLAN STA. 107+50 – 112+50
  - A. Added notes clarifying the limits of flowable fill.
7. C26 – RESTORATION PLAN:
  - A. Revised depth of topsoil from 6" to 4".
8. C27 – DETAILS:
  - A. Added note to PIPE EMBEDMENT detail to describe suitable trench backfill.
  - B. Revised STANDARD DUTY ASPHALT PAVEMENT detail to permit 5" of CA2 and 3" RAP, in lieu of 8" of CA6
  - C. Revised HEAVY DUTY ASPHALT PAVEMENT detail to permit 7" of CA2 and 3" RAP, in lieu of 10" of CA6.
  - D. Added note to PAVEMENT DETAILS regarding the use of RAP in right-of-way.
9. C28 – IDOT DETAIL:
  - A. Added Pavement Joint Details.
10. C31 – WATER DETAILS 2:
  - A. Added WATER MAIN CASING DETAIL per City of Rockford review comments.
11. C34 – PARENT DROP OFF AND RESTRIPIING PLAN:
  - A. Revised pavement note to permit the use of HMA pavement in lieu of PCC pavement.
  - B. Added TEMPORARY HMA PAVEMENT ACCESS ROAD detail to be used as contractor option.

12. S0101 – FOUNDATION WALL LAYOUT PLAN

A. Removed “Note”.

13. S0101.A – FOUNDATION PLAN – AREA A

A. Removed “Note to Contractor”.

14. S0101.B – FOUNDATION PLAN – AREA B

A. Removed “Note to Contractor”.

15. S0101.C – FOUNDATION PLAN – AREA C

A. Removed “Note to Contractor”.

16. S0101.D – FOUNDATION PLAN – AREA D

A. Removed “Note to Contractor”.

**Volume 2:**

1. A0052 – ENLARGED ENTRY PLAZA PLAN - KISHWAUKEE

A. Drawing A0052 is being issued as an attachment to this Addendum.

2. A0053 – TRASH ENCLOSURE

A. Drawing A0053 is being issued as an attachment to this Addendum.

3. A0101A – LEVEL 01 PLAN - AREA A

A. Drawing A0101A is being issued as an attachment to this Addendum.

4. A0101B – LEVEL 01 PLAN - AREA B

A. Drawing A0101B is being issued as an attachment to this Addendum.

5. A0102A – ROOF PLAN - AREA A

A. Drawing A0102A is being issued as an attachment to this Addendum.

6. A0102B – ROOF PLAN - AREA B

A. Drawing A0102B is being issued as an attachment to this Addendum.

7. A0102C – ROOF PLAN - AREA C

A. Drawing A0102C is being issued as an attachment to this Addendum.

8. A0311 – EXTERIOR ELEVATIONS

A. Drawing A0311 is being issued as an attachment to this Addendum.

9. A0312 – EXTERIOR ELEVATIONS

A. Drawing A0312 is being issued as an attachment to this Addendum.

10. A0313 – CLERESTORY ELEVATIONS

A. Drawing A0313 is being issued as an attachment to this Addendum.

11. A0314 – BRICK COURSING - KINDERGARTEN ELEVATIONS

A. Drawing A0314 is being issued as an attachment to this Addendum.

12. A0422 – EXTERIOR PLAN DETAILS

A. Drawing A0422 is being issued as an attachment to this Addendum.

13. A0453 – EXTERIOR SECTION DETAILS

A. Drawing A0453 is being issued as an attachment to this Addendum.

14. A0454 – EXTERIOR SECTION DETAILS

A. Drawing A0454 is being issued as an attachment to this Addendum.

15. A0604 – INTERIOR ELEVATIONS

A. Drawing A0604 is being issued as an attachment to this Addendum.

16. A0605 – INTERIOR ELEVATIONS

A. Drawing A0605 is being issued as an attachment to this Addendum.

17. A0701B – LEVEL 01 REFLECTED CEILING PLAN – AREA B

A. Drawing A0604 is being issued as an attachment to this Addendum.

18. A0802 – PLAN DETAILS

A. Drawing A0802 is being issued as an attachment to this Addendum.

19. A0811 – SECTION DETAILS

A. Drawing A0811 is being issued as an attachment to this Addendum.

**Volume 3:**

1. P0501 – PLUMBING SCHEDULES

A. Drawing P0501 is being issued as an attachment to this Addendum.

2. M0502 – SCHEDULES

A. Drawing M0502 is being issued as an attachment to this Addendum.

3. E0052 – SITE PLAN B

A. Drawing E0052 is being issued as an attachment to this Addendum.

4. E0101B – LEVEL 01 LIGHTING PLAN - AREA B

A. Drawing E0101B is being issued as an attachment to this Addendum.

5. E0201A – LEVEL 01 LIGHTING PLAN - AREA A

A. Drawing E0201A is being issued as an attachment to this Addendum.

6. E0201B – LEVEL 01 LIGHTING PLAN - AREA B

A. Drawing E0201B is being issued as an attachment to this Addendum.

7. E0201C – LEVEL 01 LIGHTING PLAN - AREA C

A. Drawing E0201C is being issued as an attachment to this Addendum.

8. E0201D – LEVEL 01 LIGHTING PLAN - AREA D

A. Drawing E0201D is being issued as an attachment to this Addendum.

9. E0401 – ENLARGED PLANS

A. Drawing E0401 is being issued as an attachment to this Addendum.

10. E0402 – ENLARGED PLANS

A. Drawing E0402 is being issued as an attachment to this Addendum.

11. E0601 – LIGHTING SCHEDULES

A. Drawing E0601 is being issued as an attachment to this Addendum.

12. E0621 – POWER SCHEDULES

A. Drawing E0621 is being issued as an attachment to this Addendum.

13. E0623 – PANEL SCHEDULES

A. Drawing E0623 is being issued as an attachment to this Addendum.

14. E0741 – SYSTEM DETAILS

A. Drawing E0741 is being issued as an attachment to this Addendum.

15. E0743 – SYSTEM DETAILS

A. Drawing E0743 is a new sheeting and is being issued as an attachment to this Addendum.

END OF ADDENDUM NO. 5

Bidding RFI Report

PROJECT: 5005.00 Rockford 205 - School B, Zone 1, Rockford, IL  
ADDENDUM 01: 4/21/2017  
ADDENDUM 02: 4/26/2017  
ADDENDUM 03: 5/4/2017  
ADDENDUM 04: 5/11/2017  
ADDENDUM 05: 5/22/2017



ID	From	Received	Response Date	Question	Answer
1	Judy Stanley Stenstrom Construction 2420 20th St. Rockford, IL 61104 Office: 815-398-2420 Fax: 815-398-0041 JudiS@rstenstrom.com	4/27/2017	5/4/2017	Would you see if the architect will waive the AWI Certification requirement?	No, this requirement will not be waived.
2	Al Musch Estimator/ Project Manager Premier Woodwork Inc. 1522 7th Street Rockford, IL 61104 Phone 1-815-968-6650 Fax 1-815-972-1141	4/27/2017	5/4/2017	Please pass along two questions for me. 1) See if they will waive the AWI Quality Certification Program  2) See if they can waive the ¾" solid surface and use ½" solid surface	1. No, this requirement will not be waived.  2. Please provide specified thickness.
3	Jill Anderson Sales Support Specialist TK Products 952.938.7223 local janderson@tkproduct.com wwwtkproducts.com	4/27/2017	5/4/2017	Request to substitute the following in lieu of specified products in Section 072726, Fluid Applied Membrane Air Barriers:  TK-AirMax 2102 Non-Permeable	Refer to Addendum 3.
4	Jill Anderson Sales Support Specialist TK Products 952.938.7223 local janderson@tkproduct.com wwwtkproducts.com	4/27/2017	5/4/2017	Request to substitute the following in lieu of specified products in Section 072726, Fluid Applied Membrane Air Barriers:  TK-AirMax 2103 Non-Permeable WB	Refer to Addendum 3.
5	David B. McCallum Estimator Graphic Specialties Inc 3110 Washington Avenue North Suite 200 Minneapolis, MN 55411 d.mccallum@signsbygisi.com	5/1/2017	5/4/2017	Regarding spec sections 101416, 101419, 101423.13 & 101426, I did not find any sign details or schedules in the documents. Did I miss them or will more information be forthcoming?	101416 - PLAQUES, 101419 - DIMENSIONAL LETTER SIGNAGE, 101423.13 - ROOM IDENTIFICATION SIGNAGE, 101426 - PANEL SIGNAGE: Please see District Signage Standards Sheet Volume 1: G0203; Architectural Site Plan Volume 2 A0051; Exterior Elevations Sheets Volume 2: A0311, A0312, A0313, Level 01 Plan - Area A-D A0101A,B,C, and D.



ID	From	Received	Response Date	Question	Answer
6	Jill Lindeman Architectural Coordinator, Commercial Related Products Division I Logan Contractors Supply 4101 106th Street Des Moines, IA 50322 Office: (515) 253-9048	5/3/2017	5/4/2017 5/22/2017	1. Request to substitute the following in lieu of specified products in Section 033000, Cast-in-Place Concrete:  SpecHard by SpecChem  2. Request to substitute the following in lieu of specified products in Section 042000, Unit Masonry:  Polyguard 400 Flashing	1. Refer to Addendum 5.     2. Refer to Addendum 3.
7	Roman Tylka Advanced Glazing Products, LLC 17 Cliffside Drive Willow Springs IL 60480 312-805-2396 roman@advancedglazingproducts.com	5/3/2017	5/4/2017	Request to substitute the following in lieu of specified products in Section 085113, Aluminum Windows:  Litex Windows	Please provide a product from one of the specified manufacturers.
8	Lisa Roberts Project Engineer Fiblast, LLC. 1602, Mizell Road, Tuskegee, Al-36083 Phone: (334) 513 1314 Ext-1 Fax: (334) 239 4333 Email: fiblastllc@live.com	5/3/2017	5/4/2017	Request to substitute the following in lieu of specified products in Section 092713, Glass-Fiber-Reinforced Plaster Fabrications:  Fiblast	Please provide a product from one of the specified manufacturers.
9	Jim Kohler (jkohler@mechinc.com)	5/4/2017	5/22/2017	1. Drawing P0404: Shows 3" feed line up to the tee for the water softener. The Hot Water piping to & from the water heater is 2". The WSFU's listed on the P0404 drawing shows a total of 40 WSFU's for hot water. This works out to be around 65-75 gpm. The water heater plumbing schematic (drawing # P0601) shows 2" piping from the water heater. The water softener system should be able to match the 2" pipe flow rate of the hot water system of around 80 GPM. The schedule for the water softener (Plan # P0501) shows a single tank water softener with 1" piping and a 9" x 48" tank. We would like to see if a duplex water softener system with 16" tanks, continuous flow rate of 57 GPM @ 15 psi drop and a peak flow rate of 75 GPM @ 25 psi drop per tank, with progressive flow and a total capacity of 180,000 grains or a larger 21" single tank water softener system with a continuous flow rate of 65 GPM @ 15 psi drop and a peak flow rate of 85 GPM @ 25 psi drop with a capacity of 210,000 grains of capacity is acceptable?	1. Refer to Addendum 5.

ID	From	Received	Response Date	Question	Answer
10	Nick Mehn, CSI Sales Associate Insulation Solutions, Inc. Phone: 309.698.0062 Fax: 309.698.0065 www.insulationsolutions.com www.viper2.com	5/4/2017	5/22/2017	Please add Viper VaporCheck II as an acceptable vapor barrier for this project. I have attached a sub request for your viewing. Let me know if you have any questions.	Refer to Addendum 5.
11	Joe Madonia Estimator IHC Construction Companies, LLC (847) 742-1516 jmadonia@ihcconstruction.com	5/8/2017	5/22/2017	<p>1. Drawing C01 General Note 20 calls for us to carry an undercut allowance of 2,200 CY's in our base bid. Please confirm that this undercut allowance is in addition to Allowance #1, #3 and #4 on the bid form.</p> <p>2. If you plan on saving the trees as indicated on the landscape drawings that are in the construction areas, extensive root pruning will be required. If this is to be part of the base bid, it should be noted on the landscape drawings and be in the landscape specifications.</p> <p>3. Drawings S0101 states that we should anticipate and plan for undercutting existing man made fill from 1' to 6" over the entire building footprint, but the undercut allowance that we are to include in the bid (allowance #3 – 100 CYD @ Bld Fndt &amp; Allowance #4 700 CYD under Bld Pad) does not even cover a 6" undercut of the entire footprint which would be 1,575 CYDS. Please confirm that the base bid includes no undercutting other than the allowances on the bid form.</p> <p>4. Trash enclosure plan A0053 fence post hinge detail – Reference Detail 9/A053 which is a wood corner post but should be a metal post per referenced Elevation 1. Please also confirm that the latch side support post for the single man door is wood.</p> <p>5. Please provide the referenced Site Clearing and Building Bid Package.</p> <p>6. Detail 2/A0452 shows a ½ SS top on two layers of particle board supported by an un-sized continuous plate and refers to structural drawings. Please confirm which detail on the structural drawings shows this support plate. I checked Detail 10/S0200.D but it is for wall reinforcing.</p>	<p>1. Refer to Addendum 5.</p> <p>2. Professional root pruning will not be required.</p> <p>3. Refer to Addendum 5.</p> <p>4. Refer to Addendum 5.</p> <p>5. Refer to Addendum 3. These documents can be found on the District's website under IFB 17-53: <a href="http://www3.rps205.com/departments/Purchasing/Lists/BidsRFPs/DispForm.aspx?ID=370&amp;Source=http%3A%2F%2Fwww3%2Erps205%2Ecom%2Fdepartments%2FPurchasing%2FPages%2FBids%2DRFPs%2Easpx&amp;ContentTypeId=0x010007C78365391D464187F9C043243581F9">http://www3.rps205.com/departments/Purchasing/Lists/BidsRFPs/DispForm.aspx?ID=370&amp;Source=http%3A%2F%2Fwww3%2Erps205%2Ecom%2Fdepartments%2FPurchasing%2FPages%2FBids%2DRFPs%2Easpx&amp;ContentTypeId=0x010007C78365391D464187F9C043243581F9</a></p> <p>6. Refer to structural Detail 4/S0200.D.</p>

ID	From	Received	Response Date	Question	Answer
12	Joe Madonia Estimator IHC Construction Companies, LLC (847) 742-1516 jmadonia@ihcconstruction.com	5/8/2017	5/22/2017	<p>1. Civil drawing C15 shows a 1000 gallon grease interceptor located more than 5 foot outside the building, but plumbing drawing P0501 shows a 275 gallon GSI-1 located just outside the exterior wall. Please confirm if these are the same units and if so, which detail do we go with?</p> <p>2. Please confirm washing machine is by owner.</p> <p>3. Please confirm quantity and description of compressed 24"x24" quartz floor tile as shown on drawing A1232?</p> <p>4. Confirm specification of ceramic wall tile material CWT-1 which is not on drawing A1200 finish specification plan.</p> <p>5. Detail 2/A0453 calls for an exterior gypsum soffit, but similar detail at main canopy calls for EIFS.</p>	<p>1. Refer Addendum 5.</p> <p>2. Correct, washing machine is by Owner.</p> <p>3. Refer to RFT-1 and RFT-2 floor finish tag on Drawing A1232 and refer to Drawing A1200 for floor finish, under resilient floor column, for RFI-1 and RFT-2 information.</p> <p>4. Refer to Drawing A1200, under wall finish column, for CWT-1 information.</p> <p>5. Refer Addendum 5.</p>
13	Joe Madonia Estimator IHC Construction Companies, LLC (847) 742-1516 jmadonia@ihcconstruction.com	5/8/2017	5/22/2017	<p>1) There is a substantial amount of excess site excavation to be removed from this site. Does this site have any environmental issues or can all the excavated soils be disposed of off-site at a CCDD/ Uncontaminated Soil Fill Operations Facility?</p> <p>2) The demolition contractor will most likely contaminate the existing site topsoil during his operations. Will any of the existing topsoil be salvaged during the demolition contract for the grading contractors use? Should the grading contractor assume all required topsoil will need to be imported from off-site?</p>	<p>1. Refer to Addendum 4 for information on how to access the Phase 1 Environmental Report. No environmental issues have been identified. Contractors must conform to applicable regulatory procedures if hazardous or contaminated materials are discovered. The Owner will be responsible for any costs associated with hazardous or contaminated soils.</p> <p>2. Refer to notes on Drawings C9 and C10. Salvage of topsoil is not included in the site demo contract.</p>
14	Joe Madonia Estimator IHC Construction Companies, LLC (847) 742-1516 jmadonia@ihcconstruction.com	5/11/2017	5/22/2017	<p>1. Specs call for abuse-resistant board for the outer layer at the classrooms only. Does this need to go to the deck, or just above ACT?</p> <p>2. Specs call for a structural corner bead. Is this typical for all corner beads? Do they need to go to the deck, or just above ACT?</p>	<p>1. Refer to sheet A1001 PARTITION TYPES for typical partitions. Provide specified material as shown in details.</p> <p>2. Structural corner bead is required at all drywall partitions at vertical corners, running 6" above ceiling. See detail 7/A0802 for more information.</p>
15	Steve Crouch Estimator/Project Manager Scandroli Construction Co 855 N. Madison St. Rockford, IL 61107 steve.crouch@scandroli.com Phone 815-962-4037 Fax 815-962-8103 Cell 815-222-9373	5/15/2017	5/22/2017	<p>In looking over the plans today for this project, we came across some conflicting information regarding topsoil. If this hasn't already been addressed, could you submit it as an RFI:</p> <p>Sheet C11 shows Grading Note #2 – All areas should receive 4" of topsoil Sheet C26 shows a box in the center of the page stating 'All areas should receive 6" of topsoil'</p>	Refer to Addendum No. 5 for clarification on topsoil requirements.

ID	From	Received	Response Date	Question	Answer
16	Brian Amling Northern Illinois Service Co. 4781 Sandy Hollow Road Rockford, IL 61109 815.874.4422 Office 815.874.1944 Fax 815.378.9081 Mobile brian@northernillinoiservice.com	5/18/2017	5/22/2017	<p>1. On Sheet C19 please indicate the north extent of the abandonment / filling of the existing 6" watermain at Kishwaukee St.</p> <p>2. On Sheet C09 the existing 4" watermain on Catlin St. is noted to be abandoned per one note and removed per another note; please clarify.</p> <p>3. Please provide information regarding the acceptable method of abandoning the RRWRD sewer manholes.</p> <p>4. What will be the required value of the IDOT utility permit bond?</p> <p>5. Sheet C04 indicates that site excavation work in Area A will take place prior to Areas C and D. Can removed soil materials from Area A be placed in Areas C and D for future grading?</p> <p>6. On Sheet C04 are we to assume that all demolition within Area A will be complete and the entire area will be available when work begins?</p> <p>7. On Sheet C01 General Note #20 states that 2,200 CY of undercut is to be included in the base bid. The addendum #1 bid form indicates 2,7000 CY is to be included (Allowance #1 800 CY, #2 1,100 CY, #3 100 CY #4 700 CY). Please verify what we are to include as an allowance.</p>	<p>1. Refer to Addendum 5.</p> <p>2. The existing 4" watermain and water services are to be abandoned. Service boxes need to be removed. Any water services or watermain that conflicts with building foundations or other improvements needs to be removed as necessary.</p> <p>3. See RRWRD standard specifications for requirements.</p> <p>4. Contractor shall assume the following bond amounts and include the cost of obtaining each bond in his bid for this project: IDOT Utility bond shall be \$25,000 for a period of 5 years. IDOT highway bond shall be \$50,000 for a period of 5 years.</p> <p>5. Yes, pending the removal of other structures.</p> <p>6. Yes.</p> <p>7. Refer to Addendum 5. The allowances listed on sheet C11 shall be used. The total allowance for undercut is 1,600 CY and an allowance of 1,100 SY is required for fabric stabilization at roadways. Contractor to include these allowances in their bid.</p>
17	Kevin McGinn Engel Electric Co	5/18/2017	5/22/2017	<p>EE RFI-1 Alternate #7, Traffic Signals.</p> <p>There are no specifications for the mast arm assemblies.</p> <p>There are no specifications for the traffic signal equipment.</p>	The traffic signal equipment specifications are included as Section 014000.2 in the project manual.
18	Roger Stoeckel, Owner Shade Aire Company 7511 Grace Dr. Roscoe, IL 61073 815 623-7597 815 623-8541 fax 815 543-0612 cell	5/18/2017		<p>Specification 122413, 1.4, A., 1., (Extra Material) reads "Roller Shades:1 shade for each window size up to 4 openings".</p> <p>1. Please clarify more fully EXTRA MATERIAL requirements.</p> <p>2. Does "EXTRA MATERIAL" pertain to motorized shades?</p>	

BID FORM

To: Rockford Public School District 205  
501 7<sup>th</sup> Street  
Rockford, Illinois 61104

In compliance with your Invitation for Bids, the undersigned,

---

(Name of firm, partnership or Corporation)

hereby proposes to furnish all labor and materials and perform all general work for the construction of the in strict accordance with the Project Manual dated March 1, 2017 and the Drawings mentioned therein, and including any subsequently issued addenda for consideration of the following amount:

Base Bid \_\_\_\_\_ Dollars (\$\_\_\_\_\_)

ALTERNATES

Refer to Division 01 Section 012300 – Alternates for description of Alternates.

Alternate Bid #1A: ADD Kindergarten Room Cubbies

Bid Amount \$\_\_\_\_\_.

Alternate Bid #1B: ADD Kindergarten Room Wall Cabinets

Bid Amount \$\_\_\_\_\_.

Alternate Bid #2: ADD Display Cases & Tack Surface

Bid Amount \$\_\_\_\_\_.

Alternate Bid #3: ADD Library Casework

Bid Amount \$\_\_\_\_\_.

Alternate Bid #4: ADD Increase Generator Capacity & Transfer Switch

Bid Amount \$\_\_\_\_\_.

Alternate Bid #5: ADD Parking Spaces at Bus Loop

Bid Amount \$\_\_\_\_\_.

Alternate Bid #6: ADD Water Main Extension

Bid Amount \$\_\_\_\_\_.

Alternate Bid #7: ADD New Traffic Signal

Bid Amount \$\_\_\_\_\_.

Alternate Bid #8: ADD/ DEDUCT/NO CHANGE for Alternate Work Schedule.

Bid Amount \$\_\_\_\_\_.

#### PROJECT MILESTONE DATES

1. Notice of Letter of Intent – ~~5/17/17~~ **6/7/17**
2. BOE Approval – ~~5/23/17~~ **6/13/17**
3. Area "A" Available-7/03/17
4. North Site Access Completion-8/01/17
5. Substantial Completion -7/18/18
6. Final Building Completion- 8/01/18
7. Area "D" Completion- 8/31/18
8. Commissioning-Pre-Construction Meeting - ~~6/16/2017~~ **7/6/17**
9. Commissioning-Functional Testing- 6/06/18
10. Existing School Demolition (by others)- 6/11/18 to 8/03/18
11. Commissioning- Final – Winter 2019
12. Pre-Construction Meeting-~~6/14/17~~ **6/28/17**
13. Storm Shelter Pre-Construction Meeting- ~~6/28/17~~ **7/12/17**

If written notice of the acceptance of this Bid is mailed, telegraphed, or delivered to the undersigned at any time prior to the date set for the expiration of the Bid Security, the undersigned will, within ten (10) days after the notice, execute and deliver a contract in accordance with the required Form of the Agreement and give Performance and Payment Bond, if so required, in accordance with the Bid as accepted.

The undersigned acknowledges that the bidder has adequate equipment to do the work properly and expeditiously:

The undersigned hereby designates as his office to which such notice of acceptance may be mailed, telegraphed or delivered:

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This Bid may be withdrawn at any time prior to the scheduled time for the opening of Bids or any authorized postponement thereof.

Caution: This Bid may be rejected if not accompanied by a guarantee in the specified amount. Any certified check may be held uncollected at risk of Bidders submitting them.

Addendum Receipt: The receipt of the following addenda to the Specifications is acknowledged:

Addendum No. _____	Date _____	Addendum No. _____	Date _____
Addendum No. _____	Date _____	Addendum No. _____	Date _____
Addendum No. _____	Date _____	Addendum No. _____	Date _____

Submittals, as required by the Instructions/Supplementary Instructions to Bidders, shall be completed and delivered to the Architect, by the two (2) or three (3) low bidders, within three working days after the Bid opening.

Dated \_\_\_\_\_, 2017

\_\_\_\_\_  
Legal name of person, partnership or corporation

(Sign Bid Here) By:

\_\_\_\_\_  
Name and Title

Legal Business Address:

\_\_\_\_\_  
Street Address

\_\_\_\_\_  
City and State

#### UNIT PRICES

Should the amount of work required for this project be increased or decreased due to changes in design or conditions at the site, the undersigned agrees that the following unit prices will be the basis for an increase or decrease to the contract amount.

Refer to Division 01 Section 012200 – Unit Prices for description of Unit Prices.

Unit Price No. 1: For over excavation, hauling spoils off-site and breaker run aggregate (2" -3") material at locations where unsuitable soils are encountered at roadways.. \$ \_\_\_\_\_/cubic yard.

Unit Price No.2:  
Furnish and install fabric stabilization at roadway.  
\$ \_\_\_\_\_/square yard

Unit Price No. 3: For over excavation, hauling spoils off-site and compacted granular fill material at locations where unsuitable soils are encountered at the building foundations.  
\$ \_\_\_\_\_/cubic yard.

Unit Price No.4:  
For over excavation, hauling spoils off-site and compacted granular fill material at locations where unsuitable soils are encountered at building pad/paved areas.  
\$ \_\_\_\_\_/cubic yard

ALLOWANCES:

The following material cost allowances have been included in the Base Bid and should the following allowance exceed or be less than the cost of selected items, the difference in cost shall be added to, or credited to the Owner's Contract.

Refer to Division 01 Section 012100 – Allowances for description of Allowances.

Allowance No. 1: Include 800 cubic yards of over-excavation, hauling spoils off-site and breaker run aggregate (2" -3") material at locations where unsuitable soils are encountered at the Roadway.

Allowance No.2: Include 1100 square yards of fabric stabilization at roadways.

Allowance No.3: Include 100 cubic yards of over excavation, hauling spoils off-site and compacted granular fill material at locations where unsuitable soils are encountered at the building foundations.

Allowance No.4: Include 700 cubic yards of over excavation, hauling spoils off-site and compacted granular fill material at locations where unsuitable soils are encountered at building pad/paved areas.

Allowance No. 5: Include the sum of \$15,000 for temporary site lighting in front of existing school along Catlin Street.

Allowance No. 6: Include the sum of \$30,000 to accommodate Owner move-in under the Base Bid Schedule to address punch list items prior to final completion.

LIST MAJOR SUBCONTRACTORS/VALUES

1. EARTHWORK SUBCONTRACTOR \_\_\_\_\_ \$ \_\_\_\_\_
2. SITE UTILITIES SUBCONTRACTOR \_\_\_\_\_ \$ \_\_\_\_\_
3. CONCRETE \_\_\_\_\_ \$ \_\_\_\_\_
4. MASONRY \_\_\_\_\_ \$ \_\_\_\_\_
5. STEEL FABRICATION \_\_\_\_\_ \$ \_\_\_\_\_
6. ROOFING \_\_\_\_\_ \$ \_\_\_\_\_
7. WINDOWS \_\_\_\_\_ \$ \_\_\_\_\_
8. PLUMBING \_\_\_\_\_ \$ \_\_\_\_\_
9. HVAC SUBCONTRACTOR \_\_\_\_\_ \$ \_\_\_\_\_
  - a) HVAC CONTROLS SUBCONTRACTOR \_\_\_\_\_
10. ELECTRICAL SUBCONTRACTOR \_\_\_\_\_ \$ \_\_\_\_\_
  - a) TECHNOLOGY SYSTEMS SUBCONTRACTOR \_\_\_\_\_
  - b) FIRE ALARM SYSTEM SUBCONTRACTOR \_\_\_\_\_



**IF BIDDER IS A FIRM OR PARTNERSHIP, COMPLETE THE FOLLOWING:**

Name of Members or Partners

Legal Residence

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**IF BIDDER IS A CORPORATION, COMPLETE THE FOLLOWING:**

State of Incorporation: \_\_\_\_\_

Name and Title

Legal Residence

\_\_\_\_\_  
President

---

\_\_\_\_\_  
Vice President

---

\_\_\_\_\_  
Secretary

---

Bidders References: Each contractor is to submit a list of reference as indicated on AIA A305-1986.

**DIRECTION FOR MAILING**

Envelopes containing Bids, Guarantees, etc., must be sealed, marked and addressed in lower left hand corner as follows:

Bid For:  
School B, Zone 1  
Rockford, IL

Address:  
Rockford Public School District 205  
501 7<sup>th</sup> Street  
Rockford, Illinois 61104

Attention: Cannon Design

**BID PROPOSAL CERTIFICATIONS**

Firm Name \_\_\_\_\_

Business Address \_\_\_\_\_

Telephone Number \_\_\_\_\_ Date of Bid \_\_\_\_\_

**I. General Bid Certification**

The bidder certifies that he will furnish, at the prices herein quoted, the materials, equipment and/or services as proposed on this bid.

**II. Non-Collusive Bidding Certifications:** By submission of this bid proposal, the bidder also certifies compliance with the following:

1. Statement of Non-Collusion in Bids and Proposals to Political Subdivision of the State: Every bid or proposal hereafter made to a political subdivision of the state or any public department, agency or official thereof where competitive bidding is required by statute, rule, regulation, or local law, for work or services performed or to be performed or goods sold or to be sold, shall contain the following statement subscribed by the bidder and affirmed by such bidder as true under the penalties of perjury: Non-collusive bidding certification.

(a) By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid, each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:

- (1) The prices in this bid have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
- (2) Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder to any competitor; and
- (3) No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

(b) A bid shall not be considered for award nor shall any award be made where (a)(1), (a)(2) and (a)(3) above have not been complied with; provided, however, that if in any case the bidder cannot make the foregoing certification, the bidder shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons therefore. Where (a)(1), (a)(2) and (a)(3) above have not been complied with, the bid shall not be considered for award nor shall any award be made unless the head of the purchasing unit of the political subdivision, public department, agency or official thereof to which the bid is made, or his designee, determines that such disclosure was not made for the purpose of restricting completions.

The fact that a bidder (a) has published price lists, rates, or tariffs covering items being procured, (b) has informed prospective customers of proposed or pending publication of new or revised price lists for such items, or (c) has sold the same items to other customers at the same prices being bid, does not constitute, without more, a disclosure within the meaning subparagraph one (a).

2. Any bid hereafter made to any political subdivision of the state or any public department, agency or official thereof by a corporate bidder for work of services performed or to be performed or goods sold or not to be sold, where competitive bidding is required by statute, rule, regulation, or local law, and where such bid contains the certification referred to in subdivision one of the section, shall be deemed to have been authorized by the board of directors of the bidder, and such authorization shall be deemed the board of directors of the bidder, and such authorization shall be deemed to include the signing and submission of the bid and the inclusion therein of the certificate as to non-collusion as the act and deed of the corporation.

Signature (Authorized) \_\_\_\_\_

Title \_\_\_\_\_

**WAIVER OF IMMUNITY CLAUSE**

The bidder hereby agrees to the provisions of the applicable General Municipal Law which requires that upon the refusal of person, when called before a grand Jury to testify concerning any transaction or contract had with the State, any political subdivision thereof, a public authority or with any public department, agency or official of the state or of any political subdivision thereof or of a public authority, to sign a waiver of immunity against subsequent criminal prosecution or to answer any relevant question concerning such transaction or contract.

- (a) Such person, any firm, partnership, or corporation of which he is a member, partner, director or officer shall be disqualified from thereafter selling to or submitting bids to or receiving awards from or entering into any contracts with any municipal corporation or any public department, agency or official thereof, for goods, work or services, for a period of five years after such refusal, and
- (b) Any and all contracts made with any municipal corporation or any public department, agency or official thereof, since the effective date of this law, by such person, and by any firm, partnership, or corporation of which he is a member, partner, director or officer may be canceled or terminated by the municipal corporation without incurring any penalty or damages on account of such cancellation or termination, but any monies owing by the municipal corporation for goods delivered or work done prior to the cancellation or termination shall be paid.

\_\_\_\_\_  
Individual

\_\_\_\_\_  
Corporation

Date \_\_\_\_\_ By: \_\_\_\_\_

AFFIRMATIVE ACTION AGREEMENT

Firm Name: \_\_\_\_\_

Business Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Non-discrimination Clauses:

1. The Contractor will not discriminate against any employee or applicant for employment because of race, creed, sex, color or national origin and will take affirmative action to insure that they are afforded equal employment opportunities without discrimination because of race, creed, sex, color or national origin. Such action shall be taken with reference, but not limited to: recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff or termination, rates of pay or other forms of compensation, and selection for training or retraining, including apprenticeship and on-the-job training.
2. The Contractor will send to each labor union or representative of workers with which he has or is bound by a collective bargaining or other agreement or understanding, a notice, to be provided by the State Commission for Human Rights, advising such labor union or representative of the Contractor's agreement under clauses (1) through (7) (hereinafter called "non-discrimination clauses"). If the Contractor was directed to do so by the contracting agency as part of the bid or negotiation of this Contract, the Contractor shall request such labor union or representative to furnish him with a written statement that such labor union or representative will not discriminate because of race, creed, sex, color or national origin and that such labor union or representative either will affirmatively cooperate, within the limits of its legal and contractual authority, in the implementation of the policy and provisions of these non-discrimination clauses or that it consents and agrees that recruitment, employment and the terms and conditions of employment under this Contract shall be in accordance with the purposes and provisions of these non-discrimination clauses. If such labor union or representative fails or refuses to comply with such a request that it furnish such a statement, the Contractor shall promptly notify the State Commission for Human Rights of such failure or refusal.
3. The Contractor will post and keep posted in conspicuous places, available to employees and applicants for employment, notices to be provided by the State Commission for Human Rights setting forth the substance of the provisions of clauses (1) and (2) and such provisions of the State's laws against discrimination as the State Commission for Human Rights shall determine.
4. The Contractor will state, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, that all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, sex, color or national origin.
5. The Contractor will comply with the provisions of Sections 291-299 of the Executive Law and the Civil Rights Law, will furnish all information and reports deemed necessary by the State Commission for Human Rights under these non-discrimination clauses and such sections of the Executive Law, and will permit access to his books, records and accounts by the State Commission for Human Rights, the Attorney General and the Industrial Commissioner for the purposes of investigation to ascertain compliance with these non-discrimination clauses and such sections of the Executive Law and Civil Rights Law.

6. This Contract may be forthwith canceled, terminated or suspended, in whole or in part, by the contracting agency upon the basis of a finding made by the State Commission for Human Rights that the Contractor has not complied with these non-discrimination clauses, and the Contractor may be declared ineligible for future contracts made by or on behalf of the State or a public authority or agency of the state, until he satisfies the State Commission for Human Rights that he has established and is carrying out a program in conformity with the provisions of these non-discrimination clauses. Such finding shall be made by the State Commission for Human Rights after conciliation efforts by the Commission have failed to achieve compliance with these non-discrimination clauses and after a verified complaint has been filed with the Commission, notice thereof has been given to the Contractor and an opportunity has been afforded him to be heard publicly before three members of the Commission. Such sanctions may be imposed and remedies invoked dependently of or in addition to sanctions and remedies otherwise provided by law.
7. The Contractor will include the provisions of clauses (1) through (6) in every subcontract or purchase order in such a manner that such provisions will be binding upon each subcontractor or vendor as to operations to be performed within the State of Illinois. The Contractor will take such action in enforcing such provisions of such subcontract or purchase order as the contracting agency may direct, including sanctions or remedies for non-compliance. If the Contractor becomes involved in or is threatened with litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the Contractor shall promptly so notify the Attorney General, requesting him to intervene and protect the interests of the State of Illinois.

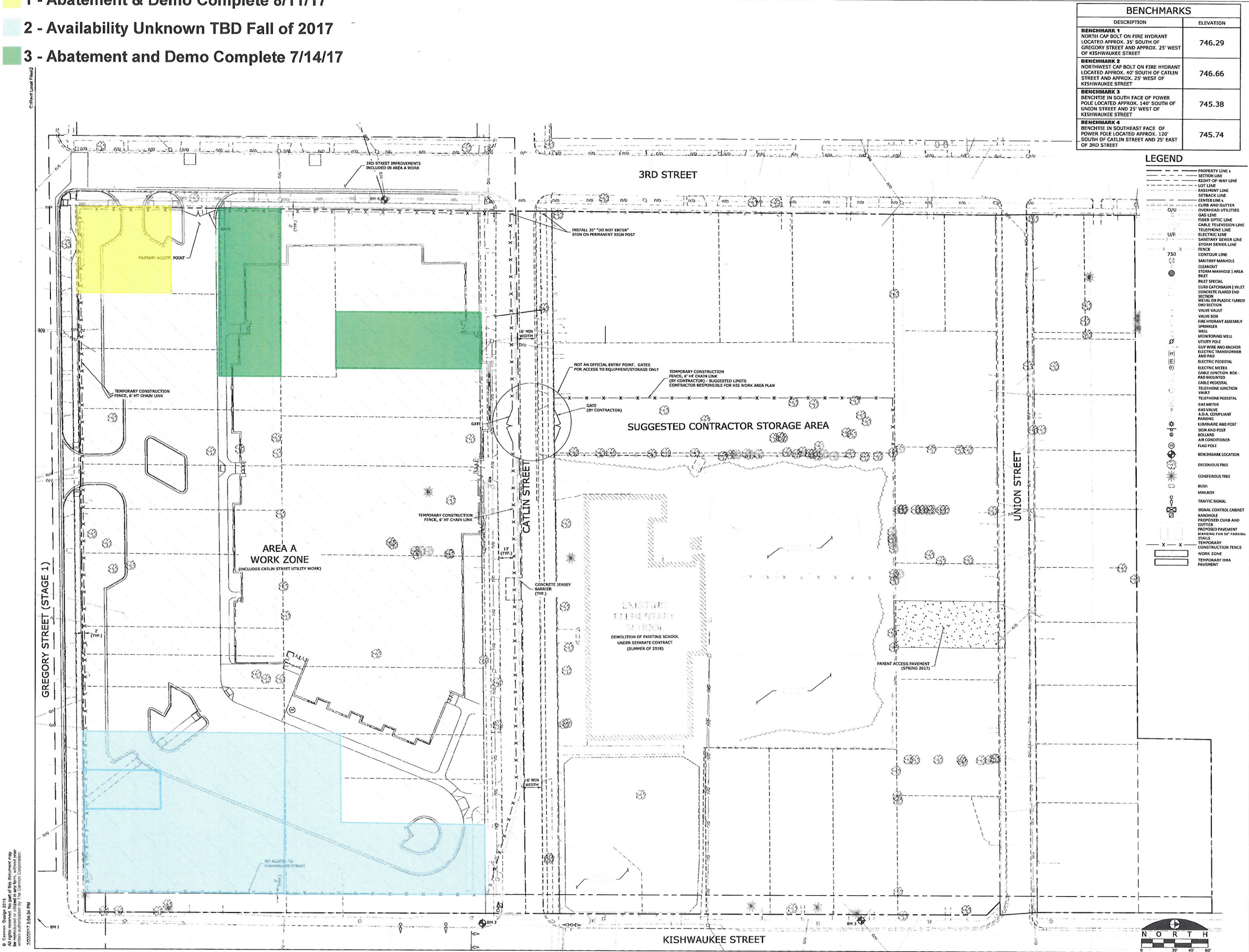
Signature (Authorized) \_\_\_\_\_

Title \_\_\_\_\_

END OF BID FORM



- 1 - Abatement & Demo Complete 8/11/17
- 2 - Availability Unknown TBD Fall of 2017
- 3 - Abatement and Demo Complete 7/14/17



ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

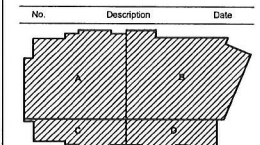


225 North Michigan Avenue, Suite 1100  
Chicago, Illinois 60601  
T: 312.332.9600  
F: 312.332.9601  
PROFESSIONAL DESIGN FIRM  
LICENSE NUMBER 184.005683

S20 CONSULTANTS, INC.  
Kitchen Consultants  
13 Winding Branch Rd  
Hawthorn Woods, IL 60047  
224-717-1999

ARC DESIGN RESOURCES INC.  
Civil Consultants  
5291 Zenith Parkway  
Loves Park, IL 61111  
(815) 484-4300

1 ISSUED FOR BID 03/01/2016



KEY PLAN

AREA A WORK SCOPE

Project No.: 005005.00 Checked by: JSL

C05

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## SECTION 087100 – DOOR HARDWARE SETS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section references specification sections relating to commercial door hardware for the following:
  - 1. Swinging doors.
  - 2. Sliding Doors.
  - 3. Other doors to the extent indicated.
- B. Commercial door hardware includes, but is not necessarily limited to, the following:
  - 1. Mechanical door hardware.
  - 2. Electromechanical and access control door hardware.
  - 3. Electromechanical and access control door hardware power supplies, back-ups and surge protection.
  - 4. Automatic operators.
  - 5. Cylinders specified for doors in other sections.
- C. Related Sections:
  - 1. Division 08 Section "Hollow Metal Doors and Frames".
  - 2. Division 08 Sections "Flush and Clad Wood Doors".
  - 3. Division 08 Section "Aluminum Framed Entrances and Storefronts".
  - 4. Division 08 Section "Door Hardware".
  - 5. Division 28 Section "Access Control".
- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
  - 1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
  - 2. ICC/IBC - International Building Code.
  - 3. NFPA 70 - National Electrical Code.
  - 4. NFPA 80 - Fire Doors and Windows.
  - 5. NFPA 101 - Life Safety Code.
  - 6. NFPA 105 - Installation of Smoke Door Assemblies.
  - 7. State Building Codes, Local Amendments.
- E. Standards: Reference Related Sections for requirements regarding compliance with applicable industry standards.

#### 1.3 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.



- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
    - 1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
    - 2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
    - 3. Content: Include the following information:
      - a. Type, style, function, size, label, hand, and finish of each door hardware item.
      - b. Manufacturer of each item.
      - c. Fastenings and other pertinent information.
      - d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
      - e. Explanation of abbreviations, symbols, and codes contained in schedule.
      - f. Mounting locations for door hardware.
      - g. Door and frame sizes and materials.
    - 4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
  - C. Keying Schedule: Prepared under the supervision of the Owner, separate schedule detailing final keying instructions for locksets and cylinders in writing. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner to approve submitted keying schedule prior to the ordering of permanent cylinders.
  - D. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.
  - E. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Submittals. The manual to include the name, address, and contact information of the manufacturers providing the hardware and their nearest service representatives. The final copies delivered after completion of the installation test to include "as built" modifications made during installation, checkout, and acceptance.
  - F. Warranties and Maintenance: Special warranties and maintenance agreements specified in the Related Sections.
- 1.4 QUALITY ASSURANCE
- A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum [5] years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

- B. Installer Qualifications: Installers, trained by the primary product manufacturers, with a minimum [3] years documented experience installing both standard and electrified builders hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- C. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum [5] years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor in good standing by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.
- D. Source Limitations: Obtain each type and variety of Door Hardware specified in the Related Sections from a single source, qualified supplier unless otherwise indicated.
- E. Regulatory Requirements: Comply with NFPA 70, NFPA 80, NFPA 101 and ANSI A117.1 requirements and guidelines as directed in the applicable model building code.
- F. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.
- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

#### 1.6 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.
- B. Door and Frame Preparation: Division 08 Sections (Steel, Aluminum and Wood) doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

#### 1.7 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

## PART 2 - PRODUCTS

### 2.1 SCHEDULED DOOR HARDWARE

- A. Refer to "PART 3 – EXECUTION" for required specification sections.

## PART 3 - EXECUTION

### 3.1 DOOR HARDWARE SETS

- A. The door hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.
- B. The supplier is responsible for handing and sizing all products as listed in the door hardware sets. Quantities listed are for each pair of doors, or for each single door.
- C. Products listed in the Door Hardware Sets must meet the requirements described in the specification sections noted.
1. Section 08 71 00 – Door Hardware.
- D. Manufacturer's Abbreviations:

1. MK - McKinney
2. PE - Pemko
3. RF - Rixson
4. RO - Rockwood
5. SA - Sargent
6. SU - Securitron
7. HS - HES
8. FO - Folger Adam
9. NO - Norton

## Hardware Sets

### Set: AC1.00

2 Continuous Hinge	MCK-25HD SER-12	CL	MK
<del>1 Keyed Removable Mullion</del>	<del>L980</del>	<del>600</del>	<del>SA</del>
1 Exit Device	43 53 55 56-HK 8810	630	SA
1 Exit Device	43 53 55 56-HK 8804	630	SA
<del>1 Cylinder Kit</del>	<del>980C1 (for Removable Mullion)</del>	<del>626</del>	<del>SA</del>
2 Pull	RM201	630	RO
2 Concealed Overhead Stop	6 SERIES	630	RF
1 Door Closer	J7500	689	NO
1 Door Operator (Push Side)	6060	689	NO
1 Threshold	273x224AFGT		PE
2 ElectroLynx Harness	QC-C006		MK

2 ElectroLynx Harness	QC-C1500P	MK
1 Actuator Switch (Wall Mount)	505	NO
1 Actuator Switch (Vestibule) Switch	504	NO
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>	
<del>2 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>	
<del>1 Power Supply</del>	<del>BPS-24-2</del>	<del>SU</del>
1 Card Reader	BY DIVISION 28	
2 Door Position Switch	BY DIVISION 28	
1 Power Supply	BPS-24-x (size supply as required per plans)	SU
1 Push Button	BY DIVISION 28	
1 Aiphone	BY DIVISION 28	

Notes: Fixed mullion and weather strip by aluminum door and frame manufacturer.

Keyed exit device to be mounted on RHR door, automatic operator to be mounted on LHR door.

BPS power supply to be used for openings 100A, 100B, 100C, and 100D. Power supply to be appropriately sized to accommodate all exit devices at each opening.

**Operation: Doors normally closed and locked. Egress allowed at all times. Doors can be unlocked for selected periods of time by hex key dogging or scheduled unlocking by the access control system. Entry by mechanical key operation or by presenting a valid credential to the card reader, which will retract the exit device latchbolts on both doors, allowing the doors to be pulled open and also, when the exterior ADA push button is engaged, will enable the automatic operator. Exit devices have internal switches to monitor the latchbolt status and have request to exit (REX) switches to shunt the door position switches. Depressing the actuator switch on the pull side of the doors, when the operator is enabled, signals the operator to automatically open the LHR door. Doors can also be opened by remote push button operation from the office area through Aiphone request, which will also enable the operator. Depressing the actuator switch on the push side of the doors will retract the exit device latchbolt on the LHR door and signal the operator to automatically open the door. In the event of power failure or fire alarm activation the doors will remain locked - FAIL-SECURE.**

**Set: AC1.01**

2 Continuous Hinge	MCK-25HD SER-12	CL	MK
<del>1 Keyed Removable Mullion</del>	<del>L980</del>	<del>600</del>	<del>SA</del>
2 Exit Device	43 53 55 56-HK 8810	630	SA
<del>1 Cylinder Kit</del>	<del>980C1 (for Removable Mullion)</del>	<del>626</del>	<del>SA</del>
2 Pull	RM201	630	RO
2 Concealed Overhead Stop	6 SERIES	630	RF
2 Door Closer	J7500	689	NO
1 Threshold	273x224AFGT		PE
2 ElectroLynx Harness	QC-C006		MK
2 ElectroLynx Harness	QC-C1500P		MK
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>2 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-24-2</del>	<del>SU</del>	
2 Door Position Switch	BY DIVISION 28		
1 Power Supply	BPS-24-x (size supply as required per plans)	SU	

Notes: Fixed mullion and weather strip by aluminum door and frame manufacturer.

**Operation: Doors normally closed and secured. Egress allowed at all times. Doors can be opened for selected periods of time by hex key dogging or scheduled unlocking by the access control system. Exit devices have internal switches to monitor the latchbolt status and have request to**

exit (REX) switches to shunt the door position switches. In the event of power failure or fire alarm activation the doors will remain secured - FAIL-SECURE.

**Set: AC1.02**

2 Continuous Hinge	MCK-25HD SER-12	CL	MK
<del>1 Keyed Removable Mullion</del>	<del>L980</del>	<del>600</del>	<del>SA</del>
1 Exit Device	43 55 56- <b>HK</b> 8810	630	SA
1 Exit Device	43 55 56- <b>HK</b> 8804	630	SA
<del>1 Cylinder Kit</del>	<del>980C1 (for Removable Mullion)</del>	<del>626</del>	<del>SA</del>
2 Pull	RM201	630	RO
2 Concealed Overhead Stop	6 SERIES	630	RF
2 Door Closer	J7500	689	NO
1 Threshold	273x224AFGT		PE
2 ElectroLynx Harness	QC-C006		MK
2 ElectroLynx Harness	QC-C1500P		MK
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>2 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-24-2</del>		<del>SU</del>
<b>1 Card Reader</b>	<b>BY DIVISION 28</b>		
<b>2 Door Position Switch</b>	<b>BY DIVISION 28</b>		
<b>1 Power Supply</b>	<b>BPS-24-x (size supply as required per plans)</b>		<b>SU</b>

Notes: Fixed mullion and weather strip by aluminum door and frame manufacturer.

**Operation: Doors normally closed and locked. Egress allowed at all times. Doors can be opened for selected periods of time by hex key dogging or scheduled unlocking by the access control system.**

**Entry by mechanical key operation or by presenting a valid credential to the card reader, which will retract the exit device latchbolts on both doors, allowing the doors to be pulled open. Exit devices have internal request to exit (REX) switches to shunt the door position switches. In the event of power failure or fire alarm activation the doors will remain secured - FAIL-SECURE.**

**Set: AC1.03**

2 Continuous Hinge	MCK-25HD SER-12	CL	MK
<del>1 Keyed Removable Mullion</del>	<del>L980</del>	<del>600</del>	<del>SA</del>
1 Exit Device	43 <b>53</b> 55 56- <b>HK</b> 8810	630	SA
1 Exit Device	43 <b>53</b> 55 56- <b>HK</b> 8804	630	SA
<del>1 Cylinder Kit</del>	<del>980C1 (for Removable Mullion)</del>	<del>626</del>	<del>SA</del>
2 Pull	RM201	630	RO
2 Concealed Overhead Stop	6 SERIES	630	RF
1 Door Closer	J7500	689	NO
1 Door Operator (Push Side)	6060	689	NO
2 ElectroLynx Harness	QC-C006		MK
1 Wiring Diagram	WD-SYSPK		
2 ElectroLynx Harness	QC-C1500P		MK
1 Actuator Switch (Wall Mount)	505		NO
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>2 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-24-2</del>		<del>SU</del>
<b>1 Card Reader</b>	<b>BY DIVISION 28</b>		
<b>1 Power Supply</b>	<b>BPS-24-x (size supply as required per plans)</b>		<b>SU</b>

Notes: Fixed mullion by aluminum door and frame manufacturer.  
Keyed exit device to be mounted on RHR door, automatic operator to be mounted on LHR door.

**Operation: Doors normally closed and locked. Egress allowed at all times. Doors can be unlocked for selected periods of time by hex key dogging or scheduled unlocking by the access control system. Entry by mechanical key operation or by presenting a valid credential to the card reader, which will retract the exit device latchbolts on both doors, allowing the doors to be pulled open. Exit devices have internal switches to monitor the latchbolt status. Depressing the actuator switch on the pull side of the doors, when the operator is enabled, signals the operator to automatically open the LHR door. Depressing the actuator switch on the push side of the doors will retract the exit device latchbolt on the LHR door and signal the operator to automatically open the door. In the event of power failure or fire alarm activation the doors will remain locked - FAIL-SECURE.**

**Set: AC1.04**

2 Continuous Hinge	MCK-25HD SER-12	CL	MK
<del>1 Keyed Removable Mullion</del>	<del>L980</del>	<del>600</del>	<del>SA</del>
<del>2 Exit Device</del>	<del>43 53 55 56-HK 8810</del>	<del>630</del>	<del>SA</del>
2 Exit Device	43 53 56-HK 8810	630	SA
<del>1 Cylinder Kit</del>	<del>980C1 (for Removable Mullion)</del>	<del>626</del>	<del>SA</del>
2 Pull	RM201	630	RO
2 Concealed Overhead Stop	6 SERIES	630	RF
2 Door Closer	J7500	689	NO
2 ElectroLynx Harness	QC-C006		MK
2 ElectroLynx Harness	QC-C1500P		MK
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>2 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-24-2</del>		<del>SU</del>
1 Power Supply	BPS-24-x (size supply as required per plans)		SU

Notes: Fixed mullion by aluminum door and frame manufacturer.

**Operation: Doors normally closed and secured. Egress allowed at all times. Doors can be opened for selected periods of time by hex key dogging or scheduled unlocking by the access control system. Exit devices have internal switches to monitor the latchbolt status. In the event of power failure or fire alarm activation the doors will remain secured - FAIL-SECURE.**

**Set: AC1.05**

1 Continuous Hinge	MCK-25HD SER-12	CL	MK
1 Exit Device	43 53 55 56-HK 8804	630	SA
1 Pull	RM201	630	RO
1 Concealed Overhead Stop	6 SERIES	630	RF
1 Door Closer	J7500	689	NO
1 Threshold	278x224AFGT x length as required		PE
1 ElectroLynx Harness	QC-C006		MK
1 ElectroLynx Harness	QC-C1500P		MK
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-24-2</del>		<del>SU</del>
1 Card Reader	BY DIVISION 28		

<b>1 Door Position Switch</b>	<b>BY DIVISION 28</b>		
<b>1 Power Supply</b>	<b>BPS-24-x (size supply as required per plans)</b>		<b>SU</b>

Notes: Weather strip by aluminum door and frame manufacturer.  
BPS power supply to be used for openings 121A, 121B, 121C, & 311A, 311B, 311C, & 329A, 329B, 329C. Power supply to be appropriately sized to accommodate all exit devices at each opening.

**Operation: Door normally closed and locked. Egress allowed at all times. Door can be unlocked for selected periods of time by hex key dogging or scheduled unlocking by the access control system. Entry by mechanical key operation or by presenting a valid credential to the card reader, which will retract the exit device latchbolt, allowing the door to be pulled open. Exit device has an internal switch to monitor the latchbolt status and a request to exit (REX) switch to shunt the door position switches. In the event of power failure or fire alarm activation the door will remain locked - FAIL-SECURE.**

**Set: AC1.06 NOT USED**

1 Continuous Hinge	MCK-25HD SER-12	CL	MK
1 Exit Device	43 55 56 8810	630	SA
1 Pull	RM201	630	RO
1 Concealed Overhead Stop	6 SERIES	630	RF
1 Door Closer	J7500	689	NO
1 Threshold	278x224AFGT x length as required		PE
1 ElectroLynx Harness	QC-C006		MK
1 ElectroLynx Harness	QC-C1500P		MK
1 Door Position Switch	BY SECURITY CONTRACTOR		
1 Power Supply	BPS-12/24-1		SU
-			

Notes: Weatherstrip by aluminum door and frame manufacturer.

**Set: AC1.07**

2 Continuous Hinge	MCK-25HD SER-12	CL	MK
1 Keyed Removable Mullion	L980	600	SA
1 Exit Device	43 55 56-HK 8810	630	SA
1 Exit Device	43 55 56-HK 8804	630	SA
2 Cylinder Kit	980C1 (for Removable Mullion)	626	SA
1 Cylinder Kit	980C1 (for Removable Mullion)	626	SA
2 Pull	RM201	630	RO
2 Concealed Overhead Stop	6 SERIES	630	RF
2 Door Closer	J7500	689	NO
1 Threshold	273x224AFGT		PE
1 ElectroLynx Harness	QC-C006		MK
1 ElectroLynx Harness	QC-C1500P		MK
1 Card Reader	BY SECURITY CONTRACTOR		
1 Door Position Switch	BY SECURITY CONTRACTOR		
1 Power Supply	BPS-24-2		SU
<b>1 Card Reader</b>	<b>BY DIVISION 28</b>		
<b>1 Door Position Switch</b>	<b>BY DIVISION 28</b>		

Notes: Weatherstrip by aluminum door and frame manufacturer.

**Operation:** Doors normally closed and locked. Egress allowed at all times. Doors can be opened for selected periods of time by hex key dogging or scheduled unlocking by the access control system.

**Entry** by mechanical key operation or by presenting a valid credential to the card reader, which will retract the exit device latchbolts on both doors, allowing the doors to be pulled open. Exit devices have internal request to exit (REX) switches to shunt the door position switches. In the event of power failure or fire alarm activation the doors will remain secured - FAIL-SECURE.

**Set: AC2.00**

1 Continuous Hinge	MCK-12HD	CL	MK
1 Continuous Hinge	MCK-12HD SER-12	CL	MK
2 Flush Bolt	555	626	RO
1 Dust Proof Strike	570	626	RO
1 Fail Secure Electric Lock	RX 8271 LL	630	SA
2 Surface Overhead Holder	9 SERIES	630	RF
2 Door Closer (Parallel Arm)	PRO 7500 x 2018S	689	NO
2 Armor Plate	K1050 36" x 2" LDW 4BE CSK	630	RO
1 Threshold	252x3AFG		PE
2 Sweep	315CN		PE
1 ElectroLynx Harness	QC-C206		MK
1 ElectroLynx Harness	QC-C1500P		MK
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>2 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-12/24-1</del>		<del>SU</del>
<b>1 Card Reader</b>	<b>BY DIVISION 28</b>		
<b>2 Door Position Switch</b>	<b>BY DIVISION 28</b>		
<b>1 Power Supply</b>	<b>BY DIVISION 28 (From S2 Panel)</b>		

Notes: Weatherstripping integral with thermally broken frame.

**Operation:** Electrically controlled door opening. Doors normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the lockset outside trim allowing entry. Lockset has an internal request to exit switch (REX) to shunt the door position switch. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC2.01**

1 Continuous Hinge	MCK-12HD	CL	MK
1 Continuous Hinge	MCK-12HD SER-12	CL	MK
2 Flush Bolt	555	626	RO
1 Dust Proof Strike	570	626	RO
1 Fail Secure Electric Lock	RX 8271 LL	630	SA
2 Surface Overhead Stop	9 SERIES	630	RF
2 Door Closer (Parallel Arm)	PRO 7500 x 2018S	689	NO
1 Threshold	252x3AFG		PE
2 Sweep	315CN		PE
1 ElectroLynx Harness	QC-C206		MK
1 ElectroLynx Harness	QC-C1500P		MK
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>2 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-12/24-1</del>		<del>SU</del>



1 Card Reader	BY DIVISION 28
2 Door Position Switch	BY DIVISION 28
1 Power Supply	BY DIVISION 28 (From S2 Panel)

Notes: Weatherstripping integral with thermally broken frame.

**Operation: Electrically controlled door opening. Doors normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the lockset outside trim allowing entry. Lockset has an internal request to exit switch (REX) to shunt the door position switches. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.**

**Set: AC2.02 NOT USED**

1 Continuous Hinge	MCK-12HD	CL	MK
1 Continuous Hinge	MCK-12HD SER-12	CL	MK
2 Flush Bolt	555	626	RO
1 Dust Proof Strike	570	626	RO
1 Exit Device	43 55 56 8904 ETL	630	SA
2 Surface Overhead Stop	9 SERIES	630	RF
2 Door Closer (Parallel Arm)	PRO 7500 x 2018S	689	NO
1 Threshold	252x3AFG		PE
1 Rain Guard	346C		PE
2 Sweep	315CN		PE
1 ElectroLynx Harness	QC-C006		MK
1 ElectroLynx Harness	QC-C1500P		MK
1 Card Reader	BY SECURITY CONTRACTOR		
2 Door Position Switch	BY SECURITY CONTRACTOR		
1 Power Supply	BPS-12/24-1		SU
-			

Notes: Weatherstripping integral with thermally broken frame.

**Set: AC2.03**

1 Continuous Hinge	MCK-12HD SER-12	CL	MK
1 Fail Secure Electric Lock	RX 8271 LL	630	SA
1 Surface Overhead Stop	9 SERIES	630	RF
1 Door Closer (Parallel Arm)	PRO 7500 x 2018S	689	NO
1 Threshold	252x3AFG		PE
1 Rain Guard	346C		PE
1 Sweep	315CN		PE
1 ElectroLynx Harness	QC-C206		MK
1 ElectroLynx Harness	QC-C1500P		MK
1 Card Reader	BY SECURITY CONTRACTOR		
1 Door Position Switch	BY SECURITY CONTRACTOR		
1 Power Supply	BPS-12/24-1		SU
1 Card Reader	BY DIVISION 28		
1 Door Position Switch	BY DIVISION 28		
1 Power Supply	BY DIVISION 28 (From S2 Panel)		

Notes: Weatherstripping integral with thermally broken frame.

Operation: Electrically controlled door opening. Doors normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the lockset outside trim allowing entry. Lockset has an internal request to exit switch (REX) to shunt the door position switch. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC3.00**

2 Continuous Hinge	MCK-FM300 EL-12	630	MK
1 <del>Exit Device</del>	<del>43 55 56 NB8706 ETL</del>	<del>630</del>	<del>SA</del>
1 <del>Exit Device</del>	<del>43 55 56 NB8710 ETL</del>	<del>630</del>	<del>SA</del>
1 Exit Device	43 56 NB8706 ETL	630	SA
1 Exit Device	43 56 NB8710 ETL	630	SA
2 Door Closer (Parallel Arm)	PR7500	689	NO
2 <del>Kick Plate</del>	<del>K1050 10" x 1" LDW 4BE CSK</del>	<del>630</del>	<del>RO</del>
2 Electromagnetic Holder	998	689	RF
1 Threshold	151A		PE
1 Set Gasketing	S88D		PE
2 Door Bottom	313AN		PE
1 Astragal	S772D		PE
2 ElectroLynx Harness	QC-C006		MK
1 Wiring Diagram	WD-SYSPK		
2 ElectroLynx Harness	QC-C1500P		MK
1 <del>Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
2 <del>Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
1 Power Supply	BPS-24-x (size supply as required per plans)		SU
1 Card Reader	BY DIVISION 28		

Operation: Electrically controlled door opening. Doors normally closed and locked. Egress allowed at all times. Doors can be held open at designated times by electromagnetic holders which are tied into the building's alarm system. Entry by mechanical key or by presenting a valid credential to the card reader, which will retract the exit device latchbolts on both doors allowing entry. If the doors are in the hold open position, fire alarm activation or power failure will release the magnetic holders, the doors will close, latch, and be locked. Upon fire alarm activation or power failure, if the doors are in the closed and secured position, the doors will remain locked - FAIL-SECURE.

**Set: AC3.01**

2 Continuous Hinge	MCK-FM300 EL-12	630	MK
2 Hinge (heavy weight)	T4A3786 QC12 5" x 4 1/2"	652	MK
4 Hinge (heavy weight)	T4A3786 NRP 5" x 4 1/2"	652	MK
1 Exit Device	NB 43 55 56 WD8606 ETL	630	SA
1 Exit Device	NB 43 55 56 WD8610 ETL	630	SA
1 <del>Exit Device</del>	<del>43 55 56 NB8706 ETL</del>	<del>630</del>	<del>SA</del>
1 <del>Exit Device</del>	<del>43 55 56 NB8710 ETL</del>	<del>630</del>	<del>SA</del>
1 Exit Device	43 56 NB8706 ETL	630	SA
1 Exit Device	43 56 NB8710 ETL	630	SA
2 Door Closer (Parallel Arm)	PR7500	689	NO
2 <del>Kick Plate</del>	<del>K1050 10" x 1" LDW 4BE CSK</del>	<del>630</del>	<del>RO</del>
2 Electromagnetic Holder	998	689	RF
2 Silencer - Metal Frame	608		RO
2 ElectroLynx Harness	QC-C006		MK

1 Wiring Diagram	WD-SYSPK		
2 ElectroLynx Harness	QC-C1500P		MK
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>2 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
1 Power Supply	BPS-24-x (size supply as required per plans)		SU
1 Card Reader	BY DIVISION 28		

**Operation:** Electrically controlled door opening. Doors normally closed and locked. Egress allowed at all times. Doors can be held open at designated times by electromagnetic holders which are tied into the building's alarm system. Entry by mechanical key or by presenting a valid credential to the card reader, which will retract the exit device latchbolts on both doors allowing entry. If the doors are in the hold open position, fire alarm activation or power failure will release the magnetic holders, the doors will close, latch, and be locked. Upon fire alarm activation or power failure, if the doors are in the closed and secured position, the doors will remain locked - FAIL-SECURE.

**Set: AC3.02**

2 Continuous Hinge	MCK-FM300 EL-12	630	MK
2 Hinge (heavy weight)	T4A3786 QC12 5" x 4-1/2"	652	MK
4 Hinge (heavy weight)	T4A3786 NRP 5" x 4-1/2"	652	MK
1 Exit Device	43 55 56 NB8706 ETL	630	SA
1 Exit Device	43 55 56 NB8710 ETL	630	SA
1 Exit Device	43 56 NB8706 ETL	630	SA
1 Exit Device	43 56 NB8710 ETL	630	SA
2 Door Closer (Parallel Arm)	PR7500	689	NO
2 Kick Plate	K1050 10" x 1" LDW 4BE CSK	630	RO
2 Electromagnetic Holder	998	689	RF
1 Set Gasketing	S88D		PE
1 Astragal	S772D		PE
2 ElectroLynx Harness	QC-C006		MK
1 Wiring Diagram	WD-SYSPK		
2 ElectroLynx Harness	QC-C1500P		MK
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>2 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
1 Power Supply	BPS-24-x (size supply as required per plans)		SU
1 Card Reader	BY DIVISION 28		

**Operation:** Electrically controlled door opening. Doors normally closed and locked. Egress allowed at all times. Doors can be held open at designated times by electromagnetic holders which are tied into the building's alarm system. Entry by mechanical key or by presenting a valid credential to the card reader, which will retract the exit device latchbolts on both doors allowing entry. If the doors are in the hold open position, fire alarm activation or power failure will release the magnetic holders, the doors will close, latch, and lock. Upon fire alarm activation or power failure, if the doors are in the closed and secured position, the doors will remain locked - FAIL-SECURE.

**Set: AC3.03**

2 Hinge (heavy weight)	T4A3786 NRP 4-1/2" x 4-1/2"	652	MK
1 Hinge (heavy weight)	T4A3786 QC12 4-1/2" x 4-1/2"	652	MK
1 Exit Device	43 55 56 8804 ETL	630	SA
1 Exit Device	43 56 8804 ETL	630	SA

1 Door Closer (Parallel Arm)	PR7500	689	NO
<del>1 Kick Plate</del>	<del>K1050 10" x 2" LDW 4BE CSK</del>	<del>630</del>	<del>RO</del>
1 Electromagnetic Holder	998	689	RF
1 Set Gasketing	S88D		PE
1 ElectroLynx Harness	QC-C006		MK
1 ElectroLynx Harness	QC-C1500P		MK
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
1 Power Supply	BPS-24-x (size supply as required per plans)		SU
1 Card Reader	BY DIVISION 28		

Operation: Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Door can be held open at designated times by the electromagnetic holder which is tied into the building's alarm system. Entry by mechanical key or by presenting a valid credential to the card reader, which will retract the exit device latchbolt allowing entry. If the doors are in the hold open position, fire alarm activation or power failure will release the magnetic holders, the doors will close, latch, and be locked. Upon fire alarm activation or power failure, if the doors are in the closed and secured position, the doors will remain locked - FAIL-SECURE.

**Set: AC3.04**

<del>2 Hinge (heavy weight)</del>	<del>T4A3786 NRP 4-1/2" x 4-1/2"</del>	<del>652</del>	<del>MK</del>
5 Hinge (heavy weight)	T4A3786 NRP 4-1/2" x 4-1/2"	652	MK
1 Hinge (heavy weight)	T4A3786 QC12 4-1/2" x 4-1/2"	652	MK
1 Flush Bolt Set	2845	626	RO
1 Dust Proof Strike	570	626	RO
<del>1 Exit Device</del>	<del>12 43 55 56 76 8904 ETL</del>	<del>630</del>	<del>SA</del>
<del>1 Exit Device</del>	<del>43 55 56 76 8804 ETL</del>	<del>630</del>	<del>SA</del>
1 Exit Device	12 43 56 76 8904 ETL	630	SA
<del>1 Door Closer (Stop Arm)</del>	<del>CPS7500</del>	<del>689</del>	<del>NO</del>
2 Door Closer (Stop Arm)	CPS7500	689	NO
2 Kick Plate	K1050 10" x 1" LDW 4BE CSK	630	RO
3 Silencer - Metal Frame	608		RO
<del>2 Silencer - Metal Frame</del>	<del>608</del>		<del>RO</del>
1 Set Gasketing	S88D		PE
1 Astragal	S772D		PE
1 ElectroLynx Harness	QC-C006		MK
1 Wiring Diagram	WD-SYSPK		
1 ElectroLynx Harness	QC-C1500P		MK
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>2 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
1 Power Supply	BPS-24-x (size supply as required per plans)		SU
1 Card Reader	BY DIVISION 28		

Operation: Electrically controlled door opening. Doors normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will retract the exit device latchbolt allowing entry. Upon fire alarm activation or power failure, if the doors are in the closed and secured position, the doors will remain locked - FAIL-SECURE.

**Set: AC3.05**

2 Hinge (heavy weight)	T4A3786 NRP 4-1/2" x 4-1/2"	652	MK
1 Hinge (heavy weight)	T4A3786 QC12 4-1/2" x 4-1/2"	652	MK
<del>1 Exit Device</del>	<del>43 55 56 8804 ETL</del>	<del>630</del>	<del>SA</del>
<b>1 Exit Device</b>	<b>43 56 8804 ETL</b>	<b>630</b>	<b>SA</b>
1 Door Closer (Parallel Arm)	PR7500	689	NO
1 Kick Plate	K1050 10" x 2" LDW 4BE CSK	630	RO
1 Wall Stop	406	630	RO
1 Threshold	151A		PE
1 Set Gasketing	S88D		PE
1 Door Bottom	313AN		PE
1 ElectroLynx Harness	QC-C006		MK
1 ElectroLynx Harness	QC-C1500P		MK
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
1 Power Supply	<b>BPS-24-x (size supply as required per plans)</b>		SU
<b>1 Card Reader</b>	<b>BY DIVISION 28</b>		

**Operation:** Electrically controlled door opening. Doors normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will retract the exit device latchbolt allowing entry. Upon fire alarm activation or power failure, if the doors are in the closed and secured position, the doors will remain locked - FAIL-SECURE.

**Set: AC3.06**

2 Hinge (heavy weight)	T4A3786 NRP 4-1/2" x 4-1/2"	652	MK
1 Hinge (heavy weight)	T4A3786 QC12 4-1/2" x 4-1/2"	652	MK
<del>1 Exit Device</del>	<del>12 43 55 56 8804 ETL</del>	<del>630</del>	<del>SA</del>
<b>1 Exit Device</b>	<b>12 43 55 56 8804 ETL</b>	<b>630</b>	<b>SA</b>
1 Door Closer (Parallel Arm)	PR7500	689	NO
1 Kick Plate	K1050 10" x 2" LDW 4BE CSK	630	RO
1 Wall Stop	406	630	RO
1 Threshold	151A		PE
1 Set Gasketing	S88D		PE
1 Door Bottom	313AN		PE
1 ElectroLynx Harness	QC-C006		MK
1 ElectroLynx Harness	QC-C1500P		MK
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
1 Power Supply	<b>BPS-24-x (size supply as required per plans)</b>		SU
<b>1 Card Reader</b>	<b>BY DIVISION 28</b>		

**Operation:** Electrically controlled door opening. Doors normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will retract the exit device latchbolt allowing entry. Upon fire alarm activation or power failure, if the doors are in the closed and secured position, the doors will remain locked - FAIL-SECURE.

**Set: AC3.07**

<b>2 Continuous Hinge</b>	<b>MCK-FM300 EL-12</b>	<b>630</b>	<b>MK</b>
<del>1 Exit Device</del>	<del>43 55 56 NB8706 ETL</del>	<del>630</del>	<del>SA</del>
<del>1 Exit Device</del>	<del>43 55 56 NB8710 ETL</del>	<del>630</del>	<del>SA</del>

1 Exit Device	43 56 NB8706 ETL	630	SA
1 Exit Device	43 56 NB8710 ETL	630	SA
2 Door Closer (Parallel Arm)	PR7500	689	NO
2 Kick Plate	K1050 10" x 1" LDW 4BE CSK	630	RO
<del>2 Electromagnetic Holder</del>	<del>998</del>	<del>689</del>	<del>RF</del>
2 Silencer - Metal Frame	608		RO
2 ElectroLynx Harness	QC-C006		MK
1 Wiring Diagram	WD-SYSPK		
2 ElectroLynx Harness	QC-C1500P		MK
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>2 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
1 Power Supply	BPS-24-x (size supply as required per plans)		SU
1 Card Reader	BY DIVISION 28		

Operation: Electrically controlled door opening. Doors normally closed and locked. Egress allowed at all times. Doors can be held open at designated times by electromagnetic holders which are tied into the building's alarm system. Entry by mechanical key or by presenting a valid credential to the card reader, which will retract the exit device latchbolts on both doors allowing entry. If the doors are in the hold open position, fire alarm activation or power failure will release the magnetic holders, the doors will close, latch, and lock. Upon fire alarm activation or power failure, if the doors are in the closed and secured position, the doors will remain locked - FAIL-SECURE.

**Set: AC3.08**

1 Continuous Hinge	MCK-25HD QC-12	CL	MK
1 Exit Device	43 56 8804 ETL	630	SA
1 Door Closer (Parallel Arm)	CPS7500	689	NO
1 ElectroLynx Harness	QC-C006		MK
1 ElectroLynx Harness	QC-C1500P		MK
1 Power Supply	BPS-24-x (size supply as required per plans)		SU
1 Card Reader	BY DIVISION 28		

Operation: Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Door can be held open at designated times by the electromagnetic holder which is tied into the building's alarm system. Entry by mechanical key or by presenting a valid credential to the card reader, which will retract the exit device latchbolt allowing entry. If the doors are in the hold open position, fire alarm activation or power failure will release the magnetic holders, the doors will close, latch, and be locked. Upon fire alarm activation or power failure, if the doors are in the closed and secured position, the doors will remain locked - FAIL-SECURE.

**Set: AC4.00**

5 Hinge (heavy weight)	T4A3786 NRP 4-1/2" x 4-1/2"	652	MK
1 Hinge (heavy weight)	T4A3786 QC12 4-1/2" x 4-1/2"	652	MK
1 Flush Bolt Set	2845	626	RO
1 Dust Proof Strike	570	626	RO
1 Storeroom Lock	76 10G04 LL	626	SA
1 SMART Pac Bridge Rectifier	2005M3		HS
1 Electric Strike	310-2-3/4OB	630	FO
2 Door Closer (Parallel Arm)	PR7500	689	NO
2 Wall Stop	406	630	RO
1 Set Gasketing	S88D		PE

1 Astragal	S772D	PE
1 Request to Exit Device	BY SECURITY CONTRACTOR	
1 Card Reader	BY SECURITY CONTRACTOR	
2 Door Position Switch	BY SECURITY CONTRACTOR	
1 Power Supply	BPS-12/24-1	SU
1 Card Reader	BY DIVISION 28	
1 Power Supply	BY DIVISION 28 (From S2 Panel)	

Operation: Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the electric strike allowing entry. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC4.01 NOT USED**

1 Continuous Hinge	MCK-25HD QC-12	CL	MK
1 Continuous Hinge	MCK-25HD	CL	MK
1 Dust Proof Strike	570	626	RO
2 Flush Bolt	555	626	RO
<b>1 Flush Bolt</b>	<b>555 (Top Bolt Only)</b>	<b>626</b>	<b>RO</b>
1 Lockset (storeroom)	10G04 LL	626	SA
1 SMART Pac Bridge Rectifier	2005M3		HS
1 Electric Strike	310-2-3/4OB	630	FO
1 Surface Overhead Stop	9 SERIES	630	RF
1 Door Closer	J7500	689	NO
1 Wall Stop	406	630	RO
1 Threshold	151A		PE
2 Door Bottom	313AN		PE
1 Request to Exit Device	BY SECURITY CONTRACTOR		
1 Card Reader	BY SECURITY CONTRACTOR		
2 Door Position Switch	BY SECURITY CONTRACTOR		
1 Power Supply	BPS-12/24-1		SU

Notes: Gasketing by aluminum door and frame manufacturer.

**Set: AC4.02 NOT USED**

1 Continuous Hinge	MCK-25HD QC-12	CL	MK
1 Continuous Hinge	MCK-25HD	CL	MK
1 Dust Proof Strike	570	626	RO
2 Flush Bolt	555	626	RO
<b>1 Flush Bolt</b>	<b>555 (Top Bolt Only)</b>	<b>626</b>	<b>RO</b>
1 Lockset (storeroom)	10G04 LL	626	SA
1 SMART Pac Bridge Rectifier	2005M3		HS
1 Electric Strike	310-2-3/4OB	630	FO
2 Surface Overhead Stop	9 SERIES	630	RF
1 Door Closer	J7500	689	NO
1 Threshold	151A		PE
2 Door Bottom	313AN		PE
1 Request to Exit Device	BY SECURITY CONTRACTOR		
1 Card Reader	BY SECURITY CONTRACTOR		
2 Door Position Switch	BY SECURITY CONTRACTOR		
1 Power Supply	BPS-12/24-1		SU

-  
Notes: Gasketing by aluminum door and frame manufacturer.

**Set: AC4.03**

1 Continuous Hinge	MCK-25HD QC-12	CL	MK
1 Continuous Hinge	MCK-25HD	CL	MK
2 Flush Bolt	555	626	RO
1 Dust Proof Strike	570	626	RO
1 Lockset (storeroom)	10G04 LL	626	SA
1 SMART Pac Bridge Rectifier	2005M3		HS
1 Electric Strike	310-2-3/4OB	630	FO
1 Door Closer	J7500	689	NO
2 Wall Stop	406	630	RO
1 Threshold	151A		PE
2 Door Bottom	313AN		PE
<del>1 Request to Exit Device</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>2 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-12/24-1</del>		<del>SU</del>
<b>1 Card Reader</b>	<b>BY DIVISION 28</b>		
<b>1 Power Supply</b>	<b>BY DIVISION 28 (From S2 Panel)</b>		

Operation: Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the electric strike allowing entry. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC4.04**

6 Hinge (heavy weight)	T4A3786 4-1/2" x 4-1/2"	652	MK
2 Flush Bolt	555	626	RO
1 Dust Proof Strike	570	626	RO
1 Lockset (storeroom)	10G04 LL	626	SA
1 SMART Pac Bridge Rectifier	2005M3		HS
1 Electric Strike	1006	630	HS
2 Concealed Overhead Stop	1 SERIES	630	RF
1 Door Closer (Reg Arm)	7500	689	NO
2 Armor Plate	K1050 36" x 1" LDW 4BE CSK	630	RO
2 Silencer - Metal Frame	608		RO
<del>1 Request to Exit Device</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>2 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-12/24-1</del>		
<b>1 Card Reader</b>	<b>BY DIVISION 28</b>		
<b>1 Power Supply</b>	<b>BY DIVISION 28 (From S2 Panel)</b>		

Operation: Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the electric strike allowing entry. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC4.05**



6 Hinge	TA2714 NRP 4-1/2" x 4-1/2"	652	MK
2 Flush Bolt	555	626	RO
1 Dust Proof Strike	570	626	RO
1 Storeroom Lock	28 10G04 LL	626	SA
1 SMART Pac Bridge Rectifier	2005M3		HS
1 Electric Strike	1006	630	HS
1 Door Closer (Parallel Arm)	PR7500	689	NO
2 Wall Stop	406	630	RO
<del>1 Request to Exit Device</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>2 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-12/24-1</del>		<del>SU</del>
1 Card Reader	BY DIVISION 28		
1 Power Supply	BY DIVISION 28 (From S2 Panel)		

**Operation:** Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the electric strike allowing entry. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC4.06**

3 Hinge (heavy weight)	T4A3786 NRP 4-1/2" x 4-1/2"	652	MK
1 Lockset (storeroom)	10G04 LL	626	SA
1 SMART Pac Bridge Rectifier	2005M3		HS
1 Electric Strike	1006	630	HS
1 Door Closer (Parallel Arm)	PR7500	689	NO
1 Kick Plate	K1050 10" x 2" LDW 4BE CSK	630	RO
1 Wall Stop	406	630	RO
1 Threshold	151A		PE
1 Set Gasketing	S88D		PE
1 Door Bottom	313AN		PE
<del>1 Request to Exit Device</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-12/24-1</del>		<del>SU</del>
1 Card Reader	BY DIVISION 28		
1 Power Supply	BY DIVISION 28 (From S2 Panel)		

**Operation:** Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the electric strike allowing entry. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC4.07**

3 Hinge (heavy weight)	T4A3786 4-1/2" x 4-1/2"	652	MK
1 Lockset (storeroom)	10G04 LL	626	SA
1 SMART Pac Bridge Rectifier	2005M3		HS
1 Electric Strike	1006	630	HS
1 Concealed Overhead Stop	6 SERIES	630	RF
1 Door Closer (Reg Arm)	7500	689	NO

1	Armor Plate	K1050 36" x 2" LDW 4BE CSK	630	RO
3	Silencer - Metal Frame	608		RO
1	<del>Request to Exit Device</del>	<del>BY SECURITY CONTRACTOR</del>		
1	<del>Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
1	<del>Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
1	<del>Power Supply</del>	<del>BPS-12/24-1</del>		<del>SU</del>
1	Card Reader	BY DIVISION 28		
1	Power Supply	BY DIVISION 28 (From S2 Panel)		

**Operation:** Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the electric strike allowing entry. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC4.08**

3	Hinge (heavy weight)	T4A3786 NRP 4-1/2" x 4-1/2"	652	MK
1	Lockset (storeroom)	10G04 LL	626	SA
1	SMART Pac Bridge Rectifier	2005M3		HS
1	Electric Strike	1006	630	HS
1	Door Closer (Parallel Arm)	PR7500	689	NO
1	Wall Stop	406	630	RO
3	Silencer - Metal Frame	608		RO
1	<del>Request to Exit Device</del>	<del>BY SECURITY CONTRACTOR</del>		
1	<del>Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
1	<del>Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
1	<del>Power Supply</del>	<del>BPS-12/24-1</del>		<del>SU</del>
1	Card Reader	BY DIVISION 28		
1	Power Supply	BY DIVISION 28 (From S2 Panel)		

**Operation:** Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the electric strike allowing entry. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC4.09**

3	Hinge (heavy weight)	T4A3786 NRP 4-1/2" x 4-1/2"	652	MK
1	Lockset (storeroom)	10G04 LL	626	SA
1	SMART Pac Bridge Rectifier	2005M3		HS
1	Electric Strike	1006	630	HS
1	Surface Overhead Stop	9 SERIES	630	RF
1	Door Closer (Parallel Arm)	PRO 7500 x 2018S	689	NO
1	Kick Plate	K1050 10" x 2" LDW 4BE CSK	630	RO
3	Silencer - Metal Frame	608		RO
1	<del>Request to Exit Device</del>	<del>BY SECURITY CONTRACTOR</del>		
1	<del>Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
1	<del>Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
1	<del>Power Supply</del>	<del>BPS-12/24-1</del>		<del>SU</del>
1	Card Reader	BY DIVISION 28		
1	Power Supply	BY DIVISION 28 (From S2 Panel)		

Operation: Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the electric strike allowing entry. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC4.10**

3 Hinge (heavy weight)	T4A3786 4-1/2" x 4-1/2"	652	MK
1 Lockset (storeroom)	10G04 LL	626	SA
1 SMART Pac Bridge Rectifier	2005M3		HS
1 Electric Strike	1006	630	HS
1 Door Closer (Reg Arm)	7500	689	NO
1 Kick Plate	K1050 10" x 2" LDW 4BE CSK	630	RO
1 Wall Stop	406	630	RO
3 Silencer - Metal Frame	608		RO
<del>1 Request to Exit Device</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-12/24-1</del>		<del>SU</del>
<b>1 Card Reader</b>	<b>BY DIVISION 28</b>		
<b>1 Power Supply</b>	<b>BY DIVISION 28 (From S2 Panel)</b>		

Operation: Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the electric strike allowing entry. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC4.11**

<del>3 Hinge (heavy weight)</del>	<del>T4A3786 4-1/2" x 4-1/2"</del>	<del>652</del>	<del>MK</del>
<b>3 Hinge</b>	<b>TA2714 4-1/2" x 4-1/2"</b>	<b>652</b>	<b>MK</b>
1 Lockset (storeroom)	10G04 LL	626	SA
1 SMART Pac Bridge Rectifier	2005M3		HS
1 Electric Strike	1006	630	HS
1 Door Closer (Reg Arm)	7500	689	NO
<del>1 Kick Plate</del>	<del>K1050 10" x 2" LDW 4BE CSK</del>	<del>630</del>	<del>RO</del>
1 Wall Stop	406	630	RO
1 Threshold	151A		PE
1 Set Gasketing	S88D		PE
1 Door Bottom	313AN		PE
<del>1 Request to Exit Device</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-12/24-1</del>		<del>SU</del>
<b>1 Card Reader</b>	<b>BY DIVISION 28</b>		
<b>1 Power Supply</b>	<b>BY DIVISION 28 (From S2 Panel)</b>		

Operation: Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the electric strike allowing entry. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC4.12**

3 Hinge	TA2714 NRP 4-1/2" x 4-1/2"	652	MK
1 Storeroom Lock	76 10G04 LL	626	SA
1 SMART Pac Bridge Rectifier	2005M3		HS
1 Electric Strike	1006	630	HS
1 Door Closer (Stop Arm)	CPS7500	689	NO
3 Silencer - Metal Frame	608		RO
<del>1 Request to Exit Device</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-12/24-1</del>		<del>SU</del>
1 Card Reader	BY DIVISION 28		
1 Power Supply	BY DIVISION 28 (From S2 Panel)		

**Operation:** Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the electric strike allowing entry. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC4.13**

3 Hinge	TA2714 NRP 4-1/2" x 4-1/2"	652	MK
1 Lockset (storeroom)	10G04 LL	626	SA
1 SMART Pac Bridge Rectifier	2005M3		HS
1 Electric Strike	1006	630	HS
1 Door Closer (Stop Arm)	CPS7500	689	NO
3 Silencer - Metal Frame	608		RO
<del>1 Request to Exit Device</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-12/24-1</del>		<del>SU</del>
1 Card Reader	BY DIVISION 28		
1 Power Supply	BY DIVISION 28 (From S2 Panel)		

**Operation:** Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the electric strike allowing entry. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC4.14**

3 Hinge	TA2714 NRP 4-1/2" x 4-1/2"	652	MK
1 Lockset (storeroom)	10G04 LL	626	SA
1 SMART Pac Bridge Rectifier	2005M3		HS
1 Electric Strike	1006	630	HS
1 Door Closer (Stop Arm)	CPS7500	689	NO
1 Threshold	151A		PE
1 Set Gasketing	S88D		PE
1 Door Bottom	313AN		PE
<del>1 Request to Exit Device</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-12/24-1</del>		<del>SU</del>

1 Card Reader BY DIVISION 28  
1 Power Supply BY DIVISION 28 (From S2 Panel)

Operation: Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the electric strike allowing entry. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC4.15**

3 Hinge	TA2714 4-1/2" x 4-1/2"	652	MK
1 Lockset (storeroom)	10G04 LL	626	SA
1 SMART Pac Bridge Rectifier	2005M3		HS
1 Electric Strike	1006	630	HS
1 Door Closer (Reg Arm)	7500	689	NO
1 Wall Stop	409	630	RO
3 Silencer - Metal Frame	608		RO
<del>1 Request to Exit Device</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-12/24-1</del>		<del>SU</del>
1 Card Reader	BY DIVISION 28		
1 Power Supply	BY DIVISION 28 (From S2 Panel)		

Operation: Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the electric strike allowing entry. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC4.16**

3 Hinge (heavy weight)	T4A3786 4-1/2" x 4-1/2"	652	MK
1 Lockset (storeroom)	10G04 LL	626	SA
1 SMART Pac Bridge Rectifier	2005M3		HS
1 Electric Strike	1006	630	HS
1 Door Closer (Reg Arm)	7500	689	NO
1 Kick Plate	K1050 10" x 2" LDW 4BE CSK	630	RO
1 Wall Stop	406	630	RO
1 Threshold	151A		PE
1 Set Gasketing	S88D		PE
1 Door Bottom	313AN		PE
<del>1 Request to Exit Device</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-12/24-1</del>		<del>SU</del>
1 Card Reader	BY DIVISION 28		
1 Power Supply	BY DIVISION 28 (From S2 Panel)		

Operation: Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the electric strike allowing entry. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC4.17**

3 Hinge (heavy weight)	T4A3786 4-1/2" x 4-1/2"	652	MK
1 Lockset (storeroom)	10G04 LL	626	SA
1 SMART Pac Bridge Rectifier	2005M3		HS
1 Electric Strike	1006	630	HS
1 Door Closer (Reg Arm)	7500	689	NO
1 Kick Plate	K1050 10" x 2" LDW 4BE CSK	630	RO
1 Wall Stop	406	630	RO
1 Set Gasketing	S88D		PE
<del>1 Request to Exit Device</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-12/24-1</del>		<del>SU</del>
1 Card Reader	BY DIVISION 28		
1 Power Supply	BY DIVISION 28 (From S2 Panel)		

**Operation:** Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the electric strike allowing entry. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC4.18**

3 Hinge (heavy weight)	T4A3786 4-1/2" x 4-1/2"	652	MK
1 Lockset (storeroom)	10G04 LL	626	SA
1 SMART Pac Bridge Rectifier	2005M3		HS
1 Electric Strike	1006	630	HS
1 Door Closer (Reg Arm)	7500	689	NO
1 Kick Plate	K1050 10" x 2" LDW 4BE CSK	630	RO
1 Wall Stop	406	630	RO
1 Threshold	151A		PE
1 Set Gasketing	S88D		PE
1 Door Bottom	313AN		PE
<del>1 Request to Exit Device</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-12/24-1</del>		<del>SU</del>
1 Card Reader	BY DIVISION 28		
1 Power Supply	BY DIVISION 28 (From S2 Panel)		

**Operation:** Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the electric strike allowing entry. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC4.19 NOT USED**

<del>3 Hinge</del>	<del>TA2714 4-1/2" x 4-1/2"</del>	<del>652</del>	<del>MK</del>
<del>1 Lockset (storeroom)</del>	<del>10G04 LL</del>	<del>626</del>	<del>SA</del>
<del>1 SMART Pac Bridge Rectifier</del>	<del>2005M3</del>		<del>HS</del>
<del>1 Electric Strike</del>	<del>1006</del>	<del>630</del>	<del>HS</del>
<del>1 Door Closer (Reg Arm)</del>	<del>7500</del>	<del>689</del>	<del>NO</del>

1 Wall Stop	409	630	RO
1 <del>Wall Stop</del>	<del>406</del>	<del>630</del>	<del>RO</del>
1 <del>Threshold</del>	<del>151A</del>		<del>PE</del>
1 <del>Set Gasketing</del>	<del>S88D</del>		<del>PE</del>
1 <del>Door Bottom</del>	<del>313AN</del>		<del>PE</del>
3 Silencer - Metal Frame	608		RO
1 Request to Exit Device	BY SECURITY CONTRACTOR		
1 Card Reader	BY SECURITY CONTRACTOR		
1 Door Position Switch	BY SECURITY CONTRACTOR		
1 Power Supply	BPS-12/24-1		SU
1 <del>Card Reader</del>	<del>BY DIVISION 28</del>		
1 <del>Power Supply</del>	<del>BY DIVISION 28</del>		

Operation: Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the electric strike allowing entry. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC4.20 NOT USED**

3 Hinge	TA2714 4-1/2" x 4-1/2"	652	MK
1 Lockset (storeroom)	10G04 LL	626	SA
1 SMART Pac Bridge Rectifier	2005M3		HS
1 Electric Strike	1006	630	HS
1 Door Closer (Reg Arm)	7500	689	NO
1 Kick Plate	K1050 10" x 2" LDW 4BE CSK	630	RO
1 Wall Stop	409	630	RO
1 Electromagnetic Holder	998	689	RF
3 Silencer - Metal Frame	608		RO
1 Request to Exit Device	BY SECURITY CONTRACTOR		
1 Card Reader	BY SECURITY CONTRACTOR		
1 Door Position Switch	BY SECURITY CONTRACTOR		
1 Power Supply	BPS-12/24-1		SU
1 Card Reader	BY DIVISION 28		
1 Power Supply	BY DIVISION 28		

Operation: Electrically controlled door opening. Door normally closed and locked. Egress allowed at all times. Entry by mechanical key or by presenting a valid credential to the card reader, which will release the electric strike allowing entry. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: AC5.00 (NOT USED)**

1 Continuous Hinge	MCK-25HD	CL	MK
1 Magnetic Lock	M680BDX	689	SU
1 Push Pull Bar Set	RM351	630	RO
1 Concealed Overhead Stop	1 SERIES	630	RF
1 Door Closer	J7500	689	NO
1 Card Reader	BY SECURITY CONTRACTOR		
1 Door Position Switch	BY SECURITY CONTRACTOR		
1 Card Reader	BY DIVISION 28		
1 Motion Detector	BY DIVISION 28		
1 Push Button	EEB3N		SU

**Set: E1.00**

1 Continuous Hinge	MCK-25HD SER-12	CL	MK
1 Exit Device	43 53 55 56-HK 8810	630	SA
1 Pull	RM201	630	RO
1 Concealed Overhead Stop	6 SERIES	630	RF
1 Door Closer	J7500	689	NO
1 Threshold	278x224AFGT x length as required		PE
1 ElectroLynx Harness	QC-C006		MK
1 ElectroLynx Harness	QC-C1500P		MK
<del>1 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>1 Power Supply</del>	<del>BPS-12/24-1</del>		<del>SU</del>
1 Door Position Switch	BY DIVISION 28		
1 Power Supply	BPS-24-x (size supply as required per plans)		SU

Notes: Weatherstrip by aluminum door and frame manufacturer.

Operation: Door normally closed and secured. Egress allowed at all times. Door can be unlocked for selected periods of time by hex key dogging or scheduled unlocking by the access control system. Exit device has an internal switch to monitor the latchbolt status and a request to exit (REX) switch to shunt the door position switch. In the event of power failure or fire alarm activation the door will remain locked - FAIL-SECURE.

**Set: E1.01**

1 Continuous Hinge	MCK-12HD	CL	MK
1 Exit Latch	8213 LL	626	SA
1 Surface Overhead Stop	9 SERIES	630	RF
1 Door Closer (Parallel Arm)	PRO 7500 x 2018S	689	NO
1 Threshold	252x3AFG		PE
1 Rain Guard	346C		PE
1 Sweep	315CN		PE
<del>1 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
1 Door Position Switch	BY DIVISION 28		

Notes: Weatherstripping integral with thermally broken frame.

Operation: Door position switch monitors the open/closed status of the door.

**Set: E2.00 NOT USED**

<del>6 Hinge (heavy weight)</del>	<del>T4A3786 5" x 4-1/2"</del>	<del>652</del>	<del>MK</del>
<del>2 Exit Device</del>	<del>43 NB8713 ETL</del>	<del>630</del>	<del>SA</del>
<del>2 Door Closer (Parallel Arm)</del>	<del>PR7500</del>	<del>689</del>	<del>NO</del>
<del>2 Mop Plate</del>	<del>K1050 4" x 1" LDW 4BE CSK</del>	<del>630</del>	<del>RO</del>
<del>2 Electromagnetic Holder</del>	<del>998</del>	<del>689</del>	<del>RF</del>
<del>1 Threshold</del>	<del>151A</del>		<del>PE</del>
<del>1 Set Gasketing</del>	<del>S88D</del>		<del>PE</del>



2 Door Bottom	313AN	PE
1 Astragal	S772D	PE

**Set: E2.01 NOT USED**

3 Hinge (heavy weight)	T4A3786 NRP 4-1/2" x 4-1/2"	652	MK
1 Exit Device (exit only)	43 8810	630	SA
1 Door Closer (Parallel Arm)	PR7500	689	NO
1 Kick Plate	K1050 10" x 2" LDW 4BE CSK	630	RO
1 Wall Stop	406	630	RO
1 Set Gasketing	S88D		PE
1 Door Position Switch	BY SECURITY CONTRACTOR		

Operation: ~~Door position switch monitors the open/closed status of the door.~~

**Set: E2.02 NOT USED**

3 Hinge (heavy weight)	T4A3786 NRP 4-1/2" x 4-1/2"	652	MK
1 Exit Device	43 8813 ETL	630	SA
1 Door Closer (Parallel Arm)	PR7500	689	NO
1 Mop Plate	K1050 4" x 1" LDW 4BE CSK	630	RO
1 Electromagnetic Holder	998	689	RF
1 Set Gasketing	S88D		PE

**Set: E2.03 NOT USED**

3 Hinge (heavy weight)	T4A3786 NRP 4-1/2" x 4-1/2"	652	MK
1 Exit Device	12 43 8810	630	SA
1 Door Closer (Parallel Arm)	PR7500	689	NO
1 Kick Plate	K1050 10" x 2" LDW 4BE CSK	630	RO
1 Wall Stop	406	630	RO
1 Set Gasketing	S88D		PE
1 Door Position Switch	BY SECURITY CONTRACTOR		

Operation: ~~Door position switch monitors the open/closed status of the door.~~

**Set: E3.00**

2 Hinge (heavy weight)	T4A3786 NRP 4-1/2" x 4-1/2"	652	MK
1 Hinge (heavy weight)	T4A3786 QC8 4-1/2" x 4-1/2"	652	MK
1 Fail Secure Electric Lock	28 10G71-24V LL	626	SA
1 Surface Overhead Stop	9 SERIES	630	RF
1 Door Closer (Parallel Arm)	PRO 7500 x 2018S	689	NO
1 Mop Plate	K1050 4" x 1" LDW 4BE CSK	630	RO
3 Silencer - Metal Frame	608		RO
1 ElectroLynx Harness	QC-C206		MK
1 Wiring Diagram	WD-SYSPK		
1 ElectroLynx Harness	QC-C1500P		MK
1 Power Supply	BPS-12/24-1		SU
1 Power Supply	BY DIVISION 28 (From S2 Panel)		

Operation: Electrically controlled door opening. Doors normally closed and locked. Egress allowed at all times. Entry by mechanical key operation. Upon fire alarm activation or power

failure, door will remain locked - FAIL-SECURE.

**Set: E3.01**

1 Hinge	TA2714 QC8 4-1/2" x 4-1/2"	652	MK
2 Hinge	TA2714 4-1/2" x 4-1/2"	652	MK
1 Fail Secure Electric Lock	28 10G71-24V LL	626	SA
1 Door Closer (Reg Arm)	7500	689	NO
1 Mop Plate	K1050 4" x 1" LDW 4BE CSK	630	RO
1 Wall Stop	406	630	RO
1 Set Gasketing	S88D		PE
<del>1 Power Supply</del>	<del>BPS-12/24-1</del>		<del>SU</del>
1 Power Supply	BY DIVISION 28 (From S2 Panel)		

Operation: Electrically controlled door opening. Doors normally closed and locked. Egress allowed at all times. Entry by mechanical key operation. Upon fire alarm activation or power failure, door will remain locked - FAIL-SECURE.

**Set: E4.00**

3 Hinge (heavy weight)	T4A3786 4-1/2" x 4-1/2"	652	MK
1 Passage Set	28 10U15 LL	626	SA
1 Door Closer (Reg Arm)	7500	689	NO
1 Kick Plate	K1050 10" x 2" LDW 4BE CSK	630	RO
1 Mop Plate	K1050 4" x 1" LDW 4BE CSK	630	RO
1 Electromagnetic Holder	998	689	RF
1 Set Gasketing	S88D		PE

Operation: Door can be held open by electromagnetic holder which is tied into the building's alarm system. Upon alarm activation the magnetic holder releases, and the door closes and latches.

**Set: E5.00**

3 Hinge (heavy weight)	T4A3786 NRP 4-1/2" x 4-1/2"	652	MK
1 Classroom Lock	28 10G37 LL	626	SA
1 Door Closer (Parallel Arm)	PR7500	689	NO
1 Kick Plate	K1050 10" x 2" LDW 4BE CSK	630	RO
1 Electromagnetic Holder	998	689	RF
1 Set Gasketing	S88D		PE

Operation: Door can be held open by electromagnetic holder which is tied into the building's alarm system. Upon alarm activation the magnetic holder releases, and the door closes and latches.

**Set: WS1.00**

1 Continuous Hinge	MCK-HG305	630	MK
1 Multi-Point Lock	FM7101 ECL	626	SA
1 Door Closer	7500ST	689	NO
1 Threshold	252x3AFG		PE

1 Set Gasketing	S88D		PE
1 Rain Guard	346C		PE
1 Sweep	315CN		PE
<del>1 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
<b>1 Door Position Switch</b>	<b>BY DIVISION 28</b>		

Operation: Door position switch monitors the open/closed status of the door.

**Set: WS2.00**

2 Continuous Hinge	MCK-HG305 EL-12 83-1/8"	630	MK
1 Removable Mullion	HC980	PC	SA
2 Electric Multipoint Device	12 43 FM8774-24v ETL	630	SA
2 Door Closer (Parallel Arm)	PR7500	689	NO
2 Electromagnetic Holder	998	689	RF
1 Set Gasketing	S88D		PE
1 Astragal	S772D		PE
1 ElectroLynx Harness	QC-C006		MK
1 Wiring Diagram	WD-SYSPK		
1 ElectroLynx Harness	QC-C1500P		MK
<del>1 Card Reader</del>	<del>BY SECURITY CONTRACTOR</del>		
<del>2 Door Position Switch</del>	<del>BY SECURITY CONTRACTOR</del>		
1 Power Supply	BPS-24-2		SU
<b>1 Card Reader</b>	<b>BY DIVISION 28</b>		

Operation: Electrically controlled door opening. Doors normally closed and locked. Egress allowed at all times. Doors can be held open at designated times by electromagnetic holders which are tied into the building's alarm system. Entry by presenting a valid credential to the card reader, which will retract the exit device latchbolts on both doors allowing entry. If the doors are in the hold open position, fire alarm activation or power failure will release the magnetic holders, the doors will close, latch, and be locked. Upon fire alarm activation or power failure, if the doors are in the closed and secured position, the doors will remain locked - FAIL-SECURE.

**Set: 1.00**

1 Continuous Hinge	MCK-12HD	CL	MK
1 Push Pull Bar Set	RM351	630	RO
1 Concealed Overhead Stop	1 SERIES	630	RF
1 Door Closer	J7500	689	NO

**Set: 2.00**

6 Hinge (heavy weight)	T4A3786 NRP 4-1/2" x 4-1/2"	652	MK
2 Exit Device	12 43 NB8713 ETL	630	SA
2 Door Closer (Parallel Arm)	PR7500	689	NO
<del>2 Mop Plate</del>	<del>K1050 4" x 1" LDW 4BE CSK</del>	<del>630</del>	<del>RO</del>
<b>2 Kick Plate</b>	<b>K1050 10" x 1" LDW 4BE CSK</b>	<b>630</b>	<b>RO</b>
2 Wall Stop	406	630	RO
1 Set Gasketing	S88D		PE
1 Astragal	S772D		PE

**Set: 2.01 NOT USED**

6 Hinge (heavy weight)	T4A3786 NRP 4-1/2" x 4-1/2"	652	MK
2 Exit Device	43 NB8713 ETL	630	SA
2 Door Closer (Parallel Arm)	PR7500	689	NO
2 Mop Plate	K1050 4" x 1" LDW 4BE CSK	630	RO
2 Wall Stop	406	630	RO
1 Set Gasketing	S88D		PE
1 Astragal	S772D		PE

**Set: 2.02**

2 Continuous Hinge	MCK-FM300	630	MK
2 Exit Device	43 NB8713 ETL	630	SA
2 Door Closer (Parallel Arm)	PR7500	689	NO
2 Kick Plate	K1050 10" x 1" LDW 4BE CSK	630	RO
2 Wall Stop	406	630	RO
1 Set Gasketing	S88D		PE
1 Astragal	S772D		PE

**Set: 2.03**

3 Hinge (heavy weight)	T4A3786 NRP 4-1/2" x 4-1/2"	652	MK
1 Exit Device (exit only)	12 43 8810	630	SA
1 Door Closer (Parallel Arm)	PR7500	689	NO
1 Kick Plate	K1050 10" x 2" LDW 4BE CSK	630	RO
1 Wall Stop	406	630	RO
1 Set Gasketing	S88D		PE

**Set: 2.04**

3 Hinge (heavy weight)	T4A3786 NRP 4-1/2" x 4-1/2"	652	MK
1 Exit Device (exit only)	43 8810	630	SA
1 Door Closer (Parallel Arm)	PR7500	689	NO
1 Kick Plate	K1050 10" x 2" LDW 4BE CSK	630	RO
1 Wall Stop	406	630	RO
1 Set Gasketing	S88D		PE

**Set: 2.05**

1 Continuous Hinge	MCK-25HD	652	MK
1 Exit Device (exit only)	43 8810	630	SA
1 Door Closer (Parallel Arm w/ stop)	CPS7500	689	NO
1 Kick Plate	K1050 10" x 2" LDW 4BE CSK	630	RO

**Set: 3.00**

6 Hinge	TA2714 4-1/2" x 4-1/2"	652	MK
2 Flush Bolt	557	626	RO
1 Dust Proof Strike	570	626	RO
1 Storeroom Lock	28 10G04 LL	626	SA
1 Concealed Overhead Stop	1 SERIES	630	RF

1 Wall Stop	406	630	RO
2 Silencer - Metal Frame	608		RO

**Set: 3.01**

6 Hinge	TA2714 4-1/2" x 4-1/2"	652	MK
2 Flush Bolt	557	626	RO
1 Dust Proof Strike	570	626	RO
1 Storeroom Lock	28 10G04 LL	626	SA
2 Surface Overhead Stop	10 SERIES	630	RF
2 Silencer - Metal Frame	608		RO

**Set: 3.02 NOT USED**

<del>3 Hinge (heavy weight)</del>	<del>T4A3786 NRP 4-1/2" x 4-1/2"</del>	<del>652</del>	<del>MK</del>
<del>1 Storeroom Lock</del>	<del>28 76 10G04 LL</del>	<del>626</del>	<del>SA</del>
<del>1 Door Closer (Stop Arm)</del>	<del>CPS7500</del>	<del>689</del>	<del>NO</del>
<del>1 Set Gasketing</del>	<del>S88D</del>		<del>PE</del>

**Set: 3.03**

3 Hinge	TA2714 NRP 4-1/2" x 4-1/2"	652	MK
1 Storeroom Lock	28 10G04 LL	626	SA
1 Door Closer (Stop Arm)	CPS7500	689	NO
3 Silencer - Metal Frame	608		RO

**Set: 3.04**

3 Hinge	TA2714 4-1/2" x 4-1/2"	652	MK
1 Storeroom Lock	28 10G04 LL	626	SA
1 Wall Stop	406	630	RO
3 Silencer - Metal Frame	608		RO

**Set: 3.05**

3 Hinge	TA2714 NRP 4-1/2" x 4-1/2"	652	MK
1 Storeroom Lock	28 10G04 LL	626	SA
1 Door Closer (Reg Arm)	7500	689	NO
1 Wall Stop	406	630	RO
<b>1 Threshold</b>	<b>151A</b>		<b>PE</b>
<b>1 Set Gasketing</b>	<b>S88D</b>		<b>PE</b>
<b>1 Door Bottom</b>	<b>313AN</b>		<b>PE</b>
<del>3 Silencer - Metal Frame</del>	<del>608</del>		<del>RO</del>

**Set: 3.06**

6 Hinge (heavy weight)	T4A3786 NRP 4-1/2" x 4-1/2"	652	MK
2 Flush Bolt	557	626	RO
1 Dust Proof Strike	570	626	RO
1 Storeroom Lock	28 10G04 LL	626	SA
1 Surface Overhead Stop	9 SERIES	630	RF
1 Door Closer (Stop Arm)	CPS7500	689	NO
2 Kick Plate	K1050 10" x 1" LDW 4BE CSK	630	RO

2 Silencer - Metal Frame	608		RO
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**Set: 3.07**

3 Hinge	TA2714 4-1/2" x 4-1/2"	652	MK
1 Storeroom Lock	28 10G04 LL	626	SA
1 Concealed Overhead Stop	1 SERIES	630	RF
3 Silencer - Metal Frame	608		RO

**Set: 4.00**

3 Hinge (heavy weight)	T4A3786 4-1/2" x 4-1/2"	652	MK
1 Classroom Lock	28 10G37 LL	626	SA
1 Door Closer (Reg Arm)	7500	689	NO
<del>1 Mop Plate</del>	<del>K1050 4" x 1" LDW 4BE CSK</del>	<del>630</del>	<del>RO</del>
<b>1 Kick Plate</b>	<b>K1050 10" x 2" LDW 4BE CSK</b>	<b>630</b>	<b>RO</b>
1 Wall Stop	406	630	RO
3 Silencer - Metal Frame	608		RO

**Set: 4.01 NOT USED**

<del>3 Hinge (heavy weight)</del>	<del>T4A3786 NRP 4-1/2" x 4-1/2"</del>	<del>652</del>	<del>MK</del>
<del>1 Classroom Lock</del>	<del>28 10G37 LL</del>	<del>626</del>	<del>SA</del>
<del>1 Door Closer (Parallel Arm)</del>	<del>PR7500</del>	<del>689</del>	<del>NO</del>
<del>1 Kick Plate</del>	<del>K1050 10" x 2" LDW 4BE CSK</del>	<del>630</del>	<del>RO</del>
<del>1 Wall Stop</del>	<del>406</del>	<del>630</del>	<del>RO</del>
<del>1 Set Gasketing</del>	<del>S88D</del>		<del>PE</del>

**Set: 5.00 NOT USED**

<del>3 Hinge (heavy weight)</del>	<del>T4A3786 4-1/2" x 4-1/2"</del>	<del>652</del>	<del>MK</del>
<del>1 Office Lock</del>	<del>28 10G05 LL</del>	<del>626</del>	<del>SA</del>
<del>1 Door Closer (Reg Arm)</del>	<del>7500</del>	<del>689</del>	<del>NO</del>
<del>1 Kick Plate</del>	<del>K1050 10" x 2" LDW 4BE CSK</del>	<del>630</del>	<del>RO</del>
<del>1 Wall Stop</del>	<del>409</del>	<del>630</del>	<del>RO</del>
<del>1 Threshold</del>	<del>151A</del>		<del>PE</del>
<del>1 Set Gasketing</del>	<del>S88D</del>		<del>PE</del>
<del>1 Door Bottom</del>	<del>313AN</del>		<del>PE</del>

**Set: 5.01**

3 Hinge (heavy weight)	T4A3786 4-1/2" x 4-1/2"	652	MK
1 Office Lock	28 10G05 LL	626	SA
1 Surface Overhead Stop	9 SERIES	630	RF
1 Door Closer (Parallel Arm)	PRO 7500 x 2018S	689	NO
<del>1 Mop Plate</del>	<del>K1050 4" x 1" LDW 4BE CSK</del>	<del>630</del>	<del>RO</del>
<b>1 Kick Plate</b>	<b>K1050 10" x 2" LDW 4BE CSK</b>	<b>630</b>	<b>RO</b>
1 Threshold	151A		PE
1 Set Gasketing	S88D		PE
1 Door Bottom	313AN		PE

**Set: 5.02**

3 Hinge (heavy weight)	T4A3786 4-1/2" x 4-1/2"	652	MK
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**Rockford Public School District 205  
School B, Zone 1  
Rockford, IL  
Cannon Project No. 005005.00**

**Addendum No. 5  
Issued May 22, 2017**

1 Office Lock	28 10G05 LL	626	SA
1 Kick Plate	K1050 10" x 2" LDW 4BE CSK	630	RO
1 Wall Stop	409	630	RO
1 Threshold	151A		PE
1 Set Gasketing	S88D		PE
1 Door Bottom	313AN		PE

**Set: 5.03**

3 Hinge	TA2714 4-1/2" x 4-1/2"	652	MK
1 Office Lock	28 10G05 LL	626	SA
1 Wall Stop	409	630	RO
<b>1 Threshold</b>	<b>151A</b>		<b>PE</b>
<b>1 Set Gasketing</b>	<b>S88D</b>		<b>PE</b>
<b>1 Door Bottom</b>	<b>313AN</b>		<b>PE</b>
<del>3 Silencer - Metal Frame</del>	<del>608</del>		<del>RO</del>

**Set: 5.04**

<b>2 Continuous Hinge</b>	<b>MCK-25HD</b>	<b>CL</b>	<b>MK</b>
<b>1 Flush Bolt</b>	<b>555</b>	<b>626</b>	<b>RO</b>
<b>1 Office Lock</b>	<b>28 10G05 LL</b>	<b>626</b>	<b>SA</b>
<b>1 Door Closer</b>	<b>J7500</b>	<b>689</b>	<b>NO</b>
<b>1 Wall Stop</b>	<b>406</b>	<b>630</b>	<b>RO</b>
<b>2 Floor Stop</b>	<b>RM850</b>	<b>626</b>	<b>RO</b>
<b>1 Threshold</b>	<b>151A</b>		<b>PE</b>
<b>2 Sweep</b>	<b>315CN</b>		<b>PE</b>

**Set: 5.05 NOT USED**

<del><b>2 Continuous Hinge</b></del>	<del><b>MCK-25HD</b></del>	<del><b>CL</b></del>	<del><b>MK</b></del>
<del><b>1 Flush Bolt</b></del>	<del><b>555</b></del>	<del><b>626</b></del>	<del><b>RO</b></del>
<del><b>1 Office Lock</b></del>	<del><b>28 10G05 LL</b></del>	<del><b>626</b></del>	<del><b>SA</b></del>
<del><b>1 Door Closer (Reg Arm)</b></del>	<del><b>7500</b></del>	<del><b>689</b></del>	<del><b>NO</b></del>
<del><b>1 Wall Stop</b></del>	<del><b>406</b></del>	<del><b>630</b></del>	<del><b>RO</b></del>
<del><b>1 Floor Stop</b></del>	<del><b>RM850</b></del>	<del><b>626</b></del>	<del><b>RO</b></del>
<del><b>1 Threshold</b></del>	<del><b>151A</b></del>		<del><b>PE</b></del>
<del><b>2 Sweep</b></del>	<del><b>315CN</b></del>		<del><b>PE</b></del>

**Set: 6.00**

3 Hinge	TA2714 4-1/2" x 4-1/2"	652	MK
1 Mortise Lock	49 8250 LL	626	SA
1 Door Closer (Reg Arm)	7500	689	NO
1 Kick Plate	K1050 10" x 2" LDW 4BE CSK	630	RO
1 Mop Plate	K1050 4" x 1" LDW 4BE CSK	630	RO
1 Wall Stop	406	630	RO
3 Silencer - Metal Frame	608		RO

**Set: 7.00**

3 Hinge	TA2714 4-1/2" x 4-1/2"	652	MK
1 Privacy Set	49 8265 LL	626	SA

**Rockford Public School District 205  
School B, Zone 1  
Rockford, IL  
Cannon Project No. 005005.00**

**Addendum No. 5  
Issued May 22, 2017**

1 Door Closer (Reg Arm)	7500	689	NO
1 Kick Plate	K1050 10" x 2" LDW 4BE CSK	630	RO
1 Mop Plate	K1050 4" x 1" LDW 4BE CSK	630	RO
1 Wall Stop	406	630	RO
3 Silencer - Metal Frame	608		RO

**Set: 7.01**

3 Hinge	TA2714 4-1/2" x 4-1/2"	652	MK
1 Privacy Set	28 10U65 LL	626	SA
1 Door Closer (Reg Arm)	7500	689	NO
1 Kick Plate	K1050 10" x 2" LDW 4BE CSK	630	RO
1 Mop Plate	K1050 4" x 1" LDW 4BE CSK	630	RO
1 Wall Stop	409	630	RO
3 Silencer - Metal Frame	608		RO

**Set: 7.02**

3 Hinge	TA2714 4-1/2" x 4-1/2"	652	MK
1 Privacy Set	28 10U65 LL	626	SA
1 Surface Overhead Stop	9 SERIES	630	RF
1 Mop Plate	K1050 4" x 1" LDW 4BE CSK	630	RO
3 Silencer - Metal Frame	608		RO

**Set: 8.00**

6 Hinge (heavy weight)	T4A3786 4-1/2" x 4-1/2"	652	MK
2 Flush Bolt	555	626	RO
<b>1 Flush Bolt</b>	<b>555 (Top Bolt Only)</b>	<b>626</b>	<b>RO</b>
1 Dust Proof Strike	570	626	RO
1 Passage Set	28 10U15 LL	626	SA
1 Wall Stop	406	630	RO
1 Door Stop	442	626	RO
1 Threshold	151A		PE
2 Door Bottom	313AN		PE

Notes: Gasketing by aluminum door and frame manufacturer.

**Set: 8.01 NOT USED**

<del>6 Hinge (heavy weight)</del>	<del>T4A3786 4-1/2" x 4-1/2"</del>	<del>652</del>	<del>MK</del>
<del>2 Flush Bolt</del>	<del>555</del>	<del>626</del>	<del>RO</del>
<del><b>1 Flush Bolt</b></del>	<del><b>555 (Top Bolt Only)</b></del>	<del><b>626</b></del>	<del><b>RO</b></del>
<del>1 Dust Proof Strike</del>	<del>570</del>	<del>626</del>	<del>RO</del>
<del>1 Passage Set</del>	<del>28 10U15 LL</del>	<del>626</del>	<del>SA</del>
<del>1 Wall Stop</del>	<del>406</del>	<del>630</del>	<del>RO</del>
<del>1 Door Stop</del>	<del>442</del>	<del>626</del>	<del>RO</del>
<del>1 Threshold</del>	<del>151A</del>		<del>PE</del>
<del>2 Door Bottom</del>	<del>313AN</del>		<del>PE</del>

Notes: Gasketing by aluminum door and frame manufacturer.

**Set: 8.02**



3 Hinge	TA2714 4-1/2" x 4-1/2"	652	MK
1 Passage Set	28 10U15 LL	626	SA
1 Door Closer (Reg Arm)	7500	689	NO
1 Wall Stop	406	630	RO
1 Set Gasketing	S88D		PE

**Set: 8.03**

3 Hinge	TA2714 4-1/2" x 4-1/2"	652	MK
1 Passage Set	28 10U15 LL	626	SA
1 Wall Stop	406	630	RO
1 Threshold	151A		PE
1 Set Gasketing	S88D		PE
1 Door Bottom	313AN		PE

**Set: 8.04**

3 Hinge	TA2714 4-1/2" x 4-1/2"	652	MK
1 Passage Set	28 10U15 LL	626	SA
1 Mop Plate	K1050 4" x 1" LDW 4BE CSK	630	RO
1 Wall Stop	406	630	RO
3 Silencer - Metal Frame	608		RO

**Set: 8.05 NOT USED**

<del>3 Hinge (heavy weight)</del>	<del>T4A3786 4-1/2" x 4-1/2"</del>	<del>652</del>	<del>MK</del>
<del>1 Passage Set</del>	<del>28 10U15 LL</del>	<del>626</del>	<del>SA</del>
<del>1 Door Closer (Reg Arm)</del>	<del>7500</del>	<del>689</del>	<del>NO</del>
<del>1 Kick Plate</del>	<del>K1050 10" x 2" LDW 4BE CSK</del>	<del>630</del>	<del>RO</del>
<del>1 Mop Plate</del>	<del>K1050 4" x 1" LDW 4BE CSK</del>	<del>630</del>	<del>RO</del>
<del>1 Wall Stop</del>	<del>406</del>	<del>630</del>	<del>RO</del>
<del>1 Set Gasketing</del>	<del>S88D</del>		<del>PE</del>

**Set: 9.00**

<del>1 Track System w/ Hardware</del>	<del>W60/6 - 6'6" w/ Cushion Stops</del>		<del>PE</del>
<b>1 Track System w/ Hardware</b>	<b>W60/6- LENGTH AS REQUIRED w/ Cushion Stops</b>		<b>PE</b>
2 Flush Pull	BF97L	630	RO

**Set: 10.00**

ALL HARDWARE BY DOOR MANUFACTURER

END OF SECTION 080671

DOOR HARDWARE SETS

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## SECTION 221323 - SANITARY WASTE INTERCEPTORS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes the following types of interceptors outside the building:

1. Exterior grease interceptors.

#### 1.2 DEFINITIONS

- A. FOG: Fats, oils and grease.
- B. FRP: Fiberglass-reinforced plastic.
- C. HDPE: High-density polyethylene plastic.
- D. PE: Polyethylene plastic.
- E. PP: Polypropylene plastic.

#### 1.3 SUBMITTALS

- A. General: Submit the following in accordance with Division 22 Section "Basic Division 22 Requirements."

#### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of metal and plastic interceptor indicated. Include materials of fabrication, dimensions, rated capacities, retention capacities, operating characteristics, size and location of each pipe connection, furnished specialties, and accessories.
1. Include materials of construction, dimensions, rated capacities, retention capacities, location and size of each pipe connection, furnished specialties, and accessories.
- B. Coordination Drawings: Interceptors, drawn to scale, on which the following items are shown and coordinated with each other, based on input from installers of the items involved:
1. Interceptors.
  2. Piping connections. Include size, location, and elevation of each.
  3. Interface with underground structures and utility services.

1.5 PROJECT CONDITIONS

- A. Interruption of Existing Sewer Services: Do not interrupt services to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary sewer services according to requirements indicated:
  - 1. Notify Owner no fewer than seven days in advance of proposed interruption of service.
  - 2. Do not proceed with interruption of sewer services without Owner's written permission.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Refer to Division 23 Section "Basic Mechanical Requirements."
- B. Handle interceptors carefully to prevent damage, and/or breaking. Do not install damaged or broken interceptors; replace with new.
- C. Store interceptors in clean dry place. Protect from weather, dirt, water, construction debris, and physical damage.

PART 2 - PRODUCTS

2.1 GREASE INTERCEPTORS

- A. Grease Interceptors:
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Schier Products **or Crest Precast, Inc.**
  - 2. Standard: ASTM C 1613-06, for intercepting and retaining fats, oils, and greases from food-preparation wastewater.
  - 3. Capacity: 1,000 gallon.
  - 4. Body Material: Molded Polyethylene **or concrete, 5,000 PSI.**
  - 5. Interior Lining: Not required
  - 6. Exterior Coating: Not required.
  - 7. Baffles: Metal.
  - 8. Chambers: Two.
  - 9. Mounting: Below grade, direct buried.
  - 10. Flow-Control Fitting: Not required.
  - 11. Operation: Manual cleaning.
- B. Manhole access frame and cover.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the followings:
    - a. Neenah Foundries
      - 1) Solid cast iron cover on cast iron frame with bolts for limiting access.

- b. Shall be marked as indication of grease interceptor.

### PART 3 - EXECUTION

#### 3.1 EARTHWORK

- A. Excavating, trenching, and backfilling are specified in Division 31 Section "Earth Moving."

#### 3.2 INSTALLATION

- A. Install grease interceptors, including trapping, venting, and flow-control fitting, according to authorities having jurisdiction and with clear space for servicing.
  - 1. Install cleanout immediately downstream from interceptors not having integral cleanout on outlet.
- B. Repair and restore protective coatings to original condition.

#### 3.3 CONNECTIONS

- A. Piping installation requirements are specified in other Division 22 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Make piping connections between interceptors and piping systems.
- C. Install piping adjacent to equipment to allow service and maintenance.
- D. Grease Interceptors: Connect inlet and outlet to unit, and connect flow-control fitting and vent to unit inlet piping. Install valve on outlet of automatic drawoff-type unit.
- E. Ground equipment according to Division 26 Section "Grounding and Bonding."

#### 3.4 IDENTIFICATION

- A. Equipment Nameplates and Signs: Install engraved plastic-laminate equipment nameplate or sign on or near each of the following:
  - 1. Grease interceptors.
- B. Distinguish among multiple units, inform operator of operational requirements, indicate safety and emergency precautions, and warn of hazards and improper operations, in addition to identifying unit. Nameplates and signs are specified in Division 22 Section "Identification for Plumbing Piping and Equipment."

#### 3.5 FIELD QUALITY CONTROL

- A. Tests and Inspections:

1. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

**3.6 PROTECTION**

- A. Protect drains during remainder of construction period to avoid clogging with dirt or debris and to prevent damage from traffic or construction work.
- B. Place plugs in ends of uncompleted piping at end of each day or when work stops.

END OF SECTION 221323

SECTION 237413 - PACKAGED, OUTDOOR, CENTRAL-STATION AIR-HANDLING UNITS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes packaged, outdoor, central-station air-handling units (rooftop units) with the following components and accessories:
  - 1. Direct-expansion cooling.
  - 2. Heat-pump refrigeration components.
  - 3. Hot-gas reheat.
  - 4. Gas furnace.
  - 5. Economizer outdoor- and return-air damper section.
  - 6. Integral, space temperature controls.
  - 7. Roof curbs.

1.2 DEFINITIONS

- A. DDC: Direct-digital controls.
- B. ECM: Electrically commutated motor.
- C. Outdoor-Air Refrigerant Coil: Refrigerant coil in the outdoor-air stream to reject heat during cooling operations and to absorb heat during heating operations. "Outdoor air" is defined as the air outside the building or taken from outdoors and not previously circulated through the system.
- D. Outdoor-Air Refrigerant Coil Fan: The outdoor-air refrigerant-coil fan in RTUs. "Outdoor air" is defined as the air outside the building or taken from outdoors and not previously circulated through the system.
- E. RTU: Rooftop Unit. As used in this Section, this abbreviation means packaged, outdoor, central-station air-handling units. This abbreviation is used regardless of whether the unit is mounted on the roof or on a concrete base on ground.
- F. Supply Air Fan: The fan providing supply air to conditioned space. "Supply air" is defined as the air entering a space from air-conditioning, heating, or ventilating apparatus.
- G. Supply Air Refrigerant Coil: Refrigerant coil in the supplyair stream to absorb heat (provide cooling) during cooling operations and to reject heat (provide heating) during heating operations. "Supply air" is defined as the air entering a space from air-conditioning, heating, or ventilating apparatus.
- H. VVT: Variable-air volume and temperature.

1.3 PERFORMANCE REQUIREMENTS

- A. Seismic & Wind Performance: RTUs shall withstand the effects of seismic & wind forces determined according to the requirements of Division 23 Section "Vibration, Seismic, and Wind Controls for HVAC."

1.4 SUBMITTALS

- A. General: Submit the following in accordance with Division 23 Section "Basic Division 23 Requirements."

1.5 ACTION SUBMITTALS

- A. Product Data: Include manufacturer's technical data for each RTU, including rated capacities, dimensions, required clearances, characteristics, furnished specialties, and accessories, including the following:
  - 1. Certified fan performance curves with system operating conditions indicated.
  - 2. Certified fan sound power ratings.
  - 3. Certified coil performance ratings with system operating conditions indicated.
  - 4. Motor ratings and electrical characteristics plus motor and fan accessories.
  - 5. Materials gauges and finishes.
  - 6. Certified heat wheel performance data.
  - 7. Filter performance data.
  - 8. Damper performance data and descriptions of housings, linkages, and operators.
- B. Certification Letter: Signed by manufacturers of applied rooftop packaged air conditioning units certifying that their products comply with specified requirements.
- C. Shop Drawings: Detail equipment assemblies and indicate dimensions, weights, loads, required installation and service clearances, method of field assembly, components, and location and size of each field connection.
  - 1. Wiring Diagrams: Power, signal, and control wiring, (differentiating between manufacturer-installed wiring and field-installed wiring).

1.6 INFORMATION SUBMITTALS

- A. Field Quality Control Test Reports specified in Part 3 of this Section.

1.7 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For RTUs to include in emergency, operation, and maintenance manuals.
  - 1. Special Warranty Information: Special warranty specified in this Section.

**1.8 QUALITY ASSURANCE**

**A. ARI Compliance:**

1. Comply with the latest edition of ARI 210/240 and ARI 340/360 for testing and rating energy efficiencies for RTUs.
2. Comply with the latest edition of ARI 270 for testing and rating sound performance for RTUs.

**B. ASHRAE Compliance:**

1. Comply with the latest edition of ASHRAE 15 for refrigeration system safety.
2. Comply with the latest edition of ASHRAE 33 for methods of testing cooling and heating coils.
3. Comply with ASHRAE/IESNA 90.1-2010 for minimum efficiency of heating and cooling.

**C. NFPA Compliance: Comply with the latest editions of NFPA 90A and NFPA 90B.**

**D. UL Compliance: Comply with UL 1995.**

**E. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.**

**F. Motors shall conform to the latest applicable requirements of NEMA, IEEE, ANSI, and NEC standards.**

**G. Damper leakage rate shall be tested and certified in accordance with the Air Movement and Controls Association (AMCA) Standard 500.**

**1.9 DELIVERY, STORAGE AND HANDLING**

**A. Disassemble units as required for movement to the site location. Reassemble major units under direction of manufacturer's representative.**

**B. Lift and support unit with the manufacturer's designated lifting or supporting points.**

**1.10 SEQUENCING AND SCHEDULING**

**A. Coordinate the size and location of structural steel support members.**

**B. Coordinate the size and location of roof curbs.**

**1.11 WARRANTY**

**A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to replace components of RTUs that fail in materials or workmanship within specified warranty period.**

1. **Warranty Period for Compressors: Manufacturer's standard, but not less than 3 years from date of Substantial Completion.**



2. Warranty Period for Gas Furnace Heat Exchangers: Manufacturer's standard, but not less than five years from date of Substantial Completion.
3. Warranty Period for Solid-State Ignition Modules: Manufacturer's standard, but not less than three years from date of Substantial Completion.
4. Warranty Period for Control Boards: Manufacturer's standard, but not less than three years from date of Substantial Completion.

#### 1.12 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  1. Fan Belts: One set for each belt-driven fan.
  2. Filters: Provide two spare sets of pre-filters and one spare set of final filters for each unit.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  1. AAON, Inc.
  2. Engineered Air.
  3. McQuay International.
  4. Trane; American Standard Companies, Inc.
  5. YORK International Corporation.
  - ~~5-6.~~ **Carrier, Inc.**

#### 2.2 PACKAGED FACTORY ASSEMBLED UNITS

- A. General:
  1. Provide and install packaged rooftop unit(s) including fans, compressors, coils, piping, electrical and DDC controls. Each system shall be factory assembled, piped, internally wired, and fully charged with refrigerant and ready to operate. The systems shall heat, cool, dehumidify and be of the constant volume or variable air volume type as so specified or scheduled on the plans. The units shall be constructed for outdoor installation and configured as shown on the plans.
  2. Factory packaged applied rooftop air conditioning system shall be the size indicated and shall contain the components indicated on drawings and described herein. Performance characteristics of all components are the minimum that will be acceptable.
  3. Units must be shipped in single piece or major assembled sections to facilitate ease of rigging and installation. Rigging and joining of sections shall be done at the job site. Field built units and their components will not be accepted. All units shall be inspected and tested at the manufacturer's plant before shipment is made to the jobsite.
  4. Entire unit shall be warranted by the manufacturer against defects in materials and workmanship, and for all parameters of the unit operation and performance, to include all components for a period of one year after first use by the owner.
  5. Manufacturer shall have a minimum of five (5) years of experience in building units of like kind.

- B. Motor and Electrical Components: Refer to Division 23 Sections "Electrical Requirements for Mechanical Equipment and Motors".
- C. Capacity, size, static pressure, coils, filters, accessories, limiting velocities, arrangement, etc., as shown on Drawings and referred to in appropriate Division 23 Sections.

## 2.3 CASING

- A. The frame and unit base shall be made of 15 gauge (40 tons and below) or 13 gauge (45 tons and above) painted galvanized steel. The unit shall be provided with a integral structural base that extends the full length of the unit to facilitate curb or post and rail mounting. The unit base channel shall be equipped with lifting lugs for rigging.
- B. Exterior surfaces shall be phosphatized and coated with baked-on Mist Gray enamel. Finished surface shall withstand a minimum 750 hour salt spray test in accordance with ASTM B117 standard for salt spray resistance. All sections of the unit shall be provided with full sized, double wall, hinged access doors, constructed of 17 gauge galvanized steel. Access doors shall utilize a three point (minimum) flush mounted single action lever, staggered engagement latching mechanism, which provides easy access to each cabinet section. Access doors shall be provided on both sides of the unit. Each door shall be equipped with a steel retainer rod to hold the door fully open.
- C. Unit shall be completely insulated with 2 inch thick, foam or glass fiber insulation with an R-value of 6.0 (minimum) secured to all panels with adhesive. All interior surfaces of the unit shall include solid galvanized liners to form a double wall panel construction. Liners in the supply and return plenum areas of the unit shall be perforated.
- D. The unit shall incorporate a discharge plenum to provide additional sound attenuation.

## 2.4 FANS

- A. Provide belt guards for belt driven fans, and safety screens where fan inlet or outlet is exposed to human contact.
- B. Supply Fan Section:
  - 1. Supply fan shall be a centrifugal double width, double inlet, non-overloading, airfoil type. All fans shall be statically and dynamically balanced for quiet operation. The airfoil fan wheel shall be Class II type and fabricated from aluminum with the fan blades continuously welded to the back plate and end rim. Units shall have solid steel fan shafts mounted in heavy-duty, 200,000 hour relubricative ball bearings.
  - 2. Fan motors shall be heavy-duty, 1800 RPM, open drip-proof type with relubricative ball bearings. The motor shall have a variable pitch sheave and an adjustable base for proper alignment and belt tension adjustment. The entire fan assembly shall be completely isolated from the unit bulkhead with neoprene gasketing and mounted on double deflection spring isolators with thrust restraints.
- C. Seismic Fabrication Requirements: Fabricate fan section, internal mounting frame and attachment to fans, fan housings, motors, casings, accessories, and other fan section components with reinforcement strong enough to withstand seismic forces defined in Division 23 Section "Vibration, Seismic, and Wind Controls for HVAC" when fan-mounted frame and RTU mounted frame are anchored to building structure.

- D. Fan Motor: Comply with requirements in Division 23 Section "Common Motor Requirements for HVAC Equipment."

## 2.5 COILS

- A. Evaporator coils shall be multi-row interlaced circuiting and fabricated from 5/8 inch O.D. seamless copper tubing mechanically bonded to rippled and corrugated aluminum fins. Evaporator coils shall have rows and fins as scheduled.
- B. Coils shall be factory leak tested at 315 PSIG under water. Each evaporator coil circuit shall be fed with an adjustable thermal expansion valve with an external equalizer.
- C. A stainless steel positively sloped primary drain pan shall be provided beneath the cooling coil and extend beyond the leaving side of the coil and underneath the cooling coil connections. The drain pan shall be connected to a threaded drain connection extended through the unit base. Units shall be provided with a secondary stainless steel drain (extended under the coil distributor tubes, return bends and refrigeration specialties) connected to the primary drain pan.

## 2.6 RELIEF FAN/ECONOMIZER SECTION

- A. Relief fans shall be centrifugal airfoil non-overloading type. All fans shall be statically and dynamically balanced for quiet operation.
- B. The airfoil fan wheel shall be Class II type and fabricated from aluminum with the fan blades continuously welded to the back plate and end rim. Units shall have solid steel fan shafts mounted in heavy-duty, 200,000 hour relubricative ball bearings.
- C. Fan motors shall be heavy duty, 1800 RPM, open drip-proof type with relubricative ball bearings. The motor shall have a variable pitch sheave and an adjustable base for proper alignment and belt tension adjustment. The entire fan assembly shall be completely isolated from the unit bulkhead with neoprene gasketing and mounted on double deflection spring isolators with thrust restraints
- D. Outside Air Section:
  - 1. The outside air/return air section shall be designed to form an economizer plenum. Outside air shall be introduced from both sides of the unit through a horizontal louvered intake complete with rain lip and bird screen. The floor of the outside air section shall be sloped to the outside of the unit for water drainage. The outside and return air dampers shall be sized to handle 100 percent of the supply air volume and arranged vertically to converge the return and outside air streams in a circular mixing pattern. Dampers shall be Ultra Seal low leak type with gasketed blade to blade contact and spring side seals. Damper blades shall be hollow core, airfoil type for extra rigidity. Air leakage through the damper section shall be less than two tenths of one percent leakage at 1.5 inches static pressure differential, or 6 CFM/Ft at 4 inch static pressure differential.
  - 2. A gravity relief type exhaust air damper shall be provided on all 0-100 percent outside air sections and located in the return air section to exhaust air out the back of the unit. Exhaust louvers and bird screen shall be provided to protect the relief damper. The exhaust dampers shall be lined with urethane gasketing on the contact edges.
  - 3. 0-100 percent outside air economizer control shall consist of outside, return air and exhaust air dampers, damper motor, and an adjustable enthalpy control mounted in the outside air stream. An enthalpy control shall be provided to sense the dry bulb temperature and relative humidity of the outside air and compare it to the building return

air to optimize the choice of outdoor air or return air for economizer cooling mode. The damper motor shall be of the modulating spring return type.

## 2.7 VARIABLE AIR VOLUME CONTROL

- A. An electronic variable frequency drive shall be provided for the supply and return air fans. Each drive shall be factory installed in a designated access section, downstream of the filters and upstream of the cooling coil, in a manner that the drive(s) are directly cooled by the filtered, mixed air stream. Drives shall meet UL Standard 95-5V and the variable frequency drive manufacturer shall have specifically approved them for plenum duty application. The completed unit assembly shall be listed by a recognized safety agency, such as ETL. Drives are to be accessible through a hinged door assembly complete with a single handle latch mechanism. Mounting arrangements that expose drives to high temperature, unfiltered ambient air are not acceptable. The unit manufacturer shall install all power and control wiring. The supply and return fan drive outputs shall be independently controlled in order to provide the control needed to maintain building pressure control. Refer to Division 26 for additional variable speed drive requirements.

## 2.8 CONDENSING SECTION

- A. (70 Tons and Below): Unit shall have multiple, heavy-duty Copeland scroll compressors. Each compressor shall be complete with gauge ports, crankcase heater, sight-glass, anti-slug protection, motor overload protection and a time delay to prevent short cycling and simultaneous starting of compressors following a power failure. Compressors shall be isolated with resilient rubber isolators to decrease noise transmission.
- B. The unit shall have two independent refrigeration circuits. Each circuit shall be complete with a liquid line solenoid valve, low pressure control, filter-drier, liquid moisture indicator/sight-glass, thermal expansion valve, liquid line shutoff valve with charging port, discharge line shutoff valve, a manual reset high pressure safety switch, high pressure relief device and pump down switch. The thermal expansion valve shall be capable of modulation from 100 percent to 25 percent of its rated capacity. A minimum of three stages shall be provided. Hot gas bypass control shall be factory installed on both refrigerant circuits. Hot gas bypass control shall include a modulating hot gas bypass control valve, integral solenoid valve, all associated piping, and be automatically operated by the units microprocessor control.
- C. The condensing unit section shall be open on the sides and bottom to assure complete access and airflow through the coils. Condenser coils shall be multi-row type fabricated from 3/8 inch O.D. high efficiency rifled copper tubing mechanically bonded to aluminum fins (copper where indicated on the schedule). Each refrigerant circuit shall include a sub-cooler circuit to provide 15 degrees F of sub liquid sub-cooling. Each condenser shall be factory leak tested under water. Each circuit shall be dehydrated and factory charged with refrigerant and oil.
- D. Provide condenser coil guards, constructed of cross wire welded steel, PVC coated, where indicated on the schedule. Mount guards to each side of the condensing section to provide protection to the condenser coil.
- E. Condenser fans shall be direct drive, propeller type designed for, low tip speed and vertical air discharge. Fan blades shall be constructed of steel and riveted to a steel center hub.
- F. Condenser fan motors shall be heavy-duty, inherently protected three-phase non-reversing type with permanently lubricated ball bearing and integral rain shield.

- G. Units shall have at least one condenser fan controlled to maintain positive head pressure. An ambient thermostat shall prevent the refrigeration system from operating below 45 degrees F. Condenser fan speed control shall be added to the last fan off on each refrigeration circuit to provide cooling operation to ambient temperatures down to 0 degrees F.
- H. Refrigeration Specialties:
  - 1. Refrigerant Charge: R-410A.
  - 2. Expansion valve with replaceable thermostatic element.
  - 3. Refrigerant filter/dryer.
  - 4. Manual-reset high-pressure safety switch.
  - 5. Automatic-reset low-pressure safety switch.
  - 6. Minimum off-time relay.
  - 7. Automatic-reset compressor motor thermal overload.
  - 8. Brass service valves installed in compressor suction and liquid lines.
  - 9. Low-ambient kit high-pressure sensor.
  - 10. Hot-gas reheat solenoid valve with a replaceable magnetic coil.
  - 11. Hot-gas bypass solenoid valve with a replaceable magnetic coil.
  - 12. Four-way reversing valve with a replaceable magnetic coil, thermostatic expansion valves with bypass check valves, and a suction line accumulator.

## 2.9 GAS HEAT

- A. A natural gas fired furnace shall be installed in the unit heat section. The heat exchanger shall include a type 430 stainless steel cylindrical primary combustion chamber, a type 430 stainless steel header, type 430 stainless steel secondary tubes, and type 430 stainless steel turbulators. The heat exchanger shall have a condensate drain. Clean out of the primary heat exchanger and secondary tubes shall be accomplished without removing casing panels or passing soot through the supply air passages. The furnace section shall be positioned downstream of the supply air fan.
- B. The furnace will be supplied with a modulating forced draft burner capable of continuous modulation between 5 percent and 100 percent of rated capacity, without steps. The burner shall operate efficiently at all firing rates. The burner shall have proven open damper low-high-low pre-purge cycle, and proven low fire start. The combustion air control damper shall be in the closed position during the off cycle to reduce losses. The burner shall be rated for operation and full modulation capability at inlet gas pressures down to 7.0 in. W.C. The shutoff cock and test cock shall be fully ported ball valves.
- C. The burner shall be specifically designed to burn natural gas and shall include a microprocessor based flame safeguard control, combustion air proving switch, pre-purge timer and spark ignition. The gas train shall include redundant gas valves, shutoff cock, pilot gas valve, pilot pressure regulator, and pilot cock. The gas train shall be FM or IRI rated.
- D. The gas burner shall be controlled by the factory installed main unit control system.

## 2.10 STATIC MIXER (AIR BLENDER)

- A. A static air mixing device shall be factory installed between the outside/return air section and the filter section. The static air mixer shall be installed with proper upstream and downstream distances. The mixing device shall perform at face velocities from 500 fpm through 2500 fpm with no loss in mixing performance. The mixing device shall provide mixing and distribution of

the outside and return air streams to minimize the threat of coil freeze-up during operation and to improve temperature control.

2.11 DISCHARGE PLENUM

- A. A supply air discharge plenum shall be provided. A combination burglar bar/safety grate shall be provided in the bottom return and supply air openings. Burglar bar/safety grate shall be made of 3/4 inch diameter ground and polished steel shaft welded to a galvanized steel frame.

2.12 AIR FILTRATION

- A. The filter section shall be supplied complete with galvanized steel filter racks as an integral part of the unit. Filters shall be accessible from both sides of the unit. Refer to Division 23 Section "Particulate Air Filtration" for filter requirements.
- B. Draw through pre-filter section shall be provided with 2 inch thick MERV 7 pleated pre-filters mounted in a galvanized steel filter frame.
- C. Blow through final filter section shall be provided with 12 inches deep MERV 15, UL Std. 900, Class 1, cartridge filters. For units with gas heat, high temperature cartridge filters rated for 500 degrees F shall be used. Cartridge filters shall consist of filter media permanently attached to a metal frame and shall slide into a gasketed, extruded aluminum rack contained within the unit. The filter rack shall have secondary gasketed, hinged end panels to insure proper sealing. Filters shall be accessible from both sides of the filter section.

2.13 ELECTRICAL

- A. Each unit shall be wired and tested at the factory before shipment. Wiring shall comply with NEC requirements and shall conform with all applicable UL standards. All electrical components shall be labeled according to the electrical diagram and be UL recognized where applicable. Each unit shall have a 115 volt control circuit transformer, 115 volt receptacle with separate electrical connection.
- B. The supply air and return air fan, compressor and condenser fan motor branch circuits shall be individually fused. Contactors and inherent thermal overload protection. Shall be furnished for each compressor and condenser fan motor. The supply and return air fan motors shall have contactors and external overload protection. The unit shall include a weatherproof main control panel and mounted within a weatherproof construction with a dead front cover over main power circuit control. A single point through the door non-fused disconnect shall be provided for the main power connection and a terminal board shall be provided for low voltage control wiring. Knockouts shall be provided in the bottom of the main control panels for field wiring entrance. A separate key locked control panel shall house all controls for the condensing section.
- C. Phase failure and under voltage protection on three-phase motors shall be provided to prevent damage from single phasing, phase reversal, and low voltage conditions.
- D. Factory mounted smoke detectors shall be factory installed in the supply and return air openings. Smoke detectors to be ionization type, which responds to invisible products of combustion without requiring the sensing of heat, flame or visible smoke. Upon sensing smoke, the unit shall provide a control output for use by building management system.

2.14 CONTROLS

- A. Control equipment and sequence of operation are specified in Division 23 Section "Instrumentation and Control for HVAC."
- B. The applied rooftop packaged air conditioning systems shall be provided with DDC controls to control all unit functions. The control system shall be suitable to control constant volume or variable air volume applications. The controller shall be factory installed and mounted in the main control panel of the unit. The unit shall have a keypad/display module to allow adjustment and display of control functions. The display window shall be a 32 character monitor providing the operator with full description and output of pertinent data. The unit controller shall be capable of being used as a stand-alone control, or as part of networked control system involving multiple units.
  - 1. The unit shall be equipped with a complete microprocessor control system. The system shall consist of temperature and pressure (thermistor and transducer) sensors, input/output board, power supply board, main processor board with display and keypad, and all staging boards. Boards shall be individually replaceable for ease of service. All microprocessors, boards, and sensors shall be factory mounted, wired, and tested.
  - 2. The microprocessor shall be a standalone DDC controller not dependent on communications with an on-site PC or the Network Master Panel. The microprocessor shall be equipped with LEDs indicating all hardware, software, and interconnecting wiring are in proper operating condition.
  - 3. The input/output boards shall be optically isolated to prevent transients or wrong voltages from entering the board circuits. Direct wired, fuses, or MOVs are not acceptable means of wiring to the I/O boards. Each digital input and digital output shall be equipped with an LED for ease of service. All field wiring shall be terminated at a separate, clearly marked terminal strip. Direct wiring to the I/O boards is not acceptable.
  - 4. The microprocessor memory shall be non-volatile EEPROM type requiring no battery backup to maintain all data, even during an extended shutdown or power failure.
  - 5. The main microprocessor shall support an RS-232 direct connection to a product service tool or a modem. A BACnet IPcommunications port shall be provided for direct communication into the BAS network.
  - 6. Should the rooftop unit ever lose either direct connect or network communications, the microprocessor shall maintain existing set points. Defaulting to a pre-defined condition or setpoint shall not be acceptable.
  - 7. The microprocessor shall have a built-in time schedule. The schedule shall be programmable from the unit keypad interface. The schedule shall be maintained in nonvolatile memory to insure that it is not lost during a power failure. There shall be one start/stop per day and a separate holiday schedule. The controller shall accept up to sixteen holidays each with up to a five (5) day duration. Each unit shall also have the ability to accept a time schedule via BAS network communication.
  - 8. Provide night setback space temperature control sensor, and field wiring to the unit DDC controller, where indicated on the plans.
  - 9. Each packaged rooftop unit shall incorporate an optimum stop sequence. The unit shall be programmable with fixed heating and cooling factors or have the ability to adjust the start/stop times automatically based on the historical performance of the unit.
- C. Space sensors shall be available in several combinations with selectable features. All sensors will be optional in use with the RPS units. Options include:
  - 1. 3K thermistor for temperature indication and LED annunciation for unit status and alarms with tenant override and setpoint adjustment.

- D. The keypad display character format shall be 20 characters x 4 lines. The character font shall be 5 x 8 dot matrix. The display shall be supertwist liquid crystal display (LCD) with black characters on yellow background providing high visibility. The display form shall be in plain English coded formats.
- E. The keypad shall be equipped with 8 individual touch-sensitive membrane key switches. All control settings shall be password protected from changes by unauthorized personnel.
- F. The user interaction with the display section of the interface shall provide the following:
  - 1. Return Air Temperature.
  - 2. Supply Air Temperature.
  - 3. Space Air Temperature (Average).
  - 4. Outdoor enthalpy high/low.
  - 5. Pre-filter pressure.
  - 6. Final-filter pressure.
  - 7. Airflow verification.
  - 8. Supply fan status.
  - 9. Return fan status.
  - 10. Economizer damper position.
  - 11. Duct static pressure.
  - 12. Duct static pressure.
  - 13. Cooling status.
  - 14. Heating status.
  - 15. Control temperature changeover.
  - 16. External exhaust fan status.
  - 17. VAV output status.
  - 18. Occupied / Unoccupied output status.
  - 19. Unit status.
  - 20. Unit mode of operation.
  - 21. Time schedules.
  - 22. Current alarm with time and date.
  - 23. Previous alarm with time and date.
  - 24. Sixteen most recent alarms in reverse order of occurrence.
- G. The user interaction with the keypad section of the interface shall provide the following set points as minimum:
  - 1. Control Modes:
    - a. Off manual.
    - b. Auto.
    - c. Occupied only.
    - d. Occupied cool only.
    - e. Occupied heat only.
    - f. Occupied fan only.
    - g. Calibrate.
  - 2. Control Temperature (Changeover):
    - a. Return air temperature.
    - b. Space temperature.
  - 3. Cooling setpoint with differential.
  - 4. Heating setpoint with differential.



5. Cooling supply setpoint.
6. Cooling supply reset options.
  - a. Return air temperature.
  - b. Outdoor air temperature.
  - c. Space temperature.
  - d. No reset.
  - e. Network signal (other BAS or EMS).
7. Reset target temperatures.
8. Interstage timers on compressors (min. 4 minutes).
9. Temperature high limits.
  - a. High supply air temperature setpoint.
  - b. Low supply air temperature setpoint.
  - c. High return air temperature setpoint.
10. Ambient lockout setpoint on compressors.
11. Auto lead-lag on compressors.
  - a. Auto.
  - b. Circuit 1 lead.
  - c. Circuit 2 lead.
12. Night setback space temperature setpoint.
13. Duct static pressure setpoint.
14. Minimum outdoor airflow.
  - a. Setpoint as a percent of CFM capacity.
15. Enthalpy selection.
16. Dry bulb selection option.
17. Dirty filter set points.
  - a. Pre-filters.
  - b. Final filters.
18. Current time and date.
19. Tenant override setpoint.
20. Occupied/Unoccupied time schedules.
21. Holiday dates and duration.
22. Service mode.
  - a. Timers normal (all time delays active).
  - b. Timers fast (all time delays).
  - c. Mode normal (unit on).
  - d. Mode shutdown (unit off).

## 2.15 ACCESSORIES

- A. Filter differential pressure switch with sensor tubing on either side of filter. Set for final filter pressure loss.

- B. Coil guards of painted, galvanized-steel wire.
- C. Hail guards of galvanized steel, painted to match casing.

## 2.16 ROOF CURBS

- A. Roof curbs with vibration isolators and restraints are specified in Division 23 Section "Vibration, Seismic, and Wind Controls for HVAC."
- B. Materials: Galvanized steel with corrosion-protection coating, watertight gaskets, and factory-installed wood nailer; complying with NRCA standards.
  - 1. Curb Insulation and Adhesive: Comply with NFPA 90A or NFPA 90B.
    - a. Materials: ASTM C 1071, Type I or II.
    - b. Thickness: 2 inches (50 mm).
  - 2. Application: Factory applied with adhesive and mechanical fasteners to the internal surface of curb.
    - a. Liner Adhesive: Comply with ASTM C 916, Type I.
    - b. Mechanical Fasteners: Galvanized steel, suitable for adhesive attachment, mechanical attachment, or welding attachment to duct without damaging liner when applied as recommended by manufacturer and without causing leakage in cabinet.
    - c. Liner materials applied in this location shall have air-stream surface coated with a temperature-resistant coating or faced with a plain or coated fibrous mat or fabric depending on service air velocity.
    - d. Liner Adhesive: Comply with ASTM C 916, Type I.
- C. Curb Height: 14 inches (355 mm).

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, housekeeping pads, and other conditions affecting performance of RTUs.
- B. Examine roughing-in for RTUs to verify actual locations of piping, electric and duct connections before equipment installation.
- C. Examine roofs for suitable conditions where RTUs will be installed.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Manufacturer shall provide field supervision of assembly, start-up and checkout of assembled system.
- B. Install applied rooftop packaged air conditioning systems level and plumb, in accordance with manufacturer's instructions.
  - 1. Support floor mounted indoor units on concrete equipment bases using neoprene pads or housed spring isolators as scheduled. Secure units to anchor bolts installed in concrete equipment base for seismic support.
  - 2. Support roof mounted units on structural dunnage. Secure units with anchor bolts as required for seismic & wind support.
- C. Arrange installation of units to provide access space around rooftop units for service and maintenance.
- D. Coordinate control sensor installation with Controls Contractor.
- E. Install restraints according to manufacturer's written instructions. Wind and seismically restrained vibration isolation roof-curb rails are specified in Division 23 Section "Vibration, Seismic, and Wind Controls for HVAC."

### 3.3 CONNECTIONS

- A. Piping installation requirements are specified in other Division 23 sections. The Drawings indicate the general arrangement of piping, valves, fittings, and specialties. The following are specific connection requirements:
  - 1. Arrange piping installations adjacent to units to allow unit servicing and maintenance.
  - 2. Connection piping to applied rooftop units with flexible connectors.
  - 3. Connection condensate drain pans using 1-1/4 inch, Type M copper tubing. Extend to the nearest floor drain or to roof. Construct deep trap at connection to drain pan and install cleanouts at changes in direction.
  - 4. Gas Piping: Comply with applicable requirements in Division 23 Section "Facility Natural-Gas Piping". Connect gas piping to burner, full size of gas train inlet, and connect with union and shutoff valve with sufficient clearance for burner removal and service.
- B. Duct installation requirements are specified in other Division 23 Sections. Drawings indicate the general arrangement of ducts. The following are specific connection requirements:
  - 1. Install ducts to termination at top of roof curb.
  - 2. Remove roof decking only as required for passage of ducts. Do not cut out decking under entire roof curb.
  - 3. Connect supply ducts to RTUs with flexible duct connectors specified in Division 23 Section "Air Duct Accessories."
  - 4. Install return air duct continuously through roof structure.
  - 5. Install normal weight, 3000 psi (20.7 MPa), compressive strength (28 day) concrete mix inside roof curb, 4 inches (100 mm) thick. Concrete, formwork, and reinforcement are specified in Division 03.
- C. Electrical Connections: The following requirements apply:
  - 1. Electrical power wiring is specified in Division 26.

2. Temperature control wiring and interlock wiring is specified in Division 23 Section "Automatic Temperature Control Systems."
3. Grounding: Connect unit and components to ground in accordance with the National Electrical Code.

### 3.4 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections. Report results in writing.
- B. Tests and Inspections:
  1. After installing RTUs and after electrical circuitry has been energized, test units for compliance with requirements.
  2. Inspect for and remove shipping bolts, blocks, and tie-down straps.
  3. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.
  4. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- C. Remove and replace malfunctioning units and retest as specified above.

### 3.5 ADJUSTING, CLEANING AND PROTECTING

- A. Adjust water coil flow, with control valves to full coil flow, to indicated gpm.
- B. Adjust damper linkages for proper damper operation.
- C. Clean unit cabinet interiors to remove foreign material and construction dirt and dust. Vacuum clean fan wheel, fan cabinet and coils entering air face.

### 3.6 STARTUP SERVICE

- A. Engage a factory-authorized service representative to perform startup service.
- B. Install concrete if equipped with inertia base.
- C. Verify unit is secure on mountings and supporting devices and that connections for piping, ductwork and electrical are complete. Verify proper thermal overload protection is installed in motors, starter, and disconnects.
- D. Perform cleaning and adjusting specified in this Section.
- E. Disconnect fan drive from motor and verify proper motor rotation direction and verify fan wheel free rotation and smooth bearings operations. Reconnect fan drive system, align belts and install belt guards.
- F. Lubricate bearings, pulleys, belts and other moving parts with factory recommended lubricants.
- G. Set heat wheel or heat pipe into operation.

- H. Set outside-air and return air mixing dampers to minimum outside-air setting.
- I. Comb coil fins for parallel orientation.
- J. Install clean filters.
- K. Verify manual and automatic volume control and fire and smoke dampers in connected ductwork systems are in the full-open position.
- L. Disable automatic temperature control operators.
- M. Starting procedures for applied rooftop systems:
  - 1. Energize motor, verify proper operation of motor, drive system and fan wheel. Adjust fan to indicated RPM.
    - a. Replace fan and motor pulleys and belts as required to achieve design conditions.
  - 2. Measure and record motor electrical values for voltage and amperage.
  - 3. Vacuum the heat exchanger. Clean after all necessary tests have been carried out and before system is turned over to Owner.
- N. Shut unit down and reconnect automatic temperature control operators.
- O. Refer to Division 23 Section "Testing, Adjusting and Balancing for HVAC" for procedures for rooftop system testing, adjusting, and balancing.

### 3.7 POST OCCUPANCY ADJUSTMENT

- A. Occupancy Adjustments: When requested within 12 months of date of Substantial Completion, provide on-site assistance in adjusting system to suit actual occupied conditions. Provide up to 2 visits to site during other-than-normal occupancy hours for this purpose.
- B. After completing system installation and testing, adjusting, and balancing RTU and air distribution systems, clean filter housings, and install new filters.

### 3.8 DEMONSTRATION

- A. Engage a factory-authorized service representative to provide minimum eight (8) hour training to Owner's maintenance personnel to adjust, operate, and maintain RTUs. Refer to Division 01 Section "Demonstration and Training."

END OF SECTION 237413

SECTION 281300 – ACCESS CONTROL/INTRUSION DETECTION SYSTEM

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. Base Bid – Provide new Access Control System (ACS) devices and Motion Detection, including associated equipment and appurtenances that are compatible with the district's S2 system. The design of the ACS shall include all devices, wiring and equipment required to control access, and deny unauthorized entries within specific areas. Report generation, Photo Identification badges, and annunciation of alarms are existing at the district level. The ACS shall be designed to provide operational flexibility and reliable performance. The ACS shall be modular, allowing for future incremental expansion or modification of inputs, outputs, and remote control stations. Each system shall be complete and ready for operation and provide for a fully integrated access control solution.

1.2 WORK INCLUDES

- A. The work includes furnishing all labor, materials, tools, and equipment, and documentation required for a complete and working Security Management System (SMS) as specified in this Section. This scope of work shall cover the requirements for the access control, alarm monitoring (door contacts and motion detectors) and badging system.
- B. The SMS specified herein shall be fully compatible and coordinated in seamless operation with the district's S2 system.
- C. Base Bid – All equipment (security panel, cards readers, door contacts, ~~REX~~, etc.) shall operate and function as a single system with existing campus buildings via Owner WAN connectivity for updating user profiles, access rights and recording events. Multiple system data entry steps will not be acceptable to perform events/functions at other buildings.

1.3 REFERENCES

- A. Design and operation of the system shall conform to the following referenced codes, regulations, and standards as applicable:
  - 1. National Electrical Code (NEC).
  - 2. American National Standards Institute (ANSI)
    - a. Section ANSI C39.1 Requirements for Electrical Analog Indicating Instruments.
  - 3. Underwriters Laboratories (UL):
    - a. UL 294 Access Control Systems Units
    - b. UL 497B Protectors for Data Communication Circuits.
    - c. UL 796 Standard for Printed-Wiring Boards.
  - 4. National Electrical Manufacturers Association (NEMA):
    - a. Section 250 Enclosures for Electrical Equipment.

5. Applicable Federal, State, and Local laws, regulations, and codes.
6. CE mark as and where applicable.

#### 1.4 SUBMITTALS

- A. General: Submit the following in accordance with Division 28 Section "Basic Division 28 Requirements".

#### 1.5 ACTION SUBMITTALS

- A. Submittals and shall include but not be limited to the following:
  1. Model numbers of all provided components.
  2. Manufacturers catalog data sheets for all components.
  3. Input power requirements for all SMS components.
  4. Complete engineered drawings indicating:
    - a. Manufacturer model numbers and specifications.
    - b. Dimensions, layouts, installation details.
    - c. Point-to-point wiring diagrams for all SMS devices.
    - d. Termination details for all SMS devices.
    - e. Single-line system architecture drawings representing the entire SMS.
    - f. Interfaces with all sub-systems.
    - g. ACS operational test plan
    - h. Installer's qualifications.
    - i. Instructor's qualifications.
    - j. ACS components Operation and Maintenance Data.
    - k. As-Built drawings for ACS.
    - l. Posted operating instructions for ACS.

#### 1.6 CLOSEOUT SUBMITTALS

- A. Manufacturer's User's Manuals and Installation Manuals.
- B. Course outlines for each of the end user training programs. The course outlines shall include the course duration, and a brief description of the subject matter.

#### 1.7 OPERATIONAL REQUIREMENTS

- A. Scope of Work for this Project:
  1. Card Access/Building Security network controller shall be installed with associated Proximity readers, door switches, and motion detectors.
  2. Communication between SMS workstation, network controllers and workstations shall be over the districts Ethernet network. A back-up dialer connected to the network controller shall notify telephone number(s) selected by owner on an alarm condition in the building.
  3. **Contractor shall provide and install all motion detectors and wire to new Intrusion Detection System provided by RPS.**
  4. Provide door contacts at all building door entrances and overhead doors as shown on the drawings and connect to building security system controllers.
  5. The following functions shall be provided via web access to process navigation, data visualization and object\attribute interaction, and graphic floor plans. Provide via this interface access for alarm management for viewing and acknowledging all pending critical

SMS conditions including archived message analysis, which is provided by the alarm management program.

B. Functional Description of System:

1. Central-Station Control Units: Supervise system components continuously for normal, alarm, and trouble conditions. Indicate deviations from normal conditions at any location in system. Indication includes identification of device or circuit in which deviation has occurred and whether deviation is an alarm or malfunction.
2. Operator Commands:
  - a. Help with System Operation: Display all commands available to operator. Help command, followed by a specific command, shall produce a short explanation of the purpose, use, and system reaction to that command.
  - b. Acknowledge Alarm: To indicate that alarm message has been observed by operator.
  - c. Place Protected Zone in Access: Disable all intrusion-alarm circuits of a specific protected zone. Tamper circuits may not be disabled by operator.
  - d. Place Protected Zone in Secure: Activate all intrusion-alarm circuits of a protected zone.
  - e. Protected Zone Test: Initiate operational test of a specific protected zone.
  - f. System Test: Initiate system-wide operational test.
  - g. Print Reports.
3. Timed Control of Central-Station Control Unit: Allow automatically timed "secure" and "access" functions of selected protected zones.
4. Automatic Control of Related Systems: Alarm or supervisory signals from certain intrusion detection devices control the following functions in related systems:
  - a. Switch signal to selected monitor from closed-circuit television camera in vicinity of sensor signaling an alarm.
5. Circuit Supervision: Supervise all signal and data transmission lines, links with other systems, and sensors from central-station control unit. Indicate circuit and detection device faults with both protected zone and trouble signals, sound a distinctive audible tone, and illuminate an LED. Maximum permissible elapsed time between occurrence of a trouble condition and indication at central-station control unit is 20 seconds. Initiate an alarm in response to opening, closing, shorting, or grounding of a signal or data transmission line.
6. Programmed Secure-Access Control: System shall be programmable to automatically change status of various combinations of protected zones between secure and access conditions at scheduled times. Status changes may be preset for repetitive, daily, and weekly; specially scheduled operations may be preset up to a year in advance. Manual secure-access control stations shall override programmed settings.
7. Manual Secure-Access Control: Coded entries at manual stations shall change status of associated protected zone between secure and access conditions.

C. System Component Requirements:

1. Compatibility: Detection devices and their communication features, connecting wiring, and central-station control unit shall be selected and configured with accessories for full compatibility.

D. SMS Interface Capabilities:



1. General: The SMS shall be a true Client Server architecture. All SMS software and firmware required to provide the following system functions shall be existing and fully tested SMS application software. Custom software including "ladder logic programming" and other custom application programming intended to provide the following sequences of operation are unacceptable.
2. Database management: The system shall create and maintain a master database of all cardholder records and all system activity for all connected points.
3. Audit trail: The SMS shall maintain an audit trail file of operator activity, and provide the ability to generate a report by operator, time and date, and type of activity (audit code). The system shall allow the operator to direct the audit trail report to screen, printer, or file. The audit trail feature shall record the following system events at a minimum:
  - a. Site parameters modified.
  - b. System login or logout.
  - c. System restart.
  - d. Cardholder added, deleted, or changed.
  - e. Event added, deleted, changed, or executed.
  - f. Alarm message added, deleted, or changed.
  - g. Communications initiated or terminated.
  - h. Field device/points added, deleted, or changed.
  - i. Access privileges added, deleted, or changed.
4. Input point monitoring: Collect and process status information from all monitored points.
5. Alarm annunciation: Audibly and visually annunciate all alarm, tamper and trouble conditions, and advisories.
6. Input point supervision: The system shall electrically supervise all 2-state and 4-state input point circuits as specified or shown on the drawings.
7. Reports: the SMS shall fully integrate with a, dynamic report writer module that shall have access to the SMS database fields to allow users to create custom reports.
  - a. Mouse driven graphical user interface with the ability to select database fields from a list of SMS database fields.
  - b. User definable reports that can be saved and re-run as required without redefining the report fields and format each time the report is run. The SMS shall provide predefined reports. The predefined reports shall include the following at a minimum:
  - c. Cardholder Report - including all fields from the standard and user defined cardholder record.
  - d. Input Point Report - listing of all connected hardware input points including the point name, terminal name, and controller name to which the points are physically connected.
  - e. Alarm Response Message Report - listing of all user defined alarm response messages.
  - f. Alarm Instruction Text Report - listing of all user defined alarm instruction text.
  - g. Output Point Report - listing of all connected hardware output points including the point name, terminal name, and controller name to which the points are physically connected.
  - h. Time Zone Report - listing all user defined time zone parameters.
  - i. Event Trigger Report – listing all user defined triggers.
  - j. Event Action Report - listing all user defined event sequences.
  - k. Panel Report - listing all control panel configuration settings for each sub-controller.
  - l. Field Device Report - listing all terminals associated with each sub-controller panel.
  - m. Card Transaction History Report - listing the transaction history filtered by cardholder name, reader name, transaction type and stop and start date and time.

- n. Access Reports - listing all access groups or cardholders with access to a specified door.
  - o. Reader Group Report - listing all readers associated with a given reader group.
  - p. All event names that are linked to a specified event action.
  - q. Alarm History Report listing the alarm history filtered by alarm input point name, and start and stop date and time.
  - r. Transaction History Report with the ability to filter by any one or more of the following parameters:
    - 1) Reader name.
    - 2) Start date.
    - 3) Start time.
    - 4) End date.
    - 5) End time.
    - 6) Transaction type:
      - a) Reader up.
      - b) Reader down.
      - c) System restart.
      - d) Facility code error.
      - e) Card event activated at a keypad reader.
      - f) Card event deactivated at a keypad reader.
      - g) Alarm set.
      - h) Alarm reset.
      - i) Alarm acknowledged at a keypad reader.
      - j) Controller tamper alarm set.
      - k) Controller tamper alarm reset.
      - l) Door open alarm.
      - m) Duress alarm.
      - n) PIN code retry alarm.
      - o) Forced door alarm.
      - p) Controller AC power fail.
      - q) Controller battery low.
      - r) Controller tamper.
      - s) Reader AC power fail.
      - t) Reader tamper alarm.
      - u) Alarm open.
      - v) Alarm short.
- 8. On-line help system: The SMS shall provide online help, which shall be available at anytime and from any active screen with single-key or mouse-click operation.
  - 9. Operator Menu Access: The operator password shall control which menu items that the individual operator may access. It shall also be possible to restrict operators such that certain specified menu commands do not appear on the screen, or are grayed-out (disabled) for a given operator. All user passwords are fully encrypted, even while being stored and transmitted across the network.
  - 10. Alarm Input Point Reporting Delay: The SMS shall allow the operator to apply an input point reporting delay period from 0-60 seconds for each input point terminal. The default setting for each input point reporting delay shall be 0 seconds.
  - 11. Alarm Input Point Suppression: The SMS shall provide an alarm input point suppression facility such that the operator may define a timezone suppression period for each individual input point. Alarm conditions for suppressed input points shall not be recorded or archived by the system; however, trouble conditions will be recorded.
  - 12. Alarm graphics: The alarm-graphics portion of the system shall provide dynamic color alarm graphic maps on the workstation with the following functions:

- a. User definable graphic maps to depict input and output point conditions, reader status, and sub-map attachments in the SMS.
  - b. The SMS shall support the importing of most bitmap file format graphics produced with any graphic drawing program such as .TIF, .BMP or .JPG file format. Vector file formats are not acceptable.
  - c. The SMS map program shall support the importing of most bitmap file format graphics to produce custom icons for all map attachments (input, output, reader, etc.).
  - d. The map display window shall have Home, Previous and Up level buttons for rapid movement among map levels. It shall also provide map selection and size adjustment lists.
  - e. The SMS software shall be capable of storing a number of graphic maps. The quantity shall be limited by available hard disk storage space only.
  - f. The SMS shall provide a palette that includes six categories of pre-defined alarm map icons:
    - 1) Input: Representing a user-defined alarm input point located anywhere in the system. The input point icon shall flash, change color, and the computer's internal sounder shall beep when an alarm condition exists. It shall be possible to click on the icon to respond to the alarm condition or move directly to the alarm queue window to respond to the alarm. Each alarm-input icon shall have a pop-up box that indicates the point's current state (open, short, alarm/active, secure).
    - 2) Output: Representing a user defined output point located anywhere in the SMS. It shall be possible to click on the icon to set or reset the output point. In addition, it can display the set or reset status of point.
    - 3) Map Layer: Representing that lower level maps associated with the top layer map exist in the system. It shall be possible to navigate through the map layers by clicking on the map layer (up and down) icons.
    - 4) Reader Terminals: Reader icons shall have the capability of displaying: held open, forced open, locked, unlocked, unknown, override, up and down.
    - 5) Panels: Representing a system panel controlled by the SMS. Panel icons shall have the capability of displaying the up or down status of the panel.
    - 6) I/O Terminals: I/O terminal icons shall have the capability of displaying the up or down status.
- E. Alarm handling: The alarm handling portion of the system, which consists of the point contacts, and the Alarm monitoring Window shall provide the following functions:
1. The Alarm Monitoring Window shall be capable of being sorted by any column. It shall also have displayed the total number of alarms in the queue and the number which are pending.
  2. The Alarm Monitoring Window shall have the capability to bring up the map to the input, which is highlighted in the window.
  3. User definable alarm message/instructions description. The system shall provide the ability to assign an alarm message/instructions to each state of an input point ('Open', 'Short', 'Alarm/Active', and 'Secure').
  4. Alarm Message "Pick List": All alarm message names and associated descriptions shall appear in the form of a pick list from which the operator may select an appropriate alarm name and message from all alarm messages defined in the database by the operator.
  5. Alarm Input Points: The system shall support up to 17,000 alarm-input points.
  6. Alarm Input Point Maintenance: the system shall provide the option for the operator to 'Add', 'Edit', or 'Delete' an alarm input point. The 'Delete' option shall require the user to confirm deletion of input point(s). All maintenance functions shall be logged to the audit trail and archived to hard disk of the host PC.

7. The system shall support both 2-state and 4-state alarm input point monitoring as called for in this specification or as shown on the drawings.
8. Alarm Priority: The system shall provide an alarm priority queue from 0-9. Individual wave sound assignment based on alarm priority shall be possible.
9. Alarm Popup: Alarm inputs that are designated, as "pop-up" by the operator shall take priority over any active "non-alarm" window. If the operator is viewing a non-alarm window when a popup alarm occurs, the alarm queue window shall be automatically placed on top all other windows to allow the operator to respond to the alarm condition.
10. Alarm Instruction Display: The SMS shall provide a window with up to ten lines of user defined instructions, which shall tell the operator how to respond to a selected alarm.
11. Alarm Condition History Display: The SMS shall provide a window displaying the previous states of the alarm point with a time and date stamp of each condition.
12. Alarm response entry: the SMS shall provide a window in which the operator may enter free form text up to 255 characters describing how he/she responded to a given alarm.
13. The operator shall also have the ability to select from a user defined list of pre-defined response descriptions.
14. The alarm instruction display, alarm condition history display, and the alarm response entry box shall all be a part of one summary window. Separate windows or applications to support any of these three functions is unacceptable.

F. Event Processing:

1. Panel card events: the SMS shall provide the capability for the user to define a panel card event, which may be executed by a cardholder at a reader equipped with a keypad. For each 'card event' the user may define the following data:
  - a. Alphanumeric event name (numeric identifier only is unacceptable).
  - b. Access code to control the triggering of the event (card activated event).
  - c. Event trigger type (card only, card + PIN, card + PIN + code, card + code, void card).
  - d. Event Privilege level (0-7).
  - e. Duration of the event execution (0-1440 minutes).
  - f. Input point group to be suppressed or not.
  - g. Output point group to be activated or not.
  - h. Door strike operation enabled/disable.
  - i. Reset panel alarm relay.
2. Host events - Triggers: the SMS shall provide the operator with a scrolling list of the following event sequence triggers as a minimum that may be combined with the event sequence logical operators listed below to program a custom sequence of events. The SMS shall be delivered with this entire listed functionality whether or not these features are implemented by the user upon initial installation.
  - a. Anti-passback timer on.
  - b. Executive Privilege grant of access.
  - c. Host computer grant of access.
  - d. Invalid In-X-It status.
  - e. Invalid badge.
  - f. Invalid badge time zone.
  - g. Invalid keypad event.
  - h. Invalid event privilege level.
  - i. Invalid issue level.
  - j. Invalid PIN code entry.
  - k. Invalid reader.
  - l. Invalid reader time zone.

- m. Local controller grant of access.
  - n. Soft In-X-It violation.
  - o. Card event activated.
  - p. Card event de-activated.
  - q. Timed override disabled.
  - r. Timed override enabled.
  - s. Timed override expired.
  - t. Keypad event activated.
  - u. Keypad event de-activated.
  - v. Alarm point set.
  - w. Alarm point reset.
  - x. Alarm point short.
  - y. Alarm point open.
  - z. Reader up.
  - aa. Reader down.
  - bb. Facility code error.
  - cc. Timed override disabled by host.
  - dd. Timed override enabled by host.
  - ee. System restart.
  - ff. Panel online.
  - gg. Panel offline.
  - hh. Converter tamper.
  - ii. Date.
  - jj. Time.
  - kk. Start timezone period.
  - ll. End timezone period.
  - mm. Event Counters (32 available).
3. Host Events - Actions: the SMS shall be provide a scrolling list of the following event sequence actions as a minimum, and allow the user to attach one or more actions to one or more of the event sequence triggers listed above to program a custom sequence of events.
- a. Enable anti-passback.
  - b. Disable anti-passback.
  - c. Unlock door control relay.
  - d. Lock door control relay.
  - e. Enable timed override of door control relay.
  - f. Set time zone for PIN code suppression.
  - g. Set time zone for reader.
  - h. Set time zone for reader override.
  - i. Enable reader override.
  - j. Disable reader override.
  - k. Enable soft In-X-It.
  - l. Disable soft In-X-It.
  - m. Enable local timed override.
  - n. Disable local timed override.
  - o. Lock all doors.
  - p. Unlock all doors.
  - q. Enable history upload.
  - r. Disable history upload.
  - s. Include timezone in access decision.
  - t. Ignore timezone in access decision.
  - u. Set controller relay.
  - v. Reset controller relay.

- w. Enable input point group.
  - x. Disable input point group.
  - y. Set output point group.
  - z. Reset output point group.
  - aa. Display a user defined message in a pop-up window.
  - bb. Print user defined message on any printer.
  - cc. System Database backup.
  - dd. System Panel Download.
  - ee. Display map.
  - ff. Event Counters.
4. Logical Operators For Trigger Conditions: The SMS shall provide a scrolling list of the following logical operators for event trigger conditions:
- a. = (Equal to).
  - b. != (not equal to).
  - c. > (Greater than).
  - d. < (Less than).
  - e. >= (Greater than or equal to).
  - f. <= (Less than or equal to).
5. Logical Operators For Triggers: The SMS shall the provide the following event trigger logical operators to allow the user to attach one or more of the logical operators with one or more of the event triggers and card actions listed above to program a custom sequence of events.
- a. And.
  - b. Or.
- G. Time Zones: The SMS shall provide the capability for the user to define timezones with the following identification and configuration parameters.
- 1. Alphanumeric name.
  - 2. Alphanumeric description.
  - 3. Allowance for up to eight periods, four active and four inactive, during each day of the week and each of three different holiday types.
  - 4. Any day of the year may be designated as a holiday; each defined as one of three holiday types.
- H. Communications:
- 1. Should the network controller(s) lose communications with the Host, the network controllers shall continue to control access and monitor inputs for all connected points. Local history of all transactions shall be buffered at the network controller and automatically uploaded to the Host for alarm reporting and long-term historical storage once communications is re-established.
- I. User Defined Cardholder Database Fields: The system shall support up to 128 user defined data fields, which may be used to store information for each cardholder. Each field may be of a type: alphanumeric text, numeric, date, toggle (Yes/No). The SMS shall provide standard menu items, which shall allow the operator to define these cardholder database fields at anytime. The system shall remain on-line while user defined cardholder database fields are added or edited. It shall be possible, using standard SMS system menu commands to report on all user defined cardholder fields. Database shall be ODBC compliant.

- J. Event and Transaction History: The SMS shall maintain a record of all alarm, card transaction, and system exceptions which take place, and provide a means for a user to access this information. It shall be possible to print information in the log in real-time or by a report.
- K. Anti-Passback Control: The SMS shall provide the capability to prevent more than one person from gaining access to a controlled area by recognizing when a cardholder who is granted access is passing back the card to another person to use the same card to gain access. If so programmed, an alarm may be generated if the anti-passback rules are violated by the cardholder. It shall be possible to define on a reader by reader basis, which readers are subject to anti-passback rules.
- L. Duress Processing: The SMS shall permit cardholders to indicate that they are requesting access to an area under some forced or duress situation. An alarm may be generated if a duress condition occurs, and the cardholder will be granted access.
- M. Real-time system activity window. A real time system activity monitor window shall be available for display on any OWS screen whenever the SMS host is on-line. The real time window shall have the following capability:
  - 1. Be able to selectively display the following items at the operator's discretion:
    - a. Input point alarms.
    - b. System Exception messages.
    - c. Access Grant.
    - d. Access Deny.
    - e. Access Trace.
    - f. Entry/Exit Central Mode of operation.
    - g. Audit Trail.
  - 2. Be able to toggle the display on and off.
- N. System Status Display. The SMS shall provide a dynamic system status summary display that graphically indicates the following status information, filtered by panel or terminal. All status display information shall be summarized in a single window.
  - 1. Terminal up/down.
  - 2. Panel up/down.
  - 3. State of input points (alarm, secure, short, open).
  - 4. Indication of whether each sub-controller, terminal, reader is disabled or not reporting.
- O. Alarm Routing. The SMS shall provide the ability for the user to define which input points or groups of input points are displayed on specific SMS Operator Workstations. The system shall provide a report showing which input points are routed to each OWS.
- P. Real Time Printer. The SMS shall be capable of printing to a network accessible printer as well as printing from an LPT port.
- Q. BAS/SMS Integration. Allow the SMS to interface the districts Ethernet network via TCP/IP to the BAS workstations. It shall further allow the BAS workstation(s) to view and acknowledge alarms and control output functions in real time. This shall allow the operator to use the BAS workstation running the graphics to view and interact with alarms generated from the SMS.

**1.8 QUALITY ASSURANCE**

**A. Manufacturer's Qualifications:**

1. Firms regularly engaged in manufacturer of professional quality access control systems, components and accessories, of types, capacities and characteristics required, whose products have been in satisfactory use in similar service for not less than 2 years.

**B. Supplier's Qualifications:**

1. Engage an experienced product supplier who is a factory-authorized sales and service representative regularly engaged in the design and installation of such systems to oversee the installation, trouble-shoot and make final connections at headend equipment.
2. Supplier shall have represented the product and components being installed for a minimum of 5 years.

**C. Installer Qualifications:**

1. Prior to installation, submit data of the installer's experience and certified qualifications. Show that the installer who will perform the work has a minimum of 2 years' experience successfully installing ACS of the same type and design as specified herein. Include the names, locations, and points of contact of at least two installations of the same type and design as specified herein where the installer has installed such systems. Indicate the type of each system and certify that each system has performed satisfactorily in the manner intended for a period of not less than 12 months.

**D. Instructor's Qualifications:**

1. Prior to installation, submit data of the instructor's experience and certified qualifications. Show that the instructor, who will train operating and maintenance personnel, has received a minimum of 24 hours of ACS training from the manufacturer, and 2 years' experience in the installation of ACS of the type specified.

**E. Electrical Component Standard: Provide work complying with applicable requirements of NFPA 70 "National Electrical Code."**

**F. All system and components shall be Underwriters Laboratories listed and labeled.**

**G. EIA Compliance: Comply with the following Electronics Industries Association Standards:**

1. UL Compliance: Comply with requirements of UL.

**1.9 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver products in factory containers. Store in clean, dry space in original containers. Protect products from fumes and construction traffic. Handle carefully to avoid damage.**



PART 2 - PRODUCTS

2.1 PRODUCT -- GENERAL

- A. Provide components that are compatible with the districts existing S2 enterprise access control system; ensure a complete integrated ACS consisting of the following major subsystems:
1. Automated Access Control System Hardware and Software – Door Controllers
    - a. ~~Mercury EP 1501 (RPS provided Contractor installed)~~
    - b. S2 NetBox (RPS provided Contractor installed)
    - c. ~~ELK Product ELK M1GCB Control Board~~
    - d. ~~ELK Product ELK M1KPNAV Keypad~~
    - e. ~~ELK Product ELK M1XRFTW Two-Way Wireless Transceiver~~
    - f. Provide all necessary equipment for complete and functional system.
  2. Communications/Cabling/Wiring – See Access Control Block Diagram on drawings.
  3. All access control hardware and software shall be of a single manufacturer including Host system, controller panels, and input and output terminal modules.
- B. Network Controllers:
1. The Network Controllers shall be a fully stand-alone processor capable of making all access control decisions without the involvement of the Host Server based on a set of parameters passed to the sub-controller from the host.
    - a. The Network Controllers shall support up to thirty-two (32) ~~eight (4) or sixteen (8)~~ card readers in addition to either 256 input points or 128 input points and 128 output points. It shall further support up to 12 facility codes per reader, 40 unique holidays, 8 access group and time zone pairs.
    - b. Memory Requirements:
      - 1) Minimum number of cards: By district.
    - c. The controller shall require no firmware changes and shall use flash memory modules to provide non-volatile storage of both data and operational code.
    - d. Each controller shall be provided with built-in hardware to support hard-wired communications between the controller(s) and readers of up to 4000 feet.
    - e. Communications between the controller(s) and the host server shall be via Ethernet TCP/IP at 10Mbps minimum. There shall be an alternate communications path to the host via a secondary IP address such that in the unlikely even the primary IP address/network is down an alternate communications path may be established.
    - f. An alarm summary relay shall be built-in to the controller motherboard. The alarm relay shall be activated whenever a connected alarm point transfers to the alarm state and whenever soft alarms become active.
    - g. A tamper switch shall be attached to the inner surface of the controller enclosure. The tamper switch shall change state whenever the enclosure door is opened to signal the SMS of the condition. The tamper switch input shall be user programmable to be suppressed, to be recognized as an input point to be process by the alarm queue at the host computer, to printout at an optional printer connected directly to the controller, and to activate the alarm summary relay described above.

- h. The standard AC linear power supply version of the controller shall include a battery module to back-up the controller's applications programs and database for 30 days after the failure of the primary AC power service. The controller database, the time clock, the transaction history, and all operator entered parameters shall be backed-up by the battery.
  - i. The controller shall provide built-in LED to indicate whether the controller is properly communicating with the host computer.
  - j. Alarm monitoring and Output Control terminal boards. Intelligent alarm monitoring and output control terminal boards shall be plug-in modules to the Network Controllers with the following functionality:
    - 1) Sixteen two-state alarm input points.
    - 2) Eight four-state supervised alarm input points.
    - 3) Eight two-state alarm input points and eight SPDT output relays.
    - 4) Eight four-state supervised alarm-input points and six SPDT output relays.
2. Signature capture device shall be connectable via a serial port interface communicating at 9600 BPS. Signature capture device shall be able to display the signature at the capture pad as well as on-screen.

## 2.2 READERS – VERIFICATION DEVICES

### A. General:

- 1. All readers shall be configured with the reader electronics mounted separately, on the "secure" side of the door such that only the reader head/keypad and pilot lights are mounted in the reader housing on the "entry" side of the door.
- 2. All readers shall support the following technologies:
  - a. HID Proximity.
- 3. All readers shall be in compliance with the following standards:
  - a. ISO 14443A.
  - b. ISO 14443B.
  - c. ISO 15693.
  - d. All readers shall be multi-frequency capable.
    - 1) 125 KHz.

### B. HID Proximity - Furnish and install the reader style as shown on the drawings or as called for in this Specification:

- 1. Proximity Reader:
  - a. The reader shall be integrated and contain all reader electronics inside a single polycarbonate enclosure; exterior, vandal proof, weatherproof housing.
  - b. The reader shall operate when mounted on a variety of surfaces including metal. Maximum read range degradation when mounted on a metal surface shall be 50-percent.
  - c. The reader shall contain an integral color LED and audio tone to indicate if the card has been successfully read.
  - d. Mullion Mounted
  - e. The reader shall be 6.0" x 1.7" x 1" maximum.

- f. Read range shall be up to 5".
- g. The reader shall be rated for normal operation from -22 to 150 deg. F.
- h. HID Mini Prox. 5365
- i. Access Control Cards are by the district.

## 2.3 INTEGRATED SYSTEM FUNCTIONAL REQUIREMENTS:

- A. Ensure that ACS is fully integrated with physical security and other elements of the existing S2 District security system. Provide specific subsystem consisting of the following:
  - 1. Automated Access Control subsystem: Door Access Control Nodes, and Electronic devices to include Door Contacts, Card Readers, and Request to Exit sensors/modules to control personnel movement through normal access routes in and out of the school.
  - 2. Communications subsystem: Cabling/wiring between elements required to ensure that pertinent data is transferred from point of origin to point where appropriate actions can be taken.
  - 3. Power subsystem: Components required to ensure continuous operation of the entire ACS.

## 2.4 INTEGRATED SYSTEM PERFORMANCE REQUIREMENTS:

- A. The installed and operating ESS shall be integrated into the overall facility to detect intrusion, Control Access, provide Closed Circuit Television (CCTV) surveillance, provide visual verification and shall perform as an entity, as specified below.
  - 1. Fail-Safe Capability
    - a. Provide fail-safe capability in critical elements of the ACS. This shall include, but not be limited to, capability to monitor communication link integrity and to provide self-test. When diminished functional capabilities are detected, system shall provide annunciation of the fault. Fail-safe alarms shall be annunciated to be clearly distinguishable from other type of alarms.
  - 2. Line Fault Detection
    - a. Communication links of the ACS shall have an active mode for line fault detection. System shall be either a static, or dynamic system. in a static system, the "no-alarm" condition shall always be represented by the same signal, which will be different than the signal originally transmitted. The dynamic system shall represent "no-alarm" with a signal which continually changes with time.
  - 3. Power Loss Detection
    - a. Provide capability to detect when a critical component of the system experiences temporary or permanent loss of power and to declare an alarm. Alarm shall be annunciated to clearly identify the component experiencing power loss.
  - ~~4. Electrical Power~~
    - ~~a. Obtain by PoE connection from district provided Ethernet switches powered by emergency electrical distribution system.~~

2.5 SYSTEM PERFORMANCE REQUIREMENTS:

- A. Design system components to operate as described herein within the context of the overall system performance previously described. Perceived inconsistencies between the following component performance specifications and overall system level performance descriptions shall be decided in favor of the former.
  - 1. Modularity
    - a. Provide components designed for modular increase and decrease of system capability by installation or removal of plug-in modules. Design system components to facilitate modular subassembly and part replacement.
  - 2. Reliability
    - a. Provide only new components in current manufacturing production, manufactured to meet requirements specified herein, and free from characteristics and defects which affect appearance, or serviceability or render equipment unsuitable for the intended purpose.
  - 3. Environmental Conditions
    - a. Interior conditions – Equipment installed in environmentally protected interior areas shall meet performance requirements specified for the following ambient conditions:
      - 1) Temperature: 32 to 120 degrees F. Components installed in unheated security protected areas shall meet performance requirements for temperatures as low as zero degrees F.
      - 2) Pressure: Sea level to 15,000 feet above sea level.
    - b. Exterior conditions – Components mounted in locations exposed to weather shall be housed in corrosion-resistant enclosures with appropriate environmental protection or be rated for their environment. Component performance shall not degrade because of improper housing.

2.6 ELECTRIC STRIKE

- A. Electric strike/lock release provided by hardware manufacturer. Connections by Division 26. Interface door electrical strike release system to local card access control panel at the local doors terminal cabinet serving that area.

2.7 DOOR LATCH NOTIFICATION

- A. Provided by door hardware manufacturer and connected by Division 26.

2.8 SECURITY OVERRIDE DEVICE

- A. Provided by Door Hardware Manufacturer. Connected by Division 26.

2.9 DOOR CONTACTS

- A. Provide, where shown on drawings, UL listed magnetic flush mounted contacts and magnets. Each contact shall be provided with matching magnet. All contacts shall be hermetically sealed for long term 10,000,000 cycle contact. Switch contacts shall be of the reed blade type with rhodium plating eliminating cold-welding; sticking and resistance build-up. All switches shall be 100% factory tested prior to installation. Coordinate with door frame manufacturer.
- B. Manufacturer: Bosch ISN-CSM 20-WG Commercial Contacts, or Honeywell 7940.

~~2.10 REQUEST TO EXIT DEVICES~~

- ~~A. Motion Sensors: Passive infrared type designed for hands-free operation.~~
  - ~~1. Coverage Pattern: Provide adjustable coverage pattern using masking kit. Sensor shall have adjustable aiming of 14 degrees vertically.~~
  - ~~2. Provide a walk test/activation LED indicator.~~
  - ~~3. Relay latch time adjustable to 60 seconds. Provide two (2) Form C contacts rated 1 amp at 30 VDC for resistive loads.~~
  - ~~4. Sensors shall be RFI immune in the 26-900 MHz range.~~
- ~~B. REX devices that are part of the electrified hardware will be provided by others. This Contractor shall completely wire (power and control) hardware to the access control system.~~
- ~~C. Manufacturer: Bosch DS150i with trim plate TP160. Provide in color white.~~

2.11 LOCKDOWN DEVICE:

- A. Provide where shown on drawings, momentary pushbutton with S.P.D.T contacts, rated 10 AMP @ 35VDC. Push Button protected with 1" Diameter guard ring. UL approved. Single gang stainless steel wall plate. Provide with a clear tamper resistant cover over the push button device/plate. Label faceplate to read "Lockdown device".
- B. Manufacturer: Alarm Controls PBL-1 or approved equal

2.12 MOTION DETECTOR:

- A. Provide where shown on drawings, 360 degrees look-down capability, up to 36' diameter coverage pattern, tampered front cover.
- B. Manufacturer: Honeywell 997 or approved equal.

2.13 DOOR RELEASE DEVICE:

- A. **Provide where shown on drawings, black plastic box with two mounting ears. SPDT Contacts rated at 4a @ 28VDC. Push Button Protected with 1" Diameter Guard Ring.**
- B. **Manufacturer: Alarm Controls Corp TS-18.**

2.14 WIRE AND CABLE

- A. Comply with requirements of Section "Wires and Cables" with stranded copper conductors. Size conductors as indicated, but not less than recommended by system manufacturer.
- B. Utilize unshielded, twisted pair cable (UTP) installed in conduit system.

- C. Furnish and install standard manufacturer's cable assemblies for components, as recommended by the system manufacturer. Include connections for electric door strikes, card reader connections and all required peripheral devices.

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. Examine conditions, with the installer present, for compliance with requirements and other factors affecting the performance of the security access system work.
- B. Do not proceed until satisfactory conditions have been corrected.

#### **3.2 INSTALLATION REQUIREMENTS**

- A. All consoles, terminals, and controllers shall be factory wired before shipment to the job site.
- B. Cabinet doors shall open a minimum of 170 degrees to avoid blocking personnel movement. Each door shall be equipped with a cylinder lock, a tamper switch and a piano-type hinge with welded tamperproof pins.
- C. Provisions shall be made for field wiring to enter the cabinet via standard knock-outs at the top, bottom and sides of controller cabinets.
- D. Each wire shall be identified at both ends with the wire designation corresponding to the wire numbers shown on the wiring diagrams.
- E. All exposed wiring within the cabinets, consoles, and terminals shall be formed neatly with wires grouped in bundles using non-metallic, flame-resistant wiring cleats or wire ties.
- F. All ferrous metal work shall be painted, in accordance with the manufacturer's standards.
- G. Coordinate installation of door contacts with door/door hardware manufacturer. All wiring shall be concealed within door-frame and fished/routed within building walls, where not accessible with conduits.

#### **3.3 SYSTEM WIRING**

- A. Provide system and device wiring as recommended by the manufacturer. All wiring shall be concealed. Route system cabling in J-hooks above ceiling or in crawlspace as required. Install in surface raceway in other areas.

#### **3.4 TESTING AND COMMISSIONING**

- A. The Contractor shall be responsible for testing and commissioning of the installation in accordance with all applicable documents in the Contract set.
  - 1. Testing shall be comprehensive and sufficient to demonstrate compliance with each requirement.

2. Proposed test plan shall be submitted to the Engineer and Owner's representative for approval before commencement of final test.
3. Final tests shall be conducted in the presence of the Engineer and Owner's representative.

### **3.5 TRAINING AND INSTRUCTION**

- A. Upon completion of the work, and prior to acceptance of the same by the Owner, the Contractor and major equipment manufacturer's qualified representative shall provide 4 hours of Owner instruction in one-hour sessions. Sessions shall include instruction on the operation and service of all closed circuit television system equipment and controls. This instruction shall be done at the facilities' location and convenience, and in the presence of the Architect/Engineer's representative.
- B. Training materials shall consist of the following:
  1. Formal course outline and agenda.
  2. Operator training student guide for each student.
  3. Hands-on practice with on-line equipment.
  4. Written examinations.

### **3.6 WARRANTY**

- A. All equipment furnished under this contract shall be warranted for a period of twelve (12) months from the date of final Engineer/Owner acceptance of the system.
  1. Respond to service requests on-site, if required.
  2. Replace or repair defective components as required.

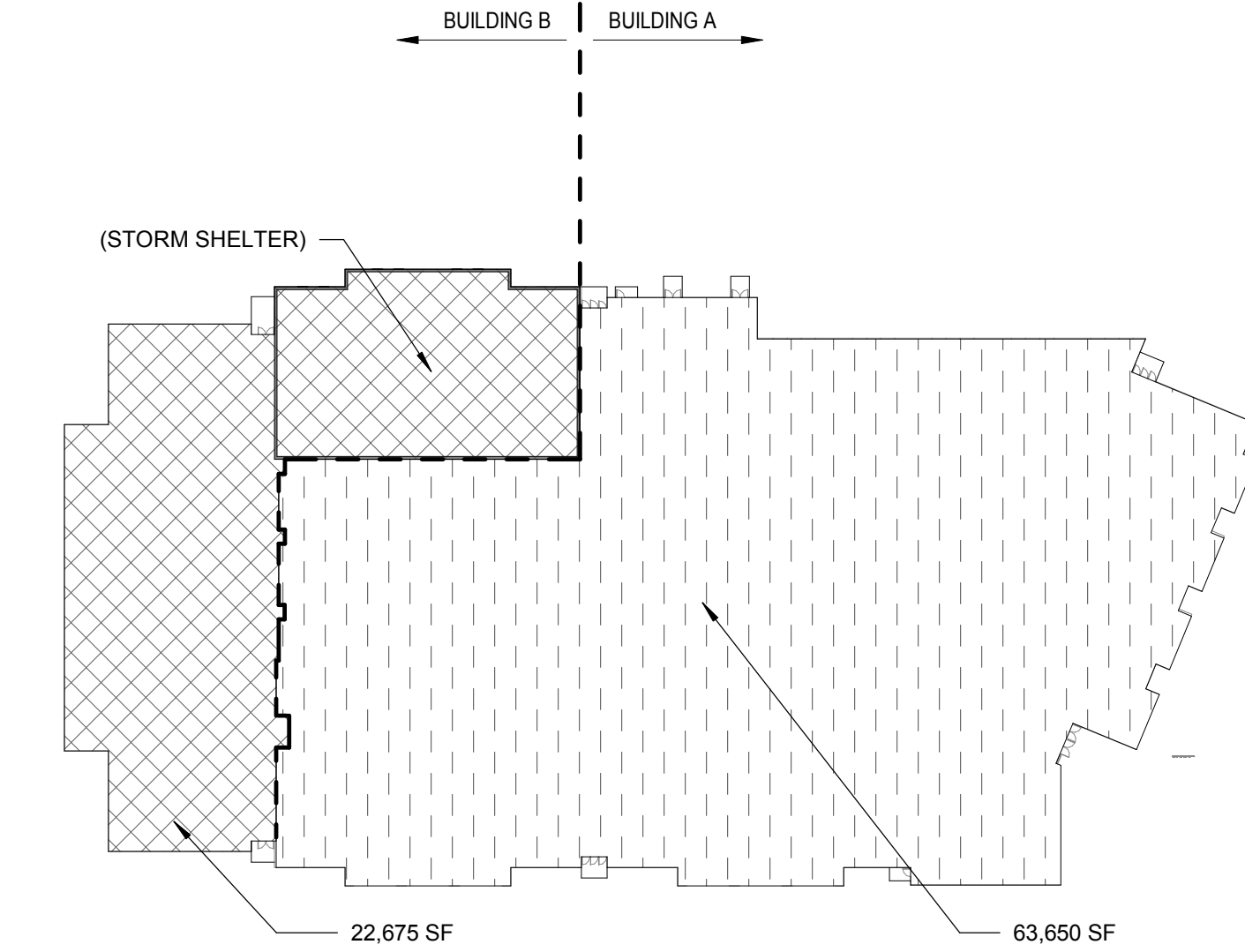
**END OF SECTION 281300**



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GENERAL NOTES

1. THE FLOOR PLAN BACKGROUND FOR NEW CONSTRUCTION IS SHOWN IN GRAY HALF-TONE. DESIGNATIONS FOR FIRE RATED PARTITIONS, SMOKE PARTITIONS AND OTHER CODE COMPLIANCE RELATED INFORMATION ARE SHOWN FULL TONE.
2. REFER TO ELECTRICAL DRAWINGS FOR LOCATIONS OF EXIT LIGHTS, EMERGENCY LIGHTS, AND FIRE ALARM SYSTEM.
3. REFER TO FIRE PROTECTION DRAWINGS FOR LOCATIONS OF SPRINKLERS AND FIRE PUMP.
4. REFER TO PLUMBING DRAWINGS FOR PLUMBING FIXTURE COUNTS.
5. REFER TO STRUCTURAL DRAWINGS FOR STRUCTURAL LOADS.



1 LEVEL 01 CODE COMPLIANCE PLAN AREA DIAGRAM  
1/8" = 1'-0"

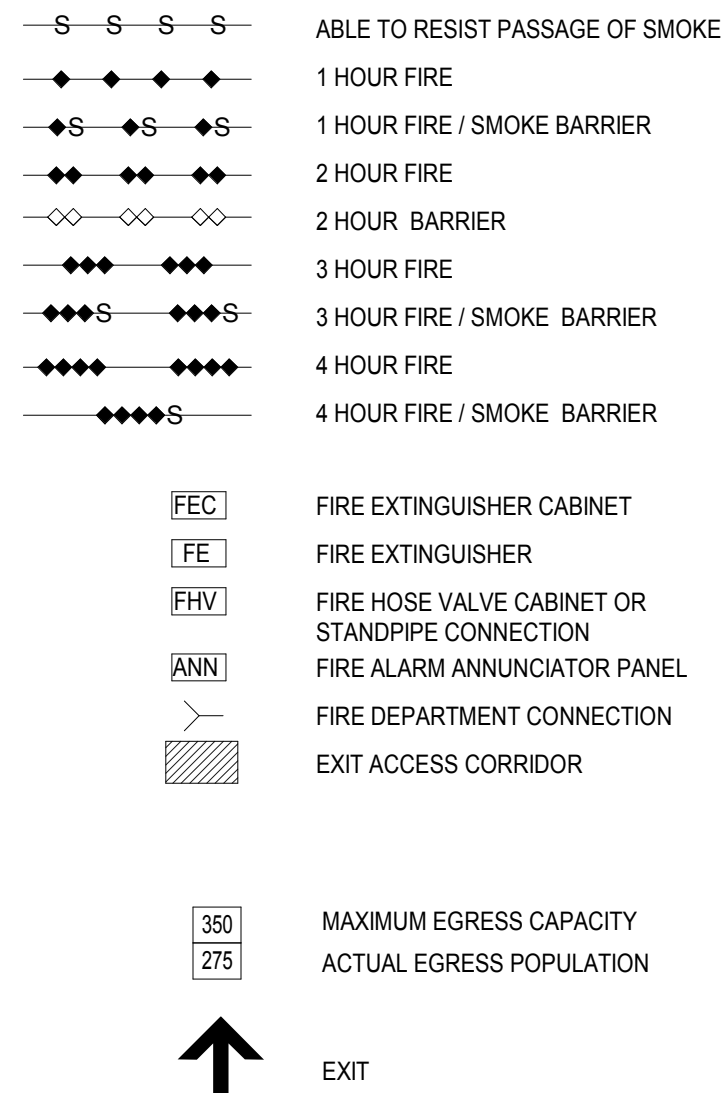
PLUMBING FIXTURE COUNT

STORM SHELTER:  
TOTAL POPULATION: 793  
STUDENTS: 688

**PLUMBING FIXTURE REQUIREMENT PER ILLINOIS PLUMBING CODE:**  
SCHOOL POPULATION BASED ON ACTUAL STUDENT PROJECTED ENROLLMENT  
ASSEMBLY POPULATION BASED ON EGRESS CAPACITY FOR ASSEMBLY SPACES

**SCHOOL REQUIREMENTS:**  
**WATER CLOSETS:**  
MALE: 1:1-20, 2: 21-50, OVER 50, ADD 1 FIXTURE PER EACH ADDITIONAL 50 PERSONS  
FEMALE: 1:1-20, 2: 21-50, OVER 50, ADD 1 FIXTURE PER EACH ADDITIONAL 50 PERSONS  
**LAVATORIES:**  
MALE: 1:1-15, 2: 16-35, 3: 36-55, 4: 56-80  
FEMALE: 1:1-15, 2: 16-35, 3: 36-55, 4: 56-80  
**DRINKING FOUNTAINS:**  
1 PER 75 PERSONS  
**OFFICE / STAFF:**  
**WATER CLOSETS:**  
MALE: 1:1-15, 2: 16-35, 3: 36-55, 4: 56-80  
FEMALE: 1:1-15, 2: 16-35, 3: 36-55, 4: 56-80  
**ASSEMBLY REQUIREMENTS (50 SF/PERSON):**  
**WATER CLOSETS:**  
MALE: 1:1-100, 2: 101-200, 3: 201-400, 4: 401-800  
FEMALE: 1:1-100, 2: 101-200, 3: 201-400, 4: 401-800  
**LAVATORIES:**  
MALE: 1:1-15, 2: 16-35, 3: 36-55, 4: 56-80  
FEMALE: 1:1-15, 2: 16-35, 3: 36-55, 4: 56-80  
**PROTOTYPE SCHOOL REQUIREMENTS:**  
**SCHOOL:**  
TOTAL STUDENT POPULATION: 688  
344 MALE = 9 W.C.S., 9 LAVS  
344 FEMALE = 9 W.C.S., 9 LAVS  
10 DRINKING FOUNTAINS  
**ASSEMBLY (GYMNASIUM/ DINING):**  
9,775 SF, ASSUME 50 SF/ PERSON = 196  
98 MALE = 1 W.C.S., 1 URINALS, 1 LAV  
98 FEMALE = 2 W.C.S., 1 LAV  
1 DRINKING FOUNTAIN  
**STAFF:**  
TOTAL STAFF: 75  
4 UNISEX STAFF TOILET ROOMS WITH 1 WATER CLOSET, 1 LAVATORY

LEGEND



APPLICABLE CODES, STANDARDS, AND ORDINANCES:

PER ILLINOIS ADMINISTRATIVE CODE 180:  
2009 INTERNATIONAL BUILDING CODE (WITH AMENDMENTS)  
2009 INTERNATIONAL MECHANICAL CODE (WITH AMENDMENTS)  
2004 ILLINOIS PLUMBING CODE  
2009 INTERNATIONAL FUEL GAS CODE  
2009 INTERNATIONAL ENERGY CONSERVATION CODE  
2009 INTERNATIONAL FIRE CODE  
ILLINOIS ACCESSIBILITY CODE / 2010 ADAAG

EGRESS LEGEND

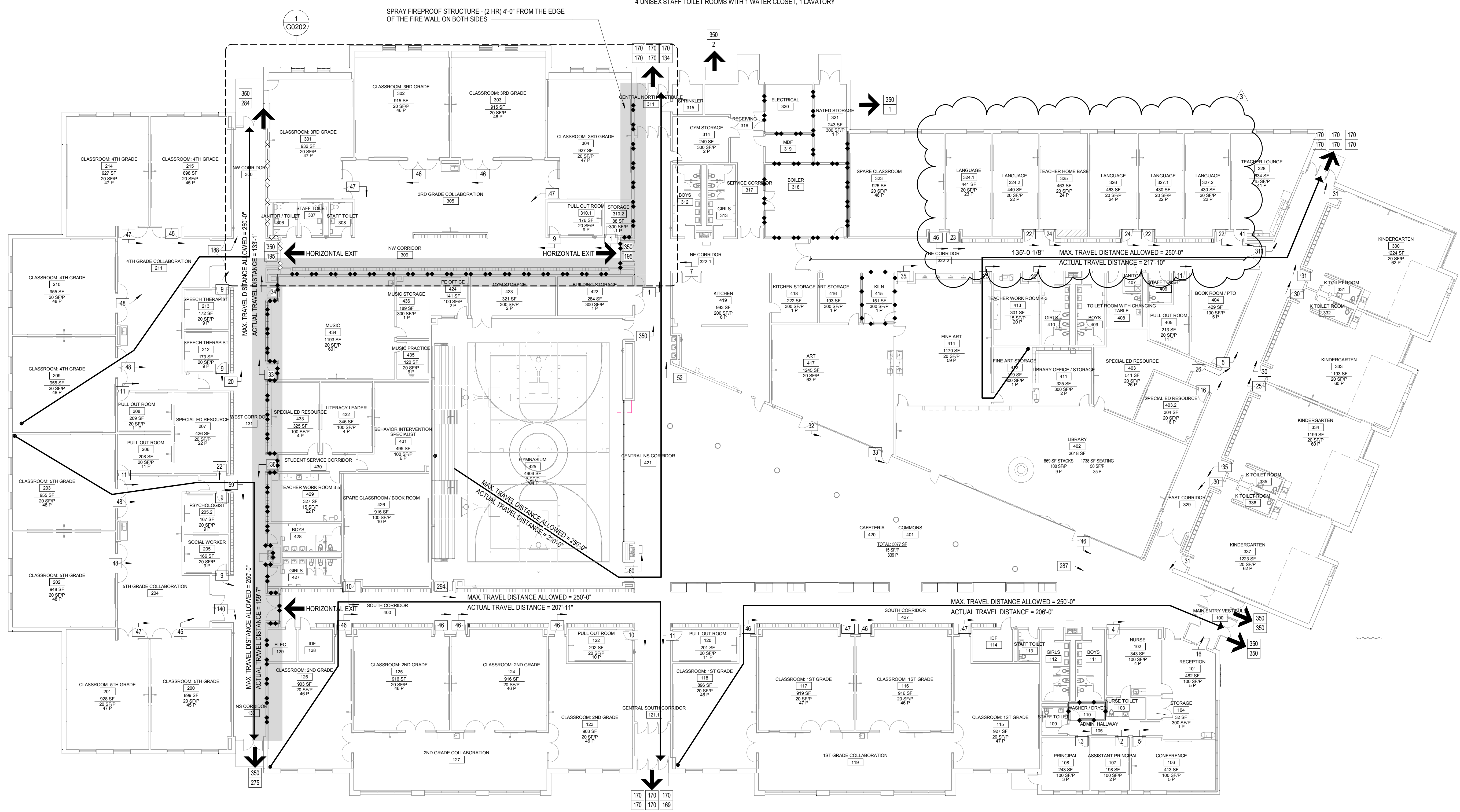
PART 180 / IBC 2009
DOOR CAPACITY = 2 INCH / PERSON
36" DOOR (34" CLEAR) = 170 OCCUPANTS
72" OPENING (70" CLEAR) = 350 OCCUPANTS
0-49 OCC. LOAD = 1 DOOR
50-500 OCC. LOAD = 2 DOORS
3 EXITS REQUIRED FOR OCC. LOAD 501-1000
MAXIMUM TRAVEL DISTANCE = 250'-0" (SPRINKLERED)
COMMON PATH OF TRAVEL = 75'-0"
DEAD-END CORRIDOR = 50'-0"

GENERAL INFORMATION:

OCCUPANCY: EDUCATION  
OCCUPANCY CLASSIFICATION: IBC 2009 - TYPE 2B  
CONSTRUCTION CLASSIFICATION: IBC 2009 - TYPE 2B  
CONSTRUCTION TYPE: IBC 2009 - TYPE 2B  
AUTOMATIC SPRINKLER SYSTEM: YES  
ALLOWABLE BUILDING AREA (ASSUMES 20' PUBLIC WAY AROUND ENTIRE PERIMETER OF BUILDING)  
AUTOMATIC SPRINKLER SYSTEM INCREASE BY ADDITIONAL 300 PERCENT IS = 3 FOR BUILDING WITH NO MORE THAN ONE STORY ABOVE GRADE PLANE  
If = [F / P - 0.25] W / 30  
If = [14,006 / 14,005 - 0.25] 20 / 30  
If = 10.78 / 30  
If = 15 / 30  
If = 0.5  
Aa = [A] + [A] x [I] + [A] x [I] x [I]  
Aa = [14,500 + (14,500 x 0.5) + (14,500 x 0.5) x 0.5]  
Aa = 14,500 + 7,250 + 43,500  
Aa = 65,250 SF  
ALLOWABLE: 65,250 SF  
ACTUAL: BUILDING A: 63,650 SF  
BUILDING B: 22,875 SF  
ALLOWABLE BUILDING HEIGHT ("A" ADDITION):  
ALLOWABLE: 55'-0", 2 STORIES  
ACTUAL: 15'-0", 1 STORY  
ALLOWABLE BUILDING HEIGHT ("B" ADDITION):  
55'-0", 2 STORIES AND 27'-0" AND 1 STORY INCREASE FOR AUTOMATIC SYSTEM  
ALLOWABLE: 75'-0", 3 STORIES  
ACTUAL: 27'-0", 1 STORY (AT GYMNASIUM)

FIRE RESISTANCE RATINGS

ITEM	FIRE RESISTANCE RATING
STRUCTURAL FRAME	0 HRS
SUPPORTING ROOF ONLY	0 HRS
BEARING WALLS: EXTERIOR	0 HRS
INTERIOR	0 HRS
INTERIOR SUPPORTING ROOF ONLY	0 HRS
NON-BEARING WALLS AND PARTITIONS	0 HRS
EXTERIOR SEPARATION >30'	0 HRS
FLOOR CONSTRUCTION	NA
ROOF CONSTRUCTION	0 HRS
MISCELLANEOUS RATINGS:	
IBC 2009:	
SHAFT ENCLOSURES 4 OR MORE STORIES <4 STORIES	2 HRS 1 HR 0 HRS
HALLWAYS	0 HRS
VERTICAL EXIT ENCLOSURES 4 OR MORE STORIES <4 STORIES	2 HRS 1 HR
SMOKE BARRIERS	NA
SOILED LINEN ROOMS	NA
FIRE WALL (BUILDING SEPARATION) (TABLE 706.4)	2 HRS



3 LEVEL 01 CODE COMPLIANCE PLAN  
1/16" = 1'-0"



ROCKFORD PUBLIC SCHOOLS

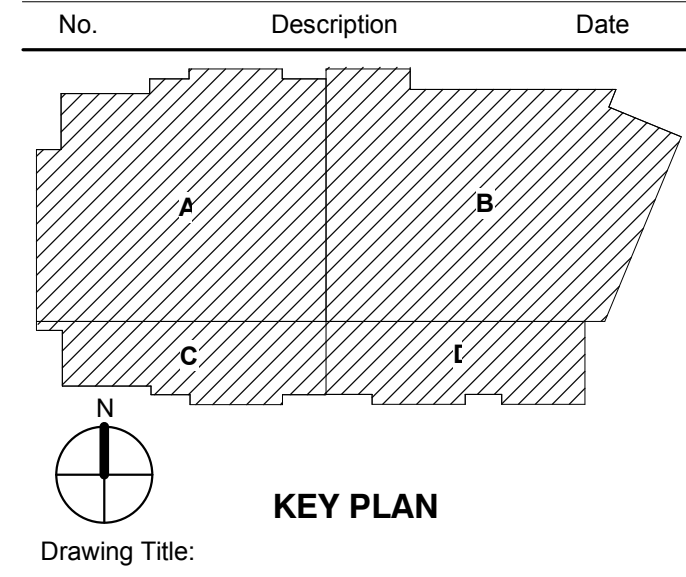
SCHOOL B, ZONE 1

CANNONDESIGN

225 North Michigan Avenue, Suite 1100  
Chicago, Illinois 60601  
T: 312.332.9800  
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PROFESSIONAL DESIGN FIRM  
LICENSE NUMBER: 184-005683

**S2O CONSULTANTS, INC.**  
Civil Consultants  
5291 Zenith Parkway  
Loves Park IL 61111  
(815) 484-4300

3	ADDENDUM 05	05/22/2017
2	ADDENDUM 02	04/26/2017
1	ISSUED FOR BID	03/01/2017



LEVEL 01 CODE COMPLIANCE

Project No.: 005005.04 Checked by: Checker

G0201



WATER UTILITY NOTES

Refer to project specifications for City of Rockford watermain construction requirements.

REQUIREMENTS FOR WATER MAIN VALVE SHUT OFF

- a)Contractor shall obtain the permission of the Water Superintendent, or his designee, prior to any water main valve shut off.
- b)Contractor shall notify all water customers affected by the water main valve shut off at least 24 hours in advance, using forms supplied by the Water Division.
- c)Contractor shall notify the Water Division Operations Center Operator (779-348-7368) prior to any water main valve shut off and provide the following information (pursuant to Illinois Municipal Code 65 ILCS 5/11-20-10.5):
- Streets and boundaries of shut down
  - Time of shut down
  - Approximate duration of shut down
  - Number of customers affected
  - If non-residential customers (hospitals, nursing homes, restaurants, etc.) are affected, a count of how many individuals affected will be provided.
- d)Contractor shall notify Water Division Operations Center Operator upon completion of repairs and restoration of water service.
- e)Contractor shall demonstrate, to the satisfaction of the Owner, that water service at each residence or business affected by the shut down has been restored once the water service line has been reconnected.
- f) Contractor shall meet with Water Division personnel at least five (5) days prior to start of construction to coordinate exercising valves and determining valve shut off patterns during construction. The shut down shall be allowed to proceed only after the Water Division representative has determined that the required valves are functioning. The Contractor shall be responsible for turning valves on and off during construction and accepts the responsibility for any and all damage to City property during construction.
- g)All costs of work associated with scheduled water main valve shut off shall be included in the individual bid items and no additional compensation shall be allowed.

REQUIREMENTS FOR UNSCHEDULED (EMERGENCY) WATER MAIN VALVE SHUT OFF:

- a)In the event the Contractor must perform an unscheduled water main valve shut off, the Contractor shall notify the Water Division Operations Center Operator (779-348-7368) as soon as possible.
- b)The Contractor shall notify all water customers affected by the water main valve shut off and the need to boil water as soon as possible, using forms supplied by the Water Division.
- c)The Contractor shall provide the following information (pursuant to Illinois Municipal Code 65 ILCS 5/11-20-10.5):
- Streets and boundaries of shut down
  - Time of shut down
  - Approximate duration of shut down
  - Number of customers affected
  - If non-residential customers (hospitals, nursing homes, restaurants, etc.) are affected, a count of how many individuals affected will be provided.
- d)If the Contractor is involved in repairs, the Contractor shall notify Water Division Operations Center Operator upon completion of repairs when water service has been restored.

GENERAL NOTES

- The designs represented in these plans are in accordance with established practices of civil engineering for the design functions and uses intended by the owner at this time. Neither the engineer nor its personnel can or do warrant these designs or plans as constructed except in the specific cases where the engineer inspects and controls the physical construction on a contemporary basis at the site.
- The contractor, by agreeing to perform the work, agrees to indemnify and hold harmless the owner, the engineer, the city, and all agents and assigns of those parties, from all suits and claims arising out of the performance of said work, and further agrees to defend or otherwise pay all legal fees arising out of the defense of said parties.
- In accordance with generally accepted construction practices, the contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours. Any construction observation by the engineer of the contractor's performance is not intended to include review of the adequacy of the contractors safety measures, in, or near the construction site. The contractor is responsible for maintaining adequate signs, barricades, fencing, traffic control devices and measures, and all other measures that are necessary to protect the safety of the site at all times.
- Maintain access for vehicular and pedestrian traffic as required for other construction activities. Use traffic control devices to include temporary striping, flagmen, barricades, warning signs, and warning lights shall be in accordance with current MUTCD and IDOT standards.
- All phases of the site work for this project shall meet or exceed industry standards and requirements set forth by the City of Rockford, the State of Illinois, and this plan set. This project is governed by project specific specifications found in the Project Manual. Where no written specification exists, all aspects of the site construction shall be deemed to automatically follow the State of Illinois "Standard Specifications For Road and Bridge Construction", current edition, or City of Rockford specifications, if more strict.
- The City of Rockford must be notified at least two (2) working days prior to the commencement or resumption of any work.
- The contractor shall coordinate all permit and inspection requirements with responsible local, state, and federal agencies. The contractor shall include the costs of this coordination and all inspection fees in the bid price.
- All work performed by the contractor shall come with a warranty against defects in workmanship and materials. This warranty period shall run concurrent with the required warranty periods the owner must provide to each local government agency, as a condition of the permit.
- The contractor will be held solely responsible for and shall take precautions necessary to avoid property damage to adjacent properties during the construction of this project.
- All structures, inlets, pipes, swales, roads and public egresses must be kept clean and free of dirt and debris at all times.
- Any field tiles encountered during construction shall be recorded showing size, location, and depth by the contractor, and either reconnected and rerouted or connected to the storm sewer system. The owner shall be notified immediately upon encountering any tile.
- The contractor shall field verify the elevations of the benchmarks prior to commencing work. The contractor shall also field verify the location and elevation of existing pipe inverts, curb or pavement where matching into existing work. The contractor shall field verify horizontal control by referencing property corners to known property lines. Notify the engineer of discrepancies in either vertical or horizontal control prior to proceeding.
- All elevations are on NAVD 88 datum.
- The contractor shall verify the location of all utilities in the field prior to construction. This includes sanitary sewer, water main, storm sewer, General Telephone, Commonwealth Edison, Nicor Gas and cable television, if any. The U.L.I.E. number is 1-800-892-0123.
- Property corners shall be carefully protected until they have been referenced by a Professional Land Surveyor.
- The contractor shall keep careful measurements and records of all construction and shall furnish the Engineer, the Owner and the City with record drawings in a digital format compatible with AutoCAD Release 14 upon completion of his work.
- Any excess dirt or materials shall be placed by the contractor onsite at the owner's direction or as indicated on the plans.
- Notify the owner and City of Rockford of any existing wells. Obtain permit form the Illinois Bureau of Minerals and the State Water Survey. Cap and abandon wells in accordance with local, state, and federal regulations.
- Finish grade shall be in all areas not specifically reserved for storm water management shall drain freely. No ponding shall occur. Tolerances to be observed will be measured to the nearest 0.04 of a foot for paved surfaces and 0.10 of a foot for unpaved areas.
- Contractor shall employ discing and drying techniques continuously for 3 days prior to acceptance of any undercut.
- Contractor shall include all construction layout in his bid. If interested in obtaining a price quote from ARC Design Resources, contact Mr. Lee Sprecher at 815-484-4300 x238 with items requested.

SANITARY SEWER NOTES [RRWRD]

- Sanitary Sewer shall be constructed in accordance with the following:
  - "Standard Specifications for Water and Sewer Main Construction in Illinois" (Standard Specifications), seventh edition dated 2014, and all revisions and supplements thereto.
  - "General Provisions and Technical Specifications for Sanitary Sewer Construction" in the Rock River Water Reclamation District Sanitary District (formerly known as the Sanitary District of Rockford) dated October 24, 1983, and all standards and revisions adopted by the Board of Trustees for said Sanitary District of Rockford.
  - Additional details and requirements provided in the contract documents, including this plan set.Where criteria of the aforementioned specifications conflict, the more stringent criteria shall be implemented.
- All PVC sanitary sewer (SDR 26 AND SDR 35) shall meet the requirements of ASTM D-3034 (4"-24") or ASTM F-679 (18"-24") with joints conforming to ASTM D-3212. All PVC watermain-quality sanitary sewer (SDR 26) shall meet the requirements of ASTM D-2241 with joints conforming to ASTM D-3139. Pipe bedding for all PVC pipe shall be Class 1A per ASTM D-2321-14el.
- Sanitary sewer services shall be 6" PVC/Schedule 40 in accordance with ASTM D-1785, and shall extend 3' past the property line of all lots. Joints between the wye and end of service riser shall be gasketed in accordance with ASTM D-3139. All services shall be sloped from the main at 1% MINIMUM. Mark at property line with a 2x4 painted green. End of service risers are required in accordance with the RRWRD standard details included in these plans.
- WYE or TEE branches shall be a minimum 7' from the outside of any sanitary manhole and be furnished and installed by the Contractor as shown on the Engineering drawings.
- All testing, fittings, bedding, granular cradle, and trench backfill where necessary shall be included in the unit costs for the installation of the underground facilities unless quantified on plans. PVC pipe should be installed with proper bedding providing uniform longitudinal support under the pipe. Bedding material should be worked under the sides of the pipe to provide satisfactory haunching. Initial bedding material should be placed to a minimum depth of one foot over the top of the pipe. All pipe embedment material should be selected and placed carefully, avoiding large stones, frozen lumps, and debris.
- After placement and compaction of pipe embedment materials, the balance of backfill materials may be machine placed and should contain no large stones or rocks, frozen material or debris. Excavated materials free from topsoil may be used in the final trench depth provided they are placed in 9" lifts loose measured and compacted to not less than 95% ASTM D-698 standard proctor.
- All sanitary sewer manholes shall have eccentric cones with the cone openings centered over the pipe. All manholes shall be guaranteed by the contractor for 3 years after RRWRD acceptance.
- All sanitary sewer manholes shall be 48-inch diameter precast concrete.
- The allowable infiltration shall not exceed 200 gallons/inch diameter/mile/24 hours.
- Sanitary sewers shall be air-tested in accordance with RRWRD requirements.
- All new sanitary sewer manholes shall be vacuum tested in accordance with ASTM C 1244.
- All sanitary sewers under or within two feet of any existing or proposed street pavement or curb shall be backfilled with IDOT approved granular backfill material. Trench backfill shall be placed in lifts not to exceed 9" compacted to 95% of maximum standard proctor density.
- Rock River Water Reclamation District shall be notified 48 hours prior to the start of construction and air testing of sanitary sewers. Water main, water services, and storm sewer must be installed and RRWRD notified soon after installation before sanitary sewer testing can be performed.
- Trenches must be backfilled to 2' below subgrade and mains and services must have 5' minimum depth of cover over the top of pipe before sanitary sewer testing can be performed.
- Manhole frames shall be provided with self sealing lids, Neenah R-1670, East Jordan E 1117 or District approved equivalent frame and lid.
- Exterior manhole seals shall be required on all new manholes including the barrel sections.
- Deflection testing for flexible conduit.
  - All sanitary sewer lines shall be deflection-tested after 30 days following final backfill operations.
  - If the deflection test is to be run using a rigid ball or mandrel, it shall have a diameter equal to 95% of the base diameter of the pipe as established in proposed ASTM D-3034. The test shall be performed without mechanical pulling devices.
  - Wherever possible and practical, the testing shall initiate at the downstream lines and proceed towards the upstream lines.
  - Maximum allowable pipe deflection is 5%. Where deflection is found to be in excess of 5% of the original pipe diameter, the Contractor shall excavate to the point of excess deflection and carefully compact around the point excess deflection was found. The line shall then be retested for deflection. However, should after the initial testing the deflected pipe fail to return to the original size (inside diameter) the line shall be replaced.
- For water main separation notes applicable to sanitary sewer, refer to project specifications for City of Rockford watermain construction requirements.
- Where sanitary sewer depths exceed 12' the contractor shall use the Alternate Service Riser method to install the sewer service line so that the invert of the service, at the property line, is 10.5' below the proposed centerline grade.
- Upon completion of construction all sanitary manhole castings shall be exposed and set to final grade. The District must inspect this work.
- Exterior manhole seals will be required as part of manhole adjustments. Flattop manholes are not permitted. No adjusting rings are required outside a paved roadway or in a roadway with curb and gutter. All manholes adjusted or reconstructed where more than two rings are involved will require vacuum testing.
- The Rock River Water Reclamation District will furnish a full-time inspector for all sanitary work.
- All fill material in the area of sanitary sewer mains and services must be placed and compacted prior to installation of the sewer mains and services.
- The Rock River Water Reclamation District specifies the following for manhole adjustment requirements:
  - A minimum of 4" of adjusting rings (4" adjusting ring not required in turf areas or in full curb and gutter roadways)
  - A maximum of 12" of adjusting rings
  - A maximum of 1 - 2" adjusting ring per manhole.
  - A maximum of 30" from the top of casting to the first stepNotes: Adjustment by grouting is not permitted. Where the roadway agency of jurisdiction allows, rubber adjusting rings shall be used
- Labeled pipe lengths are from center of manhole to center of manhole.
- Labeled sanitary sewer rates are calculated based on the difference between the invert elevations from the outside-to-outside distance of the manhole wall and the distance between the centers-to-center of the manholes minus 5' for a 4' diameter manhole.
- Refer to typical section for pavement and shoulder dimensions.
- All sanitary sewer work shall be performed in accordance with District and local Plumbing Code requirements.

Sanitary Sewer Service Connection

- Contractor must complete a standard RRWRD Industrial/Commercial (I/C) application and submit to RRWRD for approval of the sewers shown as part of the building connection permitting process.
- The contractor shall coordinate all RRWRD fees associated with this project. the contractor shall pay all application fees, and should be reimbursed by the Owner. Contractor shall provide the owner with a written breakdown of all RRWRD fees with evidence of payment.
- RRWRD will require inspection of the sewer installation. Contractor shall coordinate this work directly with RRWRD. Owner shall pay for all inspection fees.
- All sanitary sewer, manholes, services and other appurtenances shall be installed as required by the RRWRD and/or the [local agency] contractor is responsible for familiarizing himself with the specific requirements for materials and construction for these two agencies.
- The City of Rockford may also require inspection of the building connections, the contractor shall coordinate all City inspections with the City building inspector, if needed.
- Contractor to install 6" service from main to designated point of connection as shown on the plans as part of sewer installation.
- RRWRD sanitary sewer service connection permits will not be issued under the District's Standard Service Connection permit process until after the RRWRD has issued a "Notice Allowing Connections".

UTILITY OFFICIALS

PUBLIC WORKS DEPARTMENT:

CITY OF ROCKFORD  
PUBLIC WORKS  
425 E. STATE STREET  
ROCKFORD, IL 61104

GAS:

SCOTT KOENIG  
NICOR GAS  
1844 FERRY ROAD  
NAPERVILLE, IL 60563  
(708) 678-1242

SEWER DISTRICT

CHRISTOPHER BAER  
ROCK RIVER WATER RECLAMATION DISTRICT  
3501 KISHAWKEE STREET  
ROCKFORD, IL  
(815) 387-7660

TELEPHONE

HECTOR GARCIA  
AT&T MIDWEST  
2404 8TH AVENUE  
ROCKFORD, IL 61108  
(815) 394-7270

ELECTRIC

ADAM SADKOWSKI  
COMED  
123 ENERGY DRIVE  
ROCKFORD, IL 61109  
(815) 263-3123

CABLE TELEVISION

MIKE OWENS  
COMCAST  
4450 KISHAWKEE STREET  
ROCKFORD, IL 61101  
(815) 395-8977

WATER

CITY OF ROCKFORD  
WATER DIVISION  
425 E. STATE STREET  
ROCKFORD, IL 61104  
(779) 348-7368



DIAL 811 OR  
(800) 892-0123



ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

CANNONDESIGN

225 North Michigan Avenue, Suite 1100  
Chicago, Illinois 60601  
T: 312.332.9600  
F: 312.332.9601

PROFESSIONAL DESIGN FIRM  
LICENSE NUMBER 184.005683

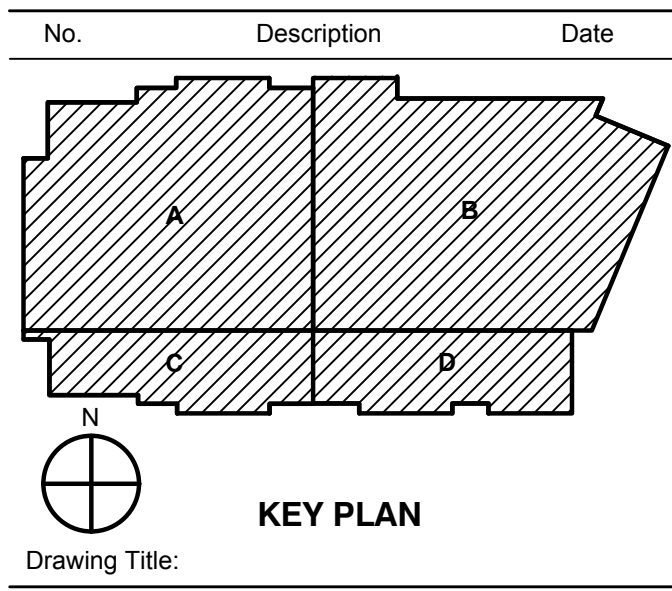
S20 CONSULTANTS, INC

Kitchen Consultants  
13 Winding Branch Rd  
Hawthorn Woods, IL 60047  
224-717-1999

ARC DESIGN RESOURCES INC.

Civil Consultants  
5291 Zenith Parkway  
Loves Park, IL 61111  
(815) 484-4300

2 ADDENDUM 5 05/22/2017  
1 ISSUED FOR BID 03/01/2017



GENERAL NOTES

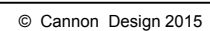
Project No.: 005005.00 Checked by: JSL

C01



## LEGEND

**ARC DESIGN RESOURCES INC.**  
Civil Consultants  
5291 Zenith Parkway  
Loves Park IL 61111  
(815) 484-4300

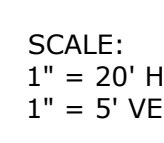
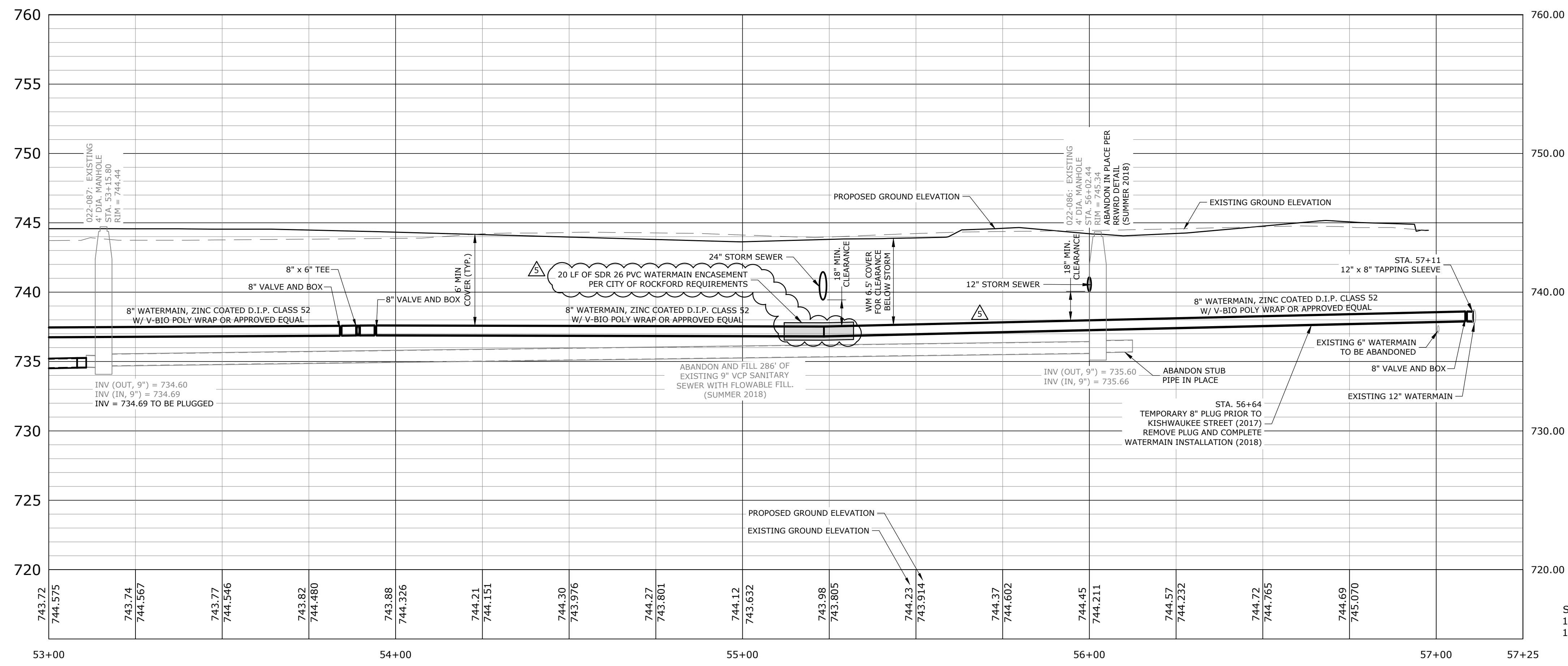








BENCHMARKS ESTABLISHED FROM WinGIS MONUMENTATION:  
WinGIS STATION # 57 (ELEV. = 757.00)



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 **KEY PLAN**

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1. *Journal of Management Studies*, 1997, 34, 1, 1-14.

C17



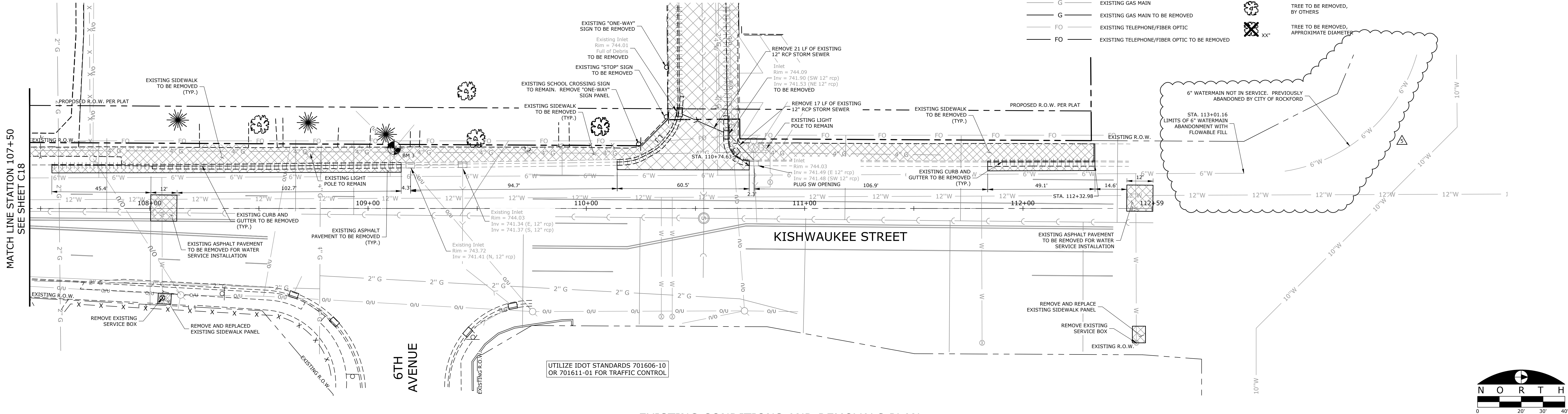
BENCHMARKS	
DESCRIPTION	ELEVATION
<b>BENCHMARK 1</b> NORTH CAP BOLT ON FIRE HYDRANT LOCATED APPROX. 35' SOUTH OF GREGORY STREET AND APPROX. 25' WEST OF KISHWAUKEE STREET	746.29
<b>BENCHMARK 2</b> NORTHWEST CAP BOLT ON FIRE HYDRANT LOCATED APPROX. 40' SOUTH OF CATLIN STREET AND APPROX. 25' WEST OF KISHWAUKEE STREET	746.66
<b>BENCHMARK 3</b> BENCHMARK IN SOUTH FACE OF POWER POLE LOCATED APPROX. 140' SOUTH OF UNION STREET AND 25' WEST OF KISHWAUKEE STREET	745.38
<b>BENCHMARK 4</b> BENCHMARK IN SOUTHEAST FACE OF POWER POLE LOCATED APPROX. 120' SOUTH OF CATLIN STREET AND 25' EAST OF 3RD STREET	745.74

## REMOVAL NOTES

1. EXTEND SIDEWALK REMOVAL PAST LIMITS SHOWN TO THE NEAREST JOINT AT NO ADDITIONAL COMPENSATION (TYPICAL ALL).
2. EXTERIOR STAIR REMOVAL SHALL BE INCIDENTAL TO SIDEWALK REMOVAL.
3. SEE UTILITY PLAN FOR SANITARY REMOVALS.
4. ALL TREE PROTECTIONS AND REMOVALS ON RPS PROPERTY AND IN R.O.W. UNDER SEPARATE CONTRACT. CONTRACTOR TO COORDINATE WITH DEMOLITION PLANS.

## LEGEND

EXISTING PAVEMENT TO BE REMOVED	EXISTING CONTOUR	TREE TO BE PROTECTED WITH SNOW FENCE TO DRIP LINE OR MAXIMUM EXTENT PRACTICAL
EXISTING CURB & GUTTER TO BE REMOVED	EXISTING ASPHALT PAVEMENT OR SIDEWALK TO BE REMOVED	EVERGREEN TREE
6"W	EXISTING FIRE HYDRANT ASSEMBLY	BUSH
6"W	EXISTING WATER MAIN	EXISTING SIGN
6"W	EXISTING WATER MAIN TO BE REMOVED	GAS METER
6"W	EXISTING SANITARY SEWER	ELECTRIC METER
6"W	EXISTING SANITARY SEWER TO BE REMOVED	A/C UNIT
6"W	EXISTING STORM SEWER	BOLLARD
6"W	EXISTING STORM SEWER TO BE REMOVED	SANITARY CLEANOUT
U/E	EXISTING BURIED ELECTRIC	
U/E	EXISTING BURIED ELECTRIC TO BE REMOVED	
O/U	EXISTING OVERHEAD WIRES	
O/U	EXISTING OVERHEAD WIRES TO BE REMOVED	
G	EXISTING GAS MAIN	
G	EXISTING GAS MAIN TO BE REMOVED	
FO	EXISTING TELEPHONE/FIBER OPTIC	
FO	EXISTING TELEPHONE/FIBER OPTIC TO BE REMOVED	



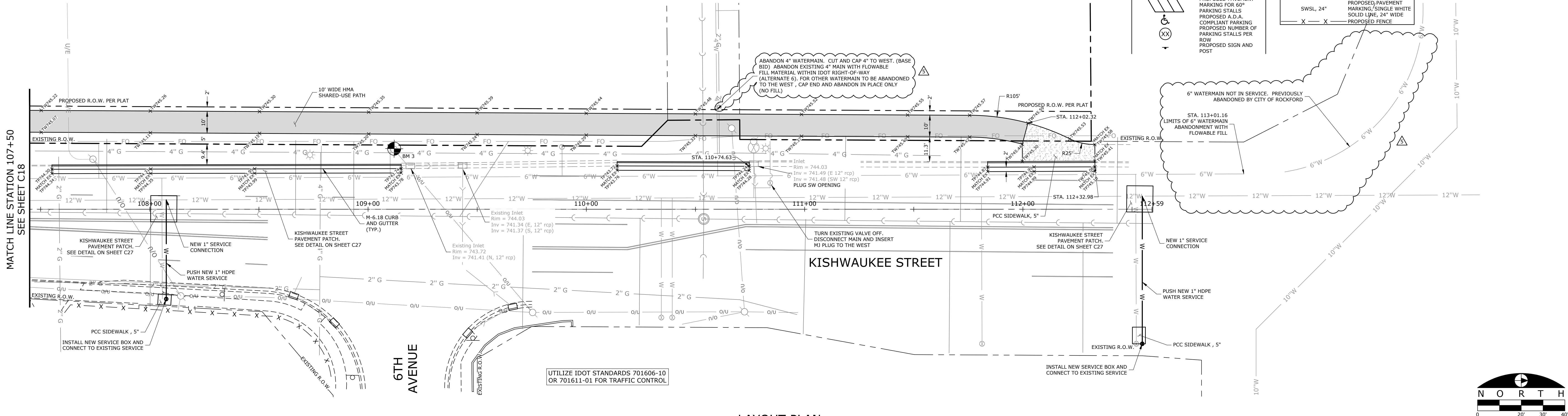
EXISTING CONDITIONS AND REMOVALS PLAN

## LAYOUT NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATIONS OF THE BENCHMARKS PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL ALSO FIELD VERIFY LOCATION AND ELEVATION OF EXISTING PIPE INVERTS, FLOOR ELEVATIONS, CURB OR PAVEMENT WHERE MATCHING INTO EXISTING WORK. THE CONTRACTOR SHALL FIELD VERIFY HORIZONTAL CONTROL BY REFERENCING SHOWN COORDINATES TO KNOWN PROPERTY LINES. NOTIFY ENGINEER OF DISCREPANCIES IN EITHER VERTICAL OR HORIZONTAL CONTROL PRIOR TO PROCEEDING WITH WORK.
2. REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS.
3. DIMENSIONS THAT LOCATE THE BUILDING ARE MEASURED TO THE OUTSIDE FACE OF THE BUILDING.
4. SIGN CONSTRUCTION AND PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.
5. ALL RADII ARE DIMENSIONED TO THE EDGE OF PAVEMENT.
6. SOME FIELD ADJUSTMENTS MAY BE NECESSARY AT POINTS WHERE PROPOSED PAVEMENT, CURB AND SIDEWALKS MEET EXISTING PAVEMENT, CURB AND SIDEWALKS. REVIEW ANY REQUIRED CHANGES WITH ENGINEER PRIOR TO CONSTRUCTION OF WORK.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARATION, COORDINATION AND OBTAINING APPROVAL OF A TRAFFIC MANAGEMENT PLAN IF CLOSURES OF LANES EXCEED THE CRITERIA ESTABLISHED BY IDOT.

## LEGEND

PROPOSED PROPERTY LINE	PROPOSED BOLLARD
PROPOSED RIGHT-OF-WAY LINE	PROPOSED POLE
PROPOSED EASEMENT LINE	PROPOSED ORNAMENTAL POST AND LUMINAIRE
PROPOSED SETBACK LINE	PROPOSED PAVEMENT MARKING, SINGLE
PROPOSED CENTER LINE	PROPOSED PAVEMENT MARKING, DOUBLE
PROPOSED CURB AND GUTTER	PROPOSED PAVEMENT MARKING, SINGLE WHITE
PROPOSED STANDARD DUTY CONCRETE PAVEMENT	PROPOSED PAVEMENT MARKING, SINGLE WHITE
PROPOSED HEAVY DUTY CONCRETE PAVEMENT	PROPOSED PAVEMENT MARKING, SINGLE WHITE
PROPOSED HEAVY DUTY ASPHALT PAVEMENT	PROPOSED PAVEMENT MARKING, SINGLE WHITE
PROPOSED STANDARD DUTY ASPHALT PAVEMENT	PROPOSED PAVEMENT MARKING, SINGLE WHITE
PROPOSED PAVEMENT MARKING FOR 60' PARKING STALLS	PROPOSED PAVEMENT MARKING, SINGLE WHITE
PROPOSED A.D.A. COMPLIANT PARKING	PROPOSED PAVEMENT MARKING, SINGLE WHITE
PROPOSED NUMBER OF PARKING STALLS PER ROW	PROPOSED PAVEMENT MARKING, SINGLE WHITE
PROPOSED SIGN AND POST	PROPOSED PAVEMENT MARKING, SINGLE WHITE

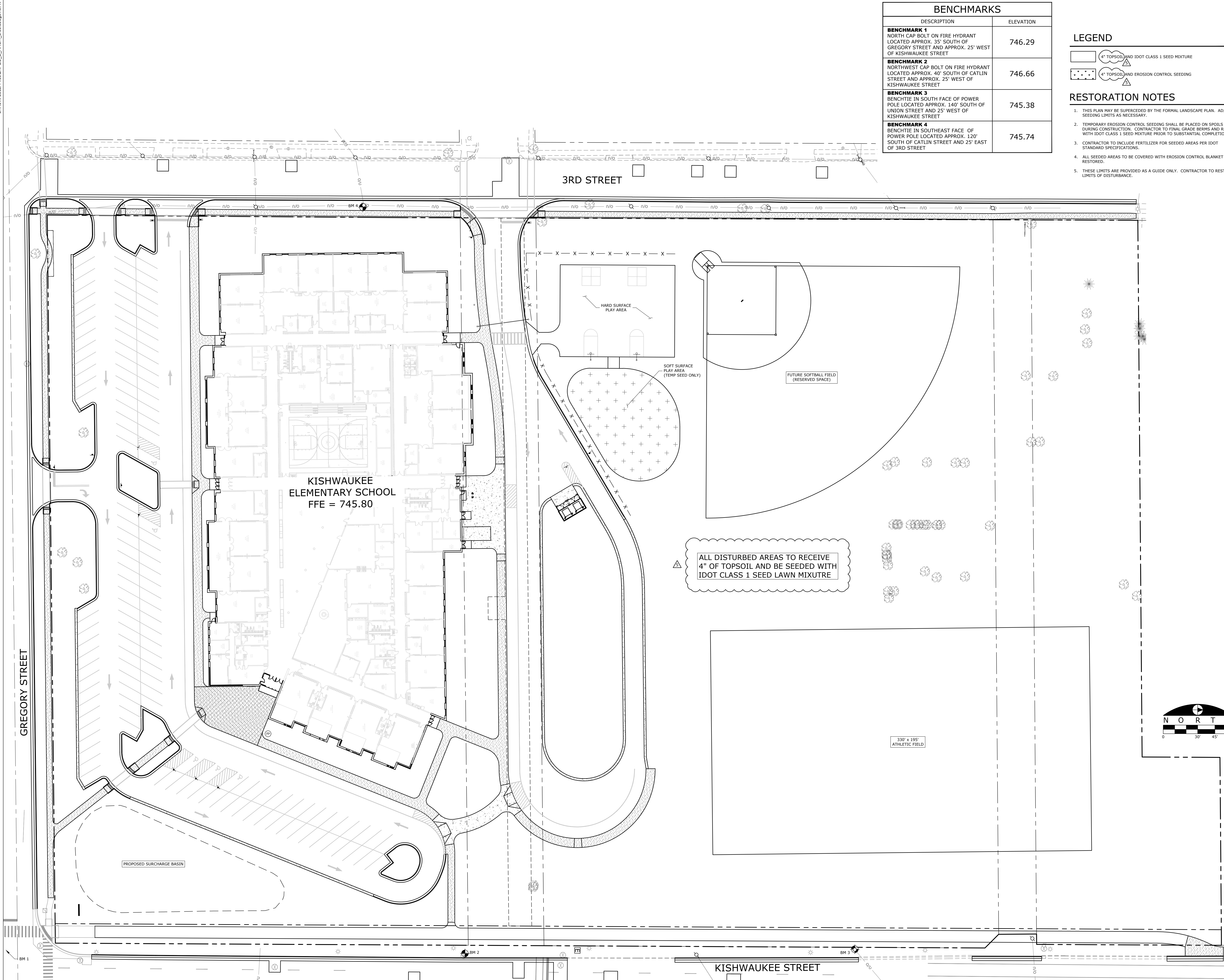


LAYOUT PLAN



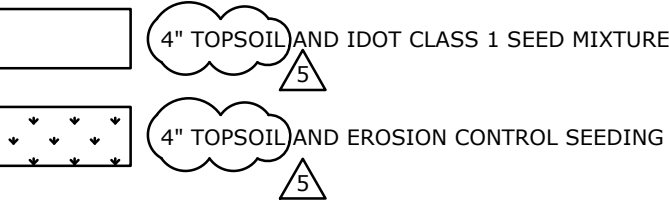
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BENCHMARKS	
DESCRIPTION	ELEVATION
<b>BENCHMARK 1</b> NORTH CAP BOLT ON FIRE HYDRANT LOCATED APPROX. 35' SOUTH OF GREGORY STREET AND APPROX. 25' WEST OF KISHWAUKEE STREET	746.29
<b>BENCHMARK 2</b> NORTHWEST CAP BOLT ON FIRE HYDRANT LOCATED APPROX. 40' SOUTH OF CATLIN STREET AND APPROX. 25' WEST OF KISHWAUKEE STREET	746.66
<b>BENCHMARK 3</b> BENCHTIE IN SOUTH FACE OF POWER POLE LOCATED APPROX. 140' SOUTH OF UNION STREET AND 25' WEST OF KISHWAUKEE STREET	745.38
<b>BENCHMARK 4</b> BENCHTIE IN SOUTHEAST FACE OF POWER POLE LOCATED APPROX. 120' SOUTH OF CATLIN STREET AND 25' EAST OF 3RD STREET	745.74

LEGEND



RESTORATION NOTES

1. THIS PLAN MAY BE SUPERCEDED BY THE FORMAL LANDSCAPE PLAN. ADJUST SEEDING LIMITS AS NECESSARY.
2. TEMPORARY EROSION CONTROL SEEDING SHALL BE PLACED ON SPOILS PILE DURING CONSTRUCTION. CONTRACTOR TO FINAL GRADE BERMS AND RESTORE WITH IDOT CLASS 1 SEED MIXTURE PRIOR TO SUBSTANTIAL COMPLETION.
3. CONTRACTOR TO INCLUDE FERTILIZER FOR SEEDED AREAS PER IDOT STANDARD SPECIFICATIONS.
4. ALL SEEDED AREAS TO BE COVERED WITH EROSION CONTROL BLANKET ONCE RESTORED.
5. THESE LIMITS ARE PROVIDED AS A GUIDE ONLY. CONTRACTOR TO RESTORE TO LIMITS OF DISTURBANCE.



ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

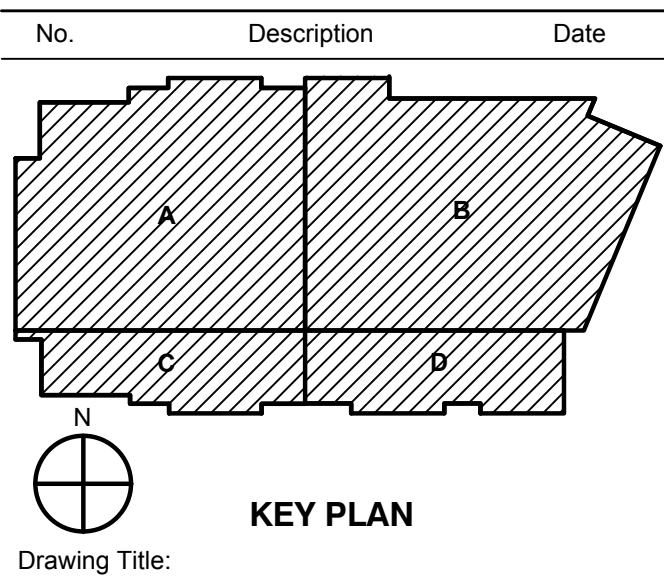
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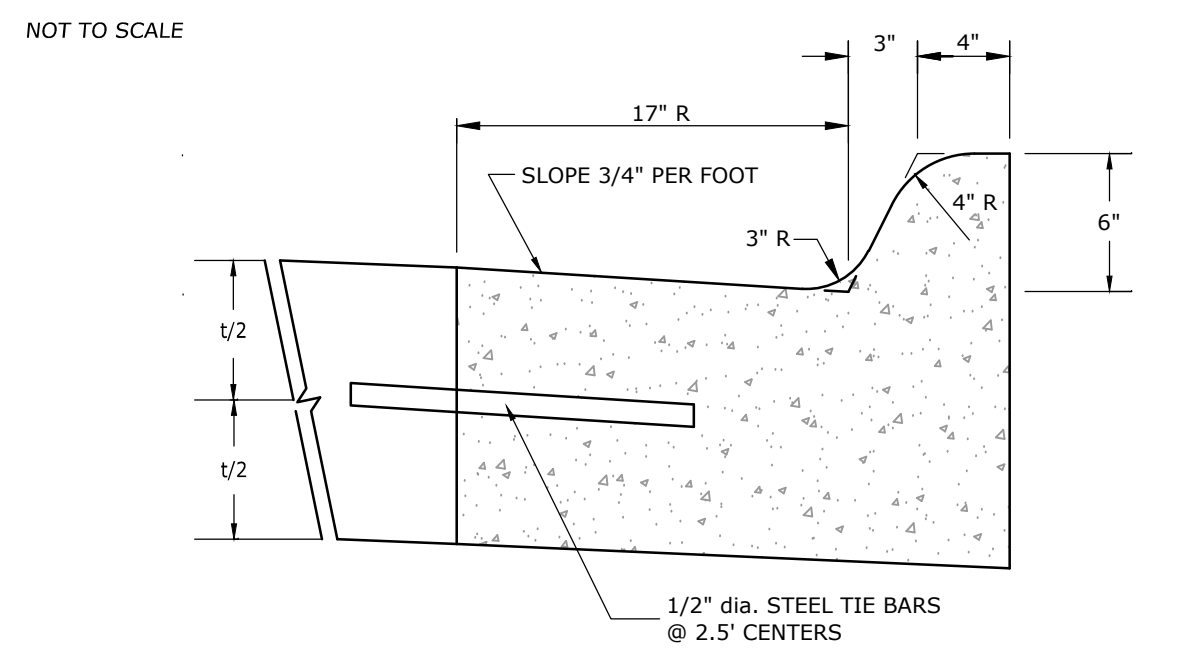
RESTORATION PLAN

Project No.: 005005.00 Checked by: JSL

C26



## COMBINATION CONC. CURB AND GUTTER, TYPE M-6.18 MODIFIED



t shall be 9" minimum when adjacent to flexible pavement.  
Expansion joints at 100' intervals and at construction joints including 1" Premolded Joint Filler and 1" Smooth Dowels (2).  
Construction joints at 15' intervals.

NOTE: TIP OUT GUTTER TO HAVE GUTTER SLOPE OF 2% AWAY FROM CURB.

THICKNESS (t) = thickness of pavement and gutter flag.

ADJACENT PCC PAVEMENT - Adjacent PCC pavement or base course less than 1' in width shall be constructed monolithic with the curb and gutter. This area of pavement will be included in the measured area of the adjacent pavement.

DEPRESSED CURBS - The top of curbs shall be depressed where the curb and gutter is constructed across alleys and for private drives or where directed by Engineer. The transition from full height curb to depressed curb shall be made at the rate of 3" per foot of length or flatter.

JOINTS - Joints shall be constructed as detailed herein. Joints shall be placed in prolongation with pavement joints. Expansion joints adjacent to drainage casting may be placed in prolongation with other joint types.

SUBGRADE - 12" thick improved subgrade shall extend to the back of curb.

MONOLITHIC CONSTRUCTION - Curbs and combination curb and gutter may be constructed monolithically with PCC pavement at the option of the Contractor. Tie bars between pavement and gutter will not be required. Pavement reinforcement (when required) shall be extended laterally to within 3" to 5" from the back of the curb.

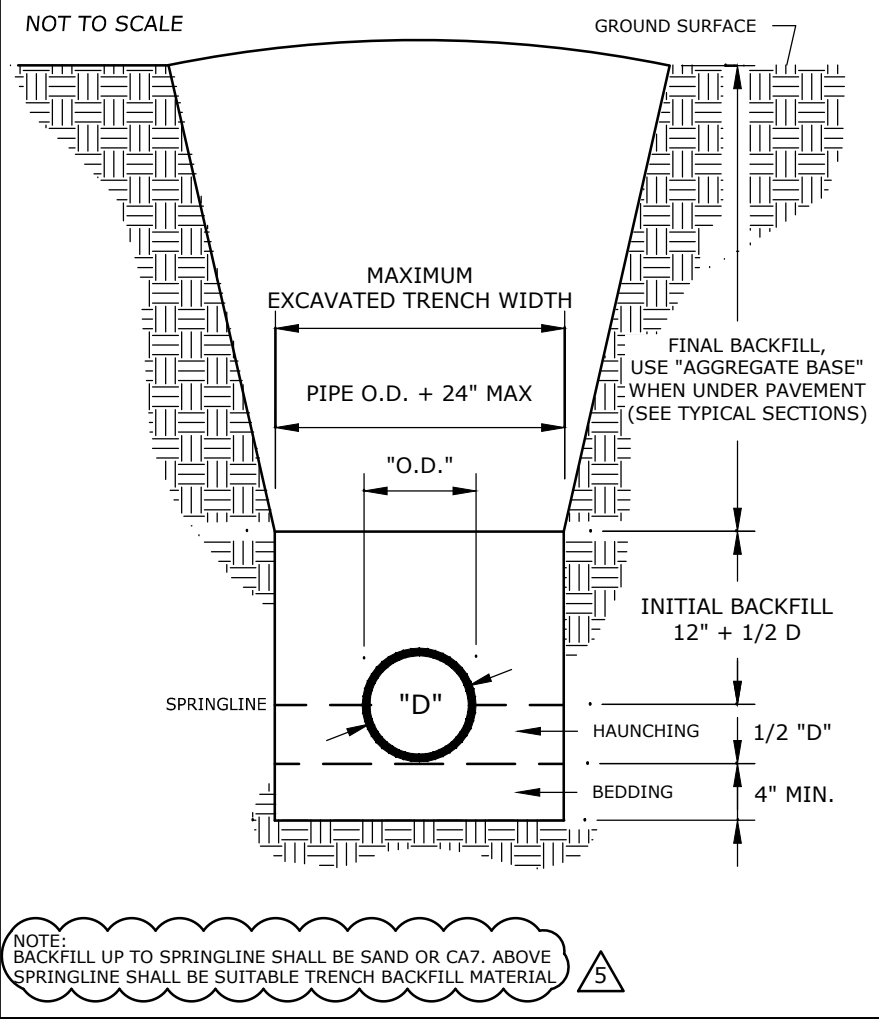
Curb and combination curb and gutter may be constructed monolithically with PCC base course. Tie bars will be required. Tie bars shall be held in proper location by support pins and approved mechanical means.

Longitudinal joints between the PCC pavement or PCC base course and curb or combination curb and gutter will not be required.

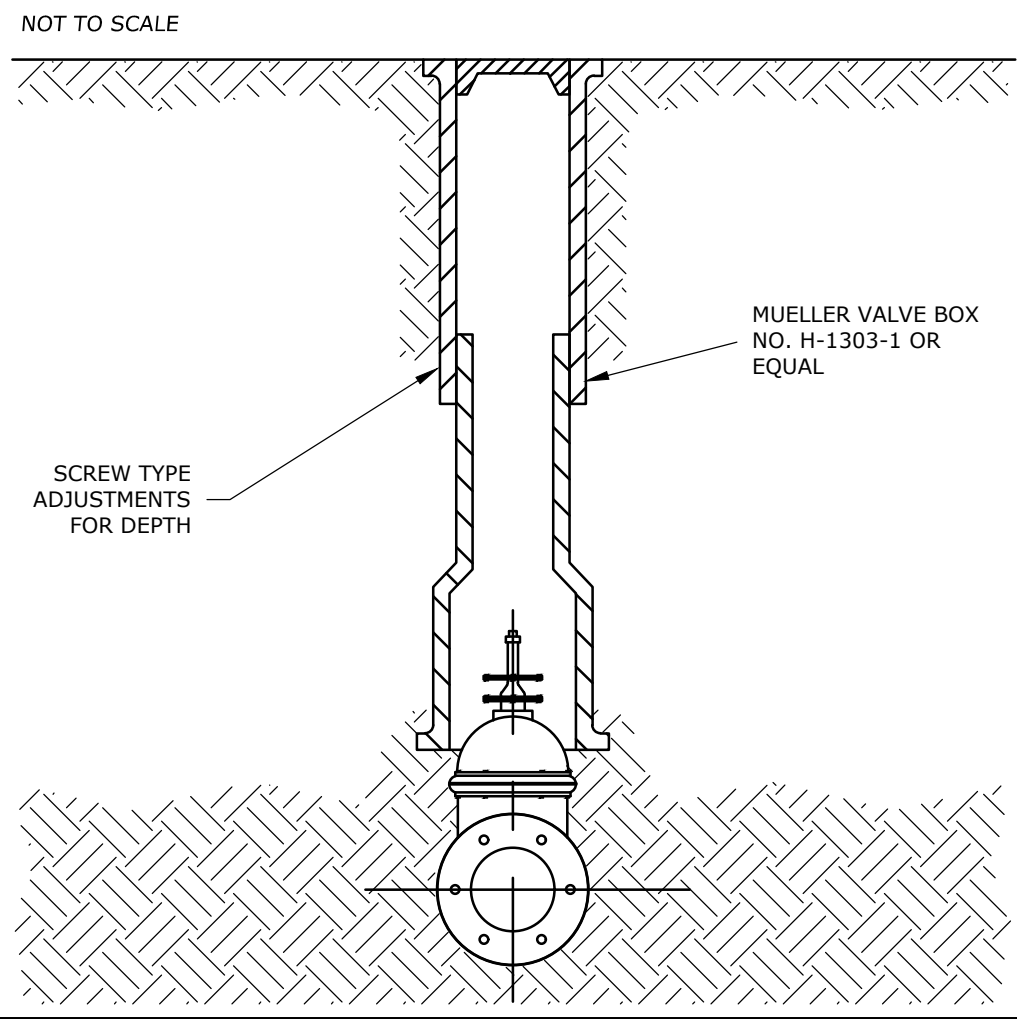
SLIPFORM CONSTRUCTION - Vertical faces may be battered at the rate of 3/4" per foot of height to aid in slipform operations.

TIE BARS/DOWEL BARS - Longitudinal joint tie bars shall be in accordance with details for Bulkhead Longitudinal Construction Joint shown on Standard 2323. Transverse joint use one tie/dowel bar for gutter width less than 18" placed at midpoint. Tie/dowel bars in the transverse hinge/contraction joints will not be required for non-monolithic construction.

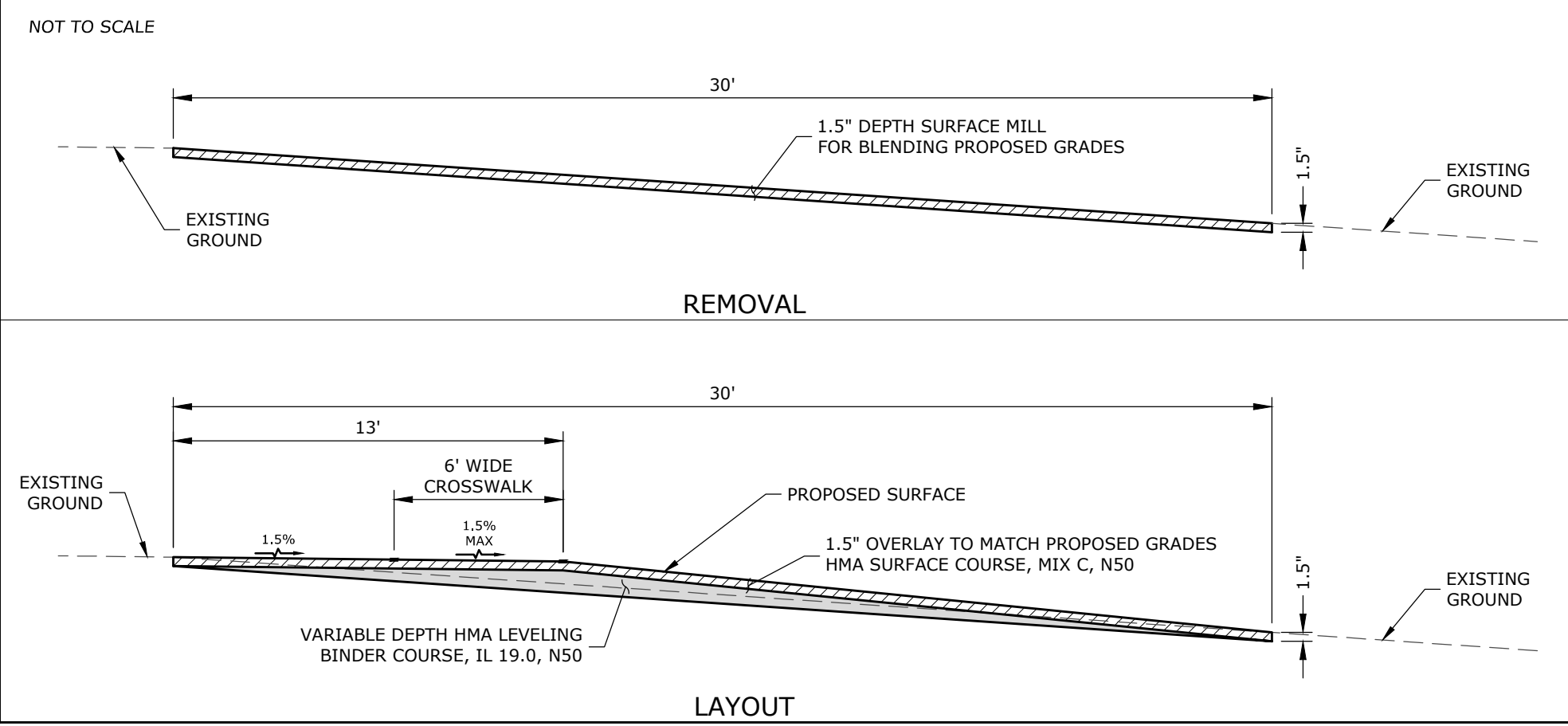
## PIPE EMBEDMENT



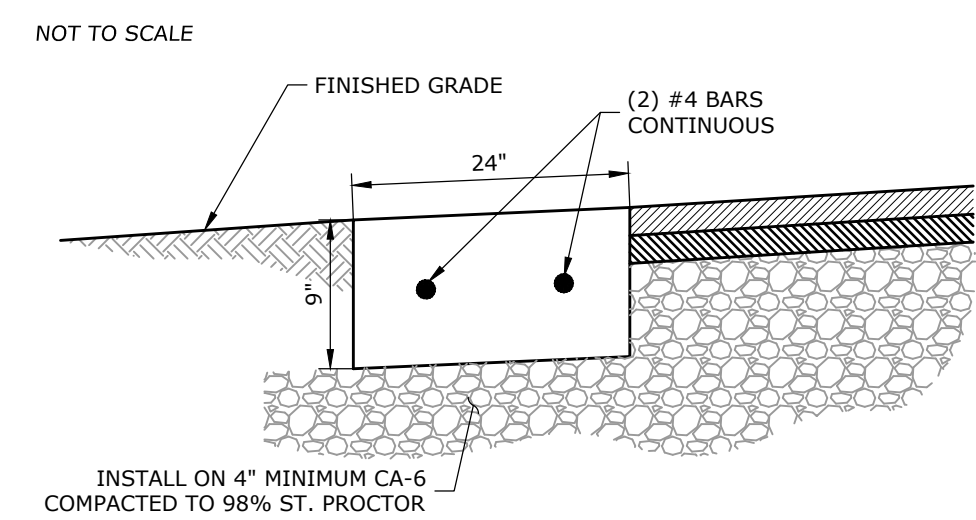
## VALVE BOX DETAIL



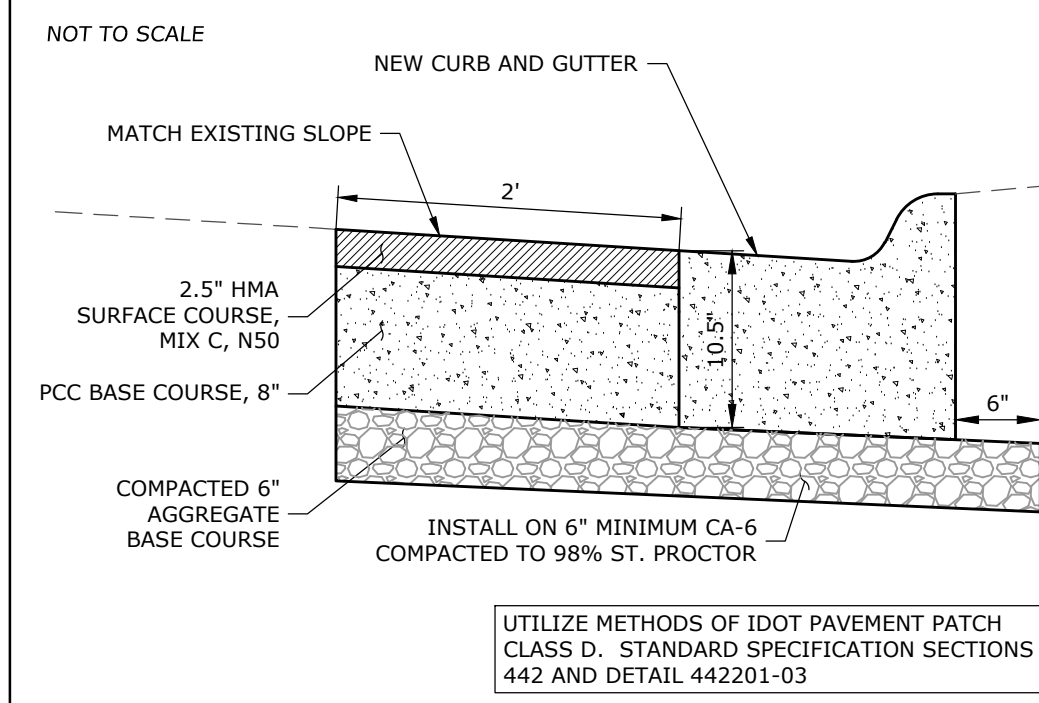
## 8TH AVENUE SURFACE MILL AND OVERLAY



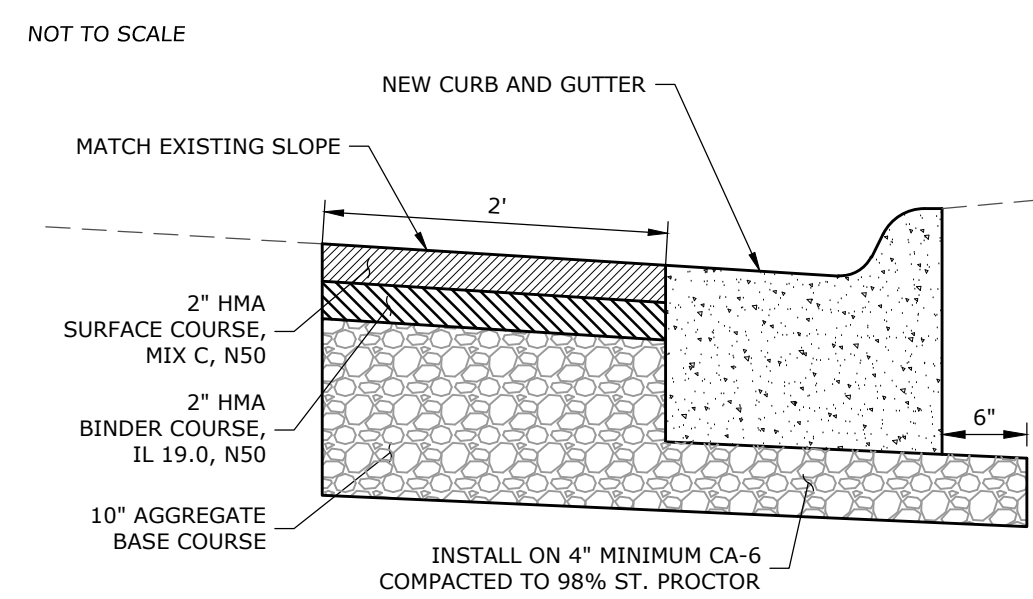
## 2' RIBBON CURB DETAIL



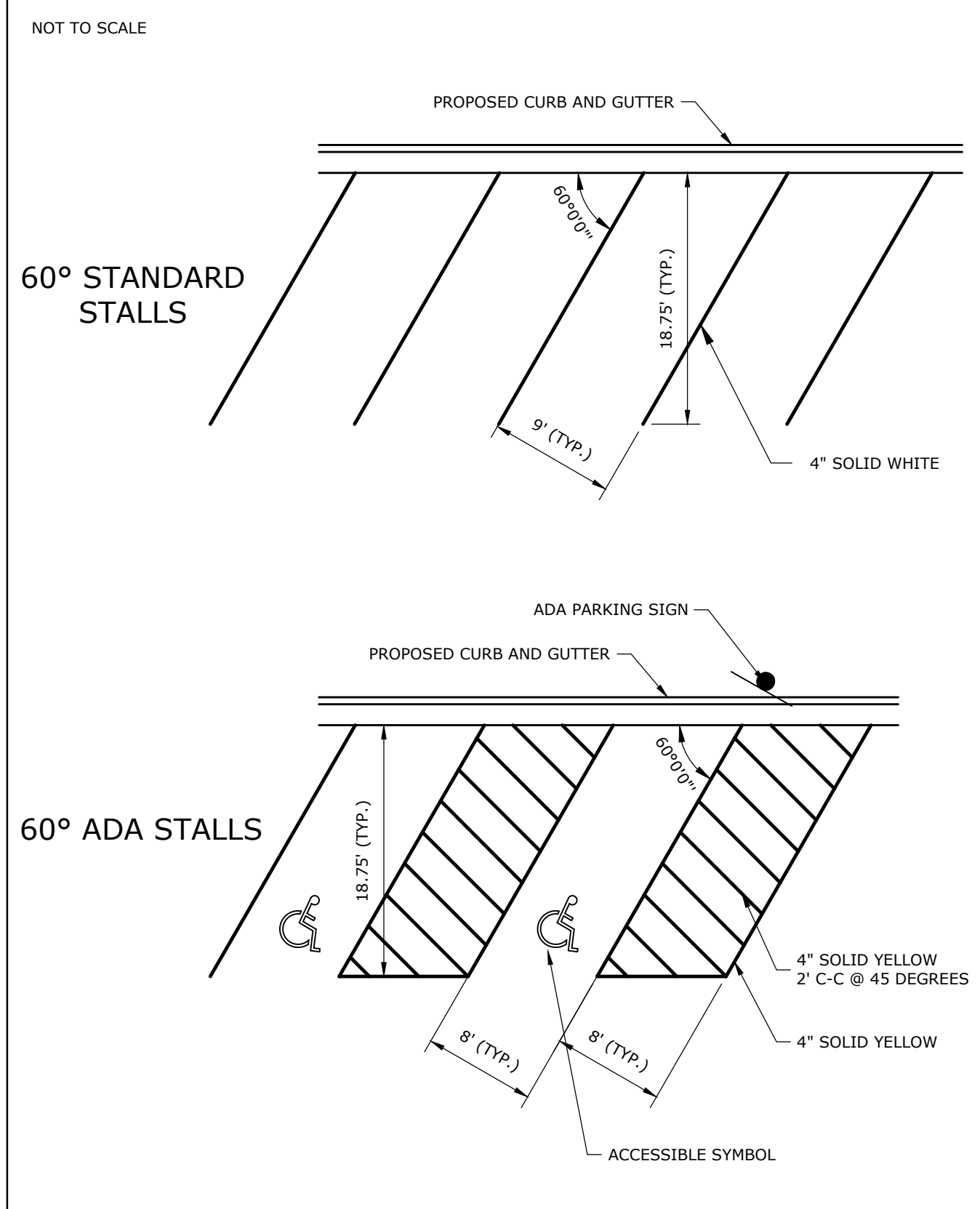
## KISHWAUKEE ST. CURB AND PATCH DETAIL



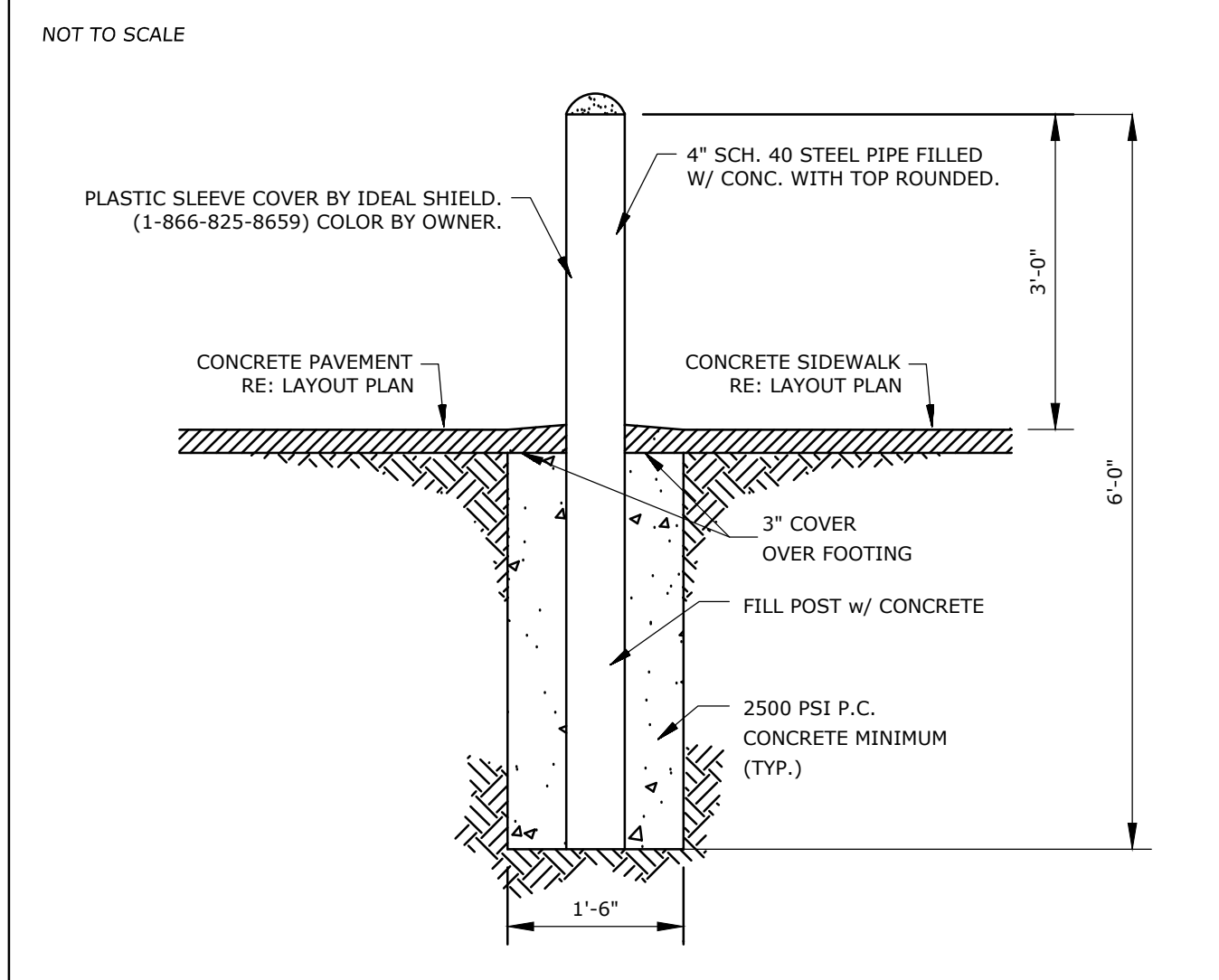
## GREGORY/3RD STREET PAVEMENT PATCH



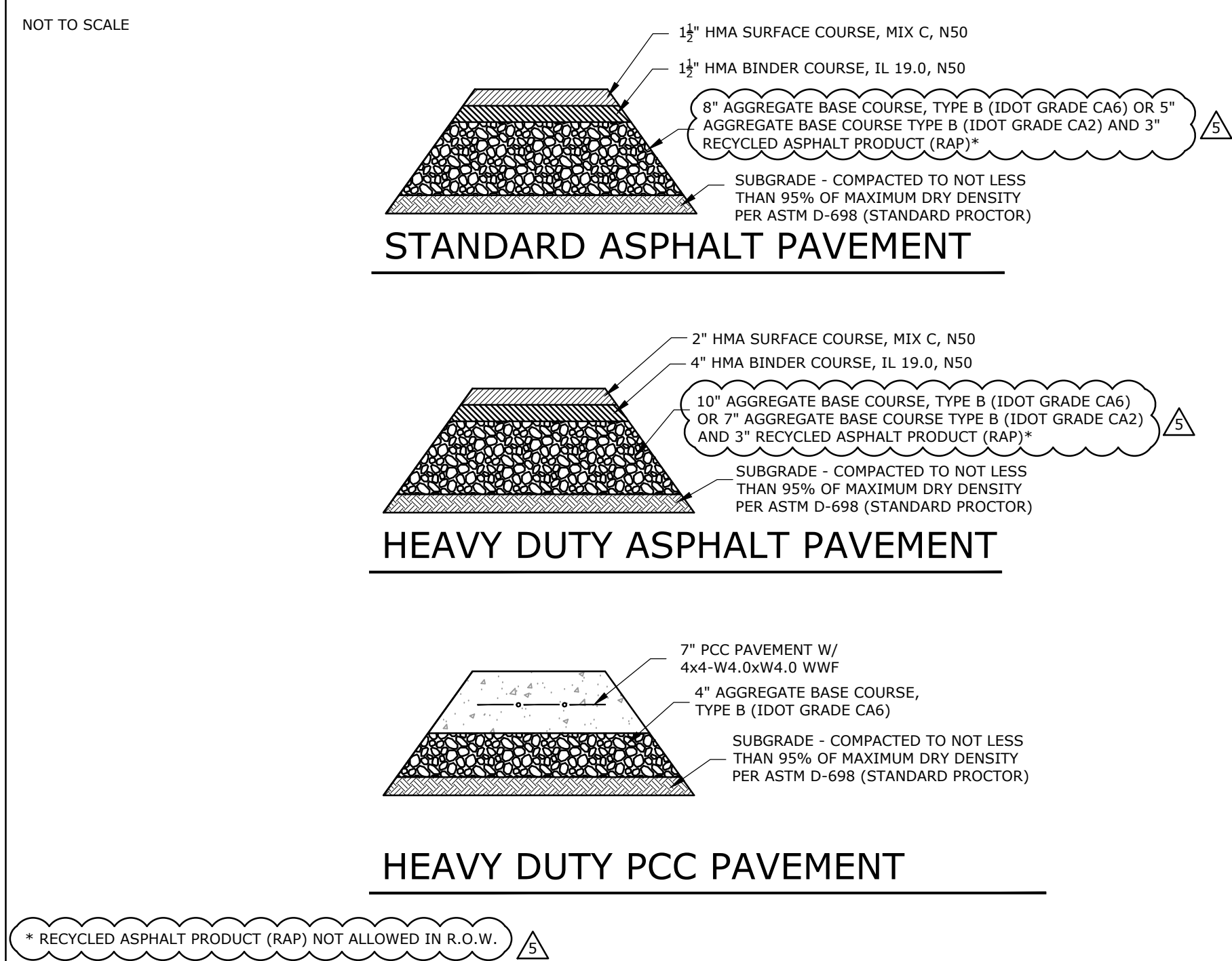
## TYPICAL 90 DEGREE PARKING STRIPING DETAILS



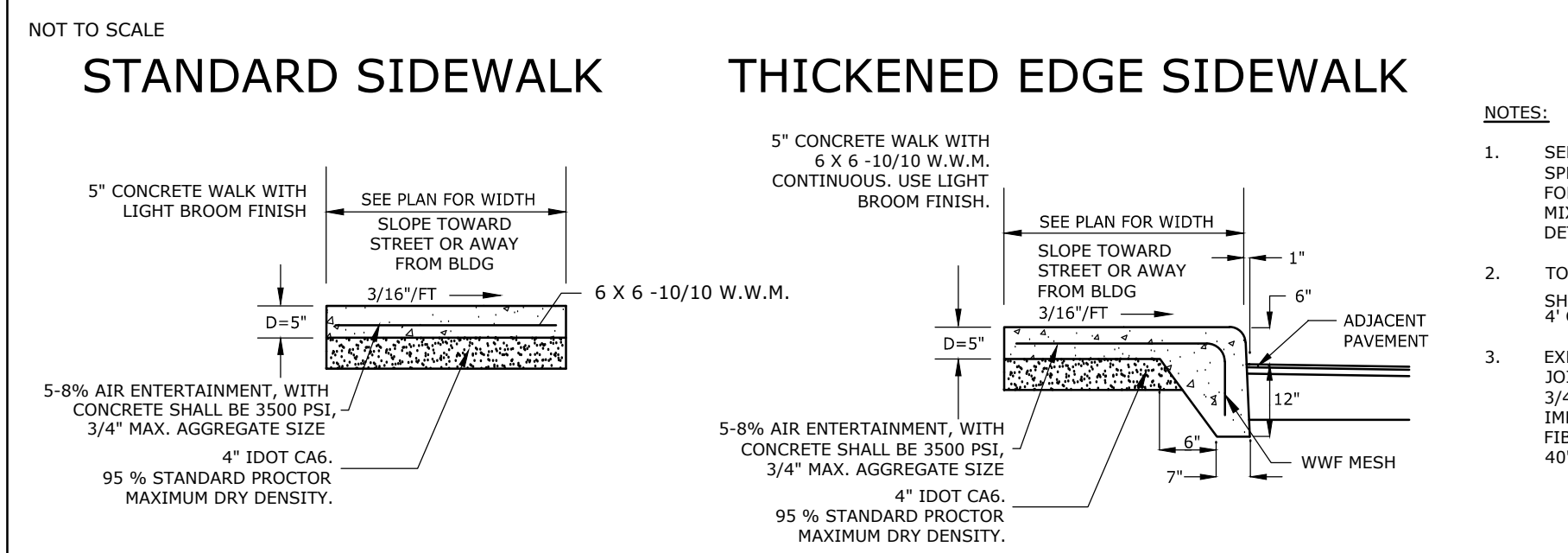
## STANDARD BOLLARD DETAIL



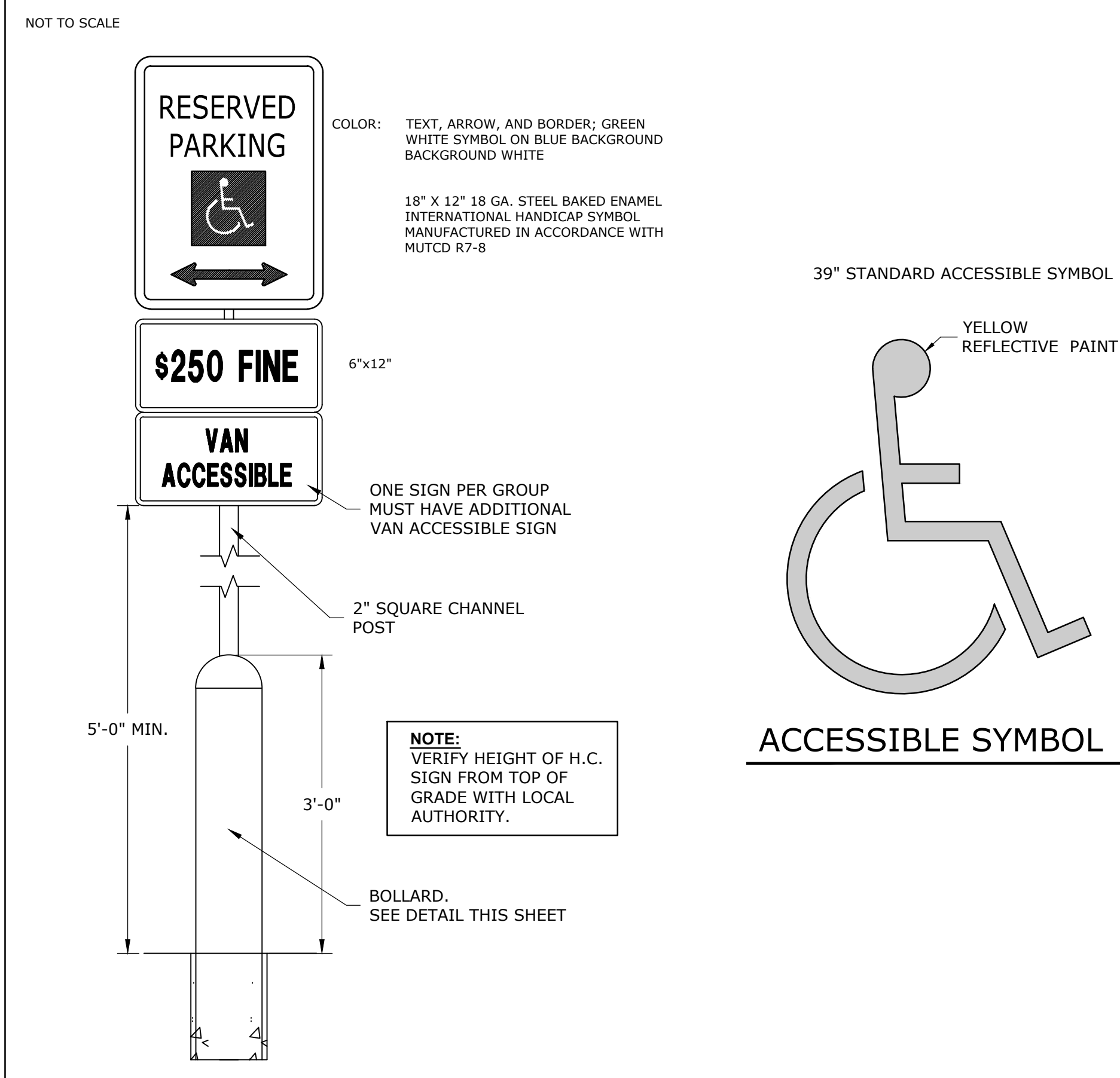
## PAVEMENT DETAILS



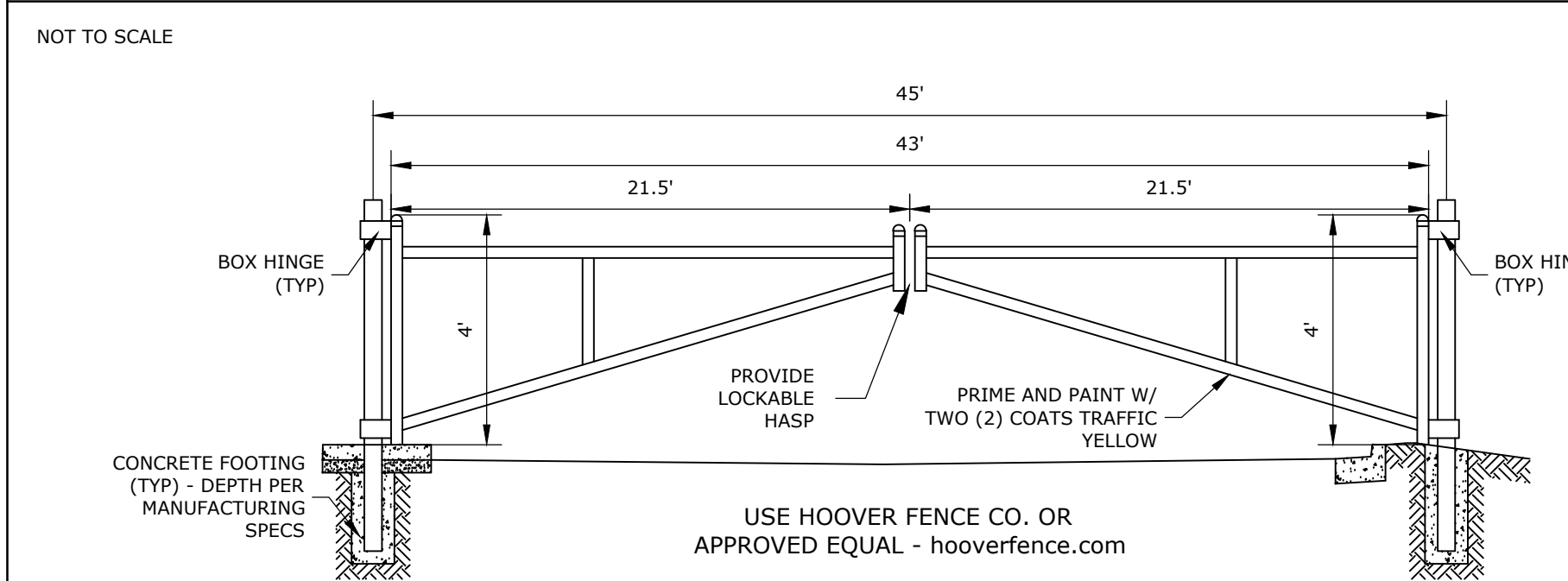
## CONCRETE SIDEWALK DETAILS



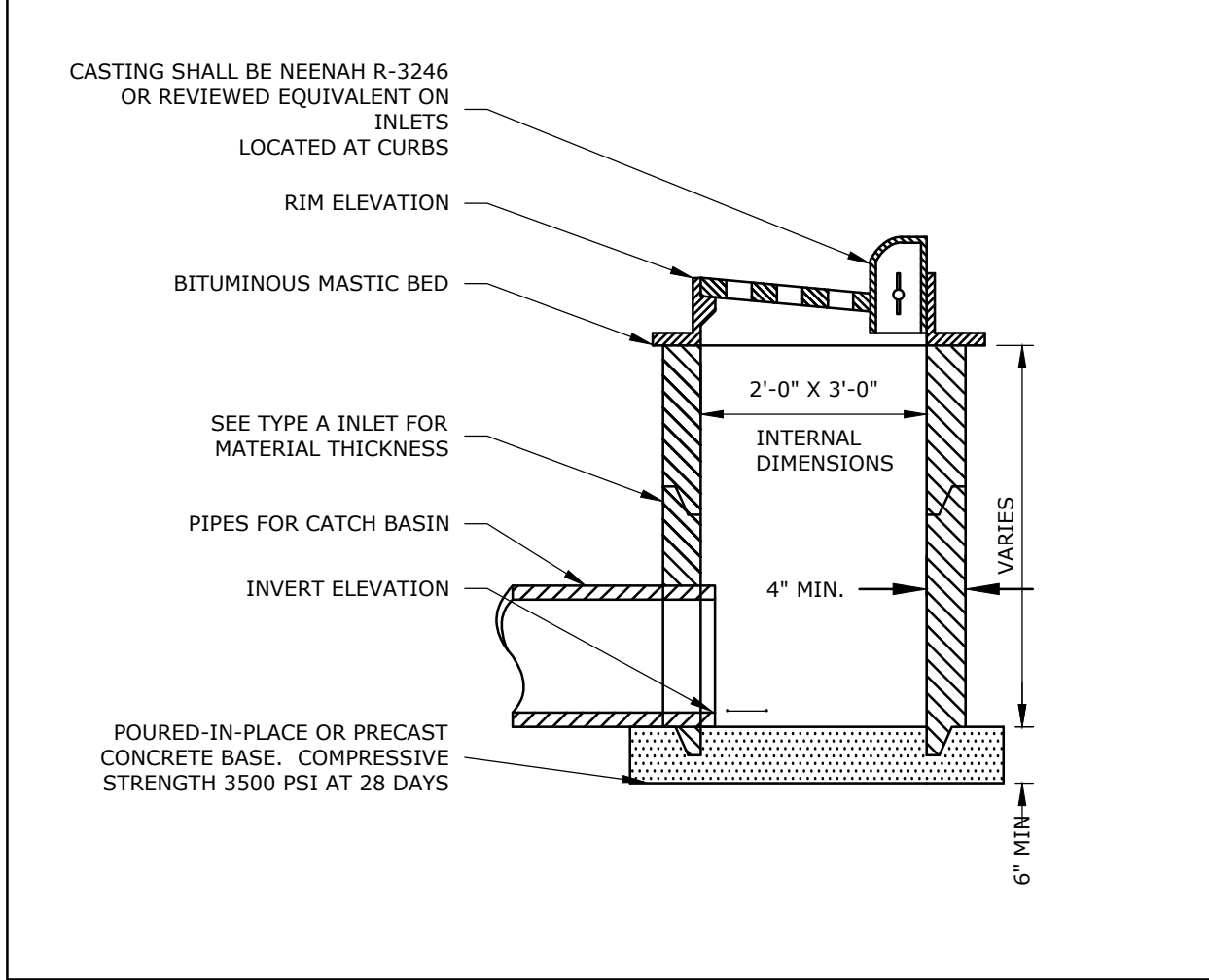
## ACCESSIBLE PARKING SIGN DETAIL



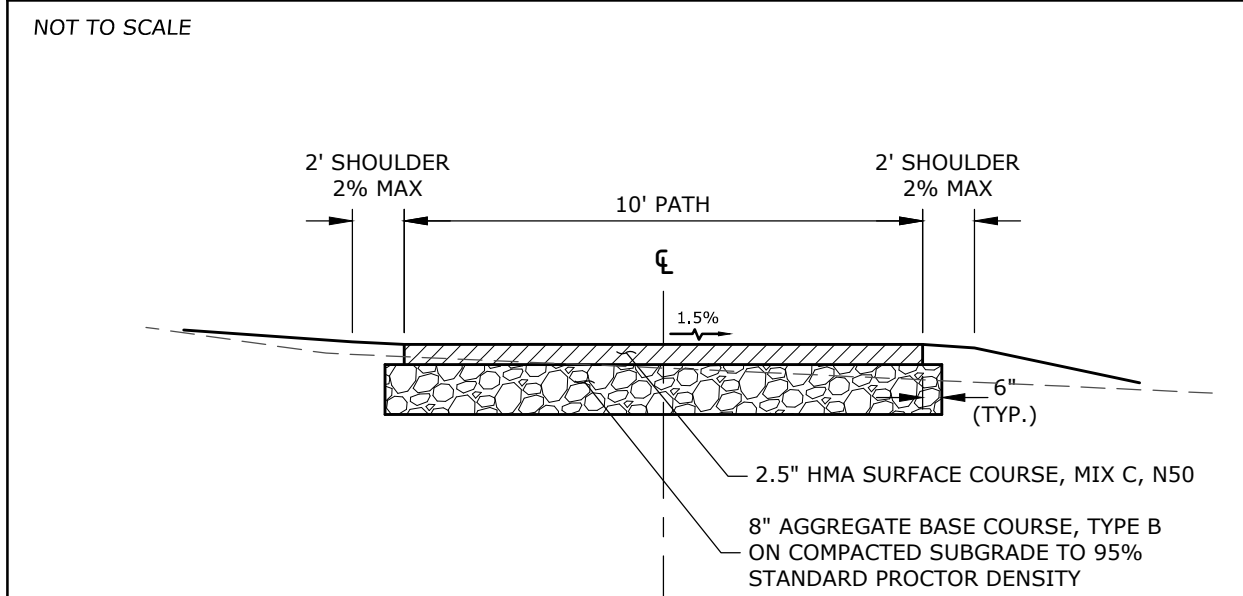
## 45' BARRIER SWING GATE



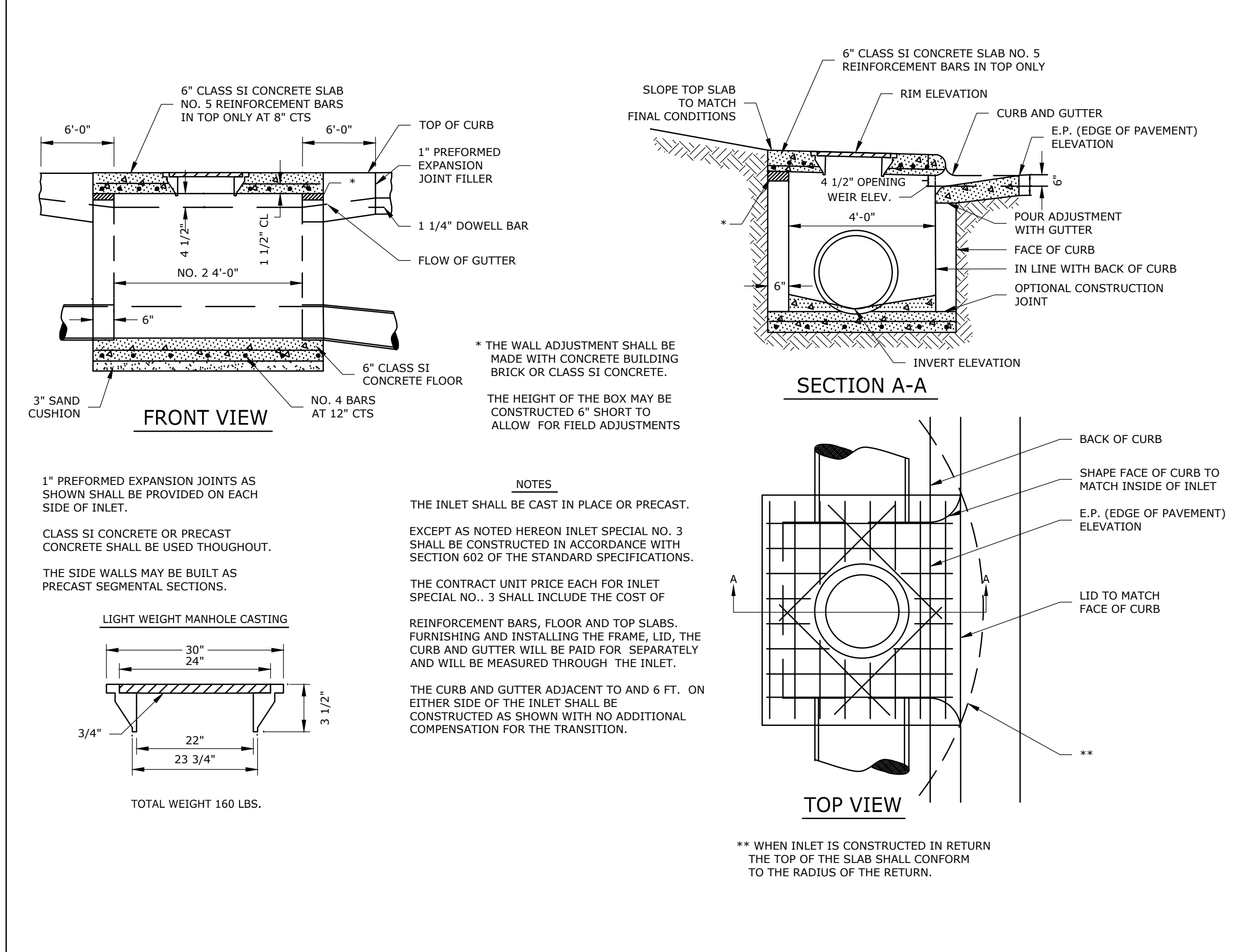
## INLET 700



## SHARED USE HMA PATH SECTION



## INLET SPECIAL NO. 2



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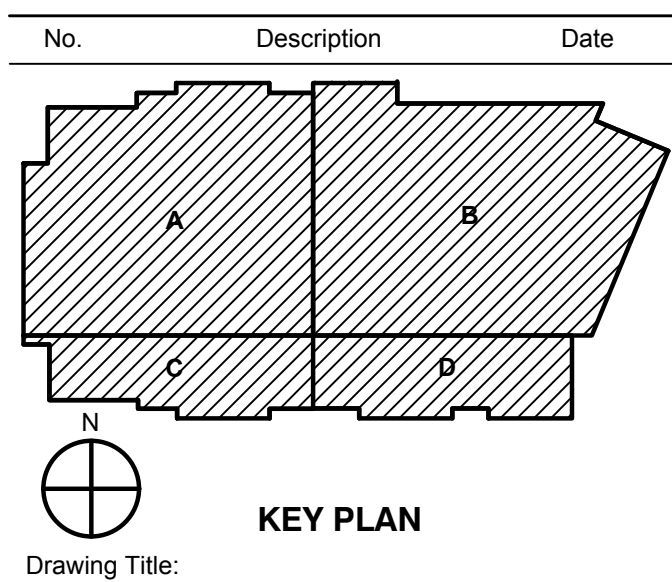
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### ARC DESIGN RESOURCES INC.

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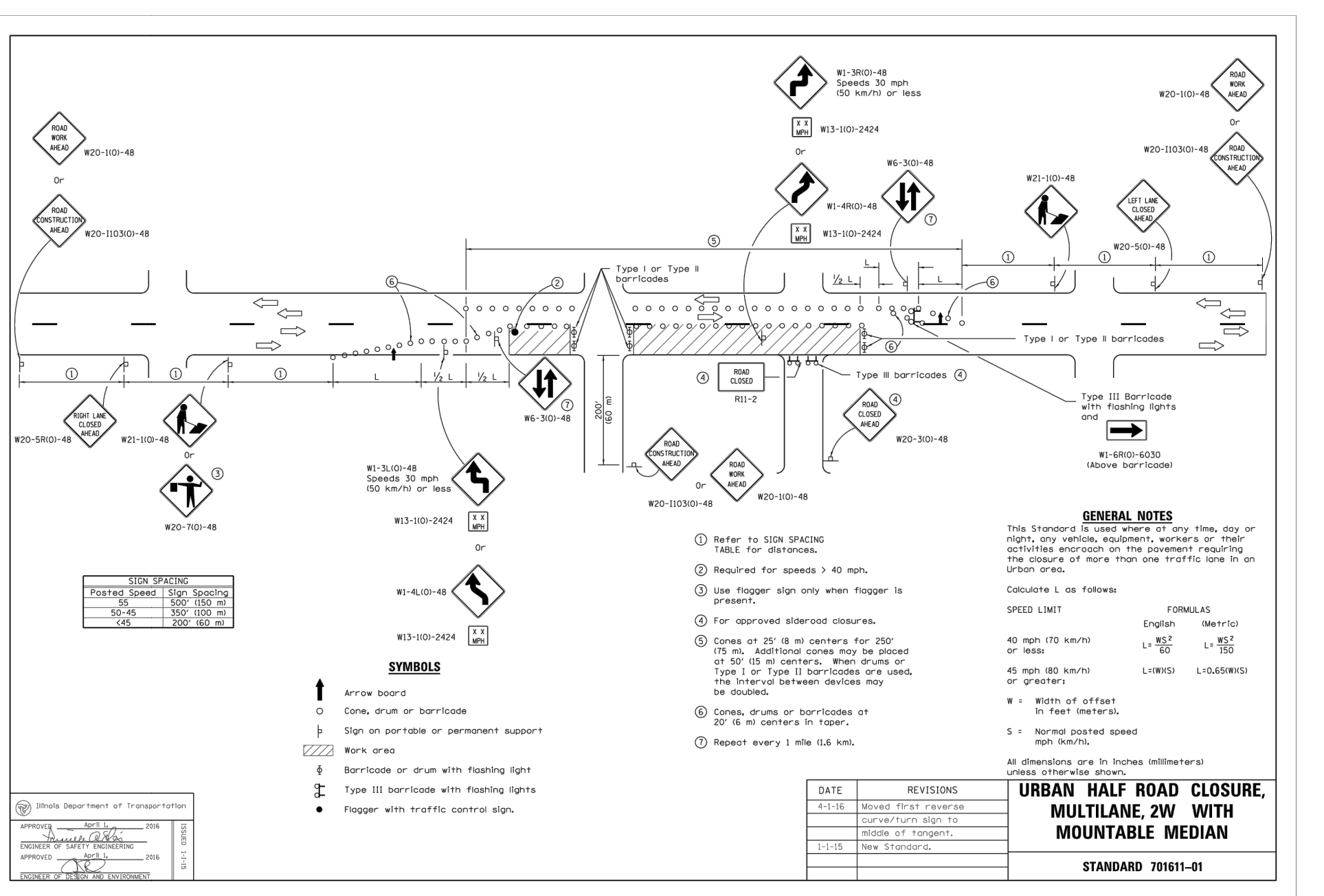
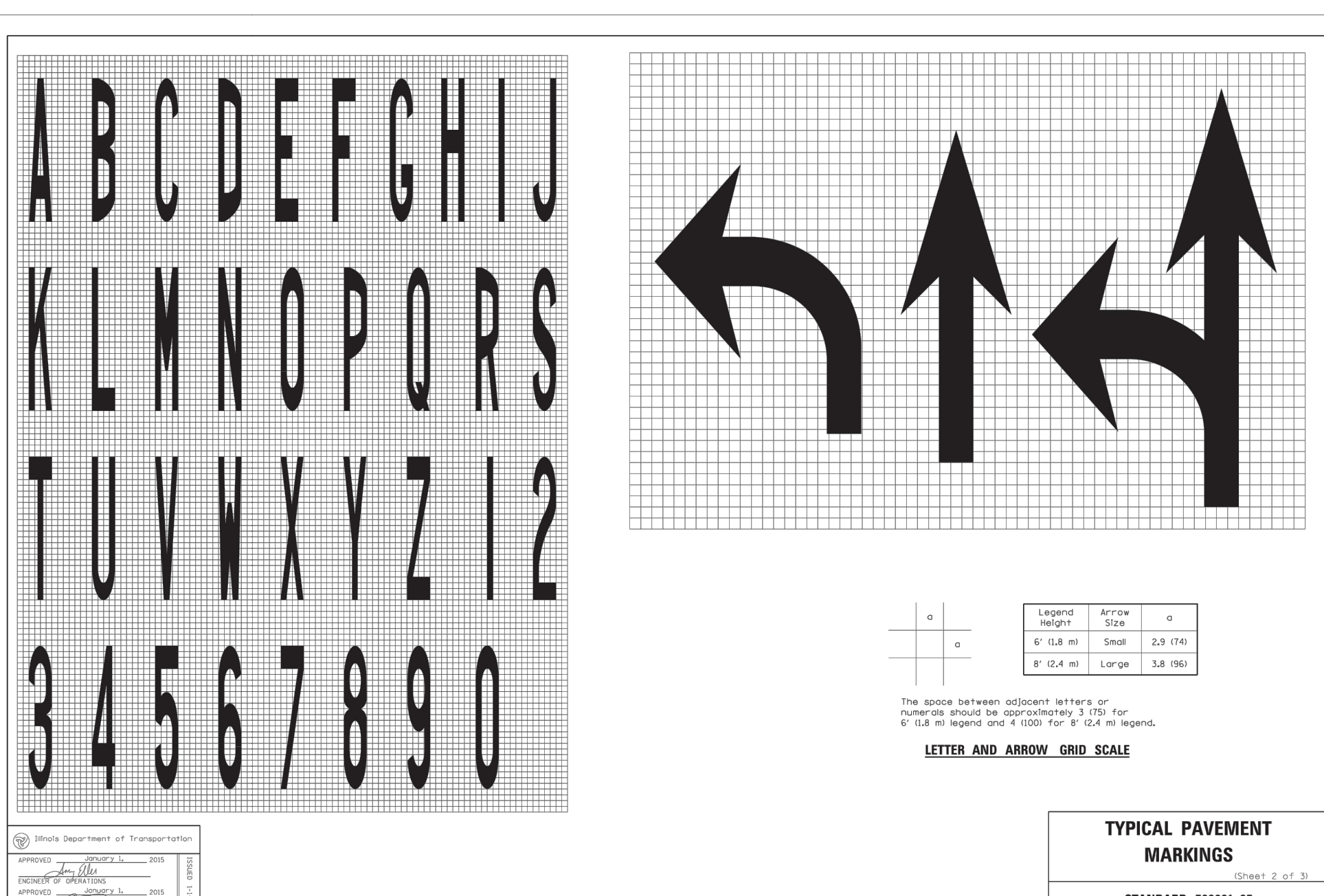
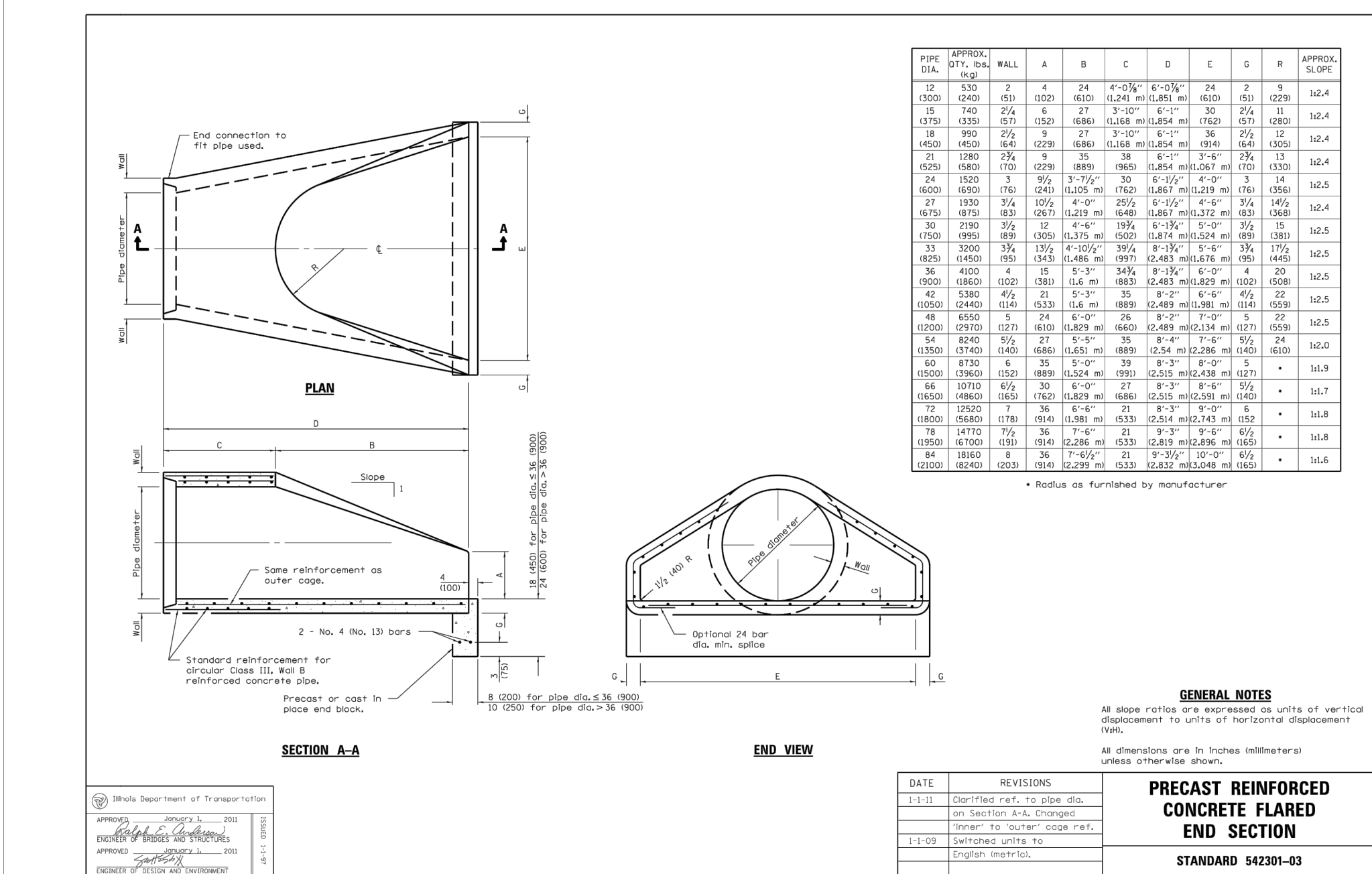
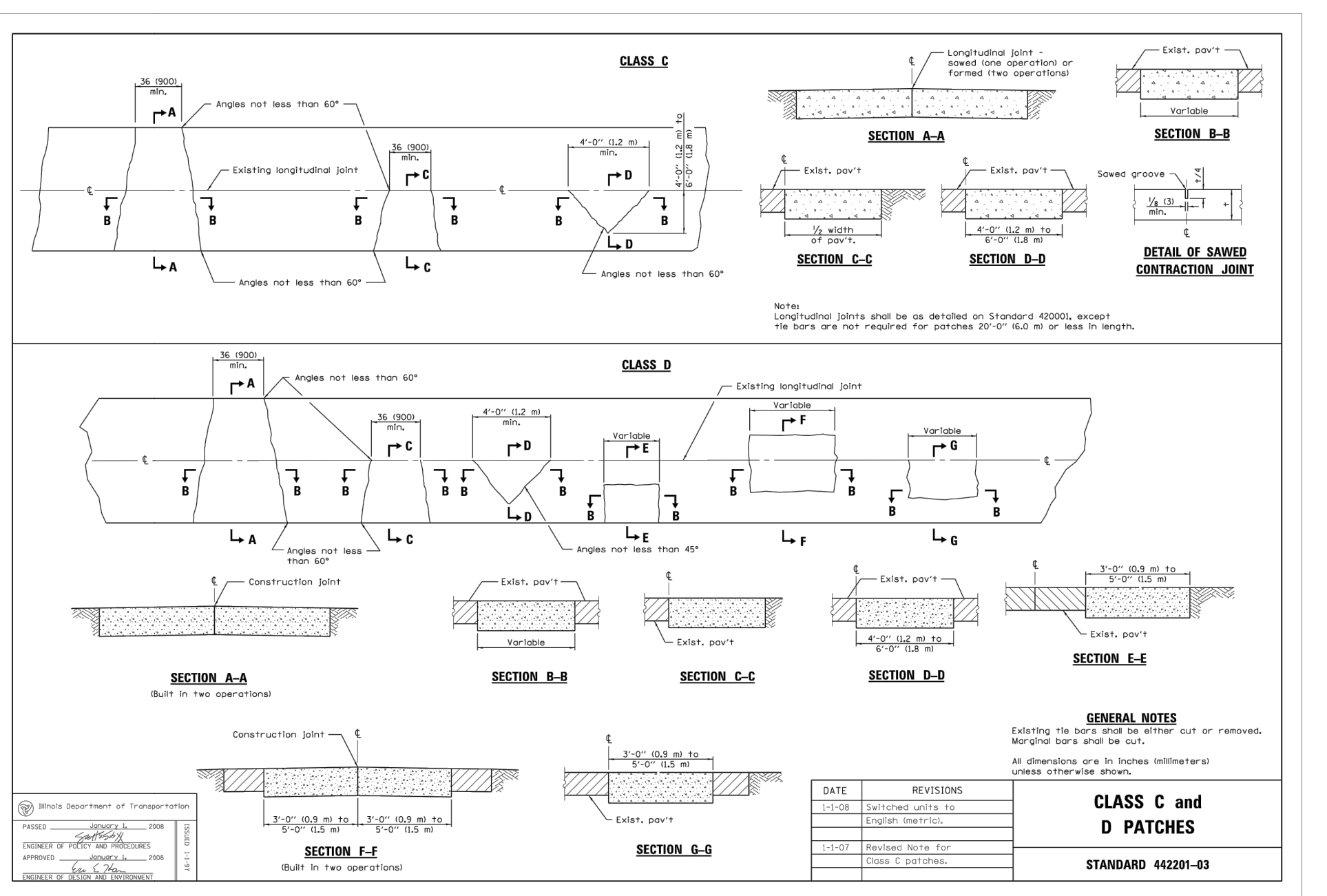
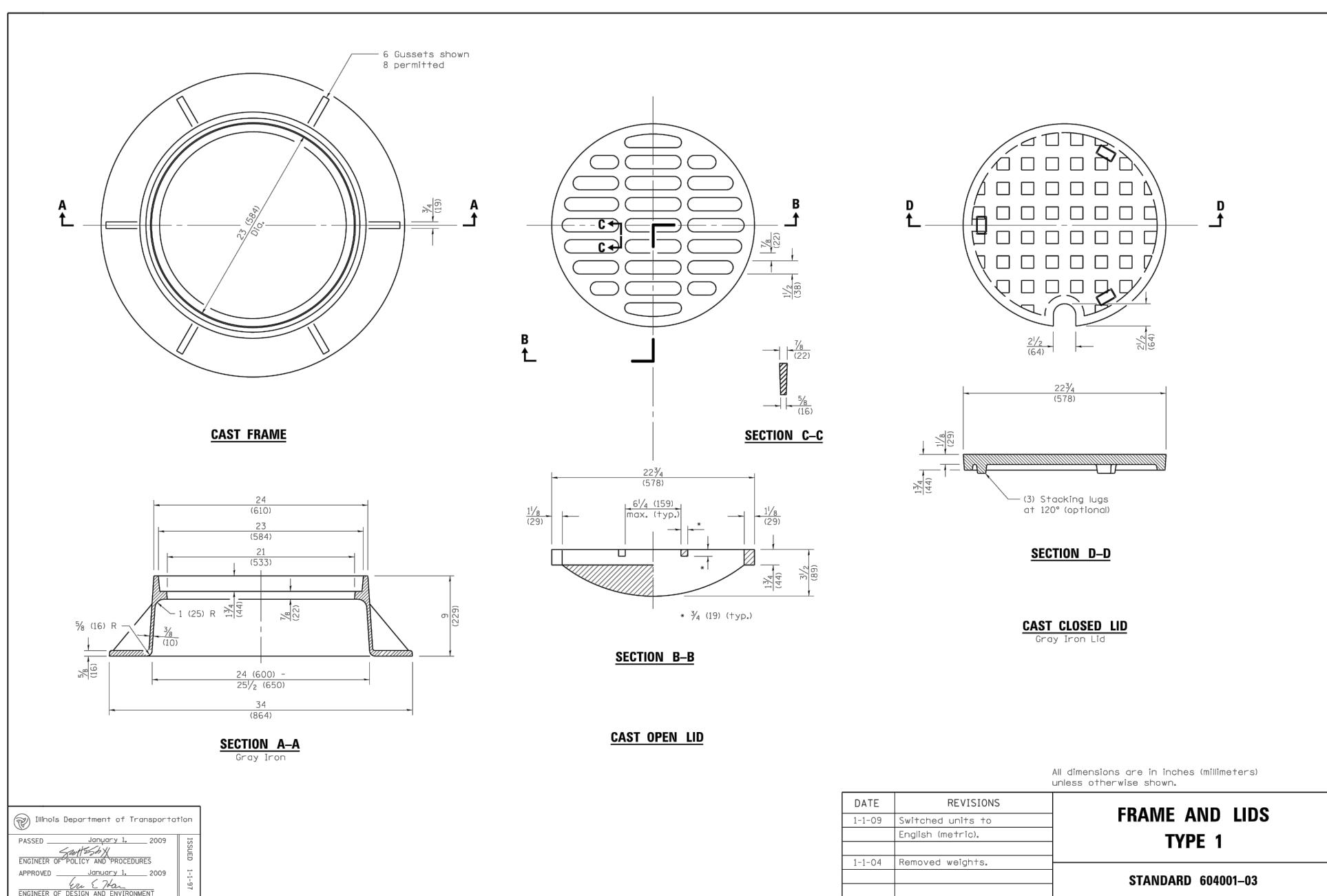
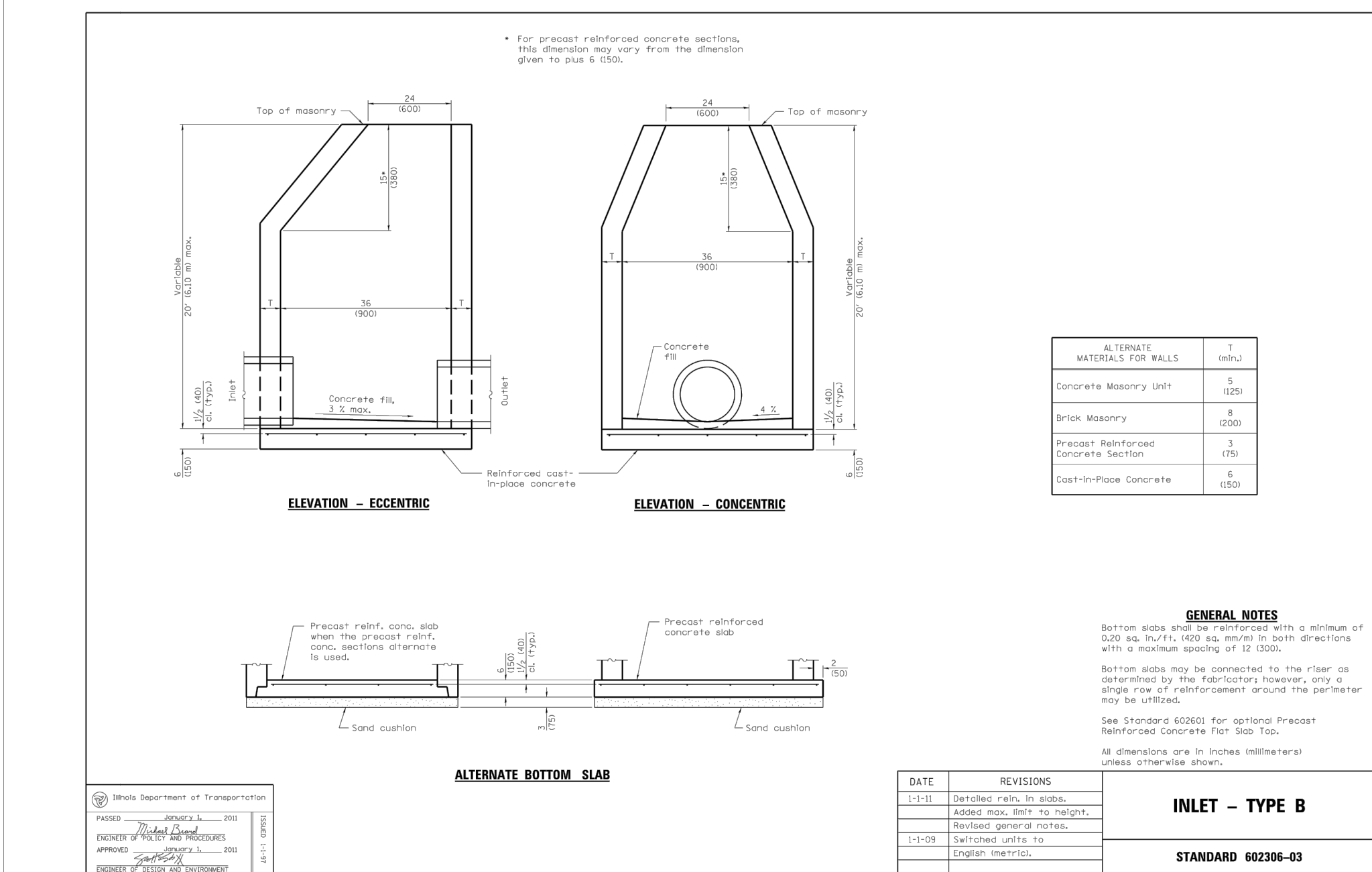
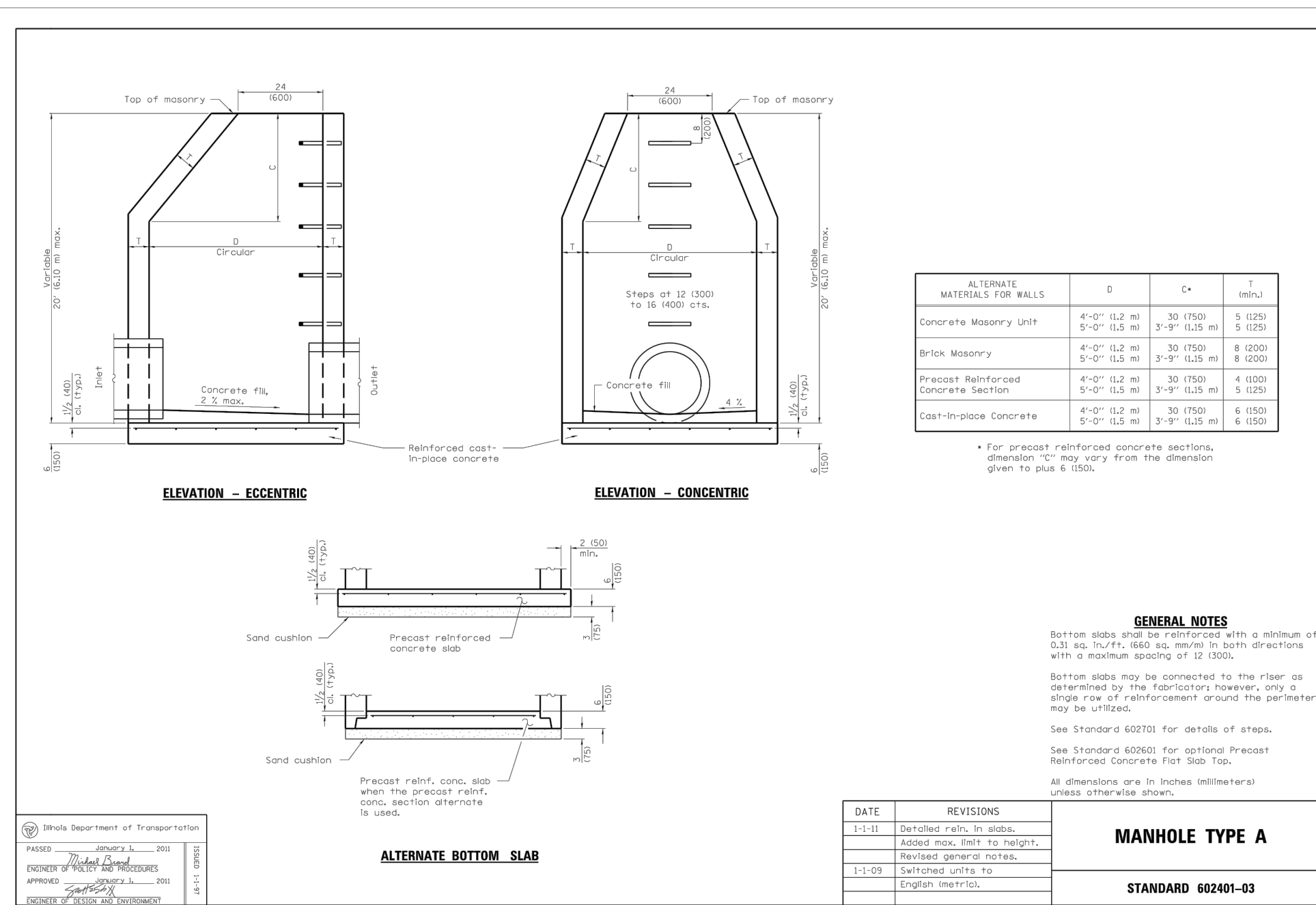
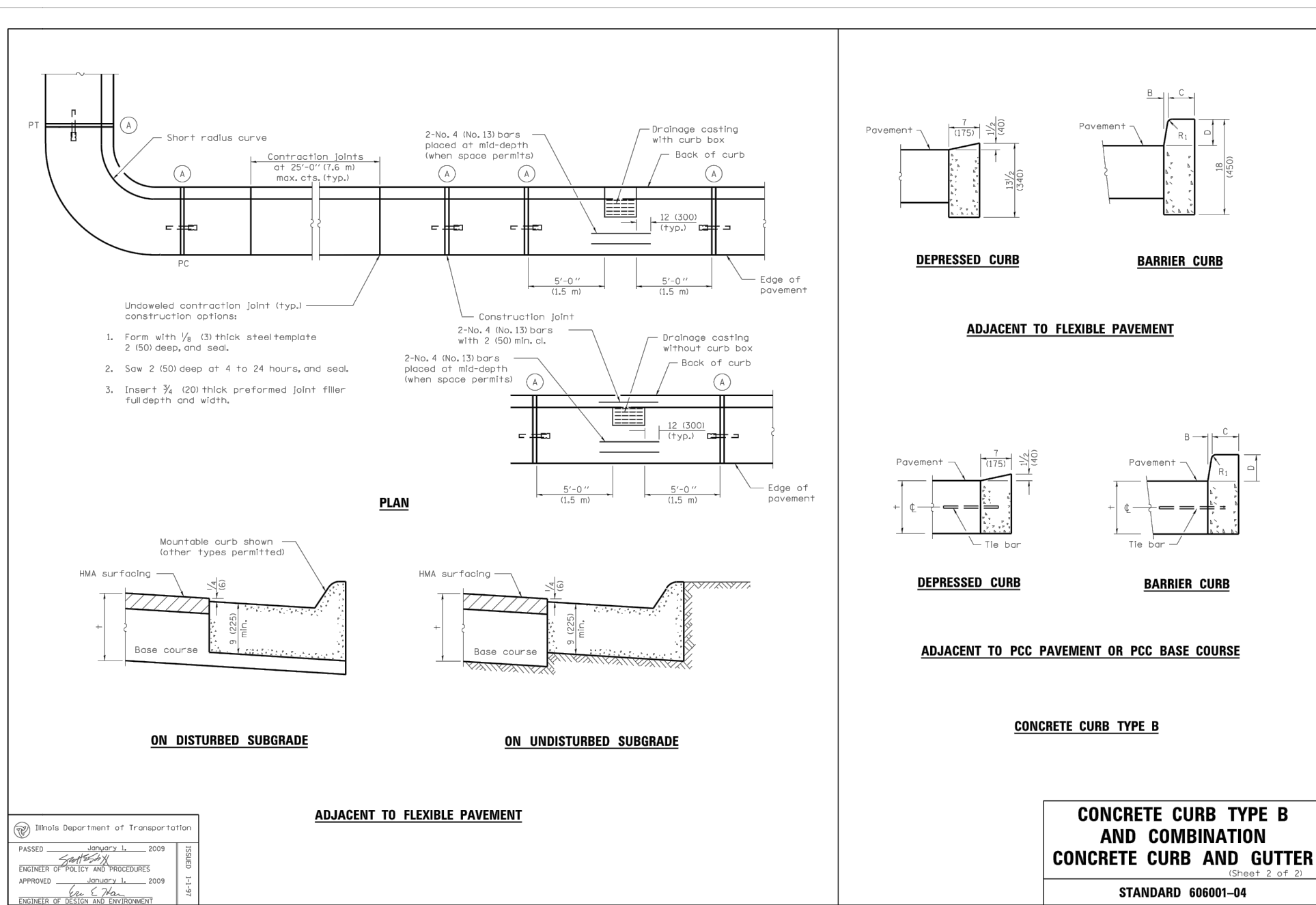
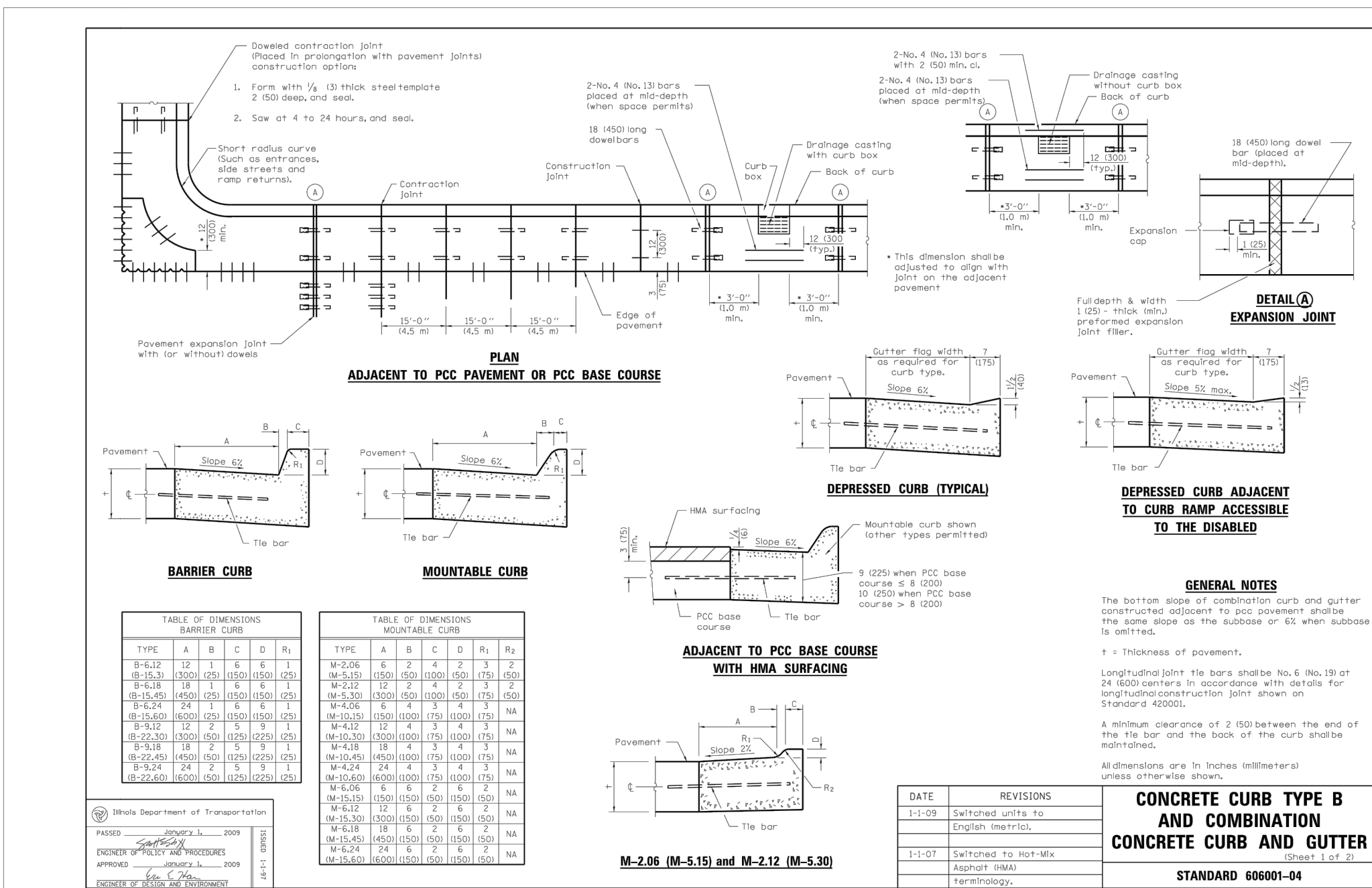


## DETAILS

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# C27





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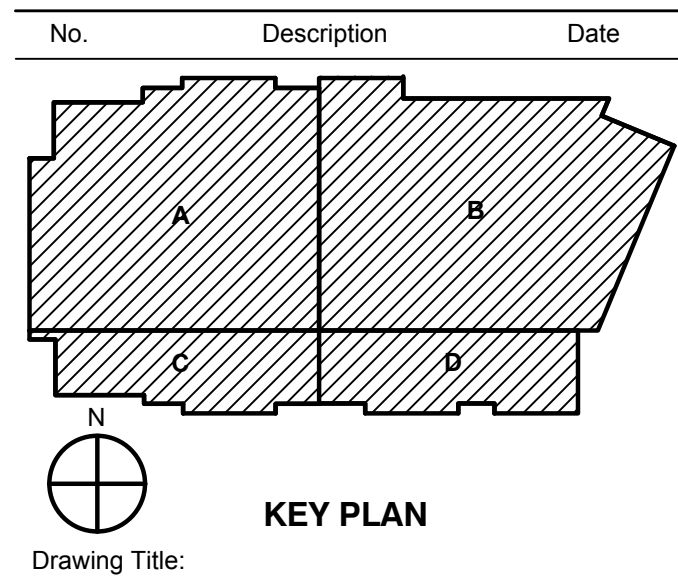
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KEY PLAN

PAVEMENT JOINTS

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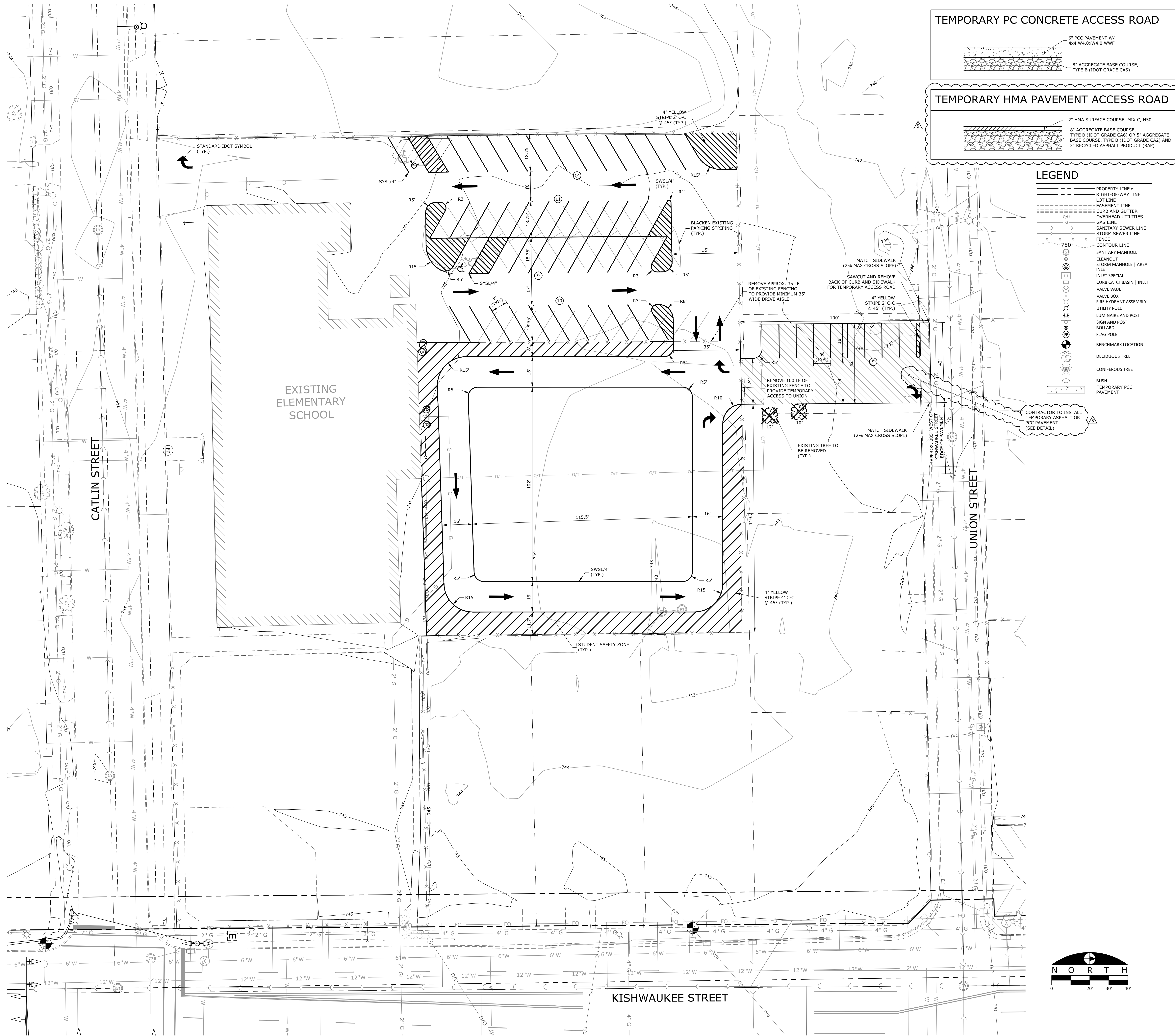
C28





N.T.S.





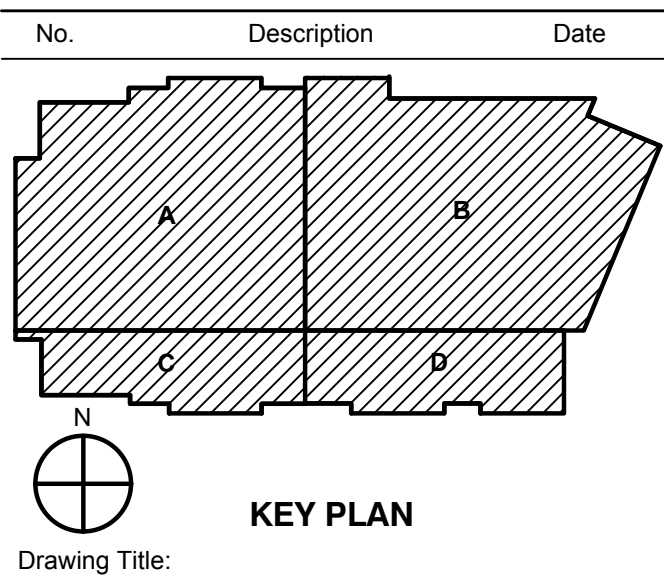
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1 ADDENDUM 2 04/26/2017



PARENT DROP OFF AND  
RESTRIPIING PLAN

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C34



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1 BUILDING LAYOUT PLAN  
1/16" = 1'-0"



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SCHOOL B, ZONE 1

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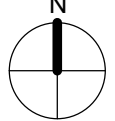
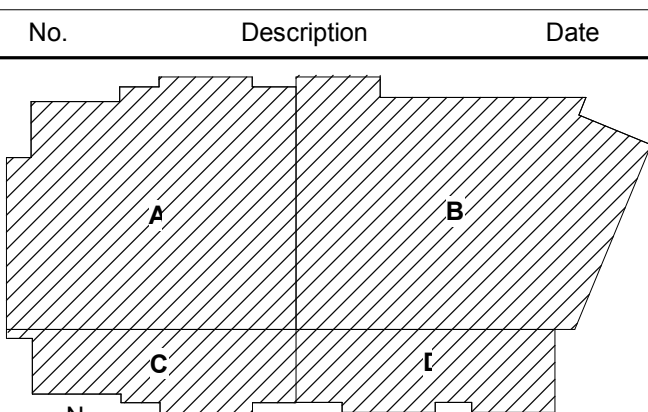
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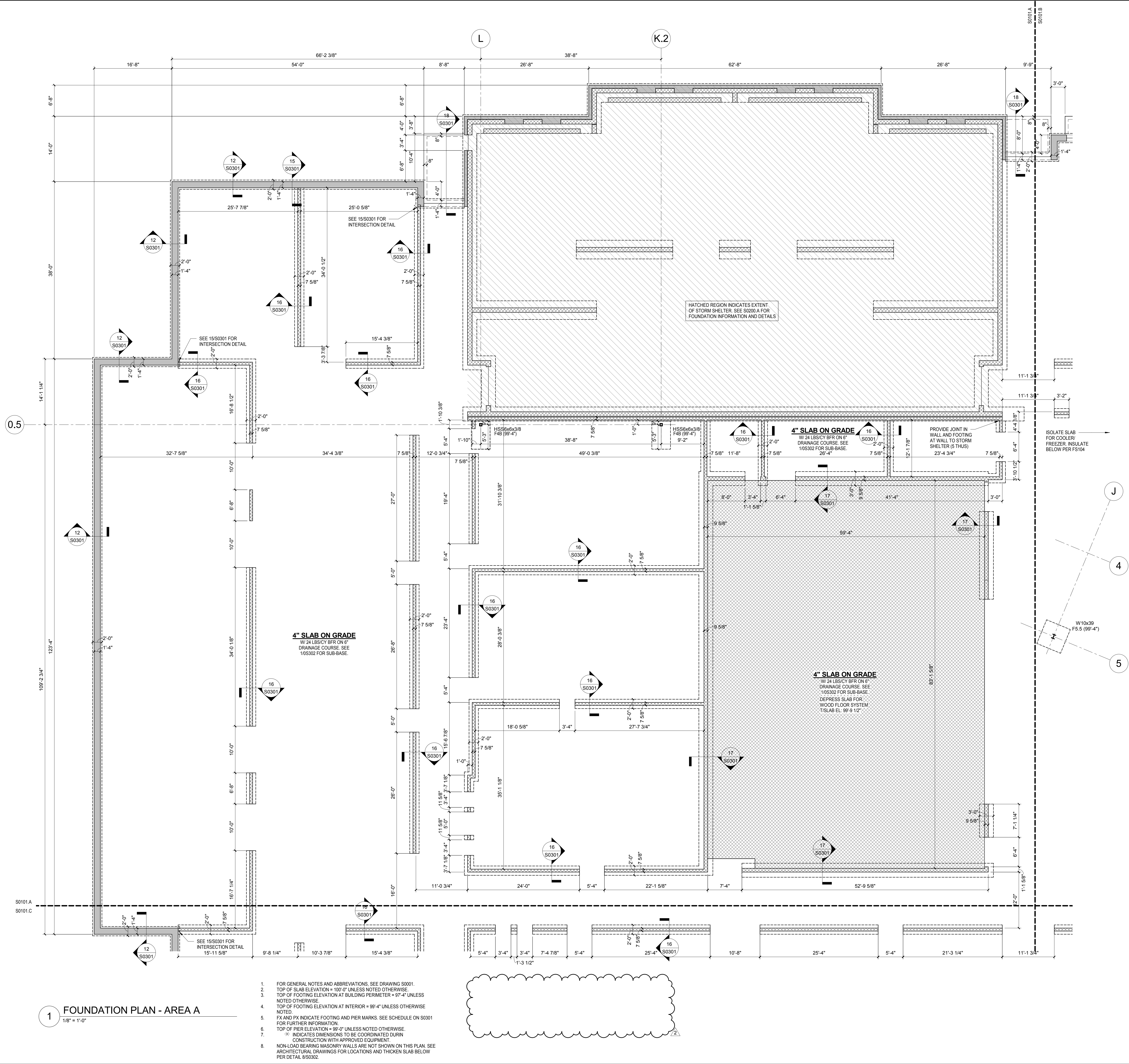
FOUNDATION WALL  
LAYOUT PLAN

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S0101



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1 FOUNDATION PLAN - AREA A  
1/8" = 1'-0"

- FOR GENERAL NOTES AND ABBREVIATIONS, SEE DRAWING S0001.
- TOP OF SLAB ELEVATION = 100'-0" UNLESS NOTED OTHERWISE.
- TOP OF FOOTING ELEVATION AT BUILDING PERIMETER = 97'-4" UNLESS NOTED OTHERWISE.
- TOP OF FOOTING ELEVATION AT INTERIOR = 99'-4" UNLESS NOTED OTHERWISE.
- FX AND PX INDICATE FOOTING AND PIER MARKS. SEE SCHEDULE ON S0301 FOR FURTHER INFORMATION.
- TOP OF PIER ELEVATION = 99'-0" UNLESS NOTED OTHERWISE.
- \* INDICATES DIMENSIONS TO BE COORDINATED DURING CONSTRUCTION WITH APPROVED EQUIPMENT.
- NON-LOAD BEARING MASONRY WALLS ARE NOT SHOWN ON THIS PLAN. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND THICKEN SLAB BELOW PER DETAIL S0302.



ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

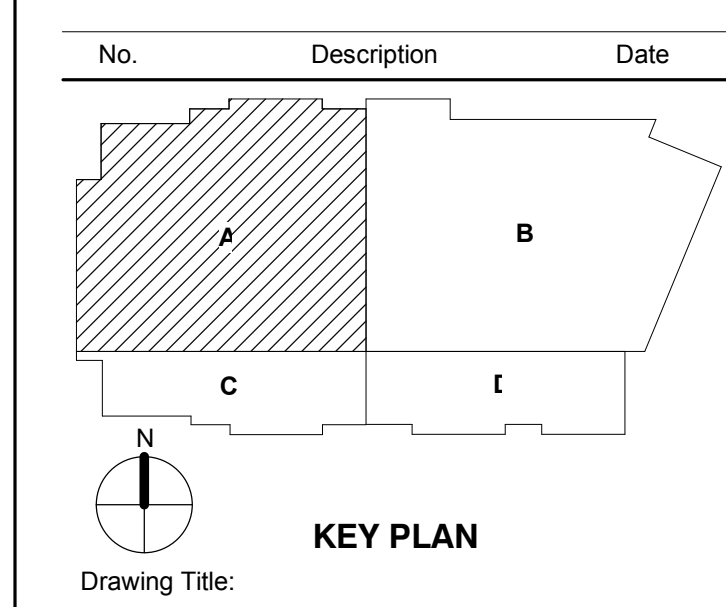
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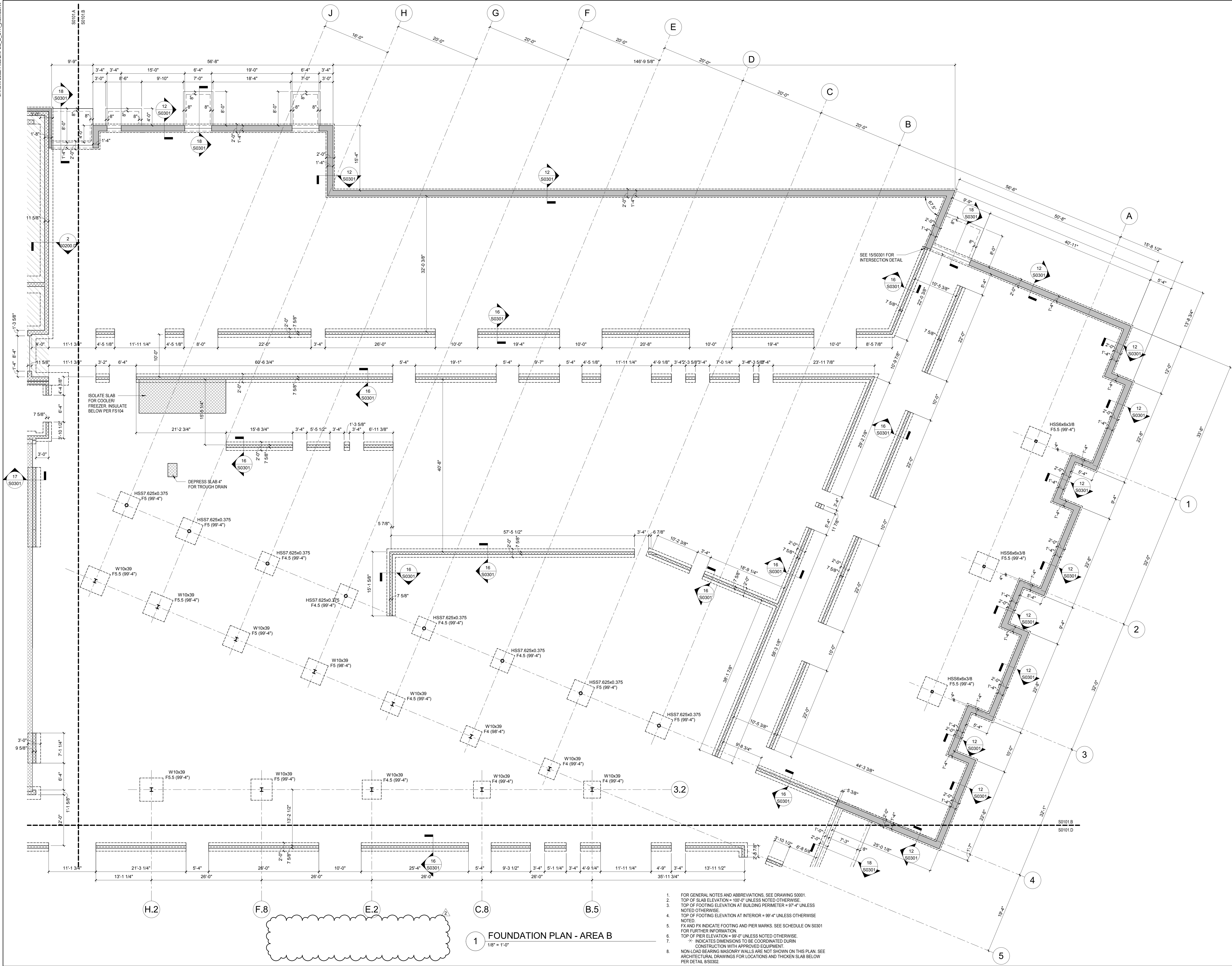
KEY PLAN  
FOUNDATION PLAN - AREA A

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ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

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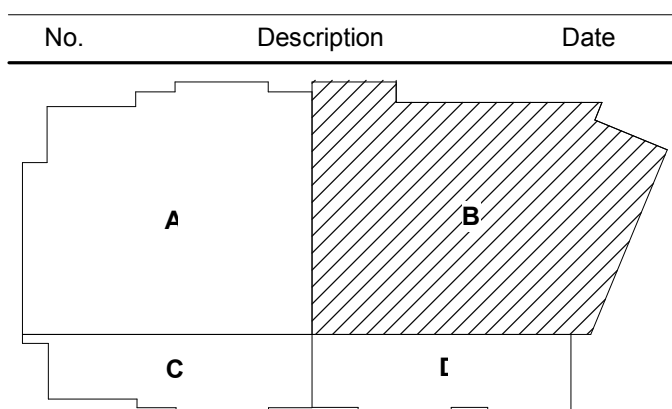
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KEY PLAN

FOUNDATION PLAN -  
AREA B

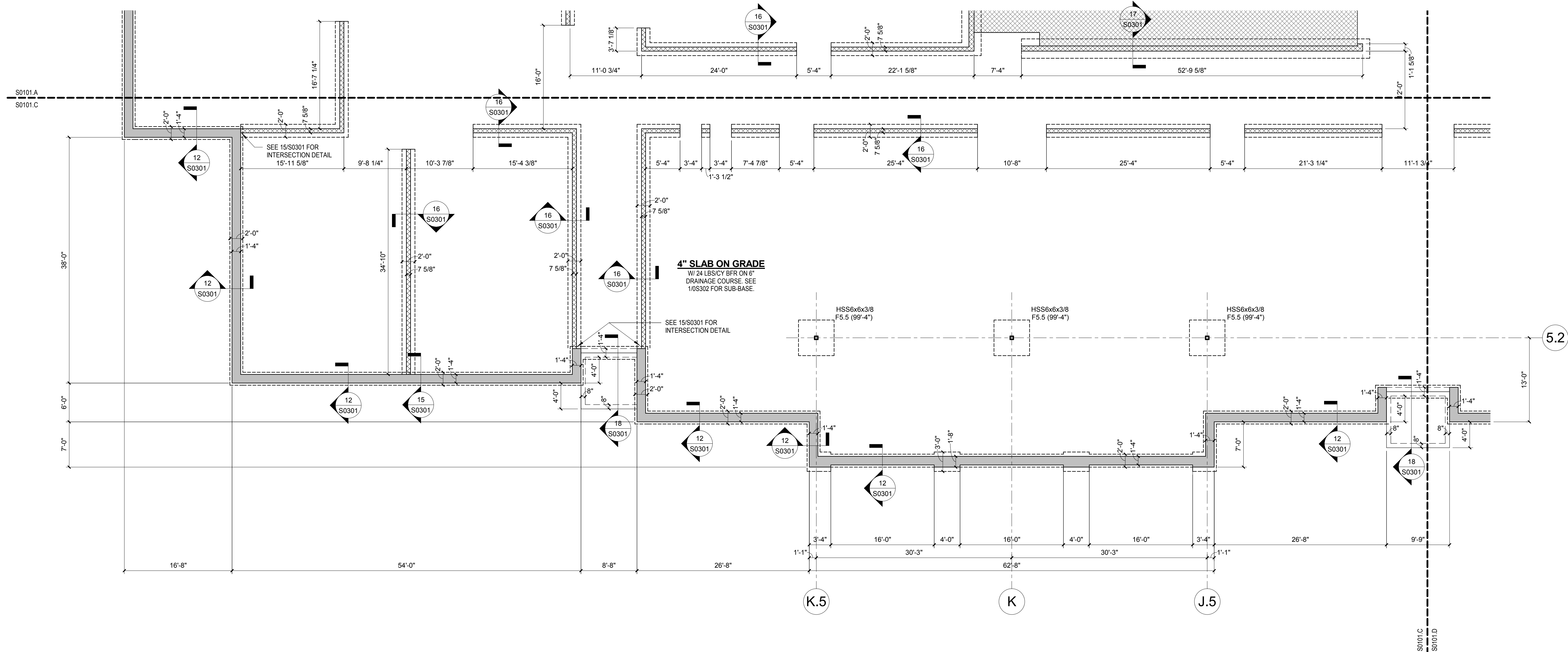
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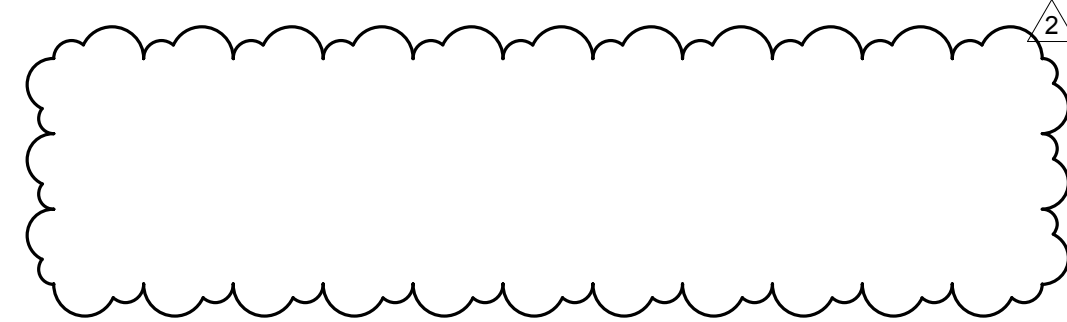
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1 FOUNDATION PLAN - AREA C  
1/8" = 1'-0"

1. FOR GENERAL NOTES AND ABBREVIATIONS, SEE DRAWING S0001.
2. TOP OF SLAB ELEVATION = 100'-0" UNLESS NOTED OTHERWISE.
3. TOP OF FOOTING ELEVATION AT BUILDING PERIMETER = 97'-4" UNLESS NOTED OTHERWISE.
4. TOP OF FOOTING ELEVATION AT INTERIOR = 99'-4" UNLESS OTHERWISE NOTED.
5. FX AND PY INDICATE FOOTING AND PIER MARKS. SEE SCHEDULE ON S0301 FOR FURTHER INFORMATION.
6. TOP OF PIER ELEVATION = 99'-0" UNLESS NOTED OTHERWISE.
7. \* INDICATES DIMENSIONS TO BE COORDINATED DURING CONSTRUCTION WITH APPROVED EQUIPMENT.
8. NON-LOAD BEARING MASONRY WALLS ARE NOT SHOWN ON THIS PLAN. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND THICKEN SLAB BELOW PER DETAIL S0302.



ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

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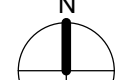
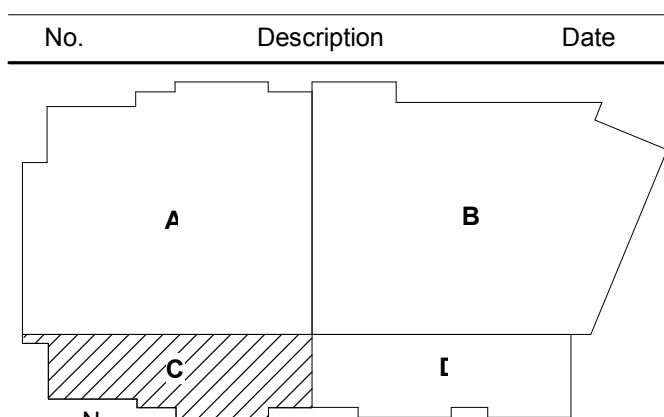
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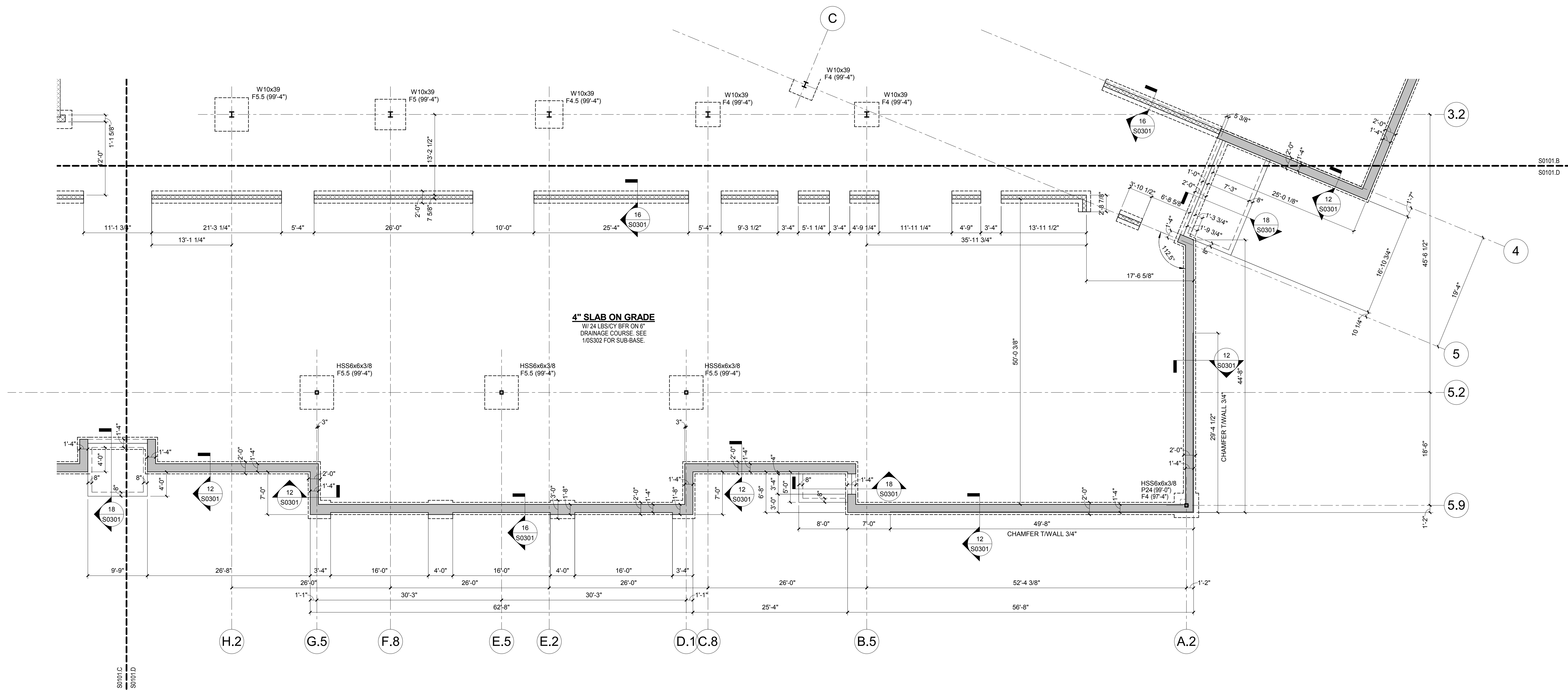
KEY PLAN

Drawing Title:

FOUNDATION PLAN -  
AREA C

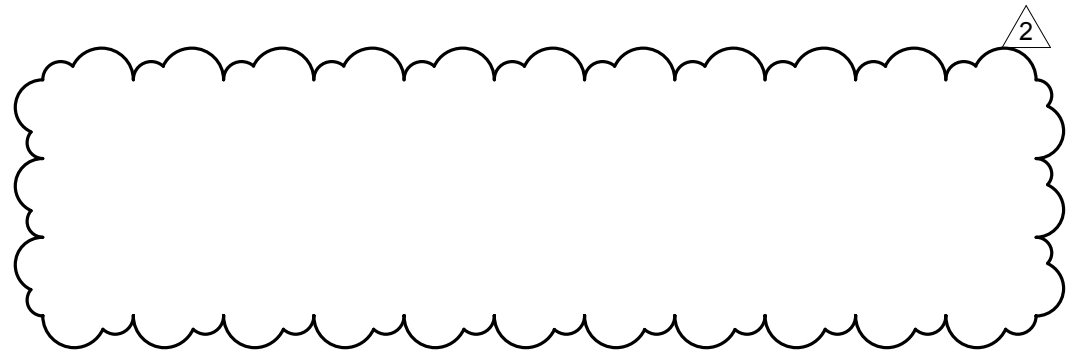
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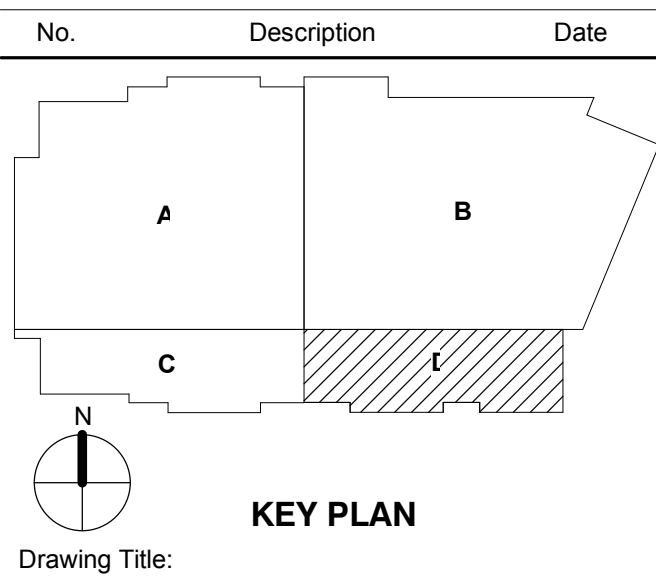


1 FOUNDATION PLAN - AREA D  
1/8" = 1'-0"

- FOR GENERAL NOTES AND ABBREVIATIONS, SEE DRAWING S0001.
- TOP OF SLAB ELEVATION = 100'-0" UNLESS NOTED OTHERWISE.
- TOP OF FOOTING ELEVATION AT BUILDING PERIMETER = 97'-4" UNLESS NOTED OTHERWISE.
- TOP OF FOOTING ELEVATION AT INTERIOR = 99'-4" UNLESS NOTED OTHERWISE.
- FX AND PY INDICATE FOOTING AND PIER MARKS. SEE SCHEDULE ON S0301 FOR FURTHER INFORMATION.
- TOP OF PIER ELEVATION = 99'-0" UNLESS NOTED OTHERWISE.
- "X" INDICATES DIMENSIONS TO BE COORDINATED DURING CONSTRUCTION WITH APPROVED EQUIPMENT.
- NON-LOAD BEARING MASONRY WALLS ARE NOT SHOWN ON THIS PLAN. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND THICKEN SLAB BELOW PER DETAIL 6/S0302.



2	ADDENDUM 05	05/22/2017
1	ISSUED FOR BID	03/01/2017



FOUNDATION PLAN -  
AREA D

Project No.: 005005.00      Checked by: Checker

S0101.D



**ROCKFORD PUBLIC SCHOOLS**

### SCHOOL B, ZONE 1

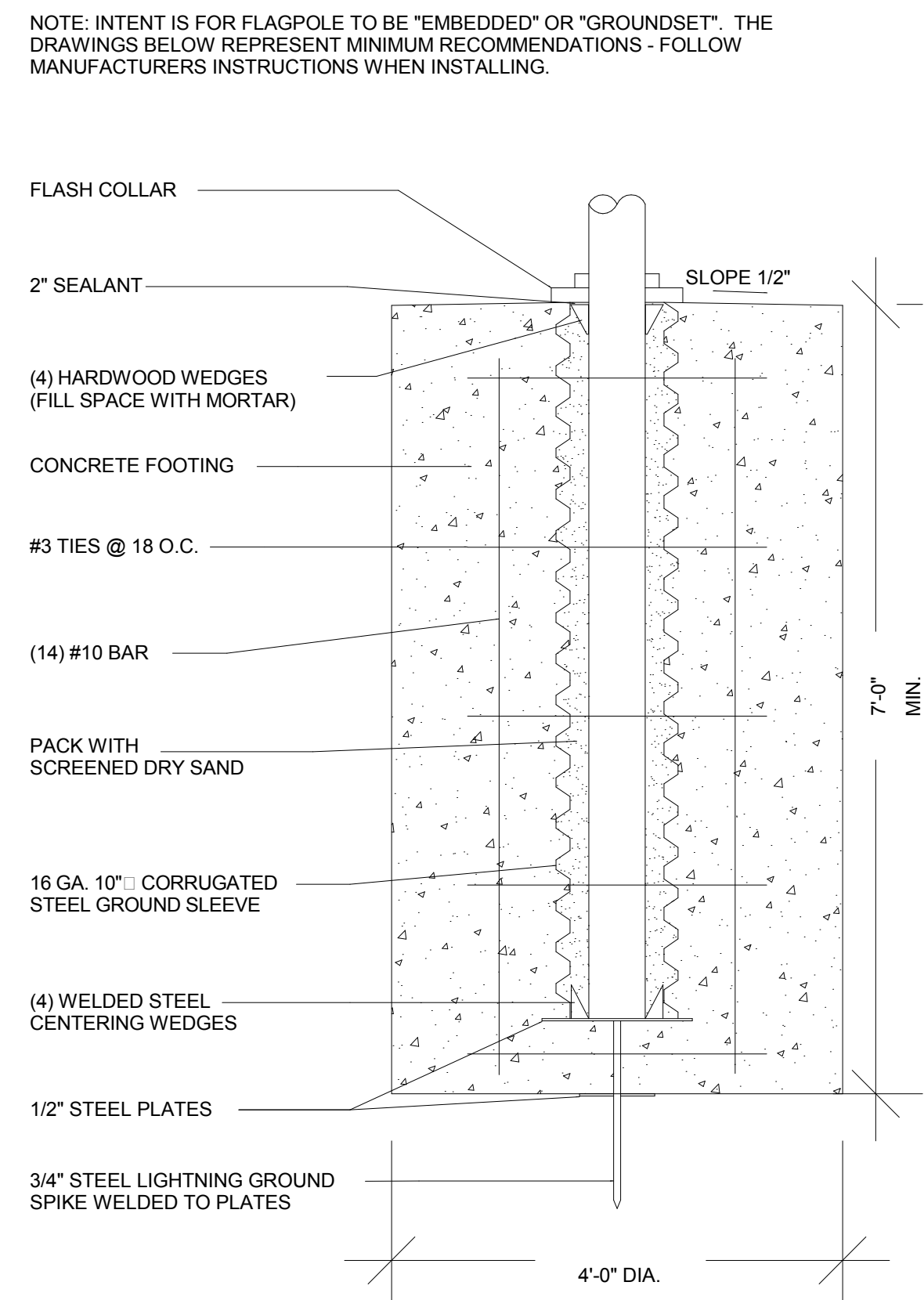
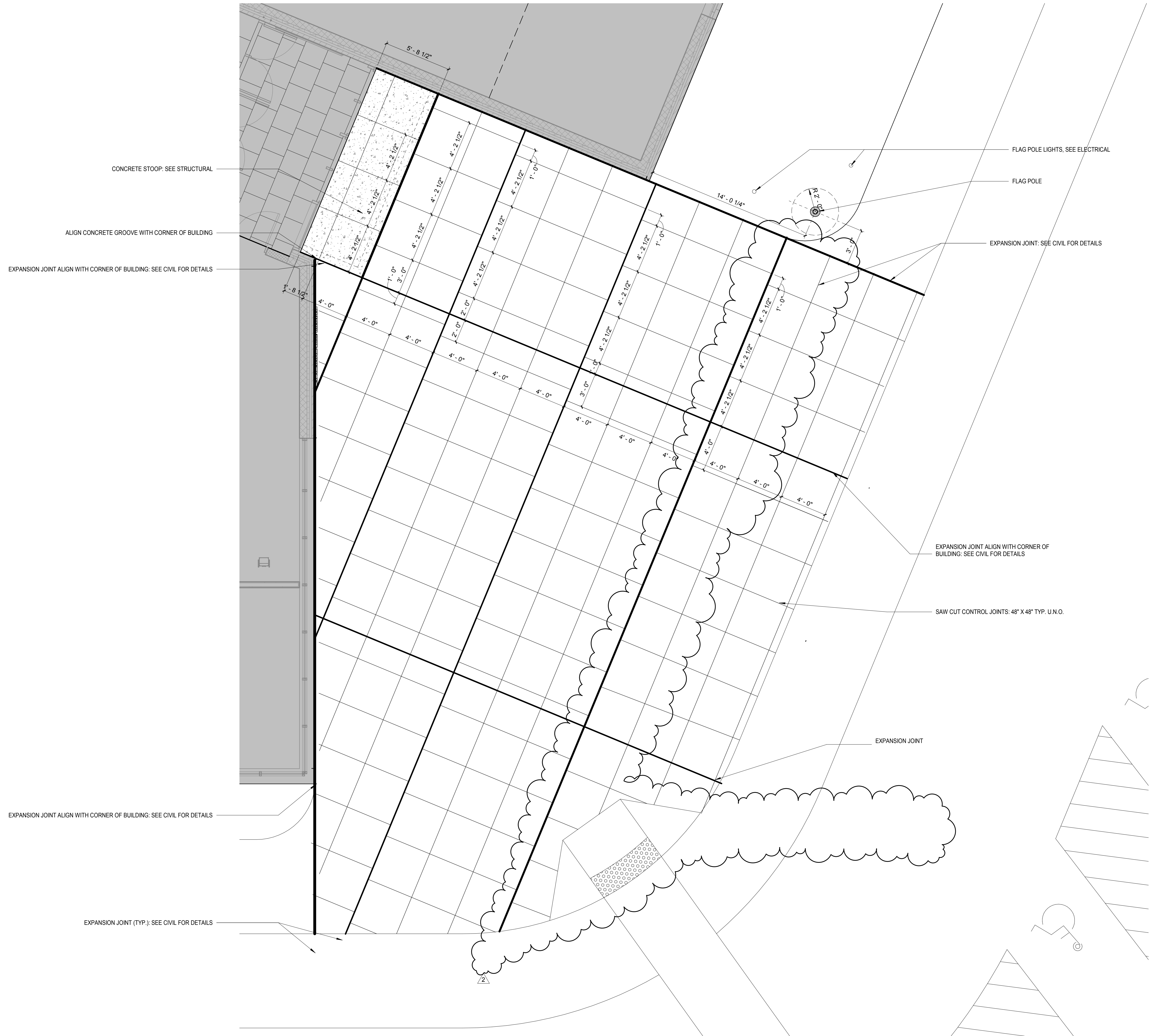
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Civil Consultants  
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Loves Park IL 61111  
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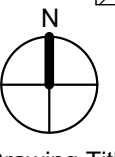


2 FLAG POLE FOUNDATION DETAIL  
3/4" = 1'-0"

1 ENLARGED ENTRY PLAZA  
1/4" = 1'-0"

2	ADDENDUM 05	05/22/2017
1	ISSUED FOR BID	03/01/2017

No.	Description	Date
A	B	
C	D	



## KEY PLAN

Drawing Title:

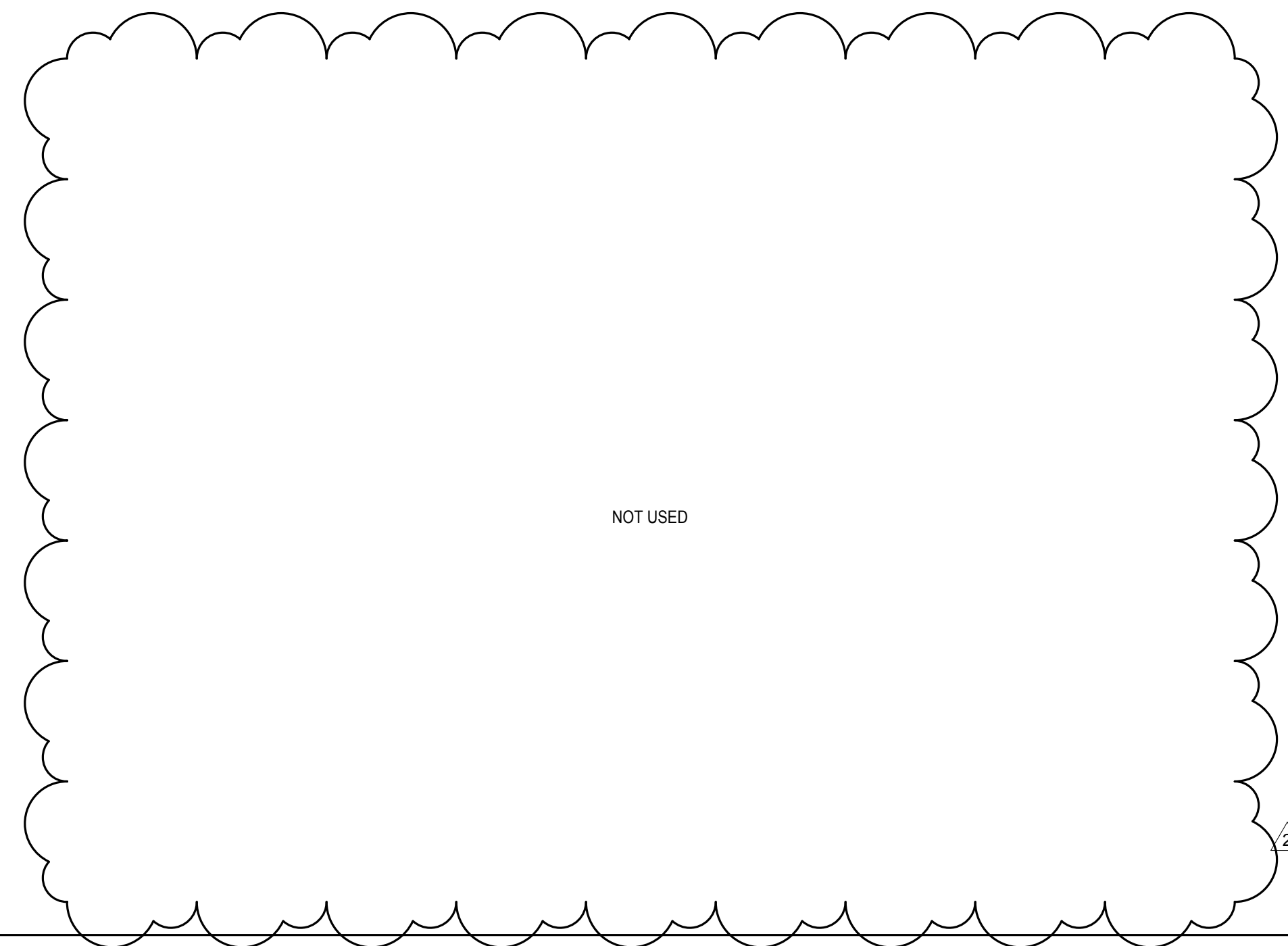
## ENLARGED ENTRY PLAZA PLAN - KISHWAUKEE

Project No.: 005005.04

Checked by: Checker

# A0052

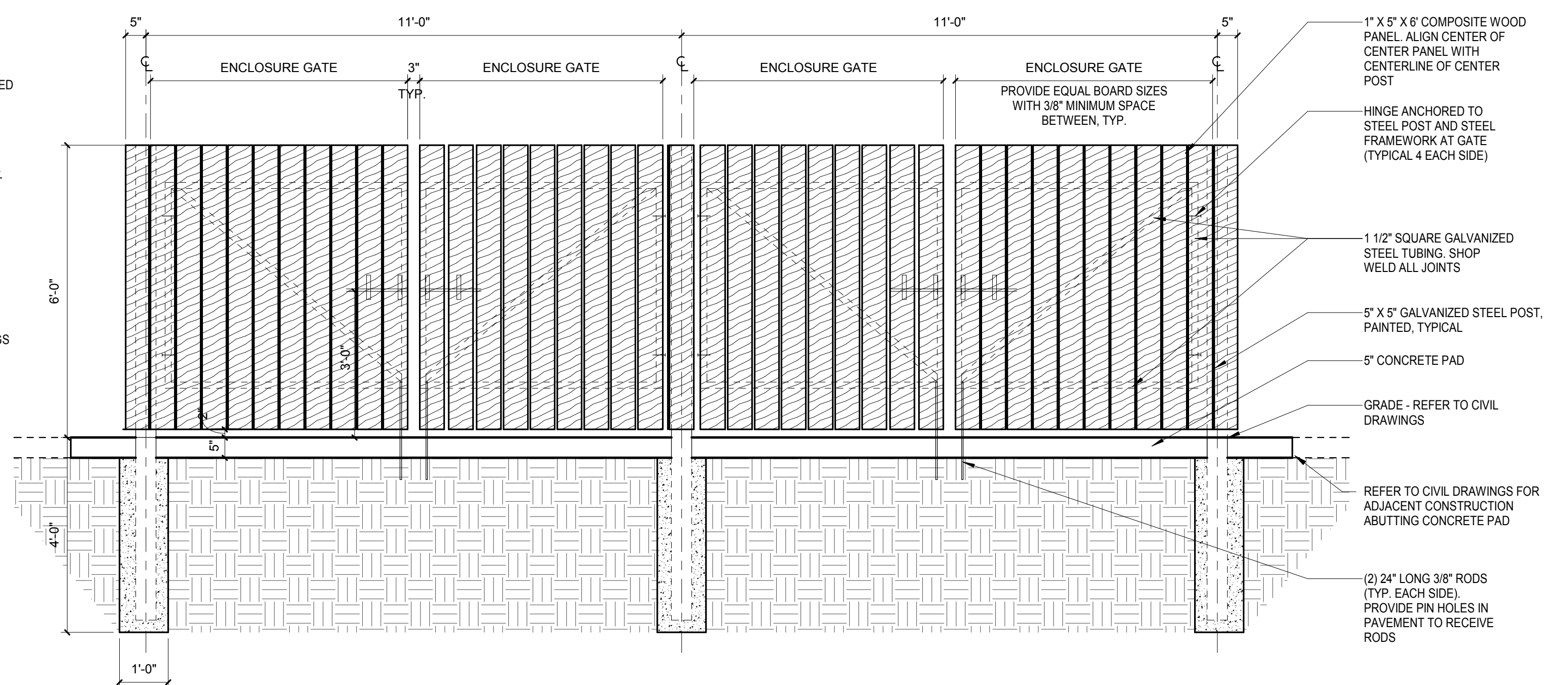




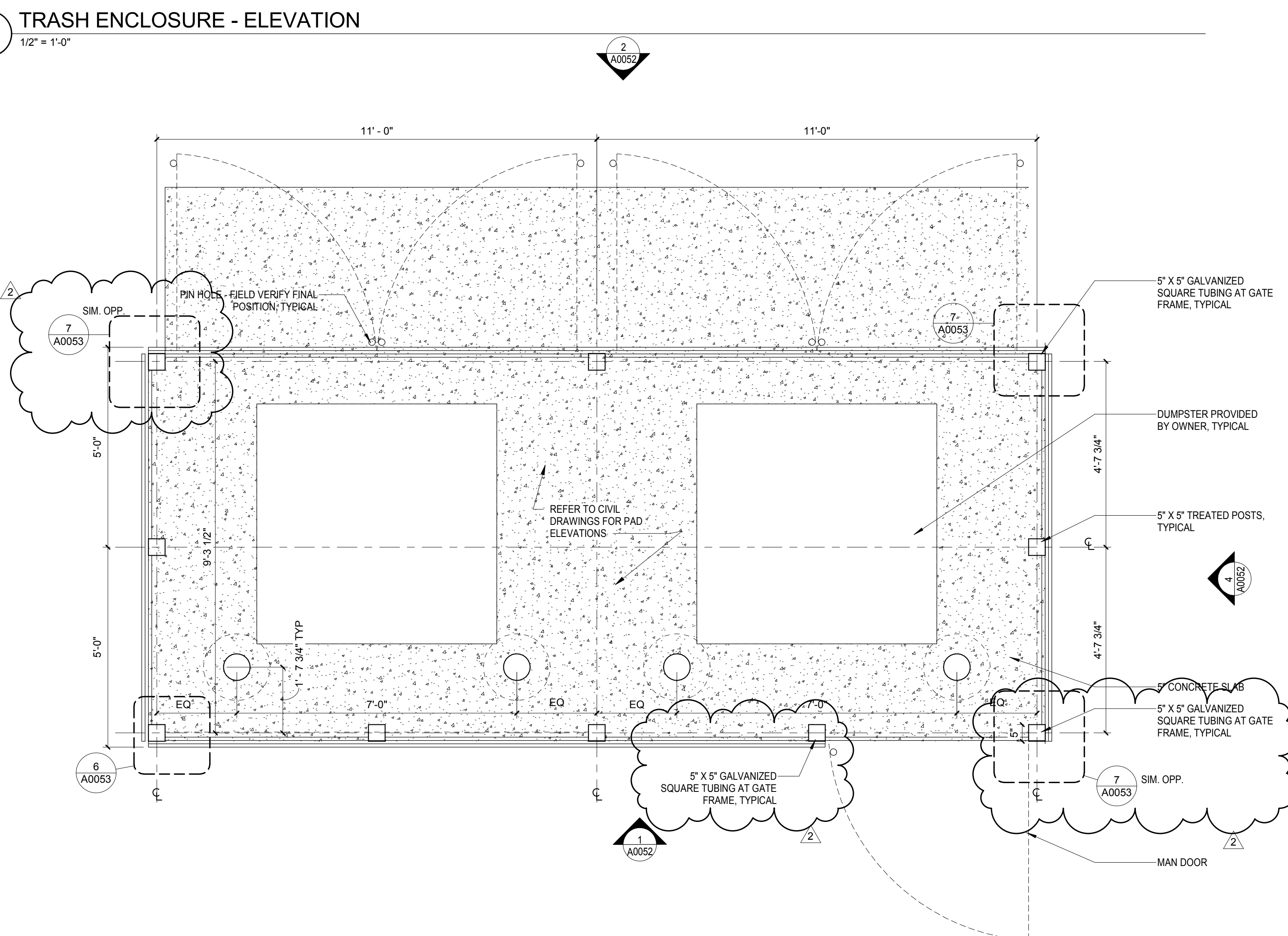
NOT USED



TRASH ENCLOSURE - EAST ELEVATION



② TRASH ENCLOSURE - ELEVATION



2 TRASH ENCLOSURE - PLAN

Project No.: 005005.04      Checked by: Checker

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### GENERAL FLOOR PLAN NOTES

1. REFER TO SHEET A0001 FOR LIST OF TYPICAL ABBREVIATIONS AND TYPICAL ARCHITECTURAL GRAPHIC LEGENDS AND SYMBOLS.
2. REFER TO ENLARGED ELEVATIONS FOR EXTERIOR FINISHES AND FRAME TYPES.
3. ALL EXTERIOR WALL ASSEMBLIES ARE BC-0 UNO.
4. SEE A0400 FOR EXTERIOR WALL ASSEMBLIES TYPES, THICKNESSES, AND MATERIALS.
5. REFER TO SHEET A0002 FOR TYPICAL MOUNTING HEIGHTS.
6. DIMENSIONS ARE FROM FACE OF WALL UNLESS NOTED OTHERWISE.
7. OPENING DIMENSIONS ARE FROM FACE OF WALL TO OUTSIDE OF FRAME.
8. IF OPENING IS NOT DIMENSIONED, OUTSIDE FACE OF FRAME TO BE 4" FROM ADJACENT PARTITION.
9. PROVIDE BLOCKING AT WALL HUNG ACCESSORIES, EQUIPMENT AND CASEWORK.
10. PREPARE SUBSURFACE AS REQUIRED FOR NEW FLOORING FINISH.

### FLOOR PLAN NOTES

- 1 INTERACTIVE WHITE BOARD, FURNISHED BY OWNER, CONTRACTOR-INSTALLED
- 2 BUILDING EXPANSION JOINT WITH CONTINUOUS RATED EXPANSION JOINT COVER AT WALL/CILING
- 3A **ALTERNATE 1A:** PROVIDE MILLWORK CUBBIES WITH COAT HOOKS
- 3B **ALTERNATE 1B:** PROVIDE LOCKABLE WALL CASEWORK CABINETS ABOVE KINDERGARTEN CUBBIES
- 4 VOLLEYBALL INSERT (TYP. 6)
- 5 MOTORIZED, FORWARD FOLD, HEIGHT ADJUSTABLE BACKSTOP (TYP. 4)
- 6 FIRE EXTINGUISHER CABINET - RECESSED
- 7 FIRE EXTINGUISHER - TYPE K
- 8 WALL MOUNTED STEEL ROOF ACCESS LADDER - PAINTED
- 9 ALL EXTERIOR FACE BRICK TO RECEIVE ANI-GRAFFITI COATING FULL HEIGHT
- 10 BLEACHERS, SEE SPECIFICATION
- 11 SCORE BOARD, SEE SPECIFICATION
- 12 **ALTERNATE 2:** DISPLAYCASE, SEE INTERIOR ELEVATIONS AND SPECIFICATION
- 13 DOUBLE TIER LOCKERS, SEE SPECIFICATION
- 14 SINGLE TIER LOCKERS, SEE SPECIFICATION
- 15 MODERN FOLD OPERABLE PARTITION, SEE SPECIFICATION
- 16 **ALTERNATE 3:** MILLWORK AND TREE SEE A0901
- 17 NANAWALL OPERABLE PARTITION, SEE SPECIFICATION
- 18 DISPLAYCASE, SEE INTERIOR ELEVATIONS AND SPECIFICATION
- 19 1/2" CHAMFER AT FOUNDATION IN THIS LOCATION
- 20 ACCESS PANEL
- 21 KNOX BOX - RECESSED
- 22 AED - RECESSED
- 23



ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

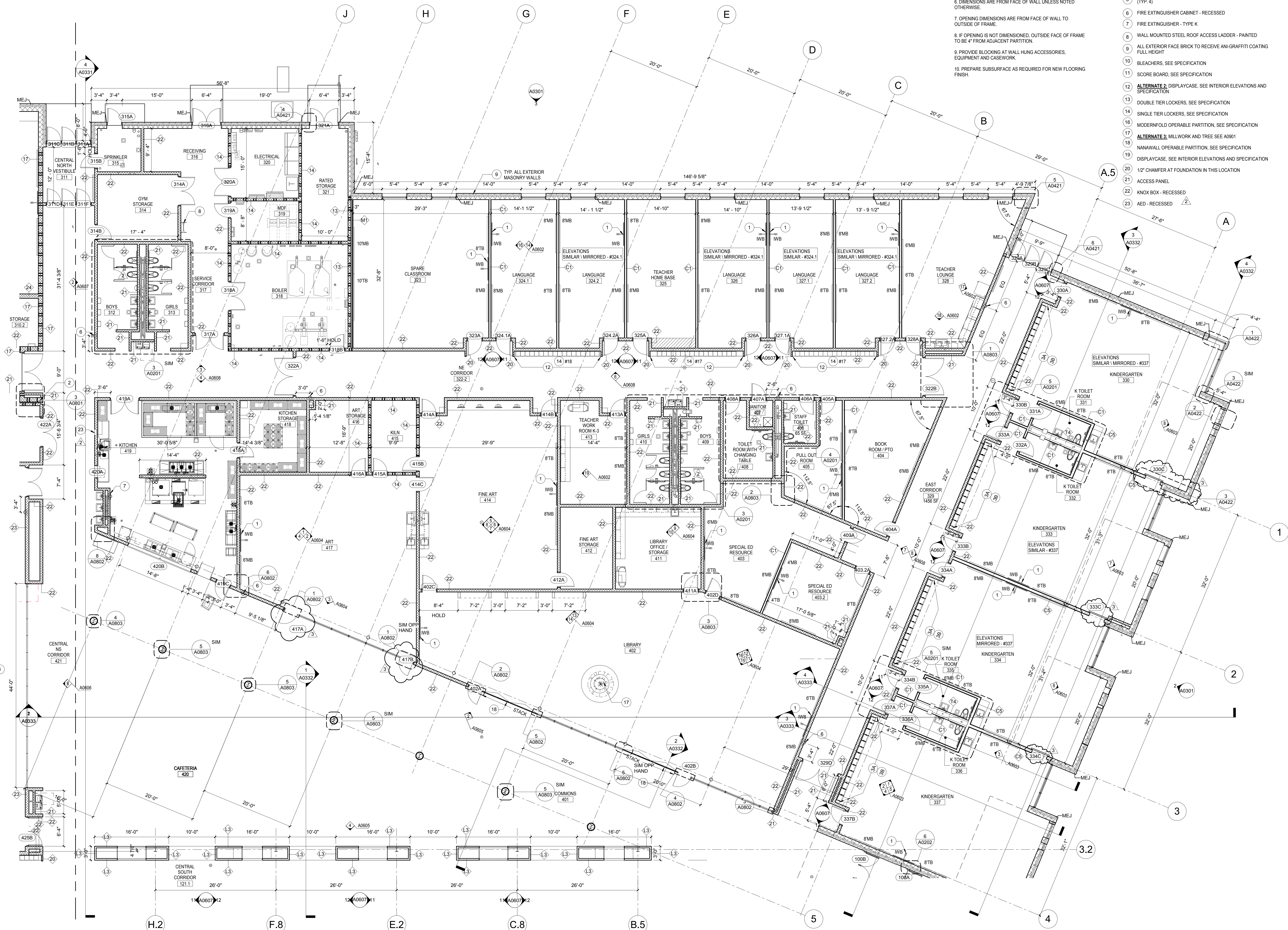
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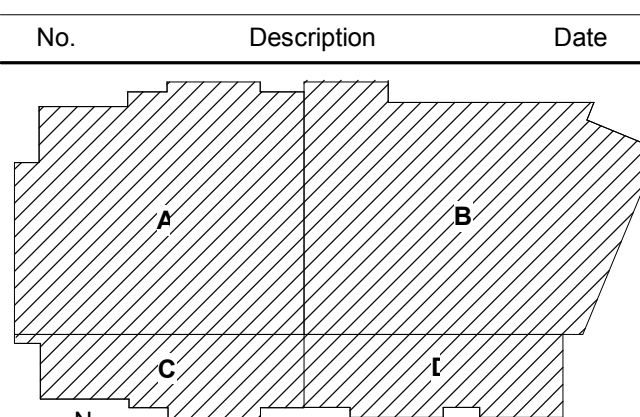
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3	ADDENDUM 05	05/22/2017
2	ADDENDUM 02	04/26/2017
1	ISSUED FOR BID	03/01/2017



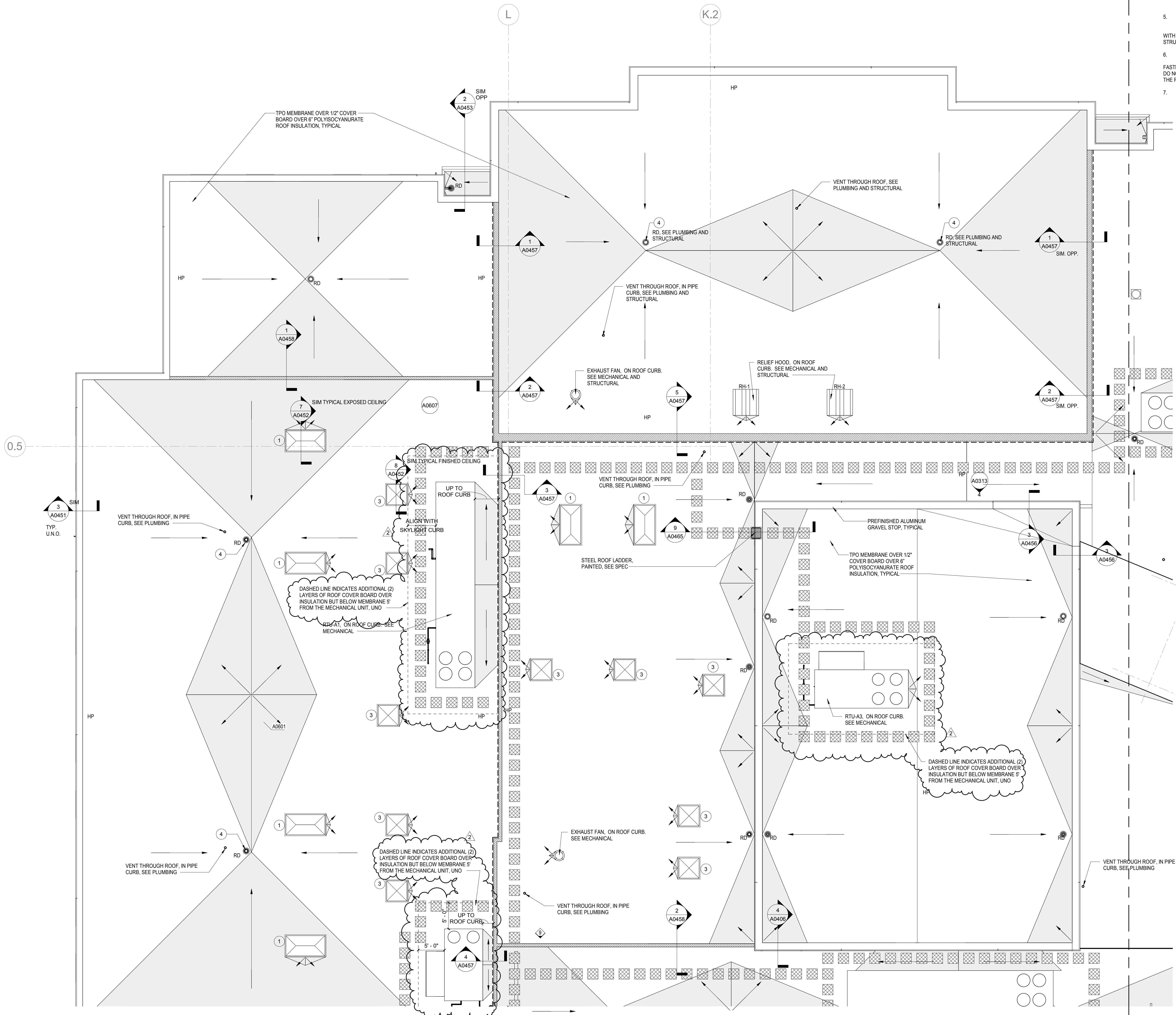
KEY PLAN  
Drawing Title:

LEVEL 01 PLAN - AREA B

Project No.: 005005.04 Checked by: Checker

A0101B





GENERAL SHEET NOTES

1. TAPERED INSULATION TO BE 1/4" / FOOT U.N.O.
2. NOT ALL MEP EQUIPMENT OR PENETRATIONS ARE SHOWN ON ARCHITECTURAL ROOF PLAN. REFER TO MEP DRAWINGS FOR ROOF EQUIPMENT AND PENETRATION LOCATIONS.
3. COORDINATE REQUIRED ROOF OPENINGS WITH SELECTED EQUIPMENT
4. USE ROOF MANUFACTURER FLASHING DETAILS AT MEP EQUIPMENT
5. LOCATIONS OF ROOF MOUNTED DEVICES INCLUDING, DRAINS, ROOF HATCHES, LADDERS ETC. TO BE VERIFIED FOR CONFLICTS WITH OTHER DEVICES (INTERIOR AND EXTERIOR) AND STRUCTURE PRIOR TO PLACEMENT.
6. IN AREAS WHERE THE ACOUSTICAL DECK IS EXPOSED (SEE REFLECTED CEILING PLANS), ROOF FASTENERS TO BE LOCATED ONLY IN THE UPPER FLUTE. DO NOT PENETRATE THE BOTTOM EXPOSED FACE OF THE ROOF DECK.
7. REFER TO WALL SECTIONS AND ASSOCIATED DETAILS

ROOF PLAN NOTES

1. 46" x 89" SKYLIGHT WITH MANUFACTURED 12" INSULATED CURB. SEE SPECIFICATION
2. 57" x 57" SKYLIGHT WITH MANUFACTURED 12" INSULATED CURB. SEE SPECIFICATION
3. 46" x 46" SKYLIGHT WITH MANUFACTURED 12" INSULATED CURB. SEE SPECIFICATION
4. ROOF DRAIN TO BE INSTALLED ON SIDE OF BEARING WALL WITH ACOUSTICAL CEILING. NO ROOF DRAIN OR PIPE ASSOCIATED TO BE EXPOSED IN THE AREAS WITH EXPOSED CEILINGS. REFER TO REFLECTED CEILING PLANS

ROOF LEGEND

- STRUCTURAL ROOF SLOPE
- 1/4" / FT TAPERED ROOF INSULATION
- FLEXIBLE WALK WAY PADS
- ROOF CURBS

1 ROOF PLAN - AREA A  
1/8" = 1'-0"



ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

CANNONDESIGN

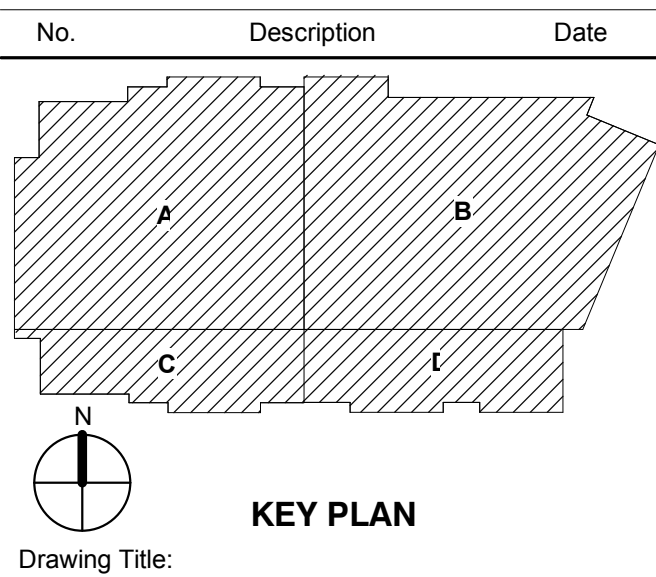
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2 ADDENDUM 05 05/22/2017  
1 ISSUED FOR BID 03/01/2017

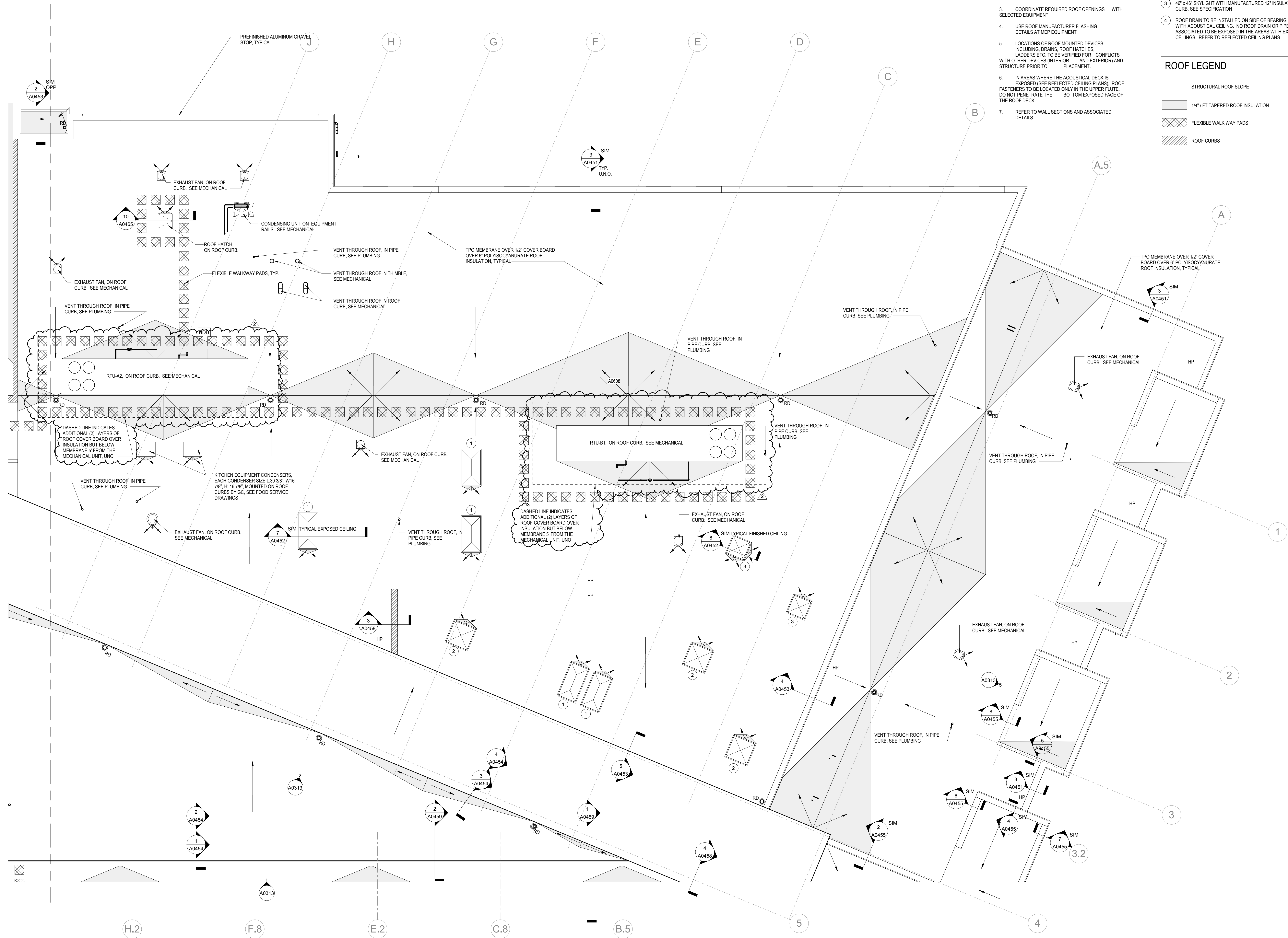


ROOF PLAN - AREA A

Project No.: 005005.04 Checked by: Checker

A0102A





#### GENERAL SHEET NOTES

1. TAPERED INSULATION TO BE 14\" / FOOT U.N.O.
2. NOT ALL MEP EQUIPMENT OR PENETRATIONS ARE SHOWN ON ARCHITECTURAL ROOF PLAN. REFER TO MEP DRAWINGS FOR ROOF EQUIPMENT AND PENETRATION LOCATIONS.
3. COORDINATE REQUIRED ROOF OPENINGS WITH SELECTED EQUIPMENT
4. USE ROOF MANUFACTURER FLASHING DETAILS AT MEP EQUIPMENT
5. LOCATIONS OF ROOF MOUNTED DEVICES INCLUDING DRAINS, ROOF HATCHES, LADDERS ETC. TO BE VERIFIED FOR CONFLICTS WITH OTHER DEVICES (INTERIOR AND EXTERIOR) AND STRUCTURE PRIOR TO PLACEMENT.
6. IN AREAS WHERE THE ACOUSTICAL DECK IS EXPOSED (SEE REFLECTED CEILING PLANS), ROOF FASTENERS TO BE LOCATED ONLY IN THE UPPER FLUTE. DO NOT PENETRATE THE BOTTOM EXPOSED FACE OF THE ROOF DECK.
7. REFER TO WALL SECTIONS AND ASSOCIATED DETAILS

#### ROOF PLAN NOTES

1. 48\" x 88\" SKYLIGHT WITH MANUFACTURED 12\" INSULATED CURB, SEE SPECIFICATION
2. 57\" x 57\" SKYLIGHT WITH MANUFACTURED 12\" INSULATED CURB, SEE SPECIFICATION
3. 48\" x 48\" SKYLIGHT WITH MANUFACTURED 12\" INSULATED CURB, SEE SPECIFICATION
4. ROOF DRAIN TO BE INSTALLED ON SIDE OF BEARING WALL WITH ACOUSTICAL CEILING. NO ROOF DRAIN OR PIPE ASSOCIATED TO BE EXPOSED IN THE AREAS WITH EXPOSED CEILINGS. REFER TO REFLECTED CEILING PLANS

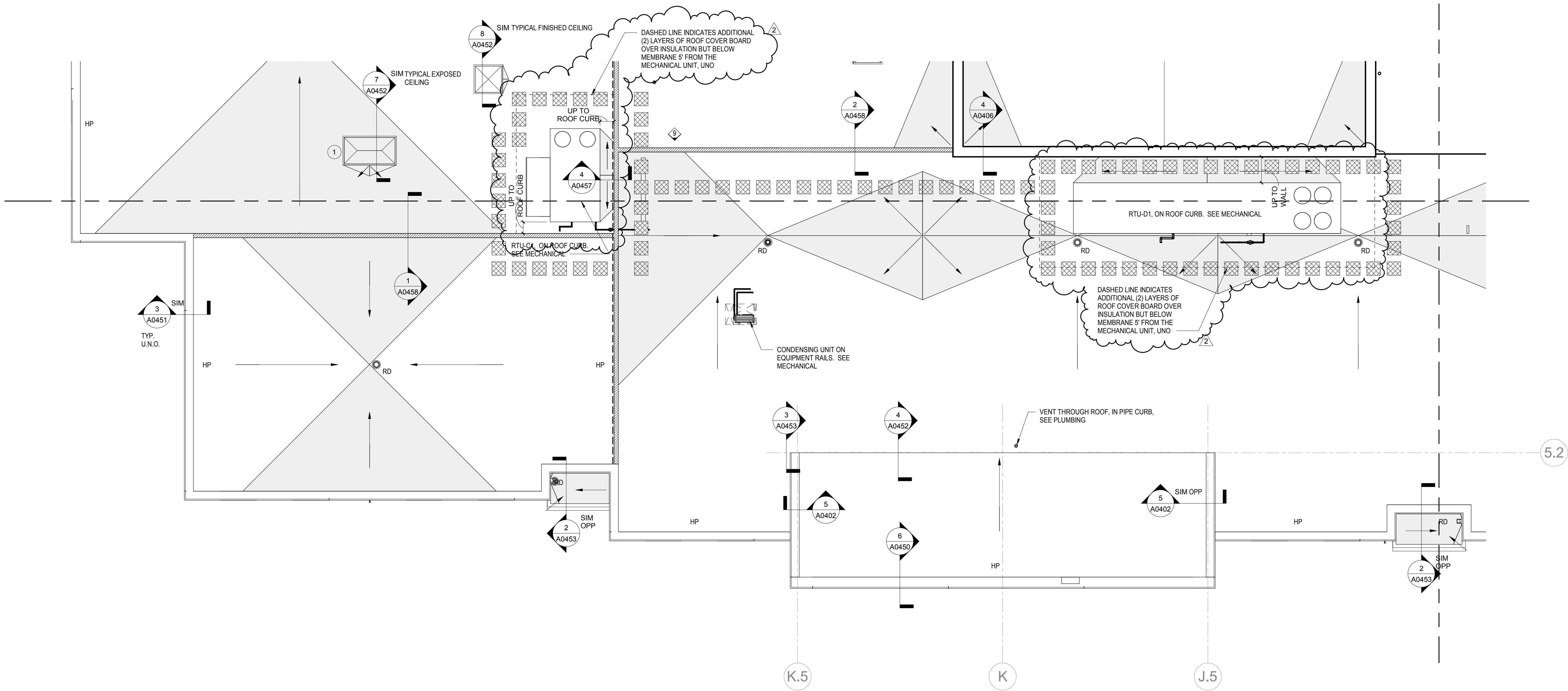
#### ROOF LEGEND

- STRUCTURAL ROOF SLOPE
- 1/4\" / FT TAPERED ROOF INSULATION
- FLEXIBLE WALK WAY PADS
- ROOF CURBS

1 ROOF PLAN - AREA B  
1/8\" = 1'-0\"



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1 ROOF PLAN - AREA C  
1/8" = 1'-0"

GENERAL SHEET NOTES

1. TAPERED INSULATION TO BE 1/4" / FOOT U.N.O.
2. NOT ALL MEP EQUIPMENT OR PENETRATIONS ARE SHOWN ON ARCHITECTURAL ROOF PLAN. REFER TO MEP DRAWINGS FOR ROOF EQUIPMENT AND PENETRATION LOCATIONS.
3. COORDINATE REQUIRED ROOF OPENINGS WITH SELECTED EQUIPMENT
4. USE ROOF MANUFACTURER FLASHING DETAILS AT MEP EQUIPMENT
5. LOCATIONS OF ROOF MOUNTED DEVICES INCLUDING, DRAINS, ROOF HATCHES, LADDERS ETC. TO BE VERIFIED FOR CONFLICTS WITH OTHER DEVICES (INTERIOR AND EXTERIOR) AND STRUCTURE PRIOR TO PLACEMENT.
6. IN AREAS WHERE THE ACOUSTICAL DECK IS EXPOSED (SEE REFLECTED CEILING PLANS), ROOF FASTENERS TO BE LOCATED ONLY IN THE UPPER FLUTE. DO NOT PENETRATE THE BOTTOM EXPOSED FACE OF THE ROOF DECK.
7. REFER TO WALL SECTIONS AND ASSOCIATED DETAILS

ROOF PLAN NOTES

- 1 48" x 88" SKYLIGHT WITH MANUFACTURED 12" INSULATED CURB, SEE SPECIFICATION
- 2 57" x 57" SKYLIGHT WITH MANUFACTURED 12" INSULATED CURB, SEE SPECIFICATION
- 3 48" x 48" SKYLIGHT WITH MANUFACTURED 12" INSULATED CURB, SEE SPECIFICATION
- 4 ROOF DRAIN TO BE INSTALLED ON SIDE OF BEARING WALL WITH ACOUSTICAL CEILING. NO ROOF DRAIN OR PIPE ASSOCIATED TO BE EXPOSED IN THE AREAS WITH EXPOSED CEILINGS. REFER TO REFLECTED CEILING PLANS

ROOF LEGEND

- STRUCTURAL ROOF SLOPE
- 1/4" / FT TAPERED ROOF INSULATION
- FLEXIBLE WALK WAY PADS
- ROOF CURBS



ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

CANNONDESIGN

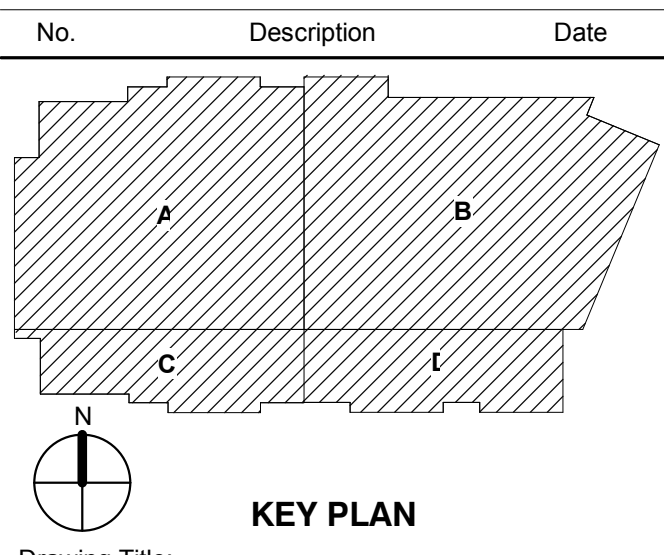
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1 ISSUED FOR BID 03/01/2017

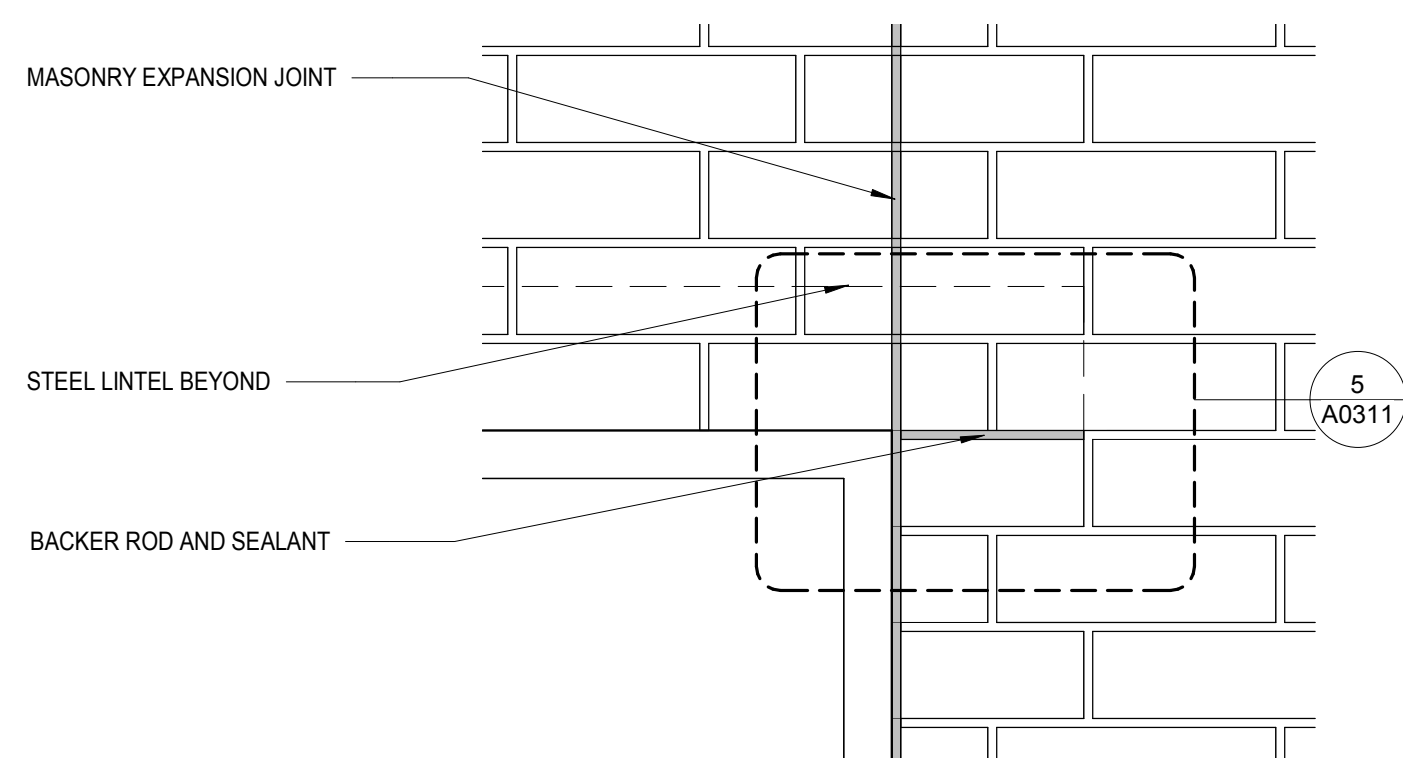


ROOF PLAN - AREA C

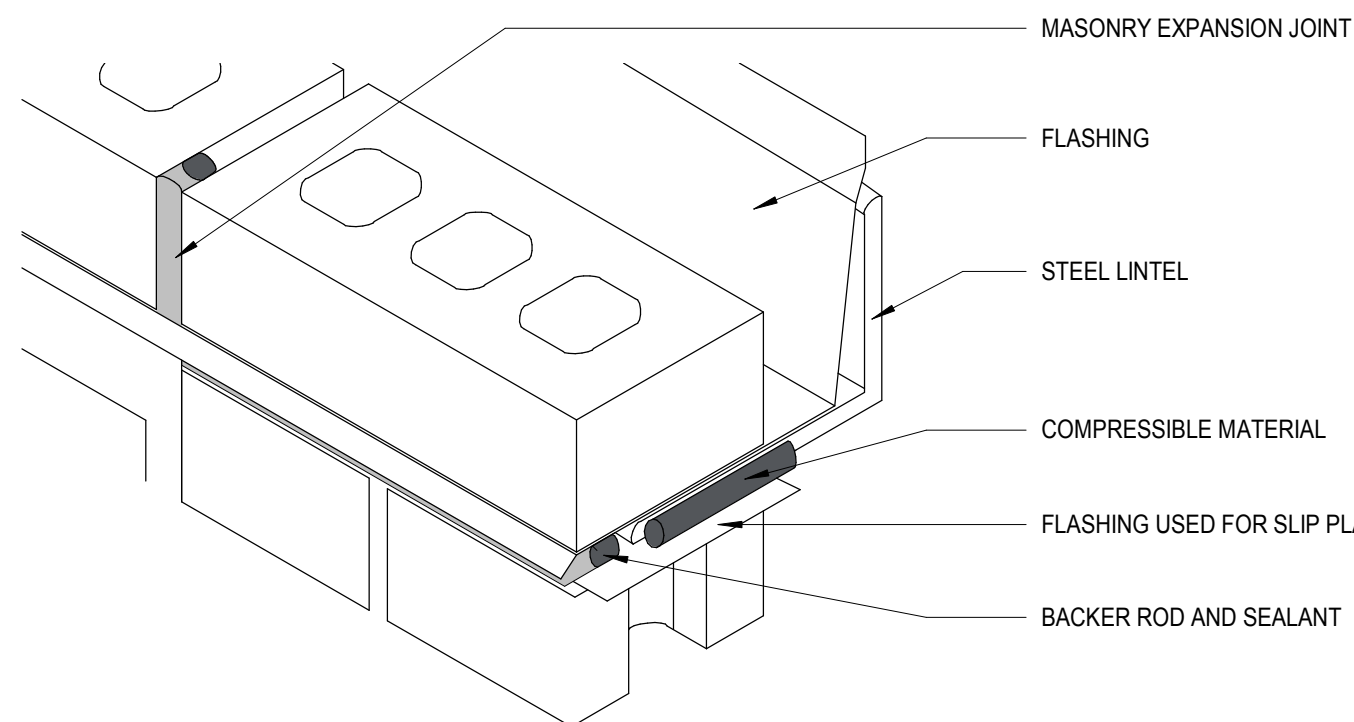
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A0102C





4 LOOSE LINTEL EXPANSION DETAIL  
1 1/2" = 1'-0"



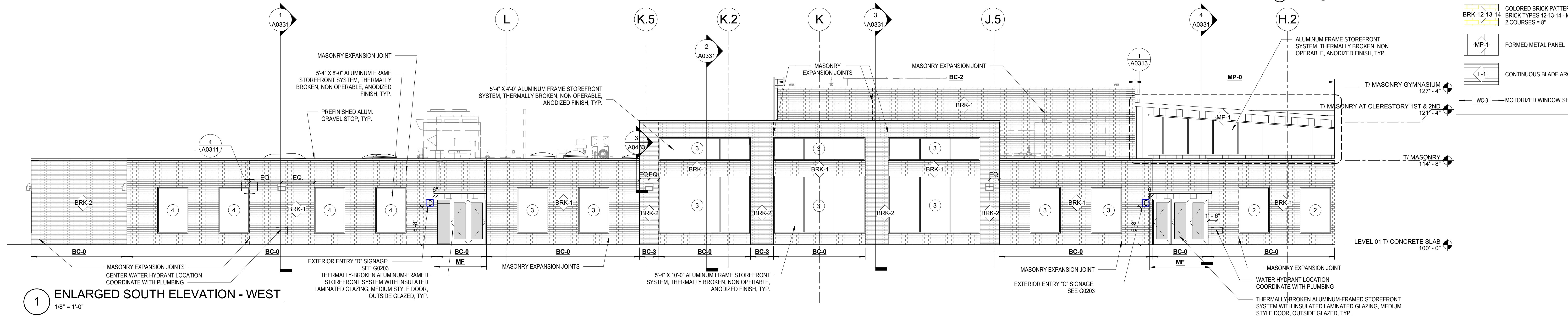
5 EXPANSION JOINT AT LOOSE LINTEL  
3" = 1'-0"

## ELEVATION NOTES

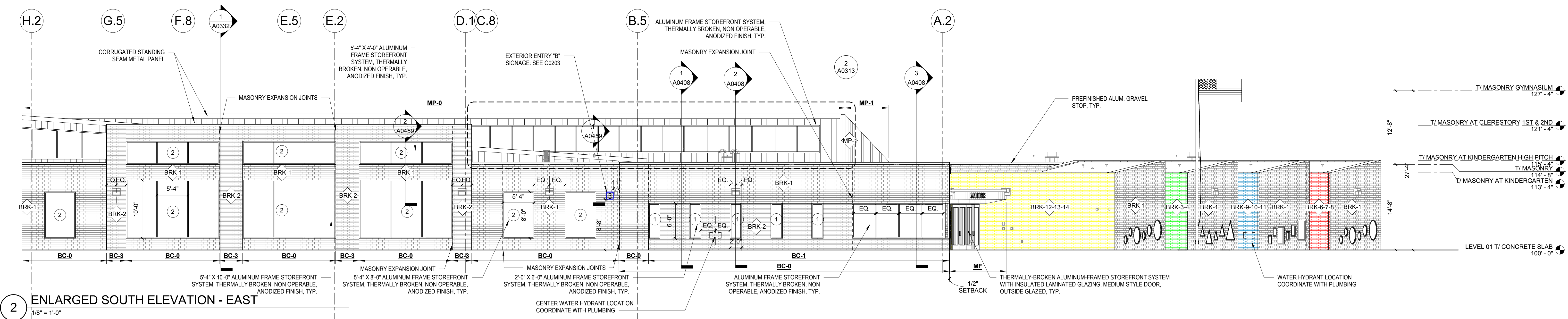
- 1 ALUMINUM TRIM ALL 4 SIDES, CLEAR ANODIZED
- 2 ALUMINUM TRIM ALL 4 SIDES, PREFINISHED RED  
COLOR TO MATCH VALSPAR SLK103 FLUOROPON SPECIAL  
PREMIERE CARDINAL RED II
- 3 ALUMINUM TRIM ALL 4 SIDES, PREFINISHED YELLOW  
COLOR TO MATCH VALSPAR SLK104 FLUOROPON SPECIAL  
LEMON SHINE
- 4 ALUMINUM TRIM ALL 4 SIDES, PREFINISHED BLUE  
COLOR TO MATCH VALSPAR SLK104 FLUOROPON PREMIERE  
LAGUNA BLUE
- 5 ALUMINUM TRIM ALL 4 SIDES, PREFINISHED GREEN  
COLOR TO MATCH VALSPAR SLK103 FLUOROPON SPECIAL  
PREMIERE MELROSE GREEN
- 6 ALUMINUM TRIM ALL 4 SIDES, PREFINISHED ORANGE  
COLOR TO MATCH VALSPAR SLK103 FLUOROPON SPECIAL  
PREMIERE CARNIVAL
- 7 ALUMINUM TRIM ALL 4 SIDES, PREFINISHED PURPLE  
COLOR TO MATCH VALSPAR SLK104 FLUOROPON PREMIERE  
TULARE PURPLE

## ELEVATION LEGEND

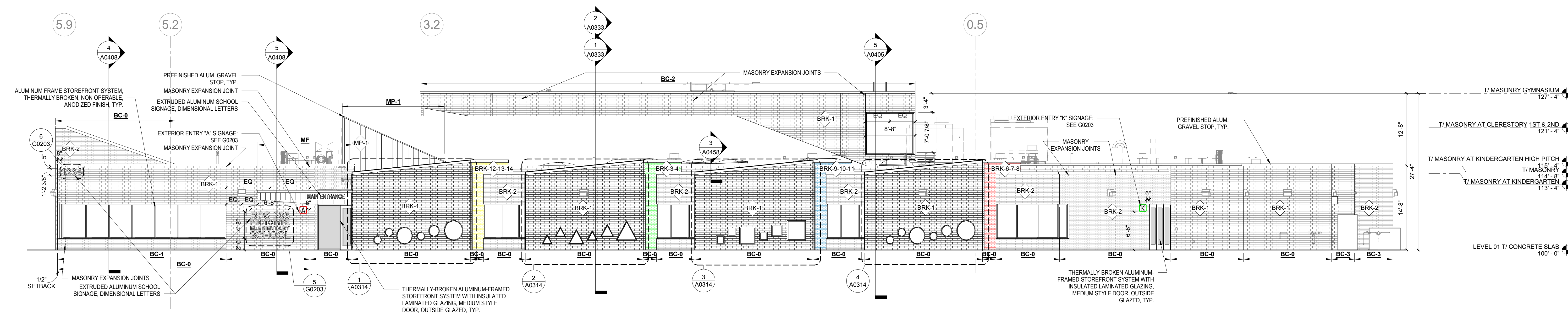
1. ALL BRICK TO BE BRK-1 UNLESS NOTED OTHERWISE
  2. SPECIAL BRICK CORNERS FOR BRK-2 THROUGH BRK-14
  3. WEEP HOLE VENTILATORS @ 24" OC AT FOUNDATIONS, SILLS AND TOP FOR BRK-2 THROUGH BRK-14
  4. SEE A400 FOR WALL CONSTRUCTION
- BRK-1 BRICK 1 - UTILITY - 1/3 RUNNING BOND  
2 COURSES = 8"
- BRK-2 BRICK 2 - NORMAN - 1/3 RUNNING BOND  
3 COURSES = 8"
- BRK-3-4 COLORED BRICK PATTERN "A":  
BRICK TYPES 3-4 - MODULAR - RUNNING BOND  
2 COURSES = 8"
- BRK-6-7-8 COLORED BRICK PATTERN "B":  
BRICK TYPES 6-7-8 - MODULAR - RUNNING BOND  
2 COURSES = 8"
- BRK-9-10-11 COLORED BRICK PATTERN "C":  
BRICK TYPES 9-10-11 - MODULAR - RUNNING BOND  
2 COURSES = 8"
- BRK-12-13-14 COLORED BRICK PATTERN "D":  
BRICK TYPES 12-13-14 - MODULAR - RUNNING BOND  
2 COURSES = 8"
- MP-1 FORMED METAL PANEL
- L-1 CONTINUOUS BLADE ARCHITECTURAL LOUVER
- WC-3 MOTORIZED WINDOW SHADE, SEE FINISH SCHEDULE



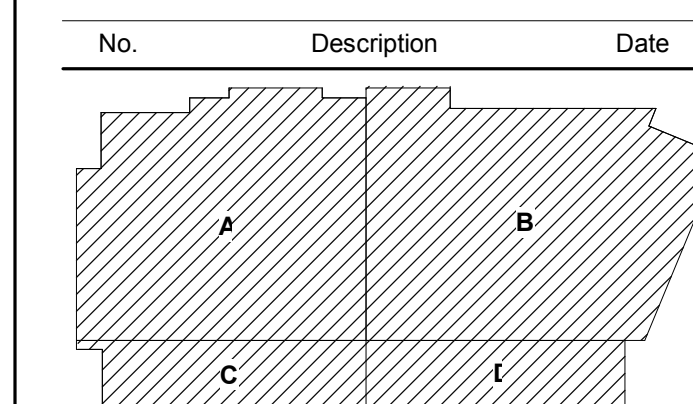
1 ENLARGED SOUTH ELEVATION - WEST  
1/8" = 1'-0"



2 ENLARGED SOUTH ELEVATION - EAST  
1/8" = 1'-0"



3 ENLARGED EAST ELEVATION  
1/8" = 1'-0"





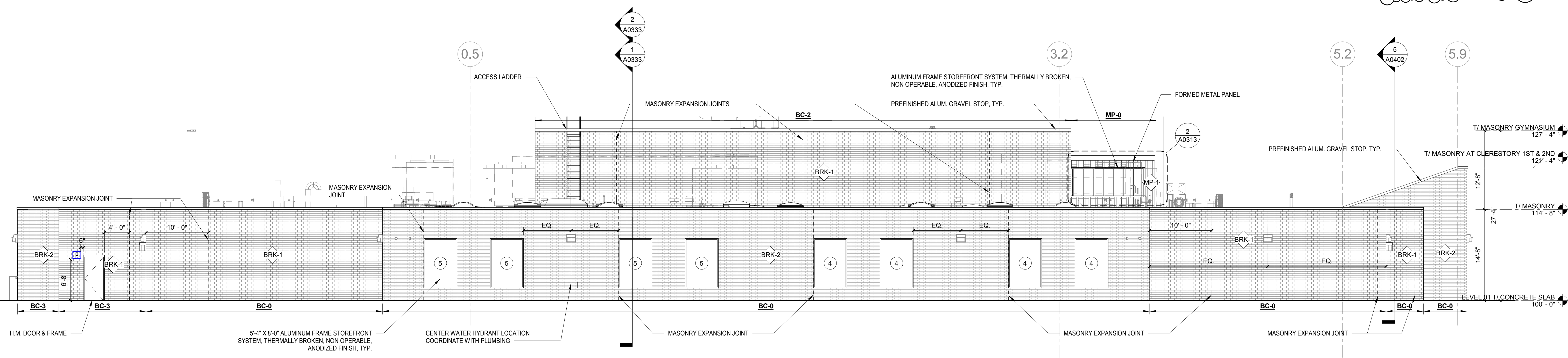
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ELEVATION NOTES

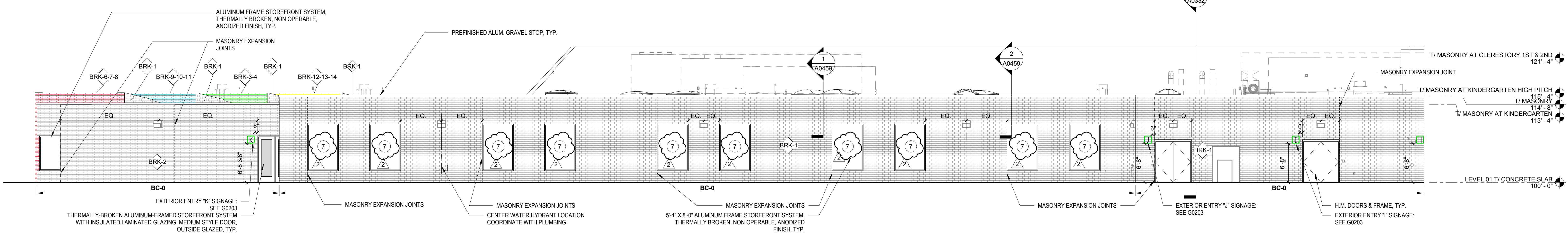
1. ALUMINUM TRIM ALL 4 SIDES, CLEAR ANODIZED
2. ALUMINUM TRIM ALL 4 SIDES, PREFINISHED RED  
COLOR TO MATCH VALSPAR SLANTY FLUORON SPECIAL  
PREMIERE CARDINAL RED II
3. ALUMINUM TRIM ALL 4 SIDES, PREFINISHED YELLOW  
COLOR TO MATCH VALSPAR SLANTY FLUORON SPECIAL  
LEMON SHINE
4. ALUMINUM TRIM ALL 4 SIDES, PREFINISHED BLUE  
COLOR TO MATCH VALSPAR SLANTY FLUORON PREMIERE  
LAGUNA BLUE
5. ALUMINUM TRIM ALL 4 SIDES, PREFINISHED GREEN  
COLOR TO MATCH VALSPAR SLANTY FLUORON SPECIAL  
PREMIERE MELROSE GREEN
6. ALUMINUM TRIM ALL 4 SIDES, PREFINISHED ORANGE  
COLOR TO MATCH VALSPAR SLANTY FLUORON SPECIAL  
PREMIERE CARNIVAL
7. ALUMINUM TRIM ALL 4 SIDES, PREFINISHED PURPLE  
COLOR TO MATCH VALSPAR SLANTY FLUORON PREMIERE  
TULARE PURPLE

ELEVATION LEGEND

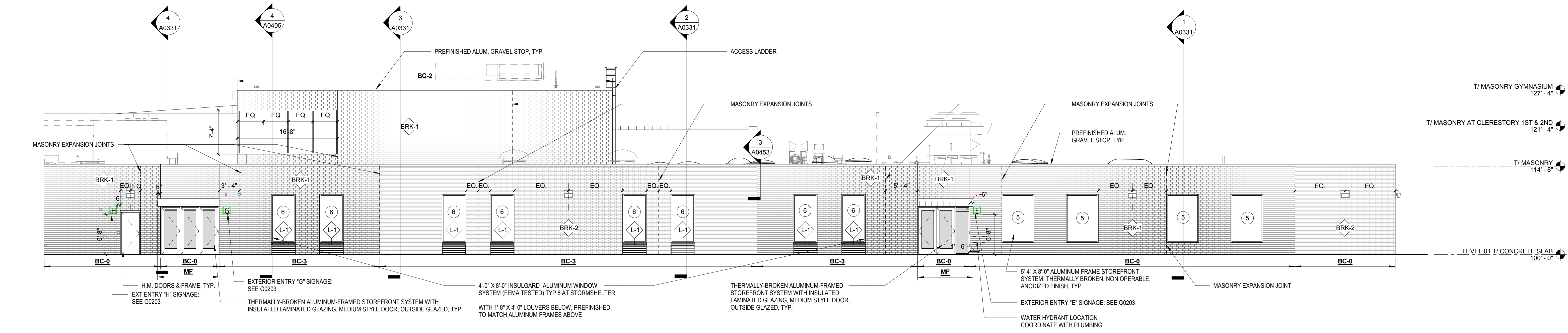
1. ALL BRICK TO BE BRK-1 UNLESS NOTED OTHERWISE
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  3. WEEP HOLE VENTILATORS @ 24" OC AT FOUNDATIONS, SILLS AND TOP FOR BRK-2 THROUGH BRK-14
  4. SEE A400 FOR WALL CONSTRUCTION
- BRK-1 BRICK 1 - UTILITY - 1/3 RUNNING BOND  
2 COURSES = 8"
- BRK-2 BRICK 2 - NORMAN - 1/3 RUNNING BOND  
3 COURSES = 8"
- BRK-3-4 COLORED BRICK PATTERN "A":  
BRICK TYPES 3-4 - MODULAR - RUNNING BOND  
2 COURSES = 8"
- BRK-6-7-8 COLORED BRICK PATTERN "B":  
BRICK TYPES 6-7-8 - MODULAR - RUNNING BOND  
2 COURSES = 8"
- BRK-9-10-11 COLORED BRICK PATTERN "C":  
BRICK TYPES 9-10-11 - MODULAR - RUNNING BOND  
2 COURSES = 8"
- BRK-12-13-14 COLORED BRICK PATTERN "D":  
BRICK TYPES 12-13-14 - MODULAR - RUNNING BOND  
2 COURSES = 8"
- MP-1 FORMED METAL PANEL
- L-1 CONTINUOUS BLADE ARCHITECTURAL LOUVER
- WC-3 MOTORIZED WINDOW SHADE, SEE FINISH SCHEDULE



3 ENLARGED WEST ELEVATION  
1/8" = 1'-0"



1 ENLARGED NORTH ELEVATION - EAST  
1/8" = 1'-0"



2 ENLARGED NORTH ELEVATION - WEST  
1/8" = 1'-0"



ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

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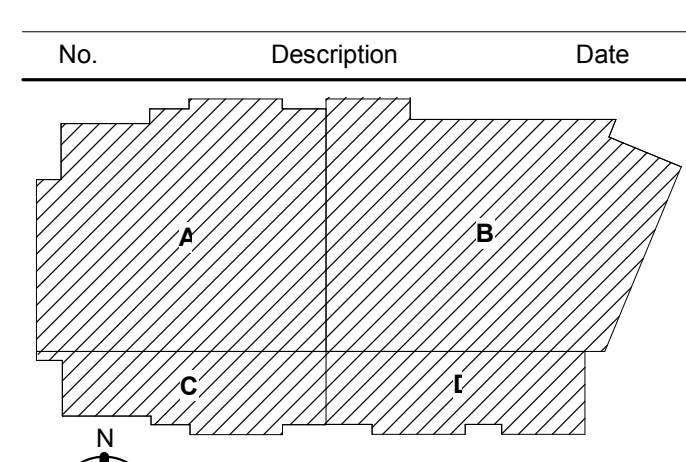
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2 ADDENDUM 05 05/22/2017  
1 ISSUED FOR BID 03/01/2017



KEY PLAN  
Drawing Title:

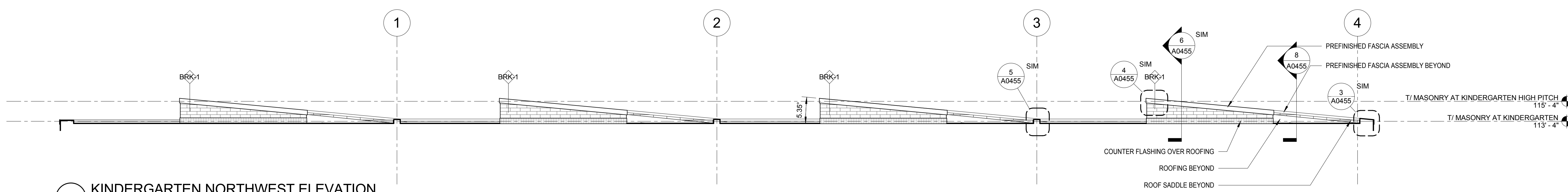
EXTERIOR ELEVATIONS

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A0312



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5 KINDERGARTEN NORTHWEST ELEVATION  
3/16" = 1'-0"

ELEVATION LEGEND

1.

ALL BRICK TO BE BRK-1 UNLESS NOTED OTHERWISE

2.

SPECIAL BRICK CORNERS FOR BRK-2 THROUGH BRK-14

3.

WEEP HOLE VENTILATORS @ 24" OC AT FOUNDATIONS, SILLS AND TOP FOR BRK-2 THROUGH BRK-14

4.

SEE A400 FOR WALL CONSTRUCTION

BRK-1

BRICK 1 - UTILITY - 1/3 RUNNING BOND  
2 COURSES = 8"

BRK-2

BRICK 2 - NORMAN - 1/3 RUNNING BOND  
3 COURSES = 8"

BRK-3-4

COLORLED BRICK PATTERN "A"  
BRICK TYPES 3-4 - MODULAR - RUNNING BOND  
2 COURSES = 8"

BRK-6-7-8

COLORLED BRICK PATTERN "B"  
BRICK TYPES 6-7-8 - MODULAR - RUNNING BOND  
2 COURSES = 8"

BRK-9-10-11

COLORLED BRICK PATTERN "C"  
BRICK TYPES 9-10-11 - MODULAR - RUNNING BOND  
2 COURSES = 8"

BRK-12-13-14

COLORLED BRICK PATTERN "D"  
BRICK TYPES 12-13-14 - MODULAR - RUNNING BOND  
2 COURSES = 8"

MP-1

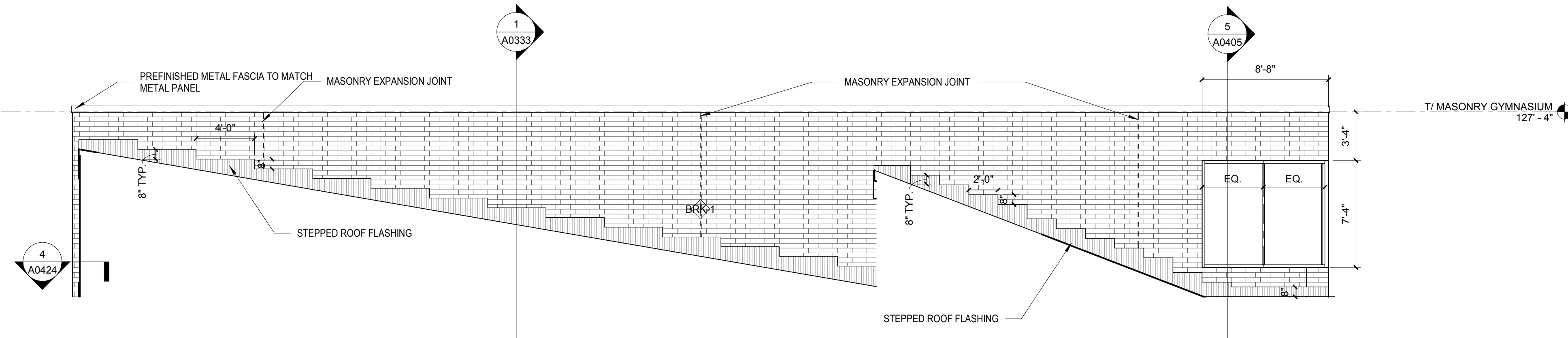
FORMED METAL PANEL

L-1

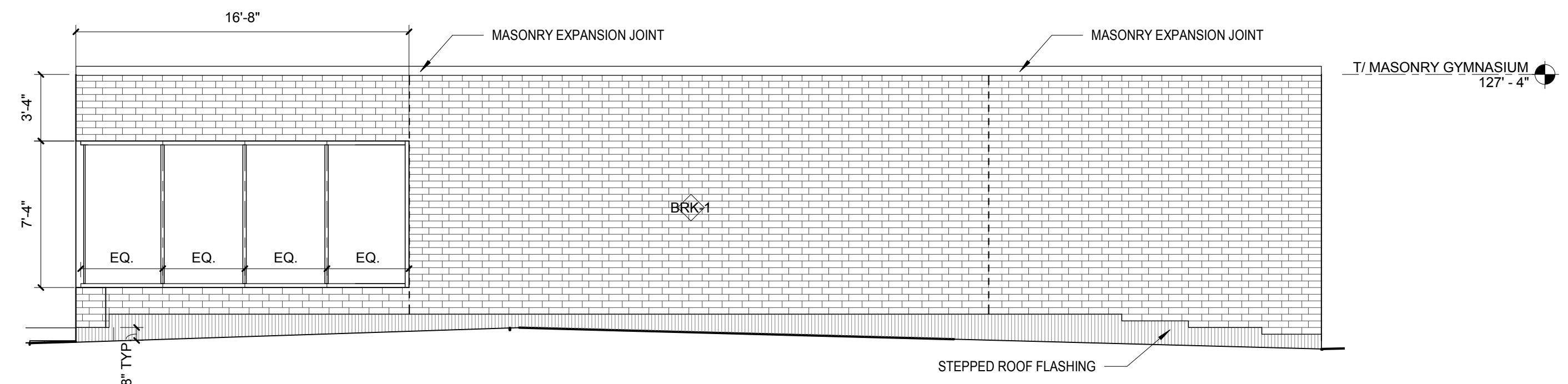
CONTINUOUS BLADE ARCHITECTURAL LOUVER

WC-3

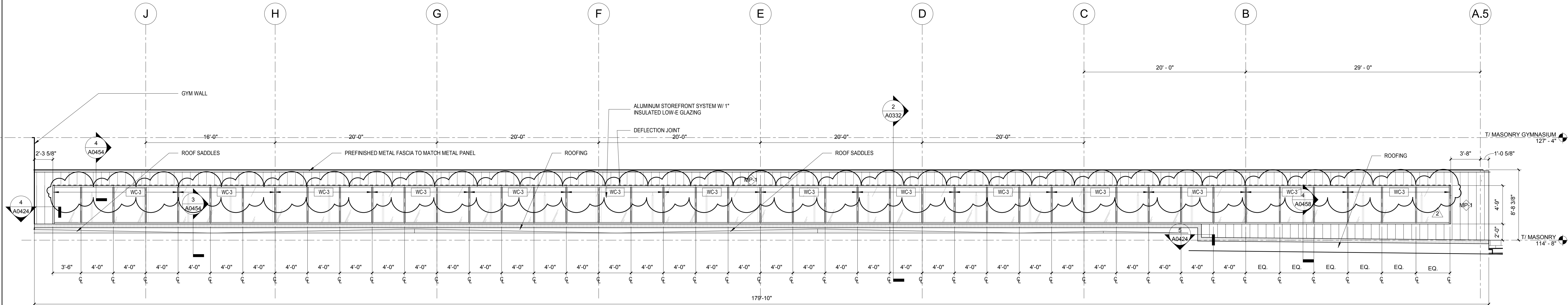
MOTORIZED WINDOW SHADE, SEE FINISH SCHEDULE



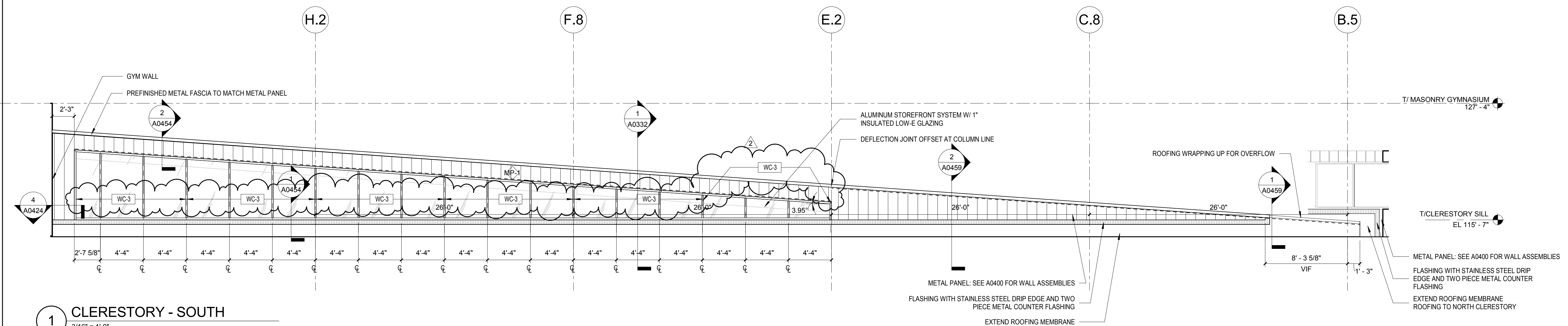
3 EAST GYM ELEVATION AT CLERESTORY  
3/16" = 1'-0"



4 NORTH GYM ELEVATION  
3/16" = 1'-0"



2 CLERESTORY - NORTH  
3/16" = 1'-0"



1 CLERESTORY - SOUTH  
3/16" = 1'-0"



ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

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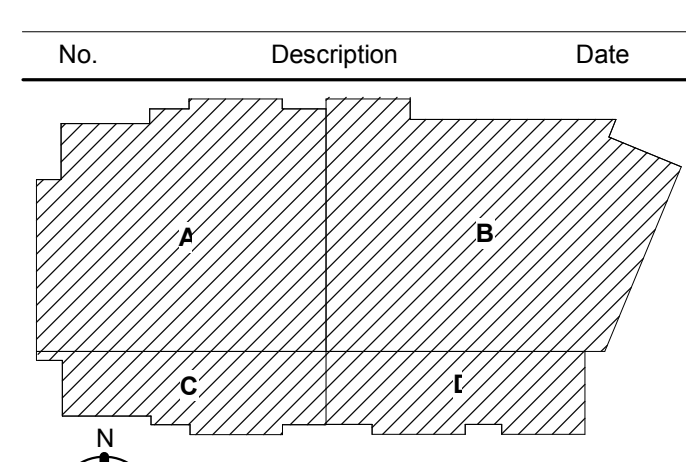
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2 ADDENDUM 05 05/22/2017  
1 ISSUED FOR BID 03/01/2017



KEY PLAN

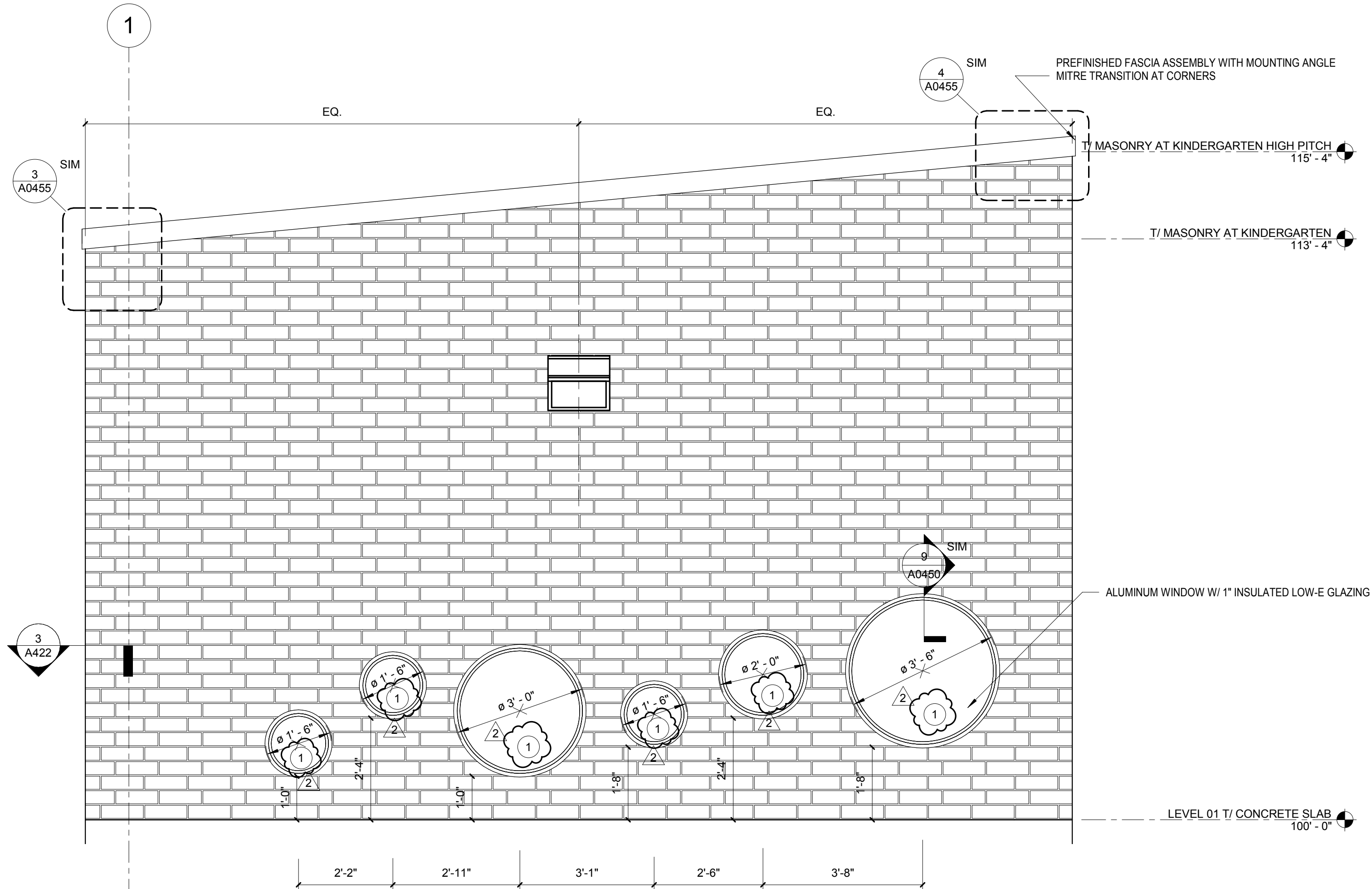
CLERESTORY ELEVATIONS

Project No.: 005005.04 Checked by: Checker

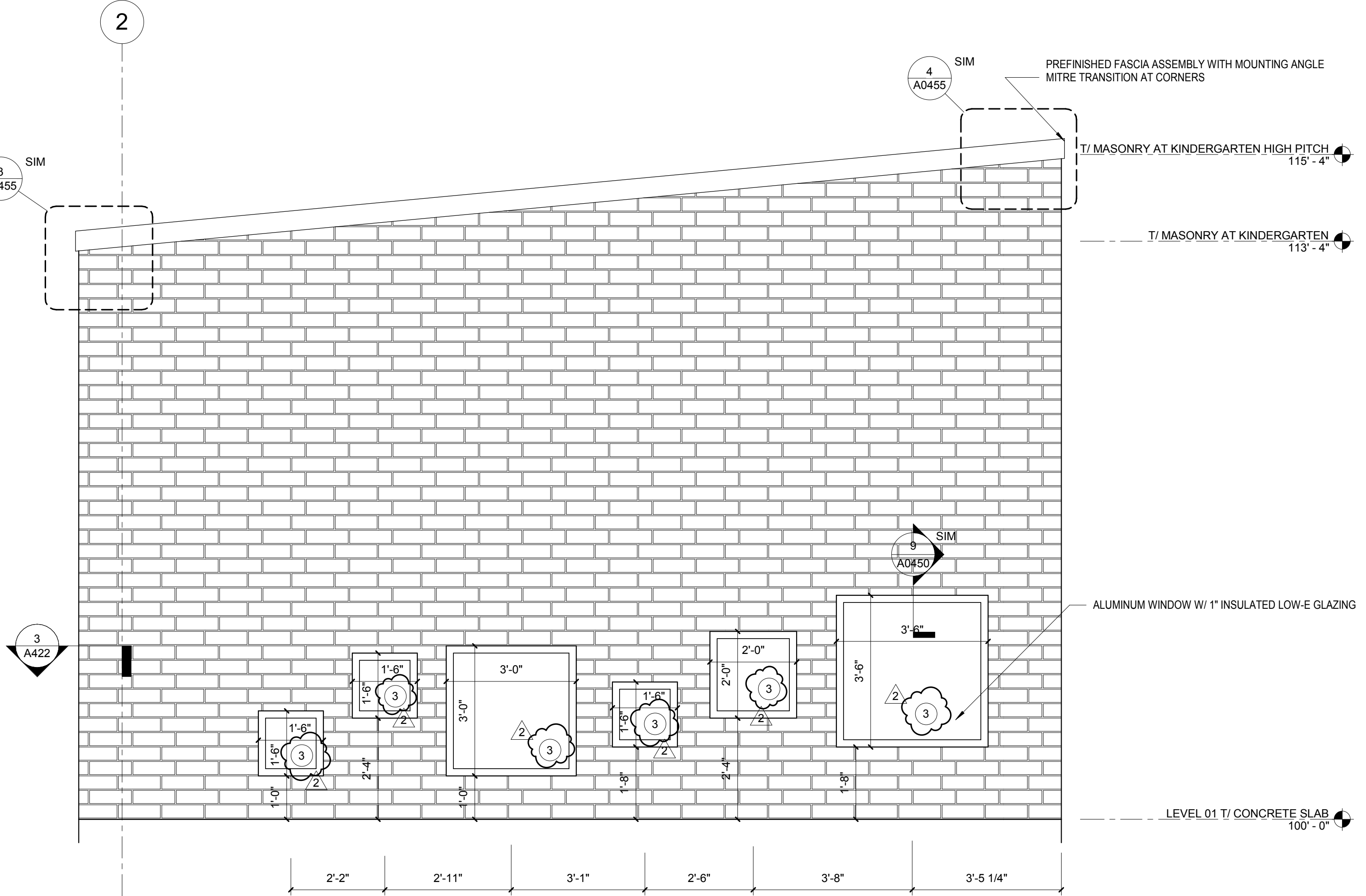
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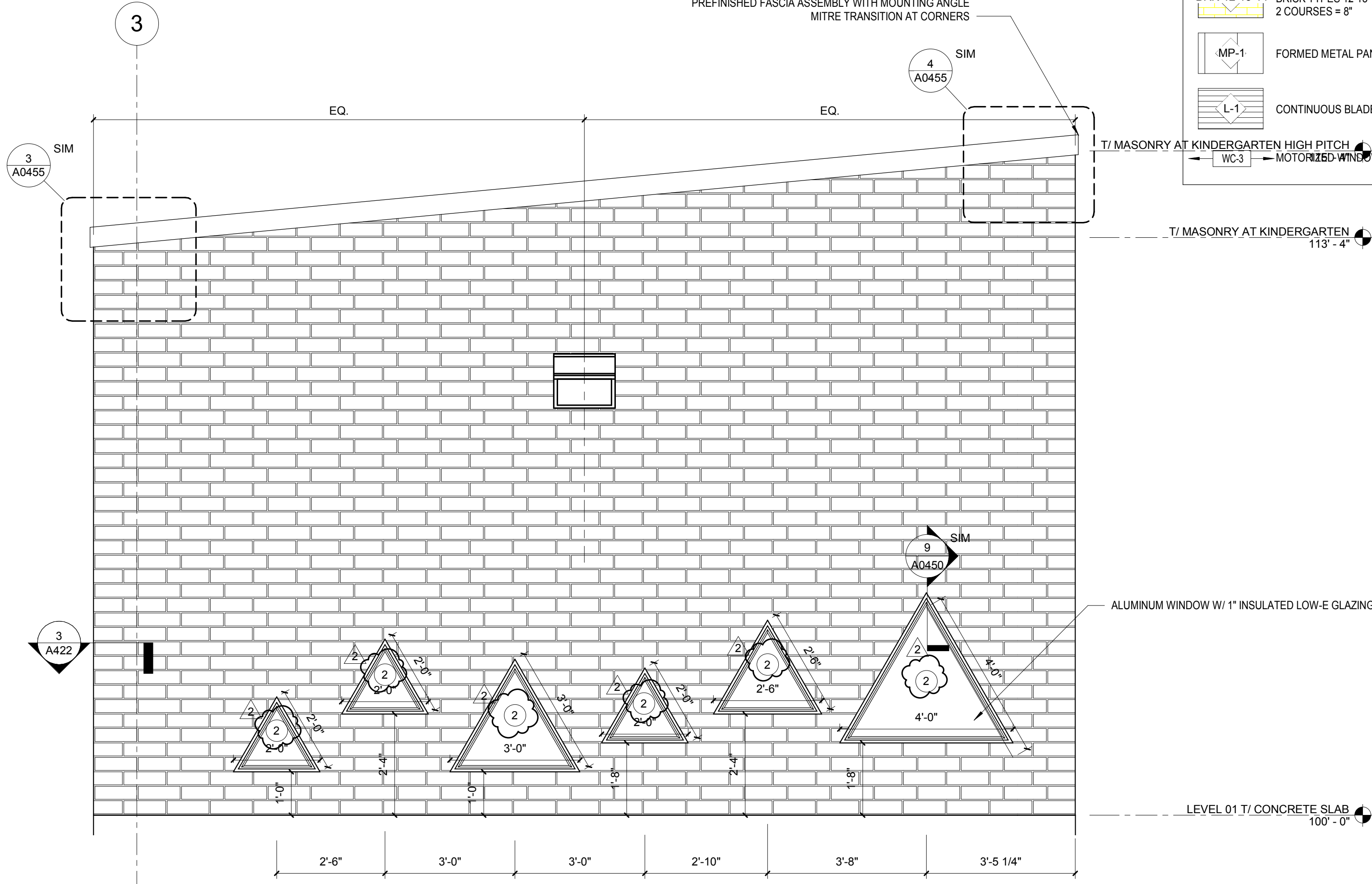
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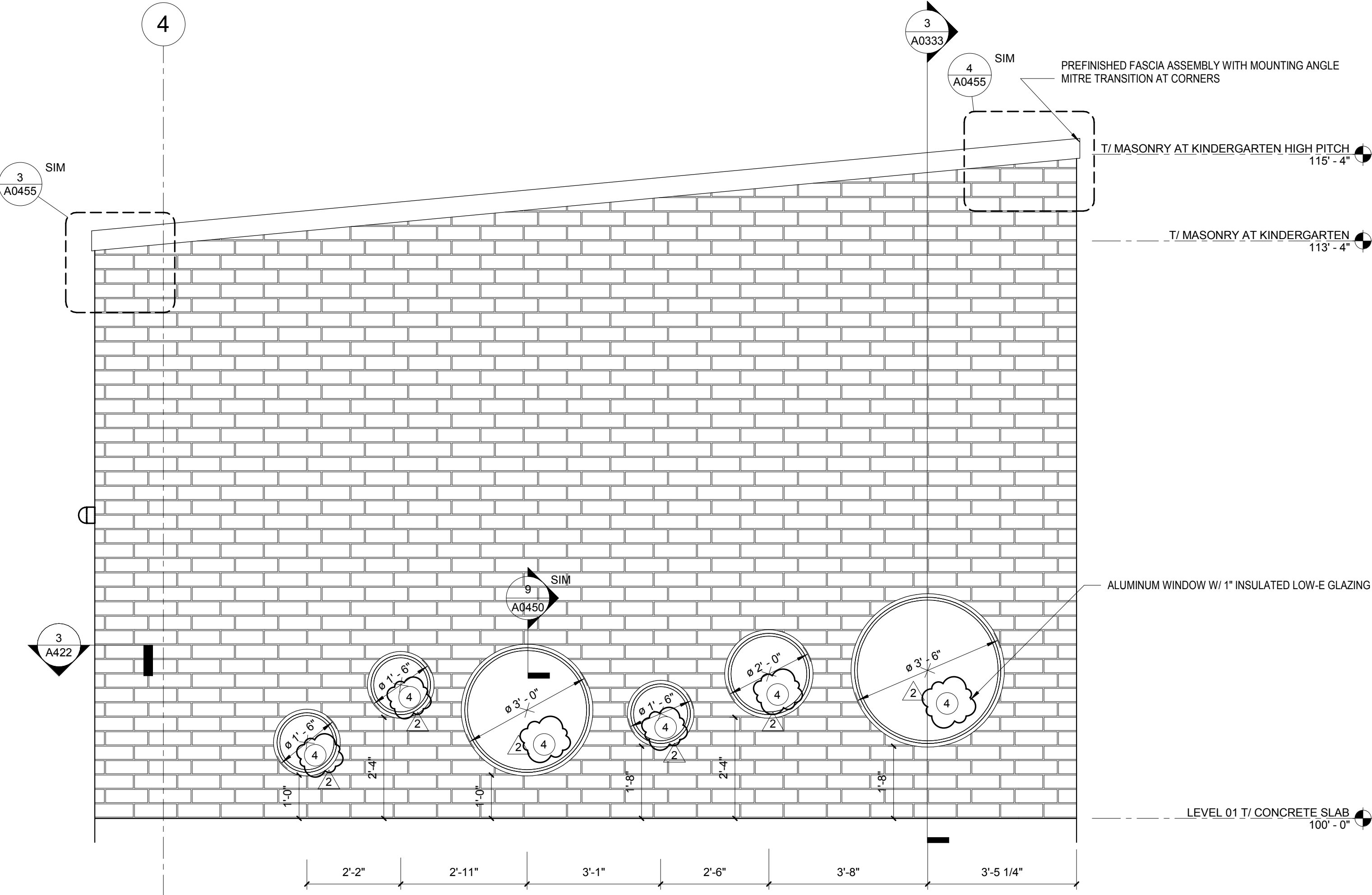
4 BRICK COURSING - KINDERGARTEN - CIRCLE 2  
1/2" = 1'-0"



3 BRICK COURSING - KINDERGARTEN - SQUARE  
1/2" = 1'-0"



2 BRICK COURSING - KINDERGARTEN - TRIANGLE  
1/2" = 1'-0"



1 BRICK COURSING - KINDERGARTEN - CIRCLE  
1/2" = 1'-0"

NOTES: ALUMINUM WINDOWS

ELEVATION LEGEND

1 CUSTOM COLOR FINISH (INTENT IS TO MATCH GLAZED BRICK 8800); COLOR TO MATCH SHERWIN WILLIAMS, REAL RED SW 6868, WITH INTERIOR PLAM PANEL MANUFACTURER: NEVAMAR, LIBERTY RED S10277

2 CUSTOM COLOR FINISH (INTENT IS TO MATCH GLAZED BRICK 4505); COLOR TO MATCH SHERWIN WILLIAMS, KILKENNY SW 6740, WITH INTERIOR PLAM PANEL MANUFACTURER: PIONITE, SPRINGTIME SV709 SUEDE

3 CUSTOM COLOR FINISH (INTENT IS TO MATCH GLAZED BRICK 4889); COLOR TO MATCH SHERWIN WILLIAMS, MORNING GLORY SW 6971, WITH INTERIOR PLAM PANEL MANUFACTURER: ARBORITE, IRIS S-573 CA

4 CUSTOM COLOR FINISH (INTENT IS TO MATCH GLAZED BRICK 4863); COLOR TO MATCH SHERWIN WILLIAMS, DAISY SW 6910, WITH INTERIOR PLAM PANEL MANUFACTURER: ARPA, 0647 ERRE FINISH

1 ALL BRICK TO BE BRK-1 UNLESS NOTED OTHERWISE

2 SPECIAL BRICK CORNERS FOR BRK-2 THROUGH BRK-14

3 WEEP HOLE VENTILATORS @ 24" OC AT FOUNDATIONS, SILLS AND TOP FOR BRK-2 THROUGH BRK-14

4 SEE A400 FOR WALL CONSTRUCTION

BRK-1 BRICK 1 - UTILITY - 1/3 RUNNING BOND 2 COURSES = 8"

BRK-2 BRICK 2 - NORMAN - 1/3 RUNNING BOND 3 COURSES = 8"

BRK-3-4 COLORED BRICK PATTERN "A": BRICK TYPES 3-4 - MODULAR - RUNNING BOND 2 COURSES = 8"

BRK-6-7-8 COLORED BRICK PATTERN "B": BRICK TYPES 6-7-8 - MODULAR - RUNNING BOND 2 COURSES = 8"

BRK-9-10-11 COLORED BRICK PATTERN "C": BRICK TYPES 9-10-11 - MODULAR - RUNNING BOND 2 COURSES = 8"

BRK-12-13-14 COLORED BRICK PATTERN "D": BRICK TYPES 12-13-14 - MODULAR - RUNNING BOND 2 COURSES = 8"

MP-1 FORMED METAL PANEL

L-1 CONTINUOUS BLADE ARCHITECTURAL LOUVER

WC-3 MOTORIZED WINDOW SHADE, SEE FINISH SCHEDULE



ROCKFORD PUBLIC SCHOOLS

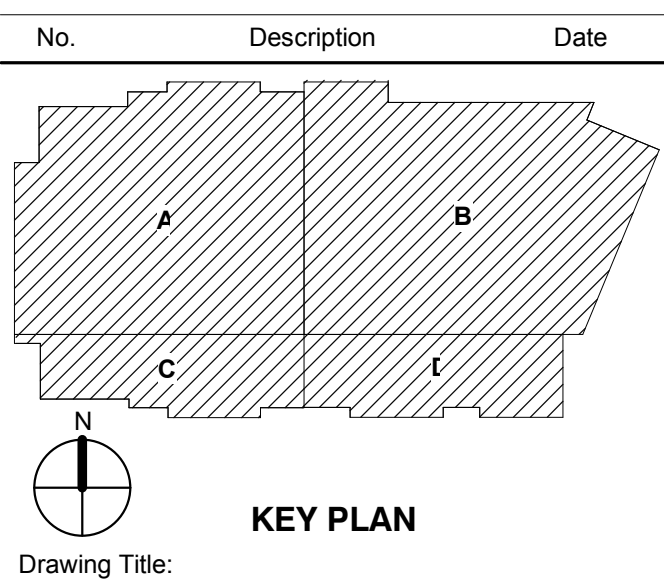
SCHOOL B, ZONE 1

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2 ADDENDUM 05 05/22/2017  
1 ISSUED FOR BID 03/01/2017



BRICK COURSING -  
KINDERGARTEN  
ELEVATION

Project No.: 005005.04 Checked by: Checker

A0314



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1. FLUID APPLIED MEMBRANE AIR BARRIER IS TO BE USED FOR ALL CMU SUBSTRATES. USE TRANSITION STRIP OVERLAPPING THE FLEXIBLE FLASHING AND SEALING AGAINST FLUID APPLIED MEMBRANE AIR BARRIER.
2. MODIFIED BITUMINOUS SHEET AIR BARRIER IS TO BE USED FOR ALL COLD FORM METAL FRAMED GYPSUM SHEETING SUBSTRATES. ALSO USE AS A TRANSITION FROM FLUID APPLIED AIR BARRIER TO SEAL AGAINST ADJACENT MATERIALS PER SPECIFICATION



ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

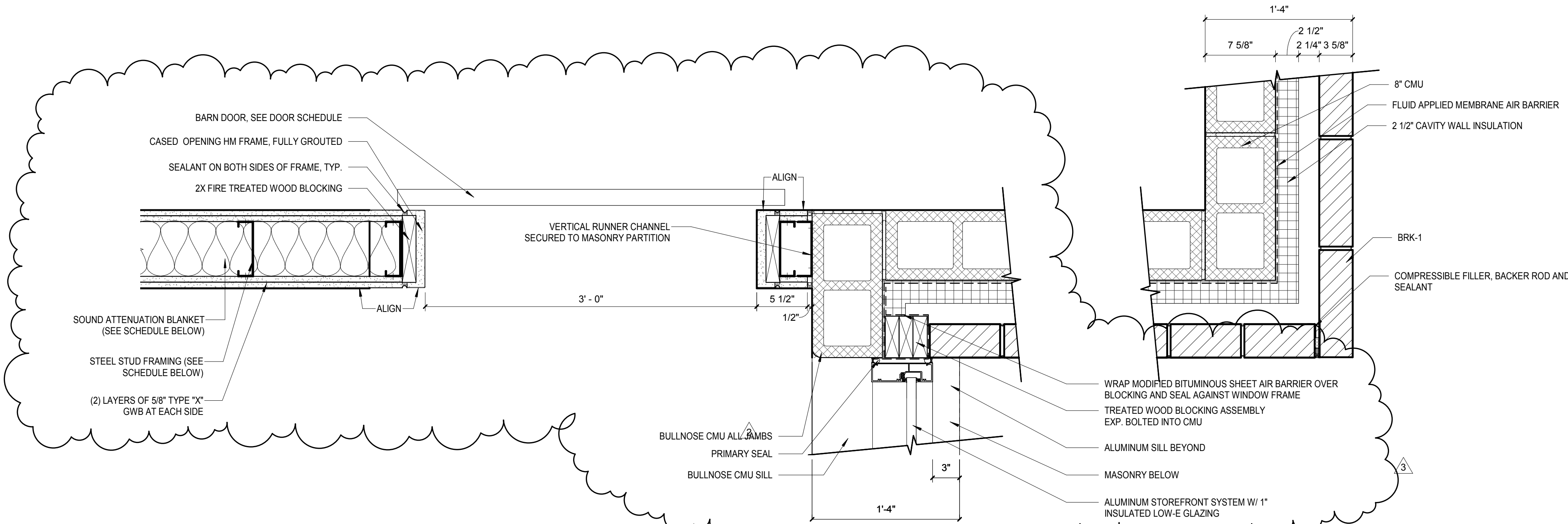
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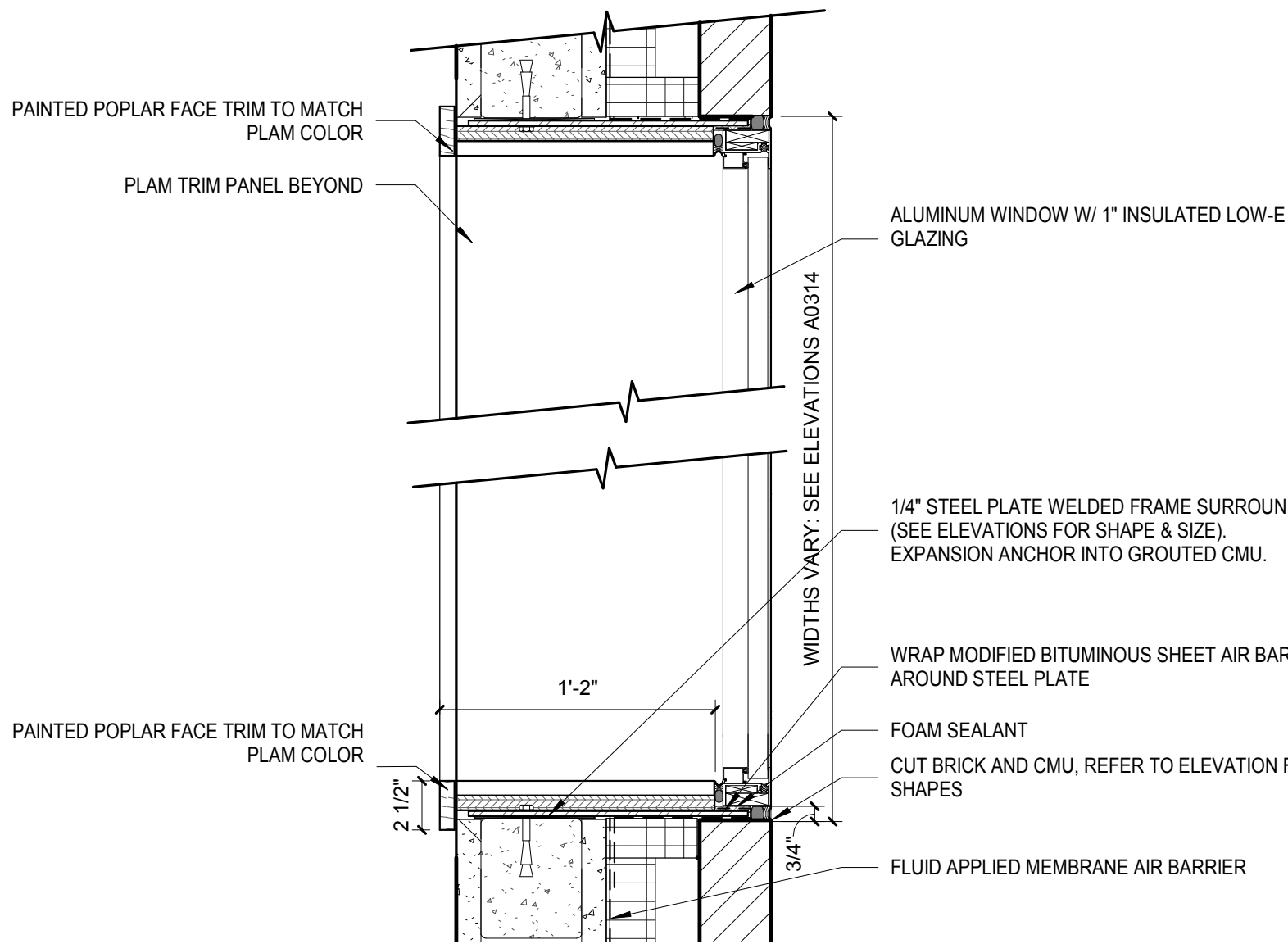
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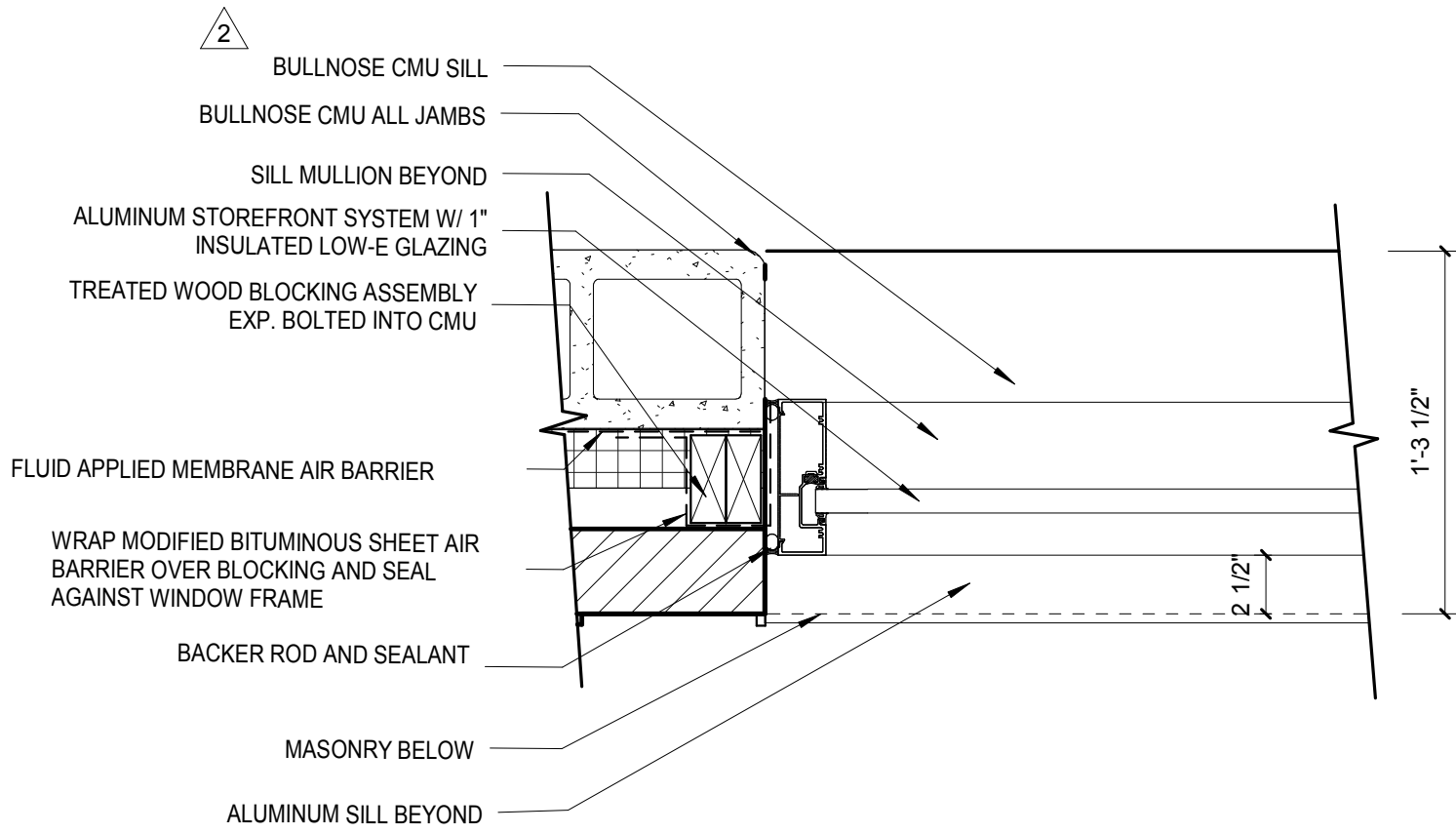
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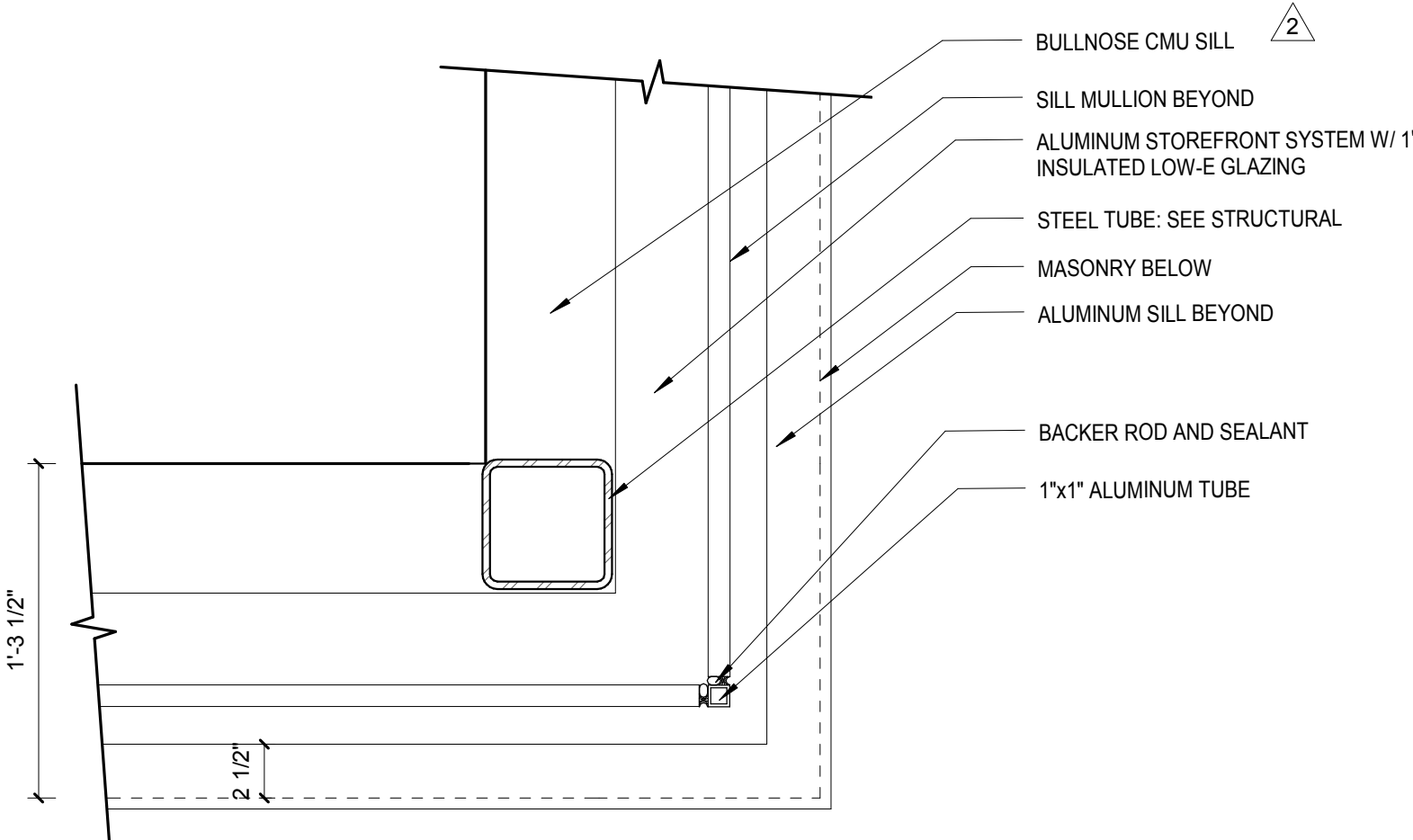
3 EXTERIOR PLAN DETAIL - KINDERGARTEN SW CORNER, TYP.  
1 1/2" = 1'-0"



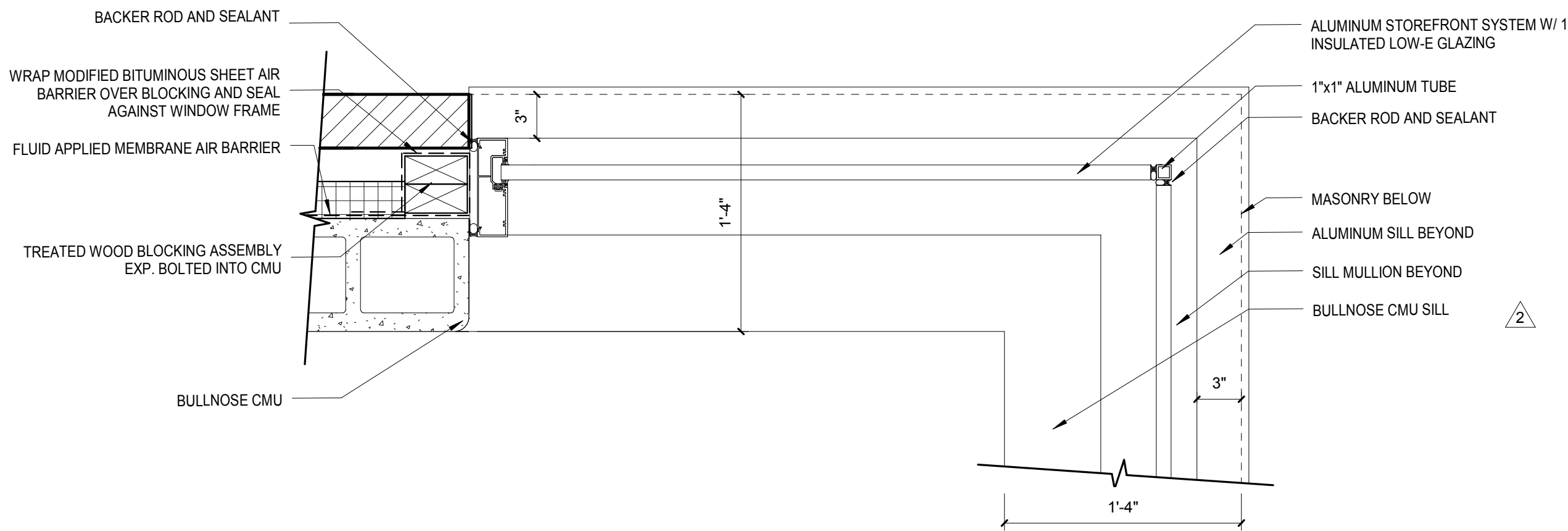
2 EXTERIOR PLAN DETAIL - KINDERGARTEN SPECIAL SHAPE JAMB (TYP.)  
1 1/2" = 1'-0"



5 EXTERIOR PLAN DETAIL - ADMIN WINDOW JAMB AT SETBACK  
1 1/2" = 1'-0"

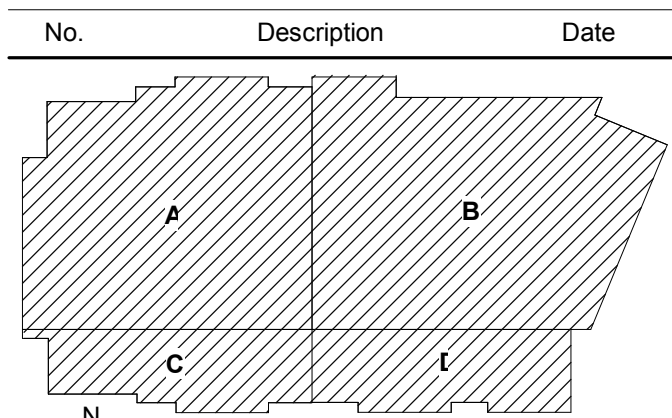


4 EXTERIOR PLAN DETAIL - ADMIN E WINDOW CORNER MULLION  
1 1/2" = 1'-0"



1 EXTERIOR PLAN DETAIL - KINDERGARTEN 330 E WINDOW CORNER MULLION, TYP.  
1 1/2" = 1'-0"

3	ADDENDUM 05	05/22/2017
2	ADDENDUM 02	04/28/2017
1	ISSUED FOR BID	03/01/2017



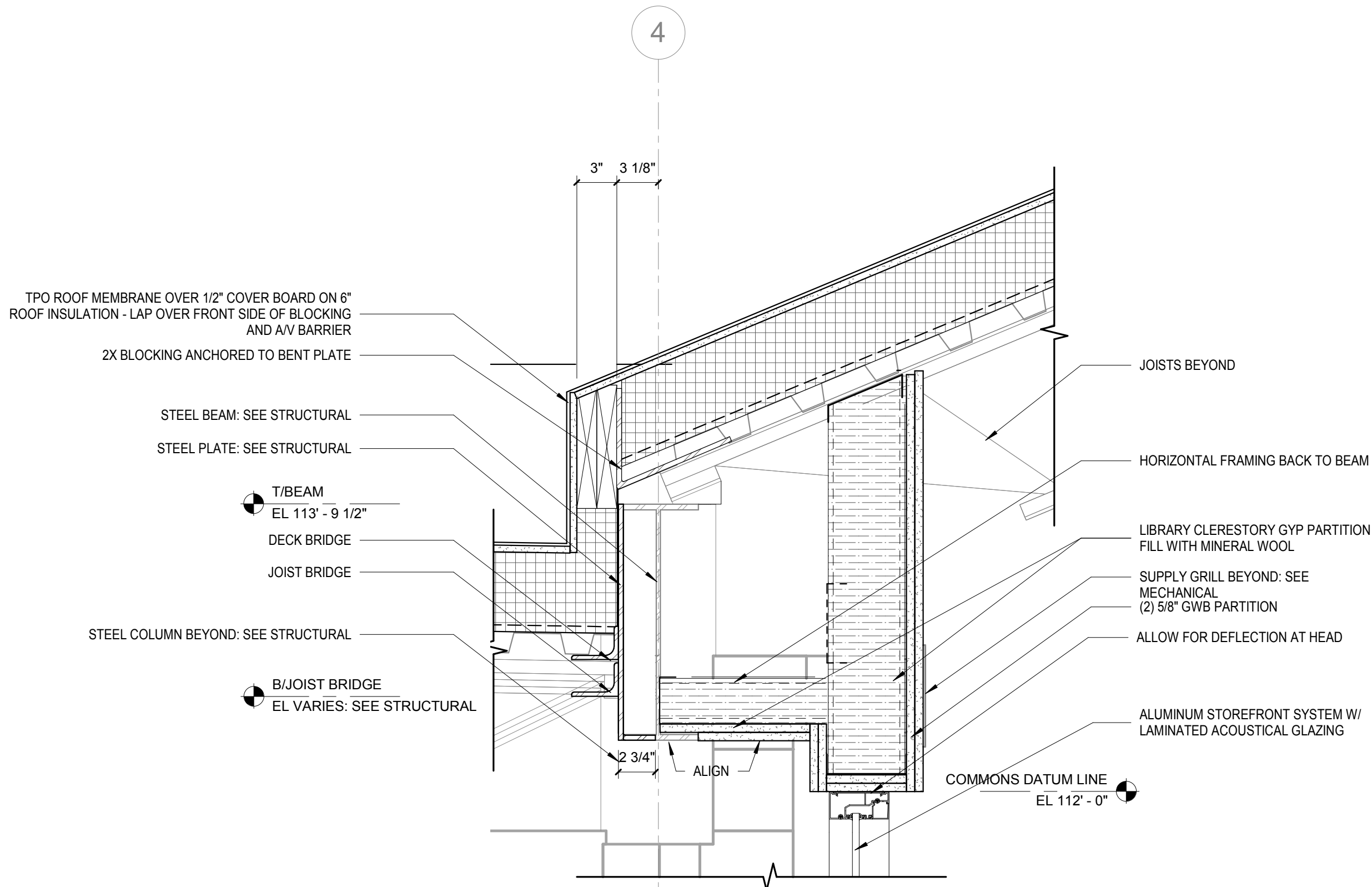
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Drawing Title:

EXTERIOR PLAN DETAILS

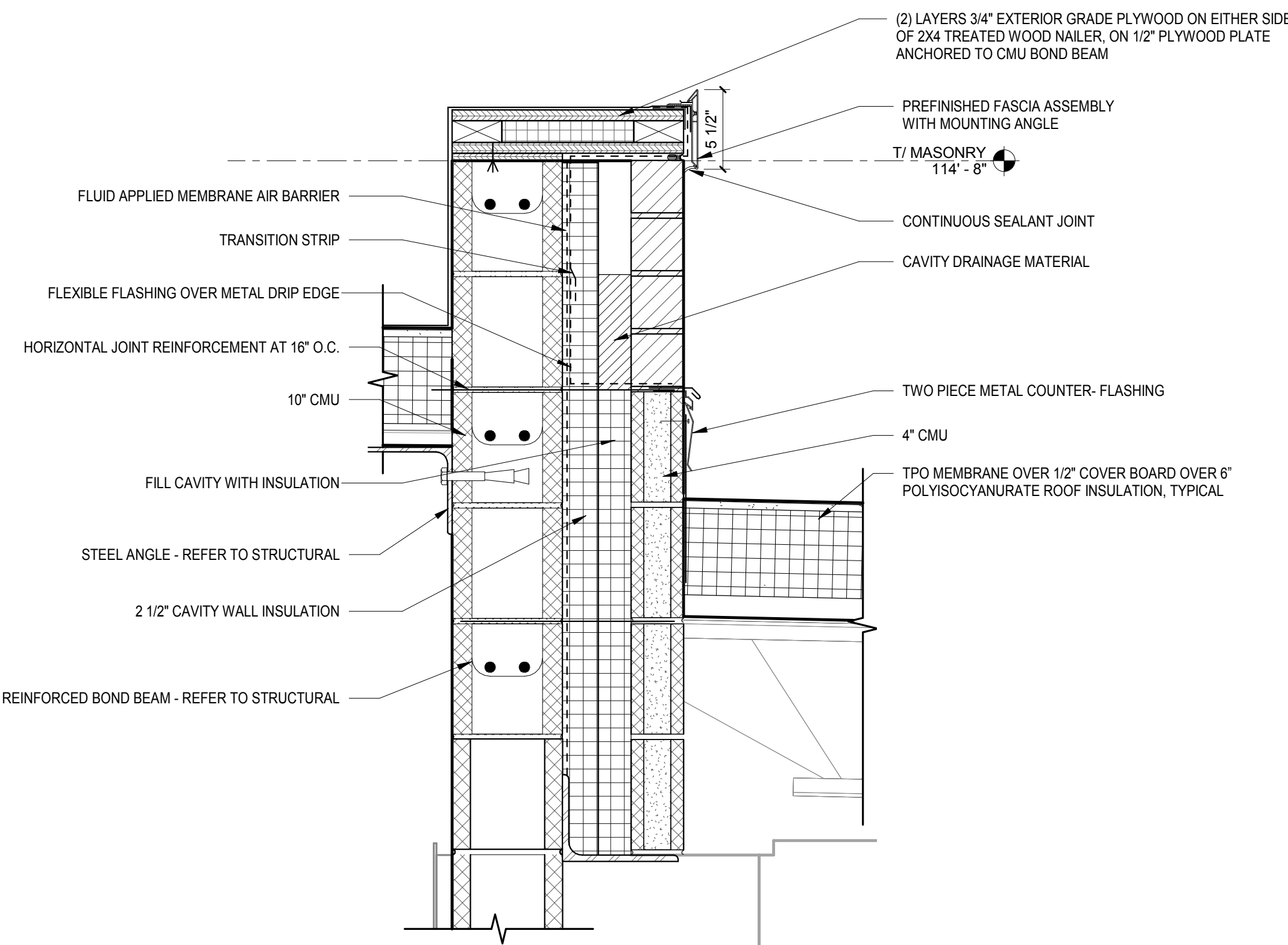
Project No.: 005005.04 Checked by: Checker

A0422

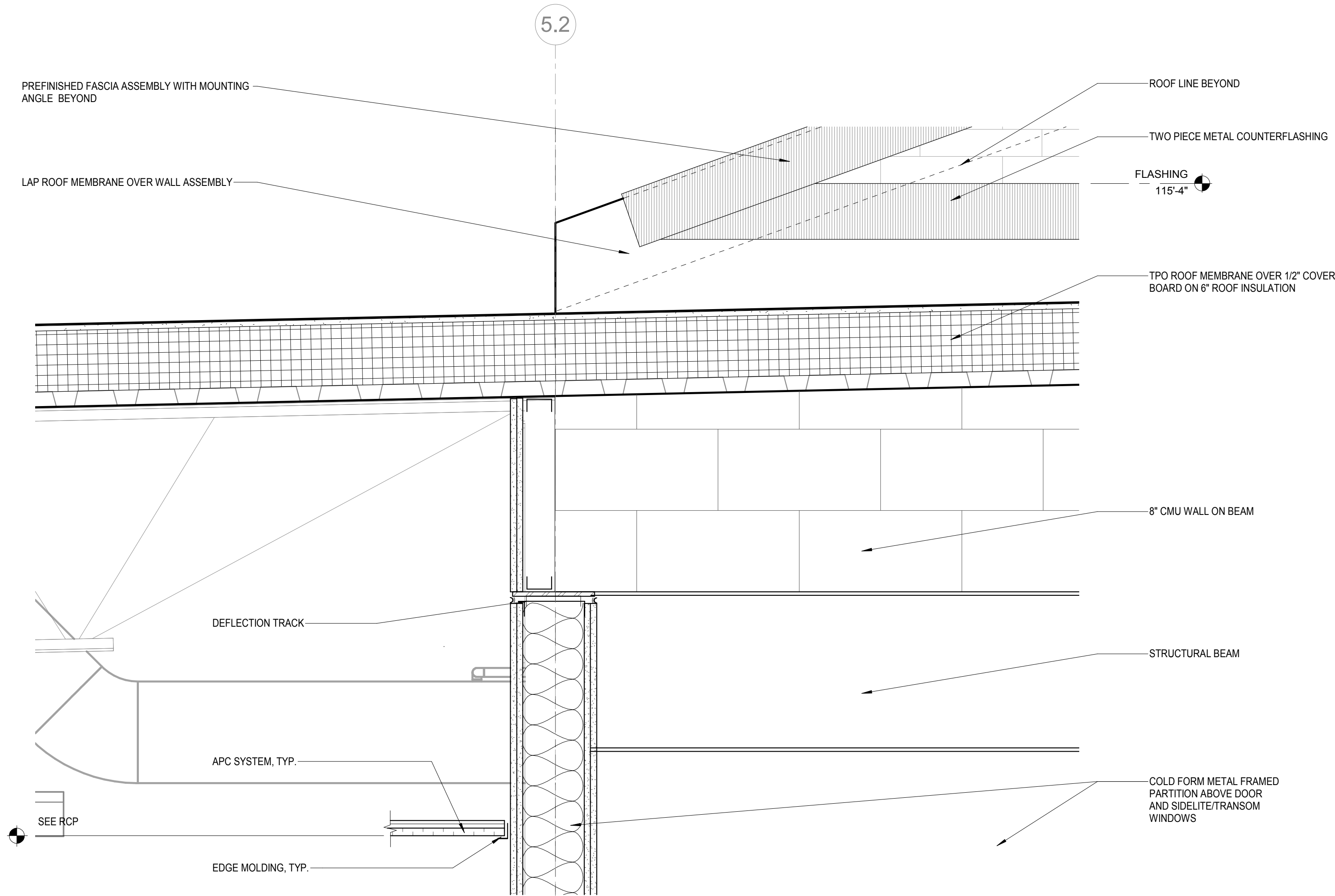




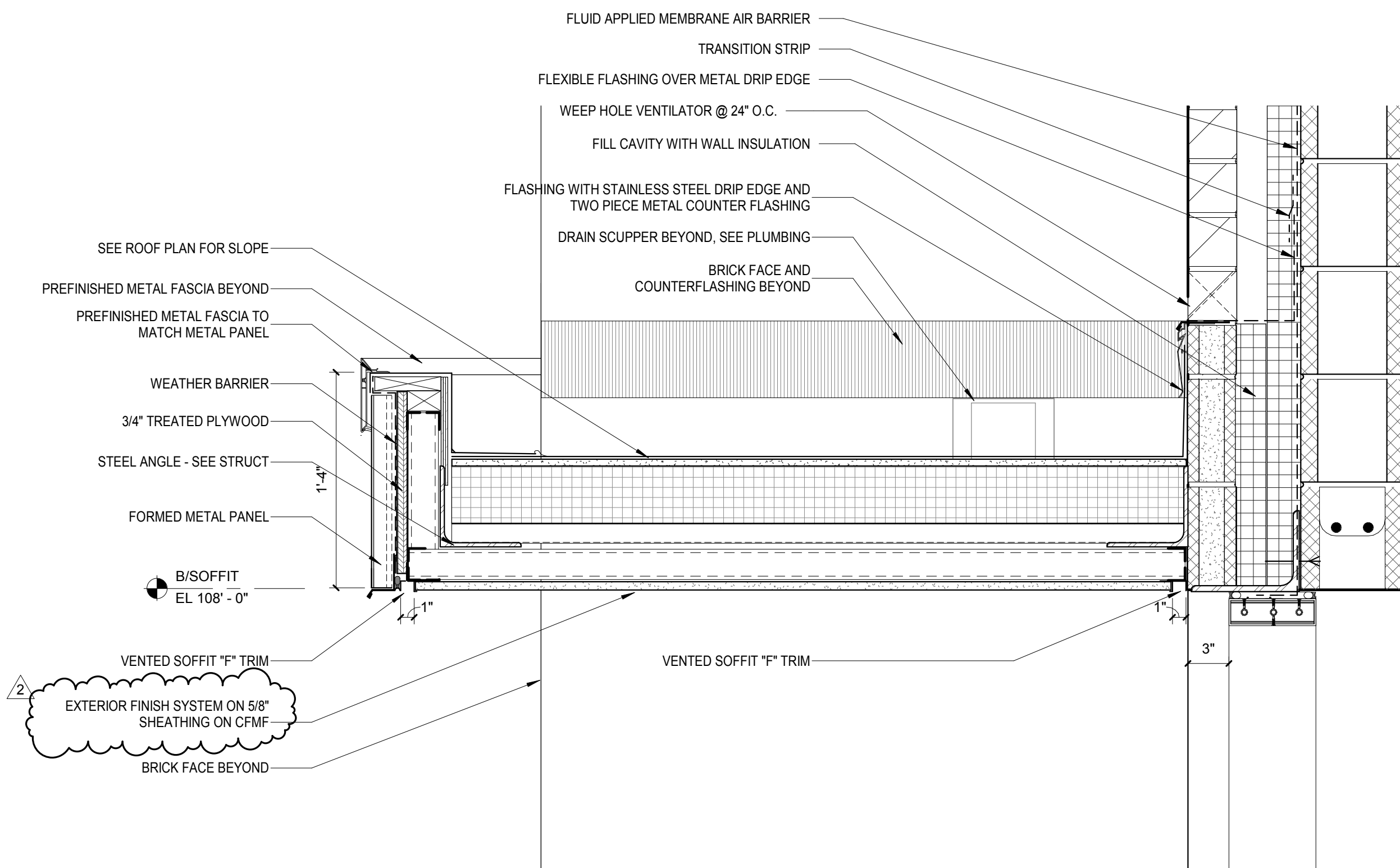
5 NORTH CLERESTORY - LIBRARY ROOF TRANSITION  
1 1/2" = 1'-0"



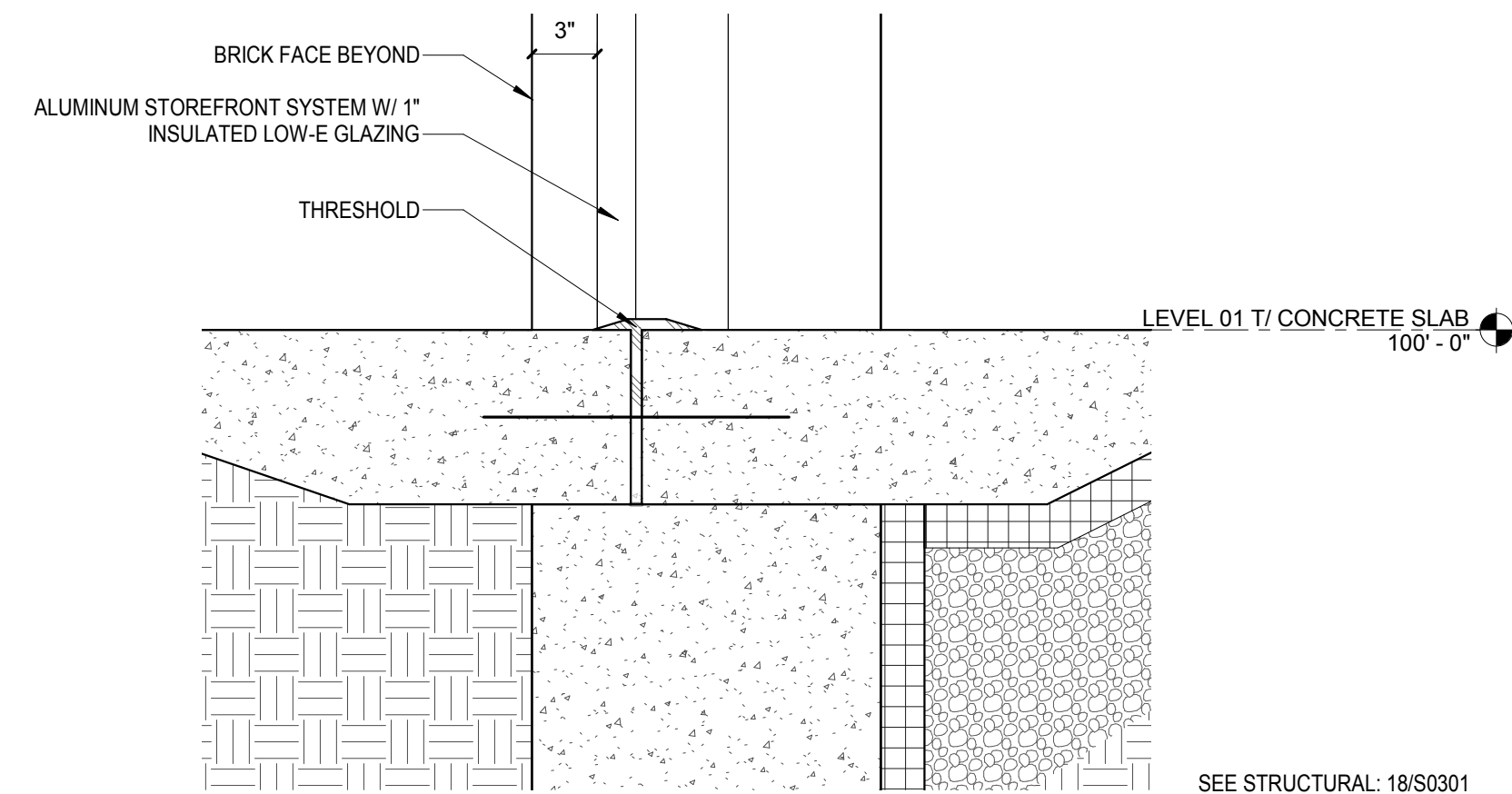
4 LIBRARY E WALL AT LOWER ROOF  
1 1/2" = 1'-0"



3 1ST AND 2ND GRADE COLLABORATION ROOF TRANSITION (TYP.)  
1 1/2" = 1'-0"



2 CENTRAL NORTH CORRIDOR ENTRY CANOPY (TYP.)  
1 1/2" = 1'-0"

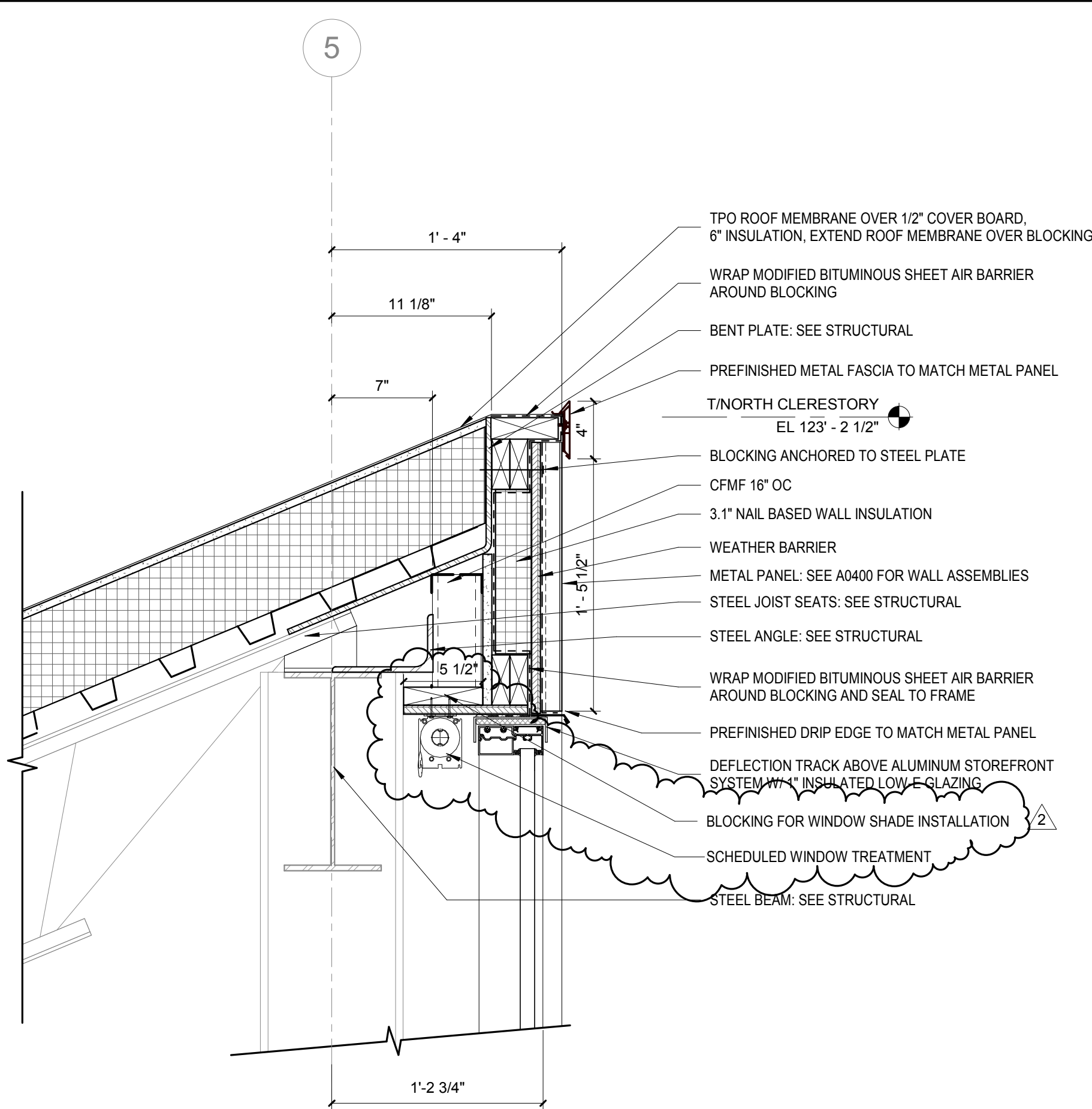


1 CENTRAL NORTH CORRIDOR ENTRY SLAB / SIDEWALK TRANSITION  
1 1/2" = 1'-0"

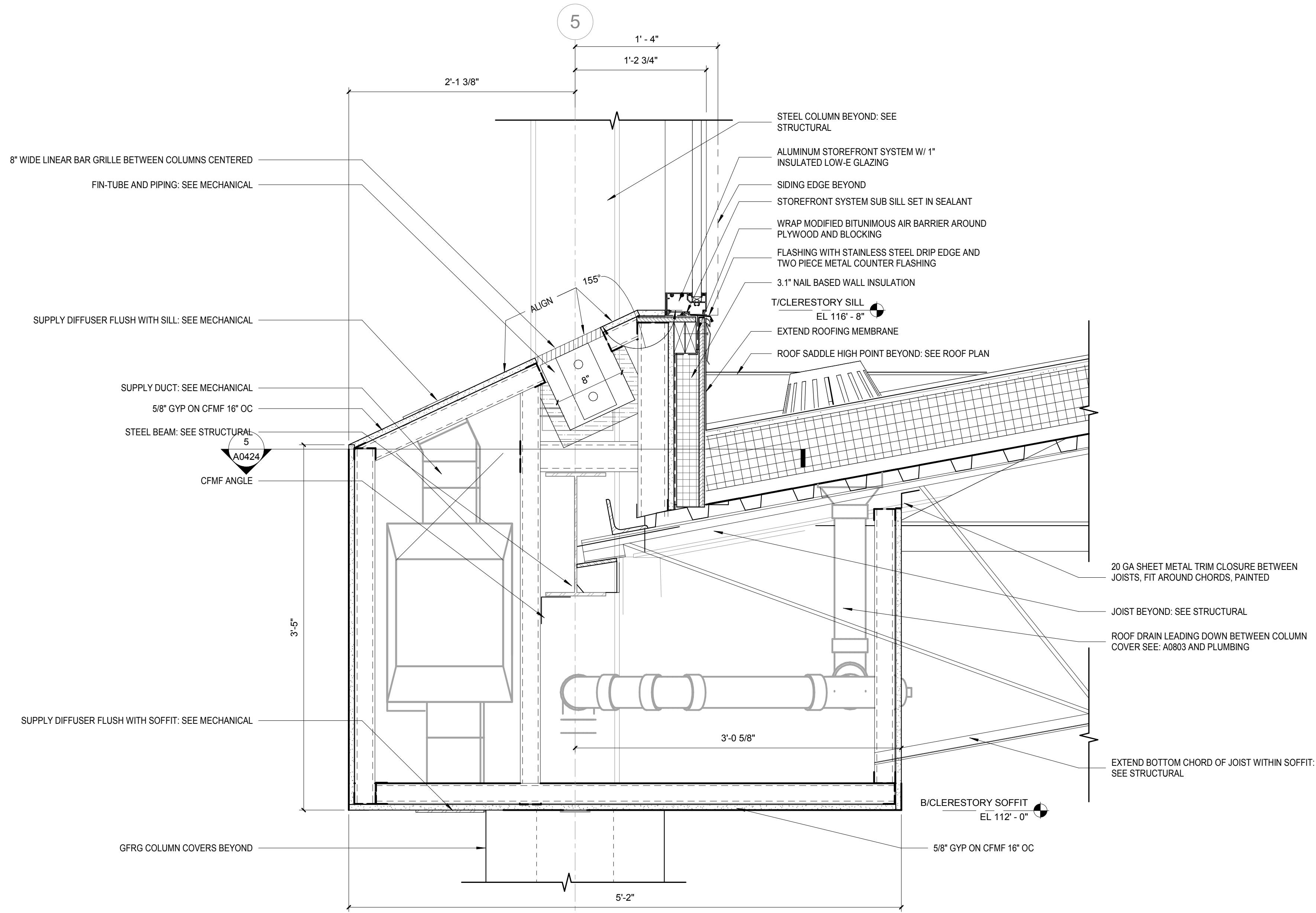
#### A0400 SERIES GENERAL NOTES

1. FLUID APPLIED MEMBRANE AIR BARRIER IS TO BE USED FOR ALL CMU SUBSTRATES. USE TRANSITION STRIP OVERLAPPING THE FLEXIBLE FLASHING AND SEALING AGAINST FLUID APPLIED MEMBRANE AIR BARRIER.
2. MODIFIED BITUMINOUS SHEET AIR BARRIER IS TO BE USED FOR ALL COLD FORM METAL FRAMED GYPSUM SHEETING SUBSTRATES. ALSO USE AS A TRANSITION FROM FLUID APPLIED AIR BARRIER TO SEAL AGAINST ADJACENT MATERIALS PER SPECIFICATION.





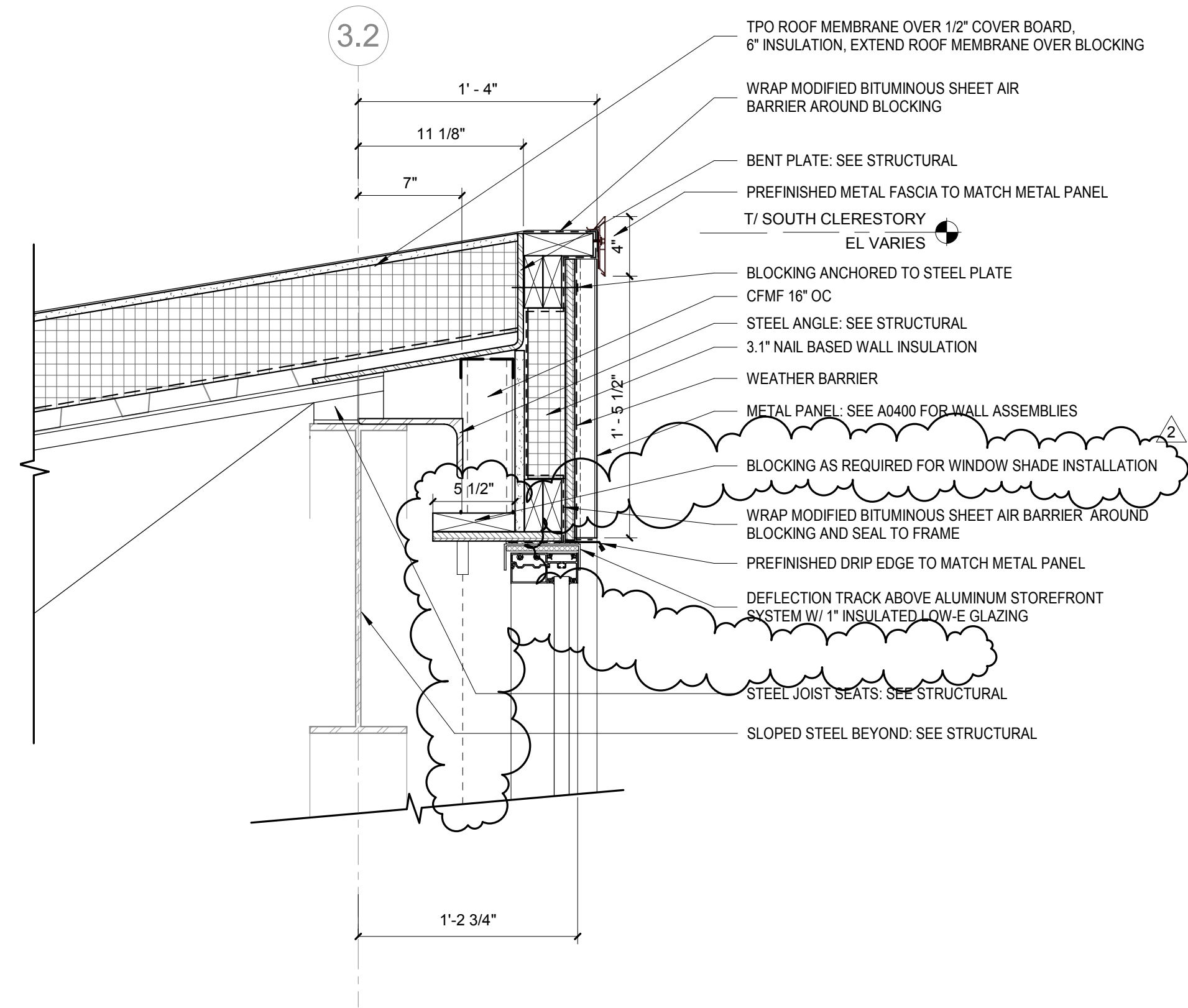
4 ROOF @ TOP OF CLERESTORY NORTH, TYP.  
1 1/2" = 1'-0"



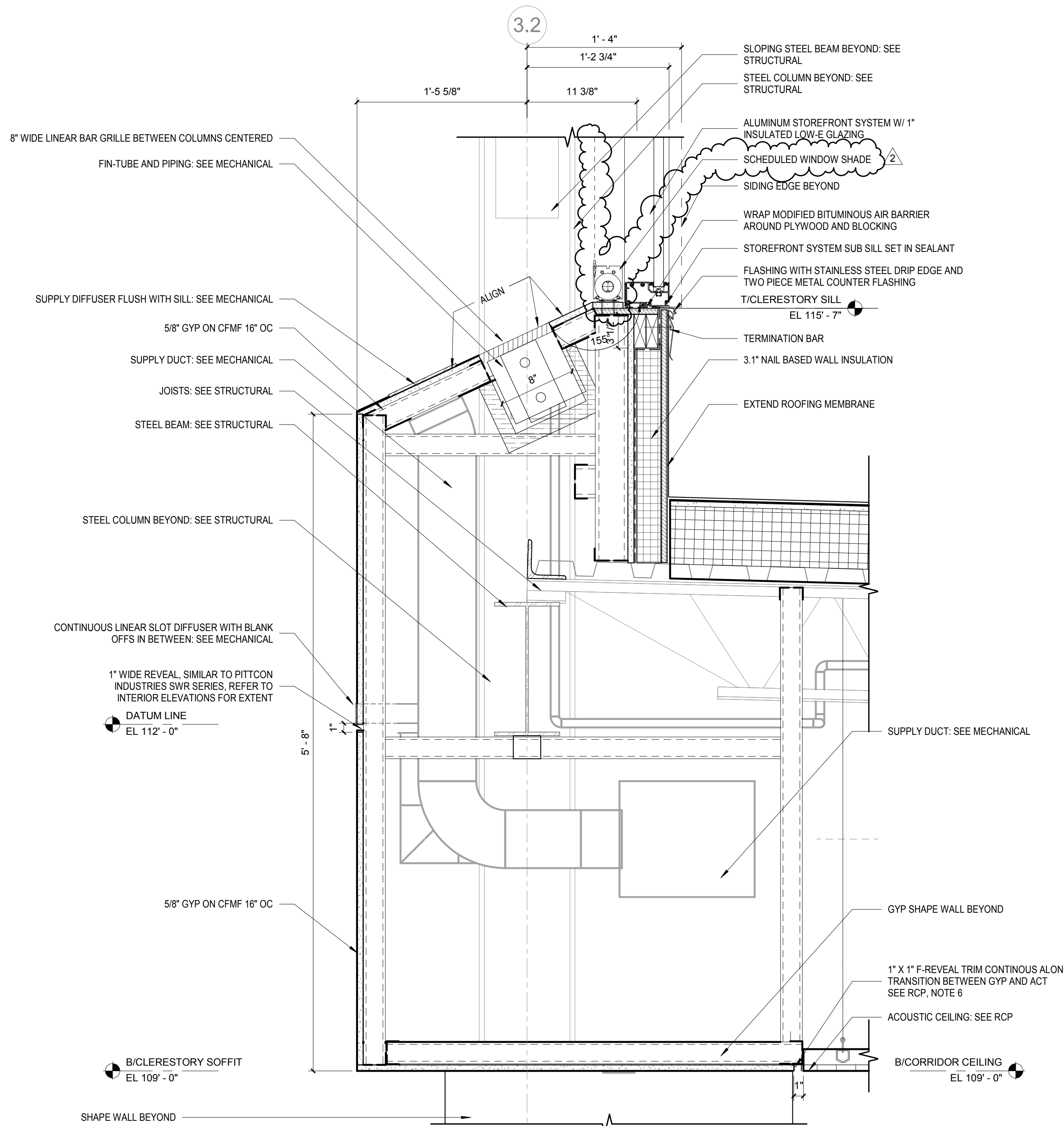
3 SILL/SOFFIT @ CLERESTORY NORTH, TYP.  
1 1/2" = 1'-0"

#### A0400 SERIES GENERAL NOTES

1. FLUID APPLIED MEMBRANE AIR BARRIER IS TO BE USED FOR ALL CMU SUBSTRATES. USE TRANSITION STRIP OVERLAPPING THE FLEXIBLE FLASHING AND SEALING AGAINST FLUID APPLIED MEMBRANE AIR BARRIER.
2. MODIFIED BITUMINOUS SHEET AIR BARRIER IS TO BE USED FOR ALL COLD FORM METAL FRAMED GYPSUM SHEETING SUBSTRATES. ALSO USE AS A TRANSITION FROM FLUID APPLIED AIR BARRIER TO SEAL AGAINST ADJACENT MATERIALS PER SPECIFICATION.

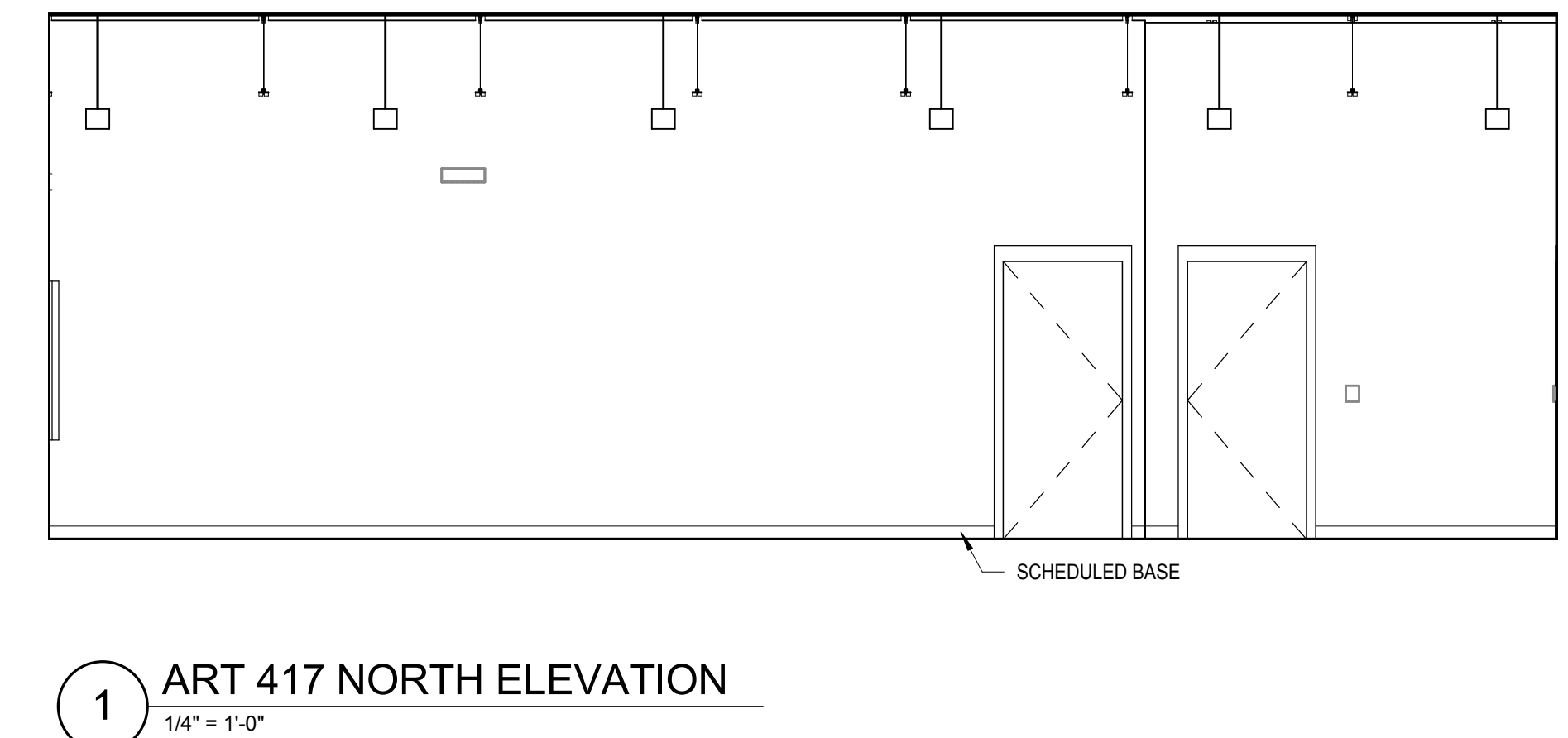
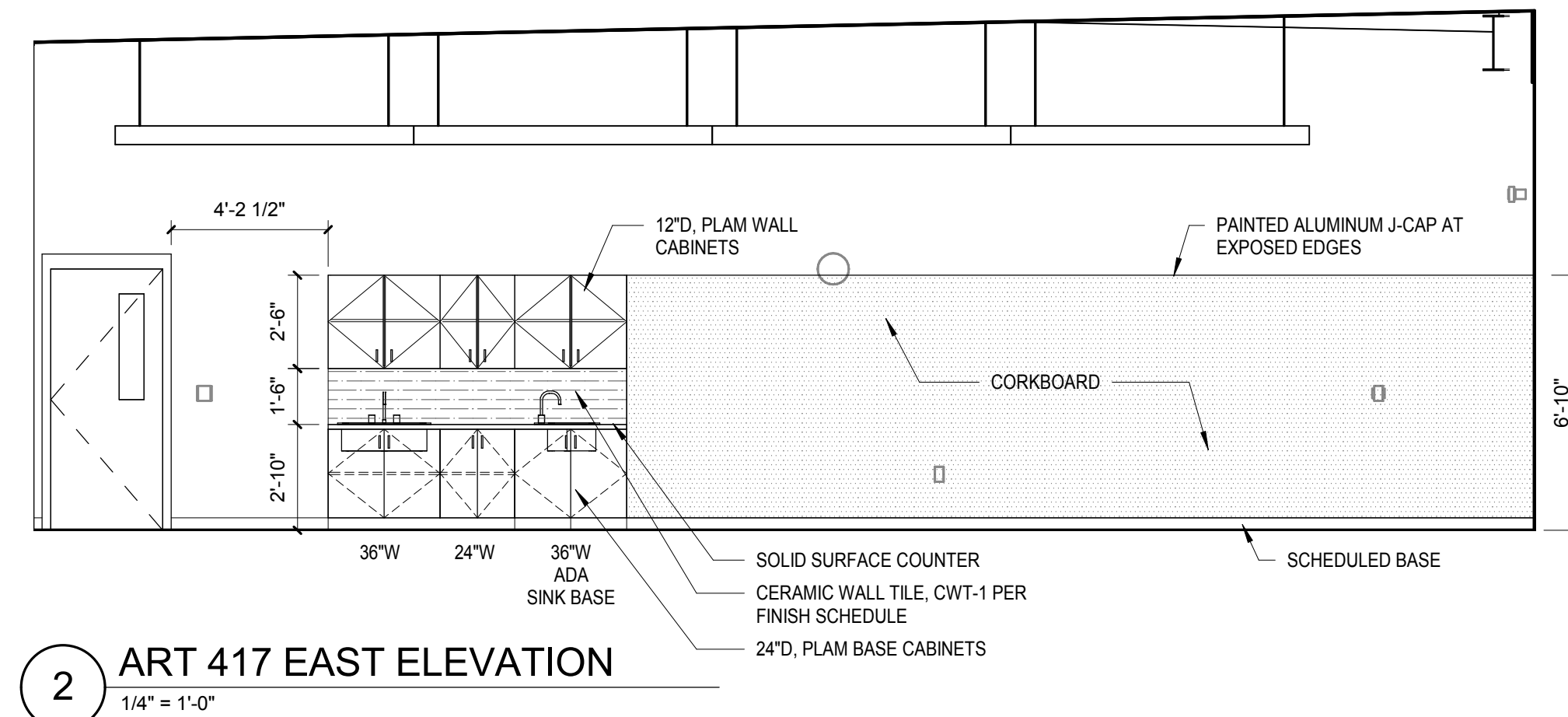
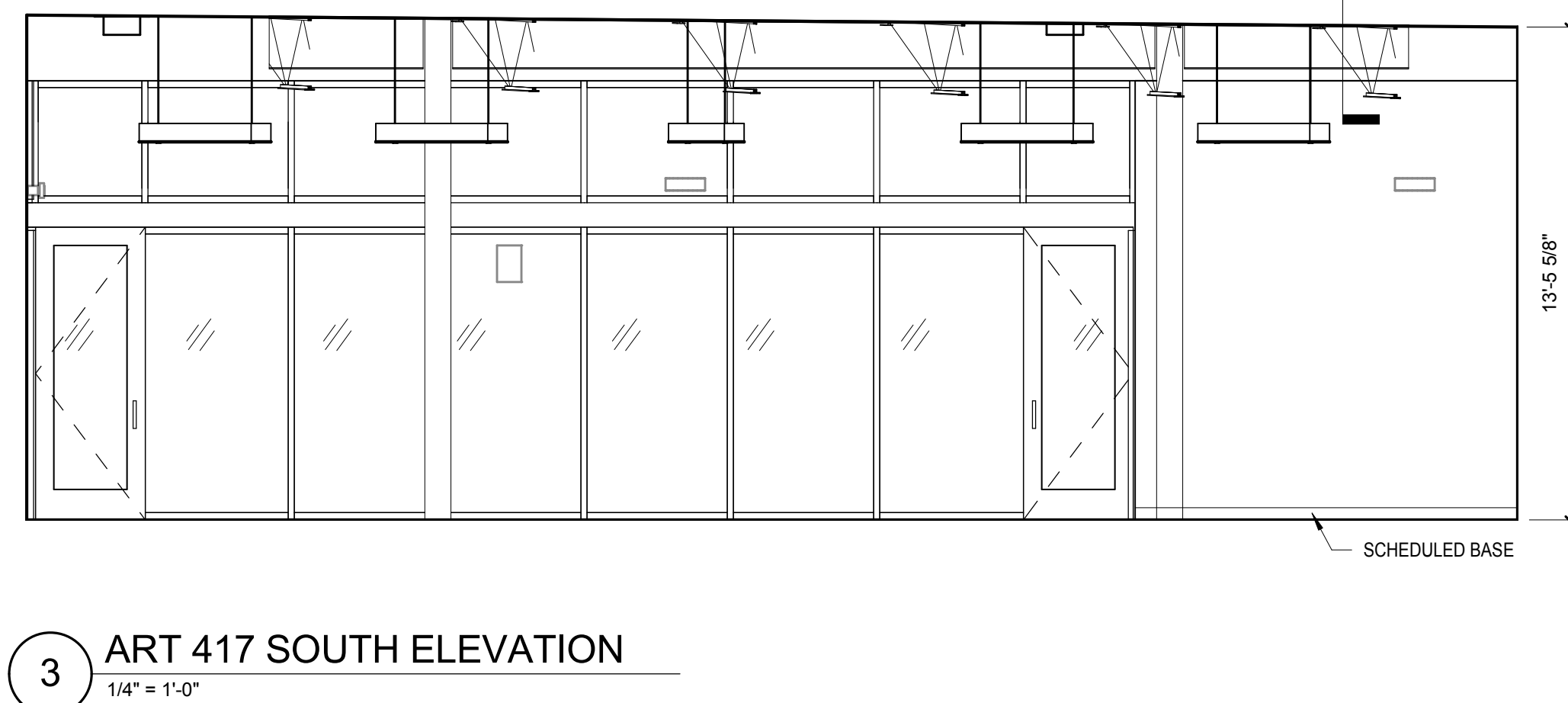
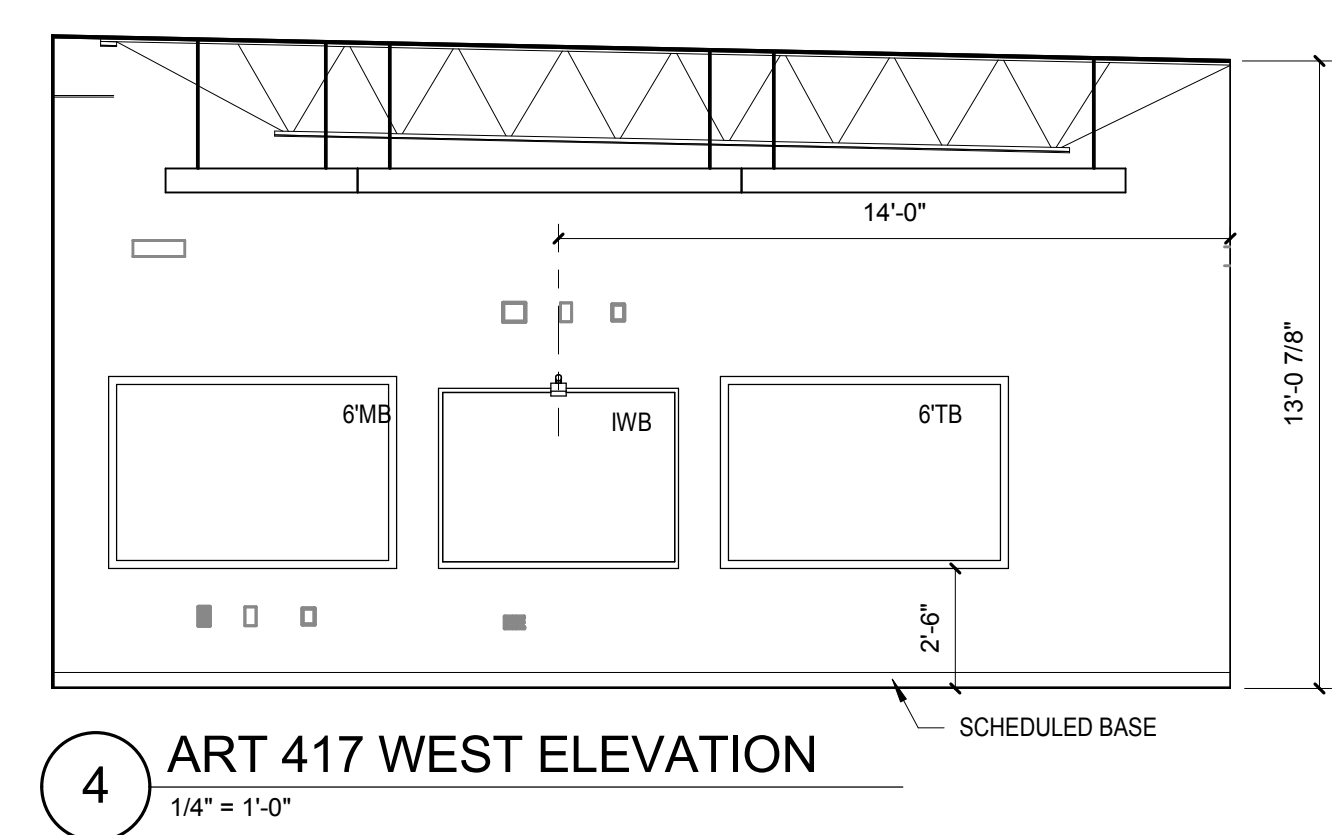
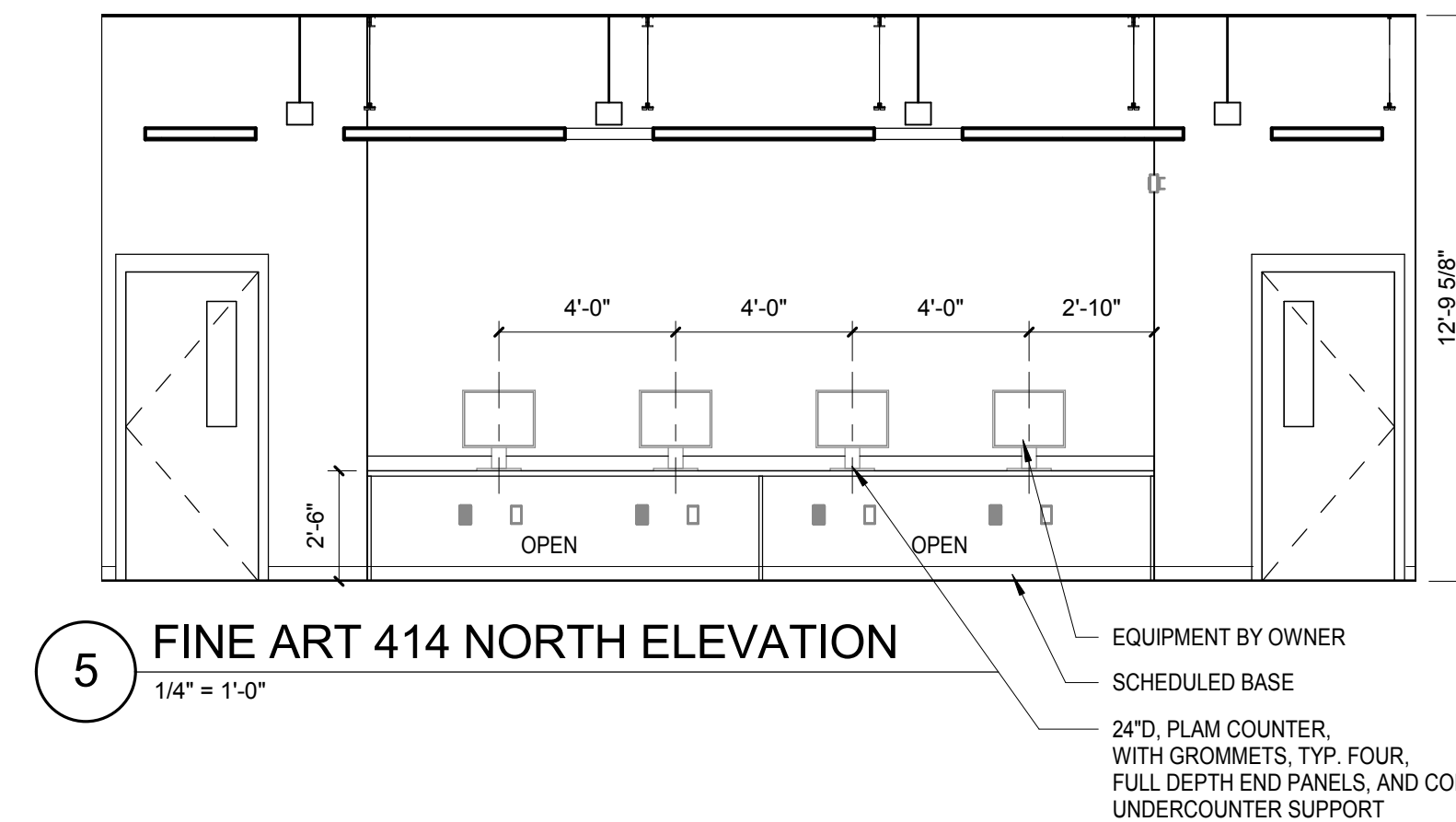
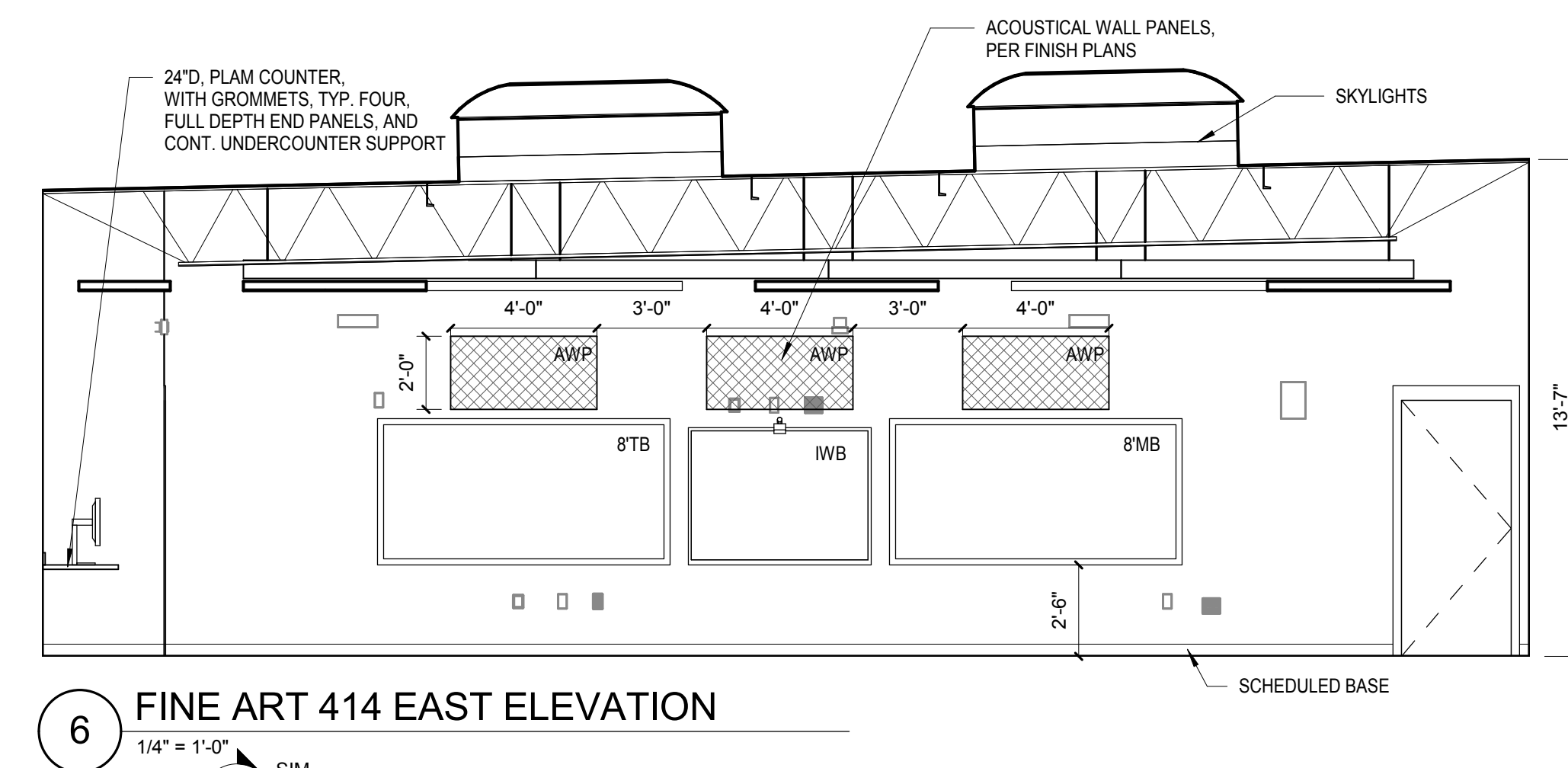
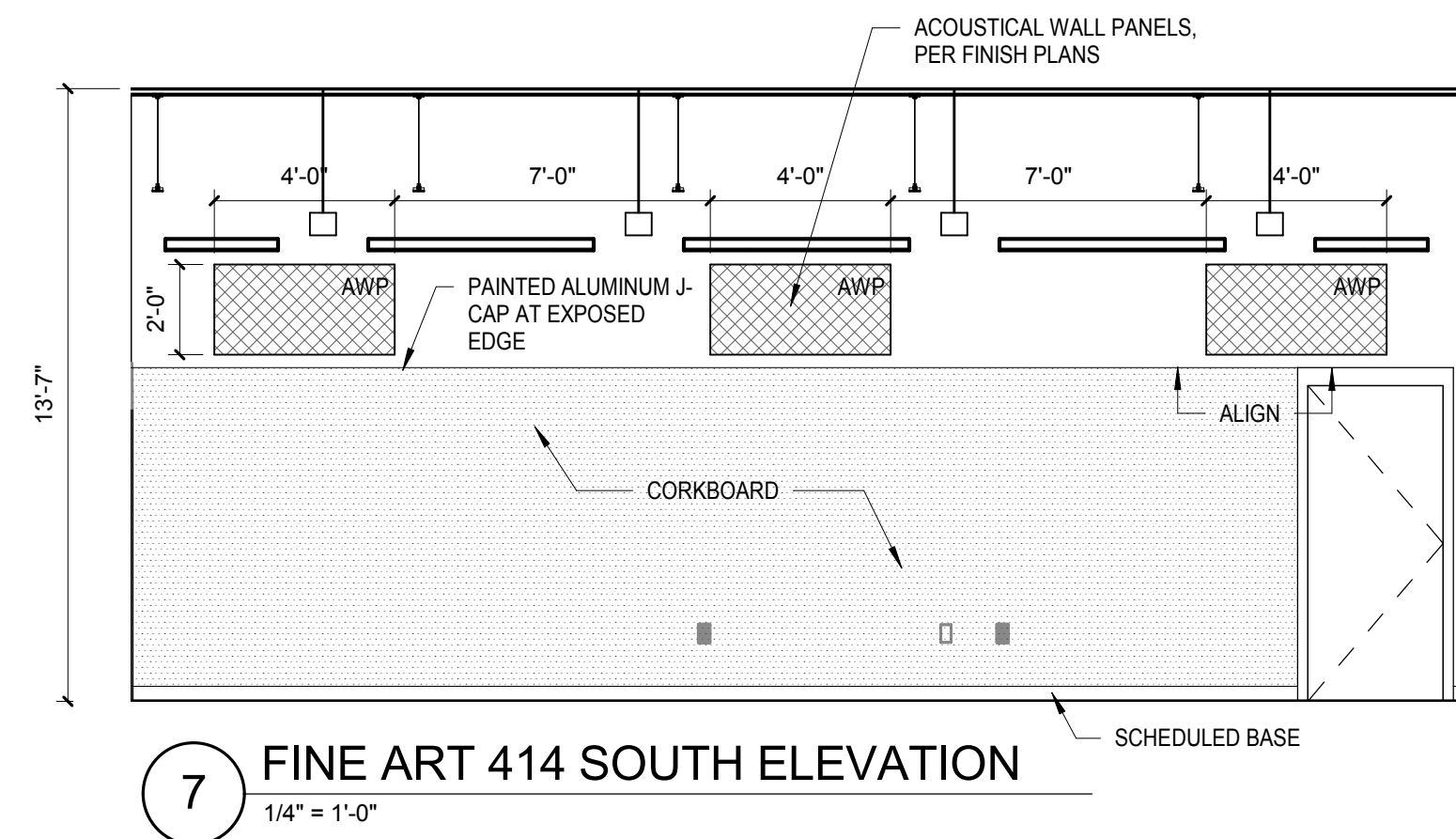
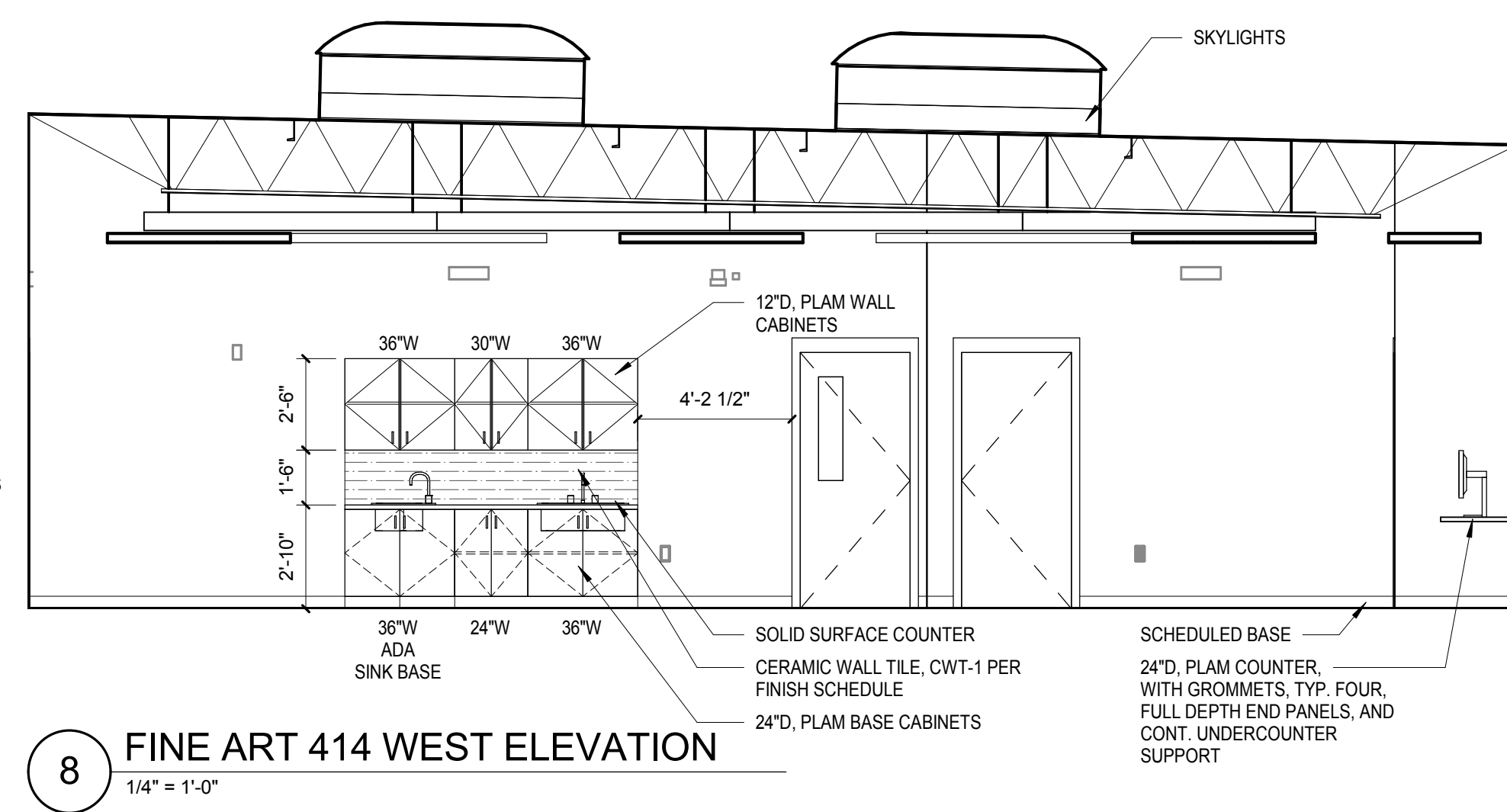
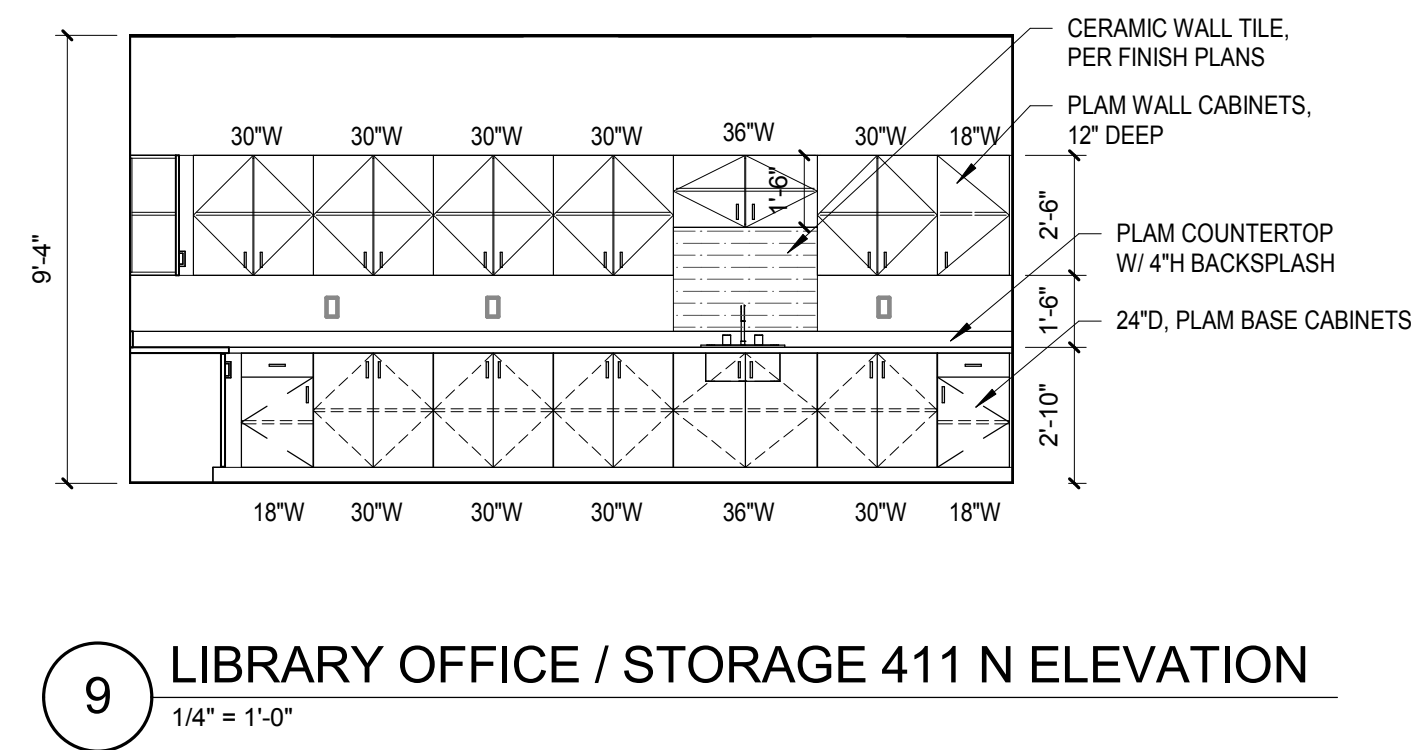
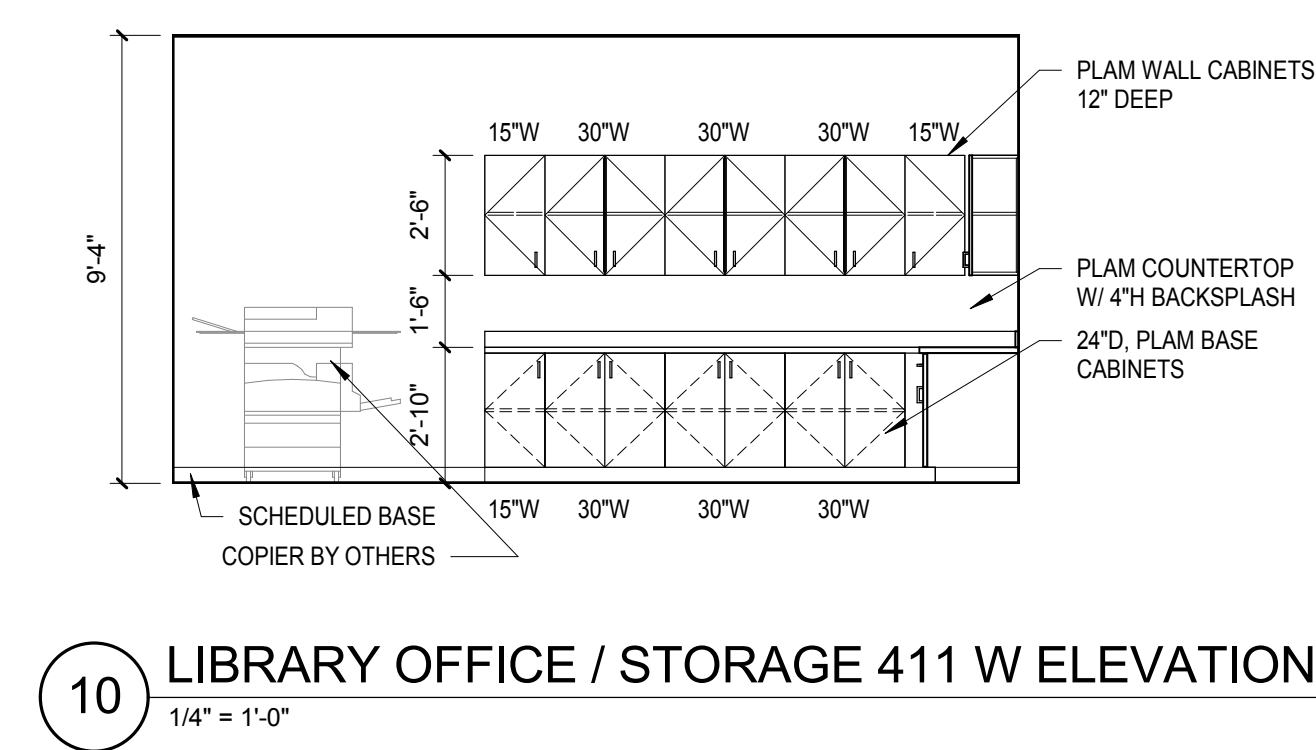
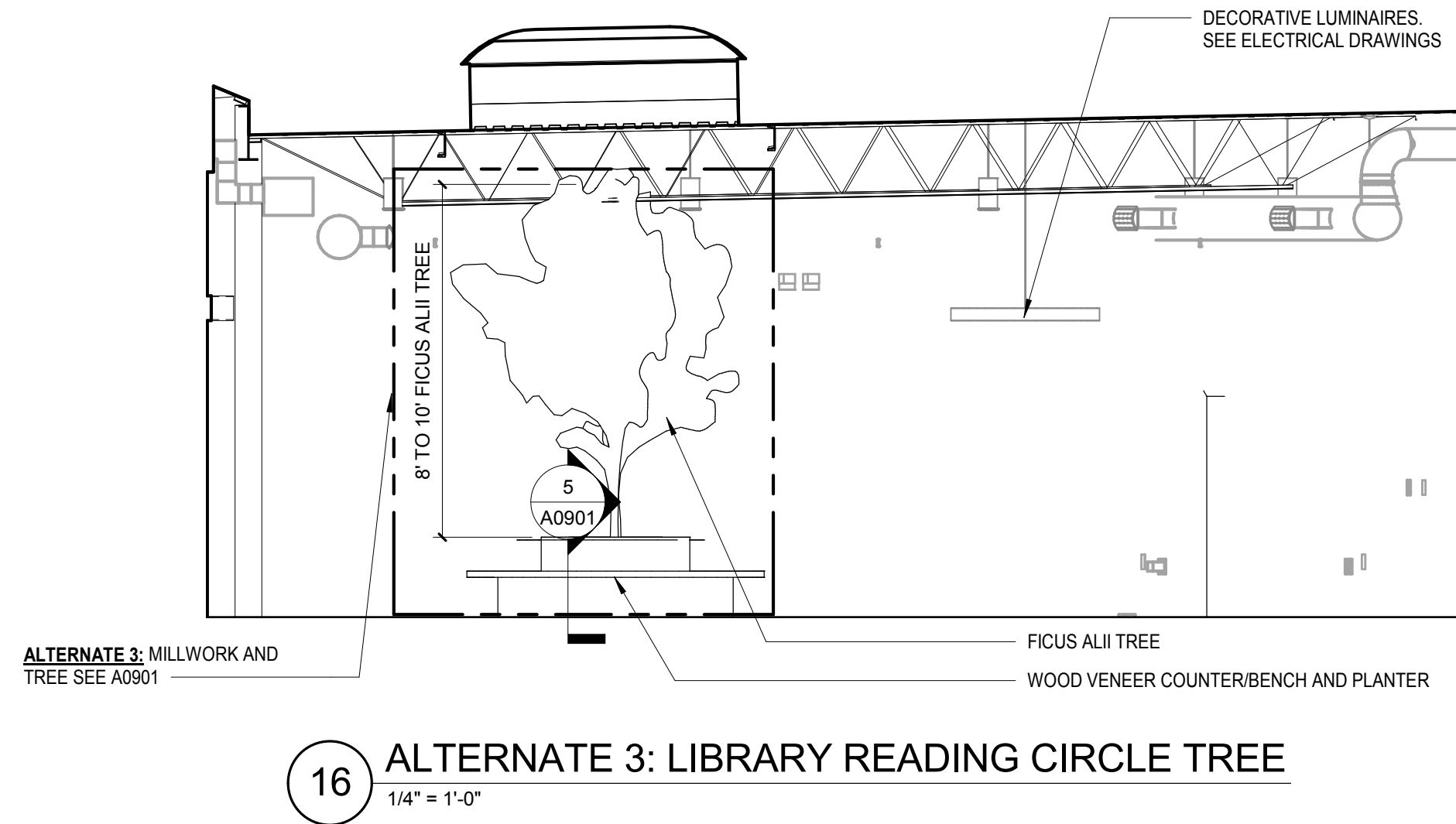
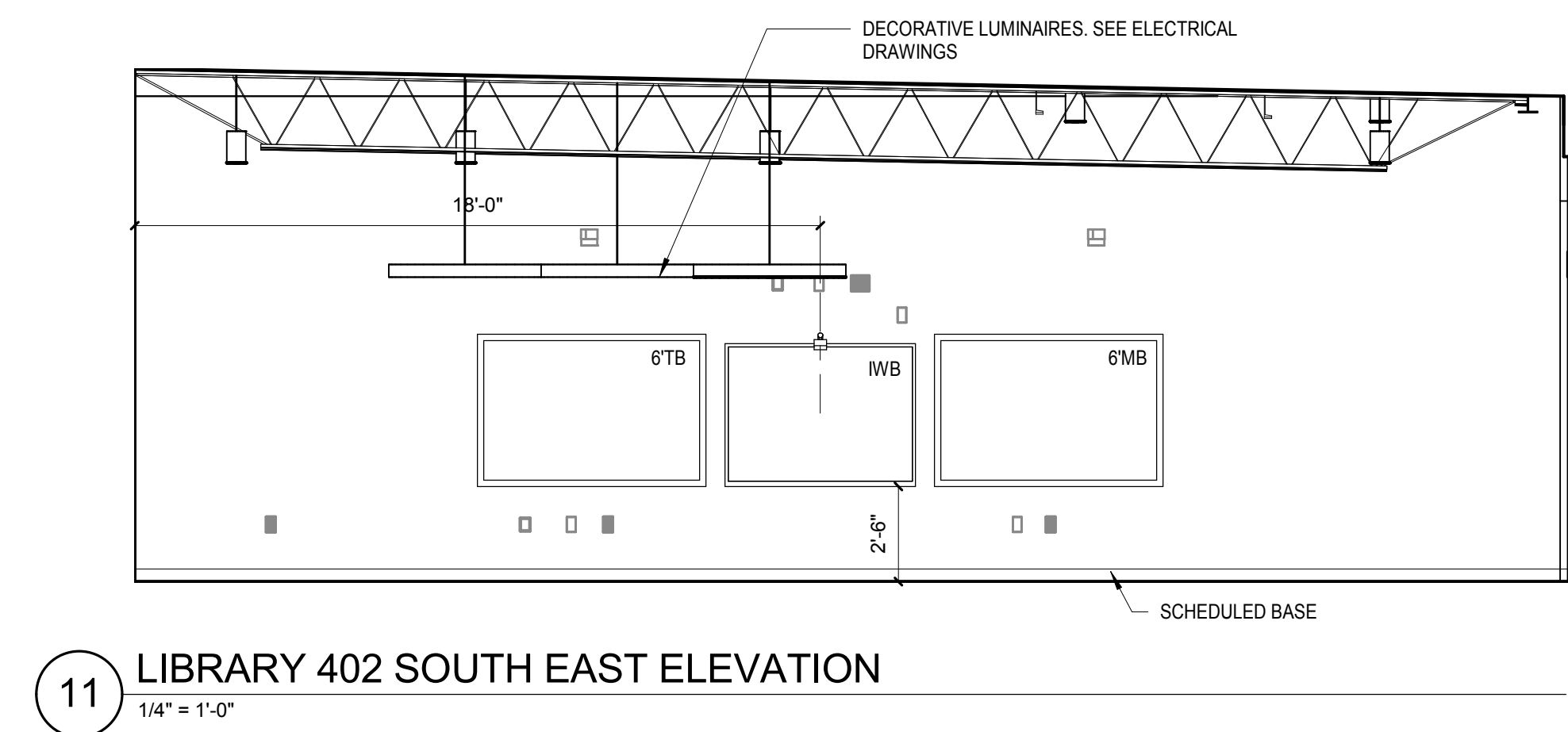
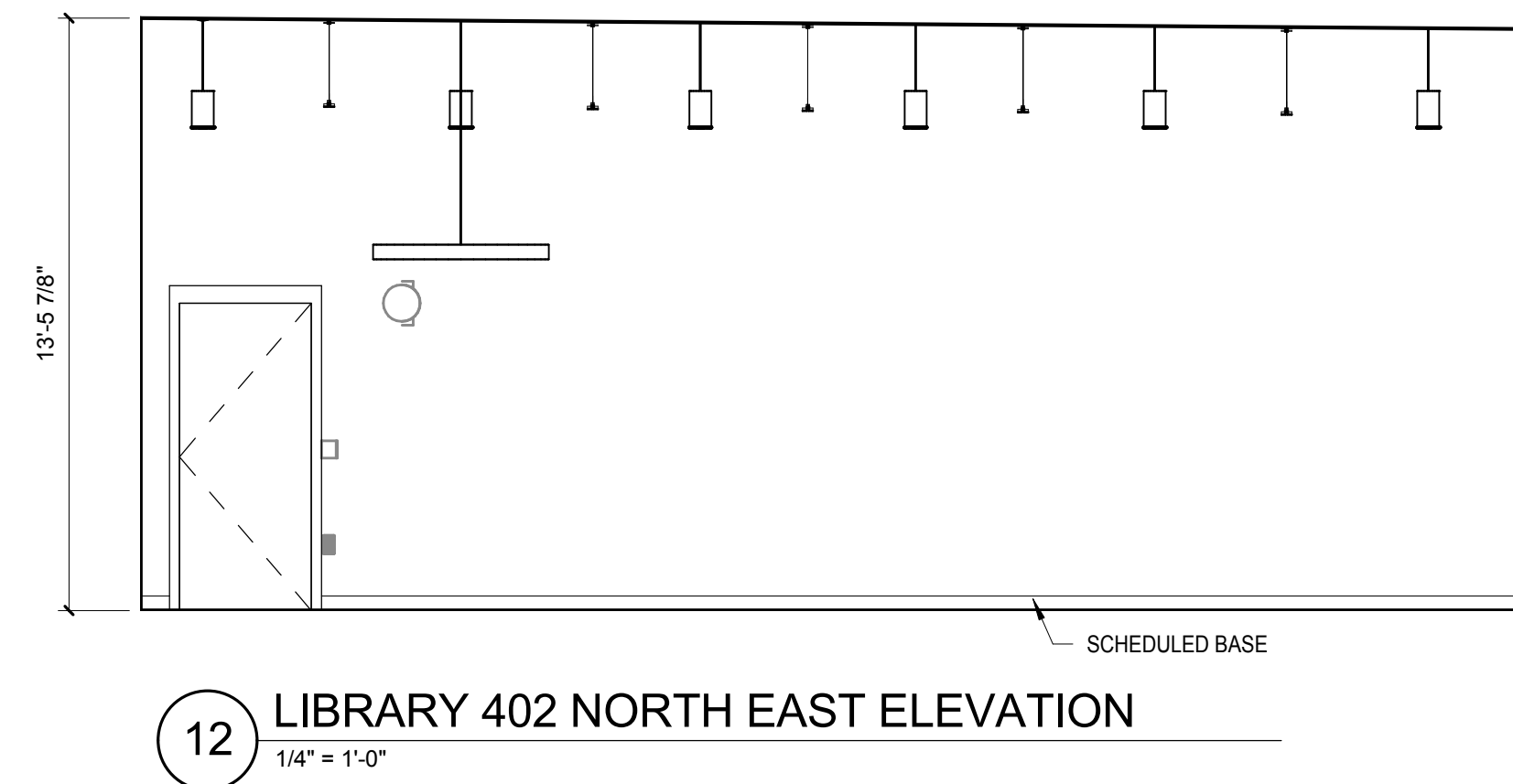
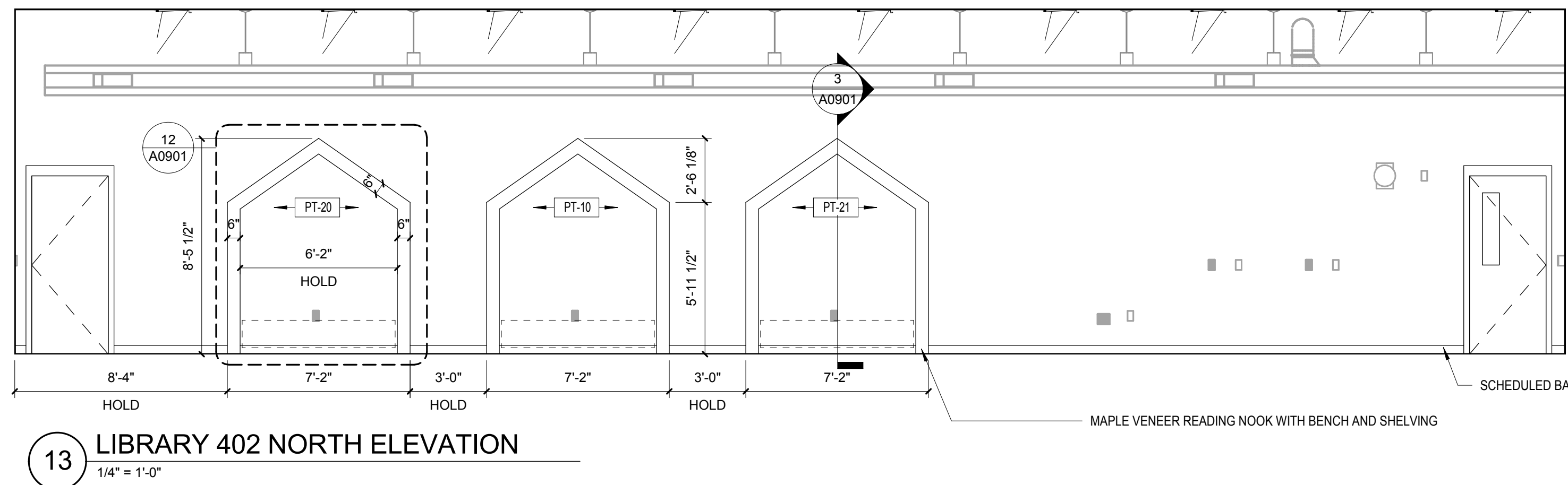
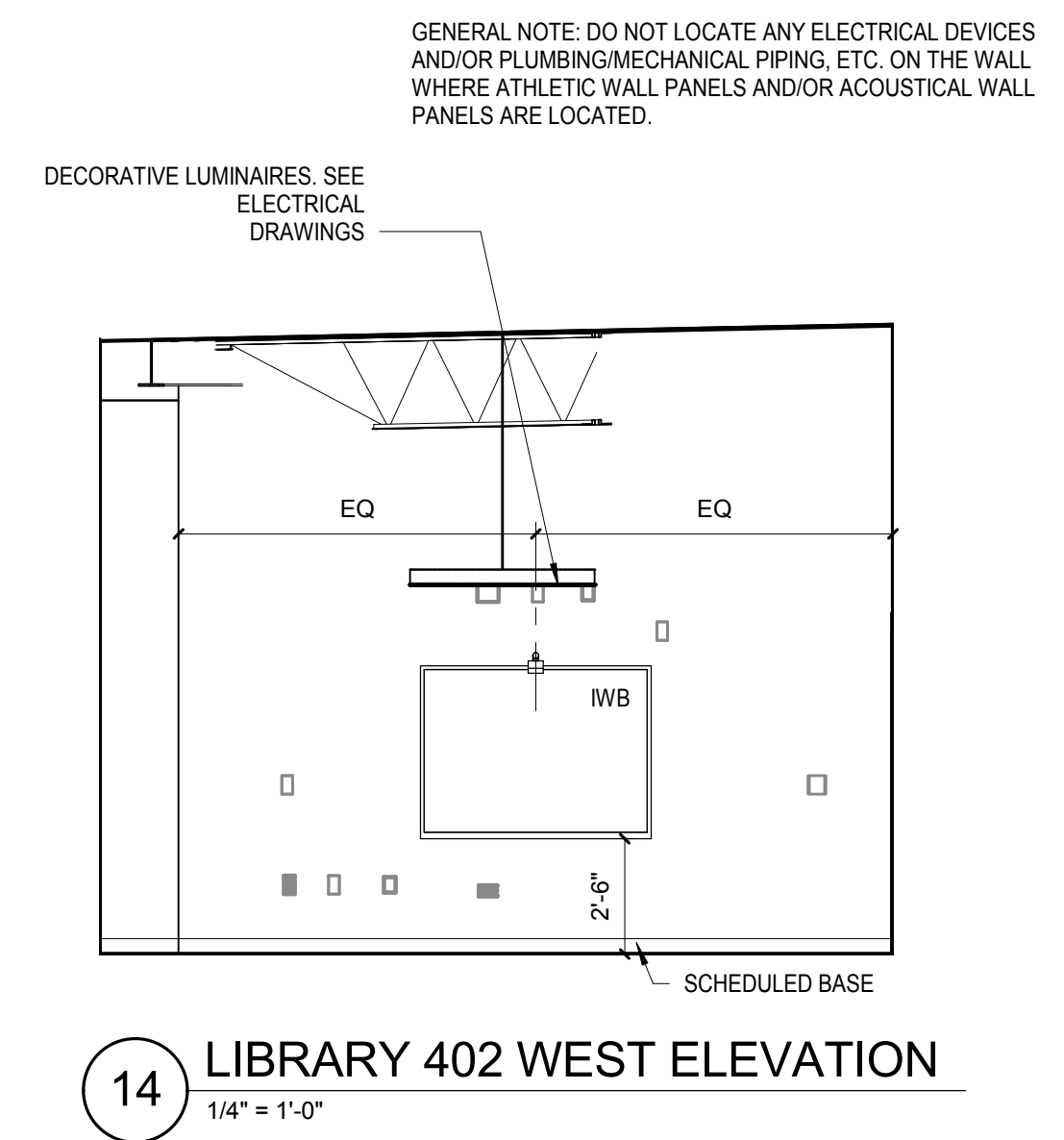
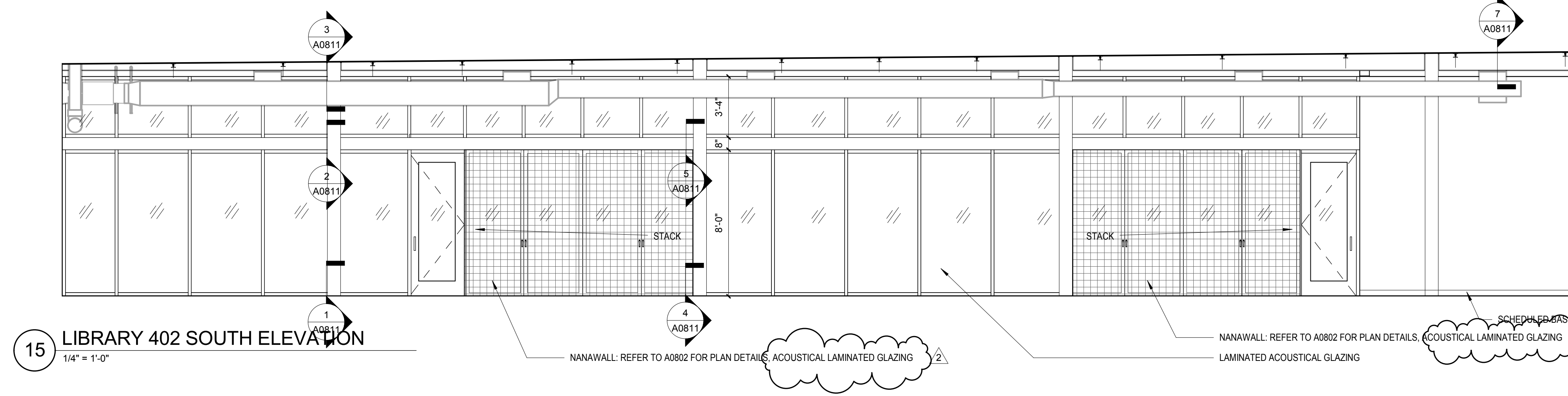


2 ROOF @ TOP OF CLERESTORY SOUTH, TYP.  
1 1/2" = 1'-0"

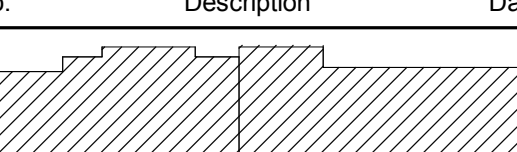


1 SILL/SOFFIT @ CLERESTORY SOUTH, TYP.  
1 1/2" = 1'-0"





2	ADDENDUM 05	05/22/2017
1	ISSUED FOR BID	03/01/2017

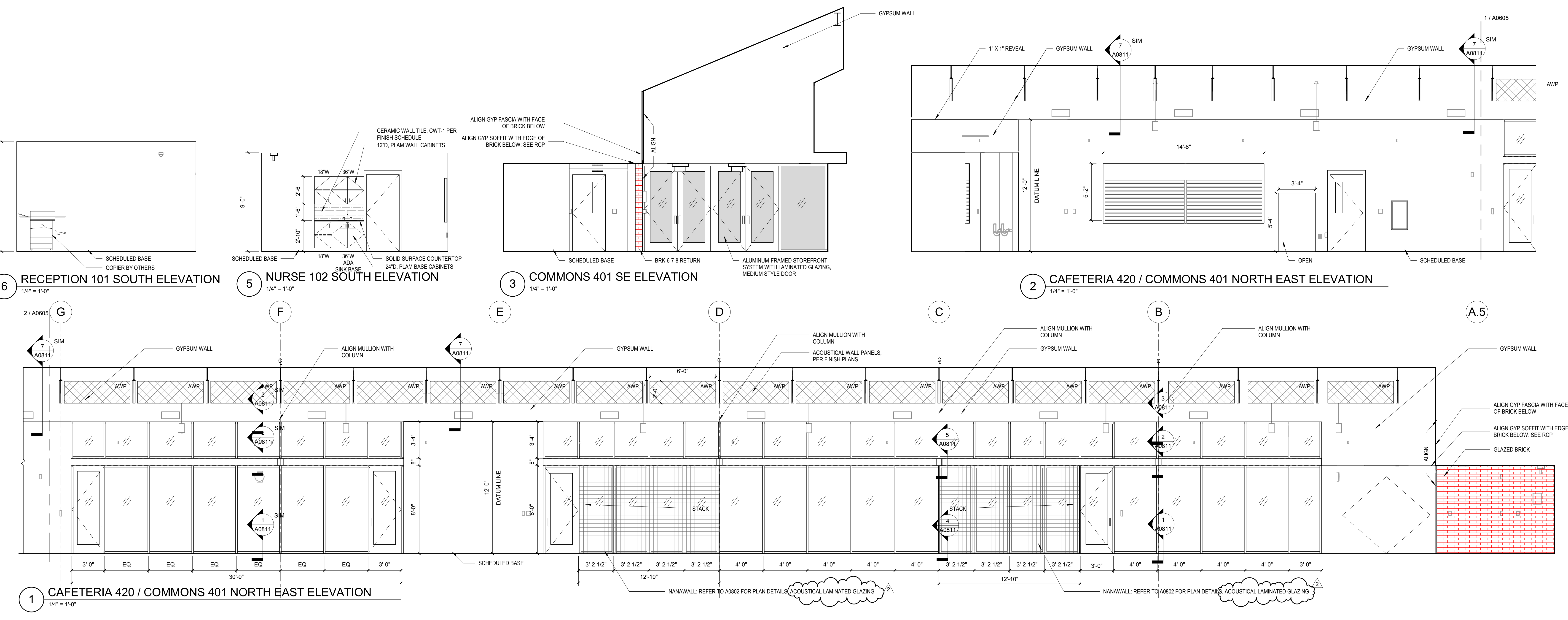
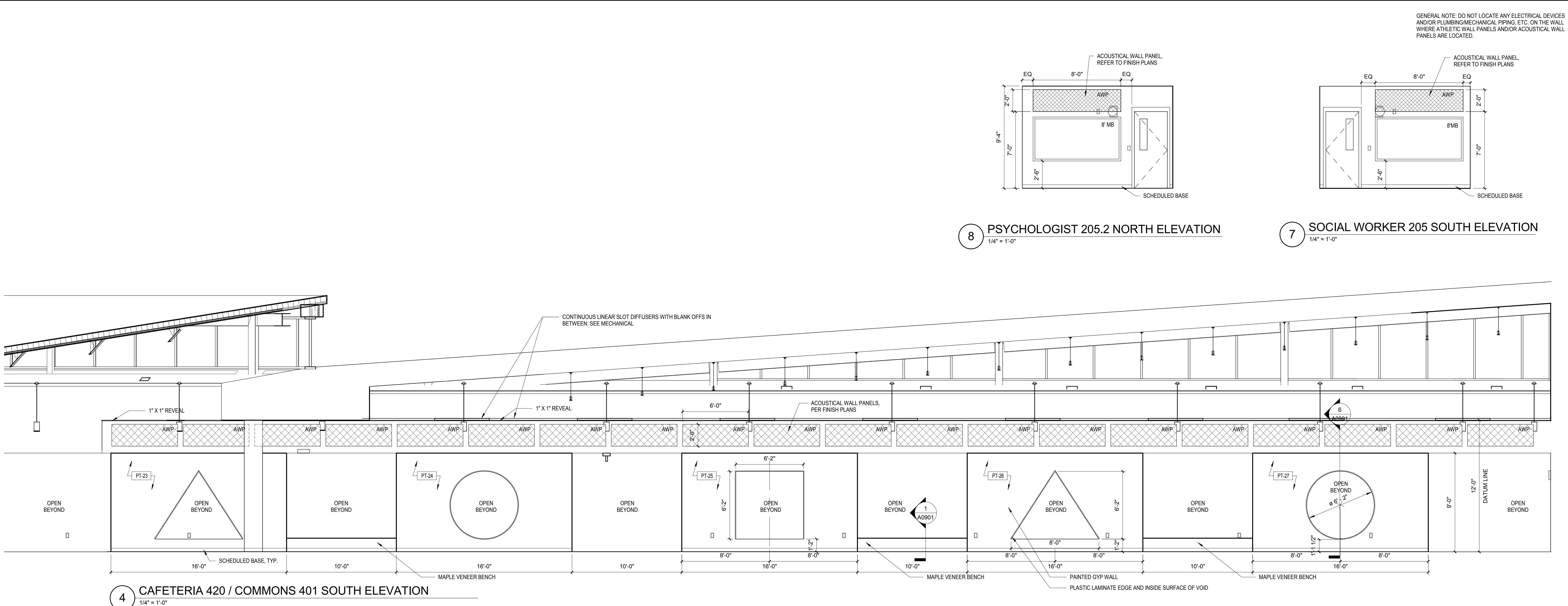
No.	Description	Date
		

**KEY PLAN**

Drawing Title: \_\_\_\_\_



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ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

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2  
1

ADDENDUM 05  
ISSUED FOR BID

05/22/2017  
03/01/2017

No.	Description	Date
A	ALIGN GYP FASCIA WITH FACE OF BRICK BELOW	
B	ALIGN GYP SOFFIT WITH EDGE OF BRICK BELOW; SEE RCP	
C	GLAZED BRICK	

KEY PLAN

Drawing Title:

INTERIOR ELEVATIONS

Project No.: 005005.04      Checked by: Checker

A0605

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1. IN ALL AREAS, ALL CEILING GRIDS TO BE CENTERED IN ROOMS, IN BOTH DIRECTIONS, U.N.O.
2. IN ALL AREAS, ALL LIGHT FIXTURES AND DIFFUSERS TO BE CENTERED IN THE T.I.E. IN BOTH DIRECTIONS, U.N.O.
3. IN ALL AREAS, ALL SPRINKLER HEADS TO BE CENTERED IN THE T.I.E. IN BOTH DIRECTIONS U.N.O.
4. IN ALL PAINTED CMU WALLS, LINTEL TO BE PAINTED TO MATCH ADJACENT WALL.
5. FOR FINISH LEGEND, SEE SHEET A1200.
6. SEE MECHANICAL DRAWINGS FOR DIFFUSER DESCRIPTIONS.
7. SEE ELECTRICAL/TELEPHONE DRAWINGS FOR LIGHT FIXTURE AND SPEAKER INFORMATION.
8. SEE FIRE PROTECTION DRAWINGS FOR SPRINKLER DESCRIPTIONS.

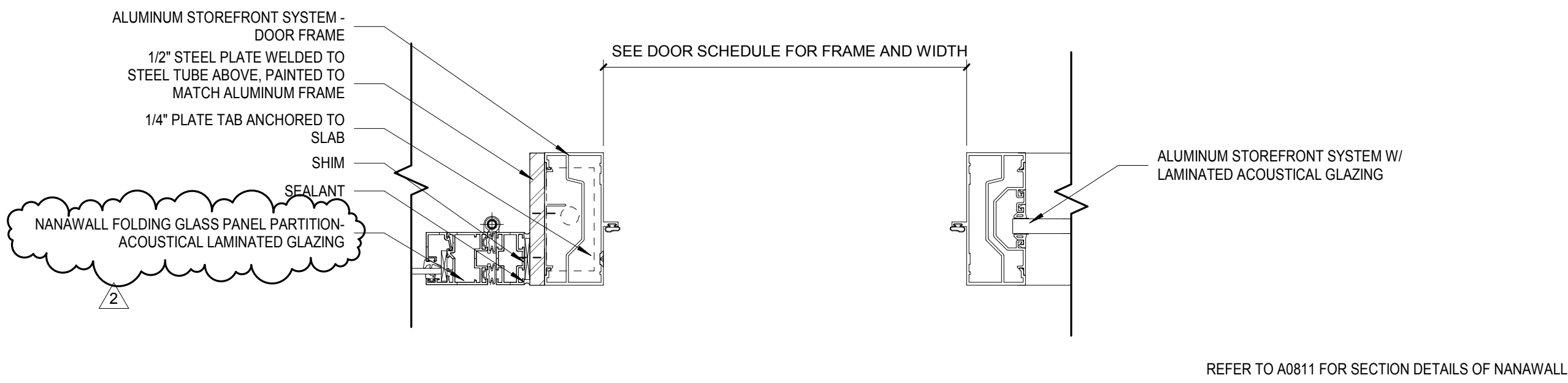
ACT-1	2' X 2' ACT
ACT-2	2' X 2' ACT KITCHEN
ACT-3	2' X 2' ACT. CLASSROOMS
GWB-1	GYPSUM BOARD CEILING
1	PAINT EXPOSED STRUCTURE
2	ACOUSTICAL METAL DECK
3	CEILING SUSPENDED GWB PANELS WITH 2" METAL TRIM EDGE SIMILAR TO COMPASSO EDGE TRIM
4	CEILING EXPANSION JOINT COVER BY BALCO ACWC-2
5	ROOF HATCH, SEE SPECIFICATION
6	1" X 1" F-REVEAL
7	EXPOSED CEILING AT THIRD GRADE STORM SHELTER COLLABORATION AREA, WITH TEXTURED PANELS DIRECTLY ATTACHED TO DECK IN BETWEEN STRUCTURAL BEAMS.
8	PROVIDE 2.5" THICK MINERAL WOOL ABOVE CEILING TILES.



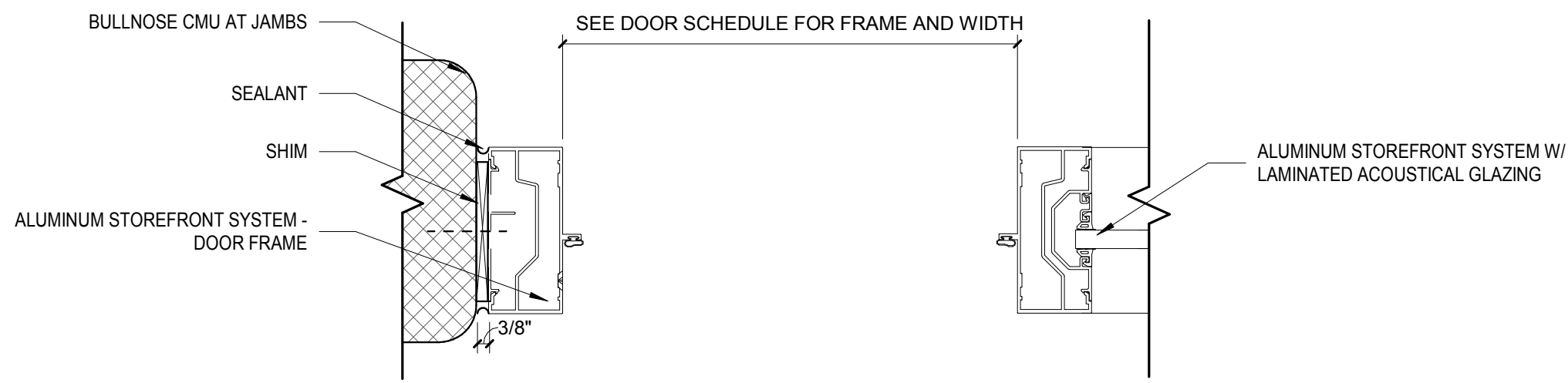
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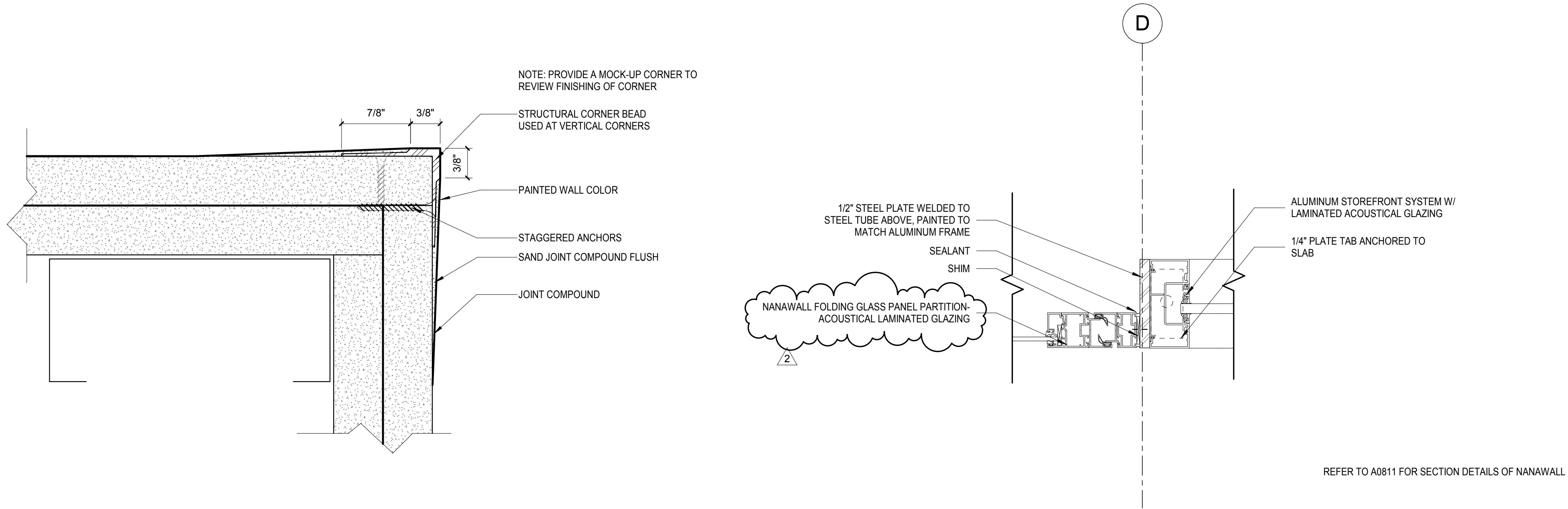
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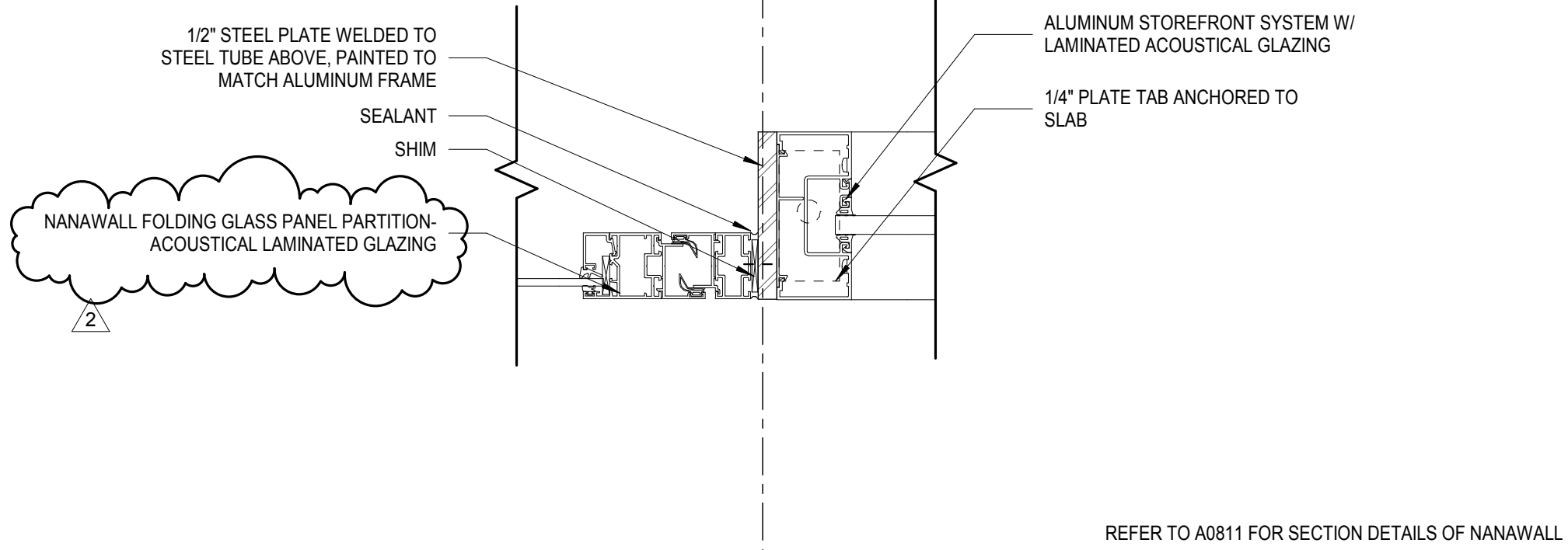
4 PLAN DETAIL - AT SE LIBRARY STOREFRONT DOOR JAMB AND NANAWALL JAMB  
3" = 1'-0"



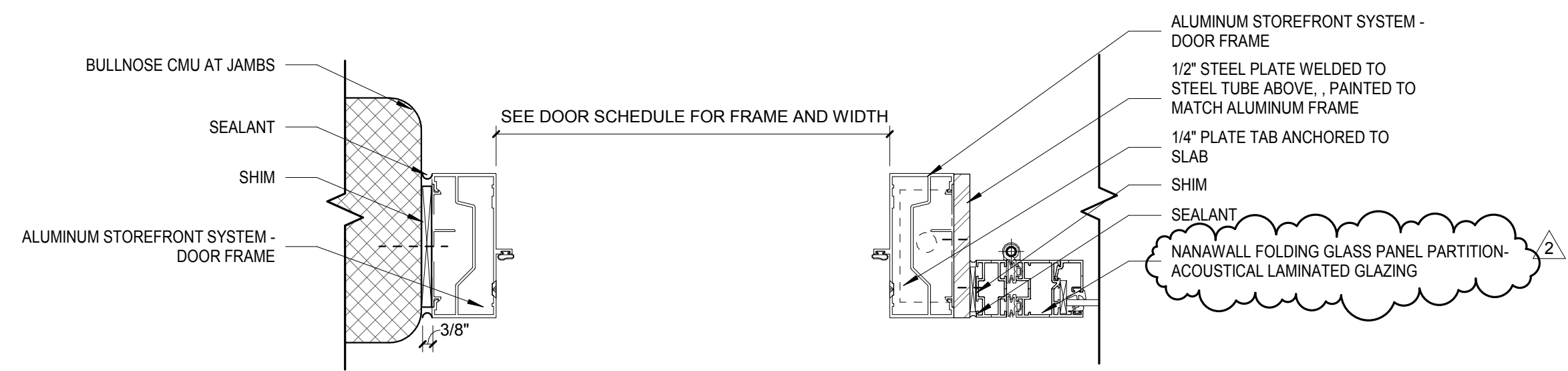
1 PLAN DETAIL - AT SW ART STOREFRONT DOOR JAMB  
3" = 1'-0"



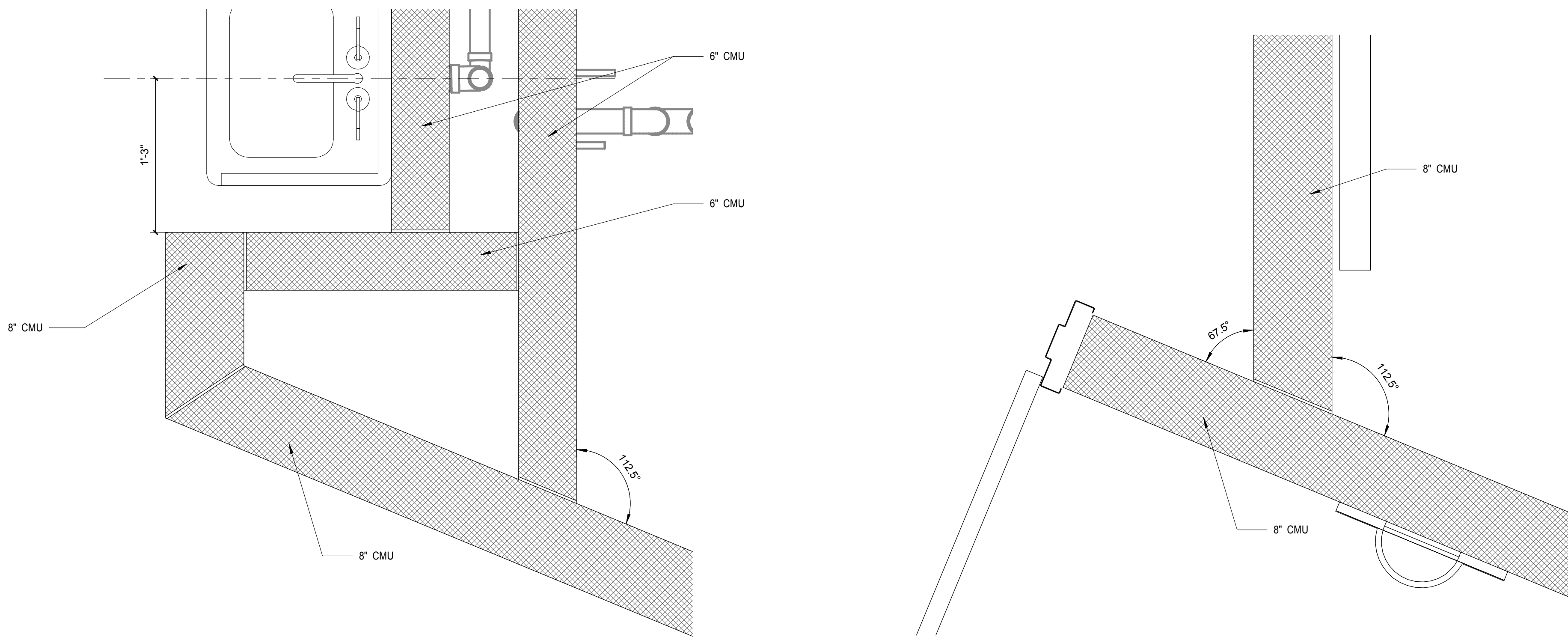
7 STRUCTURAL CORNER BEAD, TYP.  
12" = 1'-0"



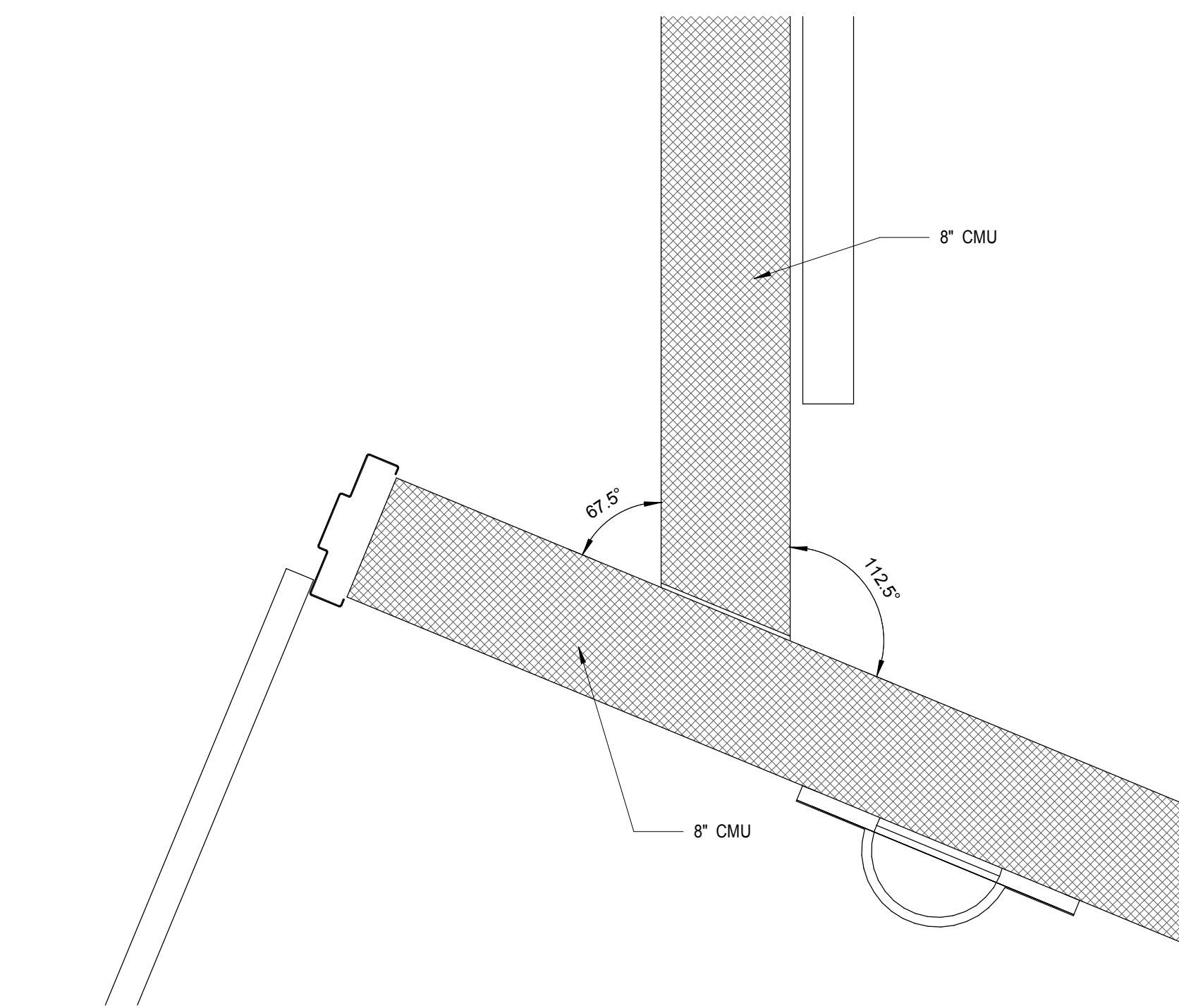
5 PLAN DETAIL - AT SE LIBRARY STOREFRONT MULLION AND NANAWALL JAMB  
3" = 1'-0"



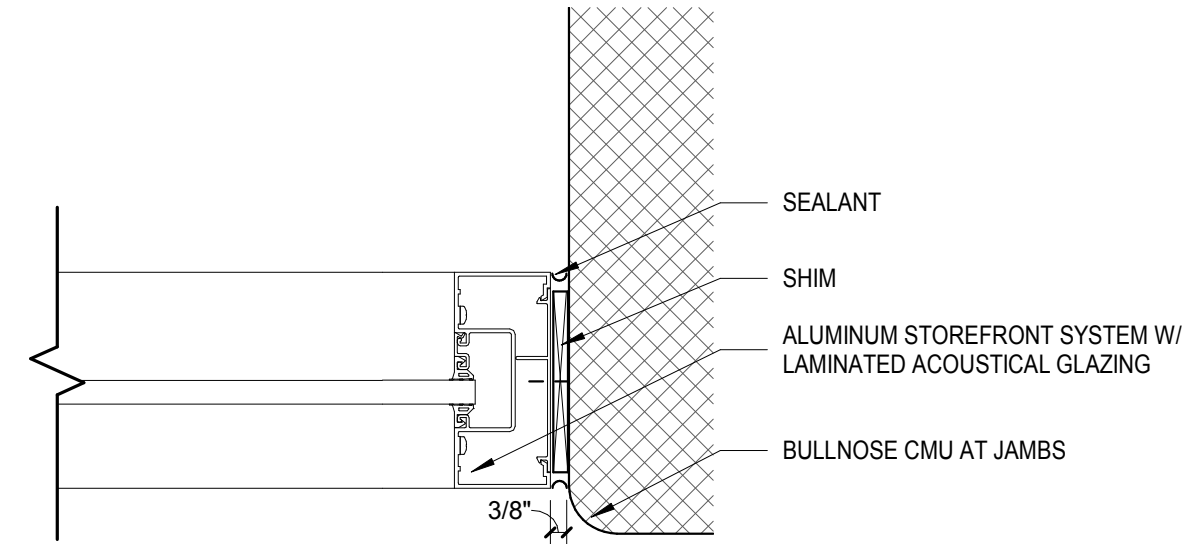
2 PLAN DETAIL - AT SW LIBRARY STOREFRONT DOOR JAMB AND NANAWALL JAMB  
3" = 1'-0"



8 PLAN DETAIL - AT SW KITCHEN CORNER  
1 1/2" = 1'-0"



6 PLAN DETAIL - AT SE KITCHEN CORNER  
1 1/2" = 1'-0"



3 PLAN DETAIL - AT SE LIBRARY STOREFRONT JAMB  
3" = 1'-0"



ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

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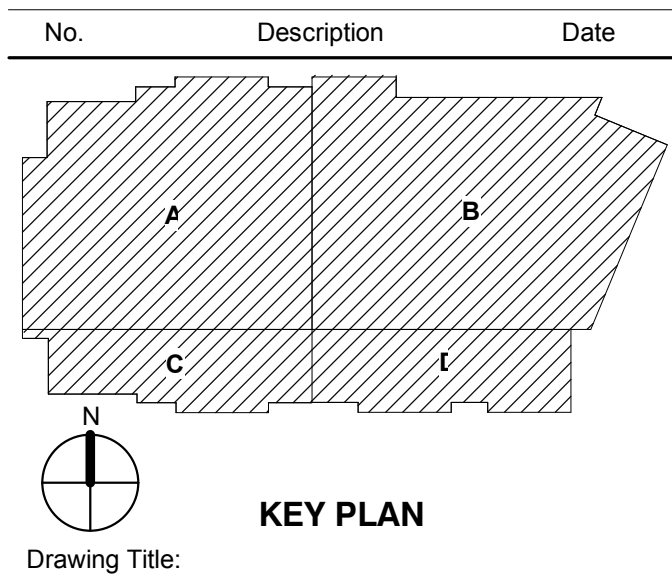
225 North Michigan Avenue, Suite 1100  
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PROFESSIONAL DESIGN FIRM  
LICENSE NUMBER 184.005683

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ARC DESIGN RESOURCES INC.  
Civil Consultants  
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(815) 484-4300

2 ADDENDUM 05 05/22/2017  
1 ISSUED FOR BID 03/01/2017



KEY PLAN

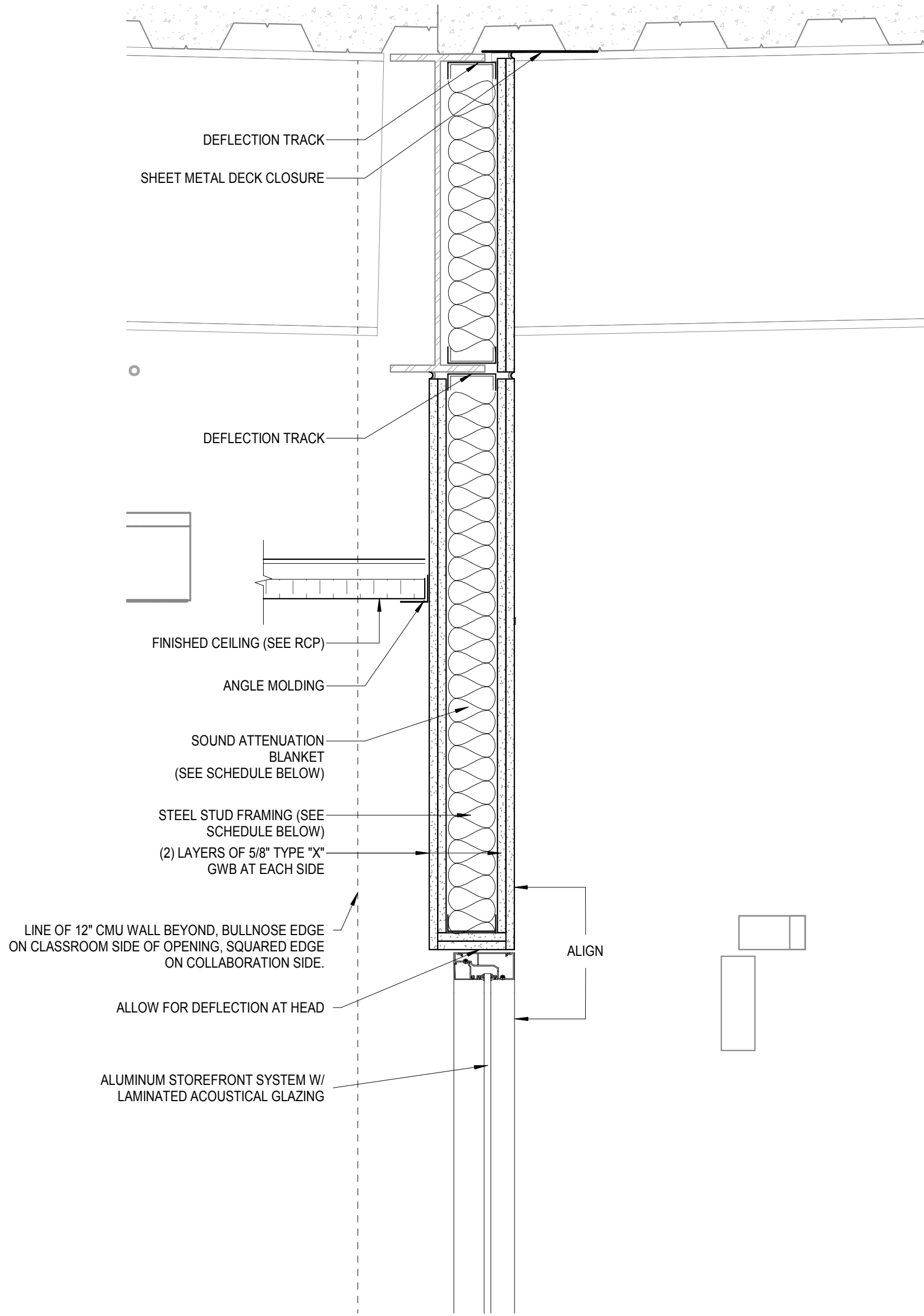
PLAN DETAILS

Project No.: 005005.04 Checked by: Checker

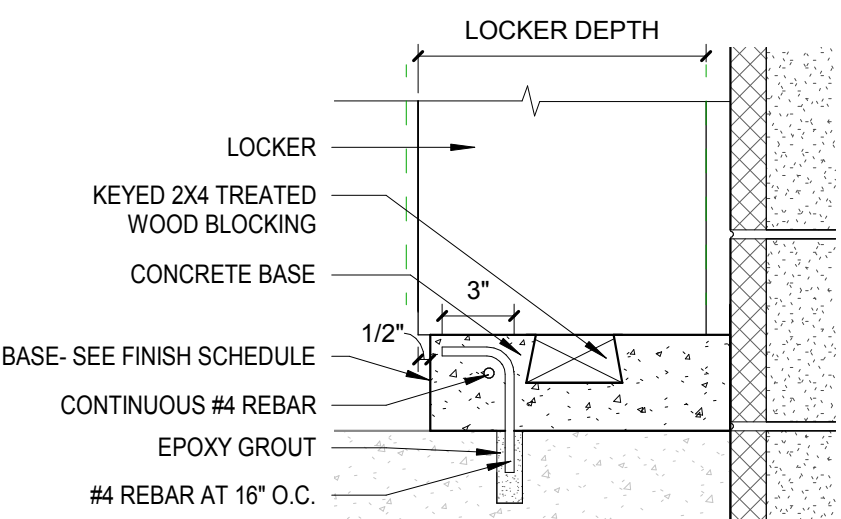
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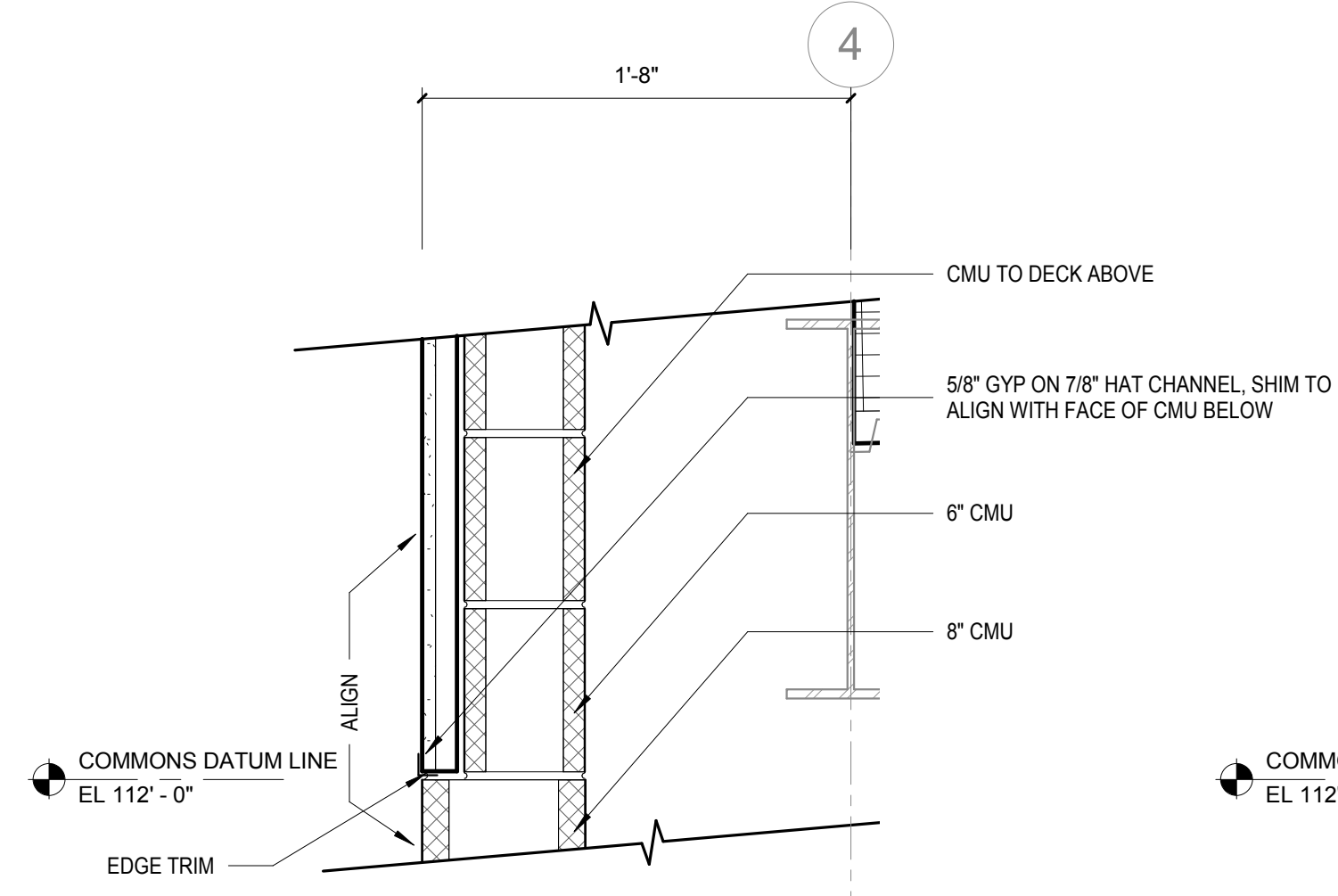
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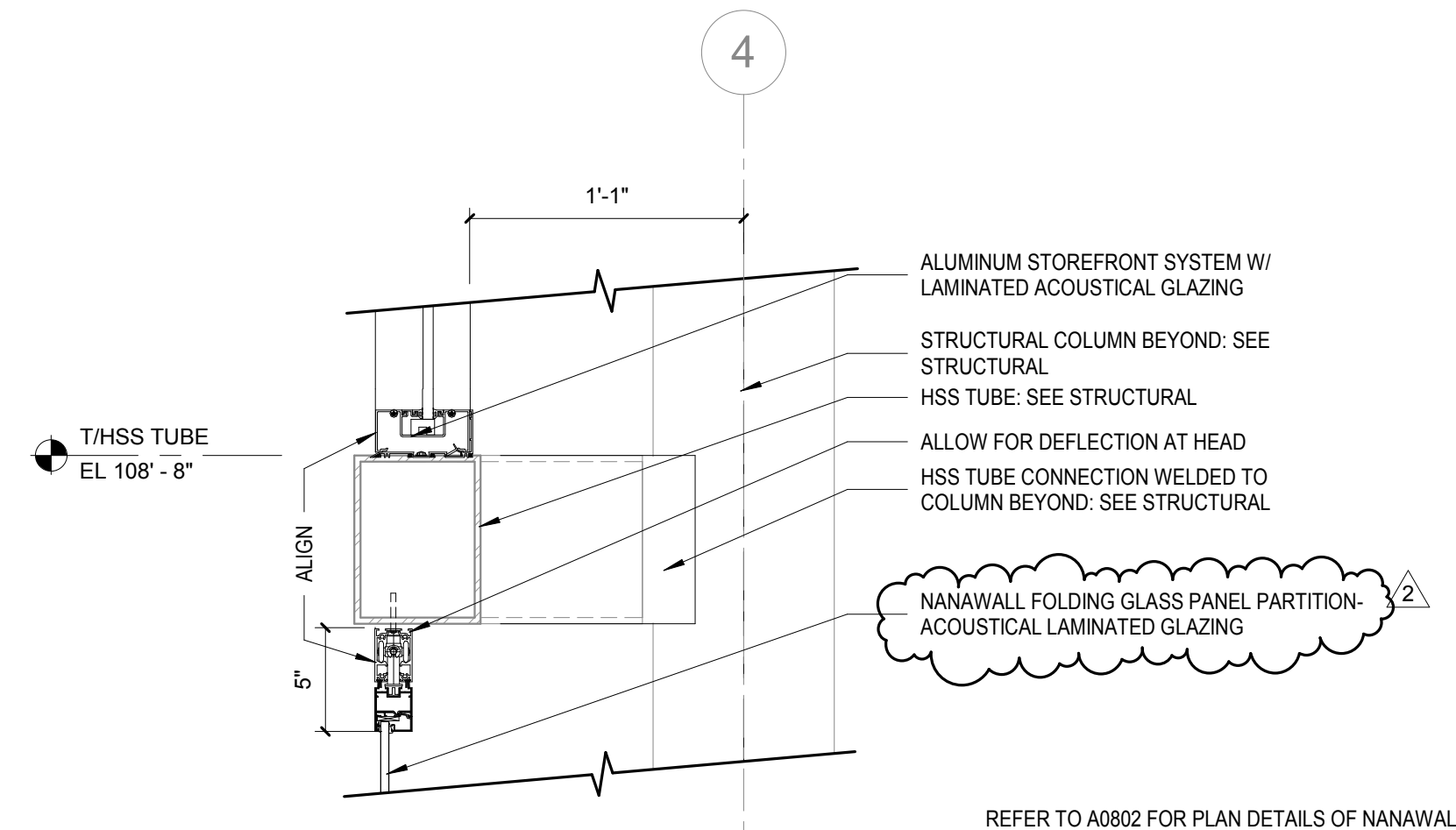
8 CLASSROOM 302 ENTRY HEAD  
1 1/2" = 1'-0"



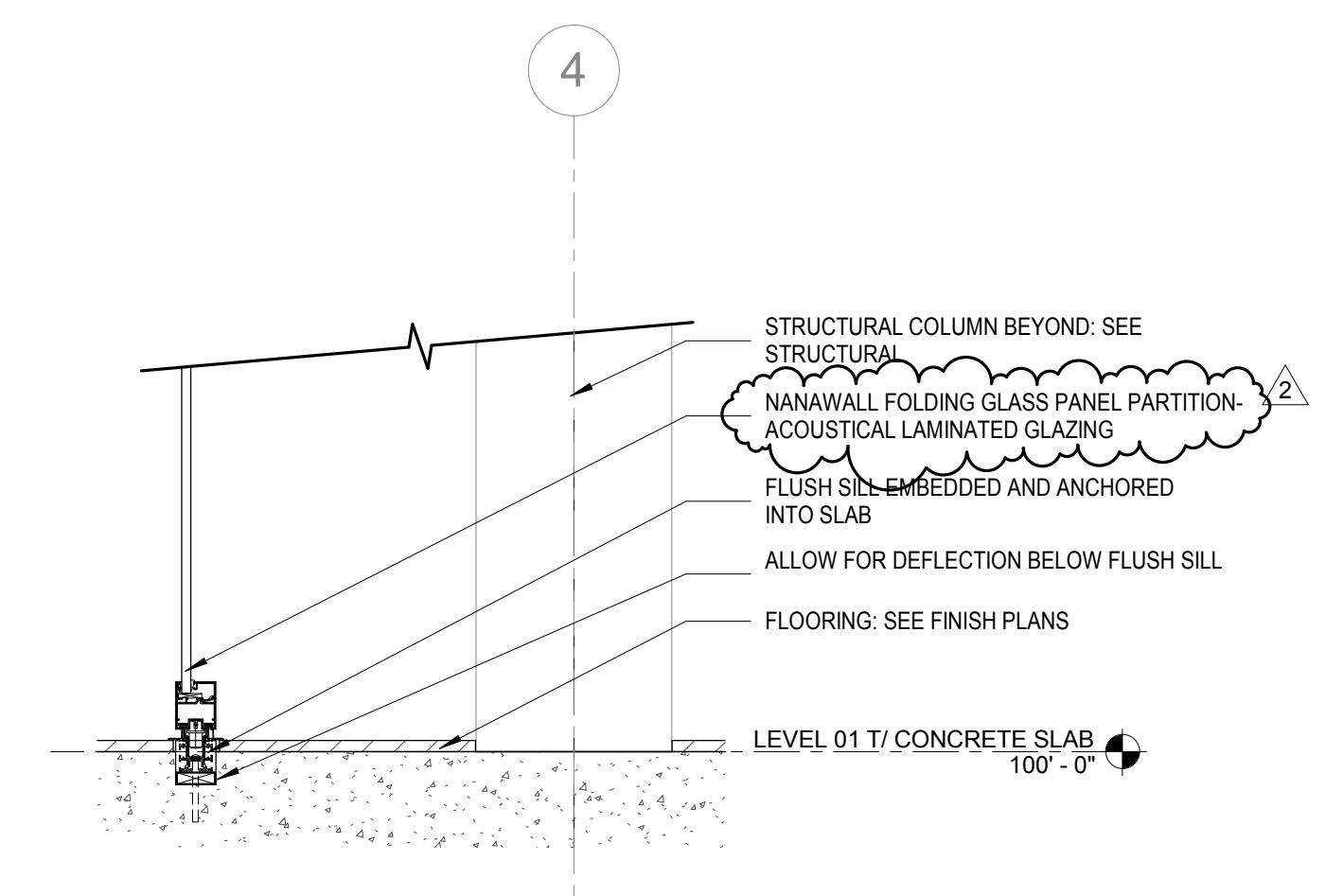
6 TYP. LOCKER BASE  
1 1/2" = 1'-0"



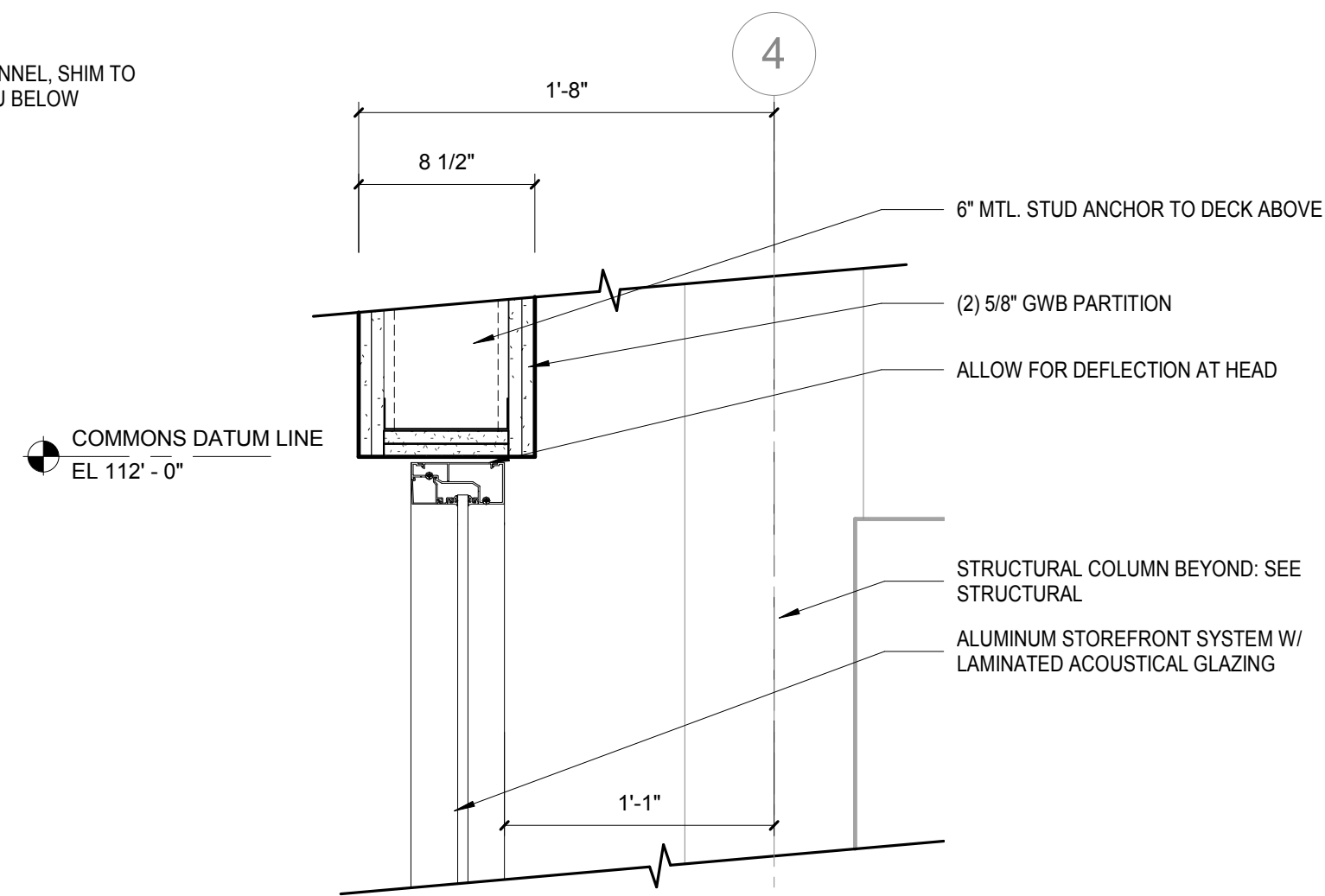
7 CMU TO GYP TRANSITION  
1 1/2" = 1'-0"



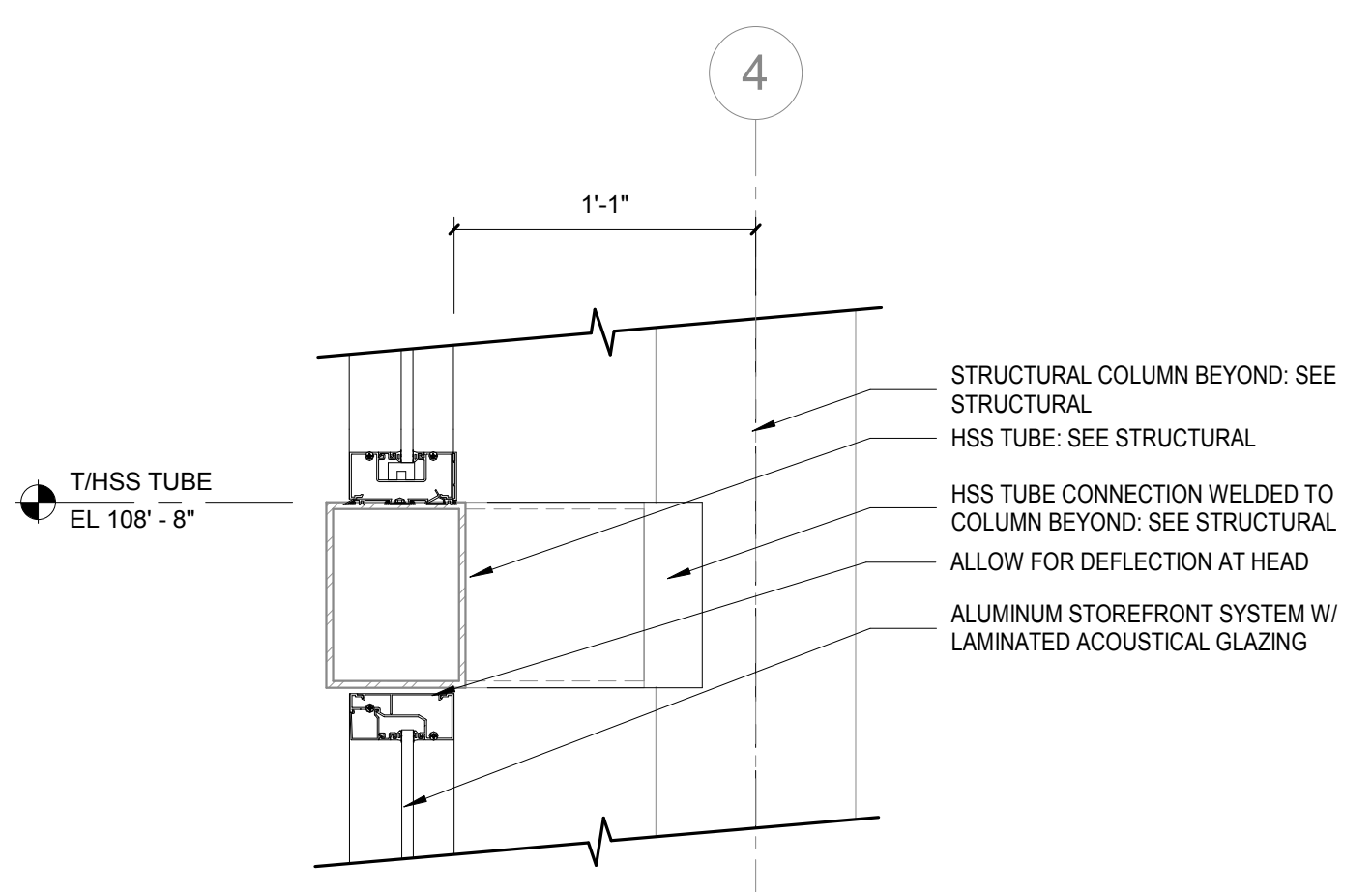
5 LIBRARY - NANAWALL - HEAD  
1 1/2" = 1'-0"



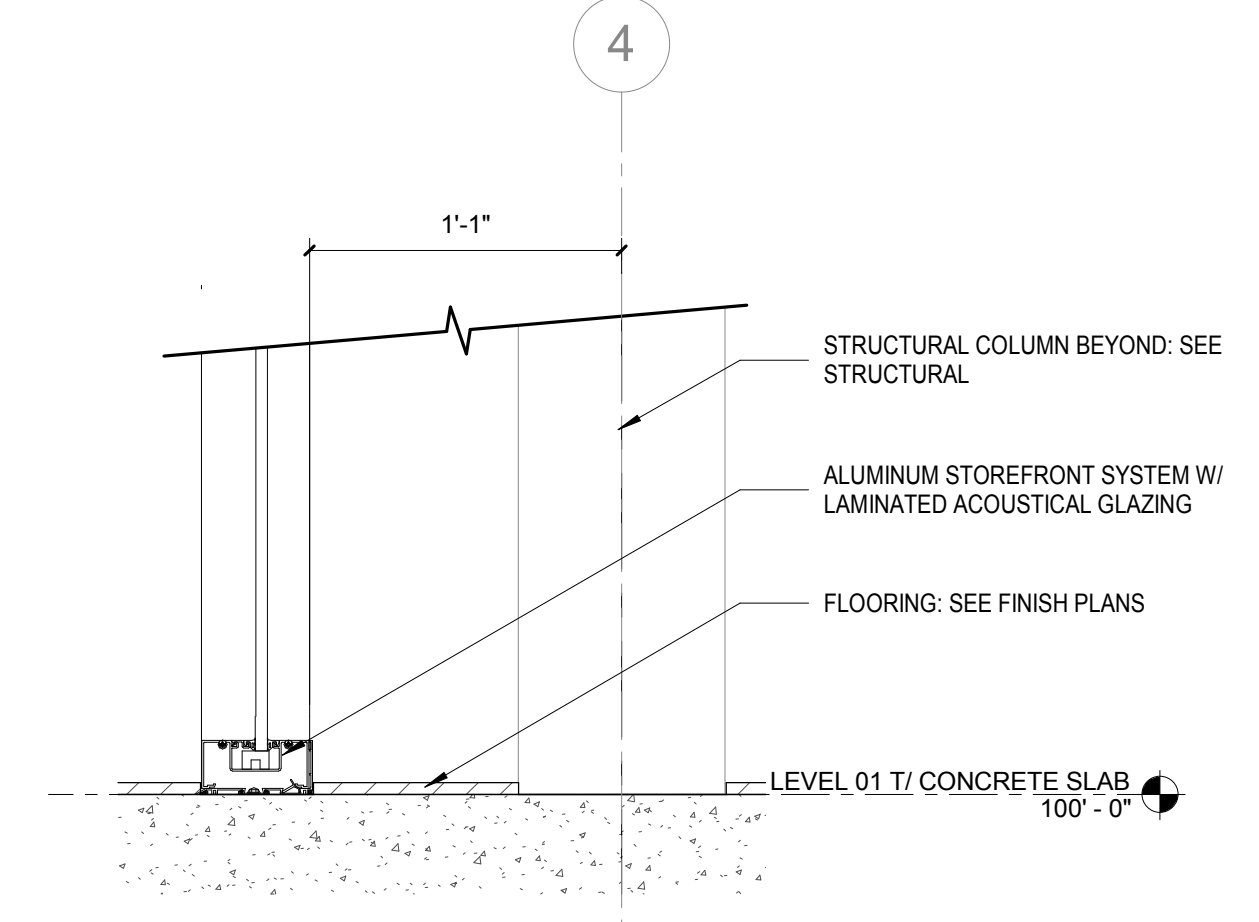
4 LIBRARY - NANAWALL - BASE  
1 1/2" = 1'-0"



3 LIBRARY/ART GLASS WALL - CLERESTORY HEAD  
1 1/2" = 1'-0"



2 LIBRARY/ART GLASS WALL - HORIZONTAL SUPPORT  
1 1/2" = 1'-0"



1 LIBRARY/ART GLASS WALL - BASE  
1 1/2" = 1'-0"



ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

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2	ADDENDUM 05	05/22/2017
1	ISSUED FOR BID	03/01/2017

No.	Description	Date
A		
B		
C		
D		

KEY PLAN  
Drawing Title:

SECTION DETAILS

Project No.: 005005.04      Checked by: Checker

A0811

PLUMBING FIXTURE SCHEDULE																							SECTION 224000			
TAG	FIXTURE TYPE	ADA	FIXTURE		FAUCET OR FLUSH VALVE			P-TRAP		DRAIN		SUPPLIES AND STOPS		SEAT		ROUGH-IN				CARRIER		MOUNTING	NOTES	TAG		
			MANUFACTURER	MODEL	MANUFACTURER	MODEL	FLOWRATE	MANUFACTURER	MODEL	MANUFACTURER	MODEL	MANUFACTURER	MODEL	MANUFACTURER	MODEL	SAN...	VENT...	DCW...	DHW...	MANUFACTURER	MODEL					
EW-1	ELECTRIC WATER COOLER	YES	ELKAY	LZSLBWS	--	--	1.1 GPM	--	2" PVC P-TRAP	--	--	MCQUIRE	H2165CC	--	--	1 1/2	1	1/2	--	ELKAY	MLP200	UPPER RUBBER AT 38-3/8" AFF	1	EW-1		
HB-1	HOSE BIBB	NO	WOODFORD	21	--	--	--	--	--	--	--	--	--	--	--	--	--	3/4	--	--	--	WALL - 3/8" AFF	--	HB-1		
L-1	LAVATORY	YES	KOHLER	K-2005	CHICAGO FAUCETS	802-665ABCP	0.5 GPM	MCQUIRE	PW2125WCPRO	MCQUIRE	--	MCQUIRE	LFST010X	--	--	1 1/2	1 1/2	1/2	1/2	ZURN	Z1231	WALL - RIM TO BE AT 34" AFF	3.4, 6.9	L-1		
L-2	LAVATORY	YES	KOHLER	K-2005	CHICAGO FAUCETS	786-E35ABCP	1.5 GPM	MCQUIRE	PW2125WCPRO	MCQUIRE	--	MCQUIRE	LFST010X	--	--	1 1/2	1 1/2	1/2	1/2	ZURN	Z1231	WALL MOUNT	3.4, 6.9	L-2		
L-3	LAVATORY	YES	KOHLER	K-2005	CHICAGO FAUCETS	802-665ABCP	0.5 GPM	MCQUIRE	PW2125WCPRO	MCQUIRE	--	MCQUIRE	LFST010X	--	--	1 1/2	1 1/2	1/2	1/2	ZURN	Z1231	WALL MOUNT	3.4, 6.9	L-3		
LT-1	LAVATORY	YES	MUSTEE	10CFT	MUSTEE	93.6	1.5 GPM	MCQUIRE	PW2125WCPRO	MCQUIRE	--	MCQUIRE	LFST10	--	--	1 1/2	1 1/2	1/2	1/2	ZURN	Z1231	WALL - RIM TO BE AT 34" AFF	3.4, 6.9	LT-1		
MB-1	MOP BASIN	NO	FLORESTONE	10	CHICAGO FAUCETS	814-VBCP	2.2 GPM	--	--	--	--	--	--	--	--	3	1 1/2	1/2	1/2	--	--	FAUCET CENTER LINE TO BE 42" AFF	2.3, 5.5, 11, 12	MB-1		
SK-1	SINGLE COMPARTMENT SINK	YES	ELKAY	LR3122	CHICAGO FAUCETS	2302-QN8AE3ABCP	1.5 GPM	MCQUIRE	BB912	ELKAY	LK18	MCQUIRE	LFST10	--	--	1 1/2	1 1/2	1/2	1/2	--	--	DROP INTO COUNTERTOP	6.7	SK-1		
SK-2	SINGLE COMPARTMENT SINK	YES	ELKAY	LR2022	CHICAGO FAUCETS	2302-QN8AE3ABCP	1.5 GPM	MCQUIRE	BB912	ELKAY	LK18	MCQUIRE	LFST10	--	--	1 1/2	1 1/2	1/2	1/2	--	--	DROP INTO COUNTERTOP	6.7	SK-2		
SK-3	SINGLE COMPARTMENT SINK		ELKAY	LR1919	CHICAGO FAUCETS	786-E35ABCP	1.5 GPM	MCQUIRE	BB912	ELKAY	LK18	MCQUIRE	LFST010X	--	--	1 1/2	1 1/2	1/2	1/2	--	--	DROP INTO COUNTERTOP	6	SK-3		
SK-4	SINGLE COMPARTMENT SINK		ELKAY	LR1312	CHICAGO FAUCETS	2302-QN8AE3ABCP	2.2 GPM	SOLIDIS INTERCEPTOR	--	ELKAY	LK35	MCQUIRE	LFST010X	--	--	1 1/2	1 1/2	1/2	1/2	--	--	DROP INTO COUNTERTOP	6	SK-4		
SK-5	SINGLE COMPARTMENT SINK		ELKAY	LR2022	CHICAGO FAUCETS	2302-QN8AE3ABCP	2.2 GPM	SOLIDIS INTERCEPTOR	--	ELKAY	LK35	MCQUIRE	LFST010X	--	--	1 1/2	1 1/2	1/2	1/2	--	--	DROP INTO COUNTERTOP	6.10	SK-5		
SS-1	SERVICE SINK	NO	SWANSTONE	MF-F	CHICAGO FAUCETS	891-317ABCP	2.2 GPM	MCQUIRE	BB912	INTEGRAL TO FIXTURE	--	MCQUIRE	LFST10	--	--	1 1/2	1 1/2	1/2	1/2	--	--	--	--	SS-1		
UR-1	URNAL	YES	KOHLER	K-4991-ET	SLOAN	8186-0-125	0.125 GPM	INTEGRAL TO UNIT	--	--	--	INTEGRAL TO FLUSH VALVE	--	--	--	2	1 1/2	3/4	--	ZURN	Z1222	WALL - RIM TO BE AT 24" AFF	3	UR-1		
WC-1	WATER CLOSET	NO	KOHLER	K-4325	SLOAN	8111-1-28	1.28 GPF	INTEGRAL TO UNIT	--	--	--	--	BEMIS	1955SSCT	4	2	1 1/2	--	ZURN	1203-H	WALL MOUNT	3	WC-1			
WC-2	WATER CLOSET	YES	KOHLER	K-4325	SLOAN	8111-1-28	1.28 GPF	INTEGRAL TO UNIT	--	--	--	--	BEMIS	1955SSCT	4	2	1 1/2	--	ZURN	1203-H	WALL MOUNT	3	WC-2			
WC-3	WATER CLOSET	NO	KOHLER	K-4325	SLOAN	8111-1-28	1.28 GPF	INTEGRAL TO UNIT	--	--	--	--	BEMIS	1955SSCT	4	2	1 1/2	--	ZURN	1203-H	WALL MOUNT	3.13	WC-3			
WC-4	WATER CLOSET	YES	AMERICAN STANDARD	2093-100	INTEGRAL TO FLUSH TANK	--	1.6 GPF	INTEGRAL TO UNIT	--	--	--	MCQUIRE	BEMIS	1955SSCT	4	2	1/2	--	ZURN	1203-H	WALL MOUNT	3	WC-4			
WC-5	WATER CLOSET	YES	AMERICAN STANDARD	2093-100	AMERICAN STANDARD	4098-800	1.6 GPF	INTEGRAL TO UNIT	--	--	--	MCQUIRE	BEMIS	1955SSCT	4	2	1/2	--	ZURN	1203-H	WALL MOUNT	3	WC-5			
WH-1	WALL HYDRANT	NO	WOODFORD	B76	--	--	--	--	--	--	--	--	--	--	--	--	--	3/4	--	--	--	WALL - 3/8" AFF	--	WH-1		
WOB-1	WALL OUTLET BOX	NO	SIOUX CHIEF	OXB0X	--	--	--	--	--	--	--	--	--	--	--	--	--	1/2	1/2	--	--	WALL MOUNT	8	WOB-1		
NOTES:																										
1- DUAL HEIGHT ELECTRIC WATER COOLER WITH ATTACHED BOTTLE FILLER, INCLUDE WATER FILTER.											9- METERING FAUCET WITH 4" CENTERS.															
2- PROVIDE WITH FLORESTON MODELS OF THE FOLLOWING: MR-370 HOSE AND HOSE BRACKET, MR-372 MOP HANGER, MR-373 STAINLESS STEEL RIM GUARDS, AND MR-377 STAINLESS STEEL WALL GUARDS.											10- ROTATE FIXTURE AS INDICATED ON DRAWINGS SO FAUCET IS CLOSER TO THE FRONT OF THE CABINET.															
3- PROVIDE WHITE COLOR FIXTURE.											11- APPLY CLEAR NON MOLDING SILICONE CAULK TO ALL SIDES IN CONTACT WITH FLOOR AND WALLS.															
4- OFFSET GRID DRAIN INCLUDED WITH MCQUIRE PW2125WCPRO.											12- SEE DETAIL XX / ZZZ															
5- INCLUDE NIDEL BA THREADED ON VACUUM BREAKER.											13- PER SLOAN VALVE COMPANY, PLUMBING CONTRACTOR MAY FIELD OUT VACUUM BREAKER TUBE SO TOP OF FLUSH VALVE IS BELOW ADA GRAB BAR.															
6- FURNISH AND INSTALL BRASS/CRAFT 58-30A F FLEXIBLE STAINLESS STEEL BRAIDED SUPPLIES, 30" LENGTH, LOOSELY COIL AND TIE EXCESS LENGTH.																										
7- DEPTH OF SINK 6".																										
8- PROVIDE FOR EACH WASHING MACHINE.																										

EQUIPMENT IDENTIFICATION SCHEDULE			SECTION 220553	
EQUIPMENT	IDENTIFICATION		NOTES	
DOMESTIC WATER HEATER	DWH-1		1	
WATER SOFTENER	SOFTENER		4	
DOMESTIC COLD WATER TANK	DWT-1		3	
RE-CIRCULATION PUMP	RCP-1		2	
THERMOSTATIC MIXING VALVE	TMV-1		2	
THERMOSTATIC MIXING VALVE	TMV-2		2	
BACKFLOW PREVENTERS	SEE SCHEDULE FOR IDENTIFICATION		2	
NOTES:	1- MOUNT ON FRONT 60" ABOVE FINISH FLOOR. 2- MOUNT ABOVE PIECE OF EQUIPMENT ON STRUCTURE. 3- MOUNT ON EACH SIDE OF TANK BELOW CENTER LINE. 4- MOUNT ON SIDE OF TANK ON UPPER 1/3 OF TANK.			

PIPE IDENTIFICATION SCHEDULE			SECTION 220553		
SERVICE	BAND COLOR	TEXT COLOR	TAGGING SPECIFICATIONS		
			PIPE SIZE	MIN. LENGTH	TEXT HEIGHT
DOMESTIC COLD WATER	GREEN	WHITE	3/4" - 1 1/4"	8"	1/2"
DOMESTIC HOT WATER	YELLOW	BLACK	1 1/2" - 2"	8"	3/4"
DOMESTIC HOT WATER RETURN	YELLOW	BLACK	2 1/2" - 6"	12"	1 1/4"
DOMESTIC 120°F HOT WATER	YELLOW	BLACK			
DOMESTIC 140°F HOT WATER	YELLOW	BLACK			
DOMESTIC 120°F HOT WATER RETURN	YELLOW	BLACK			
DOMESTIC 140°F HOT WATER RETURN	YELLOW	BLACK			
SANITARY SEWER	GREEN	WHITE			
STORM SEWER	GREEN	WHITE			
VENT	GREEN	WHITE			
NON POTABLE COLD WATER	YELLOW	BLACK			
COMBUSTION AIR INTAKE	YELLOW	BLACK			
EXHAUST VENT	YELLOW	BLACK			
NOTES:					
1- WITHIN 1'-6" OF EACH VALVE.					
2- WITHIN 3'-0" OF EACH 90 DEGREE ELBOW, CONNECTION TO EQUIPMENT OR VESSELS, POINT WHERE PIPE ENTERS SHAFTS, OR PENETRATES OUTSIDE WALL.					
3- ON NOT OVER 20'-0" INTERVALS ALONG ALL PIPING (EXPOSED AND CONCEALED).					
4- AT TEES WITHIN 3'-0" OF BOTH MAIN AND BRANCH.					
5- FOR AREAS OF MULTIPLE 90 DEGREE ELBOWS OR TEES CONSULT PROJECT ENGINEER FOR PLACEMENT.					
6- WHERE NEW PIPING MEETS EXISTING, PLACE ONE ADDITIONAL LABEL ON EXISTING PIPING AS SPECIFIED IN ITEMS 1 THRU 5.					
7- INSTALL BURNED PIPE LABELS CONTINUOUS AND 12" BELOW FINISHED GRADE.					
8- INSTALL "NON-POTABLE" LABELS WITHIN 3'-0" OF BACKFLOW PREVENTER.					
9- STENCILING WILL NOT BE ALLOWED.					

PIPE INSULATION SCHEDULE			SECTION 220700	
SERVICE	PIPE SIZE	INSULATION THICKNESS	NOTES	
DOMESTIC HOT WATER	UP TO 2"	1"	3	
DOMESTIC HOT WATER	OVER 2"	1 1/2"	--	
DOMESTIC HOT WATER RETURN	UP TO 2"	1"	--	
NON POTABLE COLD WATER	ALL	1"	--	
DOMESTIC COLD WATER	ALL	1"	3	
ROOF DRAIN BODIES	ALL	1"	--	
HORIZONTAL RAIN CONDUCTORS	ALL	1"	--	
VENT PIPING	ALL	1/2"	2	
SANITARY	ALL	2"	1	
DOMESTIC COLD WATER TANK	ALL	1"	--	
NOTES:				
1- 2" THICK ON ALL HEAT TRACED PIPING.				
2- WITHIN 12'-0" OF THE VENT THROUGH ROOF.				
3- 1/2" ON FIXTURE BRANCH PIPING IN WALLS ONLY.				

WATER HAMMER ARRESTOR SCHEDULE					SECTION 221119
PDI SYMBOL	FIXTURE UNITS	SIZE	NOTES		
"A"	1-11	1/2"	1. WATER HAMMER ARRESTORS SHOWN ON TYPICAL RISERS TO BE INSTALLED AT EVERY FLOOR IN AN ACCESSIBLE LOCATION. INSTALL ABOVE CEILING WHERE POSSIBLE. PROVIDE ACCESS PANEL WHERE LOCATED IN WALL. 2. MUST BE A PDI WH201 OR ASSE 1015 APPROVED DEVICE. 3. WHEN HORIZONTAL, BRANCH PIPING EXCEEDS 20'-0" IN LENGTH AN ADDITIONAL ARRESTOR SHALL BE USED. 4. INSTALL DEVICE A MAXIMUM OF 10'-0" FROM LAST UPSTREAM DEVICE.		
"B"	12-31	3/4"			
"C"	32-60	1"			
"D"	61-113	1"			
"E"	114-154	1"			
"F"	155-330	1"			

INTERCEPTOR SCHEDULE										SECTION 221323	
TAG	MANUFACTURER	MODEL	LIQUID CAPACITY (GALLONS)	MAX FLOW RATE (GPM)	MAX GREASE CAPACITY (LBS)	INLET (IN)	OUTLET (IN)	DIMENSIONS (IN)			DETAIL
GI-1	SCHER PRODUCTS	GSI-1000	1000	314	1080	4	4	L	W	H	NOTES
NOTES: SEE SPEC SECTION 221323 FOR ALTERNATE PRECAST CONCRETE OPTION.											

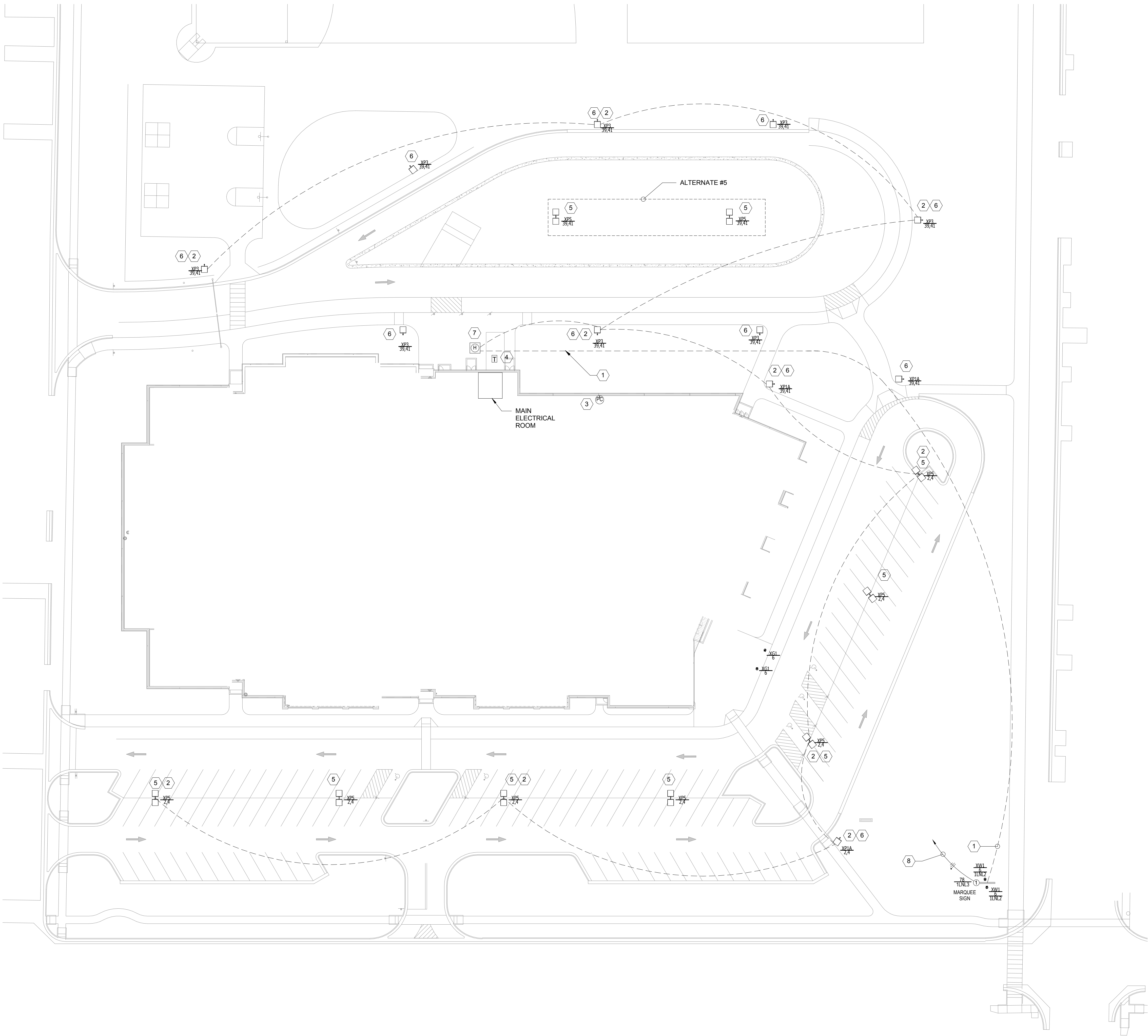
WATER SOFTENER SCHEDULE										SECTION 223100	
TAG	MANUFACTURER	MODEL	CAPACITY (GRAINS/SALT LBS)	PRESSURE DROP (PSI)	CONT. FLOW RATE (GPM)	BACK WASH RATE (GPM)	MINERAL TANK SIZE (IN)	BRINK TANK SIZE (IN)	INLET/OUTLET (IN)	ELECTRICAL	DETAIL
WS-1	MARLO	MGT-45-1-1/2	22.5	15	18	3	13" DIA X 54" H	18" DIA X 40" H	1-1/2	120	1
NOTES:											

DRAIN/CLEANOUT SCHEDULE										SECTION 221319		
TAG	MANUFACTURER	MODEL	SERVICE	BODY MATERIAL	STRAINER/COVER		OPTIONS		DETAIL	OUTLET SIZE (IN)	DESCRIPTION	NOTES
					SIZE	FINISH						
FD-1	WADE	1100-B	SANITARY	CAST IRON	5	SATIN NICKEL BRONZE	1	B5	--	2	FLOOR DRAIN WITH ROUND ADJUSTABLE TOP, DECORATIVE GRATE	2
FD-2	WADE	1000-R	SANITARY	CAST IRON	5	BRONZE	27	MRS	--	3	FLOOR DRAIN WITH ROUND ADJUSTABLE TOP, SLOTTED GRATE	2
FD-3	WADE	1100-WW	SANITARY	CAST IRON	5	SATIN NICKEL BRONZE	1	ARC	--	3	FLOOR DRAIN WITH 4" DIAMETER FUNNEL	2
FS-1	WADE	9744	SANITARY	STAINLESS	12x12	STAINLESS	15 OR 18	--	--	4	STAINLESS FLOOR SINK WITH 3/4 OR 1/2 GRATE	1,2
RD-1	ZURN	ZC100	STORM	CAST IRON	VARIABLES	CAST IRON	C	--	--	--	PROVIDE SS GRAVEL GUARD ON ROOF	3
RD-2	WADE	3271	STORM	CAST IRON	9-18" H x 14-12" W x 12" L	ROUGH-BRONZE	3	--	--	3	SCUPPER STYLE ROOF DRAIN WITH 135 DEGREE ANGLE - PAINTED CAST IRON	
WOD	ZURN	Z1441	VARIABLES	CAST IRON	VARIABLES	STAINLESS STEEL	--	--	--	--	ROUND COVER	
NOTES:												
1. COORDINATE LOCATION OF FLOOR SINKS WITH THE FOOD SERVICE PLANS												
2. REM TO BE 1/2" BELOW FINISHED FLOOR, GENERAL CONTRACTOR TO SLOPE FLOOR OUT TO 20" FROM FLOOR DRAIN OR SINK												
3. COORDINATE LOCATION OF ROOF DRAIN WITH ROOF PLAN AND FLOOR PLAN, SO DRAIN IS OVER THE CLASSROOM ABOVE CEILING												





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1 ELECTRICAL SITE PLAN KISHWAUKEE  
1/32" = 1'-0"

BRANCH CIRCUIT NOTES :

1. EXTEND BRANCH CIRCUITS IN THIS AREA TO THE FOLLOWING BRANCH PANELBOARDS, UNLESS OTHERWISE NOTED:  
120/208V PANELBOARDS  
1LN12 - NORMAL POWER  
1LE11 - EMERGENCY POWER
- PROVIDE CAT6 CABLE CONNECTION VIA SEPARATE CONDUIT TO ALL POLE FIXTURES FOR RLIGHT CONTROLS. TERMINATE AT MDF ROOM AT RESPECTIVE RLIGHT PANELS. PROVIDE POWER PACKS FOR NON RLIGHT ENABLED FIXTURES AS REQUIRED.

KEYED NOTES :

1. PROVIDE FIBER OPTIC CABLE AND FIBER OPTIC TRANSCEIVER (TRANSITION SGETF-1039-110) AT MARQUEE SIGN LOCATION. ROUTE FIBER OPTIC CABLE IN (1) ONE 1-1/4" CONDUIT BACK TO NEAREST IDF CLOSET. PROVIDE CATEGORY 6 PATCH CORD FROM THE TRANSCEIVER TO THE MARQUEE SIGN. REFER TO CIVIL DRAWINGS FOR COMPLETE SITE PLAN. CONTRACTOR SHALL PROVIDE ALL NECESSARY COMPONENT FOR FUNCTIONAL AND COMPLETE INSTALLATION.
2. PROVIDE 1" CONDUIT WITH RG-59 CABLE BACK TO MDF 319. TERMINATE AND TEST ON COAX PATCH PANEL. REFER TO DETAIL 7 ON E0741 FOR ADDITIONAL INFORMATION.
3. PHOTOCELL FOR EXTERIOR LIGHTING. MOUNT AT ROOF FACING NORTH. PHOTOCELL SHALL BE BY RLIGHT. PROVIDE OUTDOOR PHOTOCELL KIT NO-NLI. PROVIDE 2#16 AWG AND CAT6 CABLING IN 1-INCH CONDUIT TO rPANEL RELAY PANELS LOCATED AT MDF. PROVIDE INTERFACES AS REQUIRED.
4. PAD MOUNT UTILITY TRANSFORMER. PROVIDE 5" EMPTY CONDUIT, UNDERGROUND TO DESIGNATED COMED POLE. SEE CIVIL DRAWINGS FOR EXACT ROUTING.
5. SEE LIGHT POLE BASE DETAIL 3/E701.
6. SEE LIGHT POLE BASE DETAIL 4/E701.
7. CONTRACTOR SHALL SIZE PER DESIGNATED REQUIREMENTS. THE COVER OF THE HANDHOLE SHOULD READ "COMMUNICATIONS". REFER TO E0201B FOR DETAILS.
8. PROVIDE 3#8, 1" C. TO DESIGNATED PANEL FOR THE ELECTRICAL CONNECTION FOR THE MARQUEE SIGN.



ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

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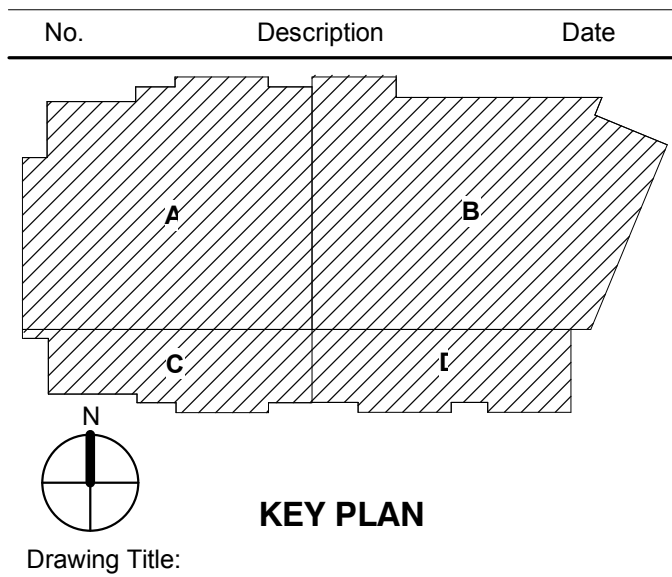
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2 ADDENDUM 05 05/22/2017  
1 ISSUED FOR BID 03/01/2017



SITE PLAN B

Project No.: 005005.00 Checked by: JE

E0052



GENERAL NOTES:

- A. PROVIDE COMPLETE rLIGHT LIGHTING CONTROL SYSTEM THAT CONSISTS BUT IS NOT LIMITED TO: DEVICES AS SHOWN, rBRIDGES, GATEWAYS, RELAY PANELS, CAT6 CABLEING, AND ALL REQUIRED ACCESSORIES.
- B. PROVIDE AN INTEGRATED AUXILIARY RELAY AT ALL OCCUPANCY SENSORS FOR INTERFACE WITH RESPECTIVE VAV BOX THAT SERVES EACH ROOM. CABLEING AND CONNECTION SHALL BE PROVIDED BY TEMPERATURE CONTROL CONTRACTOR.

BRANCH CIRCUIT NOTES:

1. EXTEND BRANCH CIRCUITS IN THIS AREA TO THE FOLLOWING BRANCH PANELBOARDS, UNLESS OTHERWISE NOTED:
- 120 / 208V PANELBOARDS  
1LN L2 - NORMAL POWER  
1LE L1 - EMERGENCY POWER
2. EXTEND BRANCH CIRCUITS IN THIS AREA TO THE FOLLOWING BRANCH PANELBOARDS, UNLESS OTHERWISE NOTED:
- 120 / 208V PANELBOARDS  
1LN L2 - NORMAL POWER  
1LE L1 - EMERGENCY POWER
3. EXTEND BRANCH CIRCUITS IN THIS AREA TO THE FOLLOWING BRANCH PANELBOARDS, UNLESS OTHERWISE NOTED:
- 120 / 208V PANELBOARDS  
1LN L2 - NORMAL POWER  
1LE L1 - EMERGENCY POWER

LIGHTING CONTROL SCENES:

- CLASSROOMS  
TYPICAL SWITCH LEGS  
a - FIRST ROW OF LIGHTS NEAR TEACHING WALL  
b - GENERAL CLASSROOM LIGHTING  
c - LIGHTS ON DAYLIGHT SENSOR (IF APPLICABLE)  
d - LIGHT RIGHT IN FRONT OF SMARTBOARD  
e - MISCELLANEOUS  
f - LIGHTS SECOND DAYLIGHT SENSOR (IF APPLICABLE)
- SCENES  
SCENE 1: d - OFF, a - 25%, b.e. - 100%, c.f - AUTO  
SCENE 2: d - OFF, a - 25%, b.e. - 50%, c.f - AUTO  
SCENE 3: a.b.d.e. - 50%, c.f - AUTO  
SCENE 4: a.b.d.e. - 75%, c.f - AUTO
- COLLABORATION  
TYPICAL SWITCH LEGS  
a - FIRST ROW OF LIGHTS NEAR TEACHING WALL  
b - GENERAL LIGHTING  
c - LIGHTS ON DAYLIGHT SENSOR (IF APPLICABLE)  
d - LIGHTING POWER PACK LOCATED AT THE CEILING. ALL LIGHTING CONTROL DEVICES  
e - LIGHT RIGHT IN FRONT OF SECOND SMARTBOARD (IF APPLICABLE)  
f - FIRST ROW OF LIGHTS NEAR SECOND TEACHING WALL (IF APPLICABLE)  
g - MISCELLANEOUS
- SCENES  
SCENE 1: d.f - OFF, a - 25%, b.e. - 100%, c - AUTO  
SCENE 2: d.f - OFF, a - 25%, b.e. - 50%, c - AUTO  
SCENE 3: a.b.d.e.f - 50%, c - AUTO  
SCENE 4: a.b.d.e.f - 75%, c - AUTO

KEYED NOTES:

1. PROVIDE LOW VOLTAGE LIGHTING CONTROL SYSTEM BY rLIGHT LIGHTING CONTROLS. PROVIDE A 4-SCENE (8-BUTTON) WALL CONTROL STATION, CEILING/CORNER MOUNT OCCUPANCY SENSOR, DAYLIGHT HARVESTING SENSOR, AND POWER PACKS TO FUNCTION AS A SEPARATE ZONE. ALL LIGHTING CONTROL DEVICES SHALL BE CONNECTED VIA CAT6 CABLEING THAT WILL TERMINATE TO A rBRIDGE DEVICE. PROVIDE ALL DEVICES RELAYS, rBRIDGES AND CONNECTIONS AS REQUIRED. SEE WIRING DIAGRAMS FOR ADDITIONAL INFORMATION. SEE CLASSROOM SCENE PROGRAMMING.
2. EXTERIOR PERIMETER LIGHT FIXTURES SHALL BE INTERFACED WITH rLIGHT RELAY PANEL RC2 LOCATED AT MDF 319. PROVIDE rLIGHT RELAY PANEL (PANEL 4-1EB3) WITH EMERGENCY BARRIER. RELAY ABOVE BARRIER SHALL BE INTERFACED WITH EMERGENCY CIRCUIT EM5 FOR PERIMETER WALL PACKS. RELAYS BELOW BARRIER SHALL BE INTERFACED WITH NORMAL CIRCUITS PERIMETER WALL PACKS. INTERFACE RELAY PANEL WITH ROOF MOUNT PHOTOCELL.
3. INTERFACE WITH RELAY PANEL RC2 LOCATED AT MDF 319 AND DESIGNATED MOMENTARY CONTACT SWITCHES. PROVIDE rLIGHT RELAY PANEL FOR CONTROL OF PUBLIC SPACES AS SHOWN. PROVIDE LOW VOLTAGE MOMENTARY CONTACT SWITCHES AS SHOWN.
4. PROVIDE LOW VOLTAGE LIGHTING CONTROL SYSTEM BY rLIGHT LIGHTING CONTROLS. PROVIDE A PUSH BUTTON ON/OFF SWITCH WITH DIMMING, A CEILING OCCUPANCY SENSOR, AND A DIMMING POWER PACK LOCATED AT THE CEILING. ALL LIGHTING CONTROL DEVICES AND ALL LIGHT FIXTURES SHALL BE DAISY CHAINED WITH CAT6 CABLE THAT WILL TERMINATE AT A rBRIDGE DEVICE. SEE WIRING DIAGRAMS FOR ADDITIONAL INFORMATION.
5. PROVIDE EMERGENCY RELAY/POWER PACK FOR DESIGNATED FIXTURE. INTERFACE WITH DESIGNATED CONTROL ZONE AS SHOWN.
6. PROVIDE FIXTURE TYPE L51 FOR DISPLAY CASES. REMOTE LED DRIVER TO BE PLACED IN NEAREST ACCESSIBLE CEILING.
7. ALTERNATE 2: FULL DISPLAY CASE ALONG WALL WITH ADDITIONAL LIGHT FIXTURES SHOWN. SEE ARCHITECTURAL DETAILS FOR MORE INFORMATION.



ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

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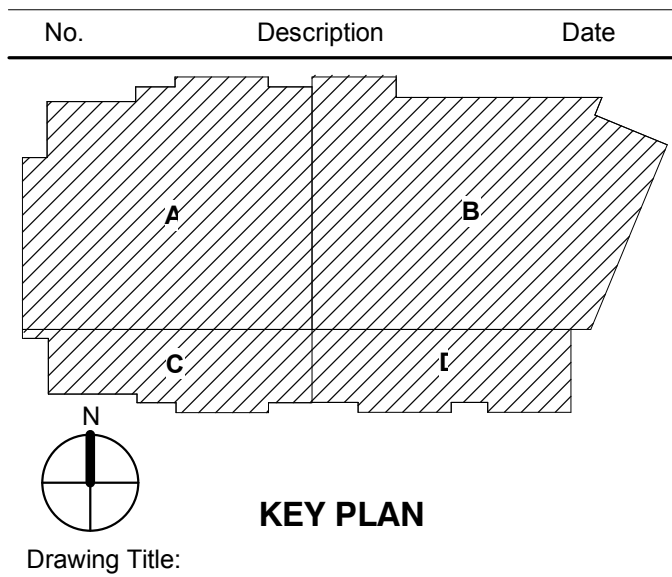
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2	ADDENDUM 02	04/26/2017
1	ISSUED FOR BID	03/01/2017



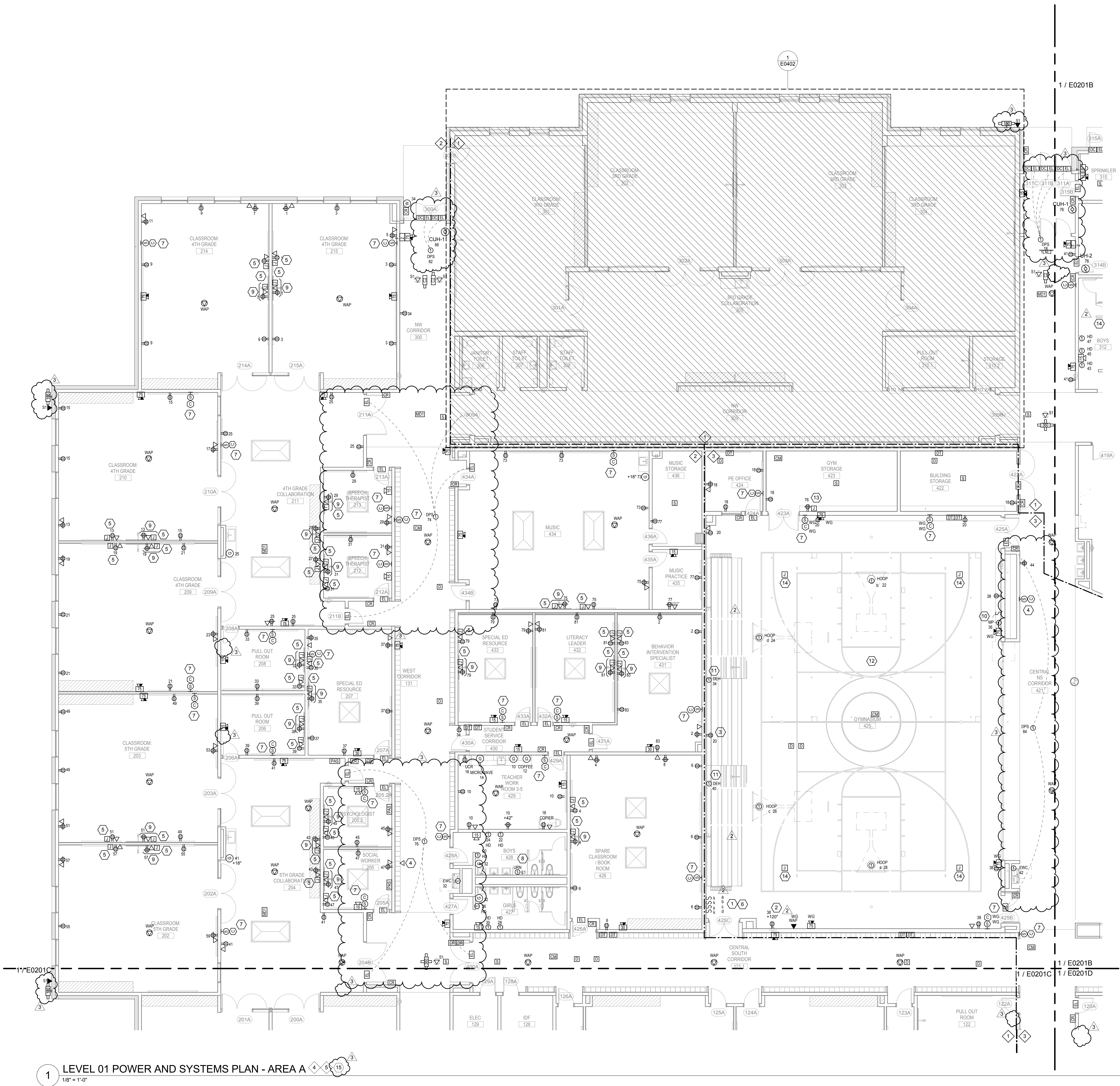
LEVEL 01 LIGHTING PLAN - AREA B

Project No.: 005005.00 Checked by: JE

E0101B



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- KEYED NOTES** :
- KEY OPERATED SWITCHES FOR MOTORIZED BACKSTOPS. ENGRAVE COVERPLATES WITH "A,B,C, AND D BACKSTOP" LETTERING. PROVIDE ALL CONTROL WIRING AND INTERFACE WITH BACKSTOP MOTORS AS REQUIRED. KEYED SWITCHES SHALL BE BY IPI BY BISON OR DRAPER. GANG BACKSTOP SWITCHES IN A 4 GANG ARRANGEMENT. SEE KEYED NOTE #6 FOR ADDITIONAL PROVISIONS.
  - SCOREBOARD LOCATION.
  - PROVIDE DUPLEX MOUNTED ABOVE TOP OF BLEACHERS FOR CHARGING SCORER'S EQUIPMENT. PROVIDE WEATHERPROOF COVER.
  - NOT USED
  - PROVIDE AND INSTALL A SINGLE GANG JUNCTION BACKBOX WITH 1-1/4" CONDUIT TO NEAREST ACCESSIBLE CEILING SPACE.
  - PROVIDE A RECESSED LOCKABLE STAINLESS STEEL CABINET THAT WILL ENCLOSE THE CONTROLS FOR LIGHTING AND BACKSTOPS. KEYED SWITCHES SHALL BE BY IPI BY BISON OR DRAPER. PAINT CABINET TO MATCH WALL COLOR.
  - INTERCOM SPEAKER AND CLOCK SHALL BE FURNISHED BY RPS AND INSTALLED BY CONTRACTOR. PROVIDE ONE CATEGORY 6 CABLE AND BACKBOX AT THIS LOCATION. CONTRACTOR SHALL TEST AND TERMINATE CABLE TO THE NEAREST IDF CLOSET.
  - ELECTRICAL CONNECTION SHALL BE HIDDEN BEHIND FLUSH VALVE. EXPOSED FLEXIBLE CONDUIT IS NOT ACCEPTABLE.
  - EXACT MOUNTING HEIGHT OF QUAD RECEPTACLE, DATA OUTLET, AND AV BACKBOX FOR SMARTBOARD / INTERACTIVE DISPLAY SHALL BE COORDINATED WITH RPS PRIOR TO ROUGH-IN.
  - PROVIDE A RECESSED, STAINLESS STEEL, LOCKABLE CABINET THAT WILL ENCLOSE THE LIGHTING CONTROL WALL STATION AND MOTORIZED PARTITION KEYED SWITCH. PAINT CABINET TO MATCH WALL PAINT COLOR. PROVIDE ENGRAVINGS FOR MOTORIZED PARTITION SWITCH TO READ "PARTITION". KEYED SWITCH SHALL BE BY IPI BY BISON OR DRAPER.
  - PROVIDE 120V CONNECTION TO DEHUMIDIFICATION UNDER FLOOR SYSTEM. CONTROL PANEL SHALL BE LOCATED RIGHT ABOVE THE FLOOR WITH METAL BLANK COVER. PROVIDE 2#18 AWG WIRE TO HUMIDISTAT BELOW FLOOR. PROVIDE 2#18 AWG WIRES TO THE TWO EXHAUST FANS. PROVIDE ALL WIRING AND TERMINATIONS PER MANUFACTURERS INSTRUCTIONS.
  - COORDINATE LOCATION OF ALL ELECTRICAL DEVICES AT GYMNASIUM WITH WALL MATS SO THAT NO CONFLICTS OCCUR. COORDINATE FINAL LOCATIONS WITH ARCHITECT PRIOR TO ROUGH-IN.
  - PROVIDE A SINGLE GANG JUNCTION BOX WITH 1-1/4" CONDUIT TO THE NEAREST TRUSS FOR OWNER PROVIDED AUDIO RACK.
  - PROVIDE A SINGLE GANG JUNCTION BOX WITH 1" CONDUIT MOUNTED TO NEAREST TRUSS. COORDINATE HEIGHT AND LOCATION OF THE JUNCTION BOX WITH RPS PRIOR TO INSTALLATION. PROVIDE AND INSTALL CABLE SUPPORTHOOKS FOR 222 AWG CABLEING THAT WILL BE ROUTED TO GYM STORAGE 423. PROVIDE AUDIO CABLEING FROM EACH SPEAKER BACK TO GYM STORAGE 423. COORDINATE WITH ROCKFORD PUBLIC SCHOOL IT FOR EXACT CABLEING REQUIREMENT. NEATLY COIL THE CABLE IN GYM STORAGE 423 AT THE DESIGNATED AUDIO RACK LOCATION.
  - DOOR TAGS SHOWN FOR COORDINATION PURPOSES.

- BRANCH CIRCUIT NOTES** :
- EXTEND BRANCH CIRCUITS IN THIS AREA TO THE FOLLOWING BRANCH PANELBOARDS, UNLESS OTHERWISE NOTED:  
120 / 208V PANELBOARDS  
1LN1 - NORMAL POWER  
1LE1 - EMERGENCY POWER
  - EXTEND BRANCH CIRCUITS IN THIS AREA TO THE FOLLOWING BRANCH PANELBOARDS, UNLESS OTHERWISE NOTED:  
120 / 208V PANELBOARDS  
1LN4 - NORMAL POWER  
1LE1 - EMERGENCY POWER
  - EXTEND BRANCH CIRCUITS IN THIS AREA TO THE FOLLOWING BRANCH PANELBOARDS, UNLESS OTHERWISE NOTED:  
120 / 208V PANELBOARDS  
1LN3 - NORMAL POWER  
1LE1 - EMERGENCY POWER

- GENERAL NOTES:**
- VERIFY ALL POWER AND DATA RECEPTACLE MOUNTING HEIGHTS WITH OWNER PRIOR TO INSTALLATION.
  - PENETRATIONS THROUGH THE STORM SHELTER ENVELOPE LARGER THAN 3-1/2 SQUARE INCHES IN AREA FOR RECTANGULAR OPENINGS OR 2-1/16" IN DIAMETER SHALL BE CONSIDERED AN OPENING AND SHALL BE PROVIDED WITH AN OPENING PROTECTIVE DEVICE. REFERENCE STRUCTURAL DRAWINGS. AVOID BUNDLING CONDUIT FEEDERS IN CLOSE PROXIMITY SO THAT THE SHELTER ENVELOPE IS NOT DEGRADED OR THE PENETRATION FALLS INTO THE CONDITION AS DESCRIBED ABOVE.
  - PROVIDE A MINIMUM OF 16" SEPARATION BETWEEN DEVICES ON OPPOSITE SIDES OF WALLS.

- HORIZONTAL TERMINATION NOTES** :
- TERMINATE STRUCTURED TELECOMMUNICATIONS DATA CABLEING IN THIS AREA ON PATCH PANELS INSTALLED ON RACKS IN TELECOMMUNICATIONS ROOM 128. REFER TO E0201C FOR ROOM LOCATION.
  - TERMINATE SECURITY SYSTEM CABLEING IN THIS AREA AT SECURITY EQUIPMENT INSTALLED IN TELECOMMUNICATIONS ROOM 128. REFER TO E0201C FOR ROOM LOCATION.



ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

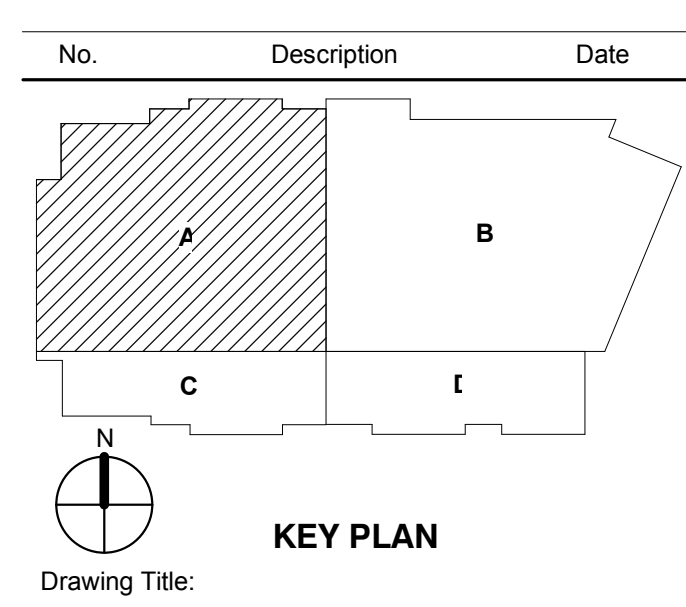
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3	ADDENDUM 05	05/22/2017
2	ADDENDUM 02	04/28/2017
1	ISSUED FOR BID	03/01/2017



LEVEL 01 POWER AND SYSTEMS PLAN - AREA A

Project No.: 005005.00 Checked by: JE

E0201A



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GENERAL NOTES:

- A. VERIFY ALL POWER AND DATA RECEPTACLE MOUNTING HEIGHTS WITH OWNER PRIOR TO INSTALLATION.  
B. PROVIDE A MINIMUM OF 16" SEPARATION BETWEEN DEVICES ON OPPOSITE SIDES OF WALLS.

HORIZONTAL TERMINATION NOTES:

4. TERMINATE STRUCTURED TELECOMMUNICATIONS DATA CABLE IN THIS AREA ON PATCH PANELS INSTALLED ON RACKS IN MDF ROOM 319, UNLESS NOTED OTHERWISE.  
5. TERMINATE SECURITY SYSTEM CABLE IN THIS AREA AT SECURITY EQUIPMENT INSTALLED IN MDF ROOM 319, UNLESS NOTED OTHERWISE.

BRANCH CIRCUIT NOTES:

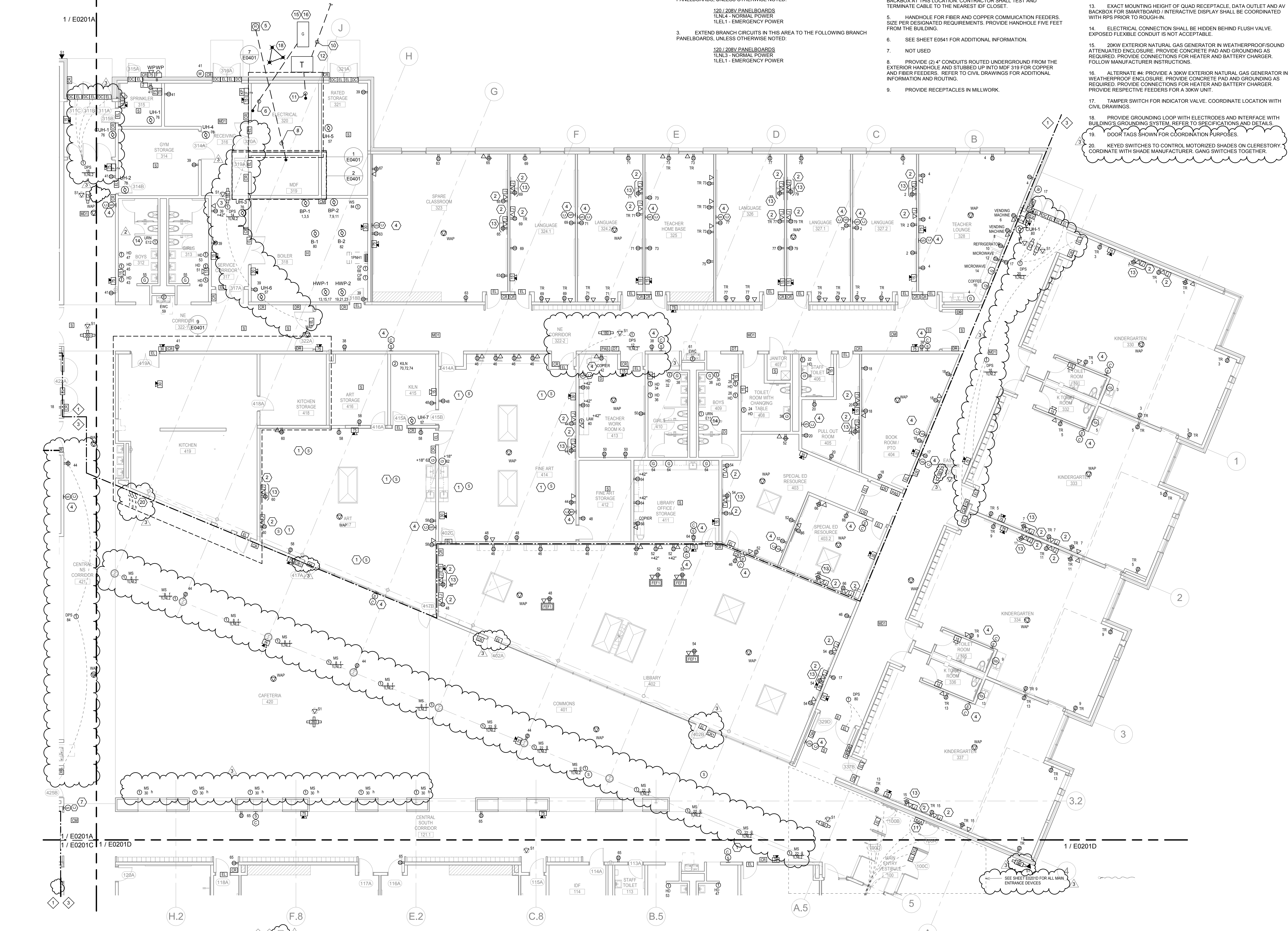
1. EXTEND BRANCH CIRCUITS IN THIS AREA TO THE FOLLOWING BRANCH PANELBOARDS, UNLESS OTHERWISE NOTED:  
120 / 208V PANELBOARDS  
1LN1 - NORMAL POWER  
1LE1 - EMERGENCY POWER  
2. EXTEND BRANCH CIRCUITS IN THIS AREA TO THE FOLLOWING BRANCH PANELBOARDS, UNLESS OTHERWISE NOTED:  
120 / 208V PANELBOARDS  
1LN1 - NORMAL POWER  
1LE1 - EMERGENCY POWER  
3. EXTEND BRANCH CIRCUITS IN THIS AREA TO THE FOLLOWING BRANCH PANELBOARDS, UNLESS OTHERWISE NOTED:  
120 / 208V PANELBOARDS  
1LN1 - NORMAL POWER  
1LE1 - EMERGENCY POWER

KEYED NOTES:

1. PROVIDE AND INSTALL 1" CONDUIT TO NEAREST ACCESSIBLE CEILING SPACE.  
2. PROVIDE AND INSTALL A SINGLE GANG JUNCTION BACKBOX WITH 1-1/4" CONDUIT TO NEAREST ACCESSIBLE CEILING SPACE.  
3. PROVIDE A DATA CONNECTION FOR TIME CLOCK.  
4. INTERCOM SPEAKER AND CLOCK SHALL BE FURNISHED BY RPS AND INSTALLED BY CONTRACTOR. PROVIDE A CATEGORY 6 CABLE AND BACKBOX AT THIS LOCATION. CONTRACTOR SHALL TEST AND TERMINATE CABLE TO THE NEAREST IDF CLOSET.  
5. HANDHOLE FOR FIBER AND COPPER COMMUNICATION FEEDERS. SIZE PER DESIGNATED REQUIREMENTS. PROVIDE HANDHOLE FIVE FEET FROM THE BUILDING.  
6. SEE SHEET E0541 FOR ADDITIONAL INFORMATION.  
7. NOT USED  
8. PROVIDE (2) 4" CONDUITS ROUTED UNDERGROUND FROM THE EXTERIOR HANDHOLE AND STUBBED UP INTO MDF 319 FOR COPPER AND FIBER FEEDERS. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION AND ROUTING.  
9. PROVIDE RECEPTACLES IN MILLWORK.

KEYED NOTES:

10. PROVIDE (1) 4" UNDERGROUND EMPTY CONDUIT TO UTILITY POLE FOR PRIMARY FEEDER. COORDINATE EXACT ROUTING WITH COMED. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION AND ROUTING.  
11. PROVIDE UNDERGROUND CONCRETE ENCASE SECONDARY FEEDERS FROM UTILITY TRANSFORMER TO SERVICE SWITCHBOARD.  
12. UTILITY TRANSFORMER. PROVIDE CONCRETE PAD AND GROUNDING PER COMED REQUIREMENTS. MAINTAIN 3-FOOT MIN. CLEARANCE FROM THE BUILDING AND 10-FOOT CLEARANCE FROM GENERATOR.  
13. EXACT MOUNTING HEIGHT OF QUAD RECEPTACLE, DATA OUTLET AND AV BACKBOX FOR SMARTBOARD / INTERACTIVE DISPLAY SHALL BE COORDINATED WITH RPS PRIOR TO ROUGH-IN.  
14. ELECTRICAL CONNECTION SHALL BE HIDDEN BEHIND FLUSH VALVE. EXPOSED FLEXIBLE CONDUIT IS NOT ACCEPTABLE.  
15. 20KW EXTERIOR NATURAL GAS GENERATOR IN WEATHERPROOF/SOUND ATTENUATED ENCLOSURE. PROVIDE CONCRETE PAD AND GROUNDING AS REQUIRED. PROVIDE CONNECTIONS FOR HEATER AND BATTERY CHARGER. FOLLOW MANUFACTURER INSTRUCTIONS.  
16. ALTERNATE #4: PROVIDE A 30KW EXTERIOR NATURAL GAS GENERATOR IN WEATHERPROOF ENCLOSURE. PROVIDE CONCRETE PAD AND GROUNDING AS REQUIRED. PROVIDE CONNECTIONS FOR HEATER AND BATTERY CHARGER. PROVIDE RESPECTIVE FEEDERS FOR A 30KW UNIT.  
17. TAMPER SWITCH FOR INDICATOR VALVE. COORDINATE LOCATION WITH CIVIL DRAWINGS.  
18. PROVIDE GROUNDING LOOP WITH ELECTRODES AND INTERFACE WITH BUILDING'S GROUNDING SYSTEM. REFER TO SPECIFICATIONS AND DETAILS.  
19. DOOR TAGS SHOWN FOR COORDINATION PURPOSES.  
20. KEYED SWITCHES TO CONTROL MOTORIZED SHADES ON CLOSETORY. COORDINATE WITH SHADE MANUFACTURER. GANG SWITCHES TOGETHER.



1 LEVEL 01 POWER AND SYSTEMS PLAN - AREA B  
1/8" = 1'-0"

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3	ADDENDUM 05	05/22/2017
2	ADDENDUM 02	04/26/2017
1	ISSUED FOR BID	03/01/2017

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KEY PLAN

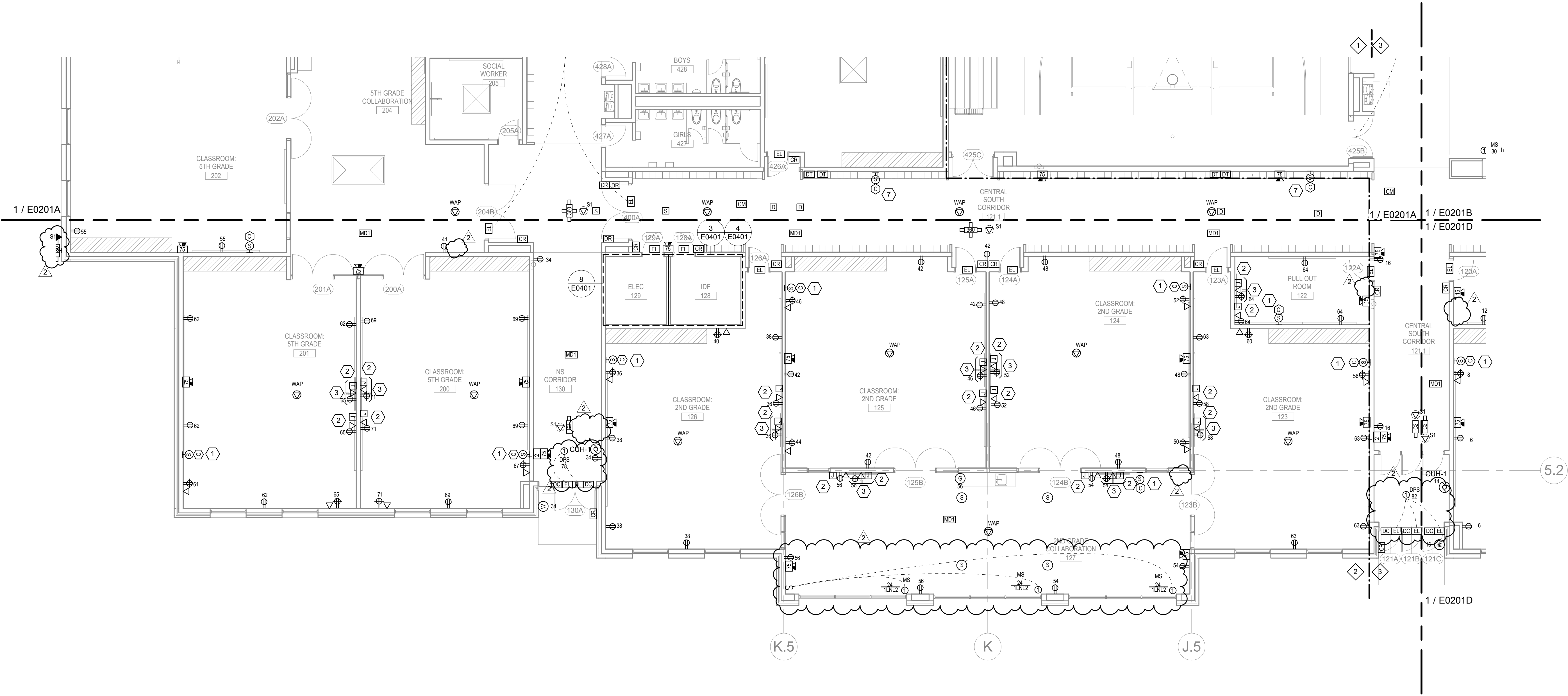
LEVEL 01 POWER AND SYSTEMS PLAN - AREA B

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**KEYED NOTES** :

- INTERCOM SPEAKER AND CLOCK SHALL BE FURNISHED BY RPS AND INSTALLED BY CONTRACTOR. PROVIDE CATEGORY 6 CABLE AND BACKBOX AT THIS LOCATION. CONTRACTOR SHALL TEST AND TERMINATE CABLE TO THE NEAREST IDF CLOSET.
- PROVIDE A SINGLE GANG JUNCTION BACKBOX WITH 1-1/4" CONDUIT TO NEAREST ACCESSIBLE CEILING SPACE.
- EXACT MOUNTING HEIGHT OF QUAD RECEPTACLE, DATA OUTLET AND AV BACKBOX FOR SMARTBOARD / INTERACTIVE DISPLAY SHALL BE COORDINATED WITH RPS PRIOR TO ROUGH-IN.
- DOOR TAGS SHOWN FOR COORDINATION PURPOSES.

**HORIZONTAL TERMINATION NOTES** :

- TERMINATE STRUCTURED TELECOMMUNICATIONS DATA CABLING IN THIS AREA ON PATCH PANELS INSTALLED ON RACKS IN IDF ROOM 128, UNLESS NOTED OTHERWISE.
- TERMINATE SECURITY SYSTEM CABLING IN THIS AREA AT SECURITY EQUIPMENT INSTALLED IN IDF ROOM 128, UNLESS NOTED OTHERWISE.

**GENERAL NOTES:**

- VERIFY ALL POWER AND DATA RECEPTACLE MOUNTING HEIGHTS WITH OWNER PRIOR TO INSTALLATION.
- PROVIDE A MINIMUM OF 16" SEPARATION BETWEEN DEVICES ON OPPOSITE SIDES OF WALLS.

**BRANCH CIRCUIT NOTES** :

- EXTEND BRANCH CIRCUITS IN THIS AREA TO THE FOLLOWING BRANCH PANELBOARDS, UNLESS OTHERWISE NOTED:  
**120 / 208V PANELBOARDS**  
1NLL1 - NORMAL POWER  
1LEL1 - EMERGENCY POWER
- EXTEND BRANCH CIRCUITS IN THIS AREA TO THE FOLLOWING BRANCH PANELBOARDS, UNLESS OTHERWISE NOTED:  
**120 / 208V PANELBOARDS**  
1NLL4 - NORMAL POWER  
1LEL1 - EMERGENCY POWER
- EXTEND BRANCH CIRCUITS IN THIS AREA TO THE FOLLOWING BRANCH PANELBOARDS, UNLESS OTHERWISE NOTED:  
**120 / 208V PANELBOARDS**  
1NLL3 - NORMAL POWER  
1LEL1 - EMERGENCY POWER



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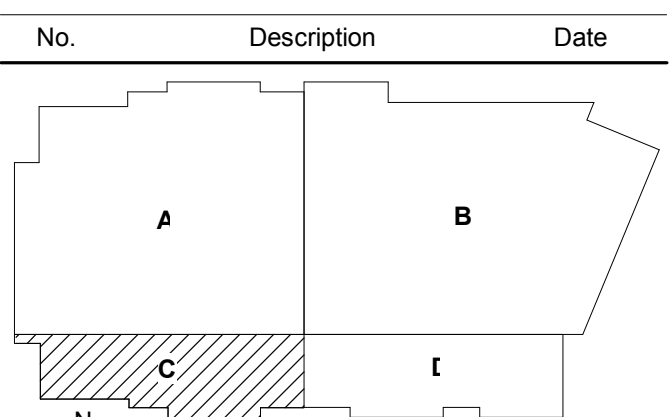
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1 ISSUED FOR BID 03/01/2017



**KEY PLAN**

**LEVEL 01 POWER AND SYSTEMS PLAN - AREA C**

Project No.: 005005.00 Checked by: JE

**E0201C**



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GENERAL NOTES:

- A. VERIFY ALL POWER AND DATA RECEPTACLE MOUNTING HEIGHTS WITH OWNER PRIOR TO INSTALLATION.
- B. PROVIDE A MINIMUM OF 16" SEPARATION BETWEEN DEVICES ON OPPOSITE SIDES OF WALLS.

KEYED NOTES  :

1. INTERCOM SPEAKER AND CLOCK SHALL BE FURNISHED BY RPS AND INSTALLED BY CONTRACTOR. PROVIDE CATEGORY 6 CABLE AND BACKBOXES. CONTRACTOR SHALL TEST AND TERMINATE CABLE TO THE NEAREST IDF CLOSET.
2. PROVIDE, INSTALL AND PROGRAM DOWN RELEASE BUTTON TO RELEASE DOOR. COORDINATE WITH FURNITURE MANUFACTURER FOR RACEWAY INSTALLATION OF DEVICE.
3. PROVIDE AND INSTALL A SINGLE GANG JUNCTION BACKBOX WITH 1-1/4" CONDUIT TO NEAREST ACCESSIBLE CEILING SPACE.
4. PROVIDE PUBLIC ADDRESS AND CLOCK SYSTEM BY ADVANCED NETWORK DEVICES IP CLOCK SYSTEM. PROVIDE AMPLIFIER, ZONE CONTROLLERS, ADMINISTRATIVE DEVICE AND ALL NECESSARY ACCESSORIES FOR A COMPLETE SYSTEM. PROVIDE CAT6 CABLEING AND RJ-45 CONNECTIONS TO ALL SPEAKER/CLOCK DEVICES SHOWN AT THE RESPECTIVE FLOOR PLANS.
5. AIPHONE NETWORK ROUGH-IN ONLY. PROVIDE AND INSTALL JUNCTION BOX WITH 1" CONDUIT TO ACCESSIBLE CEILING.
6. EXACT MOUNTING HEIGHT OF QUAD RECEPTACLE, DATA OUTLET, AND AV BACKBOX OR SMARTBOARD / INTERACTIVE DISPLAY SHALL BE COORDINATED WITH RPS PRIOR TO ROUGH-IN.
7. ELECTRICAL CONNECTION SHALL BE HIDDEN BEHIND FLUSH VALVE. EXPOSED FLEXIBLE CONDUIT IS NOT ACCEPTABLE.
8. PROVIDE 1" EMPTY CONDUIT TO ACCESSIBLE CEILING FOR AIPHONE SYSTEM WIRING.
9. CONTRACTOR SHALL VERIFY SIGNAL STRENGTH FROM LOCAL WIFI ACCESS POINT. PROVIDE MANUFACTURER'S RECOMMENDED dB LEVEL. REPORT ALL DISCREPANCIES TO ENGINEER.
10. CONTRACTOR SHALL COORDINATE WITH RPS IT DEPARTMENT TO ENSURE OWNER'S LAN IS CONFIGURED TO SUPPORT WIFI LOCKS.
11. INTRUSION DETECTION KEYPAD PROVIDED BY RPS IT DEPARTMENT. COORDINATE WITH OWNER ON FINAL LOCATION.
12. DOOR TAGS SHOWN FOR COORDINATION PURPOSES.

HORIZONTAL TERMINATION NOTES  :

4. TERMINATE STRUCTURED TELECOMMUNICATIONS DATA CABLING IN THIS AREA ON PATCH PANELS INSTALLED ON RACKS IN IDF ROOM 114, UNLESS NOTED OTHERWISE.
5. TERMINATE SECURITY SYSTEM CABLING IN THIS AREA AT SECURITY EQUIPMENT INSTALLED IN IDF ROOM 114, UNLESS NOTED OTHERWISE.

BRANCH CIRCUIT NOTES  :

1. EXTEND BRANCH CIRCUITS IN THIS AREA TO THE FOLLOWING BRANCH  
PANELBOARDS, UNLESS OTHERWISE NOTED:

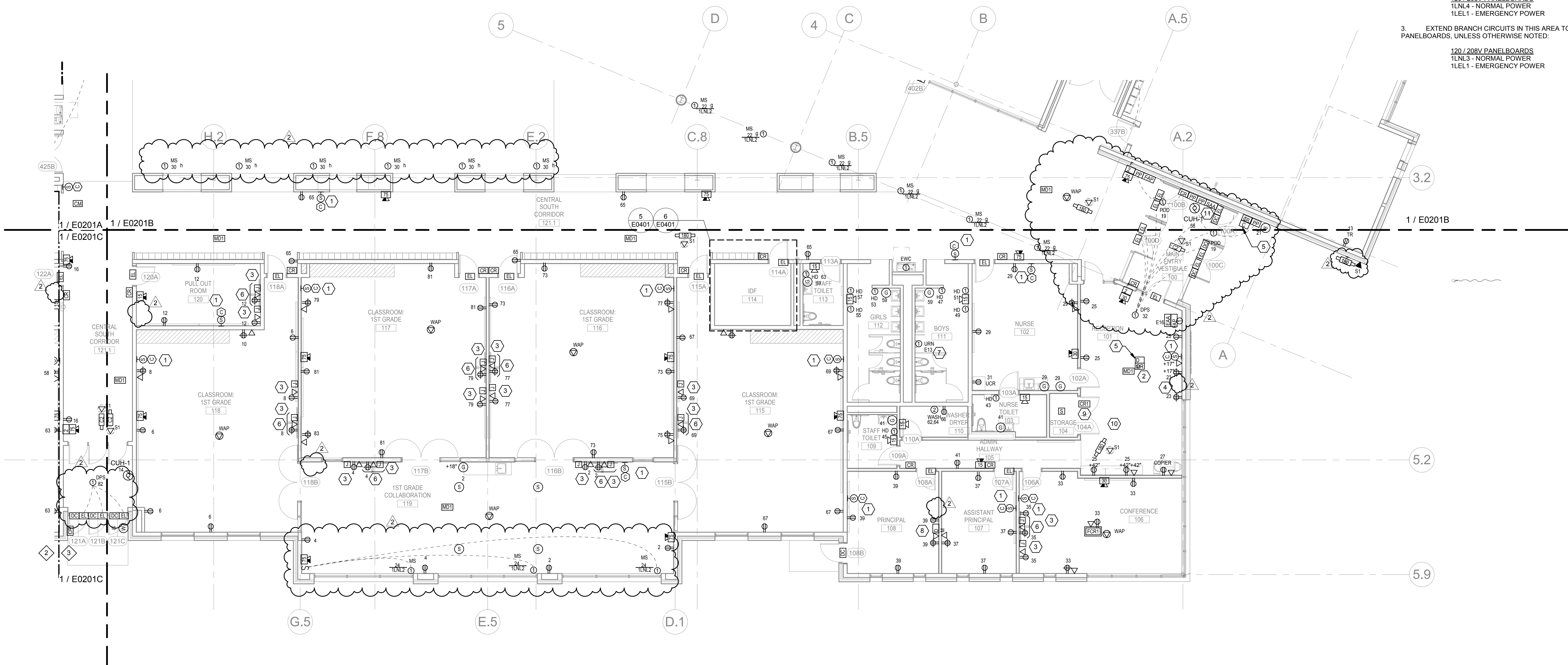
120 / 208V PANELBOARDS  
1LNL1 - NORMAL POWER  
1LEL1 - EMERGENCY POWER

2. EXTEND BRANCH CIRCUITS IN THIS AREA TO THE FOLLOWING BRANCH PANELBOARDS, UNLESS OTHERWISE NOTED:

120 / 208V PANELBOARDS  
1LNL4 - NORMAL POWER  
1LEL1 - EMERGENCY POWER

3. EXTEND BRANCH CIRCUITS IN THIS AREA TO THE FOLLOWING BRANCH PANELBOARDS, UNLESS OTHERWISE NOTED:

120 / 208V PANELBOARDS  
1LNL3 - NORMAL POWER  
1LEL1 - EMERGENCY POWER

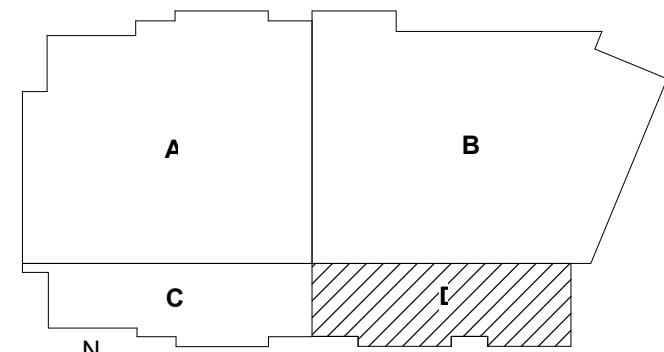


1 LEVEL 01 POWER AND SYSTEMS PLAN - AREA D

$$1/8^* = 1^*-0^*$$

2	ADDENDUM 05	05/22/201
1	ISSUED FOR BID	03/01/201

No.	Description	Date
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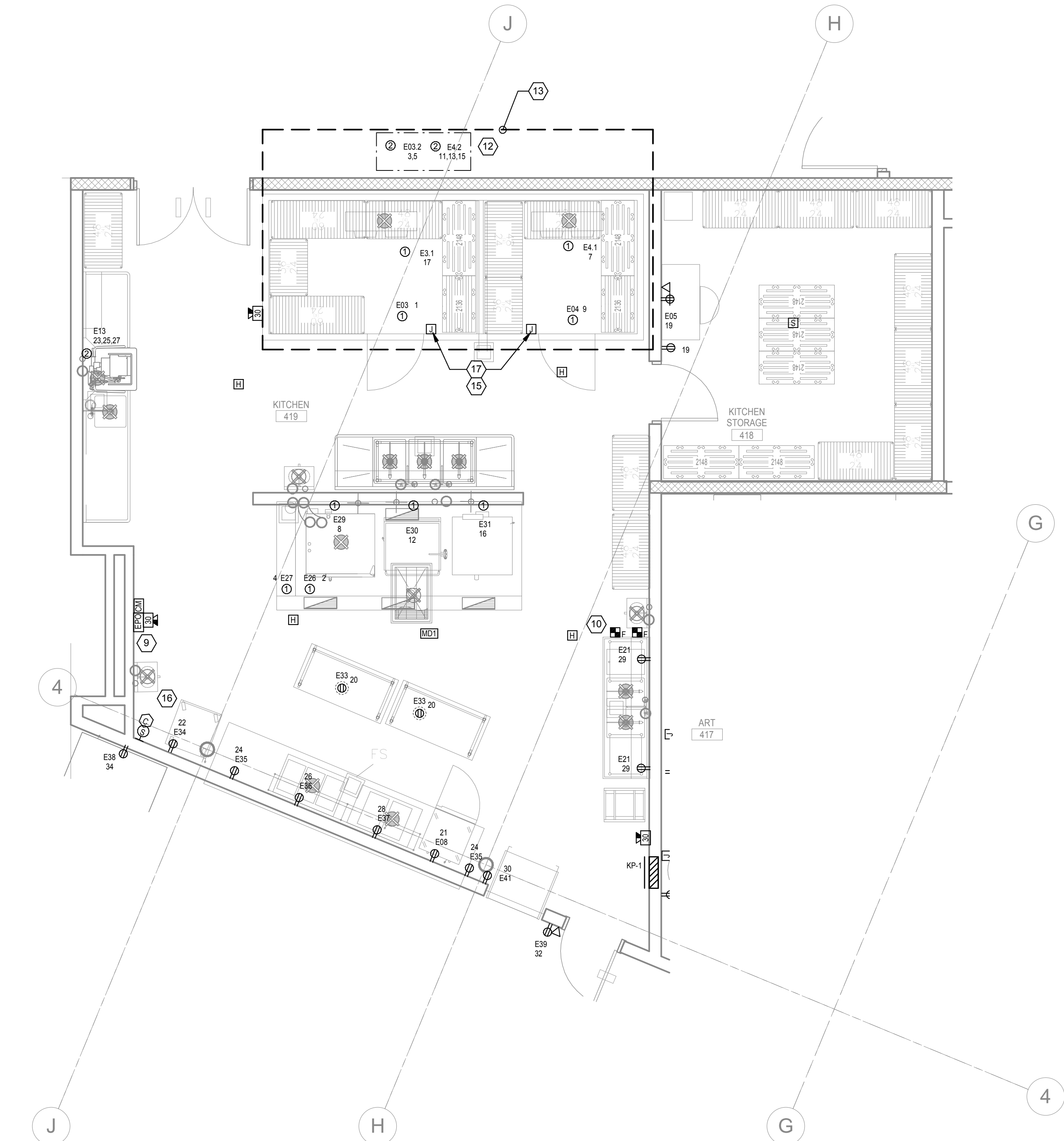


## KEY PLAN

**LEVEL 01 POWER AND  
SYSTEMS PLAN - AREA D**

Project No.: 005005.00      Checked by: JE

# E0201D

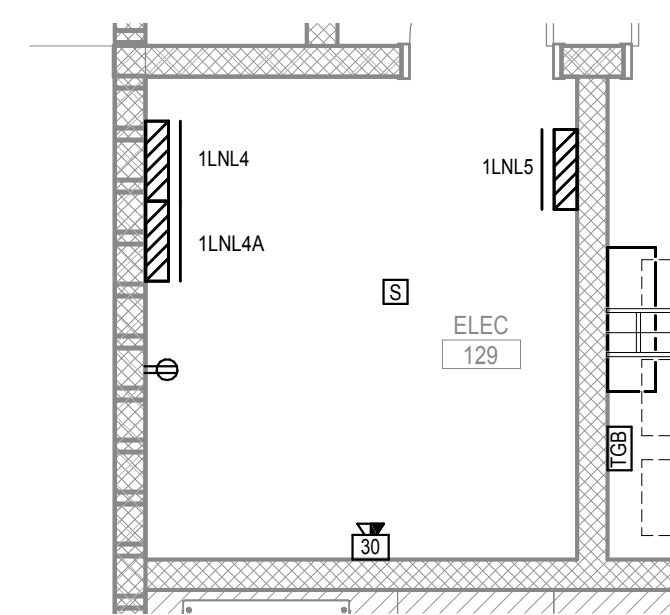


9 ENLARGED KITCHEN  
1/4" = 1'-0"

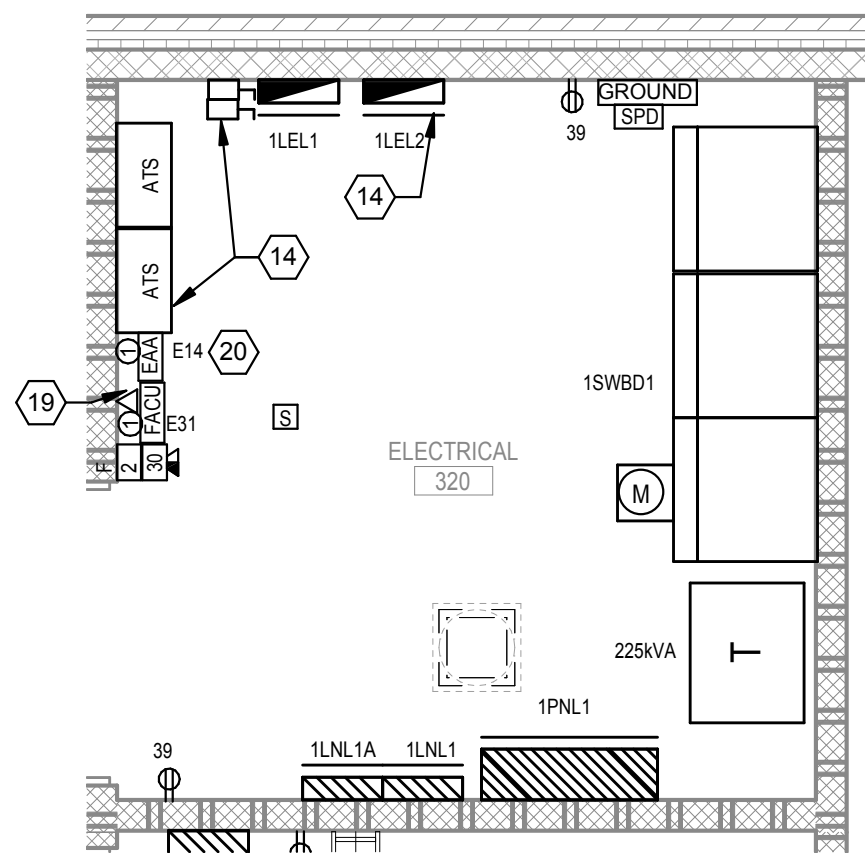
KITCHEN EQUIPMENT SCHEDULE																						
EQUIPMENT DESIGNATION	DESCRIPTION	VOLT	PHASE	FLA	KW	HP	POLE AMPS	POLES	PANEL	CIRCUIT	WIRING								CONNECTION TYPE	MOUNTING HEIGHT	PROVIDE LOCAL DISCONNECT	REMARKS
											PHASE		NEUTRAL		GROUND		CONDUIT					
											QUANTITY	SIZE	QUANTITY	SIZE	QUANTITY	SIZE	QUANTITY	SIZE				
E03	WALK-IN COOLER	120	1	16			20	1	KP-1 OR ALT. 1LEL2	1	#12	1	#12	1	#12	1	3/4"	DC	48"			
E03.1	EVAPORATOR COIL WALK-IN COOLER	120	1	16			20	1	KP-1 OR ALT. 1LEL2	1	#12	1	#12	1	#12	1	3/4"	DC	96"			
E03.2	COMPRESSOR	208	1			1	20	2	KP-1 OR ALT. 1LEL2	2	#12	1	#12	1	#12	1	3/4"	DC	96"			
E04	WALK-IN FREEZER	120	1	16			20	1	KP-1 OR ALT. 1LEL2	1	#12	1	#12	1	#12	1	3/4"	DC	48"			
E04.1	EVAPORATOR COIL WALK-IN FREEZER	120	1	16			20	1	KP-1	1	#12	1	#12	1	#12	1	3/4"	DC	96"			
E04.2	COMPRESSOR - WALK-IN FREEZER	208	3			1.5	20	3	KP-1	3	#12	1	#12	1	#12	1	3/4"	DC	96"			
E05	DESK	120	1	16			20	1	KP-1	1	#12	1	#12	1	#12	1	3/4"	DR	48"			
E08	PREP REFRIGERATOR	120	1	6			20	1	KP-1	1	#12	1	#12	1	#12	1	3/4"	DC	12"			
E13	WAREWASHER	208	3	45.4			60	3	KP-1	3	#4	#4	#4	#4	#4	1	1-1/4"	DC	12.75"	X		
E21	TABLE, PREP W/ SINK	120	1	16			20	1	KP-1	1	#12	1	#12	1	#12	1	3/4"	DR	48"			
E26	EXHAUST HOOD	120	1	16			20	1	KP-1	1	#12	1	#12	1	#12	1	3/4"	DC	86"			
E27	FIRE SUPPRESSION SYSTEM	120	1	10			20	1	KP-1	1	#12	1	#12	1	#12	1	3/4"	DC	96"			
E29	OVEN-STEAMER	120	1	6.8			20	1	KP-1	1	#12	1	#12	1	#12	1	3/4"	DC				
E30	TILT SKILLET	120	1	1.8			20	1	KP-1	1	#12	1	#12	1	#12	1	3/4"	DR	21.25"			
E31	OVEN-CONVECTION	120	1	10			20	1	KP-1	1	#12	1	#12	1	#12	1	3/4"	DR	46"			
E33	MOBILE WORKTABLE	120	1	16			20	1	KP-1	1	#12	1	#12	1	#12	1	3/4"	CEILING				
E34	HOLDING CABINET, HEATED	120	1	19.8			30	1	KP-1	1	#10	1	#10	1	#10	1	3/4"	DR	48"			
E35	FRONT COUNTER	120	1	16			20	1	KP-1	1	#12	1	#12	1	#12	1	3/4"	DR	18"			
E36	DROP-IN, HOT WELLS	120	1	15.6			20	1	KP-1	1	#12	1	#12	1	#12	1	3/4"	DR	16"			
E37	DROP-IN, HOT/COLD UNIT	120	1	11.2			20	1	KP-1	1	#12	1	#12	1	#12	1	3/4"	DR	18"			
E38	MILK COOLER	120	1	6.3			20	1	KP-1	1	#12	1	#12	1	#12	1	3/4"	DR	12"			
E39	POS	120	1	16			20	1	KP-1	1	#12	1	#12	1	#12	1	3/4"	DR	34"			
E41	REFRIGERATOR SELF-SERVICE	120	1	14			20	1	KP-1	1	#12	1	#12	1	#12	1	3/4"	DR	48"			
CONNECTION TYPE:																						
CP	CONTROL PANEL - MAKE DIRECT CONNECTION																					
DR	STANDARD NEMA 5-20R DUPLEX RECEPTACLE																					
JB	JUNCTION BOX																					
DC	DIRECT CONNECTION TO EQUIPMENT																					
RC	RECEPTACLE TO MATCH EQUIPMENT PLUGS																					
REMARKS:																						
1.																						
2.																						
3.																						
4.																						

## KEYED NOTES

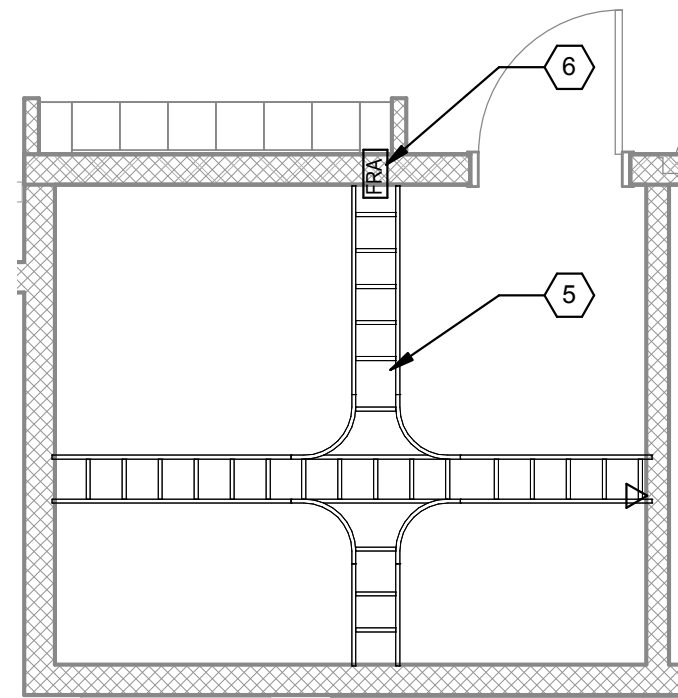
- NOT USED.
- 19" OPEN RELAY RACK FOR NETWORK ELECTRONICS WITH 6" VERTICAL CABLE MANAGEMENT ON BOTH ENDS.
- PROVIDE A SINGLE CATEGORY 6 DIRECT TELEPHONE CONNECTION TO THE SECURITY CONTROL PANEL. PROVIDE CITY OF 1 IN THIS ROOM. PROVIDE POWER TO EACH SECURITY PANEL. EACH PANEL SHALL HAVE A SINGLE CATEGORY 6 DIRECT TELEPHONE CONNECTION.
- MAIN TELECOMMUNICATIONS GROUND BAR MOUNTED AT 7'-0" A.F.F.
- INSTALL 12" X 4" CABLE RUNWAY FROM CONDUIT SLEEVE/FIRE RATED ASSEMBLY ENTRANCE.
- INSTALL 4" FIRE RATED ASSEMBLY DEVICES IN QUANTITIES OF 4 WITH MOUNTING BRACKET. FOLLOW MANUFACTURERS RECOMMENDATIONS FOR SPACING BETWEEN FIRE RATED ASSEMBLIES OR PROVIDE ADDITIONAL SUPPORT AS RECOMMENDED BY MANUFACTURER.
- TELECOMMUNICATIONS GROUND BAR MOUNTED AT 7'-0" A.F.F.
- INTERFACE SECURITY PANEL (PROVIDED BY RPS, INSTALLED BY CONTRACTOR) WITH FIRE ALARM SYSTEM FOR DOOR RELEASE AS REQUIRED.
- PROVIDE MANUAL STATION FOR FIRE SUPPRESSION SYSTEM, MOUNTED 48" CEILING AFF. SYSTEM TO BE INTERWIRED WITH MECHANICAL GAS SHUT-OFF VALVE SERVING ITEMS OF COOKING EQUIPMENT BENEATH THE HOOD. TO PROVIDE POWER AND FUEL SHUT-OFF IN THE EVENT OF SYSTEM ACTUATION, FIRE PULL SHALL BE LOCATED BETWEEN 10 AND 20 FEET FROM HOOD. INTERCONNECT MICRO SWITCH TO REMOTE NOTIFICATION LOCATION PER NFPA 96. INTERCONNECT SHUNT TRIP CONTROL AND MICRO SWITCH TO SHUT OFF POWER TO EQUIPMENT UNDER THE EXHAUST HOOD. ALL CIRCUIT BREAKERS AT PANEL KP-1 THAT CORRESPOND TO LOADS UNDER THE HOOD SHALL BE THE SHUNT-TRIP TYPE. INTERFACE ANSUL FIRE SUPPRESSION SYSTEM WITH FIRE ALARM.
- FIRE ALARM CONNECTION TO ANSUL SYSTEM.
- 110 BLOCK WITH LUGS.
- COMPRESSORS E3.2 AND E4.2 WILL BE MOUNTED ON ROOF. VERIFY EXACT LOCATION WITH.



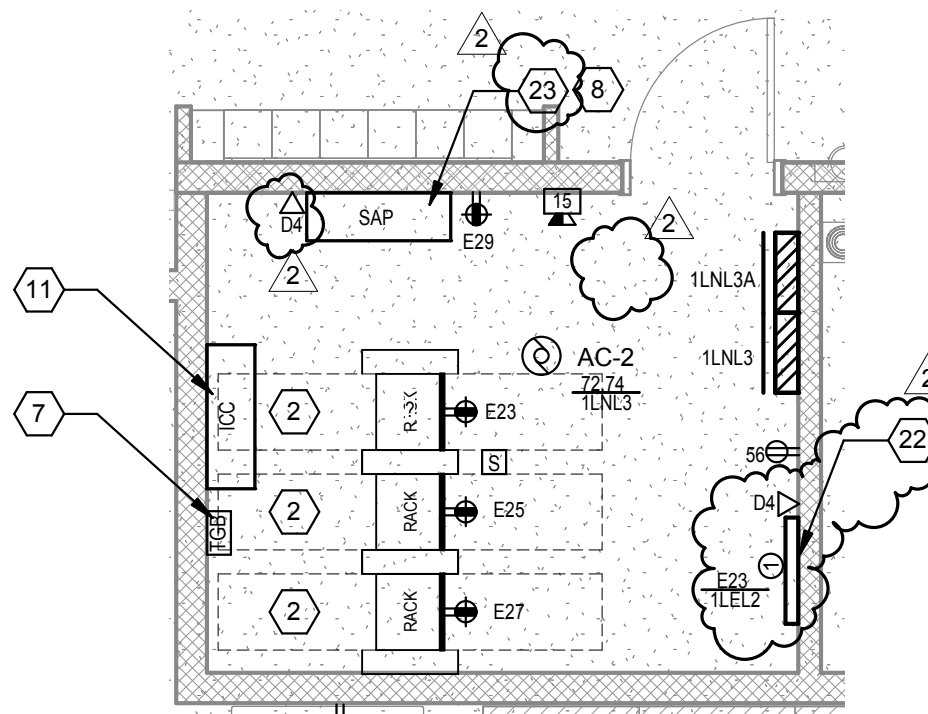
8 ENLARGED ELEC 129  
1/4" = 1'-0"



7 ENLARGED ELECTRICAL ROOM  
1/4" = 1'-0"



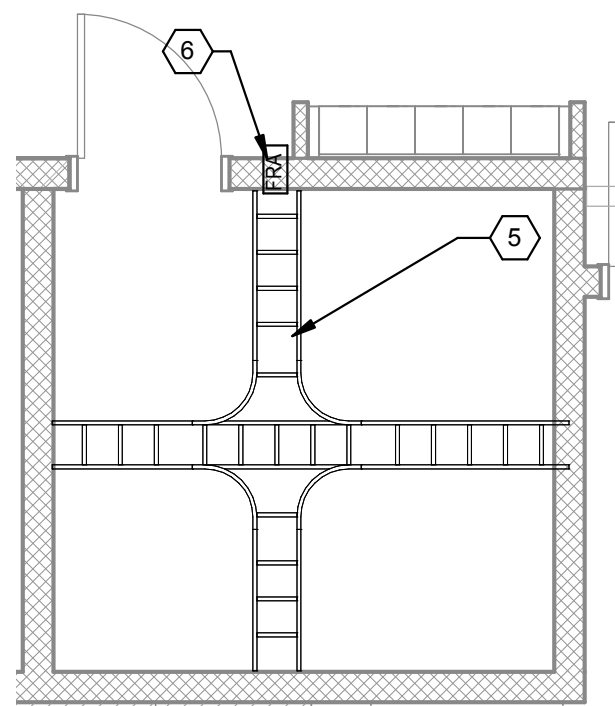
6 IDF 114 ROOM CEILING PLAN  
1/4" = 1'-0"



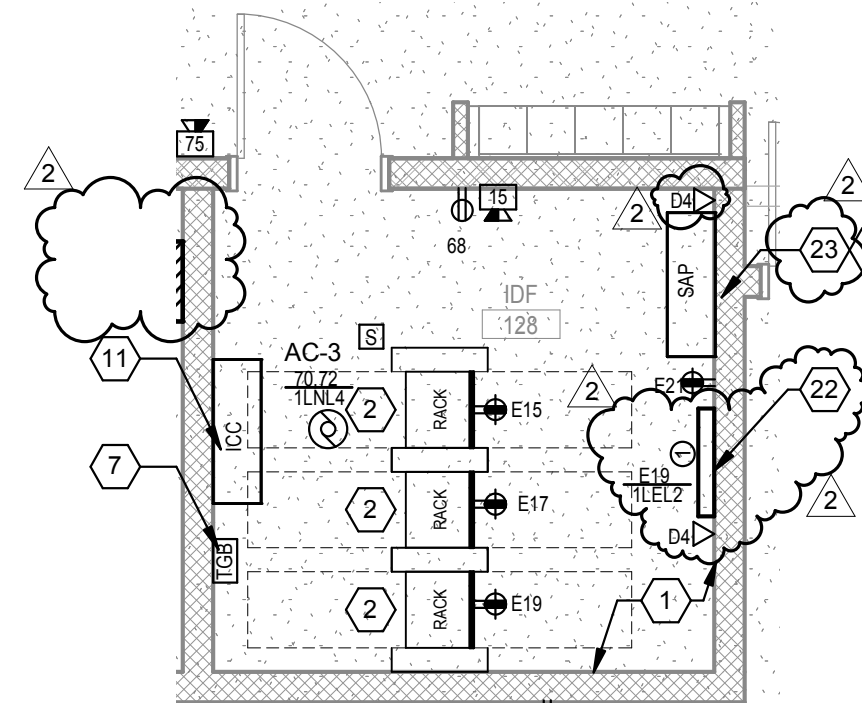
5 IDF 114 ROOM LAYOUT  
1/4" = 1'-0"

## KEYED NOTES

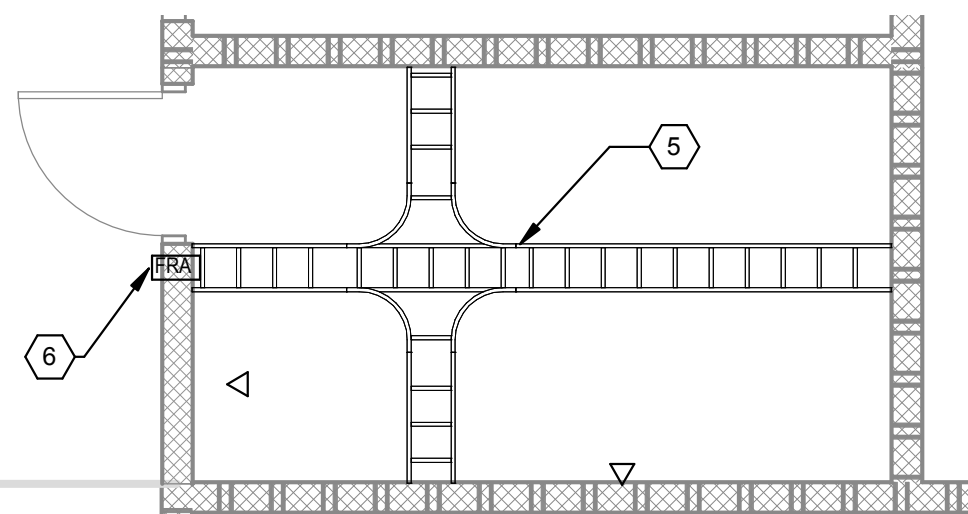
- ALTERNATE #4: CONNECT DESIGNATED EQUIPMENT TO EMERGENCY PANEL CIRCUITS AS SHOWN AT THE KITCHEN EQUIPMENT SCHEDULE.
- ALTERNATE #4: PROVIDE ATS, PANEL, TRANSFORMER, DISCONNECT SWITCHES, ETC. AS SHOWN ON E0521 FOR KITCHEN LOADS.
- COORDINATE FINAL LOCATION WITH EQUIPMENT PROVIDER.
- INTERCOM SPEAKER AND CLOCK SHALL BE PROVIDED BY RPS. PROVIDE A CATEGORY 6 CABLE AND BACKBOX AT THIS LOCATION. CONTRACTOR SHALL TEST AND TERMINATE CABLE TO THE NEAREST IDF CLOSET.
- PROVIDE A SINGLE GANG JUNCTION WITH 1" CONDUIT TO NEAREST ACCESSIBLE CEILING FOR FREEZER AND COOLER MONITORING WIRES.
- RELAY PANELS RC1 AND RC2 BY NIGHT FOR LIGHTING CONTROLS OF INTERIOR AND EXTERIOR LIGHTING. PROVIDE A COMPLETE NIGHT SYSTEM WITH BRIDGES GATEWAY AND ALL OTHER ACCESSORIES FOR A COMPLETE SYSTEM.
- PROVIDE 120V EMERGENCY CIRCUITS TO ANY NAC PANELS REQUIRED FOR THE FIRE ALARM SYSTEM. ALLOW FOR TWO (2) 120V EMERGENCY CIRCUIT CONNECTIONS.
- GENERATOR ANNUNCIATOR PANEL.
- PROVIDE CAT5E INTERFACE CABLE BETWEEN NIGHT GATEWAY EQUIPMENT AND THE BAS PANEL LOCATED AT THE BOILER ROOM.
- SPACE RESERVED FOR OWNER PROVIDED INTRUSION DETECTION SYSTEM PANEL.
- PROVIDE A SINGLE CATEGORY 6 DIRECT TELEPHONE CONNECTION TO THE SECURITY CONTROL PANEL. PROVIDE CITY OF 1 IN THIS ROOM. EACH PANEL SHALL HAVE A SINGLE CATEGORY 6 DIRECT TELEPHONE CONNECTION.



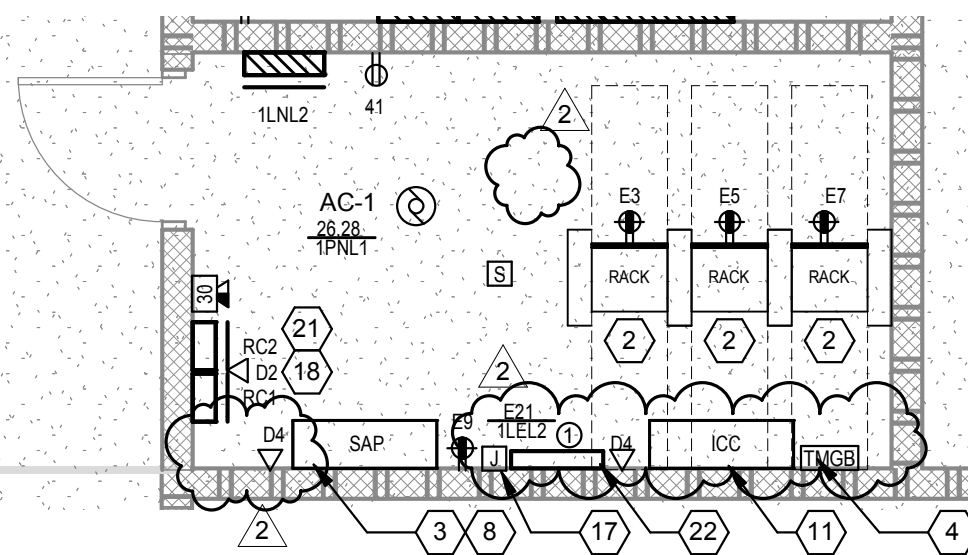
4 IDF 128 ROOM CEILING PLAN  
1/4" = 1'-0"



3 IDF 128 ROOM LAYOUT  
1/4" = 1'-0"



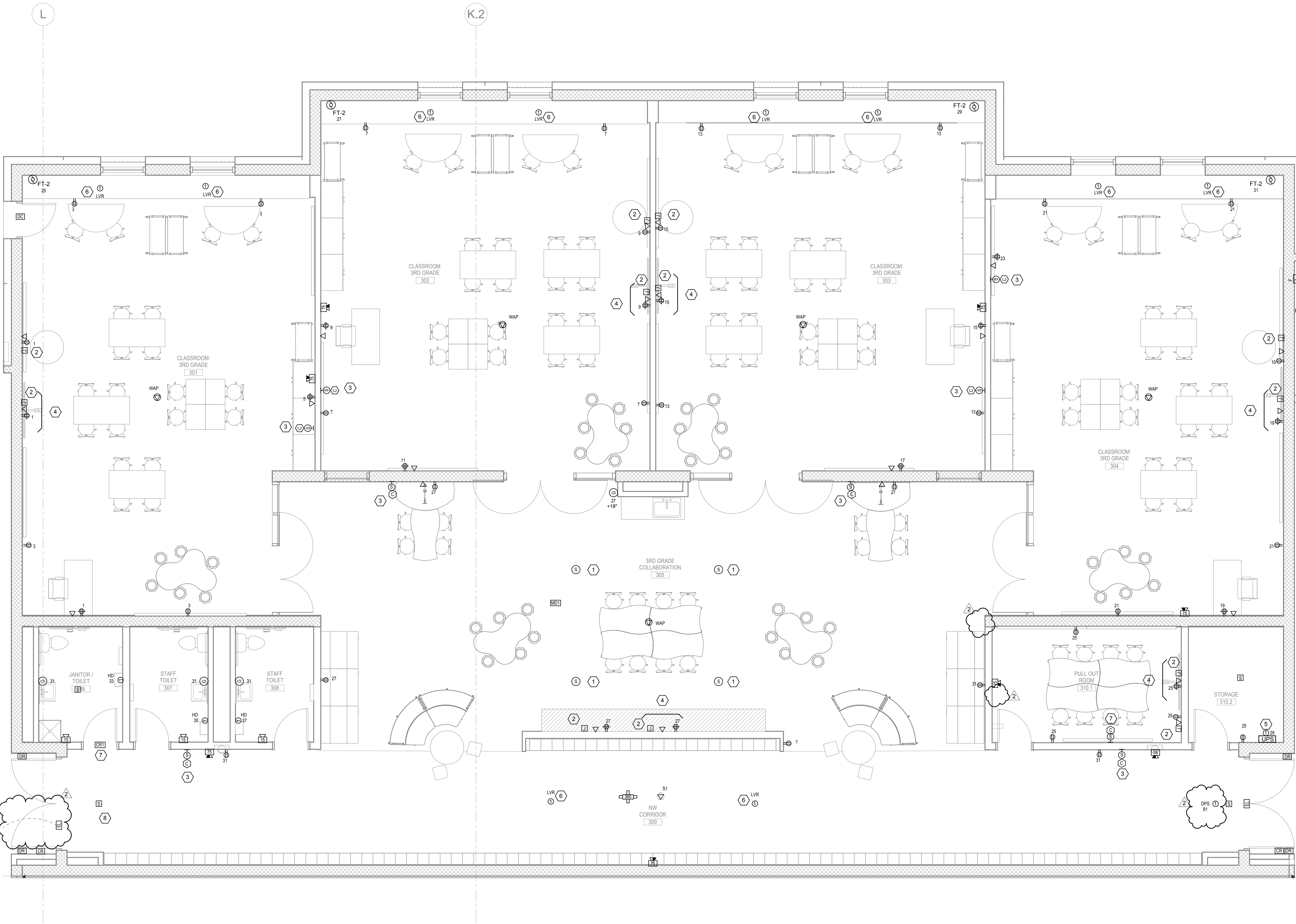
2 MDF 319 ROOM CEILING PLAN  
1/4" = 1'-0"



1 MDF 319 ROOM LAYOUT  
1/4" = 1'-0"



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1 ENLARGED STORM SHELTER POWER AND SYSTEMS PLAN  
1/4" = 1'-0"

### KEYED NOTES

1. PROVIDE 1" CONDUIT TO NEAREST ACCESSIBLE CEILING SPACE.
2. PROVIDE A SINGLE GANG JUNCTION BACKBOX WITH 1-1/4" CONDUIT TO NEAREST ACCESSIBLE CEILING SPACE.
3. INTERCOM SPEAKER AND CLOCK SHALL BE FURNISHED BY RPS AND INSTALLED BY CONTRACTOR. PROVIDE A CATEGORY 6 CABLE AND BACKBOX AT THIS LOCATION. CONTRACTOR SHALL TEST AND TERMINATE CABLE TO THE NEAREST IDF CLOSET.
4. EXACT MOUNTING HEIGHT OF QUAD RECEPTACLE, DATA OUTLET AND AV BACKBOX FOR SMARTBOARD / INTERACTIVE DISPLAY SHALL BE COORDINATED WITH RPS PRIOR TO ROUGH-IN.
5. 1000VA UPS FLOOR MOUNT UNIT BY EATON 9130 (PW9130N100T-EBM) TOWER OR EQUAL BY APC OR TRIPPLITE. PROVIDE HARD WIRE 120V CONNECTION TO DESIGNATED SOLENOID SPRING LOAD FOR LOUVER CONTROL. CONNECT UPS TO DEDICATED 20A, 120V CIRCUIT AS SHOWN. PROVIDE APPROPRIATE SIZE RACK, WALL MOUNT, FOR PLACEMENT OF UPS UNIT.
6. SOLENOID SPRING LOAD FOR LOUVER CONTROLS FOR STORM SHELTER. CONNECT TO UPS IN STORAGE 310.2.
7. VERIFY SIGNAL STRENGTH FROM LOCAL WI-FI ACCESS POINT. PROVIDE MANUFACTURER'S RECOMMENDED dB LEVEL. REPORT ALL DISCREPANCIES TO ENGINEER.
8. COORDINATE WITH RPS IT DEPARTMENT TO ENSURE OWNER'S LAN IS CONFIGURED TO SUPPORT WI-FI LOCKS.

### BRANCH CIRCUIT NOTES

1. EXTEND BRANCH CIRCUITS IN THIS AREA TO THE FOLLOWING BRANCH PANELBOARDS, UNLESS OTHERWISE NOTED:  
120 / 208V PANELBOARDS  
1LN1 - NORMAL POWER  
1LE1 - EMERGENCY POWER
2. EXTEND BRANCH CIRCUITS IN THIS AREA TO THE FOLLOWING BRANCH PANELBOARDS, UNLESS OTHERWISE NOTED:  
120 / 208V PANELBOARDS  
1LN4 - NORMAL POWER  
1LE1 - EMERGENCY POWER
3. EXTEND BRANCH CIRCUITS IN THIS AREA TO THE FOLLOWING BRANCH PANELBOARDS, UNLESS OTHERWISE NOTED:  
120 / 208V PANELBOARDS  
1LN3 - NORMAL POWER  
1LE1 - EMERGENCY POWER

### GENERAL NOTES:

- A. VERIFY ALL POWER AND DATA RECEPTACLE MOUNTING HEIGHTS WITH OWNER PRIOR TO INSTALLATION.
- B. PENETRATIONS THROUGH THE STORM SHELTER ENVELOPE LARGER THAN 3-1/2 SQUARE INCHES IN AREA FOR RECTANGULAR OPENINGS OR 2-1/4" IN DIAMETER SHALL BE CONSIDERED AN OPENING AND SHALL BE PROVIDED WITH AN OPENING PROTECTIVE DEVICE. REFERENCE STRUCTURAL DRAWINGS. AVOID BUNDLING CONDUIT FEEDERS IN CLOSE PROXIMITY SO THAT THE SHELTER ENVELOPE IS NOT DEGRADED OR THE PENETRATION FALLS INTO THE CONDITION AS DESCRIBED ABOVE.
- C. PROVIDE A MINIMUM OF 16" SEPARATION BETWEEN DEVICES ON OPPOSITE SIDES OF WALLS.

### HORIZONTAL TERMINATION NOTES

1. TERMINATE STRUCTURED TELECOMMUNICATIONS DATA CABLING IN THIS AREA ON PATCH PANELS INSTALLED ON RACKS IN TELECOMMUNICATIONS ROOM 128, UNLESS NOTED OTHERWISE.
2. TERMINATE SECURITY SYSTEM CABLING IN THIS AREA AT SECURITY EQUIPMENT INSTALLED IN TELECOMMUNICATIONS ROOM 128, UNLESS NOTED OTHERWISE.



ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

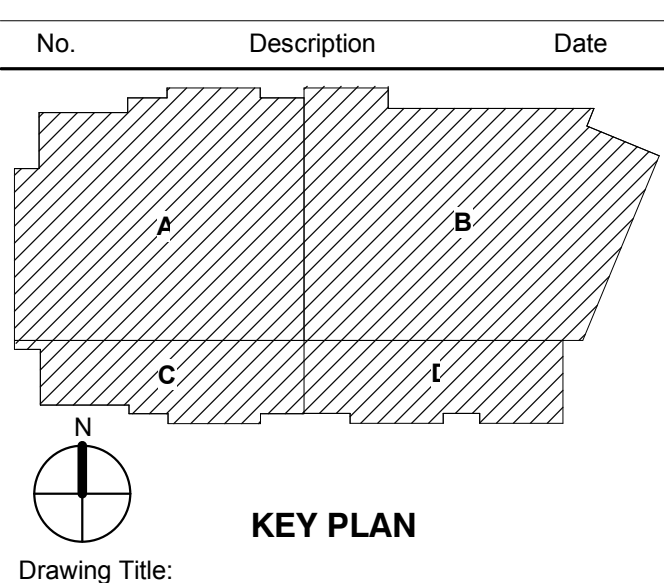
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2 ADDENDUM 05 05/22/2017  
1 ISSUED FOR BID 03/01/2017



ENLARGED PLANS

Project No.: 005005.00 Checked by: JE

E0402



LUMINAIRE SCHEDULE														
TAG	DESCRIPTION	INSTALLATION METHOD	DEPTH	LIGHT SOURCE SPEC	QTY	BALLAST/DRIVER SPEC	VOLT	INPUT WATTS	MIN. EFF.	SHIELDING/OPTICS	FEATURES/OPTIONS	REFERENCED PRODUCTS	NOTES	
LP6A	7" x 4FT LED LINEAR PENDANT BI-DIRECTIONAL DISTRIBUTION, CONTINUOUSLY MOUNT (MUSIC AND COLLABORATION AREA)	P-AC	1-13/16"	LED 5000K 3400 LUM PER 4FT	-	INTERNAL LED DIMMABLE 0-10V	120	24.2 PER 4FT	84 LPW	75% DIRECT/ 25% INDIRECT, 125" WHITE SATINE LENS, MATTE FINISH, CLEAR DUST GUARD	DIE FORM 18 GAUGE STEEL HOUSING, DIE CAST ALUMINUM ENDCAPS, FINISH WHITE, DUAL AIR CRAFT ADJUSTABLE CABLE	PEERLESS - BRM8L-LO-ENNB-N-LIGHT-LMES20	1, 2	
LP6A-EM	7" x 4FT LED LINEAR PENDANT BI-DIRECTIONAL DISTRIBUTION, CONTINUOUSLY MOUNT, INTEGRAL BATTERY BACKUP, (COLLABORATION AREA)	P-AC	1-13/16"	LED 5000K 3400 LUM PER 4FT	-	INTERNAL LED DIMMABLE 0-10V	120	24.2 PER 4FT	84 LPW	75% DIRECT/ 25% INDIRECT, 125" WHITE SATINE LENS, MATTE FINISH, CLEAR DUST GUARD	DIE FORM 18 GAUGE STEEL HOUSING, DIE CAST ALUMINUM ENDCAPS, FINISH WHITE, DUAL AIR CRAFT ADJUSTABLE CABLE, 2 HOURS EMERGENCY BATTERY BACKUP	PEERLESS - BRM8L-LO-ENNB-N-LIGHT-LMES20	1, 2	
LP6B	7" x 8FT LED LINEAR PENDANT BI-DIRECTIONAL DISTRIBUTION, INDIVIDUALLY MOUNT (COLLAB)	P-AC	1-13/16"	LED 5000K 3400 LUM PER 4FT	-	INTERNAL LED DIMMABLE 0-10V	120	24.2 PER 4FT	84 LPW	75% DIRECT/ 25% INDIRECT, 125" WHITE SATINE LENS, MATTE FINISH, CLEAR DUST GUARD	DIE FORM 18 GAUGE STEEL HOUSING, DIE CAST ALUMINUM ENDCAPS, FINISH WHITE, DUAL AIR CRAFT ADJUSTABLE CABLE	PEERLESS - BRM8L-LO-ENNB-N-LIGHT-LMES20	1, 2	
LP6B-EM	7" x 8FT LED LINEAR PENDANT BI-DIRECTIONAL DISTRIBUTION, INDIVIDUALLY MOUNT (COLLAB)	P-AC	1-13/16"	LED 5000K 3400 LUM PER 4FT	-	INTERNAL LED DIMMABLE 0-10V	120	24.2 PER 4FT	84 LPW	75% DIRECT/ 25% INDIRECT, 125" WHITE SATINE LENS, MATTE FINISH, CLEAR DUST GUARD	DIE FORM 18 GAUGE STEEL HOUSING, DIE CAST ALUMINUM ENDCAPS, FINISH WHITE, DUAL AIR CRAFT ADJUSTABLE CABLE N-LITE EMERGENCY RELAY	PEERLESS - BRM8L-LO-ENNB-N-LIGHT-LMES20	1, 2	
LP7	4FT DIAMETER DECORATIVE CIRCULAR PENDANT LUMINAIRE (LIBRARY)	P-AC	54"H	LED 5000K 3000 LUM	-	INTERNAL LED DIMMABLE 0-10V	120	72		FROSTED ACRYLIC LENS, FLUSH WITH BOTTOM OF THE HOUSING	EXTRUDED ALUMINUM FRAME, FINISH TBD	NEIDHARDT INC - RP006R1-E OR APPROVED EQUAL BY OCL AXIS	1, 2, 8	
LP7A	4FT DIAMETER DECORATIVE CIRCULAR PENDANT LUMINAIRE	P-AC	54"H	LED 5000K 3000 LUM	-	INTERNAL LED DIMMABLE 0-10V	120	72		FROSTED ACRYLIC LENS, FLUSH WITH BOTTOM OF THE HOUSING	EXTRUDED ALUMINUM FRAME, FINISH TBD	NEIDHARDT INC - RP006R1-E OR APPROVED EQUAL BY OCL AXIS	1, 2, 8	
LP7B	3FT DIAMETER DECORATIVE CIRCULAR PENDANT LUMINAIRE	P-AC	54"H	LED 5000K 2300 LUM	-	INTERNAL LED DIMMABLE 0-10V	120	56		FROSTED ACRYLIC LENS, FLUSH WITH BOTTOM OF THE HOUSING	EXTRUDED ALUMINUM FRAME, FINISH TBD	NEIDHARDT INC - RP006R1-E OR APPROVED EQUAL BY OCL AXIS	1, 2, 8	
LP7C	2FT DIAMETER DECORATIVE CIRCULAR PENDANT LUMINAIRE	P-AC	54"H	LED 5000K 1500 LUM	-	INTERNAL LED DIMMABLE 0-10V	120	36		FROSTED ACRYLIC LENS, FLUSH WITH BOTTOM OF THE HOUSING	EXTRUDED ALUMINUM FRAME, FINISH TBD	NEIDHARDT INC - RP006R1-E OR APPROVED EQUAL BY OCL AXIS	1, 2, 8	
LP8A	NOT USED													
LP8B	NOT USED													
LP8C	NOT USED													
LP8D	NOT USED													
LP8E	NOT USED													
LX1	16.5" 7H LED EXTERIOR TRAPEZOID WALL MOUNT LUMINAIRE	SURFACE WALL	10-3/16" PROJ.	LED 5000K 2157 LUM	-	INTERNAL LED DRIVER	120	32	84 LPW	7 LED LIGHT BAR, SHARP CUTOFF DISTRIBUTION, TYPE 4 DISTRIBUTION 0.187" CLEAR POLYCARBONATE LENS	HIGH IMPACT RESISTANT INJECTION MOLDED POLYCARBONATE, BALLAST HOUSING DIE-CAST ALUMINUM, GASKETED, WET LABEL, PHOTOCONTROL, BUTTON TYPE, FINISH TBS	McGRAW-EDISON - IST-F01-BL4-7050 LITHONIA - WST	2, 5	
LX1-EM	16.5" 7H LED EXTERIOR TRAPEZOID WALL MOUNT LUMINAIRE	SURFACE WALL	10-3/16" PROJ.	LED 5000K 2157 LUM	-	INTERNAL LED DRIVER	120	32	84 LPW	7 LED LIGHT BAR, SHARP CUTOFF DISTRIBUTION, TYPE 4 DISTRIBUTION 0.187" CLEAR POLYCARBONATE LENS	HIGH IMPACT RESISTANT INJECTION MOLDED POLYCARBONATE, BALLAST HOUSING DIE-CAST ALUMINUM, GASKETED, WET LABEL, PHOTOCONTROL, BUTTON TYPE, FINISH TBS N-LITE EMERGENCY RELAY	McGRAW-EDISON - IST-F01-BL4-7050 LITHONIA - WST	2, 5	
XB1	NOT USED													
XD1	4" APERTURE LED DOWNLIGHT, WET LABEL	RECESSED V	6-1/8"	LED... 5000K 1000 LUM	1	INTERNAL LED DRIVER	UNIV	20	50 LMW	COMFORT CLEAR DIFFUSE REFLECTOR	SELF-FLANGE, PAINTED WHITE, U.N.O., WET LABEL, IP66 RATED	GOTHAM - EV04-NLIGHT FOCAL POINT - FL4D PHILIPS-LIGHTOLIER - C4L10DL CREE-KR4 PORTFOLIO - LD4	2	
XG1	9"x27" FLOOD UPLIGHT LED LIGHT (FLAG POLES)	GROUND, CONCRETE BASE	8"	LED 5000K 5785 LUM	1	INTERNAL LED DRIVER	120	51		TEMPERED CLEAR DIFFUSER, 6X6 DISTRIBUTION, BARN DOORS	DIE CAST ALUMINUM HOUSING, FINISH STANDARD TBS, IP66 RATED, 6" STEM, SUPPLIER AND SURFACE MOUNT, TENON, LOCKABLE, AIM TOWARDS TO FLAG, PROVIDE CONCRETE BASE 4" HEIGHT BY 12" DIAMETER	LUMARK - NFFLD-SC70-66-7050- S-TYS BARN DOORS	2	
XP1	20FT LIGHT POLE WITH SINGLE HEAD LUMINAIRE	POLE BASE	23-1/2" PROJ.	LED 5000K 12,000 LUM	-	INTERNAL LED DIMMABLE 0-10V	208	134	89LPW	PRECISION MOLDED ACRYLIC LENSES, TYPE FORWARD THROW DISTRIBUTION, HOUSE SIDE SHIELD	SINGLE PIECE DIE CAST HOUSING, HOUSESIDE SHIELD, FINISH TBS, MOUNT ON 20FT SQUARE STRAIGHT STEEL POLE AND 36" H x 24" DIA CONCRETE BASE	LITHONIA - CXS1LED-60C-700-TFM HS -SPASSS205G-NLIGHT	1, 2, 7	
XP1A	15FT LIGHT POLE WITH SINGLE HEAD LUMINAIRE	POLE BASE	23-1/2" PROJ.	LED 5000K 12,000 LUM	-	INTERNAL LED DIMMABLE 0-10V	208	134	89LPW	PRECISION MOLDED ACRYLIC LENSES, TYPE FORWARD THROW DISTRIBUTION, HOUSE SIDE SHIELD	SINGLE PIECE DIE CAST HOUSING, HOUSESIDE SHIELD, FINISH TBS, MOUNT ON 15FT SQUARE STRAIGHT STEEL POLE AND 36" H x 24" DIA CONCRETE BASE	LITHONIA - CXS1LED-60C-700-TFM HS -SPASSS205G-NLIGHT	1, 2, 7	
XP2	20FT LIGHT POLE WITH SINGLE HEAD LUMINAIRE	POLE BASE	23-1/2" PROJ.	LED 5000K 12,000 LUM	-	INTERNAL LED DIMMABLE 0-10V	208	134	89LPW	PRECISION MOLDED ACRYLIC LENSES, TYPE 3 DISTRIBUTION, HOUSE SIDE SHIELD	SINGLE PIECE DIE CAST HOUSING, HOUSESIDE SHIELD, FINISH TBS, MOUNT ON 20FT SQUARE STRAIGHT STEEL POLE AND 36" H x 24" DIA CONCRETE BASE	LITHONIA - CXS1LED-60C-700-T3 HS -SPASSS205G-NLIGHT	1, 2, 7	
XP2A	20FT LIGHT POLE WITH SINGLE HEAD LUMINAIRE WITH INTEGRAL PHOTOCELL	POLE BASE	23-1/2" PROJ.	LED 5000K 12,000 LUM	-	INTERNAL LED DIMMABLE 0-10V	208	134	89LPW	PRECISION MOLDED ACRYLIC LENSES, TYPE 3 DISTRIBUTION, HOUSE SIDE SHIELD	SINGLE PIECE DIE CAST HOUSING, HOUSESIDE SHIELD, FINISH TBS, MOUNT ON 20FT SQUARE STRAIGHT STEEL POLE AND 36" H x 24" DIA CONCRETE BASE	LITHONIA - CXS1LED-60C-700-T3 HS -SPASSS205G-NLIGHT-DLL127F 1.5 JU	1, 2, 7	
XP3	20FT LIGHT POLE WITH SINGLE HEAD LUMINAIRE	POLE BASE	23-1/2" PROJ.	LED 5000K 12,000 LUM	-	INTERNAL LED DIMMABLE 0-10V	208	134	89LPW	PRECISION MOLDED ACRYLIC LENSES, TYPE 4 DISTRIBUTION, HOUSE SIDE SHIELD	SINGLE PIECE DIE CAST HOUSING, HOUSESIDE SHIELD, FINISH TBS, MOUNT ON 20FT SQUARE STRAIGHT STEEL POLE AND 36" H x 24" DIA CONCRETE BASE	LITHONIA - CXS1LED-60C-700-T4 HS -SPASSS205G-NLIGHT	1, 2, 7	
XP4	NOT USED													
XP5	20FT LIGHT POLE WITH DOUBLE HEADS AT 180 DEGREE LUMINAIRE	POLE BASE	23-1/2" PROJ.	(2) LED 5000K 12,000 LUM	-	INTERNAL LED DIMMABLE 0-10V	208	268	89LPW	PRECISION MOLDED ACRYLIC LENSES, TYPE FORWARD THROW DISTRIBUTION, HOUSE SIDE SHIELD	SINGLE PIECE DIE CAST HOUSING, HOUSESIDE SHIELD, FINISH TBS, MOUNT ON 20FT SQUARE STRAIGHT STEEL POLE AND 36" H x 24" DIA CONCRETE BASE, 180 DEGREE HEADS ORIENTATION	LITHONIA - (2) HEADS CXS1LED-60C-700-TFM HS -SPASSS205G-NLIGHT	1, 2, 7	
XST1-EM	13" LED EXTERIOR LUMINAIRE VANDAL PROOF (EXTERIOR CANOPY)	SURFACE	4" H	LED 5000K 1000 LUM	-	INTERNAL LED DRIVER	120	82	110 LMW	UV STABILIZED HIGH IMPACT RESISTANT POLYCARBONATE LENS	ONE-PIECE DIE-CAST ALUMINUM HOUSING, HEAVY WALL CONSTRUCTION, FINISH TBD, WET LABEL, N-LITE EMERGENCY RELAY	KENALL - MR13L	2	
XW1	4FT NOMINAL LENGTH ADJUSTABLE UPLIGHT FOR SIGNAGE	SURFACE WALL	12" PROJ.	LED 5000K 2523 LUM	-	INTEGRAL OR REMOTE LED DRIVER	120	57	44 LMW	12" CANTILEVER, FLOOD DISTRIBUTION	EXTRUDED ALUMINUM HOUSING, HIGH STRENGTH LENS, ADJUSTABLE MOUNT, WET LABEL, FINISH TBD, CONTRACTOR TO COORDINATE REMOTE DRIVER LOCATION (HYDREL)	LUMENPULSE - LOGH RO-48-50K-WAMH12-30"X60" HYDREL - RHY4-SBBR-WHTS3K-FL-SASM-EARM12	10	
EBU-1	SELF CONTAINED, RECESSED, STANDBYEMERG. LIGHTING BATTERY UNIT	RECESSED LG		12V, 9W PAR-36, SEALED BEAM	2		120	18W			STEEL SURFACE HOUSING-WHITE, PPC-ADJUSTABLE LAMP HEADS-12VDC NICKEL CADMIUM BATTERY-RATED 250W @ 120 MIN.-SELF-TESTING DIAGNOSTICS	BIG BEAM - BR SURE LIGHTS - 12ST4		
EBU-2	SELF CONTAINED, STANDBYEMERG. LIGHTING BATTERY UNIT	SURFACE WALL		12V, 9W PAR-36, SEALED BEAM	2		120				STEEL SURFACE HOUSING-WHITE, PPC-ADJUSTABLE LAMP HEADS-12VDC NICKEL CADMIUM BATTERY-RATED 350W @ 120 MIN.-SELF-TESTING DIAGNOSTICS	BIG BEAM - RC SURE LIGHTS -PC2-27		
X1	LED EXIT SIGN	CEILING, WALL, PENDANT AS SHOWN		LED		INTERNAL LED DRIVER	120	5		STENCIL CUT, CODE SIZE "EXIT" LETTERS & DIRECTIONAL CHEVRON(S) RED ACRYLIC SHEET BACKING	DIE-CAST ALUMINUM HOUSING-SINGLE/DOUBLE FACE-WITH DIRECTIONAL CHEVRONS AS SHOWN,PAINTED PPC FINISH-COLOR WHITE	CHLORIDE - CX SERIES DUAL-LITE - "SIEMPRE" SE SERIES JUNO - NAVILITE - NXD SERIES LITHONIA - "SIGNATURE" LE SERIES	4	
GENERAL NOTES: A REFERENCED PRODUCTS ARE INCLUDED HEREIN, OF MANUFACTURERS & PRODUCTS, THAT GENERALLY CONFORM TO THE LUMINAIRE DESIGN INTENTS ESTABLISHED HEREIN, & IN THE PROJECT MANUAL. EQUIVALENT PRODUCTS BY OTHER MANUFACTURERS MAY BE CONSIDERED, PRIOR TO BID. B DETERMINE SPECIFIC LUMINAIRE PART NUMBERS BASED ON THE REFERENCED PRODUCT SERIES, WRITTEN DESCRIPTIONS & PROJECT MANUAL SPECIFICATIONS. C INCLUSION HEREIN OF MANUFACTURER'S SERIES & OR MODEL NUMBERS DOES NOT IMPLY UNCONDITIONAL PRODUCT APPROVAL. MANUFACTURER'S STANDARD PRODUCTS MAY REQUIRE CUSTOM MODIFICATIONS TO MEET THE REQUIREMENTS SPECIFIED HEREIN & IN THE PROJECT MANUAL. D LISTED SIZES, LAMPING, & TYPES OF LUMINAIRES MAY NOT BE STANDARD PRODUCTS PRODUCED FROM ANY GIVEN MANUFACTURER OR SERIES LISTED. MANUFACTURERS STANDARD PRODUCTS MAY REQUIRE CUSTOM MODIFICATIONS TO MEET THE DESIGN CRITERIA, DESCRIPTIONS, & REQUIREMENTS SPECIFIED HEREIN & IN THE PROJECT MANUAL. E ALERT ARCHITECT TO DISCREPANCIES PRIOR TO BID.														
ABBREVIATIONS: CONC CONCRETE DW DRYWALL DIR DIRECT/INDIRECT EFF EFFICIENCY/EFFICACY ELBD EMERG. LTG. BYPASS DEVICE EXP EXPOSED LX LAY-IN GRID LO, LOW IRRIDISCENT LU LUMENS LUFT LUMENS PER LINEAR FOOT LWU LUMENS PER WATT NT NARROW TEE GRID PAF PAINT AFTER FABRICATION PARA PARABOLIC PL PLASTER P-AC PENDANT AIR-CRAFT P-PR P-REF. P-RS P-SPEC P-SS P-SPECULAR P-SP P-SPLINE CEILING SYSTEM P-TBS P-TO BE SELECTED BY ARCH P-UNV P-UNIVERSAL 120-27VAC P-WH P-WHITE P-PPC POLYESTER POWDER COAT FINISH P-SS STAINLESS STEEL P-TBS TO BE SELECTED BY ARCH P-UNV UNIVERSAL 120-27VAC P-WH WHITE S'S. SEMI-SPECULAR SS STAINLESS STEEL TBS TO BE SELECTED BY ARCH UNV UNIVERSAL 120-27VAC WH WHITE														
NOTES: 1 THE DIMMING LED DRIVER AND DIMMER SWITCH OR MODULE MUST BE TESTED AS A PAIR AND LISTED AS COMPATIBLE. 2 LIGHTING FIXTURES TO BE CONTROLLED THROUGH CONTROLS SYSTEM AS SELECTED. 3 MOUNT LIGHT FIXTURES TYPE LP2 SO THE BOTTOM OF THE FIXTURES IS ALINE WITH BOTTOM OF STRUCTURE. CONTRACTOR TO PROVIDE RIGID STEM SUSPENSION WITH SWIVEL CANOPY, STEM LENGTHS AS REQUIRED. 4 PROVIDE RED LETTERS ON WHITE BACKGROUND. PROVIDE UNIVERSAL MOUNTING. CONTRACTOR TO PROVIDE WEATHER PROOF ENCLOSURE FOR EXIT SIGNS INSTALLED OUTDOOR. SEE LOCATIONS INDICATED ON PLANS. 5 MOUNT LIGHT FIXTURES TYPE LX1 AT 10'-0" AFF TO BOTTOM OF THE FIXTURES. 6 LUMINAIRE SHALL BE SUSPENDED A MIN. 24" BELOW UNFINISHED CEILING (UNLESS OTHERWISE INDICATED ON PLANS). LENGTH OF SUSPENSION TBD BY CONTRACTOR. 7 SEE POLE BASE DETAIL. 8 SEE ARCHITECTURAL ELEVATIONS FOR FIXTURES MOUNTING HEIGHT. 9 PROVIDE LOW VOLTAGE CONDUIT FOR POLE MOUNTED SECURITY CAMERA. LOCATIONS AS INDICATED ON THE ELECTRICAL SITE PLAN. 10 CONTRACTOR TO COORDINATE THE FINAL FIXTURES LOCATION ON THE WALL UNDER THE LETTERS WITH ARCHITECTS PRIOR INSTALLATION.														

LUMINAIRE SCHEDULE														
TAG	DESCRIPTION	INSTALLATION METHOD	DEPTH	SPEC	QTY	SPEC	VOLT	INPUT WATTS	MIN EFF.	SHIELDING/OPTICS	FEATURES/OPTIONS	REFERENCED PRODUCTS	NOTES	
FS1	4FT FLUORESCENT PENDANT	P-RS	3.75"	F32T8 5000K CRI>=82	2	ELEC/T8 PROGRAM START	120	56		UV STABILIZED, HIGH IMPACT EXTRUDED PEARLESCENT POLYCARBONATE LENS	MARINE GRADE ALUMINUM HOUSING, FLAT ENDCAPS, WET LABEL, WHITE FINISH	KENALL - MLH4S-F-MV-PP-32-PM	6	
FT1	2X4 RECESSED WET LABEL, GASKETED LUMINAIRE (KITCHEN)	RECESSED LG	5"	F32T8 5000K CRI>=82	3	ELEC/T8 PROGRAM START	120	88	98 LPW	0.135" LENS P12 INVERTED, SEALED TO DOOR	20 GA STEEL HOUSING, SEAM WELDED, OVERWET LABEL, GASKETED, NSF RATED, GRID SIZE TBS	KURTZON - GEZ-2X4 KENALL - CSEGI	2	
FT1-EM	2X4 RECESSED WET LABEL, GASKETED LUMINAIRE (KITCHEN)	RECESSED LG	5"	F32T8 5000K CRI>=82	3	ELEC/T8 PROGRAM START	120	88	98 LPW	0.135" LENS P12 INVERTED, SEALED TO DOOR	20 GA STEEL HOUSING, SEAM WELDED, OVERWET LABEL, GASKETED, NSF RATED, GRID SIZE TBS N-LITE EMERGENCY RELAY	KURTZON - GEZ-2X4 KENALL - CSEGI	2	
LI1	4FT LED INDUSTRIAL STRIP LUMINAIRE	PENDANT, HANGER CHAIN	4"	LED 5000K 2680 LUM	1	INTERNAL LED DRIVER	120	32	84 LPW	MEDIUM DIFFUSE LENSED	FINISH WHITE, HANGER CHAIN	LITHONIA - ZL2-L48 COLUMBIA - LCS-LW METALUX - SNLED	2, 6	
LI1-EM	4FT LED INDUSTRIAL STRIP LUMINAIRE	PENDANT, HANGER CHAIN	4"	LED 5000K 2680 LUM	1	INTERNAL LED DRIVER	120	32	84 LPW	MEDIUM DIFFUSE LENSED	FINISH WHITE, HANGER CHAIN N-LITE EMERGENCY RELAY	LITHONIA - ZL2-L48 COLUMBIA - LCS-LW METALUX - SNLED	2, 6	
LD1	4" APERTURE LED DIMMABLE DOWNLIGHT	RECESSED V	6-1/8"	LED 4000K 1000 LUM	-	INTERNAL LED DIMMABLE 0-10V	120	20	50 LPW	COMFORT CLEAR DIFFUSE REFLECTOR	SELF-FLANGE, PAINTED WHITE, U.N.O.	GOTHAM - EV04-NLIGHT PRESOLITE - LF4LEDG4 LIGHTOLIER - C4L10DL PORTFOLIO - LD4A09	1, 2	
LD1-EM	4" APERTURE LED DIMMABLE DOWNLIGHT	RECESSED V	6-1/8"	LED 4000K 1000 LUM	-	INTERNAL LED DIMMABLE 0-10V	120	20	50 LPW	COMFORT CLEAR DIFFUSE REFLECTOR	SELF-FLANGE, PAINTED WHITE, U.N.O. N-LITE EMERGENCY RELAY	GOTHAM - EV04-NLIGHT PRESOLITE - LF4LEDG4 LIGHTOLIER - C4L10DL PORTFOLIO - LD4A09	1, 2	
LD1A	4" APERTURE LED DIMMABLE DOWNLIGHT (CLASSROOMS)	RECESSED V	6-1/8"	LED 5000K 1000 LUM	-	INTERNAL LED DIMMABLE 0-10V	120	20	50 LPW	COMFORT CLEAR DIFFUSE REFLECTOR	SELF-FLANGE, PAINTED WHITE, U.N.O.	GOTHAM - EV04-NLIGHT PRESOLITE - LF4LEDG4 LIGHTOLIER - C4L10DL PORTFOLIO - LD4A09	1, 2	
LD1A-EM	4" APERTURE LED DIMMABLE DOWNLIGHT (CLASSROOMS)	RECESSED V	6-1/8"	LED 5000K 1000 LUM	-	INTERNAL LED DIMMABLE 0-10V	120	20	50 LPW	COMFORT CLEAR DIFFUSE REFLECTOR	SELF-FLANGE, PAINTED WHITE, U.N.O. N-LITE EMERGENCY RELAY	GOTHAM - EV04-NLIGHT PRESOLITE - LF4LEDG4 LIGHTOLIER - C4L10DL PORTFOLIO - LD4A09	1, 2	
LC1	NOT USED													
LS1	LED STRIP LUMINAIRE IN CORNER CHANNEL, HORIZONTALLY MOUNTED	SURFACE,	0.72"H	LED 4100K 134 LUM PER 1FT	-	REMOTE LED DRIVER 10% 0-10V	24 DC	1.5 W/FT		SLIM CORNER MOUNT CHANNEL WITH FROSTED LENS	ANODIZED ALUMINUM HOUSING, SPRING CLIPS, FINISH TBS, PROVIDE REMOTE DRIVER, LENGTH AS INDICATED ON DRAWINGS	OPTIC ART - FLEX-DC-15 -CHS-C-1919-MC-CF DESIGN PLAN - STOL		
LT1	2" X 4" LED VOLUMETRIC TROFFER (CORRIDOR)	RECESSED LG	4-3/8"	LED 4000K ~3000 LUM	-	INTERNAL LED DIMMABLE 0-10V	120	31	103 LPW	HIGH PERFORMANCE CLEAR ACRYLIC DIFFUSER, WIDE DISTRIBUTION	RUGGED, ONE-PIECE COLD-ROLLED STEEL COATED POLYESTER HOUSING, PAF WITH EMBOSSED FACETS	LITHONIA - VTLED-30L-NLIGHT-N100 PHILIPS - CLEAR APPEAL METALUX - ENCOUNTER	1, 2	
LT1-EM	2" X 4" LED VOLUMETRIC TROFFER (CORRIDOR)	RECESSED LG	4-3/8"	LED 4000K ~3000 LUM	-	INTERNAL LED DIMMABLE 0-10V	120	31	103 LPW	HIGH PERFORMANCE CLEAR ACRYLIC DIFFUSER, WIDE DISTRIBUTION	RUGGED, ONE-PIECE COLD-ROLLED STEEL COATED POLYESTER HOUSING, PAF WITH EMBOSSED FACETS N-LITE EMERGENCY RELAY	LITHONIA - VTLED-30L-NLIGHT-N100 PHILIPS - CLEAR APPEAL METALUX - ENCOUNTER	1, 2	
LT2	2" X 4" LED VOLUMETRIC DIMMABLE TROFFER	RECESSED LG	4-3/8"	LED 5000K ~4000 LUM	-	INTERNAL LED DIMMABLE 0-10V	120	39	102 LPW	HIGH PERFORMANCE CLEAR ACRYLIC DIFFUSER, WIDE DISTRIBUTION	RUGGED, ONE-PIECE COLD-ROLLED STEEL COATED POLYESTER HOUSING, PAF WITH EMBOSSED FACETS	LITHONIA - VTLED-40L-NLIGHT-N100 PHILIPS - CLEAR APPEAL METALUX - ENCOUNTER	1, 2	
LT2-EM	2" X 4" LED VOLUMETRIC DIMMABLE TROFFER	RECESSED LG	4-3/8"	LED 5000K ~4000 LUM	-	INTERNAL LED DIMMABLE 0-10V	120	39	102 LPW	HIGH PERFORMANCE CLEAR ACRYLIC DIFFUSER, WIDE DISTRIBUTION	RUGGED, ONE-PIECE COLD-ROLLED STEEL COATED POLYESTER HOUSING, PAF WITH EMBOSSED FACETS N-LITE EMERGENCY RELAY	LITHONIA - VTLED-40L-NLIGHT-N100 PHILIPS - CLEAR APPEAL METALUX - ENCOUNTER	1, 2	
LT3	NOT USED													
LT4	2" X 4" LED VOLUMETRIC DIMMABLE TROFFER	RECESSED LG	4-3/8"	LED 5000K ~4800 LUM	-	INTERNAL LED DIMMABLE 0-10V	120	47	99 LPW	HIGH PERFORMANCE CLEAR ACRYLIC DIFFUSER, WIDE DISTRIBUTION	RUGGED, ONE-PIECE COLD-ROLLED STEEL COATED POLYESTER HOUSING, PAF WITH EMBOSSED FACETS	LITHONIA - VTLED-48L-NIGHT-N100 PHILIPS - CLEAR APPEAL METALUX - ENCOUNTER	1, 2	
LT5	2" X 2" LED VOLUMETRIC DIMMABLE TROFFER (AUTISM)	RECESSED LG		LED 5000K 3000 LUM	-	INTERNAL LED DIMMABLE 0-10V	120	42	72 LMW	EDGE LIT LED SYSTEM WITH VAULTED VOLUMETRIC LENS, MATT WHITE DIFFUSE, CONCEALED INDIRECT LEDS	GAVALIZED STEEL REFLECTOR AND HOUSING.	FOCAL POINT - VAULT	1, 2	
LT6	2" X 4" LED VOLUMETRIC DIMMABLE TROFFER	RECESSED LG	4-3/8"	LED 5000K 6000 LUM	-	INTERNAL LED DIMMABLE 0-10V	120	52	115 LMW	HIGH PERFORMANCE CLEAR ACRYLIC DIFFUSER, WIDE DISTRIBUTION	RUGGED, ONE-PIECE COLD-ROLLED STEEL COATED POLYESTER HOUSING, PAF WITH EMBOSSED FACETS	LITHONIA - VTLED-60L-NIGHT-N100 PHILIPS - CLEAR APPEAL METALUX - ENCOUNTER	1, 2	
LT6-EM	2" X 4" LED VOLUMETRIC DIMMABLE TROFFER	RECESSED LG	4-3/8"	LED 5000K 6000 LUM	-	INTERNAL LED DIMMABLE 0-10V	120	52	115 LMW	HIGH PERFORMANCE CLEAR ACRYLIC DIFFUSER, WIDE DISTRIBUTION	RUGGED, ONE-PIECE COLD-ROLLED STEEL COATED POLYESTER HOUSING, PAF WITH EMBOSSED FACETS N-LITE EMERGENCY RELAY	LITHONIA - VTLED-60L-NIGHT-N100 PHILIPS - CLEAR APPEAL METALUX - ENCOUNTER	1, 2	
LT7	2" X 4" LED VOLUMETRIC DIMMABLE TROFFER (KINDERGARTEN)	RECESSED LG	4-3/8"	LED 5000K ~3000 LUM	-	INTERNAL LED DIMMABLE 0-10V	120	31	103 LPW	HIGH PERFORMANCE CLEAR ACRYLIC DIFFUSER, WIDE DISTRIBUTION	RUGGED, ONE-PIECE COLD-ROLLED STEEL COATED POLYESTER HOUSING, PAF WITH EMBOSSED FACETS	LITHONIA - VTLED-30L-NLIGHT-N100 PHILIPS - CLEAR APPEAL METALUX - ENCOUNTER	1, 2	
LT7-EM	2" X 4" LED VOLUMETRIC DIMMABLE TROFFER (KINDERGARTEN)	RECESSED LG	4-3/8"	LED 5000K ~3000 LUM	-	INTERNAL LED DIMMABLE 0-10V	120	31	103 LPW	HIGH PERFORMANCE CLEAR ACRYLIC DIFFUSER, WIDE DISTRIBUTION	RUGGED, ONE-PIECE COLD-ROLLED STEEL COATED POLYESTER HOUSING, PAF WITH EMBOSSED FACETS N-LITE EMERGENCY RELAY	LITHONIA - VTLED-30L-NLIGHT-N100 PHILIPS - CLEAR APPEAL METALUX - ENCOUNTER	1, 2	
LP1	4" DIAMETER LED PENDANT DIMMABLE CYLINDER (CAFETERIA, COMMONS)	P-AC	10"	LED 4000K 3000 LUM DELIVERED	-	INTERNAL LED DRIVER 1% DIMMABLE 0-10V	120	43		50 DEGREE BEAM ANGLE, SOLITE FROSTED LENS	FRONT CAP AND BODY FINISH AS SELECTED BY ARCHITECTS, PENDANT MOUNT ACCESSORY	GOTHAM - ICO CYL-4K-RFD-NLIGHT JUNO - LC4-C	1, 2, 8	
LP1-EM	4" DIAMETER LED PENDANT DIMMABLE CYLINDER (CAFETERIA, COMMONS)	P-AC	10"	LED 4000K 3000 LUM DELIVERED	-	INTERNAL LED DRIVER 1% DIMMABLE 0-10V	120	43		50 DEGREE BEAM ANGLE, SOLITE FROSTED LENS	FRONT CAP AND BODY FINISH AS SELECTED BY ARCHITECTS, PENDANT MOUNT ACCESSORY N-LITE EMERGENCY RELAY	GOTHAM - ICO CYL-EM-4K-RFD JUNO - LC4-C	1, 2, 8	
LP1A	4" DIAMETER LED PENDANT DIMMABLE CYLINDER (LIBRARY)	P-AC	10"	LED 5000K 2000 LUM DELIVERED	-	INTERNAL LED DRIVER 1% DIMMABLE 0-10V	120	24		50 DEGREE BEAM ANGLE, SOLITE FROSTED LENS	FRONT CAP AND BODY FINISH AS SELECTED BY ARCHITECTS, PENDANT MOUNT ACCESSORY	GOTHAM - ICO CYL-NLIGHT JUNO - LC4-C USA - LNRP6	1, 2, 8	
LP1A-EM	4" DIAMETER LED PENDANT DIMMABLE CYLINDER (LIBRARY)	P-AC	10"	LED 5000K 2000 LUM DELIVERED	-	INTERNAL LED DRIVER 1% DIMMABLE 0-10V	120	24		50 DEGREE BEAM ANGLE, SOLITE FROSTED LENS	FRONT CAP AND BODY FINISH AS SELECTED BY ARCHITECTS, PENDANT MOUNT ACCESSORY N-LITE EMERGENCY RELAY	GOTHAM - ICO CYL-NLIGHT JUNO - LC4-C USA - LNRP6	1, 2, 8	
LP2	16"X 46" PENDANT DIMMABLE LED HIGHBAY (GYM)	P-RS	3"	LED 5000K 21300 LUM	-	INTERNAL LED DIMMABLE 0-10V	120	245	87 LPW	WIDE DISTRIBUTION OPTIC, SEMI-DIFFUSE ACRYLIC LENS FOR GLARE CONTROL	ALUMINUM HEAT SINK, CHANNEL AND END CAPS ARE STEEL, BOTTOM WIRE GUARD, FINISH STANDARD TBS	LITHONIA - IBL-24L-WD-SD125-WGX-NLIGHT	1, 2, 3	
LP2-EM	16"X 46" PENDANT DIMMABLE LED HIGHBAY (GYM)	P-RS	3"	LED 5000K 21300 LUM	-	INTERNAL LED DIMMABLE 0-10V	120	245	87 LPW	WIDE DISTRIBUTION OPTIC, SEMI-DIFFUSE ACRYLIC LENS FOR GLARE CONTROL	ALUMINUM HEAT SINK, CHANNEL AND END CAPS ARE STEEL, BOTTOM WIRE GUARD, FINISH STANDARD TBS N-LIGHT EMERGENCY RELAY	LITHONIA - IBL-24L-WD-SD125-WGX-NLIGHT	1, 2, 3	
LP4	7" x 8FT LED LINEAR PENDANT BI-DIRECTIONAL DISTRIBUTION (ART)	P-AC	1-13/16"	LED 5000K 4800 LUM PER 4FT	-	INTERNAL LED DIMMABLE 0-10V	120			75% DIRECT/ 25% INDIRECT, 125" WHITE SATINE LENS, MATTE FINISH, CLEAR DUST GUARD	DIE FORM 18 GAUGE STEEL HOUSING, DIE CAST ALUMINUM ENDCAPS, FINISH WHITE, DUAL AIR CRAFT ADJUSTABLE CABLE	PEERLESS - BRM6L-HI-ENNB-N-LIGHT-LMES20	1, 2	
LP4-EM	7" x 8FT LED LINEAR PENDANT BI-DIRECTIONAL DISTRIBUTION (ART)	P-AC	1-13/16"	LED 5000K 4800 LUM PER 4FT	-	INTERNAL LED DIMMABLE 0-10V	120			75% DIRECT/ 25% INDIRECT, 125" WHITE SATINE LENS, MATTE FINISH, CLEAR DUST GUARD	DIE FORM 18 GAUGE STEEL HOUSING, DIE CAST ALUMINUM ENDCAPS, FINISH WHITE, DUAL AIR CRAFT ADJUSTABLE CABLE N-LITE EMERGENCY RELAY	PEERLESS - BRM6L-HI-ENNB-N-LIGHT-LMES20	1, 2	
LP4A	7" x 4FT LED LINEAR PENDANT BI-DIRECTIONAL DISTRIBUTION (ART)	P-AC	1-13/16"	LED 5000K 4800 LUM PER 4FT	-	INTERNAL LED DIMMABLE 0-10V	120			75% DIRECT/ 25% INDIRECT, 125" WHITE SATINE LENS, MATTE FINISH, CLEAR DUST GUARD	DIE FORM 18 GAUGE STEEL HOUSING, DIE CAST ALUMINUM ENDCAPS, FINISH WHITE, DUAL AIR CRAFT ADJUSTABLE CABLE	PEERLESS - BRM6L-HI-ENNB-N-LIGHT-LMES20	1, 2	
LP5-ALT	NOT USED													
LP6	7" x 8FT LED LINEAR PENDANT BI-DIRECTIONAL DISTRIBUTION, CONTINUOUSLY MOUNT (MUSIC AND COLLABORATION AREA)	P-AC	1-13/16"	LED 5000K 3400 LUM PER 4FT	-	INTERNAL LED DIMMABLE 0-10V	120	24.2 PER 4FT	84 LPW	75% DIRECT/ 25% INDIRECT, 125" WHITE SATINE LENS, MATTE FINISH, CLEAR DUST GUARD	DIE FORM 18 GAUGE STEEL HOUSING, DIE CAST ALUMINUM ENDCAPS, FINISH WHITE, DUAL AIR CRAFT ADJUSTABLE CABLE	PEERLESS - BRM6L-LO-ENNB-N-LIGHT-LMES20	1, 2	
LP6-EM	7" x 8FT LED LINEAR PENDANT BI-DIRECTIONAL DISTRIBUTION, CONTINUOUSLY MOUNT (MUSIC)	P-AC	1-13/16"	LED 5000K 3400 LUM PER 4FT	-	INTERNAL LED DIMMABLE 0-10V	120	24.2 PER 4FT	84 LPW	75% DIRECT/ 25% INDIRECT, 125" WHITE SATINE LENS, MATTE FINISH, CLEAR DUST GUARD	DIE FORM 18 GAUGE STEEL HOUSING, DIE CAST ALUMINUM ENDCAPS, FINISH WHITE, DUAL AIR CRAFT ADJUSTABLE CABLE N-LITE EMERGENCY RELAY	PEERLESS - BRM6L-LO-ENNB-N-LIGHT-LMES20	1, 2	

MULTI-SERVICE BOX SCHEDULE																																																																																									
BOX ID	LOCATION / TYPE										ACCESS	SERVICE COVERS/ DEVICE FITTINGS										MATERIALS				FEATURES					RE: DETAIL ON DRAWING E9 / XXXXX	REMARKS																																																									
	FLOOR - SINGLE SERVICE	FLOOR - MULTI-SERVICE	FLOOR - LARGE CAPACITY (1-6 GANG)	FLOOR - X-LARGE CAPACITY (6-10 GANG)	FLOOR - STAGE	POKE THRU (4")	POKE THRU LARGE CAPACITY (6" OR 8")	RAISED FLOOR	WALL - MULTI-SERVICE	CEILING - MULTI-SERVICE		TABLE TOP - MULTI-SERVICE	CONCEALED	EXPOSED	ROUND	SQUARE	RECTANGULAR	FLUSH (TILE)	SEMI-FLUSH	RECESSED	TOMBSTONE	"WHIP" FURNITURE FEED	COVER FINISH (METAL)	COVER COLOR (PAINT)	CAST IRON	STAMPED STEEL	NON-METALLIC	CARPET FLANGE	TILE FLANGE	# OF GANGS			FIRE CLASSIFIED	POWER	TELECOM	AV	MULTI-SERVICE FLOOR BOX DEPTH	LARGE X-LARGE CAPACITY FLOOR BOX DEPTH																																																			
FCR1												X							X												X	X					1.3.6.7.9																																																				
FEF1													X			X															X	X					1.3.6.7.9																																																				
<b>FINISHES:</b>																														<b>COLORS:</b>																														<b>REMARKS:</b>																													
AL ALUM																														G GRAY																														1. PROVIDE (1) 3/4" EMT CONDUIT (POWER) AND TELECOM CONDUIT. PROVIDE FULL CONDUIT SYSTEM.																													
BR BRASS																														B BLACK																														2. PROVIDE (1) 3/4" EMT CONDUIT (POWER), TELECOM & AV CONDUIT. PROVIDE FULL CONDUIT SYSTEM.																													
BZ BRONZE																																																												3. ROUTE POWER CONDUIT TO ELECTRICAL PANEL AND CIRCUIT AS INDICATED ON PLANS.																													
PT PAINT (POLYESTER POWDER COAT)																																																												4. PROVIDE WIRING AND TERMINATIONS IN THE FURNITURE SYSTEM AS INDICATED ON PLANS.																													
																																																												5. PROVIDE INNERDUCT FOR LOW VOLTAGE CABLING TRANSITION. '																													
																																																												6. ROUTE LOW VOLTAGE CONDUITS/CABLING TO LAN ROOM AS INDICATED ON PLANS.																													
																																																												7. REFER TO PLANS FOR CONDUIT SIZES AND QUANTITIES.																													
																																																												8. CONDUIT STUB-UPS FOR POWER AND LOW VOLTAGE BRANCHES DIRECTLY INTO FURNITURE SUPPORTS.																													
																																																												9. PROVIDE WIREMOLD 6AT POKETHRU WITH COVER.																													
																																																												10. PROVIDE WIREMOLD 6AT POKETHRU WITH COVER.																													

MC	OUTLET MOUNTED IN MILLWORK. FEED FROM FLOOR OR WALL AS REQUIRED.
GFI	GFI OUTLET
IG	ISOLATED GROUND OUTLET
AC	ABOVE COUNTER OUTLET. COORDINATE HEIGHT WITH ARCHITECTURAL ELEVATION
	NORMAL OUTLET MOUNTING HEIGHT. REFER TO SPECIFICATION 262716.
WM	OUTLET MOUNTED IN MULTIOUTLET ASSEMBLY.
V	VARIABLES. (VERIFY)
CWM	COORDINATE WITH EQUIPMENT MANUFACTURER.



Panel: 1LE2

Location: ELECTRICAL 320

Supply From:

Mounting: Surface

Enclosure: Type 1

Panel Options:

Volts: 120/208 Vyle

Wiring: 3-Phase 4-Wire

A.I.C. Rating (A):

Available Fault Current (A):

Mains Rating (A): 100

Mains Type:

Remarks	CKT	Load Name	Poles	Size (A)	A (VA)	B (VA)	C (VA)	Size (A)	Poles	Load Name	CKT	Remarks	
	E1	E03 - WALK-IN COOLER	1	20	500	0		20	1	Spare	E2		
	E3	E03.1 - EVAP COIL - COOLER	1	20		540	0		20	1	Spare	E4	
	E5	E03.2 - COMPRESSOR - COOLER	2	20			740	0	20	1	Spare	E6	
	E7	--	--	--	740	0			20	1	Spare	E8	
	E9	E04 - WALK-IN FREEZER	1	20		500	0		20	1	Spare	E10	
	E11	E04.1 - EVAP COIL - FREEZER	1	20			600	0	20	1	Spare	E12	
	E13	E04.2 - COMPRESSOR - FREEZER	3	20	720	0			20	1	Spare	E14	
	E15	--	--	--		720	0		20	1	Spare	E16	
	E17	--	--	--			720	0	20	1	Spare	E18	
	E19	General IDF 128	1	20	500	0			20	1	Spare	E20	
	E21	General MDF 319	1	20		500	0		20	1	Spare	E22	
	E23	General IDF 114	1	20			500	0	20	1	Spare	E24	
	E25	Spare	1	20	0	0	0	0	20	1	Spare	E26	
	E27	Spare	1	20		0	0		20	1	Spare	E28	
	E29	Spare	1	20			0	0	20	1	Spare	E30	
	E31	Spare	1	20	0	0			20	1	Spare	E32	
	E33	Spare	1	20		0	0		20	1	Spare	E34	
	E36	Spare	1	20			0	0	20	1	Spare	E36	
	E37	Spare	1	20	0	0			20	1	Spare	E38	
	E39	Spare	1	20		0	0		20	1	Spare	E40	
	E41	Spare	1	20			0	0	20	1	Spare	E42	
Total Load (VA):					2,460	2,260	2,560						
Total A:					21	19	22						
										Panel Totals			
										Total Connected Load (VA): 7,280			
										Total Demand Load* (VA): 7,280			
										Total Connected (A): 20			
										Total Demand (A): 20			

\*Demand Load calculated as outlined by articles 220, 430, and 440 of the National Electrical Code

Remarks:

[illegible]

Panel: 1PNH1

Location: BOILER 318

Volts: 480/277 Wye

A.I.C. Rating (A):

Supply From:

Wiring: 3-Phase 4-Wire

Available Fault Current (A):

Mounting: Surface

Enclosure: Type 1

Mains Rating (A):

Panel Details:

Mains Type:

Remarks	CKT	Load Name	Poles	Size (A)	A (VA)	B (VA)	C (VA)	Size (A)	Poles	Load Name	CKT	Remarks
	1	Motor BOILER 318	3	20	1,330 0			20	1	Spare	2	
	3	--	--	--		1,330 0		20	1	Spare	4	
	5	--	--	--			1,330 0	20	1	Spare	6	
	7	Motor BOILER 318	3	20	1,330 0			20	1	Spare	8	
	9	--	--	--		1,330 0		20	1	Spare	10	
	11	--	--	--			1,330 0	20	1	Spare	12	
	13	Motor BOILER 318	3	20	3,050 0			20	1	Spare	14	
	15	--	--	--		3,050 0		20	1	Spare	16	
	17	--	--	--			3,050 0	20	1	Spare	18	
	19	Motor BOILER 318	3	20	3,050 0			20	1	Spare	20	
	21	--	--	--		3,050 0		20	1	Spare	22	
	23	--	--	--			3,050 0	20	1	Spare	24	
	25	Motor	1	20	750 0			20	1	Spare	26	
	27	Motor	1	20		750 0		20	1	Spare	28	
	29	Motor	1	20			750 0	20	1	Spare	30	
	31	Motor	1	20	750 0			20	1	Spare	32	
	33	Spare	1	20		0 0		20	1	Spare	34	
	35	Spare	1	20			0 0	20	1	Spare	36	
	37	Spare	1	20	0 0			20	1	Spare	38	
	39	Spare	1	20		0 0		20	1	Spare	40	
	41	Spare	1	20			0 0	20	1	Spare	42	
Total Load (VA):					10,260	9,510	9,510					
Total (A):					37	34	34					

Panel Totals

Total Connected Load (VA): 29,280

Total Demand Load\* (VA): 29,280

Total Connected (A): 35

Total Demand (A): 35

\*Demand Load calculated as outlined by articles 220, 430, and 440 of the National Electrical Code

Remarks:

Panel: 1LEL1

Location: ELECTRICAL 320

Volts: 120/208 Wye

Supply From:

Wiring: 3-Phase 4-Wire

Mounting: Surface

Enclosure: Type 1

Panel Options:

A.I.C. Rating (A): 10,000 A

Available Fault Current (A):

Mains Rating (A): 100

Mains Type: MCB

Remarks	CKT	Load Name	Poles	Size (A)	A (VA)	B (VA)	C (VA)	Size (A)	Poles	Load Name	CKT	Remarks		
	E1	General BOYS 428	1	20	200	530		20	1	Lighting	E2			
	E3	Receptacle MDF 319	1	20			200	250	20	1	Lighting Room 425	E4		
	E5	Receptacle MDF 319	1	20				200	931	20	1	Lighting	E6	
	E7	Receptacle MDF 319	1	20	200	20			20	1	Lighting	E8		
	E9	Receptacle	1	20			200	70		20	1	Lighting Room 301	E10	
	E11	General BOYS 409	1	20				200	200	20	1	General BOYS 312	E12	
	E13	General BOYS 111	1	20	200	500			200	20	1	General ELECTRICAL 320	E14	
	E15	Receptacle IDF 128	1	20			200	500		20	1	General RECEPTION 101	E16	
	E17	Receptacle IDF 128	1	20				200	0	20	1	Spare	E18	
	E19	Receptacle IDF 128	1	20	200	0			20	1	Spare	E20		
	E21	Receptacle	1	20			200	0		20	1	Spare	E22	
	E23	Receptacle IDF 114	1	20				200	0	20	1	Spare	E24	
	E25	Receptacle IDF 114	1	20	200	0			20	1	Spare	E26		
	E27	Receptacle IDF 114	1	20			200	0		20	1	Spare	E28	
	E29	Receptacle	1	20				200	0	20	1	Spare	E30	
	E31	General ELECTRICAL 320	1	20	500	0			20	1	Spare	E32		
	E33	Lighting EAST CORRIDOR 329	1	20			1,464	0		20	1	Spare	E34	
	E36	Lighting Room 430	1	20				870	0	20	1	Spare	E36	
	E37	Lighting	1	20	1,225	0			20	1	Spare	E38		
	E39	Lighting	1	20			1,063	0		20	1	Spare	E40	
	E41	Lighting	1	20				276	0	20	1	Spare	E42	
Total Load (VA):					3,774	4,347	3,258							
Total (A):					32	37	27							
Panel Totals														
Total Connected Load (VA): 11,374														
Total Demand Load* (VA): 13,043														
Total Connected (A): 32														
Total Demand (A): 36														

\*Demand Load calculated as outlined by articles 220, 430, and 440 of the National Electrical Code

Remarks:

2	ADDENDUM 05	05/22/2017
1	ISSUED FOR BID	03/01/2017

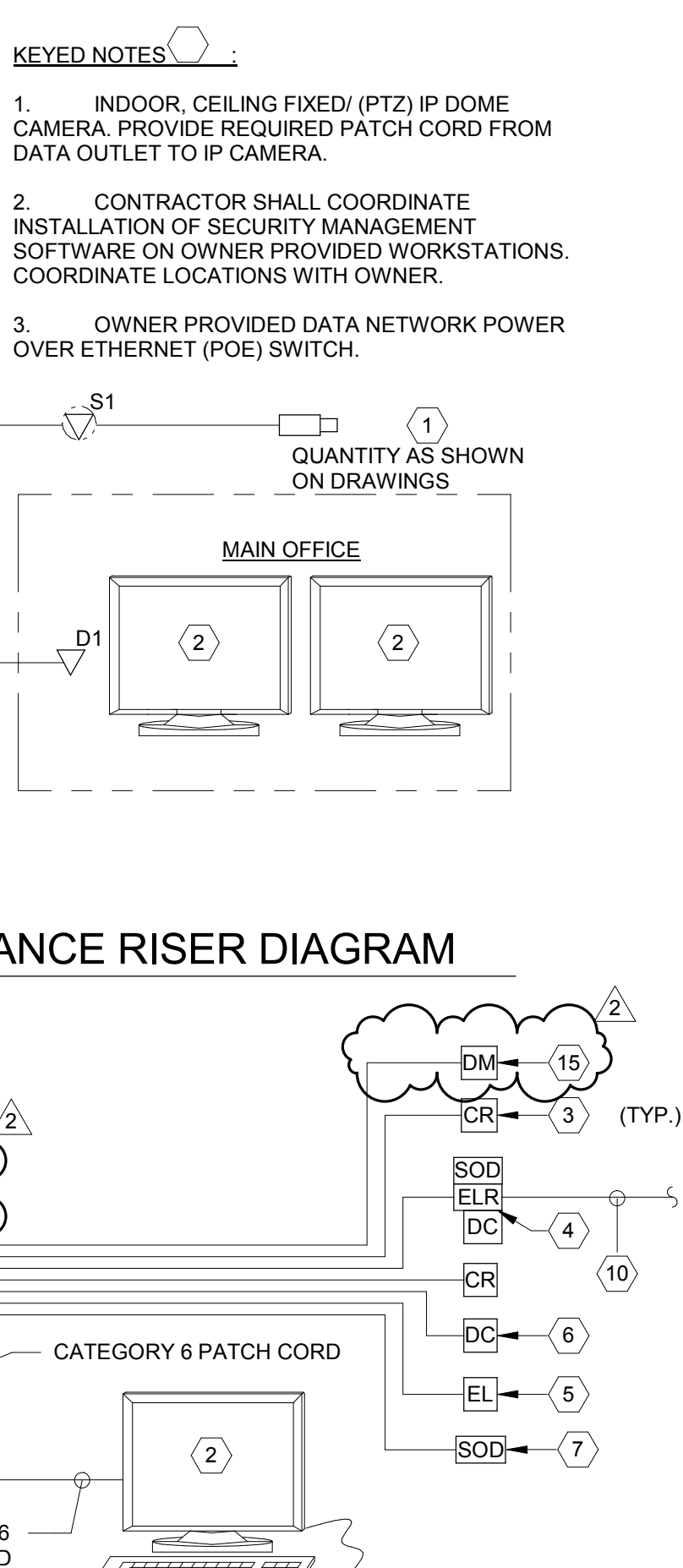
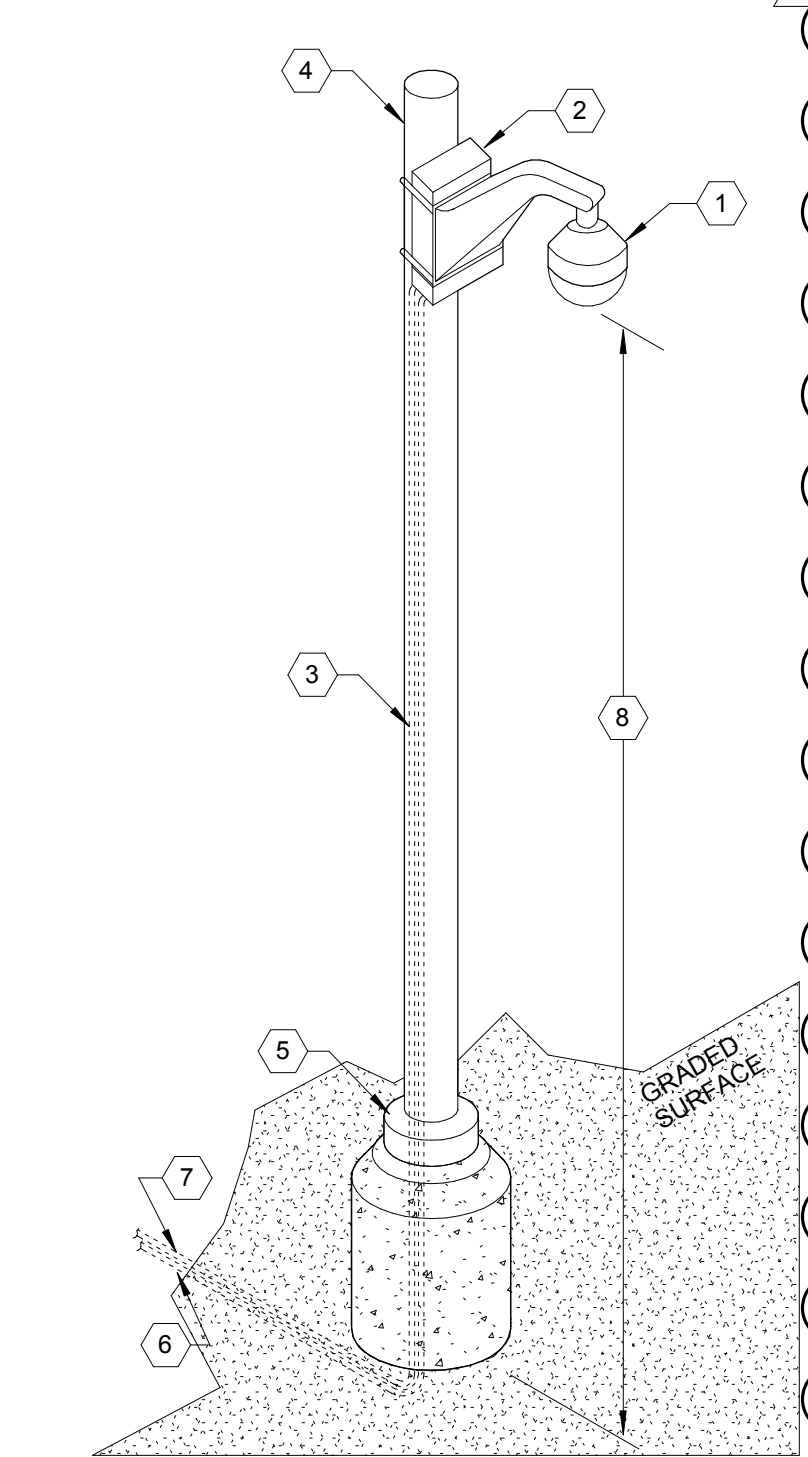
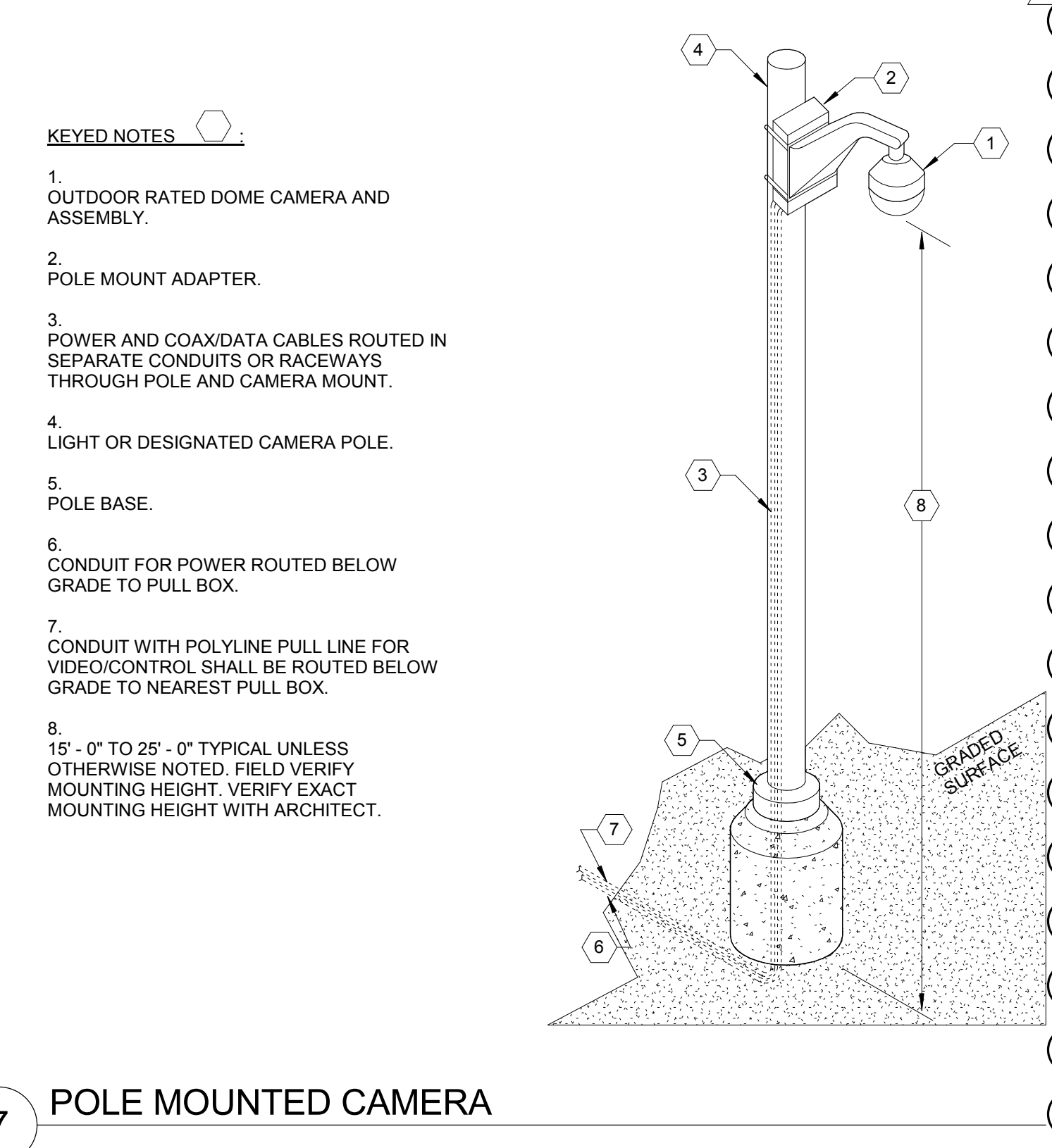
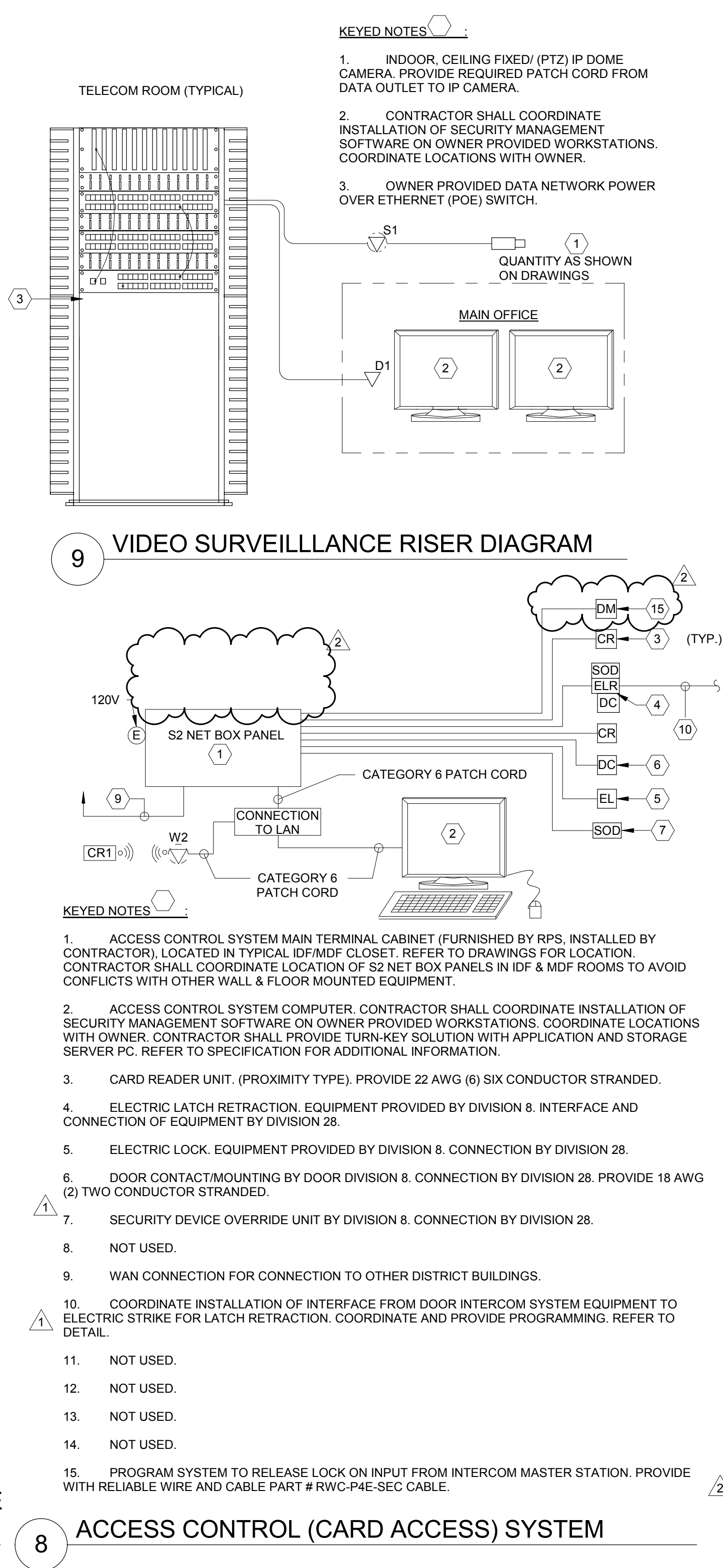
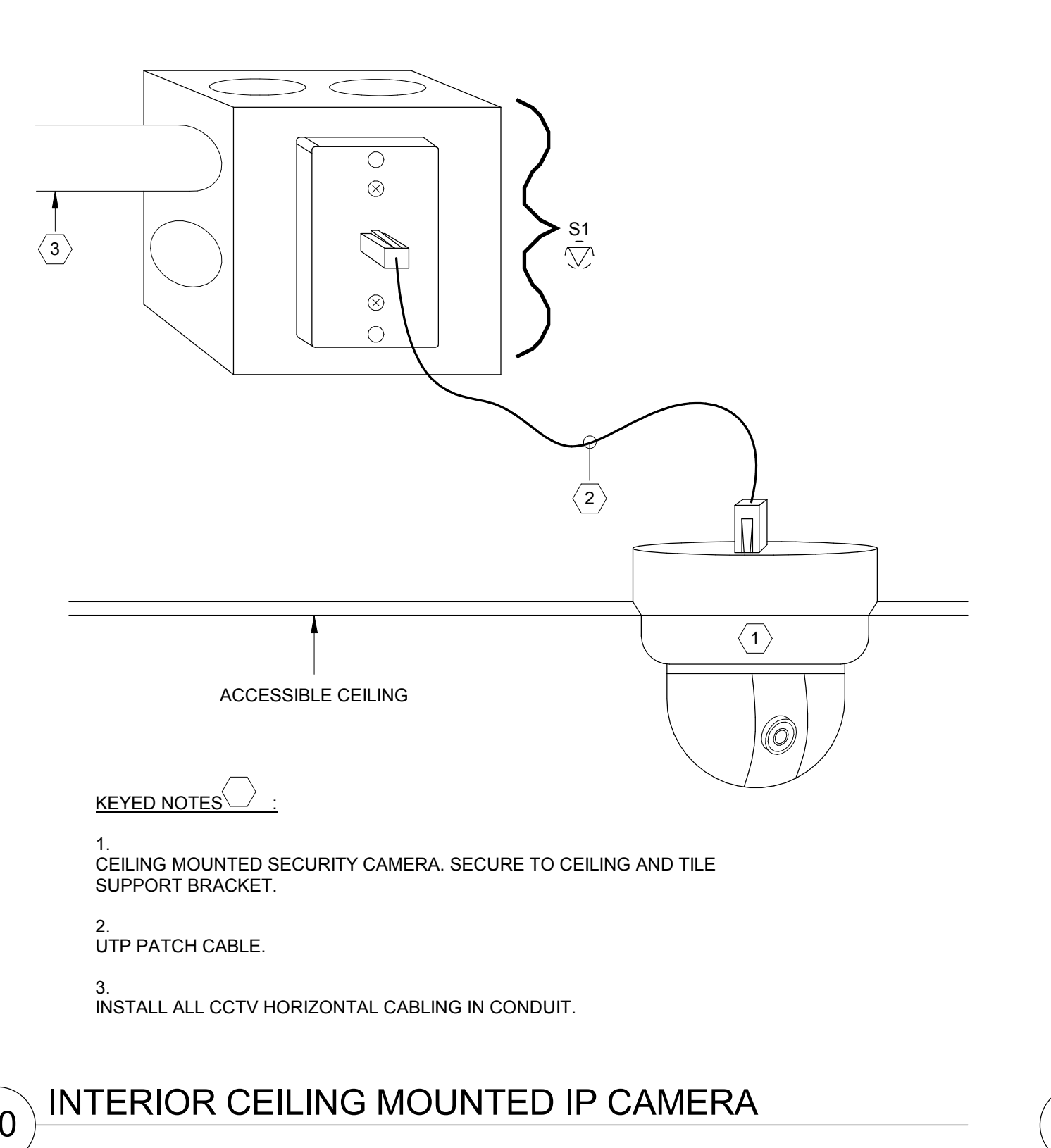
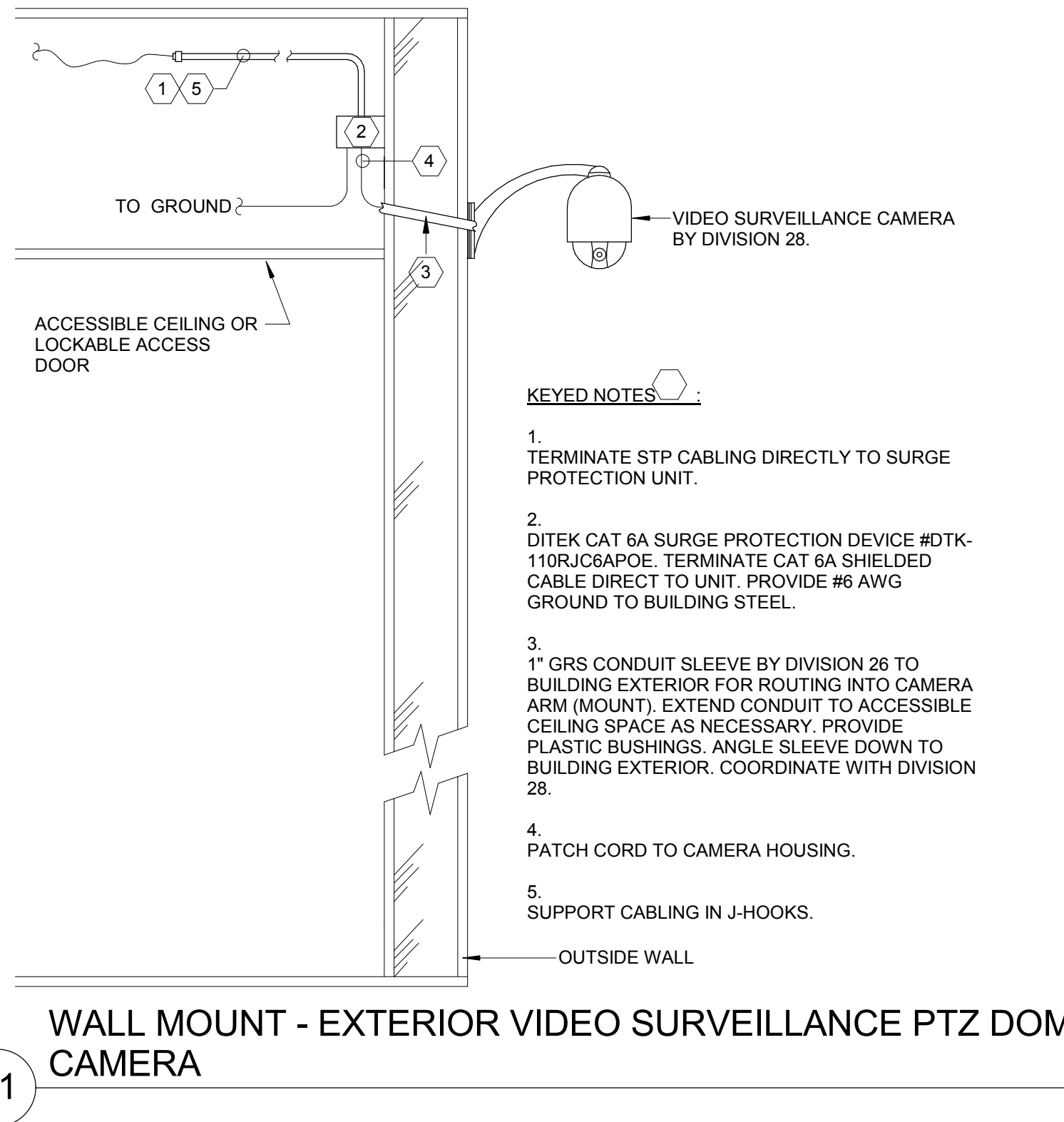
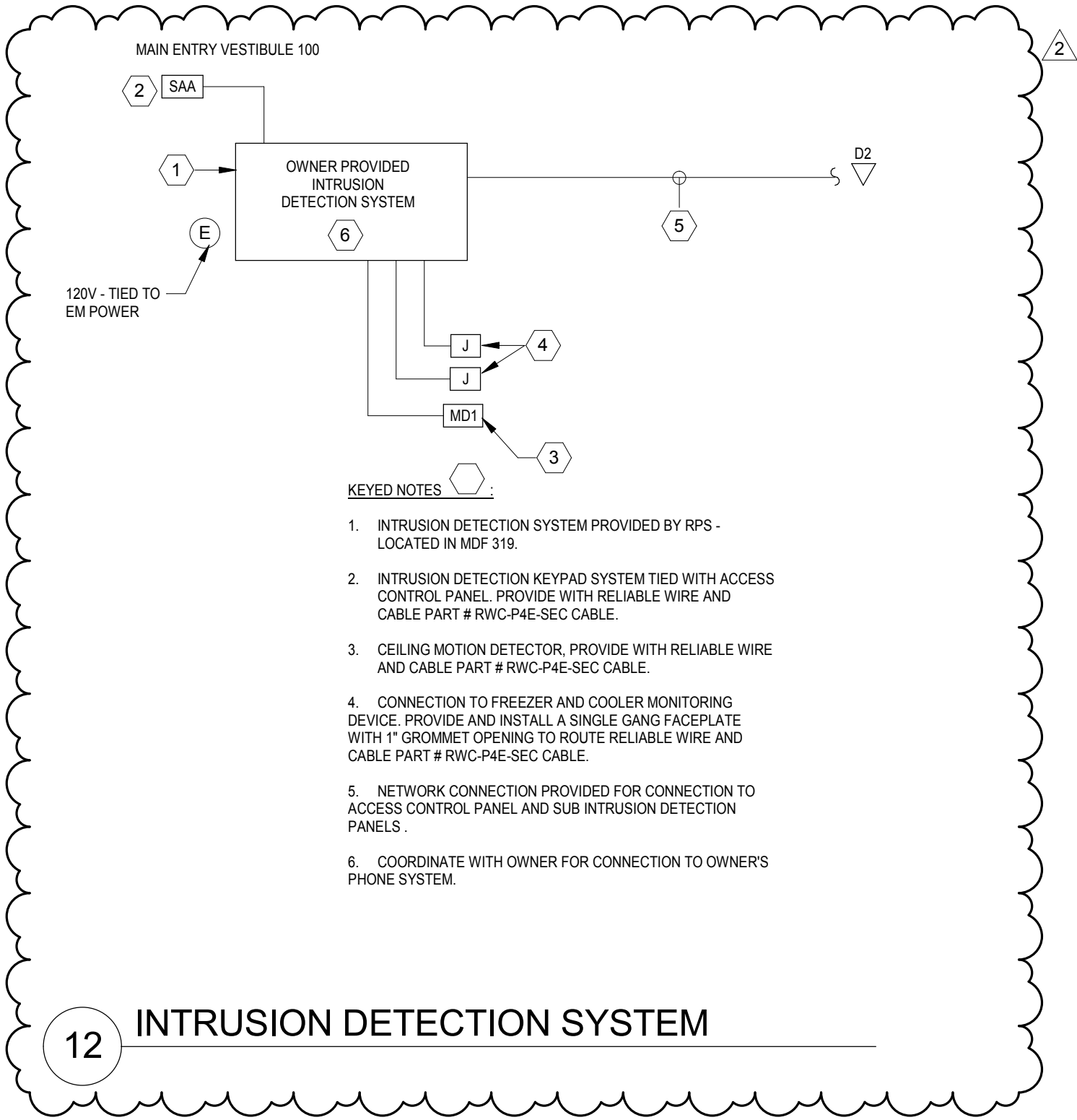
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GENERAL NOTES:

A. PENETRATIONS THROUGH THE STORM SHELTER ENVELOPE LARGER THAN 3-1/2 SQUARE INCHES IN AREA FOR RECTANGULAR OPENINGS OR 2-1/16" IN DIAMETER SHALL BE CONSIDERED AN OPENING AND SHALL BE PROVIDED WITH AN OPENING PROTECTIVE DEVICE. REFERENCE STRUCTURAL DRAWINGS.



ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

CANNONDESIGN

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2 ADDENDUM 05 05/22/2017  
1 ISSUED FOR BID 03/01/2017

No.	Description	Date
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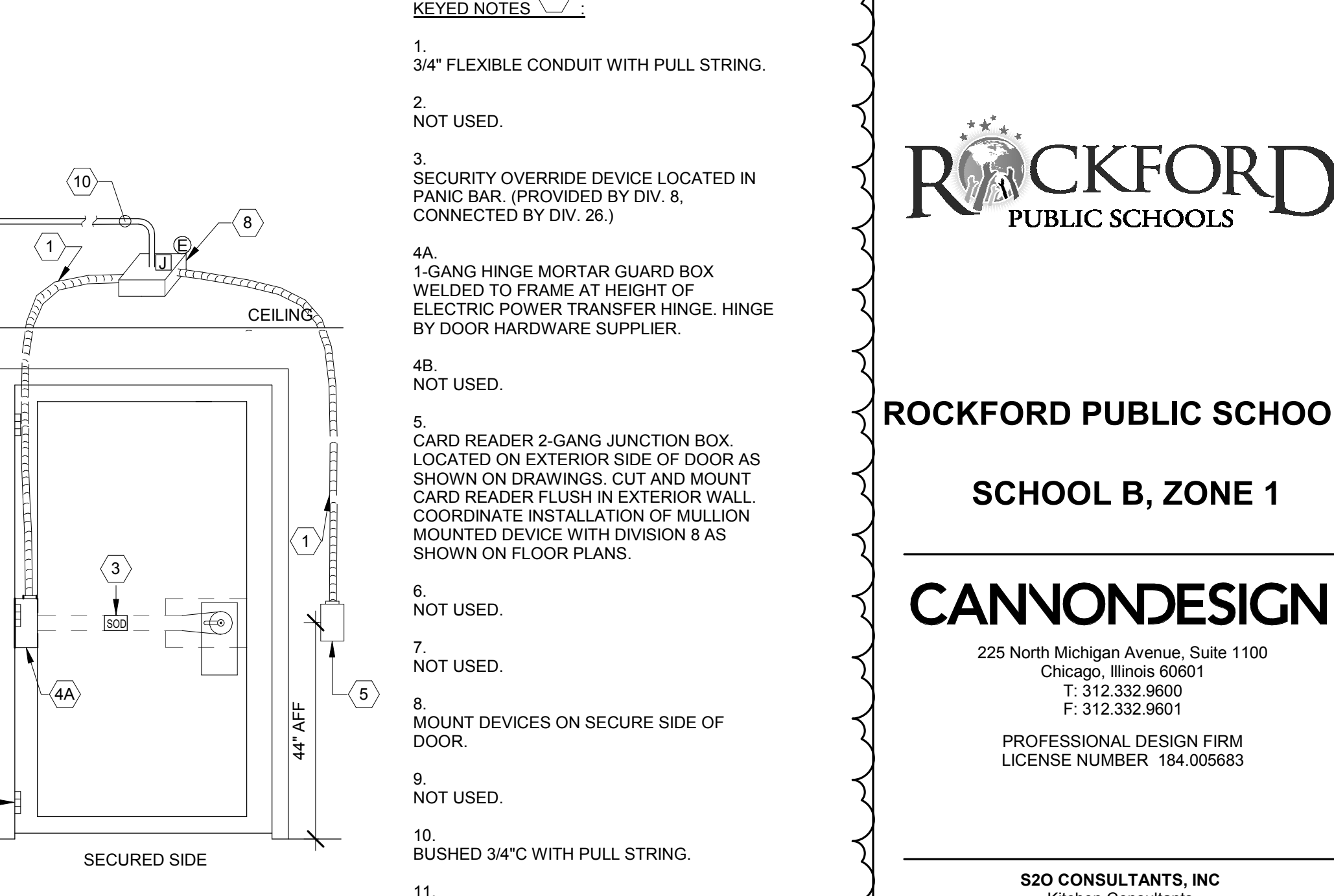
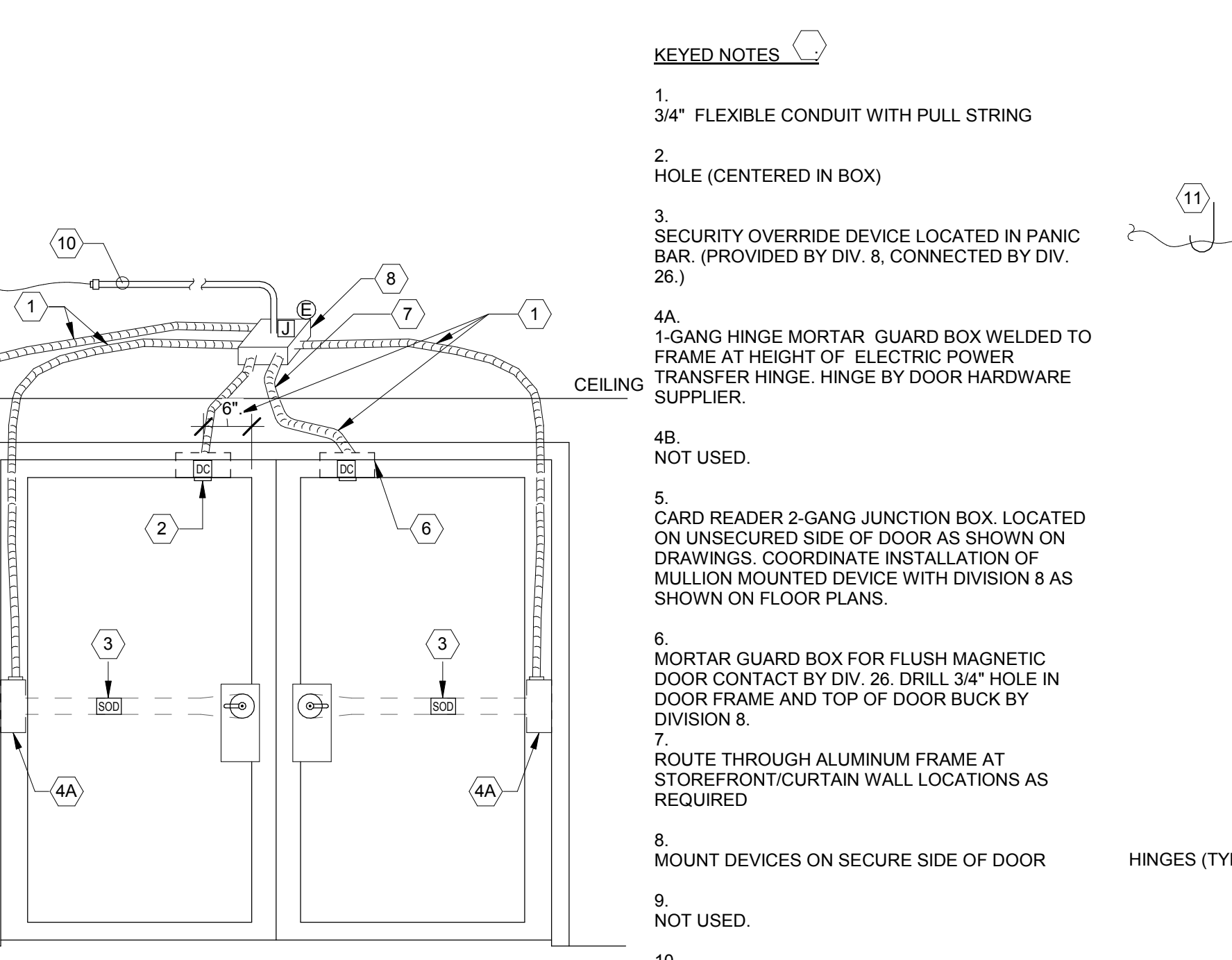
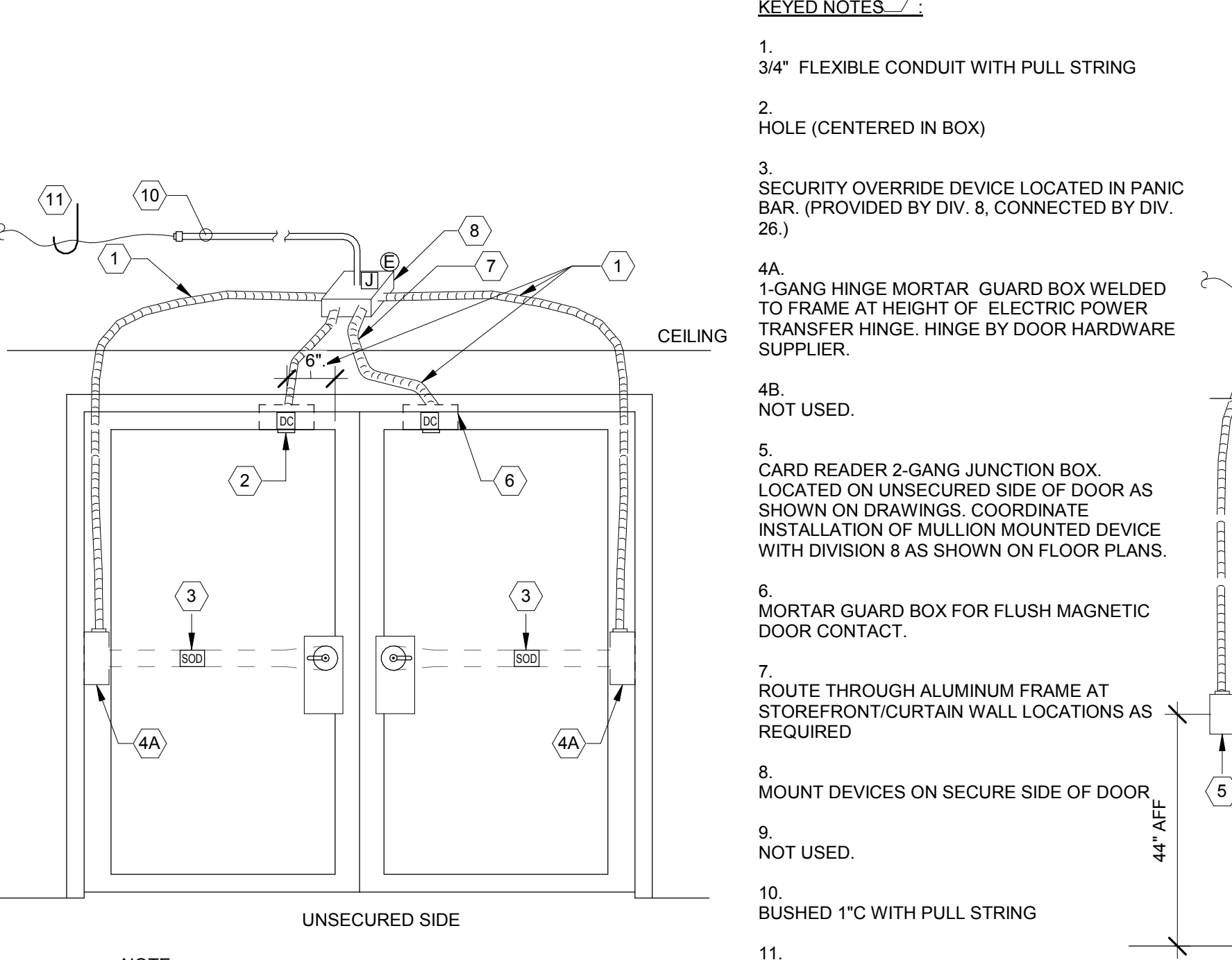
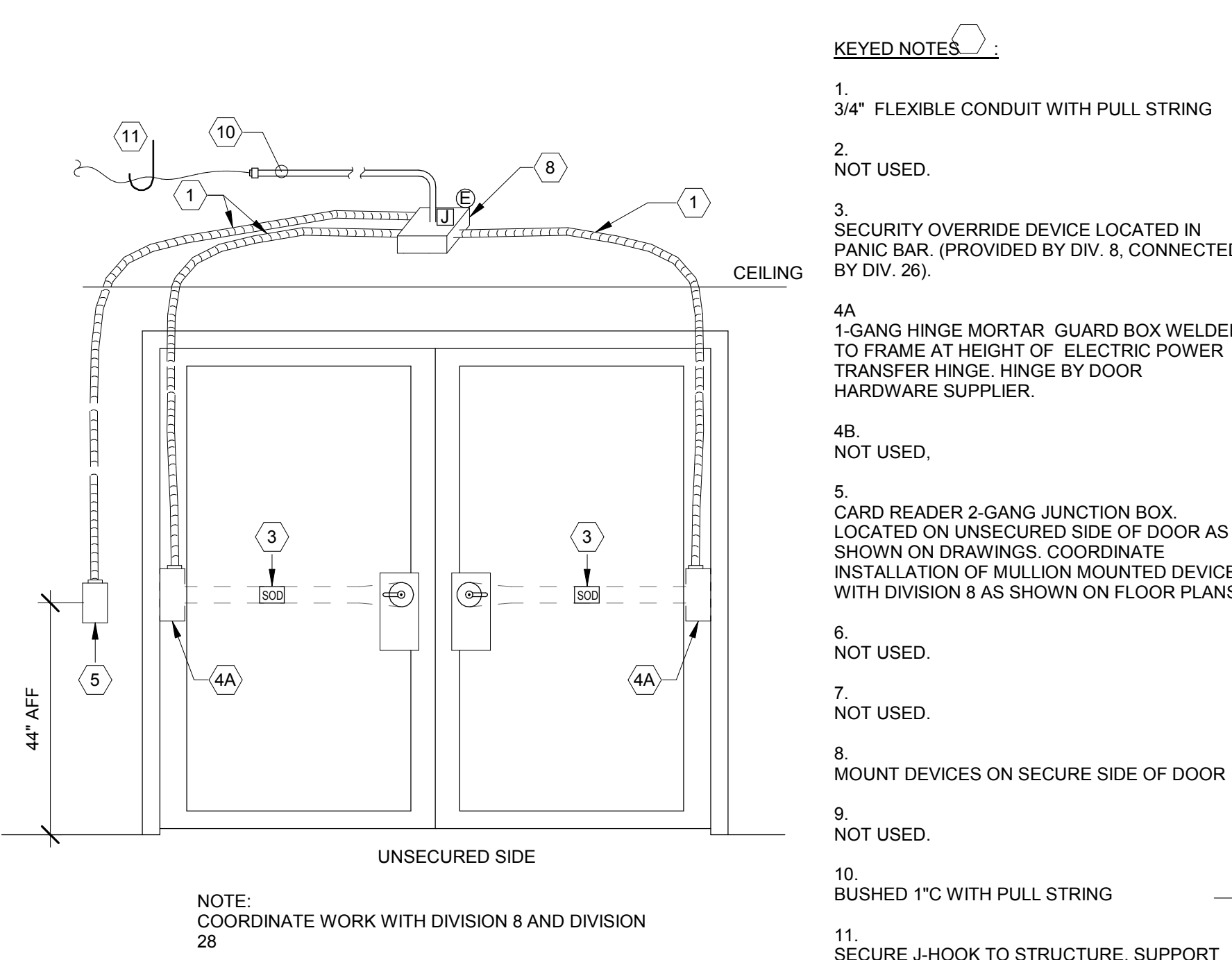
SYSTEMS DETAILS

Project No.: 005005.00 Checked by: JE

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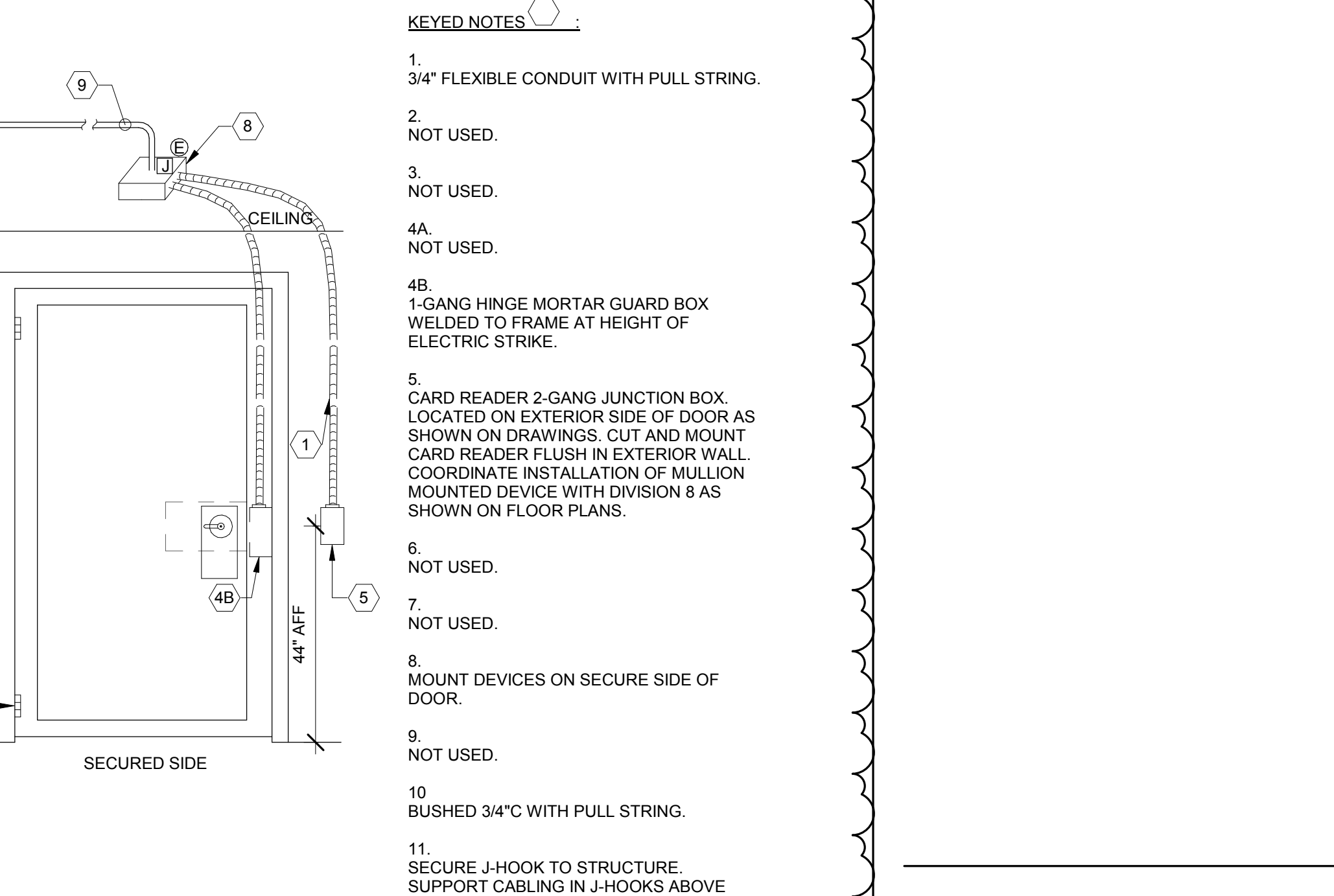
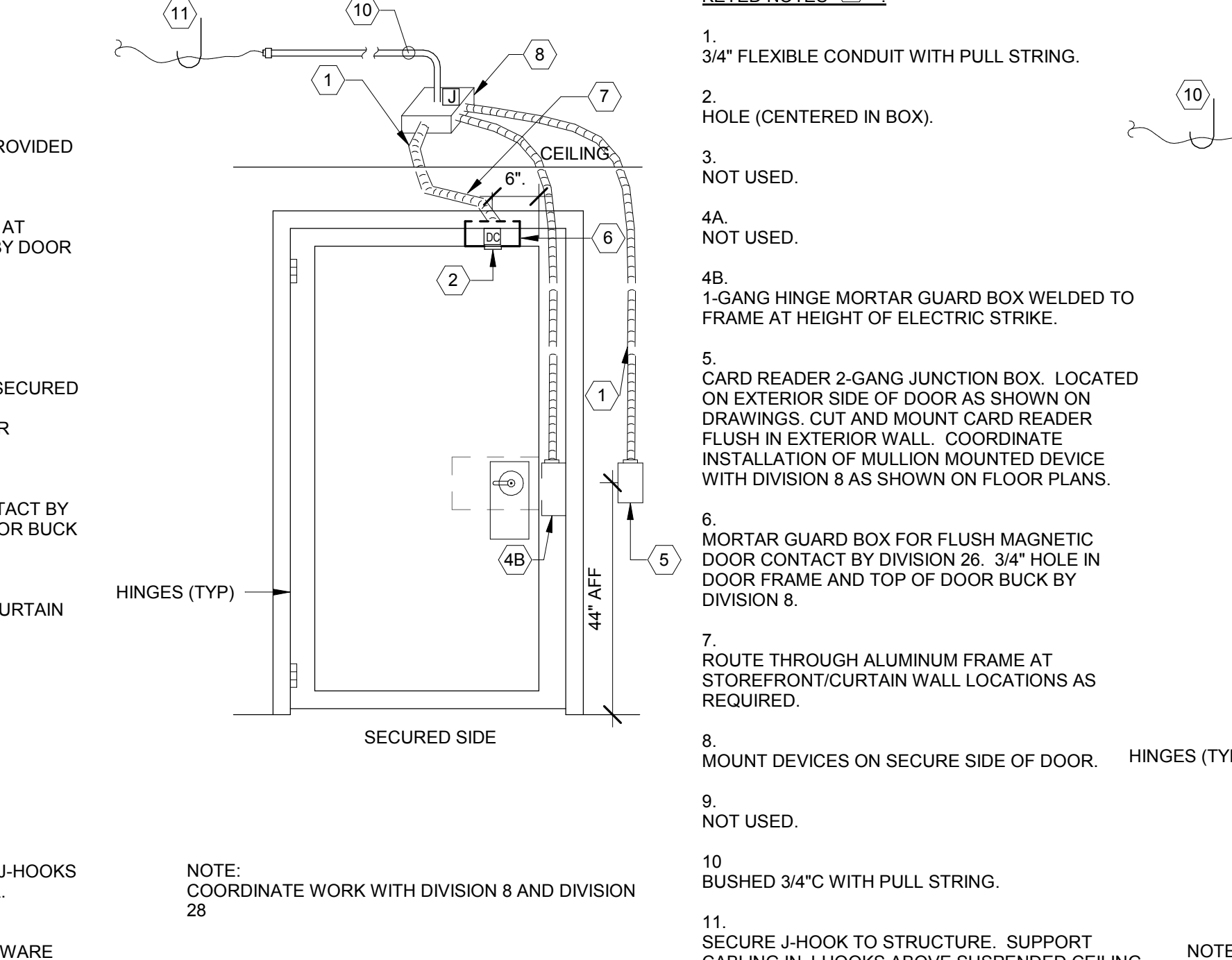
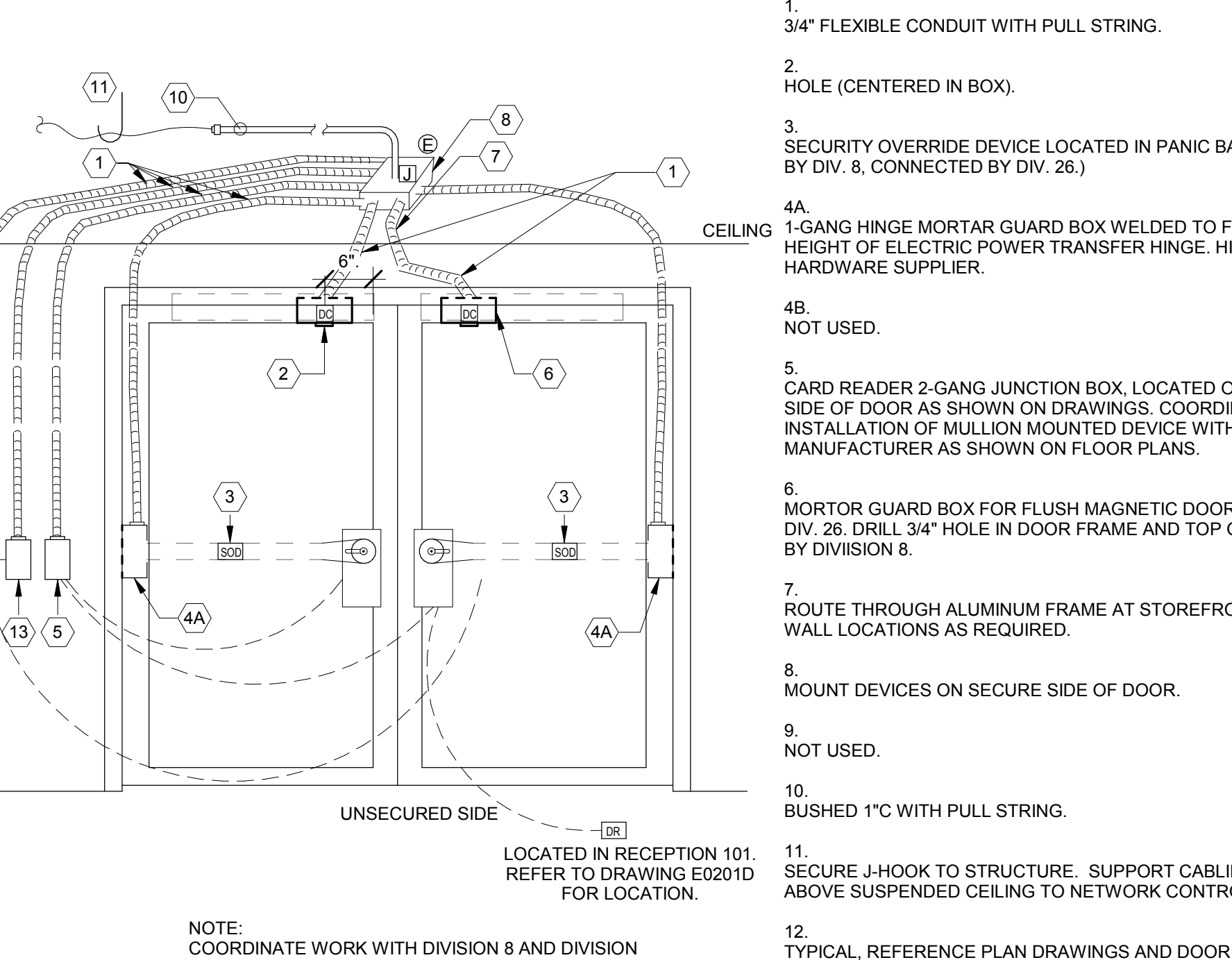
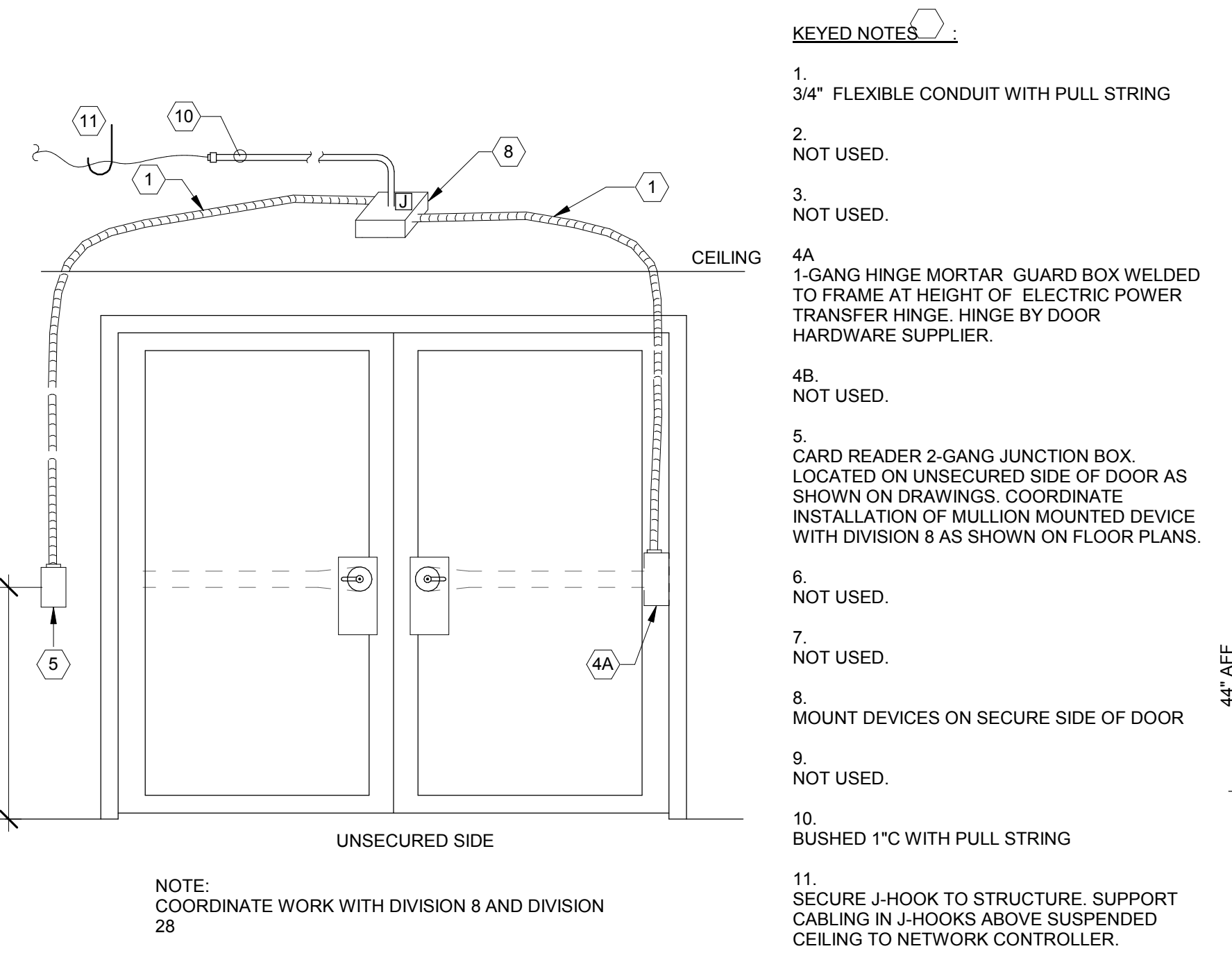
12 DOUBLE INTERIOR DOOR CARD READER WITH PANIC DEVICE

9 DOUBLE EXTERIOR DOOR WITH DOOR CONTACT, PANIC DEVICE AND W/OUT CARD READER

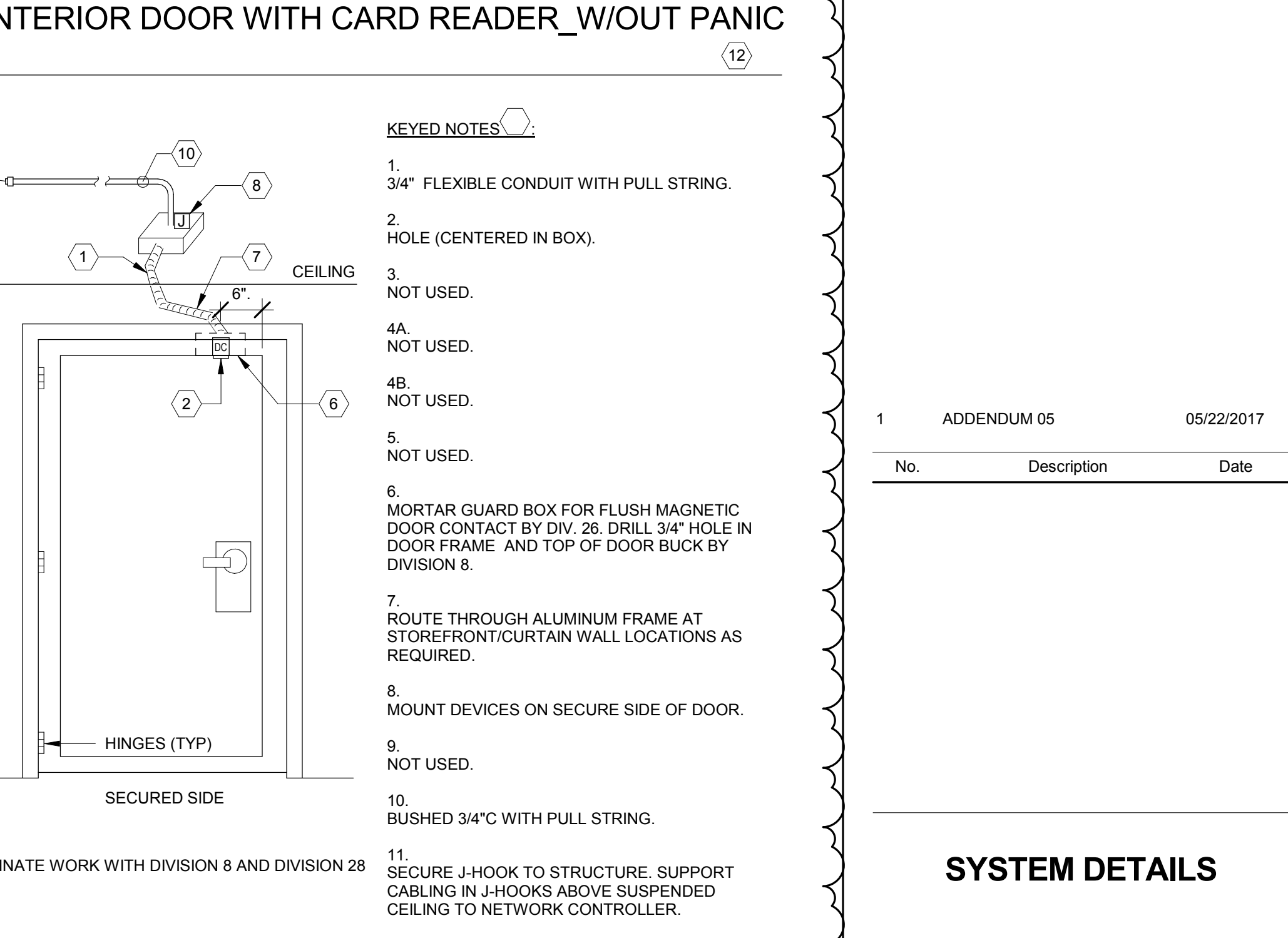
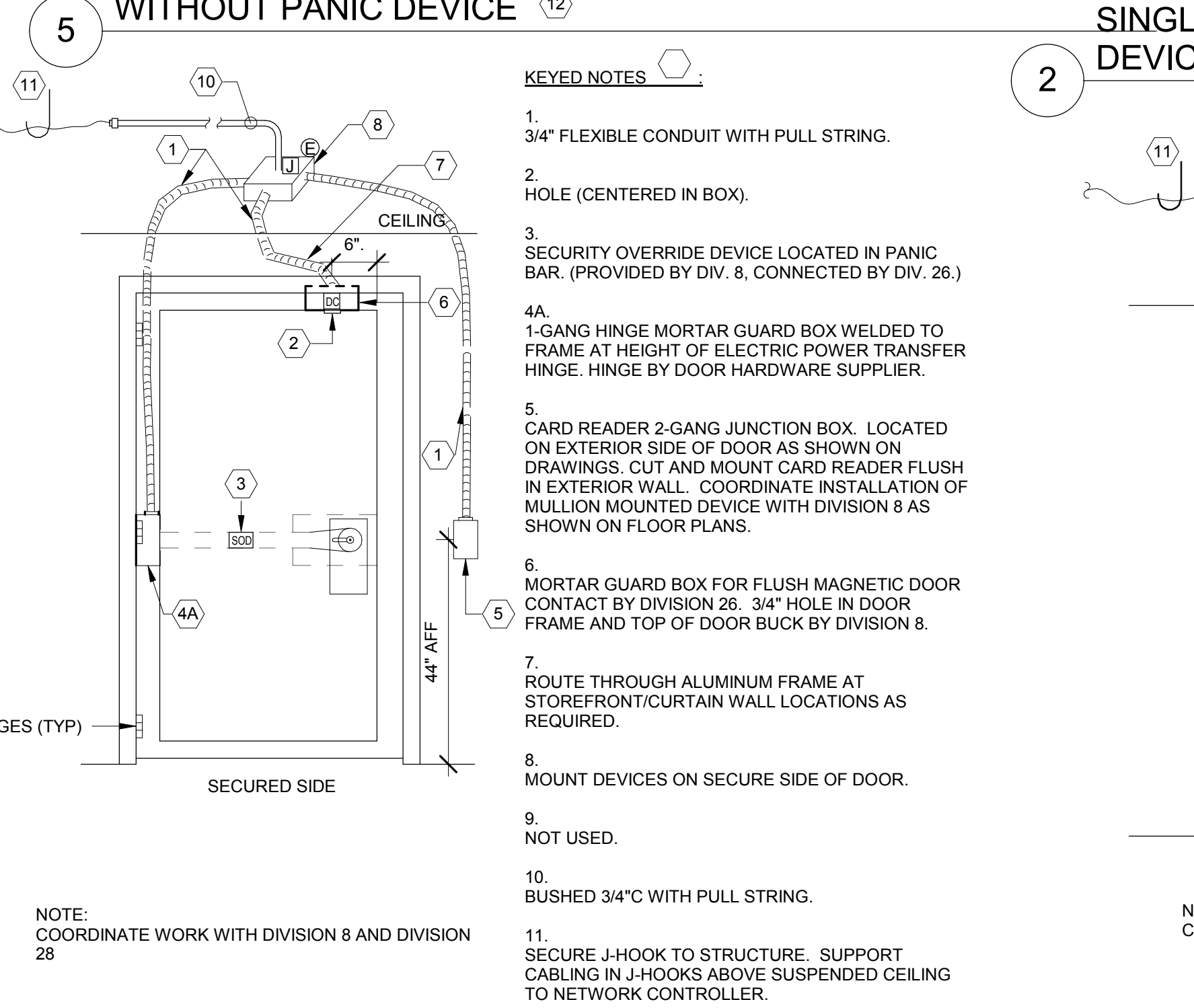
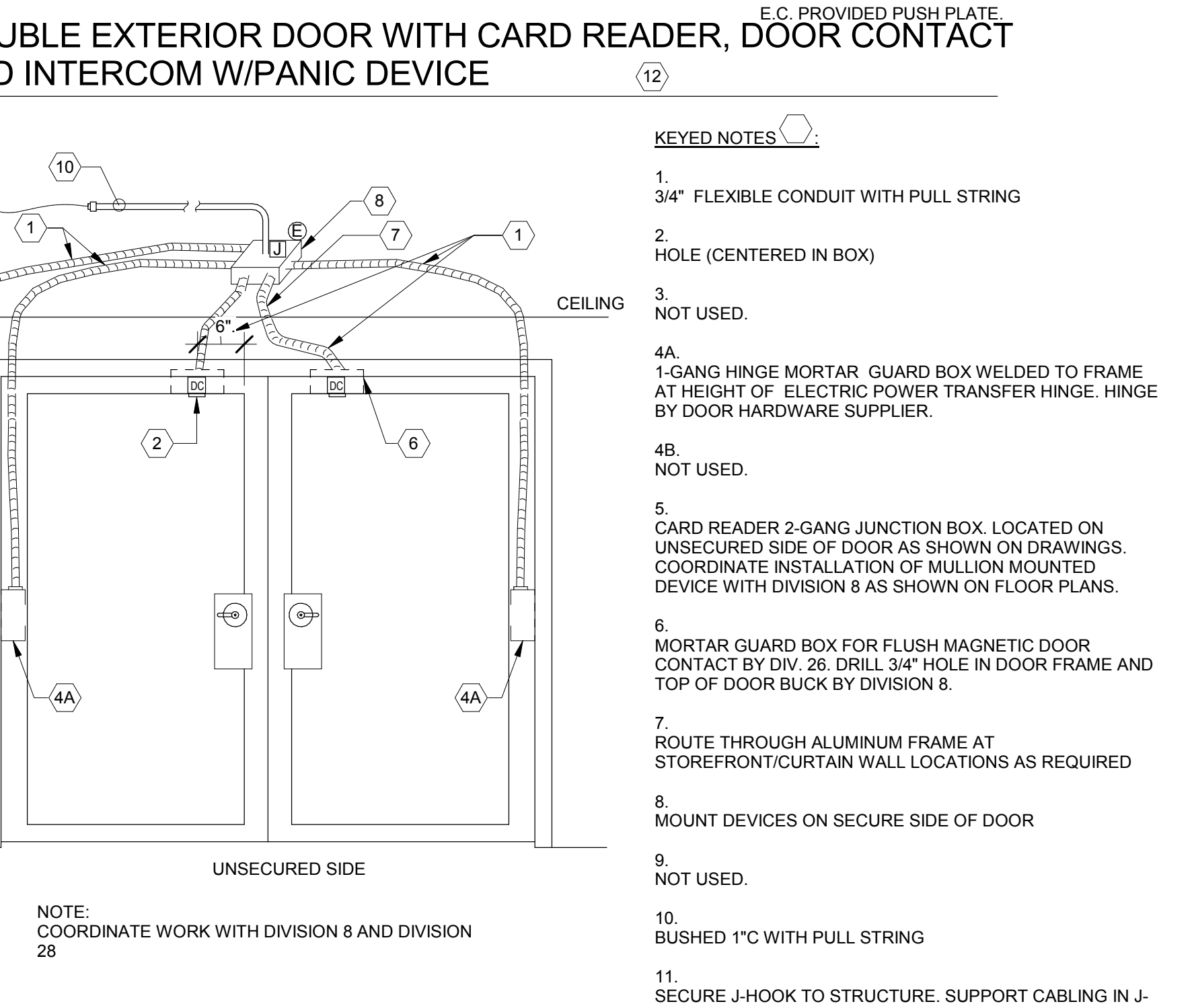
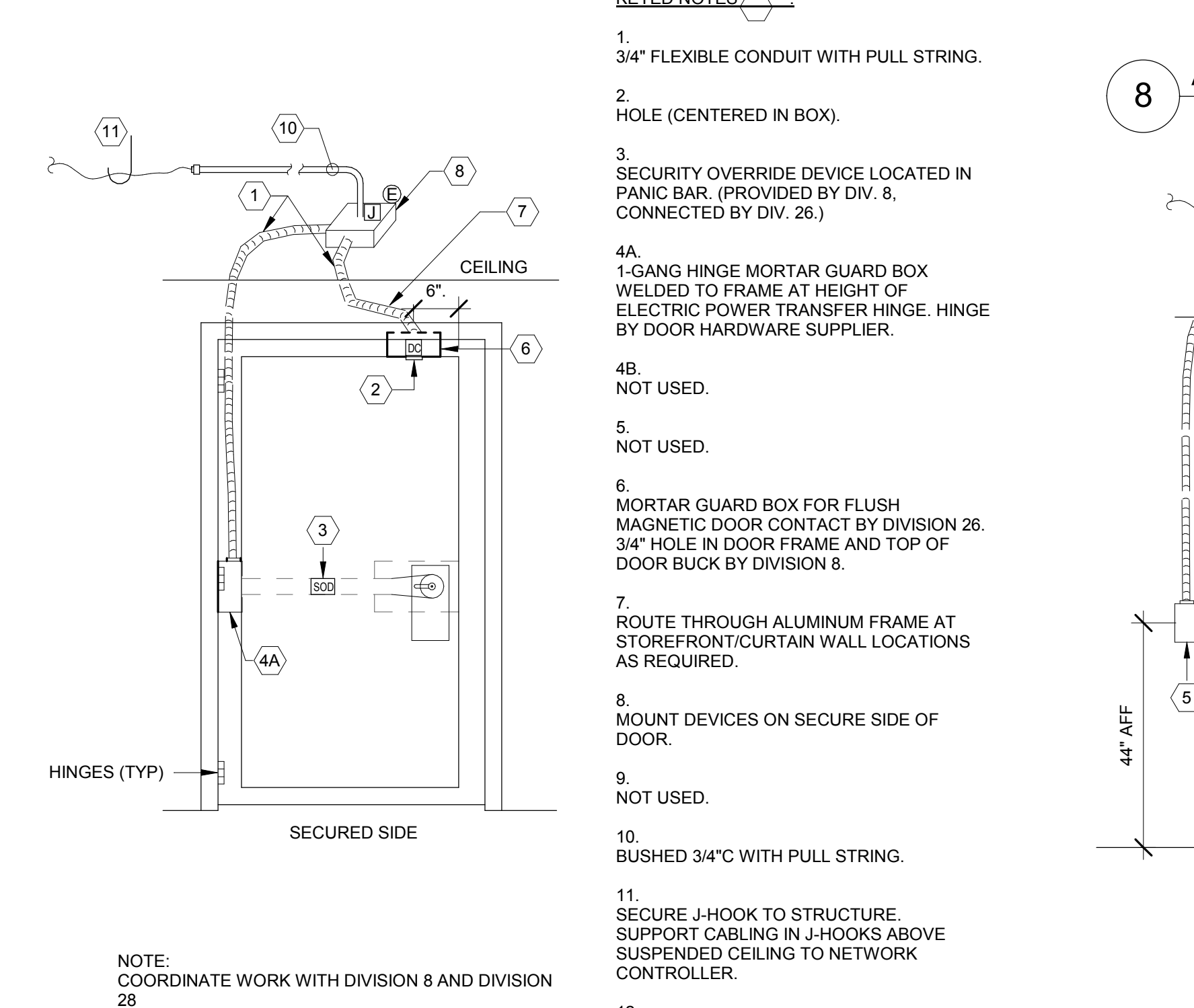
6 DOUBLE EXTERIOR DOOR WITH CARD READER W/PANIC DEVICE

3 SINGLE INTERIOR DOOR WITH CARD READER W/PANIC DEVICE

12 DOUBLE INTERIOR DOOR CARD READER WITH PANIC DEVICE



12 DOUBLE INTERIOR DOOR CARD READER WITH PANIC DEVICE



12 SINGLE EXTERIOR DOOR WITH PANIC DEVICE AND DOOR CONTACT

7 DOUBLE EXTERIOR DOOR WITH DOOR CONTACT

4 SINGLE EXTERIOR DOOR CARD READER WITH PANIC DEVICE W/DOOR CONTACT

1 SINGLE EXTERIOR DOOR WITH DOOR CONTACT

ROCKFORD PUBLIC SCHOOLS

SCHOOL B, ZONE 1

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No.	Description	Date
1	ADDENDUM 05	05/22/2017

SYSTEM DETAILS

Project No.: 005005.00      Checked by: Checker

**E0743**

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