ADDENDUM NO. 1

April 5, 2022

RIVER VALLEY HIGH, MIDDLE, & ELEMENTARY SCHOOLS ADDITIONS & RENOVATIONS
15480 Three Oaks Road
Three Oaks, MI, 49128

TO: ALL BIDDERS OF RECORD

BIDS DUE DATE CHANGED TO APRIL 19, 2022

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications, and the Drawings dated March 22, 2022, by Cordogan Clark & Associates. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of Pages ADD 1 through ADD 7, Guideline Schedule, RFI Log, and Cordogan Clark Addendum No. 1, dated March 31, 2022, consisting of six pages, Issued Specification Section: 09 05 61.13 Moisture Vapor Emission Control, Revised Specification Sections: 03 30 00 Cast-in-Place Concrete and 08 80 00 Glazing, Issued Drawings: T2.0, T2.1, and T2.2, Revised Drawings: A1.1B, A1.1D, A1.2B, A2.1A, A2.1B, A2.1C, A2.1D, A3.1A, A3.1B, A3.1C, A3.1D, A3.2, A4.1, A4.1D, A4.2, A5.0, A5.2, A6.1, A8.2, A8.8, A9.0, A9.2, A10.1B, S2.1D, S4.2, M4.0, P2.0D, P2.1D, P4.0, P4.1, E2.2, E3.1A, E3.1B, E3.1C, E3.1D, E4.2, E4.4, and E4.5.

A. SPECIFICATION SECTION 00 00 10 – TITLE PAGE

1. All references to the **Bids Received Date** are to change from April 12, 2022, to **April 19, 2022**. Bids remain due at 2:00 PM (EST) and will be publicly read aloud immediately following the deadline.

B. SPECIFICATION SECTION 00 00 20 – TABLE OF CONTENTS

Add the following Specification Section:

09 05 61.13 – Moisture Vapor Emission Control

B. SPECIFICATION SECTION 00 02 00 – NOTICE TO BIDDERS

1. All references to the **Bids Received Date** are to change from April 12, 2022, to **April 19, 2022**. Bids remain due at 2:00 PM (EST) and will be publicly read aloud immediately following the deadline.

C. SPECIFICATION SECTION 00 10 00 – INSTRUCTIONS TO BIDDERS

1. 1.18 Time of Commencement and Completion

Revise the following:

1. It is anticipated that construction will start within **23** calendar days after receipt of bids.

D. SPECIFICATION SECTION 01 12 00 - MULTIPLE CONTRACT SUMMARY

1. Part 1.16 Time of Commencement and Completion

Revise the following:

1. It is anticipated that construction will start within **23** calendar days after receipt of bids.

2. Part 3.02 General Requirements

A. Provided by the Owner through the Construction Manager.

Delete the following Specification Section:

01 71 50 – Final Cleaning

Add the following Specification Section:

23 08 00 – Commissioning of HVAC

3. Part 3.03 Bid Categories

A. Bid Category No. 1 – General Trades.

Add the following Specification Sections:

01 71 50 – Final Cleaning
07 42 13.23 – Metal Composite Material Wall Panels

Add the following Clarifications:

1. Provide selective demolition and removal of existing concrete slabs to facilitate new construction. Refer to Demolition Keynote 22 and 23 for areas of existing concrete slab removals.
2. Provide all architectural and structural demolition work as required to facilitate new work. Refer to Demolition Plans for reference, including but not limited too walls, doors, frames, slabs, flooring, windows, casework, ceiling systems/assemblies, exterior walls, cornice, stairs, balustrade, storefront systems, and assemblies.
3. Provide roof overhang demolition work, refer to A1.3D.
4. Provide protection to existing building assemblies and finishes to remain, salvage, and replace existing items as identified, prepare and patch existing finishes and surfaces as required for new work.
5. Salvaged items to be returned to the Owner shall be placed on pallet and delivered to the Owners existing building and/or storage facility on this site.
6. Provide all fire treated wood blocking as required for casework, smart boards, markerboards, tackboards, grab bars, handrails, toilet accessories, stops and any other wall mounted equipment.
7. Provide fluid applied weather resistive barrier and rigid insulation at metal stud framing at locations for composite metal wall panels.
8. Provide all required wood blocking, nailers, sheathing as required for project, including roofing work.
9. Provide dimensional aluminum building letters.
10. Provide Toilet Accessories, and install Owner provided accessories, refer to Toilet Accessory Schedule on sheet A8.9 for reference.
11. Provide all caulking and joint sealant work for your installed work.
12. Provide black vinyl coated fencing and gates as shown on C series drawings.

B. Bid Category No. 2 – Sitework.

Delete the following Specification Section:

07 42 13.23 - Metal Composite Material Wall Panels

Add the following Clarifications:

1. Provide all site demolition and removals as shown and required to facilitate new work. Refer to sheet C-1.1.
2. Provide demolition and removal of metal antenna/radio tower. Electrical disconnect, if required, will be provided by Bid Category No. 11 Electrical. Tower to remain in use until Summer of 2023.

3. Provide aggregate base course materials, granular fill, engineered fill and provide required excavation, backfilling, and compacting work to prepare sub-base for concrete and asphalt pavements. Refer to sheet C-2.
4. Provide all site utilities work, including storm piping, sanitary sewers, sewage ejector, sanitary lift station, force main, catch basins, manholes, insulated storm piping, and perforated underdrains. Refer to C series drawings for work and specifications.
5. Provide engineered mulch in play area.
6. Provide site restoration, seeding, mulching of construction and disturbed areas. Contractor has the option to provide preparation, seeding and maintenance of lawn areas via seeding in lieu of sod. Maintain areas until established stand of lawn/grass. Include first two (2) mowing and reseeding as required.
7. Provide, maintain, and remove soil erosion measures as required, refer to C-6.

C. Bid Category No. 3 – Concrete.

Add the following Clarifications:

1. Provide all Concrete Work for cast in place concrete footings, foundations, slab on grade, concrete walks, and concrete curbs including interior concrete slab replacement for respective architectural, structural, plumbing, and electrical work shown to be removed. Refer to Demolition Keynote 22 & 23 for areas of existing concrete slab removal, repair, and replacement.
2. Any Contractors requiring additional concrete work not shown to be removed, repaired, or replaced shall include the costs of required demolition, concrete repair, and concrete replacement.
3. Provide rigid foam infill and concrete work at C114 Band Room.
4. Provide fine grading and preparation for concrete placement, including providing vapor retarder.
5. Provide all caulking and joint sealant work for your installed work.
6. Provide concrete wash out dumpsters shown on site logistics plan.

D. Bid Category No. 4 – Masonry.

Add the following Clarifications:

1. Provide wool batt insulation at top of CMU walls as required.
2. Provide rigid insulation and fluid applied weather resistive barrier at new exterior CMU walls and CMU wall patching.
3. Provide all Lintels, including Lintels for MEP openings in CMU walls.
4. Provide all caulking and joint sealant work for your installed work.

E. Bid Category No. 5 – Structural & Miscellaneous Steel.

Add the following Clarifications:

1. Provide joist reinforcing as required. Refer to S series drawings for existing joint

reinforcement notes.
2. Provide all MEP steel equipment frames as shown.

F. Bid Category No. 6 – Aluminum, Glass & Glazing.

Add the following Clarification:

1. Provide all caulking and joint sealant work for your installed work.

G. Bid Category No. 7 – Roofing.

Add the following Clarifications:

1. Provide all roof patching for structural, architectural, plumbing, mechanical and electrical penetrations in existing and new roof areas. Contractor requiring and performing the penetration shall provide opening, protection, curb, boot etc. for a complete assembly.
2. Refer to Alternate(s) scope and provide respective pricing on bid form for related roofing work.
3. Provide all caulking and joint sealant work for your installed work.

H. Bid Category No. 8 – Interior Finishes.

Add the following Clarifications:

1. Provide full height metal backed plastic corner guards at all exposed outside corners of gypsum board wall construction.
2. Provide acoustical sealant, steel closure piece, and sound attenuation insulation at top of wall conditions as required.
3. Provide dense glass sheathing as required.
4. Provide all caulking and joint sealant work for your installed work.
5. Salvage 60 existing field tile from area D and include labor for reinstalling in corridors at CM"s direction.

I. Bid Category No. 9 – Flooring.

Add the following Specification Sections:

09 05 61.13 – Moisture Vapor Emission Control

Add the following Clarifications:

1. Provide preparation of substrate to receive new flooring materials, including moisture mitigation and adhesion testing requirements.
2. Provide all caulking and joint sealant work for your installed work.

J. Bid Category No. 10 – Mechanical.

Add the following Specification Section:

02 41 19 – Selective Demolition

Delete the following Specification Section:

23 08 00 – Commissioning of HVAC

Add the following Clarifications:

1. Provide all mechanical and plumbing demolition work as required.
2. Provide all caulking and joint sealant work for your installed work.
3. Maintain existing system(s) in a manner to accommodate a phased renovation and occupancy for the duration of the project. Provide for temporary valves, shut offs, disconnects, and services as required.
4. Refer to Bid Category No. 1 General Trades and No. 3 Concrete Clarifications, issued in Addendum No. 1, for scope assigned for existing concrete slab demolition and concrete slab replacement.

K. Bid Category No. 11 – Electrical.

Add the following Specification Section:

02 41 19 – Selective Demolition

Add the following Clarifications:

1. Provide all electrical disconnects, removals and demolition work as required.
2. Maintain existing system(s) in a manner to accommodate a phased renovation and occupancy for the duration of the project. Provide for temporary valves, shut offs, disconnects, and services as required.
3. Refer to Bid Category No. 1 General Trades and No. 3 Concrete Clarifications, issued in Addendum No. 1, for scope assigned for existing concrete slab demolition and concrete slab replacement.

M. Bid Category No. 13 – Asphalt Paving.

Add the following Clarifications:

1. Provide fine grading, Asphalt Paving and Striping work. Refer to C series drawings for layout, locations, and specifications.
2. Refer to Alternate(s) as shown on C-2 and provide pricing on bid form for fine grading, Asphalt Paving, and Striping.

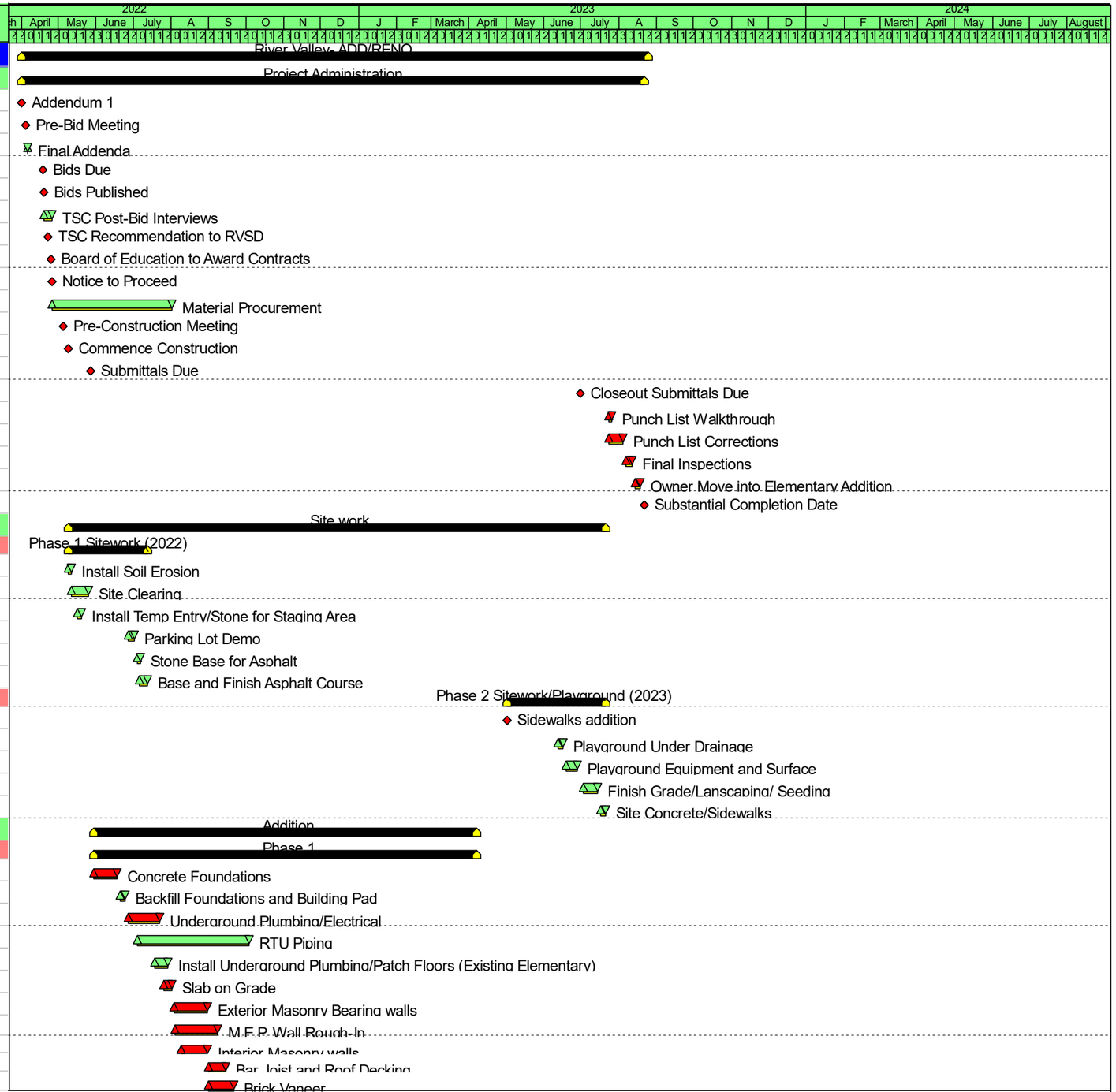
E. SPECIFICATION SECTION 01 32 00 – SCHEDULES AND REPORTS

1. Part 1.03 GUIDELINE SCHEDULE. Refer to the attached Guideline Construction Schedule, dated March 18, 2022.

F. RFI LOG AND SUBSTITUTION REQUESTS

1. Refer to the attached Request for Information (RFI Log), dated April 5, 2022.

Activity Name	Original Duration	Start	Finish
River Valley- ADD/RENO	422	01-Apr-22 A	25-Aug-23
Project Administration	362	01-Apr-22	21-Aug-23
Addendum 1	0	01-Apr-22*	
Pre-Bid Meeting	0	04-Apr-22*	
Final Addenda	0	06-Apr-22*	06-Apr-22
Bids Due	0	18-Apr-22*	
Bids Published	0	19-Apr-22*	
TSC Post-Bid Interviews	5	19-Apr-22*	25-Apr-22
TSC Recommendation to RVSD	0		22-Apr-22
Board of Education to Award Contracts	0	25-Apr-22*	
Notice to Proceed	0	26-Apr-22	
Material Procurement	70	26-Apr-22*	01-Aug-22
Pre-Construction Meeting	0	05-May-22*	
Commence Construction	0	09-May-22*	
Submittals Due	0		27-May-22
Closeout Submittals Due	0		30-Jun-23
Punch List Walkthrough	3	24-Jul-23*	26-Jul-23
Punch List Corrections	10	24-Jul-23*	04-Aug-23
Final Inspections	5	07-Aug-23*	11-Aug-23
Owner Move into Elementary Addition	5	14-Aug-23*	18-Aug-23
Substantial Completion Date	0		21-Aug-23
Site work	397	09-May-22 A	21-Jul-23
Phase 1 Sitework (2022)	47	09-May-22	12-Jul-22
Install Soil Erosion	3	09-May-22*	11-May-22
Site Clearing	10	11-May-22*	25-May-22
Install Temp Entry/Stone for Staging Area	4	16-May-22*	19-May-22
Parking Lot Demo	5	27-Jun-22	01-Jul-22
Stone Base for Asphalt	3	04-Jul-22	06-Jul-22
Base and Finish Asphalt Course	5	06-Jul-22	12-Jul-22
Phase 2 Sitework/Playground (2023)	397	02-May-23 A	21-Jul-23
Sidewalks addition	0	02-May-23 A	
Playground Under Drainage	5	12-Jun-23*	16-Jun-23
Playground Equipment and Surface	8	19-Jun-23*	28-Jun-23
Finish Grade/Lanscaping/ Seeding	10	03-Jul-23	14-Jul-23
Site Concrete/Sidewalks	5	17-Jul-23	21-Jul-23
Addition	225	30-May-22	07-Apr-23
Phase 1	225	30-May-22	07-Apr-23
Concrete Foundations	15	30-May-22*	17-Jun-22
Backfill Foundations and Building Pad	5	20-Jun-22	24-Jun-22
Underground Plumbing/Electrical	20	27-Jun-22	22-Jul-22
RTU Piping	66	04-Jul-22	03-Oct-22
Install Underground Plumbing/Patch Floors (Existing Elementary)	10	18-Jul-22	29-Jul-22
Slab on Grade	5	26-Jul-22*	01-Aug-22
Exterior Masonry Bearing walls	20	03-Aug-22*	30-Aug-22
M.E.P. Wall Rough-In	25	04-Aug-22	07-Sep-22
Interior Masonry walls	15	09-Aug-22	30-Aug-22
Bar Joist and Roof Decking	10	31-Aug-22	14-Sep-22
Brick Veneer	15	31-Aug-22	21-Sep-22



Primary Baseline
Actual Work
Remaining Work
Critical Remaining Work
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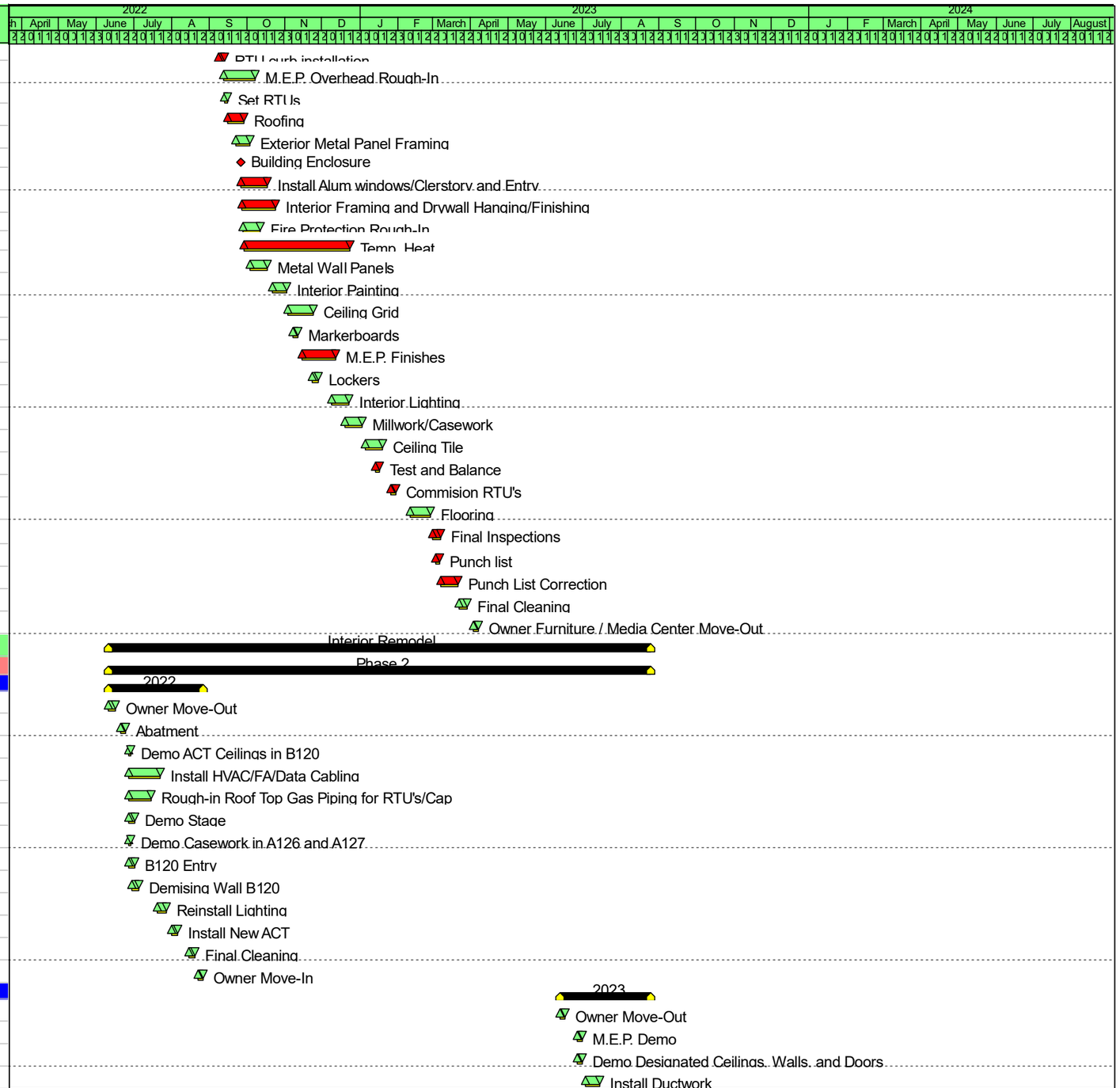
Summary

River Valley School District

Guideline Construction Schedule 18-Mar-22

SKILLMAN

Activity Name	Original Duration	Start	Finish
RTU curb installation	3	08-Sep-22	12-Sep-22
M.E.P. Overhead Rough-In	20	12-Sep-22	07-Oct-22
Set RTUs	3	13-Sep-22	15-Sep-22
Roofing	10	15-Sep-22	28-Sep-22
Exterior Metal Panel Framing	8	22-Sep-22	03-Oct-22
Building Enclosure	0	26-Sep-22*	
Install Alum windows/Clerstory and Entry	15	26-Sep-22*	17-Oct-22
Interior Framing and Drywall Hanging/Finishing	20	27-Sep-22	24-Oct-22
Fire Protection Rough-In	10	28-Sep-22	11-Oct-22
Temp. Heat	62	28-Sep-22	23-Dec-22
Metal Wall Panels	10	03-Oct-22	17-Oct-22
Interior Painting	8	21-Oct-22	02-Nov-22
Ceiling Grid	15	03-Nov-22	23-Nov-22
Markerboards	5	07-Nov-22	11-Nov-22
M.E.P. Finishes	20	14-Nov-22	12-Dec-22
Lockers	3	23-Nov-22	28-Nov-22
Interior Lighting	10	09-Dec-22	22-Dec-22
Millwork/Casework	10	19-Dec-22	02-Jan-23
Ceiling Tile	10	05-Jan-23	19-Jan-23
Test and Balance	2	13-Jan-23	16-Jan-23
Commision RTU's	2	26-Jan-23	30-Jan-23
Flooring	11	10-Feb-23	27-Feb-23
Final Inspections	5	28-Feb-23	07-Mar-23
Punch list	2	03-Mar-23	06-Mar-23
Punch List Correction	10	07-Mar-23	21-Mar-23
Final Cleaning	5	22-Mar-23	29-Mar-23
Owner Furniture / Media Center Move-Out	5	03-Apr-23	07-Apr-23
Interior Remodel	316	10-Jun-22	25-Aug-23
Phase 2	316	10-Jun-22	25-Aug-23
2022	56	10-Jun-22	26-Aug-22
Owner Move-Out	5	10-Jun-22*	16-Jun-22
Abatment	5	20-Jun-22*	24-Jun-22
Demo ACT Ceilings in B120	2	27-Jun-22	28-Jun-22
Install HVAC/FA/Data Cabling	20	27-Jun-22	22-Jul-22
Rough-in Roof Top Gas Piping for RTU's/Cap	15	27-Jun-22	15-Jul-22
Demo Stage	5	27-Jun-22*	01-Jul-22
Demo Casework in A126 and A127	2	27-Jun-22	28-Jun-22
B120 Entry	5	27-Jun-22	01-Jul-22
Demising Wall B120	5	29-Jun-22	05-Jul-22
Reinstall Lighting	5	20-Jul-22	27-Jul-22
Install New ACT	5	01-Aug-22	05-Aug-22
Final Cleaning	5	15-Aug-22	19-Aug-22
Owner Move-In	5	22-Aug-22*	26-Aug-22
2023	55	12-Jun-23	25-Aug-23
Owner Move-Out	5	12-Jun-23*	16-Jun-23
M.E.P. Demo	5	26-Jun-23	30-Jun-23
Demo Designated Ceilings, Walls, and Doors	5	26-Jun-23	30-Jun-23
Install Ductwork	10	03-Jul-23	14-Jul-23



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River Valley School District

Guideline Construction Schedule 18-Mar-22

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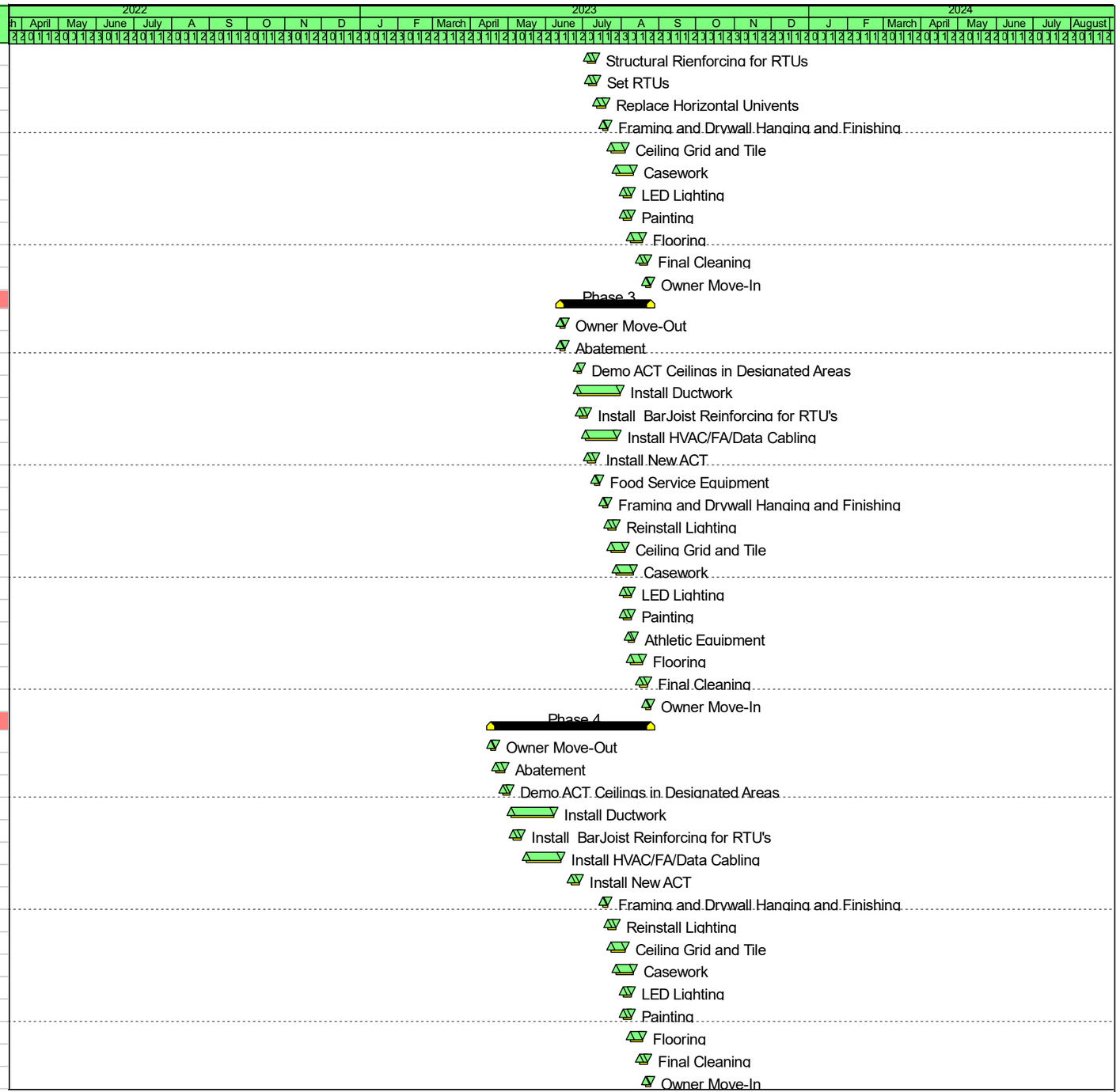
SKILLMAN

Activity Name	Original Duration	Start	Finish
Structural Rienforcing for RTUs	5	05-Jul-23	11-Jul-23
Set RTUs	5	05-Jul-23	12-Jul-23
Replace Horizontal Univents	5	12-Jul-23	19-Jul-23
Framing and Drywall Hanging and Finishing	5	17-Jul-23	21-Jul-23
Ceiling Grid and Tile	10	24-Jul-23	04-Aug-23
Casework	10	28-Jul-23	11-Aug-23
LED Lighting	5	02-Aug-23	09-Aug-23
Painting	5	02-Aug-23	09-Aug-23
Flooring	8	08-Aug-23	18-Aug-23
Final Cleaning	5	16-Aug-23	22-Aug-23
Owner Move-In	5	21-Aug-23*	25-Aug-23
Phase 3	55	12-Jun-23	25-Aug-23
Owner Move-Out	5	12-Jun-23*	16-Jun-23
Abatement	5	12-Jun-23	16-Jun-23
Demo ACT Ceilings in Designated Areas	4	26-Jun-23	29-Jun-23
Install Ductwork	25	26-Jun-23	31-Jul-23
Install BarJoist Reinforcing for RTU's	5	28-Jun-23	04-Jul-23
Install HVAC/FA/Data Cabling	20	03-Jul-23	28-Jul-23
Install New ACT	5	04-Jul-23	11-Jul-23
Food Service Equipment	5	10-Jul-23	14-Jul-23
Framing and Drywall Hanging and Finishing	5	17-Jul-23	21-Jul-23
Reinstall Lighting	5	21-Jul-23	28-Jul-23
Ceiling Grid and Tile	10	24-Jul-23	04-Aug-23
Casework	10	28-Jul-23	11-Aug-23
LED Lighting	5	02-Aug-23	09-Aug-23
Painting	5	02-Aug-23	09-Aug-23
Athletic Equipment	5	07-Aug-23*	11-Aug-23
Flooring	8	08-Aug-23	18-Aug-23
Final Cleaning	5	16-Aug-23	22-Aug-23
Owner Move-In	5	21-Aug-23*	25-Aug-23
Phase 4	95	17-Apr-23	25-Aug-23
Owner Move-Out	5	17-Apr-23*	21-Apr-23
Abatement	5	21-Apr-23	28-Apr-23
Demo ACT Ceilings in Designated Areas	4	27-Apr-23	02-May-23
Install Ductwork	25	03-May-23	07-Jun-23
Install BarJoist Reinforcing for RTU's	5	05-May-23	12-May-23
Install HVAC/FA/Data Cabling	20	16-May-23	13-Jun-23
Install New ACT	5	21-Jun-23	28-Jun-23
Framing and Drywall Hanging and Finishing	5	17-Jul-23	21-Jul-23
Reinstall Lighting	5	21-Jul-23	28-Jul-23
Ceiling Grid and Tile	10	24-Jul-23	04-Aug-23
Casework	10	28-Jul-23	11-Aug-23
LED Lighting	5	02-Aug-23	09-Aug-23
Painting	5	02-Aug-23	09-Aug-23
Flooring	8	08-Aug-23	18-Aug-23
Final Cleaning	5	16-Aug-23	22-Aug-23
Owner Move-In	5	21-Aug-23*	25-Aug-23



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River Valley School District

Guideline Construction Schedule 18-Mar-22

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SKILLMAN

River Valley School District - School Consolidation

Pre-Bid RFI Log
Date - 4/5/2022
CC=Cordogan Clark TSC=The Skillman Corp.

RFI #	Company Submitting RFI	Date Received	RFI Description	RFI Response
1	Hunter-Prell	3/23/2022	Fire Suppression Specs. 211313-14 3.2 A. Connect sprinkler piping to building's interior water-distributio n piping. Will the site contractor bring the water supply for fire system into building in riser room 12" AFF?	TSC: Bid Category No. 2 Sitework will bring the water supply to within 5' of the building. Bid Category No. 10 Mechanical will connect and bring water service into the building and provide supply line for Fire Suppression connection and piping.
2	Hunter-Prell	3/23/2022	Fire Suppression specs. 211313-19 3.15 C. Standard-pressure, wet-pipe sprinkler system, NPS and smaller Number 3. Thin wall or Schedule 10 black-steel pipe On the fire plan FP2.1D Note number 2 Line piping to be sched ule 40. Which statement is correct? Can line pipe be sch. 10?	CC:
3	Hunter-Prell	3/23/2022	3) Fire suppression plan FP2.1D Keynote 3: Provide and install Fire Protection Riser sized to fully sprinkler t he High School and include (4) Fire Protection zone assemblies in the riser (3) zones assem blies shall be used for future projects. What consists of "Zone assemblies"?	CC:
4	S.A.Mormon	3/25/2022	081416 Flush Wood Doors and/or A9.0 Door Schedule - There is no mention in the Specifications if Factory Glazing is required for Wood Doors with Lites. If Factory Glazing is required – A9.0 Door Schedule notes “I-GL1-T” at Door Types D5 and D6. This glass type does not appear in 08800 Glazing Specifications. If factory glazing is required for Wood Doors with Lites please clarify specific glass required.	CC: Glazing type I-GL1-T refers to Monolithic ""B. Glass Type: Clear fully tempered float glass. 1. Minimum Thickness: 6 mm. 2. Safety glazing required."" "
5	S.A.Mormon	3/25/2022	081113 Hollow Metal Doors and Frames and/or A9.0 Door Schedule - A9.0 Door Schedule list numerous Hollow Metal Doors as Type D1. Door Elevations show Type D1 Doors to be Exterior Doors. Specifications call for Exterior Hollow Metal Doors to be 16 Gauge Curries 777 Trio-E Series (fairly expensive doors) while Interior Hollow Metal Doors are specified as 18 Gauge Curries 707 (typical “standard” hollow metal door). The only Exterior Hollow Metal Door is Opening E2. Should the other Eight Hollow Metal Doors indicated to be Type D1 actually be Type D4 Interior Door?	CC:REVISE ALL INTERIOR HM DOORS TO TYPE D4
6	S.A.Mormon	3/25/2022	081113 Hollow Metal Doors and Frames and/or A9.0 Door Schedule - A9.0 Door Schedule - Openings D103A, D118, D124, D129 and D129A are indicated on the Door Schedule to have a 2 Hour Fire-Rating (these are also the only Openings indicated to have a fire-rating). Due to the 2 Hour Rating are these Hollow Metal Doors/Frames required to be “E119” Fire Rated Systems (Note: extremely expensive with extended lead-times)?	A/E: REFER TO 081113 1.4.C, 2.3.C.1.a, & 2.4.E FOR FIRE DOOR REQUIREMENTS. DOORS ASSEMBLIES LOCATED IN A 2HR WALL REQUIRE 1 1/2 HR RATING AND ""SHALL BE TESTED IN ACCORDANCE WITH NFPA 525 OR UL10C"""
7	Balfrey & Johnston, Inc.	3/28/2022	Request approval to bid Navien’s Wall Hung Condensing Water Heater as an equal to the water heater with tank specified (refer to 3/28 Email).	CC: Rejected
8	Pearson	3/29/2022	What bid category will 07 4213.23 “Composite Metal Panels” be assigned? They are currently in the site package?	TSC: Composite Metal Panels will be assigned to Bid Category No. 1 General Trades. Refer to Addendum No. 1.
9	Pearson	3/29/2022	Section 01 72 00 Field Engineering ?	TSC: Bid Category No. 1 General Trades shall provide and maintain Reference Points (benchmarks & control points) and provide Certified Survey at completion of foundation walls and other major improvements for ALL Contractors to utilize for their respective "Work Layout-Section 01 72 50". Refer to Section 01 72 00 Field Engineering, Part 3.04.
10	Pearson	3/29/2022	Will 10% retention remain as part of the contract along with the additional scheduled items such as closeout that essentially increases retention to an amount >10%. Is 5% acceptable?	TSC: No. Ten (10%) Retainage is part of the agreement. There are provisions including in the General Conditions affording Contractors the opportunity to request reduction in retainage.
11	Pearson	3/29/2022	The elevations noted on the civil drawings differ from those noted in the subsurface investigation.	CC: The elevations shown on the Civils should be used. They are shown per the Topographic Survey which uses 2 different NAVD88 datum benchmarks, and are consistent with the GIS contours.
12	Pearson	3/29/2022	Is the removal and reinstallation of fencing required for Alternate #4 the responsibility of the site package as defined buy cutting and patching?	TSC: The removal and replacement of existing fencing for access to perform Alternate No. 4 work shall be provided by Bid Category No. 13 Asphalt Paving.
13	Pearson	3/29/2022	What bid category will be responsible for asphalt patching and line striping?	TSC: Refer to Addendum No. 1, new Bid Category No. 13 Asphalt Paving.
14	Pearson	3/29/2022	Please verify who is responsible for the basketball hoops noted in the Activity Area on sheet C-2. It states “by others”	TSC: The Owner will provide the basketball hoops.
15	Pearson	3/29/2022	What category will be responsible for the black vinyl fence noted on sheet c-2?	TSC: Bid Category No. 1 General Trades shall provide the black vinyl chain link fence and gates as shown on sheet C-2.
16	Herman & Goetz	4/1/2022	Drawing sheet E4.2- Is there a panel/breaker schedule for the new 1600 amp switchgear in room D144?	CC: To be issued via addendum 01. The board will be relocated.
17	Herman & Goetz	4/1/2022	Drawing sheet E4.2- Is the existing 3000 amp switchboard being replaced (room B-43A)? Detail 1A & 1B show different breaker/switch counts.	CC: To be clarified via addendum.
18	Herman & Goetz	4/1/2022	Drawing sheet E4.2- Detail 1B shows new panels E & F. Are these replacing existing panels? Detail 1A show these as existing 400 amp panels and detail 1B show them as new 600 amp panels. Also new panel F is shown to be in room B16. We cannot locate B16. Panel schedules would be helpful too. Please clarify.	CC: Both panels will be partially replaced. One 400-amp tub will remain on the existing feeder; one 400-amp tub will be refed with a new 400-amp feeder and will receive new interior and cover.
19	Herman & Goetz	4/1/2022	Drawing sheet E4.3- Can you confirm that the new panel PP0 in room D144 is being fed from existing gear in room B-43A as shown on the drawings? There are no spare switches in the existing gear.	CC: To be clarified via addendum.
20	Herman & Goetz	4/1/2022	Drawing sheet E4.3- Does panel PP0 need to be GE brand as shown on the drawing?	CC: G.E. or Square D.

21	Herman & Goetz	4/1/2022	In regards to the Lift Station mentioned at the walkthrough. We have not been able to find where it is located or where it is supposed to be fed from. Please confirm if there is one.	CC: REFER TO C-5 WEST OF PLAYGROUND AND C-11 FOR SANITARY LIFT STATION PLAN.
22	Herman & Goetz	4/1/2022	Drawing sheet E1.1D - There is no circuiting shown for the lighting in the new addition. Can you confirm which panel will feed that lighting? Panel LP-0 in that area does not show any lighting circuits on the panel schedule.	CC:
23	Herman & Goetz	4/1/2022	Drawing sheet E4.2 – Can you provide the location of the new utility pad mount transformer and pad mount CT cabinet? Drawing shows us tying into the existing utility transformer on the opposite side of the building from the new addition. Is it expected to run through the building or underground around the outside of the building?	CC: To be clarified via addendum.
24	Pearson	4/1/2022	What trade is responsible for fire separation of the work and temporary egress plans. Will these requirements be paid for by allowance or more specifically detailed if desired to be included in the base bid by bid categories?	TSC: Bid Category No. 1 General Trades shalll provide maintain and remove required construction separations for construction phasing. Allow for six (6) 1 hour construction separations including provisions for temporary frame and doors.
25	Pearson	4/1/2022	What deciphers Between 2022 and 2023 for the work summer work scheduled in phase 2 noted in light blue ?	TSC: Refer to Guideline Schedule.
26	Pearson	4/1/2022	Please clarify if section 08 88 00 is required by both General Trades Package 1 and Aluminum Package 6? If so please clarify the separation between these packages.	TSC: Refer to Addendum No. 1
27	Pearson	4/1/2022	Please clarify section 01 53 10 Fences, Quantities are given in this section to provide 500’ of two different types of fencing, The site logistics plans shows the temp fencing desired for site layout. Please verify if we bid temp fencing per the site logistics plan or as quantified in the specification section.	TSC: Refer to Addendum No. 1. Revise Section 01 53 10 - Fences, Part 2.01, A. (Allow for 1,000 Lineal Feet). Part 3.01 Installation, D. revise to one (1) 20' wide gate and two (2) 4' wide man gates.
28	Pearson	4/1/2022	Field Engineering Services, section 01 72 00. Work described in this section seems very broad along with describing work that is either stated will be provided by the owner, “property lines” or has previously been performed by the civil engineer, or not applicable to this construction project, “anchor bolt survey”. Can you clarify the specific work to be provided by this section along with how the costs for replacing established control points if damaged?	TSC: Refer to Section 01 72 00 Field Engineering, Part 3.04. The Owner will identify existing benchmark, control points and property corners. Bid Category No. 1 General Trades shall provide the required work as outlined in 3.04 B., C., and D. Include cost to reestablish Control Points and Bench Marks two (2) times.
29	ASI Signage Innovations	4/1/2022	Can you confirm there is only a need for dimensional lettering at River Valley Elementary School? Additionally, the lines directing to the lettering on drawing A5.1D are off. Please confirm RIVER VALLEY is to be 18" and ELEMENTARY SCHOOL is to be 8". Also please confirm font.	CC: YES ONLY DIMENSIONAL LETTERING. CONFIMED 18" RIVER VALLEY, 8" ELEMENTARY. ALSO PLEASE NOTE LINE UNDER ELEMENTARY. FONT TO BE CHOSEN BY OWNER THROUGH SHOP DRAWINGS FROM MFG. STANDARD FONTS.
30	MWG	4/4/2022	Is bid package #1 or #6 to provide the glass for the hollow metal frames?	TSC: Glazing for Hollow Metal Frames shall be provided by Bid Category No. 6 Aluminum Glass and Glazing, specified in Section 08 80 00-Glazing. Bid Category No. 1 General Trades shall provide Glazing for Hollow Metal Doors, specified in Section 08 11 13-Hollow Metal Doors and Frames, Part 1.2, A. 4. Light frames and glazing in hollow metal doors.
31	MWG	4/4/2022	Are the wood doors factory glazed?	CC:
32	KMI	4/5/2022	Multiple locations. Example sheets, M1.1A and A1.1A. The mechanical sheets show removal of electric finned tube at 6 locations. The architectural sheets do not show any work associated with them. Will wall patching or painting be required at removed finned tubes? If so, which bid package will be responsible for this work?	CC: TSC:
33	KMI	4/5/2022	Reference sheet A1.1B. Math Room B114. Only a portion of the ceiling is shown to be removed. This entire ceiling should be removed to facilitate duct demo. It is not clear why only a portion of the ceiling is being removed in this room, when the adjacent rooms B117 and B119 have full removal and have the same amount of above ceiling demo required.	TSC: Bid Category No. 1 General Trades shall remove the entire existing ceiling system, Bid Category No. 11 shall remove and/or suspend existing lights and reinstall lights and Bid Category No. 8 Interior Finishes shall provide a new ceiling system.
34	KMI	4/5/2022	Reference sheet M1.1C. media center/tech lab area. There is an existing ceiling AHU that is to be removed. The plan, Note 3, calls for the louver to be removed. Nothing is mentioned about patching the opening. The architectural demo sheet A1.1C does not have any notes about this. How should this opening be patched and what bid package is responsible?	CC:
35	KMI	4/5/2022	The new mechanical design incorporates many new duct penetrations through existing walls. I do not see a structural drawing showing these penetrations. Please confirm which duct openings will require lintels and which bid category will be responsible for providing and installing the lintels.	CC: TSC: Lintels are provided by Bid Category No. 5 Structural & Miscellaneous Steel.
36	KMI	4/5/2022	I would like to request a more thorough explanation of the delineations between the base bid mechanical work and the Alternate No. 1 mechanical work. For example, sheet M2.1A, science lab A133. a. Our understanding of base bid: remove existing UV and replace. Add new roof intake hood and duct. b. Our understanding of the Alternate No.1: Remove existing UV, patch wall. Add new RTU and duct system. Omit the new UV, intake hood, and duct shown.	CC:

37	KMI	4/5/2022	Reference sheets M1.1A and M2.1A. Room A100. Please clarify the intent of the base bid versus the alternate. The demo plan shows the UVs to be removed. The new work shows only an RTU system to be installed, but then shows a Note 1, indicating it is part of the alternate. What will the base bid scope of work be? No work in this room? Or should the RTU be the base bid?	CC:RTU IS BASE BID FOR ROOM A100.

CORDOGAN CLARK
ARCHITECTURE ▪ ENGINEERING ▪ CONSTRUCTION

ARCHITECT'S ADDENDUM

Addendum Number: 001

Date: 03.31.22

RE: River Valley School Consolidation

Prepared By: Cayce Horton
Cordogan, Clark & Associates

CCA Project No.: 21346

To: Prospective Bidders

Subject: Addendum No. 001 to the Construction Documents for the River Valley School Consolidation Project.

This Addendum forms a part of the Construction Documents and modifies the original Construction Documents, dated 03.22.22. Acknowledge receipt of this Addendum in space provided on the Bid Form. Failure to do so may subject Bidder to disqualification.

THE FOLLOWING ITEMS ARE TO BE INCLUDED IN THE PROPOSAL.

Clarifications To The Specifications:

033000 – Cast-In-Place Concrete
- REVISE PER ATTACHED
  - NOTE: all new concrete slab work to include PIA additive. Refer to specification.

088000 - GLAZING
- REVISE TO INCLUDE:

"3.8 MONOLITHIC GLASS SCHEDULE

A. Glass Type: Clear annealed float glass.
1. Minimum Thickness: 6 mm.
B. Glass Type: Clear fully tempered float glass.
1. Minimum Thickness: 6 mm.
2. Safety glazing required."

090561.13 – MOISTURE VAPOR EMISSION CONTROL
- ADD ATTACHED SPECIFICATION IN ITS ENTIRETY

Clarifications To The Drawings:

Sheet T1.0
- REMOVE SHEET S0.1 from sheet list

- REMOVE SHEET P1.0D from sheet list
- ADD SHEET P2.1C to sheet list
- ADD SHEET E2.2 to sheet list
- ADD SHEET E4.1B to sheet list

Sheet T2.0
- ADD SHEET IN ITS ENTRIETY.

Sheet T2.1
- ADD SHEET IN ITS ENTRIETY.

Sheet T2.2
- ADD SHEET IN ITS ENTRIETY.

Sheet A1.1B
- REVISE terrazzo replacement.

Sheet A1.1D
- REVISE sawcut location at D109 & D117.

Sheet A1.2B
- REVISE demolished wall at B111 per A1.1B.

Sheet A2.1A
- REVISE A125 casework
- ADD detail section references.

Sheet A2.1B
- REVISE doors B110 and B11
- ADD detail section references.

Sheet A2.1C
- ADD detail section references.

Sheet A2.1D
- ADD pipe chase to room D109 and adjustment of casework.
- ADD detail section references.

Sheet A3.1A
- ADD detail 16/A3.2 tags
- ADD alternate tag to ceilings

Sheet A3.1B
- ADD detail 16/A3.2 tags
- ADD alternate tag to ceilings

Sheet A3.1C

- ADD detail 16/A3.2 tags
- ADD alternate tag to ceilings

Sheet A3.1D
- ADD detail 16/A3.2 tags
- ADD alternate tag to ceilings

Sheet A3.2
- REVISE detail 16 name to "ACT/ROLLER SHADE AT EXISTING OR NEW STOREFRONT"

Sheet A4.1
- ADD alternate tag to RTUs.

Sheet A4.1D
- REVISE RTUs location per Mechanical drawings.
- REVISE roof saddles.
- ADD splash blocks for downspouts discharge.

Sheet A4.2
- REVISE detail 11 name to "TYPICAL ROOF TOP UNIT".

Sheet A5.0
- REVISE louvers in window panels.
- ADD detail section references.

Sheet A5.2
- REVISE clerestory height.

Sheet A6.1
- REVISE clerestory height.

Sheet A8.2
- REVISE east elevation of room B111 per update of doors.

Sheet A8.8
- ADD pipe chase to room D109 and adjustment of casework.
- REVISE counter and sink in room D109.

Sheet A9.0
- REVISE doors B110 and B111.
- REVISE all interior HM doors to type D4.
- ADD Glazing legend

Sheet A9.2
- REVISE clerestory glazing height.

Sheet A10.1B

- REVISE terrazzo patching.

Sheet S2.1D
- ADD Section mark 14/S4.2

Sheet S4.2
- ADD section 14 interior bearing cmu wall

Sheet M4.0
- REMOVE LV-C122 from the project.
- ADD GV-C122 rated for 400 CFM, intake, MFR Titus, model number PR8.

Sheet P2.0D
- REVISE location of solids interceptor SI-1 and associated sanitary piping moved from Media Center D110 to Art Room D109.
- REVISE Sanitary piping serving both sinks in Art Room D109 to connect to SI-1 in Art Room D109.
- REVISE Location of vent connection serving SI-1 moved from Media Center D110 to Art Room D109.
- REVISE Sanitary piping serving sink S-1 in Kindergarten Room D115 to connect to sanitary line servicing Toilet D116 and Toilet D118.

Sheet P2.1D
- REVISE Location of floor cleanouts, and vent connection adjusted to reflect changes to P2.0D.
- REVISE Sink S-1 in Art Room D109 to the new S-4 sink.

Sheet P4.0
- ADD New sink type S-4, MFR Elkay, model number ELUH361710.

Sheet P4.1
- REVISE Waste and Vent Riser Diagram to reflect changes to P2.0D.

Sheet E2.2
- ADD SHEET IN ITS ENTRIETY

Sheet E3.1A
- REVISE per attached

Sheet E3.1B
- REVISE per attached

Sheet E3.1C
- REVISE per attached

Sheet E3.1D
- REVISE per attached

Sheet E4.2
- REVISE per attached

Sheet E4.4
- REVISE per attached

Sheet E4.5
- REVISE per attached

Attachments:
- Revised 033000 – CAST-IN-PLACE CONCRETE
- 090561.13 – MOISTURE VAPOR EMISSION CONTROL

- T2.0 - LIFE SAFETY PLAN – ELEMENTARY
- T2.1 - LIFE SAFETY PLAN - HIGH / MIDDLE SCHOOL
- T2.2 - LIFE SAFETY PLAN - HIGH / MIDDLE SCHOOL
- Revised A1.1B – DEMOLITION PLAN – AREA B
- Revised A1.1D – DEMOLITION PLAN – AREA D
- Revised A2.1A – FLOOR PLAN – AREA A
- Revised A2.1B – FLOOR PLAN – AREA B
- Revised A2.1C – FLOOR PLAN – AREA C
- Revised A2.1D – FLOOR PLAN – AREA D
- Revised A3.1A – REFLECTIVE CEILING PLAN – AREA A
- Revised A3.1B – REFLECTIVE CEILING PLAN – AREA B
- Revised A3.1C – REFLECTIVE CEILING PLAN – AREA C
- Revised A3.1D – REFLECTIVE CEILING PLAN – AREA D
- Revised A4.1 – ROOF PLAN - OVERALL
- Revised A4.1D – ROOF PLAN – AREA D
- Revised A5.0 – EXTERIOR BUILDING ELEVATIONS
- Revised A5.2 – ALUMINIUM COMPOSITE CLADDING LAYOUT
- Revised A6.1 – WALL SECTIONS
- Revised A8.2 – ENLARGED PLANS & ELEVATIONS – H.S. TYP. CLASSROOM
- Revised A8.8 – ENLARGED PLANS & ELEVATIONS – E.S. ART & MEDIA CENTER
- Revised A9.0 – DOOR/FRAME SCHEDULE & TYPES
- Revised A9.2 – STOREFRONT & WINDOW TYPES
- Revised A10.1B – FIRST FLOOR FINISH PLAN AREA B

- Revised S2.1D – ROOF FRAMING PLAN AREA D
- Revised S4.4 – FRAMING SECTIONS AND DETAILS

- Revised P2.0D – PARTIAL UNDERFLOOR PLUMBING PLAN – AREA D
- Revised P2.1D – PARTIAL FIRST FLOOR PLUMBING PLAN – AREA D
- Revised P4.0 – PLUMBING SCHEDULES AND DETAILS
- Revised P4.1 – WASTE & VENT RISER DIAGRAMS

- E2.2 ELECTRICAL POWER PLAN – OVERALL ROOF
- Revised E3.1A ELECTRICAL SYSTEMS PLAN – AREA A

- Revised E3.1B ELECTRICAL SYSTEMS PLAN – AREA B
- Revised E3.1C ELECTRICAL SYSTEMS PLAN – AREA C
- Revised E3.1D ELECTRICAL SYSTEMS PLAN – AREA D
- Revised E4.2 DISTRIBUTION RISER AND GROUNDING PLAN
- Revised E4.4 STRUCTURED CABLING RISERS, SPEAKER, AND CLOCK RISER
- Revised E4.5 FIRE ALARM RISER

End Of Addendum No. 001

CORDOGAN CLARK & ASSOCIATES, INC.
960 RIDGEWAY AVENUE
AURORA, ILLINOIS 60506
630-896-4678

ADDENDUM 001

SECTION 033000 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Cast-in-place concrete, including concrete materials, mixture design, placement procedures, and finishes.

B. Related Requirements:

1. Section 031000 "Concrete Forming and Accessories" for form-facing material.
2. Section 032000 "Concrete Reinforcing" for steel reinforcing bars and welded-wire reinforcement.

1.2 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: fly ash, and other pozzolans materials subject to compliance with requirements.

B. Water/Cement Ratio (w/cm): The ratio by weight of water to cementitious materials.

1.3 ACTION SUBMITTALS

A. Product Data: For each of the following.

1. Portland cement.
2. Fly ash.
3. Aggregates.
4. Admixtures:

    a. Include limitations of use, including restrictions on cementitious materials, supplementary cementitious materials, air entrainment, aggregates, temperature at time of concrete placement, relative humidity at time of concrete placement, curing conditions, and use of other admixtures.

5. Color pigments.
6. Fiber reinforcement.

7. Vapor retarders.
8. Floor and slab treatments.
9. Liquid floor treatments.
10. Curing materials.

    a. Include documentation from color pigment manufacturer, indicating that proposed methods of curing are recommended by color pigment manufacturer.

11. Joint fillers.
12. Repair materials.

B. Design Mixtures: For each concrete mixture, include the following:

1. Mixture identification.
2. Minimum 28-day compressive strength.
3. Durability exposure class.
4. Maximum w/cm.
5. Calculated equilibrium unit weight, for lightweight concrete.
6. Slump limit.
7. Air content.
8. Nominal maximum aggregate size.
9. Steel-fiber reinforcement content.
10. Synthetic micro-fiber content.
11. Indicate amounts of mixing water to be withheld for later addition at Project site if permitted.
12. Include manufacturer's certification that permeability-reducing admixture is compatible with mix design.
13. Include certification that dosage rate for permeability-reducing admixture matches dosage rate used in performance compliance test.
14. Intended placement method.
15. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

C. Shop Drawings:

1. Construction Joint Layout: Indicate proposed construction joints required to construct the structure.

    a. Location of construction joints is subject to approval of the Architect.

D. Concrete Schedule: For each location of each Class of concrete indicated in "Concrete Mixtures" Article, including the following:

1. Concrete Class designation.
2. Location within Project.
3. Exposure Class designation.
4. Formed Surface Finish designation and final finish.
5. Final finish for floors.
6. Curing process.
7. Floor treatment if any.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For the following:

1. Installer: Include copies of applicable ACI certificates.
2. Ready-mixed concrete manufacturer.
3. Testing agency: Include copies of applicable ACI certificates.

B. Material Certificates: For each of the following, signed by manufacturers:

1. Cementitious materials.
2. Admixtures.
3. Fiber reinforcement.
4. Curing compounds.
5. Floor and slab treatments.
6. Bonding agents.
7. Adhesives.
8. Vapor retarders.
9. Semirigid joint filler.
10. Joint-filler strips.
11. Repair materials.

C. Material Test Reports: For the following, from a qualified testing agency:

1. Portland cement.
2. Fly ash.
3. Aggregates.
4. Admixtures:

    a. Permeability-Reducing Admixture: Include independent test reports, indicating compliance with specified requirements, including dosage rate used in test.

D. Floor surface flatness and levelness measurements report, indicating compliance with specified tolerances.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: A qualified installer who employs Project personnel qualified as an ACI-certified Flatwork Technician and Finisher and a supervisor who is a certified ACI Flatwork Concrete Finisher/Technician or an ACI Concrete Flatwork Technician.

1. Post-Installed Concrete Anchors Installers: ACI-certified Adhesive Anchor Installer.

B. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

2. Porosity Inhibiting Admixture Manufacturer Qualifications: A manufacturer with not less than Ten (10) years' experience in the actual manufacturing of concrete enhancement technology admixtures. Selected product manufacturer must have certification of compliance with ASTM C494 /C494M testing protocols from an independent AASHTO / Corps of Engineers approved laboratory. A manufactured product is a stand-alone source or entity that manufacturers the porosity inhibiting admixture "PIA" and its components primarily in house. Manufacturer must have legitimate USA manufacturing presence to assure legitimate warranty enforcement. Manufacturer will provide an on-site, contracted independent ACI certified technical representative capable of randomly sampling each day's placement. One random cylinder per day's concrete placement should be independently tested per ASTM 5084 and / or Army Corp of Engineers CRD C48-92 testing criteria.
3. Porosity Inhibiting Admixture ("PIA") Warranty Requirements:
   a. "PIA" must be installed according to, and in compliance with, the manufacturer's published data sheet, including:
      1) Dosing instructions.
      2) Onsite independent representation and sampling requirements.
      3) Use of an ASTM E 1745 vapor retarder installed following ASTM E 1643 and ACI 303.2R -06 and ASTM F710 guidelines; elevated slabs to receive flooring do not require a vapor retarder.
      4) The design and specifications for roof deck assemblies, to include but not limited to, the use of air barriers and/or vapor retarders is the sole responsibility of the design professional and is excluded from this warranty as are any costs incurred due to roofing overburden.
      5) Curing for all moisture sensitive products should be in compliance with ACI 308-16 "Guide to External Curing of Concrete" Section 4.1.4 "Moisture Sensitive Floors"
   b. "PIA" Manufacturer's Standard Warranty shall include:
      1) Term: Life of the Concrete Warranty.
      2) Repair and/or removal of failed flooring or roofing.
      3) Placement of a topical moisture remediation system.
      4) Replacement of flooring/roofing materials like original installed to include material and labor.
      5) Sodium Silicate Free Concrete Enhancement Technology (CET) known as a
      6) Porosity Inhibiting Admixture "PIA"
   c. Manufacturer's Adhesion Warranty shall include:
      1) Warranty term to match that of the adhesive and/or primer manufacturer's material defect warranty.
      2) Issued upon "PIA" manufacturer's acceptance of field adhesive bond testing which followed flooring / adhesive manufacturer guidelines and requirements noted in ASTM F-710 for installation on a nonporous surface.
   d. Moisture Letter: "PIA" Manufacturer shall provide a standard moisture letter indicating warrantability up to 100% RH per qualified ASTM 2170 Insitu Probe testing and up 25lbs for ASTM 1869 CaCl testing.

C. Testing Agency Qualifications: An independent agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.
1. Porosity Inhibiting Admixture Collection Agent / Representative Qualifications:
   a. Daily sample collections shall be taken by an ACI Concrete Field Testing Technician, Grade 1, or equivalent, on behalf and at cost of the PIA manufacturer.

b. Slab Moisture Testing and Evaluation: Personnel performing laboratory tests shall be certified in the conduct of ASTM D5084 and/or Army Corp of Engineers CRD C48-92 under the supervision of a licensed geotechnical engineer. The determination as to whether the concrete slab is prepared to receive flooring, coatings, roofing, etc. rests with the "PIA" manufacturer in conjunction with adherence and compliance with manufacture's installation guidelines.

1.6 PRECONSTRUCTION TESTING

A. Preconstruction Testing Service: Engage a qualified testing agency to perform preconstruction testing on each concrete mixture.

1. Include the following information in each test report:

a. Admixture dosage rates.
b. Slump.
c. Air content.
d. Seven-day compressive strength.
e. 28-day compressive strength.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Comply with ASTM C94/C94M and ACI 301.

B. 'PIA" DELIVERY, STORAGE, AND HANDLING
1. Deliver "PIA" in manufacturer's original, undamaged containers.
2. Store "PIA" protected from exposure to harmful weather conditions and in a temperature controlled area above 36 degrees.
3. Do not allow product to freeze. Should product freeze, immediately contact the "PIA" manufacturer for further instructions.

1.8 FIELD CONDITIONS

A. Cold-Weather Placement: Comply with ACI 301 and ACI 306.1 and as follows.

1. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
2. When average high and low temperature is expected to fall below 40 deg F for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301.
3. Do not use frozen materials or materials containing ice or snow.
4. Do not place concrete in contact with surfaces less than 35 deg F, other than reinforcing steel.
5. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.

B. Hot-Weather Placement: Comply with ACI 301 and ACI 305.1, and as follows:

1. Maintain concrete temperature at time of discharge to not exceed 95 deg F.
2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

PART 2 - PRODUCTS

2.1 CONCRETE, GENERAL

A. ACI Publications: Comply with ACI 301unless modified by requirements in the Contract Documents.

2.2 CONCRETE MATERIALS

A. Source Limitations:

1. Obtain all concrete mixtures from a single ready-mixed concrete manufacturer for entire Project.
2. Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant.
3. Obtain aggregate from single source.
4. Obtain each type of admixture from single source from single manufacturer.

B. Cementitious Materials:

1. Portland Cement: ASTM C150/C150M, Type I/II, gray.
2. Fly Ash: ASTM C618, Class C or F.

C. Normal-Weight Aggregates: ASTM C33/C33M, coarse aggregate or better, graded. Provide aggregates from a single source.

1. Alkali-Silica Reaction: Comply with one of the following:

    a. Expansion Result of Aggregate: Not more than 0.04 percent at one-year when tested in accordance with ASTM C1293.
    b. Expansion Results of Aggregate and Cementitious Materials in Combination: Not more than 0.10 percent at an age of 16 days when tested in accordance with ASTM C1567.
    c. Alkali Content in Concrete: Not more than 4 lb./cu. yd. for moderately reactive aggregate or 3 lb./cu. yd. for highly reactive aggregate, when tested in accordance with ASTM C1293 and categorized in accordance with ASTM C1778, based on alkali content being calculated in accordance with ACI 301.

2. Maximum Coarse-Aggregate Size: 3/4 inch nominal.
3. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

D. Lightweight Aggregate: ASTM C330/C330M, 1/2-inch nominal maximum aggregate size.

E. Air-Entraining Admixture: ASTM C260/C260M.

F. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures that do not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C494/C494M, Type A.
2. Retarding Admixture: ASTM C494/C494M, Type B.
3. Water-Reducing and -Retarding Admixture: ASTM C494/C494M, Type D.
4. High-Range, Water-Reducing Admixture: ASTM C494/C494M, Type F.
5. Porosity Inhibiting Admixture "PIA" for interior slabs (on ground and elevated) and structural roof deck construction shall be a non-toxic, liquid admixture that is free of volatile organic compounds (VOC) and sodium silicates. This PIA shall create a natural chemical reaction forming a permanent barrier (capillary break) that is integral to the concrete, insoluble, and irremovable.
   a. "PIA" Basis-of-Design "Barrier One Admixture"
      1) Subject to compliance with the requirements of this section, under provisions of Section 01 60 00, substitutions may be considered if they are demonstrated to be equal through qualified independent testing and processes demonstrated and certified to be free of sodium silicate. Failure to provide a product that meets or exceeds the "PIA's" minimum warranty requirements of Part I and the "PIA" field quality control requirements of Part 3 will result in all subsequent testing and slab remediation costs being borne by the Ready-Mix supplier, Concrete Contractor and General Contractor. Sodium Silicate MVRAs are not to be considered as equal to the newest concrete enhancement technologies known as porosity inhibiting admixtures or "PIA". The responsibility and issuance of warranties for such a substitution will be borne by the project field parties submitting such a substitution.
   b. Hydraulic conductivity: Project specific maximum of 6.0 E-8 cm/s per ASTM D5084 as tested daily
   c. Toxicity: None
   d. Odor: None
   e. Flammability: None
   f. VOC levels: zero
   g. Solvent: water
   h. Freeze Temp: 32 degrees Fahrenheit (00 C) (store above 360 F (2.30 C))
   i. Acid resistance: Excellent
   j. Hazardous vapors: None
   k. Installation: Slab Concrete
   l. Capillary break: Calcium Silicate Hydrate
   m. pH: 11.3
   n. weight: 10.3 lbs/gal (net)
   o. Integral biocide to inhibit growth of mold and bacteria
   p. Reactive Silicates: Contains no sodium silicate

G. Water and Water Used to Make Ice: ASTM C94/C94M, potable

2.3 VAPOR RETARDERS

A. Sheet Vapor Retarder, Class A: ASTM E1745, Class A; not less than 15 mils thick. Include manufacturer's recommended adhesive or pressure-sensitive tape.

2.4 CURING MATERIALS

A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.

B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.

C. Moisture-Retaining Cover: ASTM C171, polyethylene film burlap-polyethylene sheet.

1. Color:

a. Ambient Temperature Below 50 deg F: Black.
b. Ambient Temperature between 50 deg F and 85 deg F: Any color.
c. Ambient Temperature Above 85 deg F: White.

D. Water: Potable or complying with ASTM C1602/C1602M.

E. Clear, Waterborne, Membrane-Forming, Dissipating Curing Compound: ASTM C309, Type 1, Class B.

F. Clear, Waterborne, Membrane-Forming, Nondissipating Curing Compound: ASTM C309, Type 1, Class B. For use only at locations indicated on Drawings to receive sealed concrete finish.

2.5 RELATED MATERIALS

A. Expansion- and Isolation-Joint-Filler Strips: ASTM D1751, asphalt-saturated cellulosic fiber or ASTM D1752, cork or self-expanding cork.

B. Semirigid Joint Filler: Two-component, semirigid, 100 percent solids, epoxy resin with a Type A shore durometer hardness of 80 or aromatic polyurea with a Type A shore durometer hardness range of 90 to 95 in accordance with ASTM D2240.

C. Bonding Agent: ASTM C1059/C1059M, Type II, nonredispersible, acrylic emulsion or styrene butadiene.

2.6 REPAIR MATERIALS

A. Repair Underlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/8 inch and that can be feathered at edges to match adjacent floor elevations.

1. Cement Binder: ASTM C150/C150M portland cement or hydraulic, as defined in ASTM C219.
2. Primer: Product of underlayment manufacturer recommended for substrate, conditions, and application.
3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch or coarse sand, as recommended by underlayment manufacturer.
4. Compressive Strength: Not less than 4100 psi at 28 days when tested in accordance with ASTM C109/C109M.

B. Repair Overlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/4 inch and that can be filled in over a scarified surface to match adjacent floor elevations.

1. Cement Binder: ASTM C150/C150M portland cement or hydraulic, as defined in ASTM C219.
2. Primer: Product of topping manufacturer recommended for substrate, conditions, and application.
3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch or coarse sand as recommended by topping manufacturer.
4. Compressive Strength: Not less than 5000 psi at 28 days when tested in accordance with ASTM C109/C109M.

2.7 CONCRETE MIXTURES, GENERAL

A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, in accordance with ACI 301.

1. Use a qualified testing agency for preparing and reporting proposed mixture designs, based on laboratory trial mixtures.

B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:

1. Fly Ash or Other Pozzolans: 25 percent by mass.
2. Total of Fly Ash or Other Pozzolans: 50 percent by mass, with fly ash or pozzolans not exceeding 25 percent by mass.
3. Total of Fly Ash or Other Pozzolans: 35 percent by mass with fly ash or pozzolans not exceeding 25 percent by mass.

C. Admixtures: Use admixtures in accordance with manufacturer's written instructions.

1. Use water-reducing admixture in concrete, as required, for placement and workability.
2. Use water-reducing and -retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
3. Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs concrete for parking structure slabs, and concrete with a w/cm below 0.50.
4. Use corrosion-inhibiting admixture in concrete mixtures where indicated.
5. Use permeability-reducing admixture in concrete mixtures where indicated.
6. Use of Porosity Inhibiting Admixture (PIA) in all slabs.

2.8 CONCRETE MIXTURES

A. Normal-weight concrete used for footings, grade beams, and tie beams.

1. Exposure Class: ACI 318 F1.
2. Minimum Compressive Strength: 4000 psi at 28 days.
3. Maximum w/cm: As indicated on S1.1.
4. Slump Limit: 4 inches, plus or minus 1 inch.
5. Air Content: As indicated on S1.1.

B. Normal-weight concrete used for foundation walls.

1. Exposure Class: ACI 318 F1.
2. Minimum Compressive Strength: 4000 psi at 28 days.
3. Maximum w/cm: As indicated on S1.1.
4. Slump Limit: 4 inches, plus or minus 1 inch.
5. Air Content: As indicated on S1.1.

C. Normal-weight concrete used for interior slabs-on-ground.

1. Exposure Class: ACI 318 F0.
2. Minimum Compressive Strength: 3500 psi at 28 days.
3. Maximum w/cm: As indicated on S1.1.
4. Slump Limit: 4 inches, plus or minus 1 inch.
5. Air Content: As indicated on S1.1.

D. Normal-weight concrete used for concrete toppings.

1. Exposure Class: ACI 318 F0.
2. Minimum Compressive Strength: 4000 psi at 28 days.
3. Maximum w/cm: As indicated on S1.1.
4. Slump Limit: 4 inches, plus or minus 1 inch.
5. Air Content: As indicated on S1.1.

2.9 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete in accordance with ASTM C94/C94M[and ASTM C1116/C1116M], and furnish batch ticket information.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verification of Conditions:

1. Before placing concrete, verify that installation of concrete forms, accessories, and reinforcement, and embedded items is complete and that required inspections have been performed.
2. Do not proceed until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Provide reasonable auxiliary services to accommodate field testing and inspections, acceptable to testing agency, including the following:

1. Daily access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Secure space for storage, initial curing, and field curing of test samples, including source of water and continuous electrical power at Project site during site curing period for test samples.
4. Security and protection for test samples and for testing and inspection equipment at Project site.

3.3 INSTALLATION OF EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining Work that is attached to or supported by cast-in-place concrete.

1. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
2. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of ANSI/AISC 303.
3. Install reglets to receive waterproofing and to receive through-wall flashings in outer face of concrete frame at exterior walls, where flashing is shown at lintels, shelf angles, and other conditions.

3.4 INSTALLATION OF VAPOR RETARDER

A. Sheet Vapor Retarders: Place, protect, and repair sheet vapor retarder in accordance with ASTM E1643 and manufacturer's written instructions.

1. Install vapor retarder with longest dimension parallel with direction of concrete pour.
2. Face laps away from exposed direction of concrete pour.
3. Lap vapor retarder over footings and grade beams not less than 6 inches, sealing vapor retarder to concrete.
4. Lap joints 6 inches and seal with manufacturer's recommended tape.
5. Terminate vapor retarder at the top of floor slabs, grade beams, and pile caps, sealing entire perimeter to floor slabs, grade beams, foundation walls, or pile caps.
6. Seal penetrations in accordance with vapor retarder manufacturer's instructions.
7. Protect vapor retarder during placement of reinforcement and concrete.

    a. Repair damaged areas by patching with vapor retarder material, overlapping damages area by 6 inches on all sides, and sealing to vapor retarder.

3.5 JOINTS

A. Construct joints true to line, with faces perpendicular to surface plane of concrete.

B. Construction Joints: Coordinate with floor slab pattern and concrete placement sequence.

1. Install so strength and appearance of concrete are not impaired, at locations indicated on Drawings or as approved by Architect.
2. Place joints perpendicular to main reinforcement.

    a. Continue reinforcement across construction joints unless otherwise indicated.
    b. Do not continue reinforcement through sides of strip placements of floors and slabs.

3. Form keyed joints as indicated. Embed keys at least 1-1/2 inches into concrete.
4. Locate joints for beams, slabs, joists, and girders at third points of spans. Offset joints in girders a minimum distance of twice the beam width from a beam-girder intersection.
5. Locate horizontal joints in walls and columns at underside of floors, slabs, beams, and girders and at the top of footings or floor slabs.
6. Space vertical joints in walls as indicated on Drawings. Unless otherwise indicated on Drawings, locate vertical joints beside piers integral with walls, near corners, and in concealed locations where possible.
7. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

C. Control Joints in Slabs-on-Ground: Form weakened-plane control joints, sectioning concrete into areas as indicated. Construct control joints for a depth equal to at least one-fourth of concrete thickness as follows:

1. Grooved Joints: Form control joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch. Repeat grooving of control joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.
2. Sawed Joints: Form control joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- wide joints into concrete when cutting action does not tear, abrade, or otherwise damage surface and before concrete develops random cracks.

D. Isolation Joints in Slabs-on-Ground: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.

1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface unless otherwise indicated on Drawings.
2. Terminate full-width joint-filler strips not less than 1/2 inch or more than 1 inch below finished concrete surface, where joint sealants, specified in Section 079200 "Joint Sealants," are indicated.
3. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.

E. Doweled Joints:

1. Install dowel bars and support assemblies at joints where indicated on Drawings.
2. Lubricate or asphalt coat one-half of dowel bar length to prevent concrete bonding to one side of joint.

3.6 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, embedded items, and vapor retarder is complete and that required inspections are completed.

1. Immediately prior to concrete placement, inspect vapor retarder for damage and deficient installation, and repair defective areas.
2. Provide continuous inspection of vapor retarder during concrete placement and make necessary repairs to damaged areas as Work progresses.

B. Notify Architect and testing and inspection agencies 24 hours prior to commencement of concrete placement.

C. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Architect in writing, but not to exceed the amount indicated on the concrete delivery ticket.

1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.

D. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301, but not to exceed the amount indicated on the concrete delivery ticket.

1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.

E. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete is placed on concrete that has hardened enough to cause seams or planes of weakness.

1. If a section cannot be placed continuously, provide construction joints as indicated.
2. Deposit concrete to avoid segregation.
3. Deposit concrete in horizontal layers of depth not to exceed formwork design pressures and in a manner to avoid inclined construction joints.
4. Consolidate placed concrete with mechanical vibrating equipment in accordance with ACI 301.

    a. Do not use vibrators to transport concrete inside forms.
    b. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches into preceding layer.
    c. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity.
    d. At each insertion, limit duration of vibration to time necessary to consolidate concrete, and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.

F. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.

1. Do not place concrete floors and slabs in a checkerboard sequence.
2. Consolidate concrete during placement operations, so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
3. Maintain reinforcement in position on chairs during concrete placement.
4. Screed slab surfaces with a straightedge and strike off to correct elevations.
5. Level concrete, cut high areas, and fill low areas.
6. Slope surfaces uniformly to drains where required.
7. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface.
8. Do not further disturb slab surfaces before starting finishing operations.

G. INSTALLATION OF POROSITY INHIBITING ADMIXTURE (PIA) DOSED CONCRETE:

1. Add "PIA" in accordance with manufacturer's printed data sheet instructions: For mix designs ranging from 0.31 to 0.52 w/cm, dosages at 14 ounces per 100 pounds (414ml/45kg) of total cementitious materials. Remove an equal amount of water from the mix. Add separately from other admixtures at the tail end of the load. Mix designs below 0.31 and above 0.52 may require adjustment and consultation with "PIA" manufacturer and is required prior to their use.
   a. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete with "PIA" according to ASTM C 94/C 94M; furnish batch ticket information showing dosage of "PIA".
   b. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Add the "PIA" to where it makes direct contact with the ready-mix material and then rotate drum of batch truck on high for at least seven minutes prior to discharge.
2. Freshening onsite with held back mix water is acceptable so long as the practice is in accordance with published ACI guidelines and does not exceed the original water to cementitious material ratio or instructions of the structural engineer and those reviewed by the "PIA: manufacturer.
3. Use of water reducing admixtures is recommended to achieve slumps greater than 4" (102mm).
4. Use of other admixtures in the same batch as "PIA" is acceptable so long as each admixture is added separately.
5. The inclusion of a shrink reducing admixture (SRA) is not acceptable.
6. The addition of a crystalline growth admixture is not acceptable.
7. In Cold-Weather Placement: Comply with ACI 306.1.
8. In Hot-Weather Placement: Comply with ACI 305.

3.7 FINISHING FORMED SURFACES

A. As-Cast Surface Finishes:

1. ACI 301 Surface Finish SF-1.0: As-cast concrete texture imparted by form-facing material.
   a. Patch voids larger than 1-1/2 inches wide or 1/2 inch deep.
   b. Remove projections larger than 1 inch.

c. Tie holes do not require patching.
d. Surface Tolerance: ACI 117 Class D.
e. Apply to concrete surfaces not exposed to public view.

2. ACI 301 Surface Finish SF-3.0:

a. Patch voids larger than 3/4 inch wide or 1/2 inch deep.
b. Remove projections larger than 1/8 inch.
c. Patch tie holes.
d. Surface Tolerance: ACI 117 Class A.
e. Locations: Apply to concrete surfaces exposed to public view, to receive a rubbed finish,.

B. Rubbed Finish: Apply the following to as cast surface finishes exposed to public view:

1. Smooth-Rubbed Finish:

a. Perform no later than one day after form removal.
b. Moisten concrete surfaces and rub with carborundum brick or another abrasive until producing a uniform color and texture.
c. If sufficient cement paste cannot be drawn from the concrete by the rubbing process, use a grout made from the same cementitious materials used in the in-place concrete.
d. Maintain required patterns or variances as shown on Drawings or to match field sample panels.

C. Related Unformed Surfaces:

1. At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a color and texture matching adjacent formed surfaces.
2. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

3.8 FINISHING FLOORS AND SLABS

A. Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Float Finish:

1. When bleedwater sheen has disappeared and concrete surface has stiffened sufficiently to permit operation of specific float apparatus, consolidate concrete surface with power-driven floats or by hand floating if area is small or inaccessible to power-driven floats.
2. Repeat float passes and restraightening until surface is left with a uniform, smooth, granular texture and complies with ACI 117 tolerances for conventional concrete.
3. Apply float finish to surfaces to receive trowel finish.

C. Trowel Finish:

1. After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel.
2. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance.
3. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.
4. Do not add water to concrete surface.
5. Do not apply hard-troweled finish to concrete, which has a total air content greater than 3 percent.
6. Apply a trowel finish to surfaces exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin-film-finish coating system.
7. Finish surfaces to the following tolerances, in accordance with ASTM E1155, for a randomly trafficked floor surface:

    a. Slabs on Ground:

        1) Finish and measure surface so gap at any point between concrete surface and an unleveled, freestanding, 10-ft.- long straightedge resting on two high spots and placed anywhere on the surface does not exceed 1/8 inch.
        2) Specified overall values of flatness, F_F 45; and of levelness, F_L 35; with minimum local values of flatness, F_F 30; and of levelness, F_L 24.

3.9 INSTALLATION OF MISCELLANEOUS CONCRETE ITEMS

A. Filling In:

1. Fill in holes and openings left in concrete structures after Work of other trades is in place unless otherwise indicated.
2. Mix, place, and cure concrete, as specified, to blend with in-place construction.
3. Provide other miscellaneous concrete filling indicated or required to complete the Work.

B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and by steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.

C. Equipment Bases and Foundations:

1. Coordinate sizes and locations of concrete bases with actual equipment provided.
2. Construct concrete bases 4 inches high unless otherwise indicated on Drawings, and extend base not less than 6 inches in each direction beyond the maximum dimensions of supported equipment unless otherwise indicated on Drawings, or unless required for seismic anchor support.
3. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch centers around the full perimeter of concrete base.
4. For supported equipment, install epoxy-coated anchor bolts that extend through concrete base and anchor into structural concrete substrate.
5. Prior to pouring concrete, place and secure anchorage devices.

a. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
b. Cast anchor-bolt insert into bases.
c. Install anchor bolts to elevations required for proper attachment to supported equipment.

3.10 CONCRETE CURING

A. Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.

1. Comply with ACI 301 and ACI 306.1 for cold weather protection during curing.
2. Comply with ACI 301 and ACI 305.1 for hot-weather protection during curing.
3. Maintain moisture loss no more than 0.2 lb/sq. ft. x h before and during finishing operations.

B. Curing Formed Surfaces: Comply with ACI 308.1 as follows:

1. Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces.
2. If forms remain during curing period, moist cure after loosening forms.
3. If removing forms before end of curing period, continue curing for remainder of curing period, as follows:

a. Continuous Fogging: Maintain standing water on concrete surface until final setting of concrete.
b. Continuous Sprinkling: Maintain concrete surface continuously wet.
c. Absorptive Cover: Pre-dampen absorptive material before application; apply additional water to absorptive material to maintain concrete surface continuously wet.
d. Water-Retention Sheeting Materials: Cover exposed concrete surfaces with sheeting material, taping, or lapping seams.
e. Membrane-Forming Curing Compound: Apply uniformly in continuous operation by power spray or roller in accordance with manufacturer's written instructions.

1) Recoat areas subject to heavy rainfall within three hours after initial application.
2) Maintain continuity of coating and repair damage during curing period.

C. Curing Unformed Surfaces: Comply with ACI 308.1 as follows:

1. Begin curing immediately after finishing concrete.
2. Interior Concrete Floors:

a. Floors to Receive Floor Coverings Specified in Other Sections: Contractor has option of the following:

1) Absorptive Cover: As soon as concrete has sufficient set to permit application without marring concrete surface, install prewetted absorptive cover over entire area of floor.

a) Lap edges and ends of absorptive cover not less than 12-inches.
b) Maintain absorptive cover water saturated, and in place, for duration of curing period, but not less than seven days.

2) Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive.

a) Immediately repair any holes or tears during curing period, using cover material and waterproof tape.
b) Cure for not less than seven days.

3) Ponding or Continuous Sprinkling of Water: Maintain concrete surfaces continuously wet for not less than seven days, utilizing one, or a combination of, the following:

a) Water.
b) Continuous water-fog spray.

b. Floors to Receive Curing Compound:

1) Apply uniformly in continuous operation by power spray or roller in accordance with manufacturer's written instructions.
2) Recoat areas subjected to heavy rainfall within three hours after initial application.
3) Maintain continuity of coating, and repair damage during curing period.
4) Removal: After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer unless manufacturer certifies curing compound does not interfere with bonding of floor covering used on Project.

c. Floors to Receive Curing and Sealing Compound:

1) Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller in accordance with manufacturer's written instructions.
2) Recoat areas subjected to heavy rainfall within three hours after initial application.
3) Repeat process 24 hours later, and apply a second coat. Maintain continuity of coating, and repair damage during curing period.

3.11 TOLERANCES

A. Conform to ACI 117.

3.12 JOINT FILLING

A. Prepare, clean, and install joint filler in accordance with manufacturer's written instructions.

1. Defer joint filling until concrete has aged at least one month(s).
2. Do not fill joints until construction traffic has permanently ceased.

B. Remove dirt, debris, saw cuttings, curing compounds, and sealers from joints; leave contact faces of joints clean and dry.

C. Install semirigid joint filler full depth in saw-cut joints and at least 2 inches deep in formed joints.

D. Overfill joint, and trim joint filler flush with top of joint after hardening.

3.13 CONCRETE SURFACE REPAIRS

A. Defective Concrete:

1. Repair and patch defective areas when approved by Architect.
2. Remove and replace concrete that cannot be repaired and patched to Architect's approval.

B. Patching Mortar: Mix dry-pack patching mortar, consisting of 1 part portland cement to 2-1/2 parts fine aggregate passing a No. 16 sieve, using only enough water for handling and placing.

C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.

1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch in any dimension to solid concrete.

a. Limit cut depth to 3/4 inch.
b. Make edges of cuts perpendicular to concrete surface.
c. Clean, dampen with water, and brush-coat holes and voids with bonding agent.
d. Fill and compact with patching mortar before bonding agent has dried.
e. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.

2. Repair defects on surfaces exposed to view by blending white portland cement and standard portland cement, so that, when dry, patching mortar matches surrounding color.

a. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching.
b. Compact mortar in place and strike off slightly higher than surrounding surface.

3. Repair defects on concealed formed surfaces that will affect concrete's durability and structural performance as determined by Architect.

D. Repairing Unformed Surfaces:

1. Test unformed surfaces, such as floors and slabs, for finish, and verify surface tolerances specified for each surface.

a. Correct low and high areas.

b. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.

2. Repair finished surfaces containing surface defects, including spalls, popouts, honeycombs, rock pockets, crazing, and cracks in excess of 0.01 inch wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.
3. After concrete has cured at least 14 days, correct high areas by grinding.
4. Correct localized low areas during, or immediately after, completing surface-finishing operations by cutting out low areas and replacing with patching mortar.

   a. Finish repaired areas to blend into adjacent concrete.

5. Correct other low areas scheduled to receive floor coverings with a repair underlayment.

   a. Prepare, mix, and apply repair underlayment and primer in accordance with manufacturer's written instructions to produce a smooth, uniform, plane, and level surface.
   b. Feather edges to match adjacent floor elevations.

6. Correct other low areas scheduled to remain exposed with repair topping.

   a. Cut out low areas to ensure a minimum repair topping depth of 1/4 inch to match adjacent floor elevations.
   b. Prepare, mix, and apply repair topping and primer in accordance with manufacturer's written instructions to produce a smooth, uniform, plane, and level surface.

7. Repair defective areas, except random cracks and single holes 1 inch or less in diameter, by cutting out and replacing with fresh concrete.

   a. Remove defective areas with clean, square cuts, and expose steel reinforcement with at least a 3/4-inch clearance all around.
   b. Dampen concrete surfaces in contact with patching concrete and apply bonding agent.
   c. Mix patching concrete of same materials and mixture as original concrete, except without coarse aggregate.
   d. Place, compact, and finish to blend with adjacent finished concrete.
   e. Cure in same manner as adjacent concrete.

8. Repair random cracks and single holes 1 inch or less in diameter with patching mortar.

   a. Groove top of cracks and cut out holes to sound concrete, and clean off dust, dirt, and loose particles.
   b. Dampen cleaned concrete surfaces and apply bonding agent.
   c. Place patching mortar before bonding agent has dried.
   d. Compact patching mortar and finish to match adjacent concrete.
   e. Keep patched area continuously moist for at least 72 hours.

E. Perform structural repairs of concrete, subject to Architect's approval, using epoxy adhesive and patching mortar.

F. Repair materials and installation not specified above may be used, subject to Architect's approval.

3.14 FIELD QUALITY CONTROL

A. Special Inspections: Owner will engage a special inspector to perform field tests and inspections and prepare testing and inspection reports.

1. Testing agency shall be responsible for providing curing container for composite samples on Site and verifying that field-cured composite samples are cured in accordance with ASTM C31/C31M.
2. Testing agency shall immediately report to Architect, Contractor, and concrete manufacturer any failure of Work to comply with Contract Documents.
3. Testing agency shall report results of tests and inspections, in writing, to Owner, Architect, Contractor, and concrete manufacturer within 48 hours of inspections and tests.

    a. Test reports shall include reporting requirements of ASTM C31/C31M, ASTM C39/C39M, and ACI 301, including the following as applicable to each test and inspection:

        1) Project name.
        2) Name of testing agency.
        3) Names and certification numbers of field and laboratory technicians performing inspections and testing.
        4) Name of concrete manufacturer.
        5) Date and time of inspection, sampling, and field testing.
        6) Date and time of concrete placement.
        7) Location in Work of concrete represented by samples.
        8) Date and time sample was obtained.
        9) Truck and batch ticket numbers.
        10) Design compressive strength at 28 days.
        11) Concrete mixture designation, proportions, and materials.
        12) Field test results.
        13) Information on storage and curing of samples before testing, including curing method and maximum and minimum temperatures during initial curing period.
        14) Type of fracture and compressive break strengths at seven days and 28 days.

B. Batch Tickets: For each load delivered, submit three copies of batch delivery ticket to testing agency, indicating quantity, mix identification, admixtures, design strength, aggregate size, design air content, design slump at time of batching, and amount of water that can be added at Project site.

C. Inspections:

1. Headed bolts and studs.
2. Verification of use of required design mixture.
3. Concrete placement, including conveying and depositing.
4. Curing procedures and maintenance of curing temperature.

5. Verification of concrete strength before removal of shores and forms from beams and slabs.
6. Batch Plant Inspections: On a random basis, as determined by Architect.

D. Concrete Tests: Testing of composite samples of fresh concrete obtained in accordance with ASTM C 172/C 172M shall be performed in accordance with the following requirements:

1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd., but less than 25 cu. yd., plus one set for each additional 50 cu. yd. or fraction thereof.

    a. When frequency of testing provides fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.

2. Slump: ASTM C143/C143M:

    a. One test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture.
    b. Perform additional tests when concrete consistency appears to change.

3. Slump Flow: ASTM C1611/C1611M:

    a. One test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture.
    b. Perform additional tests when concrete consistency appears to change.

4. Air Content: ASTM C231/C231M pressure method, for normal-weight concrete; ASTM C173/C173M volumetric method, for structural lightweight concrete.

    a. One test for each composite sample, but not less than one test for each day's pour of each concrete mixture.

5. Concrete Temperature: ASTM C1064/C1064M:

    a. One test hourly when air temperature is 40 deg F and below or 80 deg F and above, and one test for each composite sample.

6. Unit Weight: ASTM C567/C567M fresh unit weight of structural lightweight concrete.

    a. One test for each composite sample, but not less than one test for each day's pour of each concrete mixture.

7. Compression Test Specimens: ASTM C31/C31M:

    a. Cast and laboratory cure two sets of two 6-inch by 12-inch or 4-inch by 8-inch cylinder specimens for each composite sample.
    b. Cast, initial cure, and field cure two sets of two standard cylinder specimens for each composite sample.

8. Compressive-Strength Tests: ASTM C39/C39M.

a. Test one set of two laboratory-cured specimens at seven days and one set of two specimens at 28 days.
b. Test one set of two field-cured specimens at seven days and one set of two specimens at 28 days.
c. A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.

9. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor shall evaluate operations and provide corrective procedures for protecting and curing in-place concrete.
10. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength, and no compressive-strength test value falls below specified compressive strength by more than 500 psi if specified compressive strength is 5000 psi, or no compressive strength test value is less than 10 percent of specified compressive strength if specified compressive strength is greater than 5000 psi.
11. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.
12. Additional Tests:

a. Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect.
b. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C42/C42M or by other methods as directed by Architect.

1) Acceptance criteria for concrete strength shall be in accordance with ACI 301 section 1.6.6.3.

13. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
14. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.

A. Measure floor and slab flatness and levelness in accordance with ASTM E1155 within 48 hours of completion of floor finishing and promptly report test results to Architect.

B. Testing of Slabs Containing “PIA”: The manufacturer of the “PIA” will, at their expense, contract with a qualified independent agency to obtain project specific sample cylinders and independent certified laboratories for subsequent testing per ASTM D5084 and/or Army Corp of Engineers CRD C48-92 and preparation of test reports per each daily concrete placement.
1. The “PIA” manufacturer will perform all daily concrete placement internal moisture ASTM 5084 and/or Army Corp of Engineers CRD C48-92 testing in accordance with this specification and will issue project specific standard literature “Life of the Concrete” warranties and adhesion guarantees prior to installation of any slab finishes when requested; no further field slab moisture nor pH testing shall be required.
2. A contracted independent and certified agency of the “PIA” manufacturer’s choice must be present at the jobsite during placement of all “PIA” treated concrete.
a. Do not proceed without this contracted, qualified representative being present.

b. A minimum of one business day notification is required.
c. Field testing technician shall procure at least one 4x8 inch (102 mm) cylinder from a random project placement of "PIA" dosed concrete for subsequent hydraulic conductivity/coefficient of permeability testing.

3. All cylinders shall be independently lab tested in accordance with ASTM D 5084 and/or Army Corp of Engineers CRD C48-92.
4. Test results must conform to specified limits.
5. Should any cylinder from any day of placement deliver results more than 6.0 E-08 cm/sec, the PIA manufacturer shall procure, at their expense, a core (or cores) from that day's placement. This core (cores) shall be sent to an independent laboratory for hydraulic conductivity testing (coefficient or permeability) per ASTM D 5084 and/or Army Corp of Engineers CRD C48-92.
   a. Should any core deliver results more than 6.0 E-08 cm/sec per ASTM D 5084, the concrete porosity inhibiting admixture manufacturer shall provide, at their expense, a topical moisture mitigation system for the tested areas not meeting the stated limit provided dosing and field process protocol was followed.
6. Proceeding with any concrete placement dosed with the "PIA" and without the required representation will result in the contractor bearing the cost to core and ship appropriate material for testing per ASTM D 5084 and/or Army Corp of Engineers CRD C48-92 and the possible subsequent remediation expenses.

3.15 PROTECTION

A. Protect concrete surfaces as follows:

1. Protect from petroleum stains.
2. Diaper hydraulic equipment used over concrete surfaces.
3. Prohibit vehicles from interior concrete slabs.
4. Prohibit use of pipe-cutting machinery over concrete surfaces.
5. Prohibit placement of steel items on concrete surfaces.
6. Prohibit use of acids or acidic detergents over concrete surfaces.

END OF SECTION 033000

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AURORA, ILLINOIS 60506
630-896-4678

ADDENDUM 001

SECTION 090561.13 - MOISTURE VAPOR EMISSION CONTROL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes fluid-applied, resin-based, membrane-forming systems that control the moisture-vapor-emission rate of high-moisture, interior concrete to prepare it for floor covering installation.

1.3 ALLOWANCES

A. Concrete MVE-control systems are part of Moisture Vapor Emission Control Allowance.

1.4 UNIT PRICES

A. Work of this Section is affected by Moisture Vapor Emission Control Unit Price.

1.5 DEFINITIONS

A. MVE: Moisture vapor emission.

B. MVER: Moisture vapor emission rate.

1.6 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.7 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Preinstallation testing reports.

C. Field quality-control reports.

1.8 QUALITY ASSURANCE

A. Manufacturer Qualifications: Employs factory-trained personnel who are available for consultation and Project-site inspection.

B. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original packages and containers, with seals unbroken, bearing manufacturer's labels indicating directions for storage and mixing with other components.

1.10 FIELD CONDITIONS

A. Environmental Limitations: Comply with MVE-control system manufacturer's written instructions for substrate and ambient temperatures, humidity, ventilation, and other conditions affecting system installation.

1. Store system components in a temperature-controlled environment and protected from weather and at ambient temperature of not less than 65 deg F and not more than 85 deg F at least 48 hours before use.
2. Maintain ambient temperature and relative humidity in installation areas within range recommended in writing by MVE-control system manufacturer, but not less than 65 deg F or more than 85 deg F and not less than 40 or more than 60 percent relative humidity, for 48 hours before installation, during installation, and for 48 hours after installation unless longer period is recommended in writing by manufacturer.
3. Install MVE-control systems where concrete surface temperatures will remain a minimum of 5 deg F higher than the dew point for ambient temperature and relative humidity conditions in installation areas for 48 hours before installation, during installation, and for 48 hours after installation unless longer period is recommended in writing by manufacturer.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. MVE-Control System Capabilities: Capable of suppressing MVE without failure where installed on concrete that exhibits the following conditions:

1. MVER: Maximum 25 lb of water/1000 sq. ft. when tested according to ASTM F 1869.
2. Relative Humidity: Maximum 100 percent when tested according to ASTM F 2170 using in situ probes.

B. Water-Vapor Transmission: Through MVE-control system, maximum 0.09 perm when tested according to ASTM E 96/E 96M.

C. Tensile Bond Strength: For MVE-control system, greater than 200 psi with failure in the concrete according to ASTM D 7234.

2.2 MVE-CONTROL SYSTEM

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

1. Advanced Moisture Control; Vapor-Green FC.
2. KOSTER American Corporation; VAP I 2000.
3. MAPEI Corporation; Planiseal EMB.

B. MVE-Control System: ASTM F 3010-qualified, fluid-applied, two-component, epoxy-resin, membrane-forming system; formulated for application on concrete substrates to reduce MVER to level required for installation of floor coverings indicated and acceptable to manufacturers of floor covering products indicated, including adhesives.

1. Substrate Primer: Provide MVE-control system manufacturer's concrete-substrate primer if required for system indicated by substrate conditions.
2. Cementitious Underlayment Primer: If required for subsequent installation of cementitious underlayment products, provide MVE-control system manufacturer's primer to ensure adhesion of products to MVE-control system.

2.3 ACCESSORIES

A. Patching and Leveling Material: Moisture-, mildew-, and alkali-resistant product recommended in writing by MVE-control system manufacturer and with minimum of 3000-psi compressive strength after 28 days when tested according to ASTM C 109/C 109M.

B. Crack-Filling Material: Resin-based material recommended in writing by MVE-control system manufacturer for sealing concrete substrate crack repair.

C. Cementitious Underlayment: If required to maintain manufacturer's warranty, provide MVE-control system manufacturer's hydraulic cement-based underlayment.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements for maximum moisture content, installation tolerances, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

1. Installation of system indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Preinstallation Testing:

1. Testing Agency: Contractor shall engage a qualified testing agency to perform tests.
    a. Alkalinity Testing: Perform pH testing according to ASTM F 710. Install MVE-control system in areas where pH readings exceed finished floor manufacturer's written requirements and/or as specified in finished floor specification sections.
2. Moisture Testing: Perform tests so that each test area does not exceed 1000 sq. ft., and perform no fewer than three tests in each installation area and with test areas evenly spaced in installation areas.
    a. Anhydrous Calcium Chloride Test: ASTM F 1869. Install MVE-control system in locations where concrete substrate MVER exceeds manufacturer's written requirements and/or as specified in finished floor specification sections.
    b. Internal Relative Humidity Test: Using in situ probes, ASTM F 2170. Install MVE-control system in locations where concrete substrates exhibit relative humidity level greater than manufacturer's written requirements and/or as specified in finished floor specification sections.

3. Tensile-Bond-Strength Testing: For typical locations indicated to receive installation of MVE-control system, install minimum 100-sq. ft. area of MVE-control system to prepared concrete substrate and test according to ASTM D 7234.

    a. Proceed with installation only where tensile bond strength is greater than 200 psi with failure in the concrete.

B. Concrete Substrates: Prepare and clean substrates according to MVE-control system manufacturer's written instructions to ensure adhesion of system to concrete.

1. Remove coatings and other substances that are incompatible with MVE-control system and that contain soap, wax, oil, or silicone, using mechanical methods recommended in writing by MVE-control system manufacturer. Do not use solvents.
2. Provide concrete surface profile complying with ICRI 310.2R CSP 3 by shot blasting using apparatus that abrades the concrete surface with shot, contains the dispensed shot within the apparatus, and recirculates the shot by vacuum pickup.
3. After shot blasting, repair damaged and deteriorated concrete according to MVE-control system manufacturer's written instructions.
4. Protect substrate voids and joints to prevent resins from flowing into or leaking through them.
5. Fill surface depressions and irregularities with patching and leveling material.
6. Fill surface cracks, grooves, control joints, and other nonmoving joints with crack-filling material.
7. Allow concrete to dry, undisturbed, for period recommended in writing by MVE-control system manufacturer after surface preparation, but not less than 24 hours.
8. Before installing MVE-control systems, broom sweep and vacuum prepared concrete.

C. Protect walls, floor openings, electrical openings, door frames, and other obstructions during installation.

3.3 INSTALLATION

A. General: Install MVE-control system according to ASTM F 3010 and manufacturer's written instructions to produce a uniform, monolithic surface free of surface deficiencies such as pin holes, fish eyes, and voids.

1. Install primers as required to comply with manufacturer's written instructions.

B. Do not apply MVE-control system across substrate expansion, isolation, and other moving joints.

C. Apply system, including component coats if any, in thickness recommended in writing by MVE-control system manufacturer for MVER indicated by preinstallation testing.

D. Cure MVE-control system components according to manufacturer's written instructions. Prevent contamination or other damage during installation and curing processes.

E. After curing, examine MVE-control system for surface deficiencies. Repair surface deficiencies according to manufacturer's written instructions.

F. Install cementitious underlayment over cured membrane if required to maintain manufacturer's warranty and in thickness required to maintain the warranty.

3.4 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to perform installation inspections.

B. Installation Inspections: Inspect substrate preparation and installation of system components to ensure compliance with manufacturer's written instructions and to ensure that a complete MVE-control system is installed without deficiencies.

1. Verify that surface preparation meets requirements.
2. Verify that component coats and complete MVE-control-system film thicknesses comply with manufacturer's written instructions.
3. Verify that MVE-control-system components and installation areas that evidence deficiencies are repaired according to manufacturer's written instructions.

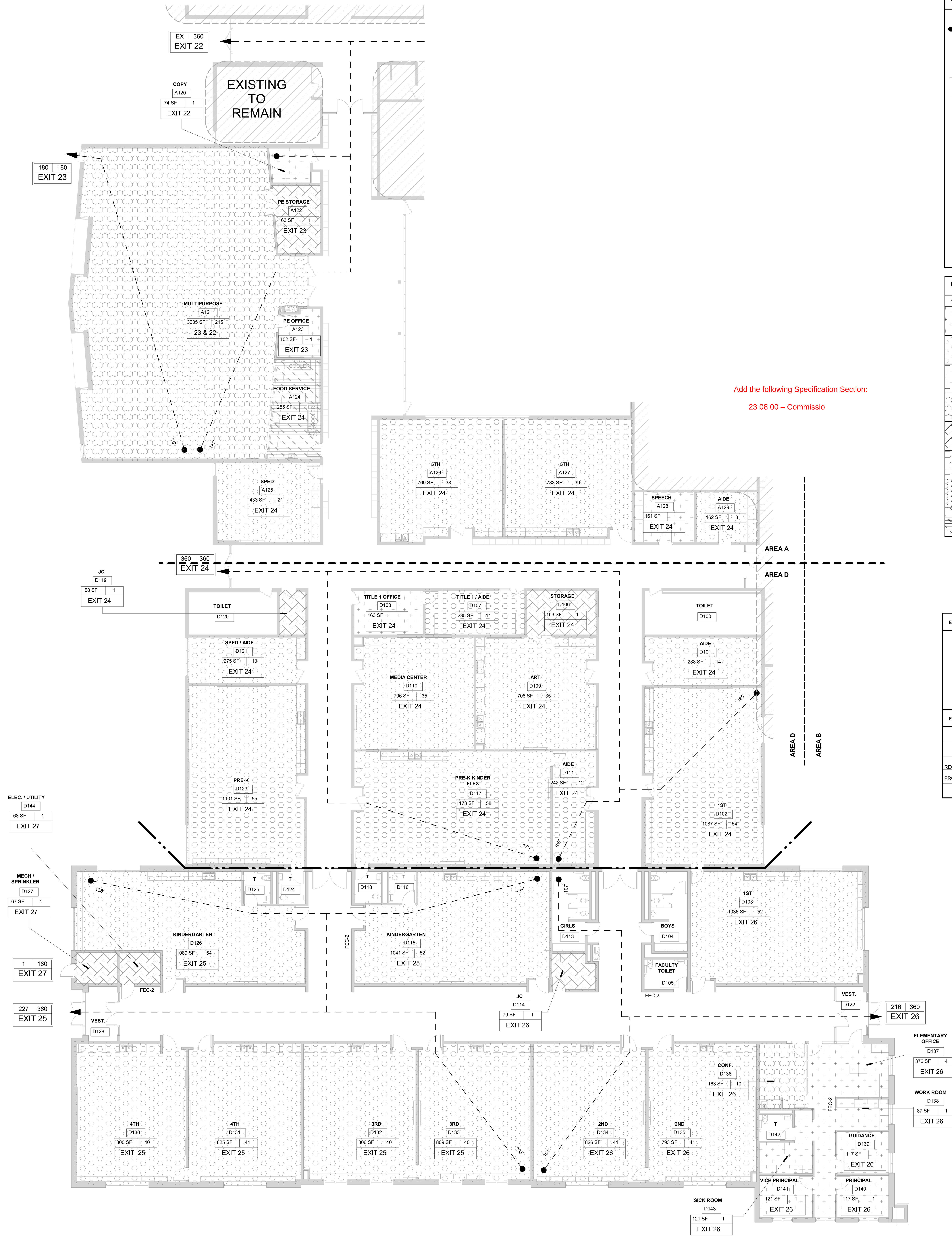
C. MVE-control system will be considered defective if it does not pass inspections.

3.5 PROTECTION

A. Protect MVE-control system from damage, wear, dirt, dust, and other contaminants before floor covering installation. Use protective methods and materials, including temporary coverings, recommended in writing by MVE-control system manufacturer.

B. Do not allow subsequent preinstallation examination and testing for floor covering installation to damage, puncture, or otherwise compromise the MVE-control system membrane.

END OF SECTION 090561.13



1 PARTIAL FIRST FLOOR PLAN - ELEMENTARY
3/32" = 1'-0"

Add the following Specification Section:
23 08 00 – Commissio

SYMBOL LEGEND

- 2 HOUR RATED FIRE WALL
- XXX — EGRESS TRAVEL DISTANCES IN FEET
- EXIT # — EXIT NUMBER
- ACT. MAX — MAXIMUM CAPACITY TO EXIT; ACTUAL NUMBER OF OCCUPANTS EXITING
- Room name 101 / 150 SF 4 Occ / EXIT # — ROOM NAME & NUMBER; TOTAL NUMBER OF OCCUPANTS; AREA IN SQUARE FEET; EXIT NUMBER TO EXIT FROM SPACE

FE-1 NEW WALL-MOUNTED FIRE EXTINGUISHER AND BRACKET (BY OWNER)
FEC-1 NEW SEMI-RECESSED FIRE EXTINGUISHER CABINET (BY GENERAL PRIME) WITH FIRE EXTINGUISHER (BY OWNER)
FEC-2 NEW RECESSED FIRE EXTINGUISHER CABINET (BY GENERAL PRIME) WITH FIRE EXTINGUISHER (BY OWNER)

OCCUPANCY LEGEND

SYMBOL	CODE REQUIREMENT
	ADMINISTRATION - BUSINESS 100 G.S.F. PER PERSON
	EDUCATIONAL - CLASSROOM 20 N.S.F. PER PERSON
	EDUCATIONAL - VOCATIONAL CLASSROOM 50 N.S.F. PER PERSON
	ASSEMBLY - UNCONCENTRATED 15 N.S.F. PER PERSON
	STORAGE / MECHANICAL / EQUIPMENT 300 G.S.F. PER PERSON
	LIBRARY (STACK AREA) 100 G.S.F. PER PERSON
	EXERCISE ROOM 50 G.S.F. PER PERSON
	KITCHEN 200 G.S.F. PER PERSON

ELEMENTARY OCCUPANCY COUNT / EGRESS INFORMATION

OCCUPANCY TYPE E
329 : AREA A (UNSPRINKLERED)
290 : AREA D (UNSPRINKLERED)
444 : AREA D (SPRINKLERED)

TOTAL: 1,063 OCCUPANTS

EGRESS WIDTH
213" EGRESS WIDTH REQUIRED
1,620" EGRESS WIDTH PROVIDED

ELEMENTARY ADDITION - PLUMBING COUNTS

AREA D (SPRINKLERED) : TYPE E : 444 OCCUPANTS

	WC		LAV		DF	SS
	F	M	F	M		
REQUIRED	4	4	4	4	4	1
PROVIDED	5	5	5	5	4	1

CORDOGAN CLARK
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Chicago 716 North Wells Street, Chicago, IL 60654 Tel 312.943.7300 Fax 312.943.4771

RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION
15480 THREE OAKS RD.
THREE OAKS, MI 49128

LIFE SAFETY PLAN - ELEMENTARY

JOB NUMBER 21-346
DATE 03.22.22
03.31.22
REVISIONS: ADD. 1

STATE OF MICHIGAN John G. Cordogan Architect No. 1301035955 LICENSED ARCHITECT

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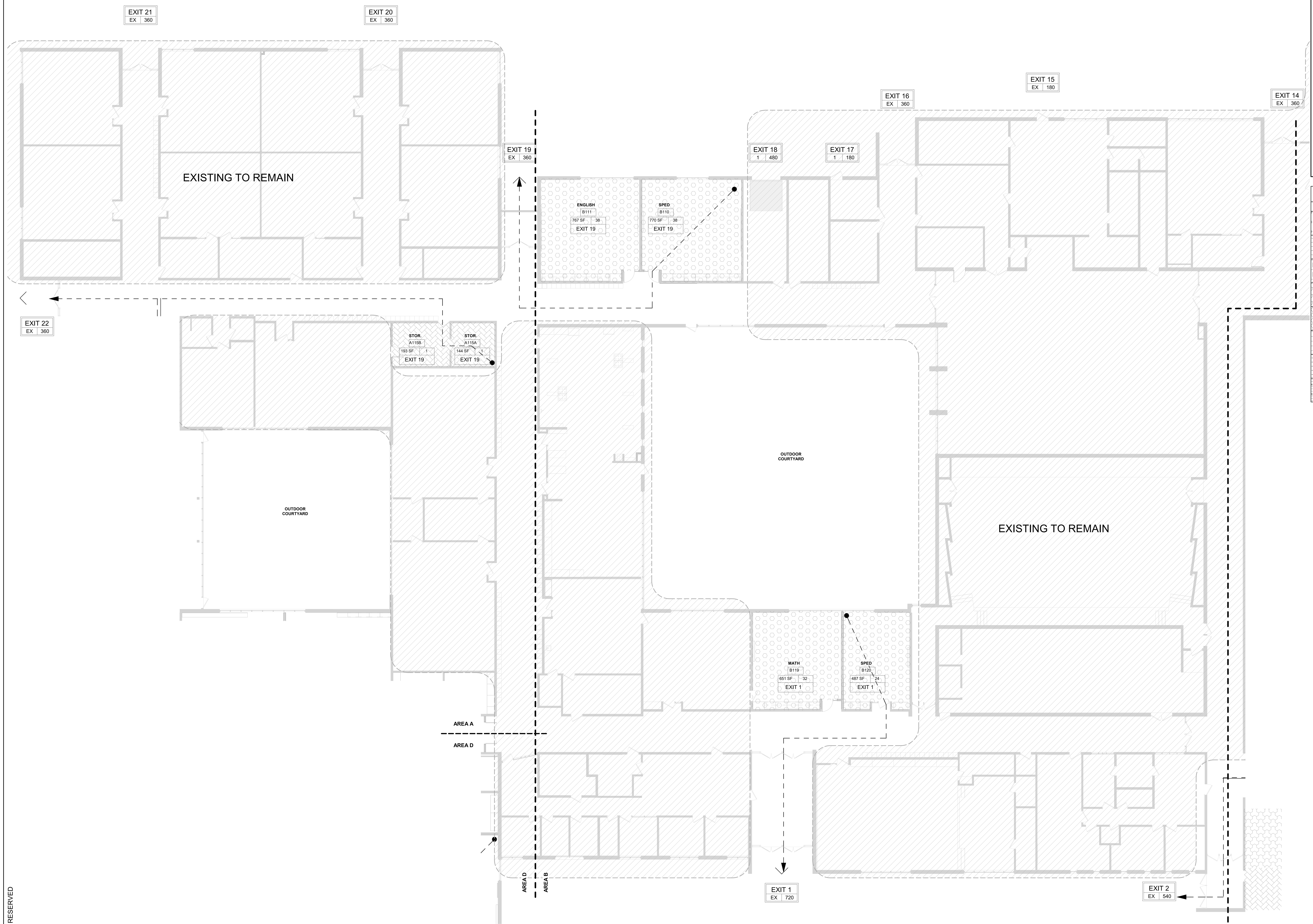

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Room name / 101 / 150 SF / # Occ / EXIT #:
- ROOM NAME & NUMBER
- TOTAL NUMBER OF OCCUPANTS
- AREA IN SQUARE FEET
- EXIT NUMBER TO EXIT FROM SPACE

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RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION

15480 THREE OAKS RD.

THREE OAKS, MI 49128

LIFE SAFETY PLAN - HIGH / MIDDLE SCHOOL

JOB NUMBER 21-346

DATE 03.22.22

REVISIONS:
1 ADD. 1 03.31.22

STATE OF MICHIGAN
John G. Cordogan
Architect
No. 1301035955
LICENSED ARCHITECT

CD BID SET

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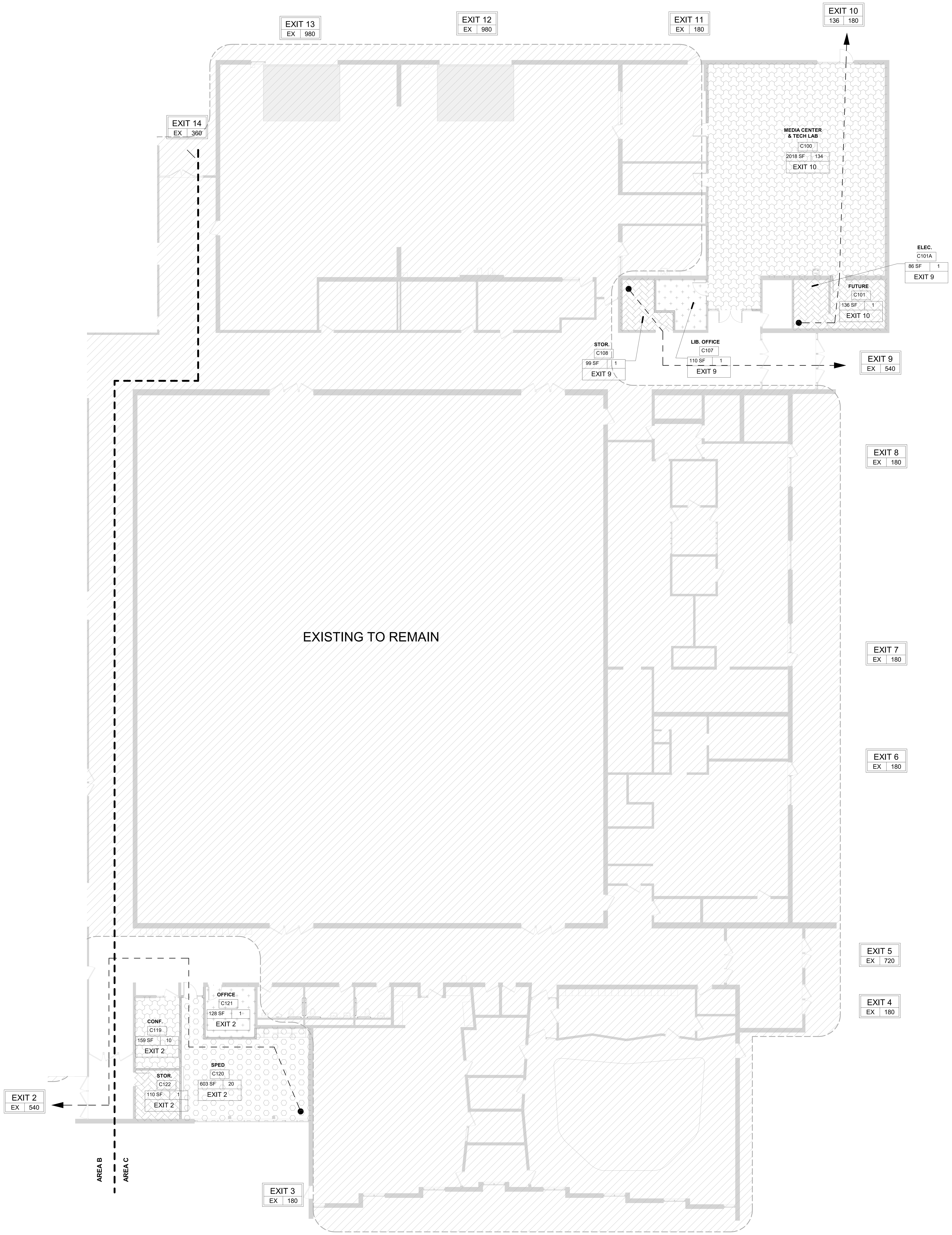

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LIFE SAFETY PLAN - HIGH / MIDDLE SCHOOL

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John G. Cordogan
Architect
No. 1301035955
LICENSED ARCHITECT

CD BID SET

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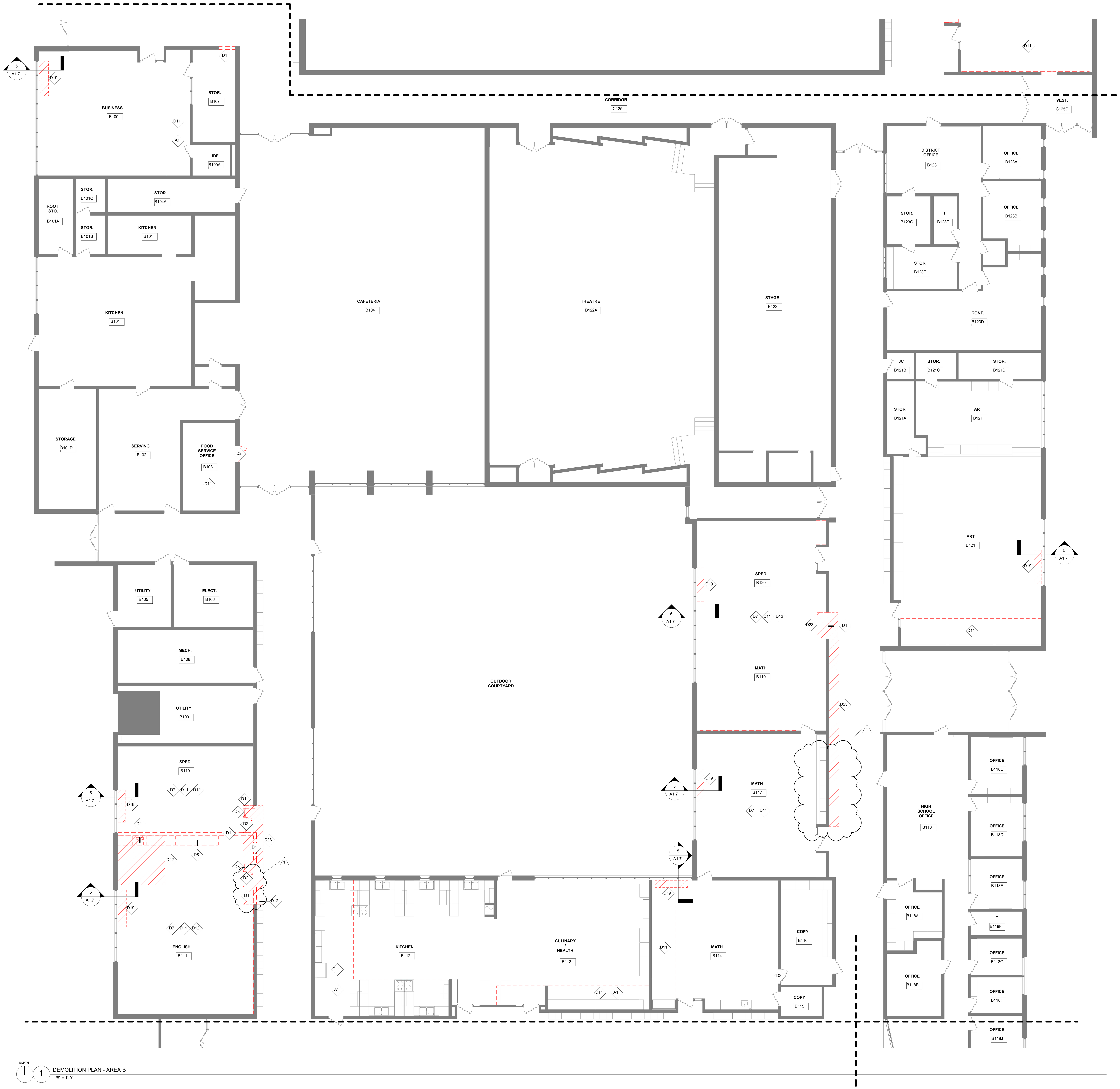


GENERAL DEMOLITION NOTES

1. REFER TO SHEET T1.0 FOR FULL GENERAL DEMOLITION NOTES.
2. REMOVE EXISTING MECHANICAL, PLUMBING AND ELECTRICAL THAT WILL NOT BE REUSED AS PART OF THE NEW WORK. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR FULL MECHANICAL, PLUMBING, AND ELECTRICAL SCOPE OF WORK.
3. PREPARE EXISTING FLOOR SLABS. PREPARATION IS TO INCLUDE, BUT IS NOT LIMITED TO, INFILL OF EXISTING SLAB PENETRATIONS (SHOWN AND NOT SHOWN) AND GRINDING/LEVELING OF EXISTING UNEVEN, CRACKED, OR DAMAGED SLABS.
4. MOISTURE MITIGATION AND FLOOR ADHESION TESTING REQUIRED.
5. IN AREAS WHERE EXISTING WALLS, PARTITIONS, ETC. ARE TO BE REMOVED, IT SHALL BE NECESSARY TO REPAIR EXISTING CEILINGS, ADJUST AND RELOCATE OR REWIRE LIGHTING FIXTURES, AND REMOVE OR RELOCATE ELECTRICAL AND MECHANICAL COMPONENTS AS REQUIRED OR DIRECTED.
6. ACTIVE PIPES, CONDUITS, AND OTHER UTILITIES OF ALL TYPES, WHETHER SHOWN IN THE CONSTRUCTION DOCUMENTS OR NOT, MUST BE PROTECTED AT ALL TIMES DURING THE CONSTRUCTION OF THE WORK. EXTREME CARE SHALL BE EXERCISED AT ALL TIMES NOT TO DAMAGE ANY SUCH PIPES AND CONDUITS. WHERE DAMAGE OCCURS, THE CONTRACTOR CAUSING THE DAMAGE SHALL REPAIR SUCH DAMAGE IN A MANNER APPROVED BY THE ARCHITECT AND OWNER.
7. ALL RELEVANT EXISTING DIMENSIONS MUST BE VERIFIED IN FIELD.
8. ALL EXISTING ELEMENTS TO BE RETAINED MUST BE PROTECTED FROM ANY DAMAGE DURING DEMOLITION AND CONSTRUCTION WORKS.

DEMOLITION KEYNOTES

D1 DEMOLISH WALL OR PORTION OF WALL AS REQUIRED FOR NEW WORK. PREP FOR NEW CONDITION.

D2 DEMOLISH DOOR AND FRAME IN ITS ENTIRETY. PREP FOR NEW CONDITION.

D3 DEMOLISH WINDOW AND FRAME IN ITS ENTIRETY. PREP FOR NEW CONDITION.

D4 DEMOLISH CASEWORK AND SINK IN THEIR ENTIRETY. SEE PLUMBING DRAWINGS FOR FURTHER INFORMATION ON DEMOLITION AND NEW CONDITIONS.

D5 CAREFULLY REMOVE CEILING GRID, TILES, LIGHTING FIXTURES, EXIT SIGNS, EM LIGHTS, ETC AND SALVAGE FOR REINSTALLATION. COORDINATE WITH ELECTRICAL DRAWINGS AND RCPS.

D6 PARTIALLY DEMOLISH FLOORING AS REQUIRED FOR NEW WORK. COORDINATE WITH FLOOR PLANS AND FINISH SCHEDULE. PATCH AND MATCH AS REQUIRED.

D7 DEMOLISH FLOORING IN ITS ENTIRETY. PREP FOR NEW CONDITION.

D8 DEMOLISH CASEWORK INCLUDING ANY PLUMBING FIXTURES, GAS FITTINGS, ELECTRICAL AND OTHER ACCESSORIES. REFER TO MEP DRAWINGS. FURNITURE TO BE REMOVED BY OWNER PRIOR TO CONSTRUCTION.

D9 DEMOLISH EXTERIOR WALL, COORDINATE EXTENT WITH ELEVATIONS. COORDINATE ANY REQUIRED SHORING WITH STRUCTURAL.

D10 DEMOLISH CORNICE AND ROOF AS REQUIRED FOR NEW WORK.

D11 DEMOLISH SUSPENDED CEILING, INCLUDING ALL WIRE HANGERS AND ACCESSORIES, LIGHTING AND DEVICES.

D12 REMOVE ALL WALL MOUNTED EQUIPMENT, SHELVING, FURNITURE ETC. SALVAGE AND RETURN TO THE OWNER REUSE.

D13 OWNER TO REMOVE BUILT IN CHORAL PLATFORMS IN THEIR ENTIRETY. PREPARE FLOOR AND WALL FOR INSTALLATION OF NEW CONSTRUCTION.

D14 REMOVE EXISTING LIGHTING AND PREPARE FOR INSTALLATION OF NEW LIGHT FIXTURES.

D15 DEMOLISH STAIRS AND BALUSTRADE. PREP FOR NEW CONDITION.

D16 DEMOLISH STOREFRONT AND DOOR PANELS. FRAME TO BE RETAINED AND PREPARE FOR NEW CONDITION.

D17 SALVAGE EXISTING FURNITURE FOR REINSTALLATION.

D18 REMOVE ALL WALL MOUNTED EQUIPMENT, ALL EXISTING SHELVING AND DESK TO BE REMOVE AND SALVAGED FOR OWNER REUSE. PROTECT TRHOUGHOUT CONSTRUCTION.

D19 EXISTING LOUVER AND MECHANICAL EQUIPMENT TO BE REPLACED OR AREA TO BE PREPARED TO PLACE NEW LOUVER AND MECHANICAL EQUIPMENT. DEMOLISH PORTION OF WALL OR STOREFRONT PANEL AS REQUIRED FOR NEW WORK. REPAIR OR REPLACE AS REQUIRED.

D20 DEMOLISH EXISTING PLANTER IN ITS ENTIRETY AND PREPARE WALL FOR NEW FINISH.

D21 DEMOLITION OF EXISTING LOUVER. PREPARE FOR WALL INFILL.

D22 SAWCUT AND REMOVE FLOOR SLAB AS REQUIRED TO CAP EXISTING MEP PIPING. REFER TO MEP DRAWINGS. PREPARE FLOOR SLAB FOR PATCHING AND FINISH AS SCHEDULED.

D23 SAWCUT TERRAZZO AND SLAB BELOW. PREPARE FOR INSTALLATION OF NEW.

D24 REMOVE, SALVAGE BOOK DROP. PATCH WALL TO MATCH SURROUNDING.

ALTERNATES KEYNOTES

WORK RELATED WITH THE FOLLOWING ALTERNATES:

A1 ROOF TOP UNITS IN LIEU OF UNIT VENTILATION AT EXISTING.

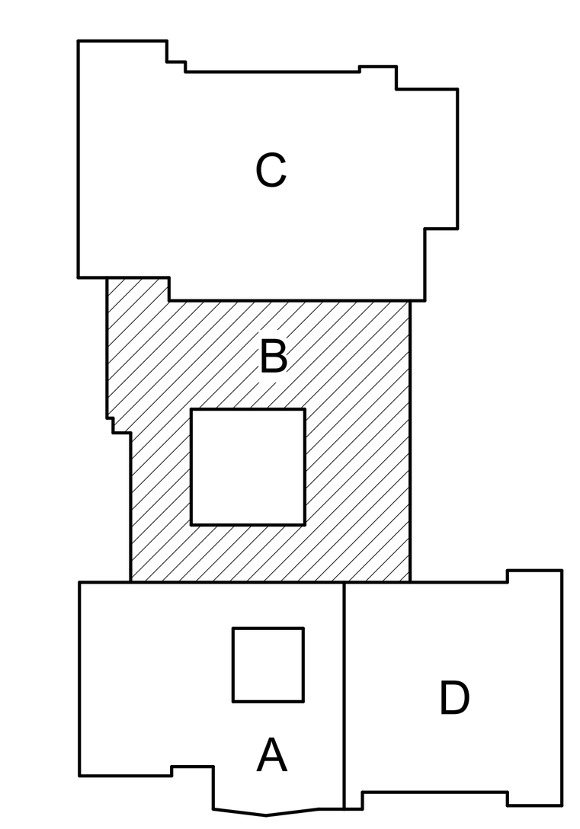
A2 SITE WORK ON WEST SIDE OF THE BUILDING.

A3 ADDITIONAL PAVEMENT REPLACEMENT.

A4 TENNIS COURT SURFACE REPLACEMENT.

A5 SINKS IN ELEMENTARY CLASSROOMS.

A6 CLERESTORY OMISSION.



KEY PLAN
NOT TO SCALE

CORDOGAN CLARK
Aurora
960 Ridgeway Avenue, Aurora, IL 60506
Tel 630.896.4678 Fax 630.896.4987
Chicago
716 North Wells Street, Chicago, IL 60654
Tel 312.943.7300 Fax 312.943.4771

RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION
15480 THREE OAKS RD.
THREE OAKS, MI 49128

DEMOLITION PLAN - AREA B

JOB NUMBER 21-346
DATE 03.22.22
REVISIONS:
1 ADD. 1 03.31.22

STATE OF MICHIGAN
John G. Cordogan Architect No. 1301035955
LICENSED ARCHITECT

CD BID SET

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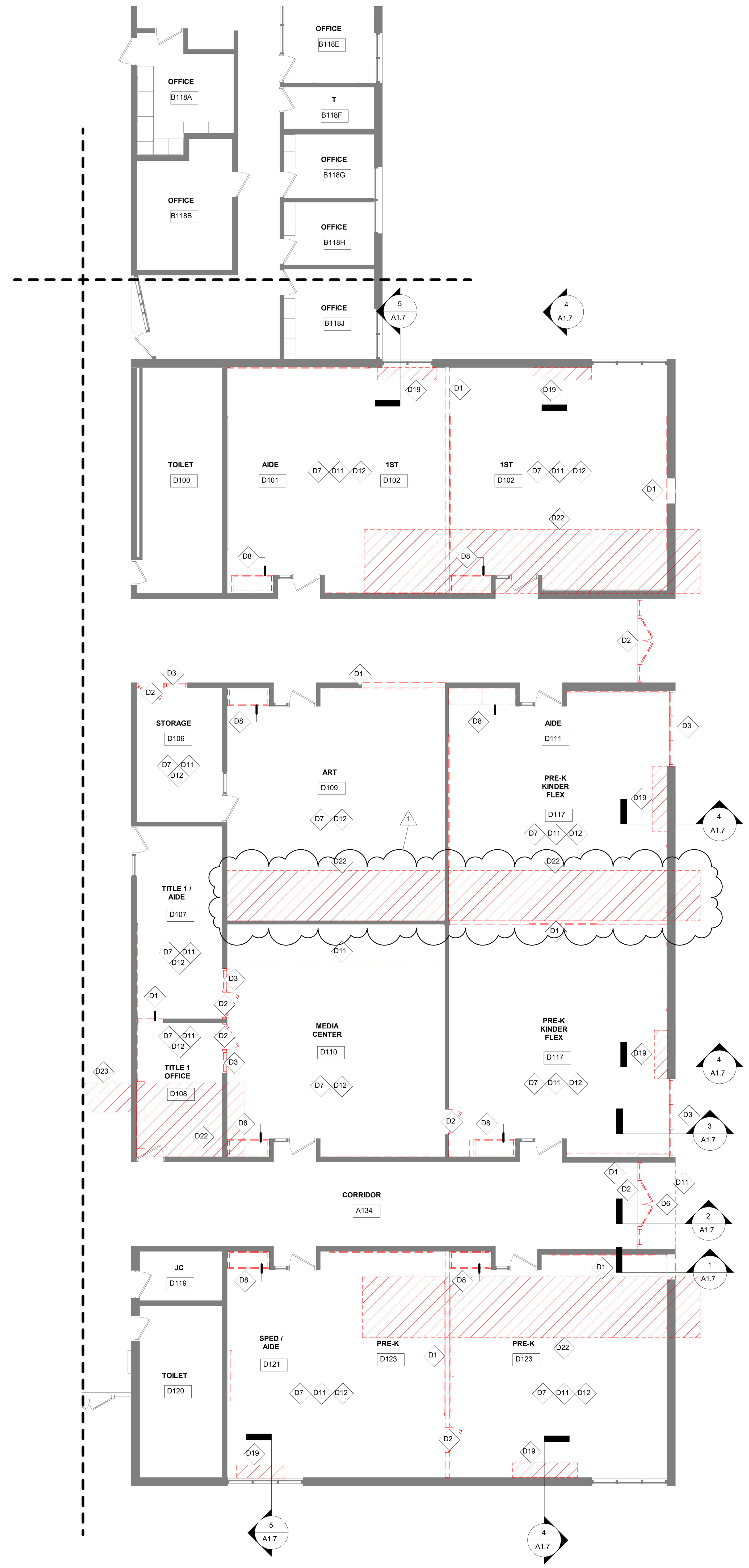


1 DEMOLITION PLAN - AREA D
1/8" = 1'-0"

NORTH

GENERAL DEMOLITION NOTES

1. REFER TO SHEET T1.0 FOR FULL GENERAL DEMOLITION NOTES.
2. REMOVE EXISTING MECHANICAL, PLUMBING AND ELECTRICAL THAT WILL NOT BE REUSED AS PART OF THE NEW WORK. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR FULL MECHANICAL, PLUMBING, AND ELECTRICAL SCOPE OF WORK.
3. PREPARE EXISTING FLOOR SLABS. PREPARATION IS TO INCLUDE, BUT IS NOT LIMITED TO, INFILL OF EXISTING SLAB PENETRATIONS (SHOWN AND NOT SHOWN) AND GRINDING/LEVELING OF EXISTING UNEVEN, CRACKED, OR DAMAGED SLABS.
4. MOISTURE MITIGATION AND FLOOR ADHESION TESTING REQUIRED.
5. IN AREAS WHERE EXISTING WALLS, PARTITIONS, ETC. ARE TO BE REMOVED, IT SHALL BE NECESSARY TO REPAIR EXISTING CEILINGS, ADJUST AND RELOCATE OR REWIRE LIGHTING FIXTURES, AND REMOVE OR RELOCATE ELECTRICAL AND MECHANICAL COMPONENTS AS REQUIRED OR DIRECTED.
6. ACTIVE PIPES, CONDUITS, AND OTHER UTILITIES OF ALL TYPES, WHETHER SHOWN IN THE CONSTRUCTION DOCUMENTS OR NOT, MUST BE PROTECTED AT ALL TIMES DURING THE CONSTRUCTION OF THE WORK. EXTREME CARE SHALL BE EXERCISED AT ALL TIMES NOT TO DAMAGE ANY SUCH PIPES AND CONDUITS. WHERE DAMAGE OCCURS, THE CONTRACTOR CAUSING THE DAMAGE SHALL REPAIR SUCH DAMAGE IN A MANNER APPROVED BY THE ARCHITECT AND OWNER.
7. ALL RELEVANT EXISTING DIMENSIONS MUST BE VERIFIED IN FIELD.
8. ALL EXISTING ELEMENTS TO BE RETAINED MUST BE PROTECTED FROM ANY DAMAGE DURING DEMOLITION AND CONSTRUCTION WORKS.

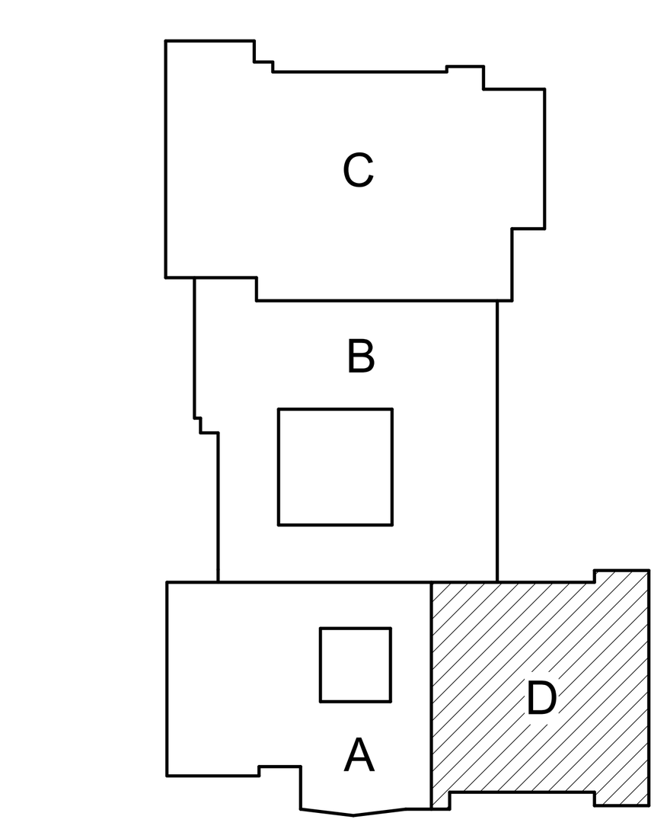
DEMOLITION KEYNOTES

- D1 DEMOLISH WALL OR PORTION OF WALL AS REQUIRED FOR NEW WORK. PREP FOR NEW CONDITION.
- D2 DEMOLISH DOOR AND FRAME IN ITS ENTIRETY. PREP FOR NEW CONDITION.
- D3 DEMOLISH WINDOW AND FRAME IN ITS ENTIRETY. PREP FOR NEW CONDITION.
- D4 DEMOLISH CASEWORK AND SINK IN THEIR ENTIRETY. SEE PLUMBING DRAWINGS FOR FURTHER INFORMATION ON DEMOLITION AND NEW CONDITIONS.
- D5 CAREFULLY REMOVE CEILING GRID, TILES, LIGHTING FIXTURES, EXIT SIGNS, EM LIGHTS, ETC AND SALVAGE FOR REINSTALLATION. COORDINATE WITH ELECTRICAL DRAWINGS AND RCPS.
- D6 PARTIALLY DEMOLISH FLOORING AS REQUIRED FOR NEW WORK. COORDINATE WITH FLOOR PLANS AND FINISH SCHEDULE. PATCH AND MATCH AS REQUIRED.
- D7 DEMOLISH FLOORING IN ITS ENTIRETY. PREP FOR NEW CONDITION.
- D8 DEMOLISH CASEWORK INCLUDING ANY PLUMBING FIXTURES, GAS FITTINGS, ELECTRICAL AND OTHER ACCESSORIES. REFER TO MEP DRAWINGS. FURNITURE TO BE REMOVED BY OWNER PRIOR TO CONSTRUCTION.
- D9 DEMOLISH EXTERIOR WALL, COORDINATE EXTENT WITH ELEVATIONS. COORDINATE ANY REQUIRED SHORING WITH STRUCTURAL.
- D10 DEMOLISH CORNICE AND ROOF AS REQUIRED FOR NEW WORK.
- D11 DEMOLISH SUSPENDED CEILING, INCLUDING ALL WIRE HANGERS AND ACCESSORIES, LIGHTING AND DEVICES.
- D12 REMOVE ALL WALL MOUNTED EQUIPMENT, SHELVING, FURNITURE ETC. SALVAGE AND RETURN TO THE OWNER REUSE.
- D13 OWNER TO REMOVE BUILT IN CHORAL PLATFORMS IN THEIR ENTIRETY. PREPARE FLOOR AND WALL FOR INSTALLATION OF NEW CONSTRUCTION.
- D14 REMOVE EXISTING LIGHTING AND PREPARE FOR INSTALLATION OF NEW LIGHT FIXTURES.
- D15 DEMOLISH STAIRS AND BALUSTRADE. PREP FOR NEW CONDITION.
- D16 DEMOLISH STOREFRONT AND DOOR PANELS. FRAME TO BE RETAINED AND PREPARE FOR NEW CONDITION.
- D17 SALVAGE EXISTING FURNITURE FOR REINSTALLATION.
- D18 REMOVE ALL WALL MOUNTED EQUIPMENT, ALL EXISTING SHELVING AND DESK TO BE REMOVE AND SALVAGED FOR OWNER REUSE. PROTECT TRHOUGHOUT CONSTRUCTION.
- D19 EXISTING LOUVER AND MECHANICAL EQUIPMENT TO BE REPLACED OR AREA TO BE PREPARED TO PLACE NEW LOUVER AND MECHANICAL EQUIPMENT. DEMOLISH PORTION OF WALL OR STOREFRONT PANEL AS REQUIRED FOR NEW WORK. REPAIR OR REPLACE AS REQUIRED.
- D20 DEMOLISH EXISTING PLANTER IN ITS ENTIRETY AND PREPARE WALL FOR NEW FINISH.
- D21 DEMOLITION OF EXISTING LOUVER. PREPARE FOR WALL INFILL.
- D22 SAWCUT AND REMOVE FLOOR SLAB AS REQUIRED TO CAP EXISTING MEP PIPING. REFER TO MEP DRAWINGS. PREPARE FLOOR SLAB FOR PATCHING AND FINISH AS SCHEDULED.
- D23 SAWCUT TERRAZZO AND SLAB BELOW. PREPARE FOR INSTALLATION OF NEW.
- D24 REMOVE, SALVAGE BOOK DROP. PATCH WALL TO MATCH SURROUNDING.

ALTERNATES KEYNOTES

WORK RELATED WITH THE FOLLOWING ALTERNATES:

- A1 ROOF TOP UNITS IN LIEU OF UNIT VENTILATION AT EXISTING.
- A2 SITE WORK ON WEST SIDE OF THE BUILDING.
- A3 ADDITIONAL PAVEMENT REPLACEMENT.
- A4 TENNIS COURT SURFACE REPLACEMENT.
- A5 SINKS IN ELEMENTARY CLASSROOMS.
- A6 CLERESTORY OMISSION.



KEY PLAN
NOT TO SCALE

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RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION
15480 THREE OAKS RD.
THREE OAKS, MI 49128

DEMOLITION PLAN - AREA D

JOB NUMBER 21-346
DATE 03.22.22
03.31.22

REVISIONS:
ADD. 1

STATE OF MICHIGAN
John G. Cordogan Architect No. 1301035955
LICENSED ARCHITECT

CD BID SET

A1.1D

FIRST FLOOR A

1/8" = 1'-0"

GENERAL FLOOR PLAN NOTES

1. PROVIDE GYPSUM BOARD CONTROL JOINTS THE FULL HEIGHT OF THE PARTITION PER GYPSUM ASSOCIATION STANDARD RECOMMENDATIONS.
2. EXTEND ALL PARTITIONS TO BOTTOM OF DECK. CEILING ABOVE UNLESS OTHERWISE NOTED.
3. LOCATE DOORS 4" FROM INSIDE CORNER UNLESS OTHERWISE NOTED.
4. ALL INFILL WALLS ARE TO MATCH ADJACENT CONSTRUCTION AND THICKNESS (V.I.F.). PATCH, MATCH, AND PAINT BOTH SIDES TO ACHIEVE CONTINUOUS FINISH ON BOTH SIDES.
5. ALL EXISTING DOOR FRAMES WITHIN PROJECT SCOPE TO REMAIN ARE TO BE PAINTED TO MATCH NEW DOOR FRAMES.
6. AT ALL AREAS OF GYP BD WALLS AND CEILING TO REMAIN, PATCH AND MATCH ALL PREVIOUSLY EXISTING DAMAGE, IMPERFECTIONS, AND HOLES AS WELL AS ANY DAMAGE OCCURRING DURING CONSTRUCTION AND DEVICE RELOCATION TO ACHIEVE CONTINUOUS FINISH.
7. PATCH AND MATCH EXISTING CONCRETE FLOOR SLAB TO MATCH ADJACENT CONSTRUCTION AS REQUIRED AT ALL AREAS DISTURBED FOR IN-SLAB PLUMBING WORK. COORDINATE WITH PLUMBING DRAWINGS.
8. PROVIDE CORNER GUARDS AS SPECIFIED ON ALL VERTICAL GYP BD OUTSIDE CORNERS.

FLOOR PLAN KEYNOTES

F1 PROVIDE FRAMING AND GYP BD AS REQUIRED TO MATCH GYP BD COLUMN WRAP ON OPPOSITE SIDE OF CORRIDOR.

F2 ROOM TO BE FULLY ENCLOSED IN 2 HOUR FIRE RATING. PROVIDE 2 LAYERS OF TYPE X GYP BD AT EACH SIDE OF ALL WALLS AND 2 LAYERS AT CEILING REGARDLESS OF WALL TYPES NOTED. FIRE CAULK ALL PENETRATIONS. REFERENCE UL U419. PROVIDE RATED DOOR AND FRAME.

STEEL SHIPS LADDER AS SPECIFIED. PAINT <PT-02> AS SPECIFIED.

F3 INFILL WALL PENETRATION TO MATCH ADJACENT CONSTRUCTION. PATCH AND MATCH ALL FINISHES, TYP.

F4 EXISTING MECHANICAL EQUIPMENT TO REMAIN. PROTECT AT ALL TIMES DURING CONSTRUCTION.

F5 NEW MECHANICAL EQUIPMENT. MODIFY EXISTING LOUVER OPENING TO ACCOMMODATE NEW LOUVER AS REQUIRED. PROVIDE NEW LINTEL AND BRICK LEDGE AS REQUIRED. PATCH AND MATCH EXISTING FINISHES AS REQ'D. COORDINATE WITH MECH DRAWINGS FOR FURTHER INFORMATION.

F6

MODIFY WALL AND FINISHES AS REQUIRED FOR NEW PLUMBING WORK. PATCH AND MATCH AS REQUIRED. COORDINATE WITH PLUMBING AND MECHANICAL DRAWINGS.

F7 CUT WALLS AS REQUIRED FOR NEW PIPING WORK. COORDINATE WITH PLUMBING DRAWINGS FOR MORE INFORMATION. CORE THROUGH BRICK AND SUPPORT REMAINING BRICKS AS REQ'D.

PROVIDE NEW MANUAL ROLLER SHADE AS SPECIFIED.

F8 PROVIDE NEW MOTORIZED ROLLER SHADE AS SPECIFIED. COORDINATE WITH ELECTRICAL DRAWINGS FOR CONTROL INFORMATION.

PROVIDE NEW CHASE FOR EXISTING UNIT PIPING. ALL PIPING AND ELECTRICAL CONDUIT/BOXES TO BE CONCEALED FROM VIEW.

F9

F10 PROVIDE NEW CHASE WALL TO EXTEND EXISTING CHASE TO ACCOMMODATE NEW PIPING WORK. REFER TO MPFP DRAWINGS FOR MORE INFORMATION. PATCH AND MATCH EXISTING FINISHES. MODIFY SURFACE RACEWAY AS REQUIRED TO ACCOMMODATE WORK. PROVIDE ACCESS DOORS AS REQUIRED FOR MAINTENANCE

F11

F12

ALTERNATES KEYNOTES

WORK RELATED WITH THE FOLLOWING ALTERNATES:

- A1 ROOF TOP UNITS IN LIEU OF UNIT VENTILATION AT EXISTING.
- A2 SITE WORK ON WEST SIDE OF THE BUILDING.
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- A5 SINKS IN ELEMENTARY CLASSROOMS.
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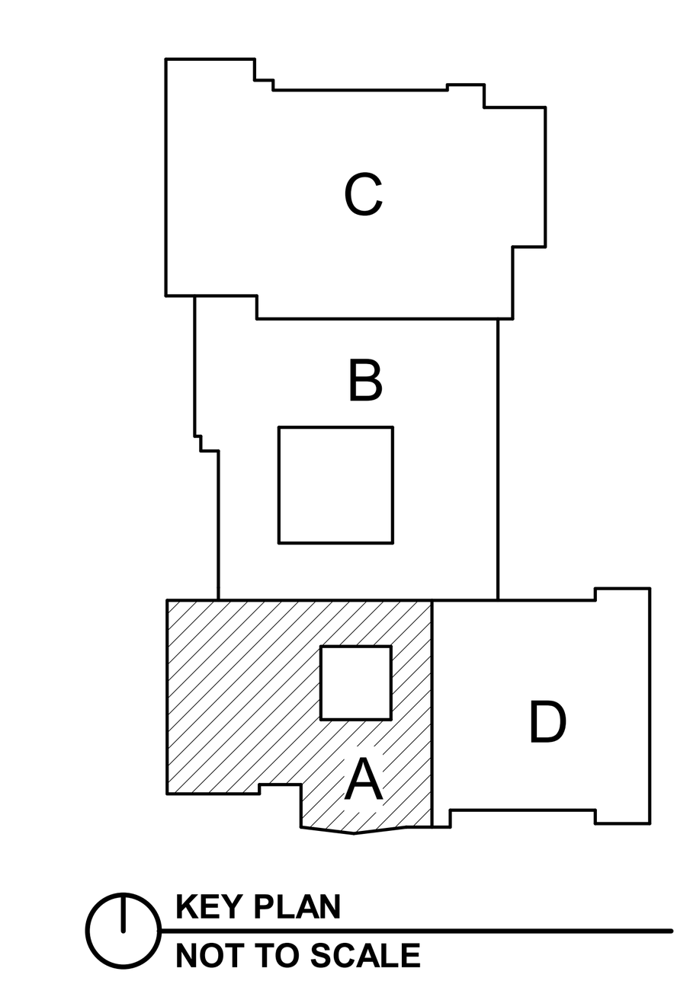

KEY PLAN

NOT TO SCALE

CORDOGAN CLARK

RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION

15480 THREE OAKS RD.
THREE OAKS, MI 49128

FLOOR PLAN - AREA A

JOB NUMBER 21-346

DATE 03.22.22

REVISIONS: ADD. 1 03.31.22

John G. Cordogan Architect No. 1301035955 — STATE OF MICHIGAN LICENSED ARCHITECT

CD BID SET

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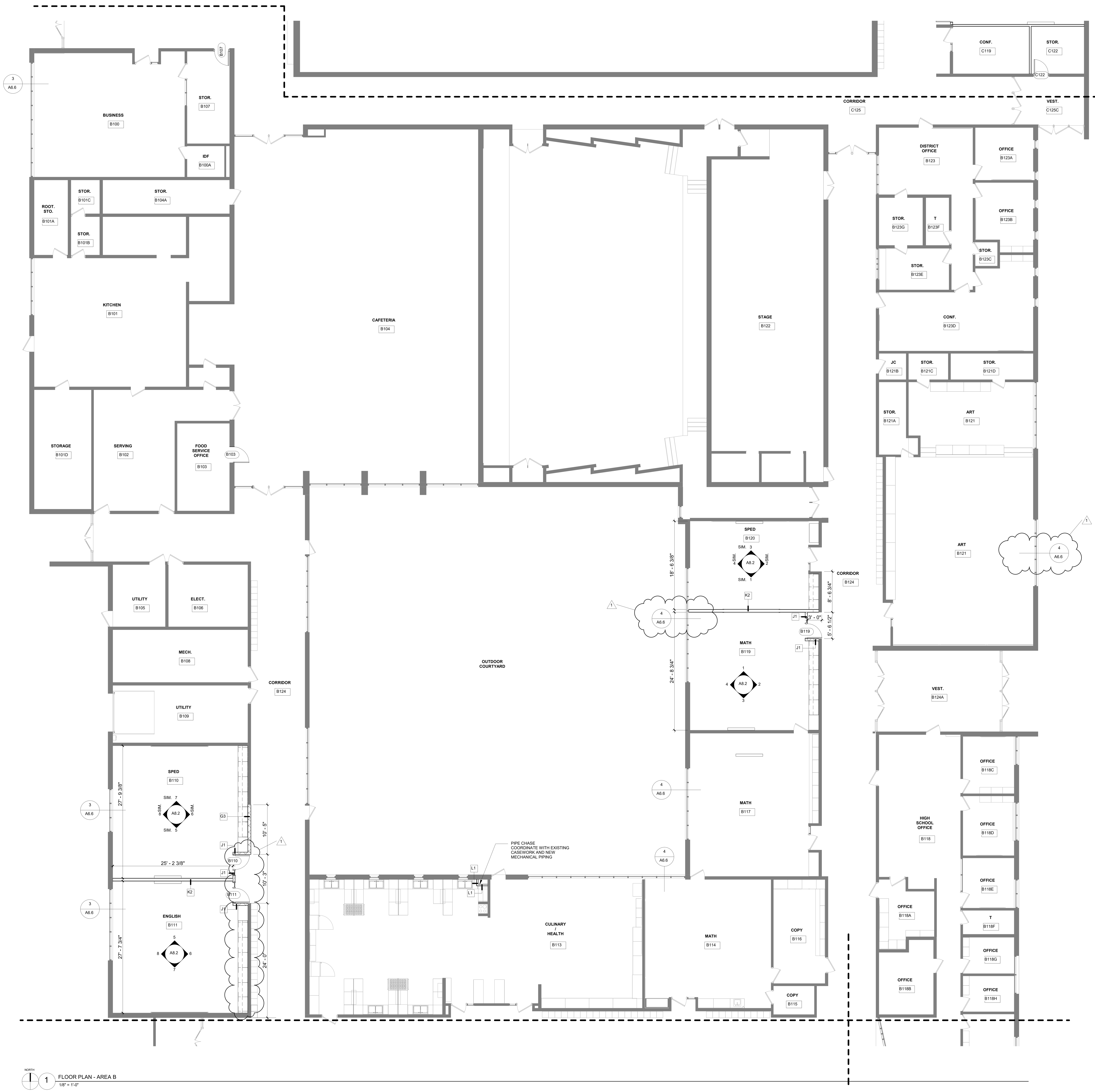

1 FLOOR PLAN - AREA B
1/8" = 1'-0"

GENERAL FLOOR PLAN NOTES

1. PROVIDE GYPSUM BOARD CONTROL JOINTS THE FULL HEIGHT OF THE PARTITION PER GYPSUM ASSOCIATION STANDARD RECOMMENDATIONS.
2. EXTEND ALL PARTITIONS TO BOTTOM OF DECK. CEILING ABOVE UNLESS OTHERWISE NOTED.
3. LOCATE DOORS 4" FROM INSIDE CORNER UNLESS OTHERWISE NOTED.
4. ALL INFILL WALLS ARE TO MATCH ADJACENT CONSTRUCTION AND THICKNESS (V.I.F.). PATCH, MATCH, AND PAINT BOTH SIDES TO ACHIEVE CONTINUOUS FINISH ON BOTH SIDES.
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FLOOR PLAN KEYNOTES

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STEEL SHIPS LADDER AS SPECIFIED. PAINT <PT-02> AS SPECIFIED.

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F5 NEW MECHANICAL EQUIPMENT. MODIFY EXISTING LOUVER OPENING TO ACCOMMODATE NEW LOUVER AS REQUIRED. PROVIDE NEW LINTEL AND BRICK LEDGE AS REQUIRED. PATCH AND MATCH EXISTING FINISHES AS REQ'D. COORDINATE WITH MECH DRAWINGS FOR FURTHER INFORMATION.

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CUT WALLS AS REQUIRED FOR NEW PIPING WORK. COORDINATE WITH PLUMBING DRAWINGS FOR MORE INFORMATION. CORE THROUGH BRICK AND SUPPORT REMAINING BRICKS AS REQ'D.

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F8 PROVIDE NEW MOTORIZED ROLLER SHADE AS SPECIFIED. COORDINATE WITH ELECTRICAL DRAWINGS FOR CONTROL INFORMATION.

PROVIDE NEW CHASE FOR EXISTING UNIT PIPING. ALL PIPING AND ELECTRICAL CONDUIT/BOXES TO BE CONCEALED FROM VIEW.

F9

F10 PROVIDE NEW CHASE WALL TO EXTEND EXISTING CHASE TO ACCOMMODATE NEW PIPING WORK. REFER TO MPFP DRAWINGS FOR MORE INFORMATION. PATCH AND MATCH EXISTING FINISHES. MODIFY SURFACE RACEWAY AS REQUIRED TO ACCOMMODATE WORK. PROVIDE ACCESS DOORS AS REQUIRED FOR MAINTENANCE

F11

F12

ALTERNATES KEYNOTES

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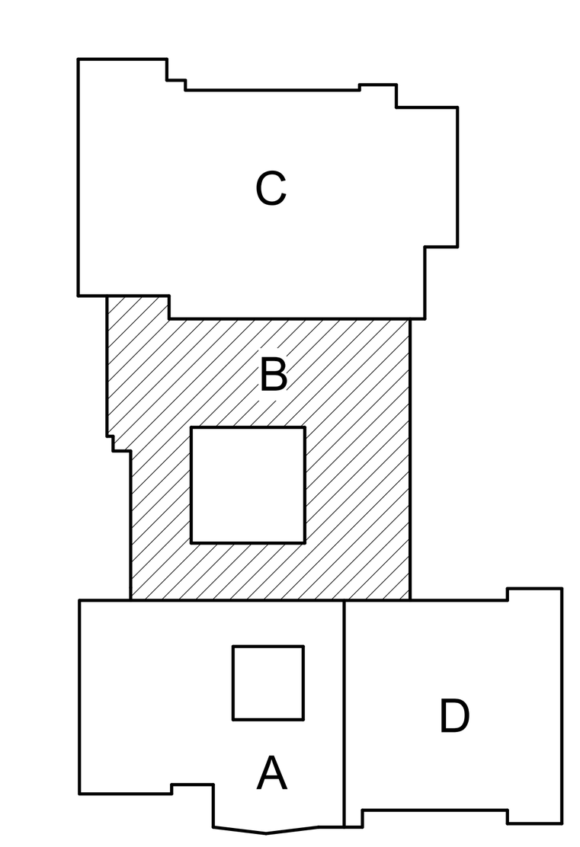

KEY PLAN
NOT TO SCALE

CORDOGAN CLARK

RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION
15480 THREE OAKS RD.
THREE OAKS, MI 49128

FLOOR PLAN - AREA B

JOB NUMBER 21-346
DATE 03.22.22

REVISIONS:
ADD. 1 03.31.22

STATE OF MICHIGAN
John G. Cordogan
Architect
No. 1301035955
LICENSED ARCHITECT

CD BID SET

A2.1B

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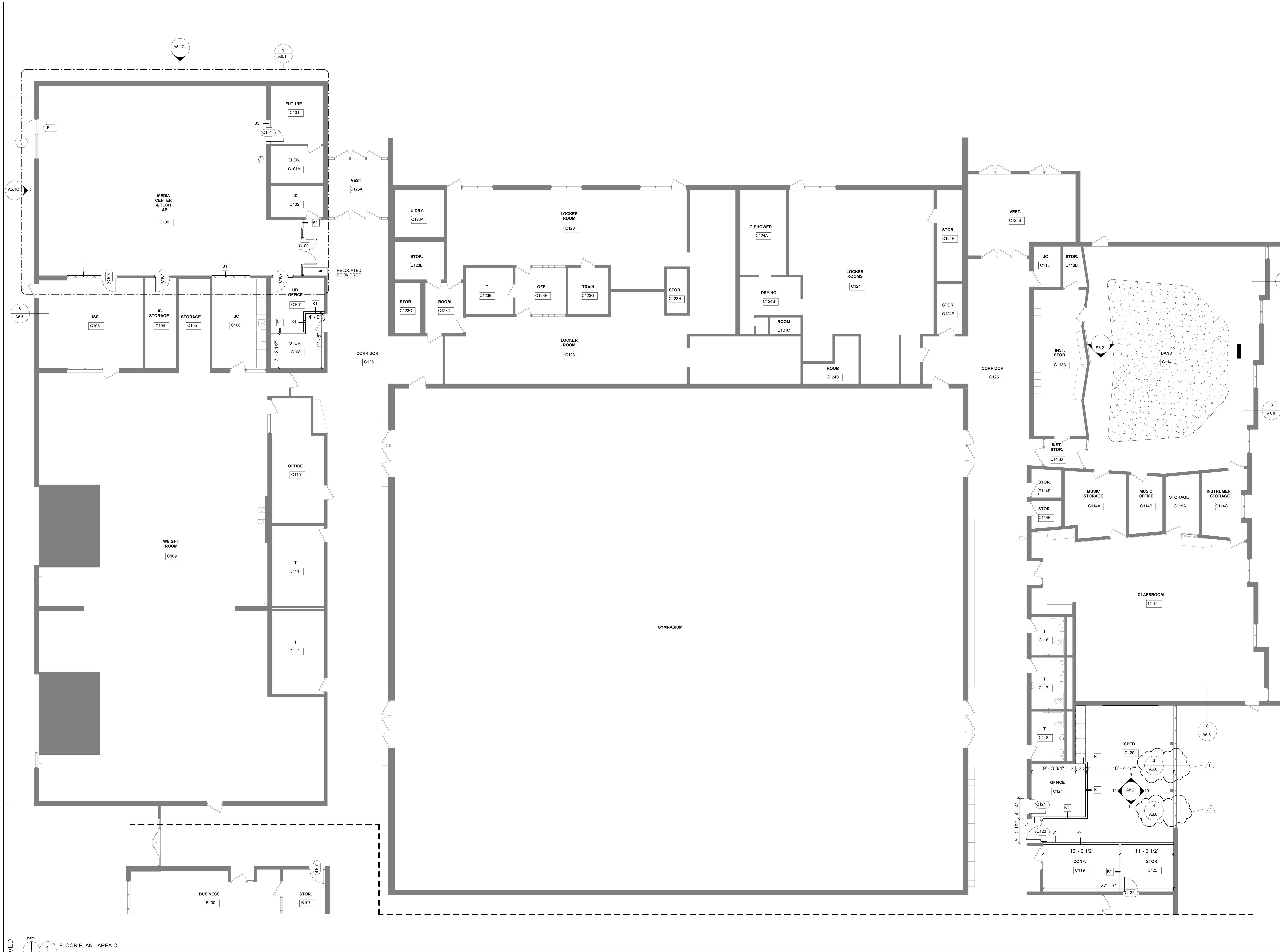

1 FLOOR PLAN - AREA C
1/8" = 1'-0"

GENERAL FLOOR PLAN NOTES

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2. EXTEND ALL PARTITIONS TO BOTTOM OF DECK. CEILING ABOVE UNLESS OTHERWISE NOTED.
3. LOCATE DOORS 4" FROM INSIDE CORNER UNLESS OTHERWISE NOTED.
4. ALL INFILL WALLS ARE TO MATCH ADJACENT CONSTRUCTION AND THICKNESS (V.I.F.). PATCH, MATCH, AND PAINT BOTH SIDES TO ACHIEVE CONTINUOUS FINISH ON BOTH SIDES.
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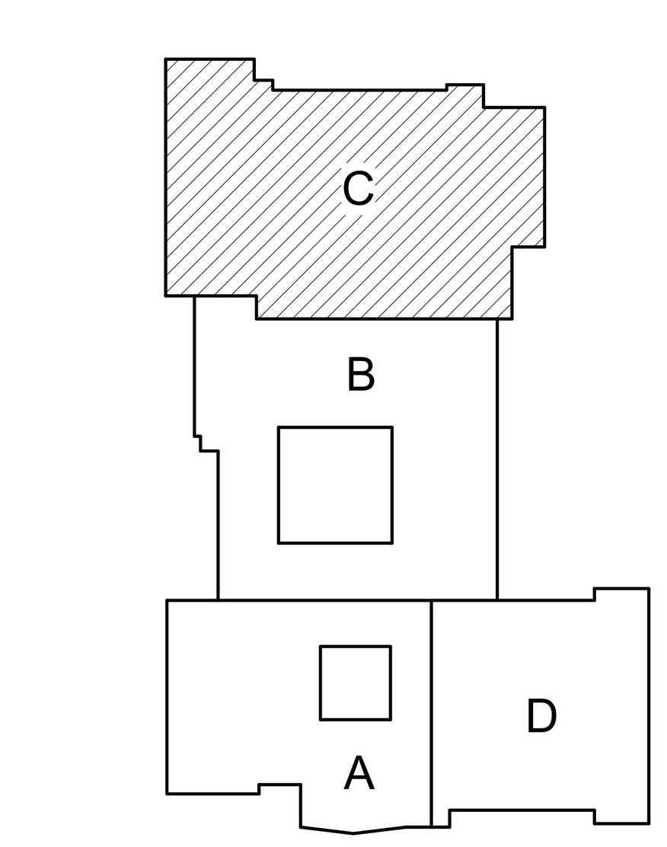

KEY PLAN
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RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION
15480 THREE OAKS RD.
THREE OAKS, MI 49128

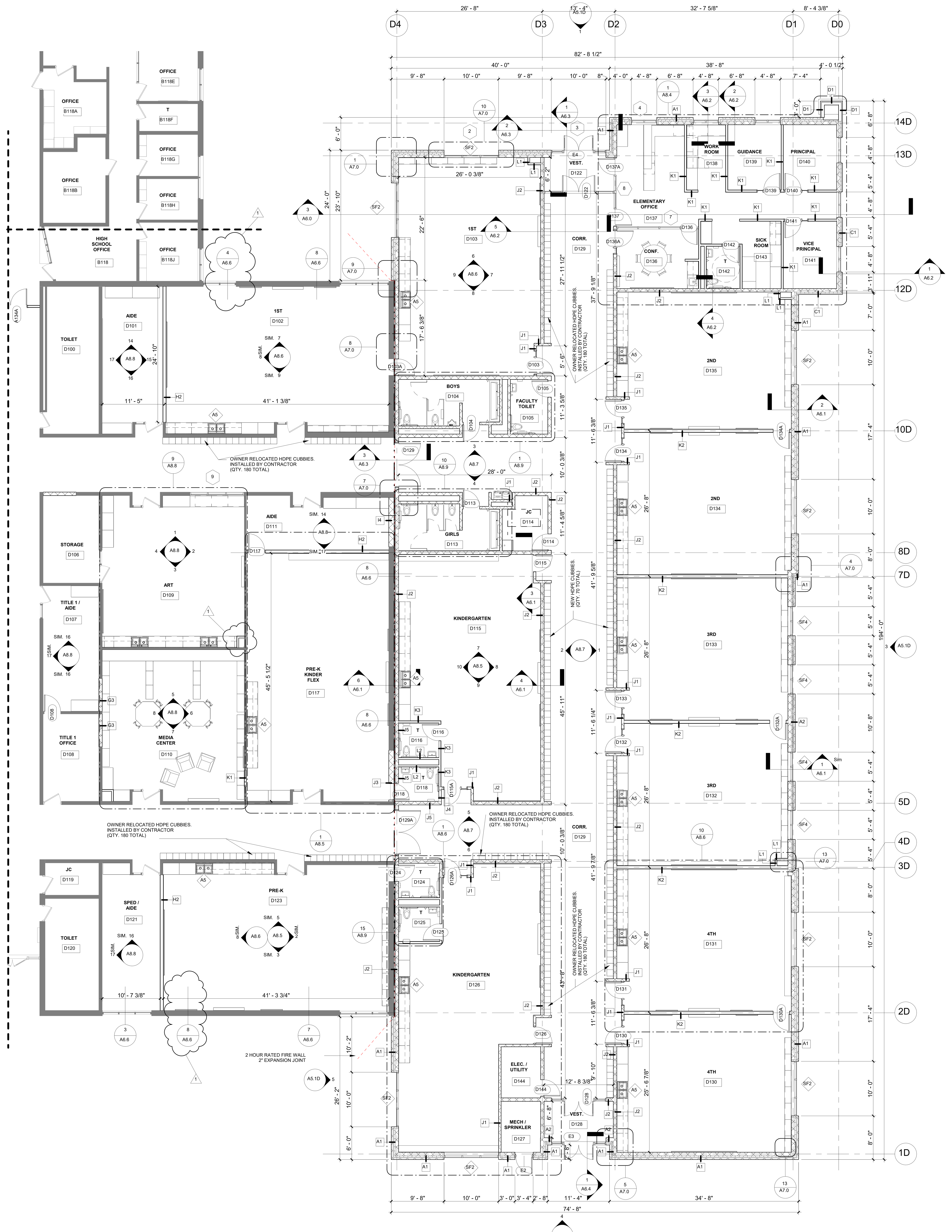
FLOOR PLAN - AREA C

JOB NUMBER 21-346
DATE 03.22.22
REVISIONS:
ADD. 1 03.31.22

STATE OF MICHIGAN
John G. Cordogan Architect No. 1301035955
LICENSED ARCHITECT

CD BID SET

A2.1C



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

GENERAL FLOOR PLAN NOTES

1. PROVIDE GYPSUM BOARD CONTROL JOINTS THE FULL HEIGHT OF THE PARTITION PER GYPSUM ASSOCIATION STANDARD RECOMMENDATIONS.
2. EXTEND ALL PARTITIONS TO BOTTOM OF DECK. CEILING ABOVE UNLESS OTHERWISE NOTED.
3. LOCATE DOORS 4" FROM INSIDE CORNER UNLESS OTHERWISE NOTED.
4. ALL INFILL WALLS ARE TO MATCH ADJACENT CONSTRUCTION AND THICKNESS (V.I.F.). PATCH, MATCH, AND PAINT BOTH SIDES TO ACHIEVE CONTINUOUS FINISH ON BOTH SIDES.
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F2 ROOM TO BE FULLY ENCLOSED IN 2 HOUR FIRE RATING. PROVIDE 2 LAYERS OF TYPE X GYP BD AT EACH SIDE OF ALL WALLS AND 2 LAYERS AT CEILING REGARDLESS OF WALL TYPES NOTED. FIRE CAULK ALL PENETRATIONS. REFERENCE UL U419. PROVIDE RATED DOOR AND FRAME.

STEEL SHIPS LADDER AS SPECIFIED. PAINT <PT-02> AS SPECIFIED.

F3 INFILL WALL PENETRATION TO MATCH ADJACENT CONSTRUCTION. PATCH AND MATCH ALL FINISHES, TYP.

F4 EXISTING MECHANICAL EQUIPMENT TO REMAIN. PROTECT AT ALL TIMES DURING CONSTRUCTION.

F5 NEW MECHANICAL EQUIPMENT. MODIFY EXISTING LOUVER OPENING TO ACCOMMODATE NEW LOUVER AS REQUIRED. PROVIDE NEW LINTEL AND BRICK LEDGE AS REQUIRED. PATCH AND MATCH EXISTING FINISHES AS REQ'D. COORDINATE WITH MECH DRAWINGS FOR FURTHER INFORMATION.

F6 MODIFY WALL AND FINISHES AS REQUIRED FOR NEW PLUMBING WORK. PATCH AND MATCH AS REQUIRED. COORDINATE WITH PLUMBING AND MECHANICAL DRAWINGS.

CUT WALLS AS REQUIRED FOR NEW PIPING WORK. COORDINATE WITH PLUMBING DRAWINGS FOR MORE INFORMATION. CORE THROUGH BRICK AND SUPPORT REMAINING BRICKS AS REQ'D.

F7 PROVIDE NEW MANUAL ROLLER SHADE AS SPECIFIED.

F8 PROVIDE NEW MOTORIZED ROLLER SHADE AS SPECIFIED. COORDINATE WITH ELECTRICAL DRAWINGS FOR CONTROL INFORMATION.

PROVIDE NEW CHASE FOR EXISTING UNIT PIPING. ALL PIPING AND ELECTRICAL CONDUIT/BOXES TO BE CONCEALED FROM VIEW.

F9

F10 PROVIDE NEW CHASE WALL TO EXTEND EXISTING CHASE TO ACCOMMODATE NEW PIPING WORK. REFER TO MPFP DRAWINGS FOR MORE INFORMATION. PATCH AND MATCH EXISTING FINISHES. MODIFY SURFACE RACEWAY AS REQUIRED TO ACCOMMODATE WORK. PROVIDE ACCESS DOORS AS REQUIRED FOR MAINTENANCE

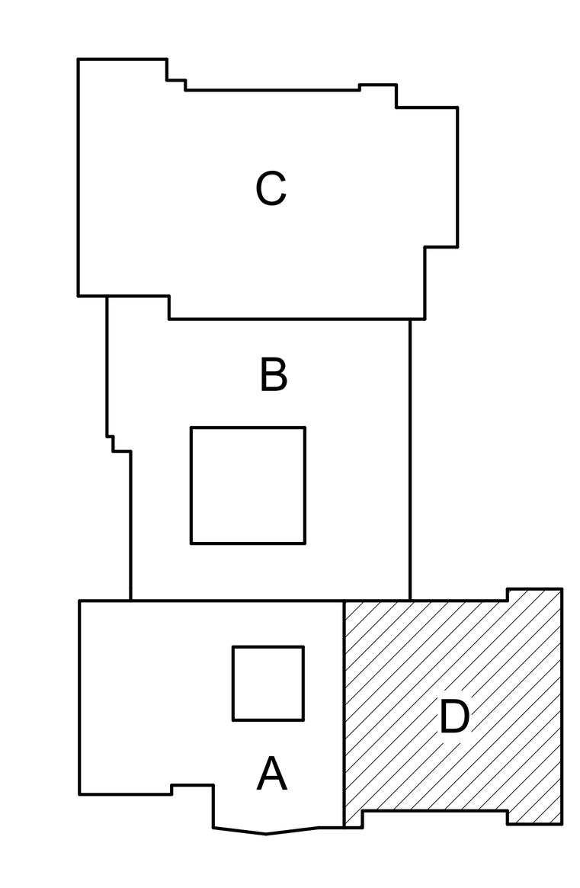
F11

F12

ALTERNATES KEYNOTES

WORK RELATED WITH THE FOLLOWING ALTERNATES:

A1 ROOF TOP UNITS IN LIEU OF UNIT VENTILATION AT EXISTING.
A2 SITE WORK ON WEST SIDE OF THE BUILDING.
A3 ADDITIONAL PAVEMENT REPLACEMENT.
A4 TENNIS COURT SURFACE REPLACEMENT.
A5 SINKS IN ELEMENTARY CLASSROOMS.
A6 CLERESTORY OMISSION.



KEY PLAN
NOT TO SCALE

CORDOGAN CLARK
Aurora 960 Ridgeway Avenue, Aurora, IL 60506 Tel 630.896.4678 Fax 630.896.4987
Chicago 716 North Wells Street, Chicago, IL 60654 Tel 312.943.7300 Fax 312.943.4771

RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION
15480 THREE OAKS RD.
THREE OAKS, MI 49128

FLOOR PLAN - AREA D

JOB NUMBER 21-346
DATE 03.22.22

REVISIONS:
ADD. 1 03.31.22

STATE OF MICHIGAN John G. Cordogan Architect No. 1301035955 LICENSED ARCHITECT

CD BID SET

A2.1D

1 REFLECTED CEILING PLAN - AREA A
1/8" = 1'-0"

REFLECTED CEILING LEGEND

EXISTING LIGHT FIXTURE. SEE ELECTRICAL PLANS FOR REPLACEMENT SCOPE.

NEW LIGHT FIXTURE. SEE ELECTRICAL PLANS FOR MORE INFORMATION

EXISTING ACOUSTICAL CEILING TILE

NEW ACOUSTICAL CEILING TILE

EXISTING 1x1 ADHERED CEILING TILE

EXISTING, NEW GYPSUM BOARD CEILING, RESPECTIVELY

NEW PROJECTOR. SEE ELECTRICAL DRAWINGS FOR FURTHER INFORMATION.

EXISTING, NEW EM LIGHT. SEE ELECTRICAL DRAWINGS FOR FURTHER INFORMATION.

EXISTING, NEW EXIT SIGN. SEE ELECTRICAL DRAWINGS FOR FURTHER INFORMATION.

MECHANICAL UNIT. SEE MECHANICAL DRAWINGS FOR MORE INFORMATION.

GENERAL CEILING NOTES

1. REFER TO ELECTRICAL DRAWINGS AND SPECIALTY LIGHTING DRAWINGS FOR LIGHT FIXTURE INFORMATION.
2. REFER TO ELECTRICAL DRAWINGS FOR COORDINATION OF EXIT SIGNS, ETC.
3. REFER TO MECHANICAL AND FIRE PROTECTION DRAWINGS FOR COORDINATION OF DIFFUSERS, SPRINKLER HEADS, ETC.
4. REFER TO AUDIO VISUAL DRAWINGS FOR SPEAKER LOCATIONS, ETC.
5. CENTER SPRINKLER HEADS IN CEILING TILES, UNLESS NOTED OTHERWISE.
6. IN AREAS OF 2'x2' ACT WHERE LESS THAN 4" OF TILE WOULD BE REQUIRED TO FILL SPACE TO THE WALL, PROVIDE MATCHING 2'x4' TILE CUT AS REQUIRED TO FILL SPACE. DO NOT PROVIDE INTERVENING TEE GRID.
7. PROVIDE GYPSUM BOARD CONTROL JOINTS THE FULL LENGTH OF THE CEILING FOR A SPACING OF 30'-0" O.C. MAX.
8. METAL FRAMING PERFORMANCE CRITERIA: PROVIDE NECESSARY FRAMING, GAUGES, FASTENERS, ETC. TO ACHIEVE L/360 DEFLECTION AT ALL METAL FRAMING INSTALLATIONS.
9. ALL PENETRATIONS WITHIN FIRE RATED CEILINGS ARE TO BE SEALED WITH FIRE CAULKING TO MAINTAIN THE SPECIFIED U.L. DESIGN. CONTRACTOR RESPONSIBLE FOR THE PENETRATION IS RESPONSIBLE FOR THE FIRE CAULKING INSTALLATION.
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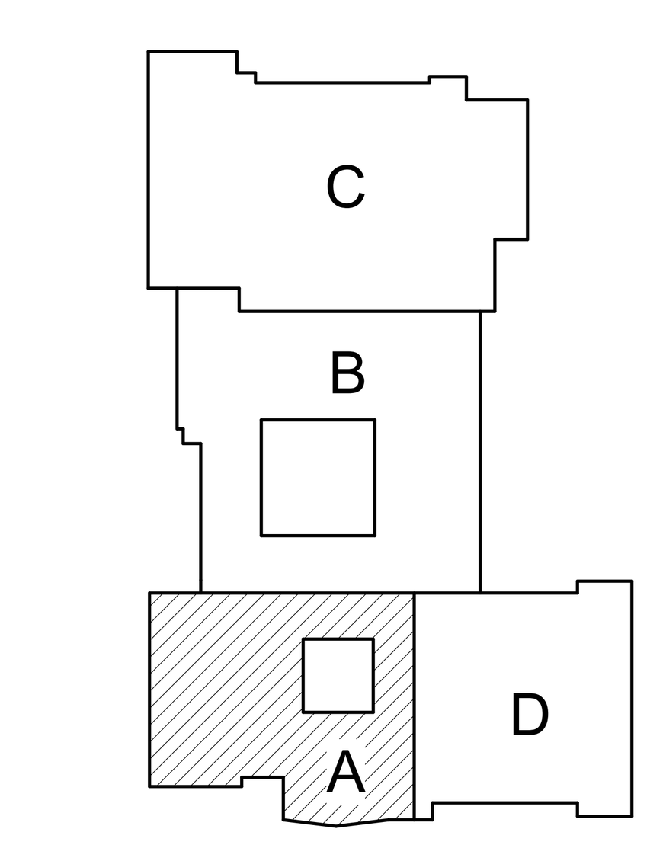

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RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION
15480 THREE OAKS RD.
THREE OAKS, MI 49128

REFLECTED CEILING PLAN - AREA A

JOB NUMBER 21-346
DATE 03.22.22
03.31.22
REVISIONS: ADD. 1

STATE OF MICHIGAN John G. Cordogan Architect No. 1301035955 LICENSED ARCHITECT

CD BID SET

A3.1A

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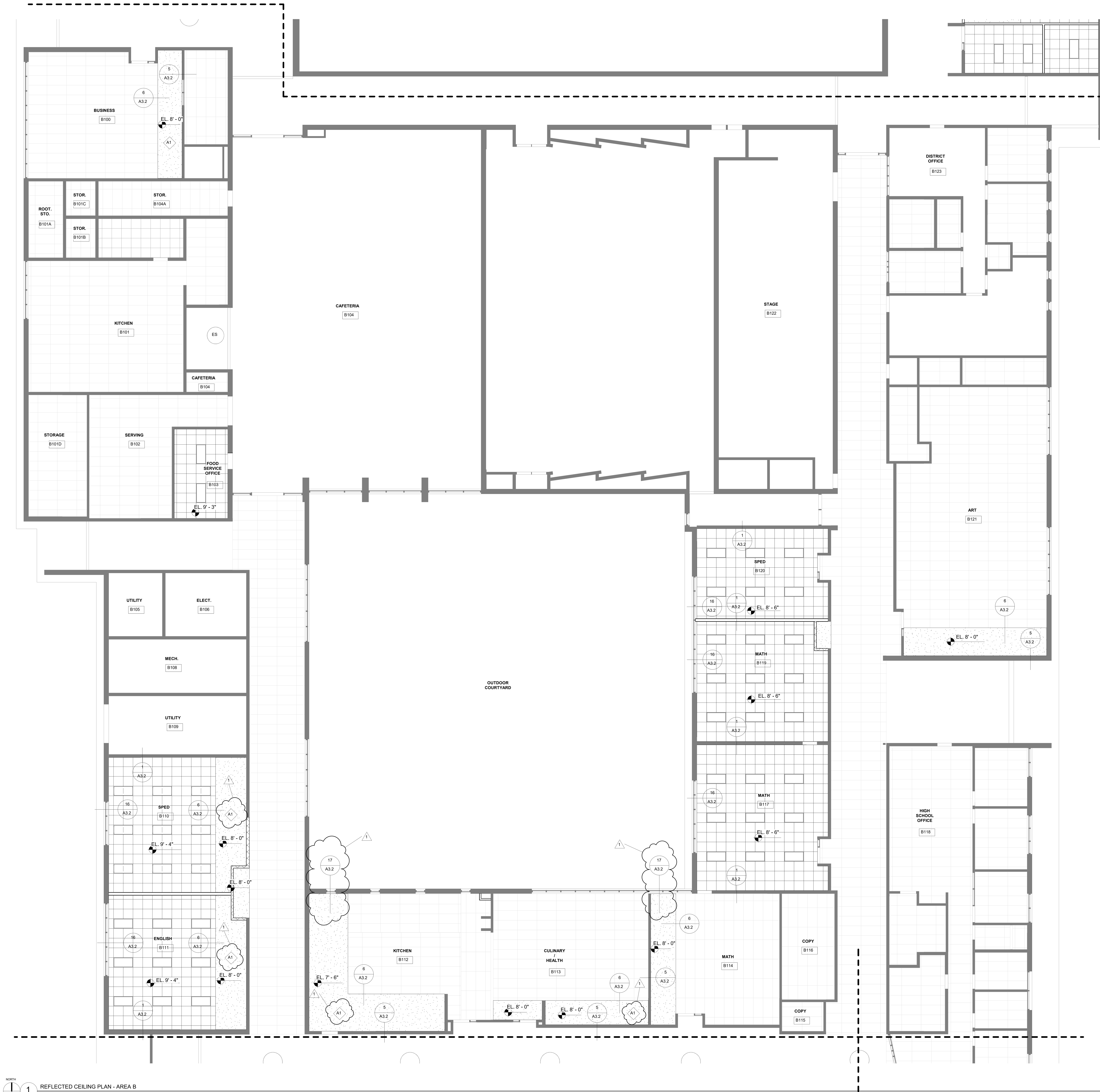

1 REFLECTED CEILING PLAN - AREA B
1/8" = 1'-0"

REFLECTED CEILING LEGEND

EXISTING LIGHT FIXTURE. SEE ELECTRICAL PLANS FOR REPLACEMENT SCOPE.

NEW LIGHT FIXTURE. SEE ELECTRICAL PLANS FOR MORE INFORMATION

EXISTING ACOUSTICAL CEILING TILE

NEW ACOUSTICAL CEILING TILE

EXISTING 1x1 ADHERED CEILING TILE

EXISTING, NEW GYPSUM BOARD CEILING, RESPECTIVELY

NEW PROJECTOR. SEE ELECTRICAL DRAWINGS FOR FURTHER INFORMATION.

EXISTING, NEW EM LIGHT. SEE ELECTRICAL DRAWINGS FOR FURTHER INFORMATION.

EXISTING, NEW EXIT SIGN. SEE ELECTRICAL DRAWINGS FOR FURTHER INFORMATION.

PJ

MECHANICAL UNIT. SEE MECHANICAL DRAWINGS FOR MORE INFORMATION.

GENERAL CEILING NOTES

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- A5 SINKS IN ELEMENTARY CLASSROOMS.
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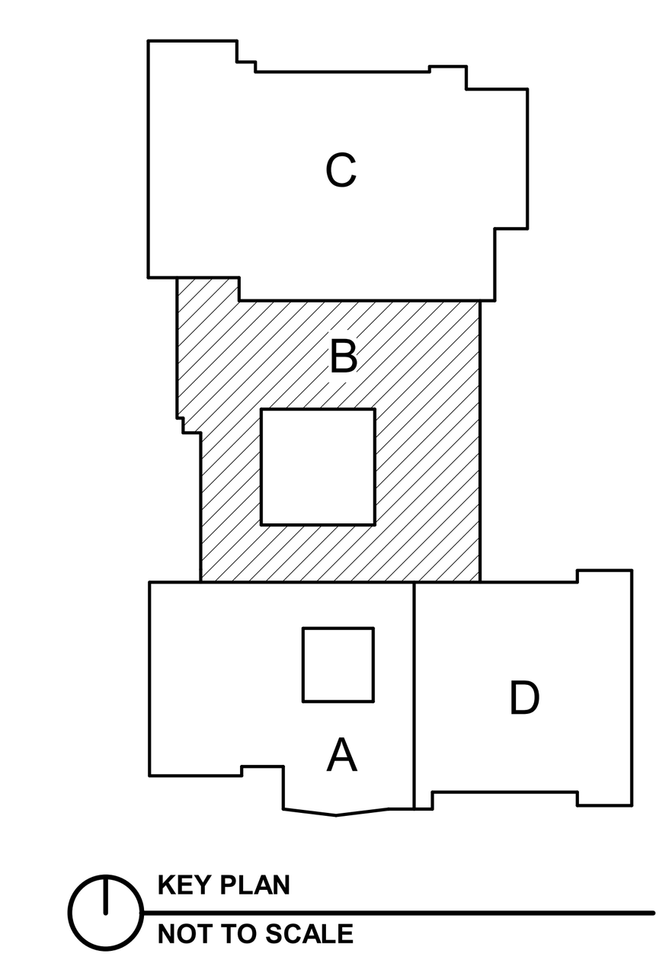

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RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION
15480 THREE OAKS RD.
THREE OAKS, MI 49128

REFLECTED CEILING PLAN - AREA B

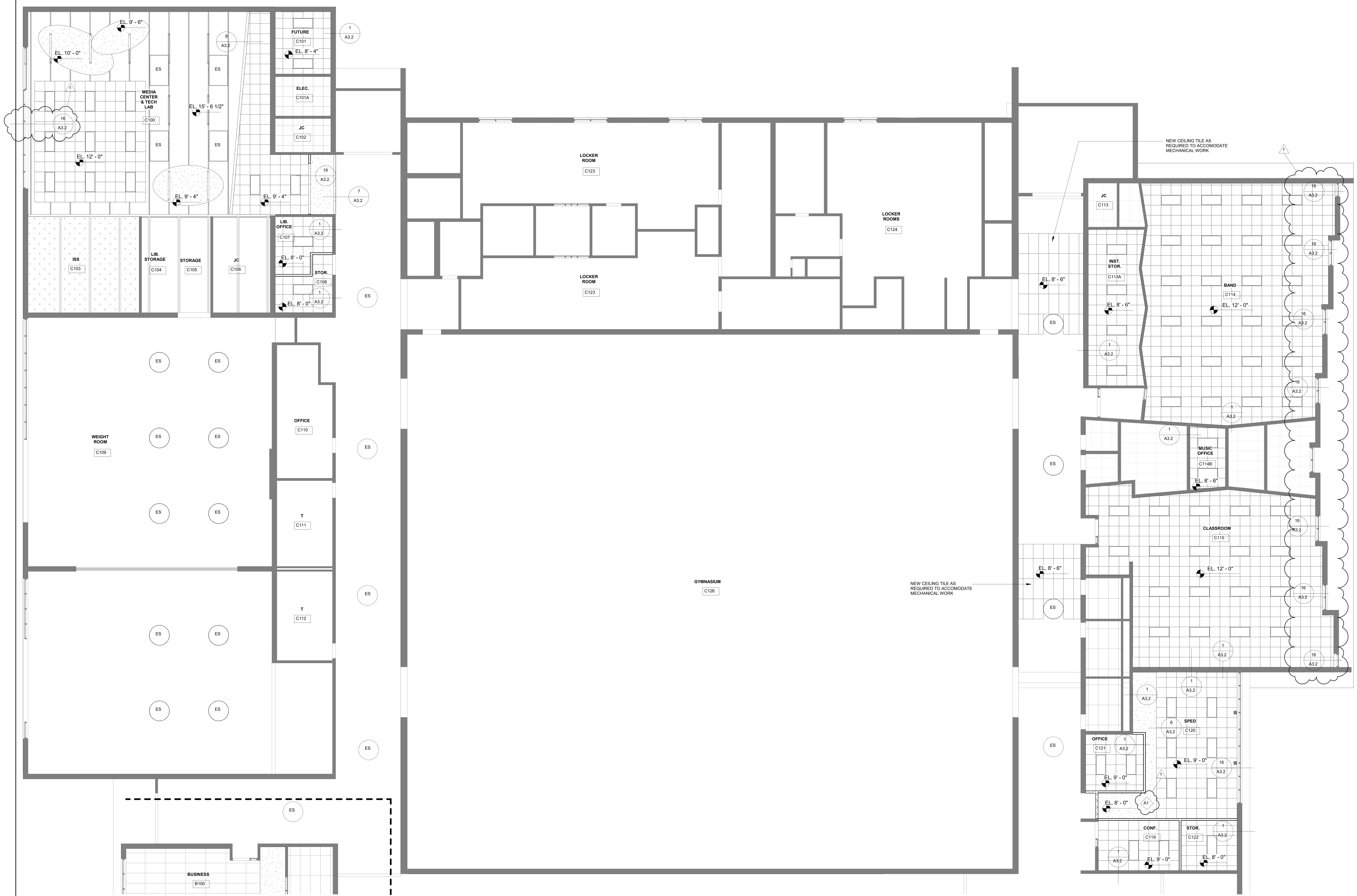
JOB NUMBER 21-346
DATE 03.22.22

REVISIONS:
1 ADD. 1 03.31.22

STATE OF MICHIGAN
John G. Cordogan Architect No. 1301035955
LICENSED ARCHITECT

CD BID SET

A3.1B



1 REFLECTED CEILING PLAN - AREA C

1/8" = 1'-0"

REFLECTED CEILING LEGEND

- EXISTING LIGHT FIXTURE. SEE ELECTRICAL PLANS FOR REPLACEMENT SCOPE.
- NEW LIGHT FIXTURE. SEE ELECTRICAL PLANS FOR MORE INFORMATION
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- EXISTING, NEW GYPSUM BOARD CEILING, RESPECTIVELY
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- MECHANICAL UNIT. SEE MECHANICAL DRAWINGS FOR MORE INFORMATION.

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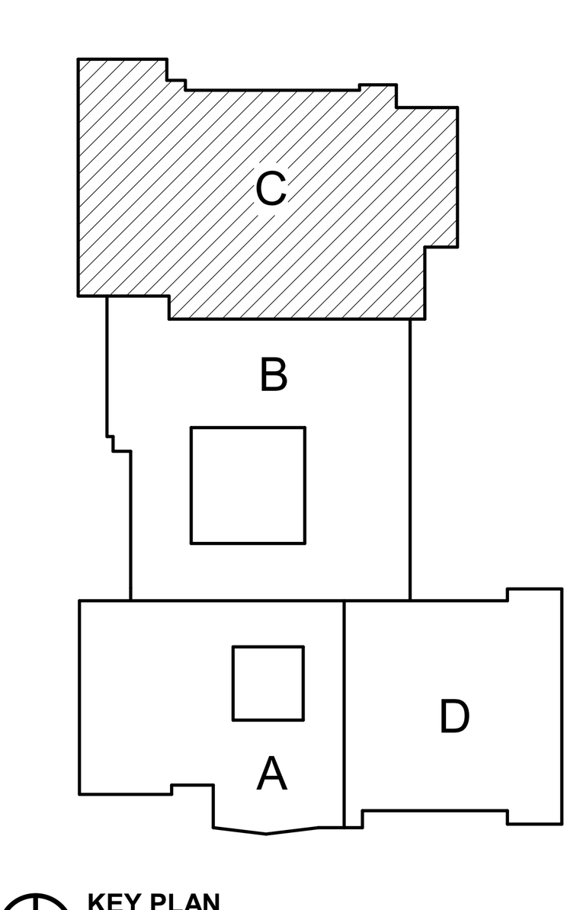

KEY PLAN

NOT TO SCALE

CORDOGAN CLARK

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960 Ridgeway Avenue, Aurora, IL 60506
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RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION

15480 THREE OAKS RD.
THREE OAKS, MI 49128

REFLECTED CEILING PLAN - AREA C

JOB NUMBER 21-346

DATE 03.22.22

03.31.22

REVISIONS: ADD. 1

STATE OF MICHIGAN
John G. Cordogan
Architect
No. 1301035955
LICENSED ARCHITECT

CD BID SET

A3.1C

1 REFLECTED CEILING PLAN - AREA D
1/8" = 1'-0"

REFLECTED CEILING LEGEND

- EXISTING LIGHT FIXTURE. SEE ELECTRICAL PLANS FOR REPLACEMENT SCOPE.
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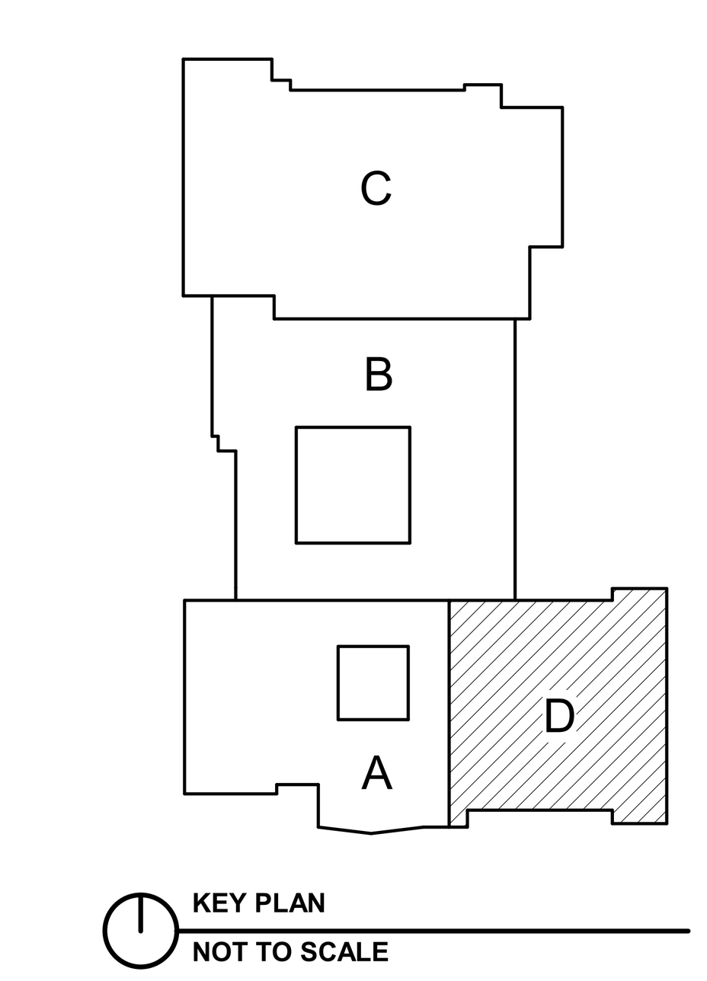

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RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION
15480 THREE OAKS RD.
THREE OAKS, MI 49128

REFLECTED CEILING PLAN - AREA D

JOB NUMBER 21-346
DATE 03.22.22

REVISIONS:
03.31.22 ADD. 1

John G. Cordogan Architect No. 1301035955 — STATE OF MICHIGAN — LICENSED ARCHITECT

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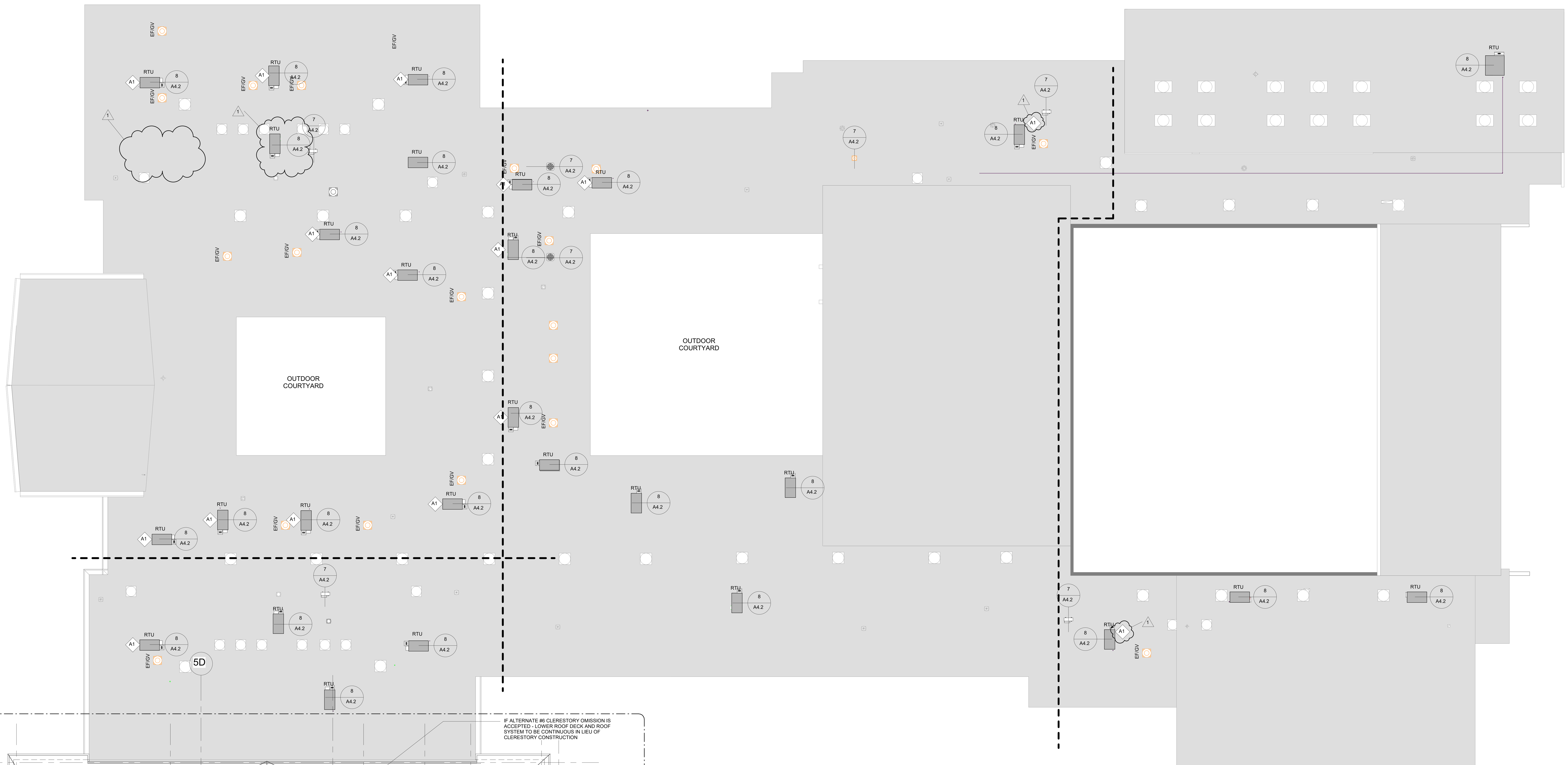
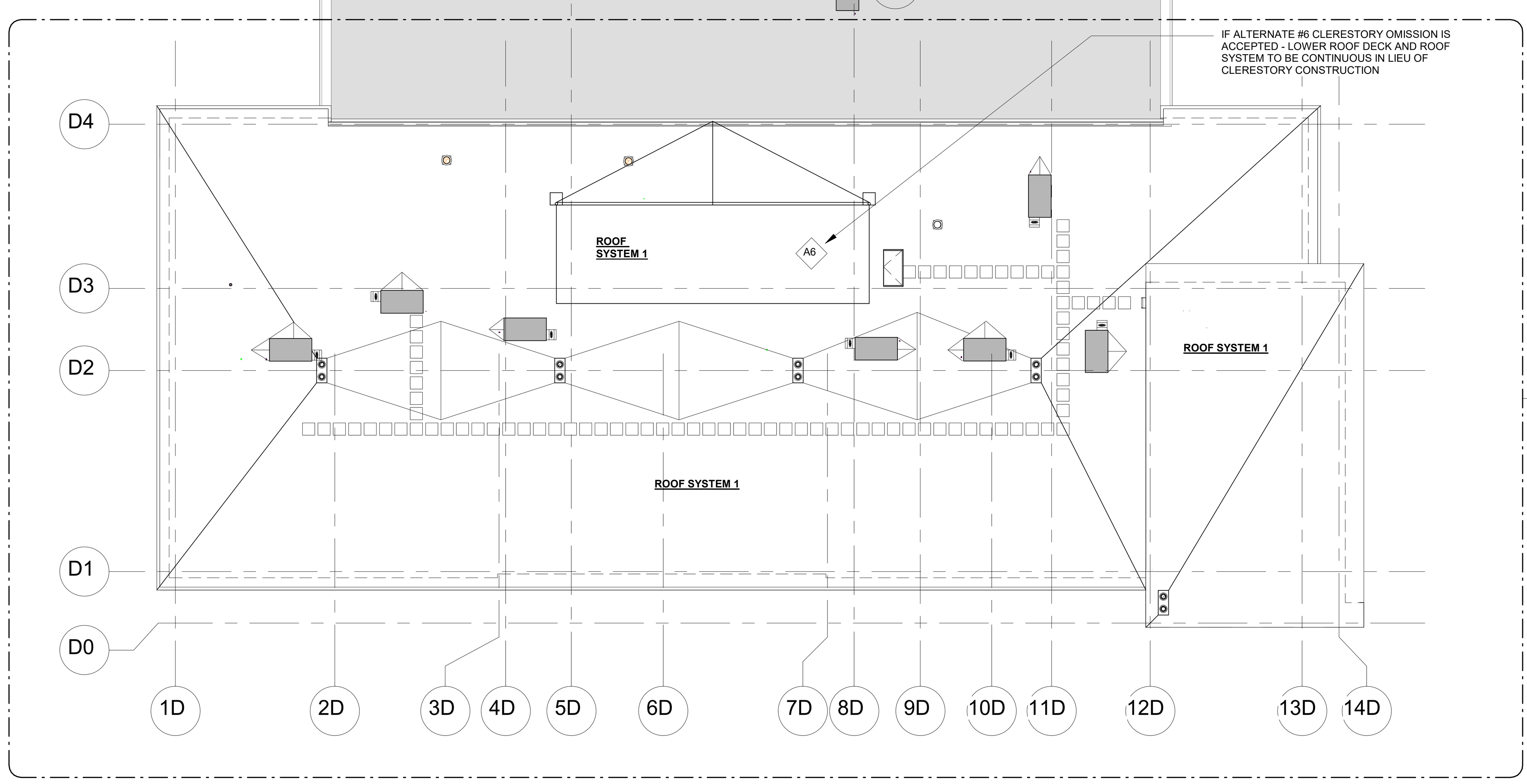
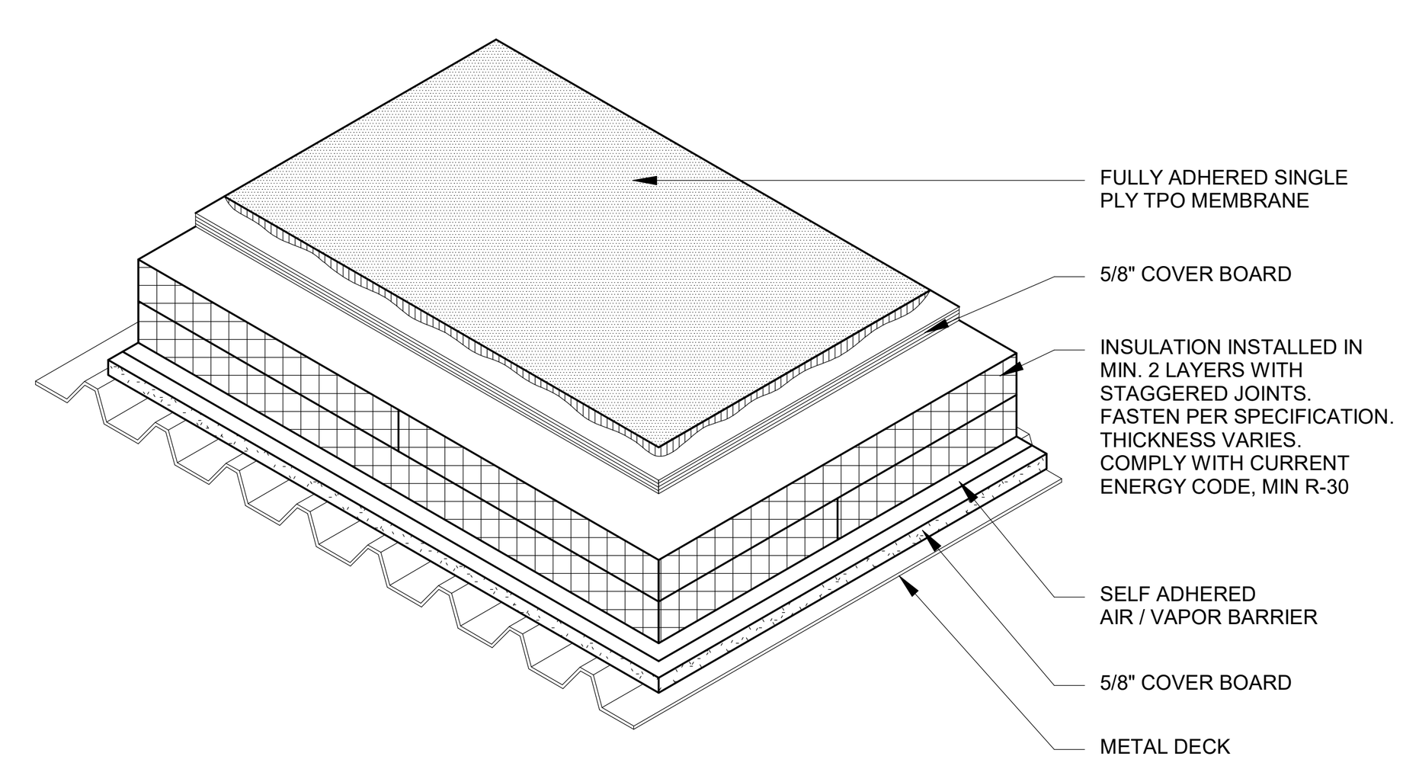




NORTH
1 ROOF PLAN - OVERALL
1/16" = 1'-0"



ROOF SYSTEM AXON - TPO ON METAL DECK
1 1/2" = 1'-0"

ROOF PLAN LEGEND

Symbol	Description
	NEW ROOF
	EXISTING ROOF
	ROOF HATCH
RTU	RTU
	ROOF WALK PAD
SLOPE	FLAT INSULATION OVER SLOPED STRUCTURE OR SLOPED INSULATION OVER FLAT STRUCTURE (MINIMUM SLOPE = 1/4" PER FOOT)
SADDLED	PROVIDE TAPERED INSULATION TO SADDLE. SLOPE = 1/2" PER FOOT)
	EQUIPMENT SCREEN REFER TO MECHANICAL DRAWINGS
RD / OD	PRIMARY ROOF DRAIN AND OVERFLOW DRAIN ROOF DRAIN SHALL BE AT THE LOW POINT OF THE ROOF. OVERFLOW DRAIN (INLET TO BE SET AT 2" ABOVE THE PRIMARY ROOF DRAIN WITH A STANDARD 2" DAM)
EF/GV	EXHAUST FAN / GRAVITY VENT REFER TO MECHANICAL DRAWINGS
VTR	VENT STACK REFER TO PLUMBING DRAWINGS
RP	ROOF PENETRATION REFER TO MECHANICAL DRAWINGS
T/CP	TOP OF COPING
T/PT	TOP OF PARAPET
T/STL	TOP OF STEEL ELEVATION
T/GLZ	TOP OF GLAZING
	EXISTING SKYLIGHT
DS	DOWNSPOUT

GENERAL ROOFING NOTES

1. PROVIDE MECHANICAL EQUIPMENTS INCLUDING INSULATED ROOF CURBS. REFER TO STRUCTURAL AND MECHANICAL DRAWINGS FOR ROOF PENETRATIONS AND ROOF TOP EQUIPMENT. REFER TO SHEET ________FOR ROOF CURB DETAILS FOR ROOF TERMINATIONS AND COUNTERFLASHING.
2. REFER TO PLUMBING DRAWINGS FOR ROOF PENETRATIONS. REFER TO SHEET ____________ FOR ROOF PENETRATION DETAILS ROOF TERMINATIONS AND COUNTERFLASHING.
3. ALL TAPERED INSULATION SHALL PROVIDE A MINIMUM 1/4"= 1'-0" SLOPE UNLESS OTHERWISE NOTED.
4. ALL INSULATION JOINTS, HORIZONTAL AND VERTICAL, TO BE STAGGERED.
5. ALL ROOF PENETRATIONS, INCLUDING VENT STACKS, ROOF CURBS, AND PIPE SUPPORT CURBS, ARE TO BE A MINIMUM OF 8" ABOVE THE ROOF MEMBRANE.
6. ALL COUNTER FLASHING, COPING, AND MISCELLANEOUS METAL FLASHING PIECES ARE TO HAVE SEALANT APPLIED AT THE END CONDITION.
7. ALL EXPOSED FASTENERS TO BE CORROSIVE RESISTANT, HAVE NEOPRENE WASHERS, AND TO BE COVERED WITH SEALANT FOLLOWING ARCHITECT'S APPROVAL.
8. DRAINS TO BE FLASHED PER MANUFACTURER'S SPECIFICATION.
9. PROVIDE THROUGH-WALL COUNTER-FLASHING FOR ALL VERTICAL FLANGES, END WALL FLASHING, AND ROOF INTERSECTIONS.
10. INSTALL SADDLES ON THE HIGH SIDE OF ALL ROOF PENETRATION DETAILS.

ALTERNATES KEYNOTES

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ROOF PLAN - OVERALL

JOB NUMBER 21-346
DATE 03.22.22
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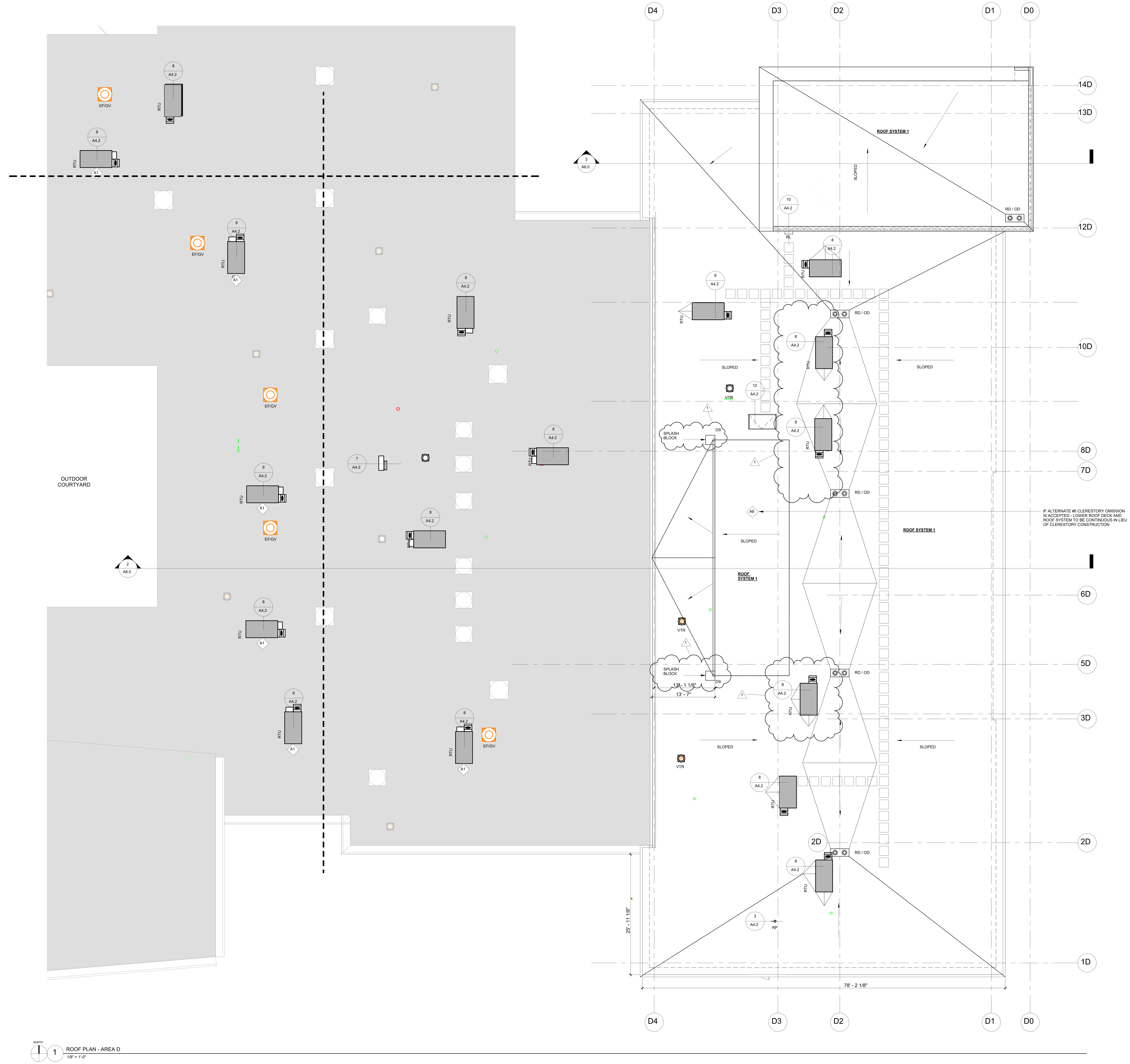

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GENERAL ROOFING NOTES

1. PROVIDE MECHANICAL EQUIPMENTS INCLUDING INSULATED ROOF CURBS. REFER TO STRUCTURAL AND MECHANICAL DRAWINGS FOR ROOF PENETRATIONS AND ROOF TOP EQUIPMENT. REFER TO SHEET ________FOR ROOF CURB DETAILS FOR ROOF TERMINATIONS AND COUNTERFLASHING.
2. REFER TO PLUMBING DRAWINGS FOR ROOF PENETRATIONS. REFER TO SHEET ____________ FOR ROOF PENETRATION DETAILS ROOF TERMINATIONS AND COUNTERFLASHING.
3. ALL TAPERED INSULATION SHALL PROVIDE A MINIMUM 1/4"= 1'-0" SLOPE UNLESS OTHERWISE NOTED.
4. ALL INSULATION JOINTS, HORIZONTAL AND VERTICAL, TO BE STAGGERED.
5. ALL ROOF PENETRATIONS, INCLUDING VENT STACKS, ROOF CURBS, AND PIPE SUPPORT CURBS, ARE TO BE A MINIMUM OF 8" ABOVE THE ROOF MEMBRANE.
6. ALL COUNTER FLASHING, COPING, AND MISCELLANEOUS METAL FLASHING PIECES ARE TO HAVE SEALANT APPLIED AT THE END CONDITION.
7. ALL EXPOSED FASTENERS TO BE CORROSIVE RESISTANT, HAVE NEOPRENE WASHERS, AND TO BE COVERED WITH SEALANT FOLLOWING ARCHITECT'S APPROVAL.
8. DRAINS TO BE FLASHED PER MANUFACTURER'S SPECIFICATION.
9. PROVIDE THROUGH-WALL COUNTER-FLASHING FOR ALL VERTICAL FLANGES, END WALL FLASHING, AND ROOF INTERSECTIONS.
10. INSTALL SADDLES ON THE HIGH SIDE OF ALL ROOF PENETRATION DETAILS.

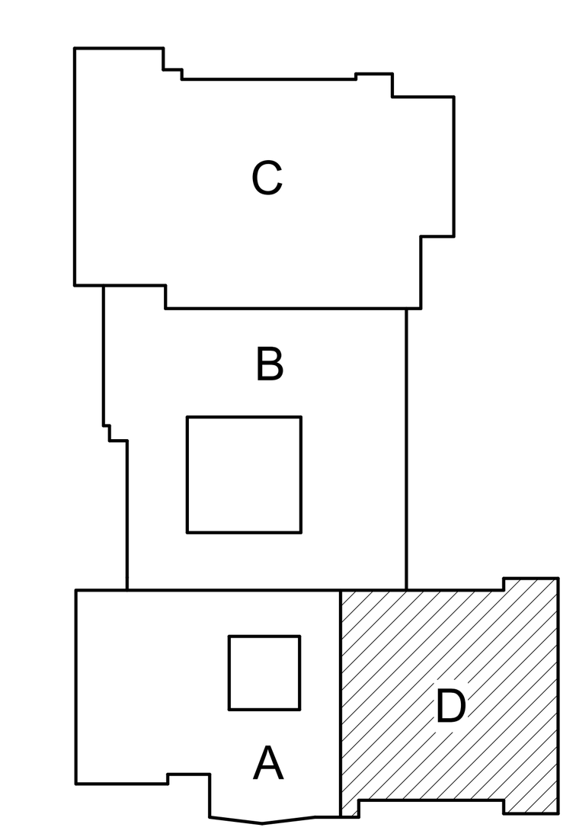
ROOF PLAN LEGEND

Symbol	Description
	NEW ROOF
	EXISTING ROOF
	ROOF HATCH
RTU	RTU
	ROOF WALK PAD
SLOPE	FLAT INSULATION OVER SLOPED STRUCTURE OR SLOPED INSULATION OVER FLAT STRUCTURE (MINIMUM SLOPE = 1/4" PER FOOT)
SADDLED	PROVIDE TAPERED INSULATION TO SADDLE. SLOPE = 1/2" PER FOOT)
	EQUIPMENT SCREEN REFER TO MECHANICAL DRAWINGS
RD / OD	PRIMARY ROOF DRAIN AND OVERFLOW DRAIN ROOF DRAIN SHALL BE AT THE LOW POINT OF THE ROOF. OVERFLOW DRAIN (INLET TO BE SET AT 2" ABOVE THE PRIMARY ROOF DRAIN WITH A STANDARD 2" DAM)
EF/GV	EXHAUST FAN / GRAVITY VENT REFER TO MECHANICAL DRAWINGS
VTR	VENT STACK REFER TO PLUMBING DRAWINGS
RP	ROOF PENETRATION REFER TO MECHANICAL DRAWINGS
T/CP	TOP OF COPING
T/PT	TOP OF PARAPET
T/STL	TOP OF STEEL ELEVATION
T/GLZ	TOP OF GLAZING
	EXISTING SKYLIGHT
DS	DOWNSPOUT

ALTERNATES KEYNOTES

WORK RELATED WITH THE FOLLOWING ALTERNATES:

A1 ROOF TOP UNITS IN LIEU OF UNIT VENTILATION AT EXISTING.
A2 SITE WORK ON WEST SIDE OF THE BUILDING.
A3 ADDITIONAL PAVEMENT REPLACEMENT.
A4 TENNIS COURT SURFACE REPLACEMENT.
A5 SINKS IN ELEMENTARY CLASSROOMS.
A6 CLERESTORY OMISSION.



KEY PLAN
NOT TO SCALE

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RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION
15480 THREE OAKS RD.
THREE OAKS, MI 49128

ROOF PLAN - AREA D

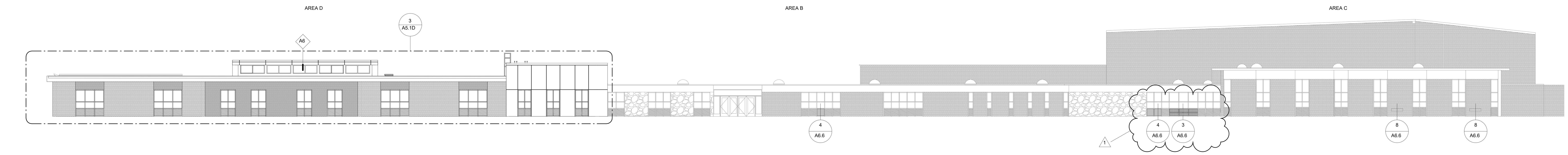
JOB NUMBER 21-346
DATE 03.22.22

REVISIONS:
03.31.22 ADD. 1

STATE OF MICHIGAN John G. Cordogan Architect No. 1301035955 LICENSED ARCHITECT

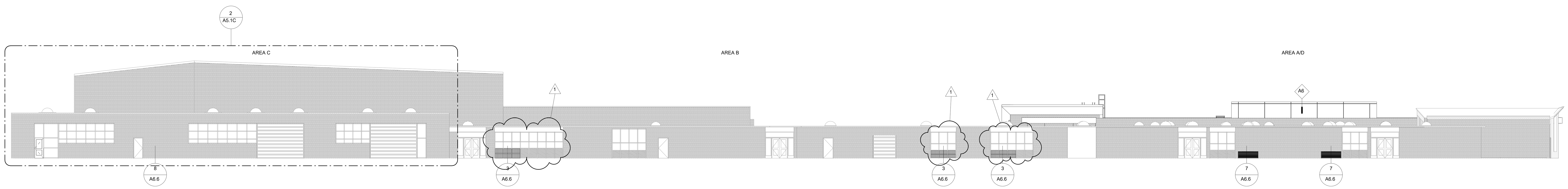
CD BID SET

A4.1D

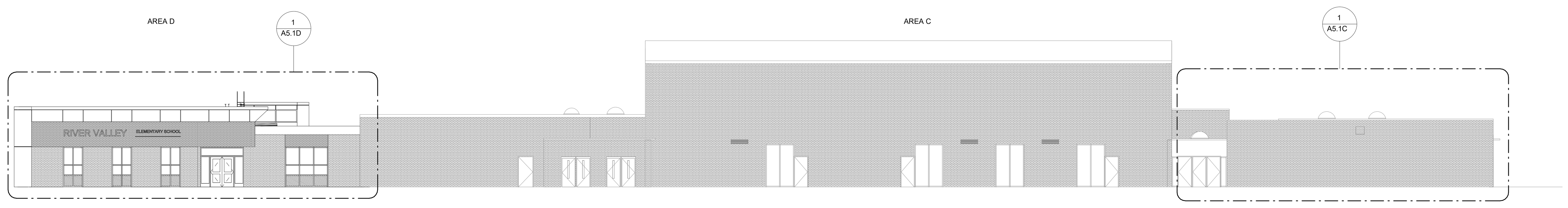


1 EAST ELEVATION
1/16" = 1'-0"

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



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



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

GENERAL ELEVATION NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING MASONRY CONDITIONS AND DIMENSIONS. CONTRACTOR SHALL INFORM THE ARCHITECT OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THE CONTRACT DOCUMENTS.
2. CONTRACTOR ASSUMES RESPONSIBILITY FOR MAINTAINING INTEGRITY OF THE EXISTING BRICK / MASONRY. ANY REPAIRS TO DAMAGED BRICK / MASONRY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS NOT TO DAMAGE OR DISRUPT EXISTING BUILDING SYSTEMS WHICH MAY BE AFFECTED BY THE WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ANY EXISTING SYSTEMS.
4. PROVIDE OVERHEAD PROTECTION AND MAINTAIN EMERGENCY EGRESS AT ALL ENTRANCES.
5. PROTECT ALL OTHER EXTERIOR NON-MASONRY BUILDING ELEMENTS THROUGHOUT THE PROJECT.
6. WALL TAGS HAVE BEEN INCLUDED ON ELEVATIONS FOR ADDITIONAL INFORMATION ON CORRUGATED METAL WALL TYPES.

ALTERNATES KEYNOTES

WORK RELATED WITH THE FOLLOWING ALTERNATES:

- A1 ROOF TOP UNITS IN LIEU OF UNIT VENTILATION AT EXISTING.
- A2 SITE WORK ON WEST SIDE OF THE BUILDING.
- A3 ADDITIONAL PAVEMENT REPLACEMENT.
- A4 TENNIS COURT SURFACE REPLACEMENT.
- A5 SINKS IN ELEMENTARY CLASSROOMS.
- A6 CLERESTORY OMISSION.

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RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION
15480 THREE OAKS RD.
THREE OAKS, MI 49128

EXTERIOR BUILDING ELEVATIONS

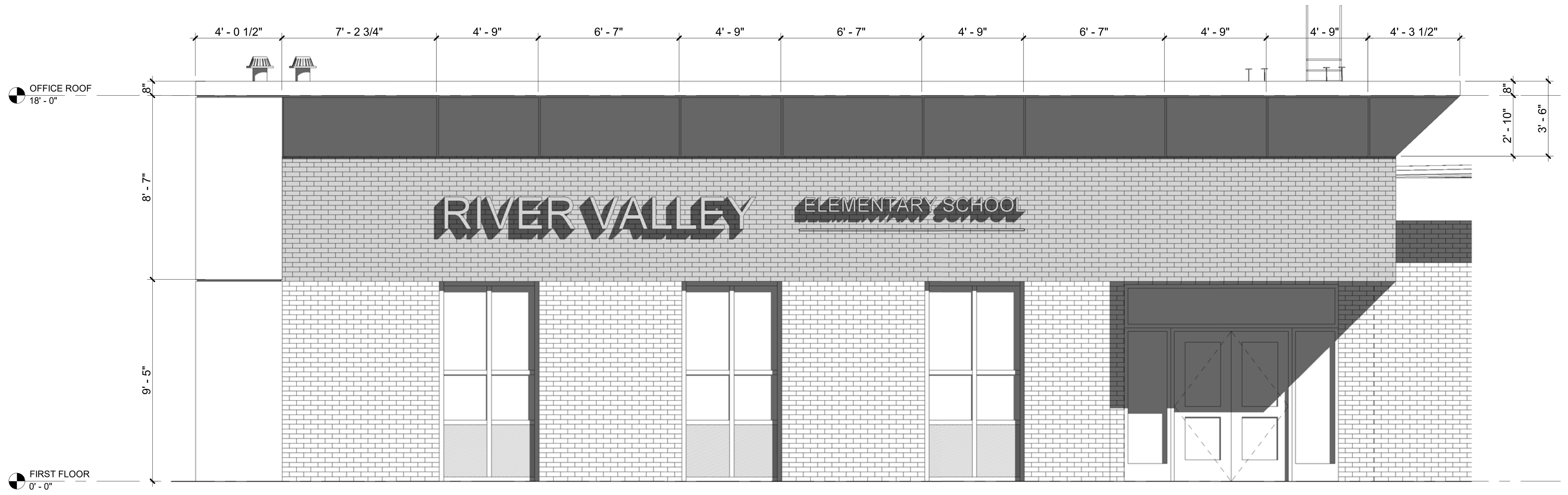
JOB NUMBER 21-346
DATE 03.22.22

REVISIONS:
03.31.22 ADD. 1

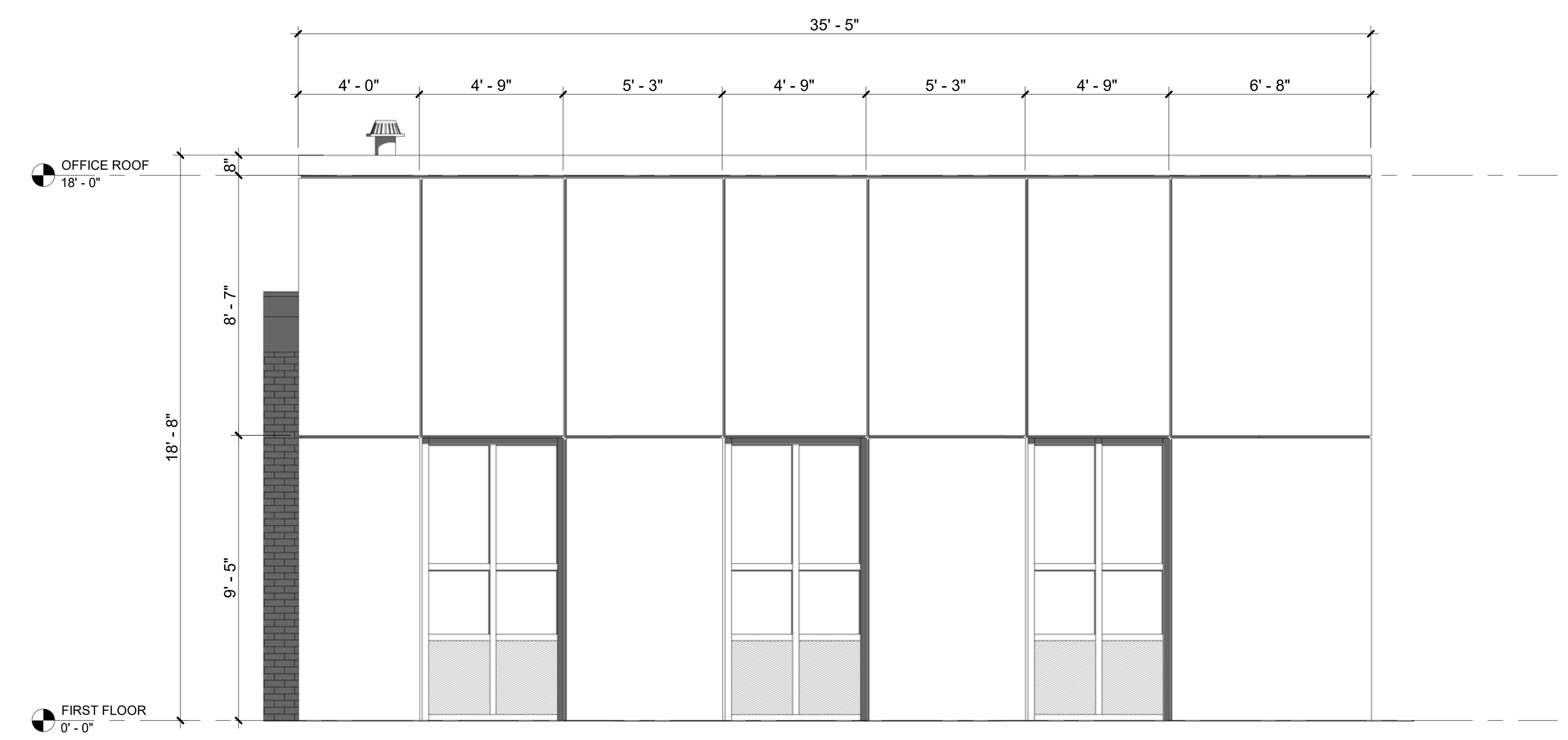
STATE OF MICHIGAN
John G. Cordogan
Architect
No. 1301035955
LICENSED ARCHITECT

CD BID SET

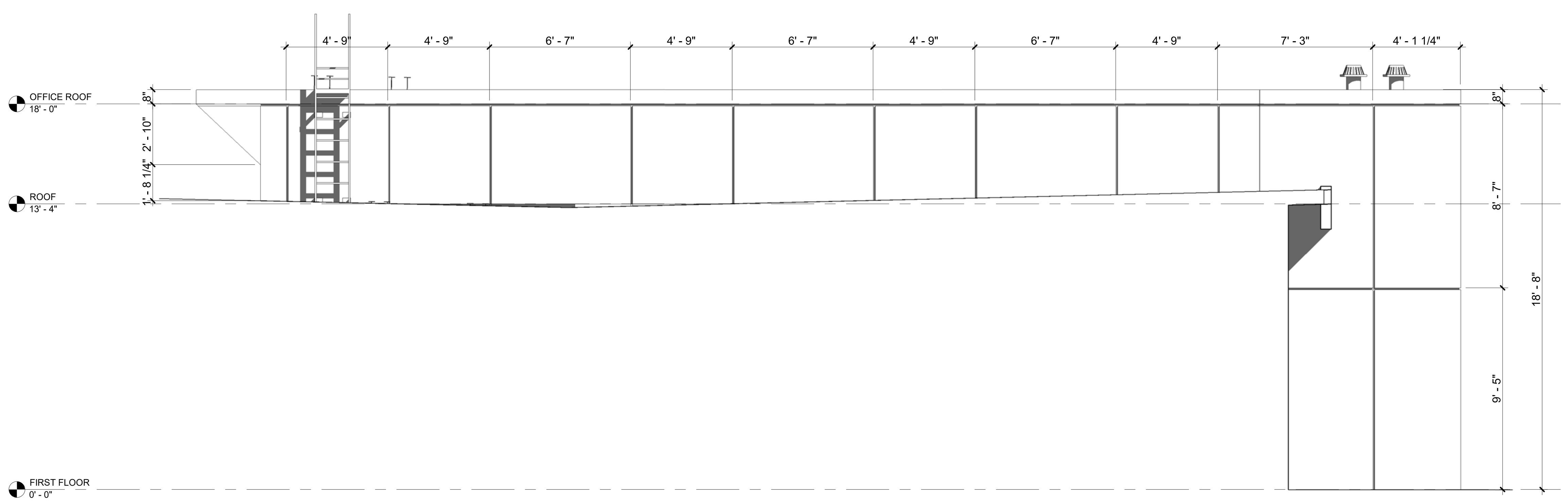
A5.0



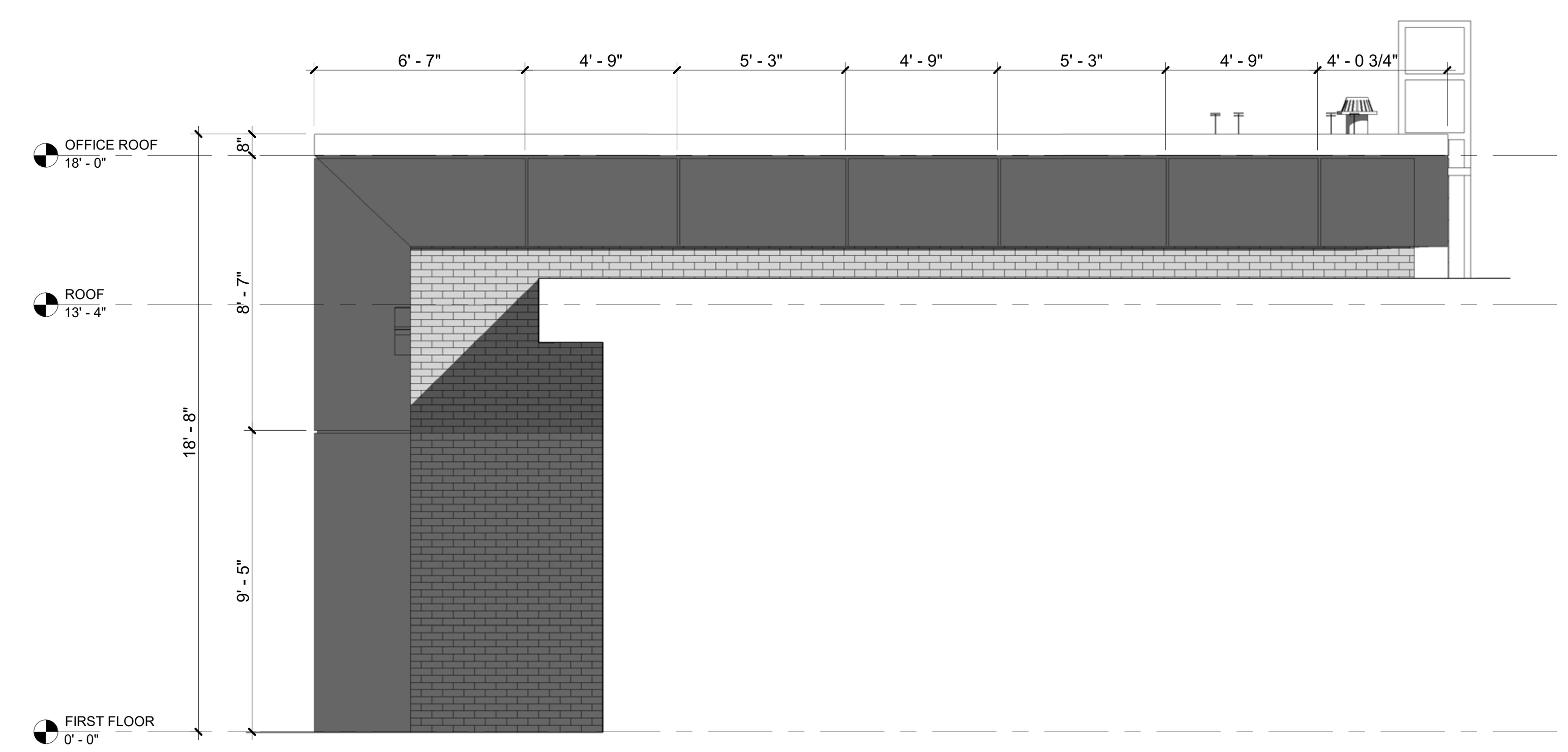
1 NORTH ELEVATION_OFFICES
1/4" = 1'-0"



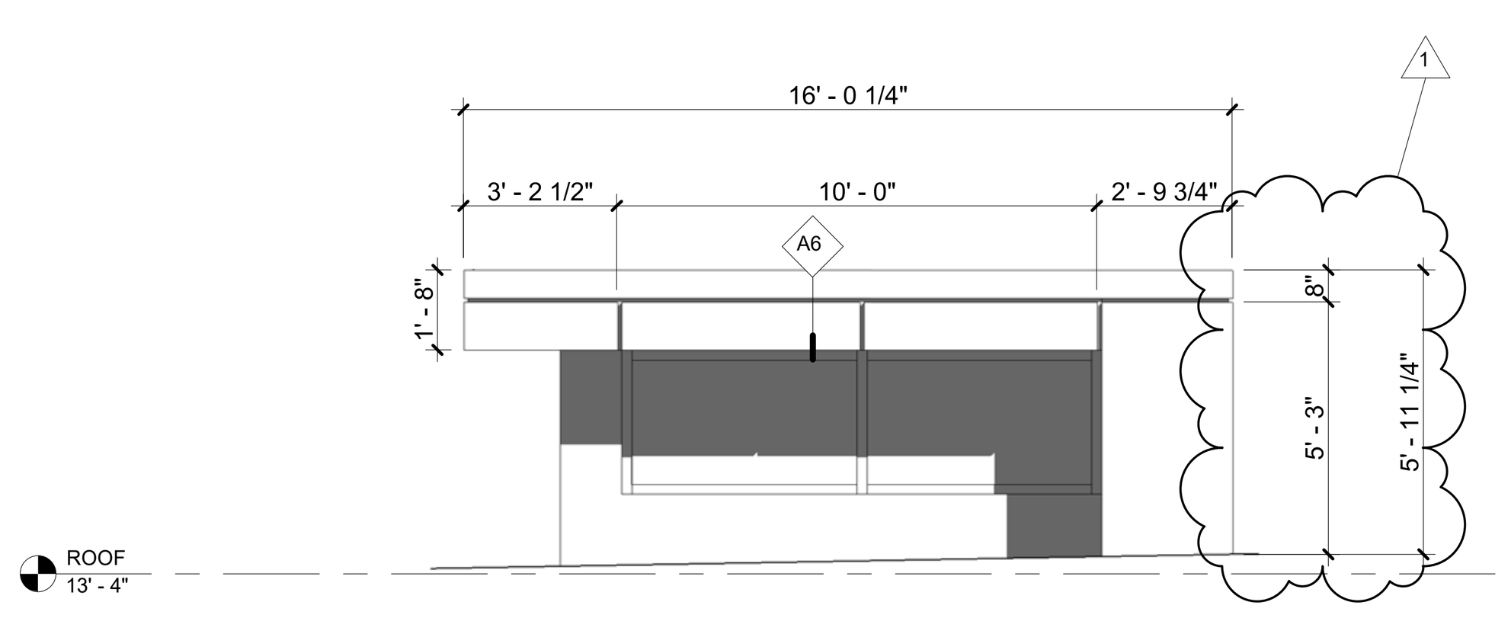
2 EAST ELEVATION_OFFICES
1/4" = 1'-0"



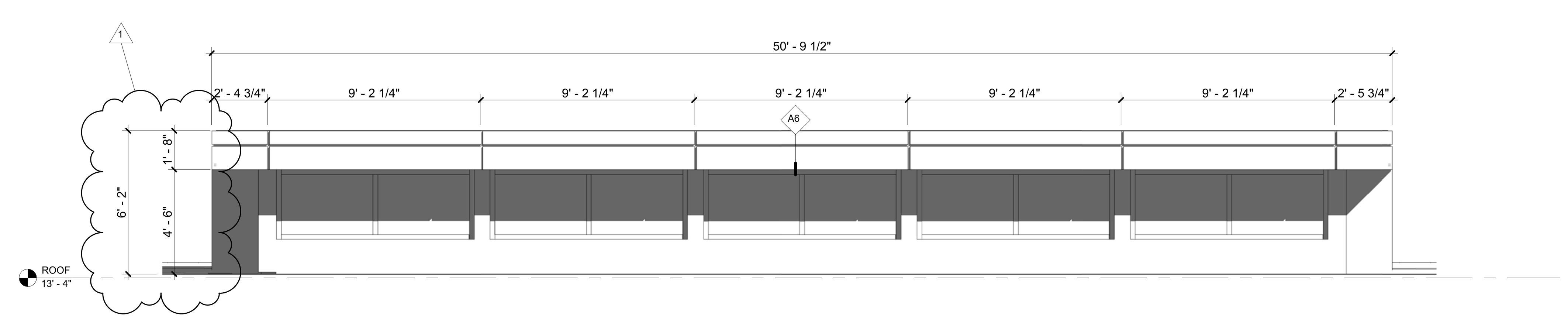
3 SOUTH ELEVATION_OFFICES
1/4" = 1'-0"



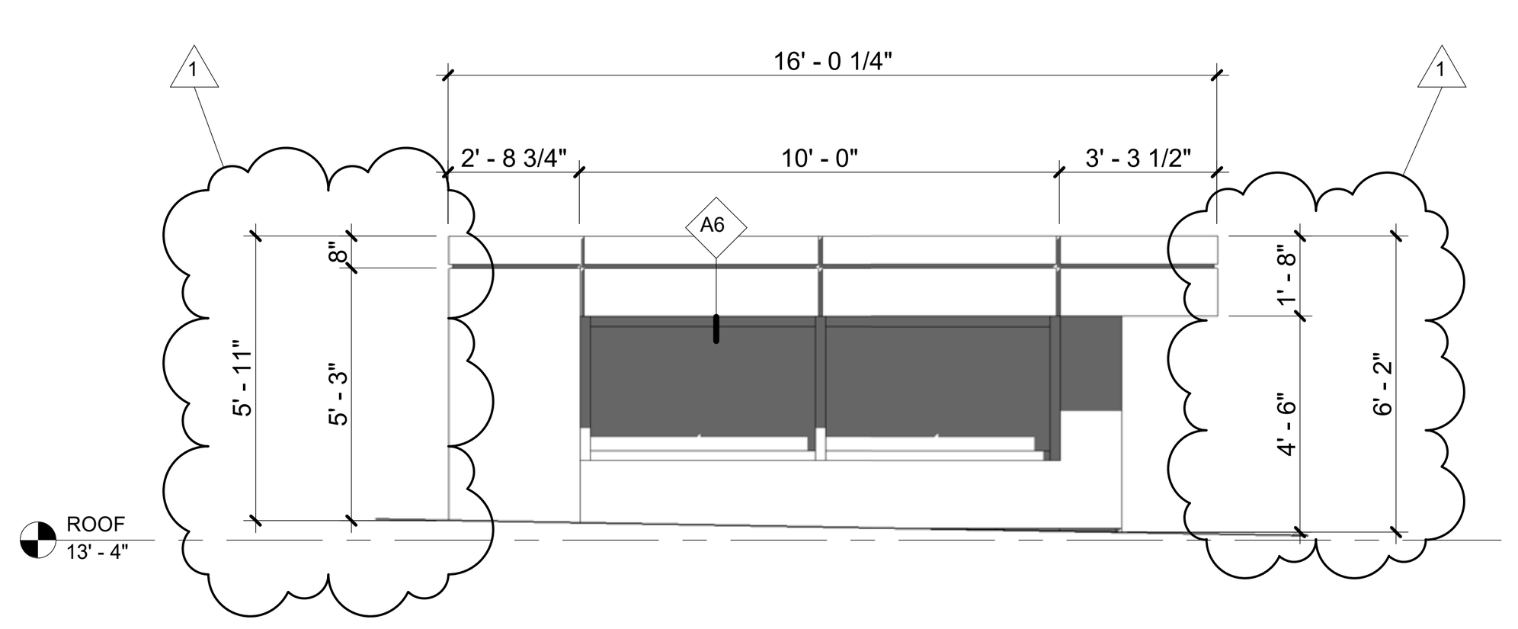
4 WEST ELEVATION_OFFICES
1/4" = 1'-0"



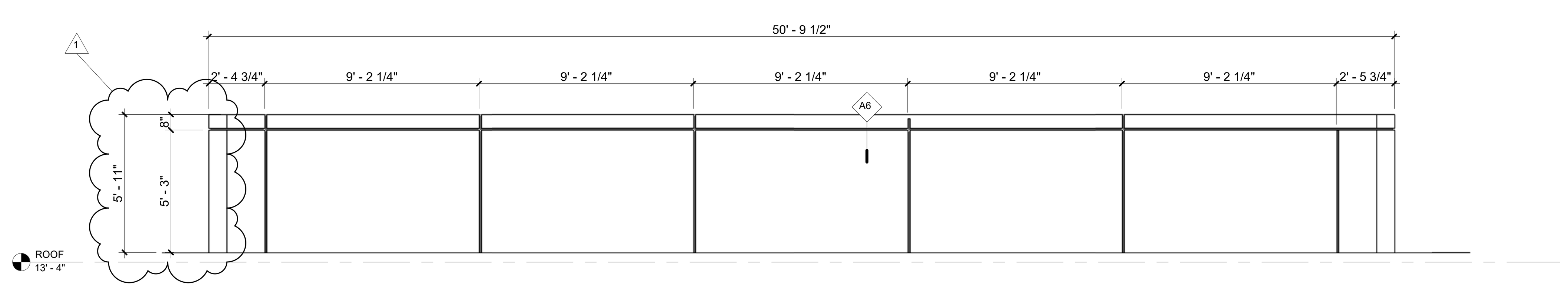
5 NORTH ELEVATION_CLERESTORY
1/4" = 1'-0"



6 EAST ELEVATION_CLERESTORY
1/4" = 1'-0"



7 SOUTH ELEVATION_CLERESTORY
1/4" = 1'-0"



8 WEST ELEVATION_CLERESTORY
1/4" = 1'-0"

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RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION
15480 THREE OAKS RD.
THREE OAKS, MI 49128

ALUMINIUM COMPOSITE CLADDING LAYOUT

JOB NUMBER 21-346
DATE 03.22.22

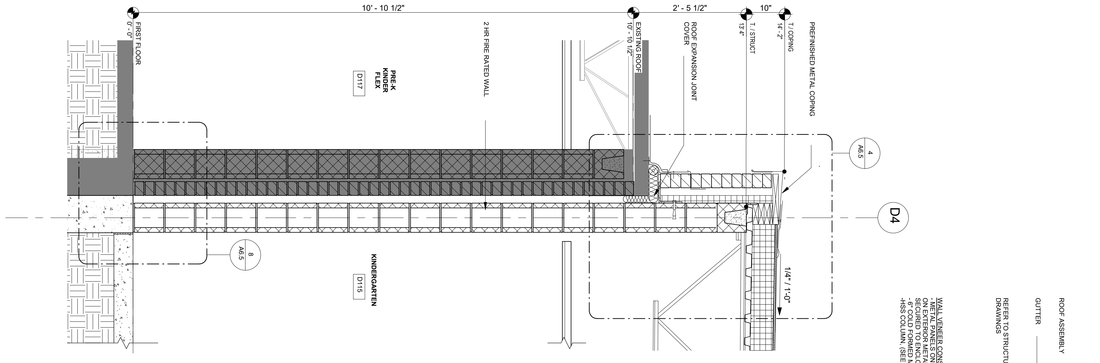
REVISIONS:
03.31.22 ADD. 1

STATE OF MICHIGAN
John G. Cordogan
Architect
No.
1301035955
LICENSED ARCHITECT

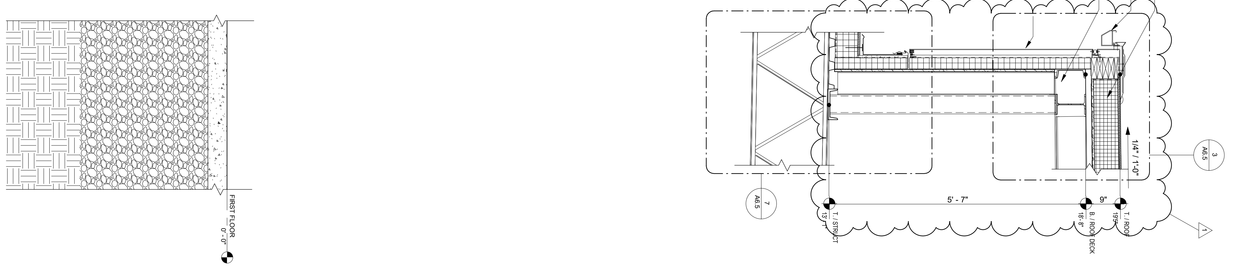
CD BID SET

A5.2

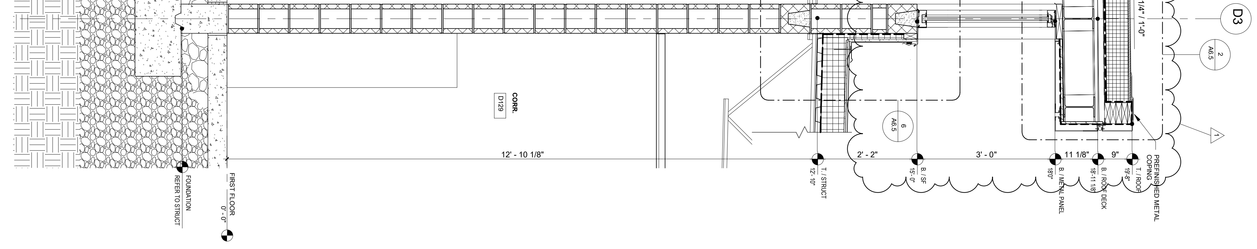
6 WALL SECTION AT EXISTING BUILDING - WEST
3/4" = 1'-0"



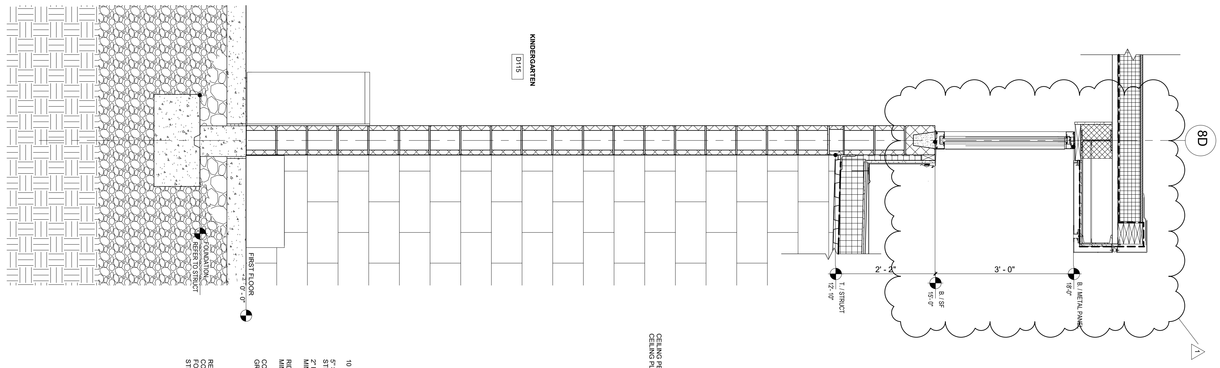
5 WALL SECTION AT CLERESTORY - WEST
3/4" = 1'-0"



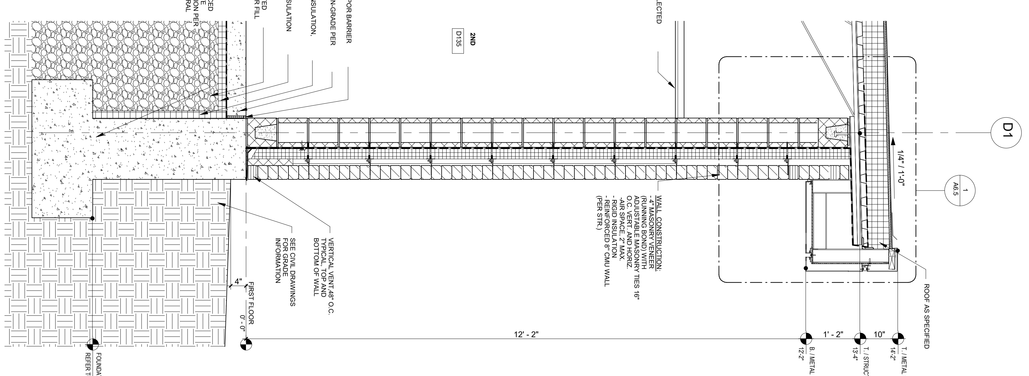
4 WALL SECTION CLERESTORY - EAST
3/4" = 1'-0"



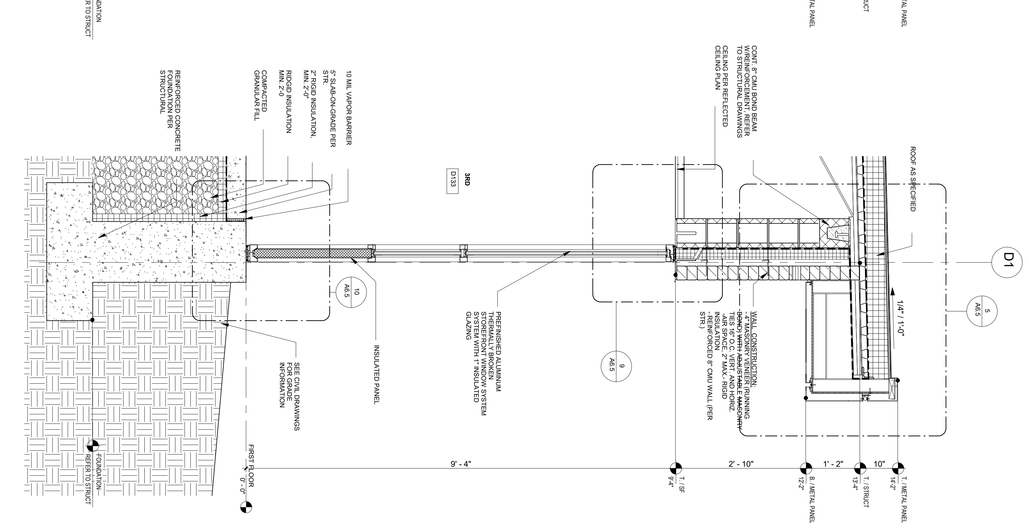
3 WALL SECTION CLERESTORY - NORTH
3/4" = 1'-0"



2 WALL SECTION
3/4" = 1'-0"



1 WALL SECTION
3/4" = 1'-0"



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REVISIONS:
ADD. 1 — 03.31.22

DATE: 03.22.22

JOB NUMBER: 21-346

WALL SECTIONS

SCHOOL CONSOLIDATION

15480 THREE OAKS RD.

THREE OAKS, MI 49128

RIVER VALLEY SCHOOL DISTRICT

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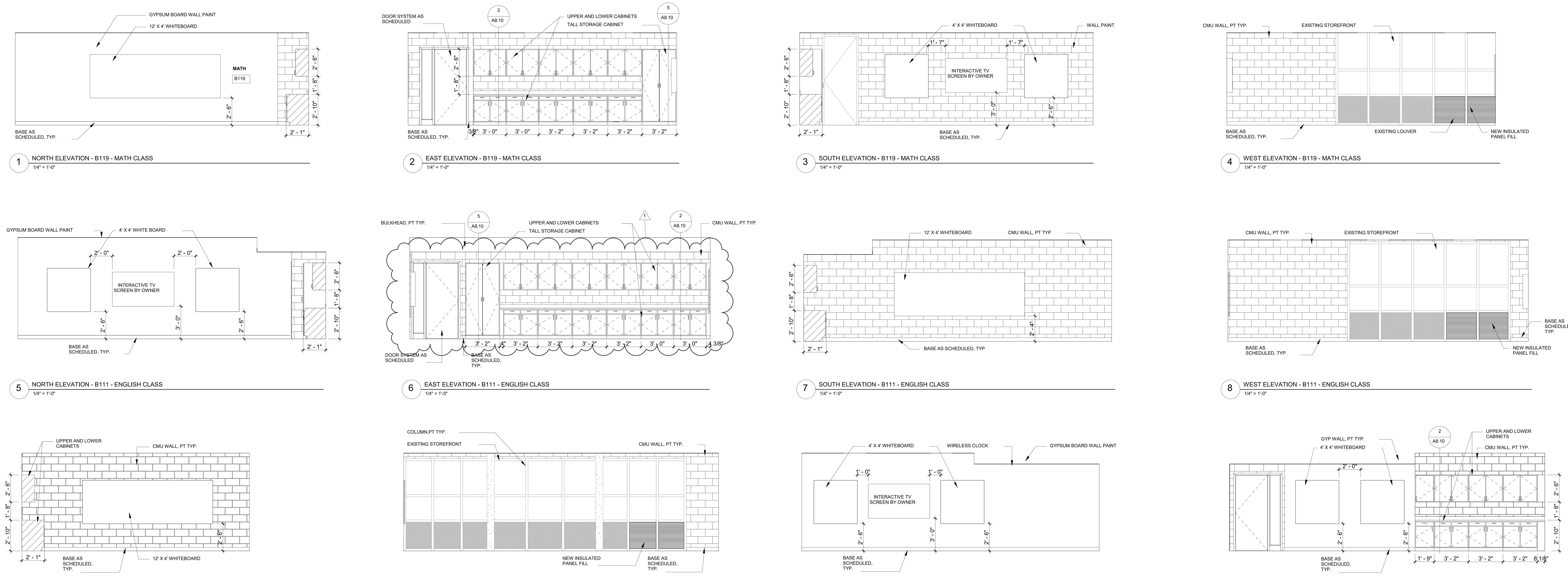
STATE OF MICHIGAN
LICENSED ARCHITECT
No. 1301039565
John C. Cordogan
Architect



1 NORTH ELEVATION - B119 - MATH CLASS
1/4" = 1'-0"

2 EAST ELEVATION - B119 - MATH CLASS
1/4" = 1'-0"

3 SOUTH ELEVATION - B119 - MATH CLASS
1/4" = 1'-0"

4 WEST ELEVATION - B119 - MATH CLASS
1/4" = 1'-0"

5 NORTH ELEVATION - B111 - ENGLISH CLASS
1/4" = 1'-0"

6 EAST ELEVATION - B111 - ENGLISH CLASS
1/4" = 1'-0"

7 SOUTH ELEVATION - B111 - ENGLISH CLASS
1/4" = 1'-0"

8 WEST ELEVATION - B111 - ENGLISH CLASS
1/4" = 1'-0"

9 NORTH ELEVATION - C120 SPEED CLASS
1/4" = 1'-0"

10 EAST ELEVATION - C120 - SPEED CLASS
1/4" = 1'-0"

11 SOUTH ELEVATION - C120 - SPEED CLASS
1/4" = 1'-0"

12 WEST ELEVATION - C120 - SPED CLASS
1/4" = 1'-0"

GENERAL NOTES

1. COORDINATE CASEWORK DIMENSIONS WITH ARCHITECTURAL PLANS. FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION.
2. ALL UPPER CABINETS SHALL MATCH LOWER CABINETS IN WIDTH, U.N.O.
3. ALL EXPOSED SURFACES OF CASEWORK, CABINETRY, SHELVING, END PANELS, HARDWARE AND SUPPORT BRACKETS SHALL BE FINISHED.
4. WHERE CABINETS RUN WALL-TO-WALL, PROVIDE EQUAL FILLER STRIP AT EACH END.
5. COORDINATE MOUNTING DIMENSIONS OF MAGNETIC MARKER BOARDS, GLASS MARKER BOARDS, TACK BOARDS, CLOCKS, SPEAKERS, EQUIPMENT, ETC... WITH OWNER.
6. PROVIDE ALL REQUIRED IN-WALL BLOCKING AND BACKING FOR ALL WALL-MOUNTED CASEWORK, COUNTERTOPS, BACKSPLASHES, MAGNETIC MARKER BOARDS, GLASS MARKER BOARDS, CLOCKS, SPEAKERS, EQUIPMENT, ETC...
7. PROVIDE PAINT STRIPING AND LOGOS ON WALLS AS SHOWN IN DOCUMENTS. FINAL ARTWORK / DESIGN SUBJECT TO CHANGE.

COORDINATE FINISHED FACE DIMENSIONS OF STRUCTURAL COLUMNS, SHAFTS, ETC. PROTRUDING FROM WALLS WITH FINAL CASEWORK AND COUNTERTOP LAYOUTS PRIOR TO FABRICATION. IT IS EXPECTED THAT CASEWORK AND COUNTERTOPS MAY NEED TO BE SCRIBED, NOTCHED AND / OR FITTED AROUND THESE PROTRUSIONS IN SOME AREAS. FIELD CUTTING AND PATCHING OF CASEWORK WILL NOT BE ACCEPTED. TYPICAL AT ALL CASEWORK AND COUNTERTOP LOCATIONS.

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RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION
15480 THREE OAKS RD.
THREE OAKS, MI 49128

ENLARGED PLANS & ELEVATIONS - H.S. TYP. CLASSROOM

JOB NUMBER 21-346
DATE 03.22.22

REVISIONS:
ADD. 1 03.31.22

STATE OF MICHIGAN
John G. Cordogan Architect
No. 1301035955
LICENSED ARCHITECT

CD BID SET

A8.2

CORDOGAN CLARK

RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION

15480 THREE OAKS RD.
THREE OAKS, MI 49128

ENLARGED PLANS & ELEVATIONS - E.S. ART & MEDIA CENTER

JOB NUMBER 21-346

DATE 03.22.22

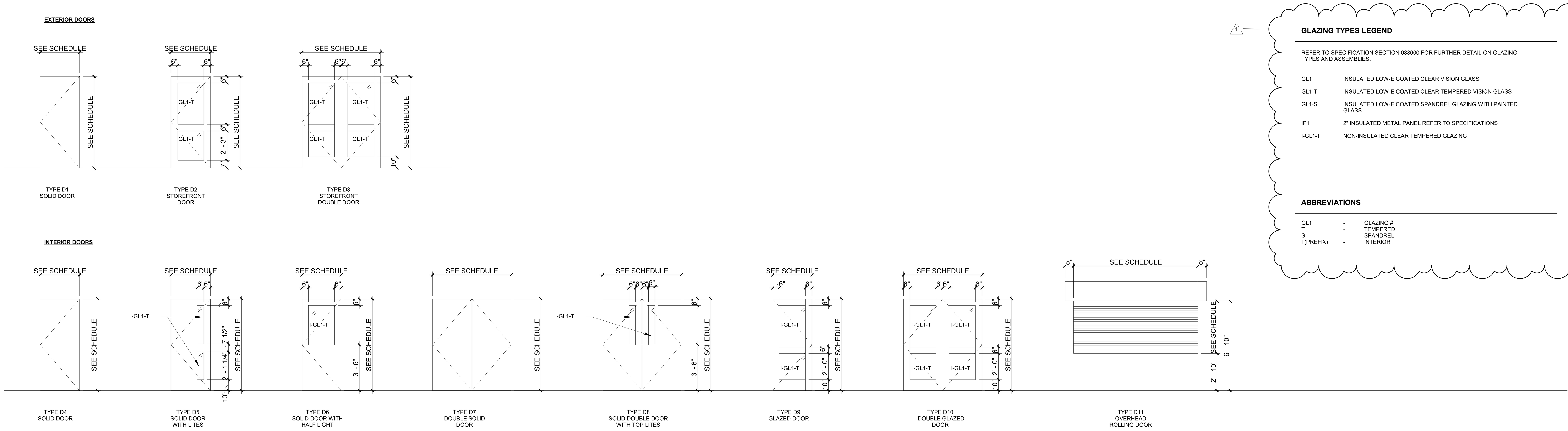
REVISIONS: ADD. 1 03.31.22

John G. Cordogan Architect No. 1301035955 — State of Michigan Licensed Architect

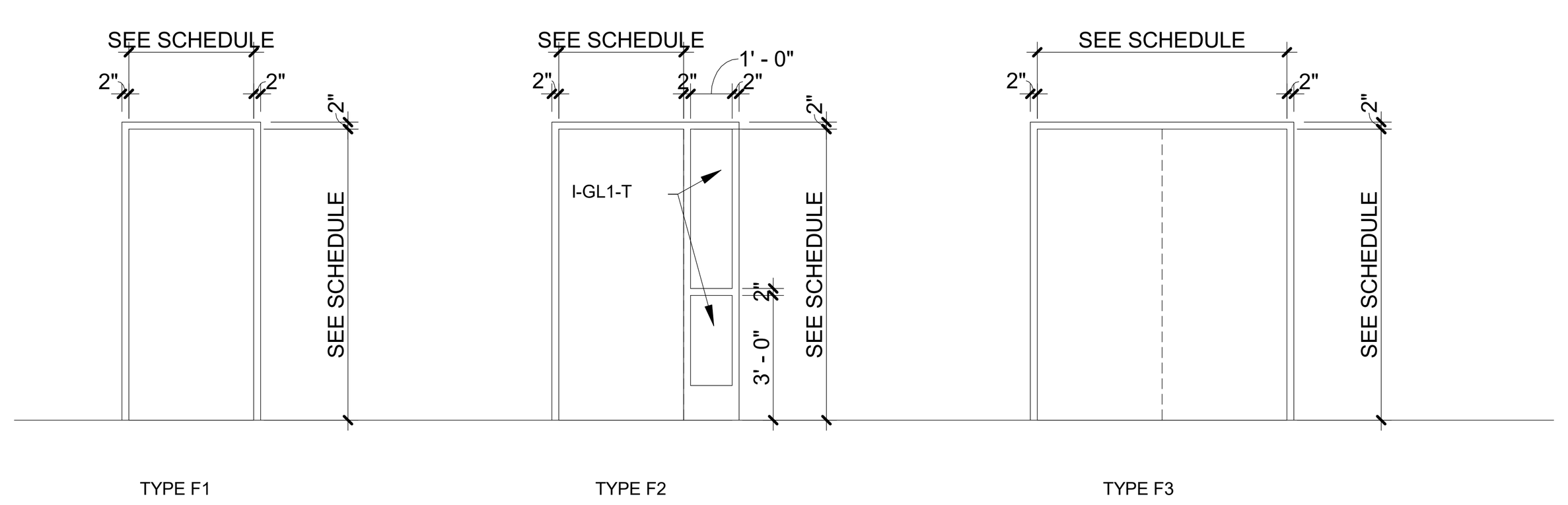
CD BID SET

A8.8

3/30/2022 12:50:56 PM



DOOR TYPE LEGEND
1/4" = 1'-0"



FRAME TYPE LEGEND
1/4" = 1'-0"

GLAZING TYPES LEGEND

REFER TO SPECIFICATION SECTION 088000 FOR FURTHER DETAIL ON GLAZING TYPES AND ASSEMBLIES.

GL1	INSULATED LOW-E COATED CLEAR VISION GLASS
GL1-T	INSULATED LOW-E COATED CLEAR TEMPERED VISION GLASS
GL1-S	INSULATED LOW-E COATED SPANDREL GLAZING WITH PAINTED GLASS
IP1	2" INSULATED METAL PANEL REFER TO SPECIFICATIONS
I-GL1-T	NON-INSULATED CLEAR TEMPERED GLAZING

ABBREVIATIONS

GL1 - GLAZING #
T - TEMPERED
S - SPANDREL
I (PREFIX) - INTERIOR

DOOR & FRAME GENERAL NOTES

1. REFER TO SPECIFICATION SECTION 081113 FOR INFORMATION REGARDING HOLLOW METAL DOORS AND FRAMES.
2. REFER TO SPECIFICATION SECTION 081416 FOR INFORMATION REGARDING WOOD DOORS.
3. REFER TO SPECIFICATION SECTION 084113 FOR INFORMATION REGARDING ALUMINUM DOORS.
4. ALL EXISTING HOLLOW METAL FRAMES AND DOORS WITHIN RENOVATED ROOMS TO BE PAINTED.

DOOR & FRAME LEGEND

EX	EXISTING TO REMAIN
AL	ALUMINUM
GL	SOLID GLAZING
HM	HOLLOW METAL
PF	PREFINISHED
PT	PAINT
ST	STAIN - PREFINISHED
WD	SOLID CORE WOOD
SS	STAINLESS STEEL

DOOR SCHEDULE

	DOOR						FRAME			DETAILS				
DOOR NO.	W	H	T	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	SILL DETAIL	HEAD DETAIL	JAMB DETAIL	Door Hardware	REMARKS
A114	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F1	HM	PT	7 / A9.1	10 / A9.1	11 / A9.1	11	
A122	6' - 0"	7' - 0"	1 3/4"	D7	WD	ST	F3	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	17	
A123	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	14	
A124	3' - 0"	7' - 0"	1 3/4"	D4	HM	PT	F1	HM	PF	7 / A9.1	8 / A9.1	9 / A9.1	19	
A125	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	19	
A127	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	10 / A9.1	11 / A9.1	19	
A128	3' - 0"	7' - 0"	1 3/4"	D5	WD	ST	F1	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	19	
A129	3' - 0"	7' - 0"	1 3/4"	D5	WD	ST	F1	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	19	
A134	6' - 0"	7' - 0"	1 3/4"	D7	WD	ST	F3	HM	PT	7 / A9.1	10 / A9.1	11 / A9.1	9	
A134A	6' - 0"	7' - 0"	1 3/4"	D7	WD	ST	F3	HM	PT	7 / A9.1	10 / A9.1	11 / A9.1	9	
B103	3' - 4"	8' - 0"	1 3/4"	D6	WD	ST	EX	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	15	FRAME TO REMAIN - DOOR REPLACEMENT ONLY
B107	3' - 0"	7' - 0"	1 3/4"	D4	HM	PT	F1	HM	PF	7 / A9.1	8 / A9.1	9 / A9.1	12	
B110	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	21	
B111	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	21	
B119	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	21	
C100	5' - 4"	7' - 0"	1 3/4"	D10	AL / GL	PF	F3	AL	PF	12 / A9.1	15 / A9.1	16 / A9.1	7	
C101	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F1	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	11	
C103	3' - 0"	7' - 0"	1 3/4"	D4	HM	PT	F1	HM	PF	7 / A9.1	8 / A9.1	9 / A9.1	19	
C104	3' - 0"	7' - 0"	1 3/4"	D4	HM	PT	F1	HM	PF	7 / A9.1	8 / A9.1	9 / A9.1	11	
C107	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	14	
C120	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	10 / A9.1	11 / A9.1	12	
C121	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F1	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	16	
C122	3' - 0"	7' - 0"	1 3/4"	D4	HM	PT	F1	HM	PF	7 / A9.1	10 / A9.1	11 / A9.1	12	
D103	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	19	
D103A	3' - 0"	7' - 0"	1 3/4"	D4	HM	ST	F1	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	22	2HR FIRE RATING
D104	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F1	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	29	
D105	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F1	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	26	
D108	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F1	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	20	
D113	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F1	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	29	
D114	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F1	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	12	
D115	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F1	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	12	
D115A	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	19	
D116	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F1	HM	PT	7 / A9.1	10 / A9.1	11 / A9.1	28	
D117	3' - 0"	7' - 0"	1 3/4"	D4	HM	PT	F1	HM	PF	7 / A9.1	10 / A9.1	11 / A9.1	12	
D118	3' - 0"	7' - 0"	1 3/4"	D4	HM	ST	F1	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	27	2HR FIRE RATING
D122	6' - 0"	7' - 0"	1 3/4"	D10	AL / GL	PF	F3	AL	PF	12 / A9.1	15 / A9.1	16 / A9.1	2	
D124	3' - 0"	7' - 0"	1 3/4"	D4	HM	ST	F1	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	27	2HR FIRE RATING
D125	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F1	HM	PT	7 / A9.1	10 / A9.1	11 / A9.1	28	
D126	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F1	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	12	
D126A	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	19	
D128	5' - 4"	7' - 0"	1 3/4"	D10	AL / GL	PF	F3	AL	PF	12 / A9.1	13 / A9.1	14 / A9.1	8	
D129	8' - 0"	7' - 0"	1 3/4"	D7	HM	ST	F3	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	10	2HR FIRE RATING
D129A	8' - 0"	7' - 0"	1 3/4"	D7	HM	ST	F3	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	10	2HR FIRE RATING
D130	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	19	
D130A	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F1	HM	PT	7 / A9.1	10 / A9.1	11 / A9.1	18	
D131	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	19	
D132	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	19	
D132A	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F1	HM	PT	7 / A9.1	10 / A9.1	11 / A9.1	18	
D133	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	19	
D134	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	19	
D134A	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F1	HM	PT	7 / A9.1	10 / A9.1	11 / A9.1	18	
D135	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	19	
D136	3' - 0"	7' - 0"	1 3/4"	D9	AL / GL	PF	F1	AL	PF	12 / A9.1	15 / A9.1	16 / A9.1	23	
D136A	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	24	
D137	3' - 0"	7' - 0"	1 3/4"	D9	AL / GL	PF	F1	AL	PF	12 / A9.1	15 / A9.1	14 / A9.1	6	
D137A	3' - 0"	7' - 0"	1 3/4"	D9	AL / GL	PF	F1	AL	PF	12 / A9.1	15 / A9.1	14 / A9.1	5	
D139	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	10 / A9.1	11 / A9.1	14	
D140	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	10 / A9.1	11 / A9.1	14	
D141	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F2	HM	PT	7 / A9.1	10 / A9.1	11 / A9.1	14	
D142	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F1	HM	PT	7 / A9.1	10 / A9.1	11 / A9.1	25	
D144	3' - 0"	7' - 0"	1 3/4"	D4	WD	ST	F1	HM	PT	7 / A9.1	8 / A9.1	9 / A9.1	13	
E1	3' - 0"	7' - 0"	1 3/4"	D2	AL / GL	PF	EX	AL	PF	4 / A9.1	5 / A9.1	6 / A9.1	3	FRAME TO REMAIN. INSULATED EXTERIOR DOOR
E2	3' - 0"	7' - 0"	1 3/4"	D1	HM	PT	F1	HM	PF	1 / A9.1	2 / A9.1	3 / A9.1	4	INSULATED EXTERIOR DOOR AND FRAME
E3	5' - 4"	7' - 0"	1 3/4"	D3	AL / GL	PF	F3	AL	PF	4 / A9.1	5 / A9.1	6 / A9.1	1	INSULATED EXTERIOR DOOR AND FRAME
E4	5' - 4"	7' - 0"	1 3/4"	D3	AL / GL	PF	F3	AL	PF	4 / A9.1	5 / A9.1	6 / A9.1	1	INSULATED EXTERIOR DOOR AND FRAME
OH1	10' - 0"	4' - 0"	2"	D11	SS	PF	-	ST	PF	17 / A9.1	18 / A9.1	19 / A9.1	30	
OH2	10' - 0"	4' - 0"	2"	D11	SS	PF	-	ST	PF	17 / A9.1	18 / A9.1	19 / A9.1	30	

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RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION
15480 THREE OAKS RD.
THREE OAKS, MI 49128

DOOR/FRAME SCHEDULE & TYPES

JOB NUMBER 21-346
DATE 03.22.22

REVISIONS:
03.31.22 ADD. 1

STATE OF MICHIGAN
John G. Cordogan Architect No. 1301035955
LICENSED ARCHITECT

CD BID SET

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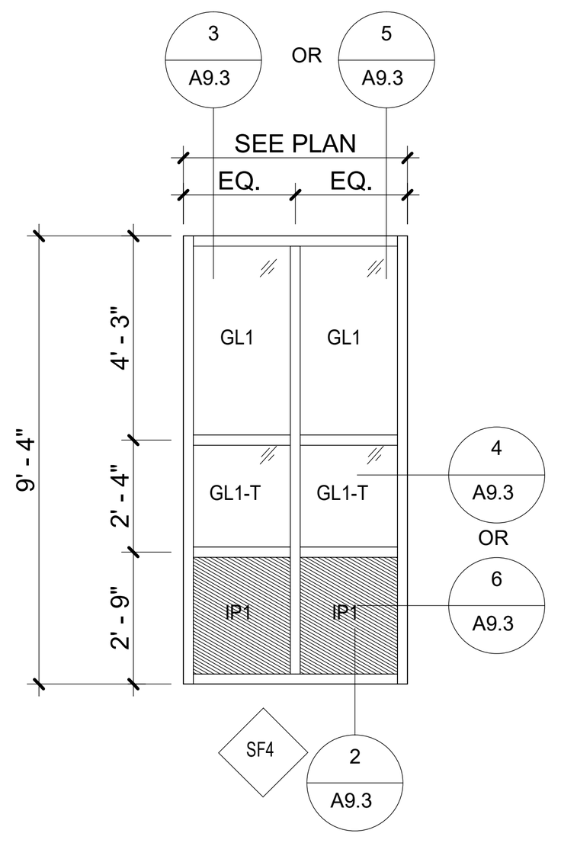
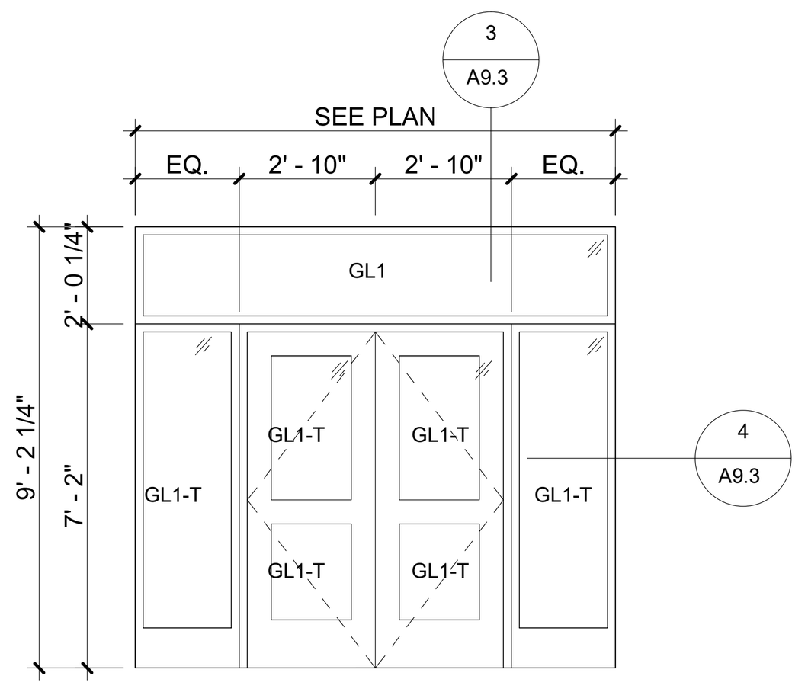
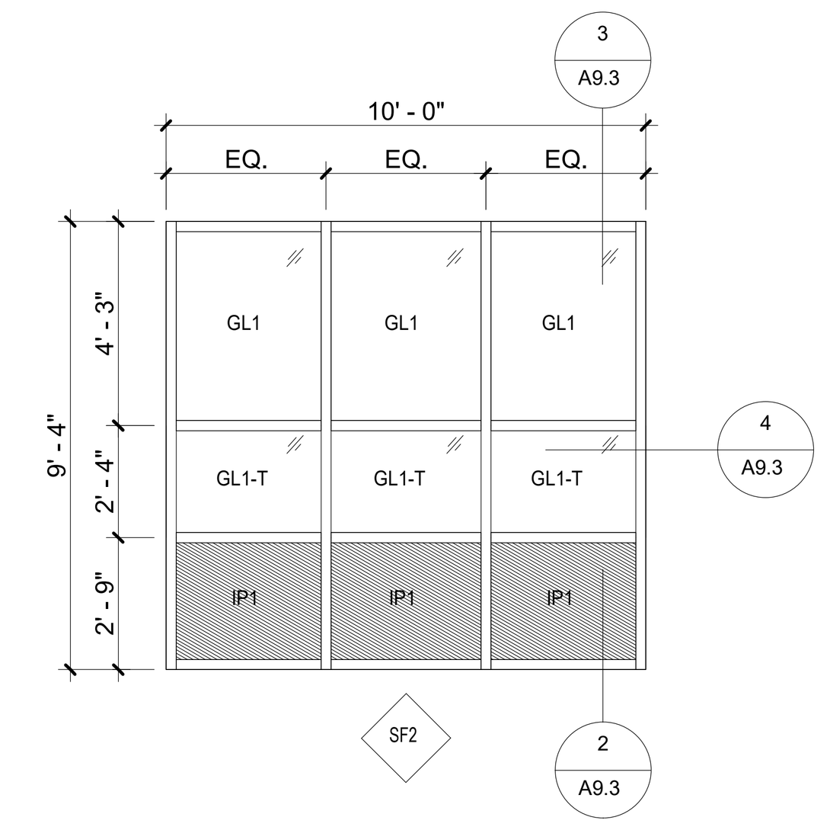


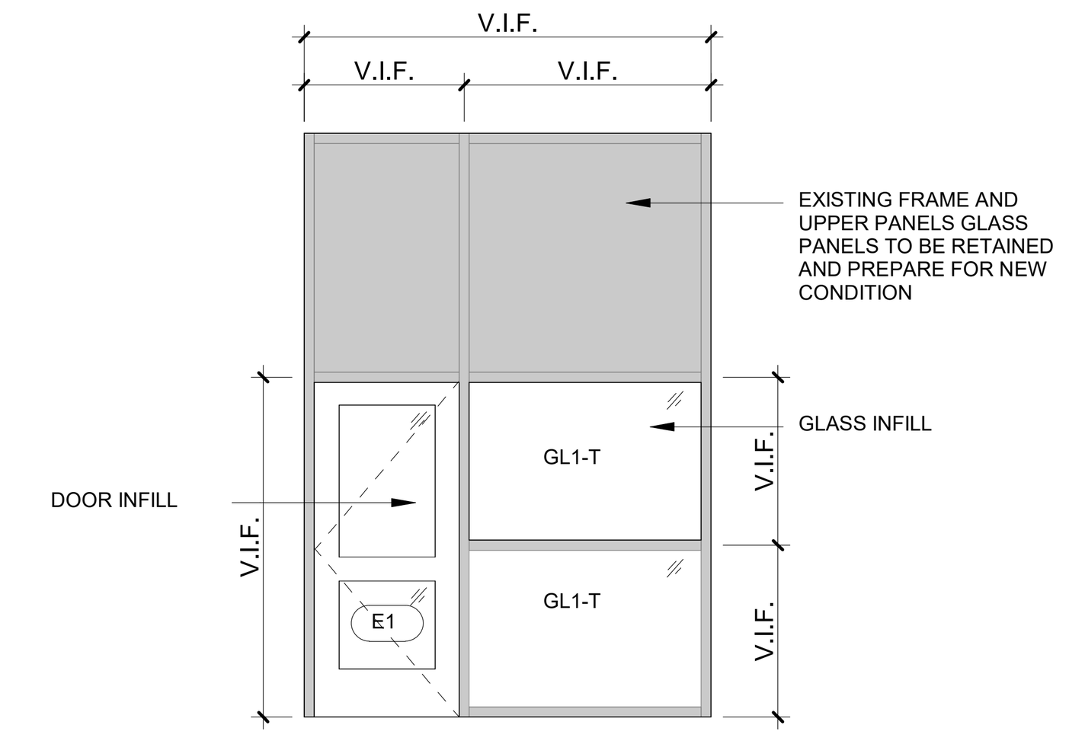
4 SF4 X 9
1/4" = 1'-0"



3 SF3 X 2
1/4" = 1'-0"



2 SF2 X 6
1/4" = 1'-0"



1 SF1 X 1
1/4" = 1'-0"

EXTERIOR GLAZING NOTES

1. ALL GLASS BELOW 3'-0" A.F.F. IS TO BE TEMPERED.
2. ALL GLASS ADJACENT TO A DOOR IS TO BE TEMPERED.
3. ALL GLASS WHERE THE BOTTOM EDGE IS LESS THAN 5'-0" ABOVE STAIR LANDINGS IS TO BE TEMPERED.
4. DIMENSIONS ARE APPROXIMATE. FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION. SHOP DRAWINGS DIMENSIONS WILL NOT QUALIFY UNLESS THEY ARE CERTIFIED FIELD DIMENSIONS.
5. COORDINATE LOCATIONS OF SPANDREL GLAZING WITH EXTERIOR ELEVATIONS, SECTIONS AND DETAILS.
6. PROVIDE BACKER ROD AND SEALANT AT ALL FRAMES AS REQUIRED.

GLAZING TYPES LEGEND

REFER TO SPECIFICATION SECTION 088000 FOR FURTHER DETAIL ON GLAZING TYPES AND ASSEMBLIES.

GL1	INSULATED LOW-E COATED CLEAR VISION GLASS
GL1-T	INSULATED LOW-E COATED CLEAR TEMPERED VISION GLASS
GL1-S	INSULATED LOW-E COATED SPANDREL GLAZING WITH PAINTED GLASS
IP1	2" INSULATED METAL PANEL REFER TO SPECIFICATIONS
I-GL1-T	NON-INSULATED CLEAR TEMPERED GLAZING

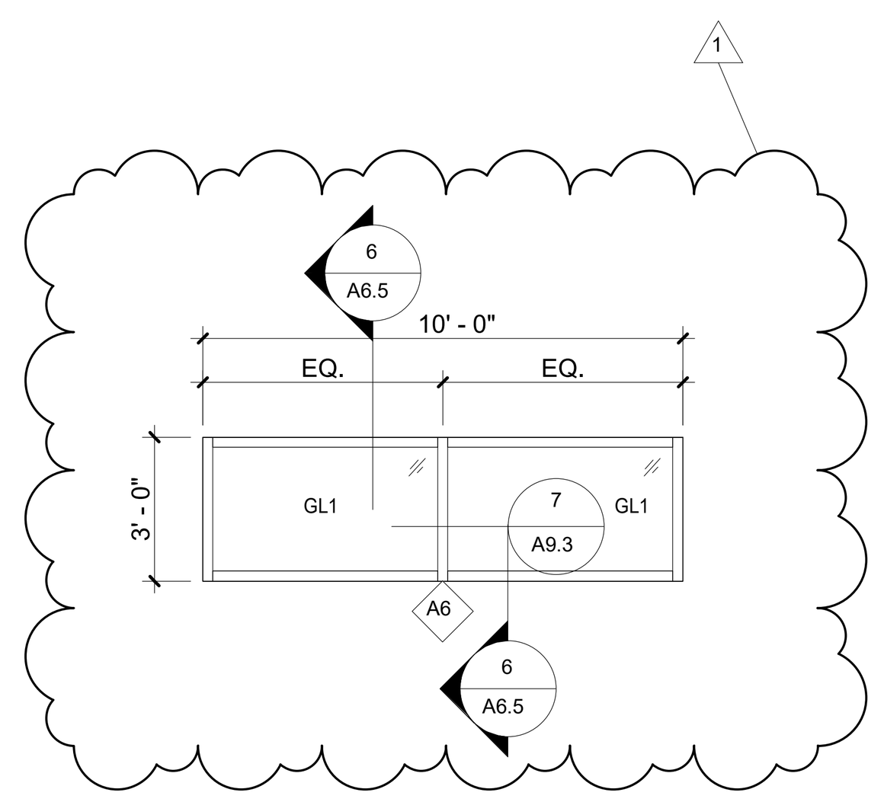
ABBREVIATIONS

GL1	-	GLAZING #
T	-	TEMPERED
S	-	SPANDREL
I (PREFIX)	-	INTERIOR

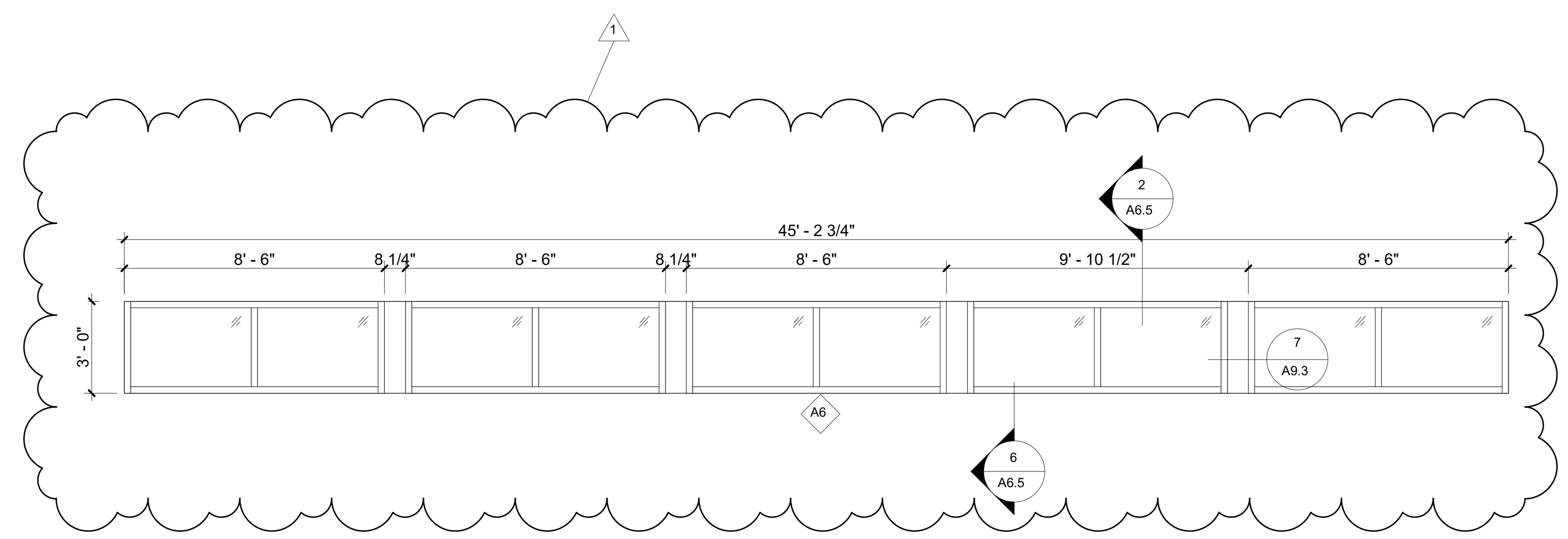
ALTERNATES KEYNOTES

WORK RELATED WITH THE FOLLOWING ALTERNATES:

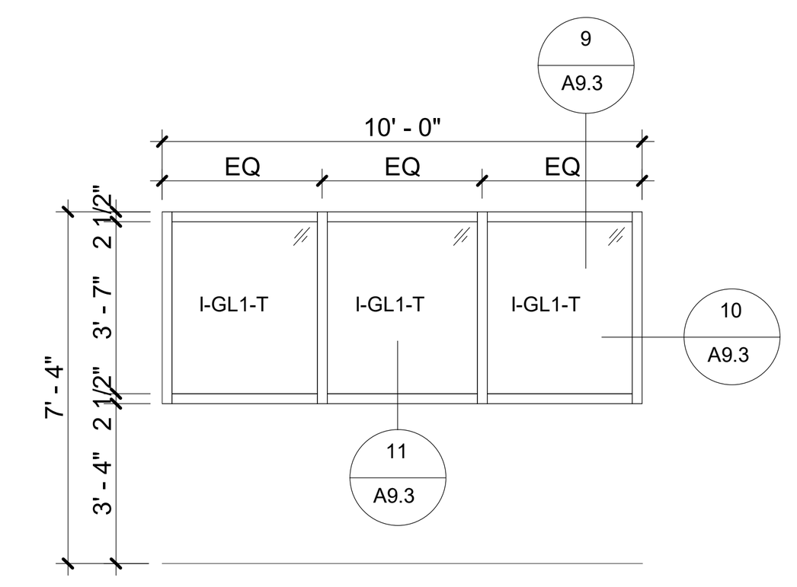
- A1 ROOF TOP UNITS IN LIEU OF UNIT VENTILATION AT EXISTING.
- A2 SITE WORK ON WEST SIDE OF THE BUILDING.
- A3 ADDITIONAL PAVEMENT REPLACEMENT.
- A4 TENNIS COURT SURFACE REPLACEMENT.
- A5 SINKS IN ELEMENTARY CLASSROOMS.
- A6 CLERESTORY OMISSION.



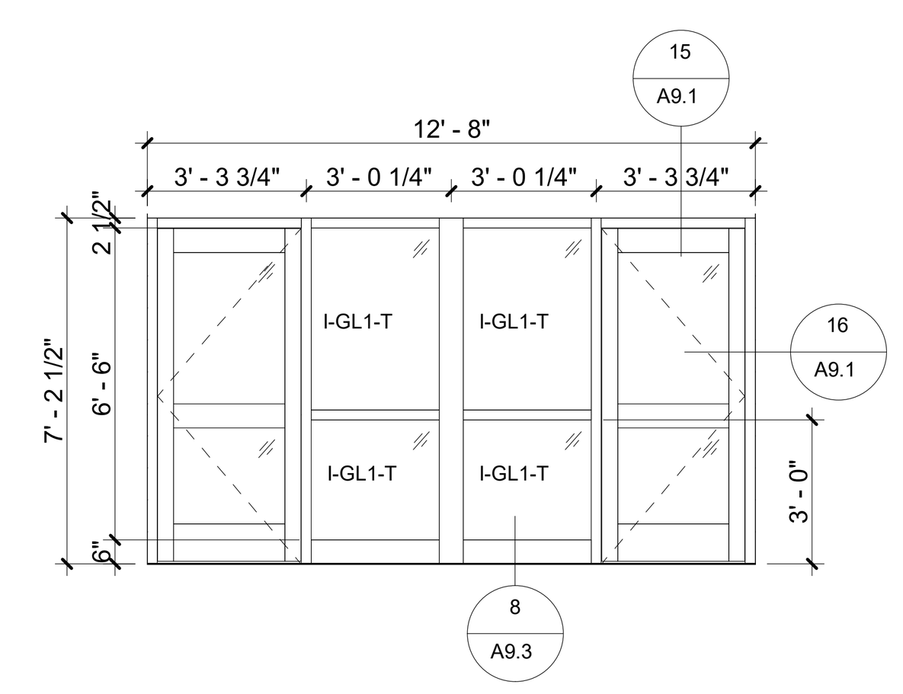
6 SF6 X 2
1/4" = 1'-0"



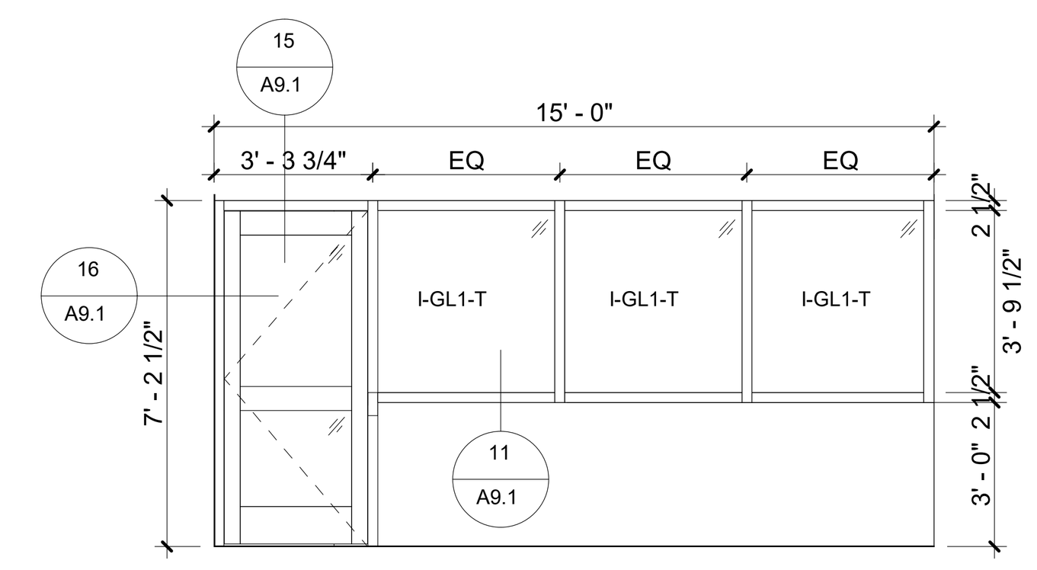
5 SF5 X 1
1/4" = 1'-0"



9 SF9 - ART ROOM DISPLAY
1/4" = 1'-0"



8 SF8 - RECEPTION WEST WALL
1/4" = 1'-0"



7 SF7 - RECEPTION SOUTH WALL
1/4" = 1'-0"

CORDOGAN CLARK

RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION
15480 THREE OAKS RD.
THREE OAKS, MI 49128

STOREFRONT & WINDOW TYPES

JOB NUMBER 21-346
DATE 03.22.22

REVISIONS:
ADD. 1 03.31.22

STATE OF MICHIGAN
John G. Cordogan Architect No. 1301035955
LICENSED ARCHITECT

CD BID SET

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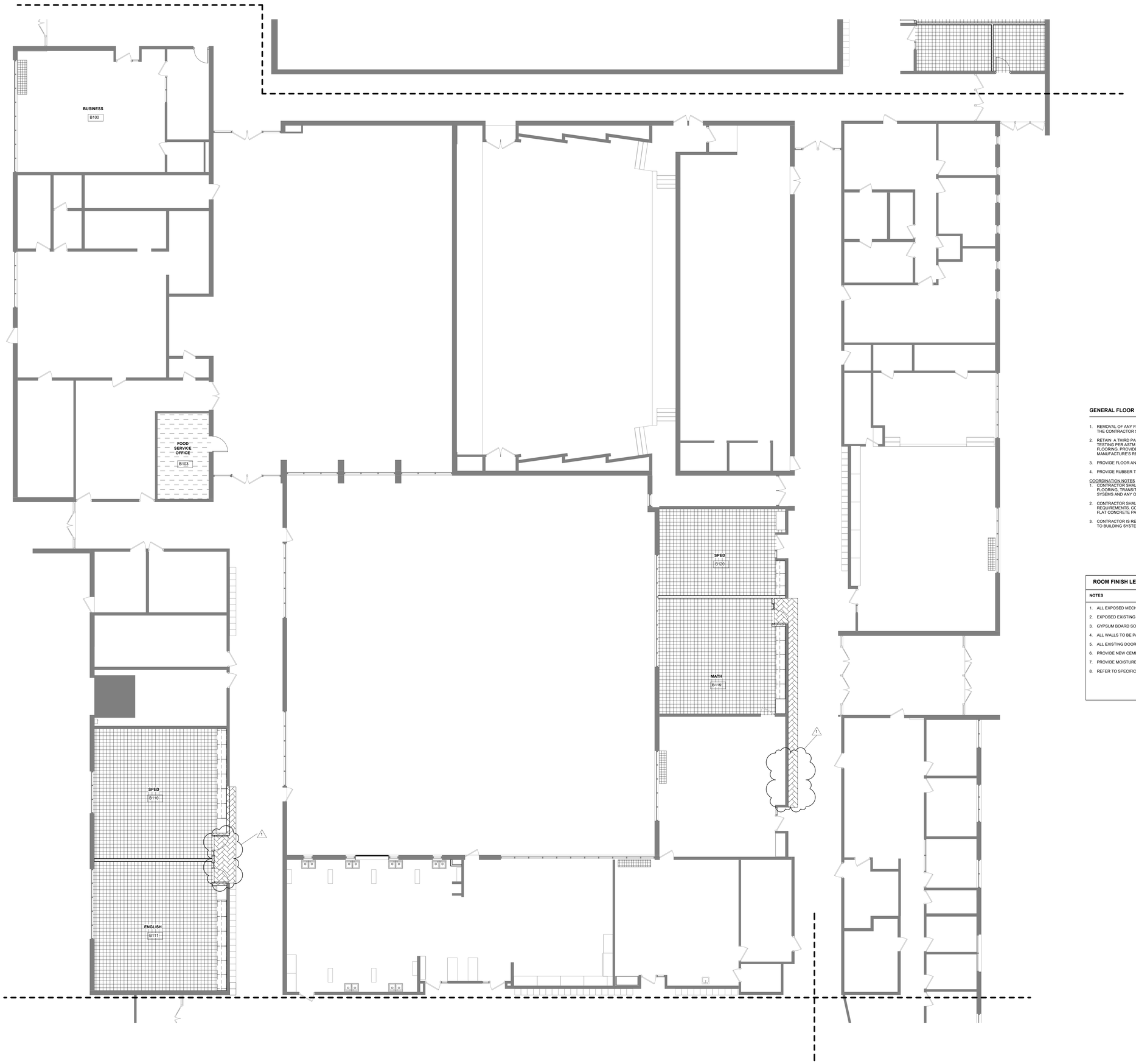


FLOOR FINISH LEGEND

	WCPT**: WALK-OFF-CARPET TILE
	CPT**: CARPET TILE
	RES**: RESINOUS FLOORING SYSTEM
	LVT-01**: LUXURY VINYL TILE
	VCT-01**: VINYL TILE
	SC SEALED CONCRETE
	TRZ TERRAZZO PATCHING
	EXISTING TO REMAIN

LEGEND			
ACT	ACOUSTICAL CEILING TILE	PCT	PORCELAIN CERAMIC TILE
AL	PREFINISHED ALUMINUM	PT	PAINT
CMU	CONCRETE MASONRY UNIT	RUB	RUBBER BASE
CONC	CONCRETE	SC	STAINED CONCRETE
CPT	CARPET TILE POWERBOND	TRZ	TERRAZZO
CT	CERAMIC TILE	VCT	VINYL TILE
EXP	EXPOSED STRUCTURE	WCPT	WALK OFF CARPET TILE
RES	RESINOUS FLOORING	WD	WOOD
GL	GLAZING	ETR	EXISTING TO REMAIN
GYP	GYPSUM BOARD		
LVT	VINYL TILE / PLANK FLOOR		

GENERAL FLOOR PLAN NOTES

1. REMOVAL OF ANY FLOOR ADHESIVES, LEVELING ANY OTHER FLOOR PREPARATION REQUIRED BY THE CONTRACTOR SHALL BE PROVIDED WITHIN THIS CONTRACT
2. RETAIN A THIRD PARTY TESTING COMPANY TO PERFORM IN SITU RELATIVE HUMIDITY MOISTURE TESTING PER ASTM F2170ON ALL SLABS INDICATED TO RECIEVE MOISTURE SENSITIVE FLOORING. PROVIDE MOISTURE MITIGATION AS REQUIRED TO MEET FLOORING & ADHESIVE MANUFACTURE'S REQUIREMENTS.
3. PROVIDE FLOOR AND BASE UNDER AND BEHIND ALLMOVABLE EQUIPMENT
4. PROVIDE RUBBER TRANSITION AT ALL FLOOR MATERIAL CHANGES

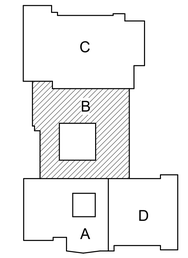
COORDINATION NOTES

1. CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS FOR A COMPLETE INSTALLATION OF FLOORING, TRANSITIONS, RESINOUS WALL BASE, MOISTURE TESTING, MOISTURE MITIGATION SYSEMS AND ANY OTHER SCOPE IDENTIFIED ON THIS SHEET
2. CONTRACTOR SHALL GRIND AND LEVEL CONCRETE PATCHES AS REQUIRED TO MANUFACTURE'S REQUIREMENTS. CONTRACTOR SHALL TAKE REASONABLE CARE IN PROVIDING A TROWELED, FLAT CONCRETE PATCH WITH ADJACENTEDGES ON CONCRETE PATCHES
3. CONTRACTOR IS RESPONSIBLE FOR REVIEWING SITE CONDITIONS, INCLUDING BUT NOT LIMITED TO BUILDING SYSTEMS THAT MAY AFFECT FLOORING. (FLOOR DRAINS, ETC.)

ROOM FINISH LEGEND & NOTES

NOTES

1. ALL EXPOSED MECHANICAL DUCTWORK AND PIPING TO BE PAINTED TO MATCH CEILING
2. EXPOSED EXISTING STRUCTURE AND ANY NEW UNISTRUT TO BE PAINTED TO MATCH CEILING
3. GYPSUM BOARD SOFFITS AND CEILINGS ARE TO BE PAINTED PT-1. UNLESS OTHERWISE NOTED
4. ALL WALLS TO BE PAINTED PT-1 UNLESS OTHERWIDE NOTED
5. ALL EXISTING DOOR FRAMES/DOORS TO BE PAINTED UNLESS OTHERWIDE NOTED
6. PROVIDE NEW CEMENTITIOUS BACKER BOARD AT ALL TILE WALLS
7. PROVIDE MOISTURE RESISTANT ACT ALL RESTROOMS
8. REFER TO SPECIFICATIONS FOR ACT TYPES



1 KEY PLAN
NOT TO SCALE

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Grand Rapids
820 Monroe Avenue, Suite 310 Grand Rapids, MI 49503
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RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION

15480 THREE OAKS RD.
THREE OAKS, MI 49128

FIRST FLOOR FINISH PLAN AREA B

JOB NUMBER 21-346

DATE 03.22.22

03.31.22

REVISIONS:
ADD. 1

STATE OF MICHIGAN
John G. Cordogan
Architect
No. 1301035955
LICENSED ARCHITECT

CD BID SET

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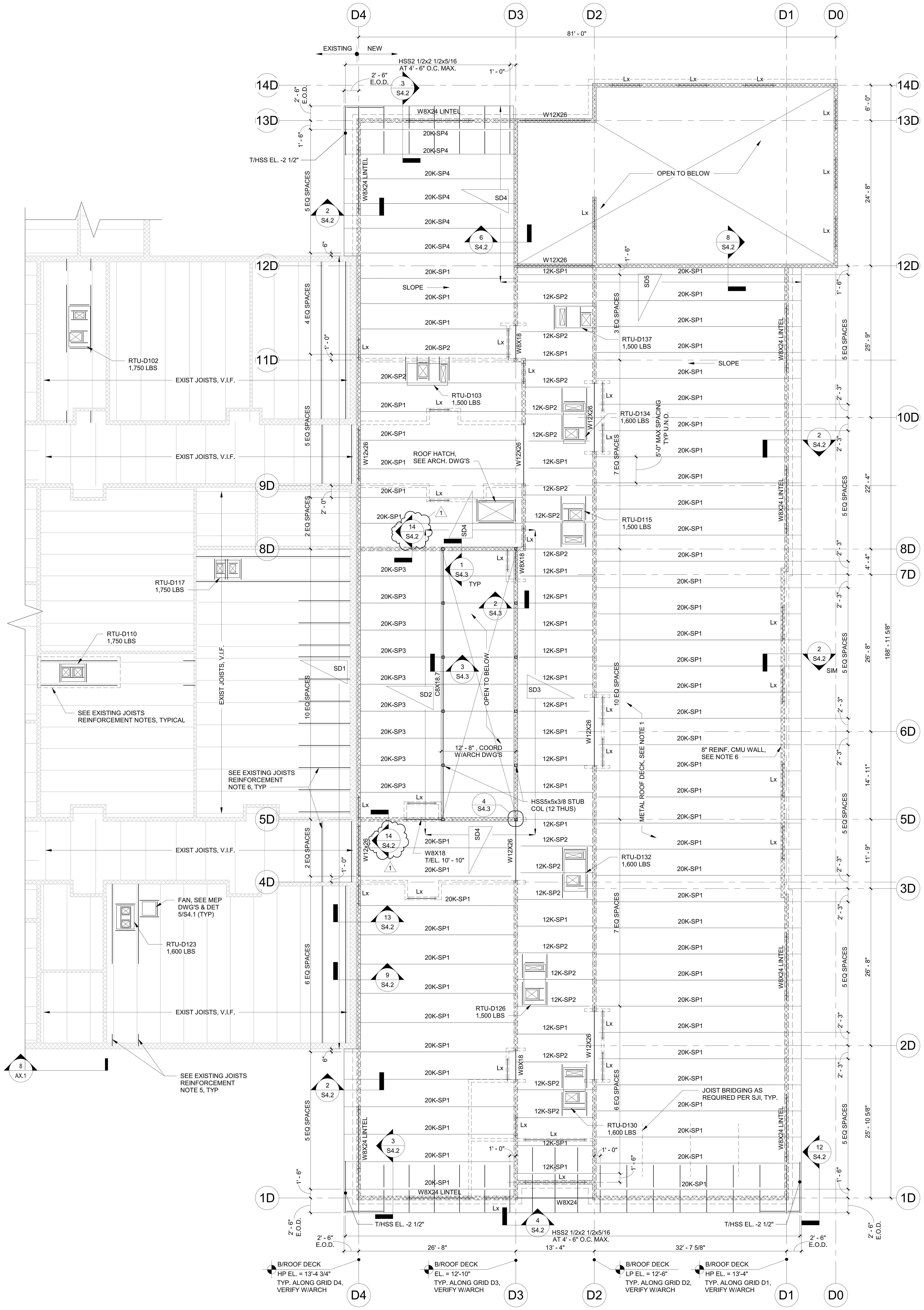
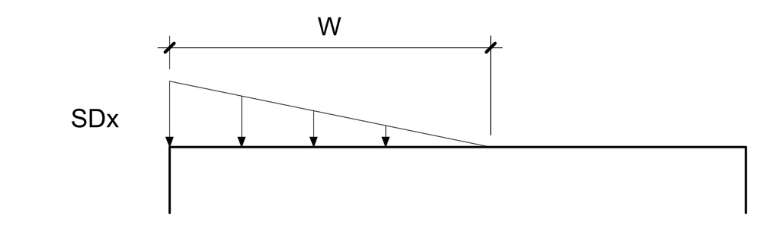
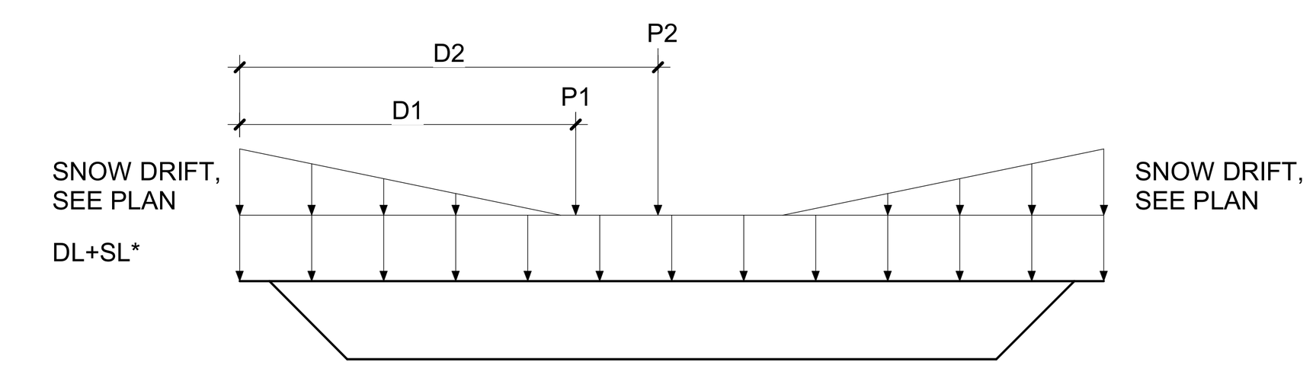


NORTH 1 ROOF FRAMING PLAN - AREA D
1/8" = 1'-0"



SNOW DRIFT LOADING DIAGRAM		
MARK	MAX. DRIFT (PSF)	W
SD1	20	6' - 6"
SD2	36	7' - 0"
SD3	45	8' - 9"
SD4	60	13' - 0"
SD5	63	19' - 0"



K-SP JOIST LOADING DIAGRAM

MARK	DL	SL*	P1 (LBS)		D1	P2	D2
	(PSF)	(PSF)	DL	SL		(LBS)	
SP1	25	38.5	-	-	-	-	-
SP2	25	38.5	SEE NOTE 2 BELOW				
SP3	25	38.5	2000	1500	14' - 4"	-	-
SP4	25	38.5	500	-	25' - 9"	-	-

NOTES:

1. * - DENOTES JOIST DESIGN ENGINEER TO INCLUDE SUPERIMPOSED UNIFORM LOAD FROM SNOW DRIFT IN ADDITION TO INDICATED SL, WHERE APPLICABLE
2. COORDINATE FINAL LOCATION OF MEP EQUIPMENT WITH MEP DRAWINGS. JOIST DESIGNER TO INCLUDE SUPERIMPOSED DEAD LOAD FROM MEP EQUIPMENT

ALTERNATE BID A6:

CLERESTORY IS BEING BID AS AN ALTERNATE. COORDINATE THE EXTENT WITH MEP AND ARCHITECTURAL DRAWINGS. CONTRACTOR TO INCLUDE ALL CLERESTORY PERTAINING STRUCTURE WITHIN THE ALTERNATE BID.

ALTERNATE BID A1:

RTU-D123 IS BEING BID AS AN ALTERNATE. COORDINATE THE EXTENT WITH MEP AND ARCHITECTURAL DRAWINGS. CONTRACTOR TO INCLUDE ALL REQUIRED REINFORCEMENT OF EXISTING STRUCTURE TO SUPPORT THE UNIT WITHIN THE ALTERNATE BID.

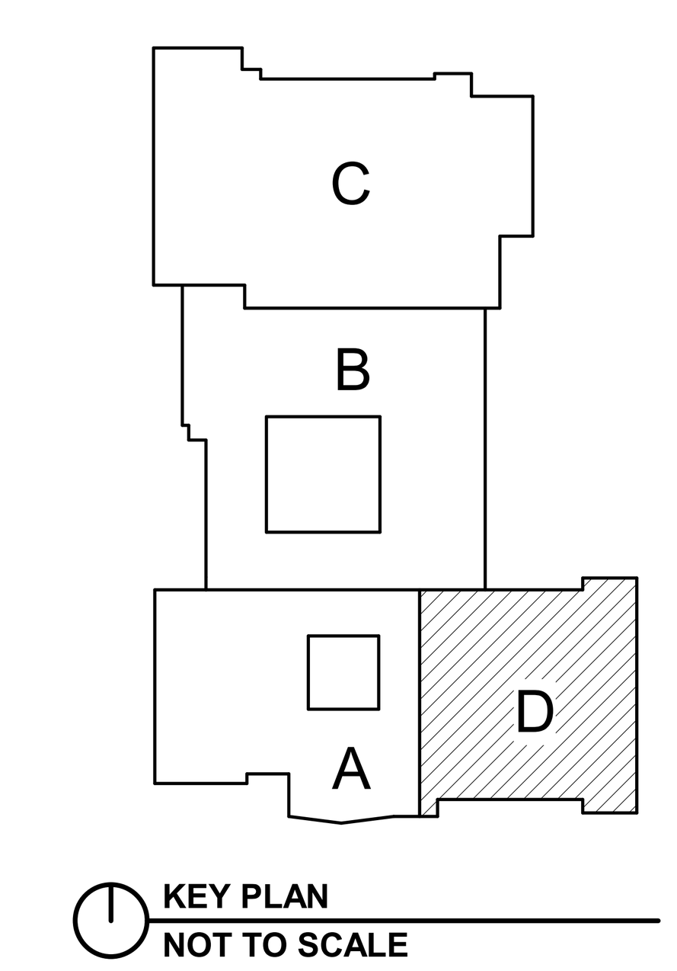
EXISTING JOISTS REINFORCEMENT NOTES:

1. ALL NEW MEP EQUIPMENT SHALL BE PLACED IN SUCH WAY TO ENGAGE AT LEAST 2 EXISTING JOIST AND THE LOAD TO BE SHARED EQUALLY.
2. CONTRACTOR TO COORDINATE LOCATION OF MEP EQUIPMENT WITH MEP AND ARCH DRAWINGS. FOR ANY DISCREPANCIES OR IF MEP EQUIPMENT WEIGHT EXCEEDS INDICATED WEIGHT ON THE DWG'S, CONTRACTOR SHOULD NOTIFY ARCHITECT/ENGINEER
3. ALL AFFECTED JOISTS SHALL BE REINFORCED AS PER DETAILS 5, 6 & 7/S4.1, TYPICAL UNO.
4. JOIST TOP AND BOTTOM CHORD SHALL BE REINFORCED PER 6/S4.1 IN THIS MANNER:
   - A. IF THE UNIT FALLS IN THE FIRST QUARTER OF THE SPAN, FIRST THIRD OF JOIST SHALL BE REINFORCED
   - B. IF THE UNIT FALLS IN THE SECOND QUARTER OF THE SPAN, FIRST HALF OF JOIST SHALL BE REINFORCED
   - C. IF THE UNIT FALLS IN THE MIDDLE OF THE SPAN, THE MIDDLE THIRD OF JOIST SHALL BE REINFORCED
   - D. FOR SPANS SHORTER THAN 15 FEET, REINFORCE THE ENTIRE SPAN
5. TOP CHORDS OF ALL EXISTING JOISTS RECEIVING NEW MEP EQUIPMENT SHALL BE REINFORCED WITH 5/8" DIA RODS SIM TO 6/S4.1 FOR FIRST 2 FEET FROM JOIST BEARING
6. EXISTING JOISTS THAT FALL WITHIN THE NEW SNOW DRIFT SHALL BE REINFORCED PER DETAIL 6/S4.1 IN THIS MANNER:
   - A. JOISTS PERPENDICULAR TO NEW ADDITION SHALL BE REINFORCED FOR A LENGTH OF 8 FEET STARTING FROM JOIST BEARING IMPACTED BY THE SNOW DRIFT
   - B. JOISTS PARALLEL TO NEW ADDITION THAT FALL WITHIN THE SNOW DRIFT FOOTPRINT SHALL BE REINFORCED FOR ENTIRE SPAN

NOTE: ALL EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY CONTRACTOR AND ALL DISCREPANCIES SHALL BE REPORTED TO AOR/EOR PRIOR TO FABRICATION, ERECTION AND CONSTRUCTION.

NOTES:

1. 1 1/2"x20GA. GALVANIZED WIDE RIB METAL ROOF DECK ATTACHED TO SUPPORTING MEMBERS WITH 36/4 PATTERN 5/8" WELD WITH (4) #10 TEK SCREWS SIDE LAP, VERIFY WELDING REQUIREMENTS WITH DECK MANUFACTURER
2. B/DECK ELEV. = SEE PLAN, VERIFY WITH ARCH.
3. ALL ROOF DECK OPENING SIZES AND LOCATIONS SHALL BE COORDINATED WITH ARCHITECTURAL AND MEP DRAWINGS. PROVIDE ADDITIONAL FRAMING STEEL AS REQUIRED PER DETAIL 1/S4.1, TYPICAL U.N.O.
4. CONTRACTOR TO COORDINATE LOCATION OF MEP EQUIPMENT WITH MEP AND ARCH DRAWINGS, SEE 1 & 2/S4.1 FOR FRAMING. FOR ANY DISCREPANCIES OR IF MEP EQUIPMENT WEIGHT EXCEEDS INDICATED WEIGHT ON THE DWG'S, CONTRACTOR SHOULD NOTIFY ARCHITECT/ENGINEER
5. ALL ROOF METAL DECK EDGES SHALL BE COORDINATED W/ARCH DWG'S
6. 8" CMU WALL WITH #5 VERTICALS AT 40" O.C. IN FULLY GROUTED CELLS
7. JOIST MANUFACTURER TO COORDINATE WITH MECHANICAL DWG'S FOR SIZE AND LOCATION OF DUCTWORK RUN THROUGH JOIST WEBBING AND TO MAKE SURE TO PROVIDE JOIST BRIDGING TO CLEAR ANY DUCTWORK
8. WALLS SHOWN ON THESE PLANS ARE STRUCTURAL LOAD BEARING OR SHEAR WALLS. ALL OTHER NON-STRUCTURAL WALLS ARE NOT SHOWN FOR CLARITY. SEE AND COORDINATE WITH ARCH. FOR LAYOUT OF ALL WALLS
9. "Lx" DENOTES STEEL LINTEL FOR OPENING BELOW. COORDINATE LOCATION WITH ARCHITECTURAL DRAWINGS AND SEE GENERAL NOTES FOR SIZES AND REQUIREMENTS
10. MISC. STEEL, WOOD OR CONCRETE REQUIRED BY OTHER DISCIPLINES MAY NOT BE INDICATED ON STRUCTURAL DRAWINGS



KEY PLAN
NOT TO SCALE

CORDOGAN CLARK
Aurora 960 Ridgeway Avenue, Aurora, IL 60506 Tel 630.896.4678 Fax 630.896.4987
Chicago 716 North Wells Street, Chicago, IL 60654 Tel 312.943.7300 Fax 312.943.4771

RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION
15480 THREE OAKS RD.
THREE OAKS, MI 49128

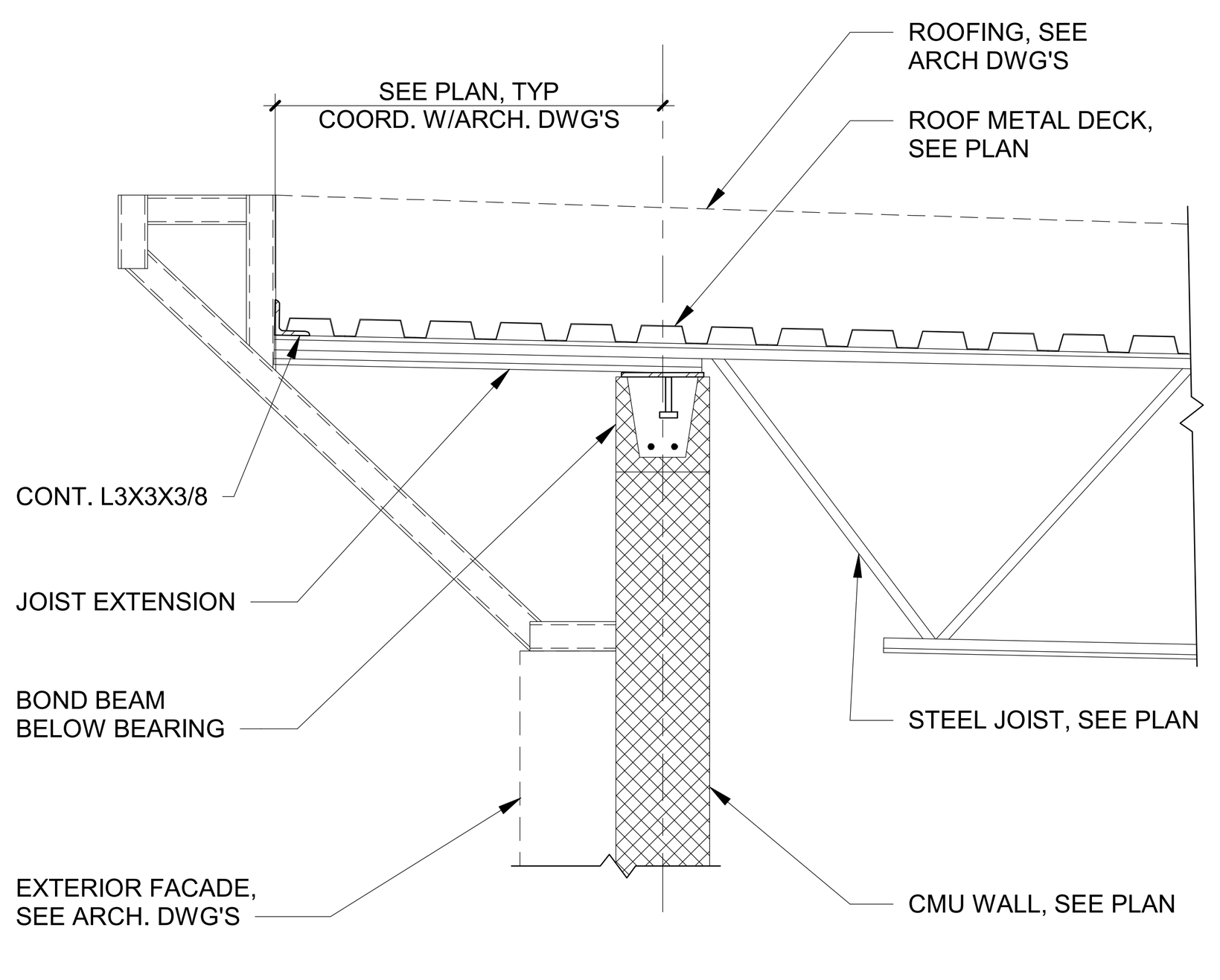
ROOF FRAMING PLAN - AREA D

JOB NUMBER 21-346
DATE 03.22.22
REVISIONS: ADDENDUM 001 03.31.22

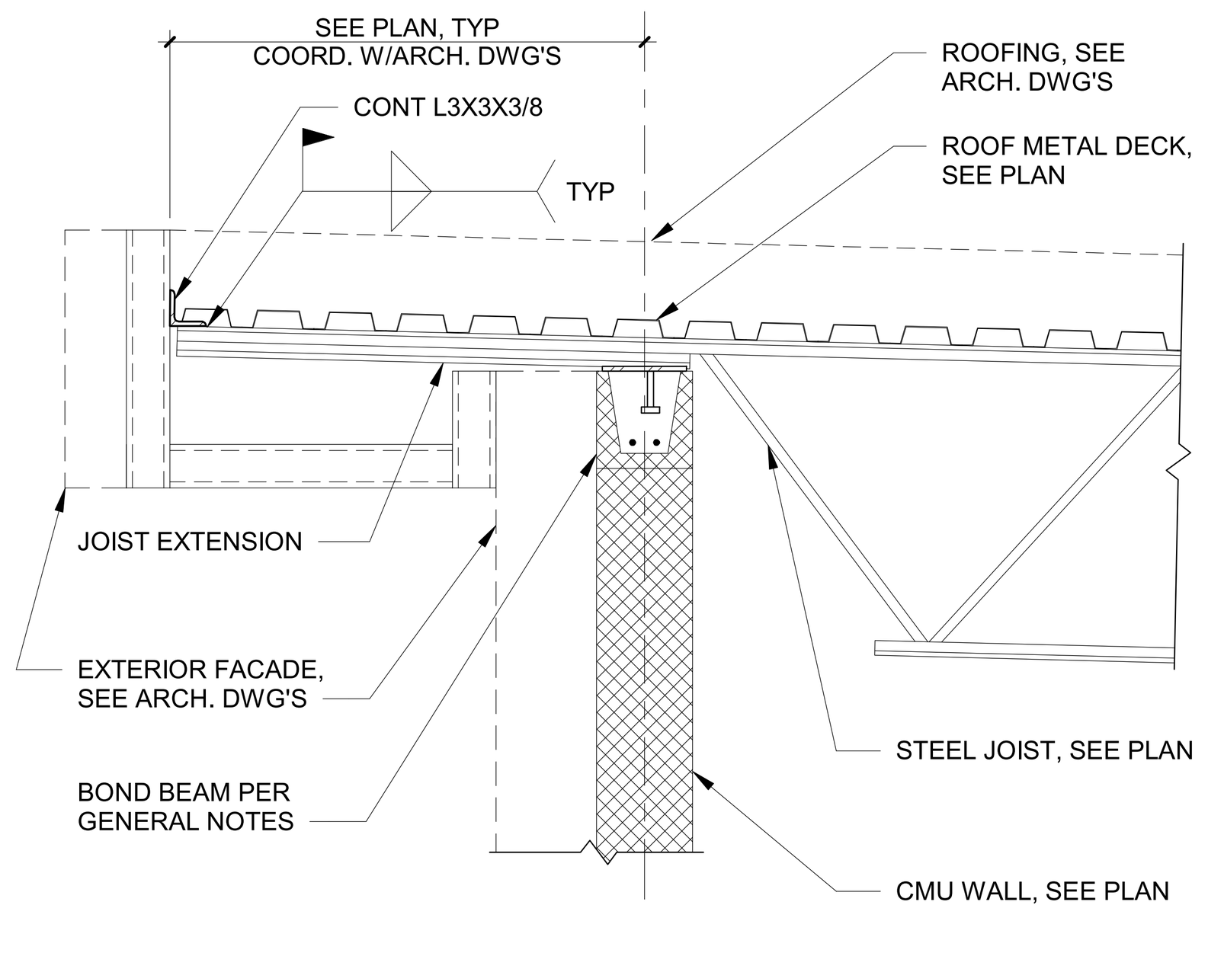
STATE OF MICHIGAN John G. Cordogan Architect No. 1301035955 LICENSED ARCHITECT

CD BID SET

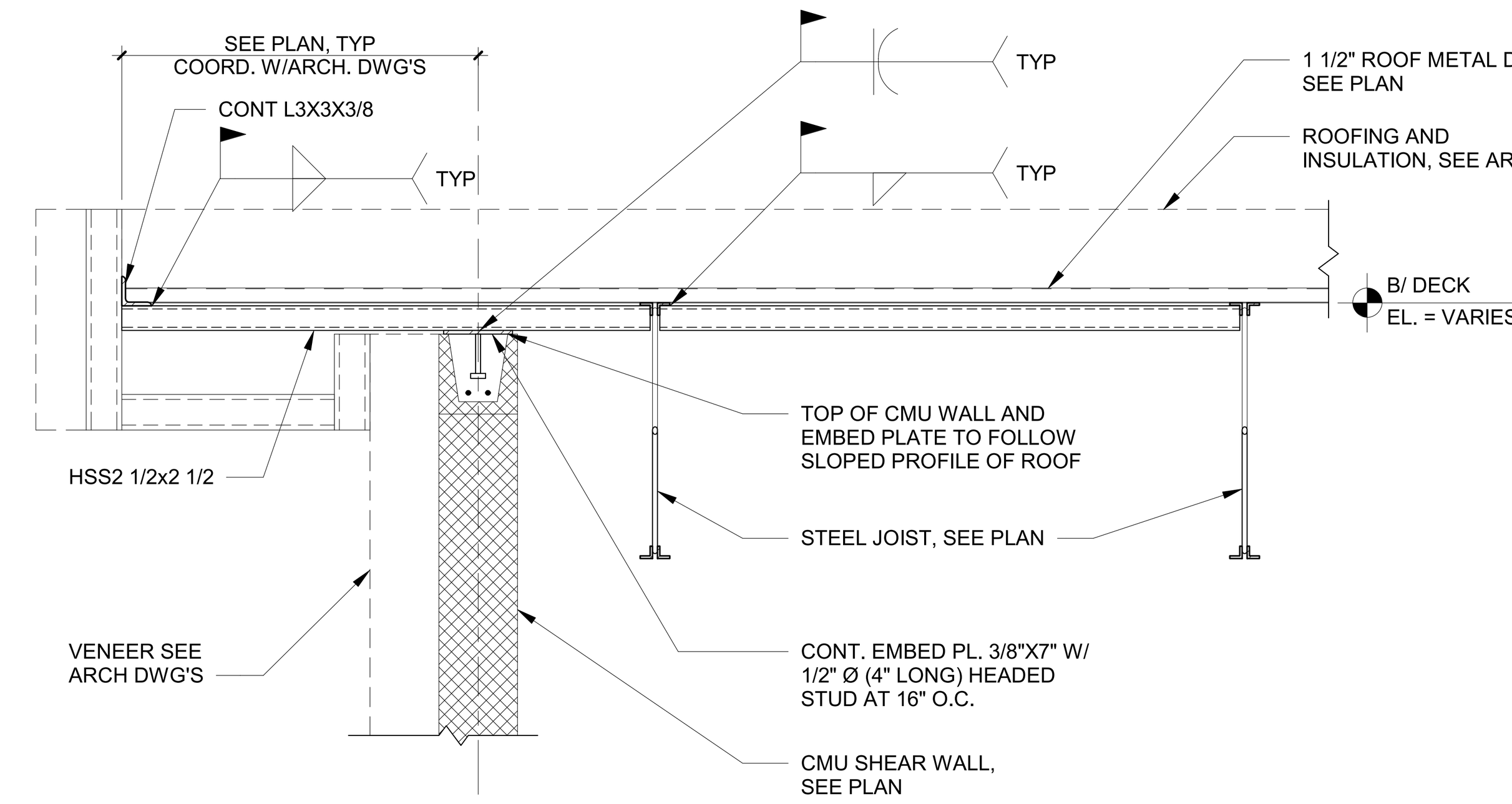
S2.1D



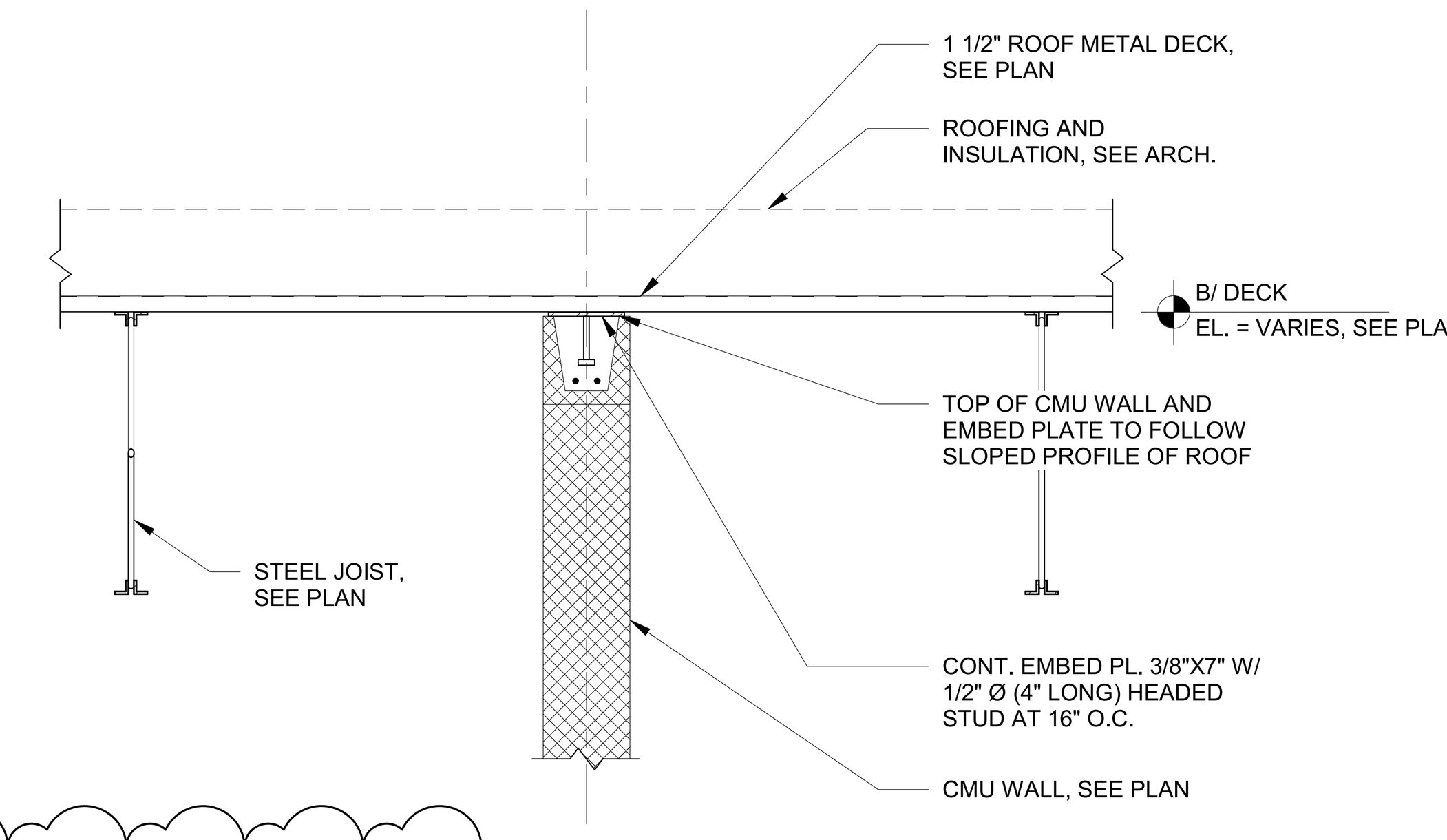
1 UPPER ROOF DECK EDGE DETAIL - NORTH
3/4" = 1'-0"



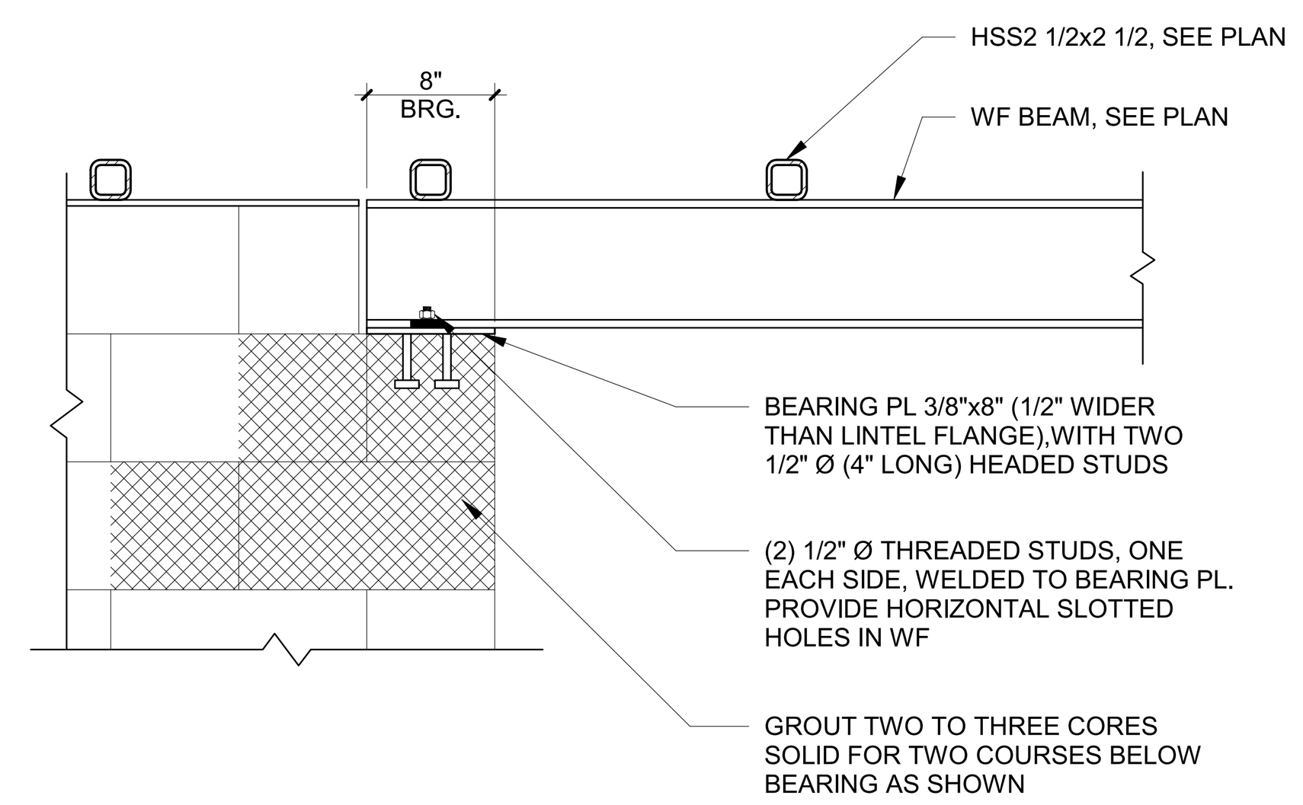
2 ROOF DECK EDGE DETAIL - EAST & WEST
3/4" = 1'-0"



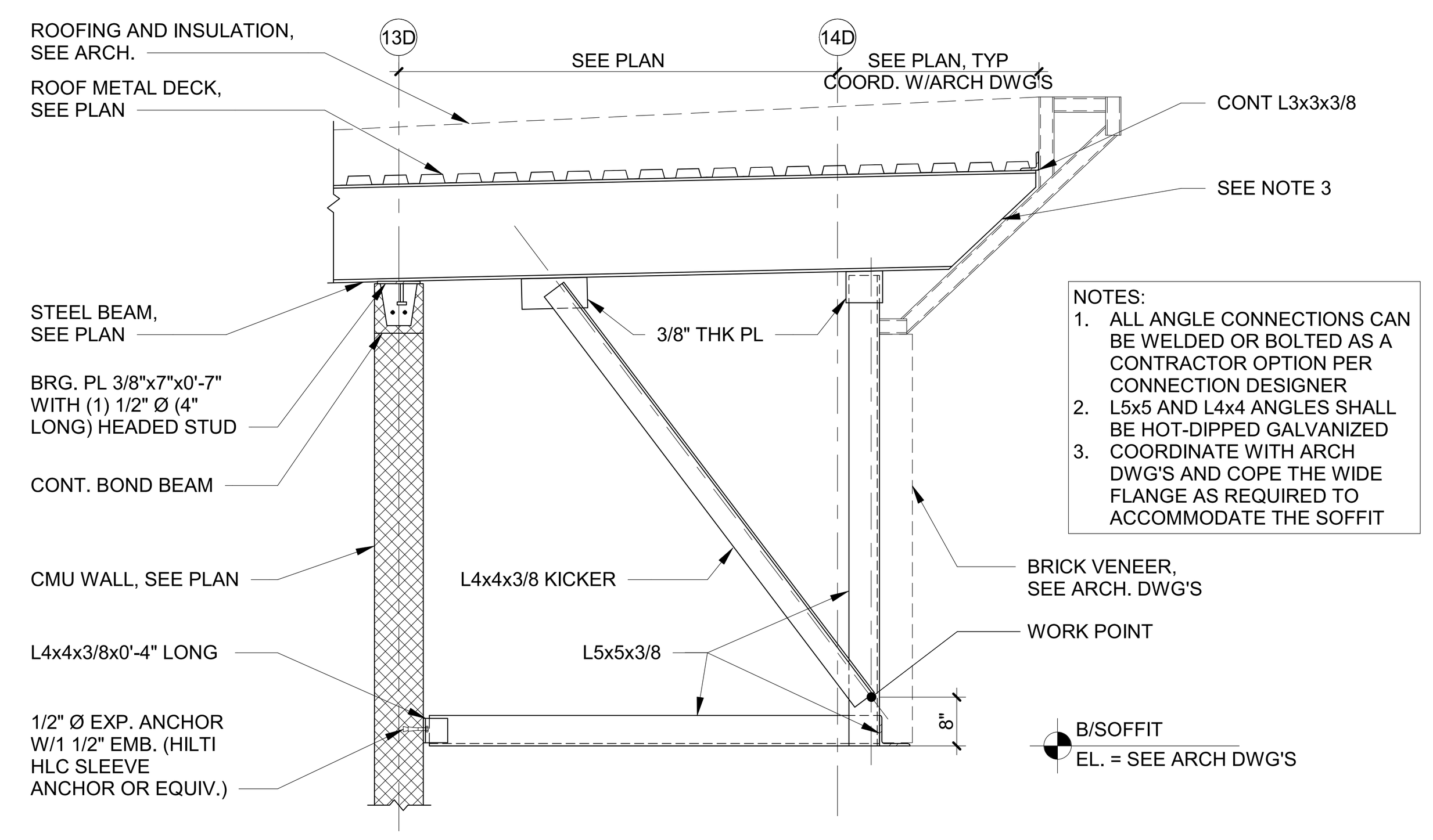
3 ROOF DECK EDGE DETAIL - NORTH & SOUTH
3/4" = 1'-0"



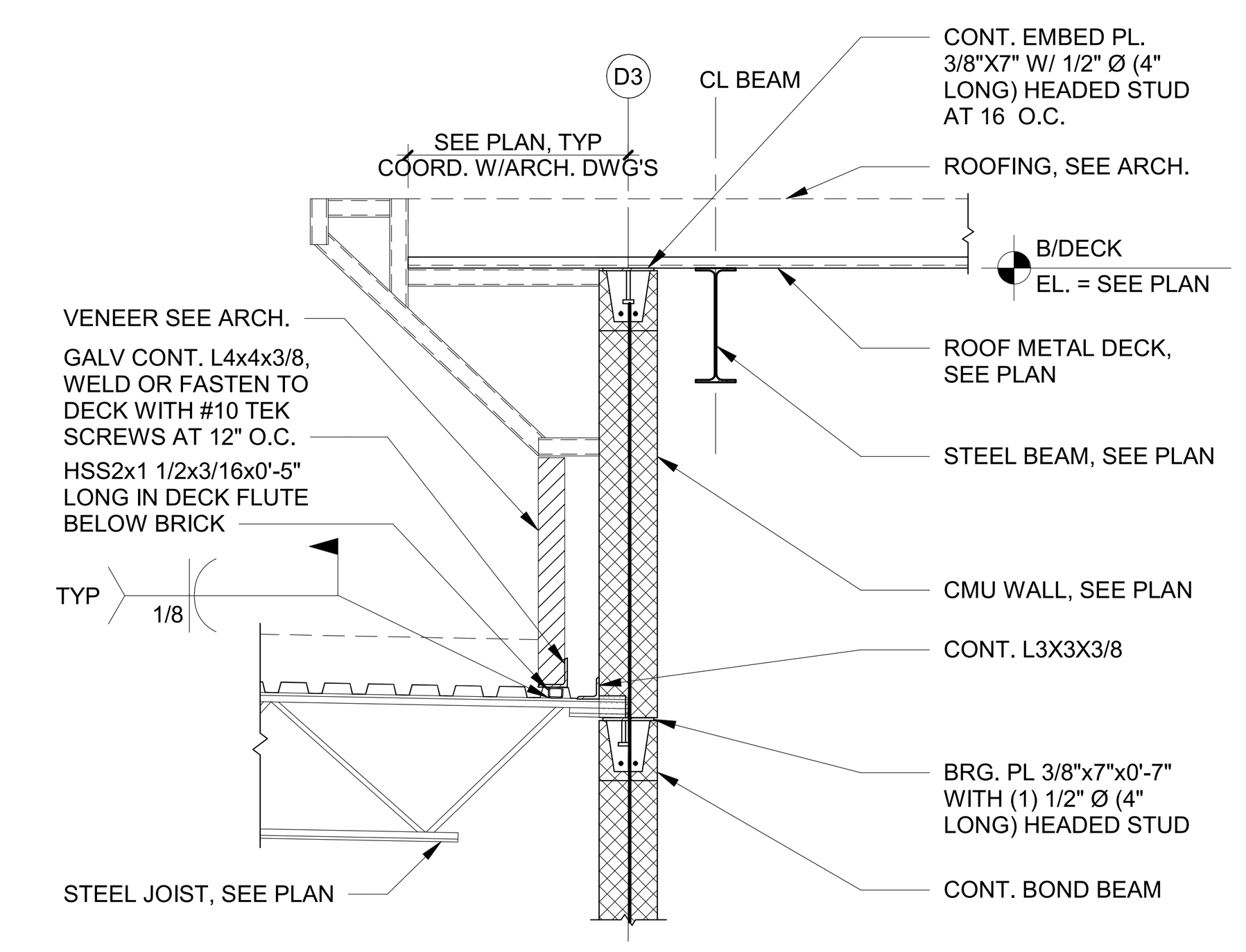
14 INTERIOR BEARING CMU WALL
3/4" = 1'-0"
1



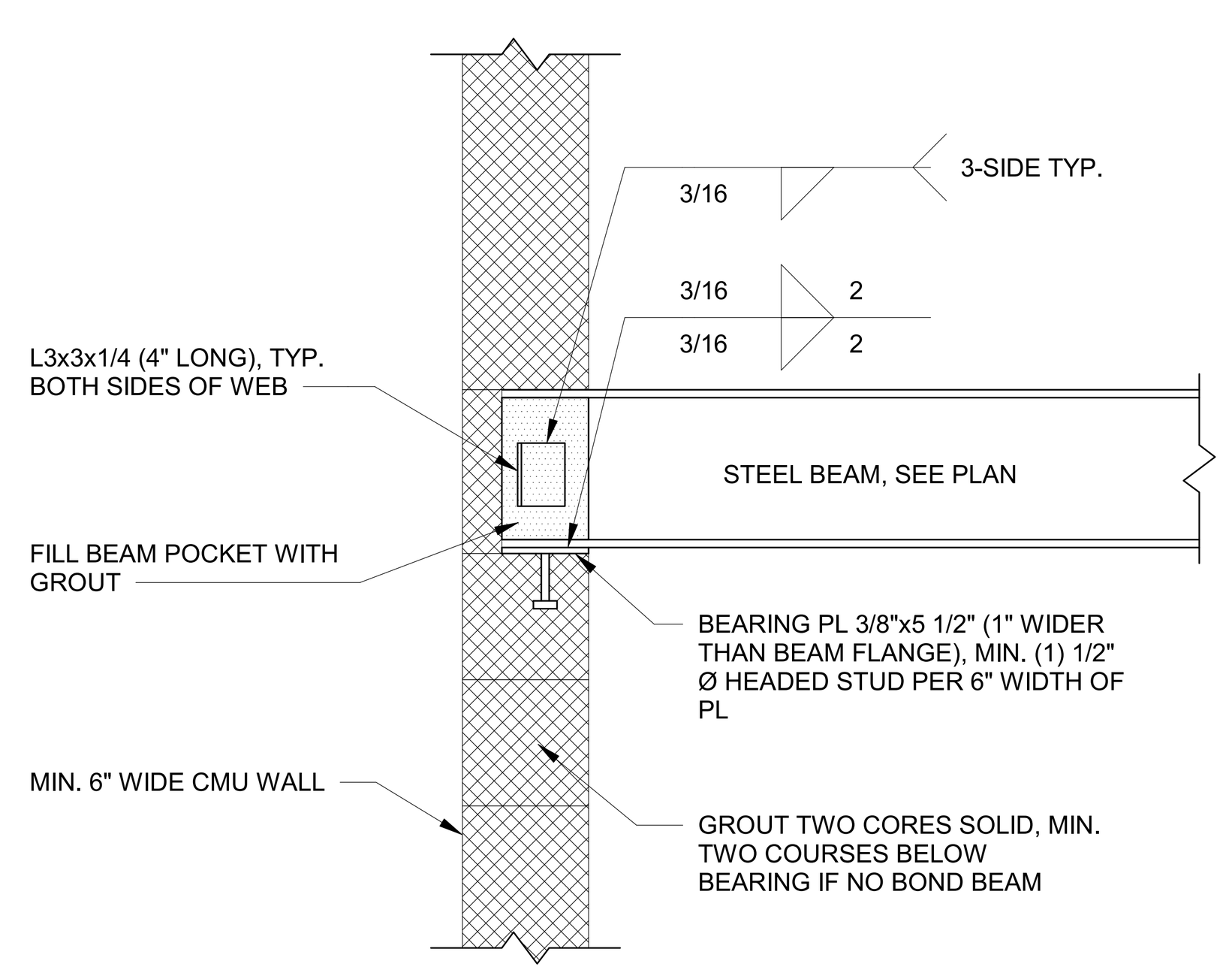
4 BEAM CONNECTION TO CMU WALL - SOUTH ENTRANCE
1" = 1'-0"



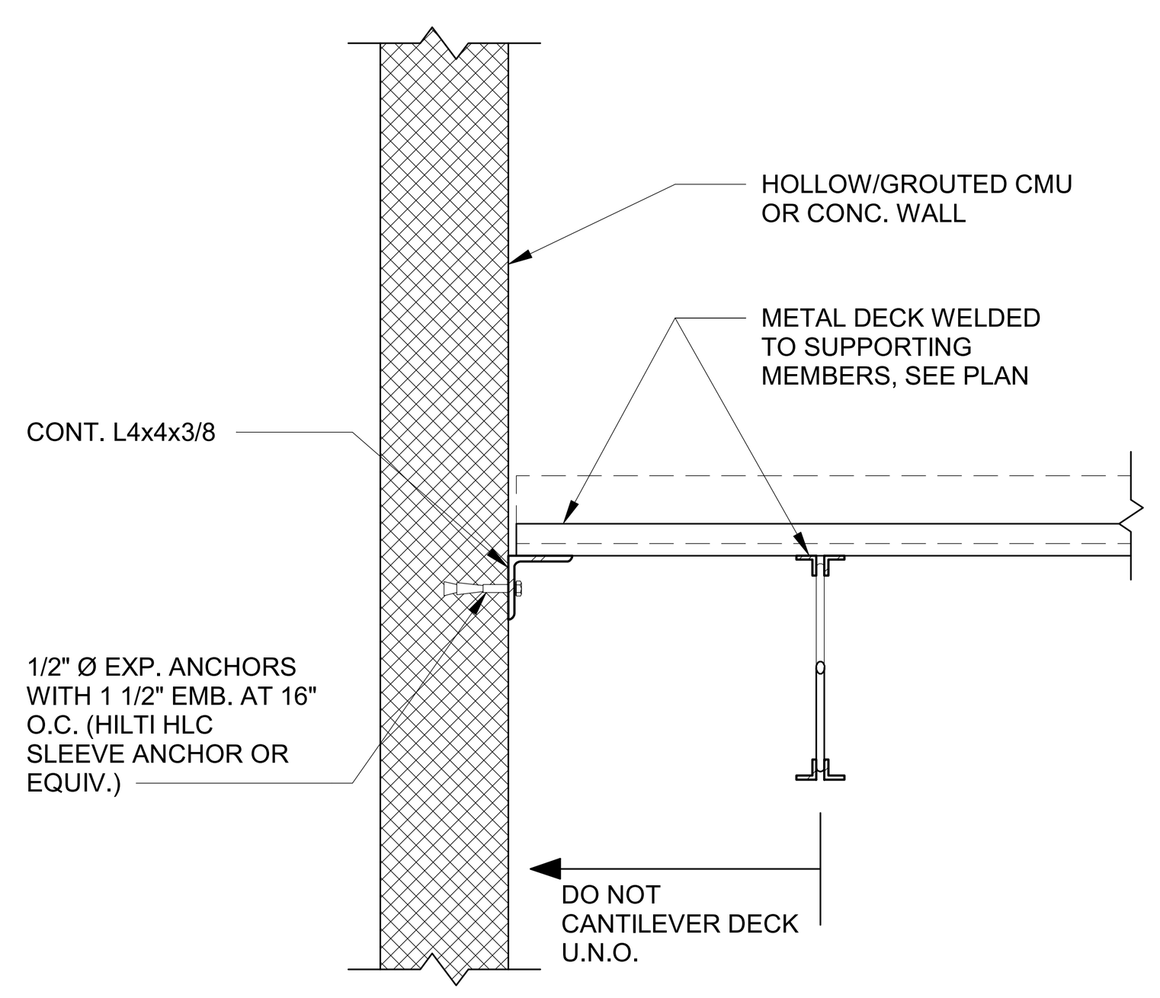
5 UPPER ROOF OVERHANG - NORTH ENTRANCE
1/2" = 1'-0"



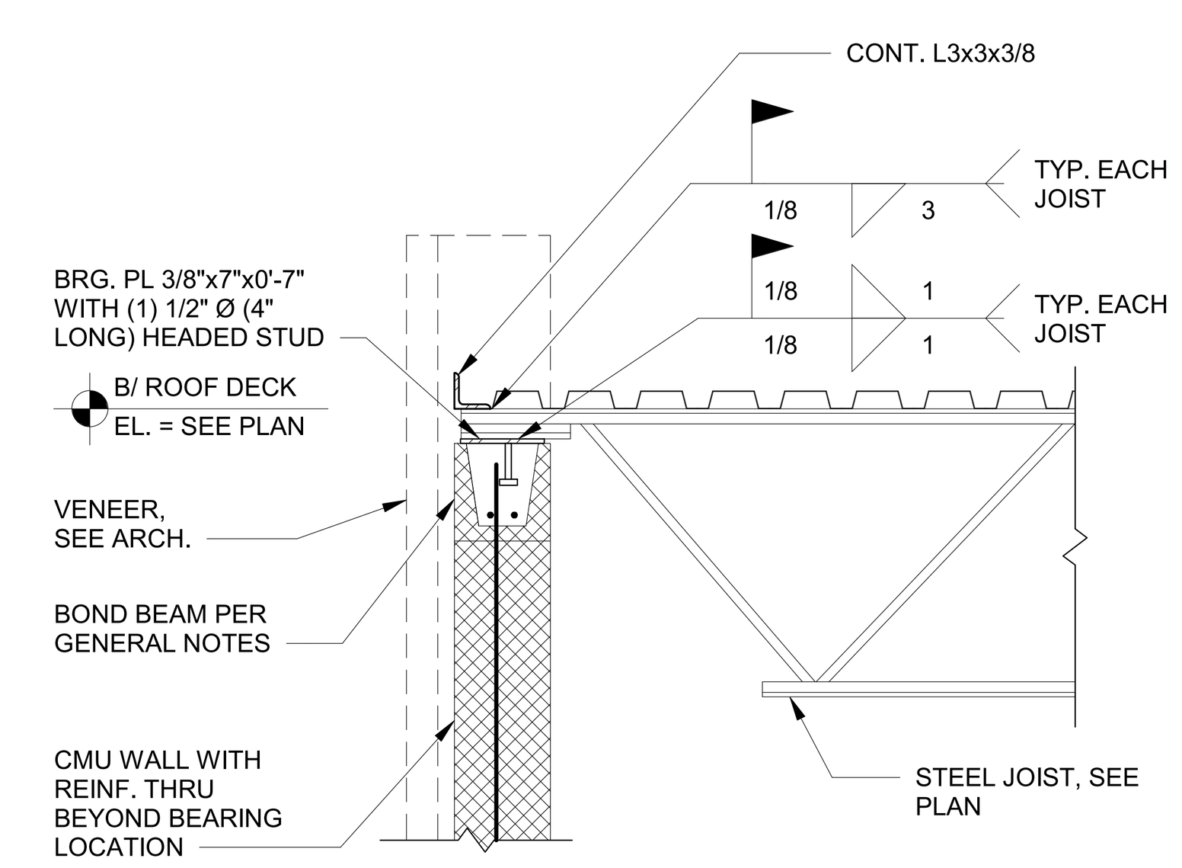
6 LOW-HIGH ROOF SECTION AT GRID D3
1/2" = 1'-0"



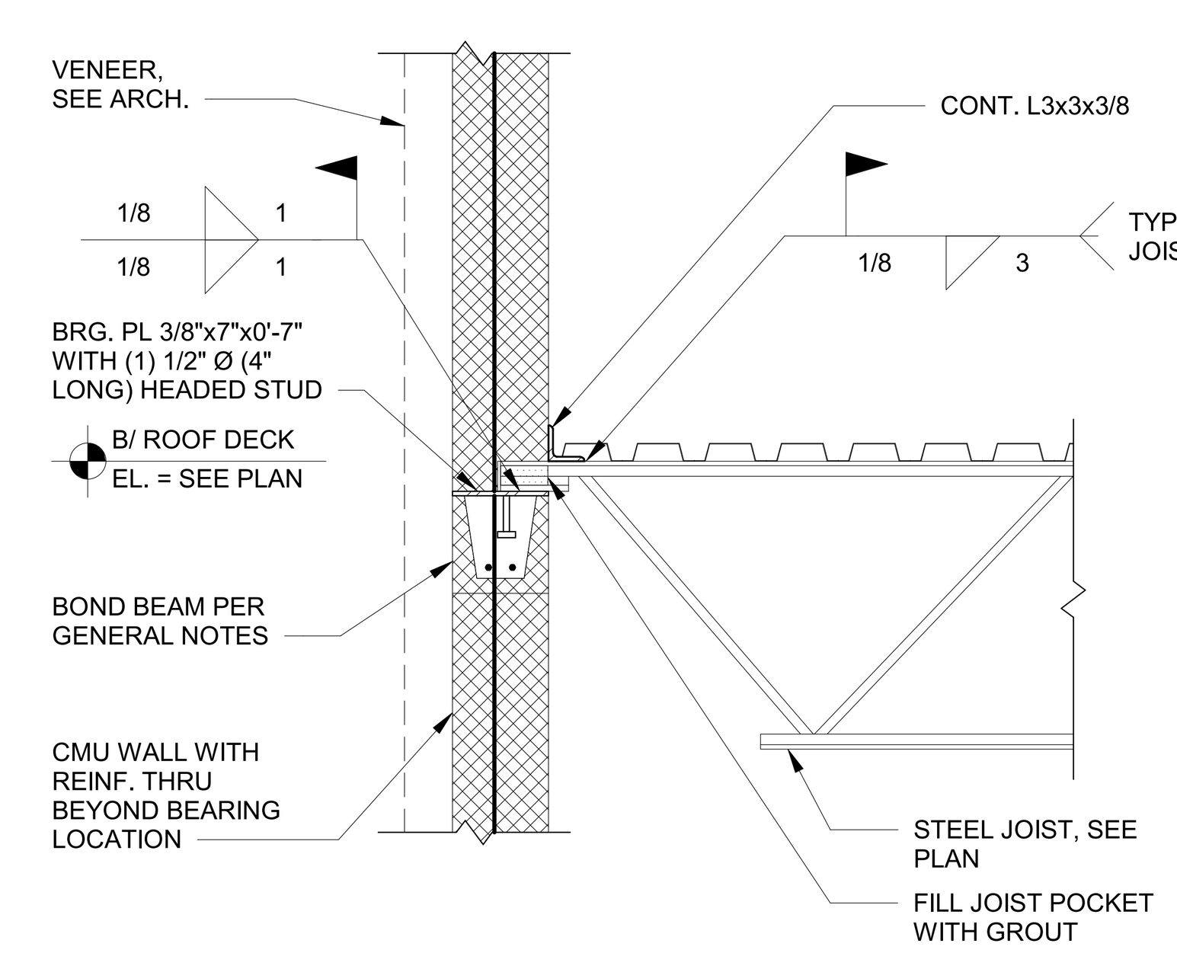
7 TYPICAL BEAM BEARING ON CMU WALL
1" = 1'-0"



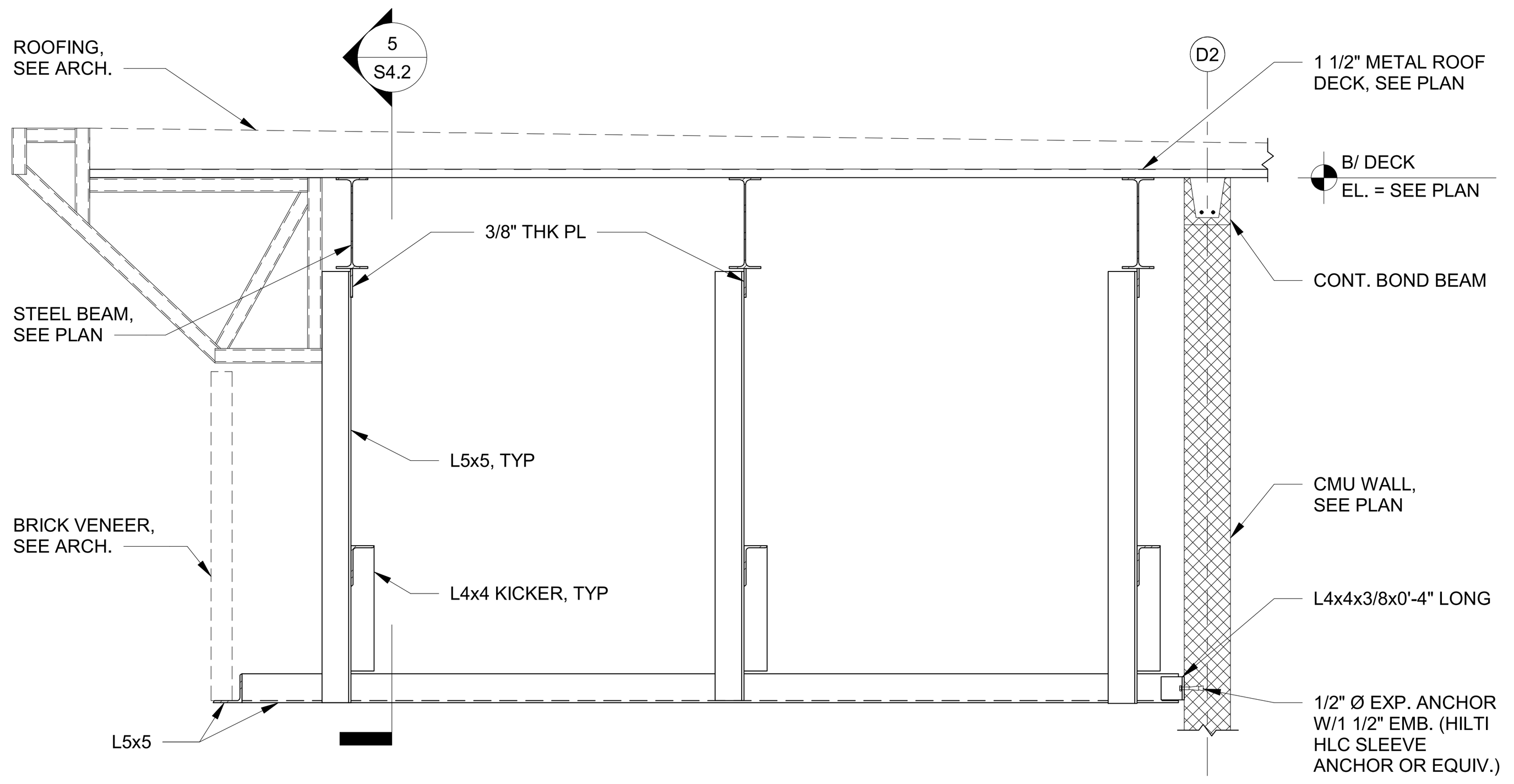
8 TYPICAL DECK BEARING ON CMU WALL
1" = 1'-0"



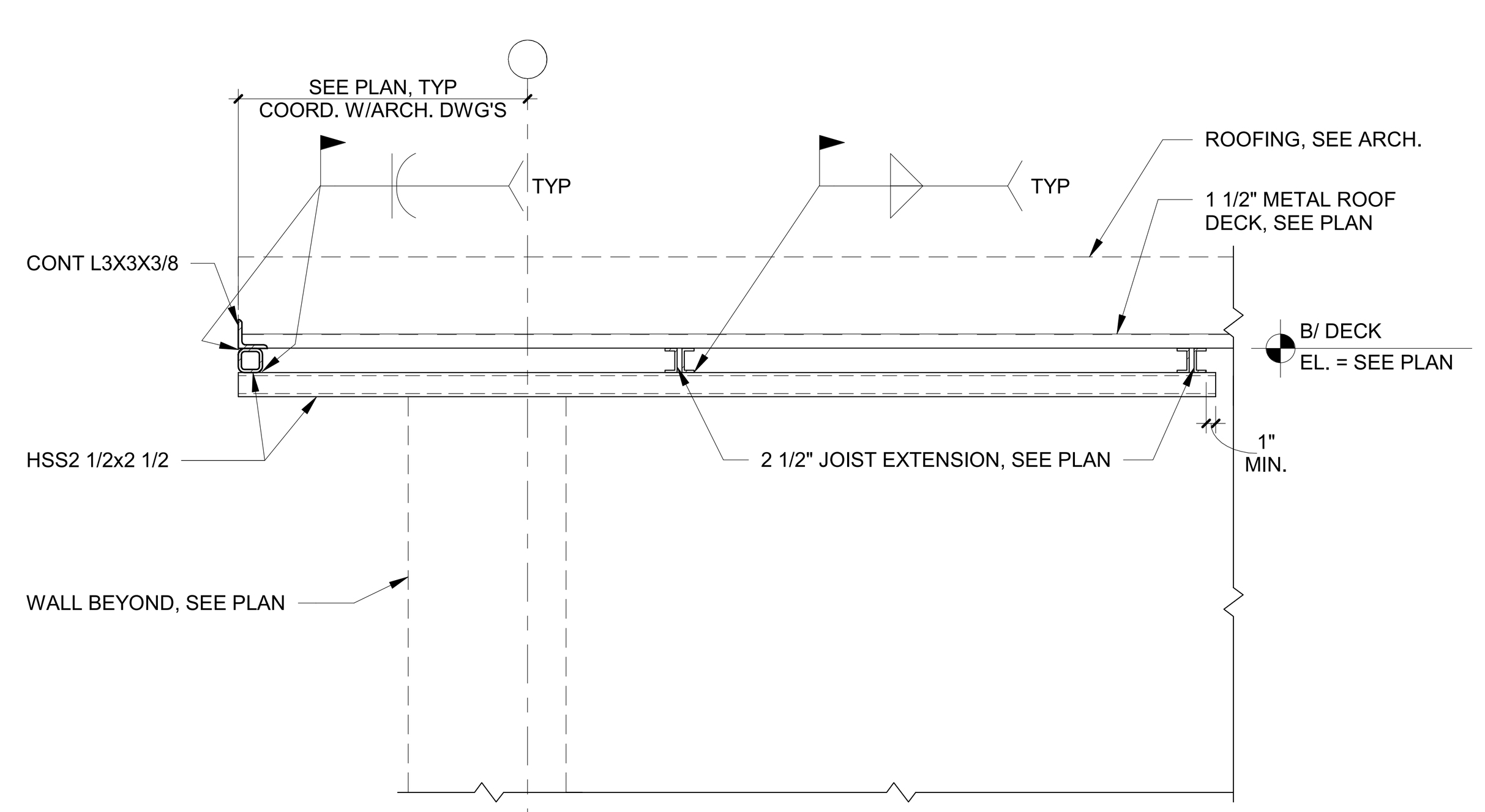
9 JOIST BEARING ON CMU WALL
3/4" = 1'-0"



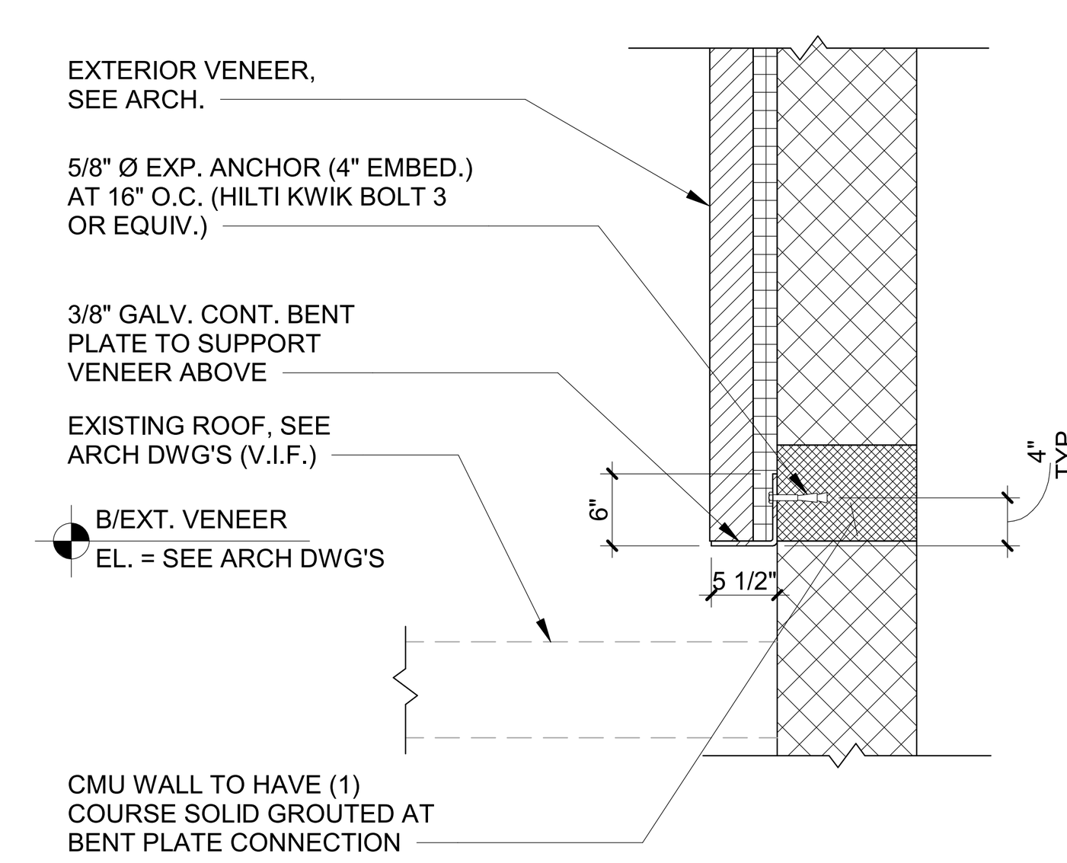
10 JOIST BEARING ON CMU WALL
3/4" = 1'-0"



11 UPPER ROOF OVERHANG - NORTH ENTRANCE
1/2" = 1'-0"



12 HSS DETAIL
3/4" = 1'-0"



13 EXTERIOR WALL VENEER LEDGE ABOVE EXISTING ROOF
3/4" = 1'-0"

ALL LIGHT GAUGE CONNECTION DETAILS ARE CONCEPTUAL ONLY. ALL LIGHT GAUGE FRAMING MEMBERS AND CONNECTIONS TO BE DESIGNED AND SUPPLIED BY LIGHT GAUGE MANUFACTURER.

CORDOGAN CLARK

RIVER VALLEY SCHOOL DISTRICT

SCHOOL CONSOLIDATION
15480 THREE OAKS RD.
THREE OAKS, MI 49128

FRAMING SECTIONS AND DETAILS

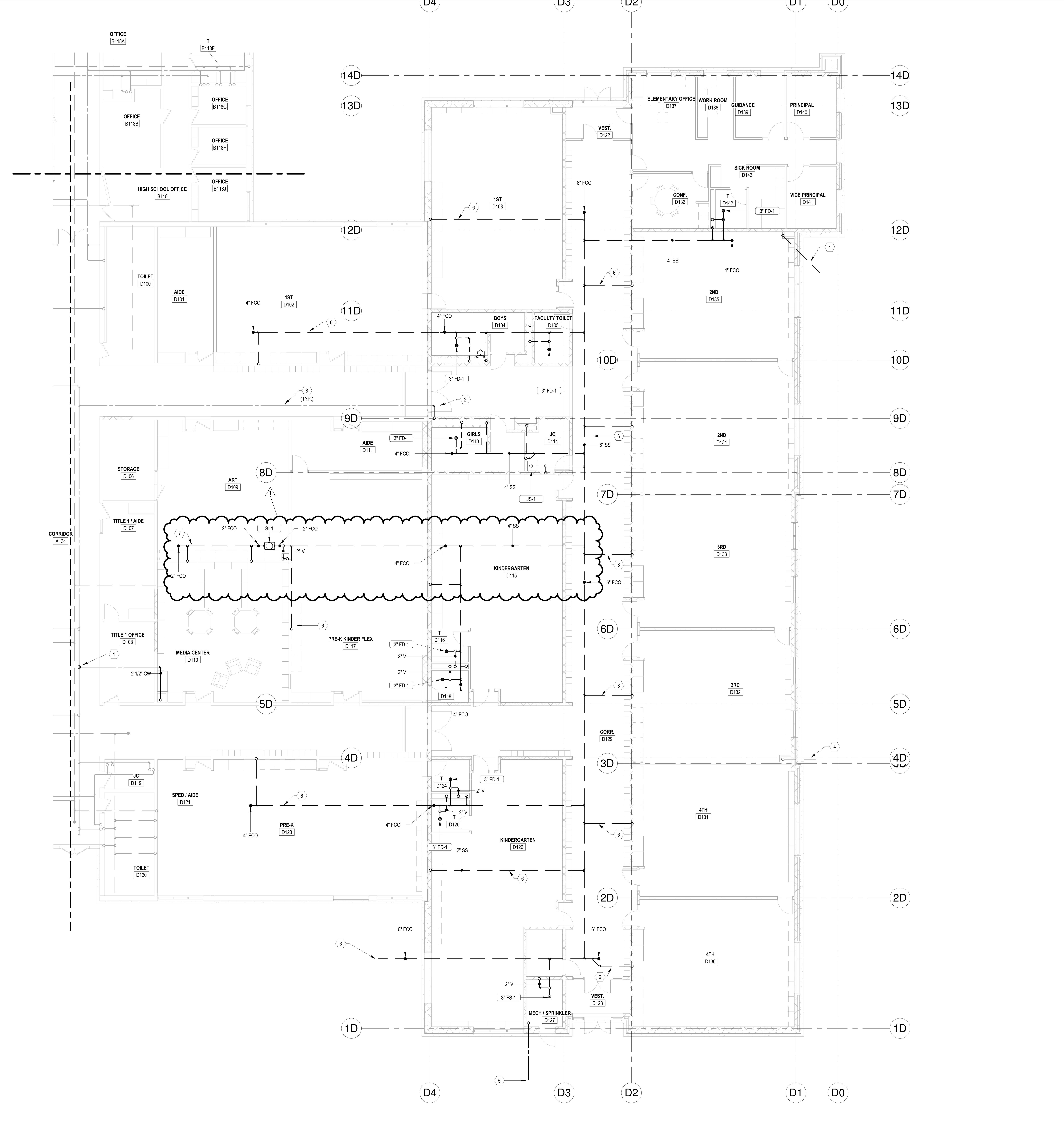
JOB NUMBER 21-346
DATE 03.22.22

REVISIONS:
ADDENDUM 001 03.31.22

STATE OF MICHIGAN
John G. Cordogan
Architect
No. 1301035955
LICENSED ARCHITECT

CD BID SET

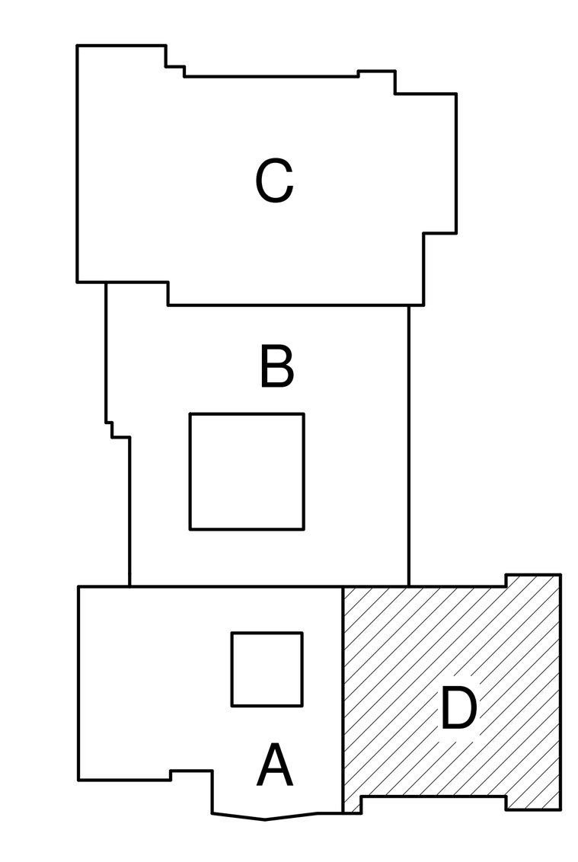
S4.2



1 PARTIAL UNDERFLOOR PLUMBING PLAN - AREA D
1/8" = 1'-0"

KEYNOTES

1 CONNECT TO EXISTING UNDERGROUND COLD WATER LINE AS REQUIRED.
2 CONNECT TO THE EXISTING UNDERGROUND 3/4" CW AS REQUIRED.
3 6-INCH WASTE. REFER TO CIVIL PLANS.
4 8-INCH STORM LINE. REFER TO CIVIL PLANS.
5 8 INCH FP LINE. REFER TO CIVIL
6 ALTERNATE 5:PLUMBING SERVICES SUPPORTING SINKS WITHIN THE CLASSROO SHALL BE INCLUDED IN THE ALTERNATE.
7 ALL PLUMBING SERVICES SUPPORTING SINKS WITHIN THE ART ROOM ARE TO BE INCLUDED IN THE BASE BID.
8 EXISTING TO REMAIN



KEY PLAN
NOT TO SCALE

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RIVER VALLEY SCHOOL DISTRICT

RIVER VALLEY HIGH SCHOOL

15480 THREE OAKS RD
THREE OAKS, MI 49128

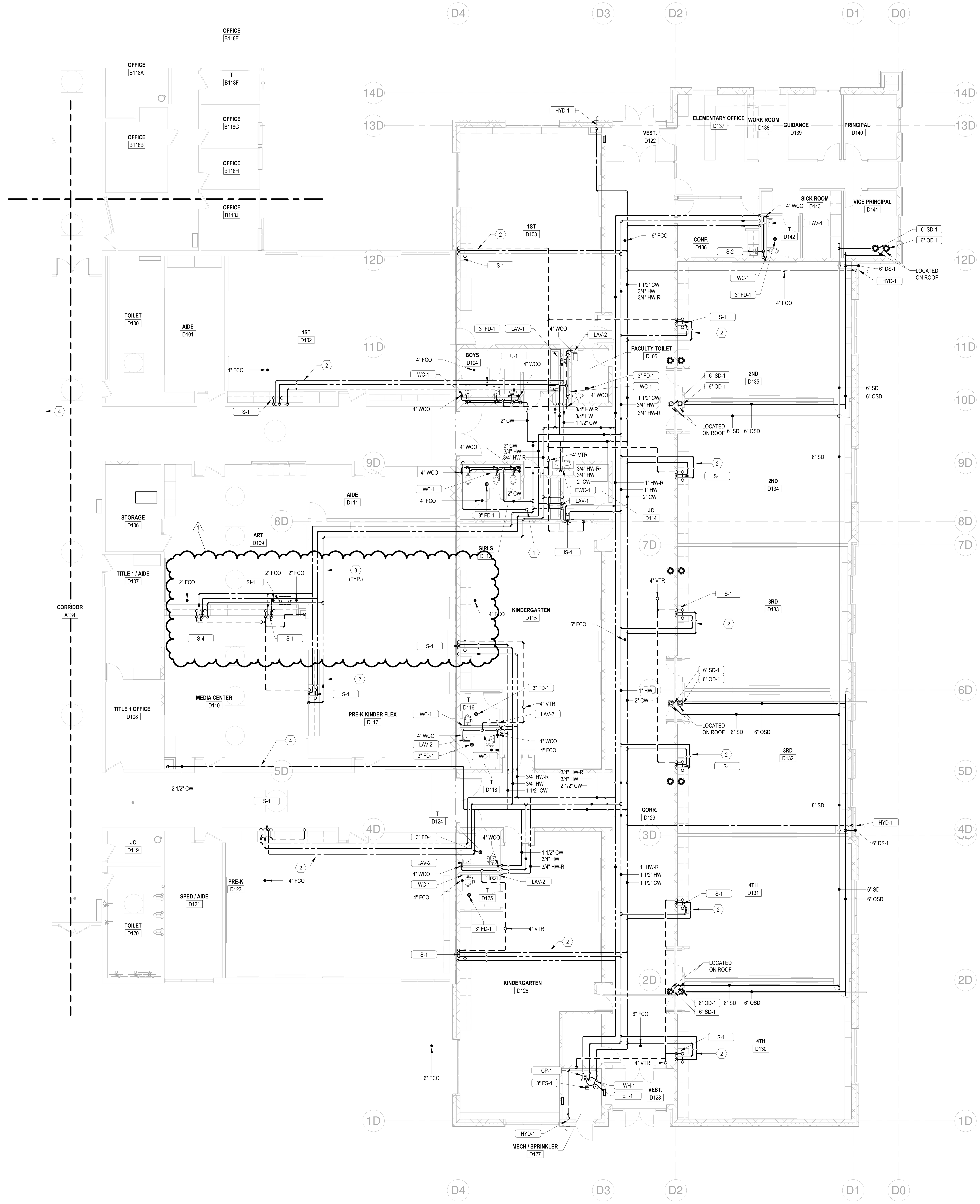
PARTIAL UNDERFLOOR PLUMBING PLAN - AREA D

JOB NUMBER 21-346
DATE 03.22.2022

REVISIONS:
1 ADDENDUM 001 03.30.2022

BID SET

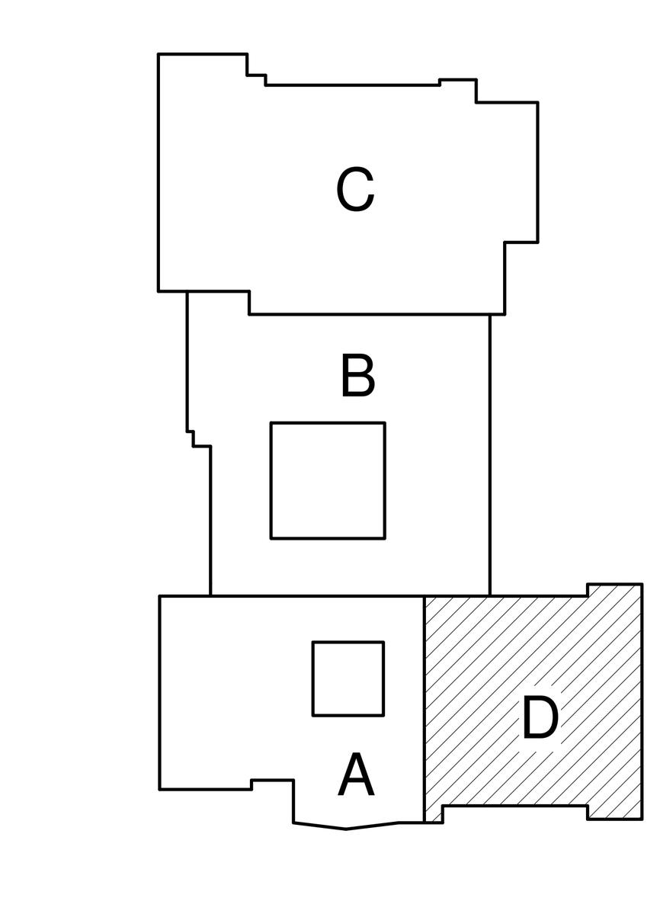
P2.0D



PARTIAL FIRST FLOOR PLUMBING PLAN - AREA D
1/8" = 1'-0"

KEYNOTES

1. ROUTE 3/4" CW LINE UP TO RH-1. ROUTE 1" DRAIN TO NEAREST MOP BASIN AS REQUIRED.
2. ALTERNATE 5: PLUMBING SERVICES SUPPORTING SINKS WITHIN THE CLASSROOM SHALL BE INCLUDED IN THE ALTERNATE.
3. ROUTE COLD WATER, HOT WATER, AND HOT WATER RETURN PIPING WITHIN SOFFIT.
4. ROUTE COLD WATER PIPING WITHIN SOFFIT.



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RIVER VALLEY SCHOOL DISTRICT

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15480 THREE OAKS RD
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PARTIAL FIRST FLOOR PLUMBING PLAN - AREA D

JOB NUMBER 21-346
DATE 03.22.2022

REVISIONS:
1 ADDENDUM 001 03.30.2022

BID SET

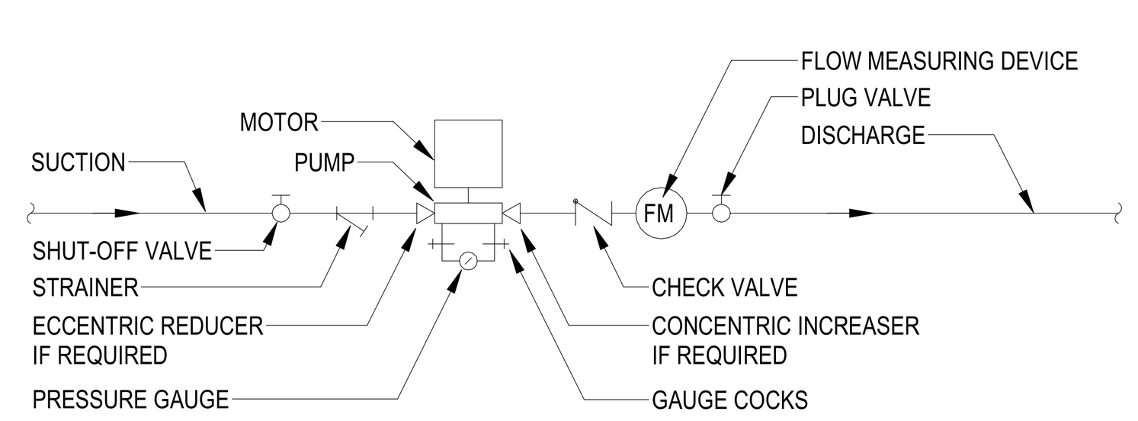
P2.1D

PLUMBING FIXTURE SCHEDULE

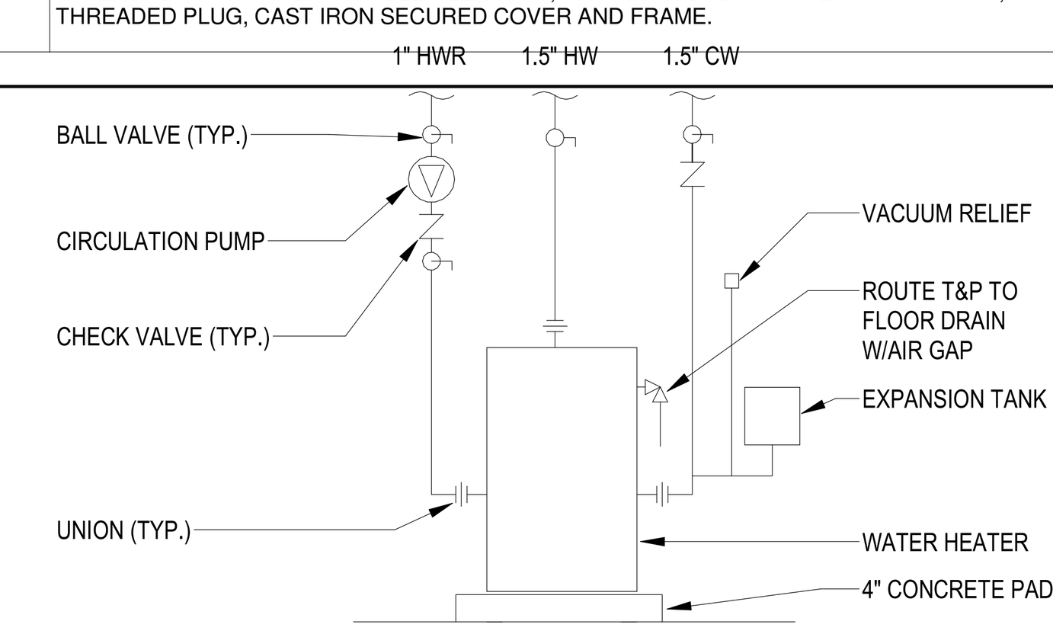
MARK	CW	HW	WASTE	VENT	MFR	MODEL	DESCRIPTION	REMARKS
CP-1	-	1"	-	-	BELL & GOSSETT	ECOCIRC 19-16	HOT WATER RECIRCULATION PUMP, LEAD FREE, FLANGED CONNECTIONS, EC MOTOR, ONBOARD CONTROLLER, 4.5 GPM @ 6'. ELECTRIC: 120 / 1, 60 WATTS.	
DS-1	-	-	-	-	ZURN	Z199	NICKEL BRONZE DOWNSPOUT NOZZLE, NICKEL BRONZE FINISH. STORM PIPE SIZES VARIES.	LOCATE ~18" ABOVE GRADE, COORDINATE EXACT ELEVATION WITH ARCHITECT.
ET-1	3/4"	-	-	-	AMTROL	ST-12C	ASME RATED IN LINE EXPANSION TANK, 6.4 GAL VOLUME, 3.2 GAL ACCEPTANCE.	-
EWC-1	1/2"	-	1-1/2"	1-1/2"	ELKAY	LZSTL8WSSK	ADA COMPLIANT BI-LEVEL FILTERED DRINKING FOUNTAIN, STAINLESS STEEL, 1.1 GPM BOTTLE FILLER, FILTER, 8 GPH CHILLER.	ELECTRIC: 120/1, 6 AMPS.
EWC-2	1/2"	-	1-1/2"	1-1/2"	ELKAY	LZS8WSSK	ADA COMPLIANT FILTERED DRINKING FOUNTAIN, STAINLESS STEEL, 1.1 GPM BOTTLE FILLER, FILTER, 8 GPH CHILLER.	ELECTRIC: 120/1, 6 AMPS.
FCO-1	-	-	VARIES	-	ZURN	CO1	ADJUSTABLE FLOOR CLEANOUT WITH PVC BODY AND NICKEL BRONZE SQUARE COVER AND INVERTIBLE MEMBRANE CLAMP.	-
FD-1	-	-	VARIES	2"	ZURN	EZ1	ADJUSTABLE FINISHED AREA FLOOR DRAIN, PVC BODY, NICKEL BRONZE SQUARE GRATE AND INVERTIBLE MEMBRANE CLAMP WITH SEEPAGE SLOTS.	PROVIDE WITH JOSAM TSI WATERLESS TRAP SEAL
FD-2	-	-	3"	2"	-	-	HUB DRAIN	PROVIDE WITH JOSAM TSI WATERLESS TRAP SEAL
FS-1	-	-	3"	2"	ZURN	Z1900	FLOOR SINK, 12X12X6, HALF GRATE, CAST IRON, ENAMEL COATING.	PROVIDE WITH JOSAM TSI WATERLESS TRAP SEAL
HYD-1	3/4"	-	-	-	WOODFORD	B65	FREEZE PROOF WALL HYDRANT, ASSE 1019, VACUUM BREAKER, SELF DRAINING, BRASS BODY, CHROME WALL BOX, OPERATING KEY.	-
HYD-2	3/4"	-	-	-	WOODFORD	74	CLOSE COUPLED WALL HYDRANT, ASSE 1011, BRASS BODY, OPERATING KEY.	PROVIDE ASSE 1015 WATTS LF007-S LEAD FREE DOUBLE CHECK VALVE WITH STRAINER.
JS-1	3/4"	3/4"	3"	2"	FIAT	MSB2424	24"X24" MOLDED STONE MOP BASIN WITH STAINLESS STEEL WALL GUARDS, HOSE, HOSE BRACKET, AND MOP HANGER.	FAUCET: ELKAY LK945BP07L2T WALL MOUNTED, LEAD FREE, LEVER HANDLE, VACUUM BREAKER, PAIL HOOK, CHROME PLATE FINISH.
LAV-1	1/2"	1/2"	1-1/4"	1-1/4"	SLOAN	ELGR-83000	ADA COMPLIANT WALL MOUNTED LAVATORY SYSTEM SINK WITH THREE STATIONS, TMV-1, AND GRID STRAINERS.	FAUCET: SLOAN COMMERICAL MODEL NUMBER EAF-150, ADA COMPLIANT, DECK MOUNTED, ELECTRONIC SENSOR OPERATED, 0.5 GPM FLOWRATE, BATTERY POWERED, CHROME PLATE FINISH.
LAV-2	1/2"	1/2"	1-1/4"	1-1/4"	AMERICAN STANDARD	0955.001EC	ADA COMPLIANT WALL MOUNTED LAVATORY SINK WITH WHITE VITREOUS CHINA CONSTRUCTION, ANTIMICROBIAL FINISH, CENTER HOLE ONLY, OVERFLOW, VITREOUS CHINA SHROUD/KNEE CONTACT GUARD. PROVIDE GRID DRAIN AND TMV-1 LOCATED IN SHROUD.	FAUCET: CHICAGO FAUCETS 116.951.AB.1 DECK MOUNTED , ADA COMPLIANT, DECK MOUNTED, ELECTRONIC SENSOR OPERATED, 0.5 GPM FLOWRATE, TURBINE POWERED, CHROME PLATE FINISH.
OD-1	-	-	-	-	ZURN	ZC100	OVERFLOW DRAIN, EPOXY COATED CAST IRON BODY, CAST IRON DOME, 4" WATER DAM.	-
RD-1	-	-	-	-	ZURN	ZC100	ROOF DRAIN, EPOXY COATED CAST IRON BODY, CAST IRON DOME.	-
RH-1	1"	-	-	-	WOODFORD	RHY2-MS	ROOF HYDRANT, FREEZE PROOF, SELF DRAINING, ASSE 1052, VACUUM BREAKER, ROOF MOUNTING KIT. ROUTE DRAIN TO NEAREST DRAIN.	-
RH-1	1"	-	-	-	WOODFORD	RHY2-MS	ROOF HYDRANT, FREEZE PROOF, SELF DRAINING, ASSE 1052, VACUUM BREAKER, ROOF MOUNTING KIT. ROUTE DRAIN TO NEAREST DRAIN.	-
RPZ-1"	1"	-	-	1"	WATTS	LF909	ASSE 1013 REDUCED PRESSURE ZONE ASSEMBLY, LEAD FREE, PROVIDE AIR GAP AND PIPE TO DRAIN.	-
S-1	1/2"	1/2"	1-1/2"	1-1/2"	ELKAY	ELUHAD361855	ADA COMPLIANT UNDERMOUNT DOUBLE BOWL SINK WITH 18 GAUGE STAINLESS STEEL CONSTRUCTION, 35-3/4"X18-1/2"X5-3/8" BOWL, REAR DRAIN, AND THREE HOLE DRILLING. PROVIDE STRAINERS AND TMV-1.	FACUET: CHICAGO FAUCETS 786-GR2E35V317XKAB DECK MOUNTED, 8" CENTERS, WRISTBLADE HANDLE, 5-1/4" GOOSENECK SPOUT, 1.5 GPM AERATING, LEAD-FREE, CHROME PLATE FINISH.
S-2	1/2"	1/2"	1-1/2"	1-1/2"	ELKAY	ELUHAD191655	ADA COMPLIANT UNDERMOUNT SINK WITH 18 GAUGE STAINLESS STEEL CONSTRUCTION, 21-1/2"X18-1/2"X5-3/8" BOWL, REAR DRAIN, AND THREE HOLE DRILLING. PROVIDE STRAINERS AND TMV-1 IN CABINET.	FACUET: CHICAGO FAUCETS 786-GR2E35V317XKAB DECK MOUNTED, 8" CENTERS, WRISTBLADE HANDLE, 5-1/4" GOOSENECK SPOUT, 1.5 GPM AERATING, LEAD-FREE, CHROME PLATE FINISH.
S-3	1/2"	1/2"	1-1/2"	1-1/2"	ADVANCE TABCO	7-PS-40	HEAVY GAUGE 304 S.S. WALL MOUNTED HAND SINK, CENTER DRAIN, 10"X14"X5" BOWL, SPLASH MOUNTED FAUCET, 7-3/4" SIDE SPLASHES, 17 GAUGE BRASS P-TRAP, PROVIDE BASKET STRAINER.	FACUET: INTEGRAL
S-4	1/2"	1/2"	1-1/2"	1-1/2"	ELKAY	ELUH361710	UNDERMOUNT DOUBLE BOWL SINK WITH 18 GAUGE STAINLESS STEEL CONSTRUCTION, 35-3/4"X18-1/2"X10" BOWL, REAR DRAIN, AND THREE HOLE DRILLING. PROVIDE STRAINERS AND TMV-1.	FACUET: CHICAGO FAUCETS 786-GR2E35V317XKAB DECK MOUNTED, 8" CENTERS, WRISTBLADE HANDLE, 5-1/4" GOOSENECK SPOUT, 1.5 GPM AERATING, LEAD-FREE, CHROME PLATE FINISH.
SI-1	-	-	2"	-	STRIEM	AA-S	HDPE SOLIDS INTERCEPTOR, REMOVABLE DEBRIS BASKET WITH 1/8" DIA PERFORATION, 35 GPM, RISER, COMPOSITE COVER, 57 GAL.	-
TMV-1	3/8"	3/8"	-	-	CASH ACME	25686	ASSE 1070 THERMOSTATIC MIXING VALVE, LEAD FREE, MIN 0.35 GPM FLOWRATE. SET AT 110F FOR LAVATORIES, 120F FOR SINKS.	-
U-1	3/4"	-	2"	1-1/2"	AMERICAN STANDARD	6561.017	ADA COMPLIANT URINAL WITH WHITE VITREOUS CHINA CONSTRUCTION, ANTI-MICROBIAL FINISH, 1.0 GPF, SIPHON JET FLUSH, 3/4" TOP SPUD.	FLUSHOMETER: SLOAN SOLIS 8180-1.0, EXPOSED, CHROME FINISH, SOLAR POWERED BATTERY BACKUP, SENSOR-OPERATED, DIAPHRAGM TYPE, 1 GPF
WC-1	1"	-	4"	2"	AMERICAN STANDARD	3351.101	ADA COMPLIANT ELONGATED WALL MOUNTED TOILET WITH WHITE VITREOUS CHINA CONSTRUCTION, ANTI-MICROBIAL FINISH, 1.6GPF, SIPHON JET FLUSH, 1-1/2" TOP SPUD.	FLUSHOMETER: SLOAN SOLIS 8111-1.6, EXPOSED, CHROME FINISH, SOLAR POWERED, BATTERY BACKUP, SENSOR-OPERATED, DIAPHRAGM TYPE, 1.6 GPF, 1-1/2" TOP SPUD. SEAT: CHURCH 2155CT, ELONGATED, OPEN FRONT, ANTIMICROBIAL FINISH.
WCO	-	-	VARIES	-	ZURN	Z1441	WALL CLEANOUT WITH GAS AND WATERTIGHT THREADED PLUG AND STAINLESS STEEL ACCESS COVER.	-
WH-1	1-1/2"	1-1/2"	-	-	AO SMITH	BTH199A	GAS POWERED CONDENSING HOT WATER HEATER, ASME RATED, 199 MBH, 100 GAL, 235 GPH @ 100F RISE, MODULATING BURNER. 3" FLUE AND COMBUSTION AIR PIPING. SET AT 140F.	PROVIDE WITH CONTROLS TO SEQUENCE HEATERS AND CONTROL PUMPS. PROVIDE 3" CPVC FLUE AND 3" CPVC INTAKE WITH CONCENTRIC TERMINATION KIT AND CONDENSATE NEUTRALIZING KIT. PROVIDE 4" CONCRETE PAD.
WHA-1	-	-	-	-	WATTS	LF15M2	WATER HAMMER ARRESTOR, LEAD FREE, COPPER BODY WITH POLYPROPYLENE PISTON.	INSTALL PER MANUFACTURER'S RECOMMENDATIONS AT ALL FIXTURE BRANCHES
YCO	-	-	6"	-	ZURN	Z1402	6" HEAVY DUTY NON-ADJUSTABLE CLEANOUT, CAST IRON BODY WITH EPOXY COATING, GAS AND WATERTIGHT THREADED PLUG, CAST IRON SECURED COVER AND FRAME.	-

PLUMBING PIPING SCHEDULE

SYSTEM	MATERIAL	JOINTS	INSULATION	INSULATION TYPE
COLD WATER, ALL SIZES	TYPE L COPPER	PRESS / SOLDER	1"	FIBERGLASS
HOT WATER <1.5"	TYPE L COPPER	PRESS / SOLDER	1"	FIBERGLASS
HOT WATER >=1.5"	TYPE L COPPER	PRESS / SOLDER	1.5"	FIBERGLASS
HOT WATER RETURN	TYPE L COPPER	PRESS / SOLDER	1"	FIBERGLASS
STORM (NON-PLENUM)	SCH 40 PVC	SOLVENT WELD	1"	FIBERGLASS
STORM (PLENUM)	CAST IRON	NO HUB	1"	FIBERGLASS
WASTE & VENT (NON-PLENUM)	SCH 40 PVC	SOLVENT WELD	NONE	NA
WASTE & VENT (PLENUM)	CAST IRON	NO HUB	NONE	NA
ACID WASTE	REFER TO SPEC.	REFER TO SPEC.	NONE	NA



1 P4.0 PUMP DETAIL - INLINE
NOT TO SCALE



2 P4.0 WATER HEATER PIPING DETAIL
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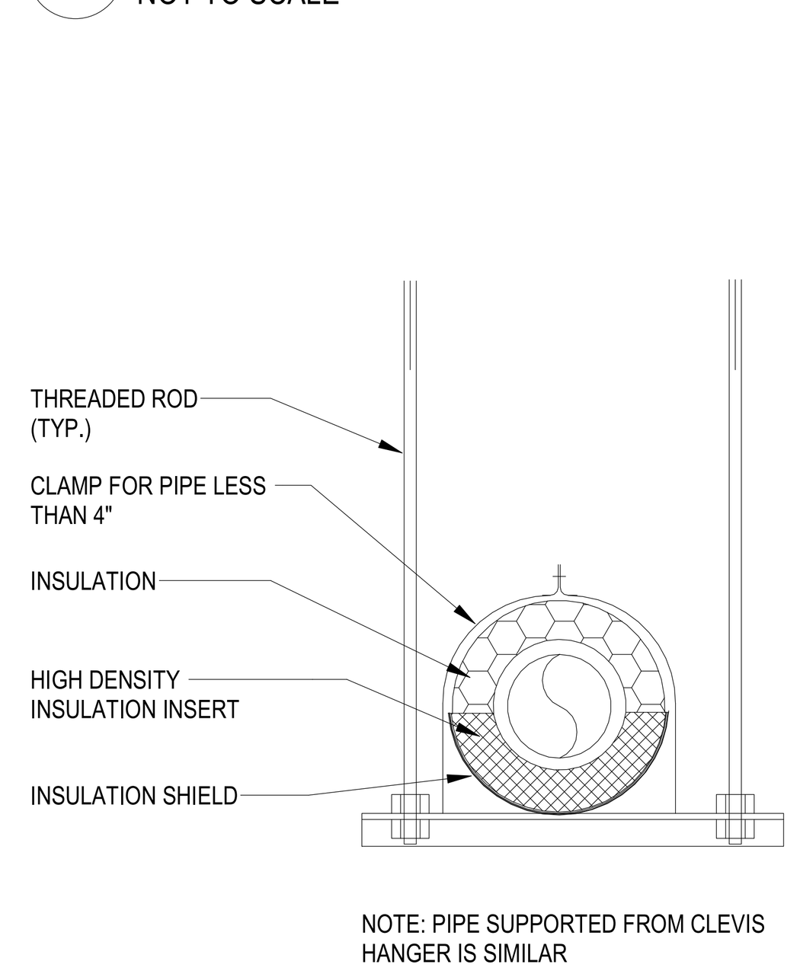
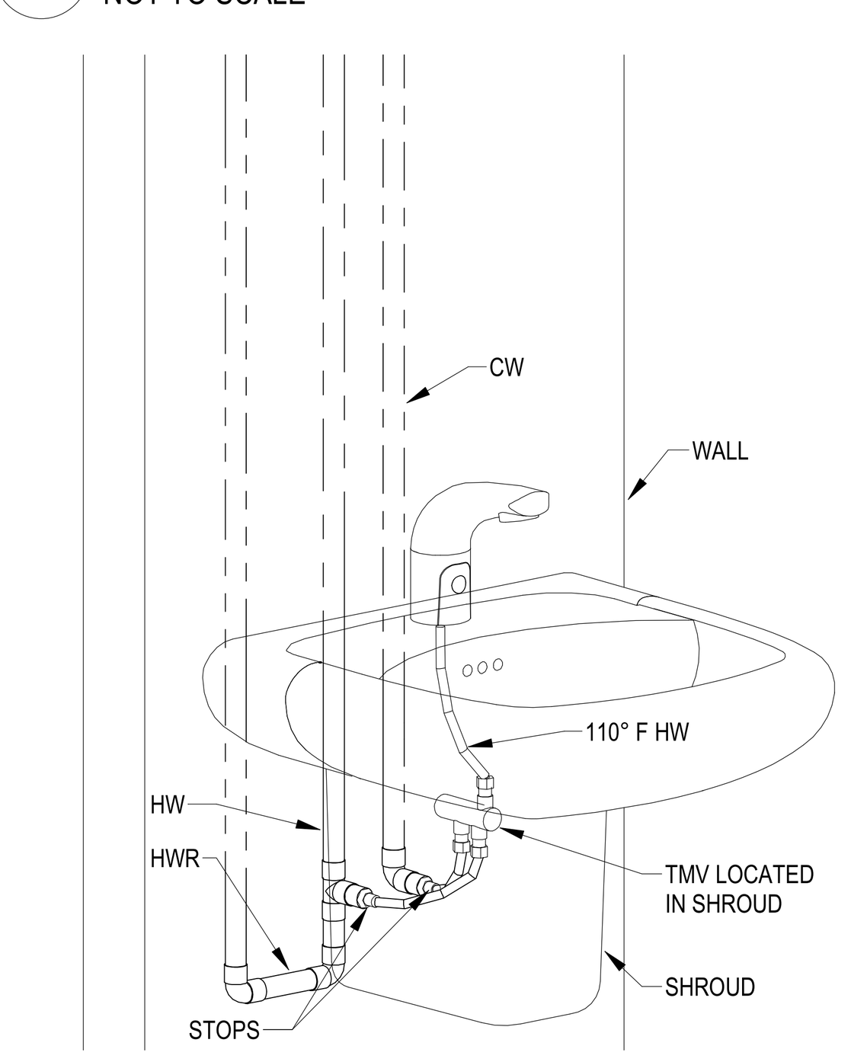


3 P4.0 TYPICAL PIPE SUPPORT DETAIL
NOT TO SCALE



4 P4.0 TYPICAL HOT WATER RETURN DETAIL
NOT TO SCALE

GENERAL PLUMBING NOTES

1. OBTAIN AND PAY ALL FEES AND PERMITS TO ALL PRIVATE AND PUBLIC AGENCIES HAVING JURISDICTION.
2. OSHA RULES, REGULATIONS AND REQUIREMENTS ARE A PART OF THIS PROJECT. CONTRACTOR SHALL FOLLOW THEM ALONG WITH FEDERAL, STATE AND LOCAL REQUIREMENTS FOR THE SAFETY OF WORKERS ON THE JOB AND PASSERS-BY.
3. CONSULT AND CHECK AT ALL TIMES THE LATEST ARCHITECTURAL AND PLUMBING DRAWINGS, WHICH ARE A PART OF THIS CONTRACT, FOR EXACT LOCATION OF EACH PLUMBING FIXTURE, EQUIPMENT AND DRAIN AND WATER REQUIREMENTS.
4. ALL WORK SHALL CONFORM TO ALL LOCAL CODES, AUTHORITIES AND INDUSTRY STANDARDS INCLUDING, BUT NOT LIMITED TO, INTERNATIONAL PLUMBING CODE AND ILLINOIS PLUMBING CODE.
5. COORDINATE ALL EQUIPMENT CONNECTIONS, SIZES AND LOCATIONS WITH ACTUAL EQUIPMENT DELIVERED, INCLUDING EQUIPMENT FURNISHED BY OTHER CONTRACTORS AND/OR THE OWNER. PROVIDE ALL NECESSARY FITTINGS AND ADAPTERS REQUIRED FOR FINAL CONNECTIONS. PROVIDE SHUT-OFF VALVES FOR ALL WATER CONNECTIONS TO EQUIPMENT.
6. FOR CLARITY, THESE DOCUMENTS DO NOT NECESSARILY SHOW EVERY OFFSET, FITTING, VALVE, ETC.
7. THE PLUMBING CONTRACTOR SHALL PROVIDE, DELIVER, AND INSTALL ALL NEW PLUMBING SYSTEMS, PLUMBING FIXTURES, WASTE, VENT, HOT AND COLD WATER DISTRIBUTION PIPING AS SPECIFIED, AS WELL AS ALL ACCESSORIES, AND EQUIPMENT AND SPECIALTIES MATERIALS NOT SPECIFIED BUT NECESSARY FOR COMPLETE INSTALLATION, GUARANTEE AND SERVICE.
8. ALL EXCAVATION AND BACKFILLING FOR THE ENTIRE PLUMBING INSTALLATION SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR.
9. PLUMBING CONTRACTOR SHALL FILL AND DRAIN EXISTING AND NEW DOMESTIC WATER LINES AS REQUIRED TO INSTALL PLUMBING SYSTEM.
10. ALL HANGERS, RODS, SUPPORTS, SUPPLIES, UNISTRUTS, P-TRAPS, STOPS, VALVES, SLEEVES, AND MISCELLANEOUS ITEMS SHALL BE FURNISHED AND INSTALLED BY PLUMBING CONTRACTOR AS REQUIRED IN FIELD.
11. ROUTE ALL PIPING TIGHT TO STRUCTURE ABOVE IN EXPOSED CEILINGS.
12. DO NOT ROUTE DOMESTIC WATER PIPING OVER ELECTRICAL PANELS.
13. PROVIDE CAULK AROUND ALL PIPES AT ALL WALL PENETRATIONS.
14. PROVIDE P-TRAP ON FIXTURE NOT HAVING AN INTEGRAL PART OF THE SAME INTO WASTE LINE.
15. TRAP SEALS SUBJECT TO EVAPORATION SHALL BE PROTECTED IN ACCORDANCE WITH 890.410F OF THE ILLINOIS PLUMBING CODE.
16. TEMPERED HOT WATER NOT TO EXCEED 110 DEGREES TO BE SUPPLIED TO ALL PUBLIC LAVATORIES.
17. 100 PSI AIR TEST OR WATER PRESSURE REQUIRED ON WATER PIPING AT TIME OF ROUGH INSPECTION.
18. PROVIDE INSULATION WITH FACTORY APPLIED ALL SERVICE JACKET FOR ALL HOT AND COLD WATER PIPING.
19. UNLESS OTHERWISE NOTED ON THE ARCHITECTURAL DRAWINGS, THE PLUMBING CONTRACTOR SHALL CUT, PATCH, AND MATCH EXISTING CONDITIONS AS REQUIRED TO REMOVE AND INSTALL WORK.

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RIVER VALLEY SCHOOL DISTRICT

RIVER VALLEY HIGH SCHOOL
15480 THREE OAKS RD
THREE OAKS, MI 49128

PLUMBING SCHEDULES AND DETAILS

JOB NUMBER 21-346
DATE 03.22.2022

REVISIONS:
1 ADDENDUM 001 03.30.2022

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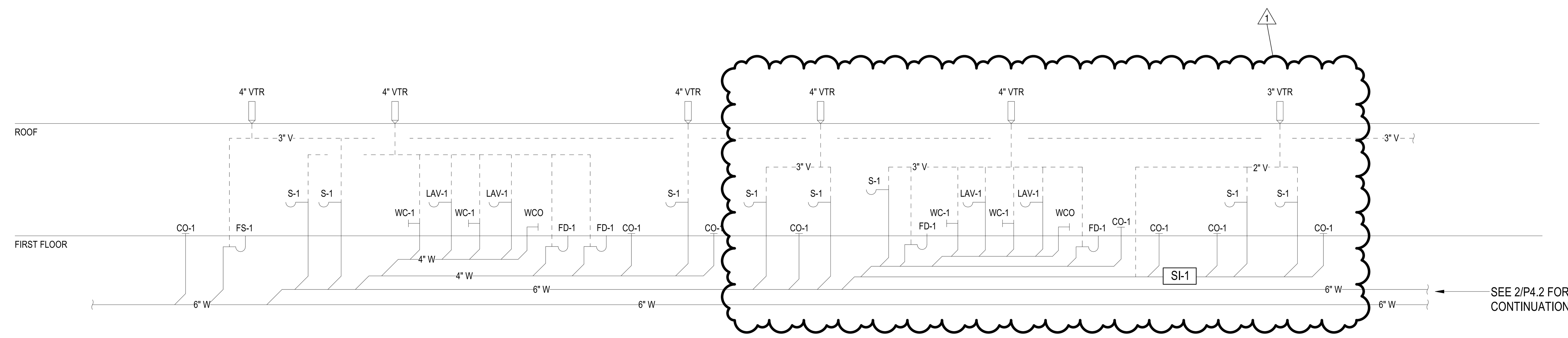
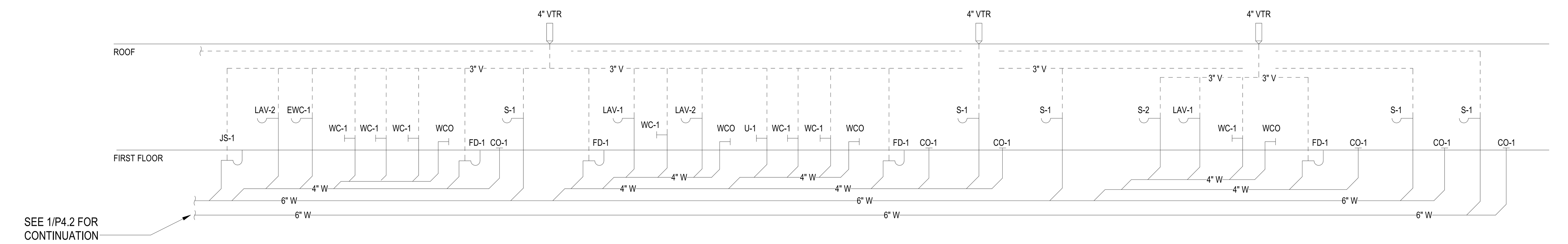
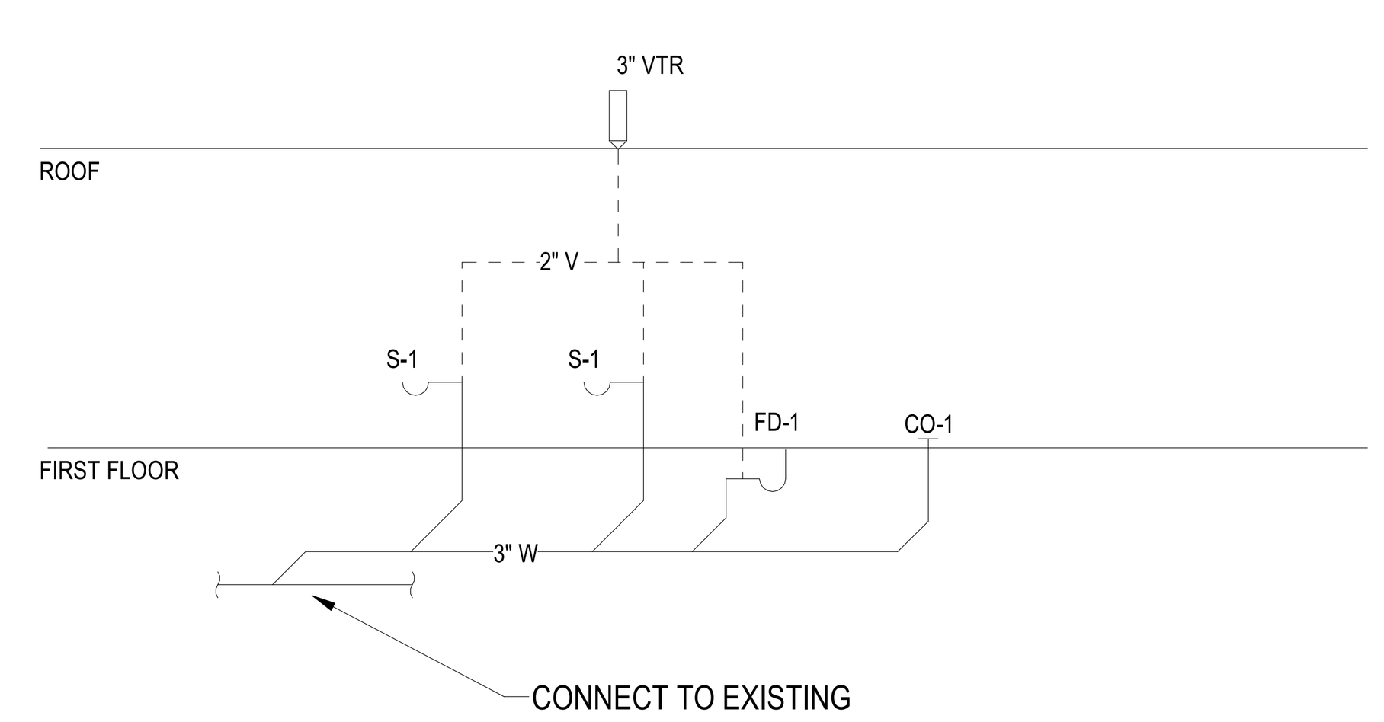


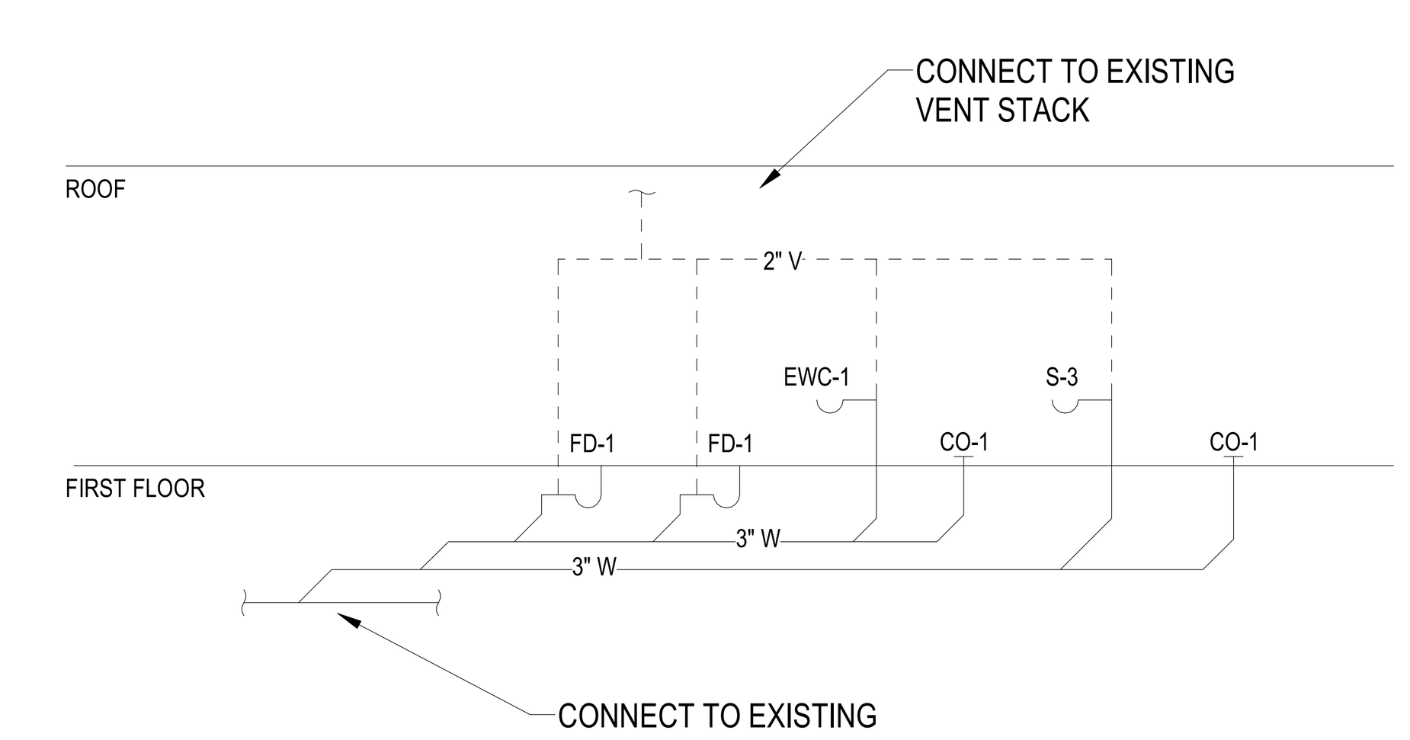
NORTH 1 WASTE AND VENT RISER DIAGRAM - AREA D PLAN
1/4" = 1'-0"



NORTH 2 WASTE AND VENT RISER DIAGRAM - AREA D PLAN CONTINUED
1/4" = 1'-0"



NORTH 3 WASTE AND VENT RISER DIAGRAM - AREA A CLASSROOMS
1/4" = 1'-0"



NORTH 4 WASTE AND VENT RISER DIAGRAM - FOOD SERVICE A124
1/4" = 1'-0"

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WASTE & VENT RISER DIAGRAMS

JOB NUMBER 21-346
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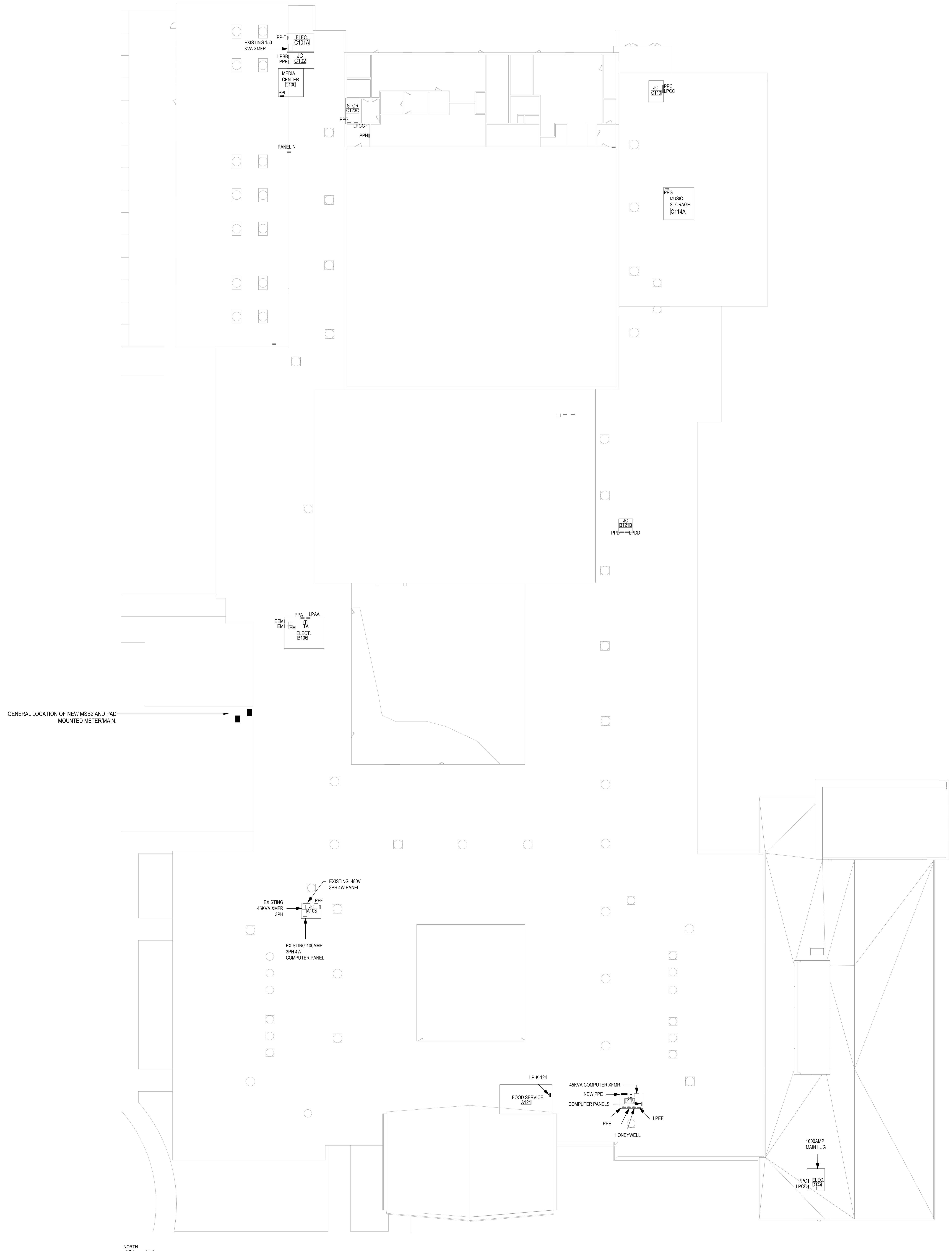

1 ELECTRICAL POWER PLAN - OVERALL ROOF
1" = 20'-0"

GENERAL LIGHTING & POWER NOTES

1. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, & FIRE PROTECTION PLANS FOR ADDITIONAL INFORMATION ON EXACT POWER, WIRING, & ROUGH-IN REQUIREMENTS AND LOCATIONS OF DEVICES.
2. MINIMUM NEW CIRCUIT WIRING SHALL CONSIST OF 2#12,1#12G, 1/2"C. WHERE HOME RUNS EXCEED 75' OR CONTINUOUS LOAD EXCEEDS 65% OF CIRCUIT RATING, MINIMUM CIRCUIT SIZE SHALL CONSIST OF 2#10G, 1/2"C. ALL NEW CIRCUITS SHALL INCLUDE A CONTINUOUS EQUIPMENT GROUNDING CONDUCTOR.
3. CIRCUITS BEING CONTROLLED BY VARIABLE DIMMING EQUIPMENT SHALL ROUTED WITH SEPARATED DEDICATED NEUTRALS
4. CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF ALL RECESSED LIGHTING FIXTURES WITH ARCHITECTURAL REFLECTED CEILING PLANS PRIOR TO INSTALLATION. VERIFY CEILING CONSTRUCTION WITH ARCHITECT IN ALL AREAS. CONTRACTOR SHALL BE RESPONSIBLE FOR ORDERING FIXTURES WITH CORRECT TRIMS, ETC. TO ASSURE COMPATIBILITY WITH CEILING STRUCTURE.
5. WHERE MORE THAN ONE SWITCH IS INDICATED AT A LOCATION, CONTRACTOR SHALL INSTALL CO-LOCATED LIGHT SWITCHES IN A COMMON FACEPLATE. USE MULTI-GANG BACKBOXES. VERIFY MOUNTING HEIGHT WITH ADA REQUIREMENTS. PROVIDE STEEL BARRIES BETWEEN SWITCHES FOR EACH CIRCUIT WHERE MANDATED BY CODE.
6. COORDINATE INSTALLATION OF LIGHTING FIXTURES IN MECHANICAL AREAS, EQUIPMENT ROOM, ETC; ADJUST FIXTURE HEIGHTS AND LOCATIONS AS NECESSARY TO OFFSET CONFLICTS
7. FOR EXISTING AREAS WITH NEW REPLACMENT LIGHTING.
   a. E.C. TO REWORK AND EXTEND EXISTING LIGHTING CIRCUIT TO NEW REPLACEMENT FIXTURES IN LOCATIONS AS SHOWN.
   b. REPLACEMENT WALL CONTROLS SHALL BE INSTALLED IN EXISTING SWITCH LOCATIONS WITH NEW FACEPLATES MATCHING NEW DEVICES. EXTEND NEW NEUTRAL TO SWITCH LOCATION AS REQUIRED FOR NEW WALL STATION LIGHTING CONTROLS.

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ELECTRICAL POWER PLAN - OVERALL ROOF

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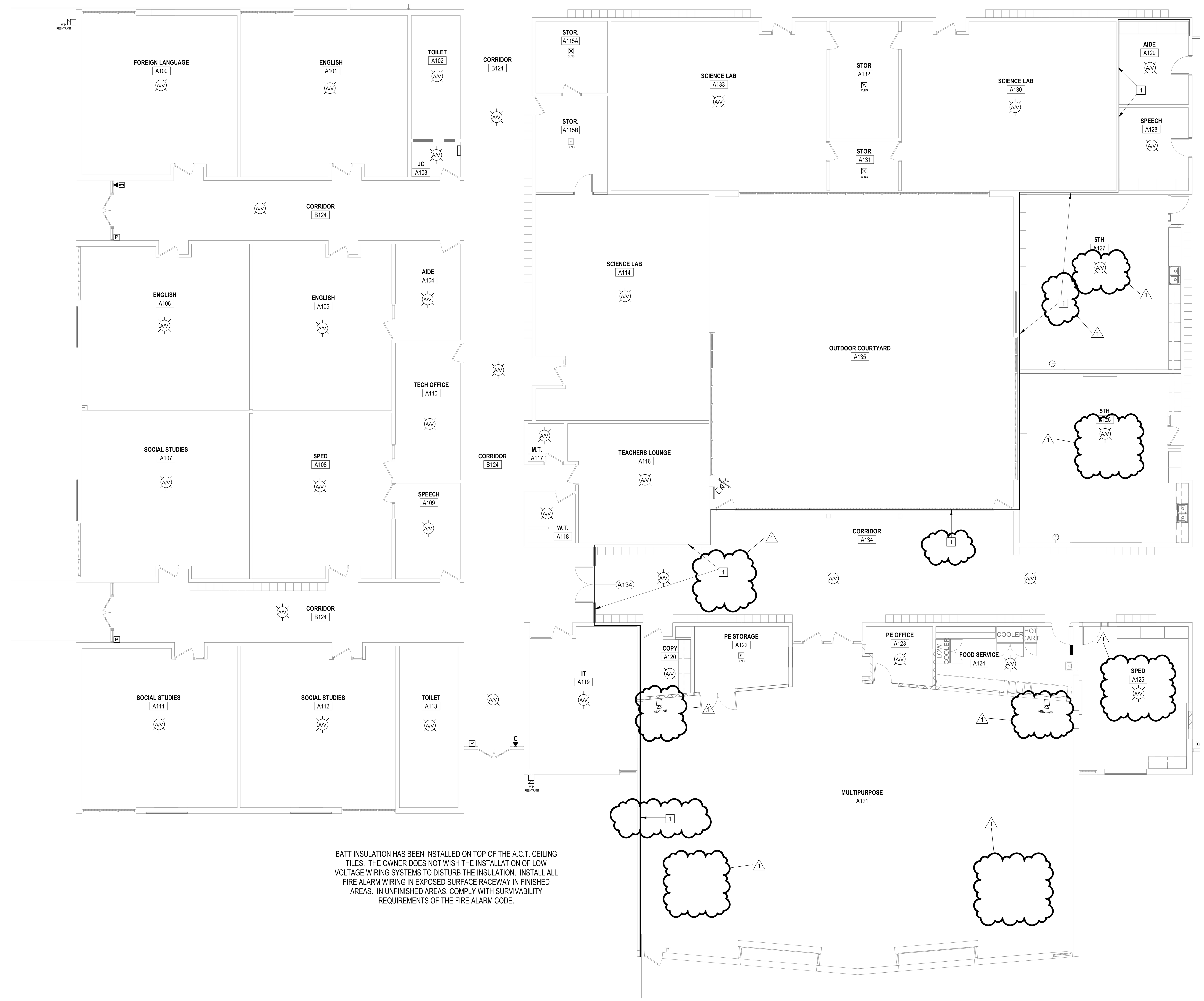

BATT INSULATION HAS BEEN INSTALLED ON TOP OF THE A.C.T. CEILING TILES. THE OWNER DOES NOT WISH THE INSTALLATION OF LOW VOLTAGE WIRING SYSTEMS TO DISTURB THE INSULATION. INSTALL ALL FIRE ALARM WIRING IN EXPOSED SURFACE RACEWAY IN FINISHED AREAS. IN UNFINISHED AREAS, COMPLY WITH SURVIVABILITY REQUIREMENTS OF THE FIRE ALARM CODE.

1 ELECTRICAL SYSTEM PLAN - AREA A
1/8" = 1'-0"

GENERAL SYSTEMS NOTES

1. REFER TO ARCHITECTURAL, MECHANICAL, TEMPERATURE CONTROL, PLUMBING, & FIRE PROTECTION PLANS FOR ADDITIONAL INFORMATION, REQUIREMENTS, AND EQUIPMENT LOCATIONS.
2. MINIMUM SYSTEMS RACEWAY SIZE TO BE 3/4". ALL WIRING IN EXPOSED AREAS SHALL BE IN CONDUIT.MINIMUM SYSTEMS RACEWAY SIZE TO BE 3/4". ALL WIRING IN EXPOSED AREAS SHALL BE IN CONDUIT.
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4. WIRING METHODS ABOVE PLENUM CEILINGS MUST BE PLENUM RATED. ALL WIRING METHODS MUST COMPLY WITH ARTICLE 300.22(C)
5. LOW VOLTAGE CABLES ROUTED VIA APPROVED OPEN WIRING METHODS MUST BE INDEPENDENTLY SUPPORTED VIA STRAPS, HANGERS, OR TRAY SPECIFICALLY DESIGNED TO PREVENT DAMAGE TO THE CABLE.LOW VOLTAGE CABLES ROUTED VIA APPROVED OPEN WIRING METHODS MUST BE INDEPENDENTLY SUPPORTED VIA STRAPS, HANGERS, OR TRAY SPECIFICALLY DESIGNED TO PREVENT DAMAGE TO THE CABLE.
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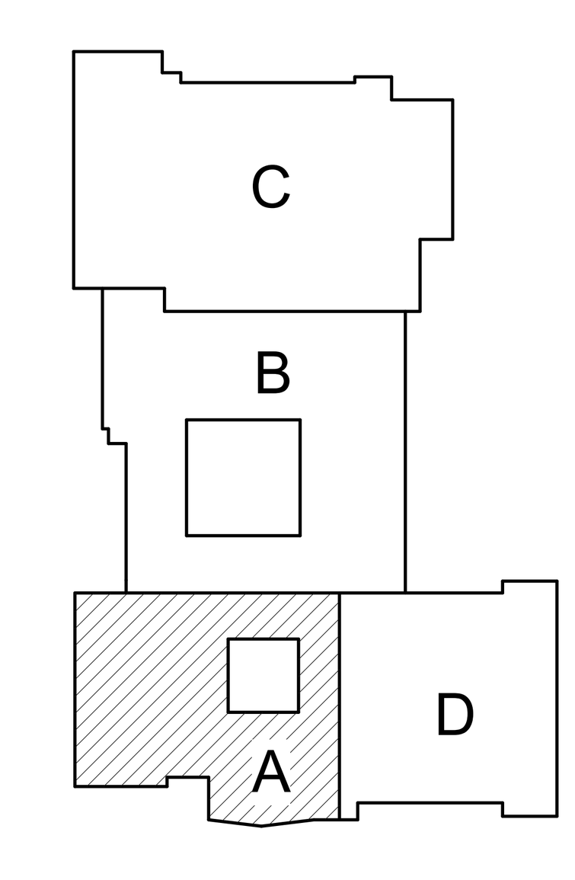
9. FIRE SEAL ALL PENETRATIONS THROUGH FIRE RATED WALLS AND PARTITIONS PER SPEC'S. PROVIDE ACOUSTICAL SEALANT AT OTHER PENETRATIONS. PROVIDE EXPANSION FITTINGS AT ALL EXPANSION JOINTS.

ELECTRICAL SYSTEMS KEYNOTES

1 DEMARCATION OF THE ELEMENTARY SCHOOL BOUNDARY FOR FIRE ALARM NOTIFICATION, EMERGENCY COMMUNICATION, AND AUXILIARY PUBLIC ADDRESS ANNOUNCEMENTS . SED ARCHITECTURAL PLAN.



KEY PLAN
NOT TO SCALE

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ELECTRICAL SYSTEMS PLAN - AREA A

JOB NUMBER 21-346
DATE 03/22/2022

REVISIONS:
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John G. Cordogan
Architect
No.
1301035955
LICENSED ARCHITECT

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E3.1A

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1 ELECTRICAL SYSTEM PLAN - AREA B
1/8" = 1'-0"

GENERAL SYSTEMS NOTES

1. REFER TO ARCHITECTURAL, MECHANICAL, TEMPERATURE CONTROL, PLUMBING, & FIRE PROTECTION PLANS FOR ADDITIONAL INFORMATION, REQUIREMENTS, AND EQUIPMENT LOCATIONS.
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ELECTRICAL SYSTEMS KEYNOTES

1 PROVIDE NEW CLASSROOM WIRELESS ANALOG CLOCK MATCHING EXISTING AMERICAN CLOCK SYSTEM.

1

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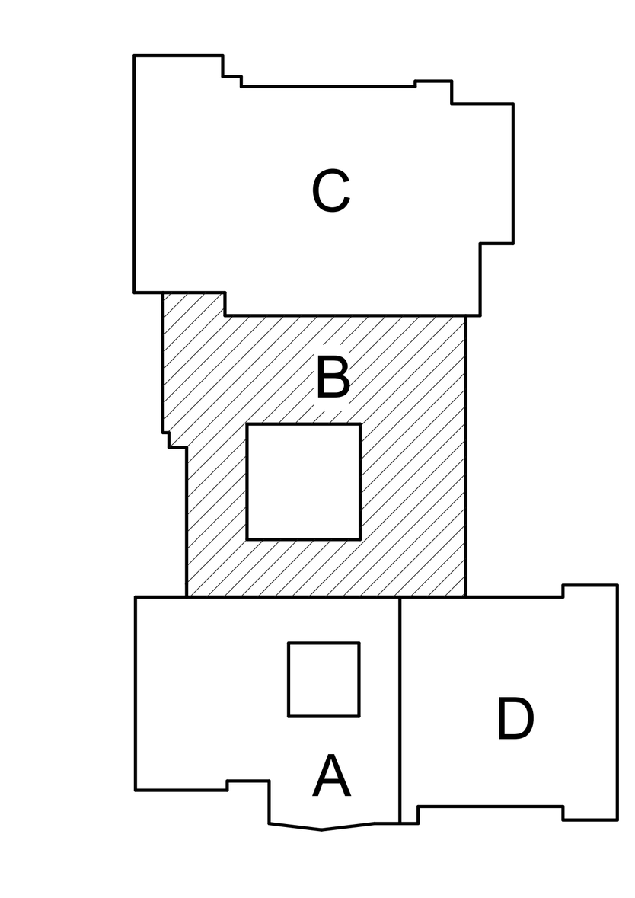

KEY PLAN
NOT TO SCALE

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ELECTRICAL SYSTEMS PLAN - AREA B

JOB NUMBER 21-346
DATE 03/22/2022

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1 ADDENDUM 01 03.29.2022

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John G. Cordogan
Architect
No. 1301035955
LICENSED ARCHITECT

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GENERAL SYSTEMS NOTES

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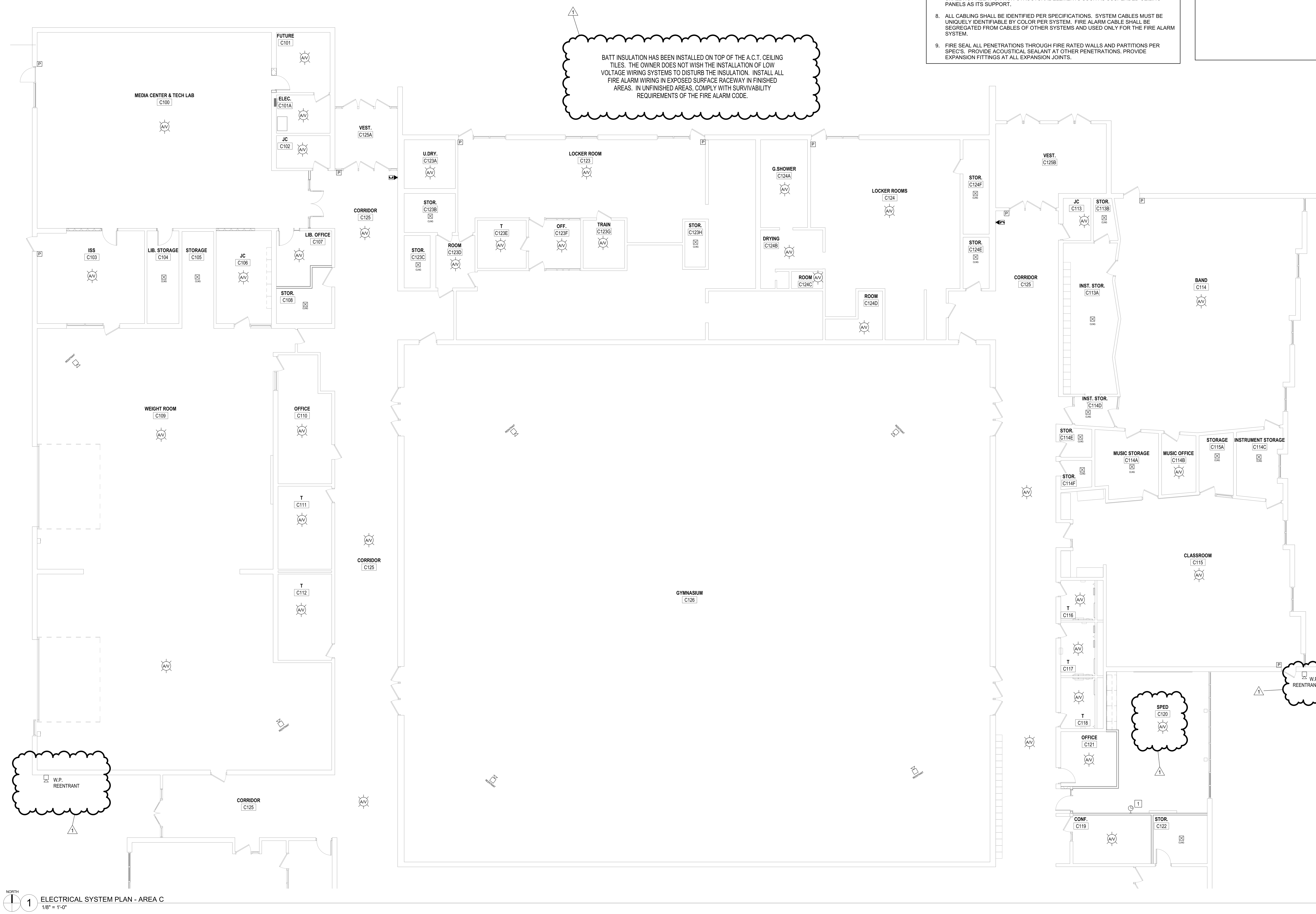
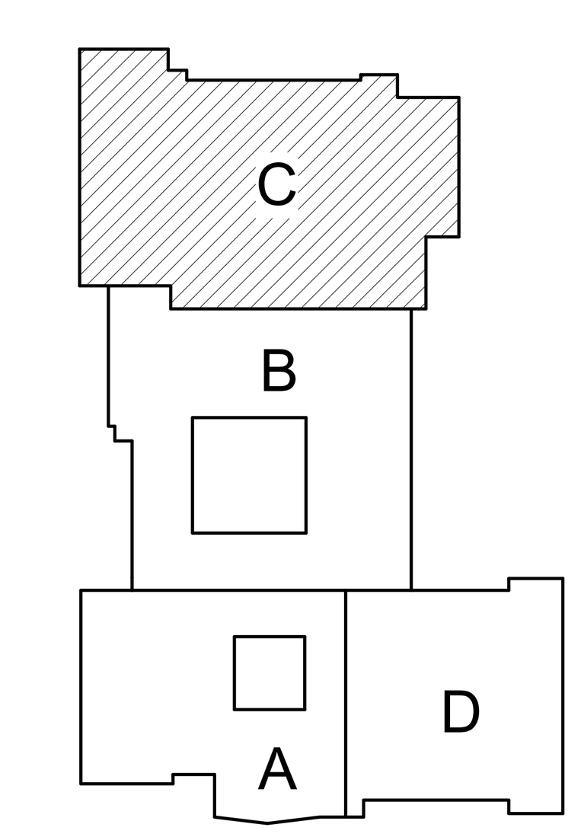


NORTH

1 ELECTRICAL SYSTEM PLAN - AREA C
1/8" = 1'-0"



KEY PLAN
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ELECTRICAL SYSTEMS PLAN - AREA C

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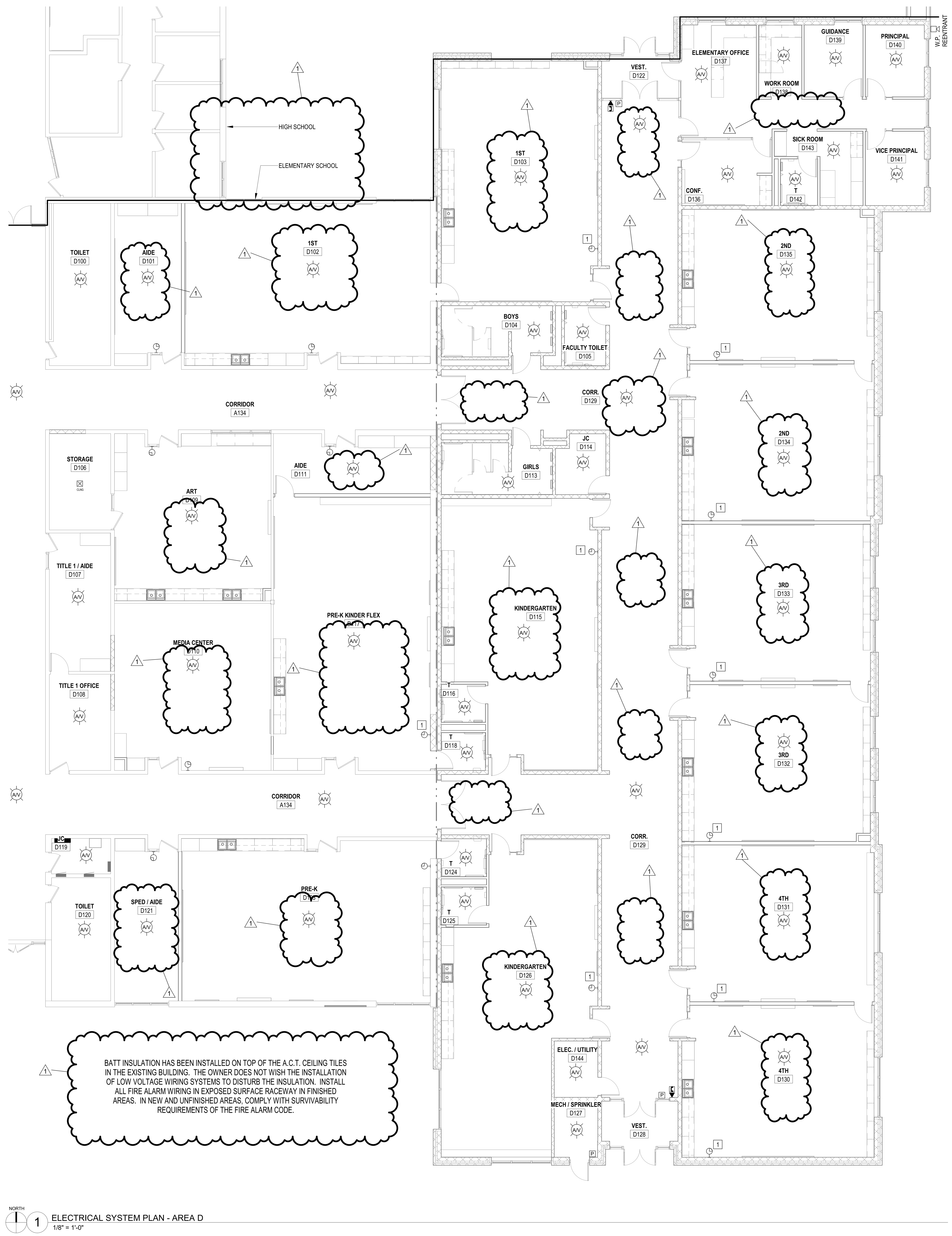

1 ELECTRICAL SYSTEM PLAN - AREA D
1/8" = 1'-0"

GENERAL SYSTEMS NOTES

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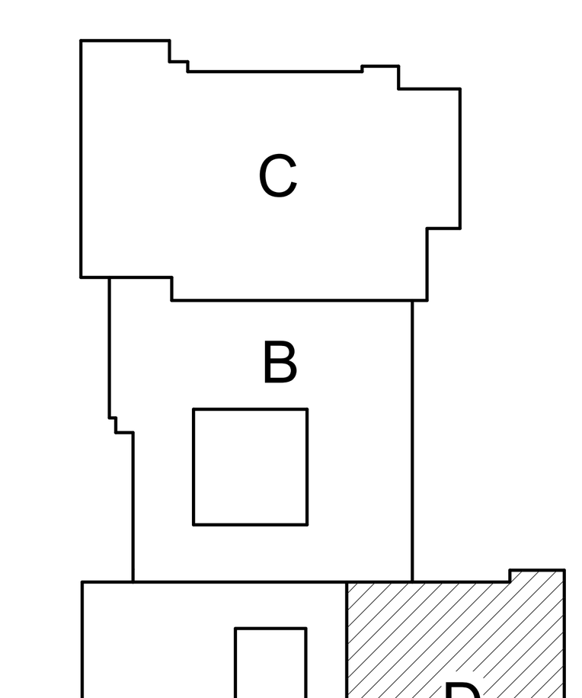
ELECTRICAL SYSTEMS KEYNOTES

1 EXISTING WIRELESS ANALOG CLOCK FROM OWNER'S STOCK TO BE REUSED IN THE CLASSROOMS.



KEY PLAN
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ELECTRICAL SYSTEMS PLAN - AREA D

JOB NUMBER 21-346
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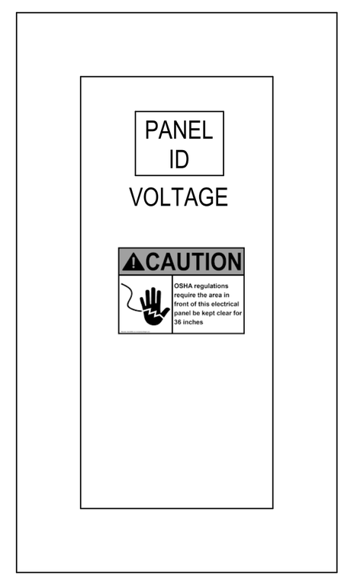
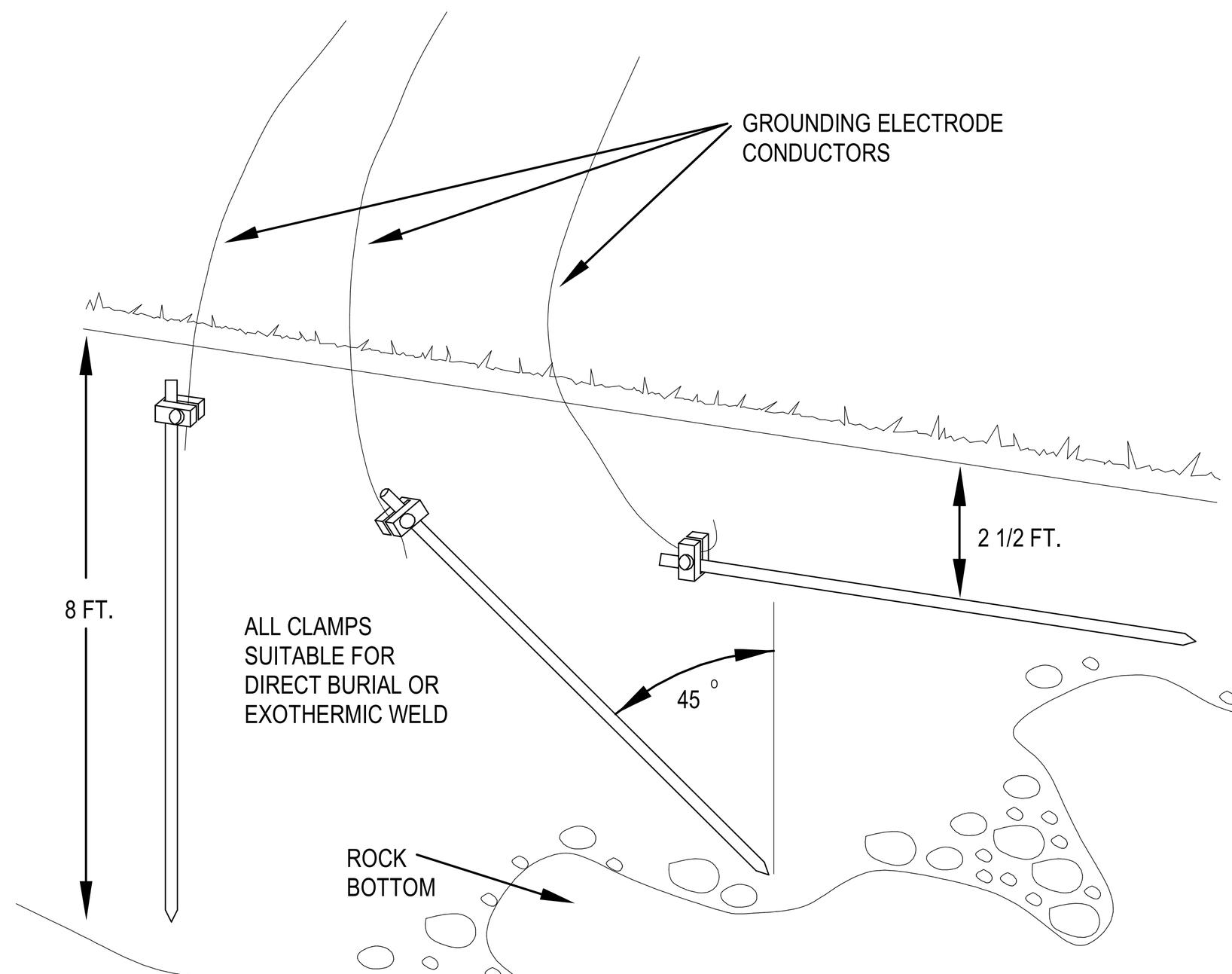
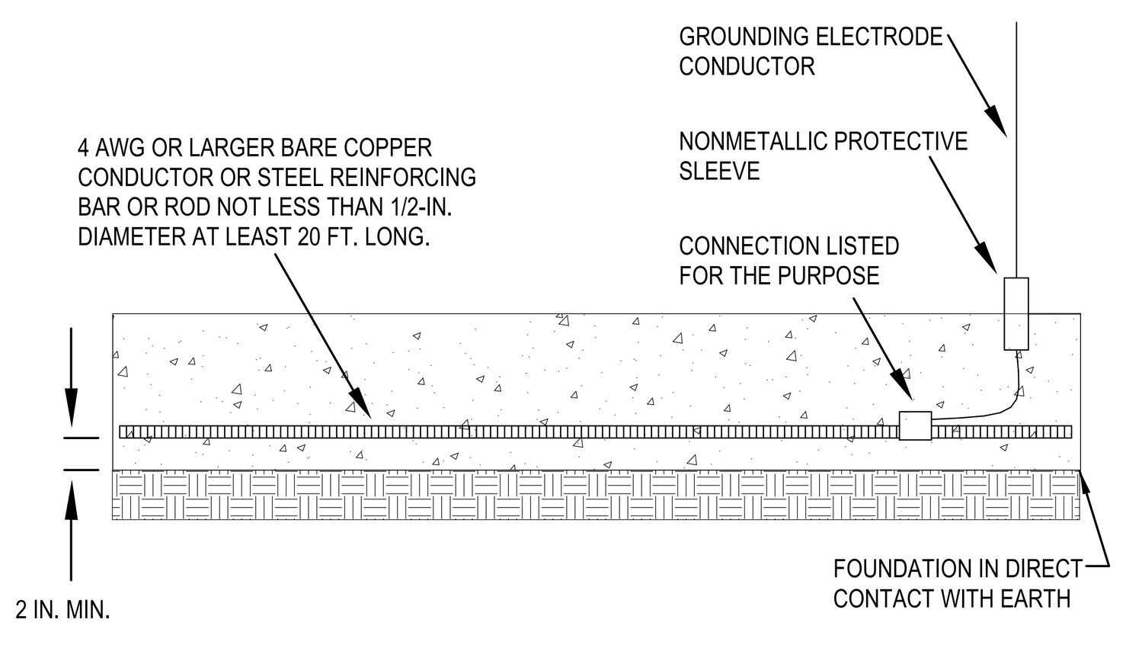


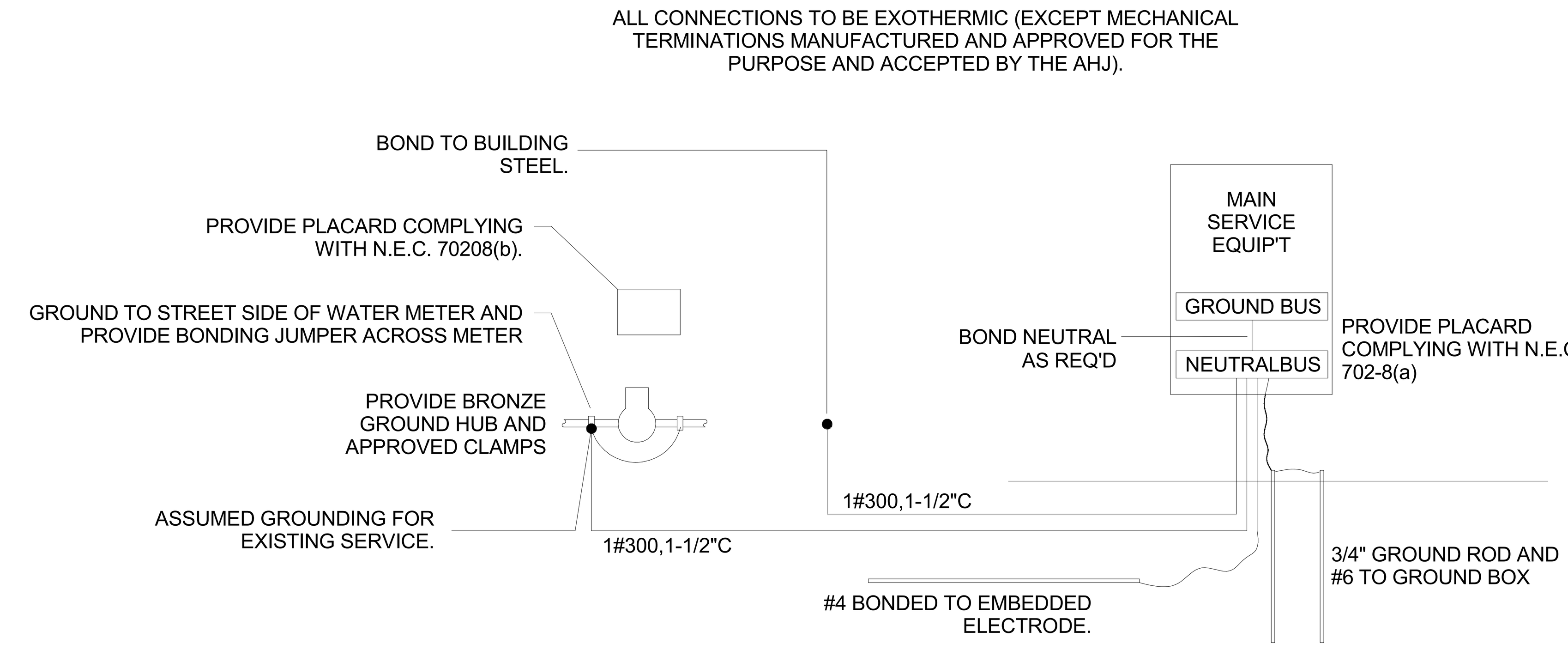
5 TYP. PANEL PLACECARDING



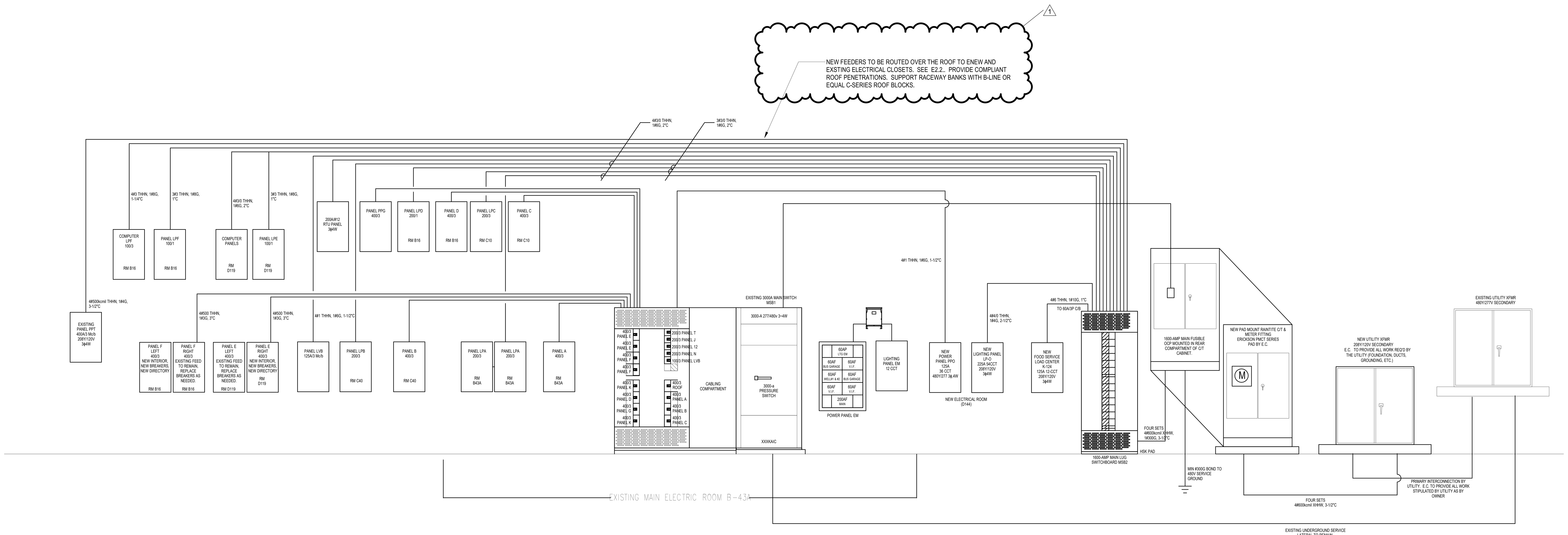
4 GROUND ROD COORDINATION



3 EMBEDDED (UFER) GROUND DETAIL



2 GROUNDING PLAN



1B DISTRIBUTION SYSTEM REVISIONS AND ADDITIONS

1A EXISTING DISTRIBUTION SYSTEM

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DISTRIBUTION RISER AND GROUNDING PLAN

JOB NUMBER 21-346
DATE 03/22/2022

REVISIONS:
ADDENDUM 01 03.29.2022

John G. Cordogan Architect No. 1301035955 — State of Michigan Licensed Architect

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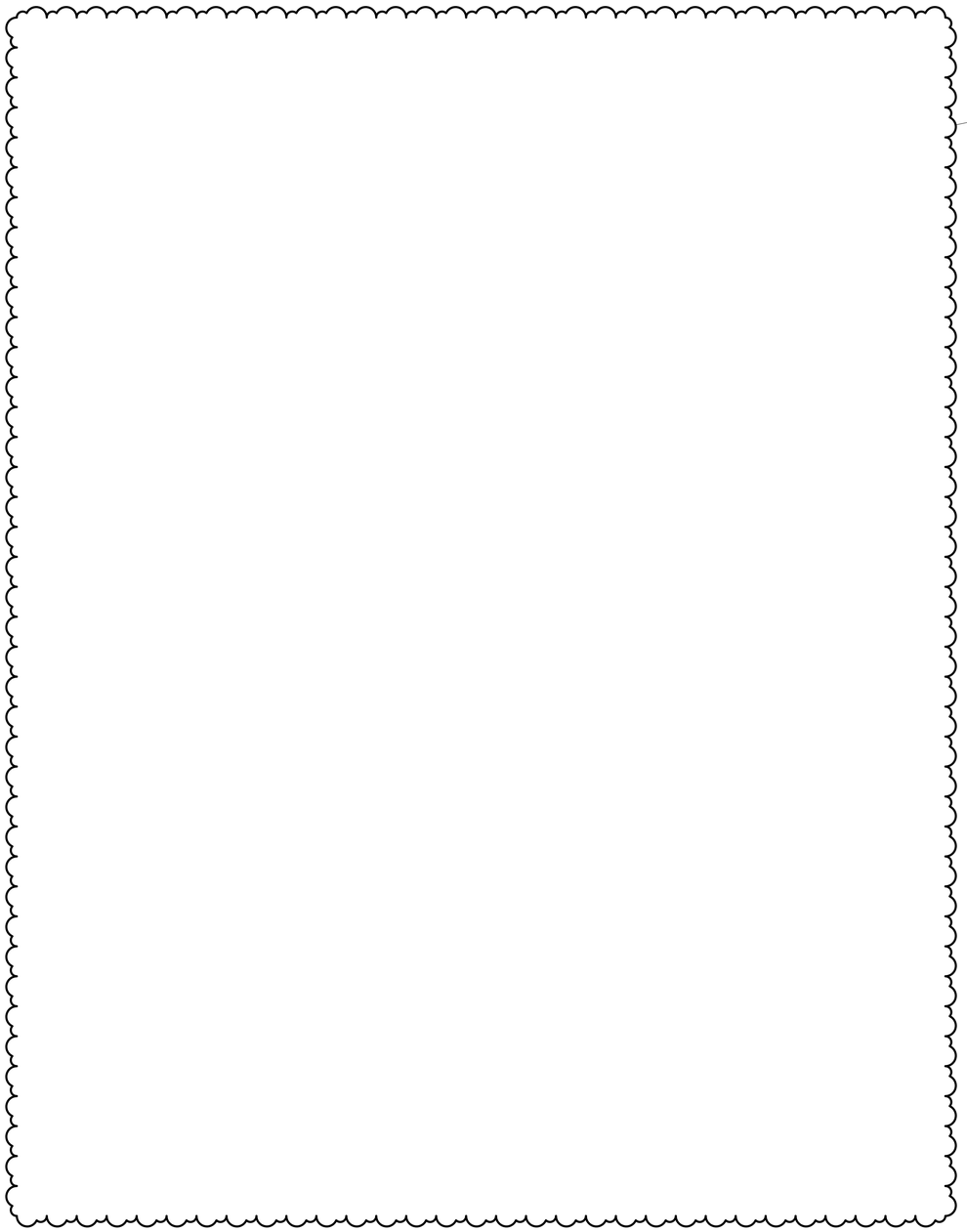
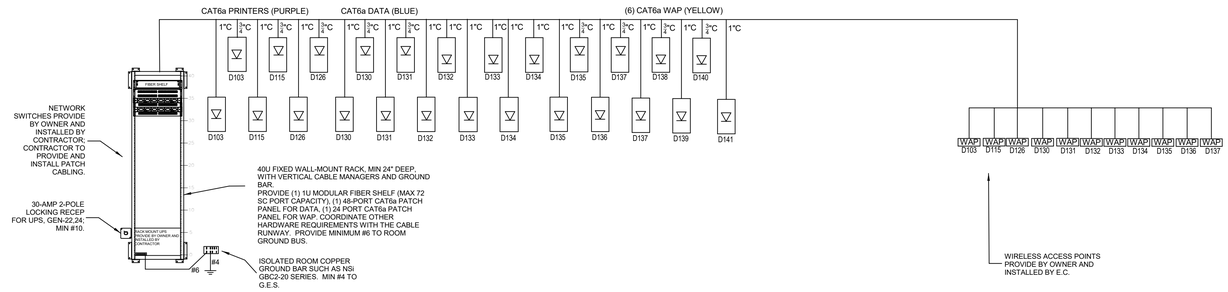


LEGEND FOR STRUCTURED CABLING	
WAP — CEILING OR WALL WIRELESS ACCESS POINT DROP CAT6a	(1) CAT6a CABLE IDENTIFIED FOR USE OF DATA
WALL BOX	
FLOOR BOX SEE PLAN FOR FACE PLATES	
COPY — WALL BOX FOR COPIER/PRINTER CAT6E	



ALL DATA CABLING TO BE MINIMUM CAT6a RATED 500MHZ UTP. INSTALL 10G RJ-45 WALL OUTLETS, CAT 6a TERMINATIONS AND PATCH PANELS, AND COMPLY WITH EIA/TIA-568, 569, AND 607. TEST AND CERTIFY THE ENTIRE CABLING SYSTEM FOR ALL TEST PARAMETERS NOTED IN EIA/TIA-568. ALL WORK MUST MEET OWNER REQUIREMENTS AND BICSI INSTALLATION STANDARDS. SEE SPECIFICATIONS FOR MORE INFORMATION.

1 STRUCTURED CABLING RISER

CORDOGAN CLARK
Chicago
115 North Wells Street, Chicago, IL 60606
Tel 312.641.3535 Fax 312.641.4771
Aurora
101 N Broadway Avenue, Aurora, IL 60505
Tel 630.896.4616 Fax 630.896.4891

RIVER VALLEY SCHOOL DISTRICT

RIVER VALLEY HIGH SCHOOL
15480 THREE OAKS RD.
THREE OAKS, MI 49128

STRUCTURED CABLING RISERS, SPEAKER, AND CLOCK RISER

JOB NUMBER 21-346

DATE 03/22/2022

REVISIONS:
ADDENDUM 01 03.29.2022

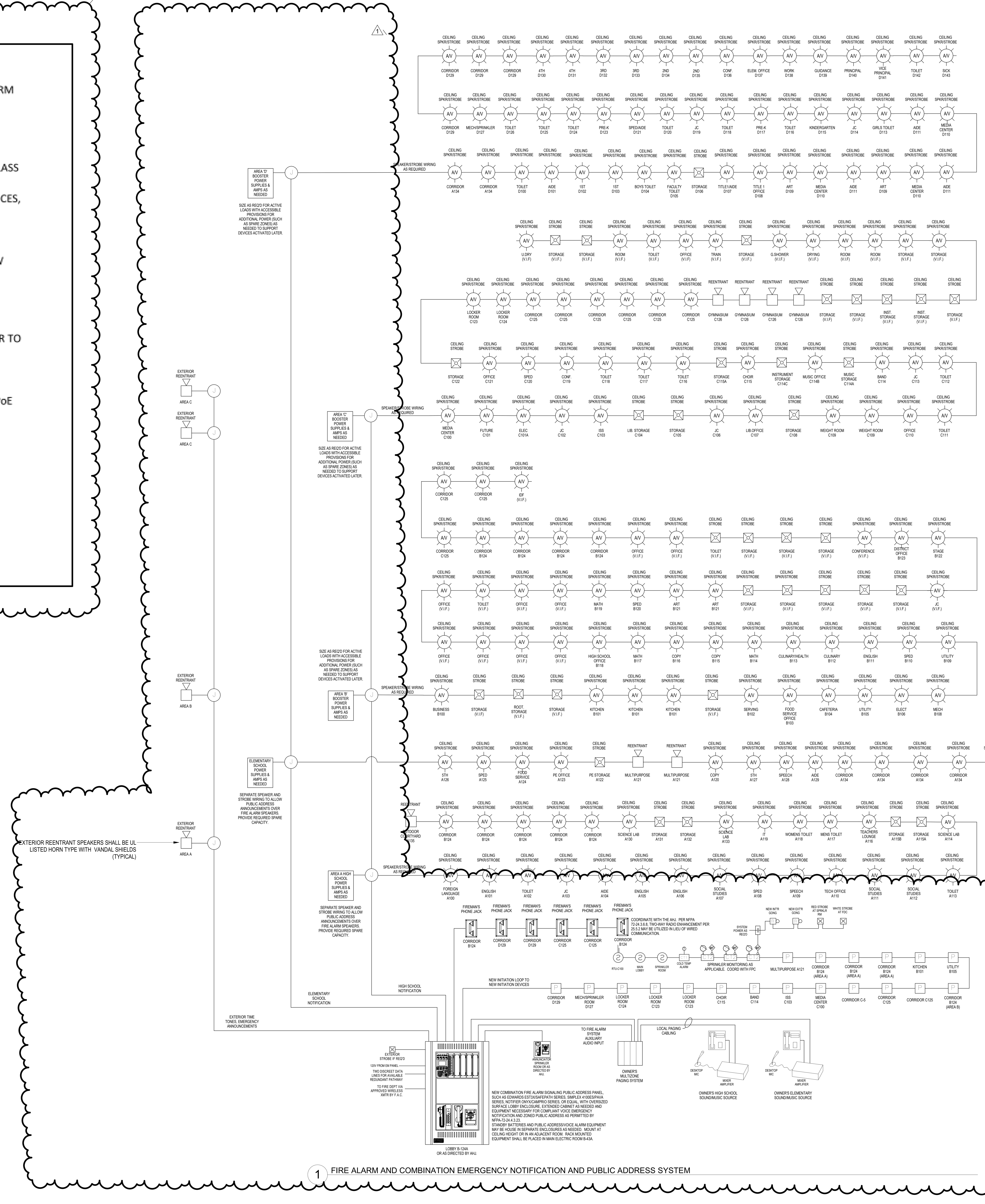
STATE OF MICHIGAN
John G. Cordogan
Architect
No. 1301035955
LICENSED ARCHITECT

CD BID SET

E4.4

ALTERNATE IP BASED PUBLIC ADDRESS SYTEM:

1. DEDUCT PROVISION OF PUBLIC ADDRESS FUNCTIONS THROUGH THE NEW FIRE ALARM SYSTEM.
2. DESIGN, FURNISH, AND INSTALL A ONE-WAY ZONED PUBLIC ADDRESS SYSTEM UTILIZING THE EXISTING OR NEW BUILDING IP NETWORK INFRASTRUCTURE AS APPLICABLE.
   a. PROVIDE PROGRAMMING FOR MULIPLE P.A. ZONES: HIGH SCHOOL (WITH CLASS CHANGE BELL TONES), ELEMENTARY SCHOOL (WITH CLASS CHANHE BELL TONES), EXTERIOR, ALL CALL CORRIDORS, ACCESSED VIA WEB ENABLED DEVICES, DESKTOP OR MOBILE.
   b. PROVIDE ALL EQUIPMENT, PROGRAMMING, AND COMMISSIONING FOR A SATISFACTORILY COMPLETE AND OPERATING SYSTEM.
   c. IP BASED PoE SPEAKERS ADDED TO EXISTING NETWORK BY PATCHING A NEW LOCAL MANAGED ETHERNET SWITCH (SUCH AS NETGEAR GS110TPv3) TO EXISTING WIFI ROOM PORT. PROVIDE 120-VOLT RECEPTACLE.
   d. SIP DEVICE AND TRUNK SUPPORT. SUPPORT FUTURE VISUAL MESSAGING DEVICES.
   e. COMPATIBLE WITH ANY EXISTING LEGACY SPEAKERS DESIGNATED BY OWNER TO REMAIN.
   f. INTEGRATABLE WITH 3RD PARTY PBX's, SECURITY/ALARM, FIRE, ACCESS CONTROL, AND OTHER ENTERPRISE SYSTEMS.
3. USE THE MULTI-PORT SWITCH IN 2c ABOVE TO SERVE A NEW WALL MOUNTED SIP PoE SPEAKER IN THE ROOM, ONE IN THE NEAREST ADJACENT CORRIDOR OR EXTERIOR (WEATHERTIGHT SPEAKER), OTHERS SPEAKERS AS NEEDED, AND ANY OTHER NEW EQUIPMENT IN THE ROOM NEEDING NETWORK CONNECTIVITIY.
4. EQUAL TO BOGEN E7000 SERIES, CYBERDATA, TELECOR, PRO ACOUSTICS, VALCOM.
5. ALL WORK TO COMPLY WITH BICSI STANDARDS BY A CONTRACTOR HAVING COMPLETED AT LEAST FIVE PROJECTS OF SIMILAR SCALE.



1 FIRE ALARM AND COMBINATION EMERGENCY NOTIFICATION AND PUBLIC ADDRESS SYSTEM

GENERAL FIRE ALARM NOTES

THE FIRE ALARM CONTRACTOR (F.A.C.) SHALL DESIGN, FURNISH, AND INSTALL A COMPLETE LOCAL PROTECTIVE AND REMOTE ALARM SIGNALING AND EMERGENCY COMMUNICATION SYSTEM. THE F.A.C. SHALL PROCURE PERMITS AND SUBMIT INSTALLER'S LAYOUT DRAWINGS, PRODUCT DATA, AND BATTERY COMPUTATIONS TO THE AHJ FOR REVIEW AND COMMENT. PROVIDE ALL NEW EQUIPMENT AND DEVICES REQUIRED; COORDINATE WITH OTHER SYSTEMS. IF DIFFERENT FROM THE F.A.C., THE ELECTRICAL CONTRACTOR (E.C.) SHALL PROVIDE ALL ADDITIONAL RACEWAYS WHERE REQUIRED TO SUPPORT THE FIRE ALARM INSTALLATION.

THE FIRE ALARM SYSTEM SHALL BE DESIGNED TO ACCOMMODATE NORMAL PAGING ANNOUNCEMENTS AND CLASS CHANGE TIME TONES FROM MIXING AMPLIFIERS SPECIFIED BY THE SIRE ALARM DESIGN AND PROVIDED BY THE OWNER.

THE RISER DIAGRAM IS DEPICTORIAL FOR PLAN REVIEW SCOPE ONLY AND NOT INTENDED TO REPRESENT THE COMPLETE DESIGN REQUIREMENTS OR SHOW ALL ACCESSORIES, WIRING, AND COMPONENTS NECESSARY FOR A COMPLETE AND OPERATING SYSTEM. THE ACTUAL CONFIGURATION AND COMPONENT REQUIREMENTS ARE TO BE DETERMINED BY THE FIRE ALARM CONTRACTOR'S DESIGNER IN CONSULTATION WITH THE MANUFACTURER AND THE AHJ. ALL WORK IS SUBJECT TO REVIEW AND COMMENT BY LOCAL AHJ VIA THE LOCAL SUBMITTAL PROCESS DEFINED BY THE AHJ.

1. THE FIRE ALARM SYSTEM LAYOUT DRAWINGS SHALL BE DEVELOPED N ACCORDANCE WITH NFPA 72-2013 BY PERSONS WHO ARE EXPERIENCED IN THE PROPER DESIGN, APPLICATION, INSTALLATION AND TESTING OF FIRE ALARM SYSTEMS. EXAMPLES INCLUDE FACTORY TRAINED AND CERTIFIED STAFF, MINIMUM LEVEL IV NICET CERTIFICATION, OR LICENSED P.E.

2. F.A.C. IS COMPLETELY RESPONSIBLE FOR FIELD VERIFICATION OF FIELD CONDITIONS, COORDINATION WITH AFFECTED TRADES, AND ADAPTATIONS NECESSARY TO EXECUTE THE WORK. VISIT THE JOB SITE. USE FIELD SURVEYS AND MEASUREMENTS IN PREPARING THE BID AND EXECUTING THE WORK. COMMENCEMENT OF WORK INDICATES ACCEPTANCE OF EXISTING CONDITIONS.

3. ALL FIRE ALARM WORK TO BE COMPLIANT WITH APPLICABLE CODES AND STANDARDS. THE F.A.C. SHALL PROVIDE ALL DOCUMENTATION AS MANDATED BY NFPA 72, AND AS STIPULATED BY THE AHJ.

4. QUALITY ASSURANCE:
   a. NFPA 70-2014, 72-2013, 101, AND ALL OTHER APPLICABLE NFPA STANDARDS AS LOCALLY ADOPTED.
   b. EIA/TIA WHERE REFERENCED FOR LOW VOLTAGE WIRING STANDARDS.
   c. IBC-2015 AND ASSOCIATED CODES INCLUDING IFC-2015.
   d. LOCAL AHJ.
   e. UL, ANSI, IEEE.
   f. NECA/NEIS 301 AND OTHER WORKMANSHIP STANDARDS, AS WELL AS THE AMERICAN ELECTRICIAN'S HANDBOOK, LATEST EDITION.

5. FURNISH AND INSTALL PHOTOELECTRIC DUCT DETECTORS AND SAMPLING TUBES WHEN REQUIRED FOR ALL NEW AND EXISTING PACKAGED HVAC AND AIR HANDLING UNITS 2000CFM OR GREATER. INCLUDE FAN SHUTDOWN INTERLOCKING WIRING AND REMOTE INDICATORS AND TEST BUTTONS AS NECESSARY. PROGRAM AS DIRECTED (FOR ALARM OR SUPERVISION) PER LOCAL AHJ. CONSULT MECHANICAL DRAWINGS FOR QUANTITIES OF UNITS AND ANY ADDITIONAL SCOPE OF WORK.

6. ALL NEW DEVICE HEIGHTS MUST COMPLY WITH ADA WHEN WORK IS COMPLETED. PROVIDE ADA NOTIFICATION APPLIANCES AS REQUIRED THROUGHOUT. WIRING SHALL MEET THE SURVIVABILITY STANDARDS INDICATED IN NFPA 72.

7. COORDINATE WITH SPRINKLER PLANS FOR FINAL QUANTITIES OF INITIATING DEVICES TO BE MONITORED. COORDINATE w/ LOCAL AHJ FOR DESIRED CONFIGURATION OF TAMPER AND FLOW MONITORING. WHEN APPLICABLE, MONITOR ALL FIRE PUMP PARAMETERS REQUIRED BY CODE.

8. REMOVE ALL ABANDONED OPEN WIRING PER N.E.C.

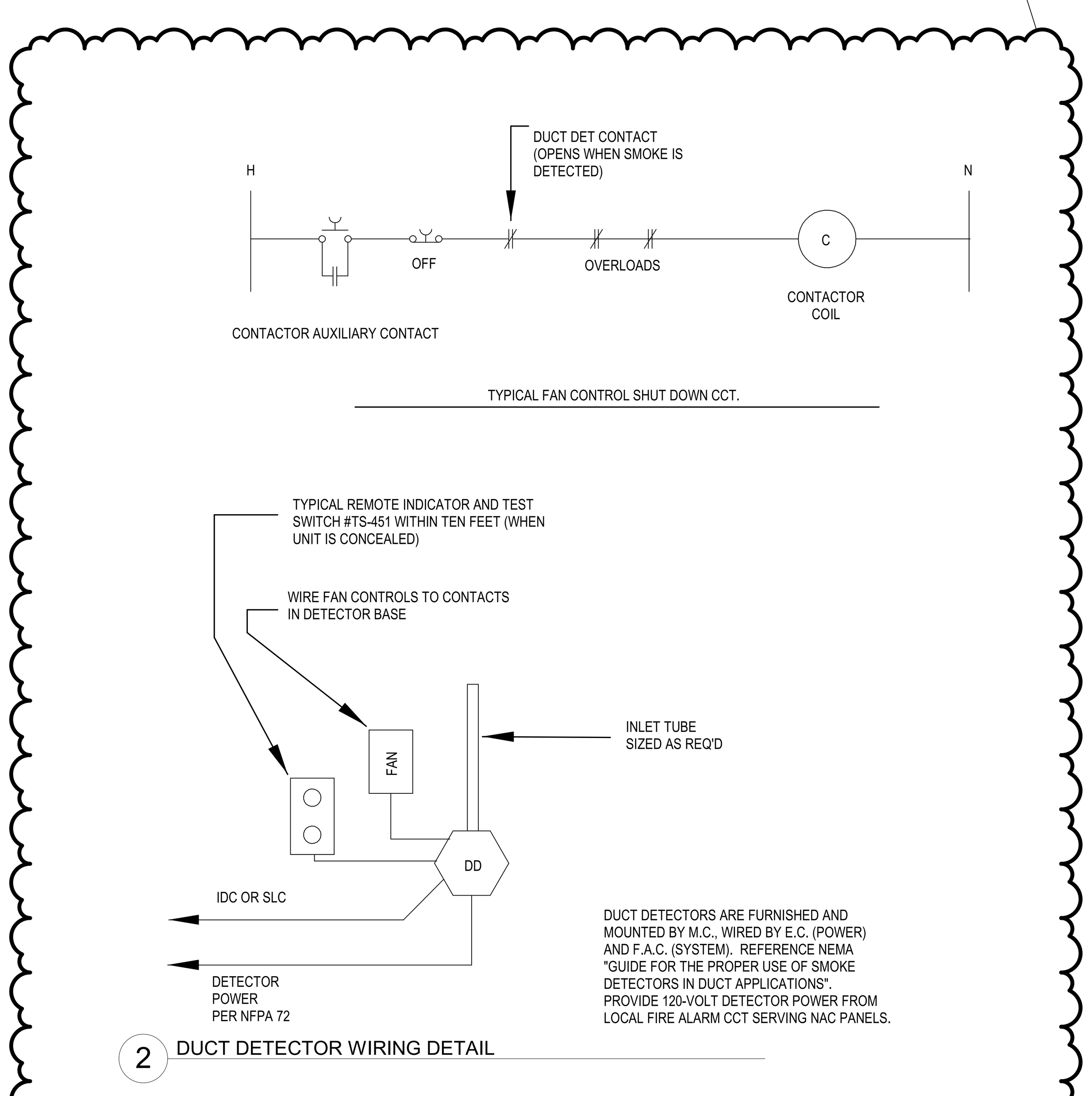
9. PROVIDE ALL PARTS AND PIECES FOR A COMPLETE AN OPERATING SYSTEM.

10. REFERENCE NFPA-72-2013 SUPPLEMENT 2 FOR VOICE INTELLIGIBILITY.

11. PROVIDE AUXILIARY 3-ZONE PUBLIC ADDRESS FUNCTION PER NFPA-72, CHAPTER 24.3.24.3.23, AVAILABLE ONLY DURING BUSINESS HOURS, OTHERWISE NOT AFFECTING EMERGENCY NOTIFICATION. COORDINATE WITH LOCAL AHJ. F.A.C. TO SELECT APPROPRIATE AUDIBLE AND VISUAL SETTINGS ON NOTIFICATION APPLIANCES.

12. REFERENCE NFPA-72-2013 CHAPTER 10 FOR INTEGRITY AND CAPACITY OF SECONDARY POWER SUPPLY AND AMPLIFIERS. VERIFY FINAL REQUIREMENTS WITH AHJ.

13. NEW WIRING MAY NOT BE ROUTED ABOVE THE CEILINGS DUE TO THE CEILING PANELS BEING COVERED WITH BATT INSULATION THE OWNER DOES NOT WISH TO DISTURB. ROUTE WIRING IN SURFACE RACEWAY INSTALLED ON THE ACT GRID TEES; COMPLY WITH PATHWAY SURVIVABILITY STANDARDS OF NFPA-72.



2 DUCT DETECTOR WIRING DETAIL

3/31/2022 11:46:44 AM

CORDOGAN CLARK
716 North State Street Chicago, IL 60654 Tel: 312.943.7300
960 Ridgeway Avenue Aurora, IL 60506 Tel: 630.896.4678

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RIVER VALLEY HIGH SCHOOL
15480 THREE OAKS RD
THREE OAKS, MI 49128

FIRE ALARM RISER

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John G. Cordogan Architect No. 1301035955 — STATE OF MICHIGAN — LICENSED ARCHITECT

CD BID SET

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