

MOLINE-COAL VALLEY SCHOOL DISTRICT

2025 CONTROLLED ENTRY IMPROVEMENTS

LEGAT ARCHITECTS
Design with a Difference

MOLINE-COAL
VALLEY SCHOOL
DISTRICT

**2025
CONTROLLED
ENTRY
IMPROVEMENTS**

ARCHITECT

Legat Architects, Inc.
1515 5th Avenue, Suite 108
Moline, IL 61265
P: 309.517.5536
www.legat.com

CIVIL ENGINEER

RTM Engineering
5137 Utica Ridge Road
Davenport, IA 52807
P: 563.726.6310
www.rtmec.com

STRUCTURAL ENGINEER

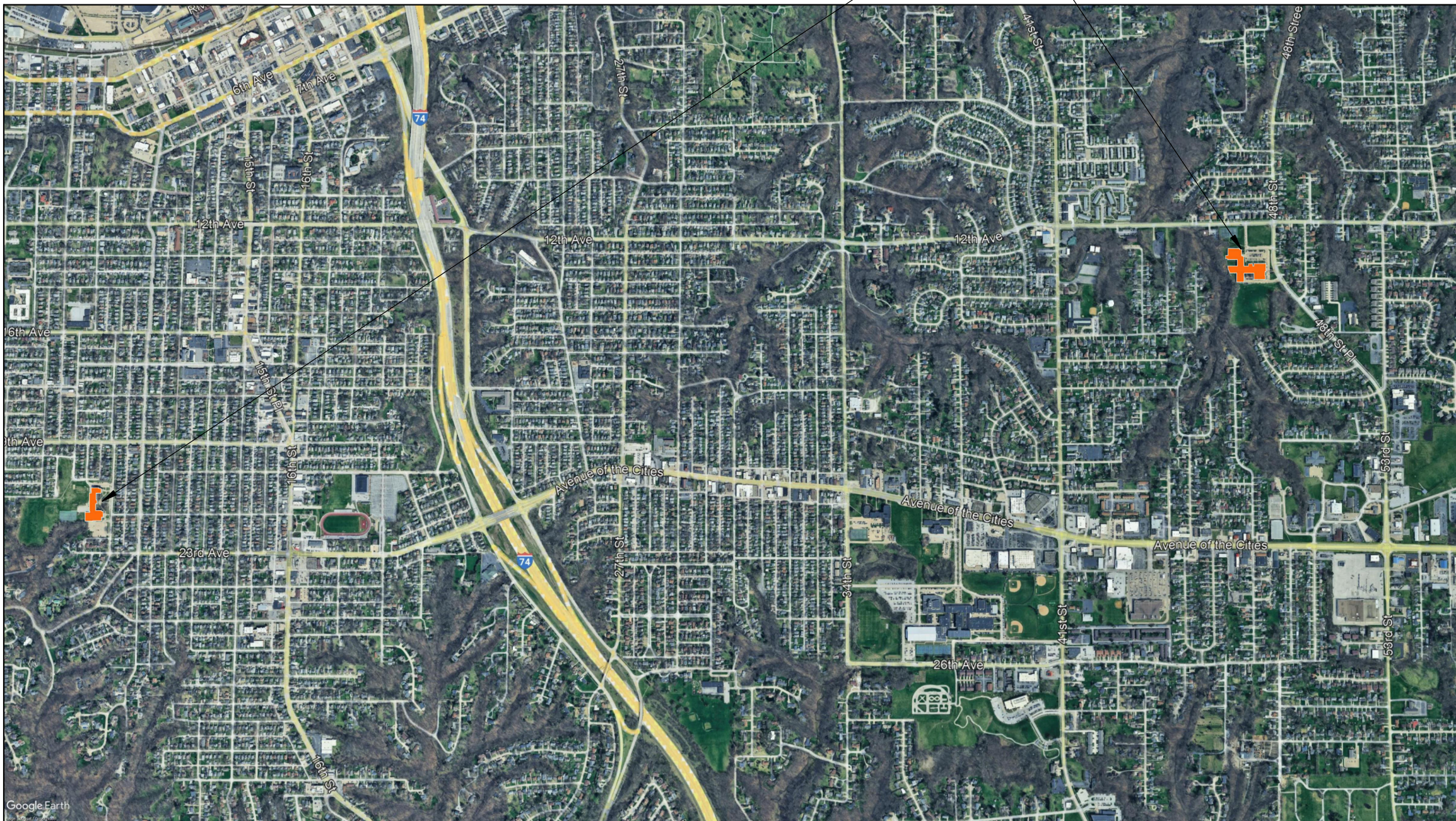
IMEG

623 26th Avenue
Rock Island, IL 61201
P: 309.788.0673
www.imegcorp.com

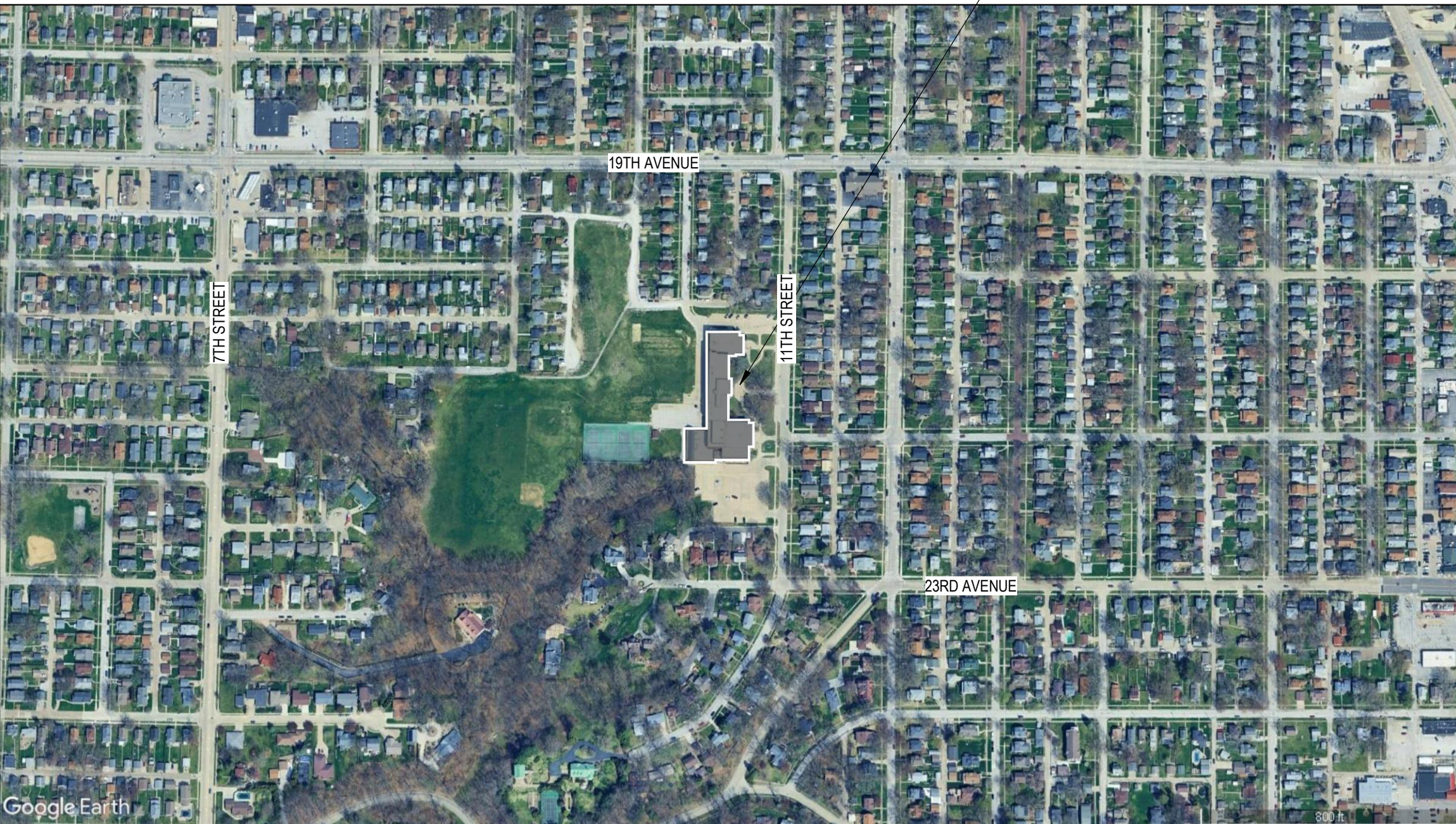
MEP/FP ENGINEER

RTM Engineering
5137 Utica Ridge Road
Davenport, IA 52807
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SITE LOCATIONS MAP

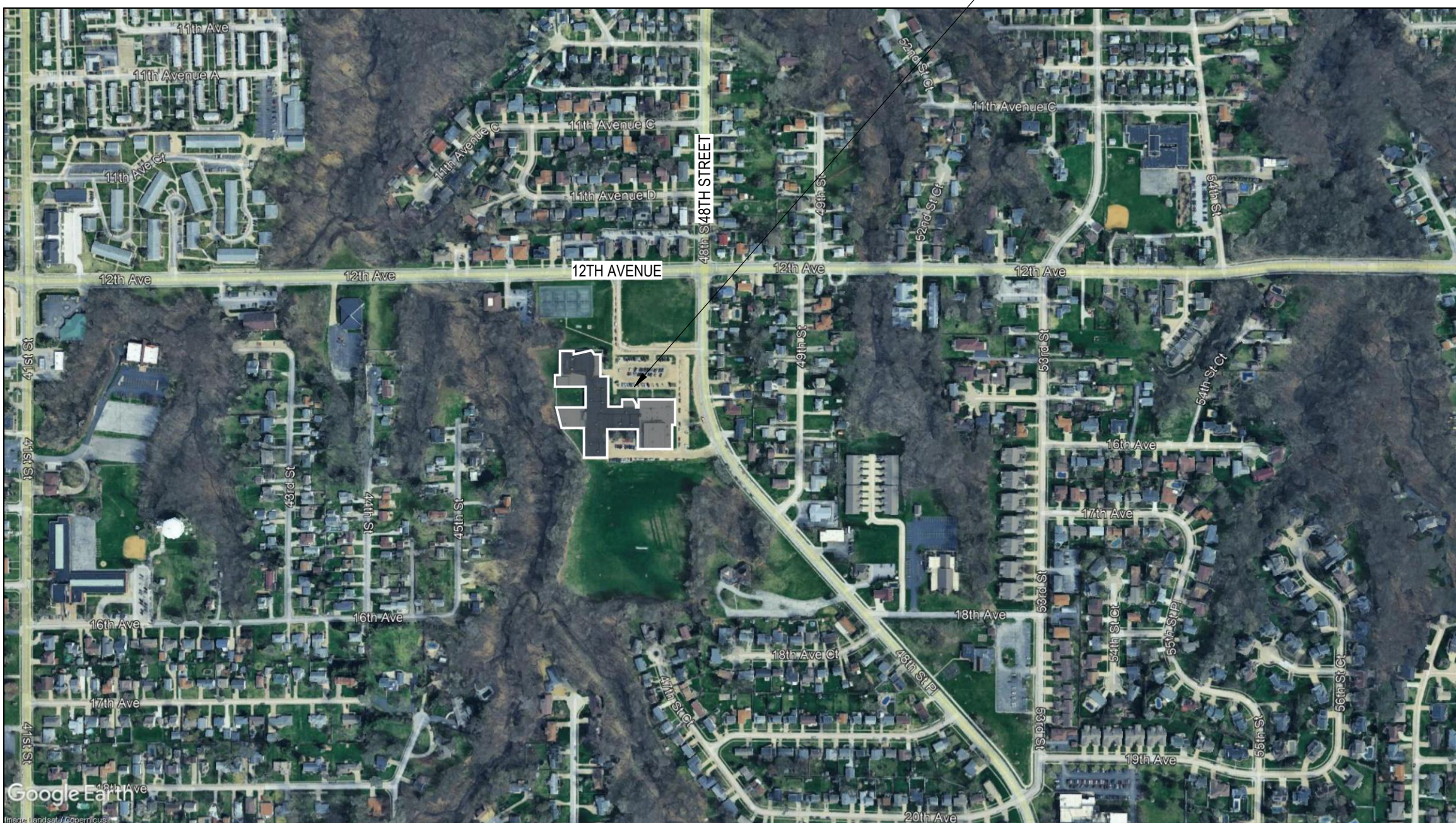


SITE LOCATION MAP



2035 11th STREET, MOLINE, IL 61265

SITE LOCATION MAP



1301 48th STREET, MOLINE, IL 61265

SCHEDULE OF DRAWINGS

GENERAL DRAWINGS		
G-001	TITLE SHEET	
CIVIL DRAWINGS		
CJ-100	EXISTING CONDITIONS AND DEMO PLAN	
CJ-200	SITE LAYOUT AND GRADING PLAN	
CW-100	EXISTING CONDITIONS AND DEMO PLAN	
CW-200	SITE LAYOUT AND GRADING PLAN	
STRUCTURAL DRAWINGS		
SJ-000	GENERAL NOTES	
SJ-001	TESTING AND INSPECTIONS	
SJ-100	DEMO PLAN	
SJ-101	FOUNDATION AND FRAMING PLANS	
SJ-300	DETAILS	
SW-000	GENERAL NOTES	
SW-002	TESTING AND INSPECTIONS	
SW-100	FOUNDATION AND FRAMING PLAN	
SW-300	DETAILS	
ARCHITECTURAL DRAWINGS		
AJ-011	OVERALL REFERENCE PLAN	
AJ-100	LOWER LEVEL FLOOR PLAN	
AJ-101	VESTIBULE PLANS AND DETAILS - JOHN DEERE	
AJ-501	EXTERIOR DETAILS	
AW-101	VESTIBULE PLANS AND DETAILS - WILSON	
FIRE PROTECTION DRAWINGS		
F000	FIRE PROTECTION LEGEND	
FJ101	FIRE PROTECTION NEW WORK PLANS - JOHN DEERE	
FW101	FIRE PROTECTION FIRST FLOOR PLAN - WILSON	
MECHANICAL DRAWINGS		
M000	MECHANICAL LEGEND	
M001	MECHANICAL SPECIFICATIONS	
M200	CONTROLS LEGEND	
M201	ELECTRIC UNIT HEATER CONTROL DIAGRAM	
MJ101	MECHANICAL DEMOLITION & NEW WORK PLANS - JOHN DEERE	
MW101	MECHANICAL FIRST FLOOR PLAN - WILSON	
ELECTRICAL DRAWINGS		
EJ0101	ELECTRICAL FIRST FLOOR DEMOLITION PLAN	
EW0101	ELECTRICAL FIRST FLOOR DEMOLITION PLAN	
E000	ELECTRICAL GENERAL NOTES AND SYMBOLS	
E001	ELECTRICAL SPECIFICATIONS	
EJ101	ELECTRICAL FIRST FLOOR PLAN	
EJ300	ELECTRICAL SCHEDULES	
EW101	ELECTRICAL FIRST FLOOR PLAN	

BOARD OF EDUCATION

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RELEASE

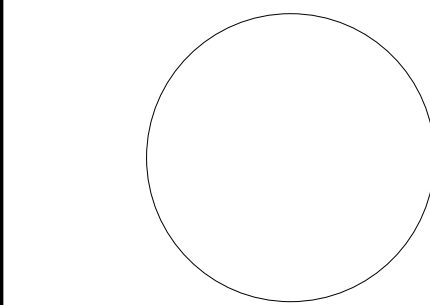
BIDDING

DATE OF ISSUE

02.10.2025

ARCHITECT'S PROJECT NUMBER

225017.00



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REVISIONS		
NO.	DESCRIPTION	DATE
1		

PROJECT NUMBER 225017.00
DATE OF ISSUE 02.10.2025
DRAWN BY Author
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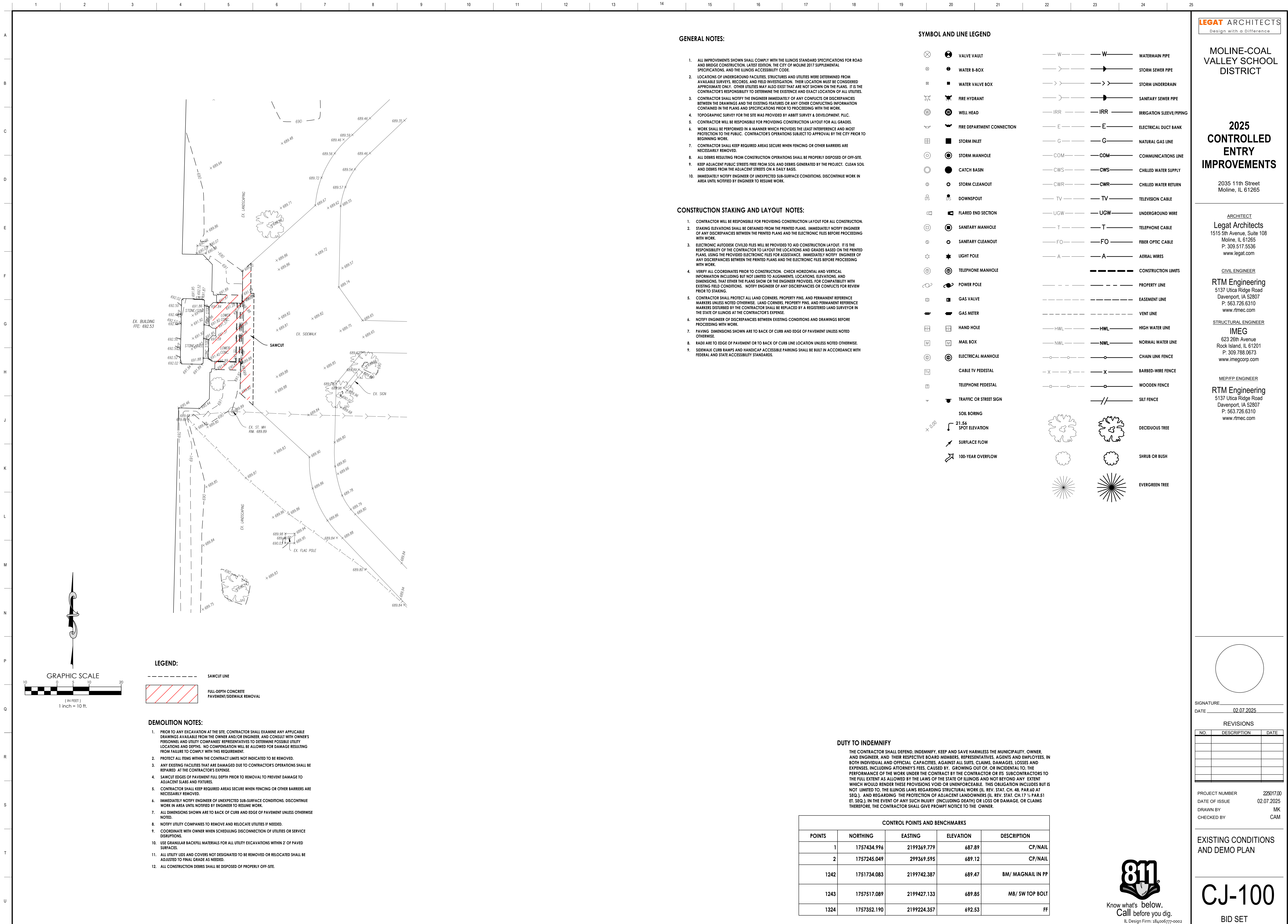
TITLE SHEET

G-001
BIDDING

LEGAT ARCHITECTS



Users\mrdp\p\our File: C:\Users\mrdp\p\our\DC_MCD\Doc\18M_Engineering\Consultants\11C\U48&Moline-SD-Civil\Project Files\03 DESIGN DRAWINGS\02 SHEET SET\03 Ex & Demo.dwg Time: Fri Jul 06, 2024 - 1:22pm



GENERAL NOTES:

- ALL IMPROVEMENTS SHOWN SHALL COMPLY WITH THE ILLINOIS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, THE CITY OF MOLINE 2017 SUPPLEMENTAL SPECIFICATIONS, AND THE ILLINOIS ACCESSIBILITY CODE.
- LOCATIONS OF UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES WERE DETERMINED FROM AVAILABLE SURVEYS, RECORDS, AND FIELD INVESTIGATION. THEIR LOCATION MUST BE CONSIDERED APPROXIMATE ONLY. OTHER UTILITIES MAY ALSO EXIST THAT ARE NOT SHOWN ON THE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXISTENCE AND EXACT LOCATION OF ALL UTILITIES.
- CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY CONFLICTS OR DISCREPANCIES BETWEEN THE DRAWINGS AND THE EXISTING FEATURES OR ANY OTHER CONFLICTING INFORMATION CONTAINED IN THE PLANS AND SPECIFICATIONS PRIOR TO PROCEEDING WITH THE WORK.
- TOPOGRAPHIC SURVEY FOR THE SITE WAS PROVIDED BY ABBITT SURVEY & DEVELOPMENT, PLLC.
- CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING CONSTRUCTION LAYOUT FOR ALL GRADES.
- WORK SHALL BE PERFORMED IN A MANNER WHICH PROVIDES THE LEAST INTERFERENCE AND MOST PROTECTION TO THE PUBLIC. CONTRACTOR'S OPERATIONS SUBJECT TO APPROVAL BY THE CITY PRIOR TO BEGINNING WORK.
- CONTRACTOR SHALL KEEP REQUIRED AREAS SECURE WHEN FENCING OR OTHER BARRIERS ARE NECESSARILY REMOVED.
- ALL DEBRIS RESULTING FROM CONSTRUCTION OPERATIONS SHALL BE PROPERLY DISPOSED OF OFF-SITE.
- KEEP ADJACENT PUBLIC STREETS FREE FROM SOIL AND DEBRIS GENERATED BY THE PROJECT. CLEAN SOIL AND DEBRIS FROM THE ADJACENT STREETS ON A DAILY BASIS.
- IMMEDIATELY NOTIFY ENGINEER OF UNEXPECTED SUB-SURFACE CONDITIONS. DISCONTINUE WORK IN AREA UNTIL NOTIFIED BY ENGINEER TO RESUME WORK.

CONSTRUCTION STAKING AND LAYOUT NOTES:

- CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING CONSTRUCTION LAYOUT FOR ALL CONSTRUCTION.
- STAKING ELEVATIONS SHALL BE OBTAINED FROM THE PRINTED PLANS. IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN THE PRINTED PLANS AND THE ELECTRONIC FILES BEFORE PROCEEDING WITH WORK.
- ELECTRONIC AUTODESK CIVIL3D FILES WILL BE PROVIDED TO AID CONSTRUCTION LAYOUT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LAYOUT THE LOCATIONS AND GRADES BASED ON THE PRINTED PLANS, USING THE PROVIDED ELECTRONIC FILES FOR ASSISTANCE. IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN THE PRINTED PLANS AND THE ELECTRONIC FILES BEFORE PROCEEDING WITH WORK.
- VERIFY ALL COORDINATES PRIOR TO CONSTRUCTION. CHECK HORIZONTAL AND VERTICAL INFORMATION INCLUDING BUT NOT LIMITED TO ALIGNMENTS, LOCATIONS, ELEVATIONS, AND DIMENSIONS, THAT EITHER THE PLANS SHOW OR THE ENGINEER PROVIDES, FOR COMPATIBILITY WITH EXISTING FIELD CONDITIONS. NOTIFY ENGINEER OF ANY DISCREPANCIES OR CONFLICTS FOR REVIEW PRIOR TO STAKING.
- CONTRACTOR SHALL PROTECT ALL LAND CORNERS, PROPERTY PINS, AND PERMANENT REFERENCE MARKERS UNLESS NOTED OTHERWISE. LAND CORNERS, PROPERTY PINS, AND PERMANENT REFERENCE MARKERS DISTURBED BY THE CONTRACTOR SHALL BE REPLACED BY A REGISTERED LAND SURVEYOR OR IN THE STATE OF ILLINOIS AT THE CONTRACTOR'S EXPENSE.
- NOTIFY ENGINEER OF DISCREPANCIES BETWEEN EXISTING CONDITIONS AND DRAWINGS BEFORE PROCEEDING WITH WORK.
- PAVING DIMENSIONS SHOWN ARE TO BACK OF CURB AND EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.
- RADI ARE TO EDGE OF PAVEMENT OR TO BACK OF CURB LINE LOCATION UNLESS NOTED OTHERWISE.
- SIDEWALK CURB RAMPS AND HANDICAP ACCESSIBLE PARKING SHALL BE BUILT IN ACCORDANCE WITH FEDERAL AND STATE ACCESSIBILITY STANDARDS.

SYMBOL AND LINE LEGEND

	VALVE VAULT		WATERMAIN PIPE
	WATER 8-BOX		STORM SEWER PIPE
	WATER VALVE BOX		STORM UNDERDRAIN
	FIRE HYDRANT		SANITARY SEWER PIPE
	WELL HEAD		IRRIGATION SLEEVE/PIPLINE
	FIRE DEPARTMENT CONNECTION		ELECTRICAL DUCT BANK
	STORM INLET		NATURAL GAS LINE
	STORM MANHOLE		COMMUNICATIONS LINE
	CATCH BASIN		CHILLED WATER SUPPLY
	STORM CLEANOUT		CHILLED WATER RETURN
	DOWNSPOUT		TELEVISION CABLE
	FLARED END SECTION		UNDERGROUND WIRE
	SANITARY MANHOLE		TELEPHONE CABLE
	SANITARY CLEANOUT		FIBER OPTIC CABLE
	LIGHT POLE		AERIAL WIRES
	TELEPHONE MANHOLE		CONSTRUCTION LIMITS
	POWER POLE		PROPERTY LINE
	GAS VALVE		EASEMENT LINE
	GAS METER		VENT LINE
	HAND HOLE		HIGH WATER LINE
	MAIL BOX		NORMAL WATER LINE
	ELECTRICAL MANHOLE		CHAIN LINK FENCE
	CABLE TV PEDESTAL		BARBED-WIRE FENCE
	TELEPHONE PEDESTAL		WOODEN FENCE
	TRAFFIC OR STREET SIGN		SILT FENCE
	SOIL BORING		DECIDUOUS TREE
	SPOT ELEVATION		SHRUB OR BUSH
	SURFACE FLOW		EVERGREEN TREE
	100-YEAR OVERFLOW		

DUTY TO INDEMNIFY

THE CONTRACTOR SHALL DEFEND, INDEMNIFY, KEEP AND SAVE HARMLESS THE MUNICIPALITY, OWNER, AND ENGINEER, AND THEIR RESPECTIVE BOARD MEMBERS, REPRESENTATIVES, AGENTS AND EMPLOYEES, IN BOTH INDIVIDUAL AND OFFICIAL CAPACITIES, AGAINST ALL SUITS, CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES, CAUSED BY: GROWING OUT OF, OR INCIDENTAL TO, THE PERFORMANCE OF THE WORK UNDER THE CONTRACT BY THE CONTRACTOR OR ITS SUBCONTRACTORS TO THE FULL EXTENT AS ALLOWED BY THE LAWS OF THE STATE OF ILLINOIS AND NOT BEYOND ANY EXTENT WHICH WOULD RENDER THESE PROVISIONS VOID OR UNENFORCEABLE. THIS OBLIGATION INCLUDES BUT IS NOT LIMITED TO, THE ILLINOIS LAWS REGARDING STRUCTURAL WORK (IL REV. STAT. CH. 48, PAR. 60 AT SEQ.), AND REGARDING THE PROTECTION OF ADJACENT LANDOWNERS (IL REV. STAT. CH. 17-1/2, PAR. 51 ET. SEQ.), IN THE EVENT OF ANY SUCH INJURY, (INCLUDING DEATH) OR LOSS OR DAMAGE, OR CLAIMS THEREFORE, THE CONTRACTOR SHALL GIVE PROMPT NOTICE TO THE OWNER.

CONTROL POINTS AND BENCHMARKS				
POINTS	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	1757434.996	2199369.779	687.89	CP/NAIL
2	1757245.049	299369.595	689.12	CP/NAIL
1242	1751734.083	2199742.387	689.47	BM/ MAGNAIL IN PP
1243	1757517.089	2199427.133	689.85	MB/ SW TOP BOLT
1324	1757352.190	2199224.357	692.53	FF



Know what's below.
Call before you dig.
IL Design Firm: 184006777-0002

SIGNATURE

DATE: 02.07.2025

REVISIONS

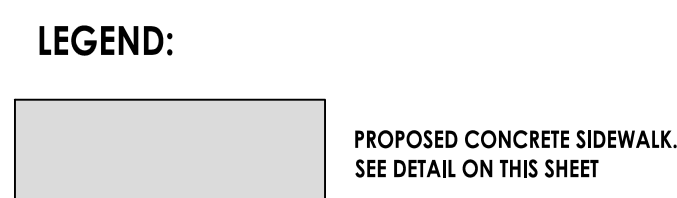
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PROJECT NUMBER 225017.00
DATE OF ISSUE 02.07.2025
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EXISTING CONDITIONS
AND DEMO PLAN

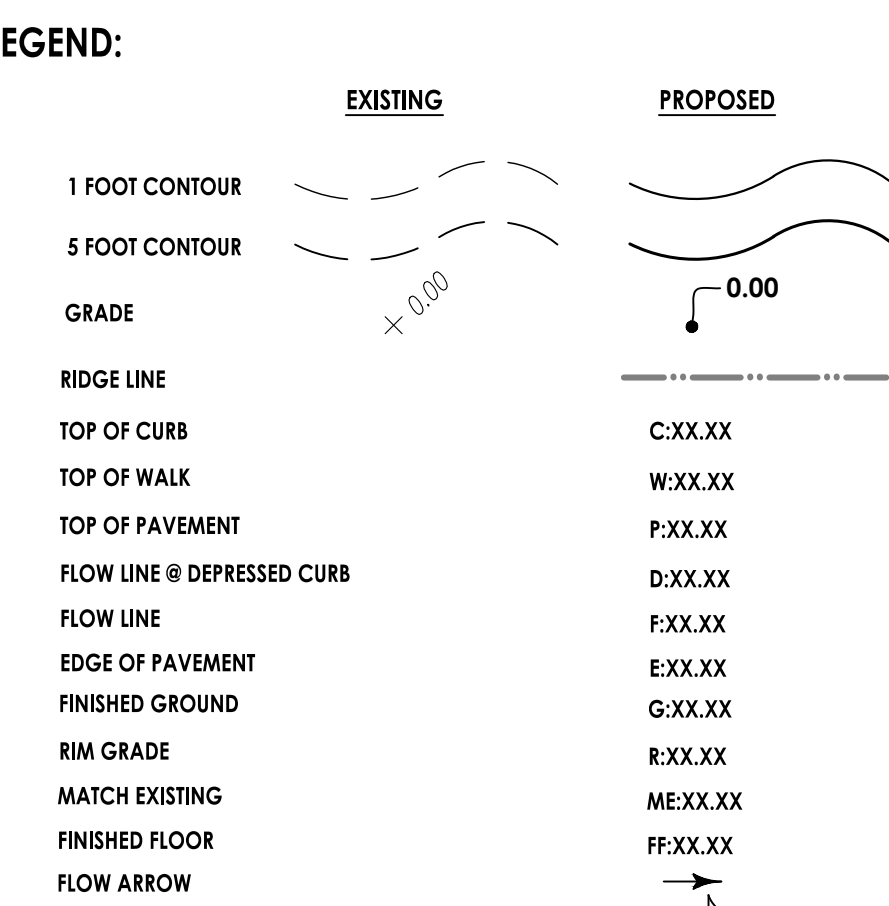
CJ-100

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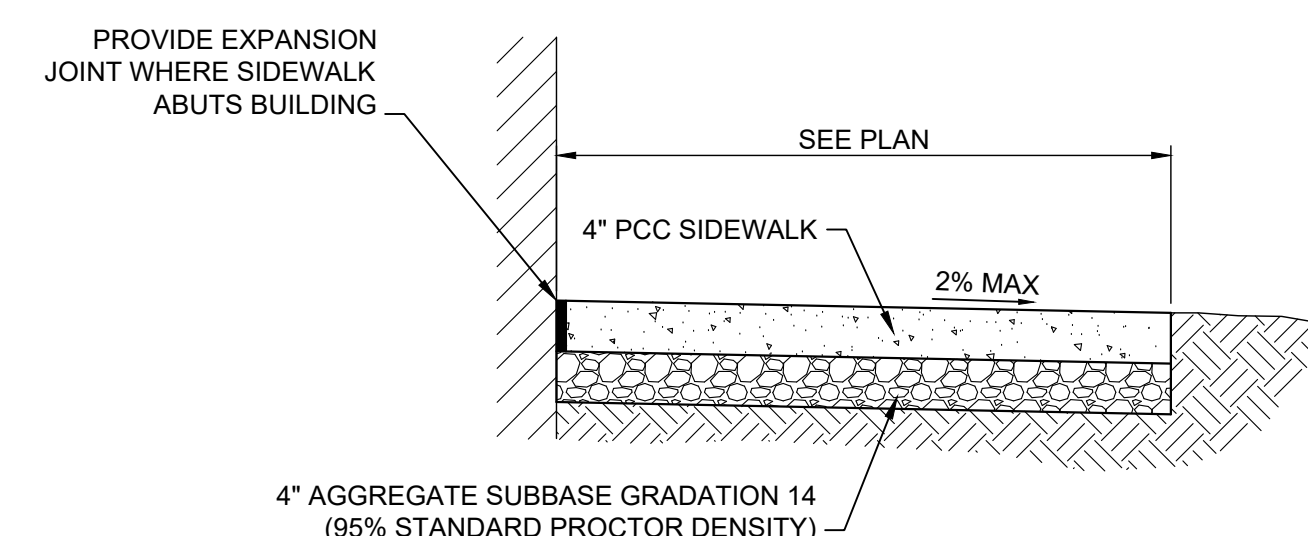
GRAPHIC SCALE

(IN FEET)
1 inch = 10 ft.



GRADING NOTES:

1. IMMEDIATELY NOTIFY ENGINEER OF UNEXPECTED SUB-SURFACE CONDITIONS. DISCONTINUE WORK IN AREA UNTIL NOTIFIED BY ENGINEER TO RESUME WORK.
2. ALL ELEVATIONS SHOWN ARE TO FLOWLINE GRADE OR TOP OF PAVEMENT UNLESS NOTED OTHERWISE.
3. PROVIDE POSITIVE DRAINAGE AT ALL TIMES WITHIN THE CONSTRUCTION AREAS. DO NOT ALLOW WATER TO DRAIN OR TO POND ONTO ADJOINING PROPERTY OR PUBLIC RIGHT-OF-WAY.



PCC SIDEWALK DETAIL - ADJACENT TO BUILDING
N.T.S.

MOLINE-COAL
VALLEY SCHOOL
DISTRICT

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Moline, IL 61265

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SIGNATURE

DATE 02.07.2025

REVISIONS

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DATE OF ISSUE 02 07 2025

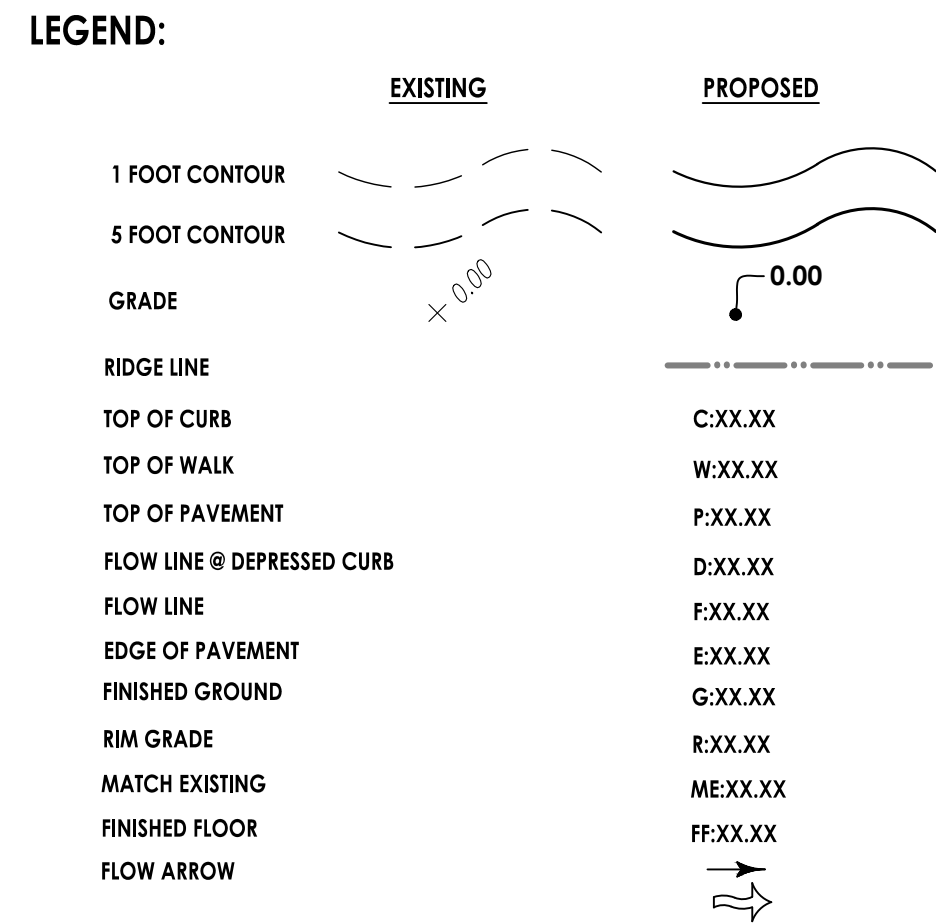
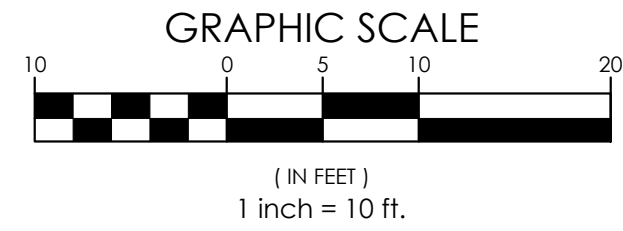
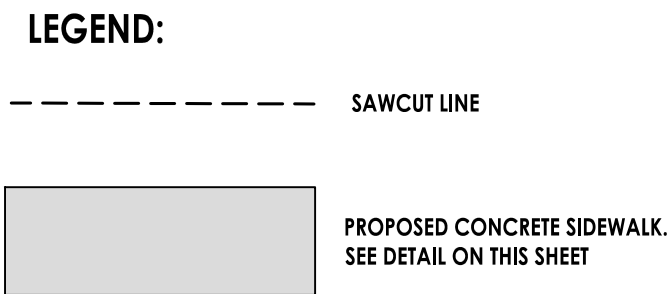
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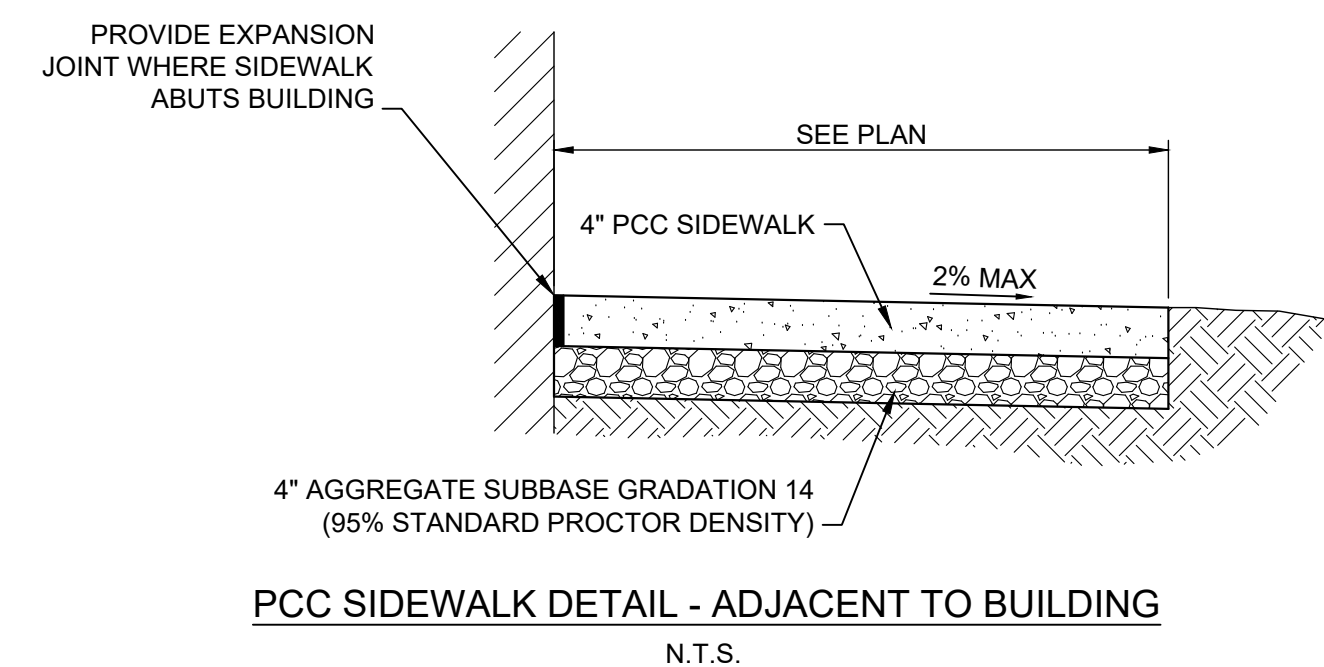
SITE LAYOUT AND GRADING PLAN

CJ-200

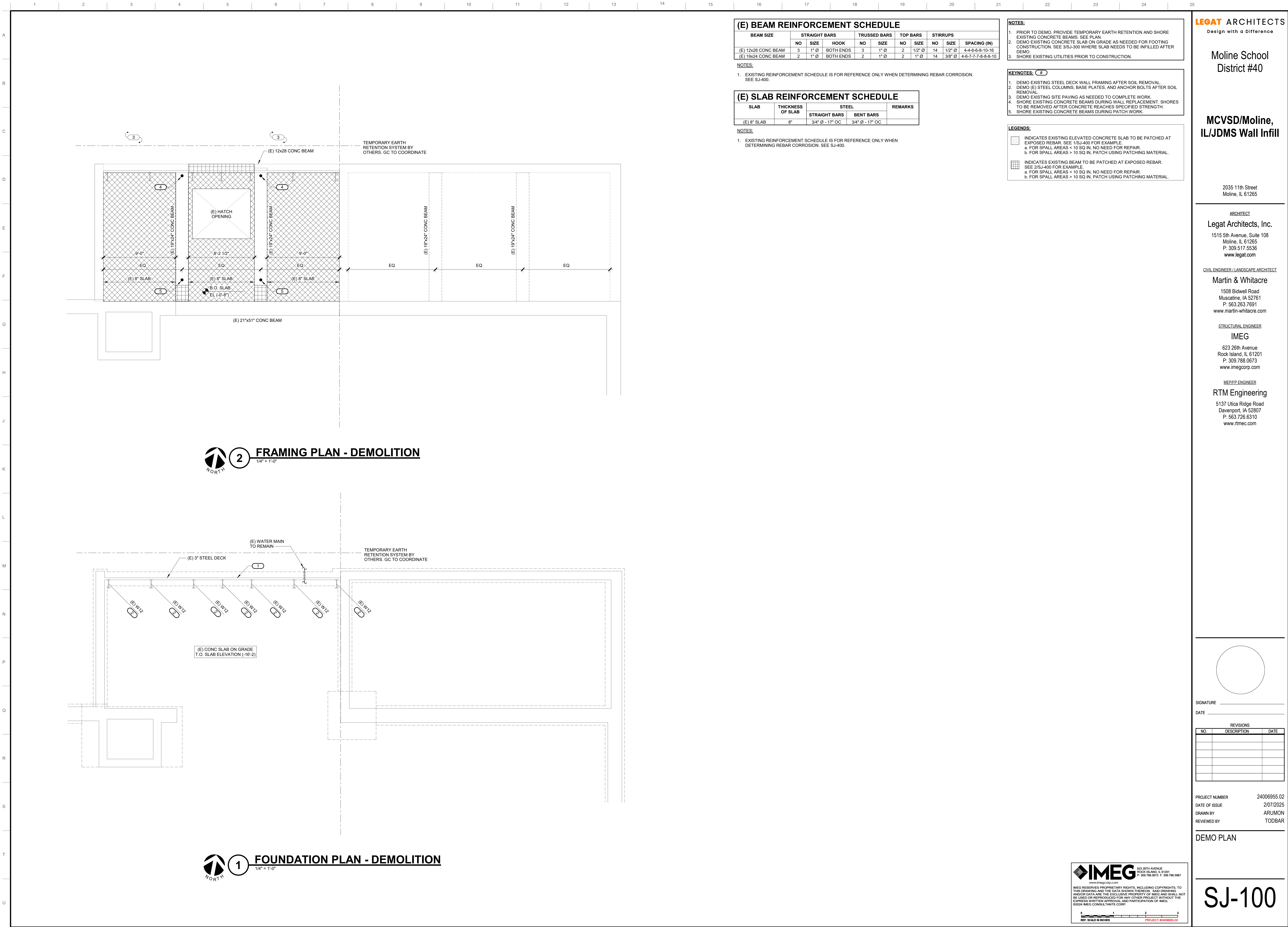
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BID SET



NOTES:

1. CONTRACTOR TO VERIFY EXISTING FIELD CONDITIONS PRIOR TO NEW CONSTRUCTION.
2. SHORE EXISTING MEP UTILITIES TO FACILITATE NEW CONSTRUCTION.
3. SEE 4/SJ-300 FOR REBAR LAP SPICE LENGTH.

KEYNOTES: (#)

1. DRILL AND EPOXY NEW CONCRETE WALL CONSTRUCTION TO EXISTING CONCRETE WALL PER 5/SJ-300.

Moline School
District #40

MCVSD/Moline,
IL/JDMS Wall Infill

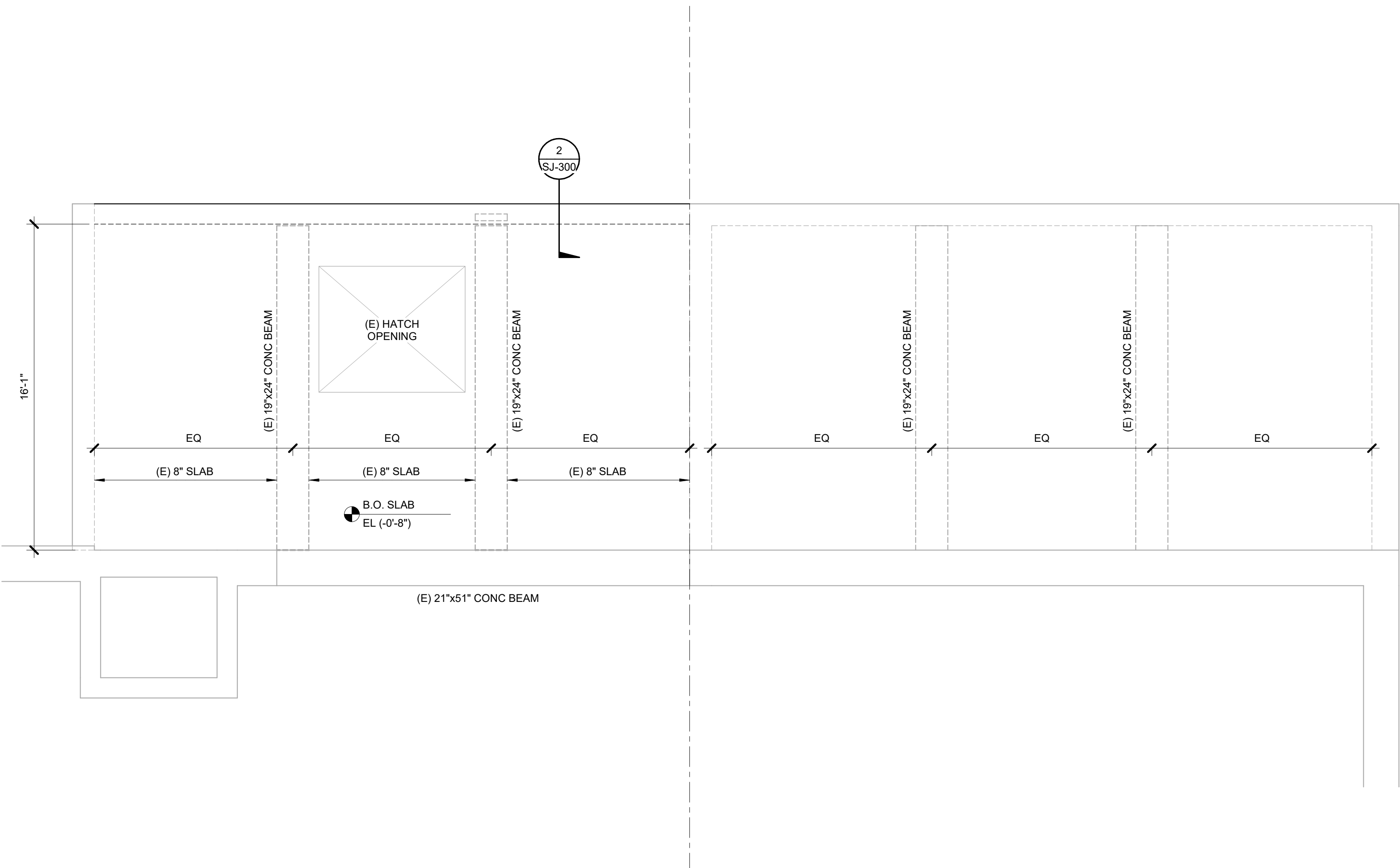
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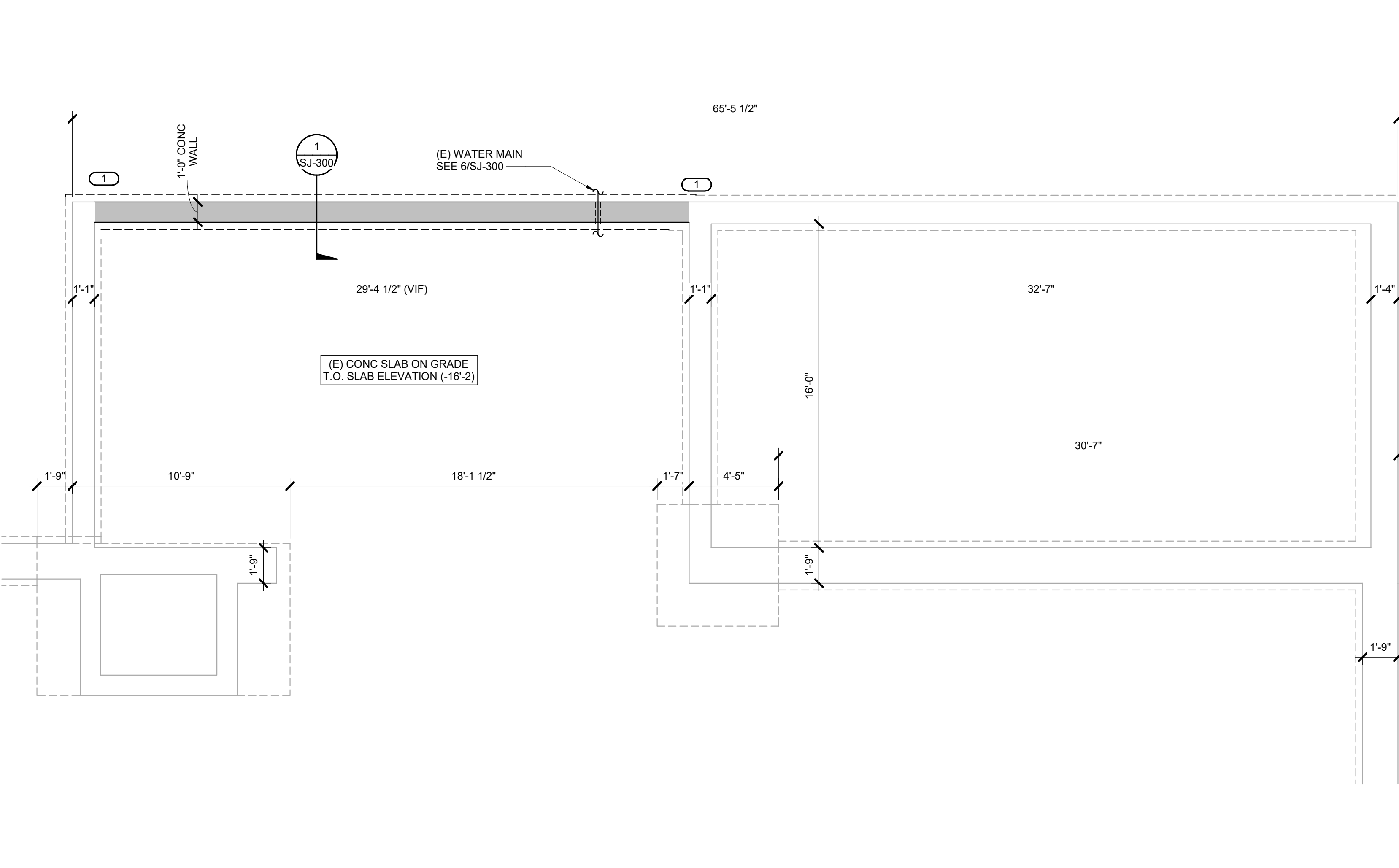
CIVIL ENGINEER / LANDSCAPE ARCHITECT
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1508 Bidwell Road
Muscatine, IA 52761
P: 563.263.7691
www.martin-whitacre.com

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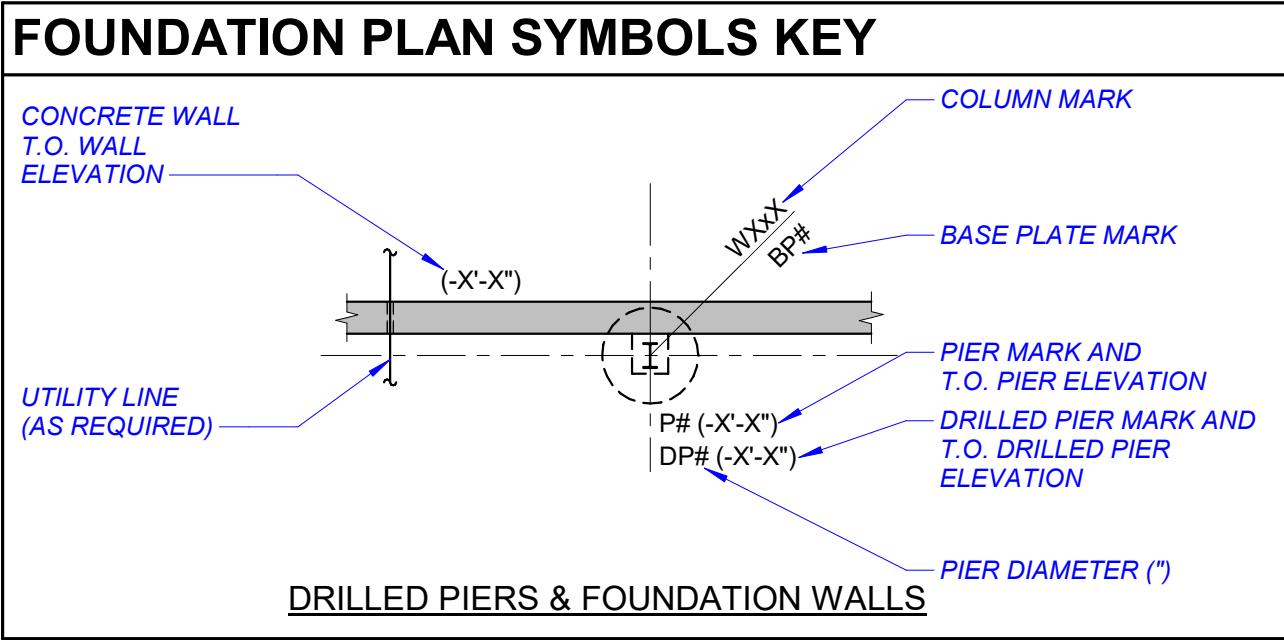
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2 FRAMING PLAN
1/4" = 1'-0"



1 FOUNDATION PLAN
1/4" = 1'-0"

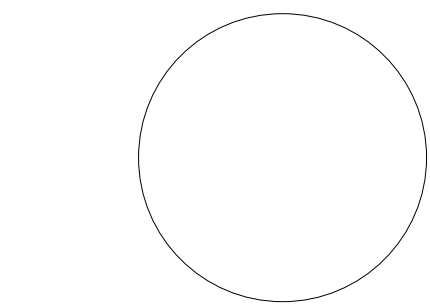


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REF. SCALE IN INCHES

PROJECT #24006955-02



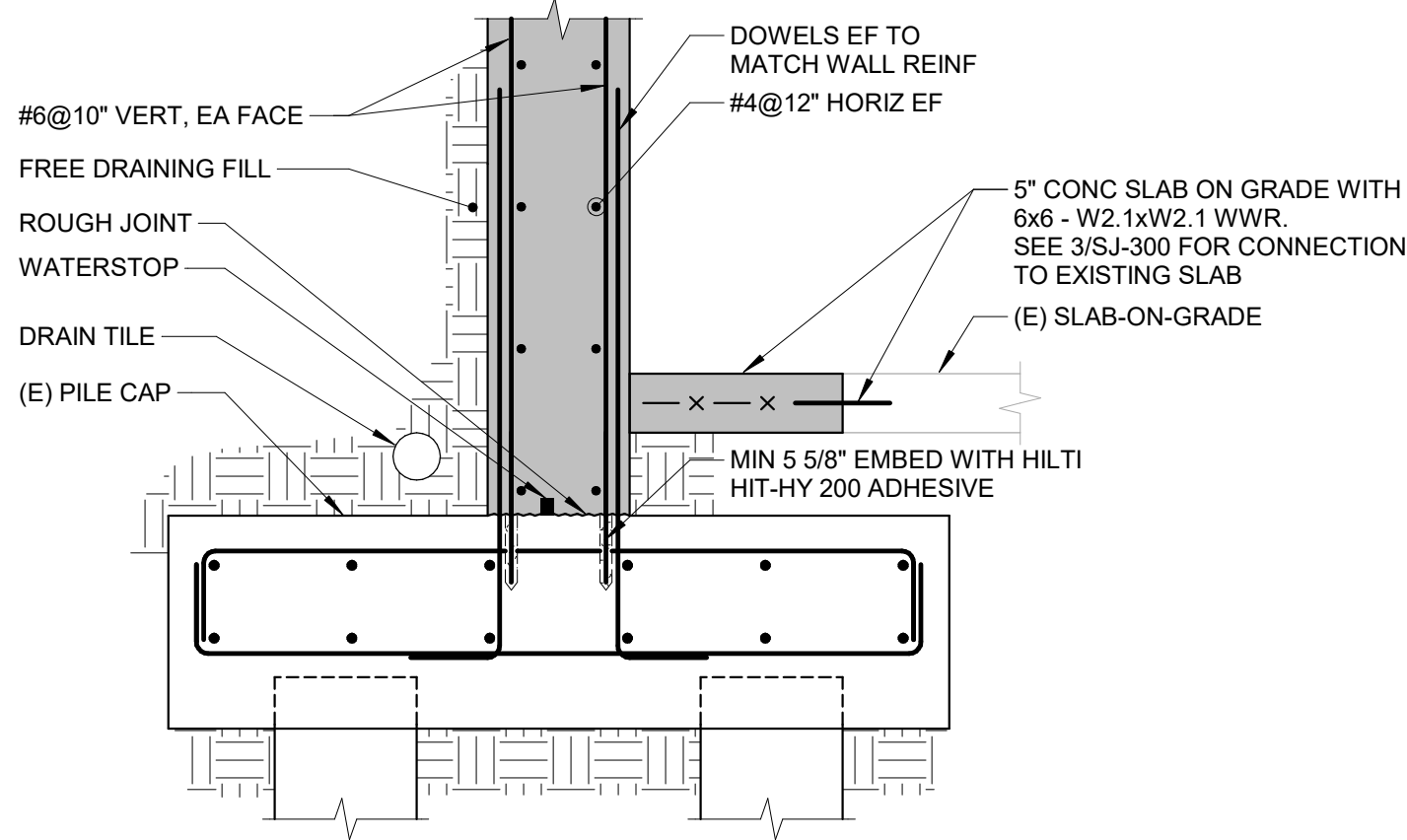
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DATE _____

REVISIONS		
NO.	DESCRIPTION	DATE

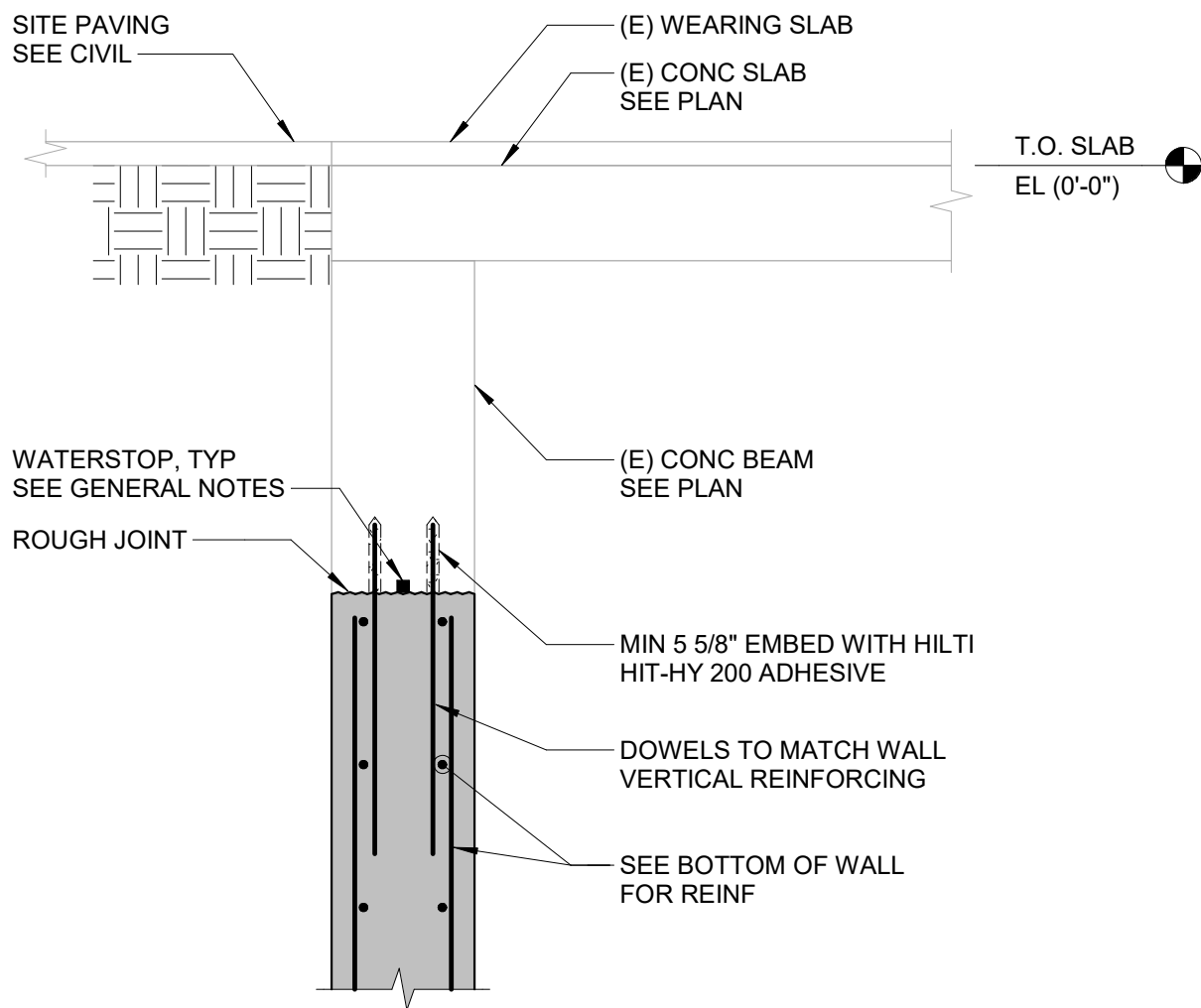
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DATE OF ISSUE 2/07/2025
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FOUNDATION AND
FRAMING PLANS

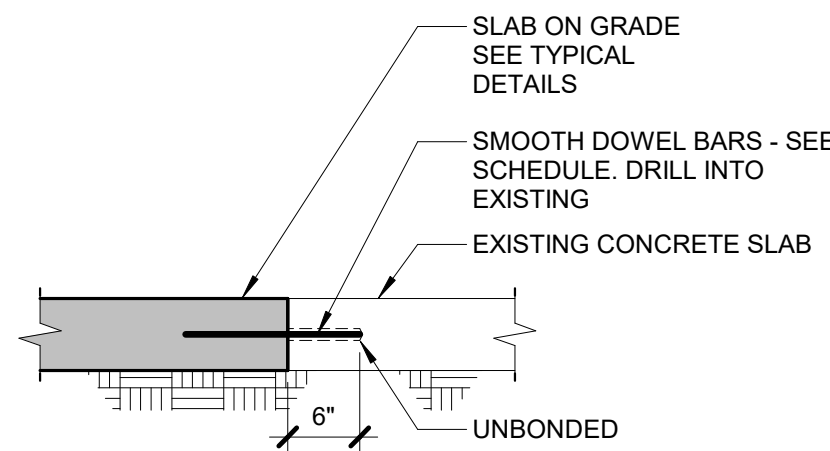
SJ-101



1 BASEMENT WALL WITH PILE CAP
3/4" = 1'-0"
2400-03



2 BASEMENT WALL SUPPORTING SLAB
3/4" = 1'-0"
2405-04



SLAB THICKNESS	SMOOTH DOWEL BAR
4"	1/2"Ø x 1'-4" @ 18" OC
5"	3/4"Ø x 1'-4" @ 12" OC
6"	1"Ø x 1'-4" @ 12" OC

3 NEW TO EXISTING SLAB DETAIL
3/4" = 1'-0"

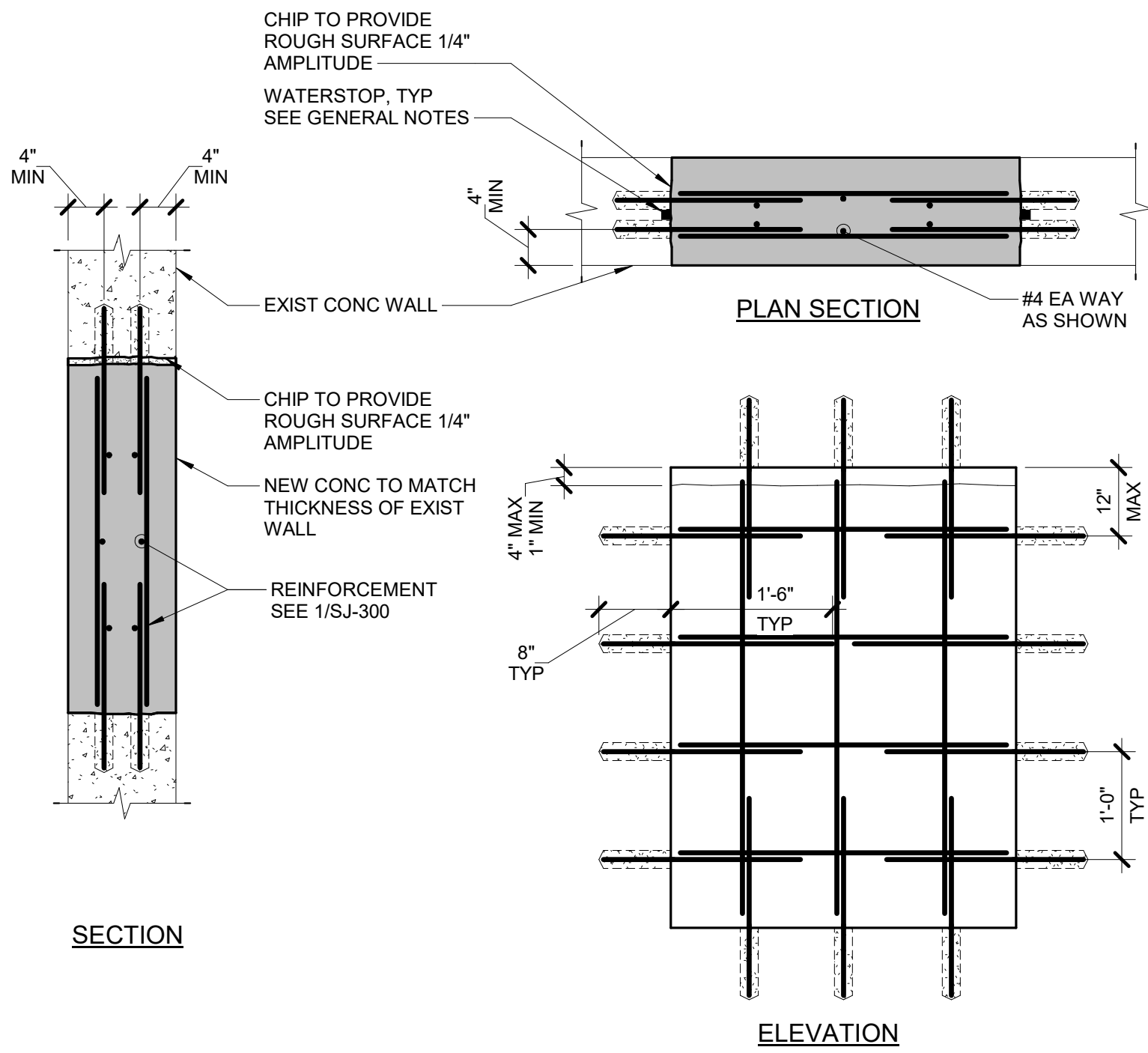
CLASS B TENSION LAP SPLICE LENGTH										
REINF STEEL, Fy	BAR SIZE	BAR LOCATION	CONCRETE STRENGTH, Fc							
			3 KSI	4 KSI	5 KSI	6 KSI	7 KSI	8 KSI	9 KSI	10 KSI
60 KSI	#3	TOP	2'-4"	2'-1"	1'-10"	1'-8"	1'-7"	1'-6"	1'-5"	1'-4"
		OTHER	1'-10"	1'-7"	1'-5"	1'-4"	1'-2"	1'-2"	1'-1"	1'-0"
	#4	TOP	3'-2"	2'-9"	2'-5"	2'-3"	2'-1"	1'-11"	1'-10"	1'-9"
		OTHER	2'-5"	2'-1"	1'-11"	1'-9"	1'-7"	1'-6"	1'-5"	1'-4"
	#5	TOP	3'-11"	3'-5"	3'-0"	2'-9"	2'-7"	2'-5"	2'-3"	2'-2"
		OTHER	3'-0"	2'-7"	2'-4"	2'-2"	2'-0"	1'-10"	1'-9"	1'-8"
	#6	TOP	4'-8"	4'-1"	3'-8"	3'-4"	3'-1"	2'-11"	2'-9"	2'-7"
		OTHER	3'-7"	3'-1"	2'-10"	2'-7"	2'-4"	2'-3"	2'-1"	2'-0"
	#7	TOP	6'-9"	5'-11"	5'-3"	4'-10"	4'-6"	4'-2"	3'-11"	3'-9"
		OTHER	5'-3"	4'-6"	4'-1"	3'-9"	3'-5"	3'-3"	3'-0"	2'-11"
	#8	TOP	7'-9"	6'-9"	6'-0"	5'-6"	5'-1"	4'-9"	4'-6"	4'-3"
		OTHER	6'-0"	5'-2"	4'-8"	4'-3"	3'-11"	3'-8"	3'-6"	3'-3"
	#9	TOP	8'-9"	7'-7"	6'-9"	6'-2"	5'-9"	5'-4"	5'-1"	4'-10"
		OTHER	6'-9"	5'-10"	5'-3"	4'-9"	4'-5"	4'-2"	3'-11"	3'-8"
	#10	TOP	9'-10"	8'-6"	7'-8"	7'-0"	6'-5"	6'-0"	5'-8"	5'-5"
		OTHER	7'-7"	6'-7"	5'-11"	5'-4"	5'-0"	4'-8"	4'-5"	4'-2"
	#11	TOP	10'-11"	9'-6"	8'-6"	7'-9"	7'-2"	6'-8"	6'-4"	6'-0"
		OTHER	8'-5"	7'-3"	6'-8"	5'-11"	5'-6"	5'-2"	4'-10"	4'-7"

- NOTES:**
- SPLICE LENGTHS SHOWN ARE APPLICABLE FOR SPLICES OCCURRING UNDER THE FOLLOWING CONDITIONS:
 - NORMAL-WEIGHT CONCRETE
 - MIN BAR SPACING REQUIREMENTS:
 - CLEAR SPACING BETWEEN BARS AT SPLICE LOCATION > BAR DIAMETER, CLEAR COVER TO BARS > BAR DIAMETER, AND TIES OR STIRRUPS OCCUR PER CODE SPACING WITHIN LENGTH OF SPLICE; OR
 - CLEAR SPACING BETWEEN BARS AT SPLICE > 2 x BAR DIAMETER AND CLEAR COVER > BAR DIAMETER
 - INDICATED SPLICE LENGTHS SHALL BE INCREASED BY THE LISTED FACTORS WHERE THE FOLLOWING CONDITIONS EXIST:

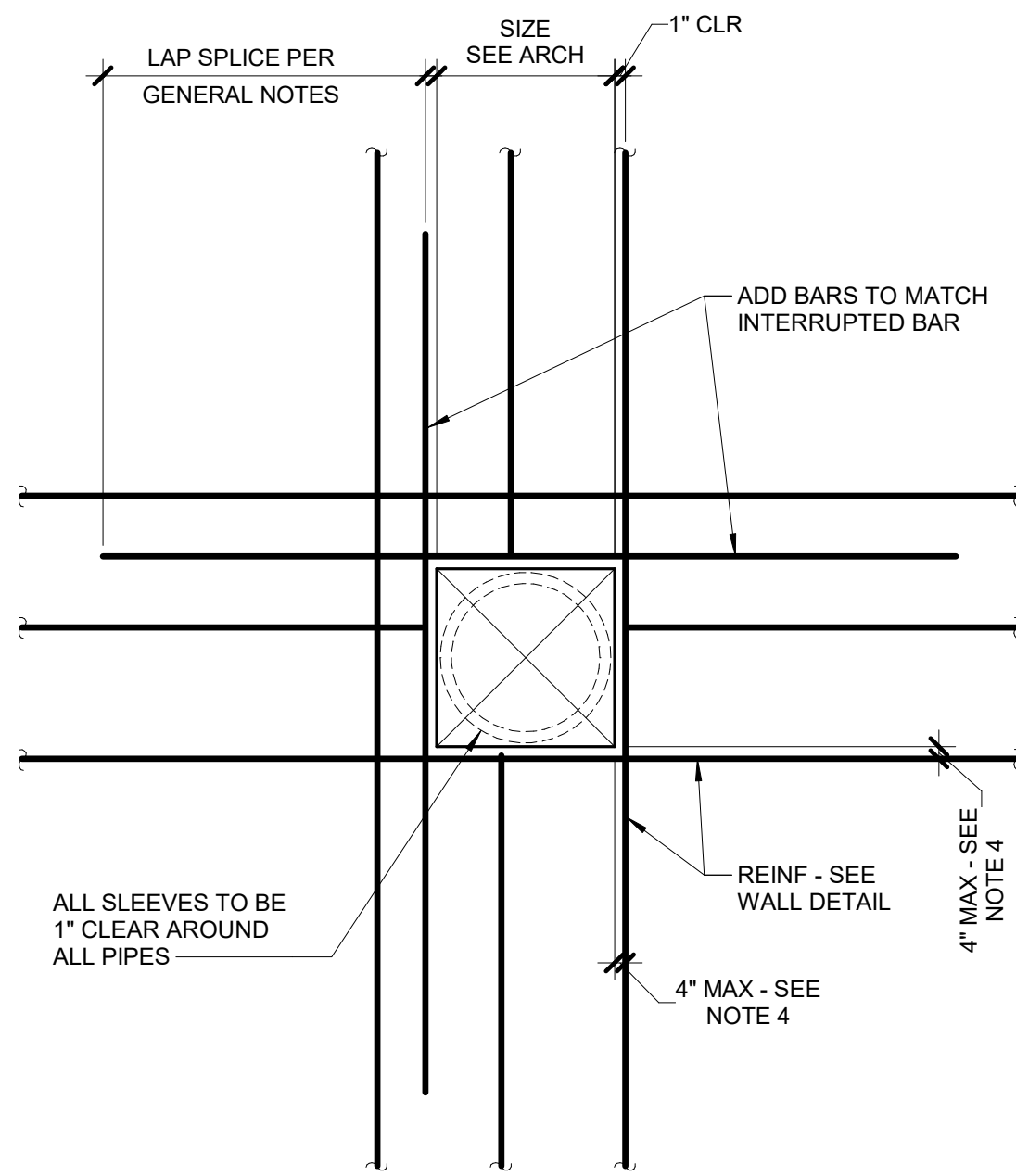
CONDITION	SPLICE LENGTH MULTIPLIER*
A. BAR SPACING OR CLEAR COVER IS LESS THAN REQUIRED PER NOTE 1	1.5
B. LIGHTWEIGHT CONCRETE	1.3
C. EPOXY COATED REINF WITH COVER < 3 x BAR DIAMETER OR CLEAR SPACING < 6 x BAR DIAMETER	1.5
D. ALL OTHER EPOXY COATED BARS	1.2

*WHERE MULTIPLE CONDITIONS EXIST, APPLY EACH OF THE APPLICABLE FACTORS TO THE TABULATED TENSION LAP SPLICE LENGTH TO OBTAIN THE REQUIRED SPLICE LENGTH.
 - TOP BARS ARE HORIZ BARS LOCATED WHERE MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BARS.
 - USE SMALLER BAR SIZE TO DETERMINE LENGTH WHERE SPLICING BARS OF DIFFERENT SIZES.

4 CLASS B TENSION LAP SPLICE LENGTHS
3/4" = 1'-0"
3010-01

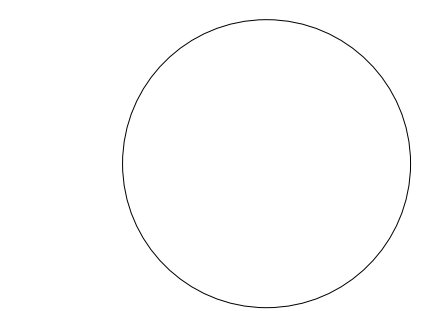


5 INFILL OF EXISTING OPENING
3/4" = 1'-0"



- NOTES:**
- OPENING SIZE 4" TO 1'-6" MAX IN EITHER DIRECTION. FOR OPENING SIZES LARGER THAN 1'-6", SEE
 - OPENINGS SHALL BE LOCATED SO AS NOT TO INTERFERE WITH JAMB REBAR.
 - NO ADDED BARS REQUIRED IF NO BARS ARE INTERRUPTED.
 - ADD ADDITIONAL TRIM BARS TO MATCH INTERRUPTED BAR IF 4" MAX DIMENSION IS EXCEEDED.

6 TYPICAL WALL OPENING SMALLER THAN 1'-6" DETAIL
3/4" = 1'-0"



SIGNATURE

DATE

REVISIONS		
NO	DESCRIPTION	DATE

PROJECT NUMBER 24006955.02
DATE OF ISSUE 2/07/2025
DRAWN BY ARUMON
REVIEWED BY TODD BAR

DETAILS

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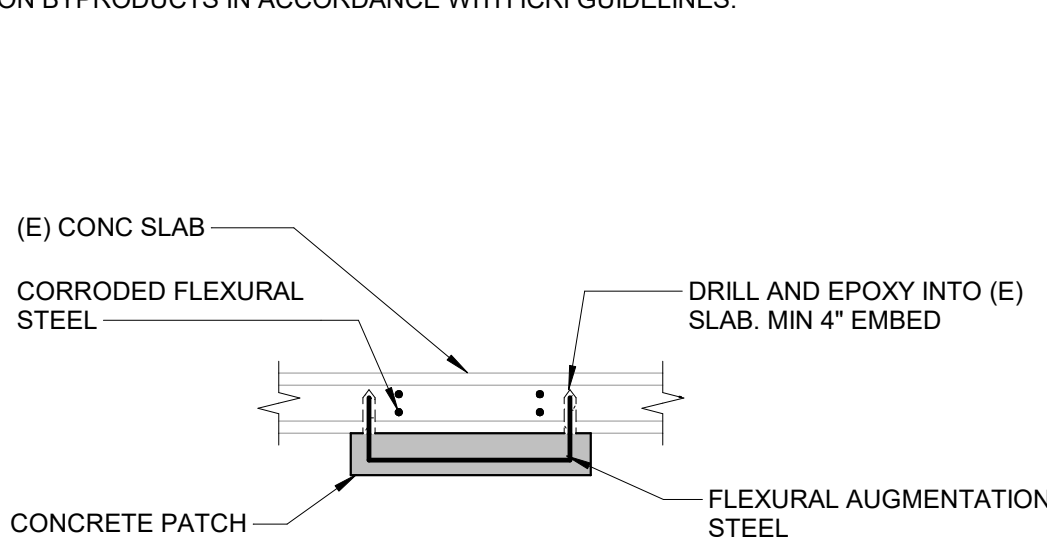
1 TYPICAL SLAB UNDERSIDE SPALL REQUIRING REPAIR
NO SCALE



2 TYPICAL BEAM UNDERSIDE SPALL REQUIRING REPAIR
NO SCALE

SCHEDULE 1 - REBAR LOSS INFORMATION							
Ø (IN)	D.B. CROSS SECTION AREA LOSS (IN)						
	0%	10%	20%	30%	40%	50%	60%
0.375	0.375	0.36	0.34	0.31	0.29	0.27	0.24
0.5	0.5	0.47	0.45	0.42	0.39	0.35	0.32
0.625	0.625	0.59	0.56	0.52	0.48	0.44	0.40
0.75	0.75	0.71	0.67	0.63	0.58	0.53	0.47
0.875	0.875	0.83	0.78	0.73	0.68	0.62	0.55
1.0	1	0.95	0.89	0.84	0.77	0.71	0.63
1.128	1.128	1.07	1.01	0.94	0.87	0.80	0.71
1.27	1.27	1.20	1.14	1.06	0.98	0.90	0.80

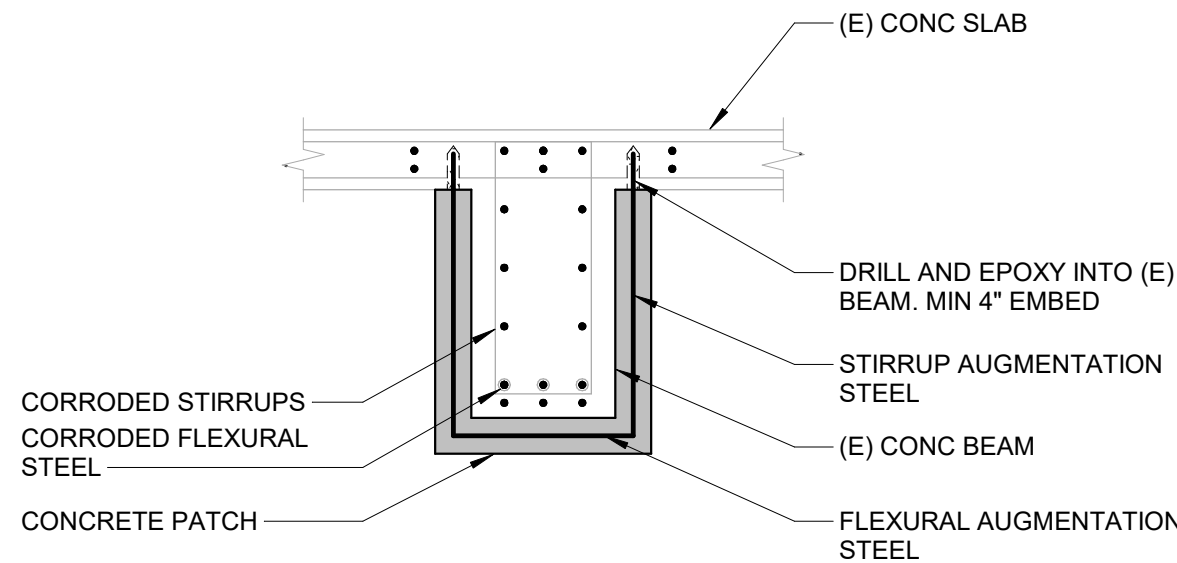
- NOTES:
- THIS TABLE SHALL BE USED FOR INFORMATIONAL PURPOSES. THE VALUE REFER TO DIAMETER LOSS OF AN EXISTING BAR AND ITS CORRESPONDING CROSS-SECTIONAL AREA LOSS. FOR EXAMPLE, A NUMBER 4 BAR WITH A 10 PERCENT CROSS-SECTIONAL AREA LOSS WILL HAVE A DIAMETER OF 0.47 IN.
 - ALL MEASUREMENTS SHALL BE PERFORMED AFTER REBAR HAS BEEN CLEANED OF CORROSION BYPRODUCTS IN ACCORDANCE WITH ICRI GUIDELINES.



3 SLAB PATCH DETAIL
3/4" = 1'-0"

SCHEDULE 2 - STEEL AUGMENTATION TABLE-FLEXURAL STEEL					
EXISTING REBAR	REQUIRED AUGMENTATION STEEL, 10% SECTION LOSS	REQUIRED AUGMENTATION STEEL, 20% SECTION LOSS	REQUIRED AUGMENTATION STEEL, 30% SECTION LOSS	REQUIRED AUGMENTATION STEEL, 40% SECTION LOSS	REQUIRED AUGMENTATION STEEL, 50% SECTION LOSS
0.75" Ø	#3 BAR	#3 BAR	#4 BAR	#4 BAR	#5 BAR
.625" Ø	#3 BAR	#3 BAR	#3 BAR	#4 BAR	#4 BAR
0.5" Ø	#3 BAR	#3 BAR	#3 BAR	#3 BAR	#3 BAR

- NOTES:
- ONLY VALID FOR LONGITUDINAL BEAM/COLUMN REINFORCEMENT.
 - LONGITUDINAL BARS WITH GREATER THAN 50% LOSS BY AREA SHOULD BE REPLACED IN-KIND.
 - REFER TO DETAIL 3 AND 4/SJ-400 FOR STANDARD AUGMENTATION DETAIL FOR LONGITUDINAL BARS.



4 BEAM PATCH DETAIL
3/4" = 1'-0"

SCHEDULE 3 - STEEL AUGMENTATION TABLE-STIRRUPS					
EXISTING REBAR	REQUIRED AUGMENTATION STEEL, 10% SECTION LOSS	REQUIRED AUGMENTATION STEEL, 20% SECTION LOSS	REQUIRED AUGMENTATION STEEL, 30% SECTION LOSS	REQUIRED AUGMENTATION STEEL, 40% SECTION LOSS	REQUIRED AUGMENTATION STEEL, 50% SECTION LOSS
#3 BAR	(2) #3 HOOK BARS, MATCH EXISTING SPACING	(2) #3 HOOK BARS, MATCH EXISTING SPACING	(2) #3 HOOK BARS, MATCH EXISTING SPACING	(2) #3 HOOK BARS, MATCH EXISTING SPACING, EMBED 20" INTO SOUND CONCRETE	(2) #3 HOOK BARS, MATCH EXISTING SPACING, EMBED 20" INTO SOUND CONCRETE

- NOTES:
- ONLY VALID FOR STIRRUPS IN BEAMS.
 - REFER TO DETAIL 3/SJ-400 FOR TYPICAL AUGMENTATION DETAIL.
 - AUGMENTATION ONLY REQUIRED FOR THIS TIES WITH SECTION LOSS.

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REF. SCALE IN INCHES

PROJECT 40006955-02

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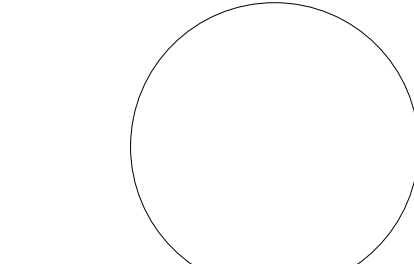
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REVISIONS		
NO.	DESCRIPTION	DATE

PROJECT NUMBER 24006955-02
DATE OF ISSUE 2/07/2025
DRAWN BY ARUMON
REVIEWED BY TODBAR

DETAILS

SJ-400



SIGNATURE

DATE

REVISIONS		
NO	DESCRIPTION	DATE

PROJECT NUMBER 24006955.03
DATE OF ISSUE 02.07.2025
DRAWN BY ARUMON
REVIEWED BY TODBAR

GENERAL NOTES



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SW-000

DESIGN CRITERIA

- STRUCTURE HAS BEEN DESIGNED TO COMPLY WITH 2021 IBC AND SUBSEQUENT REFERENCE STANDARDS.
- RISK CATEGORY: III
- SUPERIMPOSED LIVE LOADS: LIVE LOAD REDUCTION USED AS ALLOWED PER CODE

FLOOR	CORRIDORS & PUBLIC AREAS		100 PSF
WIND:			
BASIC WIND SPEED	VULT = 115 MPH		
EXPOSURE CLASS	B		
INTERNAL PRESSURE COEFFICIENT, GCpi	±0.18		
MAIN WIND FORCE PRESSURE (STRENGTH LEVEL)	25 PSF		
COMPONENTS & CLADDING:			
WALL COMPONENTS	ZONE 4	ZONE 5	
A=200 SF	21.5 PSF	23.0 PSF	
A=50 SF	23.5 PSF	27.0 PSF	
A=20 SF	26.0 PSF	32.0 PSF	

C & C NOTES:

- THE PRESSURES LISTED ARE IN ACCORDANCE CBC AND ASCE 7, AND THE DESIGN FORCES USED BY THE SUBCONTRACTOR FOR A SPECIFIC APPLICATION ARE THE RESPONSIBILITY OF THE SUBCONTRACTOR.
 - WIND PRESSURES ARE ULTIMATE DESIGN LEVEL.
 - SEE ASCE 7 FOR ZONE DEFINITIONS AND EXTENT OF ZONES.
 - SUBMIT DESIGN CALCULATIONS SIGNED AND SEALED BY A LICENSED ENGINEER IN THE PROJECT'S JURISDICTION FOR ANY DESIRED MODIFICATION TO THE STATED PRESSURES
- ALL LATERAL LOAD RESISTANCE AND STABILITY OF THE BUILDING IN THE COMPLETED STRUCTURE IS PROVIDED BY THE EXISTING BUILDING IN EACH ORTHOGONAL DIRECTION.

GENERAL

- DURING THE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONNEL AND PROPERTY ON AND AROUND THE JOBSITE. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING, GUYS, ETC., IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES. TEMPORARY BRACING, SHORING, GUYING, ETC. SHALL AVOID EXCESSIVE STRESSES AND HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION. THE STRUCTURE SHOULD NOT BE CONSIDERED STABLE UNTIL ALL STRUCTURAL ELEMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- ALL DRAWINGS AND SPECIFICATIONS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION SO A CLARIFICATION CAN BE ISSUED. ANY WORK THAT DEVIATES FROM OR IS PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR THE DESIGN PROFESSIONALS.
- THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALLOWABLE CONSTRUCTION LOADS AND FOR DETERMINING SEQUENCES OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKERS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO: FALSEWORK, FORMWORK, STAGING, BRACING, AND SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT SHALL NOT INCLUDE INSPECTION OR APPROVAL OF THE ABOVE ITEMS AND DO NOT IN ANY WAY RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES FOR THE ABOVE. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
- ALL DIMENSIONS AND SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOBSITE PRIOR TO BID SUBMITTAL. START OF SHOP DRAWINGS, START OF CONSTRUCTION, AND/OR FABRICATION OF MATERIALS, IF DISCREPANCIES ARE ENCOUNTERED, OR CONDITIONS DEVELOP THAT ARE NOT COVERED BY THE CONTRACT DOCUMENTS, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.
- STRUCTURAL SUBSTITUTIONS MAY BE ALLOWED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. SUPPLIER SHALL PROVIDE SIGNED AND SEALED DESIGN CALCULATIONS OR SUITABLE PRODUCT LITERATURE FOR THE COMPONENTS. ALL PRODUCT SUBSTITUTIONS SHALL INCLUDE A CODE EVALUATION REPORT SPECIFIC TO THE BUILDING CODE LISTED IN THE DESIGN CRITERIA.
- STRUCTURAL DRAWINGS INCLUDE DESIGN REQUIREMENTS AND DIMENSIONS FOR STRUCTURAL INTEGRITY BUT DO NOT SHOW ALL DETAIL DIMENSIONS TO FIT INTRICATE ARCHITECTURAL AND MECHANICAL DETAILS. CONTRACTOR SHALL CONSTRUCT THE WORK SO IT WILL CONFORM TO THE CLEARANCES REQUIRED BY ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DESIGN.
- ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
- DO NOT SCALE DRAWINGS. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND LARGE-SCALE OVER SMALL-SCALE DRAWINGS. CONTRACTOR TO DETERMINE FINAL DIMENSION DIMENSIONS WITHIN THE WORK.
- SEE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR DETAILS, CONDITIONS, PITS, TRENCHES, PADS, DEPRESSIONS, ROOF / FLOOR OPENINGS, TOP OF WALL ELEVATIONS, STAIRS, SLEEVES, ITEMS TO BE EMBEDDED OR ATTACHED TO STRUCTURAL ELEMENTS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS. FOR THESE NON-STRUCTURAL ELEMENTS SHOWN ON STRUCTURAL DRAWINGS, THEY ARE FOR GENERAL INFORMATION ONLY.
- PROVIDE TEMPORARY BLOCKOUTS AND TEMPORARY OPENINGS IN THE STRUCTURE AS REQUIRED TO PERMIT INSTALLATION OF ALL WORK. BLOCKOUTS AND TEMPORARY OPENINGS SHALL BE LOCATED, CONFIGURED, DETAILED, AND INFILLED IN A MANNER THAT ALTERS NEITHER THE STRENGTH OF THE STRUCTURAL FRAMING NOR THE STRENGTH OF CONNECTIONS. INFILL ALL BLOCKOUTS AND TEMPORARY OPENINGS USING THE MATERIALS SPECIFIED FOR THE FRAMING AT THE LOCATIONS WHERE THE BLOCKOUTS AND OPENINGS OCCUR. SUBMIT DRAWINGS INDICATING THE LOCATIONS, DIMENSIONS, AND DETAILS OF ALL PROPOSED BLOCKOUTS AND OPENINGS AND DETAILS INDICATING THE MANNER IN WHICH THE BLOCKOUTS AND OPENINGS WILL BE INFILLED.
- NO HOLES, NOTCHES, BLOCK-OUTS, ETC. ARE ALLOWED IN STRUCTURAL ELEMENTS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
- BEFORE SUBMITTING A PROPOSAL FOR THIS WORK, CONTRACTOR SHALL VISIT THE PREMISES AND BECOME FULLY ACQUAINTED WITH FIELD CONDITIONS, TEMPORARY CONSTRUCTION REQUIRED, QUANTITIES AND TYPE OF EQUIPMENT, ETC. THE PROPOSAL SHALL INCLUDE ALL SUMS REQUIRED TO DO THE WORK.
- ELEMENTS SUCH AS NON-BEARING PARTITIONS, ETC. ATTACHED TO AND/OR SUPPORTED BY THE STRUCTURE SHALL TAKE INTO ACCOUNT DEFLECTIONS AND OTHER STRUCTURAL MOVEMENTS. THE STRUCTURAL FRAMING WAS DESIGNED TO LIMIT DRIFT AND DEFLECTION OF THE STRUCTURAL SYSTEM TO LESS THAN THE MAXIMUM PERMITTED DEFLECTIONS LISTED IN THE BUILDING CODE. THE CONTRACTOR SHALL COORDINATE THE WORK OF OTHER TRADES TO ACCOMMODATE THESE DEFLECTIONS AND TO ACCOMMODATE CONSTRUCTION TOLERANCES.

SUBMITTALS

- SUBMITTALS ARE:
 - CONCRETE MIX DESIGNS
 - CONCRETE REINFORCING
 - STEEL FABRICATION AND MISCELLANEOUS METALS
- SUBMITTALS SHALL BE REVIEWED AND COORDINATED PRIOR TO SUBMITTING TO THE ARCHITECT. EACH SHOP DRAWING SUBMITTED SHALL BE STAMPED INDICATING REVIEW BY THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR AND REVIEW BY THE ARCHITECT SHALL NOT BEGIN UNTIL THIS IS COMPLETE. WORK SHALL NOT BEGIN WITHOUT REVIEW BY THE DESIGN PROFESSIONALS.
- SUBMITTALS SHALL BE REVIEWED BY THE DESIGN PROFESSIONALS FOR GENERAL CONFORMANCE WITH DESIGN CONCEPT ONLY. NOTATIONS MADE BY THE DESIGN PROFESSIONALS ON THE SHOP DRAWINGS DO NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS.
- FOR ADDITIONAL INFORMATION ON REQUIRED SUBMITTALS, SEE INDIVIDUAL MATERIAL SECTIONS.

DELEGATED DESIGN

- DELEGATED DESIGNS PER SECTION 107.3.4.1 SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND THE DESIGN PROFESSIONALS AND REVIEWED PRIOR TO INSTALLATION.
- DELEGATED DESIGNS ARE:
 - EXCAVATION, SHORING, AND UNDERPINNING
 - CURTAIN WALL AND STOREFRONT SYSTEMS
- ALL DELEGATED DESIGNS SHALL BE SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROJECT'S JURISDICTION RESPONSIBLE FOR THE PREPARATION OF THESE DOCUMENTS.

EXISTING CONDITIONS / DEMOLITION

- EXISTING CONDITIONS:
 - EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM EXISTING DRAWINGS.
 - DATED MAY 24, 1960 BY HOWARD M PARKURST.
 - DATED MAY 25, BY SHIVE HATTERY.
 - DATED JULY 1, 2007 BY SHIVE HATTERY.
 - EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM FIELD TAKE-OFF BY IMEG AS PERMITTED BY ACCESS RESTRICTIONS DURING DESIGN.
 - ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE. CONTRACTOR TO VERIFY EXISTING INFORMATION, DIMENSIONS, AND SIZES AS REQUIRED TO COMPLETE THEIR WORK. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE ARCHITECT SO CLARIFICATION MAY BE MADE. MODIFICATION OF CONSTRUCTION DETAILS SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE ARCHITECT
- ALL DEMOLITION SHALL BE CARRIED OUT IN SUCH A WAY TO PREVENT DAMAGE TO EXISTING ELEMENTS WHICH ARE TO REMAIN.
- ALL ELEMENTS WHICH ARE TO REMAIN AND WHICH ARE DAMAGED DURING DEMOLITION WORK SHALL BE REPLACED AT NO ADDED COST. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED AS A RESULT OF NEW WORK.
- CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS OF EXISTING STRUCTURE AND SITES THAT ARE AFFECTED BY NEW WORK BEFORE PROCEEDING WITH FABRICATION AND CONSTRUCTION.
- ALL CONSTRUCTION IS NEW UNLESS IDENTIFIED AS EXISTING. "E1", THE CONTRACTOR SHALL VERIFY ALL EXISTING BUILDING INFORMATION AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO FABRICATION OF ANY STRUCTURAL COMPONENT. NEW SLABS ARE TO BE AT THE SAME ELEVATIONS AS ADJACENT EXISTING SLABS UON. FOUNDATION ELEVATIONS OR COLUMN LENGTHS SHALL BE ADJUSTED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER TO ACHIEVE MATCHING SLAB ELEVATIONS.
- SHORING:
 - SHORING DRAWINGS AND CALCULATIONS BY OTHERS, AS REQUIRED, ARE NOT INCLUDED IN THIS PACKAGE. SHORING DRAWINGS AND STRUCTURAL CALCULATIONS SHALL BE PROVIDED BY CONTRACTOR FOR REVIEW.
 - SHORING / UNDERPINNING OF EXISTING BUILDINGS OR IMPROVEMENTS SHALL BE PROVIDED BEFORE EXISTING SUPPORTING WALLS, SLABS, FOUNDATIONS, PAVEMENT, ETC. ARE CUT, MODIFIED, OR REMOVED.

EARTHWORK

- FOUNDATIONS SHOWN IN ACCORDANCE WITH THE INFORMATION SHOWN ON THE EXISTING BUILDING DRAWINGS. NO NEW GEOTECHNICAL REPORT HAS BEEN PROVIDED BY THE OWNER FOR THIS PROJECT.
- SOIL PROPERTIES:

FROST DEPTHS	3'-6" FT
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- A GEOTECHNICAL ENGINEER SHALL BE EMPLOYED TO VERIFY THAT THE PRESUMED ALLOWABLE BEARING PRESSURE WILL BE ACHIEVED PRIOR TO CONSTRUCTION. THAT CONTRACTOR SHALL DEVELOP AND ENSURE IMPLEMENTATION OF A SITE SUBGRADE PREPARATION PROGRAM AS REQUIRED TO ACHIEVE THE PRESUMED SOIL BEARING PRESSURE. FOOTING AND SLAB-ON-GRADE SUBGRADE PREPARATION SHALL BE IN COMPLIANCE WITH THE APPLICABLE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL CRIBBING, SHEETING, SHORING, ETC. REQUIRED FOR CONSTRUCTION OF THE PROJECT AND SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, STREETS, AND UTILITIES. CONTRACTOR SHALL SUBMIT DESIGN CALCULATIONS AND SHOP DRAWINGS SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROJECT'S JURISDICTION.
- ALL REQUIRED BACKFILL AND UTILITY TRENCH BACKFILL WITHIN THE BUILDING AREA SHALL BE COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.

SHALLOW FOUNDATIONS

- SHALLOW FOUNDATIONS SHALL HAVE THE FOLLOWING MINIMUM NET ALLOWABLE SERVICE LOAD BEARING PRESSURES:

SERVICE LOAD BEARING PRESSURES:	
NET ALLOWABLE BEARING PRESSURE	1500 PSF (ASSUMED)

REINFORCING STEEL

- ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", AND ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE", UON.
- CONCRETE REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING STANDARDS:

REINFORCING STEEL UON	ASTM A615, GR 60	Fy=60 KSI
WELDED WIRE REINFORCING	ASTM A1064	Fy=65 KSI
- MINIMUM CONCRETE COVER SHALL BE PROVIDED AS FOLLOWS TO THE OUTERMOST REINFORCING BARS:

CONCRETE EXPOSURE	MEMBER	REINFORCE MENT	COVER (IN)
CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	ALL	ALL	3
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	ALL	#6 TO #18	2
		#5 AND SMALLER	1 1/2
- REINFORCING STEEL SHALL BE INSTALLED TO WITHIN THE FOLLOWING TOLERANCES, INDICATED TOLERANCES ARE PER ACI 117, "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS":

ITEM FOR WHICH TOLERANCE IS BEING MEASURED	PERMITTED TOLERANCE
CONCRETE COVER FOR SLAB TOP AND BOTTOM BARS	±1/4"
COVER FOR OTHER REINFORCING STEEL	±3/8"
SPECIFIED SPACING BETWEEN PARALLEL BARS IN SLAB	+ (SPECIFIED SPACING/4) BUT NOT TO EXCEED 1"
HORIZONTAL DEVIATION FROM SPECIFIED LOCATION UON	±3"
SPACING AND LOCATION OF BEAM STIRRUPS	± (BEAM DEPTH IN INCHES/12) x 1"
SPACING AND LOCATION OF COLUMN TIES	± (MINIMUM COLUMN DIMENSION IN INCHES/12) x 1"
LOCATION OF ENDS OF BARS PERPENDICULAR TO SLAB EDGES	±1"
HORIZONTAL LOCATION OF PRESTRESSED TENDONS	±1/2" FOR MEMBER DEPTH = 24" ±1" FOR MEMBER DEPTH > 24"
VERTICAL LOCATION (DRAPE) OF PRESTRESSED TENDONS	±1/4" FOR MEMBER DEPTH = 8" ±3/8" FOR MEMBER DEPTH 8" <lt; D = 24" ±1/2" FOR MEMBER DEPTH > 24"

- THE ABOVE LIST OF PERMITTED TOLERANCES SHALL BE PROVIDED ON ALL REINFORCING STEEL PLACING DRAWINGS AND ON ALL POST-TENSIONED TENDON PLACING DRAWINGS. PLACING DRAWINGS THAT DO NOT PROVIDE THIS LIST OF TOLERANCES WILL BE REJECTED.
- FIELD BENDING OF REINFORCING STEEL IS NOT PERMITTED UON.
 - WELDING OF REINFORCING STEEL OTHER THAN A706 IS PROHIBITED. WELDING OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH AWS D1.4 OR D1.8.
 - ALL WELDED WIRE REINFORCING SHALL BE LAP SPICED 2 PANELS (1'-0" MIN).
 - SPLICING:
 - SPLICES IN REINFORCING STEEL SHALL BE MADE ONLY AT THOSE LOCATIONS WHERE SPLICES ARE SHOWN ON THE STRUCTURAL DRAWINGS AND AT THOSE LOCATIONS WHERE SPLICES HAVE BEEN DETAILED ON THE REINFORCING STEEL PLACING DRAWINGS THAT HAVE BEEN REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER. ALL SPLICES SHALL BE CLASS B TENSION LAP SPLICES UON.
 - MECHANICAL SPLICE COUPLERS MAY BE USED INSTEAD OF TENSION LAP SPLICES AT THE CONTRACTOR'S OPTION AT ANY LOCATION. MECHANICAL SPLICE COUPLERS MUST BE USED WHERE SPLICES #14 AND LARGER BARS, INCLUDING WHERE SPLICES #14 AND LARGER BARS TO #11 AND SMALLER BARS. STAGGER MECHANICAL SPLICES IN ADJACENT BARS 30" MINIMUM.
 - COMPRESSION LAP SPLICES MAY BE USED ONLY AT THOSE LOCATIONS WHERE SUCH SPLICES ARE SPECIFICALLY INDICATED. STAGGER SPLICES WHERE REQUIRED TO PROVIDE 1 1/2" MINIMUM CLEAR SPACING BETWEEN REINFORCING STEEL AT SPLICE LOCATIONS.
 - ALL HOOKS SHALL BE STANDARD HOOKS OR STANDARD STIRRUP HOOKS UON. STANDARD STIRRUP HOOKS SHALL HAVE CONTINUOUS BAR AT INSIDE CORNER OF HOOK.
 - VERTICAL REINFORCING STEEL IN CONCRETE AND MASONRY WALLS WITH ONE LAYER OF REINFORCING BARS SHALL BE INSTALLED IN THE CENTER OF THE WALL UON.
 - STANDARD STIRRUP HOOKS FOR #3, #4, AND #5 BARS SHALL BE PROVIDED IN SLABS LESS THAN 9" THICK.
 - DOWELS SHALL MATCH GRADE, SIZE, SPACING, AND QUANTITY OF LAPPED REINFORCING STEEL UON. EXTEND ALL DOWELS FOR FULL DEPTH OF SUPPORTING ELEMENT AND PROVIDE HOOKS UON. DOWELS SHALL NOT BE POST-INSTALLED INTO FRESH CONCRETE.
 - HEADED DEFORMED BARS MAY ONLY BE USED ON #11 AND SMALLER BARS. THREADED OR FORGED HEADS CAN BE USED AT THE FABRICATOR'S DISCRETION AT JOINTS.
 - FIELD CUTTING OF REINFORCING STEEL IS PROHIBITED UNLESS INDICATED ON THE REINFORCING PLACING DRAWINGS.
 - HEATING OF BARS FOR BENDING IS PROHIBITED.
 - REINFORCING STEEL PLACING DRAWINGS SHALL BE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 315. THE PLACING DRAWINGS SHALL SHOW ALL INFORMATION NECESSARY TO FABRICATE AND PLACE THE REINFORCING STEEL.
 - REINFORCING STEEL SPACINGS ARE CENTER-TO-CENTER DIMENSIONS UON. REINFORCING STEEL SHOWN IN SECTION PERPENDICULAR TO THE CUT ARE CONTINUOUS UON.
 - THE SPACING OF ALL REINFORCING STEEL MUST BE COMPUTED BY THE REINFORCING STEEL DETAILER AND MUST BE INDICATED ON THE PLACING DRAWINGS. EXTENT ARROWS MUST BE USED TO CLEARLY INDICATE THE LOCATIONS WHERE GROUPS OF REINFORCING BARS ARE TO BE INSTALLED.
 - A LIST OF ALL APPLICABLE REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE INDICATED ON ALL REINFORCING STEEL PLACING DRAWINGS. PLACING DRAWINGS THAT DO NOT SHOW SUFFICIENT INFORMATION NEEDED TO PLACE THE REINFORCING STEEL WILL BE REJECTED.

CAST-IN-PLACE CONCRETE

- CONCRETE MATERIALS SHALL CONFORM TO:

PORTLAND LIMESTONE CEMENT	ASTM C595, TYPE II
FLY ASH	ASTM C618, TYPE C OR F
SLAG CEMENT	ASTM C989
FINE AND COARSE AGGREGATE	ASTM C33
WATER	POTABLE
AIR-ENTRAINING ADMIXTURE	ASTM C260
WATER REDUCING ADMIXTURE	ASTM C494
- ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, AND ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE UON.
- AIR ENTRAINMENT:

NOMINAL MAXIMUM AGGREGATE SIZE	REQUIRED AIR CONTENT PER EXPOSURE CATEGORY	
	F1	F2
3/8"	6%	7.5%
1/2"	5.5%	7%
3/4"	5%	6%
1"	4.5%	6%

 - CONCRETE SHALL BE AIR ENTRAINED WITH THE APPROPRIATE PERCENTAGE AIR CONTENT LISTED IN THE TABLE ABOVE AS APPLICABLE FOR THE INDICATED EXPOSURE CLASS AND NOMINAL MAXIMUM AGGREGATE SIZE IN THE CONCRETE MIX. THE REQUIRED AIR CONTENT VALUE MAY BE REDUCED BY 1% FOR ALL CONCRETE WITH COMPRESSIVE STRENGTH GREATER THAN 5000 PSI. THE PERMITTED TOLERANCE ON THE REQUIRED AIR CONTENT IS ±1.5%.
- CONCRETE STRENGTHS SHALL CONFORM TO:

LOCATION	f _c AT 28 DAYS (PSI)	MAX PERMITTED W/C	EXPOSURE CLASS
ALL FOUNDATION CONCRETE UON	4500	0.45	F1, S0, W1, C1
SLAB-ON-GRADE UON	3000	0.55	F0, S0, W0, C0
WALLS OTHER THAN SHEAR WALLS	4500***	0.50	F1, S0, W1, C1

* LIGHTWEIGHT CONCRETE SHALL HAVE A 115 PCF DRY UNIT WEIGHT (±3PCF). LIGHTWEIGHT AGGREGATES SHALL BE PRESOAKED AS REQUIRED IN ACCORDANCE WITH ACI 301.

** SEE SCHEDULE OR ELEVATIONS FOR AREAS OF DIFFERENT STRENGTH REQUIREMENTS.

*** WALLS MONOLITHIC WITH COLUMNS OR PIERS SHALL BE CONSTRUCTED USING CONCRETE SPECIFIED FOR THE COLUMNS WITHIN 15 FEET MINIMUM TO EACH SIDE OF THE COLUMNS.
- REQUIRED NOMINAL MAXIMUM COARSE AGGREGATE SIZE:

CONCRETE ELEMENT	REQUIRED NOMINAL MAXIMUM COARSE AGGREGATE SIZE"
ALL CONCRETE UON	1"
TOPPING SLABS LESS THAN 3" THICK	3/8"

* SMALLER NOMINAL MAXIMUM COARSE AGGREGATE SIZE SHALL BE USED WHERE REQUIRED PER ACI 318.
- COMBINED AGGREGATE GRADING FOR STRUCTURAL SLABS: 8-22% BY WEIGHT OF AGGREGATE SHALL BE RETAINED ON EACH SIEVE BELOW THE MAXIMUM AGGREGATE SIZE SIEVE AND ABOVE THE #100 SIEVE.
- ALL FOUNDATION ELEMENTS SHALL BE CENTERED UNDER WALLS, PIERS, OR COLUMNS UON.
- "ROUGH JOINTS" ARE JOINTS ROUGHENED TO AN AMPLITUDE OF 1/4" AND FREE AND CLEAN OF LATANCE. PROVIDE ROUGH JOINTS AT ALL CONSTRUCTION JOINTS UON.
- CONTRACTOR SHALL SUBMIT PROPOSED LOCATIONS OF ALL CONSTRUCTION JOINTS WHERE JOINTS ARE NOT INDICATED ON THE DRAWINGS.
- CONSTRUCTION JOINTS IN CAST-IN-PLACE CONCRETE SHALL BE LOCATED WITHIN THE MIDDLE THIRD OF SPAN. PROPOSED CONSTRUCTION JOINT LOCATIONS SHALL BE SHOWN ON REINFORCING STEEL PLACING DRAWINGS. ANY STOP IN CONCRETE WORK MUST BE MADE WITH VERTICAL BULKHEADS AND HORIZONTAL KEYS UON. ALL REINFORCING TO BE CONTINUOUS THROUGH JOINTS UON.
- HORIZONTAL CONSTRUCTION JOINTS THROUGH CAST-IN-PLACE CONCRETE FRAMING ARE NOT PERMITTED EXCEPT WHERE SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS.
- JOINTS ABUTTING EXISTING CONCRETE CONSTRUCTION SHALL BE ROUGH JOINTS UON.
- PROVIDE TEMPLATES TO SET EMBEDDED ITEMS.
- INSTALLATION OF ELECTRICAL CABLE, CONDUIT, AND PIPING IN OR THROUGH CONCRETE COLUMNS AND WALLS IS PROHIBITED UNLESS APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION. INSTALLATION OF PIPING IN CAST-IN-PLACE CONCRETE IS PROHIBITED UNLESS APPROVED BY STRUCTURAL ENGINEER PRIOR TO INSTALLATION. DRAWINGS SHALL BE SUBMITTED FOR REVIEW SHOWING PROPOSED PLACEMENT OF ELECTRICAL CABLE AND CONDUIT IN SLABS. THOSE DRAWINGS SHALL SHOW SIZES AND DIMENSIONED LOCATIONS OF ALL CABLE AND CONDUIT.
- PROVIDE CONTINUOUS BENTONITE WATERSTOPS IN ALL CONSTRUCTION JOINTS IN BELOW GRADE CONCRETE CONSTRUCTION. COORDINATE WATERSTOPS WITH ARCHITECTURAL DRAWINGS.
- PROJECTING CORNERS OF BEAMS, WALLS, COLUMNS, ETC. SHALL BE FORMED WITH A 3/4" CHAMFER UON ON ARCHITECTURAL DRAWINGS.

- SLOPE SLABS TO DRAINS. SEE ARCHITECTURAL AND MEP DRAWINGS FOR DRAIN LOCATIONS AND SLOPE REQUIREMENTS. SLAB THICKNESSES SHOWN ON DRAWINGS ARE MINIMUMS.
- AFTER CONCRETE IS PLACED, IN NO CASE SHALL THE SUPERIMPOSED CONSTRUCTION LOADS BE GREATER THAN SPECIFIED DESIGN LIVE LOADS UNLESS THE WORK IS SHORED.
- CONTRACTOR SHALL SURVEY ALL CONCRETE WORK WITHIN 48 HOURS OF PLACING CONCRETE TO ENSURE PLACEMENT IS IN ACCORDANCE WITH PROJECT REQUIREMENTS.
- CONCRETE OF CONCRETE IS NOT PERMITTED UNLESS APPROVED BY THE STRUCTURAL ENGINEER. SUBMIT LOCATIONS OF PROPOSED CONCRETE CORES.
- REINFORCING STEEL SHALL NOT BE DAMAGED WHEN DRILLING CONCRETE.
- ADHERE TO ACI 305R AND ACI 306R FOR HOT AND COLD WEATHER CONCRETE CONSTRUCTION.
- THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE TESTING AND INSPECTION AGENCY. RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH IS THE CONTRACTOR'S. SUBMIT TEST DATA ON EACH PROPOSED MIX FOR REVIEW IN ACCORDANCE WITH THE APPLICABLE CODE. MIX DESIGNS SUBMITTED WITHOUT THE REQUIRED TEST DATA WILL BE RETURNED WITHOUT REVIEW.
- SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, LOCATIONS, AND DETAILS OF ALL ARCHITECTURAL FEATURES IN THE CONCRETE. SEE ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS FOR REQUIREMENTS FOR ALL CONCRETE FINISHES.

STEEL

- STRUCTURAL STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "DETAILING FOR STEEL CONSTRUCTION" AND FABRICATED AND ERECTED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".
- STRUCTURAL STEEL SHALL CONFORM TO ASTM STANDARDS AS NOTED BELOW:

WIDE FLANGE SHAPES	ASTM A992	Fy=50 KSI
OTHER ROLLED SHAPES	ASTM A36	Fy=36 KSI
HSS SECTIONS, SQUARE	ASTM A500, GR C	Fy=50 KSI
BASE AND CONNECTION PLATES	ASTM A36 A572	Fy=36 50 KSI
ANCHOR RODS	ASTM F1554, GR 36 55	Fy=36 55 KSI
HEAVY HEX NUTS	ASTM A563	
WASHERS	ASTM F436	
ELECTRODES FOR ARC WELDING	AWS 5.1, E70XX	
- ALL BOLTED CONNECTIONS SHALL BE GRADE A325N BEARING TYPE BOLTS UON. ALL BOLTS SHALL BE INSTALLED TO A MINIMUM SNUG TIGHT CONDITION UON.
- FULLY TENSIONED HIGH STRENGTH BOLTS AND SLP CRITICAL HIGH STRENGTH BOLTS SHALL USE TENSION-CONTROL. "TWIST-OFF" BOLTS OR BE INSTALLED USING THE TURN OF THE NUT METHOD.
- FIELD CONNECTIONS SHALL BE WELDED OR BOLTED. SHOP CONNECTIONS SHALL BE WELDED UON. WELDS INDICATED WITH A SHOP WELD SYMBOL MAY BE MADE IN THE FIELD WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. LOCATIONS OF ALL FIELD WELDS SHALL BE CLEARLY SHOWN ON THE SHOP DRAWINGS. WELDS SHALL BE DESIGNED TO BE FULLY EQUIVALENT IN STRENGTH TO BOLTED CONNECTIONS DETAILED TO MINIMIZE BENDING IN THE CONNECTION.
- WELD LENGTHS INDICATED ON THE DRAWINGS ARE THE NET EFFECTIVE LENGTH REQUIRED, WHERE WELD LENGTH IS NOT SPECIFIED, PROVIDE WELD ALONG ENTIRE INTERSECTION OF THE JOINED PARTS. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM WELD SIZE AS SPECIFIED IN AISC 360, TABLE J2.4.
- ALL WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED BY CERTIFIED WELDERS WITH EXPERIENCE AND CERTIFICATION IN THE TYPES OF WELDING INDICATED. WELDERS SHALL HAVE BEEN RECENTLY QUALIFIED AS PRESCRIBED IN "QUALIFICATION PROCEDURES" OF THE AMERICAN WELDING SOCIETY (AWS).
- BEAMS SHALL BE CAMBERED UPWARD WHERE SHOWN ON THE DRAWINGS, WHERE NO UPWARD CAMBER IS INDICATED, ANY MILL CAMBER SHALL BE DETAILED UPWARD IN THE BEAMS.
- SPLICING OF STEEL MEMBERS WHERE NOT DETAILED ON THE DRAWINGS IS PROHIBITED WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER AS TO LOCATION, TYPE OF SPLICE, AND CONNECTION TO BE MADE.
- PROVIDE ONE SHOP COAT OF PAINT ON ALL STRUCTURAL STEEL NOT COVERED WITH CONCRETE, FIREPROOFING, MASONRY, OR AT CONTACT SURFACES AT HIGH STRENGTH BOLTS.
- ALL STEEL EXPOSED TO WEATHER OR AS NOTED ON PLAN SHALL BE HOT-DIP GALVANIZED. AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 GR60, ABRASDED AREAS TO BE TOUCHED UP WITH COLD GALVANIZING COMPOUND IN ACCORDANCE WITH ASTM A780.
- ALL GALVANIZED HOLLOW SECTIONS SHALL HAVE WELDED CAP PLATES TO SEAL EXPOSED ENDS.
- CUTS, HOLES, OPENINGS, ETC. REQUIRED IN STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES SHALL BE SHOWN ON THE SHOP DRAWINGS. BURNING OR TORCHING OF HOLES, CUTS, AND OTHER FIELD MODIFICATIONS SHALL NOT BE ALLOWED, EXCEPT BY WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER.
- SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC. FOR MISCELLANEOUS STEEL NOT DETAILED SPECIFICALLY ON THE STRUCTURAL DRAWINGS.
- GROUT FOR BASE AND BEARING PLATES SHALL BE A NON-SHRINK, NON-METALLIC PRODUCT. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 10,000 PSI. INSTALL GROUT PRIOR TO APPLYING SIGNIFICANT LOADING TO MEMBER.
- THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS OF ALL STRUCTURAL STEEL FOR REVIEW AND APPROVAL BEFORE FABRICATION.

STRUCTURAL ABBREVIATION KEY

ABBR: DESCRIPTION:

#	NUMBER OR POUNDS
@	AT
Ø	DEGREE
∅	DIAMETER
(E)	EXISTING
A.B.	ANCHOR BOLT
ARCH	ARCHITECT, -URE, -URAL
B.O.	BOTTOM OF
B	BEAM
BF	BOUNDARY FRAME
BM	BEAM
B.U.	BOUNDARY NAILING
BO	BOTTOM
BTWN	BETWEEN
CFSP	COLD FORM STEEL FRAMING
COS	CENTER OF GRAVITY OF THE TENDON
C/C	COMPLETE JOINT PENETRATION WELD
CLEAR	CLEAR
CJ	CENTERLINE
CMU	CONCRETE MASONRY UNIT
CL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATION
DIAMETER	DIAMETER
DL	DEAD LOAD
DET	DETAIL
DRAWING	DRAWING
DOWL	DOWEL
EACH	EACH
EACH FACE	EACH FACE
EFF	EFFECTIVE
ELEV	ELEVATION
EMBED	EMBEDMENT
EN	EDGE NAILING
E.O.S.	EDGE OF SLAB
EQU	EQUAL
EQUIP	EQUIPMENT
ETCETERA	ETCETERA
EW	EACH WAY
EXP	EXPANSION
EXT	EXTERIOR
F'c	CONCRETE COMPRESSIVE STRENGTH
FDR	FOUNDATION
F.N.	FIELD NAILING
FT	FOOT
FG	FOOTING
FTG	FIELD STRESS
GA	GAGE OR GAUGE
GALV	GALVANIZED
GLB	GLULAM BEAM
GT	GIRDER TRUSS
HORIZON	HORIZONTAL
HSA	HEADED STUD ANCHOR
HSB	HIGH STRENGTH BOLT
J	JOINT
K, KIP	KILOPOUND (1,000 POUNDS)
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
L	LENGTH
LBS	POUNDS
LIVE	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LS	LONG SIDE
LSH	LONG SIDE HORIZONTAL
LSV	LONG SIDE VERTICAL
LT	LIGHTWEIGHT

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POST-INSTALLED ANCHORS

1. BASIS OF DESIGN ANCHORS:

INSTALLATION CONDITION	ANCHOR TYPE
EXPANSION ANCHORS INTO CONCRETE	HILTI KWIK BOLT T2Z (ESR-4266)
SCREW ANCHORS > 1/4"Ø INTO CONCRETE	HILTI KWIK HUS-EZ (ESR-3027)
ADHESIVE ANCHORS INTO CONCRETE	HILTI SAFE-SET SYSTEM w/ HIT-HY 200 V3 AND HIT-Z ROD (ESR-4868)or HILTI SAFE-SET SYSTEM w/ HIT-HY 200 V3 AND HAS-E THREADED ROD (ESR-4866) or HILTI SAFE-SET SYSTEM w/ HIT-RE 500 V3 AND HAS-E THREADED ROD (ESR-3814) FOR ALL ADHESIVE ANCHORS, HOLES SHALL BE HAMMER DRILLED AND HOLES MAY BE DRY OR WATER SATURATED.
EXPANSION ANCHORS INTO GROUTED CMU	HILTI KWIK T2Z (ESR-4561)
SCREW ANCHORS > 1/4"Ø INTO GROUTED CMU	HILTI KWIK HUS-EZ (ESR-3056)
SCREW ANCHORS = 1/4"Ø INTO CONCRETE OR GROUTED CMU	HILTI KWIK-CON II+
ADHESIVE ANCHORS IN GROUTED CMU OR SOLID BRICK	HILTI HIT-HY 270 SYSTEM w/ HAS-E THREADED ROD (ESR-4143)
ADHESIVE ANCHORS INTO HOLLOW CMU, BRICK OR MULTI-WYTHE BRICK WALLS	HILTI HIT-HY 270 SYSTEM w/ HAS-E THREADED ROD AND APPROPRIATE SCREEN TUBE (ESR-4144)
ADHESIVE DOWELING FOR ANCHORING REINFORCING BARS INTO (E) CONCRETE	HILTI SAFE-SET SYSTEM w/ HIT-HY 200 V3 ADHESIVE (ESR-4868) or HILTI SAFE-SET SYSTEM w/ HIT-RE 500 V3 ADHESIVE (ESR-3814)
POWDER-ACTUATED FASTENERS (PAFs) IN CONCRETE	HILTI X-U FASTENERS (ESR-2269)

2. ALTERNATIVE ANCHORS MAY BE USED IF APPROVED IN WRITING BY THE STRUCTURAL ENGINEER. THE CONTRACTOR SHALL SUBMIT CALCULATIONS SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROJECT'S JURISDICTION VERIFYING PROPOSED ALTERNATIVE ANCHORS WILL PROVIDE THE SAME OR GREATER LOAD-CARRYING CAPACITY AS THE SPECIFIED ANCHORS. THE CONTRACTOR SHALL SUBMIT EVALUATION REPORTS. EACH ANCHOR CONFIGURATION SHALL BE EVALUATED AND COMPARED TO THE SPECIFIED ANCHOR.

3. CRACKED CONCRETE IS ASSUMED FOR ALL ANCHORAGE DESIGN CONDITIONS UNLESS IT CAN BE DEMONSTRATED THROUGH ENGINEERING ANALYSIS THAT THE CONCRETE REMAINS UNCRACKED DURING THE GOVERNING ULTIMATE LOAD STATE.

4. POST-INSTALLED ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.

5. THE CONTRACTOR SHALL ARRANGE FOR AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR EACH SPECIFIED ANCHOR TYPE. THE STRUCTURAL ENGINEER SHALL RECEIVE DOCUMENTATION VERIFYING ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS HAVE BEEN TRAINED PRIOR TO COMMENCEMENT OF INSTALLING ANCHORS.

6. INSTALLATION OF ADHESIVE ANCHORS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPROVED CERTIFICATION PROGRAM. CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM OR EQUIVALENT. THE ACCEPTABILITY OF CERTIFICATIONS OTHER THAN THE ACI/CRSI ADHESIVE INSTALLER CERTIFICATION WILL BE DETERMINED BY THE STRUCTURAL ENGINEER.

7. CONCRETE SHALL HAVE ACHIEVED DESIGN STRENGTH PRIOR TO INSTALLING POST-INSTALLED ANCHORS. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE THAT HAS CURED FOR A MINIMUM OF 21 DAYS.

8. ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ANCHORS AND PROXIMITY OF ANCHORS TO EDGES OF CONCRETE OR MASONRY. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.

9. POST-INSTALLED ANCHORS AND DOWELS SHALL BE INSTALLED IN A MANNER THAT DOES NOT DAMAGE REINFORCING STEEL, CONDUIT OR OTHER EMBEDDED ITEMS. REINFORCING STEEL SHALL BE LOCATED BY NON-DESTRUCTIVE MEANS PRIOR TO DRILLING HOLES. PLATES AND BRACKETS THROUGH WHICH ANCHORS WILL BE INSTALLED SHALL NOT BE FABRICATED UNTIL AFTER REINFORCING STEEL IS LOCATED AND ANCHOR LOCATIONS ARE ADJUSTED. CONTRACTOR SHALL NOTIFY STRUCTURAL ENGINEER TO OBTAIN ALTERNATIVE ANCHOR LAYOUT WHERE ANCHORS MUST BE RELOCATED TO AVOID INTERFERENCE WITH REINFORCING STEEL.

10. ADHESIVE ANCHORING SYSTEMS ARE PERMITTED TO BE USED FOR INSTALLATION OF REINFORCING STEEL INTO EXISTING CONCRETE ONLY WHERE SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS OR WITH APPROVAL FROM THE STRUCTURAL ENGINEER LOCATIONS WHERE REINFORCING STEEL WAS INCORRECTLY PLACED OR MISSED SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

11. WHERE POST-INSTALLED MECHANICAL ANCHOR EMBEDMENT DEPTHS ARE SPECIFIED, THOSE DEPTHS ARE THE REQUIRED MINIMUM NOMINAL EMBEDMENT DEPTHS. WHERE MECHANICAL ANCHOR EMBEDMENT DEPTHS ARE NOT INDICATED, THE ANCHORS SHALL BE INSTALLED TO THE MAXIMUM EMBEDMENT DEPTH NOTED IN THE MANUFACTURER'S PRODUCT TECHNICAL GUIDE.

12. ADHESIVE ANCHORS SHALL BE INSTALLED WITH A MINIMUM 6" EMBEDMENT DEPTH UON.

TESTING, INSPECTIONS, AND OBSERVATIONS

1. THE STRUCTURAL ENGINEER DOES NOT PROVIDE INSPECTIONS OF CONSTRUCTION. STRUCTURAL ENGINEER MAY MAKE PERIODIC OBSERVATIONS OF THE CONSTRUCTION. SUCH OBSERVATIONS SHALL NOT REPLACE REQUIRED INSPECTIONS BY THE GOVERNING AUTHORITIES OR SERVE AS "SPECIAL INSPECTIONS" AS MAY BE REQUIRED BY CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.

2. SEE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS OR SPECIFICATIONS FOR TESTING AND INSPECTION REQUIREMENTS OF NON-STRUCTURAL COMPONENTS.

3. DUTIES OF THE INSPECTION AGENCY PER IBC CHAPTER 17:

a. SUBMIT A PROPOSED TESTING AND INSPECTION PROGRAM TO THE OWNER, THE ARCHITECT AND THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF WORK.

b. PERFORM ALL TESTING AND INSPECTION REQUIRED PER APPROVED TESTING AND INSPECTION PROGRAM.

c. FURNISH INSPECTION REPORT TO THE BUILDING OFFICIAL, THE OWNER, THE ARCHITECT, STRUCTURAL ENGINEER AND THE GENERAL CONTRACTOR. THE REPORTS SHALL BE COMPLETED AND FURNISHED WITHIN 48 HOURS OF INSPECTED WORK.

d. SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE SPECIAL INSPECTION AGENCY'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.

4. SPECIAL INSPECTIONS AND TESTS ARE REQUIRED FOR MATERIALS AND SYSTEMS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH ADDITIONAL MANUFACTURER'S INSTRUCTIONS THAT PRESCRIBE REQUIREMENTS NOT CONTAINED IN CHAPTER 17 OF THE IBC OR IN STANDARDS REFERENCED BY THE IBC. THESE ITEMS INCLUDE:

a. POST-INSTALLED ANCHORS - INSPECTION

5. THE FOLLOWING WORK SHALL BE INSPECTED BY THE SPECIAL INSPECTOR UNLESS SPECIFICALLY WAIVED BY THE BUILDING OFFICIAL.

CONCRETE CONSTRUCTION:

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
INSPECT REINFORCEMENT AND VERIFY PLACEMENT		X	ACI 318: CH 20, 25.2, 26.3, 26.6 1-26.6.3	1908.4
REINFORCING BAR WELDING:			AWS D1.4 ACI 318: 26.6.4	
a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706		X		
b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"		X		
c. INSPECTS ALL OTHER WELDS	X			
INSPECT ANCHORS CAST IN CONCRETE		X	ACI 318: 17.8.2	
INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS:				
a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	X		ACI 318: 17.8.2.4	
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED ABOVE		X	ACI 318: 17.8.2	
VERIFY USE OF REQUIRED DESIGN MIX		X	ACI 318: CH 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X		ASTM C172, ASTM C31, ACI 318: 26.5, 26.12	1908.10
INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X		ACI 318: 26.5	1908.6, 1908.7, 1908.8
VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		X	ACI 318: 26.5.3-26.5.5	1908.9
INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		X	ACI 318: 26.11.1-2(d)	

STRUCTURAL STEEL -- INSPECTION TASKS PRIOR TO BOLTING (AS A MINIMUM):

VERIFICATION AND INSPECTION TASK	QC	QA	AISC 360	RCSC SECTIONS
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	P	TABLE N5.6-1	2.1, 9.1
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O	TABLE N5.6-1	FIG. C-2.1, 9.1
CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM THE SHEAR PLANE)	O	O	TABLE N5.6-1	2.3.2, 2.7.2, 9.1
CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O	O	TABLE N5.6-1	4, 8
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O	O	TABLE N5.6-1	3.9.1, 9.3
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P	O	TABLE N5.6-1	7, 9.2
PROTECTION STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS, AND OTHER FASTENER COMPONENTS	O	O	TABLE N5.6-1	2.2, 8, 9.1

O=OBSERVE AND P=PERFORM

STRUCTURAL STEEL -- INSPECTION TASKS DURING TO BOLTING (AS A MINIMUM):

VERIFICATION AND INSPECTION TASK	QC	QA	AISC 360	RCSC SECTIONS
FASTENER ASSEMBLIES PLACED IN ALL HOLES AND WASHERS AND NUTS ARE POSITIONED AS REQUIRED	O	O	TABLE N5.6-2	7.1(1), 8.1, 9.1
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	O	O	TABLE N5.6-2	8.1, 9.1
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	O	O	TABLE N5.6-2	8.2, 9.2
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	O	O	TABLE N5.6-2	8.2, 9.2

O=OBSERVE AND P=PERFORM

STRUCTURAL STEEL -- INSPECTION TASKS AFTER BOLTING (AS A MINIMUM):

VERIFICATION AND INSPECTION TASK	QC	QA	AISC 360	RCSC SECTIONS
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	P	P	TABLE N5.6-3	

P=PERFORM

STRUCTURAL STEEL -- INSPECTIONS TASKS PRIOR TO WELDING (AS A MINIMUM):

VERIFICATION AND INSPECTION TASK	QC	QA	AISC 360	AWS D1.1 CLAUSES
WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	P	O	TABLE N5.4-1	N/A
WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE	P	P	TABLE N5.4-1	6.3
MANUFACTURER CERTIFICATES FOR WELDING CONSUMABLES AVAILABLE	P	P	TABLE N5.4-1	6.2
MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O	TABLE N5.4-1	6.2
WELDER IDENTIFICATION	O	O	TABLE N5.4-1	6.4 (WELDER QUALIFICATION)
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)				
a. JOINT PREPARATIONS	O	O	TABLE N5.4-1	6.5.2
b. DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)	O	O	TABLE N5.4-1	5.2.2
c. CLEANLINESS (CONDITION OF STEEL SURFACES)	O	O	TABLE N5.4-1	5.14
d. TACKING (TACK WELD QUALITY AND LOCATION)	O	O	TABLE N5.4-1	5.17
e. BACKING TYPE AND FIT (IF APPLICABLE)	O	O	TABLE N5.4-1	5.9, 5.21.1.1
FIT-UP OF CJP GROOVE WELDS OF HSS T-, Y- & K- JOINTS WITHOUT BACKING (INCLUDING JOINT GEOMETRY)				
a. JOINT PREPARATIONS	P	O	TABLE N5.4-1	9.11.2
b. DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)	P	O	TABLE N5.4-1	9.11.2
c. CLEANLINESS (CONDITION OF STEEL SURFACES)	P	O	TABLE N5.4-1	9.11.2
d. TACKING (TACK WELD QUALITY AND LOCATION)	P	O	TABLE N5.4-1	9.11.2
CONFIGURATION AND FINISH OF ACCESS HOLES	O	O	TABLE N5.4-1	6.5.2, 5.16 (& SEE AISC 360 SECT. J1.6)
FIT-UP OF FILLET WELDS				
a. DIMENSIONS (ALIGNMENT, GAPS AT ROOT)	P/O ¹	O	TABLE N5.4-1	5.21.1
f. CLEANLINESS (CONDITION OF STEEL SURFACES)	P/O ¹	O	TABLE N5.4-1	5.14
g. TACKING (TACK WELD QUALITY AND LOCATION)	P/O ¹	O	TABLE N5.4-1	5.17
h. CHECK WELDING EQUIPMENT	O	O	TABLE N5.4-1	6.2, 5.10

O=OBSERVE AND P=PERFORM

STRUCTURAL STEEL -- INSPECTION TASKS DURING WELDING (AS A MINIMUM):

VERIFICATION AND INSPECTION TASK	QC	QA	AISC 360	AWS D1.1 CLAUSES
USE OF QUALIFIED WELDERS	O	O	TABLE C-N5.4-2	6.4
CONTROL AND HANDLING OF WELDING CONSUMABLES	O	O	TABLE N5.4-2	6.2
a. PACKAGING	O	O	TABLE N5.4-2	5.3.1
b. EXPOSURE CONTROL	O	O	TABLE N5.4-2	5.3.2 (FOR SMAW), 5.3.3 (FOR SAW)
NO WELDING OVER CRACKED TACK WELDS	O	O	TABLE N5.4-2	5.17
ENVIRONMENTAL CONDITIONS				
a. WIND SPEED WITHIN LIMITS	O	O	TABLE N5.4-2	5.11.1
b. PRECIPITATION AND TEMPERATURE	O	O	TABLE N5.4-2	5.11.2
WPS FOLLOWED	O	O	TABLE 5.4-2	6.3.3, 6.5.2, 5.5, 5.20
a. SETTINGS ON WELDING EQUIPMENT	O	O	TABLE N5.4-2	
b. TRAVEL SPEED	O	O	TABLE N5.4-2	
c. SELECTED WELDING MATERIALS	O	O	TABLE N5.4-2	
d. SHIELDING GAS TYPE/FLOW RATE	O	O	TABLE N5.4-2	
e. PREHEAT APPLIED	O	O	TABLE N5.4-2	5.6, 5.7
f. INTERPASS TEMPERATURE MAINTAINED (MIN/MAX)	O	O	TABLE N5.4-2	
g. PROPER POSITION (F, V, H, OH)	O	O	TABLE N5.4-2	
WELDING TECHNIQUES	O	O	TABLE 5.4-2	6.5.2, 6.5.3, 5.23
a. INTERPASS AND FINAL CLEANING	O	O	TABLE N5.4-2	5.29.1
b. EACH PASS WITHIN PROFILE LIMITATIONS	O	O	TABLE N5.4-2	
c. EACH PASS MEETS QUALITY REQUIREMENTS	O	O	TABLE N5.4-2	
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	P	P	TABLE N5.4-2	

O=OBSERVE AND P=PERFORM

STRUCTURAL STEEL -- INSPECTION TASKS AFTER WELDING (AS A MINIMUM):

C	VERIFICATION AND INSPECTION TASK		QC	QA	AISC 360	AWS D1.1 CLAUSES		---	----	----	--------------	---		WELDS CLEANED	O	O	TABLE N5.4-3	5.29.1		SIZE, LENGTH, AND LOCATION OF WELDS	P	P	TABLE N5.4-3	6.5.1		WELDS MEET VISUAL ACCEPTANCE CRITERIA						a. CRACK PROHIBITION	P	P	TABLE N5.4-3	TABLE 6.1(1)		b. WELDBASE-METAL FUSION	P	P	TABLE N5.4-3	TABLE 6.1(2)		c. CRATER CROSS-SECTION	P	P	TABLE N5.4-3	TABLE 6.1(3)		d. WELD PROFILES	P	P	TABLE N5.4-3	TABLE 6.1(4), 5.24		e. WELD SIZE	P	P	TABLE N5.4-3	TABLE 6.1(6)		f. UNDERCUT	P	P	TABLE N5.4-3	TABLE 6.1(7)		g. POROSITY	P	P	TABLE N5.4-3	TABLE 6.1(8)		ARC STRIKES	P	P	TABLE N5.4-3	5.28		k-AREA ¹	P	P	TABLE N5.4-3			WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES ²	P	P	TABLE N5.4-3	5.16, 6.5.2 (& SEE AISC 360 SECT. J1.6)		BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P	P	TABLE N5.4-3	5.9, 5.30		REPAIR ACTIVITIES	P	P	TABLE N5.4-3	6.5.3, 5.25		DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P	P	TABLE N5.4-3	6.5.4, 6.5.5		NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR	O	O	TABLE N5.4-3		O=OBSERVE AND P=PERFORM 1 WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE k-AREA, VISUALLY INSPECT THE WEB k-AREA FOR CRACKS WITHIN 3" OF THE WELD. THE VISUAL INSPECTION SHALL BE PERFORMED NO SOONER THAN 48 HOURS FOLLOWING COMPLETION OF THE WELDING. 2 AFTER ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES ARE WELDED, VISUALLY INSPECT THE WELD ACCESS HOLE FOR CRACKS. STRUCTURAL DECKING: VERIFICATION AND INSPECTION TASK		CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE		----------------------------------	------------	----------	------------------------		1. DECK PLACEMENT AND ATTACHMENT	X	X		SOILS:	VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC		---	------------	----------		VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY		X		VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X		PERFORM CLASSIFICATIONS AND TESTING OF COMPACTED FILL MATERIAL	X			VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL				PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X																									
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REF. SCALE IN INCHES

PROJECT NUMBER: 00

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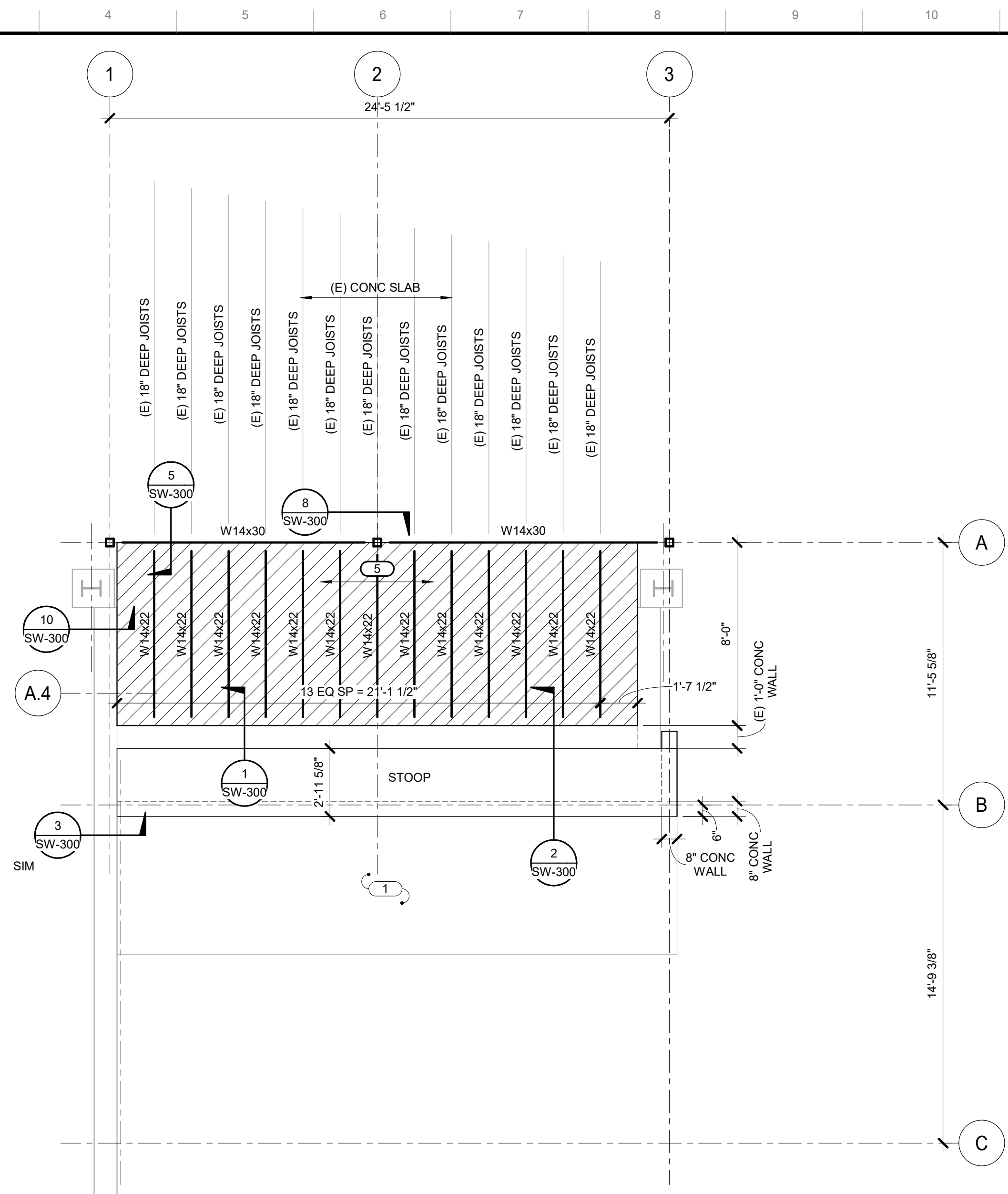
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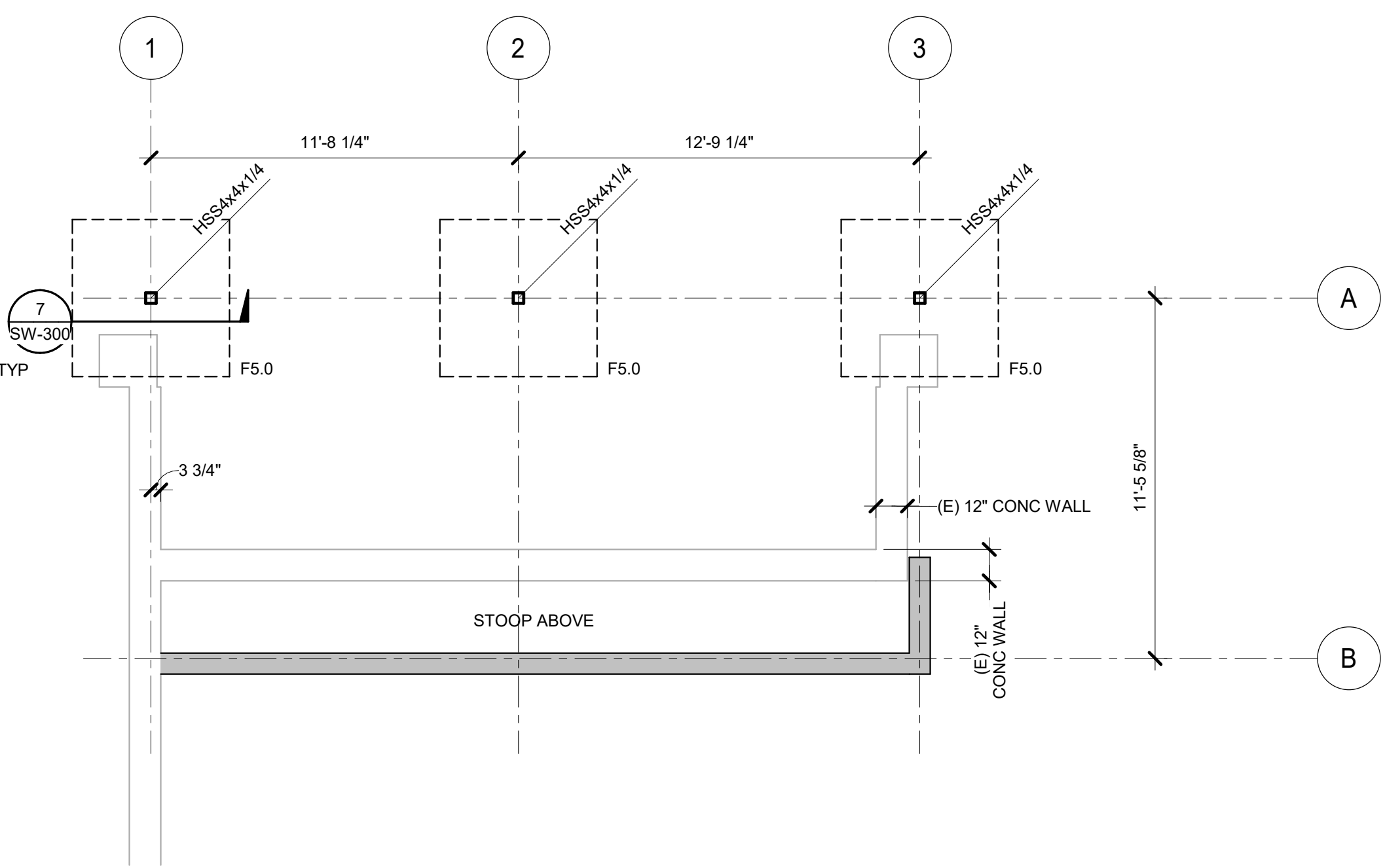
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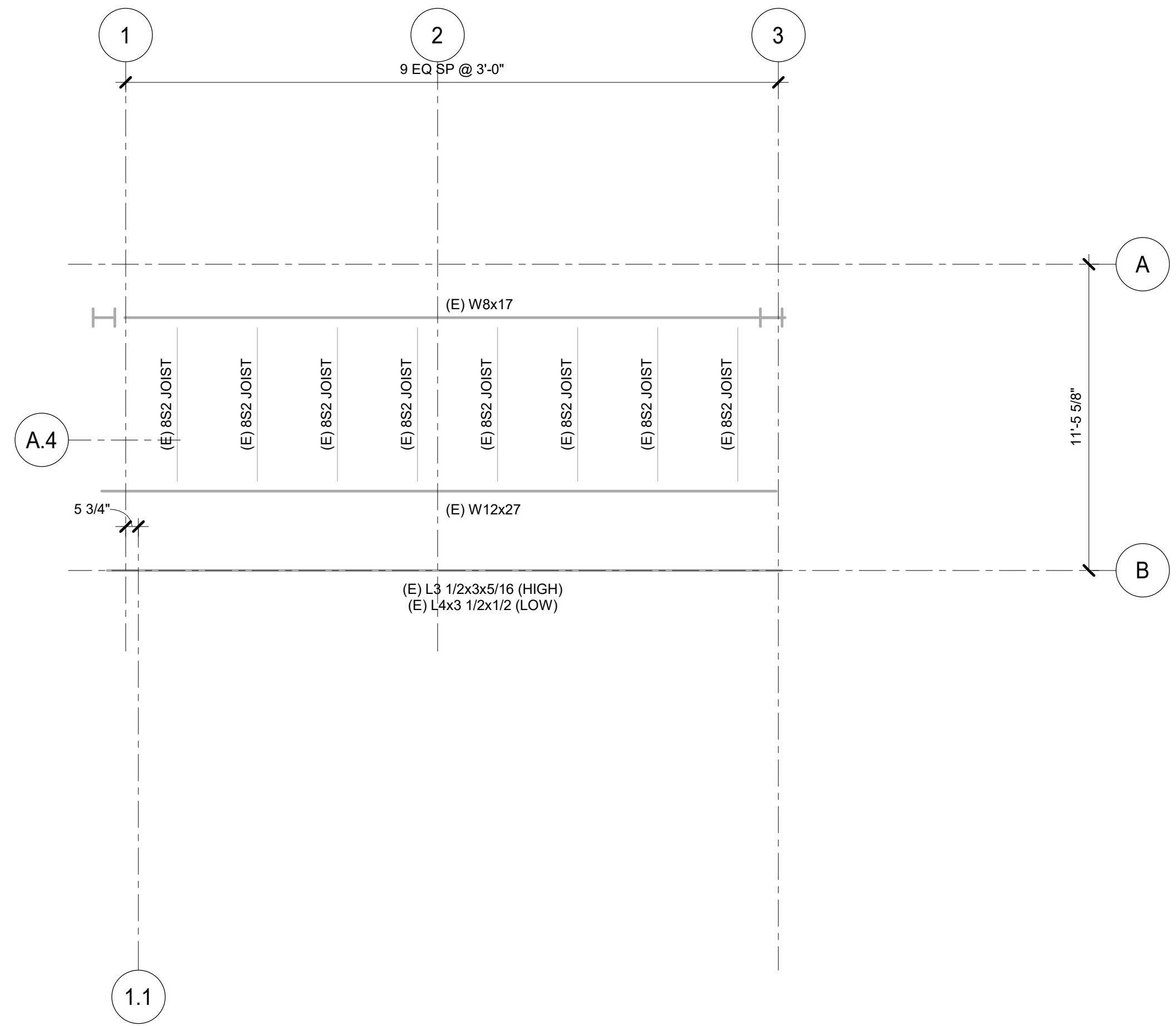
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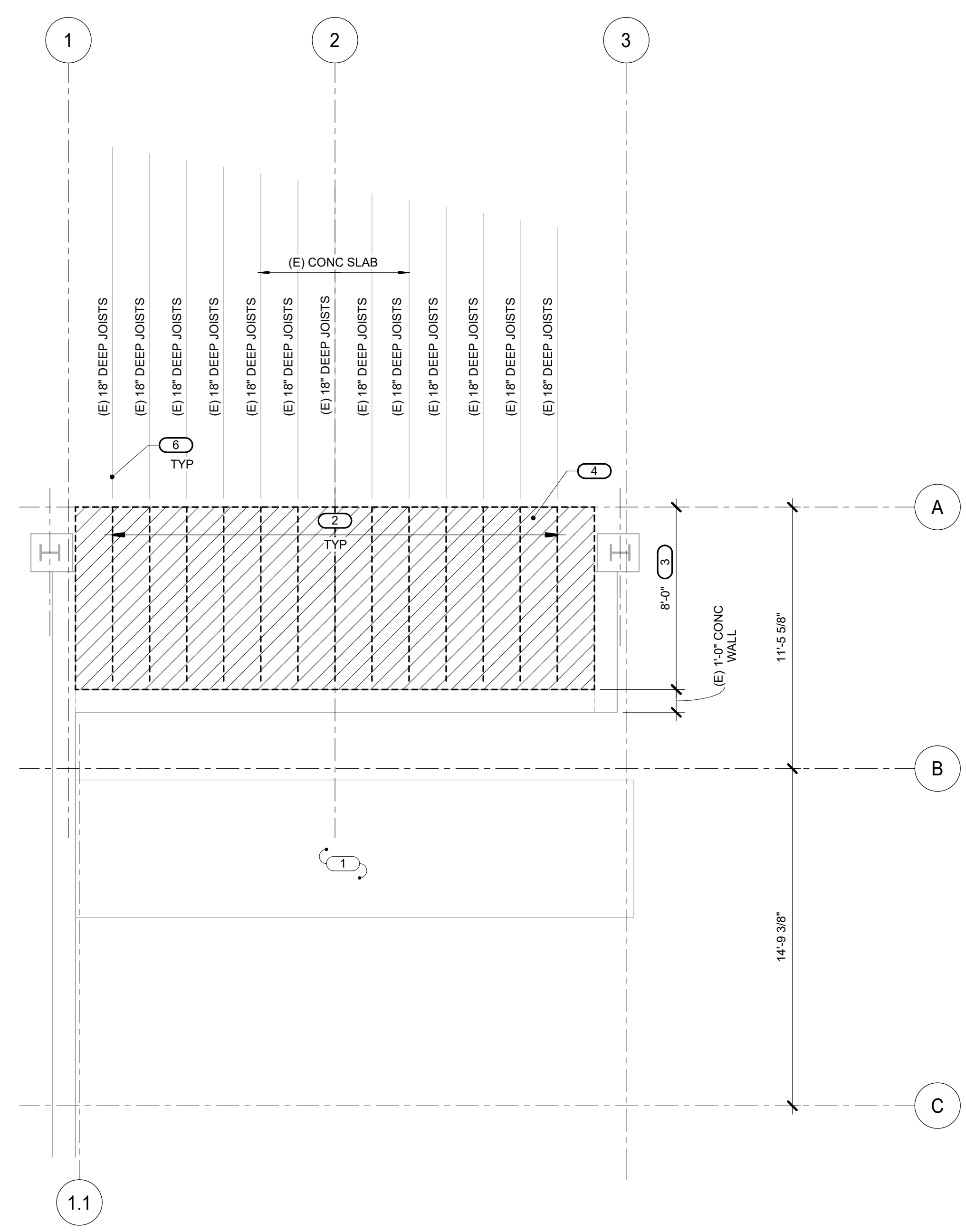
2 FIRST FLOOR FRAMING PLAN
1/4" = 1'-0"



1 FOUNDATION PLAN
1/4" = 1'-0"



3 FRAMING PLAN
1/4" = 1'-0"



4 FIRST FLOOR DEMO PLAN
1/4" = 1'-0"

- NOTES:**
- CONTRACTOR TO VERIFY EXISTING FIELD CONDITION PRIOR TO NEW CONSTRUCTION AND COORDINATE WITH STEEL SUPPLIER.
 - SHORE AND RELOCATE EXISTING MEP UTILITIES TO FACILITATE NEW CONSTRUCTION AND REPLACE AFTER NEW CONSTRUCTION.
 - ALL NEW STRUCTURAL STEEL FRAMING TO BE HOT DIPPED GALVANIZED.
 - SEE 8/SW-300 FOR HSS COLUMN BASE PLATES.
 - ALTERNATE 3 TO ONLY INCLUDE SHORING AS SHOWN IN 4/SW-100.
 - ALTERNATE 4 TO INCLUDE SHORING AND FULL REPLACEMENT AS SHOWN ON 1 THROUGH 4/SW-100.
- KEYNOTES:**
- (E) CONCRETE SLAB ON GRADE.
 - DEMO END OF EXISTING JOIST. SEE 9/SW-300.
 - ANTICIPATED JOIST DEMO LENGTH. CONTRACTOR TO VERIFY EXISTING CONDITIONS IN FIELD. NOTIFY EOR IF (E) JOIST CORROSION EXTENDS PAST JOIST DEMO.
 - DEMO EXISTING SLAB TO FACILITATE NEW CONSTRUCTION.
 - 1.5C-32 (20 GA) NON-COMPOSITE STEEL DECK WITH 5" CONCRETE SLAB (TOTAL THICKNESS) WITH 8x6-W2 1xW2 1 WWR TOP OF SLAB EL (0'-0"). SEE 4/SW-300 FOR CONNECTION TO EXISTING SLAB.
 - PRIOR TO DEMO, PROVIDE TEMPORARY SHORING OF (E) JOIST BRACING TO REMAIN IN PLACE UNTIL JOIST MODIFICATIONS ARE COMPLETE.

LEGAT ARCHITECTS
Design with a Difference

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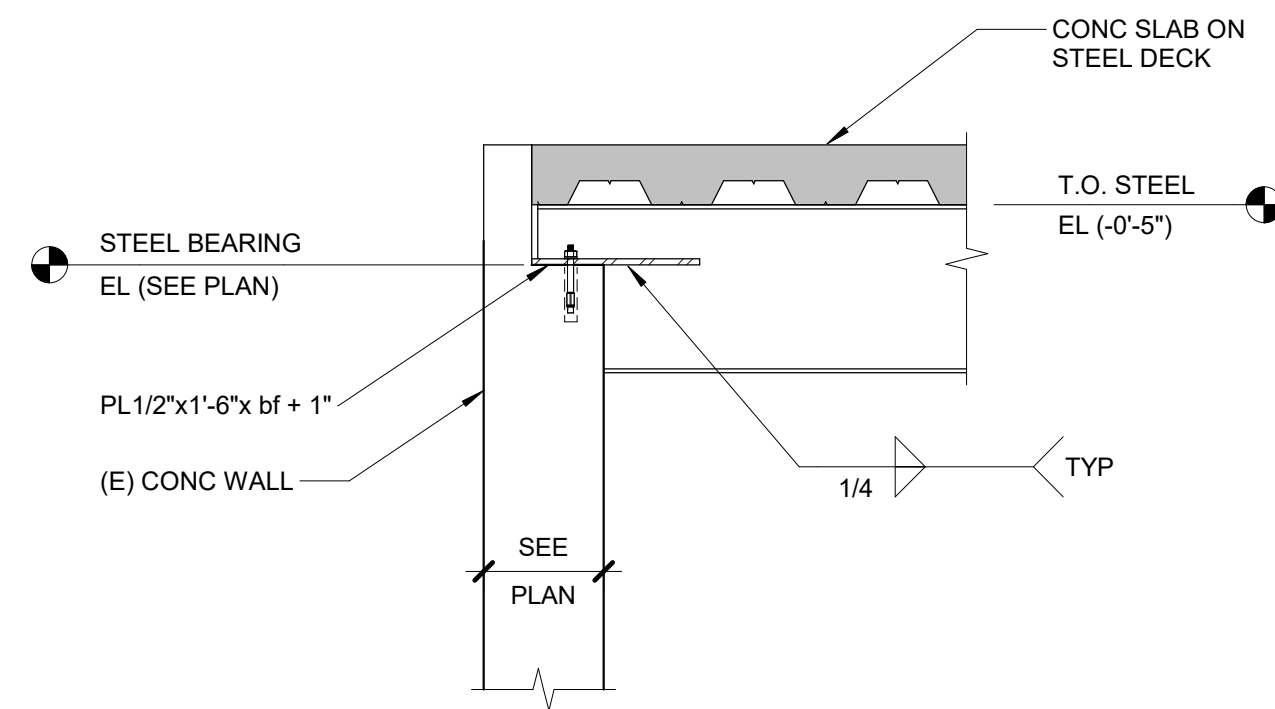
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DATE OF ISSUE 02.07.2025
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REVIEWED BY TODD BAR

FOUNDATION AND FRAMING PLAN

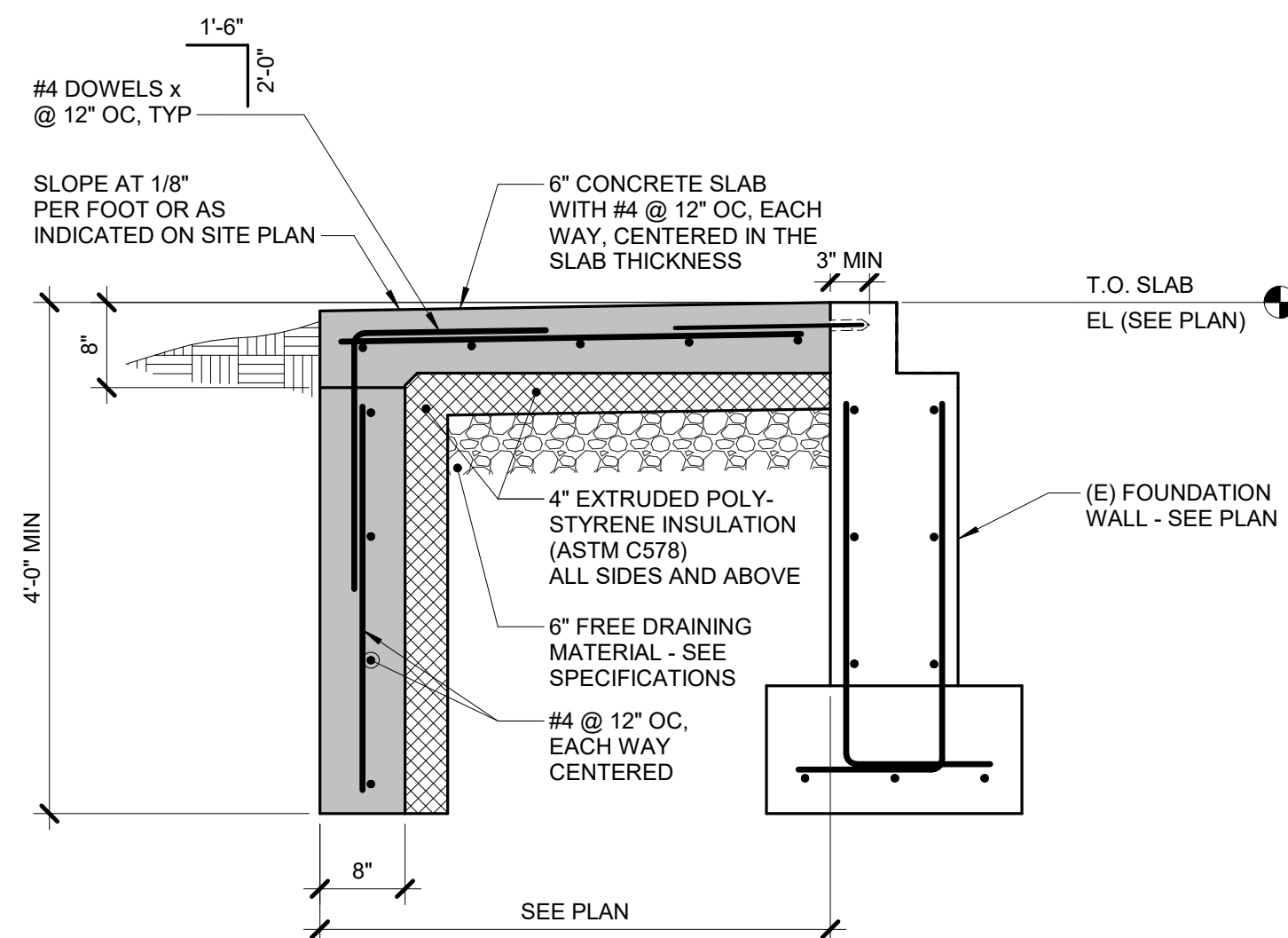
SW-100

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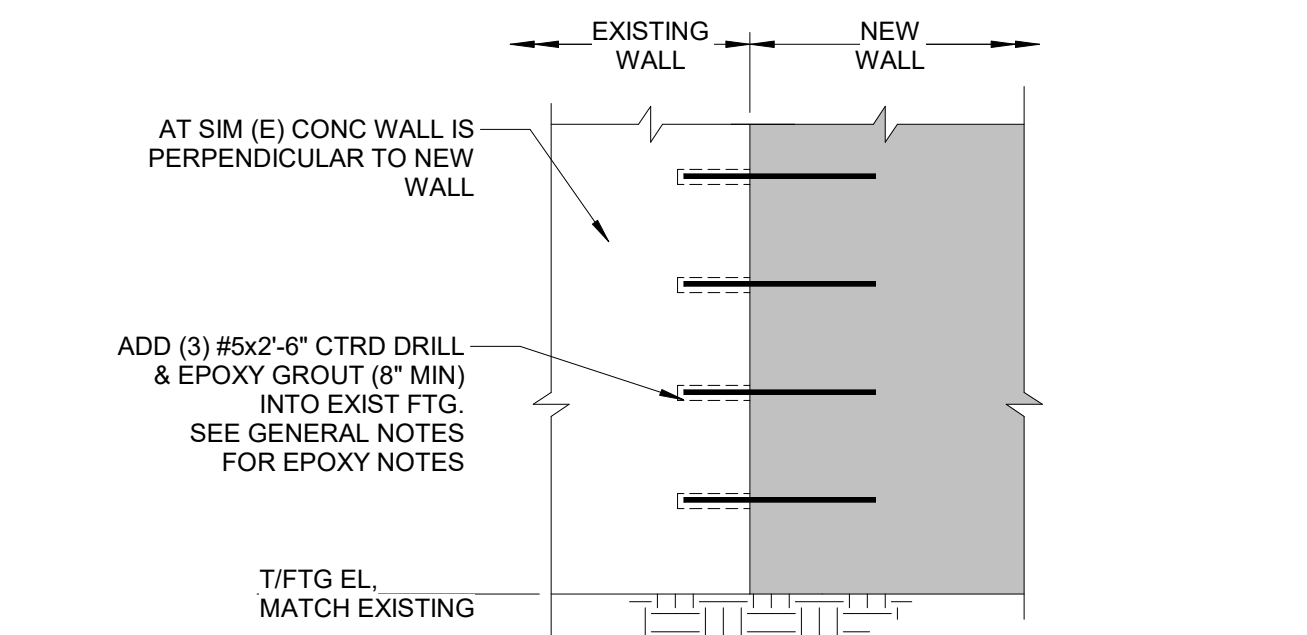
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FEET SCALE IN INCHES PROJECT 24006955.03



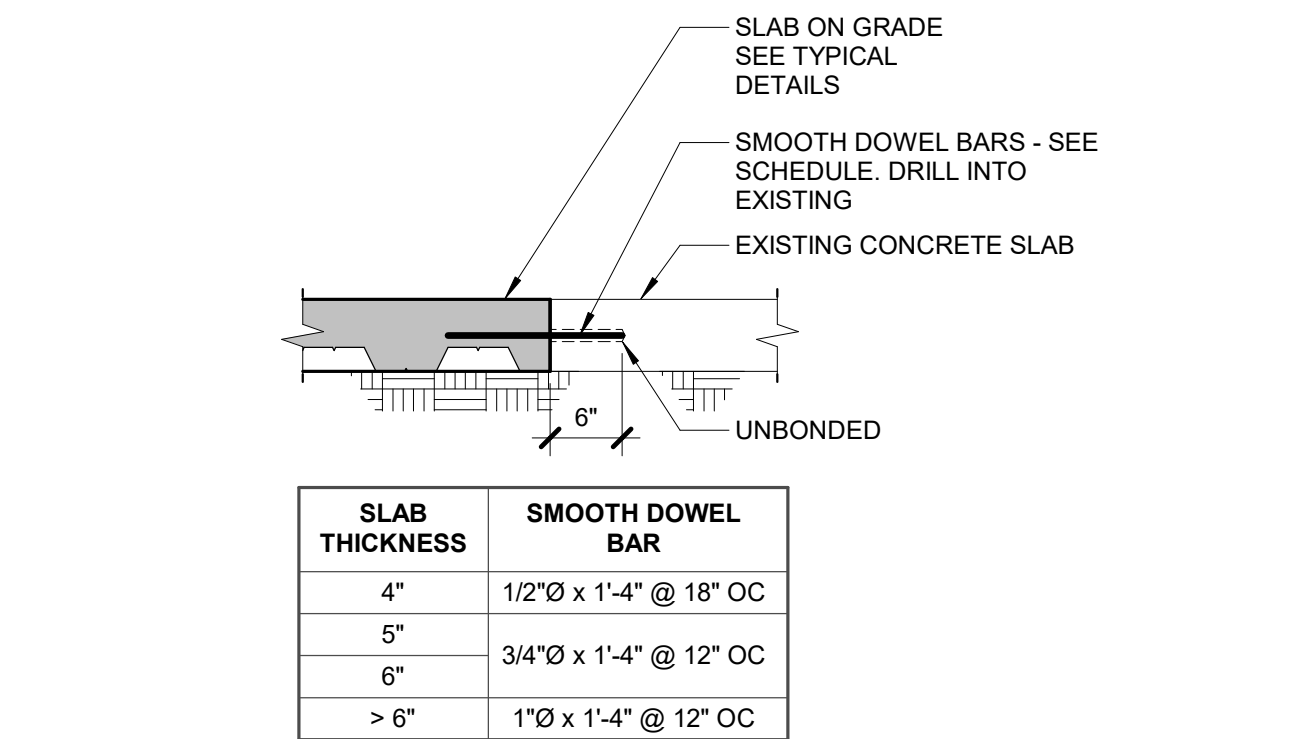
1 BEAM BEARING ON CONC WALL
3/4" = 1'-0"



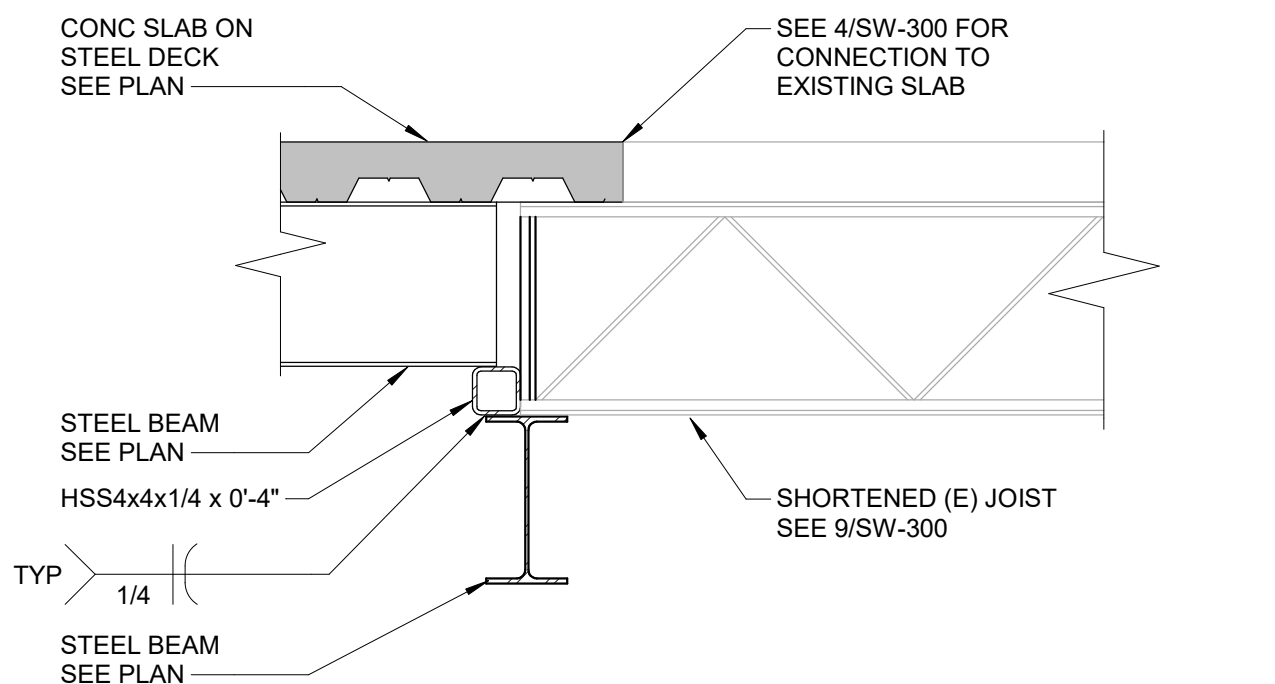
2 TYPICAL STOOP DETAIL
3/4" = 1'-0"



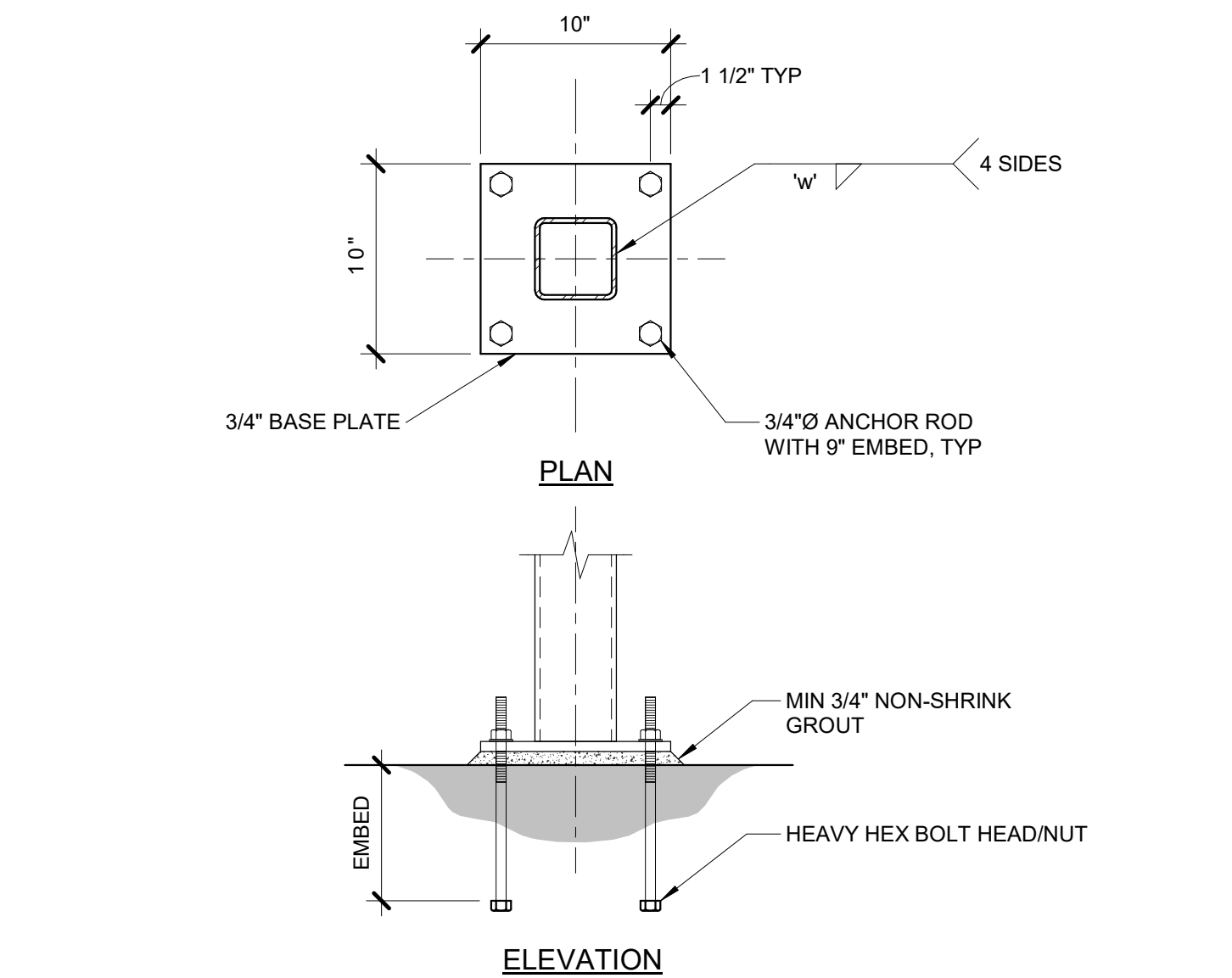
3 NEW WALL TO EXISTING WALL
3/4" = 1'-0"



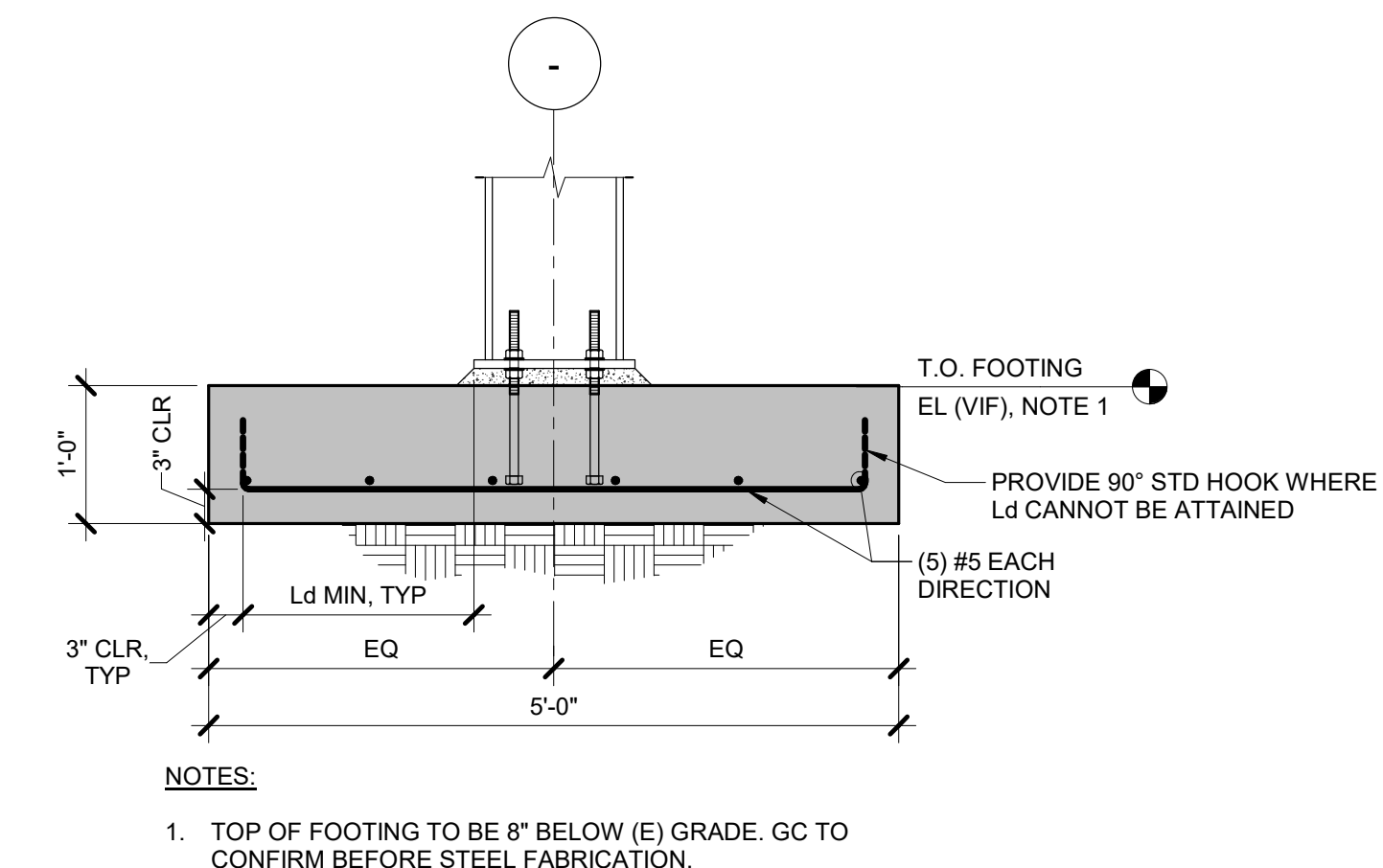
4 NEW TO EXISTING SLAB DETAIL
3/4" = 1'-0"



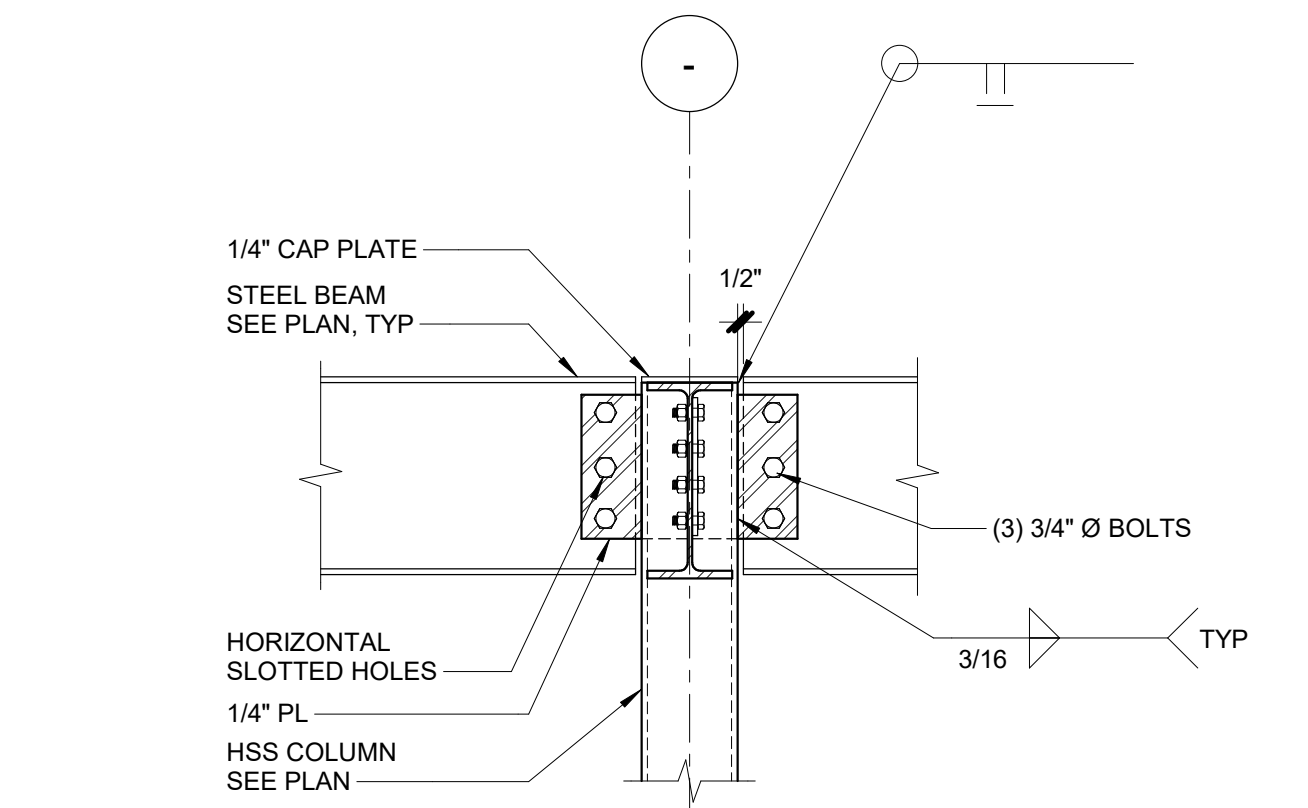
5 JOIST MODIFICATION DETAIL
3/4" = 1'-0"



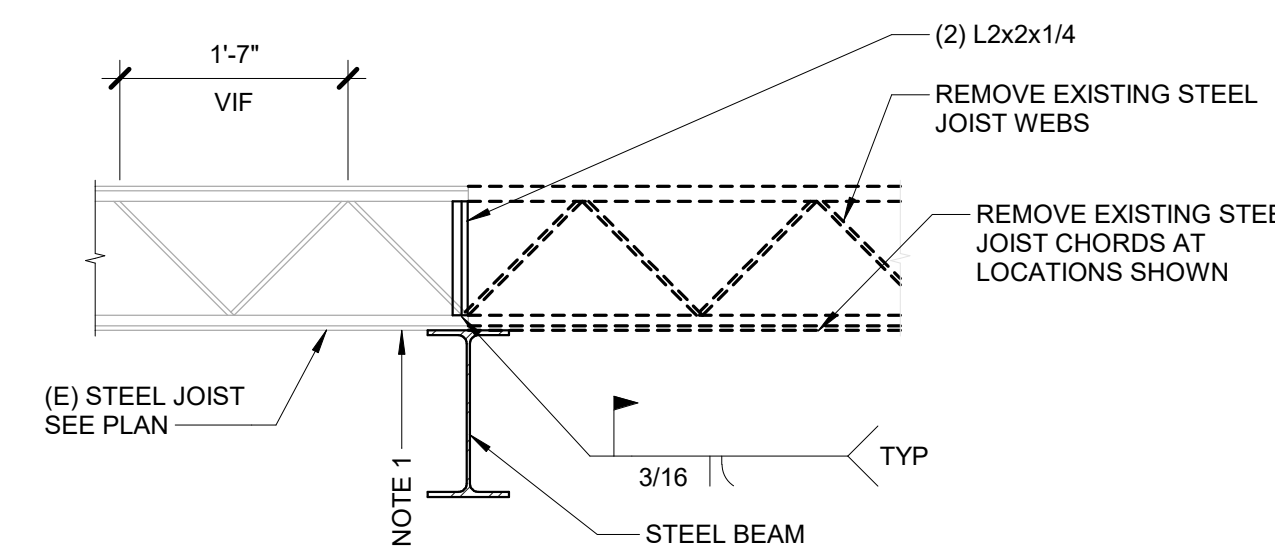
6 HSS COLUMN BASE PLATE
1" = 1'-0"



7 COLUMN FOOTING DETAIL
3/4" = 1'-0"

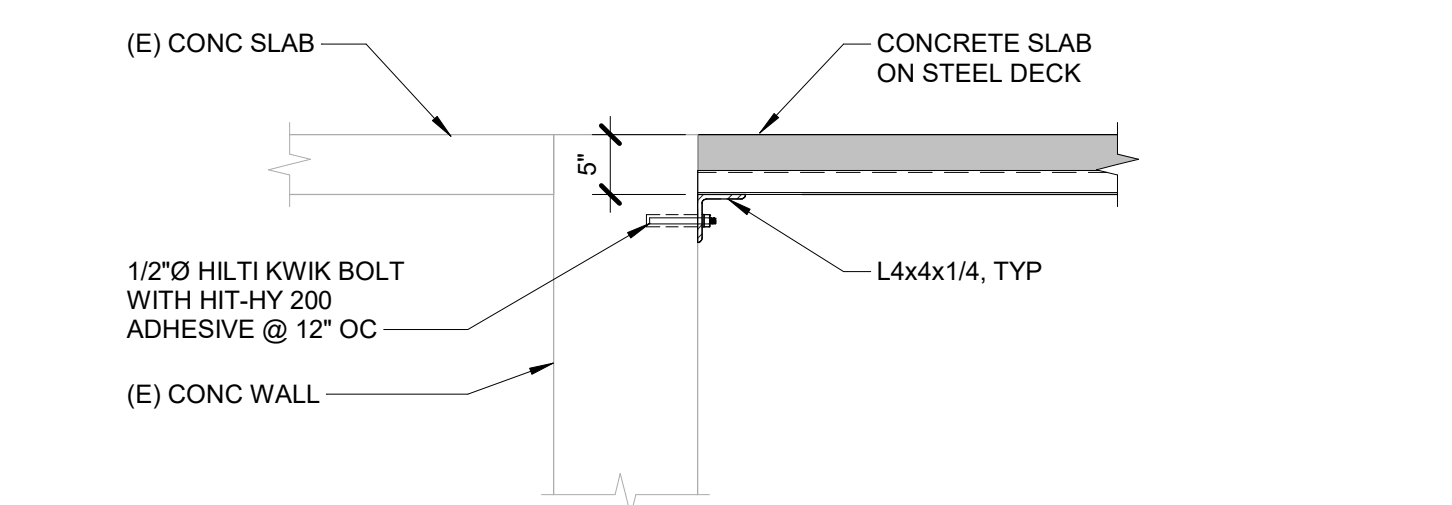


8 TWO-SIDED CONNECTION AT HSS COLUMN
3/4" = 1'-0"
S_5-613

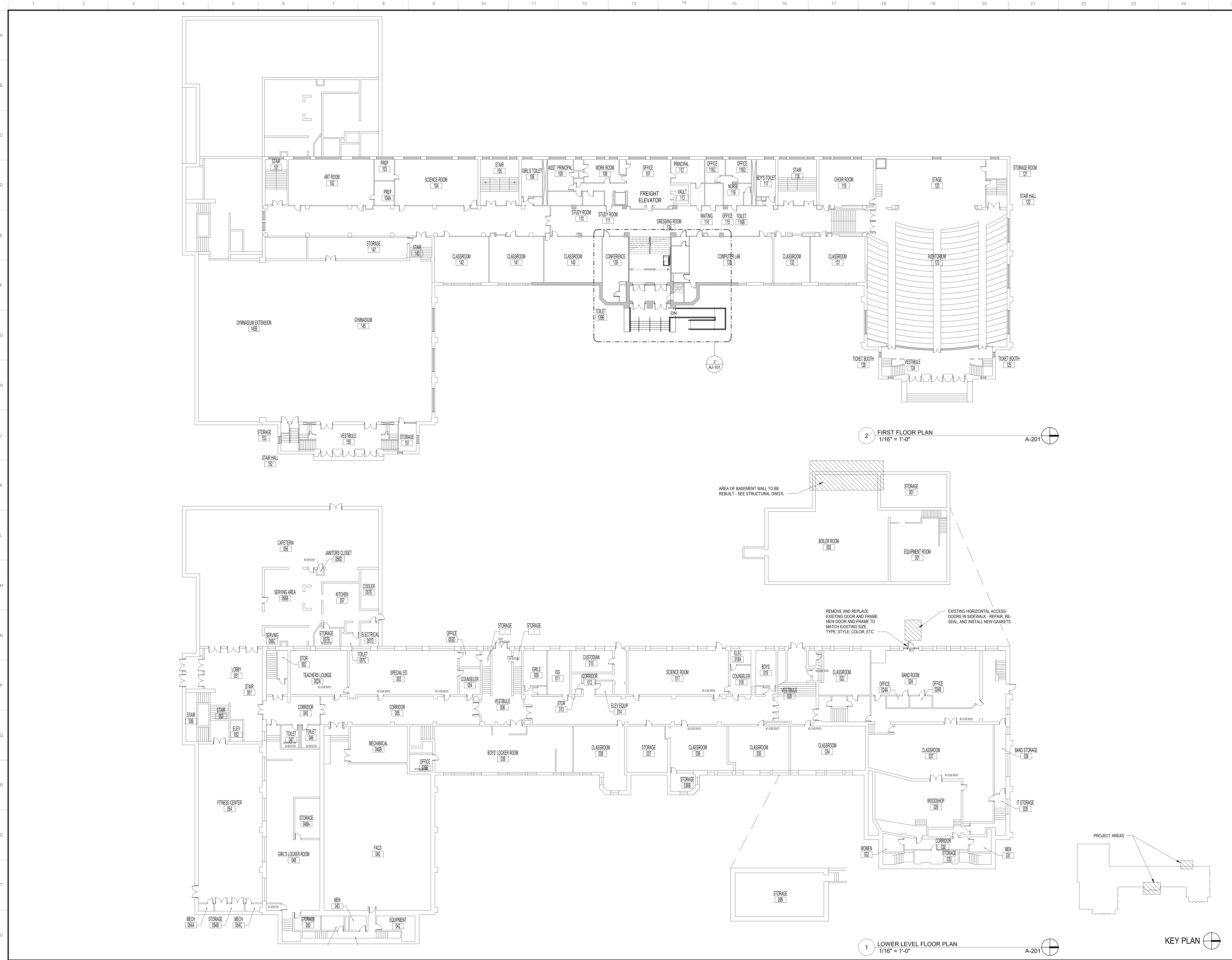


NOTES:
1. SHORE STEEL JOIST BEFORE CUTTING CHORDS AND WEBS.
SHORING LOAD EACH JOIST
1.0 DL = 500 LBS
1.0 LL = 860 LBS (20 PSF CONSTRUCTION LL)

9 SHORTENED EXISTING JOIST
3/4" = 1'-0"



10 SLAB TO (E) WALL
3/4" = 1'-0"



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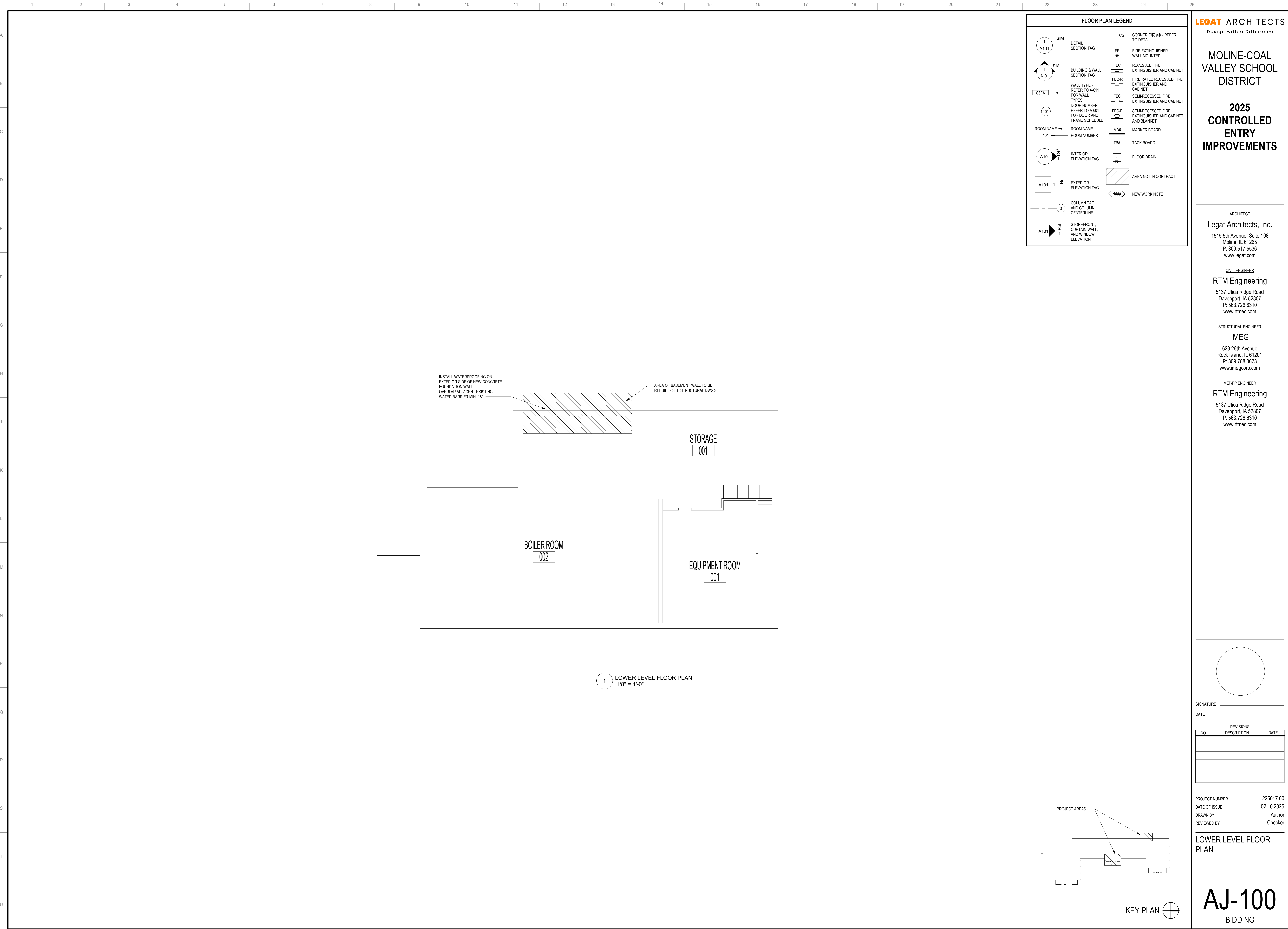
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OVERALL REFERENCE
PLAN

AJ-011
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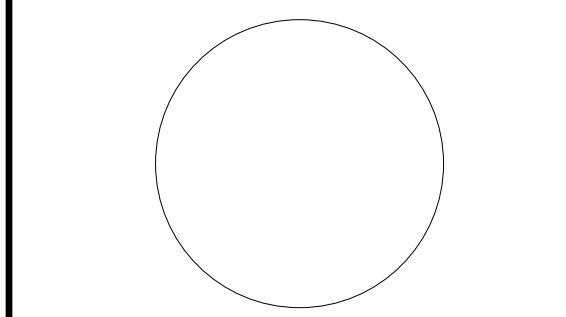
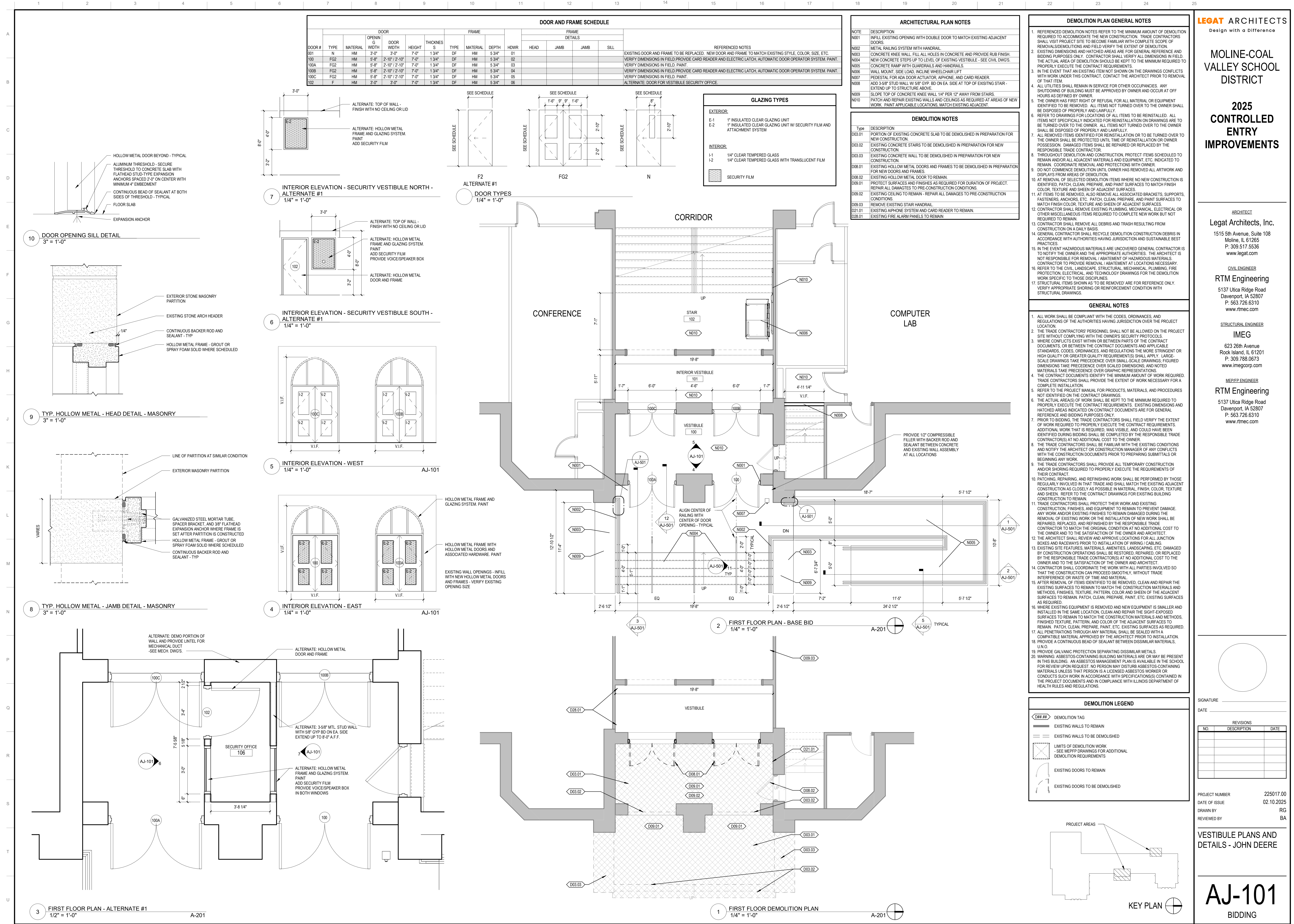
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LOWER LEVEL FLOOR
PLAN

AJ-100
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VESTIBULE PLANS AND
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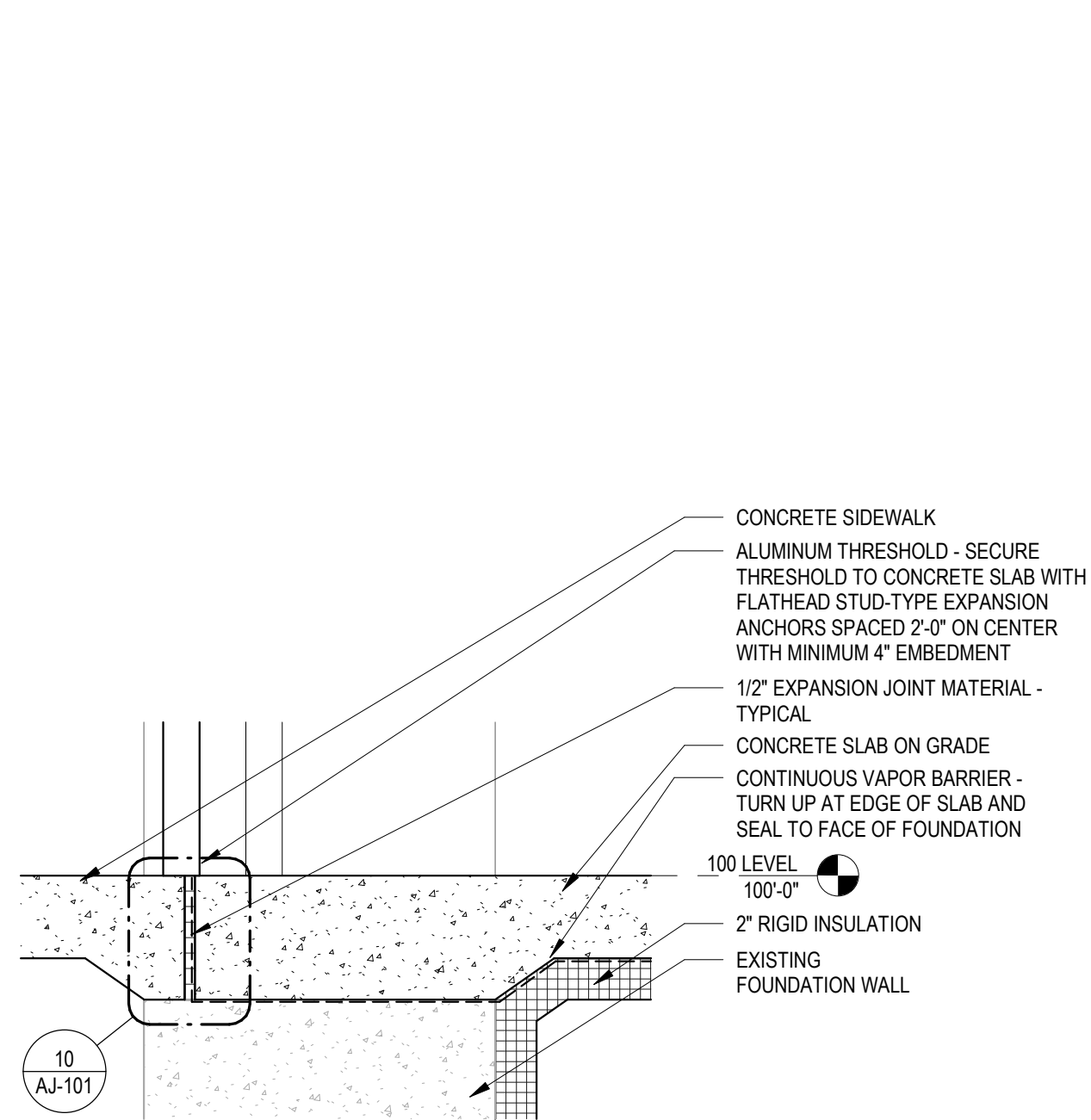
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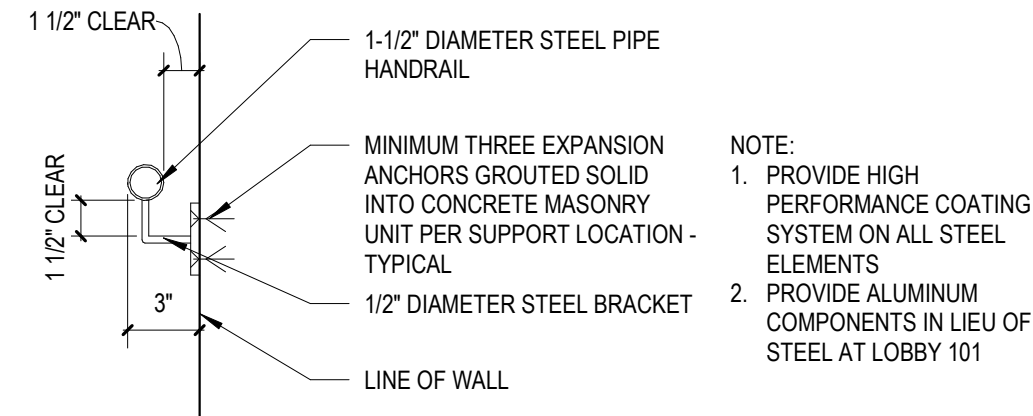
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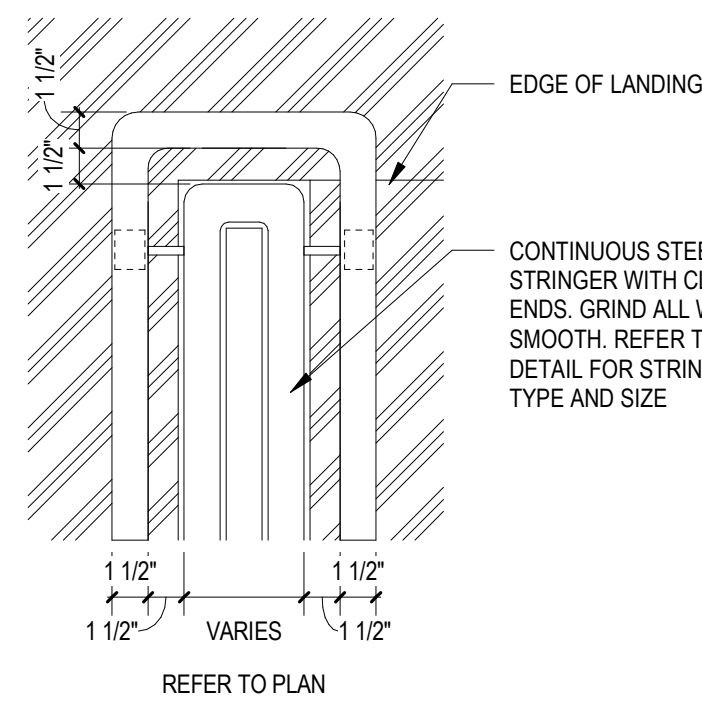
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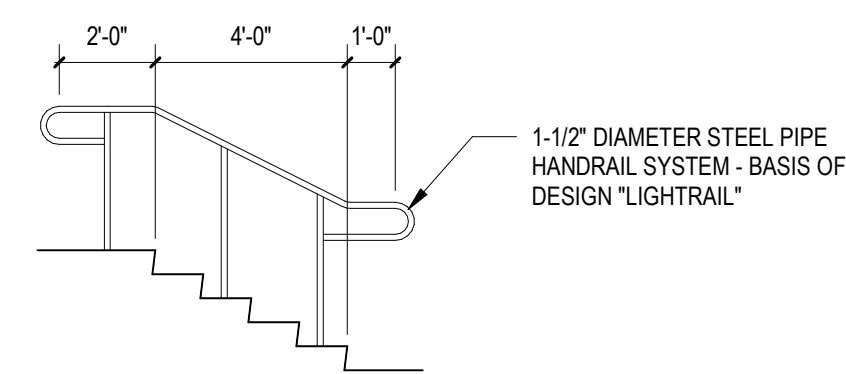
12 SECTION DETAIL
1 1/2" = 1'-0" AJ-101



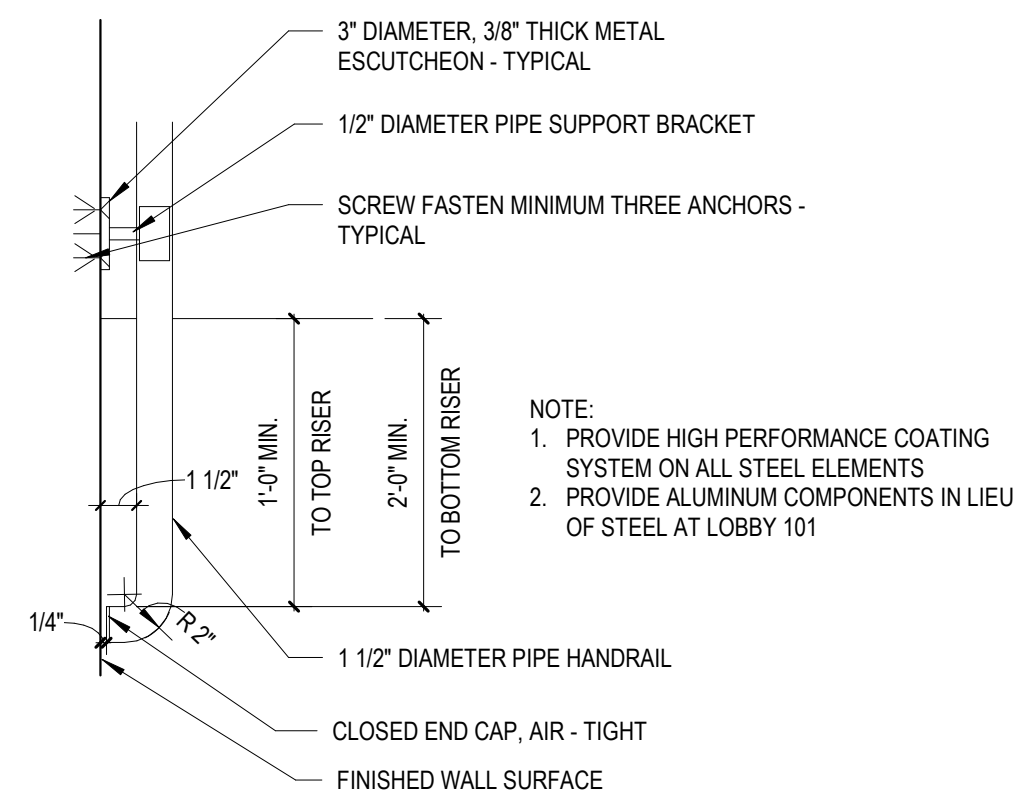
9 HANDRAIL SECTION DETAIL
1 1/2" = 1'-0"



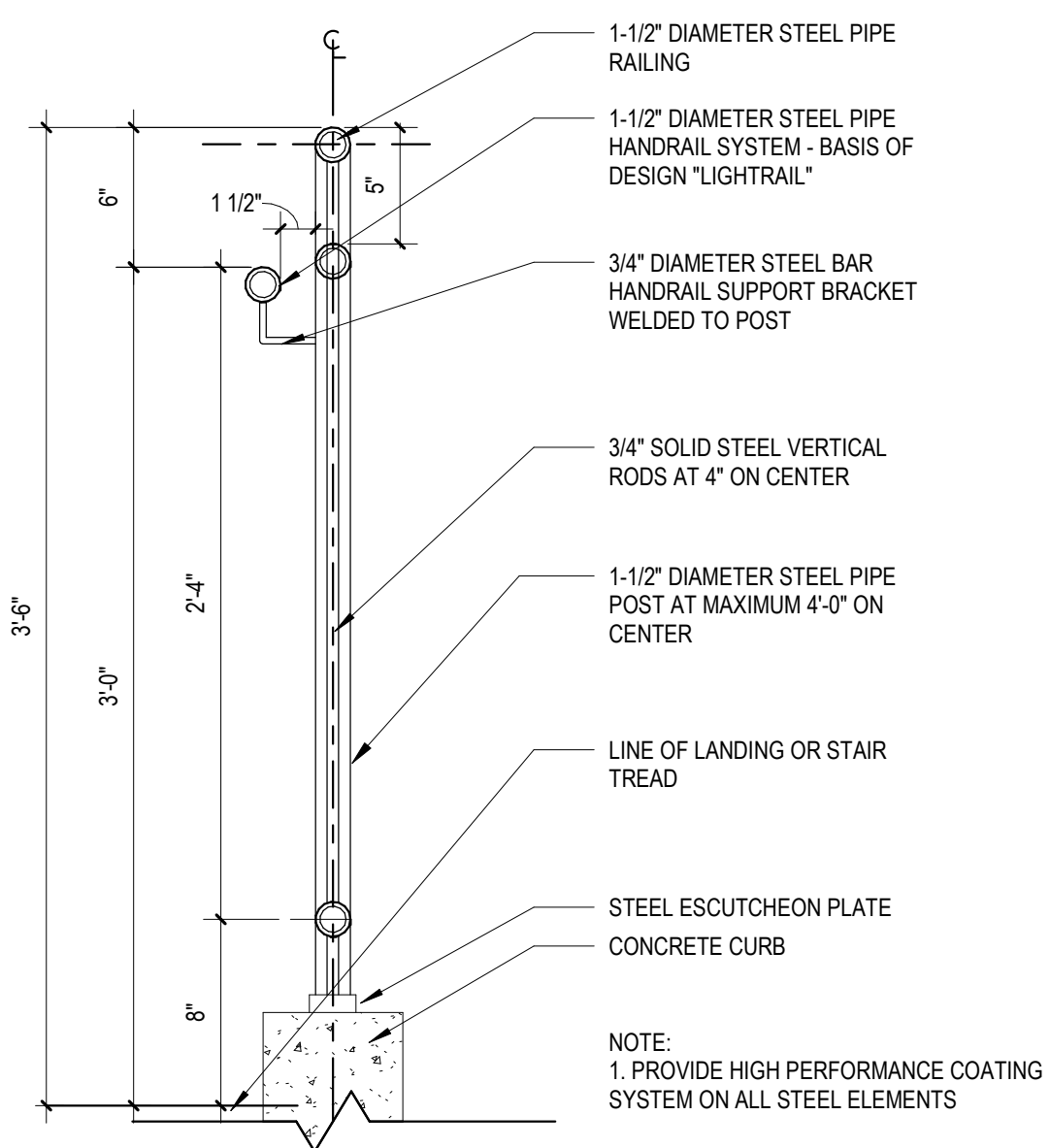
8 HANDRAIL WRAP PLAN DETAIL
1 1/2" = 1'-0"



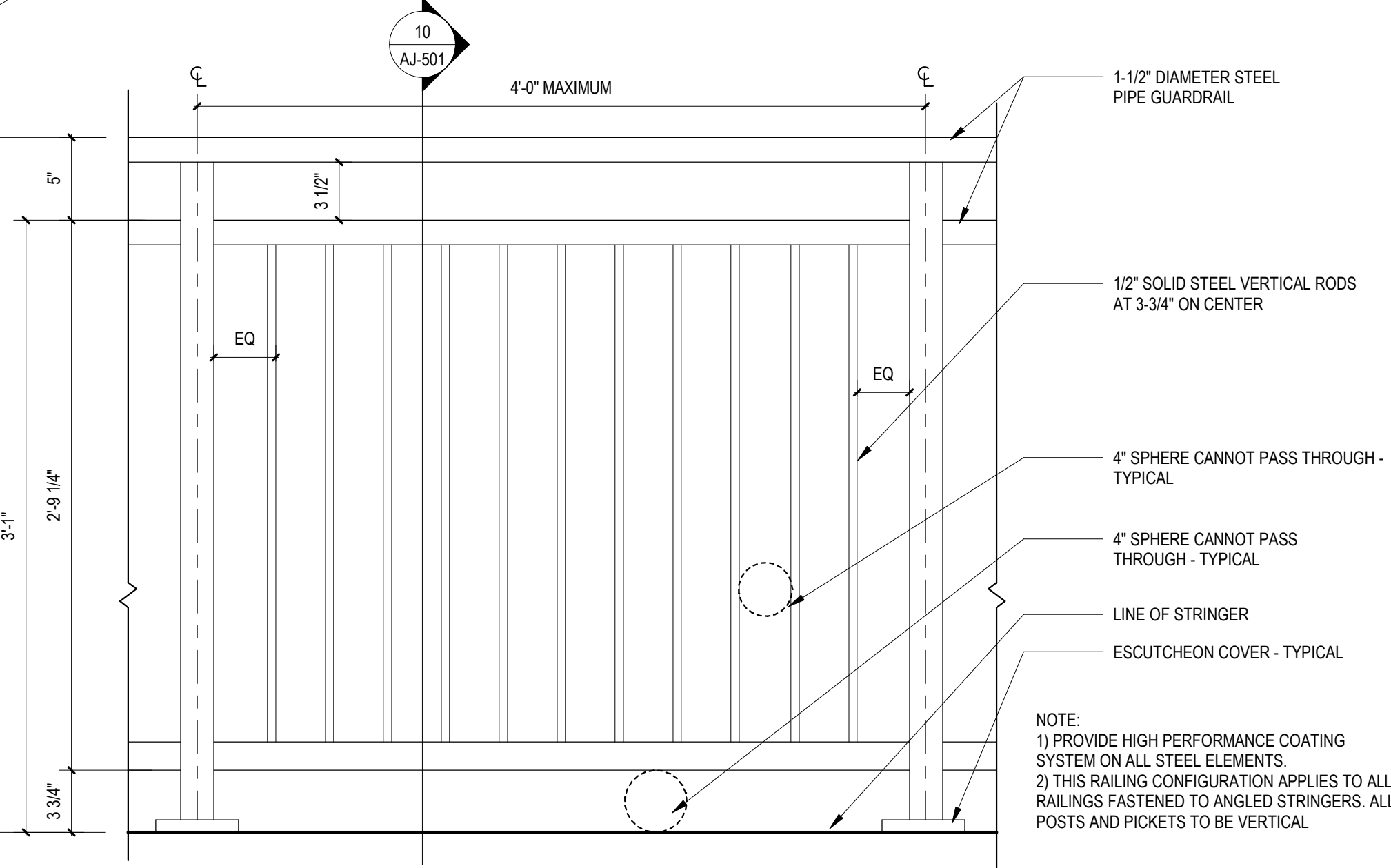
11 TYPICAL HANDRAIL ELEVATION
1/4" = 1'-0" AJ-101



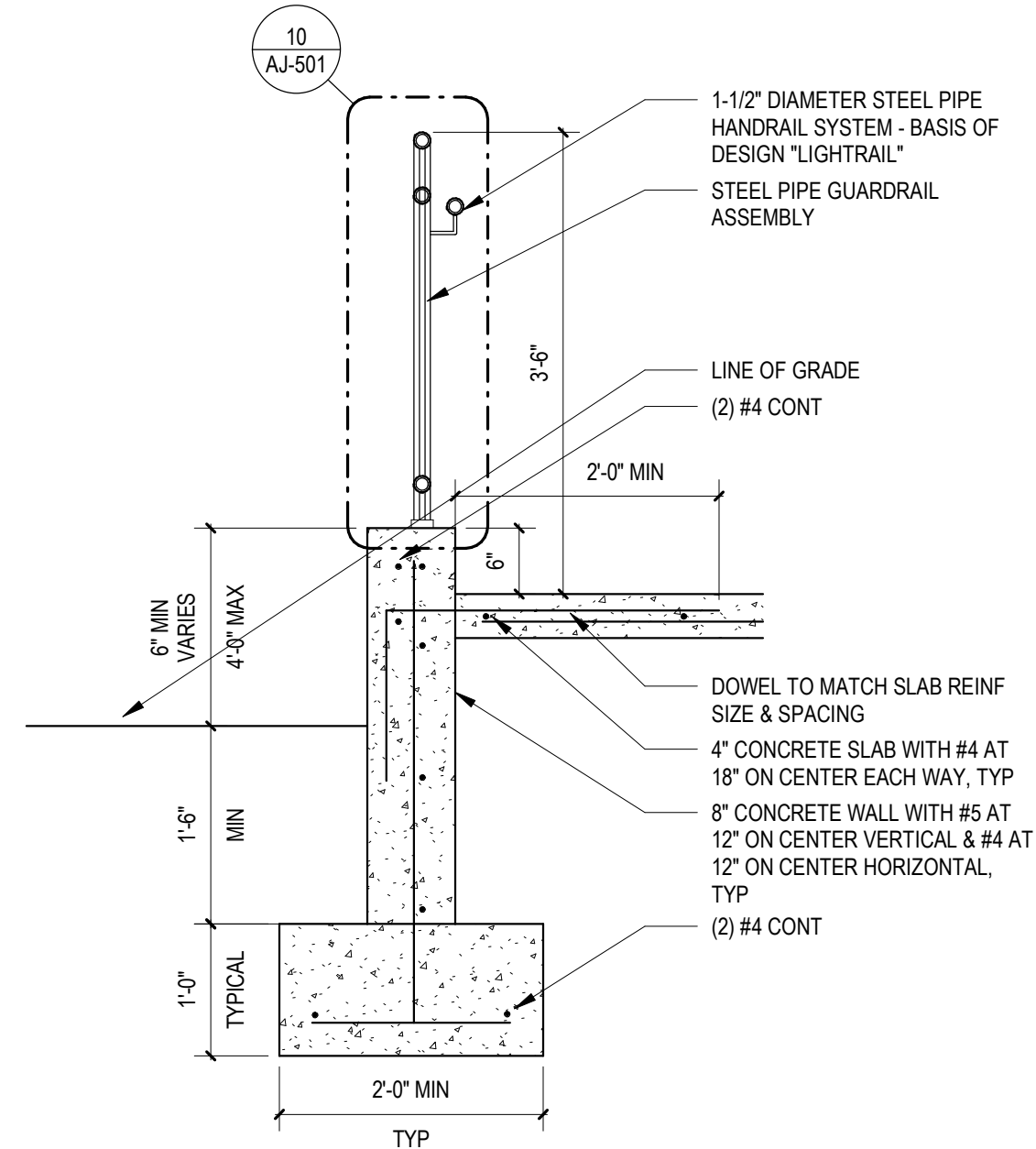
7 HANDRAIL END CONDITION
1 1/2" = 1'-0" AJ-101



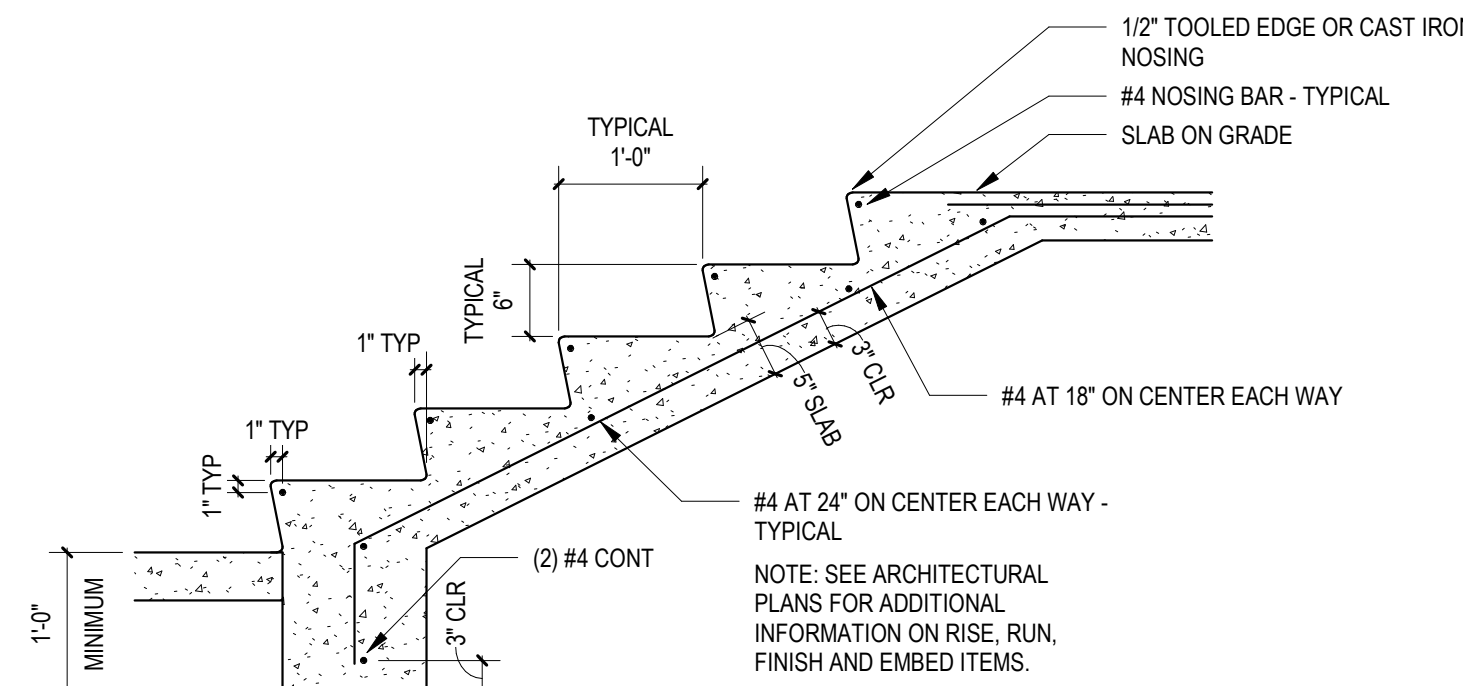
10 STAIR STRINGER DETAIL
1 1/2" = 1'-0" AJ-501



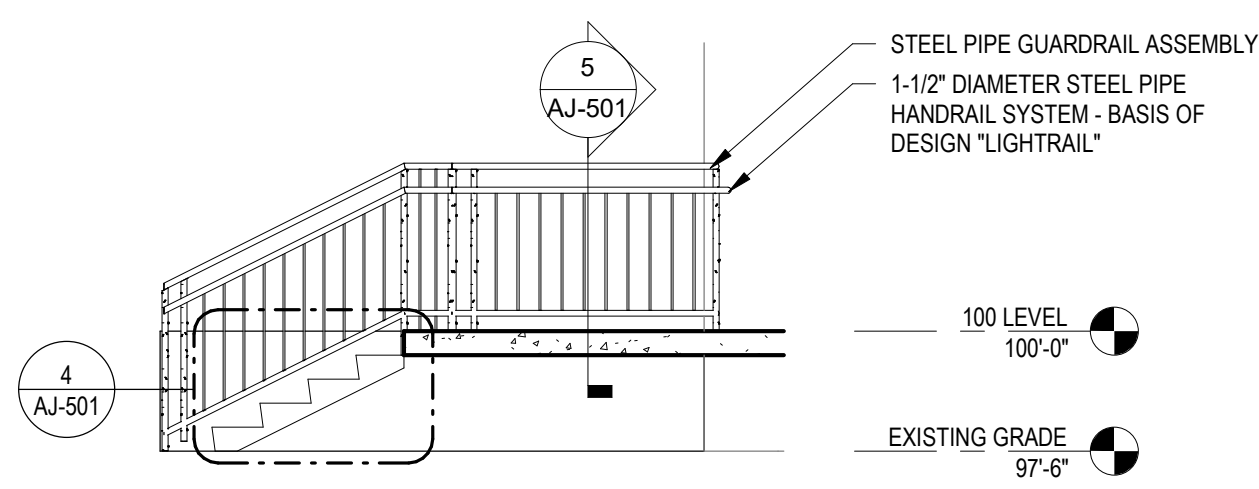
6 TYPICAL RAILING ELEVATION
1 1/2" = 1'-0"



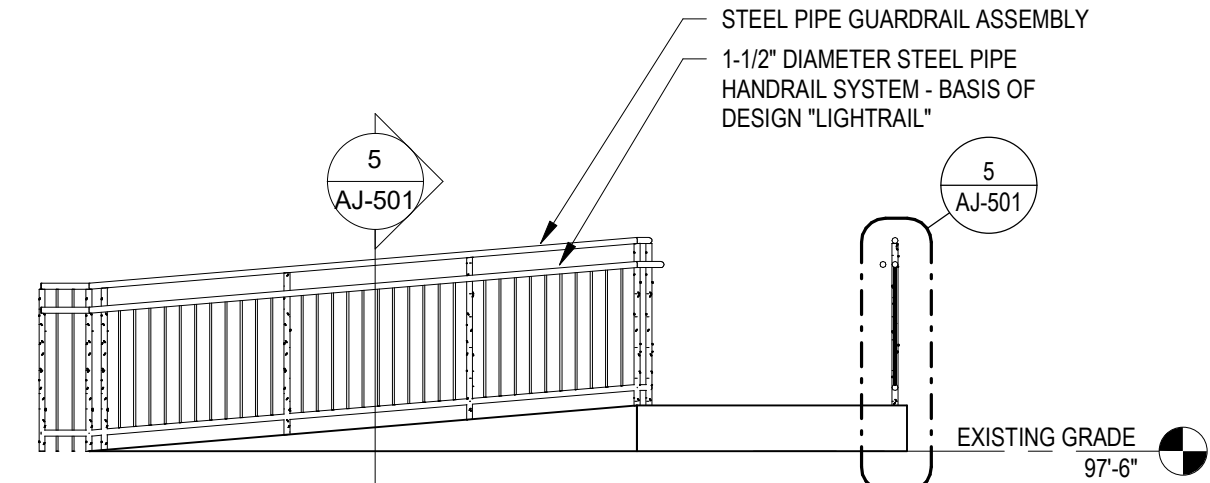
5 RAMP DETAIL
3/4" = 1'-0" AJ-101



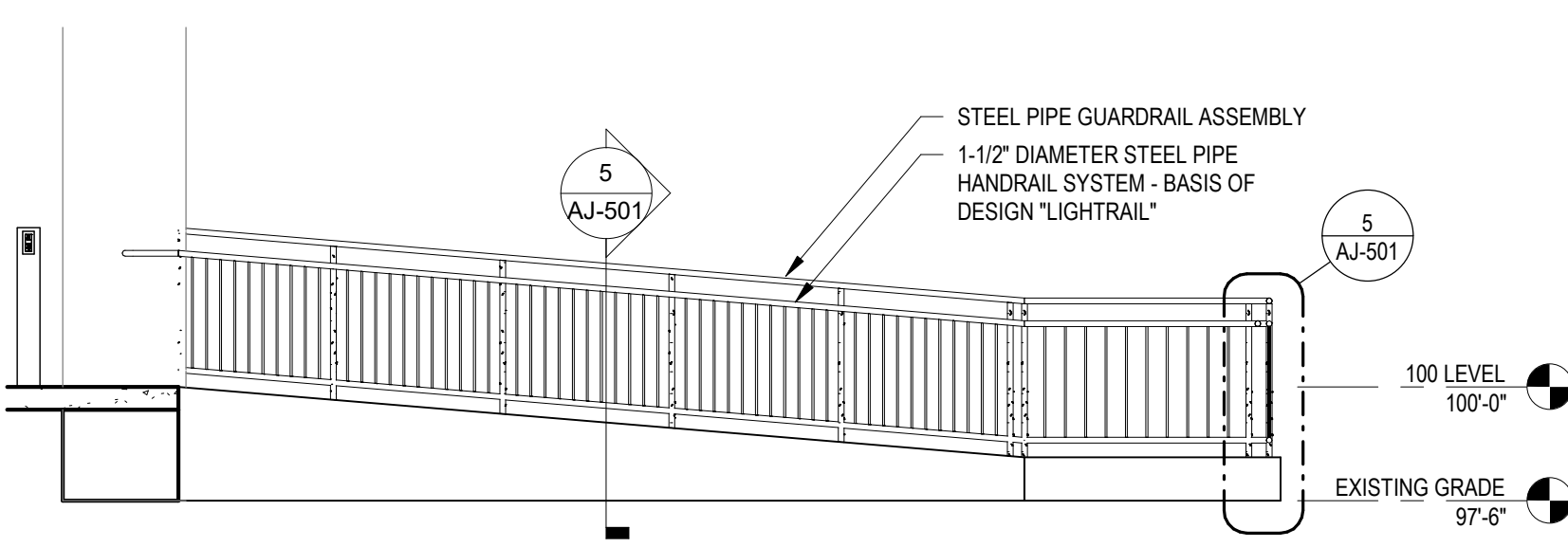
4 TYPICAL STAIR ON GRADE DETAIL
3/4" = 1'-0" AJ-501



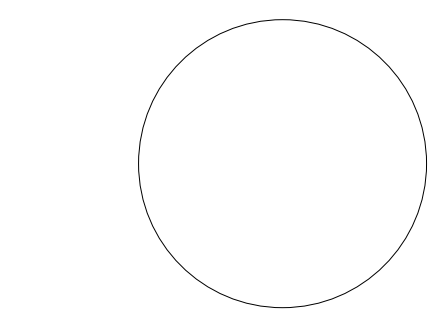
3 STAIR SECTION
1/4" = 1'-0" AJ-101



2 RAMP SECTION
1/4" = 1'-0" AJ-101



1 RAMP SECTION
1/4" = 1'-0" AJ-101



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EXTERIOR DETAILS

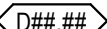




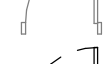
AJ-501
BIDDING

ARCHITECTURAL PLAN NOTES	
N001	DESCRIPTION
N002	NEW SIEMALK TO CONFORM TO EXISTING DOOR OPENING AND ADA REQUIREMENTS.
N003	REFER TO CIVIL DRAWINGS FOR NEW SIDEWALK DESIGN.
N004	NEW HOLLOW METAL AND GLAZING SYSTEM.
N005	ADD SECURITY FILM TO EXISTING WINDOWS.
N006	ADA DOOR ACTUATOR AND CARD READER.
N007	ADA DOOR ACTUATOR LOCATION.
N008	PORTION OF CEILING ASSEMBLY TO BE REPLACED, REPAIRED OR REINSTALLED AS REQUIRED.
N009	NEW RECESSED LIGHTING - SEE ELECTRICAL DRAWINGS.

LEGAT ARCHITECTS
Design with a Difference

**MOLINE COAL
VALLEY SCHOOL
DISTRICT**

DEMOLITION LEGEND

	DEMOLITION TAG
	EXISTING WALLS TO REMAIN
	EXISTING WALLS TO BE DEMOLISHED
	LIMITS OF DEMOLITION WORK (SEE MEPPF DRAWINGS FOR ADDITIONAL DEMOLITION REQUIREMENTS)
	EXISTING DOORS TO REMAIN
	EXISTING DOORS TO BE DEMOLISHED

[illegible]

ARCHITECT

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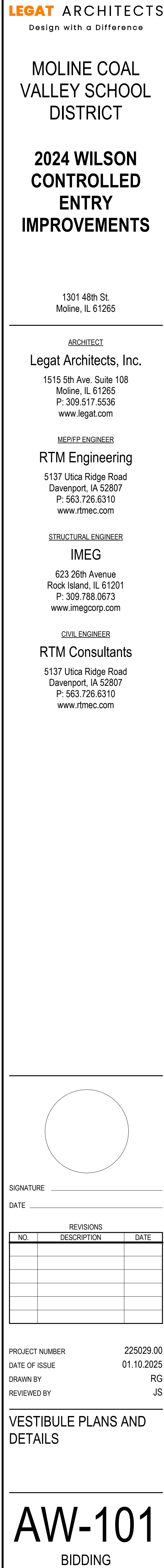
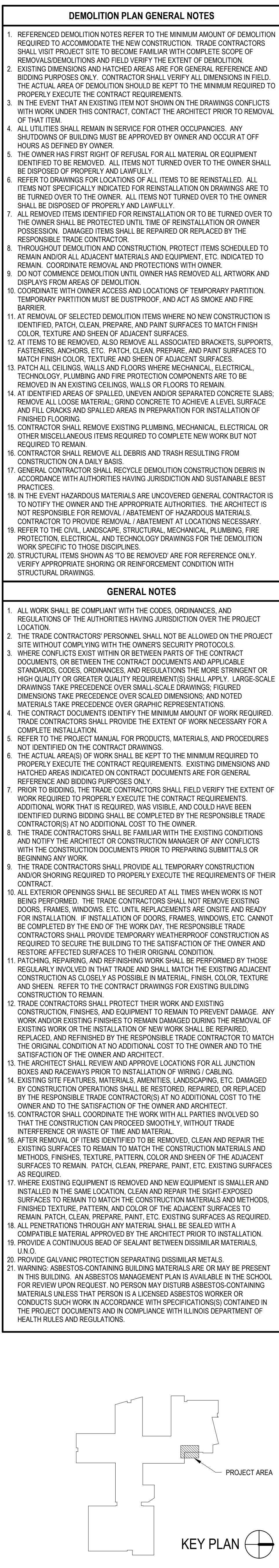
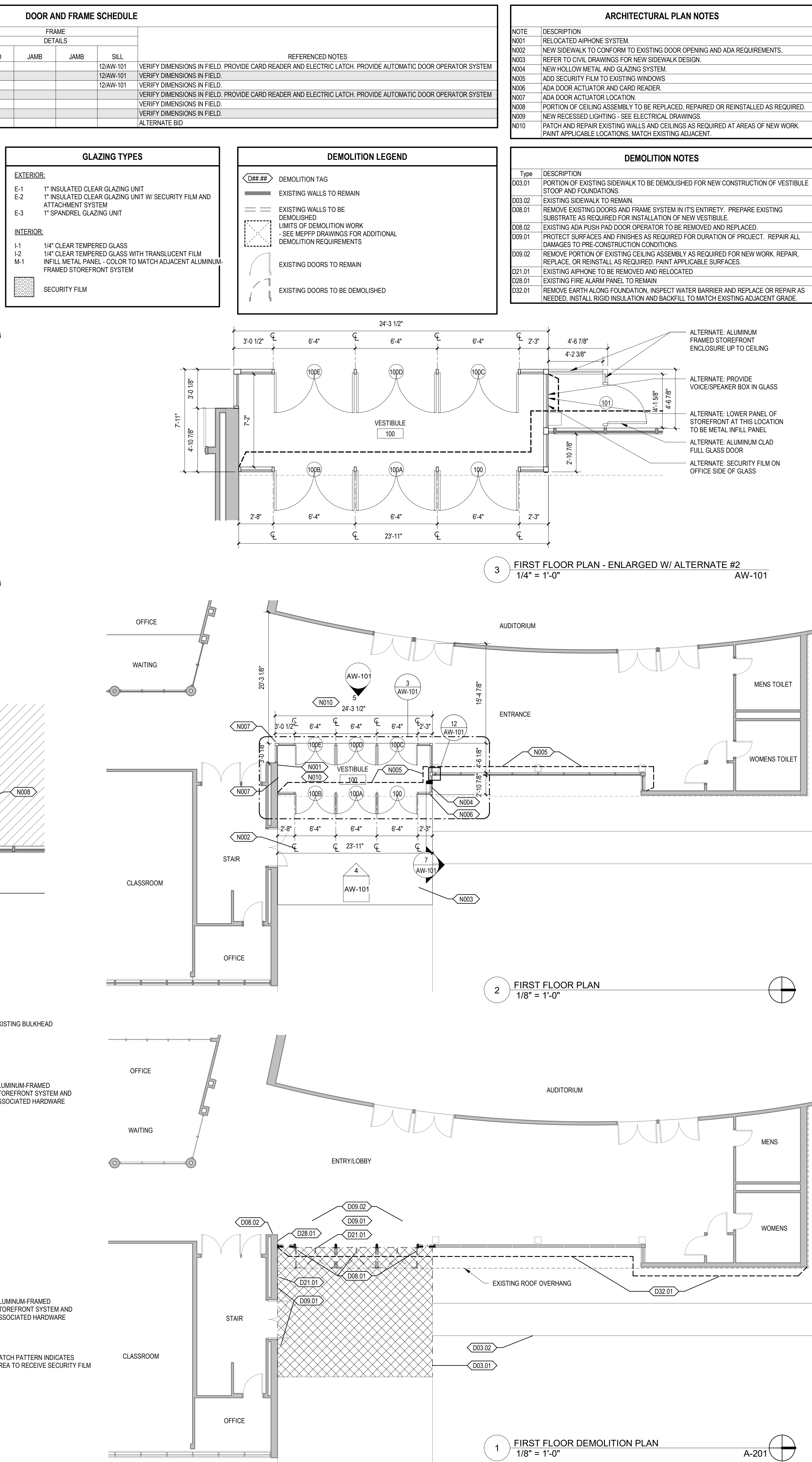
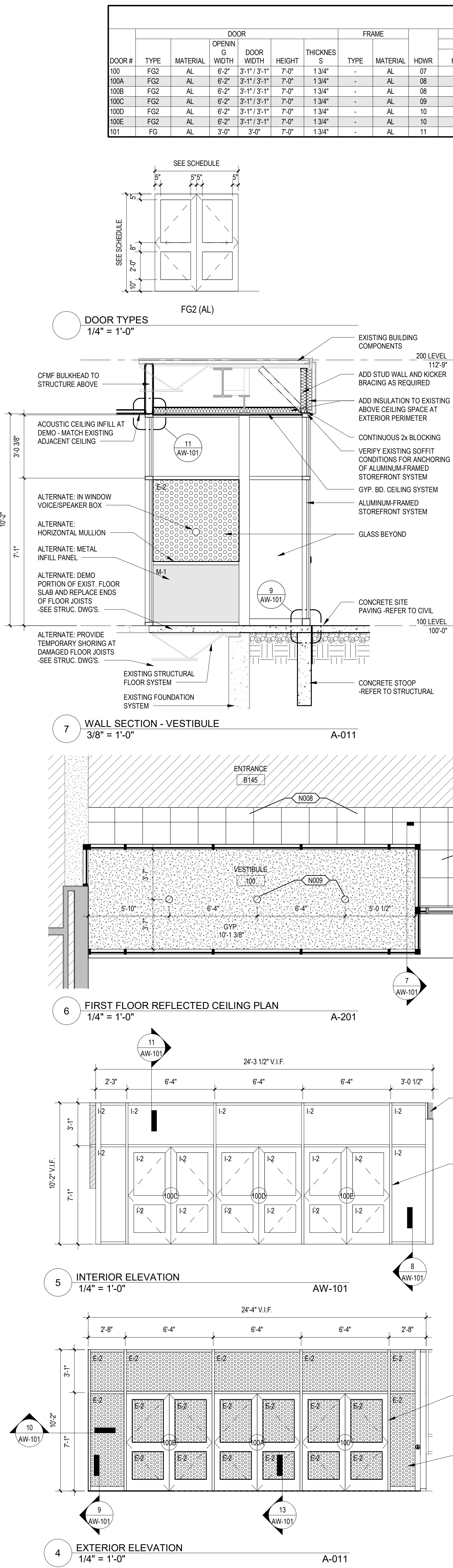
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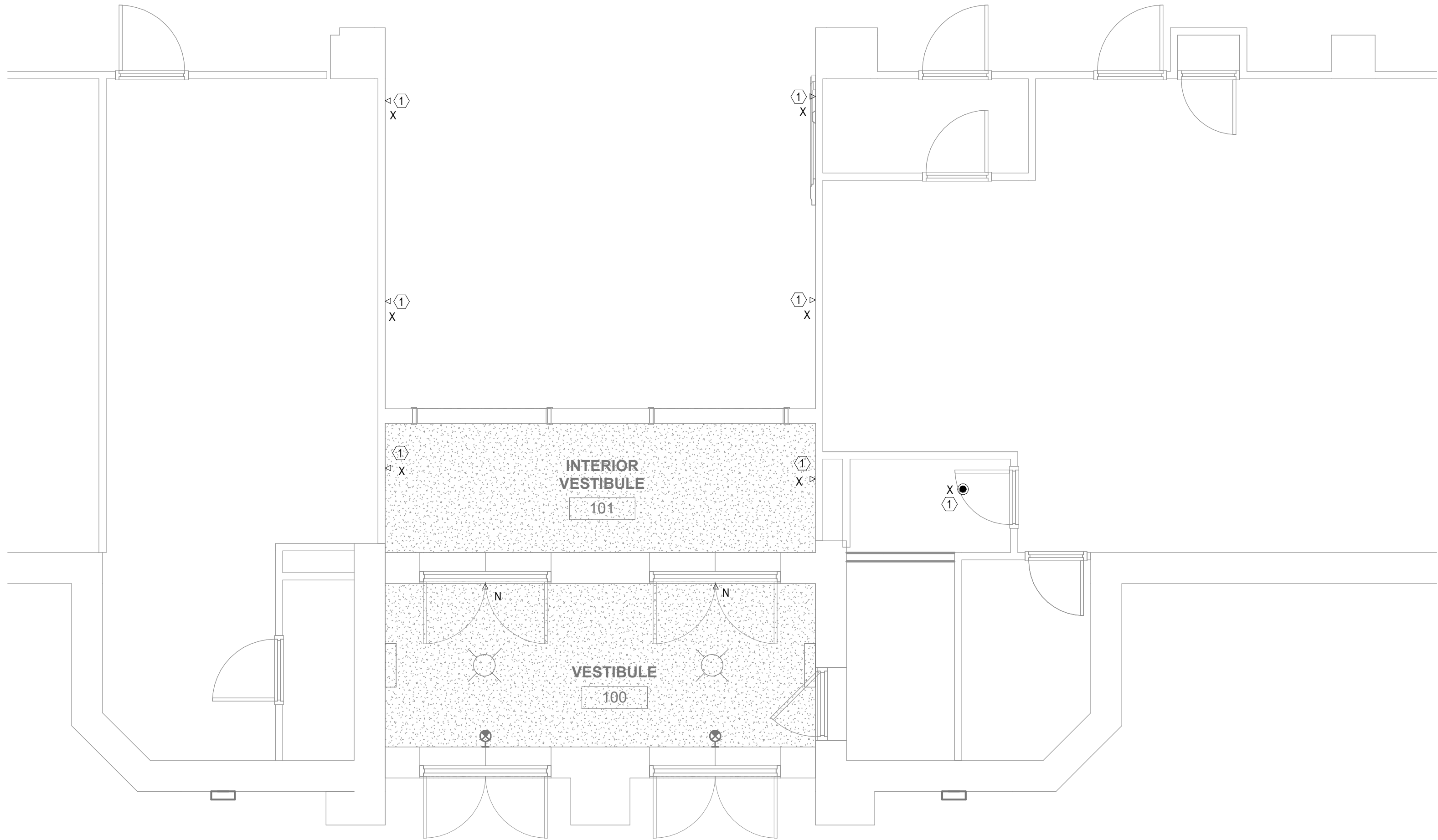
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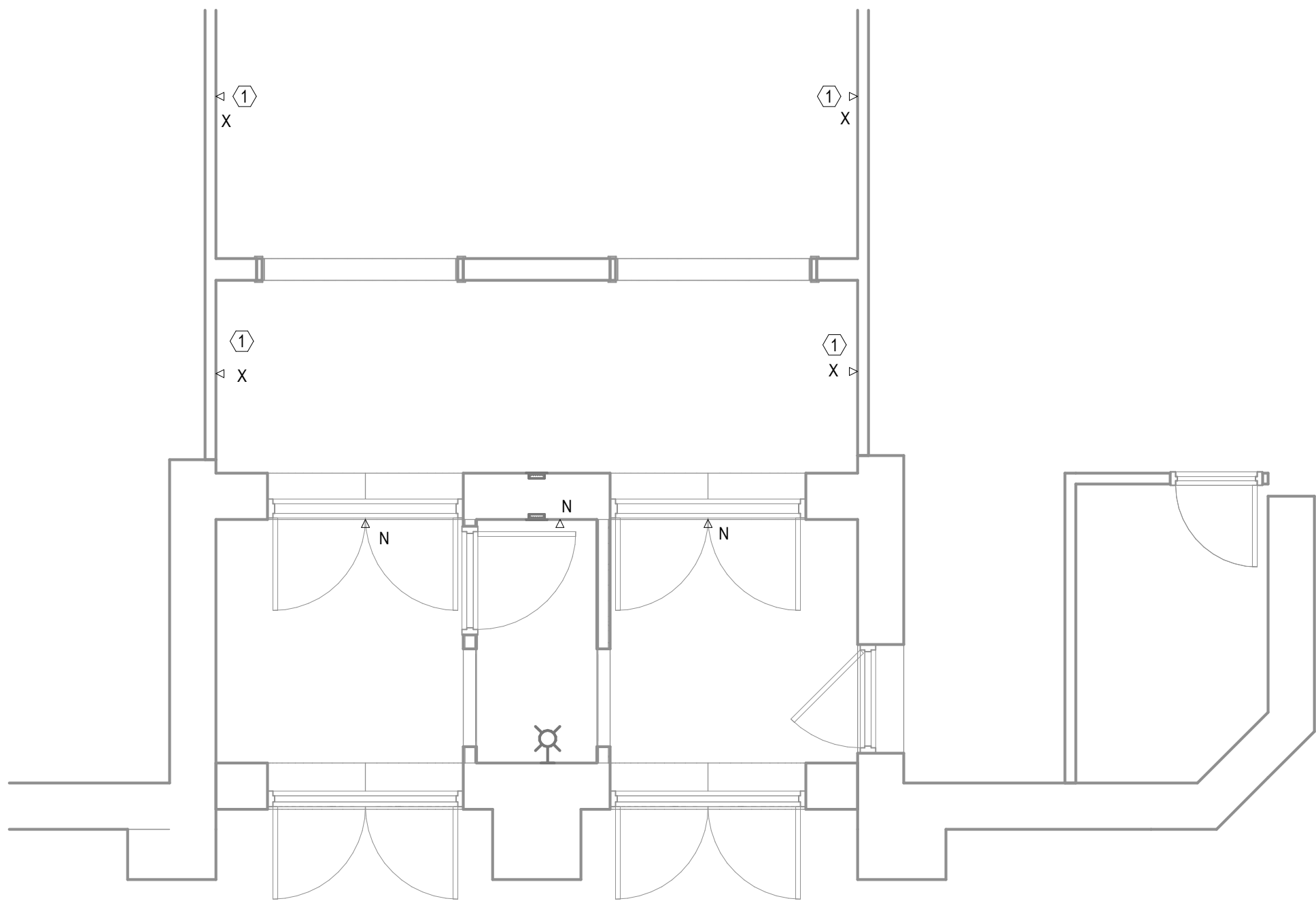
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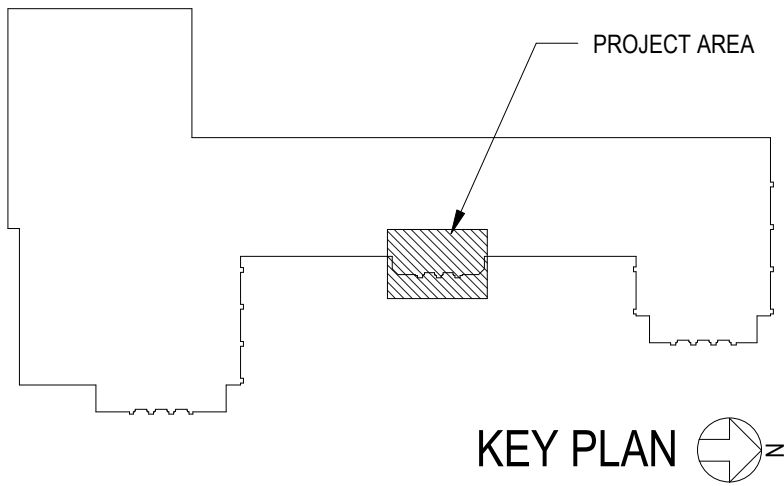
- GENERAL NOTES:**
- DRAWINGS ARE TO BE REVIEWED IN FULL DETAIL WITH SPECIFICATIONS. IN THE EVENT THAT THERE IS CROSS DIRECTION, A REQUEST FOR INFORMATION (RFI) IS TO BE SENT TO THE ENGINEER TO RECORD, AS STATED IN SPECIFICATION DIV. 1, THE HIGHER COST OF THE TWO OPTIONS IS TO BE TAKEN AS THE OPTION WHILE AT BID UNLESS CLARIFICATION FROM RFI.
 - ALL FIRE PROTECTION SHEETS SHALL BE REVIEWED AND COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
 - REFER TO SHEET F-000 FOR LEGEND.
 - SPRINKLER HEADS IN CEILING TO BE POSITIONED IN CENTER OF TILE IN ORDER TO PROVIDE FULL COVERAGE.
 - SPRINKLER CONTRACTOR TO INSTALL SPRINKLER SYSTEM TO MEET NFPA 13 REQUIREMENTS.
 - ALL UPRIGHT SPRINKLER HEADS TO FOLLOW DETAIL 3 ON SHEET FP-000 FOR SPRINKLER HEAD ORIENTATION.
- # KEYNOTES**
- EXISTING SPRINKLER HEAD TO REMAIN.



1 FIRE PROTECTION FIRST FLOOR PLAN
FJ-101 1/4" = 1'-0"



2 FIRE PROTECTION FIRST FLOOR PLAN - ALTERNATIVE BID
FJ-101 1/4" = 1'-0"



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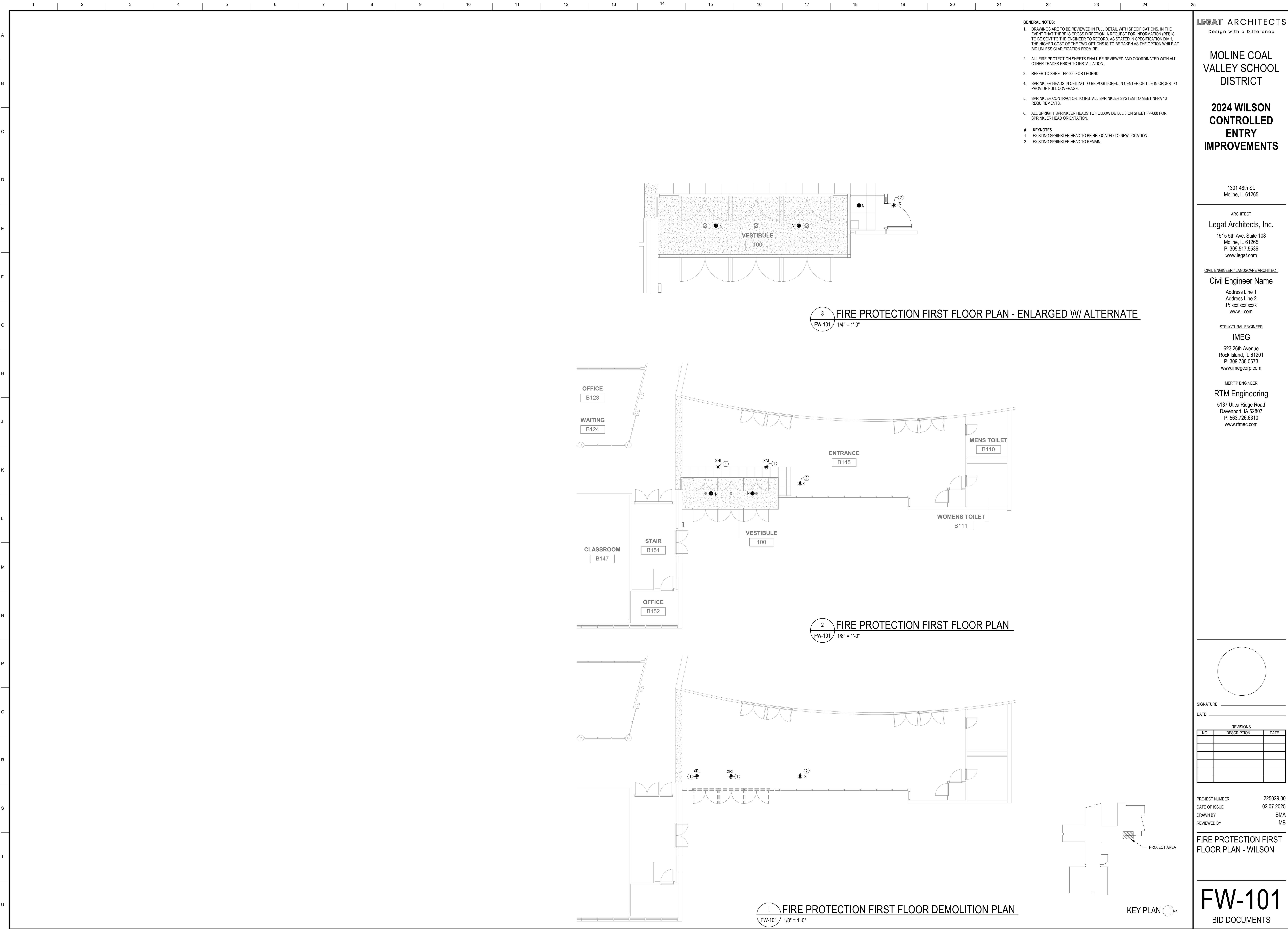
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**FIRE PROTECTION NEW
WORK PLANS - JOHN
DEERE**

FJ-101
BID DOCUMENTS



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VALLEY SCHOOL
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Civil Engineer Name
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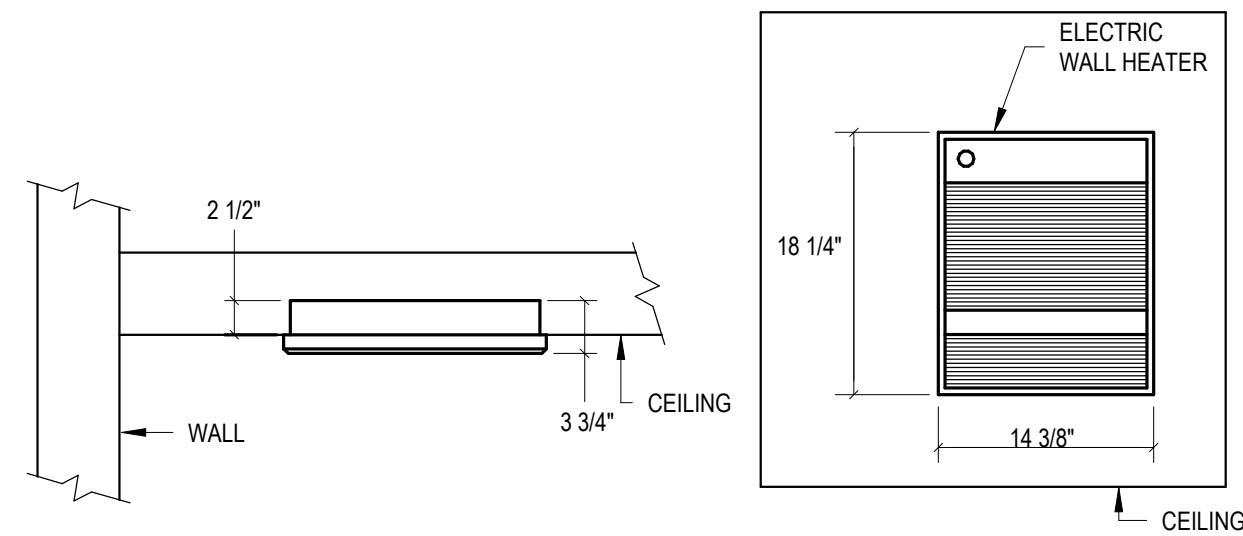
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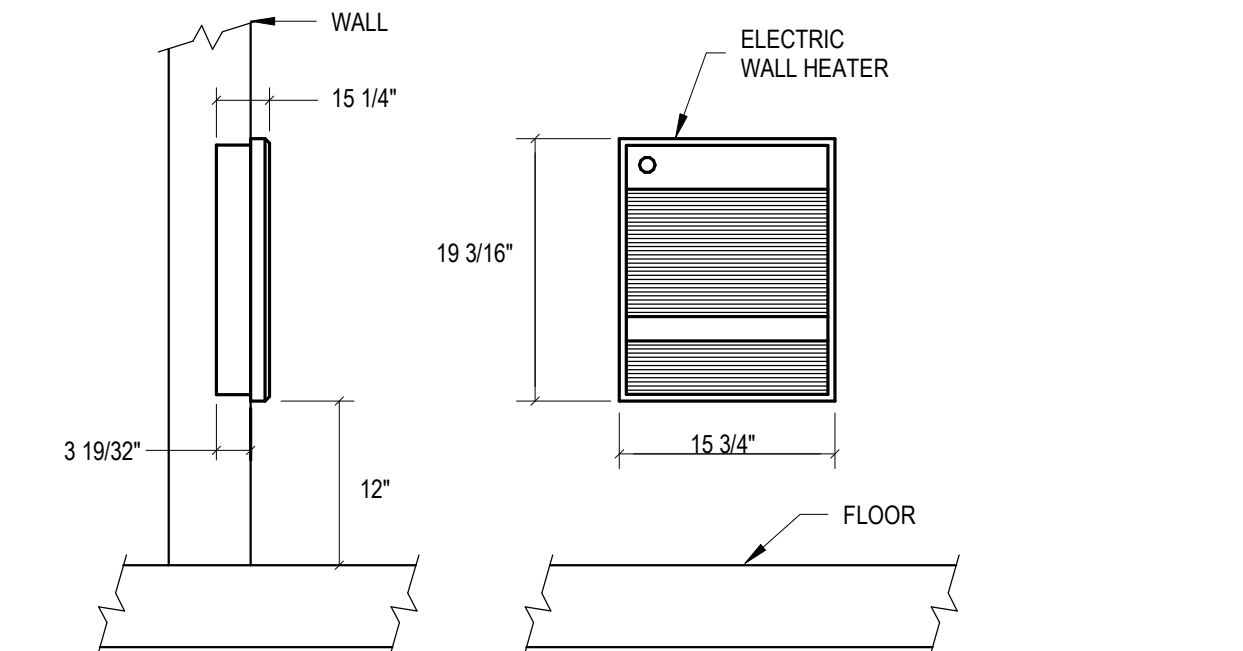
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DATE OF ISSUE 02.07.2025
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REVIEWED BY MB

FIRE PROTECTION FIRST
FLOOR PLAN - WILSON

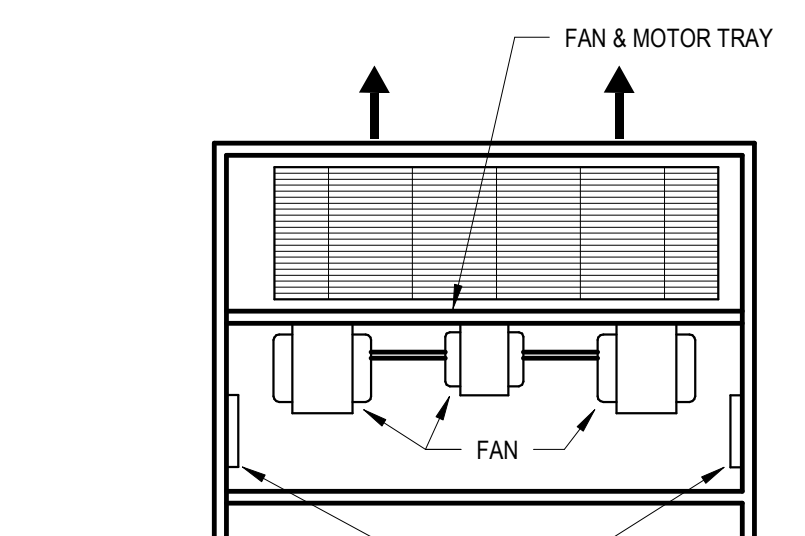
FW-101
BID DOCUMENTS



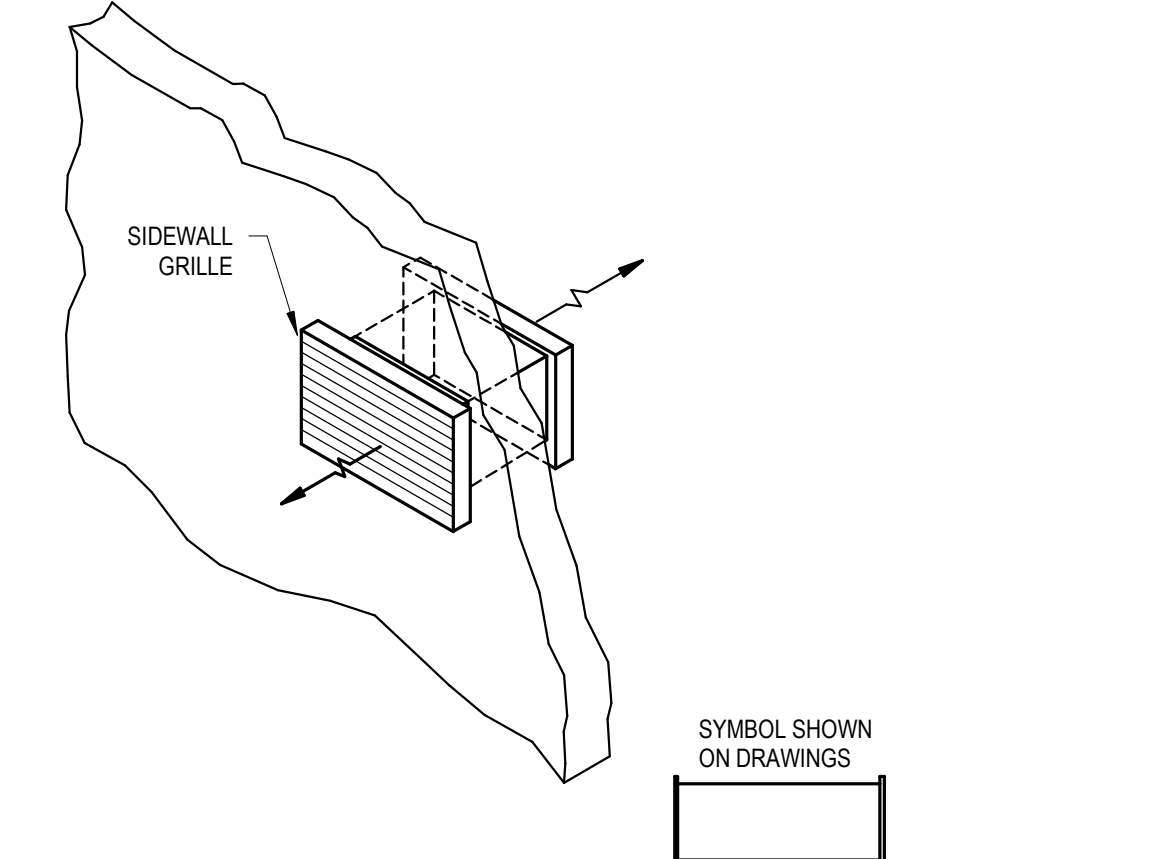
1 ELECTRIC CEILING HEATER (RECESSED)
M-000 SCALE: N.T.S.



3 ELECTRIC WALL HEATER (RECESSED)
M-000 SCALE: N.T.S.



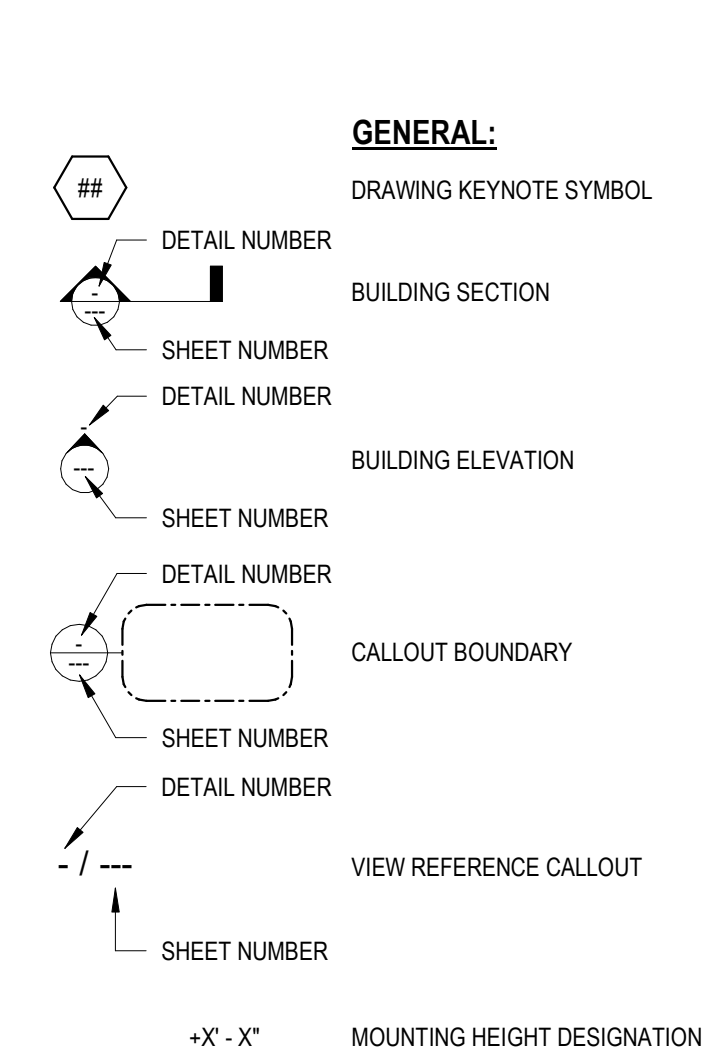
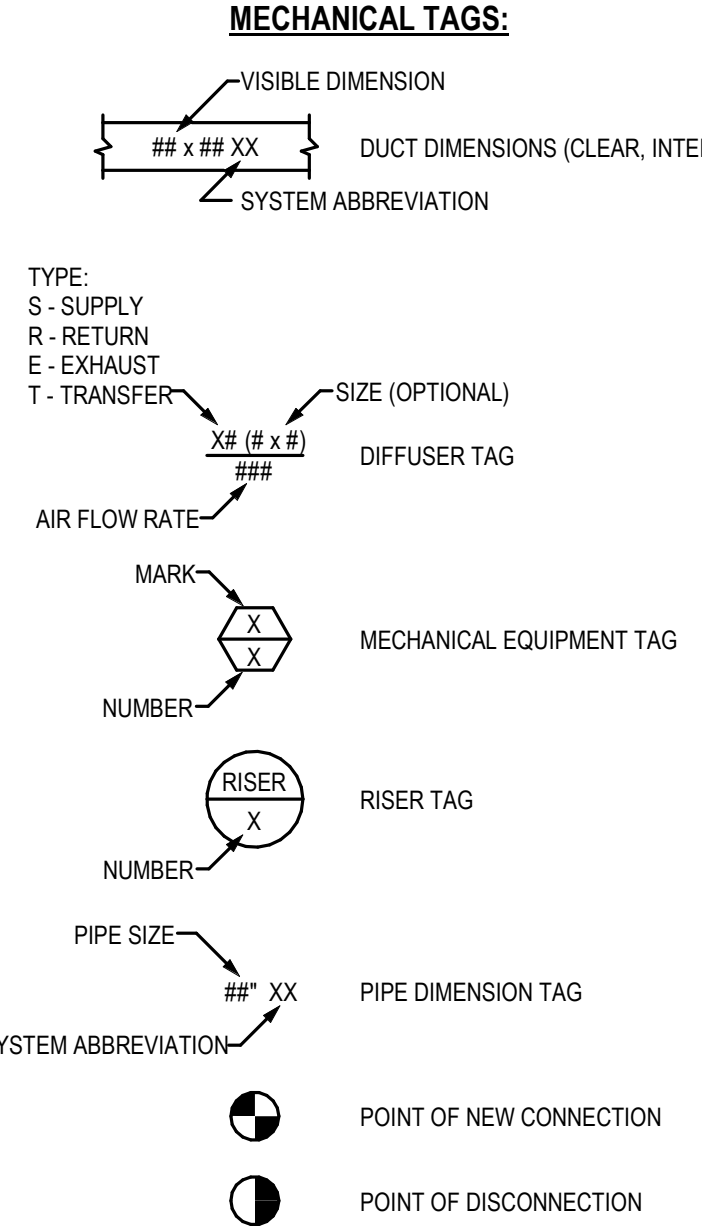
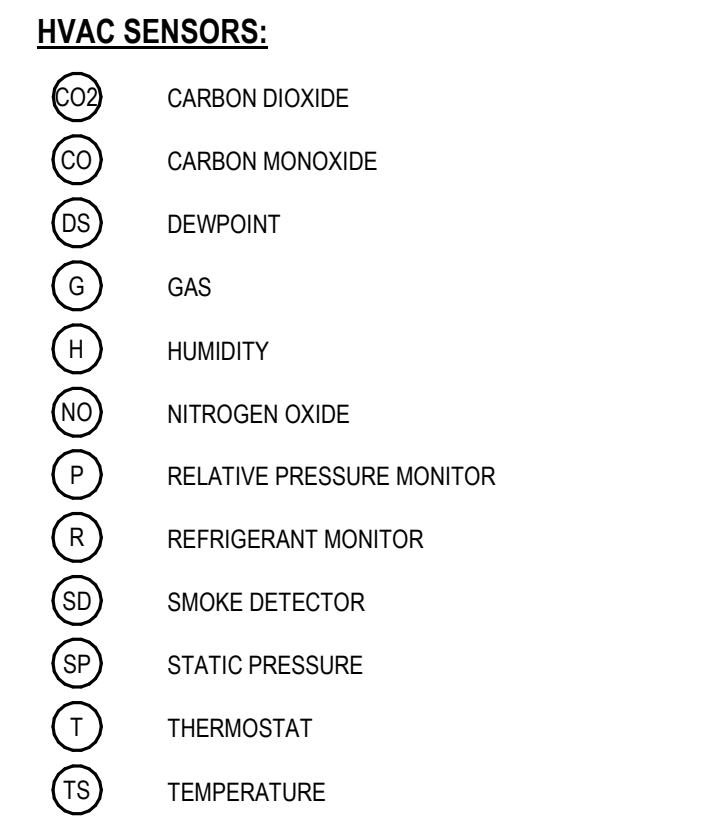
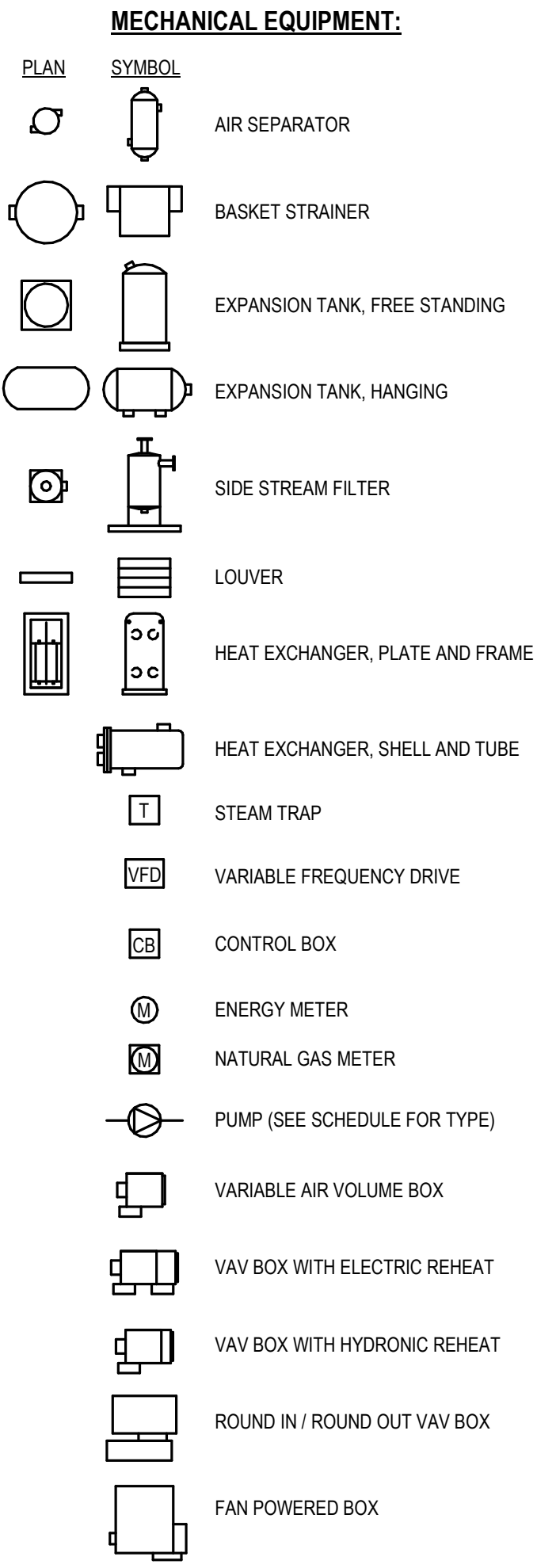
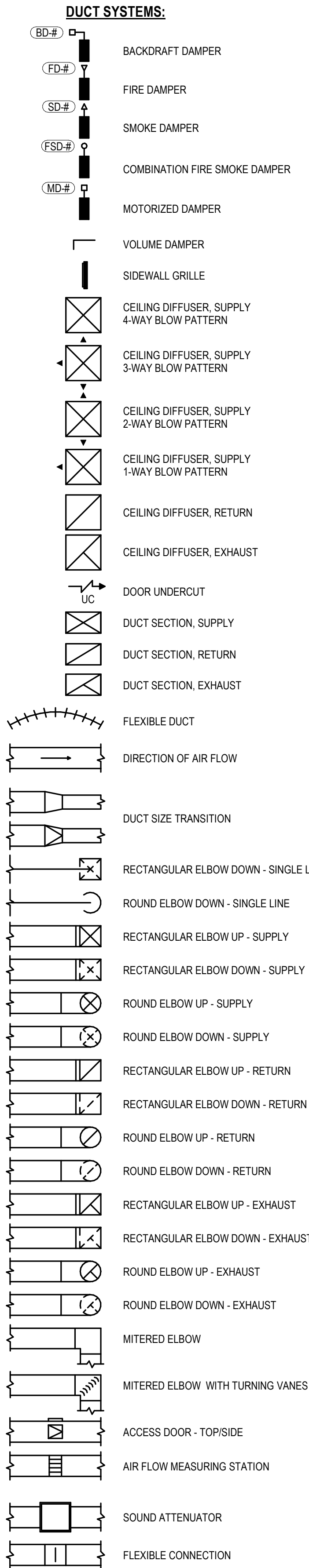
2 CABINET UNIT HEATER DETAIL
M-000 SCALE: N.T.S.



4 TRANSFER DUCT DETAIL
M-000 SCALE: N.T.S.

- GENERAL NOTES:**
- CONTRACTOR SHALL PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR AS REQUIRED TO INSTALL A COMPLETE AND OPERABLE HVAC SYSTEM PER THE NEW ARCHITECTURAL LAYOUT AND AS TO COMPLY WITH THE SPECIFICATION DETAILS, THIS SCOPE OF WORK AND ALL APPLICABLE CODES.
 - ALL WORK PERFORMED SHALL CONFORM TO ALL APPLICABLE STATE AND LOCAL CODES.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS AND COORDINATE ALL NEW WORK WITH ALL TRADES PRIOR TO ANY WORK BEING DONE TO INSURE CONFLICTS DO NOT OCCUR.
 - DISRUPTION OF ANY EXISTING SERVICE SHALL BE CLEARED WITH THE OWNER. COMMUNICATION SHALL BE PERFORMED AT A TIME AND IN A MANNER SO AS TO CAUSE MINIMAL INCONVENIENCE TO THE OWNER.
 - ALL DUCT SIZES INDICATED ON PLANS AND RISERS ARE CLEAR INSIDE DIMENSIONS. DUCT SIZES NOT SHOWN SHALL BE SIZED TO VELOCITIES NO GREATER THAN UPSTREAM SECTION USING SIMILAR ASPECT RATIOS.
 - ALL SUPPLY AIR TAKEOFFS FROM MAIN TRUNK DUCTS ARE TO BE INSTALLED WITH BELL MOUTH FITTINGS OR 45 DEGREE ENTRY TO PROVIDE THE SMOOTHEST AIR FLOW POSSIBLE.
 - PROVIDE TURNING VANES IN ALL LOW-PRESSURE 90-DEGREE DUCT TURNS.
 - ALL THERMOSTAT LOCATIONS SHALL BE APPROVED BY THE ARCHITECT.
 - ALL DUCTS LOCATED ABOVE INACCESSIBLE CEILINGS ARE TO BE BALANCED PRIOR TO CEILING INSTALLATIONS. PROVIDE REMOTE CABLE OPERATED BALANCING DAMPER FOR DIFFUSERS MOUNTED IN HARD CEILING.
 - CONTRACTOR SHALL PROVIDE ACCESS DOORS FOR SERVICE AND MAINTENANCE OF ALL EQUIPMENT LOCATED ABOVE INACCESSIBLE CEILINGS.
 - PROVIDE GUIDES, HANGERS, EXPANSION LOOPS AND SUPPLEMENTARY STEEL SUPPORT WHERE REQUIRED FOR ALL PIPING.

- DUCT INSULATION NOTES:**
- | | |
|---|-----------|
| ALL EXPOSED DUCTWORK IN CONDITIONED SPACES OR SPIRAL DUCT | NONE |
| ALL EXTERIOR DUCTWORK | MIN. R-12 |
| ALL CONCEALED SUPPLY AND RETURN DUCT | MIN. R-6 |
| ALL EXHAUST UP TO 10'-0" FROM DISCHARGE | MIN. R-6 |
| ALL HEATING AND COOLING HYDRONIC PIPING | MIN. 2" |
| CONDENSATE PIPING | MIN. 1" |
- NOTE: ALL SUPPLY AND RETURN AIR DUCTS AND PLENUMS SHALL BE INSULATED WITH A MINIMUM OF R-6 INSULATION WHEN LOCATED IN UNCONDITIONED SPACES AND WITH A MINIMUM OF R-12 INSULATION WHEN LOCATED OUTSIDE THE BUILDING ENVELOPE. WHEN LOCATED WITHIN A BUILDING ENVELOPE ASSEMBLY, THE DUCT OR PLENUM SHALL BE SEPARATED FROM THE BUILDING EXTERIOR OR UNCONDITIONED OR EXEMPT SPACES BY A MINIMUM OF R-12 INSULATION. ALL JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS, AND CONNECTIONS IN DUCTWORK SHALL BE SECURELY FASTENED AND SEALED WITH WELDS, GASKETS, MASTICS, MASTIC-PLUS-EMBEDDED-FABRIC SYSTEM OR TAPES. TAPES AND MASTICS SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A OR UL 181B. DUCT CONNECTIONS TO FLANGES OF AIR DISTRIBUTION SYSTEM EQUIPMENT SHALL BE SEALED AND MECHANICALLY FASTENED. DUCT TAPE IS NOT PERMITTED AS A SEALANT ON ANY METAL DUCTS.



- MECHANICAL ABBREVIATIONS:**
- | | |
|---------|--|
| ACH | AIR CHANGES PER HOUR |
| AF | AIR FILTER |
| AHU | AIR HANDLING UNIT |
| APD | AIR PRESSURE DROP |
| BAS | BUILDING AUTOMATION SYSTEM |
| BHP | BRAKE HORSEPOWER |
| BTU | BRITISH THERMAL UNIT |
| BTUH | BTU PER HOUR |
| CC | COOLING COIL |
| CF | CUBIC FEET |
| CFH | CUBIC FEET PER HOUR |
| CFM | CUBIC FEET PER MINUTE |
| CH | CHILLER |
| CO | CLEANOUT |
| CT | COOLING TOWER |
| CU | CONDENSING UNIT |
| CUH | CABINET UNIT HEATER |
| CV | CONSTANT AIR VOLUME |
| DAT | DISCHARGE AIR TEMPERATURE |
| DB | DECEBEL OR DRY BULB TEMPERATURE |
| DDC | DIRECT DIGITAL CONTROL |
| DH | DUCT HEATER |
| DX | DIRECT EXPANSION |
| EA | ENTERING AIR TEMPERATURE |
| EER | ENERGY EFFICIENCY RATIO |
| EF | EXHAUST FAN |
| ESP | EXTERNAL STATIC PRESSURE |
| ET | EXPANSION TANK |
| EWT | ENTERING WATER TEMPERATURE |
| FA | FREEZ AREA |
| FC | FAN COIL |
| FD | FIRE DAMPER |
| FH | FUME HOOD |
| FPB | FAN POWERED BOX |
| FFM | FEET PER MINUTE |
| FFS | FEET PER SECOND |
| FS | FREEZE STAT |
| FSD | COMBINATION FIRE/SMOKE DAMPER |
| GA | GAUGE |
| GAL | GALLON |
| GPH | GALLONS PER HOUR |
| GPM | GALLONS PER MINUTE |
| H | HUMIDISTAT |
| HC | HEATING COIL |
| HD | HOOD OR HEAT DETECTOR |
| HEPA | HIGH EFFICIENCY PARTICULATE AIR FILTER |
| HP | HORSEPOWER OR HEAT PUMP |
| HR | HOUR |
| HUM | HUMIDIFIER |
| HX | HEAT EXCHANGER |
| HZ | HERTZ |
| IN W.C. | INCHES WATER COLUMN |
| IN W.G. | INCHES WATER GAUGE |
| KW | KILOWATT |
| KWH | KILOWATT HOUR |
| LAT | LEAVING AIR TEMPERATURE |
| LSB | LEAVING WATER TEMPERATURE |
| LWT | LEAVING WATER TEMPERATURE |
| MBH | THOUSAND BTUH |
| NC | NORMALLY CLOSED |
| NK | NECK |
| NO | NORMALLY OPEN |
| P | PUMP |
| PA | PASCAL |
| PH | PHASE |
| PRV | PRESSURE REDUCING VALVE |
| PSIA | POUNDS PER SQUARE INCH ABSOLUTE |
| PSIG | POUNDS PER SQUARE INCH GAUGE |
| RF | RETURN FAN |
| RH | RELATIVE HUMIDITY |
| RHC | REHEAT COIL |
| RO | RELIEF OPENING |
| RPM | REVOLUTIONS PER MINUTE |
| SAT | SUPPLY AIR TEMPERATURE |
| SD | SMOKE DAMPER OR SMOKE DETECTOR |
| SF | SQUARE FEET OR SUPPLY FAN |
| SPS | STATIC PRESSURE SENSOR |
| T | THERMOSTAT |
| TD | TEMPERATURE DIFFERENCE |
| TO | TRANSFER OPENING |
| TPV | TYPICAL |
| UC | UNDERCUT (DOOR) |
| UH | UNIT HEATER |
| VAV | VARIABLE AIR VOLUME |
| VD | VOLUME DAMPER |
| VFD | VARIABLE FREQUENCY DRIVE |
| VSD | VARIABLE SPEED DRIVE |
| VTR | VENT THROUGH ROOF |
| W | WATT |
| WB | WET BULB TEMPERATURE |
| WC | WATER COLUMN |
| WPD | WATER PRESSURE DROP |

- GENERAL ABBREVIATIONS:**
- | | |
|------|--|
| A/E | ARCHITECT/ENGINEER |
| ABV | ABOVE |
| AFB | ABOVE FINISHED FLOOR |
| AFG | ABOVE FINISHED GRADE |
| ALT | ALTERNATE |
| ARCH | ARCHITECT |
| BFG | BELOW FINAL GRADE |
| BLDG | BUILDING |
| CLG | CEILING |
| DIR | DIRECT |
| DISC | DISCONNECT |
| DN | DOWN |
| EC | ELECTRICAL CONTRACTOR |
| ELEV | ELEVATION REFERENCE |
| EM | EMERGENCY |
| EP | EXPLOSION PROOF |
| EWC | ELECTRIC WATER COOLER |
| F | FLUSH |
| FBO | FURNISHED BY OTHERS |
| FIXT | FIXTURE |
| FLA | FULL LOAD AMPS |
| FLR | FLOOR |
| FS | FLOW SWITCH |
| GC | GENERAL CONTRACTOR |
| GRD | GROUND |
| GYP | GYPSON BOARD |
| HC | HEATING CONTRACTOR |
| HVAC | HEATING & VENTILATING - AIR CONDITIONING |
| HW | HEAVY WALL |
| ID | INDIRECT |
| IL | INTERLOCK |
| IU | IN UNIT |
| J-BX | JUNCTION BOX |
| LG | LAY-IN GRID |
| LTG | LIGHTING |
| LV | LOW VOLTAGE |
| LVT | LINE VOLTAGE THERMOSTAT |
| MC | MECHANICAL CONTRACTOR |
| MCA | MINIMUM CIRCUIT AMPS |
| MOCP | MAXIMUM OVERCURRENT PROTECTION |
| MTD | MOUNTED |
| NIC | NOT IN CONTRACT |
| NTS | NOT TO SCALE |
| PLBG | PLUMBING CONTRACTOR |
| RW | ROOM |
| SURF | SURFACE |
| TS | TAMPER SWITCH |
| TYP | TYPICAL |
| UG | UNDERGROUND |
| VC | VENTILATION CONTRACTOR |
- DUCT SYSTEM ABBREVIATIONS:**
- | | |
|--------|---|
| CA | COMBUSTION AIR |
| CV | COMBUSTION VENT |
| EA-AII | EXHAUST AIR - AIRBORNE INFECTIOUS ISOLATION |
| EA-CH | EXHAUST AIR - CHEMICAL |
| EA-D | EXHAUST AIR - DRYER |
| EA | EXHAUST AIR - ENVIRONMENTAL |
| EA-K1 | TYPE 1 - KITCHEN EXHAUST |
| EA-K2 | TYPE 2 - KITCHEN EXHAUST |
| OA | OUTDOOR AIR |
| RA | RETURN AIR |
| SA | SUPPLY AIR |
- RENOVATION LEGEND:**
- | | |
|-------|--------------------------|
| <X> | EXISTING TO REMAIN |
| <XRL> | EXISTING TO BE RELOCATED |
| <XD> | EXISTING TO BE REMOVED |
| <XNL> | EXISTING IN NEW LOCATION |
| <N> | NEW |
| <RAI> | REMAIN AS IS |

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REVIEWED BY MB

MECHANICAL LEGEND

M-000
BID DOCUMENTS

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A																									
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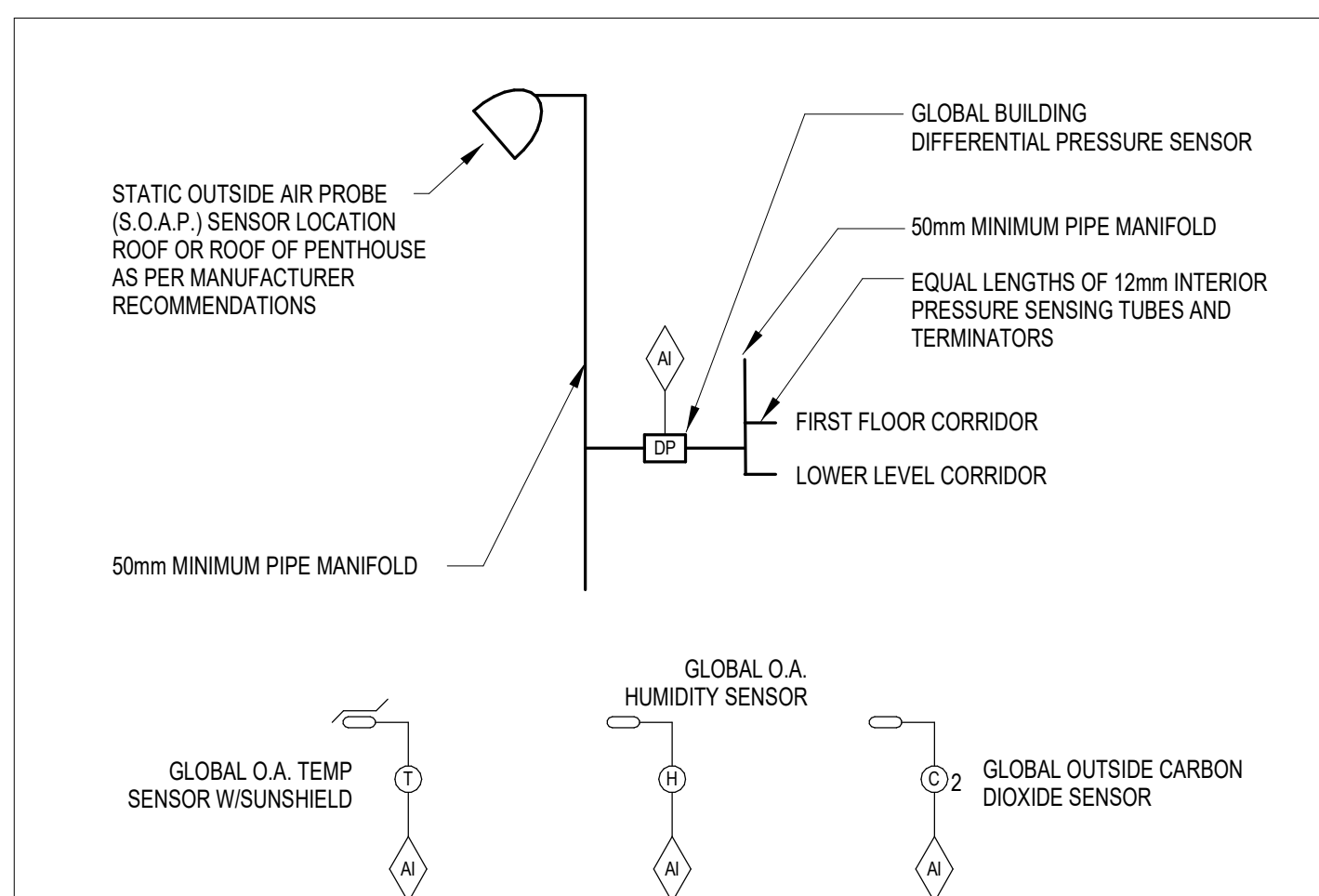
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NO	DESCRIPTION	DATE

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DATE OF ISSUE
DRAWN BY
REVIEWED BY

225017.00
02.07.2025
BMA
MB

MECHANICAL SPECIFICATIONS

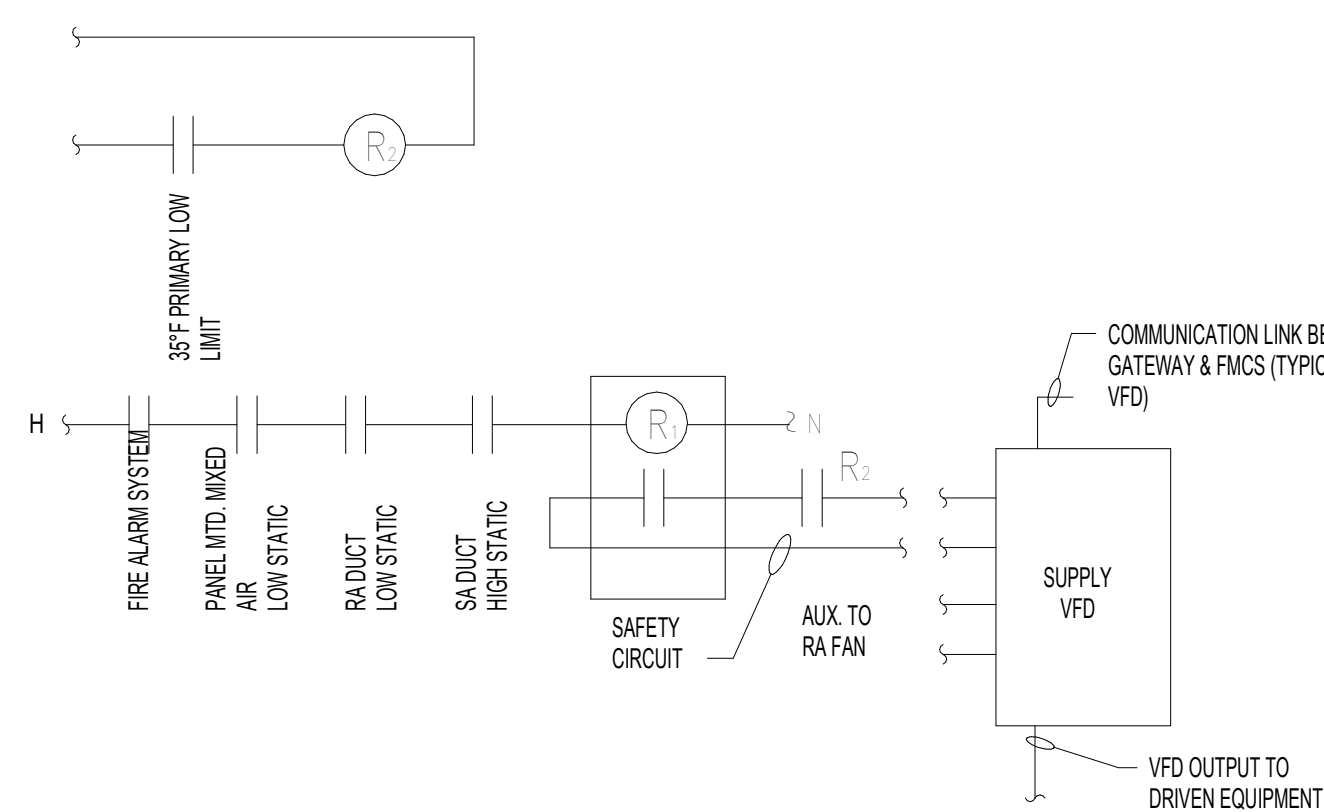
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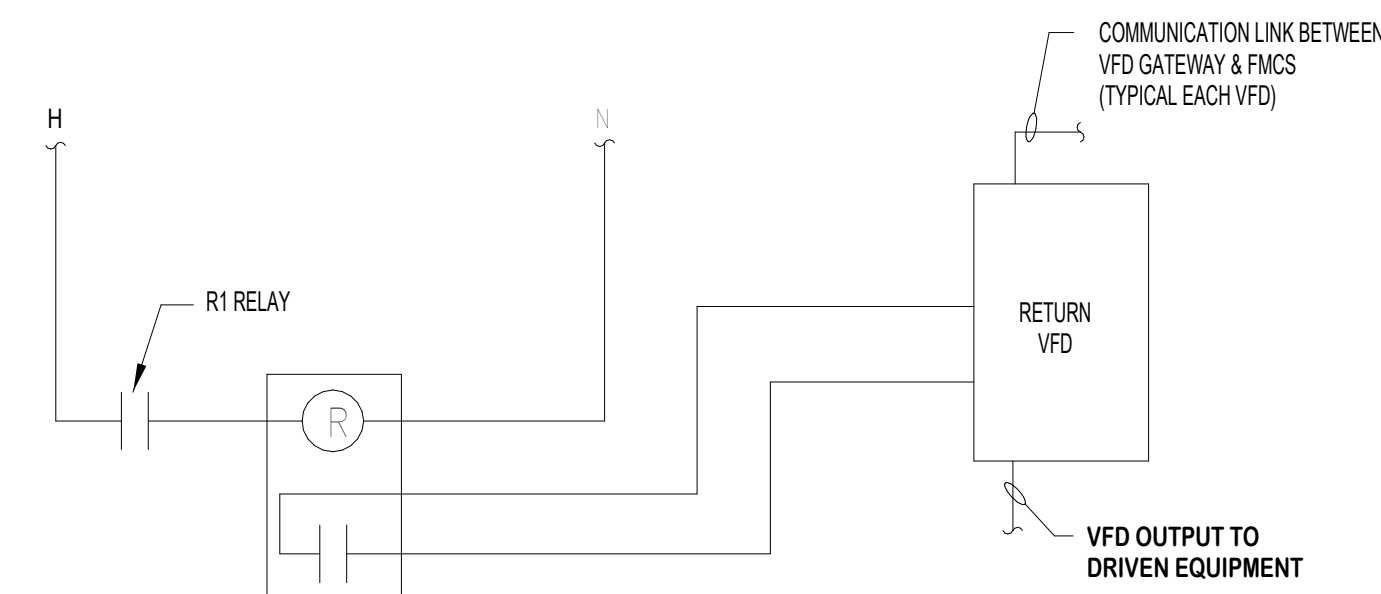
- ### GLOBAL REFERENCE POINTS

- OUTSIDE AIR REFERENCE DRY BULB TEMPERATURE:
- LOCATE ON THE EXTERIOR NORTH SIDE OF THE BUILDING. LOCATION MUST BE SHADDED AWAY FROM ANY HEAT SOURCE. LOCATION TO BE DETERMINED PER MANUFACTURERS RECOMMENDATIONS AND ARCHITECT/ENGINEERS APPROVAL. CONTRACTOR SHALL PRIME AND PAINT THE DEVICE ENCLOSURE. COLOR SELECTION BY ARCHITECT/ENGINEER.
- OUTSIDE AIR REFERENCE CARBON DIOXIDE:
- LOCATE ON THE EXTERIOR OF THE BUILDING. LOCATION TO BE DETERMINED PER MANUFACTURERS RECOMMENDATIONS AND ARCHITECT/ENGINEERS APPROVAL. CONTRACTOR SHALL PRIME AND PAINT THE DEVICE ENCLOSURE. COLOR SELECTION BY ARCHITECT.
- OUTSIDE AIR REFERENCE HUMIDITY:
- LOCATE ON THE EXTERIOR OF THE BUILDING. LOCATION TO BE DETERMINED PER MANUFACTURERS RECOMMENDATIONS AND ARCHITECT/ENGINEERS APPROVAL. CONTRACTOR SHALL PRIME AND PAINT THE DEVICE ENCLOSURE. COLOR SELECTION BY ARCHITECT.
- BUILDING DIFFERENTIAL PRESSURE:
- INPUTS TO THE DIFFERENTIAL PRESSURE SENSOR SHALL BE THE AVERAGE OUTSIDE AIR PRESSURE AND THE AVERAGE INTERIOR AIR PRESSURE. PIPING BY HEATING CONTRACTOR. FINAL LOCATIONS (MINIMUM 4) TO BE DETERMINED PER MANUFACTURERS RECOMMENDATIONS AND ARCHITECT/ENGINEERS APPROVAL. CONTRACTOR SHALL PRIME AND PAINT THE DEVICE ENCLOSURES. COLOR SELECTION BY ARCHITECT.

1 BUILDING PRESSURE SENSOR (S.O.A.P.)
NOT TO SCALE

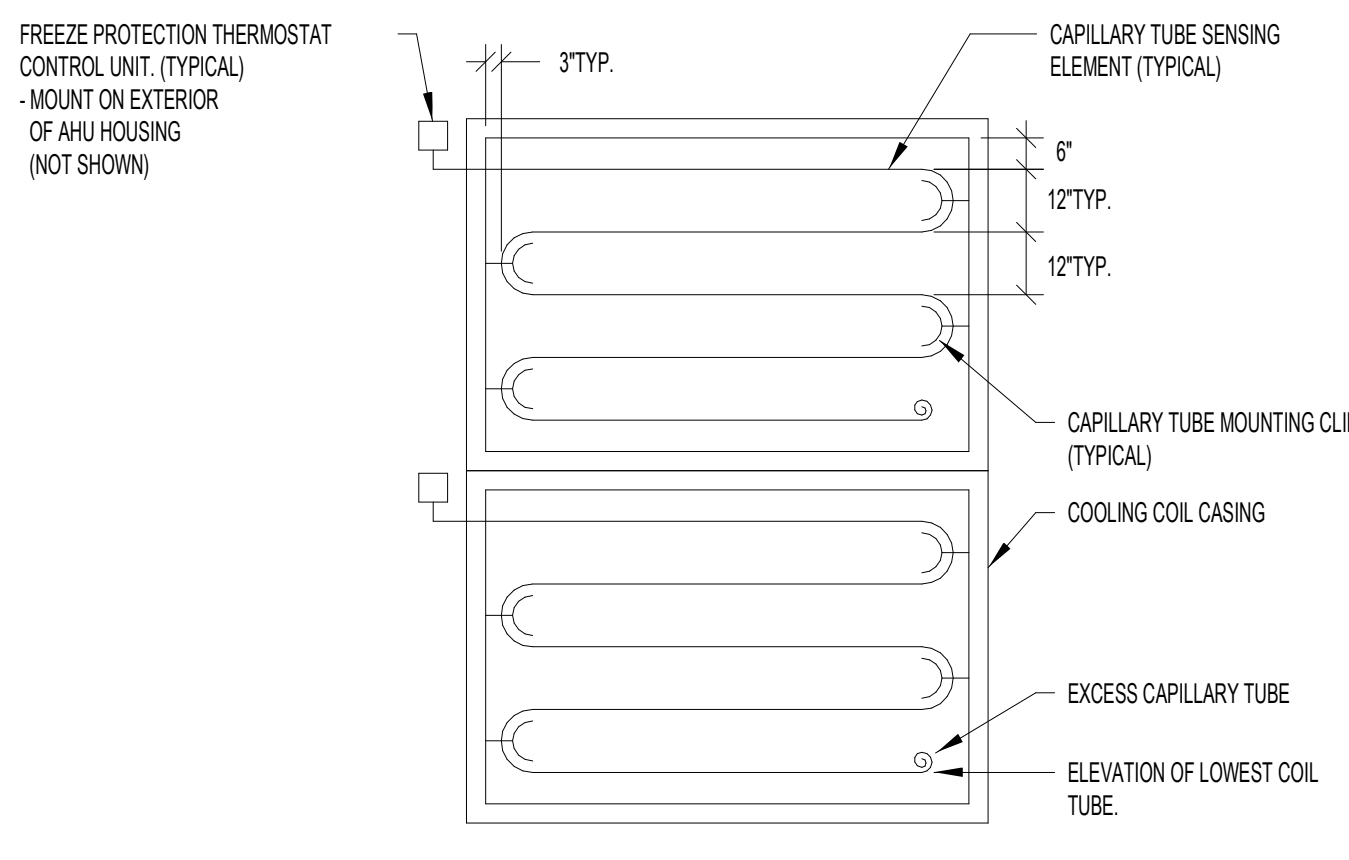


SUPPLY FAN VFD TEMPERATURE CONTROL DIAGRAM

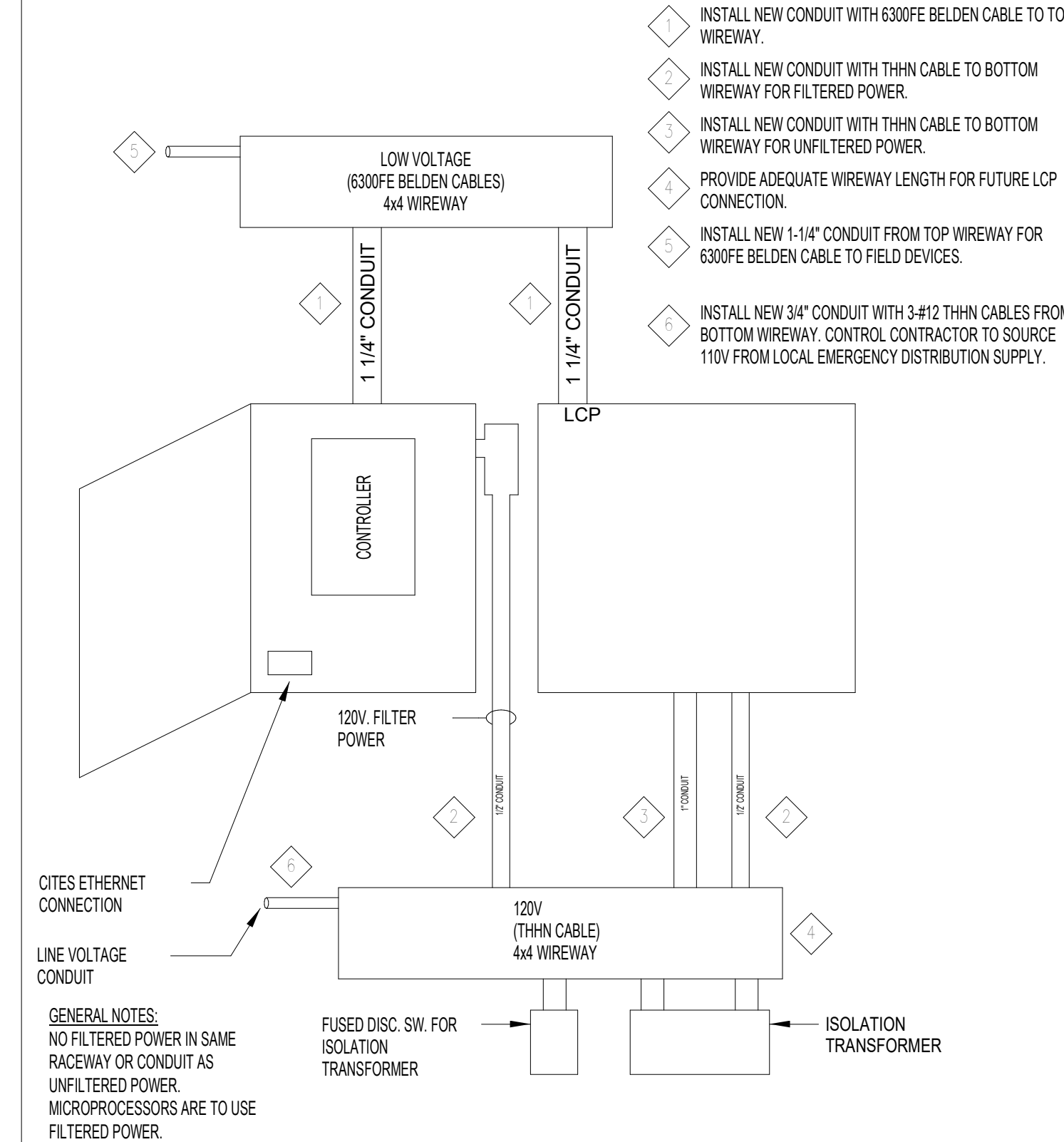


RETURN FAN VFD TEMPERATURE CONTROL DIAGRAM

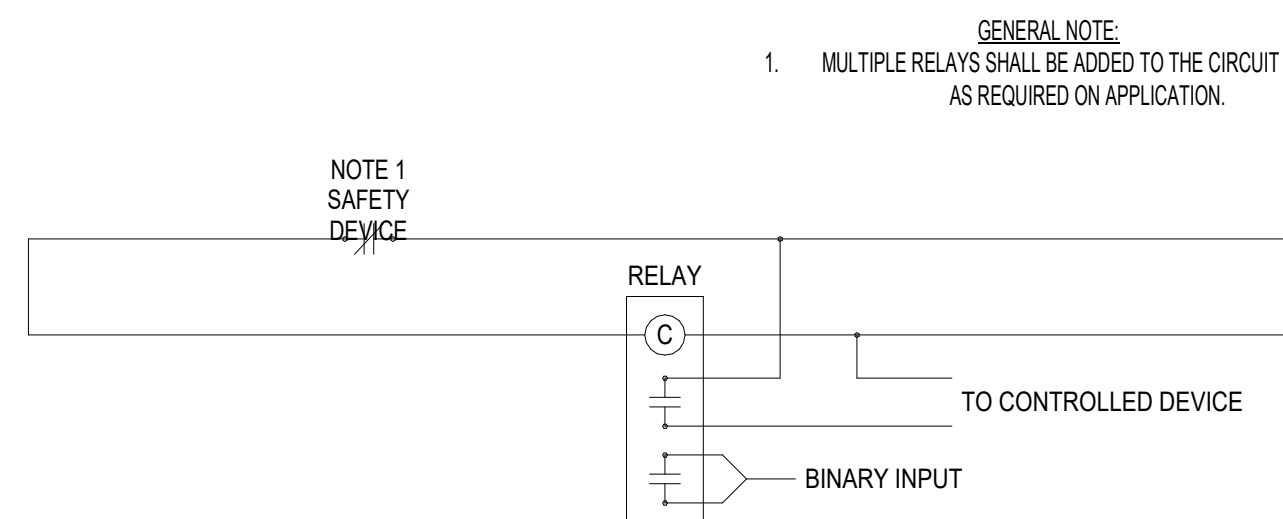
- NOTES
1. INSTALL FREEZE PROTECTION THERMOSTAT (A.K.A. FREEZESTAT) CONTROL UNIT(S) ON EXTERIOR OF AIR HANDLING UNIT HOUSING.
 2. **SAFE OFF** SEAL SPACE BETWEEN COIL CASING AND HOUSING TO PREVENT UNNECESSARY FREEZE/STAT TRIPPS.
 3. INSTALL FREEZE PROTECTION CAPILLARY TUBE (SENSING ELEMENT) ON UPTAKE/FASE OF EACH COIL. PROVIDE COMPLETE COVERAGE SUCH THAT CAPILLARY TUBES ARE WITHIN 6" OF EVERY POINT ON COIL FACE.
 4. PROVIDE MULTIPLE FREEZE(STAT)S AS REQUIRED FOR COMPLETE COVERAGE OF LARGER COILS.
 5. SUPPORT CAPILLARY TUBES FROM SIDES OF COIL CASING USING CLIPS DESIGNED FOR THIS PURPOSE.
 6. PITCH CAPILLARY TUBES CONTINUALLY DOWNSHIFTING TOWARD COILS.
 7. INSTALL LAST PASS OF CAPILLARY TUBE AT SAME ELEVATION AS LOWEST COIL TUBE.
 8. ROLL UP EXCESS PORTION OF CAPILLARY TUBE. TIE NEATLY AND LOCATE IN LOWER CORNER OF COIL CASING.
 9. FOR PROTECTION OF CHILLED WATER COILS, PROVIDE TWO COMPLETE SETS OF FREEZE PROTECTION THERMOSTATS.
35°F SETPOINT - MANUAL RESET
40°F SETPOINT - AUTOMATIC RESET
- INSTALL EACH COMPLETE SET INDEPENDENTLY FOLLOWING PROCEDURE OUTLINED ABOVE.
10. COMB ANY BENT COIL FINS AFTER INSTALLATION IS COMPLETE.



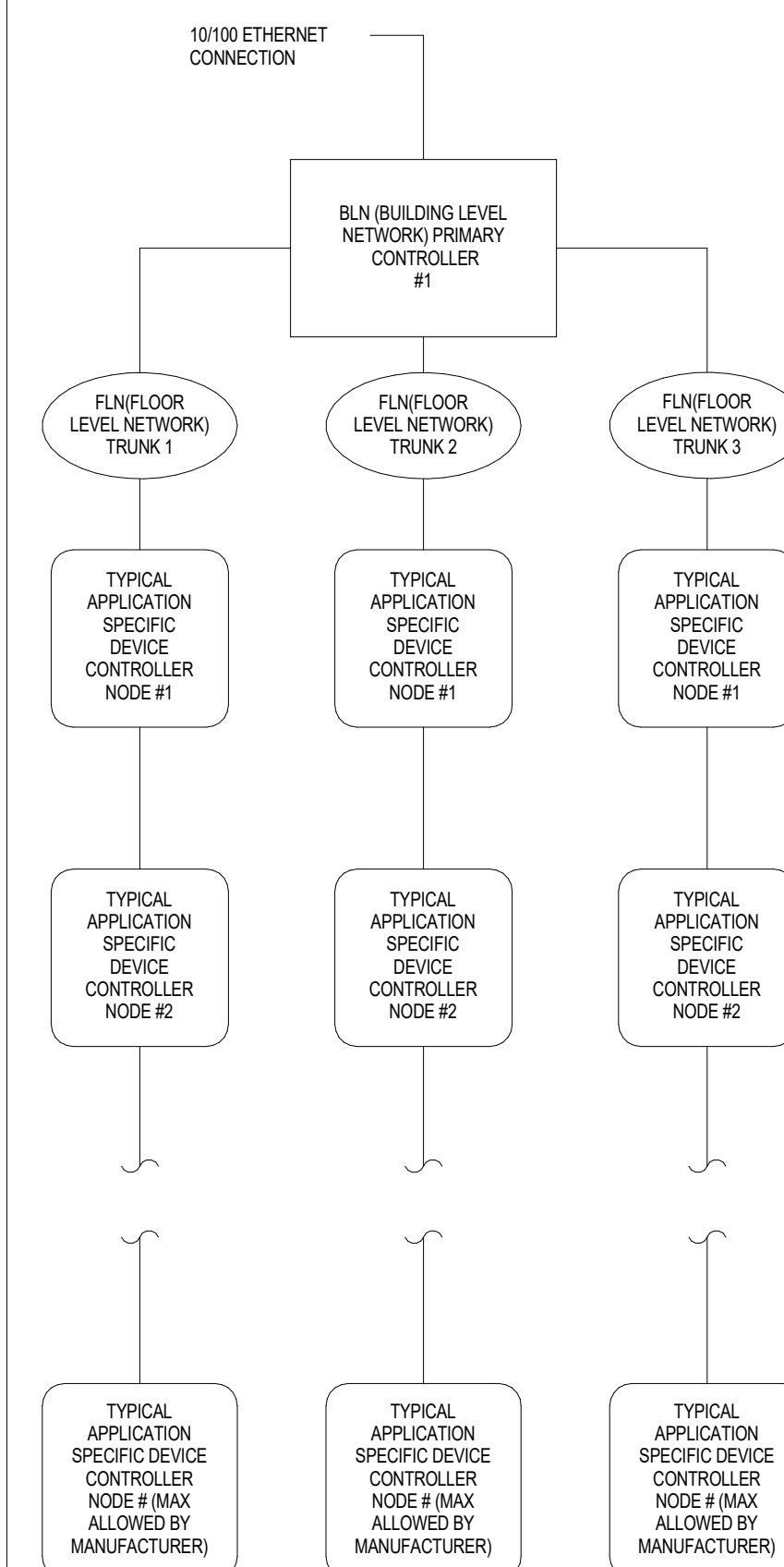
3. FREEZE PROTECTION THERMOSTAT INSTALLATION



4 DDC PANEL INSTALLATION DETAIL



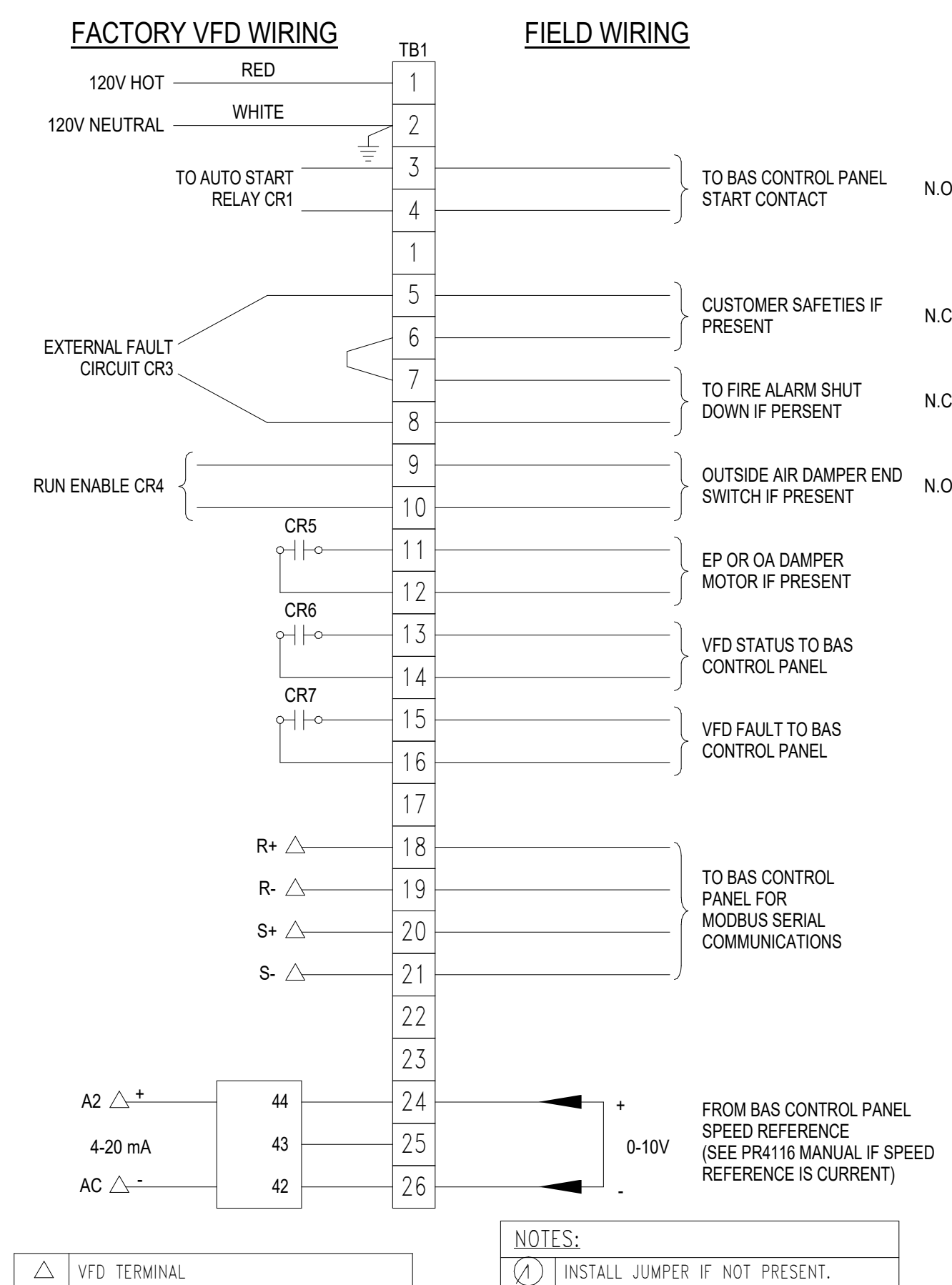
5 GENERAL SAFETY CIRCUIT
NOT TO SCALE



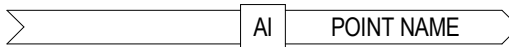
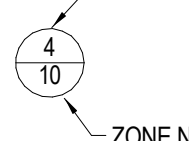
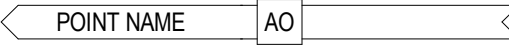
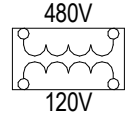
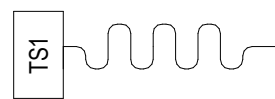

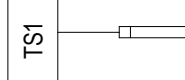

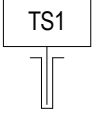

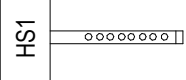
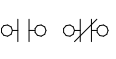
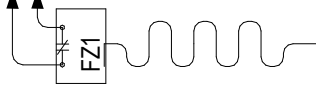
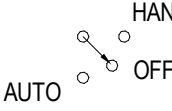
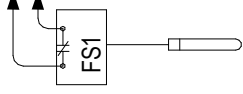

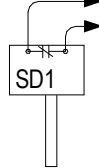

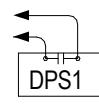



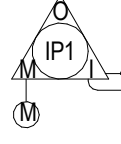

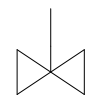


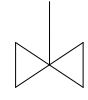
7 TYPICAL BAS (BUILDING AUTOMATION SYSTEM) NETWORK ARCHITECTURE

- ## NOTES

1. BUILDING LEVEL NETWORK, DEFINED AS A NETWORK OF NATIVE ETHERNET SDC CONTROLLERS IN A BUILDING CONTROLLING MAJOR HVAC EQUIPMENT SUCH AS AIR HANDLING UNITS, HEATING SYSTEMS, COOLING SYSTEMS, ETC. THESE PANELS SHALL COMMUNICATE NETWORK WITH EACH OTHER TO SHARE DATA WITHOUT THE NEED FOR INTERFACING WITH A SERVER FOR THE PURPOSES OF HANDLING LOCAL BUILDING CONTROLS.
2. TWO 10/100 ETHERNET NETWORK JACKS SHALL BE INSTALLED AT EACH LOCATION OF A PRIMARY CONTROLLER FOR THE PURPOSE OF CONNECTING THE PRIMARY CONTROLLER AND THE ADDITIONAL JACK FOR THE PURPOSE OF A LOCAL PROGRAMMING OPERATOR LAPTOP INTERFACE TO THE SYSTEM FOR THE PURPOSE OF COMMISSIONING AND TROUBLESHOOTING.
3. FLOOR LEVEL NETWORKS SHALL BE A RS-485 TWISTED PAIR SHIELDED NETWORK USING EITHER AN APPROVED VENDOR SPECIFIC PROPRIETARY PROTOCOL OR CAN BUSNET MIST (MASTERSLAVE/TOKEN PASSING) PROTOCOL. THE NUMBER OF FLOOR LEVEL NETWORKS AND NUMBER OF NODES SHALL NOT EXCEED VENDOR SPECIFIC REQUIREMENTS FOR THEIR SYSTEMS.
4. APPLICATION SPECIFIC DEVICES ARE TYPICALLY VARIABLE REFRIGERANT FREQUENCY UNITS (VRF), CABINET UNIT HEATERS (CUH), BASEBOARD HEATERS (BB), OR SECONDARY CONTROLS SUPPORTED OFF THE FLOOR LEVEL NETWORK COMMUNICATION BUS.
5. EACH SDC AND ASD CONTROLLER SHALL BE REQUIRED A PROGRAMMING OPERATOR INTERFACE PORT FOR THE LOCAL CONNECTION OF A LAPTOP SERVICE TOOL TO ALLOW FIELD PROGRAMMING OR OPERATION OF THE SYSTEMS LOCAL BY AN OPERATOR OR PROGRAMMER.



6 FACTORY VFD WIRING TO FIELD WIRING TERMINAL STRIP
NOT TO SCALE

SYMBOL		CONTROLS SYMBOLS	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
 AI POINT NAME	DDC POINT DESCRIPTOR WITH NAME AI - ANALOG INPUT DI - DIGITAL INPUT AO - ANALOG OUTPUT DO - DIGITAL OUTPUT	 AHU OR EQ. NO. ZONE NUMBER	ZONE DESCRIPTOR
 POINT NAME AO		 480V 120V	CONTROL TRANSFORMER
	TEMPERATURE SENSOR WITH AVERAGING ELEMENT	 (MS) (EP1) (S)	RELAY COILS
	TEMPERATURE SENSOR WITH SINGLE POINT ELEMENT		FUSE
	TEMPERATURE SENSOR WITH PIPE WELL	 OL	THERMAL OVERLOAD
	HUMIDITY SENSOR	 NO NC	NORMALLY OPEN AND NORMALLY CLOSED CONTACTS
	LOW TEMPERATURE SWITCH (FREEZE STAT)	 HAND AUTO OFF	HAND-OFF-AUTO SELECTOR SWITCH
	HIGH TEMPERATURE SWITCH (FIRESTAT)		WIRING DESIGNATION (NO. OF HATCHES INDICATES NO. OF CONDUCTORS)
	SMOKE DETECTOR		WIRING CONNECTION
	DIFFERENTIAL PRESSURE SWITCH	 ON-OFF	ON-OFF SELECTOR SWITCH
	MAIN AIR SUPPLY	 (T)	ROOM TEMPERATURE SENSOR AS SHOWN ON FLOOR PLANS
	CURRENT TO PNEUMATIC TRANSDUCER	 (H)	ROOM HUMIDITY SENSOR AS SHOWN ON FLOOR PLANS
	TWO WAY CONTROL VALVE	 (PS)	PRESSURE SENSOR AS SHOWN ON FLOOR PLANS
	STARTER		THREE WAY CONTROL VALVE

LEGAT ARCHITECTS
Design with a Difference

MOLINE-COAL
VALLEY SCHOOL
DISTRICT

2025 CONTROLLED ENTRY IMPROVEMENTS

ARCHITECT

Legat Architects, Inc.

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Moline, IL 61265
P: 309.517.5536
www.legat.com

CIVIL ENGINEER

RTM Engineering

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STRUCTURAL ENGINEER

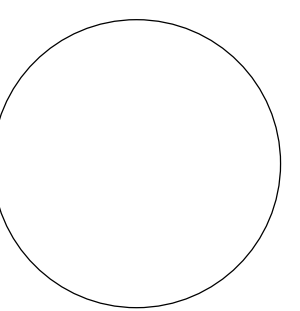
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Rock Island, IL 61201
P: 309.788.0673
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MEP/FP ENGINEER

RTM Engineering

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www.rtmec.com



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[illegible]

PROJECT NUMBER	225017.00
DATE OF ISSUE	02.07.2025
DRAWN BY	BMA
REVIEWED BY	MB

CONTROLS LEGEND

M-200

BID DOCUMENTS

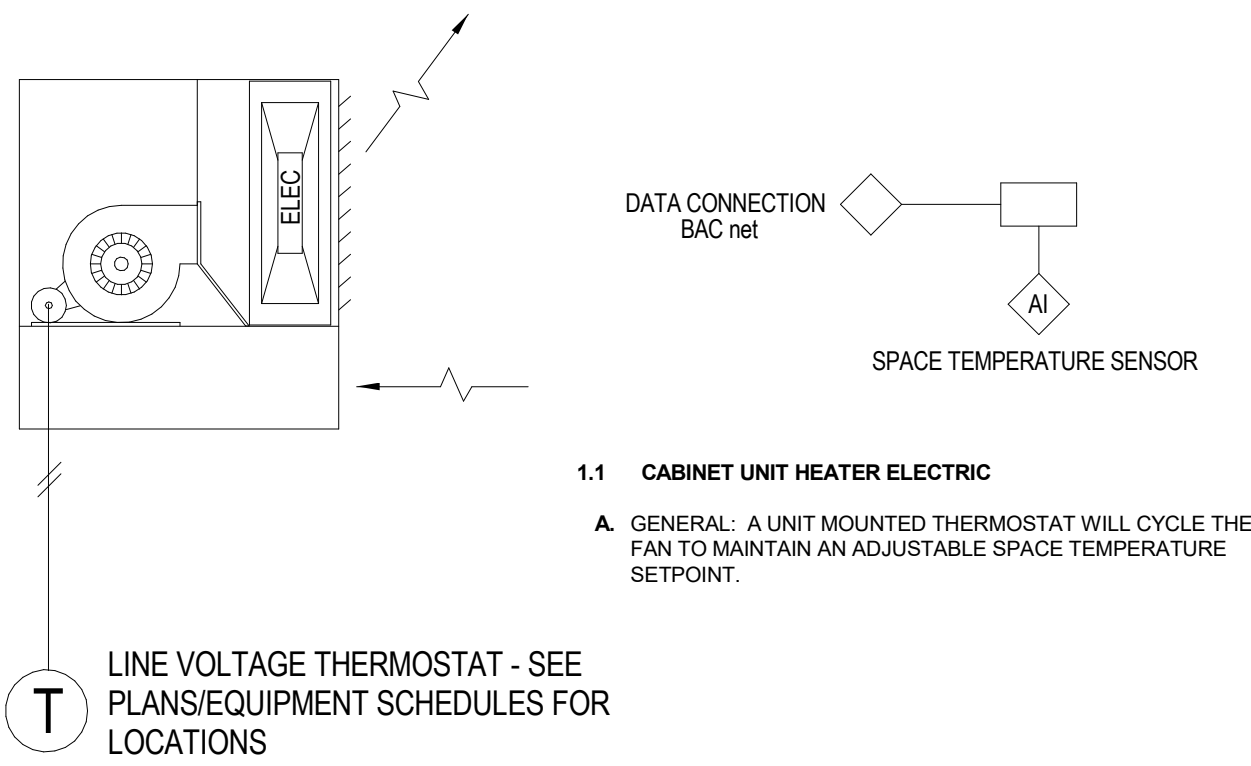
Sequence of Operations
EUH Flow

Occupied Mode:
During occupied periods the supply fan shall run continuously . The electric heat shall stage to maintain the active space temperature setpoint.

Unoccupied Mode:
When the space temperature is below the unoccupied heating setpoint of 60.0 deg. F (adj.) the supply fan shall start and the electric heat shall energize. When the space temperature rises above the unoccupied heating setpoint of 60.0 deg. F (adj.) plus the unoccupied differential of 2.0 deg. F (adj.) the supply fan shall stop and the electric heat shall deenergize.

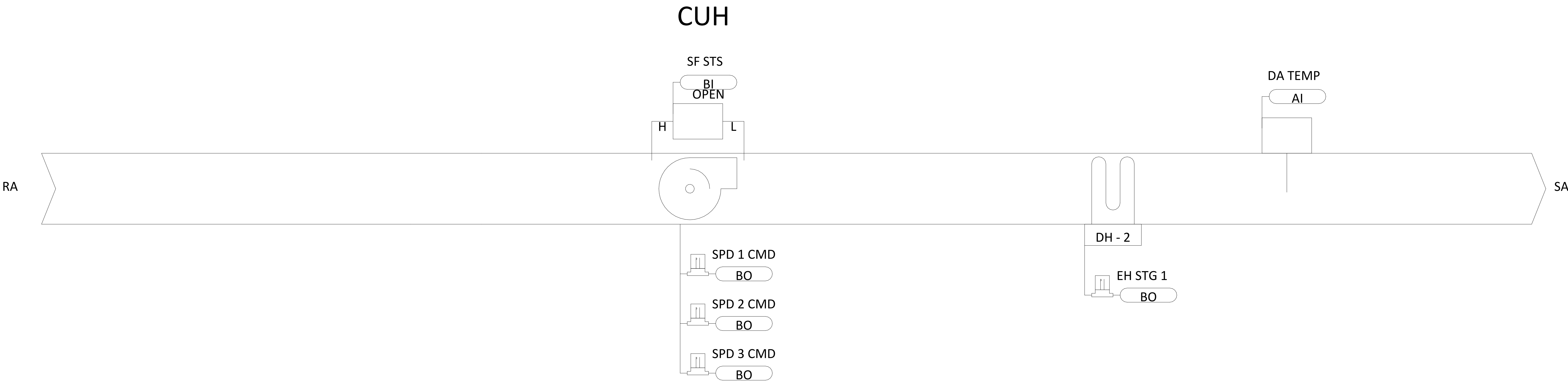
Space Temperature Control:
Cascade zone control shall be used in the occupied, occupied bypass, and occupied standby modes. It maintains zone temperature by controlling the discharge air temperature to control the zone temperature while minimizing the fan speed. The space temperature shall be maintained at the occupied heating setpoint of 71.0 deg. F (adj.).

Supply Fan Operation:
The supply fan shall run continuously during occupied mode. When the controller transitions to the occupied mode, the supply fan shall start at high speed before transitioning to continuous operation at the selected speed. The supply fan status shall be monitored by a differential pressure switch. A manual reset shall be required to restart the fan.

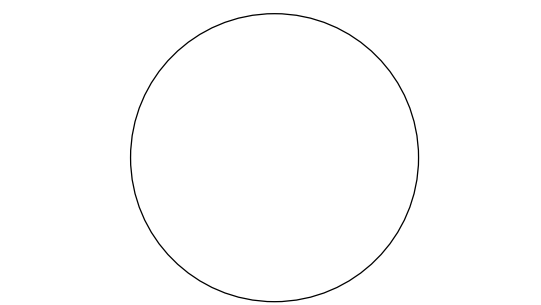


TYPICAL ELEC.CABINET UNIT HEATER

CABINET HEATER (ELECTRIC) CONTROL DIAGRAM



EUH TYPICAL - SYSTEM POINTS LIST



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NO	DESCRIPTION	DATE

PROJECT NUMBER 225017.00
DATE OF ISSUE 02.07.2025
DRAWN BY BMA
REVIEWED BY MB

ELECTRIC UNIT HEATER
CONTROL DIAGRAM

INTERNATIONAL MECHANICAL CODE 2018 VENTILATION SCHEDULE - JOHN DEERE - ALTERNATIVE BID													
ROOM NUMBER	ROOM NAME	FLOOR AREA (SF)	OCCUPANCY CLASSIFICATION	DEFAULT OCCUPANCY (#/1000 SF)	# OF PEOPLE	IMC 2018 REQUIREMENTS				ACTUAL		EQUIPMENT	
						OA (CFM/PERSON)	OA (CFM/SF)	OA (CFM)	EA (CFM)	SUPPLY (CFM)	OA (CFM)	EXHAUST (CFM)	SUPPLY FAN
103	VESTIBULE	64 SF	VESTIBULE	0	0	0	0.00	0	0	0 CFM	0	0 CFM	CUH 103
104	VESTIBULE	64 SF	VESTIBULE	0	0	0	0.00	0	0	0 CFM	0	0 CFM	CUH 104
105	INTERIOR VESTIBULE	121 SF	VESTIBULE	0	0	0	0.00	0	0	0 CFM	0	0 CFM	EXISTING
106	SECURITY OFFICE	26 SF	OFFICE SPACES	5	1	5	0.06	7	0	50 CFM	10	0 CFM	EWI 106

ELECTRIC HEATER SCHEDULE - JOHN DEERE - ALTERNATIVE BID													
TAG	LOCATION	AIRFLOW (CFM)	HEATING CAPACITY (KW)	ELECTRICAL DATA				DIMENSIONS (IN)				WEIGHT (LBS)	REMARKS
				MCA	MOC	V	PH	HZ	LENGTH	WIDTH	HEIGHT		
CUH 103	VESTIBULE 103	250	2.0	9	15	208	3	60	35	10	26	120	QMARK CU935 1,3-5
CUH 104	VESTIBULE 104	250	2.0	9	15	208	3	60	35	10	26	120	QMARK CU935 1,3-5
EWI 106	SECURITY OFFICE 106	150	1.5	13	20	120	1	60	16	10	19	25	QMARK AWH3150 2-5

REMARKS:

- UNIT TO BE SURFACE MOUNTED.
- UNIT TO BE RECESSED WALL MOUNTED.
- UNIT TO BE PROVIDED WITH INTERNAL THERMOSTAT.
- COLOR TO BE DETERMINED AND APPROVED BY AOR.
- UNIT TO BE PROVIDED WITH FACTORY INSTALLED DISCONNECT SWITCH.

GRILLE, REGISTERS, AND DIFFUSER SCHEDULE - JOHN DEERE - ALTERNATIVE BID													
TAG	AIR STREAM	MOUNTING TYPE	DIA.	INLET SIZE (IN)				FRAME SIZE				MANUFACTURER	REMARKS
				HEIGHT	WIDTH	HEIGHT	WIDTH	HEIGHT	WIDTH	HEIGHT	WIDTH		
A	SUPPLY	WALL		6"	6"	0'-7 1/2"	0'-7 1/2"					TITUS 301FL	ALL

REMARKS:

- 4-WAY THROW UNLESS OTHERWISE NOTED.
- PROVIDE ADAPTOR BOOTS AS REQUIRED.
- PROVIDE WITH MANUAL VOLUME BALANCE DAMPER.
- COORDINATE FRAME STYLE WITH ARCHITECTURAL PLANS.
- REFER TO PLAN FOR FACE AND DUCT SIZE.

INTERNATIONAL MECHANICAL CODE 2018 VENTILATION SCHEDULE - JOHN DEERE													
ROOM NUMBER	ROOM NAME	FLOOR AREA (SF)	OCCUPANCY CLASSIFICATION	DEFAULT OCCUPANCY (#/1000 SF)	# OF PEOPLE	IMC 2018 REQUIREMENTS				ACTUAL		EQUIPMENT	
						OA (CFM/PERSON)	OA (CFM/SF)	OA (CFM)	EA (CFM)	SUPPLY (CFM)	OA (CFM)	EXHAUST (CFM)	SUPPLY FAN
100	VESTIBULE	164 SF	VESTIBULE	0	0	0	0.00	0	0	0 CFM	0	0 CFM	CUH 100A B
101	INTERIOR VESTIBULE	121 SF	VESTIBULE	0	0	0	0.00	0	0	0 CFM	0	0 CFM	EXISTING

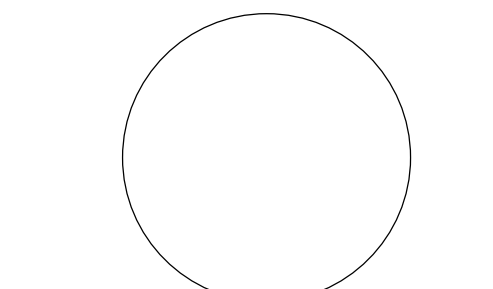
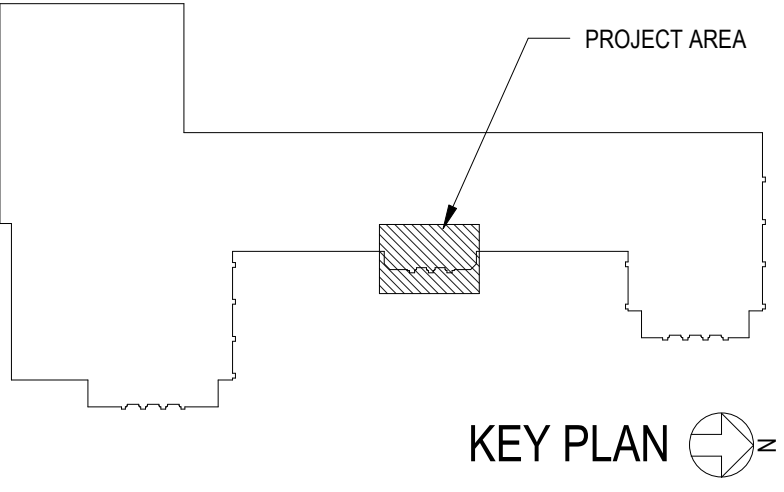
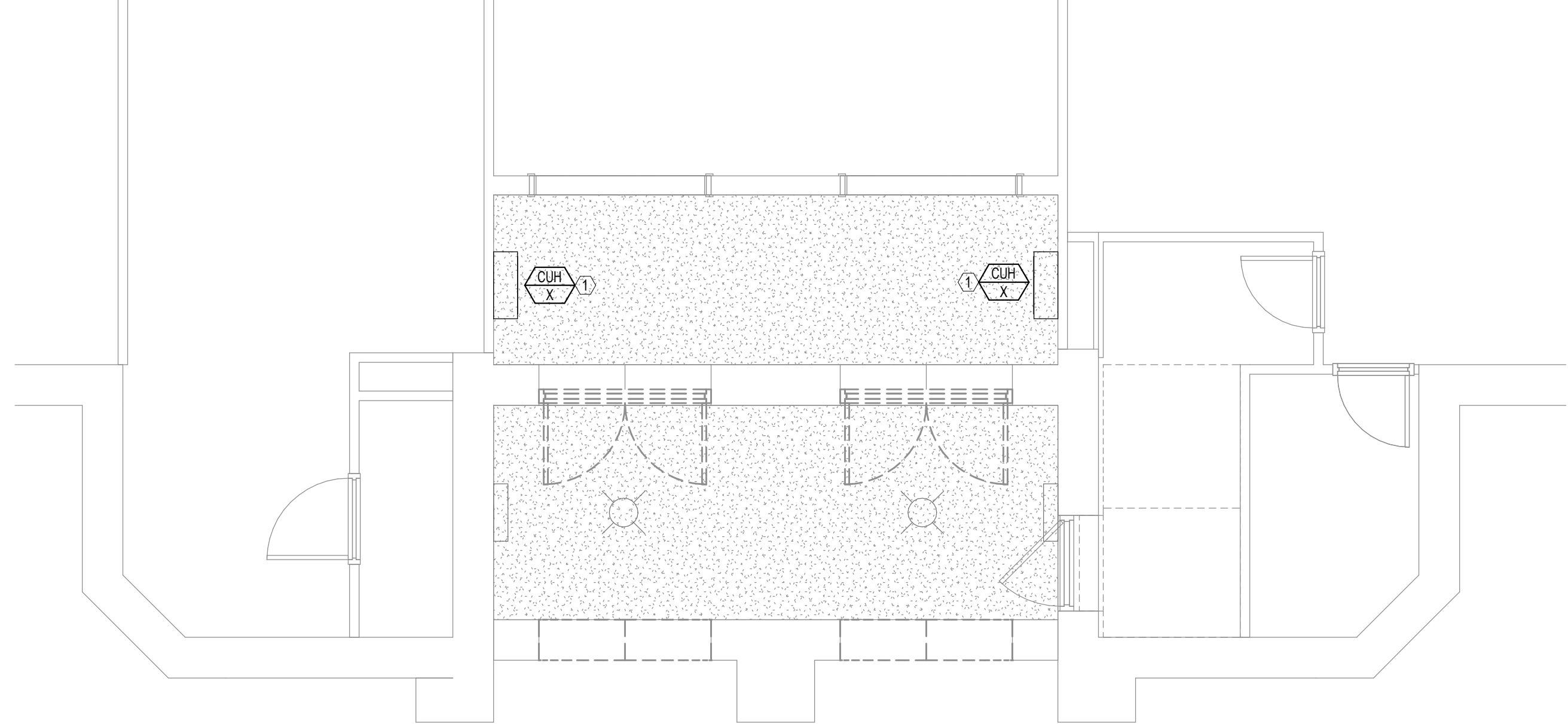
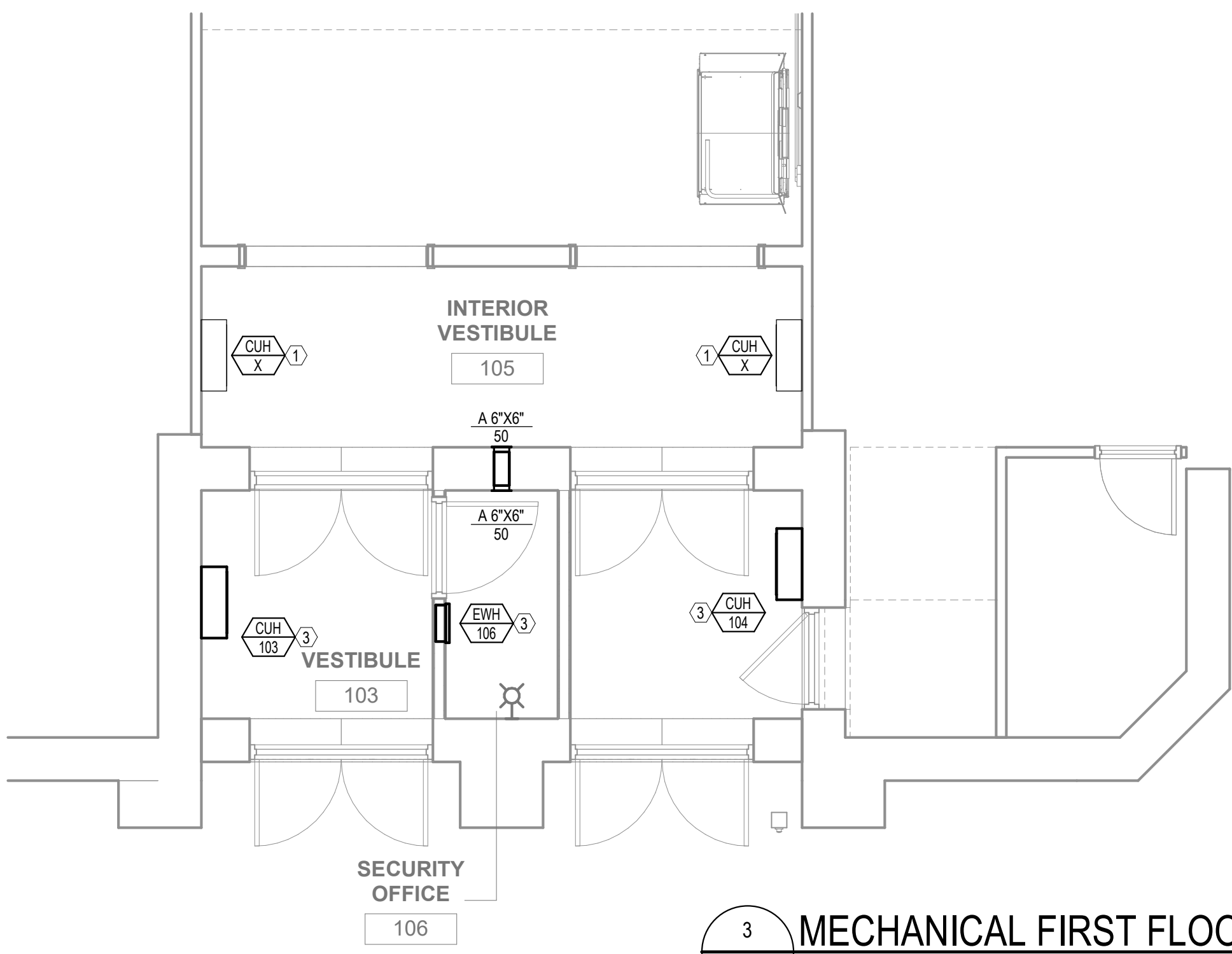
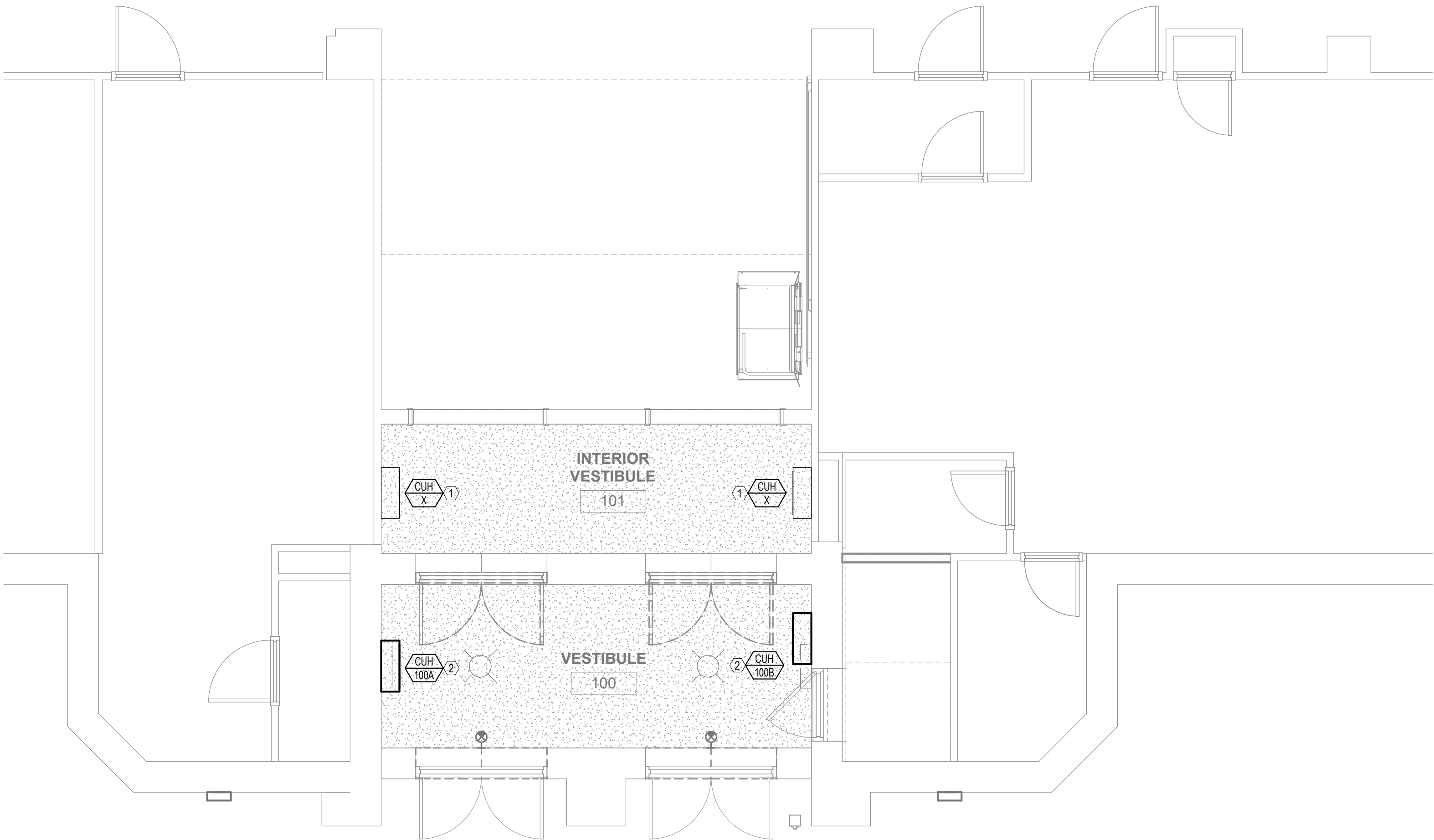
ELECTRIC HEATER SCHEDULE - JOHN DEERE													
TAG	LOCATION	AIRFLOW (CFM)	HEATING CAPACITY (KW)	ELECTRICAL DATA				DIMENSIONS (IN)				WEIGHT (LBS)	REMARKS
				MCA	MOC	V	PH	HZ	LENGTH	WIDTH	HEIGHT		
CUH 100A	VESTIBULE 100	250	2.0	9	15	208	3	60	35	10	26	120	QMARK CU935 ALL
CUH 100B	VESTIBULE 100	250	2.0	9	15	208	3	60	35	10	26	120	QMARK CU935 ALL

REMARKS:

- UNIT TO BE WALL MOUNTED.
- UNIT TO BE PROVIDED WITH INTERNAL THERMOSTAT.
- COLOR TO BE DETERMINED AND APPROVED BY AOR.
- UNIT TO BE PROVIDED WITH FACTORY INSTALLED DISCONNECT SWITCH.

- GENERAL NOTES:
- DRAWINGS ARE TO BE REVIEWED IN FULL DETAIL WITH SPECIFICATIONS. IN THE EVENT THAT THERE IS CROSS DIRECTION, A REQUEST FOR INFORMATION (RFI) IS TO BE SENT TO THE ENGINEER TO RECORD. AS STATED IN SPECIFICATION DIV 1, THE HIGHER COST OF THE TWO OPTIONS IS TO BE TAKEN AS THE OPTION WHILE AT BID UNLESS CLARIFICATION FROM RFI.
 - ALL MECHANICAL SHEETS SHALL BE REVIEWED AND COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
 - REFER TO SHEET M-000 FOR DUCT AND PIPE INSULATION.
 - ALL PLENUM MATERIALS SHALL HAVE A FLAME SPREAD INDEX NOT GREATER THAN 25 AND A SMOKE DEVELOPED INDEX NOT GREATER THAN 50 WHEN TESTED WITH ASTM 384 OR UL 723. PVC VENT PIPING PLENUM SHALL BE FIRE WRAPPED OR MEET PREVIOUS STATEMENT

- KEYNOTES
- EXISTING UNIT HEATER TO REMAIN.
 - SEE CONTROL SHEET M-201 FOR MORE INFORMATION.
 - ALTERNATIVE BID - SEE CONTROL SHEET M-201 FOR MORE INFORMATION.



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PROJECT NUMBER 225017.00
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DRAWN BY BMA
REVIEWED BY MB

MECHANICAL
DEMOLITION & NEW
WORK PLANS - JOHN
DEERE

INTERNATIONAL MECHANICAL CODE 2021 VENTILATION SCHEDULE - WILSON - ALTERNATIVE												
ROOM NUMBER	ROOM NAME	FLOOR AREA (SF)	OCCUPANCY CLASSIFICATION	DEFAULT OCCUPANCY (#/1000 SF)	# OF PEOPLE	IMC 2012 REQUIREMENTS			ACTUAL		EQUIPMENT	
						OA (CFM/PERSON)	OA (CFM/SF)	EA (CFM)	SUPPLY (CFM)	OA (CFM)	EXHAUST (CFM)	EXHAUST FAN
100	VESTIBULE	180 SF	VESTIBULE	0	0	0	0.00	0	0 CFM	0	0 CFM	CUH 100C.D
101	OFFICE	17 SF	OFFICE SPACES	5	1	5	0.06	6	50 CFM	10	0 CFM	CUH 101
B145	ENTRANCE	2407 SF	CORRIDORS	0	0	0	0.06	144	1700 CFM	340	0 CFM	EXISTING
TOTAL								150	0	1750 CFM	350	0 CFM

ELECTRIC UNIT HEATER SCHEDULE - WILSON - ALTERNATIVE BID													
TAG	LOCATION	AIRFLOW (CFM)	HEATING CAPACITY (KW)	ELECTRICAL DATA						WEIGHT (LBS)	MANUFACTURER	MODEL NO.	REMARKS
				MCA	MOCP	V	PH	HZ					
CUH 100C	VESTIBULE 100	150	2.0	10	15	208	1	60	23	QMARK	EFF4008	ALL	
CUH 100D	VESTIBULE 100	150	2.0	10	15	208	1	60	23	QMARK	EFF4008	ALL	
CUH 101	VESTIBULE 100	150	1.5	13	20	120	1	60	23	QMARK	EFF1500	ALL	

- REMARKS:
- UNIT TO BE RECESSED IN CEILING.
 - UNIT TO BE PROVIDED WITH INTERNAL THERMOSTAT.
 - COLOR TO BE DETERMINED AND APPROVED BY AOR.
 - UNIT TO BE PROVIDE WITH FACTORY INSTALLED DISCONNECT SWITCH.

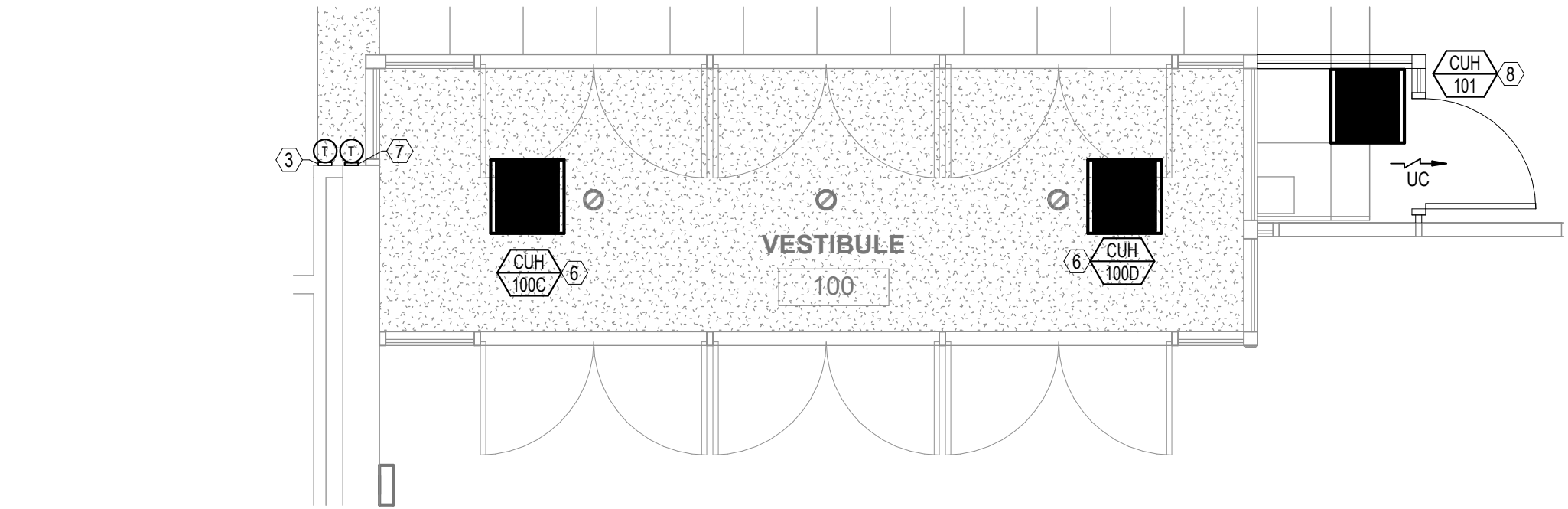
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ROOM NUMBER	ROOM NAME	FLOOR AREA (SF)	OCCUPANCY CLASSIFICATION	DEFAULT OCCUPANCY (#/1000 SF)	# OF PEOPLE	IMC 2012 REQUIREMENTS			ACTUAL		EQUIPMENT	
						OA (CFM/PERSON)	OA (CFM/SF)	EA (CFM)	SUPPLY (CFM)	OA (CFM)	EXHAUST (CFM)	EXHAUST FAN
100	VESTIBULE	180 SF	VESTIBULE	0	0	0	0.00	0	0 CFM	0	0 CFM	CUH 100C.D
B145	ENTRANCE	2407 SF	CORRIDORS	0	0	0	0.06	144	1700 CFM	340	0 CFM	EXISTING
TOTAL								144	0	1700 CFM	340	0 CFM

ELECTRIC UNIT HEATER SCHEDULE - WILSON												
TAG	LOCATION	AIRFLOW (CFM)	HEATING CAPACITY		ELECTRICAL DATA				WEIGHT (LBS)	MANUFACTURER	MODEL NO.	REMARKS
			(KW)		MCA	MOCP	V	PH				
CUH 100C	VESTIBULE 100	150	2.0	10	15	208	1	60	23	QMARK	EFF4008	ALL
CUH 100D	VESTIBULE 100	150	2.0	10	15	208	1	60	23	QMARK	EFF4008	ALL

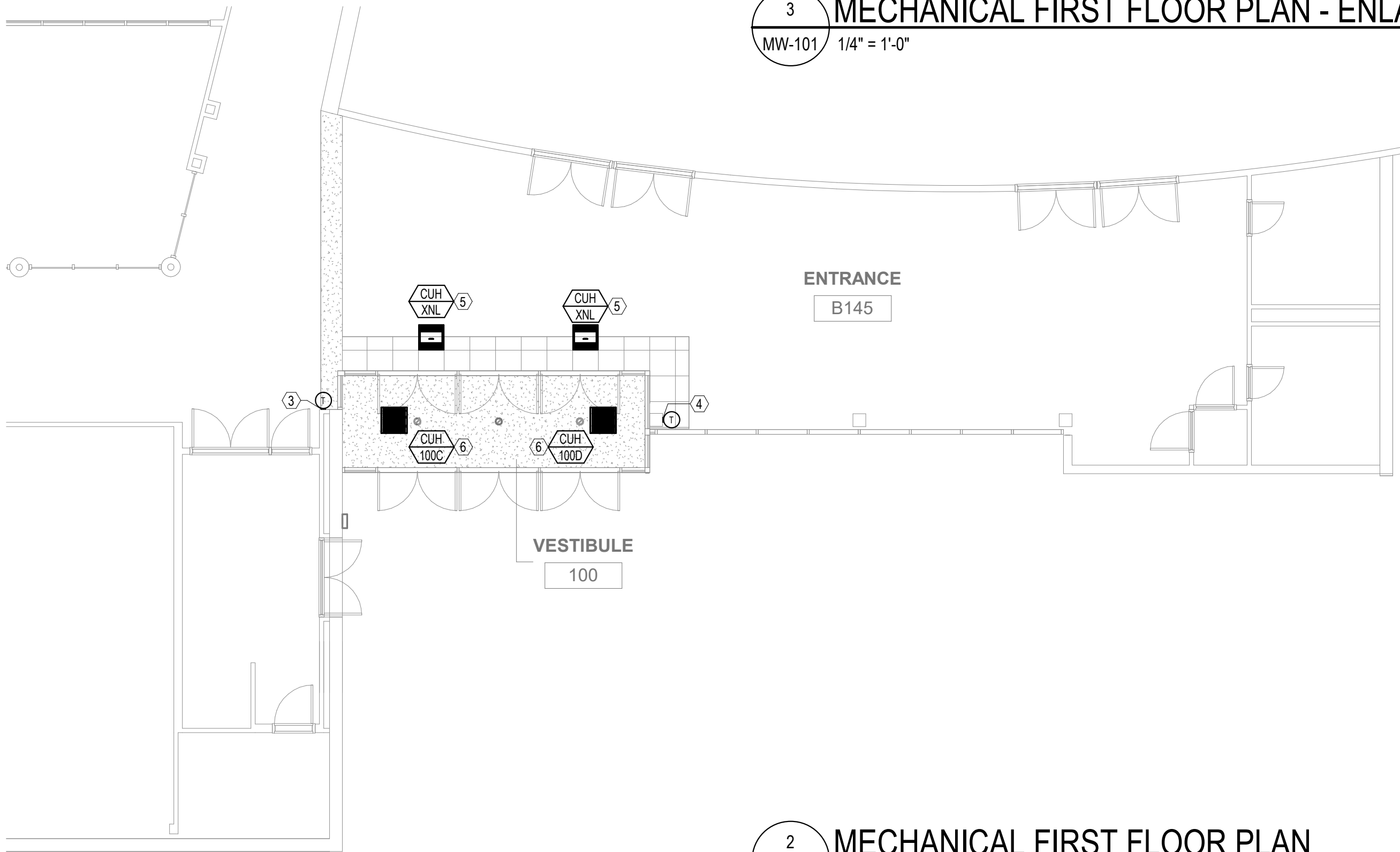
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 - REFER TO SHEET M-000 FOR DUCT AND PIPE INSULATION.
 - ALL PLENUM MATERIALS SHALL HAVE A FLAME SPREAD INDEX NOT GREATER THAN 25 AND A SMOKE DEVELOPED INDEX NOT GREATER THAN 50 WHEN TESTED WITH ASTM 384 OR UL 723. PVC VENT PIPING PLENUM SHALL BE FIRE WRAPPED OR MEET PREVIOUS STATEMENT.

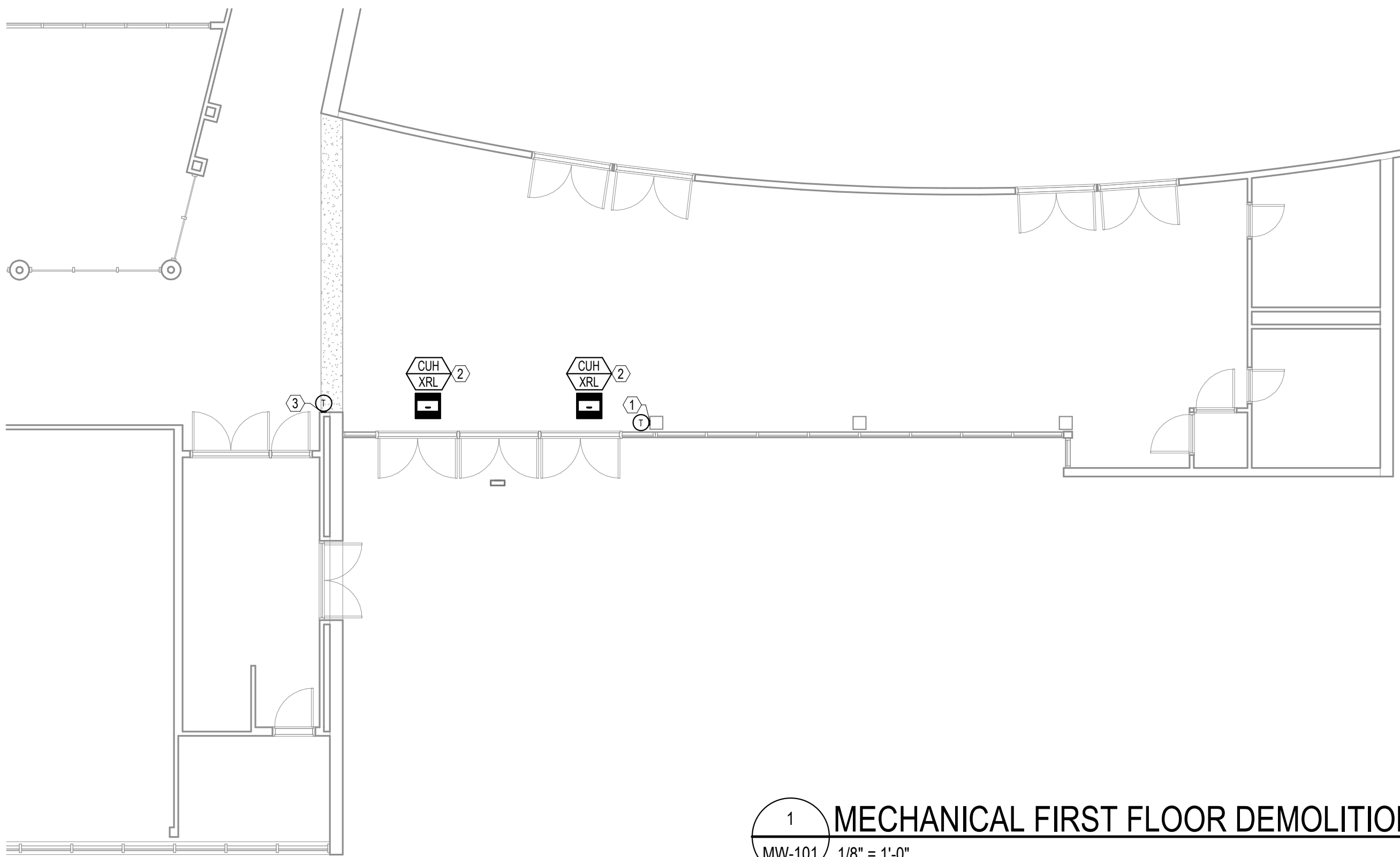
- # KEYNOTES
- EXISTING THERMOSTAT TO BE RELOCATED TO NEW LOCATION.
 - EXISTING UNIT HEATER TO BE RELOCATED TO NEW LOCATION.
 - EXISTING THERMOSTAT TO REMAIN.
 - EXISTING THERMOSTAT ALONG WITH EXISTING WIRING TO BE RELOCATED TO NEW LOCATION.
 - EXISTING UNIT HEATER TO BE RELOCATED TO NEW LOCATION. EXTEND AND RECONNECT DDC CONTROL WIRING.
 - SEE CONTROL SHEET M-201 FOR MORE INFORMATION.
 - ALTERNATIVE BID - EXISTING THERMOSTAT ALONG WITH EXISTING WIRING TO BE RELOCATED TO NEW LOCATION.
 - ALTERNATIVE BID - SEE CONTROL SHEET M-201 FOR MORE INFORMATION.



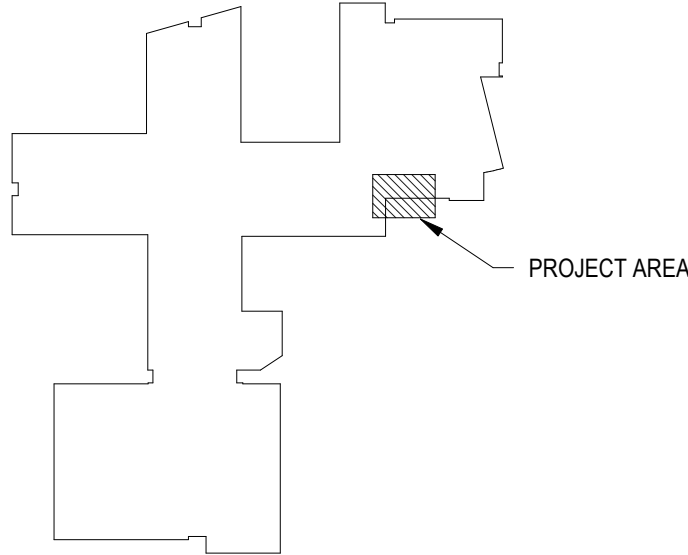
3 MECHANICAL FIRST FLOOR PLAN - ENLARGED W/ ALTERNATE
MW-101 / 1/4" = 1'-0"



2 MECHANICAL FIRST FLOOR PLAN
MW-101 / 1/8" = 1'-0"



1 MECHANICAL FIRST FLOOR DEMOLITION PLAN
MW-101 / 1/8" = 1'-0"



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www.legat.com

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RTM Engineering
5137 Ulca Ridge Road
Davenport, IA 52807
P: 563.726.6310
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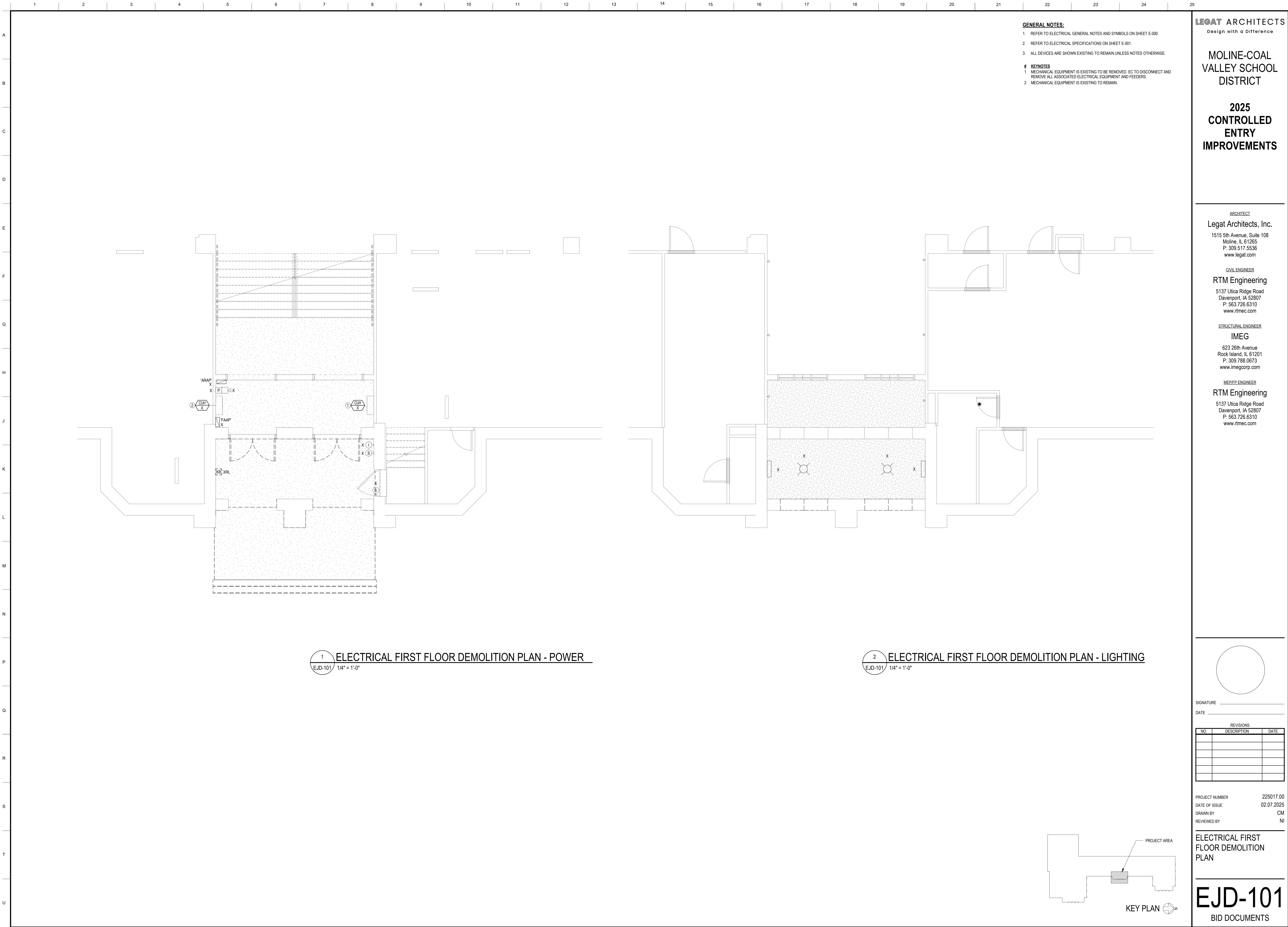
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REVISIONS		
NO	DESCRIPTION	DATE

PROJECT NUMBER 225029.00
DATE OF ISSUE 02.07.2025
DRAWN BY BMA
REVIEWED BY MB

MECHANICAL FIRST FLOOR PLAN - WILSON

MW-101
BID DOCUMENTS



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VALLEY SCHOOL
DISTRICT**

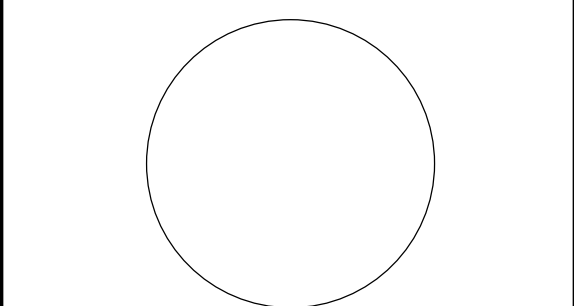
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NO	DESCRIPTION	DATE

PROJECT NUMBER 225017.00
DATE OF ISSUE 02.07.2025
DRAWN BY CM
REVIEWED BY NI

**ELECTRICAL FIRST
FLOOR DEMOLITION
PLAN**

EJD-101
BID DOCUMENTS

GENERAL NOTES:
1. REFER TO ELECTRICAL GENERAL NOTES AND SYMBOLS ON SHEET E-000.
2. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E-001.
3. ALL DEVICES ARE SHOWN EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

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2024 WILSON
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IMPROVEMENTS

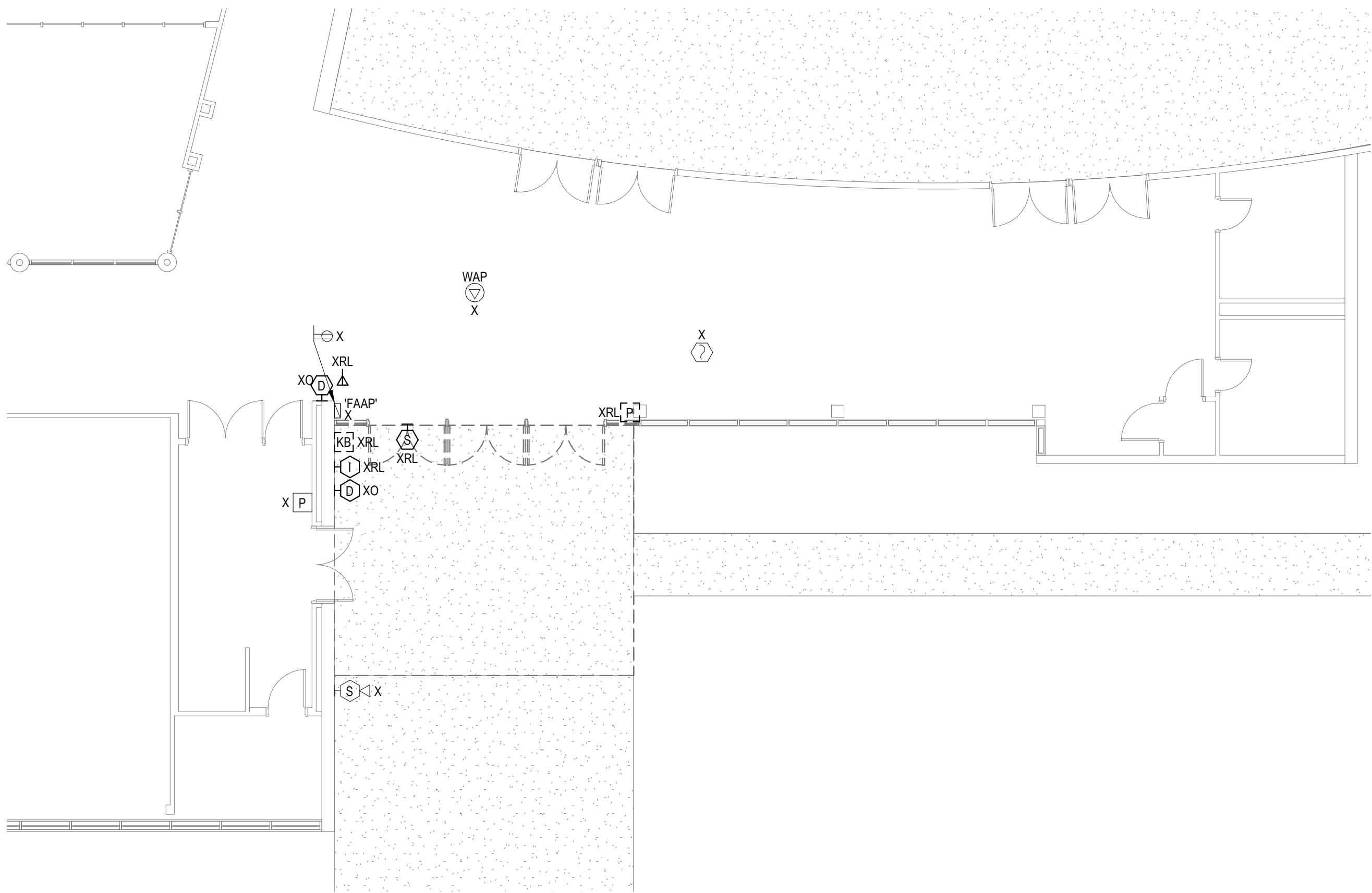
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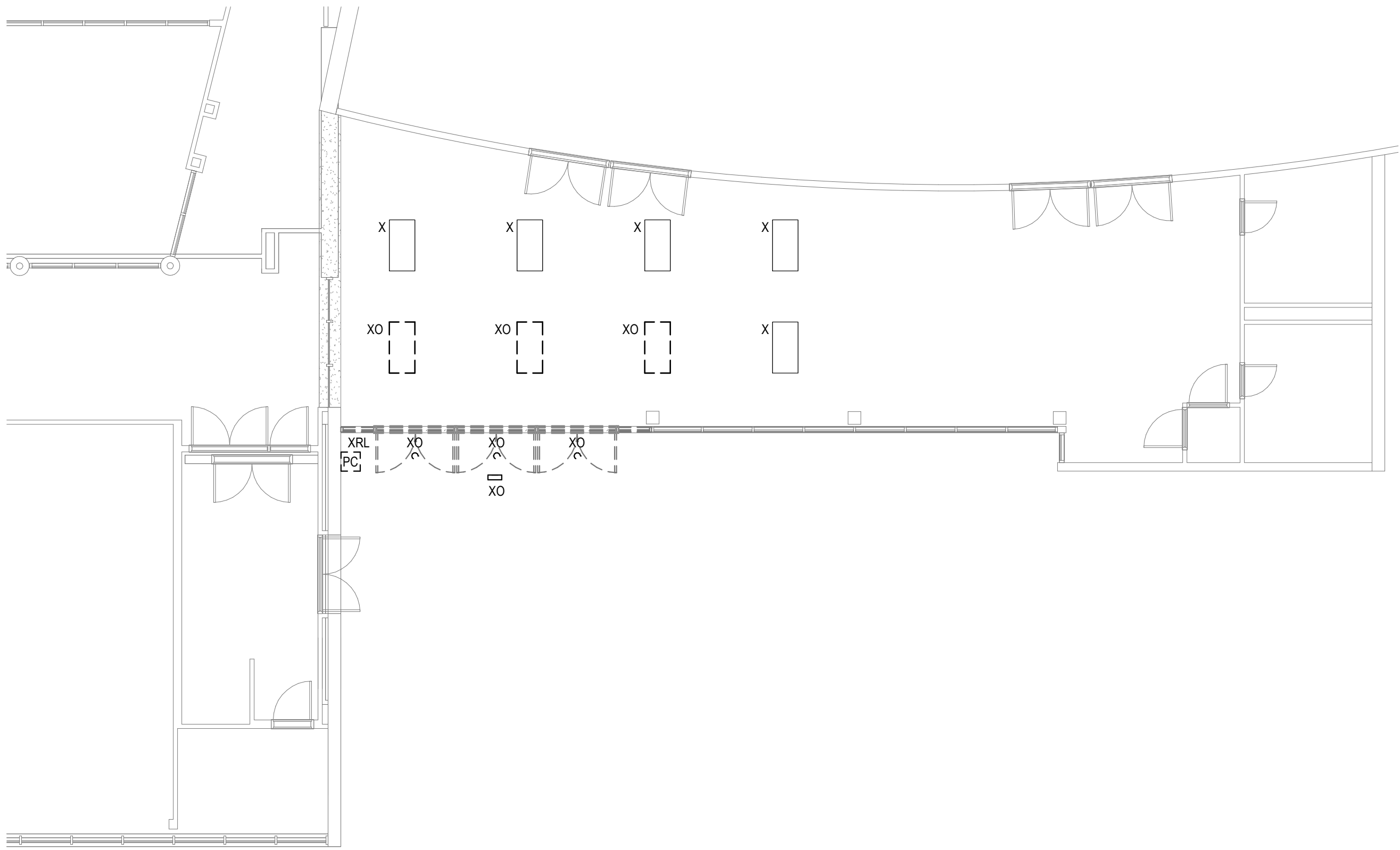
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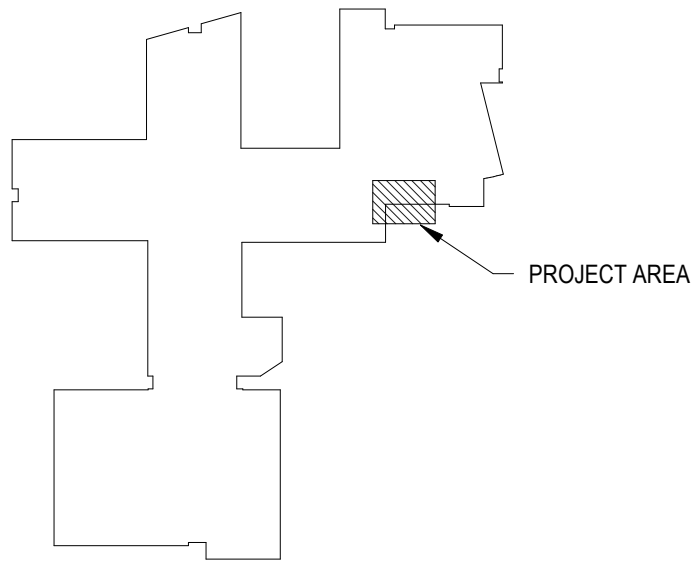
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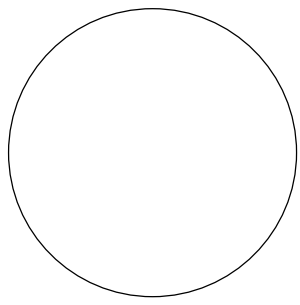
1 ELECTRICAL FIRST FLOOR DEMOLITION PLAN
EWD-101/ 1/8" = 1'-0"



2 ELECTRICAL FIRST FLOOR DEMOLITION PLAN - LIGHTING
EWD-101/ 1/8" = 1'-0"



KEY PLAN


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DATE _____

REVISIONS		
NO	DESCRIPTION	DATE

PROJECT NUMBER 225029.00
DATE OF ISSUE 02.07.2025
DRAWN BY CM
REVIEWED BY NI

ELECTRICAL FIRST
FLOOR DEMOLITION
PLAN

EWD-101
BID DOCUMENTS

E-000
BID DOCUMENTS

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PART 1 - GENERAL

1.1 General Conditions

- A. The General, Special, and Other Conditions of the Architectural, Mechanical and Vendor documents shall be considered an integral part of these Electrical Specifications.
- B. Reference to "Contractor" in this specification shall mean "Electrical Contractor (EC)", unless otherwise noted. All work specified herein is the responsibility of the Electrical Contractor unless specifically noted otherwise.

1.2 Scope of Work

- A. Furnish all labor, materials, equipment, tools, and other items necessary for, or incidental to, installation of a complete electrical system as required for this project.
- B. Also include other work and miscellaneous equipment not specifically mentioned, but reasonably inferred, that are required for a fully functional and tested system.

1.3 Drawings and Documents

- A. The Drawings and Specifications form a complete set of plans for the electrical work for this project. What is required by either shall be as binding as if required by both. In the event the Drawings and Specifications are in conflict, the greater requirement or cost shall be included in bid, or if time, a clarification will be issued.
- B. Bidders shall examine and include all other trade and equipment Vendor Drawings and Specifications to avoid omissions, duplications, and to insure complete installation of all work for electrical.
- C. The Electrical Drawings are diagrammatic and are intended to show approximate location only. Placement of electrical equipment and devices shall not interfere with locations or clearances of other trades' materials or equipment. Coordinate the placement of electrical devices with Architectural plans, elevations and details.
- D. The direct routing of conduits and wiring is not assured. Expect requirements shall be governed by the conditions of the project site. Extra lengths of wiring or the addition of pull or junction boxes, etc., necessitated by such conditions, shall be included in the Bid.

1.4 Codes, Inspections, and Fees

- A. The completed electrical installation shall comply with the latest edition of the National Electrical Code as well as applicable Federal, State, and Local Codes, Regulations, and standards including interpretations by appropriate Authorities Having Jurisdiction. Where the Drawings and Specifications call for workmanship or materials in excess of code or regulatory requirements, the Drawings and Specifications shall govern.
- B. The work specified herein shall be subject to inspection and approval by authorized representatives of the National Board of Fire Underwriters, State and Local Authorities Having Jurisdiction, and the Engineer. The Contractor shall make the necessary arrangements to have the electrical work inspected by appropriate inspectors(s) and shall provide two (2) copies of final signed "Certificate of Inspection" to the Owner.
- C. Obtain and pay for all licenses, permits, fees and charges for all work installed by the Contractor. Contractor is responsible to pay all fees and charges levied by the Electric Utility Company for connection to electric services.

1.5 Job Site Safety

- A. The Contractor is solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of work. This requirement will apply continuously and not be limited to normal working hours.
- B. No act, drawing review or construction review by the Owner, the Engineers or their Consultants, is intended to include review of the adequacy of the Contractor's safety measures in, on, or near the construction site.

1.6 Conditions at the Site

- A. Examine the site and be familiar with all existing building conditions and limitations prior to submitting bid. No extra payment will be allowed for work required because of these conditions, or if information is visible or readily ascertainable, by inspection of existing conditions.
- B. Any discrepancies from these documents should be reported to the Architect/Engineer prior to bid.

1.7 Workmanship and Contractor Qualifications

- A. Install electrical equipment and materials in a neat and workmanlike manner by persons experienced and skilled in the trade. Only the best quality workmanship will be accepted. Haphazard or poor installation will be cause for rejection of work. All exposed components of the electrical systems shall be square and true with building lines and surfaces, and shall be in accordance with the following:
- B. Contractor shall be licensed in the state in which the project is located.

1.8 Coordination of Work

- A. Give careful consideration to the work of the general, mechanical and all other contractors/subcontractors on the project. Organize and phase the electrical work so that it will not interfere with the work of other trades.
- B. Drawings and Specifications for other trades and general construction drawings shall be consulted for coordination information, details, dimensions, etc. Coordinate all shafts, chases, furred spaces, suspended ceiling, locations of equipment, etc.
- C. The location of all outlets, wiring, and equipment shall be verified. The electrical requirements of any equipment shall be verified with actual equipment or approved Shop Drawings prior to any rough in work. Notify Engineer of any discrepancies.
- D. Dimensions given on the Drawings shall take precedence over scaled dimensions. Dimensions, whether calculated or scaled, shall be verified in the field.
- E. Check actual job conditions before fabricating work. Coordinate with other trades to avoid rework due to field conditions. Changes or additions, subject to additional compensation, which are made without written authorization and in agreed prices, shall be at the Contractor's risk and expense.
- F. Coordinate routing of all conduit and wire concealed in walls, soffits or ceilings provided by the General Contractor. Field coordinate all work to coordinate installations not coordinated or specifically approved by the Architect and Engineer.
- G. Verify items such as door swings, window locations, casework, etc., before installing any electrical equipment or devices.
- H. Make minor adjustments to work where requested by the Owner or the Owner's representative when adjustments are required for proper operation and within the intent of the contract.

1.9 Materials and Equipment

- A. Unless otherwise specified, all material and equipment shall be new and manufactured by approved or listed manufacturers. All materials and equipment shall meet the requirements of all governing codes.
- B. All material and equipment shall be listed and labeled by Underwriters Laboratories, Inc. (UL), as conforming to its standards in every case where such a standard has been established for that type of material or equipment.
- C. Obtain written approval within 7 days prior to bid, to use any proposed substitute material or equipment before contacting to purchase such substitute. The Owner reserves the right to require the removal of any material or equipment which does not have this written approval and which does not comply with the Specifications, regardless of the state of installation of such equipment.
- D. Where equipment supplied by the Contractor has characteristics other than as specified herein, the Contractor shall, at no additional cost to the Owner, remove and replace the electrical work necessitated by the substituted product.

1.10 Demolition

- A. Where electrical work to remain is damaged or disturbed in the course of the work, remove damaged portions and install new products of equal capacity, quality, and functionality.
- B. Accessible work indicated to be demolished: Remove exposed electrical installation in its entirety.
- C. Abandoned work: Cut and remove buried raceway and wiring indicated to be abandoned in place 2 inches below the surface of adjacent construction. Cap and patch surface to match existing finish.
- D. Removal: Remove demolished material from the project site.
- E. Temporary disconnection: Remove, store, clean, re-install, reconnect, and make operational components indicated for relocation.

1.11 Cutting and Patching

- A. Perform all core drilling, cutting and patching necessary for the completion of the electrical work for this project. No structural members shall be disturbed without obtaining written permission of the Engineer.
- B. Any surface which is disturbed in any way by the Contractor shall be repaired and refinished to provide a surface equal in strength, durability, and appearance to the original surface.
- C. Where it is necessary to drill or cut concrete surfaces, the edges shall be sharply defined. Holes shall be made with a rotary drill. Cuts shall be made with a concrete saw unless some other method of making specific cuts is approved by the Engineer.
- D. Penetrations through smoke, fire, hazardous area, or other rated separations shall be fire sealed to preserve the ratings of the separations.
- E. All cutting, drilling, patching, repairing, and refinishing shall be done by persons skilled in appropriate trades.
- F. Clean away all rubbish and litter generated during electrical installation.

1.12 Maintenance Manual and Record Drawings

- A. Furnish the Owner with two (2) printed copies and two (2) digital data DVD's of a manual covering the operation and maintenance of all equipment provided under this contract. The manuals shall be in a 3-ring, loose leaf, heavy duty binder and submitted to the Architect/Engineer for approval. Each manual shall contain the following:
1. Complete manufacturer catalog data, manufacturer's literature, wiring diagrams, detailed operating instructions, and a complete listing of suppliers and distributors where replacement parts and maintenance services are available for all equipment.
 2. Physical description and installation instructions and user's manual and operating instructions.
 3. Replaceable parts list. Include replacement lamps per fixture type.
 4. Inspection certificates, signed by the appropriate inspector, shall be furnished in the maintenance manual.
 5. Manufacturer's warranty.
 6. Data DVD with indexed PDF documents of all the manual content of items 1-5 above.
- B. Markup a set of construction documents as work progresses, to show actual circuit routing with dimensional information, sizes types, etc., equipment location changes, and any other changes or deviations between project work, as built, and the contract documents. Markings shall be neat, legible, and permanent. Upon completion of the work, the Contractor shall transfer applicable markings to second set of documents and provide both sets of record documents to the Owner.

1.13 Clean-Up

- A. Rid the premises of scrap materials, trash and debris both during construction and at

completion of project. Leave the building and surrounding area in a clean and orderly condition.

1.14 Acceptance Demonstration and Training

- A. Perform system start-up, testing and programming prior to Owner's training. Do not schedule demonstrations until systems are completely ready to turn over to the Owner as final.
- B. Demonstrate to the Owner the operation of the electrical installations, including any and all special items installed by EC or installed under EC supervision. The timing of the demonstration will be determined by the Owner upon completion of the work. Properly set automatic time switches to perform scheduling operations in accordance with schedules provided by the Owner's Representative, and demonstrate (using the manufacturer's operating instructions) how to override, test and program intelligent systems.

1.15 Release Program

- A. Provide the Owner with all rebate forms, filled with all applicable project information, for utility or product rebate programs to which the Owner is eligible.

1.16 Guarantees and Warranties

- A. Furnish the Owner with a written guarantee for the period of one (1) year against the failure of any part of the electrical systems installed under the Specifications due to faulty material or workmanship, without any charges, to the Owner. Guarantee period to start upon substantial completion or as specified under general and special conditions. Lamps shall be operable on the start date of, but excluded from, the guarantee.
- B. Assume that any extended warranties to which the Owner is eligible, are passed on to the Owner.

PART 2 - PRODUCTS

2.1 Material Approval

- A. All materials must be new and bear Underwriter's Laboratories (UL) label. Materials that are not covered by UL testing standards shall be tested and approved by an independent testing laboratory or a governmental agency. Material not in accordance with these Specifications may be rejected either before or after installation.

2.2 Conductors and Cables

- A. Electrical conductors shall be building wire, except where other type of wire or cable is specifically indicated.
- B. Building wire conductors shall be soft-drawn annealed copper, having a conductivity of not less than 98% pure copper. Conductor sizes are American Wire Gauge (AWG) or circular mils (CMIL) as follows:
1. #12 AWG and smaller shall be solid copper.
 2. #10 AWG and larger shall be stranded copper.
 3. Branch circuits to be color coded, color impregnated wire.
 4. Conduit type: THHN, THHW, THWN-2, THHN, or THWN-2, color coded, color impregnated wire.
 5. AC, core clad or Romex cables are allowed. Type MC cables with green ground conductor allowed only where noted in Part 3 Execution.
 6. Light fixtures shall not be used as a raceway unless listed and marked as a raceway in accordance with NEC Article 410.64 and as noted in Part 3 - Execution.
 7. Electrical conduit installments must be supported per the NEC and not exceed 10 feet between supports.
 8. Cord Cords and Portable Appliance Connections: Type SO, of proof, hard service cable with stainless-steel, wire-mesh, strain relief device at terminations to suit application.

2.3 Low Voltage Conductors and Cables

- A. UTP cable: Category 6, 100-ohm, four-pair. Listed and Labeled by an NRTL acceptable to Authorities Having Jurisdiction as complying with UL 444 and NFPA 70, UTP Cable Connecting Hardware: IDC type, using modules designed for punch-down cages or tools. Cables shall be terminated with connecting hardware of the same category or higher. Plenum rated.
- B. RS-232 Cable: Plenum rated, Type CMP, two pair; No. 22 AWG, stranded copper, each pair 100 ohms impedance.
- C. RS-485 Cable: Plenum rated, Type CMP, two twisted pair; No. 22 AWG, stranded copper, unshielded.
- D. Coaxial cable for CATV, MATV and DBS:
1. RG-6: 16 AWG, solid, copper-covered steel conductor; gas-injected, foam-PE insulation. Double shielded with 100 percent aluminum-foil shield and 60 percent aluminum braid. Plenum rated, Type CMP. Use where the coaxial cable will be tapped or split.
 2. RG-59 20 AWG, solid, copper-covered steel conductor; gas-injected, foam-PE insulation. Double shielded with 100 percent aluminum-foil shield and 40 percent aluminum braid. Plenum rated, Type CMP. Use for single device or from a tap or splitter.

2.4 Control Circuits

1. Low voltage control cable: twisted pairs #16 AWG with overall shield.
2. Class 1 Control Circuits: Stranded copper, Type THWN or XHHN, in raceway or cable with armor jacket.
3. Class 2 Control Circuits: Stranded copper, Type THWN or XHHN, in raceway, power-limited cable, concealed in building finishes, cable with armor jacket or power-limited tray cable, in cable tray or on hangers.
4. Class 3 Remote-Control and Signal Circuits: Stranded copper, Type TW or Type TF, complying with UL 83.

2.4 Grounding and Bonding

- A. Circuits, metal raceway systems, and all other permanently installed electrical equipment shall be solidly grounded in accordance with the National Electrical Code to form a continuous, permanent and effective grounding system.
- B. Grounding conductor connections shall be made with solderless pressure type fittings. Where welded connections are practical, connections may be made by the use of suitable welding process. All connections shall be made in strict conformance with the manufacturer's recommendations.
- C. To maintain uninterrupted electrical continuity, flexible raceway sections must have conductance equal to that of the system's inflexible raceway. Raceway fittings listed must be such as to ensure existence of a permanent bond. Grounding bushings shall be provided to ground conduits to control center ground. All new equipment shall be grounded to the existing grounding system.
- D. Include a separate bare ground conductor in all flexible metal cable of the same size as phase conductors.
- E. Isolated ground conductors: green colored insulation with continuous yellow stripe.
- F. Bonding interior metal ducts: bond metal air ducts to equipment grounding conductors of associated fans, blowers, electric heaters, and air cleaners. Install bonded jumper to bond across flexible metal duct connectors to achieve continuity.
- G. Ground rods to be 1/2"x24" copper clad steel. Ground rods at exterior area lights to be 6"x68" copper clad steel.

2.5 Conduit Hangers

- A. For individual conduit runs not directly fastened to the structure, use threaded rod and hangers manufactured by Caddy, Unistrut or Powerstrut.
- B. Galvanized steel slotted channel support systems with fittings and supports by the same manufacturer.

2.6 Raceways and Outlet Boxes

- A. Provide raceways, fittings, connectors and accessories for a complete raceway system. Raceways include:
1. Rigid steel: hot-dipped galvanized.
 2. Intermediate metal conduit (IMC): hot-dipped galvanized.
 3. Electrical metallic tubing (EMT): electro-galvanized.
 4. Wireways: enamel finish, hinged type.
 5. Flexible metallic conduit for final connection in dry locations less than 6' lengths.
 6. Liquid tight flexible metal conduit: for final connection in damp or wet locations less than 6' lengths.
- B. Provide fittings and accessories approved for the purpose equal in all respects to the conduit or raceway. EMT connectors and couplings shall be steel setscrew type indoors and steel compression type in damp or wet locations and outdoors.
- C. Outlet boxes: 4" square x 1-1/2" deep (or larger) galvanized steel KO-type with plaster ring and cover for general interior use. Cast metal type PS or FD with matching screw covers for exterior and exposed interior locations (gasketed in damp or wet locations).
- D. Junction boxes shall be same as outlet boxes up to 42 cu. in. Use code-gauge steel in larger sizes with surface or flush-type screw-mounted trim covers. Boxes and covers painted with inhibitor-primed paint inside and out.
- E. Pull boxes shall be same as junction boxes unless indicated otherwise on the Drawings, with covers.
- F. Telephone outlet boxes shall be the type and size required by the serving telephone company but not smaller than 4-11/16" square x 2-1/2" deep with single-gang ring. Other configurations as shown on the plan.

2.7 Identification and Labeling

- A. Label all control devices and device enclosures with individual name plates or legend plates.
- B. Individual name or legend plates to be black laminated plastic plates with white cut letters. Paper, foil or tape markers attached with adhesives shall not be used.
- C. Engraved, laminated acrylic or melamine label, punched or drilled for screw mounting. White letters on a dark gray background. Minimum letter height shall be 3/16 inch.
- D. Equipment to be labeled:
1. Panelboards, electrical cabinets, and enclosures.
 2. Access doors and panels for concealed electrical items.
 3. Electrical breakers in existing distribution panels.
 4. Transformers.
 5. Emergency system boxes and enclosures.
 6. Disconnect switches.
 7. Enclosed circuit breakers.
 8. Motor starters.
 9. Push-button stations.
 10. Remotely-controlled switches, dimmer modules, and control devices.
 11. Control devices.
 12. Panels, terminal cabinets, and racks.
- E. Accessible raceways and cables of auxiliary systems: Identify the following systems at panel and junction box locations within each room as follows:
1. Fire alarm system: Red boxes and covers.
 2. 120/208 volt: Mark covers with panel and circuit numbers.

3. 277/480 volt: Mark covers with panel and circuit numbers.
- F. Recreational: Identify panelboard and circuit number from which served. Use hot, stamped or engraved machine printing with black filled lettering on face of plate, and durable wire markers or tags inside outlet boxes.

2.8 Lighting Control Devices

- A. Time switches: Solid state programmable unit with multiple channels for exterior lighting control.
- B. Indoor occupancy sensor to be dual technology with solid state separate external relay unit for ceiling mounted units.
- C. Wall box occupancy sensors to have adaptive technology with time delay, quantity of integral switches as shown on the Drawings (minimum of one (1) switch).
- D. Lighting controllers: Mechanically held, non-fused switch with 2 wire solid state control modules.
- E. Emergency shunt relay: Normally closed electrically held with automatic switching contacts to bypass local room controls.
- F. Wall mounted programmable dimming control: installed where shown on the Drawings with scene selector and multi-station dimming over ride controls. Lutron Graphic Eye system.
- G. LED wall box dimmers: rated for quantity and type of fixtures shown on Drawings. Divide switch legs and add additional dimmers to meet manufacturer's recommendation.

2.9 Panelboards

- A. Panelboards shall be Schneider Electric style RNFQ for 100-400A, L-line for 400A-800A or equal by Cutler-Hammer, G.E., or Siemens.
- B. Panelboards shall be dead front safety type with enclosures of code grade steel. Oversize gutters shall be provided for feed through where indicated or required. Where double legs are not permitted by local code, a suitable pull box or gutter adjacent to panels shall be provided for connections.
- C. Panelboards shall have trim and face locking doors with both hinges and trim clamps completely concealed. Panels to be door in door construction. Door locks shall be flush with the cover. All door locks shall be common keyed. Two (2) keys shall be provided for each panelboard. A clear plastic-covered typewritten circuit directory shall be mounted in a card holder attached to the inner side of the door. Panelboards shall have black plastic plates with 1/2-inch high white cut demarcation lettering and voltage. Where panelboards are in public areas, identification plates shall be visible.
- D. Buses shall be made from 96 percent electrolytic copper or 95 percent conductivity aluminum and shall be independently supported (without dependence upon the circuit breakers). Where breakers and/or switches are listed in the schedules as "space only", this shall include extended bus and mounting provisions.
- E. Circuit breakers shall be bolt-on and shall have bolted line and load terminals. All branch circuit breakers shall be quick-make, quick-break, magnetic trip type on all multi-pole breakers and have a minimum UL short circuit rating as shown on the Drawings. Each breaker shall have its current rating engraved, in easy to read numbers, on the toggle handle. All breakers used for lighting switching control shall be UL listed "SWO" switching duty. All breakers used for motor or high inductance loads shall be HACR rated.
- F. Multiple factory assembled panelboards shall be Schneider Electric OME for 225A-1600A or equal by Cutler-Hammer, G.E., or Siemens with requirements noted above.
- G. Breakers used for lighting switching control shall be UL listed "SWO" switching duty. All breakers used for motor or high inductance loads shall be HACR rated.
- H. Multiple factory assembled panelboards shall be Schneider Electric OME for 225A-1600A or equal by Cutler-Hammer, G.E., or Siemens with requirements noted above.
- I. 1. Trims to a piece without door for NEMA 1, with door where noted on the Drawings or per NEMA 3R/12.
2. Fused switches: NEMA KS 1, Type HD, Twin, side by side mount for 30A-200A. Single mount for 400A and above.
- J. Where not in rejection fuses as noted in 2.14 below.

2.10 Wiring Devices

- A. Wiring devices shall be installed in metal device boxes.
- B. Switches and receptacles shall be by Lutron, Hubbell, Bryant, Leviton, Pass & Seymour, or approved equal subject to approval by the Architect, cover & switch shall be as noted on plans for normal power and red for emergency power. Special color device outlets and matching coverplates as indicated on the plans.
- C. Switches shall be heavy duty grade, as quiet type, 20-amp, 120/277-volt, with silver alloy contacts, equal to Hubbell R5362.
- D. General outlet receptacles shall be heavy duty grade, NEMA 5-20P, 20-amp, 125-volt, 3-wire grounding type devices with brass one piece ground strap, third pole grounding to the outlet box.
- E. Switch and circuit interrupt (GFI) duplex receptacles shall be heavy duty grade, 20-amp devices wired so that each unit is self-contained. GFI receptacles shall not be connected to feed other units unless specifically noted on the Drawings.
- F. Receptacles in damp or wet locations shall have NEC Weather Resistant rating.
- G. Tamper Resistant rating in areas required by the NEC.
- H. AFCI outlets where required by the NEC.
- I. Isolated ground receptacles to be orange in color.
- J. Surge Protective Device (SPD) type 1 duplex receptacle with indication light and audible alarm.
- K. Special color plastic cover plates to match Style Line type receptacles as noted on the plans with matching colors.
- L. Weatherproof duplex receptacles shall be GFI protected with "white-in-use" weatherproof coverplates.

2.11 Fuses

- A. Fuses shall be one-time cartridge fuses manufactured by Bussmann, Ferraz Shawmut, or Littelfuse.
- B. The Contractor shall furnish and install fuses of the types and ratings designated in the Drawings and Specifications in each fusible device installed by the Contractor.
1. Feeder and branch circuits class RKK time delay.
 2. Motor circuits class RKK time delay.
 3. Control circuit fuses to be time delay.
- C. 12 Enclosed Switches, Circuit Breakers and Controllers
- A. Disconnect switches shall be heavy duty, AC, single throw safety switches, built in accordance with NEMA requirements with a visible full cover interlock and quick-make, quick-break mechanism. Each switch shall be fusible unless non-fusible (NF) is specifically indicated. Switches shall be in NEMA 1 enclosures in dry locations and NEMA 3R where exposed to the weather.
- B. Provide auxiliary contacts to shut down VFD prior to disconnecting power. Provide rejection fuses where noted.
- C. Full voltage non-reversing starters size 0 minimum.
- D. All starters to be combination starters and molded case circuit breaker or fused disconnect as noted on the Drawings with cover mounted HOA and pilot lights.
- E. Fractional HP starters quick make quick break single pole switches for integrally protected motors.
- F. Multi pole horse power rated switches or enclosed circuit breakers in flush NEMA 1 enclosures where motors are located in finished spaces.
- G. All devices NEMA rated for the environment they are located.

2.13 Lighting Fixtures

- A. Rigid fixture to be LED, refer to light fixture schedule with drawing set for specifics.
- B. Dimming driver to be 0-10V compatible with the dimming controller selected.

2.14 Voice/Data Systems

- A. The Electrical Contractor is to install an empty conduit, backbox and junction box system for installation of the Owner's voice and data system by others. All telephone and network systems equipment and cabling shall be provided by the Owner's communications cabling contractor.
- B. The Electrical Contractor is to install an empty conduit, backbox and junction box rough in for installation of the following Owner's systems:
1. Voltage phase A phase, B phase, C, neutral ground.
 2. 120/208V black, red, blue, white, green.
 3. 277/480V brown, orange, yellow, grey, green.
 4. Provide Brady wire markers where number of conductors in a box exceeds four.

PART 3 - EXECUTION

- A. Electric system layouts indicated on the Drawings are generally diagrammatic and shall be followed as closely as actual construction and work of other trades will permit. Govern exact routing of cable and wiring and the locations of outlets by the structure and equipment served. Take all dimensions from Architectural Drawings.
- B. Consult all other drawings, verify scales and report any dimensional discrepancies or other conflicts with Owner before submitting bid.
- C. All home runs to panelboards are indicated as starting from the outlet nearest the panel and continuing in the general direction of final panel. Continue such circuits to the panel as through the routes were completely indicated. Terminate all home runs of signal, alarm

- and communication systems in a similar manner.
- D. Avoid cutting and boring holes through structure or structural members wherever possible. Obtain prior approval of Owner and conform to all structural requirements when cutting or boring the structure is necessary and permitted.
- E. Furnish and install all necessary hardware, hangers, blocking, brackets, bracing, runners, etc., required for equipment specified under this section.
- F. Provide necessary backing required to insure rigid mounting of outlet boxes.

3.2 Conductors and Cables

- A. Provide #12 branch circuit conductors for all 120V, 20 amp circuits less than 75' (100' for 277V circuits). Provide #10 branch circuit conductors for all 120V, 20 amp circuits over 75' (100' for 277V circuits).
- B. Where more than three current carrying conductors are installed in a single raceway (e.g. combining multi-circuit home runs), conductor ampacity shall be de-rated as required by the NEC.
- C. Provide dedicated neutral circuits for all 120V and 277V branch circuits.
- D. Megger and record insulation resistance of all 600 volt insulated conductors size #4/0 and larger using 500 volt megger for one minute. Make tests with circuits isolated from source and load.

3.3 Low Voltage Conductors and Cables

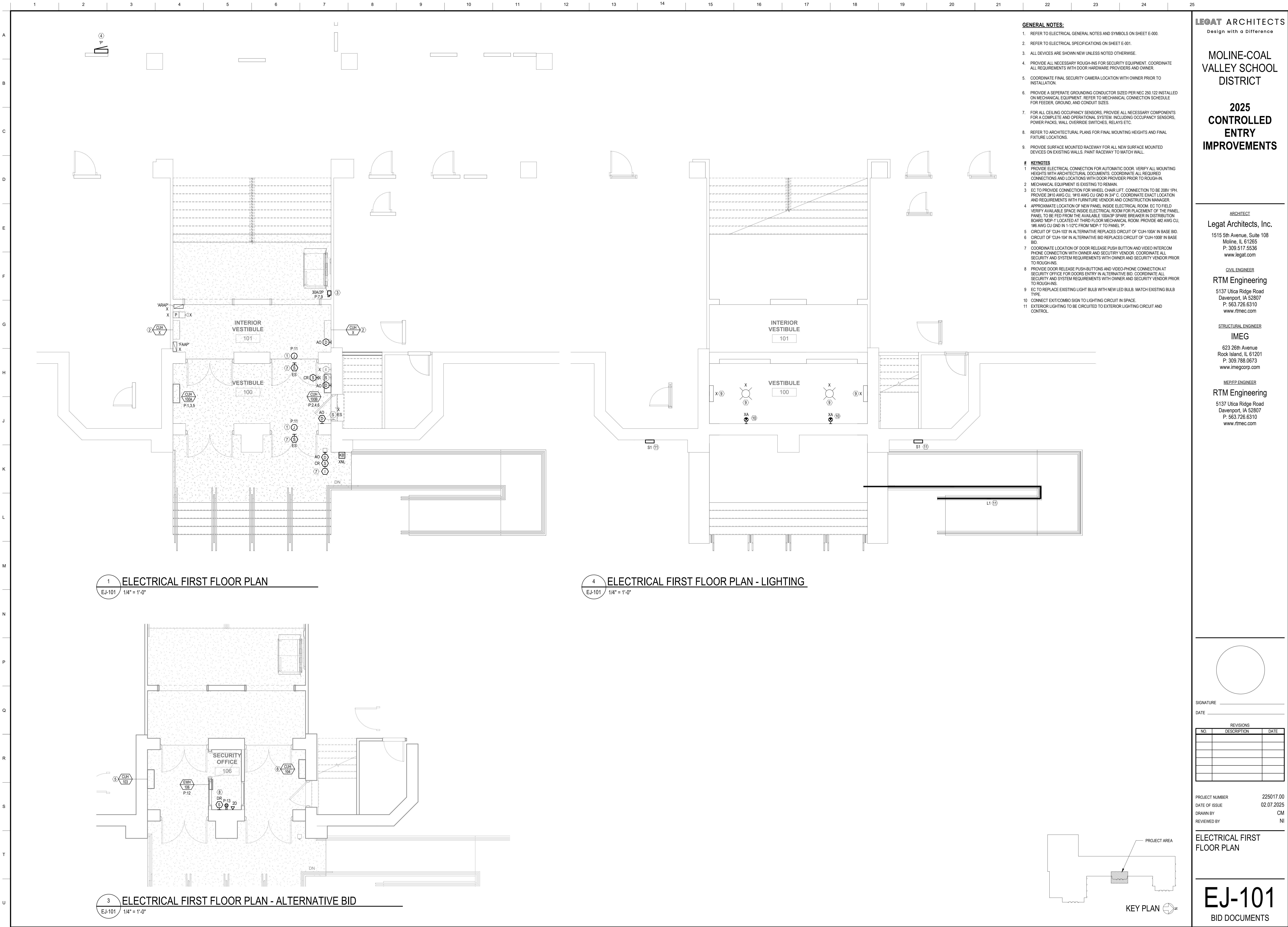
- A. All low voltage cables installed in a metal box and raceway system to an accessible ceiling.
- B. Minimum conduit size is 3/4" with larger sizes noted on plan. Install plastic bushing on conduit ends.
- C. Group and bundle low voltage cables and provide support independent of ceiling supports. Utilize D rings, J hooks or approved nylon straps to hold cables and provide supports independent of the ceiling supports.

3.4 Grounding and Bonding

- A. The building and electrical systems shall be grounded and bonded in accordance with the NEC, IEEE and best practices.
- B. Electrical service and separately derived alternating current systems shall be grounded in accordance with NEC Article 250.
- C. All feeder and branch circuits shall have a green copper ground conductor run with the phase and neutral conductors.
- D. Provide code required #6 or larger ground conductor and 12" ground bus at telecommunication demarcation location.

3.5 Raceways and Boxes

- A. Enclose all electrical power wiring in conduit.
- B. Conduit shall be rigid steel, IMC or EMT as follows:
1. Above ground: use rigid steel or IMC only.
 2. Locations subject to mechanical injury: Rigid steel or IMC only.
 3. Dry locations and not subject to mechanical injury: EMT, IMC or rigid steel conduit.
- C. Use flexible conduits in the following applications:
1. Recessed lighting fixtures.
 2. Motor connections.
 3. At building joints.
 4. At wet locations, flexible conduit shall be liquid tight type.
- D. Multiple factory assembled panelboards shall be Schneider Electric OME for 225A-1600A or equal by Cutler-Hammer, G.E., or Siemens with requirements noted above.
- E. 1. Trims to a piece without door for NEMA 1, with door where noted on the Drawings or per NEMA 3R/12.
2. Fused switches: NEMA KS 1, Type HD, Twin, side by side mount for 30A-200A. Single mount for 400A and above.
- F. Conduit cast in concrete floors and walls.
- G. Motor and transformer connections in dry locations shall be made with flexible metal conduit. Motor connections in damp or wet locations shall be made with liquid tight flexible



- GENERAL NOTES:**
1. REFER TO ELECTRICAL GENERAL NOTES AND SYMBOLS ON SHEET E-000.
 2. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E-001.
 3. ALL DEVICES ARE SHOWN NEW UNLESS NOTED OTHERWISE.
 4. PROVIDE ALL NECESSARY ROUGH-INS FOR SECURITY EQUIPMENT. COORDINATE ALL REQUIREMENTS WITH DOOR HARDWARE PROVIDERS AND OWNER.
 5. COORDINATE FINAL SECURITY CAMERA LOCATION WITH OWNER PRIOR TO INSTALLATION.
 6. PROVIDE A SEPERATE GROUNDING CONDUCTOR SIZED PER NEC 250.122 INSTALLED ON MECHANICAL EQUIPMENT. REFER TO MECHANICAL CONNECTION SCHEDULE FOR FEEDER, GROUND, AND CONDUIT SIZES.
 7. FOR ALL CEILING OCCUPANCY SENSORS, PROVIDE ALL NECESSARY COMPONENTS FOR A COMPLETE AND OPERATIONAL SYSTEM, INCLUDING OCCUPANCY SENSORS, POWER PACKS, WALL OVERRIDE SWITCHES, RELAYS ETC.
 8. REFER TO ARCHITECTURAL PLANS FOR FINAL MOUNTING HEIGHTS AND FINAL FIXTURE LOCATIONS.
 9. PROVIDE SURFACE MOUNTED RACEWAY FOR ALL NEW SURFACE MOUNTED DEVICES ON EXISTING WALLS. PAINT RACEWAY TO MATCH WALL.

- # KEYNOTES**
1. PROVIDE ELECTRICAL CONNECTION FOR AUTOMATIC DOOR. VERIFY ALL MOUNTING HEIGHTS WITH ARCHITECTURAL DOCUMENTS. COORDINATE ALL REQUIRED CONNECTIONS AND LOCATIONS WITH DOOR PROVIDER PRIOR TO ROUGH-IN.
 2. MECHANICAL EQUIPMENT IS EXISTING TO REMAIN.
 3. EC TO PROVIDE CONNECTION FOR WHEEL CHAIR LIFT. CONNECTION TO BE 208V 1PH. PROVIDE 2#10 AWG CU, 1#10 AWG CU GND IN 3/4" C. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH FURNITURE VENDOR AND CONSTRUCTION MANAGER.
 4. APPROXIMATE LOCATION OF NEW PANEL INSIDE ELECTRICAL ROOM. EC TO FIELD. VERIFY AVAILABLE SPACE INSIDE ELECTRICAL ROOM FOR PLACEMENT OF THE PANEL. PANEL TO BE FED FROM THE AVAILABLE 100A/3P SPARE BREAKER IN DISTRIBUTION BOARD MDP-11 LOCATED AT THIRD FLOOR MECHANICAL ROOM. PROVIDE #2 AWG CU, 1#6 AWG CU GND IN 1-1/2" C FROM MDP-11 TO PANEL P.
 5. CIRCUIT OF CUH-103 IN ALTERNATIVE REPLACES CIRCUIT OF CUH-100A IN BASE BID.
 6. CIRCUIT OF CUH-104 IN ALTERNATIVE BID REPLACES CIRCUIT OF CUH-100B IN BASE BID.
 7. COORDINATE LOCATION OF DOOR RELEASE PUSH BUTTON AND VIDEO INTERCOM PHONE CONNECTION WITH OWNER AND SECURITY VENDOR. COORDINATE ALL SECURITY AND SYSTEM REQUIREMENTS WITH OWNER AND SECURITY VENDOR PRIOR TO ROUGH-INS.
 8. PROVIDE DOOR RELEASE PUSH-BUTTONS AND VIDEO-PHONE CONNECTION AT SECURITY OFFICE FOR DOORS ENTRY IN ALTERNATIVE BID. COORDINATE ALL SECURITY AND SYSTEM REQUIREMENTS WITH OWNER AND SECURITY VENDOR PRIOR TO ROUGH-INS.
 9. EC TO REPLACE EXISTING LIGHT BULB WITH NEW LED BULB. MATCH EXISTING BULB TYPE.
 10. CONNECT EXITCOMBO SIGN TO LIGHTING CIRCUIT IN SPACE.
 11. EXTERIOR LIGHTING TO BE CIRCUITED TO EXTERIOR LIGHTING CIRCUIT AND CONTROL.

LEGAT ARCHITECTS
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**MOLINE-COAL
VALLEY SCHOOL
DISTRICT**

**2025
CONTROLLED
ENTRY
IMPROVEMENTS**

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SIGNATURE _____		
DATE _____		
REVISIONS		
NO.	DESCRIPTION	DATE

PROJECT NUMBER 225017.00
DATE OF ISSUE 02.07.2025
DRAWN BY CM
REVIEWED BY NI

**ELECTRICAL FIRST
FLOOR PLAN**

EJ-101
BID DOCUMENTS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
A																								
B																								
C																								
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MOLINE-COAL VALLEY SCHOOL DISTRICT

2025 CONTROLLED ENTRY IMPROVEMENTS

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SIGNATURE

DATE

REVISIONS

NO	DESCRIPTION	DATE

PROJECT NUMBER225017.00

DATE OF ISSUE02.07.2025

DRAWN BYCM

REVIEWED BYNI

ELECTRICAL SCHEDULES

- GENERAL NOTES:
1. REFER TO ELECTRICAL GENERAL NOTES AND SYMBOLS ON SHEET E-000.
2. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E-001.

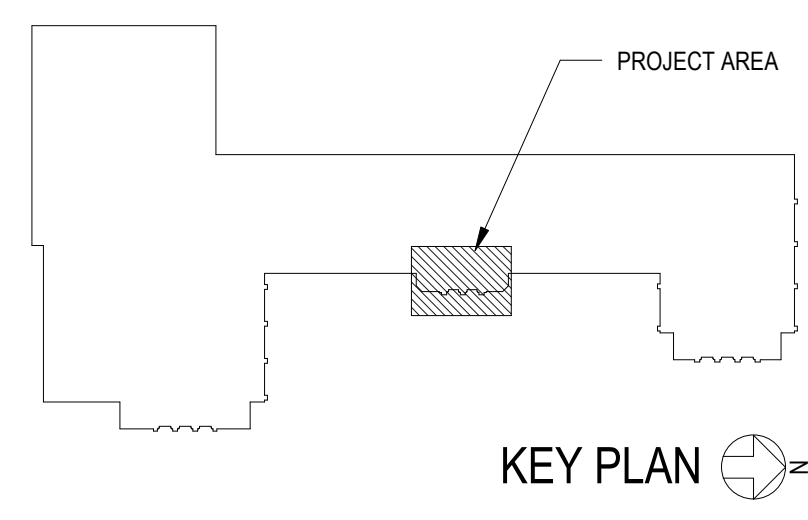
Branch Panel: P															Location: Supply From: Mounting: Surface Enclosure: Type 1										Volts: 120/208 Wye Phases: 3 Wires: 4										A.I.C. Rating: 10K Mains Type: MCB Bus Amps: 100 A MCB Rating: 100 A									
CB Info	CKT	Circuit Description					Amps	Trip	Poles	A		B		C		Poles	Trip	Amps	Circuit Description					CKT	CB Info																			
	1	CUH-100A					8.99	15 A	3	1080 VA 1080 VA		1080 VA 1080 VA		1080 VA 1080 VA		3	15 A	8.99	CUH-100B					2																				
	3																																											
	5																																											
	7	WHEELCHAIR LIFT					15.8	30 A	2	1650 VA 0 VA		1650 VA 0 VA				1	20 A	--	SPARE					8																				
	9	AUTO-DOOR POWER					3 A	20 A	1			1650 VA 0 VA		360 VA 1560 VA		1	20 A	--	SPARE					10																				
*	11	POWER SECURITY OFFICE 106					1.5 A	20 A	1	180 VA 0 VA		0 VA 0 VA		0 VA 0 VA		1	20 A	--	EWA-106					12	*																			
	13	SPARE					--	20 A	1			0 VA 0 VA		0 VA 0 VA		1	20 A	--	SPARE					14																				
	15	SPARE					--	20 A	1			0 VA 0 VA		0 VA 0 VA		1	20 A	--	SPARE					16																				
	17	SPARE					--	20 A	1			0 VA 0 VA		0 VA 0 VA		1	20 A	--	SPARE					18																				
	19	SPARE					--	20 A	1	0 VA 0 VA						1	20 A	--	SPARE					20																				
	21	SPARE					--	20 A	1			0 VA 0 VA		0 VA 0 VA		1	20 A	--	SPARE					22																				
	23	SPARE					--	20 A	1					0 VA 0 VA		1	20 A	--	SPARE					24																				
							Total Load:		3950 VA		3810 VA		0 VA 0 VA		4080 VA																													
							Tot...		33 A		32 A		34 A																															
CIRCUIT BREAKER INFORMATION LEGEND:															ABBREVIATIONS:																													
G = GROUND FAULT SENSING															MCB = MAIN CIRCUIT BREAKER																													
S = SHUNT TRIP															CB = CIRCUIT BREAKER																													
L = LOCK OUT															CKT = CIRCUIT																													
A = ARC FAULT INTERRUPTER																																												
Load Classification					Connected Load			Demand Factor			Estimated Demand			Panel Totals																														
HVAC					8040 VA			100.00%			8040 VA																																	
Other					3300 VA			100.00%			3300 VA			Total Conn. Load: 11880 VA																														
Power					540 VA			100.00%			540 VA			Total Est. Demand: 11880 VA																														
														Total Conn.: 33 A																														
														Total Est. Demand: 33 A																														

MECHANICAL EQUIPMENT CONNECTION SCHEDULE									
TAG	DESCRIPTION	LOAD	WIRE/CONDUIT	STARTER	VOLTAGE	LOCAL DISCONNECT	REMARKS		
CUH	CABINET UNIT HEATER (100A, 100B, 103, 104)	9 MCA 15 MOCP	3#12 AWG 1#12 AWG EQ. GND. 3/4" C.	<input checked="" type="checkbox"/> INTEGRAL TO EQUIPMENT <input type="checkbox"/> IN MCC NEMA SIZE <input type="checkbox"/> 00 TYPE	208V 3P	<input type="checkbox"/> FUSED A FUSE <input checked="" type="checkbox"/> NON-FUSED A SWITCH <input type="checkbox"/> THERMAL SWITCH, 120V, 1P	DISCONNECT INTEGRAL TO EQUIPMENT.		
EWA-108	ELECTRIC WALL HEATER	13 MCA 20 MOCP	2#12 AWG 1#12 AWG EQ. GND. 3/4" C.	<input checked="" type="checkbox"/> INTEGRAL TO EQUIPMENT <input type="checkbox"/> IN MCC NEMA SIZE <input type="checkbox"/> 00 TYPE	120V 1P	<input type="checkbox"/> FUSED A FUSE <input checked="" type="checkbox"/> NON-FUSED A SWITCH <input type="checkbox"/> THERMAL SWITCH, 120V, 1P	DISCONNECT INTEGRAL TO EQUIPMENT.		

- SCHEDULE KEY NOTES
1. VERIFY FINAL LOCATION OF ALL EQUIPMENT WITH EQUIPMENT INSTALLER BEFORE INSTALLING FEEDERS.
2. SEE ARCHITECTURAL, MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS FOR MORE INFORMATION.
3. SIZE STARTER/FEEDER DISCONNECT PER FINAL EQUIPMENT REQUIREMENTS.
4. PROVIDE FEEDERS AS INDICATED, VERIFY WITH EQUIPMENT REQUIREMENTS.
5. PROVIDE OVERLOAD PROTECTION (FUSES OR MOTOR CIRCUIT PROTECTOR) FOR STARTERS PER SPECIFICATIONS, ACTUAL FIELD MEASURED FULL LOAD CURRENT, AND EQUIPMENT MANUFACTURER'S REQUIREMENTS.
6. VERIFY FINAL VOLTAGE AND PHASE REQUIREMENTS OF ALL EQUIPMENT WITH INSTALLER BEFORE INSTALLING FEEDERS.
7. EC TO PROVIDE LOCAL DISCONNECT WITHIN 5'-0" OF EQUIPMENT. NON-STANDARD ITEMS, TIMERS, METERS, INTERLOCKS, ETC.
- SCHEDULE GENERAL NOTES
1. PROVIDE POWER CONNECTIONS TO ALL ARCHITECTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION AND OWNER FURNISHED EQUIPMENT. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR LOCATIONS AND POWER REQUIREMENTS. VERIFY ALL TECHNICAL DATA WITH FINAL SHOP DRAWINGS.
2. OVER CURRENT PROTECTION SIZES LISTED ARE FROM MANUFACTURER'S AND STANDARD MOTOR DATA, FURNISH FUSES BASED ON FUSE MANUFACTURER'S STANDARDS, ACTUAL FIELD MEASURED FULL LOAD CURRENT, AND EQUIPMENT MANUFACTURER'S REQUIREMENTS.
3. FLEXIBLE CONNECTIONS TO MOTORS SHALL BE IN FLEXIBLE CONDUIT. PROVIDE COPPER EQUIPMENT GROUND FROM DISCONNECT TO MOTOR CONNECTION.
4. EC TO COORDINATE WITH THE MECHANICAL EQUIPMENT SCHEDULES TO PROVIDE DISCONNECTS FOR THE MECHANICAL EQUIPMENT.

LIGHTING FIXTURE SCHEDULE									
TYPE	DESCRIPTION	FIXTURE TYPE	K	CRI	INPUT WATTS	VOLTS	MANUFACTURER	MODEL NO.	
L1	HAND RAIL LIGHT	LED	30	85	3.0	120	COLE LIGHTING	LRS	
S1	EXTERIOR WALL MOUNTED SCONCE	LED	30	80	40.0	120	STERNBERG	1W 8030LED BB 1L 30 T4 MDL07 CSA DBT	
XA	EMERGENCY LIGHT/EXIT COMBO	LED	0	0	2.0	120	LITHONIA	ECRG RD M6	

- NOTES:
1. PROVIDE ALL NECESSARY MOUNTING HARDWARE AND ACCESSORIES FOR A COMPLETE INSTALLATION OF FIXTURE(S) IN THE SPACE. COORDINATE ALL INSTALLATION REQUIREMENTS WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
2. THE FIRST LISTED FIXTURE PRODUCT IN THE APPROVED MANUFACTURERS COLUMN WITH A FULL PRODUCT NUMBER FOR EACH FIXTURE TYPE IS THE BASIS OF DESIGN. ADDITIONAL APPROVED PRODUCT SERIES LISTED MUST MEET ALL THE CHARACTERISTICS LISTED AS THE BASIS OF DESIGN FIXTURE. FINAL PRODUCT APPROVAL WILL BE PROVIDED DURING THE SUBMITTAL PROCESS.
3. COORDINATE SELECTION OF HANDRAIL LIGHTING WITH ARCHITECT AND HANDRAIL VENDOR PRIOR TO ORDERING.
4. COORDINATE SELECTION OF WALL MOUNTED SCONCE WITH ARCHITECT AND OWNER PRIOR TO ORDERING.



MECHANICAL EQUIPMENT CONNECTION SCHEDULE					
TAG<1>	DESCRIPTION<2>	LOAD<3>	WIRE/CONDUIT<4>	STARTER<5>	VOLTAGE<6>
CLUH 100	CABINET UNIT HEATER (100C, 100D)	10 MCA 15 MOCIP	2#12 AWG 1#12 AWG EQ. GND 3/4" C.	<input checked="" type="checkbox"/> INTEGRAL TO EQUIPMENT <input type="checkbox"/> IN MCC - NEMA SIZE TYPE	208V 1P
CLUH 101	CABINET UNIT HEATER	13 MCA 20 MOCIP	2#12 AWG 1#12 AWG EQ. GND 3/4" C.	<input checked="" type="checkbox"/> INTEGRAL TO EQUIPMENT <input type="checkbox"/> IN MCC - NEMA SIZE TYPE	120V 1P

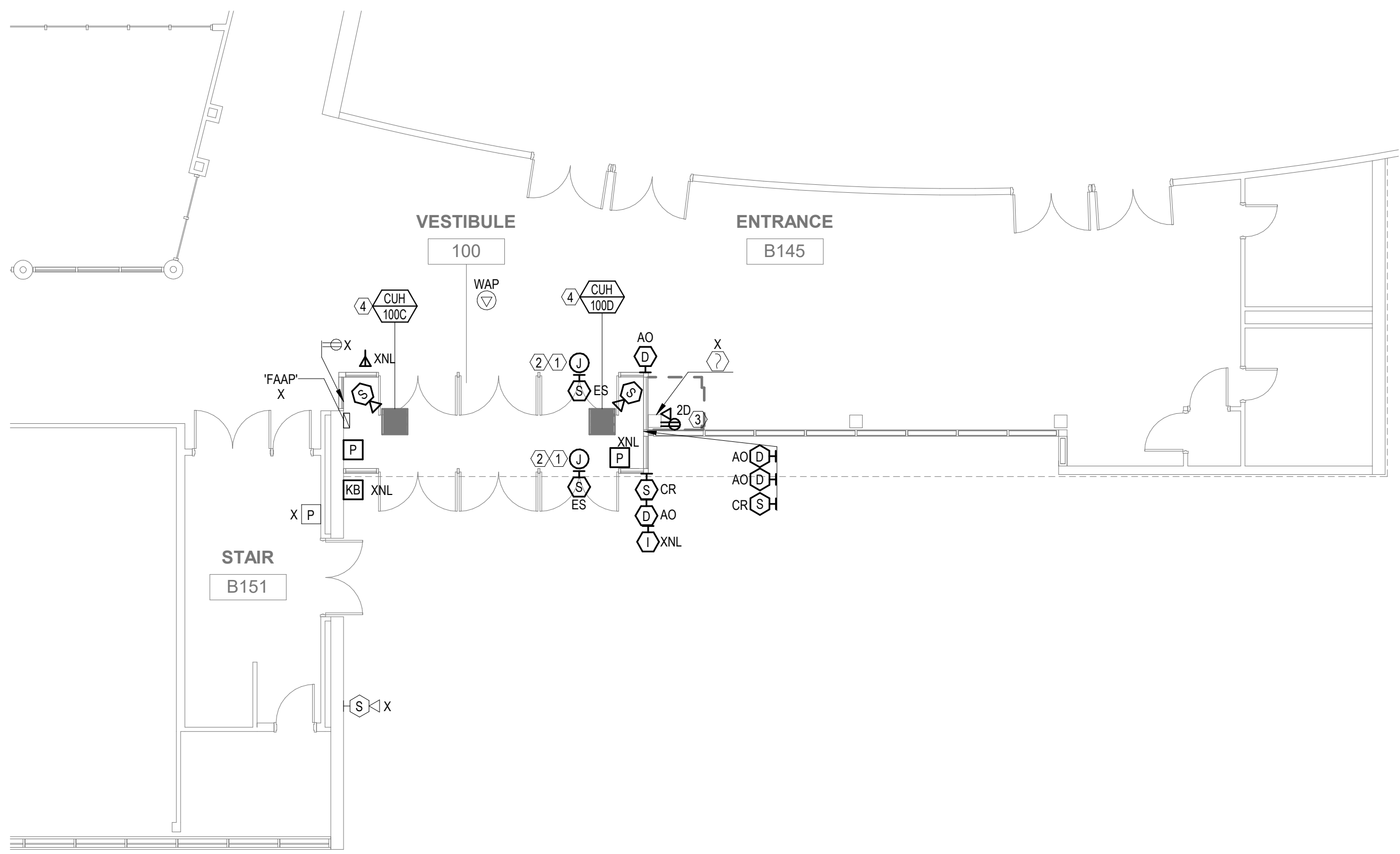
SCHEDULE KEY NOTES

- VERIFY FINAL LOCATION OF ALL EQUIPMENT WITH EQUIPMENT INSTALLER BEFORE INSTALLING FEEDERS.
- SEE ARCHITECTURAL, MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS FOR MORE INFORMATION.
- SIZE STARTER/FEEDER DISCONNECT PER FINAL EQUIPMENT REQUIREMENTS.
- PROVIDE FEEDERS AS INDICATED, VERIFY WITH EQUIPMENT REQUIREMENTS.
- PROVIDE OVERLOAD PROTECTION (FUSES OR MOTOR CIRCUIT PROTECTOR) FOR STARTERS PER SPECIFICATIONS, ACTUAL FIELD MEASURED FULL LOAD CURRENT, AND EQUIPMENT MANUFACTURER'S REQUIREMENTS.
- VERIFY FINAL VOLTAGE AND PHASE REQUIREMENTS OF ALL EQUIPMENT WITH INSTALLER BEFORE INSTALLING FEEDERS.
- PEC TO PROVIDE LOCAL DISCONNECT WITHIN 5'-0" OF EQUIPMENT.

NON-STANDARD ITEMS, TIMERS, METERS, INTERLOCKS, ETC.

SCHEDULE GENERAL NOTES

- PROVIDE POWER CONNECTIONS TO ALL ARCHITECTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION AND OWNER FURNISHED EQUIPMENT. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR LOCATIONS AND POWER REQUIREMENTS. VERIFY ALL TECHNICAL DATA WITH FINAL SHOP DRAWINGS.
- OVER CURRENT PROTECTION SIZES LISTED ARE FROM MANUFACTURERS AND STANDARD MOTOR DATA, FURNISH FUSES BASED ON FUSE MANUFACTURER'S STANDARDS, ACTUAL FIELD MEASURED FULL LOAD CURRENT, AND EQUIPMENT MANUFACTURER'S REQUIREMENTS.
- FLEXIBLE CONNECTIONS TO MOTORS SHALL BE IN FLEXIBLE CONDUIT. PROVIDE COPPER EQUIPMENT GROUND FROM DISCONNECT TO MOTOR CONNECTION.
- EO TO COORDINATE WITH THE MECHANICAL EQUIPMENT SCHEDULES TO PROVIDE DISCONNECTS FOR THE MECHANICAL EQUIPMENT.

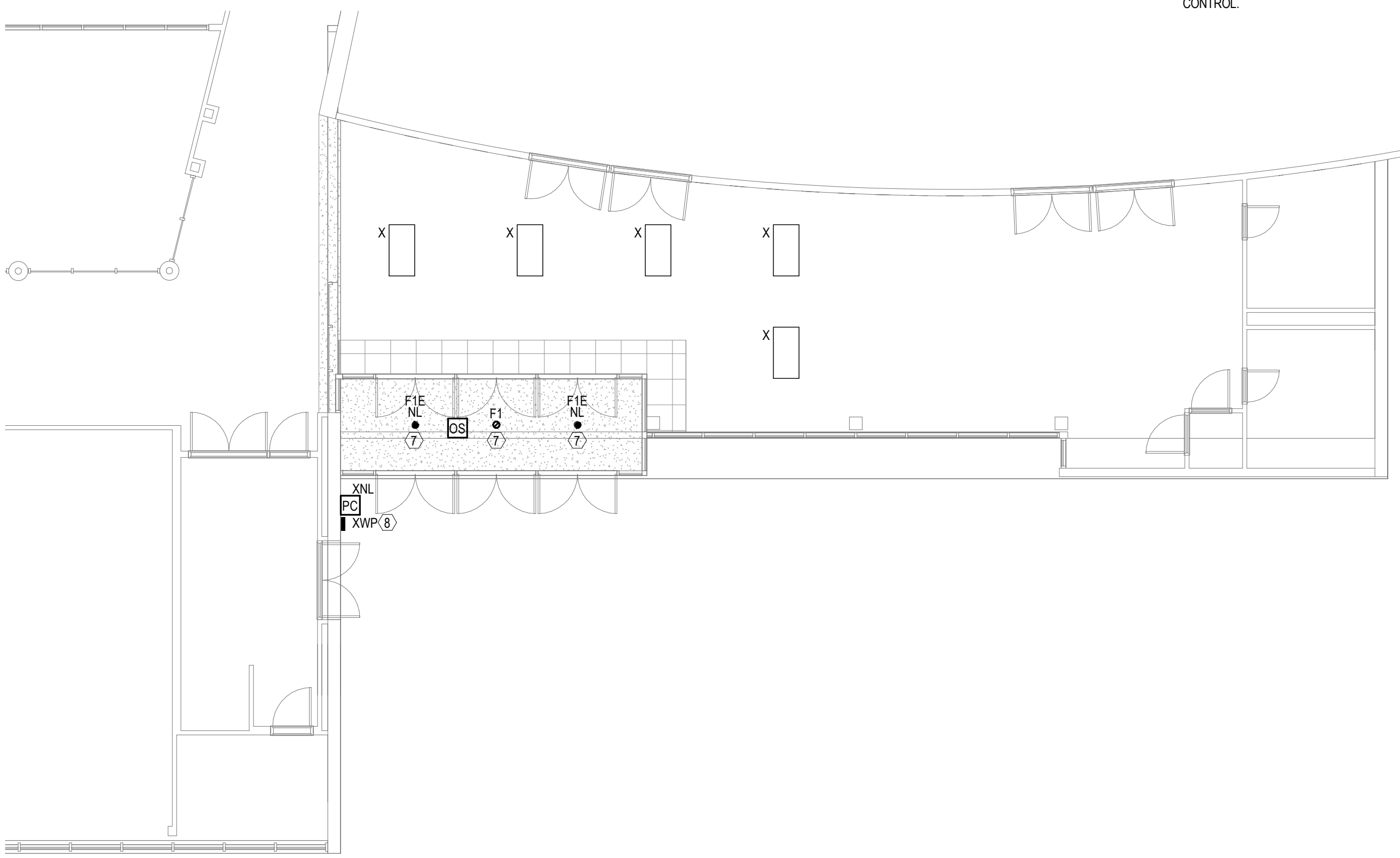


1 ELECTRICAL FIRST FLOOR PLAN
EW-101 1/8" = 1'-0"

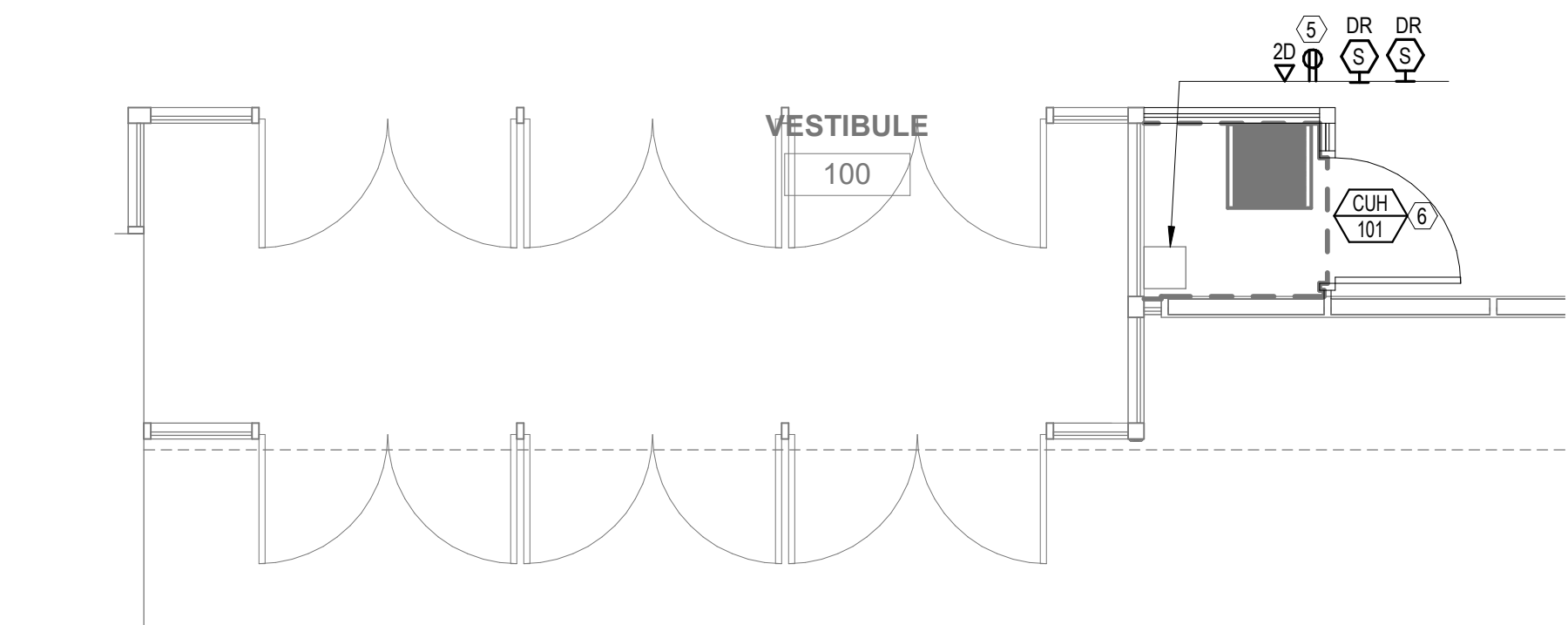
LIGHTING FIXTURE SCHEDULE							
TYPE	DESCRIPTION	FIXTURE TYPE	K	CRI	INPUT WATTS	VOLTS	MANUFACTURER
F1	6" RECESSED LED DOWNLIGHT	LED	35	80	22.5	120	LITHONIA PRESCOUTE COOPER
FIE	6" RECESSED LED DOWNLIGHT WITH EMERGENCY BACKUP	LED	35	80	22.5	120	LITHONIA PRESCOUTE COOPER
XWP	EXTERIOR WALL PACK WITH BATTERY BACKUP	LED	30	80	32.0	120	LITHONIA HUBBEL COOPER

NOTES:

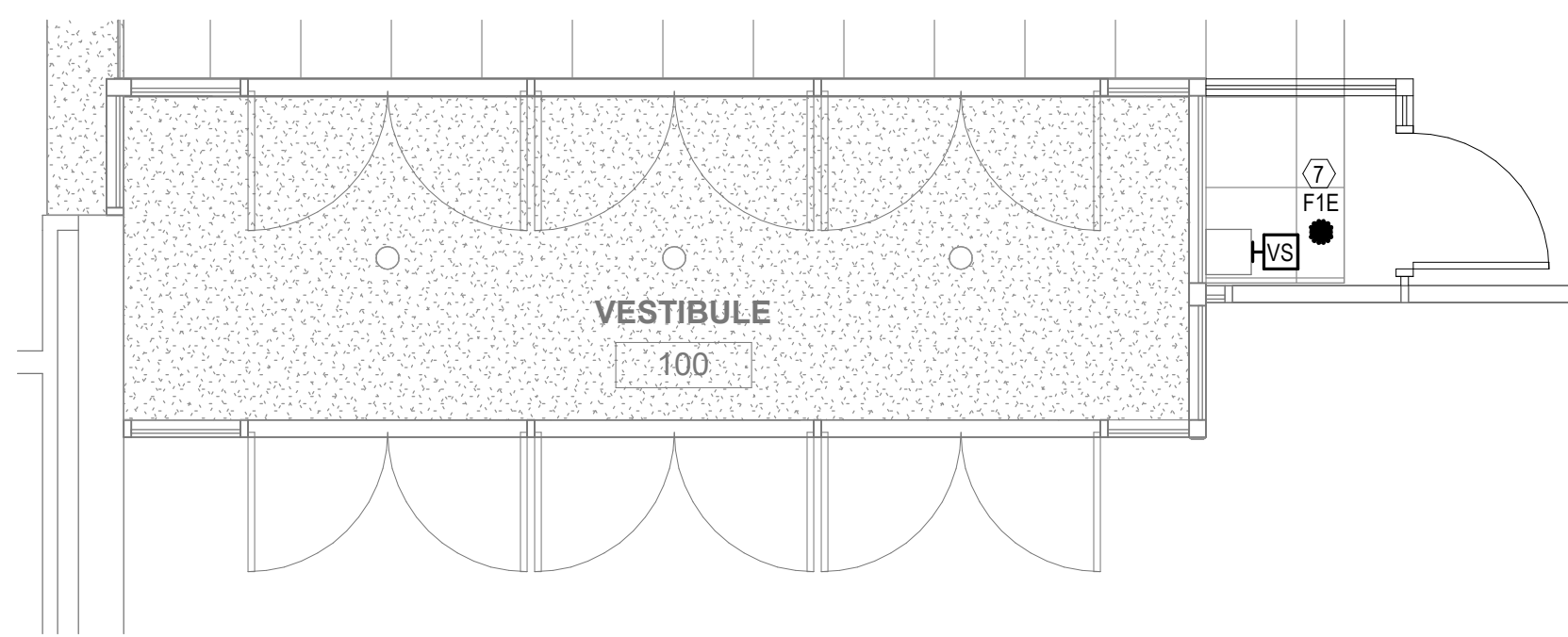
- PROVIDE ALL NECESSARY MOUNTING HARDWARE AND ACCESSORIES FOR A COMPLETE INSTALLATION OF FIXTURE(S) IN THE SPACE. COORDINATE ALL INSTALLATION REQUIREMENTS WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
- THE FIRST LISTED FIXTURE PRODUCT IN THE APPROVED MANUFACTURERS COLUMN WITH A FULL PRODUCT NUMBER FOR EACH FIXTURE TYPE IS THE BASIS OF DESIGN. ADDITIONAL APPROVED PRODUCT SERIES LISTED MUST MEET ALL THE CHARACTERISTICS LISTED AS THE BASIS OF DESIGN FIXTURE. FINAL PRODUCT APPROVAL WILL BE PROVIDED DURING THE SUBMITTAL PROCESS.



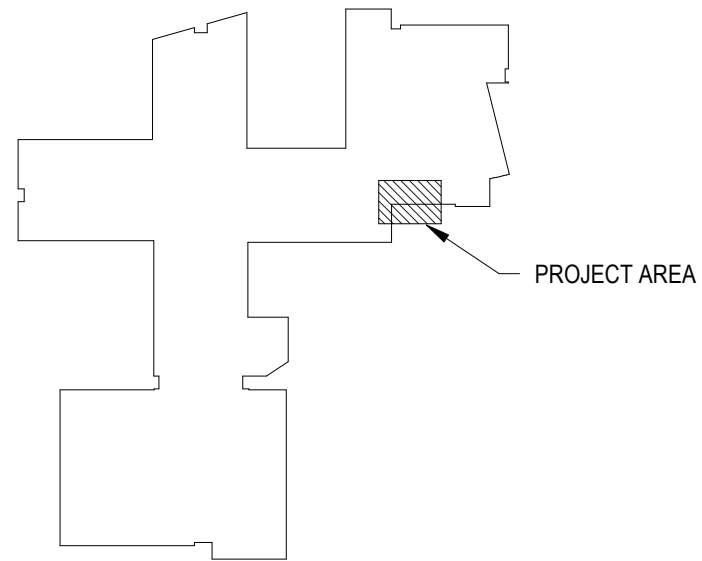
2 ELECTRICAL FIRST FLOOR PLAN - LIGHTING
EW-101 1/8" = 1'-0"



3 ELECTRICAL FIRST FLOOR PLAN - ALTERNATIVE BID
EW-101 1/4" = 1'-0"



4 ELECTRICAL FIRST FLOOR PLAN - LIGHTING - ALTERNATIVE BID
EW-101 1/4" = 1'-0"



KEY PLAN

GENERAL NOTES:

- REFER TO ELECTRICAL GENERAL NOTES AND SYMBOLS ON SHEET E-000.
- REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E-001.
- ALL DEVICES ARE SHOWN NEW UNLESS NOTED OTHERWISE.
- PROVIDE ALL NECESSARY ROUGH-INS FOR SECURITY EQUIPMENT. COORDINATE ALL REQUIREMENTS WITH DOOR HARDWARE PROVIDERS AND OWNER.
- COORDINATE FINAL SECURITY CAMERA LOCATION WITH OWNER PRIOR TO INSTALLATION.
- PROVIDE A SEPARATE GROUNDING CONDUCTOR SIZED PER NEC 250.122 INSTALLED ON MECHANICAL EQUIPMENT. REFER TO MECHANICAL CONNECTION SCHEDULE FOR FEEDER, GROUND, AND CONDUIT SIZES.
- FOR ALL CEILING OCCUPANCY SENSORS, PROVIDE ALL NECESSARY COMPONENTS FOR A COMPLETE AND OPERATIONAL SYSTEM, INCLUDING OCCUPANCY SENSORS, POWER PACKS, WALL OVERRIDE SWITCHES, RELAYS ETC.
- REFER TO ARCHITECTURAL PLANS FOR FINAL MOUNTING HEIGHTS AND FINAL FIXTURE LOCATIONS.
- PROVIDE SURFACE MOUNTED RACEWAY FOR ALL NEW SURFACE MOUNTED DEVICES ON EXISTING WALLS. PAINT RACEWAY TO MATCH WALL.

KEYNOTES

- PROVIDE ELECTRICAL CONNECTION FOR AUTOMATIC DOOR. VERIFY ALL MOUNTING HEIGHTS WITH ARCHITECTURAL DOCUMENTS. COORDINATE ALL REQUIRED CONNECTIONS AND LOCATIONS WITH DOOR PROVIDER PRIOR TO ROUGH-IN.
- PROVIDE ELECTRICAL CIRCUIT FOR THE 2 AUTO-DOORS FROM PANEL "PP-1F" AT "PR RM B119". PROVIDE 20A/1P BREAKER IN BUSSED SPACE.
- PROVIDE ELECTRICAL CIRCUIT FROM PANEL "PP-1F" AT "PR RM B119". PROVIDE 20A/1P BREAKER IN BUSSED SPACE.
- PROVIDE ELECTRICAL CIRCUIT FROM PANEL "MP-1E" AT "PR RM B119". PROVIDE 15A/2P BREAKER IN BUSSED SPACE.
- PROVIDE ELECTRICAL CIRCUIT FROM PANEL "PP-1F" AT "PR RM B119". PROVIDE 20A/1P BREAKER IN BUSSED SPACE.
- PROVIDE ELECTRICAL CIRCUIT FROM PANEL "MP-1E" AT "PR RM B119". PROVIDE 20A/1P BREAKER IN BUSSED SPACE.
- LIGHTING FIXTURE TO BE CIRCUITED TO EXISTING INTERIOR LIGHTING CIRCUIT.
- EXTERIOR WALL PACK TO BE CIRCUITED TO EXTERIOR LIGHTING CIRCUIT AND CONTROL.

MOLINE COAL VALLEY SCHOOL DISTRICT

2024 WILSON CONTROLLED ENTRY IMPROVEMENTS

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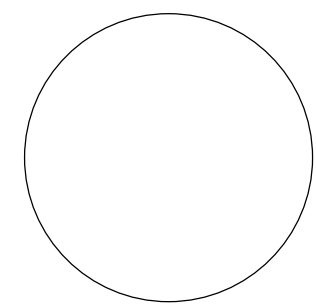
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SIGNATURE
DATE

REVISIONS		
NO	DESCRIPTION	DATE

PROJECT NUMBER 225029.00
DATE OF ISSUE 02.07.2025
DRAWN BY CM
REVIEWED BY NI

ELECTRICAL FIRST FLOOR PLAN