



EYESTONE ELEMENTARY ECE

ECE CLASSROOM RESTROOM ADDITIONS

4000 WILSON AVENUE

WELLINGTON, COLORADO 80549

OWNER:

POUDRE SCHOOL DISTRICT
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FORT COLLINS, COLORADO 80521
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Architect

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Mechanical Engineer

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Electrical Engineer

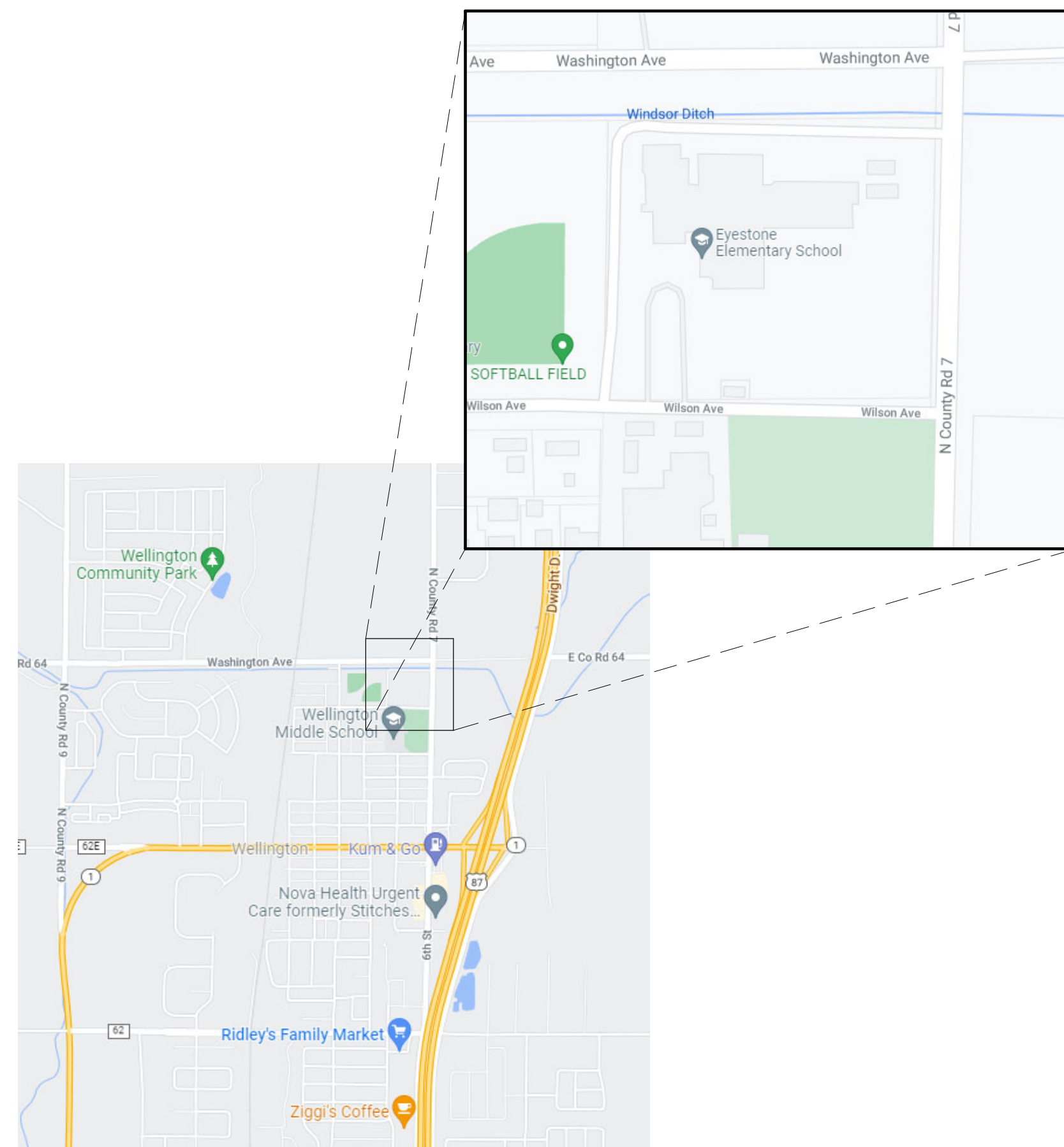
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Fire Protection Engineer

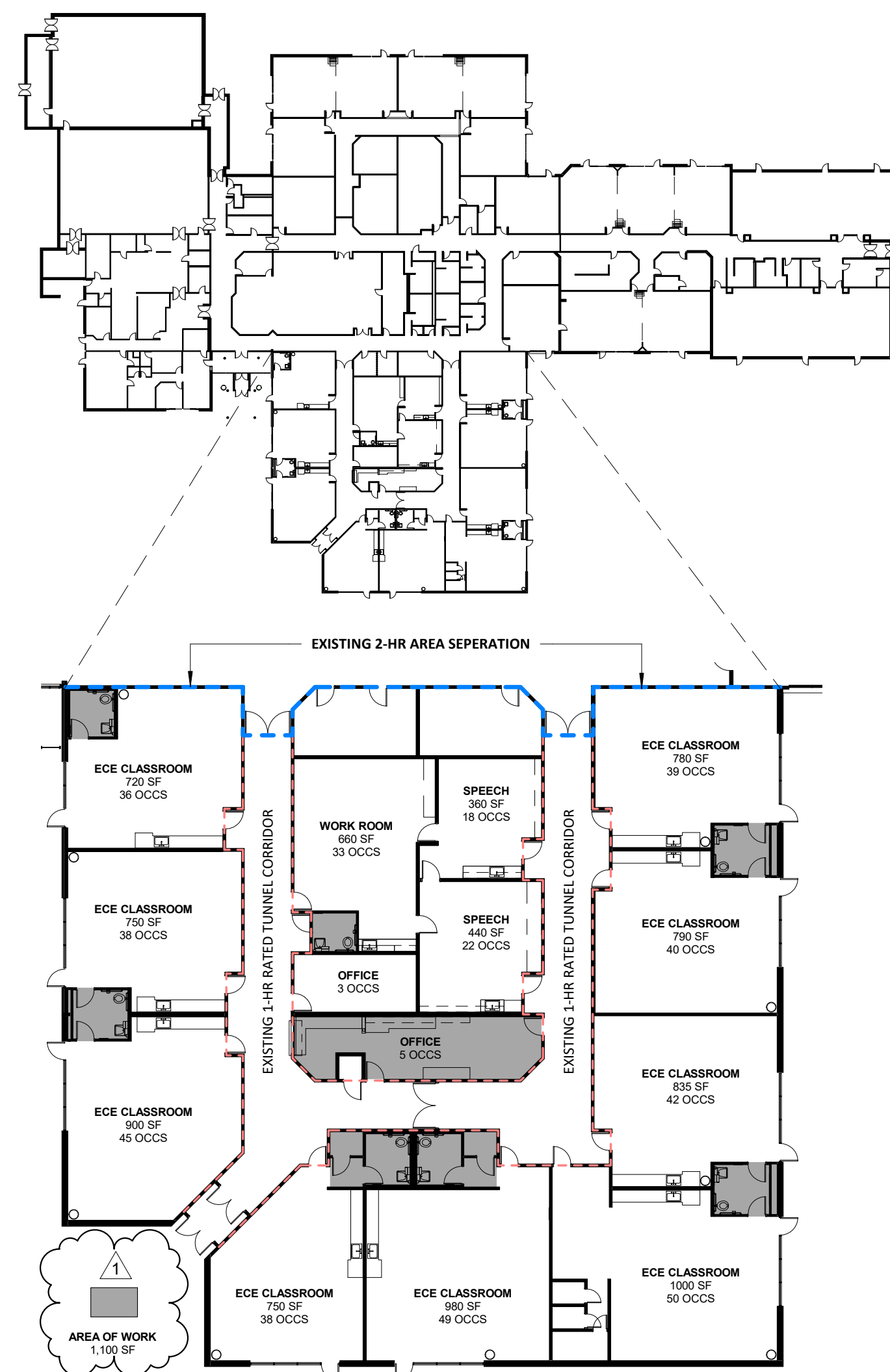
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VICINITY MAP:

NOT TO SCALE



KEY PLAN AND CODE INFORMATION:

NOT TO SCALE

CODE USED:

- 2021 IBC, IFC, IMC, IEBC, IECC, 2020 NEC,
- 2018 COLORADO PLUMBING CODE
- 2018 COLORADO FUEL GAS CODE
- ICC/ANSI A117.1 - 2017 ACC. STANDARDS
- POUDRE SCHOOL DISTRICT

BUILDING OWNER: POUDRE SCHOOL DISTRICT

BUILDING OCCUPANCY: E

BUILDING AREA: 64,890 SF

EXISTING CONSTRUCTION TYPE: II-B - PER 2021 IBC

NUMBER OF STORIES: 1

BUILDING HEIGHT: VARIES

FIRE RATED ASSEMBLIES: EXISTING TO REMAIN

FIRE SPRINKLERS: EXISTING NON-SPRINKLER

FIRE ALARM: EXISTING HORN AND STROBE NOTIFICATION

AREA OF WORK: (7) ECE CLASSROOM RESTROOMS - 1,100 SF

ALTERATION LEVEL: LEVEL 2 - PER 2021 IBC CHAPTER 6, 603.1 AND CHAPTER 3, 301.3.2 AREA OF WORK COMPLIANCE METHOD: CHAPTER 7 AND 8 ALTERATIONS - LEVEL 1 AND LEVEL 2

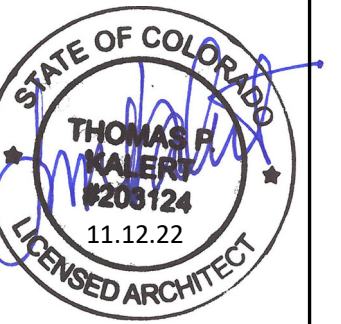
AREA OF WORK OCCUPANCY: E - CLASSROOM

PER TABLE 1004.1.2 MAXIMUM FLOOR AREA PER OCCUPANT CLASSROOM = 20 SF (NET) PER OCCUPANT

ACTUAL OCCUPANCY = 460 OCCUPANTS

SPECIAL INSPECTIONS: SPECIAL INSPECTIONS ARE REQUIRED AND WILL BE PROVIDED BY THE OWNER (POUDRE SCHOOL DISTRICT) FOR PENETRATIONS IN THE EXISTING RATED CORRIDOR - SEE PLANS

KCG | LLC
KALERT | Consulting Group, LLC
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SHEET CONTENTS
TITLE SHEET, VICINITY MAP AND CODE INFORMATION

EYESTONE ELEMENTARY ECE
4000 WILSON AVENUE
WELLINGTON, COLORADO 80549



NO.	BY	DESCRIPTION	DATE
1	KCG	STATE COMMENTS	11.12.22

ISSUE FOR PERMIT

DESIGNED BY: DAM
CHECKED BY: KCG
DATE: 11.12.22

SHEET NO.: A0.0

REVISIONS

STRUCTURAL GENERAL NOTES

DESIGN LOADS:

- 1. DESIGN LOADS: 2021 INTERNATIONAL BUILDING CODE, ASCE 7-16
 - A. RISK CATEGORY: III SUBSTANTIAL HAZARD

POST-INSTALLED ANCHORS

- 1. ALL CAST-IN-PLACE ANCHORS DESIGNED IN ACCORDANCE WITH ACI 318.
- 2. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER-OF-RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS.
- 3. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REBAR. EXISTING REINFORCING BARS SHALL NOT BE CUT UNLESS APPROVED BY THE EOR.
- 4. ALL ANCHORS MUST BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INFORMATION (MPII) IN CONJUNCTION WITH EDGE DISTANCE, SPACING, AND EMBEDMENT DEPTH AS INDICATED ON THE DRAWINGS. HOLES SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH THE MPII. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE SPECIFIED, SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER-OF-RECORD ALONG WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER. REGISTRATION MUST BE IN THE STATE IN WHICH THE PROJECT IS LOCATED. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING EQUIVALENT PERFORMANCE VALUES (MINIMUM) OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARD(S) AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
- 5. THE CONTRACTOR SHALL ARRANGE FOR A MANUFACTURER'S FIELD REPRESENTATIVE TO PROVIDE INSTALLATION TRAINING FOR ALL PRODUCTS TO BE USED, PRIOR TO THE ANCHOR INSTALLATION. A RECORD OF TRAINING SHALL BE KEPT ON SITE AND MADE AVAILABLE TO THE EOR/SPECIAL INSPECTOR AS REQUESTED.
- 6. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL TO VERTICALLY OVERHEAD ORIENTATION THAT SUPPORT SUSTAINED TENSION LOADS SHALL BE DONE BY A CERTIFIED ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH AICIRSI (ACI 318-11 D 9.2.2, ACI 318-14 17.8.2.2). PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE EOR FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION.
- 7. ADHESIVE ANCHORS MUST BE INSTALLED IN CONCRETE AGED A MINIMUM OF 21 DAYS (ACI 318-11 D 2.2, ACI 318-14 17.1.2).
- 8. ALL POST-INSTALLED ANCHORS SHALL BE INSTALLED IN DRY HOLES THAT HAVE BEEN DRILLED, CLEANED, AND PREPARED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INFORMATION AND THE RESPECTIVE ICC-ES EVALUATION REPORTS.
- 9. PROVIDE SPECIAL INSPECTION FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE APPLICABLE BUILDING CODE AND PER THE CURRENT ICC-ES REPORT (IBC TABLE 1705.3 NOTE B).

CONCRETE POST-INSTALLED ANCHORS				
ANCHOR TYPE	DEWALT	HILTI	SIMPSON	
EXPANSION	POWER-STUD+ SD2 (ICC ESR-2502)	KWIK BOLT TZ2 (ICC ESR-4266)	STRONG-BOLT 2 (ICC ESR-3037)	
SCREW	SCREW-BOLT+ (ICC ESR-3889)	KWIK HUS-EZ (ICC ESR-3027)	TITEN HD (ICC ESR-2713)	
ADHESIVE	AC208 (ICC ESR-4027)	HIT-HY 200 (ICC ESR-3187)	AT-XP (UES ER-263)	

MASONRY POST-INSTALLED ANCHORS				
ANCHOR TYPE	DEWALT	HILTI	SIMPSON	
EXPANSION	POWER-STUD+ SD1 (ICC ESR-2966)	KWIK BOLT TZ2 (ICC ESR-4561)	WEDGE-ALL (ICC ESR-1396)	
SCREW	SCREW-BOLT+ (ICC ESR-4042)	KWIK HUS-EZ (ICC ESR-3056)	TITEN HD (ICC ESR-1056)	
ADHESIVE	AC108+ GOLD (ICC ESR-3200)	HIT-HY-270 (ICC ESR-4143 / 4144)	AT-XP (UES ER-281)	

STRUCTURAL STEEL:

- 1. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" (AISC 360) AND THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" (AISC 308) BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
- 2. STRUCTURAL STEEL WIDE FLANGE BEAMS AND WTS SHALL CONFORM TO ASTM A992, 90 KSI YIELD.
- 3. OTHER ROLLED SHAPES, INCLUDING PLATES, CHANNELS, AND ANGLES SHALL CONFORM TO ASTM A36, 36 KSI YIELD.
- 4. EXCEPT AS NOTED, FRAMED BEAM CONNECTIONS SHALL BE BEARING-TYPE WITH 3/4" DIAMETER, SNUG TIGHT, ASTM F3125 BOLTS, DETAILED IN CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND THE "STEEL CONSTRUCTION MANUAL" BY THE AISC. INSTALL BOLTS IN ACCORDANCE WITH AISC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS".
- 5. ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE 36, 55 WITH WELDABILITY SUPPLEMENT S1, AND/OR 105 AS NOTED ON THE STRUCTURAL DRAWINGS.
- 6. WELDING SHALL BE DONE BY A CERTIFIED WELDER IN ACCORDANCE WITH THE AISC DOCUMENTS LISTED ABOVE. THE AMERICAN WELDING SOCIETY (AWS) D1.1: STRUCTURAL WELDING CODE, AND THE RECOMMENDATIONS FOR USE OF WELD E70 ELECTRODES. WHERE NOT SPECIFICALLY NOTED, MINIMUM WELD SHALL BE 3/16" FILLET BY LENGTH OF CONTACT EDGE.

SHOP DRAWINGS

- 1. THE STRUCTURAL DRAWINGS ARE COPYRIGHTED AND SHALL NOT BE COPIED FOR USE AS ERECTION PLANS OR SHOP DETAILS. USE OF JVA'S ELECTRONIC FILES AS THE BASIS FOR SHOP DRAWINGS REQUIRES PRIOR APPROVAL BY JVA. A SIGNED RELEASE OF LIABILITY BY THE GENERAL CONTRACTOR AND/OR HIS SUBCONTRACTORS, AND DELETION OF JVA'S NAME AND LOGO FROM ALL SHEETS SO USED.
- 2. THE GENERAL CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE STRUCTURAL DRAWINGS OR PROJECT SPECIFICATIONS.
- 3. ALL SHOP AND ERECTION DRAWINGS SHALL BE CHECKED AND STAMPED (AFTER HAVING BEEN CHECKED) BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION FOR STRUCTURAL ENGINEER'S REVIEW. SHOP DRAWING SUBMITTALS NOT CHECKED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION TO THE STRUCTURAL ENGINEER WILL BE RETURNED WITHOUT REVIEW.
- 4. FURNISH ELECTRONIC VERSION (PDF) OF SHOP AND ERECTION DRAWINGS TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION FOR:
 - A. STRUCTURAL STEEL
- 5. SUBMIT IN A TIMELY MANNER TO PERMIT 10 WORKING DAYS FOR REVIEW BY THE STRUCTURAL ENGINEER.
- 6. SHOP DRAWINGS SUBMITTED FOR REVIEW DO NOT CONSTITUTE "REQUEST FOR CHANGE IN WRITING" UNLESS SPECIFIC SUGGESTED CHANGES ARE CLEARLY MARKED. IN ANY EVENT, CHANGES MADE BY MEANS OF THE SHOP DRAWING SUBMITTAL PROCESS BECOME THE RESPONSIBILITY OF THE ONE INITIATING THE CHANGE.

FIELD VERIFICATION OF EXISTING CONDITIONS:

- 1. THE GENERAL CONTRACTOR SHALL THOROUGHLY INSPECT AND SURVEY THE EXISTING STRUCTURE TO VERIFY CONDITIONS THAT AFFECT THE WORK SHOWN ON THE DRAWINGS.
- 2. THE GENERAL CONTRACTOR SHALL REPORT ANY VARIATIONS OR DISCREPANCIES TO THE ARCHITECT AND STRUCTURAL ENGINEER BEFORE PROCEEDING.

STRUCTURAL ERECTION AND BRACING REQUIREMENTS:

- 1. THE STRUCTURAL DRAWINGS ILLUSTRATE AND DESCRIBE THE COMPLETED STRUCTURE WITH ELEMENTS IN THEIR FINAL POSITIONS, PROPERLY SUPPORTED, CONNECTED, AND/OR BRACED.
- 2. THE STRUCTURAL DRAWINGS ILLUSTRATE TYPICAL AND REPRESENTATIVE DETAILS TO ASSIST THE GENERAL CONTRACTOR. DETAILS SHOWN APPLY AT ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED. ALTHOUGH DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE, NOT EVERY DETAIL IS ILLUSTRATED AND NOT EVERY EXCEPTIONAL CONDITION IS ADDRESSED.
- 3. ALL PROPRIETARY CONNECTIONS AND ELEMENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- 4. ALL WORK SHALL BE ACCOMPLISHED IN A WORKMANLIKE MANNER AND IN ACCORDANCE WITH THE APPLICABLE CODES AND LOCAL ORDINANCES.
- 5. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL WORK, INCLUDING LAYOUT AND DIMENSION VERIFICATION, MATERIALS COORDINATION, SHOP DRAWING REVIEW, AND THE WORK OF SUBCONTRACTORS. ANY DISCREPANCIES OR OMISSIONS DISCOVERED IN THE COURSE OF THE WORK SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR RESOLUTION.
- 6. CONTINUATION OF WORK WITHOUT NOTIFICATION OF DISCREPANCIES RELIEVES THE ARCHITECT AND STRUCTURAL ENGINEER FROM ALL CONSEQUENCES.
- 7. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE STRUCTURAL DRAWINGS DO NOT DESCRIBE METHODS OF CONSTRUCTION.
- 8. THE GENERAL CONTRACTOR, IN THE PROPER SEQUENCE, SHALL PERFORM OR SUPERVISE ALL WORK NECESSARY TO ACHIEVE THE FINAL COMPLETED STRUCTURE, AND TO PROTECT THE STRUCTURE, WORKMEN, AND OTHERS DURING CONSTRUCTION. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO TEMPORARY BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EXCAVATION, FORMWORK, SCAFFOLDING, SAFETY DEVICES AND PROGRAMS OF ALL KINDS, SUPPORT AND BRACING FOR CRANES AND OTHER ERECTION EQUIPMENT.
- 9. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND ANY OTHER SUPPORTING ELEMENTS ARE IN PLACE.
- 10. THE ARCHITECT AND STRUCTURAL ENGINEER BEAR NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND OBSERVATION VISITS TO THE SITE DO NOT IN ANY WAY INCLUDE INSPECTIONS OF THESE ITEMS.

LETTERS OF CONSTRUCTION COMPLIANCE:

- 1. THE GENERAL CONTRACTOR SHALL DETERMINE FROM THE LOCAL BUILDING AUTHORITY, AT THE TIME THE BUILDING PERMIT IS OBTAINED, WHETHER ANY LETTERS OF CONSTRUCTION COMPLIANCE WILL BE REQUESTED FROM THE STRUCTURAL ENGINEER.
- 2. THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF ALL SUCH REQUIREMENTS IN WRITING PRIOR TO THE START OF CONSTRUCTION.
- 3. TWO-DAY ADVANCE NOTICE SHALL BE GIVEN WHEN REQUESTING SITE VISITS NECESSARY AS THE BASIS FOR THE COMPLIANCE LETTER.
- 4. THE GENERAL CONTRACTOR SHALL PROVIDE COPIES OF ALL THIRD-PARTY TESTING AND INSPECTION REPORTS TO THE ARCHITECT AND STRUCTURAL ENGINEER A MINIMUM OF ONE WEEK PRIOR TO THE DATE THAT THE COMPLIANCE LETTER IS ISSUED.

SPECIAL INSPECTIONS - 2015

- 1. THE FOLLOWING SPECIAL INSPECTIONS AND TESTING SHALL BE PERFORMED BY A QUALIFIED SPECIAL INSPECTOR, RETAINED BY THE OWNER, IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF IBC CHAPTER 17:
 - A. SECTION 1704 SPECIAL INSPECTIONS, CONTRACTOR RESPONSIBILITY, AND STRUCTURAL OBSERVATIONS AND THE FOLLOWING SUB-SECTION:
 - 1. 1704.2 SPECIAL INSPECTIONS AND TESTS
 - 2. 1704.3 STATEMENT OF SPECIAL INSPECTIONS
 - B. SECTION 1705 REQUIRED VERIFICATION AND INSPECTION AND THE FOLLOWING SUB-SECTIONS:
 - 1. 1705.1.1 SPECIAL CASES
 - 2. 1705.2 STEEL CONSTRUCTION
 - 3. 1705.3 CONCRETE CONSTRUCTION
 - 4. 1705.6 SOILS
 - C. SECTION 1705.11 SPECIAL INSPECTIONS FOR WIND RESISTANCE AND THE FOLLOWING SUB-SECTIONS:
 - a. 1705.11.2 COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION
 - b. 1705.11.3 WIND-RESISTING COMPONENTS
 - D. SECTION 1705.12 SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE AND THE FOLLOWING SUB-SECTIONS:
 - a. 1705.12.1 STRUCTURAL STEEL
 - b. 1705.12.3 COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION
 - c. 1705.12.4 DESIGNATED SEISMIC SYSTEM
 - d. 1705.12.8 SEISMIC ISOLATION SYSTEM
 - E. SECTION 1705.13 STRUCTURAL TESTING FOR SEISMIC RESISTANCE AND THE FOLLOWING SUB-SECTIONS:
 - a. 1705.13.1 STRUCTURAL STEEL
 - b. 1705.13.3 DESIGNATED SEISMIC SYSTEMS (SDC C, D, E, OR F)
 - c. 1705.13.4 SEISMICALLY ISOLATED STRUCTURES
 - F. SECTION 1709 PRECONSTRUCTION LOAD TESTS
- 2. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. THE APPROVED INSPECTOR MUST BE INDEPENDENT FROM THE CONTRACTOR RESPONSIBLE FOR THE WORK BEING INSPECTED.
- 3. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR SHALL BE TO INSPECT AND/OR TEST THE WORK OUTLINED ABOVE AND WITHIN THE STATEMENT OF SPECIAL INSPECTIONS IN ACCORDANCE WITH CHAPTER 17 OF THE IBC FOR CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
- 4. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.
- 5. PER SECTION 1704.2.4 THE SPECIAL INSPECTOR SHALL FURNISH REGULAR REPORTS TO THE BUILDING OFFICIAL AND THE STRUCTURAL ENGINEER. PROGRESS REPORTS FOR CONTINUOUS INSPECTION SHALL BE FURNISHED WEEKLY. INDIVIDUAL REPORTS OF PERIODIC INSPECTIONS SHALL BE FURNISHED WITHIN ONE WEEK OF INSPECTION DATES. THE REPORTS SHALL NOTE UNCORRECTED DEFICIENCIES, CORRECTION OF PREVIOUSLY REPORTED DEFICIENCIES, AND CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE STRUCTURAL ENGINEER OF RECORD.
- 6. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN 10 DAYS OF THE FINAL SPECIAL INSPECTION STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC. WORK NOT IN COMPLIANCE SHALL BE NOTED IN THE REPORT.
- 7. THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON A MAIN WIND- OR SEISMIC-FORCE-RESISTING SYSTEM PER SECTION 1704.4. THE STATEMENT SHALL ACKNOWLEDGE THE AWARENESS OF THE SPECIAL LISTED REQUIREMENTS OF DESIGNATED SEISMIC SYSTEM OR A WIND- OR SEISMIC-RESISTING COMPONENT IN THE STATEMENT OF SPECIAL INSPECTIONS PER SECTION 1705.
- 8. EXCEPT AS NOTED, THE SPECIAL INSPECTIONS OUTLINED ABOVE ARE IN ADDITION TO, AND BEYOND THE SCOPE OF, PERIODIC STRUCTURAL OBSERVATIONS AS DEFINED IN SECTION 1704.6. STRUCTURAL OBSERVATIONS ARE INCLUDED IN THE STRUCTURAL ENGINEERING DESIGN AND CONSTRUCTION ADMINISTRATION SERVICES PROVIDED BY THE STRUCTURAL ENGINEER.

STEEL SPECIAL INSPECTION (IBC 1705.2, 1705.12.2 & 1705.13.1)

ITEM	REQUIRED QUALIFICATIONS	FREQUENCY	DETAILED INSTRUCTIONS
FABRICATORS	AWS/AISC-SSI ICC-SWSI		(IBC 1704.2.5 & 1705.10)
In-plant inspection			Required unless Fabricator is approved and follows procedures of 1704.2.5.2 (TABLE N5.4-1, AISC 360-10)
PRIOR TO WELDING			
Verify welding procedures (WPS) and consumable certificates	AWS-CWI ASNT	Continuous	
Material identification	AWS-CWI ASNT	Periodic	Verify type and grade of material.
Welder identification	AWS-CWI ASNT	Periodic	A system shall be maintained by which a welder who has welded a joint or member can be identified.
Fit-up groove welds	AWS-CWI ASNT	Periodic	Verify joint preparation, dimensions, cleanliness, tacking, and backing.
Access holes	AWS-CWI ASNT	Periodic	Verify configuration and finish.
Fit-up of fillet welds	AWS-CWI ASNT	Periodic	Verify alignment, gaps at root, cleanliness of steel surfaces, and tack weld quality and location.
DURING WELDING			
Use of qualified welders	AWS-CWI ASNT	Periodic	Verify that welders are appropriately qualified.
Control and handling of welding consumables	AWS-CWI ASNT	Periodic	Verify packaging and exposure control.
Cracked tack welds	AWS-CWI ASNT	Periodic	Verify that welding does not occur over cracked tack welds.
Environmental conditions	AWS-CWI ASNT	Periodic	Verify wind speed is within limits as well as precipitation and temperature.
WPS followed	AWS-CWI ASNT	Periodic	Verify items such as settings on welding equipment, travel speed, welding materials, shielding gas type/flow rate, preheat applied, interpass temperature maintained, and proper position.
Welding techniques	AWS-CWI ASNT	Periodic	Verify interpass and final cleaning, each pass is within profile limitations, and quality of each pass.
AFTER WELDING			
Welds cleaned	AWS-CWI ASNT	Periodic	(TABLE N5.4-3, AISC 360-10)
Size, length, and location of welds	AWS-CWI ASNT	Continuous	Verify that welds have been properly cleaned.
Welds meet visual acceptance criteria	AWS-CWI ASNT	Continuous	
Arc strikes	AWS-CWI ASNT	Continuous	
k-area	AWS-CWI ASNT	Continuous	
Backing & weld tabs removed	AWS-CWI ASNT	Continuous	
Repair activities	AWS-CWI ASNT	Continuous	
Document acceptance or rejection of welded joint/member	AWS-CWI ASNT	Continuous	
PRIOR TO BOLTING			
- Not required if only snug-tight joints are specified per Section N5.6(1) of AISC 360-10.			(TABLE N5.6-1, AISC 360-10)
Certifications of fasteners	AWS/AISC-SSS ICC-SWSI	Continuous	
Fasteners marked	AWS/AISC-SSS ICC-SWSI	Periodic	Verify that fasteners have been marked in accordance with ASTM requirements.
Proper fasteners for joint	AWS/AISC-SSS ICC-SWSI	Periodic	Verify grade, type, and bolt length if threads are excluded from the shear plane.
Proper bolting procedure	AWS/AISC-SSS ICC-SWSI	Periodic	Verify proper procedure is used for the joint detail.
Connecting elements	AWS/AISC-SSS ICC-SWSI	Periodic	Verify appropriate faying surface condition and hole preparation, if specified, meet requirements.
Pre-installation verification testing	AWS/AISC-SSS ICC-SWSI	Periodic	Observe and document verification testing by installation personnel for fastener assemblies and methods used.
Proper storage	AWS/AISC-SSS ICC-SWSI	Periodic	Verify proper storage of bolts, nuts, washers, and other fastener components.
AFTER BOLTING			
Document acceptance or rejection of bolted connections	AWS/AISC-SSS ICC-SWSI	Continuous	(TABLE N5.6-3, AISC 360-10)

STATEMENT OF SPECIAL INSPECTIONS

This Statement of Special Inspections is submitted as a condition for permit issuance in accordance with the Special Inspection and Structural Testing requirements of the Building Code. It includes a schedule of Special Inspection services applicable to this project as well as the name of the Special Inspection Coordinator and the identity of other approved agencies to be retained for conducting these inspections and tests. This Statement of Special Inspections encompasses the following disciplines:

The Special Inspection Coordinator shall keep records of all inspections and shall furnish inspection reports to the Building Official and the Registered Design Professional in Responsible Charge. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Registered Design Professional in Responsible Charge. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

The inspectors and testing agencies shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official, prior to commencing work.

Interim reports shall be submitted to the Building Official and the Registered Design Professional in Responsible Charge. Interim Report Frequency: Within XX hours of inspection, unless indicated otherwise.

A Final Report of Special Inspections documenting completion of all required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy.

Job site safety and means and methods of construction are solely the responsibility of the Contractor.

The qualifications of all personnel performing Special Inspection and testing activities are subject to the approval of the Building Official. The credentials of all Inspectors and testing technicians shall be provided if requested.

Key for Minimum Qualifications of Inspection Agencies:

When the Registered Design Professional in Responsible Charge deems it appropriate that the individual performing a stipulated test or inspection have a specific certification or license as indicated below, such designation shall appear below the Agency Number on the Schedule.

- PE/SE Structural Engineer – a licensed SE or PE specializing in the design of building structures
- PE/GE Geotechnical Engineer – a licensed PE specializing in soil mechanics and foundations
- EIT Engineer-In-Training – a graduate engineer who has passed the Fundamentals of Engineering examination

- American Concrete Institute (ACI) Certification**
 - ACI-CFTT Concrete Field Testing Technician – Grade 1
 - ACI-CCI Concrete Construction Inspector
 - ACI-LTT Laboratory Testing Technician – Grade 1 & 2
 - ACI-STT Strength Testing Technician

- American Welding Society (AWS) Certification**
 - AWS-CWI/Certified Welding Inspector
 - AWS/AISC-SSI/Certified Structural Steel Inspector

- American Society of Non-Destructive Testing (ASNT) Certification**
 - ASNT Non-Destructive Testing Technician – Level II or III

- International Code Council (ICC) Certification**
 - ICC-SMSI Structural Masonry Special Inspector
 - ICC-SWSI Structural Steel and Welding Special Inspector
 - ICC-SFSI Spray-Applied Fireproofing Special Inspector
 - ICC-PCSI Prestressed Concrete Special Inspector
 - ICC-RCIS Reinforced Concrete Special Inspector

- National Institute for Certification in Engineering Technologies (NICET)**
 - NICET-CT Concrete Technician – Levels I, II, III & IV
 - NICET-ST Soils Technician – Levels I, II, III & IV
 - NICET-GET Geotechnical Engineering Technician – Levels I, II, III & IV

- Exterior Design Institute (EDI) Certification**
 - EDI-EIFS EIFS Third Party Inspector

Prepared by:

EOR NAME / Signature Date

Owner's Authorization:

Signature Date

Building Official's Acceptance:

Signature Date

SCHEDULE OF INSPECTION AND TESTING AGENCIES

SPECIAL INSPECTION AGENCIES	FIRM	ADDRESS, TELEPHONE, E-MAIL
Special Inspection Coordinator	TBD	
Inspector	TBD	
Inspector	TBD	
Testing Agency	TBD	
Testing Agency	TBD	
Continuous	TBD	
Other	TBD	

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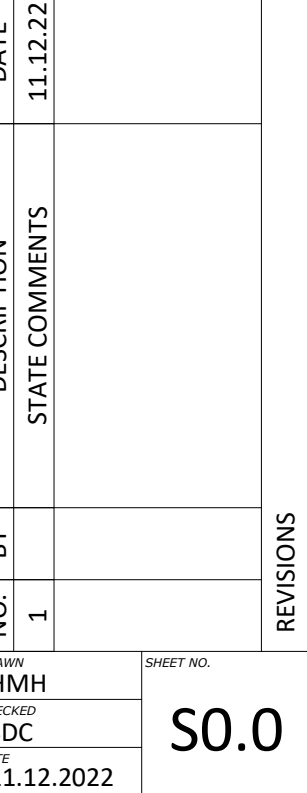
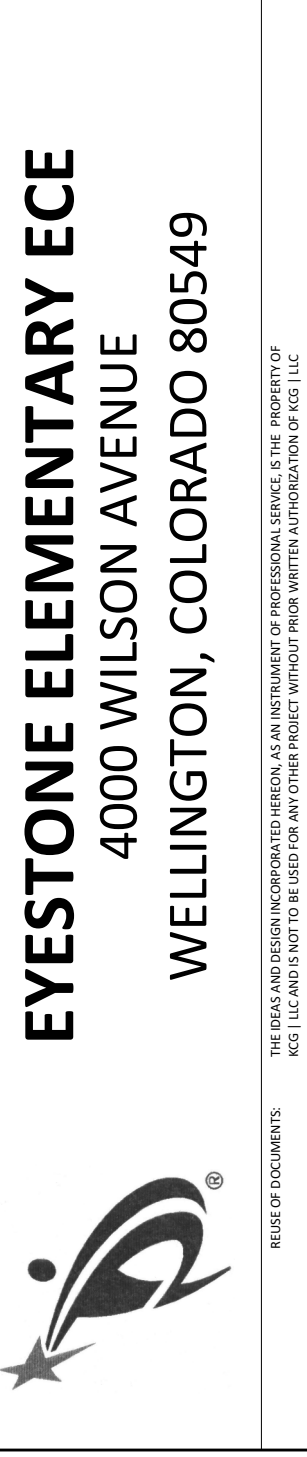
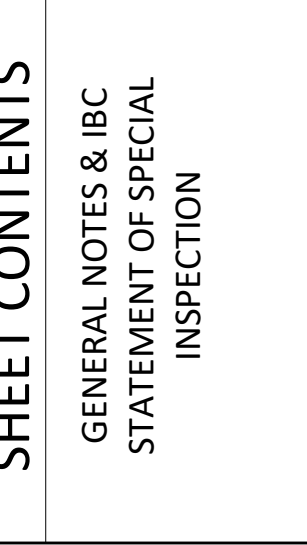
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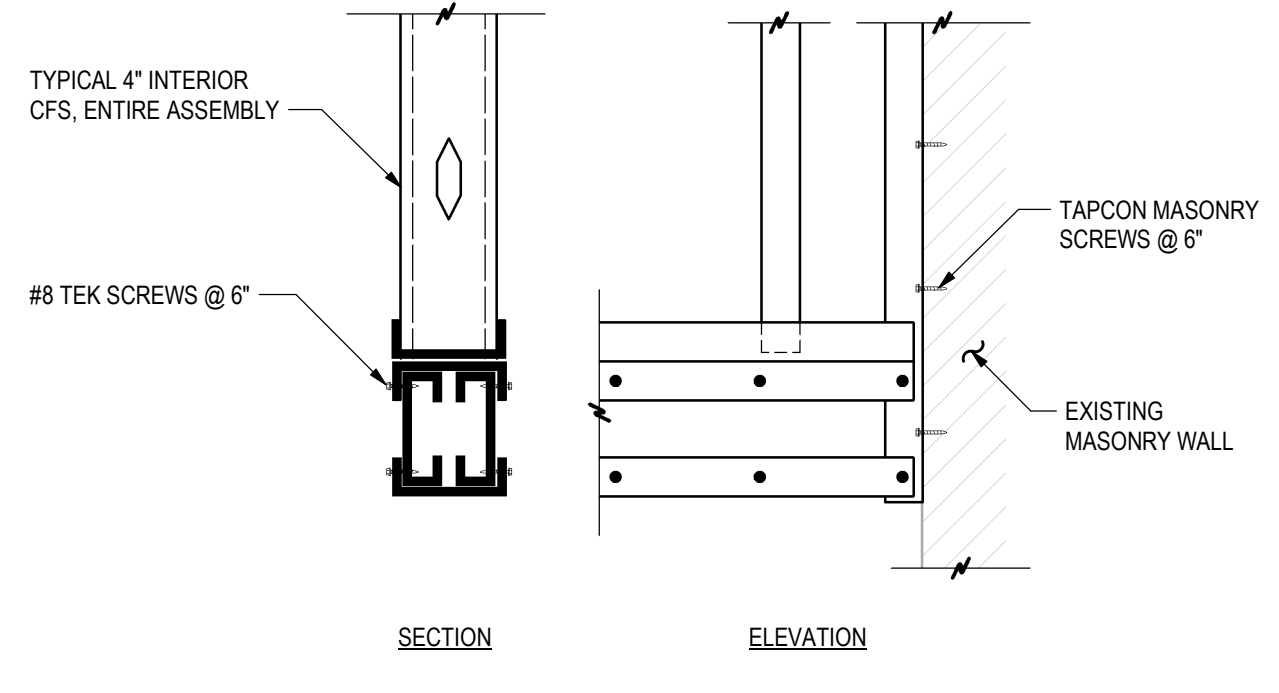
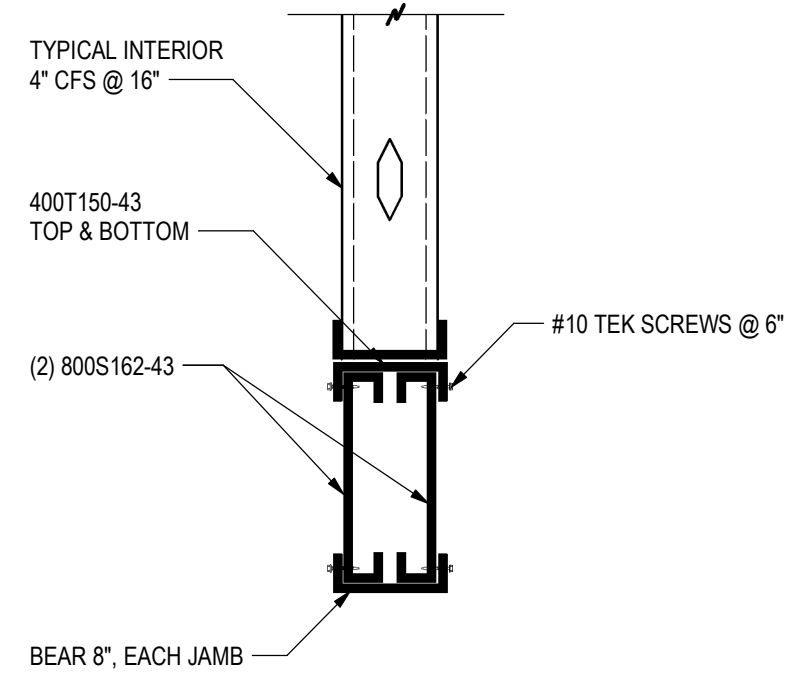
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CHECKED: SDK
DATE: 11.12.2022

SHEET NO. 50.0

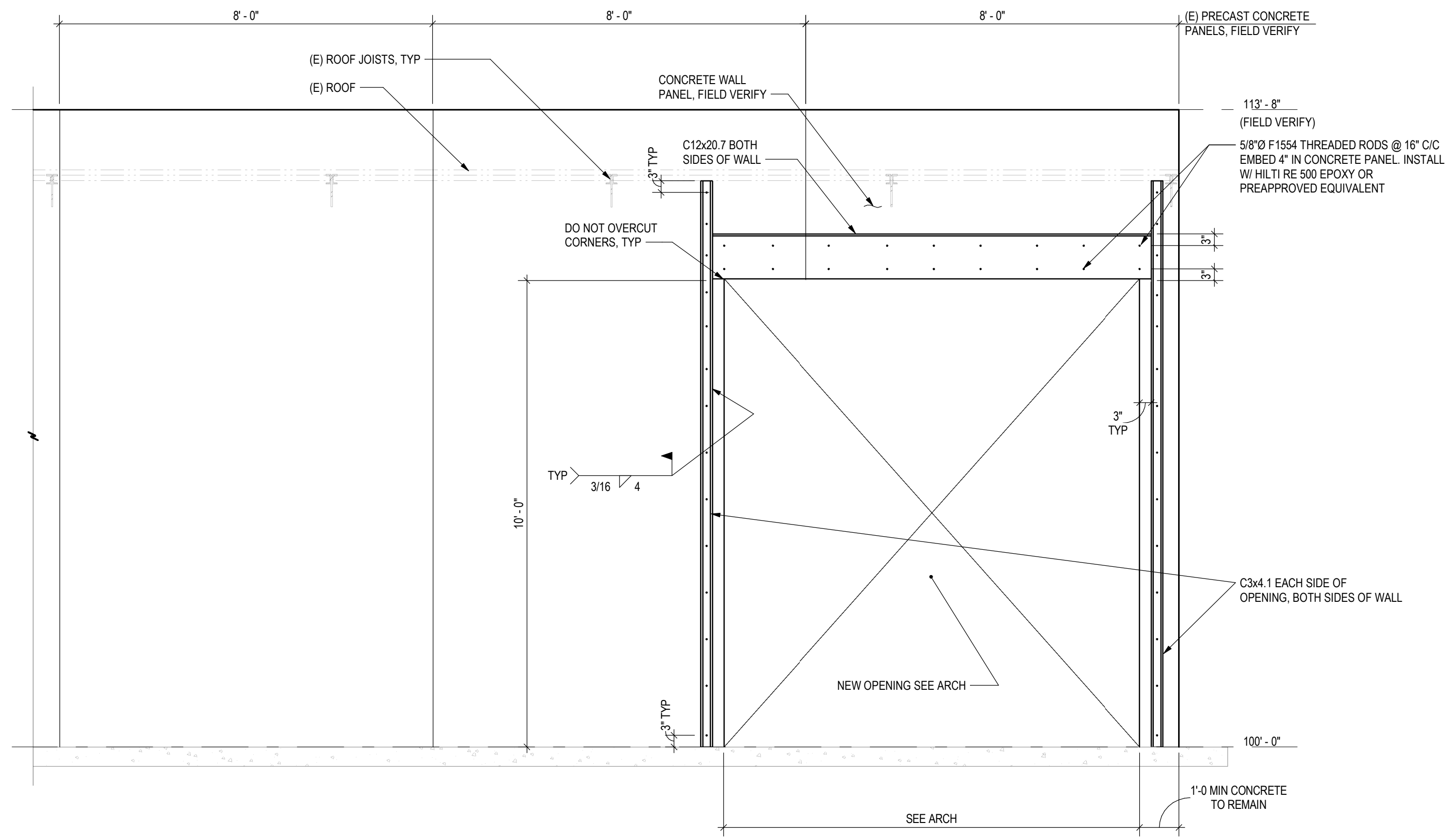
11.12.2022





2 HEADER AT ROLLUP DOOR
S1.1 1 1/2" = 1'-0"

3 TYPICAL DOOR HEADER
S1.1 1 1/2" = 1'-0"



1 SECTION
S1.1 1/2" = 1'-0"



EXISTING PLAN
1/8" = 1'-0"
NORTH

FIELD VERIFICATION:
 • ALL DIMENSIONS AND CONDITIONS SHALL BE FIELD VERIFIED BY CONTRACTOR
 • IF DIMENSIONS AND CONDITIONS DIFFER THAN THOSE SHOWN ON DRAWINGS, NOTIFY ARCHITECT AND ENGINEER



ISSUE FOR PERMIT

NO.	BY	DESCRIPTION	DATE
1	HMH		
2	SDC		
3			

DATE: 11.12.2022

REVISIONS
S1.1

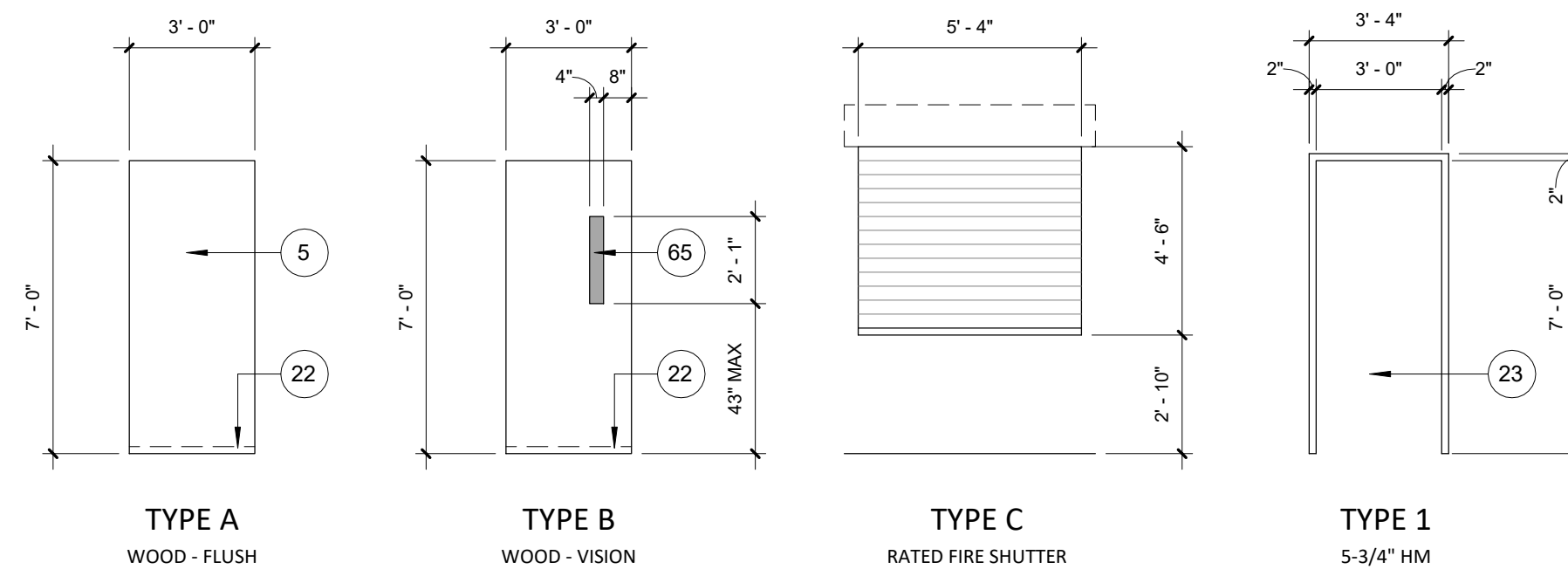
SHEET CONTENTS
PLAN & DETAILS

EYESTONE ELEMENTARY ECE
 4000 WILSON AVENUE
 WELLINGTON, COLORADO 80549

JVA, Inc.
 CONSULTING ENGINEERS
 218 Linden Street, Suite 200
 Fort Collins, CO 80524 970.225.9099
 www.jvajva.com
 Boulder • Fort Collins • Weller Park
 Glenwood Springs • Denver
 JVA #21286

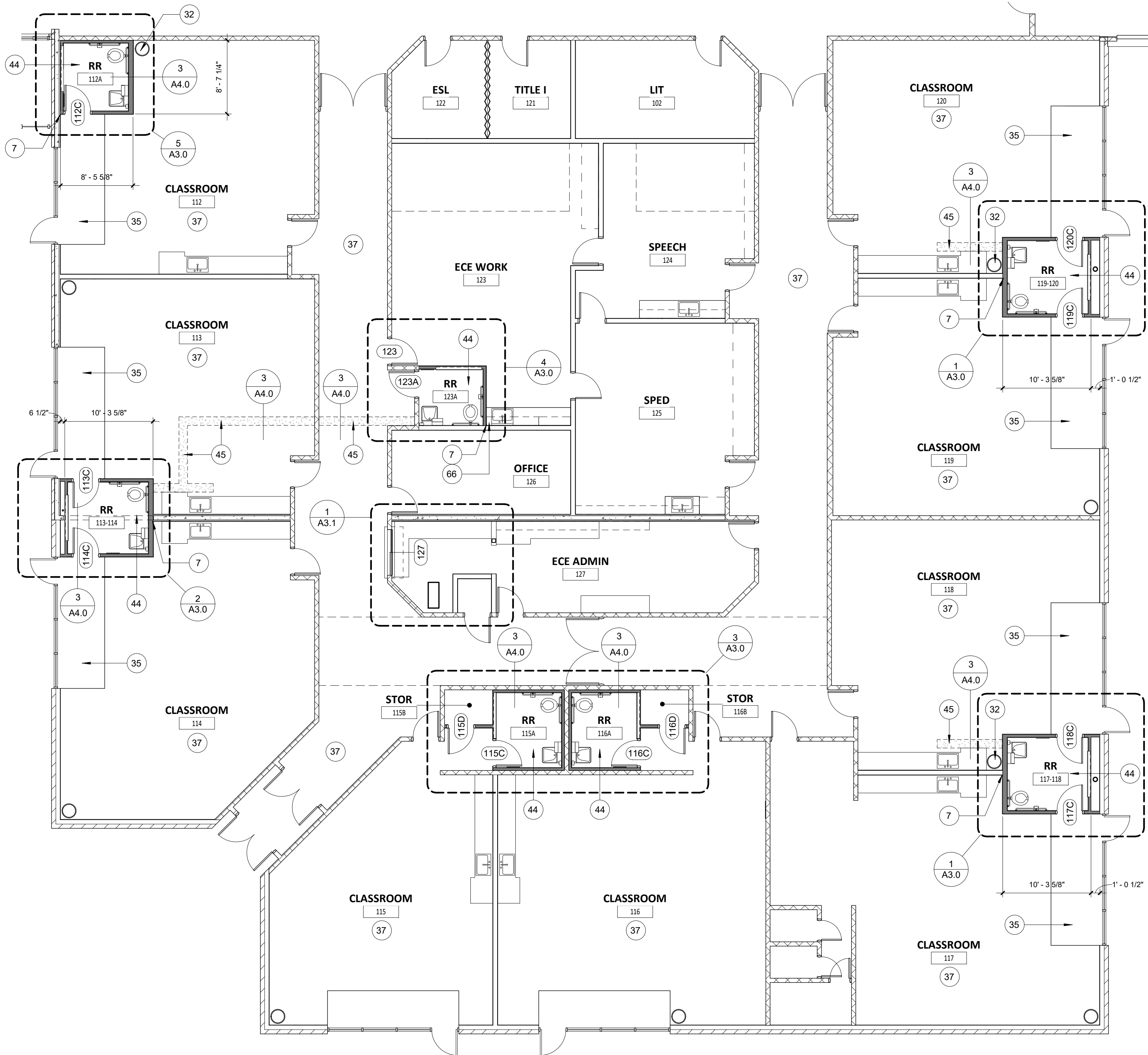
KCG | LLC
 KALERT | Consulting Group, LLC
 2429 Stonecrest Drive
 Fort Collins, Colorado 80521
 tomkalert@gmail.com

DOOR SCHEDULE									
MARK	WIDTH	HEIGHT	DOOR		FRAME		HDW		NOTES
			TYPE	FINISH	TYPE	FINISH			
112C	3'-0"	7'-0"	A	STAIN	1	PT	01		
113C	3'-0"	7'-0"	A	STAIN	1	PT	01		
114C	3'-0"	7'-0"	A	STAIN	1	PT	01		
115C	3'-0"	7'-0"	A	STAIN	1	PT	01		
115D	3'-0"	7'-0"	A	STAIN	1	PT	04		
116C	3'-0"	7'-0"	A	STAIN	1	PT	01		
116D	3'-0"	7'-0"	A	STAIN	1	PT	04		
117C	3'-0"	7'-0"	A	STAIN	1	PT	01		
118C	3'-0"	7'-0"	A	STAIN	1	PT	01		
119C	3'-0"	7'-0"	A	STAIN	1	PT	01		
120C	3'-0"	7'-0"	A	STAIN	1	PT	01		
123	3'-0"	7'-0"	B	STAIN	1	PT	03		
123A	3'-0"	7'-0"	A	STAIN	EXIST	EXIST	02		NEW 20-MIN RATED DOOR IN NEW 20-MIN RATED FRAME
127	5'-4"	4'-6"	C	MFG	MFG	MFG	MFG		NEW 20-MIN RATED DOOR IN EXISTING RATED FRAME 1-HR RATED FIRE SHUTTER



3 DOOR AND FRAME TYPES AND SCHEDULE

1/4" = 1'-0"

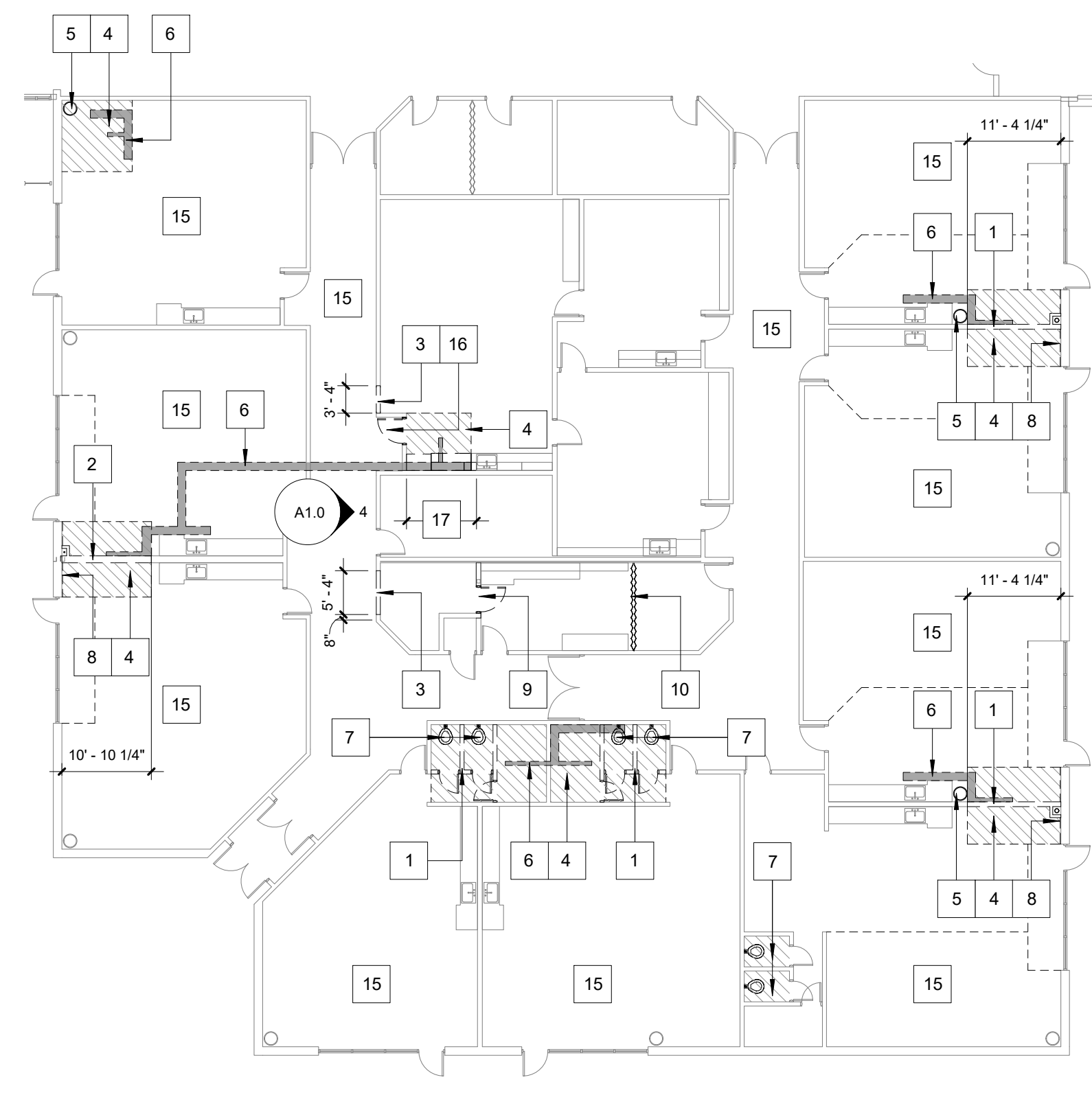
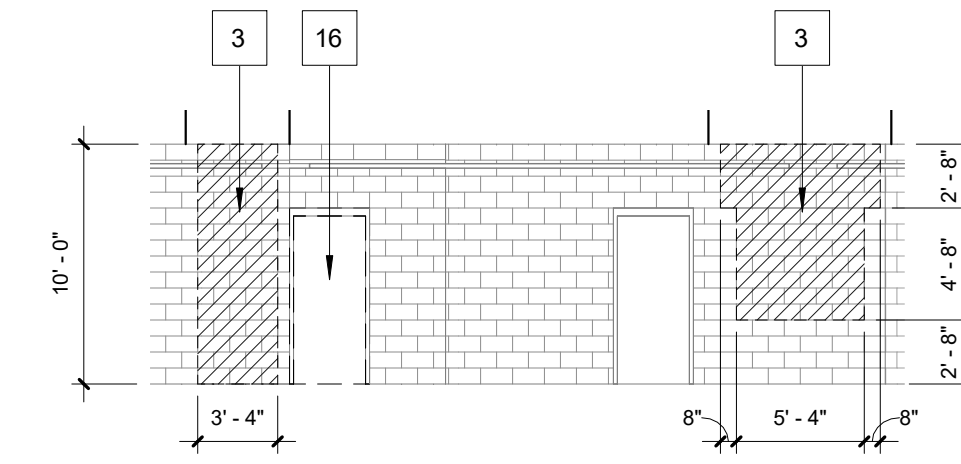


2 AREA OF WORK - NEW FLOOR PLAN

1/8" = 1'-0"

4 DEMO ELEVATION

1/8" = 1'-0"



1 AREA OF WORK - DEMOLITION PLAN

1/16" = 1'-0"

GENERAL NOTES:

- SCOPE OF WORK TO INCLUDE: NEW ECE RESTROOMS AND ECE ADMIN AREA
- CONTRACTOR TO FIELD VERIFY ALL EXISTING SITE CONDITIONS AND SHALL INFORM ARCHITECT AND OWNER OF ANY MAJOR DISCREPANCIES
- ALL GLAZING SHALL MEET CLASS II SAFETY STANDARDS
- ALL MECHANICAL, ELECTRICAL AND PLUMBING WORK SHOWN FOR REFERENCE - SEE MEP DRAWINGS
- EXISTING ROOFING JOHNS-MANVILLE ROLLED SHEET GOODS CURRENTLY UNDER WARRANTY - ROOFING REPAIRS SHALL BE COMPLETED BY PSD APPROVED VENDORS ONLY:
 - FRONT RANGE ROOFING
 - B&M ROOFING
 - COLORADO MOISTURE CONTROL
 - UNITED ROOFING MATERIALS

KEY NOTES:

- TYPICAL: NEW WALLS TO BE STEEL STUD WITH R-13 OR EQUAL SOUND BATT INSULATION AND 5/8" GYP. BD. PROVIDE MOISTURE RESISTANT GYP. BD. AT RESTROOM INTERIOR - FRAME TO 6" ABOVE EXISTING CEILING HEIGHT - SEE WALL TYPES AND HEAD DETAIL
- PATCH FLOORING AND PROVIDE RUBBER BASE TO MATCH EXISTING AT CLASSROOM SIDE - TYPICAL
- PROVIDE MOISTURE RESISTANT GYP. BD. AT INTERIOR WALLS AND CEILING OF NEW RESTROOM - TYPICAL
- PROVIDE NEW R-13 BATT INSULATION AT EXTERIOR WALL THIS LOCATION
- NEW WOOD DOOR IN HOLLOW METAL FRAME - SEE DOOR SCHEDULE AND DETAILS
- NEW FIRE RATED SHUTTER AT ECE ADMIN NEW WALL OPENING
- PATCH AND REPAIR EXISTING GYP. BD. AS REQUIRED
- PROVIDE NEW 2" x 48" STAINLESS STEEL CORNER GUARD - TYPICAL AT ALL OUTSIDE WALL CORNERS
- CLEARANCE: 48" x 48" FRONT APPROACH
- CLEARANCE: 60" x 54" FRONT APPROACH
- CLEARANCE: 30" x 48" CLEAR FLOOR SPACE
- CLEARANCE: 56" x 60" WATER CLOSET
- INSTALL NEW LED LIGHTING FIXTURES AT NEW RESTROOMS AND THIS ROOM - SEE ELECTRICAL DRAWINGS
- NEW GYP. BD. CEILING AT 8'-0", LIGHTING AND MECHANICAL PROVIDE MOISTURE RESISTANT GYP. BD. AT NEW RESTROOM AREAS - SEE MEP DRAWINGS
- PATCH AND REPAIR EXISTING ACP CEILING, INSTALL SALVAGED ACP CEILING TILES TO MATCH EXISTING
- PROVIDE FRP PANELS AND ALL NECESSARY TERMINATION AND TRIM PIECES TO 48" MIN AT FULL PERIMETER OF RESTROOM - TYPICAL
- ADA COMPLIANT SINK - SEE PLUMBING DRAWINGS
- 24" DEEP PLAM WORKTOP WITH WALL MOUNTED BRACKETS AND WIRE GRAMMETS AS SHOWN - COLOR BY OWNER
- PLAM TRANSACTION COUNTER - SEE ELEVATION
- PROVIDE SEALANT BEAD, FULL PERIMETER, BOTH SIDES - TYPICAL
- PROVIDE (2) GA. METAL STUDS AT DOOR JAMB, TYPICAL UNDERCUT NEW DOOR AT ALL ROOM LOCATIONS AND AS NEEDED WITH INSTALLATION OF NEW FLOORING
- PROVIDE MOISTURE RESISTANT GYP. BD. ECE WORK ROOM "WET" WALL
- PROVIDE J-BEAD TERMINATION PIECE AND SEALANT AT GYP. BD. TO CMU OR ACP LOCATION
- EXISTING MASONRY WALL, SHOWN FOR REFERENCE
- REINSTALL SALVAGED ACP CEILING TILES THIS AREA
- EXISTING ACP CEILING, PROVIDE NEW GRID AT RESTROOM WALLS AND REINSTALL SALVAGED ACP CEILING TILES - SEE CEILING PLAN
- BRACE TOP OF WALL TO STRUCTURE ABOVE AT 48" OC - TYPICAL
- REINSTALL EXISTING SALVAGED MECHANICAL RETURN DUCT THIS LOCATION - SEE MECHANICAL DRAWINGS
- EXISTING ROOF DRAIN AND/OR WATER LINE - SHOWN FOR REFERENCE - PROVIDE NEW PIPE INSULATION AT WATER LINE LOCATIONS - SEE PLUMBING DRAWINGS
- HEAVY DUTY STAINLESS STEEL RECESSED CHANGING STATION - SEE SPECIFICATIONS
- INSTALL NEW ABRASIVE ACTION WALK-OFF MAT AND TRANSITION STRIPS - SEE NEW FLOORING PLAN
- REINSTALL SALVAGED CARPET THIS LOCATION
- PROVIDE NEW FLOORING THIS AREA - SEE NEW FLOORING PLAN
- APPROXIMATE LOCATION OF REMOVED EXHAUST FAN, PROVIDE NEW METAL CAP - SEE DETAIL
- APPROXIMATE LOCATION OF NEW CURB MOUNTED EXHAUST FAN, COORDINATE EXACT LOCATION AND EXTENT OF ROOF REPAIR IN FIELD - SEE MECHANICAL DRAWINGS
- NEW CONCRETE FLOOR PATCH, GRIND EXISTING CONCRETE FOUNDATION WALL, FLOAT WITH LEVELING COMPOUND, PREP FLOOR FOR NEW LIQUID APPLIED EPOXY FLOORING - COORDINATE EXTENT IN FIELD
- EXISTING CONCRETE FLOOR TO REMAIN, PREP FOR NEW CONCRETE PATCH AND FLOORING
- EXISTING CONCRETE FOUNDATION WALL BELOW
- EXISTING UNDISTURBED EARTH TO REMAIN
- NEW LIQUID APPLIED EPOXY FLOORING WITH INTEGRAL COVED BASE, PROVIDE CARPET TRANSITION STRIP AT ALL DOOR LOCATIONS - SEE NEW FLOORING PLAN
- NEW CONCRETE PATCH, COORDINATE EXTENT IN FIELD - SEE PLUMBING DRAWINGS
- NEW #5 REBAR DOWELS AT 24" OC - GREASE AND WRAP BAR ENDS IN EXISTING CONCRETE
- NEW WASTE LINE SET IN NEW POROUS FILL - SEE PLUMBING DRAWINGS
- DEMOLISHED PRECAST PANEL WALL - SHOWN FOR REFERENCE ONLY - SEE DEMOLITION PLAN
- (2) LAYERS 3/4" FIRE-RATED PLYWOOD UNDERLAYMENT AT PLAM COUNTERTOP
- 1-1/2" x 1-1/2" POPLAR NOSING - TYPICAL
- EXISTING FUR WALL OVER CONCRETE PRECAST, PROVIDE ANCHORS AS REQUIRED
- PROVIDE (2) HEAVY DUTY WALL MOUNTED WORKTOP BRACKETS AS SHOWN
- PROVIDE WOOD LEDGER AT PERIMETER OF WALL AT WORKTOP, PAINT TO MATCH EXISTING WALL
- EXISTING FUR WALL OVER CONCRETE PRECAST, TO REMAIN - CONTRACTOR TO PROTECT DURING CONSTRUCTION
- FIRE RATED CEILING SHUTTER AT NEW ADMIN TRANSACTION WINDOW - SEE SPECIFICATIONS
- 1/4" GLASS SERVICE WINDOW WITH ALUMINUM TRACK
- WOOD CASING AT TOP, SIDES AND FRONT OF OPENING, PRIME AND PAINT TO MATCH WALL
- NEW RATED FRAME WALL INFILL: 3-5/8" STEEL STUD WITH (1) LAYER 3/8" GYP. BD. OVER (1) LAYER 5/8" TYPE X GYP. BD. BOTH SIDES, PROVIDE J-BEAD TERMINATION PIECE AT FULL PERIMETER OF GYP. BD. INFILL
- COUNTER SHUTTER MANUFACTURE RATED TRACK
- PROVIDE NEW WOOD CAP AND APRON AT PONY WALL, SAND AND SEAL
- BRACE STRUCTURE ABOVE
- REPAIR AND/OR EXTEND EXISTING STEEL STUD TO ADJACENT WALL OR STRUCTURE ABOVE
- PROVIDE NEW GYP. BD. AS REQUIRED - FINISH TO MATCH EXISTING ADJACENT GYP. BD. - TYPICAL
- STRUCTURAL LINTEL SHOWN FOR REFERENCE ONLY - SEE STRUCTURAL DRAWINGS
- 1/4" FIRE RATED LAMINATED GLAZING - GLAZING SHALL MEET CLASS II SAFETY STANDARDS
- INSTALL NEW BASE AND UPPER CABINET FILLER FROM SALVAGED CABINET MATERIALS
- EXISTING FIRE RATED TUNNEL ASSEMBLY TO REMAIN, SHOWN FOR REFERENCE, PROTECT DURING CONSTRUCTION
- STRUCTURAL HEADER - SEE STRUCTURAL DRAWINGS
- EXISTING STEEL COLUMN TO REMAIN - PAINT TO MATCH ADJACENT WALL

DEMOLITION NOTES:

- REMOVE EXISTING STUD OR CMU WALLS AND DOORS AS SHOWN
- REMOVE PORTION OF EXISTING PRECAST CONCRETE WALL - SEE STRUCTURAL DRAWINGS
- REMOVE PORTION OF EXISTING CMU WALL FOR INSTALLATION OF NEW DOOR OR WINDOW - PROVIDE NEW LATERAL SUPPORT PER STRUCTURAL DRAWINGS - SEE DEMO ELEVATION AND NEW FLOOR PLAN
- PREP FLOOR FOR INSTALLATION OF NEW LIQUID APPLIED FLOORING - TYPICAL
- REMOVE EXISTING MECHANICAL RETURN DUCTING - SALVAGE FOR REINSTALLATION - SEE MECHANICAL AND NEW FLOOR PLANS
- REMOVE EXISTING CARPET/VCT FLOORING, SALVAGE CARPET FOR REINSTALLATION, SAWCUT EXISTING CONCRETE FLOOR FOR INSTALLATION OF NEW PLUMBING LINES - SEE PLUMBING DRAWINGS FOR EXTENT
- REMOVE EXISTING TOILET FIXTURE, TILE FLOOR AND TILE BASE THIS ROOM
- REMOVE EXISTING GYP. BD. FINISH THIS PORTION OF EXTERIOR WALL
- REMOVE EXISTING DOOR AND PORTION OF WALL TO 42" AFF AT THIS LOCATION ONLY
- REMOVE EXISTING FOLDING PARTITION
- REMOVE EXISTING ACP CEILING GRID, TILES AND LIGHTING TO NEAREST GRID AS SHOWN - SALVAGE TILES FOR REINSTALLATION - SEE CEILING PLAN
- REMOVE EXISTING GYP. BD. CEILING AS SHOWN
- REMOVE EXISTING LIGHTING THIS ROOM AS SHOWN - SEE ELECTRICAL DRAWINGS
- REMOVE PORTION OF EXISTING ACP CEILING TILES AS REQUIRED FOR REMOVAL OR INSTALLATION OF HVAC DUCT OR PLUMBING LINES - SALVAGE TILES FOR REINSTALLATION
- REMOVE ALL FLOORING THIS AREA, PREP FOR INSTALLATION OF NEW LVT - SEE FLOORING PLANS
- REMOVE EXISTING DOOR AND HARDWARE, FRAME TO REMAIN, SALVAGE AND RETURN HARDWARE TO OWNER
- DEMO EXISTING BASE AND UPPER CABINETS TO NEAREST FULL CABINET, SALVAGE PORTIONS OF CABINETS TO CONSTRUCT NEW FILLER PIECE TO MATCH - SEE NEW FLOOR PLAN

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KALERT | Consulting Group, LLC
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tomkalert@gmail.com



SHEET CONTENTS
AREA OF WORK DEMOLITION
AND NEW FLOOR PLANS AND
DOOR AND FRAME SCHEDULE

EYESTONE ELEMENTARY ECE
4000 WILSON AVENUE
WELLINGTON, COLORADO 80549



NO.	BY	DESCRIPTION	DATE
1	KCG	STATE COMMENTS	11.12.22

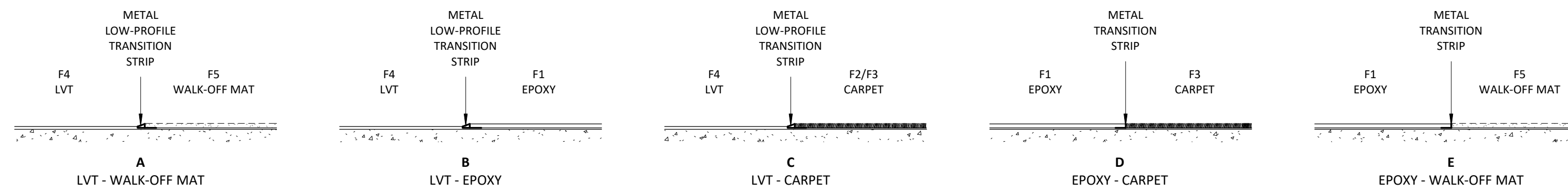
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CHECKED BY: KCG
DATE: 11.12.22

SHEET NO.: A1.0

REVISIONS

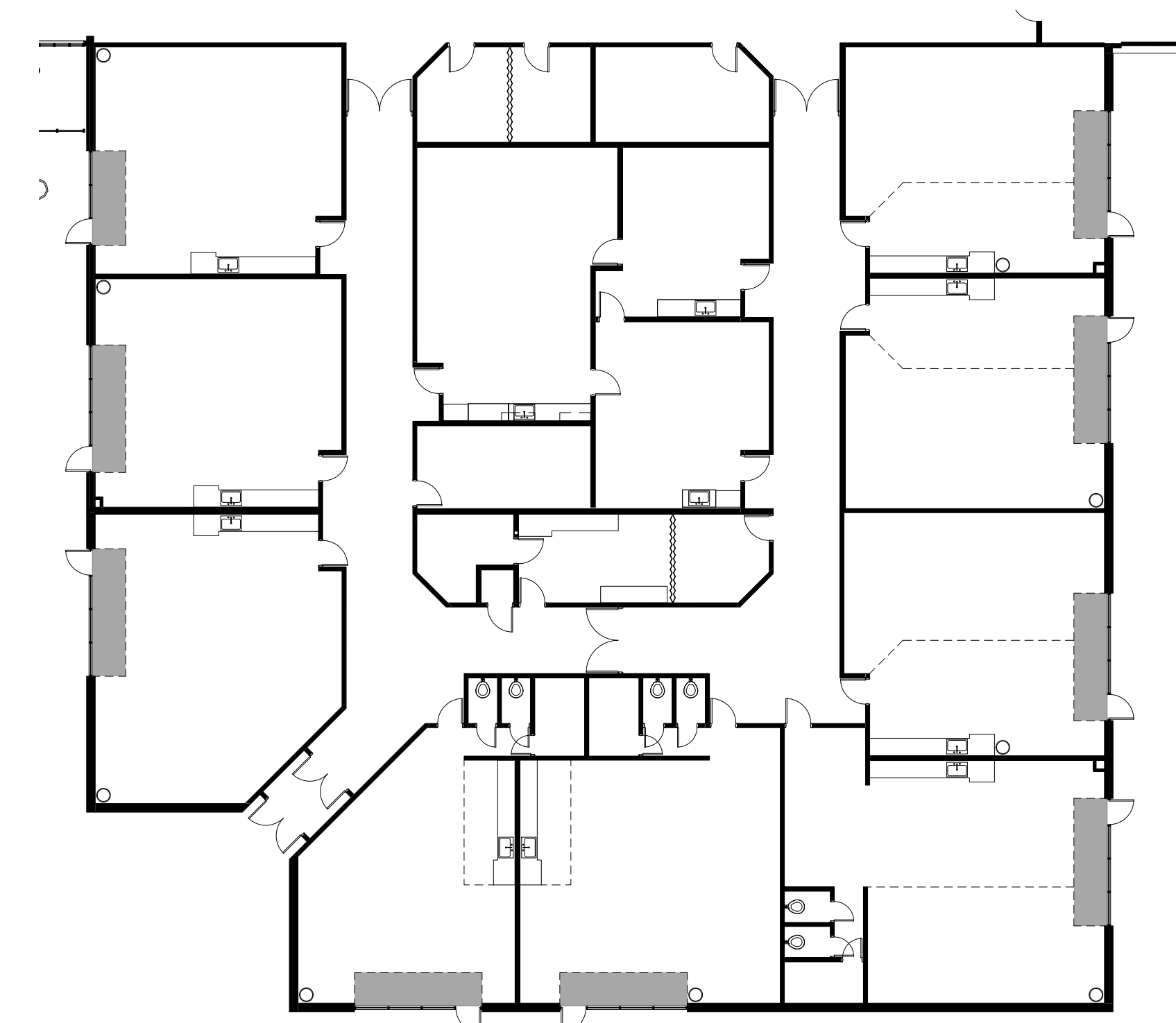
- SEE FLOOR PLANS FOR TRANSITION TAG
- THERE SHALL NOT BE ANY CHANGES IN A LEVEL GREATER THAN 1/2" AT THRESHOLDS, TYPICAL
- A FINISH WITH A CHANGE IN LEVEL BETWEEN 1/4" AND 1/2" THICK SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2 WHERE DOOR OCCURS AT TRANSITIONS, LOCATE TRANSITION STRIP AT THE CENTER LINE OF DOOR



FINISH SCHEDULE								
NUMBER	NAME	FLOOR	WALL				BASE	CEILING
			N	E	S	W		
112	CLASSROOM	F4/F5	W2	-	-	W2	B2	C2
112A	RR	F1	W1/W4	W1/W4	W1/W4	W1/W4	B1	C1
113	CLASSROOM	F4/F5	-	-	W2	W2	B2	C2
113-114	RR	F1	W1/W4	W1/W4	W1/W4	W1/W4	B1	C1
114	CLASSROOM	F4/F5	W2	-	-	W2	B2	C2
115	CLASSROOM	F4/F5	-	-	-	-	B2	-
115A	RR	F1	W1/W4	W1/W4	W1/W4	W1/W4	B1	C1
115B	STOR	F2	W3	W2	W2	W3	B2	C1
116	CLASSROOM	F4/F5	-	-	-	-	B2	-
116A	RR	F1	W1/W4	W1/W4	W1/W4	W1/W4	B1	C1
116B	STOR	F2	W3	W3	W2	W2	B2	C1
117	CLASSROOM	F4/F5	W2	W2	-	-	B2	C2
117-118	RR	F1	W1/W4	W1/W4	W1/W4	W1/W4	B1	C1
118	CLASSROOM	F4/F5	-	W2	W2	-	B2	C2
119	CLASSROOM	F4/F5	-	W2	W2	-	B2	C2
119-120	RR	F1	W1/W4	W1/W4	W1/W4	W1/W4	B1	C1
120	CLASSROOM	F4/F5	-	W2	W2	-	B2	C2
123	ECE WORK	F2	-	W2	W2	-	B2	C2
123A	RR	F1	W1/W4	W1/W4	W1/W4	W3	B1	C1
127	ECE ADMIN	F2	W2	-	W2	-	B2	C2

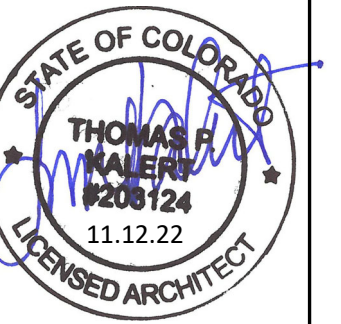
ROOM FINISHES - SEE SPECIFICATIONS:

- | | | | |
|----|--|----|---------------------------------------|
| F1 | LIQUID APPLIED EPOXY | B1 | 4" LIQUID APPLIED INTERGRAL COVERED |
| F2 | REINSTALLED SALVAGED CARPET - SEE PLAN | B2 | 4" BLACK RUBBER TO MATCH EXISTING |
| F3 | NEW CARPET | | |
| F4 | NEW LVT | | |
| F5 | NEW WALK-OFF MAT - SEE PLAN | | |
| W1 | MOISTURE RESISTANT GYP. BD. - PAINTED | C1 | MOISTURE RESISTANT GYP. BD. - PAINTED |
| W2 | GYP. BD. - PAINTED | C2 | PATCH/REPAIR EXISTING ACP - SEE RCP |
| W3 | EXISTING CMU - PAINTED | | |
| W4 | 48" FRP WAINSCOT - SEE ELEVATIONS | | |



2 AREA OF WORK - NEW FLOORING PLAN
1/8" = 1'-0"

1 AREA OF WORK - DEMOLITION FLOORING PLAN
1/16" = 1'-0"



SHEET CONTENTS
FLOORING DEMOLITION, NEW
FLOORING PLANS, FINISH
SCHEDULE AND DETAILS

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4000 WILSON AVENUE
WELLINGTON, COLORADO 80549



NO.	BY	DESCRIPTION	DATE

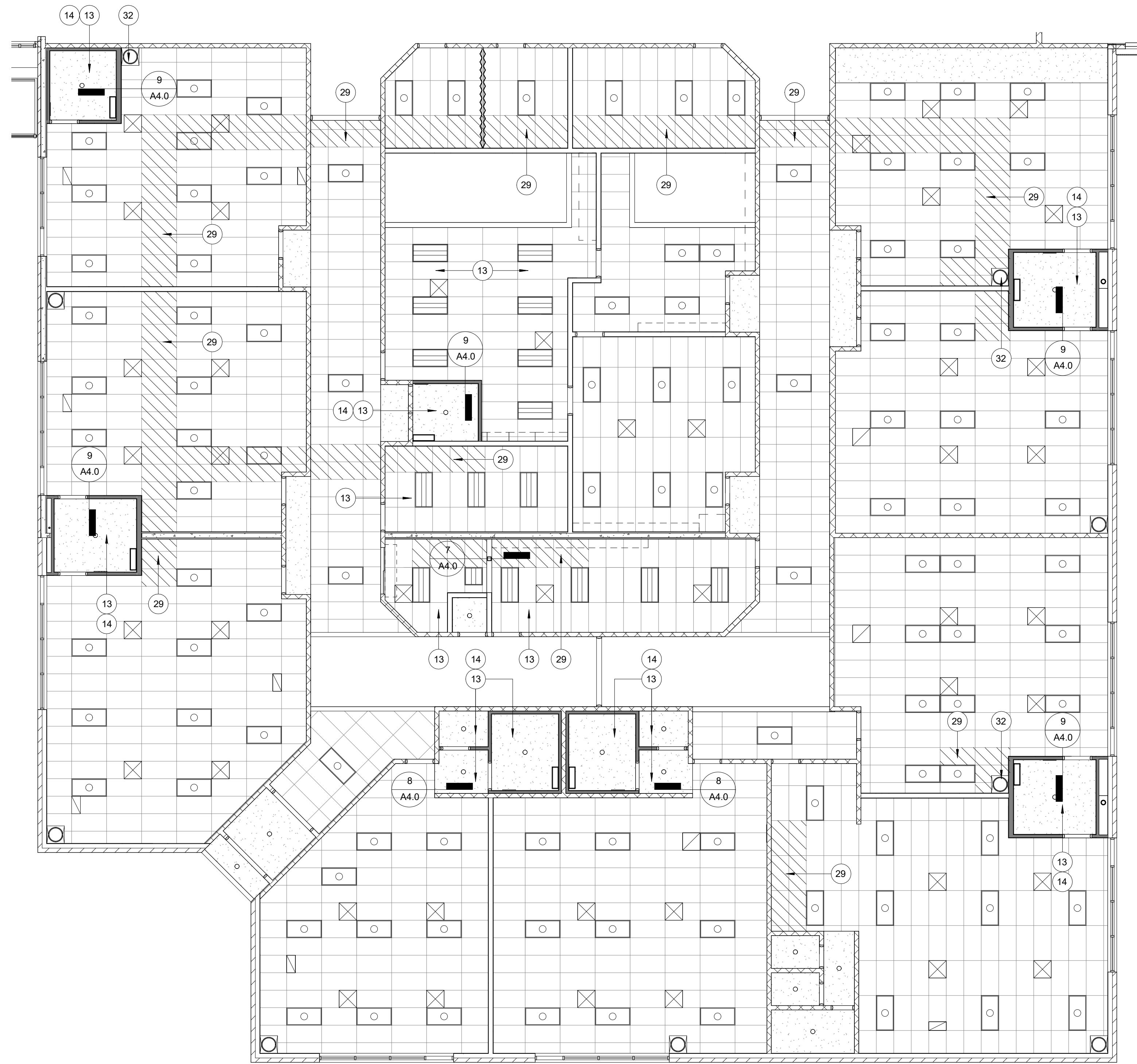
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DATE 11.12.22	

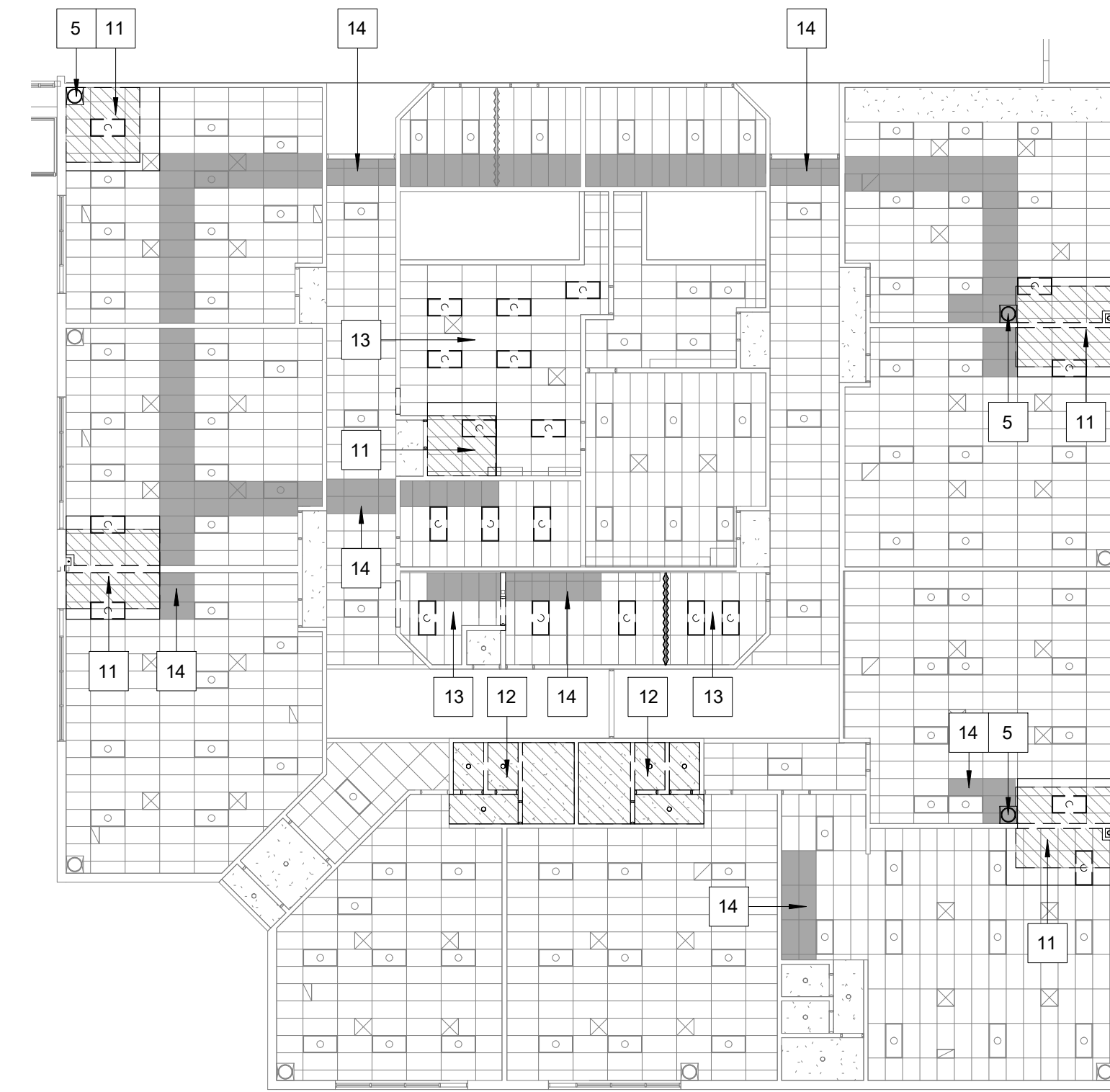
REVISIONS

CEILING EQUIPMENT KEY AND RESPONSIBILITY MATRIX			
ALL WORK RELATED TO ACTIVITY INDICATED IN THIS RESPONSIBILITY MATRIX IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHOULD BE INCLUDED IN THE BASE BID UNLESS NOTED OTHERWISE. UNIT PRICING INCLUDES ONLY ADDITIONAL SCOPE THAT IS PERFORMED BEYOND ANTICIPATED SCOPE INDICATED IN THE DRAWINGS			
EQUIPMENT ITEM	LOCATION IN ROOM	WORK SCOPE	RESPONSIBLE PARTY
DESKTOP COMPUTERS	DESKTOPS, TABLES	OWNER WILL TURN OFF AND DISCONNECT. GC RESPONSIBLE FOR REMOVAL OF COMPUTERS AFFECTED BY WORK SCOPE IN AREA. STORAGE, PROTECTION, AND REINSTALLATION IN ORIGINAL LOCATION. OWNER WILL RECONNECT. G.C. TO VERIFY OPERATION FOLLOWING REINSTALLATION	GENERAL CONTRACTOR MEANS AND METHODS
TELEVISIONS	WALL MOUNTED-REFERENCE DRAWINGS FOR SPECIFIC LOCATIONS.	REMOVE TELEVISIONS AFFECTED BY WORK SCOPE IN AREA. GENERAL CONTRACTOR TO REMOVE, STORE, PROTECT, AND REINSTALL IN ORIGINAL LOCATION. G.C. TO VERIFY OPERATION FOLLOWING REINSTALLATION.	GENERAL CONTRACTOR MEANS AND METHODS
SMARTBOARDS AND SMARTBOARD PROJECTORS	SMART BOARDS: WALL MOUNTED-REFERENCE DRAWINGS FOR SPECIFIC LOCATIONS. PROJECTORS: CEILING/WALL MOUNTED-REFERENCE DRAWINGS FOR SPECIFIC LOCATIONS.	REMOVE SMART BOARDS AND SMART BOARD PROJECTORS AFFECTED BY WORK SCOPE IN AREA. GENERAL CONTRACTOR TO SUBCONTRACT WITH H&H FOR REMOVAL AND REINSTALLATION. GC IS RESPONSIBLE FOR STORAGE, CLEANING, AND VERIFY OPERATION FOLLOWING REINSTALLATION.	GENERAL CONTRACTOR AND QUALIFIED SUBCONTRACTOR MEANS AND METHODS
WIRELESS ACCESS POINTS	CEILING MOUNTED-REFERENCE DRAWINGS FOR SPECIFIC LOCATIONS.	OWNER WILL REMOVE AND REINSTALL. GC RESPONSIBLE TO MAINTAIN EXISTING CABLING IN WORKING CONDITION.	PSD
SECURITY CAMERAS	REFERENCE DRAWINGS FOR SPECIFIC LOCATIONS.	OWNER WILL REMOVE AND REINSTALL. GC RESPONSIBLE TO MAINTAIN EXISTING CACC/TV CABLING IN WORKING CONDITION.	PSD

INTERCOM SPEAKERS	CEILING-REFERENCE DRAWINGS FOR SPECIFIC LOCATIONS.	PRIOR TO ANY INTERCOM SYSTEM WORK, THE GENERAL CONTRACTOR AND APPROVED SUBCONTRACTOR WILL PERFORM A PRE-DEMOLITION TEST OF THE INTERCOM SYSTEM IN IT'S ENTIRETY AND DOCUMENT ALL DEFICIENCIES PRIOR TO BEGINNING ANY WORK ON THE SYSTEM. PROVIDE DOCUMENTATION OF THIS TEST TO THE OWNER. REMOVE INTERCOM SPEAKERS AFFECTED BY WORK SCOPE IN AREA. GENERAL CONTRACTOR TO SUBCONTRACT WITH QUALIFIED AND APPROVED SUBCONTRACTOR (BEACON COMMUNICATIONS OR EQUAL) FOR REMOVAL AND REINSTALLATION. GC AND APPROVED SUBCONTRACTOR IS RESPONSIBLE FOR STORAGE, CLEANING, AND REINSTALLATION OF ALL INTERCOM COMPONENTS. FOLLOWING REINSTALLATION, THE GENERAL CONTRACTOR AND APPROVED SUBCONTRACTOR WILL PERFORM A POST INSTALLATION TEST OF THE INTERCOM SYSTEM IN IT'S ENTIRETY AND DOCUMENT THAT THE INTERCOM SYSTEM IS WORKING IN IT'S ENTIRETY. PROVIDE DOCUMENTATION OF THIS TEST TO THE OWNER GC SHALL ALLOW 24 HOUR NOTICE FOR ALL PRE AND POST TESTING OF INTERCOM WORK TO ALLOW PSD IT MAINTENANCE ATTENDANCE	GENERAL CONTRACTOR AND APPROVED QUALIFIED SUBCONTRACTOR MEANS AND METHODS
LIGHTING FIXTURES	CEILING MOUNTED-REFERENCE DRAWINGS FOR SPECIFIC LOCATIONS.	REMOVE LIGHTING FIXTURES AFFECTED BY WORK SCOPE IN AREA. GENERAL CONTRACTOR TO SUBCONTRACT WITH QUALIFIED AND APPROVED SUBCONTRACTOR FOR REMOVAL AND REINSTALLATION. GC IS RESPONSIBLE FOR STORAGE, CLEANING, AND VERIFY OPERATION FOLLOWING REINSTALLATION.	GENERAL CONTRACTOR AND APPROVED QUALIFIED SUBCONTRACTOR
FURNITURE, FIXTURES, EQUIPMENT	THROUGHOUT	REMOVE FURNITURE, FIXTURES, & EQUIPMENT AFFECTED BY WORK SCOPE IN AREA. GENERAL CONTRACTOR TO SUBCONTRACT WITH QUALIFIED AND APPROVED SUBCONTRACTOR FOR REMOVAL AND REINSTALLATION. GC IS RESPONSIBLE FOR STORAGE, CLEANING, AND REINSTALLATION.	GENERAL CONTRACTOR AND APPROVED QUALIFIED SUBCONTRACTOR
SECURITY/ACCESS SYSTEM	THROUGHOUT	INSTALLATION OF NEW ELECTRONIC ACCESS CONTROL, CONTROL PANEL AND ASSOCIATED WIRING TO DOORS AND DEVICES SCHEDULED TO RECEIVE NEW OR RECONFIGURED ACCESS CONTROL, PER SPEC. SECTION 28 13 53	GENERAL CONTRACTOR AND APPROVED QUALIFIED SUBCONTRACTOR



2 CEILING PLAN - AREA OF WORK
1/8" = 1'-0"



1 CEILING PLAN - DEMO
1/16" = 1'-0"

GENERAL NOTES:

- A. SCOPE OF WORK TO INCLUDE: NEW ECE RESTROOMS AND ECE ADMIN AREA
- B. CONTRACTOR TO FIELD VERIFY ALL EXISTING SITE CONDITIONS AND SHALL INFORM ARCHITECT AND OWNER OF ANY MAJOR DISCREPANCIES
- C. ALL GLAZING SHALL MEET CLASS II SAFETY STANDARDS
- D. ALL MECHANICAL, ELECTRICAL AND PLUMBING WORK SHOWN FOR REFERENCE - SEE MEP DRAWINGS
- E. EXISTING ROOFING JOHNS-MANVILLE ROLLED SHEET GOODS CURRENTLY UNDER WARRANTY - ROOFING REPAIRS SHALL BE COMPLETED BY PSD APPROVED VENDORS ONLY:
 - FRONT RANGE ROOFING
 - B&M ROOFING
 - COLORADO MOISTURE CONTROL
 - UNITED ROOFING MATERIALS

KEY NOTES:

1. TYPICAL: NEW WALLS TO BE STEEL STUD WITH R-13 OR EQUAL SOUND BATT INSULATION AND 5/8" GYP. BD. PROVIDE MOISTURE RESISTANT GYP. BD. AT RESTROOM INTERIOR - FRAME TO 6" ABOVE EXISTING CEILING HEIGHT - SEE WALL TYPES AND HEAD DETAIL
2. PATCH FLOORING AND PROVIDE RUBBER BASE TO MATCH EXISTING AT CLASSROOM SIDE - TYPICAL
3. PROVIDE MOISTURE RESISTANT GYP. BD. AT INTERIOR WALLS AND CEILING OF NEW RESTROOM - TYPICAL
4. PROVIDE NEW R-13 BATT INSULATION AT EXTERIOR WALL THIS LOCATION
5. NEW WOOD DOOR IN HOLLOW METAL FRAME - SEE DOOR SCHEDULE AND DETAILS
6. NEW FIRE RATED SHUTTER AT ECE ADMIN NEW WALL OPENING
7. PATCH AND REPAIR EXISTING GYP. BD. AS REQUIRED
8. PROVIDE NEW 2" x 48" STAINLESS STEEL CORNER GUARD - TYPICAL AT ALL OUTSIDE WALL CORNERS
9. CLEARANCE: 48" x 48" FRONT APPROACH
10. CLEARANCE: 60" x 54" FRONT APPROACH
11. CLEARANCE: 30" x 48" CLEAR FLOOR SPACE
12. CLEARANCE: 56" x 60" WATER CLOSET
13. INSTALL NEW LED LIGHTING FIXTURES AT NEW RESTROOMS AND THIS ROOM - SEE ELECTRICAL DRAWINGS
14. NEW GYP. BD. CEILING AT 8' - 0". LIGHTING AND MECHANICAL PROVIDE MOISTURE RESISTANT GYP. BD. AT NEW RESTROOM AREAS - SEE MEP DRAWINGS
15. PATCH AND REPAIR EXISTING ACP CEILING, INSTALL SALVAGED ACP CEILING TILES TO MATCH EXISTING
16. PROVIDE FRP PANELS AND ALL NECESSARY TERMINATION AND TRIM PIECES TO 48" MIN AT FULL PERIMETER OF RESTROOM - TYPICAL
17. ADA COMPLIANT SINK - SEE PLUMBING DRAWINGS
18. 24" DEEP PLAM WORKTOP WITH WALL MOUNTED BRACKETS AND WIRE GROMMETS AS SHOWN - COLOR BY OWNER
19. PLAM TRANSACTION COUNTER - SEE ELEVATION
20. PROVIDE SEALANT BEAD, FULL PERIMETER, BOTH SIDES - TYPICAL
21. PROVIDE (2) 20 GA. METAL STUDS AT DOOR JAMB, TYPICAL
22. UNDERCUT NEW DOOR AT ALL RESTROOM LOCATIONS AND AS NEEDED WITH INSTALLATION OF NEW FLOORING
23. TYPICAL NEW 5-3/4" HOLLOW METAL FRAME - PAINT TO MATCH EXISTING
24. (2) LAYERS 3/4" PLYWOOD AT PLAM COUNTERTOPS
25. 1-1/2" x 1-1/2" POPLAR NOSING
26. PROVIDE MOISTURE RESISTANT GYP. BD. ECE WORK ROOM "WET" WALL
27. PROVIDE J-BEAD TERMINATION PIECE AND SEALANT AT GYP. BD. TO CMU OR ACP LOCATION
28. EXISTING MASONRY WALL, SHOWN FOR REFERENCE
29. REINSTALL SALVAGED ACP CEILING TILES THIS AREA
30. EXISTING ACP CEILING, PROVIDE NEW GRID AT RESTROOM WALLS AND REINSTALL SALVAGED ACP CEILING TILES - SEE CEILING PLAN
31. BRACE TOP OF WALL TO STRUCTURE ABOVE AT 48" OC - TYPICAL
32. REINSTALL EXISTING SALVAGED MECHANICAL RETURN DUCT THIS LOCATION - SEE MECHANICAL DRAWINGS
33. EXISTING ROOF DRAIN AND/OR WATER LINE - SHOWN FOR REFERENCE - PROVIDE NEW PIPE INSULATION AT WATER LINE LOCATIONS - SEE PLUMBING DRAWINGS
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35. INSTALL NEW ABRASIVE ACTION WALK-OFF MAT AND TRANSITION STRIPS - SEE NEW FLOORING PLAN
36. REINSTALL SALVAGED CARPET THIS LOCATION
37. PROVIDE NEW FLOORING THIS AREA - SEE NEW FLOORING PLAN
38. APPROXIMATE LOCATION OF REMOVED EXHAUST FAN, PROVIDE NEW METAL CAP - SEE DETAIL
39. APPROXIMATE LOCATION OF NEW CURB MOUNTED EXHAUST FAN, COORDINATE EXACT LOCATION AND EXTENT OF ROOF REPAIR IN FIELD - SEE MECHANICAL DRAWINGS
40. NEW CONCRETE FLOOR PATCH, GRIND EXISTING CONCRETE FOUNDATION WALL, FLOAT WITH LEVELING COMPOUND, PREP FLOOR FOR NEW LIQUID APPLIED EPOXY FLOORING - COORDINATE EXTENT IN FIELD
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43. EXISTING UNDISTURBED EARTH TO REMAIN
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45. NEW CONCRETE PATCH, COORDINATE EXTENT IN FIELD - SEE PLUMBING DRAWINGS
46. NEW #5 REBAR DOWELS AT 24" OC - GREASE AND WRAP BAR ENDS IN EXISTING CONCRETE
47. NEW WASTE LINE SET IN NEW POROUS FILL - SEE PLUMBING DRAWINGS
48. DEMOLISHED PRECAST PANEL WALL - SHOWN FOR REFERENCE ONLY - SEE DEMOLITION PLAN
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51. EXISTING FUR WALL OVER CONCRETE PRECAST, PROVIDE ANCHORS AS REQUIRED
52. PROVIDE (2) HEAVY DUTY WALL MOUNTED WORKTOP BRACKETS AS SHOWN
53. PROVIDE WOOD LEDGER AT PERIMETER OF WALL AT WORKTOP, PAINT TO MATCH EXISTING WALL
54. EXISTING FLOOR MOUNTED DATA RACK TO REMAIN - CONTRACTOR TO PROTECT DURING CONSTRUCTION
55. FIRE RATED COLLING SHUTTER AT NEW ADMIN TRANSACTION WINDOW - SEE SPECIFICATIONS
56. 1/4" GLASS SERVICE WINDOW WITH ALUMINUM TRACK
57. WOOD CASING AT TOP, SIDES AND FRONT OF OPENING, PRIME AND PAINT TO MATCH WALL
58. NEW RATED FRAME WALL INFILL: 3-5/8" STEEL STUD WITH (1) LAYER 3/8" GYP. BD. OVER (1) LAYER 5/8" TYPE X GYP. BD. BOTH SIDES, PROVIDE J-BEAD TERMINATION PIECE AT FULL PERIMETER OF GYP. BD. INFILL
59. COUNTER SHUTTER MANUFACTURE RATED TRACK
60. PROVIDE NEW WOOD CAP AND APRON AT PONY WALL, SAND AND SEAL
61. EXISTING STRUCTURE ABOVE
62. REPAIR AND/OR EXTEND EXISTING STEEL STUDS TO ADJACENT WALL OR STRUCTURE ABOVE
63. PROVIDE NEW GYP. BD. AS REQUIRED - FINISH TO MATCH EXISTING ADJACENT GYP. BD. - TYPICAL
64. STRUCTURAL LINTEL SHOWN FOR REFERENCE ONLY - SEE STRUCTURAL DRAWINGS
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DEMOLITION NOTES:

1. REMOVE EXISTING STUD OR CMU WALLS AND DOORS AS SHOWN
2. REMOVE PORTION OF EXISTING PRECAST CONCRETE WALL - SEE STRUCTURAL DRAWINGS
3. REMOVE PORTION OF EXISTING CMU WALL FOR INSTALLATION OF NEW DOOR OR WINDOW - PROVIDE NEW LATERAL SUPPORT PER STRUCTURAL DRAWINGS - SEE DEMO ELEVATION AND NEW FLOOR PLAN
4. PREP FLOOR FOR INSTALLATION OF NEW LIQUID APPLIED FLOORING - TYPICAL
5. REMOVE EXISTING MECHANICAL RETURN DUCTING - SALVAGE FOR REINSTALLATION - SEE MECHANICAL AND NEW FLOOR PLANS
6. REMOVE EXISTING CARPET/VCT FLOORING, SALVAGE CARPET FOR REINSTALLATION, SAWCUT EXISTING CONCRETE FLOOR FOR INSTALLATION OF NEW PLUMBING LINES - SEE PLUMBING DRAWINGS FOR EXTENT
7. REMOVE EXISTING TOILET FIXTURE, TILE FLOOR AND TILE BASE THIS ROOM
8. REMOVE EXISTING GYP. BD. FINISH THIS PORTION OF EXTERIOR WALL
9. REMOVE EXISTING DOOR AND PORTION OF WALL TO 42" AFF AT THIS LOCATION ONLY
10. REMOVE EXISTING FOLDING PARTITION
11. REMOVE EXISTING ACP CEILING GRID, TILES AND LIGHTING TO NEAREST GRID AS SHOWN - SALVAGE TILES FOR REINSTALLATION - SEE CEILING PLAN
12. REMOVE EXISTING GYP. BD. CEILING AS SHOWN
13. REMOVE EXISTING LIGHTING THIS ROOM AS SHOWN - SEE ELECTRICAL DRAWINGS
14. REMOVE PORTION OF EXISTING ACP CEILING TILES AS REQUIRED FOR REMOVAL OR INSTALLATION OF HVAC DUCT OR PLUMBING LINES - SALVAGE TILES FOR REINSTALLATION
15. REMOVE ALL FLOORING THIS AREA, PREP FOR INSTALLATION OF NEW LVT - SEE FLOORING PLANS
16. REMOVE EXISTING DOOR AND HARDWARE, FRAME TO REMAIN, SALVAGE AND RETURN HARDWARE TO OWNER
17. DEMO EXISTING BASE AND UPPER CABINETS TO NEAREST FULL CABINET, SALVAGE PORTIONS OF CABINETS TO CONSTRUCT NEW FILLER PIECE TO MATCH - SEE NEW FLOOR PLAN

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STATE OF COLORADO
THOMAS F. KALERT
#208124
11.12.22
LICENSED ARCHITECT

SHEET CONTENTS
AREA OF WORK CEILING
DEMOLITION AND NEW PLANS
AND CEILING MATRIX

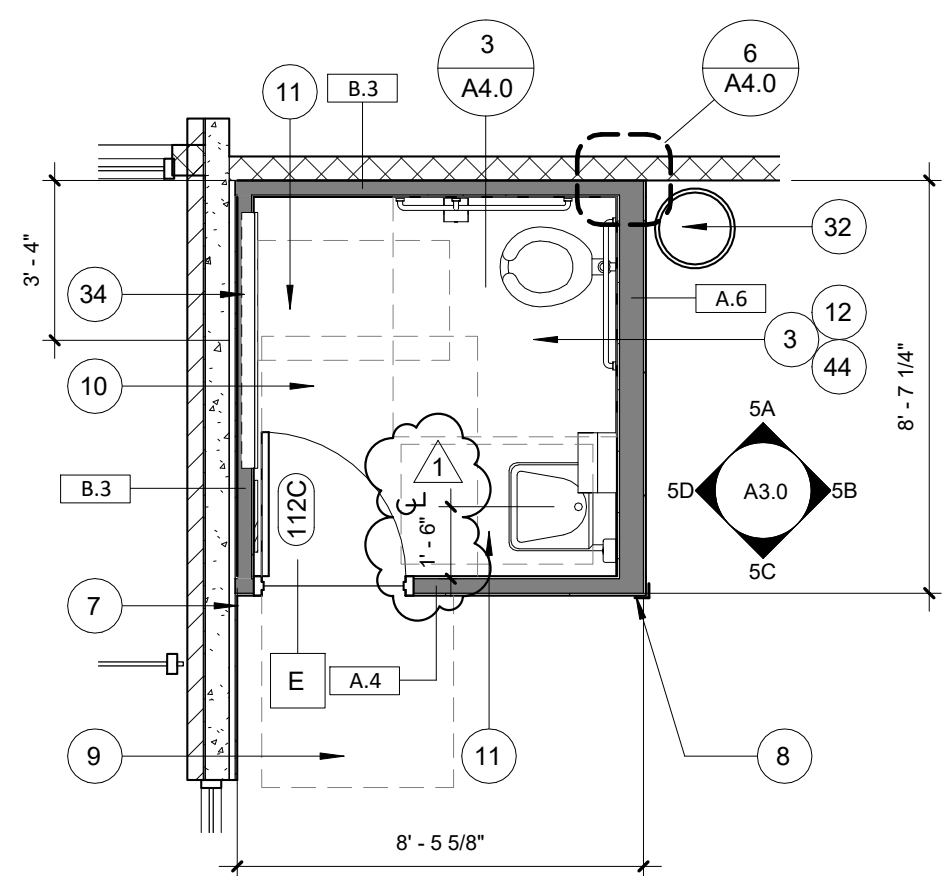
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WELLINGTON, COLORADO 80549

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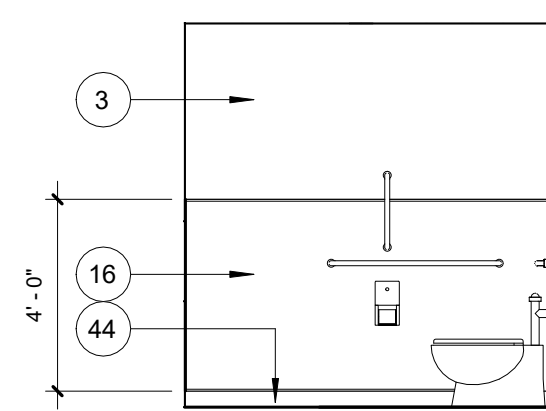
ISSUE FOR PERMIT

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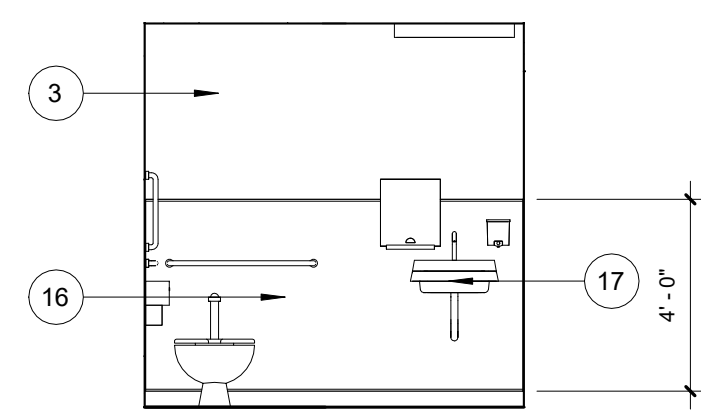
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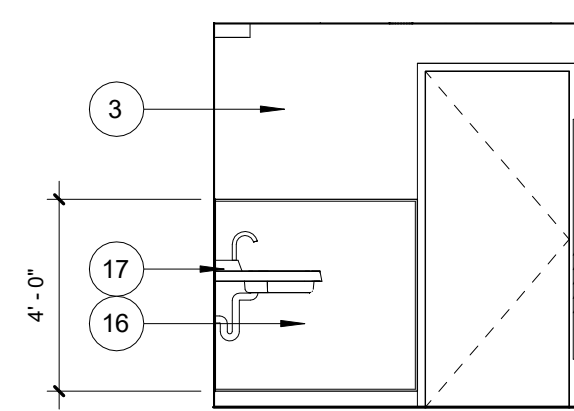
5 RESTROOM 112
1/4" = 1'-0"



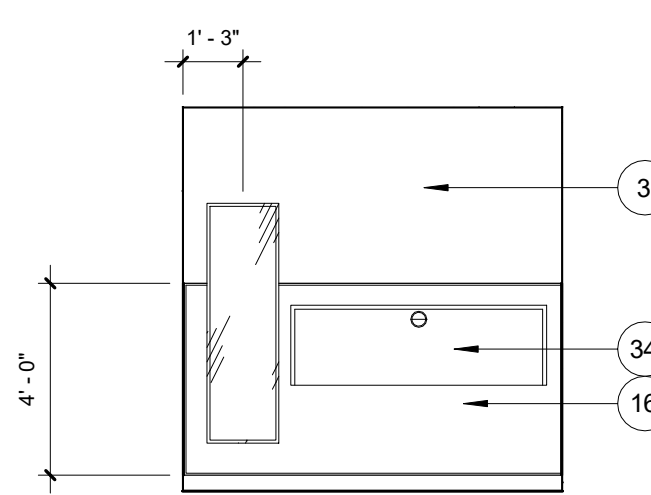
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5C 112 - SOUTH
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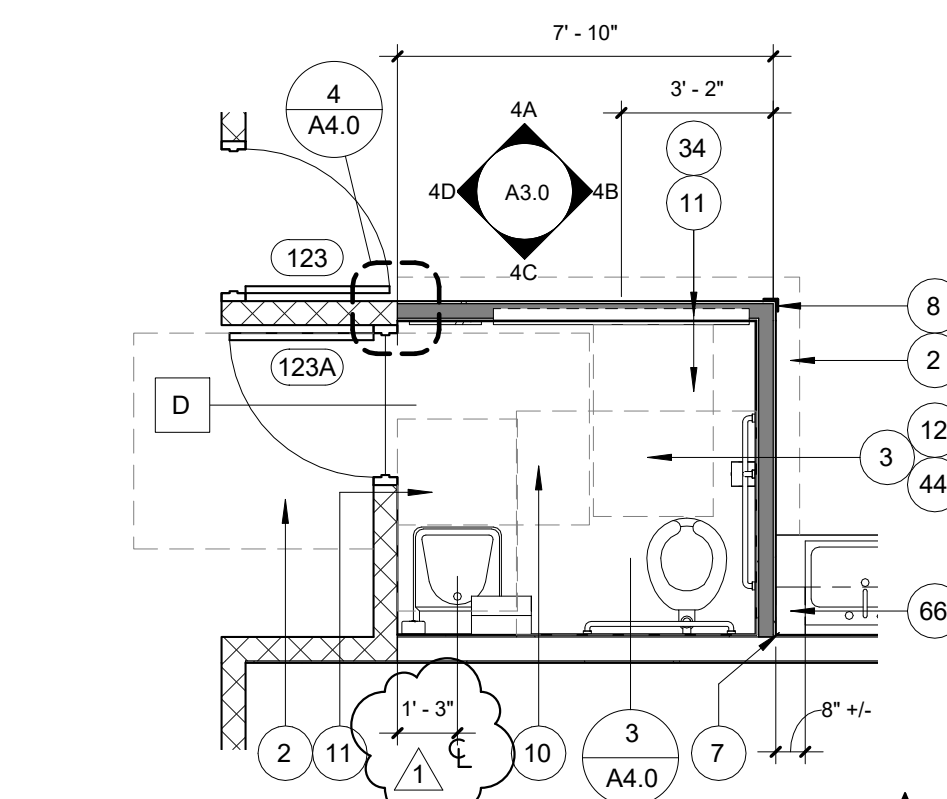
5D 112 - WEST
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GENERAL NOTES:

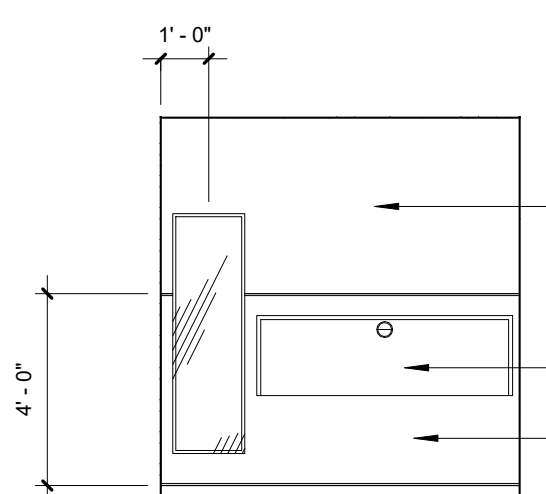
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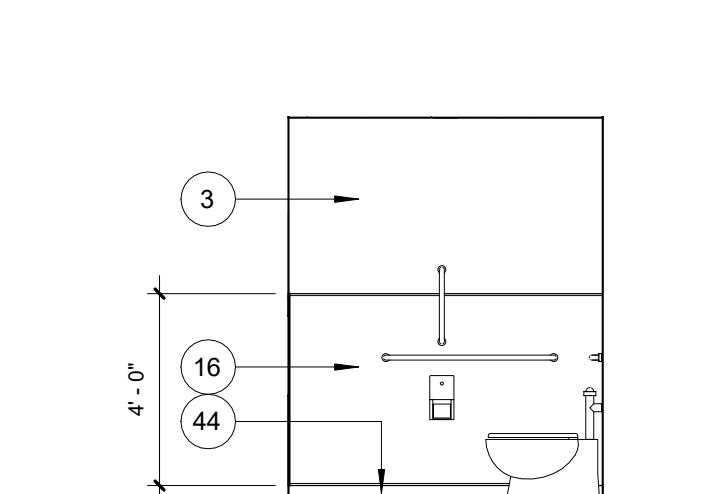
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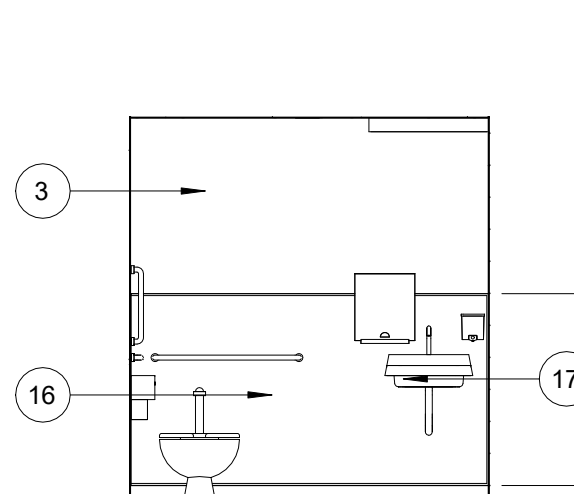
4 RESTROOM 123
1/4" = 1'-0"



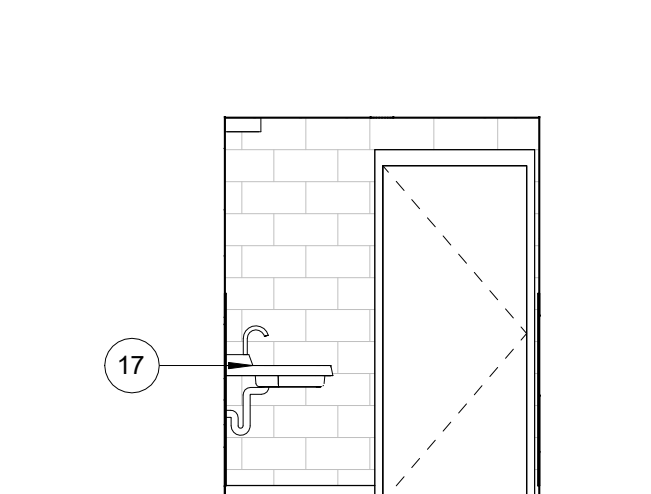
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1/4" = 1'-0"



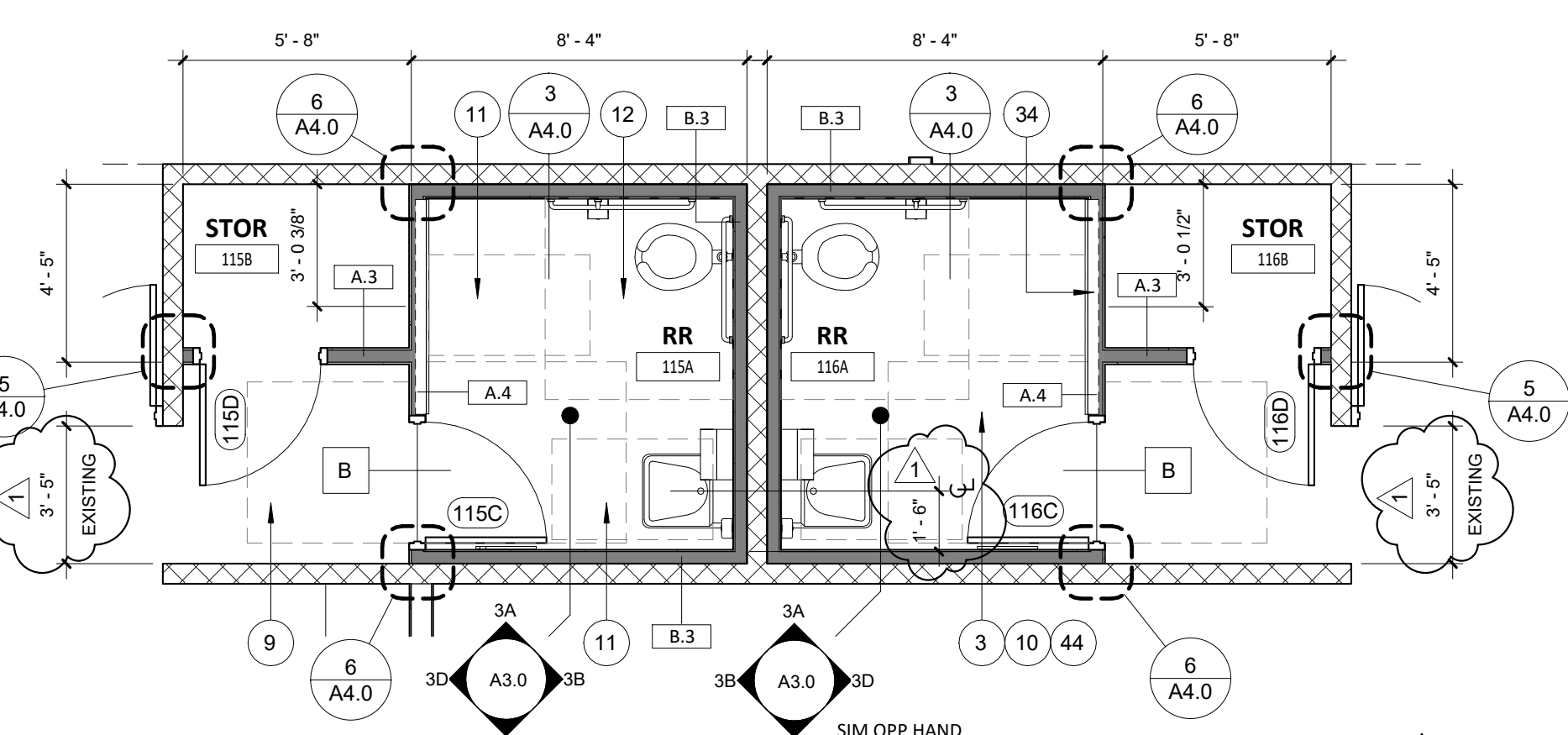
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1/4" = 1'-0"



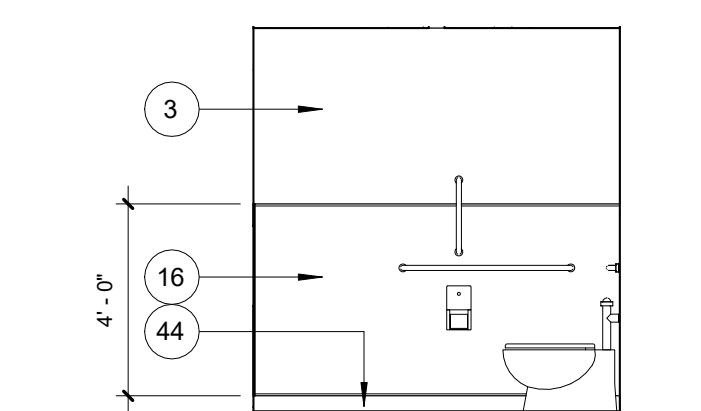
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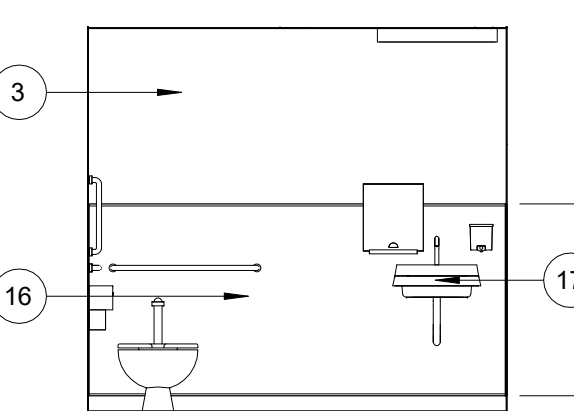
4D 123 - WEST
1/4" = 1'-0"



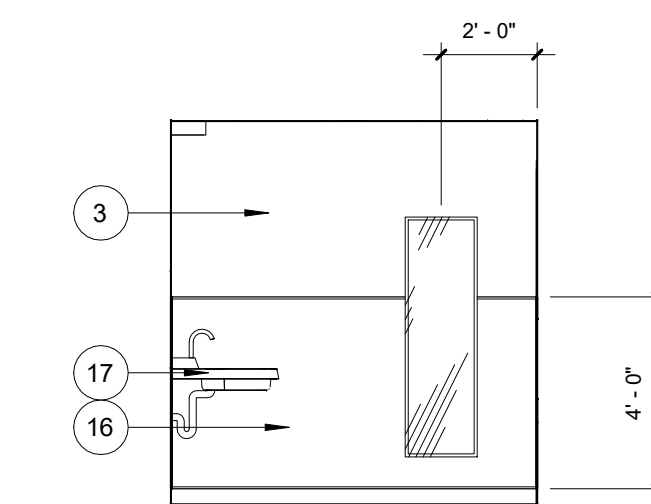
3 RESTROOM 115-116
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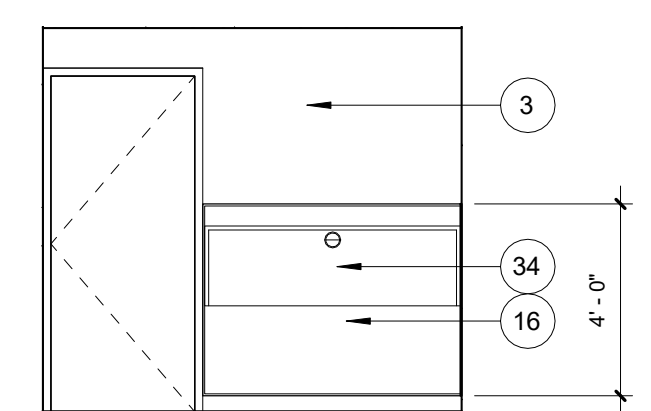
3A 115 - NORTH
1/4" = 1'-0"



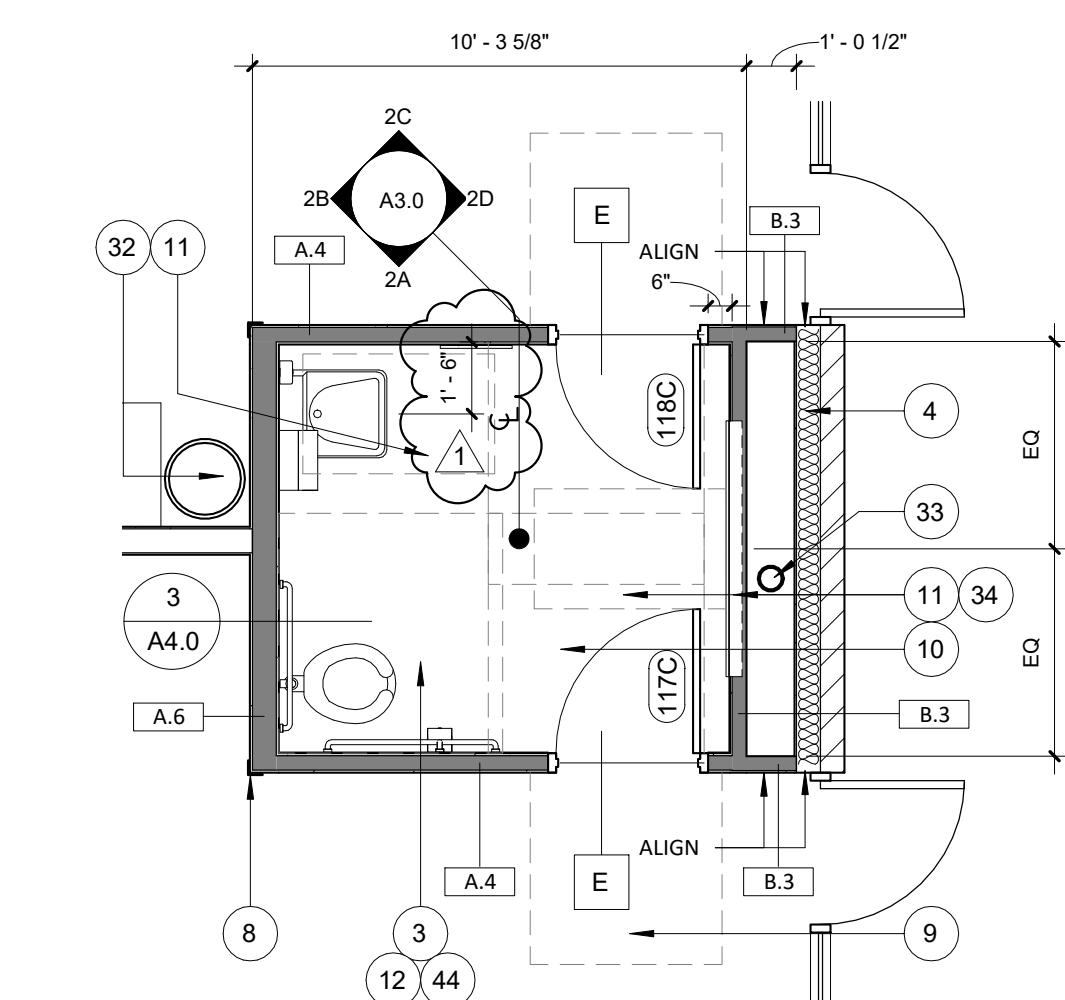
3B 115 - EAST
1/4" = 1'-0"



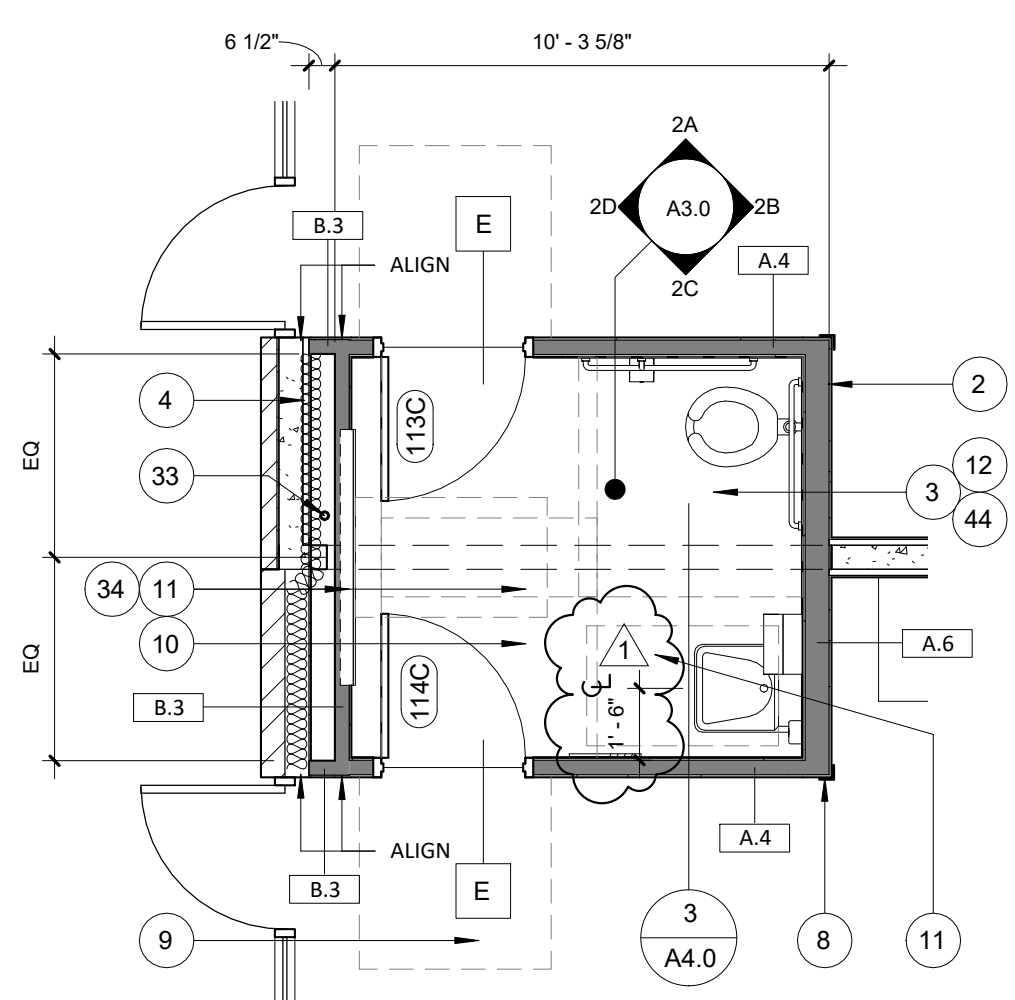
3C 115 - SOUTH
1/4" = 1'-0"



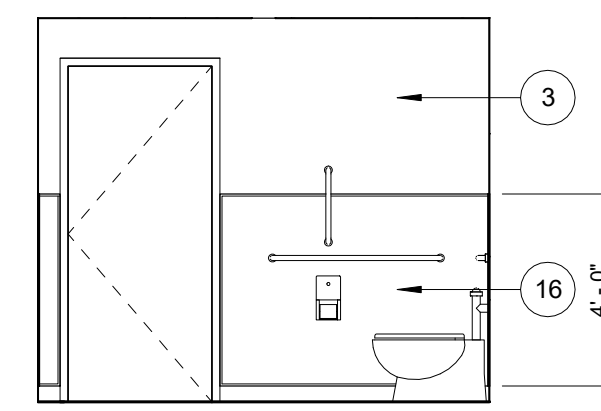
3D 115 - WEST
1/4" = 1'-0"



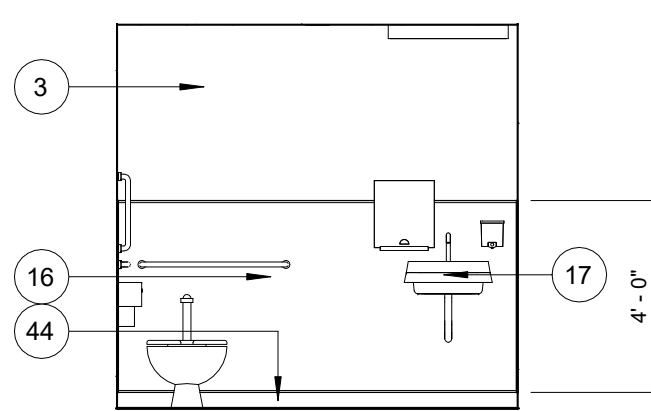
1 RESTROOM 117-118 AND 119-120
1/4" = 1'-0"



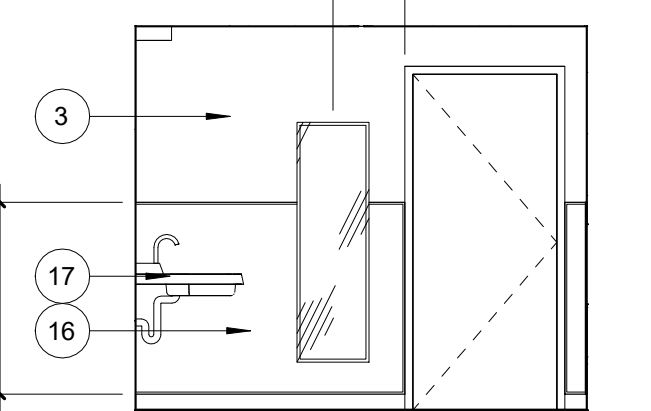
2 RESTROOM 113-114
1/4" = 1'-0"



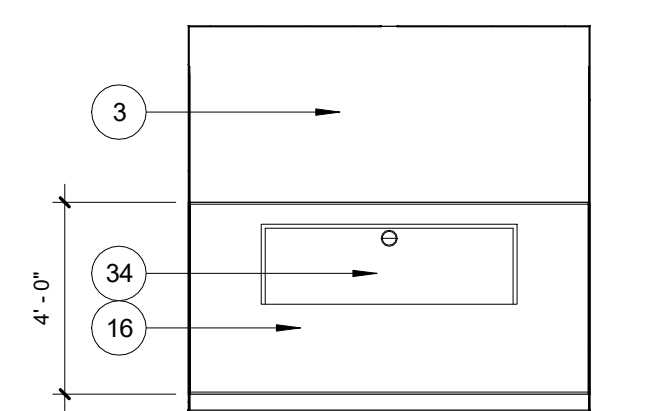
2A TYP - NORTH
1/4" = 1'-0"



2B TYP - EAST
1/4" = 1'-0"



2C TYP - SOUTH
1/4" = 1'-0"



2D TYP - WEST
1/4" = 1'-0"

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Fort Collins, Colorado 80521
tomkalert@gmail.com

STATE OF COLORADO
THOMAS F. KALERT
#208124
11.12.22
LICENSED ARCHITECT

SHEET CONTENTS
ENLARGED RESTROOM PLANS
AND ELEVATIONS

EYESTONE ELEMENTARY ECE
4000 WILSON AVENUE
WELLINGTON, COLORADO 80549

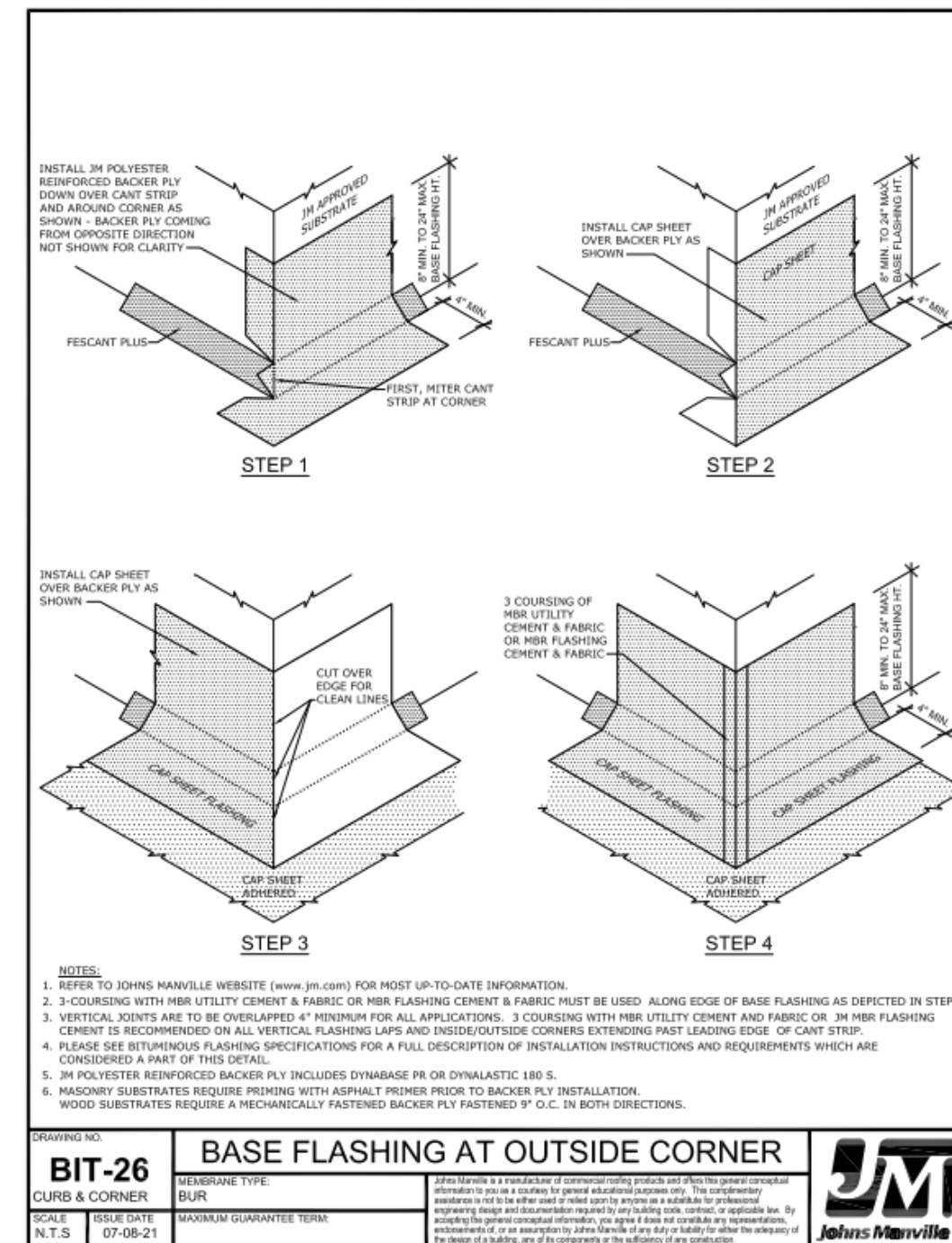
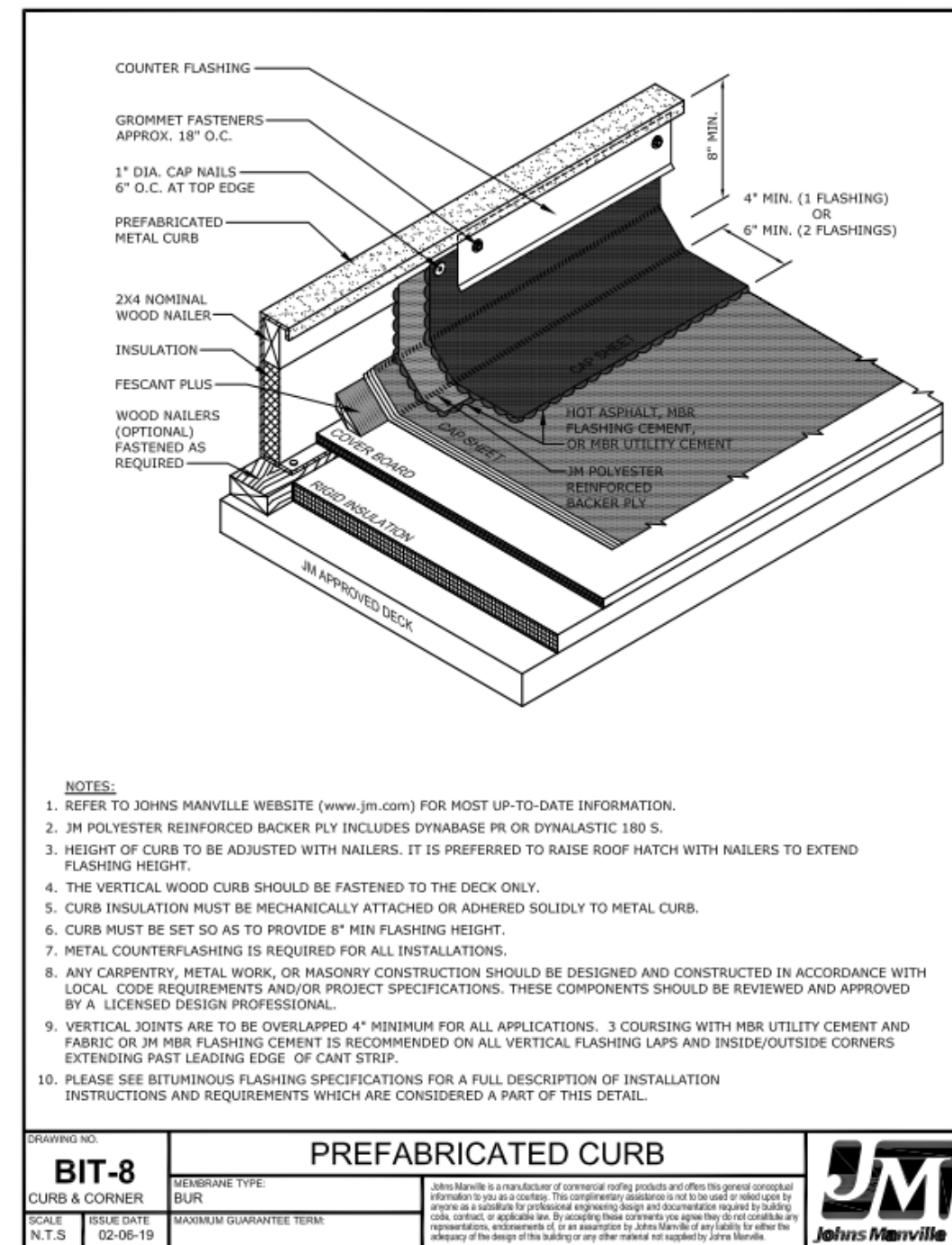
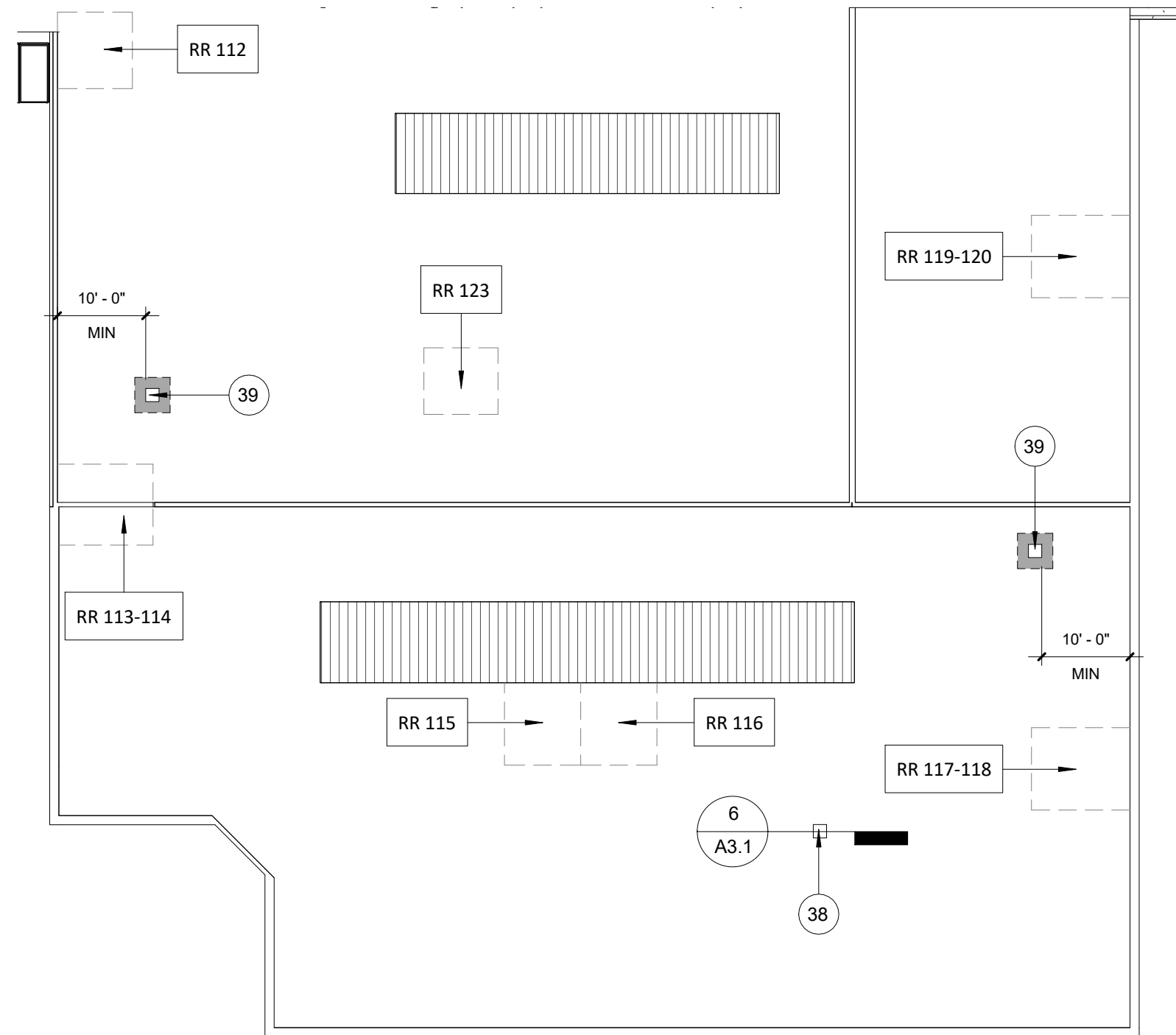
THE EYESTONE GROUP, INC. IS AN EQUAL OPPORTUNITY EMPLOYER. THE PROJECT OF KCG | LLC AND NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT PRIOR WRITTEN PERMISSION FROM KCG | LLC.

NO.	BY	DESCRIPTION	DATE
1	KCG	STATE COMMENTS	11.12.22

ISSUE FOR PERMIT

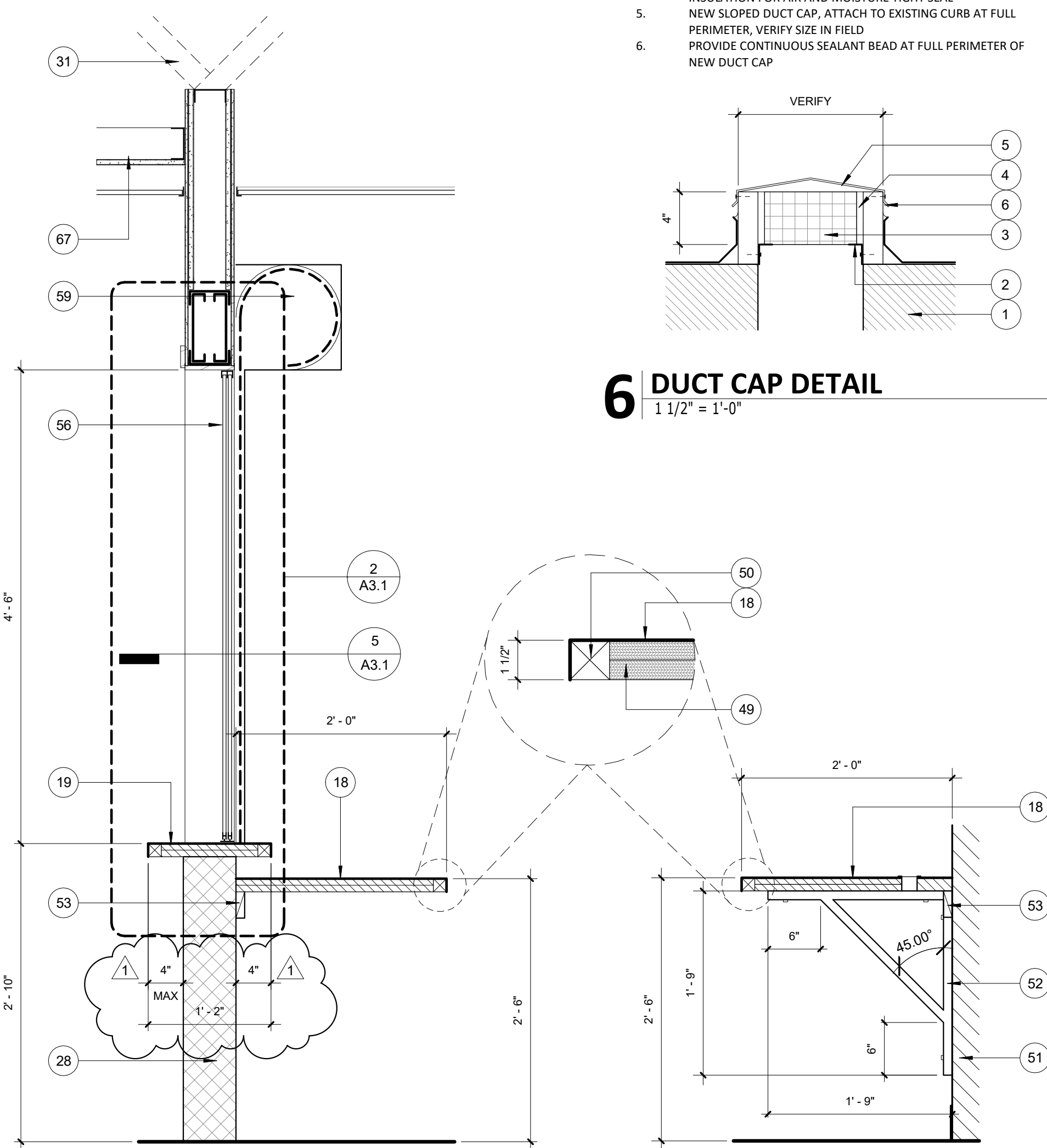
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DRAWN BY KCG	
DATE 11.12.22	

REVISIONS



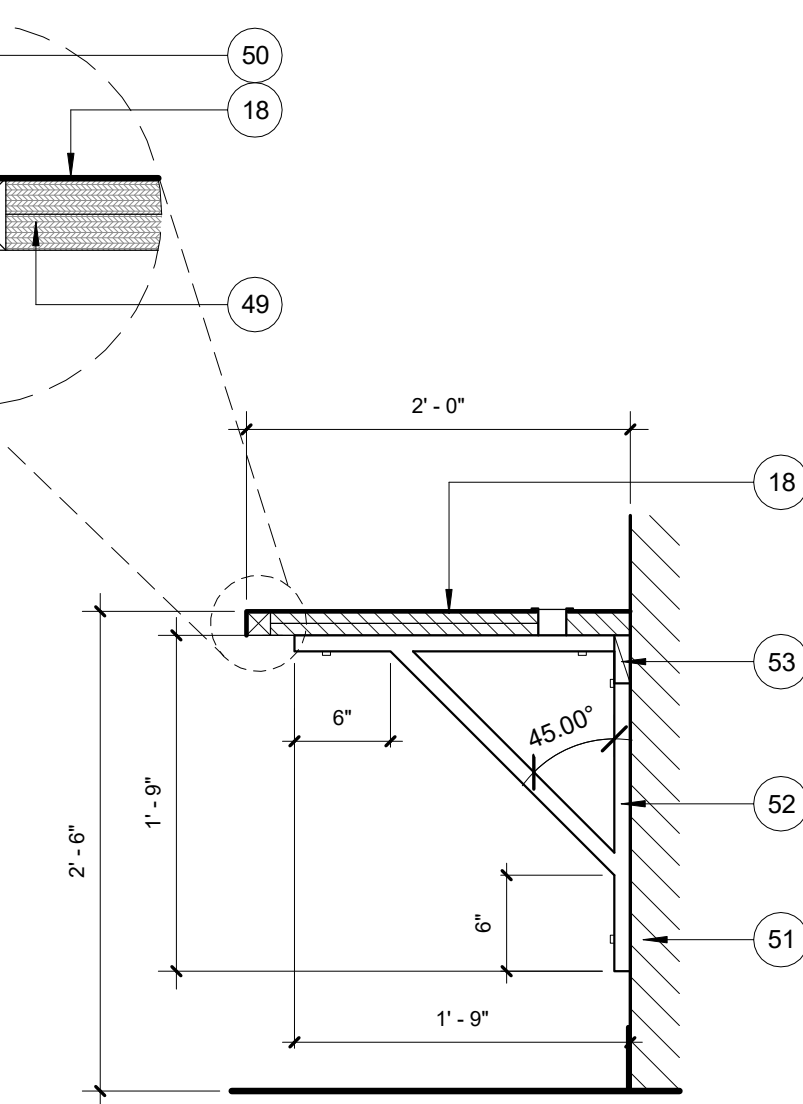
7 ROOF PLAN - AREA OF WORK AND MANUFACTURES CURB DETAILS
1/16" = 1'-0"

- EXISTING ROOF DECK AND CURB TO REMAIN
- INSTALL NEW ANGLE, FULL PERIMETER, AT INSIDE OF MECHANICAL OPENING
- INSTALL 4" RIGID INSULATION
- PROVIDE EXPANDING FOAM AT FULL PERIMETER OF RIGID INSULATION FOR AIR AND MOISTURE TIGHT SEAL
- NEW SLOPED DUCT CAP, ATTACH TO EXISTING CURB AT FULL PERIMETER, VERIFY SIZE IN FIELD
- PROVIDE CONTINUOUS SEALANT BEAD AT FULL PERIMETER OF NEW DUCT CAP



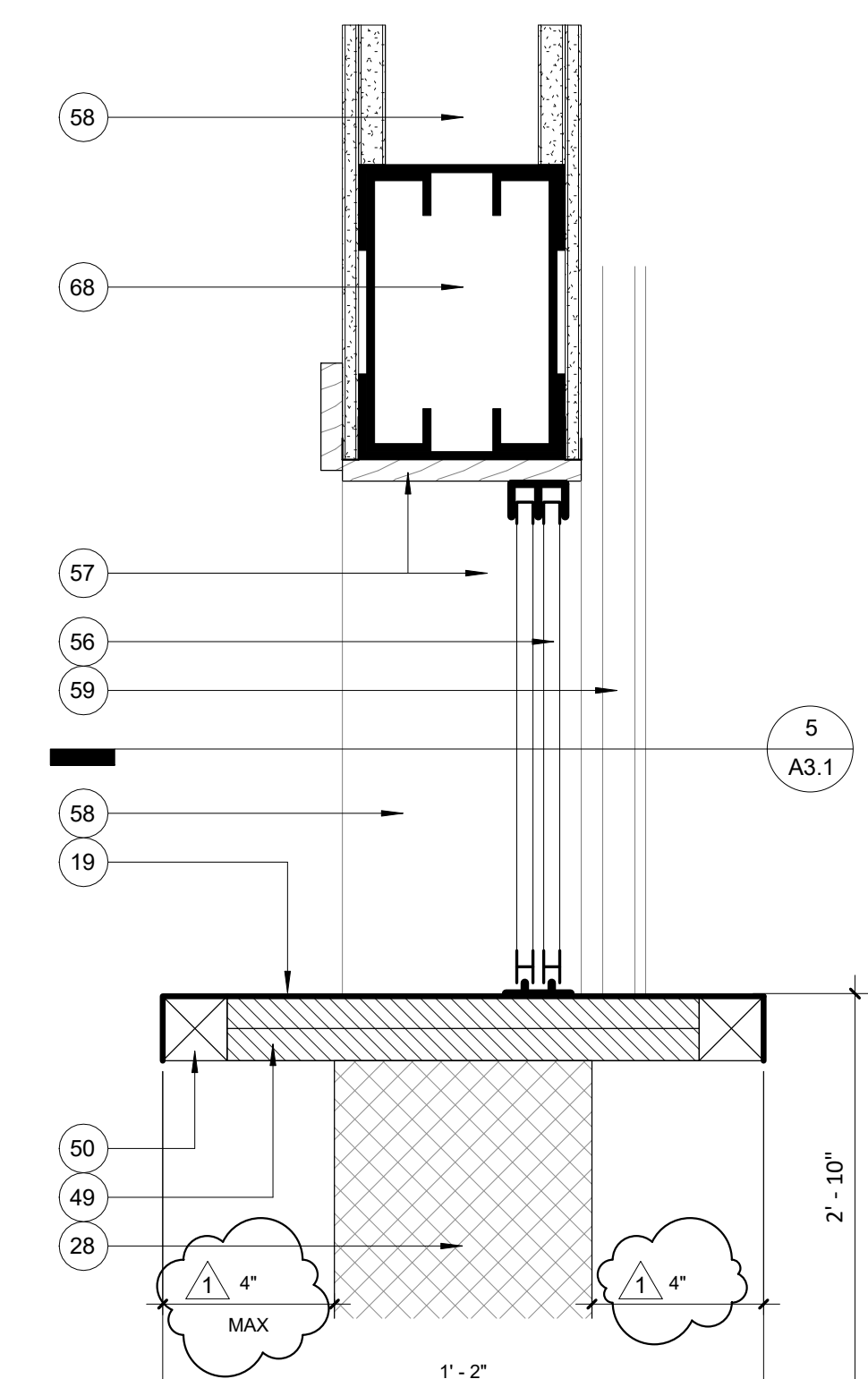
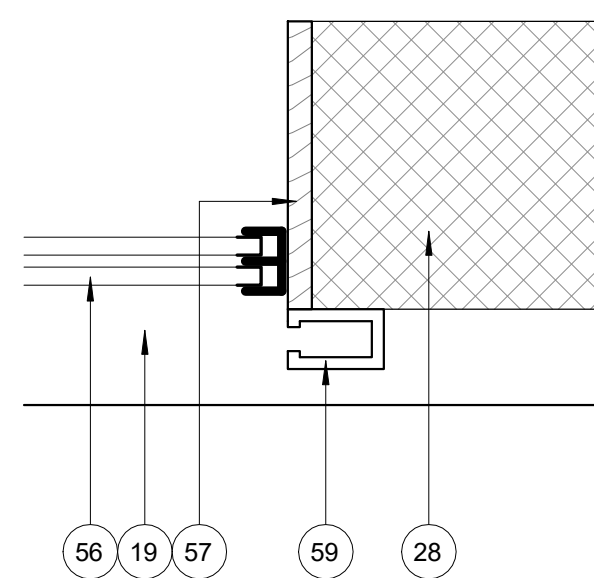
4 ADMIN OPENING DETAIL
1" = 1'-0"

6 DUCT CAP DETAIL
1 1/2" = 1'-0"



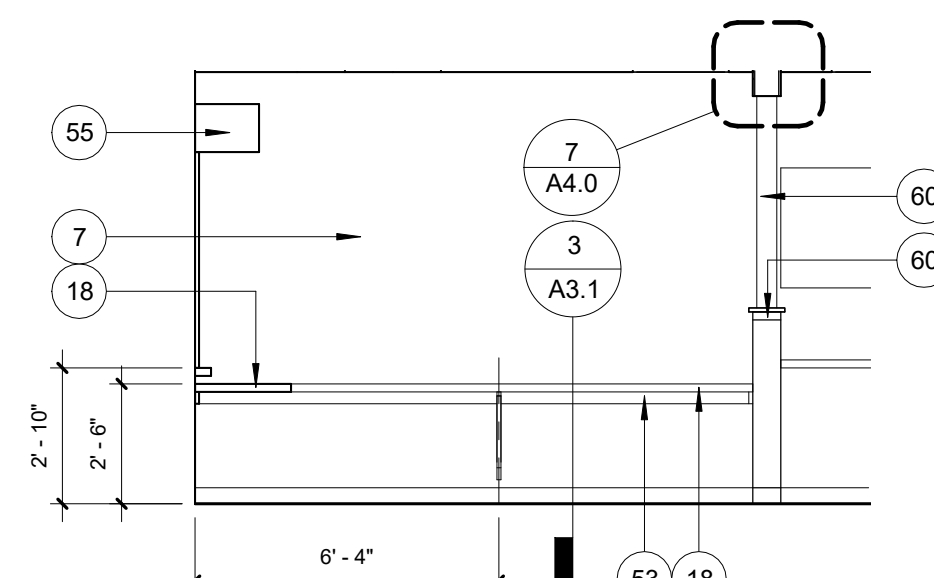
3 WORKTOP DETAIL
1" = 1'-0"

5 SHUTTER JAMB DETAIL
3" = 1'-0"

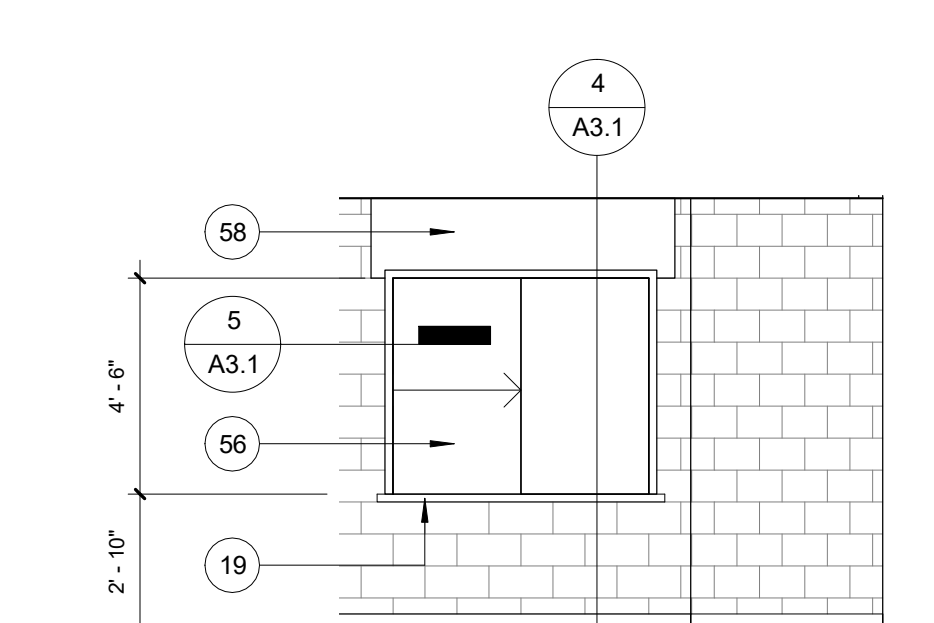


2 TRANSACTION WINDOW DETAIL
3" = 1'-0"

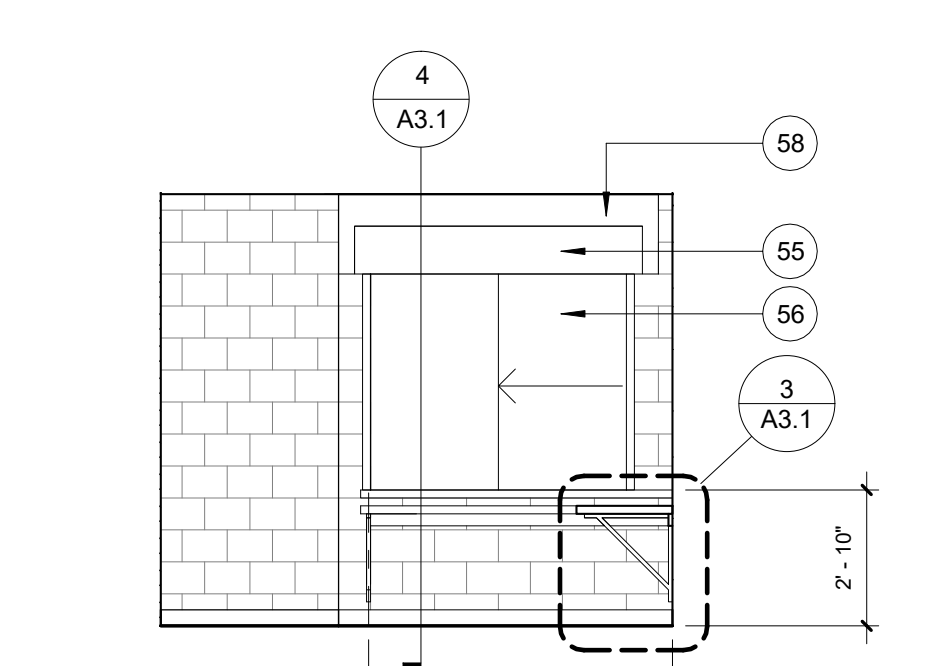
1C ADMIN - NORTH
1/4" = 1'-0"



1A ADMIN - WEST
1/4" = 1'-0"



1B ADMIN - EAST
1/4" = 1'-0"



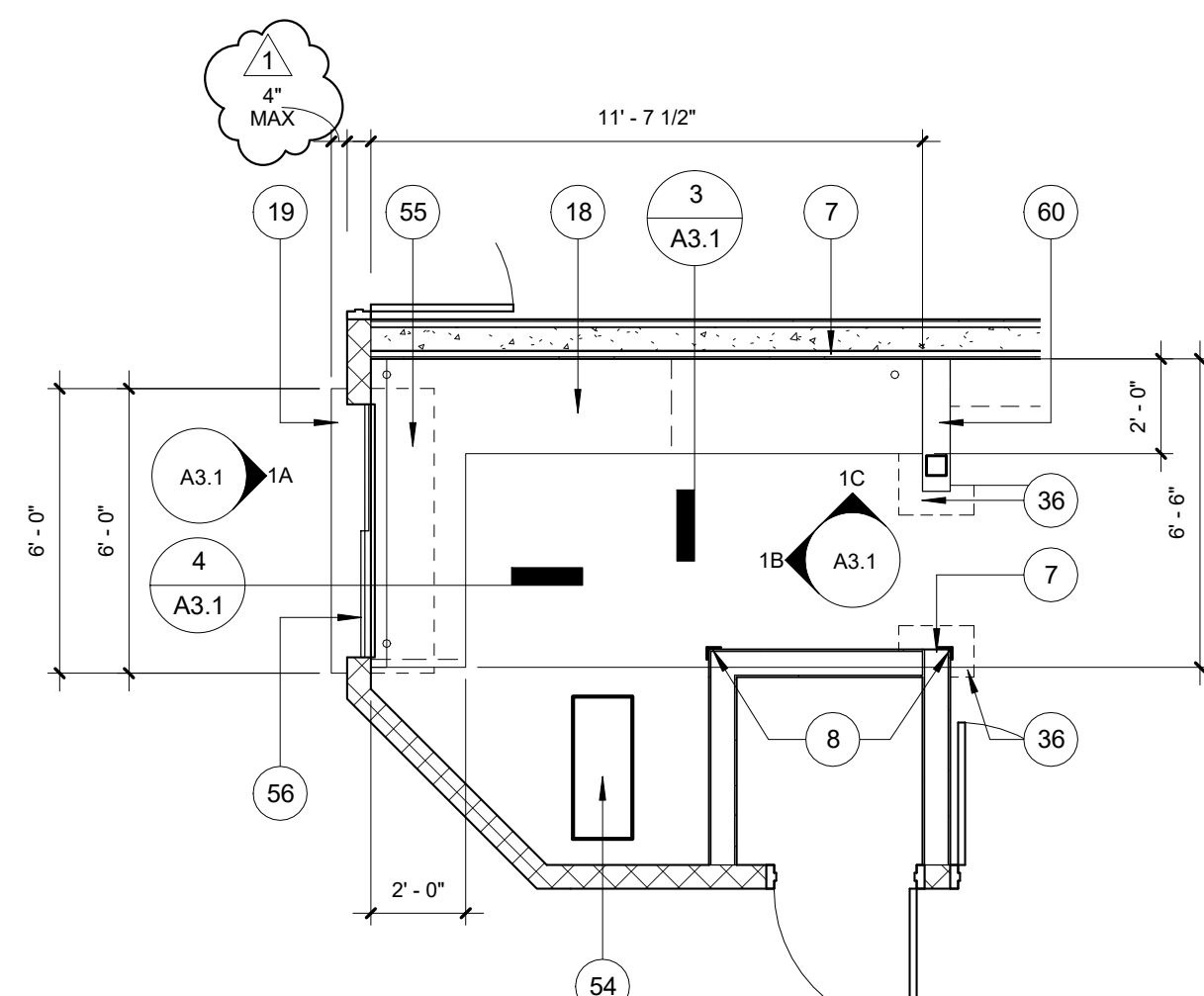
GENERAL NOTES:

- SCOPE OF WORK TO INCLUDE: NEW ECE RESTROOMS AND ECE ADMIN AREA
- CONTRACTOR TO FIELD VERIFY ALL EXISTING SITE CONDITIONS AND SHALL INFORM ARCHITECT AND OWNER OF ANY MAJOR DISCREPANCIES
- ALL GLAZING SHALL MEET CLASS II SAFETY STANDARDS
- ALL MECHANICAL, ELECTRICAL AND PLUMBING WORK SHOWN FOR REFERENCE - SEE MEP DRAWINGS
- EXISTING ROOFING JOHNS-MANVILLE ROLLED SHEET GOODS CURRENTLY UNDER WARRANTY - ROOFING REPAIRS SHALL BE COMPLETED BY PSD APPROVED VENDORS ONLY:
 - FRONT RANGE ROOFING
 - B&M ROOFING
 - COLORADO MOISTURE CONTROL
 - UNITED ROOFING MATERIALS

KEY NOTES:

- TYPICAL: NEW WALLS TO BE STEEL STUD WITH R-13 OR EQUAL SOUND BATT INSULATION AND 5/8" GYP. BD. - PROVIDE MOISTURE RESISTANT GYP. BD. AT RESTROOM INTERIOR - EXISTING AT CLASSROOM SIDE - TYPICAL
- PATCH FLOORING AND PROVIDE RUBBER BASE TO MATCH EXISTING AT CLASSROOM SIDE - TYPICAL
- PROVIDE MOISTURE RESISTANT GYP. BD. AT INTERIOR WALLS AND CEILING OF NEW RESTROOM - TYPICAL
- PROVIDE NEW R-13 BATT INSULATION AT EXTERIOR WALL THIS LOCATION
- NEW WOOD DOOR IN HOLLOW METAL FRAME - SEE DOOR SCHEDULE AND DETAILS
- NEW FIRE RATED SHUTTER AT ECE ADMIN NEW WALL OPENING
- PATCH AND REPAIR EXISTING GYP. BD. AS REQUIRED
- PROVIDE NEW 2" x 48" STAINLESS STEEL CORNER GUARD - TYPICAL AT ALL OUTSIDE WALL CORNERS
- CLEARANCE: 48" x 48" FRONT APPROACH
- CLEARANCE: 60" x 54" FRONT APPROACH
- CLEARANCE: 30" x 48" CLEAR FLOOR SPACE
- CLEARANCE: 56" x 60" WATER CLOSET
- INSTALL NEW LED LIGHTING FIXTURES AT NEW RESTROOMS AND THIS ROOM - SEE ELECTRICAL DRAWINGS
- NEW GYP. BD. CEILING AT 8' - 0". LIGHTING AND MECHANICAL PROVIDE MOISTURE RESISTANT GYP. BD. AT NEW RESTROOM AREAS - SEE MEP DRAWINGS
- PATCH AND REPAIR EXISTING ACP CEILING, INSTALL SALVAGED ACP CEILING TILES TO MATCH EXISTING
- PROVIDE FRP PANELS AND ALL NECESSARY TERMINATION AND TRIM PIECES TO 48" MIN AT FULL PERIMETER OF RESTROOM - TYPICAL
- ADA COMPLIANT SINK - SEE PLUMBING DRAWINGS
- 24" DEEP PLAM WORKTOP WITH WALL MOUNTED BRACKETS AND WIRE GROMMETS AS SHOWN - COLOR BY OWNER
- PLAM TRANSACTION COUNTER - SEE ELEVATION
- PROVIDE SEALANT BEAD, FULL PERIMETER, BOTH SIDES - TYPICAL
- PROVIDE (2) 20 GA. METAL STUDS AT DOOR JAMB, TYPICAL
- UNDERCUT NEW DOOR AT ALL RESTROOM LOCATIONS AND AS NEEDED WITH INSTALLATION OF NEW FLOORING
- TYPICAL NEW 5-3/4" HOLLOW METAL FRAME - PAINT TO MATCH EXISTING
- (2) LAYERS 3/4" PLYWOOD AT PLAM COUNTERTOPS
- 1-1/2" x 1-1/2" POPLAR NOSING
- PROVIDE MOISTURE RESISTANT GYP. BD. ECE WORK ROOM
- "WET" WALL
- PROVIDE J-BEAD TERMINATION PIECE AND SEALANT AT GYP. BD. TO CMU OR ACP LOCATION
- EXISTING MASONRY WALL, SHOWN FOR REFERENCE
- REINSTALL SALVAGED ACP CEILING TILES THIS AREA
- EXISTING ACP CEILING, PROVIDE NEW GRID AT RESTROOM WALLS AND REINSTALL SALVAGED ACP CEILING TILES - SEE CEILING PLAN
- BRACE TOP OF WALL TO STRUCTURE ABOVE AT 48" OC - TYPICAL
- REINSTALL EXISTING SALVAGED MECHANICAL RETURN DUCT THIS LOCATION - SEE MECHANICAL DRAWINGS
- EXISTING ROOF DRAIN AND/OR WATER LINE - SHOWN FOR REFERENCE - PROVIDE NEW PIPE INSULATION AT WATER LINE LOCATIONS - SEE PLUMBING DRAWINGS
- HEAVY DUTY STAINLESS STEEL RECESSED CHANGING STATION - SEE SPECIFICATIONS
- INSTALL NEW ABRASIVE ACTION WALK-OFF MAT AND TRANSITION STRIPS - SEE NEW FLOORING PLAN
- REINSTALL SALVAGED CARPET THIS AREA - SEE NEW FLOORING PLAN
- PROVIDE NEW FLOORING THIS AREA - SEE NEW FLOORING PLAN
- APPROXIMATE LOCATION OF REMOVED EXHAUST FAN, PROVIDE NEW METAL CAP - SEE DETAIL
- APPROXIMATE LOCATION OF NEW CURB MOUNTED EXHAUST FAN, COORDINATE EXACT LOCATION AND EXTENT OF ROOF REPAIR IN FIELD - SEE MECHANICAL DRAWINGS
- NEW CONCRETE FLOOR PATCH, GRIND EXISTING CONCRETE FOUNDATION WALL, FLOAT WITH LEVELING COMPOUND, PREP FLOOR FOR NEW LIQUID APPLIED EPOXY FLOORING - COORDINATE EXTENT IN FIELD
- EXISTING CONCRETE FLOOR TO REMAIN, PREP FOR NEW CONCRETE PATCH AND FLOORING
- EXISTING CONCRETE FOUNDATION WALL BELOW EXISTING UNDISTURBED EARTH TO REMAIN
- NEW LIQUID APPLIED EPOXY FLOORING WITH INTEGRAL COVER BASE, PROVIDE CARPET TRANSITION STRIP AT ALL DOOR LOCATIONS - SEE NEW FLOORING PLAN
- NEW CONCRETE PATCH, COORDINATE EXTENT IN FIELD - SEE PLUMBING DRAWINGS
- NEW #5 REBAR DOVELS AT 24" OC - GREASE AND WRAP BAR ENDS IN EXISTING CONCRETE
- NEW WASTE LINE SET IN NEW POROUS FILL - SEE PLUMBING DRAWINGS
- DEMOLISHED PRECAST PANEL WALL - SHOWN FOR REFERENCE ONLY - SEE DEMOLITION PLAN
- (2) LAYERS 3/4" FIRE-RATED PLYWOOD UNDERLAYMENT AT PLAM COUNTERTOP
- 1-1/2" x 1-1/2" POPLAR NOSING
- EXISTING FULL WALL OVER CONCRETE PRECAST, PROVIDE ANCHORS AS REQUIRED
- PROVIDE (2) HEAVY DUTY WALL MOUNTED WORKTOP BRACKETS AS SHOWN
- PROVIDE WOOD LEDGER AT PERIMETER OF WALL AT WORKTOP, PAINT TO MATCH EXISTING WALL
- EXISTING FLOOR MOUNTED DATA RACK TO REMAIN - CONTRACTOR TO PROTECT DURING CONSTRUCTION
- FIRE RATED COILING SHUTTER AT NEW ADMIN TRANSACTION WINDOW - SEE SPECIFICATIONS
- 3/4" GLASS SERVICE WINDOW WITH ALUMINUM TRACK
- WOOD CASING AT TOP, SIDES AND FRONT OF OPENING, PRIME AND PAINT TO MATCH WALL
- NEW RATED FRAME WALL INFILL: 3-5/8" STEEL STUD WITH (1) LAYER 3/8" GYP. BD. OVER (1) LAYER 5/8" TYPE X GYP. BD. BOTH SIDES, PROVIDE J-BEAD TERMINATION PIECE AT FULL PERIMETER OF GYP. BD. INFILL
- COUNTER SHUTTER MANUFACTURE RATED TRACK
- PROVIDE NEW WOOD CAP AND APRON AT PONY WALL, SAND AND SEAL
- EXISTING STRUCTURE ABOVE
- REPAIR AND/OR EXTEND EXISTING STEEL STUDS TO ADJACENT WALL OR STRUCTURE ABOVE
- PROVIDE NEW GYP. BD. AS REQUIRED - FINISH TO MATCH EXISTING ADJACENT GYP. BD. - TYPICAL
- STRUCTURAL LINTEL SHOWN FOR REFERENCE ONLY - SEE STRUCTURAL DRAWINGS
- 1/4" FIRE RATED LAMINATED GLAZING - GLAZING SHALL MEET CLASS II SAFETY STANDARDS
- INSTALL NEW BASE AND UPPER CABINET FILLER FROM SALVAGED CABINET MATERIALS
- EXISTING FIRE RATED TUNNEL ASSEMBLY TO REMAIN, SHOWN FOR REFERENCE, PROTECT DURING CONSTRUCTION
- STRUCTURAL HEADER - SEE STRUCTURAL DRAWINGS
- EXISTING STEEL COLUMN TO REMAIN - PAINT TO MATCH ADJACENT WALL

1 ADMIN RECEPTION
1/4" = 1'-0"



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STATE OF COLORADO
THOMAS F. KALERT
#208124
11.12.22
LICENSED ARCHITECT

SHEET CONTENTS
ROOF PLAN AND DETAILS,
ENLARGED ADMIN PLAN,
ELEVATIONS AND DETAILS

EYESTONE ELEMENTARY ECE
4000 WILSON AVENUE
WELLINGTON, COLORADO 80549

ISSUE FOR PERMIT

NO.	BY	DESCRIPTION	DATE
1	KCG	STATE COMMENTS	11.12.22

DESIGNED BY: DAM
CHECKED BY: KCG
DATE: 11.12.22

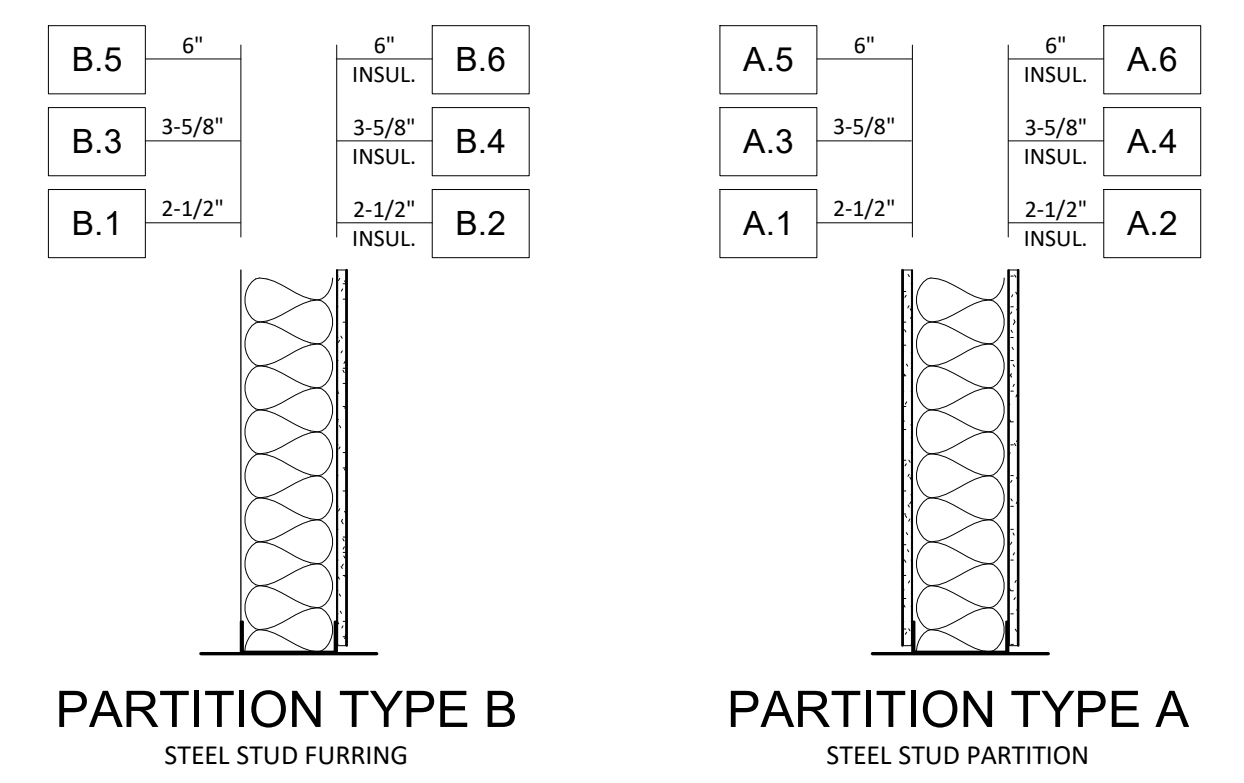
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GENERAL NOTES:

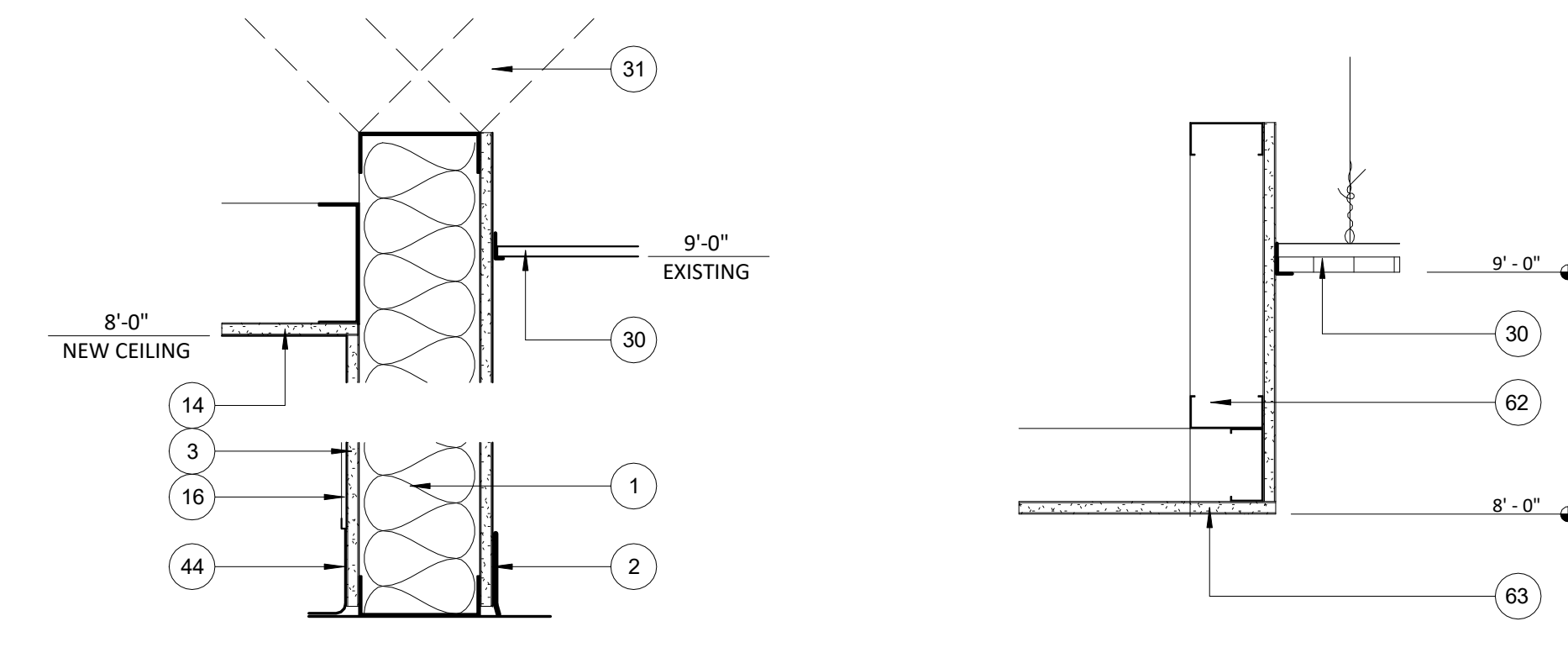
- | | |
|---|---|
| <p>A. SCOPE OF WORK TO INCLUDE: NEW ECE RESTROOMS AND ECE ADMIN AREA</p> <p>B. CONTRACTOR TO FIELD VERIFY ALL EXISTING SITE CONDITIONS AND SHALL INFORM ARCHITECT AND OWNER OF ANY MAJOR DISCREPANCIES</p> <p>C. ALL GLAZING SHALL MEET CLASS II SAFETY STANDARDS</p> <p>D. ALL MECHANICAL, ELECTRICAL AND PLUMBING WORK SHOWN FOR REFERENCE - SEE MEP DRAWINGS</p> | <p>E. EXISTING ROOFING: JOHNS-MANVILLE ROLLED SHEET GOODS CURRENTLY UNDER WARRANTY - ROOFING REPAIRS SHALL BE COMPLETED BY PSD APPROVED VENDORS ONLY:</p> <ul style="list-style-type: none"> • FRONT RANGE ROOFING • B&M ROOFING • COLORADO MOISTURE CONTROL • UNITED ROOFING MATERIALS |
|---|---|

KEY NOTES:

1. TYPICAL: NEW WALLS TO BE STEEL STUD WITH R-13 OR EQUAL SOUND BATT INSULATION AND 5/8" GYP. BD. PROVIDE MOISTURE RESISTANT GYP. BD. AT RESTROOM INTERIOR - FRAME TO 6" ABOVE EXISTING CEILING HEIGHT - SEE WALL TYPES AND HEAD DETAIL
2. PATCH FLOORING AND PROVIDE RUBBER BASE TO MATCH EXISTING AT CLASSROOM SIDE - TYPICAL
3. PROVIDE MOISTURE RESISTANT GYP. BD. AT INTERIOR WALLS AND CEILING OF NEW RESTROOM - TYPICAL
4. PROVIDE NEW R-13 BATT INSULATION AT EXTERIOR WALL THIS LOCATION
5. NEW WOOD DOOR IN HOLLOW METAL FRAME - SEE DOOR SCHEDULE AND DETAILS
6. NEW FIRE RATED SHUTTER AT ECE ADMIN NEW WALL OPENING
7. PATCH AND REPAIR EXISTING GYP. BD. AS REQUIRED
8. PROVIDE NEW 2" x 48" STAINLESS STEEL CORNER GUARD - TYPICAL AT ALL OUTSIDE WALL CORNERS
9. CLEARANCE: 48" x 48" FRONT APPROACH
10. CLEARANCE: 60" x 54" FRONT APPROACH
11. CLEARANCE: 30" x 48" CLEAR FLOOR SPACE
12. CLEARANCE: 56" x 60" WATER CLOSET
13. INSTALL NEW LED LIGHTING FIXTURES AT NEW RESTROOMS AND THIS ROOM - SEE ELECTRICAL DRAWINGS
14. NEW GYP. BD. CEILING AT 8' - 0", LIGHTING AND MECHANICAL PROVIDE MOISTURE RESISTANT GYP. BD. AT NEW RESTROOM AREAS - SEE MEP DRAWINGS
15. PATCH AND REPAIR EXISTING ACP CEILINGS, INSTALL SALVAGED ACP CEILING TILES TO MATCH EXISTING
16. PROVIDE FRP PANELS AND ALL NECESSARY TERMINATION AND TRIM PIECES TO 48" MIN AT FULL PERIMETER OF RESTROOM - TYPICAL
17. ADA COMPLIANT SINK - SEE PLUMBING DRAWINGS
18. 24" DEEP PLAIN WORKTOP WITH WALL MOUNTED BRACKETS AND WIRE GROMMETS AS SHOWN - COLOR BY OWNER
19. PLAM TRANSACTION COUNTER - SEE ELEVATION
20. PROVIDE SEALANT BEAD, FULL PERIMETER, BOTH SIDES - TYPICAL
21. PROVIDE (2) 20 GA. METAL STUDS AT DOOR JAMB, TYPICAL UNDERCUT NEW DOOR AT ALL RESTROOM LOCATIONS AND AS NEEDED WITH INSTALLATION OF NEW FLOORING
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25. PROVIDE MOISTURE RESISTANT GYP. BD. ECE WORK ROOM "WET" WALL
26. PROVIDE J-BEAD TERMINATION PIECE AND SEALANT AT GYP. BD. TO CMU OR ACP LOCATION
27. EXISTING MASONRY WALL, SHOWN FOR REFERENCE
28. REINSTALL SALVAGED ACP CEILING TILES THIS AREA
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32. EXISTING ROOF DRAIN AND/OR WATER LINE - SHOWN FOR REFERENCE - PROVIDE NEW PIPE INSULATION AT WATER LINE LOCATIONS - SEE PLUMBING DRAWINGS
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34. INSTALL NEW ABRASIVE ACTION WALK-OFF MAT AND TRANSITION STRIPS - SEE NEW FLOORING PLAN
35. REINSTALL SALVAGED CARPET THIS LOCATION
36. PROVIDE NEW FLOORING THIS AREA - SEE NEW FLOORING PLAN
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38. APPROXIMATE LOCATION OF NEW CURB MOUNTED EXHAUST FAN, COORDINATE EXACT LOCATION AND EXTENT OF ROOF REPAIR IN FIELD - SEE MECHANICAL DRAWINGS
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40. EXISTING CONCRETE FLOOR TO REMAIN, PREP FOR NEW CONCRETE PATCH AND FLOORING
41. EXISTING UNDISTURBED EARTH TO REMAIN
42. NEW LIQUID APPLIED EPOXY FLOORING WITH INTEGRAL COVERED BASE, PROVIDE CARPET TRANSITION STRIP AT ALL DOOR LOCATIONS - SEE NEW FLOORING PLAN
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51. PROVIDE WOOD LEDGER AT PERIMETER OF WALL AT WORKTOP, PAINT TO MATCH EXISTING WALL
52. EXISTING FLOOR MOUNTED DATA RACK TO REMAIN - CONTRACTOR TO PROTECT DURING CONSTRUCTION
53. FIRE RATED COLLING SHUTTER AT NEW ADMIN TRANSACTION WINDOW - SEE SPECIFICATIONS
54. 1/4" GLASS SERVICE WINDOW WITH ALUMINUM TRACK
55. WOOD CASING AT TOP, SIDES AND FRONT OF OPENING, PRIME AND PAINT TO MATCH WALL
56. NEW RATED FRAME WALL INFILL: 3-5/8" STEEL STUD WITH (1) LAYER 3/8" GYP. BD. OVER (1) LAYER 5/8" GYP. BD. BOTH SIDES, PROVIDE J-BEAD TERMINATION PIECE AT FULL PERIMETER OF GYP. BD. INFILL
57. COUNTER SHUTTER MANUFACTURE RATED TRACK
58. PROVIDE NEW WOOD CAP AND APRON AT PONY WALL, SAND AND SEAL
59. EXISTING STRUCTURE ABOVE
60. REPAIR AND/OR EXTEND EXISTING STEEL STUDS TO ADJACENT WALL OR STRUCTURE ABOVE
61. PROVIDE NEW GYP. BD. AS REQUIRED - FINISH TO MATCH EXISTING ADJACENT GYP. BD. - TYPICAL
62. STRUCTURAL LINTEL SHOWN FOR REFERENCE ONLY - SEE STRUCTURAL DRAWINGS
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65. EXISTING FIRE RATED TUNNEL ASSEMBLY TO REMAIN, SHOWN FOR REFERENCE, PROTECT DURING CONSTRUCTION
66. STRUCTURAL HEADER - SEE STRUCTURAL DRAWINGS
67. EXISTING STEEL COLUMN TO REMAIN - PAINT TO MATCH ADJACENT WALL

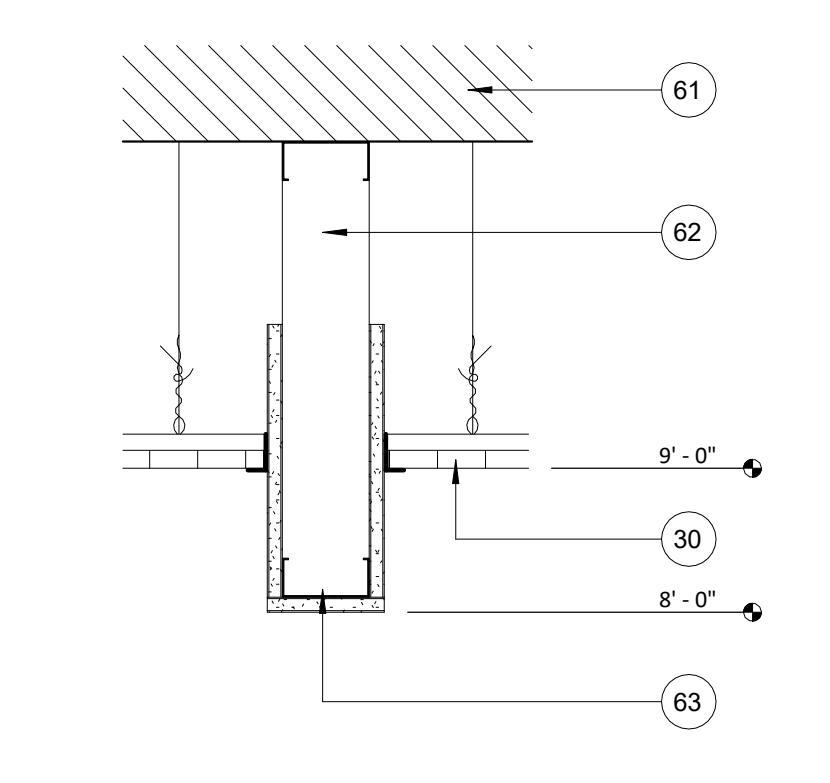


10 WALL TYPES
 1" = 1'-0"

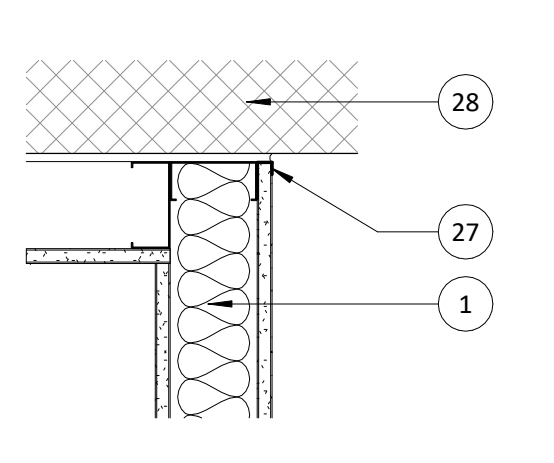


9 TYPICAL WALL DETAIL
 1 1/2" = 1'-0"

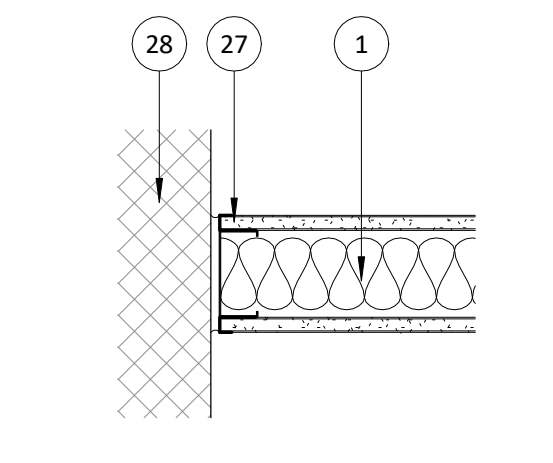
8 SOFFIT DETAIL
 1 1/2" = 1'-0"



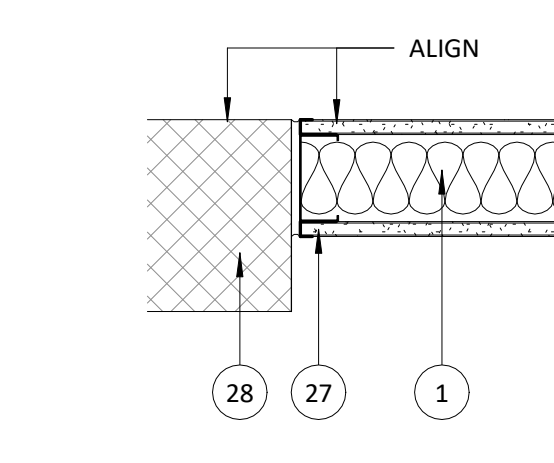
7 BULKHEAD DETAIL
 1 1/2" = 1'-0"



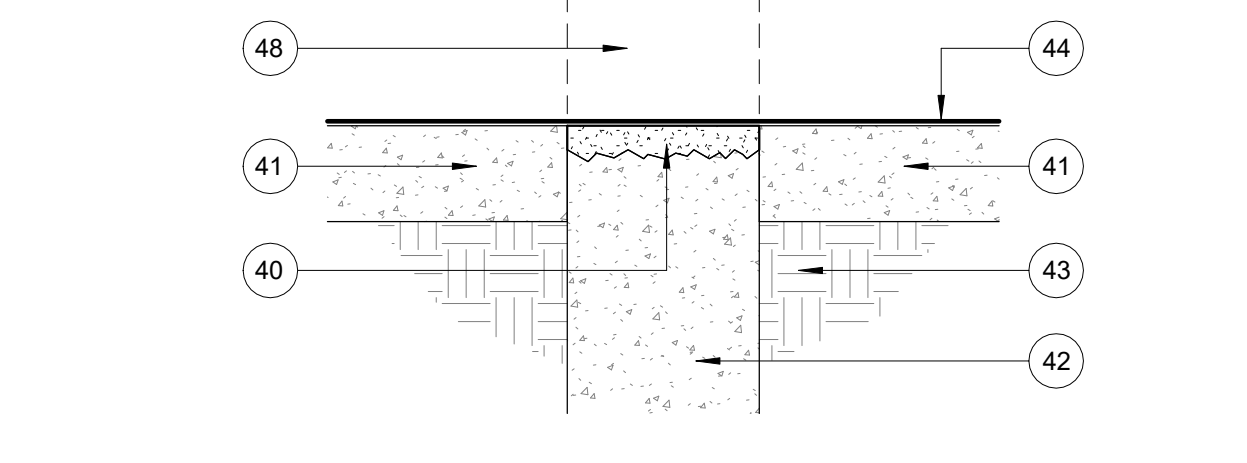
6 WALL TO CMU - A
 1 1/2" = 1'-0"



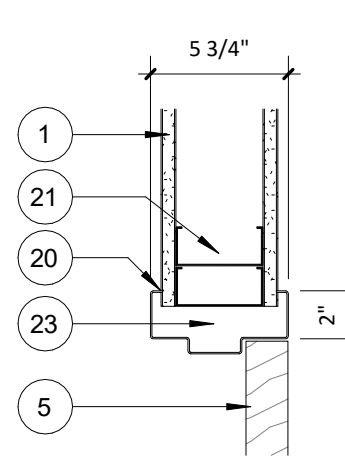
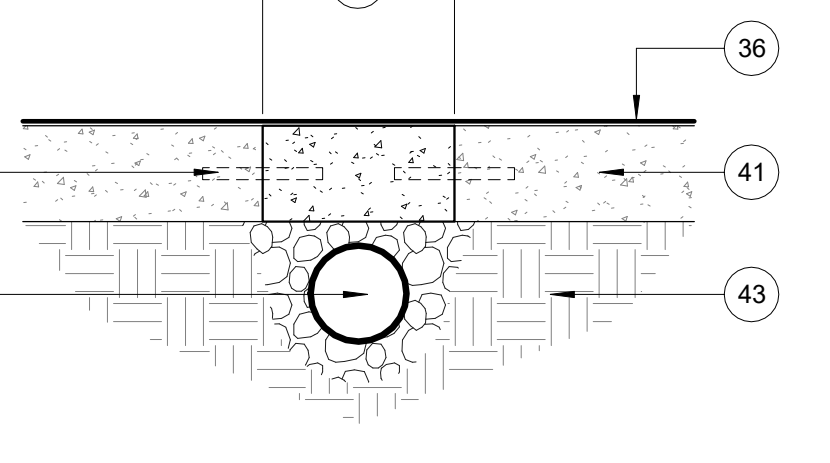
5 WALL TO CMU - B
 1 1/2" = 1'-0"



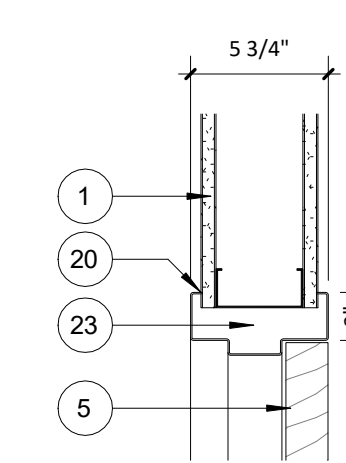
4 WALL TO CMU - C
 1 1/2" = 1'-0"



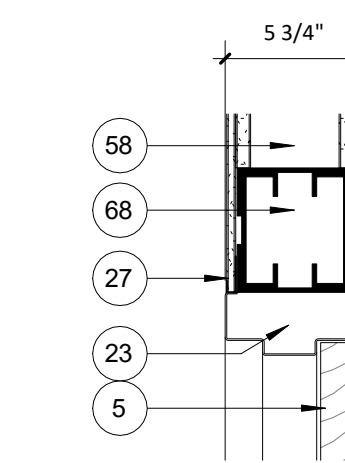
3 FLOOR INFILL DETAILS
 1 1/2" = 1'-0"



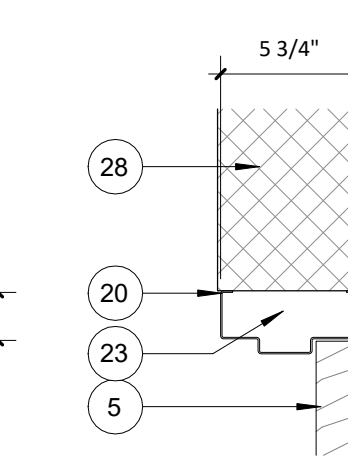
JAMB DETAIL
 FRAME WALL



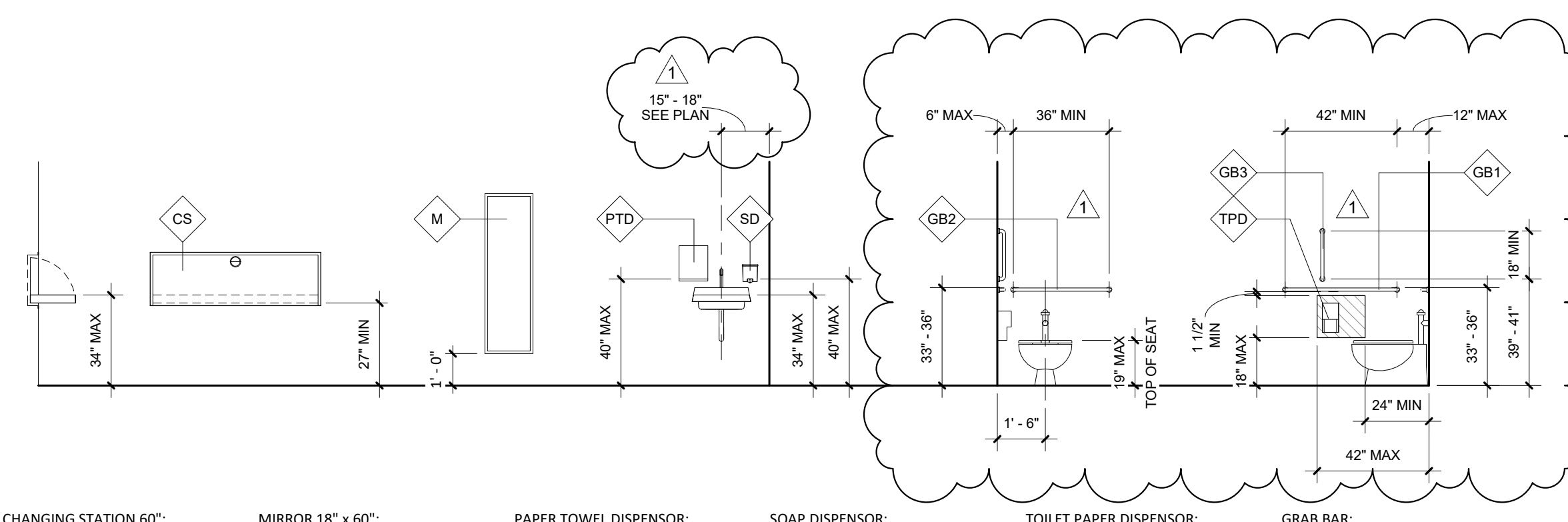
HEAD DETAIL
 FRAME WALL



HEAD DETAIL
 FRAME WALL
 DOOR 123



JAMB DETAIL
 CMU WALL
 DOOR 123



ADA MOUNTING LEGEND
 1/4" = 1'-0"

CHANGING STATION 60":
 CS: CFCI (7) TOTAL

MIRROR 18" x 60":
 M: CFCI (7) TOTAL

PAPER TOWEL DISPENSOR:
 PTD: OFCI (7) TOTAL

SOAP DISPENSOR:
 SD: OFCI (7) TOTAL

TOILET PAPER DISPENSOR:
 TPD: OFCI (7) TOTAL

GRAB BAR:
 GB1 - 42": CFCI (7) TOTAL
 GB2 - 36": CFCI (7) TOTAL
 GB3 - 18": CFCI (7) TOTAL

2 DOOR DETAILS
 1 1/2" = 1'-0"

MECHANICAL GENERAL NOTES & SPECIFICATIONS:

- ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL AND STATE CODES INCLUDING BUT NOT LIMITED TO THE 2021 INTERNATIONAL BUILDING, FIRE, MECHANICAL, PLUMBING, AND ENERGY CONSERVATION CODES (IBC, IFBC, IMC, IPC, IECC) WITH LOCAL AMENDMENTS.
- ALL WORK SHALL COMPLY WITH THE POUDBRE SCHOOL DISTRICT TECHNICAL CONTROLS SPECIFICATIONS. THE CONTRACTOR SHALL OBTAIN A COPY PRIOR TO THE BID AND NOTIFY THE ENGINEER OF ANY CONFLICTS OR DISCREPANCIES. WHERE A CONFLICT OCCURS, THE CONTRACTOR SHALL INCLUDE IN THEIR BID THE MOST STRINGENT (HIGHEST COST) REQUIREMENT.
- CONTRACTOR AND SUB-CONTRACTORS SHALL PROVIDE ALL LABOR, MATERIAL AND EQUIPMENT TO COMPLETE ALL WORK SHOWN ON PLANS, CALLED FOR IN SPECIFICATIONS, OR REASONABLY IMPLIED FOR A COMPLETE INSTALLATION.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS ON DRAWINGS WITH ACTUAL FIELD CONDITIONS. COORDINATE DRAWINGS WITH ACTUAL FIELD CONDITIONS. COORDINATE WORK LAYOUTS AND LOCATIONS OF OPENINGS THROUGH FLOORS, WALLS, CEILINGS AND ROOFS WITH DRAWINGS OR OTHER REQUIREMENTS. VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO FABRICATION OR CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
- MECHANICAL DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DO NOT SCALE DRAWINGS. USE DIMENSIONS ONLY. ALL DIMENSIONS/LAYOUTS SHOWN ARE APPROXIMATE, FIELD VERIFY ALL WORK PRIOR TO ORDERING MATERIALS OR INSTALLING WORK.
- KEEP SITE AND BUILDING ACCESSIBLE AND SAFE TO CONTRACTOR'S PERSONNEL, OWNER'S EMPLOYEES AND PUBLIC AT ALL TIMES. CONTRACTOR SHALL ENSURE SAFETY OF PERSONNEL, OWNER AND PUBLIC DURING ALL WORK AND COMPLY WITH ALL APPLICABLE REGULATIONS AND ORDINANCES PERTAINING TO SAFETY OF PERSONS AND PROPERTY.
- INSTALL ALL WORK IN STRICT ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS, ANCHORING ALL COMPONENTS PLUMB, LEVEL, SQUARE, AND FIRMLY INTO PLACE IN FIRST CLASS MANNER AND WORKMANSHIP ACCORDING TO STANDARD CONSTRUCTION PRINCIPLES & AS APPROVED BY ENGINEER.
- THROUGHOUT THE WORK, CAULK AND SEAL ALL JOINTS AS REQUIRED TO PROVIDE A POSITIVE BARRIER AGAINST THE PASSAGE OF AIR AND MOISTURE.
- PROTECT EXISTING OR ADJACENT SITE IMPROVEMENTS, EXISTING FLOOR, WALL, CEILING AND ROOF FINISHES, FURNISHINGS AND EQUIPMENT TO REMAIN DURING CONSTRUCTION. REPLACE OR REPAIR ANY DAMAGED IMPROVEMENTS, MATERIALS, FINISHES, FURNISHINGS OR EQUIPMENT TO SATISFACTION OF ARCHITECT/ENGINEER.
- REPLACE OR REPAIR ANY DAMAGED SURFACES, FILL AND PATCH HOLES, ETC., TO MATCH ADJACENT SURFACES AFTER ALL ALTERATIONS AND OTHER WORK IS COMPLETED, TO SATISFACTION OF ARCHITECT/ENGINEER.
- PRIOR TO THE DEMOLITION OF ANY EXISTING EQUIPMENT, COORDINATE WITH THE OWNER TO DETERMINE WHAT EQUIPMENT THEY MAY WANT TO KEEP. ANY EQUIPMENT NOT WANTED BY THE OWNER SHALL BECOME THE PROPERTY OF THE GENERAL CONTRACTOR AND SUBCONTRACTORS AND SHALL BE REMOVED FROM THE PROJECT SITE AND DISPOSED OF IN A LAWFUL MANNER.
- CONTRACTOR MUST COORDINATE THE WORK SO AS NOT TO EXTENSIVELY DISRUPT OWNERS OCCUPANCY OF ADJACENT AREAS AS APPROVED BY OWNER.
- THE ENGINEER HAS ENDEAVORED TO LOCATE AND IDENTIFY THE MECHANICAL EQUIPMENT AND PIPING IN THE SCOPE OF WORK INCLUDING IDENTIFYING SIZES. HOWEVER, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BID. THE CONTRACTOR SHALL INCLUDE IN THEIR BID ADDITIONAL MINOR MECHANICAL WORK THAT MAY NOT BE SHOWN IN ORDER TO PROVIDE A COMPLETE AND WORKING SYSTEM.
- ASBESTOS MAY BE ENCOUNTERED DURING MECHANICAL WORK INCLUDING BUT NOT LIMITED TO PIPE INSULATION. IF THE CONTRACTOR DURING CONSTRUCTION ENCOUNTERS WHAT IS BELIEVED TO BE ASBESTOS CONTAINING MATERIALS, NOTIFY THE OWNER IMMEDIATELY.
- WHERE THE CEILING SPACE IS TO BE USED AS A RETURN AIR PLENUM, THE MECHANICAL CONTRACTOR SHALL VERIFY WITH OTHER TRADES TO ENSURE THAT ALL MATERIALS ARE NON-COMBUSTIBLE AND HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50.
- COORDINATE WITH THE G.C. TO PROVIDE ACCESS PANELS AS REQUIRED TO ACCESS VALVES, DAMPERS, CONTROL DEVICES, ETC. REQUIRED FOR THE PROPER MAINTENANCE OF THE MECHANICAL SYSTEMS.
- COORDINATE WITH G.C. TO PATCH ROOFING, ROOF DECK, AND FLASHINGS AS REQ'D WITH NEW MATERIALS AND FLASHINGS FOR ALL NEW ROOF PENETRATIONS.
- PATCH OPENINGS IN DUCTS WHICH ARE TO REMAIN ACTIVE AND HAVE HAD SECTION REMOVED. ALSO REPAIR DUCT INSULATION SO THAT IT IS CONTINUOUS.
- DO NOT RUN DUCTWORK/PIPES ABOVE ELECTRICAL PANELS OR EQUIPMENT. COORDINATE WITH THE E.C. FOR LOCATIONS PRIOR TO THE START OF WORK.
- THERMOSTATS, TEMPERATURE SENSORS, SWITCHES, OR OTHER CONTROL DEVICES SHALL BE MOUNTED AT 48" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
- PROVIDE PLASTIC LAMINATED EQUIPMENT LABELS FOR THE NEW EQUIPMENT. LABEL ALL THE THERMOSTATS, SWITCHES, MOTOR STARTERS, ETC. INDICATING WHICH SYSTEM THEY CONTROL.
- LABEL ALL HYDRONIC WATER PIPING WITH NAMES AND FLOW ARROWS. LABELS SHALL BE NOT MORE THAN 10'-0" APART AND SHALL BE LOCATED AT ALL ACCESS LOCATIONS TO CONCEALED SPACES.
- ALL DUCTWORK SHALL BE 24 GAUGE GALVANIZED SHEET METAL MINIMUM. WORK SHALL BE IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS, LATEST EDITION. ALL DUCTWORK SHALL BE 2 IN WG PRESSURE CLASS MINIMUM.
- ALL DUCTWORK JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS, SHALL BE SEALED WITH WELDS, GASKETS, OR MASTIC ADHESIVE. MASTICS SHALL BE LISTED IN ACCORDANCE WITH UL 181A.
- FLEXIBLE DUCTWORK SHALL BE INSULATED AND SHALL BE TESTED IN ACCORDANCE WITH UL 181. FLEXIBLE DUCTWORK SHALL NOT EXCEED 6'-0" IN LENGTH. PROVIDE WRAPPED RIGID ROUND DUCTWORK FOR TAKEOFFS IN EXCESS OF 6'-0". FLEXIBLE DUCTWORK ALLOWED FOR SUPPLY AIR ONLY.
- DUCTWORK DIMENSIONS LISTED ON THE DRAWINGS ARE CLEAR, INSIDE DIMENSIONS. WHERE DUCT LINER IS SPECIFIED, INCREASE THE OUTSIDE SHEET METAL DIMENSIONS TO PROVIDE THE CLEAR INSIDE DIMENSIONS SPECIFIED.
- ALL BRANCH DUCT TAKEOFFS SHALL BE 45° HIGH-EFF. TYPE AND SHALL HAVE A HEAVY DUTY MANUAL BALANCING DAMPER WITH MINIMUM 1/4" ROD AND LOCKING INDICATING QUADRANT. ACCEPTABLE MANUFACTURERS INCLUDE GREENHECK, POTTORFF, AND RUSKIN. LIGHT-DUTY DAMPERS THAT ARE INTEGRAL TO TAKE-OFF FITTINGS ARE NOT ACCEPTABLE.
- DUCTWORK AND PIPING INSULATION SHALL BE INSTALLED BY A QUALIFIED INSULATION CONTRACTOR WITH A MINIMUM OF 3-YEARS DOCUMENTED EXPERIENCE. INSULATION WORK SHALL BE COMPLETE WITH ALL EDGES SEALED, PER INDUSTRY STANDARDS, AND TO THE SATISFACTION OF THE ENGINEER.
- ALL RECTANGULAR SUPPLY AND RETURN DUCTWORK SHALL BE INSULATED WITH DUCT LINER INSULATION PER THE SCHEDULE BELOW, UNLESS OTHERWISE NOTED. JOHNS MANVILLE LINAACOUSTIC RC OR EQUAL BY KNAUF OR OWENS CORNING.
 - IN A CONDITIONED SPACE: 1" THICK (R-4.2)

TEMPERATURE CONTROLS NOTES:

- THE PROJECT INCLUDES DDC CONTROLS FOR THE NEW EXHAUST FANS, FINNED TUBE HEATERS, AND DOMESTIC HOT WATER CIRCULATION PUMP (REFER TO PLUMBING DRAWINGS FOR CIRCULATOR PUMP SEQUENCE OF OPERATION). THE TEMPERATURE CONTROLS CONTRACTOR (TCC) SHALL TIE THE NEW SYSTEMS INTO THE EXISTING BUILDING DDC SYSTEM.
- ALL CONTROLS WORK SHALL COMPLY WITH THE POUDBRE SCHOOL DISTRICT TECHNICAL CONTROLS SPECIFICATIONS. THE CONTRACTOR SHALL OBTAIN A COPY PRIOR TO THE BID AND NOTIFY THE ENGINEER OF ANY CONFLICTS OR DISCREPANCIES. WHERE A CONFLICT OCCURS, THE CONTRACTOR SHALL INCLUDE IN THEIR BID THE MOST STRINGENT (HIGHEST COST) REQUIREMENT.
- THE EXISTING BUILDING DDC SYSTEM IS A SCHNEIDER ELECTRIC SYSTEM AND THE APPROVED VENDOR IS LONG BUILDING TECHNOLOGIES. THE COMMUNICATION PROTOCOL SHALL MATCH THE EXISTING.
- THE TCC SHALL PROVIDE A FULL CONTROLS SUBMITTAL PACKAGE CONTAINING SHOP DRAWINGS WITH CONTROL SCHEMATICS, POINTS LISTS, WRITTEN SEQUENCE OF OPERATION, VALVE SCHEDULE, AND BILL OF MATERIALS. THE SHOP DRAWINGS SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE START OF WORK.
- ALL SET POINTS SHALL BE ADJUSTABLE AND EASILY ACCESSIBLE FROM THE GRAPHICS SCREEN FOR EACH SYSTEM. THE GRAPHICS SHALL BE UPDATED FOR THE NEW FLOOR PLAN AND SYSTEMS BEING CONTROLLED.
- THE TCC SHALL PROVIDE TEMPERATURE SENSORS, RELAYS, CONTROL VALVES, CONTROL WIRING, ETC. AS REQUIRED TO CONNECT THE NEW EQUIPMENT TO THE EXISTING DDC SYSTEM. RESTROOM TEMPERATURE SENSORS TO BE FLAT PLATE.
- CONTROL VALVES 2" AND SMALLER: CHARACTERIZED CONTROL VALVES WITH NICKEL-PLATED BRASS BODY, STAINLESS STEEL STEM AND BALL, EPDM STEM SEAL, PTFE SEAT, AND THREADED CONNECTIONS. 600 PSI BODY PRESSURE RATING, 200 PSI CLOSE-OFF PRESSURE. CONTROL VALVES SHALL HAVE MODULATING ACTUATORS WITH SPRING RETURN TO FAIL OPEN ON HEATING WATER VALVES. SIZE VALVES FOR 5 PSI MAXIMUM PRESSURE DROP.
- ALL CONTROL WIRING INSIDE THE WALLS AND IN EXPOSED AREAS SHALL BE RUN IN CONDUIT. ALL WIRING SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE AND BE PLENUM RATED.
- COORDINATE WITH THE OWNER IN SETTING UP DESIRED TRENDDING, ALARMS, AND SCHEDULING.
- THE TCC SHALL BE RESPONSIBLE FOR A COMPLETE WORKING SYSTEM AT THE END OF THE PROJECT, WHICH MAY INCLUDE ADDING ADDITIONAL POINTS WHICH SHALL BE INCLUDED IN THE BID. THE TCC SHALL COMMISSION ALL THE NEW CONTROLS TO VERIFY THAT THE ENTIRE SYSTEM IS PERFORMING PER THE SEQUENCE OF OPERATION. THE ENGINEER AND/OR OWNER WILL PERFORM AN OPERATIONAL CHECK ON THE CONTROLS WITH THE TCC AFTER THE TCC HAS SENT NOTIFICATION IN WRITING THAT THE CONTROLS HAVE BEEN COMMISSIONED AND ALL SEQUENCES ARE WORKING.
- AFTER COMPLETION OF THE COMMISSIONING BY THE TCC, THE TCC SHALL PROVIDE OWNER TRAINING.
- THE TCC SHALL PROVIDE AN AS-BUILT SET OF TEMPERATURE CONTROLS DRAWINGS TO THE OWNER IN THE FINAL O&M MANUAL PRINTED AND IN PDF FORMAT. THE TCC SHALL ALSO PROVIDE A PRINTED COPY OF THE AS-BUILT TEMPERATURE CONTROL DRAWINGS IN THE BUILDING IN A LOCATION DETERMINED BY THE OWNER.

- ALL CONCEALED ROUND SUPPLY, RETURN, OR OUTSIDE AIR DUCTS SHALL BE INSULATED WITH DUCT WRAP FIBERGLASS INSULATION WITH FSK VAPOR BARRIER FACING. JOHNS MANVILLE MICROLITE XG OR EQUAL BY KNAUF OR OWENS CORNING.
 - IN A CONDITIONED SPACE: 1.5" THICK (R-4.5)
- PROVIDE FLEXIBLE DUCT CONNECTIONS TO THE SUPPLY AND RETURN OF ALL MOTOR DRIVEN EQUIPMENT.
- PROVIDE DUCT TRANSITIONS AS REQUIRED TO CONNECT THE DUCTS TO THE EQUIPMENT CONNECTIONS.
- ELBOWS SHALL HAVE A MINIMUM RADIUS OF 1-1/2 TIMES CENTERLINE DUCT WIDTH. WHERE RECTANGULAR ELBOWS ARE USED, PROVIDE TURNING VANES.
- PROVIDE DUCT TRANSITIONS AS REQUIRED TO CONNECT THE DUCTS TO THE EQUIPMENT CONNECTIONS. INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 15° DIVERGENCE WHEREVER POSSIBLE; MAXIMUM 30° DIVERGENCE UPSTREAM OF EQUIPMENT AND 45° CONVERGENCE DOWNSTREAM.
- HYDRONIC HEATING WATER PIPING SHALL BE COPPER TUBING, ASTM B88 TYPE L DRAWN. FITTINGS: ASME B16.18, CAST BRASS, OR ASME B16.22 SOLDER WROUGHT COPPER, OR APPROVED PRESS-CONNECT. JOINTS: SOLDER LEAD FREE. ASTM B32, 95-5 TIN-ANTIMONY, OR TIN AND SILVER, WITH MELTING RANGE 430 TO 535° F, OR APPROVED PRESS-CONNECT TYPE. UNIONS FOR PIPES 2" AND SMALLER: CLASS 150, BRONZE UNIONS, THREADED. FLANGES FOR PIPES 2-1/2" AND LARGER, CLASS 150, SLIP-ON BRONZE.
- ALL NEW HEATING WATER AND DOMESTIC WATER PIPING SHALL BE INSULATED WITH FIBERGLASS PIPE INSULATION JACKETED WITH A REINFORCED VAPOR RETARDER FACING WITH A FACTORY LONGITUDINAL ACRYLIC ADHESIVE CLOSURE SYSTEM. OVERSIZE HANGERS FOR INSULATION SO NO PENETRATION OF THE VAPOR BARRIER OCCURS. PROVIDE INSERTS AND SADDLES AS REQUIRED TO PREVENT INSULATION DAMAGE FROM SUPPORTS. JOHNS MANVILLE MICRO-LOCK OR EQUAL BY KNAUF OR OWENS CORNING.
 - HEATING WATER SUPPLY AND RETURN: 1-1/4" AND SMALLER - 1.0" THICK. 1-1/2" AND LARGER - 1.5" THICK.
- ALL VALVES USED ON DOMESTIC WATER SYSTEMS SHALL BE LEAD FREE AND NSF RATED.
- BALL VALVES 2" AND SMALLER: MSS SP 110, 600 PSI WOG, TWO PIECE BRONZE BODY, CHROME PLATED BRASS BALL, FULL PORT, TEFLON SEATS, BLOW-OUT PROOF STEM, SOLDER OR THREADED ENDS, EXTENDED LEVER HANDLE AS REQUIRED FOR OPERATION WITH PIPING INSULATION.
- HORIZONTAL SWING CHECK VALVES 2" AND SMALLER: MSS SP 80, CLASS 125, BRONZE BODY AND CAP, Y-PATTERN, BRONZE REGRINDING DISC, SOLDER OR THREADED ENDS.
- SPRING LOADED CHECK VALVES:
 - 2" AND SMALLER: MSS SP 80, CLASS 125, BRONZE BODY, IN-LINE SPRING LIFT CHECK, SILENT CLOSING, BUNA-N DISC, INTEGRAL SEAT, SOLDER OR THREADED ENDS.
- HYDRONIC MANUAL BALANCE VALVES:
 - 2" AND SMALLER: VALVE SHALL BE VENTURI TYPE WITH A THROTTLING BALL VALVE WITH A MEMORY STOP ON THE DOWNSTREAM SIDE OF THE VENTURI. THE BALL VALVE SHALL BE BRONZE BLOW-OUT PROOF STEM, VIRGIN TEFLON SEATS, BRASS STEM, EPDM O-RING AND TEFLON STEAM SEALS AND STEEL HANDLE. ALL BALL VALVES SHALL CONFORM TO MS-110 STANDARD. RATED FOR 600 PSIG AT 250° F. ACCEPTABLE MANUFACTURERS INCLUDE ARMSTRONG, FLOWSET, IMI FLOW DESIGN, OR TOUR & ANDERSON.
- PROVIDE ISOLATION VALVES ON ALL BRANCH LINES WHETHER SHOWN ON THE PLANS OR NOT.
- ALL PIPE PENETRATIONS THROUGH THE FLOORS AND WALLS SHALL BE SLEEVED WITH GALVANIZED STEEL. SLEEVES SHALL BE LARGE ENOUGH TO ALLOW FOR INSULATION TO BE CONTINUOUS THROUGH THE SLEEVE. APPLY SEALANT TO BOTH SIDES OF PENETRATION TO COMPLETELY FILL ANNULAR SPACE. PROVIDE STAINLESS STEEL ESCUTCHEONS IN FINISHED SPACES.
- WHERE DUCTS AND/OR PIPES PENETRATE A FIRE RATED ASSEMBLY PACK THE VOID WITH BACKING MATERIAL AND SEAL WITH UL LISTED FIRE CAULK TO MEET THE FIRE RATING OF ASSEMBLY PENETRATED. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS AND TYPES OF FIRE RATED ASSEMBLIES.
- FLUSH, CLEAN, AND PRESSURE TEST ALL DOMESTIC WATER AND HYDRONIC PIPING IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING AND MECHANICAL CODES AND PER THE LOCAL AUTHORITY HAVING JURISDICTION.
- PROVIDE CORROSION INHIBITORS FOR THE HYDRONIC SYSTEMS. CONTRACTOR TO PROVIDE ENOUGH FOR THE ENTIRE VOLUME OF THE SYSTEM.
- THE EXISTING HEATING WATER SYSTEM CONTAINS PROPYLENE GLYCOL. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY INHIBITED PROPYLENE GLYCOL LOST DURING CONSTRUCTION. THE CONTRACTOR SHALL MEASURE THE PERCENTAGE BEFORE AND AFTER CONSTRUCTION AND PROVIDE RESULTS TO THE OWNER. THE FINAL SOLUTION SHALL MATCH THE MEASURED PRE-CONSTRUCTION GLYCOL PERCENTRAGE.
 - APPROVED GLYCOL SOLUTION IS 100% PROPYLENE VIRGIN DOWFROST GLYCOL WITH INHIBITOR (OR PRIOR APPROVED EQUAL).
- ALL AIR AND HYDRONIC SYSTEMS SHALL BE BALANCED TO THE QUANTITIES SHOWN. THE BALANCING FIRM SHALL EITHER BE AABC OR NEBB CERTIFIED AND SHALL SUBMIT A BALANCE REPORT TO THE ENGINEER FOR REVIEW.
- THE MECHANICAL CONTRACTOR SHALL PROVIDE PRODUCT DATA FOR ALL THE MECHANICAL EQUIPMENT SCHEDULED, BALANCING DAMPERS, TEMPERATURE CONTROLS, DAMPERS, AND DUCT INSULATION. SUBMITTALS SHALL BE IN ELECTRONIC PDF FORMAT AND SENT VIA EMAIL TO THE ENGINEER. IF THE CONTRACTOR WANTS TO USE A MANUFACTURER NOT LISTED, THEY SHALL PROVIDE DOCUMENTATION TO THE ENGINEER FOR APPROVAL. ALL EQUIPMENT SUBMITTALS SHALL BE REVIEWED BY THE ENGINEER PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL PROVIDE THE OWNER WITH (1) COPY OF ALL OPERATIONAL AND MAINTENANCE (O&M) MANUALS FOR EACH PIECE OF MECHANICAL EQUIPMENT. THE MANUAL SHALL INCLUDE: THE CONTRACTOR'S CONTACT INFORMATION, THE MANUFACTURER'S PUBLISHED O&M INSTRUCTIONS, THE APPROVED SUBMITTAL DRAWINGS, AND THE FINAL APPROVED TEST & BALANCE REPORT. COMBINE ALL THE MANUALS IN A 3-RING BINDER INDEXED FOR EACH PIECE OF EQUIPMENT. ALSO PROVIDE THE OWNER WITH THE ENTIRE O&M MANUAL IN PDF FORMAT.
- THE CONTRACTOR SHALL PROVIDE THE OWNER WITH (1) FULL SIZE SET OF THE AS-BUILT MECHANICAL DRAWINGS WHICH SHALL SHOW THE ACTUAL LOCATIONS OF DUCTWORK, DAMPERS, GRDs, OR ANY OTHER DEVIATIONS FROM THE DESIGN DRAWINGS.
- THE CONTRACTOR SHALL PROVIDE OWNER TRAINING ON THE OPERATION AND MAINTENANCE OF THE MECHANICAL EQUIPMENT INCLUDING CONTROLS.

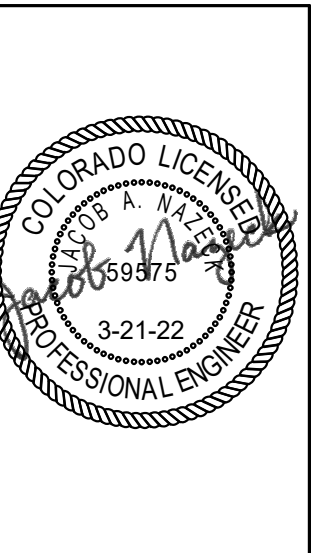
MECHANICAL LEGEND		MECHANICAL ABBREVIATIONS	
	EXISTING DUCTWORK	AFF	ABOVE FINISHED FLOOR
	DUCTWORK DEMOLITION	BB	BASEBOARD HEATER
	NEW DUCTWORK (SHADED)	BLW	BELOW
	DUCT DOWN, DUCT UP	CD	CEILING DIFFUSER
	DUCT RISERS (SUPPLY, RETURN, EXHAUST)	DN	DOWN
	90° ELBOW W/ TURNING VANES, 45° TAKE-OFF W/ MANUAL BALANCING DAMPER	EA	EXISTING
	EXISTING PIPE	EC	EXHAUST AIR
	PIPE DEMOLITION	EF	ELECTRICAL CONTRACTOR
	HEATING WATER SUPPLY	EG	EXHAUST FAN
	HEATING WATER RETURN	EH	EXHAUST GRILLE
	CHECK VALVE	HUH	HYDRONIC UNIT HEATER
	BALL VALVE, GATE VALVE	HWR	HEATING WATER RETURN
	2-WAY CONTROL VALVE, 3-WAY CONTROL VALVE	HWS	HEATING WATER SUPPLY
	BUTTERFLY VALVE, BALANCE VALVE	MC	MECHANICAL CONTRACTOR
	PIPE UNION OR FLANGE	NEW	NEW
	ELBOW DOWN, TEE UP	(N)	OUTSIDE AIR
	TEE DOWN, PIPE CONTINUATION	OA	POINT OF CONNECTION
	REDUCER OR INCREASER	POC	RETURN AIR
	THERMOSTAT	RA	REBALANCE
	TEMPERATURE SENSOR	RB	RELOCATED
	POINT OF CONNECTION	REL	RELOCATED
	LIMIT OF DEMOLITION	RG	RETURN GRILLE
		RTU	ROOFTOP UNIT
		SA	SUPPLY AIR
		SD	SUPPLY DIFFUSER
		TA	TRANSFER AIR
		TAB	TEST & BALANCE
		TC	TEMPERATURE CONTROLS
		TCC	TEMPERATURE CONTROLS CONTRACTOR
		TSCP	TEMPERATURE CONTROL PANEL
		TSTAT	THERMOSTAT
		TYP	TYPICAL
		UNO	UNLESS NOTED OTHERWISE
		VAV	VARIABLE AIR VOLUME
		W/	WITH
		W/O	WITHOUT

MECHANICAL SHEET INDEX	
#	SHEET NAME
M0.0	MECHANICAL NOTES, LEGEND, & SCHEDULES
M1.1	MECHANICAL DEMOLITION PLAN
M1.2	MECHANICAL REMODEL PLAN

FIN TUBE HEATER SCHEDULE																
TAG	MAKE	MODEL	ENCLOSURE TYPE	ENCLOSURE HEIGHT	LENGTH	NO. OF TIERS	TUBE SIZE	FIN SIZE	FIN FOOT	FLUID TYPE	INLET AIR TEMP	BTU/FT	CAPACITY AT 5000'	AVE. WATER TEMP	FLOW RATE	REMARKS
BB-1	STERLING	JVB-520	SLOPE TOP	24'	3' - 0"	2	3/4"	4.25" SQ.	32	30% P.G.	65 °F	489 Btu/h	1450 Btu/h	120 °F	0.80 GPM	ALL
REMARKS: 1) 1/4 GA. STEEL ENCLOSURE 2) COPPER TUBE, ALUMINUM FIN 3) END CAP AND WALL TRIM SECTIONS AS REQUIRED 4) PROVIDE PHYSICAL COLOR SAMPLES TO ARCHITECT FOR ENCLOSURE COLOR SELECTION 5) OR EQUAL BY TRANE OR VULCAN CONTROLS: A) CONTROLLED BY THE EXISTING BUILDING DDC SYSTEM. OCCUPIED SET POINT = 70°F (ADJ.), UNOCCUPIED SET POINT = 55°F (ADJ.).																

EXHAUST FAN SCHEDULE													
TAG	MAKE	MODEL	EA CFM	EF ESP	EF RPM	DRIVE TYPE	MOTOR POWER	VOLTAGE	PHASE	SONES	WEIGHT	CONTROL	REMARKS
EF-1	GREENHECK	CUE-070-VG	150 CFM	0.25 in-wg	1403	DD	1/15 HP	120 V	1	2.9	25 lb	A	1, 3-8
EF-2	GREENHECK	CUE-080-VG	225 CFM	0.25 in-wg	1277	DD	1/10 HP	120 V	1	5.5	35 lb	A	1-6, 8
EF-3	GREENHECK	CUE-070-VG	150 CFM	0.25 in-wg	1403	DD	1/15 HP	120 V	1	2.9	25 lb	A	1-6, 8
REMARKS: 1) UL-705 LISTED 2) 18" TALL ROOF CURB - CONTRACTOR TO VERIFY SLOPE 3) #BD-100 GRAVITY BACKDRAFT DAMPER 4) BIRDSCREEN 5) WEATHER-PROOF DISCONNECT SWITCH 6) EC MOTOR W/ SPEED CONTROL DIAL ON MOTOR 7) CURB ADAPTER 8) OR EQUAL BY ACME, LOREN COOK, OR PENNBARRY CONTROLS: A) CONTROLLED BY EXISTING BUILDING DDC SYSTEM, FAN TO RUN CONTINUOUSLY DURING OCCUPIED HOURS													

GRILLES, REGISTERS AND DIFFUSER SCHEDULE									
TAG	MAKE	MODEL	APPLICATION	DAMPER	MOUNTING	MATERIAL	COLOR	DESCRIPTION	
CD-1	PRICE	SCD	SUPPLY	NO	LAY-IN	STEEL	WHITE	24"x24" SQUARE THREE-CONE CEILING DIFFUSER. SEE PLANS FOR NECK SIZE AND CFM.	
EG-1	PRICE	PDDR	EXHAUST	NO	GYP. CEILING	STEEL	WHITE	12"x12" PERFORATED FACE EXHAUST GRILLE. SEE PLANS FOR NECK SIZE.	
EG-2	PRICE	PDDR	EXHAUST	OBD	GYP. CEILING	STEEL	WHITE	12"x12" PERFORATED FACE EXHAUST GRILLE. SEE PLANS FOR NECK SIZE.	
NOTE: OR EQUAL BY KRUEGER, NAILOR, OR TITUS									



SHEET CONTENTS
MECHANICAL NOTES, LEGEND,
& SCHEDULES

EYESTONE ELEMENTARY SCHOOL
4000 WILSON AVENUE
WELLINGTON, COLORADO 80549

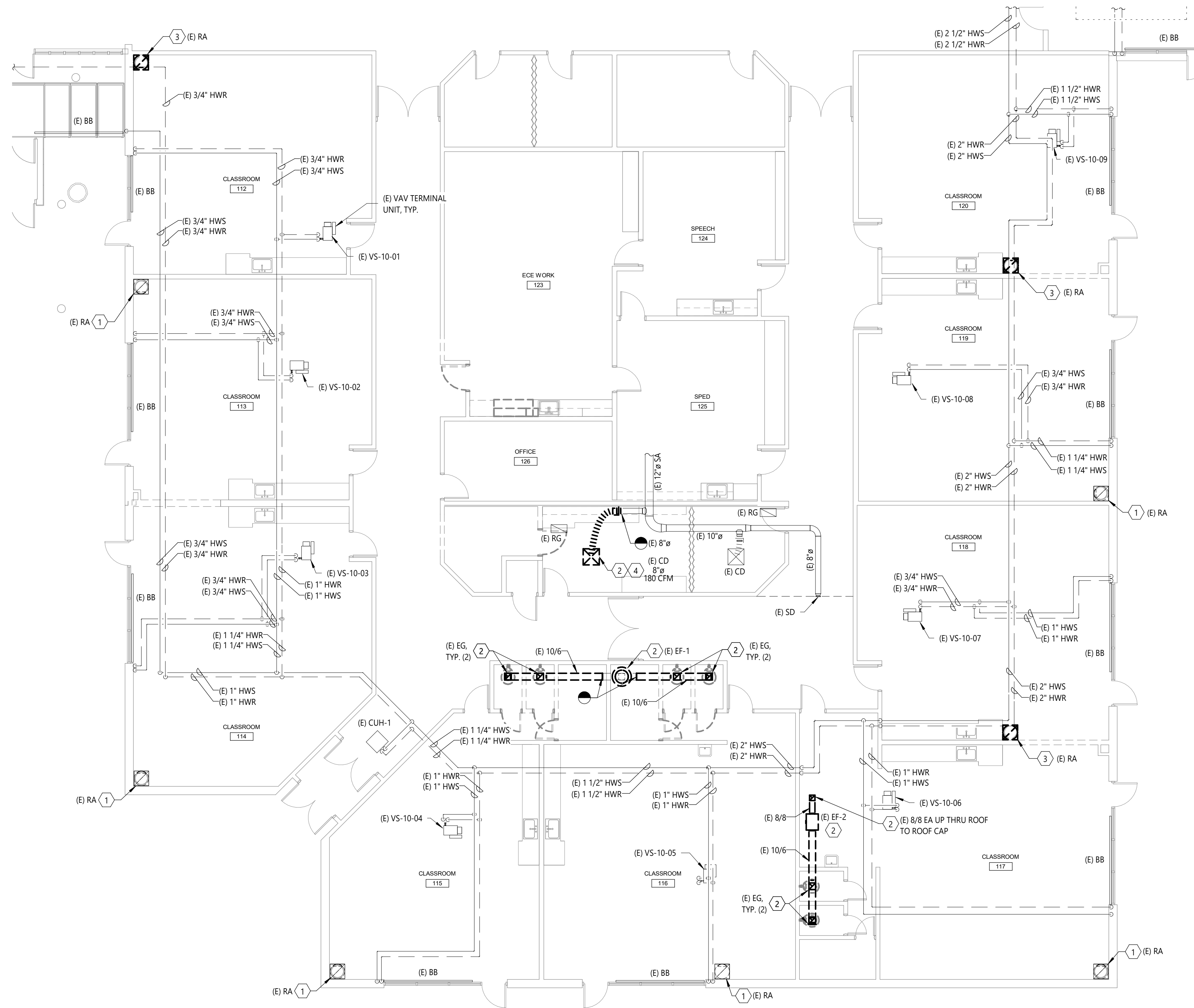
NO.	BY	DESCRIPTION	DATE

DESIGNPOINT
ENGINEERING
19 OLD TOWN SQUARE
1702 CENTRAL AVE.
FORT COLLINS, CO 80524
PH: (970) 430-5783
PH: (970) 430-5783

ISSUE FOR PERMIT

DESIGNED	JLD	SHEET NO.	M0.0
CHECKED	JAN		
DATE	3.21.2022		

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1 MECHANICAL DEMOLITION PLAN
1/8" = 1'-0"

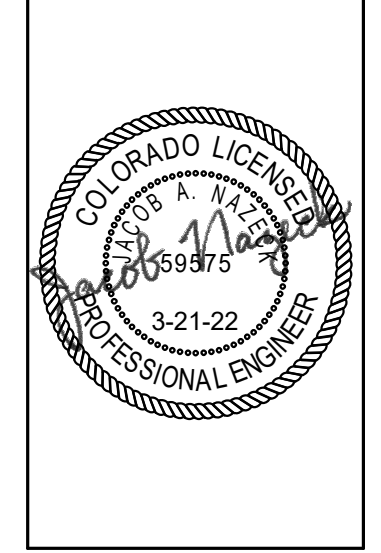
FLAG NOTES

- 1 EXISTING MECHANICAL WORK TO REMAIN AS IS.
- 2 EXISTING MECHANICAL WORK TO BE REMOVED. CAP REMAINING AS REQUIRED. COORDINATE W/ G.C. TO PATCH AND/OR REPAIR FLOORS, WALLS, CEILINGS, AND ROOF AS REQUIRED.
- 3 EXISTING FLOOR TO CEILING RETURN AIR DUCT AND RETURN AIR GRILLE TO BE CAREFULLY REMOVED AND STORED FOR REINSTALLATION. REFER TO REMODEL PLAN FOR NEW LOCATION.
- 4 TAB CONTRACTOR TO VERIFY ACTUAL AIRFLOW PRIOR TO DEMOLITION. EXISTING AIRFLOW TO BE EQUALLY DIVIDED BETWEEN TWO NEW DIFFUSERS.

PLAN GENERAL NOTES

- A. NOT ALL THE EXISTING MECHANICAL WORK IS SHOWN. REFER TO THE OWNER'S AS-BUILT DRAWINGS FOR THE COMPLETE MECHANICAL SYSTEM.
- B. EXISTING MECHANICAL SYSTEMS SHOWN ARE TAKEN FROM THE ORIGINAL AS-BUILT DRAWINGS AND FIELD VERIFICATION. THE CONTRACTOR WILL NEED TO FIELD VERIFY ACTUAL LOCATIONS PRIOR TO THE START OF WORK.

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SHEET CONTENTS
MECHANICAL DEMOLITION
PLAN

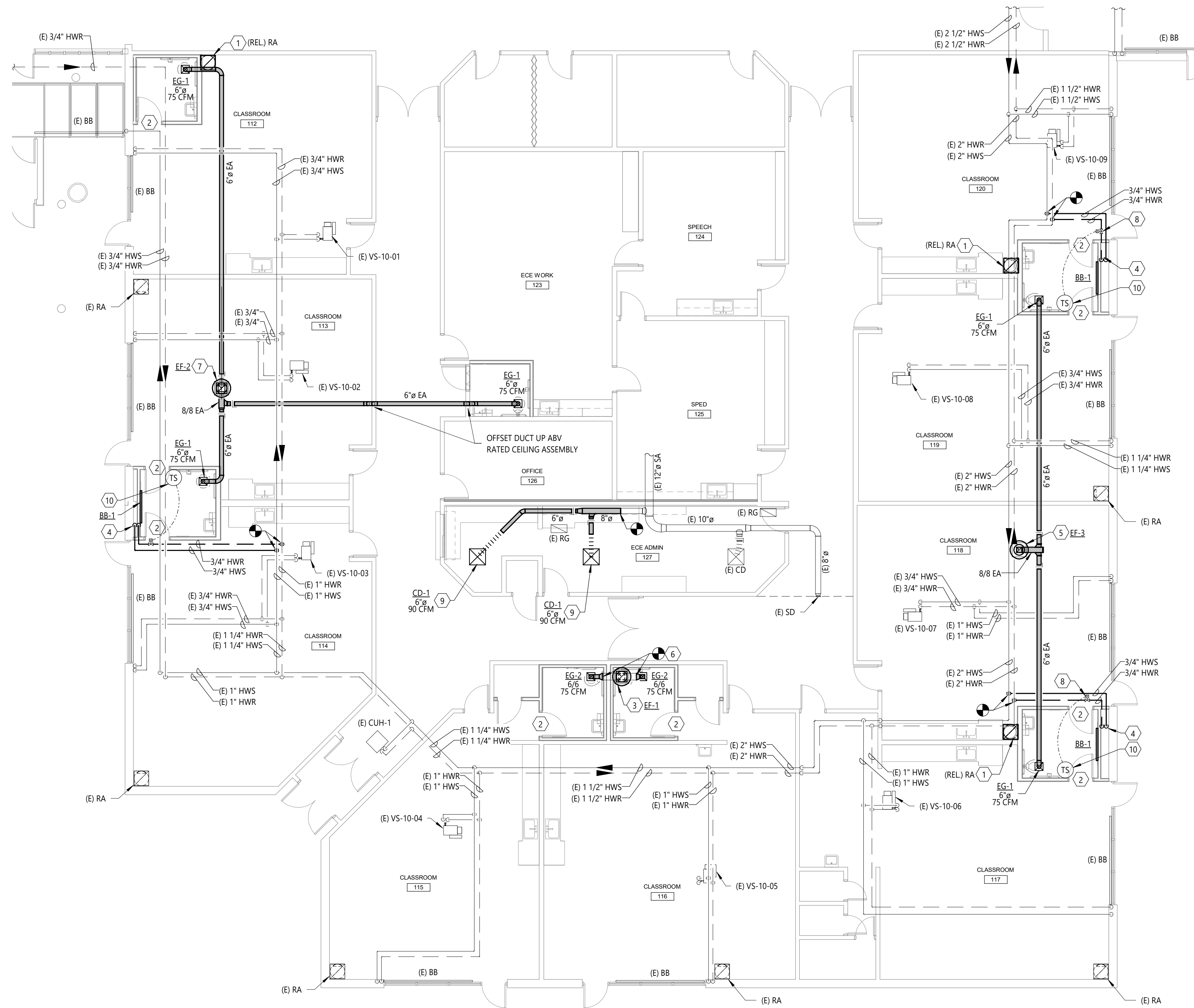
EYESTONE ELEMENTARY SCHOOL
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DESIGNPOINT ENGINEERING
19 OLD TOWN SQUARE
1623 CENTRAL AVE
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ISSUE FOR PERMIT

NO.	BY	DESCRIPTION	DATE
1	JLD	ISSUED FOR PERMIT	3.21.2022

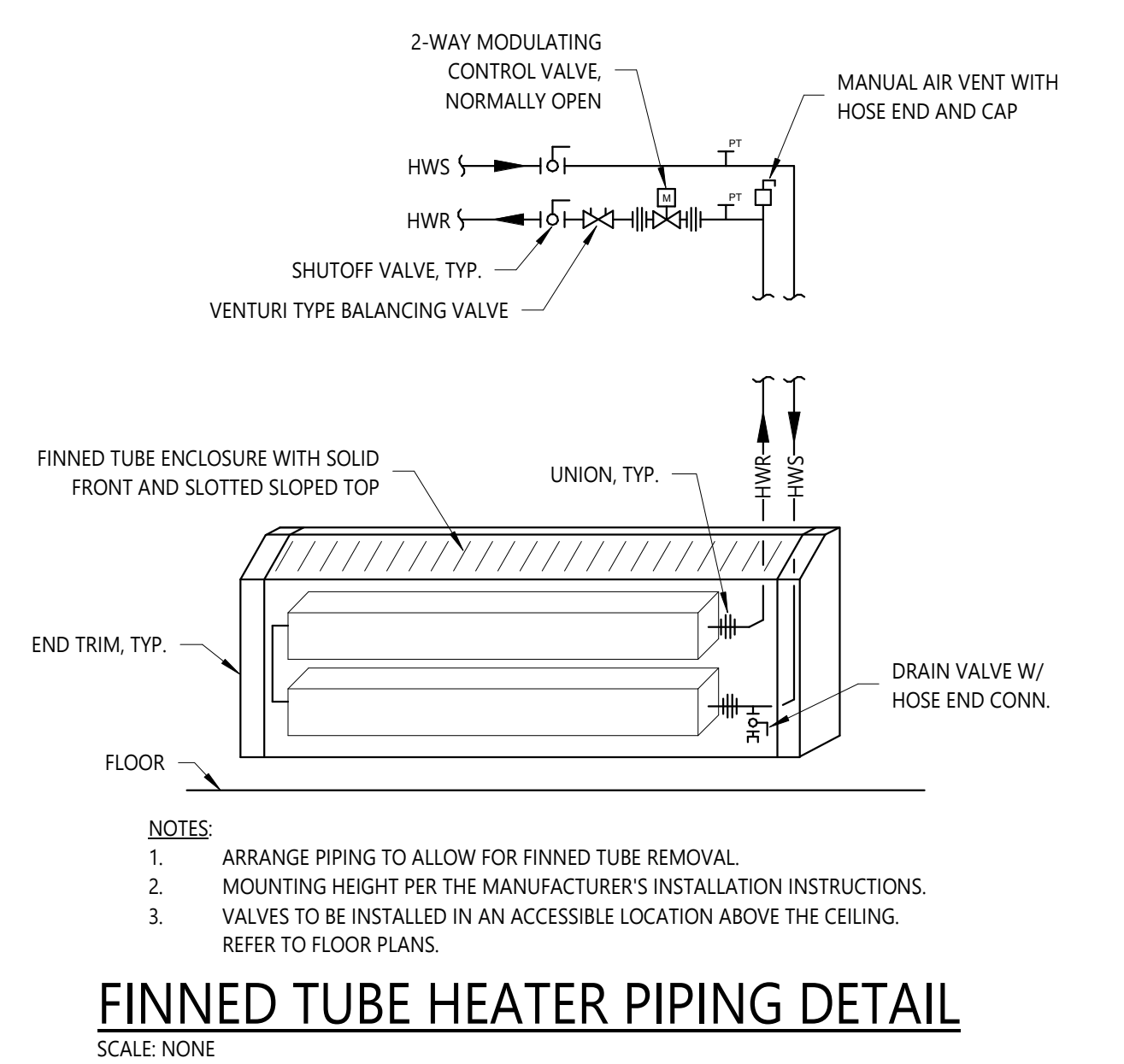
REVISIONS
M1.1



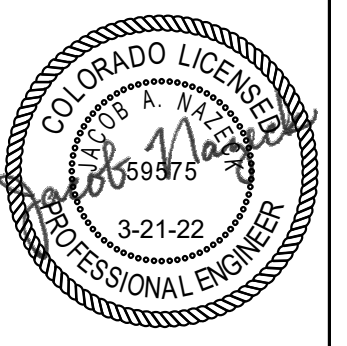
1 MECHANICAL REMODEL PLAN
1/8" = 1'-0"

- ### FLAG NOTES
- REINSTALL RETURN AIR GRILLE AND FLOOR TO CEILING RETURN AIR DUCT. COORDINATE FINAL LOCATION WITH EXISTING CEILING GRID.
 - COORDINATE WITH THE G.C. FOR A 3/4" DOOR UNDERCUT.
 - PROVIDE CURB CAP ADAPTOR TO MOUNT EF-1 ON EXISTING ROOF CURB.
 - INSTALL PIPES IN NEW FURRED WALL ON INSIDE OF WALL INSULATION.
 - 8/8 EA DUCT UP TO ROOF MOUNTED EXHAUST FAN. MAINTAIN MINIMUM 10'-0" FROM ROOF EDGE. COORDINATE W/ G.C. FOR ROOF CUTTING AND PATCHING.
 - RECONNECT TO EXISTING 10/6 EA DUCTS.
 - 10/10 EA DUCT UP TO ROOF MOUNTED EXHAUST FAN. MAINTAIN MINIMUM 10'-0" FROM ROOF EDGE. COORDINATE W/G.C. FOR ROOF CUTTING AND PATCHING.
 - INSTALL CONTROL VALVE IN AN ACCESSIBLE LOCATION ABOVE THE LAY-IN CEILING. CONTROL VALVE PROVIDED BY TCC. INSTALLED BY MC. REFER TO "FINNED TUBE HEATER PIPING DETAIL".
 - EXISTING AIRFLOW FROM DEMOLISHED CEILING DIFFUSER TO BE EQUALLY DIVIDED BETWEEN TWO NEW DIFFUSERS. AIRFLOWS SHOWN ON PLANS ARE APPROXIMATE AND ARE BASED ON THE OWNER'S RECORD DRAWINGS.
 - NEW SPACE TEMPERATURE SENSOR PROVIDED AND WIRED BY TCC.

- ### PLAN GENERAL NOTES
- REFER TO THE SPECIFICATIONS ON SHEET M0.0 FOR GLYCOL REQUIREMENTS FOR THE WORK ON THE HEATING WATER SYSTEM.



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SHEET CONTENTS
MECHANICAL REMODEL PLAN

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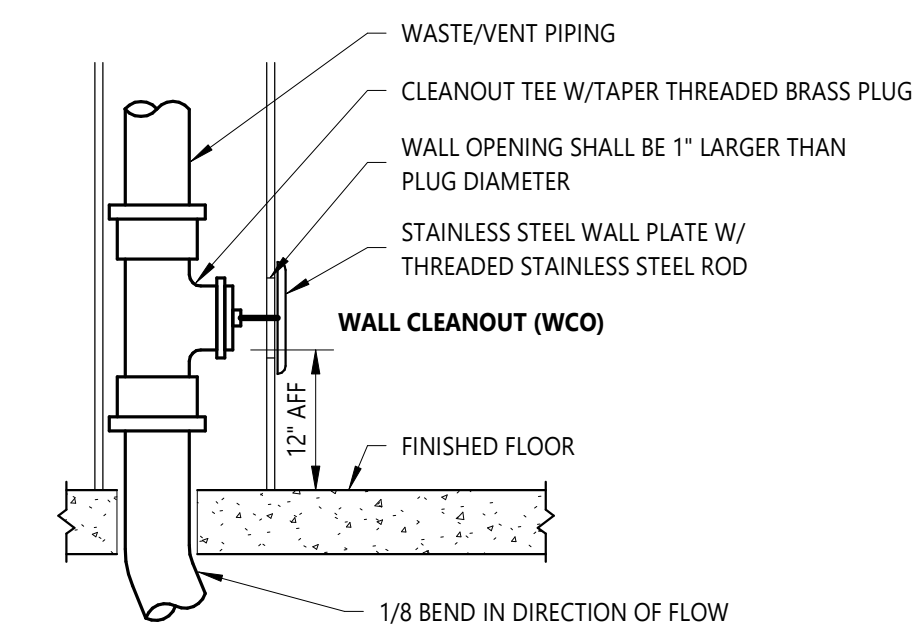
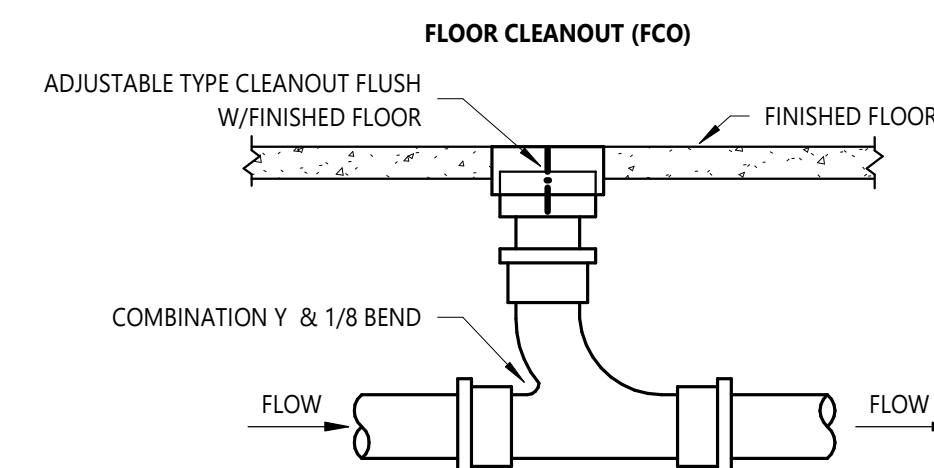
DESIGNPOINT ENGINEERING 19 OLD TOWN SQUARE 1701 CHERRY FORT COLLINS, CO 80524 PH: (970) 430-5783 designpointengineering.com	NO.	BY	DESCRIPTION	DATE
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PLUMBING GENERAL NOTES & SPECIFICATIONS:

- ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL AND STATE CODES INCLUDING BUT NOT LIMITED TO THE 2021 INTERNATIONAL BUILDING, FIRE, MECHANICAL, PLUMBING, AND ENERGY CONSERVATION CODES (IBC, IFC, IMC, IPC, IECC) WITH LOCAL AMENDMENTS.
- ALL WORK SHALL COMPLY WITH THE Poudre School District Technical Controls Specifications. THE CONTRACTOR SHALL OBTAIN A COPY PRIOR TO THE BID AND NOTIFY THE ENGINEER OF ANY CONFLICTS OR DISCREPANCIES. WHERE A CONFLICT OCCURS, THE CONTRACTOR SHALL INCLUDE IN THEIR BID THE MOST STRINGENT (HIGHEST COST) REQUIREMENT.
- CONTRACTOR AND SUB-CONTRACTORS SHALL PROVIDE ALL LABOR, MATERIAL AND EQUIPMENT TO COMPLETE ALL WORK SHOWN ON PLANS, CALLED FOR IN SPECIFICATIONS, OR REASONABLY IMPLIED FOR A COMPLETE INSTALLATION.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS ON DRAWINGS WITH ACTUAL FIELD CONDITIONS. COORDINATE DRAWINGS WITH ACTUAL FIELD CONDITIONS. COORDINATE WORK LAYOUTS AND LOCATIONS OF OPENINGS THROUGH FLOORS, WALLS, CEILINGS AND ROOFS WITH DRAWINGS OR OTHER REQUIREMENTS. VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO FABRICATION OR CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
- PLUMBING DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DO NOT SCALE DRAWINGS. USE DIMENSIONS ONLY. ALL DIMENSIONS/LAYOUTS SHOWN ARE APPROXIMATE, FIELD VERIFY ALL WORK PRIOR TO ORDERING MATERIALS OR INSTALLING WORK.
- KEEP SITE AND BUILDING ACCESSIBLE AND SAFE TO CONTRACTOR'S PERSONNEL, OWNER'S EMPLOYEES AND PUBLIC AT ALL TIMES. CONTRACTOR SHALL ENSURE SAFETY OF PERSONNEL, OWNER AND PUBLIC DURING ALL WORK AND COMPLY WITH ALL APPLICABLE REGULATIONS AND ORDINANCES PERTAINING TO SAFETY OF PERSONS AND PROPERTY.
- INSTALL ALL WORK IN STRICT ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS, ANCHORING ALL COMPONENTS PLUMB, LEVEL, SQUARE, AND FIRMLY INTO PLACE IN FIRST CLASS MANNER AND WORKMANSHIP ACCORDING TO STANDARD CONSTRUCTION PRINCIPLES & AS APPROVED BY ENGINEER.
- THROUGHOUT THE WORK, CAULK AND SEAL ALL JOINTS AS REQUIRED TO PROVIDE A POSITIVE BARRIER AGAINST THE PASSAGE OF AIR AND MOISTURE.
- PROTECT EXISTING OR ADJACENT SITE IMPROVEMENTS, EXISTING FLOOR, WALL, CEILING AND ROOF FINISHES, FURNISHINGS AND EQUIPMENT TO REMAIN DURING CONSTRUCTION. REPLACE OR REPAIR ANY DAMAGED IMPROVEMENTS, MATERIALS, FINISHES, FURNISHINGS OR EQUIPMENT TO SATISFACTION OF ARCHITECT/ENGINEER.
- REPLACE OR REPAIR ANY DAMAGED SURFACES, FILL AND PATCH HOLES, ETC., TO MATCH ADJACENT SURFACES AFTER ALL ALTERATIONS AND OTHER WORK IS COMPLETED, TO SATISFACTION OF ARCHITECT/ENGINEER.
- PRIOR TO THE DEMOLITION OF ANY EXISTING EQUIPMENT, COORDINATE WITH THE OWNER TO DETERMINE WHAT EQUIPMENT THEY MAY WANT TO KEEP. ANY EQUIPMENT NOT WANTED BY THE OWNER SHALL BECOME THE PROPERTY OF THE GENERAL CONTRACTOR AND SUBCONTRACTORS AND SHALL BE REMOVED FROM THE PROJECT SITE AND DISPOSED OF IN A LAWFUL MANNER.
- CONTRACTOR MUST COORDINATE THE WORK SO AS NOT TO EXTENSIVELY DISRUPT OWNERS OCCUPANCY OF ADJACENT AREAS AS APPROVED BY OWNER.
- THE ENGINEER HAS ENDEAVORED TO LOCATE AND IDENTIFY THE PLUMBING EQUIPMENT AND PIPING IN THE SCOPE OF WORK INCLUDING IDENTIFYING SIZES. HOWEVER, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BID. THE CONTRACTOR SHALL INCLUDE IN THEIR BID ADDITIONAL MINOR MECHANICAL WORK THAT MAY NOT BE SHOWN IN ORDER TO PROVIDE A COMPLETE AND WORKING SYSTEM.
- ASBESTOS MAY BE ENCOUNTERED DURING MECHANICAL WORK INCLUDING BUT NOT LIMITED TO PIPE INSULATION. IF THE CONTRACTOR DURING CONSTRUCTION ENCOUNTERS WHAT IS BELIEVED TO BE ASBESTOS CONTAINING MATERIALS, NOTIFY THE OWNER IMMEDIATELY.
- WHERE THE CEILING SPACE IS TO BE USED AS A RETURN AIR PLENUM, THE MECHANICAL CONTRACTOR SHALL VERIFY WITH OTHER TRADES TO ENSURE THAT ALL MATERIALS ARE NON-COMBUSTIBLE AND HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50.
- COORDINATE WITH THE G.C. TO PROVIDE ACCESS PANELS AS REQUIRED TO ACCESS VALVES, PLUMBING ACCESSORIES, ETC. REQUIRED FOR THE PROPER MAINTENANCE OF THE PLUMBING SYSTEMS.
- COORDINATE WITH G.C. TO PATCH ROOFING, ROOF DECK, AND FLASHINGS AS REQ'D WITH NEW MATERIALS AND FLASHINGS FOR ALL NEW ROOF PENETRATIONS.
- DO NOT RUN PIPES ABOVE ELECTRICAL PANELS OR EQUIPMENT. COORDINATE WITH THE E.C. FOR LOCATIONS PRIOR TO THE START OF WORK.
- SEE THE "PLUMBING FIXTURE SCHEDULE" FOR MINIMUM PIPE SIZES TO THE FIXTURES. PROVIDE AN INCREASER/REDUCER AS REQUIRED AT THE FIXTURE CONNECTION.
- LABEL ALL NEW WATER, WASTE, VENT, WITH NAMES AND FLOW ARROWS. LABELS SHALL BE NOT MORE THAN 10'-0" APART AND SHALL BE LOCATED AT ALL ACCESS LOCATIONS TO CONCEALED SPACES.
- DOMESTIC WATER PIPING ABOVE GRADE SHALL BE TYPE 'L' COPPER ASTM B88 WITH ASME B16.18 CAST COPPER OR ASME B16.22 WROUGHT COPPER FITTINGS. JOINTS SHALL BE MADE WITH LEAD-FREE SOLDER OR SHALL BE PRESS-CONNECT TYPE.
 - PEX PIPING (ASTM F876) IS PERMITTED FOR BRANCH PIPING TO PLUMBING FIXTURES PROVIDED THAT ALL FIXTURE STUB-OUTS ARE TYPE 'L' COPPER AS SPECIFIED ABOVE. PEX PIPES SHALL BE ONE NOMINAL SIZE LARGER THAN THE SIZE LISTED ON THE PLANS.
- PIPING INSULATION SHALL BE INSTALLED BY A QUALIFIED INSULATION CONTRACTOR WITH A MINIMUM OF 3-YEARS DOCUMENTED EXPERIENCE. INSULATION WORK SHALL BE COMPLETE WITH ALL EDGES SEALED, PER INDUSTRY STANDARDS, AND TO THE SATISFACTION OF THE ENGINEER. SEE THE FOLLOWING PARAGRAPHS FOR INSULATION REQUIREMENTS.
 - DOMESTIC COLD WATER PIPING: 1-1/4" AND SMALLER - 0.5" THICK. 1-1/2" AND LARGER - 1.0" THICK.
 - DOMESTIC HOT WATER PIPING: 1-1/4" AND SMALLER - 1.0" THICK. 1-1/2" AND LARGER - 1.5" THICK.
 - DOMESTIC HOT WATER RECIRC PIPING: 1-1/4" AND SMALLER - 1.0" THICK.
- PROVIDE AND INSTALL PIPE HANGERS IN ACCORDANCE WITH MSS SP-58. PIPE HANGERS SHALL HAVE A GALVANIZED INSULATION SADDLE (1-1/2" AND SMALLER) OR PIPE INSERT (2" AND LARGER) TO PROTECT INSULATION.
- WASTE AND VENT PIPING (EXCEPT IN A RETURN AIR PLENUM): SOLID CORE SCHEDULE 40 PVC, ASTM D2665. FITTINGS SHALL BE ASTM D2665. JOINTS SHALL BE ASTM D2855, SOLVENT WELD WITH ASTM D2564 SOLVENT CEMENT.
 - CELLULAR CORE IS NOT ACCEPTABLE
 - USE PURPLE PVC PRIMER. CLEAR PRIMER NOT ACCEPTABLE.

- WASTE AND VENT PIPING (IN RETURN AIR PLENUM): CAST IRON PIPE, CISPI 301, HUBLESS, SERVICE WEIGHT. FITTINGS SHALL BE CAST IRON, CISPI 301. JOINTS SHALL BE CISPI 310, NEOPRENE GASKETS AND STAINLESS STEEL CLAMP-AND-SHIELD ASSEMBLIES.
- DOMESTIC WATER PIPING MAY NOT BE INSTALLED IN ANY EXTERIOR WALLS.
- ACCEPTABLE VALVE MANUFACTURERS: APOLLO VALVE, CRANE VALVE, HAMMOND VALVE, MILWAUKEE VALVE COMPANY, NIBCO, STOCKHAM VALVES AND FITTINGS OR PRIOR APPROVED EQUAL.
- ALL VALVES USED ON DOMESTIC WATER SYSTEMS SHALL BE LEAD FREE AND NSF RATED.
- BALL VALVES 2" AND SMALLER: NSF 61 COMPLIANT, MSS SP110, 600 PSI WOG, TWO PIECE BRONZE BODY, CHROME PLATED BRASS BALL, FULL PORT, TEFLON SEATS, BLOW-OUT PROOF STEM, SOLDER OR THREADED ENDS, EXTENDED LEVER HANDLE AS REQUIRED FOR OPERATION WITH PIPING INSULATION.
- MANUAL BALANCING VALVES: NSF 61 COMPLIANT, 400 PSI AT 250°F, BALL TYPE VALVE WITH CALIBRATED NAMEPLATE AND MEMORY STOP. LEAD-FREE BRASS BODY WITH THREADED ENDS. DIFFERENTIAL PRESSURE READOUT PORTS WITH INTERNAL CHECK VALVES, STAINLESS STEEL BALL, TEFLON SEAT RINGS, AND EPDM O-RING. 1/4" TAPPED DRAIN/PURGE PORT.
- HORIZONTAL SWING CHECK VALVES 2" AND SMALLER: NSF 61 COMPLIANT, MSS SP 80, CLASS 125, BRONZE BODY AND CAP, Y-PATTERN, BRONZE REGRINDING DISC, SOLDER OR THREADED ENDS.
- SPRING LOADED CHECK VALVES 2" AND SMALLER: NSF 61 COMPLIANT, MSS SP 80, CLASS 125, BRONZE BODY, IN-LINE SPRING LIFT CHECK, SILENT CLOSING, BUNA-N DISC, INTEGRAL SEAL, SOLDER OR THREADED ENDS.
- THERMOMETERS SHALL BE MINIMUM 8" LONG WITH PAINTED METAL CASE, GLASS OR LUCITE FACE, ADJUSTABLE ANGLE, THREADED CONNECTION. 30°F - 240°F TEMPERATURE RANGE WITH 2°F DIVISIONS. THERMOMETERS SHALL BE INSTALLED IN THERMAL WELLS WITH HEAT TRANSFER COMPOUND, MINIMUM 1% ACCURACY. ACCEPTABLE MANUFACTURERS INCLUDE MOELLER, ROCHESTER, TAYLOR, TRERICE, WEISS, OR APPROVED EQUAL.
- PROVIDE BALL VALVES ON ALL BRANCH WATER LINES WHETHER SHOWN ON THE PLANS OR NOT.
- REFERENCE ARCHITECTURAL PLANS FOR EXACT FIXTURE LOCATIONS. EXAMINE ROUGH-IN FOR WATER AND WASTE PIPING. USE MANUFACTURER'S ROUGH-IN DIMENSIONS. ADJUST EXISTING AS REQUIRED. REFER TO THE ARCHITECTURAL PLANS FOR EXACT FIXTURE LOCATION DIMENSIONS.
- OFFSET FLANGES AND CROSS FITTINGS ARE NOT PERMITTED.
- INSTALL PLUMBING FIXTURES LEVEL AND PLUMB. SEAL AROUND FIXTURES TO WALL OR FLOOR WITH SEALANT TO MATCH FIXTURE. CLEAN ALL FIXTURES BEFORE TURNING OVER TO THE OWNER.
- PROVIDE A LOOSE KEY QUARTER TURN STOP ON THE WATER SUPPLY TO EACH PLUMBING FIXTURE. INSTALL STOPS SO THAT THEY ARE EASILY ACCESSIBLE. ALL SUPPLIES AFTER THE STOPS SHALL BE RIGID CHROME PLATED.
- ALL PIPE PENETRATIONS THROUGH THE FLOORS AND WALLS SHALL BE SLEEVED WITH GALVANIZED STEEL. SLEEVES SHALL BE LARGE ENOUGH TO ALLOW FOR INSULATION TO BE CONTINUOUS THROUGH THE SLEEVE. SEAL AROUND SLEEVES AND PROVIDE STAINLESS STEEL ESCUTCHEONS IN FINISHED SPACES.
- WHERE PIPES PENETRATE A FIRE RATED ASSEMBLY PACK THE VOID WITH BACKING MATERIAL AND SEAL WITH UL LISTED FIRE CAULK TO MEET THE FIRE RATING OF ASSEMBLY PENETRATED. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS AND TYPES OF FIRE RATED ASSEMBLIES.
- INSTALL TRAP AND VENT ON THE DRAIN OUTLET OF EACH FIXTURE TO BE DIRECTLY CONNECTED TO THE SANITARY SEWER SYSTEM. EXPOSED P-TRAPS LOCATED UNDER SINKS SHALL BE 17 GA. CHROME PLATED WITH CLEANOUT.
- WALL CLEANOUTS IN FINISHED AREAS SHALL BE LINE TYPE WITH ROUND STAINLESS STEEL ACCESS COVER SECURED WITH MACHINE SCREWS.
- FLOOR AND GRADE CLEANOUTS IN FINISHED AREAS SHALL BE LINE TYPE, CAST IRON BODY WITH ADJUSTABLE RISER, NO-HUB OUTLET, CAST IRON FRAME AND GRATE COVER AND INTERNAL PLUG.
- PLUMBING VENTS THROUGH THE ROOF SHALL BE 3" MINIMUM. WHERE THE CONNECTING PIPE IS SMALLER, THE PIPE SHALL TRANSITION A MINIMUM OF 12" BELOW THE ROOF STRUCTURE AND THEN EXTEND THROUGH THE ROOF AS A 3" PIPE.
- COORDINATE EXACT LOCATION OF EQUIPMENT AND ROUTES TO AND FROM EQUIPMENT WITH STRUCTURE AND CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR OFFSETS OF PIPING TO AVOID CONFLICTS. NOT ALL OFFSETS, FITTINGS, EXTENSIONS SHOWN THAT MAY BE REQUIRED DURING CONSTRUCTION.
- TEST ALL WATER, WASTE, AND VENT PIPING IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE AND PER THE LOCAL AUTHORITY HAVING JURISDICTION. ALL TESTS, INSPECTIONS, AND PIPE FLUSHING TO BE WITNESSED BY THE PSD PLUMBING DEPARTMENT.
- ALL DOMESTIC HOT WATER RECIRCULATION SYSTEMS SHALL BE BALANCED TO THE QUANTITIES SHOWN. THE BALANCING FIRM SHALL EITHER BE AABC OR NEBB CERTIFIED AND SHALL SUBMIT A BALANCE REPORT TO THE ENGINEER FOR REVIEW.
- THE PLUMBING CONTRACTOR SHALL PROVIDE PRODUCT DATA SUBMITTALS FOR ALL THE PLUMBING EQUIPMENT SCHEDULED, PLUMBING FIXTURES, PIPING, PIPE INSULATION, AND VALVES. ALL EQUIPMENT SUBMITTALS SHALL BE REVIEWED BY THE ENGINEER PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL PROVIDE THE OWNER WITH (1) FULL SIZE SET OF THE AS-BUILT PLUMBING DRAWINGS WHICH SHALL SHOW THE ACTUAL LOCATIONS OF PIPES, VALVES, FIXTURES, AND ACCESSORIES OR ANY OTHER DEVIATIONS FROM THE DESIGN DRAWINGS.
- THE CONTRACTOR SHALL PROVIDE THE OWNER WITH (1) COPY OF ALL OPERATIONAL AND MAINTENANCE (O&M) MANUALS FOR EACH PIECE OF EQUIPMENT. THE MANUAL SHALL INCLUDE: THE CONTRACTOR'S CONTACT INFORMATION, THE MANUFACTURER'S PUBLISHED O&M INSTRUCTIONS, THE APPROVED SUBMITTAL DRAWINGS, AND THE FINAL APPROVED TEST AND BALANCE REPORT. COMBINE ALL THE MANUALS IN A 3-RING BINDER INDEXED FOR EACH PIECE OF EQUIPMENT. ALSO PROVIDE THE OWNER A CD WITH THE ENTIRE O&M MANUAL IN PDF FORMAT.
- THE CONTRACTOR SHALL PROVIDE OWNER TRAINING ON THE OPERATION AND MAINTENANCE OF THE PLUMBING EQUIPMENT.

PLUMBING LEGEND		PLUMBING ABBREVIATIONS	
	EXISTING PIPE	AAV	AIR ADMITTANCE VALVE
	PIPE DEMOLITION	ABV	ABOVE FINISHED FLOOR
	DOMESTIC COLD WATER	ABFP	BACKFLOW PREVENTER
	DOMESTIC HOT WATER	BLW	BELOW
	DOMESTIC HOT WATER RECIRCULATION	DCW	DOMESTIC COLD WATER
	VENT PIPE	DHW	DOMESTIC HOT WATER
	WASTE PIPE (ABOVE GROUND)	DHWC	DOMESTIC HOT WATER RECIRCULATION
	WASTE PIPE (BELOW GROUND)	DN	DOWN
	BALL VALVE, GATE VALVE	DWH	DOMESTIC WATER HEATER
	CHECK VALVE	(E)	EXISTING
	BUTTERFLY VALVE, BALANCE VALVE	EC	ELECTRICAL CONTRACTOR
	PIPE UNION OR FLANGE	FCO	FLOOR CLEANOUT
	ELBOW DOWN, TEE UP	FD	FLOOR DRAIN
	TEE DOWN, PIPE CONTINUATION	FPWH	FREEZE PROOF WALL HYDRANT
	REDUCER OR INCREASER	GCO	GRADE CLEANOUT
	POINT OF CONNECTION	LAV	LAVATORY
	LIMIT OF DEMOLITION	IE	INVERT ELEVATION
		MC	MECHANICAL CONTRACTOR
		(N)	NEW
		PC	PLUMBING CONTRACTOR
		POC	POINT OF CONNECTION
		PRV	PRESSURE REDUCING VALVE
		REL	RELOCATED
		SA	SHOCK ABSORBER
		SH	SHOWER
		TAB	TEST & BALANCE
		TYP	TYPICAL
		UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
		VTR	VENT THROUGH ROOF
		WC	WATER CLOSET
		WCO	WALL CLEANOUT
		W/	WITH
		W/O	WITHOUT



CLEANOUT DETAIL
SCALE: NONE

PLUMBING SHEET INDEX	
#	SHEET NAME
P0.0	PLUMBING NOTES, LEGEND, & SCHEDULES
P1.1	PLUMBING DEMOLITION PLAN
P1.2	OVERALL PLUMBING REMODEL PLAN
P1.3	AREA OF WORK PLUMBING REMODEL PLAN
P3.1	ENLARGED PLUMBING PLANS

DOMESTIC WATER CIRCULATOR SCHEDULE												
TAG	MAKE	MODEL	GPM	HEAD	PUMP TYPE	VOLTAGE	MOTOR HP	MOTOR RPM	BODY	IMPELLER	CONN. SIZE	REMARKS
CP-1	TACO	0011-5F4	5.5 GPM	26 FT H2O	CARTRIDGE CIRCULATOR	120 V / 1 Ph	1/8 HP	3250	STAINLESS STEEL	NON-METALLIC	1"	ALL
1.) UL LISTED & NSF RATED 2.) CONTROLLED BY DDC SYSTEM, REFER TO TEMPERATURE CONTROLS NOTES ON SHEET M0.0 3.) OR EQUAL BY GRUNDFOS OR WILO												
DOMESTIC HOT WATER CIRCULATION PUMP SEQUENCE OF OPERATION												
1.) OCCUPIED MODE:						2.) UNOCCUPIED MODE:						
A. THE CIRCULATION PUMP SHALL BE ENABLED.												
B. IF THE AQAUSTAT DETECTS A TEMPERATURE BELOW 95°F (ADJ.), THEN THE PUMP SHALL BE ON.												
C. IF THE AQAUSTAT DETECTS A TEMPERATURE GREATER THAN OR EQUAL TO 115°F (ADJ.), THEN THE PUMP SHALL BE OFF.												

PLUMBING ACCESSORY SCHEDULE	
TAG	DESCRIPTION
SA-1	ZURN SHOKTROL MODEL# Z1700 SIZE 100 WATER HAMMER ARRESTER. PDI SIZE 'A', 3/4" CONNECTION, STAINLESS STEEL. PROVIDE ISOLATION VALVE FOR MAINTENANCE OR REPAIR.
SA-2	ZURN SHOKTROL MODEL# Z1700 SIZE 200 WATER HAMMER ARRESTER. PDI SIZE 'B', 3/4" CONNECTION, STAINLESS STEEL. PROVIDE ISOLATION VALVE FOR MAINTENANCE OR REPAIR.
TMV-1	LEONARD MODEL# 170A-LF THERMOSTATIC MIXING VALVE. ASSE 1070 LISTED, 0.25 GPM MIN. INTEGRAL INLET STRAINER SCREEN AND CHECK VALVES. LEAD FREE. PROVIDE WITH COLD WATER BYPASS AND MOUNTING BRACKET. SET OUTLET TEMPERATURE TO 110° F.

PLUMBING FIXTURE SCHEDULE											
TAG	FIXTURE			FAUCET OR FLUSH VALVE			PIPE RUNOUT SIZES		REMARKS		
	MAKE	MODEL	DESCRIPTION	MAKE	MODEL	DESCRIPTION	DCW	DHW		W	V
FD-1	ZURN	Z415B	EPOXY COATED CAST IRON FLOOR DRAIN WITH ANCHOR FLANGE, REVERSIBLE CLAMPING COLLAR WITH PRIMARY AND SECONDARY WEEPHOLES, ADJUSTABLE 5" ROUND HEEL PROOF NICKEL BRONZE STRAINER, AND NO-HUB OUTLET.	--	--	--	--	--	2"	1-1/2"	4
LAV-1	AMERICAN STANDARD	LUCERNE MODEL# 0355.012	WALL HUNG LAVATORY, WHITE VITREOUS CHINA WITH SELF-DRAINING DECK AREA, 5" BACKSPASH, AND FRONT OVERFLOW, 4" CENTER FAUCET HOLES. PROVIDE WITH PERFORATED STRAINER AND CHROME-PLATED BRASS 1-1/4" OFFSET TAILPIECE. ADA COMPLIANT.	CHICAGO	802-VE2805ABCP	HEAVY DUTY CAST BRASS DECK FAUCET WITH 4" CENTERS, CHROME FINISH, TWO QUARTER-TURN LEVER HANDLES, 0.5 GPM NON-AERATING SPRAY OUTLET. ADA COMPLIANT.	1/2"	1/2"	2"	1-1/2"	1-3
WC-1	AMERICAN STANDARD	MADERA MODEL# 3043.001	FLOOR MOUNTED FLUSHOMETER WATER CLOSET W/ ELONGATED BOWL 1-1/2" TOP SPUD. WHITE VITREOUS CHINA. 16-1/2" BOWL HEIGHT. 1.28 GPF. PROVIDE WITH OPEN FRONT SOLID PLASTIC SEAT. ADA COMPLIANT.	SLOAN	ROYAL 111-128	EXPOSED MANUAL FLUSHOMETER VALVE FOR TOP SPUD WATER CLOSET. POLISHED CHROME FINISH. 1.28 GPF, ADA COMPLIANT. LOCATE HANDLE TO THE OPEN SIDE OF THE ROOM	1-1/4"	--	4"	2"	NONE
1.) PROVIDE WITH UNDER SINK PIPE INSULATION, TRUEBRO LAV GAURD 2 2.) PROVIDE WITH THERMOSTATIC MIXING VALVE TMV-1 3.) PROVIDE WITH FLOOR MOUNTED CONCEALED ARM CARRIER 4.) PROVIDE WITH ASSE 1072 TRAP SEAL PROTECTION DEVICE, ZURN MODEL# Z1072 OR EQUAL											
NOTES: A. PIPE SIZES ARE BRANCH PIPE SIZES TO THE FIXTURES, THE FIXTURE CONNECTION SIZE MAY VARY FROM THE PIPE SIZE SHOWN. REDUCE/INCREASE PIPE AT THE FIXTURE CONNECTION AS REQUIRED.											
<u>ACCEPTABLE MANUFACTURERS:</u> LAVATORY & WATER CLOSET - KOHLER OR AMERICAN STANDARD, FLOOR DRAIN & WATER HAMMER ARRESTER - JOSAM, JR SMITH, WADE, OR ZURN, THERMOSTATIC MIXING VALVE - LEONARD OR ZURN											

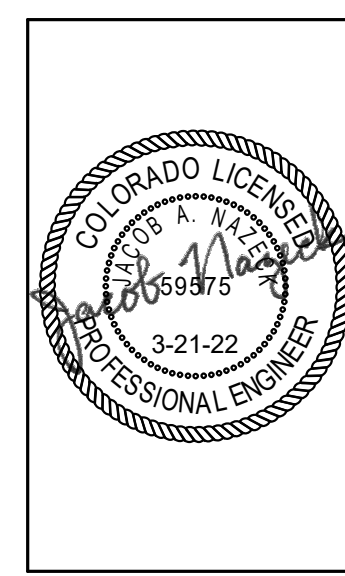
DESIGNPOINT ENGINEERING
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1	JLD	JAN 3, 2022	

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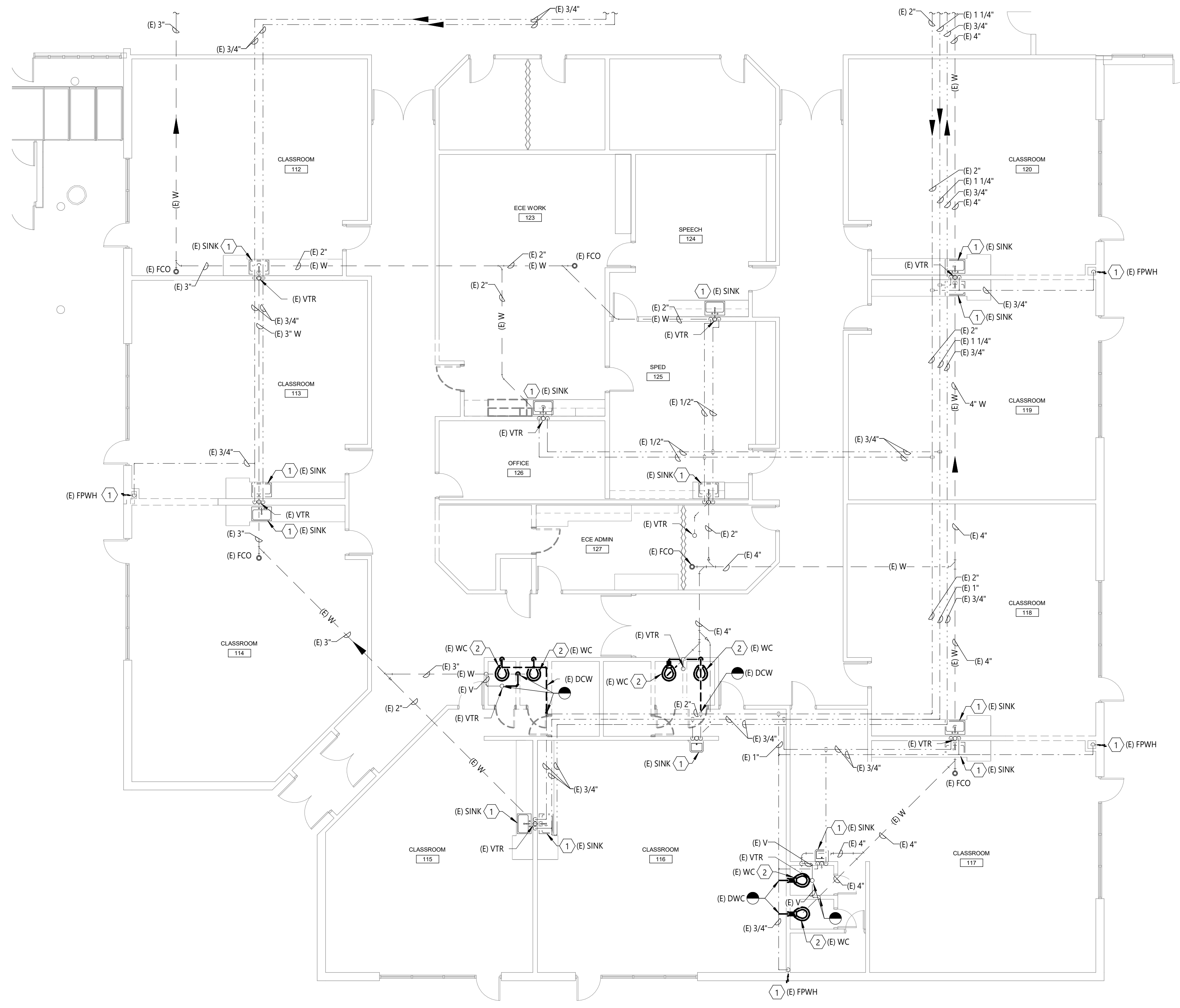
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SHEET CONTENTS
PLUMBING NOTES, LEGEND, & SCHEDULES

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REVISIONS

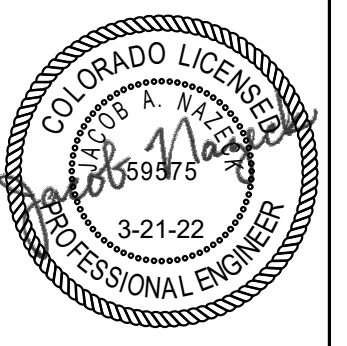


1 PLUMBING DEMOLITION PLAN
1/8" = 1'-0"

- ### # FLAG NOTES
- EXISTING PLUMBING WORK TO REMAIN AS IS.
 - EXISTING PLUMBING WORK TO BE REMOVED. CAP REMAINING AS REQUIRED. COORDINATE W/ G.C. TO PATCH AND/OR REPAIR FLOORS, WALLS, CEILINGS, AND ROOF AS REQUIRED.

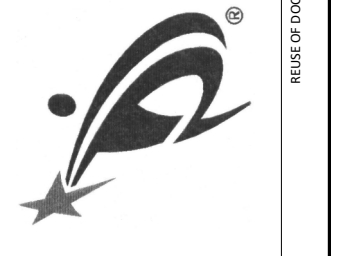
- ### PLAN GENERAL NOTES
- NOT ALL THE EXISTING PLUMBING WORK IS SHOWN. REFER TO THE OWNER'S AS-BUILT DRAWINGS FOR THE COMPLETE PLUMBING SYSTEM.
 - EXISTING PLUMBING SYSTEMS SHOWN ARE TAKEN FROM THE ORIGINAL AS-BUILT DRAWINGS AND FIELD VERIFICATION. THE CONTRACTOR WILL NEED TO FIELD VERIFY ACTUAL LOCATIONS PRIOR TO THE START OF WORK.

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SHEET CONTENTS
PLUMBING DEMOLITION PLAN

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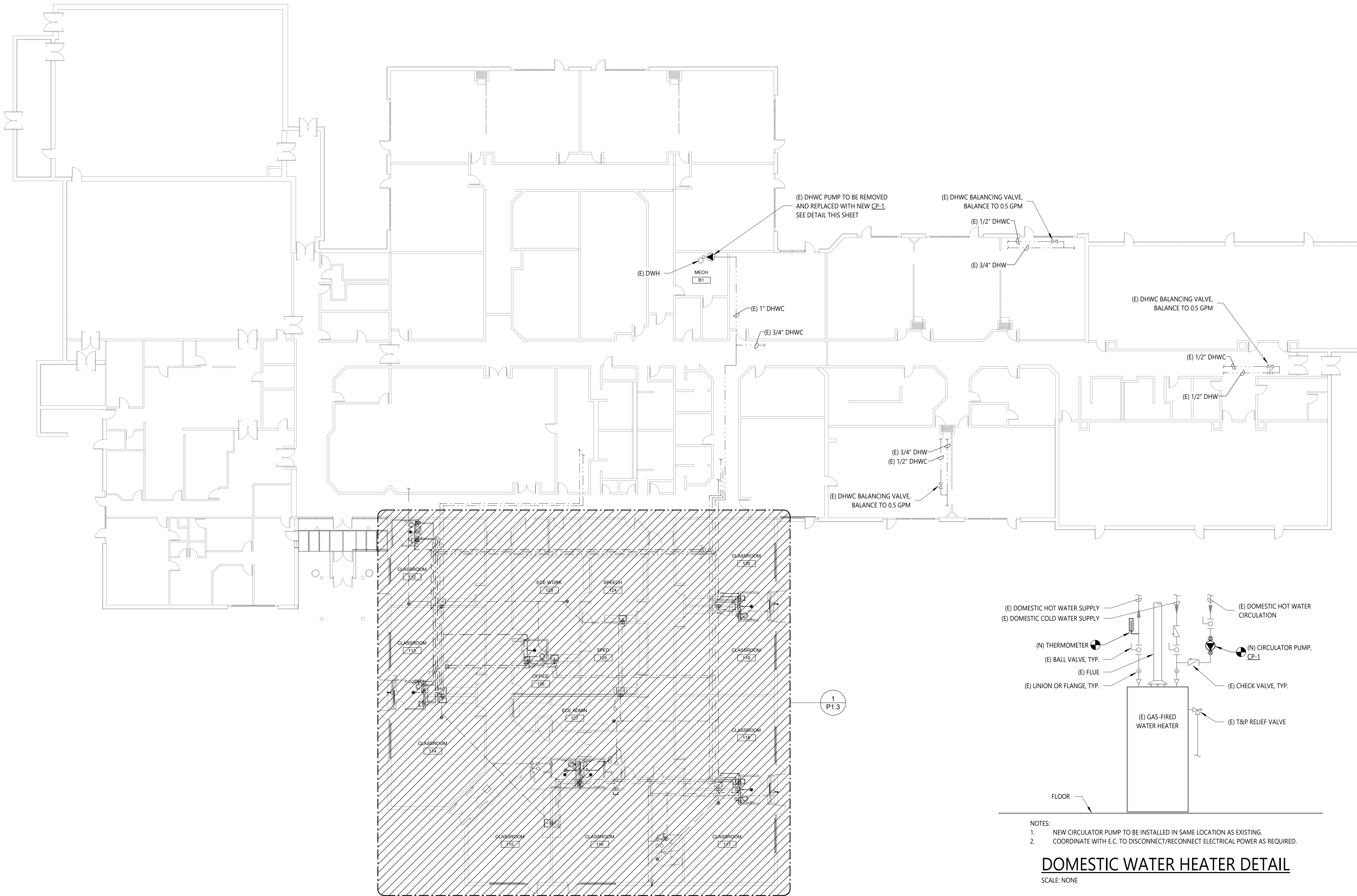


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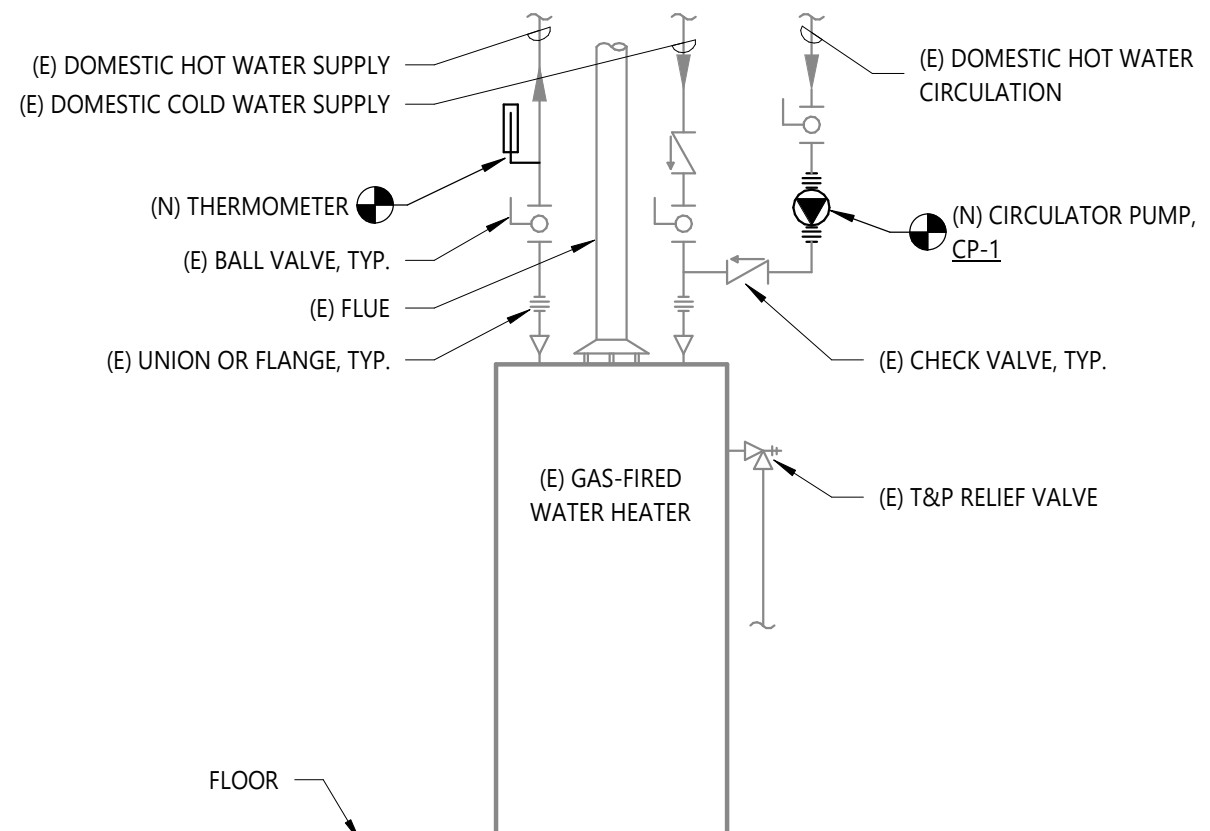
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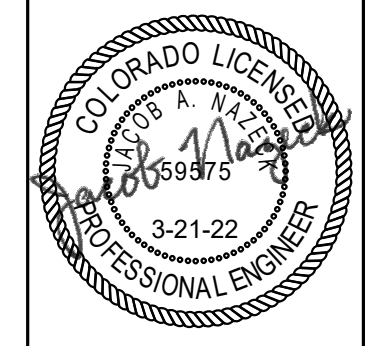


1 OVERALL PLUMBING REMODEL PLAN
1/16" = 1'-0"



NOTES:
1. NEW CIRCULATOR PUMP TO BE INSTALLED IN SAME LOCATION AS EXISTING.
2. COORDINATE WITH E.C. TO DISCONNECT/RECONNECT ELECTRICAL POWER AS REQUIRED.

DOMESTIC WATER HEATER DETAIL
SCALE: NONE



SHEET CONTENTS
OVERALL PLUMBING REMODEL
PLAN

EYESTONE ELEMENTARY SCHOOL
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WELLINGTON, COLORADO 80549



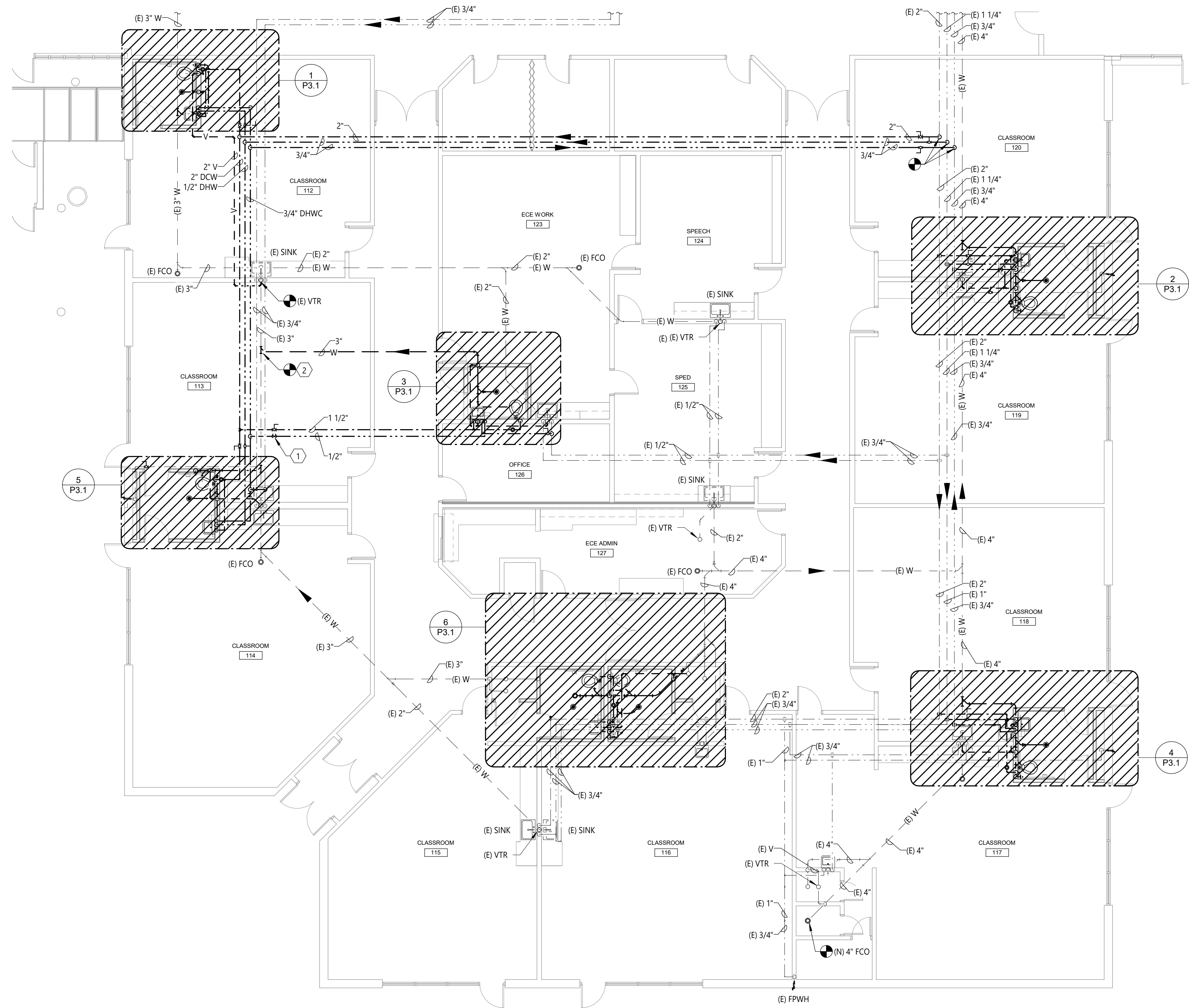
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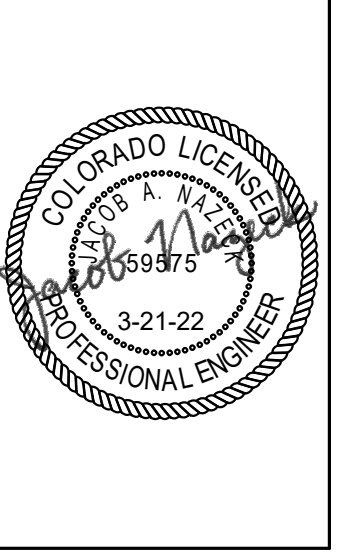


1 AREA OF WORK PLUMBING REMODEL PLAN
1/8" = 1'-0"

- ### FLAG NOTES
1. INSTALL BALANCE VALVE IN AN ACCESSIBLE LOCATION ABOVE THE CEILING. BALANCE TO 0.5 GPM.
 2. CONTRACTOR TO VERIFY INVERT ELEVATION WITH THE EXISTING UNDERGROUND WASTE PIPE PRIOR TO THE START OF WORK.

- ### PLAN GENERAL NOTES
- ALL PLUMBING WORK SHALL COMPLY WITH THE PLUMBING DETAILS INCLUDING:
 - CLEANOUT DETAIL.
 - THE SPACE ABOVE THE CEILING IS BEING USED AS A RETURN AIR PLENUM THROUGHOUT THE BUILDING.

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SHEET CONTENTS
AREA OF WORK PLUMBING
REMODEL PLAN

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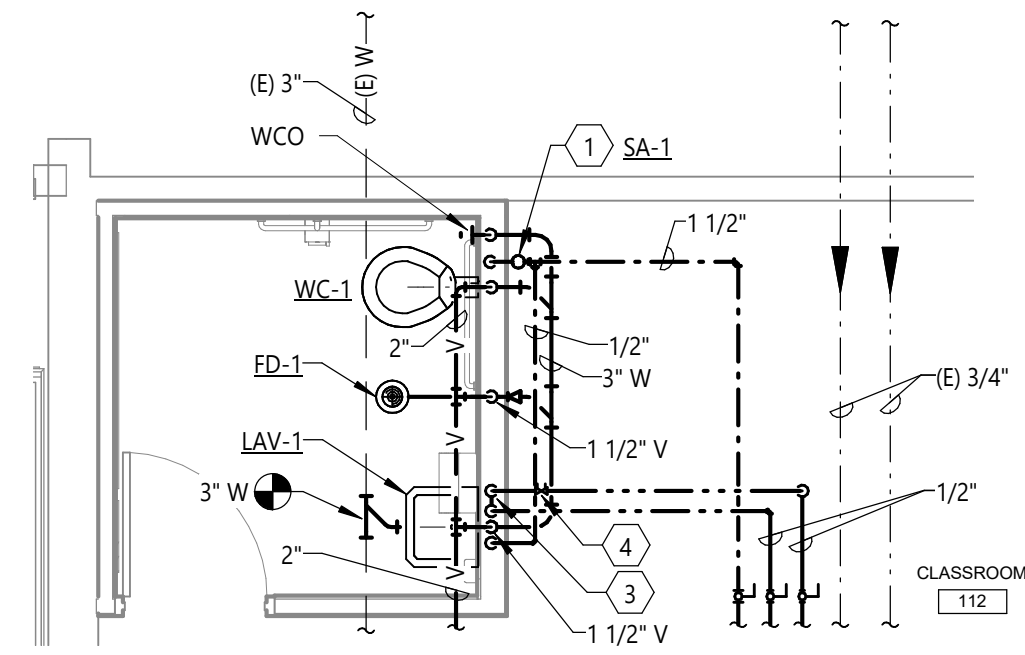
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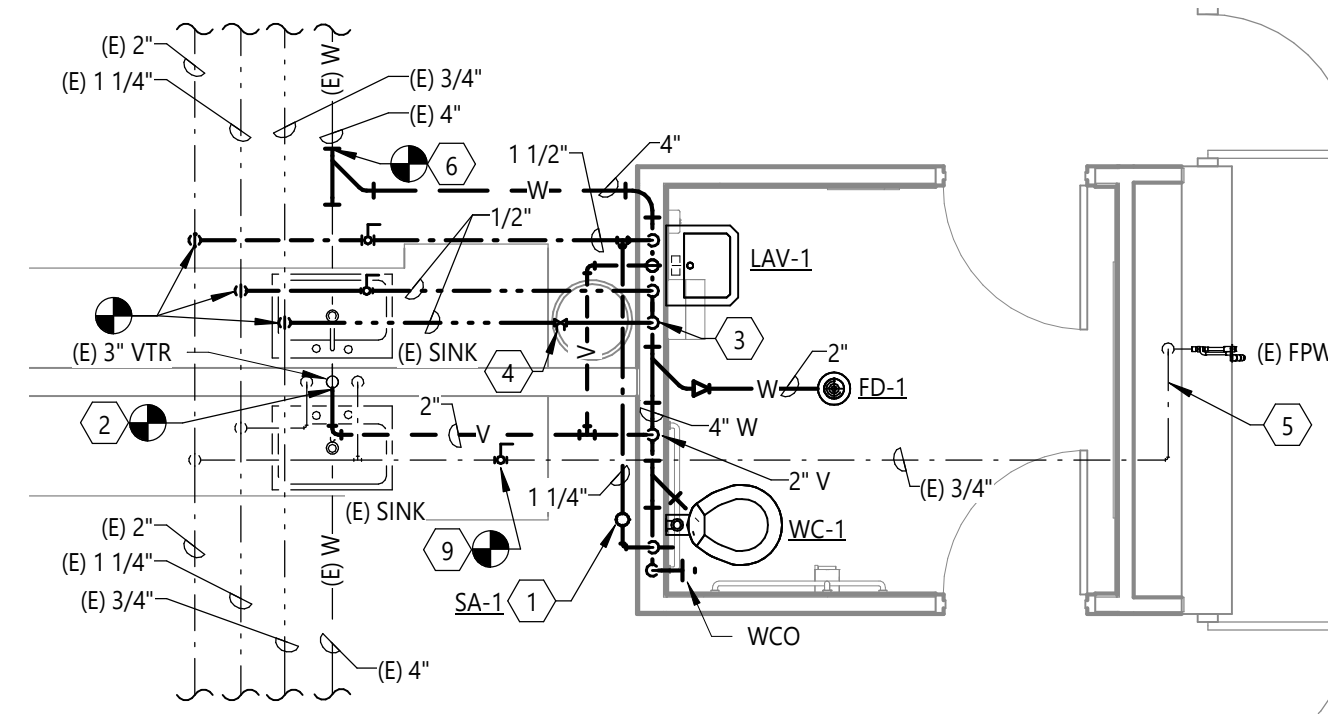
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DATE: 3.21.2022

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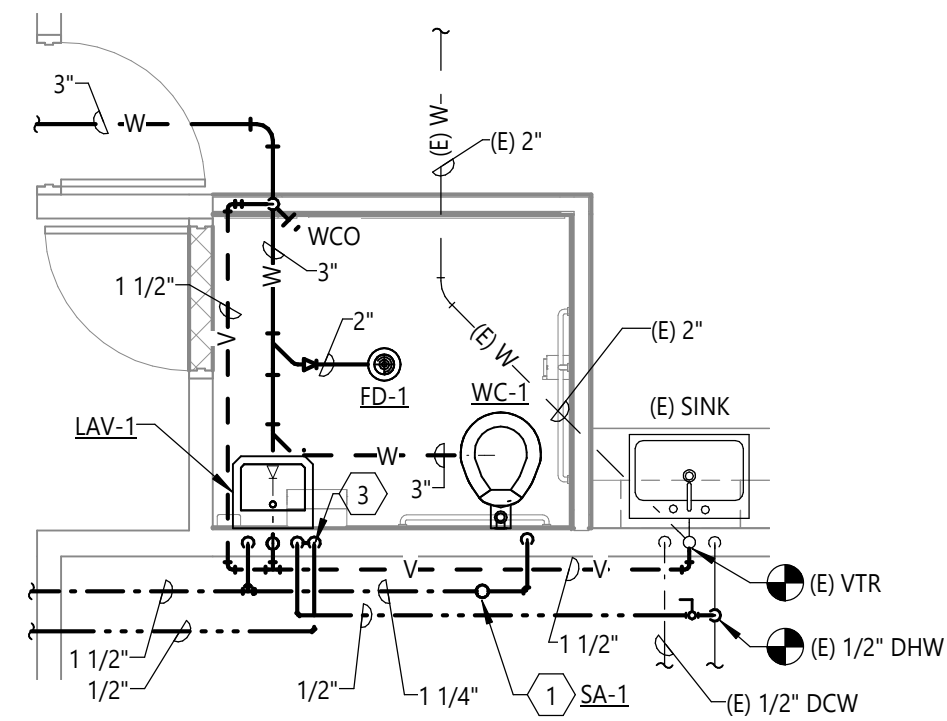
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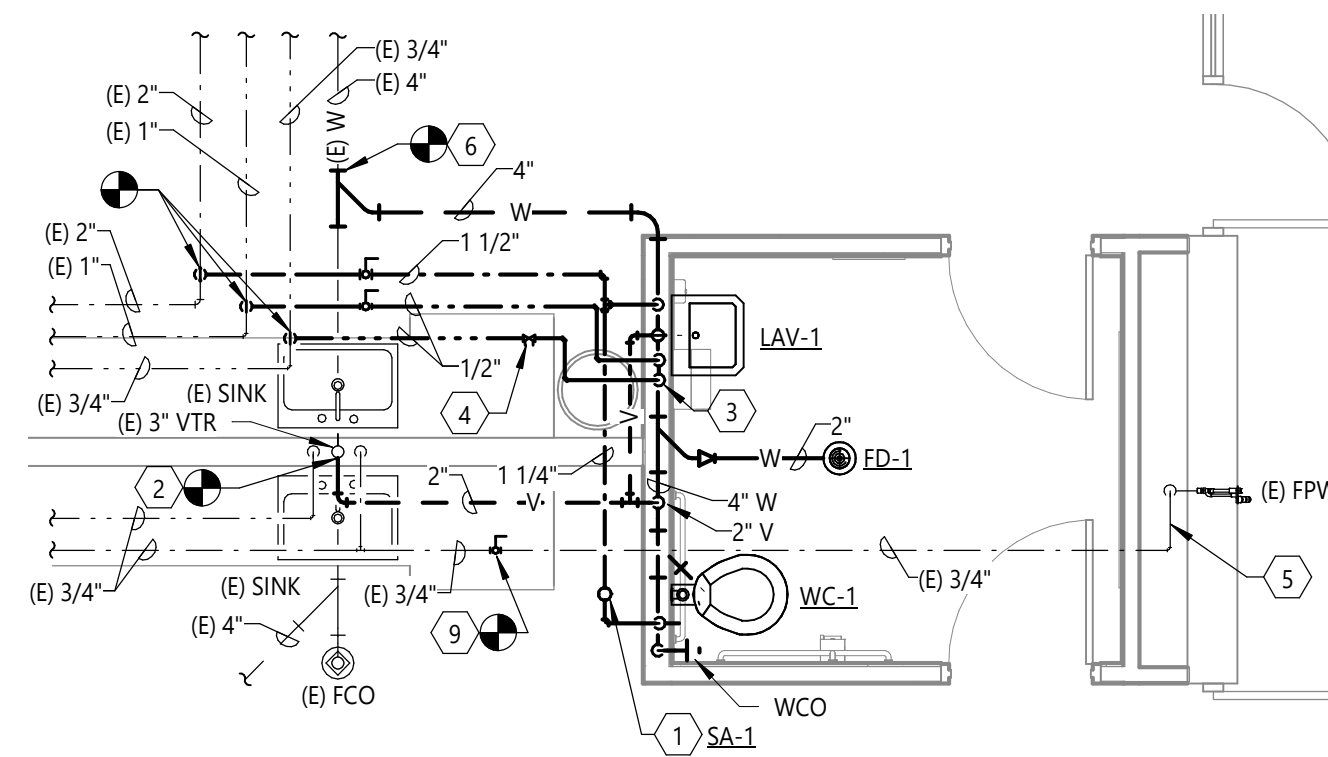
1 CLASSROOM 112 ENLARGED PLUMBING PLAN
1/4" = 1'-0"



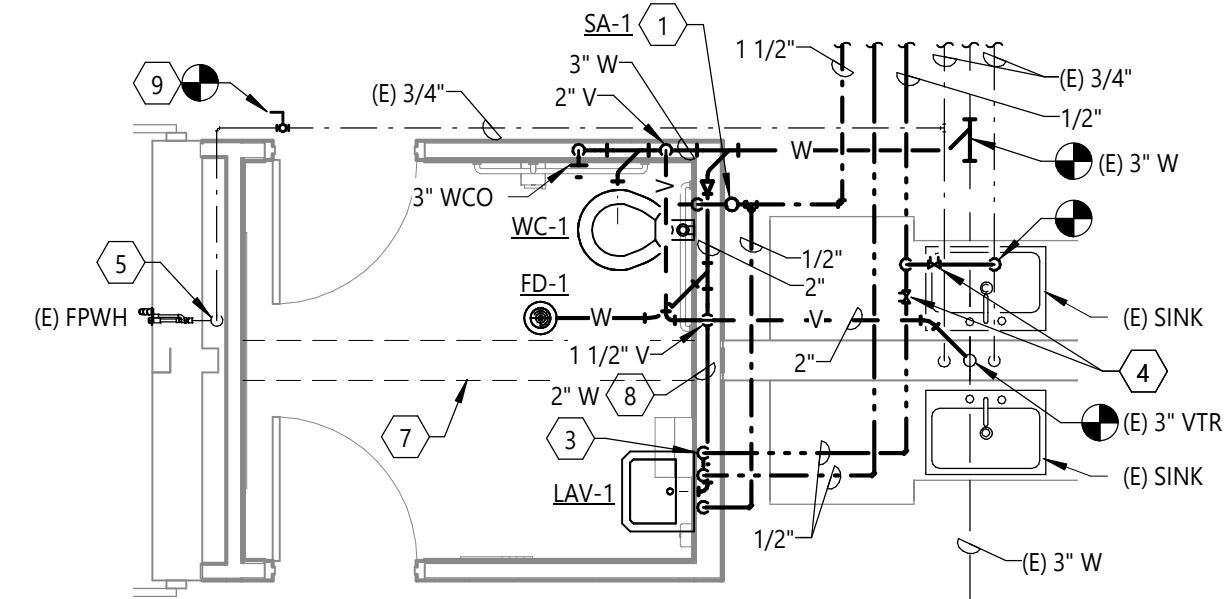
2 CLASSROOM 119 & 120 ENLARGED PLUMBING PLAN
1/4" = 1'-0"



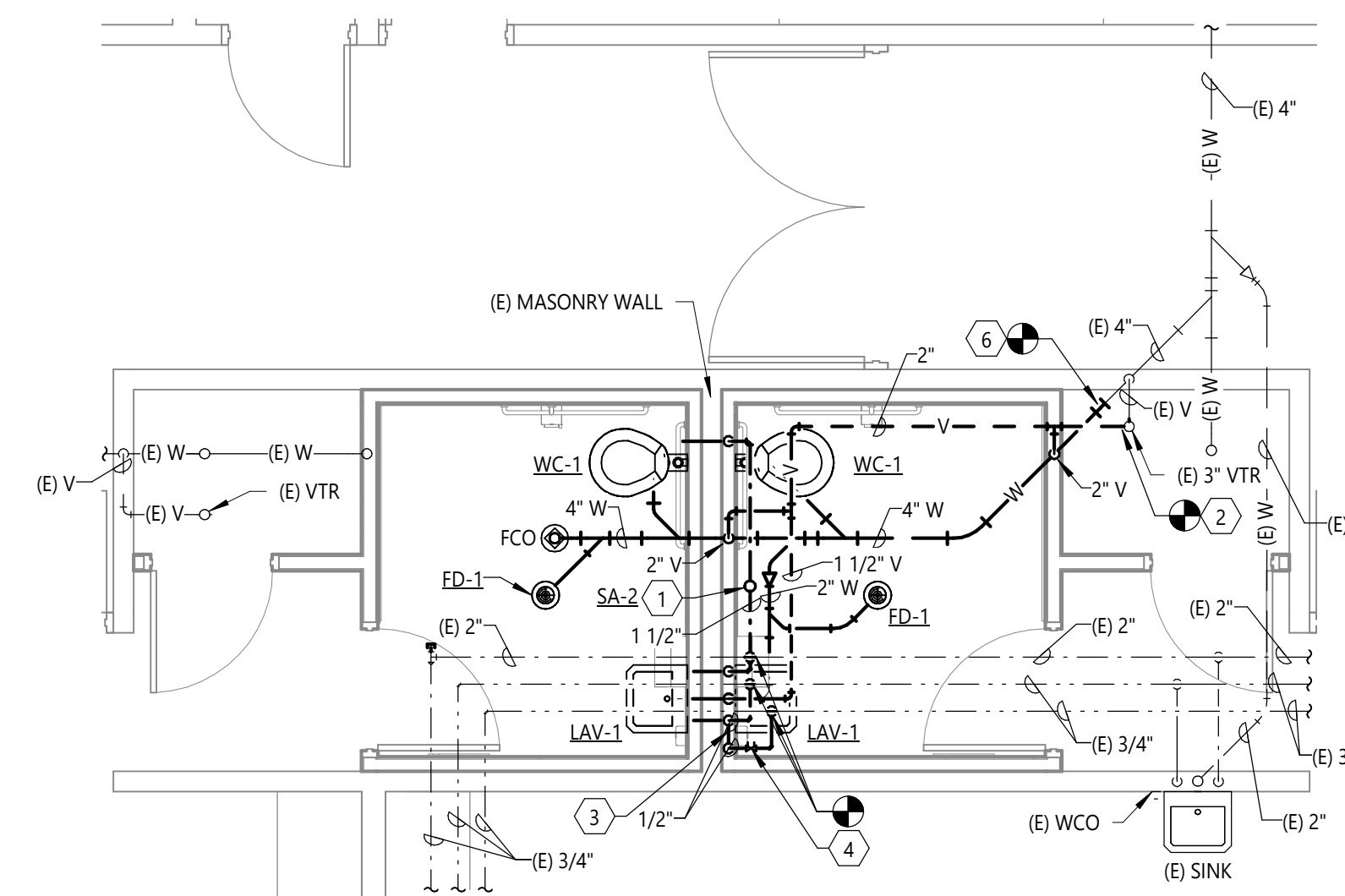
3 CLASSROOM 123 ENLARGED PLUMBING PLAN
1/4" = 1'-0"



4 CLASSROOM 117 & 118 ENLARGED PLUMBING PLAN
1/4" = 1'-0"



5 CLASSROOM 113 & 114 ENLARGED PLUMBING PLAN
1/4" = 1'-0"



6 CLASSROOM 115 & 116 ENLARGED PLUMBING PLAN
1/4" = 1'-0"

FLAG NOTES

- 1 INSTALL SHOCK ABSORBER IN AN ACCESSIBLE LOCATION ABOVE THE CEILING. PROVIDE ISOLATION VALVE FOR MAINTENANCE AND REPAIR. COORDINATE WITH THE G.C. FOR A PAINTED ACCESS PANEL AS REQUIRED.
- 2 EXISTING VENT UP TO EXISTING VENT THROUGH ROOF. CONNECT NEW 2" VENT TO EXISTING VENT PIPE. DEMOLISH EXISTING VENT AS NEEDED TO UPSIZE THE EXISTING VENT TO 2". ENSURE THE EXISTING VENT THROUGH ROOF TRANSITIONS TO 3" AT 12" MIN. BELOW THE BOTTOM OF THE ROOF.
- 3 CONNECT THE DHWC PIPE TO THE DHW PIPE IN THE WALL WITHIN 24" OF THE FIXTURE.
- 4 INSTALL BALANCE VALVE IN AN ACCESSIBLE LOCATION ABOVE THE CEILING. BALANCE TO 0.5 GPM.
- 5 PROVIDE INSULATION TO EXISTING DCW PIPE SERVING EXISTING FPWH IF THE EXISTING DCW PIPE IS NOT INSULATED.
- 6 CONTRACTOR TO VERIFY INVERT ELEVATION WITH THE EXISTING UNDERGROUND WASTE PIPE PRIOR TO THE START OF WORK.
- 7 COORDINATE WITH EXISTING FOUNDATION WALL BELOW GRADE. REFER TO ARCHITECTURAL/STRUCTURAL PLANS.
- 8 LAVATORY DRAIN ROUTED IN WALL ABOVE GRADE.
- 9 CONTRACTOR TO PROVIDE A NEW ISOLATION VALVE FOR THE FPWH IF ONE IS NOT ALREADY INSTALLED IN AN ACCESSIBLE LOCATION.

PLAN GENERAL NOTES

- A. ALL PLUMBING WORK SHALL COMPLY WITH THE PLUMBING DETAILS INCLUDING:
 - CLEANOUT DETAIL
- B. THE SPACE ABOVE THE CEILING IS BEING USED AS A RETURN AIR PLENUM THROUGHOUT THE BUILDING.

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SHEET CONTENTS
ENLARGED PLUMBING PLANS

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GENERAL CONSTRUCTION NOTES	
1. THE ELECTRICAL CONTRACTOR SHALL VERIFY THAT ALL ELECTRICAL ITEMS TO REMAIN OR BE RELOCATED AND REUSED ARE IN WORKING ORDER PRIOR TO ANY DEMOLITION WORK. IF THE EXISTING MATERIAL IS FOUND TO BE INOPERABLE, CONTRACTOR SHALL INFORM THE OWNER. ONCE ANY DEMOLITION WORK HAS BEGUN, ANY INOPERABLE OR DAMAGED MATERIAL SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.	21. ELECTRICAL CONTRACTOR SHALL VERIFY FINAL LOCATIONS OF ALL SINKS WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN. ANY ELECTRICAL DEVICES LOCATED ABOVE COUNTER AND BEHIND FINAL SINK LOCATIONS SHALL BE SHIFTED A MINIMUM OF 6" TO EITHER SIDE OF SINK. ANY ELECTRICAL DEVICES LEFT BEHIND SINK AT TIME OF FINAL ELECTRICAL OBSERVATION SHALL BE RELOCATED AT ELECTRICAL CONTRACTOR'S EXPENSE.
2. VERIFICATION OF EXISTING CONDITIONS. "IN AS MUCH AS THE REMODELING AND/OR REHABILITATION OF THE EXISTING BUILDING REQUIRES THAT CERTAIN ASSUMPTIONS BE MADE REGARDING EXISTING CONDITIONS, AND BECAUSE SOME OF THESE ASSUMPTIONS MAY NOT BE VERIFIABLE WITHOUT DESTROYING OTHERWISE ADEQUATE OR SERVICEABLE PORTIONS OF THE BUILDING, THE GENERAL CONTRACTOR AGREES THAT, EXCEPT FOR NEGLIGENCE ON THAT PART OF THE DESIGN PROFESSIONAL, THE CONTRACTOR WILL HOLD HARMLESS, INDEMNIFY AND DEFEND THE DESIGN PROFESSIONAL FROM AND AGAINST ANY AND ALL CLAIMS ARISING OUT OF THE PROFESSIONAL SERVICES PROVIDED."	22. BACK TO BACK RECEPTACLES ARE NOT PERMITTED. MAINTAIN SEPARATION OF AT LEAST ONE STUD - REFER TO ARCHITECTURAL ACoustICAL DETAILS. IF BOXES ARE WITHIN 24" OF EACH OTHER IN A FIRE RATED WALL A FIRE BARRIER MOLDABLE PUTTY (3M OR EQUIVALENT) SHALL BE USED.
3. ANY ELECTRICAL ITEMS SHOWN OR NOT SHOWN ON THE PLANS, OR WHERE CIRCUITS ARE REMOVED BY DEMOLITION, SHALL UPON COMPLETION OF REMODEL WORK BE LEFT IN WORKING CONDITION.	23. FEED THROUGH GFCI PROTECTION OF RECEPTACLES IS ACCEPTABLE ONLY WHERE RECEPTACLES ARE IN SAME ROOM AND DRAWINGS DO NOT INDICATE OTHERWISE.
4. ALL PHASES OF THE ELECTRICAL WORK SHALL BE COORDINATED WITH THE ARCHITECT. WORK SHALL BE DONE IN A FASHION TO CAUSE AS LITTLE INCONVENIENCE AS POSSIBLE TO THE OWNER.	24. PROVIDE BLANK COVER PLATES AND INSTALL THEM ON ALL UNUSED ROUGH-INS.
5. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO REVIEW ALL DRAWINGS FOR WORK UNDER THIS CONTRACT. NO EXTRAS WILL BE ALLOWED FOR WORK SHOWN ON MECHANICAL AND ARCHITECTURAL DRAWINGS.	25. INSTALL PIGTAIL AT ALL RECEPTACLES FOR FINAL CONNECTIONS.
6. ELECTRICAL DEVICES NOTED TO BE REMOVED SHALL BE REMOVED BACK TO A POINT WHERE EXISTING CONDUIT CAN BE ABANDONED IN CONCEALED SPACES. REMOVE ALL WIRING FROM ABANDONED CONDUIT. ALL BOXES TO BE REMOVED SHALL BE TAKEN OUT OF WALLS AND HAVE HOLES REFINISHED TO MATCH WALL FINISH.	26. ALL NEW ELECTRICAL ITEMS SHOWN ON EXISTING WALLS AND CEILINGS SHALL BE FLUSH MOUNTED UNLESS NOTED OTHERWISE. CUT AND PATCH EXISTING WALLS AND CEILINGS TO CONCEAL ALL MOUNTING BOXES AND CONDUITS.
7. ELECTRICAL CONTRACTOR SHALL NOT DEFACE ANY AREAS OF THE BUILDING WHERE REMODELING IS NOT BEING DONE.	27. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH GC TO MAINTAIN FIRE RATINGS FOR ALL CONDUIT PENETRATIONS, INCLUDING CONDUIT SLEEVES THROUGH FIRE RATED CONSTRUCTION. THIS INCLUDES SEALING ALL SPARE CONDUITS (SPECIAL SYSTEMS, ETC.).
8. THE ELECTRICAL CONTRACTOR SHALL BE ON SITE DURING ALL ELECTRICAL INSPECTIONS. NO ADDITIONAL FEES OR OVERTIME WILL BE PAID FOR AFTER HOURS INSPECTIONS.	28. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MEASURE THE HORIZONTAL AND VERTICAL DIMENSIONS OF HIS WORK BEFORE INSTALLATION AND COORDINATE THESE DIMENSIONS WITH OTHER CONTRACTORS IMMEDIATELY. IF CEILING HEIGHTS ARE AFFECTED, NOTIFY THE OTHER CONTRACTORS AND THE ARCHITECT IMMEDIATELY. FAILURE TO DO SO WILL RESULT IN REJECTION OF INSTALLED WORK AND REINSTALLATION OF PROPERLY LOCATED AND COORDINATED WORK WILL BE AT THIS CONTRACTOR'S EXPENSE.
9. RACEWAYS: ALL CONDUIT SHALL BE CONCEALED WHEREVER POSSIBLE. CONDUIT SHALL NOT BE EXPOSED IN FINISHED AREAS (EXCLUDES MECHANICAL ROOMS, STORAGE CLOSETS, AND SIMILAR AREAS). EXPOSED RACEWAYS SHALL BE SURFACE RACEWAYS PER SPECIFICATIONS.	29. LIGHT FIXTURES AND DEVICES IN 1-HOUR FIRE RATED CEILINGS MUST BE "TENTED". TENTING WILL BE PERFORMED BY OTHERS (EC TO COORDINATE WITH GC). COORDINATE HEIGHT REQUIRED FOR ADDITIONAL TENTING WITH CEILING AND ELECTRICAL CONTRACTORS. REFER TO ARCHITECTURAL DRAWINGS.
10. ROUTING OF EXISTING CONCEALED CONDUIT NOT KNOWN. LOCATION DETERMINED BY ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL RE-CIRCUIT AS NOTED UTILIZING ANY EXISTING CONDUIT. HE SHALL REMOVE EXISTING WIRE AND RE-PLUG NEW. ALL NEW CONDUIT ADDED SHALL BE CONCEALED WHEREVER POSSIBLE.	30. FIXTURE WHIPS SHALL BE SUPPORTED ABOVE ACCESSIBLE CEILING. LAYING FIXTURE WHIPS ON TOP OF THE GRID OR SUPPORTING USING THE FIXTURE HANGERS IS NOT ALLOWED. FIXTURE WHIPS SHALL NOT CONTACT PLUMBING.
11. SURFACE RACEWAY: WHEREVER CONCEALED CONDUIT IN FINISHED AREAS IS NOT POSSIBLE, ELECTRICAL CONTRACTOR SHALL INSTALL SURFACE MOUNTED RACEWAYS EQUAL TO WIREMOLD. RUN SURFACE RACEWAYS IN CORNER OF WALL AND CEILING. ALL RACEWAYS THAT ARE EXPOSED SHALL BE APPROVED BY ARCHITECT PRIOR TO ROUGH-IN.	31. RELOCATIONS: OWNER RESERVES THE RIGHT TO RELOCATE ANY ELECTRICAL DEVICE. UP TO A DISTANCE OF 12'-0", BEFORE INSTALLATION WITHOUT EXTRA CHARGE FROM ELECTRICAL CONTRACTOR.
12. TERMINATING AND SPLICING: MAKE ALL JOINTS AND SPLICES IN BRANCH CIRCUIT WIRING WITH APPROVED SOLDERLESS TOOL APPLIED OR TWIST-ON CONNECTORS, IN THE VARIOUS BOXES, GUTTERS, AND SIMILAR LOCATIONS, BUT NOT IN RACEWAYS. LEAVE SUFFICIENT SLACK TO PERMIT TWO (2) OR MORE SPLICES OR JOINTS TO BE REMADE IN CASE OF FAULT.	32. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC ONLY. EXACT LOCATION OF ALL SYSTEMS AND EQUIPMENT SHALL BE FIELD VERIFIED AND COORDINATED WITH OTHER TRADES PRIOR TO ANY INSTALLATION. WHERE EXACT LOCATIONS ARE NECESSARY, THEY ARE DIMENSIONED ON THESE DRAWINGS. WHERE THERE IS A QUESTION OF ADEQUATE CLEARANCE OR COORDINATION BETWEEN TRADES, THIS CONTRACTOR SHALL PREPARE SHOP DRAWINGS FOR ENGINEER'S REVIEW. ON ALL SPECIAL SYSTEMS REQUIRING DRAWINGS BY LICENSED INSTALLATION CONTRACTORS, SUCH AS FIRE PROTECTION, SUCH DRAWINGS SHALL BE SUBMITTED WITHIN 30 DAYS AFTER AWARD OF CONTRACT.
13. MC CABLE, AC CABLE, AND NM CABLE (ROMEX) WILL NOT BE ALLOWED ON THIS PROJECT.	33. EMT CONDUIT FITTINGS: DRY LOCATIONS ALL EMT COUPLERS AND CONNECTORS SHALL BE STEEL SET SCREW TYPE. DIE CAST FITTINGS SHALL NOT BE USED ON THIS PROJECT. DAMP/WET LOCATIONS, USE STEEL COMPRESSION GLAND TYPE COUPLER AND CONNECTORS.
14. ELECTRICAL CONTRACTOR SHALL RECEIVE, FROM SYSTEM SUPPLIERS, ALL WIRING DIAGRAMS FOR ALL EQUIPMENT, PRIOR TO ANY ROUGH-IN, TO ASSURE PROPER ELECTRICAL CHARACTERISTICS ARE PROVIDED. ELECTRICAL CONTRACTOR SHALL PROVIDE ARCHITECT WRITTEN NOTIFICATION PRIOR TO ROUGH-IN, THAT ALL WIRING DIAGRAMS HAVE BEEN RECEIVED AND REVIEWED FOR CORRECTNESS. ANY INCORRECT WIRING OR DEVICES INSTALLED BY ELECTRICAL CONTRACTOR WITHOUT WIRING DIAGRAMS SHALL BE CORRECTED AT ELECTRICAL CONTRACTOR'S EXPENSE.	34. ALL WIRING INCLUDING SPECIAL SYSTEMS/LOW VOLTAGE THAT IS IN AN EXPOSED CEILING AREA SHALL BE IN CONDUIT. ALL SPLICES SHALL BE IN J-BOXES.
15. ELECTRICAL CONTRACTOR SHALL RECEIVE, FROM MECHANICAL CONTRACTOR, ALL WIRING DIAGRAMS AND SHOP DRAWINGS FOR ALL MECHANICAL EQUIPMENT, PRIOR TO ANY ROUGH-IN, TO ASSURE PROPER ELECTRICAL CHARACTERISTICS, VOLTAGE, PHASE, HORSEPOWER, AMPERE, KILOWATTS AND ETC. ARE PROVIDED. ELECTRICAL CONTRACTOR SHALL PROVIDE ARCHITECT WRITTEN NOTIFICATION PRIOR TO ANY ROUGH-IN, THAT ALL WIRING DIAGRAMS AND SHOP DRAWINGS HAVE BEEN RECEIVED AND REVIEWED FOR CORRECTNESS. ANY INCORRECT WIRING OR DEVICES INSTALLED BY ELECTRICAL CONTRACTOR WITHOUT WIRING DIAGRAMS SHALL BE CORRECTED AT ELECTRICAL CONTRACTOR'S EXPENSE.	35. ACCESS PANELS REQUIRED BY THE ELECTRICAL CONTRACTOR SHALL BE PROVIDED BY THE ELECTRICAL BID CONTRACTOR, THEN TURNED OVER TO THE APPROPRIATE TRADE FOR INSTALLATION. SEE ARCHITECTURAL SPECIFICATION.
16. COORDINATE WITH MECHANICAL CONTRACTOR LOCATION AND INSTALLATION OF ANY ELECTRICAL CONTROLS FOR MECHANICAL UNITS AND PROVIDE 120V CIRCUIT AS REQUIRED.	36. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE GENERAL CONTRACTOR TO OBTAIN ACTUAL ROOM NAMES AND NUMBERS, DESIGNATED BY THE OWNER/ARCHITECT AT THE COMPLETION OF THE PROJECT. ACTUAL ROOM NAMES AND NUMBERS SHALL BE USED ON ALL PANEL SCHEDULES, COMPUTER PROGRAMMING, GRAPHIC PLAQUES, SOUND SYSTEMS, TELEPHONE SYSTEM, INTERCOMS, FIRE ALARMS, SECURITY SYSTEMS, CATV SYSTEMS, AND SIMILAR.
17. ALL EXISTING AND NEW SMOKE DETECTORS IN OR NEAR AREAS BEING REMODELED SHALL BE BAGGED OR REMOVED. IF REMOVED, STORE IN A SEALED BAG UNTIL ALL REMODELING WORK IS COMPLETE. IF SMOKE DETECTORS ARE NOT BAGGED OR REMOVED THEY SHALL BE REPLACED WITH NEW DETECTORS AT CONTRACTOR'S EXPENSE WHEN THE PROJECT IS COMPLETED.	37. CONTRACTOR SHALL NOT FASTEN, ATTACH OR HANG ANY MATERIAL FROM THE ROOF DECK. ALL CONDUITS, JUNCTION BOXES, FIXTURES, DEVICES AND EQUIPMENT SHALL BE HUNG FROM THE STRUCTURAL STEEL FRAME AND SHALL BE PLACED WITH A MINIMUM CLEARANCE PER 2017 NEC BELOW THE ROOF DECK. WIRING AND CONDUITS SHALL NOT BE PLACED WITHIN THE RIBS OF THE ROOF DECK. CONTRACTOR SHALL NOT LOOSEN, REMOVE OR CUT ANY ROOFING SYSTEM FASTENERS PROTRUDING THROUGH THE ROOF DECK.
18. EXACT ELECTRICAL DEMOLITION REQUIREMENTS NOT SHOWN ON THE DRAWINGS. ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO DETERMINE EXACT DEMOLITION WORK TO BE DONE AND SHALL INCLUDE ALL DEMOLITION COSTS IN THEIR BID.	38. ALL ELECTRICAL DEVICES, CONDUIT, J-BOXES, CABLE SUPPORTS, ETC. THAT ARE REQUIRED TO BE SUPPORTED ABOVE THE GRID CEILINGS SHALL BE SUPPORTED FROM THE STRUCTURE VIA THREADED RODS, ALL AREAS.
19. ELECTRICAL CONTRACTOR SHALL VERIFY ELECTRICAL DEVICE LOCATIONS IN ALL CASEWORK WITH ARCHITECTURAL CASEWORK DETAILS PRIOR TO ANY ROUGH-IN.	39. MULTI-WIRE BRANCH CIRCUITS ARE NOT PERMITTED U.O.N. ON DRAWINGS. WHERE THEY ARE INSTALLED THEY SHALL BE COMMON TRIP OR HAVE HANDLE TIES AS REQUIRED BY N.E.C.
20. THE CONTRACTOR SHALL COORDINATE ALL ELECTRICAL DEVICE LOCATIONS WITH THE ARCHITECTURAL PLANS, ELEVATIONS, AND DIAGRAMS.	40. SWITCHES AND RECEPTACLES SHALL BE IDENTIFIED AS TO PANEL AND CIRCUIT BREAKER FED FROM LABEL COVERPLATE ON FRONT PER SPECIFICATION AND ON BACK WITH PERMANENT INK ENSURE NO BLEED THROUGH.
	41. THESE DRAWINGS ARE SUBJECT TO AN APPROVAL OF THE BUILDING DEPARTMENT, FIRE MARSHAL, UTILITY COMPANY, AND OTHER AGENCIES AUTHORITY HAVING JURISDICTION (AHJ), BY THE ACT OF SUBMITTING A BID PROPOSAL FOR WORK. THE CONTRACTOR HAS REVIEWED THE PLANS THOROUGHLY AND ACCEPTS FULL RESPONSIBILITY OF PLAN CORRECTIONS AND ASSOCIATED CONSTRUCTION COSTS REQUIRED BY AHJ.
	42. SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF LIGHT FIXTURES.

ELECTRICAL ABBREVIATIONS	
AC	ABOVE COUNTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMP. INTERRUPTING CAPACITY
AL	ALUMINUM
ANN	ANNUNCIATOR
ARCH	ARCHITECT
BFG	BELOW FINISHED GRADE
BKR	BREAKER
BTM	BOTTOM
BWE	BAKED WHITE ENAMEL
C	CONDUIT
CASA	COLOR AS SELECTED BY ARCHITECT
CATV	CABLE TELEVISION
CKT	CIRCUIT
CLG	CEILING
CT	CURRENT TRANSFORMER
CU	COPPER
DISC	DISCONNECT
DN	DOWN
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
EC	ELECTRICAL CONTRACTOR
ELEC	ELECTRICAL
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EWC	ELECTRICAL WATER COOLER
EXIST, EX, (E)	EXISTING
F.	FUSED
FLR	FLOOR
FLUOR	FLUORESCENT
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT INTERRUPTER
GRF	GALVANIZED RIGID CONDUIT
GRD	GROUND
HOA	HAND-OFF-AUTO
HT	HEAT TRACE
IG	ISOLATED GROUND
J-BOX	JUNCTION BOX
LED	LIGHT-EMITTING DIODE
LOC	LOCATION
LTG	LIGHTING
LTF	LIQUID TIGHT FLEXIBLE CONDUIT
LTS	LIGHTS
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MLO	MAIN LUG ONLY
MTD	MOUNTED
(N)	NEW
NF	NON FUSED
N.T.S.	NOT TO SCALE
NL	NIGHT LIGHT
PB	PUSH BUTTON
PC	PHOTO CELL
PH	PHASE
PNL	PANEL
PT	POTENTIAL TRANSFORMER
PWR	POWER
RECEPT, RCPT, REC	RECEPTACLE
RL	RELOCATE
RT	RAIN TIGHT, NEMA 3R
SCA	SHORT CIRCUIT AVAILABLE
SM	SURFACE MOUNT
SPC	SPACE
SPD	SURGE PROTECTION DEVICE
SPDT	SINGLE POLE DOUBLE THROW
SPST	SINGLE POLE SINGLE THROW
SPR	SPARE
SSL	SOLID-STATE LIGHTING
SW	SWITCH
T-STAT	THERMOSTAT
TBD	TO BE DETERMINED
TC	TIME CLOCK
TTB	TELEPHONE TERMINAL BACKBOARD
TYP	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
UC	UNDER COUNTER
V	VOLTS
VA	VOLT-AMPERES
VAC	VOLTS-ALTERNATING CURRENT
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
W/	WITH
W/O	WITHOUT
WG	WIRE GUARD
WP	WEATHERPROOF
XFMR	TRANSFORMER

NOTE: THIS IS A COMPREHENSIVE LEGEND AND ABBREVIATIONS LIST AND ALL SYMBOLS SHOWN MAY NOT APPEAR ON DRAWINGS.

Sheet List	
Sheet Number	Sheet Name
E0.1	GENERAL CONSTRUCTION NOTES AND LEGEND
E1.0	OVERALL ELECTRICAL PLAN
ED1.1	DEMO POWER PLAN
ED1.2	DEMO LIGHTING PLAN
E1.1	POWER PLAN
E1.2	LIGHTING PLAN
E5.0	ELECTRICAL ONE-LINE
E6.0	ELECTRICAL SCHEDULES
E7.0	ELECTRICAL DETAILS
E8.0	ELECTRICAL SPECIFICATIONS

ELECTRICAL LEGEND	
	FLAG NOTE
	MECHANICAL EQUIPMENT SYMBOL
	SPECIAL EQUIPMENT SYMBOL
	INDICATES AIMING DIRECTION
	INDICATES EXISTING DEVICE TO REMAIN
	INDICATES EXISTING DEVICE TO BE REMOVED
	EXISTING CIRCUIT RUN TO REMAIN
	EXISTING CIRCUIT RUN TO BE REMOVED
	CIRCUIT RUN: NIGHT LIGHT
	CIRCUIT RUN: UNDERFLOOR
	CIRCUIT RUN: UNDERGROUND
	CIRCUIT RUN: WALLS OR CEILING
	CIRCUIT TURNS UP
	CIRCUIT TURNS DOWN
	UNDERGROUND TELEPHONE RUN
	UNDERGROUND SECONDARY OR PRIMARY SERVICE
	GROUND BUS
	SURFACE RACEWAY
	PLUG STRIP AS NOTED
	LOW VOLTAGE CIRCUIT
	MOISTURE OR EXPLOSION PROOF SEAL
	HOME RUN (PROVIDE DEDICATED NEUTRALS MULTI-WIRE BRANCH CIRCUITS NOT ALLOWED)
	A - PANEL DESIGNATION 1,3,5 - CIRCUIT NUMBER, 6 CONDUCTORS U.O.N.
	TRANSFORMER
	WEATHERHEAD
	MAIN DISTRIBUTION PANEL
	SWITCH AND FUSE
	CIRCUIT BREAKER
	CTS
	PTS
	GROUND
	METER
	ELECTRICAL PANEL
	TELEPHONE TERMINAL BOARD
	CONTACT - NORMALLY CLOSED (NC)
	CONTACT - NORMALLY OPEN (NO)
	LIGHTING OUTLET: CEILING RECESSED
	LIGHTING OUTLET: CEILING SURFACE A - FIXTURE TYPE, b - SWITCHING
	LIGHTING OUTLET: WALL MOUNTED SPOT LIGHT
	PORCELAIN KEYLESS P&S110 W/ 150W A21 LAMP - pc (PULL CHAIN)
	FLUORESCENT/LED FIXTURE: SURFACE
	FLUORESCENT FIXTURE/LED: SUSPENDED DIRECT/INDIRECT
	FLUORESCENT/LED FIXTURE: RECESSED IN DRYWALL
	FLUORESCENT/LED FIXTURE: RECESSED IN GRID DIRECT/INDIRECT
	FLUORESCENT/LED FIXTURE: RECESSED IN GRID PARABOLIC (U.O.N.)
	FLUORESCENT/LED FIXTURE: WALL MOUNTED
	FLUORESCENT/LED STRIP
	TRACK LIGHTING FIXTURE
	INDICATES NIGHT LIGHT OR EMERGENCY CIRCUIT
	INDICATES NIGHT LIGHT OR EMERGENCY CIRCUIT
	EXIT SIGN: CEILING MOUNTED
	EXIT SIGN: WALL MOUNTED
	EMERGENCY BATTERY WITH NO LAMPS/HEADS)
	EMERGENCY BATTERY WITH LAMPS
	REMOTE EMERGENCY LIGHTS
	REMOTE INDICATING LIGHT
	RELAY
	NOTE: ALL SWITCHES SHALL BE MOUNTED AT 48" AFF TO TOP OF BOX (U.O.N.)
	SINGLE POLE SWITCH, 20 AMP U.O.N.
	DOUBLE POLE SWITCH, 20 AMP U.O.N.
	3 - WAY SWITCH, 20 AMP U.O.N.
	SINGLE POLE SWITCH, 20 AMP U.O.N. 3 - THREE WAY, a - SWITCHING
	4 - WAY SWITCH, 20 AMP U.O.N.
	KEYED SWITCH, 20 AMP U.O.N.
	PILOT SWITCH, 20 AMP U.O.N. SWITCH ON, LIGHT ON
	SWITCH WITH THERMAL OVERLOAD, 20 AMP U.O.N.
	DIGITAL TIMER SWITCH
	SWITCH VARIABLE SPEED
	SWITCH LOW VOLTAGE
	DIMMER SWITCH AS NOTED, 20 AMP U.O.N.
	COMBINATION SWITCH/RECEPTACLE
	SINGLE RECEPTACLE, + 16" AFF TO BOTTOM OF BOX (U.O.N.)
	DUPLEX RECEPTACLE, + 16" AFF TO BOTTOM OF BOX (U.O.N.)
	DUPLEX RECEPTACLE, INDIVIDUAL GROUND FAULT RECEPTACLE
	DOUBLE DUPLEX RECEPTACLE, + 16" AFF TO BOTTOM OF BOX (U.O.N.)
	DUPLEX RECEPTACLE, SPLIT WIRED
	TELEPHONE OUTLET, + 16" AFF TO BOTTOM OF BOX (U.O.N.)
	W - WALL OUTLET, + 54" AFF (U.O.N.)
	P - PAYPHONE, + 40" AFF (U.O.N.)
	X DENOTES # OF JACKS
	DATA OUTLET, + 16" AFF TO BOTTOM OF BOX (U.O.N.)
	X DENOTES # OF JACKS
	DATA/VOICE OUTLET, + 16" AFF TO BOTTOM OF BOX (U.O.N.)
	SPECIAL PURPOSE OUTLET AS NOTED, + 16" AFF TO BOTTOM OF BOX (U.O.N.)
	FLUSH FLOOR TELEPHONE OUTLET S - SURFACE PEDESTAL
	FLUSH FLOOR DUPLEX OUTLET S - SURFACE PEDESTAL
	MULTI-CELL FLOOR BOX
	J-BOX: CEILING
	J-BOX: WALL
	EMERGENCY POWER OFF (MUSHROOM HEAD)
	MOTOR OUTLET AND CONNECTION
	MAGNETIC STARTER OR CONTACTOR
	DISCONNECT SWITCH
	DISCONNECT SWITCH NF - NON-FUSED
	FIRE-SMOKE DAMPER/SMOKE DAMPER
	LIGHTING CONTROL STATION
	OCCUPANCY SENSOR
	VACANCY SENSOR
	PHOTO CELL - ELECTRIC
	CONTRACTOR
	RELAY

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SHEET CONTENTS
GENERAL CONSTRUCTION NOTES AND LEGEND

EYESTONE ELEMENTARY ECE
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THE DESIGN AND CONSTRUCTION OF THIS PROJECT IS THE SOLE RESPONSIBILITY OF THE DESIGN PROFESSIONAL. THE DESIGN PROFESSIONAL SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THIS PROJECT. THE DESIGN PROFESSIONAL SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THIS PROJECT.

NO.	BY	DATE	DESCRIPTION



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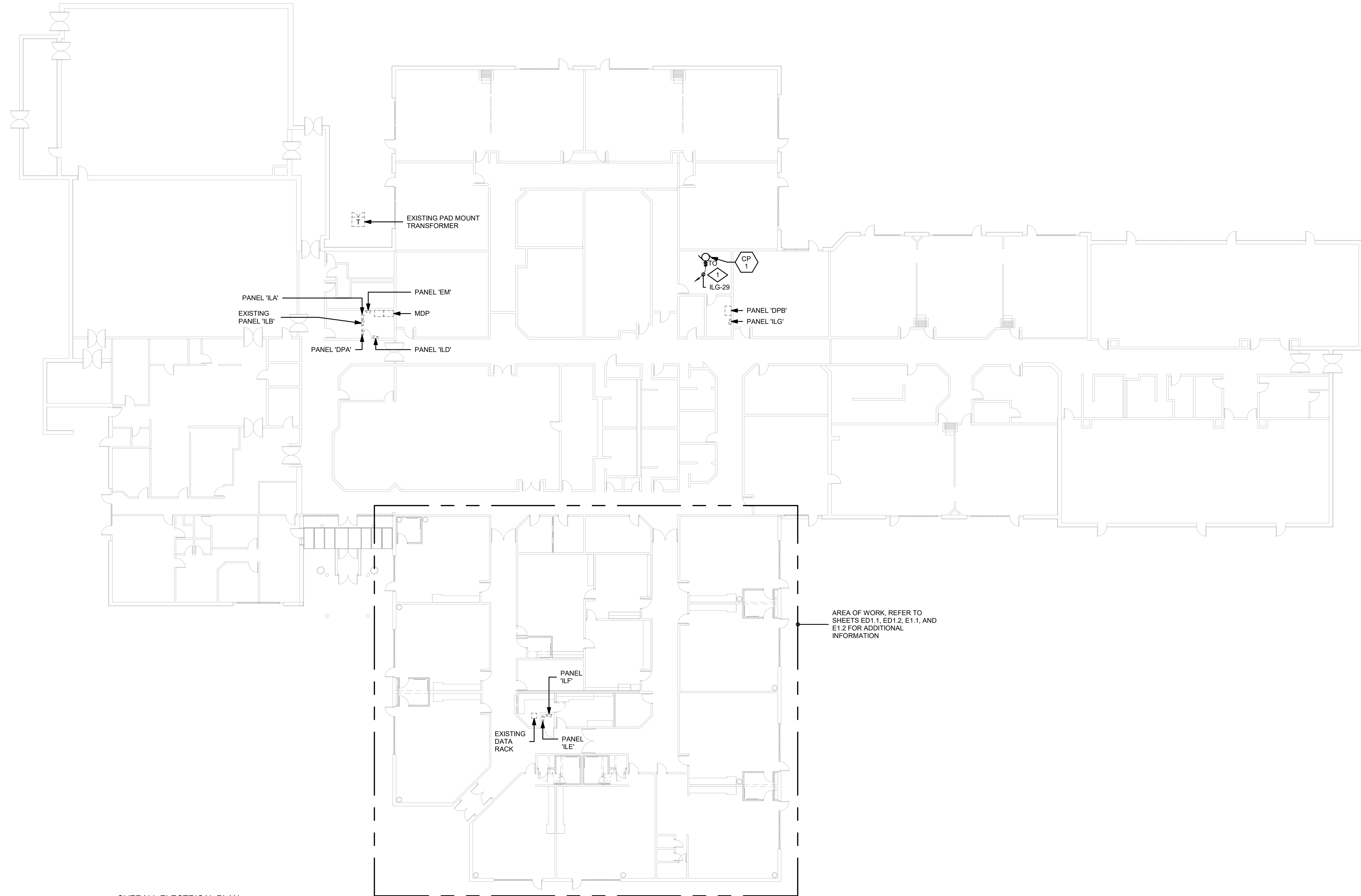
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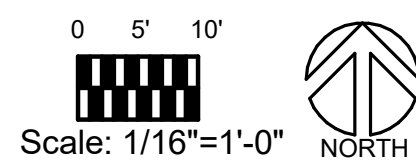
REVISIONS

FLAG NOTES - THIS SHEET ONLY

1 REMOVE EXISTING CIRCULATION PUMP AND REPLACE WITH NEW. RECONNECT TO EXISTING CIRCULATION PUMP CIRCUIT. EC SHALL FIELD VERIFY AND NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY.



1 OVERALL ELECTRICAL PLAN
1/16" = 1'-0"



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SHEET CONTENTS
OVERALL ELECTRICAL PLAN

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03/18/2022

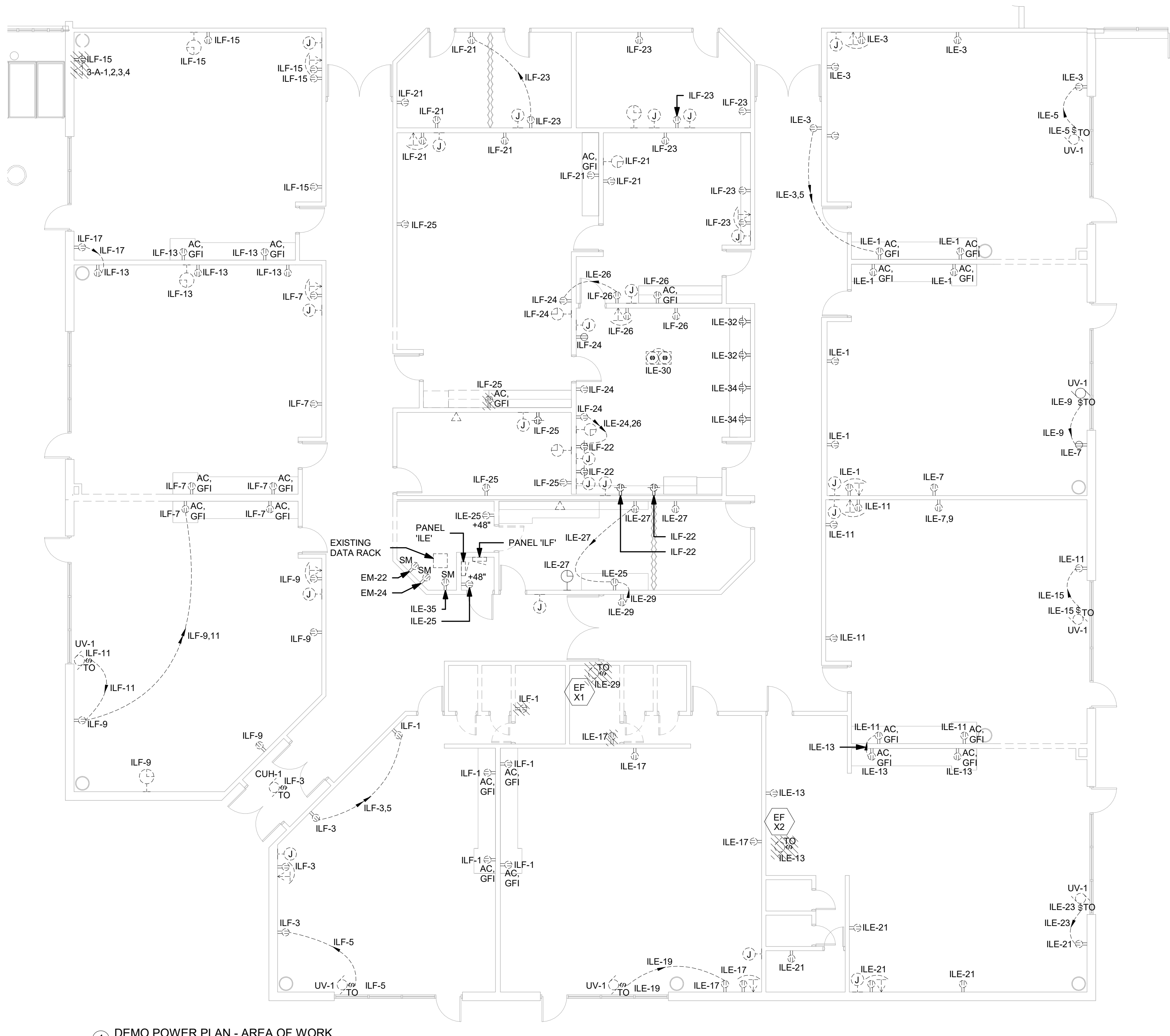
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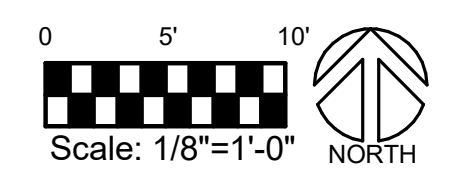
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REVISIONS

LOAD REMOVED - POWER			
EF-X1			0.350 kW
EF-X2			0.105 kW
EXISTING CIRC PUMP (1/25HP)			0.050 kW
RECEPTACLES	5 QTY	180 W	0.900 kW
TOTAL POWER LOAD REMOVED			1.355 kW



1 DEMO POWER PLAN - AREA OF WORK
1/8" = 1'-0"



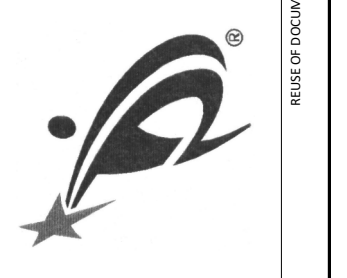
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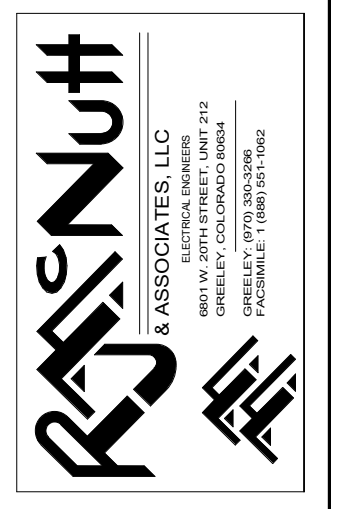
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REVISIONS

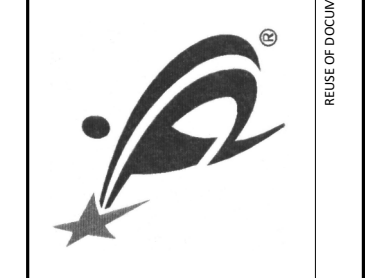
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SHEET CONTENTS
DEMO POWER PLAN



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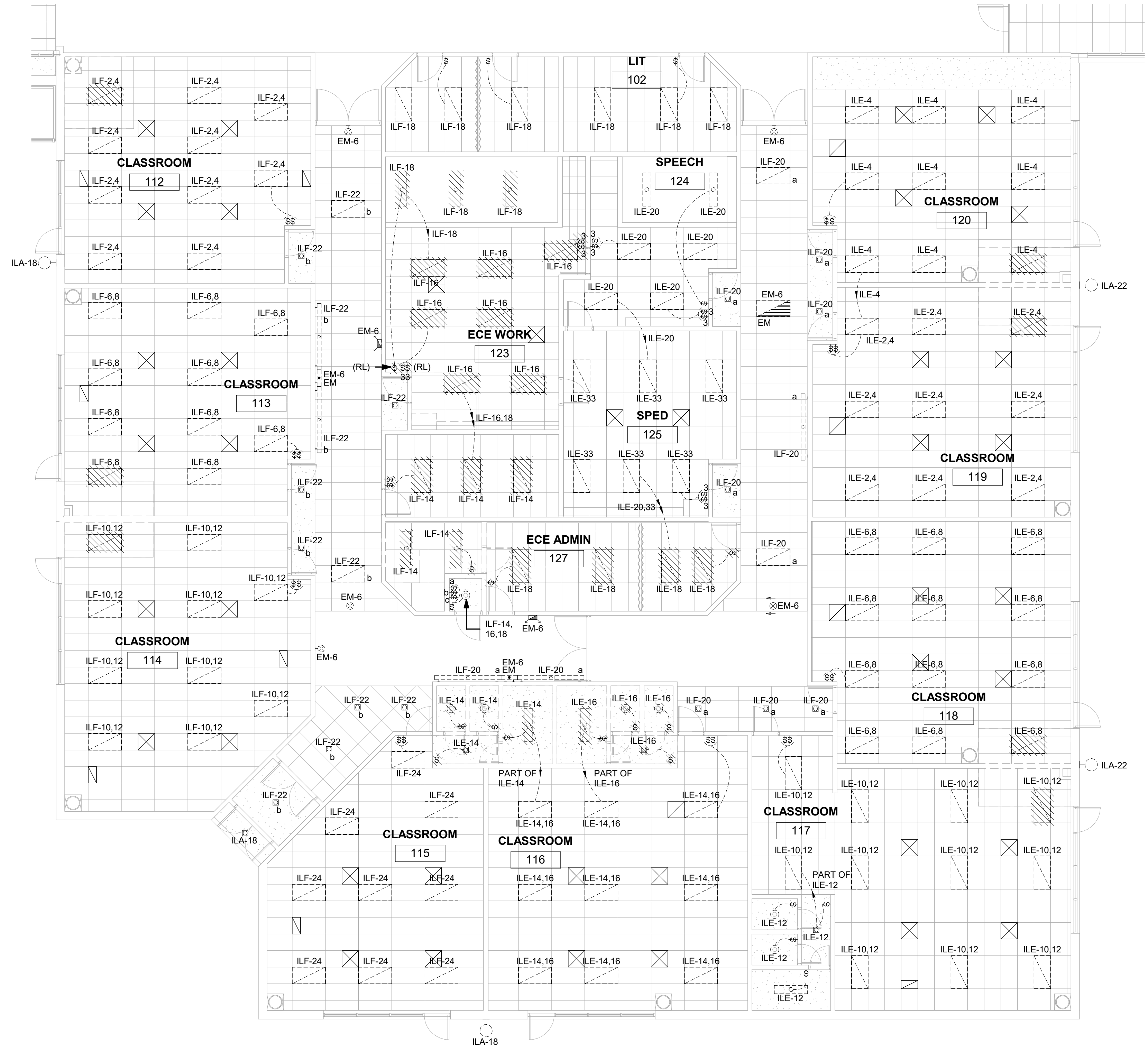


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NO. BY	DESCRIPTION
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2 WMC	
3 WMC	
DATE	
03.21.2022	
SHEET NO.	ED1.2

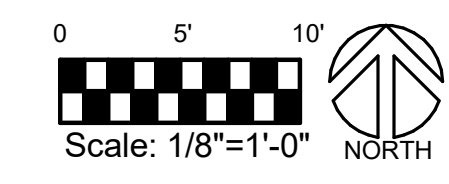


03/18/2022



LOAD REMOVED - LIGHTING			
	QTY	LOAD	TOTAL
2 X 4 FLOURESCENT	21	160 W	3.360 KW
1 X 4 FLOURESCENT	7	80 W	0.560 KW
DOWNLIGHT	6	30 W	0.180 KW
TOTAL LIGHTING LOAD REMOVED			4.100 KW

1 DEMO LIGHTING PLAN - AREA OF WORK
 1/8" = 1'-0"



- FLAG NOTES - THIS SHEET ONLY
- 1 PROVIDE CEILING MOUNTED JUNCTION BOX WITH ROUND PLASTER RING AND 1/2" C. TO ABOVE ACCESSIBLE CEILING FOR STROBE LIGHT. COORDINATE WITH F/A CONTRACTOR.
 - 2 PROVIDE JUNCTION BOX WITH BLANK COVER PLATE AND 1/2" C. TO ABOVE ACCESSIBLE CEILING FOR FUTURE.
 - 3 CONNECT NEW RECEPTACLE TO CIRCUIT FEEDING RECEPTACLES REMOVED DURING DEMOLITION.
 - 4 SEE TYPICAL ROOM CONTROLLER LIGHTING CONTROL DETAIL, SHEET E7.0. REFER TO LIGHTING PLAN, SHEET E1.2, FOR CONTROL DEVICE LAYOUTS.

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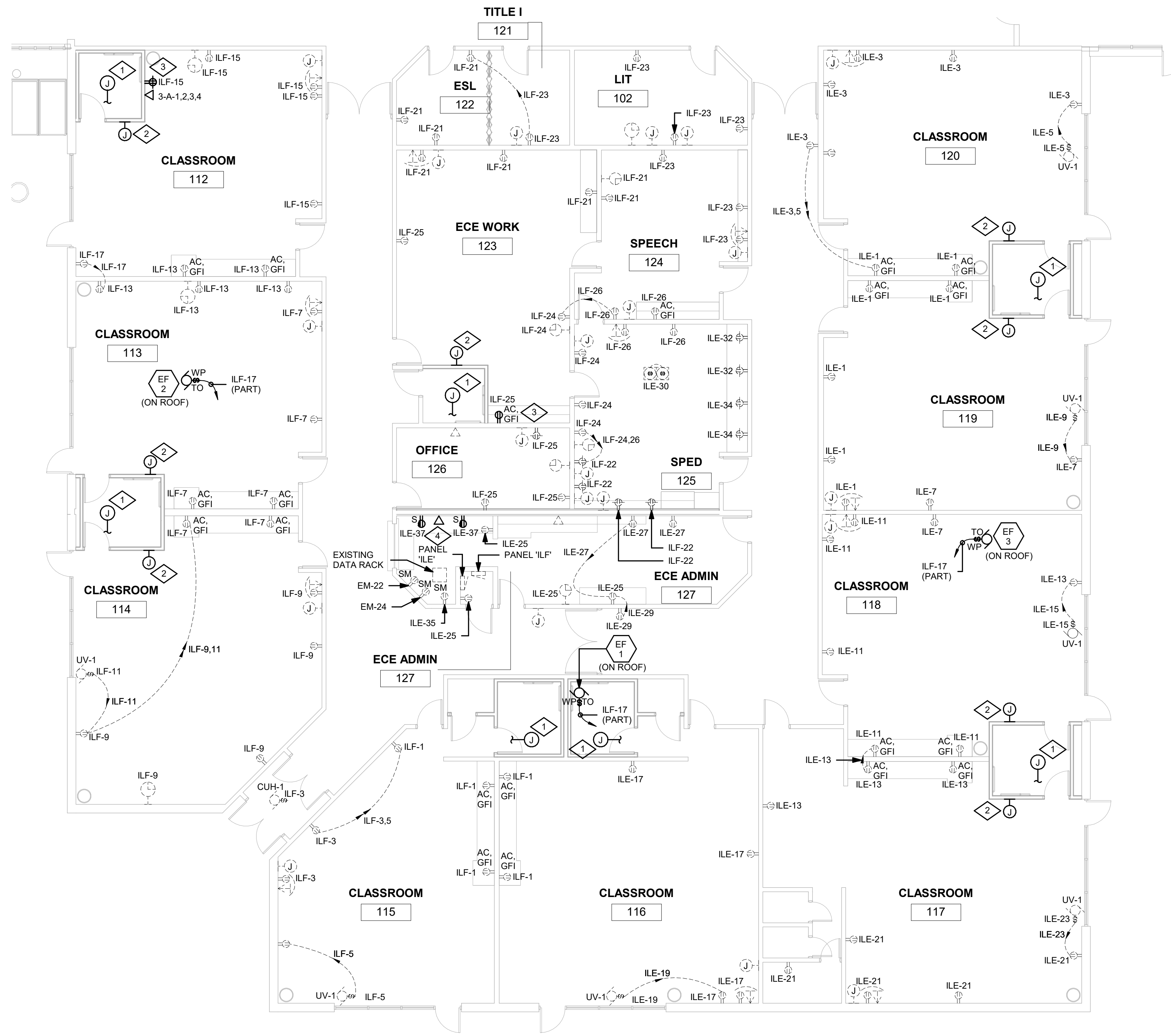
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SHEET CONTENTS
 POWER PLAN

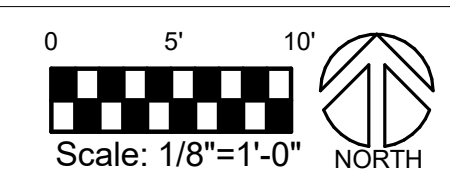
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NO.	BY	DESCRIPTION	DATE

LOAD SUMMARY - NEW POWER			
EF-1			0.050 KW
EF-2			0.075 KW
EF-3			0.050 KW
CP-1			0.500 KW
RECEPTACLES	5 QTY	180 W	0.900 KW
TOTAL POWER LOAD ADDED			1.575 KW



1 POWER PLAN - AREA OF WORK
 1/8" = 1'-0"



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REVISIONS

FLAG NOTES - THIS SHEET ONLY	
1	CONNECT NEW LIGHTING FIXTURES TO UNSWITCHED PORTION OF EXISTING CLASSROOM LIGHTING CIRCUIT TO REMAIN.
2	RE-CIRCUIT EXISTING LIGHTING TO REMAIN TO EXISTING LOCAL LIGHTING CIRCUIT.
3	SEE TYPICAL ROOM CONTROLLER LIGHTING CONTROL DETAIL, SHEET E7.0, FOR ADDITIONAL INFORMATION.

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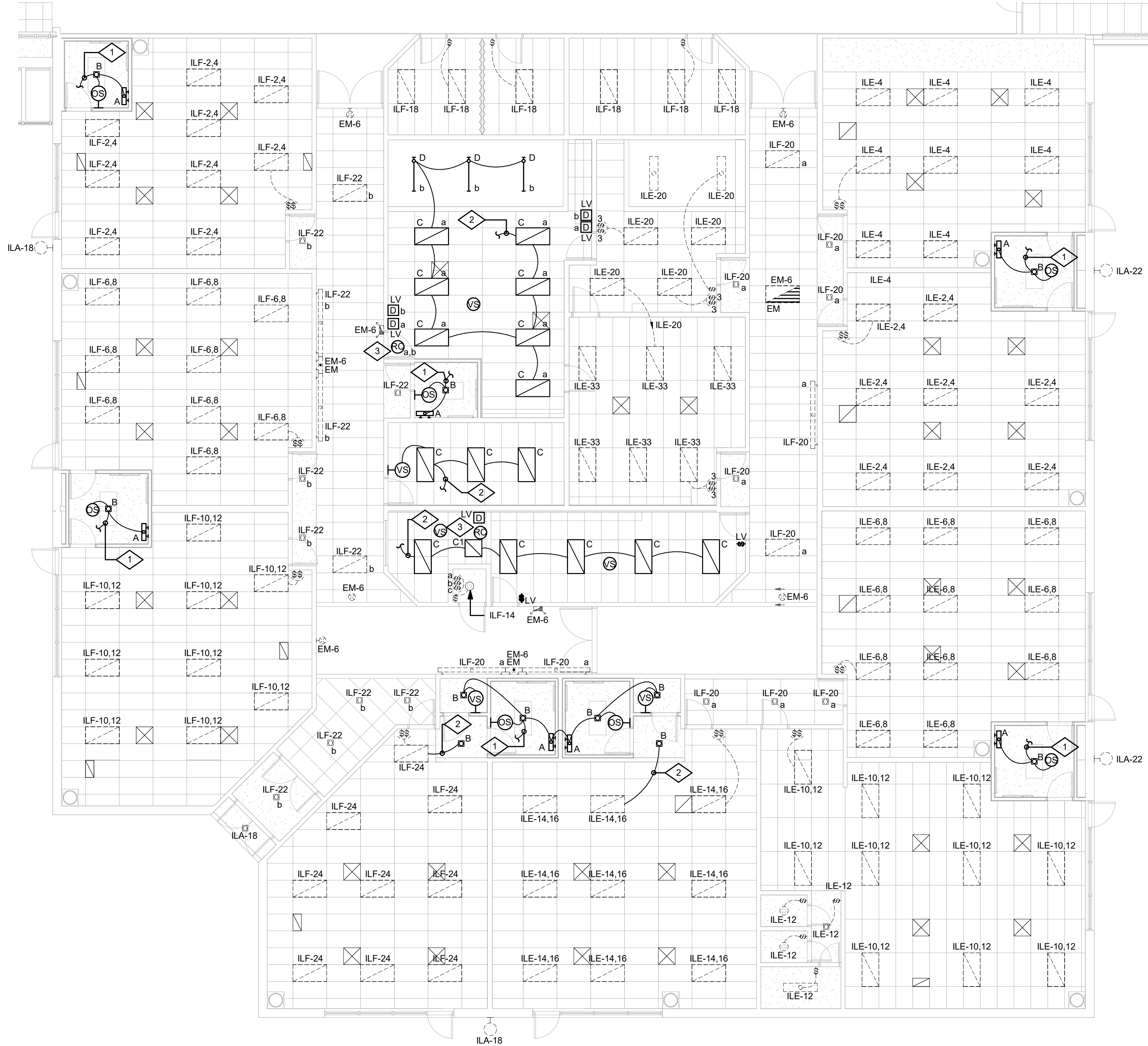
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SHEET CONTENTS
 LIGHTING PLAN

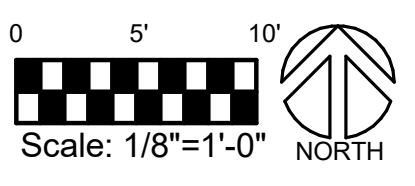
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NO.	BY	DESCRIPTION	DATE

LOAD SUMMARY - NEW LIGHTING			
TYPE A	7 QTY	29 W	0.203 KW
TYPE B	11 QTY	14.2 W	0.156 KW
TYPE C	15 QTY	41.4 W	0.621 KW
TYPE C1	1 QTY	19.6 W	0.020 KW
TYPE D	3 QTY	31 W	0.093 KW
TOTAL LIGHTING LOAD ADDED			1.093 KW



1 LIGHTING PLAN - AREA OF WORK
 1/8" = 1'-0"



03/18/2022

ISSUE FOR PERMIT

DESIGNED CAD	CHECKED WMC	DATE 03.21.2022	SHEET NO. F1.2
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REVISIONS

120/208		Voltage		Panel		Exist '1LE'		Surface		Mountings	
3 Phase, 4 Wire		NEMA 1		Enclosure Rating		AIC 10000 @ 240V		225A MLO		Mains	
								100%		Neutral Rating	
								No		Isolated Ground Bar	
Description	Load (kW)	BKR	CKT #	PH.	CKT #	BKR	Load (kW)	Description			
Rm 182 Plugs		20/1	1	A	2	20/1		Rm 182 Lights			
Rm 183 Plugs		20/1	3	B	4	20/1		Rm 183 Lights			
Htr Rm 183		20/1	5	C	6	20/1		Rm 181 Lights			
Rm 182 Plugs		20/1	7	A	8	20/1		Rm 181 Lights			
Htr Rm 182		20/1	9	B	10	20/1		Rm 180 Lights Rm 117			
Rm 181 Plugs		20/1	11	C	12	20/1		Rm 180 Lights Rm 117			
Rm 180 R Rm 117 Ex		20/1	13	A	14	20/1		Rm 175 Lights			
Htr Rm 181		20/1	15	B	16	20/1		Rm 175 Lights			
Rm 175 Plugs		20/1	17	C	18	20/1		Rm 163 & 164 Lights			
Htr Rm 175		20/1	19	A	20	20/1		Rm 186 Lights			
Rm 180 Plugs		20/1	21	B	22	20/1		Plugs Rm 161			
Htr Rm 180		20/1	23	C	24	20/1		Computer Plugs Rm 185			
Rm 163 & 164 Plugs		20/1	25	A	26	20/1		Counter Plugs Rm 185			
Rm 163 & 164 Plugs		20/1	27	B	28	20/1		Spare			
Ex Fan Rm 115 & 116		20/1	29	C	30	20/1		Floor Box Rm 185			
Rm 163 Copier		20/1	31	A	32	20/1		Plugs E Wall Rm 185			
Rm 185 Lights		20/1	33	B	34	20/1		Plugs E Wall Rm 185			
Plug Panel Rm Data		20/1	35	C	36	20/1		Spare			
ECE ADMIN RCPTS		20/1	37	A	38	20/1		Spare			
Spare		20/1	39	B	40	20/1		Spare			
Spare		20/1	41	C	42	20/1		Spare			

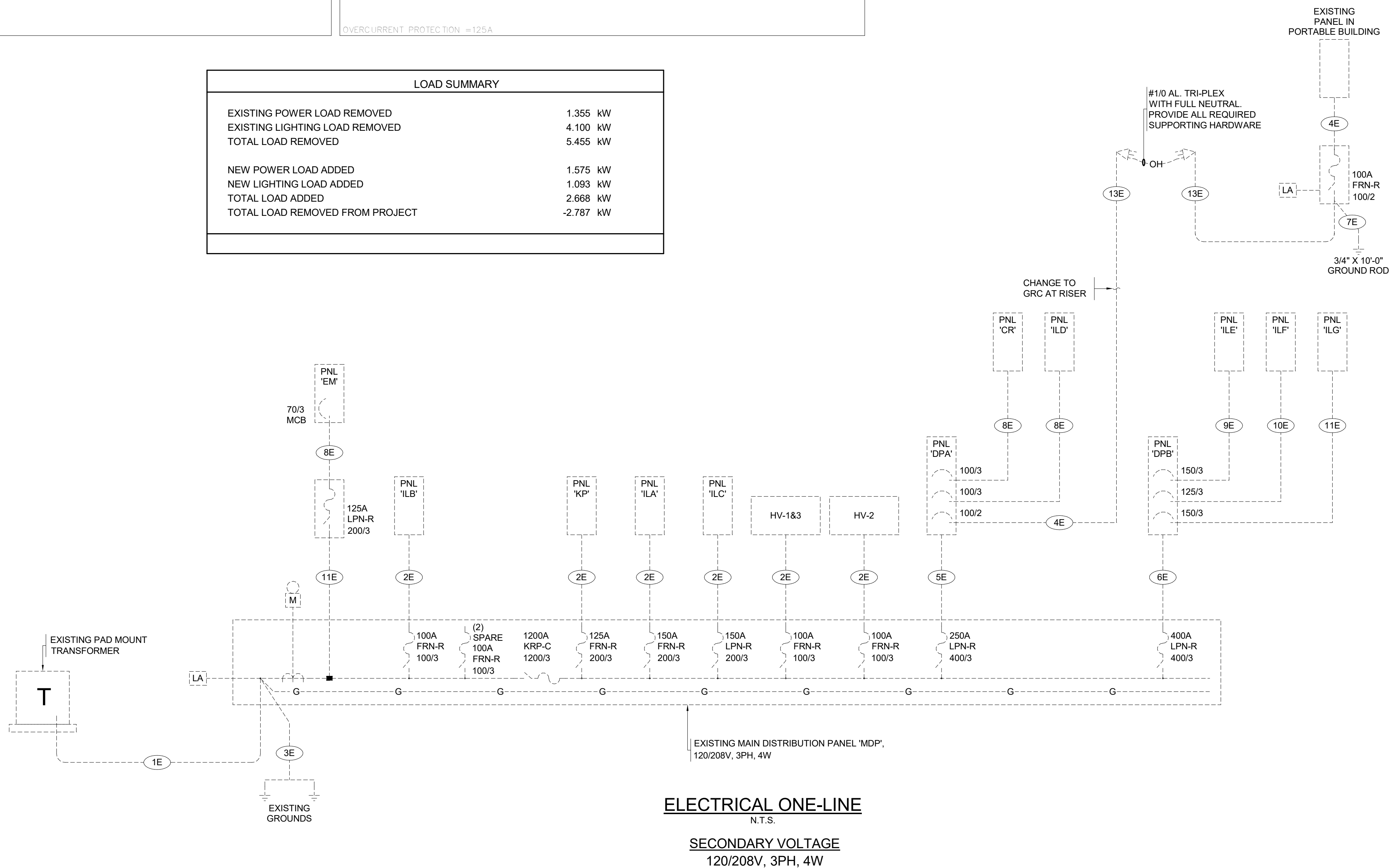
OVERCURRENT PROTECTION =150A

120/208		Voltage		Panel		Exist '1LF'		Surface		Mountings	
3 Phase, 4 Wire		NEMA 1		Enclosure Rating		AIC 10000 @ 240V		225A MLO		Mains	
								100%		Neutral Rating	
								No		Isolated Ground Bar	
Description	Load (kW)	BKR	CKT #	PH.	CKT #	BKR	Load (kW)	Description			
Rm 166 Plugs		20/1	1	A	2	20/1		Lights Rm 142			
Rm 166 Plugs		20/1	3	B	4	20/1		Lights Rm 142			
Htr Rm 166		20/1	5	C	6	20/1		Lights Rm 140			
Rm 139 & 140 Plugs		20/1	7	A	8	20/1		Lights Rm 140			
Rm 139 Plugs		20/1	9	B	10	20/1		Lights Rm 139			
Htr Rm 139		20/1	11	C	12	20/1		Lights Rm 139			
Plug Rm 140		20/1	13	A	14	20/1		Lights Rm 161 & 162			
Plugs Rm 142		20/1	15	B	16	20/1		Lights Rm 123			
Spare		20/1	17	C	18	20/1		Lights Rm 123 & 159			
Spare		20/1	19	A	20	20/1		Hall 141 Lights			
Plugs Rm 158		20/1	21	B	22	20/1		Hall 141 Lights			
Plugs Rm 187		20/1	23	C	24	20/1		Lights Rm 166			
Plugs Rm 161		20/1	25	A	26	20/1		Clocks Rm 123 & 125			
Computer Table		20/1	27	B	28	20/1		Spare			
Rm 116		20/1	29	C	30	20/1		Spare			
Computer Table		20/1	31	A	32	20/1		Used			
Pole Light		20/2	33	B	34	20/1		Computer Table			
Spare		//2	35	C	36	20/1		Spare			
Space			37	A	38	20/1		Computer Table			
Space			39	B	40	20/1		Space			
Space			41	C	42	20/1		Space			

OVERCURRENT PROTECTION =125A

FEEDER SCHEDULE	
KEY	DESCRIPTION
1E	4 RUNS [(4 #500 MCM THWN CU) 3 1/2"C.]
2E	EXISTING FEEDER TO REMAIN.
3E	(#3/0 CU GRD)
4E	(3 #1 THWN CU) 1 1/4"C.
5E	(4 #250 MCM THWN CU) 2 1/2"C.
6E	2 RUNS [(4 #4/0 THWN CU) 2 1/2"C.]
7E	(#6 CU GRD) 1/2"C.
8E	(4 #1 THWN CU) 1 1/2"C.
9E	(4 #2/0 THWN CU) 2"C.
10E	(4 #1/0 THWN CU) 2"C.
11E	(4 #1/0 THWN CU) 2"C.
12E	(4 #4 THWN CU) 1 1/4"C.
13E	(3 #1 THWN CU) 1 1/4"GRC

LOAD SUMMARY	
EXISTING POWER LOAD REMOVED	1.355 kW
EXISTING LIGHTING LOAD REMOVED	4.100 kW
TOTAL LOAD REMOVED	5.455 kW
NEW POWER LOAD ADDED	1.575 kW
NEW LIGHTING LOAD ADDED	1.093 kW
TOTAL LOAD ADDED	2.668 kW
TOTAL LOAD REMOVED FROM PROJECT	-2.787 kW



ELECTRICAL ONE-LINE
N.T.S.
SECONDARY VOLTAGE
120/208V, 3PH, 4W

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SHEET CONTENTS
ELECTRICAL ONE-LINE

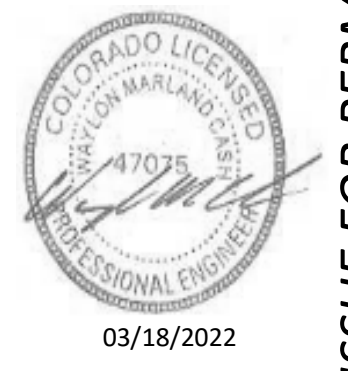
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4000 WILSON AVENUE
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NO.	BY	DESCRIPTION	DATE

ISSUE FOR PERMIT

DESIGNED CAD	CHECKED WMC	DATE 03.21.2022	SHEET NO. F5.0
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REVISIONS



03/18/2022

MECHANICAL EQUIPMENT SCHEDULE										
	DESCRIPTION	HP	KW.	AMP	VOLTAGE PHASE	WIRE SIZE	CONDUIT	BREAKER	SWITCH & FUSE	REMARKS
CP 1	CIRCULATION PUMP #1	1/8		4.4FLA	120V	2 #12 THWN CU & #12 CU GRD	1/2"	20/1	STO	NOTE 1
EF 1	EXHAUST FAN #1	1/15	0.05		120V	2 #12 THWN CU & #12 CU GRD	1/2"	20/1	STO	NOTE 1
EF 2	EXHAUST FAN #2	1/10	0.08		120V	2 #12 THWN CU & #12 CU GRD	1/2"	20/1	STO	NOTE 1
EF 3	EXHAUST FAN #3	1/15	0.05		120V	2 #12 THWN CU & #12 CU GRD	1/2"	20/1	STO	NOTE 1
EF X1	EXHAUST FAN - EXISTING #1	1/8	0.35		120V	2 #12 THWN CU & #12 CU GRD	1/2"	20/1	STO	
EF X2	EXHAUST FAN - EXISTING #2		0.105		120V	2 #12 THWN CU & #12 CU GRD	1/2"	20/1	STO	

NOTES:
1. CONTROL VIA EXISTING BUILDING DDC SYSTEM. COORDINATE WITH MECHANICAL.

LIGHTING FIXTURE SCHEDULE										
TYPE	LAMPS	DESCRIPTION	FINISH	MOUNTING	MANUFACT.	CATALOG #	VOLT.	NOTES		
A	LED-29W 3000 LUMENS 3500K 83 CRI	37" LED WALL SCONCE, 0-10V DIMMING.	GRAPHITE METALLIC	WALL	SHARPER	605-37-W-L4/835-UNV-GRM-2VTB	120/277			
B	LED-14.2W 1500 LUMENS 3500K 80CRI	6" LENSED LED DOWNLIGHT, MEDIUM 60 DEGREE BEAM ANGLE, 0-10V DIMMING.	SEMI-SPECULAR	RECESSED	HALO	HC615D010-HM612835-61MDH	120/277			
C	LED-41.4W 3500K 4591 LUMENS 80CRI	2' X 4' RECESSED FLAT PANEL WITH 0-10V DIMMING TO 10% HIGH EFFICIENCY PACKAGE.	WHITE	RECESSED	METALUX	24FP4735C	MVOLT			
C1	LED-19.6W 3500K 2551 LUMENS 80CRI	2' X 2' RECESSED FLAT PANEL WITH 0-10V DIMMING TO 10% HIGH EFFICIENCY PACKAGE.	WHITE	RECESSED	METALUX	22FP25835HE	MVOLT			
D	LED-31W 3812 LUMENS 3500K	4' LED STRIPLIGHT WITH FULL FROSTED LENS. WIDE LIGHT DISTRIBUTION. DAMP LISTED. 0-10V DIMMING.	BWE	SURFACE	METALUX	4SNLED-LD5-37SL-LW-UNV-L835-CD1-U	MVOLT	1		

NOTES:
1. MOUNT TO UNDERSIDE OF BEAM. COORDINATE WITH ARCHITECT.

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SHEET CONTENTS
ELECTRICAL SCHEDULES

EYESTONE ELEMENTARY ECE
4000 WILSON AVENUE
WELLINGTON, COLORADO 80549

THE GREAT DESIGN CORPORATION
47075
PROFESSIONAL ENGINEER

NO.	BY	DESCRIPTION	DATE

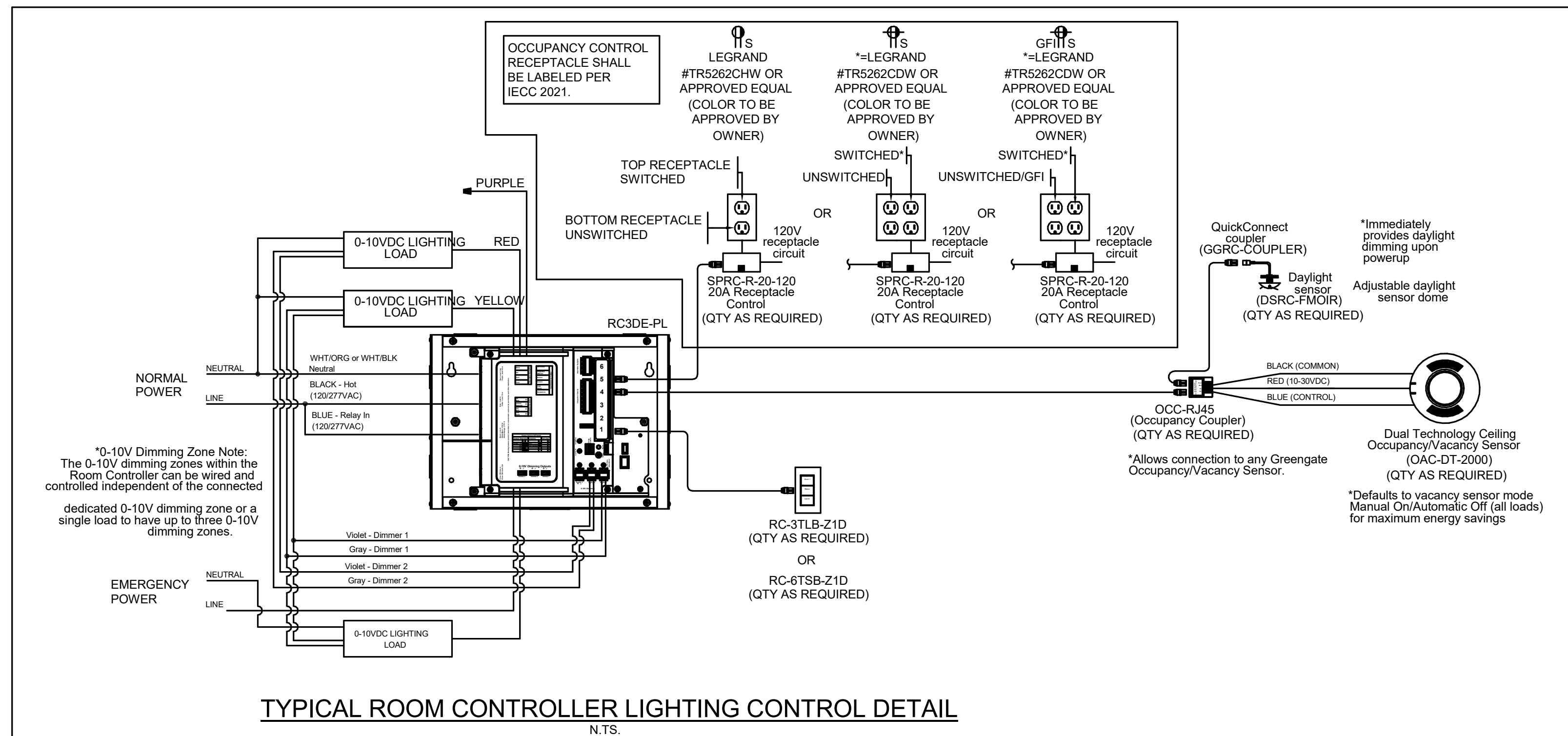
ISSUE FOR PERMIT

REVISIONS

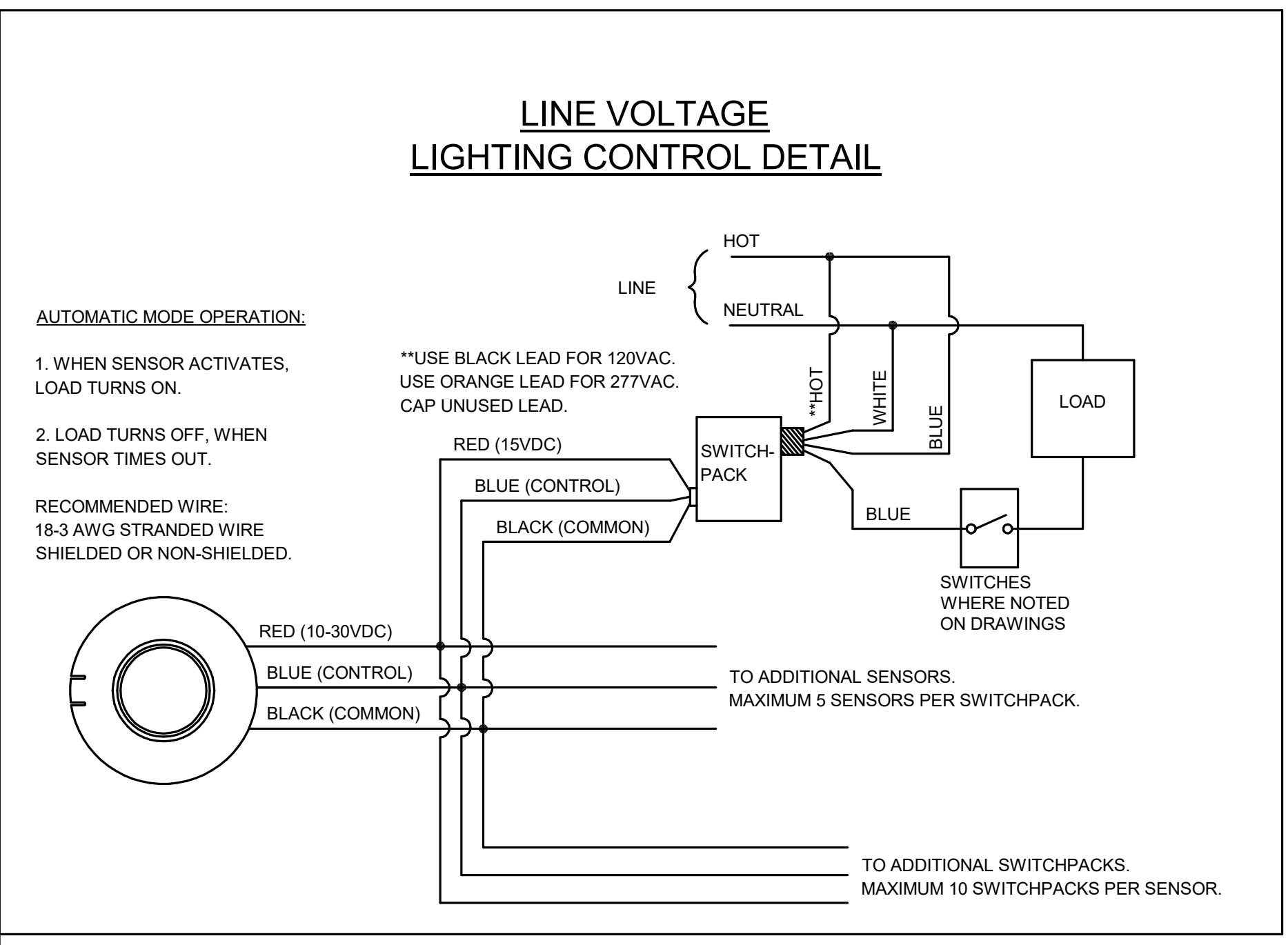


03/18/2022

DESIGNED CAD	CHECKED WMC	DATE 03.21.2022	SHEET NO. E6.0
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TYPICAL ROOM CONTROLLER LIGHTING CONTROL DETAIL
N.T.S.



LINE VOLTAGE LIGHTING CONTROL DETAIL

LIGHTING CONTROL LEGEND

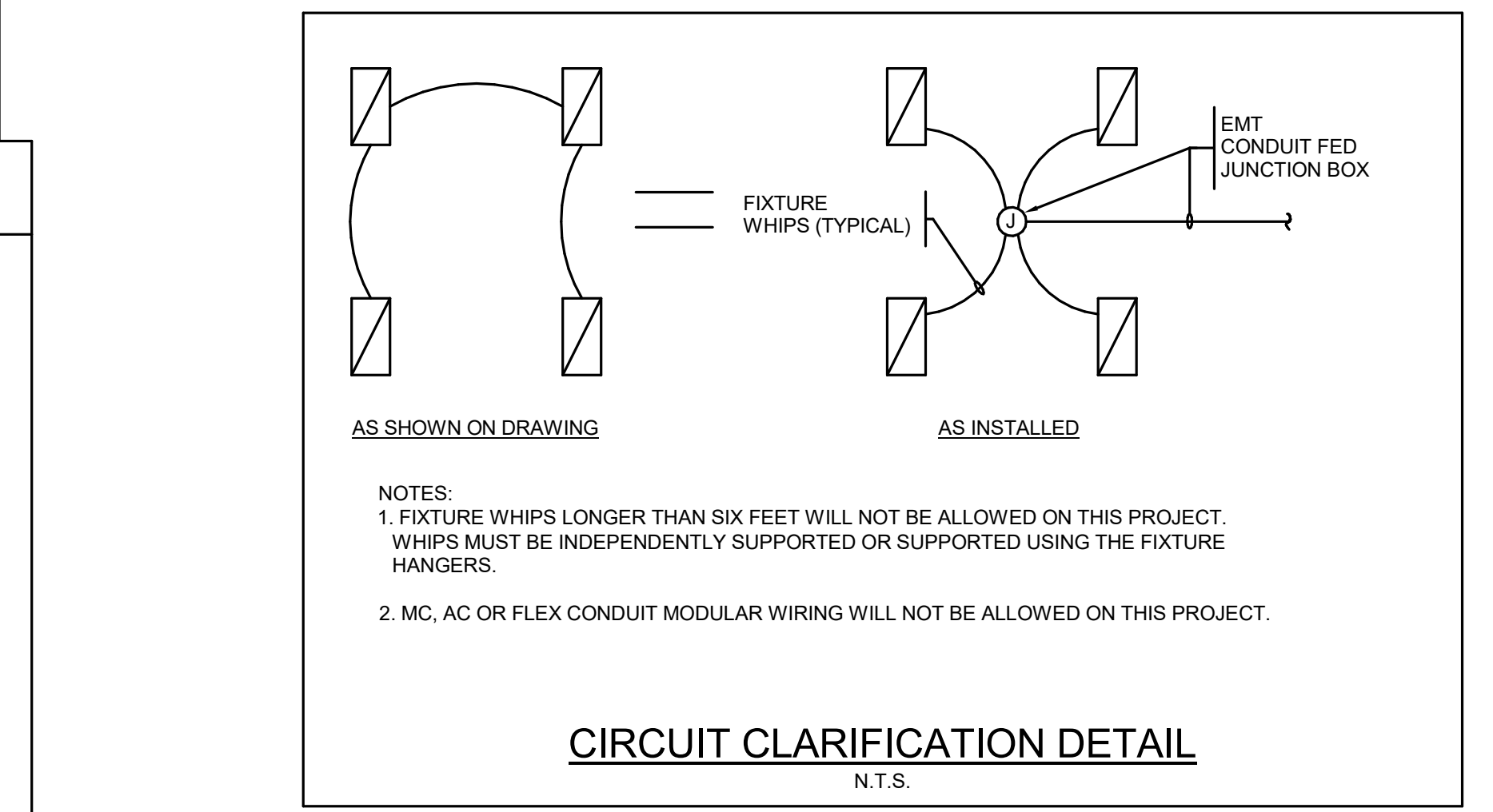
	LOW VOLTAGE CEILING MOUNTED, DUAL TECHNOLOGY SENSOR X = (V) VACANCY / (O) OCCUPANCY OAC-DT-2000
	LOW VOLTAGE CEILING MOUNTED, DUAL TECHNOLOGY SENSOR X = (V) VACANCY / (O) OCCUPANCY OXC-P-2MHO-R
	LOW VOLTAGE, WALL/CORNER MOUNTED, DUAL TECHNOLOGY SENSOR OAWC-DT-120W
	LINE VOLTAGE, 120/277V WALL/CORNER MOUNTED, DUAL TECHNOLOGY SENSOR SWITCH, PER DRAWINGS. ONW-D-1001-MV
	LINE VOLTAGE, 120/277V WALL/CORNER MOUNTED, DUAL TECHNOLOGY SENSOR SWITCH, PER DRAWINGS. 0-10V DIMMING, WATTSTOPPER DW-311 OR APPROVED EQUAL
	120/277V 3-RELAY 3 0-10V DIMMING CONTROLLER RC3D-PL REQUIRES DEDICATED CONTROL POWER (NOT POWERED FROM GENERAL LIGHTING CIRCUIT)
	EPC MODULE EPC-2D (CAN BE USED FOR SWITCHING AND 0-10V DIMMING)
	120/277V POWER PACK FOR LOW VOLTAGE SENSORS SP20-XX
	ROOM CONTROLLER DAYLIGHT SENSOR, DAYLIGHT ZONE CONTROLLED X = DESIGNATES SWITCH LEG DSRC-FMOIR
	LOW VOLTAGE ROOM CONTROLLER 3-BUTTON DIMMER (UP TO 1 DIMMING ZONE) CUSTOM ENGRAVING PDR-RC-3TLB
	LOW VOLTAGE ROOM CONTROLLER 3-BUTTON DIMMER (UP TO 2 DIMMING ZONE) CUSTOM ENGRAVING PDR-RC-6TSB
	LINE VOLTAGE SPST
	LOW VOLTAGE SWITCH GREENGATE: GMDS-W

SENSOR NOTES:

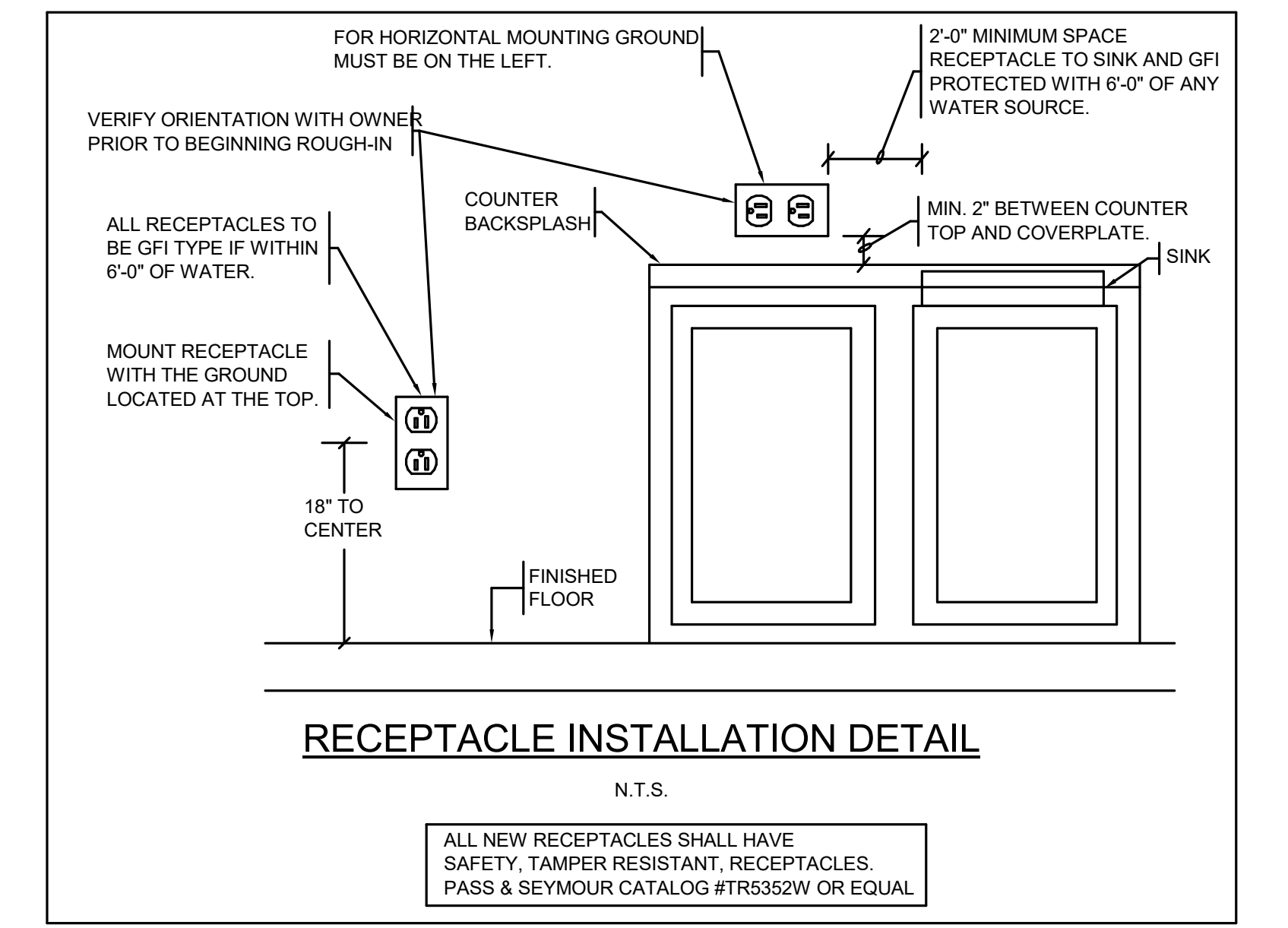
- ONE POWER PACK IS NEEDED PER CIRCUIT/ZONE TO BE CONTROLLED BY LOW VOLTAGE SENSORS, NOT NECESSARILY SHOWN ON DRAWINGS. LOCATE POWER PACK AS NOTED ON DRAWINGS OR ABOVE LIGHT SWITCHES (WHERE NOT NOTED OTHERWISE). POWER PACK LOCATIONS SHALL BE CONSISTANT THROUGHOUT PROJECT AND CLEARLY NOTED ON AS-BUILT DRAWINGS.
- ADDITIONAL SENSORS AND TYPES OF SENSORS MAY BE REQUIRED TO PROVIDE COMPLETE COVERAGE, DEPENDING ON FINAL PARTITION HEIGHT/PLACEMENT, FURNITURE PLACEMENT, EQUIPMENT HEIGHT/PLACEMENT, AND SHELVING HEIGHT/PLACEMENT. CONTRACTOR TO COORDINATE WITH MANUFACTURER/SUPPLY SHOP DRAWINGS ACCORDINGLY.
- PLACE AND ORIENT CEILING SENSORS PER MANUFACTURER SUPPLIED SHOP DRAWINGS FOR MAXIMUM COVERAGE/SENSITIVITY.
- WHERE LIGHT SWITCHES ARE USED IN ADDITION TO OCC. SENSORS, LIGHT SWITCH SHALL OVERRIDE OCC SENSOR (SWITCH CAN TURN LIGHTS OFF WHEN OCC. SENSOR CALLS FOR THEM TO BE ON; SWITCH CANNOT TURN LIGHTS ON WHEN OCC. SENSOR TURNS THEM OFF SWITCH AND OCC. SENSOR ARE WIRED IN SERIES).
- PROVIDE 10 MINUTE TIME (OFF) DELAYS IN STORAGE ROOMS AND SMALL RESTROOMS, ALL OTHERS SHALL HAVE 30 MINUTE DELAYS.
- PROVIDE SENSORS SUITABLE FOR COLD WEATHER APPLICATIONS WHERE APPLICABLE.
- PROVIDE ADDITIONAL POLES (OR AUX RELAY) FOR CONTROL OF EXHAUST FANS, OR SIMILAR DEVICES, WHERE SHOWN ON DRAWINGS AND/OR NOTED IN MECHANICAL SCHEDULES AND AS REQUIRED FOR IECC 2021 COMPLIANCE.

FIXTURE CONTROL LEGEND

A = FIXTURE TYPE
a = CONTROL LEG (SWITCH AND OR DAYLIGHT CONTROLLED)
a = DAYLIGHT CONTROL LEG (UNSWITCHED/NL)
NL = NOT SWITCHED
EM = EMERGENCY BATTERY BACKUP
dl = DAYLIGHT CONTROLLED



CIRCUIT CLARIFICATION DETAIL
N.T.S.



RECEPTACLE INSTALLATION DETAIL
N.T.S.

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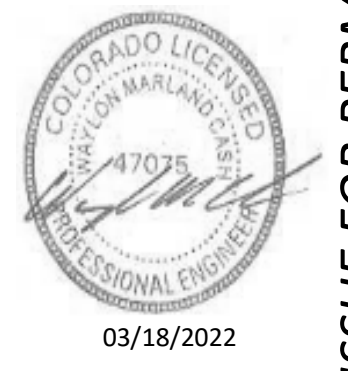
SHEET CONTENTS
ELECTRICAL DETAILS

EYESTONE ELEMENTARY ECE
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WELLINGTON, COLORADO 80549

THE SEALS AND SIGNS ARE NON-TRANSFERABLE. A SEAL IS AN INDICATOR OF PROFESSIONAL SERVICE & THE PROPERTY OF ECE, LLC AND NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT PRIOR WRITTEN PERMISSION FROM ECE, LLC.

NO.	BY	DESCRIPTION	DATE

ISSUE FOR PERMIT



PROJECT: ECE
CHECKED: WMC
DATE: 03.21.2022

SHEET NO.: E7.0

REVISIONS

Electrical Specifications

SECTION 16010 - GENERAL PROVISIONS

PART 1 - GENERAL

1.1 CONDITIONS:

- A. All work under this Section shall be governed by project general conditions, along with all supplements and amendments thereto, as published by Owner.
- 1.2 CODES AND REGULATIONS:
- A. Comply with all applicable state and local codes, regulations and ordinances, and the latest applicable requirements of the National Electrical Code (NEC) of the NFPA, as interpreted by the local inspection authority that shall have final jurisdiction. The Authority Having Jurisdiction (AHJ) is the State of Colorado.
 - B. Comply also with all OSHA requirements and directives.

1.3 EXAMINATION OF PREMISES:

- A. Examine the premises prior to bidding and become fully familiar with existing conditions.
- 1.4 PERMITS:
- A. Secure and pay for all permits, fees, taxes, licenses and inspections in connection with the electrical work.

1.5 DRAWINGS AND SPECIFICATIONS:

- A. Drawings are diagrammatic and indicate general arrangement of electrical work. Locations are approximate and shall be subject to minor modifications as directed by Engineer.
- B. Contractor shall be responsible for exact fitting of all materials, equipment, etc., in building. All dimensions shall be verified on the job.
- C. Refer to Architectural, Structural, and Mechanical Drawings and Specifications, as part of this set, and be responsible for all information contained therein as affects the electrical work.
- D. Instructions such as "provide..." shall mean "Contractor shall be responsible for the furnishing and installing of new... complete in every respect."

PART 2 - PRODUCTS

2.1 STANDARDS:

- A. All material shall be new and shall be listed by Underwriters Laboratories Incorporated (UL listed) for the purpose intended and shall bear the UL label. Damaged or defective materials shall be replaced. All materials shall comply with the latest NEMA standards.

PART 3 - EXECUTION

3.1 SHOP DRAWINGS:

- A. Furnish electronic (pdf) sets of Shop Drawings to Architect for the following:
 - 1. Control Equipment.
 - 2. Distribution Equipment.
 - 3. Light Fixtures.
- B. All materials and equipment shall be approved prior to beginning work.
- C. Receipt within 30 days after award of contract.
- D. Shop Drawings, including:
 - 1. Catalog data specifically for equipment to be used.
 - 2. See shop drawing requirements in General Provisions.

Electrical Contractor shall provide shop drawing approval stamps on all equipment supplied by them prior to Engineer's shop drawing approval. The Electrical Contractor to check for conformance with the design of the project and compliance with the information given in the contract documents. Contractor is responsible for dimensions which shall be confirmed and correlated at the job site; fabrication process and techniques of construction.

3.2 RECORD DRAWINGS:

- A. Maintain a complete set of Electrical Drawings at the job site with all changes in the work marked thereon in a contrasting color.
- B. Electrical Contractor shall provide architect at completion of project a complete set of as-built drawings showing all changes in work marked there on including all system wiring diagrams.

3.3 COORDINATION:

- A. Order the progress of the work so as to conform to the progress of other trades. Coordinate all electrical installations and rough-ins as required.

3.4 WORKMANSHIP:

- A. Provide a competent foreman on the job at all times. All work shall be accomplished in a manner which is neat, workmanlike, of first quality, and compatible with good commercial practices and standards. Provide competent workmen who are skilled as electricians.

3.5 INSTALLATION:

- A. Install all equipment and materials in accordance with information as indicated on drawings and in full accord with Manufacturer's recommendations.

3.6 CUTTING AND PATCHING:

- A. Provide all cutting, channeling, chasing, drilling, etc., operations as may be required for electrical work. In general, all such operations shall be held to a minimum.
- B. All patching and painting shall be done by Contractor.

3.7 CONSTRUCTION POWER AND LIGHTING:

- A. Provide construction power and lighting for construction as required. Energy costs will be paid by Owner. All temporary facilities shall be properly grounded, shall comply with NEC and OSHA requirements, and shall have ground fault protection.

3.8 SECONDARY SERVICE:

- A. Power for distribution within the building is available from the secondary side of a pad mount transformer supplied by the local power company. This service shall be 3 phase, 4 wire, 120/208 volt, 60 Hertz alternating current for normal power and lighting requirements. General arrangement of the service equipment is shown on drawings. Equipment shall be as specified herein.

3.9 REMODEL WORK:

- A. Electrical Contractor shall remove all wiring devices, light fixtures, etc., which are indicated to be removed. In general, symbols which are dashed indicate existing devices which are to remain. Symbols which are dashed and are crosshatched indicate existing devices which are to be removed. Devices which are to be removed may require reworking conduit and wiring in order to maintain service to other devices. If removed devices are on walls or ceilings which are to remain, blank coverplates are to be installed on outlet boxes.
- B. Where remodeling interferes with circuits in areas which are otherwise undisturbed, circuits shall be reworked as required.
- C. Existing devices and circuiting which are shown are indicated only for informational purposes. Electrical Contractor shall visit the site and shall verify conditions as they exist and shall remove, relocate and/or rework any electrical equipment or circuits affected (whether indicated or not) due to removal or reworking of existing walls, ceilings, etc. Electrical Contractor shall familiarize himself with all work to be done by other trades by studying Architectural, Structural, Mechanical and Plumbing Drawings.
- D. Coordinate routing of all conduits with Mechanical and Plumbing Contractors in order to avoid conflicts with ducts, pipes, etc.
- E. Lighting fixtures removed and reused shall be cleaned and reconditioned by Contractor prior to reinstallation. Provide new lamps, lens, ballasts, etc., as required to restore fixtures to operational condition.
- F. All equipment, fixtures, devices, etc., which are removed shall be delivered to Owner for disposition. All items which are removed and not wanted by Owner and which are not reused shall become the property of Electrical Contractor and shall be removed from site.
- G. The cost of cutting and patching necessary for the installation or removal of electrical work shall be included in the Electrical Contract. Coordinate with General Contractor.
- H. Electrical Contractor shall remove and replace lighting fixtures; rework, relocate and replace conduit and wiring and do other work required by the installation of new ductwork, piping, etc., above existing ceiling. Coordinate with other Contractors and verify the extent of the work.

3.10 GUARANTEE:

- A. Guarantee all materials, labor, workmanship and successful operation of all equipment installed under this contract for a period of two years from date of final acceptance. Repair or replace, at no expense to Owner, all defects which may arise during this time due to inferior or defective materials, equipment, or workmanship.

3.11 SUBSTITUTIONS:

- A. The intent of Specifications is to establish quality standards of materials and equipment installed. Specific items are identified by Manufacturer, trade name or catalog designation. Should Contractor propose to furnish materials and equipment other than those specified as permitted by "or approved equal" clauses, he or she shall submit a written request in duplicate, at least five calendar days prior to bidding date, for any or all substitutions. Request shall be accompanied with complete descriptive and technical data and all other information deemed necessary by Engineer for evaluation. Substitutions submitted for approval shall list items as specified with the alternate substitution.
- B. Where substitutions alter the design, conduit, wiring or space requirements indicated on drawings, Contractor shall include items of cost for the revised design and construction.
- C. Substitutions sent by fax machine will not be acceptable and will not be reviewed.

3.12 OUTAGES:

- A. Coordinate all electrical service outages with Owner and General Contractor. Plan all work so that duration of outage is kept to an absolute minimum. Provide temporary wiring as necessary and as required in order to maintain continuous service for Owner's operation where outage must be accomplished during a time when power is deemed necessary by Owner, or when outage is to be of an extended duration, maximum 6 hours. All outage time and scheduling of same shall be as approved by Owner and shall conform to Owner's schedules.

3.13 DELIVERY AND STORAGE OF MATERIALS:

- A. Make provisions for delivery and safe storage of all materials and make the required arrangements with other Contractors on the job for the introduction into the building of equipment too large to pass through finished openings.
- B. Where materials are indicated to be furnished by others to Contractor for installation, these materials shall be checked and their delivery properly accepted. Assume full responsibility for the storage and safe keeping of said materials from time of delivery until final acceptance.

3.14 AVAILABLE TO OWNER:

- A. Electrical Contractor shall be available to Owner for additional hook up to lights, equipment, etc., on time and material.

END OF SECTION 16010

SECTION 16100 - BASIC MATERIALS AND METHODS

PART 1 - GENERAL

1.1 STANDARDS:

- A. All materials shall be new, shall be UL listed for the purpose intended, and shall bear the UL label. Damaged or defective materials shall be replaced. All materials shall comply with latest NEMA standards.

PART 2 - PRODUCTS

2.4 SAFETY SWITCHES:

- A. Provide fusible and non-fusible heavy duty type disconnect switches where shown and required. Switches shall be horsepower rated, quick make, and quick-break, by same manufacturer as panelboards.

2.7 FUSES

- A. Provide sizes, classes and types of fuses as indicated for all fused safety switches. All fuses 0-600 amps shall have the Class "R" rejection feature. Verify actual load current of all motors prior to ordering fuses and provide fuses of sizes as recommended by Manufacturer. Generally, motor fuses shall be the dual element type and shall be set at 110 percent of full load amps, or 125 percent where required for heavy duty usage or high ambient temperatures. Fuses shall be the power voltage rating to match circuit characteristics in which installed. Fuses indicated on drawings are those of Bussmann Co., equal by Gould Shawmut or Littell Fuse.

2.8 SPARE FUSES

- A. Provide three spare fuses of each size and type installed. Place in a metal cabinet adjacent to main distribution equipment. Cabinet shall be wall mounted, shall have a hinged door and latch, and shall be labeled "SPARE FUSES" on cover.

2.9 NAMEPLATES

- A. Provide 1 x 3 inch laminated plastic nameplates (1/4 inch high white letters; black background for normal power equipment, red background for emergency power equipment) for all switches, panelboards, controllers, etc., in main distribution switchboards and sub-distribution panelboards. Nameplates shall be permanently attached to equipment with two screws. Provide blank nameplates for all spares.
- B. Multiple Gang Light Switches: Provide engraved coverplates 1/8 inch lettering black filled on all switch plates two and more ganged. Lettering shall indicate area served.
- C. Light switches/receptacles (all): Provide panel and circuit Kroy labels on front of coverplate and label with marker on inside panel cover and circuit also.
- D. Label all mechanical equipment, safety switches, and starters, etc., with raised letter tape. Nameplates and labels shall indicate the general areas and type of electrical load served by each circuit.
- E. Neatly label all Junction box coverplates as to their function. Use a permanent ink pen. Labeling shall be lights, smoke detector power, elevator control, fire alarm, receptacles, etc. Labeling shall be done on J-boxes that are above accessible ceiling and in storage rooms and maintenance areas, etc. Do not label J-boxes in public view.

2.10 NM-NONMETALLIC SHEATHED CABLE NOT ALLOWED ON THIS PROJECT:

2.11 CONDUCTORS:

- A. Provide a complete system of conductors for all raceway systems. All conductors shall be rated 600V, and shall be of a manufacturer subscribing to applicable IPCEA and NEMA standards and practices. Conductors shall be of sizes and types as indicated, and as required by NEC for specific uses. Where quantities of conductors in a raceway system are not specifically indicated, provide number as required to maintain function, control and number of circuits as indicated. All conductors shall be UL listed and approved, and shall conform to the following:
 - 1. Minimum wire size shall be #12 AWG copper except for control or signal circuits which may be #14 AWG copper.
 - 2. Unless otherwise indicated, all wiring for branch circuits shall be copper #12 AWG in 1/2" conduit, protected by 20 ampere circuit breakers. See Voltage Drop.
 - 3. Voltage Drop: If distance from panel to first outlet is 75 feet or greater (for 120V circuits), #10 shall be installed from circuit breaker to every device in circuit.
 - 4. Wire sizes #10 AWG copper and smaller shall be solid; #8 AWG copper and larger shall be stranded.
 - 5. The following insulation standards shall apply:
 - a. All feeder conductors shall be type THWN, XHHW or RHW.
 - b. Other conductors shall be per NEC THHN/THWN copper unless noted otherwise, Article 310.
 - c. Type THHN/THWN copper for exterior runs in conduit.
 - 6. Motor wiring for power shall be stranded.
- B. Aluminum conductors shall not be used on this project.
- C. The use of MC cable, AC (Armored Cable), NM Cable (Romex), or flexible conduit shall not be used for branch circuits or feeders.

2.12 CONDUITS:

- A. Conduits shall be provided for all wiring runs as shown and specified. All sizes shall be per NEC. Use GRC where required by code, utility company, for mechanical protection and as shown. Type IMC may be used in lieu of GRC where permitted. Use EMT for all other runs. Provide approved couplings and connectors for all connections. Final connections to motors and other vibrating or rotating equipment shall be made in LTF flexible conduit.
- B. Heavywall, type II, rigid, Schedule 40 PVC:
 - 1. For all wiring runs in or under the floor slab which is in contact with the ground.
 - 2. For all wiring runs buried underground, unless otherwise indicated.
 - 3. Do not use Schedule 40 or 80 PVC above ground. Conduit sizes 1" and smaller use schedule 80 PVC elbows and conduit sizes 1 1/4" and larger use GRC tar coated elbows to max. 6" above grade then change to EMT conduit. Note: Provide expansion joints in accordance with Manufacturer's recommendations.
- C. Use approved type couplings and connectors in all conduit runs and make all joints tight. Provide insulated bushings for all terminations in pipe size 1 1/4" and larger. Provide all steel set screw couplings and connectors for all other conduits. Provide expansion fitting and bonding conductors for all runs which cross building expansion joints. Provide waterproof steel compression gland couplings and connections for all runs in wet locations such as exposed to weather, buried in slabs, etc.
- D. All spare conduit shall be EMT with pull string. Label all spare conduits on the ends as to where it originates and terminates. Install pull string in each empty conduit. (Exception: it is not necessary to label spare conduits directly above an electrical panel.)

2.13 SUPPORTS AND HANGERS:

- A. Provide supports and hangers as necessary and as required to insure a good and substantial installation. Support raceways, fixtures, cabinets, boxes, etc., on approved types of trapeze hangers or wall brackets as manufactured by Unistrut or acceptable equal. Provide steel hanger rods securely fastened to or through the building structure for all trapezes, etc. Do not suspend from mechanical piping or ductwork. Perforated plumber's straps or wire will not be permitted.
- B. Obtain Architect's approval for the use of powder powered fasteners and use only in locations as he may direct.

2.14 OUTLETS:

- A. Outlets shall be galvanized steel or zinc pressed steel outlet boxes for all locations except where otherwise indicated or where cast metal boxes are required by NEC. Boxes are to be 4" square or octagonal, 2 1/8" Depth minimum. Provide plaster or tile rings for all flush outlets installed where wood, drywall, tile, plaster, etc., types of finishes are applied. All outlets for exterior application shall be cast, weatherproof type, with gasket and case coverplate. Tile boxes of extra depth may be used for interior, dry applications where masonry block or brick walls constitute the finished wall surface. In any event, provide outlet boxes of proper type and design for the particular fixture or device to be installed. Boxes shall be as manufactured by Steel City or acceptable equal.
- B. Surface mounted boxes shall be cast metal weatherproof, with grounding terminal, threaded hubs, and shall be similar and equal to Crouse-Hinds design Type FD or FS.
- C. Pull Boxes: Provide pull boxes in raceway runs as required by NEC and job conditions. Install in accessible locations.
- D. Surface Raceway: Surface raceway boxes same manufacturer as surface raceway.

2.15 LIGHTING EQUIPMENT

- A. General: Provide all lighting equipment and lamps as shown on drawings and as called for in these Specifications. Provide all such equipment fully complete and prewired. Install all equipment in a secure and substantial manner, and in full accord with Manufacturer's recommendations. Provide all such miscellaneous installation equipment such as support, hangers, yokes, flanges, etc., as is necessary. Provide 1-1/2 inch spacer, finished, factory approved type, between tops of fluorescent fixtures and combustible ceiling materials as required by code. Provide for aiming of all adjustable lighting fixtures as directed by Architect; exterior fixtures shall be adjusted at night.
- B. Fixtures (Luminaries): All fixtures exposed to weather or cold temperatures shall be weatherproof and suitable for efficient operation at temperatures and conditions concerned. All fixtures shall bear UL label for its particular application, or as indicated; 32 watt super T8 fluorescent shall be rapid start; 20 watt shall be trigger start. Install surface or pendant mounted luminaires true and straight. Provide plaster frames or similar type devices compatible with ceiling construction for all recessed fixtures.

2.16 DEVICES AND PLATES:

- A. Receptacles: Provide the following flush receptacle devices where indicated and required. Verify color with Architect prior to installation. All devices to be Specification Grade with screw type terminals. Provide as shown or acceptable equal. Provide tamper-resistant in special education and kindergarten, and where required by NEC.
 - 1. Devices:
 - a. 20A- 3W, grd, duplex dedicated outlet Leviton-5263-White
 - b. W.P. lift lid, duplex TayMac-503-S1G, A4
 - For GFI TayMac 52GA4
 - c. Ground Fault 20 amp Leviton-6899-White
 - 2. Switches
 - a. 20A switches Leviton-1221-White
 - b. 3-way switches Leviton-1223-White
 - 3. Coverplates
 - a. Finished and unfinished areas are to provide smooth steel White finished coverplates.

PART 3 - EXECUTION

- A. All exterior mounted disconnects 12 feet and less above finished grade shall have padlocks; master laminated type minimum 3/16 inch shafts, master keyed, to lock disconnect doors

3.4 CONDUCTORS:

- A. Conductors shall be continuous from outlet to outlet or J-box. Splices shall be held to a minimum. Where necessary, splice in readily accessible pull box, J-box, or outlet box. The joint insulation value shall equal that of the conductor. Splices and connections shall be made in an approved manner.
- B. Install wiring in the raceway systems only after the conduit run has been completed and after such time as conduits have been thoroughly cleaned and dried.
- C. Enclose underground/ exterior conductors in conduit schedule 40 PVC. All secondary and exterior branch circuit conductors to be buried a minimum of 30 inches below finished grade. Provide 2 inches of sand fill above and below conductors and install electrical marker tape 6 inches above all runs.
- D. Wire and cable No. 6 and smaller shall be factory color coded. Where factory color is not available, or where on short runs factory color coding is not practical, mark conductors on each end and in J-boxes or pull boxes with 1" band of colored pressure sensitive plastic tape or by the use of brilliant waterproof lacquer properly applied. Colors for each phase and the neutral shall be consistent throughout the system.
 - 1. The following color code prevails for all service, feeder and branch circuits:
 - Neutral White for 120V
 - Ground Green
 - Phase A Black for 120/208V
 - Phase B Red for 120/208V
 - Phase C Blue for 120/208V

- E. Wire and cable shall be the proper size to fit under lug landings in accordance with UL listing. Where larger wire and cable is used for voltage drop, etc., and will not fit under UL lug listings, Electrical Contractor shall provide proper wire and cable size under lugs and either pigtail to larger wire and cable or use power tap blocks. Provide insulation value equal to the wire and cable being used.
- F. High Compression Termination: Provide high compression terminations for connecting smaller conductors to larger for voltage drop issues as shown on drawings. H-type compression tap connectors shall be for copper combinations, sized for correct conductor installation using 15 ton and 12 ton head tools per manufacturer UL listed. Manufacturer Thomas and Betts. Compression taps series 63100 with high compression tool. Provide shop drawings. Provide interlocking insulating hard covers and secure with tape sealant per manufacturer, UL listed. Manufacturer Thomas and Betts Series HTXC00 (Hi-Tap Insulating Hard Covers), and HSTS25 Series. Provide shop drawings.

- G. Terminations Exterior
 - 1. Terminations shall be silicone filled safety connectors. Connector body shall consist of color-coded shell of non-hygroscopic material, with ribs or wings for easy grip and vibration-absorbing retention fingers. Inside shall be a non-setting, non-conductive, fire-retardant silicone sealant that eliminates the possibility of corrosion and flashover. The connector shall have a plated, conical, square-wire spring to draw in conductors securely as torque is applied.
 - 2. Connectors shall be King Technology's Model King-1, 2, 3, 4, 5, 6, and/or 9 wire connectors for pressure-type locations or accepted equal.

- H. Provide cable wraps (nylon/ty wraps) around branch circuit bundles and feeder bundles in all switchboards, panelboards, and loadcenters.
- I. All feeders and branch circuits rated below 600 volts shall be megger tested between phase conductors and between phase conductors and ground, using a 1,000-volt megger. Tests shall be made upon completion of all connections and splices and insertion of all overcurrent devices. Tests shall indicate free from short circuits and grounds.

3.5 CONDUCTOR NEUTRAL APPLICATIONS:

- A. Neutrals: Copper, same size as phase conductor, derating neutrals not allowed.
- B. Feeder neutrals to lighting or computer panels shall be 200 percent.
- C. Provide separate Neutral conductors for each 15 or 20 amp (120 or 277V) single pole breaker, the following application:
 - 1. Lighting circuits.
 - 2. Computer circuits.
 - 3. Kitchen circuits.
 - 4. Electronic equipment.
 - 5. All circuits using common raceway or provide tie handles on branch circuit breaker per NEC 2008.

3.6 CONDUITS:

- A. Slab on grade: Conduits shall not be located in slab but 6" below, thus cutting of slab will not damage conductors and conduit.
- B. All conduits shall be installed concealed in finished areas. Exposed conduits will be permitted only at surface cabinets, in mechanical equipment rooms, and as otherwise permitted by Architect.
- C. Route all conduits either parallel or perpendicular to walls and structural members, always avoiding proximity to sources of heat such as flues, hot water lines, etc. Runs which are buried below the floor slab or underground may be run direct (angular) to fullest practical extent. Locate raceways so as not to endanger the strength of any structural members. All runs pertinent to the building structural system shall be installed only when and in manner as approved by Architect. Actual conduit runs are not necessarily indicated, but are to be installed in the most feasible manner compatible with building construction and work of other crafts. Outlets shown connected together must be wired on the same circuit.
- D. All bends to be made by the use of an approved bending tool. Cut all conduits square and ream all cuts to remove burrs. Exercise all necessary precautions during the construction period to prevent entry or accumulation of moisture, dust, concrete, and all foreign matter into the raceway system. Clean and dry all raceways prior to pulling conductors.
- E. Secure all raceway systems in building structure in a rigid and secure manner using approved type fasteners such as "Caddy Clips" or similar type of other manufacturer. The use of wire, plumber's straps, etc., will not be permitted. Locations and spacing of fasteners shall be as required by NEC.
- F. Conduit hangers, clamps, light fixtures, supports, nails, etc., shall be fastened to joists or beams only. Do not support from bottom of roof decking or mechanical ductwork.
- G. Nothing of wood studs (where used) for conduit routing shall not be allowed. Drill center of studs if hole gets closer than 1" to face of studs. Provide 3/16" steel protective plates.
- H. All roof penetrations done by Electrical Contractor must conform to General Contractor's standard criteria and shall be subject to his authorized Roofing Contractor. General Contractor shall pay all such costs directly to Roofing Contractor upon demand.
- I. Conduits penetrating through fire-rated walls and floor slabs shall be sealed against the spread of fire and products of combustion with smoke-rating of the floor or wall through which conduits pass. See Drawings for additional requirements.

3.7 WIRING ABOVE SUSPENDED CEILINGS

- A. Approved Class II wiring systems such as controls, telephone, intercom, TV, Fire Alarm, etc., may be routed without conduit on bridled rings, (5 feet on center and neatly trained) where above suspended accessible ceiling systems unless otherwise indicated. Where wiring runs occur in inaccessible construction such as underfloor, in walls, above gypsum board ceilings, etc., provide all necessary outlets and conduits stubbed into nearest accessible suspended ceiling space. Wiring in all exposed areas shall be routed in conduit such as, exposed ceiling, surface mounted on walls and etc. All conduit stubs shall be tagged. Where suspended ceiling plenums are used for transportation of environmental air and where required by local inspection authority, all Class II wiring runs shall be enclosed in an approved raceway system or approved return plenum cable on bridled ring system. This shall include all systems such as telephone, data, etc., even though this Contractor is not providing the cables or conductors. Refer to Article 300-22 of NEC 2017.
- B. Where suspended ceiling plenums are used for transportation of environmental air and where required by local inspection authority, all Class II wiring runs shall be enclosed in an approved raceway system or Teflon cable approved for return air plenum application. This shall include all systems such as telephone, etc., even though this Contractor is not providing cables or conductors. Refer to Article 300-22 of NEC.

3.8 OUTLETS:

- A. Install all outlets in a secure and substantial manner and locate so as to be compatible with space, construction and equipment requirements, and with the work of other trades. Verify final outlet locations with Architect prior to installation. Install all outlets plumb and in accessible locations. Flush outlets are to be installed with front of box or ring flush with finished surface. All outlets are to be installed flush unless used in conjunction with exposed conduit system or unless otherwise indicated. If outlets are not installed plumb, flush, level or in approved locations, relocate or reset and refinish at no additional cost to Owner.
- B. Lighting outlets: Install flush wall or ceiling outlets to accommodate type of fixture to be installed. Provide 3/8" no-bolt fixture stud in all outlets where required by weight of fixture.
- C. Mount all weatherproof (WP) outlets vertically.
- D. J-boxes shall not be stacked atop or use of multiple extension rings on each other to form single J-boxes. Single J-boxes shall be used of proper size per NEC.

3.9 LIGHTING EQUIPMENT:

- A. Recessed fixtures shall be connected from a J-box above the ceiling with flexible conduit. The supply conductors to recessed fixtures shall be in accordance with Manufacturer's label or as specified, whichever is more stringent. Cut openings in ceilings for outlets or recessed fixtures so that fixture or trim completely covers the openings when installed.
- B. Recessed fixtures in suspended T bar grid ceilings: Overall dimensions of fixtures to be recessed with grid ceiling must be such that they will fit without distortion to the T bars. No field modification of fixtures will be allowed. Install fixtures only after such time as adjacent T bars have been installed and supported from the superstructure at each corner of the fixture. Provide bar hangers supported from and secured to adjacent T bars to support incandescent fixtures. Fixtures must not be supported from ceiling panels. Fixture must be securely fastened, however, to ceiling framing member as required by NEC 410.16.

3.10 COVERPLATES

- A. Install oversized or "mistake plates" for any outlet where standard sized plate will not cover opening in opening. Provide ganged plates for combination devices and multiple device installation as required. Install plates with holes sized to accommodate cable to be installed for all telephone and computer outlets.

3.11 FIRE PENETRATIONS

- A. Provide fire rated stops to maintain fire ratings of walls, ceilings and floors.
- B. Conduits may penetrate the walls, ceilings, floors or partitions provided fire stopping is provided per current International Building Code.

END OF SECTION 16100

SECTION 16400 - ELECTRICAL SYSTEMS

PART 1 - GENERAL

- 1.1 Furnish and install a complete electrical system as shown on drawings and specifications.
- PART 2 - PRODUCTS
- 2.2 GROUNDING SYSTEM:
- A. Ground the entire electrical distribution system, including all raceways, outlets, fixtures, equipment, etc., in full accord with NEC.
 - B. Provide separate grounding conductor in all raceways.
 - C. Provide separate grounding jumper from the grounding screw of all receptacle devices to the metallic box in which mounted. Jumper may attach to box with a separate grounding screw or clip device. Jumpers may be eliminated if approved self-grounding devices are used.
 - D. Provide separate bonding conductor, bare copper, for runs of flexible conduit where required by NEC.
 - E. Provide separate grounding conductor in all runs to exterior lighting standards, such as post lights, signs, etc.
 - F. All conductors used for grounding and bonding purposes shall be copper, insulated green, only.

END OF SECTION 16400

SECTION 16900 - ELECTRICAL COMPLETION

PART 1 - GENERAL

- A. The entire electrical system shall be left in first-class workable operating condition and all work shall be complete.

PART 2 - PRODUCTS

2.1 DIRECTORY CARDS:

- A. Provide labels and neatly typed directory cards for all new and existing panelboards and loadcenters. Directory cards shall indicate the general area and type of electrical load served by each circuit.

PART 3 - EXECUTION

3.1 CLEAN UP:

- A. Remove all materials, scrap, etc., relative to the electrical installation and leave the premises in a clean, orderly condition. Any costs to Owner for clean-up of the site will be charged against Contractor.
- B. Clean all electrical equipment and materials of all foreign matter. Clean all light fixtures using only methods and materials as recommended by Manufacturer.

3.2 ACCEPTANCE DEMONSTRATION:

- A. Upon completion of the work, at a time to be designated by Architect, Contractor shall demonstrate to Owner the operation of the entire electrical installation, including any and all special systems provided under this contract.

3.3 TEMPORARY WIRING:

- A. Remove all temporary wiring, outlets, etc., complete.

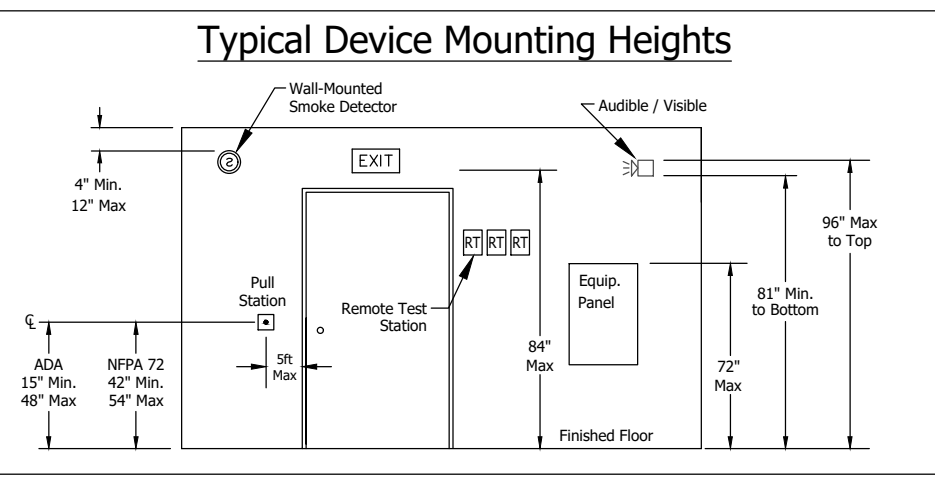
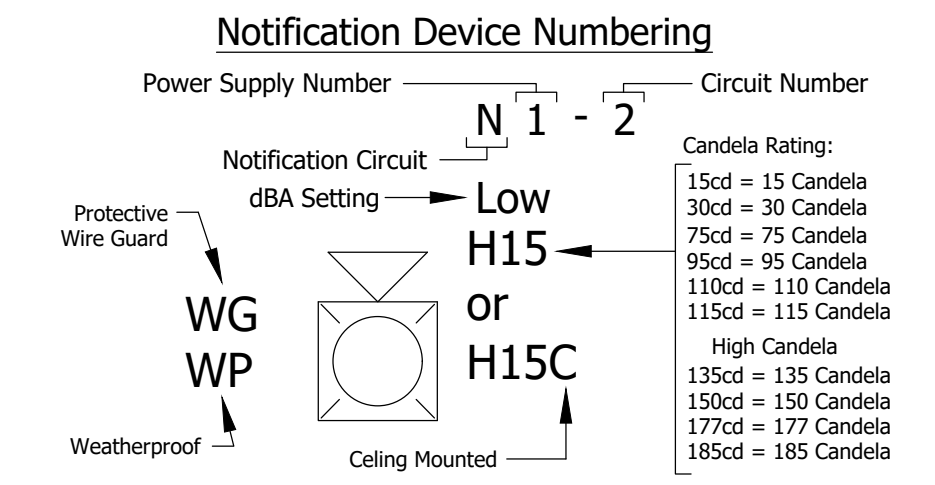
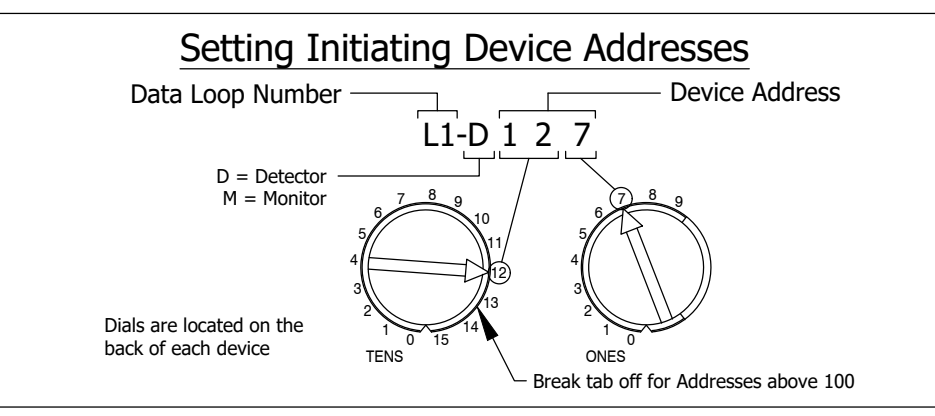
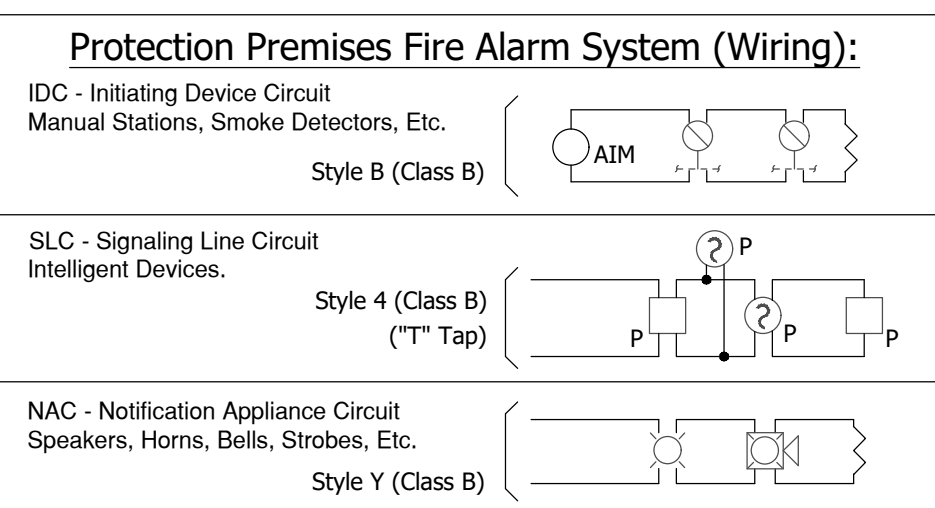
Poudre School District EYESTONE ELEMENTARY SCHOOL

FIRE ALARM SYSTEM REMODEL

4000 Wilson Avenue
Wellington, Colorado 80549

Fire Alarm System Drawings

FIRE ALARM SYSTEM DEVICE LEGEND				
DEVICE	DESCRIPTION	PART NUMBER	QTY	BACK BOX
	ANALOG FIRE ALARM SYSTEM CONTROL PANEL W/D ACT, EXISTING	AFP-200	EXISTING	-
	REMOTE POWER SUPPLY, INTELLIGENT	PSE-6	1	-
	STROBE, CEILING MOUNT, CANDELA INTENSITY	SCRL	1	4 SQUARE
	STROBE, WALL MOUNT, CANDELA INTENSITY	SRL	7	4 SQUARE
	SMOKE DETECTOR, INTELLIGENT	FSP-951	1	4 SQUARE
	MONITOR MODULE, INTELLIGENT	FMM-1	1	4 SQUARE



	System Outputs											
	Control Unit Annunciation				Notification				Control Functions			
FACP Audible												
CPU General Alarm Relay												
CPU Trouble Relay												
CPU Supervisory Relay												
CPU Alarm Indication												
CPU Trouble Indication												
CPU Supervisory Indication												
Public Mode - Audibles Activate (Temporal Pattern)												
Local Detector - Audible Activate (Temporal 4 Pattern)												
Public Mode - Strobes Activate (Synchronization)												
Transmit Alarm Signal to Central Monitoring Station												
Transmit Trouble Signal to Central Monitoring Station												
Transmit Supervisory Signal to Central Monitoring Station												
HVAC Fan Shutdown from Duct Detectors Associated with Specific RTU												
Release Magnetically Held Smoke Doors												

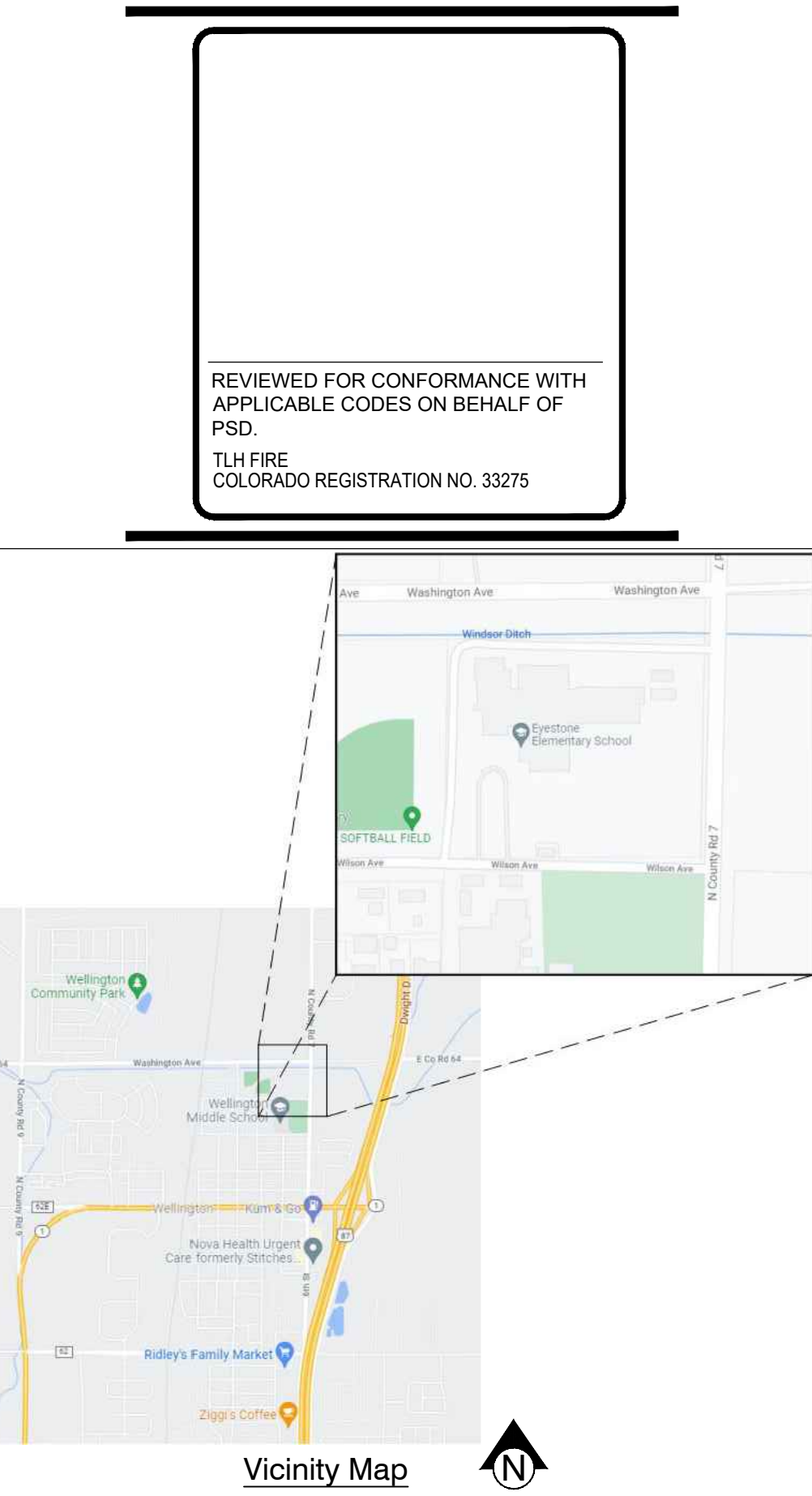
System Inputs												
Alarm (from each Device)												
Smoke Detectors	+	+										+
Portable Smoke Detector and Pull Station Zone	+	+										+
Heat Detectors	+	+										+
Manual Pull Stations	+	+										+
Supervisory (from each Device)												
Duct Smoke Detectors (Associated with HVAC Control)	+			+								+
Carbon Monoxide Detectors	+			+								+
Trouble (from each Device)												
Smoke Detectors	+	+										+
Portable Smoke Detector and Pull Station Zone	+	+										+
Heat Detectors	+	+										+
Manual Pull Stations	+	+										+
Duct Smoke Detectors	+	+										+
SLC Circuit Short	+	+										+
SLC Circuit Open	+	+										+
IDC Circuit Open	+	+										+
NAC Circuit Short	+	+										+
NAC Circuit Open	+	+										+
Ground Faults	+	+										+
Fire Alarm AC Power Failure	+	+										+
Fire Alarm AC Low Battery	+	+										+
System Functions												
ACK \ Step	-											
Signal Silence	-											
System Reset	-	-	-	-	-	-	-	-	-	-	-	-

+ indication on the matrix indicates a Function starting or activating.
- indication on the matrix indicates a Function returning to the non alarm state or de-activating.

SCOPE OF WORK

EYESTONE ELEMENTARY SCHOOL IS AN EXISTING ONE STORY EDUCATIONAL FACILITY THAT IS REMODELING 7 ECE RESTROOMS AN ONE ECE ADMIN AREA. NEW NOTIFICATION AND A DEDICATED POWER SUPPLY WILL BE INSTALLED AND CONNECTED TO THE EXISTING FIRE ALARM SYSTEM. THE CONTRACTOR SHALL FIELD VERIFY THE POWER SUPPLY LOCATION AND APPROVE WITH PSD AND ENGINEER. GRAPHIC MAPS WILL BE UPDATED, PRINTED, AND INSTALLED BY THE SCHOOL DISTRICT.

- BASE BID:
- CONTRACTOR SHALL PROTECT ALL SMOKE DETECTORS WITH PRESS AND SEAL DURING THE CONSTRUCTION PERIOD. WHERE CEILINGS ARE BEING REMOVED/REPLACED, CONTRACTOR SHALL PROTECT/SUPPORT FIRE ALARM DEVICES (SMOKE DETECTORS AND NOTIFICATION APPLIANCES) AND RELOCATE OUTSIDE THE AREA OF CONSTRUCTION PATHWAYS. CONTRACTOR SHALL PROTECT EXISTING SMOKE DETECTOR SENSORS DURING CONSTRUCTION AND CLEAN UP IN ACCORDANCE WITH NFPA 72 §17.7.1.11
 - 17.7.1.11* PROTECTION DURING CONSTRUCTION.
 - A.17.7.1.11 CONSTRUCTION DEBRIS, DUST (ESPECIALLY GYPSUM DUST AND THE FINES RESULTING FROM THE SANDING OF DRYWALL JOINT COMPOUNDS), AND AEROSOLS CAN AFFECT THE SENSITIVITY OF SMOKE DETECTORS AND, IN SOME INSTANCES, CAUSE DELETERIOUS EFFECTS TO THE DETECTOR, THEREBY SIGNIFICANTLY REDUCING THE EXPECTED LIFE OF THE DETECTOR.
 - 17.7.1.11.1 WHERE DETECTORS ARE INSTALLED FOR SIGNAL INITIATION DURING CONSTRUCTION, THEY SHALL BE CLEANED AND VERIFIED TO BE OPERATING IN ACCORDANCE WITH THE LISTED SENSITIVITY, OR THEY SHALL BE REPLACED PRIOR TO THE FINAL ACCEPTANCE TEST OF THE SYSTEM.
 - 17.7.1.11.2 WHERE DETECTORS ARE INSTALLED BUT NOT OPERATIONAL DURING CONSTRUCTION, THEY SHALL BE PROTECTED FROM CONSTRUCTION DEBRIS, DUST, DIRT, AND DAMAGE IN ACCORDANCE WITH THE MANUFACTURER'S COMMENDATIONS AND VERIFIED TO BE OPERATING IN ACCORDANCE WITH THE LISTED SENSITIVITY, OR THEY SHALL BE REPLACED PRIOR TO THE FINAL ACCEPTANCE TEST OF THE SYSTEM.
 - CONTRACTOR SHALL WALK THE JOBSITE ON A REGULAR BASIS TO ENSURE ALL PROTECTION REMAINS IN PLACE.
 - CONTRACTOR SHALL REMOVE PRESS AND SEAL PROTECTION AFTER ALL CONSTRUCTION IS COMPLETE.
 - WHERE CEILINGS ARE BEING REMOVED/REPLACED, CONTRACTOR SHALL PROTECT/SUPPORT FIRE ALARM DEVICES AND RELOCATE OUTSIDE THE AREA OF CONSTRUCTION PATHWAYS AS REQUIRED.
 - THE FIRE ALARM SYSTEM SHALL REMAIN ACTIVE AT ALL TIMES IN A MANNER THAT THE FIRE ALARM CONTROL PANEL SHOWS ALL SYSTEMS NORMAL DURING THE ENTIRE CONSTRUCTION PERIOD. (IF THE CONTRACTOR COMPROMISES A FIRE ALARM CIRCUIT/DEVICE RESULTING IN A TROUBLE CONDITION, THE CONTRACTOR SHALL NOTIFY TLH FIRE AND PSD IN WRITING WITHIN 4 HOURS OF THE OCCURRENCE OF THE TROUBLE CONDITION SO THAT A REMEDY PROCEDURE CAN BE IMMEDIATELY IMPLEMENTED.). THE CONTRACTOR SHALL HIRE AN APPROPRIATE VENDOR TO PRODUCE A HISTORY REPORT WHEN TROUBLES ARE DISCOVERED TO DETERMINE THE NATURE OF THE TROUBLE AND FUNCTIONAL TESTING WILL TAKE PLACE ONLY FOR DEVICES IMPACTED.
 - OPEN CABLING SHALL BE SUPPORTED AT A MINIMUM OF EVERY 4 TO 6 FEET TO BUILDING STRUCTURAL MEMBERS UTILIZING METAL BRIDLE RINGS. CABLING THAT IS SECURED TO OR CONTACTING SPRINKLER PIPING, HVAC DUCTWORK, ELECTRICAL CONDUIT OR OTHER NON-STRUCTURAL BUILDING MEMBER SHALL NOT BE ACCEPTABLE AND SHALL CAUSE THE CABLE TO BE RE-INSTALLED AND RE-SUPPORTED IN A PROPER MANNER.
 - FIRE ALARM GRAPHIC MAPS WILL BE PREPARED BY TLH FIRE AND DELIVERED DIRECTLY TO BRIAN ZIMMERMAN IN AUTOCAD FORMAT FOR PLOTTING AND FRAMING. Poudre School District shall install the new graphic map which reflects the new information.



Vicinity Map

- ### GOVERNING CODES
- 2021 INTERNATIONAL BUILDING CODE
 - 2021 INTERNATIONAL MECHANICAL CODE
 - 2018 INTERNATIONAL PLUMBING CODE
 - 2020 NATIONAL ELECTRICAL CODE
 - 2021 INTERNATIONAL FIRE CODE
 - 2019 NFPA 72
 - OCCUPANCY: E
 - AREA OF WORK: 1,100 +/- SF
 - CONSTRUCTION TYPE = II-B
 - NUMBER OF STORIES: 1 STORY
 - FIRE PROTECTION: NON-SPRINKLERED TO REMAIN
 - FIRE ALARM: HORNS/VOICE??

OWNER

POUDRE SCHOOL DISTRICT
2445 LAPORTE AVENUE
FORT COLLINS, COLORADO 80521
9704903017

ARCHITECT

KALERT CONSULTING GROUP | LLC
2429 STONECREST DRIVE
FORT COLLINS, COLORADO 80521
9704123049

AUTHORITY HAVING JURISDICTION

POUDRE FIRE AUTHORITY
102 REMINGTON STREET
FORT COLLINS, COLORADO 80524
9704162891

FIRE ALARM CONSULTANT

TLH FIRE
6901 SOUTH PIERCE STREET
LITTLETON, COLORADO 80128
3035179558

GENERAL CONTRACTOR

INFORMATION NEEDED BEFORE SUBMITTING TO AHJ.

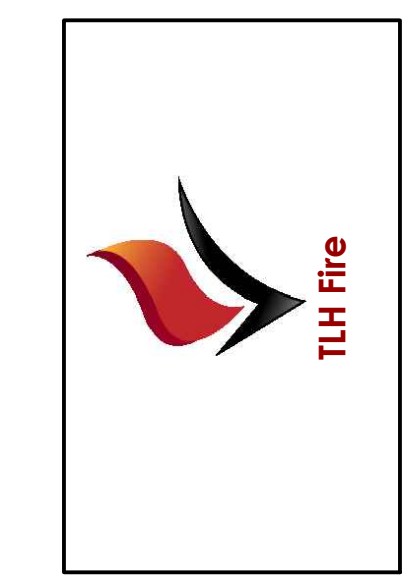
ELECTRICAL CONTRACTOR

INFORMATION NEEDED BEFORE SUBMITTING TO AHJ.

SHEET INDEX

NO.	DESCRIPTION
FA0.0	FIRE ALARM SYSTEM - COVER PAGE
FA2.0	FIRE ALARM SYSTEM - FLOOR PLAN
FA3.0	FIRE ALARM SYSTEM - RISER AND CALCULATIONS
FA6.0	FIRE ALARM SYSTEM - GRAPHIC MAP
FA7.0	FIRE ALARM SYSTEM - TECHNICAL GUIDELINES
FA7.1	FIRE ALARM SYSTEM - TECHNICAL GUIDELINES

KCG | LLC
KALERT | Consulting Group, LLC
2429 Stonecrest Drive
Fort Collins, Colorado 80521
tombaker@kcgllc.com



SHEET CONTENTS
FIRE ALARM SYSTEM
COVER PAGE

EYESTONE ELEMENTARY ECE

4000 WILSON AVENUE
WELLINGTON, COLORADO 80549

SHOP DRAWINGS

NO.	DATE	DESCRIPTION

REVISIONS

NO.	DATE	DESCRIPTION

DATE: 06.03.22

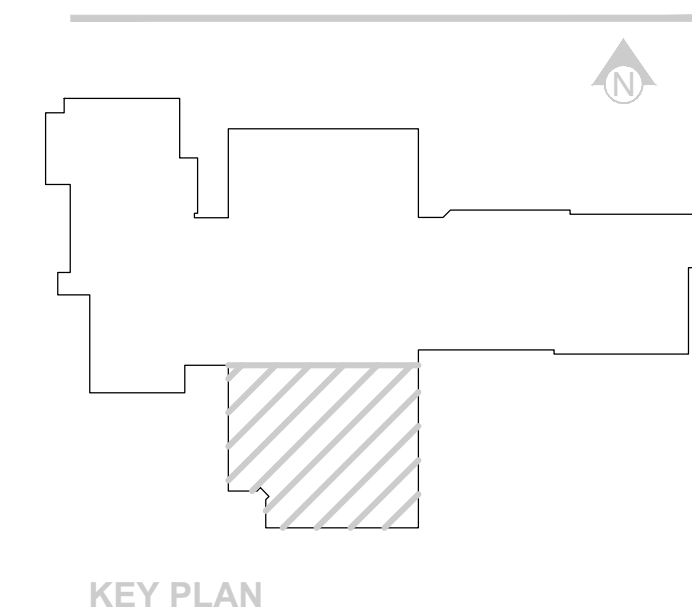


FLAG NOTES

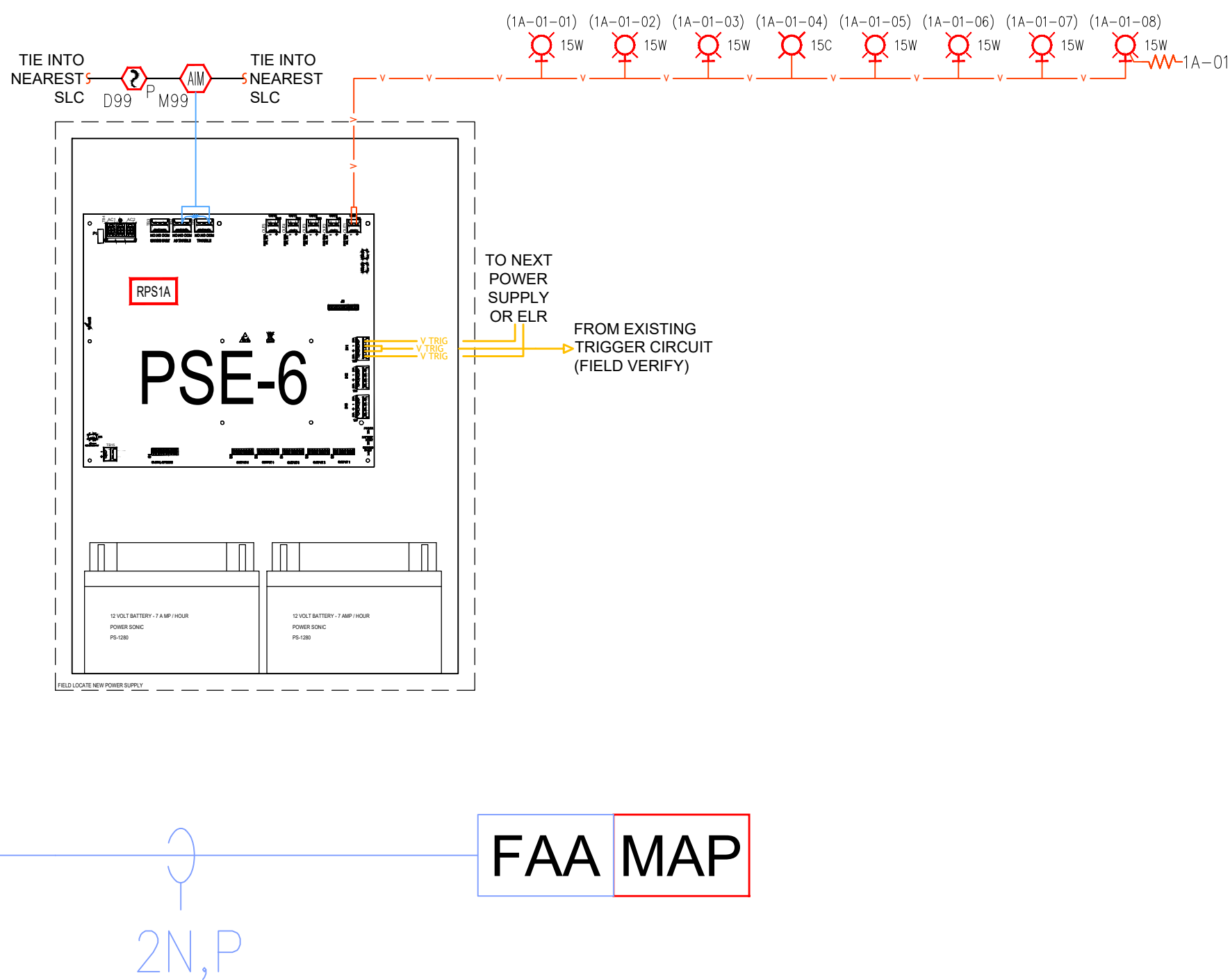
1. CONTRACTOR SHALL FIELD VERIFY NEW POWER SUPPLY LOCATION. POWER SUPPLY LOCATION SHALL BE APPROVED BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION.
2. CONTRACTOR SHALL FIELD LOCATE AND EXTEND THE EXISTING TRIGGER CIRCUIT TO THE NEW POWER SUPPLY. NEW NOTIFICATION APPLIANCES SHALL SYNCHRONIZE WITH THE EXISTING APPLIANCES.

WIRE LEGEND	
VISUAL TRIGGER WIRING	VISUAL WIRING
1 PAIR 14 AWG TWISTED / UNSHIELDED (FPLP) RED + BLACK = RED JACKET W/BLUE TRACER [PART NUMBER: WEST PENN 60993BT-BL] NAC SYNC CIRCUIT PLENUM	1 PAIR 14 AWG TWISTED / UNSHIELDED (FPLP) RED + BLACK = RED JACKET W/BLUE TRACER [PART NUMBER: WEST PENN 60993BT-BL] AUDIBLE (NAC) CIRCUIT PLENUM
SLC WIRING	CONVENTIONAL IDC WIRING
1 PAIR 16 AWG TWISTED / UNSHIELDED (FPLP) RED + BLACK = RED JACKET PRE-PRINTED "SLC" [PART NUMBER: WEST PENN 60991B-SLC] DATA (SLC) CIRCUIT PLENUM	1 PAIR 16 AWG TWISTED / UNSHIELDED (FPLP) RED + BLACK = RED JACKET W/BROWN TRACER [PART NUMBER: 60991BT-BR] CONVENTIONAL (IDC) CIRCUIT PLENUM

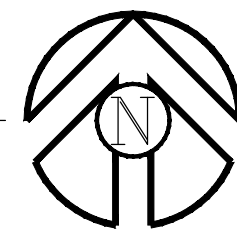
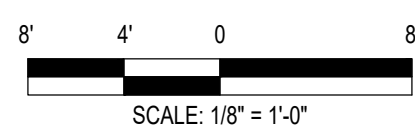
1 EYESTONE ELEMENTARY SCHOOL FIRE ALARM SYSTEM PLAN
 SCALE: 1/8" = 1'-0"
 8' 4' 0 8'
 SCALE: 1/8" = 1'-0"



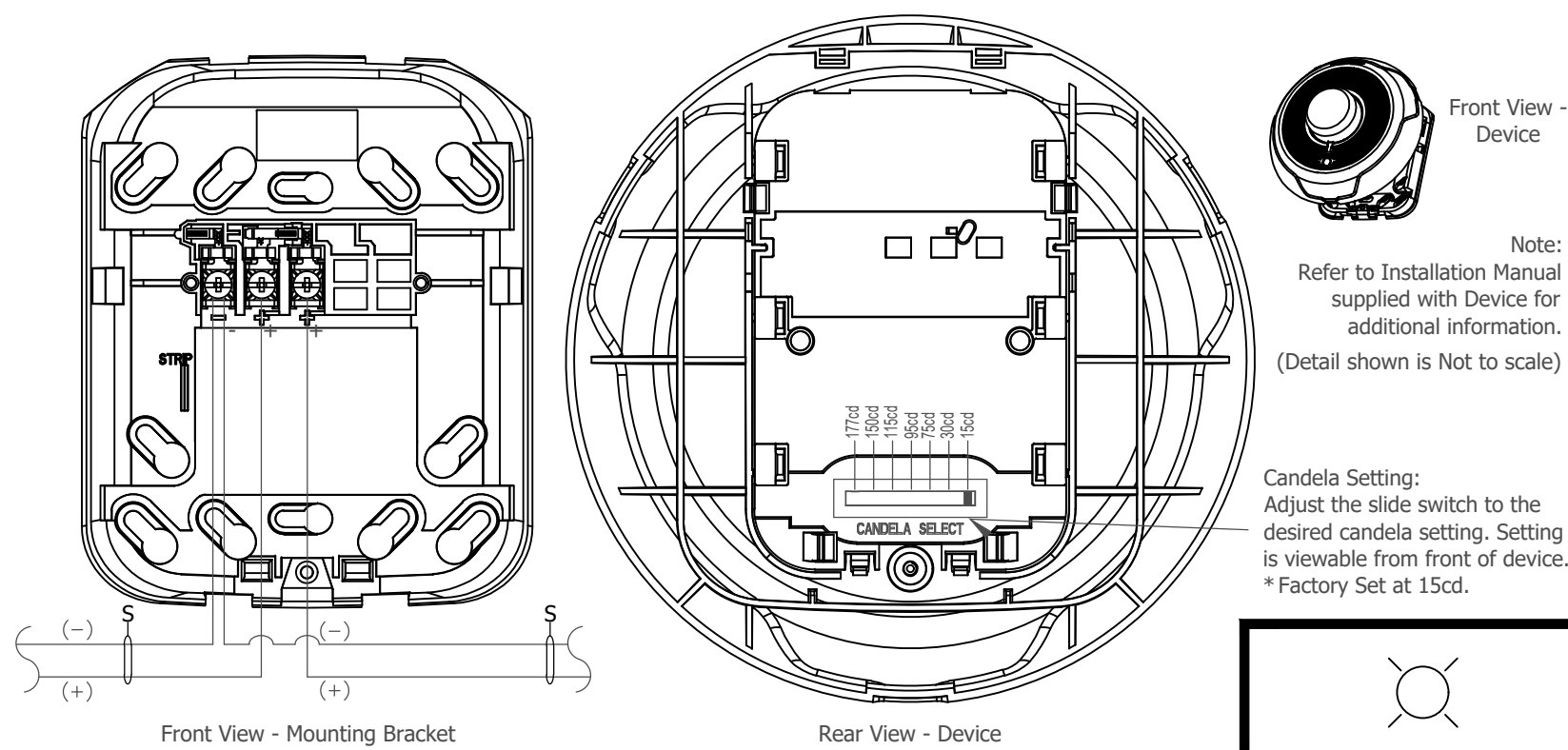
SLC Loop No. 1					
D Address	Device	Label	M Address	Device	Label
D01		Not Available	M01		Not Available
THRU		Not Available	THRU		Not Available
D99	Smoke	RPS Elect. Rm.	M99	Monitor	RPS Elect. Rm.



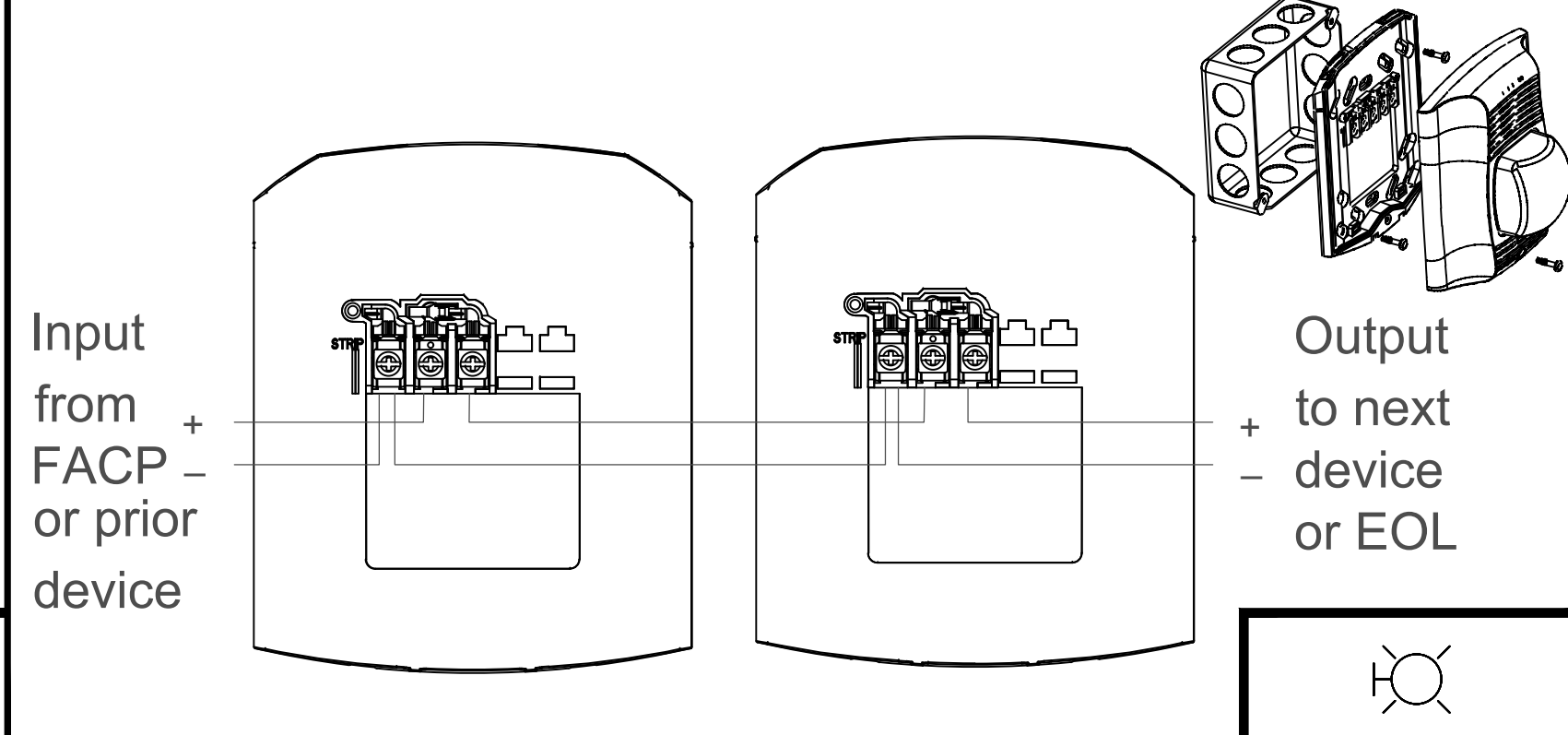
2 RISER DIAGRAM
SCALE: 1/8" = 1'-0"



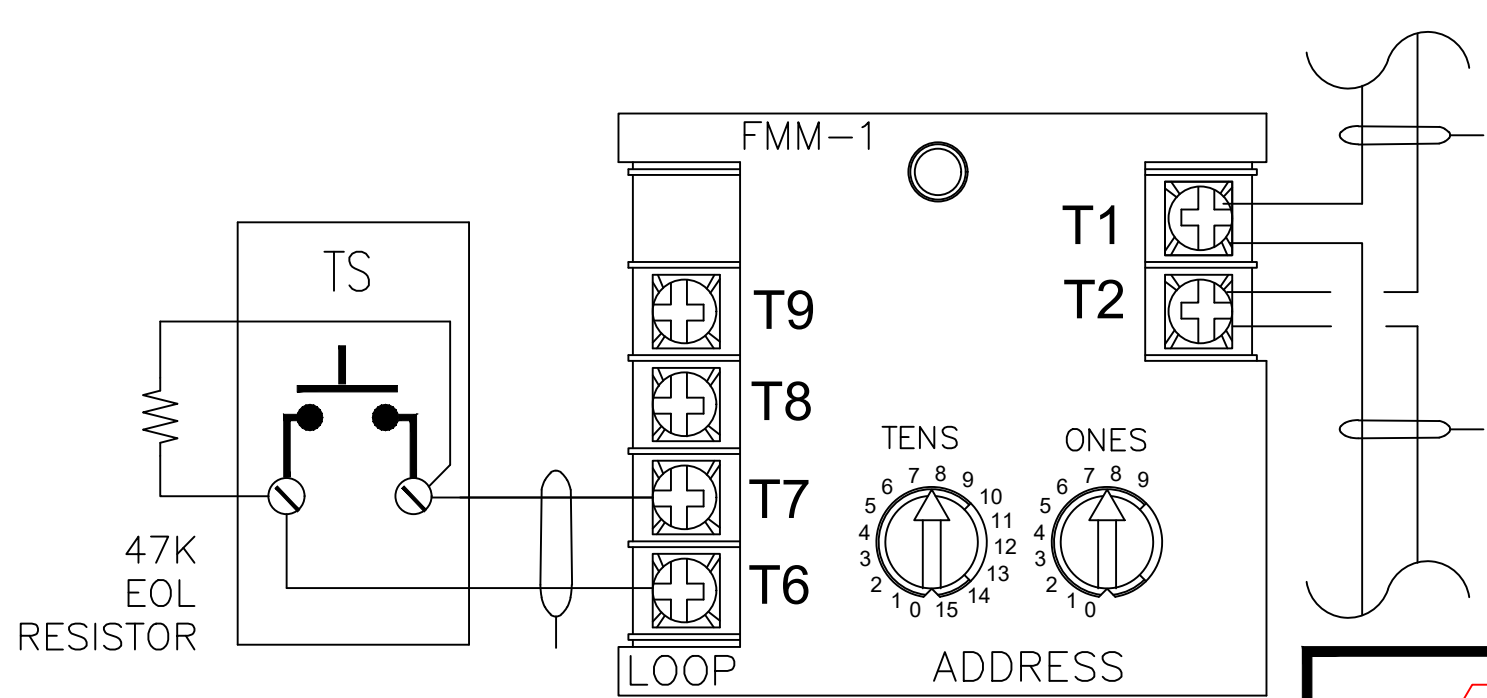
CEILING MOUNT STROBE SC-L SERIES



WALL MOUNT STROBE S-L SERIES

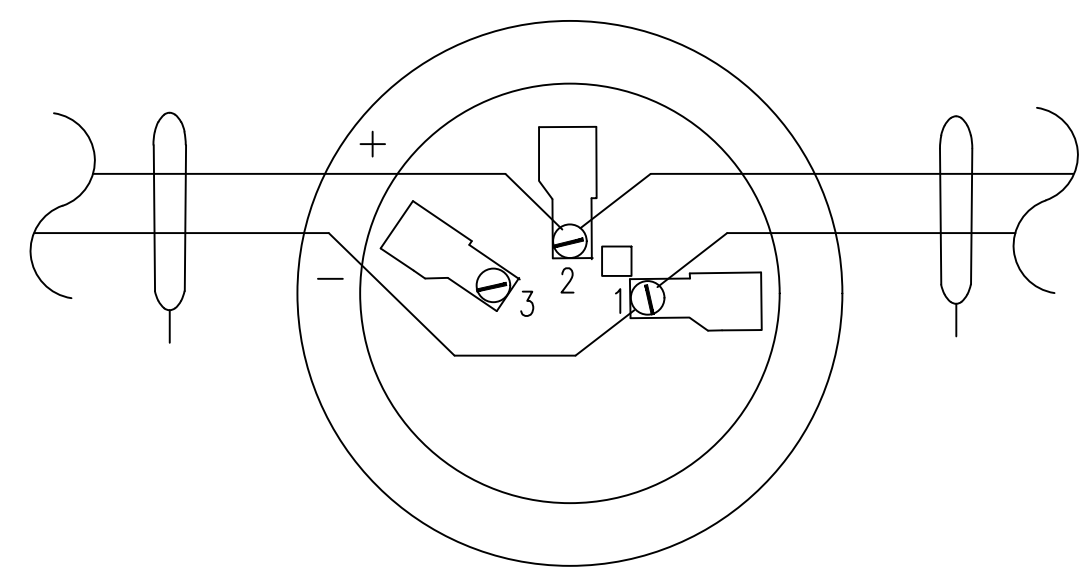


EXAMPLE DEVICE MONITORED BY FMM-1



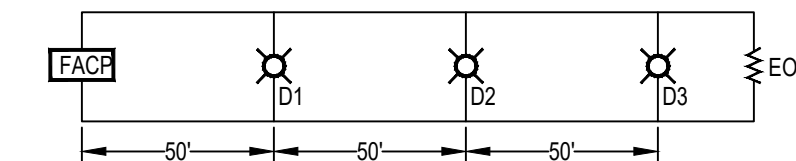
1 DEVICE DETAILS
SCALE: NTS

ADDRESSABLE SMOKE OR HEAT DETECTOR BASE

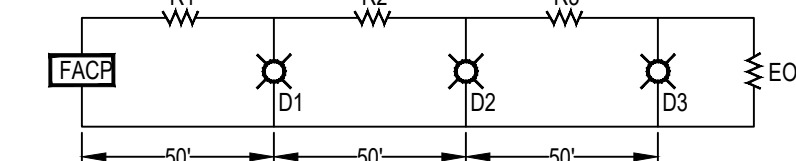


VOLTAGE DROP CALCULATION PROCESS

THIS DIAGRAM REPRESENTS A SINGLE WAC CIRCUIT CONTAINING THREE WALL MOUNT STROBES (MODEL G1F-VM), EVENLY SPACED AT 50 FEET. EACH STROBE IS SET TO ILLUMINATE AT 110 CANDELA. U.L. LISTED CURRENT DRAW 311mA. THE WIRE GAUGE USED WILL BE 14AWG WITH A RESISTANCE OF 3.07 OHMS PER 1000 FEET.



THE RESISTANCE OF EACH WIRE SEGMENT IS REPRESENTED BY R1, R2, R3. THE WIRE DISTANCE WILL BE DOUBLED IN CALCULATIONS TO ACCOUNT FOR THE RETURN WIRE SEGMENT.



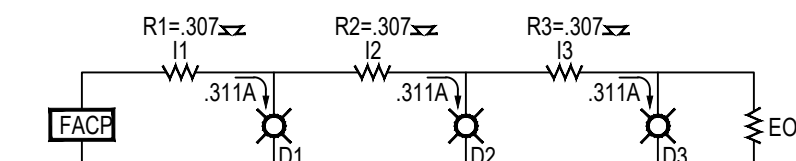
TO CALCULATE THE RESISTANCE OF EACH WIRE SEGMENT, MULTIPLY THE MANUFACTURER LISTED WIRE RESISTANCE PER FOOT (3.07/1000) BY THE LENGTH OF THE WIRE SEGMENT TO THE STROBE AND BACK.

$$R1 = (3.07/1000) * (50*2) = 0.0307 * 100 = .307 \text{ Ohms}$$

$$R2 = (3.07/1000) * (50*2) = 0.0307 * 100 = .307 \text{ Ohms}$$

$$R3 = (3.07/1000) * (50*2) = 0.0307 * 100 = .307 \text{ Ohms}$$

THE CURRENT FLOWING THROUGH EACH SEGMENT OF WIRE IS REPRESENTED BY I1, I2, I3. THE CURRENT DRAW OF EACH DEVICE IS 311mA.



TO CALCULATE THE CURRENT FLOWING IN EACH WIRE SEGMENT, SUM THE MANUFACTURER LISTED DEVICE CURRENT FROM THE DRAW TABLE @ 16 VOLTS.

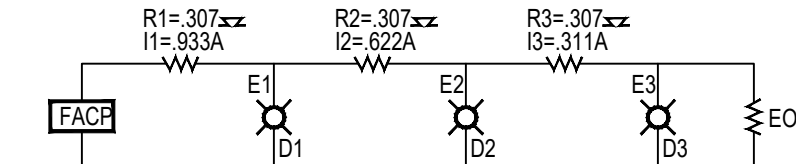
NOTE: CURRENT FOR ALL DEVICES WILL FLOW THROUGH I1, CURRENT THROUGH I2 WILL ONLY CONTAIN D2 AND D3 CURRENT DRAWS, AND I3 WILL EQUAL D3 CURRENT DRAW.

$$I1 = D1mA + D2mA + D3mA = 311 + 311 + 311 = 933 \text{ Amps}$$

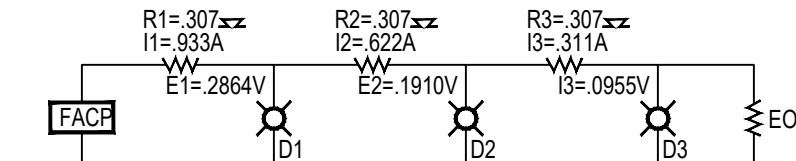
$$I2 = D2mA + D3mA = 311 + 311 = 622 \text{ Amps}$$

$$I3 = D3mA = 311 \text{ Amps}$$

THE VOLTAGE DROP FOR EACH SEGMENT IS REPRESENTED BY E1, E2, E3.



TO CALCULATE THE VOLTAGE DROP AT EACH SEGMENT, MULTIPLY THE CURRENT DRAW BY THE SEGMENT RESISTANCE.



TO CALCULATE THE TOTAL VOLTAGE DROP OF THE NAC CIRCUIT, SUM THE INDIVIDUAL VOLTAGE DROPS E1, E2, E3.

$$\text{TOTAL CIRCUIT VOLTAGE DROP} = E1 + E2 + E3 = 2864 + 1910 + 0955 = 5729 \text{ Volts}$$

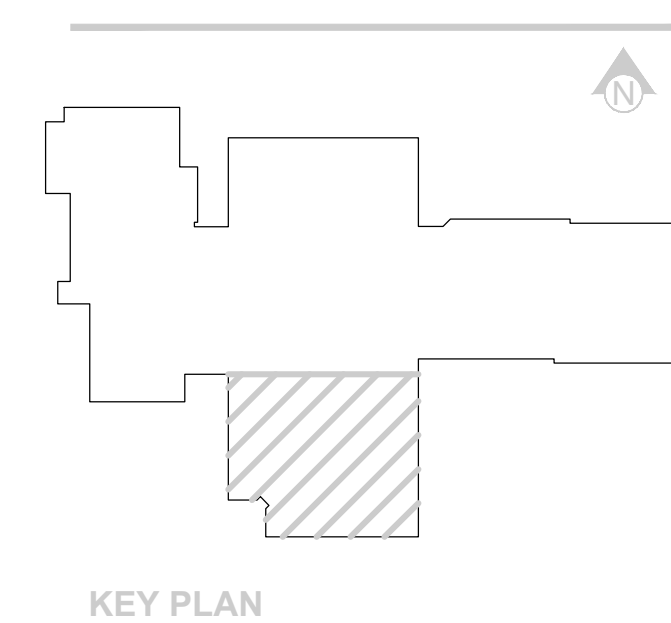
** MAXIMUM TOTAL CIRCUIT VOLTAGE DROP PERMITTED IS 4.4 VOLTS.

MINIMUM UL RATED APPLIANCE VOLTAGE: 16 VOLTS
Current shown in calculations is RMS current at 16 volts.
Source Voltage = 20.4V

Circuit Number:	1A-01 Circuit Capable of Additions Up To ~180% of Present Circuit Configuration (Current and/or Distance)	Resistance 12 Gauge	1.588				
Location:	RPS1A	14 Gauge	3.07				
		16 Gauge	4.016				
Notification Circuit	Current (in amps)	Wire Distance (in feet)	Total Distance (in feet)	Wire Size (AWG)	Resistance (Ohms)	Voltage Drop	From Baseline Voltage
SRL 15CD	0.043	43	43	14	0.2640	0.0903	20.3097
SRL 15CD	0.043	56	99	14	0.3438	0.1028	20.2069
SRL 15CD	0.043	59	158	14	0.3623	0.0927	20.1142
SCR1 15CD	0.041	25	183	14	0.1535	0.0327	20.0815
SRL 15CD	0.043	31	214	14	0.1903	0.0327	20.0487
SRL 15CD	0.043	19	233	14	0.1167	0.0150	20.0337
SRL 15CD	0.043	62	295	14	0.3807	0.0327	20.0009
SRL 15CD	0.043	62	357	14	0.3907	0.0164	19.9846
Totals:	0.342	357			2.1920	0.4154	19.9846
Total Devices:	8						

Supply Voltage & Battery Periods		Present Configuration Loaded To 4.99% of Maximum Capacity	
120	VAC Supply Voltage	139	157
Remote Power Supply 1A		139	499
24	Standby Hours		
5	Alarm Minutes		
342	NAC #1 Signal Appliance Alarm Current		342
342	Total NAC & AUX Load		342
PSE-6	Remote Power Supply, 6A, 120VAC		
TOTAL LOAD		139	499
Total Stand-By and Alarm Current		139	499
Standby Hours * Total Standby Current (Alarm Minutes/60) * Total Alarm Current		3336	41,583
Total Standby + Alarm Current		3377.583	
Battery De-Rating Factor +20%		4053.100	
4.05	Calculated Battery Ampere Hours		
Quantity	Description		
2	7.0 AH Battery		

1 RPS 1A VOLTAGE DROP/BATTERY CALCULATIONS
SCALE: NONE



KCG | LLC
KALERT | Consulting Group, LLC
2429 Stonycreek Drive
Fort Collins, Colorado 80521
tom@kcgllc.com



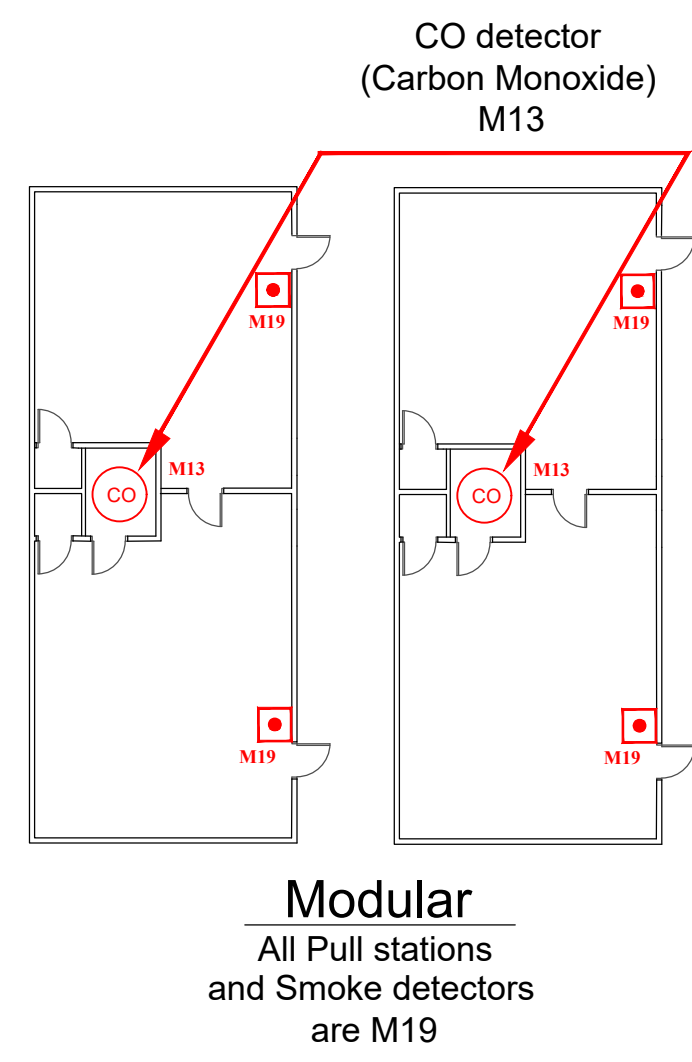
SHEET CONTENTS
FIRE ALARM SYSTEM
RISER DIAGRAM AND
CALCULATIONS

EYESTONE ELEMENTARY ECE
4000 WILSON AVENUE
WELLINGTON, COLORADO 80549

NO.	BY	DATE	DESCRIPTION	REVISIONS
1	TGS			
2	TLH			

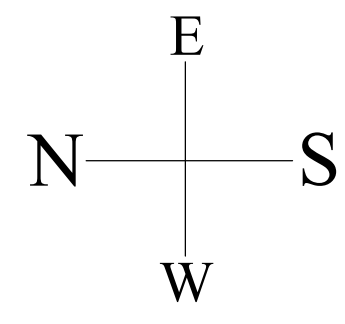
FA3.0

SHOP DRAWINGS



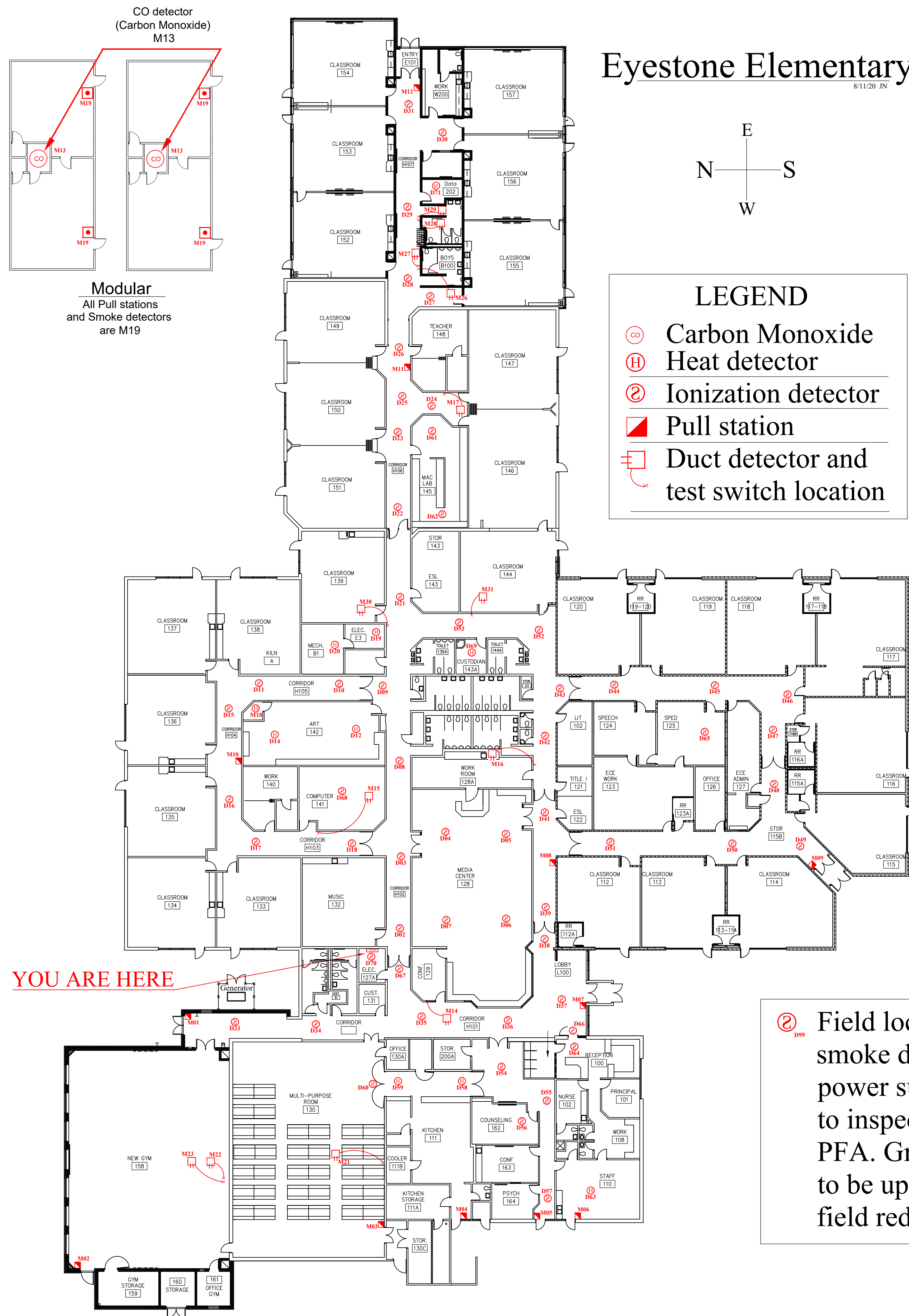
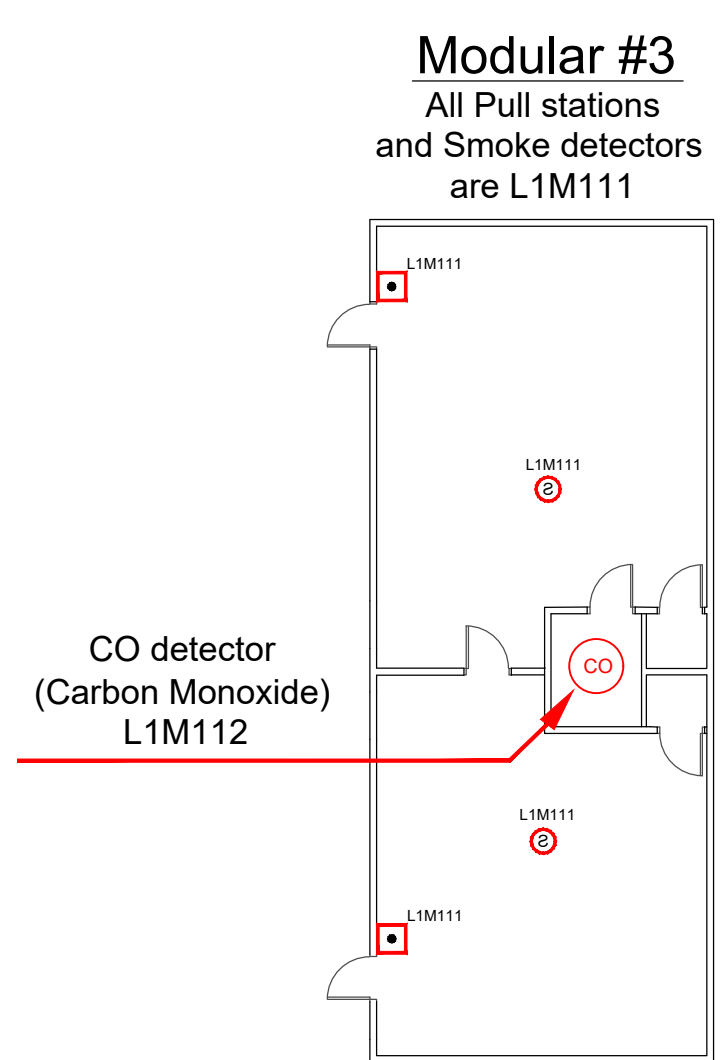
Eyestone Elementary

8/11/20 JN



LEGEND

- Carbon Monoxide
- Heat detector
- Ionization detector
- Pull station
- Duct detector and test switch location



Field locate new smoke detector and power supply prior to inspection with PFA. Graphic map to be updated per field redlines.



SHOP DRAWINGS

NO.	BY	DESCRIPTION	DATE

NO.	DATE	REVISIONS

DRAWN BY: TGS
CHECKED BY: TLH
DATE: 06.03.22

SHEET NO: FA6.0

LABEL INSIDE OF FACP WITH ACCOUNT INFORMATION, BYPASS ZONES AND LOCATION OF FACP 120VAC CIRCUIT PANEL AND BREAKER NUMBER. USE KROY LETTERING MACHINE WITH 1/4-INCH MINIMUM BLACK LETTERING ON WHITE BACKGROUND, UNLESS ALTERNATE LABELING IS APPROVED BY OWNER.



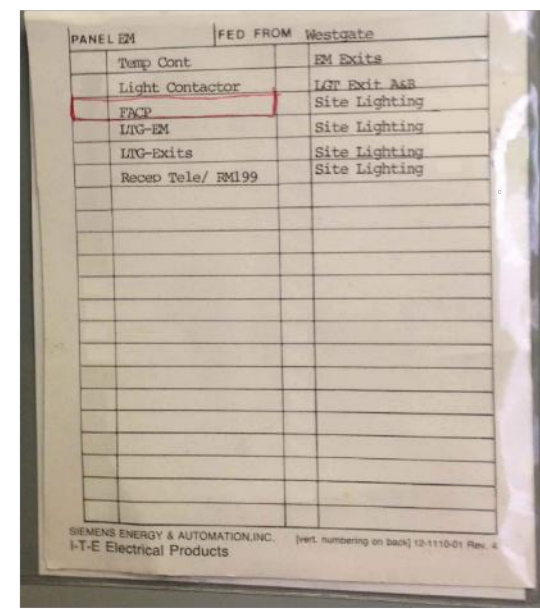
101. FACP LABELS
NOT TO SCALE

PROVIDE PANEL BREAKER LOCKS FOR ALL ELECTRICAL CIRCUITS FOR FIRE ALARM CONTROL EQUIPMENT PANELS. FIRE ALARM CIRCUIT BREAKER LOCKS SHALL BE COLOR CODED RED. BREAKER LOCKS SHALL BE ECLIPS ELOCK-FA OR APPROVED EQUIVALENT.



102. BREAKER LOCKS
NOT TO SCALE

PROVIDE TYPED ELECTRICAL PANEL BREAKER CIRCUIT LIST.



103. BREAKER CIRCUIT LIST
NOT TO SCALE

LABEL EACH NOTIFICATION APPLIANCE WITH NOTIFICATION APPLIANCE CIRCUIT NUMBER AND DEVICE NUMBER IN CIRCUIT (EX: RPS OR AMP 1:1-1, RPS OR AMP 1:1-2, ETC.). LABEL NOTIFICATION APPLIANCE CIRCUIT AND END OF LINE (EOL) DEVICE LOCATION ON THE NOTIFICATION APPLIANCE WHERE THE EOL IS LOCATED (EX: RPS OR AMP 1:1 EOL). PROVIDE SEPARATE LABEL FOR STROBE AND SPEAKER CIRCUITS. USE POWER SUPPLY AND AMPLIFIER DESIGNATIONS FOR NOTIFICATION LABELS. USE KROY LETTERING MACHINE WITH 1/4-INCH MINIMUM BLACK LETTERING ON CLEAR BACKGROUND, UNLESS ALTERNATE LABELING APPROVED BY THE DISTRICT.



104. NOTIFICATION APPLIANCE LABELS
NOT TO SCALE

SELECTABLE CANDELA DEVICES SHALL BE INSTALLED WITH SETTINGS AS INDICATED ON CONTRACT DOCUMENTS. SIMPLEX TEST SETTINGS SHALL BE SET IN FACP PROGRAMMING.



105. SELECTABLE CANDELA
NOT TO SCALE

CONTRACTOR SHALL DEMOLISH EXISTING LABELS FOR DEMOLISHED DEVICES.



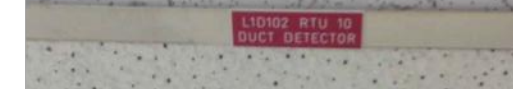
108. LABEL DEMOLITION
NOT TO SCALE

BATTERIES SHALL BE LABELED WITH MONTH/YEAR OF INSTALLATION AND MONTH/YEAR OF MANUFACTURE.



107. BATTERY LABELS
NOT TO SCALE

LABEL EACH CONCEALED DEVICE LOCATION WITH DEVICE TYPE, DEVICE ID ADDRESS AND CIRCUIT FUNCTION (IE: L01-D02 RTU-10 DUCT DETECTOR) AT THE ADJACENT CEILING TILE GRID T-BAR. USE PLASTIC LAMINATE WITH ENGRAVED 1/4-INCH LETTERING. LAMINATE SHALL BE OF RED ON WHITE CORE CONSTRUCTION (WHITE LETTERING ON RED BACKGROUND). CONTRACTOR SHALL PROVIDE SAMPLE PLACARD FOR OWNER APPROVAL PRIOR TO INSTALLATION.



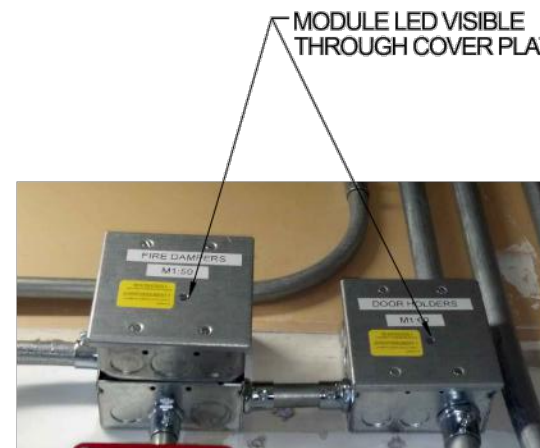
109. CONCEALED DEVICES
NOT TO SCALE

CONTRACTOR SHALL PROVIDE AND INSTALL DOOR FRAME PLACARDS TO MATCH FACILITY ASSIGNMENT. ARCHITECT/ENGINEER SHALL DEFINE ROOMS THAT REQUIRE PLACARDS ON CONTRACT DOCUMENTS. THE DOOR FRAME PLACARDS SHALL REFLECT THE MAPPS ROOM DESIGNATION AND SHALL BE ENGRAVED PHENOLIC LABELS MATCHING THE COLOR OF EXISTING DOOR FRAME LABELS (UNLESS ALTERNATE COLOR APPROVED BY DISTRICT). APPROXIMATELY 2" TALL BY 5" WIDE AND ATTACHED TO THE CENTER OF THE DOOR FRAME (STICKY BACK). CONTRACTOR SHALL PROVIDE SAMPLE DOOR TAGS FOR OWNER APPROVAL PRIOR TO INSTALLATION.



110. FACILITY ASSESSMENT DOOR PLACARDS
NOT TO SCALE

LABEL EACH CONTROL MODULE OR MONITOR MODULE WITH DEVICE ID ADDRESS AND FUNCTION (IE: L1-M1 AHJ-1 SHUTDOWN M-5 CLOSE FIRE/SMOKE DAMPERS, ETC.). USE KROY LETTERING MACHINE WITH 1/4-INCH MINIMUM BLACK LETTERING ON WHITE BACKGROUND, UNLESS ALTERNATE LABELING IS APPROVED BY OWNER. FIRE ALARM VENDOR SHALL PROVIDE COVER PLATES THAT PERMIT DEVICE CONTROL/MONITOR LED VISIBILITY.



111. MODULE LABELS
NOT TO SCALE

LABEL EACH INITIATING DEVICE WITH DEVICE ID ADDRESS (IE: L01-D001 OR M01-001). SMOKE AND HEAT DETECTORS SHALL BE LABELED ON BASE. USE KROY LETTERING MACHINE WITH 1/4-INCH MINIMUM BLACK LETTERING ON WHITE BACKGROUND, UNLESS ALTERNATE LABELING IS APPROVED BY OWNER.



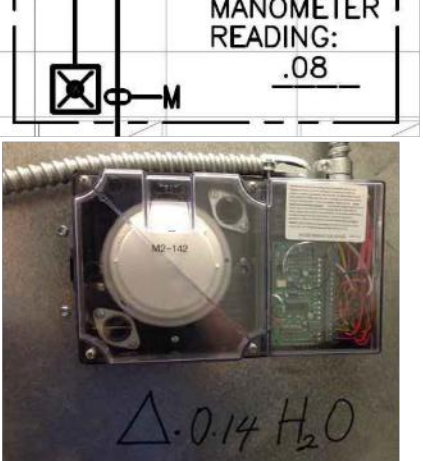
112. INITIATING DEVICE LABELS
NOT TO SCALE

CONTRACTOR SHALL REUSE/REINSTALL EXISTING UL LISTED PULL STATION COVERS. EXISTING SOUNDER COVERS SHALL HAVE BATTERIES REMOVED PRIOR TO REINSTALLATION. NEW COVERS SHALL BE EQUIPPED WITH ALARMS (WITHOUT BATTERIES) AND SHALL BE PROVIDED IN GYMS AND CAFETERIAS.



113. PULL STATION COVERS
NOT TO SCALE

LABEL DUCT DETECTOR HOUSING WITH DEVICE ID ADDRESS (IE: L01-D001 OR M01-001). USE KROY LETTERING MACHINE WITH 1/4-INCH MINIMUM BLACK LETTERING ON WHITE BACKGROUND, UNLESS ALTERNATE LABELING APPROVED BY OWNER. PROVIDE MAGNETIC DIFFERENTIAL PRESSURE DELTA WRITTEN ON THE DUCT ADJACENT TO THE DETECTOR HOUSING WITH A BLACK SHARPIE PEN. ALSO DOCUMENT THIS VALUE ON THE RECORD DRAWINGS.



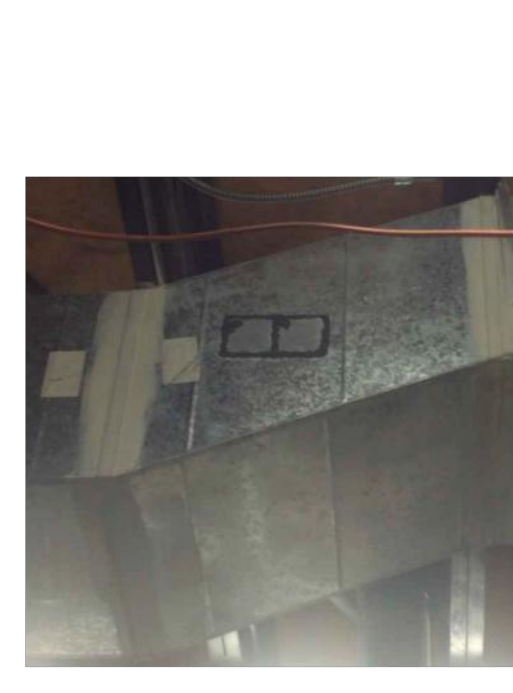
114. DUCT DETECTOR LABELS
NOT TO SCALE

LABEL EACH REMOTE DUCT DETECTOR OR BEAM DETECTOR TEST STATION WITH ASSOCIATED DEVICE ID ADDRESS AND ASSOCIATED HVAC UNIT OR BEAM DETECTOR DESIGNATION (IE: L01-D001 RTU-1, L01-D004 NORTH BEAM, ETC.). LABEL LOCATION OF THE DEVICE ASSOCIATED WITH THE TEST STATION, IF THE TEST STATION IS NOT IN THE DIRECT VICINITY OF THE ASSOCIATED DEVICE (IE: L01-M001 RTU-1 CLASSROOM 201). USE KROY LETTERING MACHINE WITH 1/4-INCH MINIMUM BLACK LETTERING ON WHITE BACKGROUND, UNLESS ALTERNATE LABELING IS APPROVED BY OWNER. LOCATE TEST STATION IN NEAREST CORRIDOR LOCATION AT A MINIMUM OF 7 FT ABOVE FINISHED FLOOR.



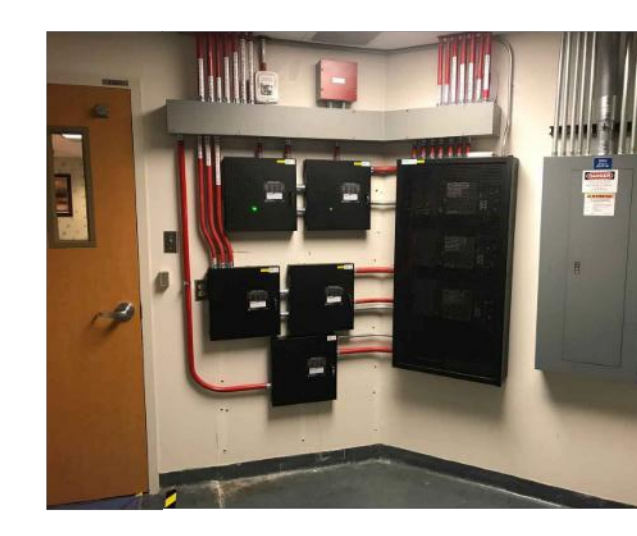
115. REMOTE TEST SWITCHES
NOT TO SCALE

WHEN PATCHING DUCTS, UTILIZE STEEL PLATES SECURED BY #8 X 1/2" INDENTED SLOTTED HEX WASHER HEAD TYPE A SHEET METAL SCREWS AND APPLY MASTIC WHICH IS LISTED AND LABELED "181A" IN ACCORDANCE WITH UL 181A. DO NOT USE TAPE.



116. DUCT DETECTOR SAMPLING TUBE
PATCH METHOD
NOT TO SCALE

CONTRACTOR SHALL LABEL CONDUIT ASSOCIATED WITH FIRE ALARM CONTROL EQUIPMENT CABINETS WITH THE CIRCUITS PRESENT IN EACH CONDUIT. LABELS SHALL BE 1" WHITE TEXT ON RED BACKGROUND FOR SILVER CONDUIT OR 1" BLACK TEXT ON WHITE BACKGROUND FOR RED CONDUIT. LABEL EACH PANEL WITH PANEL ID AS REQUIRED BY THE NEC. USE PLASTIC LAMINATE WITH ENGRAVED 1/4-INCH LETTERING. LAMINATE SHALL BE OF RED ON WHITE CORE CONSTRUCTION (WHITE LETTERING ON RED BACKGROUND). CONTRACTOR SHALL PROVIDE SAMPLE PLACARD FOR OWNER APPROVAL PRIOR TO INSTALLATION. SEE EXAMPLE PICTURES.



117. CONDUIT LABELS & PANEL IDENTIFICATION
NOT TO SCALE

CONDUITS, JUNCTION BOXES AND DEVICE BACK BOXES SHALL HAVE APPROPRIATE PLENUM RATED PLASTIC EDGE PROTECTION WIRE INSULATING BUSHING WHERE OPEN CABLE ROUTING OCCURS. DO NOT USE ROMEX TYPE CONNECTORS.



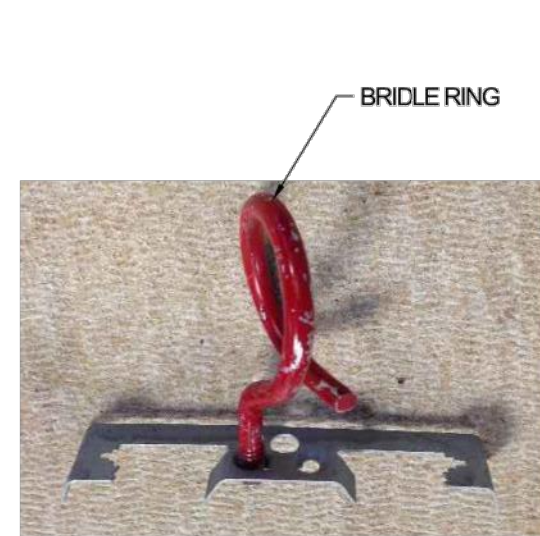
118. GROMMET & STRAIN RELIEF BUSHING
NOT TO SCALE

OPEN CABLING SHALL BE INSTALLED IN A NEAT AND WORKMANSHIP-LIKE MANNER. CONTRACTOR SHALL NOT USE ZIP TIES. RED PLENUM RATED VELCRO SHALL BE UTILIZED ONLY TO AVOID OBSTRUCTIONS AND TO SECURE THE SERVICE LOOP IN THE BRIDLE RING.



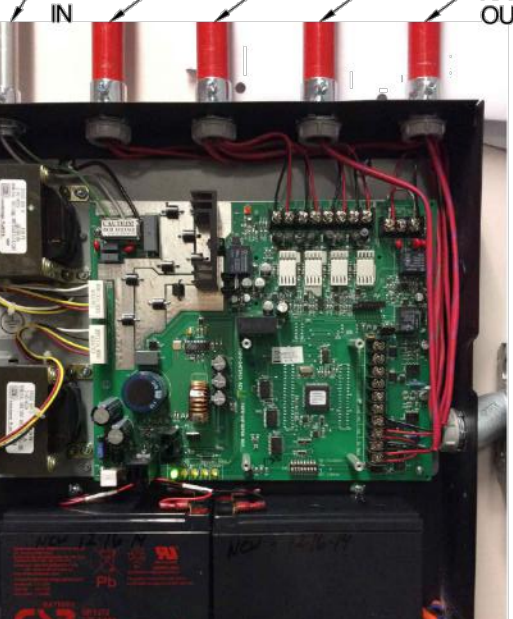
119. PLENUM RATED VELCRO WRAP
NOT TO SCALE

OPEN CABLING SHALL BE SUPPORTED AT A MINIMUM OF EVERY 4 TO 6 FEET TO BUILDING STRUCTURAL MEMBERS UTILIZING METAL BRIDLE RINGS. CABLING THAT IS SECURED TO SPRINKLER PIPING, HVAC DUCTWORK, ELECTRICAL CONDUIT OR OTHER NON-STRUCTURAL BUILDING MEMBER SHALL NOT BE ACCEPTABLE AND SHALL CAUSE THE CABLE TO BE RE-INSTALLED AND RE-SUPPORTED IN A PROPER MANNER.



120. BRIDLE RINGS
NOT TO SCALE

ROUTE CABLES SUCH THAT A MINIMUM SEPARATION OF 1/2" IS MAINTAINED BETWEEN CLASS 1 WIRE AND POWER-LIMITED FIRE ALARM CIRCUITS. PROVIDE SEPARATE RELAY (MR21C OR APPROVED EQUIVALENT) WHERE 120VAC IS REQUIRED TO RELEASE FIRE/SMOKE DAMPERS, MAGNETIC DOOR HOLDERS, OR SIMILAR, FOR NOTIFIER DEVICES. BARRIER CB500 MAY BE INSTALLED IN PLACE OF AN ADDITIONAL RELAY.



121. 110VAC AND 24VDC SEPARATION
NOT TO SCALE

APPROPRIATE FIRE CAULKING OR SEALANT SHALL BE UTILIZED WHERE OPEN CABLING PENETRATES FIRE SEPARATION BARRIERS OR BUILDING SEPARATION WALLS OCCUR. FIRE CAULK ALL CONDUIT ENDS WHERE CONDUIT SLEEVES PENETRATE FIRE BARRIER SEPARATIONS. AFTER CABLE HAS BEEN INSTALLED, COMPLY WITH UL THROUGH PENETRATION REQUIREMENTS. SEE DIVISION 7.



122. FIRE CAULKING
NOT TO SCALE

MOUNT OUTLET BOX FOR ELECTRIC DOOR HOLDER TO WITHSTAND 80 POUNDS PULLING FORCE. WHERE WALL CONSTRUCTION IS WOOD OR STEEL FRAME, UTILIZE CADDY TELESCOPIC BRACKET TSSB1815/324 OR APPROVED EQUIVALENT OR 2X4 PLYWOOD SECURED TO ADJACENT SUPPORTS FOR NEW CONSTRUCTION.



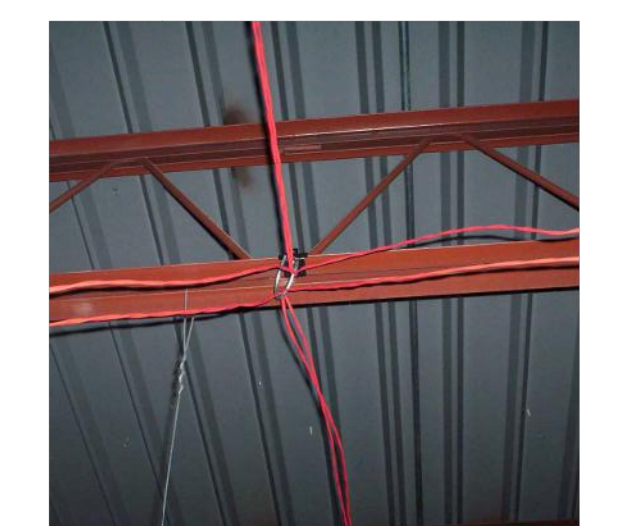
123. MAGNETIC DOOR HOLDER SUPPORT
NOT TO SCALE

CONTRACTOR SHALL PROVIDE AND INSTALL SSB-TBAR SUPPORT BRACKETS WITH T-BAR DROP CEILING MOUNTING CLIPS (OR APPROVED EQUIVALENT). ADJUSTABLE CADDYS SHALL NOT BE PERMITTED. PROVIDE AND INSTALL ORBIT FIRE ALARM AS (FA-UM8) 3-1/2" DEEP BOXES.



125. BACKBOX AND BACKBOX SUPPORT
NOT TO SCALE

CABLE ROUTING SHALL BE PERPENDICULAR TO OR PARALLEL TO STRUCTURAL BUILDING MEMBERS AND SHALL UTILIZE ALUMINUM BRIDLE RING TYPE SUPPORT SYSTEM ATTACHED TO STRUCTURAL BUILDING MEMBERS ONLY. DIAGONAL ROUTING OF CABLE SHALL NOT BE CONSIDERED ACCEPTABLE AND SHALL CAUSE CABLE TO BE REMOVED AND REINSTALLED. OPEN CABLING SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. CONTRACTOR SHALL REMOVE ANY KINKS OR PINCHES IN CABLE.



126. CABLE ROUTING
NOT TO SCALE

OPEN CABLING SHALL BE ROUTED AWAY FROM OTHER BUILDING CABLING AND EQUIPMENT, AND SHALL BE ROUTED TO AND FROM THE DEVICE IN A VERTICAL OR HORIZONTAL MANNER. MAINTAIN CABLING AT THE SAME LEVEL WHERE POSSIBLE. CABLING THAT IS NOT DROPPED VERTICALLY TO THE DEVICE OR ROUTED HORIZONTALLY STRAIGHT TO THE DEVICE SHALL NOT BE CONSIDERED ACCEPTABLE. CABLING THAT IS ROUTED THROUGH, OVER, UNDER OR AROUND OTHER EQUIPMENT, WHEN A STRAIGHT HORIZONTAL OR VERTICAL PATH IS AVAILABLE SHALL NOT BE CONSIDERED ACCEPTABLE AND SHALL CAUSE THE CABLE TO BE REMOVED AND BE REINSTALLED.



127. CABLE ROUTING
NOT TO SCALE

FOR EACH DEVICE, CONTRACTOR SHALL NEATLY LOOP 4' OF CABLE AND SUPPORT IN NEAREST BRIDLE RING.



128. SERVICE LOOP
NOT TO SCALE



TYPE OF CIRCUIT APPLICATION	DESCRIPTION	COLOR CODED CABLE
CONVENTIONAL 120V CIRCUIT PLENUM	1 PAIR 18 AWG TWISTED / UNSHIELDED FIRE ALARM CABLE (P/PL)	RED + BLACK - RED JACKET W/ BROWN STRIPE
DATA (EOL) CIRCUIT PLENUM	1 PAIR 18 AWG TWISTED / UNSHIELDED FIRE ALARM CABLE (P/PL)	RED + BLACK - RED JACKET W/ PINK-PRINTED "EOL"
DATA (EOL) WET LOCATION	1 PAIR 18 AWG TWISTED / UNSHIELDED FIRE ALARM CABLE (WET LOCATION)	RED + BLACK - BLACK JACKET TAG FOR CRT TYPE @ 2 BOX
VISUAL (RAG) CIRCUIT PLENUM	1 PAIR 18 AWG TWISTED / UNSHIELDED FIRE ALARM CABLE (P/PL)	RED + BLACK - RED JACKET W/ GREEN STRIPE
VISUAL (RAG) WET LOCATION	1 PAIR 18 AWG TWISTED / UNSHIELDED FIRE ALARM CABLE (WET LOCATION)	RED + BLACK - BLACK JACKET TAG FOR CRT TYPE @ 2 BOX
SPEAKER (RAG) CIRCUIT PLENUM	1 PAIR 18 AWG TWISTED / UNSHIELDED FIRE ALARM CABLE (P/PL)	RED + BLACK - RED JACKET W/ BLUE STRIPE
SPEAKER (RAG) WET LOCATION	1 PAIR 18 AWG TWISTED / UNSHIELDED FIRE ALARM CABLE (WET LOCATION)	RED + BLACK - BLACK JACKET TAG FOR CRT TYPE @ 2 BOX
ALC POWER CIRCUIT PLENUM	1 PAIR 18 AWG TWISTED / UNSHIELDED FIRE ALARM CABLE (P/PL)	RED + BLACK - RED JACKET W/ PURPLE STRIPE
ALC SYNC CIRCUIT PLENUM	1 PAIR 18 AWG TWISTED / UNSHIELDED FIRE ALARM CABLE (P/PL)	RED + BLACK - RED JACKET W/ YELLOW STRIPE
NETWORK CIRCUIT PLENUM	1 PAIR 18 AWG TWISTED / UNSHIELDED FIRE ALARM CABLE (P/PL)	RED + BLACK - RED JACKET W/ YELLOW STRIPE
RELAY / MISCELLANEOUS CIRCUIT PLENUM	1 PAIR 18 AWG TWISTED / UNSHIELDED FIRE ALARM CABLE (P/PL)	RED + BLACK - RED JACKET W/ YELLOW STRIPE
REMOTE TEST STATION CIRCUIT PLENUM	2 PAIR 18 AWG TWISTED / UNSHIELDED FIRE ALARM CABLE (P/PL)	RED + BLACK - RED JACKET W/ YELLOW STRIPE
TELEPHONE CIRCUIT	2 PAIR 20 AWG TWISTED / UNSHIELDED FIRE ALARM CABLE (P/PL)	RED JACKET TAG FOR CRT TYPE @ 2 BOX

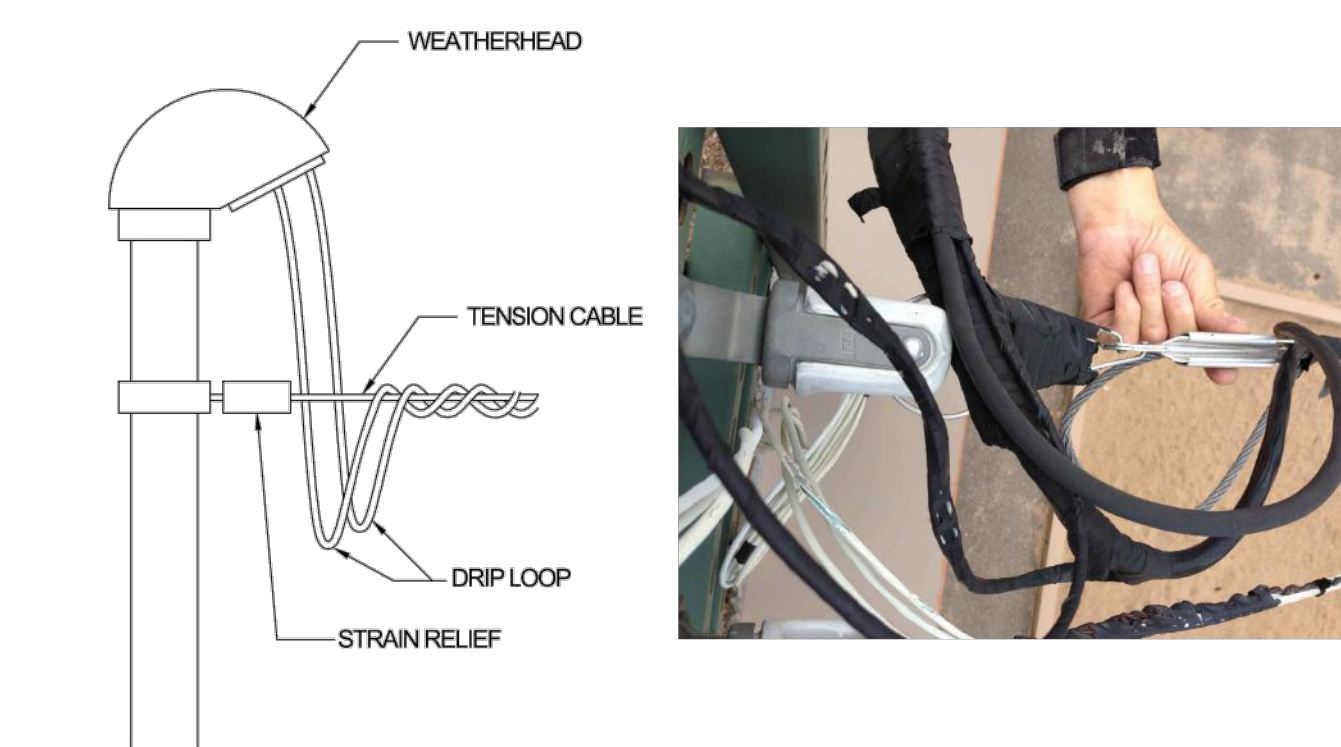
129. WIRE TYPE AND STRIPING
NOT TO SCALE

TERMINATIONS BETWEEN FPLP AND WET LOCATION CABLE SHALL BE ORIENTED IN A VERTICAL POSITION TO ALLEVIATE POSSIBILITY OF WATER RETENTION.



130. MODULAR CLASSROOM J-BOX
NOT TO SCALE

OVERHEAD CONDUIT ENTRIES TO MODULAR CLASSROOMS SHALL BE INSTALLED WITH A WEATHERHEAD, CABLE SUPPORT, DRIP LOOP AND STRAIN RELIEF. SURGE SUPPRESSORS SHALL BE PROVIDED TO PROTECT BOTH THE SCHOOL AND THE FIRST MODULAR CLASSROOM.



131. OVER-HEAD CABLE TO MODULAR CLASSROOM
NOT TO SCALE

SHOP DRAWINGS SHALL INCLUDE FACP PROGRAMMING LIST WHICH INCLUDES DEVICE NUMBER, DEVICE LOCATION AND REFERENCES TO MAJOR BUILDING AREAS. WHERE NECESSARY TO DISTINGUISH THE LOCATIONS OF TWO OR MORE DETECTORS, COMPASS DIRECTIONS SHALL BE INCORPORATED IN THE DEVICE LOCATION DESCRIPTION IN PROGRAMMING. EXAMPLES INCLUDE:

L01-D001	SMOKE(PHOTO)	CLASSROOM 1 EAST
L01-D002	SMOKE(PHOTO)	CLASSROOM 1 WEST
L01-D003	SMOKE(PHOTO)	WEST CORRIDOR NORTH
L01-D004	SMOKE(PHOTO)	WEST CORRIDOR CENTER
L01-D005	SMOKE(PHOTO)	WEST CORRIDOR SOUTH
L01-D006	HEAT	RF 200
L01-D007	SUP (DUCT P)	AHJ-1 RETURN
L01-D010	SMOKE(BEAM)	GYM 150 NORTH
L01-D011	SMOKE(BEAM)	GYM 150 SOUTH
L01-M001	PULL STATION	NORTH ENTRY 136
L01-M060	RELAY	RTU-2 SHUTDOWN

132. FACP PROGRAMMING LABELS
NOT TO SCALE

- FA-001 FIRE ALARM SYSTEM LABELING & INSTALLATION
- FA-002 FIRE ALARM SYSTEM DETAILS
- FA-003 VESDA INSTALLATION DETAILS
- FA-004 VESDA INSTALLATION DETAILS CONTINUED

133. SHEET INDEX
NOT TO SCALE



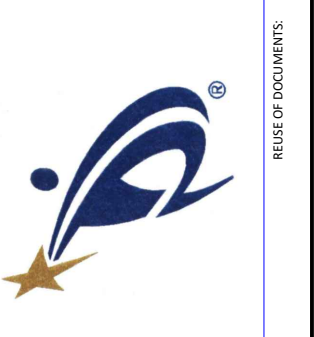
TECHNICAL GUIDELINES
DETAILS ARE GRAPHICAL DEPICTIONS OF DIV 28 SPECIFICATIONS

DATE: 01/24/2022
SCALE: NOT TO SCALE



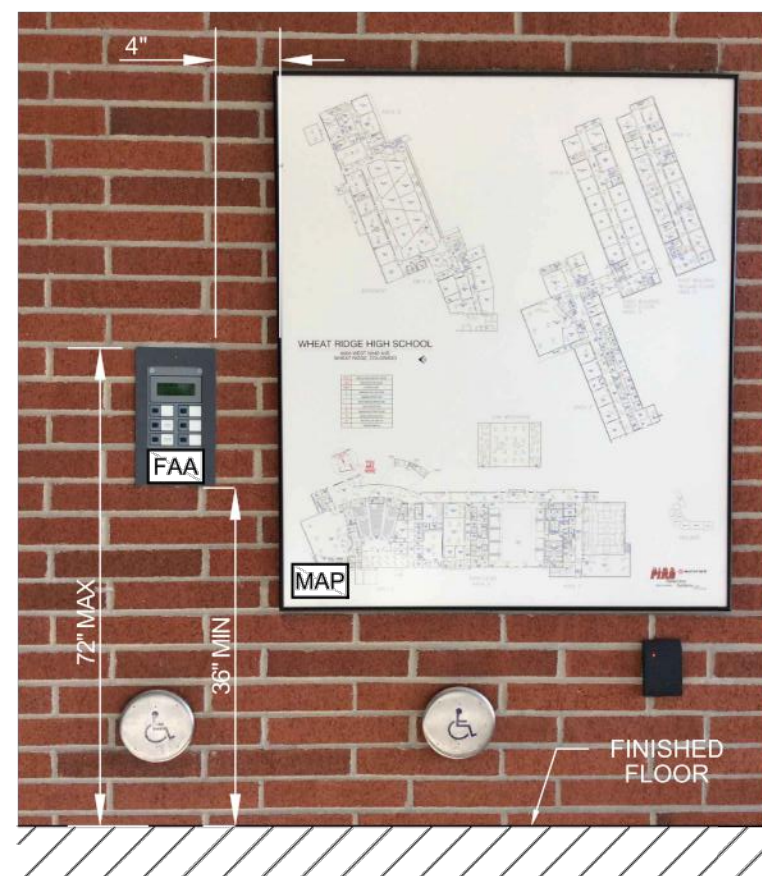
SHEET CONTENTS
FIRE ALARM SYSTEM
TECHNICAL GUIDELINES

EYESTONE ELEMENTARY ECE
4000 WILSON AVENUE
WELLINGTON, COLORADO 80549

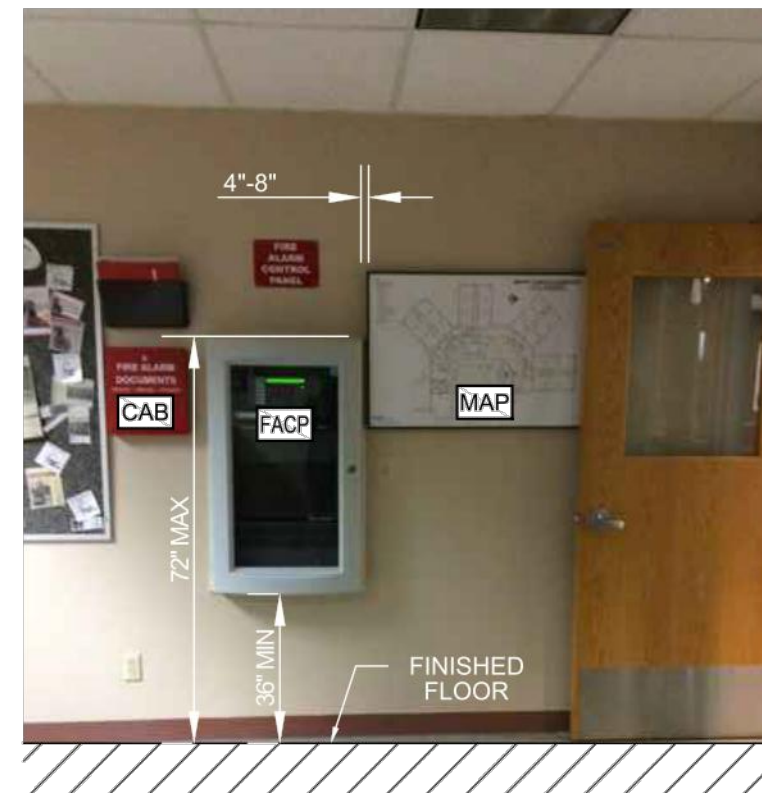


NO.	DATE	DESCRIPTION	REVISIONS
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2			
3			
4			

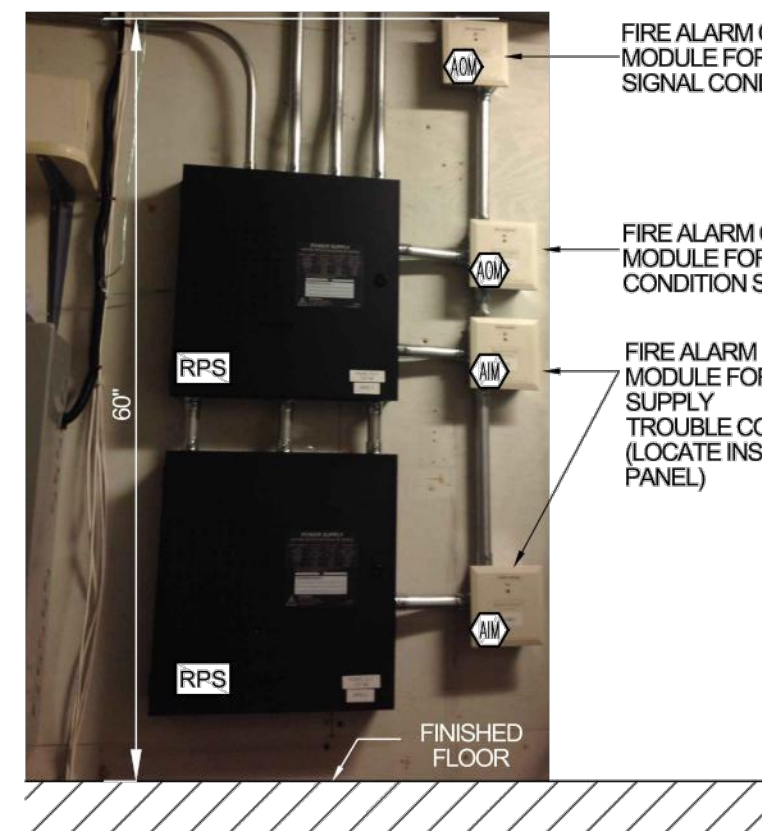
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DRAWN BY: TGS
CHECKED BY: TLH
DATE: 06.03.22
SHEET NO: FA7.0



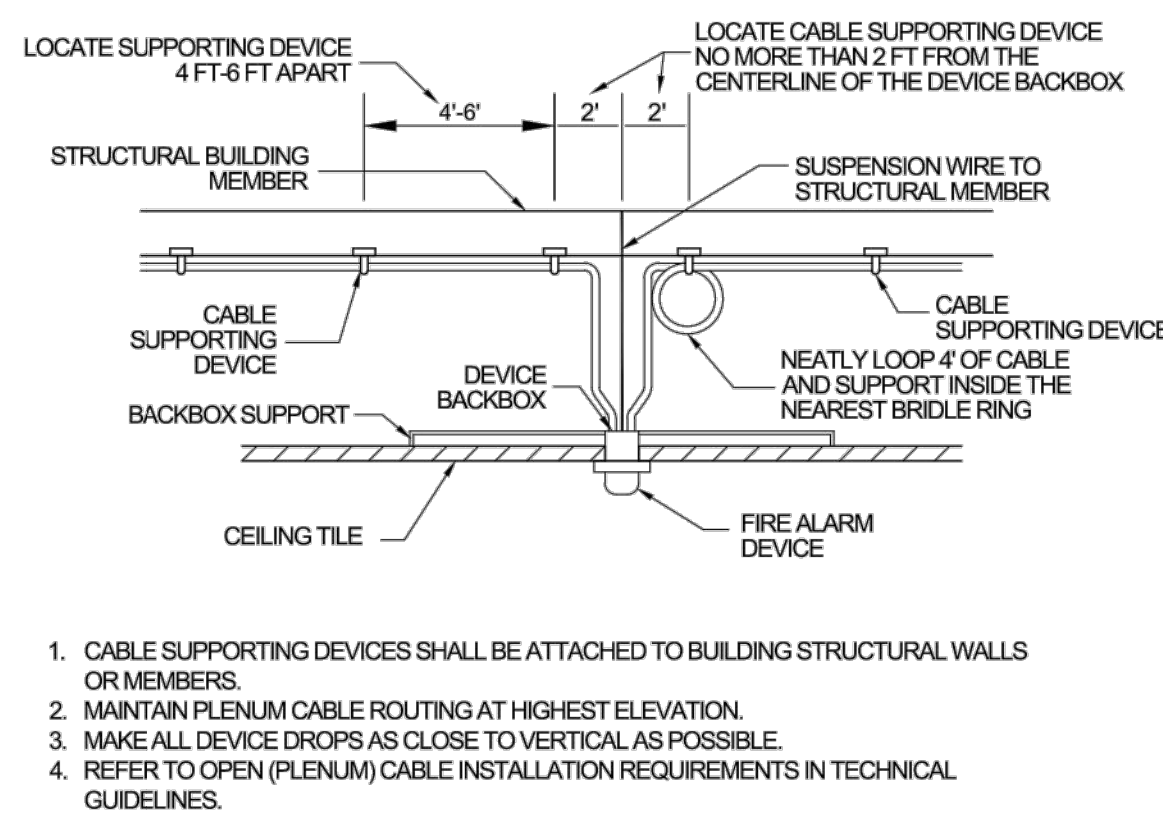
201. FIRE ALARM ANNUNCIATOR PANEL ELEVATION
NOT TO SCALE



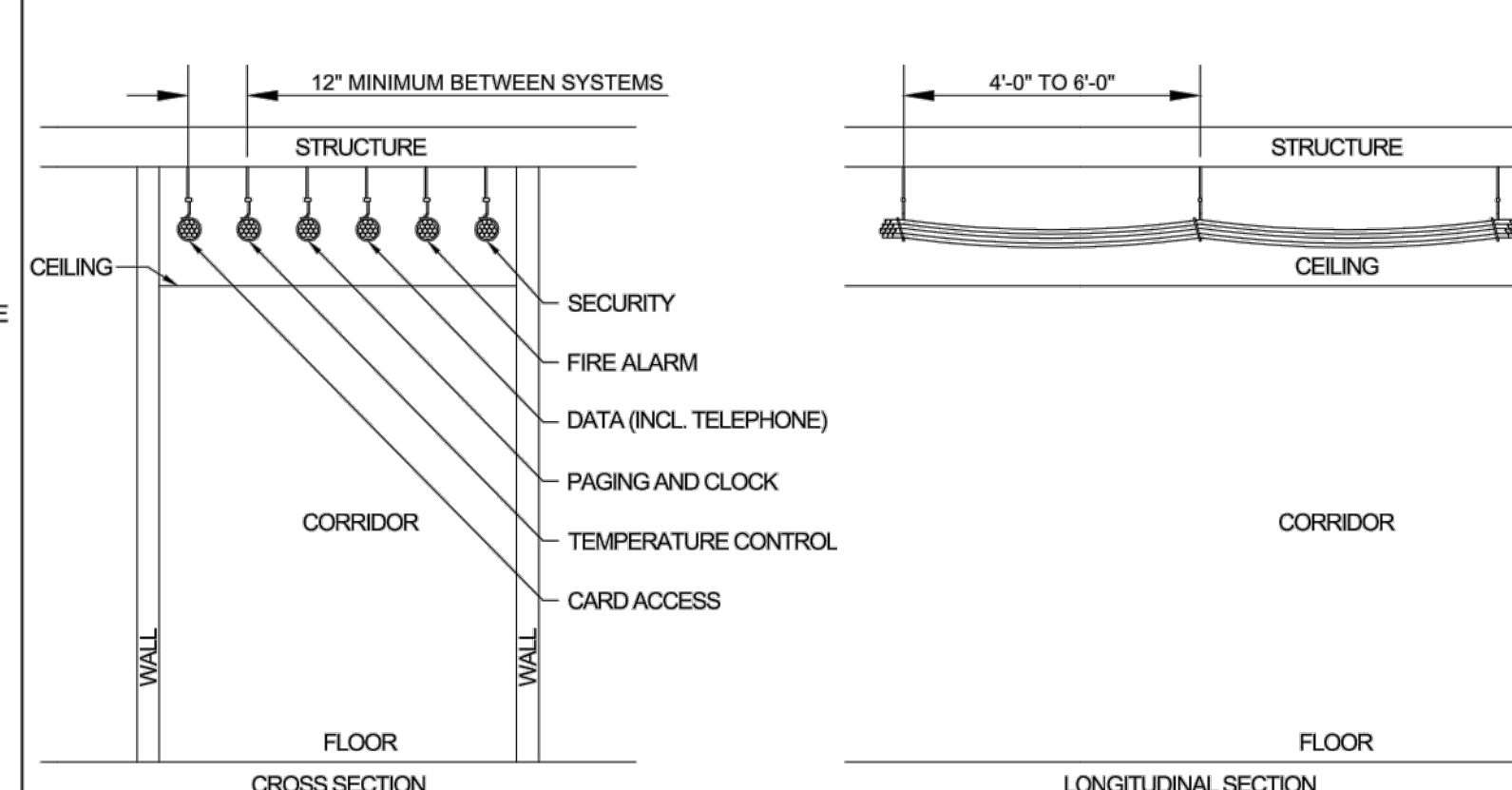
202. FIRE ALARM CONTROL PANEL ELEVATION
NOT TO SCALE



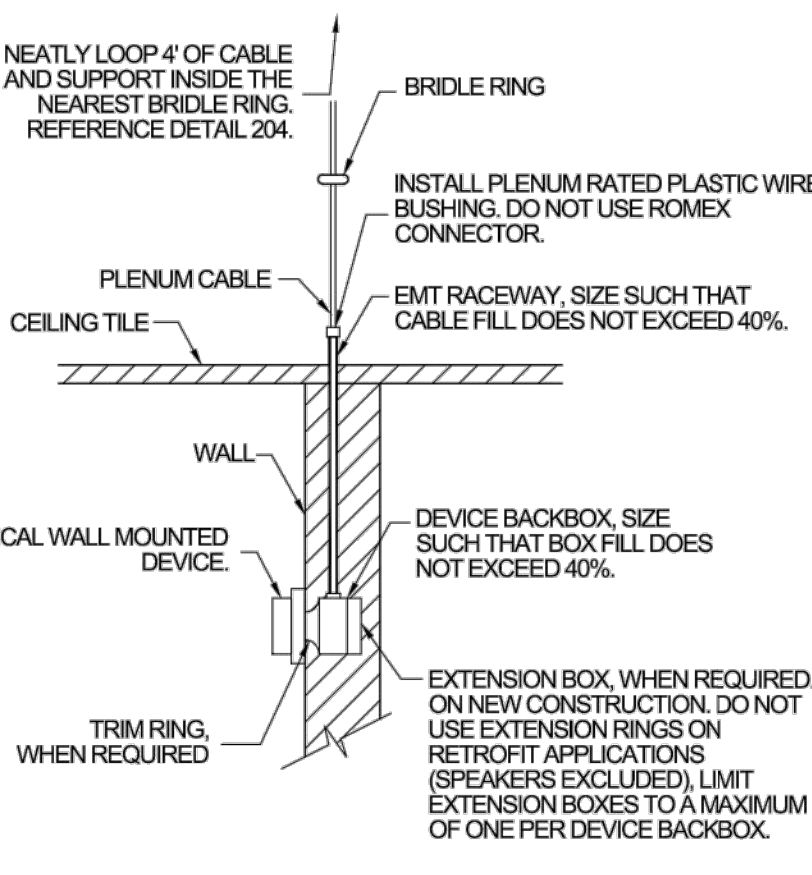
203. BOOSTER POWER SUPPLY PANEL ELEVATION
NOT TO SCALE



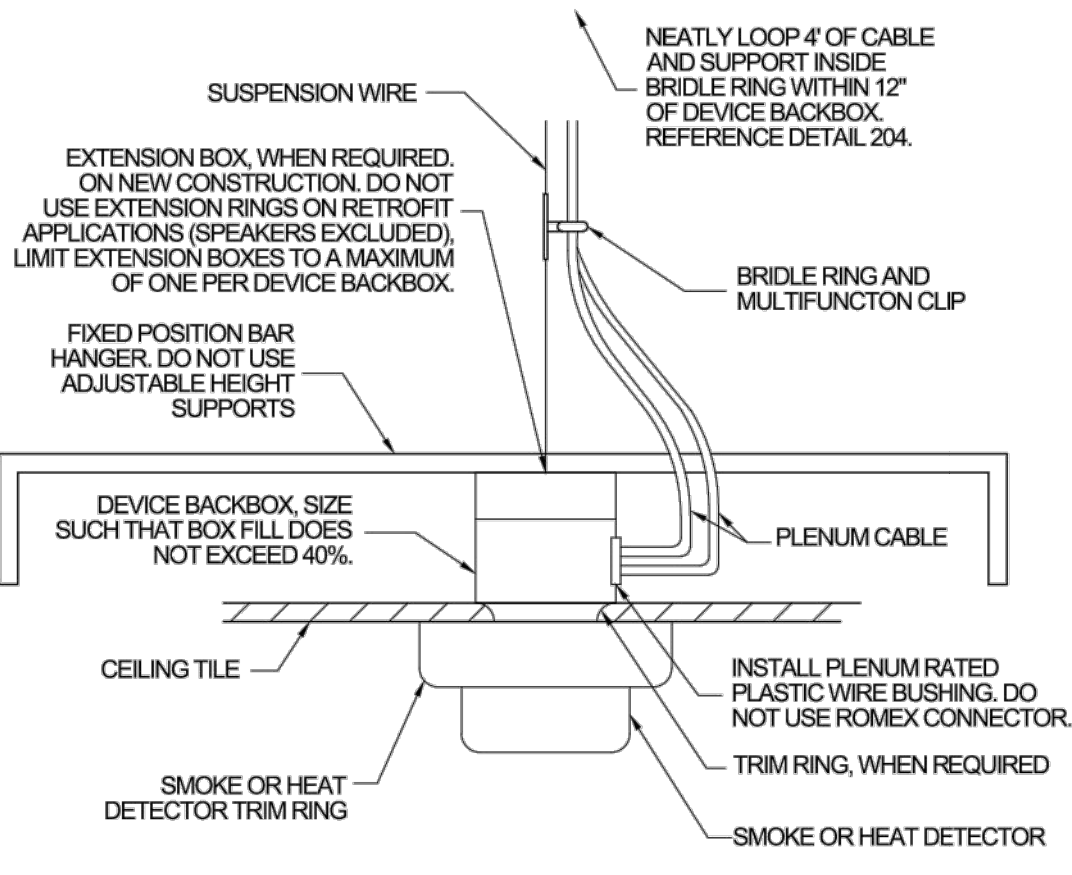
204. TYPICAL PLENUM CABLE WIRING INSTALLATION
NOT TO SCALE



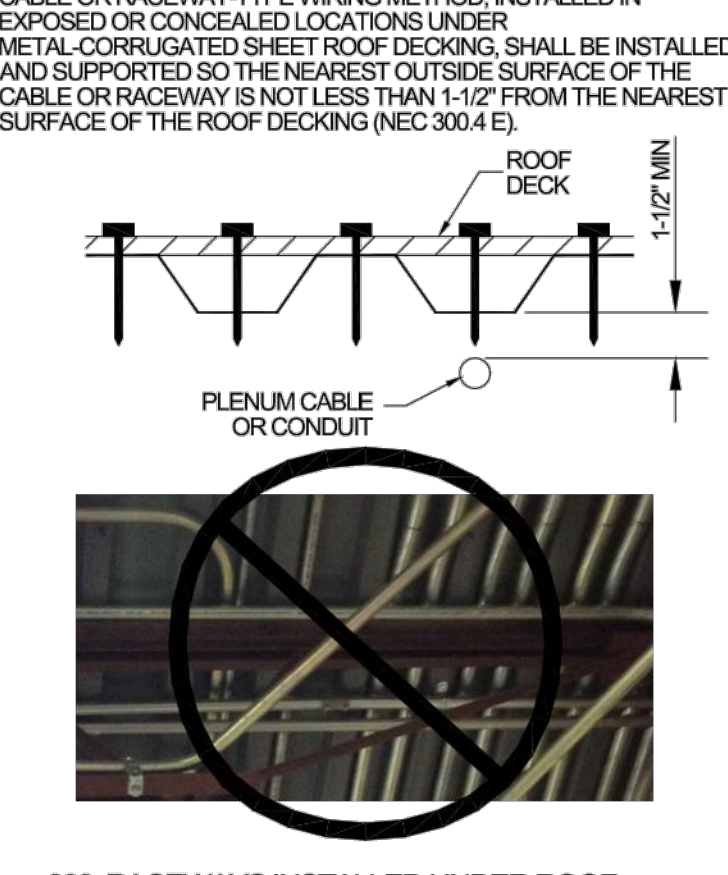
205. BRIDLE RING SUPPORT AND SYSTEM SEPARATION
NOT TO SCALE



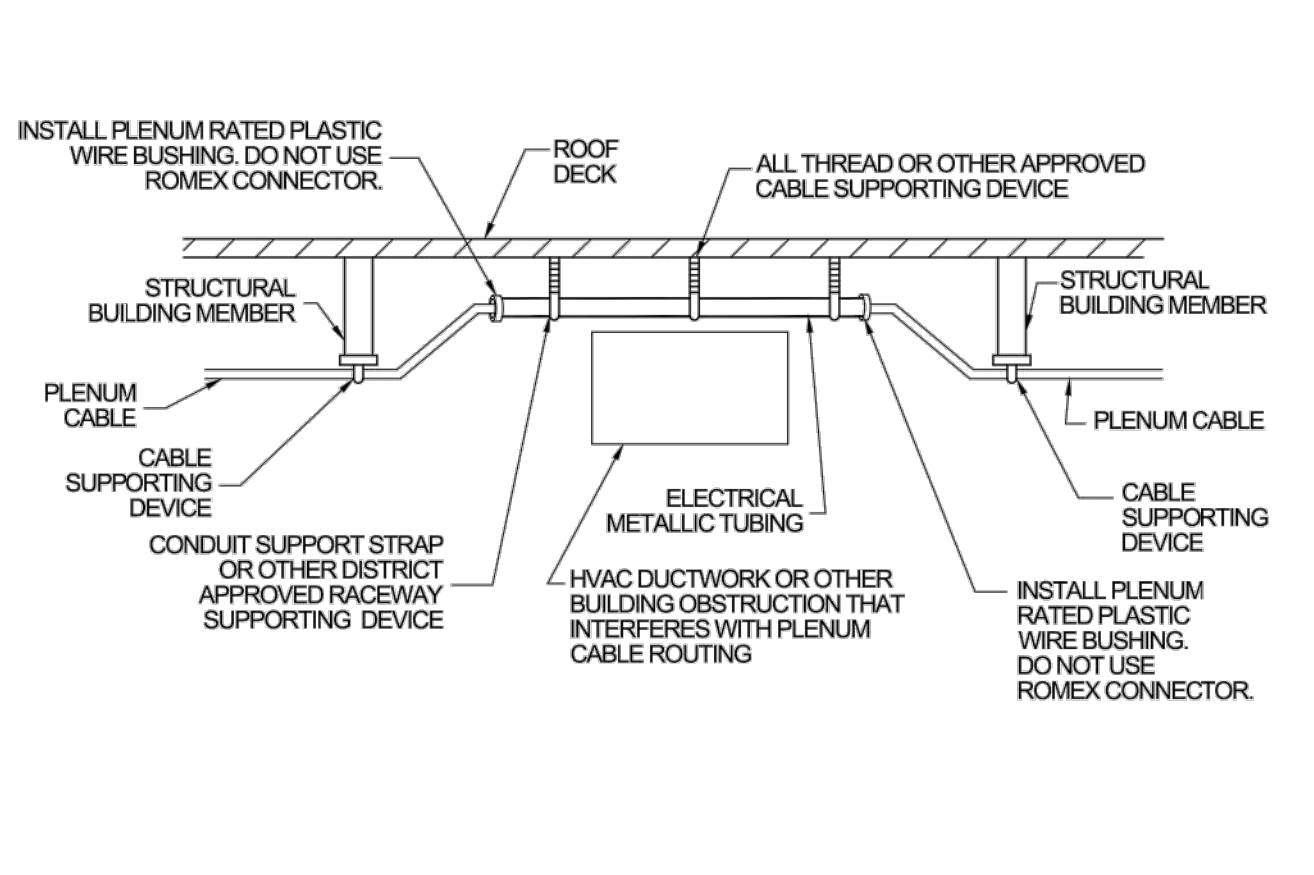
206. TYPICAL WALL MOUNT DEVICE INSTALLATION
NOT TO SCALE



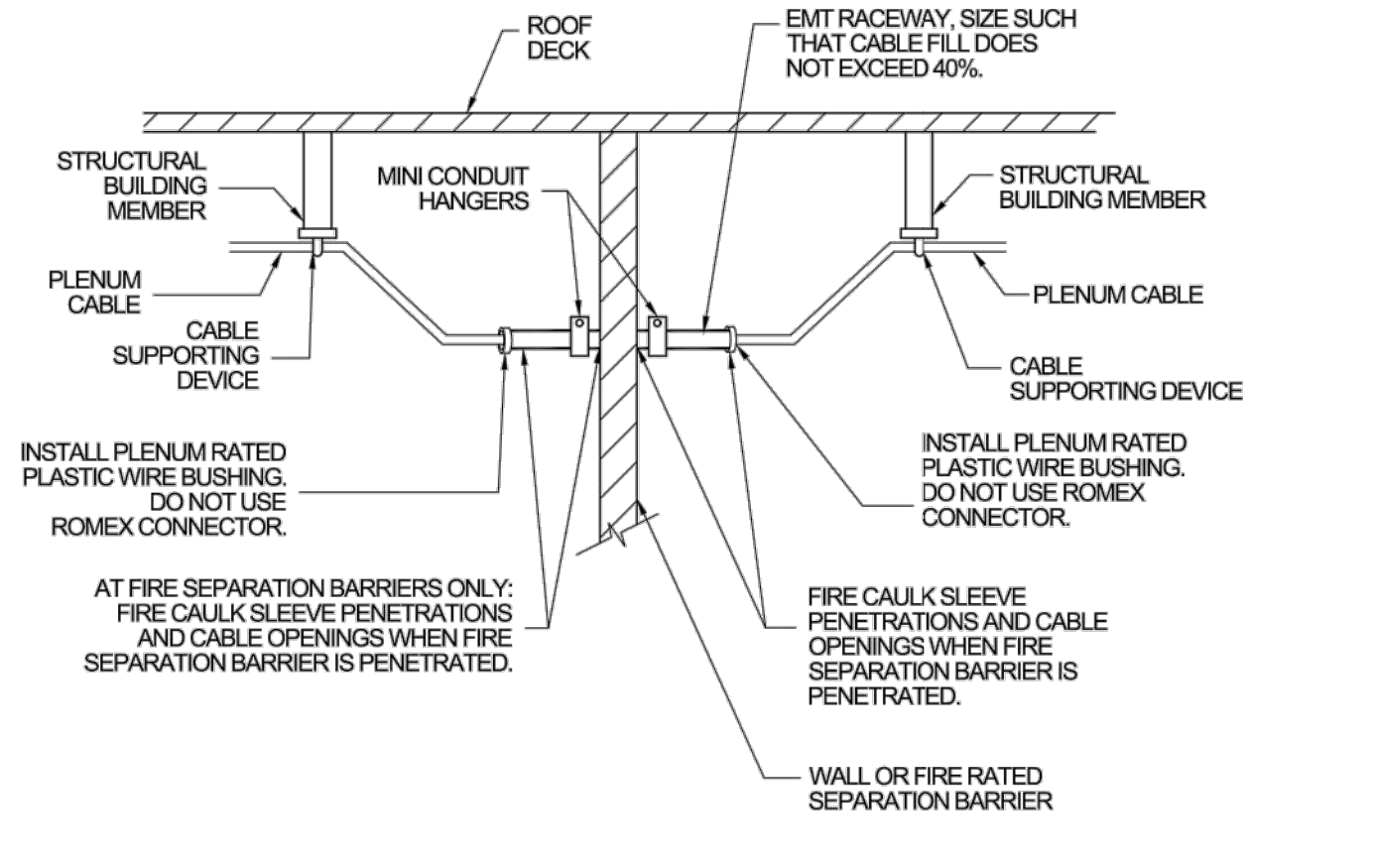
207. TYPICAL CEILING MOUNT DEVICE INSTALLATION
NOT TO SCALE



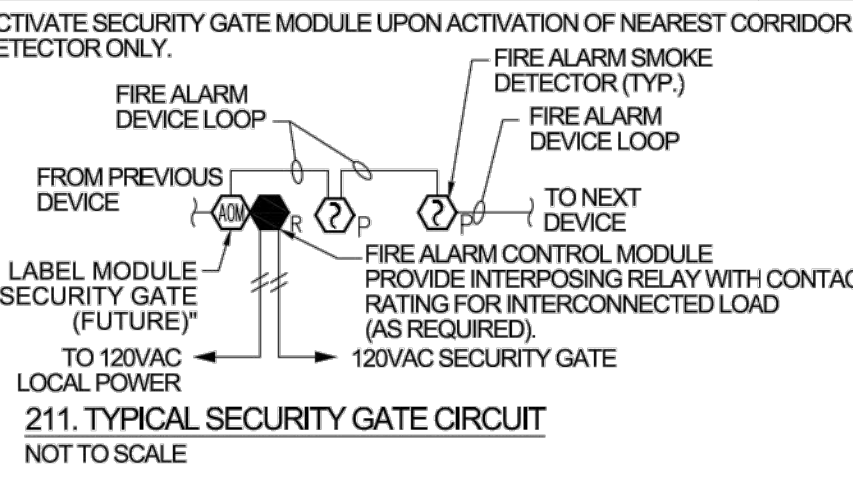
208. RACEWAYS INSTALLED UNDER ROOF DECKING
NOT TO SCALE



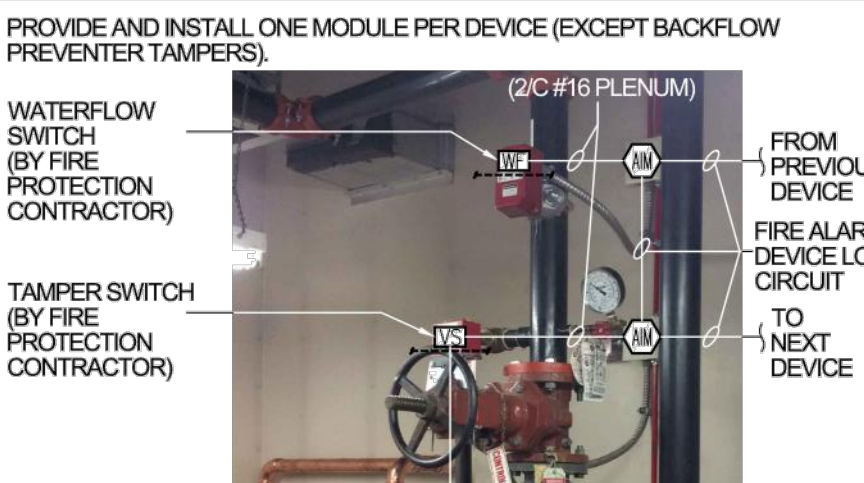
209. TYPICAL PLENUM CABLE WIRE INSTALLATION WITH OBSTRUCTION
NOT TO SCALE



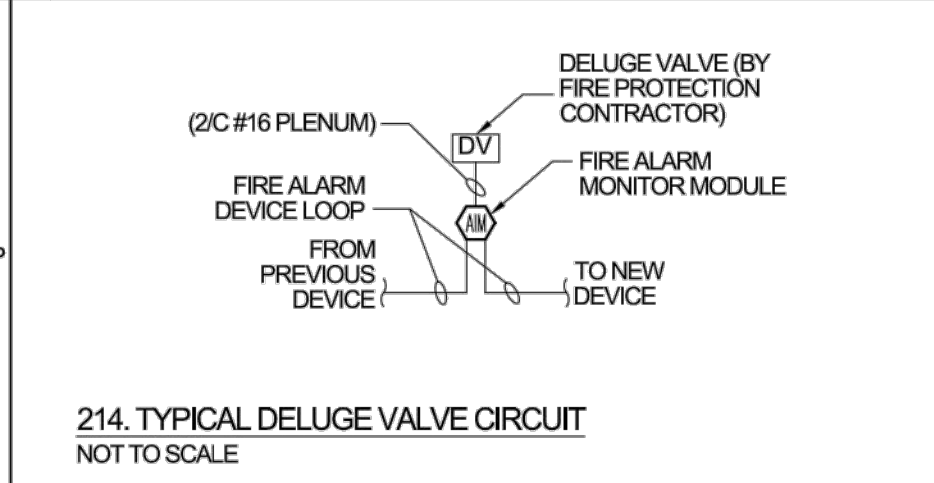
210. TYPICAL PLENUM CABLE INSTALLATION THROUGH PENETRATION
NOT TO SCALE



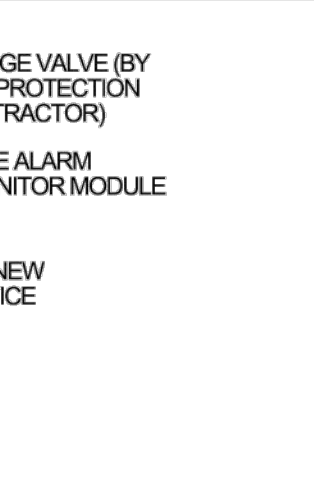
211. TYPICAL SECURITY GATE CIRCUIT
NOT TO SCALE



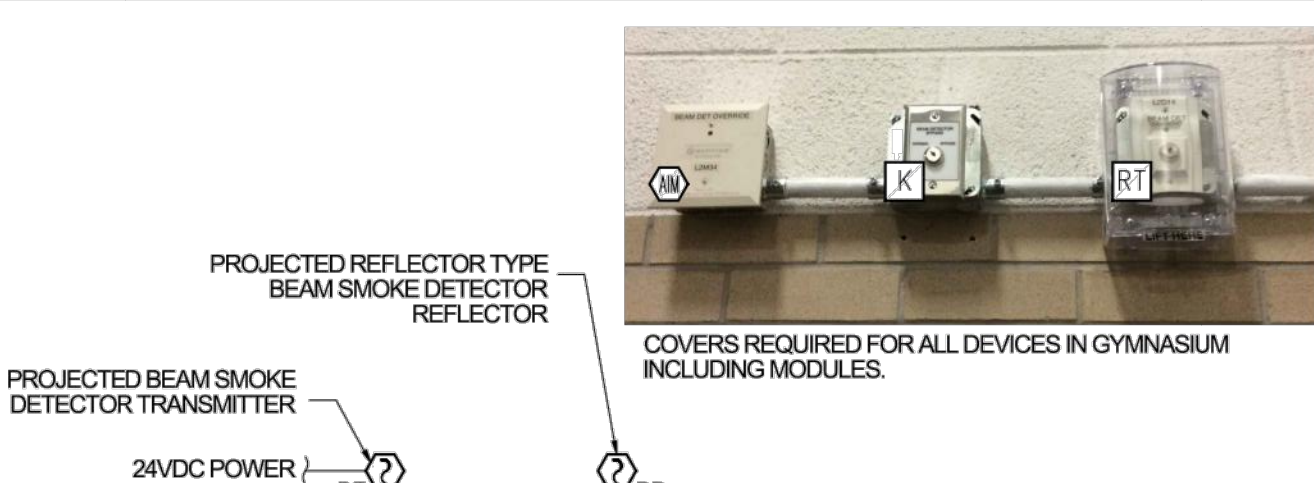
212. TYPICAL FIRE SEPARATION BARRIER CIRCUIT
NOT TO SCALE



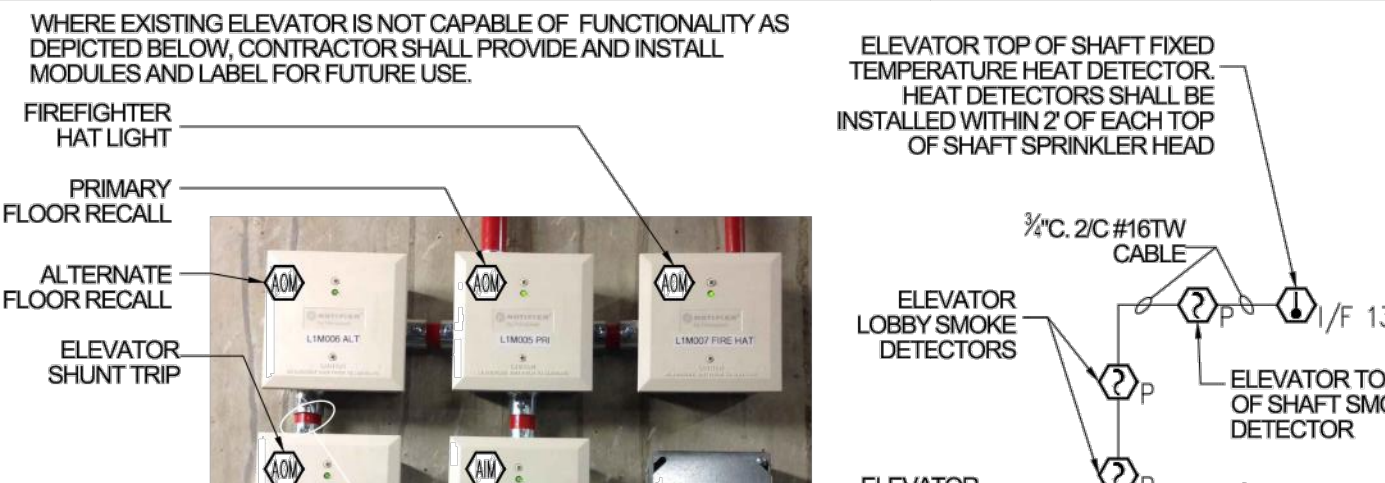
213. TYPICAL WATERFLOW AND TAMPER SWITCH CIRCUIT
NOT TO SCALE



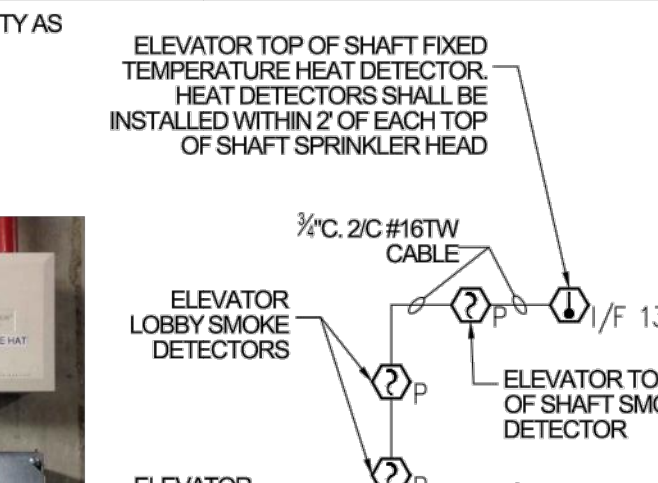
214. TYPICAL DELUGE VALVE CIRCUIT
NOT TO SCALE



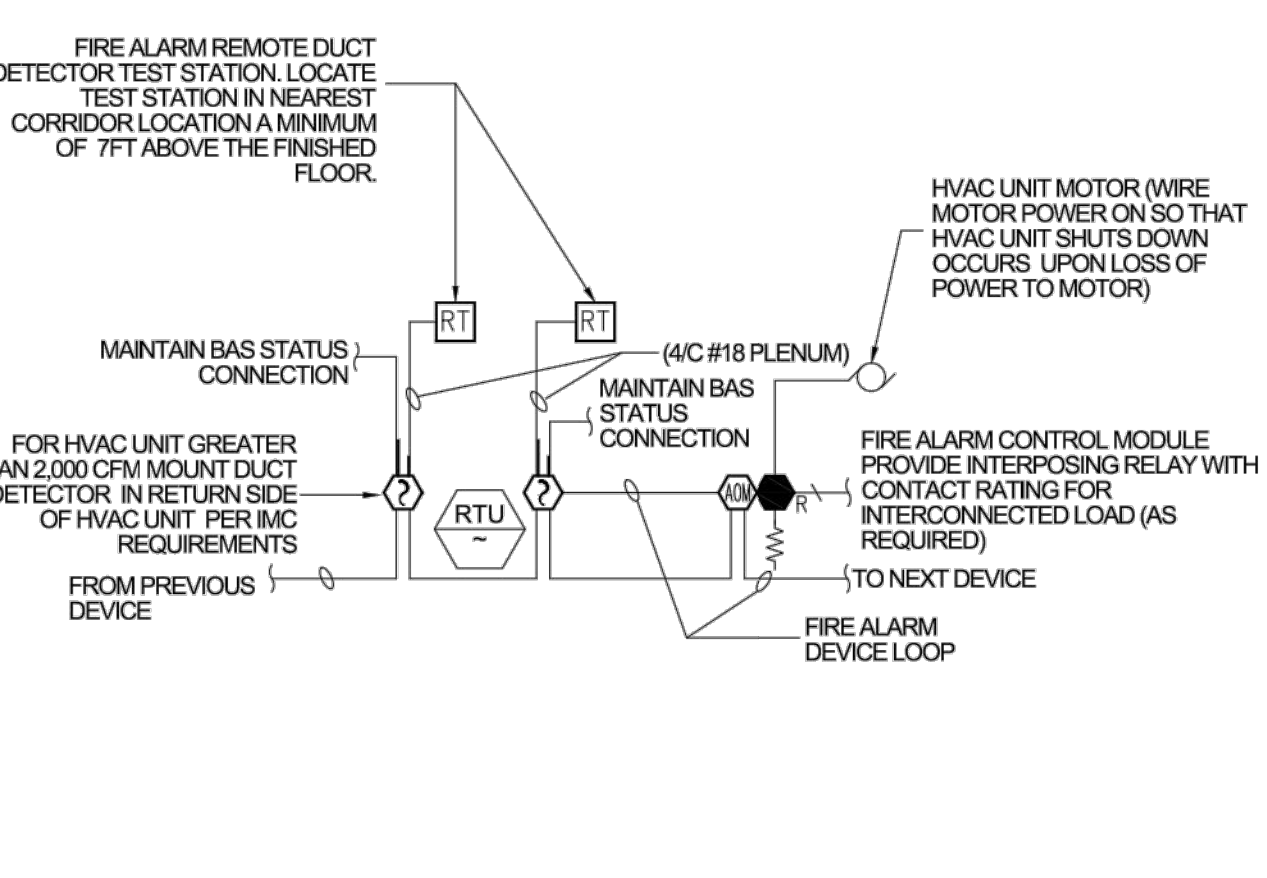
215. TYPICAL KITCHEN HOOD CIRCUIT
NOT TO SCALE



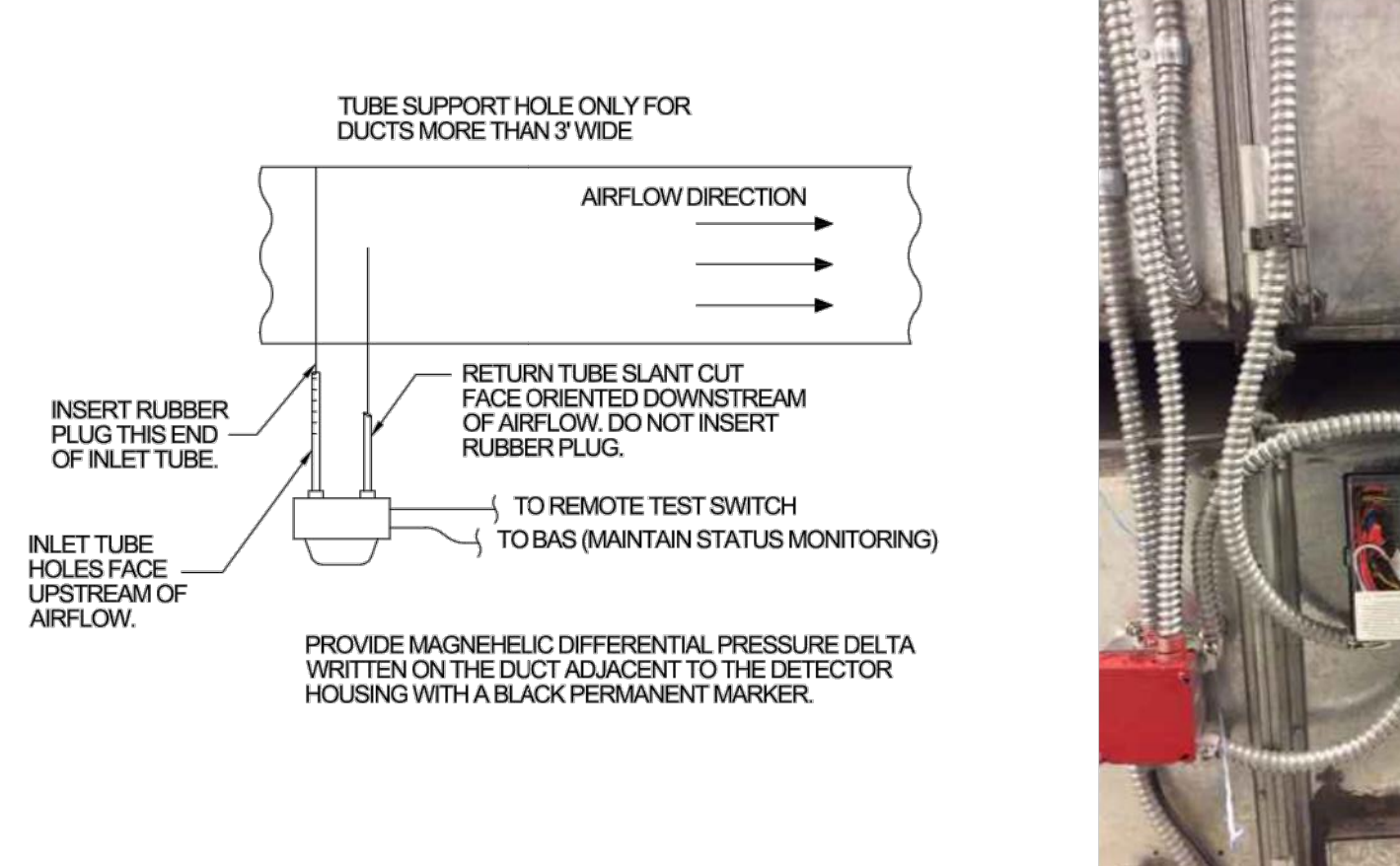
216. BEAM SMOKE DETECTOR CIRCUIT WITH TIMED OVERRIDE
NOT TO SCALE



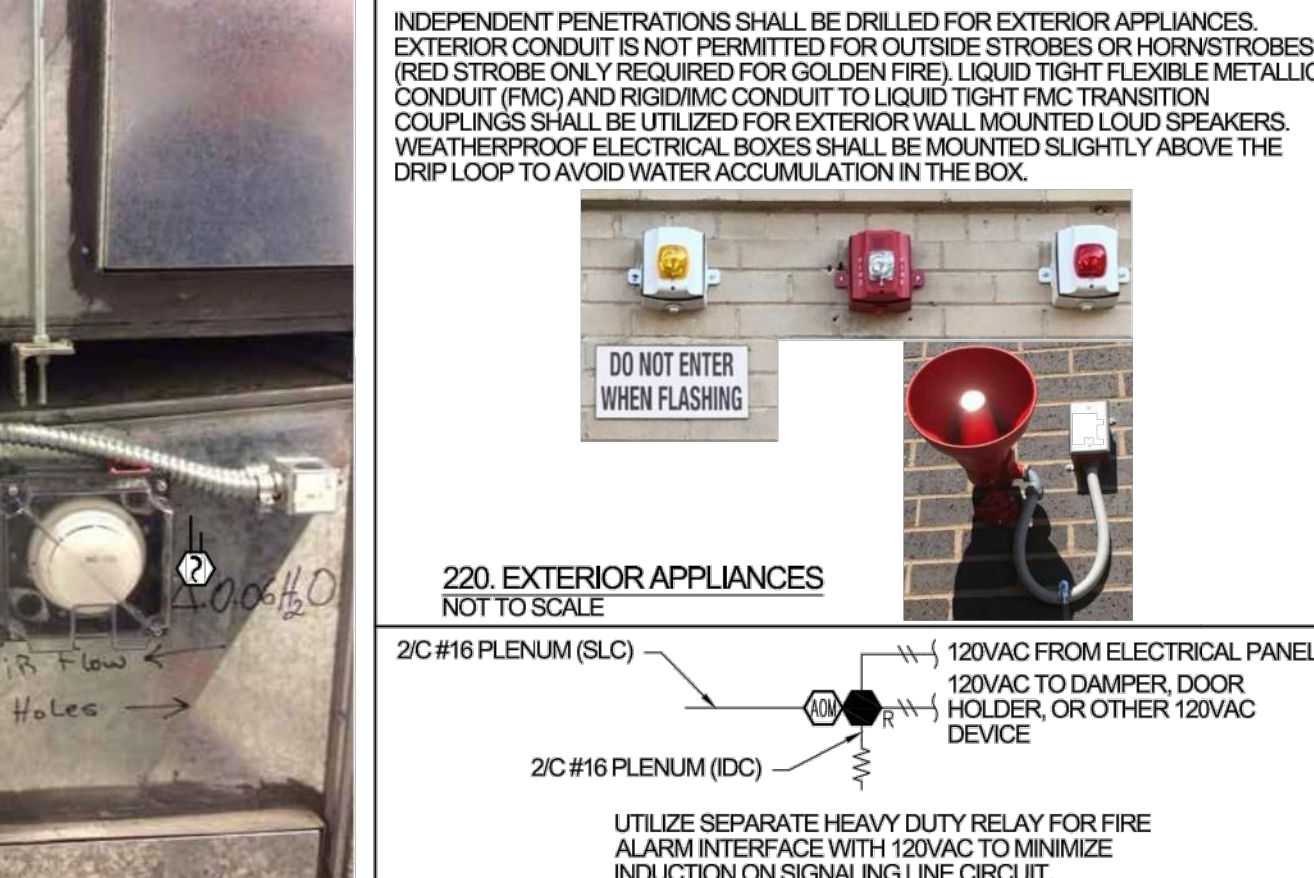
217. ELEVATOR SHUNT TRIP CONTROL CIRCUIT
NOT TO SCALE



218. TYPICAL DUCT DETECTOR AND HVAC UNIT CONTROL CIRCUIT
NOT TO SCALE



219. TYPICAL RETURN DUCT SMOKE DETECTOR INLET TUBE ORIENTATION
NOT TO SCALE



220. EXTERIOR APPLIANCES
NOT TO SCALE

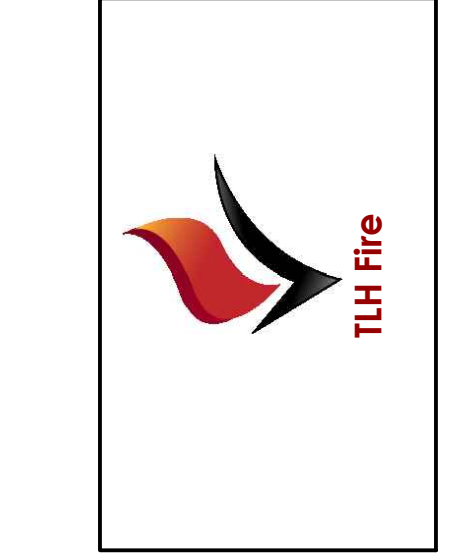
DEVICE	DESCRIPTION	DEVICE	DESCRIPTION
FACP	FIRE ALARM CONTROL PANEL	AS	AUTOMATIC SPRINKLER WATER FLOW SWITCH
AMP	AMPLIFIER	AS	AUTOMATIC SPRINKLER TAMPER SWITCH
CAB	RECORD DRAWING CABINET	S30C	SPEAKER/STROBE, CEILING, CANDELA INTENSITY, WATTS
FAA	FIRE ALARM ANNUNCIATOR	S15	SPEAKER/STROBE, WALL, CANDELA INTENSITY, WATTS
RPS	REMOTE POWER SUPPLY	S15	SPEAKER/STROBE, WALL, CANDELA INTENSITY, WATTS
DACT	DIGITAL ALARM COMMUNICATOR - POINT CONTACT ID	W	WEATHERPROOF DEVICE
MAP	GRAPHIC MAP	WG	WIRE GUARD
M	MANUAL PULL STATION, DOUBLE ACTION, INTELLIGENT W/KEY	FSD	FIRE SMOKE DAMPER
PS	PHOTOELECTRIC SMOKE DETECTOR, INTELLIGENT	KH	KITCHEN ANSUL SYSTEM
H/190	FIXED TEMP 190° HEAT DETECTOR, INTELLIGENT	M	MAGNETIC DOOR HOLDER - NEW
H/135	FIXED TEMP 135° HEAT DETECTOR, INTELLIGENT	FD	FIRE DEPARTMENT CONNECTION
R/135	RATE OF RISE 135° HEAT DETECTOR, INTELLIGENT	D	DATA (REFER TO DIVISION 270000)
RT	REMOTE TEST STATION	P	PHONE LINE DACT
K	KEYED OVERRIDE SWITCH	X	TRANSIENT SUPPRESSION
PS	PHOTOELECTRIC DUCT SMOKE DETECTOR, INTELLIGENT, HI-FLO OR LOW-FLO		
HDR	HEAVY DUTY RELAY		
OM	OUTPUT MODULE, INTELLIGENT		
SM	SINGLE INPUT MODULE, INTELLIGENT		

221. TYPICAL HEAVY DUTY RELAY
NOT TO SCALE

222. NFPA 170 COMPLIANT SYMBOLS
NOT TO SCALE



TECHNICAL GUIDELINES
DETAILS ARE GRAPHICAL DEPICTIONS OF DIV 28 SPECIFICATIONS



SHEET CONTENTS
FIRE ALARM SYSTEM
TECHNICAL GUIDELINES

EYESTONE ELEMENTARY ECE
4000 WILSON AVENUE
WELLINGTON, COLORADO 80549

NO.	BY	DATE	DESCRIPTION	REVISIONS
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DATE: 01/24/2022
SCALE: NOT TO SCALE

SHOP DRAWINGS
DATE: 06.03.22
DESCRIPTION: FA7.1