

THE VILLAGE AT DISCOVERY - LOT 4

LEE'S SUMMIT, MO

PRINTS ISSUED

01/25/2024 - CITY SUBMITTAL

REVISIONS:

1	10/21/24	ADDENDUM #1
3	12/20/24	ADDENDUM #3



ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING

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THE VILLAGE AT DISCOVERY -

LOT 4

1921 NE DISCOVERY AVE

LEE'S SUMMIT, MO

64064

SHEET TITLE
TITLE SHEET

PROJECT NUMBER: 23099

SHEET NUMBER:

G-001

PROJECT CERTIFICATION

I, **David E. Hendrikse**, hereby specify pursuant to the governing requirements of the state, that the documents intended to be authenticated by my seal are limited to:

AS-100	G-102	G-210	A-105	A-201	A-404	A-503
G-001	G-200	G-211	A-106	A-300	A-405	A-504
G-001.1	G-201	G-212	A-110	A-301	A-406	A-505
G-002	G-202	G-213	A-111	A-302	A-407	A-506
G-003	G-203	G-300	A-112	A-303	A-408	A-600
G-004	G-204	G-301	A-113	A-304	A-409	A-601
G-005	G-205	G-302	A-114	A-305	A-410	A-602
G-006	G-206	G-303	A-115	A-400	A-415	A-603
G-007	G-207	A-101	A-120	A-401	A-500	A-700
G-100	G-208	A-102	A-125	A-402	A-501	A-711
G-101	G-209	A-103	A-200	A-403	A-502	

and I hereby disclaim any responsibility for all other plans, specifications, reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or survey.

SEAL



David E. Hendrikse, AIA

REGIONAL MAP

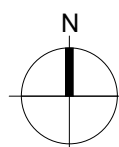


VICINITY MAP



THE VILLAGE AT DISCOVERY - LOT 4

LEE'S SUMMIT, MO



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GENERAL

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ARCHITECTURAL

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10/10/2024	A-000	SHEET NAME	-	10/10/2024
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SHEET INDEX LEGEND

SOLID FILL INDICATES INCLUSION IN ISSUE

SHEET ISSUE DATE

SHEET NUMBER AND NAME

CURRENT REVISION NUMBER & REVISION DATE ON SHEET

PROJECT DATA

PROJECT DESIGN INFORMATION

NEW CONSTRUCTION:

ZONING:

PMIX - PLANNED MIX USE DISTRICT

CODE:

2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL FUEL GAS CODE
2018 INTERNATIONAL FIRE CODE
2017 NATIONAL ELECTRIC CODE
2009 ACCESSIBILITY CODE ICC/ANSI 117-1
LEE'S SUMMIT AMENDMENTS TO ENERGY CODE

OCCUPANCY GROUP:

R-2, APARTMENTS
A-2, UNCONCENTRATED
S-2, OPEN PARKING GARAGE
R-2 & A-2, TYPE VA
S-2, TYPE IIA

TYPE OF CONSTRUCTION:

ENERGY CONSERVATION:

WALLS AS PART OF BLDG ENVELOPE
FLOORS AS PART OF BLDG ENVELOPE
ROOFS AS PART OF BLDG ENVELOPE
CEILINGS AS PART OF BLDG ENVELOPE

R-13

R-19

R-19

R-30

BUILDING SUMMARY:

NUMBER: 1 TOTAL BUILDING
HEIGHT: 3 STORIES, 43'-0"

SQUARE FOOTAGES:

GROSS NET

FIRST FLOOR	24,603 S.F.	24,089 S.F.
SECOND FLOOR	24,774 S.F.	24,305 S.F.
THIRD FLOOR	24,774 S.F.	24,305 S.F.

UNIT SUMMARY:

46 TOTAL UNITS

TYPE 'A' UNITS (2%)	(1) UNITS - ABERDEEN "A"
H1V1 UNITS (2%)	(1) UNITS - ADRIAN "H1V1" (LG)
TYPE 'B' UNITS	(3) UNITS - ABERDEEN "B" (2) UNITS - ABERDEEN - ALT (13) UNITS - ADRIAN (LG) (4) UNITS - ADRIAN - ALT (2) UNITS - ADRIAN CORNER (4) UNITS - ARA (2) UNITS - ARA - ALT (2) UNITS - ARA CORNER (4) UNITS - DELTA (2) UNITS - HURLEY (2) UNITS - LANA (2) UNITS - LANA (LG)

TOTAL UNITS

SQUARE FOOTAGE:	GROSS	NET
ABERDEEN "A" (LG)	1,377 S.F.	1,307 S.F.
ABERDEEN "B" (LG)	1,377 S.F.	1,307 S.F.
ABERDEEN - ALT	1,178 S.F.	1,098 S.F.
ADRIAN	823 S.F.	771 S.F.
ADRIAN (LG)	858 S.F.	803 S.F.
ADRIAN "H1V1" (LG)	858 S.F.	802 S.F.
ADRIAN - ALT	858 S.F.	803 S.F.
ADRIAN CORNER	731 S.F.	684 S.F.
ARA	588 S.F.	543 S.F.
ARA - ALT	693 S.F.	642 S.F.
ARA CORNER	1,094 S.F.	1,039 S.F.
DELTA	879 S.F.	829 S.F.
HURLEY	938 S.F.	874 S.F.
LANA	1,062 S.F.	985 S.F.
LANA (LG)	1,097 S.F.	1,027 S.F.

SEE CIVIL FOR SITE SUMMARY

NOTE: SQUARE FOOTAGE

-GROSS - COMMON SPACE CALCULATION: OUTSIDE PERIMETER OF STUD (ENTIRE BUILDING) LESS THE TOTAL OF THE GROSS UNIT SQUARE FOOTAGE PER FLOOR.

-GROSS - UNIT CALCULATION: CENTERLINE OF PARTY WALL TO OUTSIDE OF EXTERIOR STUD WALL AND/OR OUTSIDE OF CORRIDOR STUD WALL.

-NET - PAINT-TO-PAINT AT PERIMETER, TAKEN FROM INSIDE OF DEMISING, EXTERIOR, AND CORRIDOR WALLS.

PROJECT TEAM

OWNER

INTRINSIC DEVELOPMENT

ADDRESS: 3622 ENDEAVOR AVE., STE. 101
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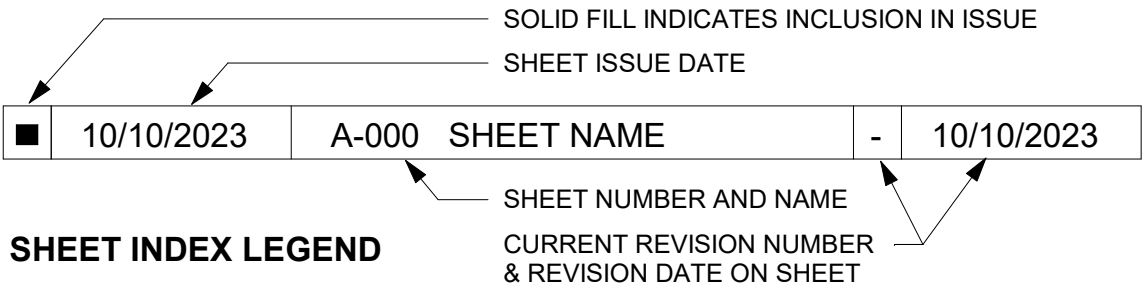
FIRE PROTECTION				
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01/25/24	FS-101	FIRE ALARM & SECURITY PLAN - FIRST FLOOR - AREA A		
01/25/24	FS-102	FIRE ALARM & SECURITY PLAN - SECOND FLOOR - AREA A		
01/25/24	FS-103	FIRE ALARM & SECURITY PLAN - THIRD FLOOR - AREA A		
01/25/24	FS-111	FIRE ALARM & SECURITY PLAN - FIRST FLOOR - AREA B		
01/25/24	FS-112	FIRE ALARM & SECURITY PLAN - SECOND FLOOR - AREA B		
01/25/24	FS-113	FIRE ALARM & SECURITY PLAN - THIRD FLOOR - AREA B		

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01/25/24	MEP3	SITE LIGHTING PLAN		
01/25/24	MEP4	ROOF MEP PLAN		
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01/25/24	UMEP1.2	UNIT TYPE ARA-ALT MEP PLAN	1	10/21/24
01/25/24	UMEP1.3	UNIT TYPE ARA-CORNER MEP PLAN	1	10/21/24
01/25/24	UMEP1.4	UNIT TYPE ADRIAN MEP PLAN	1	10/21/24
01/25/24	UMEP1.5	UNIT TYPE ADRIAN-ALT MEP PLAN	1	10/21/24
01/25/24	UMEP1.6	UNIT TYPE ADRIAN-CORNER MEP PLAN	1	10/21/24
01/25/24	UMEP1.7	UNIT TYPE DELTA MEP PLAN	1	10/21/24
01/25/24	UMEP2.1.1	UNIT TYPE ABERDEEN-A HVAC & WATER PLAN	1	10/21/24
01/25/24	UMEP2.1.2	UNIT TYPE ABERDEEN-A POWER & LIGHTING PLAN	1	10/21/24
01/25/24	UMEP2.2.1	UNIT TYPE ABERDEEN-B HVAC & WATER PLAN	1	10/21/24
01/25/24	UMEP2.2.2	UNIT TYPE ABERDEEN-B POWER & LIGHTING PLAN	1	10/21/24
01/25/24	UMEP2.3.1	UNIT TYPE ABERDEEN-ALT HVAC & WATER PLAN	1	10/21/24
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01/25/24	UMEP2.4.1	UNIT TYPE HURLEY HVAC & WATER PLAN	1	10/21/24
01/25/24	UMEP2.4.2	UNIT TYPE HURLEY POWER & LIGHTING PLAN	1	10/21/24
01/25/24	UMEP2.5.1	UNIT TYPE LANA HVAC & WATER PLAN	1	10/21/24
01/25/24	UMEP2.5.2	UNIT TYPE LANA POWER & LIGHTING PLAN	1	10/21/24

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01/25/24	M111	HVAC PLAN - FIRST FLOOR - AREA B	1	10/21/24
01/25/24	M112	HVAC PLAN - SECOND FLOOR - AREA B		
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01/25/24	M501	HVAC DETAILS & SCHEDULES		

PLUMBING				
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01/25/24	PS101	SANITARY SEWER PLAN - FIRST FLOOR - AREA A	1	10/21/24
01/25/24	PS102	SANITARY SEWER PLAN - SECOND FLOOR - AREA A	1	10/21/24
01/25/24	PS103	SANITARY SEWER PLAN - THIRD FLOOR - AREA A	1	10/21/24
01/25/24	PS111	SANITARY SEWER PLAN - FIRST FLOOR - AREA B	1	10/21/24
01/25/24	PS112	SANITARY SEWER PLAN - SECOND FLOOR - AREA B	1	10/21/24
01/25/24	PS113	SANITARY SEWER PLAN - THIRD FLOOR - AREA B	1	10/21/24
01/25/24	PW101	WATER & GAS PLAN - FIRST FLOOR - AREA A		
01/25/24	PW102	WATER & GAS PLAN - SECOND FLOOR - AREA A		
01/25/24	PW103	WATER & GAS PLAN - THIRD FLOOR - AREA A		
01/25/24	PW111	WATER & GAS PLAN - FIRST FLOOR - AREA B	1	10/21/24
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ELECTRICAL				
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01/25/24	E601	ELECTRICAL SCHEDULES AND SPECIFICATION	1	10/21/24
01/25/24	EL101	LIGHTING PLAN - FIRST FLOOR - AREA A	1	10/21/24
01/25/24	EL102	LIGHTING PLAN - SECOND FLOOR - AREA A	1	10/21/24
01/25/24	EL103	LIGHTING PLAN - THIRD FLOOR - AREA A	1	10/21/24
01/25/24	EL111	LIGHTING PLAN - FIRST FLOOR - AREA B	1	10/21/24
01/25/24	EL112	LIGHTING PLAN - SECOND FLOOR - AREA B	1	10/21/24
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01/25/24	EP101	POWER PLAN - FIRST FLOOR - AREA A		
01/25/24	EP102	POWER PLAN - SECOND FLOOR - AREA A		
01/25/24	EP103	POWER PLAN - THIRD FLOOR - AREA A		
01/25/24	EP111	POWER PLAN - FIRST FLOOR - AREA B	1	10/21/24
01/25/24	EP112	POWER PLAN - SECOND FLOOR - AREA B		
01/25/24	EP113	POWER PLAN - THIRD FLOOR - AREA B		



PRINTS ISSUED
01/25/2024 - CITY SUBMITTAL

REVISIONS:
1 10/21/24 ADDENDUM #1

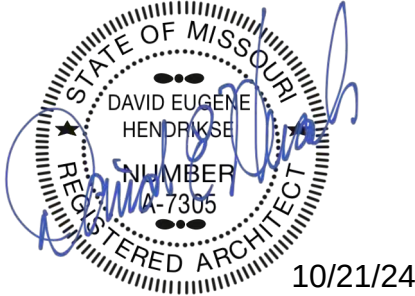
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ARCHITECTURE
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LOT 4
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SHEET TITLE
SHEET INDEX (CONT.)

PROJECT NUMBER: 23099

SHEET NUMBER:

G-001.1

ABBREVIATIONS

A	ABV	ABOVE		
	ACC	ACCESSIBLE		
	ACT	ACOUSTICAL CEILING TILE		
	AD	AREA DRAIN		
	ADA	AMERICANS WITH DISABILITIES ACT		
	ADAAG	ADA ACCESSIBILITY GUIDELINES		
	ADF	ACCESSIBLE DRINKING FOUNTAIN		
	ADH	ADHESIVE		
	ADJ	ADJUSTABLE/ADJACENT		
	AEWC	ACCESSIBLE ELECTRIC WATER COOLER		
	AFF	ABOVE FINISH FLOOR		
	AHJ	AUTHORITY HAVING JURISDICTION		
	AHU	AIR HANDLING UNIT		
	AL	ASSISTED LIVING		
	ALAV	ACCESSIBLE LAVATORY		
B	ALT	ALTERNATE		
	ALUM	ALUMINUM		
	AMI	ACCESSIBLE MIRROR		
	ANN	FIRE ANNUNCIATOR PANEL		
	ANO	ANNODIZED		
	APPD	APPROVED		
	APPROX	APPROXIMATE(LY)		
	ASD	ACCESSIBLE SOAP DISPENSER		
	ASH	ACCESSIBLE SHOWER HEAD		
	ATTEN	ATTENUATION		
	ATTN	ATTENTION		
	AU	ACCESSIBLE URINAL		
	C	B.O.	BOTTOM OF	
		BD	BOARD	
		BLDG	BUILDING	
BLK		BLOCK / BLACK		
BLKG		BLOCKING		
BM		BENCH MARK		
BO		BY OTHERS		
BOD		BOTTOM OF DECK(ING)		
BOH		BACK OF HOUSE		
BOT		BOTTOM (OF)		
BRG		BEARING		
BRKT		BRACKET		
BRZ		BRONZE		
BSMT		BASEMENT		
D		BTWN / BTW	BETWEEN	
	BUR	BUILT UP ROOFING		
	BUS	BUSINESS		
	C TO C	CENTER TO CENTER		
	CAB	CABINET		
	CB	CERAMIC BASE/CORNER BEAD/CHALKBOARD		
	CEM / CEMT	CEMENT / CEMENTITIOUS		
	CFM	CUBIC FEET PER MINUTE		
	CI	CAST IRON		
	CIP	CAST IN PLACE		
	CJ	CONTROL JOINT		
	CL	CENTERLINE		
	CLG	CEILING		
	CLO	CLOSET		
	E	CLR	CLEAR	
CLRM		CLASSROOM		
CMP		CORRUGATE METAL PIPE		
CMU		CONCRETE MASONRY UNIT		
CNTR		COUNTERTOP		
CO		CLEANOUT		
COL		COLUMN		
COMB		COMBINATION		
CONC		CONCRETE		
CONN		CONNECTION		
CONST		CONSTRUCTION		
CONT		CONTINUOUS		
CONTR		CONTRACTOR		
COORD		COORDINATE / COORDINATOR		
F		CORR	CORRIDOR	
	CPT	CARPET		
	CSK	COUNTERSINK / COUNTER SUNK		
	CT	CERAMIC TILE		
	CTG	COATING		
	CTR	CENTER		
	CY	CUBIC YARD(S)		
	DBL	DOUBLE		
	DEMO	DEMOLITION / DEMOLISH		
	DIA	DIAMETER		
	DIAG	DIAGONAL		
	DIM	DIMENSION		
	DIMS	DIMENSIONS		
	DN	DOWN		
	G	DP	DEEP	
DR		DOOR		
DS		DOWNSPOUT		
DTL		DETAIL		
DWG		DRAWING		
E		EAST		
EA		EACH		
EF		EACH FACE		
EJ		EXPANSION JOINT		
EL		ELEVATION		
ELEC		ELECTRIC(AL)		
ELEV		ELEVATOR		
ENLG		ENLARGED		
EPDM		ETHYLENE PROPYLENE DIENE TERPOLYMER		
H		EQ	EQUAL	
	ES	EACH SIDE		
	EW	EACH WAY		
	EWC	ELECTRIC WATER COOLER		
	EXH	EXHAUST		
	EXIST	EXISTING		
	EXP	EXPANSION		
	EXT	EXTERIOR		
	FA	FIRE ALARM		
	FACP	FIRE ACCESS CONTROL PANEL		
	FAWCM	FULLY ADHERED WATER CONTROL MEMBRANE		
	FBG	FIBERGLASS		
	FD	FLOOR DRAIN / FIRE DEPARTMENT		
	FDN	FOUNDATION		
	FE	FIRE EXTINGUISHER		
I	FEC	FIRE EXTINGUISHER CABINET		
	FF	FINISH FLOOR		
	FGL	FIBERGLASS		
	FH	FIRE HOSE		
	FHA	FAIR HOUSING ACT		
	FHC	FIRE HOSE CABINET		
	FIN	FINISH		
	FIXT	FIXTURE		
	FLASH	FLASHING		
	FLEX	FLEXIBLE		
	FLR	FLOOR		
	FND	FOUNDATION		
	FO	FACE OF		
	FRP	FIBER-REINFORCED PLASTIC		
	J	FT	FOOT	
FTG		FOOTING		
GA		GAUGE		
GALV		GALVANIZED		
GB		GRAB BAR		
GC		GENERAL CONTRACTOR		
GEN		GENERAL		
GFRC		GLASS FIBER REINFORCED CONCRETE		
GL		GLASS		
GLZ		GLAZED TILE		
GPM		GALLONS/MINUTE		
GR		GRADE		
GWB		GYPSUM WALL BOARD		
GYP		GYPSUM		
GYP BD		GYPSUM BOARD		
K	HB	HOSE BIBB		
	HC	HOLLOW CORE		
	HCWD	HOLLOW CORE WOOD		
	HD	HEAVY DUTY OR HAND DRYER		
	HDBD	HARD BOARD		
	HDNR	HARDENER		
	HDW	HARDWARE		
	HDWD	HARDWOOD		
	HM	HOLLOW METAL		
	HORIZ	HORIZONTAL		
	HR	HOUR		
	HT	HEIGHT		
	HTG	HEATING		
	HTR	HEATER		
	L	HYD	HYDRANT	
IBC		INTERNATIONAL BUILDING CODE		
ID		INTERIOR DESIGNER		
ID		INSIDE DIAMETER		
IDF		INDIVIDUAL DISTRIBUTION FRAME		
IL		INDEPENDENT LIVING		
IN		INCHES		
INDIV		INDIVIDUAL		
INSUL		INSULATION / INSULATED		
INT		INTERIOR		
INV		INVERT		
JAN		JANITOR		
JST		JOIST		
JT		JOINT		
M		KD	KNOCKED DOWN	
	KIT	KITCHEN		
	KN	KNOX BOX		
	LA	LANDSCAPE / LANDSCAPE ARCHITECT		
	LAM	LAMINATE		
	LAV	LAVATORY		
	LF	LINEAR FOOT/FEET		
	LG	LONG		
	LGTH	LENGTH		
	LKR	LOCKER		
	LSC	LIFE SAFETY CODE		
	LT	LIGHT		
	MAS	MASONRY		
	MATL	MATERIAL		
	N	MAX	MAXIMUM	
MB		MARKER BOARD / MAIL BOX		
MC		MEMORY CARE		
MDF		MAIN DISTRIBUTION FRAME		
MECH		MECHANICAL		
MFR		MANUFACTURE(ER)		
MH		MANHOLE		
MI		MIRROR		
MIN		MINIMUM		
MO		MASONRY OPENING		
MTD		MOUNTED		
MTG HT		MOUNTING HEIGHT		
MTL		METAL		
N		NORTH		
O		N/A	NOT APPLICABLE	
	NIC	NOT IN COUNT / NOT IN CONTRACT		
	NO	NUMBER		
	NOM	NOMINAL		
	NTS	NOT TO SCALE		
	OA	OVERALL		
	OC	ON CENTER		
	OD	OUTSIDE DIAMETER		
	OFD	OVERFLOW ROOF DRAIN		
	OFF	OFFICE		
	OH	OPPOSITE HAND		
	OPNG	OPENING		
	OPP	OPPOSITE		
	OSB	ORIENTED STRAND BOARD		
	P	PA	PUBLIC ADDRESS	
PAR		PARALLEL		
PCP		PORTLAND CEMENT PLASTER		
PERP		PERPENDICULAR		
PH		PRE-HUNG		
PL		PROPERTY LINE		
PLAM		PLASTIC LAMINATE		
PLAS		PLASTER		
PLBG		PLUMBING		
PLBG		PLUMBING		
PLYWD		PLYWOOD		
PNL		PANEL		
PNLG		PANELING		
PR		PAIR		
R		PRE-FIN	PRE-FINISHED	
	PREFAB	PREFABRICATED		
	PREFIN	PREFINISHED		
	PT	PAINT		
	PTD	PAINTED		
	PTN	PARTITION		
	PTR	PAPER TOWEL RECEPTACLE		
	R	RADIUS		
	RA	RETURN AIR		
	RC	RESILIENT CHANNEL		
	RCP	REFLECTED CEILING PLAN / REINFORCED CONCRETE PIPE(ING)		
	RD	ROOF DRAIN		
	RE / REF	REFER TO		
	RECPT	RECEPTACLE		
	RECS	RECOMMENDATION(S)		
REF	REFRIGERATOR / REFER TO			
S	REINF	REINFORCING		
	REQD	REQUIRED		
	REV	REVISION		
	RFG	ROOFING		
	RO	ROUGH OPENING		
	RR	RESTROOM		
	RTU	ROOF TOP UNIT		
	S	SOUTH		
	SAF	SELF ADHERED FLASHING		
	SAFP	SPRAYED APPLIED FIRE-PROOFING		
	SC	SOLID CORE		
	SCHED	SCHEDULE		
	SCR	SHOWER CURTAIN ROD		
	SCWD	SOLID CORE WOOD		
	SD	SOAP DISPENSER		
T	SECT	SECTION		
	SF	SQUARE FEET		
	SH	SINGLE HUNG		
	SHR	SHOWER		
	SHT	SHEET		
	SIM	SIMILAR		
	SND	SANITARY NAPKIN DISPENSER		
	SOG	SLAB ON GRADE		
	SP CTG	SPECIAL COATING		
	SPEC	SPECIFICATION		
	SPKR	SPEAKER		
	SQ	SQUARE		
	SQIN	SQUARE INCHES		
	SST	STAINLESS STEEL		
	STC	SOUND TRANSMISSION COEFFICIENT		
STD	STANDARD			
STL	STEEL			
STOR	STORAGE			
STRUCT	STRUCTURAL			
SUBFLR	SUBFLOOR			
SUSP	SUSPEND(ED)			
SY	SQUARE YARD			
SYM	SYMMETRICAL			
U	T	TREAD		
	T&B	TOP AND BOTTOM		
	T&G	TONGUE AND GROOVE		
	T.O.	TOP OF		
	TB	TOWEL BAR		
	TBD	TO BE DETERMINED		
	TEL / TELE	TELEPHONE		
	TER / TRZ	TERRAZZO (TERRACE)		
	TERM	TERMINATE / TERMINAL		
	TOC	TOP OF CURB / TOP OF CONC		
	TOM	TOP OF MASONRY		
	TOW	TOP OF WALL		
	TP / TPD	TOILET PAPER DISPENSER		
	TPO	THERMOPLASTIC POLYOLEFIN		
	TRANS	TRANSFORMER / TRANSPARENT / TRANSOM		
TS	TUBE STEEL			
TYP	TYPICAL			
V	UNO	UNLESS NOTED OTHERWISE		
	UON	UNLESS OTHERWISE NOTED		
	UR	URINAL		
	US	UTILITY SHELF		
	V	VINYL COMPOSITE TILE		
	VENT	VENTILATE / VENTILATION		
	VER	VERIFY		
	VIF	VERIFY IN FIELD		
	VP	VISION PANEL		
	VTR	VENT THRU ROOF		
	W	W	WEST	
		W/	WITH	
		W/O	WITHOUT	
		WC	WATER CLOSET	
		WD	WOOD	
WDW		WINDOW		
WF		WIDE FLANGE / WATER FOUNTAIN		
WH		WALL HUNG / HYDRANT / WATER HEATER / WEEP HOLE		
WLD		WELD(ED)		
WRB		WEATHER-RESISTANT BARRIER		
WT		T SECTION		
WWF		WELDED WIRE FABRIC		
X		X	BY (EX: 2X4)	
		Y	YD	YARD / YARD DRAIN

MATERIAL LEGEND AND SYMBOLS

	MASONRY BLOCK - PLAN 1/2" = 1'-0" AND BELOW		ROOM NUMBER
	BRICK - SECTION		ACCESSIBLE UNIT OR TYPE-A UNIT
	CONCRETE ABOVE 1-1/2" = 1'-0"		HEARING IMPAIRED UNIT
	STUD WALL		VISUALLY IMPAIRED UNIT
	GYPSUM BOARD		DOOR NUMBER
	PLYWOOD		WINDOW TYPE
	RIGID INSULATION		WALL TYPE
	BATT INSULATION		ELEVATION KEYNOTE
	STANDING SEAM METAL ROOF		PLAN KEYNOTE
	EARTH		ELEVATION NUMBER
	CRUSHED ROCK		SHEET NUMBER
	SAND		ELEVATION NUMBER
	CONTINUOUS LUMBER		SHEET NUMBER
	NON-CONTINUOUS LUMBER (SHIM)		ELEVATION NUMBER
	FINISH LUMBER		SHEET NUMBER
	STEEL OR METAL		ELEVATION NUMBER

GENERAL NOTES

STANDARDS AND REGULATIONS
- CONTRACTOR SHALL PERFORM ALL WORK IN CONFORMANCE WITH APPLICABLE BUILDING CODES, REGULATIONS, ORDINANCES, UTILITY PROVIDER REQUIREMENTS, AND SIMILAR STANDARDS. - CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND SIMILAR RELEASES REQUIRED FOR CONSTRUCTION AND OCCUPANCY. CONTRACTOR SHALL FURNISH ALL COPIES OF SUCH ITEMS TO OWNER AND ARCHITECT WITHIN 10 DAYS OF RECEIPT. IF PERMITS ARE ISSUED SUBJECT TO CERTAIN CONDITIONS OR REVISIONS TO THE WORK OR PERMITS ARE DELAYED FOR ANY REASON, CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER IMMEDIATELY. - CONTRACTOR SHALL OBTAIN ALL REQUIRED INSPECTIONS OF THE WORK. CONTRACTOR SHALL REGULARLY UPDATE OWNER AND ARCHITECT REGARDING THE STATUS OF THE INSPECTIONS. - CONTRACTOR SHALL COORDINATE WORK WITH APPLICABLE UTILITY PROVIDERS. - CONTRACTOR SHALL BE FAMILIAR WITH AND WORK SHALL BE IN COMPLIANCE WITH REFERENCED FIRE-RATED ASSEMBLY TESTS AND STANDARDS.
ADMINISTRATION OF THE WORK
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS AND SEQUENCES OF CONSTRUCTION. - CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SAFETY OF ALL CONSTRUCTION PERSONNEL AND AUTHORIZED VISITORS. - CONTRACTOR SHALL BECOME FULLY ACQUAINTED WITH THE CONDITIONS RELATED TO THE WORK. ANY KNOWN DISCREPANCIES BETWEEN THE DOCUMENTS AND ACTUAL CONDITIONS SHALL BE REPORTED TO THE OWNER FOR RESOLUTION PRIOR TO PROCEEDING WITH WORK RELATED TO THE DISCREPANCY. - CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL CONSTRUCTION AND DEMOLITION DEBRIS. CONTRACTOR SHALL OBTAIN APPROVAL OF OWNER (AND GOVERNING AUTHORITIES, IF APPLICABLE) FOR DETAILS RELATED TO REMOVAL OF TRASH, INCLUDING SUCH ISSUES AS PATH OF TRAVEL. - CONTRACTOR SHALL BECOME FAMILIAR WITH AND COMPLY WITH GOVERNMENT'S PROCEDURES FOR MAINTAINING A SECURE SITE AND BUILDING. - EACH INSTALLER SHALL EXAMINE SUBSTRATE CONDITION AND/OR SITE CONDITIONS WHICH AFFECT THE QUALITY OF EACH PRODUCT TO BE INSTALLED. IF ANY CONDITIONS EXIST WHICH WILL HAVE A DETRIMENTAL EFFECT ON THE QUALITY OF THE INSTALLATION, THE INSTALLER SHALL IMMEDIATELY NOTIFY THE CONTRACTOR. INSTALLATION SHALL NOT PROCEED UNTIL THE UNSATISFACTORY CONDITIONS ARE CORRECTED. PROCEEDING WITH THE INSTALLATION SHALL SIGNIFY ACCEPTANCE OF THE CONDITIONS. - CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS ON SITE AT ALL TIMES. - CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING COORDINATION EFFORTS OF ALL SUBCONTRACTORS. - CONTRACTOR SHALL NOT CLOSE UP CEILING UNTIL ARCHITECT HAS AN OPPORTUNITY TO INSPECT ALL WORK WHICH WILL BE CONCEALED BY CEILING. CONTRACTOR SHALL NOTIFY ARCHITECT AT LEAST TWENTY-FOUR HOURS PRIOR TO CLOSE-UP. - CONTRACTOR SHALL LAY OUT WORK AS SOON AS POSSIBLE. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK IN QUESTION.
USE OF CONSTRUCTION DOCUMENTS
- CONTRACTOR SHALL NOT SCALE DRAWINGS. ONLY WRITTEN DIMENSIONS OR KEYED NOTES SHALL BE USED. CONTACT ARCHITECT IF CLARIFICATION OR ADDITIONAL INFORMATION IS REQUIRED. - DRAWINGS SHALL NOT BE REPRODUCED FOR SUBMITTALS. DRAWINGS OR PORTIONS OF DRAWINGS USED FOR SUBMITTALS WILL BE REJECTED AND RETURNED TO CONTRACTOR. - DIMENSIONS ARE AS FOLLOWS UNLESS NOTED OTHERWISE: - FACE OF STUD - TO CENTERLINE OF COLUMNS, PARTY WALL, WINDOWS AND DOORS - TO TOP OF STRUCTURAL DECK - TO BOTTOM OF FINISHED CEILING
DEFINITIONS
"ALIGN" AS USED IN THESE DOCUMENTS SHALL MEAN TO ACCURATELY LOCATE AND FINISH FACES IN THE SAME PLANE AND/OR TO INSTALL NEW CONSTRUCTION ADJACENT TO EXISTING CONSTRUCTION WITHOUT ANY VISIBLE JOINTS OR SURFACE IRREGULARITIES. "CLEAR" AS USED IN THESE DOCUMENTS SHALL MEAN THAT THE CONDITION IS NOT ADJUSTABLE WITHOUT THE APPROVAL OF THE ARCHITECT, CLEAR DIMENSIONS ARE TYPICALLY TO FINISH FACE. "MAXIMUM" OR "MAX" AS USED IN THESE DOCUMENTS SHALL MEAN THAT THE CONDITION IS SLIGHTLY ADJUSTABLE BUT MAY NOT VARY TO A DIMENSION OR QUANTITY GREATER THAN THAT SHOWN WITHOUT APPROVAL OF THE ARCHITECT. "MINIMUM" OR "MIN." AS USED IN THESE DOCUMENTS SHALL MEAN THAT THE CONDITION IS SLIGHTLY ADJUSTABLE BUT MAY NOT VARY TO A DIMENSION OR QUANTITY LESS THAN THAT SHOWN WITHOUT APPROVAL OF THE ARCHITECT. "TYPICAL" OR "TYP" AS USED IN THESE DOCUMENTS SHALL MEAN THAT THE CONDITION OR DIMENSION IS THE SAME OR REPRESENTATIVE FOR SIMILAR CONDITIONS THROUGHOUT. "4"- AS USED IN THESE DOCUMENTS SHALL MEAN THE DIMENSION OR QUANTITY IS SLIGHTLY ADJUSTABLE TO ACCOMMODATE ACTUAL CONDITIONS.
GENERAL CONSTRUCTION ISSUES
- HATCHED AREAS INDICATE AREA TO BE FURRED DOWN ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE. - ALL PLUMBING SUPPLY LINES IN EXTERIOR WALLS TO RECEIVE FULL INSULATION. - DO NOT ALLOW EXTERIOR SHEATHING TO BE IN CONTACT WITH CONCRETE SURFACE. - HOLD ALL WOOD TRIM A MINIMUM OF 1/4-INCH ABOVE CONTACT WITH HORIZONTAL CONCRETE SURFACES.
PASSIVE SUB SLAB DEPRESSURIZATION RADON CONTROL SYSTEM
- PROVIDE UNDERSLAB RADON MITIGATION SYSTEM WITH REQUIRED VENTING. - DESIGN OF SUB SLAB DEPRESSURIZATION RADON CONTROL SYSTEM WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. - PROVIDE ELECTRICAL JUNCTION BOX IN ATTIC FOR POSSIBLE FUTURE INSTALLATION OF WARNING DEVICE FOR EACH VERTICAL STACK. - PROVIDE 15 AMP, 115 VOLT ELECTRIC CIRCUIT AND JUNCTION BOX FOR FUTURE INSTALLATION OF VENT FAN. - ALL CONCRETE SLABS THAT COME IN CONTACT WITH THE GROUND SHALL BE LAID OVER A GAS PERMEABLE MATERIAL MADE UP OF EITHER A MINIMUM 4" THICK UNIFORM CLEAN AGGREGATE OR A MINIMUM 4" THICK UNIFORM LAYER OF SAND, OVERLAIN BY A LAYER OR STRIPS OF MANUFACTURED MATTING DESIGNED TO ALLOW THE LATERAL FLOW OF SOIL GASES. - ALL CONCRETE FLOOR SLABS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL BUILDING CODES. - ALL OPENINGS, GAPS, AND JOISTS IN FLOOR AND WALL ASSEMBLIES IN CONTACT WITH SOIL OR GAPS AROUND PIPES, TOILETS, BATHTUBS OR DRAINS PENETRATING THESE ASSEMBLIES SHALL BE FILLED OR CLOSED WITH MATERIALS THAT PROVIDE A PERMANENT AIR-TIGHT SEAL. SEAL LARGE OPENINGS WITH NON-SHRINK MORTAR, GROUTS OR EXPANDING FOAM MATERIALS AND SMALLER GAPS WITH ELASTOMERIC JOINTS SEALANT, AS DEFINED ASTM C920-07. - VENT PIPES SHALL BE INSTALLED SO THAT ANY RAINWATER OR CONDENSATION DRAINS DOWNWARD INTO THE GROUND BENEATH THE SLAB OR SOIL - GAS - RETARDER MEMBRANE. - EXHAUST CLEARANCES MUST CONFORM TO THE CURRENT NATIONAL STANDARD PLUMBING CODE, FOR EXHAUST TERMINATION LIMITATION AND REQUIREMENTS.

PRINTS ISSUED
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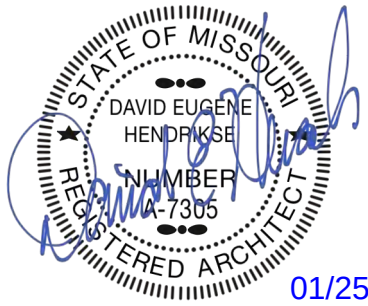
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GENEVILLE, KANSAS CITY, MO



THE VILLAGE AT DISCOVERY -
LOT 4

LEE'S SUMMIT, MO

SHEET TITLE
GENERAL INFORMATION

PROJECT NUMBER: 23099

SHEET NUMBER:

G-002

WEATHER-RESISTIVE BARRIER INSTALLATION GUIDELINES

WEATHER-RESISTIVE BARRIER INSTALLATION ON VERTICAL WALLS
PRIOR TO INSTALLATION OF WINDOWS OR DOORS

STEP 1
UNWRAP ROLL AT CORNER, LEAVE 6" TO 12" OVERLAP - PRINTED STUD MARKS TO LINE UP WITH FIRST STUD.

STEP 2
ROLL SHOULD BE PLUMB - EXTEND BOTTOM ROLL EDGE OVER SILL PLATE INTERFACE AT LEAST 2" TO 3".

STEP 3A
WEATHER-RESISTIVE BARRIER TO BE SECURED ON VERTICAL STUD LINE EVERY 12" TO 18". WHEN USING WOOD, INSULATED SHEATHING BOARD, OR EXTERIOR GYPSUM BOARD, LARGE HEAD OR PLASTIC WEATHER HEAD NAIL USE IS BEST PRACTICE. ALSO, 1" MIN. CROWN WIDE STAPLES MAY BE USED.

STEP 3B
WHEN USING MASONRY, TEMPORARILY ATTACH BARRIER WITH ADHESIVES CONTAINING POLYURETHANE, ELASTOMERIC, OR LATEX BASE IN VERTICAL STRIPS SPACE APPROXIMATELY 24" APART (CONSULT BUILDING WRAP MANUFACTURER FOR LIST OF SUGGESTED ADHESIVES). AS A PERMANENT ATTACHMENT, USE CLADDING FASTENERS.

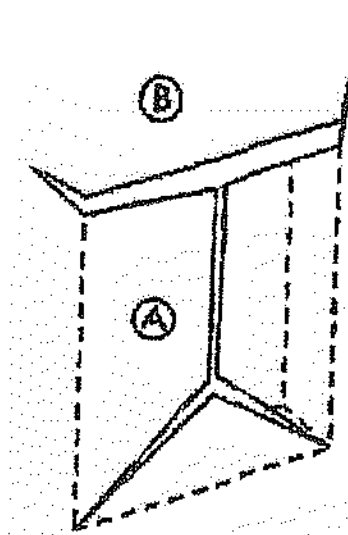
FLASHING SYSTEM INSTALLATION AT WINDOWS/DOORS
UPON COMPLETION OF WEATHER-RESISTIVE BARRIER INSTALLATION

GENERAL INSTRUCTIONS

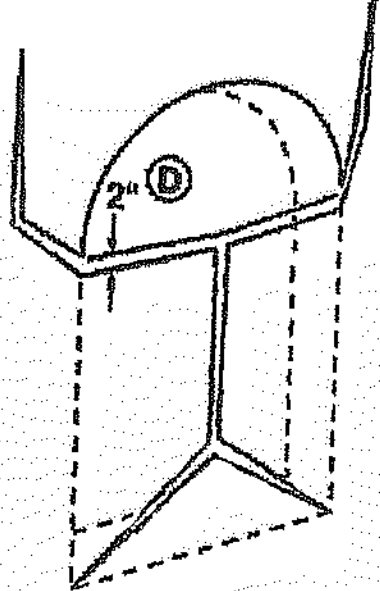
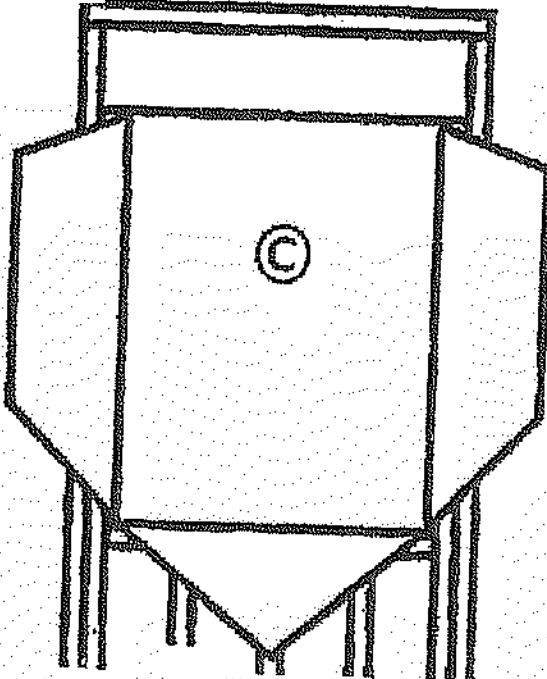
- USE AND INSTALL APPROVED FLASHING PER WEATHER-RESISTIVE BARRIER MANUFACTURER'S RECOMMENDATIONS.
- INSTALL FLASHING ON CLEAN, DRY SURFACES. SURFACES TO BE WIPED TO REMOVE MOISTURE, DIRT, GREASE AND OTHER DEBRIS WHICH MAY INTERFERE WITH ADHESION.
- PRESSURE TO BE APPLIED ALONG ENTIRE SURFACE TO ACHIEVE A GOOD BOND.
- SMOOTH/REPOSITION SURFACE AS NECESSARY TO ELIMINATE ALL WRINKLES AND BUBBLES.

STEP 6
PREPARE WEATHER-RESISTIVE BARRIER FOR WINDOW OR DOOR INSTALLATION:

- MAKE A MODIFIED 'I'-CUT IN THE BARRIER, BEGINNING WITH A HORIZONTAL CUT ACROSS THE TOP OF THE WINDOW FRAME. (FOR ROUNDTOP WINDOWS, BEGIN THE CUT 2" ABOVE THE MULL JOINT; SEE D). CUT STRAIGHT DOWN FROM THE CENTER APPROXIMATELY 2/3 OF THE WAY, THEN ANGLE THE CUT TO THE CORNERS (SEE A).
- TO EXPOSE SHEATHING, OR FRAMING MEMBERS, AND TO ALLOW FOR HEAD FLASHING INSTALLATION, CUT A FLAP ABOVE THE ROUGH OPENING.
- INTO THE ROUGH OPENING, FOLD SIDE AND BOTTOM FLAPS AND THEN SECURE.
- FLIP THE HEAD FLAP UP AND SECURE TEMPORARILY.



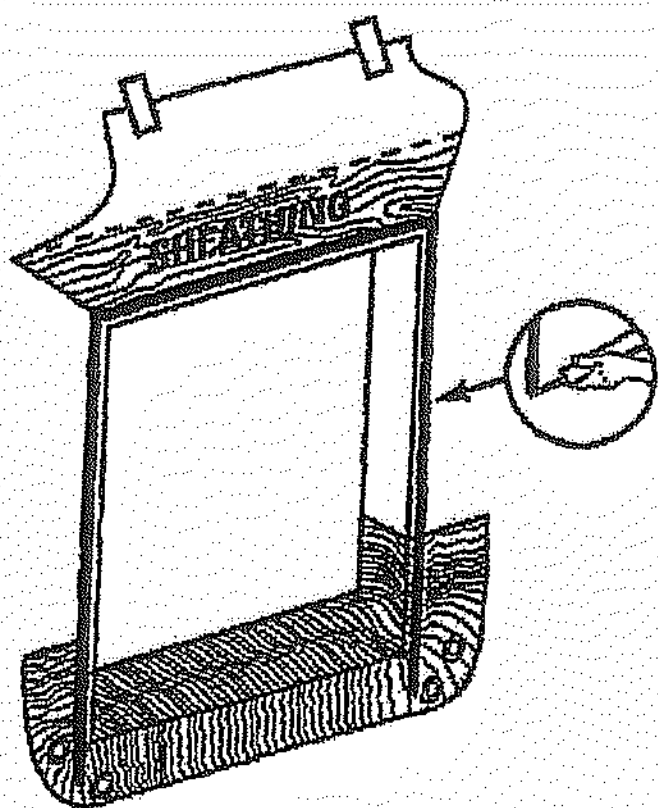
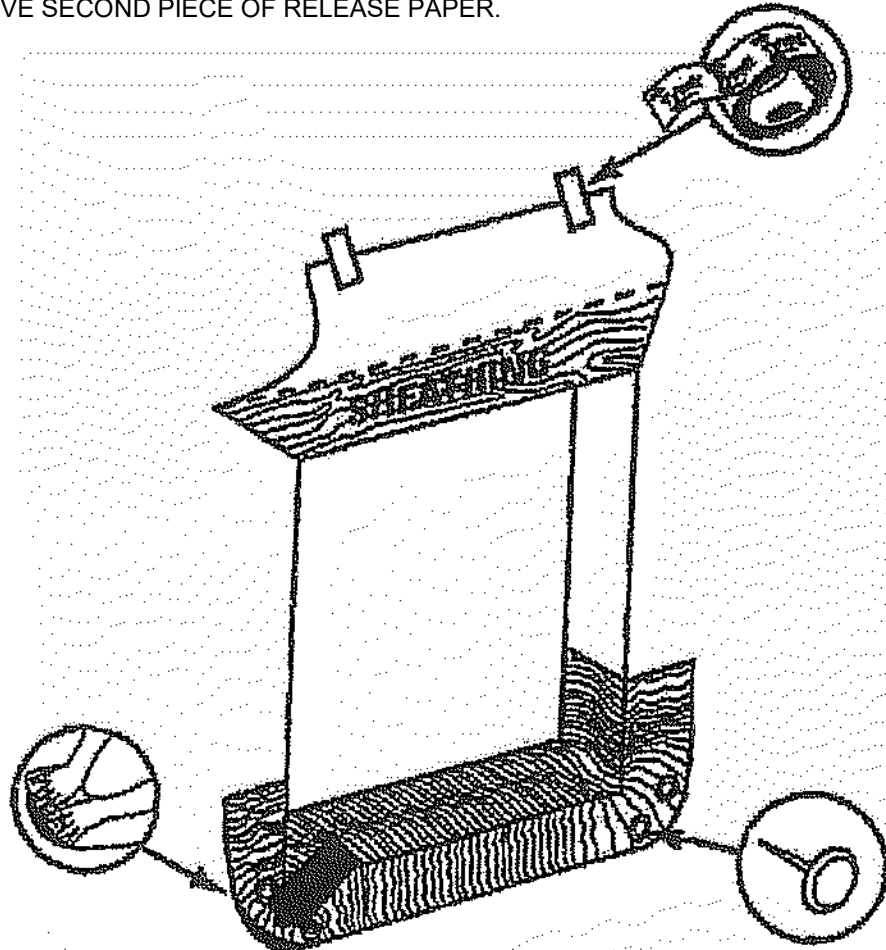
FOR RECTANGULAR WINDOWS



FOR ROUNDTOP WINDOWS

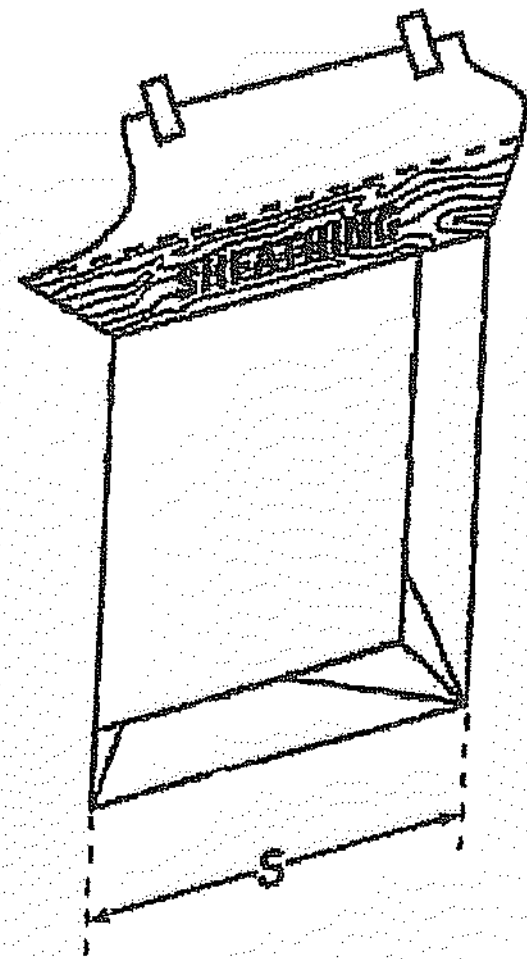
STEP 7

- CUT FLEXIBLE FLASHING AT LEAST 12" LONGER THAN SILL ROUGH OPENING WIDTH.
- REMOVE FIRST PIECE OF RELEASE PAPER, COVER HORIZONTAL SILL BY ALIGNING INSIDE EDGE OF SILL, AND SECURE IN ROUGH OPENING ACROSS SILL AND TURN UP JAMBS - MINIMUM 6". COVER HORIZONTAL SILL BY ALIGNING FLEXIBLE FLASHING EDGE WITH SILL INSIDE EDGE.
- REMOVE SECOND PIECE OF RELEASE PAPER.



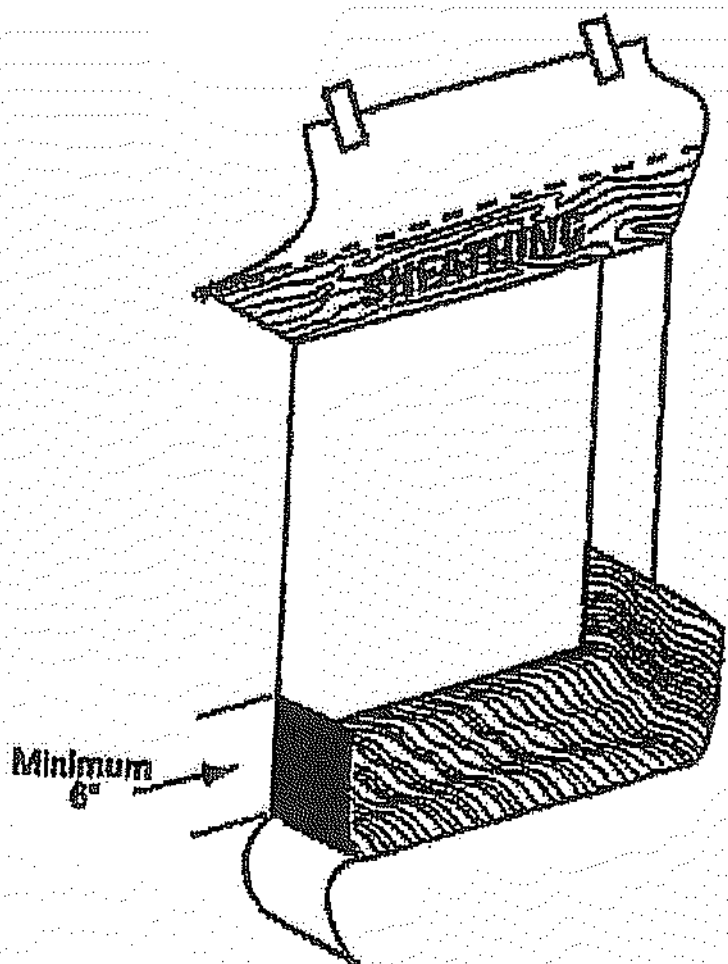
STEP 8

- FAN FLEXIBLE FLASHING ONTO WALL FACE AT BOTTOM CORNERS.
- PRESS SILL FLASHING FIRMLY TO ENSURE FULL ADHESION.
- FANNED EDGES TO BE SECURED WITH MECHANICAL FASTENERS.



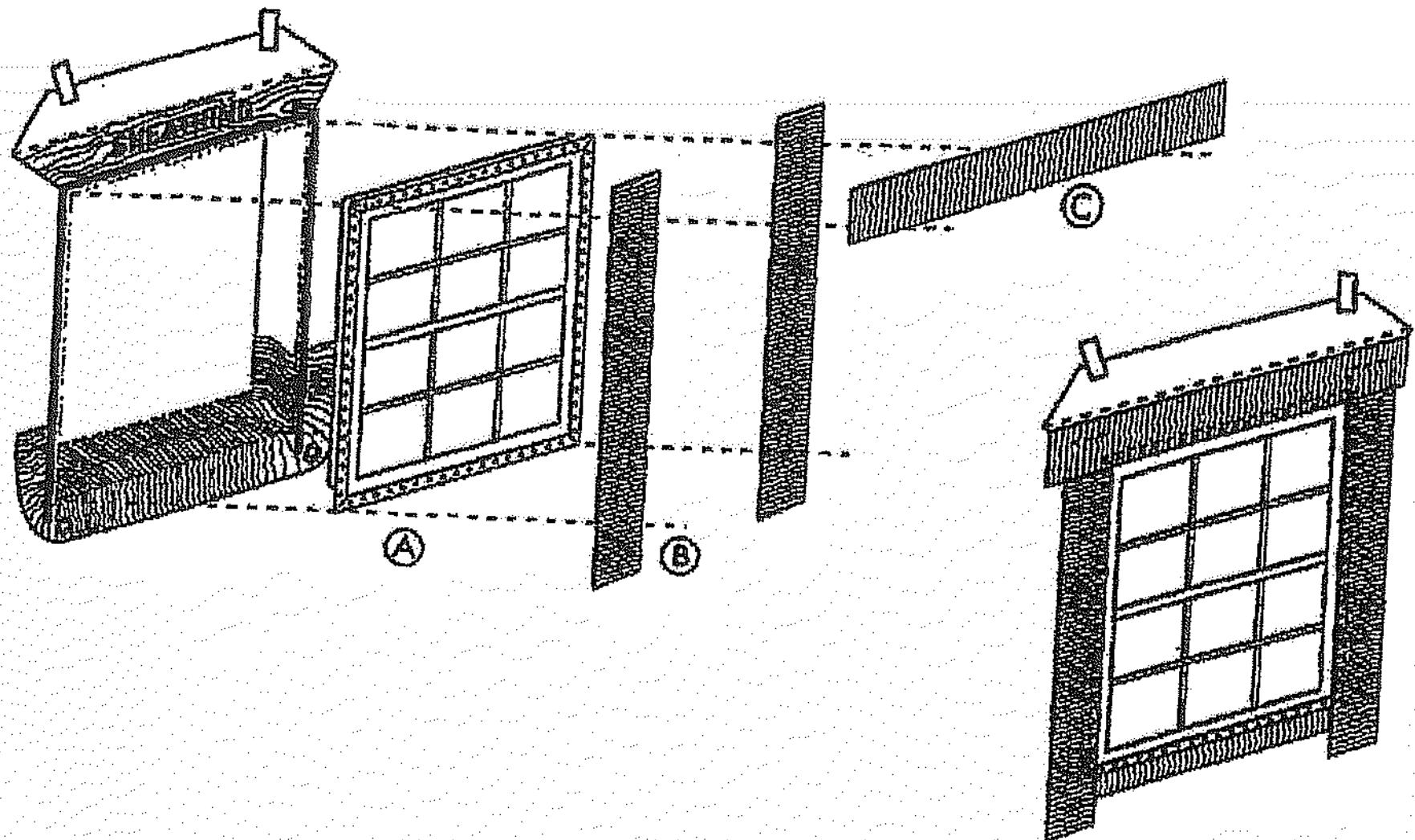
STEP 9

- AT WALL OR BACK SIDE OF WINDOW MOUNTING FLANGE, APPLY A CONTINUOUS BEAD OF CAULK ACROSS JAMBS AND HEAD - BOTTOM SILL FLANGE TO REMAIN UNCAULKED.
- CAULK NOT TO BE APPLIED TO BOTTOM SILL FLANGE.



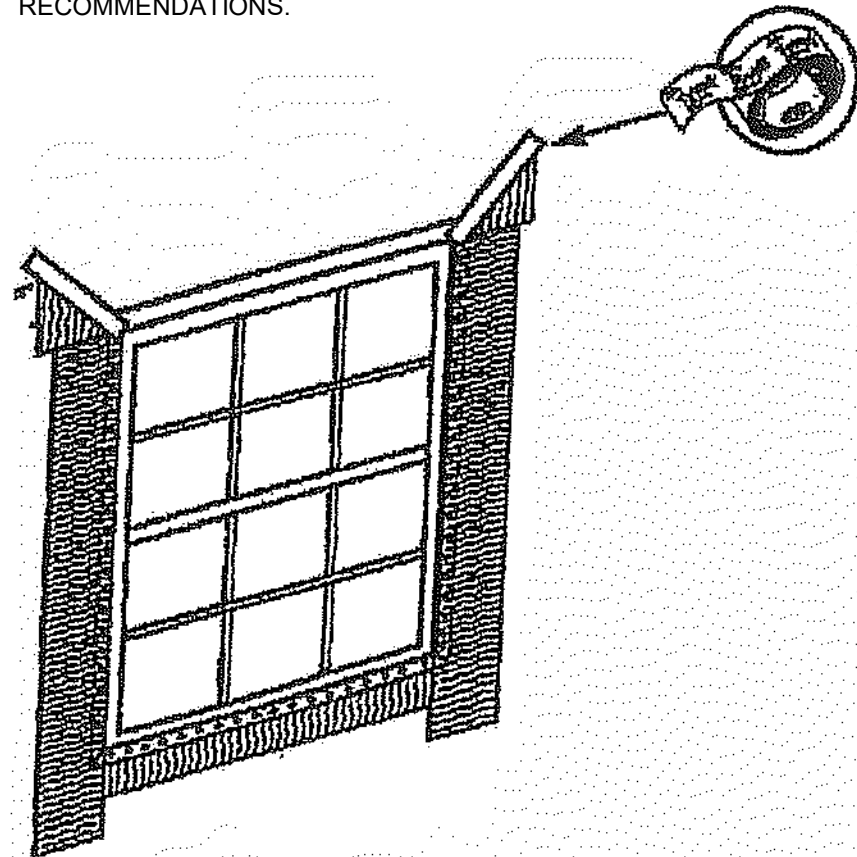
STEP 10

- INSTALL WINDOW/DOOR PER MANUFACTURER'S INSTRUCTIONS. (IMAGE A)
- CUT TWO PIECES OF FLASHING OR FLEXIBLE FLASHING FOR JAMB FLASHING TO EXTEND 1" ABOVE WINDOW HEAD FLANGE AND BELOW BOTTOM EDGE OF SILL FLASHING. REMOVE RELEASE PAPER AND TIGHTLY PRESS ALONG SIDES OF WINDOW FRAME. (IMAGE B)
- CUT A PIECE OF FLASHING OR FLEXIBLE FLASHING FOR HEAD FLASHING, TO EXTEND BEYOND OUTER EDGES OF JAMB FLASHING. REMOVE RELEASE PAPER AND INSTALL COMPLETELY COVERING MOUNTING FLANGE AND ADHERING TO EXPOSED SHEATHING OR FRAMING MEMBERS. (IMAGE C)



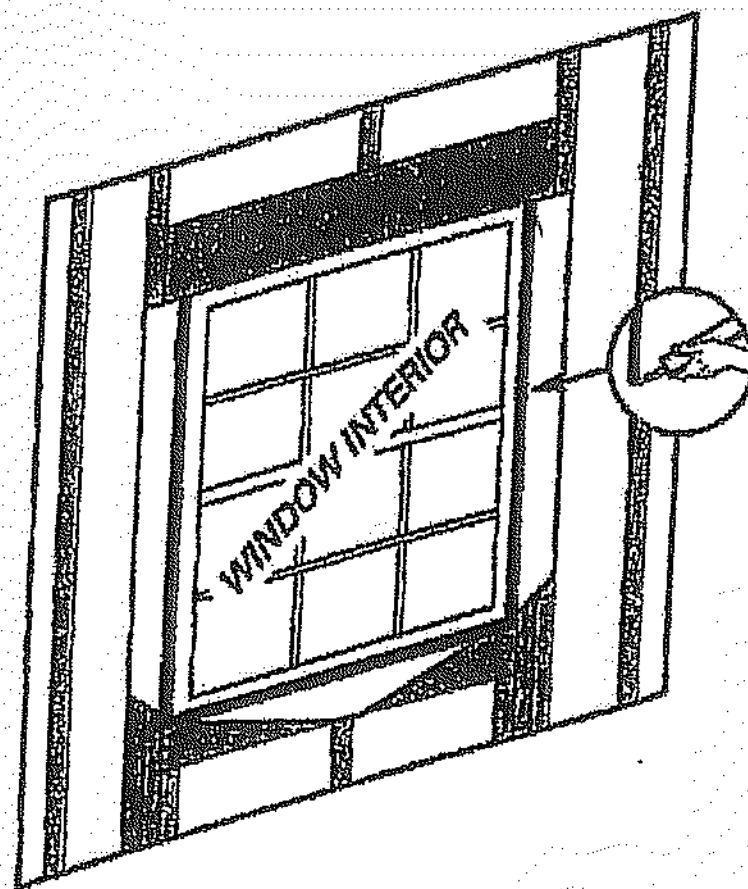
STEP 11

- FLIP DOWN WEATHER-RESISTIVE BARRIER UPPER FLAP SO THAT IT LAYS FLAT ACROSS HEAD FLASHING.
- TAPE ALONG ALL CUTS IN WEATHER-RESISTIVE BARRIER AND ACROSS WINDOW HEAD WITH APPROVED TAPE PER MANUFACTURER'S RECOMMENDATIONS.



STEP 12

CAULK (BACKER ROD, AS NECESSARY) AT REAR OF WINDOW/DOOR FRAME TO SEAL INSIDE OF ROUGH OPENING ACROSS BOTTOM AND A MINIMUM 12" TURN UP AT SIDES TO FORM A BACK DAM. IN ORDER TO AIR SEAL AROUND WINDOW OPENING, COMPLETELY CAULK AROUND BACK EDGE OF WINDOW PERIMETER.



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REVISIONS:

rosemann & ASSOCIATES P.C.

ARCHITECTURE
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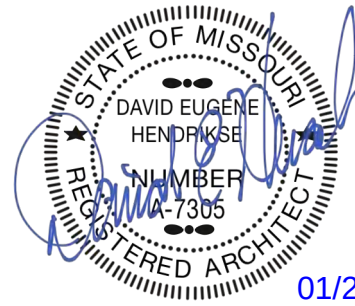
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THE VILLAGE AT DISCOVERY -
LOT 4

LEE'S SUMMIT, MO

SHEET TITLE
GENERAL INFORMATION

PROJECT NUMBER: 23099

SHEET NUMBER:

G-004

THIS SHEET IS PROVIDED
FOR REFERENCE ONLY.
ALL INSTALLATION TO BE
PER MANUFACTURER
RECOMMENDATION

Apply ZIP System tape after all ZIP System wall sheathing panels are fully fastened to wall-framing members. Only ZIP System tape should be used to seal the seams of ZIP System panels. Ensure that the panel surface is dry and free of sawdust and dirt prior to taping. **ZIP System tape is a contact tape that requires pressure for an adequate seal.**

Step 1. Tape all seams using ZIP System tape. Ensure that the tape is centered over the seam within +/- 1/2" to provide adequate coverage and that wrinkles in tape are minimal.

Use the ZIP System tape gun or roller to apply pressure to the tape and smooth out any wrinkles.

Step 2. Wherever tape splices occur at a horizontal or vertical seam, create an overlapping splice of at least 3".

At T-joints, the tape pieces should overlap by at least 1". Apply moderate pressure onto the surface of the tape to ensure a secure bond between the panel and the tape.

Use the ZIP System tape gun or roller to apply pressure to the tape and smooth out any wrinkles.

Take special care to remove any voids and/or trapped air at splice areas and T-joints.

Step 3. Tape inside and outside corner seams.

Flanged Windows

1. Fasten the ZIP System wall sheathing sheathing to the wood frame and install ZIP System tape to all wall panel seams, as de-tailed in sections 02 and 03.

2. ZIP System tape may be used as pan flashing if installed in accordance with flanged window installation details posted on zipsystem.com. Other adhesive-based flashing tapes (must meet ICC-ES Acceptance Criteria for Flashing Materials (AC148)) may be used as pan flashing if installed per ASTM 2112-07. Apply the flashing to cover the bottom of the opening, overhanging onto the sheathing by at least 2" and extending a minimum of 6" up each jamb.

3. Apply sealant around inside face of mounting flange. Sealant must be gapped at the sill to permit drainage. Install and level window per manufacturer's installation instructions. Verify sealant compatibility with window manufacturer. When using ZIP System tape as pan flashing, butyl, silicone or polyurethane sealants are acceptable. Do not use latex sealants.

4. Cut two pieces of ZIP System tape or another adhesive-backed flashing tape (must meet ICC-ES Acceptance Criteria for Flashing Materials (AC148)) and apply to each of the window jamb flashings, ensuring the jamb flashings overlap the sill flashing.

Once the tape is in place, use the tape gun or roller to seal the flashing to the sheathing.

5. Cut a length of ZIP System tape or another adhesive-backed flashing tape (must meet ICC-ES Acceptance Criteria for Flashing Materials (AC148)) and apply to the header, ensuring that the flashing overlaps the jamb flashings.

Once the tape is in place, use the tape gun or roller to seal the flashing to the sheathing.

*DO NOT tape bottom flange.

6. From the interior, apply low-pressure polyurethane foam (for windows) between the rough opening and the window frame. (Caulk sealant compatible with the sill flashing may be used at the sill if the opening between the sill flashing and window is too narrow to allow the use of low-pressure polyurethane foam.)

When using ZIP System tape, butyl, silicone or polyurethane sealants are acceptable. Do not use latex sealants with ZIP System tape. If using another flashing tape, follow the flashing manufacturer's recommendation in selecting a sealant compatible with that flashing.

Brick Mould Windows

1. Fasten the ZIP System wall sheathing sheathing to the wood frame and install ZIP System tape to all wall panel seams, as de-tailed in sections 02 and 03.

2. If recommended by the window manufacturer, cut a strip of wood to function as a back dam at the sill. The wood strip should have a length equal to the width of the rough opening and a height and width of at least 1/2". Position the block at the inside edge of the window frame.

Brick Mould Windows (continued)

3. ZIP System tape may be used as pan flashing if installed in accordance with brick mould window installation details posted on zipsystem.com. Other adhesive-based flashing tapes (must meet ICC-ES Acceptance Criteria for Flashing Materials (AC148)) may be used as pan flashing if installed per ASTM 2112-07. Apply the flashing to cover the bottom of the opening, overhanging onto the sheathing by at least 2" and extending a minimum of 6" up each jamb.

7. Cut a piece of rigid head flashing so that when installed, it is flush with the edges of the exterior moulding of the window. Apply a bead of sealant to the back and bottom surface of the rigid head flashing. Use sealant recommended by the flashing manufacturer.

8. Secure the rigid head flashing to ZIP System wall sheathing.

9. Cut a length of ZIP System tape or another adhesive-backed flashing tape (must meet ICC-ES Acceptance Criteria for Flashing Materials (AC148)) and apply to the rigid head flashing, ensuring that the adhesive-backed flashing overlaps the jamb flashings.

Once the tape is in place, use the tape gun or roller to seal the flashing to the sheathing.

10. From the interior, apply low-pressure polyurethane foam (for windows) between the rough opening and the window frame. (Caulk sealant compatible with the sill flashing may be used at the sill if the opening between the sill flashing and window is too narrow to allow the use of low-pressure polyurethane foam.)

When using ZIP System tape, butyl, silicone or polyurethane sealants are acceptable. Do not use latex sealants with ZIP System tape. If using another flashing tape, follow the flashing manufacturer's recommendation in selecting a sealant compatible with that flashing.

4. For vertical jambs, cut ZIP System tape or another adhesive-backed flashing tape (must meet ICC-ES Acceptance Criteria for Flashing Materials (AC148)) and apply to each of the window jambs. Ensure that they cover the entire inside of the rough opening as well as overlap onto the sheathing by at least 2". Flashing shall also extend above the rough opening, such that it will project 1" beyond the exterior trim of the window.

Once the tape is in place, use the tape gun or roller to seal the flashing to the sheathing.

5. Apply sealant to jambs and header allowing for drainage at the sill in accordance with window manufacturer's installation instructions. When using ZIP System tape, use a butyl, polyurethane or silicone sealant. Do not use latex sealants with ZIP System tape. When using another flashing tape, follow the flashing manufacturer's recommendations in selecting a sealant compatible with that flashing.

6. Install and level window per manufacturer's installation instructions.

WALL ASSEMBLY
ZIP SYSTEM WALL SHEATHING
WOOD OR LT. GA. METAL STUDS

1/8-INCH GAP RECOMMENDED AT PANEL EDGES UNLESS OTHERWISE PROVIDED BY MACHINED PROFILED EDGES

ZIP SYSTEM TAPE INSTALLED OVER ALL JOINTS IN ZIP SYSTEM WALL SHEATHING

OVERLAP TAPE A MINIMUM OF 1-INCH AT ALL T-JOINTS

INSTALL ZIP SYSTEM TAPE AT ALL INTERIOR CORNERS

FASTEN ZIP SYSTEM WALL SHEATHING AS REQUIRED BY DESIGNER-OF-RECORD OR LOCAL BUILDING CODE

WALL ASSEMBLY
ZIP SYSTEM WALL SHEATHING
WOOD OR LT. GA. METAL STUDS

1/8-INCH GAP RECOMMENDED AT PANEL EDGES UNLESS OTHERWISE PROVIDED BY MACHINED PROFILED EDGES

ZIP SYSTEM TAPE INSTALLED OVER ALL JOINTS IN ZIP SYSTEM WALL SHEATHING

OVERLAP TAPE A MINIMUM OF 1-INCH AT ALL T-JOINTS

INSTALL ZIP SYSTEM TAPE AT ALL EXTERIOR CORNERS

FASTEN ZIP SYSTEM WALL SHEATHING AS REQUIRED BY DESIGNER-OF-RECORD OR LOCAL BUILDING CODE

WALL ASSEMBLY
ZIP SYSTEM WALL SHEATHING
WOOD OR LT. GA. METAL STUDS

1/8-INCH GAP RECOMMENDED AT PANEL EDGES UNLESS OTHERWISE PROVIDED BY MACHINED PROFILED EDGES

ZIP SYSTEM TAPE INSTALLED OVER ALL JOINTS IN ZIP SYSTEM WALL SHEATHING

OVERLAP TAPE A MINIMUM OF 1-INCH AT ALL T-JOINTS

USE FLANGED VENT HOODS

WALL ASSEMBLY
VINYL/WOOD/PIPER CEMENT Siding
(INSTALLED IN ACCORDANCE WITH GLAZING MANUFACTURER'S INSTALLATION RECOMMENDATIONS)
ZIP SYSTEM WALL SHEATHING
WOOD OR LT. GA. METAL STUDS

1/8-INCH GAP RECOMMENDED AT PANEL EDGES UNLESS OTHERWISE PROVIDED BY MACHINED PROFILED EDGES

ZIP SYSTEM TAPE INSTALLED OVER ALL JOINTS IN ZIP SYSTEM WALL SHEATHING

OVERLAP TAPE A MINIMUM OF 1-INCH AT ALL T-JOINTS

1/8-INCH GAP RECOMMENDED AT PANEL EDGES UNLESS OTHERWISE PROVIDED BY MACHINED PROFILED EDGES

FASTEN ZIP SYSTEM WALL SHEATHING AS REQUIRED BY DESIGNER-OF-RECORD OR LOCAL BUILDING CODE

WALL ASSEMBLY
BRICK VENEER
AIR SPACE (AS PRESCRIBED BY LOCAL BUILDING CODE)
ZIP SYSTEM WALL SHEATHING
WOOD OR LT. GA. METAL STUDS

1/8-INCH GAP RECOMMENDED AT PANEL EDGES UNLESS OTHERWISE PROVIDED BY MACHINED PROFILED EDGES

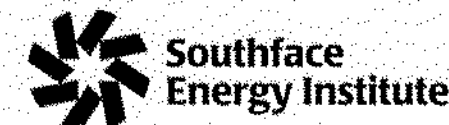
ZIP SYSTEM TAPE INSTALLED OVER ALL JOINTS IN ZIP SYSTEM WALL SHEATHING

OVERLAP TAPE A MINIMUM OF 1-INCH AT ALL T-JOINTS

1/8-INCH GAP RECOMMENDED AT PANEL EDGES UNLESS OTHERWISE PROVIDED BY MACHINED PROFILED EDGES

FASTEN ZIP SYSTEM WALL SHEATHING AS REQUIRED BY DESIGNER-OF-RECORD OR LOCAL BUILDING CODE

1. General Requirements
2. Ceiling/attic
3. Walls
4. Windows, skylights and doors
5. Rim joists
6. Floors (including above garage and cantilevered floors)
7. Crawl Space walls
8. Shafts, penetrations
9. Narrow cavities
10. Garage separation
11. Recessed lighting
12. Plumbing and wiring
13. Shower/tub on exterior wall
14. Electrical/phone bo on exterior walls
15. HVAC register boots
16. Concealed sprinklers
17. Blocking between framing
(e.g. beneath knee walls,
cantilevered floors, garage separation
walls)
18. Common walls
19. Fireplaces



Southface
Energy Institute

CODE REVIEW

PROJECT NAME: THE VILLAGE AT DISCOVERY - LOT 4
 PROJECT LOCATION: LEE'S SUMMIT, MO
 CODE: 2018 IBC
 CODE REVIEW COMPLETED BY: A.J. DOLPH

CHAPTER THREE

SECTION 302 OCCUPANCY: R-2, APARTMENTS
 A-2, UNCONCENTRATED
 S-2, OPEN PARKING GARAGE

CHAPTER FOUR

402 COVERED MALL BUILDINGS:	N/A	416 FLAMMABLE FINISHES:	N/A
403 HIGH RISE BUILDINGS:	N/A	417 DRYING ROOMS:	N/A
404 ATRIUMS:	N/A	418 ORGANIC COATINGS:	N/A
405 UNDERGROUND BUILDINGS:	N/A	419 LIV/WORK UNITS:	N/A
407 GROUP I-2:	N/A	421 HYDROGEN FUEL GAS ROOMS:	N/A
408 GROUP I-3:	N/A	422 AMBULATORY CARE FACILITY:	N/A
409 MOTION PICTURE PROJECTION:	N/A	423 STORM SHELTERS:	N/A
410 STAGES AND PLATFORMS:	N/A	424 CHILDREN'S PLAY STRUCTURE:	N/A
411 SPECIAL AMUSEMENT BUILDINGS:	N/A	425 HYPERBARIC FACILITY:	N/A
412 AIRCRAFT RELATED OCCUP.	N/A	426 COMBUSTIBLE DUSTS & GRAINS:	N/A
413 COMBUSTIBLE STORAGE:	N/A	427 MEDICAL GAS SYSTEMS:	N/A
414 HAZARDOUS MATERIALS:	N/A	428 HIGHER EDUCATION LAB:	N/A
415 GROUPS H-1, H-2, H-3, H-4, H-5:	N/A		

406.5 OPEN PARKING GARAGES: MUST BE TYPE I, II, OR IV CONSTRUCTION
 40% MIN. OPENING FOR NATURAL VENTILATION

420 GROUPS I-1, R-1, R-2, R-3, & R-4:
 420.2 SEPARATION WALLS: WALLS SEPARATING SLEEPING UNITS TO BE
 FIRE PARTITIONS PER SECTION 708

420.3 HORIZONTAL SEPARATION: FLOORS SEPARATING SLEEPING UNITS TO BE
 HORIZONTAL ASSEMBLY PER SECTION 711

420.4 AUTOMATIC SPRINKLER: 13R PER 903.3.1.2 FOR R

CHAPTER FIVE

TABLE 504.3 ALLOWABLE HEIGHT IN FEET ABOVE GRADE PLANE: CONSTRUCTION TYPE VA
 R: ACTUAL: 42'-0" ALLOWABLE: 60'-0"
 A: ACTUAL: 16'-0" ALLOWABLE: 50'-0"

TABLE 504.3 ALLOWABLE HEIGHT IN FEET ABOVE GRADE PLANE: CONSTRUCTION TYPE IIA
 S: ACTUAL: 16'-0" ALLOWABLE: 85'-0"

TABLE 504.4 ALLOWABLE NUMBER OF STORIES ABOVE GRADE PLANE: CONSTRUCTION TYPE VA
 R-2: ACTUAL: 3 ALLOWABLE: 4 STORIES
 A-2: ACTUAL: 1 ALLOWABLE: 2 STORIES

TABLE 504.4 ALLOWABLE NUMBER OF STORIES ABOVE GRADE PLANE: CONSTRUCTION TYPE IIA
 S-2: ACTUAL: 1 ALLOWABLE: 6 STORIES

TABLE 506.2 ALLOWABLE AREA FACTOR: CONSTRUCTION TYPE VA
 R-2: ACTUAL: 24.200 ALLOWABLE: 12,000 SQFT
 A-2: ACTUAL: 9.715 ALLOWABLE: 11,500 SQFT

AREA INCREASE TAKEN FOR R OCCUPANCY. SEE CALCULATION 506.2.4
 FIRE SEPARATION WALL EMPLOYED IN R OCCUPANCY

TABLE 506.2 ALLOWABLE AREA FACTOR: CONSTRUCTION TYPE IIA
 S-2: ACTUAL: 14.485 ALLOWABLE: 117,000 SQFT

506.2.4 MIXED-OCCUPANCY, MULTISTORY BUILDING:
 $A_a = [A_1 + (N_S \times I_f)]$
 $A_a = [12,000 + (12,000 \times 0.75)]$
 $A_a = 21,000$

506.3 FRONTAGE INCREASE:
 $W = (L_n \times W_n) / F$
 $W = (100 \times 30) / 100$
 $W = 30$

506.3.3. AMOUNT OF INCREASE:
 $I_f = [F/P - 0.25]W/30$
 $I_f = [100/100 - 0.25]30/30$
 $I_f = 0.75$

TABLE 506.4 REQUIRED SEPARATION OF OCCUPANCIES:

R - R: 1 HOUR
 R - A: 1 HOUR
 R - S: 1 HOUR
 A - A: 0 HOUR
 A - S: 0 HOUR
 S - S: 0 HOUR

TABLE 509 INCIDENTAL USES: LAUNDRY > 100 SF, 1HR
 STORAGE > 100 SF, 1HR

CHAPTER SIX

TABLE 601 FIRE RESISTANCE REQS. FOR BUILDING ELEMENTS (HOURS): CONSTRUCTION TYPE VA & IIA
 PRIMARY STRUCTURAL FRAME: 1 HOUR
 INTERIOR BEARING WALL: 1 HOUR
 EXTERIOR BEARING WALL: 1 HOUR
 NON-BEARING WALL: 0 HOUR
 FLOOR CONSTRUCTION: 1 HOUR
 ROOF CONSTRUCTION: 1 HOUR

TABLE 602 FIRE RESISTANCE REQS. FOR EXTERIOR WALLS BASED ON FIRE SEP. DISTANCE: 0 HOUR <30 FEET, 0 >30 FEET

CHAPTER SEVEN

704 FIRE-RESISTANCE RATING OF STRUCTURAL MEMBERS: 1 HOUR RATED
 SPRAY APPLIED FIRE RESISTANT MATERIAL

705.5 EXTERIOR WALLS FIRE-RESISTANCE RATING: FIRE SEPARATION DISTANCE > 10'-0"
 RATED EXPOSURE FROM INSIDE ONLY

TABLE 705.8 MAX AREA OF EXTERIOR WALL OPENINGS: FIRE SEPARATION DISTANCE > 25'-0"
 UNPROTECTED, NO LIMIT

706 FIRE WALLS: 2 HOUR RATED

707 FIRE BARRIERS: 1 HOUR RATED

708 FIRE PARTITIONS: 1 HOUR RATED

709 SMOKE BARRIERS: N/A

710 SMOKE PARTITIONS: N/A

711 FLOOR & ROOF ASSEMBLIES: 1 HOUR RATED

712 VERTICAL OPENINGS: N/A

713 SHAFT ENCLOSURES: 1 HOUR RATED

714 PENETRATIONS: MATCH ASSEMBLY RATING

715 FIRE-RESISTANT JOINT SYSTEM: MATCH ASSEMBLY RATING

TABLE 716.1(2) OPENING FIRE PROTECTION & RATING:
 2 HOUR FIRE BARRIER: 90 MINUTE DOOR
 1 HOUR FIRE BARRIER: 60 MINUTE DOOR
 1 HOUR CORRIDOR: 20 MINUTE DOOR

717 DUCTS AND AIR TRANSFER OPENINGS: REQUIRED AT RATED PENETRATIONS,
 1.5 HOUR DAMPER RATING

SECTION 718 CONCEALED SPACES: FIREBLOCK & DRAFTSTOP

CHAPTER NINE

903 AUTOMATIC SPRINKLER SYSTEM: R-2, REQUIRED: NFPA 13R
 A-2, REQUIRED: NFPA 13
 S-2, REQUIRED: NFPA 13, DRY SYSTEM

905 STANDPIPE SYSTEM: CLASS I REQUIRED

906 PORTABLE FIRE EXTINGUISHERS: REQUIRED PER NFPA 10, 75'-0" MAX TRAVEL

907 FIRE ALARM & DETECTION SYSTEM: REQUIRED PER NFPA 72

909 SMOKE CONTROL SYSTEM: COMPLY WITH IMC

CHAPTER TEN

TABLE 1004.5 MAX FLOOR AREA ALLOWANCES PER OCCUPANT:

R-2, 200 GROSS
 A-2, 15 NET
 S-2, 200 GROSS

SECTION 1005 MEANS OF EGRESS SIZING: STAIRS 0.2/OCC. W/ SPRINKLER EXCEPTION
 OTHER EGRESS 0.15/OCC. W/ SPRINKLER EXCP.

TABLE 1006.2.1 SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY:
 R-2: 20 OCC., 125' MAX. PATH OF EGRESS
 A: 49 OCC., 75' MAX. PATH OF EGRESS
 S: 29 OCC., 100' MAX. PATH OF EGRESS

TABLE 1006.3.2 MINIMUM NUMBER OF EXITS PER STORY: 2 EXITS REQ'D W/ OCCUPANT LOAD/STORY 1-500

1009.3.3 AREA OF REFUGE: NOT REQUIRED W/ SPRINKLER EXCEPTION

1009.8 TWO-WAY COMMUNICATION: REQ'D. AT EACH ELEV. LANDING ABOVE GRADE

1011.2 STAIRWAY WIDTH CAPACITY: 44" MIN.

1011.12 STAIRWAY TO ROOF: UNOCCUPIED ROOF, ACCESS VIA ROOF HATCH

1014.2 HANDRAIL HEIGHT: 34" MIN. - 38" MAX.

1014.6 HANDRAIL EXTENSIONS: EXTEND HORIZONTALLY 12" BEYOND TOP RISER
 CONTINUE SLOPE 1 DEPTH TREAD AT BOTTOM

1015 GUARDS: 42" MIN. HEIGHT, 4" MAX. OPENING

TABLE 1017.2 EXIT ACCESS TRAVEL DISTANCE:
 R: 250' W/ 13R SPRINKLER
 A: 250' W/ 13 SPRINKLER
 S: 400' W/ 13 SPRINKLER

1019 EXIT ACCESS STAIRWAYS: 1 HOUR RATED PER 713

TABLE 1020.1 CORRIDOR RATING: R: 1/2 HOUR RATED W/ 13R SPRINKLER
 A: NO RATING REQ'D W/ 13 R SPRINKLER

1020.1.1 HOISTWAY OPENING PROTECTION: NOT REQUIRED PER 3006.2

TABLE 1020.2 MIN. CORRIDOR WIDTH: 44" MIN.

1020.4 DEAD ENDS: 20'-0" MAX.

CHAPTER ELEVEN

ACCESSIBILITY TO COMPLY WITH THIS CH. OF IBC, ICC A117.1, ADA, & FAIR HOUSING

TABLE 1106.1 ACC. PARKING: SEE CIVIL

TABLE 1107.6.1.1 ACCESSIBLE DWELLING & SLEEPING UNITS: 2% OF TOTAL REQ'D. TO BE TYPE A

CHAPTER TWELVE

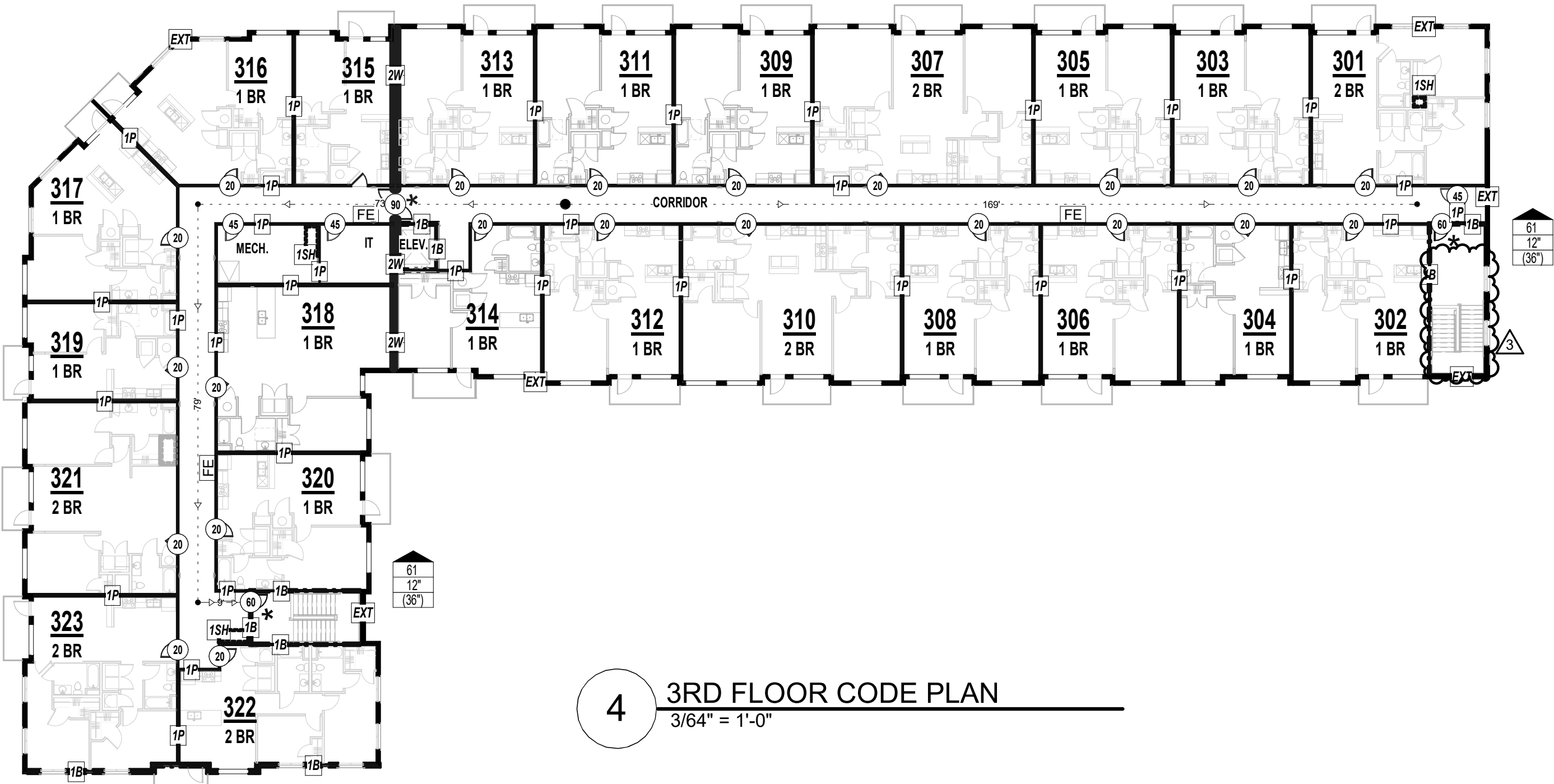
1206 SOUND TRANSMISSION: 50STC RATING BETWEEN SLEEPING UNITS

CODE PLAN GENERAL NOTES:

- FIRE EXTINGUISHERS SHALL BE LOCATED SO THAT THE MAXIMUM TRAVEL DISTANCE SHALL NOT EXCEED 75 FEET. GENERAL CONTRACTOR TO PROVIDE SEMI-RECESSED FIRE EXTINGUISHER CABINETS WITH FIRE EXTINGUISHERS THROUGHOUT AT ACCESSIBLE HEIGHT.
- SIGNS IDENTIFYING FIRE PROTECTION EQUIPMENT, CONTROLS FOR AIR CONDITIONING SYSTEMS, SPRINKLER RISERS AND VALVES, OR OTHER FIRE DETECTION, SUPPRESSION OR CONTROL ELEMENTS SHALL BE IDENTIFIED FOR THE USE OF THE FIRE DEPARTMENT PER 2018 IBC. SIGNAGE SHALL ALSO MEET 2018 IFC REQUIREMENTS FOR HEIGHT AND LETTERING. GC TO COORDINATE WITH AUTHORITY HAVING JURISDICTION ON ALL SIGNAGE.
- KNOX BOX QUANTITY AND LOCATION TO BE COORDINATED BY THE GENERAL CONTRACTOR WITH AUTHORITY HAVING JURISDICTION.
- ANNUNCIATOR PANEL AND FACP QUANTITY AND LOCATION TO BE COORDINATED BY THE GENERAL CONTRACTOR WITH AUTHORITY HAVING JURISDICTION PRIOR TO INSTALL.
- ALL DIMENSIONS ARE APPROXIMATE ON CODE PLAN. ACTUAL ARCHITECTURAL DIMENSIONS PER ARCHITECTURAL AND STRUCTURAL PLAN.

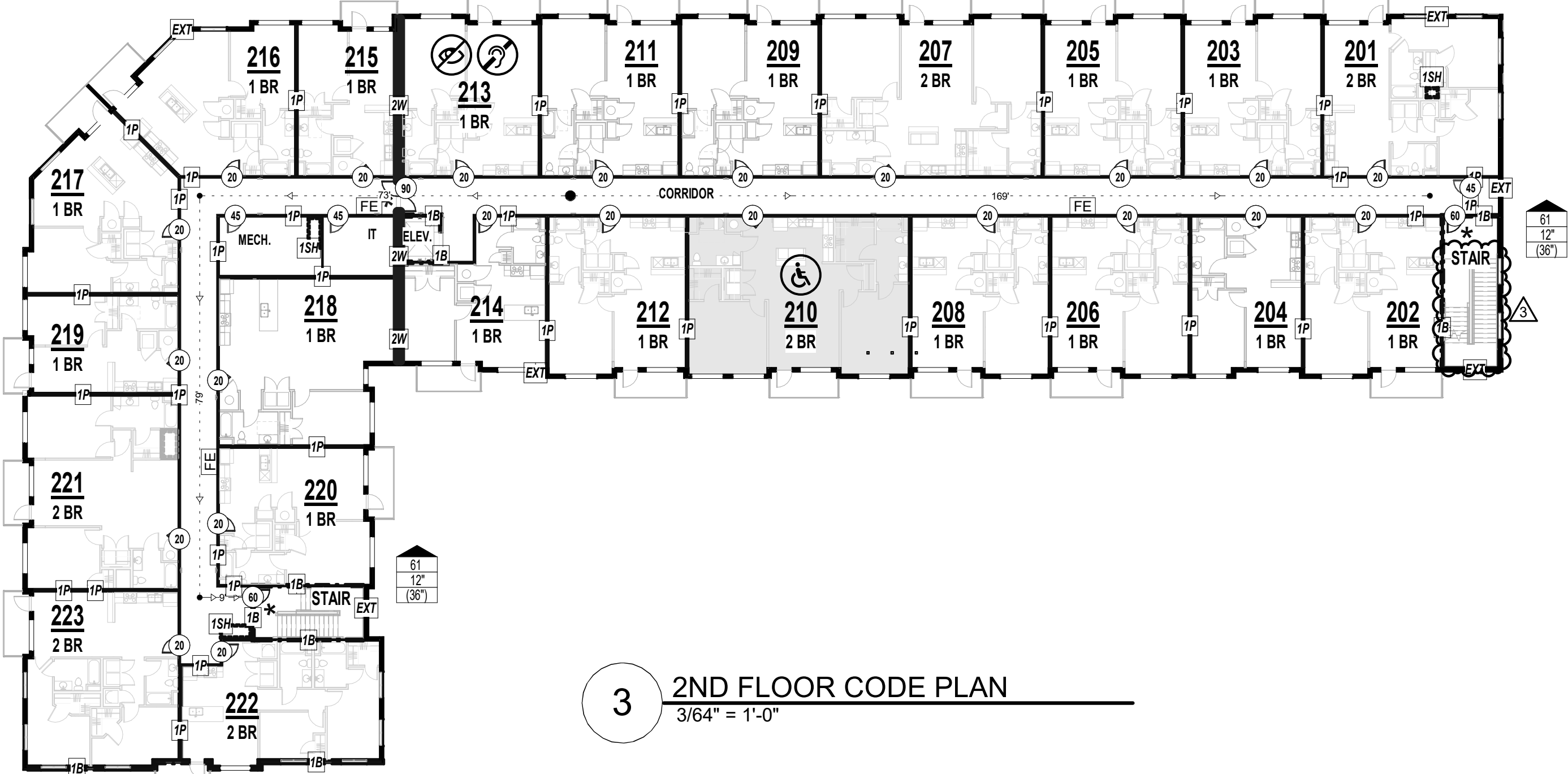
CODE PLAN LEGEND

	NUMBER OF OCCUPANTS EXITING		ROOM NUMBER
	REQUIRED EXIT WIDTH		FIRE EXTINGUISHER CABINET OR SURFACE MTD. AT CONC.
	EXIT WIDTH PROVIDED BY DESIGN		FIRE DEPARTMENT KNOX BOX (DEFER SUBMITTAL FOR LOC.)
	EXIT - RATED PARTITION (IBC CH. 6)		FIRE DEPARTMENT CONNECTION
	NON - RATED PARTITION		
	1 HR RATED PARTITION (IBC 708)		
	1 HR RATED BARRIER (IBC 707)		
	1 HR RATED SHAFT ENCLOSURE (IBC 713)		
	2 HR RATED FIRE WALL (IBC 706)		
			DOOR RATING
			DOOR WITH PANIC HARDWARE (DEFER DOOR SCHEDULE)
			EXIT SIGNAGE; SEE ELECTRICAL
			EGRESS STARTING POINT
			EGRESS DISTANCE OF TRAVEL
			EGRESS DIRECTION OF TRAVEL



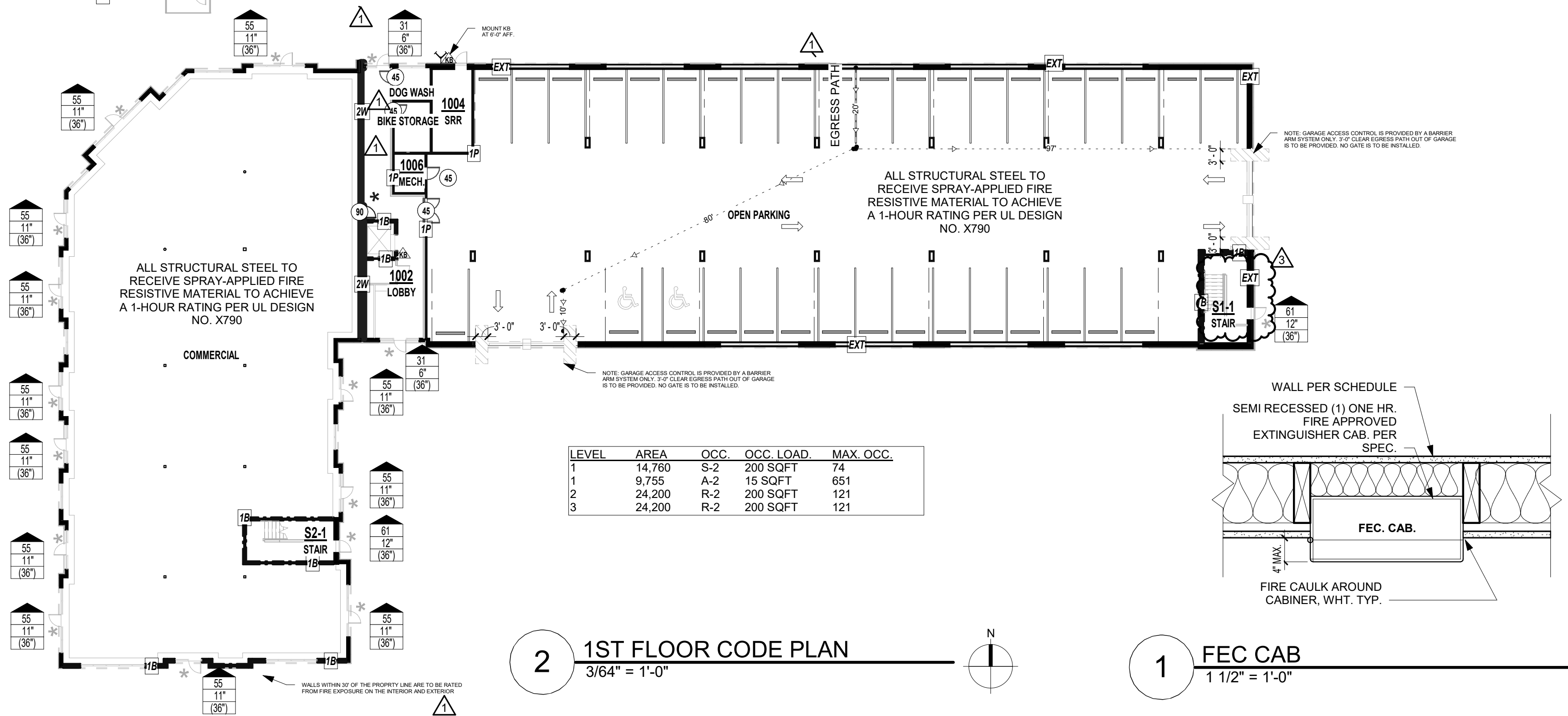
4 3RD FLOOR CODE PLAN

3/64" = 1'-0"



3 2ND FLOOR CODE PLAN

3/64" = 1'-0"



2 1ST FLOOR CODE PLAN

3/64" = 1'-0"

1 FEC CAB

1 1/2" = 1'-0"

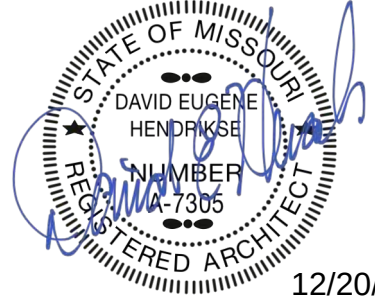
PRINTS ISSUED
 01/25/2024 - CITY SUBMITTAL

REVISIONS:
 1 10/21/24 ADDENDUM #1
 3 12/20/24 ADDENDUM #3

rosemann & ASSOCIATES P.C.
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 ENGINEERING
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GENEV KANSAS CITY ▲ ST. LOUIS ▲ ATLANTA



12/20/24

THE VILLAGE AT DISCOVERY -
 LOT 4

LEE'S SUMMIT, MO

SHEET TITLE
 CODE ANALYSIS

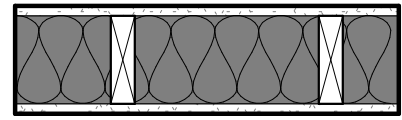
PROJECT NUMBER: 23099

SHEET NUMBER:

G-100

SEE G-102 FOR
PARTITION NOTES
AND ACCOUSTIC
SEALING

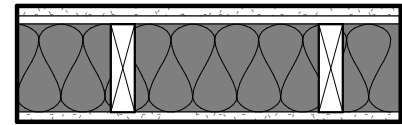
**INTERIOR BARRIER ASSEMBLIES
WOOD - 1 HR RATED**



P20

- WOOD 2x6 STUD - 1HR BARRIER - INTERIOR**
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
 - 2x6 WOOD STUDS SPACED 16" O.C. MAX. OR PER STRUCT. DWGS.
 - 5-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY
 - (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

- NOTES:
- ASSEMBLY TO COMPLY WITH UL DESIGN U305 (SEPT 19, 2023)
 - REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
 - SHALL COMPLY WITH IBC SECTION 7 FOR FIRE BARRIERS



P21

- WOOD 2x6 STUD - 1HR BARRIER - INTERIOR SOUND DAMPENING**
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
 - 25 MSG GALVANIZED RESILIENT CHANNEL, SPACED 24" O.C.
 - 2x6 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS.
 - 5-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY
 - (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

- NOTES:
- ASSEMBLY TO COMPLY WITH UL DESIGN U305 (SEPT 19, 2023)
 - REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
 - SHALL COMPLY WITH IBC SECTION 7 FOR FIRE BARRIERS
 - STC SHALL BE 50 OR OVER AT UNIT ASSEMBLIES, MEETING ASTM E90 (STC 51 BASED UPON TESTING NGC 2011071)
 - WHERE BARRIER DIVIDES A CORRIDOR AND A UNIT, CORRIDOR SIDE SHALL RECEIVE THE RESILIENT CHANNEL

**EXTERIOR PARTITION ASSEMBLIES
WOOD - NON RATED**



P31

- WOOD 2x6 STUD - NON-RATED EXTERIOR - AT BALCONY (DELTA UNIT) EXTERIOR**
- STUCCO
 - METAL LATH
 - WEATHER RESISTANT BARRIER, PER SPECIFICATIONS
 - (1) LAYER SHEATHING PER STRUCT. DWGS.
 - 2x6 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS.
 - (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
 - METAL LATH
 - STUCCO
 - EXTERIOR

- NOTES:
- SCREW PATTERN PER STRUCT.



P36

- WOOD 2x6 STUD - NON-RATED EXTERIOR EXTERIOR**
- EXTERIOR FINISH SYSTEM PER ELEVATIONS
 - WEATHER RESISTANT BARRIER, PER SPECIFICATIONS
 - (1) LAYER SHEATHING PER STRUCT. DWGS.
 - 2x6 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS.
 - (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
 - INTERIOR

- NOTES:
- INTERIOR TO BE PAINTED PER FINISH SCHEDULE
 - SCREW PATTERN PER STRUCT.
 - R-13 MIN. INSULATION R-VALUE



P36.1

- WOOD 2x6 STUD - NON-RATED EXTERIOR EXTERIOR**
- EXTERIOR FINISH SYSTEM PER ELEVATIONS
 - WEATHER RESISTANT BARRIER, PER SPECIFICATIONS
 - (1) LAYER SHEATHING PER STRUCT. DWGS.
 - 2x4 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS.
 - 1" AIR GAP
 - 2x4 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS.
 - (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
 - INTERIOR

- NOTES:
- INTERIOR TO BE PAINTED PER FINISH SCHEDULE
 - SCREW PATTERN PER STRUCT.



P36.2

- WOOD 2x8 STUD - NON-RATED EXTERIOR (UPPER FLOORS AT STAIRS) EXTERIOR**
- EXTERIOR FINISH SYSTEM PER ELEVATIONS
 - WEATHER RESISTANT BARRIER, PER SPECIFICATIONS
 - (1) LAYER SHEATHING PER STRUCT. DWGS.
 - 2x8 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS.
 - 1/2" RESILIENT CHANNEL
 - (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
 - INTERIOR

- NOTES:
- INTERIOR TO BE PAINTED PER FINISH SCHEDULE
 - SCREW PATTERN PER STRUCT.

**EXTERIOR PARTITION ASSEMBLIES
WOOD - 1 HOUR RATED**

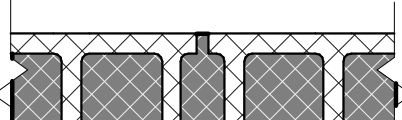


P30

- WOOD 2x6 STUD - 1HR PARTITION - EXTERIOR EXTERIOR**
- EXTERIOR FINISH SYSTEM PER ELEVATIONS
 - WEATHER RESISTANT BARRIER, PER SPECIFICATIONS
 - (1) LAYER SHEATHING PER STRUCT. DWGS.
 - 2x6 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS.
 - 5-1/2" KRAFT OR FOIL FACED BATT INSULATION IN STUD CAVITY, R-VALUE PER DRAWINGS/SPECIFICATIONS TO MEET IECC.
 - (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
 - INTERIOR

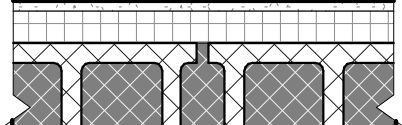
- NOTES:
- ASSEMBLY TO COMPLY WITH UL DESIGN U356 (NOV 26, 2019)
 - REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
 - EXTERIOR SYSTEM TO BE PER DETAILS AND ELEVATIONS

**INTERIOR ASSEMBLIES
CMU / CONCRETE - 1 HR RATED**



P40

- CMU 8" BLOCK - 1HR PARTITION - INTERIOR**
- 8" CMU (REINFORCING PER STRUCT)
- NOTES:
- RATING SHALL MEET IBC 2018 SECTION 721 - PRESCRIPTIVE FIRE RESISTANCE FOR 1HR RATING. SHALL MEET TABLE 721.1(2).3. - CONCRETE MASONRY UNITS. ALL TIES. MORTAR TO MEET IBC SECTION 721.
 - APPLY WATERPROOFING AT ALL SUBGRADE PORTION OF WALLS

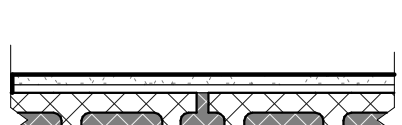


P43

- CMU 12" BLOCK - 1HR PARTITION - INTERIOR**
- EXTERIOR GYPSUM BOARD
 - WEATHER RESISTANT BARRIER PER SPECIFICATIONS
 - R VALUE PER IECC AS INDICATED ON DRAWINGS / SPECIFICATIONS
 - 12" CMU (REINFORCING PER STRUCT)
 - RESILIENT CHANNEL
 - (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

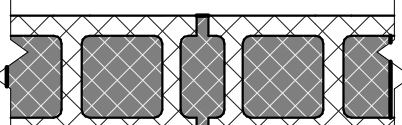
- NOTES:
- RATING SHALL MEET IBC 2018 SECTION 721 - PRESCRIPTIVE FIRE RESISTANCE FOR 1HR RATING. SHALL MEET TABLE 721.1(2).3. - CONCRETE MASONRY UNITS. ALL TIES. MORTAR TO MEET IBC SECTION 721.
 - APPLY WATERPROOFING AT ALL SUBGRADE PORTION OF WALLS

**INTERIOR BARRIER ASSEMBLIES
CMU / CONCRETE - 1 HR RATED**



P40.1

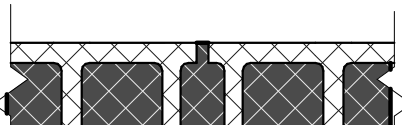
- CMU 8" BLOCK - 1HR BARRIER - INTERIOR**
- 8" CMU (REINFORCING PER STRUCT)
 - RESILIENT CHANNEL
 - (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
- NOTES:
- RATING SHALL MEET IBC 2018 SECTION 721 - PRESCRIPTIVE FIRE RESISTANCE FOR 1HR RATING. SHALL MEET TABLE 721.1(2).3. - CONCRETE MASONRY UNITS. ALL TIES. MORTAR TO MEET IBC SECTION 721.
 - APPLY WATERPROOFING AT ALL SUBGRADE PORTION OF WALLS



P40.2

- CMU 8" BLOCK - 1HR BARRIER - INTERIOR**
- 8" CMU (REINFORCING PER STRUCT)
- NOTES:
- RATING SHALL MEET IBC 2018 SECTION 721 - PRESCRIPTIVE FIRE RESISTANCE FOR 1HR RATING. SHALL MEET TABLE 721.1(2).3. - CONCRETE MASONRY UNITS. ALL TIES. MORTAR TO MEET IBC SECTION 721.
 - APPLY WATERPROOFING AT ALL SUBGRADE PORTION OF WALLS

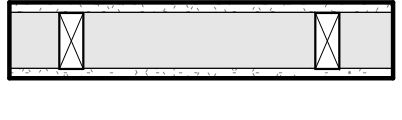
**INTERIOR ASSEMBLIES
CMU / CONCRETE - 2 HR RATED**



P42

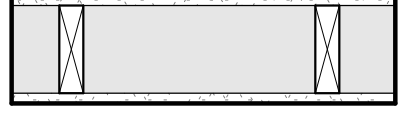
- CMU 8" BLOCK - 2HR FIRE WALL - INTERIOR**
- 8" CMU (REINFORCING PER STRUCT)
- NOTES:
- ASSEMBLY TO COMPLY WITH UL DESIGN U905 (APRIL 14, 2023)
 - APPLY WATERPROOFING AT ALL SUBGRADE PORTION OF WALLS

**INTERIOR PARTITION ASSEMBLIES
WOOD - NON RATED**



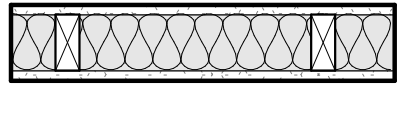
P1

- WOOD 2x4 STUD - NON-RATED PARTITION - INTERIOR**
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
 - 2x4 WOOD STUDS SPACED 16" O.C.
 - (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
- NOTES:
- ATTACH GYPSUM WITH 1-1/4" TYPE "W" STEEL SCREWS @ 12" O.C.



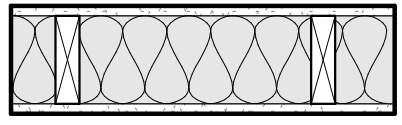
P2

- WOOD 2x6 STUD - NON-RATED PARTITION - INTERIOR**
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
 - 2x6 WOOD STUDS SPACED 16" O.C.
 - (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
- NOTES:
- ATTACH GYPSUM WITH 1-1/4" TYPE "W" STEEL SCREWS @ 12" O.C.



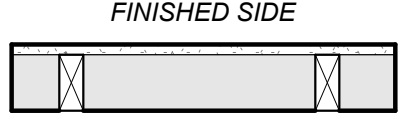
P4

- WOOD 2x4 STUD - NON-RATED PARTITION - INTERIOR SOUND DAMPENING**
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
 - 2x4 WOOD STUDS SPACED 16" O.C.
 - 3 1/2" BATT INSULATION IN STUD CAVITY
 - (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
- NOTES:
- ATTACH GYPSUM WITH 1-1/4" TYPE "W" STEEL SCREWS @ 12" O.C.



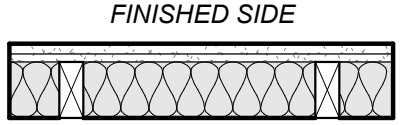
P5

- WOOD 2x6 STUD - NON-RATED PARTITION - INTERIOR SOUND DAMPENING**
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
 - 2x6 WOOD STUDS SPACED 16" O.C.
 - 5 1/2" BATT INSULATION IN STUD CAVITY
 - (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
- NOTES:
- ATTACH GYPSUM WITH 1-1/4" TYPE "W" STEEL SCREWS @ 12" O.C.



P7

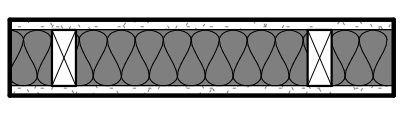
- WOOD 2x4 STUD - NON-RATED FURRING - INTERIOR**
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD ON OCCUPIED SIDE
 - 2x4 WOOD STUDS SPACED 16" O.C.
- NOTES:
- ATTACH GYPSUM WITH 1-1/4" TYPE "W" STEEL SCREWS @ 12" O.C.



P8

- WOOD 2x4 STUD - NON-RATED FURRING - INTERIOR SOUND DAMPENING**
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD ON OCCUPIED SIDE
 - (1) LAYER OF 1/2" CELLULOSE FIBER WALL BD.
 - 3 1/2" BATT INSULATION IN STUD CAVITY
 - 2x4 WOOD STUDS SPACED 16" O.C.
- NOTES:
- ATTACH INNER LAYER PER MFR RECOMMENDATION.
 - ATTACH GYPSUM WITH 2-3/8" TYPE "W" STEEL SCREWS @ 8" O.C.

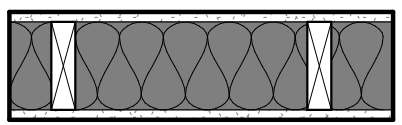
**INTERIOR PARTITION ASSEMBLIES
WOOD - 1 HR RATED**



P10

- WOOD 2x4 STUD - 1HR PARTITION - INTERIOR**
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
 - 2x4 WOOD STUDS SPACED 16" O.C. MAX. OR PER STRUCT. DWGS.
 - 3-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY
 - (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

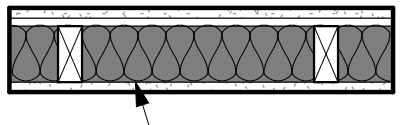
- NOTES:
- ASSEMBLY TO COMPLY WITH UL DESIGN U305 (SEPT 19, 2023)
 - REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS



P11

- WOOD 2x6 STUD - 1HR PARTITION - INTERIOR**
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
 - 2x6 WOOD STUDS SPACED 16" O.C. MAX. OR PER STRUCT. DWGS.
 - 5-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY
 - (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

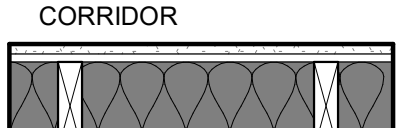
- NOTES:
- ASSEMBLY TO COMPLY WITH UL DESIGN U305 (SEPT 19, 2023)
 - REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS



P12

- WOOD 2x4 STUD - 1HR PARTITION - INTERIOR SOUND DAMPENING**
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
 - 25 MSG GALVANIZED STEEL RESILIENT CHANNEL, 24" O.C.
 - 2x4 WOOD STUDS SPACED 16" O.C. MAX. OR PER STRUCT. DWGS.
 - 3-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY
 - (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

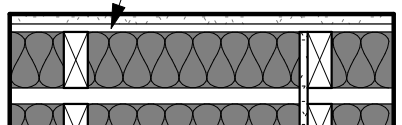
- NOTES:
- ASSEMBLY TO COMPLY WITH UL DESIGN U305 (JAN 14, 2020)
 - REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
 - STC SHALL BE 50 OR OVER AT UNIT ASSEMBLIES, MEETING ASTM E90 (STC 51 BASED UPON TESTING NGC 2011071)
 - WHERE PARTITION DIVIDES A CORRIDOR AND UNIT, RESILIENT CHANNEL SHALL BE ON CORRIDOR SIDE OF WALL. GC TO COORDINATE
 - WHERE PARTITION IS USED AS A DEMISING WALL AND/OR FOR STRUCTURAL SHEAR, GC TO COORDINATE ADDITIONAL LAYERS OF STRUCTURAL MATERIAL PER STRUCTURAL DRAWINGS. THESE LAYERS TO BE ADDITIVE TO THE ASSEMBLY LISTED ABOVE AND SHALL BE INCORPORATED PER UL 263. WHERE ONLY ONE LAYER IS ADDED FOR STRUCTURAL SHEAR, THIS SHALL BE PLACED ON SIDE OF WALL WHERE ONLY GYPSUM BOARD RESIDES, NOT ON RESILIENT CHANNEL SIDE.



P13

- WOOD 2x6 STUD - 1HR PARTITION - INTERIOR SOUND DAMPENING**
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
 - 25 MSG GALVANIZED STEEL RESILIENT CHANNEL, 24" O.C.
 - 2x6 WOOD STUDS SPACED 16" O.C. MAX. OR PER STRUCT. DWGS.
 - 5-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY
 - (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

- NOTES:
- ASSEMBLY TO COMPLY WITH UL DESIGN U305 (SEPT 19, 2023)
 - REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
 - STC SHALL BE 50 OR OVER AT UNIT ASSEMBLIES, MEETING ASTM E90 (STC 51 BASED UPON TESTING NGC 2011071)
 - WHERE PARTITION DIVIDES A CORRIDOR AND UNIT, RESILIENT CHANNEL SHALL BE ON CORRIDOR SIDE OF WALL, GC TO COORDINATE
 - WHERE PARTITION IS USED AS A DEMISING WALL AND/OR FOR STRUCTURAL SHEAR, GC TO COORDINATE ADDITIONAL LAYERS OF STRUCTURAL MATERIAL PER STRUCTURAL DRAWINGS. THESE LAYERS TO BE ADDITIVE TO THE ASSEMBLY LISTED ABOVE AND SHALL BE INCORPORATED PER UL 263. WHERE ONLY ONE LAYER IS ADDED FOR STRUCTURAL SHEAR, THIS SHALL BE PLACED ON SIDE OF WALL WHERE ONLY GYPSUM BOARD RESIDES, NOT ON RESILIENT CHANNEL SIDE.



P14

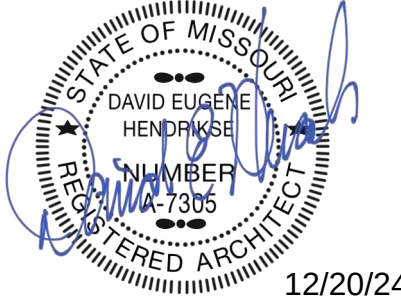
- WOOD DOUBLE 2x4 STUD - 1HR PARTITION - INTERIOR**
- (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
 - 25 MSG GALVANIZED STEEL 1/2" RESILIENT CHANNEL, 24" O.C.
 - 2x4 WOOD STUDS SPACED 16" O.C. MAX. OR PER STRUCT. DWGS.
 - 1" AIR GAP
 - 2x4 WOOD STUDS SPACED 16" O.C. MAX. OR PER STRUCT. DWGS.
 - 3 1/2" FRICTION FIT BATT INSULATION IN STUD CAVITY
 - (1) LAYER 5/8" TYPE "X" GYPSUM BOARD

- NOTES:
- ASSEMBLY TO COMPLY WITH UL U341 (AUG 4, 2023)
 - REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS
 - PROVIDE 1/2" GYP BOARD DRAFT STOP AT MAX 10'-0" O.C.
 - STC SHALL BE 50 OR OVER AT UNIT ASSEMBLIES, MEETING ASTM E90 (STC 61 BASED UPON TESTING TL11-120)

PRINTS ISSUED
01/25/2024 - CITY SUBMITTAL

REVISIONS:
1 10/21/24 ADDENDUM #1
3 12/20/24 ADDENDUM #3

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THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
PARTITION ASSEMBLIES - WALLS

PROJECT NUMBER: 23099

SHEET NUMBER:

G-101

NOTES:
a. INTERIOR EXPOSED AREAS TO BE PAINTED PER FINISH SCHEDULE
b. APPLY WATERPROOFING AT ALL SUBGRADE PORTION OF WALLS

NOTES:
a. INTERIOR EXPOSED AREAS TO BE PAINTED PER FINISH SCHEDULE
b. APPLY WATERPROOFING AT ALL SUBGRADE PORTION OF WALLS

CMU 12" BLOCK - NON-RATED - EXTERIOR (AT PARKING)

EXTERIOR

- EXTERIOR FINISH SYSTEM PER ELEVATIONS - BRICK SHOWN
- WEATHER RESISTANT BARRIER PER SPECIFICATIONS
- (1) LAYER SHEATHING PER STRUCT. DRAWINGS
- 12" CMU (REINFORCING PER STRUCT)

INTERIOR

NOTES:

- a. INTERIOR EXPOSED AREAS TO BE PAINTED PER FINISH SCHEDULE
- a. APPLY WATERPROOFING AT ALL SUBGRADE PORTION OF WALLS
- c. RATING SHALL MEET IBC SECTION 721 - PRESCRIPTIVE FIRE RESISTANCE FOR 1HR RATING. SHALL MEET TABLE 721.1(2) 3 - CONCRETE MASONRY UNITS. ALL TIES, MORTAR TO MEET IBC SECTION 721.

P57

P64

METAL 6" STUD - 1HR BARRIER - INTERIOR

- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL
- (1) LAYER 1/2" RESILIENT CHANNEL, 25 MSG, SPACED 24" O.C.
- 6" METAL STUDS SPACED PER UL AND STRUCTURAL ENGINEER (MIN 20 MSG)
- 6" BATT INSULATION PER UL
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL

- **METAL 2 1/2" C-H STUD - 1HR RATED SHAFT - INTERIOR**
- (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL
- 2-1/2" C-H STUDS SPACED 24" O.C.
- (1) LAYER 1" SHAFT WALL LINER

NOTES:

- a. ASSEMBLY TO COMPLY WITH UL DESIGN U415, SYSTEM A (FEB 14, 2022)
- b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS

P80

METAL 6" STUD - NON-RATED PARTITION - EXTERIOR - COMMERCIAL SPACE

- EXTERIOR FINISH SYSTEM PER ELEVATIONS - BRICK SHOWN
- WEATHER RESISTANT BARRIER PER SPECIFICATIONS
- (1) LAYER SHEATHING PER STRUCT. DRAWINGS
- 6" METAL STUDS SPACED PER STRUCTURAL ENGINEER (MIN 20 MSG)
- BATT INSULATION PER IECC

Diagram illustrating the exterior wall and window assembly. The assembly includes an exterior finish, a gap between the exterior face of the stud and the inside face of the masonry, and the exterior face of the stud. The diagram is labeled with 'EXTERIOR' and 'P80.'.

P82

R8

2

1

F1

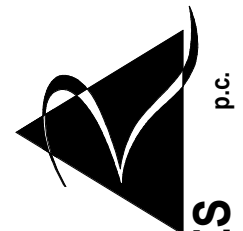
F3

WOOD 2X10 LUMBER - 1HR - STAIR & CORRIDOR

Diagram illustrating the cross-section of a floor slab. The top bar is labeled "TOP OF FLOOR" and the bottom bar is labeled "BOTTOM OF FLOOR".

Diagram illustrating the bottom surface of a floor slab, showing a wavy profile. The top is labeled "TOP OF FLOOR" and the bottom is labeled "BOTTOM OF FLOOR".

1. USE MOISTURE AND MOLD RESISTANT DRYWALL AT ALL WET WALLS. USE CEMENTITIOUS BACKER BOARD IF TILE IS TO BE INSTALLED.
2. REFER TO G-200 SHEETS FOR SPECIFIC UL DESIGN REQUIREMENTS.
3. ALL FIRE RATED PARTITIONS MUST USE TYPE-'X' FIRE RATED GYPSUM BOARD IN THICKNESS INDICATED OR NECESSARY TO ACHIEVE REQUIRED RATING.
4. ALL PARTITIONS SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS: UNIT/CORRIDOR SEPARATION PARTITIONS, ALL-TO-UNIT DEMISING PARTITIONS WHERE MULTIPLE BOXES ARE INSTALLED IN THE SAME STUD CAVITY, INCLUDING BACK-TO-BACK BOXES.
5. REFER TO STRUCTURAL FOR ALL SHEAR AND BEARING WALL LOCATIONS & REQUIREMENTS.
6. ALL WALLS ARE FULL HEIGHT TO THE UNDERSIDE OF FLOOR/ROOF CEILING ASSEMBLY UNLESS NOTED OTHERWISE.
7. ALL STEEL COLUMNS AND STEEL BEAMS REQUIRE 1 HOUR PROTECTION, REFER TO CODE PLANS FOR LOCATION.
8. FIREPROTECTING SHALL BE INSTALLED IN CONCEALED SPACES OF STUD WALL AND PARTITIONS INCLUDING FURRED SPACES BETWEEN STUDS AT THE CEILING AND FLOOR LEVELS AND HORIZONTALS AT INTERVALS NOT EXCEEDING 10 FEET. USE 1/2" RATED FIRESTOP FOAM, CAULK OR PADS (OR EQUIVALENT RATED MATERIAL THAT MAINTAINS THE ASSEMBLY'S RATING PER THE SCHEDULE.

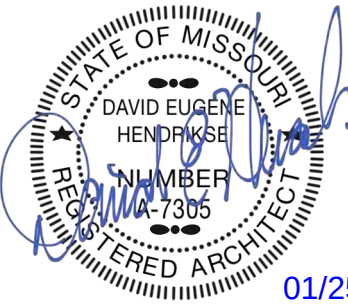


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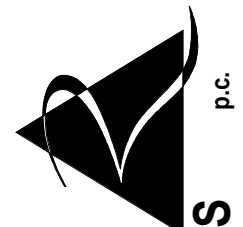


01/25/24

Alternate Floor Mat Materials* — (Optional) - Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding minimum thickness of floor topping over floor mat. GRASSWORX L L C — SC Types	edges offset a min of 4 in. between subfloor and magnesium oxide panels. Panels secured to subfloor with construction adhesive and corrosion-resistant fasteners spaced 6 in. OC around panel edges and 12 in. OC in the field of the panel. Fasteners must be placed no closer than 1/2 in. from all panel edges and no closer than 2 in. from panel corners. HUBER ENGINEERED WOODS LLC — Type 1/2 in. and 5/8 in. Square Edge Exacor® Board, Type 1/4 in. T&G Exacor® Board.	4M. Alternate Ceiling Damper* — Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 87 sq in. with the length not to exceed 9 in. and the width not to exceed 9-11/16 in. Aggregate damper openings shall not exceed 44 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions. BROAN-NUTONE L L C — Model RDMWT2	b. Cross Tees or Channels — Nom 4 ft long cross tees, with 15/16 in. or 1-1/2 in. wide face, or nom 4 ft long cross channels, with 1-1/2 in. wide face, either spaced 16 in. OC, installed perpendicular to the main runners. Additional cross tees or channels used 8 in. from each side of batted gypsum board end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.
System No. 9 Subflooring — Min 23/32 in. thick T&G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with end joints staggered 4 ft. Panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Gypsum Board* — One layer of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to joists. Gypsum board secured with 1 in. long No. 6 Type W bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. The joints of the gypsum board are to be staggered a minimum of 12 inches from the joints of the subfloor. GEORGIA-PACIFIC GYPSUM L L C — Type D5	2. Trusses — Parallel chord trusses spaced a max of 24 in. OC fabricated from nom 2 by 4 lumber, with lumber oriented vertically or horizontally. Min truss depth is 12 in. when dampers are not used and 18 in. when dampers are used. Truss members secured together with min 0.036 in. thick galv steel plates. Plates have 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other (made by the same punch), forming a split tooth type plate. Each tooth has a chisel point on its outside edge with these points being diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approximately 7/8 in. centers with four rows of teeth per inch of plate width.	4N. Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 3) — For use with min 18 in. deep trusses. Max nom 21 in. long by 18 in. wide, fabricated from galvanized steel. Plenum box max nom 21 in. long by 18 in. wide by 14 in. high (inner dimension) fabricated from either galvanized steel or min 1 in. thick listed Duct Board bearing the UL Listing Marking having a min R-Value of 4.3. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 100 sq in. per 100 sq ft of ceiling area. GREENHECK FAN CORP — Model CRD-1WT	c. Wall Angle or Channel — Painted or galv steel angle with 1 in. legs or channel with 1 in. legs, 1-9/16 in. deep attached to walls at perimeter of ceiling with fasteners 16 in. OC. To support steel framing member ends and for screw-attachment of the gypsum panel. C&C INC — Type DGL or RX.
Floor Mat Materials* — (As an alternate to the single layer gypsum board) — Floor mat material loose laid over the subfloor. MAXXON CORP — Type Encapsulated Sound Mat	3. Air Duct* — (Optional) — Any UL Class 0 or Class 1 flexible air duct installed in accordance with the instructions provided by the damper manufacturer	4O. Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 3) — For use with min 18 in. deep trusses. Max nom 12 in. long by 12 in. wide with an 8 in. diameter damper, fabricated from galvanized steel, installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 72 sq in. per 100 sq ft of ceiling area. GREENHECK FAN CORP — Model CRD-2WT	USG INTERIORS LLC — Type DGL or RX.
Gypsum Board* — (For use when floor mat is used) Two layers of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to joists on top of the floor mat material. Gypsum board secured to each other with 1 in. long No. 6 Type G bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. The joints of the gypsum board are to be staggered a minimum of 12 inches in between layers and from the joints of the subfloor. GEORGIA-PACIFIC GYPSUM L L C — Type D5	4. Ceiling Damper* — (Optional. To be used with Air Duct Item 3) — For use with min 18 in. deep trusses. Max nom area shall be 324 sq in. Max square size shall be 18 in. by 18 in. Rectangular sizes not to exceed 324 sq in. with a max width of 18 in. Max height of damper shall be 14 in. Aggregate damper openings shall not exceed 162 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions. C&S AIR PRODUCTS — Model RD-521	4P. Alternate Ceiling Damper* — (Optional. To be used with Air Duct, Item 3) — For use with min 18 in. deep trusses. Max nom 18 in. long by 18 in. wide, fabricated from galvanized steel, installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 162 sq in. per 100 sq ft of ceiling area. RUSKIN COMPANY — Model CDDT, CDDT-4ND-BT, CDDT-90-BT, CDDT-ST-BT, CDDT-58, CDDT-R6-DB, or CDDT-I86	6C. Steel Framing Members* — (Not Shown) — As an alternate to Items 6, 6A and 6B. a. Furring Channels — Hat-shaped furring channels, 7/8 in. deep by 2-5/8 in. wide at the base and 1-1/4 in. wide at the face, formed from No. 25 ga. galv steel, spaced max. 16 in. OC, perpendicular to trusses and Cold Rolled Channels (Item 6Cb). Furring channels secured to Cold Rolled Channels at every intersection with a 1/2 in. pan head self-drilling screw through each furring channel leg. Ends of adjoining channels overlapped 4 in. and tied together with two double strand No. 18 SWG galv steel wire ties, one at each end of overlap. Supplemental furring channels at base layer and outer layer gypsum board butt joints are not required. Batts and Blankets draped over furring channels as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 7.
Floor Mat Materials* — (Optional) — Nom 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in. KEENE BUILDING PRODUCTS CO INC — Type Quiet Quirl 55/025 and Quiet Quirl 55/025 N	4A. Alternate Ceiling Damper* — For use with min 18 in. deep trusses. Max nom area shall be 196 sq in. Max square size shall be 14 in. by 14 in. Rectangular sizes not to exceed 196 sq in. with a max width of 26 in. Max height of damper shall be 7 in. Aggregate damper openings shall not exceed 98 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) not to exceed 144 in² shall be installed in accordance with installation instructions. C&S AIR PRODUCTS — Model RD-521-BT	4Q. Alternate Ceiling Damper* — (Optional. To be used with Air Duct, Item 3) — For use with min 18 in. deep trusses. Max 8 in. diameter damper, fabricated from galvanized steel, installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 25 sq in. per 100 sq ft of ceiling area. RUSKIN COMPANY — Model CDRDT	b. Cold Rolled Channels — 1-1/2 in. by 1/2 in., formed from No. 16 ga. galv steel, positioned vertically and parallel to trusses. friction-fitted into the channel caddy on the Steel Framing Members (Item 6Cd). Adjoining lengths of cold rolled channels lapped min. 6 in. and wire-tied together with two double strand 18 SWG galv steel wire ties, one at each end of overlap.
Subflooring — Min 15/32 or 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered. Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt. Finish Flooring — Floor Topping Mixture* — Min 3/4 or 1 in. thickness of floor topping mixture for 19/32 or 15/32 in. thick wood structural panels respectively, having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design. DEPENDABLE LLC — GSL M3.4, GSL K2.6, G2.6, G5L, C5L, RH, and SKIMFLOW.	4B. Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 3) — For use with min 18 in. deep trusses. Max nom area shall be 256 sq in. with the length not to exceed 24 in. and the width not to exceed 20 in. Max height of damper shall be 17 in. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions. C&S AIR PRODUCTS — Model RD-521-IP, RD-521-NP	4S. Damper* — (Optional, to be used with Air Duct Item 3) For use with min 18 in. deep trusses. Max nom 12-3/8 in. long by 14-1/2 in. wide, fabricated from galvanized steel, installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 90 sq in. per 100 sq ft of ceiling area. GREENHECK FAN CORP — Model CRD-320WT	c. Blocking — Where truss design does not permit direct, full contact of the hanger bracket, a piece of nominal 2 by 4 in. lumber (blocking), min. 6 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the truss (Item 2) at the top and bottom of the blocking at each Steel Framing Member (Item 6Cd) location.
Floor Mat Materials* — (Optional) — Nom 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in. KEENE BUILDING PRODUCTS CO INC — Type Quiet Quirl 60/040 and Quiet Quirl 60/040 N	4C. Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 3) For use with min 18 in. deep trusses. Max nom 11-7/8 in. long by 13-5/8 in. wide, fabricated from galvanized steel, installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 76 sq in. per 100 sq ft of ceiling area. GREENHECK FAN CORP — Model CRD-210WT	4T. Alternate Ceiling Damper* — (Optional, to be used with Air Duct Item 3) For use with min 18 in. deep trusses. Max 12 in. diameter damper with max 15 in. by 15 in. register box with max 12 in. by 12 in. register opening fabricated from galvanized steel. Aggregate area of the register openings through the ceiling membrane shall not exceed 72 sq. in. per 100 sq. ft. of ceiling area. Damper assembly installed in accordance with the manufacturer's installation instructions. RUSKIN COMPANY — Model CDDT-58	d. Steel Framing Members — Hangers spaced 48 in. OC, max along truss, and secured to the Blocking (Item 6Cc) on alternating trusses with a single 5/16 in. by 2 in. hex head lag bolt or four #6 1-1/4 in. drywall screws through mounting hole(s) on the hanger bracket. The 1/4 in. long steel teeth on the hanger are embedded in the side of the blocking. Hanger positioned on blocking and leveling both height adjusted such that furring channels are flush with bottom of trusses before gypsum board installation. Spring gauge of hanger chosen per manufacturer's instructions. KINETICS NOISE CONTROL INC — Type ICW.
Subflooring — Min 15/32 or 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered. Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt. Finish Flooring — Floor Topping Mixture* — Min 3/4 or 1 in. thickness of floor topping mixture for 19/32 or 15/32 in. thick wood structural panels respectively, having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design. DEPENDABLE LLC — GSL M3.4, GSL K2.6, G2.6, G5L, C5L, RH, and SKIMFLOW.	4D. Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 3) — For use with min 18 in. deep trusses. Max nom area shall be 324 sq in. Max square size shall be 18 in. by 18 in. Rectangular sizes not to exceed 324 sq in. with a max width of 18 in. Max height of damper shall be 14 in. Aggregate damper openings shall not exceed 162 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions. C&S AIR PRODUCTS — Model RD-521-IP, RD-521-NP	4U. Alternate Ceiling Damper* — (Optional, to be used with Air Duct Item 3) For use with min 18 in. deep trusses. Maximum 20 in. long by 18 in. wide by 2-1/8 in. high, fabricated from galvanized steel. Plenum box maximum size nom. 21 in. long by 18 in. wide by 16 in. high fabricated from either galvanized steel or Classified Air Duct Materials bearing the UL Class 0 or Class 1 rigid air duct material. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 180 sq in. per 100 sq ft of ceiling area. NALOR INDUSTRIES INC — Types 0755, 0755A, 0756, 0756D, 0757, 0757D, 0757FP, 0757DP, 0763	6D. Steel Framing Members* — (Not Shown) — As an alternate to Items 6, 6A, 6B and 6C. a. Furring Channels — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 16 in. OC perpendicular to wood structural members. When insulation, Items 5 or 5A is applied over the furring channel/gypsum panel ceiling membrane, the furring channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galv steel wire near each end of overlap.
Subflooring — Min 15/32 or 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered. Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt. Finish Flooring — Floor Topping Mixture* — Min 3/4 or 1 in. thickness of floor topping mixture having a min compressive strength of 4500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design. KEENE BUILDING PRODUCTS CO INC — Type Quiet Quirl 65/075, Quiet Quirl 65/075 N	4E. Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 3) — For use with min 18 in. deep trusses. Max nom area shall be 256 sq in. with the length not to exceed 24 in. and the width not to exceed 20 in. Max height of damper shall be 17 in. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions. C&S AIR PRODUCTS — Model RD-521-IP, RD-521-NP	4V. Alternate Ceiling Damper* — (Optional, to be used with Air Duct Item 3) For use with min 18 in. deep trusses. Max nom 12-3/8 in. long by 14-1/2 in. wide, fabricated from galvanized steel, installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 90 sq in. per 100 sq ft of ceiling area. GREENHECK FAN CORP — Model CRD-320WT	b. Steel Framing Members* — Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC, and secured to the bottom chord of alternating trusses with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. When insulation, Items 5 or 5A is applied over the furring channel/gypsum panel ceiling membrane, the clip spacing shall be reduced to 24 in. OC and secured to consecutive trusses. Furring channels are friction fitted into clips. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7. Two layers of gypsum board required as described in Item 7. Not evaluated for use with Item 5B. KINETICS NOISE CONTROL INC — Type Isomax.
Subflooring — Min 15/32 or 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered. Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt. Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's technical support for specific mix design and minimum thickness recommended for use with eligible floor mat(s). LOW & BONAR INC — EnkaSonic® by Colbond a member of the Low & Bonar group Types 125, 250, 250 Plus, 400, 400 Plus, 750, and 750 Plus.	4F. Alternate Ceiling Damper* — For use with min 18 in. deep trusses. Max nom area shall be 324 sq in. Max square size shall be 18 in. by 18 in. Rectangular sizes not to exceed 324 sq in. with a max length of 20 in. and a max width of 22 in. Max height of damper shall be 14 in. Aggregate damper openings shall not exceed 154 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturer's installation instructions provided with the damper. An aluminum or steel grille (Item 9) shall be installed in accordance with installation instructions. UNITED ENERTech CORP — Type C-S/R-WT or C-S/R-WTP (Max nom area 324 sq in.) or C-S/R-WTS or C-S/R-WTPS (Max nom area 162 sq in.)	4W. Alternate Ceiling Damper* — (Optional, to be used with Air Duct Item 3) For use with min 18 in. deep trusses. Max nom 10-3/8 in. long by 10-3/8 in. wide, fabricated from galvanized steel, installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 54 sq in. per 100 sq ft of ceiling area. GREENHECK FAN CORP — Model CRD-300WT	6E. Steel Framing Members* — (Optional, Not Shown) — Used as an alternate method to attach min. 1/2 in. deep resilient channels (Item 6) to wood trusses (Item 2). Resilient channels are friction fitted into clips, and then clips are secured to the bottom chord of each wood truss with a min. 1-3/4 in. long Type S bugle head steel screw through the center hole of the clip and the resilient channel flange. Adjoining resilient channels are overlapped 4 in. under trusses. The clip flange is opened slightly to accommodate the two overlapped channels. Additional clips required to hold resilient channel that supports the gypsum board butt joints, as described in Item 7.
Subflooring — Min 15/32 or 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered. Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick. Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's technical support for specific mix design and minimum thickness recommended for use with eligible floor mat(s). LOW & BONAR INC — EnkaSonic® by Colbond a member of the Low & Bonar group Types 125, 250, 250 Plus, 400, 400 Plus, 750, and 750 Plus.	4G. Alternate Ceiling Damper* — Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 75 sq in. with the length not to exceed 8-9/16 in. and the width not to exceed 8-3/4 in. Max height of damper shall be 9-7/8 in. Aggregate damper openings shall not exceed 45 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions. DELTA ELECTRONICS INC — Models CRD2, GBB-CRD, ITG-CRD	4X. Alternate Ceiling Damper* — (Optional, to be used with Air Duct Item 3) For use with min 18 in. deep trusses. Max nom 10-3/8 in. long by 10-3/8 in. wide, fabricated from galvanized steel, installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 54 sq in. per 100 sq ft of ceiling area. GREENHECK FAN CORP — Model CRD-300WT	6F. Steel Framing Members — (Not Shown) — As an alternate to Item 6, furring channels and Steel Framing Members* as described below. a. Furring Channels — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 16 in. OC perpendicular to trusses. When batt insulation (Items 5) is draped over the resilient channel/gypsum board ceiling membrane, the resilient channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.
Subflooring — Min 15/32 or 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered. Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick. Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's technical support for specific mix design and minimum thickness recommended for use with eligible floor mat(s). LOW & BONAR INC — EnkaSonic® by Colbond a member of the Low & Bonar group Types 125, 250, 250 Plus, 400, 400 Plus, 750, and 750 Plus.	4H. Alternate Ceiling Damper* — Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 131 sq in. with the length not to exceed 11-1/16 in. and the width not to exceed 11-7/8 in. Aggregate damper openings shall not exceed 66 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions. DELTA ELECTRONICS INC — Model SIG-CRD	4Y. Alternate Ceiling Damper* — (Optional, to be used with Air Duct Item 3) For use with min 18 in. deep trusses. Max nom 10-3/8 in. long by 10-3/8 in. wide, fabricated from galvanized steel, installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 54 sq in. per 100 sq ft of ceiling area. GREENHECK FAN CORP — Model CRD-300WT	b. Steel Framing Members* — Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC, GenieClips secured to alternating joists with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. When insulation, Items 5 is applied over the furring channel/gypsum panel ceiling membrane, the clip spacing shall be reduced to 24 in. OC and secured to consecutive trusses. Furring channels are friction fitted into clips. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7. Not evaluated for use with Item 5A or 5B. PLITEQ INC — Type GENIECLIP
Subflooring — Min 15/32 or 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered. Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick. Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's technical support for specific mix design and minimum thickness recommended for use with eligible floor mat(s). LOW & BONAR INC — EnkaSonic® by Colbond a member of the Low & Bonar group Types 125, 250, 250 Plus, 400, 400 Plus, 750, and 750 Plus.	4I. Alternate Ceiling Damper* — Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 103 sq in. with the length not to exceed 10-1/8 in. and the width not to exceed 10-1/8 in. Aggregate damper openings shall not exceed 52 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions. PANASONIC CORPORATION, PANASONIC CORPORATION OF NORTH AMERICA — Model PC-RD0CS	4Z. Alternate Ceiling Damper* — (Optional, to be used with Air Duct Item 3) For use with min 18 in. deep trusses. Max nom 10-3/8 in. long by 10-3/8 in. wide, fabricated from galvanized steel, installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 54 sq in. per 100 sq ft of ceiling area. GREENHECK FAN CORP — Model CRD-300WT	6G. Alternate Steel Framing Members* — (Not Shown) — As an alternate to Items 6-6F, furring channels and Steel Framing Members as described below. a. Furring Channels — Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in. deep, spaced 16 in. OC, perpendicular to trusses. When batt insulation (Items 5) is draped over the resilient channel/gypsum board ceiling membrane, the resilient channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b.
Subflooring — Min 15/32 or 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered. Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt. Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's technical support for specific mix design and minimum thickness recommended for use with eligible floor mat(s). LOW & BONAR INC — EnkaSonic® by Colbond a member of the Low & Bonar group Types 125, 250, 250 Plus, 400, 400 Plus, 750, and 750 Plus.	4J. Alternate Ceiling Damper* — Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 113 sq in. with the length not to exceed 10-1/8 in. and the width not to exceed 11-1/8 in. Aggregate damper openings shall not exceed 57 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions. BROAN-NUTONE L L C — Model RD1WT	4AA. Alternate Ceiling Damper* — (Optional, to be used with Air Duct Item 3) For use with min 18 in. deep trusses. Max nom 10-3/8 in. long by 10-3/8 in. wide, fabricated from galvanized steel, installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 54 sq in. per 100 sq ft of ceiling area. GREENHECK FAN CORP — Model CRD-300WT	b. Steel Framing Members* — Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced at 48" OC and secured to the bottom of the joists with one 2 in. Coarse Drywall Screw with 1 in. diam washer through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and tied together with double strand of No. 18 AWG galvanized steel wire Additional clips are required to hold the Gypsum Butt joints as described in Item 7B. REGUPOI AMERICA — Type SonoClip
Subflooring — Min 15/32 or 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered. Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt. Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's technical support for specific mix design and minimum thickness recommended for use with eligible floor mat(s). LOW & BONAR INC — EnkaSonic® by Colbond a member of the Low & Bonar group Types 125, 250, 250 Plus, 400, 400 Plus, 750, and 750 Plus.	4K. Alternate Ceiling Damper* — Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 79 sq in. with the length not to exceed 10 in. and the width not to exceed 7-15/16 in. Aggregate damper openings shall not exceed 40 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A metallic grille (Item 9) shall be installed in accordance with installation instructions. BROAN-NUTONE L L C — Models RD1J and RDH	4AB. Alternate Ceiling Damper* — (Optional, to be used with Air Duct Item 3) For use with min 18 in. deep trusses. Max nom 10-3/8 in. long by 10-3/8 in. wide, fabricated from galvanized steel, installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 54 sq in. per 100 sq ft of ceiling area. GREENHECK FAN CORP — Model CRD-300WT	6H. Alternate Steel Framing Members* — (Not Shown) — As an alternate to Items 6-6G, furring channels and Steel Framing Members as described below. a. Furring Channels — Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced as indicated in Item 6, perpendicular to the trusses. Channels secured to Cold Rolled Channels at every intersection with a 3/4 in. TEK screw through each furring channel leg. Ends of adjoining channels overlapped 12 in. and fastened together with two double strand No. 18 SWG galv steel wire ties, one at each end of overlap, or with two 3/4 in. TEK screws in each leg of the overlap section. Two furring channels used at end joints of gypsum board (Item 7), each extending a min of 6 in. beyond both side edges of the board.
Subflooring — Min 15/32 or 19/32 in. thick T&G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with end joints staggered. Finish Floor - Building Units* — Min 1/2 in. thick magnesium oxide panels installed parallel, perpendicular, or diagonally to trusses with panel	4L. Alternate Ceiling Damper* — Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 87 sq in. with the length not to exceed 9 in. and the width not to exceed 9-11/16 in. Aggregate damper openings shall not exceed 44 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions. BROAN-NUTONE L L C — Model RDMWT	4AC. Alternate Ceiling Damper* — (Optional, to be used with Air Duct Item 3) For use with min 18 in. deep trusses. Max nom 10-3/8 in. long by 10-3/8 in. wide, fabricated from galvanized steel, installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 54 sq in. per 100 sq ft of ceiling area. GREENHECK FAN CORP — Model CRD-300WT	b. Cold Rolled Channels — 1-1/2 in. by 1/2 in., formed from No. 16 ga. galv steel, positioned vertically and parallel to trusses. friction-fitted into the channel caddy on the Steel Framing Members (Item 6Id) and secured with two 3/4 in. TEK screws. Adjoining lengths of cold rolled channels lapped min. 12 in. and secured along bottom legs with four 3/4 in. TEK screws and wire-tied together

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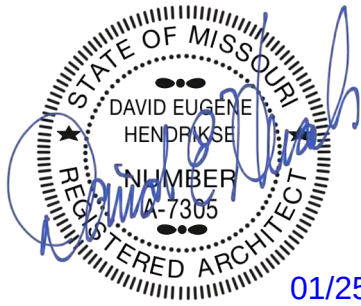
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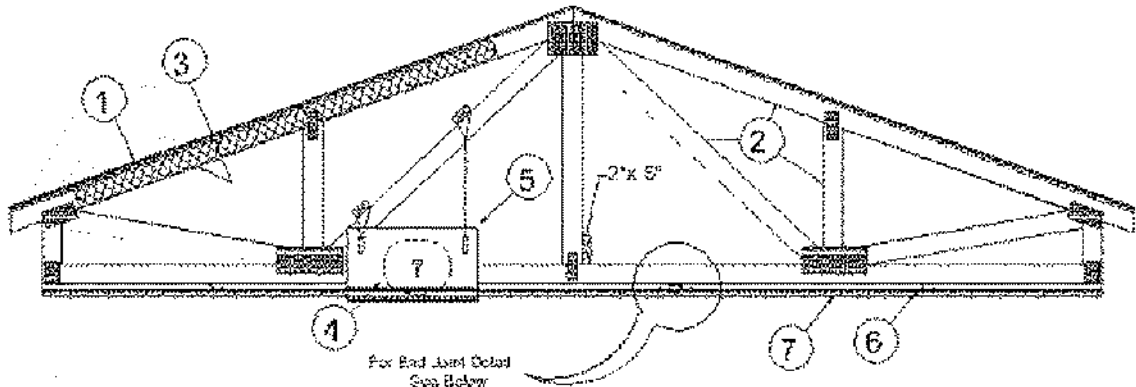
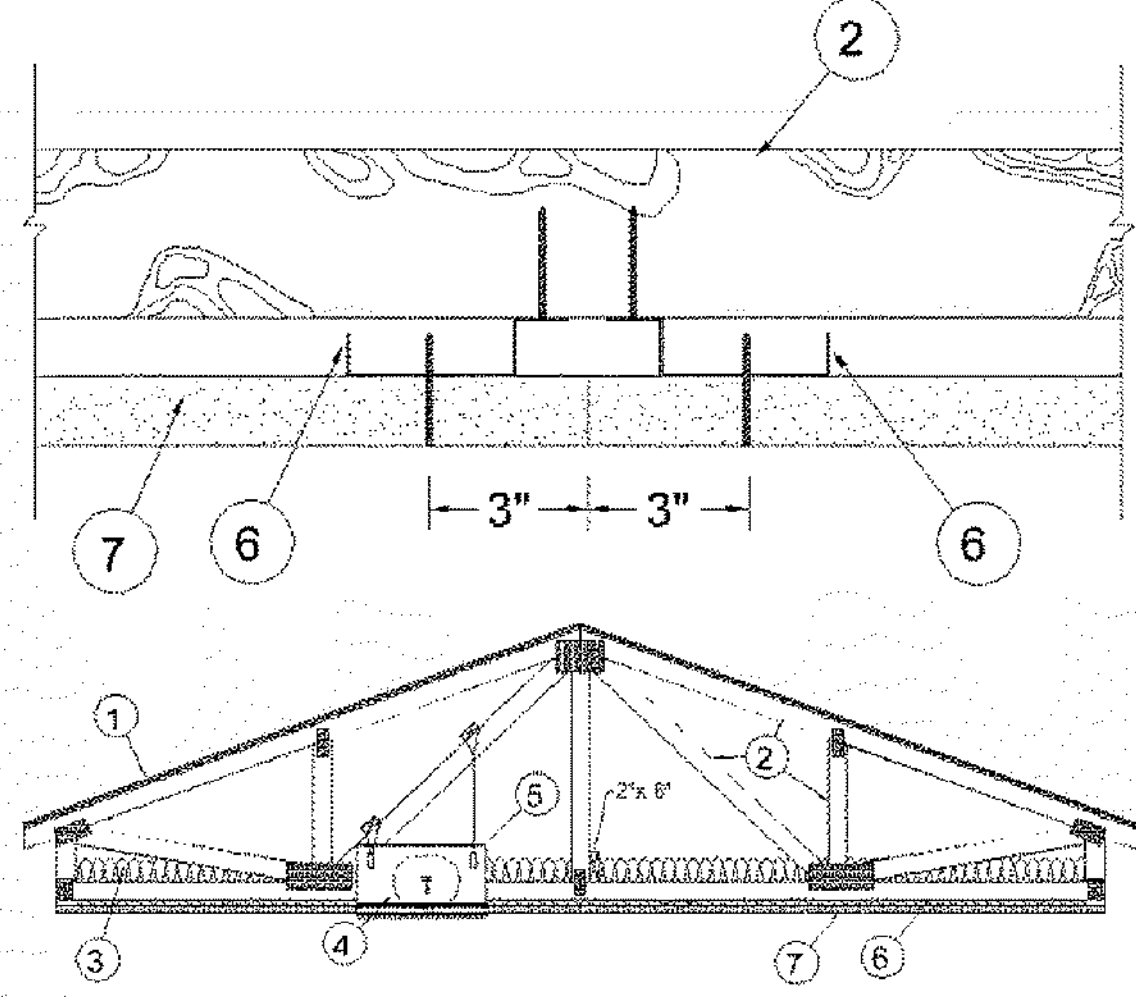
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THE VILLAGE AT DISCOVERY -
LOT 4

LEE'S SUMMIT, MO

SHEET TITLE
UL ASSEMBLIES - L546 / P545
PROJECT NUMBER: 23099
SHEET NUMBER:

G-203

with two double strand 18 SWG galv steel wire ties, one at each end of overlap. c. Blocking — Where truss design does not permit direct, full contact of the hanger bracket, a piece of nominal 2 by 4 in. lumber (blocking), min. 12 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the trusses at the top and bottom of the blocking at each Steel Framing Member (Item 6Jd) location with 16d nails or minimum 2-1/2 in. screws. d. Steel Framing Members* — Spaced 48 in. OC, max along truss, and secured to the truss on alternating trusses with two, #10 x 2 in. screws through mounting holes on the hanger bracket. PAC INTERNATIONAL L L C — Type R5IC-SI-CRC EZ Clip 6K. Steel Framing Members* — (Not Shown) — As an alternate to Item 6 a. Furring Channels — Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced as indicated in Item 6, perpendicular to trusses and friction fit into Steel Framing Members (Item 6Kc). Ends of adjoining channels overlapped 6 in., and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap or with two TEK screws along each leg of the 6 in. overlap. Two furring channels used at end joints of gypsum board (Item 7). Butt joint channels held in place by strong back channels placed upside down, on top of, and running perpendicular to primary furring channels, extending 6 in. longer than length of gypsum side joint. Strong back channels spaced maximum 48 in. OC. Strong back channels secured to every intersection of primary furring channels with four 7/16 in. pan head screws, two along each of the legs at intersections. Butt joint channels run perpendicular to strong back channels and shall be minimum 6 in. longer than length of joint, secured to strong back channels with 7/16 in. pan head screws, two along each of the legs at intersection with strong back channels. b. Blocking — Where truss design does not permit direct, full contact of the hanger bracket, a piece of nominal 2 by 4 in. lumber (blocking), min. 12 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the trusses at the top and bottom of the blocking at each Steel Framing Member (Item 6Kc) location with 16d nails or minimum 2-1/2 in. screws. c. Steel Framing Members* — Used to attach furring channels (Item 6Ka) to trusses. Clips spaced 48 in. OC and secured along truss webs at each furring channel intersection with min. 3/4 in. long self-drilling #10 x 1-1/2 in. screws through each of the provided hole locations. Furring channels are friction fitted into clips. PAC INTERNATIONAL L L C — Type R5IC-SI-1 Ultra 6L. Steel Framing Members* — (Optional - Not Shown) — Used to attach resilient channels (Item 6) to trusses (Item 2). Clips spaced 48 in. OC and secured to trusses with one No. 8 x 2-1/2 in. coarse drywall screw through center grommet hole. Channels secured to clips with one #10 x 1/2 in. pan-head self-drilling screw. Ends of adjoining channels overlapped 6 in. and secured together with two #8 15 x 1/2 in. Philips Modified screws spaced 2-1/2 in. from the center of the overlap. Gypsum board butt joints require additional resilient channels spaced 1-1/2 in. from the butt joint on either side. One edge of the extra channels will extend to an adjacent truss where it is secured with a clip. KEENE BUILDING PRODUCTS CO INC — Type RC-1 Assurance Clip 6M. Steel Framing Members* — (Optional, Not Shown) — Used as an alternate method to attach resilient channels to structural members. A resilient sound isolation accessory shall be used at each attachment point of the resilient channels and spaced max 24 in. O.C. Channel ends butted and centered under the structural members and attached with one accessory at each end. Additional accessories used to hold resilient channels that support the gypsum board end joints. The accessory envelops the mounting edge of the resilient channel. The accessory and resilient channel are fastened to the structural members with the screws supplied with the accessory and per the accessory manufacturer's installation instructions. Gypsum Board butt joints staggered minimum 24 in. OC and Gypsum Board screws spaced 8 in. OC when used. PAC INTERNATIONAL L L C — Type RC-1 Boost 6N. Resilient Channels — For use with American Gypsum Co. Type AG-C gypsum board only. Resilient channels, formed of 25 MSG thick galv steel, spaced 16 in. OC perpendicular to trusses. When insulation (Items 5A, 5B, 5A) is applied over the resilient channel/gypsum board ceiling membrane, the spacing may remain at 16 in. OC. Channels secured to each truss with 1-1/4 in. long Type S bugle head steel screws. Channels overlapped 4 in. at splices. Two channels, spaced 6 in. OC, oriented opposite each gypsum board end joint as shown in the above illustration. Additional channels shall extend 6 in. beyond each side edge of board. 6O. Steel Framing Members* — (Optional, Not Shown, As an alternate to Item 6) — Furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel, 2-23/32 in. wide by 7/8 in. When there is no insulation installed in the concealed space the furring channels are spaced 24 in. OC max perpendicular to trusses. When insulation (Item 5) is installed to be the	6S. Steel Framing Members* — (Not Shown) — As an alternate to Item 6L a. Furring Channels — Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced as indicated in Item 6, perpendicular to trusses and friction fit into Steel Framing Members (Item 6Kc). Ends of adjoining channels overlapped 6 in., and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap or with two TEK screws along each leg of the 6 in. overlap. Two furring channels used at end joints of gypsum board (Item 7). Butt joint channels held in place by strong back channels placed upside down, on top of, and running perpendicular to primary furring channels, extending 6 in. longer than length of gypsum side joint. Strong back channels spaced maximum 48 in. OC. Strong back channels secured to every intersection of primary furring channels with four 7/16 in. pan head screws, two along each of the legs at intersections. Butt joint channels run perpendicular to strong back channels and shall be minimum 6 in. longer than length of joint, secured to strong back channels with 7/16 in. pan head screws, two along each of the legs at intersection with strong back channels. b. Blocking — Where truss design does not permit direct, full contact of the hanger bracket, a piece of nominal 2 by 4 in. lumber (blocking), min. 12 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the trusses at the top and bottom of the blocking at each Steel Framing Member (Item 6Kc) location with 16d nails or minimum 2-1/2 in. screws. c. Steel Framing Members* — Used to attach furring channels (Item 6Ka) to trusses. Clips spaced 48 in. OC and secured along truss webs at each furring channel intersection with min. 3/4 in. long self-drilling #10 x 2 in. screws through each of the provided hole locations. Furring channels are friction fitted into clips. PAC INTERNATIONAL L L C — Type R5IC-SI-1 Ultra 7. Gypsum Board* — Nom 5/8 in. thick, 48 in. wide gypsum board. When resilient channels (Item 6) are used, gypsum board installed with long dimension perpendicular to resilient channels. Gypsum board secured with 1 in. long Type S bugle head screws spaced 12 in. OC and located a min of 1/2 in. from side joints and 3 in. from end joints. End joints secured to both resilient channels as shown in end joint detail. When batt insulation (Item 5) is draped over the resilient channel/gypsum board ceiling membrane, screws spacing shall be 8 in. OC. When Steel Framing Members* (Item 6A, 6F, 6O) are used, gypsum board installed with long dimension perpendicular to furring channels and side joints of sheet located beneath joints. Gypsum board secured to furring channels with 1 in. long Type S bugle head screws spaced 12 in. OC in the field. Butted end joints shall be staggered min 2 ft within the assembly, and occur between the continuous furring channels. At butted end joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 6 in. on each end. The two furring channels shall be spaced approximately 3-1/2 in. OC and be attached to underside of the joist with one clip at each end of the channel. Screw spacing along the gypsum board butt joint shall be 8 in. OC. When Steel Framing Members (Item 6A) are used, nom 5/8 in. thick, 4 ft wide gypsum board, installed as described in Item 7. Adjacent butt joints staggered minimum 48 in. OC. When Steel Framing Members (Item 6K) are used, nom 5/8 in. thick, 4 ft wide gypsum board, installed as described in Item 7. Butt joints staggered minimum 24 in. OC. AMERICAN GYPSUM CO — Type AG-C CGC INC — Types C, IP-X2, IPC-AR CERTAINTED GYPSUM INC — Type LGFC-C/A GEORGIA-PACIFIC GYPSUM L L C — Types S, DAPC, TG-C PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type C UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR USG BORAL DRYWALL SFZ LLC — Type C USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR 7A. Gypsum Board* — Nom 5/8 in. thick, 48 in. wide gypsum board, installed with long dimension perpendicular to resilient	offset a min of 24 in. from base layer end joints. Butted side joints of outer layer to be offset min 16 in. from butted side joints of base layer. When Steel Framing Members (Item 6G) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 3 in. on each end. The two support furring channels shall be spaced approximately 3 in. in from joint. Screw spacing along the gypsum board butt joint and along both additional channels shall be 8 in. OC. Additional screws shall be placed in the adjacent section of gypsum board into the aforementioned 3 in. extension of the extra butt joint channels as well as into the main channel that runs between. Butt joint furring channels shall be attached with one RESILMOUNT Sound Isolation Clip at each end of the channel. When Steel Framing Members (Item 6H) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, an additional single length of furring channel shall be installed and be spaced approximately 3 in. from the butt joint (6 in. from the continuous furring channels) to support the floating end of the gypsum board. Each of these shorter sections of furring channel shall extend one truss beyond the width of the gypsum panel and be attached to the adjacent trusses with one SonusClip at every truss involved with the butt joint. CERTAINTED GYPSUM INC — Type C CGC INC — Types C, IP-X2, IPC-AR CERTAINTED GYPSUM INC — Type LGFC-C/A GEORGIA-PACIFIC GYPSUM L L C — Types S, DAPC, TG-C PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type C UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR USG BORAL DRYWALL SFZ LLC — Type C USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR 7C. Gypsum Board* — (As an alternative to Items 7 and 7B, For use with Items 5C and 6I) — Nom 5/8 in. thick, 48 in. wide gypsum board, installed and secured as described in Items 7 and 7B but with max screw spacing 8 in. OC. When used with insulation (Batts and Blankets* or Fiber Sprayed*) that is installed over the resilient channel/Gypsum Board* ceiling membrane, the resilient channels may remain at 16 in. OC and not need to be reduced to 12 in. OC. CGC INC — Type ULUX UNITED STATES GYPSUM CO — ULUX 7D. Gypsum Board* — (As an alternative to Items 7, 7A, 7B and 7C) — For use when no insulation is used. Nom 5/8 in. thick, 48 in. wide gypsum board, installed as described in Item 7 with resilient channels (Item 6) spaced 24 in. OC. AMERICAN GYPSUM CO — Type AG-C 8. Finishing System — (Not Shown) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads. Nom 2 in. wide paper tape embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum board. 9. Grille — Grille, installed in accordance with the installation instructions provided with the ceiling damper. 10. Wire Mesh — (Not Shown) — For use with Item 5A and 5B — 1 in. 20 gauge galvanized poultry netting installed between the	UL Product iQ® Design/System/Construction/Assembly Usage Disclaimer • Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system devices, and material. • Authorities Having Jurisdiction should be consulted before construction. • Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field. • When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide information includes specifics concerning alternate materials and alternate methods of construction. • Only products which bear UL's Mark are considered Certified. BOXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States BOXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada See General Information for Fire Resistance Ratings - ANSI/UL 263 Certified for United States Design Criteria and Allowable Variances See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada Design Criteria and Allowable Variances Design No. P545 September 8, 2023 Unrestrained Assembly Rating — 1 Hr. Finish Rating — 24 or 25 Min (See Items 3 and 3A) This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BOXUV or BOXUV7 * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively. 
underside of the subfloor the furring channels are spaced 16 in. OC max. When insulation (Item 5) is applied over the furring channel/gypsum panel ceiling membrane, the furring channels are spaced 12 in. OC max. Channels secured to trusses as described in Item 6Oe. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the wallboard butt joints, as described in Item 7. b. Steel Framing Members* — Used to attach furring channels (Item 6Oa) to trusses (Item 2). Clips spaced 48 in. OC max with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clips 6P. Steel Framing Members* — (Optional, Not Shown) — Used as an alternate method to attach resilient channels (Items 6 and 6I), to structural members. A resilient sound isolation accessory shall be used at each attachment point of the resilient channels and spaced 16 in. O.C. Channel ends butted and centered under the structural members and attached with one accessory at each end. Additional accessories used to hold resilient channels that support the gypsum board end joints. The accessory envelops the mounting edge of the resilient channel. The accessory and resilient channel are fastened to the structural members with the 2in. screws supplied with the accessory and per the accessory manufacturer's installation instructions. Gypsum Board butt joints staggered minimum 24 in. OC and Gypsum Board screws spaced 8 in. OC when used. PAC INTERNATIONAL L L C — Type RC-1 Boost 6Q. Steel Framing Members* — (Not Shown) — As an alternate to Item 6I, furring channels and Steel Framing Members* as described below: a. Furring Channels — Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 16 in. OC perpendicular to trusses. When batt insulation (Item 5) is draped over the resilient channel/gypsum board ceiling membrane, the resilient channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. b. Steel Framing Members* — Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC. R5IC-1 and R5IC-1 (2.75) clips secured to alternating trusses with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. R5IC-SI-X secured with No. 10 x 3-1/2 in. screws. R5IC-1, and R5IC-SI-X, clips for use with 2-9/16 in. wide furring channels. R5IC-1 (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one 2in. screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7. PAC INTERNATIONAL L L C — Types R5IC-1, R5IC-SI-X, R5IC-1 (2.75), R5IC-SI-X 6R. Steel Framing Members* — (Optional, Not Shown) — As an alternate to Item 6I. a. Furring Channels — Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced as indicated in Item 6, perpendicular to the trusses. Channels secured to Cold Rolled Channels at every intersection with a 3/4 in. TEK screw through each furring channel leg. Ends of adjoining channels overlapped 12 in. and fastened together with two double strand No. 18 SWG galv steel wire ties, one at each end of overlap, or with two 3/4 in. TEK screws in each leg of the overlap section. Two furring channels used at end joints of gypsum board (Item 7), each extending a min of 6 in. beyond both side edges of the board. b. Cold Rolled Channels — 1-1/2 in. by 1/2 in., formed from No. 16 ga. galv steel, positioned vertically and parallel to trusses, friction-fitted into the channel cavity on the Steel Framing Members (Item 6Id) and secured with two 3/4 in. TEK screws. Adjoining lengths of cold rolled channels lapped min. 12 in. and secured along bottom legs with four 3/4 in. TEK screws and wire-tied together with two double strand 18 SWG galv steel wire ties, one at each end of overlap. c. Blocking — Where truss design does not permit direct, full contact of the hanger bracket, a piece of nominal 2 by 4 in. lumber (blocking), min. 12 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the trusses at the top and bottom of the blocking at each Steel Framing Member (Item 6Id) location with 16d nails or minimum 2-1/2 in. screws. d. Steel Framing Members* — Spaced 48 in. OC, max along truss, and secured to the truss on alternating trusses with two, #10 x 2in. screws through mounting holes on the hanger bracket. PAC INTERNATIONAL L L C — Type R5IC-SI-CRC EZ Clip	channels. Gypsum board secured with 1-1/8 in. long Type S bugle head screws spaced 8 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. End joints secured to both resilient channels as shown in end joint detail. When Item 7A is used, the insulation must be used and must be draped over the resilient channel/gypsum board. NATIONAL GYPSUM CO — Types EXP-C, FSW-G, FSW-C, FSX-G, FSX-C 7B. Gypsum Board* — Nom 5/8 in. thick, 48 in. wide gypsum panels. When resilient channels (Item 6) are used, gypsum panels installed with long dimension perpendicular to resilient channels. Gypsum panels secured with 1 in. long Type S bugle head steel screws spaced 12 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. When insulation (Items 5 or 5A) is applied over the resilient channel/gypsum panel ceiling membrane screw spacing shall be reduced to 8 in. OC. End joints secured to both resilient channels as shown in end joint detail. When Steel Framing Members (Item 6A, 6O) are used, gypsum panels installed with long dimensions perpendicular to furring channels. Panels attached to the furring channels using 1 in. long Type S bugle-head steel screws spaced 8 in. OC along butted end joints and in the field of the panel. Butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. Each end of each gypsum panel shall be supported by a single length of furring channel equal to the width of the gypsum panel plus 6 in. on each end. The two support furring channels shall be spaced approximately 3-1/2 in. OC, and be attached to underside of the truss with one clip at each end of the channel. When Steel Framing Members* (Item 6B) are used, gypsum panels installed with long dimension perpendicular to cross tees with side joints centered along main runners and end joints centered along cross tees. Panels fastened to cross tees with 1 in. long, Type S bugle-head screws spaced in the field and 8 in. OC along end joints. Panels fastened to main runners with 1 in. long, Type S bugle-head screws spaced midway between cross tees. Screws along sides and ends of panels spaced 3/8 to 1/2 in. from panel edge. End joints of panels shall be staggered with spacing between joints on adjacent panels not less than 42 ft. OC. When Fiber, Sprayed (Items 5A or 5B) is used, two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimensions perpendicular to furring channels. Base layer gypsum board secured with 1 in. long Type S bugle head steel screws spaced 12 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. End joints secured to both resilient channels as shown in end joint detail. Outer layer gypsum board secured with 1-5/8 in. long Type S bugle head steel screws spaced 12 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. Outer layer shall be finished as described in Item 8. When both Steel Framing Members (Item 6A) and Fiber, Sprayed (Items 5A or 5B) are used, furring channels spaced 12 in. OC, and two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimension perpendicular to furring channels. Base layer secured to furring channels with nom 1 in. long Type S bugle head screws spaced 8 in. OC along butted end joints and in the field of the board. Butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. Each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 6 in. on each end. The two support furring channels shall be spaced approximately 3-1/2 in. OC, and be attached to the underside of the truss with one clip at each end of the channel. Outer layer secured to furring channels using 1-5/8 in. long Type S screws spaced 8 in. OC and 1-1/2 in. from the end joint. Butted end joints to be offset a min. of 8 in. from base layer end joints. Butted side joints of outer layer to be offset min. 18 in. from butted side joints of base layer. When Steel Framing Members (Item 6C) are used, two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimensions perpendicular to furring channels (Item 6Ca). Base layer attached to the furring channels using 1 in. long Type S bugle head steel screws spaced 8 in. OC along butted end joints and 12 in. OC in the field of the board. Butted end joints centered on the continuous furring channels. Butted base layer end joints to be offset a min of 16 in. in adjacent courses. Outer layer attached to the furring channels using 1-5/8 in. long Type S bugle head steel screws spaced 8 in. OC at butted end joints and 12 in. OC in the field. Butted end joints centered on the continuous furring channels and offset a min of 16 in. from butted end joints of base layer. Butted side joints of outer layer to be offset min 16 in. from butted side joints of base layer. When Steel Framing Members (Item 6D) are used, two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimensions perpendicular to furring channels. Base layer secured to the furring channels using 1 in. long Type S bugle-head steel screws spaced 12 in. OC in the field of the board. Butted end joints shall be staggered min 2 ft within the assembly, and occur midway between the continuous furring channels. Each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 6 in. on each end. The two furring channels shall be spaced approximately 4 in. OC, and be attached to underside of the truss with one Isomax clip at each end of the channel. Screw spacing along the gypsum board butt joint shall be 8 in. OC. Outer layer attached to the furring channels using 1-5/8 in. long Type S bugle-head steel screws spaced 12 in. OC in the field. The end of the outer layer boards at the butt joint shall be attached to the base layer boards with 1-5/8 in. long Type S screws spaced 8 in. OC and 1-1/2 in. from the end joint. Butted end joints to be offset a min of 8 in. from base layer end joints. Butted side joints of outer layer to be offset min 18 in. from butted side joints of base layer. Outer layer shall be finished as described in Item 8. When Steel Framing Members (Item 6F) are used, two layers of nom 5/8 in. thick, 4 ft wide are installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels using 1 in. long No. 6 Type S bugle-head steel screws spaced 12 in. OC in the field of the board. Butted end joints shall be staggered minimum 2 ft. within the assembly. Additional furring channels constructed as per Item 6F shall be used to support each end of each gypsum board. These additional furring channels shall be attached to underside of the truss with Genie clips as described in Item 6F. Screw spacing along the gypsum board butt joint shall be 8 in. OC. Outer layer attached to the furring channels using 1-5/8 in. long No. 6 Type S bugle-head steel screws spaced 12 in. OC in the field. The outer layer boards at the butt joint shall be attached to the base layer boards with No. 10, 1-1/2 in. long drywall screws spaced 8 in. OC and 1-1/2 in. from the end joint. Butted end joints to be	furring channels and gypsum board. The poultry netting is attached with washers and 1/2 in. wafer head screws, spaced 24 in. OC, to the furring channels. The Fiber, Sprayed (Item 5A or 5B) is installed through cut-openings in the poultry netting, in-between trusses. The cut-openings in the poultry netting shall be staggered at a maximum of 6 ft. * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively. Last Updated on 2023-10-03 The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL Solutions' Follow - Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL Solutions' Follow - Up Service. Always look for the Mark on the product. UL Solutions permits the reproduction of the material contained in Product iQ subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from Product iQ with permission from UL Solutions" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "©2023 UL LLC." 	1. Roofing System* — Any UL Class A, B or C Roofing System (TGFL) or Prepared Roof Covering (TFW2) acceptable for use over nom 15/32 in. thick wood structural panels, min. grade "C-D" or "Sheathing". Nom 15/32 in. thick wood structural panels secured to trusses with No. 6d ringed shark nails. Nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the fd nails. Construction adhesive is optional. 2. Trusses — Pitch chord trusses, spaced a max of 24 in. OC, fabricated from nom 2 by 4 lumber, with lumber oriented vertically or horizontally. Truss members secured together min.0.056 in. thick galv steel tie plates. Plates have 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other, forming a split tooth type plate. Each tooth has a chisel point on its outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approximately 7/8 in. centers with four rows of teeth per inch of plate width. Where the truss intersects with the interior face of the exterior walls, the min truss depth may be reduced to 3 in., if the batts and blankets (Item 3) are used as shown in the above illustration (Alternate insulation Placement) and are firmly packed against the intersection of the bottom chords and the plywood sheathing. Min roof slope of 3/12 unless American Gypsum boards are used, in which case there is no minimum slope. 3. Batts and Blankets* — (Optional) — Glass fiber insulation, secured to the wood structural panels with staples spaced 12 in. OC or to the trusses with 0.050 in. diam galv steel wires spaced 12 in. OC. Any glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance, having a min density of 0.5 pcf. As an option, the insulation may be fitted in the concealed space, draped over the resilient channel/gypsum wallboard ceiling membrane when resilient channels and gypsum wallboard attachment is modified as specified in Items 6 and 7. The Finish Rating is 24 min. when the insulation is draped over the resilient channels and gypsum board ceiling membrane and 25 min. when it is installed on underside of the plywood deck or when it is omitted. When Type AG-C panels are installed there is no limit on maximum thickness.

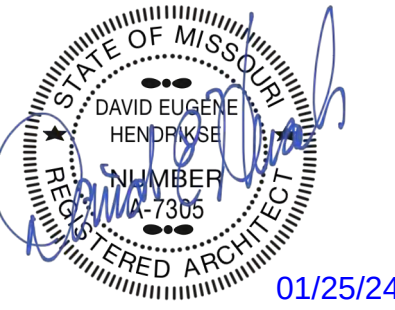


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THE VILLAGE AT DISCOVERY -
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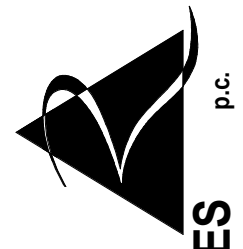
SHEET TITLE
UL ASSEMBLIES - P545

PROJECT NUMBER: 23099

SHEET NUMBER:

G-204

When Type TG-C panels are installed the maximum thickness is 3-1/2 in. 3A. Loose Fill Material* — As an alternate to Item 3 — Loose fill material bearing the UL Classification Marking for Surface Burning Characteristics, having a min density of 0.5 pcf, fitted in the concealed space, draped over the resilient channel/gypsum wallboard ceiling membrane when resilient channels and gypsum wallboard attachment is modified as specified in Items 6 and 7. The finished rating when this insulation is used has not been determined. When Type AG-C panels are installed there is no limit on maximum thickness. When Type TG-C panels are installed the maximum thickness is 3-1/2 in. 3B. Fiber, Sprayed* — For Use With American Gypsum Type AG-C only. (As an alternate to Item 3 (not evaluated for use with Item 6B and 6C) — spray-applied cellulose insulation material, having a min density of 0.5 lb/ft³, applied with water, over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7. Fiber, Sprayed is applied with moisture in accordance with the application instructions supplied with the product. The finish rating when Fiber Sprayed is used has not been determined. Alternate application method: The fiber is applied without water or adhesive in accordance with the application instructions supplied with a minimum density of 0.5 lb/ft³ over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7. Alternate application method: The fiber is applied without water or adhesive to a nominal density of 3.5 lb/ft³ behind netting (Item 11) stapled to the rafters. The netting is stapled at both lower edges of the rafters creating a cavity to accept the cellulose fiber. The finished rating when this insulation is used has not been determined. When Type AG-C panels are installed there is no limit on maximum thickness. When Type TG-C panels are installed the maximum thickness is 3-1/2 in. APPLGATE GREENFIBER ACQUISITION LLC — Insulmax and SANCTUARY for use with wet or dry application, INSS10LD, INSS15LD, and INSS41LD are to be used for dry application only. 3C. Foamed Plastic* — For Use With American Gypsum Type AG-C only. (As an alternate to Item 3, Not Shown) — Spray foam insulation applied directly to the underside of the underside of the roofing system (Item 1). Spray foam insulation installed to a maximum thickness of 10 in. at a nominal 0.5 lb/ft³ density, while maintaining a minimum 8-1/2 in. clearance between the spray foam insulation and the gypsum board. When spray foam insulation is used, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board (Item 7) installed at 6 in. OC to allow for maximum 3 in. spacing off ends of the gypsum board joints. Gypsum board to be installed using 1-1/4 in. long Type 5 screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a ceiling damper (Items 5 through SAC) in the concealed space, minimum 1 in. clearance to be maintained between damper housing and spray foam insulation. Limited to resilient channels, Item 6 only, no Item 6 alternates. The finished rating when this insulation is used has not been determined. SES FOAM INC — Sucraseal 3D. Foamed Plastic* — For Use With American Gypsum Type AG-C only. (As alternate to Item 3 Not Shown) — Spray foam insulation applied directly to the underside of the roofing system. Spray foam insulation installed to a maximum thickness of 10 in. at a nominal 0.5 lb/ft³ or 2.0 lb/ft³ density, depending on the product installed. When spray foam insulation is installed, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board spaced maximum 3 in. away from gypsum butt joints. Gypsum board to be installed using minimum 1-1/4 in. long Type 5 screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a ceiling damper (Items 5 through SAC) in the concealed space, minimum 1 in. clearance to be maintained between damper housing and spray foam insulation. Limited to resilient channels, Item 6 only, no Item 6 alternates. The finished rating when this insulation is used has not been determined. BASF CORP — Enerlite® NM, Enerlite® G, FE178®, Spraytite® 178, Spraytite® 81206, Walltite® 200, Walltite® US, Walltite® US-N, and Walltite® HP. 3E. Foamed Plastic* — For Use With American Gypsum Type AG-C only. (As an alternate to Item 3, Not Shown) — Spray foam insulation applied directly to the underside of the underside of the roofing system. Spray foam insulation installed to a maximum thickness of 17 in. at a nominal 0.5 lb/ft³ density, while maintaining a minimum 1-1/2 in. clearance between the spray foam insulation and the gypsum board. When spray foam insulation is used, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board installed at 6 in. OC to allow for maximum 3 in. spacing off ends of the gypsum board joints. Gypsum board to be installed using 1-1/4 in. long Type 5 screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a ceiling damper (Items 5 through SAC) in the concealed space, no clearance is necessary between damper housing and spray foam insulation. Limited to resilient channels, Item 6 only, no Item 6 alternates. The finished rating when this insulation is used has not been determined.	LOYD INDUSTRIES INC — Models 45-CRD-LT-BT and 45-CRD-LTD-BT 5F. Alternate Ceiling Damper* — Max size ceiling outlet in plenum box nom 10 in. long by 10 in. wide. Plenum box fabricated from galv steel. Aggregate damper openings shall not exceed 50 sq in. per 100 sq ft of ceiling area. Installed in accordance with the manufacturers installation instructions provided with the damper. LOYD INDUSTRIES INC — Model 45-LTD-95-BT-4 5G. Alternate Ceiling Damper* — Max plenum box size nom 19 in. long by 15 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 96 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. LOYD INDUSTRIES INC — Model CRD50-" X-BT 5H. Alternate Ceiling Damper* — Max nom area shall be 324 sq in. Max square size shall be 18 in. by 18 in. Rectangular sizes not to exceed 324 sq in. with a max width of 18 in. Max height of damper shall be 14 in. Aggregate damper openings shall not exceed 162 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions. C&S AIR PRODUCTS — Model RD-521 POTTORFF — Model CFD-521 5I. Alternate Ceiling Damper* — Max nom area shall be 196 sq in. Max square size shall be 14 in. by 14 in. Rectangular sizes not to exceed 196 sq in. with a max width of 26 in. Max height of damper shall be 7 in. Aggregate damper openings shall not exceed 98 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) not to exceed 144 in.2 shall be installed in accordance with installation instructions. C&S AIR PRODUCTS — Model RD-521-BT POTTORFF — Model CFD-521-BT 5J. Alternate Ceiling Damper* — Max nom area shall be 256 sq in. with the length not to exceed 24 in. and the width not to exceed 20 in. Max height of damper shall be 17 in. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions. C&S AIR PRODUCTS — Model RD-521-IP, RD-521-NP POTTORFF — Models CFD-521-IP, CFD-521-NP 5K. Alternate Ceiling Damper* — Max nom area shall be 144 sq in. with the length not to exceed 14 in. and the width not to exceed 12 in. Max height of damper shall be 17-7/8 in. Aggregate damper openings shall not exceed 74 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions. C&S AIR PRODUCTS — Model RD-521-90, RD-521-NP90 POTTORFF — Models CFD-521-90, CFD-521-NP90 5L. Alternate Ceiling Damper* — (Optional) Max nom area shall be 324 sq in. Max square size shall be 18 in. by 18 in. Rectangular sizes not to exceed 324 sq in. with a max width and max length of 18 in. Max round size shall be 18 in. dia. Aggregate damper openings shall not exceed 162 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. RUSKIN COMPANY — Models CFDT7, CFDT7-END-BT, CFDT7-90-BT, CFDT7-ST-BT, CFDT7-SB, CFDT7-R6-DB, CFDT7-IB, or CFORT7 5M. Alternate Ceiling Damper* — Ceiling damper & fan assembly. Max nom area shall be 75 sq in. with the length not to exceed 8-9/16 in. and the width not to exceed 8-3/4 in. Max height of damper shall be 9-7/8 in. Aggregate damper openings shall not exceed 38 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturers installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions. DELTA ELECTRONICS INC — Models CRD2, GBR-CRD, ITG-CRD	manufacturer. Max damper openings not to exceed 180 sq in. per 100 sq ft of ceiling area. GREENHECK FAN CORP — Model CRD-TWT 5X. Alternate Ceiling Damper* — Max nom 12 in. long by 12 in. wide with an 8 in. diameter damper, fabricated from galvanized steel. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 72 sq in. per 100 sq ft of ceiling area. GREENHECK FAN CORP — Model CRD-TWT 5Y. Alternate Ceiling Damper* — Max 12 in. diameter damper and insulated register box assembly. The maximum size of the register box assembly is nom. 20 in. long by 20 in. wide and 4 in. high fabricated from galv steel. The aggregate area of the register opening(s) through the ceiling membrane shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper assembly installed in accordance with the manufacturers installation instructions. AIRE TECHNOLOGIES INC — Model 57B. 5Z. Alternate Ceiling Damper* — Max 20 in. long by 16 in. wide by 4 in. high rectangular damper with plenum box assembly. The maximum outer dimensions of the plenum box assembly is 23-1/2 in. long by 19-1/2 in. wide and 17 in. high fabricated from 6pct. 1-1/2 to 2 in. thick Knauf Air Duct Board M*. The aggregate area of the register opening(s) through the ceiling membrane shall not exceed 160 sq in. per 100 sq ft ceiling area. Damper assembly installed in accordance with the manufacturers installation instructions. AIRE TECHNOLOGIES INC — Series 58. 5AA. Alternate Ceiling Damper* — Max 14 in. long by 14 in. wide and 18 in. high ceiling damper with boot or box assembly, fabricated from galv steel. The aggregate area of the register opening(s) through the ceiling membrane shall not exceed 98 sq in. per 100 sq ft of ceiling area. Damper assembly installed in accordance with the manufacturers installation instructions. AIRE TECHNOLOGIES INC — Model 51 w/Boot. 5AB. Alternate Ceiling Damper* — Max nom 11-1/8 in. long by 13-5/8 in. wide, fabricated from galvanized steel. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 76 sq in. per 100 sq ft of ceiling area. GREENHECK FAN CORP — Model CRD-310WT 5AC. Alternate Ceiling Damper* — Max nom 12-3/8 in. long by 14-1/2 in. wide, fabricated from galvanized steel. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 90 sq in. per 100 sq ft of ceiling area. GREENHECK FAN CORP — Model CRD-320WT 5AD. Alternate Ceiling Damper* — Max 12 in. diameter damper within max 15 in. by 15 in. register box with max 12 in. by 12 in. register opening fabricated from galvanized steel. Aggregate area of the register opening(s) through the ceiling membrane shall not exceed 72 sq. in. per 100 sq. ft. of ceiling area. Damper assembly installed in accordance with the manufacturer's installation instructions. RUSKIN COMPANY — Model CFDT7-SR 5AE. Alternate Ceiling Damper* — Max 12 in. diameter damper and insulated register box assembly. The maximum size of the register box assembly is nom. 20 in. long by 20 in. wide and 4 in. high fabricated from galv steel. The aggregate area of the register opening(s) through the ceiling membrane shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper assembly installed in accordance with the manufacturers installation instructions. SOUTHWARK METAL MFG CO — Model 800 w/Box 5AF. Alternate Ceiling Damper* — Max 20 in. long by 16 in. wide by 4 in. high rectangular damper with plenum box assembly. The maximum outer dimensions of the plenum box assembly are 23-1/2 in. long by 19-1/2 in. wide and 17 in. high fabricated from 6pct. 1-1/2 to 2 in. thick Knauf Air Duct Board M*. The aggregate area of the register opening(s) through the ceiling membrane shall not exceed 160 sq in. per 100 sq ft ceiling area. Damper assembly installed in accordance with the manufacturers installation instructions. SOUTHWARK METAL MFG CO — CRD w/DB Box 5AG. Alternate Ceiling Damper* — Max 14 in. long by 14 in. wide and 18 in. high ceiling damper with boot or box assembly, fabricated from galv steel. The aggregate area of the register opening(s) through the ceiling membrane shall not exceed 98 sq in. per 100 sq ft of ceiling area. Damper assembly installed in accordance with the manufacturers installation instructions. SOUTHWARK METAL MFG CO — Model 500 w/Boot, 510 w/Boot, 500 w/Box or 510 w/Box	of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 3 in. on each end. The two support furring channels shall be spaced approximately 3 in. in from end joint. Screw spacing along the gypsum board butt joint and along both additional channels shall be 8 in. OC. Additional screws shall be placed in the adjacent section of gypsum board into the aforementioned 3 in. extension of the extra butt joint channels as well as into the main channel that runs between. Butt joint furring channels shall be attached with one RESILMOUNT Sound Isolation Clip at each end of the channel. When Steel Framing Members (Item 6C) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type 5 bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, an additional single length of furring channel shall be installed and be spaced approximately 3 in. from the butt joint (6 in. from the continuous furring channels) to support the floating end of the gypsum board. Each of these shorter sections of furring channel shall extend one truss beyond the width of the gypsum panel and be attached to the adjacent trusses with one SonusClip at every truss involved with the butt joint. AMERICAN GYPSUM CO — Types AG-C GEORGIA-PACIFIC GYPSUM L L C — Type TG-C 7A. Gypsum Board* — (As an alternative to Item 7) — For use when no insulation is used. Nom 5/8 in. thick, 48 in. wide gypsum board, installed as described in Item 7 with resilient channels (Item 6) spaced 24 in. OC. AMERICAN GYPSUM CO — Type AG-C 8. Finishing System — (Not Shown) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum wallboard. 9. Grille — Installed in accordance with the installation instructions provided with the ceiling damper 10. Discrete Products Installed in Air-handling Spaces* — Automatic Balancing Valve/Damper — (Not Shown - Optional) — For use with Item 5L, Ruskin Company's Model CFDT7 damper (CABS). Ceiling damper to be provided with plenum box per damper manufacturer's instructions with side outlet only. Entire assembly to be installed into any UL Class 0 or Class 1 flexible air duct in accordance with the instructions provided by the automatic balancing valve/damper manufacturer. METAL INDUSTRIES INC — Model ABV-4, ABV-5, ABV-6 11. Netting — (Not shown) Fibrous, woven netting material fastened to underside of each joist with staples, with side joints overlapped. 12. Netting — (Not shown) - Non-woven polypropylene fabric fastened to underside of each joist with staples, with side joints overlapped. For use with Type AG-C gypsum boards only. * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively. 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been determined. SEES FOAM INC — EasySeal S, EasySeal ULD 3F. Foamed Plastic* — (As alternate to Item 3) — Spray foam insulation applied directly to the underside of the underside of the roofing system. Spray foam insulation installed to a maximum thickness of 11 in. at a nominal 1.0 lb/ft³ - 2.5 lb/ft³ density, while maintaining a minimum 7 in. clearance between the spray foam insulation and the gypsum board (Item 7). Spray foam insulation is limited for use with minimum 18 in. deep trusses (Item 2). When spray foam insulation is installed, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board spaced maximum 3 in. away from gypsum butt joints. Gypsum board to be installed using minimum 1-1/4 in. long Type 5 screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels, as illustrated above. If used with a ceiling damper (Items 5 through SAC) in the concealed space, no clearance is necessary between damper housing and spray foam insulation. Only for use with item 5 not evaluated for use with alternates to Item 5. Only for use with item 6 not evaluated for use with alternates to Item 6. CARLISLE SPRAY FOAM INSULATION — Types SealTite Pro Closed Cell (CC), SealTite Pro Open Cell (OC), SealTite Pro OCX, SealTite Pro No Trim 21, SealTite Pro One Zero, SealTite PRO HFO, Foamulate Closed Cell, Foamulate OCX, Foamulate 70, Foamulate HFO, and Foamulate HFO 2.0. 4. Air Duct* — For use with Ceiling Damper* - Any UL Class 0 or Class 1 flexible air duct installed in accordance with the Instructions provided by the damper manufacturer. 5. Ceiling Damper* — Nom 20 in. long by 18 in. wide by 2-1/8 in. high, fabricated from galvanized steel. Plenum box maximum size nom 21 in. long by 18 in. wide by 16 in. high fabricated from either galvanized steel or Classified Air Duct Materials bearing the UL Class 0 or Class 1 rigid air duct material. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 180 sq in. per 100 sq ft of ceiling area. NAIROL INDUSTRIES INC — Types 0755, 0755A, 0756, 0756D, 0757, 0757D, 0757FP, 0757DP, 0758, 0759, 0760, 0761, 0762, 0763, CRD5, CRD50, CRD6, CRD6D, CRD6FP, CRD6DP. SAFE AIR DOWCO — 0455, 0455A, 0456, 0456D, 0457, 0457D, 0457-DB, 0457-BC, 0463-FB, 0457-EB, 0463-GB, 0463 5A. Alternate Ceiling Damper* — Max plenum box size nom 19 in. long by 19 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. AIRE TECHNOLOGIES INC — Models: CRD model 50 w/Boot, CRD model 50EA w/Boot, CRD model 55 w/Boot, CRD model 55 EA w/Boot LOYD INDUSTRIES INC — Model CRD 50-BT, CRD 50-EA-BT, CRD 55-BT, CRD 55-EA-BT 5B. Alternate Ceiling Damper* — Max plenum box size nom 13 in. long by 13 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 50 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. LOYD INDUSTRIES INC — Model CRD 50-BT-6, CRD 50-EA-BT-6, CRD 55-BT-6, CRD 55-EA-BT-6, CRD50-" X-BT-6 5C. Alternate Ceiling Damper* — Max size ceiling outlet in plenum box nom 12 in. long by 12 in. wide. Plenum box fabricated from galv steel. Aggregate damper openings shall not exceed 72 sq in. per 100 sq ft of ceiling area. Installed in accordance with the manufacturers installation instructions provided with the damper. AIRE TECHNOLOGIES INC — Models: CRD model 50 w/Boot, CRD model 50EA w/Boot, CRD model 55 w/Boot, CRD model 55 EA w/Boot LOYD INDUSTRIES INC — Model CRD 50-95BT, CRD 50-EA-95BT, CRD 55-95BT, CRD 55-EA-95BT 5D. Alternate Ceiling Damper* — Max size ceiling outlet in plenum box nom 16 in. long by 16 in. wide. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. LOYD INDUSTRIES INC — Models CRD 50- FGPB-4.2, -4.2 NI, -6.0, -6.0 NI; CRD50-EA-FGPB-4.2, -4.2 NI, -6.0, -6.0 NI 5E. Alternate Ceiling Damper* — Max plenum box size nom 15 in. long by 15 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 72 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper.	5N. Alternate Ceiling Damper* — Max nom area shall be 324 sq in. Max square size shall be 18 in. by 18 in. Rectangular sizes not to exceed 324 sq in. with a max length of 20 in. and a max width of 22 in. Max height of damper shall be 14 in. Aggregate damper openings shall not exceed 154 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturer's installation instructions provided with the damper. An aluminum or steel grille shall be installed in accordance with installation instructions. UNITED ENTECHTE CORP — Type C-S/R-WT or C-S/R-WTP (Max nom area 324 sq in.) or C-S/R-WTS or C-S/R-WTPS (Max nom area 162 sq in.) 5O. Alternate Ceiling Damper* — Ceiling damper & fan assembly. Max nom area shall be 75 sq in. with the length not to exceed 9-1/4 in. and the width not to exceed 9-3/4 in. Max height of damper shall be 9-7/8 in. Aggregate damper openings shall not exceed 45 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions. DELTA ELECTRONICS INC — Model SIG-CRD 5P. Alternate Ceiling Damper* — Ceiling damper & fan assembly. Max nom area shall be 131 sq in. with the length not to exceed 11-1/16 in. and the width not to exceed 11-7/8 in. Aggregate damper openings shall not exceed 66 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions. DELTA ELECTRONICS INC — Model SMT-CRD 5Q. Alternate Ceiling Damper* — Ceiling damper & fan assembly. Max nom area shall be 103 sq in. with the length not to exceed 10-1/8 in. and the width not to exceed 10-1/8 in. Aggregate damper openings shall not exceed 52 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions. PANASONIC CORPORATION, PANASONIC CORPORATION OF NORTH AMERICA — Model PC-RD05C5 5R. Alternate Ceiling Damper* — Ceiling damper & fan assembly. Max nom area shall be 113 sq in. with the length not to exceed 10-1/8 in. and the width not to exceed 11-7/8 in. Aggregate damper openings shall not exceed 57 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions. BRQAN-NUTONE L L C — Model RD1UWT 5S. Alternate Ceiling Damper* — Ceiling damper & fan assembly. Max nom area shall be 79 sq in. with the length not to exceed 10 in. and the width not to exceed 7-15/16 in. Aggregate damper openings shall not exceed 40 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A metallic grille shall be installed in accordance with installation instructions. BRQAN-NUTONE L L C — Models RD1J and RDH 5T. Alternate Ceiling Damper* — Max plenum box size nom 19 in. long by 19 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. METAL-FAB INC — Models MSCD-HC and MRCD-HC 5U. Alternate Ceiling Damper* — Ceiling damper & fan assembly. Max nom area shall be 87 sq in. with the length not to exceed 9 in. and the width not to exceed 9-11/16 in. Aggregate		

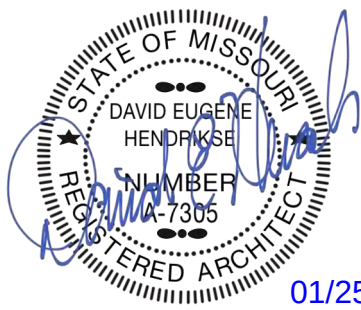


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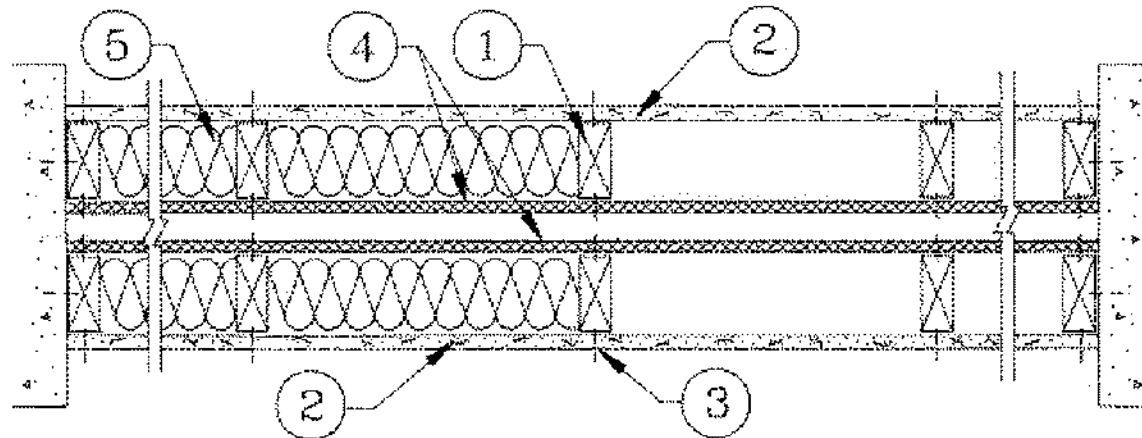
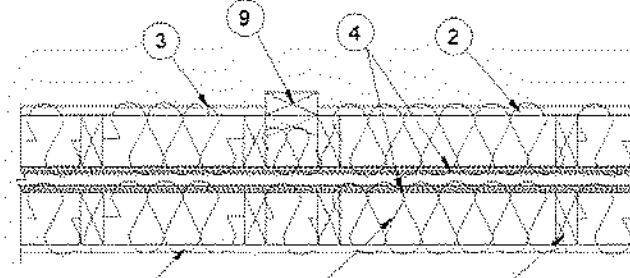
THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
UL ASSEMBLIES - U305 / U341

PROJECT NUMBER: 23099

SHEET NUMBER:

G-206

68. Steel Framing Members* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3. b. Steel Framing Members* — Used to attach furring channels (Item 68a) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. PLITEQ INC — Type Genie Clip 6C. Steel Framing Members* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 3. b. Steel Framing Members* — Used to attach furring channels (Item 6Ca) to studs. Clips spaced 48 in. OC, and secured to studs with No. 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips. STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R 6D. Steel Framing Members* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with a double strand of No. 18 AWG twisted steel wire. Gypsum board attached to furring channels as described in Item 3. b. Steel Framing Members* — Used to attach furring channels (Item 6Da) to studs. Clips spaced 48 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. REGUPOL AMERICA — Type SonusClip 6E. Steel Framing Members* — (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below: a. Resilient Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 3. b. Steel Framing Members* — Used to attach resilient channels (Item 6Ea) to studs. Clips spaced 48 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw. KEENE BUILDING PRODUCTS CO INC - Type RC+ Assurance Clip 6F. Steel Framing Members* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel, 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3. b. Steel Framing Members* — Used to attach furring channels (Item 6Fa) to studs. Clips spaced 48 in. OC. Clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip 6G. Steel Framing Members* — (Optional, Not Shown) — Used as an alternate method to attach resilient channels to wall studs; A resilient sound isolation accessory shall be used at each attachment point of the resilient channels and spaced max 16 in. O.C. Channel ends butted and centered under the structural members and attached with one accessory at each end. Additional accessories used to hold resilient channels that support the gypsum board end joints. The accessory envelops the mounting edge of the resilient channel. The accessory and resilient channel are fastened to the structural members with the screws supplied with the accessory and per the accessory manufacturer's installation instructions. PAC INTERNATIONAL L L C — Type RC-1 Boost	14A. Mineral and Fiber Board* — (Optional, Not Shown) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with minimum 1-3/8 in. long ring shanked nails or 1-1/4 in. long Type W steel screws, spaced 12 in. OC along board edges and 24 in. OC in field of board along intermediate framing. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board. HOMASOTE CO — Homasote Type 440-32 14B. Glass Fiber Insulation — (For use with Item 14A) — 3-1/2 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, placed to fill the interior of the wall. See Batts and Blankets (BKNV or BZ12) categories for names of Classified companies. 14C. Batts and Blankets* — (As an alternate to Item 14B, For use with Item 14A), 3 in. thick mineral wool batts, placed to fill interior of wall, attached to the 3-1/2 in. face of the studs with staples placed 24 in. OC. THERMAFIBER INC — Type SAFB, SAFB FF 14D. Adhesive — (For use with Item 14A) — Construction grade adhesive applied in vertical, serpentine, nominal 3/8 in. wide beads down the length of both vertical edges of Mineral and Fiber Board (Item 14A). 14E. Gypsum Board* — (For use with Item 14A) — 5/8 in. thick, 4 ft wide, applied vertically over Mineral and Fiber Board (Item 14A) with vertical joints located anywhere over stud cavities. Secured to mineral and fiber boards with 1-1/2 in. Type G Screws spaced 8 in. OC along edges of each vertical joint and 12 in. OC in intermediate field of the Mineral and Fiber Board (Item 14A). Secured to outermost studs and bearing plates with 2 in. long Type S screws spaced 8 in. OC. Gypsum Board joints covered with paper tape and joint compound. Screw heads covered with joint compound. Finish Rating 30 Min. AMERICAN GYPSUM CO — Type AG-C CGC INC — Types C, IP-X2, IPC-AR CERTAINTEED GYPSUM INC — Type LGFC-C/A GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C NATIONAL GYPSUM CO — Types FSK-C, FSW-C PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-C PANEL REY S A — Type PRC THAI GYPSUM PRODUCTS PCL — Type TC UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR USG BORAL DRYWALL SFZ LLC — Type C USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR 14F. Mineral and Fiber Board — (Optional, Not Shown) — For optional use as an additional layer on one side of wall - Nom 1/2 in. thick, 4 ft wide, square edge fiber boards applied vertically to studs on one side of the wall in between the wood studs and the UL Classified Gypsum Board (Item 3). Fiber boards installed with 1-1/4 in. long, Type W, bugle head, coarse thread gypsum board screws spaced 12 in. OC max, with the last screws spaced 2 in. and 6 in. from edge of board. Gypsum board (Item 3) installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board. BLUE RIDGE FIBERBOARD INC — SoundStop	UL Product iQ® Design/System/Construction/Assembly Usage Disclaimer • Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials. • Authorities Having Jurisdiction should be consulted before construction. • Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field. • When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide information includes specifics concerning alternate materials and alternate methods of construction • Only products which bear UL's Mark are considered Certified. BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada See General Information for Fire Resistance Ratings - ANSI/UL 263 Certified for United States Design Criteria and Allowable Variations See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada Design Criteria and Allowable Variations Design No. U341 August 4, 2023 Bearing Wall Rating — 1 Hr. Finish Rating — Min 20 min. This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7 * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively. 	USG BORAL DRYWALL SFZ LLC (View Classification) — CKNX.R3438 USG MEXICO S A DE C V (View Classification) — CKNX.R16089 2A. Gypsum Board* — (As an alternate to Item 2, not shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically to studs and bearing plates on one side of the assembly with 1-5/8 in. long Type S screws spaced 12 in. OC at perimeter of panels and 8 in. OC in the field. Horizontal joints of vertically applied panels need not be backed by studs. Panel joints covered with paper tape and two layers of joint compound. Screwheads covered with two layers of joint compound. Batts and Blankets placed in stud cavity as described in Item 5C. Not evaluated for use with Steel Framing Members, Furring Channels or Fiber, Sprayed. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-530 (finish rating 23 min). 2B. Gypsum Board* — (As an alternate to Item 2, not shown) — Any 5/8 in. thick gypsum panels that are eligible for use in Design Nos. L501, G512 or U305, supplied by the Classified companies listed below shown in the Gypsum Board* (CKNX) category. Applied horizontally or vertically and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths other than 48 in., gypsum board to be installed horizontally. UNITED STATES GYPSUM CO USG BORAL DRYWALL SFZ LLC USG MEXICO S A DE C V 2C. Gypsum Board* — (As an alternate to Item 2, Not Shown) — 5/8 in. thick gypsum panels applied horizontally or vertically and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths other than 48 in., gypsum board to be installed horizontally. AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C, LightRock CERTAINTEED GYPSUM INC — Type C or Type X-1 NATIONAL GYPSUM CO — Type FSK, Type FSK-G, Type FSW, Type FSW-3, Type FSW-5, Type FSW-G, Type FSK-C, Type FSW-C, Type FSMR-C, Type FSW-6, Type FSL THAI GYPSUM PRODUCTS PCL — Type C or Type X 2D. Gypsum Board* — (As an alternate to Items 2, 2A, 2B and 2C) — 5/8 in. thick gypsum panels, with square edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last 2 screws 1 and 4 in. from edge of board or nailed as described in Item 2. When used in widths of other than 48 in., gypsum boards are to be installed horizontally. GEORGIA-PACIFIC GYPSUM L L C — GreenGlass Type X, Type DGG 2E. Gypsum Board* — (As an alternate to Items 2 through 2D) — 5/8 in. thick, 4 ft. wide, paper surfaced applied vertically only and secured as described in Item 2. GEORGIA-PACIFIC GYPSUM L L C — Type X ComfortGuard Sound Deadening Gypsum Board. 2F. Gypsum Board* — (As an alternate to Items 2 through 2E) - Installed as described in Item 2. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically only and fastened to the studs and plates with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads, 7 in. OC. Not for use with Item #6. NATIONAL GYPSUM CO — Type SBWB 2G. Gypsum Board* — (As an alternate to Items 2 through 2F) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 2. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types QuietRock ES. 2H. Gypsum Board* — (As an alternate to Items 2 through 2G) — Installed as described in Item 2. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically or horizontally fastened to the studs and plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 12 in. OC. CERTAINTEED GYPSUM INC — Type SilentFX 2I. Wall and Partition Facings and Accessories* — (As an alternate to Items 2 through 2H) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 2. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527. 2J. Gypsum Board* — (As an alternate to 5/8 in. Type FSW in Item 2) — 2 layers nom. 5/16 in. thick gypsum panels applied vertically or horizontally. Horizontal joints on the same side need not be staggered. Inner layer attached with fasteners, as described in item 2, spaced 24 in. OC. Outer layer attached per Item 2. NATIONAL GYPSUM CO — Type FSW. 2K. Gypsum Board* — (As an alternate to Item 2) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally. CERTAINTEED GYPSUM INC — Type LGFC6A (finish rating 21 min). Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGCLX 3. Joints and Nailheads — Gypsum board joints of outer layer covered with tape and joint compound. Nail heads of outer layer covered with joint compound. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with joints reinforced with paper tape. 4. Sheathing — (Optional) — Septum may be sheathed with min 7/16 in. thick wood structural panels min grade "C-D" or "Sheathing" or min 1/2 in. thick Mineral and Fiber Boards*. See Mineral and Fiber Boards (CER2) category for names of Classified companies. 5. Batts and Blankets* — 3-1/2 in. max thickness glass or mineral fiber batt insulation. Optional when sheathing (Item 4) is used on both halves of wall. See Batts and Blankets (BZ12) category for list of Classified companies. 5A. Fiber, Sprayed* — As an alternate to Batts and Blankets (Item 5) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft³. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft³, in accordance with the application instructions supplied with the product. Applegate Greenfiber Acquisition LLC — Insulmax and SANCTUARY for use with wet or dry application. INS515LD and INS541LD are to be used for dry application only. 5B. Fiber, Sprayed* — As an alternate to Batts and Blankets (Item 5) when Sheathing (Item 4) is used on both halves of wall - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft. NU-WOOL CO INC — Cellulose Insulation 5C. Batts and Blankets* — (Required for use with Wall and Partition Facings and Accessories, Item 2A, Use of Sheathing, Item 4, does not nullify requirement of Item 5C for use with Item 2A) — Glass fiber insulation, nom 3-1/2 in. thick, min. density of 0.80 pcf, with a flame spread of 25 or less and a smoke developed of 50 or less, friction-fitted to completely fill the stud cavities. See Batts and Blankets Category (BKNV) for names of manufacturers. 5D. Fiber, Sprayed* — As an alternate to Batts and Blankets (Item 5) and Item 5A when Sheathing (Item 4) is used on both halves of wall - Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft³. INTERNATIONAL CELLULOSE CORP — Celbar-RL 5E. Deleted. 6. Steel Framing Members* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below: A. Furring Channels — Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC
7. Furring Channel — Optional — Not Shown — For use on one side of the wall - Resilient channels, 25 MSG galv steel, spaced vertically 24 in. OC, flange portion screw attached to one side of studs with 1-1/4 in. long diamond shaped point, double lead Phillips head steel screws. When resilient channels are used, insulation, Items 5C or 5D is required. 8. Caulking and Sealants — (Not Shown, Optional) — A bead of acoustical sealant applied around the partition perimeter for sound control. 9. STC Rating — The STC Rating of the wall assembly is 56 when it is constructed as described by Items 1 through 6, except: A. Item 2, above — Nailheads Shall be covered with joint compound. B. Item 2, above — Joints As described, shall be covered with fiber tape and joint compound. C. Item 5, above — Batts and Blankets* The cavities formed by the studs shall be friction fit with R-19 unfaced fiberglass insulation batts measuring 6-1/4 in. thick and 15-1/4 in. wide. D. Item 6, above — Steel Framing Members* Type RSIC-1 clips shall be used to attach gypsum board to studs on either side of the wall assembly. E. Item 8, above — Caulking and Sealants (Not Shown) A bead of acoustical sealant shall be applied around the partition perimeter for sound control. F. Steel Corner Fasteners (Item 4), Fiber, Sprayed (Items 5A and 5B) and Steel Framing Members (Item 6A), not evaluated as alternatives for obtaining STC rating. 10. Wall and Partition Facings and Accessories* — (Optional, Not Shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-510 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-500 and QR-510 11. Cementitious Backer Units* — (Optional Item Not Shown — For Use On Face Of 1 Hr Systems With All Standard Items Required) - 7/16 in., 1/2 in., 5/8 in., 3/4 in. or 1 in. thick, min. 32 in. wide. Applied vertically or horizontally with vertical joints centered over studs. Fastened to studs and runners with cement board screws of adequate length to penetrate stud by a minimum of 3/8 in. for steel framing members, and a minimum of 3/4 in. for wood framing members spaced a max of 8 in. OC. When 4 ft. wide boards are used, horizontal joints need not be backed by framing. NATIONAL GYPSUM CO — Type DuraBacker, PermaBase, DuraBacker Plus, or PermaBase Plus 12. Non-Bearing Wall Partition Intersection — (Optional) —Two nominal 2 by 4 in. studs or nominal 2 by 6 in. studs nailed together with two 3 in. long 10d nails spaced a max. 16 in. OC, vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max. 16 in. OC, vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC, vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall. 13. Mesh Netting — (Not Shown) — Any thin, woven or non-woven fibrous netting material attached with staples to the outer face of one row of studs to facilitate the installation of the sprayed fiber from the opposite row. 14. Mineral and Fiber Board* — (Optional, Not Shown) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with 2 in. long Type W steel screws, spaced 12 in. OC. The required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board. HOMASOTE CO — Homasote Type 440-32	14G. Building Units — (Optional Item Not Shown - For use over Gypsum Board, Item 3) 1 in., 2 in. or 3 in. thick, 4 ft. wide - Applied vertically or horizontally with vertical joints centered over studs. Fastened to studs and runners with wafer head screws of adequate length to penetrate framing by a minimum of 1/4 in., spaced a max 8 in. o.c. NATIONAL GYPSUM CO - Type PBC1 * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively. Last Updated on 2023-09-19 The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL Solutions' Follow - Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL Solutions' Follow - Up Service. Always look for the Mark on the product. 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Gypsum board applied horizontally or vertically, unless specified below, and nailed to studs and bearing plates 7 in. OC with 6d cement coated nails, 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam head. As an alternate, No. 6 bugle head drywall screws, 1-7/8 in. long, may be substituted for the 6d cement coated nails. When Steel Framing Members* (Item 6 or any alternate clips) are used, wallboard attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC. When used in widths other than 48 in., gypsum board to be installed horizontally. AMERICAN GYPSUM CO (View Classification) — CKNX.R14196 BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO (View Classification) — CKNX.R19374 CABOT MANUFACTURING ULC (View Classification) — CKNX.R25370 CERTAINTEED GYPSUM INC (View Classification) — CKNX.R3660 CGC INC (View Classification) — CKNX.R19751 CERTAINTEED GYPSUM INC (View Classification) — CKNX.R18482 GEORGIA-PACIFIC GYPSUM L L C (View Classification) — CKNX.R2717 NATIONAL GYPSUM CO (View Classification) — CKNX.R3501 PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM (View Classification) — CKNX.R7094 PANEL REY S A (View Classification) — CKNX.R21796 SIAM GYPSUM INDUSTRY (SARABURI) CO LTD (View Classification) — CKNX.R19262 THAI GYPSUM PRODUCTS PCL (View Classification) — CKNX.R27517 UNITED STATES GYPSUM CO (View Classification) — CKNX.R1319 USG BORAL DRYWALL SFZ LLC (View Classification) — CKNX.R38438	

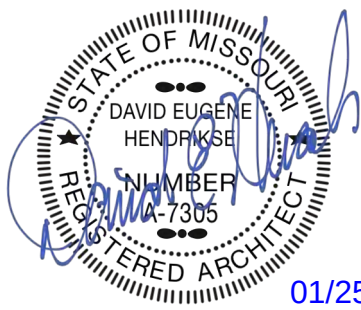


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01/25/24

THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
UL ASSEMBLIES - U341 / U415
PROJECT NUMBER: 23099
SHEET NUMBER:

G-207

perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Wallboard attached to furring channels as described in Item 2.

b. Steel Framing Members* — Used to attach furring channels (Item a) to studs (Item 1). Clips spaced 48 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75).

6A. Steel Framing Members* — (Optional, Not Shown, As an alternate to Item 6) — Furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 2.

b. Steel Framing Members* — Used to attach furring channels (Item a) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
PLITEQ INC — Type Genie Clip

6B. Steel Framing Members* — (Optional, Not Shown, As an alternate to Item 6) — Furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 2.

b. Steel Framing Members* — Used to attach furring channels (Item 6Ba) to studs. Clips spaced 48 in. OC, and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESIMOUNT Sound Isolation Clips - Type A237R

6C. Steel Framing Members* — (Optional, Not Shown, As an alternate to Item 6) — Furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 6C. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 2.

b. Steel Framing Members* — Used to attach furring channels (Item 6Ca) to studs. Clips spaced 48 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOL AMERICA — Type SonusClip

6D. Steel Framing Members* — (Optional, Not Shown, As an alternate to Item 6) — Resilient channels and Steel Framing Members as described below:
a. Resilient Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 2.

b. Steel Framing Members* — Used to attach resilient channels (Item 6Da) to studs. Clips spaced 48 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw.
KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

6E. Steel Framing Members* — (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below:
a. Resilient Channels —Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to resilient channels as described in Item 2.

b. Steel Framing Members* - Used to attach resilient channels to wall studs. A resilient sound isolation accessory shall be used at each

attachment point of the resilient channels to the studs. Channel ends butted and centered under the structural members and attached with one accessory at each end. Additional accessories used to hold resilient channels that support the gypsum board end joints. The accessory envelops the mounting edge of the resilient channel. The accessory and resilient channel are fastened to the studs with the screws supplied with the accessory and per the accessory manufacturer's installation instructions.

PAC INTERNATIONAL L L C — Type RC-1 Boost

6F. Steel Framing Members* — (Optional, Not Shown, As an alternate to Item 6) — Furring channels and Steel Framing Members as described below:

a. Furring Channels — Formed of No. 25 MSG galv steel, 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 2.

b. Steel Framing Members* — Used to attach furring channels (Item 6Fa) to studs. Clips spaced maximum 48 in. OC. Clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips.

CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

7. Wall and Partition Facings and Accessories* — (Optional, Not shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-S10 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-500 and QR-S10

8. Mineral and Fiber Board* — (Optional, Not Shown) — For optional use as an additional layer on one or both sides of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing as described in Item 2. The required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

HOMASOTE CO — Homasote Type 440-32

9. Non-Bearing Wall Partition Intersection — (Optional) — Two nominal 2 by 4 in. stud or nominal 2 by 6 in. stud nailed together with two 3in. long 10d nails spaced a max. 16 in. OC, vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max 16 in. OC, vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC, vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

(Optional, Not Shown) Alternate Construction For Use On One Side Of The Wall.

10. Mineral and Fiber Board* — For use with Items 10A-10D) —Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with minimum 1-3/8 in. long ring shanked nails or 1-1/4 in. long Type W steel screws, spaced 12 in. OC along board edges and 24 in. OC in field of board along intermediate framing. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

HOMASOTE CO — Homasote Type 440-32

10A. Glass Fiber Insulation — (For use with Item 10) — 3-1/2 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, placed to fill the interior of the wall. See Batts and Blankets (BKNV or BZJZ) categories for names of Classified companies.

10B. Batts and Blankets* — (As an alternate to Item 10B, For use with Item 10), 3 in. thick mineral wool batts, placed to fill interior of wall, attached to the 3-1/2 in. face of the studs with staples placed 24 in. OC.

THERMAFIBER INC — Type SAFB, SAFB FF

10C. Adhesive — (For use with Item 10) — Construction grade adhesive applied in vertical, serpentine, nominal 3/8 in. wide beads down the length of both vertical edges of Mineral and Fiber Board (Item 14A).

10D. Gypsum Board* — (For use with Item 10) — 5/8 in. thick, 4 ft wide, applied vertically over Mineral and Fiber Board (Item 14A) with vertical joints located anywhere over stud cavities. Secured to mineral and fiber boards with 1-1/2 in. Type G Screws spaced 8 in. OC along edges of each vertical joint and 12 in. OC in intermediate field of the Mineral and Fiber Board (Item 10). Secured to outermost studs and bearing plates with 2 in. long Type S screws spaced 8 in. OC. Gypsum Board joints covered with paper tape and joint compound. Screw heads covered with joint compound. Finish Rating 30 Min.
AMERICAN GYPSUM CO — Type AG-C

CERTAINTEE GYPSUM INC — Type C

CERTAINTEE GYPSUM INC — Type LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Types S, DAPC, TG-C

NATIONAL GYPSUM CO — Types PSK C, FSM-C

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-C

PANEL REY S A — Type PRC

THAI GYPSUM PRODUCTS PCL — Type C

UNITED STATES GYPSUM CO — Type CTypes C, IP-X2, IPC-AR

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Last Updated on 2023-08-04

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- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide information includes specifics concerning alternate materials and alternate methods of construction
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BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire Resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

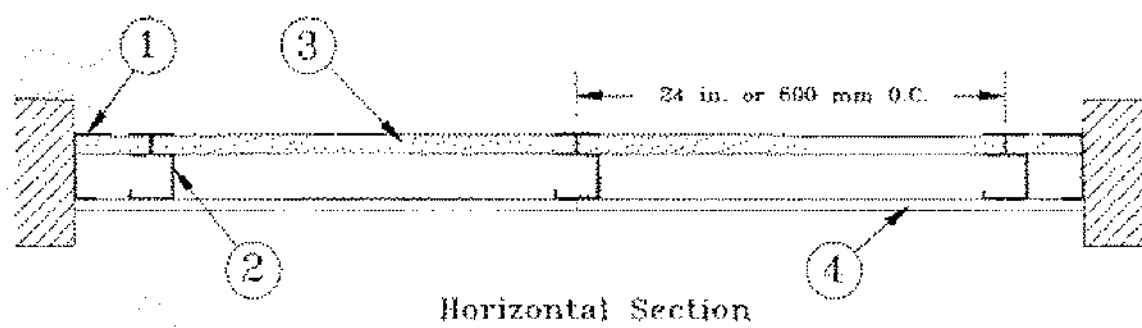
Design No. U415

February 14, 2022

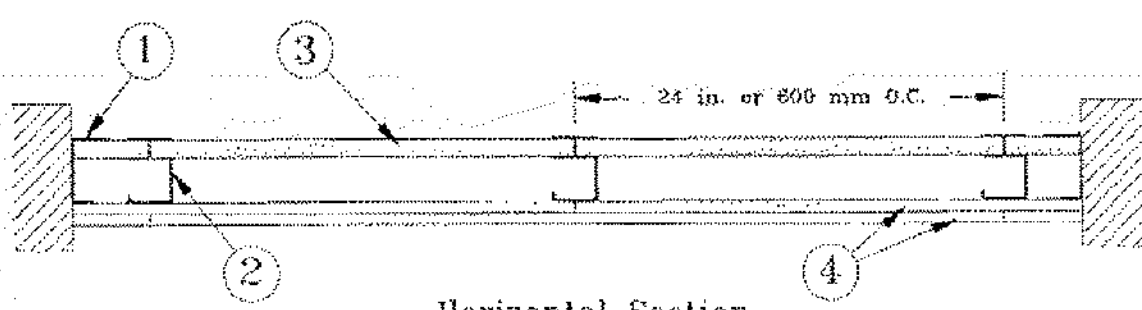
Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

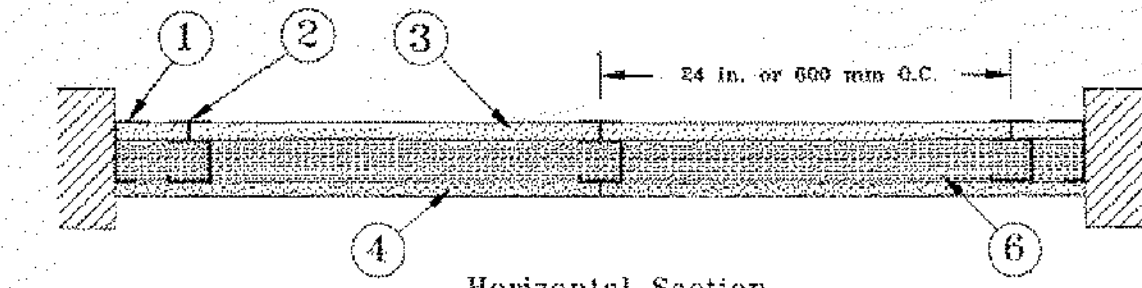
System A - 1 Hr.



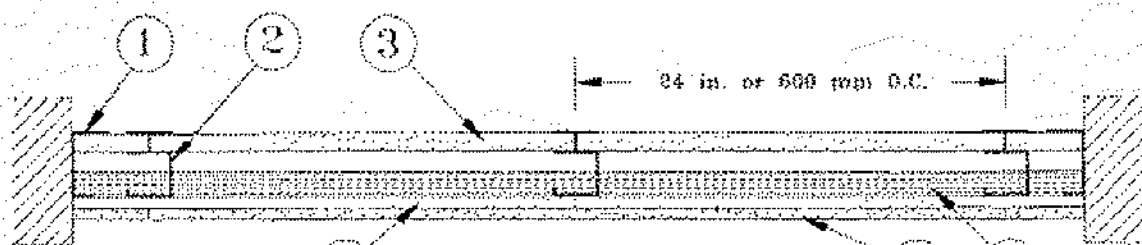
System B - 2 Hr.



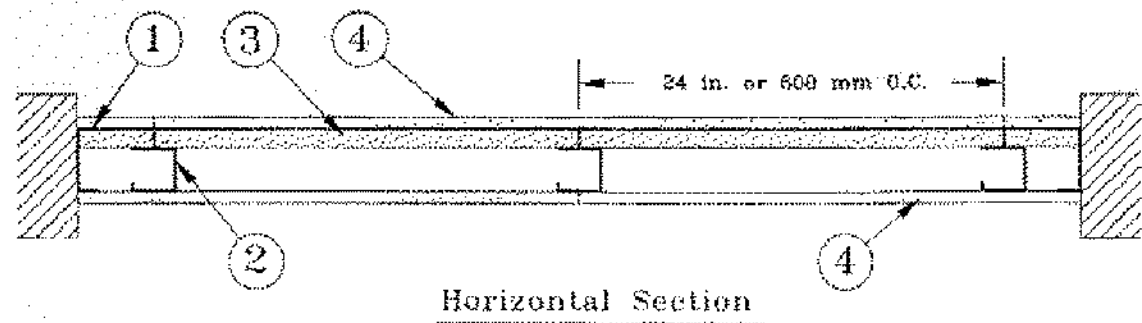
Horizontal Section
System C - 2 Hr.



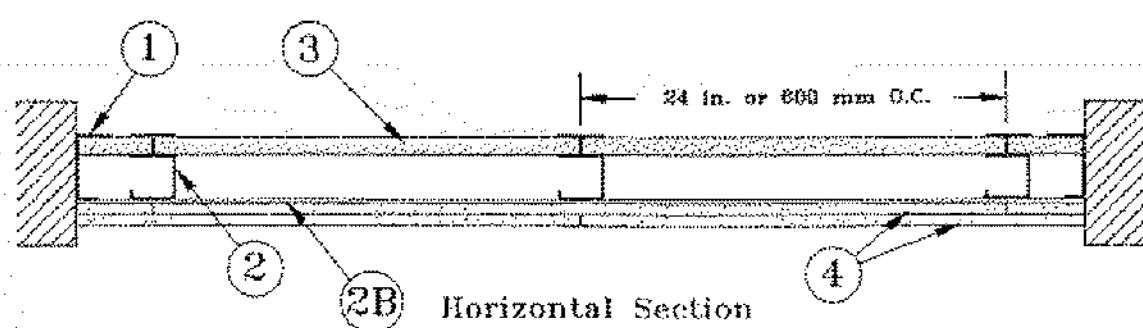
Horizontal Section
System D - 2 Hr.



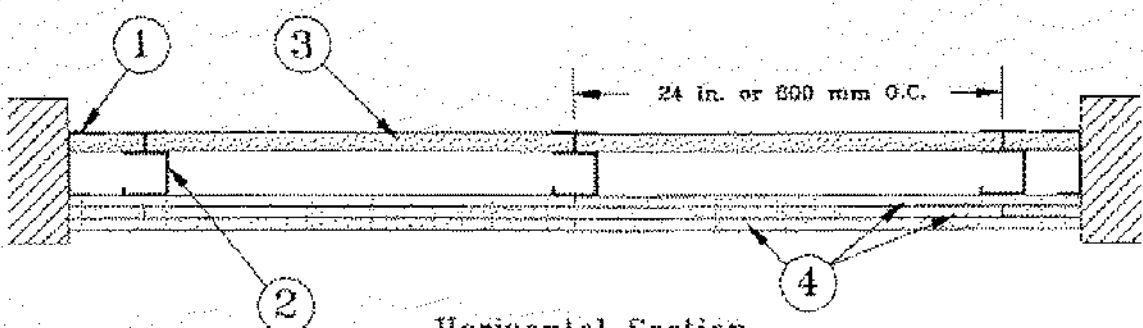
Horizontal Section
System E - 2 Hr.



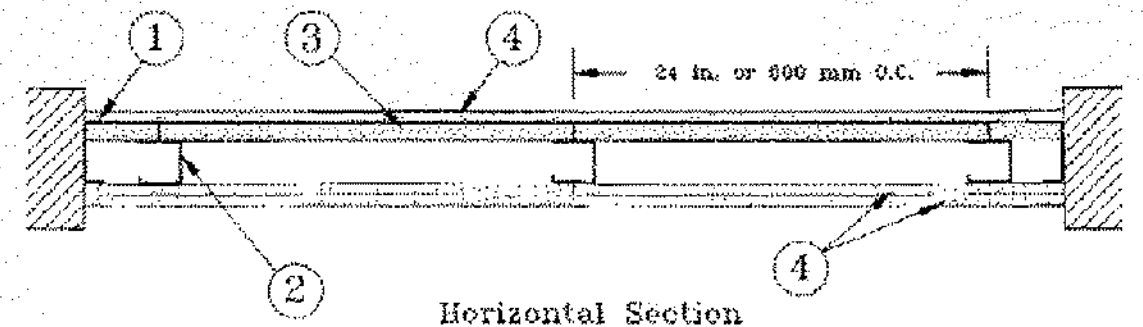
System F - 2 Hr.



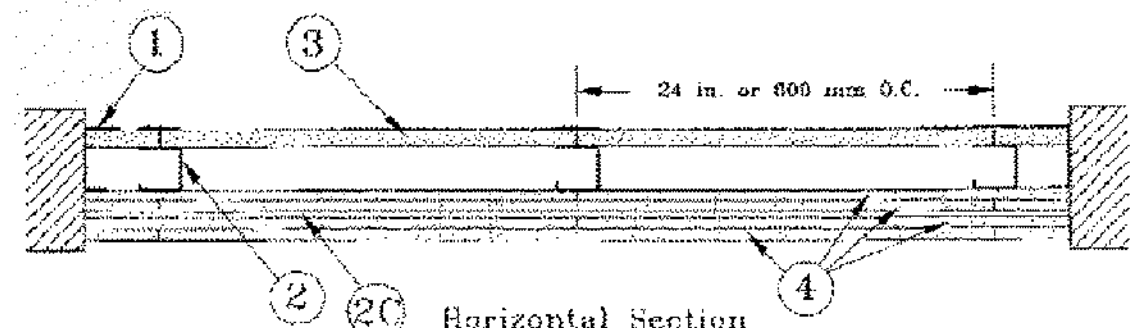
System G - 3 Hr.



Horizontal Section
System H - 3 Hr.



System I - 4 Hr.



1. **Floor, Side and Ceiling Runners** — "J" - shaped runner, min 2-1/2 in. deep (min 4 in. deep when System C is used), with unequal legs of 1 in. and 2 in., fabricated from min 24 MSG (min 20 MSG when Item 4A, 4B, 4C, 4D or 7 are used) galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC. "E" - shaped studs (Item 2A) may be used as side runners in place of "J" -

shaped runners.

2. **Steel Studs** — "C-H" - shaped studs, min 2-1/2 in. deep (min 4 in. deep when System C is used), fabricated from min 25 MSG (min 20 MSG when Items 2D, 4A, 4B, 4C, 4D or 7 is used) galv steel. Cut to lengths 3/8 to 1/2 in. less than floor-to-ceiling height and spaced 24 in. or 600 mm OC (max 16 in. OC when Items 4A, 4B, 4C, or 4D are used).

2A. **Steel Studs** — (Not Shown) — "E" - shaped studs installed back to back in place of "C-H" - shaped studs (Item 2). "E" - shaped studs secured together with steel screws spaced a maximum 12 in. OC. Fabricated from min 25 MSG (min 20 MSG when Item 2D, 4A, 4B or 7 is used) galv steel, min 2-1/2 in. deep (min 4 in. deep when System C is used), with one leg 1 in. long and two legs 3/4 in. long. Shorter legs 1 in. apart to engage gypsum liner panels. Cut to lengths 3/8 to 1/2 in. less than floor to ceiling heights.

2B. **Furring Channels** — (Optional, Not Shown) — For use with single or double layer systems. Resilient furring channels fabricated from min 25MSG corrosion protected steel, installed horizontally, and spaced vertically a max 24 in. OC. Flange portion of channel attached to each intersecting "C-H" or "E" stud on side of stud opposite the 1 in. liner panels with 1/2 in. long Type S or S-12 pan-head steel screws. When furring channels are used, wallboard to be installed vertically only. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).

2C. **Furring Channels** — For use with System I - "Hat" - shaped, 25 MSG galv steel furring channels attached directly over the inner layers of wallboard to each stud with 2 in. long Type S pan head steel screws. Screws alternate from top flange to bottom flange at each stud intersection. Furring channels spaced vertically max 24 in. OC.

2D. **Steel Framing Members*** — (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).

a. Furring Channels — Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 4.

b. Steel Framing Members* — Used to attach furring channels (Item 2Da) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC, and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75)

2E. **Steel Framing Members*** — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).

a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 4.

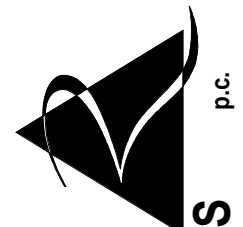
b. Steel Framing Members* — Used to attach furring channels (Item 2Ea) to studs. Clips spaced 24 in. OC, and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESIMOUNT Sound Isolation Clips - Type A237R

2F. **Steel Framing Members*** — (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).

a. Furring Channels — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 3.

b. Steel Framing Members* — Used to attach furring channels (Item 2Fa) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.
PLITEQ INC — Type GENIECLIP

2G. **Steel Framing Members*** — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. Not to



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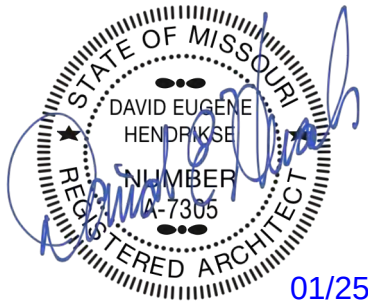
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01/25/24

THE VILLAGE AT DISCOVERY -

LOT 4

LEE'S SUMMIT, MO

SHEET TITLE
UL ASSEMBLIES - U415 / U423

PROJECT NUMBER: 23099

SHEET NUMBER:

be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7). a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 2Gb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 4. b. Steel Framing Members* — Used to attach furring channels (Item 2Ga) to studs. Clips spaced 24 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. REGUPOL AMERICA — Type SonuClip 2H. Steel Framing Members* — (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7). a. Resilient Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 4. b. Steel Framing Members* — Used to attach resilient channels (Item 2Ha) to studs. Clips spaced 48 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw. KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip 2I. Steel Framing Members* — (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7). a. Furring Channels — Formed of No. 25 MSG galv steel, 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 4. b. Steel Framing Members* — Used to attach furring channels (Item 2Ia) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC, and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips. CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip 3. Gypsum Board* — Gypsum liner panels, nom 1 in. thick, 24 in. or 600 mm (for metric spacing) wide. Panels cut 1 in. less in length than floor to ceiling height. Vertical edges inserted in "H" portion of "C-H" studs or the gap between the two 3/4 in. legs of the "E" studs. Free edge of end panels attached to long leg of vertical "J" — runners with 1-5/8 in. long Type 5 steel screws spaced not greater than 12 in. OC. When wall height exceeds liner panel length, liner panel may be butted to extend to the full height of the wall. Horizontal joints need not be backed by steel framing. In System I, butt joints in liner panels are staggered min 36 in. Butt joints backed with 6 in. by 22 in. strips of 3/4 in. thick gypsum wallboard (Item 4). Wallboard strips centered over butt joints and secured to liner panels with six 1-1/2 in. long Type G steel screws, three screws along the 22 in. dimension at the top and bottom of the strips. CGC INC — Type SLX UNITED STATES GYPSUM CO — Type SLX USG BORAL DRYWALL SFZ LLC — Type SLX USG MEXICO S A DE C V — Type SLX 4. Gypsum Board* — System A — 1 Hr Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type 5 steel screws spaced 12 in. when installed vertically or 8 in OC when installed horizontally. Horizontal joints need not be backed by steel framing. CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, ULX, USGX, WRC, WRX THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX	USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX, USGX USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, ULX, USGX, WRC, WRX System E — 2 Hr Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type 5 steel screws spaced 12 in. OC when installed vertically or 8 in. when installed horizontally. Horizontal joints need not be backed by steel framing. CGC INC — 1/2 in. Types C, IP-X2, IPC-AR, 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, ULX, USGX, WRC, WRX THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX UNITED STATES GYPSUM CO — 1/2 in. Types C, IP-X2, IPC-AR, 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULX, ULX, USGX, WRC, WRX. USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C, 5/8 in. Types C, SCX, SGX, USGX USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR or WRC, 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, ULX, USGX, WRC, WRX System F — 2 Hr Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically in two layers. Inner or base layer attached to resilient furring channels (Item 2B) with 1 in. long Type 5 steel screws spaced 24 in. Outer or face layer attached to resilient furring channels (Item 2B) with 1-5/8 in. long Type 5 steel screws spaced 12 in. OC and staggered 12 in. from base layer screws. Joints between inner and outer layers staggered 24 in. CGC INC — 1/2 in. Type C, IP-X2, IPC-AR or WRC, 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, ULX, USGX, WRC, WRX THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX UNITED STATES GYPSUM CO — 1/2 in. Type C, IP-X2, IPC-AR or WRC, 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULX, ULX, USGX, WRC, WRX. USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C, 5/8 in. Types C, SCX USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR or WRC, 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, ULX, USGX, WRC, WRX System G — 3 Hr Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in three layers. Inner or base layer attached to studs with 1 in. long Type 5 steel screws spaced 24 in. OC when installed vertically or 16 in OC when installed horizontally. Middle layer attached to studs with 1-5/8 in. long Type 5 steel screws spaced 24 in. when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 2-1/4 in. long Type 5 steel screws spaced 16 in. when installed vertically or 12 in. OC when installed horizontally. Screws offset 6 in. from layer below. Horizontal joints on adjacent layers staggered a min of 12 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. on adjacent layers. CGC INC — Types C, IP-X2, IPC-AR, ULX, WRC THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type C UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR, ULX, WRC USG BORAL DRYWALL SFZ LLC — Type C	Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 9A) or Lead Discs (see Item 10A). Lead batten strips required behind vertical joints of lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in., placed on the face of studs and attached to the stud with two 1 in. long Type 5-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. MAVCO INDUSTRIES INC — Type X-Ray Shielded Gypsum 4D. Gypsum Board* — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer. For direct attachment only) — Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type 5-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type 5-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-2011, Grade "C". RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall 5. Joint Tape and Compound — (Not Shown) Systems A, B, C, E, F, G, H, I Joints on outer layers of gypsum boards (Item 4 and 4A) covered with paper tape and joint compound. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges. Exposed screw heads covered with joint compound. 6. Batts and Blankets* — Systems A, B, E, F, G, H, I (Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity. Any mineral wool or glass fiber batt mineral bearing the UL Classification Marking as to Fire Resistance. Systems C & D Min 3 in. (System C) and min 1-1/2 in. (System D) thick mineral wool batts, friction fitted between the studs and floor and ceiling runners. ROCKWOOL — Type AFB, min density 1.8 pcf / 28.8 kg/m³ THERMAFIBER INC — Type SAFB, SAFB FF 7. Cementitious Backer Units* — (System D) — Nom 1/2 or 5/8 in. thick panels, square edge, attached to studs over gypsum wallboard with 1-5/8 in. long, Type S-12, corrosion resistant steel screws spaced 8 in. OC and staggered 8 in. from gypsum wall board screws. Joints covered with glass fiber mesh tape. Vertical joints staggered one stud cavity from gypsum wallboard joints. Horizontal joints staggered a min of 12 in. from the gypsum wallboard joints. UNITED STATES GYPSUM CO — Type DC8 8. Laminating Adhesive* — (Optional, Not Shown) — Used to bond outer layer of Cementitious Backer Units (Item 7) to inner layers of Gypsum Board (Item 4) in System D. ANSI A136.1 Type 1 organic adhesive applied with 1/4 in. square notched trowel. See Adhesives (BWWR) in the Fire Resistance Directory or Adhesives (BULZ) in the Building Materials Directory for names of Classified companies. 9. Lead Batten Strips — (Not Shown, For Use With Item 4A) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-2011, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4A) and optional at remaining stud locations. Required behind vertical joints. 9A. Lead Batten Strips — (Not Shown, for use with Item 4C) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type 5-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type 5-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-2011, Grades "B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 6) and optional at remaining stud locations. 10. Lead Discs or Tabs — (Not Shown, For Use With Item 4A) — Used in lieu of or in addition to the lead batten strips (Item 9) or	ceilings and/or outer walls. Attached to floor and ceiling assemblies with steel fasteners spaced not greater than 24 in. OC. 1A. Floor and Ceiling Runners — (Not Shown, As an alternate to Item 1, For Use With Item 5A and SC) — Channel shaped runners min 3-1/2 in. deep with 1-1/4 in. flanges fabricated from min No. 20 MSG corrosion-protected steel. Attached to floor and ceiling assemblies with steel fasteners spaced not greater than 24 in. OC. 2. Steel Studs — Min 0.0329 in. bare metal thickness (No. 20 MSG) corrosion-protected steel studs, min 3-1/2 in. wide, cold formed, designed in accordance with the current edition of the Specification for the Design of Cold-Formed Steel Structural Members by the American Iron and Steel Institute (AISI). All design details enhancing the structural integrity of the wall assembly, including the axial design load of the studs, shall be as specified by the steel stud designer and/or producer, and shall meet the requirements of all applicable local code agencies. The max stud spacing shall not exceed 24 in. OC. Studs attached to floor and ceiling runners with 1/2 in. long Type 5-12 steel screws on both sides of the studs or by welded or bolted connections designed in accordance with the AISI specifications. 2A. Steel Studs — (As an alternate to Item 2, For use with Item 5A, 5C, 5D, and 5E) — Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min width, min 1-1/2 in. flanges and 1/4 in. return, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. 2B. Steel Studs — (As an alternate to Item 2 and 2A, For Use With Item 5B) — Min 0.0329 in., (No. 20 MSG) corrosion-protected cold formed steel studs, min 3-1/2 in. deep by 1-5/8 in. wide with 1/2 in. returns. Braced at mid-height and designed in accordance with the current edition of the Specification for the Design of Cold-Formed Steel Structural Members by the American Iron and Steel Institute (AISI). All design details enhancing the structural integrity of the wall assembly, including the axial design load of the studs, shall be as specified by the steel stud designer and/or producer, and shall meet the requirements of all applicable local code agencies. The max stud spacing shall not exceed 24 in. OC. Studs attached to floor and ceiling runners with 1/2 in. long Type 5-12 steel screws on both sides of the studs or by welded or bolted connections designed in accordance with the AISI specifications. 2C. Framing Members - Steel Studs — (As an alternate to Item 2, For use with Item 5C) — Channel shaped, fabricated from min 20 MSG (0.0327 in. thick) corrosion-protected or galv steel, 3-1/2 in. min width, min 1-1/2 in. flanges and 1/4 in. return, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height. 3. Lateral Support Members — (Not shown) — Where required for lateral support of studs, support shall be provided by means of steel straps, channels or other similar means as specified in the design of a particular steel stud wall system. 4. Wood Structural Panel Sheathing — (Optional, For use with Item 5 only) — (Not Shown) — 4 ft wide, 7/16 in. thick oriented strand board (OSB) or 15/32 in. thick structural 1 sheathing (plywood) complying with DOC PS1 or PS2, or APA Standard PRP-108, manufactured with exterior glue, applied horizontally or vertically to the steel studs. Vertical joints centered on studs, and staggered one stud space from wallboard joints. Attached to studs with flat-head self-drilling tapping screws with a min. head diam. of 0.292 in. at maximum 6 in. OC. in the perimeter and 12 in. OC. in the field. When used, gypsum panels attached over OSB or plywood panels and fastener lengths for gypsum panels increased by min. 1/2 in. The maximum loading on the steel studs was evaluated with the steel studs braced at mid-height and not braced by the plywood sheathing. 5. Gypsum Board* — Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered when load is reduced to 90 percent of max stud capacity. When load is at 100 percent, horizontal edge joints and horizontal butt joints on opposite sides of studs staggered a min of 12 in. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered at 100 percent load with Type ULX. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) with Type ULX need not be staggered. When used in widths other than 48 in., gypsum panels to be installed horizontally. The thickness and number of layers and percent of design load for the 45 min. 1 hr, 1-1/2 hr, and 2 hr ratings are as follows: Wallboard Protection on Each Side of Wall <table><tr><th>Rating</th><th>No. of Layers & Thkns of Panel</th><th>% of Design Load</th></tr><tr><td>45 Min</td><td>1 layer, 1/2 in. thick</td><td>100</td></tr></table>	Rating	No. of Layers & Thkns of Panel	% of Design Load	45 Min	1 layer, 1/2 in. thick	100
Rating	No. of Layers & Thkns of Panel	% of Design Load							
45 Min	1 layer, 1/2 in. thick	100							

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01/25/24

THE VILLAGE AT DISCOVERY -

LOT 4

LEE'S SUMMIT, MO

SHEET TITLE

UL ASSEMBLIES - U423 / U905

PROJECT NUMBER: 23099

SHEET NUMBER:

G-209

<table><tr><td>1 hr</td><td>1 layer, 5/8 in. thick</td><td>100</td></tr><tr><td>1-1/2 hr</td><td>2 layers, 1/2 in. thick</td><td>100</td></tr><tr><td>2 hr</td><td>2 layers, 5/8 in. thick</td><td>80</td></tr><tr><td>2 hr@</td><td>2 layers, 5/8 in. thick</td><td>100</td></tr><tr><td>2 hr</td><td>3 layers, 1/2 in. thick</td><td>100</td></tr><tr><td>2 hr</td><td>2 layers, 3/4 in. thick</td><td>100</td></tr></table> @Rating applicable when Batts and Blankets (Item 7) are used. CGC INC — 1/2 in. thick Type IP-X2, IPC-AR, C, WRC, or 5/8 in. thick Type SCX, SHX, WRX, IP-X1, AR, C, IP-AR, IP-X2, IPC-AR, ULUX, ULX or WRC, 3/4 in. thick Types AR, IP-AR, IP-X3, ULTRACODE UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR, or WRC; 5/8 in. thick Type AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULUX, ULX, WRX, or WRC; 3/4 in. thick Types AR, IP-AR, IP-X3, ULTRACODE USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C, 5/8 in. Types C, SCX, SGX, ULTRACODE USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR, WRC; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, WRX or WRC; 3/4 in. thick Types AR, IP-AR, IP-X3, ULTRACODE 5A. Gypsum Board* — (As an alternate to Item 5 when used as the base layer on one or both sides of wall, For direct attachment only, not to be used with Item 4) — Nom 5/8 in. or 3/4 in. may be used as alternate to all 5/8 in. or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1A, 2A & 8A(a). Wallboard secured to studs with 1-1/4 in. long Type 5-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. To be used with Lead Batten Strips (see Item 12) or Lead Discs or Tabs (see Item 13). RAY-BAR ENGINEERING CORP — Type RB-LBG 5B. Gypsum Board* — (As an alternate to Items 5 and 5A) — Nom 5/8 in. thick gypsum panels with square edges, applied horizontally or vertically. For the 1 hour single layer system -when the gypsum board panels are installed horizontally the joints are to be staggered by a minimum of 12 in. on opposite sides of assembly, they are to be secured on each side of the studs with 1-1/4 in. long Type 5-12 bugle head steel screws spaced 8 in. OC to the top and bottom tracks and in the field with screws 1 in. and 4 in. from the horizontal joints. When the gypsum board panels are installed vertically all vertical joints must be centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to studs with 1-1/4 in. long Type 5-12 steel screws spaced 8 in. OC to the top and bottom tracks and in the field with screws 1 in. and 4 in. from the perimeter. For the 2 hour double layer system - when the gypsum board panels are installed horizontally the joints need not be staggered on opposite sides of assembly. Base layer secured on each side of the studs with 1-1/4 in. long Type 5-12 bugle head steel screws spaced 16 in. OC to the top and bottom track and in the field with screws beginning 1 in. and 8 in. from the horizontal joints. Face layer horizontal joints staggered 8 in. from base layer joints and secured with 1-5/8 in. long Type 5-12 bugle head steel screws spaced 16 in. OC to the top and bottom tracks and in the field with screws beginning 1 in. and 8 in. from the horizontal joints. Face layer screws offset 8 in. from base layer screws. When the gypsum board panels are installed vertically all vertical joints must be centered over studs and staggered min 1 stud cavity on opposite sides of studs. Face layer gypsum boards secured to studs with 1-1/4 in. long Type 5-12 steel screws spaced 16 in. OC with screws 2 in. and 16 in. from the perimeter. Base layer gypsum boards secured to studs with 1-1/4 in. long Type 5-12 steel screws spaced 16 in. OC with screws 1-1/2 in. and 8 in. from the perimeter. Face layer screws offset 8 in. from base layer screws. CGC INC — Type USGX UNITED STATES GYPSUM CO — 5/8 in. thick Type USGX (Joint tape and compound, Item 9, optional with Type USGX) USG BORAL DRYWALL SFZ LLC — 5/8 in. thick Type USGX (Joint tape and compound, Item 9, optional with Type USGX) USG MEXICO S A DE C V — Type USGX 5C. Gypsum Board* — (As an alternate to Item 5 when used as the base layer on one or both sides of wall, For direct attachment only, not to be used with Item 4) — Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type 5-12 (or #6 by 1-1/4 in. long bugle head fine drillers) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. NEW ENGLAND LEAD BURNING CO INC, DBA NELCO — Nelco 5D. Gypsum Board* — (As an alternate to Item 5 when used as the base layer on one or both sides of wall, For direct attachment only, not to be used with Item 4) — Nom 5/8 or 3/4 in. may be used as alternate to all 5/8 or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1A, 2A & 8A(a). Wallboard secured to studs with 1-1/4 in. long Type 5-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. To be used with Lead Batten Strips (see Item 12A) or Lead Discs (see Item 13A). MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum 5E. Gypsum Board* — (As an alternate to Item 5 when used as the base layer on one or both sides of wall, For direct attachment only, not to be used with Item 4) — Nom 5/8 in. may be used as alternate to all 5/8 shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1A, 2A & 8A(a). Wallboard secured to studs with 1-1/4 in. long Type 5-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type 5-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-2011, Grade "C". RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall 5F. Gypsum Board* — (As an alternate to Item 5 when Foam Plastic insulation (Item 17) is used) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 5 above. Applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels secured to studs with 1 in. long Type 5 steel screws spaced 8 in. OC at perimeter and in the field. For 2 layer assemblies outer layer will be attached to studs over inner layer with the 1-5/8 in. long steel screws spaced 8 in. OC. 5G. Gypsum Board* — (As an alternate to Item 5 when Foam Plastic insulation (Item 18) is used) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 5 above. Applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels secured to studs with 1-1/4 in. long Type 5 steel screws spaced 8 in. OC at perimeter and in the field. For 2 layer assemblies outer layer will be attached to studs over inner layer with the 1-7/8 in. long steel screws spaced 8 in. OC. 6. Fasteners — (Not Shown) — For use with Item 5 - Type 5-12 steel screws used to attach panels to runners (Item 1 or 1A) and studs (Item 2 or 2A) or furring channels (Item 8). Single layer systems: 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 12 in. OC when panels are applied vertically. Single layer system with Type ULUX: 1 in. long, spaced 12 in. OC along the perimeter and in the field when panels are applied horizontally or vertically. Two layer systems: First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer- 1-5/8 in. long for 1/2 in. and 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC with screws offset 8 in. from first layer. Three-layer systems: First layer- 1 in. long for 1/2 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. 7. Batts and Blankets* — (Required as indicated under Item 5) — Nom 2 in. thick mineral wool batts, friction fitted between studs and runners. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies. 7A. Batts and Blankets* — (Optional, Not Shown) — Placed in stud cavities, any glass fiber or mineral wool insulation bearing the UL Classification Marking to Surface Burning Characteristics and/or Fire Resistance. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies. 7B. Batts and Blankets* — (Optional, Not Shown) — Placed in stud cavities, glass fiber insulation bearing the UL Classification	1 hr	1 layer, 5/8 in. thick	100	1-1/2 hr	2 layers, 1/2 in. thick	100	2 hr	2 layers, 5/8 in. thick	80	2 hr@	2 layers, 5/8 in. thick	100	2 hr	3 layers, 1/2 in. thick	100	2 hr	2 layers, 3/4 in. thick	100	Marking as to Surface Burning Characteristics and/or Fire Resistance. OWENS CORNING — Type QuietZone Acoustic Batts 7C. Fiber, Sprayed* — (Optional) — As an alternate to Batts and Blankets (Item 7) — Not for use with Items 8A or 8B) — Spray applied mineral wool insulation. The fiber is applied with adhesive, at a minimum density of 4.0 pcf, to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. See Fiber, Sprayed (CCA2). AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus 8. Furring Channels — (Optional on one or both sides, not shown, for single or double layer systems) — Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type 5-12 panhead steel screws. Not for use with type FRX-G gypsum panels and Item 5A, SC, SD, or SE. 8A. Steel Framing Members (Not Shown)* — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 8, furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with type FRX-G gypsum panels and Item 5A, SC, SD, or SE. b. Steel Framing Members* — Used to attach furring channels (Item 8a) to studs (Item 2). Clips spaced max. 48 in. OC, and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, 5-12 steel screw through the center grommet. Furring channels are friction fitted into clips. R51C-1 clip for use with 2-9/16 in. wide furring channels. R51C-1 (2.75) clip for use with 2-23/32 in. wide furring channels. PAC INTERNATIONAL L L C — Types R51C-1, R51C-1 (2.75). 8B. Steel Framing Members* — (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 8, furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with type FRX-G gypsum panels and Item 5A, SC, SD, or SE. b. Steel Framing Members* — Used to attach furring channels to studs (Item 2). Clips spaced max. 48 in. OC, and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, 5-12 steel screw through the center grommet. Furring channels are friction fitted into clips. PAC INTERNATIONAL L L C — Types R51C-1, R51C-1 (2.75). 8C. Steel Framing Members* — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 8, furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 6. Not for use with type FRX-G gypsum panels and Item 5A, SC, SD, or SE. b. Steel Framing Members* — Used to attach furring channels to studs (Item 2). Clips spaced max. 48 in. OC, and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, 5-12 steel screw through the center grommet. Furring channels are friction fitted into clips. PLTEC INC — Type GENECLEIP 8D. Steel Framing Members* — (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 8, furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 6. Not for use with type FRX-G gypsum panels and Item 5A, SC, SD, or SE. b. Steel Framing Members* — Used to attach furring channels to studs (Item 2). Clips spaced max. 48 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type 623TR 8D. Steel Framing Members* — (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 8, furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 6. Not for use with type FRX-G gypsum panels and Item 5A, SC, SD, or SE. b. Steel Framing Members* — Used to attach furring channels to studs (Item 2). Clips spaced max. 48 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. REGUPOL AMERICA — Type SonusClip	14. Lead Batten Strips — (Not Shown, For Use With Item 5C) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-2011, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5C) and optional at remaining stud locations. 15. Lead Tabs — (Not Shown, For Use With Item 5C) — 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw that secures the gypsum boards, Item 5C, will penetrate the steel stud. Lead tabs to have the purity of 99.9% meeting the Federal specification QQ-L-2011, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary. 16. Wall and Partition Facings and Accessories* — (CLBV) (Optional, Not Shown) — For use with Item 1, Item 2 to 2C, Item 3, Item 5, Item 6, Item 7A, Item 8 and Item 9. For a maximum fire rating of 1 hour. On one side of the wall, over the first layer of Gypsum Board (Item 5), install Reflexor membrane with the gold side facing outwards. Membrane installed with T50 staples spaced 12 inches on center in both directions as per manufacturer's instructions, seams in membrane to be overlapped by 2 inches. When Reflexor membrane is used an additional layer of Gypsum Board identical to the one used in the first layer and as specified in Item 5 shall be installed over the membrane. Additional layer of Gypsum Board to be installed through the membrane to the stud as specified in Item 5 except the fastener length shall be increased by a minimum of 5/8 inch. Install Batts and Blankets in the stud cavity as per Item 7A. On the other side of the wall prior to the installation of the Gypsum Board install Resilient Channels as per Item 8. Over the Resilient Channels install 3/4 inch thick SONOpan panel secured to the Resilient Channels with min. 1-1/4 in. long drywall screws and washers spaced at 16 in. OC on the perimeter of the panel and 8 in. OC in the field of the panel. Over the SONOpan panel install the same Gypsum Board as specified in Item 5 with the fastener length increased by minimum 3/4 inch. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board. Alternately, on the other side of the wall prior to the installation of the Gypsum Board (Item 5), install 3/4 in. thick SONOpan panels, secured to one side of studs either horizontally or vertically. Panels secured to each stud with min. 1-1/4 in. long drywall screws spaced 12 in. OC. Over the SONOpan, install 25 MSG galv steel, Resilient Channels, spaced vertically 24 in. OC. Resilient Channels fastened through panels to each stud with min. 2 in. long drywall screws or self-tapping screws. Over the Resilient Channels install Gypsum Board as specified in Item 5 with drywall screws as specified in Item 6. Panels not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board. MSL — Reflexor membrane, SONOpan panel. 17. Foamed Plastic* — (Optional, Not Shown) Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity. CARLISLE SPRAY FOAM INSULATION — Types SealTite ONE, SealTite Pro Closed Cell (CC), SealTite Pro Open Cell (OC), SealTite Pro OCX, SealTite Pro No Trim 21, SealTite Pro One Zero, Foamulate Closed Cell, Foamulate OCX, Foamulate 70, and Foamulate HFO 18. Foamed Plastic* — (Optional, Not Shown for use with Item 5G) Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity. BASF CORP - Enerlite® NM, Enerlite® G, FE178®, Spraytite® 178, Spraytite® 81206, Walltite® 200, Walltite® US and Walltite® US-N, and Walltite HP® * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively. Last Updated on 2023-08-16 The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL Solutions' Follow - Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL Solutions' Follow - Up Service. Always look for the Mark on the product. UL Solutions permits the reproduction of the material contained in Product iQ subject to the following conditions: 1. 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1 hr	1 layer, 5/8 in. thick	100																		
1-1/2 hr	2 layers, 1/2 in. thick	100																		
2 hr	2 layers, 5/8 in. thick	80																		
2 hr@	2 layers, 5/8 in. thick	100																		
2 hr	3 layers, 1/2 in. thick	100																		
2 hr	2 layers, 3/4 in. thick	100																		

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BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States
BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire Resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. U905

April 14, 2023

Bearing Wall Rating — 2 HR

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

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- 1. Concrete Blocks*** — Various designs. Classification D-2 (2 hr). See **Concrete Blocks** category for list of eligible manufacturers.
- 2. Mortar** — Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.

- 3. Portland Cement Stucco or Gypsum Plaster** — Add 1/2 hr to classification if used. Where combustible members are framed in wall, plaster or stucco must be applied on the face opposite framing to achieve a max. Classification of 1-1/2 hr. Attached to concrete blocks (Item 1).
- 4. Loose Masonry Fill** — If all core spaces are filled with loose dry expanded slag, expanded clay or shale (Rotary Kiln Process), water repellant vermiculite masonry fill insulation, or silicone treated perlite loose fill insulation add 2 hr to classification.

- 5. Foamed Plastic*** — (Optional-Not Shown) — 1-1/2 in. thick max. 4 ft wide sheathing attached to concrete blocks (Item 1). **ATLAS ROOFING CORP** — EnergyShield Pro Wall Insulation, EnergyShield Pro 2 Wall Insulation, EnergyShield CGF Pro, EnergyShield Ply Pro, EnergyShield® CGF, EnergyShield® PanelCast, EnergyShield® and EnergyShield® XR

DUPONT DE NEMOURS, INC. — Types Thermax Sheathing, Thermax Light Duty Insulation, Thermax Heavy Duty Insulation, Thermax Metal Building Board, Thermax White Finish Insulation, Thermax ci Exterior Insulation, Thermax XARMOR ci Exterior Insulation, Thermax IH Insulation, Thermax Plus Liner Panel, Thermax Heavy Duty Plus (HDP), TuFF-R™ ci Insulation, Thermax Butler Sylwall Insulation Board and Thermax Morton Heavy Duty Insulation Board

FIRESTONE BUILDING PRODUCTS CO L L C — "Enverge™ CI Foil Exterior Wall Insulation" and "Enverge™ CI Glass Exterior Wall Insulation"

HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — Types "Xci-Class A", "Xci Foil (Class A)", "Xci 286"

RMAX, A BUSINESS UNIT OF SIKA CORPORATION — Types "TSX-8500", "ECOMAXci FR", "TSX-8510", "ECOMAX xi FR White", "ECOMAXci", "ECOMAXci FR Air Barrier", "Thermasheath-XP", "Thermasheath", "Durash Heath"

JOHNS MANVILLE — Type "AP Foil-Faced Foam Sheathing"

5A. Building Units* — As an alternate to Items 5, min. 1 in-thick polyisocyanurate composite foamed plastic insulation boards, nom. 48 by 48 or 96 in.

ATLAS ROOFING CORP — EnergyShield® Ply

HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — "Xci NB", "Xci Ply"

RMAX, A BUSINESS UNIT OF SIKA CORPORATION — "Thermasheath-Si", "ECOBASci", "ThermaBase-CI", "ECOMAXci FR Ply", "ECOMAXci Ply".

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Last Updated on 2023-04-14

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5/7/2019

FIRE-RESISTANCE RATINGS - ANSI/UL 263 | UL Product iQ

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UL Product iQ™

BXUV.W426 - FIRE-RESISTANCE RATINGS - ANSI/UL 263

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BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-Resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. W426

March 13, 2018

(Exposed to Fire on Interior Face Only)

Nonbearing Wall Rating — 1 Hr.

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5/7/2019

FIRE-RESISTANCE RATINGS - ANSI/UL 263 | UL Product iQ

3/3

1. **Floor and Ceiling Runner** — (Not Shown) — Min. 25 MSG galv steel, 1-1/8 in. return legs, 3-5/8 in. deep (min), attached to floor and ceiling with fasteners 24 in. OC max.

2. **Steel Studs** — Min 3-5/8 in. deep, formed of min 25 MSG galv steel max stud spacing 24 in. OC. Studs to be cut 1 in. less than assembly height.

3. **Gypsum Board*** — Nom 5/8 in. thick, two layers applied vertically or horizontally to the steel studs with the vertically and horizontally joints offset by 24 inches between layers. Base layer attached with 1-1/8 in. long Type 5 steel screws spaced 8 in. OC at the perimeter and 12 in. OC in the field. The face layer attached with 2 in. long Type 5 steel screws spaced 8 in. OC at the perimeter and 12 in. OC in the field. Screws between based and face layers offset by max. 6 in.

AMERICAN GYPSUM CO — Types AGX-1, AGX-12, LightRoc, M-Glass or AG-C

CERTAINTEEED GYPSUM INC — Type X, Type X-1, Easi-Lite Type X-2

GEORGIA-PACIFIC GYPSUM L L C — Type GPFS1

SAINT-GOBAIN GYPROC MIDDLE EAST FZE — Type Gyproc FireStop, Gyproc FireStop MR, Gyproc FireStop M2TECH, Gyproc FireStop ACTIVAir, Gyproc FireStop MR ACTIVAir, Gyproc FireStop M2TECH ACTIVAir, Gyproc DuraLine, Gyproc DuraLine MR, Gyproc DuraLine M2TECH, Gyproc DuraLine ACTIVAir, Gyproc DuraLine MR ACTIVAir, Gyproc DuraLine M2TECH ACTIVAir

UNITED STATES GYPSUM CO — Type SCK, ULUX

USG BORAL DRYWALL SFZ LLC — Type SCK

4. **Foamed Plastic*** — Spray applied, foamed plastic insulation, to completely filling stud cavity.

GACO WESTERN L L C — Gaco WallFoam 183M

5. **Wood Structural Panel Sheathing** — 4 ft wide, 1/2 in. thick oriented strand board (OSB) or 15/32 in. thick structural 1 sheathing (plywood) complying with DOC P51 or PS2, or APA Standard PRP-108, manufactured with exterior glue, applied horizontally or vertically to the steel studs. Vertical joints centered on studs. Attached to studs with flat-head self-drilling tapping screws with a min. head diam. of 0.292 in. at maximum 6 in. OC in the perimeter and 12 in. OC in the field. Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies may be applied over the Wood Structural Panel Sheathing.

5A. **Gypsum Sheathing** — As an option to Item 5, exterior regular gypsum sheathing, 1/2 or 5/8 in. thick applied vertically or horizontally, attached to studs and runners with 1 in. long Type S12 steel screws spaced 12 in. OC along studs and runners. Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies may be applied over the gypsum sheathing.

5/7/2019

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- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-Resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. X790

November 25, 2019

Ratings — 1, 1-1/2, 2, 3 and 4 Hr.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

1. **Steel Column, Steel Pipe or Steel Tube** — Wide flange steel column (W) or steel circular pipe (SP) or steel square or rectangular tube (ST), min sizes as shown in the tables below.

2. **Spray-Applied Fire Resistive Materials*** — Applied by mixing with water and spraying in one or more coats to the thicknesses shown below, to steel surfaces which are clean and free of dirt, loose scale, and oil. Min average and min individual density of 15 and 14 pcf, for Types 300, 300AC, 300ES, 300HS, 300N, 3000, 3000ES and 5B. For Types 400AC and 400ES min average and min individual density of 22 and 19 pcf, respectively. Min avg density of 44 pcf with min ind value of 40 pcf for Types M-II and TG. Min avg density of 47 pcf, with min individual value of 43 pcf for Type M-III/P. For method of density determination, see Design Information Section, Sprayed Material.

The min thickness of Spray-Applied Fire Resistive Materials required for various fire resistance ratings of contour sprayed or boxed wide flange columns are shown in the table below:

Column Size	W/D	1 Hr	1-1/2 Hr	2 Hr	3 Hr	4 Hr
W6x9	0.33	15/16	1-1/4	1-9/16	2-1/8	2-11/16
W6x12	0.43	13/16	1-1/8	1-7/16	2	2-9/16
W6x16	0.57	11/16	1	1-5/16	1-7/8	2-3/8
W8x28	0.68	5/8	15/16	1-1/4	1-13/16	2-5/16
W10x49	0.83	9/16	13/16	1-1/8	1-5/8	2-1/8
W12x106	1.46	3/8	9/16	13/16	1-1/4	1-11/16
W14x233	2.52	1/4	3/8	1/2	7/8	1-3/16
W14x730	6.68	1/4	1/4	1/4	3/8	1/2

The min thickness of Spray-Applied Fire Resistive Materials required for various fire resistance ratings of contour sprayed or boxed wide flange columns are shown in the table below:

Column Size	W/D	1 Hr	1-1/2 Hr	2 Hr	3 Hr	4 Hr
W6x9	0.33	15/16	1-1/4	1-9/16	2-1/8	2-11/16
W6x12	0.43	13/16	1-1/8	1-7/16	2	2-9/16
W6x16	0.57	11/16	1	1-5/16	1-7/8	2-3/8
W8x28	0.68	5/8	15/16	1-1/4	1-13/16	2-5/16
W10x49	0.83	9/16	13/16	1-1/8	1-5/8	2-1/8
W12x106	1.46	3/8	9/16	13/16	1-1/4	1-11/16
W14x233	2.52	1/4	3/8	1/2	7/8	1-3/16
W14x730	6.68	1/4	1/4	1/4	3/8	1/2

As an alternate to the above table, the required thickness of Spray-Applied Fire Resistive Materials to be applied to all surfaces of the steel columns for all rating periods may be determined from the following equations:

$$R = 75 \frac{(W/D)}{32} + 32$$
$$h = \frac{R}{75 \frac{(W/D)}{32} + 32}$$

(for column W/D range of 0.33 to 2.51)

$$R = 75 \frac{(W/D)}{15} + 15$$
$$h = \frac{R}{75 \frac{(W/D)}{15} + 15}$$

(for column W/D range of 2.51 to 6.68)

Where:
h = Spray-Applied Fire Resistive Materials thickness in the range of 1/4 to 1-1/2 in. (rounded up to the nearest 1/16 in.)
R = Fire resistance rating period in minutes (60-240 mins.)
D = Heated perimeter of the steel column in inches.
W = Weight of the steel column in lbs per foot.

The thicknesses contained in the table below are applicable when the Spray-Applied Fire Resistive Materials applied to the column's flange tips are reduced to one-half that shown in the table below (for contour application):

Column Size In.	1 Hr	1-1/2 Hr	2 Hr	3 Hr	4 Hr
W6x9	1	1-3/8	1-3/4	2-7/16	3-1/8
W6x12	7/8	1-1/4	1-5/8	2-5/16	3-1/16
W6x16	3/4	1-1/8	1-7/16	2-1/16	2-11/16
W8x28	11/16	1	1-5/16	1-15/16	2-1/2
W10x49	5/8	15/16	1-3/16	1-3/4	2-3/8
W12x106	3/8	5/8	7/8	1-3/8	1-13/16
W14x233	5/16	3/8	9/16	15/16	1-5/16
W14x730	5/16	5/16	5/16	7/16	5/8

The min thickness of Spray-Applied Fire Resistive Materials required for various fire resistance ratings of contour sprayed steel pipes or tubes are shown in the table below:

Min Column Size In.	A/P	1 Hr	1-1/2 Hr	Min Thkns In. 2 Hr	3 Hr	4 Hr
SP 4x0.237	0.22	11/16	1	1-3/8	2-1/16	2-3/4
ST 4x0.1875	0.18	3/4	1-1/16	1-7/16	2-1/16	2-11/16
ST 4x0.3125	0.29	1/2	13/16	1-1/8	1-3/4	2-5/16
ST 4x0.375	0.34	7/16	3/4	1	1-9/16	2-1/8
ST 4x0.5	0.44	3/8	9/16	7/8	1-3/8	1-7/8
ST20x20x0.75 in	0.72	5/16	1/2	11/16	1-1/16	1-7/16
ST20x20x1 in.	0.95	1/4	3/8	1/2	13/16	1-1/8
ST20x20x1.5 in.	1.39	1/4	1/4	3/8	5/8	13/16
ST20x20x1.75 in.	1.60	1/4	1/4	3/8	1/2	3/4
ST32x32x1.25 in.	1.20	1/4	5/16	7/16	11/16	15/16
ST 36x24x0.5	0.49	5/16	7/16	11/16	1-1/8	1-9/16

As an alternate to the table above, the required thickness of Spray-Applied Fire Resistive Materials to be applied to all surfaces of the steel pipes or tubes for all rating periods may be determined from the following equation:

$$R$$

$$h = 188 \frac{(A/P)}{45} + 45$$

Where:
h = Spray-Applied Fire Resistive Materials thickness in the range of 5/16 to 4-1/4 in. (rounded up to the nearest 1/16 in.)
R = Fire resistance rating in minutes (60-240 mins.)
A = Cross-sectional area of pipe or tube.
P = Heated perimeter of steel pipe or tube.
A/P = 0.18 to 0.49.

The A/P ratio of a circular pipe is determined by:

$$\frac{A}{P} = \frac{t(d-t)}{d}$$

Where:
d = the outer diameter of the pipe (in.)
t = the wall thickness of the pipe (in.)

The A/P ratio of a rectangular tube is determined by:

$$\frac{A}{P} = \frac{t(a+b-2t)}{a+b}$$

Where:
a = the outer width of the tube (in.)
b = the outer length of the tube (in.)
t = the wall thickness of the tube (in.)

BERLIN CO LTD — Types 300, 300ES, 300N, SB, M-II, TG and M-III/P.

GREENTECH ASIA PACIFIC SDN BDH — Types 300, 300ES, 300HS, M-II, or M-III/P

GREENTECH THERMAL INSULATION PRODUCTS MFG CO L L C — Types 300, 300AC, 300HS, 400AC, 3000, M-II, TG, and M-III/P.

ISOLATEK INTERNATIONAL — Type 300, 300AC, 300ES, 300HS, 300N, 400AC, 400ES, SB, 3000, 3000ES, M-II, TG and M-III/P.

NEWKEM PRODUCTS CORP — Types 300, 300ES, 300N, SB, M-II, TG and M-III/P

2A. (As an alternate to Item 2) **Spray-Applied Fire Resistive Materials*** — Applied by mixing with water and spraying in one or more coats to the thicknesses shown below, to steel surfaces which are clean and free of dirt, loose scale, and oil. Min average and min individual density of 17.5 and 16 pcf, respectively, for Type 300TW. Min average and min individual density of 22 and 19 pcf, respectively, for Type 400. For method of density determination, see Design Information Section, Sprayed Material. The min thickness of Spray-Applied Fire Resistive Materials required for various fire resistance ratings is shown in Item 2.

BERLIN CO LTD — Type 400.

GREENTECH ASIA PACIFIC SDN BDH — Type 400

GREENTECH THERMAL INSULATION PRODUCTS MFG CO L L C — Type 400.

ISOLATEK INTERNATIONAL — Type 300TW or Type 400.

NEWKEM PRODUCTS CORP — Type 400.

2B. (As an alternate to Item 2 and 2A) — **Spray-Applied Fire Resistive Materials*** — Prepared by mixing with water according to instructions on each bag of mixture and spray- or trowel-applied to steel surfaces which are free of dirt, oil or scale. Min average density of 17.5 pcf with min individual value of 17.0 pcf. For method of density determination, see Design Information Section, Sprayed Material. The min thickness of Spray-Applied Fire Resistive Materials required for various fire resistance ratings is shown in Item 2.

ISOLATEK INTERNATIONAL — Type 280.

3. **Metal Lath** — (Optional for contour application) — 3.4 lb/sq yd galv or painted expanded steel lath. Lath shall be lapped 1 in. and tied together with No. 18 SWG galv steel wire spaced vertically 6 in. OC.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Last Updated on 2019-11-25

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TABLE 721.1(2)

RATED FIRE-RESISTANCE PERIODS FOR VARIOUS WALLS AND PARTITIONS^{a, b, P}

MATERIAL	ITEM NUMBER	CONSTRUCTION	MINIMUM FINISHED THICKNESS FACE-TO-FACE ^b (inches)			
			4 hours	3 hours	2 hours	1 hour
3. Concrete masonry units	3-1.1 ^f §	Expanded slag or pumice.	4.7	4.0	3.2	2.1
	3-1.2 ^f §	Expanded clay, shale or slate.	5.1	4.4	3.6	2.6
	3-1.3 ^f	Limestone, clinders or air-cooled slag.	5.9	5.0	4.0	2.7
	3-1.4 ^f §	Calcareous or siliceous gravel.	6.2	5.3	4.2	2.8

TABLE 722.2.1.4(2) TIME ASSIGNED TO FINISH MATERIALS ON FIRE-EXPOSED SIDE OF WALL

FINISH DESCRIPTION	TIME (minutes)
Gypsum wallboard	
1/2 inch	10
5/8 inch	15
1 inch	20
2 layers of 1/2 inch	25
1 layer of 1/2 inch, 1 layer of 1/4 inch	35
2 layers of 1/4 inch	40
Type X gypsum wallboard	
1/2 inch	25
5/8 inch	40

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UL Product iQ®



BXUV.L516 - Fire-resistance Ratings - ANSI/UL 263

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

Fire-resistance Ratings - ANSI/UL 263

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. L516

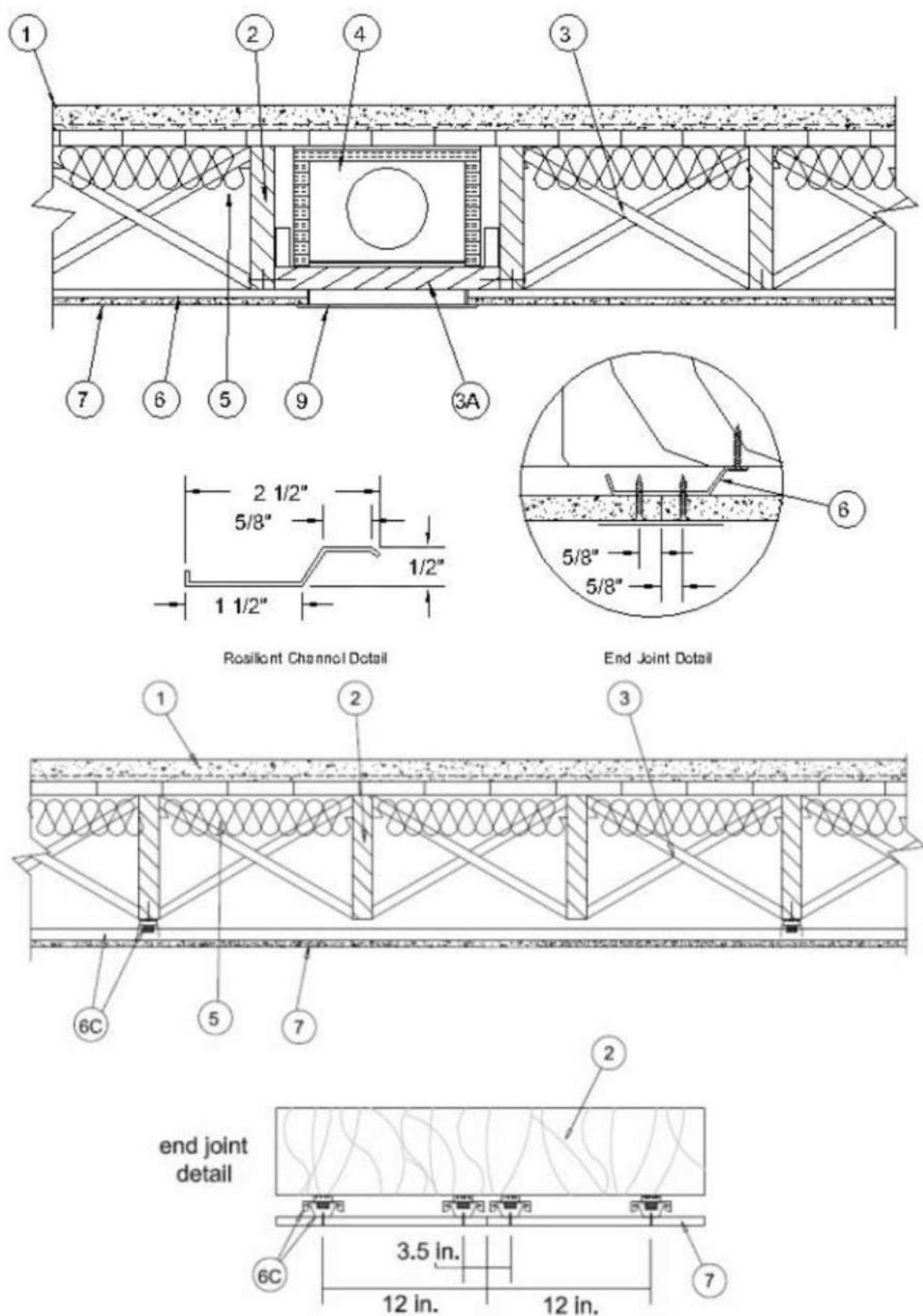
February 4, 2022

Unrestrained Assembly Rating — 1 Hr.

Finish Rating — 28 Min. or (16 Min. See Item 7B)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



1. Flooring System — The flooring system shall consist of one of the following:
System No. 1

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick plywood or min 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

Wire Reinforcement — Hexagonal mesh constructed of No. 19 SWG galv steel wire with No. 16 SWG galv steel wire woven longitudinally into the mesh spaced 3 in. OC. Mesh installed with No. 16 SWG wires perpendicular to joists and lapped 5 in. at the sides.

Sheathing Material* — Polyethylene film vapor barrier.

See **Sheathing Materials** (BVDV) Category in the Building Materials Directory for names of manufacturers.

Finish Flooring Perlite Concrete — Min 1-5/8 in. thickness of perlite-sand concrete, having a min compressive strength of 2000 psi. Mixture shall consist of 1 part Portland cement, 2 parts sand and 3 parts **Perlite Aggregate***.

See **Perlite Aggregate** (CFFX) category for names of manufacturers.

System No. 2

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick plywood or min 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

Mineral and Fiber Board* — Min 1/2 in. thick, supplied in sizes ranging from 3 ft by 4 ft to 8 ft by 12 ft. All joints to be staggered a min of 12 in. with adjacent sub-floor joints.

HOMASOTE CO — Type 440-32 Mineral and Fiber Board

System No. 3

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick plywood or min 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

Floor Mat Materials* — (Optional) — Floor mat material nom 5/64 in. (2mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1-1/4 in. (32mm) of floor-topping mixture.

HACKER INDUSTRIES INC — Type Hacker Sound-Mat.

Alternate Floor Mat Materials - (Optional) — Floor mat material nom 1/4 in. (6mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1-1/4 in. (32mm) of floor-topping mixture.

HACKER INDUSTRIES INC — Type Hacker Sound-Mat II.

Alternate Floor Mat Materials - (Optional) — Floor mat material nom 1/8 in. (3mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 3/4 in. (19mm)

HACKER INDUSTRIES INC — FIRM-FILL SCM 125

Alternate Floor Mat Materials - (Optional) — Floor mat material nom 1/4 in. (6mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1 in. (25mm)

HACKER INDUSTRIES INC — Type FIRM-FILL SCM 250, Quiet Quirl 55/025

Alternate Floor Mat Materials - (Optional) — Floor mat material nom 3/8 in. (10mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/4 in. (32mm)

HACKER INDUSTRIES INC — FIRM-FILL SCM 400, Quiet Quirl 60/040

Alternate Floor Mat Materials - (Optional) — Floor mat material nom 3/4 in. (19mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/2 in. (38mm)

HACKER INDUSTRIES INC — Type FIRM-FILL SCM 750, Quiet Quirl 65/075

Metal Lath (Optional) — For use with 3/8 in. (10 mm) floor mat materials, 3/8 in. expanded steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Hacker Floor Primer to be applied prior to the placement of the metal lath. When metal lath is used, floor topping thickness a nom 1-1/4 in. over the floor mat.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1100 psi. Mixture shall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand.

HACKER INDUSTRIES INC — Type Firm-Fill Gypsum Concrete, Firm-Fill 2010, Firm-Fill 4010, Firm-Fill High Strength, Gyp-Span Radiant, Firm-Fill 3310

System No. 4

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick plywood or min 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

Finish Flooring - Floor Topping Mixture* — Min 3/4 thickness of floor topping mixture having a minimum compressive strength of 1500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

MAXXON CORP — Type Maxxon Standard and Maxxon High Strength

Floor Mat Materials* - (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

MAXXON CORP — Type Encapsulated Sound Mat.

Floor Mat Reinforcement - (Optional) - Refer to manufacturer's instructions regarding minimum thickness of floor topping for use with floor mat reinforcement.

Metal Lath (Optional) — 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd loose laid over the floor mat material.

Fiber Glass Reinforcement - (Optional, Not Shown) - 0.015 in. thick PVC coated non-woven fiberglass mesh, 0.368 lbs/sq yd loose laid over the floor mat material.

System No. 5

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick plywood or min 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

Vapor Barrier — (Optional) Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

FORMULATED MATERIALS LLC — Types FR-25, FR-30, and SiteMix

Floor Mat Material* — (Optional) Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 3/4 in.

FORMULATED MATERIALS LLC — Types M1, M2, M3, Elite, Duo, R1, and R2

System No. 6

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick plywood or min 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

Vapor Barrier — (Optional) - Nom 0.010 in. thick commercial asphalt saturated felt.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1800 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

UNITED STATES GYPSUM CO — Types LRK, HSLRK, CSD

USG MEXICO S A DE C V — Types LRK, HSLRK, CSD

Floor Mat Materials* — (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

UNITED STATES GYPSUM CO — Types SAM, LEVELROCK® Brand Sound Reduction Board, LEVELROCK® Brand Floor Underlayment SRM-25

Alternate Floor Mat Materials* — (Optional) - Nom 3/8 in. thick floor mat material loose laid over the subfloor.

GRASSWORX L L C — Type SC50

System No. 7

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.

Vapor Barrier — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.

Vapor Barrier — (Optional) - Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's technical support for specific mix design and minimum thickness recommended for use with eligible floor mats).

Floor Mat Materials* — (Optional) - Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Quirl 55/025 and Quiet Quirl 55/025 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Quirl 60/040 and Quiet Quirl 60/040 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Quirl 65/075, Quiet Quirl 65/075 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Quirl 52/013 and Quiet Quirl 52/013 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 1/4 in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Quiet Quirl 55/025 MT and Quiet Quirl 55/025 N MT

System No. 8

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick plywood or min 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

Vapor Barrier - (Optional) — Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

ARCOSA SPECIALTY MATERIALS — AccuCrete® Types NexGen, Green, Prime and PrePour, AccuRadiant®, AccuLevel® Types G40, G50 and SD30

Floor Mat Material* — (Optional) - Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 3/4 in.

ARCOSA SPECIALTY MATERIALS — AccuQuiet Types D13, D-18, D25, DX38, EM.125, EM.125S, EM.250, EM.250S, EM.375, EM.375S, EM.750, and EM.750S.

System No. 9

Subflooring — Min 23/32 in. thick T&G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with end joints staggered 4 ft. Panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Gypsum Board* — One layer of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to joists. Gypsum board secured with 1 in. long No. 6 Type W bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. The joints of the gypsum board are to be staggered a minimum of 12 inches from the joints of the subfloor.

GEORGIA-PACIFIC GYPSUM L L C — Type D5

Floor Mat Materials* — (As an alternate to the single layer gypsum board) - Floor mat material loose laid over the subfloor.

MAXXON CORP — Type Encapsulated Sound Mat.

Gypsum Board* — (For use when floor mat is used) Two layers of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to joists on top of the floor mat material. Gypsum board secured to each other with 1 in. long No. 6 Type G bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. The joints of the gypsum board are to be staggered a minimum of 12 inches in between layers and from the joints of the subfloor.

GEORGIA-PACIFIC GYPSUM L L C — Type D5

System No. 10

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture* — Min 3/4 or 1 in. thickness of floor topping mixture for 19/32 or 15/32 in. thick wood structural panels respectively, having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

DEPENDABLE LLC — Types GSL M3.4, GSL K2.6, GSL-CSD and GSL RH

Floor Mat Materials* — (Optional) — Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Types Quiet Quirl 55/025 and Quiet Quirl 55/025 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Types Quiet Quirl 60/040 and Quiet Quirl 60/040 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

KEENE BUILDING PRODUCTS CO INC — Types Quiet Quirl 65/075, Quiet Quirl 65/075 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Types Quiet Quirl 52/013 and Quiet Quirl 52/013 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 1/4 in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Types Quiet Quirl 55/025 MT and Quiet Quirl 55/025 N MT

System No. 11

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick plywood or min 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

Finish Flooring* — **Floor Topping Materials** — Min 3/4 in. to 1-1/2 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance with a minimum compressive strength of 1500 psi. See **Floor- and Roof-Topping Mixtures** (CCOX) category for names of Classified Companies.

Floor Mat Materials* — (Optional) — Floor mat material nom 1/8 in. to 3/4 in. thick. Loose laid over the subfloor. When used, Acousti-floor CSM (crack suppression mat) is loose laid over the floor mat material. Floor topping material thickness is dependent on thickness of floor mat used.

WALFLOR INDUSTRIES INC — Type Acousti-floor, Acousti-floor CSM. Floor topping thickness depends on products used as follows:

Acousti-floor (1/8 in. thick) - Floor topping thickness shall be a minimum of 3/4 in.

Acousti-floor (1/4 in. thick) - Floor topping thickness shall be a minimum of 1 in.

Acousti-floor (3/8 in. thick) - Floor topping thickness shall be a minimum of 1 in.

Acousti-floor (3/4 in. thick) - Floor topping thickness shall be a minimum of 1-1/2 in.

Metal Lath — (Optional) — Expanded steel diamond mesh, 2.5 lb / sq yd loose laid over floor mat material.

Fiberglass Mesh Reinforcement — (Optional) — Coated non-woven glass fiber mesh grid loose laid over floor mat material.

System No. 12

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick plywood or min 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

Finish Flooring - Floor Topping Mixture* — Min 1 in. thickness of floor topping mixture having a min compressive strength of 4500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

SIKA DEUTSCHLAND GMBH — Type SCHONOX AP Rapid Plus

System No. 13

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick plywood or min 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

Vapor Barrier — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.

Vapor Barrier — (Optional) - Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies.

Floor Mat Materials* — (Optional, Not Shown) - Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

LOW & BONAR INC — EnkaSonic® by Colbond a member of the Low & Bonar group Types 125, 250, 250 Plus, 400, 400 Plus, 750, and 750 Plus.

Floor Mat Reinforcement — (Optional) - Refer to manufacturer's instructions regarding minimum thickness of floor topping for use with floor mat reinforcement.

Metal Lath — (Optional) — Expanded steel diamond mesh, 2.5 lb / sq yd loose laid over floor mat material.

Fiberglass Mesh Reinforcement — (Optional) — Coated non-woven glass fiber mesh grid loose laid over floor mat material.

2. Wood Joists — Min 2 by 10, spaced 16 in. OC and effectively fireblocked in accordance with local codes.

3. Cross Bridging — Min 1 by 3 in. or min 2 by 10 in. solid blocking.

3A. Horizontal Bridging — Used in lieu of Item 3 in same joist bay as ceiling damper (Item 4), when ceiling damper is employed. Wood 2 by 4 in. secured between joists with nails.

4. Ceiling Damper* - (Optional) — Max nom area shall be 198 sq in. Max rectangular size shall be 12 in. wide by 16-1/2 in. long. Max height of damper shall be 8-3/4 in. Aggregate damper openings shall not exceed 99 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions.

AIR BALANCE INC — Type 299 (See Item 7B)

AIR KING VENTILATION PRODUCTS — Series FRAS, Series FRAK, Series FRAKV

CENTRAL VENTILATION SYSTEMS CO L L C — Models C-S/R-HC(A), C-RD-HC(A)

GREENHECK FAN CORP — Model CRD-1WJ

METAL-FAB INC — Models MSCDHC, MRCDHC

METAL INDUSTRIES INC — Models CD-S/R-HC, CD-S/R-HC-A, CD-RD-HC, CD-RD-HC-A

NCA MFG INC — Models CD-S/R-HC, CD-S/R-HC-A, CD-RD-HC, CD-RD-HC-A

BRISK MFG INC — Model BM-50-CRD-S/R-WT

PRICE INDUSTRIES LTD — Models CD-S/R-HC, CD-RD-HC

RUSKIN COMPANY — Model CFD7

UNITED ENERTECH CORP — Models C-S/R-HC(A), C-RD-HC(A)

5. Batts and Blankets* - (Optional) — Nom 48 by 16 by 3 in. thickness of glass fiber batts secured to joists on both sides with staples spaced 12 in. OC.

CERTAINTED CORP

KNAUF INSULATION LLC

JOHNS MANVILLE

KNAUF INSULATION LLC

MANSON INSULATION INC

OWENS CORNING

6. Resilient Channels — Resilient channels, formed from No. 25 MSG galv steel and shaped as shown, spaced 24 in. OC perpendicular to joists. Channels overlapped 1/2 in. at ends and secured to each joint with one 1-1/4 in. long No. 7 Type 5 bugle head screw. Additional resilient channels positioned so as to coincide with end joints of gypsum board (Item 7). Additional channels shall extend min 3 in. beyond each side edge of board.

PRINTS ISSUED



THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
UL ASSEMBLIES - L516

PROJECT NUMBER: 23099

SHEET NUMBER:

G-212

6A. **Steel Framing Members*** — (Not Shown) - As an alternate to Item 6. Used with Item 7A only.

a. Furring Channels — Hat-shaped furring channels, 7/8 in. deep by 2-5/8 in. wide at the base and 1-1/4 in. wide at the face, formed from No. 25 ga. galv steel, spaced max. 16 in. OC perpendicular to joists and Cold Rolled Channels (Item 6Ab). Furring channels secured to Cold Rolled Channels at every intersection with a 1/2 in. pan head self-drilling screw through each furring channel leg. Ends of adjoining channels overlapped 4 in. and tied together with two double strand No. 18 SWG galv steel wire ties, one at each end of overlap. Supplemental furring channels at base layer and outer layer gypsum board butt joints are not required. Optional Batts and Blankets may be draped over furring channels as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 7A.

b. Cold Rolled Channels — 1-1/2 in. by 1/2 in., formed from No. 16 ga. galv steel, positioned vertically and parallel to joists, friction-fitted into the channel caddy on the Steel Framing Members (Item 6Ad). Adjoining lengths of cold rolled channels lapped min. 6 in. and wire-tied together with two double strand 18 SWG galv steel wire ties, one at each end of overlap.

c. Blocking — Where joint design does not permit direct, full contact of the hanger bracket, a piece of nominal 2 by 4 in. lumber (blocking), min. 6 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the joists (Item 2) at the top and bottom of the blocking at each Steel Framing Member (Item 6Ad) location.

d. Steel Framing Members* — Hangers spaced 48 in. OC, max along joist, and secured to the Blocking (Item 6Ac) on alternating joists with a single 5/16 in. by 2 in. hex head lag bolt four #6 1-1/4 in. drywall screws through mounting hole(s) on the hanger bracket. The two 1/4 in. long steel teeth on the hanger are embedded in the side of the blocking. Hanger positioned on blocking and leveling bolt height adjusted such that furring channels are flush with bottom of joists before gypsum board installation. Spring gauge of hanger chosen per manufacturer's instructions.

KINETICS NOISE CONTROL INC — Type ICW.

6B. **Steel Framing Members*** — (Not Shown) As an alternate to Item 6, furring channels and Steel Framing Members as described below:

a. Furring Channels — Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. deep, by 7/8 in. deep, spaced 24 in. OC perpendicular to joists. Channels secured to joists as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.

b. Steel Framing Members* — Used to attach furring channels (Item a) to joists (Item 2). Clips spaced 48 in. OC. RSIC-1 and RSIC-1 (2.75) secured to alternating joists with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to alternating trusses with No. 8 x 1-1/2 in. coarse drywall screws through the center hole. RSIC-Si-X secured to alternating joists with No. 10 x 3-1/2 in. coarse screw. Furring channels are friction fitted into clips. RSIC-1, RSIC-Si-X, and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped as described in Item a. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7.

PAC INTERNATIONAL L L C — Types RSIC-V, RSIC-V (2.75), RSIC-V (2.75), RSIC-Si-X.

6C. **Steel Framing Members*** — (Not Shown) — As an alternate to Item 6, furring channels and Steel Framing Members as described below:

a. Furring Channels — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to joists. Channels secured to joists as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.

b. Steel Framing Members* — Used to attach furring channels (Item a) to joists (Item 2). Clips spaced 48 in. OC, and secured to alternating joists with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. Adjoining channels are overlapped as described in Item a. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7.

PLITEQ INC — Type GENELCUP.

6D. **Alternate Steel Framing Members*** — (Not Shown) As an alternate to Item 6, furring channels and Steel Framing Members as described below:

a. Furring Channels — Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to joists. Channels secured to joists as described in Item b.

b. Steel Framing Members* — Used to attach furring channels (Item a) to the wood joists (Item 2). Clips spaced at 48 in. OC and secured to the bottom of the joists with one 2-1/2 in. Coarse Drywall Screw with 1 in. diam washer through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and tied together with double strand of No. 18 AWG galvanized steel wire. Additional clips are required to hold the Gypsum Butt joints as described in Item 7.

STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips — Type A237 or A237R.

6E. **Alternate Steel Framing Members*** — (Not Shown) As an alternate to Item 6, furring channels and Steel Framing Members as described below.

a. Furring Channels — Formed of No. 25 MSG galv steel, 2-1/2 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to joists. Channels secured to joists as described in Item b.

b. Steel Framing Members* — Used to attach furring channels (Item a) to the wood joists (Item 2). Clips spaced at 48 in. OC and secured to the bottom of the joists with one 2-1/2 in. Coarse Drywall Screw with 1 in. diam washer through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and tied together with double strand of No. 18 AWG galvanized steel wire. Additional clips are required to hold the Gypsum Butt joints as described in Item 7.

REGUPOIL AMERICA — Type SonusClip.

6F. **Steel Framing Members*** — (Optional, Not Shown) — As an alternate to Item 6.

a. Furring Channels — Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to the joists. Channels secured to Cold Rolled Channels at every intersection with a 3/4 in. TEK screw through each furring channel leg. Ends of adjoining channels overlapped 12 in. and fastened together with two double strand No. 18 SWG galv steel wire ties, one at each end of overlap, or with two 3/4 in. TEK screws in each leg of the overlap section. Two furring channels positioned 3 in. OC, 1-1/2 in. on each side of gypsum board (Item 7) end joints, each extending a min of 6 in. beyond both side edges of the board.

b. Cold Rolled Channels — 1-1/2 in. by 1/2 in., formed from No. 16 ga. galv steel, positioned vertically and parallel to joists, friction-fitted into the channel caddy on the Steel Framing Members (Item 6Fc) and secured with two 3/4 in. TEK screws. Adjoining lengths of cold rolled channels lapped min. 12 in. and secured along bottom legs with four 3/4 in. TEK screws and wire-tied together with two double strand 18 SWG galv steel wire ties, one at each end of overlap.

c. Steel Framing Members* — Spaced 48 in. OC, max along joist, and secured to the joist on alternating joists with two, #10 x 1-1/2 in. screws through mounting holes on the hanger bracket.

PAC INTERNATIONAL L L C — Type RSIC-Si-CRC EZ Clip.

6G. **Steel Framing Members*** — (Optional, Not Shown) — As an alternate to Item 6.

a. Furring Channels — Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to joists and friction fit into Steel Framing Members (Item 6Gb). Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap or with two TEK screws along each leg of the 6 in. overlap. Two furring channels positioned 6 in. OC, 3 in. on each side of gypsum board (Item 7) end joints. Butt joint channels held in place by strong back channels placed upside down, on top of, and running perpendicular to primary furring channels, extending 6 in. longer than length of gypsum side joint. Strong back channels spaced maximum 48 in. OC. Strong back channels secured to every intersection of primary furring channels with four 7/16 in. pan head screws, two along each of the legs at intersections. Butt joint channels run perpendicular to strong back channels and shall be minimum 6 in. longer than length of joint, secured to strong back channels with 7/16 in. pan head screws, two along each of the legs at intersection with strong back channels.

b. Steel Framing Members* — Used to attach furring channels (Item 6Ga) to joists. Clips spaced 48 in. OC and secured along both webs at each furring channel intersection with min. 3/4 in. long self-drilling #10 x 1-1/2 in. screws through each of the provided hole locations. Furring channels are friction fitted into clips.

PAC INTERNATIONAL L L C — Type RSIC-Si-1 Ultra.

7. **Gypsum Board*** — Nom 5/8 in. thick, 48 in. wide gypsum board, installed with long dimension perpendicular to resilient channels and side edges located between joists. Gypsum board secured with 1 in. long No. 7 Type S bugle head screws spaced 12 in. OC. End joints of gypsum board similarly fastened to additional resilient channels positioned at end joint locations. Screws located 3/4 and 5/8 in. from side and end joints, respectively.

When **Steel Framing Members*** (Item 6B, 6C) are used, sheets installed with long dimension perpendicular to furring channels and side joints of sheet located beneath joists. Nom 1 in. long No. 6 Type S bugle head screws are driven through channel spaced 12 in. OC in the field. Gypsum board butt joints shall be staggered min. 2 ft. within the assembly, and occur between the main furring channels. At the gypsum board butt joints,

each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 6 in. on each end. The two furring channels shall be spaced approximately 3-1/2 in. OC, and be attached to the joist with one clip at each end of the channel. Screw spacing along the butt joint to attach the gypsum board to the furring channels shall be 8 in. OC.

When **Steel Framing Members** (Item 6D) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 3 in. on each end. The two support furring channels shall be spaced approximately 3 in. in from joint. Screw spacing along the gypsum board butt joint and along both additional channels shall be 8 in. OC. Additional screws shall be placed in the adjacent section of gypsum board into the aforementioned 3 in. extension of the extra butt joint channels as well as into the main channel that runs between. Butt joint furring channels shall be attached with one RESILMOUNT Sound Isolation Clip at each end of the channel.

When **Steel Framing Members** (Item 6E) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, an additional single length of furring channel shall be installed and be spaced approximately 3 in. from the butt joint (6 in. from the continuous furring channels) to support the floating end of the gypsum board. Each of these shorter sections of furring channel shall extend one joint beyond the width of the gypsum panel and be attached to the adjacent joists with one SonusClip at every joint involved with the butt joint.

When **Steel Framing Members** (Item 6F) are used, nom 5/8 in. thick, 4 ft wide gypsum board, installed as described in Item 7. Adjacent butt joints staggered minimum 48 in. OC.

When **Steel Framing Members** (Item 6G) are used, nom 5/8 in. thick, 4 ft wide gypsum board, installed as described in Item 7. Butt joints staggered minimum 24 in. OC.

AMERICAN GYPSUM CO — Type AG-C

CERTAINTED GYPSUM INC — Type C

CGC INC — Type C, IP-X2, IPC-AR

CERTAINTED GYPSUM INC — Type LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Types S, DAPC, TG-C

NATIONAL GYPSUM CO — Types eXP-C, FSK-C, FSW-C, FSW-G

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type C or PG-C

PANEL REY S A — Type PRC

THAI GYPSUM PRODUCTS PCL — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP, X2, IPC-AR

7A. **Gypsum Board** — When **Steel Framing Members** (Item 6A) are used, two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimensions perpendicular to furring channels (Item 6Aa). Base layer attached to the furring channels using 1 in. long Type S bugle head steel screws spaced 8 in. OC along butted end joints and 12 in. OC in the field of the board. Butted end joints centered on the continuous furring channels. Butted base layer end joints to be offset a min of 16 in. in adjacent courses. Outer layer

attached to the furring channels using 1-5/8 in. long Type S bugle head steel screws spaced 8 in. OC at butted end joints and 12 in. OC in the field. Butted end joints centered on the continuous furring channels and offset a min of 16 in. from butted end joints of base layer. Butted side joints of outer layer to be offset min 16 in. from butted side joints of base layer.

CGC INC — Type C, IP, X2, IPC-AR.

UNITED STATES GYPSUM CO — Types C, IP, X2, IPC-AR

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP, X2, IPC-AR

7B. **Gypsum Board*** — (Finish Rating - 16 min.) Required when Air Balance Inc. Type 299 ceiling damper (Item 4) is installed. Nom 5/8 in. thick, 48 in. wide gypsum board, installed and secured as described in items 7 and 7A.

UNITED STATES GYPSUM CO — Type C

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Type C

7C. **Gypsum Board*** (As an alternative to items 7, 7A and 7B) — Nom 5/8 in. thick, 48 in. wide gypsum board, installed and secured as described in items 7, 7A and 7B with max screw spacing 8 in. OC.

CGC INC — Type ULIX

UNITED STATES GYPSUM CO — ULIX

8. **Finishing System - (Not Shown)** — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads. Nom 2 in. wide paper tape embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum board.

9. **Grille** — Steel grille, installed in accordance with the installation instructions provided with the ceiling damper.

10. **Discrete Products Installed in Air-handling Spaces*** — Automatic Balancing Valve/Damper — (Not Shown - Optional) — For use with Item 4, Ruckin Company's Model CFD7 damper (CABS). Ceiling damper to be provided with plenum box per damper manufacturer's instructions with side outlet only. Entire assembly to be installed into any UL Class 0 or Class 1 flexible air duct in accordance with the instructions provided by the automatic balancing valve/damper manufacturer.

METAL INDUSTRIES INC — Model ABV-4, ABV-5, ABV-6

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Last Updated on 2022-02-04

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6/16/2020 BXUV/W456 | UL Product IQ

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BXUV/W456

Design/Spec/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements governing the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction manner encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate installation instructions.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire Resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variations

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variations

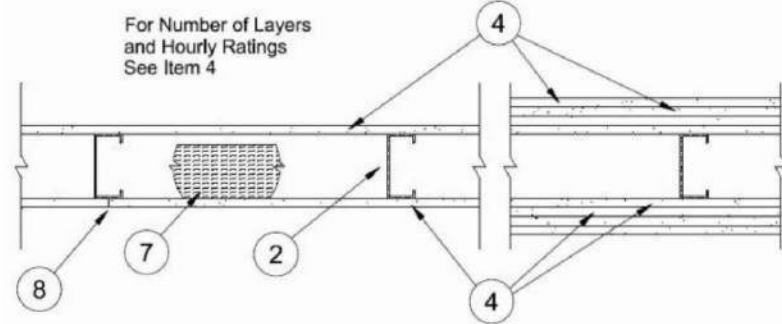
Design No. W456

June 10, 2020

Bearing Wall Rating 3/4 Hr., 1, 1-1/2 or 2 Hr. (See Item 4)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUVJ or BXUV7

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



1. **Steel floor and Ceiling Tracks** — (Not Shown) Top and bottom tracks of wall assemblies shall consist of steel members, min No. 20 MSG (0.032 in. min bare metal thickness) steel or min No. 20 MSG (0.036 in. thick) galv steel or No. 20 MSG (0.031 in. thick) primed steel, that provide a sound structural connection between steel studs, and to adjacent assemblies such as floor, ceiling, and/or other walls. Attached to floor and ceiling assemblies with steel fasteners spaced not greater than 24 in. OC.

2. **Steel Studs** — Min 3-1/2 in. wide, No. 20 MSG (0.032 in. min bare metal thickness) corrosion protected cold formed steel studs designed in accordance with the current edition of the Specification for the Design of Cold-Formed Steel Structural Members by the American Iron and Steel Institute. All design details enhancing the structural integrity of the wall assembly, including the axial design load of the studs, shall be as specified by the steel stud designer and/or producer, and shall meet the requirements of all applicable local code agencies. The max stud spacing of wall assemblies shall not exceed 24 in. OC (or 16 in. OC when Item 5b is used). Studs attached to floor and ceiling tracks with 1/2 in. long Type S-12 steel screws on both sides of studs or by welded or bolted connections designed in accordance with the AISI specifications.

3. **Framing Members* - Steel Studs** — In lieu of Item 2 Min 3-1/2 in. wide, No. 20 MSG (0.032 in. min bare metal thickness) corrosion protected cold formed steel studs designed in accordance with the current edition of the Specification for the Design of Cold-Formed Steel Structural Members by the American Iron and Steel Institute. All design details enhancing the structural integrity of the wall assembly, including the axial design load of the studs, shall be as specified by the steel stud designer and/or producer, and shall meet the requirements of all applicable local code agencies. The max stud spacing of wall assemblies shall not exceed 24 in. OC (or 16 in. OC when Item 5b is used). Studs attached to floor and ceiling tracks with 1/2 in. long Type S-12 steel screws on both sides of studs or by welded or bolted connections designed in accordance with the AISI specifications.

BAILEY METAL PRODUCTS LTD

2B. **Framing Members* - Steel Studs** — In lieu of Item 2 Min 3-5/8 in. wide, No. 20 MSG (0.036 in. min. thickness) corrosion protected cold formed steel studs designed in accordance with the current edition of the Specification for the Design of Cold-Formed Steel Structural Members by the American Iron and Steel Institute. All design details enhancing the structural integrity of the wall assembly, including the axial design load of the studs, shall be as specified by the steel stud designer and/or producer, and shall meet the requirements of all applicable local code agencies. The max stud spacing of wall assemblies shall not exceed 24 in. OC (or 16 in. OC when Item 5b is used). Studs attached to floor and ceiling tracks with 1/2 in. long Type S-12 steel screws on both sides of studs or by welded or bolted connections designed in accordance with the AISI specifications.

BAILEY METAL PRODUCTS LTD

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7B. **Fiber, Spray®** — (Optional) As an alternate to Batts and Blankets (Item 7) Spray applied mineral wool insulation. The fiber is applied with adhesive, at a minimum density of 4.0 pcf to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. See Fiber, Spray® (CAZ).

AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus

8. **Joint Tape and Compound** — (Not Shown) Vinyl or caulk, dry or premixed joint compound applied in two coats to joints and screw heads of outer layer. Perforated paper tape, 2 in. wide, embedded in first layer of compound over all joints of outer layer.

9. **Furring Channels** — (Optional, Not Shown, for single or double layer system) Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 steel fasteners.

10. **Foamed Plastic*** — (Not Shown - For use with brick veneer as outlined in Item 5A - Maximum 2 in. thick rigid polystyrene insulation attached to studs with fasteners of sufficient length to penetrate the foam and 3/16 in. into the stud. A minimum 1 in. air space is to be maintained between the outer surface of the foamed plastic and the inner surface of the brick veneer.

ATLAS MOLDED PRODUCTS, A DIVISION OF ATLAS ROOFING CORPORATION — Type ThermaTite

OWENS CORNING SCIENCE AND TECHNOLOGY, LLC

10A. **Foamed Plastic*** — (Optional, Not Shown) - Mortar drop protection - Foamed plastic with mortar control device attached, continuous, by drainage holes at bottom of air space behind brick veneer.

OWENS CORNING SCIENCE AND TECHNOLOGY, LLC — WeepGuard

10B. **Foamed Plastic*** — Polystyrene/urethane foamed plastic insulation boards, any thickness, Classified in accordance with BRXX and / or CCWV. May be used with any exterior facing shown under Items 5a, 5c, 5d and 5e.

ATLAS MOLDED PRODUCTS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — Type "Xo" and "Xo" Ply

CARLISLE COATINGS & WATERPROOFING INC — Type R24-SHEATH

FIRESTONE BUILDING PRODUCTS CO L L C — "Everedge C1 Roll Exterior Wall Insulation" and "Everedge G1 Glass Exterior Wall Insulation"

HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — Type "Xo" and "Xo" Ply

IMAX, A BUSINESS UNIT OF SKA CORPORATION — Types "TSX-8500", "ECOMAX FR", "TSX-8510", "ECOMAX FR WR", "ECOMAX", "ECOMAX FR Air Barrier", "Thermalash-30", "Thermalash-30", "Thermalash-30", "Thermalash-30"

THE DOW CHEMICAL CO — Type Therma Sheathing, Therma Light Duty Insulation, Therma Heavy Duty Insulation, Therma Metal Building Board, Therma White Finish Insulation, Therma D Insulation, Therma XADOX® Exterior Insulation, Therma H Insulation, Therma H Insulation, Therma Plus Plus Panel, Therma Heavy Duty Poly (HD), and TUFF-8 Insulation

10C. **Building Unit*** — Polystyrene/urethane foamed plastic composite insulation boards, any thickness, Classified in accordance with B20X. May be used with any exterior facing shown under Items 5a, 5c, 5d and 5e.

HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — Type "Xo" and "Xo" Ply

LAMINATORS INC — Type "Omega C"

IMAX, A BUSINESS UNIT OF SKA CORPORATION — Types Thermalash-SL, ECOMAX, ECOMAX FR Ply and Thermalash-C attached to studs with Type S screws long enough to penetrate studs a minimum of three threads.

10D. **Foamed Plastic*** — (As an alternate to Item 10) — Expanded polystyrene insulation installed to a minimum nominal density of 2.0 lb/ft³.

BAF CORP STYRENE FOAMS DIV — Type Neopor "F" Series

11. **Wall and Partition Findings and Accessories*** — (Optional, Not Shown) For use with Item 1, Items 2 and 2A, Item 3, Item 4, 4A, Item 6, Item 7, Item 8 and Item 9. For maximum fire rating of 1 hour. On one side of the wall, over the first layer of Gypsum Board (Item 4) to 4B, install Reflector membrane with the glass side facing outdoors. Membrane installed with 1/5" staples spaced 12 inches on center in both directions as per manufacturer's instructions, seams in membrane to be overlapped by 2 inches. When Reflector membrane is used an additional layer of Gypsum Board that is identical to the one used in the first layer and as specified in Item 4 to 4B shall be installed over the membrane. The additional layer of Gypsum Board to be installed through the membrane to the stud as specified in Item 4 to 4B except the fastener length shall be increased by a minimum of 5/8 inch. Install Batts and Blankets in the stud cavity as per Item 7. On the other side of the wall prior to the installation of the Gypsum Board install Resilient Channels, 25 MSG galv steel, spaced vertically 24 in. OC. Flange portion screw attached to one side of studs with 1-1/4 in. long diamond shaped point double lead Phillips head steel screws. Over the Resilient Channels install 3/4 inch SONQpan panel secured to the Resilient Channels with drywall screws and washers spaced at 16 in. OC on the perimeter of the panel and 8 in. OC in the field of the panel. Over the SONQpan panel install the same Gypsum Board as specified in Item 4 to 4B with the fastener length increased by minimum 3/4 inch. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

MIL — Reflector membrane, SONQpan panel

12. **Wall and Partition Findings and Accessories*** — (Optional, Not Shown) - **When the Wall Assembly is used as an External Wall, on the External side of the wall one of the following Wall and Partition and Facing Accessories may be used, refer to Items (A) to (C) below.**

A. Non Insulated System with Metal Channels — Install moisture barrier over the Gypsum Board Item 4 and Install Acry Metal Channels vertically at a horizontal spacing not greater than 24 inches OC over the moisture barrier. Acry Metal Channels attached through the moisture barrier and the Gypsum Board to the Steel Studs Item 2 using fasteners specified by the manufacturer and fasteners spaced max. 24 in. OC. Install Acry Panels on Acry Metal Channels using 1-1/4" long corrosion coated stainless

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3. **Lateral Support Members** — (Not Shown) Where required for lateral support of studs, support may be provided by means of steel straps, channels or other similar means as specified in the design of a particular steel stud and wall assembly.

4. **Gypsum Board*** — Any 1/2 in. thick UL Classified Gypsum Board that is eligible for use in Design No. X515. Any 5/8 in. thick UL Classified Gypsum Board that is eligible for use in Design Nos. L501, L502 or L505. Gypsum board bearing the UL Classification Marking as to Fire Resistance. Applied vertically with joints between layers staggered. Outer layer of 3 layer construction may be applied horizontally subject to the following. The thickness and number of layers and percent of design load for the 45 min. 1 hr., 1-1/2 hr. and 2 hr ratings are as follows:

Rating	Wallboard Protection Both Sides of Wall - No. of Layers & Thickness of Each in. Each Layer	% of Design Load
45 min	1 layer, 1/2 in. thick	100
1 hr	1 layer, 5/8 in. thick	100
1-1/2 hr	2 layers, 1/2 in. thick	100
1-1/2 hr	2 layers, 5/8 in. thick	100
2 hr	2 layers, 5/8 in. thick or	80
2 hr	3 layers, 1/2 in. thick	100

GEORGIA-PACIFIC GYPSUM L L C (View Classification)

4A. **Gypsum Board*** — (As an alternate to Item 4) Nom. 5/8 in. thick gypsum panels, with square edges, applied horizontally. Gypsum panels fastened to framing with 1 in. long bugle head steel screws spaced a max 16 in. OC, with last 2 screws 3/4 in. and 4 in. from each edge of board. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs on interior walls need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers on interior walls (multi-layer systems) staggered a min of 12 in.

GEORGIA-PACIFIC GYPSUM L L C — Type S60

5. **Exterior Findings - Optional - Not Shown** — One of the following findings may be applied over the gypsum board (Item 4) or 4A).

- a. Siding, Brick, or Stone** — Aluminum siding, steel siding, brick veneer, or stone attached to studs over gypsum sheathing and meeting the requirements of local code agencies. When a min 3-3/4 in. thick brick veneer facing is used, the Exterior Wall Rating is applicable with exposure on either face. Brick veneer wall attached to studs with composite metal wall ties attached to each stud with steel screws, not more than each sixth course of brick. When a min 3-3/4

UL Product iQ®



BXUV.U356 - Fire-resistance Ratings - ANSI/UL 263

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

Fire-resistance Ratings - ANSI/UL 263

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States
BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variations

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variations

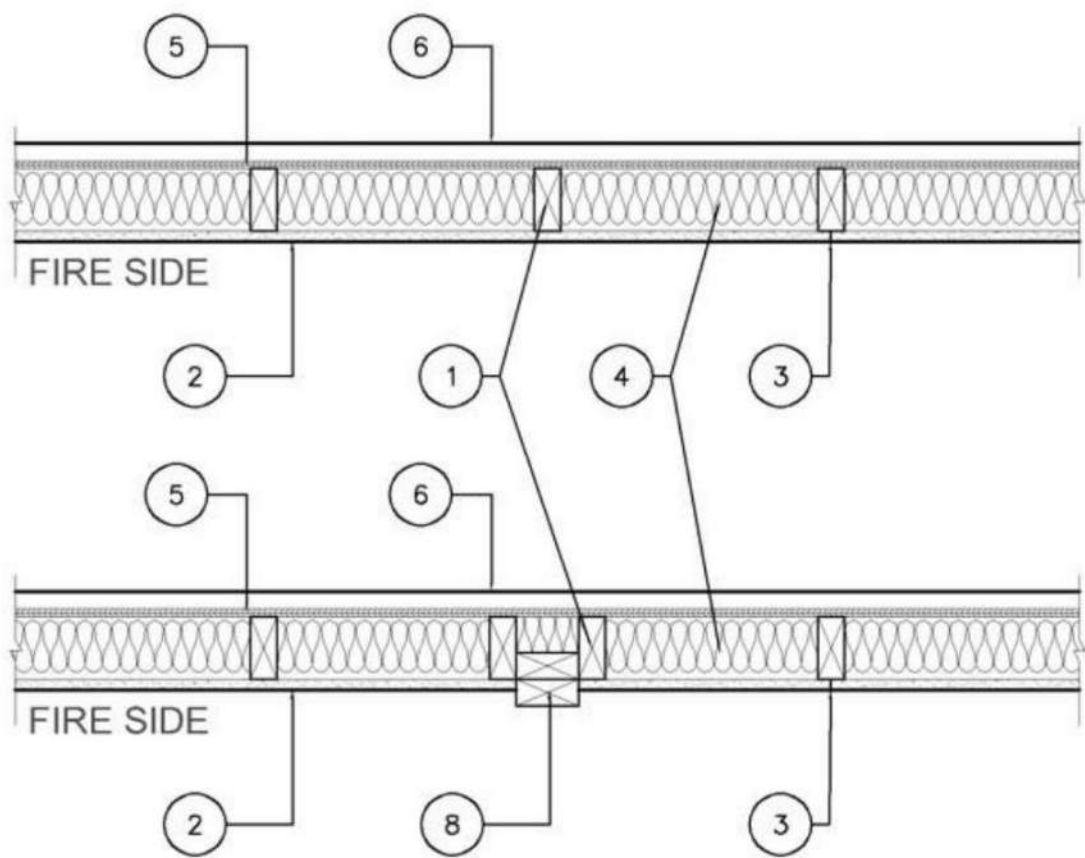
Design No. **U356**

May 25, 2022

Bearing Wall Rating - 1 Hr Rating Exposed to Fire on Interior Face Only
Bearing Wall Rating — 1 Hr Rating Exposed to Fire on Exterior Face (See Item 6E)
Finish Rating — 23 Min or 25 Min (See Item 2C)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Wood Studs** — Nom 2 by 4 in, spaced 16 in, OC with two 2 by 4 in. top and one 2 by 4 in. bottom plates. Studs laterally-braced by wood structural panel sheathing (Item 5). When **Mineral and Fiber Boards*** (Item 5A) are considered as bracing for the studs, the load is restricted to 76% of allowable axial load. Walls effectively fire stopped at top and bottom of wall.

2. **Gypsum Board*** — **Any 5/8 in. thick UL Classified Gypsum Board that is eligible for use in Design Nos. L501, G512 or U305.** Nom 5/8 in. thick, 4 ft wide, applied vertically and nailed to studs and bearing plates 7 in. OC with 6d cement-coated nails, 1-7/8 in. long with 1/4 in. diam head.

When Item **Steel Framing Members*** (Item 7 or any alternate clips), is used, gypsum panels attached to furring channels with 1 in. long Type 5 bugle-head steel screws spaced 12 in. OC.

When Item 7A **Steel Framing Members***, is used, two layers of gypsum panels attached to furring channels. Base layer attached to furring channels with 1 in. long Type 5 bugle-head steel screws spaced 12 in. OC. Face layer attached to furring channels with 1-5/8 in. long Type 5 bugle-head steel screws spaced 12 in. OC. All joints in face layers staggered with joints in base layers.

AMERICAN GYPSUM CO [\(View Classification\)](#) — CKNXR14196

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO [\(View Classification\)](#) — CKNXR19374

CABOT MANUFACTURING ULC [\(View Classification\)](#) — CKNXR25370

CERTAINTEED GYPSUM INC [\(View Classification\)](#) — CKNXR3660

CGC INC [\(View Classification\)](#) — CKNXR19751

CERTAINTEED GYPSUM INC [\(View Classification\)](#) — CKNXR18482

GEORGIA-PACIFIC GYPSUM L L C [\(View Classification\)](#) — CKNXR2717

LOADMASTER SYSTEMS INC [\(View Classification\)](#) — CKNXR11809

NATIONAL GYPSUM CO [\(View Classification\)](#) — CKNXR3501

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM [\(View Classification\)](#) — CKNXR7094

PANEL REV S A [\(View Classification\)](#) — CKNXR21796

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD [\(View Classification\)](#) — CKNXR19262

THAI GYPSUM PRODUCTS PCL [\(View Classification\)](#) — CKNXR27517

UNITED STATES GYPSUM CO [\(View Classification\)](#) — CKNXR1319

USG BORAL DRYWALL SFZ LLC [\(View Classification\)](#) — CKNXR38438

USG MEXICO S A DE C V [\(View Classification\)](#) — CKNXR16089

2A. **Gypsum Board*** — (As an alternate to Item 2, Not Shown) — Any 5/8 in. thick 4 ft wide gypsum panels that are eligible for use in Design Nos. L501, G512 or U305, supplied by the Classified Companies listed below shown in the **Gypsum Board*** (CKNO) category. Applied vertically and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board.

CGC INC

UNITED STATES GYPSUM CO

USG BORAL DRYWALL SFZ LLC

USG MEXICO S A DE C V

2B. **Gypsum Board*** — (As an alternate to Item 2, Not Shown) — 5/8 in. thick 4 ft wide gypsum panels applied vertically and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board.

AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C, LightRoc

CABOT MANUFACTURING ULC — Type X, 5/8 Type X, Type Blueglass Exterior Sheathing

CERTAINTEED GYPSUM INC — Type C, Type X-1, Easi-Lite Type X-2

GEORGIA-PACIFIC GYPSUM L L C — Types X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X, Type X ComfortGuard Sound Deadening Gypsum Board.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types PG-11, PGS-WRS, PGI.

THAI GYPSUM PRODUCTS PCL — Type C or Type X

2C. **Gypsum Board*** — (As an alternate to Item 2, Not Shown) — For Use with Item 5A only - 5/8 in. thick 4 ft wide gypsum panels applied horizontally and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screws 1 in and 4 in. from edges of board. Finish Rating is 25 min.

CABOT MANUFACTURING ULC — 5/8 Type X, Type Blueglass Exterior Sheathing

GEORGIA-PACIFIC GYPSUM L L C — Type X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types PG-11, PGS-WRS, PGI

2D. **Gypsum Board*** — (As an alternate to Item 2) — Not to be used with Item 7, 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically only and fastened to the studs and plates with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads, 7 in. OC.

NATIONAL GYPSUM CO — Type SBWB

2E. **Gypsum Board*** — (As an alternate to Items 2 through 2D) — Nominal 5/8 in. thick, 4 ft wide panels, secured as described in Item 2.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES.

2F. **Gypsum Board*** — (As an alternate to Item 2) — Not to be used with Item 7, 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically or horizontally and fastened to the studs and plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board.

CERTAINTEED GYPSUM INC — Type SilentFX

2G. **Wall and Partition Facings and Accessories*** — (As an alternate to Items 2 through 2F) — Nominal 5/8 in. thick, 4 ft wide panels, secured as described in Item 2.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock S27.

2H. **Gypsum Board*** — (As an alternate to Item 2) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally.

CERTAINTEED GYPSUM INC — Type LGFC6A (finish rating 21 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLXL

2I. **Gypsum Board*** — (As an alternate to Item 2) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.

AMERICAN GYPSUM CO — Types AGX-1 (finish rating 25 min.), M-Glass (finish rating 25 min.), AG-C (finish rating 25 min.), LightRoc (finish rating 25 min.)

NATIONAL GYPSUM CO — Type FSK, Type FSK-G, Type FSW, Type FSW-3, Type FSW-5, Type FSW-G, Type FSK-C, Type FSW-C, Type FSMR-C, Type FSW-6, Type FSL

2J. **Gypsum Board*** — (As an alternate to Item 2) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread steel screws spaced a max 8 in. OC with the last screw 1 in. from edge of board. When used in widths other than 48 in., gypsum boards are to be installed horizontally.

CERTAINTEED GYPSUM INC — Type C, Type X-1(finish rating 26 min), Easi-Lite Type X (finish rating 24 min), Easi-Lite Type X-2, Type EGRG or GlasRoc or GlasRoc Sheathing (finish rating 23 min)

3. **Joints and Fastener Heads** — (Not Shown) — Gypsum board joints covered with tape and joint compound. Fastener heads covered with joint compound.

4. **Batts and Blankets*** — Mineral fiber or glass fiber insulation, 3-1/2 in. thick, pressure fit to fill wall cavities between studs and plates. Mineral fiber insulation to be unfaced and to have a min density of 3 pcf. Glass fiber insulation to be faced with aluminum foil or kraft paper and to have a min density of 0.9 pcf (min R-13 thermal insulation rating).

See **Batts and Blankets*** (BKNV) Category in the Building Materials Directory and **Batts and Blankets*** (BZJZ) Category in the Fire Resistance Directory for names of Classified Companies.

4A. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 4) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft³. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft³, in accordance with the application instructions supplied with the product.

U S GREENFIBER L L C — INS735 and INS745 for use with wet or dry application. INS515LD, INS541LD, INS735, INS745, INS765LD, and INS773LD are to be used for dry application only.

4B. **Fiber, Sprayed*** — As an alternate to Item 4 and 4A — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 4.58 lb/ft³.

NU-WOOL CO INC — Cellulose Insulation

4C. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 4) — Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft³.

INTERNATIONAL CELLULOSE CORP — Celbar-RL

4D. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 4) — Spray applied, granulated mineral fiber material. The fiber is applied with adhesive, at a minimum density of 4.0 pcf, to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. See Fiber, Sprayed (CCA2).

AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus

5. **Wood Structural Panel Sheathing** — Min 7/16 in. thick, 4 ft wide wood structural panels, min grade "C-D" or "Sheathing". Installed with long dimension of sheet (strength axis) or face grain of plywood parallel with or perpendicular to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2 by 4 in. wood blocking. Attached to studs on exterior side of wall with 6d cement coated box nails spaced 6 in. OC at perimeter of panels and 12 in. OC along interior studs.

5A. **Mineral and Fiber Boards*** — As an alternate to Item 5 - Min 1/2 in. thick, 4 ft wide sheathing, installed vertically to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2 by 4 in. wood blocking. Attached to studs on exterior side of wall with 1-1/2 in. long galvanized roofing nails spaced 6 in. OC at perimeter of panels and 12 in. OC along interior studs. As an option a weather resistive barrier may be applied over the Mineral and Fiber Boards.

6. **Exterior Facings** — Installed in accordance with the manufacturer's installation instructions. One of the following exterior facings is to be applied over the sheathing:

A. **Vinyl Siding — Molded Plastic*** — Contoured rigid vinyl siding having a flame spread value of 20 or less.

See **Molded Plastic** (BTAT) category in the Building Materials Directory for names of manufacturers.

B. **Particle Board Siding** — Hardboard exterior sidings including patterned panel or lap siding.

C. **Wood Structural Panel or Lap Siding** — APA Rated Siding, Exterior, plywood, OSB or composite panels with veneer faces and structural wood core, per PS 1 or APA Standard PRP-108, including textured, rough sawn, medium density overlay, brushed, grooved and lap siding.

D. **Cementitious Stucco** — Portland cement or synthetic stucco systems with self-furring metal lath or adhesive base coat. Thickness from 3/8 to 3/4 in., depending on system.

E. **Brick Veneer** — Any type on nom 4 in. wide brick veneer. When brick veneer is used, the rating is applicable with exposure on either face. Brick veneer fastened with corrugated metal wall ties attached over sheathing to wood studs with 8d nail per tie. Ties spaced not more than each sixth course of brick and max 32 in. OC horizontally. One in. air space provided between brick veneer and sheathing.

F. **Exterior Insulation and Finish System (EIFS)** — Nom 1 in. **Foamed Plastic*** insulation bearing the UL Classification Marking, attached over sheathing and finished with coating system, or Portland cement or synthetic stucco systems, in accordance with manufacturer's instructions. See **Foamed Plastic** (BRXY and CCVW) categories for names of Classified companies.

G. **Siding** — Aluminum or steel siding attached over sheathing to studs.

H. **Fiber-Cement Siding** — Fiber-cement exterior sidings including smooth and patterned panel or lap siding.

I. **Wall and Partition Facings and Accessories*** — Stone veneer is mortar bonded to a lath, scratch coat and water resistant barrier applied to sheathing, installed in accordance with the manufacturers installation instructions, and meeting the requirements of local code agencies.

ELDORADO STONE OPERATIONS L L C — Type Eldorado Stone

J. **Cementitious Backer Units** — 1/2 in. or 5/8 in. min. 32 in. wide. Applied vertically or horizontally with vertical joints centered over studs. Fastened to studs and runners with cement board screws of adequate length to penetrate stud by a minimum 3/4 in., spaced a max of 8 in. OC. Horizontal joints need not be backed by framing. When Cementitious Backer Units are used, the rating is applicable with exposure on either face. Cementitious Backer Units for use as substrate for exterior finishes such as ceramic tile, slate, marble, natural stone, manufactured stone, thin brick, or Portland cement or synthetic stucco.

NATIONAL GYPSUM CO — Type PermaBase

6A. **Building Units*** — **As an alternate to Exterior Facing Item 6** — Insulated steel panels, 12 through 42 in. wide. Attached over sheathing through retainer clips to studs or support steel with No. 14 hex head self-tapping screws located at each joint in the concealed lip of the units and spaced in accordance with the structural design requirements. **KINGSPAN INSULATED PANELS INC** — Types 200, 300, 400, 500, or KS series, 2 through 6 in. thickness; CWP-V, H, 2 through 3 in. nominal thickness or Designwall 2000 or Designwall 4000, 2 and 3 in. nominal thickness.

7. **Steel Framing Members*** — (Optional, Not Shown) — Furring Channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 2.

b. Steel Framing Members* — Used to attach furring channels (Item 7A) to studs. Clips spaced 48 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-23/32 in. wide furring channels. RSIC-1 (2/75) clip for use with 2-23/32 in. wide furring channels.

PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2/75).

7A. **Steel Framing Members*** — (Optional, Not Shown. As an alternate to Item 7) — Furring channels and Steel Framing Members as described below:

a. Furring Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Two layers of gypsum board attached to furring channels as described in Item 2.

b. Steel Framing Members* — Used to attach furring channels (Item 7Aa) to interior side of studs. Clips spaced 48 in. OC, and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.

KINETICS NOISE CONTROL INC — Type Isomax.

7B. **Steel Framing Members*** — (Optional, Not Shown. As an alternate to Item 7) — Furring channels and Steel Framing Members as described below:

a. Furring Channels — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 2.

b. Steel Framing Members* — Used to attach furring channels (Item a) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

PLITEQ INC — Type Genie Clip

7C. **Steel Framing Members*** — (Optional, Not Shown. As an alternate to Item 7) — Furring channels and Steel Framing Members as described below:

a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 2.

b. Steel Framing Members* — Used to attach furring channels (Item 7Ca) to studs. Clips spaced 48 in. OC, and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.

STUOCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

7D. **Steel Framing Members*** — (Optional, Not Shown. As an alternate to Item 7) — Furring channels and Steel Framing Members as described below:

a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 7Db. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 2.

b. Steel Framing Members* — Used to attach furring channels (Item 7Da) to studs. Clips spaced 48 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

REGUPOI AMERICA — Type SonuClip

7E. **Steel Framing Members*** — (Optional, Not Shown. As an alternate to Item 7) — Resilient channels and Steel Framing Members as described below:

a. Resilient Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 2.

b. Steel Framing Members* — Used to attach resilient channels (Item 7Ea) to studs. Clips spaced 48 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw.

KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

7F. **Steel Framing Members*** — (Optional, Not Shown. As an alternate to Item 7) — Furring channels and Steel Framing Members as described below:

a. Furring Channels — Formed of No. 25 MSG galv steel, 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 2.

b. Steel Framing Members* — Used to attach furring channels (Item 7Fa) to studs. Clips spaced maximum 48 in. OC. Clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips.

CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

8. **Non-Bearing Wall Partition Intersection** — (Optional) — Two nominal 2 by 4 in. stud or nominal 2 by 6 in. stud nailed together with two 3in. long 10d nails spaced a max. 16 in. OC vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max. 16 in. OC vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2022-05-25

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PRINTS ISSUED

01/25/2024 - CITY SUBMITTAL

REVISIONS:

1 10/21/24 ADDENDUM #1



P.C.

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DENVER ▲ KANSAS CITY ▲ ST. LOUIS ▲ ATLANTA

THE VILLAGE AT DISCOVERY -
LOT 4

LEE'S SUMMIT, MO

SHEET TITLE
UL ASSEMBLIES - U356

PROJECT NUMBER: 23099

SHEET NUMBER:

G-213

1/26/2024 12:55:37 AM
C:\Users\Local Admin\Documents\230999_Lot 4 Apartments_Cover_PSD_24-0723_3mitcham\WIP\G-003.dwg

GENERAL NOTES

1. THE PROJECT SHALL MEET ALL APPLICABLE CODES SPECIFIED BY LOCAL AND FEDERAL REQUIREMENTS, INCLUDING BUT NOT LIMITED TO THE INFORMATION PRESENTED ON THE FOLLOWING G-300 SHEETS.

A. LOCAL AND FEDERAL REQUIREMENTS SHALL SUPERCEDE ANY CONFLICTING INFORMATION

2. ALL DIMENSIONS PROVIDED ON THE FOLLOWING G-300 SHEETS REPRESENT CLEAR DIMENSIONS AND ARE TAKEN FROM FACE OF FINISH/COMPONENT

UNIVERSAL DESIGN REQ'S

REQUIREMENTS FOR UNIVERSAL DESIGN HOUSING FOR THE ELDERLY AND SINGLE FAMILY DWELLINGS.

1. EQUITABLE USE

A. FLAT LANDING SURFACES LEADING TO DOORWAYS

B. LEVER ACTION DOOR HARDWARE

C. LEVER ACTION PLUMBING FIXTURE CONTROLS

D. NO THRESHOLDS AND/OR CHANGE OF WALKING SURFACE GREATER THAN 1/2 INCH

2. FLEXIBILITY IN USE

A. BLOCKING IN BATHROOM WALLS TO ACCEPT GRAB RAILS

B. BLOCKING IN OR BEHIND SHOWER/TUB ENCLOSURES TO ACCEPT GRAB RAILS

C. DOOR ASSEMBLIES AND CABINET DOOR ASSEMBLIES THAT WILL ACCEPT LEVER OR KNOB HARDWARE WITHOUT ALTERATION OR REPLACEMENT

3. SIMPLE AND INTUITIVE

A. BUTTONS ON CONTROL PANELS THAT CAN BE DISTINGUISHED BY TOUCH

4. PERCEPTIBLE INFORMATION

A. SIGNAGE WITH LARGE CONTRASTING PRINT IN ADDITION TO GENERALLY RECOGNIZED ICONS

B. CONTRASTING COLORS BETWEEN WIRING DEVICES [RECEPTACLES AND LIGHT SWITCHES] AND SURROUNDING SURFACES

C. CONTRASTING COLORS BETWEEN STEPS AND LANDINGS

D. CONTRASTING COLORS BETWEEN DIFFERENT FLOOR COVERINGS

E. CONTRASTING COLORS BETWEEN COUNTERTOPS AND FLOORING

F. CONTRASTING COLORS BETWEEN PLUMBING FIXTURES AND FLOORING/COUNTERTOPS

5. TOLERANCE FOR ERROR

A. LIGHT SWITCHES WITH LARGE FLAT PADS

B. NON-SLIP WALKING SURFACES

6. LOW PHYSICAL EFFORT

A. SELF CLOSING FIRE RATED DOORS MUST BE ON LOWEST SETTING WHILE COMPLYING WITH THE ENFORCED BUILDING CODE

B. NO INTERIOR RAMPS

7. SIZE AND SPACE FOR APPROACH AND USE

A. 36 INCH WIDE DOORS

B. FLOOR SPACE TO ACCOMMODATE A 60 INCH DIAMETER CIRCLE FOR WHEEL CHAIR TURNING IN KITCHEN AND BATHROOM

C. 42 INCH WIDE RESIDENTIAL UNIT AND COMMON HALLWAYS

OTHER HEIGHTS

IN UNIT PANEL BOARDS

ACCESSIBLE UNIT, "TYPE A" UNIT

"TYPE B" UNIT

PUBLIC RESTROOMS & COMMON AREAS

WINDOW LATCH/LOCK REQ'S

MOUNTING HEIGHTS

DOORS

DOOR CLEARANCES

DOOR HARDWARE HEIGHTS

MAIL BOXES

ALL MAILBOXES ASSOCIATED WITH DWELLING UNITS LOCATED ON AN ACCESSIBLE ROUTE AND REQUIRED TO MEET ANSI AND FHA SHALL BE WITHIN ACCESSIBLE REACH RANGE (SHADED).

ACCESSIBLE MAILBOXES

48" MAX AFF (CL OF LOCK)

28" MIN AFF (T.O. BOTTOM SHELF)

PROVIDE 30"x48" CLEAR FLOOR SPACE AT ALL ACCESSIBLE LOCKERS, CENTERED ON MAILBOX

ALL OTHER MAILBOXES

67" MAX AFF (CL OF LOCK)

28" MIN AFF (T.O. BOTTOM SHELF)

USPS ARROW LOCK

36" MIN & 48" MAX AFF (CL OF LOCK)

PARCEL LOCKER

15" AFF MIN (T.O. BOTTOM SHELF)

MINIMUM OF 1 PARCEL LOCKER FOR EVERY 5 MAILBOXES

MAIL BOXES

NOT TO SCALE

CLEAR FLOOR SPACES

1 RESIDENT LOCKER

2 USPS LOCK

3 PARCEL LOCKER

ACCESSIBLE LOCKERS

CLEAR FLOOR SPACE

FORWARD APPROACH

PARALLEL APPROACH

WHEELCHAIR TURNING SPACE

CLEAR FLOOR SPACE

NOT TO SCALE

WHEELCHAIR TURNING SPACE

NOT TO SCALE

REACH RANGES

20" MIN - 25" MAX PER ANSI, FHA

(2) 22" MAX PER ADAAG, UFAS

48" MIN

27" MIN

48" MIN

48" MIN

48" MIN

30" MIN

48" MIN

32" TO 42" PREFERRED

15" MIN

48" MAX

10" MAX

30" REQ'D

24" MAX

30" REQ'D

48" MAX

34" MAX

48" MAX

FOR ACCESSIBILITY 30" FOR TYP. CLOSET W/ TWO SHELVES

21"

48" MAX

54" FORWARD APPROACH

36"

14"

48" MAX

11" TYP

11" TYP

15" MIN

21" MAX

TO CENTERLINE OF SHELF

SHELVES

REACH REQUIREMENTS

NOT TO SCALE

PRINTS ISSUED

01/25/2024 - CITY SUBMITTAL

REVISIONS:

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GENEVILLE, MO

ST. LOUIS

ATLANTA

STATE OF MISSOURI

DAVID EUGENE HENDRICKS

REGISTERED ARCHITECT

NUMBER 335

01/25/24

THE VILLAGE AT DISCOVERY - LOT 4

LEE'S SUMMIT, MO

SHEET TITLE

ACCESSIBILITY STANDARDS

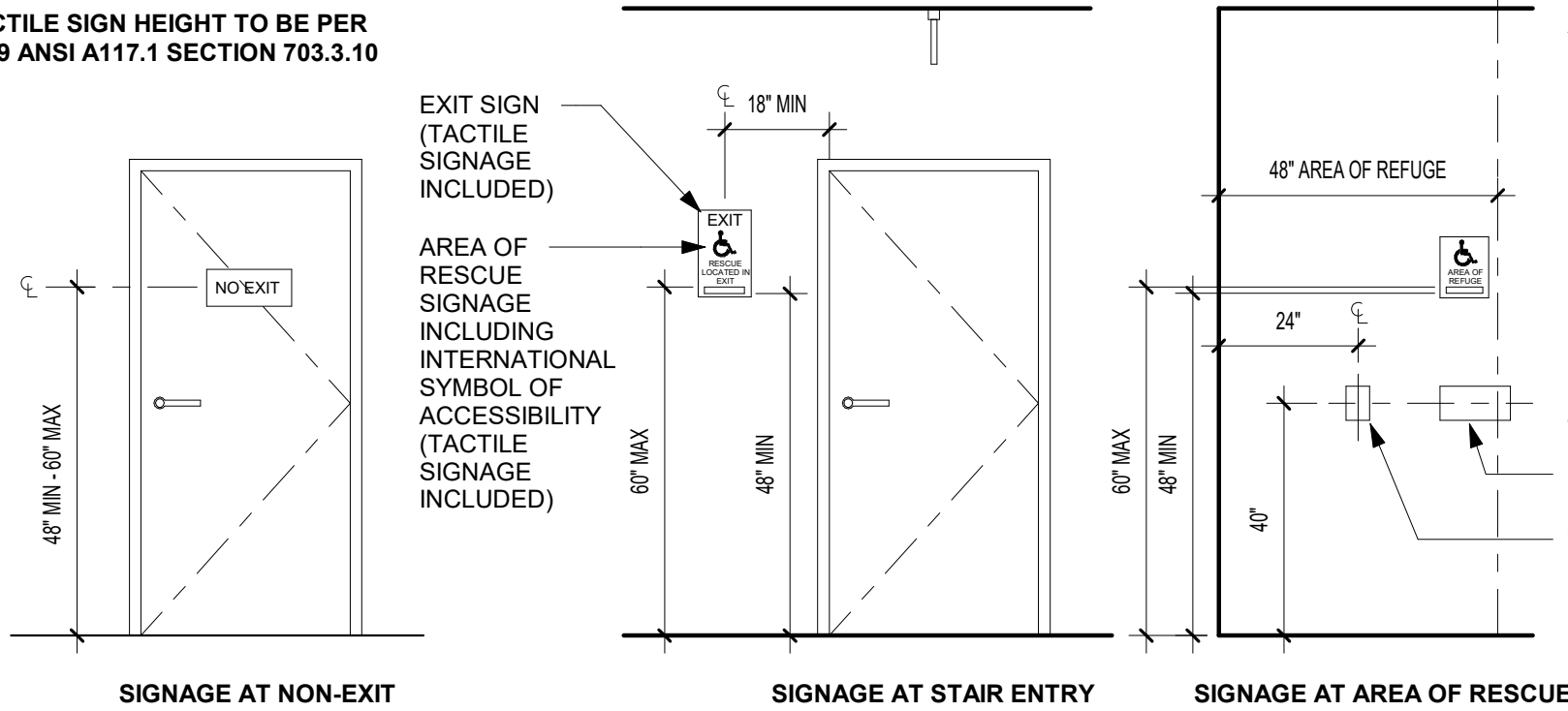
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SHEET NUMBER:

G-300

SIGNAGE

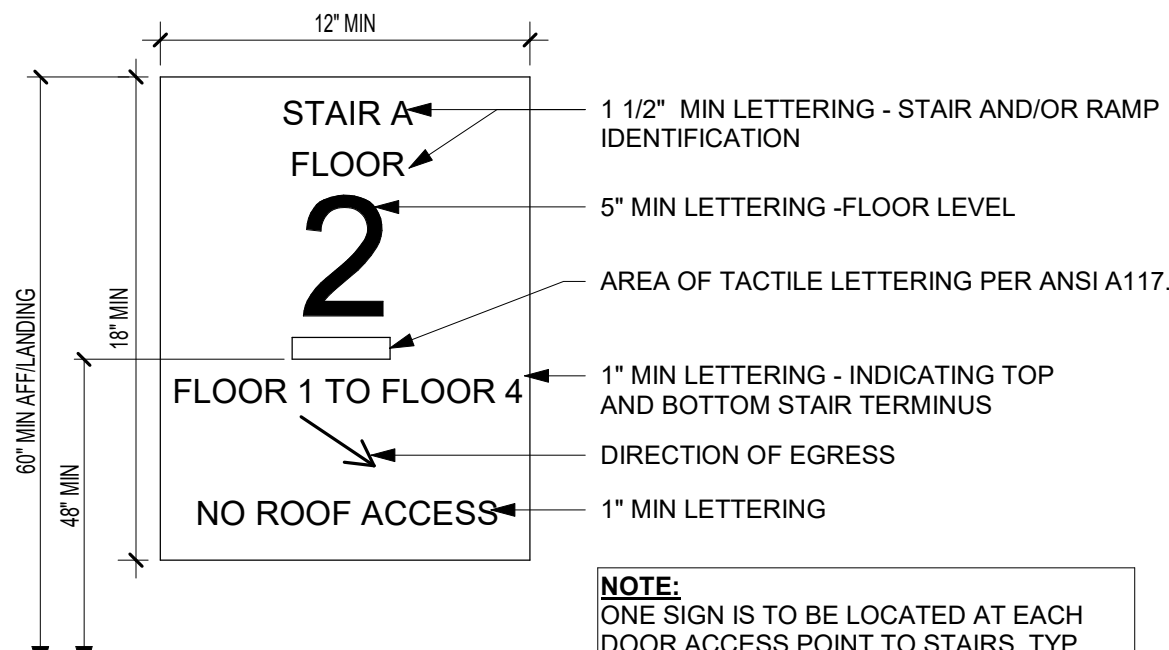
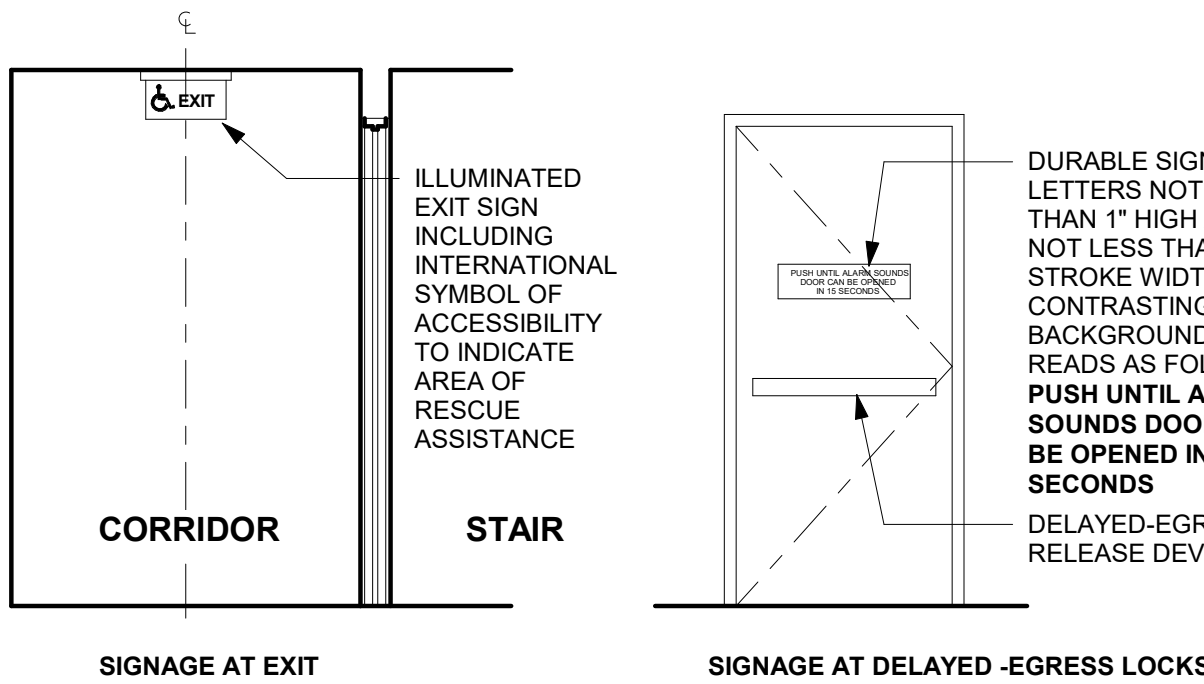
TACTILE SIGN HEIGHT TO BE PER
2009 ANSI A117.1 SECTION 703.3.10



- AREA OF RESCUE INSTRUCTIONS
INDICATING ALL OF THE FOLLOWING:**
1. DIRECTIONS TO FIND OTHER MEANS OF EGRESS
 2. UNLESS THEY ARE ASSISTING OTHERS, PERSONS ABLE TO USE THE EXIT STAIRWAY SHOULD DO SO AS SOON AS POSSIBLE
 3. INFORMATION ON PLANNED AVAILABILITY OF ASSISTANCE IN THE USE OF STAIRS OR SUPERVISED OPERATION OF ELEVATORS AND HOW TO SUMMON SUCH ASSISTANCE, DIRECTIONS FOR USE OF THE EMERGENCY COMMUNICATIONS SYSTEM.
 4. TWO-WAY COMMUNICATION DEVICE BETWEEN AREA OF RESCUE AND CENTRAL CONTROL POINT.

NOTE: SIGNS CONTAINING RAISED CHARACTERS AND BRAILLE SHALL BE LOCATED ON LATCH SIDE OF DOOR WITH A 18x18 CLEAR FLOOR SPACE OUTSIDE THE SWING OF THE DOOR

- STAIR SIGNAGE REQ'S:**
5. SIGNAGE PROVIDED AT EACH FLOOR LANDING AT INTERIOR EXIT STAIRWAYS AND/OR RAMP
 6. SIGNAGE PROVIDED AT EACH FLOOR LANDING AT INTERIOR EXIT STAIRWAYS AND/OR RAMP

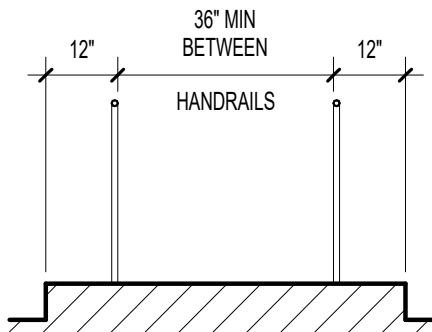
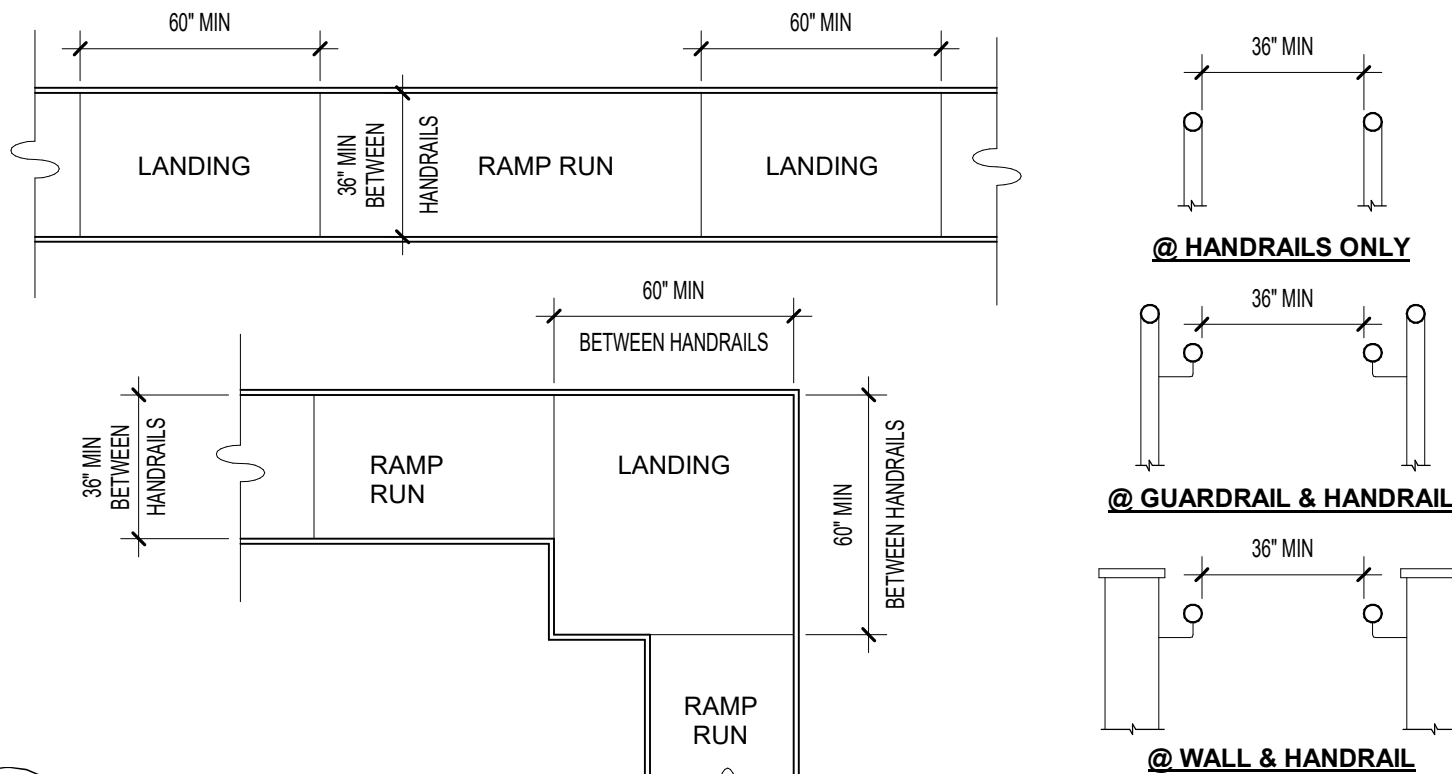


NOTE: ONE SIGN IS TO BE LOCATED AT EACH DOOR ACCESS POINT TO STAIRS, TYP

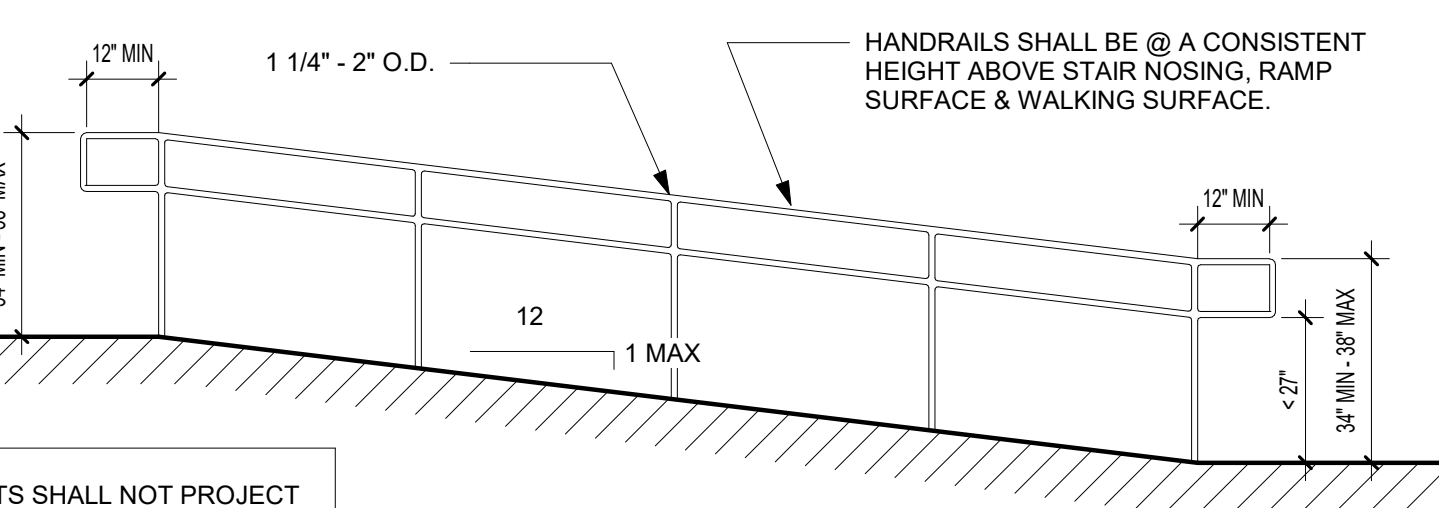
D4 CODE COMPLIANT SIGNAGE
NOT TO SCALE

A4 EGRESS STAIR SIGNAGE
NOT TO SCALE

RAMPS



- NOTES:**
1. WIDTH BETWEEN HANDRAILS IS 36" MIN; HANDRAILS AND HANDRAIL SUPPORTS SHALL NOT PROJECT INTO THE REQUIRED CLEAR WIDTH OF THE RAMP RUN.
 2. CROSS SLOPE OF RAMP SURFACES SHALL BE NO GREATER THAN 1:48 AND SHALL BE STABLE, FIRM, AND SLIP-RESISTANT. IF THE SLOPE IS EQ. OR GREATER THAN 1:20 YOU ARE REQ. TO HAVE HANDRAILS ON BOTH SIDES OF RAMP.
 3. RAMP RUNS WITH A RISE GREATER THAN 6 INCHES SHALL HAVE HANDRAILS.



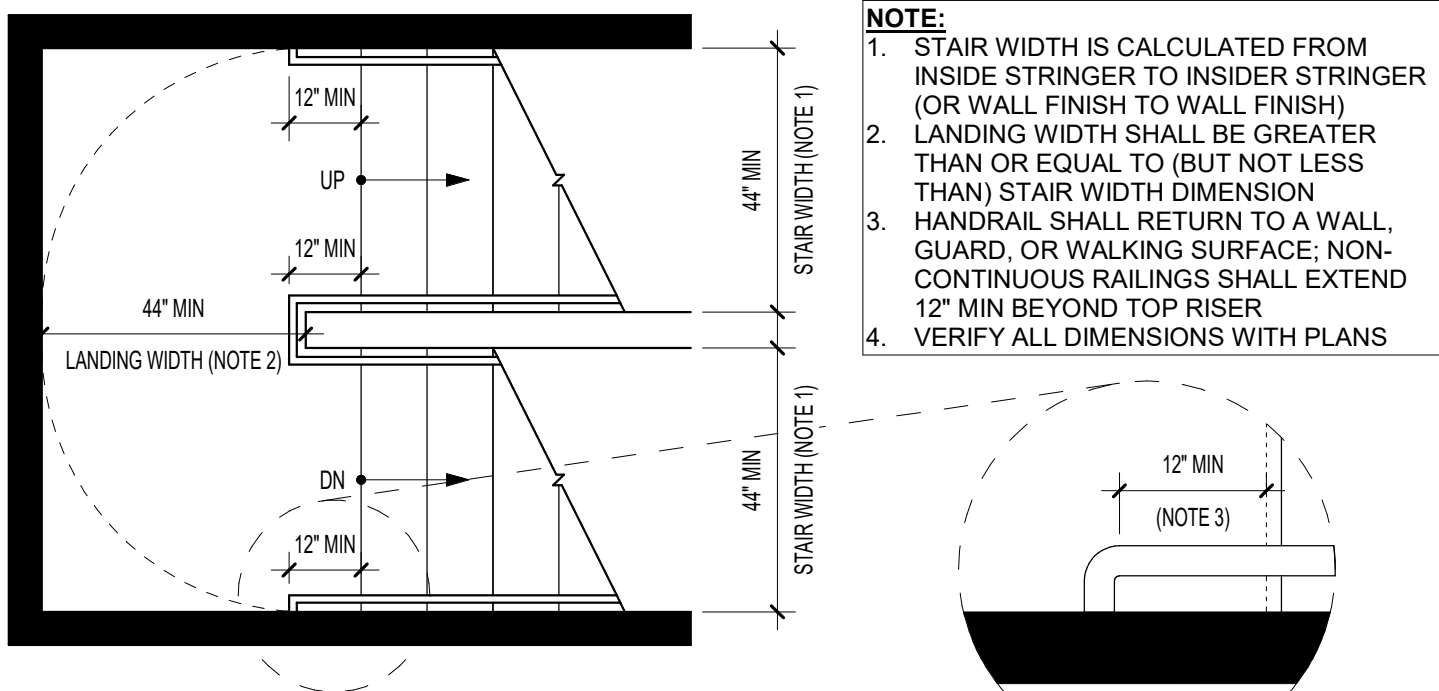
D3 RAMP LANDINGS
NOT TO SCALE

C3 RAMP & HANDRAIL SPECS
NOT TO SCALE

ADDITIONAL REQUIREMENTS

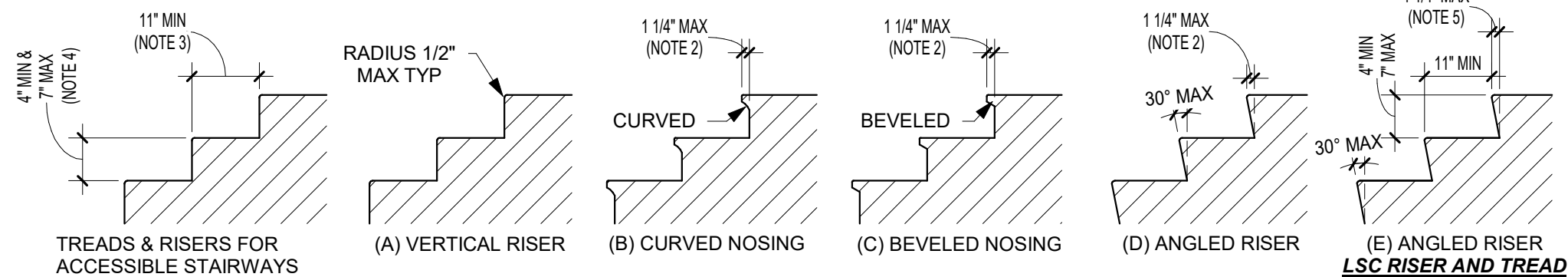
CARPET	MAX PILE HEIGHT SHALL BE 1/2 IN. EXPOSED EDGES OF CARPET SHALL BE FASTENED TO FLOOR SURFACES AND HAVE TRIM ALONG THE ENTIRE LENGTH OF THE EXPOSED EDGE. IF CARPET TILE IS USED ON AN ACCESSIBLE GROUND OF FLOOR SURFACE, IT SHALL HAVE A MAXIMUM COMBINED THICKNESS OF PILE, CUSHION, AND BACKING HEIGHT OF 1/2 IN.		
RAMPS	SLOPE	MAX RISE	MAX HORIZONTAL PROJECTION
	1:12 TO <1:16	30 IN.	30 FT.
	1:16 TO <1:20	30 IN.	40 FT.
	1:12 TO 1:20 - REQUIRES A HANDRAIL		
INTERIOR SIGNAGE	CHARACTER PROPORTION AND COLOR CONTRAST LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH-TO-HEIGHT RATIO BETWEEN 3:5 AND 1:1 AND A STROKE WIDTH-TO-HEIGHT RATIO BETWEEN 1:5 AND 1:10. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND AND BE NON-GLARE. CHARACTERS SHALL BE UPPER CASE. CHARACTER HEIGHT, MEASURED VERTICALLY FROM THE BASELINE OF THE CHARACTER, SHALL BE 5/8 IN. MINIMUM, AND 2 IN. MAXIMUM, BASED ON THE UPPERCASE LETTER "I". RAISED OR INDENTED CHARACTERS OR SYMBOLS LETTERS AND NUMBERS ON SIGNS SHALL BE RAISED OR INDENTED 1/32 IN. MIN AND SHALL BE SANS SERIF CHARACTERS. RAISED CHARACTERS OR SYMBOLS SHALL BE AT LEAST 5/8 IN HIGH, BUT NO HIGHER THAN 2 IN. INDENTED CHARACTERS OR SYMBOLS SHALL HAVE A STROKE WIDTH OF AT LEAST 1/4 IN. SYMBOLS OR PICTOGRAPHS ON SIGNS SHALL BE RAISED OR INDENTED 1/32 IN MIN MOUNTING LOCATION AND HEIGHT INTERIOR SIGNAGE SHALL BE LOCATED ALONGSIDE THE DOOR ON THE LATCH SIDE AND SHALL BE MOUNTED AT A HEIGHT OF BETWEEN 54 IN. AND 66 IN. ABOVE THE FINISHED FLOOR PER UFAS AND BETWEEN 48 IN. AND 60 IN. PER ANSI. REFER TO ICC/ANSI A117.1-2009, 703.2.8 FOR MORE REQUIREMENTS ON MOUNTING LOCATION.		

STAIRS AND RAILINGS



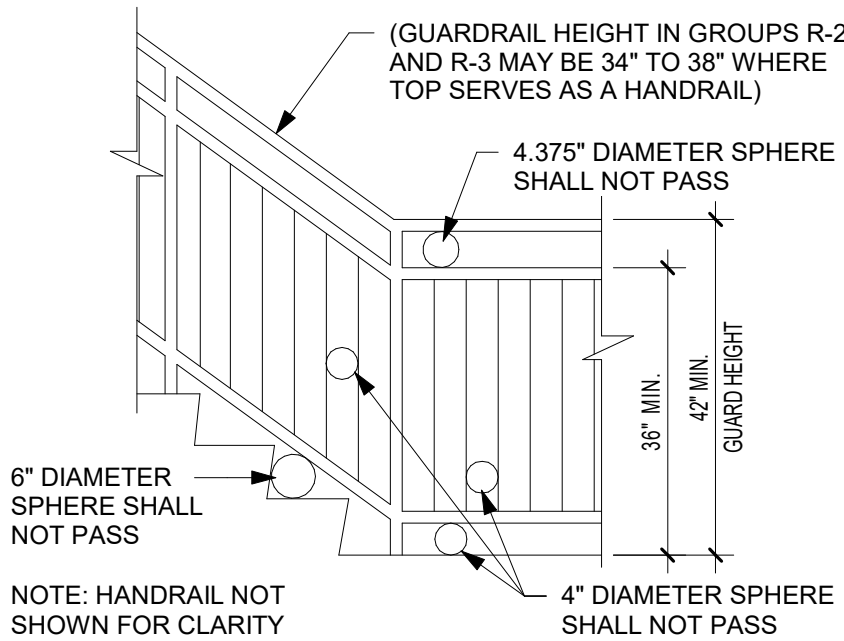
- NOTE:**
1. STAIR WIDTH IS CALCULATED FROM INSIDE STRINGER TO INSIDER STRINGER (OR WALL FINISH TO WALL FINISH)
 2. LANDING WIDTH SHALL BE GREATER THAN OR EQUAL TO (BUT NOT LESS THAN) STAIR WIDTH DIMENSION
 3. HANDRAIL SHALL RETURN TO A WALL, GUARD, OR WALKING SURFACE; NON-CONTINUOUS RAILINGS SHALL EXTEND 12" MIN BEYOND TOP RISER
 4. VERIFY ALL DIMENSIONS WITH PLANS

D2 EGRESS STAIR REQ'S
NOT TO SCALE

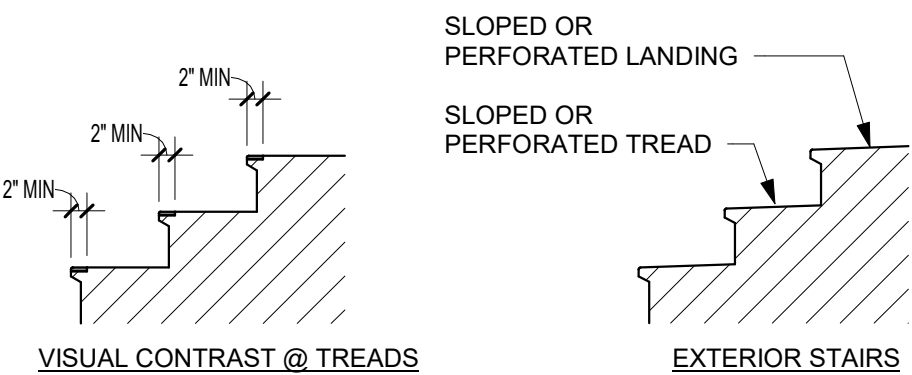


- NOTES:**
1. REFER TO THE CODE OF THE CITY & STAIR DETAILS BEFORE DETERMINING THE STYLE OF THE STAIR
 2. 3/4" MIN NOSING PROJECTION WITHIN R-2 DWELLING UNITS WITH SOLID RISERS WHERE THE TREAD DEPTH IS LESS THAN 11"
 3. 10" MIN TREAD DEPTH WITHIN INDIVIDUAL R-2 DWELLING UNITS
 4. 7 3/4" MAX RISER HEIGHT WITHIN INDIVIDUAL R-2 DWELLING UNITS
 5. 1 1/2" PER LIFE SAFETY CODE WHERE ALLOWABLE

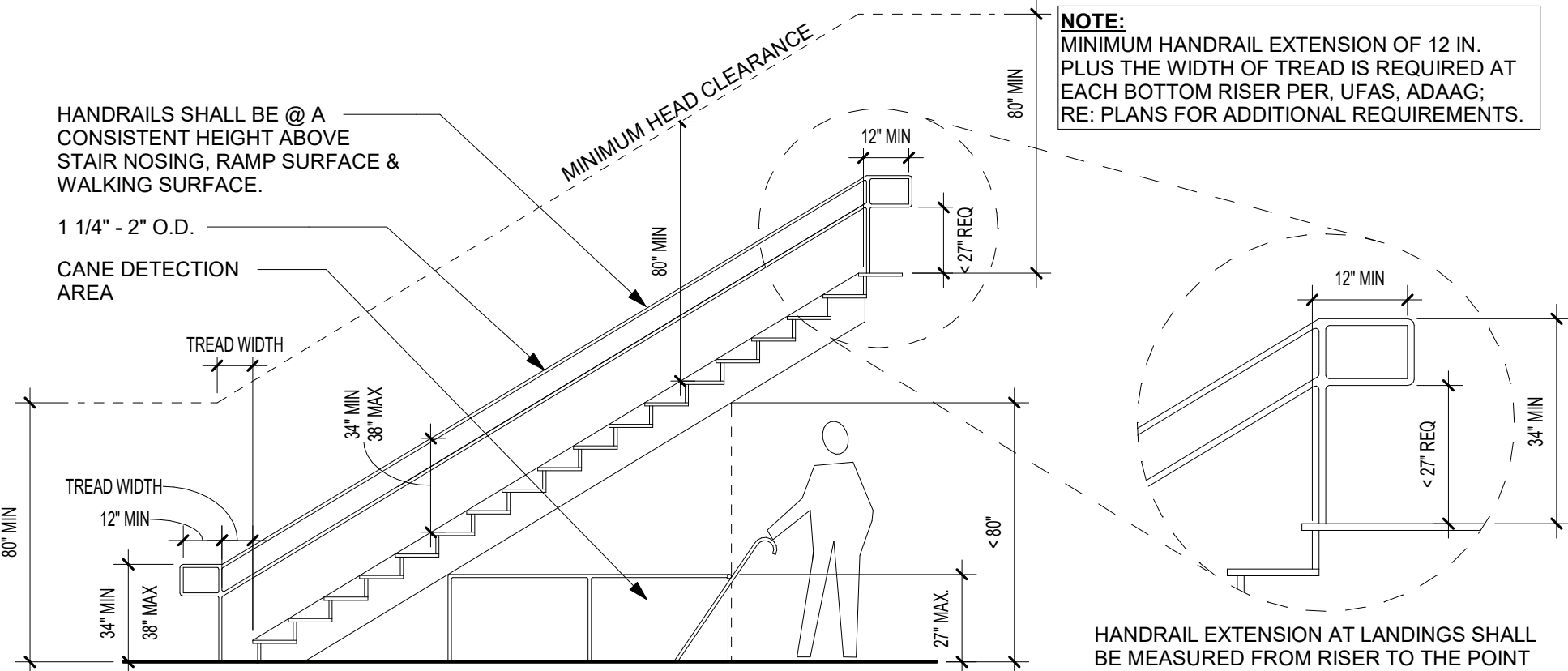
D1 STAIR RISER AND TREAD REQ
NOT TO SCALE



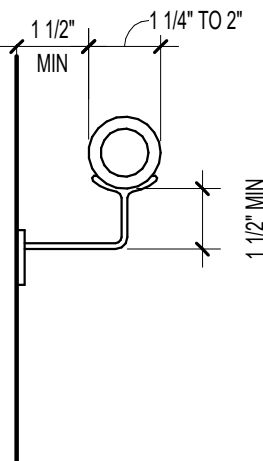
C2 STAIR OPENING GUARD LIMITATIONS
NOT TO SCALE



- THE LEADING 2" OF TREADS SHALL HAVE VISUAL CONTRAST OF DARK-ON-LIGHT OR LIGHT-ON-DARK FROM THE REMAINDER OF THE TREAD
- MATERIAL CHANGES SHALL PROVIDE A FLUSH SURFACE
- TREADS AND LANDINGS SUBJECT TO WET CONDITIONS SHALL BE DESIGNED TO PREVENT ACCUMULATION OF WATER



B2 STAIR PROTECTION & HANDRAIL DETAIL
NOT TO SCALE



B1 IBC HANDRAIL DETAIL
NOT TO SCALE

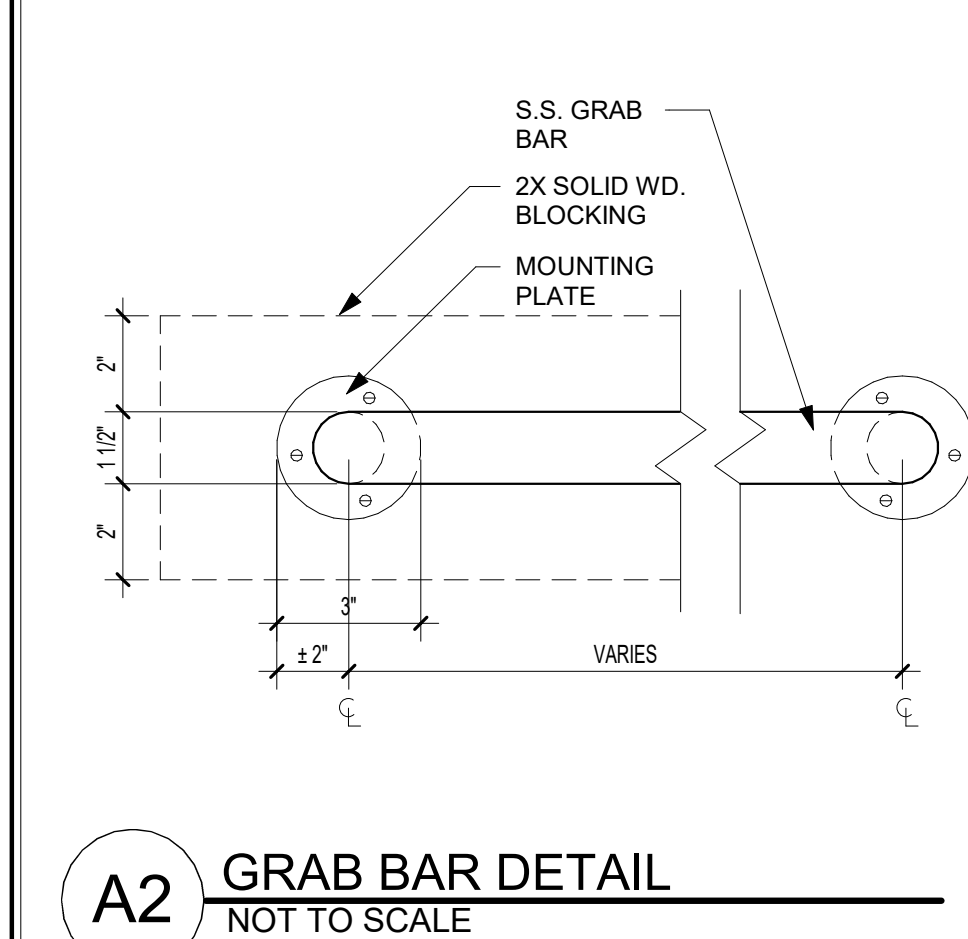
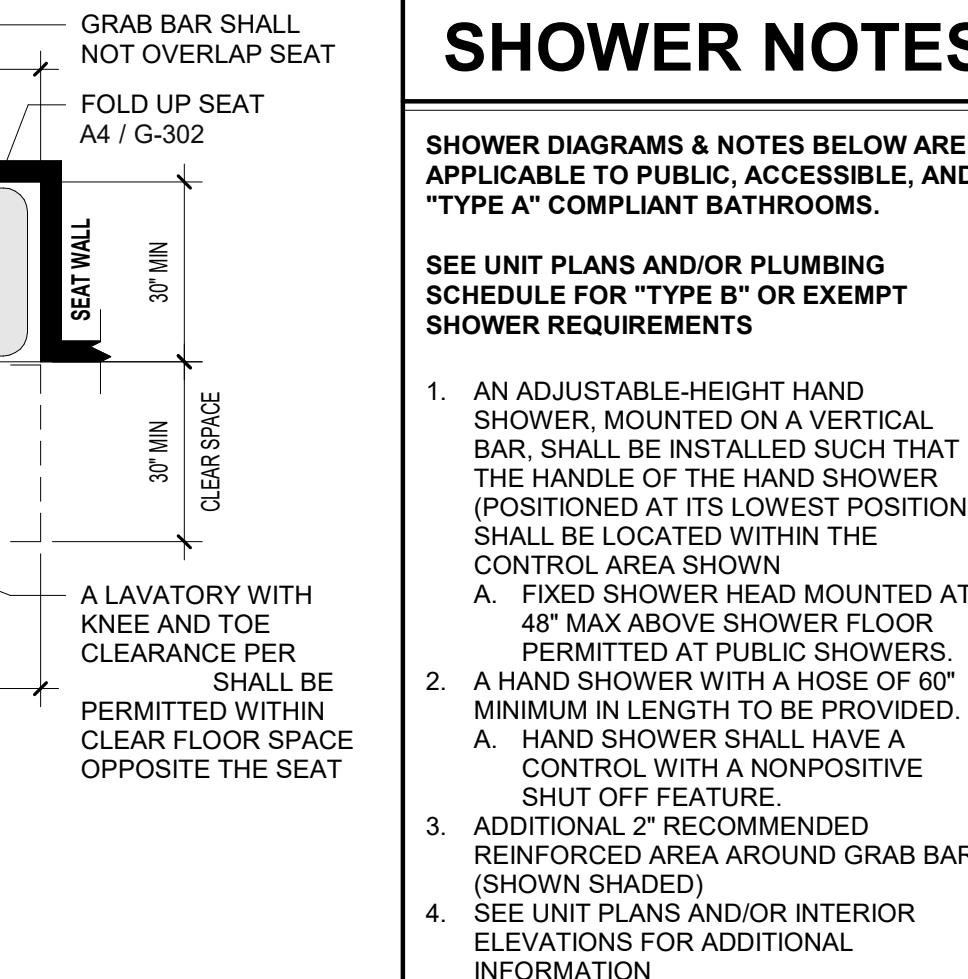
REVISIONS:

 HKS ASSOCIATES
p.c.

ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING

LOUIS ■ ATLANTA

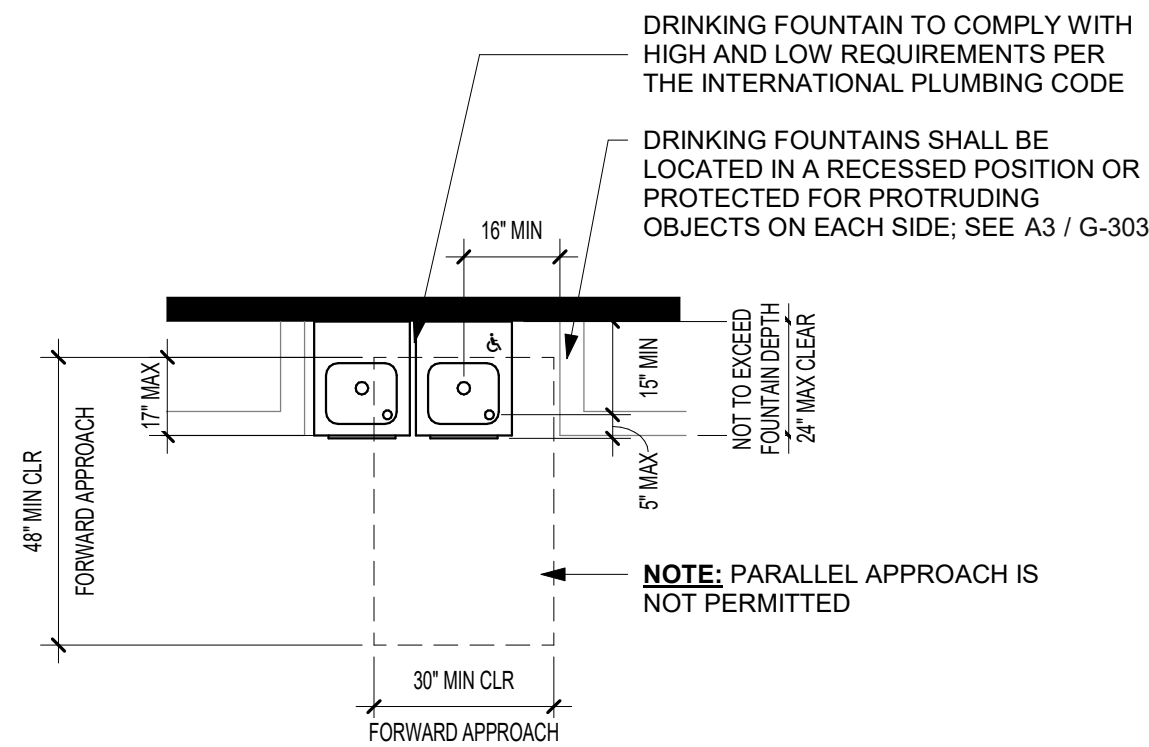
TOILET



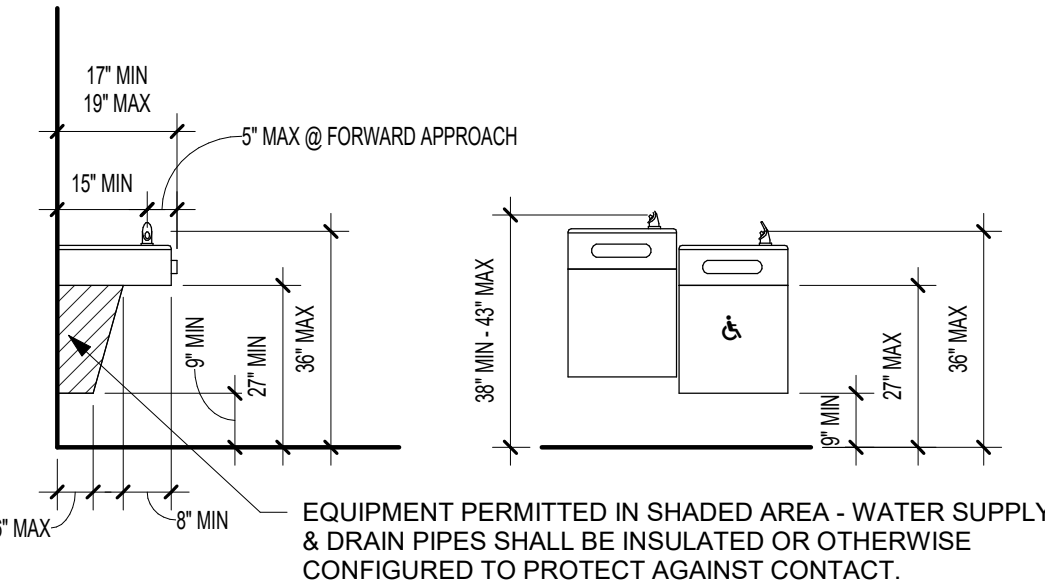
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DRINKING FOUNTAINS

D1 DRINKING FOUNTAINS CLEAR SPACE REQUIREMENTS NOT TO SCALE



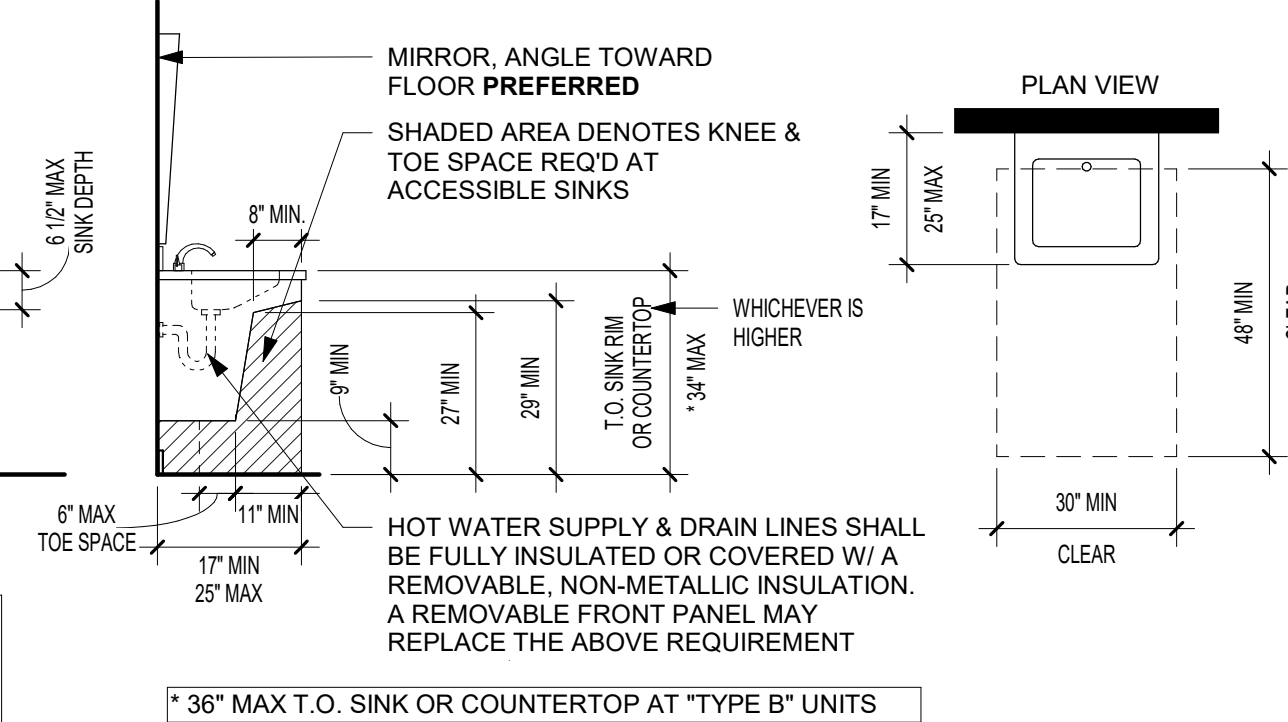
C1 DRINKING FOUNTAIN HEIGHT REQUIREMENTS NOT TO SCALE



SINKS

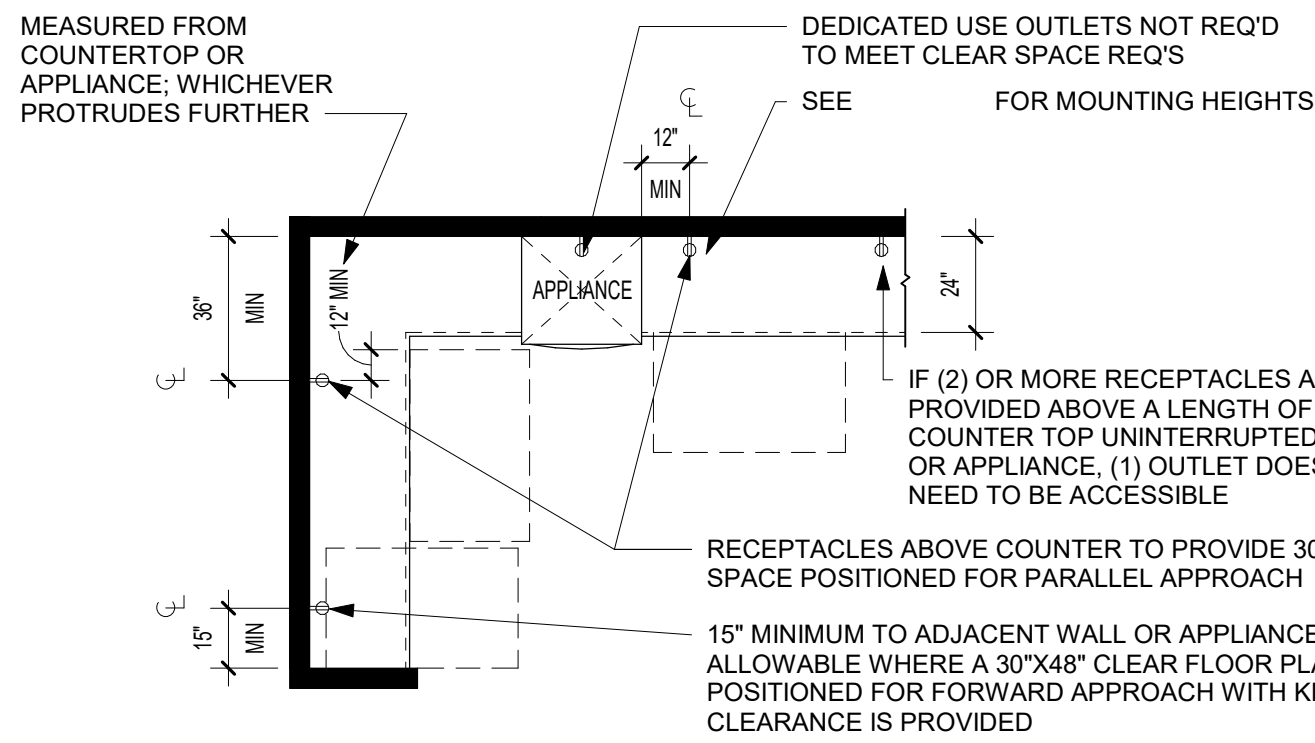
- NOTES:**
1. 34\"/>
 2. SEE PLANS & ELEV. FOR PROJ. SPECIFIC DETAILS
 3. SINKS SHALL BE 6 1/2\"/>
- FOR "TYPE B" UNITS:**
1. PARALLEL APPROACH CENTERED ON SINK PERMITTED WHEN CENTERLINE OF SINK IS 24\"/>
 2. IF FORWARD APPROACH IS PROVIDED, CABINETS ALLOWED UNDER THE LAVATORY PROVIDED:
 - A. CABINETS CAN BE REMOVED WITHOUT REPLACEMENT OF THE LAVATORY
 - B. FLOOR FINISH EXTENDS UNDER THE CABINETS
 - C. WALLS BEHIND AND SURROUNDING THE CABINETS ARE FINISHED

A1 SINK KNEE & TOE CLEARANCES & HEIGHT REQUIREMENTS NOT TO SCALE

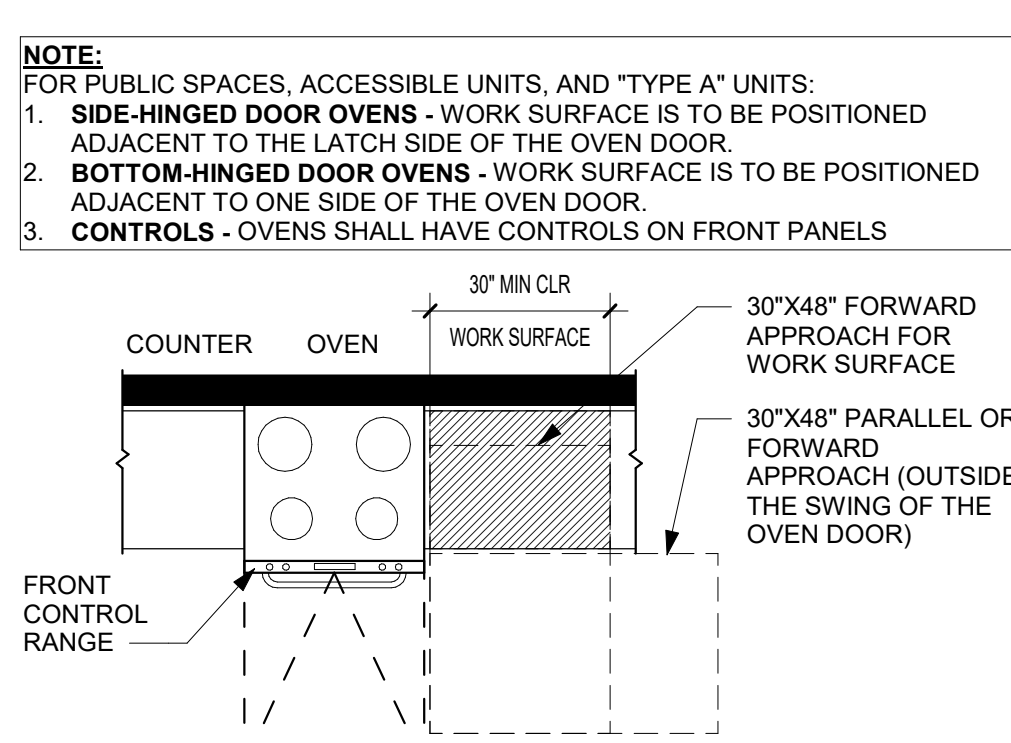


KITCHENS

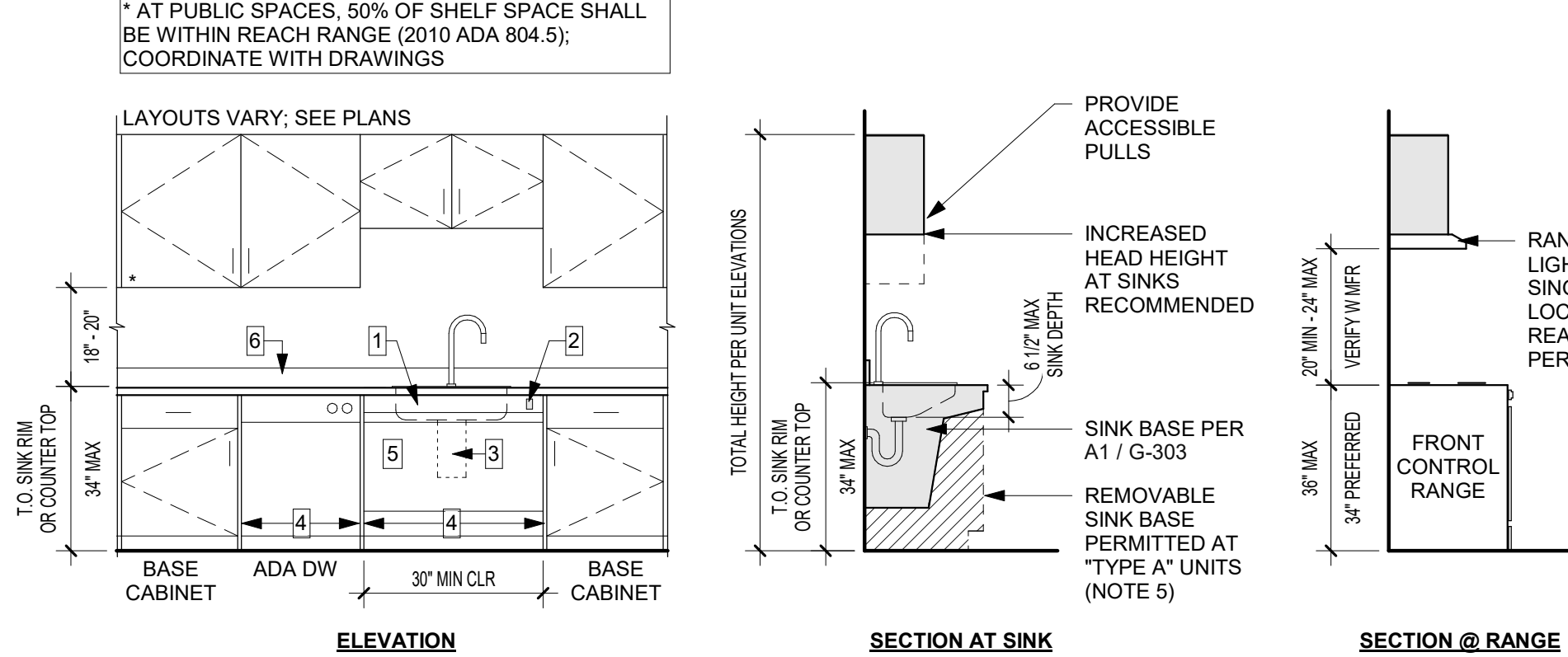
D2 ABOVE COUNTER RECEPTACLES NOT TO SCALE



C2 OVEN WITH WORK SPACE NOT TO SCALE



B2 KITCHEN REQUIREMENTS NOT TO SCALE



KITCHEN NOTES

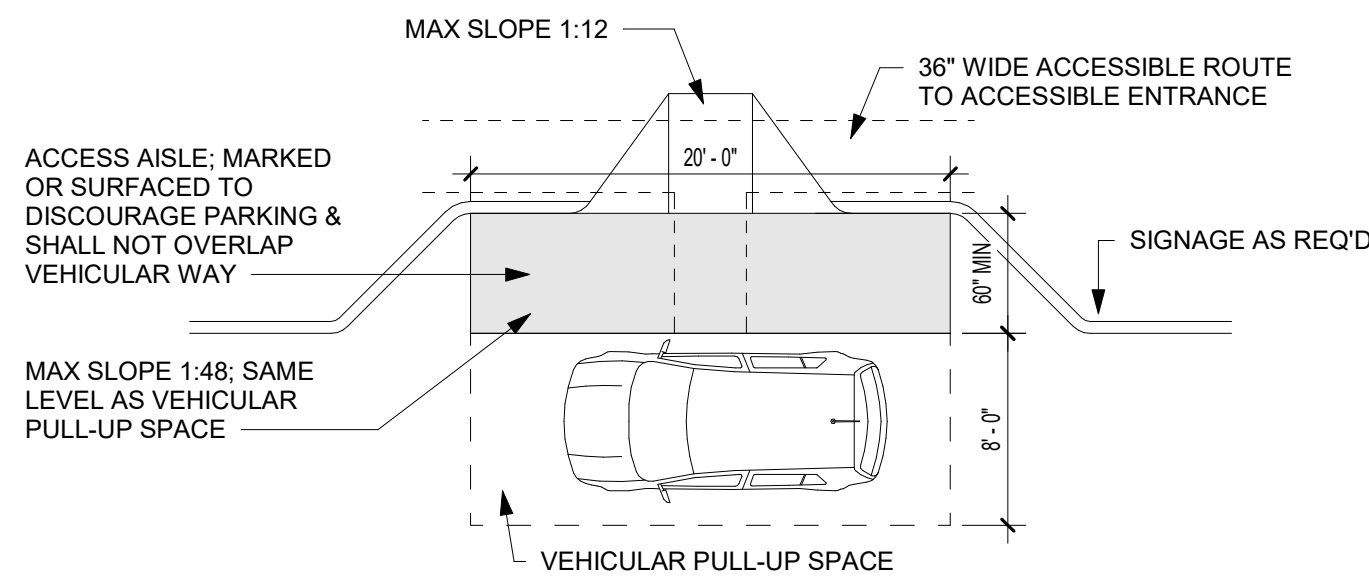
KITCHEN DIAGRAMS AND NOTES APPLICABLE TO PUBLIC SPACES, ACCESSIBLE, AND "TYPE A" COMPLIANT KITCHENS

SEE UNIT PLANS AND/OR INTERIOR ELEVATIONS FOR "TYPE B" OR EXEMPT KITCHENS

- NOTES:**
1. SINK DEPTH MAX 6 1/2\"/>
 2. GARBAGE DISPOSAL SWITCH TO BE LOCATED WITHIN REACH RANGE; COORDINATE FINAL LOCATION WITH ARCHITECT
 3. INSULATE ALL PIPES AND DRAIN EXPOSED BELOW SINK
 4. PROVIDE FINISHED END PANELS EACH SIDE OF SINK PANEL AND DISHWASHER
 - A. WALL BASE, WALL FINISH & FLOOR FINISH TO CONTINUE TO UNDERSIDE OF SINK
 5. CABINETS PERMITTED UNDER SINK AT "TYPE A" UNITS PROVIDED ALL THE FOLLOWING:
 - A. REMOVABLE CABINETS WITHOUT REPLACING SINK
 - B. FLOORING, WALL FINISH, AND WALL BASE TO CONTINUE TO UNDERSIDE OF SINK
 6. BACKSPLASH VARIES; COORDINATE WITH DRAWINGS
 7. SEE INDIVIDUAL UNIT PLANS AND INTERIOR ELEVATIONS FOR SPECIFIC LAYOUTS

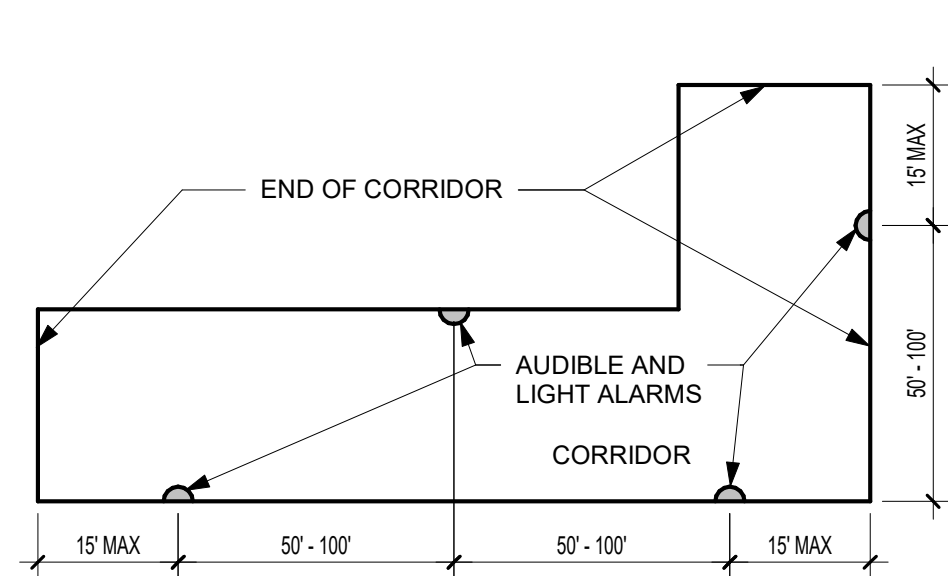
PASSENGER LOADING ZONE

D3 PASSENGER LOADING ZONE NOT TO SCALE

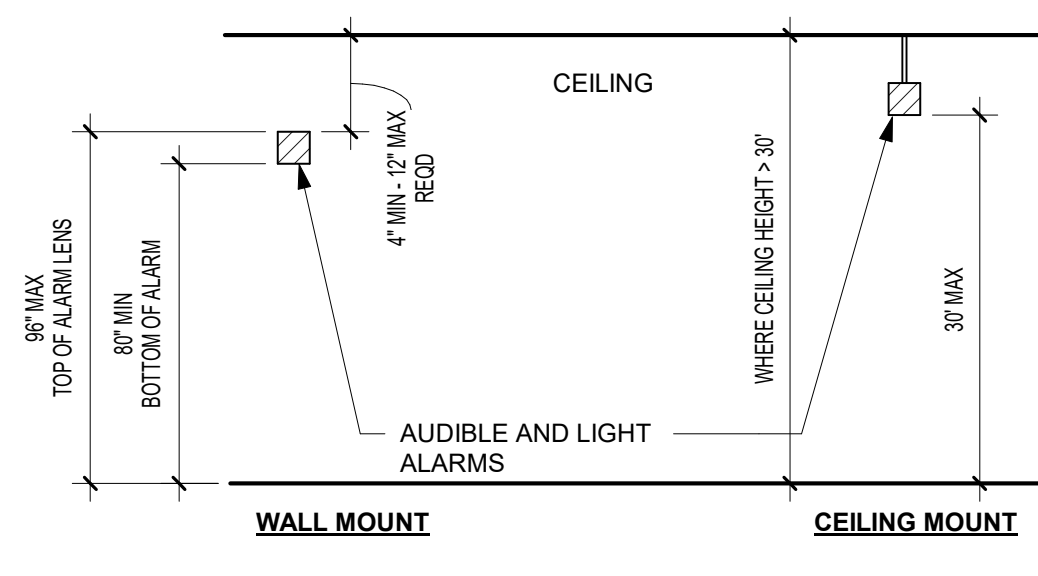


HEARING & VISION IMPAIRED

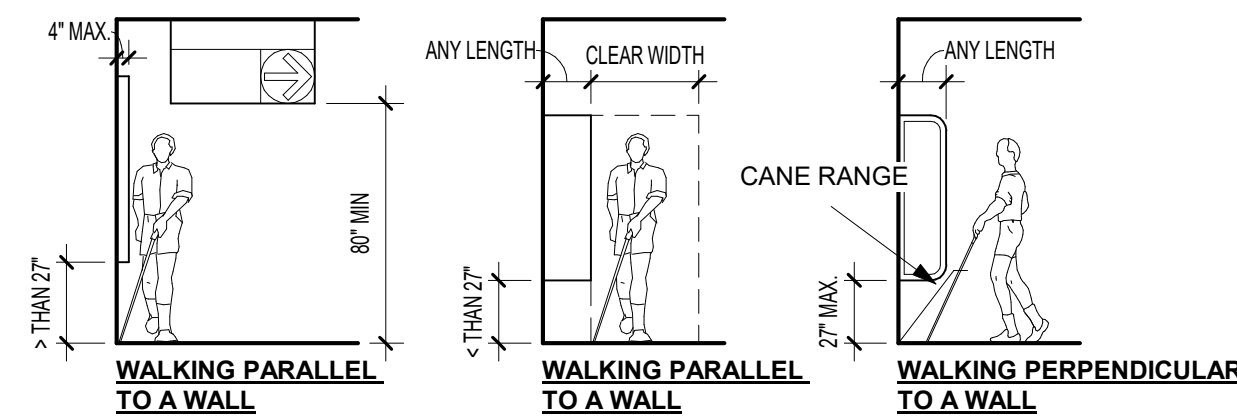
C3 ALARM SPACING IN CORRIDOR NOT TO SCALE



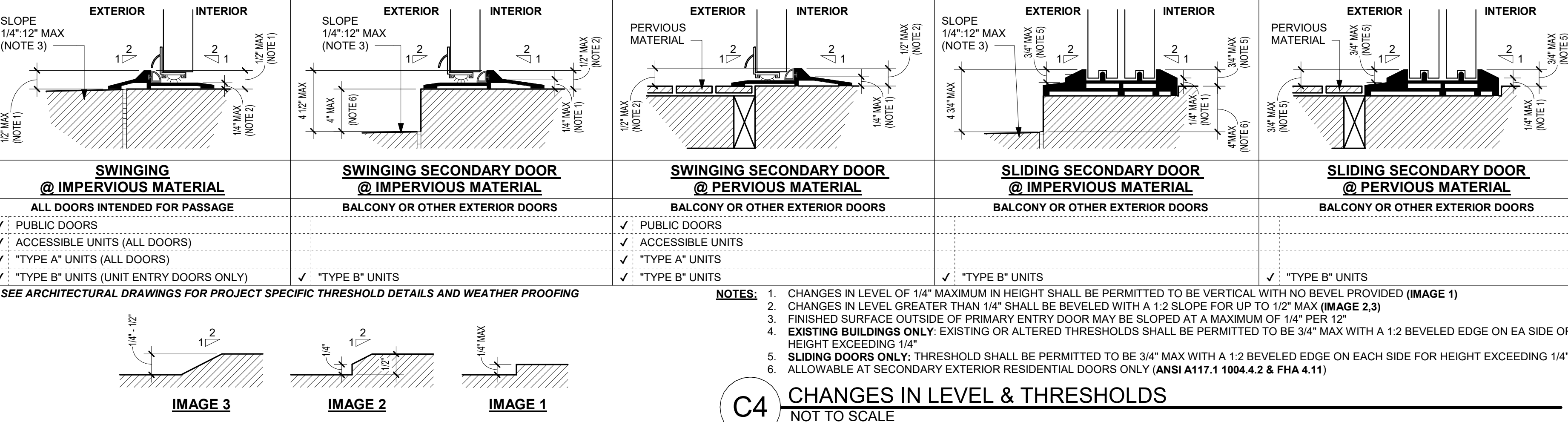
B3 CEILING/ WALL MOUNTED ALARM LOCATIONS NOT TO SCALE



A3 PROTRUDING OBJECTS NOT TO SCALE

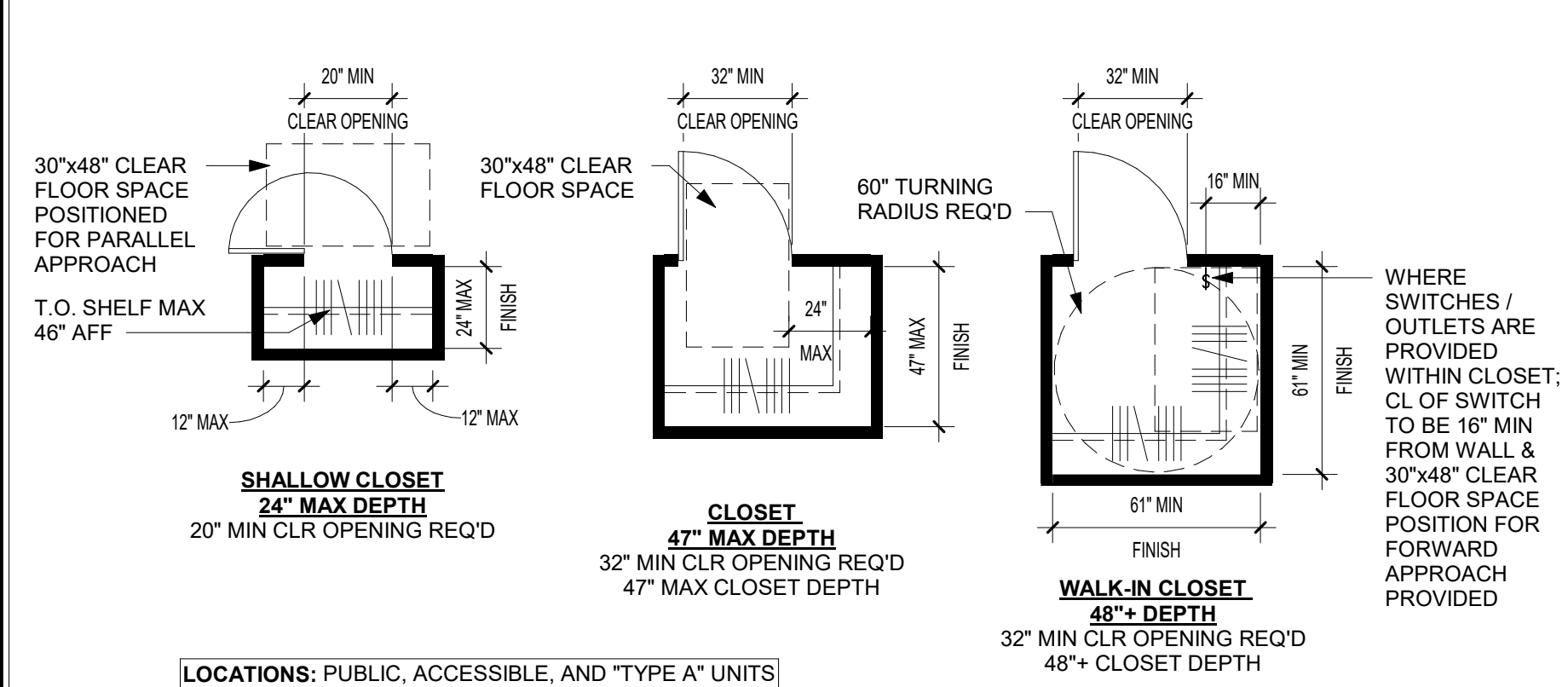


THRESHOLD



CLOSETS

A4 CLOSET DIMENSIONS NOT TO SCALE



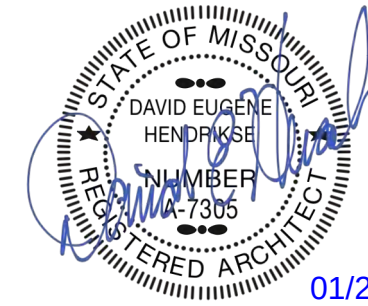
PRINTS ISSUED
01/25/2024 - CITY SUBMITTAL

REVISIONS:

roseman & ASSOCIATES P.C.
ARCHITECTURE
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01/25/24

THE VILLAGE AT DISCOVERY -
LOT 4

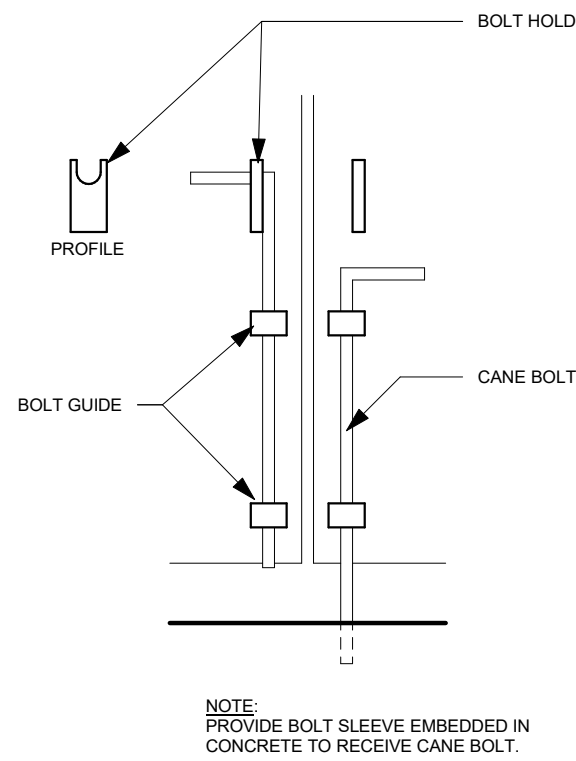
LEE'S SUMMIT, MO

SHEET TITLE
ACCESSIBILITY STANDARDS

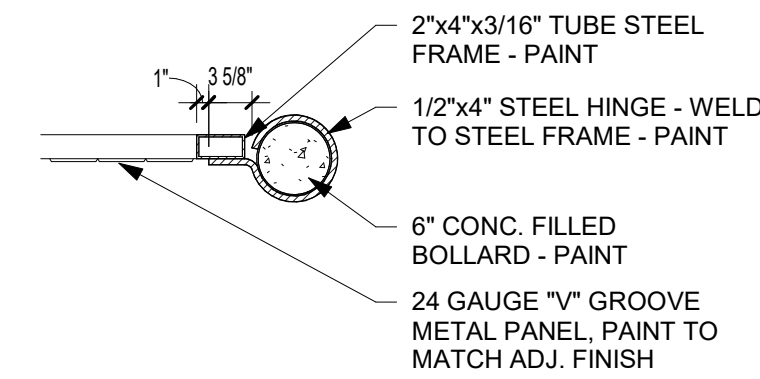
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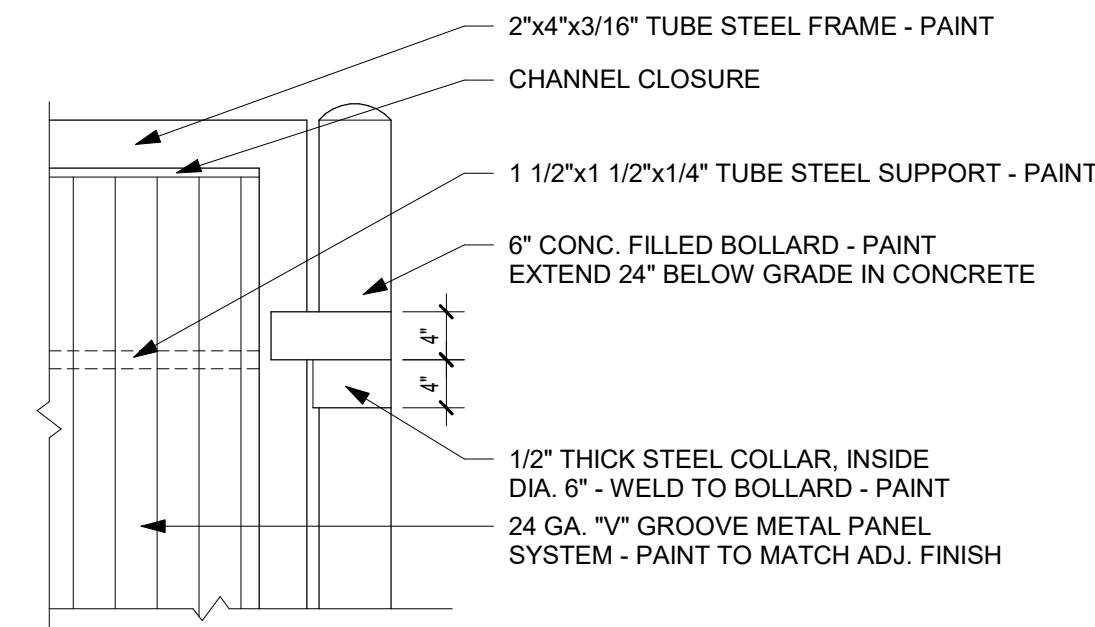
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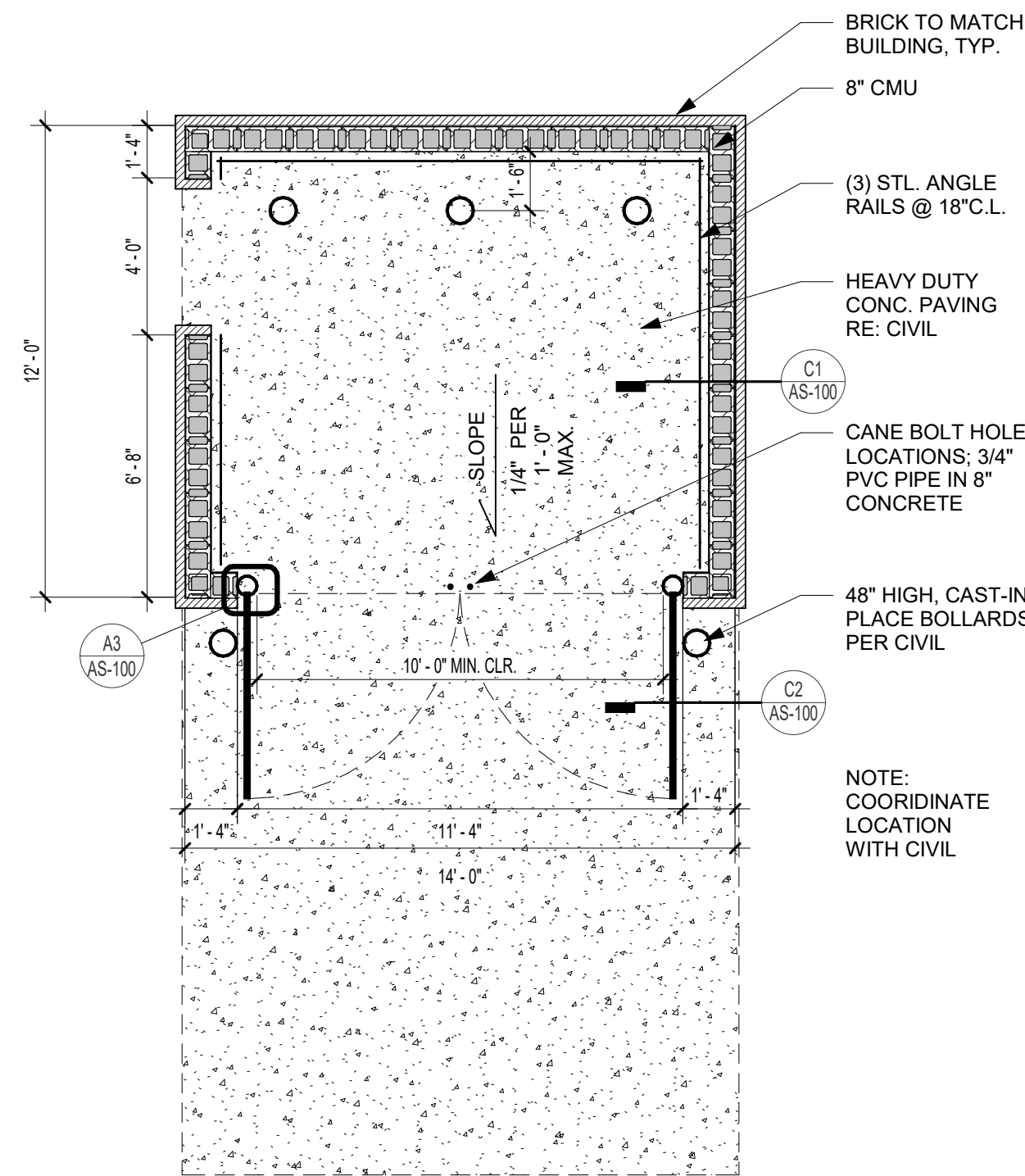
A4 SITE - CANE BOLT DETAIL
3/8" = 1'-0"



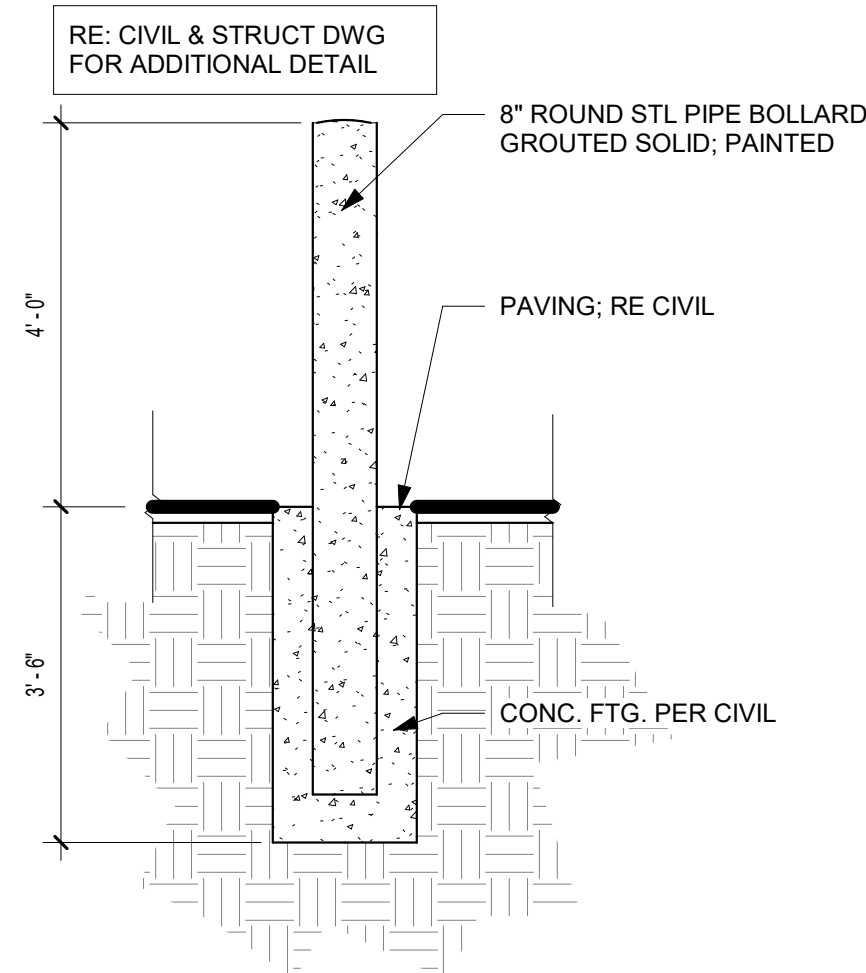
A3 TRASH GATE CROSS SECTION
3/4" = 1'-0"



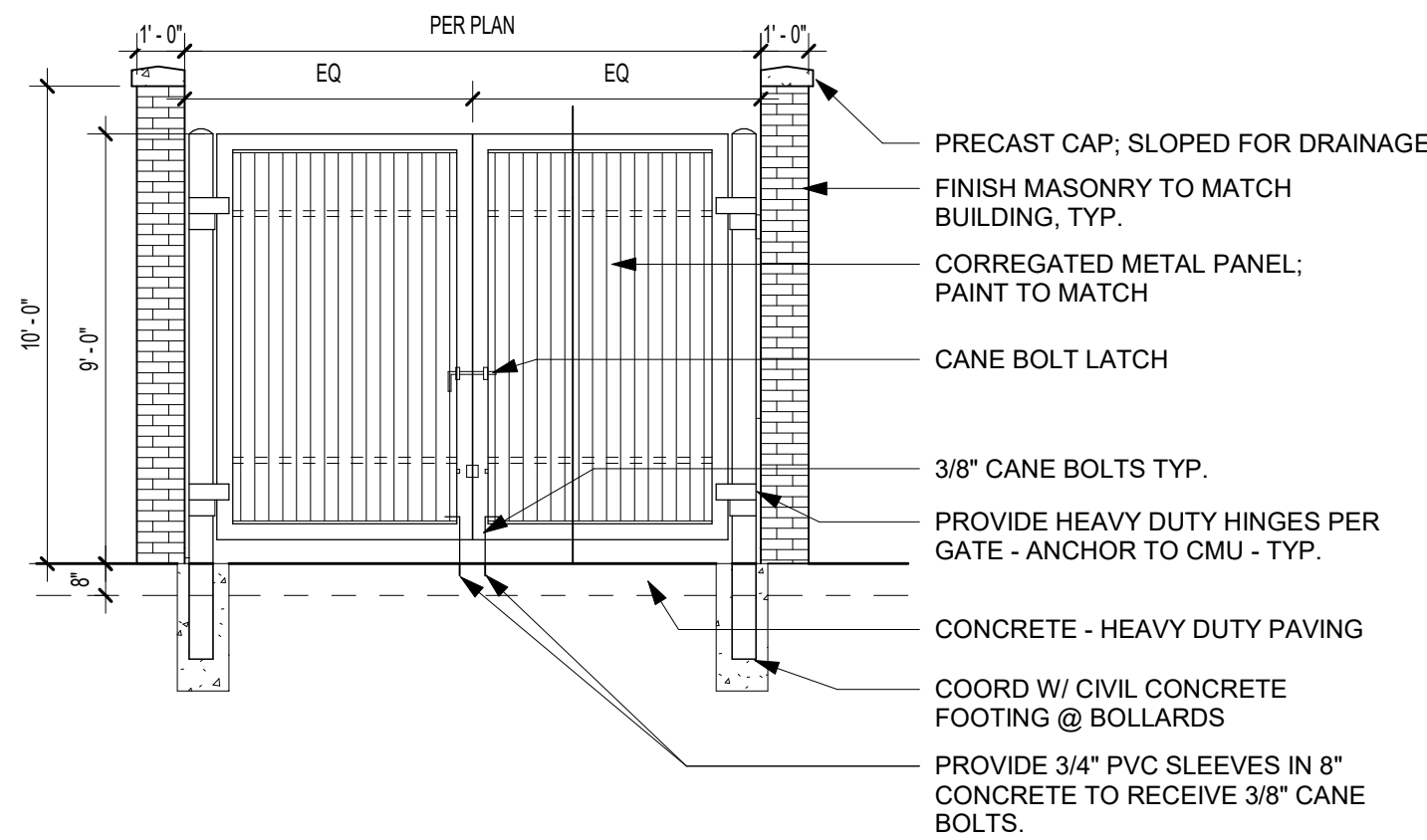
A2 TRASH GATE DETAIL
3/4" = 1'-0"



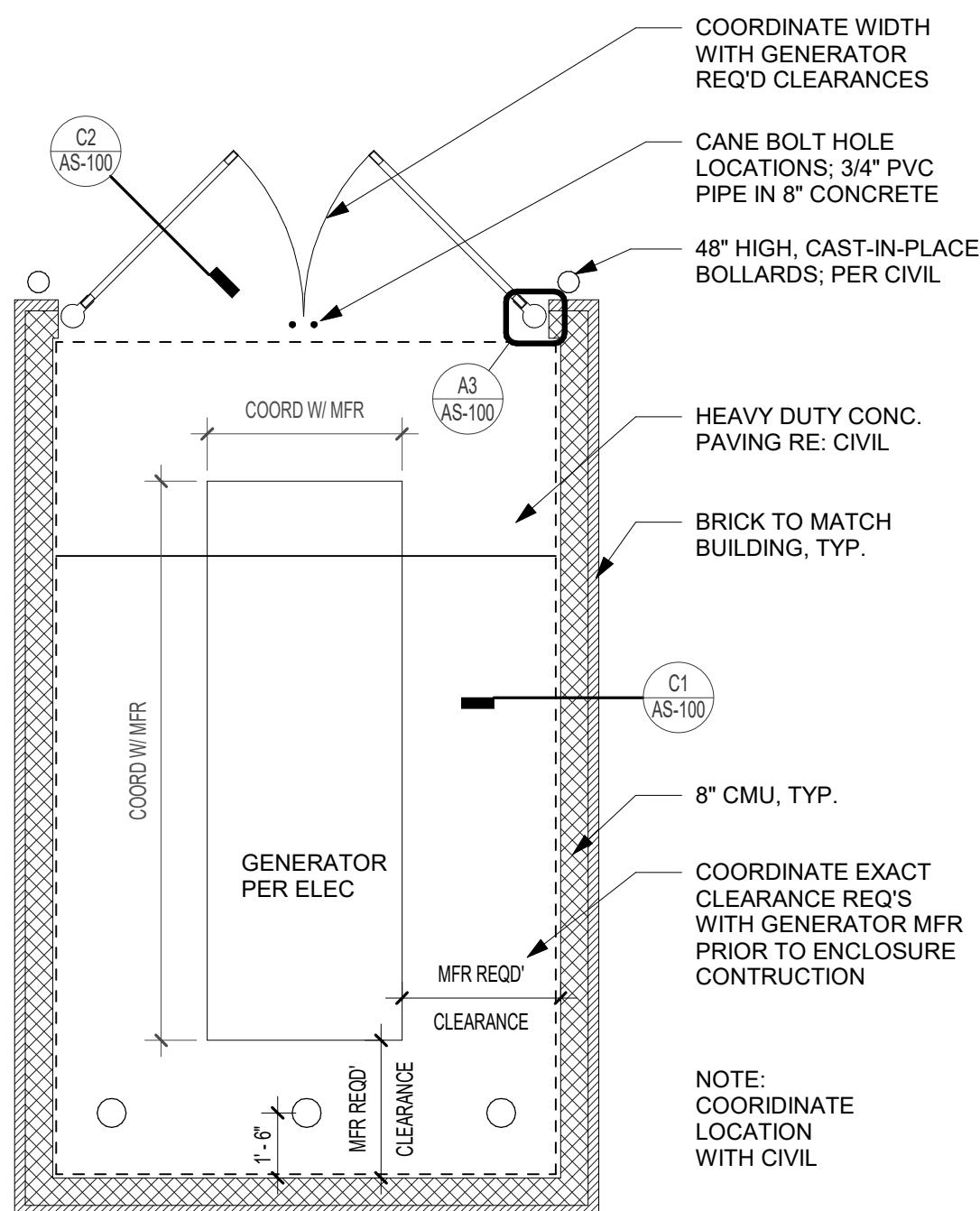
A1 SINGLE DUMPSTER TRASH ENCLOSURE PLAN
1/4" = 1'-0"



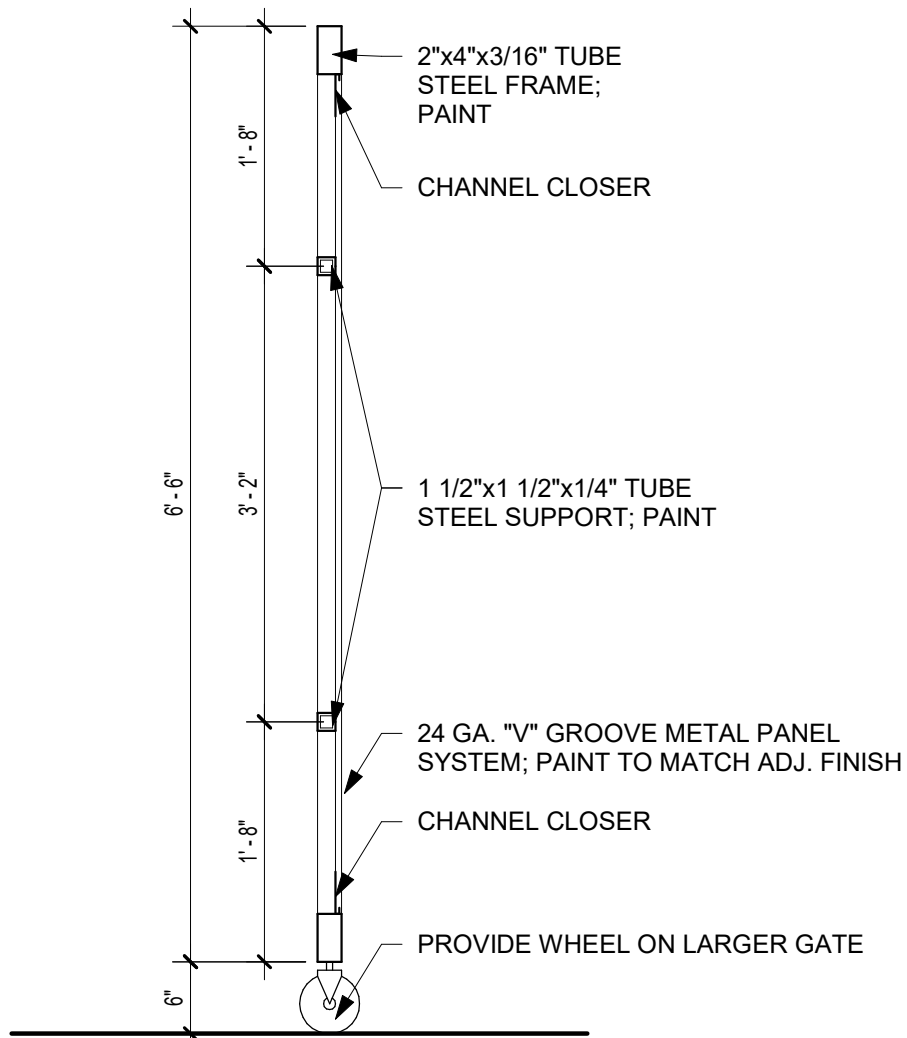
B3 SITE - BOLLARD - STEEL
1/2" = 1'-0"



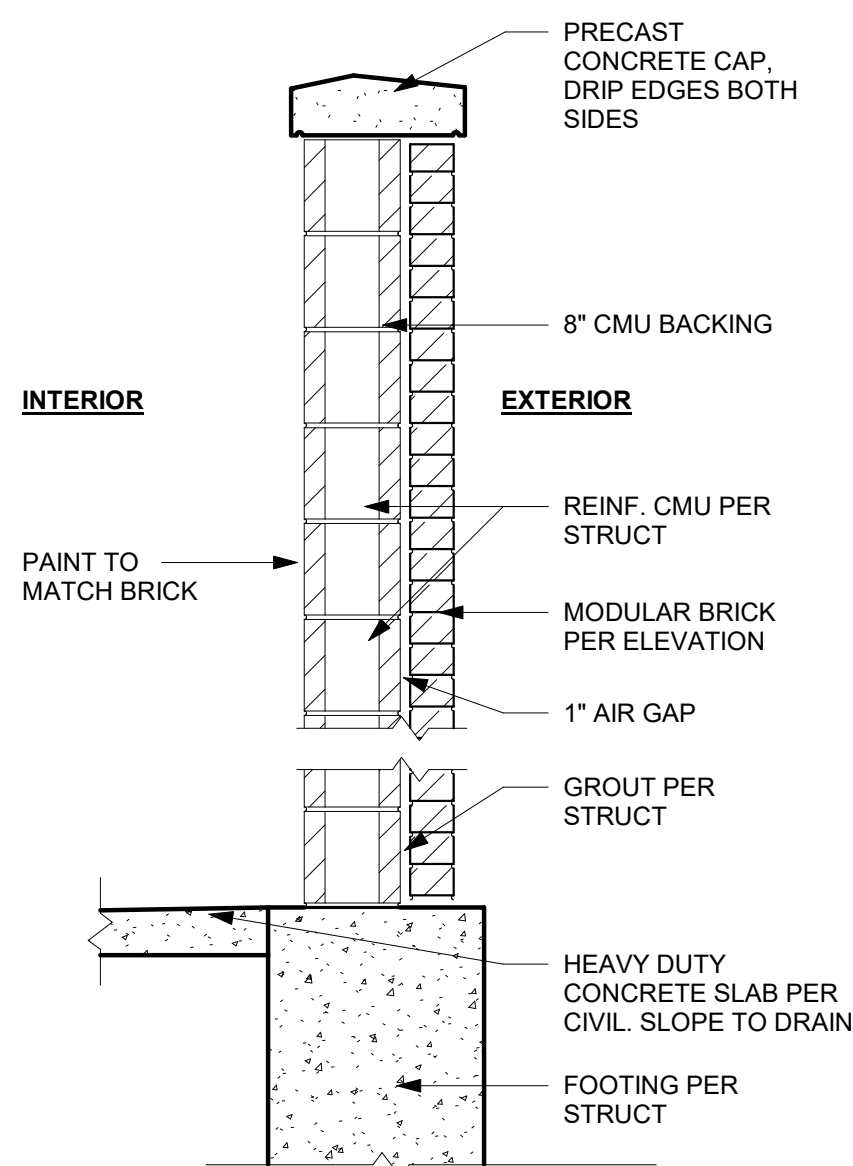
B2 ENCLOSURE FRONT ELEVATION
1/4" = 1'-0"



B1 GENERATOR ENCLOSURE PLAN
1/4" = 1'-0"



C2 TRASH GATE SECTION
3/4" = 1'-0"



C1 SITE - ENCLOSURE - CMU - WALL SECTION
3/4" = 1'-0"

G. FOUNDATIONS

- Soil Properties
a. Foundation design is based on the following to be considered part of the construction documents:
i. Geotechnical Report prepared by Olsson, dated Oct. 4, 2023.
ii. Signed and Sealed Letter from Own Inc. dated July 15, 2024 regarding use of Rammed Aggregate Piers as a foundation option.
iii. Signed Letter from Ground Improvement Engineering by Vaughn Ruprow, PE, dated May 31, 2024 confirming Rammed Aggregate Piers as a viable foundation option with **allowable subgrade bearing pressure of 6,000 psf**.
b. It is the Owner's decision to proceed with Rammed Aggregate Piers.
c. A geotechnical representative shall be retained on site for all construction activity to verify that all proper requirements have been met to meet the design requirements outlined in the geotechnical report. Representative shall be someone familiar with all documents of the geotechnical investigation provided for the project.
d. The Contractor shall provide dewatering of excavations from surface water and ground water. Do not place concrete if water is present at base of excavation.
e. Footings
i. All footings shall bear on suitable subgrade prepared in accordance with the geotechnical report. The underlying soils and the structural fill shall have a minimum safe load bearing capacity of 2,500 psf.
ii. Remove all existing topsoil, pavement, organic materials, and other soil that appears to be unsuitable prior to preparing the footing subgrade.
iii. If any adverse soil conditions are encountered which extend below footing level such as those listed above, the general contractor shall contact the geotechnical engineer immediately for determination of how to remedy the condition before continuation of work.
iv. No footings shall be placed in water or on frozen ground. All exterior construction shall be carried down to minimum 3'-0" below finished adjacent exterior grade.
f. Slab on Grade
i. Slabs shall be constructed as shown on the plans.
ii. Slabs on-grade shall be placed on subgrade prepared in accordance with the requirements of the geotechnical report and the details in these construction documents.
iii. A 10mil minimum vapor retarder shall be installed under all slabs on grade in occupied or conditioned spaces per the drawings. See the geotechnical report for additional information regarding the installation of the vapor retarder.
iv. Slab on grade shall be founded on 6" deep 1/2" clean aggregate base.
v. The upper 24" of subgrade extending 5' beyond the footprint of the building shall consist of low volume change material such as rollstone or waste-free Granular Material (GMM) compacted to a minimum of 95% of the ASTM D698 maximum dry Standard Proctor density. The 6" aggregate base shall be included in the 24" depth required for the low volume change layer.
vi. Provide joints at 30 x slab thickness (+/-) in both directions and located to conform to bay spacing wherever possible (at column centerlines, half bays, third bays, etc.). Submit control joint layout for approval by the Structural Engineer.
vii. Saw cut control joints shall be done late enough to prevent raveling of the cut edges and early enough to prevent racking of the slab ahead of the saw blade.
viii. Plumbing and utilities passing through the slab on grade shall be constructed with flexible fittings to allow for slab movement. The expected slab movement for the parking slab shall be considered up to 2" minimum for fittings.
ix. Concrete slab to be cured according to ACI Standards. Concrete slab cure to be compatible with any sealer, grout, or adhesive that may be used in the floor later.
x. Locally slope floor towards any floor drains. See architectural and plumbing drawings for drain locations.
xi. Geotechnical Testing Agency Requirements
a. If the geotechnical representative on site takes exception to anything in the Geotechnical Report and requires additional field investigation to clarify those exceptions, the cost of such investigation shall be included in the additional fee for field quality control and testing and identified as such. All other exceptions shall be documented and approved by the geotechnical engineer.
b. The geotechnical representative must have read all documents pertaining to the geotechnical report for the project and have understood and accepted the criteria contained in the report.
c. The geotechnical representative must understand and be able to make decisions affecting the work for field observations and conditions described in the report during construction. The representative must be capable of advising the owner or contractor for procedures regarding, but not limited to, sub-grade preparation, dewatering activities, and other construction considerations.
d. See notes on sheets and details for additional information.

H. POST-INSTALLED ANCHORS TO CONCRETE AND MASONRY

- Post-installed anchors shall be expansion, adhesive, or screw anchors as indicated in the details, unless noted otherwise. Only use the anchor type indicated. All anchors on the project of each type must be by the same manufacturer, see below for substitution requirements.
a. Expansion anchors:
i. Concrete
Hilti Kwik Bolt Z2 (ICC-ES ESR1917)
Simpson Strong-Bolt 2 (ICC-ES ESR3037)
DeWalt Power-Stub SD2 (ICC-ES ESR2502)
Grou-illed Concrete Masonry
Hilti Kwik Bolt 3 (ICC-ES ESR1385)
Simpson Strong-Bolt 2 (UES ESR0240)
DeWalt Power-Stub SD1 (ICC-ES ESR2966)
b. Adhesive anchors (threaded rods shall be ASTM A193 B7 for all anchors):
i. Concrete
Hilti HIT RE 500-SD (ICC-ES ESR2322) or Hilti HIT-HY 200 (ICC-ES ESR3187)
Simpson AT-XP (UES ESR0263), SET-XP (ICC-ES ESR2509) or ET-HP (ICC-ES ESR3372)
DeWalt Pure 110+ (ICC-ES ESR3298), PE1000+ (ICC-ES ESR2583), Pure 50+ (ICC-ES ESR3576), AC 200+ (ICC-ES ESR4027), or AC100+ Gold (ICC-ES ESR2582)
ii. Solid grouted concrete masonry
Hilti HIT-HY 70 anchor adhesive (ICC-ES ESR3342)
Simpson AT-XP (UES ESR0281), SET-XP (UES ESR0265) or ET-HP (UES ESR0241)
DeWalt AC100+ Gold (ICC-ES ESR3200)
iii. Hollow concrete or mull-wythe clay masonry
Hilti HIT-HY 70 with screen tubes (ICC-ES ESR3342)
Simpson SET-XP (UES ESR265)
DeWalt AC100+ Gold with screen tubes (ICC-ES ESR3200)
c. Screw anchors:
i. Concrete
Hilti Kwik HUS EZ (ICC-ES ESR3027)
Simpson Titen HD (ICC-ES ESR2713)
DeWalt Screw-Bolt+ (ICC-ES ESR2526)
Simpson Titen HD (ICC-ES ESR1056)
DeWalt Screw-Bolt+ (ICC-ES ESR1678)
ii. Grou-illed concrete masonry
Hilti Kwik HUS EZ (ICC-ES ESR3056)
Simpson Titen HD (ICC-ES ESR1056)
DeWalt Screw-Bolt+ (ICC-ES ESR1678)
2. Post-installed anchors shall only be used where specified in the drawings. The Contractor shall obtain approval from the engineer prior to using post-installed anchors for missing or misplaced cast-in-place anchors.
3. All personnel installing anchors shall be trained and certified by the anchoring system manufacturer or by ACI. Contractor shall submit current certifications for all personnel. ACI certification required for all personnel installing adhesive anchors in a horizontal or overhead conditions. If a failure occurs at any time during testing or construction, personnel shall be retrained and recertified.
4. Installation:
a. Do not cut existing reinforcing.
b. The hole through the supported steel member shall be 1/16" larger in diameter (1/8" for screw anchors) than the anchor unless noted otherwise. Use plate washers with a standard size hole welded to steel members where oversized holes must be used.
c. Holes shall be drilled per the manufacturer's written instructions as outlined in the ESR.
d. Where applicable, installation shall follow cleaning procedure indicated in the ESR. Holes shall be made with a hammer drill. Use of a core drill is not allowed.
5. Special inspection shall be provided for all post installed anchors as required by the building code and/or ICC-ES report. Written special inspection reports shall be submitted to the registered design professional in responsible charge by the special inspector. The reports shall record and report the following as a minimum:
a. One of every ten anchors installed by each technician in locations listed below shall be randomly tested in direct tension. At least one anchor shall be tested on each day that anchors are installed.
i. Test anchors in the following locations:
Shear wall hold down anchors.
Shear wall sill plate anchors.
Anchors supporting dead or live loads in tension.
ii. Test anchor to twice the allowable tension load as provided in the ESR. Test load shall not exceed 80 percent of the yield strength of the anchor ($0.8 \times A_n \times f_u$).
iii. Post-installed anchors shall not be tested using a torque wrench.
iv. If any anchor fails quality control testing, all anchors of the same type shall be randomly tested until (10) consecutive anchors pass. Resume normal frequency testing with this approval of the engineer. The failed anchor(s) shall be removed and the affected area patched per engineer's direction. Consult the engineer for anchor replacement instructions. The cost for additional work and testing required due to anchor failure is the responsibility of the installing contractor.
b. Prior to and during installation of anchors, inspection and report shall include:
i. Installer shall have reviewed manufacturer's ESR report and written installation procedures and has been certified by the manufacturer or ACI.
ii. General concrete or CMU block conditions (cracked or un-cracked, wet or dry, grouted or hollow, etc).
iii. Whether manufacturer's written procedures for preparation of hole were followed. Indicate if hole is wet or dry.
iv. Whether hole was made with a hammer drill.
v. Whether manufacturer's written procedures for anchor installation were followed.
vi. Embedment depth and concrete or block thickness.
vii. Anchor diameter, length and type.
c. After installing anchors, inspection and report shall include:
i. All test locations.
ii. Anchor size and/or type.
iii. Applied load, loading procedure, load increments and rate of loading.
iv. Mode of failure.
v. Photographs of test equipment and typical failures.
6. Substitution requests for products other than those listed above shall be submitted to the engineer with calculations that are prepared and sealed by a registered structural engineer at least two weeks prior to scheduled installations. Calculations shall demonstrate that the substituted product will achieve an equivalent capacity using the appropriate design procedure required by the building code. Product ICC-ES code reports shall be included with the submittal package.

E. CONCRETE

- Reinforced concrete shall have the following minimum 28 day compressive strengths:
a. Slab on grade, unless noted otherwise 4000 psi normal weight
b. Foundations and Grade Beams 5000 psi normal weight
c. Drilled piers and pile caps 5000 psi normal weight
d. Slabs on non-composite metal deck 4000 psi normal weight
e. Slabs on composite metal deck 4000 psi lightweight
f. All concrete exposed to weather shall have 6% (+/- 1%) air entrainment.
2. Submit mix designs for all concrete mixes prior to placement. All submittals shall include the following:
a. Batch quantities including admixture dosage rates.
b. Strength test results for all mixes.
c. Cured unit weight results (for lightweight concrete mixes only).
d. Aggregate source(s) and gradation(s).
e. Product data for all admixtures and other cementitious materials.
f. Product data for all admixtures.
3. Provide minimum concrete cover for reinforcing bars as follows (unless specified otherwise on sections and details):
a. Cast-in-place concrete:
i. Concrete cast against and permanently exposed to earth: 3"
ii. Concrete exposed to earth and weather (formed)
1. #5 and smaller 2-1/2"
2. #6 and larger 3"
iii. Concrete not exposed to weather and not in contact with ground:
1. Slabs and walls 3/4"
2. Beams and columns 1-1/2"
4. Provide construction or control joints in slab on grade as shown on plans. If joint pattern is not shown, provide joints at 10'-0" x 10'-0" and at locations to conform to bay spacing wherever possible (at column centerlines, half bays, third bays, etc.).
5. Interface of all slab and beam construction joints shall be roughened with 1/4" amplitude. Surface of construction joints shall be clean and free of laitance. Immediately before new concrete is placed, construction joints shall be moistened and standing water removed.
6. Construction joints in walls shall be keyed and placed at locations approved by the Architect and Structural Engineer.
7. Provide control joints in all relating walls at 15 ft to 20 ft intervals.
8. **Elevator pit walls shall not have control joints as they are part of the lateral system.**
9. Provide P.V.C. waterstops in all below grade construction joints and at other locations as shown.
10. Provide compressible filler and sealant in all slab-on-grade and wall and control joints and control interfaces that are not dowelled together.
11. All column pockets shall be filled with concrete after column is erected.
12. All column pockets shall be filled with concrete after column is erected.
13. Sleeves and openings in slabs not shown on structural drawings or outside the parameters of typical sleeve details are not permitted, unless approved by the Structural Engineer.
14. Conduits and pipes embedded in slabs, walls, or grade beams shall be no larger in outside dimension than 1/3 the overall member thickness and shall be placed no closer than 3 diameters or widths on center.
15. Conduits and pipes shall be permitted in concrete slabs or columns.
16. See "G. Foundations" section 5 for requirements at slab on grade.
17. Bond break material for split joints shall be one of the following: 1/8" thick tempered wood particleboard, 1/8" thick high-density plastic elastomeric strips, two layers of 10mil polyethylene sheeting or equivalent.
18. Provide concrete housekeeping pads under all mechanical, plumbing, fire protection, and electrical equipment per plans. Pads shall extend beyond equipment a nominal 6" on all sides. Provide reinforcing per details.
19. At floor drains, locally slope floor towards drain. See architectural and plumbing drawings for drain locations.
20. Foundation walls shall be temporarily braced until positive attachment is made to final framing per details. This is a means and methods item.

F. REINFORCING FOR CONCRETE

- General
a. All reinforcing steel to be ASTM A615, Grade 60, deformed bars, unless noted otherwise.
i. Any reinforcing to be welded shall be ASTM A706 and welded with E60 electrodes.
ii. Alternatively, ASTM A615 reinforcing may be welded with E90 electrodes and proper preheat according to AWS D1.4.
iii. E70 electrodes are not permitted for welding rebar.
b. Welded wire fabric shall be ASTM A185. Welded wire fabric shall be in the flat shapes.
c. All reinforcing bars to be detailed and placed in accordance with the ACI Manual of Standard Practice for Detailing Reinforced Concrete Structures' specifications.
d. All reinforcing, including dowels, shall be securely tied and cast with the lower member. Placing reinforcing after concrete has been placed will not be permitted.
e. Field bending of reinforcing parallel embedded in concrete will not be allowed unless specifically noted on the drawings or approved by the Structural Engineer.
f. All reinforcing bars shall be contact lap spliced or doweled as follows, unless noted otherwise:

Tension Development and Splice Lengths for $f_c = 5,000$ psi											
Bar Size	Development			Class "B" Splice			Standard 90 deg. Hook			Hook Length	Bend Dia
	Top	Other	Bar	Top	Other	Bar	Embed	Leg	Length		
#3	12	13	22	17	6	6	2-1/4				
#4	22	17	29	22	6	8	3				
#5	28	22	36	28	8	10	3-3/4				
#6	33	26	43	33	9	12	4-1/2				
#7	49	37	63	49	11	14	5-1/4				
#8	55	43	72	55	12	16	6				
#9	63	48	81	63	14	19	9-1/2				
#10	70	54	91	70	15	22	10-3/4				
#11	78	60	101	78	17	24	12				
#14	94	72	---	---	29	31	18-1/4				
#18	125	96	---	---	39	41	24				

Tension Development and Splice Lengths for $f_c = 4,000$ psi											
Bar Size	Development			Class "B" Splice			Standard 90 deg. Hook			Hook Length	Bend Dia
	Top	Other	Bar	Top	Other	Bar	Embed	Leg	Length		
#3	19	15	24	19	6	6	2-1/4				
#4	25	19	32	25	7	8	3				
#5	31	24	40	31	9	10	3-3/4				
#6	37	29	48	37	10	12	4-1/2				
#7	54	42	70	54	12	14	5-1/4				
#8	62	48	80	62	14	16	6				
#9	70	54	91	70	15	19	9-1/2				
#10	79	61	102	79	17	22	10-3/4				
#11	87	67	113	87	19	24	12				
#14	105	81	---	---	32	31	18-1/4				
#18	139	107	---	---	43	41	24				

Straight Development and Class "B" splice lengths shown in above tables are based on uncoated bars assuming center-to-center bar spacing $\geq 3d$, without ties or stirrups or $\geq 2d$ with ties or stirrups, and bar clear cover $\geq 1.0d$. Normal weight concrete as well as no transverse reinforcement are both assumed.											
Standard 90 deg. hook embedment lengths are based on bar side cover $\geq 2.5d$ and bar end cover $\geq 2d$ without ties around hook.											
For special seismic considerations, refer to ACI 318 Code Chapter 21.											
All tension splices shall be Class "B" splices unless noted otherwise on plans.											

g. All welded wire fabric shall be lapped 12" or 48 wire diameters, whichever is greater.
h. Provide (2) #5 x 6" diagonals at all corners of openings and re-entrant corners, unless noted otherwise.
i. Dowels between foundation and walls shall be the same grade, size, and spacing as the vertical wall reinforcing, unless noted otherwise.
j. Provide corner bars to match longitudinal reinforcing in all footings. Provide (2) corner bars at tee intersections.
k. Provide 500 pounds of miscellaneous straight bar reinforcing (#4 & #5) to be used in field for special conditions. Labor for placing same to be included.
2. Slabs and Slabs-on-Grade
a. All slabs on grade to be reinforced with 6x6 - W2.9xW2.9 welded wire fabric, unless noted otherwise.

C. GENERAL NOTES

- All construction shall conform to the Design Codes in Section "A. Design Criteria," including all applicable standards and documents referenced within those codes.
2. Plan and detail notes provided on specific sheets within these drawings supplement information in these General Notes. Always coordinate the requirements of these notes with what is shown within the drawings.
3. Unless noted specifically on a plan, all floor plans show framing for the floor indicated walls, openings, pads, columns supporting civil, floor, and foundation coordination.
4. Contract Document Coordination:
a. The drawings contained to herein are intended to be utilized in conjunction with other design consultant's drawings (architectural, civil, mechanical, etc.). It is the responsibility of the Contractor to coordinate the requirements of the drawings into their shop drawings and construction.
i. Refer to the Project Specifications issued as part of the contract documents for information supplemental to these drawings.
ii. Should conflicts between these drawings and the Specifications exist, the Contractor shall bring them to the attention of the structural engineer for clarification.
b. Refer to the architectural, mechanical, electrical, and civil drawings for location and size of block outs, inserts, openings, curbs, bases & pads, and dimensions not shown on these drawings.
c. Refer to the architectural drawings for size and location of doors and window openings, exterior wall assemblies, and floor, wall, and roof finishes. Refer to the mechanical and electrical drawings for additional information including locations of mechanical units, generators, etc.
d. Omissions or conflicts between various elements of the drawings, notes and details shall be brought to the attention of the structural engineer and resolved before proceeding with the work.
5. Use of Drawings in Construction:
a. The Contractor shall verify all dimensions and conditions at the job site before commencing work and shall report any discrepancies to the engineer responsible for the design of that work.
b. Do not use scaled dimensions; use written dimensions or, where no dimension is provided, consult the structural engineer for clarification before proceeding with the work.
i. Where member locations are not specifically dimensioned, members are either located on columns lines or are equally spaced between localized members.
c. Details and keynotes shown shall be incorporated into the project at all appropriate locations, whether specifically called out or not.
d. McClure may provide the contractor with electronic files for their convenience and use in the preparation of shop drawings. These electronic files are not construction documents; the contractor is not relieved of his/her duty to fully comply with the contract documents, including the need to confirm and coordinate all dimensions and details, take field measurements, verify field conditions, and coordinate the contractor's work with that of other contractors for the project.
6. Changes During Construction:
a. Openings shall not be cut or otherwise made in any structural member unless that opening is specifically shown on these drawings. The Contractor shall seek approval in writing from the structural engineer for any design incorporating additional openings.
b. Supplemental drawings for Architectural, Mechanical, Electrical, and Plumbing equipment as well as elevators is based upon available information from the manufacturer (if any) at the time these drawings were submitted. The Contractor shall coordinate requirements of actual equipment supplied with details and shall provide any additional framing required.
c. The Contractor shall be responsible for any architectural, mechanical, electrical, or plumbing load imposed on the structure that is not documented on the Contract Documents or differs from what is originally shown. Provide documentation of location, load, size, and anchorage of all undocumented loads in excess of 250 lbs.
7. These drawings and the related Specifications represent the finished structure and, except where specifically shown, do not indicate the method or means of construction. Loads on the structure during construction shall not exceed the design loads indicated in Section "A. Design Criteria." The Contractor shall supervise and direct the work and shall be solely responsible for all construction means, methods, procedures, techniques, and sequence.
8. The Contractor is responsible for compliance with all applicable job-related safety standards proceeding from governing organizations (e.g. OSHA).
9. It is the responsibility of the Contractor to ensure the stability of the structural elements during construction as a result of means and methods by providing shoring, bracing, etc. as required.
10. Stability considerations should include all applicable temporary construction and environmental loads per ASCE 37 which may include wind and seismic forces.
11. Temporary bracing shall remain in place until positive connection is made between the floor/roof diaphragm and the lateral force resisting elements.
12. The Contractor may at their discretion employ a Specialty Structural Engineer, licensed in the state where the project is located, for the design of any temporary bracing, lifting, rigging, and shoring.
13. The Contractor shall consider the effects of thermal movements due to hot or cold weather construction and the potential for extreme temperature variations before the structure is complete.
14. Any foundation wall restrained by a floor is not designed to be backfilled prior to the complete construction of the floor and the lateral bracing elements (shear walls, braced frames, etc.) below it. For backfilling before this time, temporary bracing shall be designed and provided by the Contractor.
15. The Contractor is responsible for the protection and repair of any adjacent existing structures, surfaces, and areas which may be damaged as a result of the work.

D. SUBMITTAL REQUIREMENTS

- Submittal Procedures:
a. The Contractor shall provide all submittals in PDF format unless otherwise requested or indicated in the Project Specifications.
b. All submittals must be reviewed by the Contractor prior to McClure's review. The Contractor is responsible for reviewing each submittal for basic coordination with these drawings and to verify that all the required components of the submittal are incorporated. The submittal must bear the electronic review stamp of the Contractor before McClure will proceed with the review.
c. Incomplete submittals or submittals not meeting the requirements of this section will not be reviewed. McClure will notify the contractor that the submittal is incomplete or unacceptable and that resubmission is required.
i. Submittals requiring engineering calculations for all or a portion of the work are considered incomplete without the sealed calculations and will not be reviewed.
ii. Shop Drawings shall be original drawings. Submissions incorporating any portion or reproduction of the contract documents will not be reviewed.
iii. Deferred Submittals not meeting the seal requirements of section D.2.b are considered incomplete and will not be reviewed.
iv. Resubmittals with comments from a previous review left unaddressed or without any response will not be reviewed.
d. Allow two weeks for review of all submittals unless an agreement for expedited review is made in writing by McClure.
e. McClure's submittal review scope of work includes a single submittal review and one review of the revised submittal if required (two reviews of a submittal). Time required of a submittal is considered an additional service and will be billed hourly. McClure reserves the right to withhold review of a submittal surpassing this allowance until proper billing to the responsible party can be established.
f. Submittals must be returned to the Contractor by McClure bearing a stamp marked "Reviewed No Exception Taken" or "Reviewed With Comments/Exceptions" prior to proceeding with the work. Submittals marked "Reject/Resubmit" must be revised according to the comments provided prior to commencing with the respective scope of work.
2. Deferred Submittals:
a. See Section "B. Structural Engineering Design Narrative" for the list of items considered Deferred Submittals.
b. Deferred Submittals shall bear the seal of a professional engineer licensed in the state where the project is located. If the project requires a licensed Structural Engineer (S.E.) as the Engineer of Record according to state laws, the same qualification level applies to the engineer sealing the Deferred Submittals.
c. Deferred Submittal items shall not be installed until the Deferred Submittal documents have been approved by the Building Official.
3. Submittal List:
a. Submittals (product data, test records, shop drawings, and/or calculations) are required for the following:

Submittal Name	Items Required:				
	Product Data	Shop Drawings	Test Records	Engineering Drawings	Engineering Calculations
1. Concrete Mix Designs	X				
2. Concrete Break Reports			X		
3. Concrete Reinforcing Layout		X			
4. Concrete Anchor Bolts & Embedded Plates	X				
5. Concrete & CMU Anchors (Post-Installed)	X				
6. Post-Installed Anchor Substitutions	X				X
7. Post-Installed Connection Geometry Alteration				X	
8. Structural Steel Framing	X	X			
9. Structural Steel Framing Connections	X	X			X
10. Steel Floor Deck	X	X			
11. Metal Railings & Connections	X			X	
12. Metal Ladders & Connections	X	X		X	
13. Fall Arrest Systems	X	X		X	
14. Wood Framing Materials	X				X
15. Wood Floor & Roof Trusses incl. Reactions				X	X
16. Wood Truss Connections to Supporting Structure				X	X
17. Specialty Wood Fasteners	X				
18. Manufactured Wood Shear Panels	X				
19. Exterior CFS Wall Framing below Podium Level	X	X		X	X
20. Premanufactured Canopies and Awnings	X	X		X	X
21. Masonry Wall Materials	X		X		
22. Masonry Reinforcing		X			

b. "Product Data" may indicate mill certifications, material data sheets, Evaluation Service Reports (ESRs), etc. See requirements of each material section of the general notes for further information.
c. Where "Engineering Drawings" and/or "Engineering Calculations" are indicated, the submittal must comply with the requirements of item "2. Deferred Submittals" above.
4. Submittals For Record:
a. The following items impact the structural design and therefore must be submitted to the engineer; however, they do not require review. They will be returned stamped as "Received For Record".
i. Elevator Shop Drawings with Loads to Structure
ii. Mechanical Equipment Shop Drawings with Weight
iii. Brick & Stone Veneers Including Weights

A. DESIGN CRITERIA

- Design Codes:
a. International Building Code: IBC 2018
b. Minimum Design Loads for Buildings and Other Structures: ASCE 7-16
2. Design Loads:
a. Dead Loads
Wood Floors = 27 psf
Composite Deck w/ LV Concrete = 51 psf
Walls within Residential Units = 15 psf (additive to floor load)
Roof = 20 psf plus mechanical equipment shown on roof plan
Kings Size Brick Veneer = 36 psf max allowed
Large Format Masonry = 70 psf max allowed
EIFS Finish System = 10 psf max allowed
b. Live Loads (reducible per code UNO)
Step on Grade = 100 psf
Flooded Rooms and Corridors Serving them = 40 psf
Mechanical Storage = 125 psf (non-reducible)
Balconies = 60 psf (1.5 x Occupancy Served)
Typical Roof = 20 psf
Handrails = 200 lb point load at any point on handrail or on top rail
Public Rooms = 100 psf linear load on top rail
Public Corridors = 100 psf
c. Roof Snow Load
Ground Snow Load (p_g) = 20 psf
Flat Roof Snow Load (p_f) = 14 psf
Snow Exposure Factor (C_e) = 1.0
Snow Load Importance (I_s) = 1.0
Thermal Factor (C_t) = 1.0
Slope Factor (C_d) = 1.0
Main Roof Parapet Snow Drift Load (p_s) = 36 psf
Main Roof Parapet Snow Drift width (w) = 17'-3"
Balcony Snow Load = 40 psf
Balcony Snow Drift Load = Full Balcony Depth
Rain on Snow Surcharge = 5 psf
d. Wind Load
Basic Design Wind Speed, V = 109 mph (3 sec. Gust)
ASD Wind Speed, V_{ASD} = 85 mph
Risk Category = II
Wind Exposure = C
Internal pressure Coefficient (C_{pi}) = -0.18
Components and Cladding (psf):

Zone	A=100'	A=50'	A=100'
Negative Zone 1	-40.6	-42	+16/-34
Negative Zone 1'	-28.5	-28.5	+16/-46
Negative Zone 2	-65.4	-55.7	+16/-48
Negative Zone 3	-65.4	-55.7	+26/-28
Positive Zone 1 & 1'	16	16	16
Positive Zones 2 & 3	28.5	25.6	24.3
Negative Zone 4	-30.9	-26.7	-27.9
Negative Zone 5	-38.0	-29.6	-32.1
Positive Zone 4 & 5	28.5	24.3	25.6

Notes:
1. A is the Effective Wind Area as defined in ASCE 7 Ch. 26.
2. Linear interpolation between tabulated values is permitted.
3. Diaphragms with Tributary Area (A) > 700 ft² shall be permitted to be designed using provisions for MWFRS.
4. Ultimate loads shown.
e. Earthquake Load
Risk Category = II
Seismic Importance Factor (I_e) = 1.0
Mapped Spectral Response Acceleration Parameters
 $S_s = 0.059g$ $S_1 = 0.089g$
Design Spectral Response Acceleration Parameters
 $S_{DS} = 0.086$ $S_{D1} = 0.088$
Soil Site Class: B
Seismic Design Category: B
Basic Seismic Force Resisting System(s)
Wood Walls with Wood Structural Panels (ASCE 7 Table 12.2-1 Line A.15)
 $R = 6.5$ $\Omega_0 = 3.0$ $C_u = 0.013$ $C_0 = 4.0$
(Ω_0 reduced to 2.5 per ASCE7-16 Table 12.2-1 footnote B)
Wood Walls with Panels of Other Materials (Gypsum) (ASCE 7 Table 12.2-1 Line A.17)
 $R = 2.0$ $\Omega_0 = 2.5$ $C_u = 0.043$ $C_0 = 2.0$
(Ω_0 reduced to 2.0 per ASCE7-16 Table 12.2-1 footnote B)
Ordinary Reinforced Masonry Shear Walls (ASCE 7 Table 12.2-1 Line A.9)
 $R = 2.0$ $\Omega_0 = 2.5$ $C_u = 0.043$ $C_0 = 1.75$
(Ω_0 reduced to 2.0 per ASCE7-16 Table 12.2-1 footnote B)
Design Base Shear, $V = C_u \times W$
Analysis Procedure = Equivalent Lateral Force Procedure (ASCE 7-16 Chapter 12.8)
f. Rain Load
100 Year 15 min. Rain Intensity (i) = 7.5 in/hr
3. Allowable Deflections:

	Total Load	Live/Snow/Wind Load	Absolute Maximum
Floor Joists/Trusses	L/360	L/480	1"
Roof Joists/Trusses	L/240	L/360	1.5"
Wall Framing (flexible finish)	L/360	L/600	0.75"
Wall Framing (brittle/brick finish)	L/600	L/600	0.5"

Cantilever deflection limits are the more restrictive of 2 x the appropriate L— limit (e.g. 2L/360 = L/180) or absolute maximum value listed above, measured at the tip of the cantilever U.N.O.
4. Soil Properties:
a. Foundation design is based on the following to be considered part of the construction documents:
i. Geotechnical Report prepared by Olsson, dated Oct. 4, 2023.
ii.

J. STRUCTURAL STEEL

- I. Materials:**
- Materials shall conform to the following, unless noted otherwise.
 - Rolled WF shapes ASTM A992, Fy = 50ksi
 - Plates and angles ASTM A572-50
 - Channels ASTM A36
 - HSS: Rectangular ASTM A500, Grade C
 - HSS: Round ASTM A500, Grade C
 - Bolts ASTM F3125
 - All bolts shall be Grade A325 or F1852, UNO
 - Bolts designated as "A490" shall be Grade A490 or F2280
 - Nuts ASTM A563 DH or A194
 - Washers ASTM F436
 - Anchor Bolts ASTM F1554 Grade 36, UNO
 - Threaded Rod ASTM A36
 - Studs ASTM A108, Type B Nelson headed shear stud connectors or equal.
 - Electrodes Matching weld metal, 70 ksi minimum strength.
 - Finishes
 - Prepare all surfaces that will be exposed in accordance with SSPC SP3
 - All exterior steel components exposed to view or weather shall be galvanized in accordance with ASTM A123.
 - All exterior welded connections shall be cold galvanized in accordance with ASTM A780.
- 2. Fabricator:**
- Steel fabricator shall be AISC Certified.
 - Structural members shall be detailed, fabricated, and erected in accordance with the latest edition AISC Code of Standard Practice.
 - Structural steel fabrication and erection drawings must be submitted to the engineer for review and approval prior to fabrication.
 - Fabricator shall engage a professional engineer registered in the state of the project for the design and detailing of:
 - Steel connections.
 - Temporary bracing.
 - Steel deck (for continuity and load transfer).
- 3. Connections:**
- The contractor has the option to use bolted or welded connections. Any connections not specifically detailed on the drawings shall be designed by a professional structural engineer licensed in the project state and retained by the fabricator. In general, any connections shown on the drawings are schematic and are intended to show only the relative relationship of the connected members.
 - Structural design calculations for all beam and bracing connections shall be submitted to the engineer prior to fabrication and should include the following (as a minimum):
 - All plate dimensions and grades (minimum plate thickness shall be 3/8").
 - All weld sizes, lengths, pitches and returns.
 - Number and type of bolts.
 - Connection design forces:
 - Beam shear connections shall be designed for the actual reactions indicated on the drawings. Connection forces shown on drawings are envelope reactions based on ASD load combinations.
 - Connections indicated on the drawings as moment-resisting shall be designed for the moment shown, if moment is not indicated on the drawings, connection shall be designed to develop the full capacity of the member.
 - Columns have not been checked for local effects at connections. Fabricator shall verify if stiffener or web doubler plates are required and provide as necessary. Column size may also be increased with approval of the Structural Engineer.
 - Connection loads indicated on the drawings include compensation for Code permitted stress increases and load reductions for connection design.
 - Bolted Connections:
 - Minimum bolt diameter shall be 3/4".
 - Slip critical connections shall be used for bracing members, moment-resisting connections, cantilevers, and as indicated on the drawings. Standard oversized and long-slotted holes are permitted for friction-type connections.
 - All non-slip-critical connections shall be typical bearing type. Oversized or slotted holes are not permitted unless indicated on the drawings.
 - The fabricator is responsible for verifying the tensile capacity of axially loaded members with the presence of bolt holes. Increase member size; add plates (etc) as required.
 - Welded Connections:
 - All fillet welds shall be sized according to AISC minimums, but never less than 3/16" (UNO).
 - All welds shall be performed in accordance with the latest edition of the AWS Structural Welding Code.
- 4. Erection:**
- All structural steel to be fabricated and erected in accordance with latest AISC specifications.
 - It is the responsibility of the contractor to ensure that structure is maintained in a safe, stable configuration at all times.
 - Any shoring required shall be submitted with engineering calculations for approval.
 - Splicing of steel members not specifically shown on the drawings is prohibited without prior approval from the engineer.
 - All beams shall be installed with the mill camber up.
- 5. Steel Details**
- Loose Intels for King Brick Masonry at all openings shall be the following:
 - L 3-1/2 x 2-1/2 x 1/2 for spans less than 6'-4"
 - L 5 x 3 x 3/8 for spans between 6'-5" and 8'-3"
 - L 6 x 3-1/2 x 3/8 for spans between 8'-4" and 10'-0"
 - L 7 x 4 x 7/16 for spans between 10'-1" and 12'-1"
 - Loose Intels for Large Format Masonry at all openings shall be the following:
 - L 6 x 6 x 3/8 for spans less than 6'-6"
 - L 8 x 6 x 1/2 for spans between 6'-7" and 9'-3"
 1. Untel sizes are based on 70 psf masonry weight with 6'-0" max height of brick above the lintel.
 - Lintels shall bear 5 minimum each end.
 - Lintels carrying masonry shall be galvanized.
 - All double angle lintels back-to-back shall be bolted at 32" o.c. maximum spacing, with 5/8" diameter A307 bolts, a minimum of two bolts per span.
 - See architectural and mechanical drawings for opening sizes and locations.

Schedule of minimum nailing for standard connections ¹												
Connection ^{2,3}	Number, or spacing, of fasteners required per connection											
	Nail lengths are minimum, nominal lengths, in inches.											
	Nail shank diameters are minimum, nominal diameters, in inches.											
Equiv. Common Nail	3"x 16d	3"x 10d	3"x 8d	3"x 6d	3"x 4d	3"x 2 1/2"x 10d	2"x 10d	2"x 8d	2"x 6d	2"x 4d	2"x 3d	2"x 2d
	16d	10d	8d	6d	4d	10d	10d	8d	6d	4d	3d	2d
Floor Framing												
Joist to band joist	3	5	5	5	N/A	6	6	N/A	N/A	N/A	N/A	N/A
Ledger strip	3	4	4	4	6	4	4	N/A	N/A	N/A	N/A	N/A
Joist to sill or girder	3	3	3	3	3	4	4	N/A	N/A	N/A	N/A	N/A
Blocking between joist or rafter to top plate	3	3	3	4	3	4	4	N/A	N/A	N/A	N/A	N/A
Bridging to joist	N/A	N/A	N/A	N/A	N/A	2	3	3	3	4	3	4
Rim joist to top plate	8" o.c. 6" o.c.	6" o.c.	6" o.c.	6" o.c.	6" o.c.	6" o.c.	6" o.c.	4" o.c.	6" o.c.	3" o.c.	3" o.c.	3" o.c.
Build-up Girders & Beams	24" o.c. 24" o.c.	24" o.c.	24" o.c.	24" o.c.	16" o.c.	16" o.c.	16" o.c.					
Spacing along edges, # at ends & splices	3	3	3	3	4	4	3	3				
Ceiling and Roof Framing												
Ceiling joists to plate	3	4	5	5	5	5	5	6	N/A	N/A	N/A	N/A
Ceiling joists, laps over partitions	3	4	4	4	6	4	4	N/A	N/A	N/A	N/A	N/A
Ceiling joist to parallel rafter	3	4	4	4	6	4	4	N/A	N/A	N/A	N/A	N/A
Collar tie to rafter	3	3	4	4	5	4	4	N/A	N/A	N/A	N/A	N/A
Jack rafter to hip, toe-nailed	3	3	4	4	5	4	4	N/A	N/A	N/A	N/A	N/A
Jack rafter to hip, face nailed	2	3	3	3	3	4	4	N/A	N/A	N/A	N/A	N/A
Roof rafter to plate	3	3	3	3	3	4	4	5	5	5	6	
Roof rafter to 2-by ridge beam (driven through beam into end of ridge)	2	3	3	3	3	4	4	N/A	N/A	N/A	N/A	N/A
Roof rafter to 2-by ridge beam (toe-nailed rafter to beam)	2	3	3	3	3	4	4	N/A	N/A	N/A	N/A	N/A
Wall Framing												
Top or sole plate to stud (End nailed)	2	3	3	3	5	4	4	N/A	N/A	N/A	N/A	N/A
Stud to top or sole plate (toe-nailed)	2	3	3	3	5	4	4	5	5	5	5	5
Cap/Top plate laps and intersections (each side of lap)	2	3	3	3	4	3	3	N/A	N/A	N/A	N/A	N/A
Diagonal bracing	2	2	2	2	2	3	3	3	4	4	4	4
Sole plate to joist or blocking @ braced panels (number per 16" joist space)	2	3	3	4		4	4	N/A	N/A	N/A	N/A	N/A
Sole plate to joist or blocking	16" o.c. 8" o.c.	8" o.c.	8" o.c.	8" o.c.	8" o.c.	8" o.c.	8" o.c.					
Double top plate	16" o.c. 16" o.c.	12" o.c.	12" o.c.	12" o.c.	8" o.c.	12" o.c.	12" o.c.	N/A	N/A	N/A	N/A	N/A
Double studs	12" o.c. 12" o.c.	8" o.c.	8" o.c.	8" o.c.	8" o.c.	8" o.c.	8" o.c.	N/A	N/A	N/A	N/A	N/A
Corner studs	24" o.c. 16" o.c.	16" o.c.	16" o.c.	16" o.c.	8" o.c.	12" o.c.	12" o.c.	N/A	N/A	N/A	N/A	N/A

N/A - Fastener not applicable to connection
¹ Fastening schedule applies to framing members having an actual thickness of 1 1/2" (Nominal "2-by" lumber)
² Fastenings listed above may also be used for other connections that have the same configuration and the same code requirement for fastener quantity/spacing and fastener size (per weight and style, e.g., 8d common, 3-penny common nail).
³ Fastening schedule only applies to buildings of conventional wood frame construction. Connections of shear walls and floor and roof diaphragms shall be as shown on the drawings.

K. WOOD FRAMING AND CONNECTIONS

- Install roof carpentry according to the American Institute of Timber Construction Manual. It is the responsibility of the contractor to verify all dimensions prior to erection.
 - Material:
 - Sawn lumber
 - Sawn lumber shall be grade stamped and visually graded with maximum 19% moisture content.
 - All members shall meet strength requirements in NDS "National Design Specification for Wood Construction".
 - Joists, rafters, and nailers with nominal depth 8" or less shall be Southern Pine (SP) or Douglas Fir-Larch (DFL), No. 2 or better, UNO.
 - Joists, rafters, and nailers with nominal depth greater than 8" shall be Southern Pine (SP) or Douglas Fir-Larch (DFL), No. 1 or better, UNO.
 - All members used as columns or beams (including headers) shall be Void of any significant defects (ie. Checking, warping, etc.) at the time of erection.
 - All exterior posts shall be Western Red Cedar No. 2 or better.
 - Bearing and shear wall studs, and wall plates, shall be Douglas Fir-Larch (DFL), No. 2 or better.
 - Structural Composite Lumber
 - SCL shall meet material specifications in ASTM D5456
 - SCL shall include laminated veneer lumber (LVL), laminated strand lumber (LSL), oriented strand lumber (OSL) and parallel strand lumber (PSL)
 - All SCL materials shall be graded as indicated on the plans.
 - Glued-laminated timber (Glulam) shall be manufactured and identified as required in ANSI/AITC A-190.1 and ASTM D3737.
 - Glulam shall be graded as indicated on the plans.
 - Structural Panels
 - All plywood or oriented strand board (OSB) panels shall meet the strength requirements in Department of Commerce (DOC) PS 1 and PS 2 or ANSI/APA PRP 210.
 - All structural panels (walls, floor and roof) shall meet the Structural I grading standard.
 - Connectors and Fasteners
 - Metal connectors and associated fasteners used for the applications indicated shall meet the following minimum standards:
 - Untreated Lumber
 - ConnectorsASTM A653 G90
 - Bolts and Anchor RodsASTM F1554 Gr36
 - Nails and StaplesASTM F1667
 - Sodium Borate (SBX) Pressure Treated Lumber
 - ConnectorsASTM A653 G90
 - BoltsASTM A307
 - Anchor RodsASTM F1554 Gr 55
 - Nails and StaplesASTM F1667 with A153 Hot Dipped Galvanized
 - Al Other Pressure Treated Lumber (e.g. ACC-Q, ACC-QD, CBA-S, CBA-A, AC2ZA)
 - ConnectorsAISI SS Type 304 or 316
 - BoltsASTM A193, GrB7
 - Anchor RodsASTM A193, GrB7
 - Nails and StaplesASTM F1667 using AISI Type 304 or 316 Stainless Steel
 - Fasteners utilizing dissimilar materials are prohibited.
 - Power driven fasteners shall comply with NES NER-272.
 - Fastener installation whether power driven or otherwise shall be in accordance with the Building Code and the manufacturer's recommendations. In general fastener heads shall be installed nominally flush with the outer ply of the connection. Sheathing and support framing damaged by overdriven fasteners shall be removed and replaced.
 - Aluminum fasteners and flashing shall not be in contact with pressure treated lumber.
- General:
 - All light framed wood construction shall be fastened as indicated on the plans. Connections not detailed shall be fastened in accordance with the table below.
 - Sill plates shall be anchored to the foundation as shown on the drawings.
 - Plywood/OSB wall, floor or roof sheathing shall be fastened per the requirements shown on the drawings.
 - Splicing of structural members is not permitted under any circumstances.
 - All framing in direct contact with water, soil, concrete, masonry, or permanently exposed to weather shall be preservative treated lumber in accordance with the AWPA Standard.
 - All framing indicated to be fire-retardant treated or fire resistive on the drawings (Architectural or Structural) shall comply with AWPA U1 UCFA, Type A or ICC-ES ESR 2645 and shall have UL FR-S surface burning characteristics.
 - All wood shall be stored on site and protected from the elements to prevent warping, cupping, bowing, crooking and twisting. Use only material that is straight. All stored wood shall be held off the ground with sacrificial damage blocks.
 - Wood connectors shall be installed to prevent wood from splitting or otherwise damaging either member.
 - All wood denoted as requiring fire-resistive treatment shall be pressure treated according to AWPA Standard requirements.
 - Use 4x4, 4x6 and 6x6 columns as shown on plans. Pull-up sections of 2x studs shall not be substituted for timber posts.
 - All multi-gy beams, joists and headers shall be fastened together.
 - Fasten sawn lumber members per schedule below.
 - Fasten structural composite lumber per manufacturer's literature.
 - Standard cut washers shall be used under bolt heads and nuts bearing against wood, unless noted otherwise per shear wall anchorage details.
 - Wall studs are designed based on being fully braced by sheathing. Design of temporary or permanent blocking or bridging for support of construction loads by unsheathed walls is the responsibility of the contractor.
 - Wood joists shall bear on the full width of supporting members (stud walls, beams, nailers, etc.) unless noted otherwise.
 - Subject to compliance with the project requirements, wood connectors, joist hangers, post caps and bases, holdowns, and related hardware shall be manufactured by Simpson Strong-Tie Company, Inc. or approved equal.
 - Contractor shall follow the manufacturer's latest recommendations for installation of connectors.
 - Other manufacturers may be acceptable. Submit substitution request demonstrating that the proposed hardware has the same or greater capacity for each connection. Allow two weeks for review.
 - All beams and joists not bearing on supporting members shall be framed with Simpson joist hangers. Use joist hangers per schedule and details. The joist hangers shall be installed using nails or screws supplied by the hanger manufacturer as required for the hanger type.
 - Sill plates of all bearing walls on concrete shall be anchored with anchors as shown on the drawings. Sill plate anchors shall be located a maximum of 1'-0" from corners, ends of walls and sill plate splices. Provide (2) anchors minimum in each sill plate segment Refer to plans and details for shear wall anchorage requirements.
 - Nailers shall be anchored to steel beams and columns with 1/2" diameter A307 bolts with required washers at a maximum spacing of 24" on center (alternate sides), unless noted otherwise.
 - Wall studs, jamb studs, and beam support studs shall have adequate vertical blocking installed to transfer all vertical loads to the foundation.
- Wood Floor and Roof Trusses:
 - Provide wood trusses capable of withstanding the design loads within the limits and under the conditions indicated. Truss design shall be in accordance with the Building Code and TPI-1 Nation Design Standard for Metal Plate Connected Wood Truss Construction.
 - Metal gusset plates shall be designed, manufactured, and approved according to IBCO requirements.
 - Wood trusses shall be of sawn lumber with 2x nominal thickness.
 - In addition to the loads indicated below and in section "A. Design Criteria", wood trusses shall be designed for all applicable wind, seismic, and snow (including drift) loads required by Building Code and noted on plans.
 - Truss design and shop drawing preparation shall be supervised by a registered professional engineer licensed in the state where the project is located. Submittals shall be signed and sealed and include comprehensive truss layout plans and design calculations that indicate species and grades of lumber, design stresses, size and type of connector plates used.
 - Fabricator shall determine truss diagonal loads. Truss configurations shown on drawings are diagrammatic only. Bearing points shall coincide with intersections of diagonals and chords. All dimensions shall be determined by the truss manufacturer. The manufacturer and contractor shall coordinate all architectural and MEP components with the truss layout and profile.
 - The manufacturer shall provide all open web trusses and accessories as shown on the structural and architectural drawings and as required for a complete project. This includes all blocking, bridging, bracing, and drag components required for construction.
 - All truss-to-truss connections and truss to supporting member connections shall be designed and detailed by the truss supplier and the size and type of connectors included in the sealed shop drawing submittal. Coordinate size, species, and grade of supporting chord and web members with the truss hanger selected.
 - All temporary and permanent bracing shall be in accordance with the TPI standards for bracing. The bracing shall be furnished and installed by the Contractor. Do not use ceilings as uplift bracing at truss bottom chord.
 - Girder trusses shown on drawings shall be designed to carry concentrated reactions from supported members. Girder trusses shall not be located directly above openings unless coordinated with the Structural Engineer.
 - Wood trusses shall be handled and erected in accordance with TPI HIB-91. Trusses shall be unloaded and stored in bundles in an upright position out of contact with the ground until ready for installation.
 - Any damage to the trusses shall be brought to the immediate attention of the Structural Engineer and truss supplier. Field repair and modification of trusses shall not be made with prior written approval from the supplier, except for nominal trimming to correct length where such trimming will not impair the load carrying capacity of the truss.
- Roof trusses shall be designed for the following:

TC SL = 10 psf	TC LL = 20 psf	TC SL = 20 psf	C&C TC WL = +24/-48 psf	MWFRS TC WL = +17 psf
BC DL = 10 psf	BC LL = N/A		C&C BC WL = +5 psf	MWCRS BC WL = +5 psf
End/Parapet C&C WL = +89/-60 psf				

Unbalanced Snow Load:
Balanced TC SL = 14psf Drift Surcharge TC SL = 36 psf Drift Width = 17'-3"
- Floor trusses shall be designed for the following loads:

TO DL = 17 psf + 15psf partition dead load	TC LL = 40/100/125 psf
BC DL = 10 psf	BC LL = 45 psf

(Coordinate LL with Architectural plans and general note section "A. Design Criteria")
- The allowable deflection is:
 - Roof Trusses
 - Total Load: L/240
 - Roof Live or Snow Load: L/360
 - Absolute Maximum: 1.5"
 - Floor Trusses
 - Total Load: L/360
 - Live Load: L/480
 - Absolute Maximum: 1"

L. WOOD SHRINKAGE

- IBC 2304.3.3 requires that architectural, mechanical, electrical, and plumbing systems be designed to accommodate movement due to shrinkage. McClure Engineering Co. takes no responsibility for the naturally occurring shrinking that will occur.
- Estimated values are based upon the following moisture content:
 - At installation (MC) = 19%
 - At equilibrium (EMC) = 8%
- The following recommendations are intended to minimize the potential issues associated to wood shrinkage. Implementation and liability are ultimately up to the contractor or design professional responsible for the impacted trade.
 - Mechanical, Electrical, Plumbing
 - Allow construction gaps in the wood framing to close by delaying installation of MEP as long as possible to allow for additional dead load to be installed.
 - Provide oversized or long slotted holes at pipe penetrations. Holes must be within conformance of typical penetration details.
 - Rigid connections shall be adjusted before completion of construction of closing of wall and ceiling assemblies.
 - All vertical sheet metal down spouts shall have intermediate slip joints.
 - Roof Drains shall utilize adjustable fittings. Fittings must be adjusted at the completion of construction and then as required to maintain proper drainage.
 - Architectural Considerations
 - Stucco, EIFS and brittle finishes shall have horizontal expansion joints, slip joints with appropriate waterproofing.
 - Brick and stone finishes shall have ties that accommodate differential movement.
 - Provide adjustable thresholds or transitions at rigid transitions such as CMU or concrete stair and elevator shafts.
 - Construction tolerance
 - Limit shortening due to nesting by cutting all studs level square and tight against plates.
 - Structural wood panels shall have 1/2" relief gaps at each floor to limit bulging.
 - Floor sheathing shall have 1/8" gaps on all sides during installation to accommodate movement.
 - Shear wall hold downs shall be check and realigned immediately prior to sheathing walls.
 - Delay gyp topping around concrete and CMU stair or elevator shafts until completion of construction.
 - Material storage
 - Stored materials shall be covered and elevation from the elements.
 - Do not allow water to pond on floor sheathing. Provide drain holes if required to allow water to quickly drain if water does temporarily pond.
 - Post occupancy
 - McClure recommends a review of roof drains every 3 months for the first 24 months of occupancy and then annually. Adjust drains as required to maintain watertight integrity.
 - McClure recommends review of joints at exterior doors, windows and finish transitions. Waterproof as needed where original joints fail per the architect's recommendations.
 - Remedial self-leveling work may be required around concrete or CMU stair and elevator towers to accommodate shrinkage.

M. STEEL FLOOR AND ROOF DECK

- General:
 - Install steel deck according to procedures outlined in the latest edition of the "SDI Manual of Construction with Steel Deck" published by the Steel Deck Institute. One copy shall be maintained on site.
 - All steel roof deck shall be welded to supporting beams and joists and erected in accordance with manufacturer's latest recommendations.
 - Deck shall be continuous over 3 spans, unless noted otherwise.
 - Parallel edges of deck to be fastened with the same fastener type and spacing as at supporting members. Fasten to all parallel supports – both at edges and in the field of the deck. Raise steel supports or provide shims at weld points if the deck valley does not engage the support.
 - Provide welding washers as required by manufacturer's recommendations.
 - All miscellaneous accessories – pour stops, column closures, etc. – will be installed in accordance with manufacturer recommendations and the Steel Deck Institute.
 - Four pour stops shall be A36 steel angles (1/4") to finish floor height unless otherwise noted.
 - The use of any equipment weighing over 150 pounds for installation or finishing of concrete or roofing is prohibited without prior approval from the Engineer. Request MUST be made prior to submittal of shop drawings for deck and supporting structure to be considered.
 - Concrete placed on steel deck shall have a constant thickness. Thickness shall be maintained by probing the deck at supports and at mid-span between supports. It is not permissible to finish the deck to be flat unless a design is submitted demonstrating that the deck and supporting structure can support the additional concrete weight.
- Floor Deck:
 - Floor deck properties shall be as follows based on deck type indicated on plans:
 - Main Floor Slab: 5 1/2" Total Depth Lightweight Concrete with 3" Composite Deck
 - Reinforcing: 6x6-W1.4W1.4 Welded Wire Mesh
 - Deck: 3" Composite 20 Gs
 - Maximum Unshored Spans: Single Span = 12'-2", Double Span = 11'-0", S_u = 0.512 in²/ft, S_y = 0.539 in²/ft, F_y = 50ksi, t_{min} = 0.0358", I_y = 0.919 in⁴/ft, I_x = 0.6921 in⁴/ft, S_x = 0.12 in³/ft, S_y = 0.12 in³/ft, Triple Span = 13'-7"
 - Balcony Structural Slab: 2 1/2" Total Depth Lightweight Concrete With 9/16" form deck
 - Reinforcing: 6x6-W1.4W1.4 Welded Wire Mesh
 - Deck: 9/16" non-composite 28 Gs.
- Composite deck to be fastened to supports with Hilti X-ENP-19-15 PAFs.
 - Typical Fastening:
 - (1) PAF per rib
 - PAFs 36" at o.c. along panel edges
 - #10 screw splayed fasteners at 36" o.c.
 - Fastening within 30 ft of cmu walls
 - Fastening per rib + (1) PAF every other rib
 - PAFs at 4" o.c. along panel edges
- Non-composite floor deck shall be fastened to supports with X-ENP-19-15 PAFs with 30/4 pattern, with 0 splayed fasteners.
- Metal floor deck shall be galvanized in accordance with the requirements of ASTM A653-94 G90.

N. CONCRETE MASONRY

- All construction shall comply with applicable provisions of the following latest ACI standards:
 - ACI 530/ASCE 52/TMS 402 – Building Code Requirements for Masonry Structures.
 - ACI 530.1/ASCE 6/TMS 602 – Specifications for Masonry Structures.
 - IBC Chapter 21 Masonry
 - Concrete block units shall conform to the requirements for Grade N Type 1, load-bearing normal-weight units per ASTM C-90. Use Grade S blocks below grade. All below grade block shall be solid grouted.
 - Net area compressive strength of masonry, f_m = 2,000 psi.
 - Standard units shall have nominal face dimensions of 16 x 8 inches high. The minimum compressive strength of the masonry units shall be as follows:

	Net Area Compressive Strength Of Concrete Masonry Units (psi)	Net Area Compressive Strength Of Concrete Masonry Units (psi)
	Mortar M or S	Type N mortar
2,000	2000	2650
 - Mortar for unit masonry shall be proportioned per ASTM C270. The minimum mortar compressive strength is as follows:
 - Type S: 1,800 psi
 - Type M: 2,500 psi
 - Grout for unit masonry shall be proportioned per ASTM C476. The minimum grout compressive strength is the larger of 2,000 psi or f_m.
 - Maximum coarse aggregate size is 3/8".
 - Reinforce all CMU walls with vertical rebar full height, centered in cell as shown on the drawings. Grout reinforced cells solid.
 - When reinforcing is not specified, provide #5 @ 48" o.c., minimum.
 - All vertical cells to be filled shall have vertical alignment to maintain an unobstructed cell area not less than 2 in. x 3 in. All bond beams shall be grouted solid and reinforced.
 - Provide bent dowels at all wall intersections – one per bond beam at corners, and two at tee intersections.
 - Provide bond beams at all walls supporting roof and floor slabs.
 - Grout solid under all beams and lintels for full height of wall.
 - All masonry walls shall have ladder type horizontal joint reinforcement with two 9 gauge wires spaced at 16" o.c., vertically, unless noted otherwise.
 - All wall intersections shall be reinforced with prefabricated tie or corner units.
 - Use low lift method of grouting. Maximum grout lift = 5'-0". Alternative methods of grouting may be acceptable. Submit method for approval two weeks in advance.
 - Masonry reinforcing lap lengths shall be as follows:

Bar Size	Masonry Strength, f _m (psi)
	2,000
#3	12"
#4	17"
#5	27"
#6	51"
#7	69"
#8	105"
#9	132"
- Notes:
 - Development length is based on 2 1/2" masonry cover for all bars. Use bar spacers to maintain cover.
- Brace all masonry walls until floor and roof framing and metal deck are installed.
 - Design and installation of bracing is the responsibility of the masonry contractor.
 - Submit bracing plan for review.
- When grouting is stopped for more than one hour, horizontal construction joints shall be formed by stopping the pour of grout 1-1/2" below the top of the uppermost course.
- Provide control joints in wall every 40 ft. Provide vertical reinforcing in first cell each side of control joint. Do not locate control joint within 2'-0" of end or opening.
- Conduit pipes and sleeves in masonry shall not displace more than 2 percent of the net cross-sectional area and shall be placed no closer than 3 diameters or holes on center.
- The Contractor shall include in his bid an allowance of 300 lbs of reinforcing steel "in place" to be used in the field as the architect or structural engineer may direct.

O. COLD FORMED STRUCTURAL STUD FRAMING

- Any dimensional information shown is included for engineering purposes only. It is the responsibility of the contractor to verify building dimensions with the A/E and MEP drawings and to comply with all other requirements for the Contract Documents.
- All materials shall have 33 ksi minimum yield strength, except studs and track of 16 gauge or heavier shall have a minimum yield strength of 50 ksi.
- All material properties, fabrication, and erection shall be in accordance the latest edition of the AISI "Specifications for the Design of Cold-Formed Structural Members."
- Any proprietary connectors shown have been selected based on specifications and capacities published by the manufacturer. Weld design values have been based on the latest edition of the AISI "Specifications for the Design of Cold-Formed Structural Members." Any deviation from the brand, type, size or quantity of connectors indicated on these drawings must be approved by the engineer prior to construction.
- All framing components shall be cut square or at an angle to fit square against abutting members. Splicing of axially loaded members shall not be permitted. Members shall be held firmly in place until properly fastened. Attachments of similar components shall be by welding, screw attachment, or bolting. Wire tying of components is not permitted.
- All field cutting of members shall be done by sawing, drilling, or shearing. Torching is not permitted.
- Special anchorage requirements required for wind and seismic bracing shall be as shown on the plans.
- Members shall not be spliced other than at the locations indicated on the drawings. All splices shall conform to the details in the drawings.
- The Contractor shall verify sizes and locations of structural components where members attach.
- All load bearing joists shall have blocking with a maximum spacing of 8'-0" on center, attached per details.
- CFS wall studs have been designed to support floor/roof load tributary to them. Masonry veneer is assumed to be self-supported and transferred to the foundation/podium. CFS framing has been designed to laterally support veneer where applicable.
- No nailing or coping of any framing member is allowed, unless stated within this drawing package.
- Per AISI standard for cold-formed framing- wall design, the maximum allowable gap (measured between the web of the stud and of the track) for a stud seated in a track is 1/4" for non-axial load bearing conditions and 1/8" for axial load bearing conditions (U.N.O.) Pressure should be applied to nest the studs into the tracks until the tolerances listed above are achieved. Failure to do so could result in serviceability problems in the future.
- CFS wall studs have been designed to support floor/roof load tributary to them. Masonry veneer is assumed to be self-supported and transferred to the foundation

STATEMENT OF SPECIAL INSPECTIONS

Project Name: Discovery Park Lee's Summit Lot 4 Address: 1921 NE Discovery Ave, Lee's Summit, MO 64064

1. This Statement of Special Inspections is submitted as a condition for permit issuance in accordance with the Special Inspection and Structural Testing requirements of the Building Code. It includes a schedule of Special Inspection services applicable to this project as well as the name of the Special Inspector to be retained for conducting these inspections and tests. This Statement of Special Inspections encompasses only the structural discipline.
2. The Special Inspector shall keep records of all inspections and shall furnish inspection reports to the Building Official and the Registered Design Professional in Responsible Charge. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Registered Design Professional in Responsible Charge. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

3. Interim reports shall be submitted to the Building Official and the Registered Design Professional in Responsible Charge.

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

5. Job site safety and means and methods of construction are solely the responsibility of the Contractor. This Statement of Special Inspections includes the following building systems:

- x Fabricators

x Cast-In-Place Foundations Elements

o Helical Pile Foundations

x Concrete Construction

x Masonry Construction - Level 2-3

o Steel Construction Other than Structural Steel

x Seismic Resistance
- x Soils

x Rammed Aggregate Piers

o Cast-In-Place Deep Foundation Elements

x Masonry Construction - Level 1

x Structural Steel Construction

x Wood Construction

x Wind Resistance

6. The following components are wind-resisting components or part of the main wind-force resisting system and are subject to special inspections in accordance with the Special Inspection Schedule - Wind Resistance:

Wood Shear Walls with Structural Plywood or Gypsum Board Sheathing

Masonry Walls

7. The following components are designated seismic systems or part of the seismic-force resisting system that are subject to special inspections in accordance with the Special Inspection Schedule - Seismic Resistance:

Wood Shear Walls with Structural Plywood or Gypsum Board Sheathing

Masonry Walls

Special Inspection Schedule: Fabricators			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Verify fabrication and implementation procedures:			
a. Steel Construction	X	-	X
b. Concrete Construction (including rebar fabrication)	X	-	X
c. Masonry Construction	X	-	X
d. Wood Construction	X	-	X
e. Cold Formed Metal Construction	-	-	X
f. Other Construction	-	-	X

Special Inspection Schedule: Soils			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Verify materials below shallow foundations are adequate to achieve the design...	X	-	X
2. Verify excavations are extended to proper depth and have reached proper...	X	-	X
3. Perform classification and testing of compacted fill materials.	X	-	X
4. Verify use of proper materials, densities and lift thickness during placement...	X	X	-
5. Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly.	X	-	X

Special Inspection Schedule: Cast-In-Place Foundation Elements			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Special Inspections and verifications for concrete foundation construction in accordance with the Special Inspection Schedule: Cast-In-Place Concrete for th...			
a. Isolated spread concrete footings.	-	-	X
b. Continuous concrete Grade Beams.	X	-	X
c. Concrete foundation walls.	X	X	-

Special Inspection Schedule: Rammed Aggregate Piers			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Observed installation operations and maintain complete and accurate records for each element.	X	X	-
2. Verify placement locations, pre-auger diameter and soil conditions encountered during drilling (if applicable), pier lengths, and planned and actual...	X	X	-
3. Document average lift thickness of each pier, volume of aggregate used in each pier, and any unusual conditions encountered including cave-in...	X	X	-
4. Perform modulus test, bottom stabilization test for Geopier replacement elements, and crowd stabilization test for Geopier replacement elements.	X	X	-

Special Inspection Schedule: Concrete Construction			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Inspect reinforcing steel, including prestressing tendons and placement.	X	-	X
2. Inspect reinforcing steel welding in accordance with the Special Inspection...	X	-	-
3. Inspect anchors cast in concrete where allowable loads have been increased...	X	-	X
4. Inspect anchors post-installed in hardened concrete members.	X	-	X
5. Verify use of required design mix.	X	-	X
6. At the time fresh concrete is sampled to fabricate specimens for strength test...	X	X	-
7. Inspect concrete and shotcrete placement for proper application techniques.	X	X	-
8. Inspect for maintenance of specified curing temperature and techniques.	X	-	X
9. Inspection of Prestressed Concrete:			
a. Observe application of prestressing forces.	-	X	-
b. Observe grouting of bonded prestressing tendons in the seismic force...	-	X	-
10. Inspect erection of precast concrete members.	-	-	X
11. Verify in-situ concrete strength prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural...	-	-	X
12. Inspect formwork for shape, location, and dimensions of the concrete member being formed.	X	-	X

Special Inspection Schedule: Masonry Construction - Level 1			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Compliance with required inspection provisions of the Construction Documen...	X	-	X
2. Verify fm and faac prior to construction except where specifically exempted ...	X	-	X
3. Verify slump flow and VSI as delivered to the site for self-consolidating grout.	X	X	-
4. As masonry construction begins, the following shall be verified to ensure...			
a. Proportions of site-prepared mortar.	X	-	X
b. Construction of mortar joints.	X	-	X
c. Location of reinforcement, connectors, prestressing tendons, and...	X	-	X
d. Prestressing technique.	-	-	X
e. Grade and size of prestressing tendons and anchorages.	-	-	X
5. During construction, the inspection program shall verify:			
a. Size and location of structural elements.	X	-	X
b. Type, size, and location of anchors, including other details of anchorage o...	X	-	X
c. Specified size, grade, and type of reinforcement, anchor bolts, prestressin...	X	-	X
d. Welding of reinforcing bars.	-	X	-
e. Preparation, construction, and protection of masonry during cold weather...	X	-	X
f. Application and measurement of prestressing force.	-	X	-
6. Prior to grouting, the following shall be verified to ensure compliance:			
a. Grout space is clean.	X	-	X
b. Placement of reinforcement, connectors, prestressing tendons, and...	X	-	X
c. Proportions of site-prepared grout and prestressing grout for bonded...	X	-	X
d. Construction of mortar joints.	X	-	X
7. Grout placement shall be verified to ensure compliance with Building Code a...			
a. Grouting of prestressing bonded tendons.	-	X	-
8. Preparation of any required grout specimens, mortar specimens, and/or prisms shall be observed.	X	-	X

Special Inspection Schedule: Structural Steel Construction			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Material verification of high-strength bolts, nuts and washers:			
a. Identification markings to conform to ASTM standards specified in the...	X	-	X
b. Manufacturer's certificate of compliance required.	X	-	X
2. Inspection of high-strength bolting:			
a. Snug-tight joints.	X	-	X
b. Pretensioned and slip-critical joints using turn-of-nut with match marking,...	-	-	X
c. Pretensioned and slip-critical joints using turn-of-nut without match markin...	-	X	-
3. Material verification of structural steel:			
a. Identification markings to conform to ASTM standards specified in the...	X	-	X
b. Manufacturer's certified test reports.	X	-	X
4. Material verification of weld filler materials:			
a. Identification markings to conform to AWS specification in the approved...	X	-	X
b. Manufacturer's certificate of compliance required.	X	-	X
5. Inspection of welding, structural steel:			
a. Complete and partial penetration groove welds.	X	X	-
b. Multi-pass fillet welds.	X	X	-
c. Single-pass fillet welds > 5/16".	X	X	-
d. Single-pass fillet welds < 5/16".	X	-	X
6. Inspection of steel frame joint details for compliance with approved...			
a. Details such as bracing and stiffening.	X	-	X
b. Member locations.	X	-	X
c. Application of joint details at each connection.	X	-	X

Special Inspection Schedule: Wood Construction			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Inspection of high-load diaphragms:			
a. Verify wood structural panel sheathing is of the grade and thickness show...	X	-	X
b. Verify nominal size of framing members at adjoining panel edges agrees...	X	-	X
c. Verify fastener diameter and length, number of fastener lines, the spacin...	X	-	X
2. Inspection of metal-plate-connected wood trusses spanning 60 feet or greater:			
a. Verify temporary installation restraint/bracing are installed in accordance...	-	-	X
b. Verify permanent individual truss member restraint/bracing are installed in accordance with approved truss submittal package.	-	-	X

PRINTS ISSUED

01/25/2024 - CITY SUBMITTAL

REVISIONS:

- 10/21/2024 Addendum #1
- 11/11/2024 Addendum #2
- 12/26/2024 Addendum #3



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2001 W Broadway
Columbia, MO 65203
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MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

SHEET TITLE
STRUCTURAL SPECIAL
INSPECTIONS SCHEDULES

PROJECT NUMBER: 2023000333

SHEET NUMBER:

S003

1

WOOD SHEAR WALL SCHEDULE						
Mark	Level	Sheathing/ Fastener Layout	Post	Hold-Down	Min. Sill/Top Plate	Base Connection
SWA	Level 3	(1) Sided, Wood Structural Panels - Sheathing - 15/32" Thick, 10d Nail, 6" Edge fastening Unblocked	(2) 2x6	MST48 w/ (26) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 8" o.c.
	Level 2	(1) Sided, Wood Structural Panels - Sheathing - 15/32" Thick, 10d Nail, 6" Edge fastening	(2) 2x6	HTT4 w/ (18) 0.148Øx1-1/2" & 5/8"Ø Anchor Rod	(1) 2x6	3/8"Ø Kwik HUS EZ w/ 1-7/8" embed @ 16" o.c.
SWB	Level 3	(1) Sided, Wood Structural Panels - Sheathing - 15/32" Thick, 10d Nail, 6" Edge fastening	(3) 2x4 or (3) 2x6	MST48 w/ (34) 0.162x2-1/2" nails	(1) 2x6	(2) 10d Nails @ 8" o.c.
	Level 2	(1) Sided, Wood Structural Panels - Sheathing - 15/32" Thick, 10d Nail, 6" Edge fastening	(3) 2x4 or (3) 2x6	HDQ8-SDS3 w/ (20) 1/4"Øx3" SDS screws & 7/8"Ø Anchor Rod	(1) 2x6	3/8"Ø Kwik HUS EZ w/ 1-7/8" embed @ 12" o.c.
SWC	Level 3	(1) Sided, Gypsum Wallboard - 5/8" Thick, 6d Nail, 7" Edge Fastening, 16"O.C. Blocked	(3) 2x4	LSTA15 w/ (12) 0.148"x2-1/2" nails	(1) 2x4	(1) 10d Nail @ 12" o.c.
	Level 2	(1) Sided, Gypsum Wallboard - 5/8" Thick, 6d Nail, 4" Edge Fastening, 16"O.C. Blocked	(3) 2x4	DTT2Z w/ (8) 1/4"Øx1-1/2" SDS screws & 1/2"Ø Anchor Rod	(1) 2x4	3/8"Ø Kwik HUS EZ w/ 1-7/8" embed @ 48" o.c.
SWD	Level 3	(2) Sided, Gypsum Wallboard - 5/8" Thick, 6d Nail, 7" Edge Fastening, 16"O.C. Blocked	(2) 2x4 or (2) 2x6	MSTA 49 w/ (26) 0.148X2-1/2" nails	(1) 2x4	(2) 10d Nails @ 16" o.c.
	Level 2	(2) Sided, Gypsum Wallboard - 5/8" Thick, 6d Nail, 7" Edge Fastening, 16"O.C. Blocked	(3) 2x4 or (3) 2x6	DTT2Z w/ (8) 1/4"Øx1-1/2" SDS screws & 1/2"Ø Anchor Rod	(1) 2x4	3/8"Ø Kwik HUS EZ w/ 1-7/8" embed @ 24" o.c.

- Notes:
1. See S530 for typical shear wall framing
 2. All hold down anchors to be welded to embeds or beams as detailed.
 3. All threaded rods shall be F1554 GR105
 4. Floor to floor strap ties at top of wall shall match that of the floor above.
 5. All hold downs and strap ties are Simpson Strong-Tie brand, U.N.O.
 6. Bottom sill plate connections shall have a 3"x3"x1/4" steel plate washer at each anchor bolt on shear walls only.
 7. All drag trusses shall be connected to shear walls per detail 4/S530.
 8. Provide floor to floor strapping on the same side as the OSB sheathing.
 9. Field fastening for all sheathing to be 12" O.C. U.N.O
 10. All shear walls to be blocked at all pael joints unless noted "Unblocked."
 11. Criteria for double wall shear wall to apply to both walls. For example shear wall "D" requires both walls to be sheathed on both sides with gypsum wall board.

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NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

SHEET TITLE
SCHEDULES

PROJECT NUMBER: 2023000333

SHEET NUMBER:

S004

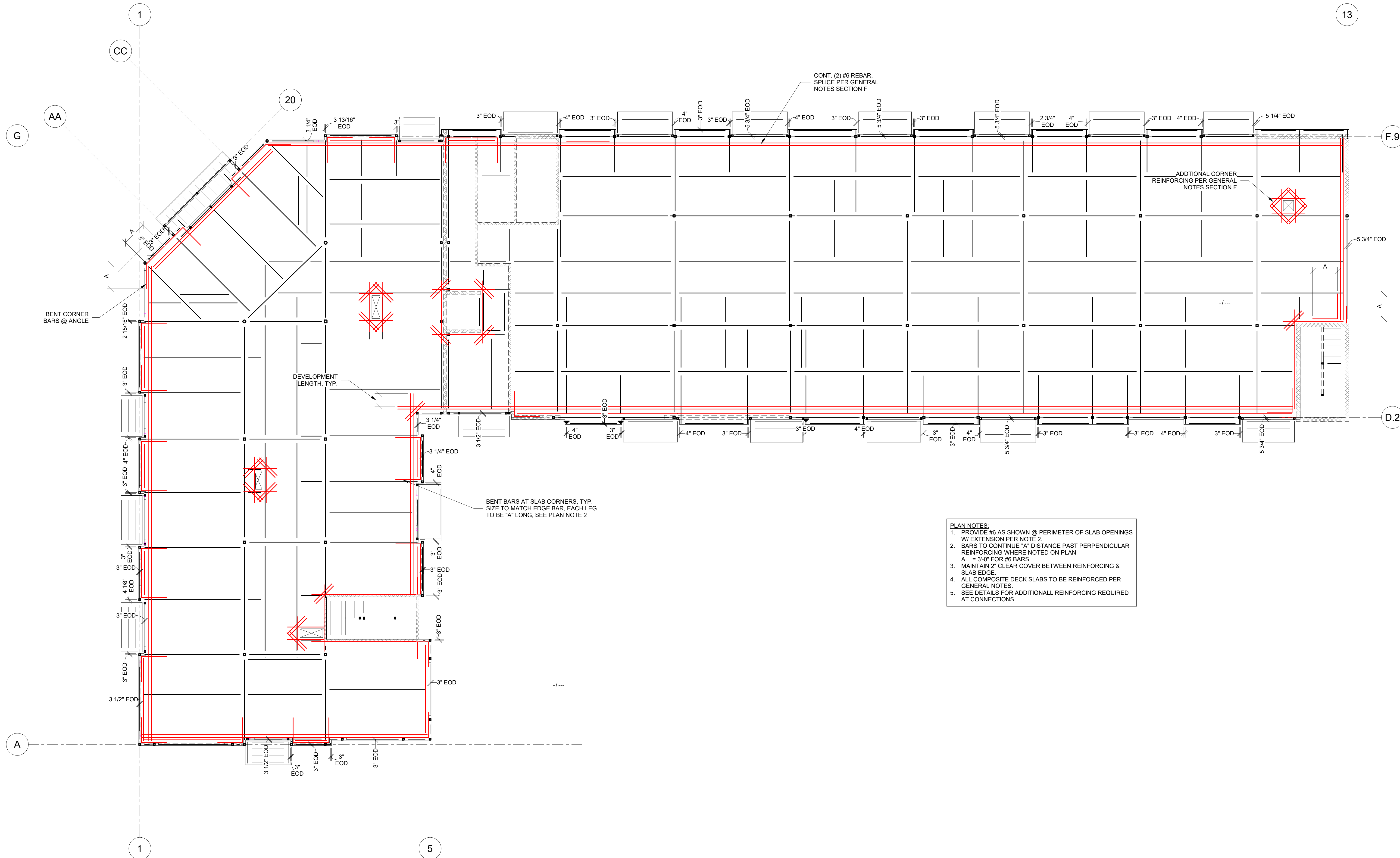
THE VILLAGE AT DISCOVERY -
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LEE'S SUMMIT, MO 64064

SHEET TITLE
LEVEL 2 REINFORCING PLAN

PROJECT NUMBER: 2023000333

SHEET NUMBER:

S005



- PLAN NOTES:
1. PROVIDE #6 AS SHOWN @ PERIMETER OF SLAB OPENINGS W/ EXTENSION PER NOTE 2.
 2. BARS TO CONTINUE "A" DISTANCE PAST PERPENDICULAR REINFORCING WHERE NOTED ON PLAN.
 3. MAINTAIN 2" CLEAR COVER BETWEEN REINFORCING & SLAB EDGE.
 4. ALL COMPOSITE DECK SLABS TO BE REINFORCED PER GENERAL NOTES.
 5. SEE DETAILS FOR ADDITIONAL REINFORCING REQUIRED AT CONNECTIONS.



1 LEVEL 2 - REINFORCING PLAN
S005 3/32" = 1'-0"

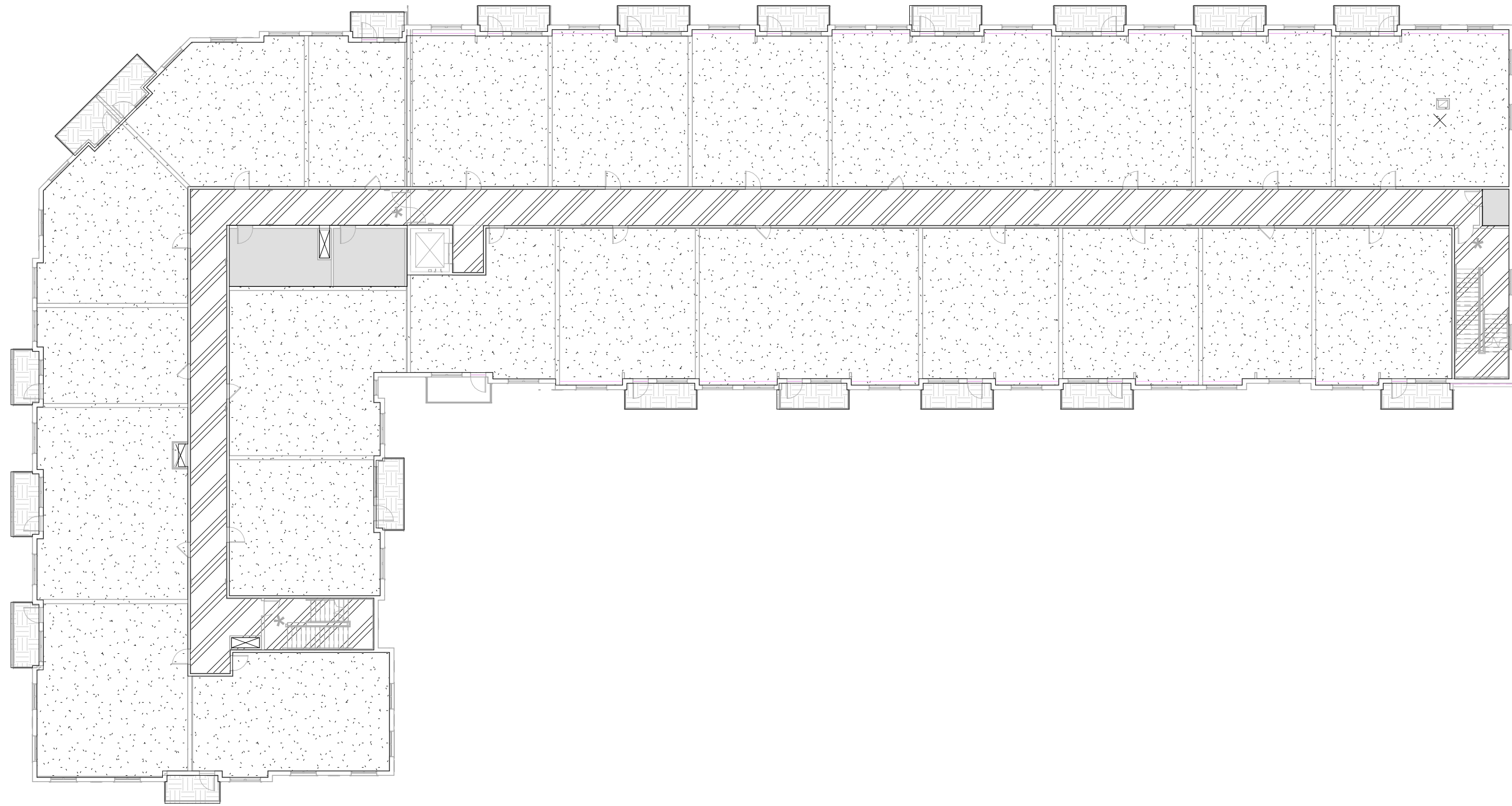
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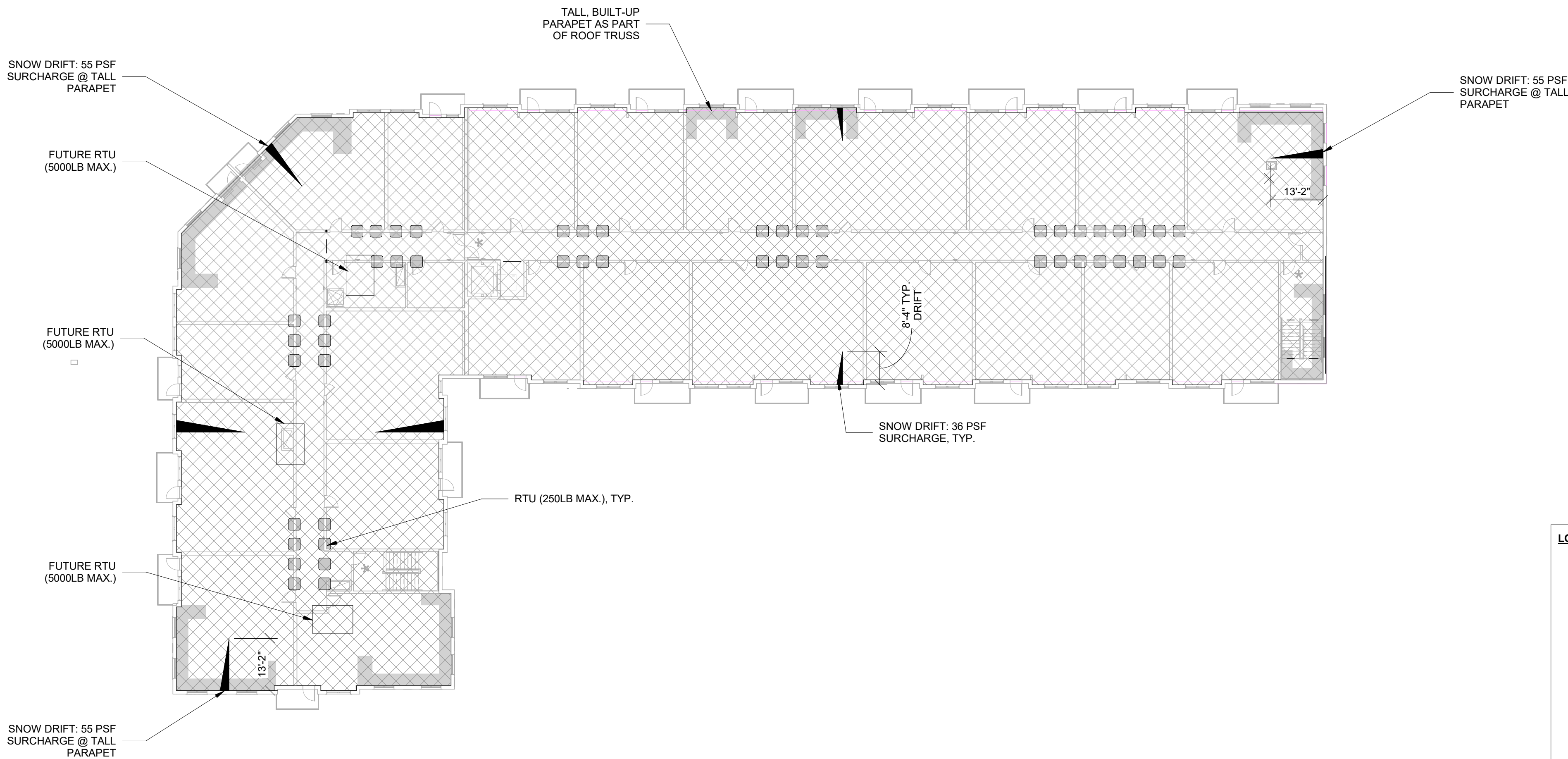


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1 LEVEL 2 & 3 LOAD PLAN
S006 1" = 20'-0"



2 ROOF - LOAD PLAN
S006 1" = 20'-0"

LOADING PLAN NOTES:

- | | | |
|---|---------|--|
| 1. RESIDENTIAL | | |
| A. SUPERIMPOSED DEAD LOAD | 15 PSF | |
| B. LIVE LOAD | 40 PSF | |
| 2. PUBLIC | | |
| A. SUPERIMPOSED DEAD LOAD | 5 PSF | |
| B. LIVE LOAD | 100 PSF | |
| 3. MECHANICAL/STORAGE | | |
| A. SUPERIMPOSED DEAD LOAD | 5 PSF | |
| B. LIVE LOAD | 125 PSF | |
| a. LIVE LOAD INCLUDED IN SEISMIC WEIGHT OF BUILDING | | |
| 4. BALCONY | | |
| A. DEAD LOAD | 80 PSF | |
| B. LIVE LOAD | 60 PSF | |
| 5. TYP. ROOF LOAD | | |
| A. SUPERIMPOSED DEAD LOAD | 7 PSF | |
| B. MECHANICAL UNITS AS INDICATED ON PLAN (DEAD) | | |
| C. ROOF LIVE LOAD | 20 PSF | |
| D. SNOW LOAD (UNIFORM/BALANCED) | 14 PSF | |
| a. APPLIED SIMULTANEOUSLY WITH DRIFT PER PLAN | | |
| E. RAIN SURCHARGE ON SNOW | 5 PSF | |

NOTE: SUPERIMPOSED DEAD LOADS ARE IN ADDITION TO TYPICAL FLOOR DEAD LOAD OF 27 PSF AND TYPICAL ROOF DEAD LOAD OF 20 PSF

THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

SHEET TITLE
LOAD PLANS

PROJECT NUMBER: 2023000333

SHEET NUMBER:

S006

PRINTS ISSUED
01/25/2024 - CITY SUBMITTAL

REVISIONS:
1 10/21/2024 Addendum #1
2 11/11/2024 Addendum #2
3 12/26/2024 Addendum #3



McCLURE™

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MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

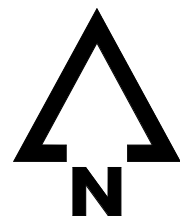
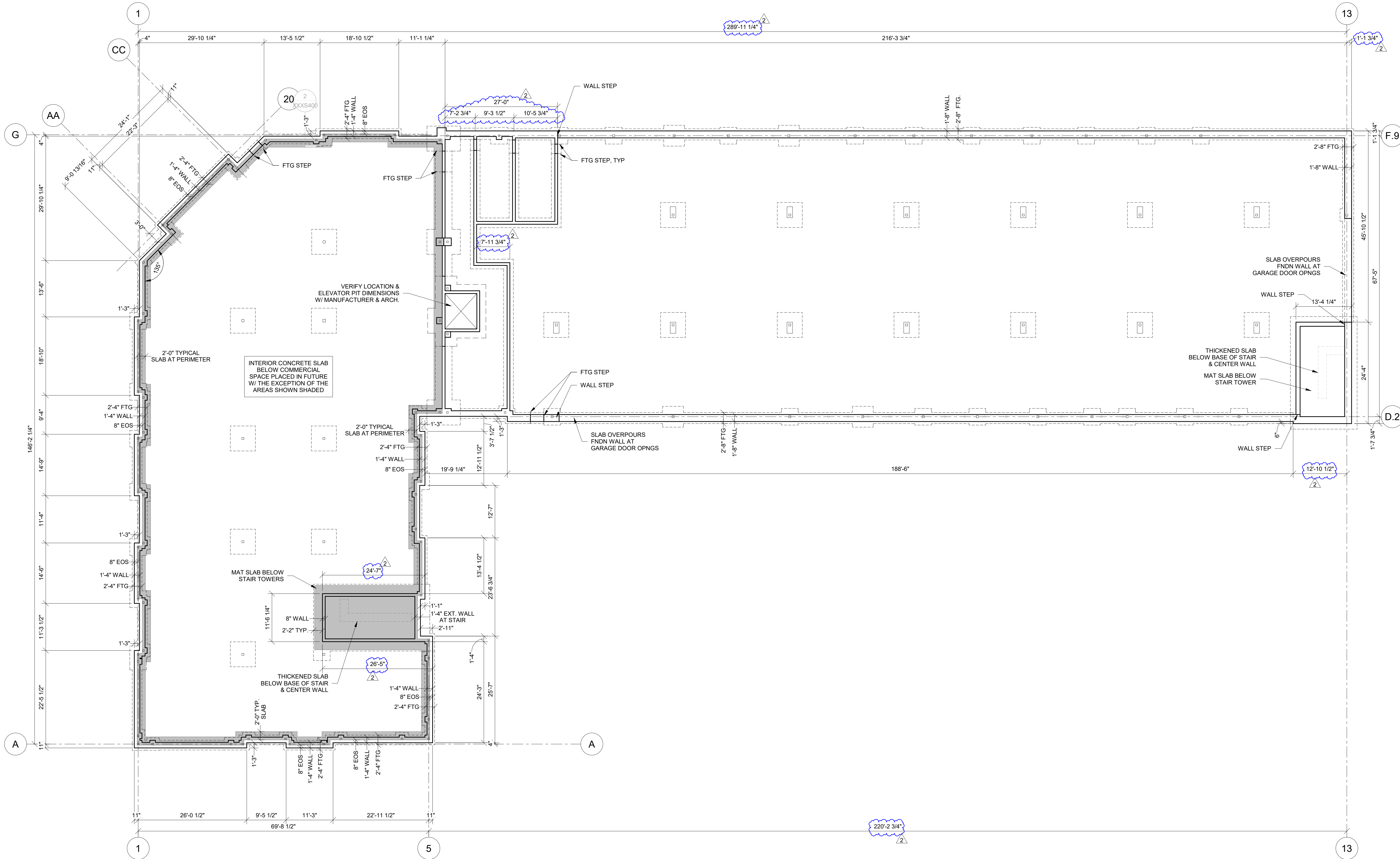
THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

SHEET TITLE
FOUNDATION WALL & SLAB ON
GRADE DIMENSION PLAN

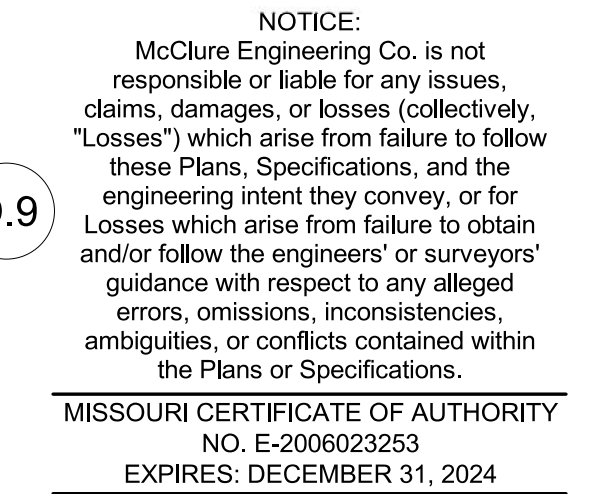
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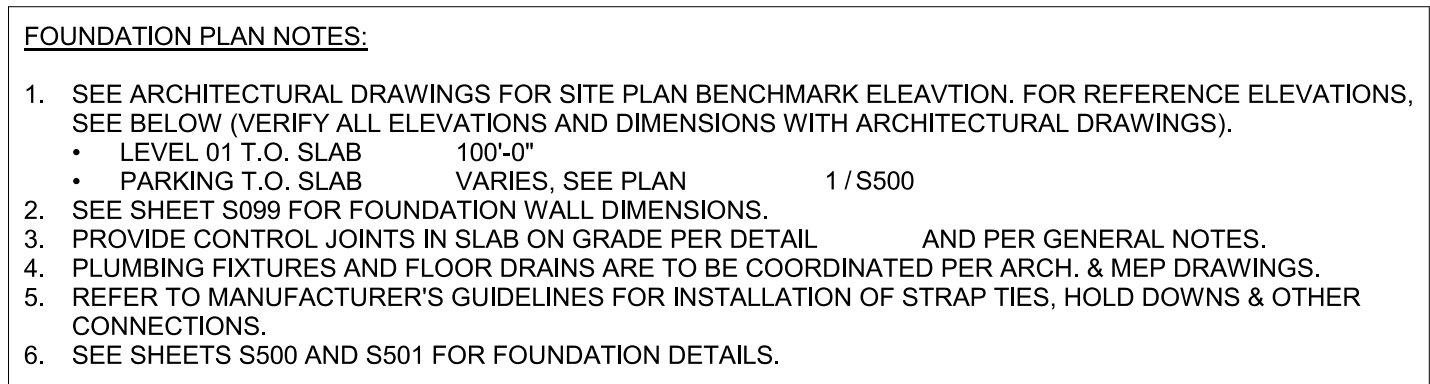
S099



1
S099
T.O. FIRST FLOOR SLAB
3/32" = 1'-0"



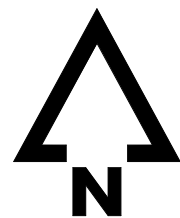
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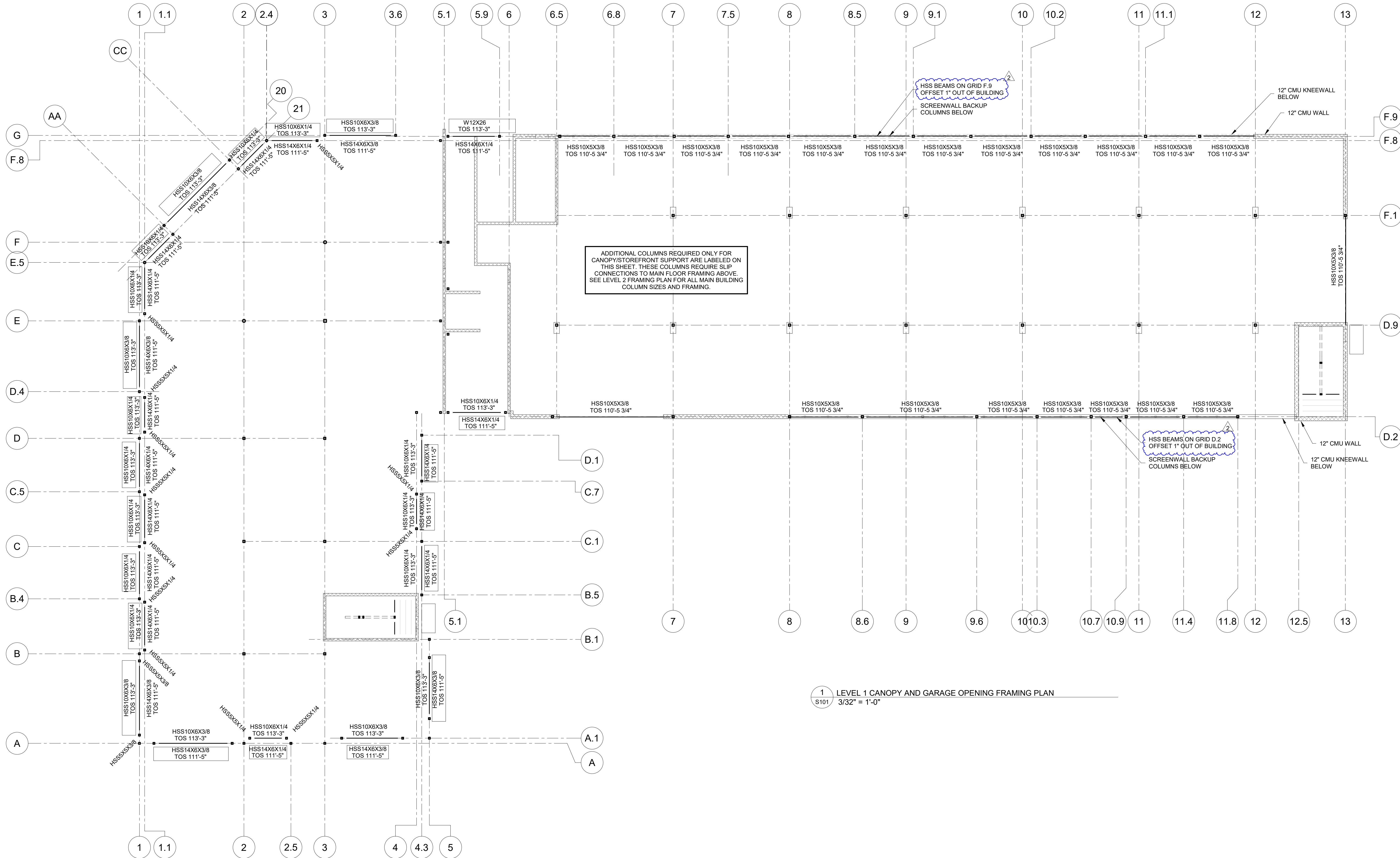


FOOTING SCHEDULE		
Mark	Size	Reinforcing
F3.0	3'-0"X3'-0"X1'-0"	(3) #5 BARS, BOTTOM EACH WAY
F4.0	4'-0"X4'-0"X1'-0"	(4) #5 BARS, BOTTOM EACH WAY
F5.0	5'-0"X5'-0"X1'-0"	(5) #5 BARS, BOTTOM EACH WAY
F6.0	6'-0"X6'-0"X1'-4"	(6) #5 BARS, BOTTOM EACH WAY
F3.0X6.0	3'-0"X6'-0"X1'-0"	(6) #5 BARS, BOTTOM SHORT (3) #5 BARS, BOTTOM LONG
F4.0X6.0	4'-0"X6'-0"X1'-0"	(6) #5 BARS, BOTTOM SHORT (4) #5 BARS, BOTTOM LONG
F6.0X8.0	4'-0"X6'-0"X1'-0"	(8) #5 BARS, BOTTOM SHORT (6) #5 BARS, BOTTOM LONG

Notes:

1. All footings must be centered on walls and columns U.N.O.





1 LEVEL 1 CANOPY AND GARAGE OPENING FRAMING PLAN
S101 3/32" = 1'-0"



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MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

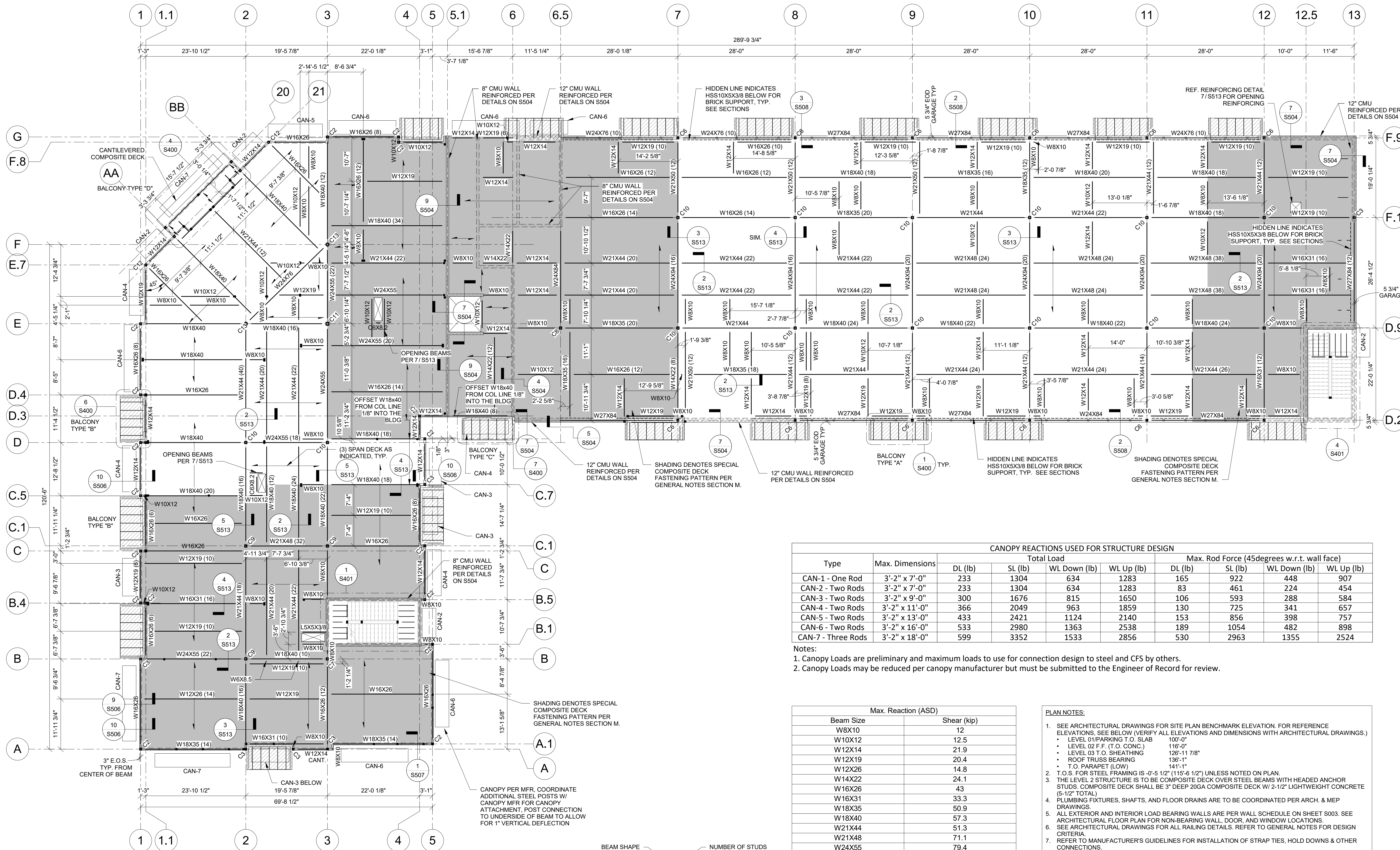
FOR PERMIT
NOT FOR
CONSTRUCTION

THE VILLAGE AT DISCOVERY -
LOT 4
NW COLBERN & NE DOUGLAS ST.,
LEE'S SUMMIT, MO 64064

SHEET TITLE
LEVEL 2 FRAMING PLAN

PROJECT NUMBER: 2023000333
SHEET NUMBER:

S102



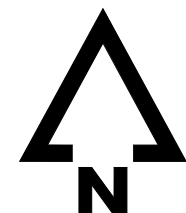
CANOPY REACTIONS USED FOR STRUCTURE DESIGN								
Type	Max. Dimensions	Total Load				Max. Rod Force (45degrees w.r.t. wall face)		
		DL (lb)	SL (lb)	WL Down (lb)	WL Up (lb)	DL (lb)	SL (lb)	WL Down (lb)
CAN-1 - One Rod	3'-2" x 7'-0"	233	1304	634	1283	165	922	448
CAN-2 - Two Rods	3'-2" x 7'-0"	233	1304	634	1283	83	461	224
CAN-3 - Two Rods	3'-2" x 9'-0"	300	1676	815	1650	106	593	288
CAN-4 - Two Rods	3'-2" x 11'-0"	366	2049	963	1859	130	725	341
CAN-5 - Two Rods	3'-2" x 13'-0"	433	2421	1124	2140	153	856	398
CAN-6 - Two Rods	3'-2" x 16'-0"	533	2980	1363	2538	189	1054	482
CAN-7 - Three Rods	3'-2" x 18'-0"	599	3352	1533	2856	216	1183	555

- Notes:
- Canopy Loads are preliminary and maximum loads to use for connection design to steel and CFS by others.
 - Canopy Loads may be reduced per canopy manufacturer but must be submitted to the Engineer of Record for review.

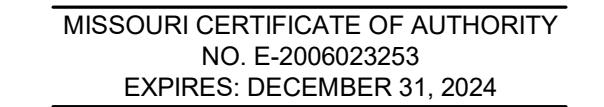
Max. Reaction (ASD)	
Beam Size	Shear (kip)
W8X10	12
W10X12	12.5
W12X14	21.9
W12X19	20.4
W12X26	14.8
W14X22	24.1
W16X26	43
W16X31	33.3
W18X35	50.9
W18X40	57.3
W21X44	51.3
W21X48	71.1
W24X55	79.4
W24X76	63.4
W24X84	64
W24X94	87.5
W27X84	77.8

- Notes:
- Connections shall be designed per General Notes sections D & J

- PLAN NOTES:
- SEE ARCHITECTURAL DRAWINGS FOR SITE PLAN BENCHMARK ELEVATION. FOR REFERENCE ELEVATIONS, SEE BELOW (VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS).
 - LEVEL 01 PARKING T.O. SLAB 100'-0"
 - LEVEL 02 F.F. (T.O. CONC.) 116'-0"
 - LEVEL 03 T.O. SHEATHING 126'-11 7/8"
 - ROOF TRUSS BEARING 136'-1"
 - T.O. PARAPET (LOW) 141'-1"
 - T.O.S. FOR STEEL FRAMING IS 0'-5 1/2" (115'-6 1/2") UNLESS NOTED ON PLAN.
 - THE LEVEL 2 STRUCTURE IS TO BE COMPOSITE DECK OVER STEEL BEAMS WITH HEADED ANCHOR STUDS. COMPOSITE DECK SHALL BE 3" DEEP 20GA COMPOSITE DECK W/ 2-1/2" LIGHTWEIGHT CONCRETE (5-1/2" TOTAL).
 - PLUMBING FIXTURES, SHAFTS, AND FLOOR DRAINS ARE TO BE COORDINATED PER ARCH. & MEP DRAWINGS.
 - ALL EXTERIOR AND INTERIOR LOAD BEARING WALLS ARE PER WALL SCHEDULE ON SHEET S003. SEE ARCHITECTURAL FLOOR PLAN FOR NON-BEARING WALL, DOOR, AND WINDOW LOCATIONS.
 - SEE ARCHITECTURAL DRAWINGS FOR ALL RAILING DETAILS. REFER TO GENERAL NOTES FOR DESIGN CRITERIA.
 - REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION OF STRAP TIES, HOLD DOWNS & OTHER CONNECTIONS.
 - ALL EXTERIOR LUMBER (POSTS, BEAMS, DECKING, ETC.) TO BE TREATED.
 - WOOD FLOOR TRUSSES TO BE DESIGNED BY OTHERS AND ARE SHOWN FOR THE INTENT OF SPAN DIRECTION AND LOAD PATH ONLY. REFER TO GENERAL NOTES FOR DESIGN CRITERIA.
 - PROVIDE FLOOR TRUSS HEADER AT CHASE OPENINGS SUPPORTING T.F. HUNG FLOOR TRUSSES AND SUPPORTED W/ T.F. HANGER EACH END AT ADJACENT TRUSSES DESIGNED PER MANUFACTURER.
 - REFER TO ARCHITECTURAL PLANS FOR STAIR DIMENSIONS AND REQUIREMENTS. REFER TO STRUCTURAL GENERAL NOTES FOR STAIR DESIGN CRITERIA.
 - VERIFY SPECIFIED ELEVATOR HOIST BEAM AND SUPPORTING FRAMING W/ ELEVATOR MANUFACTURER.



1 LEVEL 2 FRAMING PLAN
3/32" = 1'-0"



Note: Unless reactions are noted on plan, beam connections shall be designed for these reactions & provided with these minimum bolt quantities. Fabricator shall provide shop drawings indicating the provided capacity of all typical connections.

Table assumptions:

- Least web thickness for beam depth series
- 3/8" 36 ksi single shear plate or 5/16" 36 ksi double angles
- 3/4" dia. A325 bolts with threads included
- Standard size bolt holes
- Beam coped top & bottom
- Distance from end of beam to center of bolt holes = 1 1/2" minimum...

- Least web thickness for beam depth series
- 3/8" 36 ksi single shear plate or 5/16" 36 ksi double angles
- 3/4" dia. A325 bolts with threads included
- Standard size bolt holes
- Beam coped top & bottom
- Distance from end of beam to center of bolt holes = 1 1/2" minimum...

◆ SHEAR WALL HOLD DOWN PER
SHEAR WALL SCHEDULE, SEE S004,
SEE ALSO DETAILS ON SHEET S550
CMU WALL
▤ SHADING DENOTES SPECIAL
COMPOSITE DECK FAS 2 / S524
PATTERN PER GENERAL NOTES
SECTION M
↔ DENOTES COMPOSITE DECK SPAN
DIRECTION
P# PEDESTAL TYPE
BP# BASEPLATE TYPE

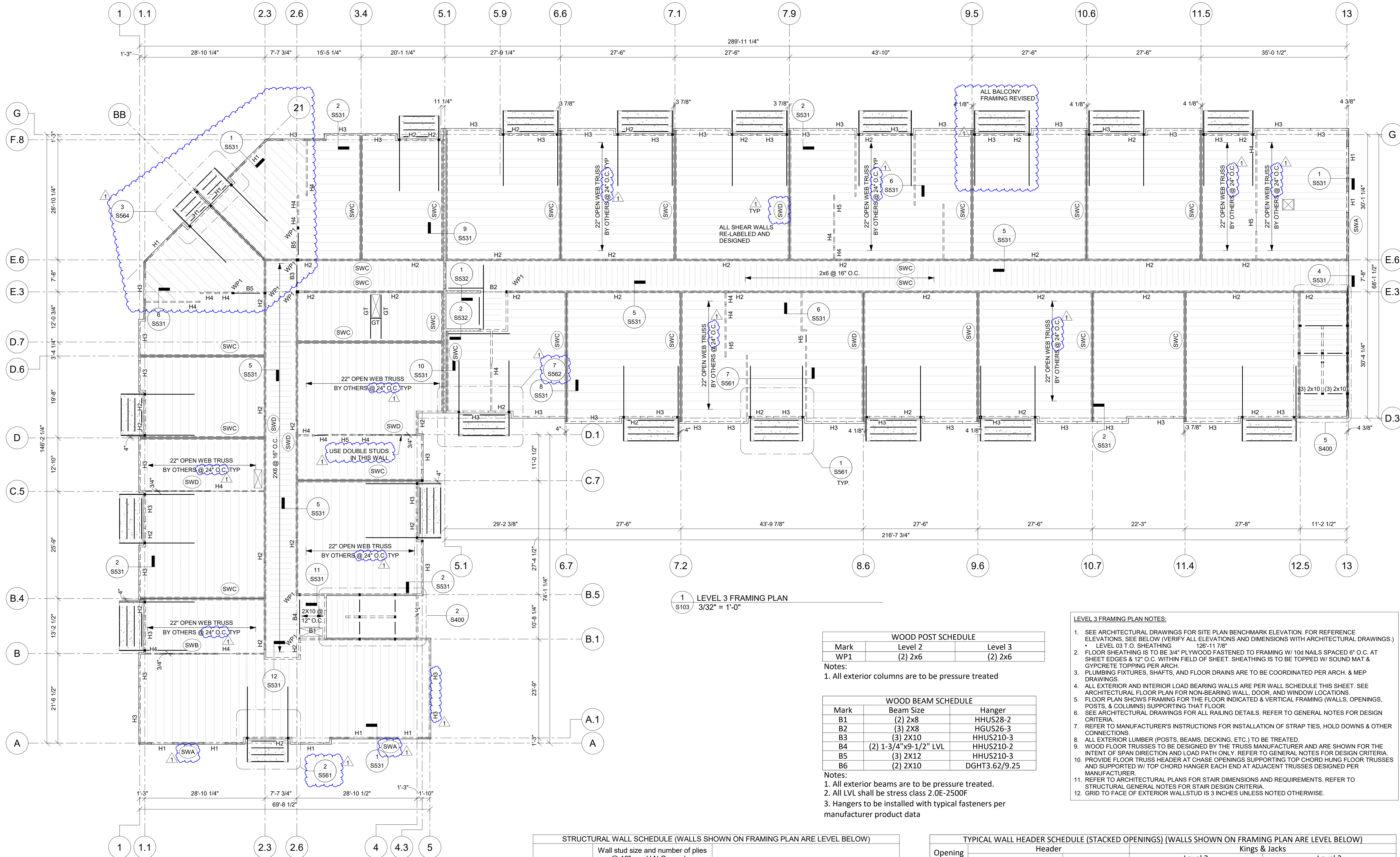
Notes:

1. See sheet S505 for typical steel details.
2. See sheet S505 for base plate and cap plate size.

1. SEE ARCHITECTURAL DRAWINGS FOR SITE PLAN BENCHMARK ELEVATION. FOR REFERENCE ELEVATIONS, SEE BELOW (VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS.)
 - LEVEL 02 F.F. (T.O. CONC.) 116'-0"
2. T.O.S. FOR STEEL FRAMING IS -0'-5 1/2" (115'-6 1/2") UNLESS NOTED OTHERWISE ON PLAN.
3. THE LEVEL 2 STRUCTURE IS TO BE COMPOSITE DECK OVER STEEL BEAMS WITH 3/4" DIA 4-1/2" LONG HEAD ANCHORS. SEE COMPOSITE DECK SHALL BE 3" DEEP 20GA COMPOSITE DECK WITH 1/2" LIGHTWEIGHT CONCRETE (1-1/2" TOTAL). SEE GENERAL NOTES SECTION "M" FOR FASTENING.
4. PLUMBING FIXTURES, SHAFTS, AND FLOOR DRAINS ARE TO BE COORDINATED PER ARCH. & MEP DRAWINGS.
5. SEE ARCHITECTURAL FLOOR PLAN FOR NON-BEARING WALL, DOOR, AND WINDOW LOCATIONS.
6. SEE ARCHITECTURAL DRAWINGS FOR ALL RAILING DETAILS. REFER TO GENERAL NOTES FOR DESIGN CRITERIA.
7. REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION OF STRAP TIES, HOLD DOWNS & OTHER CONNECTIONS.
8. REFER TO ARCHITECTURAL PLANS FOR STAIR DIMENSIONS AND REQUIREMENTS. REFER TO STRUCTURAL GENERAL NOTES FOR STAIR DESIGN CRITERIA.

PROJECT NUMBER: 2023000333
SHEET NUMBER:

S102A



1 LEVEL 3 FRAMING PLAN
3/32" = 1'-0"

WOOD POST SCHEDULE		
Mark	Level 2	Level 3
WP1	(2) 2x6	(2) 2x6

Notes:

1. All exterior columns are to be pressure treated

WOOD BEAM SCHEDULE		
Mark	Beam Size	Hanger
B1	(2) 2x8	HHUS28-2
B2	(3) 2x8	HGUS26-3
B3	(3) 2x10	HHUS210-3
B4	(2) 1-3/4"x9-1/2" LVL	HHUS210-2
B5	(3) 2x12	HHUS210-3
B6	(2) 2x10	DGHT3.62/9.25

Notes:

1. All exterior beams are to be pressure treated.
2. All LVL shall be stress class 2.0E-2500F
3. Hangers to be installed with typical fasteners per manufacturer product data

LEVEL 3 FRAMING PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR SITE PLAN BENCHMARK ELEVATION. FOR REFERENCE ELEVATIONS, SEE BELOW (VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS.)
 - LEVEL 03 T.O. SHEATHING 126'-11 7/8"
2. FLOOR SHEATHING IS TO BE 3/4" PLYWOOD FASTENED TO FRAMING W/ 10d NAILS SPACED 6" O.C. AT SHEET EDGES & 12" O.C. WITHIN FIELD OF SHEET. SHEATHING IS TO BE TOPPED W/ SOUND MAT & GYPCORE TOPPING PER ARCH.
3. PLUMBING FIXTURES, SHAFTS, AND FLOOR DRAINS ARE TO BE COORDINATED PER ARCH. & MEP DRAWINGS.
4. ALL EXTERIOR AND INTERIOR LOAD BEARING WALLS ARE PER WALL SCHEDULE THIS SHEET. SEE ARCHITECTURAL FLOOR PLAN FOR NON-BEARING WALL, DOOR, AND WINDOW LOCATIONS.
5. FLOOR PLAN SHOWS FRAMING FOR THE FLOOR INDICATED & VERTICAL FRAMING (WALLS, OPENINGS, POSTS, & COLUMNS) SUPPORTING THAT FLOOR.
6. SEE ARCHITECTURAL DRAWINGS FOR ALL RAILING DETAILS. REFER TO GENERAL NOTES FOR DESIGN CRITERIA
7. REFER TO MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION OF STRAP TIES, HOLD DOWNS & OTHER CONNECTIONS
8. ALL EXTERIOR LUMBER (POSTS, BEAMS, DECKING, ETC.) TO BE TREATED.
9. WOOD FLOOR TRUSSES TO BE DESIGNED BY THE TRUSS MANUFACTURER AND ARE SHOWN FOR THE INTENT OF SPAN DIRECTION AND LOAD PATH ONLY. REFER TO GENERAL NOTES FOR DESIGN CRITERIA.
10. PROVIDE FLOOR TRUSS HEADER AT CHASE OPENINGS SUPPORTING TOP CHORD HUNG FLOOR TRUSSES AND SUPPORTED W/ TOP CHORD HANGER EACH END AT ADJACENT TRUSSES DESIGNED PER MANUFACTURER.
11. REFER TO ARCHITECTURAL PLANS FOR STAIR DIMENSIONS AND REQUIREMENTS. REFER TO STRUCTURAL GENERAL NOTES FOR STAIR DESIGN CRITERIA.
12. GRID TO FACE OF EXTERIOR WALL/STUD IS 3 INCHES UNLESS NOTED OTHERWISE.

STRUCTURAL WALL SCHEDULE (WALLS SHOWN ON FRAMING PLAN ARE LEVEL BELOW)			
Location	Wall stud size and number of plies @ 16" o.c. U.N.O. on plan		SHEATHING & FASTENING U.N.O. (See Note 4)
	Level 2	Level 3	
EXTERIOR	(1) 2x6	(1) 2x6	15/32" Structural wood sheathing fastened w/ 10d nails, 6" o.c. edges, 12" o.c. field
DOUBLE WALLS BETWEEN UNITS	(1) 2x4	(1) 2x4	5/8" Gypsum wallboard fastened w/ 1 5/8" Type W screws 7" o.c. edges, 7" o.c. field
WITHIN UNITS	(2) 2x4	(1) 2x4	5/8" Gypsum wallboard fastened w/ 1 5/8" Type W screws 7" o.c. edge, 7" o.c. field
CORRIDOR	(1) 2x6	(1) 2x6	5/8" Gypsum wallboard fastened w/ 1 5/8" Type W screws 7" o.c. edge, 7" o.c. field

Notes:

1. Sill plates at podium level to be fastened w/ 3/8"Ø x 3-1/2" Hilti Kwik HUS EZ bolts @ 48" o.c. U.N.O.
2. Top and bottom plates at all other levels to be fastened w/ (2) 16d nails @ 16" o.c. U.N.O.
3. Shear walls shall be sheathed per Shear Wall Schedule
4. Non-structural walls not shown, refer to architectural drawings.
5. All top plates are to be continuous. Splice per 4/510.

PLAN LEGEND

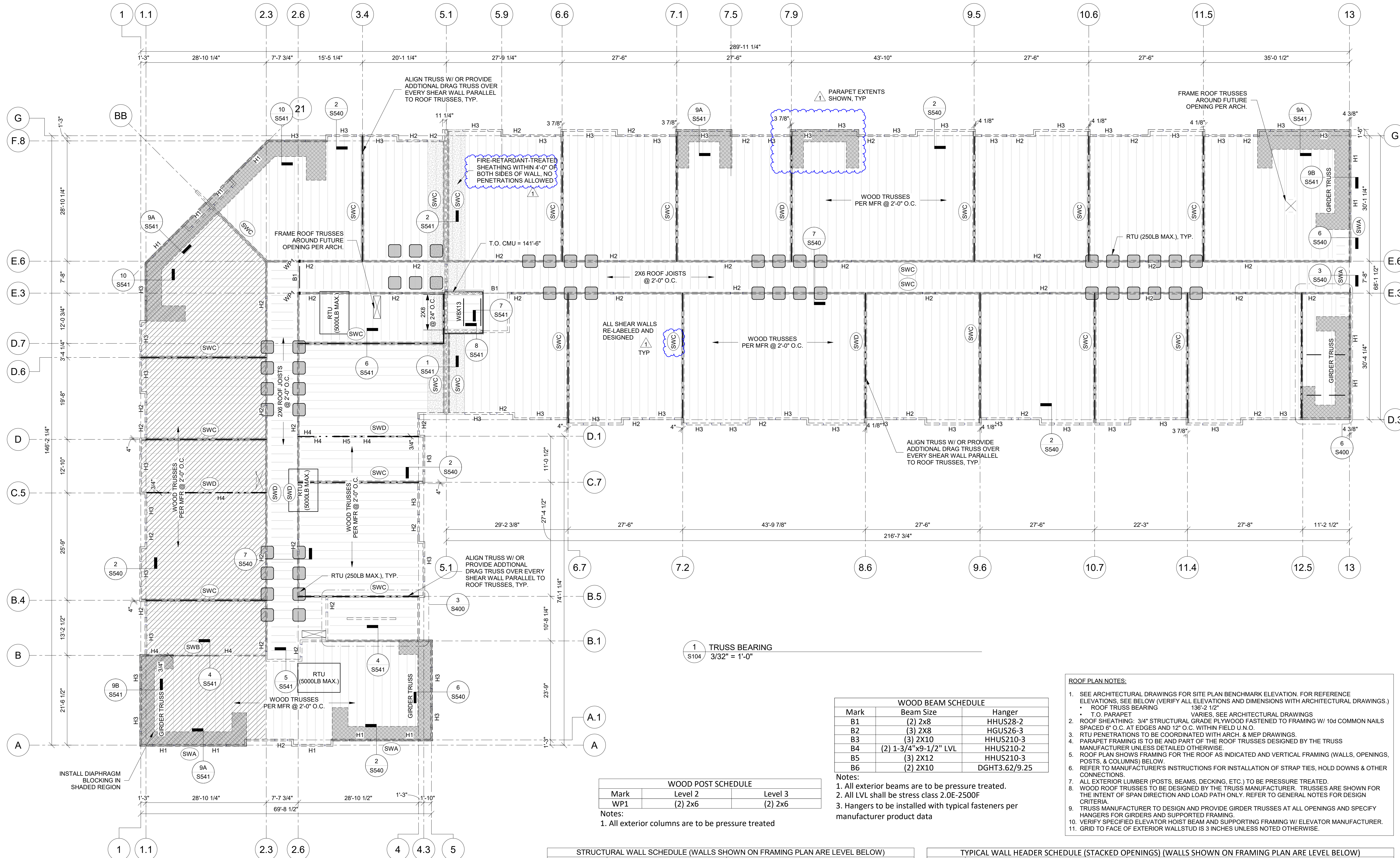
- SW# SHEAR WALL, PER SCHEDULE
H# HEADER TYPE, PER SCHEDULE
WP# WOOD POST, PER SCHEDULE
C# STEEL COLUMN, PER SCHEDULE
--- BEARING WALL BELOW
--- SHEAR WALL BELOW
--- CMU WALL

TYPICAL WALL HEADER SCHEDULE (STACKED OPENINGS) (WALLS SHOWN ON FRAMING PLAN ARE LEVEL BELOW)						
Opening Mark	Header		Kings & Jacks			
	Level 2	Level 3	Level 2		Level 3	
			Kings	Jacks	Kings	Jacks
H1	(3) 2x10	(3) 2x8	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6
H2	(3) 2x8	(3) 2x8	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6
H3	(3) 2x8	(3) 2x10	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6
H4	(2) 2x12	(2) 2x8	(2) 2x4	(1) 2x4	(1) 2x4	(1) 2x4
H5	(2) LVL 1-3/4 x 11-7/8	(2) 2x8	(1) 2x4	(2) 2x4	(1) 2x4	(1) 2x4
H6	(2) LVL 1-3/4 x 20	(2) 2x8	(2) 2x4	(2) 2x4	(2) 2x4	(1) 2x4

H# = An opening which requires a header

Notes:

1. See S500 for typical opening framing.
2. All openings should stack according to the plans.
3. Coordinate all dimensions and elevations with architectural drawings.
4. Cripple studs should match the adjacent wall framing.
5. All LVL shall be stress class 2.0E-2500F
6. All Glulam shall be stress class 24F-1.8E



ROOF PLAN NOTES:

- SEE ARCHITECTURAL DRAWINGS FOR SITE PLAN BENCHMARK ELEVATION. FOR REFERENCE ELEVATIONS, SEE BELOW VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS.)
 - ROOF TRUSS BEARING VARIES, SEE ARCHITECTURAL DRAWINGS
- T.O. PARAPET VARIES, SEE ARCHITECTURAL DRAWINGS
- ROOF SHEATHING: 3/4" STRUCTURAL GRADE PLYWOOD FASTENED TO FRAMING W/ 10d COMMON NAILS SPACED 8" O.C. AT EDGES AND 12" O.C. WITHIN FIELD U.N.O.
- RTU PENETRATIONS TO BE COORDINATED WITH ARCH. & MEP DRAWINGS.
- PARAPET FRAMING IS TO BE AND PART OF THE ROOF TRUSSES DESIGNED BY THE TRUSS MANUFACTURER UNLESS DETAILED OTHERWISE.
- ROOF PLAN SHOWS FRAMING FOR THE ROOF AS INDICATED AND VERTICAL FRAMING (WALLS, OPENINGS, POSTS, & COLUMNS) BELOW.
- REFER TO MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION OF STRAP TIES, HOLD DOWNS & OTHER CONNECTIONS
- ALL EXTERIOR LUMBER (POSTS, BEAMS, DECKING, ETC.) TO BE PRESSURE TREATED.
- WOOD ROOF TRUSSES TO BE DESIGNED BY THE TRUSS MANUFACTURER. TRUSSES ARE SHOWN FOR THE INTENT OF SPAN DIRECTION AND LOAD PATH ONLY. REFER TO GENERAL NOTES FOR DESIGN CRITERIA
- TRUSS MANUFACTURER TO DESIGN AND PROVIDE GIRDER TRUSSES AT ALL OPENINGS AND SPECIFY HANGERS FOR GIRDERS AND SUPPORTED FRAMING.
- VERIFY SPECIFIED ELEVATOR HOIST BEAM AND SUPPORTING FRAMING W/ ELEVATOR MANUFACTURER.
- GRID TO FACE OF EXTERIOR WALL/STUD IS 3 INCHES UNLESS NOTED OTHERWISE.

WOOD BEAM SCHEDULE		
Mark	Beam Size	Hanger
B1	(2) 2x8	HHUS28-2
B2	(3) 2x8	HGUS26-3
B3	(3) 2x10	HHUS210-3
B4	(2) 1-3/4"x9-1/2" LVL	HHUS210-2
B5	(3) 2x12	HHUS210-3
B6	(2) 2x10	DGHT3.62/9.25

Notes:

- All exterior beams are to be pressure treated.
- All LVL shall be stress class 2.0E-2500F
- Hangers to be installed with typical fasteners per manufacturer product data

WOOD POST SCHEDULE		
Mark	Level 2	Level 3
WP1	(2) 2x6	(2) 2x6

Notes:

- All exterior columns are to be pressure treated

STRUCTURAL WALL SCHEDULE (WALLS SHOWN ON FRAMING PLAN ARE LEVEL BELOW)			
Location	Wall stud size and number of plies @ 16" o.c. U.N.O. on plan		SHEATHING & FASTENING U.N.O. (See Note 4)
	Level 2	Level 3	
EXTERIOR	(1) 2x6	(1) 2x6	15/32" Structural wood sheathing fastened w/ 10d nails. 6" o.c. edges, 12" o.c. field
DOUBLE WALLS BETWEEN UNITS	(1) 2x4	(1) 2x4	5/8" Gypsum wallboard fastened w/ 1 5/8" Type W screws 7" o.c. edges, 7" o.c. field
WITHIN UNITS	(2) 2x4	(1) 2x4	5/8" Gypsum wallboard fastened w/ 1 5/8" Type W screws 7" o.c. edge, 7" o.c. field
CORRIDOR	(1) 2x6	(1) 2x6	5/8" Gypsum wallboard fastened w/ 1 5/8" Type W screws 7" o.c. edge, 7" o.c. field

Notes:

- Sill plates at podium level to be fastened w/ 3/8"x3-1/2" Hilti Kwik HUS EZ bolts @ 48" o.c. U.N.O.
- Top and bottom plates at all other levels to be fastened w/ (2) 16d nails @ 16" o.c. U.N.O.
- Shear walls shall be sheathed per Shear Wall Schedule
- Non-structural walls not shown, refer to architectural drawings.
- All top plates are to be continuous. Splice per 4/510.

TYPICAL WALL HEADER SCHEDULE (STACKED OPENINGS) (WALLS SHOWN ON FRAMING PLAN ARE LEVEL BELOW)						
Opening Mark	Header		Kings & Jacks			
	Level 2	Level 3	Level 2		Level 3	
			Kings	Jacks	Kings	Jacks
H1	(3) 2x10	(3) 2x8	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6
H2	(3) 2x8	(3) 2x8	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6
H3	(3) 2x8	(3) 2x10	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6
H4	(2) 2x12	(2) 2x8	(2) 2x4	(1) 2x4	(1) 2x4	(1) 2x4
H5	(2) LVL 1-3/4 x 11-7/8	(2) 2x8	(1) 2x4	(2) 2x4	(1) 2x4	(1) 2x4
H6	(2) LVL 1-3/4 x 20	(2) 2x8	(2) 2x4	(2) 2x4	(2) 2x4	(1) 2x4

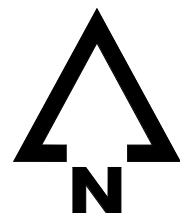
H# = An opening which requires a header

Notes:

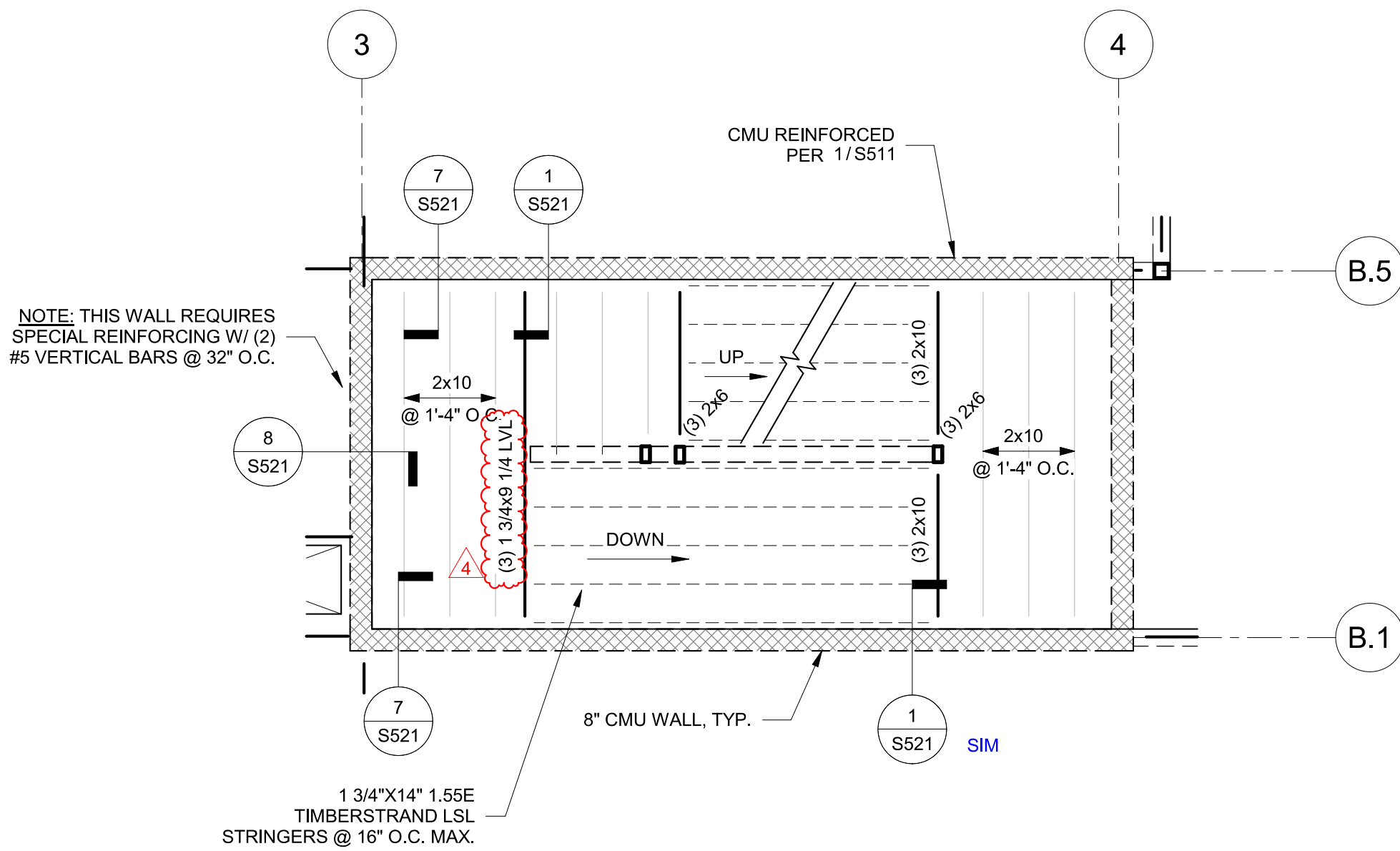
- See S500 for typical opening framing.
- All openings should stack according to the plans.
- Coordinate all dimensions and elevations with architectural drawings.
- Cripple studs should match the adjacent wall framing.
- All LVL shall be stress class 2.0E-2500F
- All Glulam shall be stress class 24F-1.8E

PLAN LEGEND

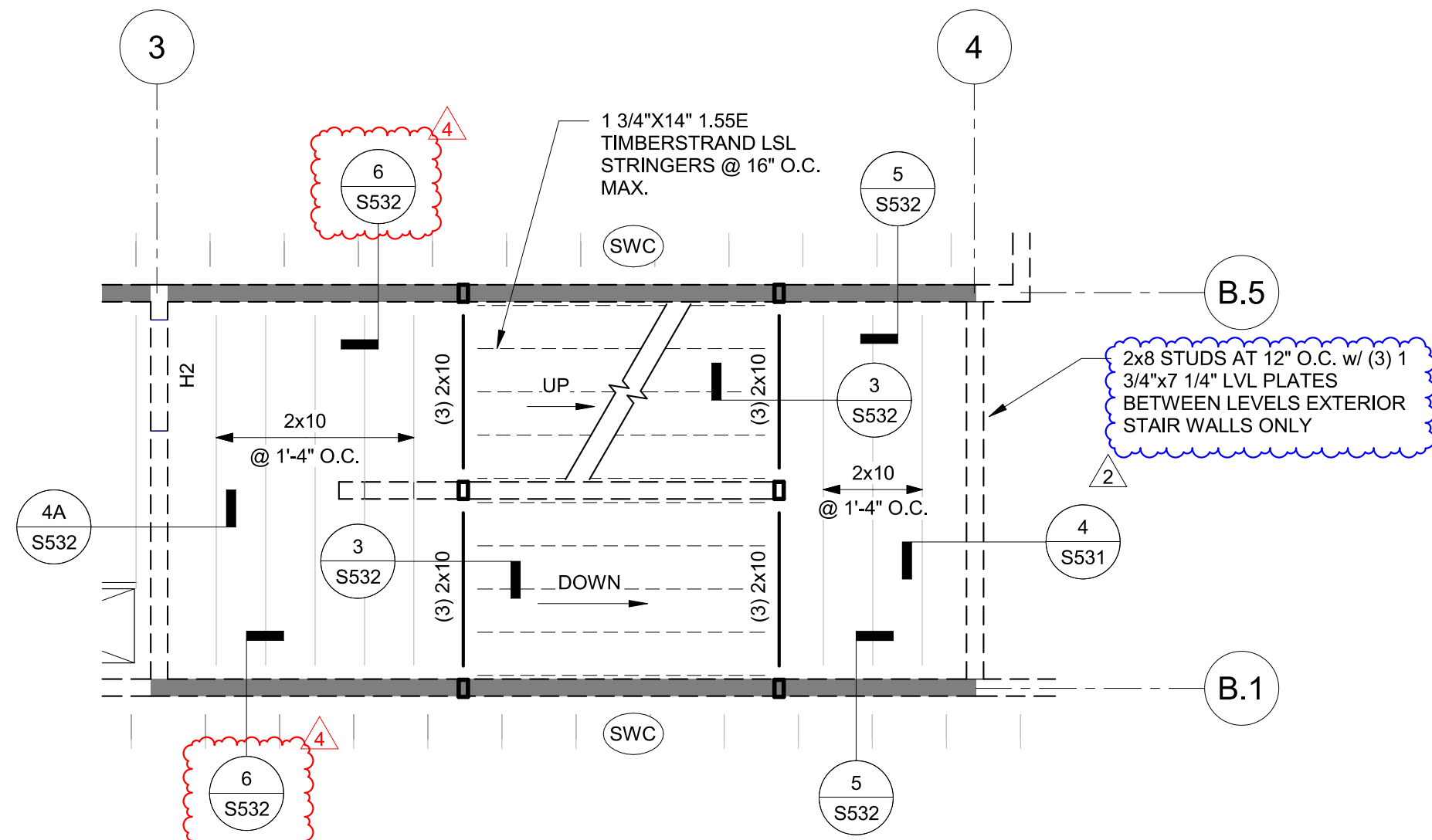
- SW# SHEAR WALL, PER SCHEDULE
- H# HEADER TYPE, PER SCHEDULE
- WP# WOOD POST, PER SCHEDULE
- C# STEEL COLUMN, PER SCHEDULE
- BEARING WALL BELOW
- SHEAR WALL BELOW
- CMU WALL



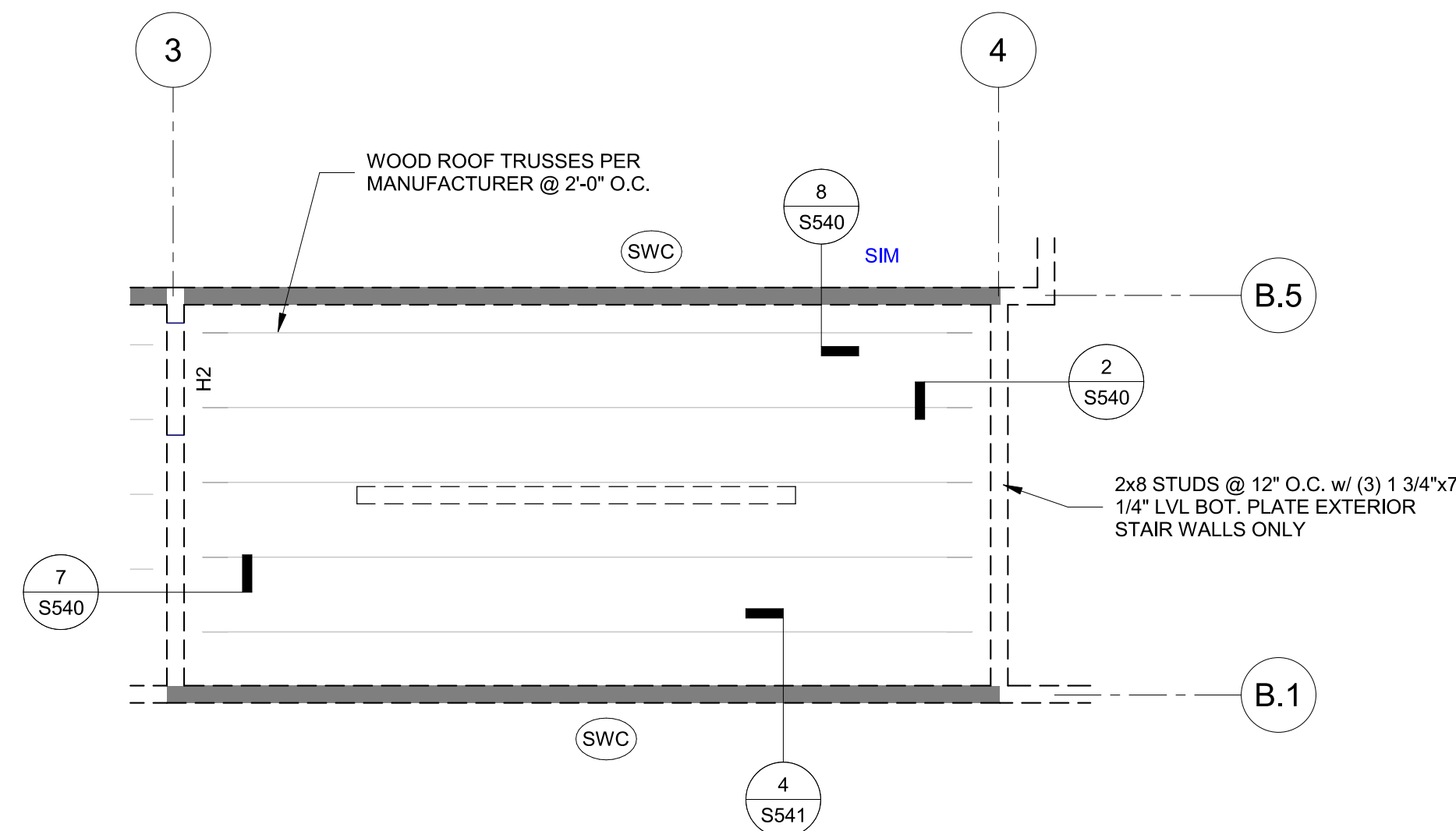
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Auditor: LUCAS020000333
Discovery Path: Lee's Summit 2023000333 - Resubmittal - Lot 4, 2023-1



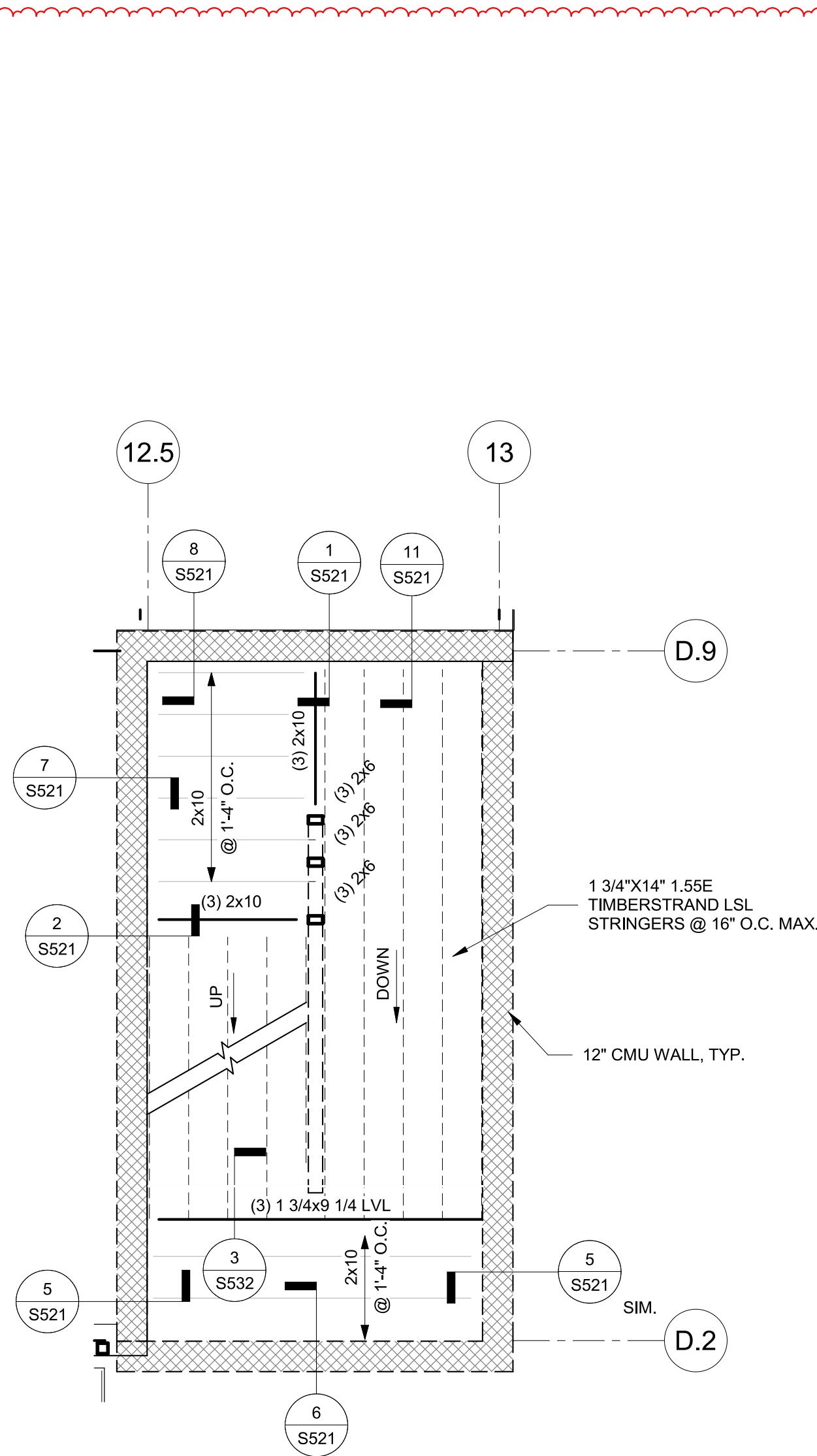
1 SOUTH STAIR TOWER AT LEVEL 2
S400 1/4" = 1'-0"



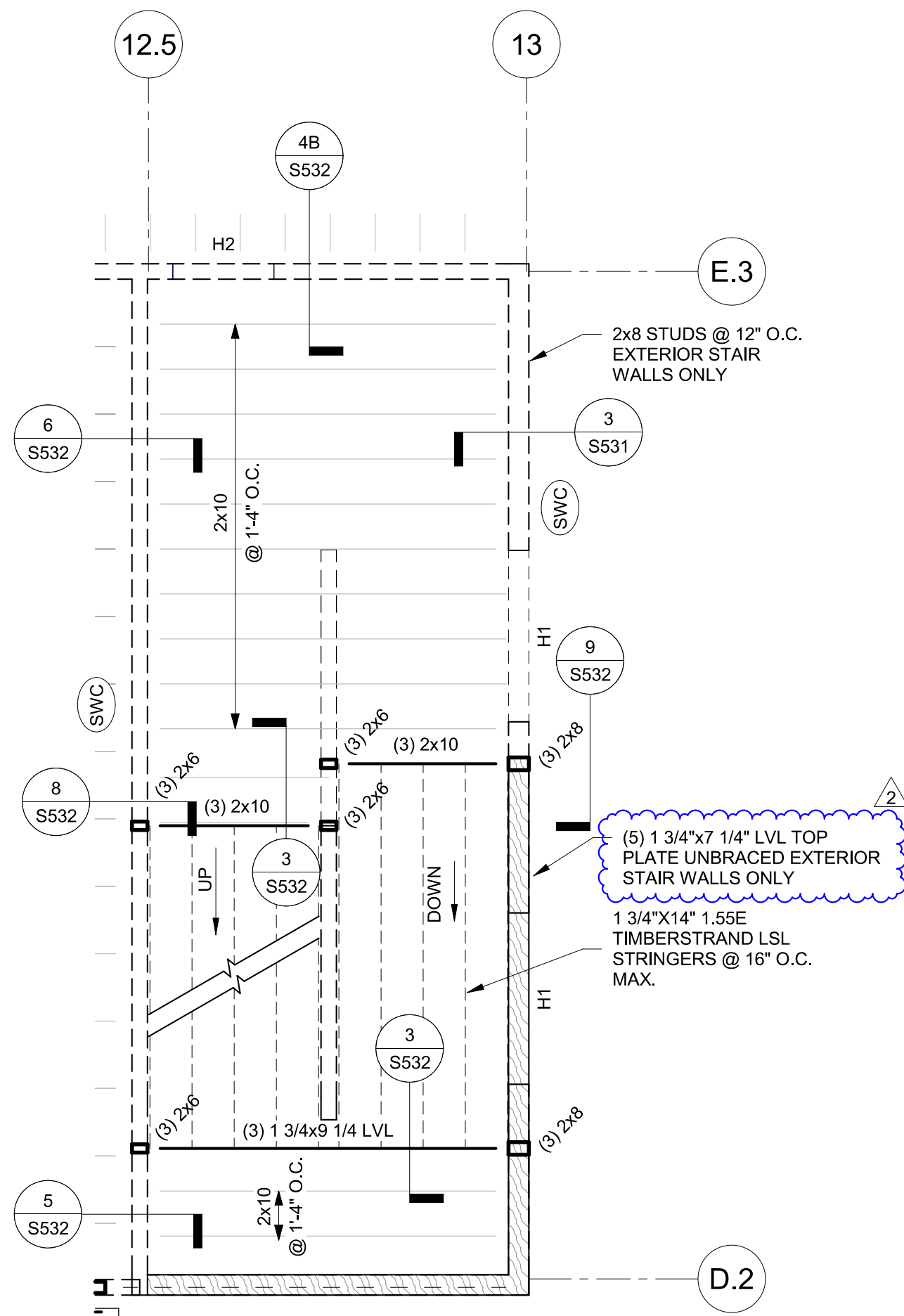
2 SOUTH STAIR TOWER AT LEVEL 3
S400 1/4" = 1'-0"



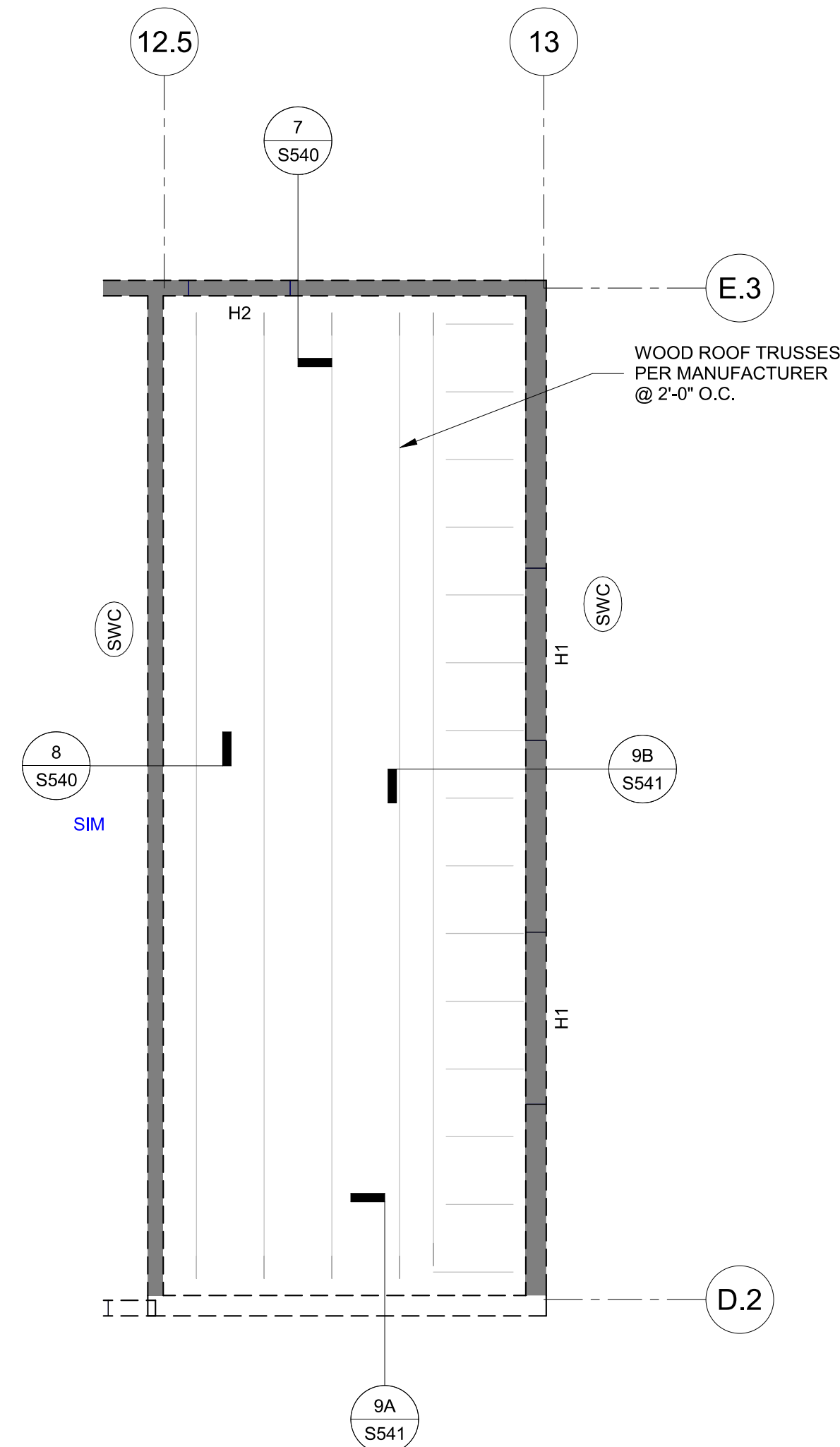
3 SOUTH STAIR TOWER AT ROOF
S400 1/4" = 1'-0"



4 EAST STAIR TOWER AT LEVEL 2
S400 1/4" = 1'-0"



5 EAST STAIR TOWER AT LEVEL 3
S400 1/4" = 1'-0"



6 EAST STAIR TOWER AT ROOF
S400 1/4" = 1'-0"

- SECTIONS 7 AND 8 MOVED TO SHEET S532
- SEE SECTION SHEETS S521 AND S532, MAJORITY OF SECTIONS UPDATED
- STAIR 2 MIRRORED AND FRAMING ADJUSTED

- BALCONY PLANS MOVED TO NEW S560 SERIES SHEETS
- ENLARGED STAIR PLANS MOVED TO THIS SHEET (S400)
- STAIR FRAMING MODIFIED
- SHEET S401 REMOVED

PRINTS ISSUED

01/25/2024 - CITY SUBMITTAL

REVISIONS:

- 10/21/2024 Addendum #1
- 11/11/2024 Addendum #2
- 12/26/2024 Addendum #3
- 01/23/2025 Addendum #4 Stair Elevation Coordination



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EXPIRES: DECEMBER 31, 2024



01/23/2025

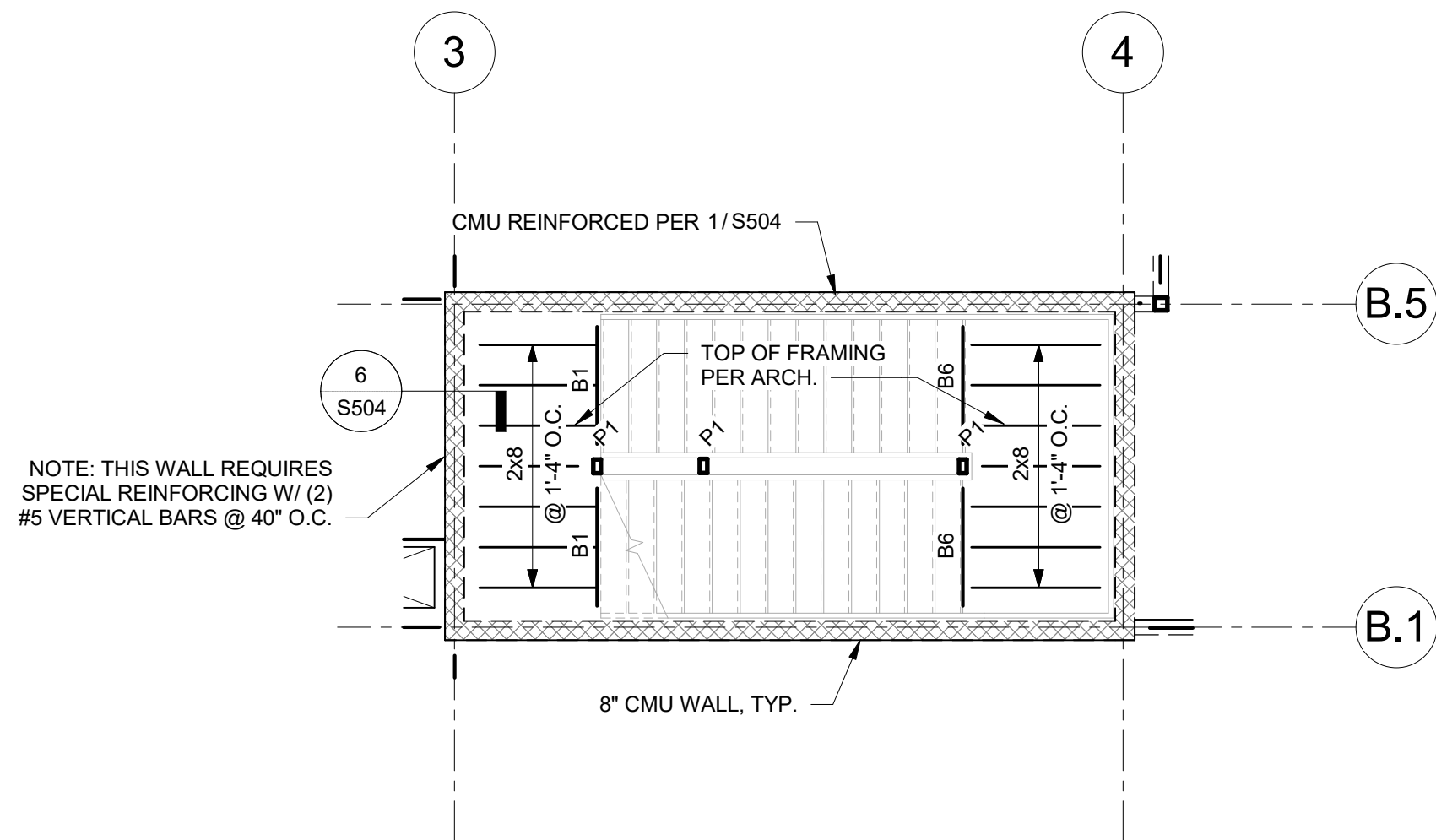
THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

SHEET TITLE
ENLARGED VIEWS

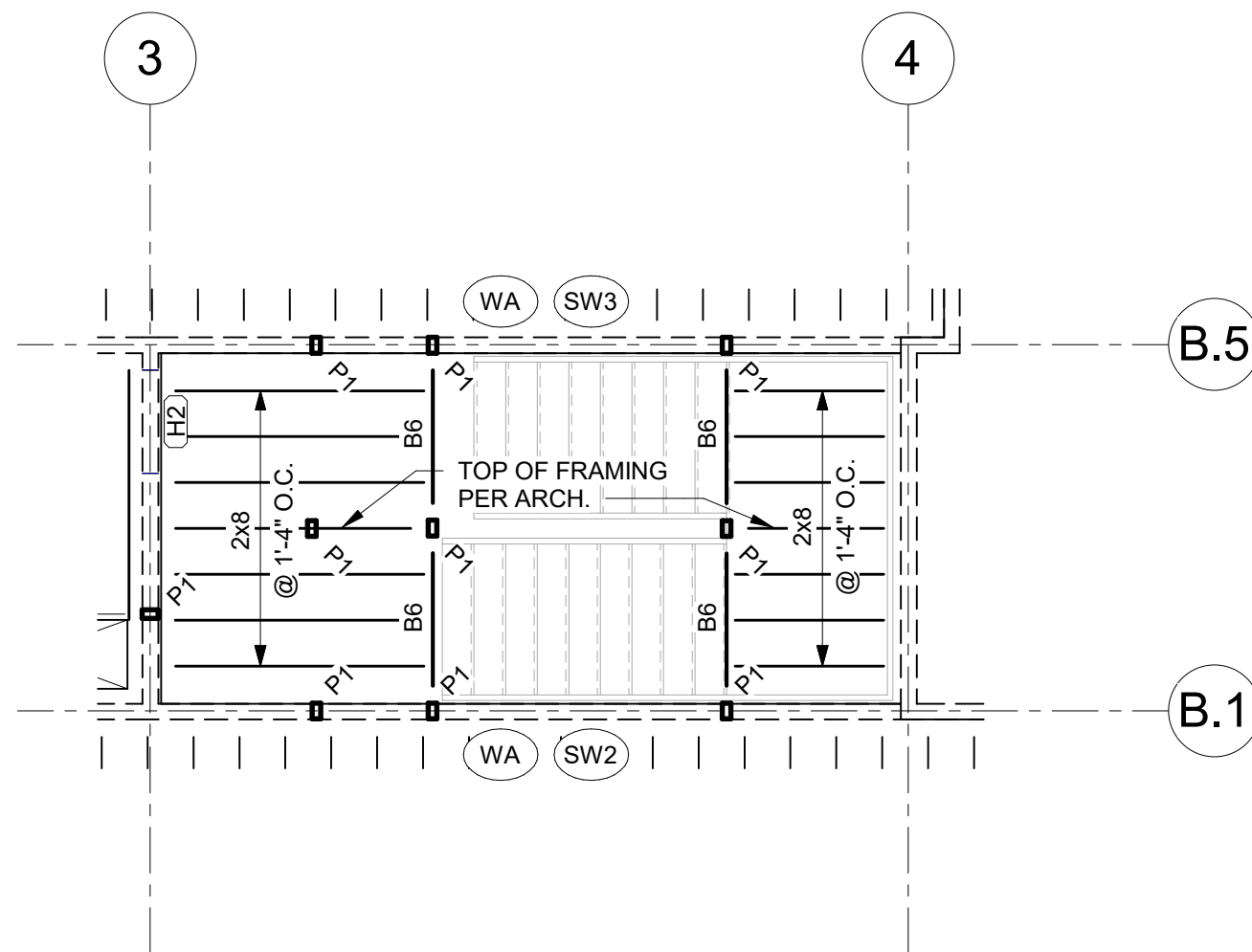
PROJECT NUMBER: 2023000333

SHEET NUMBER:

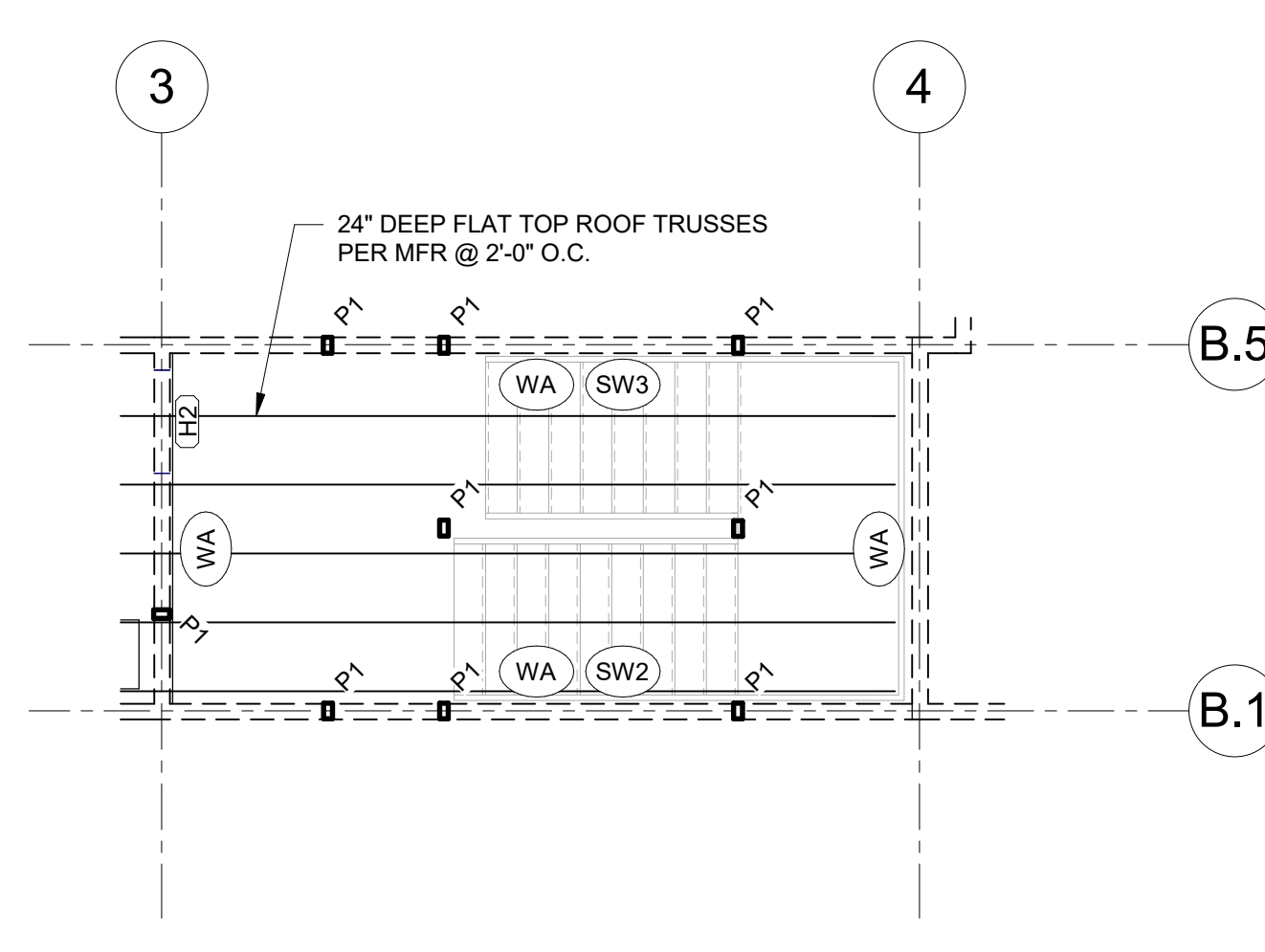
S400



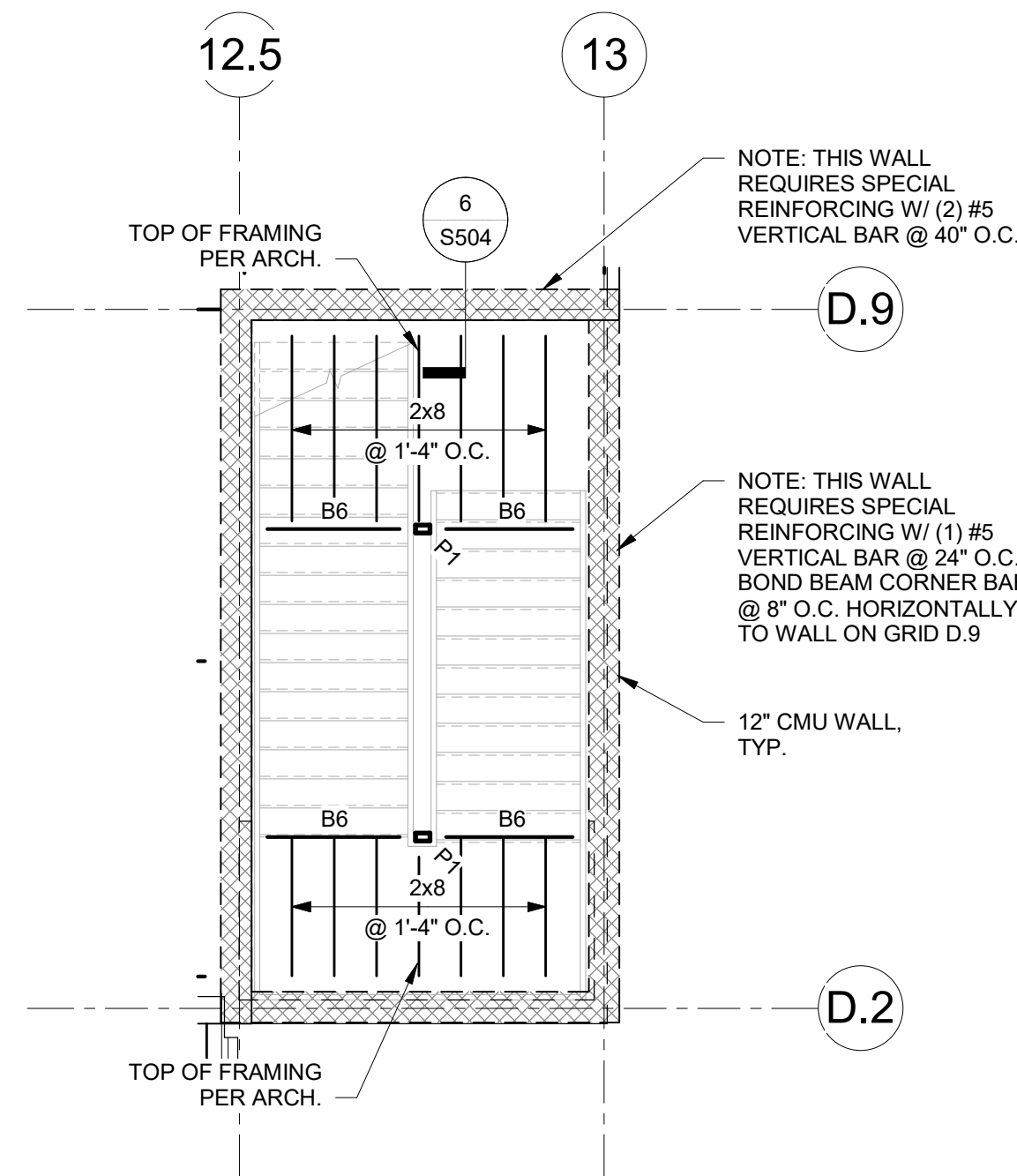
1 SOUTH STAIR TOWER AT LEVEL 2
S401 3/16" = 1'-0"



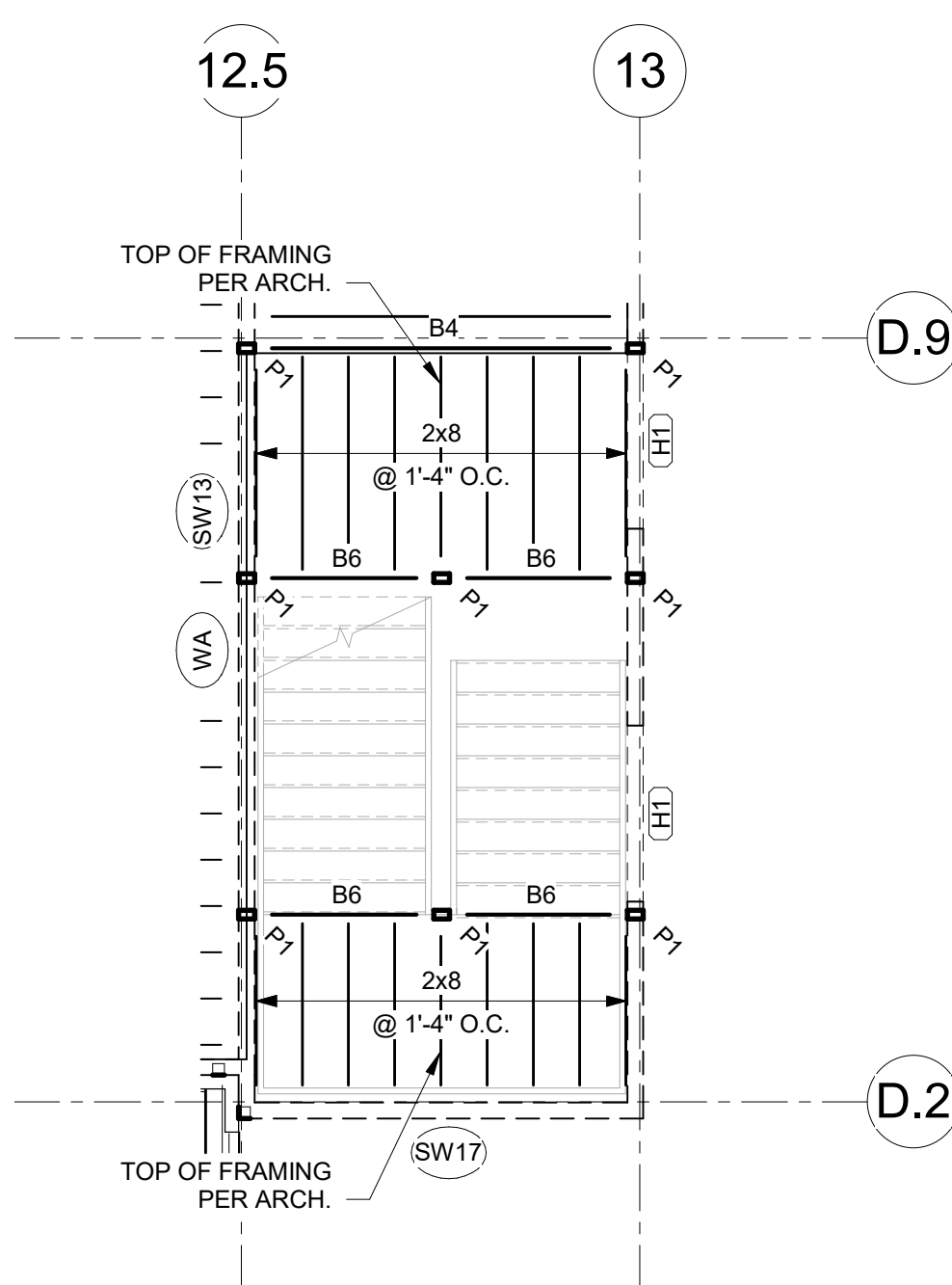
2 SOUTH STAIR TOWER AT LEVEL 3
S401 3/16" = 1'-0"



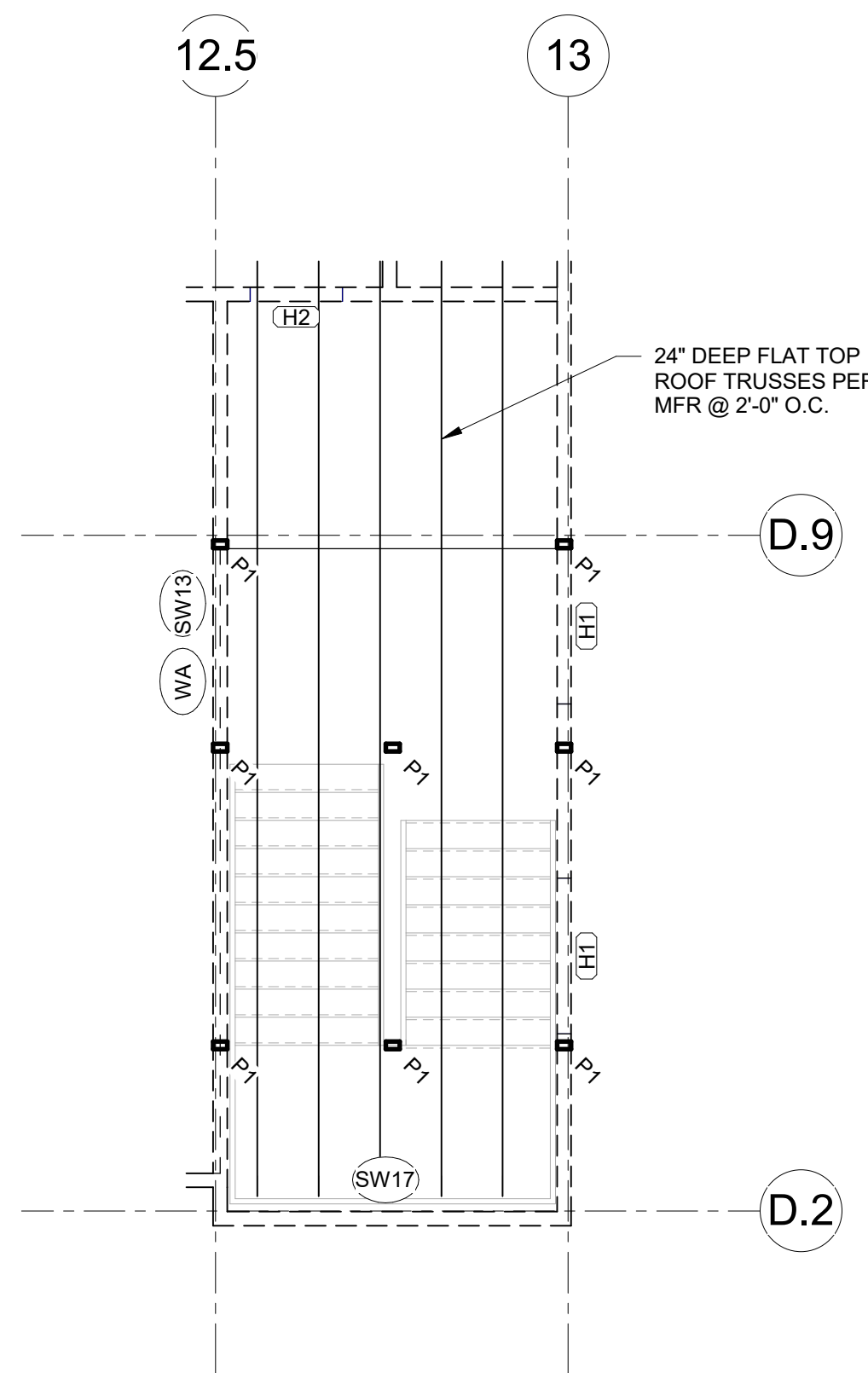
3 SOUTH STAIR TOWER AT ROOF
S401 3/16" = 1'-0"



4 EAST STAIR TOWER AT LEVEL 2
S401 3/16" = 1'-0"



5 EAST STAIR TOWER AT LEVEL 3
S401 3/16" = 1'-0"



6 EAST STAIR TOWER AT ROOF
S401 3/16" = 1'-0"

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MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

FOR PERMIT
NOT FOR
CONSTRUCTION

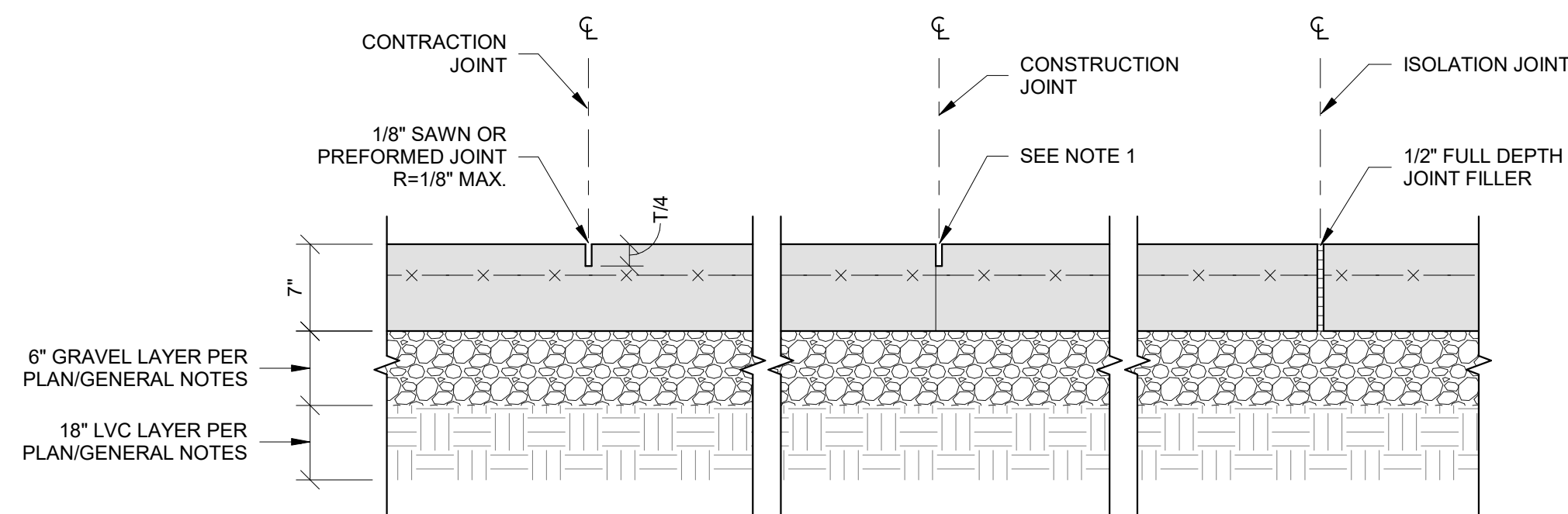
THE VILLAGE AT DISCOVERY -
LOT 4
NW COLBERN & NE DOUGLAS ST.,
LEE'S SUMMIT, MO 64064

SHEET TITLE
ENLARGED VIEWS

PROJECT NUMBER: 2023000333

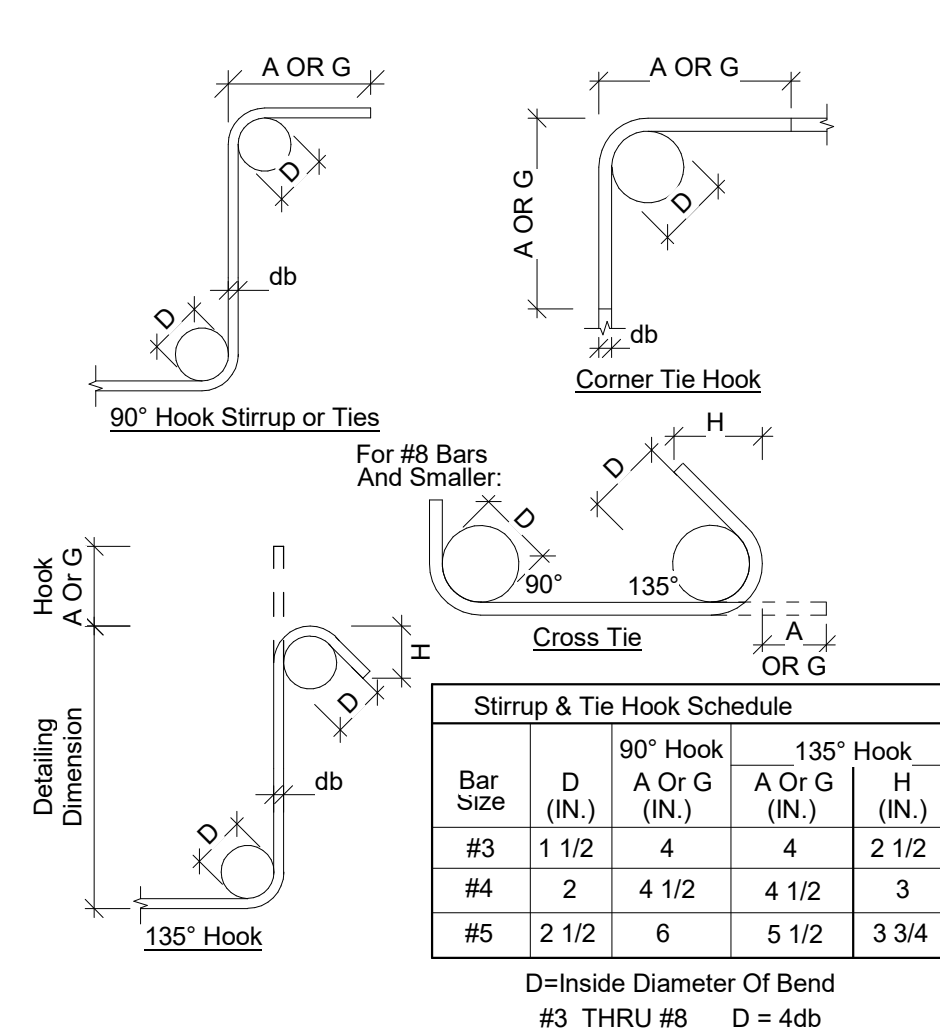
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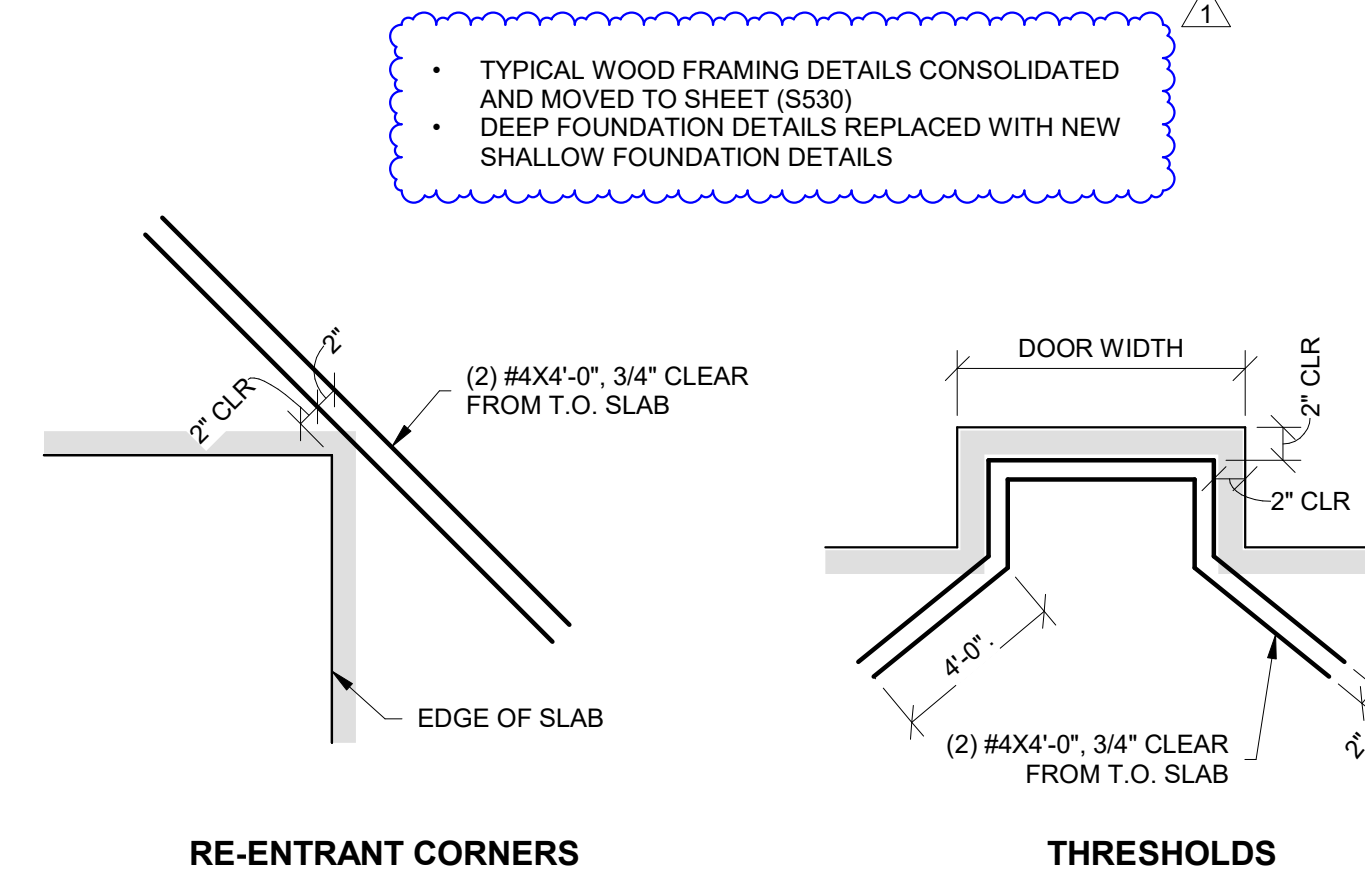


- NOTES:
1. LOCATE CONSTRUCTION JOINTS AT SAW JOINT LOCATIONS. MATCH SAW JOINT PROFILE. ALL CONSTRUCTION JOINT LOCATIONS TO BE REVIEWED AND APPROVED BY EOR PRIOR TO CONSTRUCTION.
 2. MAXIMUM SPACING BETWEEN SAW JOINTS = 15'-0" FOR 6" SLABS & 10'-0" FOR 4" SLABS. SEE PLAN FOR LOCATIONS.
 3. CONTINUE SLAB ON GRADE REINFORCING, UNO. PROVIDE TENSION LAP SPLICE AS REQUIRED.
 4. DO NOT PLACE DOWELS WITHIN 12" OF A SLAB CORNER.

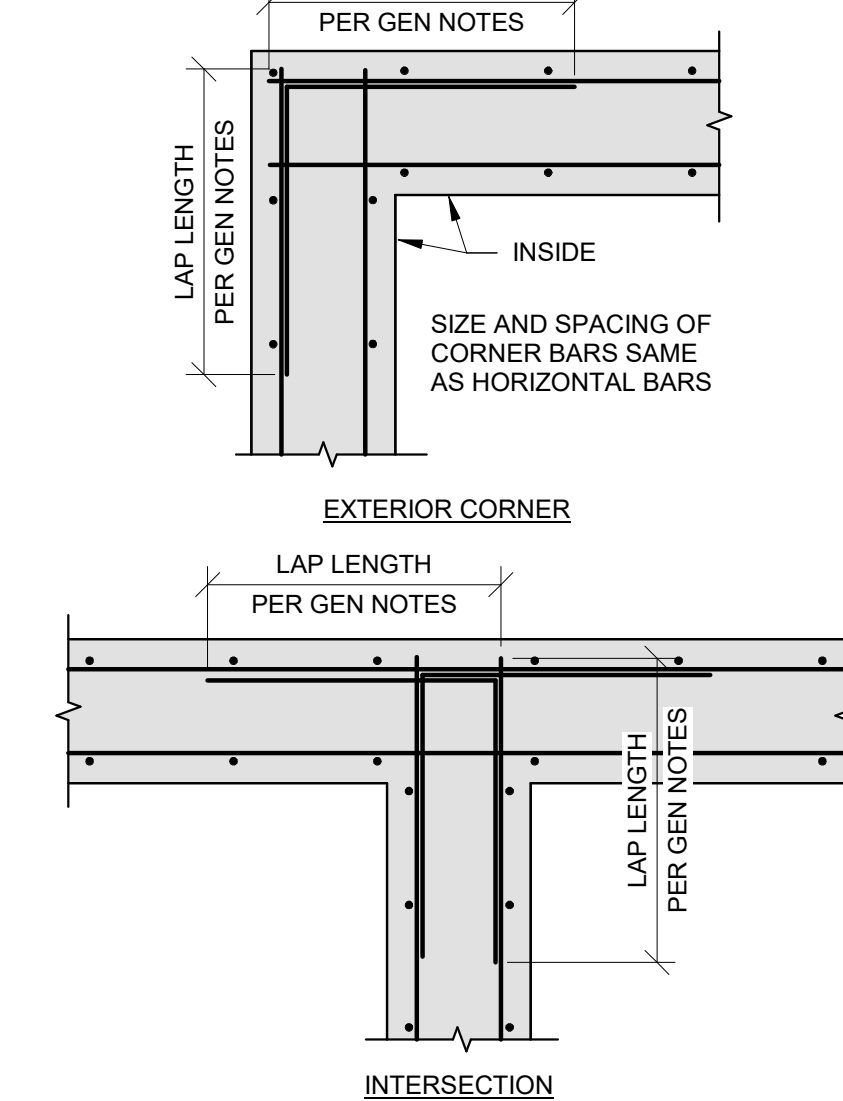
1 TYPICAL SLAB-ON-GRADE JOINTS
S500 1" = 1'-0"



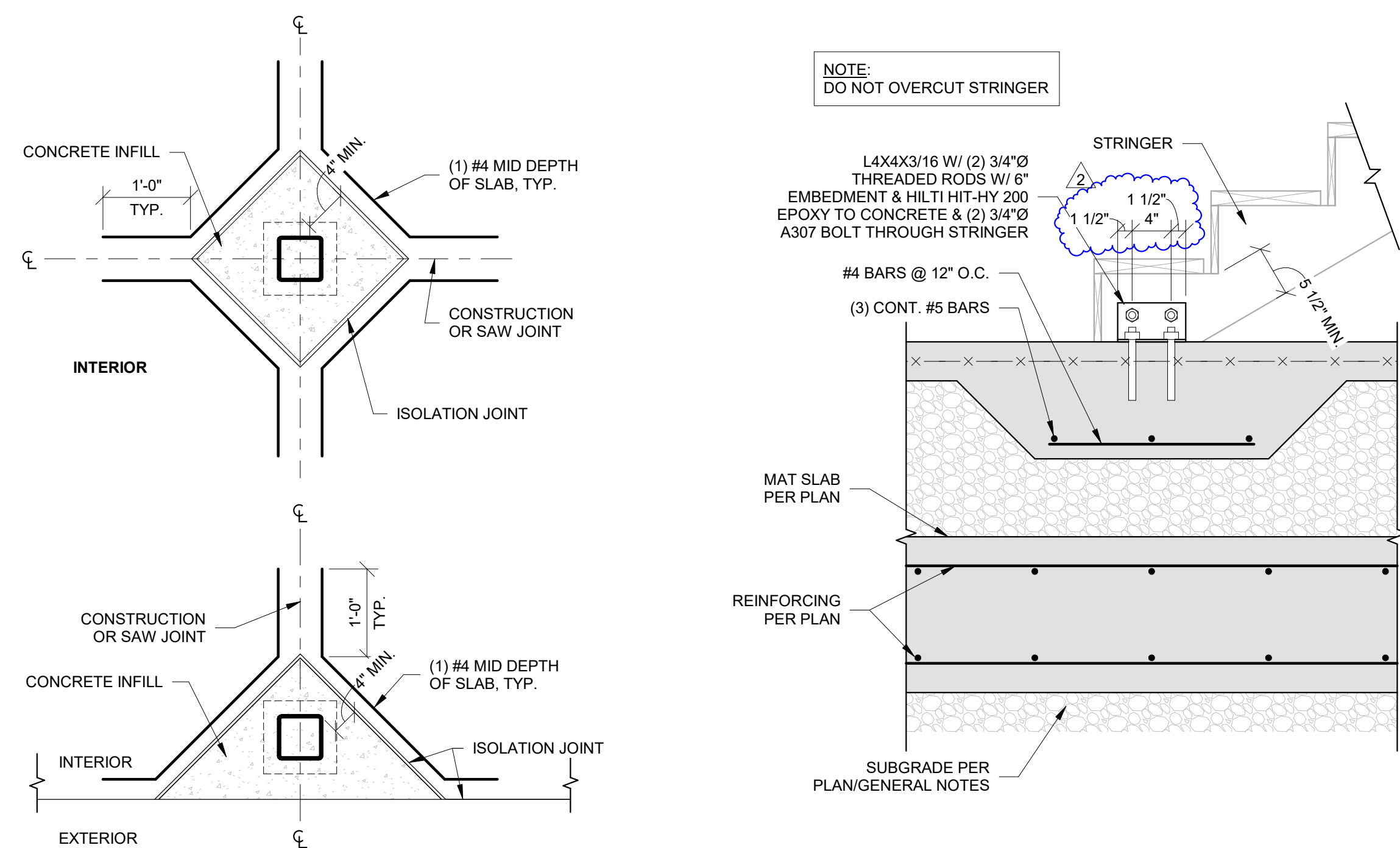
2 BAR BENDING DETAIL
S500 3/4" = 1'-0"



3 ADDITIONAL REINFORCING IN SLABS
S500 3/4" = 1'-0"

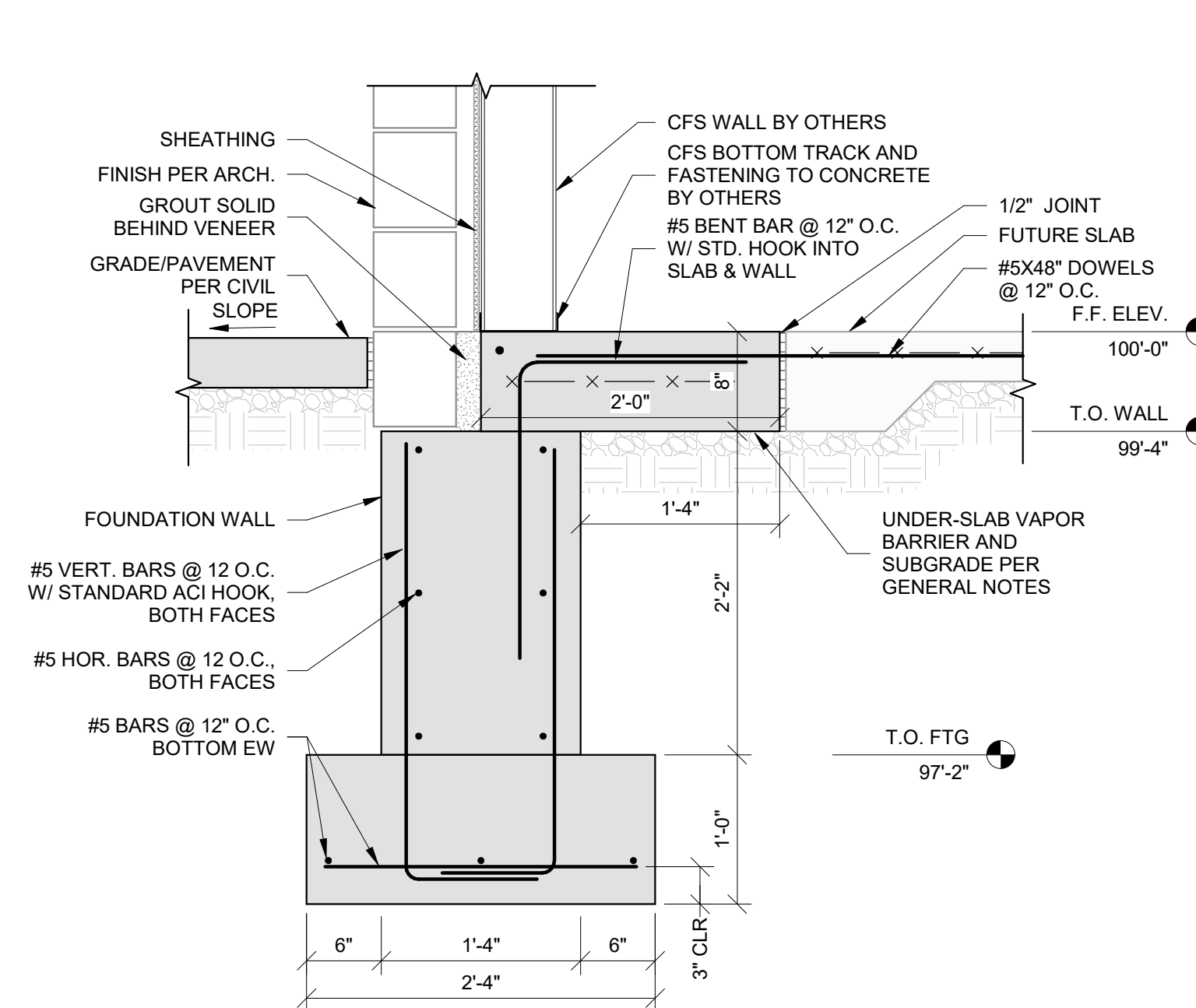


4 CORNER BAR DETAIL
S500 3/4" = 1'-0"

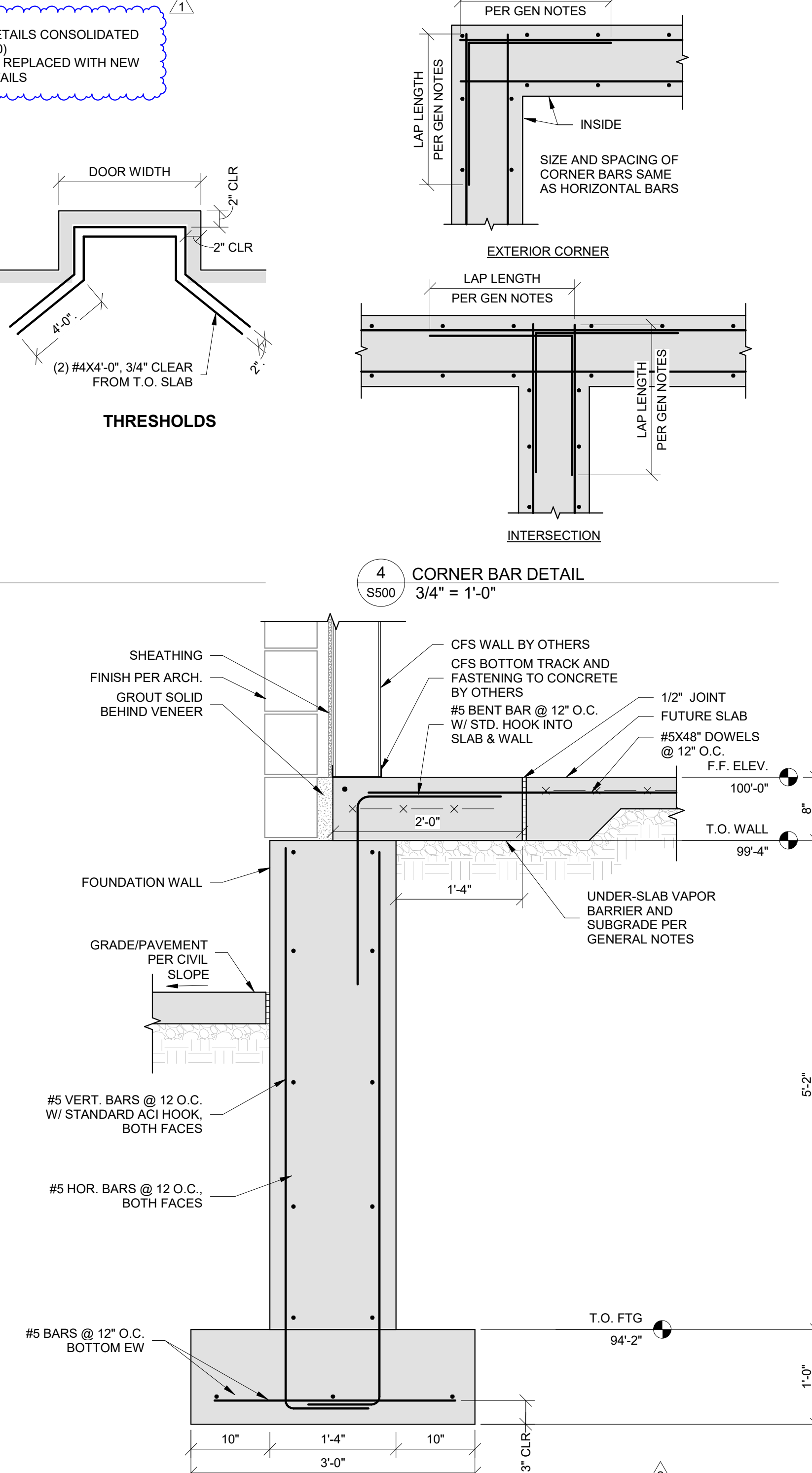


5 SLAB ON GRADE ISOLATION JOINT AT COLUMNS
S500 3/4" = 1'-0"

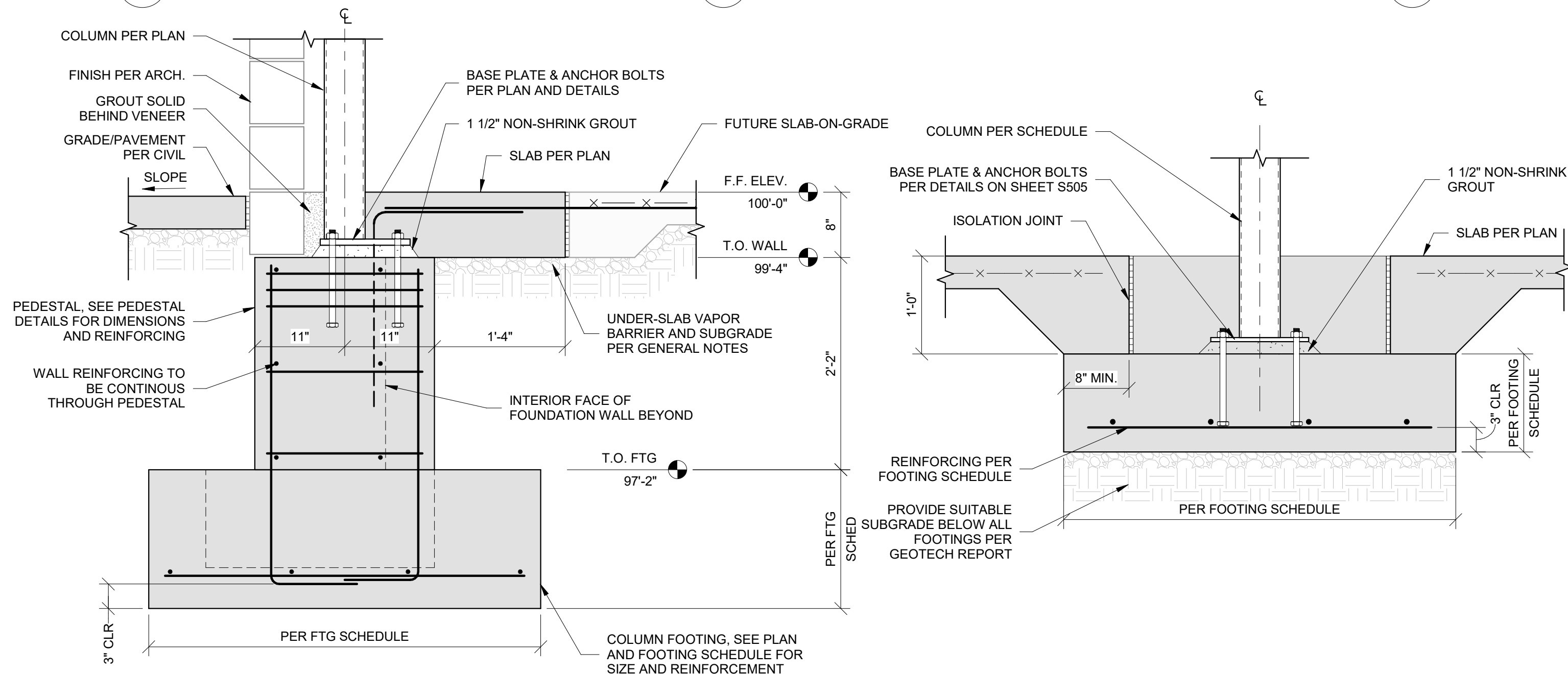
6 STAIR TO THICKENED SLAB
S500 1" = 1'-0"



7 EXTERIOR WALL (NOT AT PARKING GARAGE)
S500 1" = 1'-0"

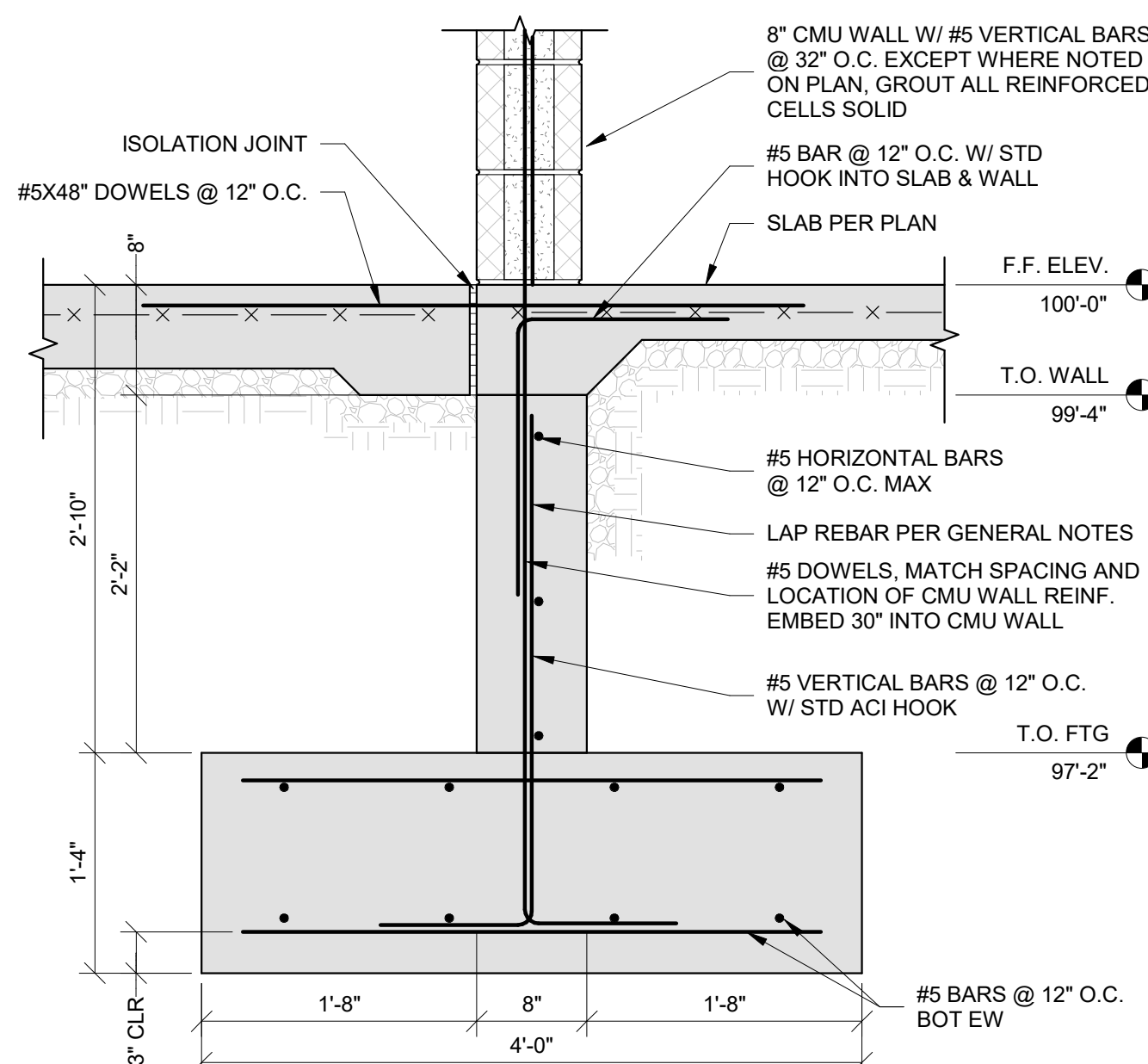


7B EXTERIOR WALL AT FOOTING STEP (NOT AT PARKING GARAGE)
S500 1" = 1'-0"

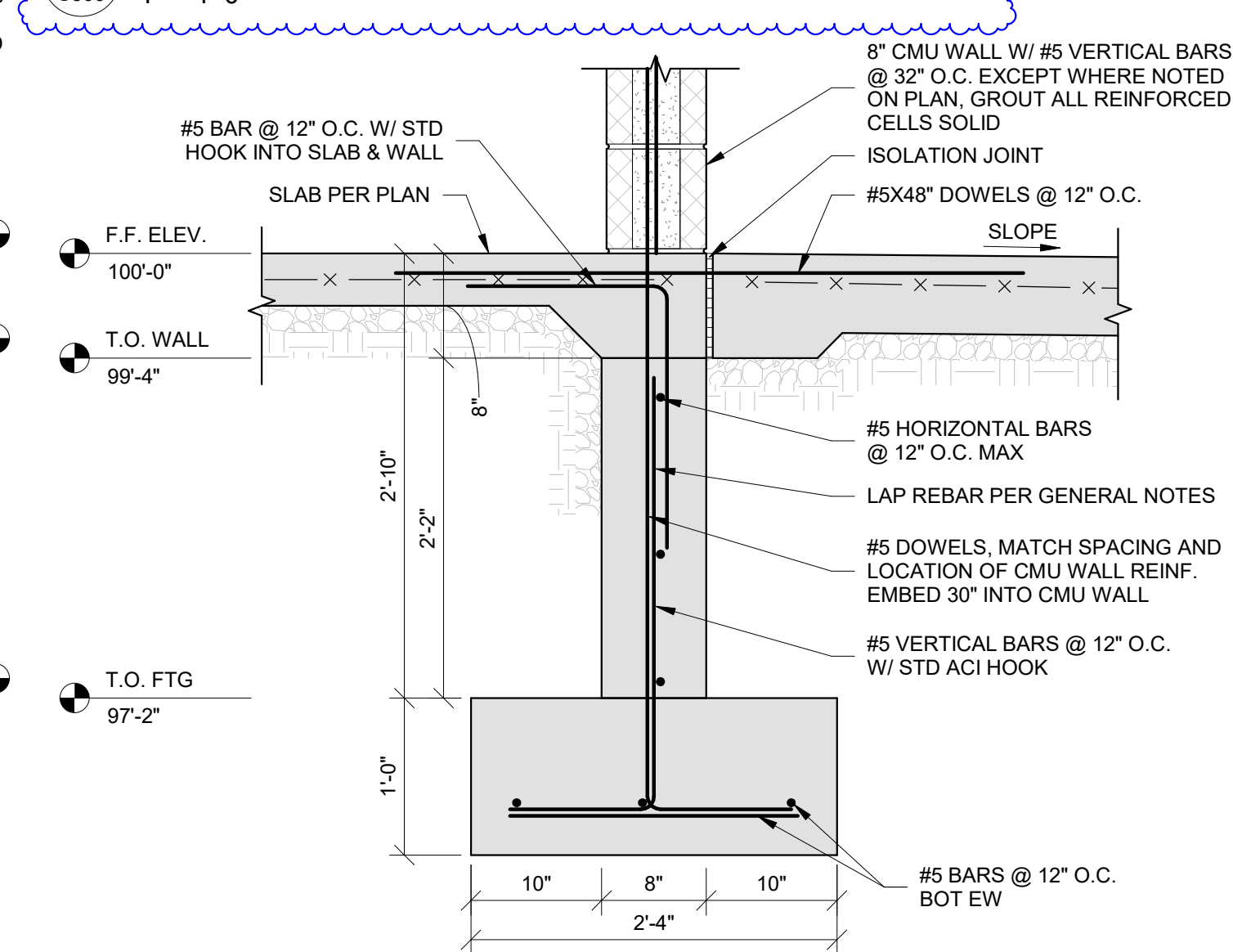


8 EXTERIOR WALL AT COLUMN PEDESTAL (NOT AT PARKING GARAGE)
S500 1" = 1'-0"

9 SECTION AT COLUMN FOOTING
S500 1" = 1'-0"



10 FOUNDATION SECTION AT FIREWALL
S500 1" = 1'-0"



11 SECTION BETWEEN GARAGE & AMENITY AREAS
S500 1" = 1'-0"

PRINTS ISSUED
01/25/2024 - CITY SUBMITTAL

REVISIONS:
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Columbia, MO 65203
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MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

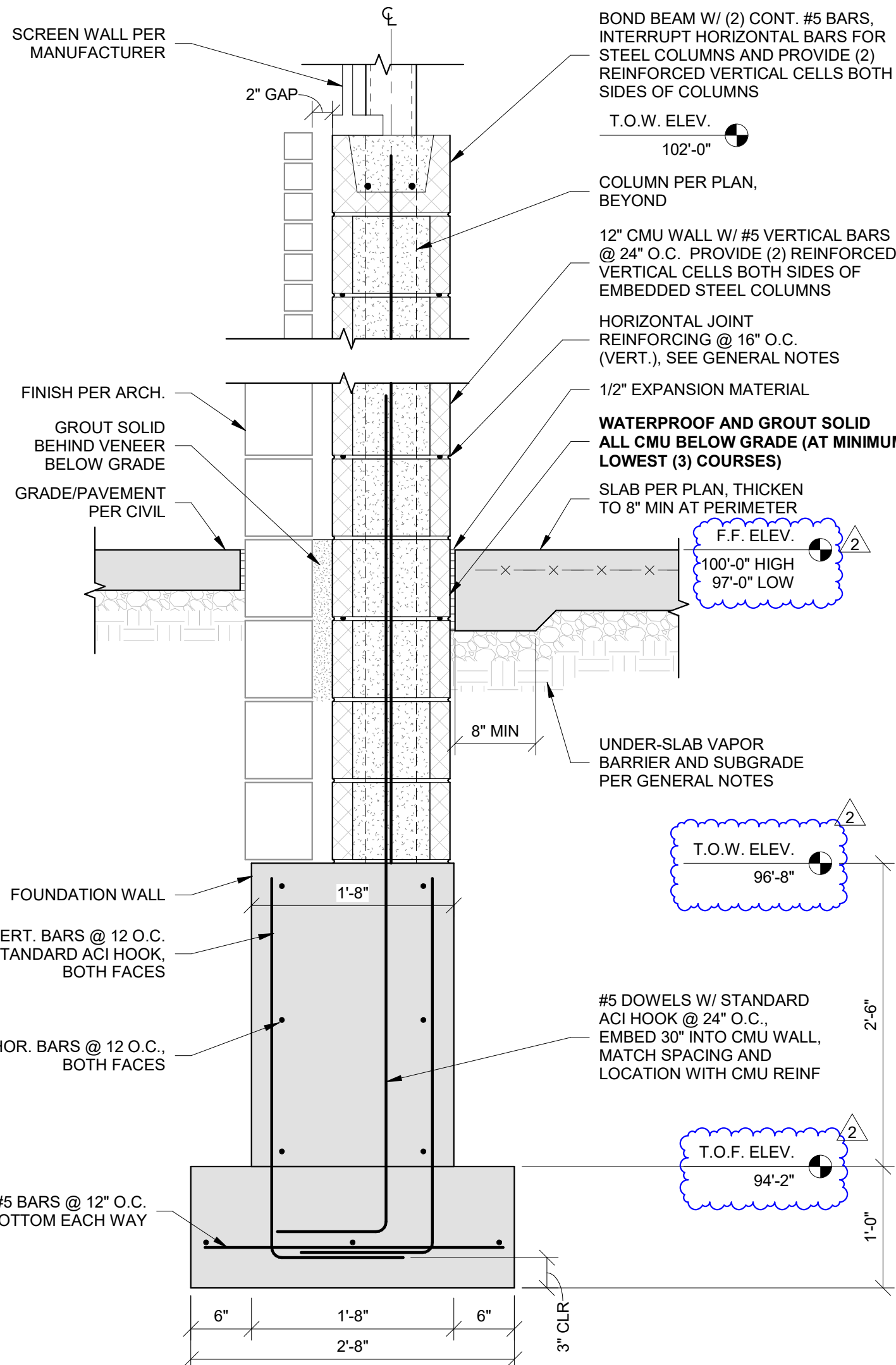
SHEET TITLE
FOUNDATION DETAILS

PROJECT NUMBER: 2023000333

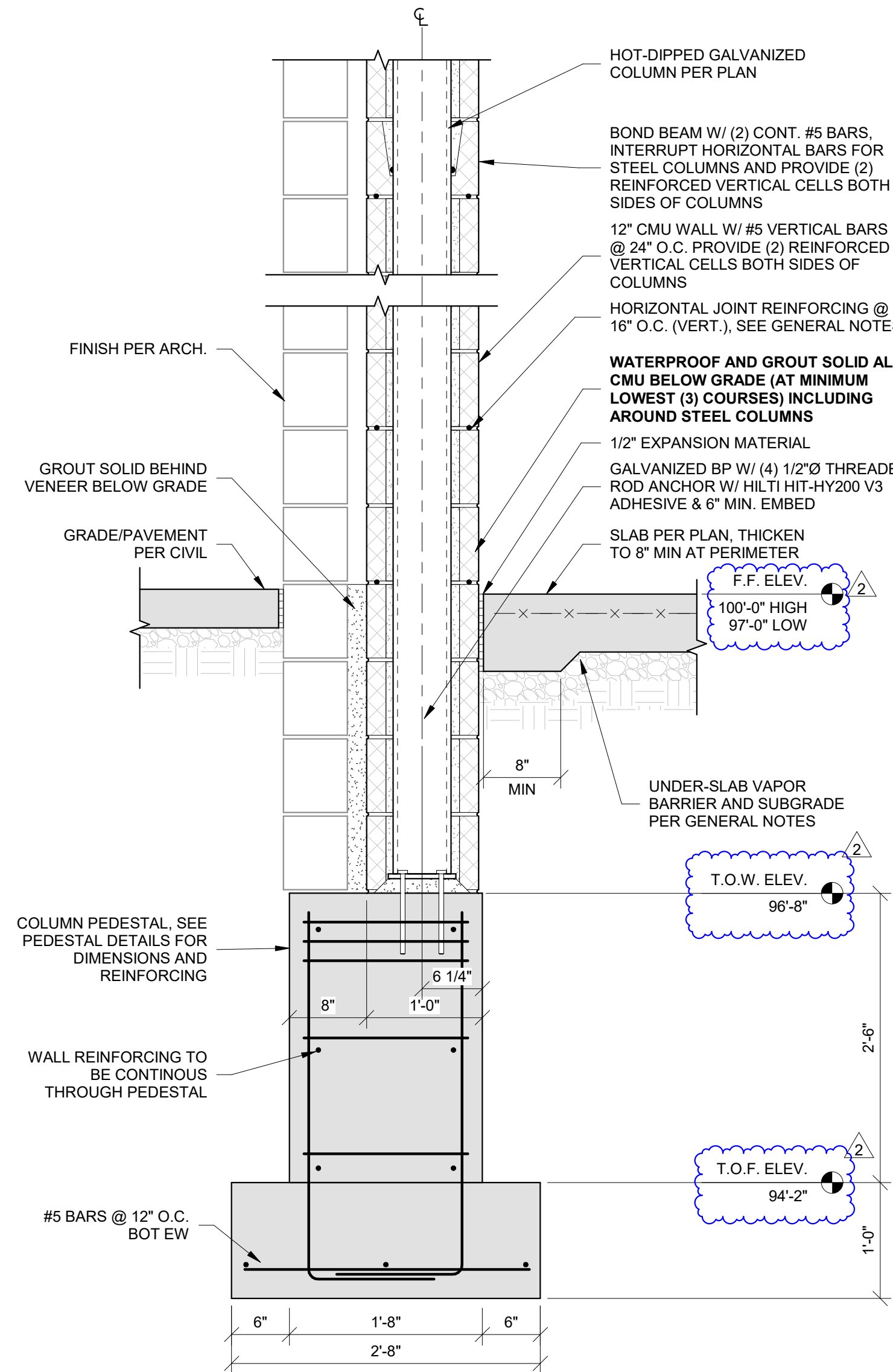
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S500

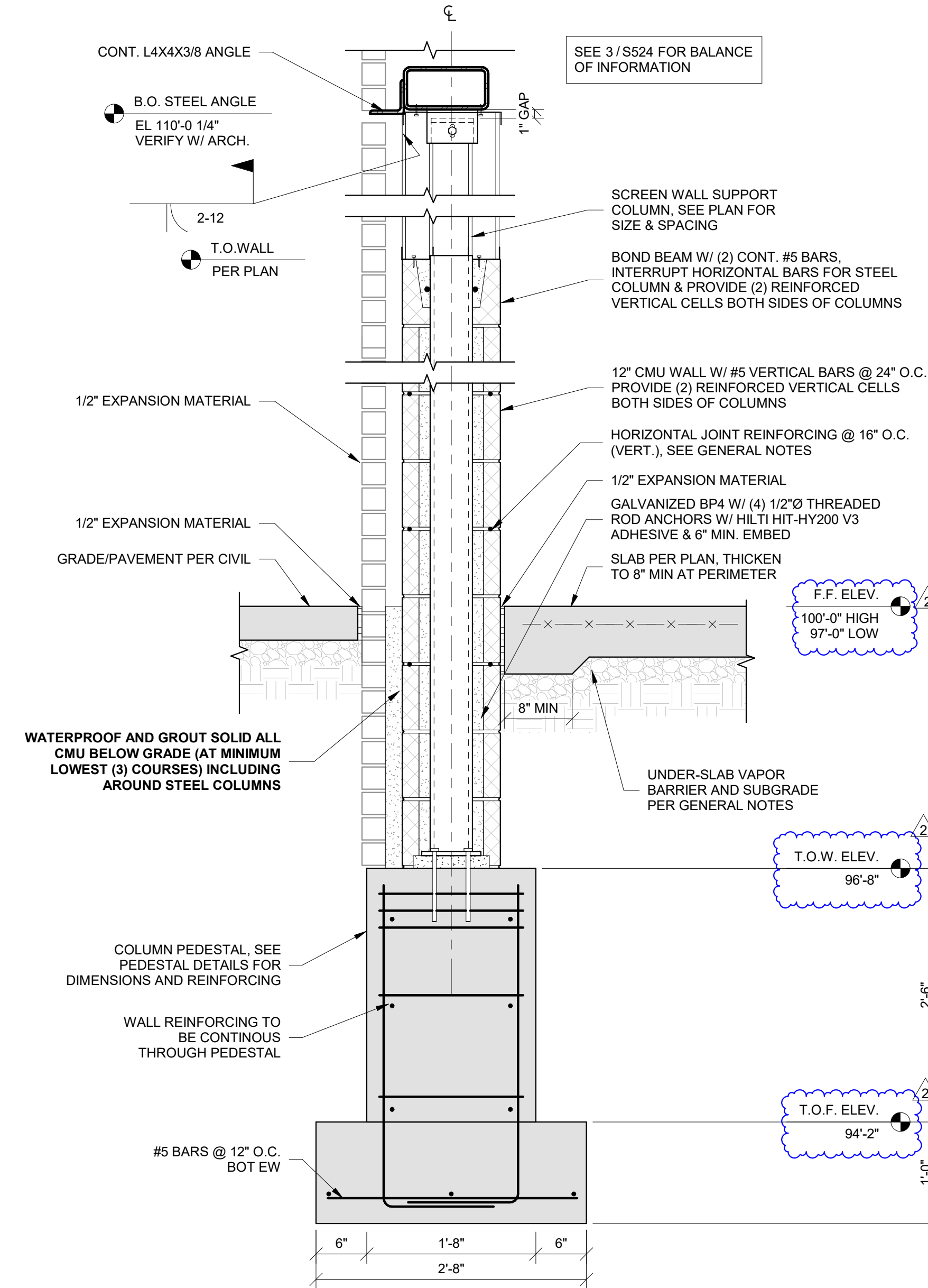
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Addendum 0001 2023000333
Discovery Park, Lee's Summit 2023000333
Roussman - Lot 4, S501



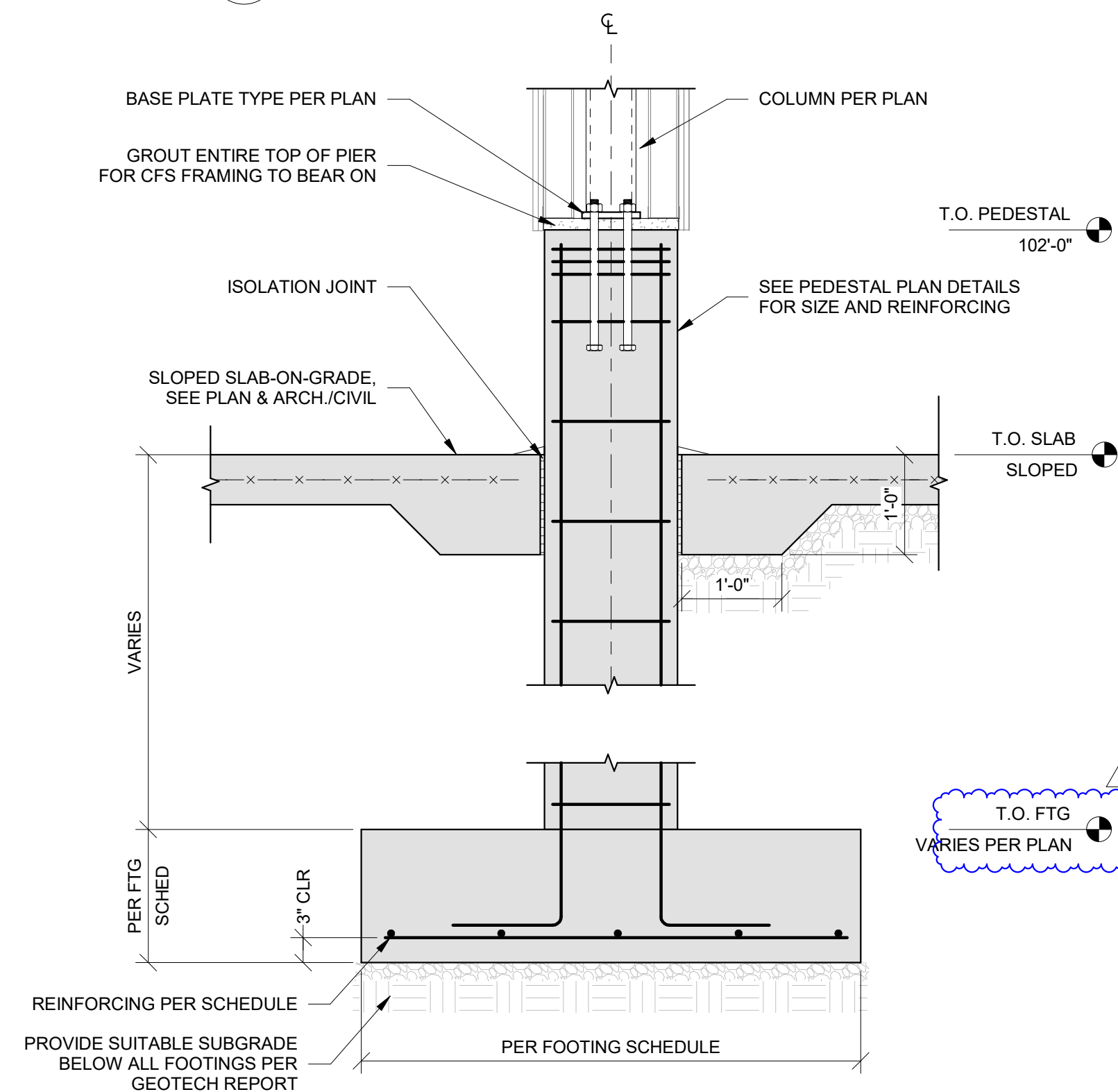
1 FOUNDATION SECTION - GARAGE EXTERIOR WALL
S501 1" = 1'-0"



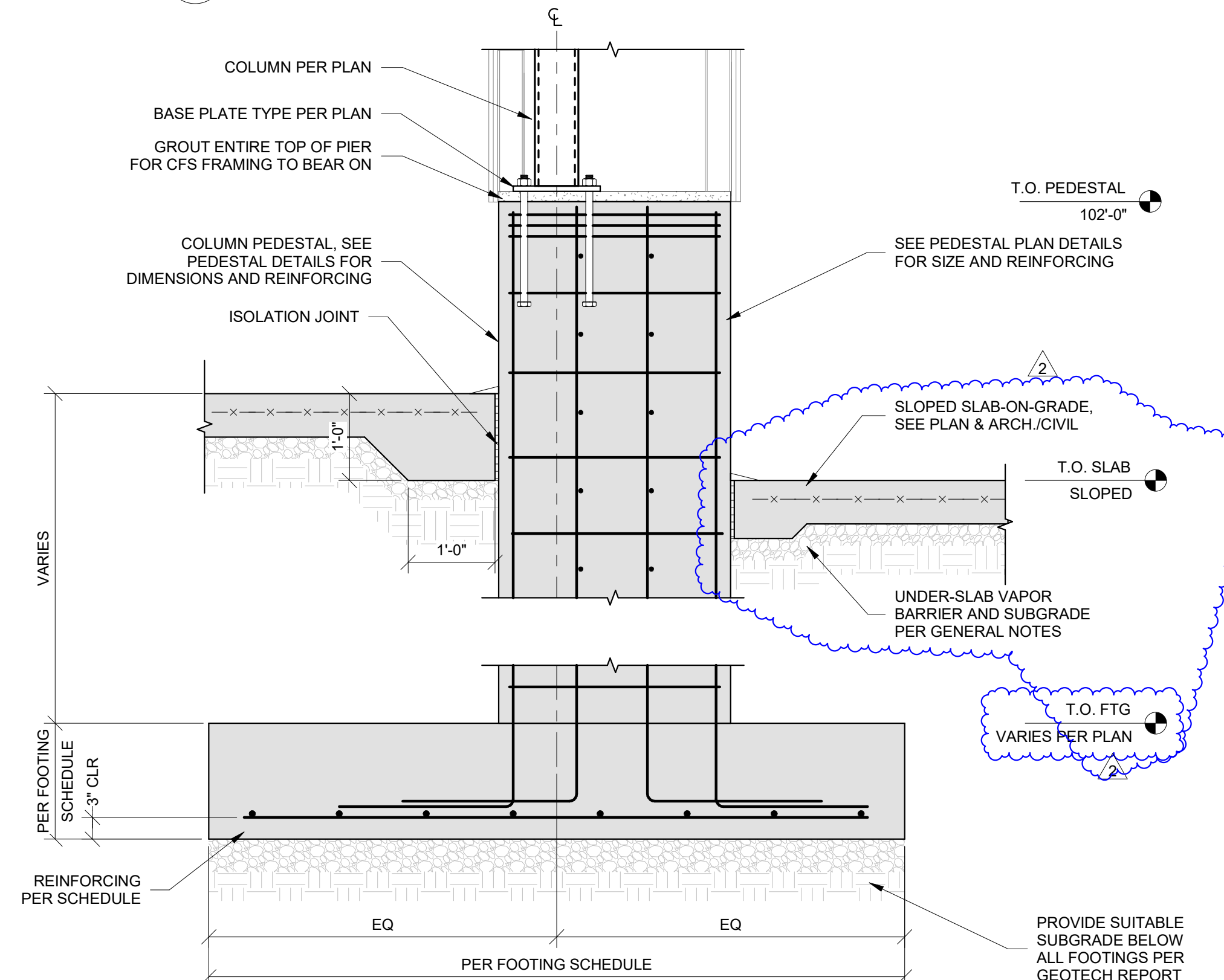
2 FOUNDATION SECTION - COLUMN FOOTING AT GARAGE EXTERIOR WALL
S501 1" = 1'-0"



3 FOUNDATION SECTION AT SCREEN WALL POST
S501 1" = 1'-0"



4 GARAGE COLUMN AND PEDESTAL
S501 3/4" = 1'-0"



5 GARAGE COLUMN AND PEDESTAL SECTION
S501 3/4" = 1'-0"

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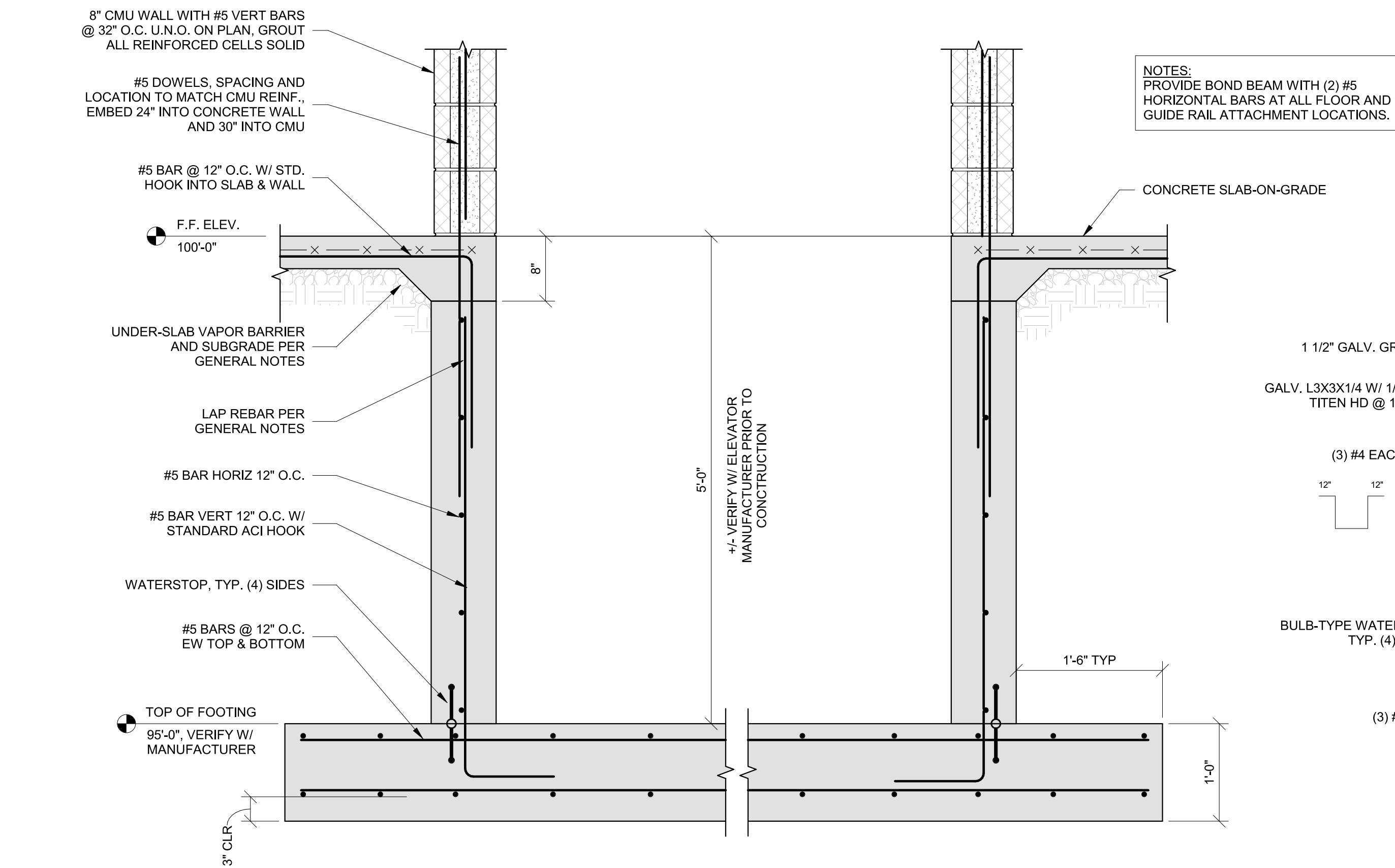
THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

SHEET TITLE
FOUNDATION DETAILS

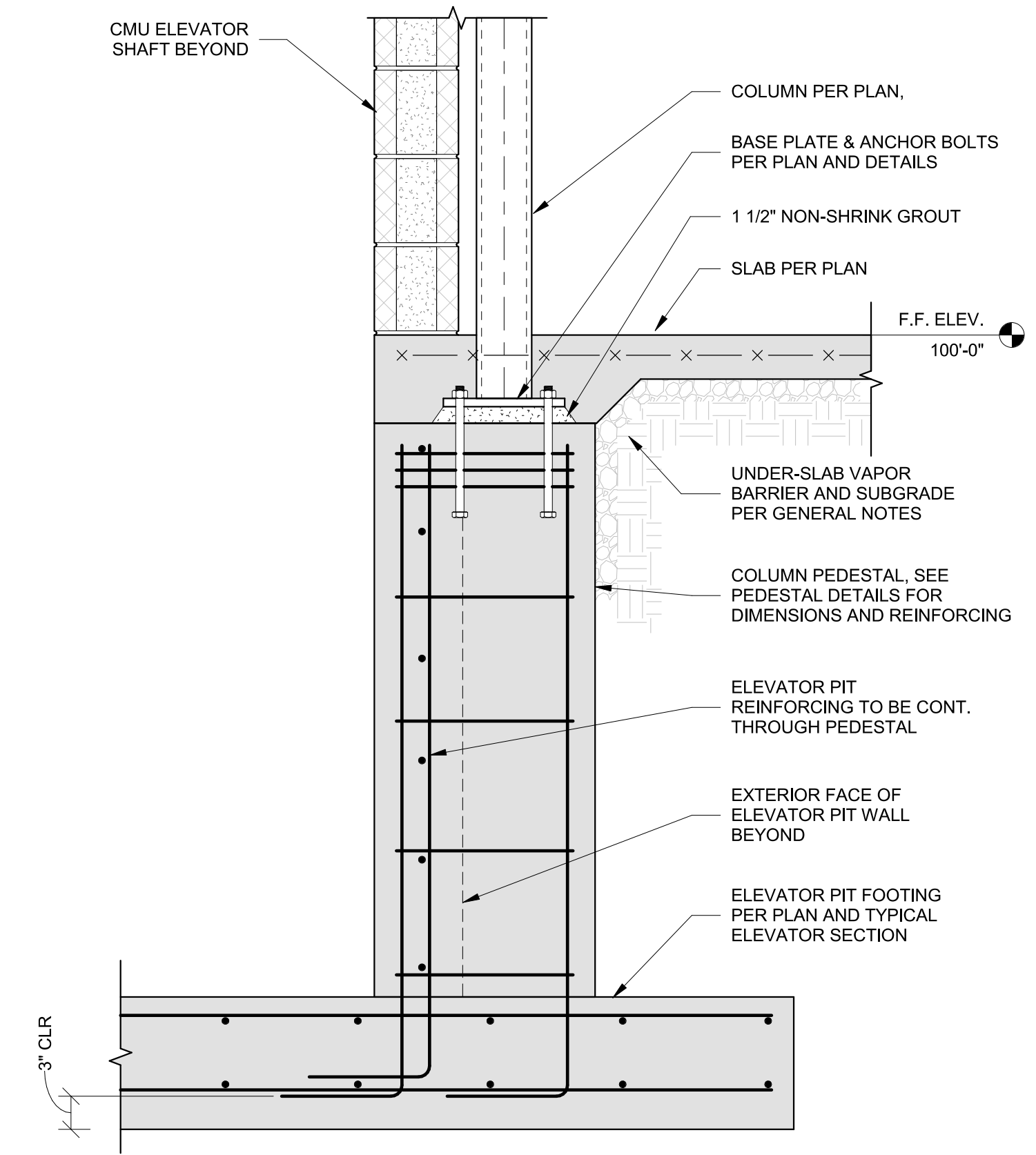
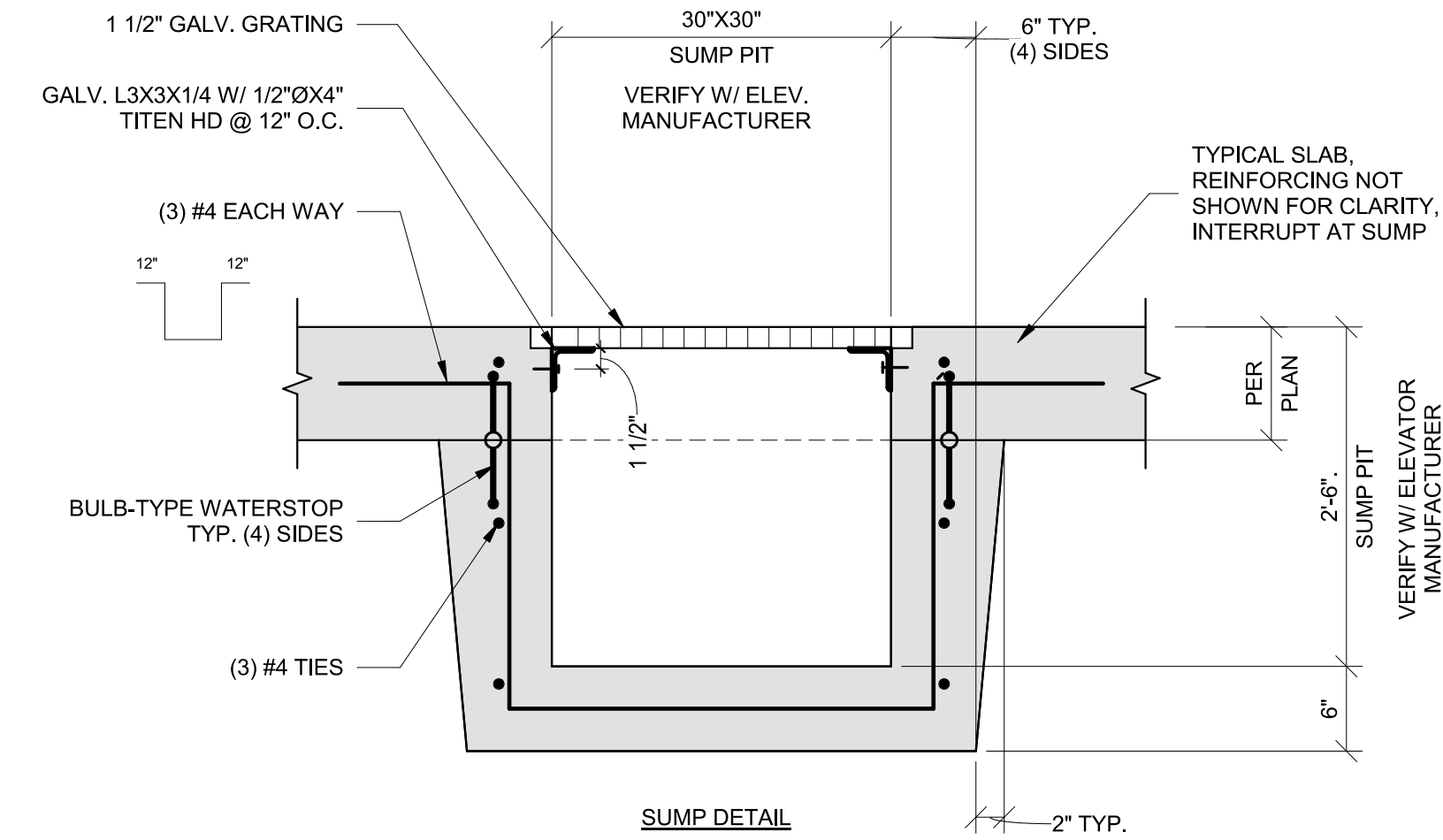
PROJECT NUMBER: 2023000333
SHEET NUMBER:

S501

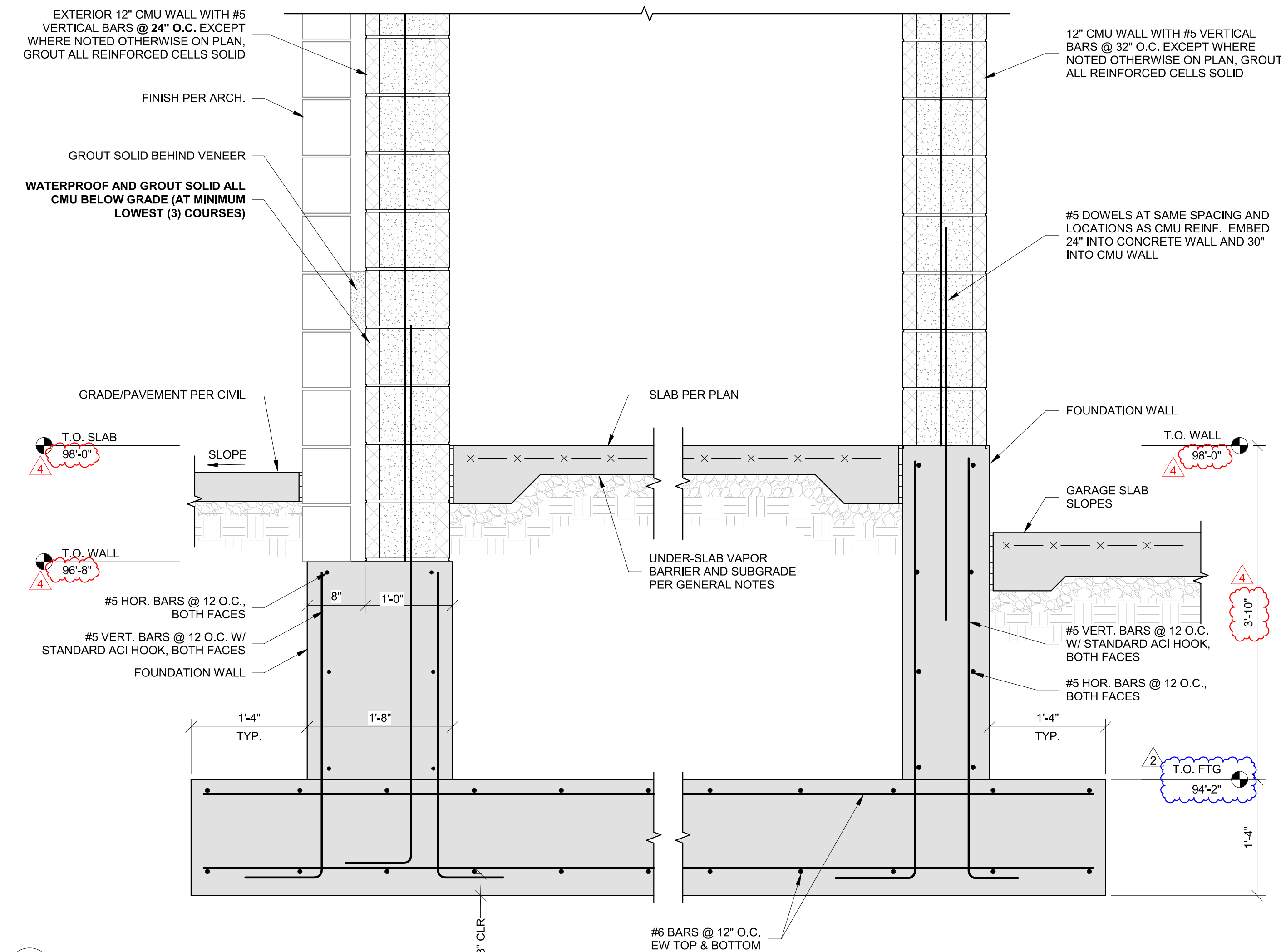
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Audrey Lutz: 2023000333
Discovery Park, Lee's Summit 2023000333 - Resubmittal - Lot 4, 2023-24



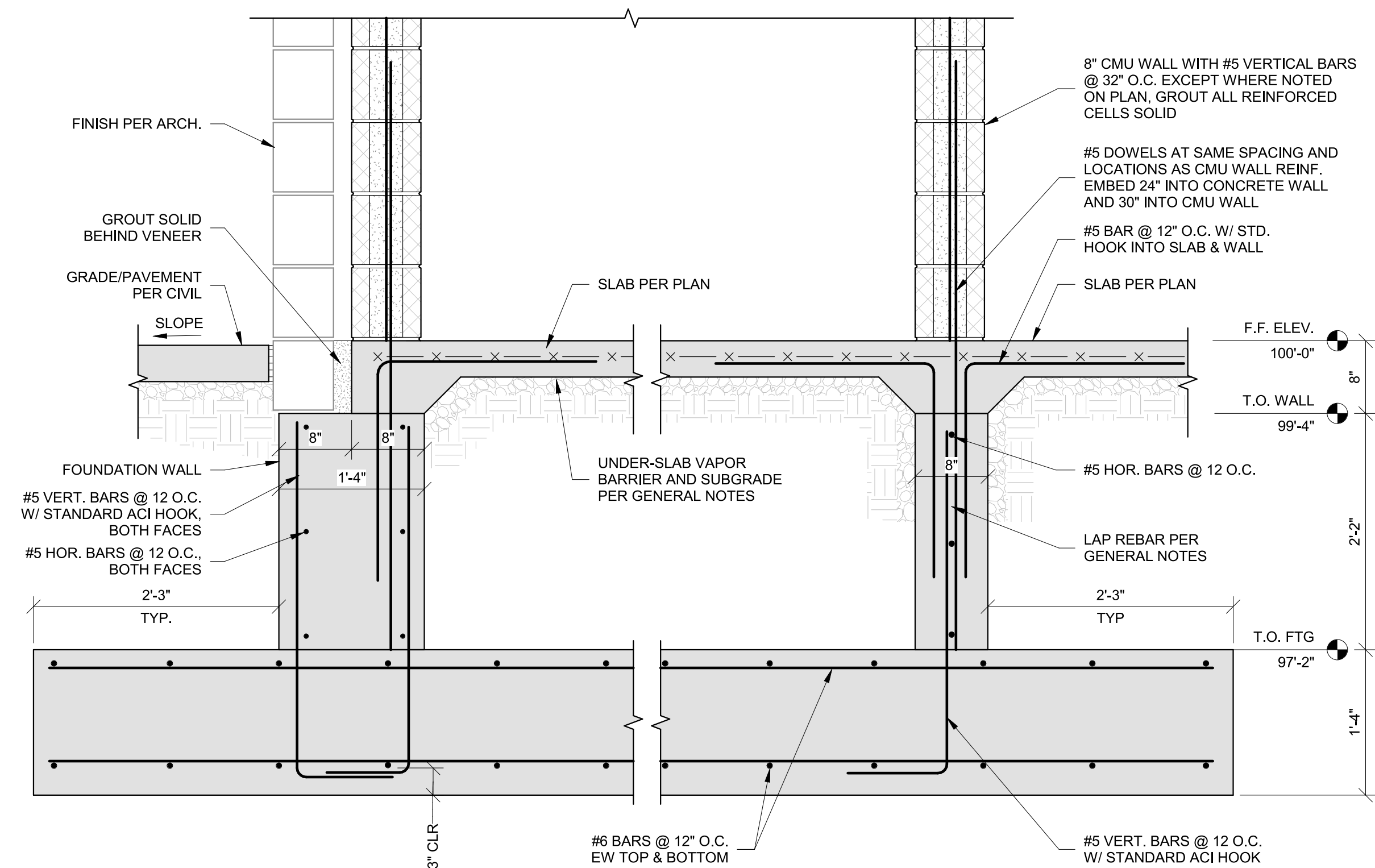
1 ELEVATOR PIT DETAIL
S502 1" = 1'-0"



2 COLUMN PEDESTAL AT ELEVATOR
S502 1" = 1'-0"



3 SECTION AT EAST STAIR FOUNDATION
S502 1" = 1'-0"



4 SECTION AT WEST STAIR FOUNDATION
S502 1" = 1'-0"

DEEP FOUNDATION DETAILS
REPLACE WITH NEW SHALLOW
FOUNDATION DETAILS

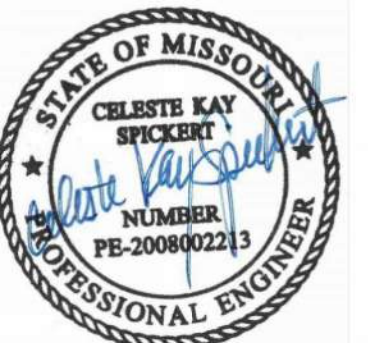
PRINTS ISSUED
01/25/2024 - CITY SUBMITTAL

REVISIONS:
1 10/21/2024 Addendum #1
2 11/11/2024 Addendum #2
3 12/26/2024 Addendum #3
4 01/23/2025 Addendum #4 Stair Elevation Coordination

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EXPIRES: DECEMBER 31, 2024



01/23/2025

THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

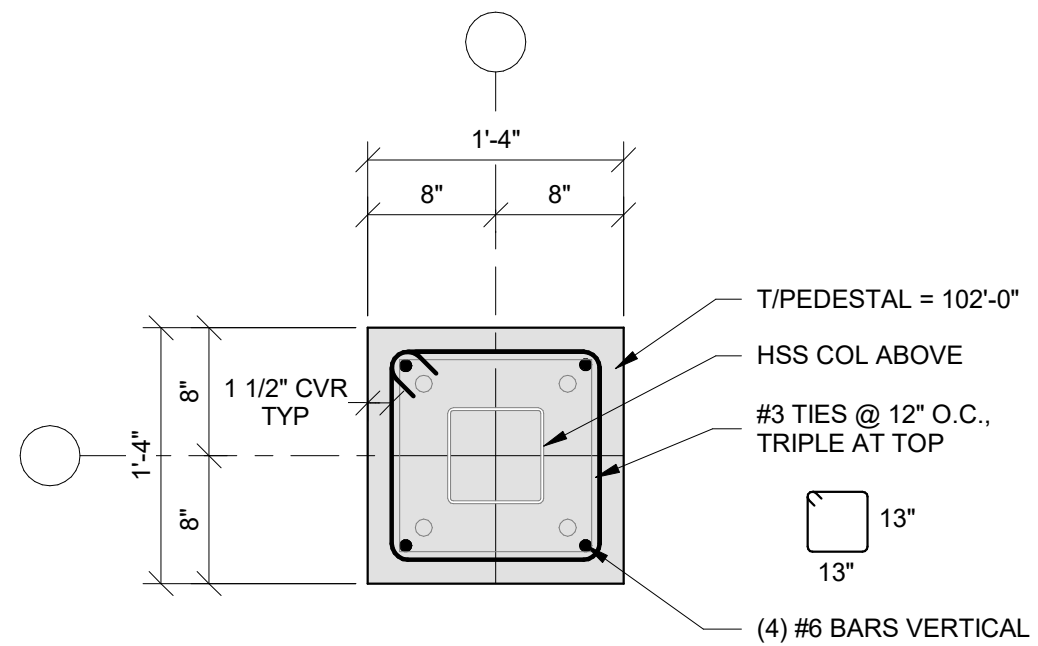
SHEET TITLE
FOUNDATION DETAILS

PROJECT NUMBER: 2023000333

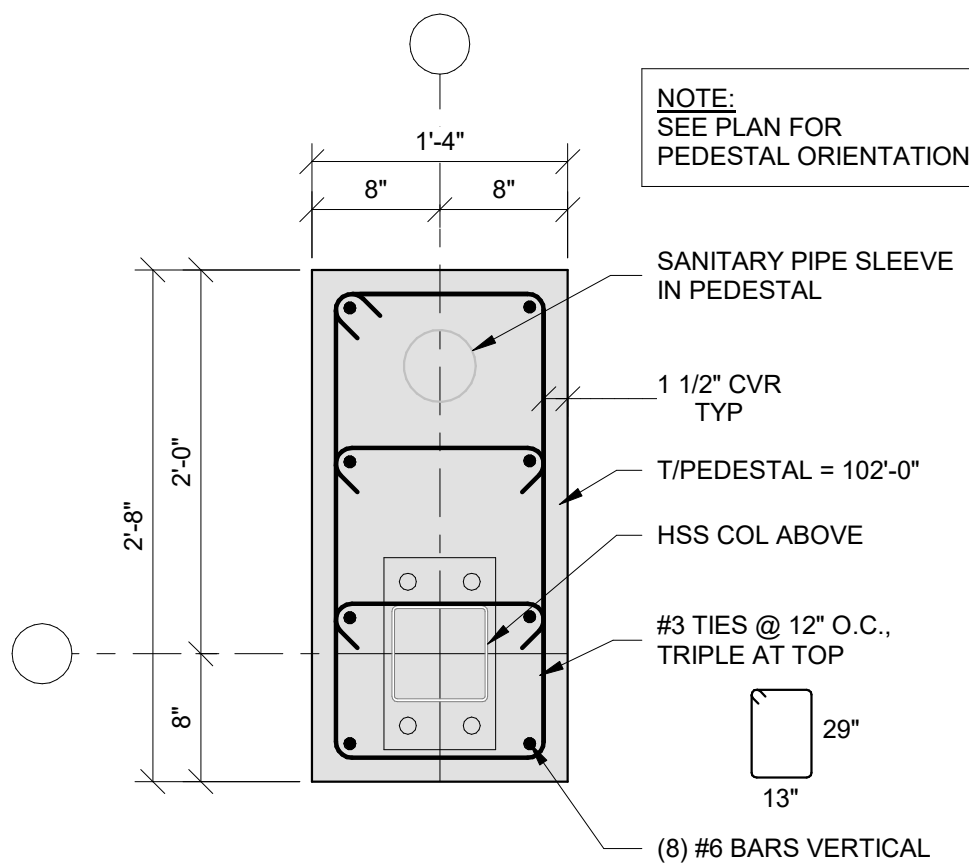
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S502

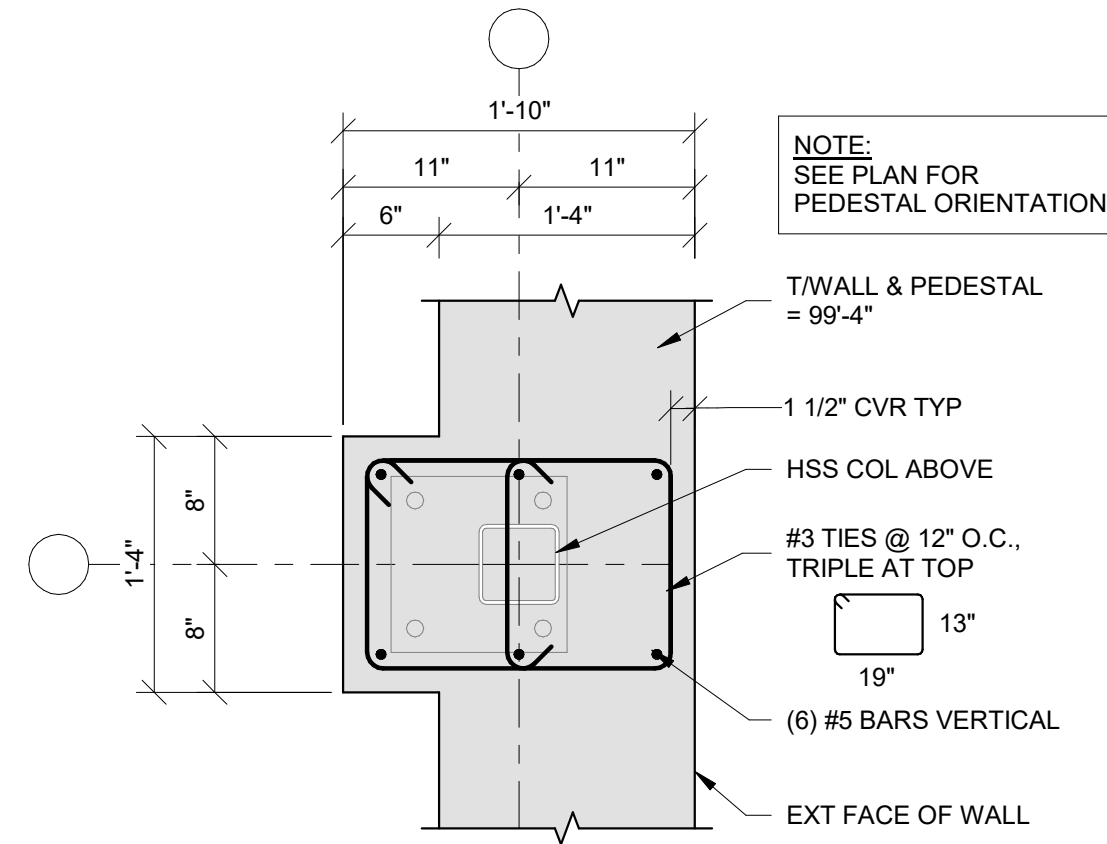
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Discovery Park, Lee's Summit 202300033
Roumanian - Lot 4, 2024



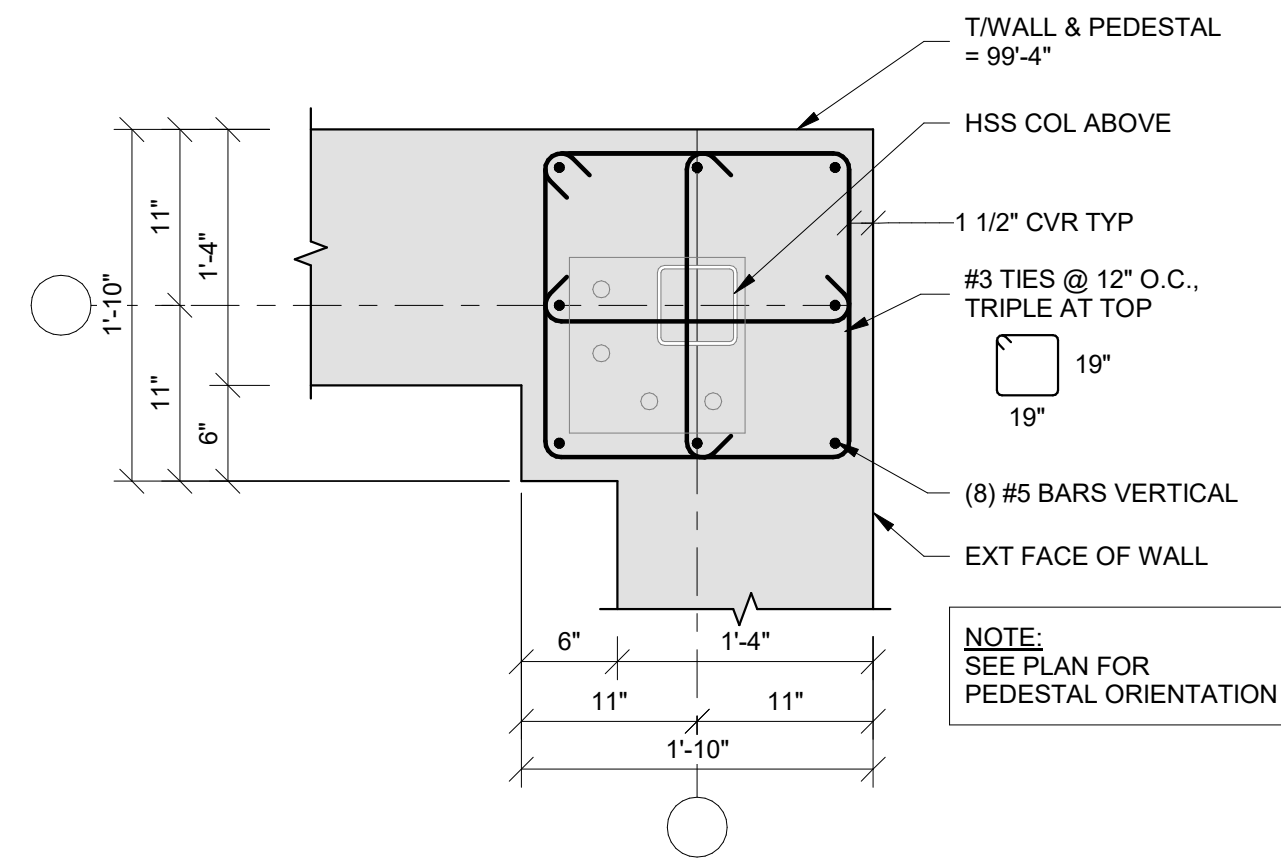
1 PEDESTAL P1
S503 1" = 1'-0"



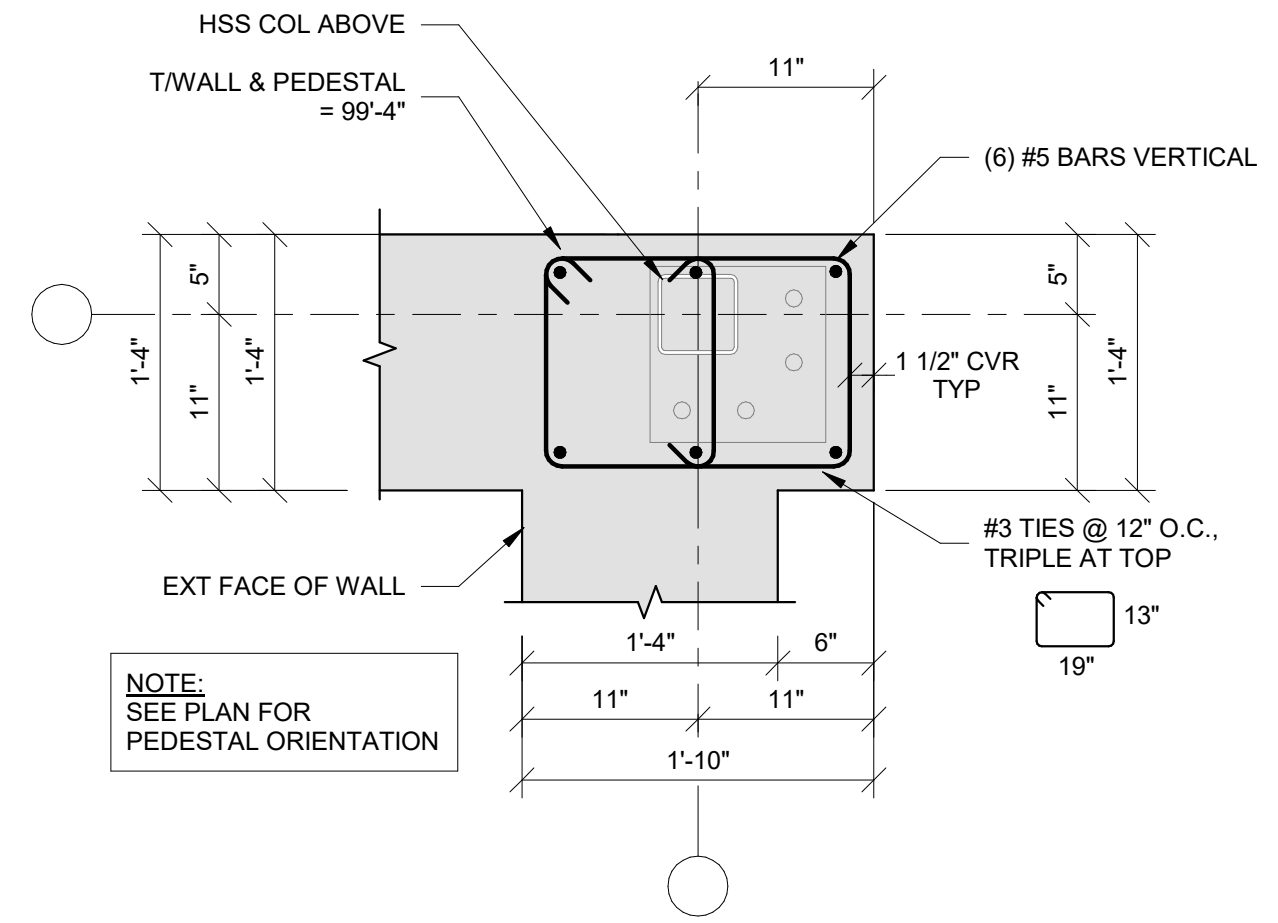
2 PEDESTAL P2
S503 1" = 1'-0"



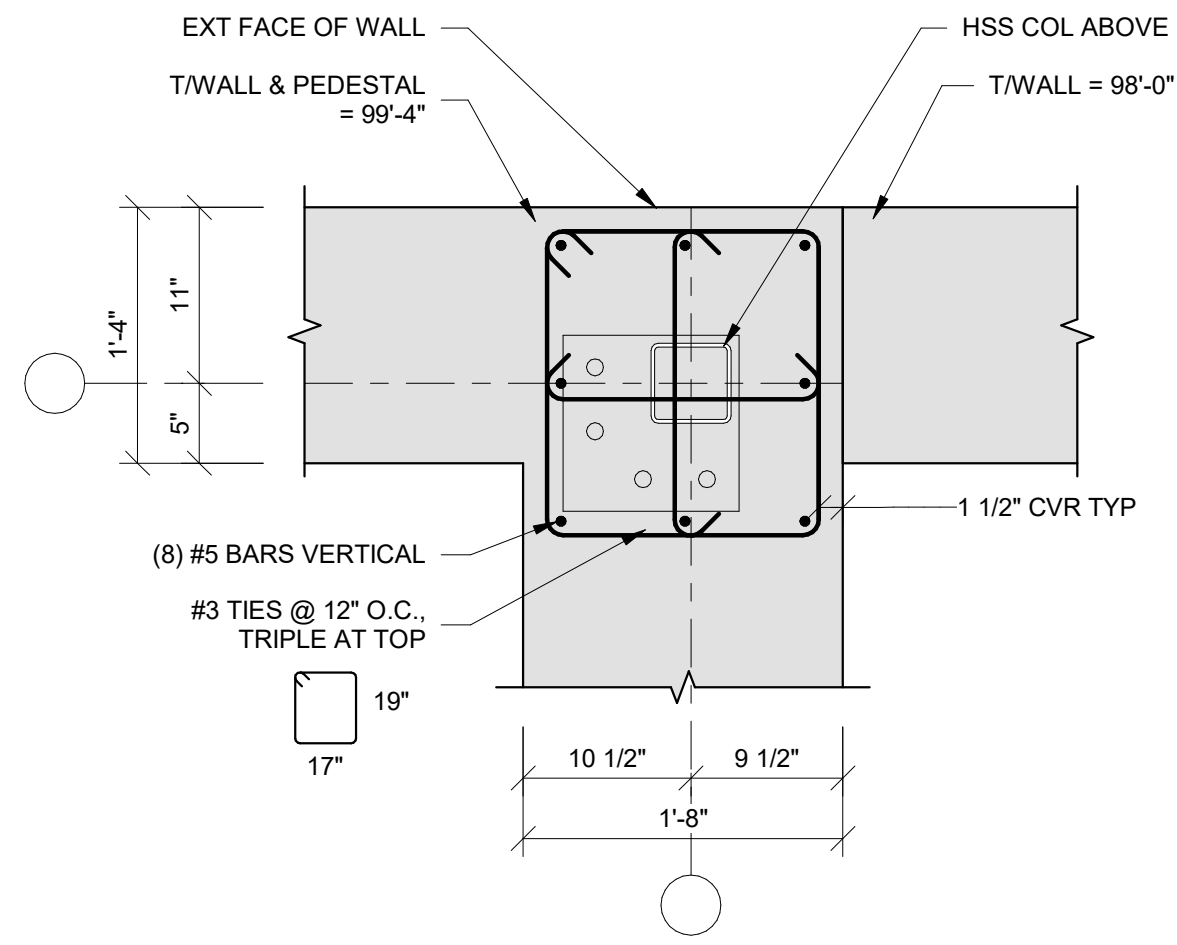
3 PEDESTAL P3
S503 1" = 1'-0"



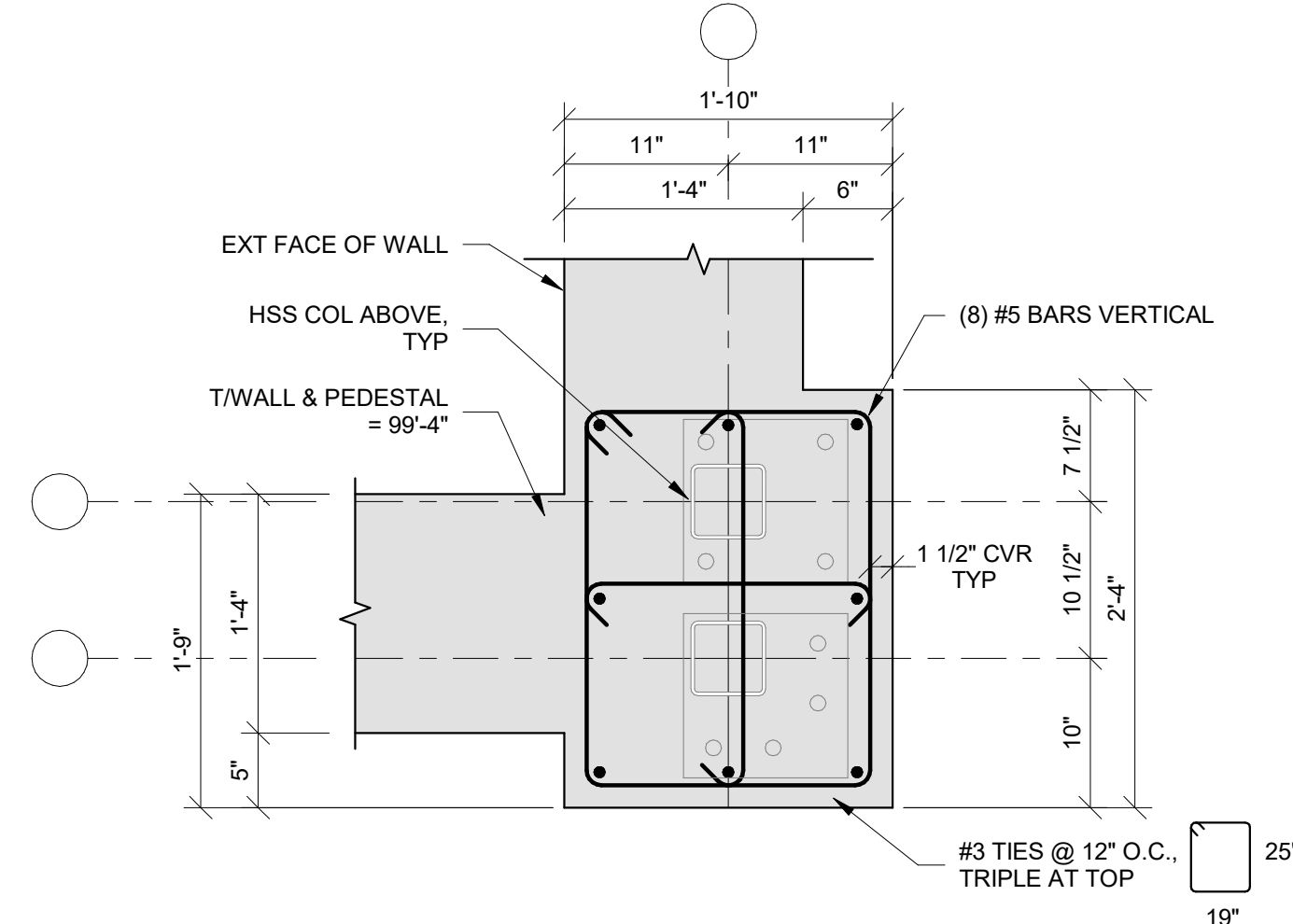
4 PEDESTAL P4
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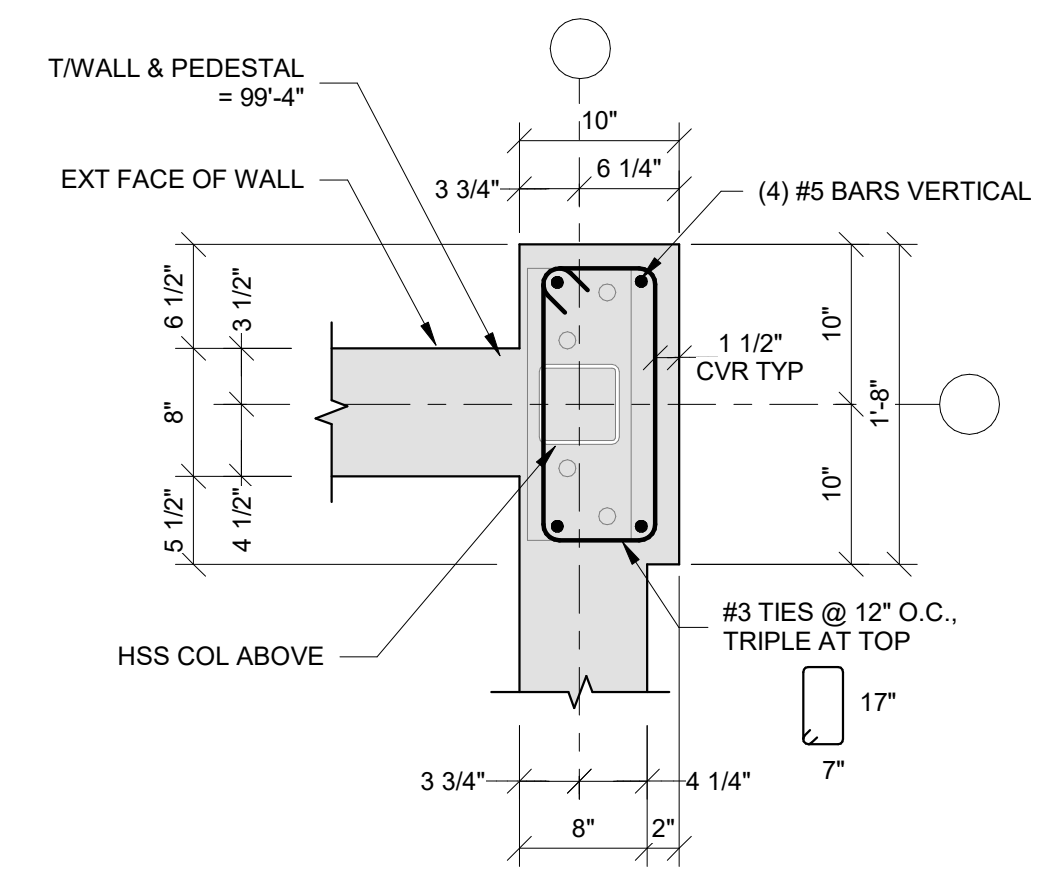
5 PEDESTAL P5
S503 1" = 1'-0"



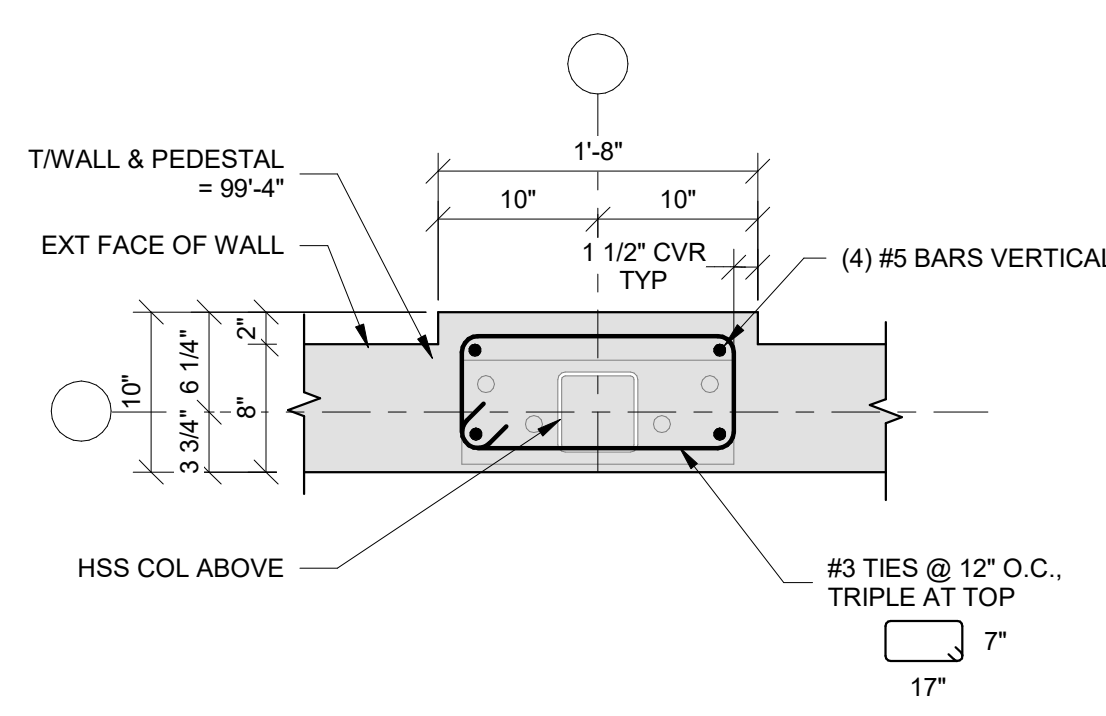
6 PEDESTAL P6
S503 1" = 1'-0"



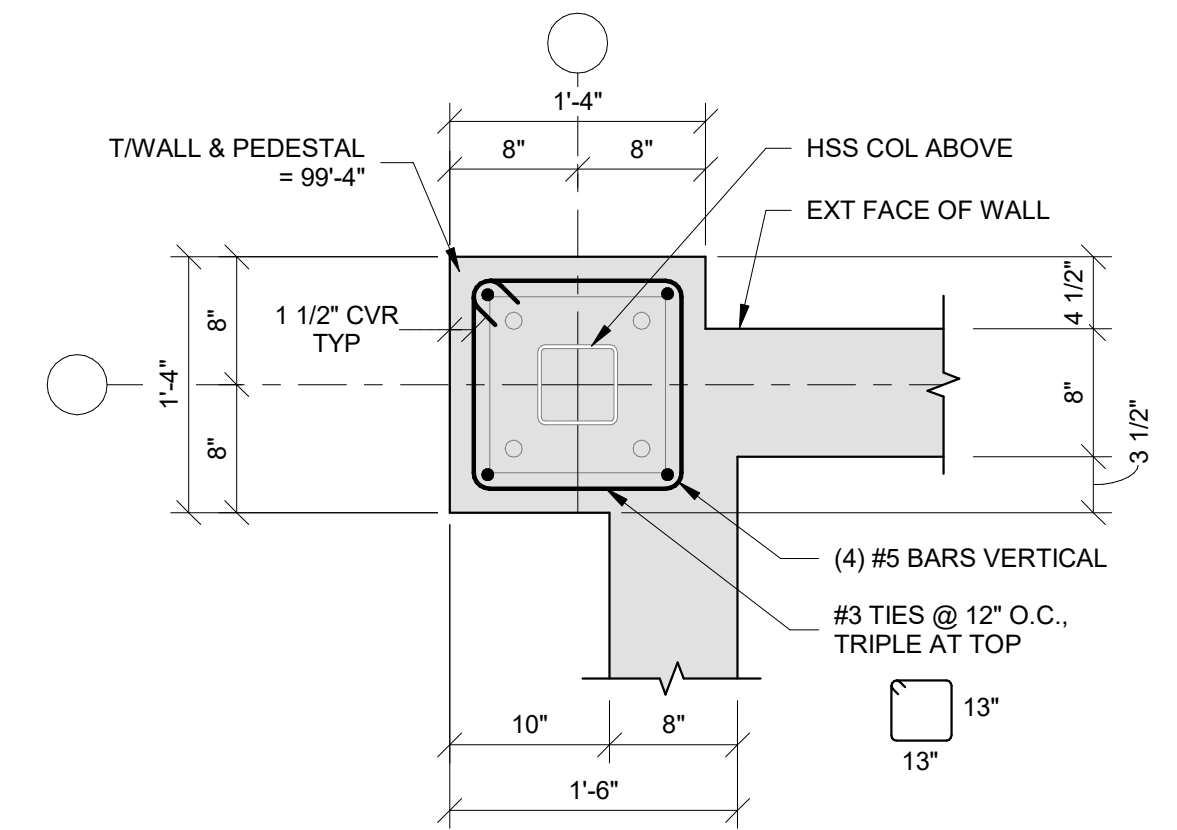
7 PEDESTAL P7
S503 1" = 1'-0"



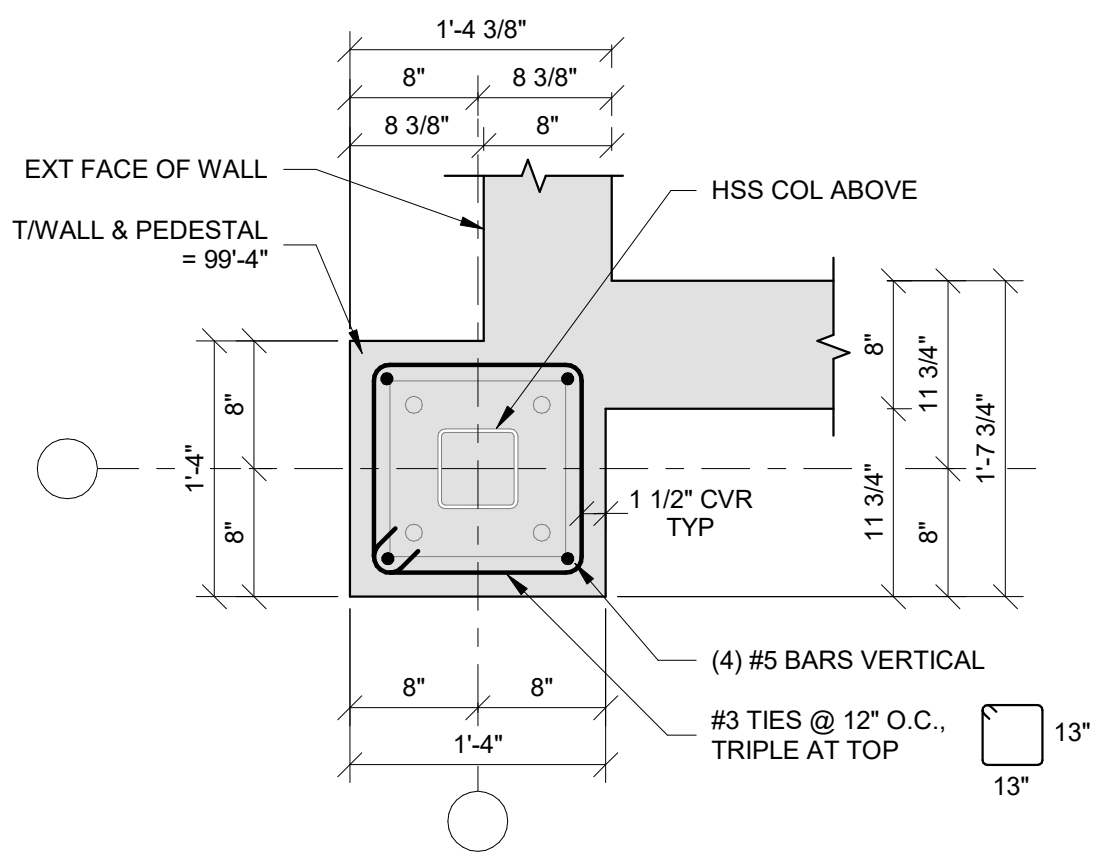
8 PEDESTAL P8
S503 1" = 1'-0"



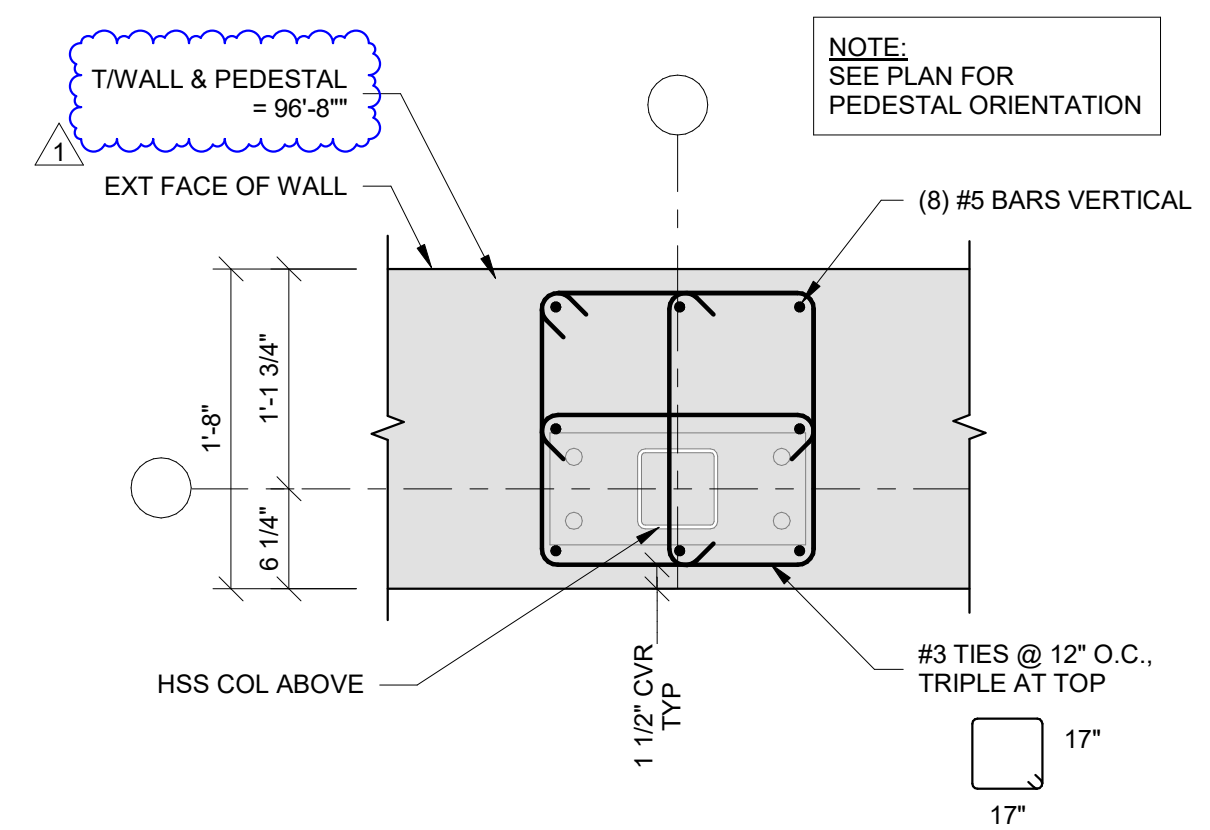
9 PEDESTAL P9
S503 1" = 1'-0"



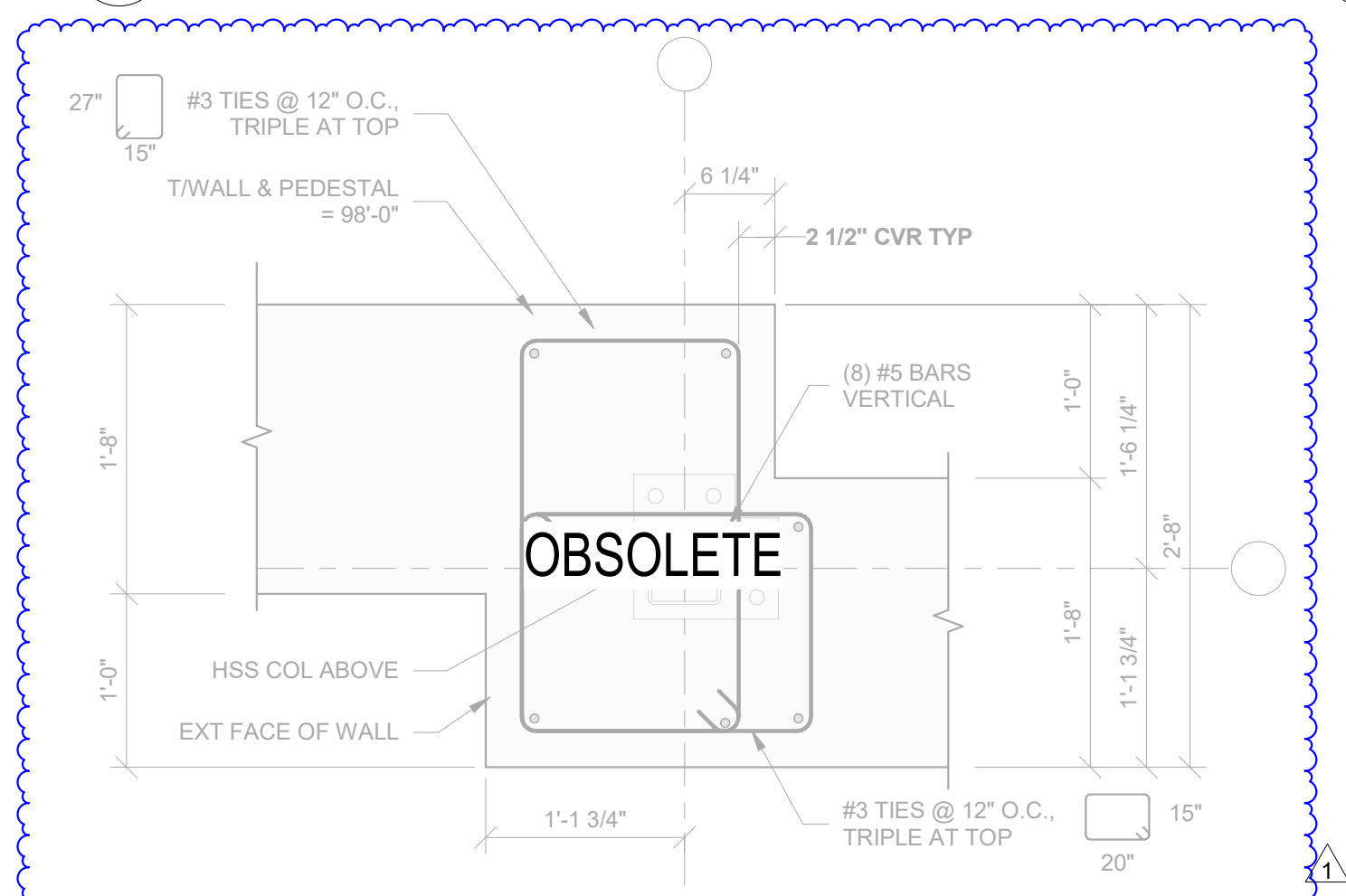
10 PEDESTAL P10
S503 1" = 1'-0"



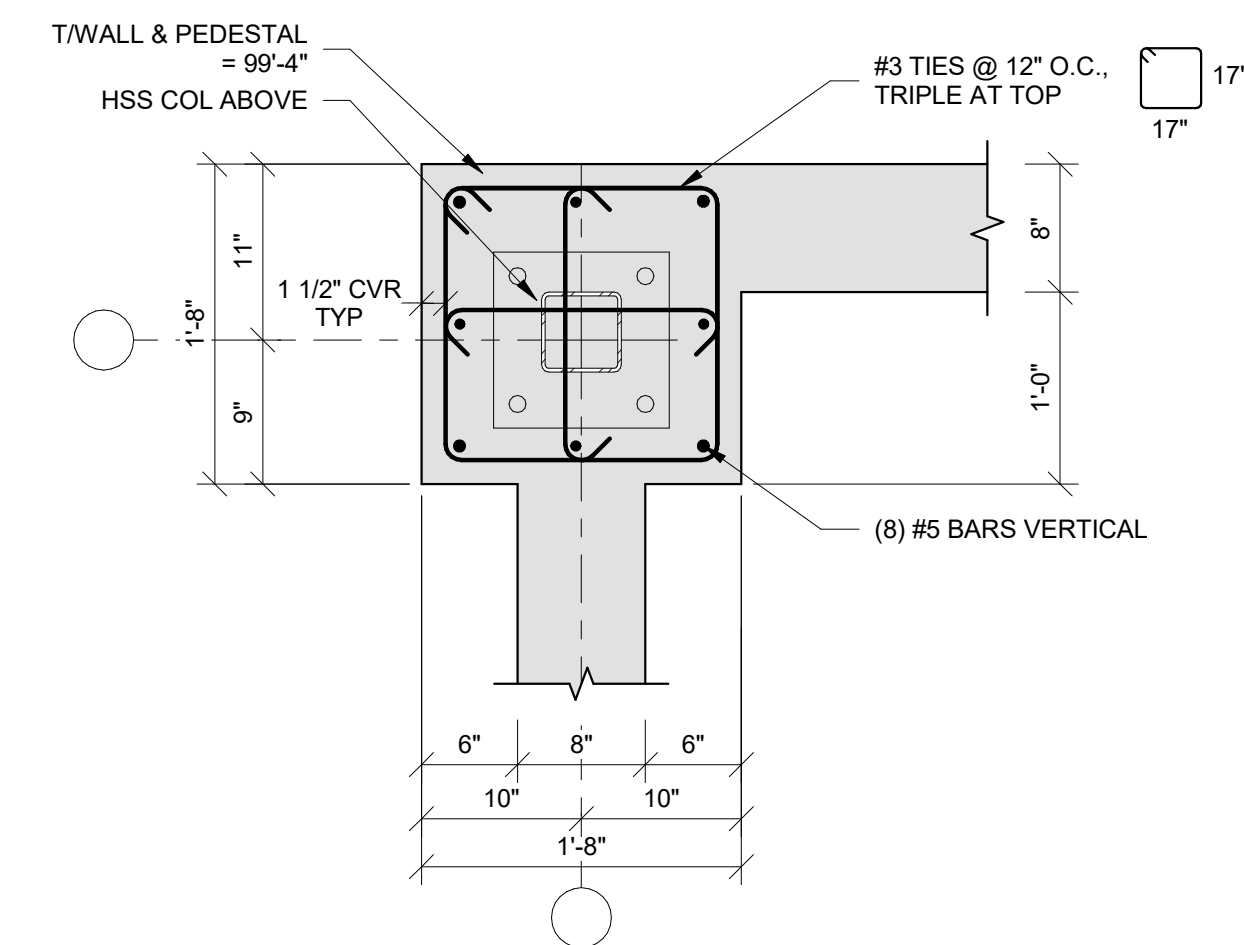
11 PEDESTAL P11
S503 1" = 1'-0"



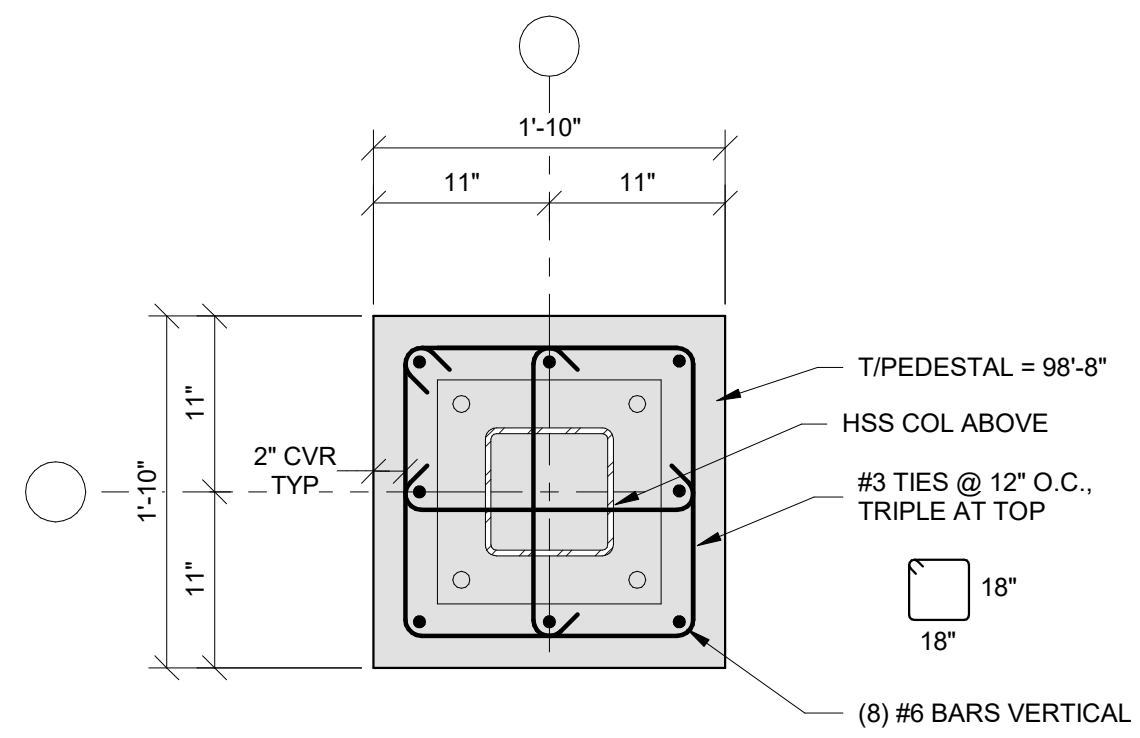
12 PEDESTAL P12
S503 1" = 1'-0"



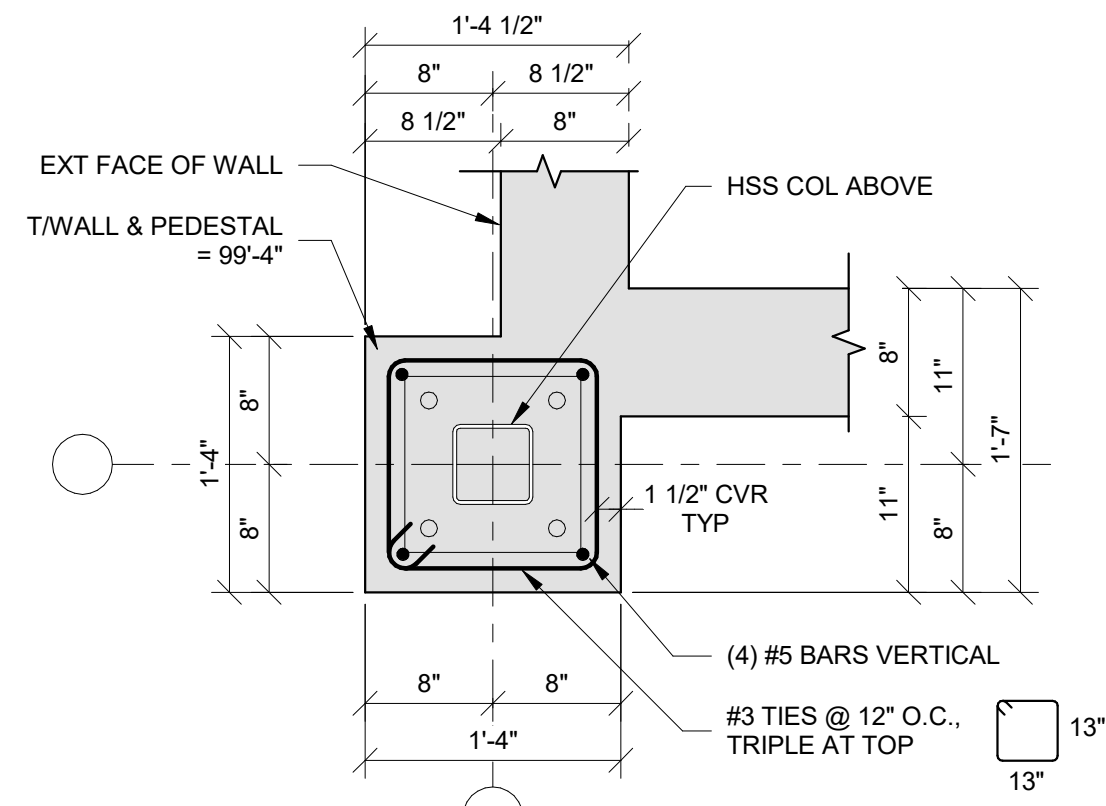
13 PEDESTAL P13
S503 1" = 1'-0"



14 PEDESTAL P14
S503 1" = 1'-0"



15 PEDESTAL P15
S503 1" = 1'-0"



16 PEDESTAL P16
S503 1" = 1'-0"

NEW DETAILS (ENTIRE SHEET)

PRINTS ISSUED
01/25/2024 - CITY SUBMITTAL

REVISIONS:
1 10/21/2024 Addendum #1
2 11/11/2024 Addendum #2
3 12/26/2024 Addendum #3

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MISSOURI CERTIFICATE OF AUTHORITY
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EXPIRES: DECEMBER 31, 2024

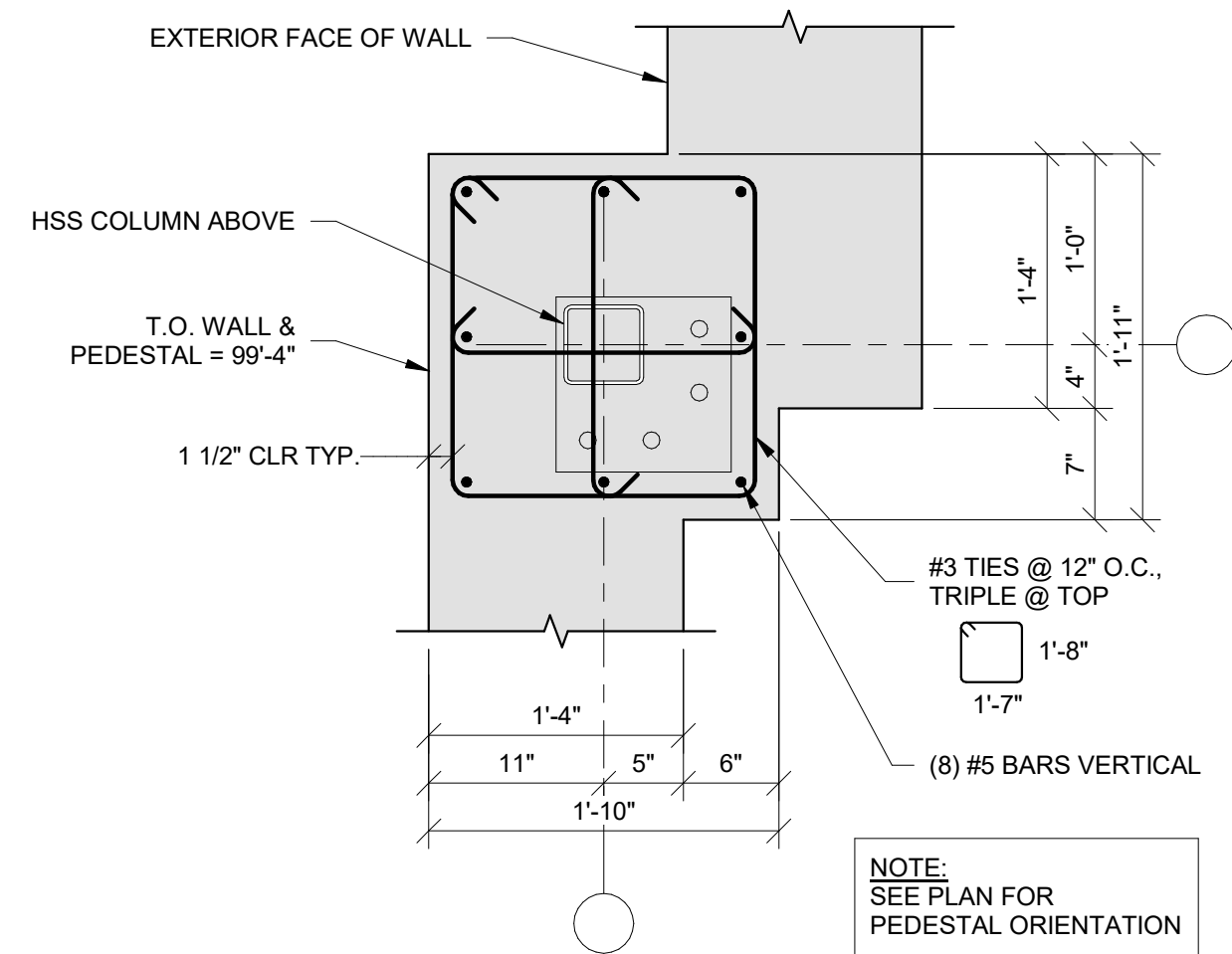
THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

SHEET TITLE
PEDESTAL DETAILS

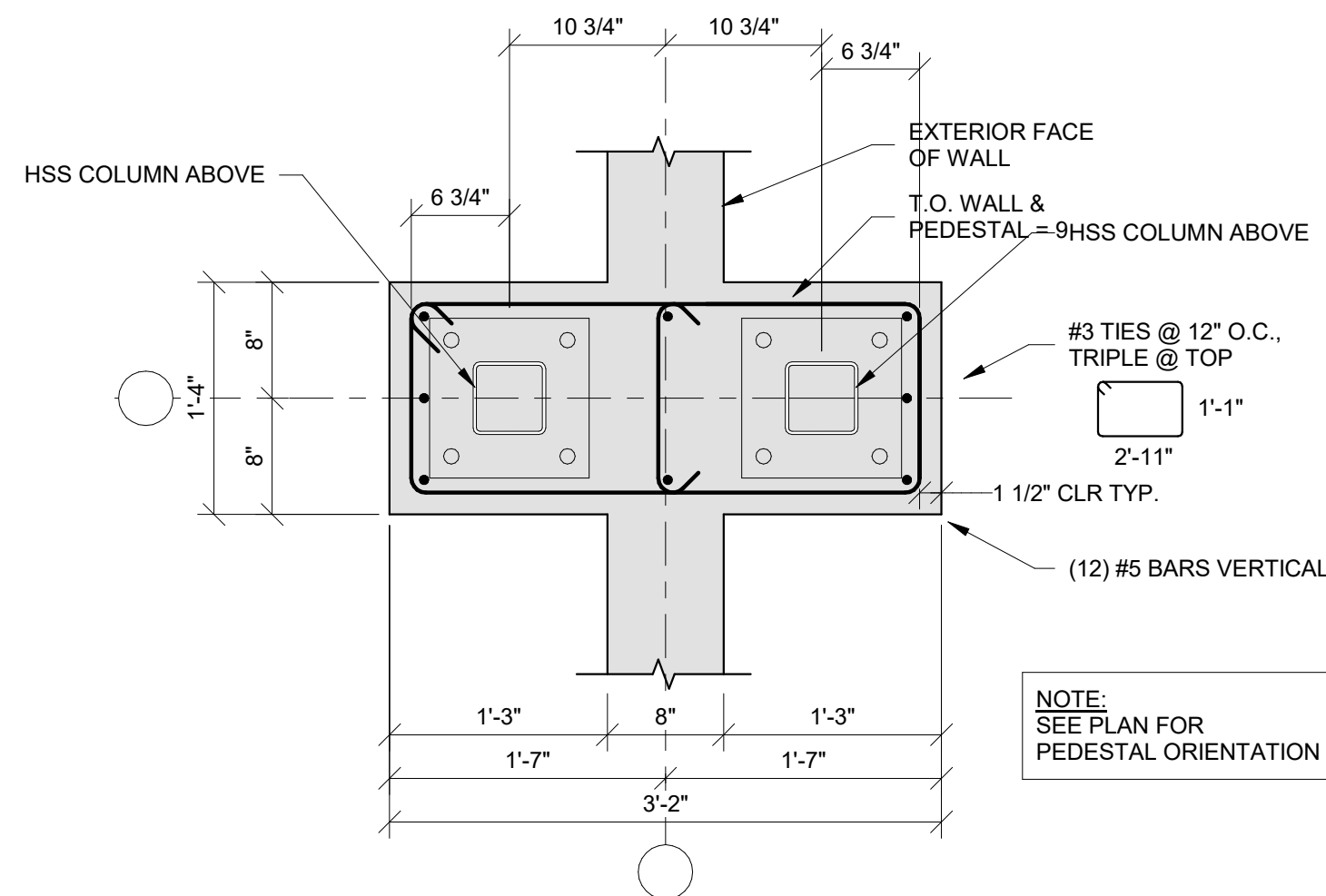
PROJECT NUMBER: 2023000333

SHEET NUMBER:

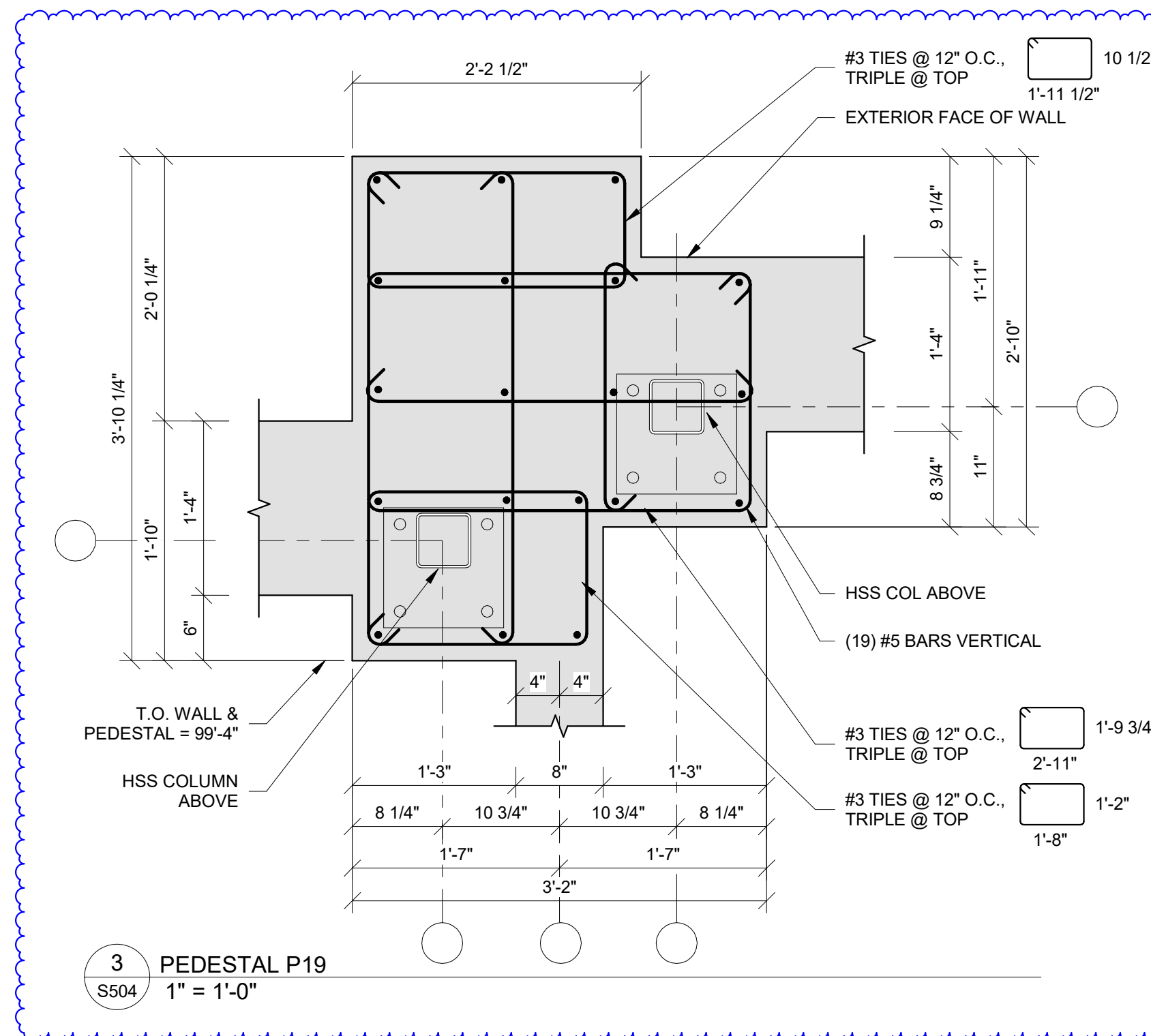
S503



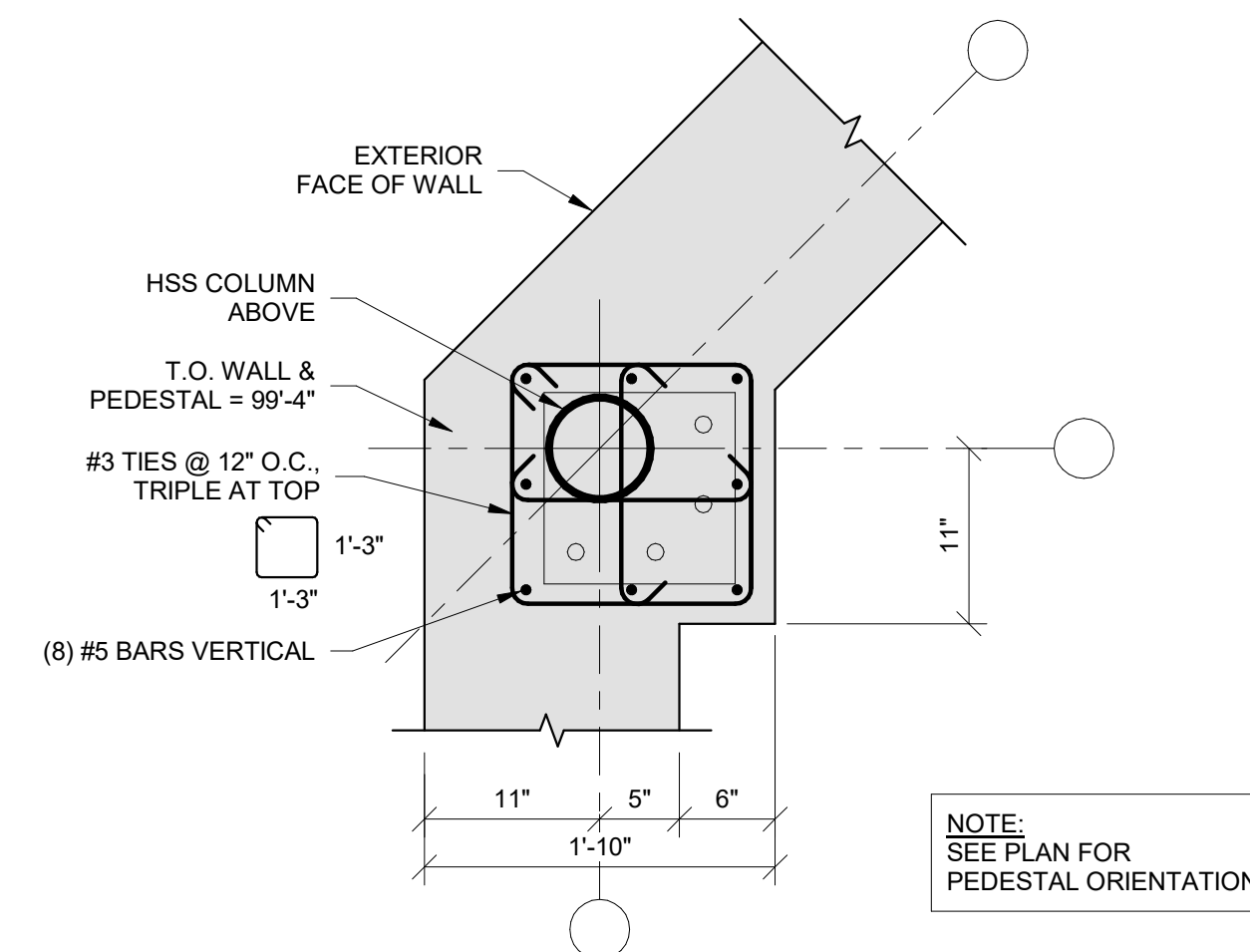
1 PEDESTAL P17
1" = 1'-0"



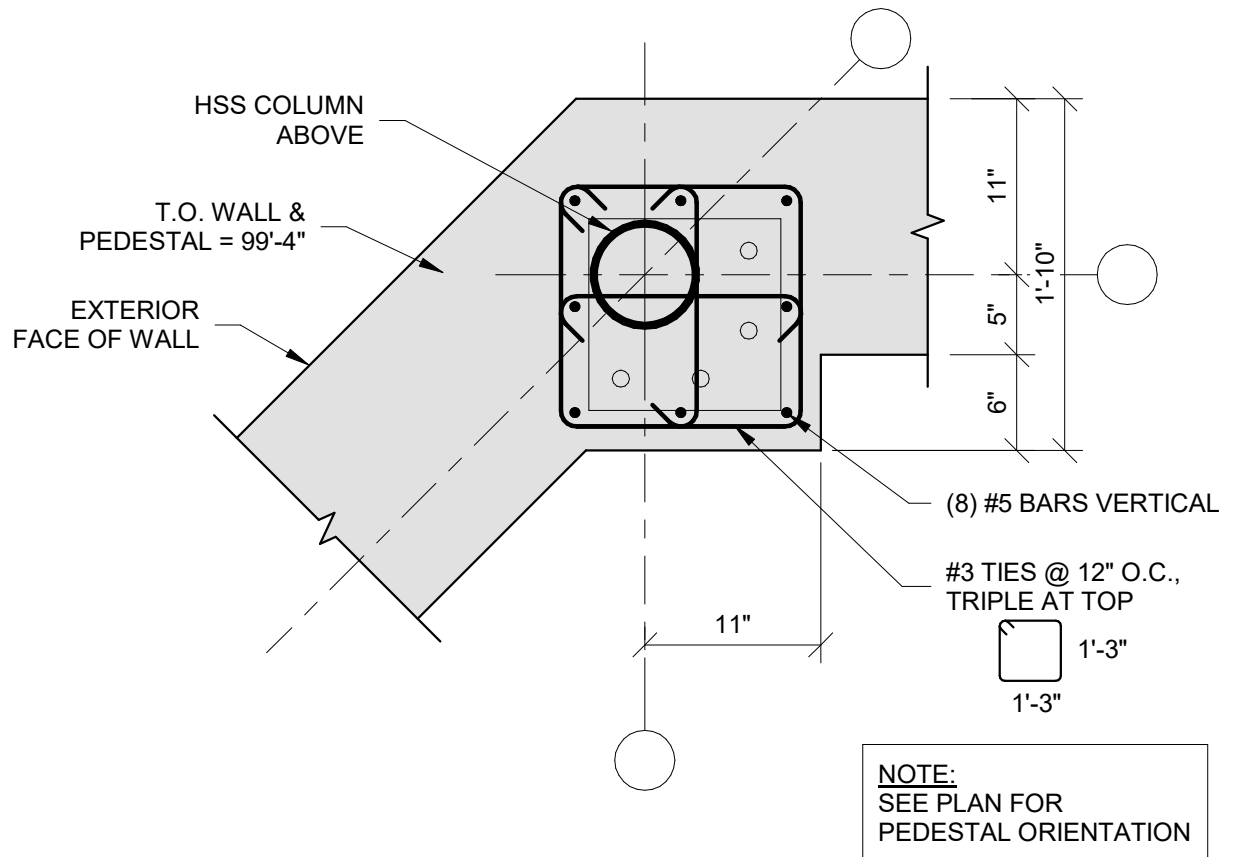
2 PEDESTAL P18
1" = 1'-0"



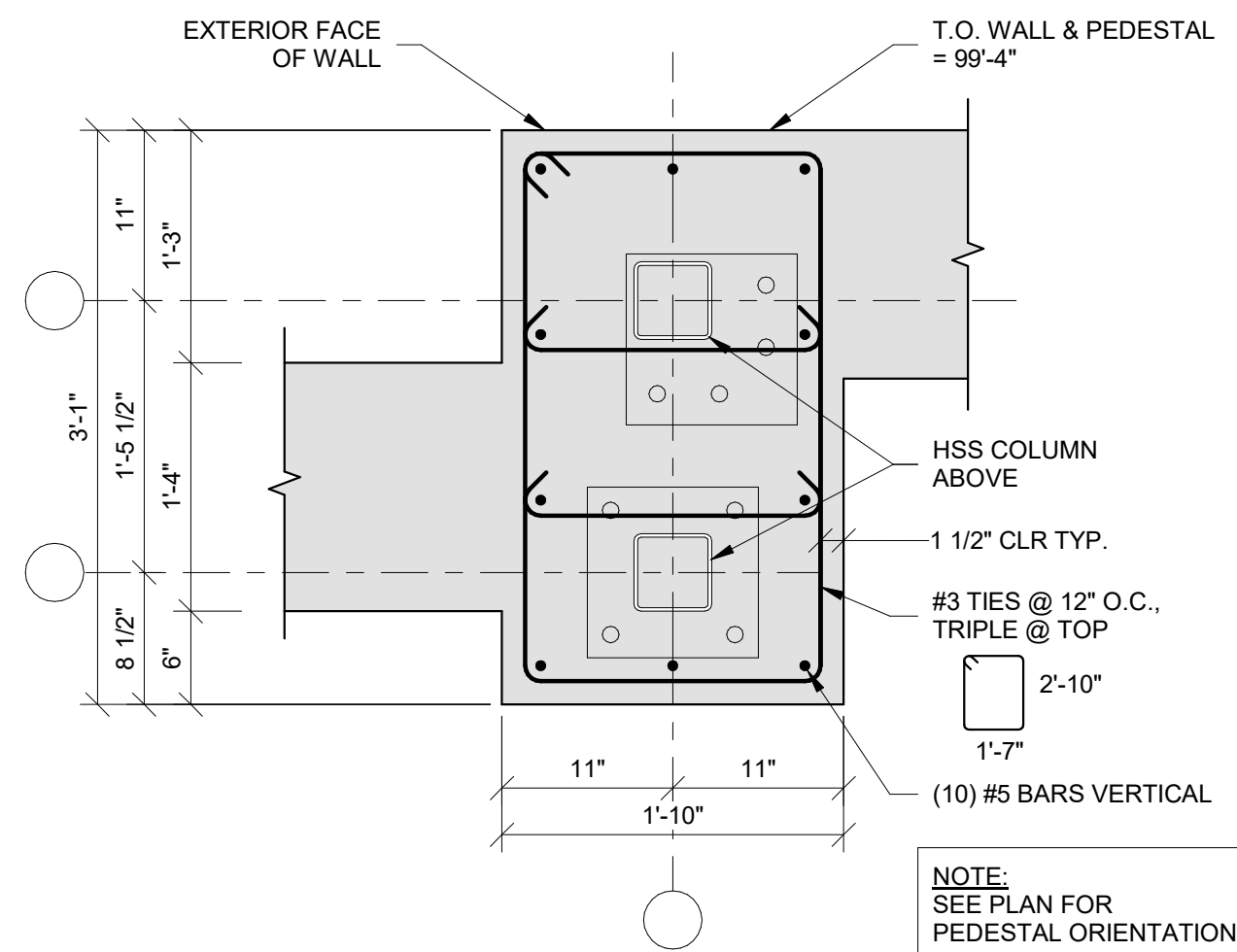
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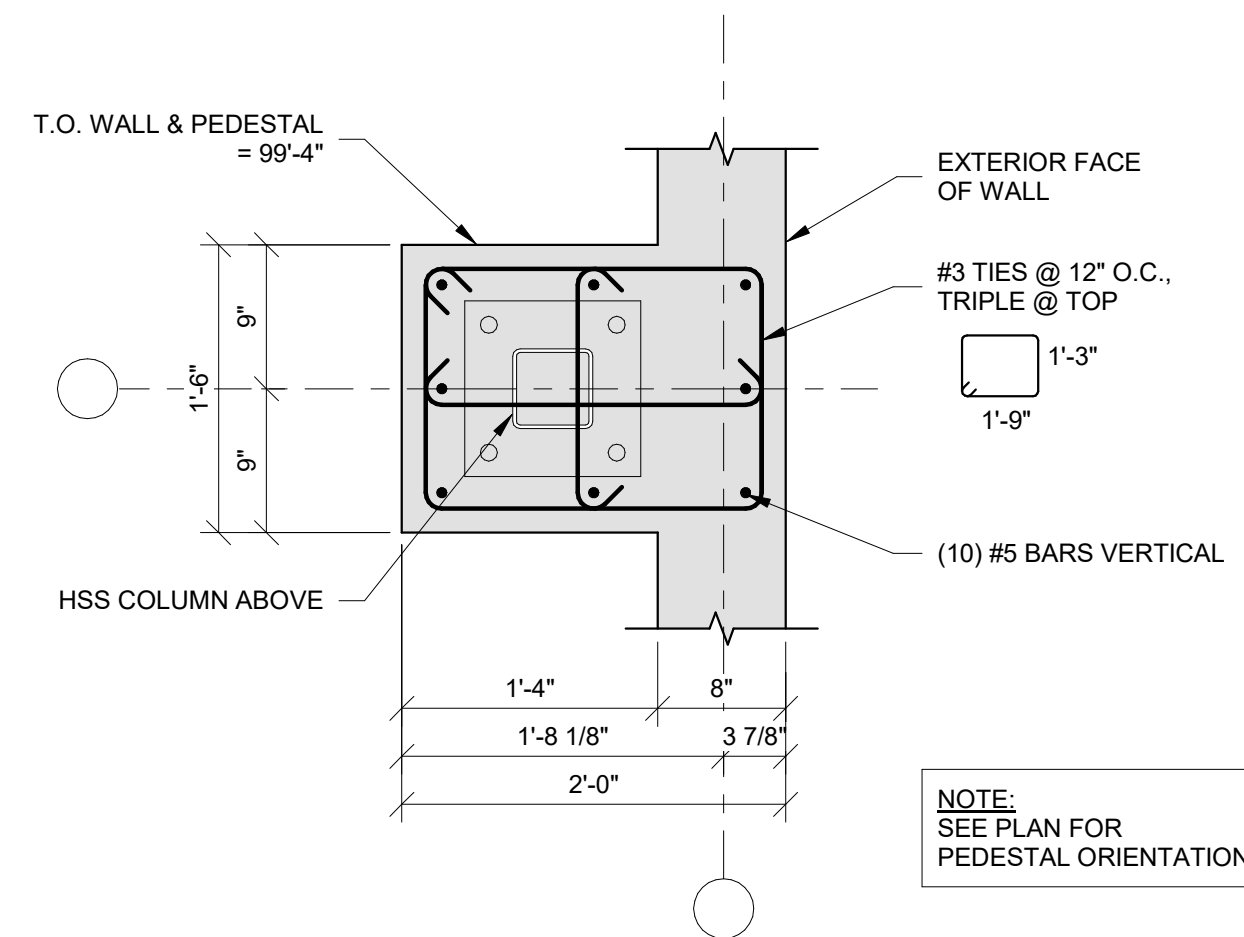
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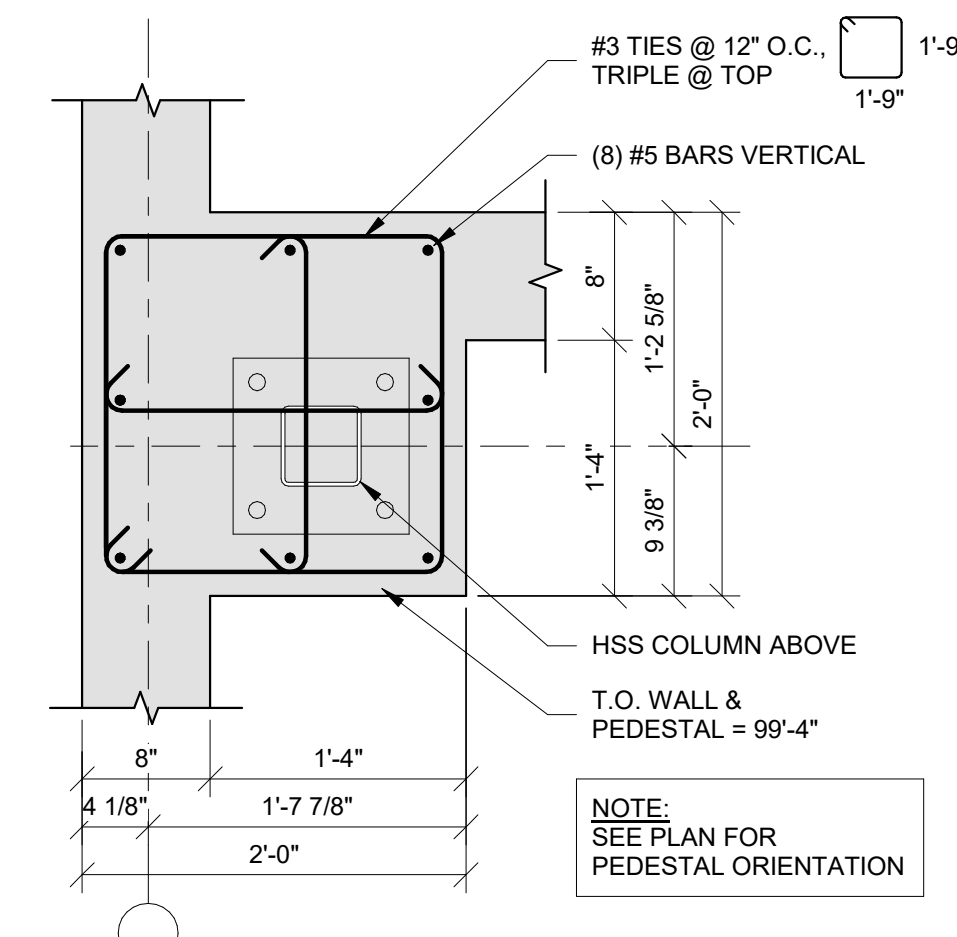
5 PEDESTAL P21
1" = 1'-0"



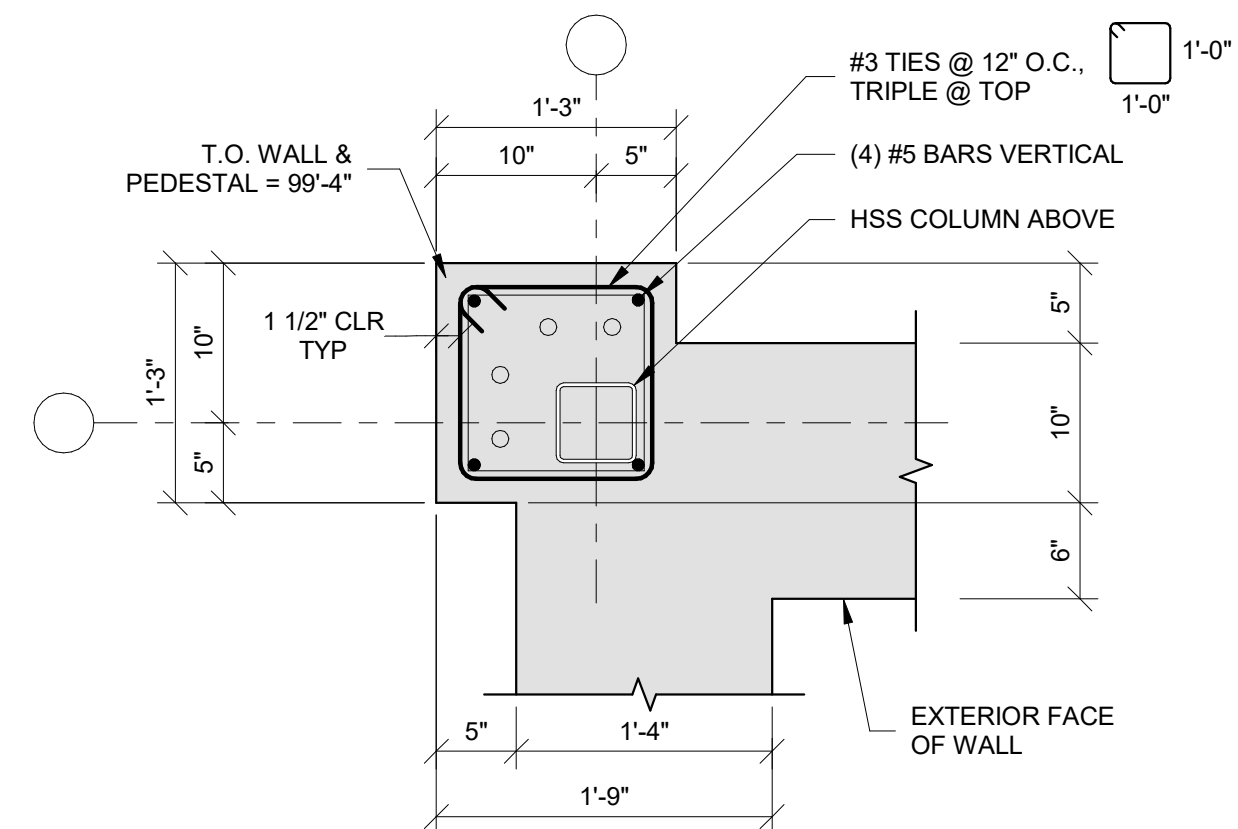
6 PEDESTAL P22
1" = 1'-0"



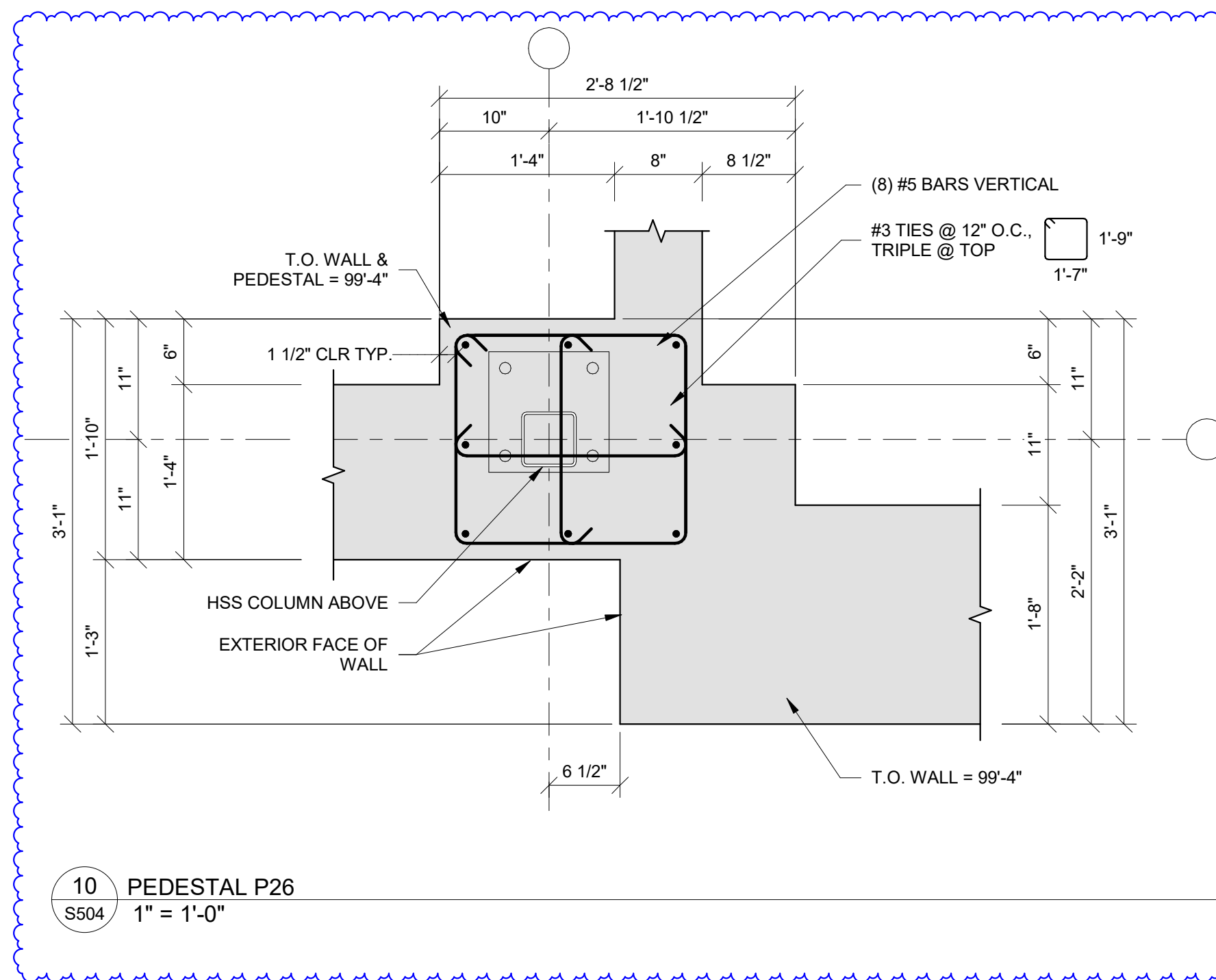
7 PEDESTAL P23
1" = 1'-0"



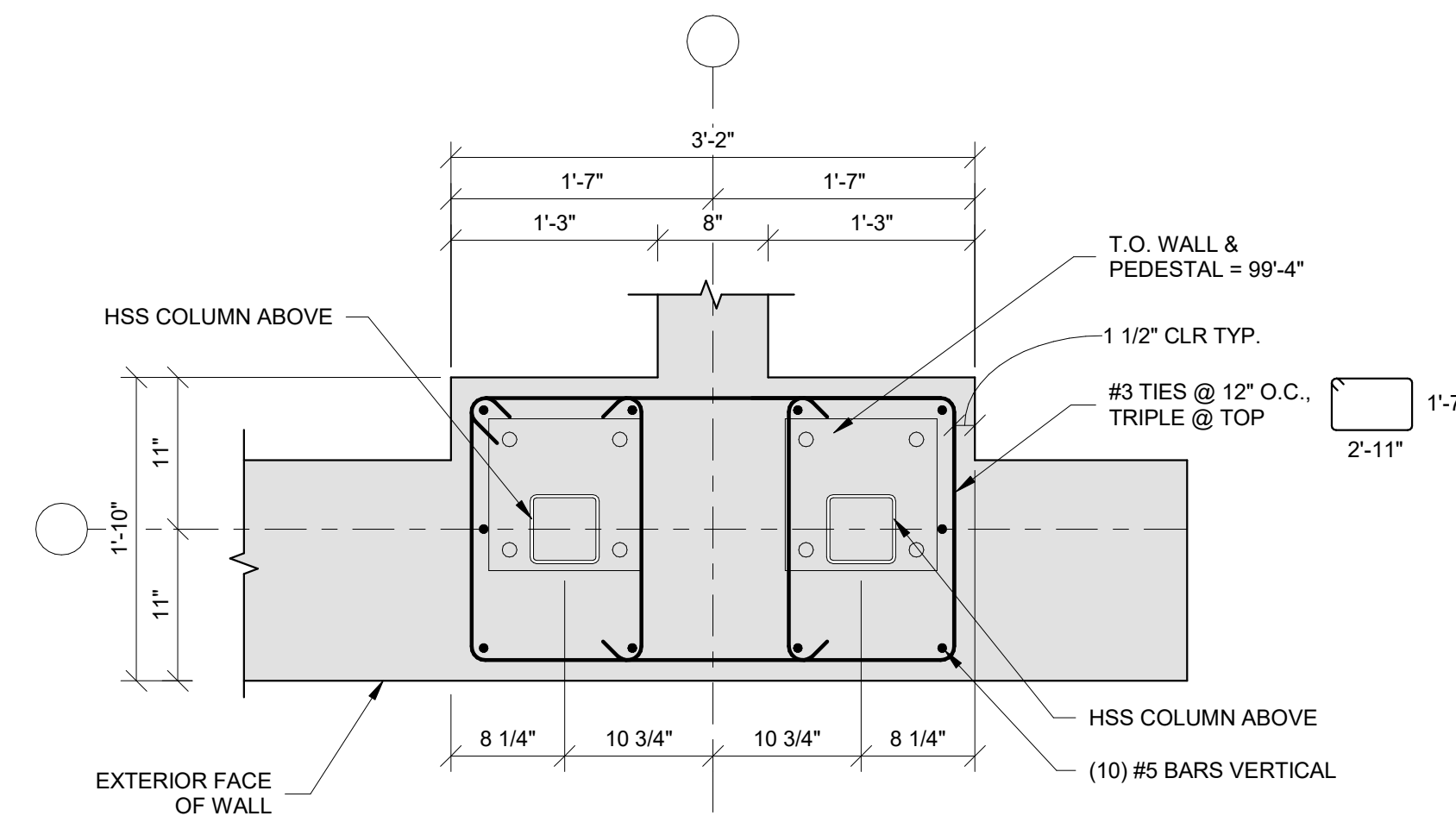
8 PEDESTAL P24
1" = 1'-0"



9 PEDESTAL P25
1" = 1'-0"



10 PEDESTAL P26
1" = 1'-0"



11 PEDESTAL P27
1" = 1'-0"

• TYPICAL MASONRY DETAILS
MOVED TO SHEET S511
• SHEET REPURPOSED FOR
NEW PEDESTAL DETAILS


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NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

THE VILLAGE AT DISCOVERY -
LOT 4
NW COLBURN & NE DOUGLAS ST.,
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S505





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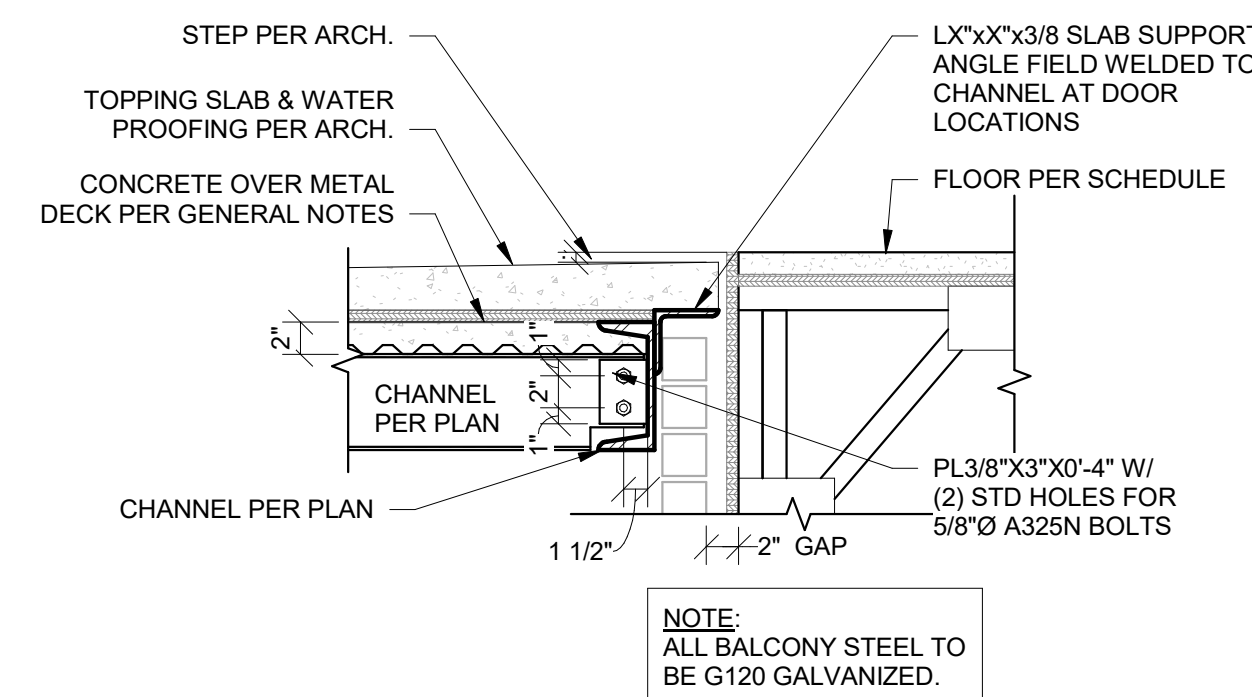
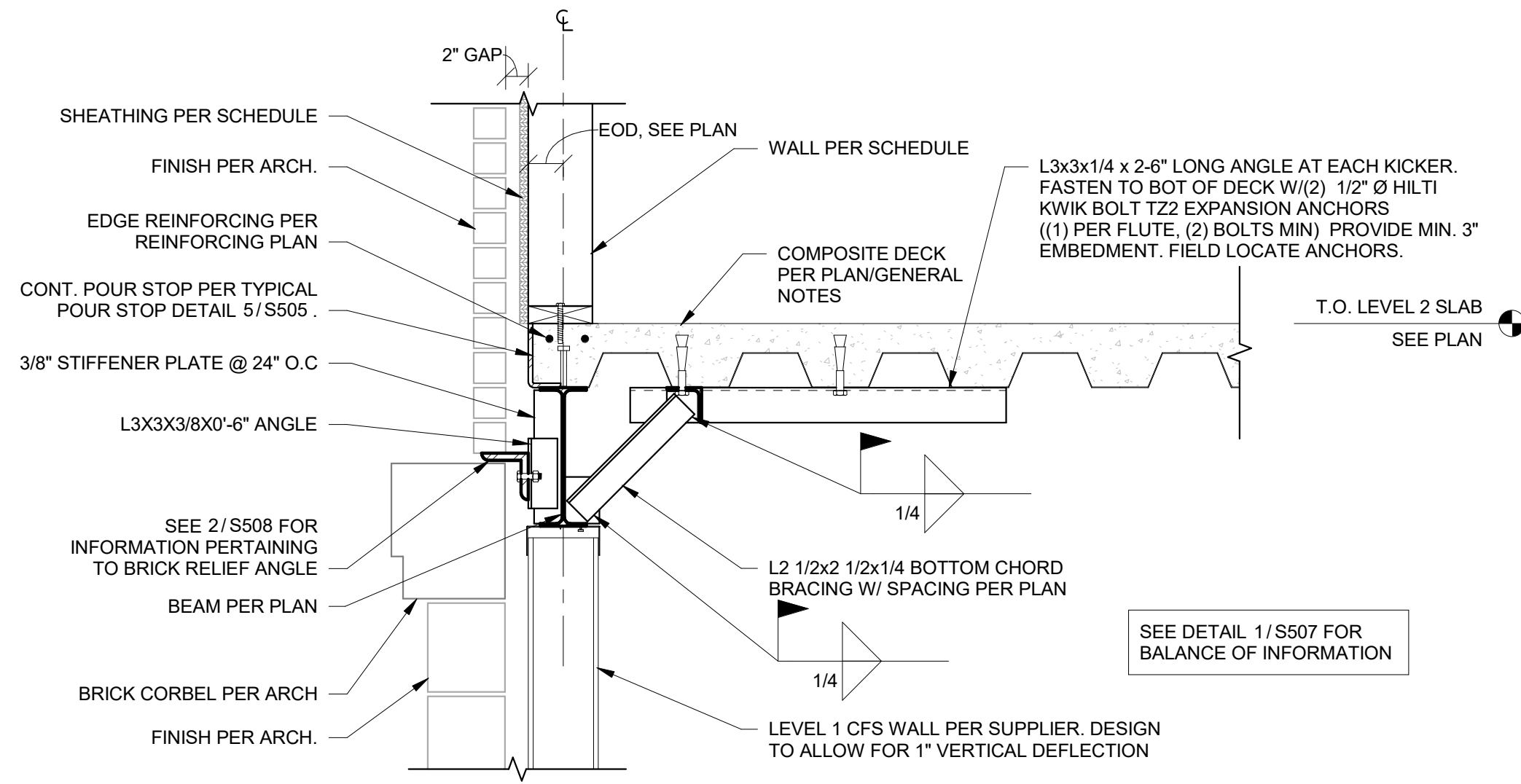
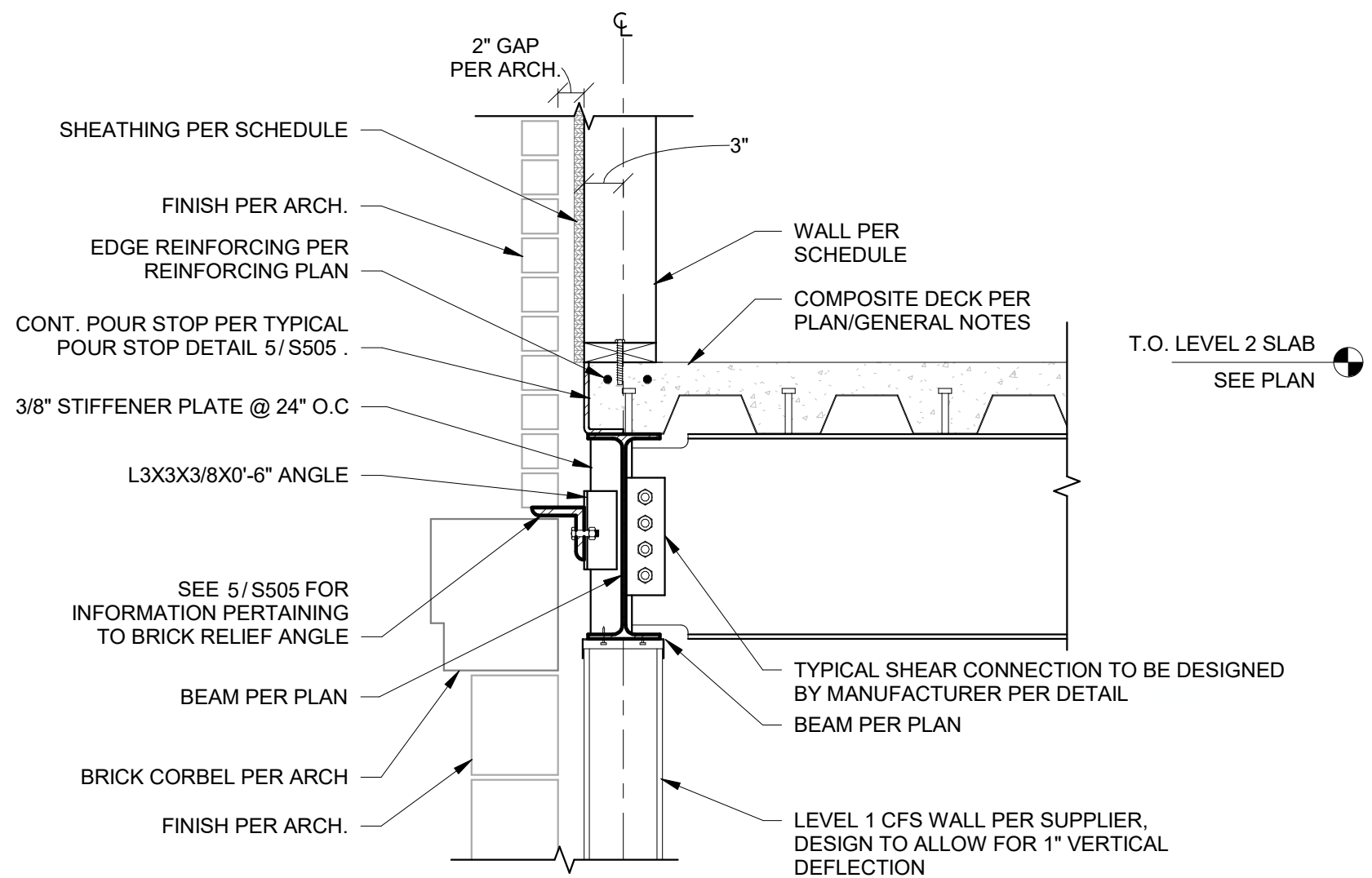
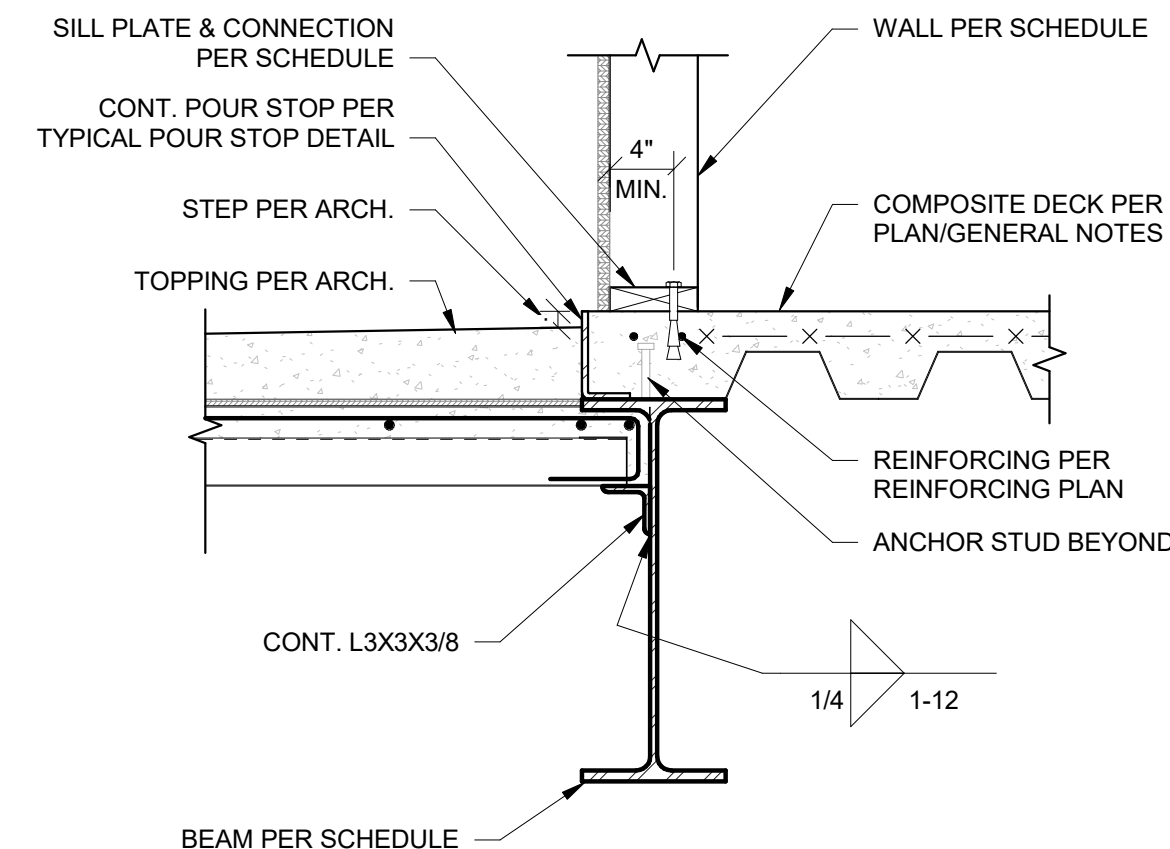
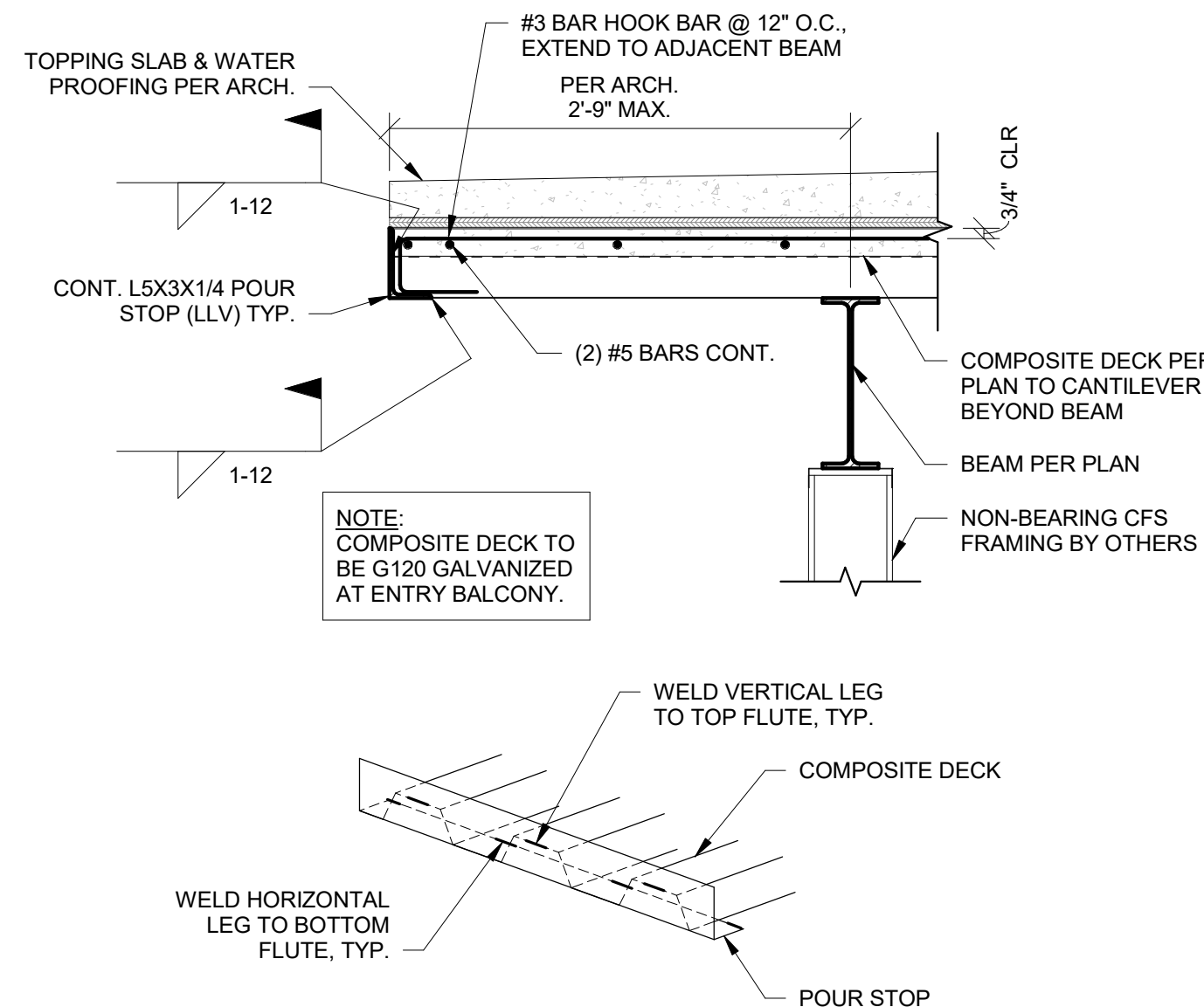
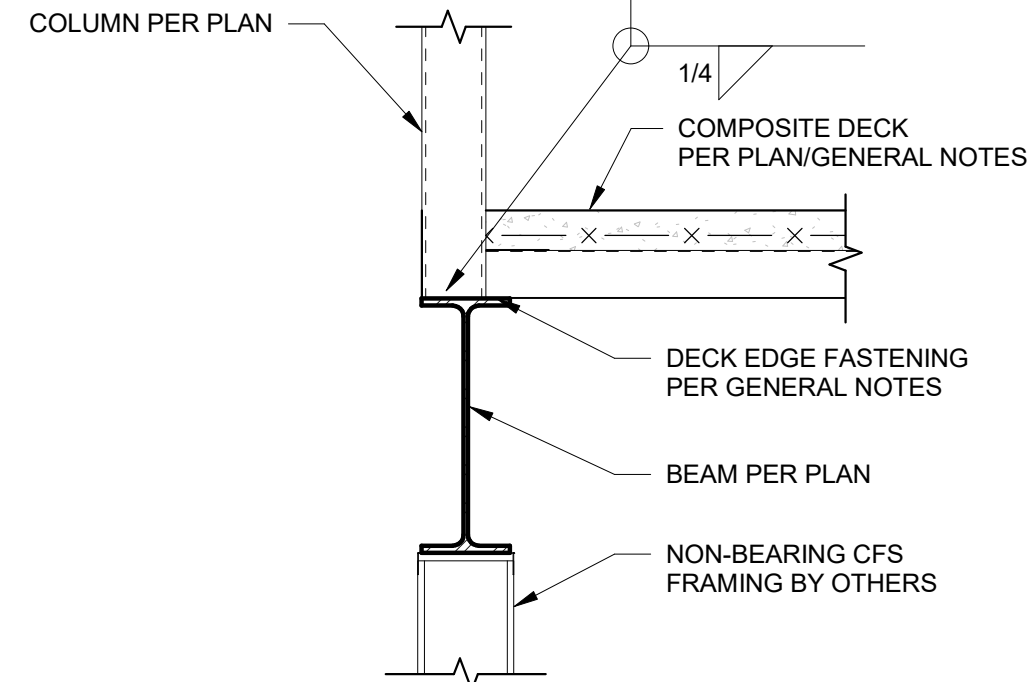
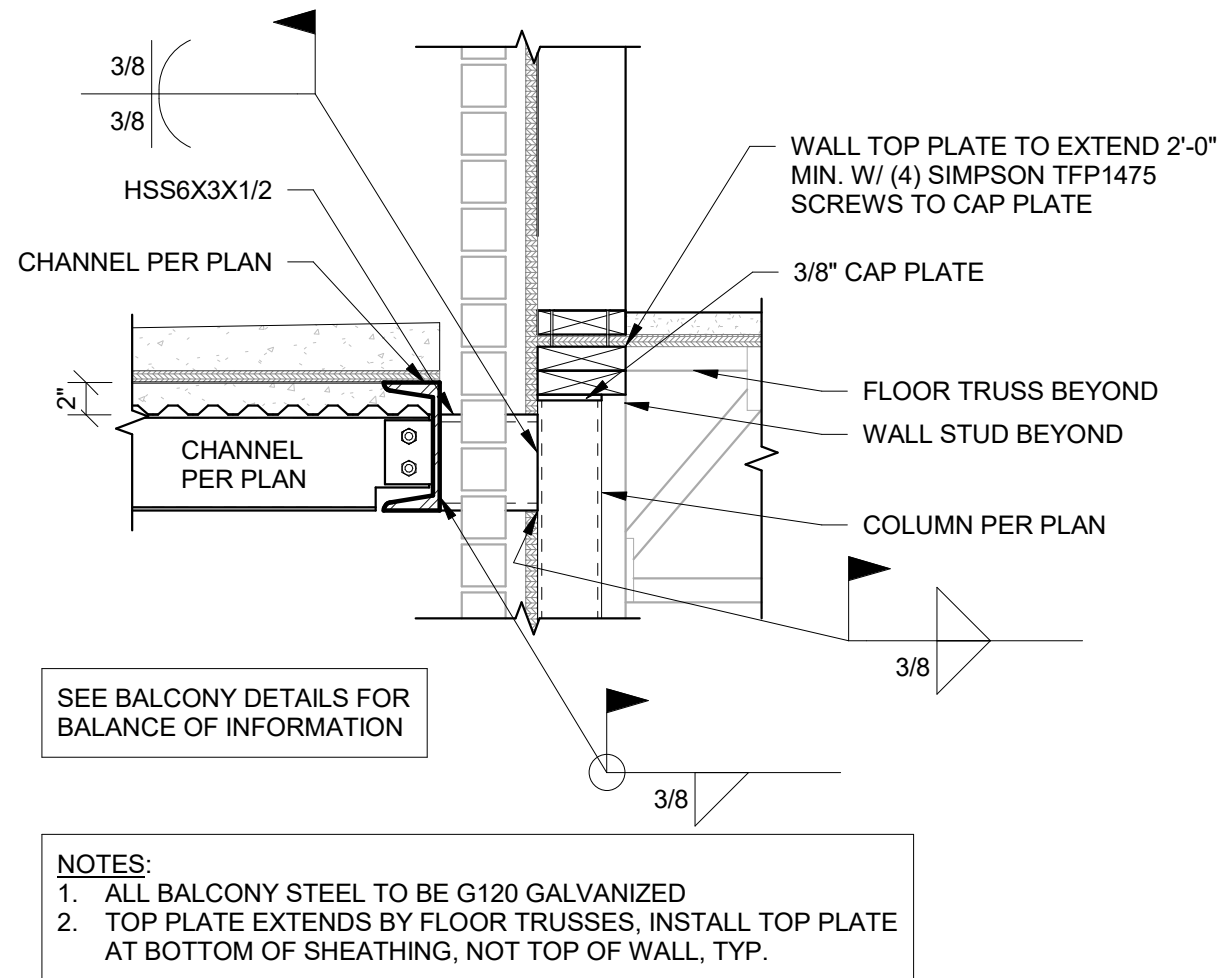
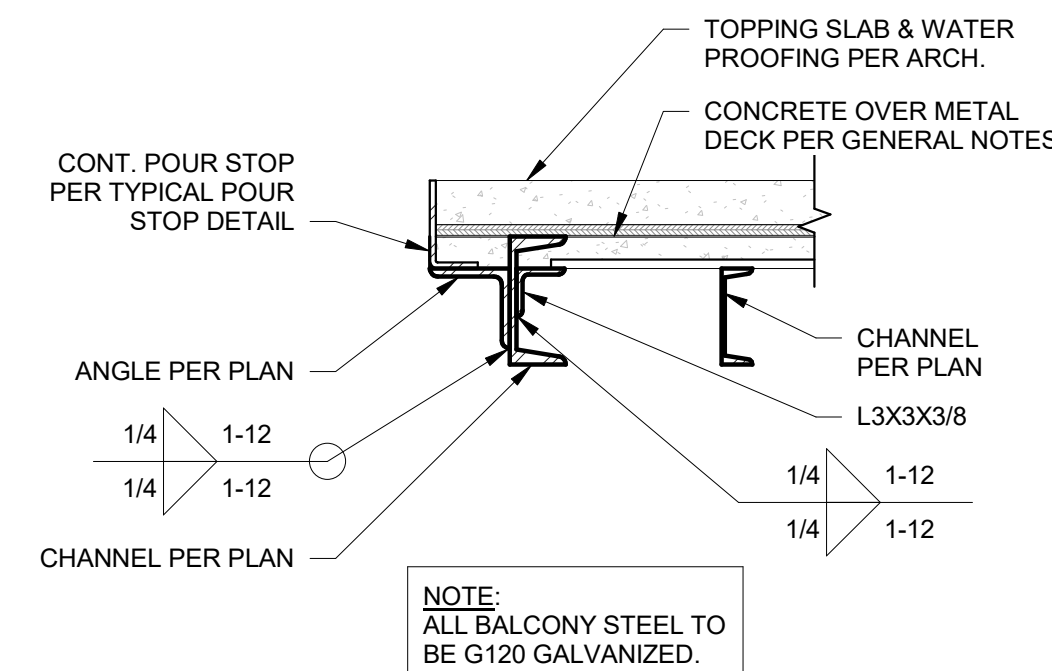
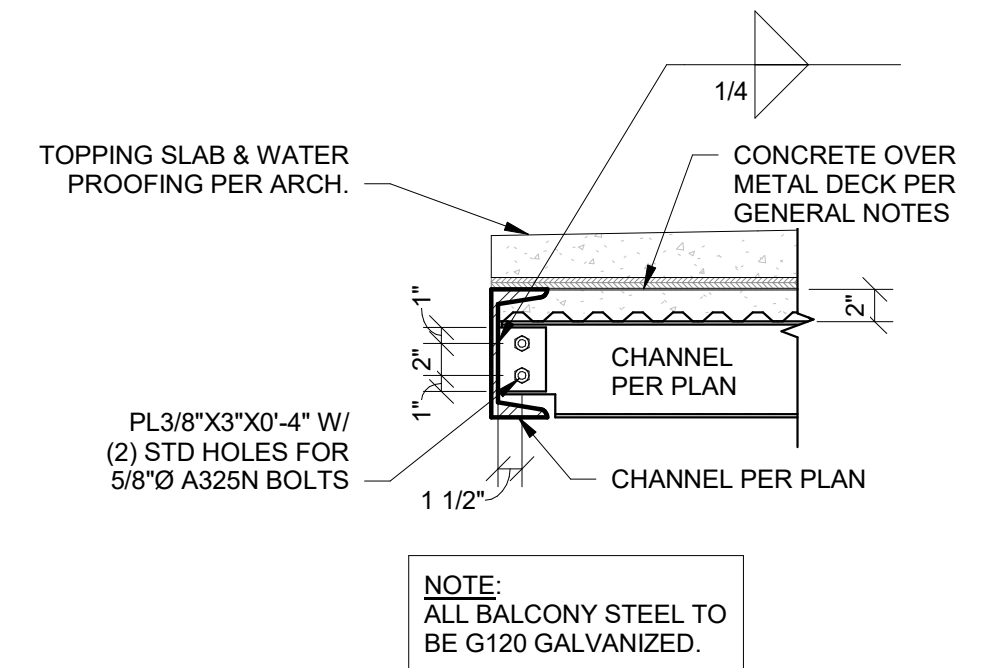
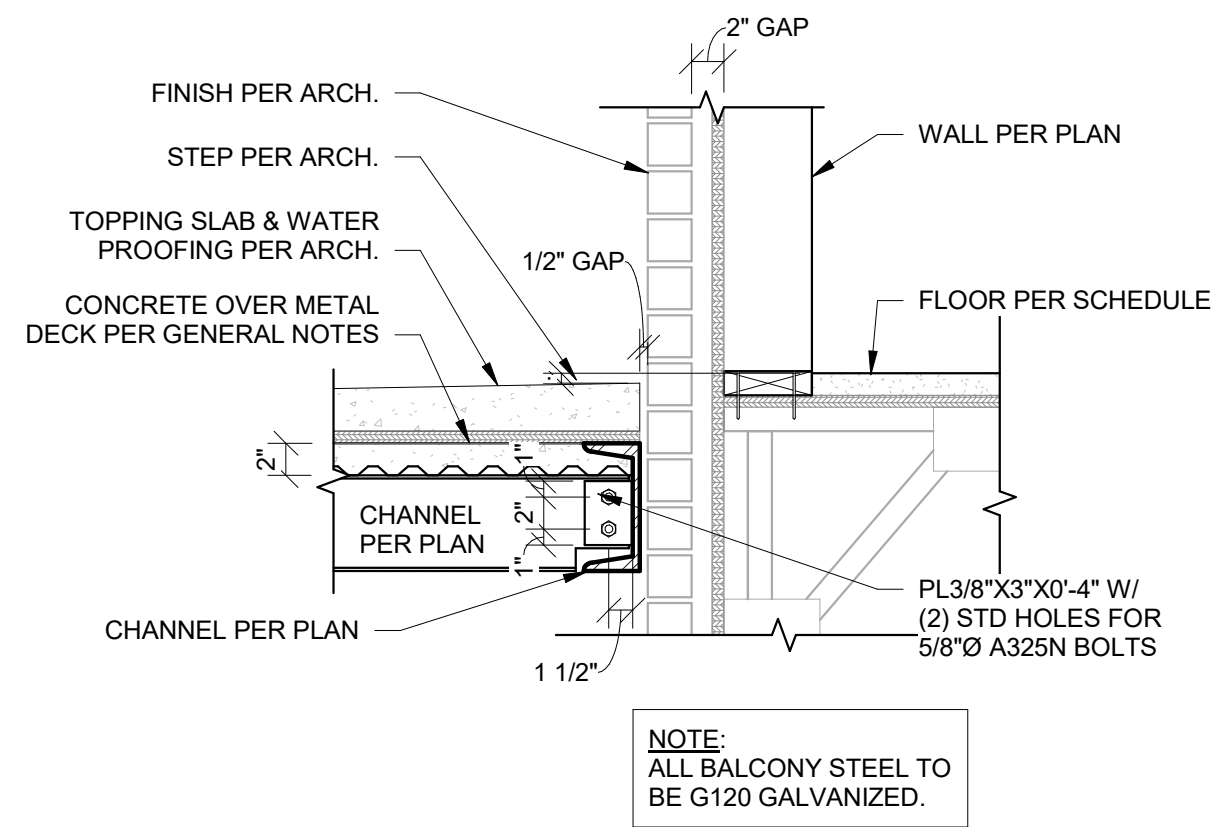
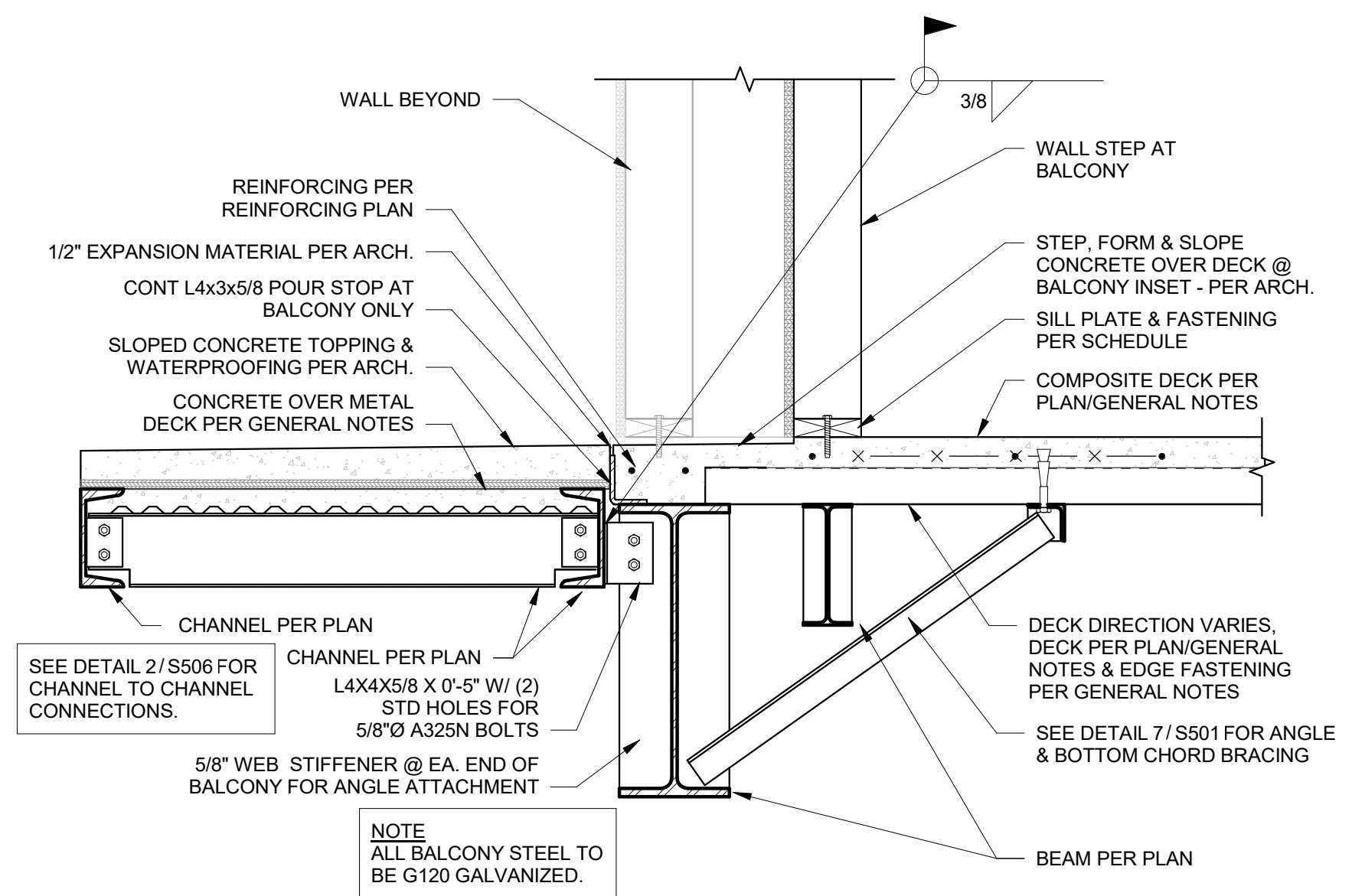
FOR PERMIT
NOT FOR
CONSTRUCTION

THE VILLAGE AT DISCOVERY -
LOT 4
NW COLBERN & NE DOUGLAS ST.,
LEE'S SUMMIT, MO 64064

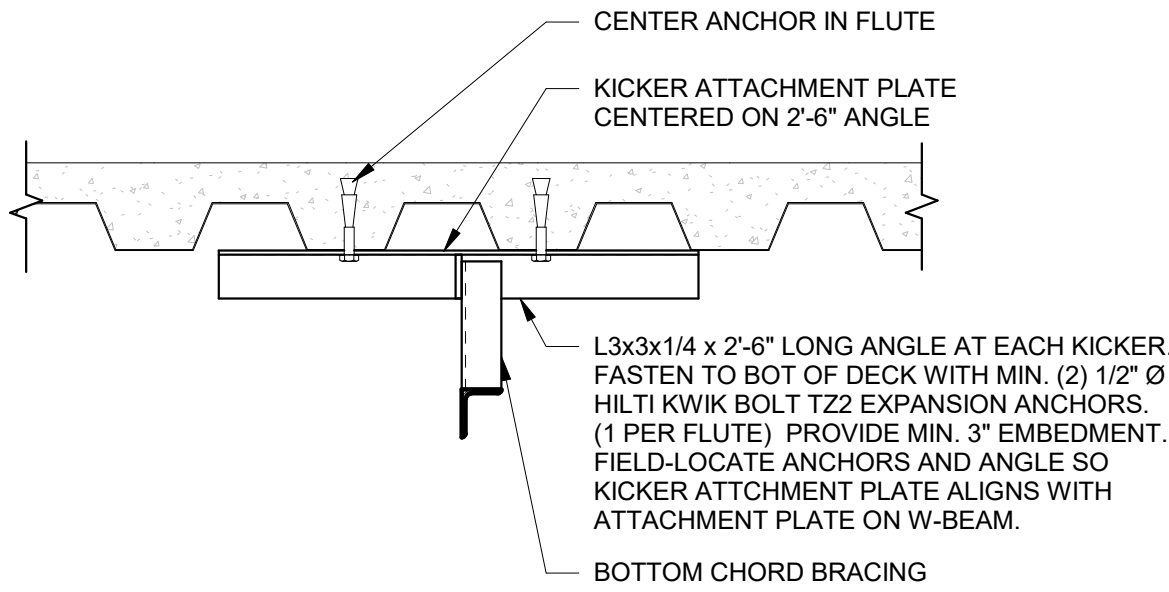
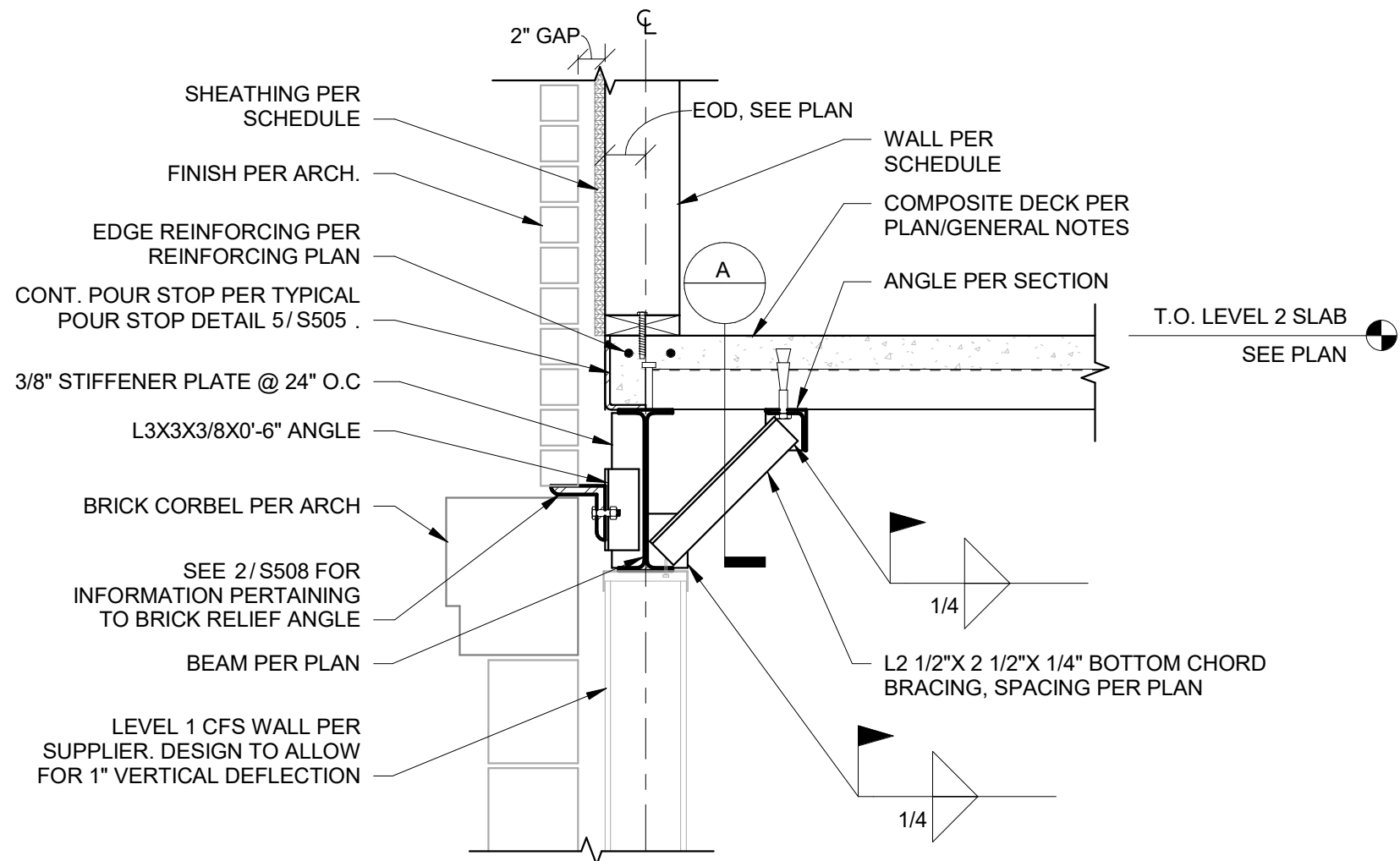
SHEET TITLE
STEEL DETAILS

PROJECT NUMBER: 2023000333
SHEET NUMBER:

S506

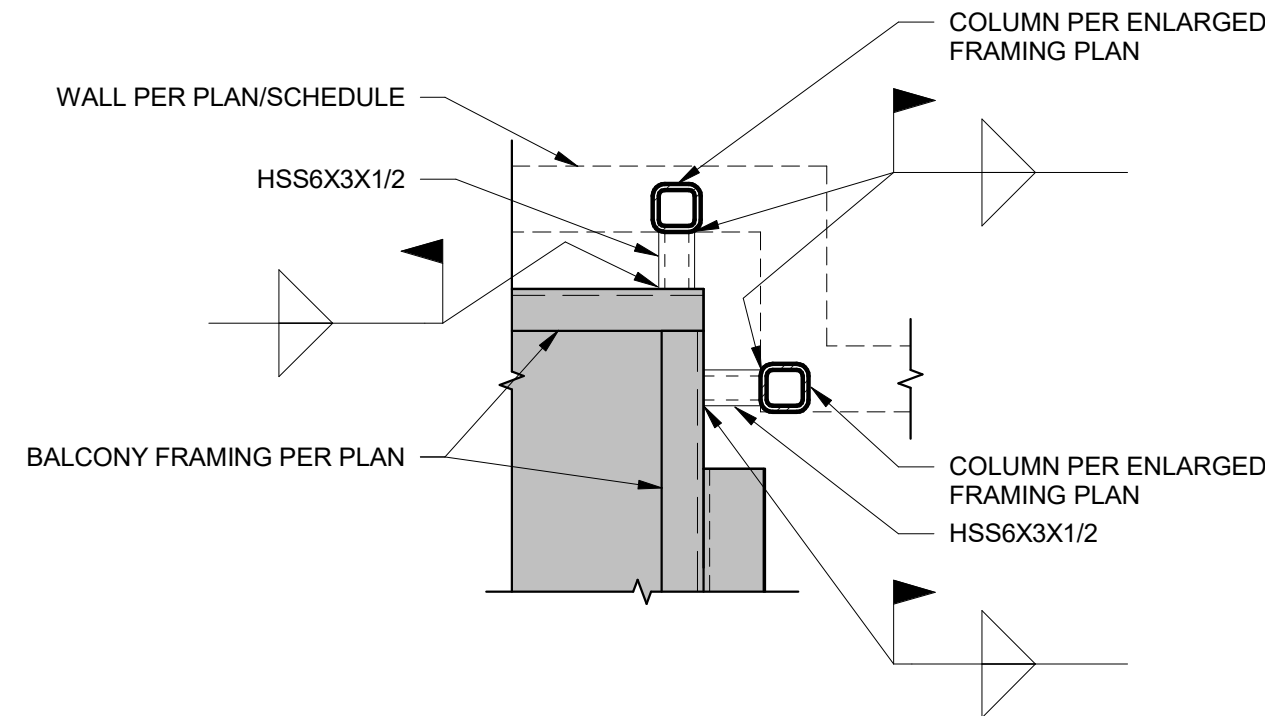


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Audrey Lora 2023000333
Discovery Plot, Lee's Summit 2023000333
Roumanian - Lot 4, 2024-1

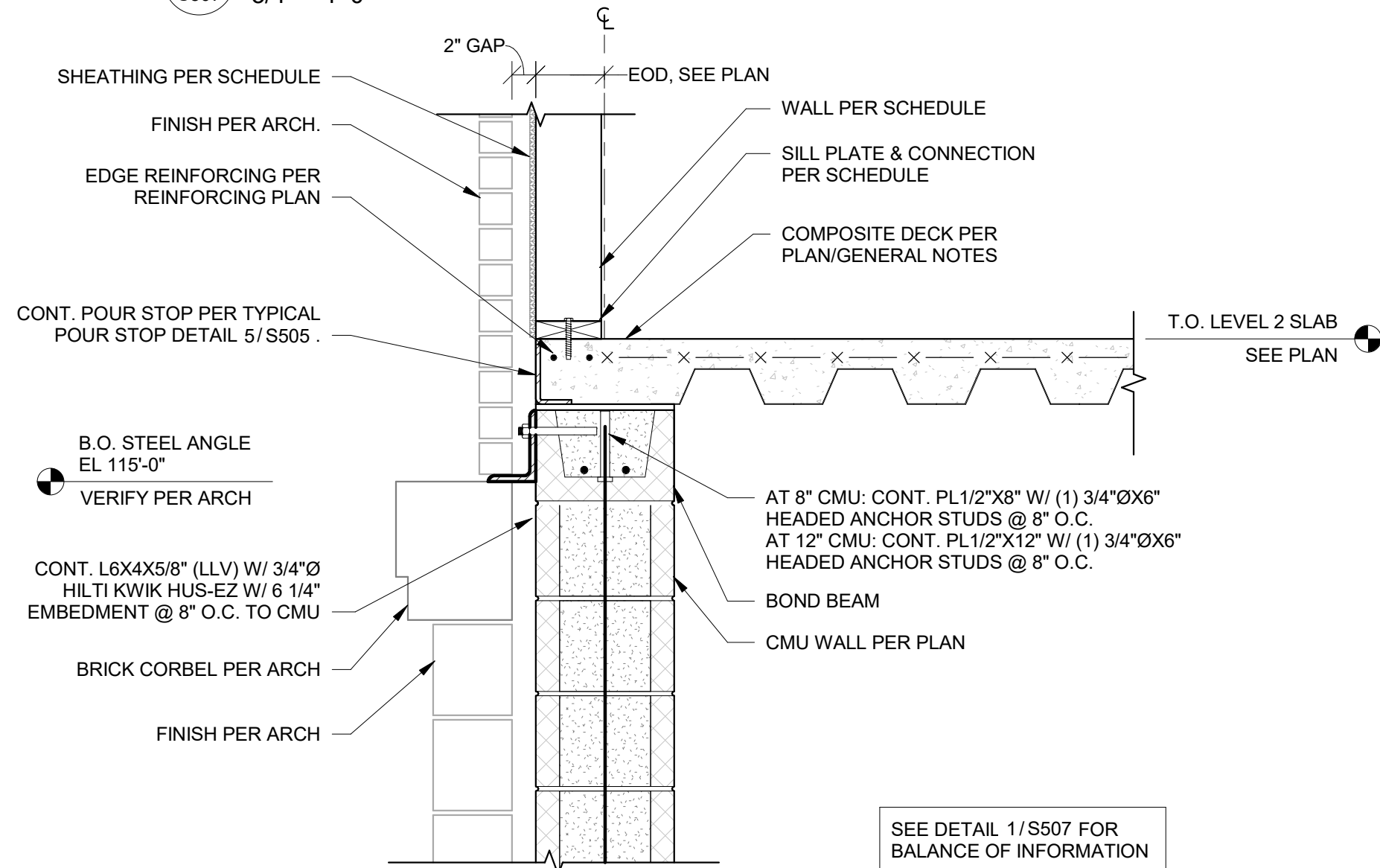


SECTION A

1
S507
DECK PERPENDICULAR TO EXTERIOR WALL SECTION AT KICKER
1" = 1'-0"



4
S507
ENLARGED BALCONY SUPPORT PLAN VIEW
3/4" = 1'-0"



5
S507
SECTION AT GARAGE AT FULL HEIGHT CMU
1" = 1'-0"

PRINTS ISSUED

01/25/2024 - CITY SUBMITTAL

REVISIONS:



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THE VILLAGE AT DISCOVERY -
LOT 4
NW COLBERN & NE DOUGLAS ST.,
LEE'S SUMMIT, MO 64064

SHEET TITLE
STEEL DETAILS

PROJECT NUMBER: 2023000333

SHEET NUMBER:

S507



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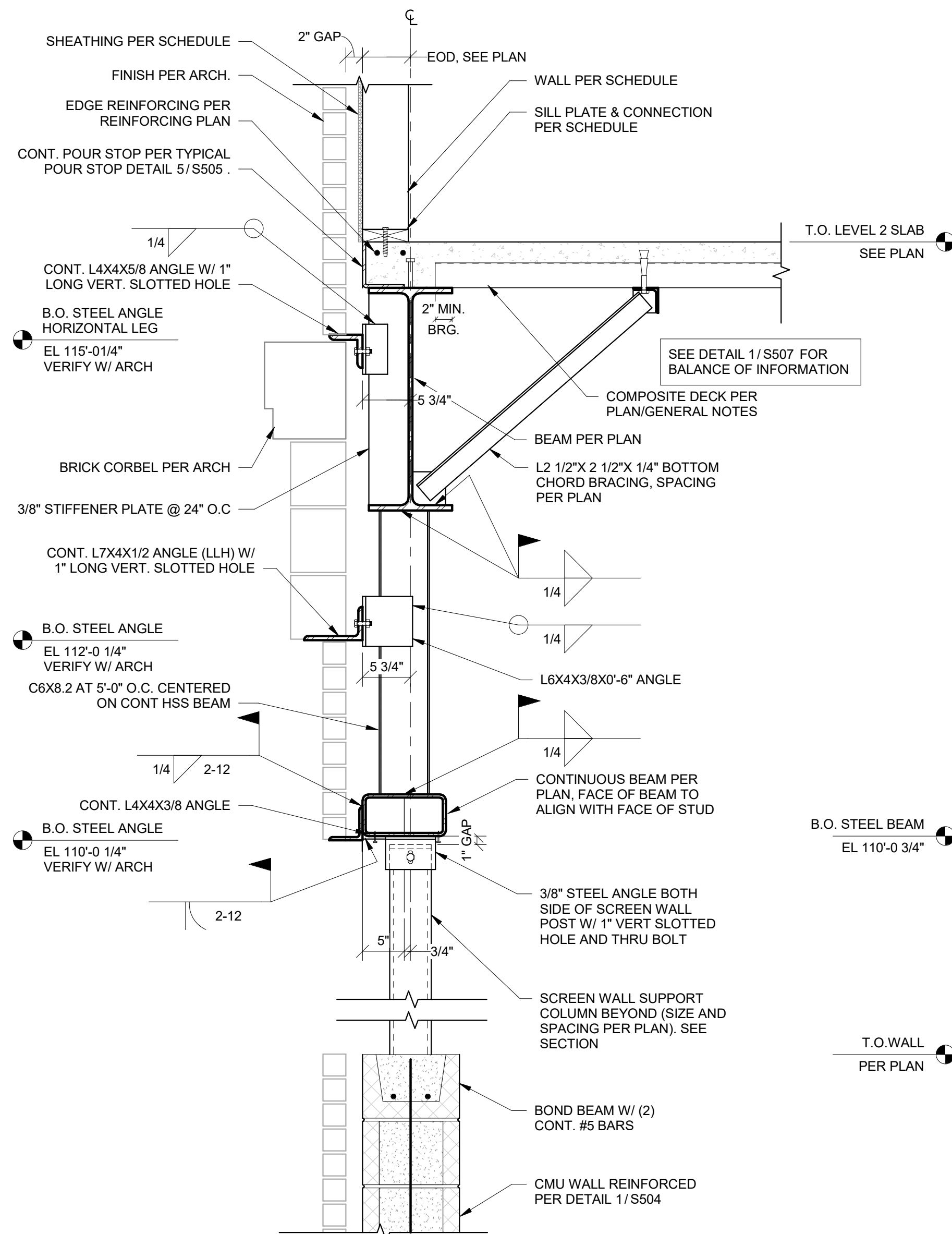
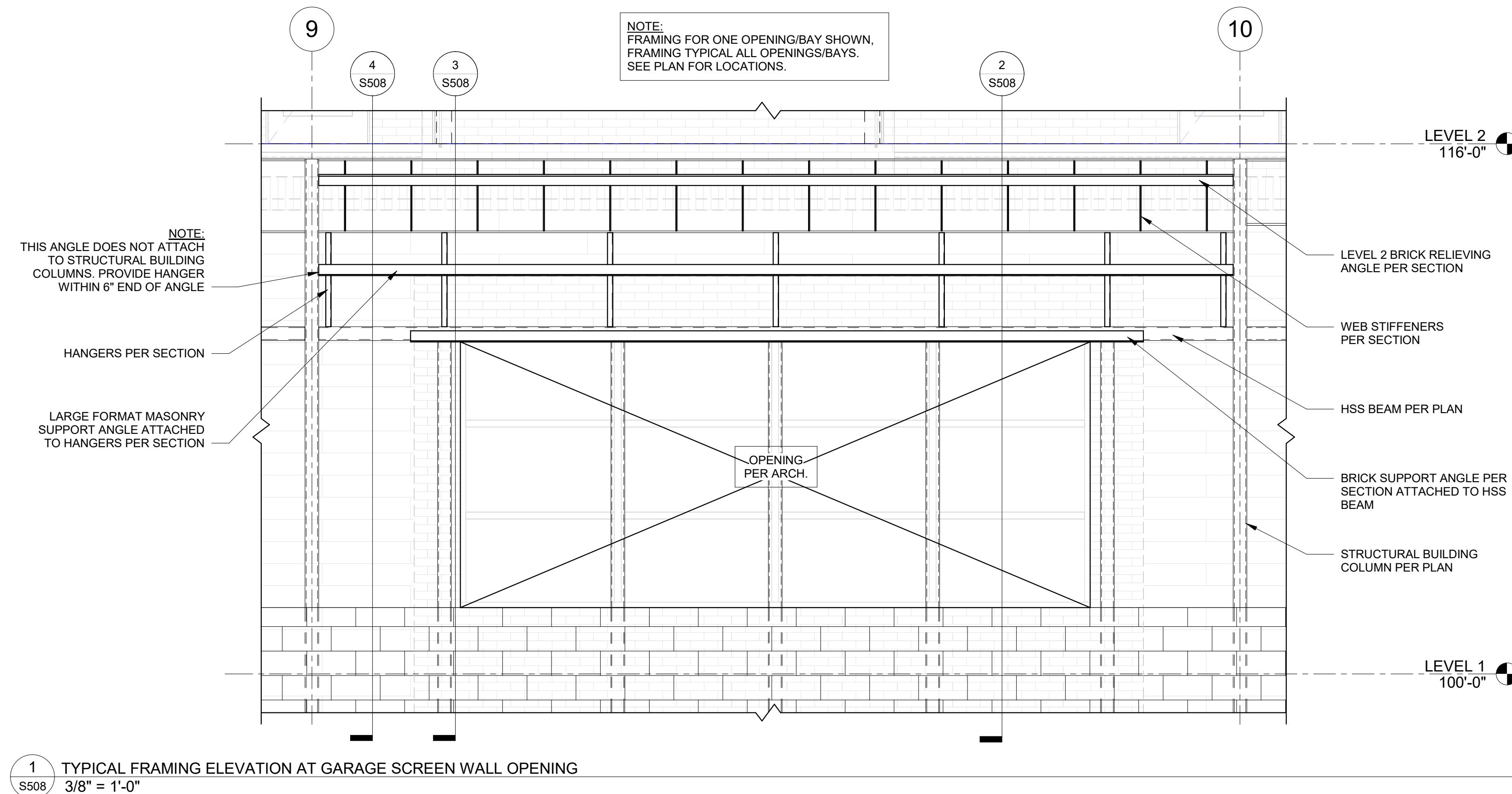
THE VILLAGE AT DISCOVERY -
LOT 4
NW COLBERN & NE DOUGLAS ST.,
LEE'S SUMMIT, MO 64064

SHEET TITLE
FRAMING AT TYPICAL GARAGE
WALL OPENING

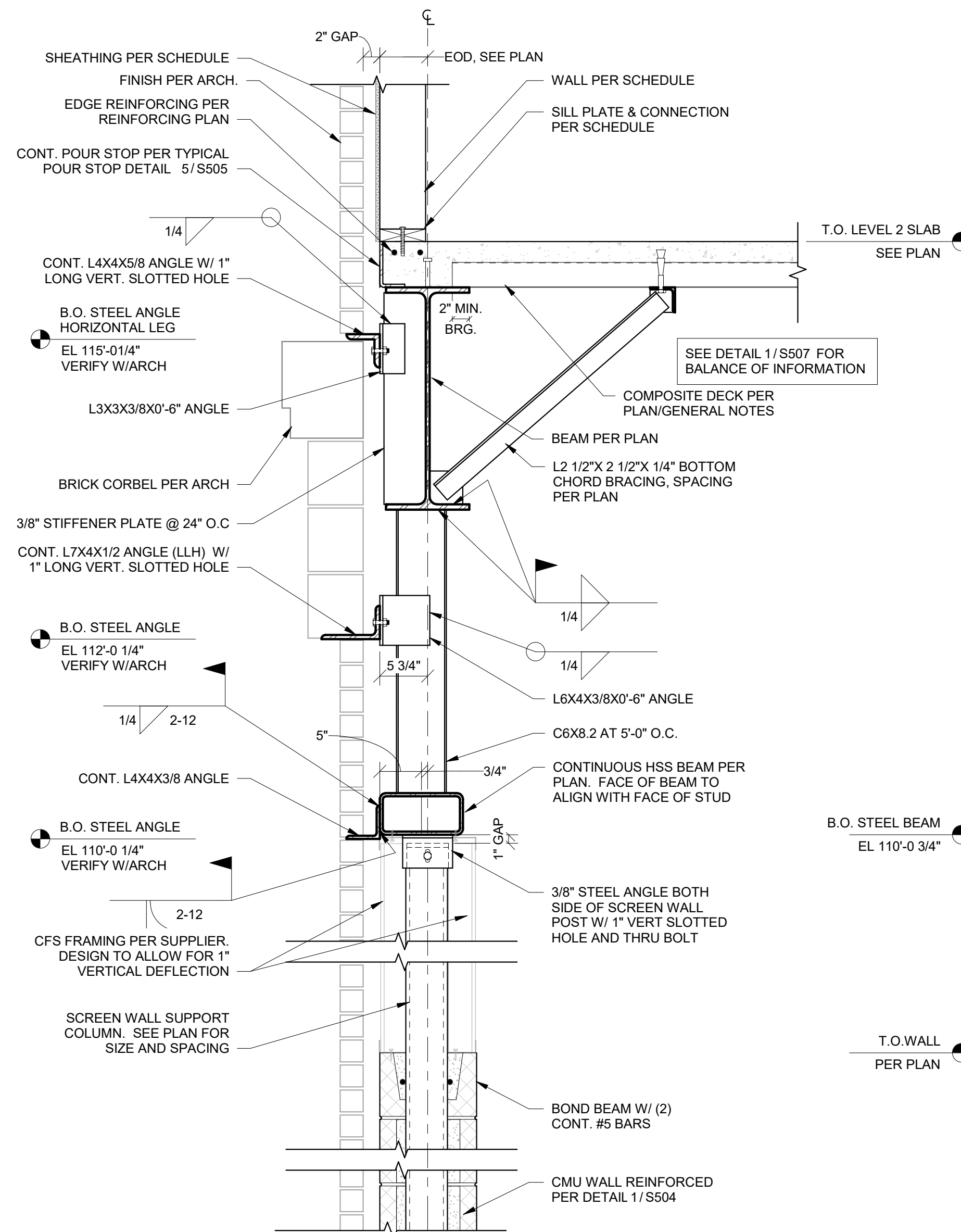
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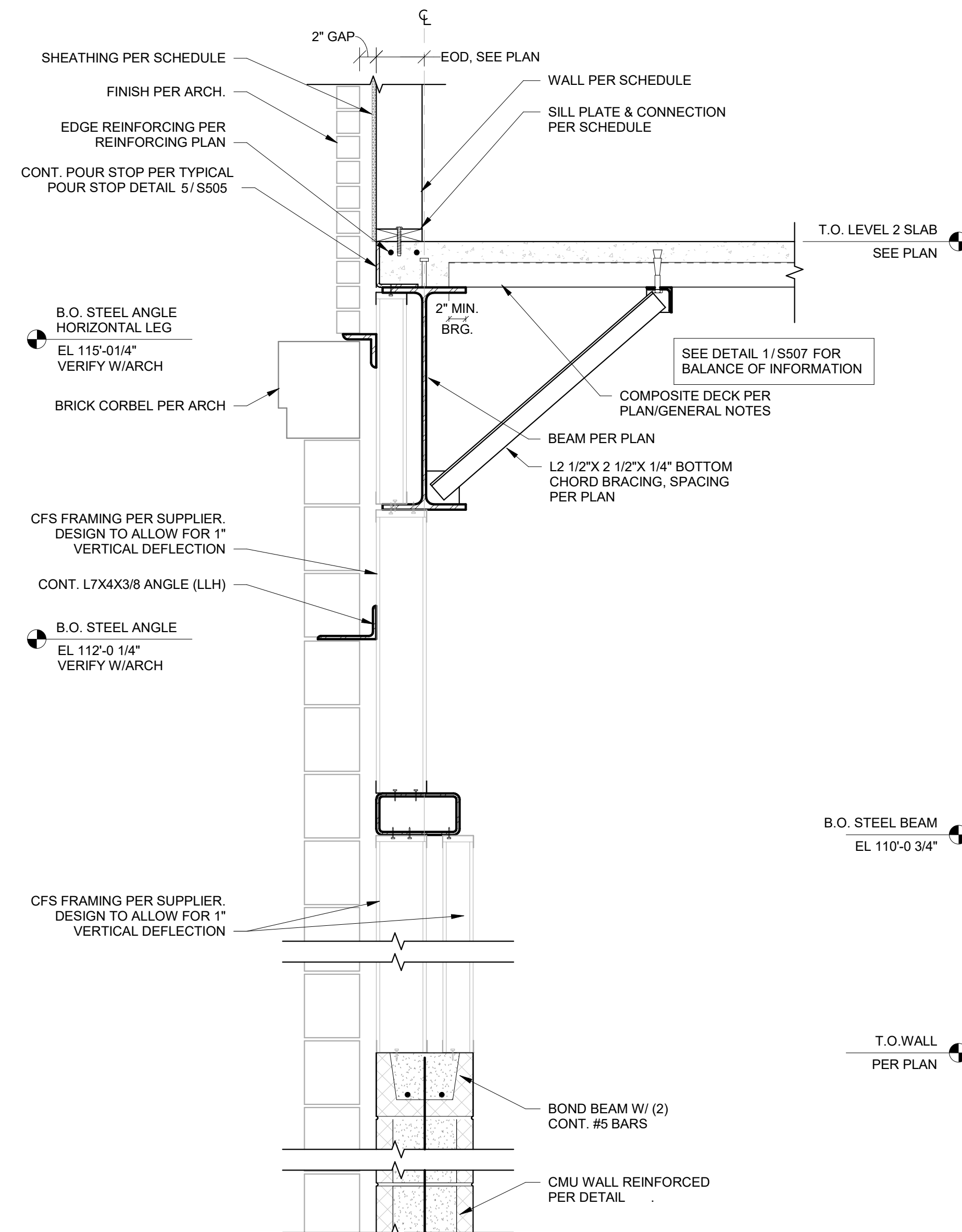
S508



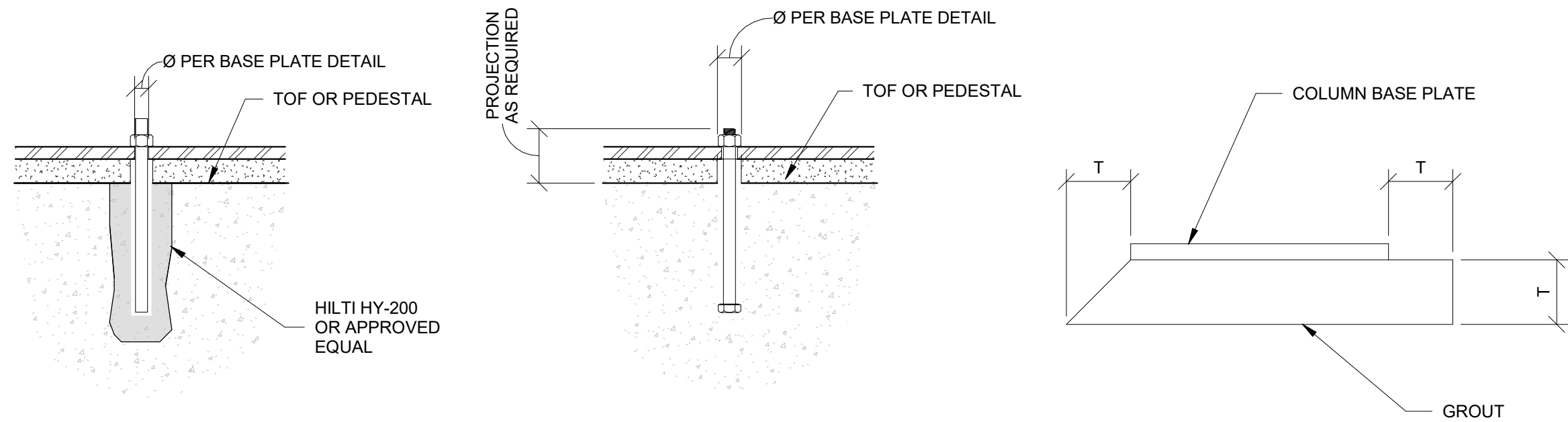
2 SECTION AT TYPICAL GARAGE OPENING FOR SCREEN WALL
1" = 1'-0"



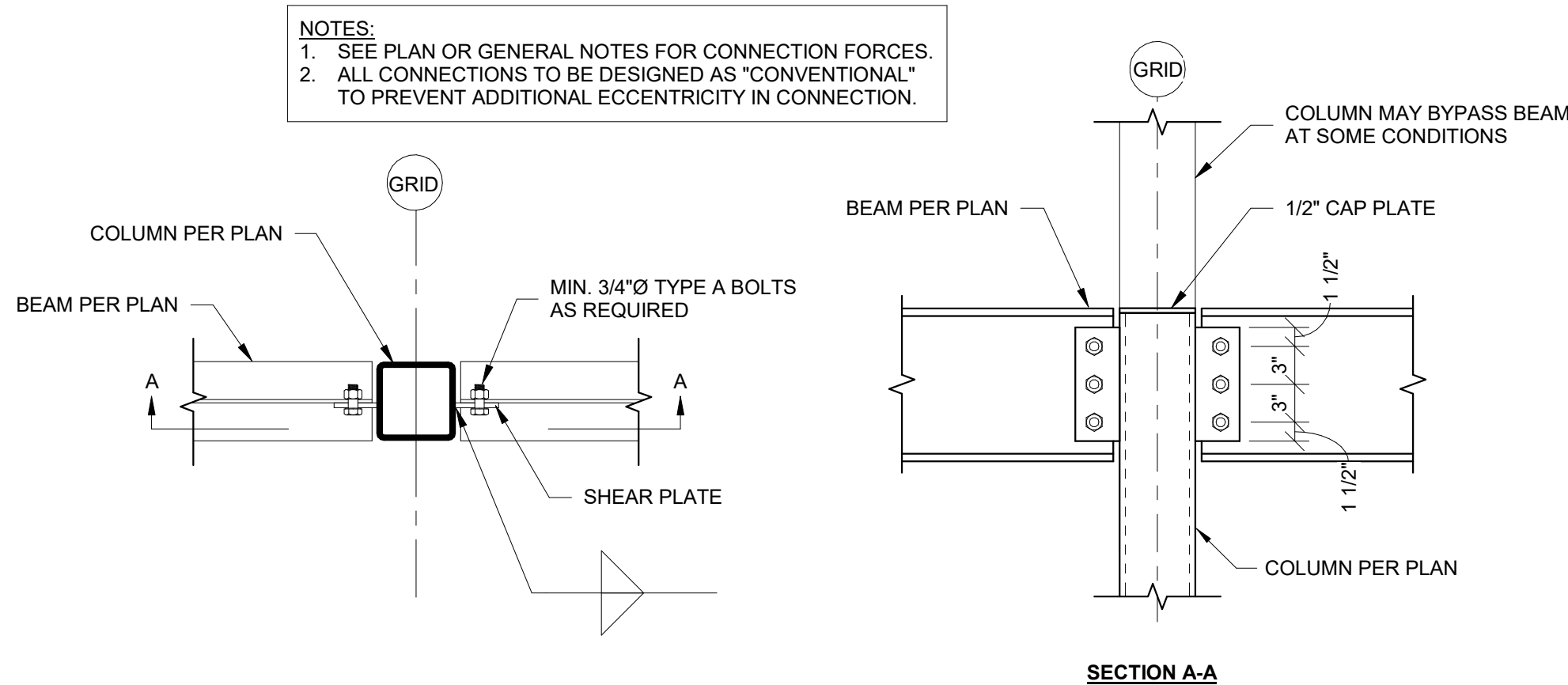
3 SECTION AT GARAGE SCREEN WALL END POST WITHIN FULL HEIGHT WALL
1" = 1'-0"



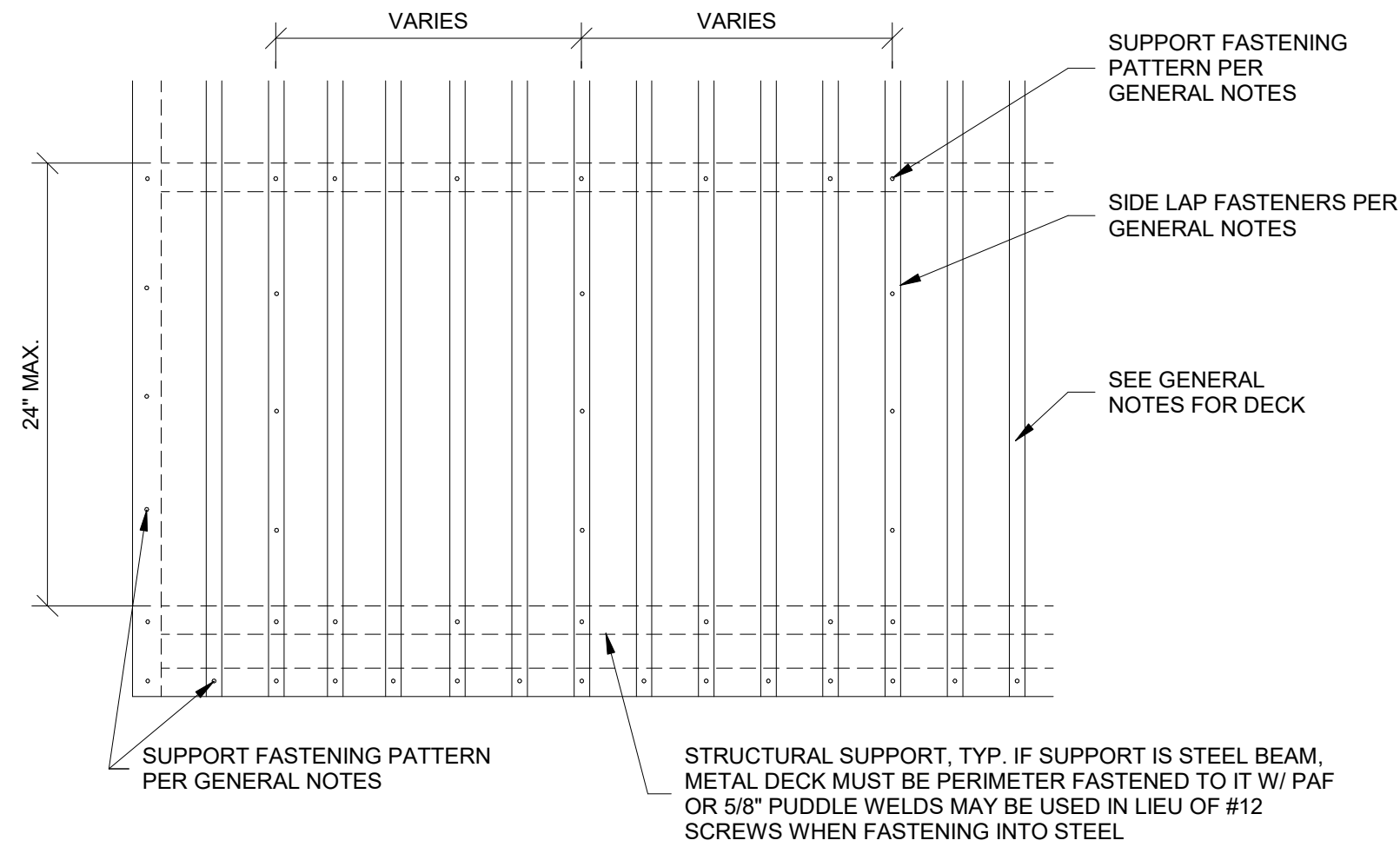
4 SECTION AT GARAGE BEYOND SCREEN WALL
1" = 1'-0"



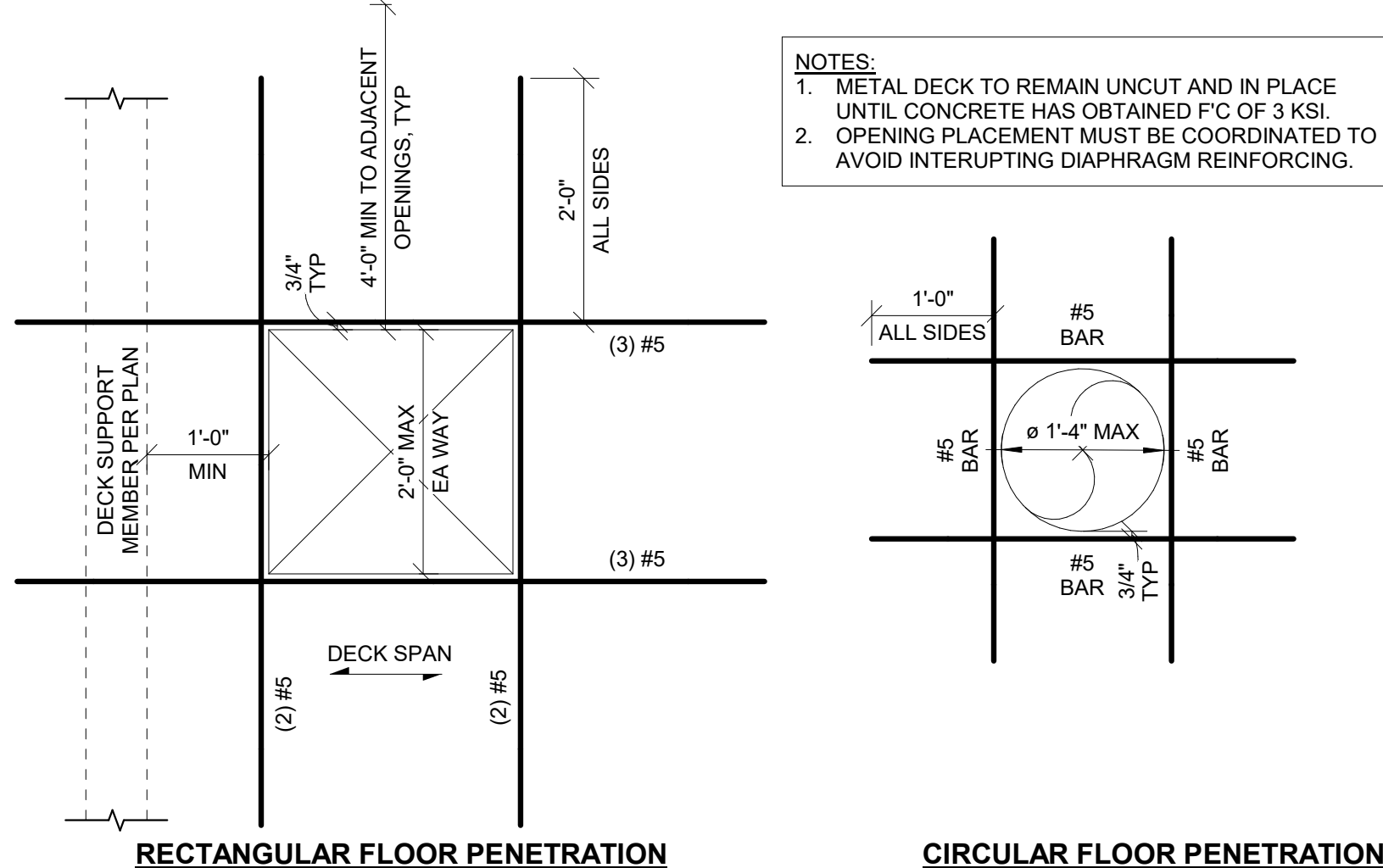
1 COLUMN ANCHOR BOLT DETAILS
S510 1 1/2" = 1'-0"



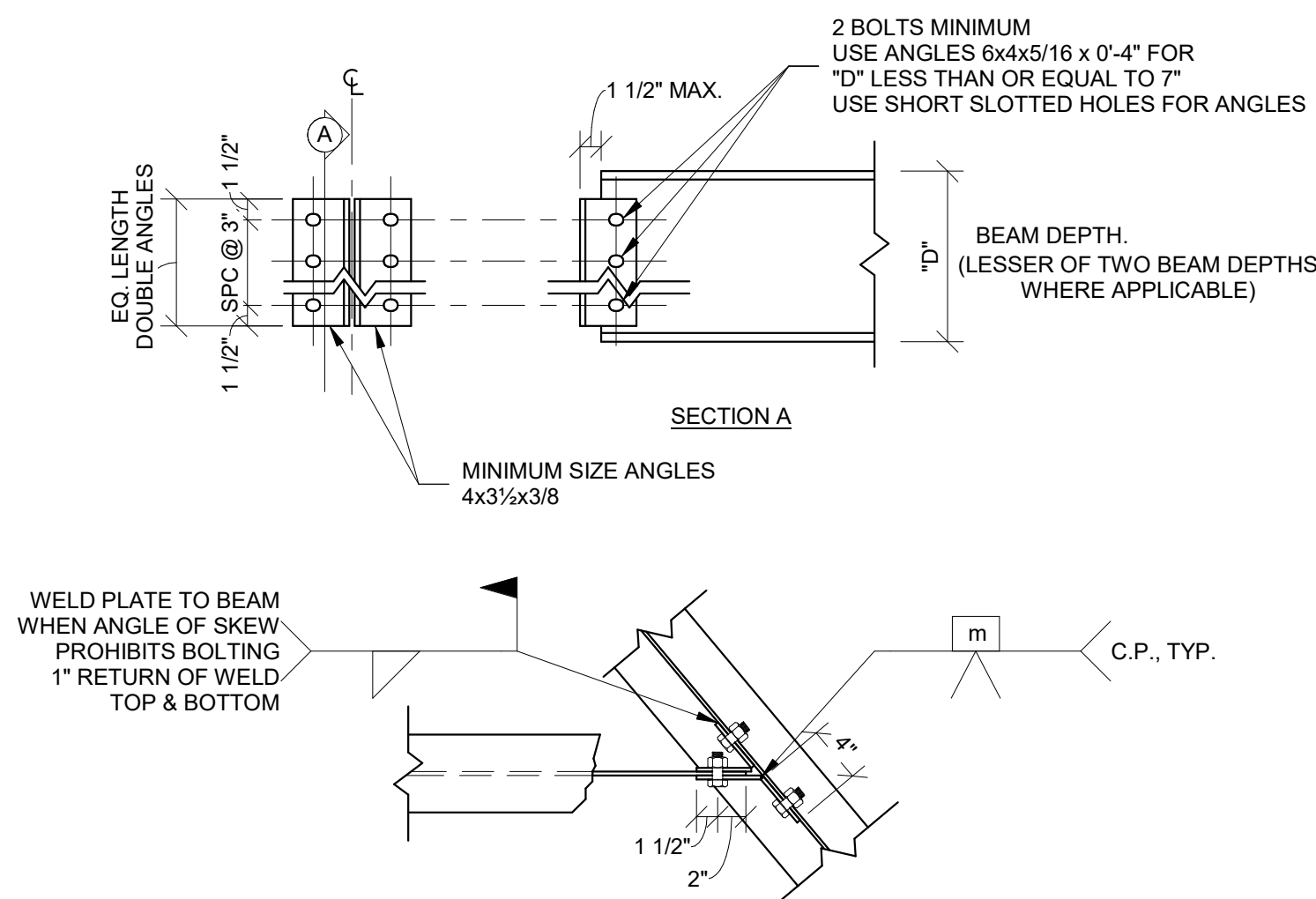
3 TYPICAL BEAM TO COLUMN SHEAR CONNECTION
S510 1" = 1'-0"



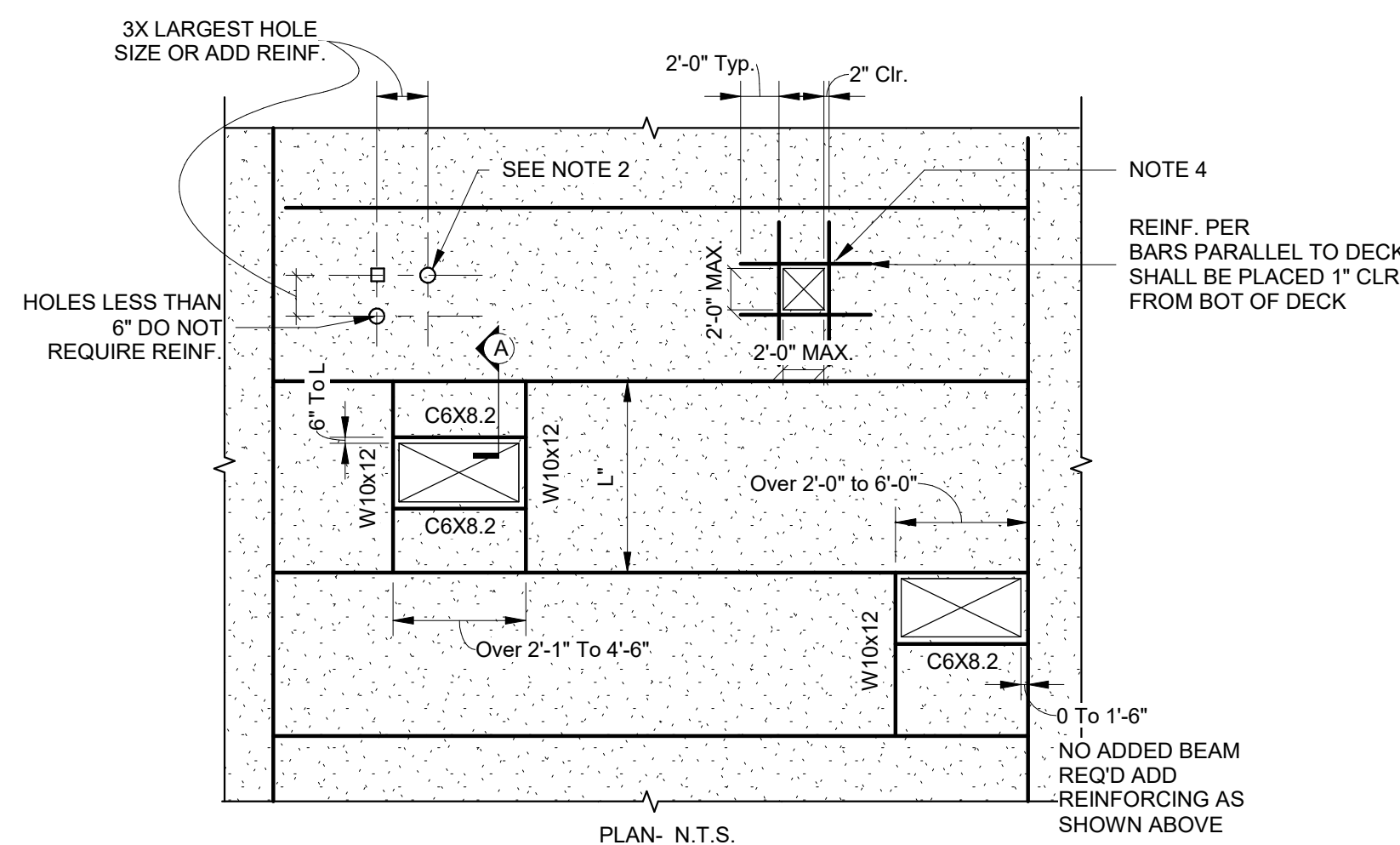
4 DECK FASTENING DETAIL
S510 1" = 1'-0"



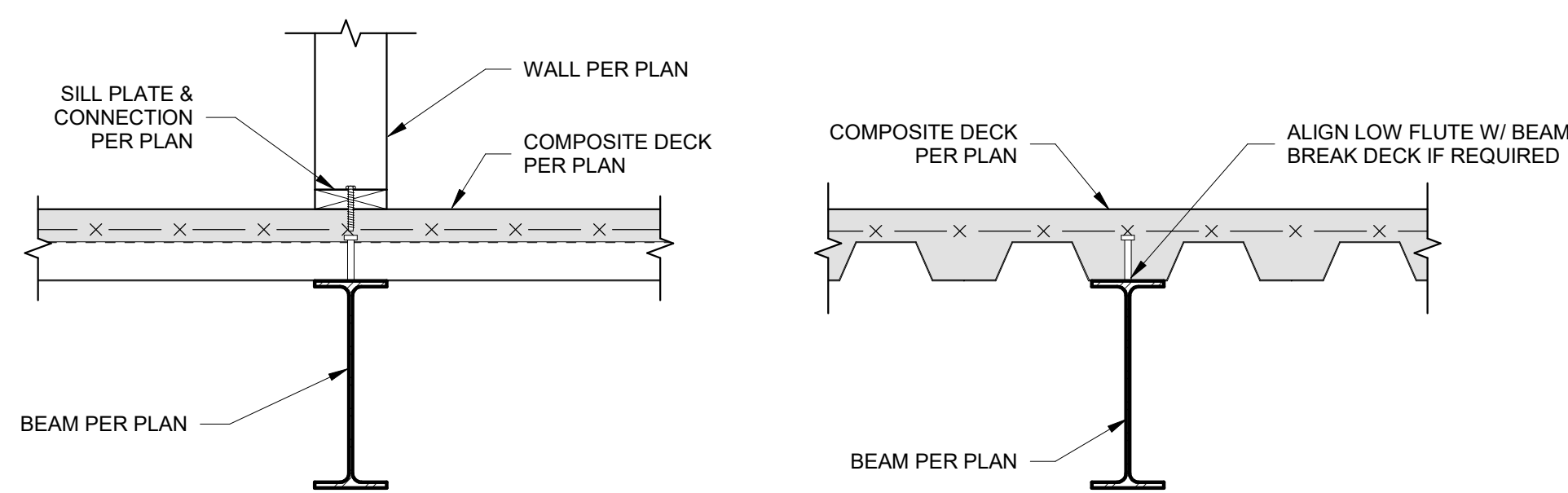
7 REINFORCED OPENING IN SLAB ON METAL DECK
S510 3/4" = 1'-0"



2 BEAM TO BEAM CONNECTION
S510 1" = 1'-0"

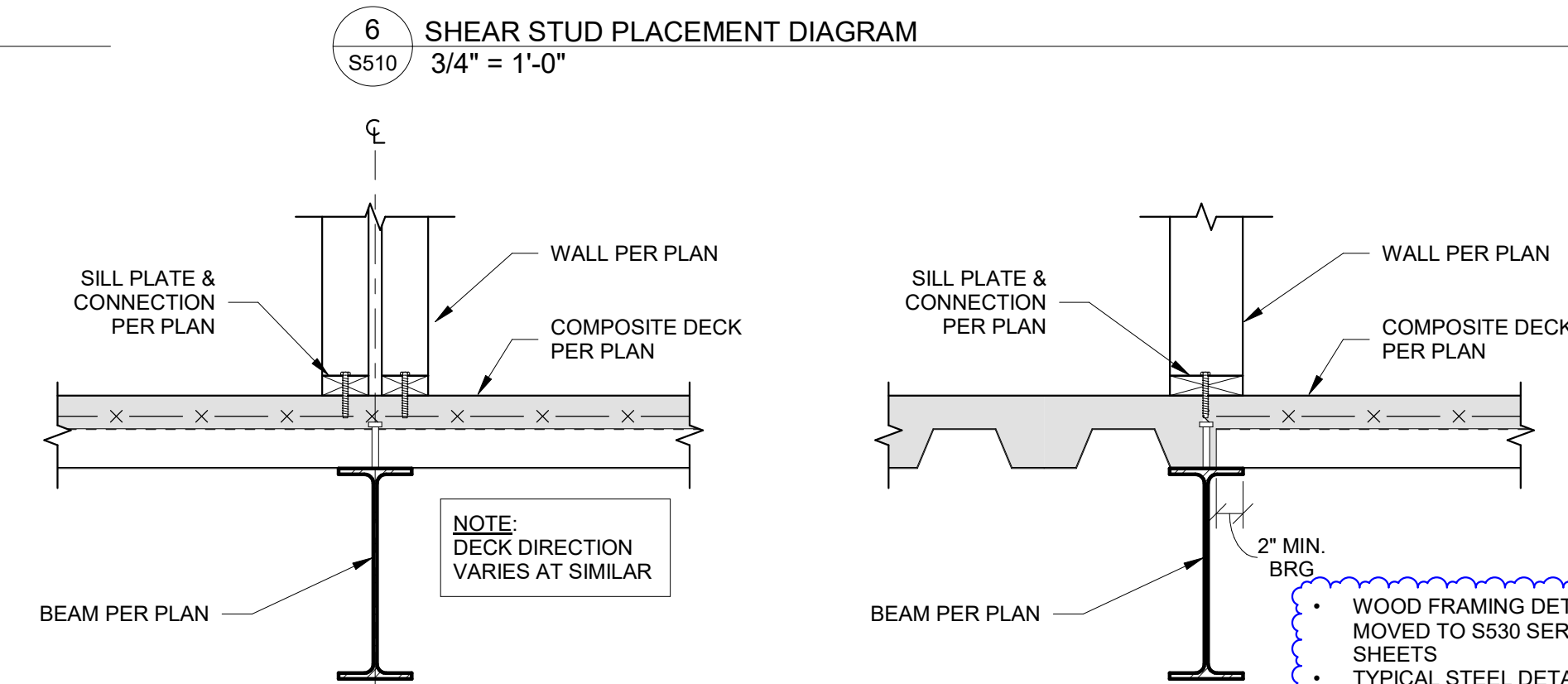


5 TYPICAL FLOOR DECK OPENING
S510 3/4" = 1'-0"



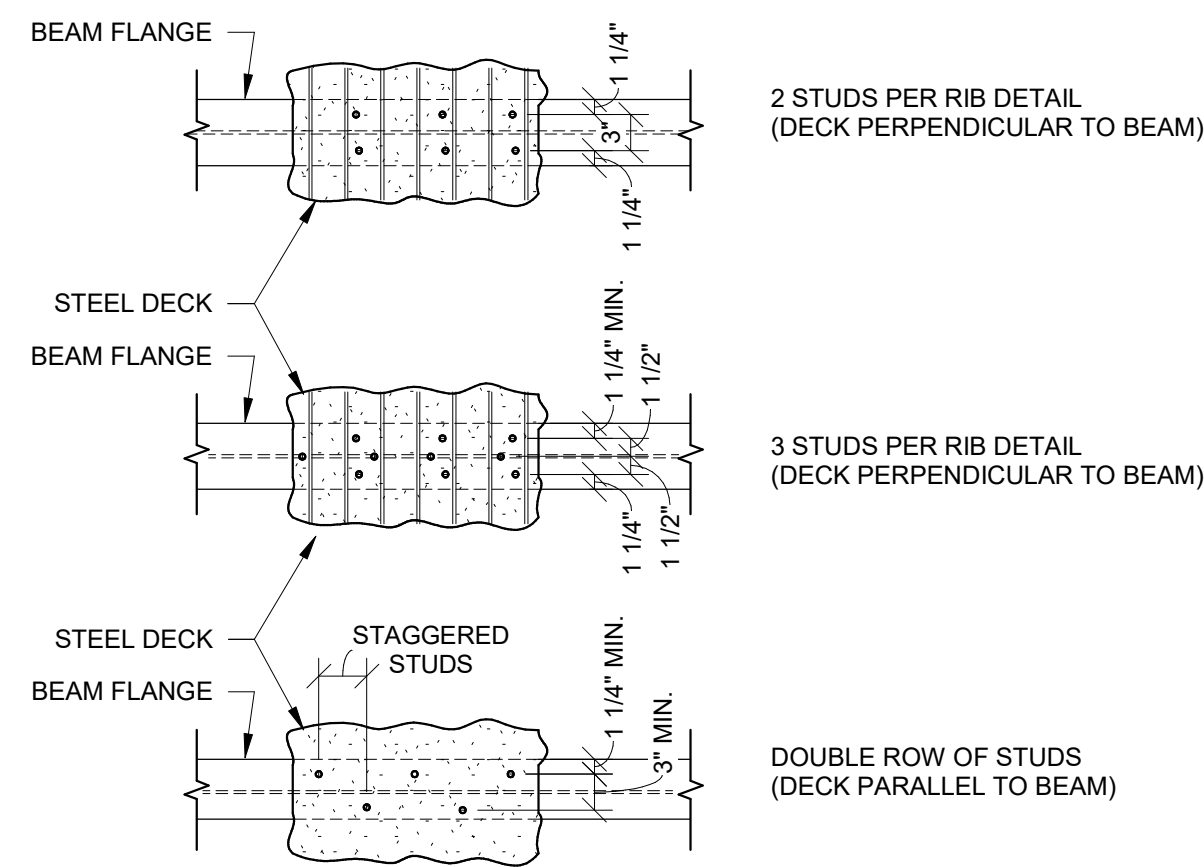
8 COMPOSITE DECK BEARING AT BEAM
S510 1" = 1'-0"

9 COMPOSITE DECK PARALLEL TO BEAM
S510 1" = 1'-0"



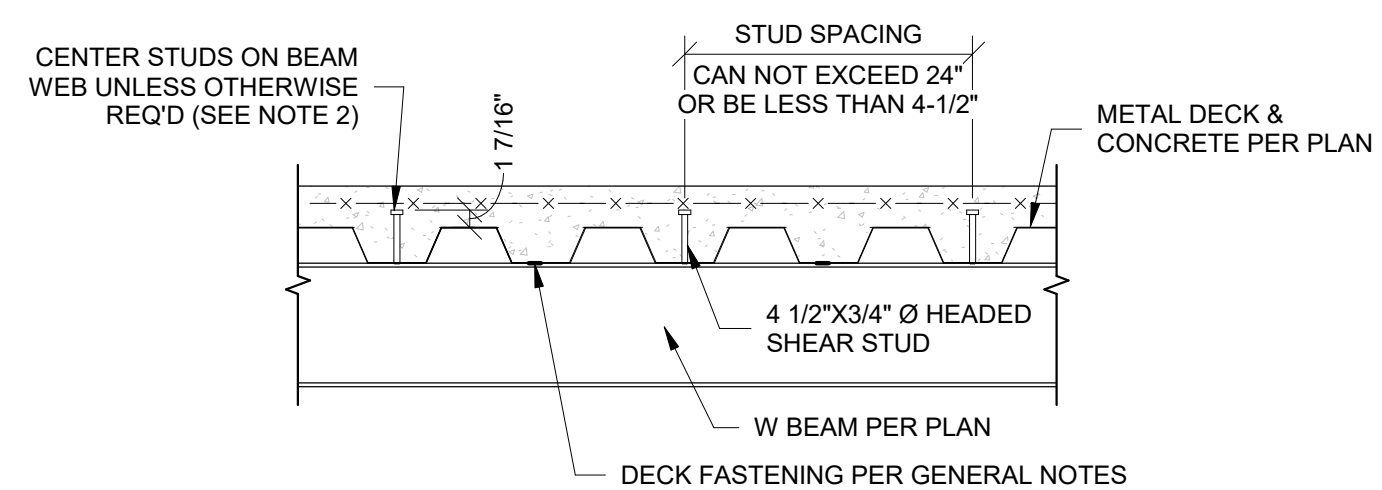
10 COMPOSITE DECK BEARING AT BEAM BELOW DEMISING WALL
S510 1" = 1'-0"

11 COMPOSITE DECK TRANSITION AT BEAM
S510 1" = 1'-0"



DECK IS PARALLEL TO BEAM

- NOTES:
1. SPACE STUDS EQUALLY WITHIN BEAM SEGMENT. WHERE STUD SPACING EXCEEDS 24", PROVIDE ADDITIONAL STUDS AS NECESSARY TO MAINTAIN A 24" MAX STUD SPACING.
 2. PLACE STUDS IN SINGLE ROW UNLESS NUMBER OF STUDS RESULTS IN SPACING LESS THAN 4-1/2". WHERE SPACING WOULD BE LESS THAN 4-1/2", PROVIDE A DOUBLE ROW OF STUDS IN A STAGGERED PATTERN RATHER THAN SIDE BY SIDE.
 3. MAINTAIN TRANSVERSE SPACING BETWEEN STUDS & EDGE DIMENSIONS AS SHOWN ON PLAN DETAIL ABOVE.



DECK IS PERPENDICULAR TO BEAM

- NOTES:
1. SEE PLAN FOR REQUIRED NUMBER OF STUDS. STUDS SHALL BE PLACED AT A MAXIMUM SPACING OF 2'-0" ALONG THE BEAM AXIS UNLESS NOTED OTHERWISE ON PLAN OR NUMBER OF STUDS INDICATED REQUIRES CLOSER SPACING. SEE "GENERAL NOTES" FOR MINIMUM NUMBER OF STUDS AND MINIMUM STEEL COMPOSITE DECK TO STEEL BEAM FASTENING REQUIREMENTS.
 2. SPACE STUDS AS EVENLY AS POSSIBLE IN AVAILABLE DECK FLUTES. WHERE STUD SPACING EXCEEDS 24", PROVIDE ADDITIONAL STUDS AS NECESSARY TO MAINTAIN A 24" MAX STUD SPACING.
 3. WHERE THE NUMBER OF STUDS EXCEEDS THE NUMBER OF FLUTES, INSTALL REMAINING STUDS IN DOUBLE OR TRIPLE ROW, STARTING FROM THE BEAM ENDS & WORKING TOWARDS THE CENTER. UNLESS NOTED OTHERWISE, STUDS ARE TO BE EQUALLY SPACED ALONG THE BEAM LENGTH AND PLACED SYMMETRICALLY ABOUT THE BEAM CENTERLINE AXIS. IF EQUAL SPACING IS NOT POSSIBLE DUE TO DECK CONFIGURATION, THE STRUCTURAL ENGINEER SHALL BE NOTIFIED.
 4. THE REQUIRED NUMBER OF STUD ROWS SHALL BE DETERMINED AS FOLLOWS (BEAM LENGTH IN FEET):
 - A. FOR DECK FLUTES PERPENDICULAR TO THE BEAM:
 - a. # ROWS = # STUDS / BEAM LENGTH
 - B. FOR DECK FLUTES PARALLEL TO THE BEAM:
 - a. # ROWS = (0.375 x # STUDS) / BEAM LENGTH
 5. FOR DECK FLUTES PARALLEL TO THE BEAM, THE FIRST STUD (OR STUDS) SHALL BE PLACED 6" FROM THE BEAM ENDS. FOR DECK FLUTES PERPENDICULAR TO THE BEAM, THE FIRST STUD (OR STUDS) SHALL BE PLACED IN THE FLUTE CLOSEST TO THE BEAM ENDS.
 6. FOR CANTILEVER SPANS, STUDS SHALL BE PLACED IN ONE ROW ALONG THE BEAM CENTERLINE AXIS AT A MAXIMUM SPACING OF 2'-0". STUDS PLACED ON THE CANTILEVER SPAN ARE NOT INCLUDED IN THE NUMBER OF STUDS SHOWN ON THE DRAWINGS.
 7. WHERE BEAM FLANGE THICKNESS IS LESS THAN 0.30", STUDS MUST BE PLACED AT CENTERLINE OF THE BEAM
 8. MAINTAIN TRANSVERSE SPACING BETWEEN STUDS & EDGES DIMENSIONS AS SHOWN ON PLAN DETAILS ABOVE.

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REVISIONS:
1 10/21/2024 Addendum #1
2 11/11/2024 Addendum #2
3 12/26/2024 Addendum #3



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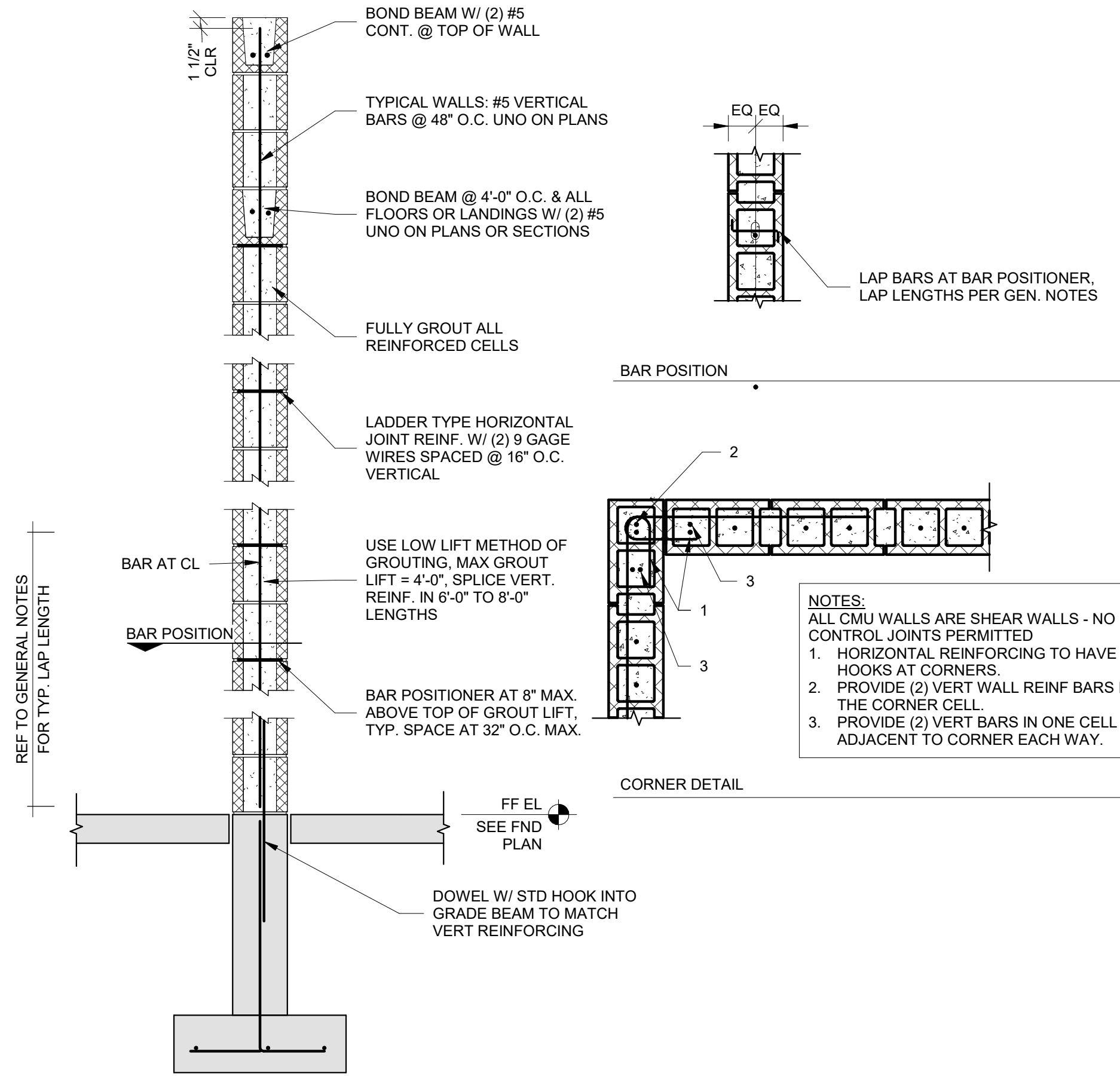
THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

SHEET TITLE
TYPICAL STEEL DETAILS

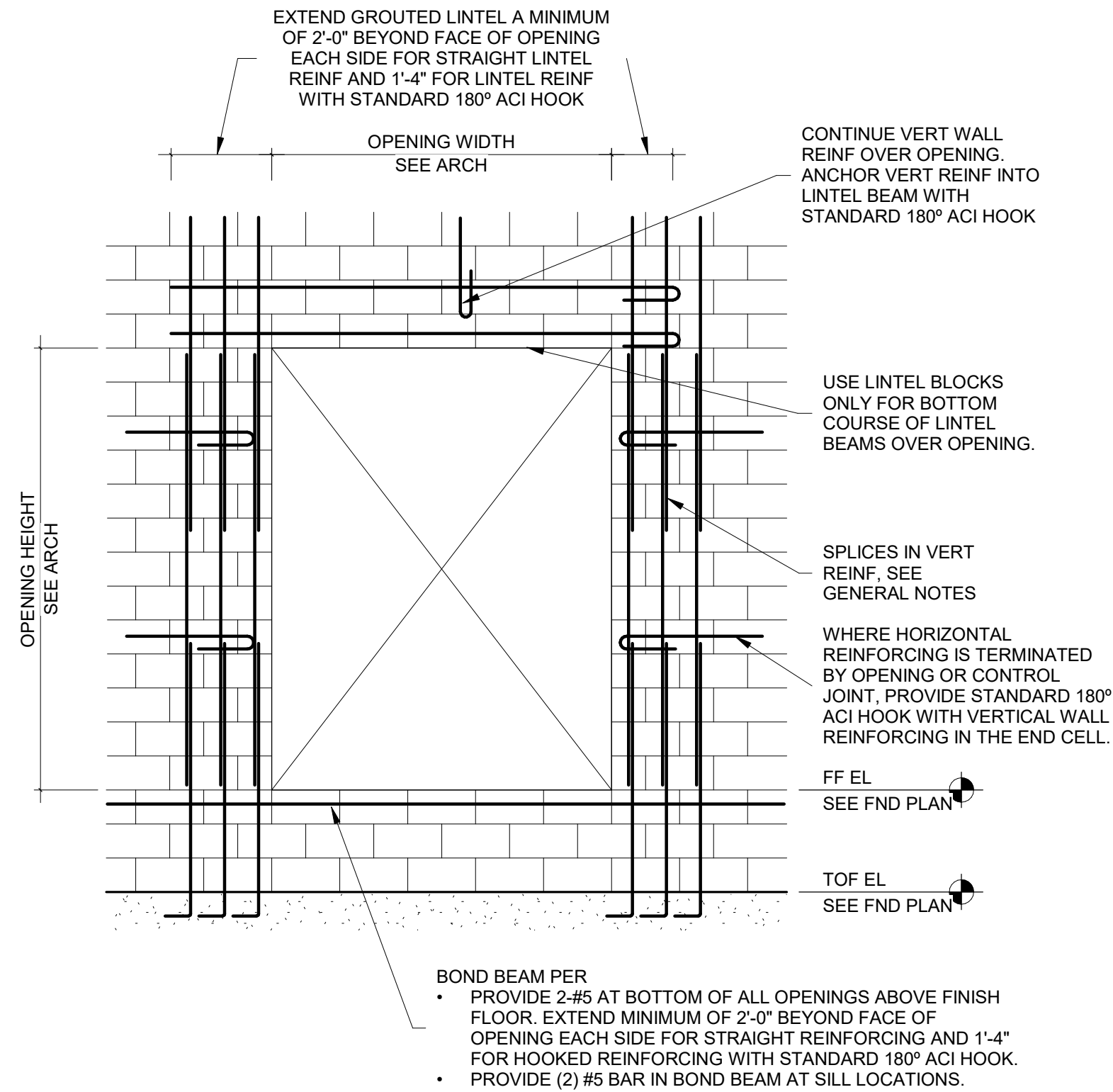
PROJECT NUMBER: 2023000333

SHEET NUMBER:

S510

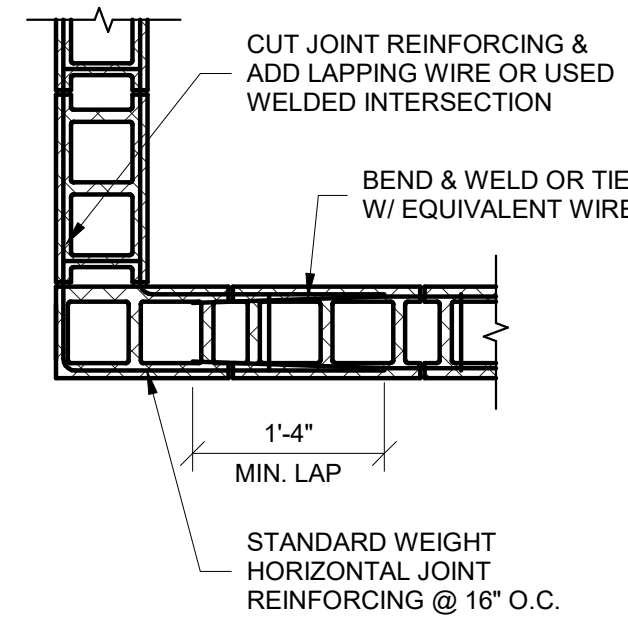
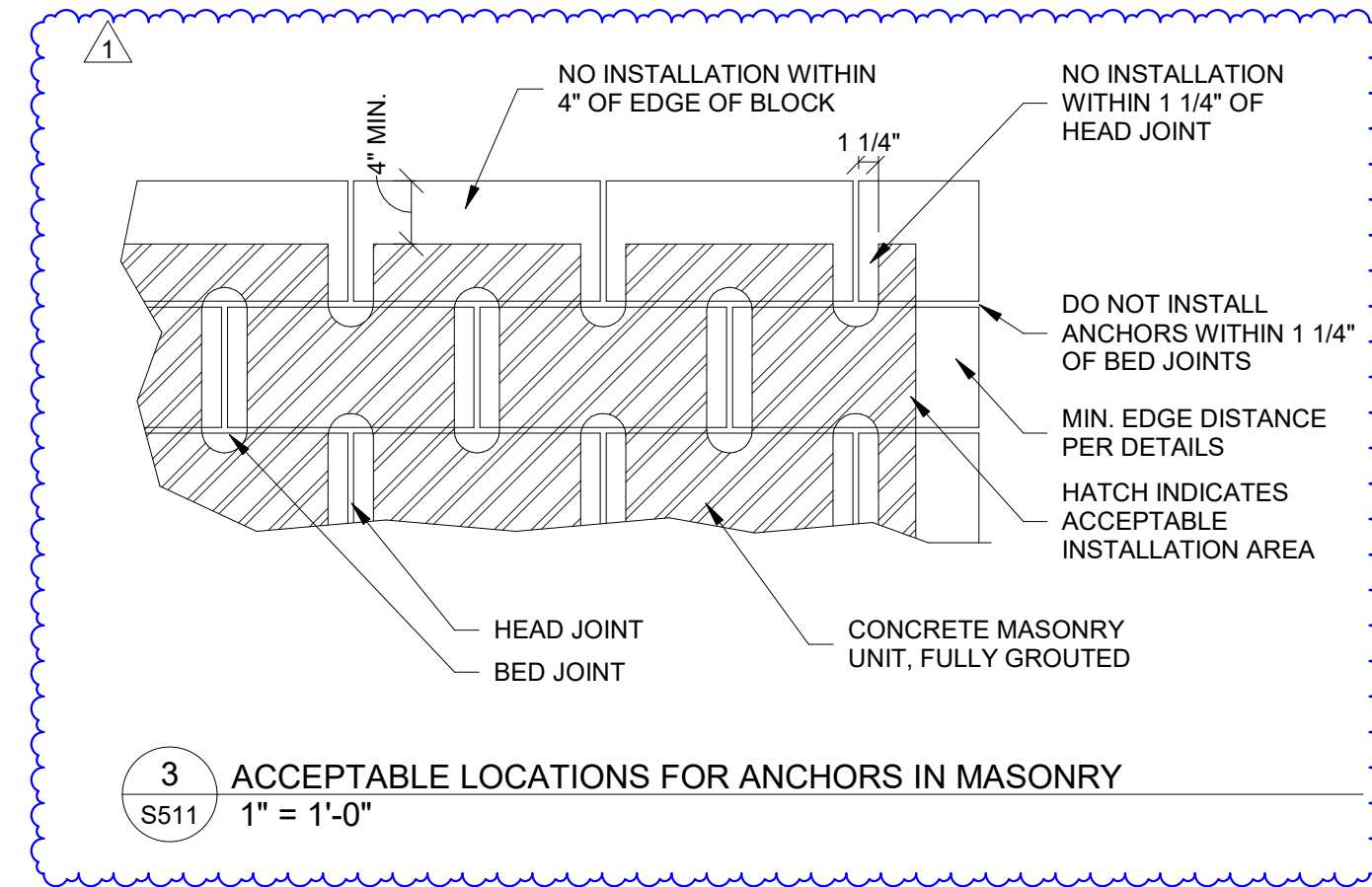
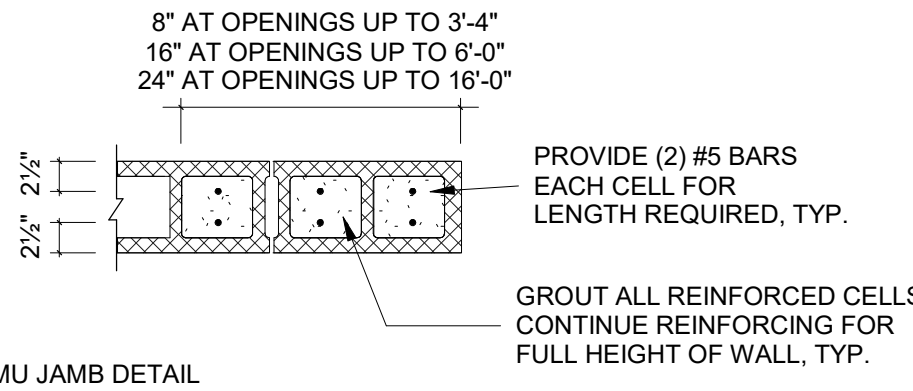
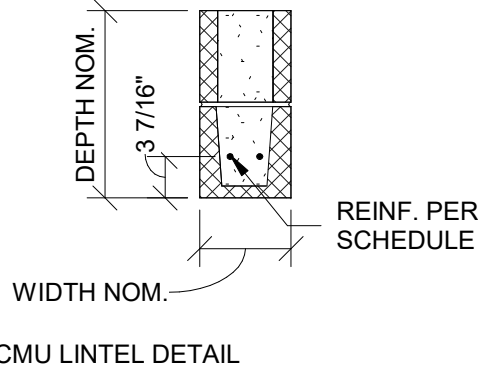


1 CMU WALL REINFORCING DIAGRAM
S511 3/4" = 1'-0"



2 TYPICAL MASONRY OPENING DIAGRAM & SCHEDULE
S511 3/4" = 1'-0"

CMU LINTEL SCHEDULE				
MARK	WIDTH	DEPTH	REINFORCING	STIRRUPS
ALL	8"	16"	(2) #5	-



4 JOINT REINFORCING AT INTERSECTING CMU WALLS
S511 3/4" = 1'-0"

WOOD FRAMING DETAILS
MOVED TO S530 SERIES
SHEETS
TYPICAL MASONRY DETAILS
MOVED TO THIS SHEET FROM
S504

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1 10/21/2024 Addendum #1
2 11/11/2024 Addendum #2
3 12/26/2024 Addendum #3

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THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

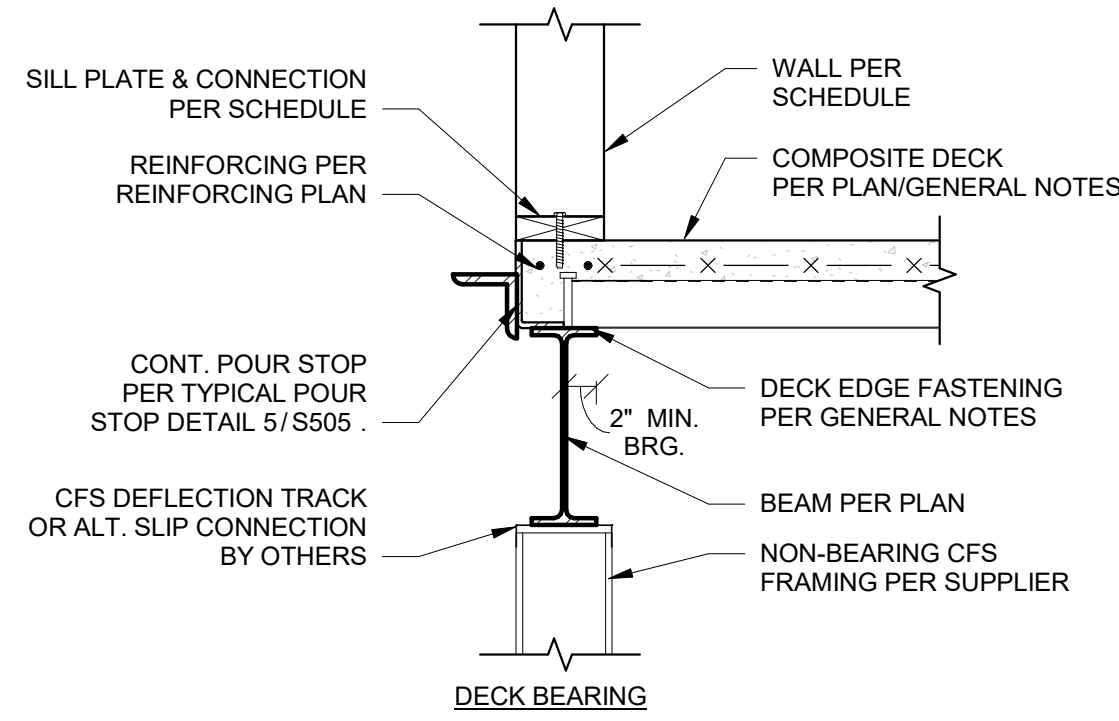
SHEET TITLE
TYPICAL MASONRY DETAILS

PROJECT NUMBER: 2023000333
SHEET NUMBER:

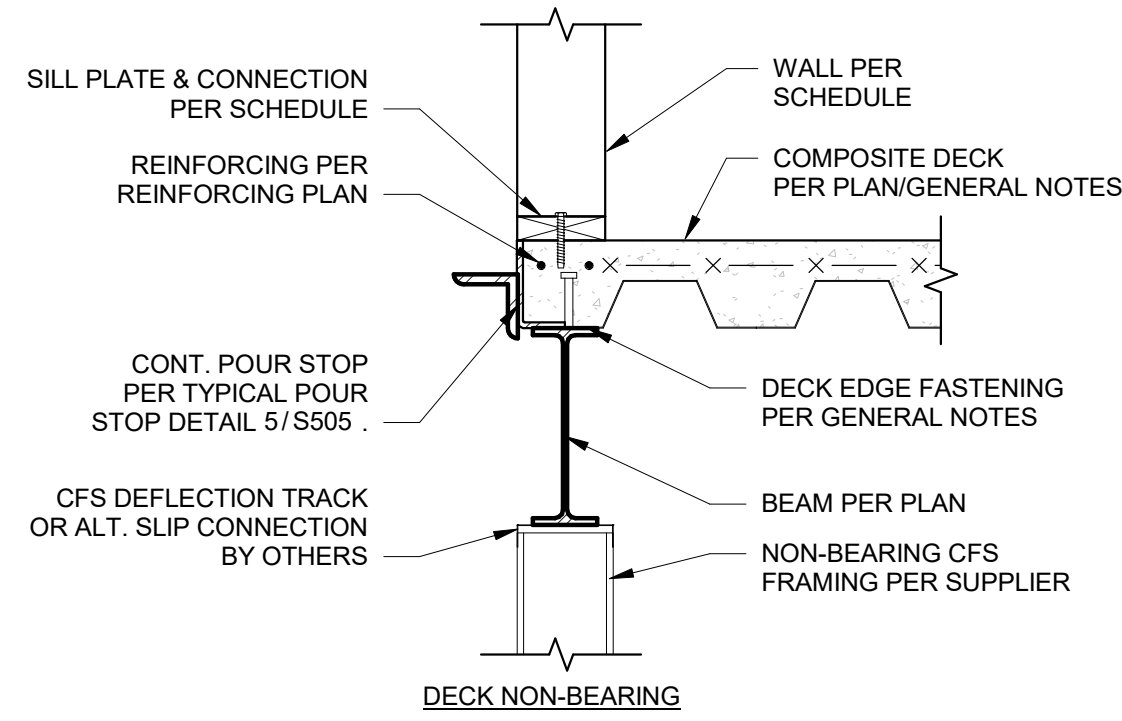
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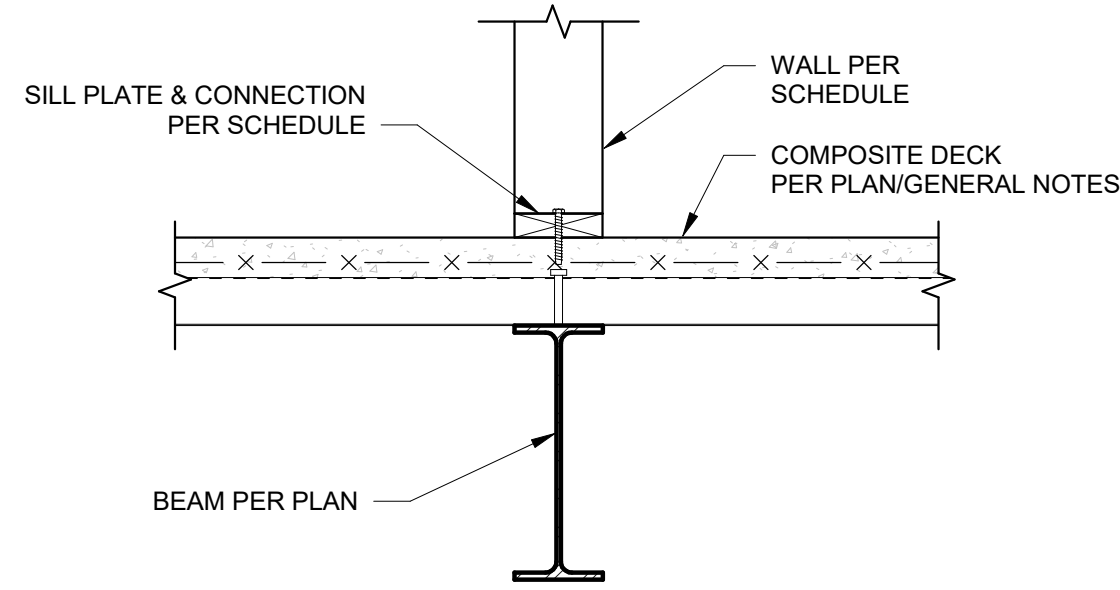
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Discovery Plot Lora Summit 2023000333
Roumanian - Lot 4, 023-14



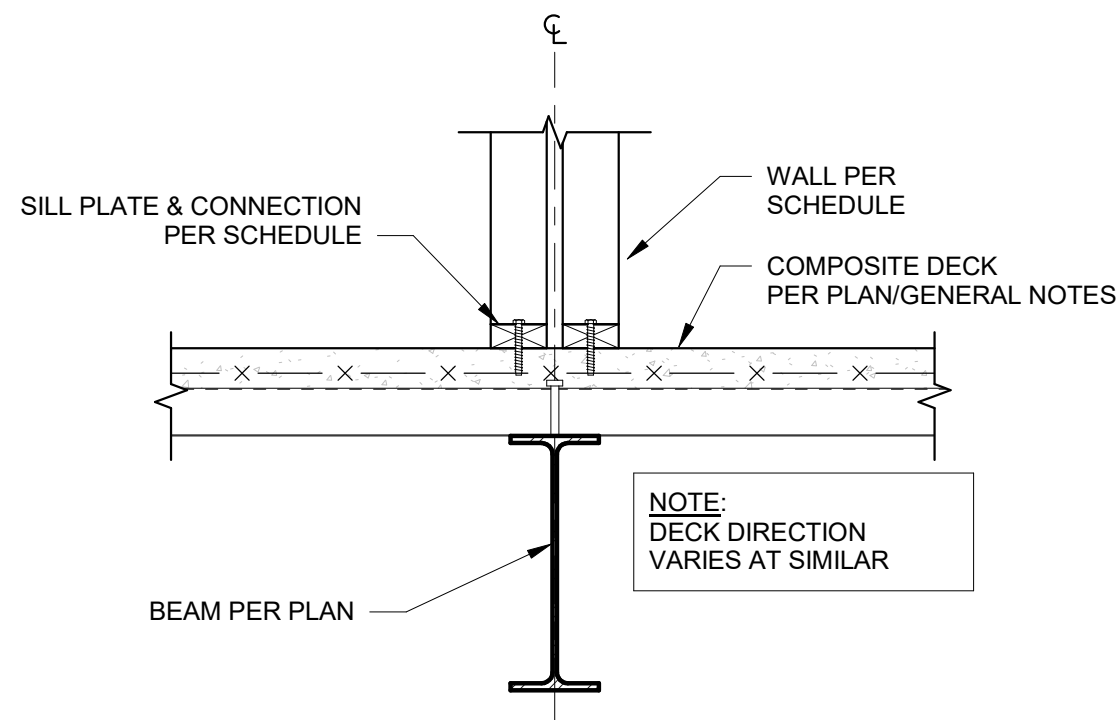
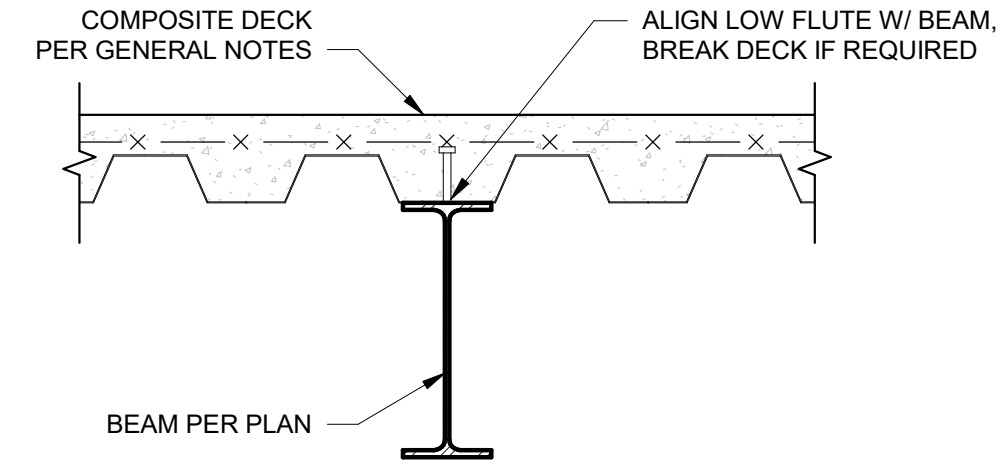
1 COMPOSITE DECK AT EXTERIOR BEAM
S513 1" = 1'-0"



2 COMPOSITE DECK BEARING AT BEAM
S513 1" = 1'-0"

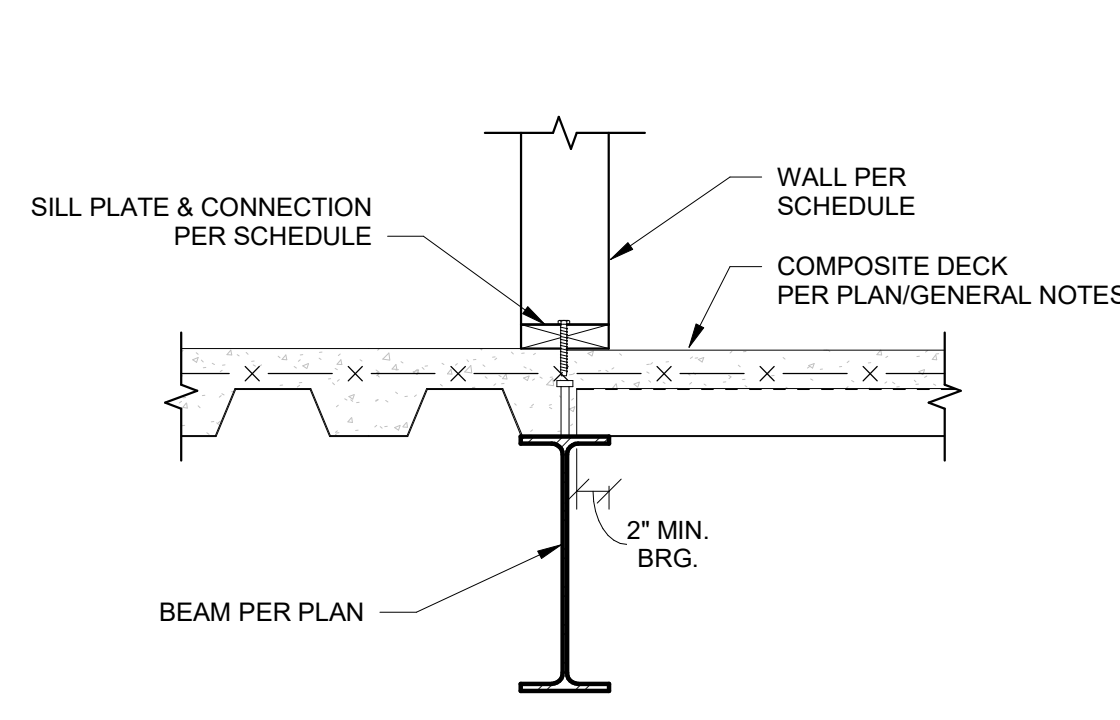


3 COMPOSITE DECK PARALLEL TO BEAM
S513 1" = 1'-0"

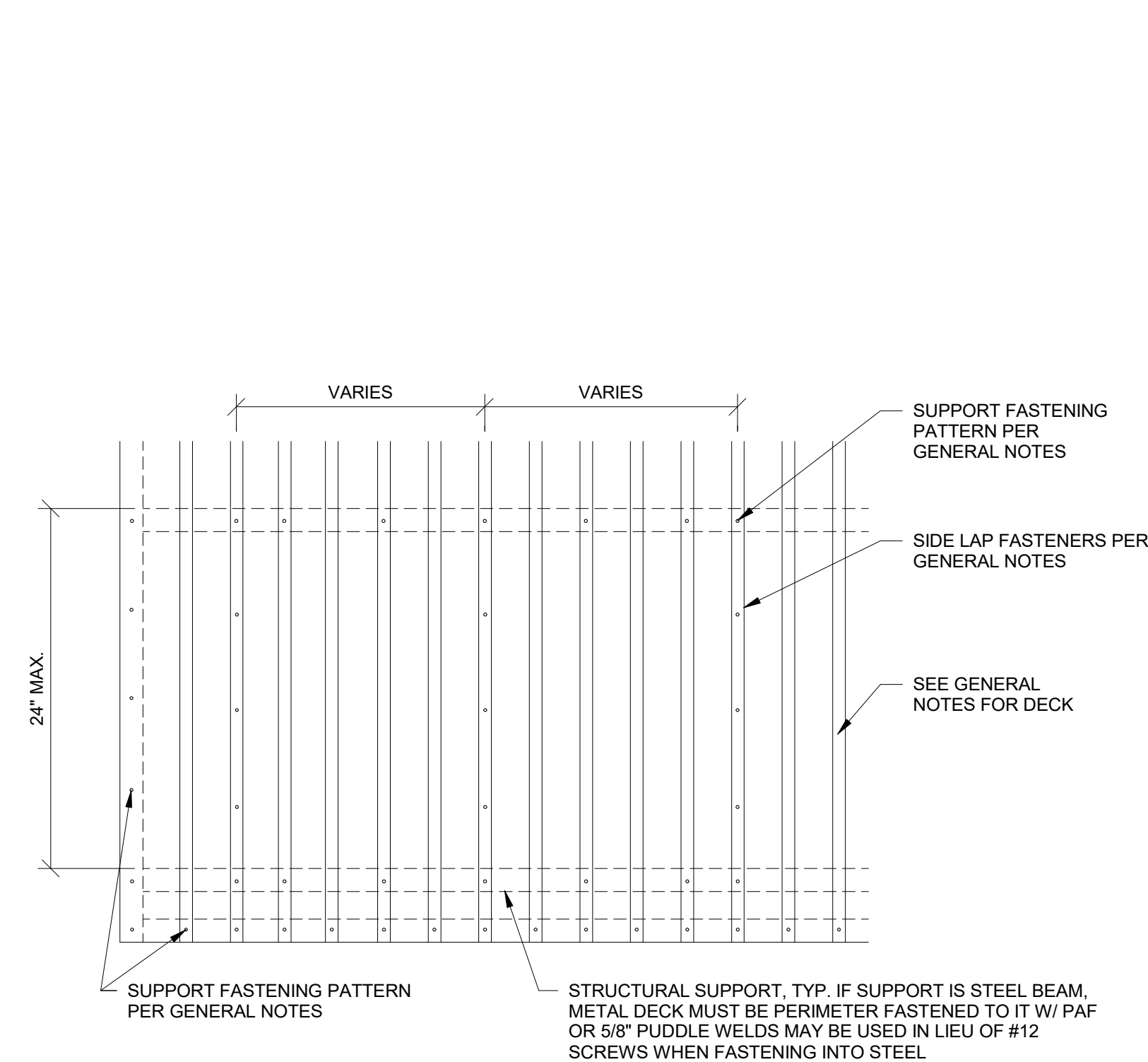


4 COMPOSITE DECK BEARING AT BEAM
S513 1" = 1'-0"

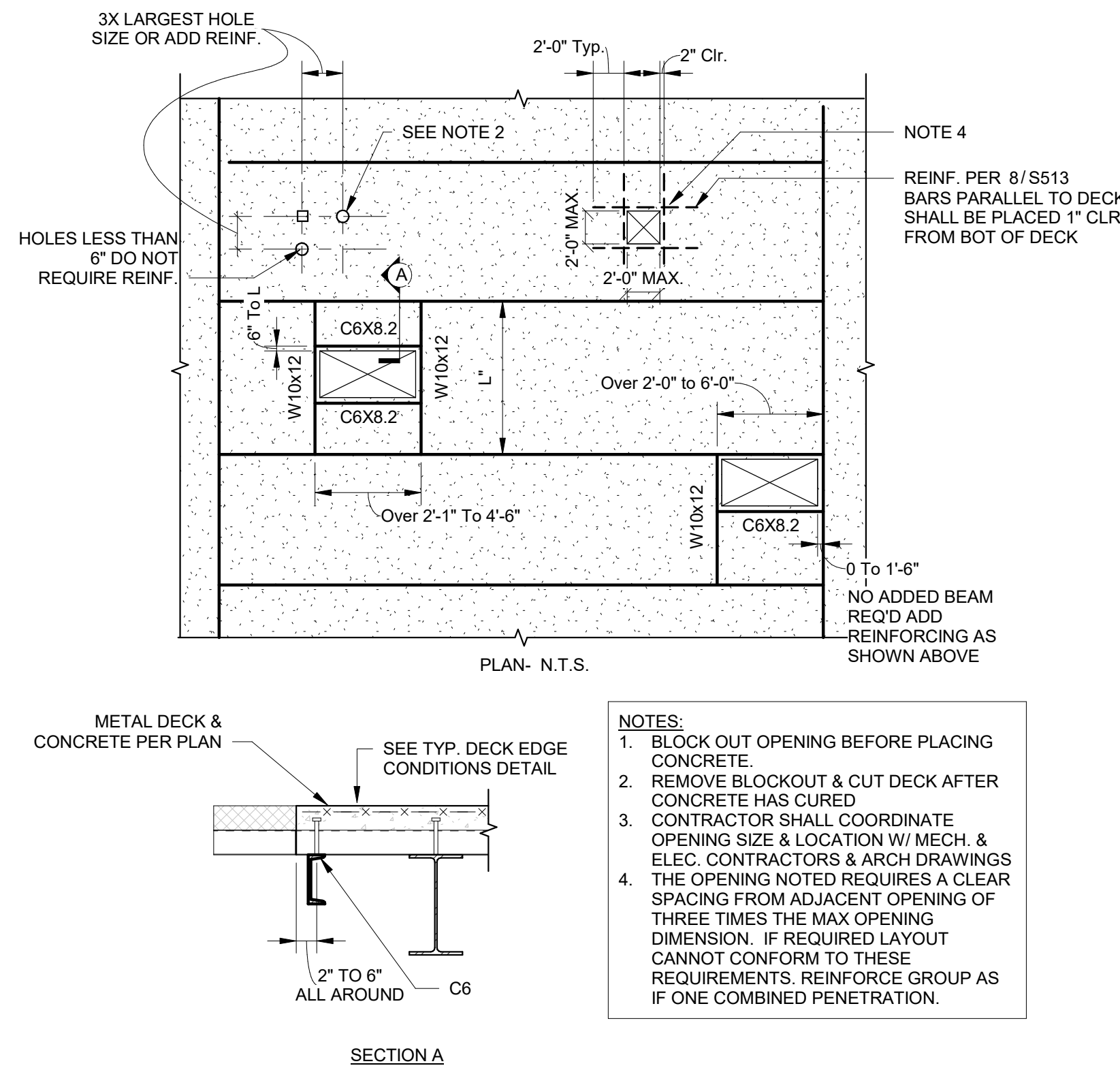
BELOW DEMISING



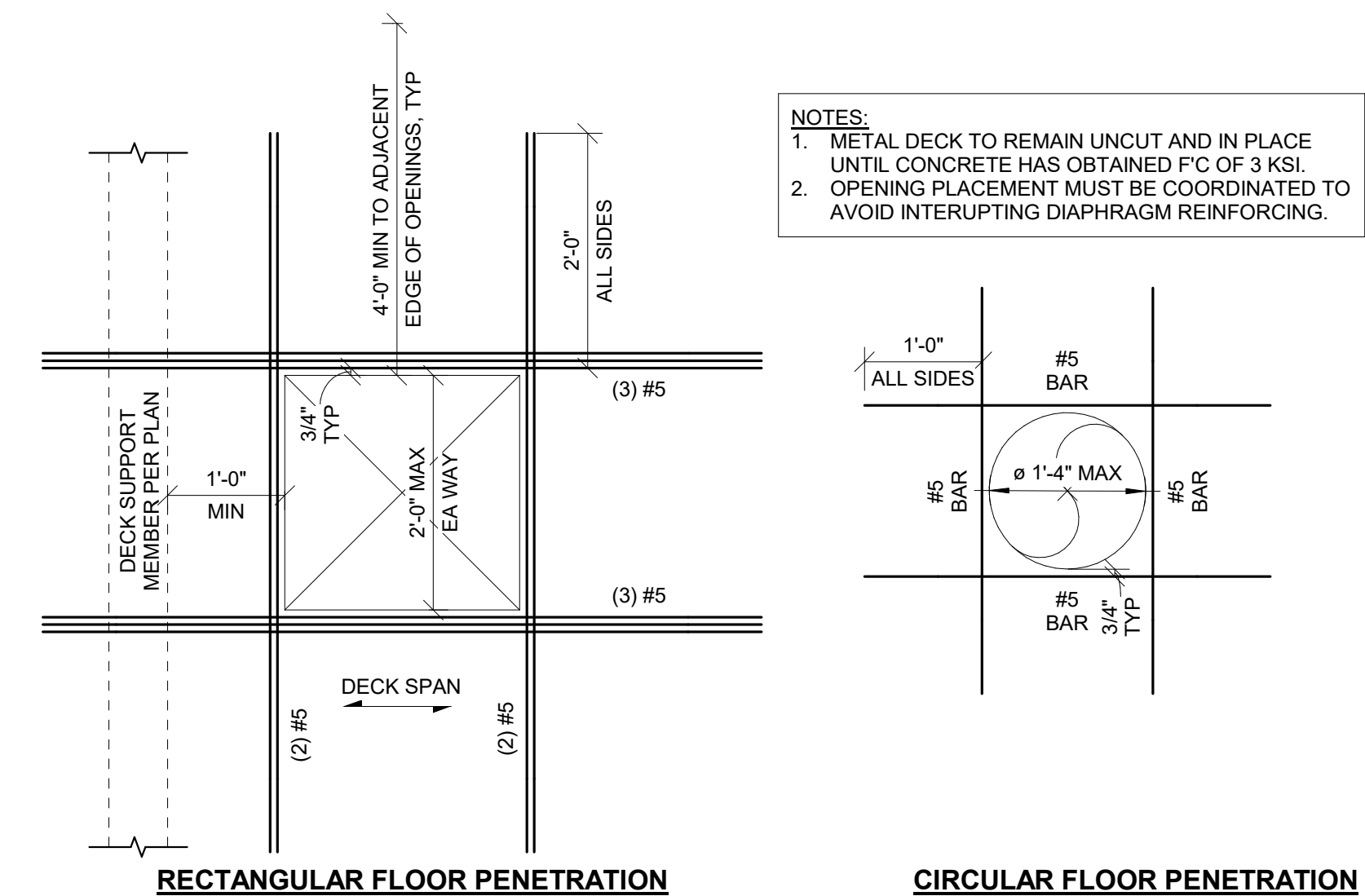
5 COMPOSITE DECK TRANSITION AT BEAM
S513 1" = 1'-0"



6 DECK FASTENING DETAIL
S513 1" = 1'-0"



7 TYPICAL FLOOR DECK OPENING
S513 3/4" = 1'-0"



8 REINFORCED OPENING IN SLAB ON METAL DECK
S513 3/4" = 1'-0"

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CONSTRUCTION

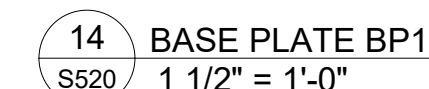
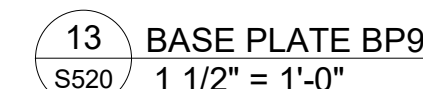
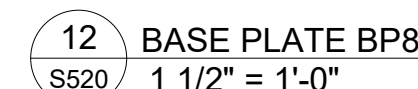
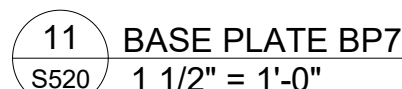
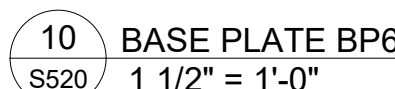
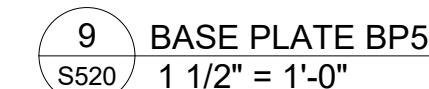
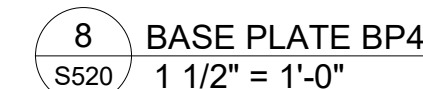
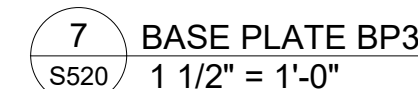
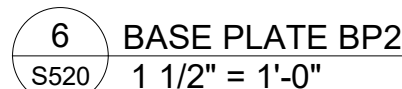
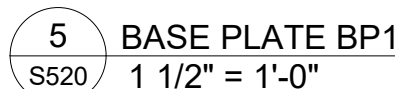
THE VILLAGE AT DISCOVERY -
LOT 4
NW COLBERN & NE DOUGLAS ST.,
LEE'S SUMMIT, MO 64064

SHEET TITLE
STEEL & COMPOSITE DECK
DETAILS

PROJECT NUMBER: 2023000333

SHEET NUMBER:

S513



- WOOD ROOF DETAILS MOVED TO S540 SERIES SHEETS
- PODIUM FRAMING DETAILS MOVED TO THIS SHEET FROM FORMER SHEETS S505, S506, S507

PRINTS ISSUED

01/25/2024 - CITY SUBMITTAL

REVISIONS:

1	10/21/2024	Addendum #1
2	11/11/2024	Addendum #2
3	12/26/2024	Addendum #3



M^CCLURE™

2001 W Broadway

Columbia, MO 65203
R 673 814 1568

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MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

THE VILLAGE AT DISCOVERY -

LOT 4

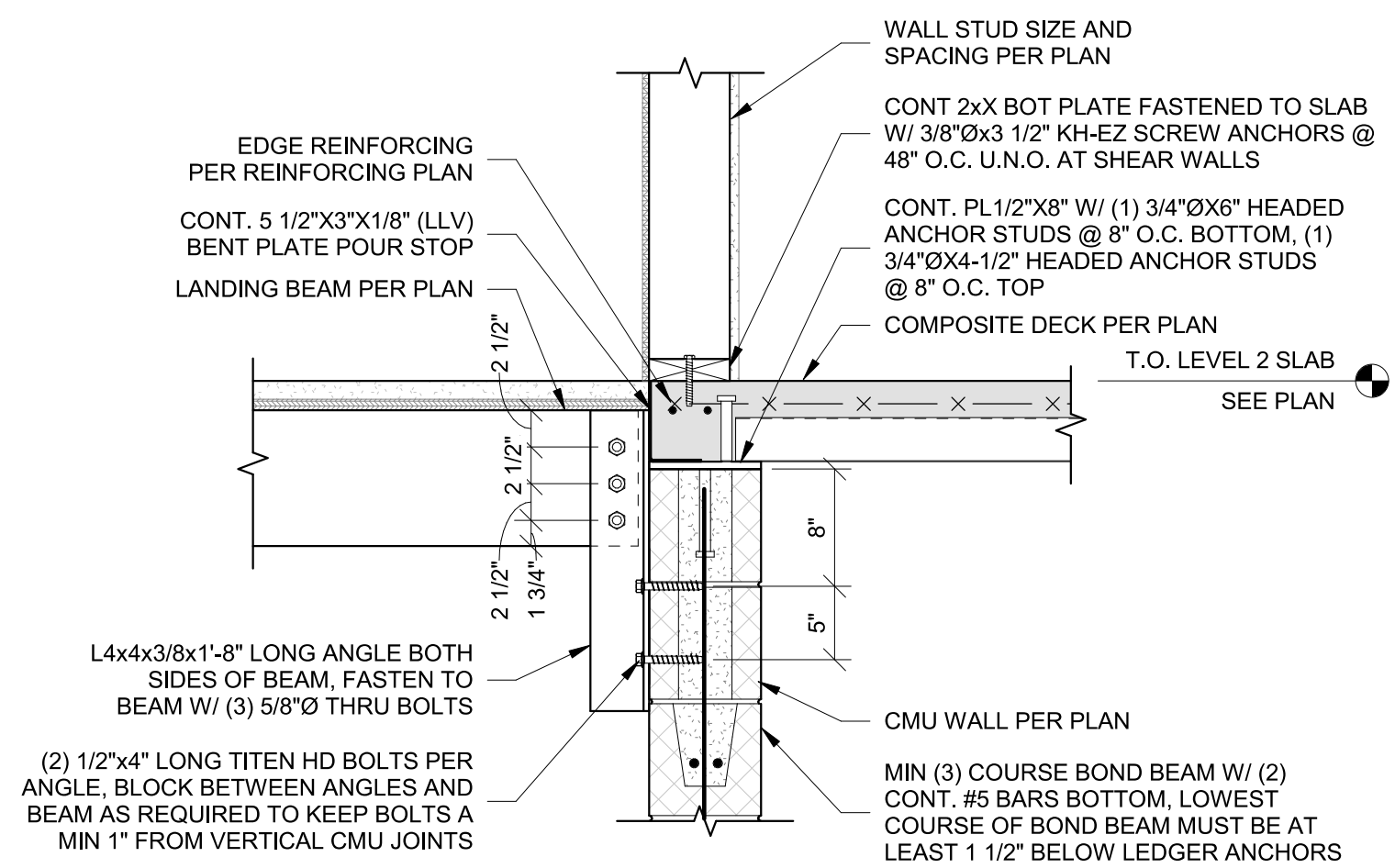
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

SHEET TITLE
PODIUM FRAMING DETAILS

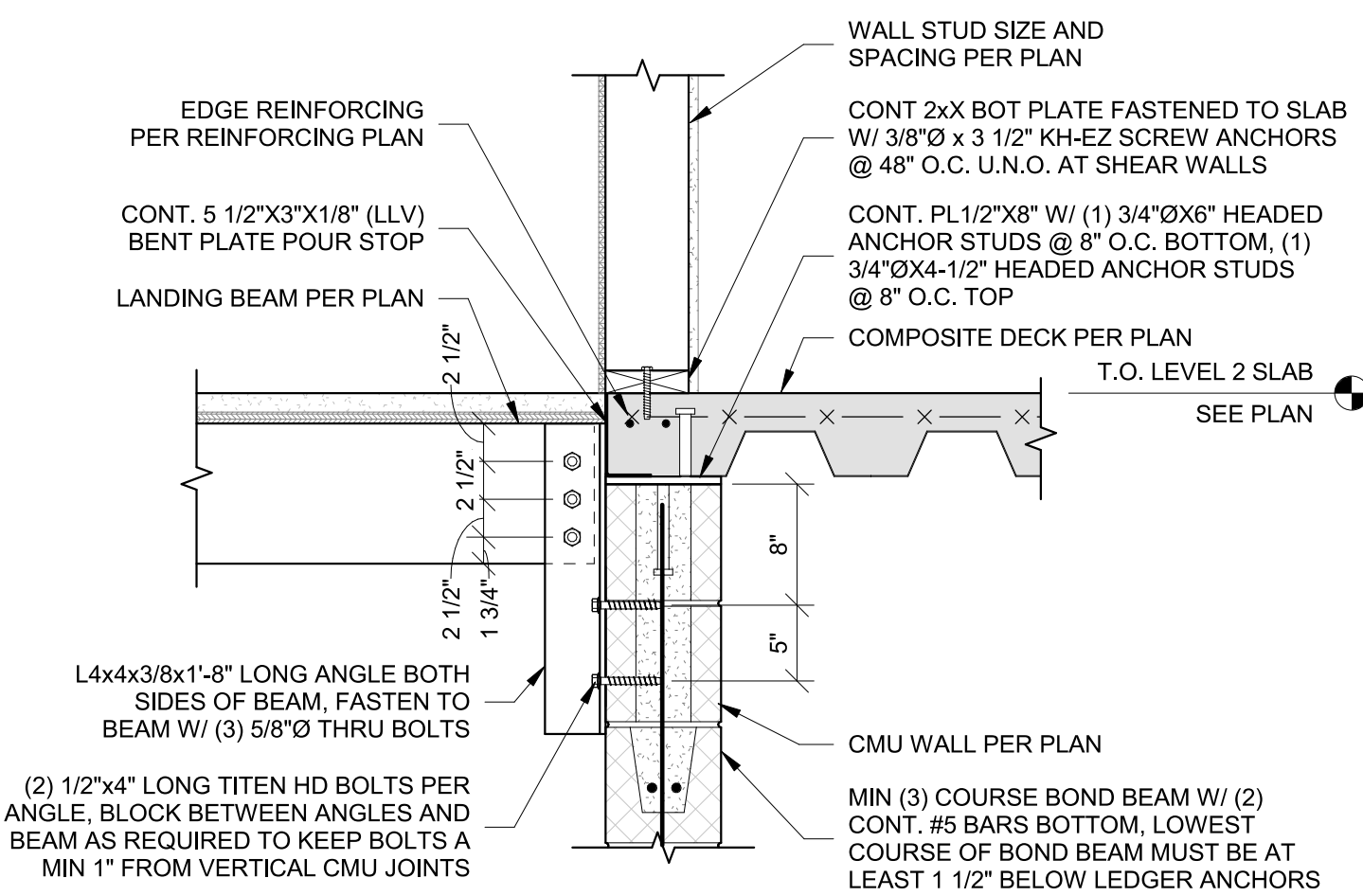
PROJECT NUMBER: 2023000333

SHEET NUMBER

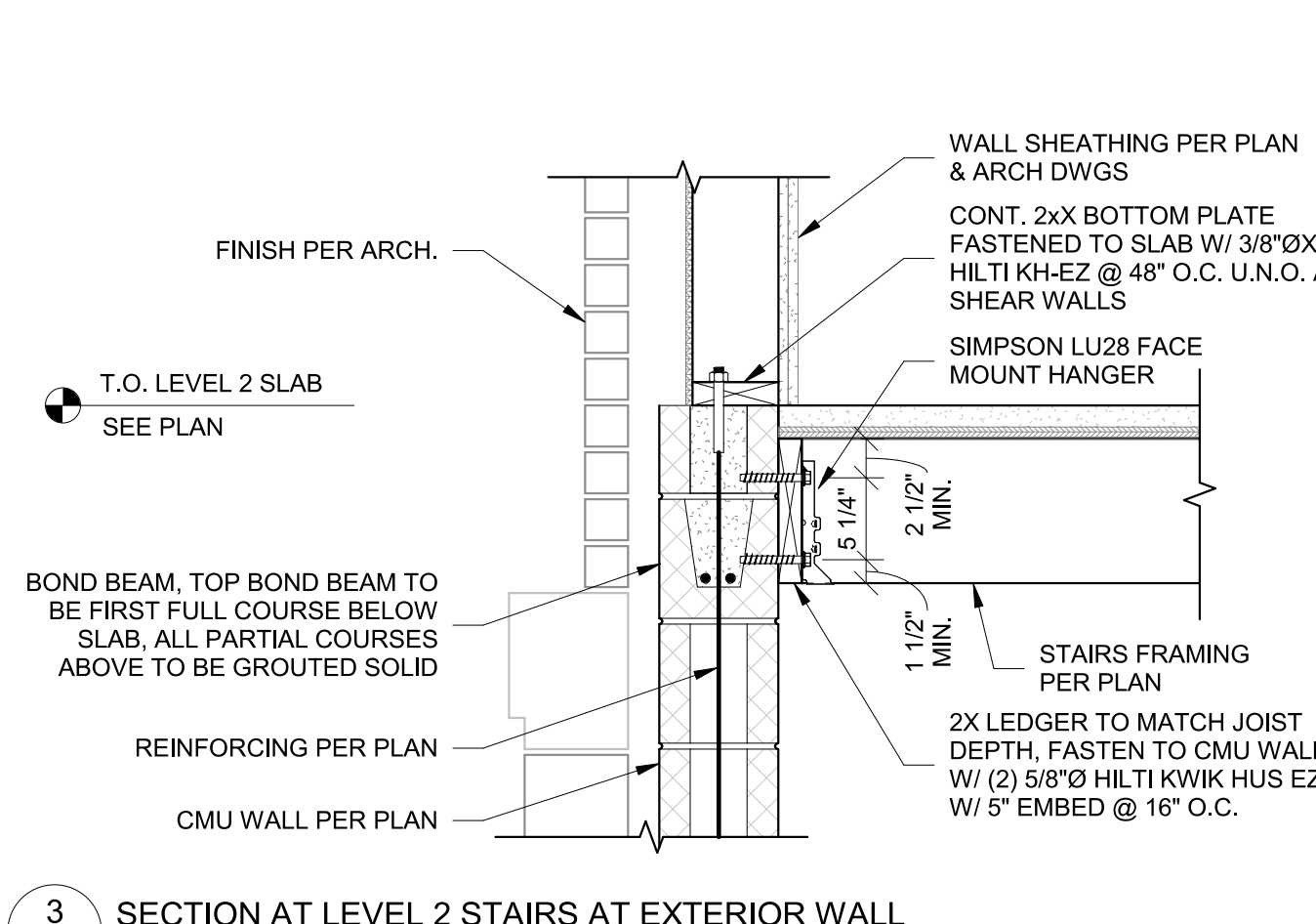
S520



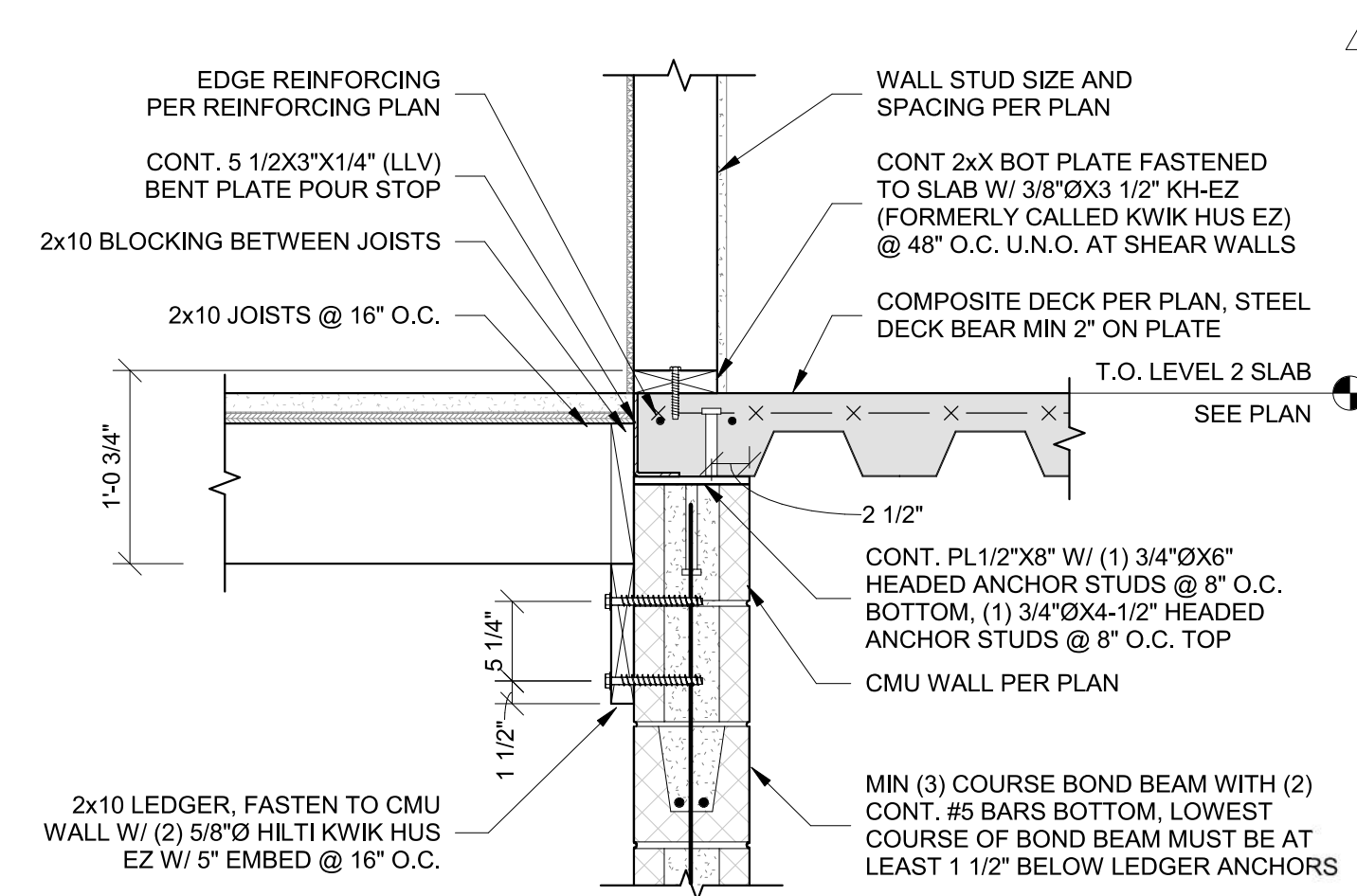
1 STAIR LANDING BEAM ATTACHMENT TO CMU
1" = 1'-0"



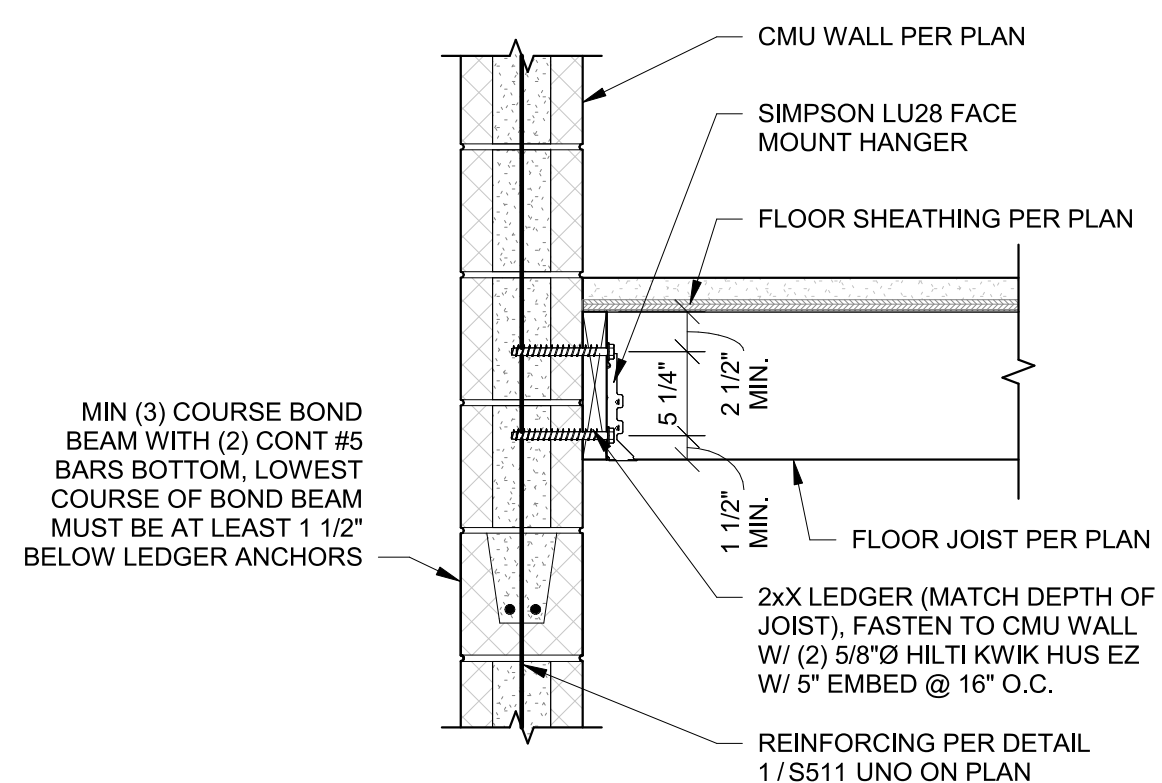
2 STAIR LANDING BEAM ATTACHMENT TO CMU
1" = 1'-0"



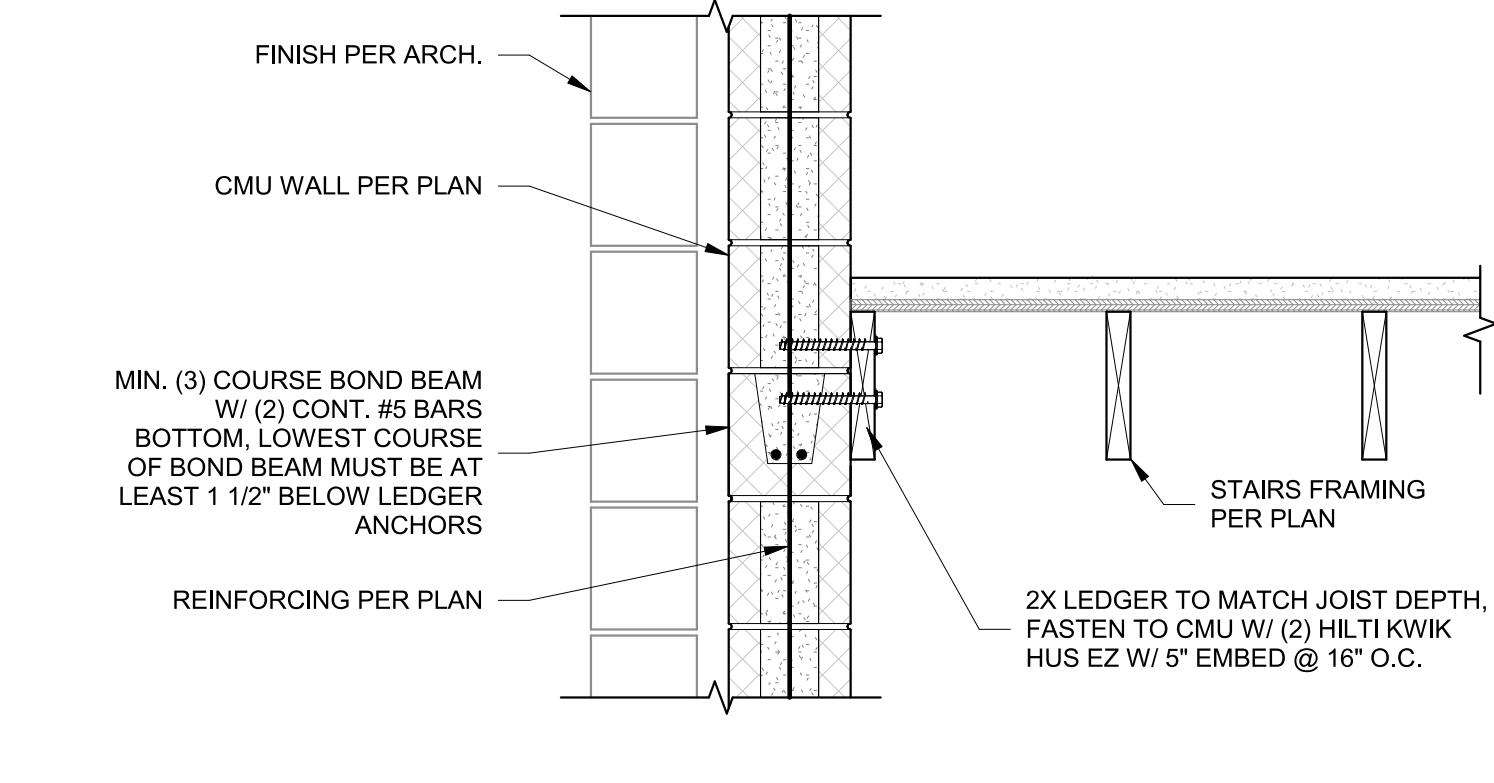
3 SECTION AT LEVEL 2 STAIRS AT EXTERIOR WALL
1" = 1'-0"



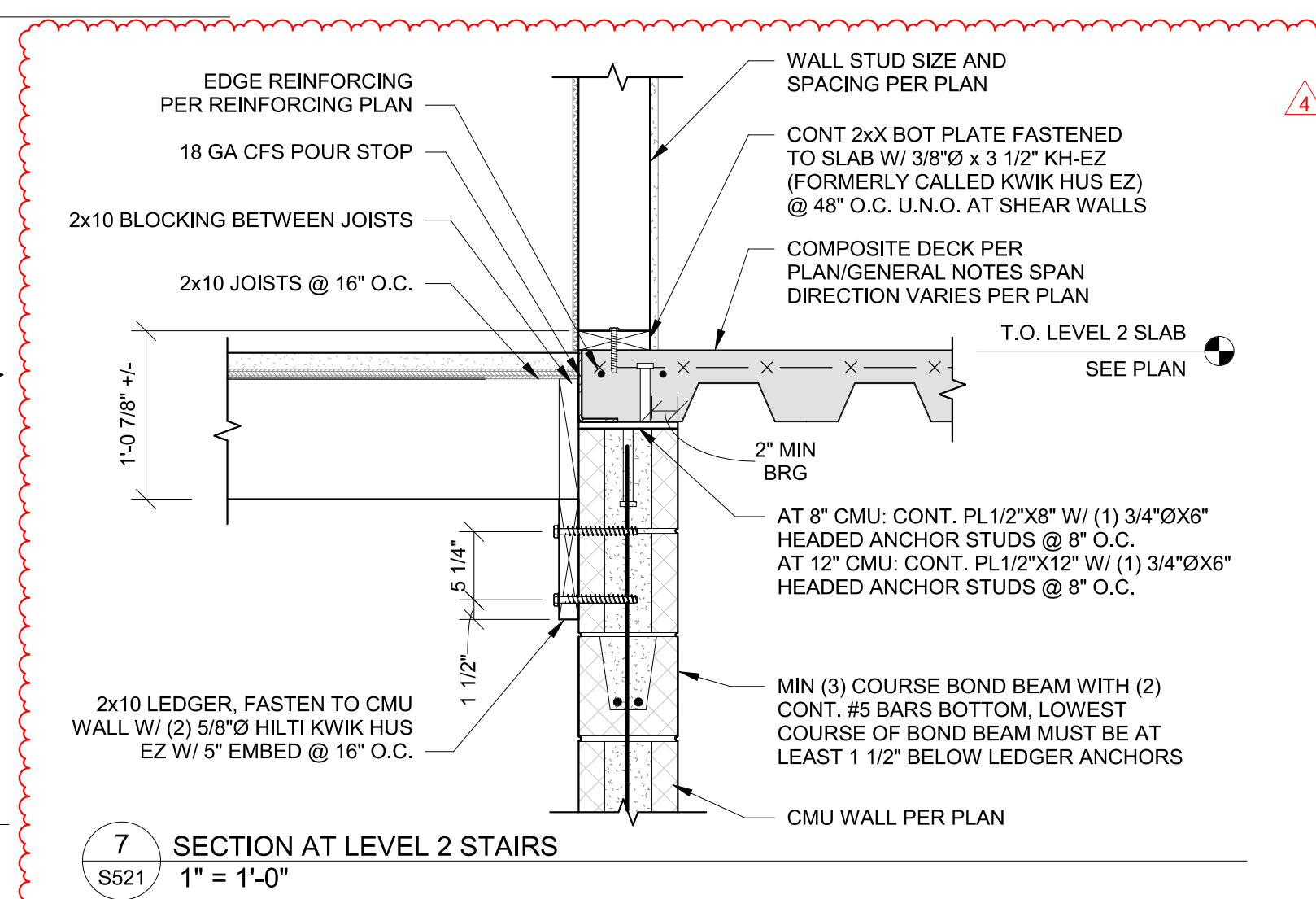
4 SECTION AT LEVEL 2 STAIRS
1" = 1'-0"



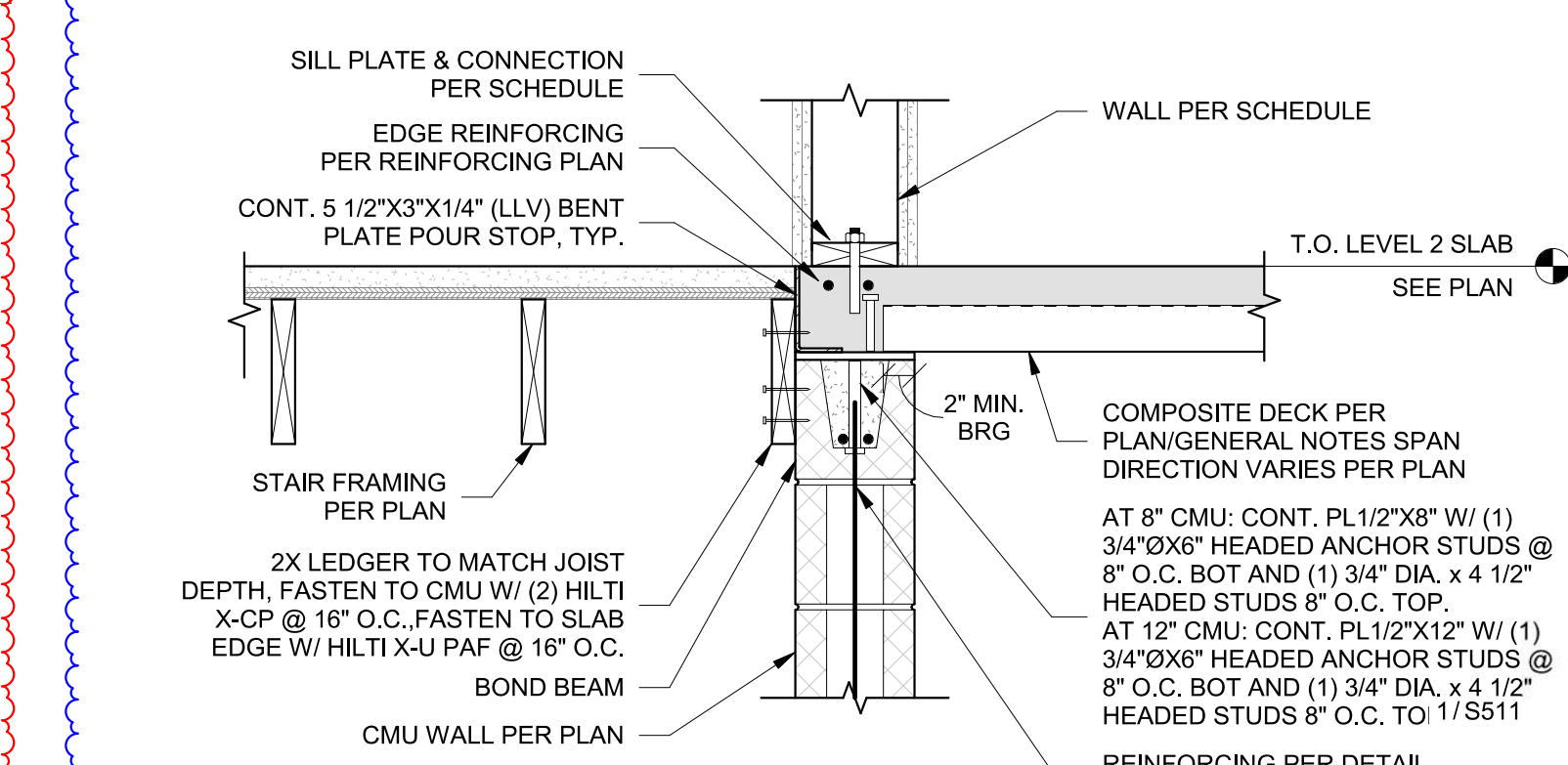
5 SECTION AT STAIR LANDING AT EXTERIOR WALL
1" = 1'-0"



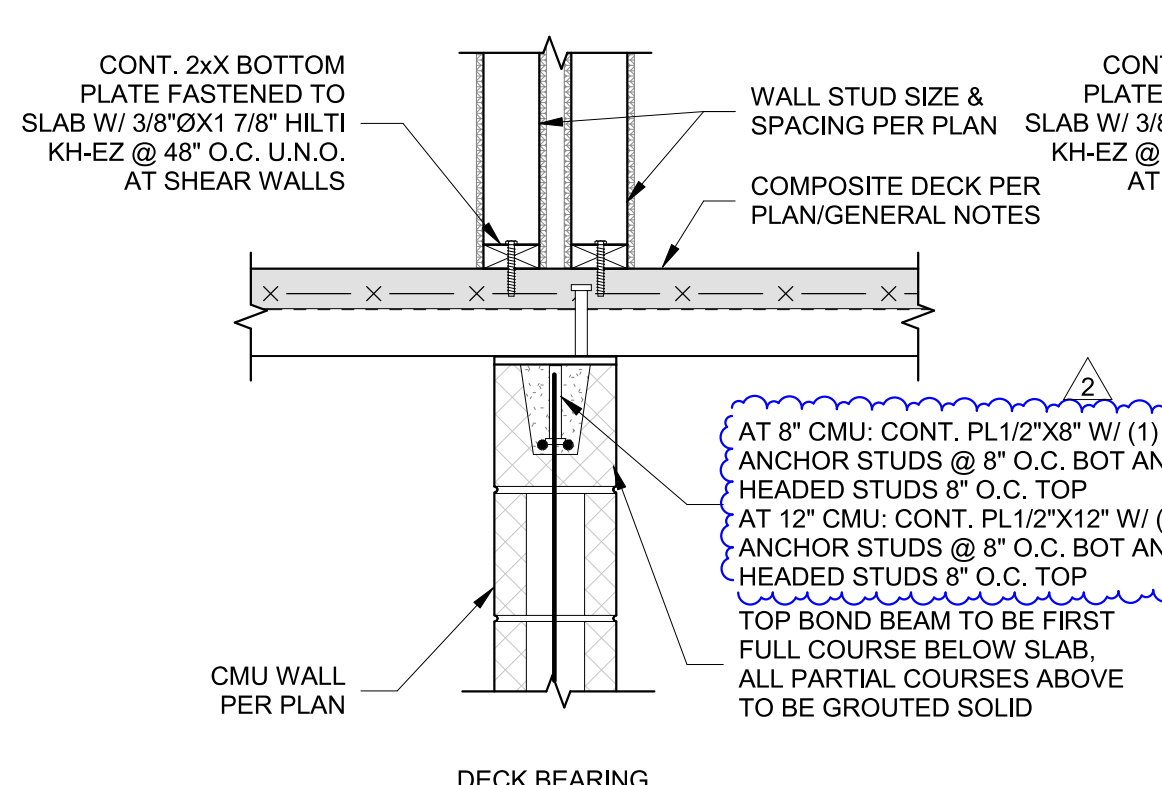
6 SECTION AT STAIR LANDING AT EXTERIOR WALL
1" = 1'-0"



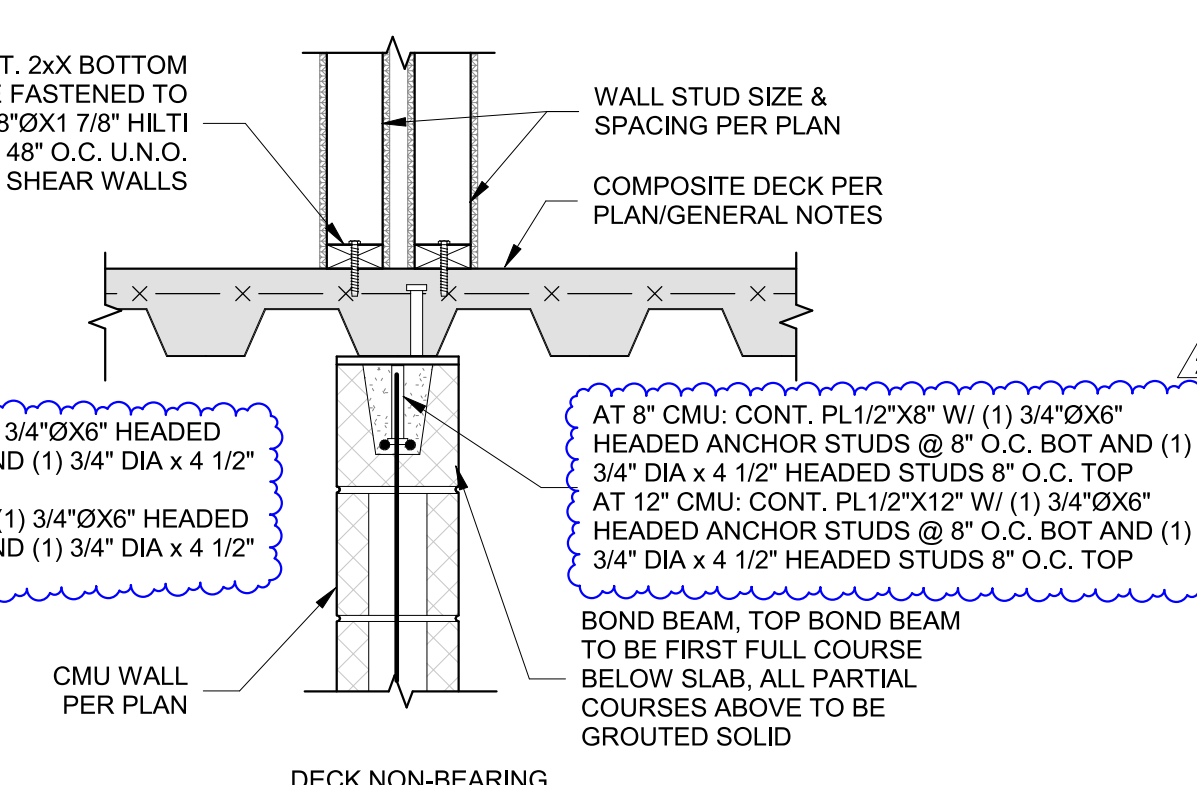
7 SECTION AT LEVEL 2 STAIRS
1" = 1'-0"



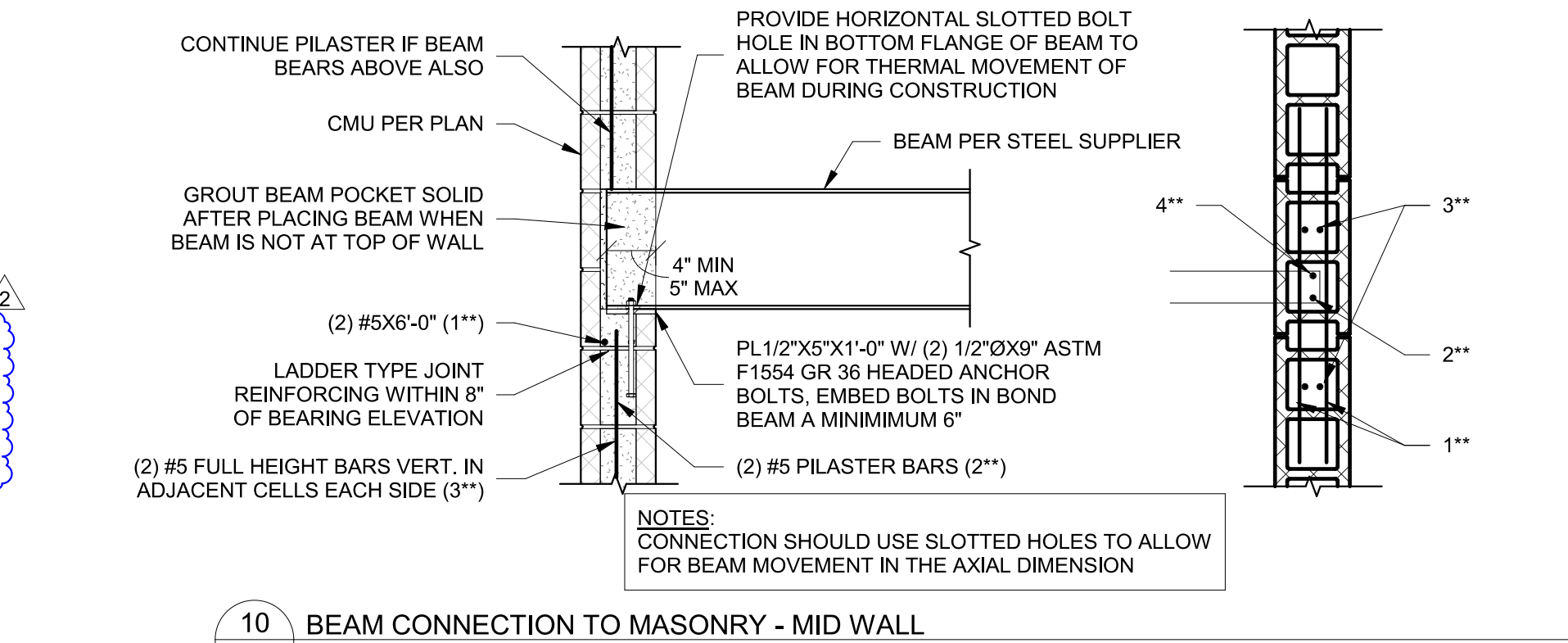
8 SECTION AT LEVEL 2 STAIRS JOISTS PARALLEL
1" = 1'-0"



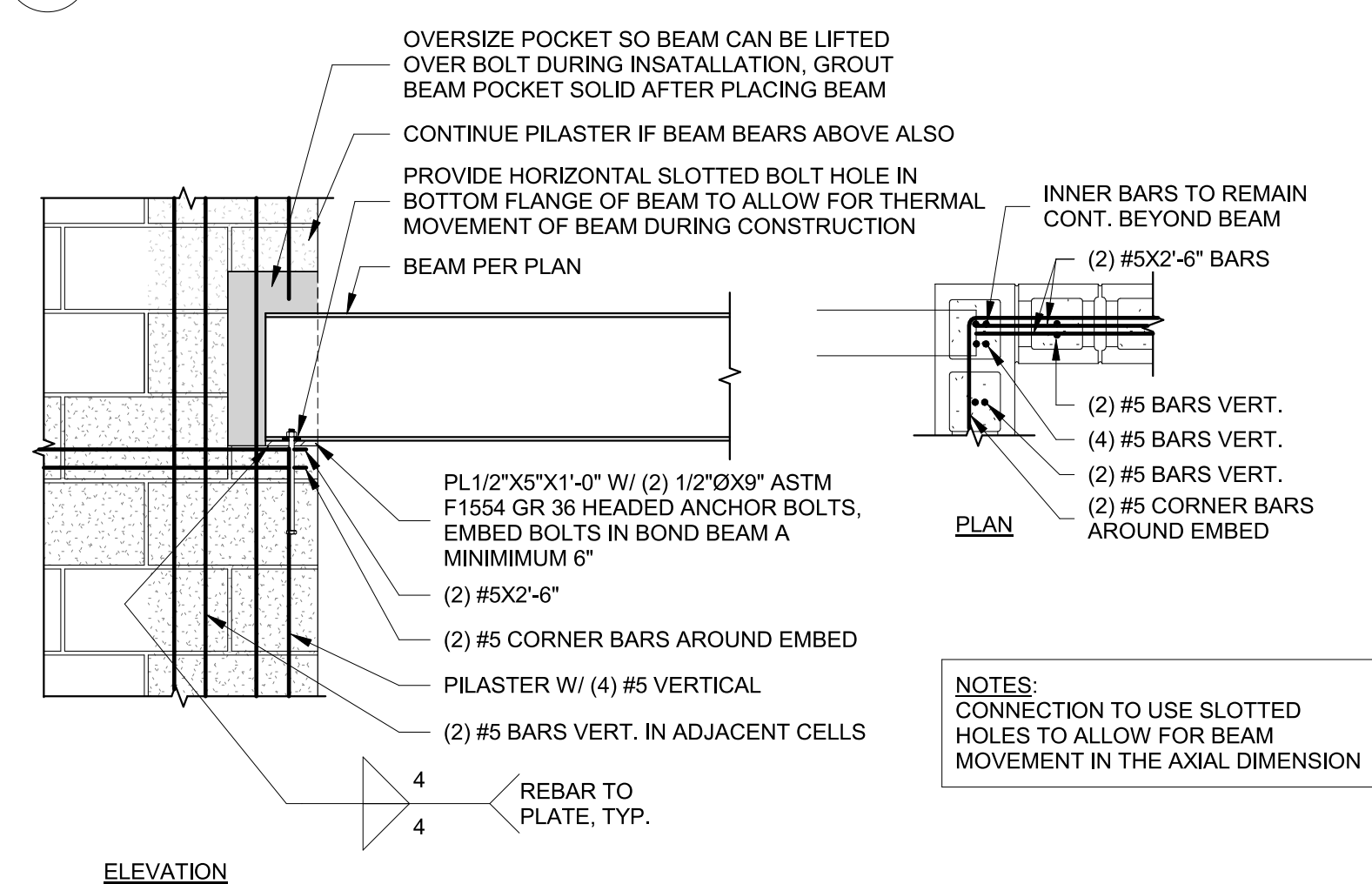
9 COMPOSITE DECK AT MASONRY
1" = 1'-0"



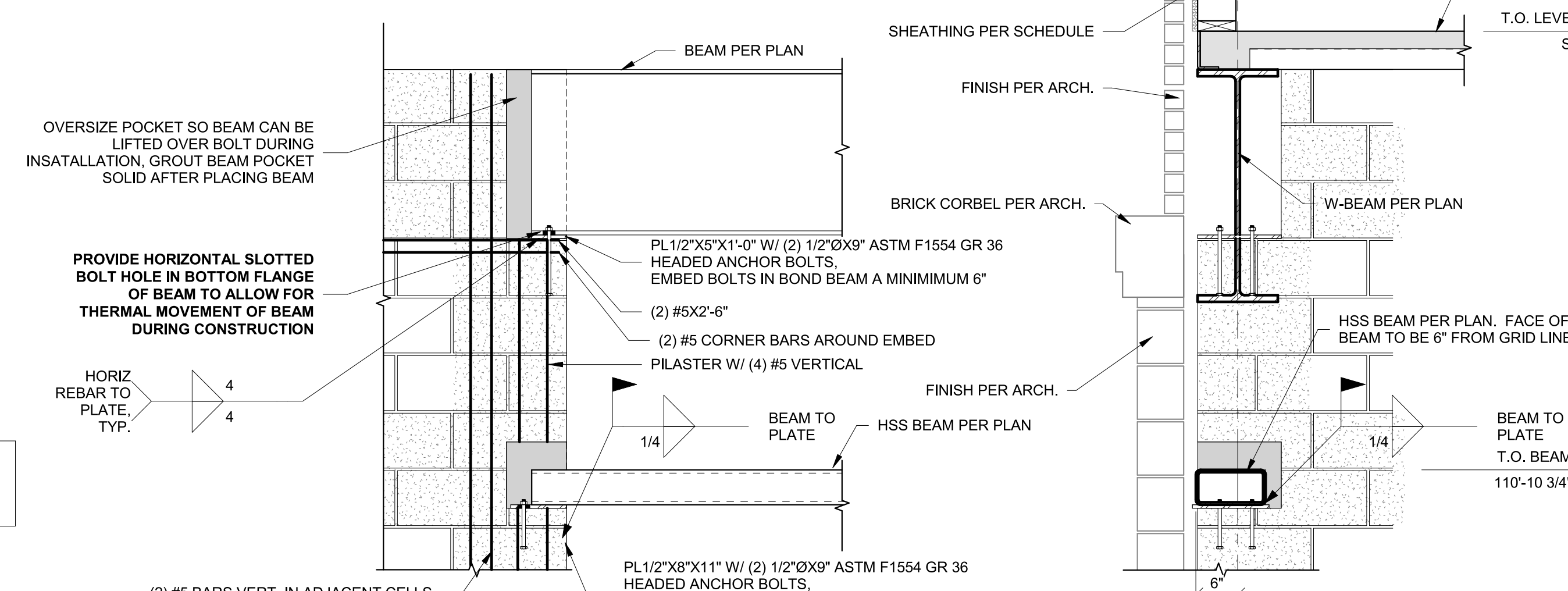
10 BEAM CONNECTION TO MASONRY - MID WALL
3/4" = 1'-0"



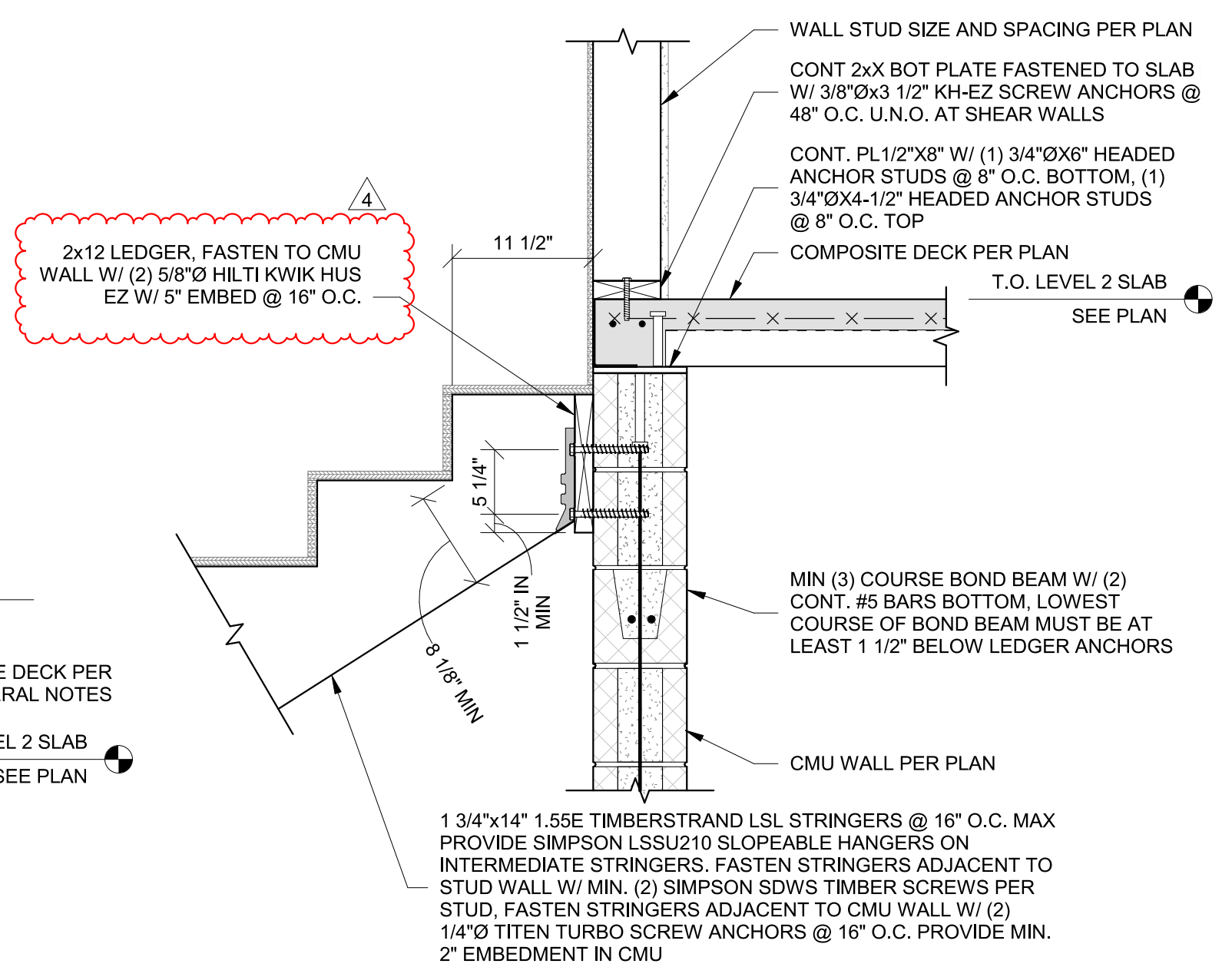
11 STAIR STRINGER CONNECTION TO CMU WALL
1" = 1'-0"



12 BEAM CONNECTION TO MASONRY AT CORNER
3/4" = 1'-0"



13 CMU WALL BEAM SUPPORT
3/4" = 1'-0"



14 SECTION AT LEVEL 2 STAIRS
1" = 1'-0"

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REVISIONS:

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- 11/11/2024 Addendum #2
- 12/26/2024 Addendum #3
- 01/23/2025 Addendum #4 Stair Elevation Coordination

McCLURE
2001 W Broadway
Columbia, MO 65203
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01/23/2025

THE VILLAGE AT DISCOVERY -

LOT 4

1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

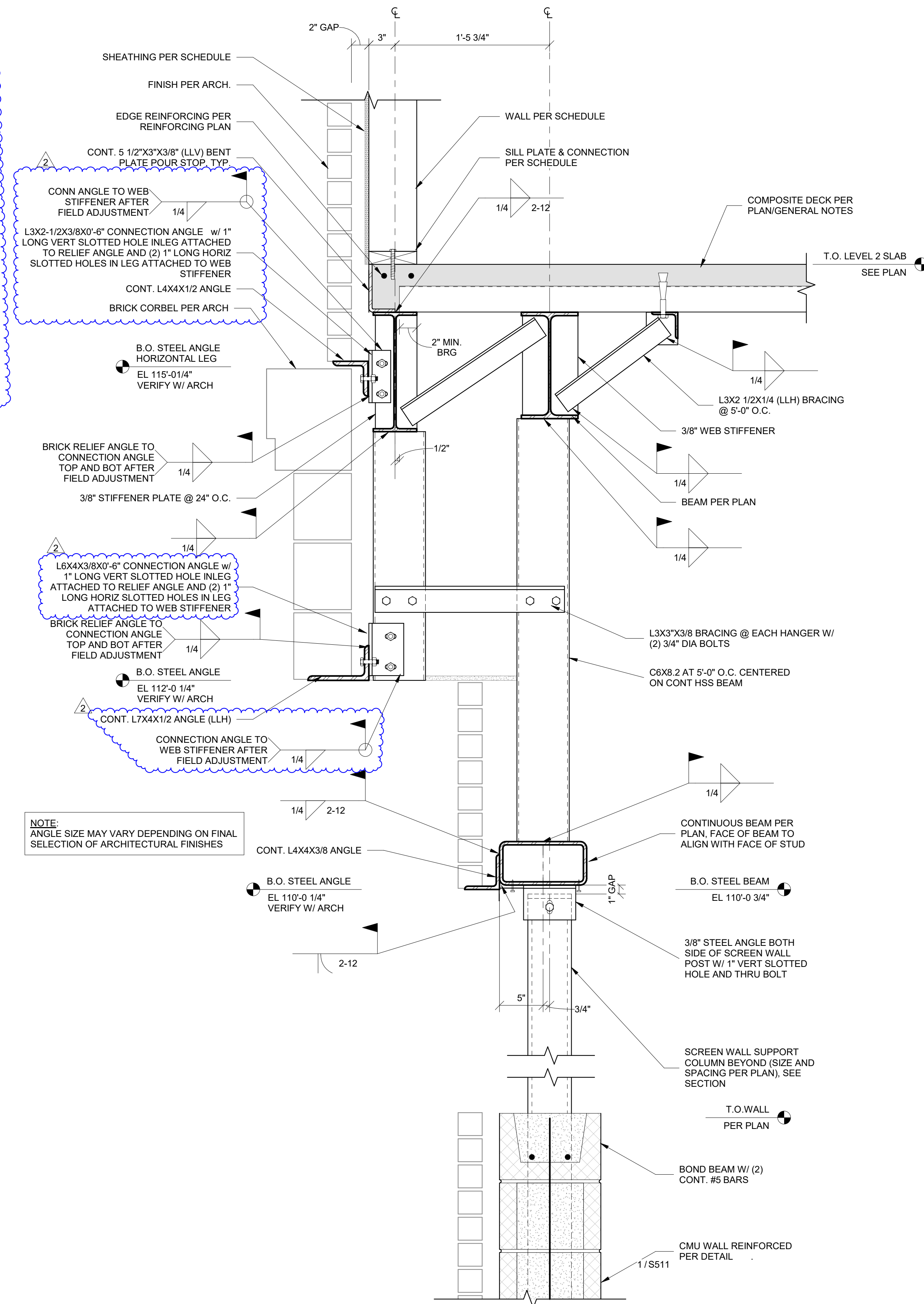
SHEET TITLE
PODIUM FRAMING DETAILS

PROJECT NUMBER: 2023000333

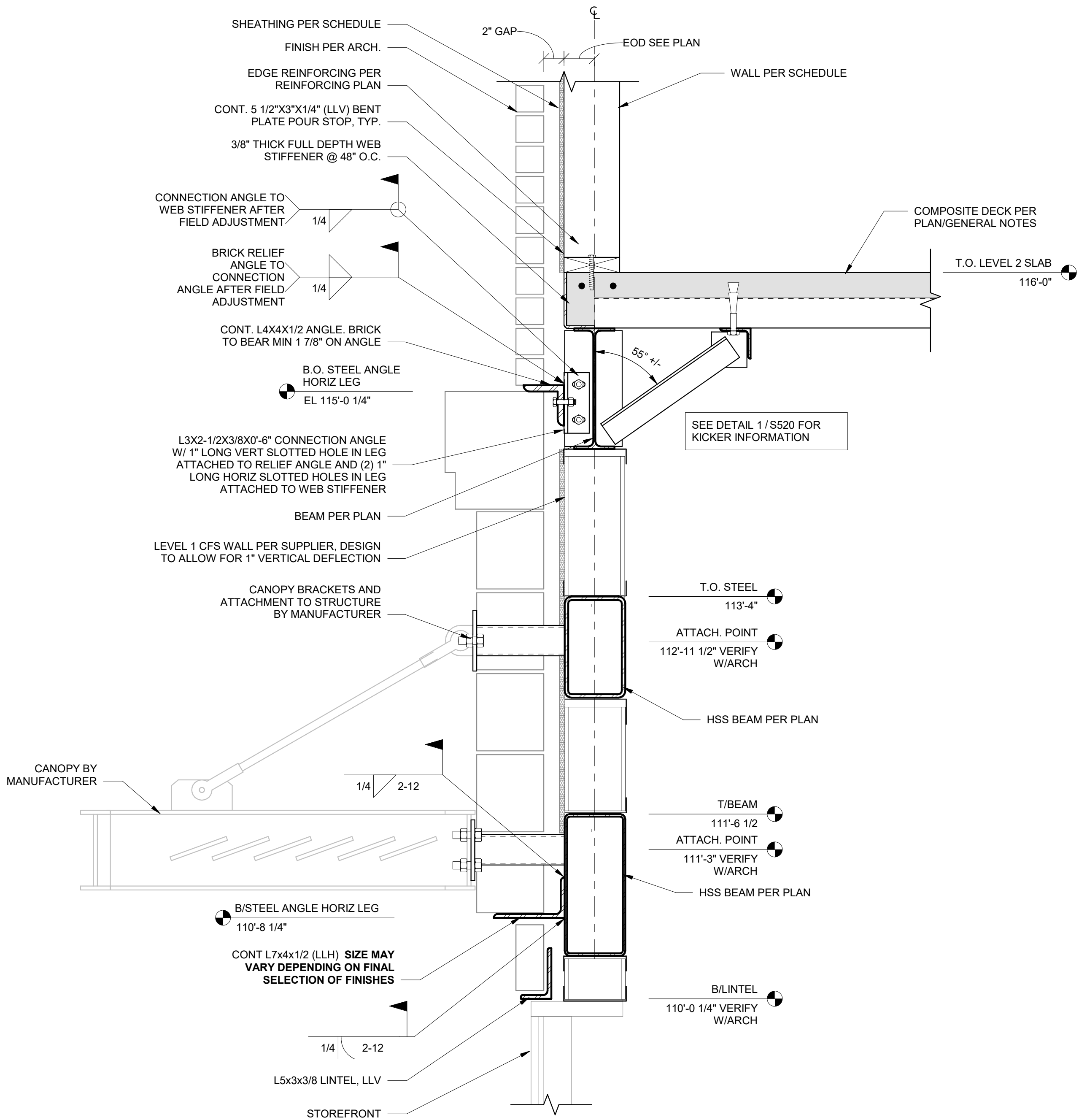
SHEET NUMBER:

S521

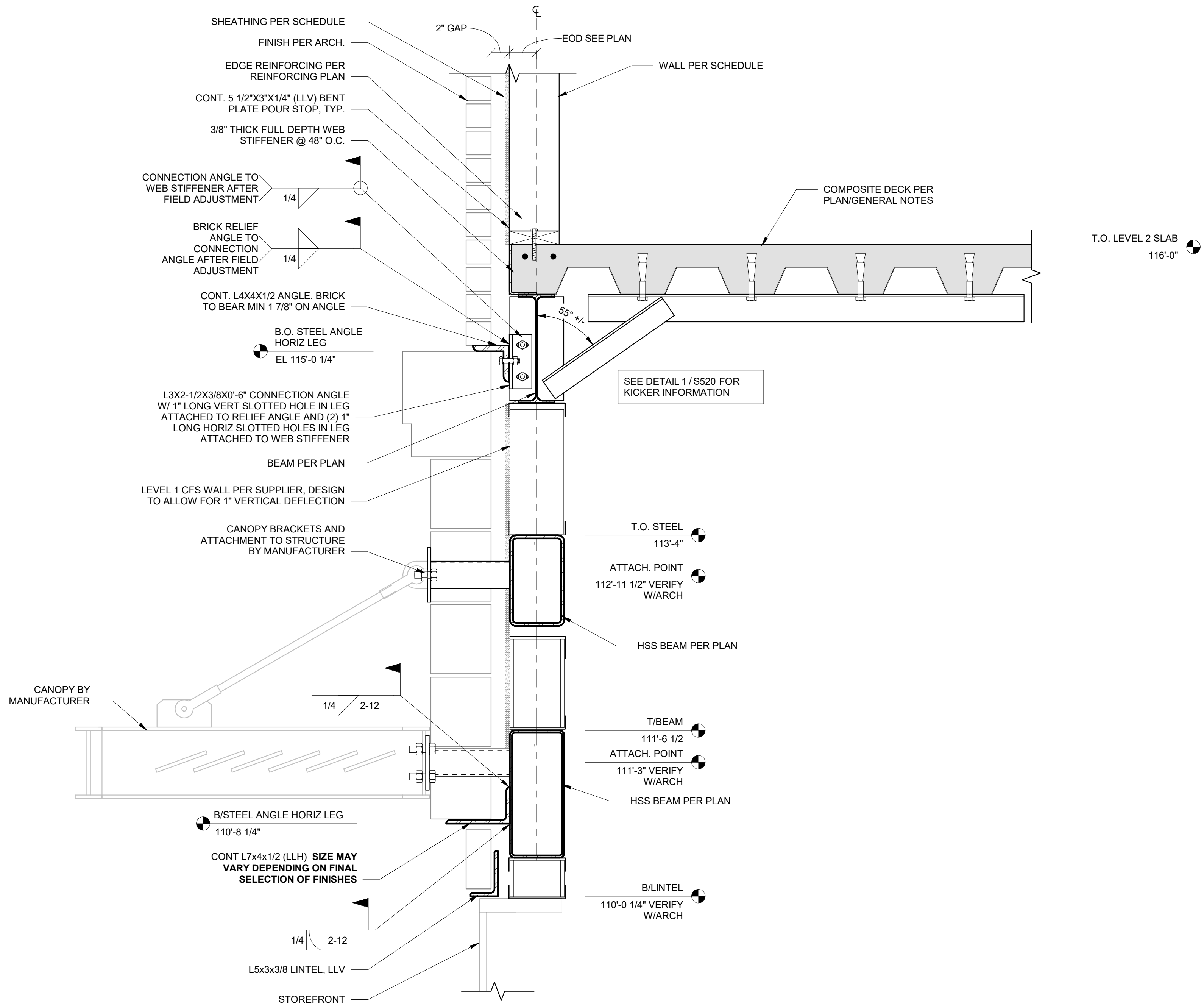
- WOOD ROOF DETAILS MOVED TO S540 SERIES SHEETS
- PODIUM FRAMING DETAILS MOVED TO THIS SHEET FROM S505, S506, S507



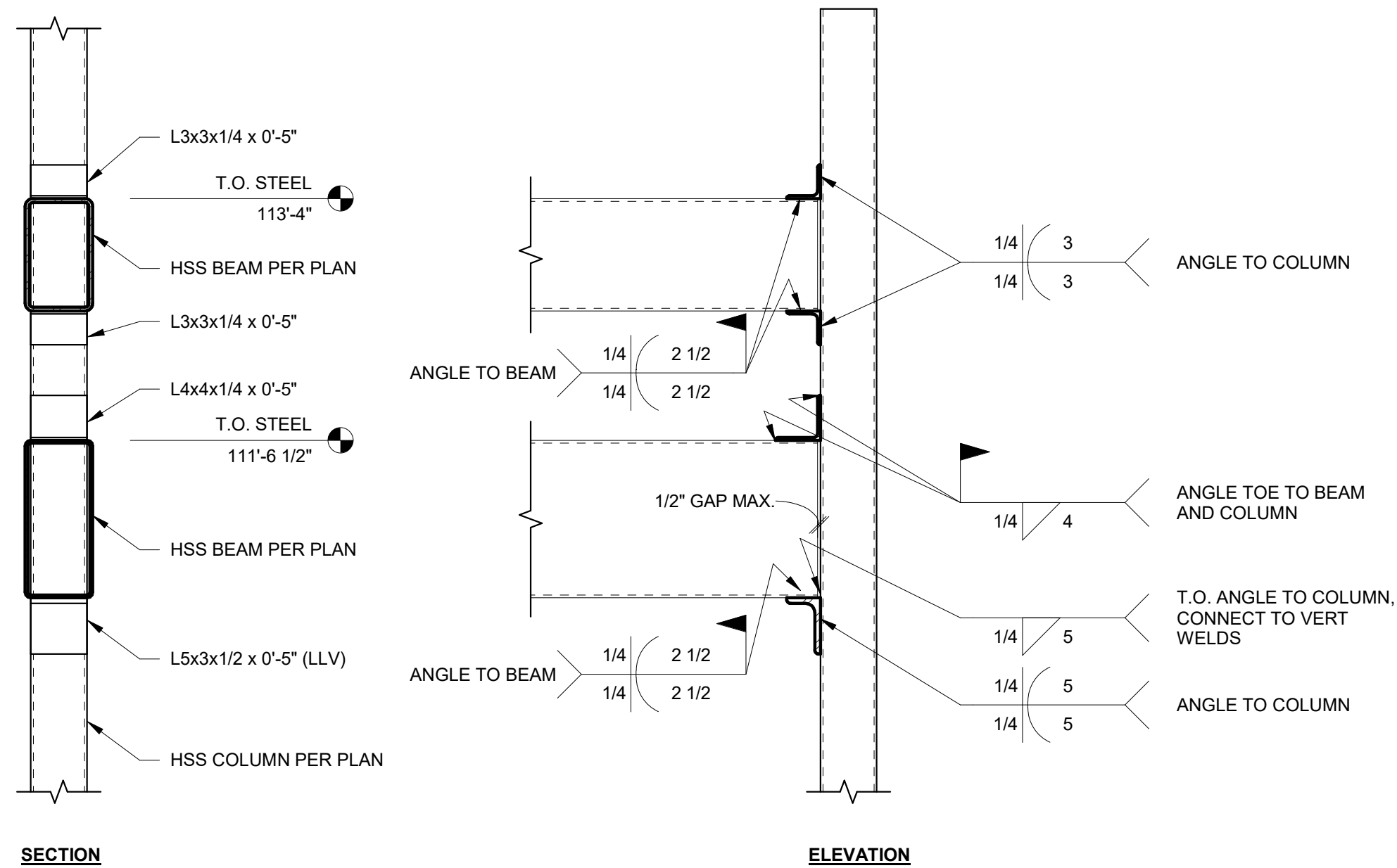
NEW SHEET AND DETAILS
(ENTIRE SHEET)



1A PODIUM SECTION AT CANOPY, DECK PERPENDICULAR
1 1/2" = 1'-0"



1B PODIUM SECTION AT CANOPY - DECK PARALLEL
1 1/2" = 1'-0"



2 CANOPY FRAMING TO COLUMN CONNECTIONS
1" = 1'-0"

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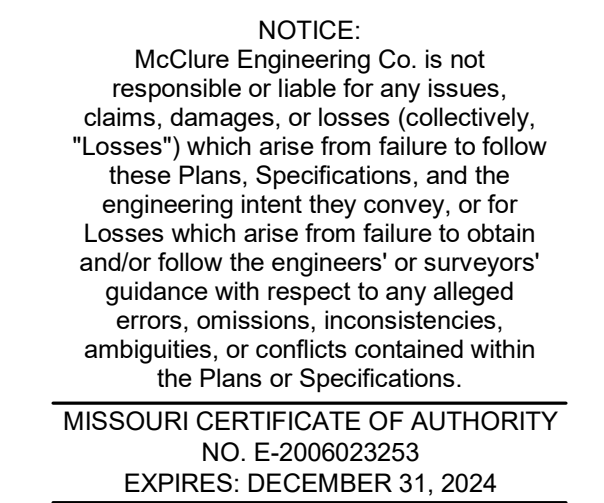
THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

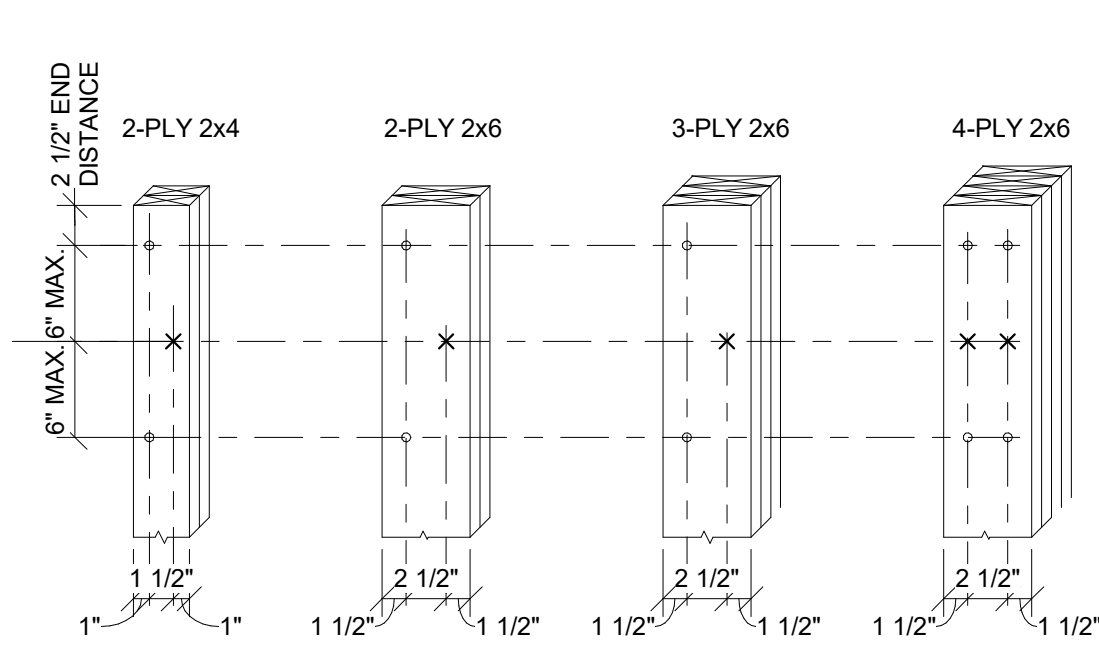
SHEET TITLE
PODIUM FRAMING DETAILS

PROJECT NUMBER: 2023000333

SHEET NUMBER:

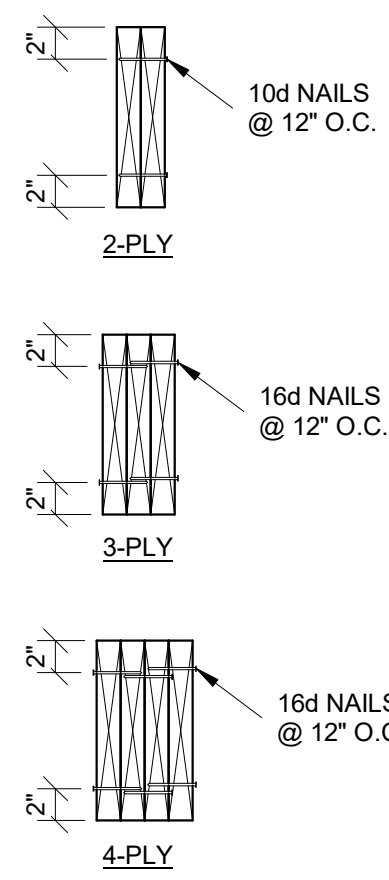
S523



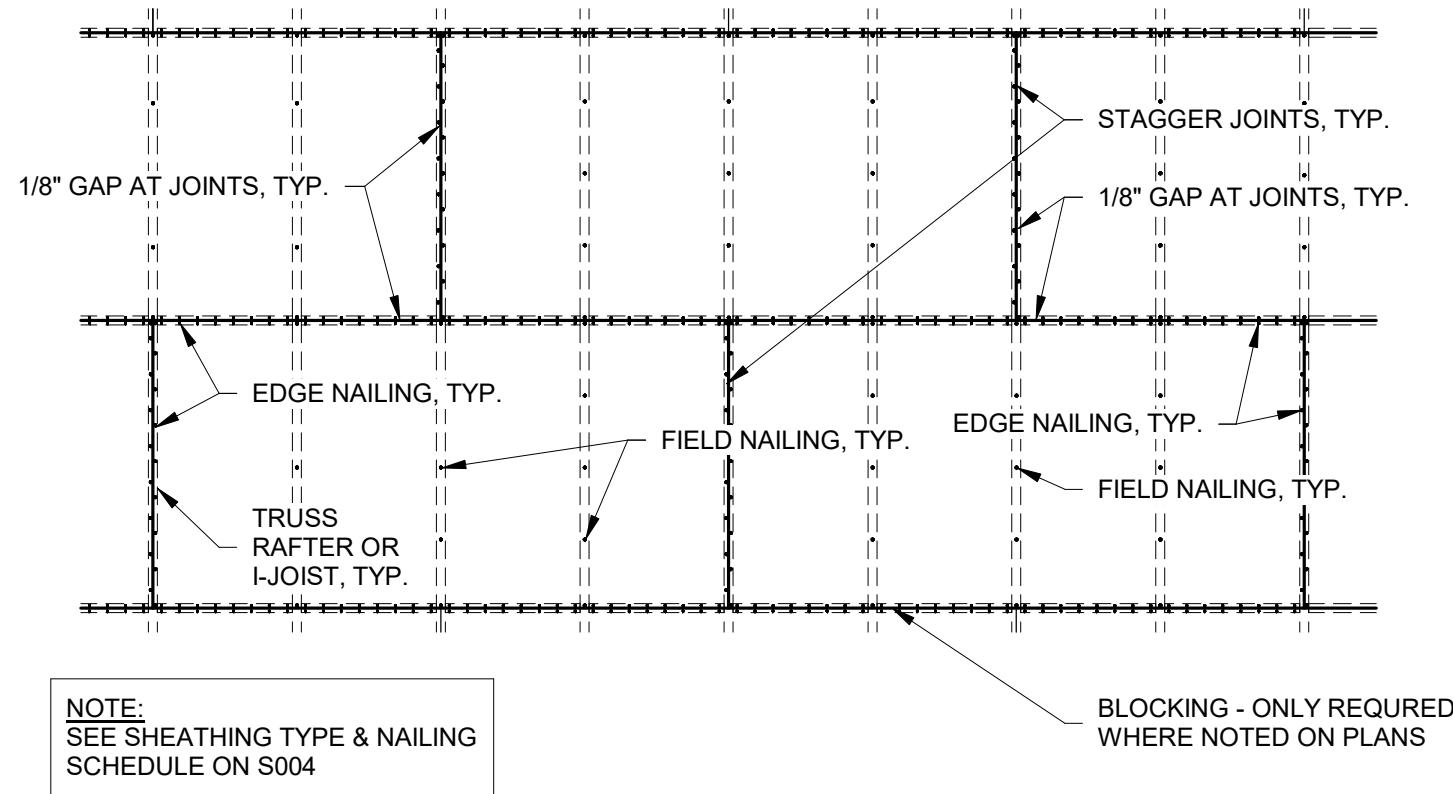


LEGEND
* NAIL FROM THIS SIDE
X NAIL FROM OPPOSITE SIDE

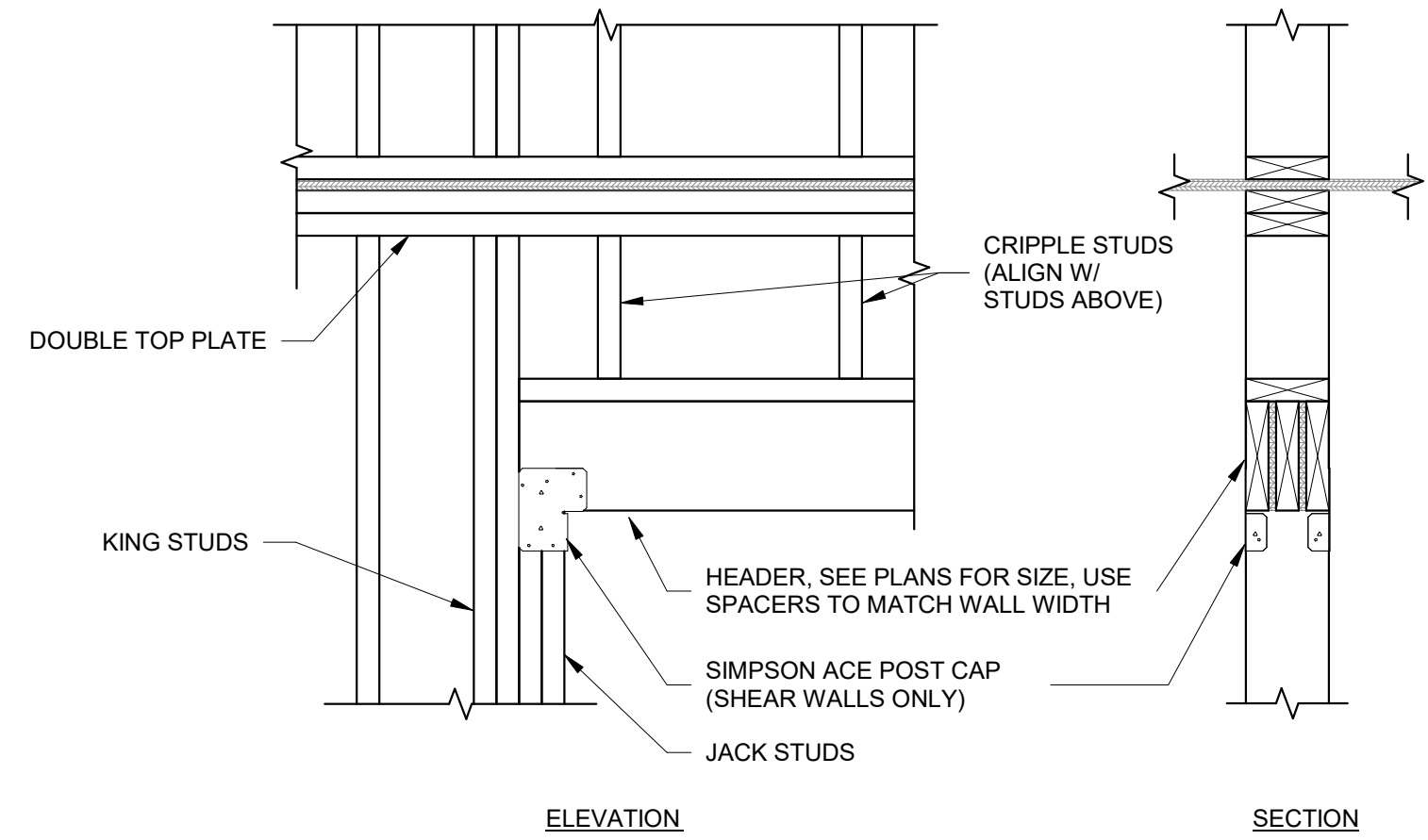
COLUMN NOTES:
1. USE 10d NAILS FOR 2-PLY & 30d FOR 3-PLY AND 4-PLY. ADJACENT NAILS ARE TO BE DRIVEN FROM OPPOSITE SIDES OF COLUMN.
2. USE 16d NAILS FOR 2-PLY & 30d FOR 3-PLY AND 4-PLY. ADJACENT NAILS ARE TO BE DRIVEN FROM OPPOSITE SIDES OF COLUMN.



BEAM NOTE:
1. PROVIDE MIN. (3) NAILS EACH END



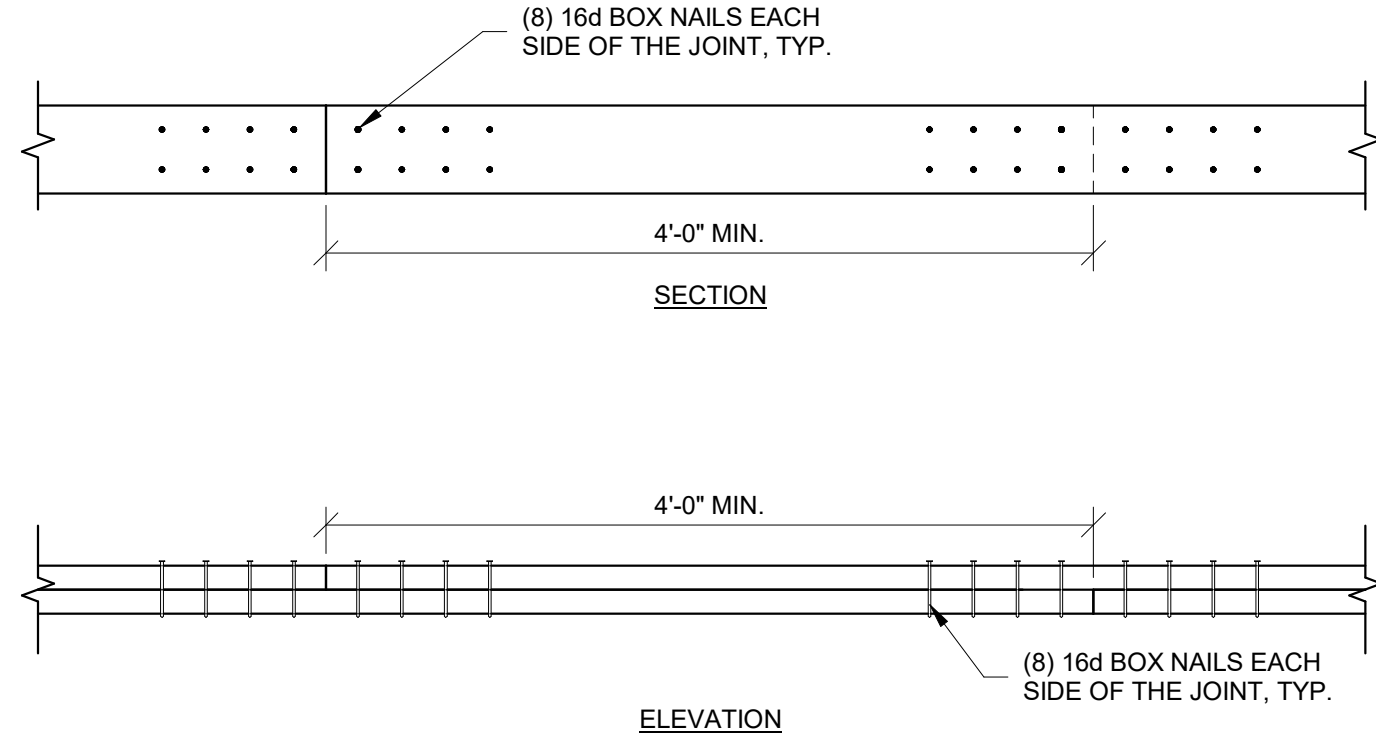
NOTE:
SEE SHEATHING TYPE & NAILING SCHEDULE ON S004



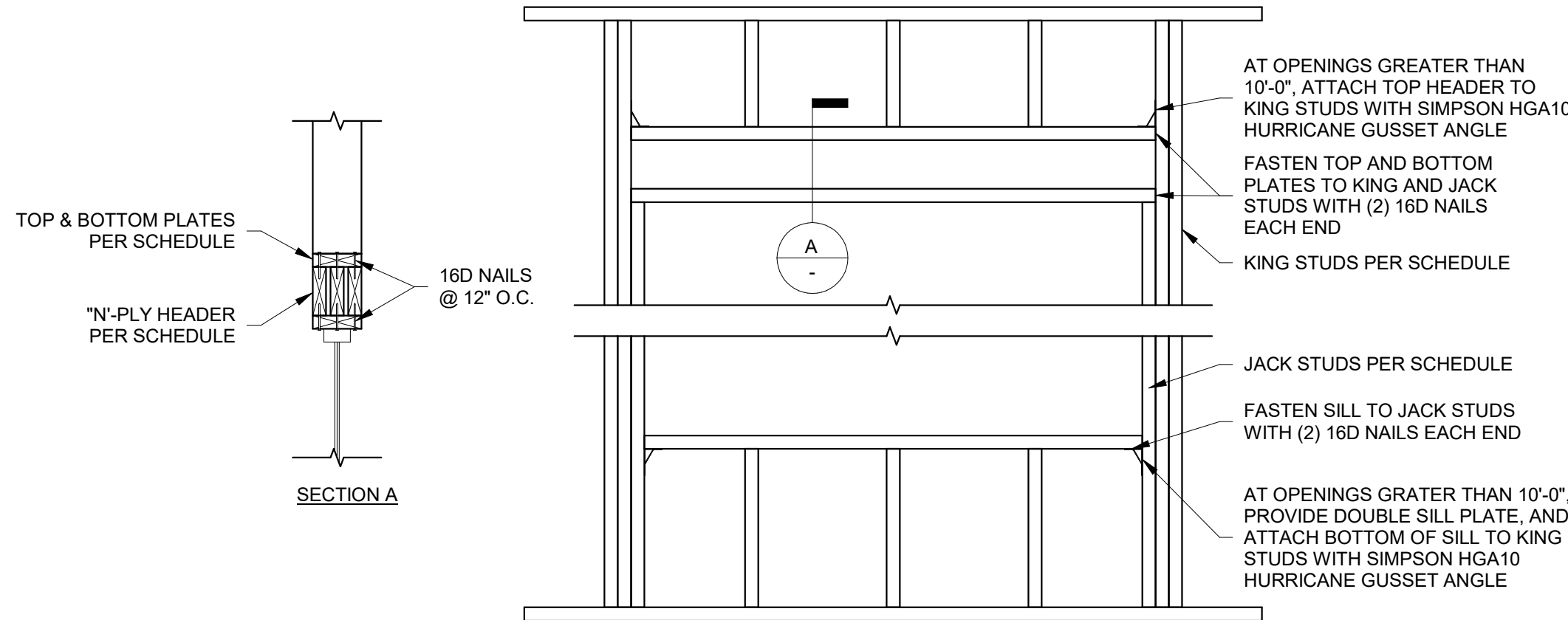
1 TYPICAL BUILT-UP MEMBERS
S530 1" = 1'-0"

2 DIAPHRAGM NAILING
S530 3/8" = 1'-0"

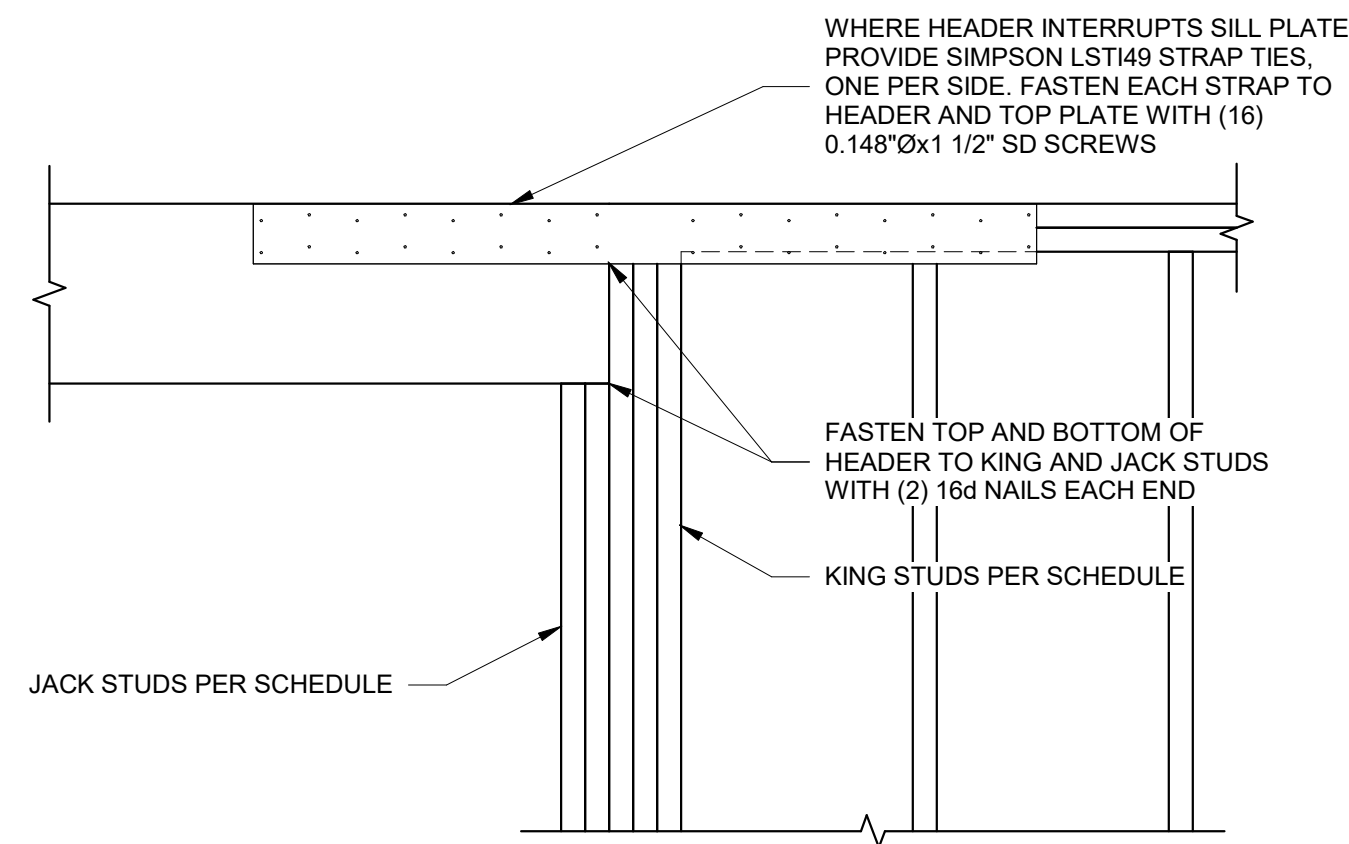
3 TYPICAL HEADER CONNECTION
S530 1" = 1'-0"



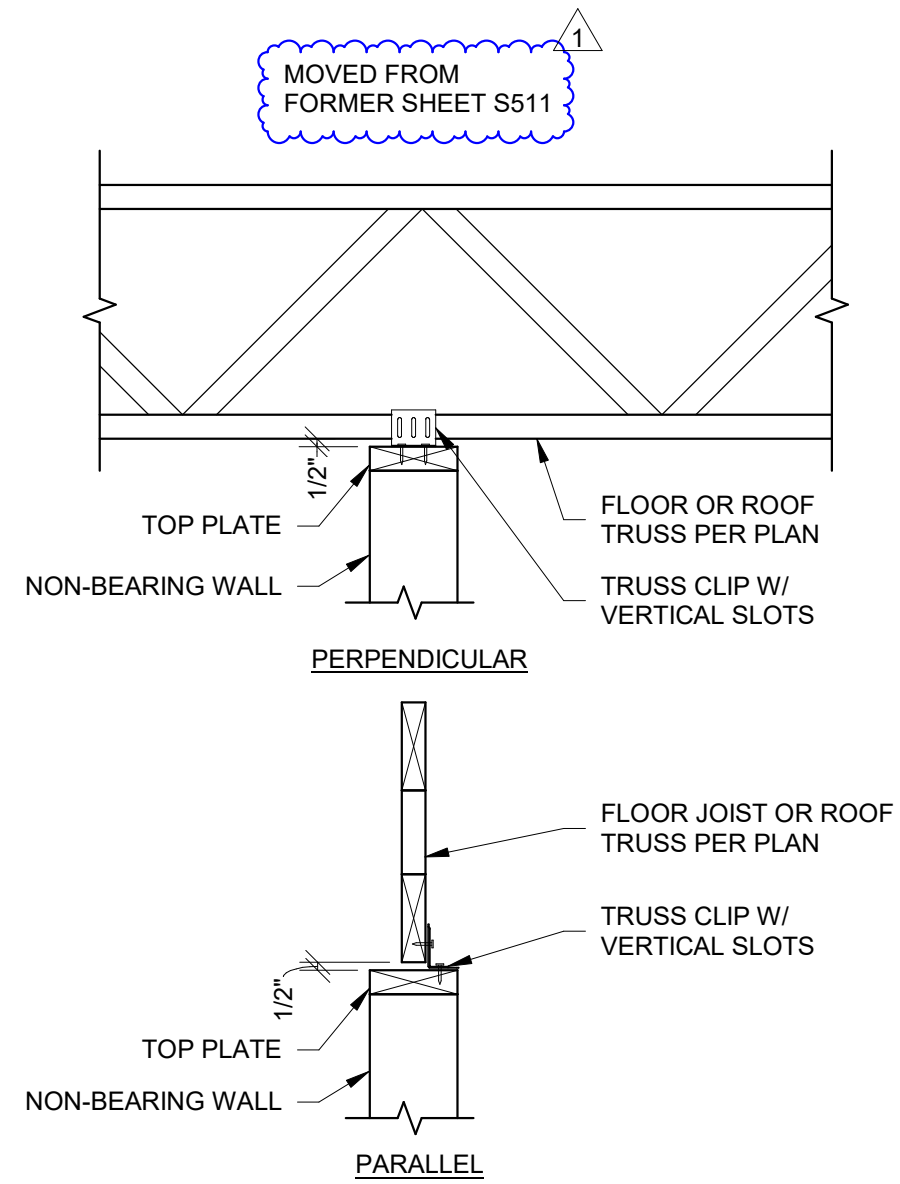
4 TOP PLATE SPLICE
S530 1" = 1'-0"



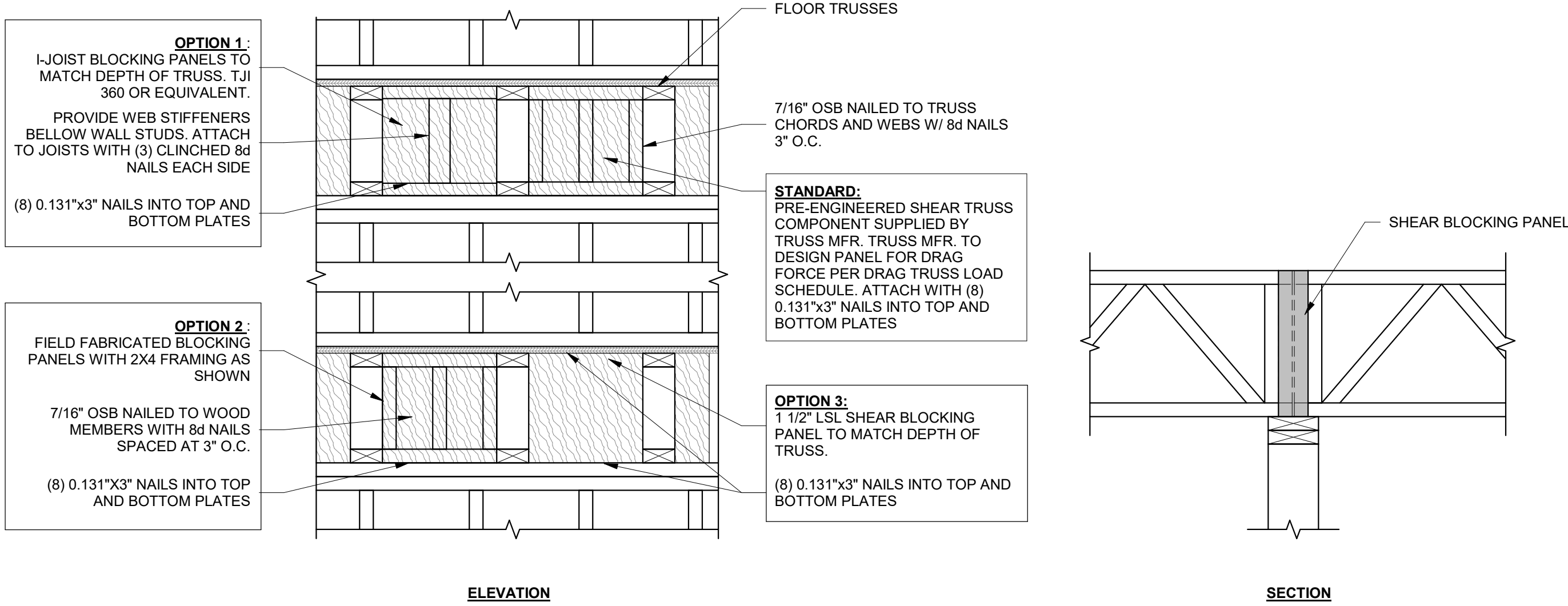
5 FRAMING AT OPENING
S530 3/4" = 1'-0"



6 FRAMING AT OPENING - RAISED HEADER
S530 1" = 1'-0"

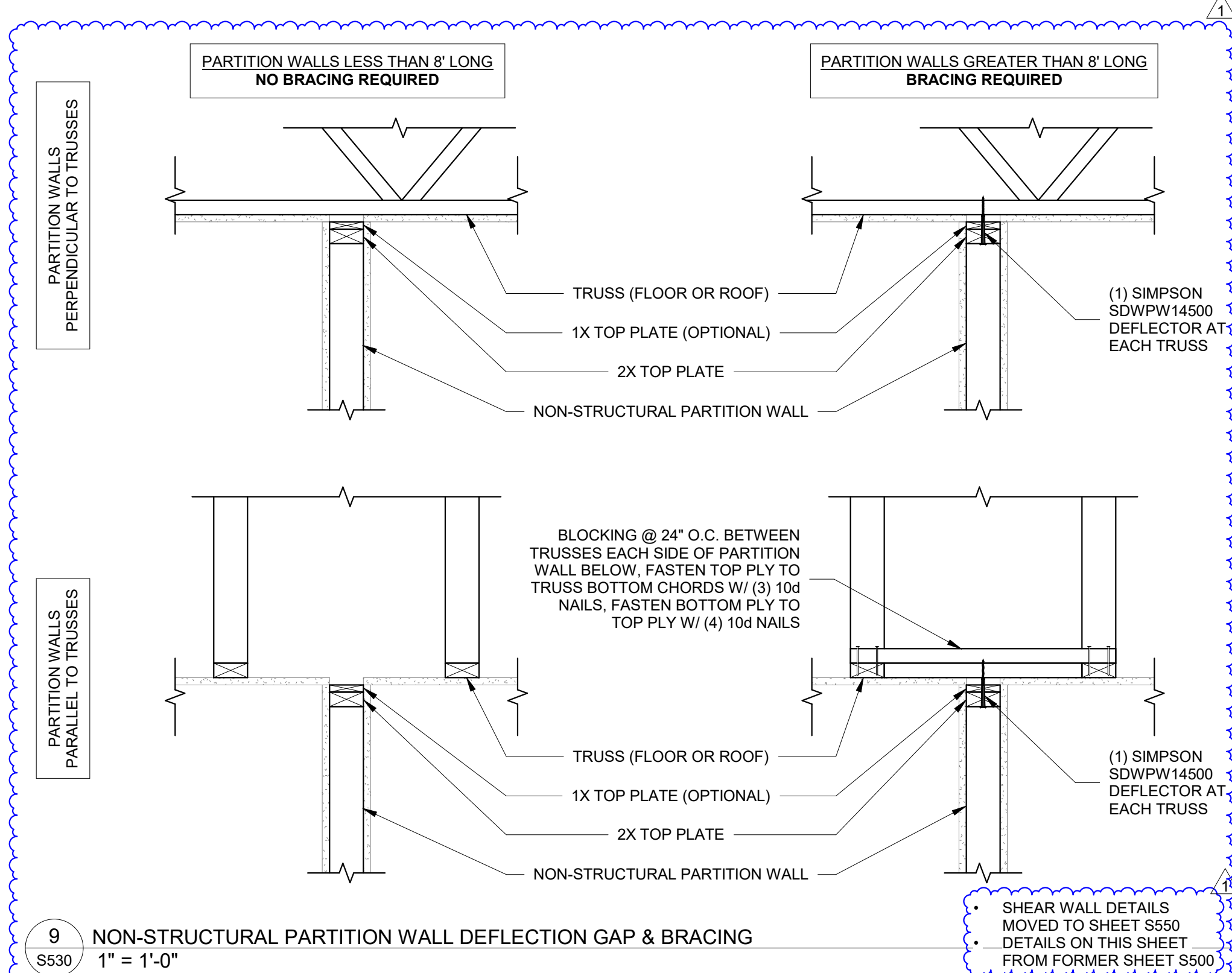


7 NON-BEARING WALL TO JOIST
S530 1" = 1'-0"



8 SHEAR BLOCKING PANEL OPTIONS
S530 1" = 1'-0"

1 TYPICAL WOOD FRAMING DETAILS CONSOLIDATED AND MOVED TO THIS SHEET (S530)



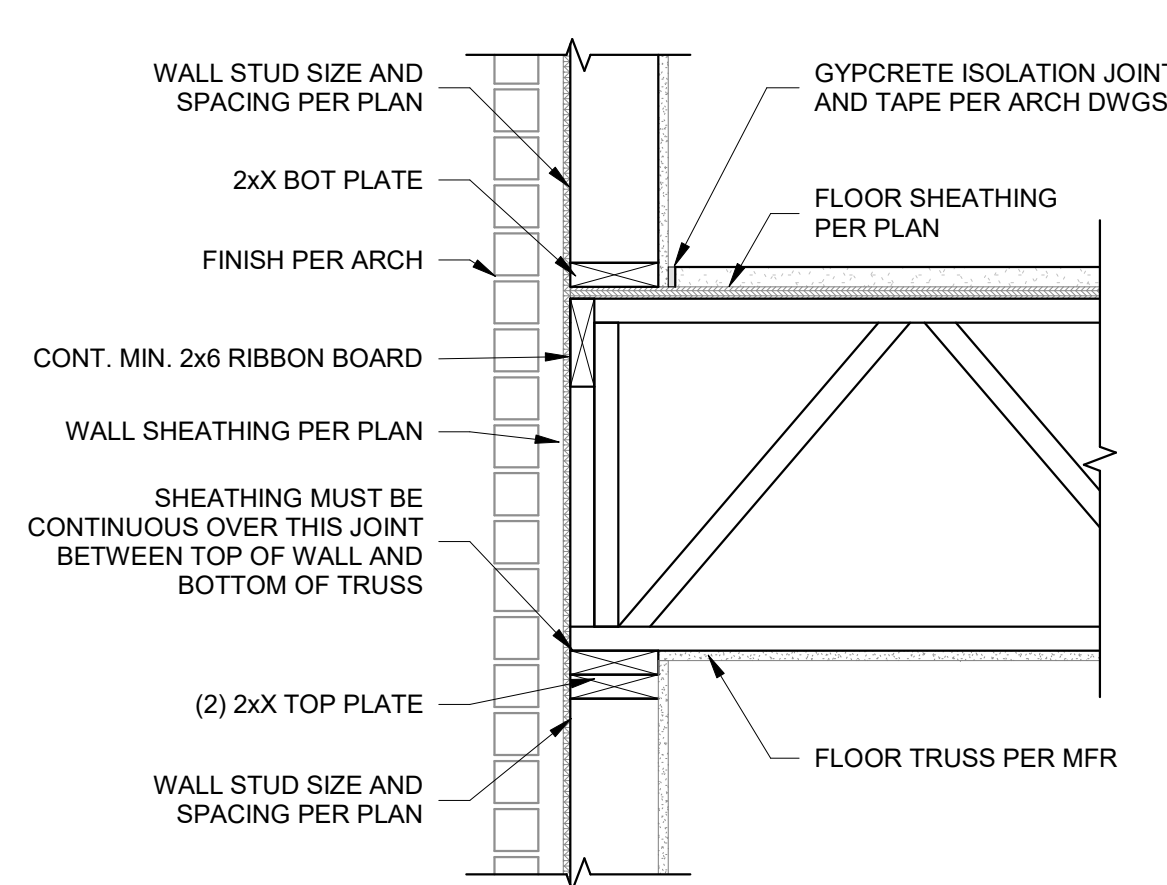
9 NON-STRUCTURAL PARTITION WALL DEFLECTION GAP & BRACING
S530 1" = 1'-0"

SHEAR WALL DETAILS MOVED TO SHEET S550. DETAILS ON THIS SHEET FROM FORMER SHEET S500

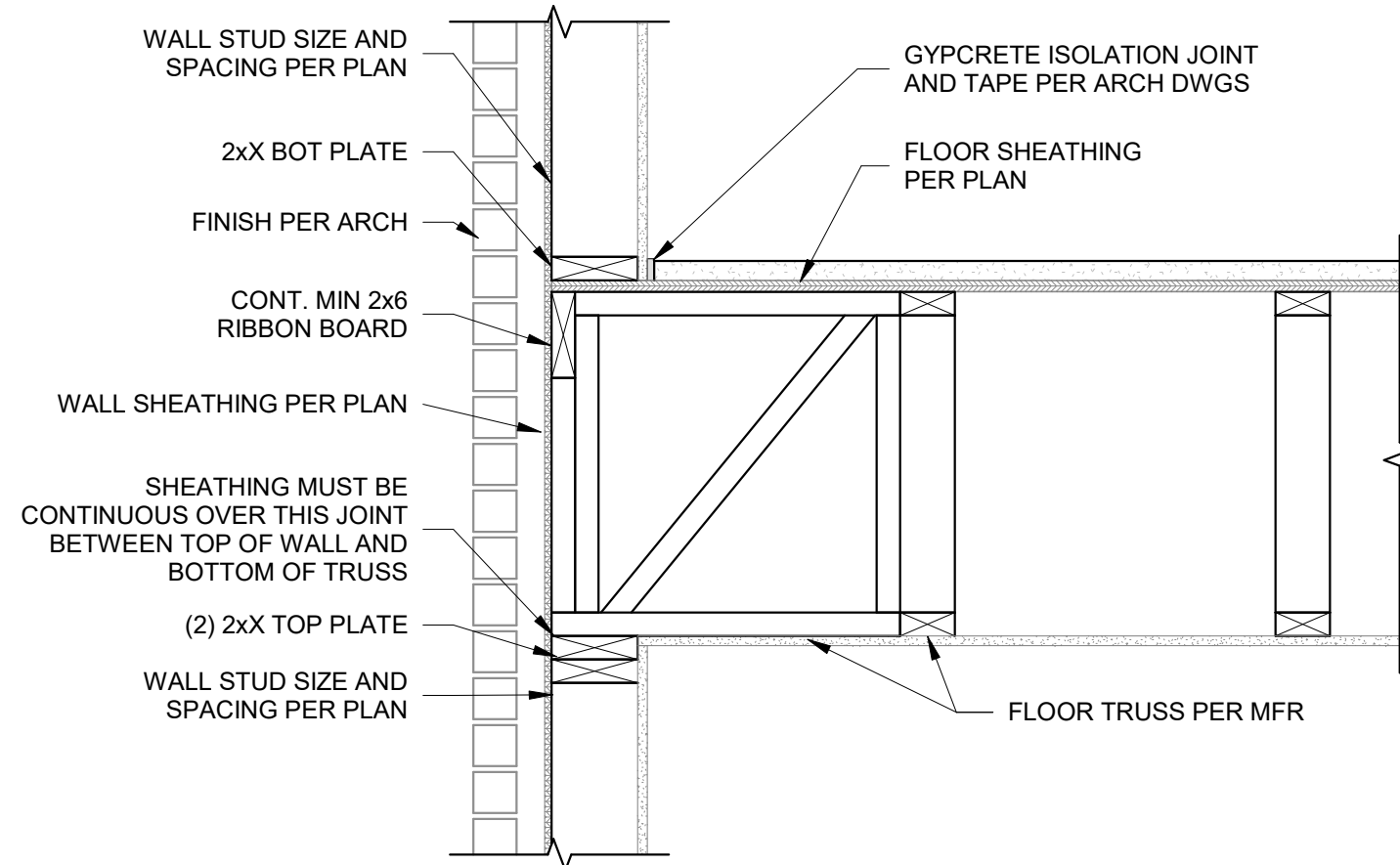
THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

SHEET TITLE
TYPICAL WOOD FRAMING DETAILS
PROJECT NUMBER: 2023000333
SHEET NUMBER:

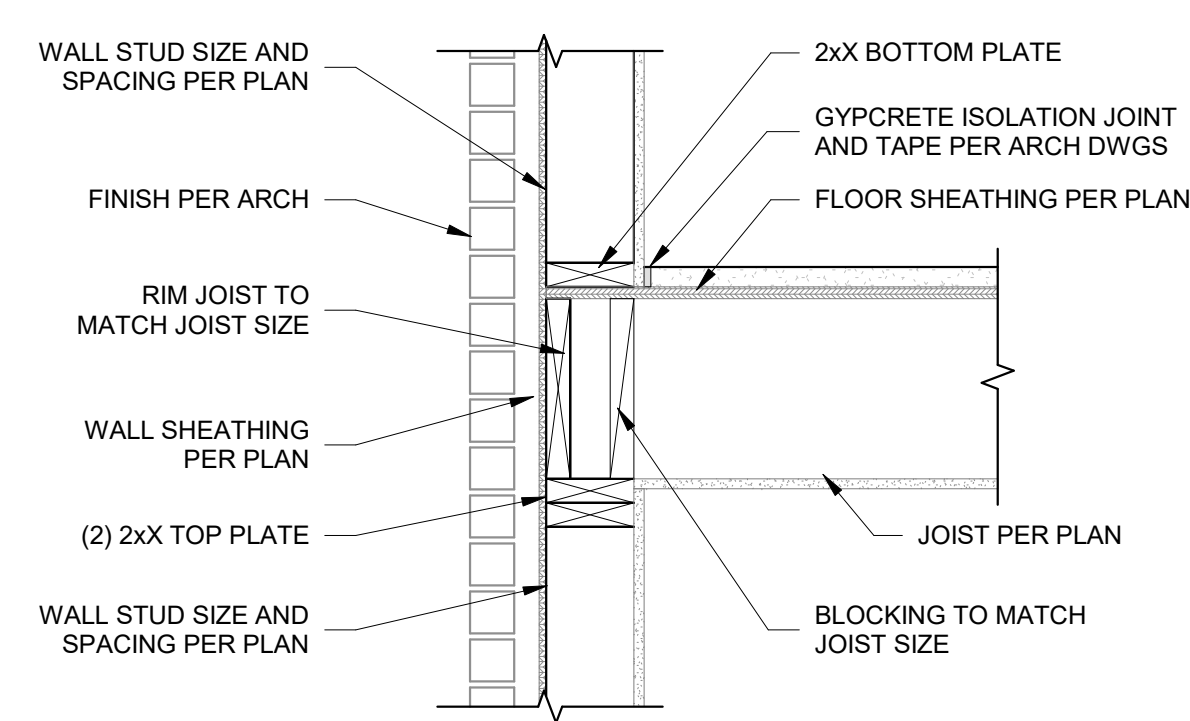
S530



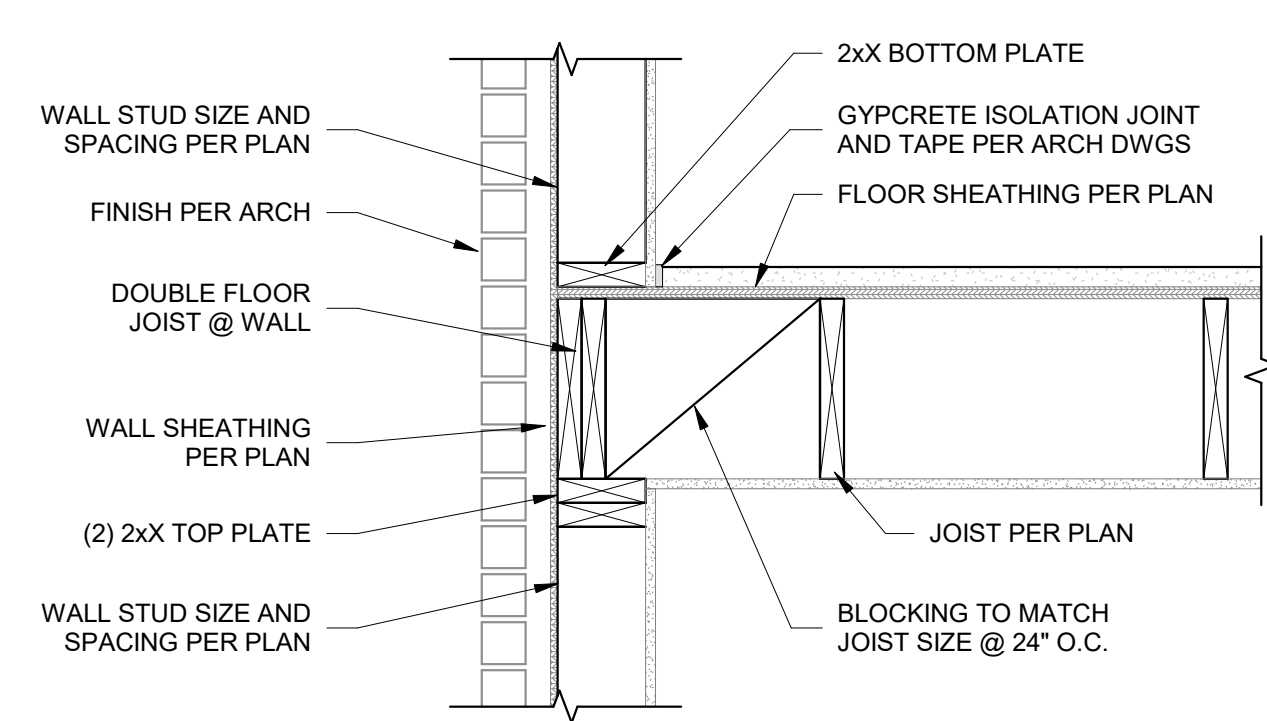
1 FRAMING AT EXTERIOR WALL - OPEN WEB TRUSS BEARING
S531 1" = 1'-0"



2 FRAMING AT EXTERIOR WALL - OPEN WEB TRUSS PARALLEL
S531 1" = 1'-0"



3 FRAMING AT EXTERIOR WALL - JOIST BEARING
S531 1" = 1'-0"



4 FRAMING AT EXTERIOR WALL - JOIST PARALLEL
S531 1" = 1'-0"

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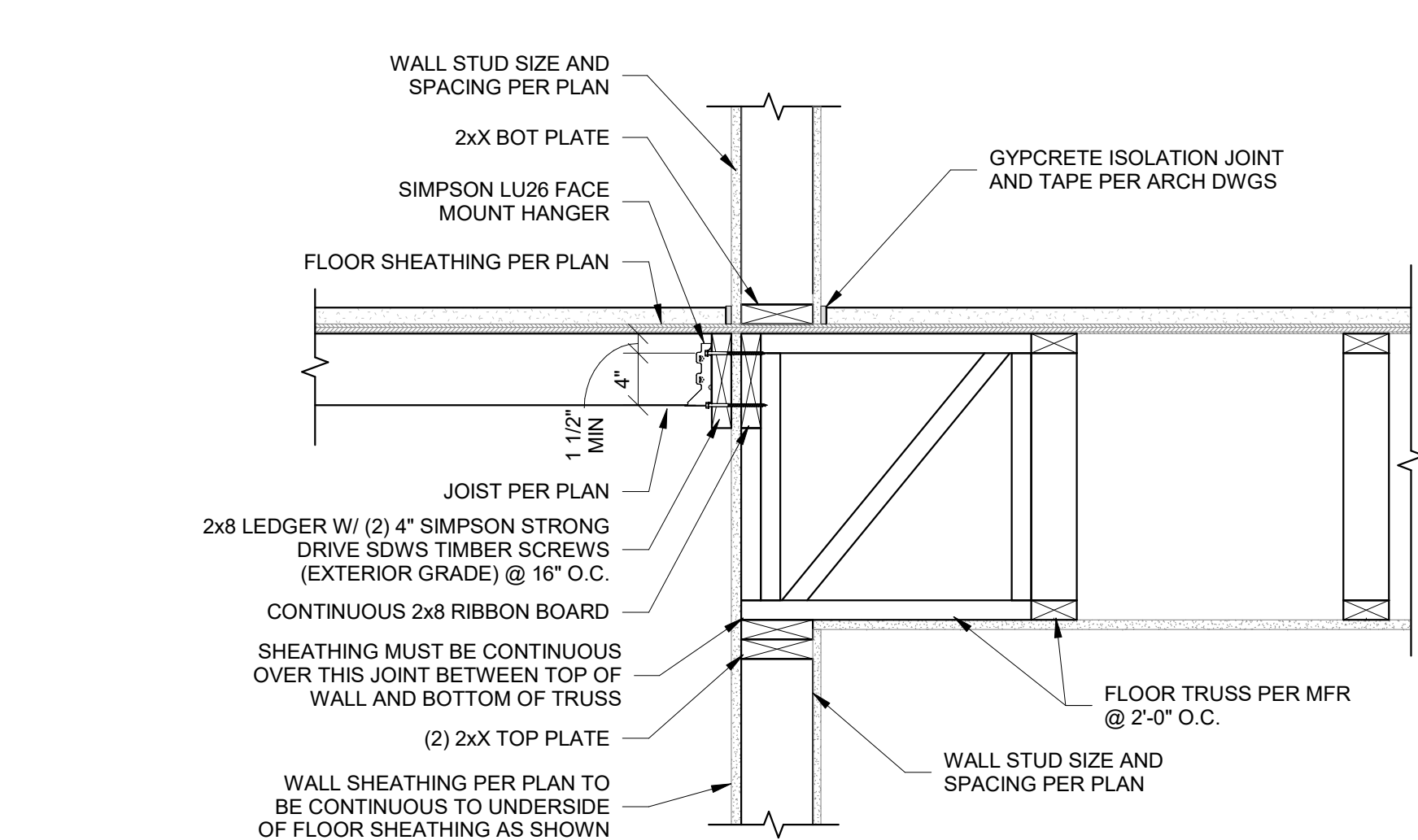


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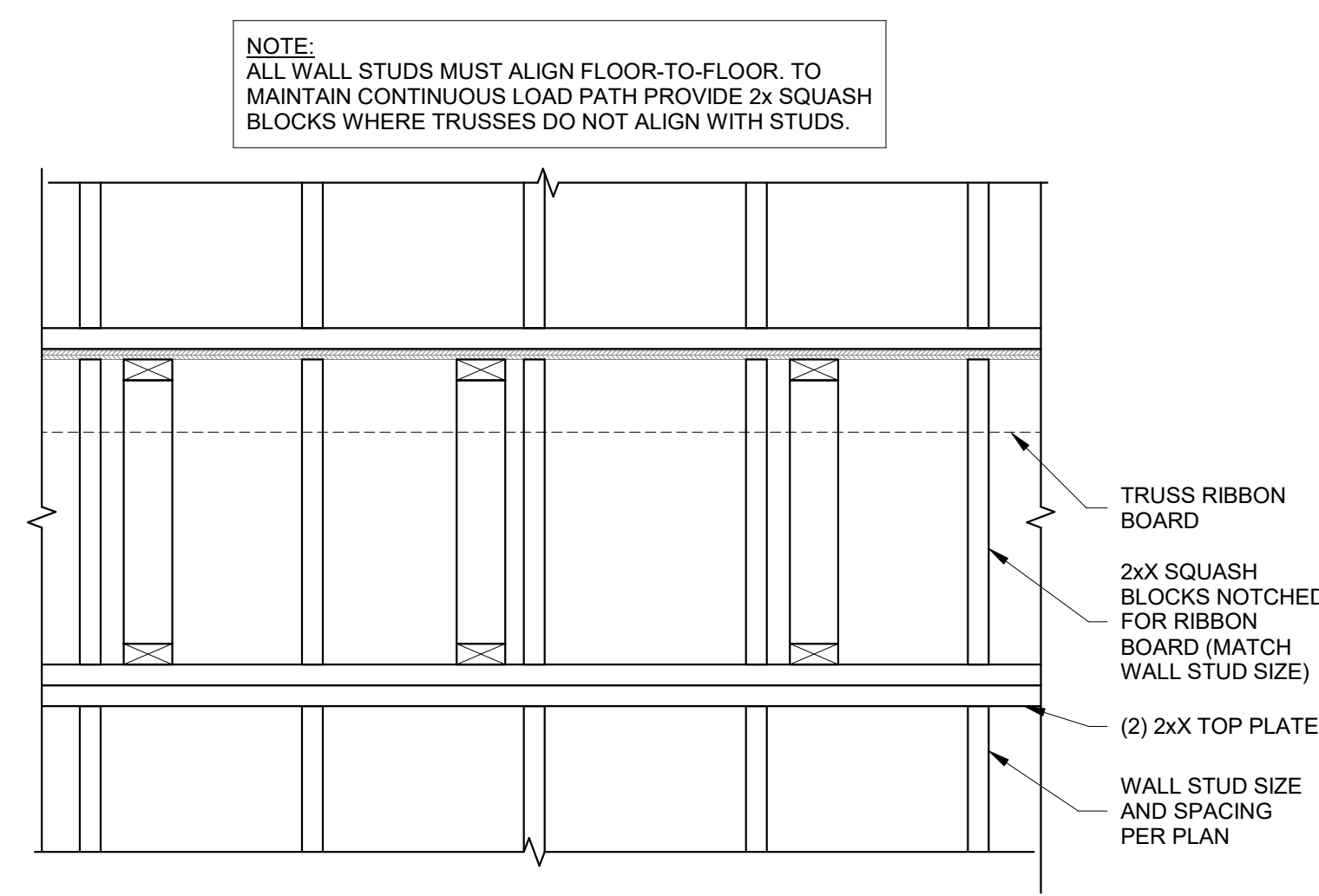
THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

SHEET TITLE
WOOD FLOOR FRAMING DETAILS
PROJECT NUMBER: 2023000333
SHEET NUMBER:

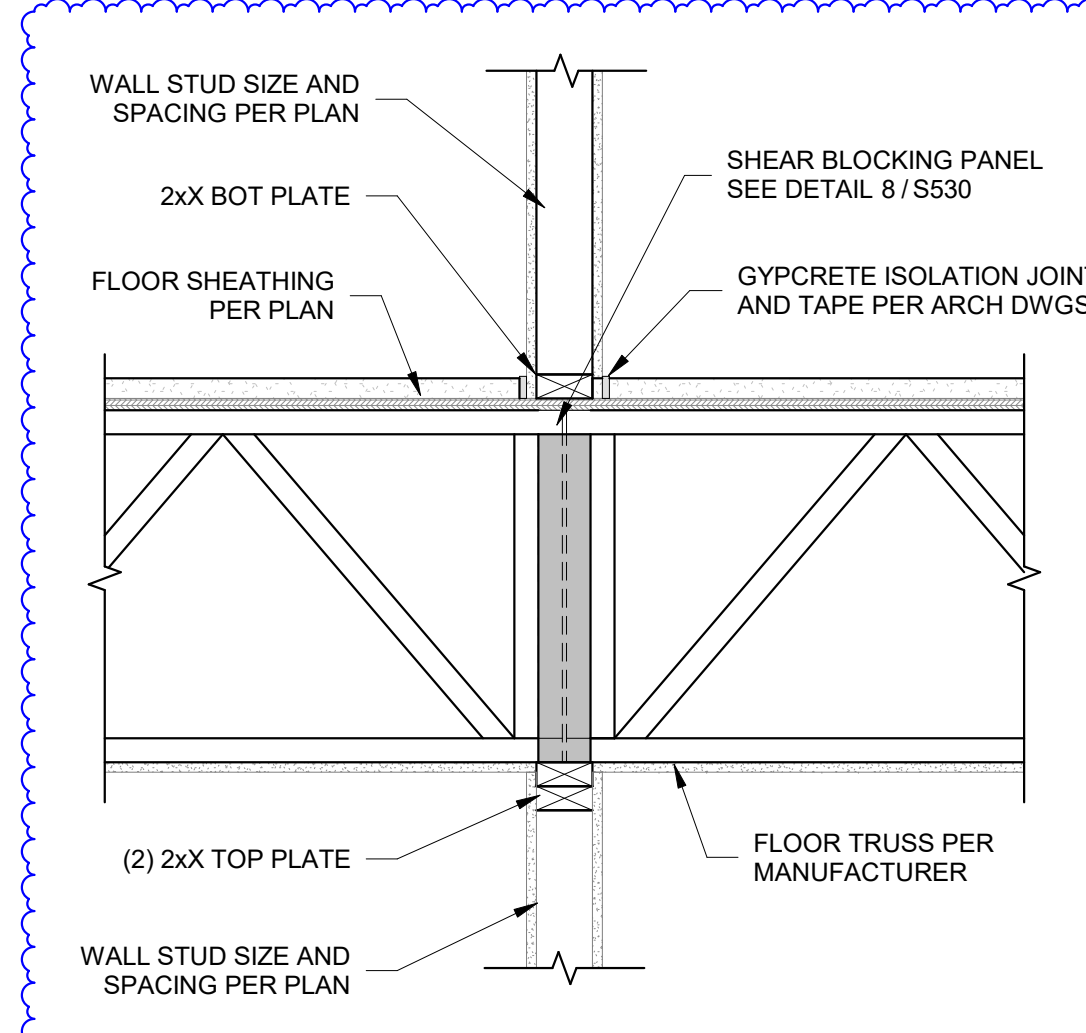
S531
RENUMBERED SHEET
(FORMERLY S510)



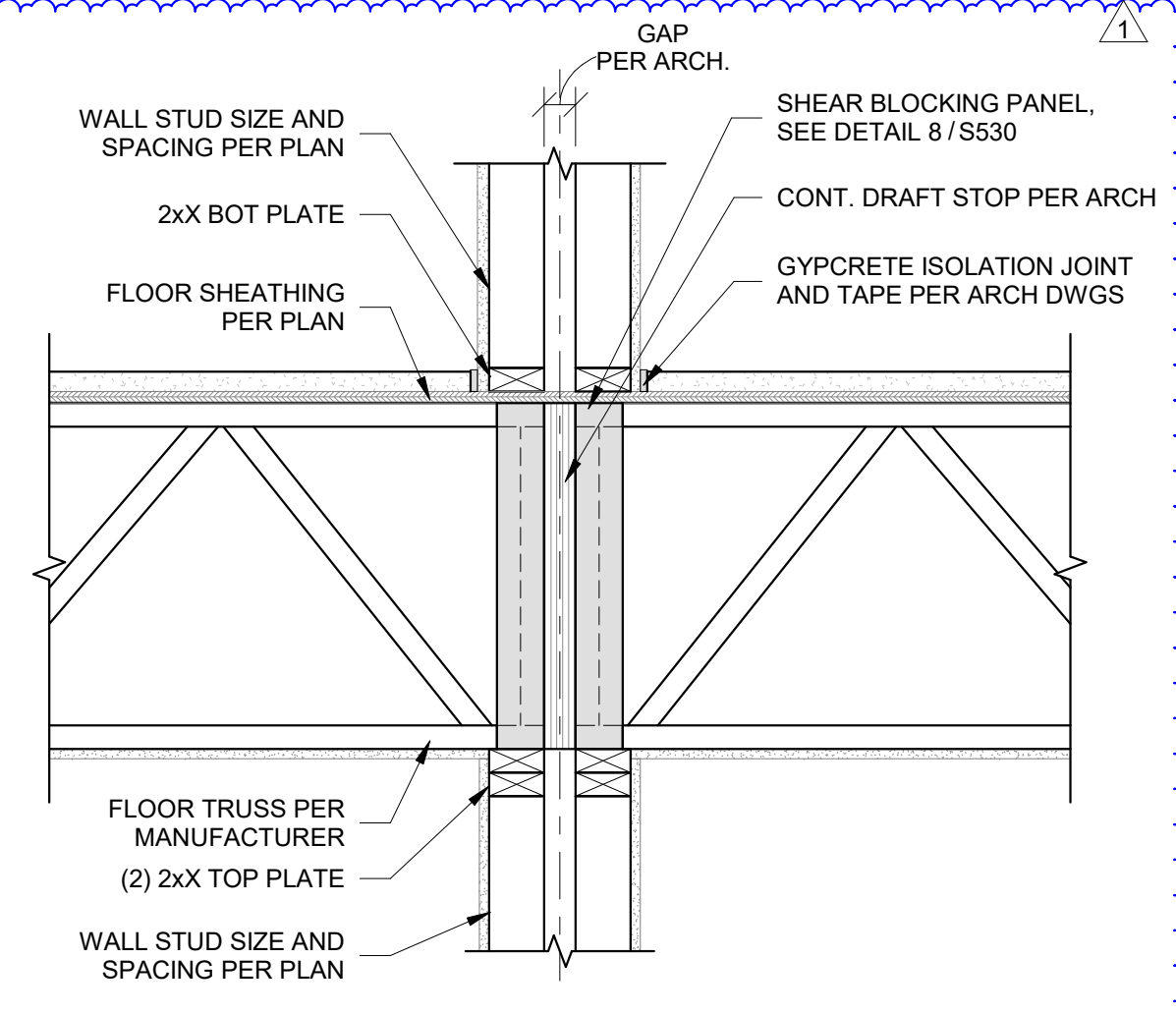
5 FRAMING AT CORRIDOR
S531 1" = 1'-0"



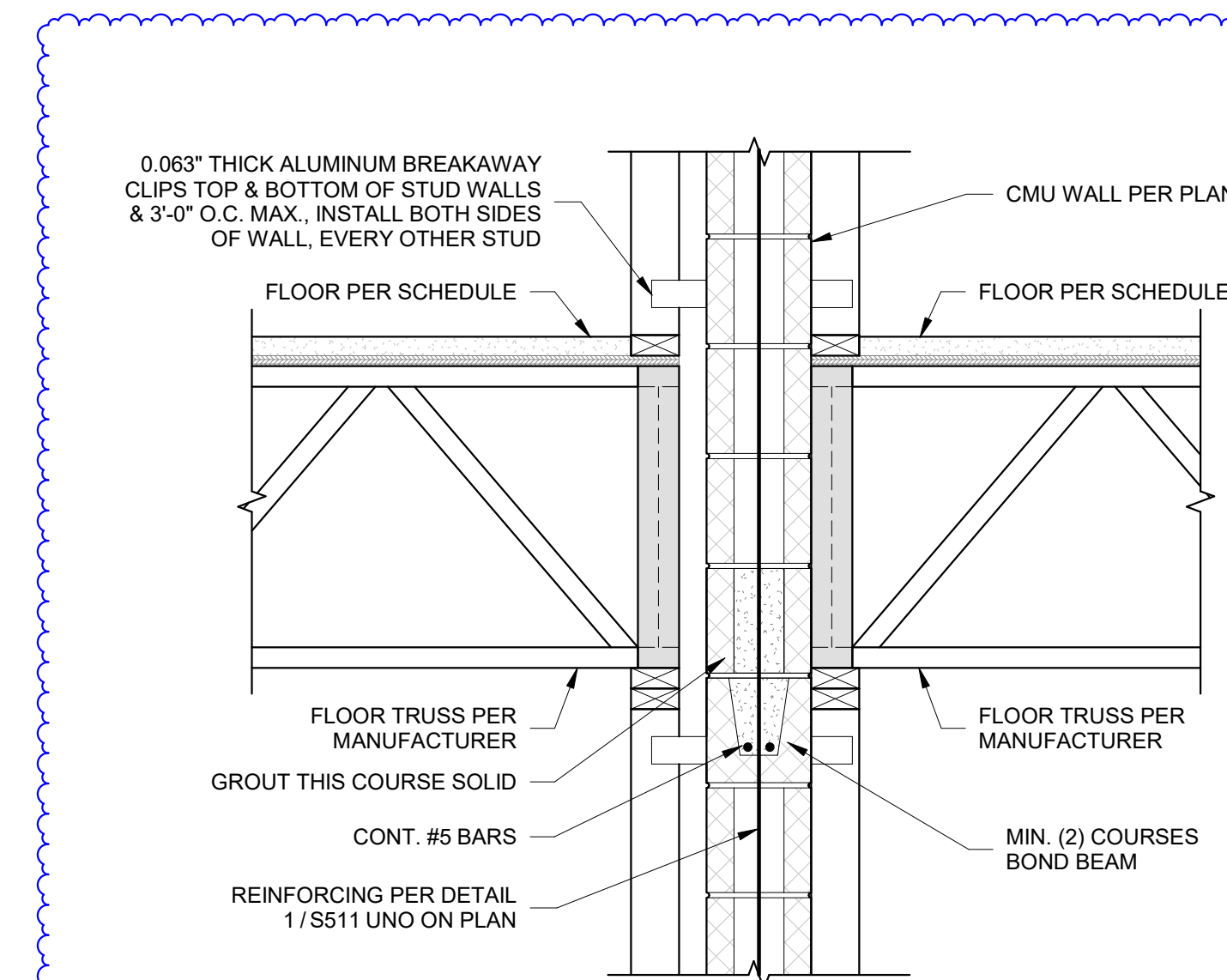
6 TYPICAL WALL FRAMING ELEVATION
S531 1" = 1'-0"



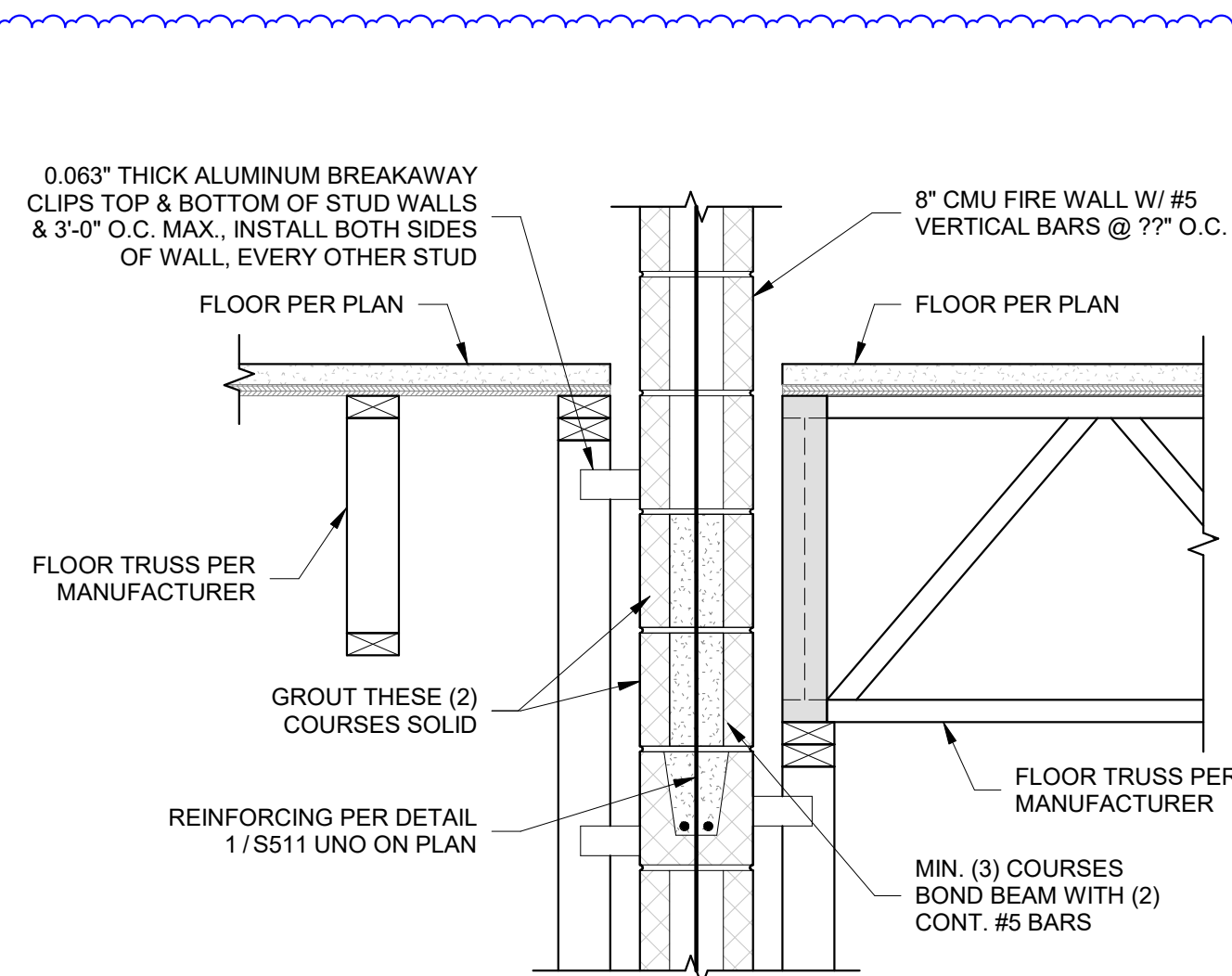
7 FRAMING AT INTERIOR WALL
S531 1" = 1'-0"



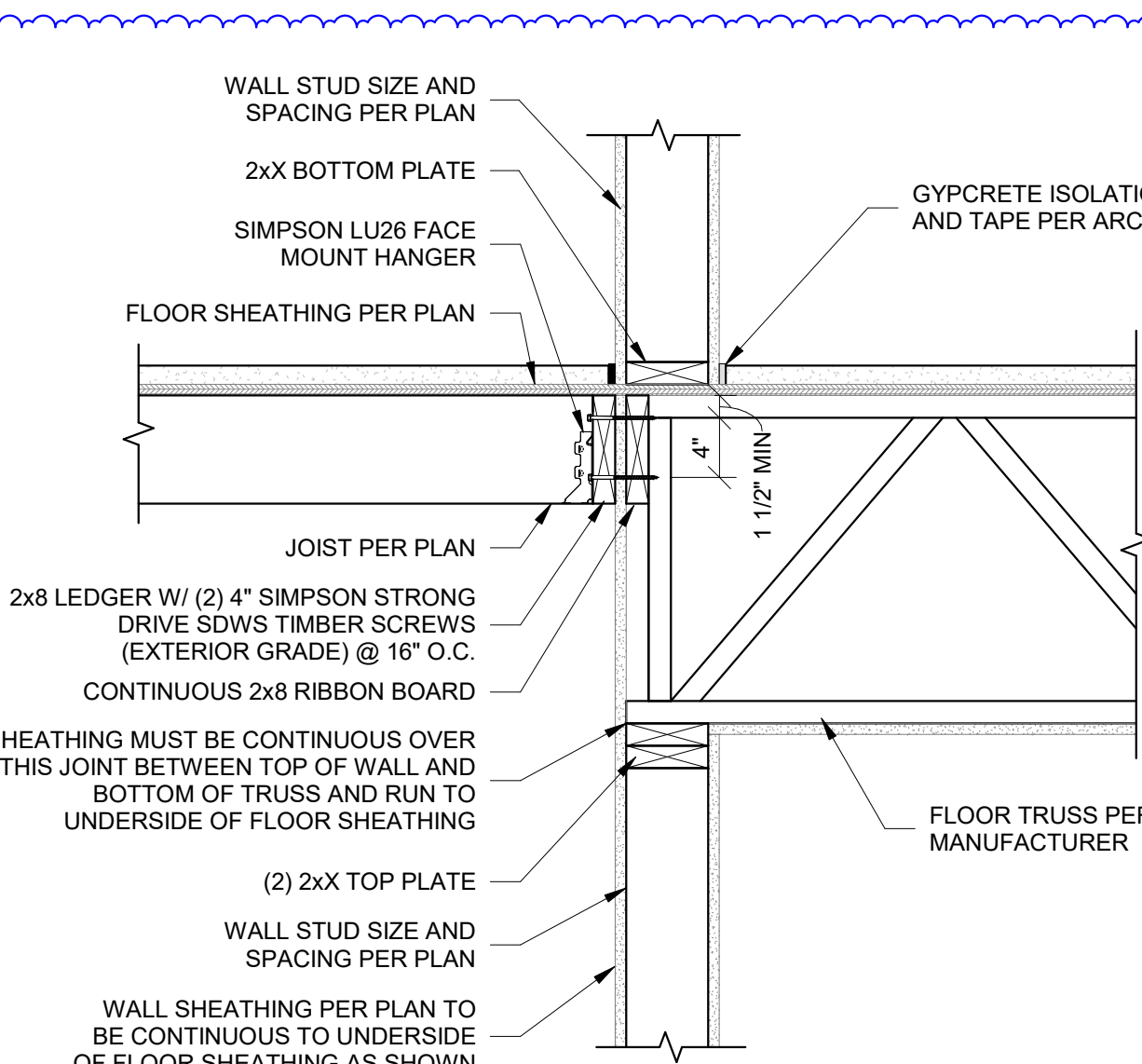
8 FLOOR FRAMING AT INTERIOR WALL
S531 1" = 1'-0"



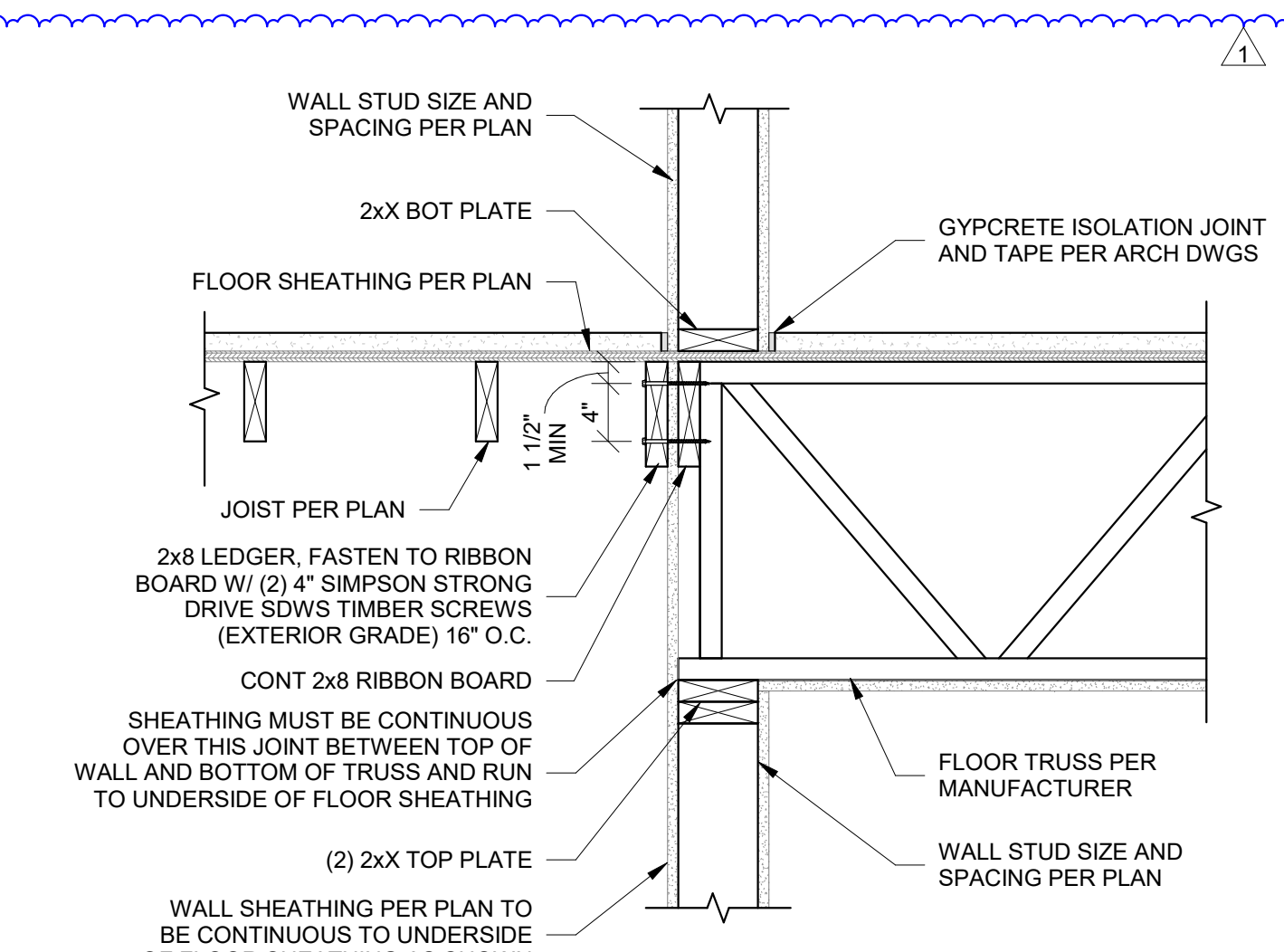
9 FLOOR FRAMING AT CMU FIRE WALL
S531 1" = 1'-0"



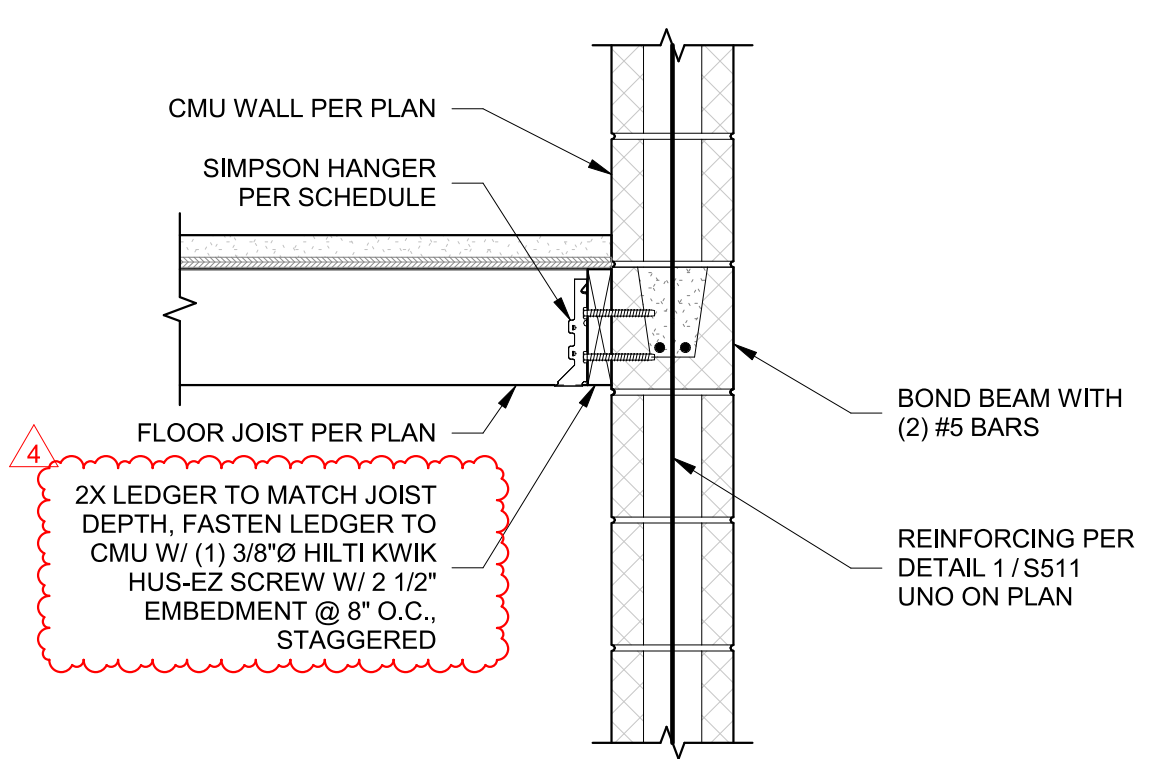
10 FLOOR FRAMING TRANSITION AT CMU FIRE WALL
S531 1" = 1'-0"



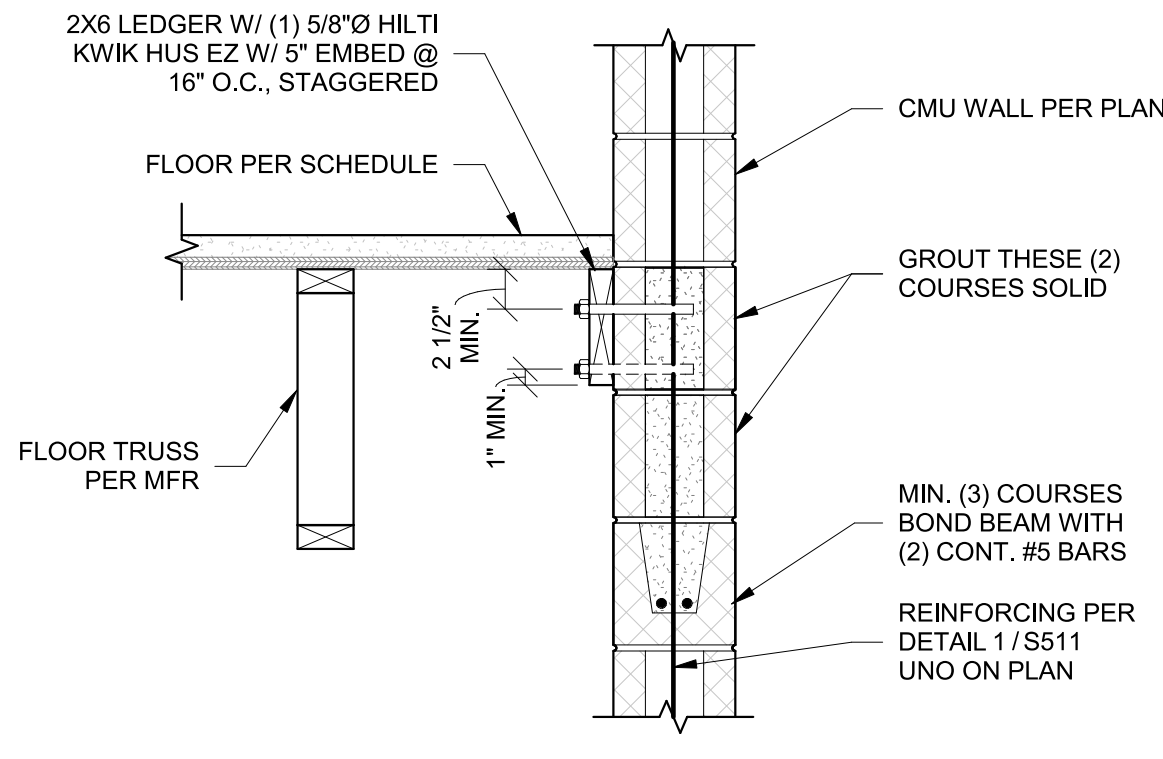
11 FLOOR TRUSS BEARING AT CORRIDOR
S531 1" = 1'-0"



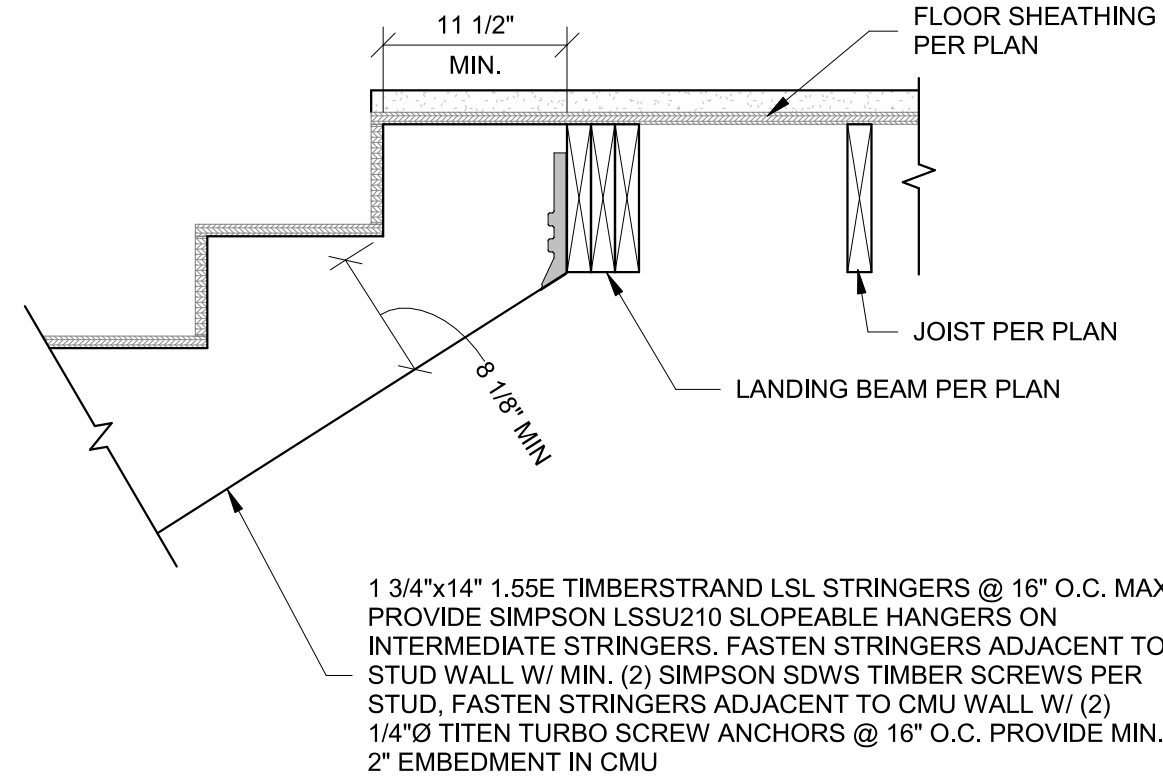
12 FRAMING AT CORRIDOR
S531 1" = 1'-0"



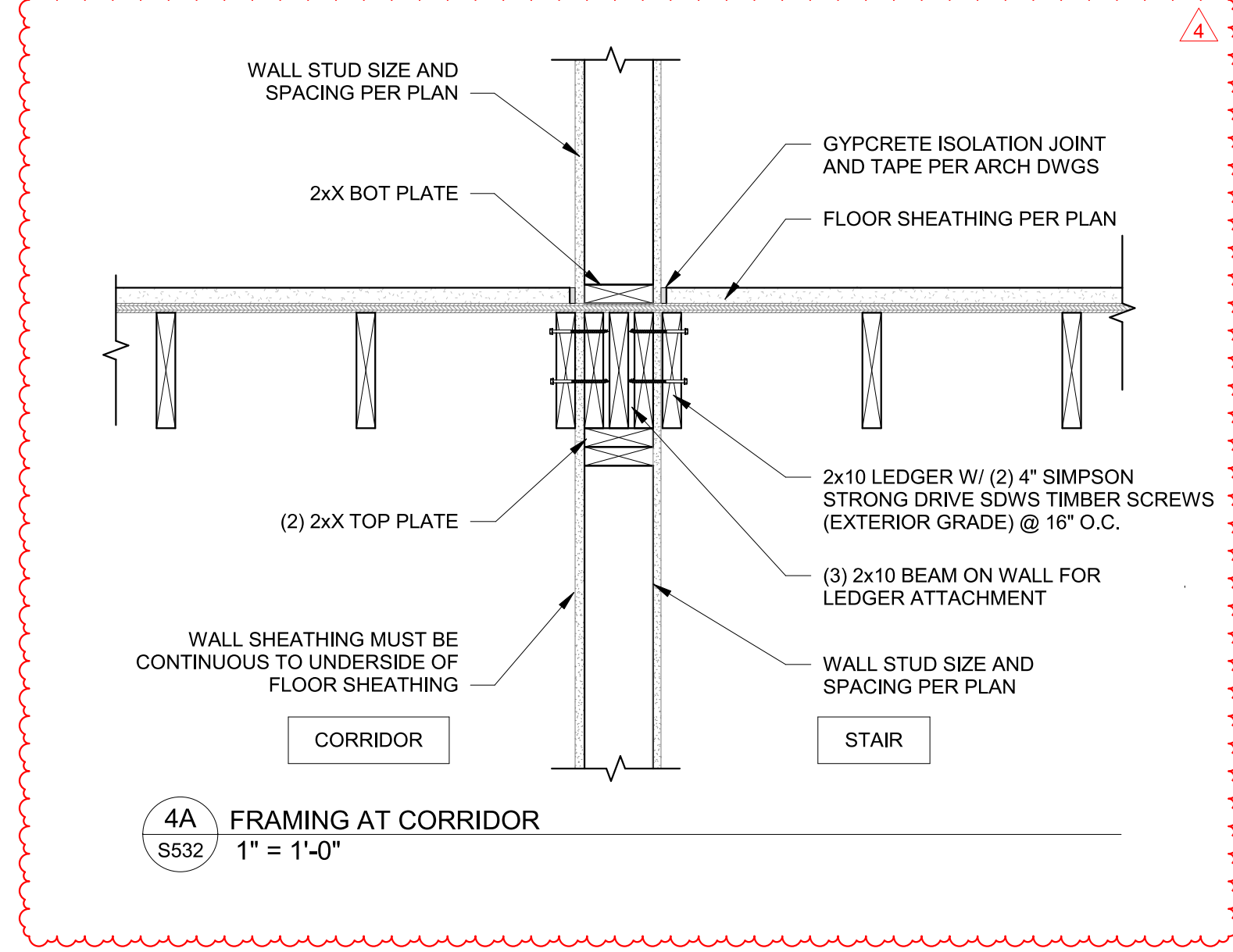
1
S532 FLOOR JOIST BEARING AT CMU
1" = 1'-0"



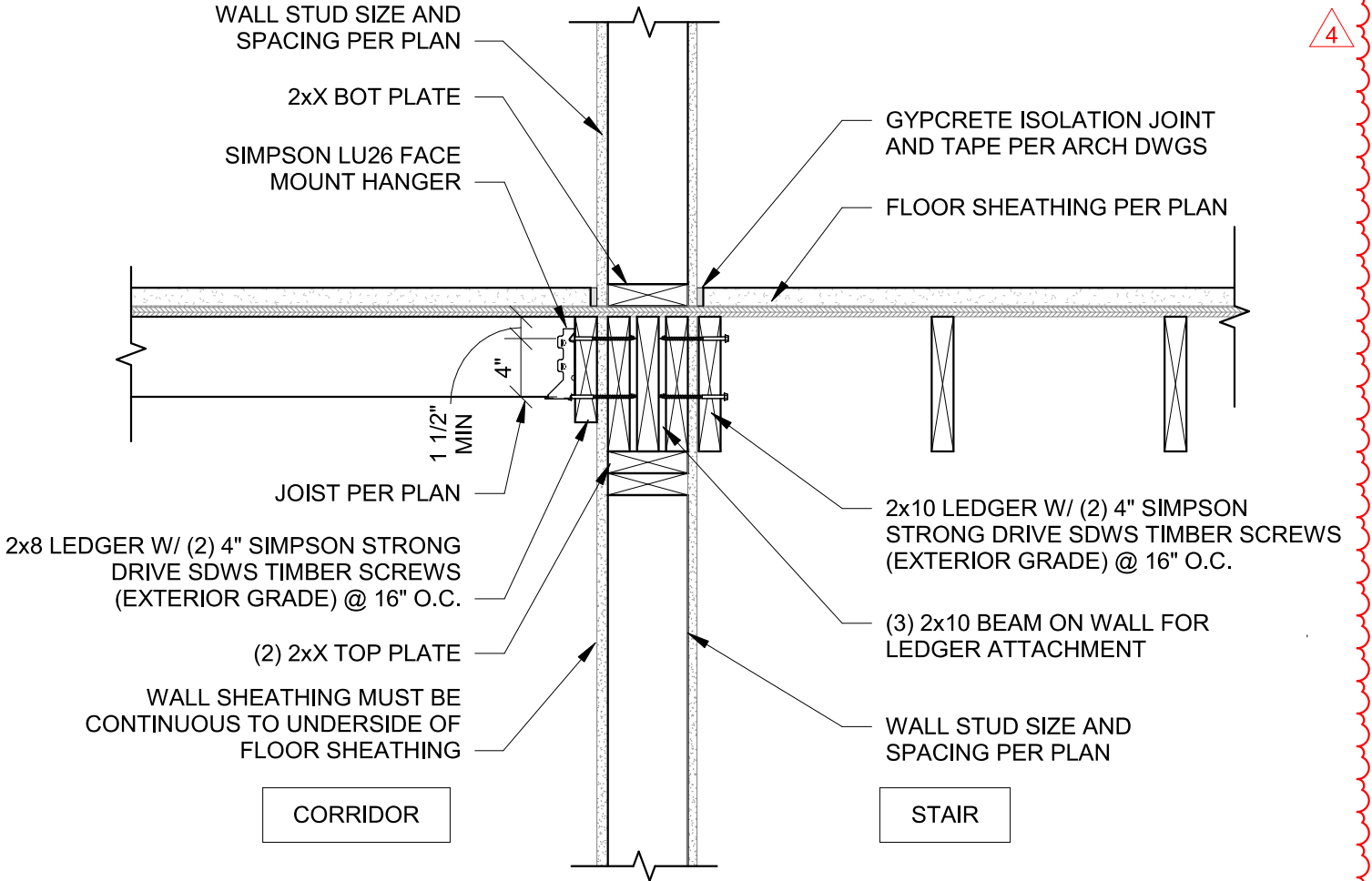
2
S532 FLOOR TRUSS PARALLEL TO CMU
1" = 1'-0"



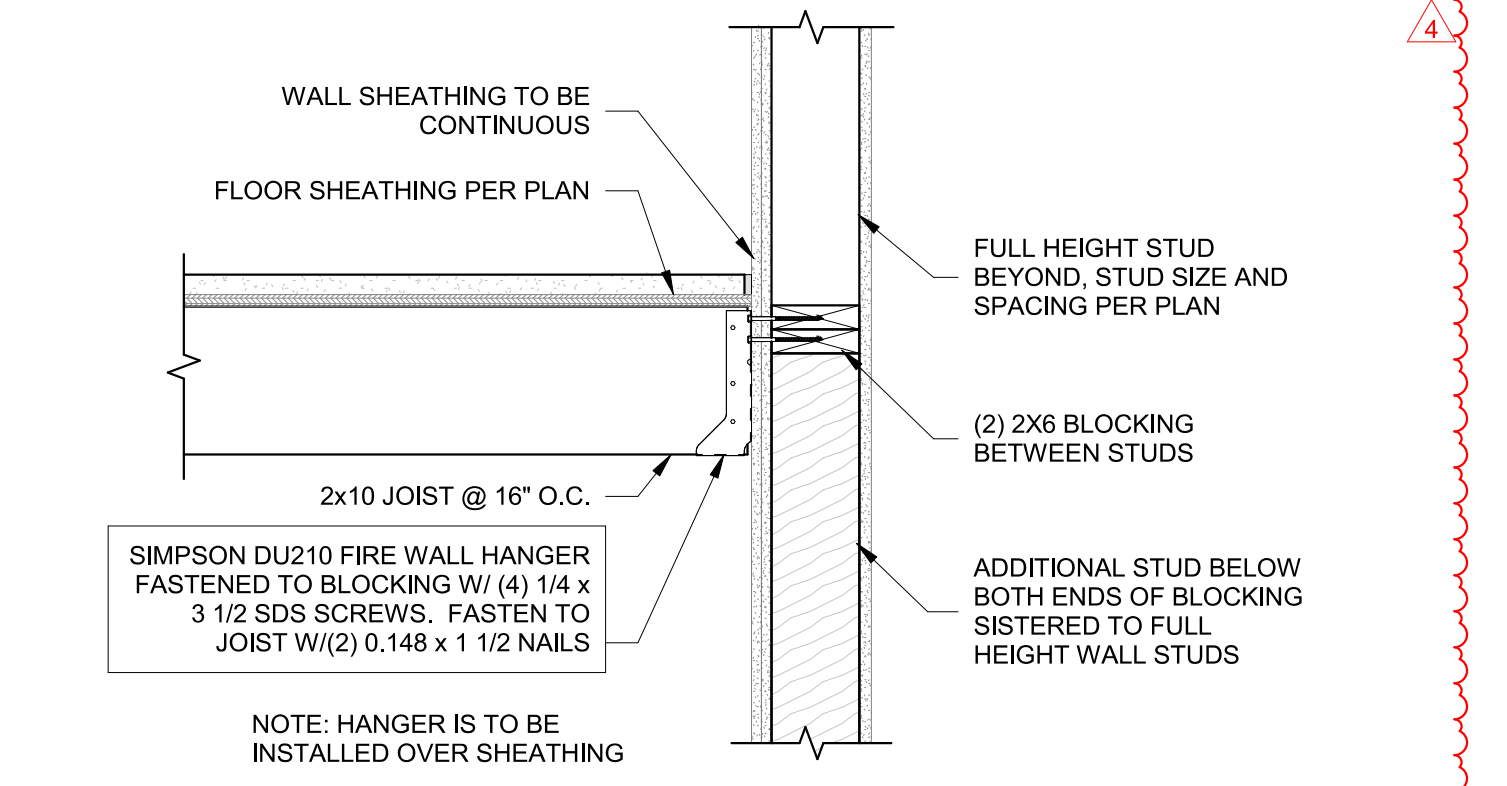
3
S532 LANDING AT FLOOR JOIST
1" = 1'-0"



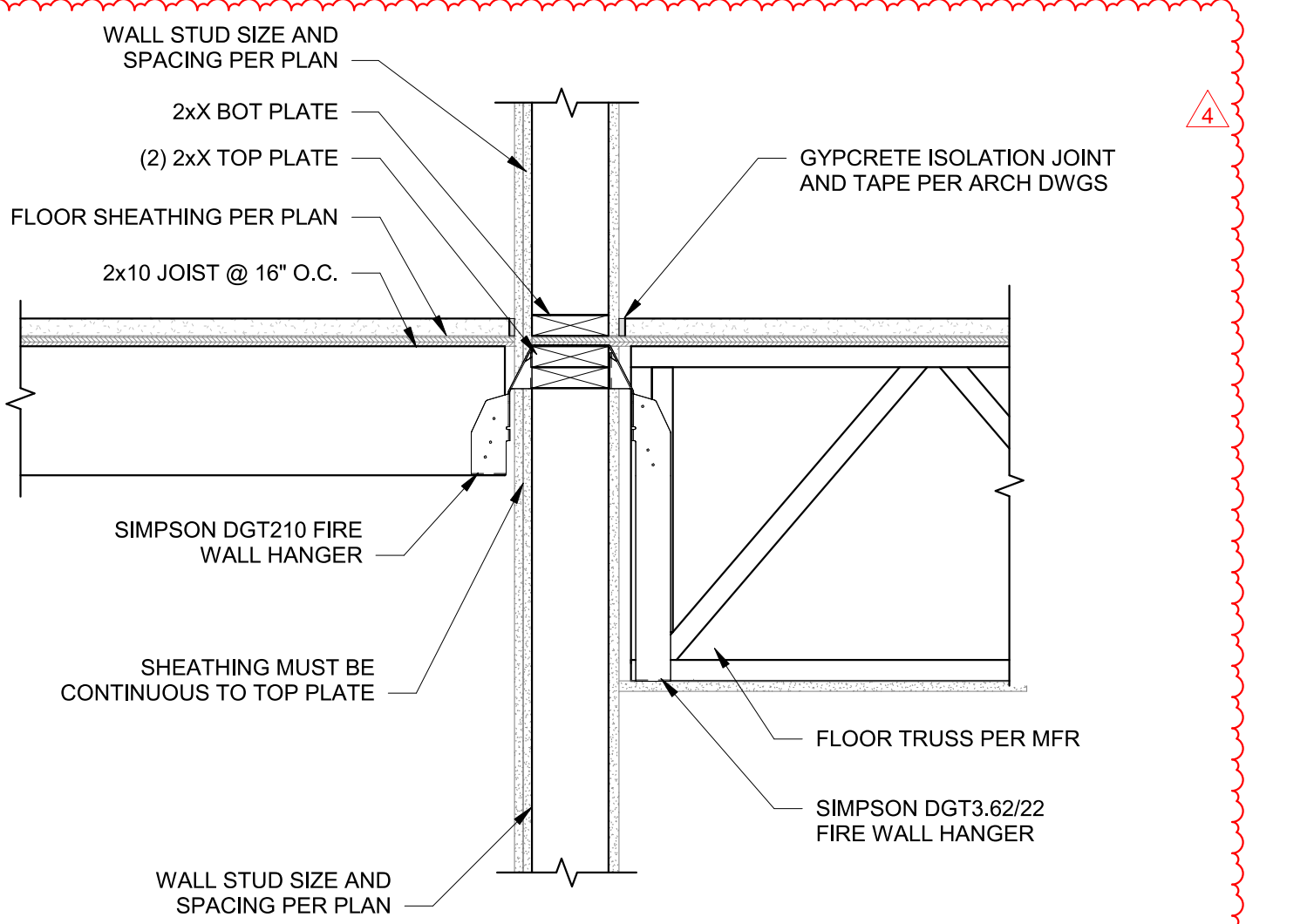
4A
S532 FRAMING AT CORRIDOR
1" = 1'-0"



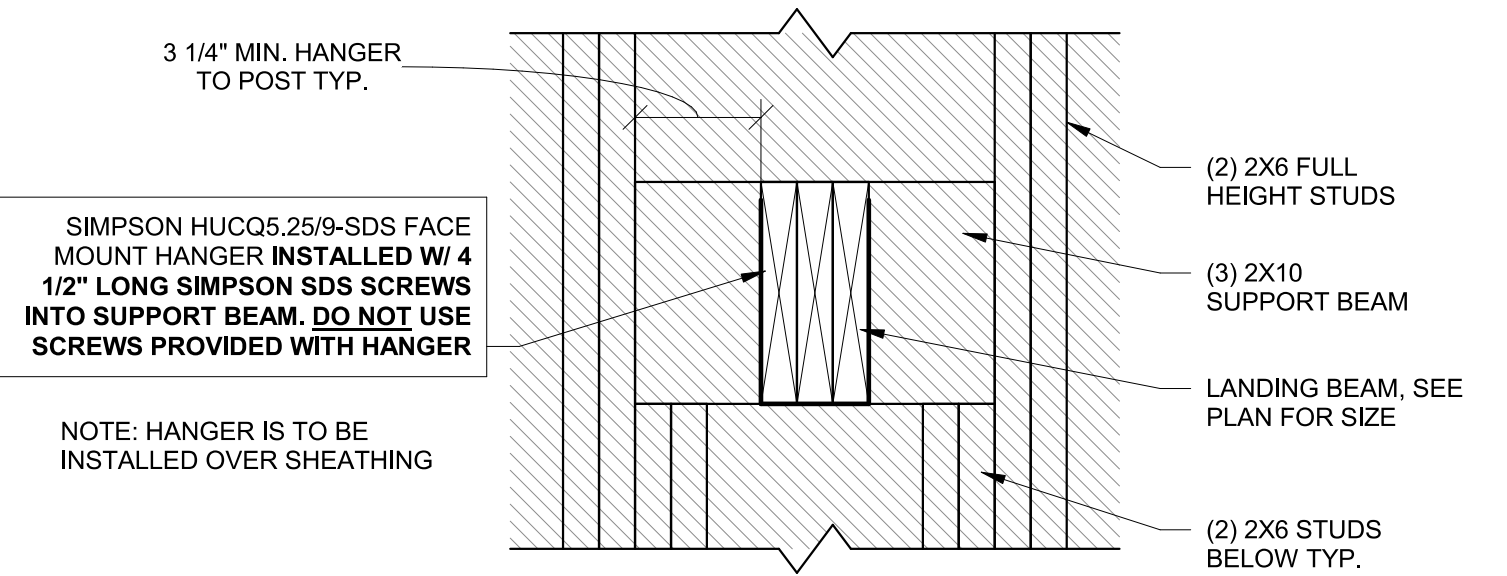
4B
S532 CORRIDOR FRAMING AT STAIR
1" = 1'-0"



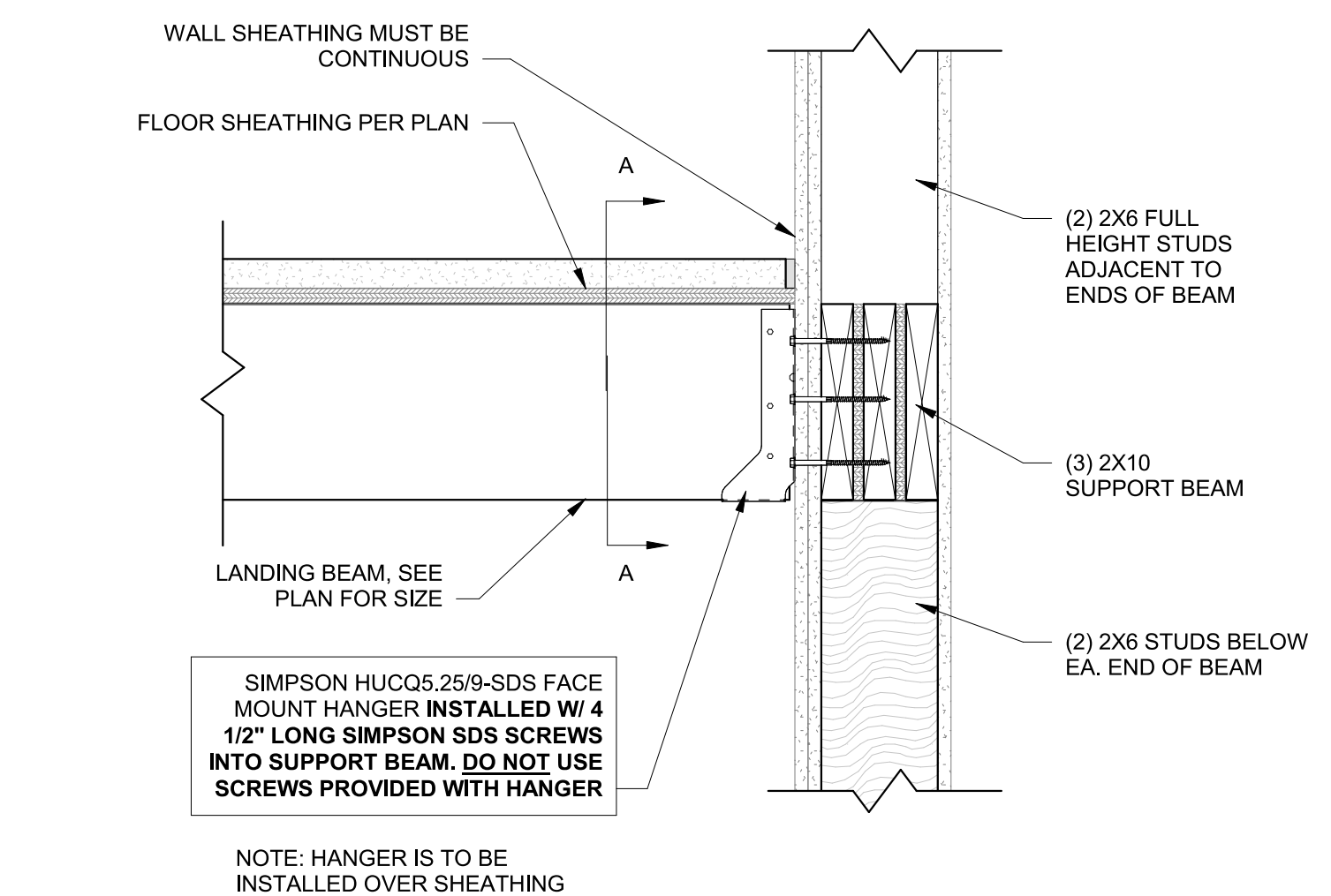
5
S532 SECTION AT STAIR WALL
1" = 1'-0"



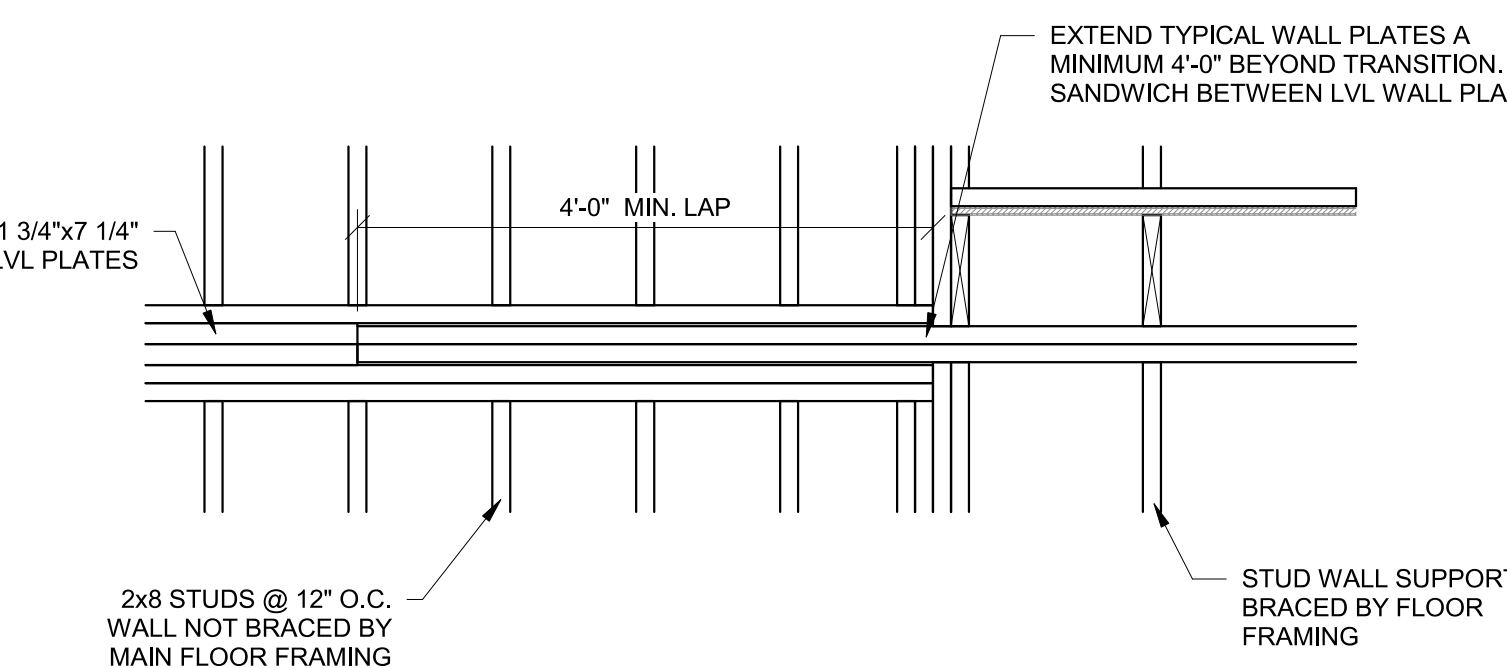
6
S532 SECTION AT STAIR WALL - TRUSS BEARING
1" = 1'-0"



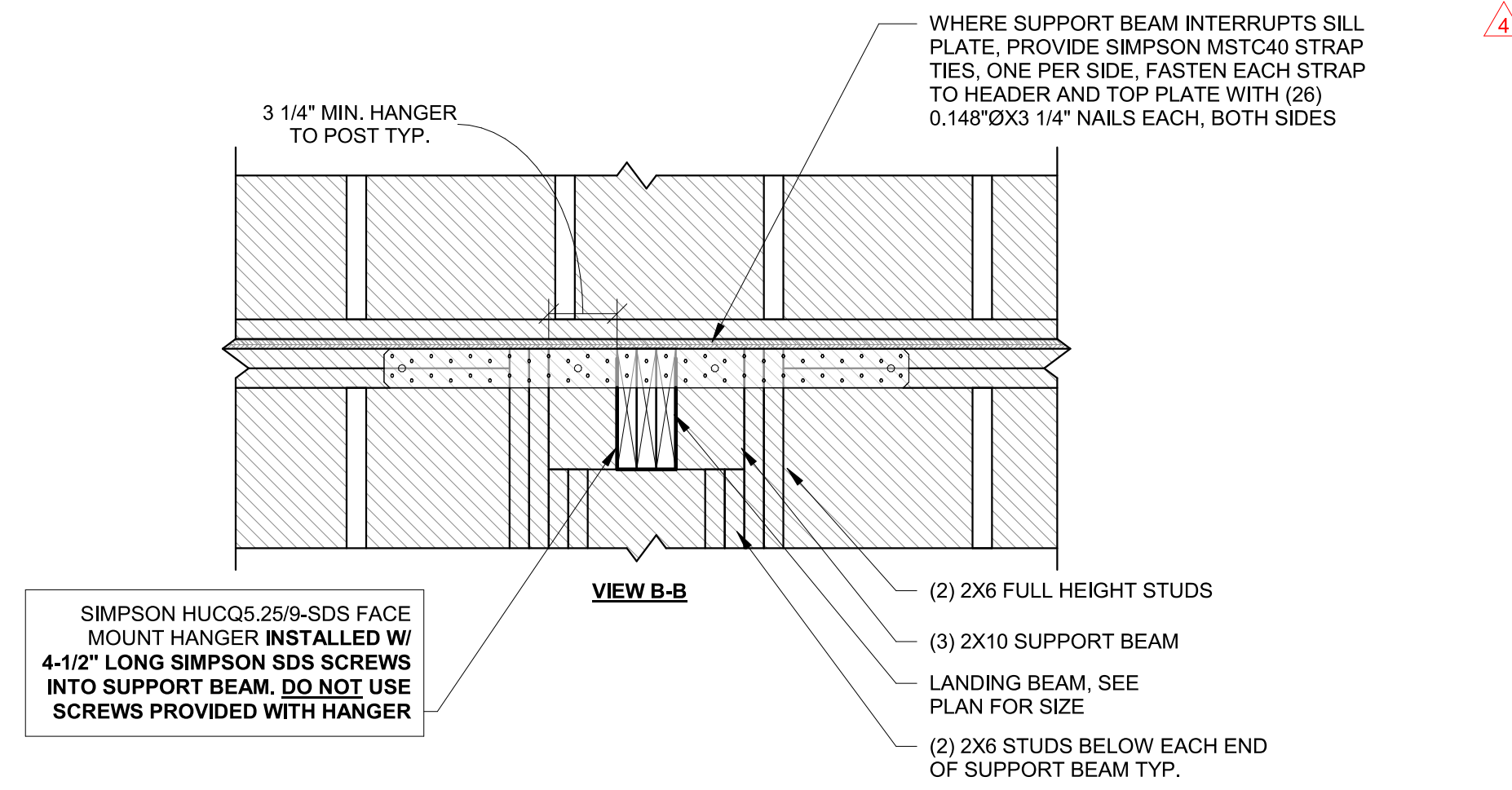
7
S532 STAIR INTERMEDIATE LANDING BEAM TO SUPPORT BEAM1
1 1/2" = 1'-0"



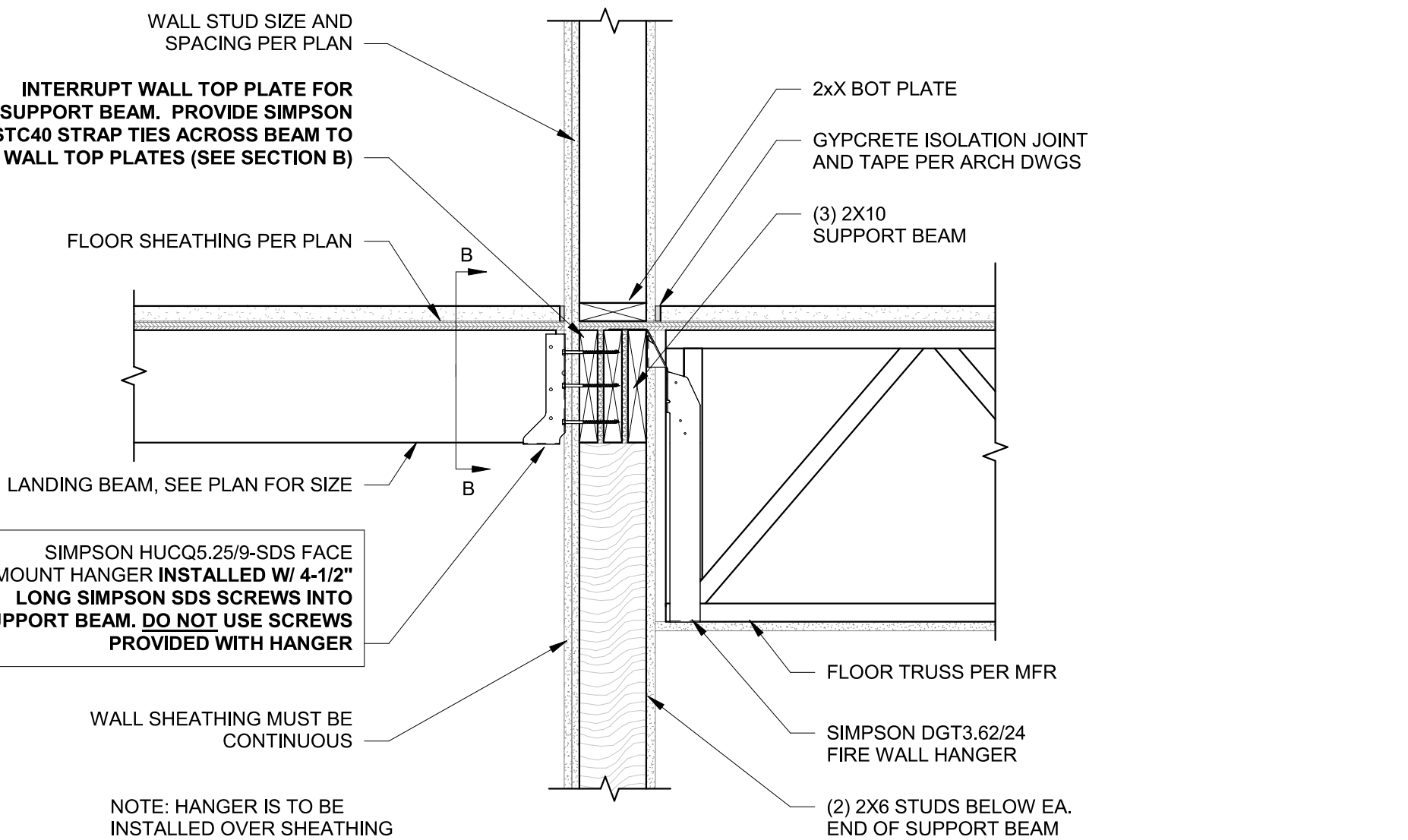
7
S532 STAIR INTERMEDIATE LANDING BEAM TO SUPPORT BEAM1
1 1/2" = 1'-0"



9
S532 STAIR FRAMING SECTION
3/4" = 1'-0"



8
S532 SECTION AT STAIR WALL - UPPER LANDING BEAM BEARING
1" = 1'-0"



8
S532 SECTION AT STAIR WALL - UPPER LANDING BEAM BEARING
1" = 1'-0"

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REVISIONS:
1 10/21/2024 Addendum #1
2 11/11/2024 Addendum #2
3 12/26/2024 Addendum #3
4 01/23/2025 Addendum #4 Stair Elevation Coordination

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MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

STATE OF MISSOURI
CELESTE KAY SPICKERT
Professional Engineer
NUMBER PE-200802213
01/23/2025

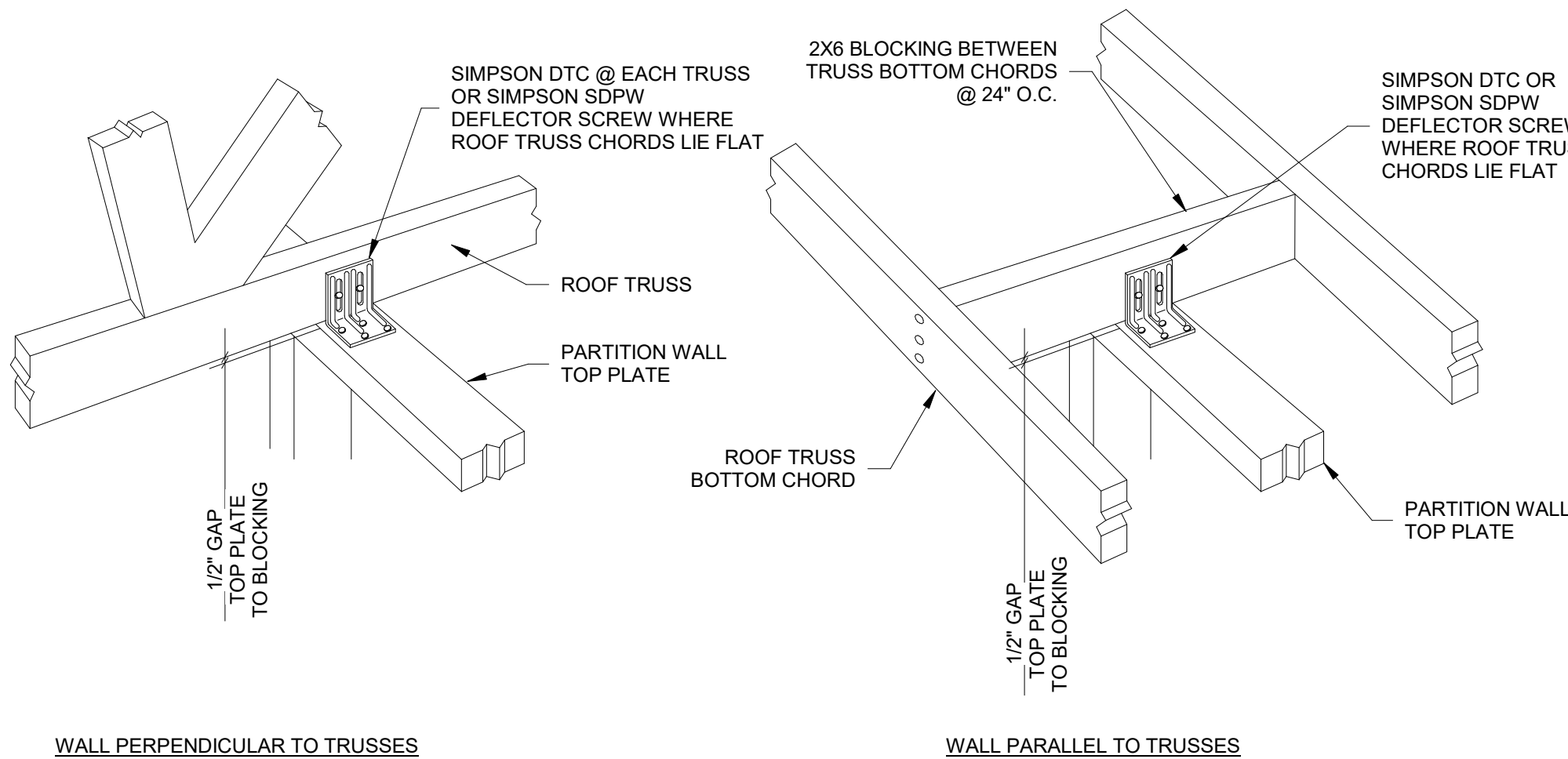
THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

SHEET TITLE
WOOD FLOOR FRAMING DETAILS

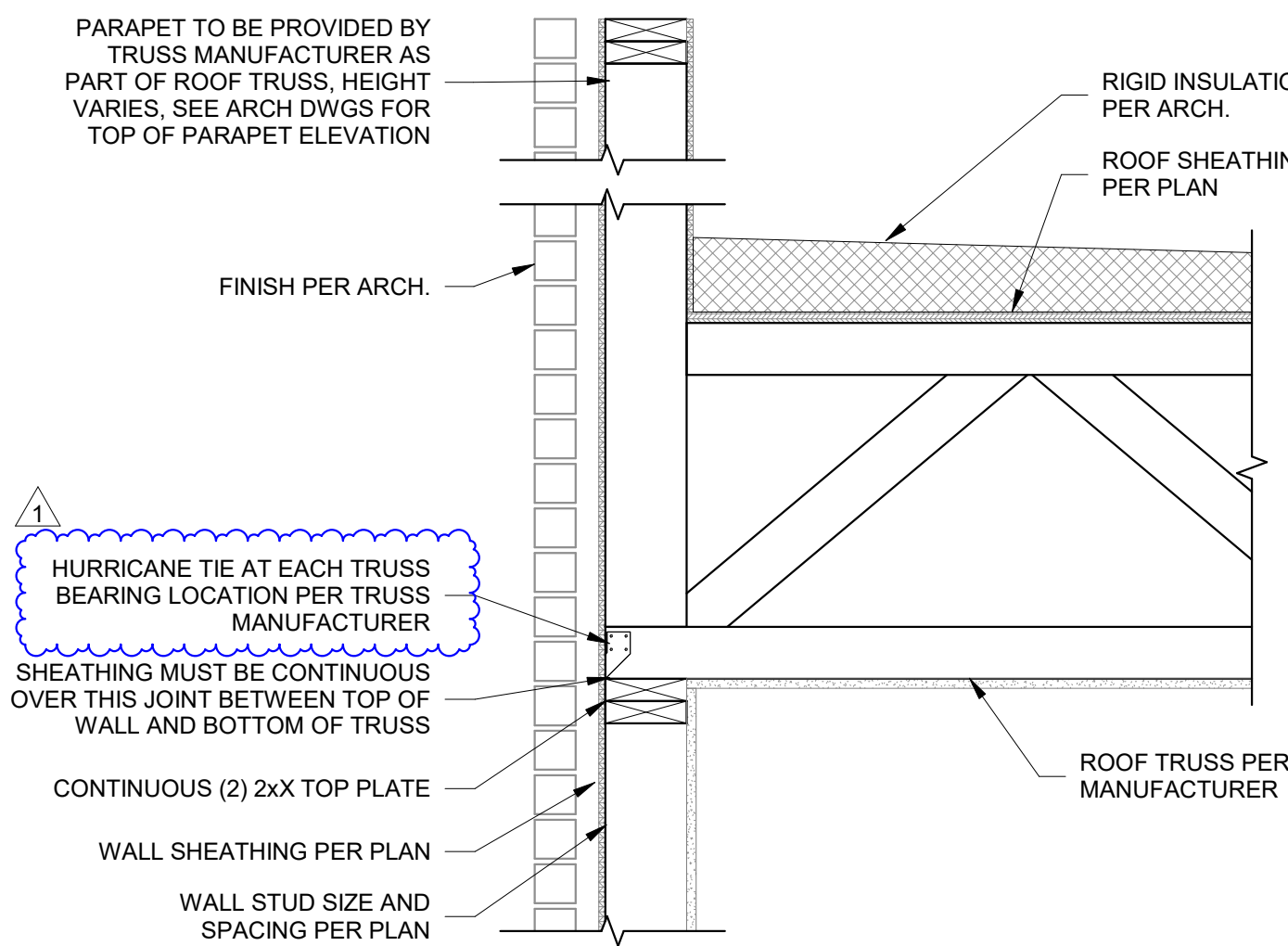
PROJECT NUMBER: 2023000333

SHEET NUMBER:

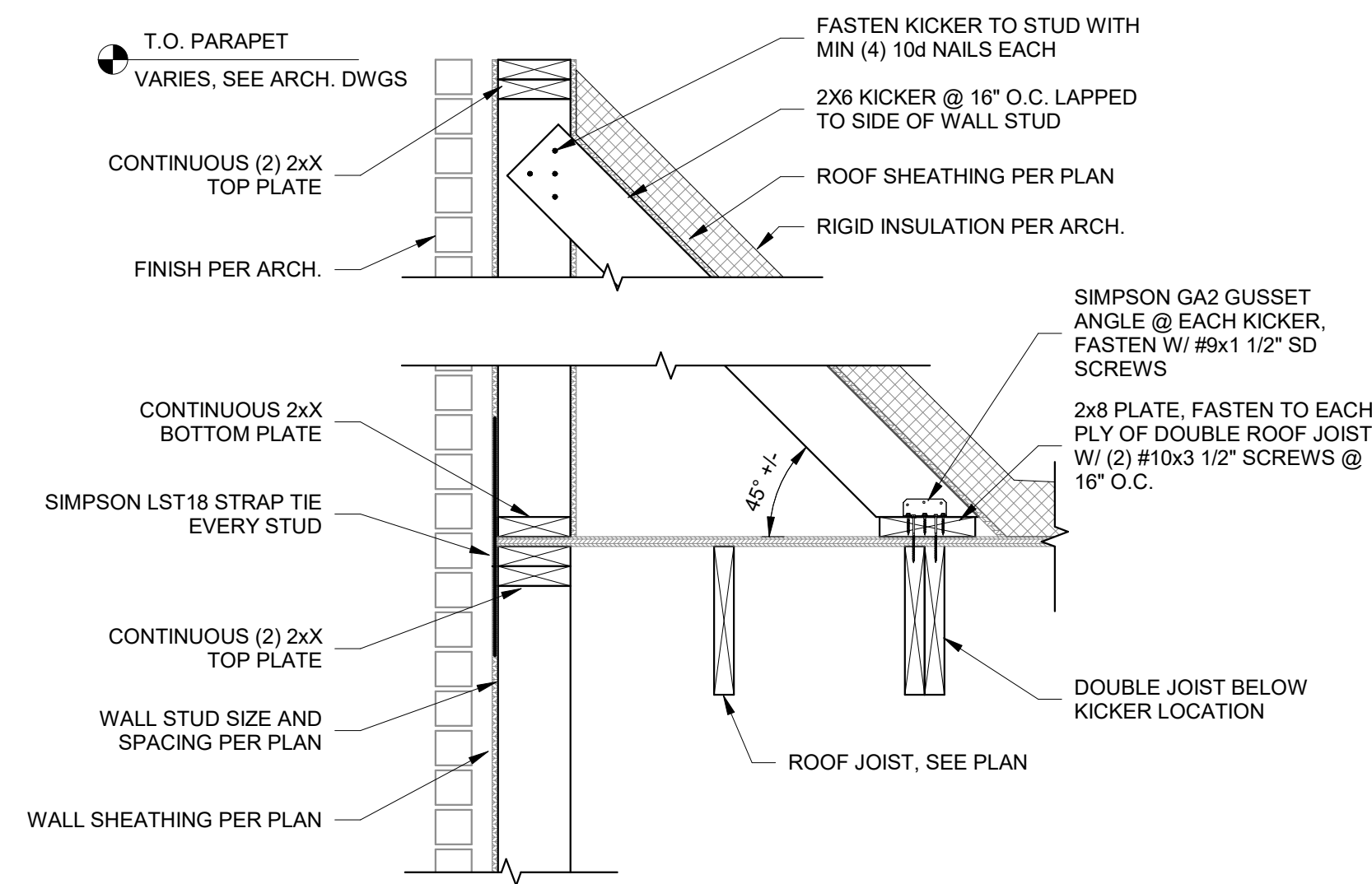
S532
RENUMBERED SHEET
(FORMERLY S511)



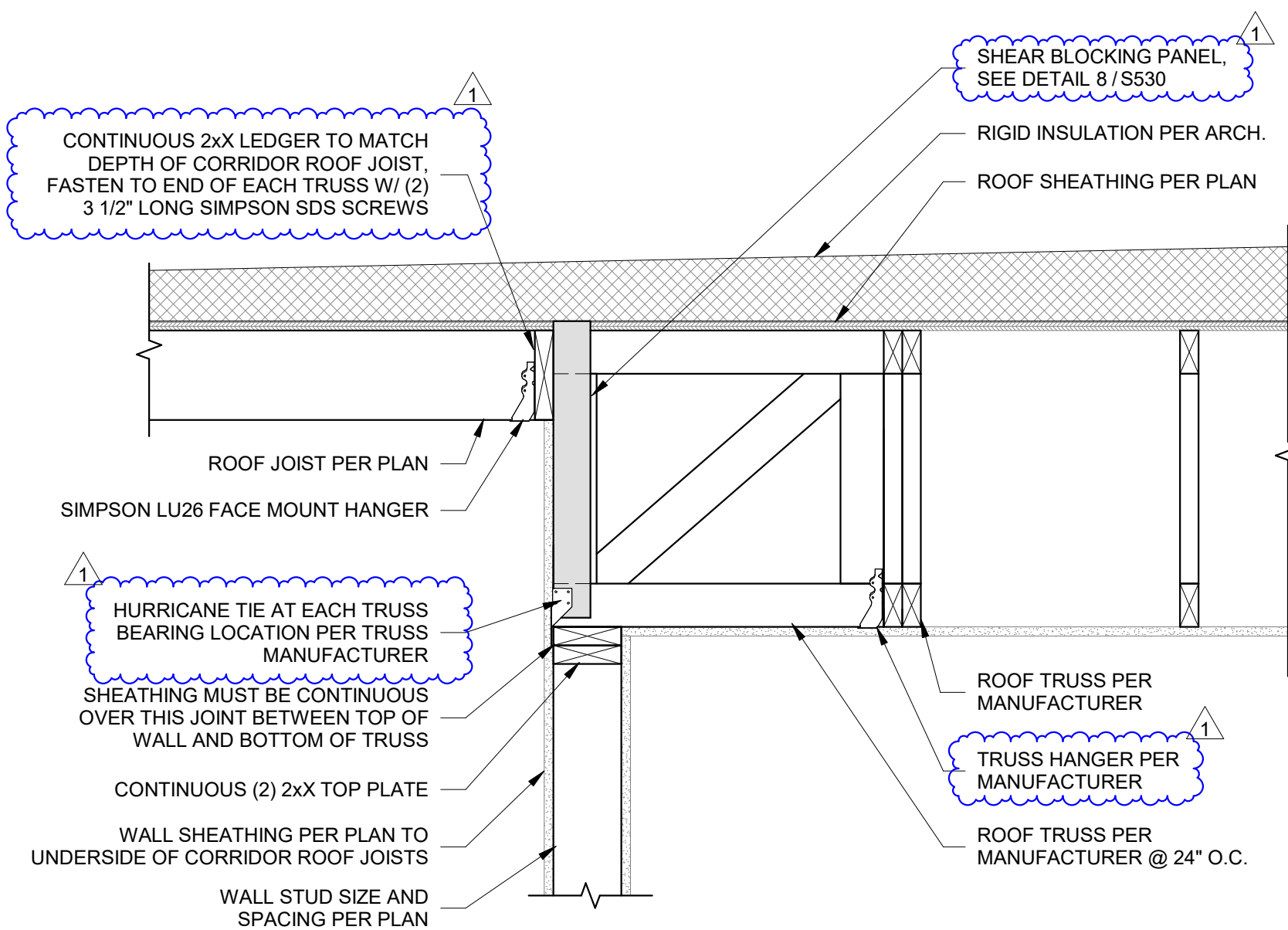
WALL PERPENDICULAR TO TRUSSES



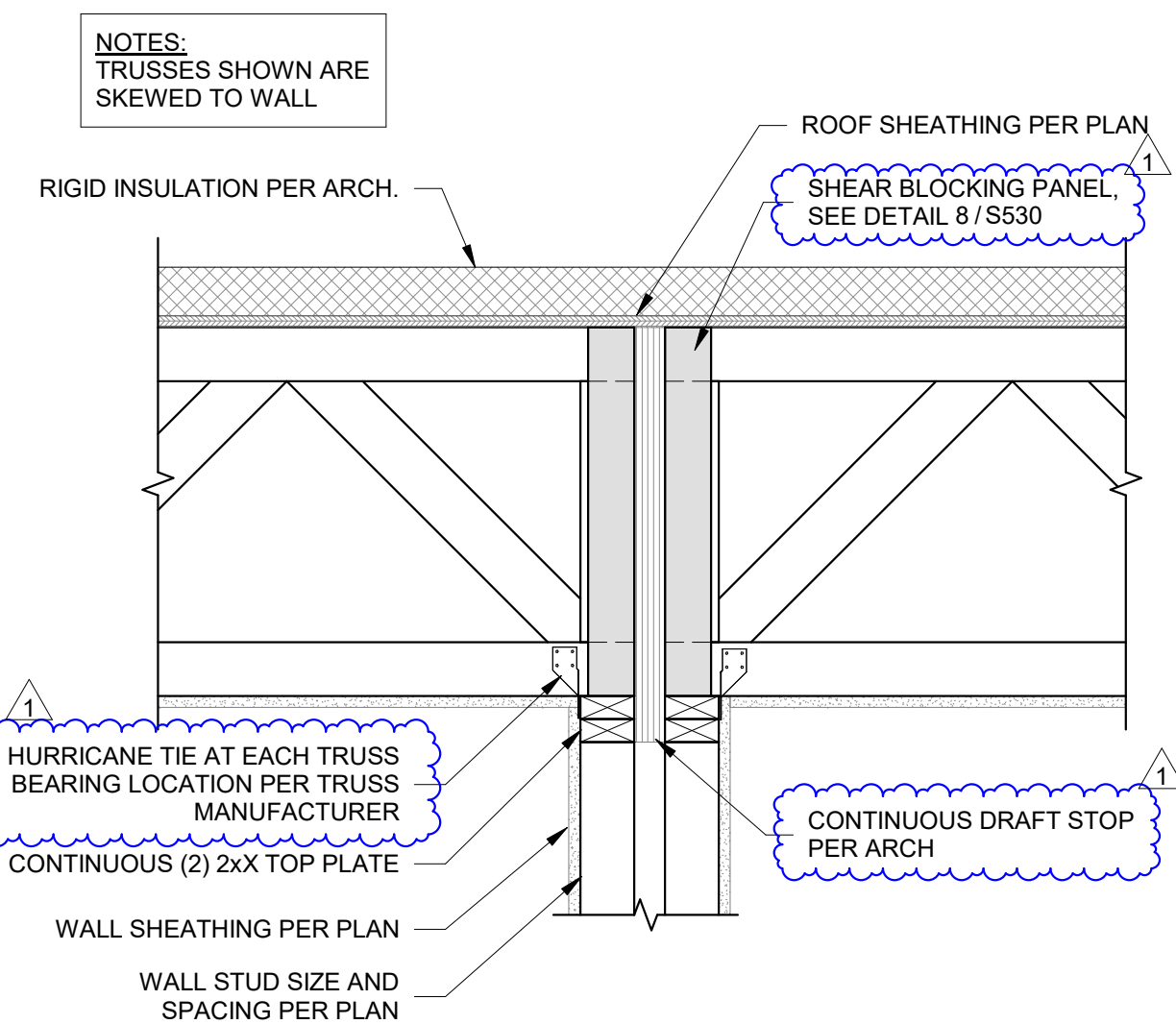
2 ROOF TRUSS AT EXTERIOR WALL
1" = 1'-0"



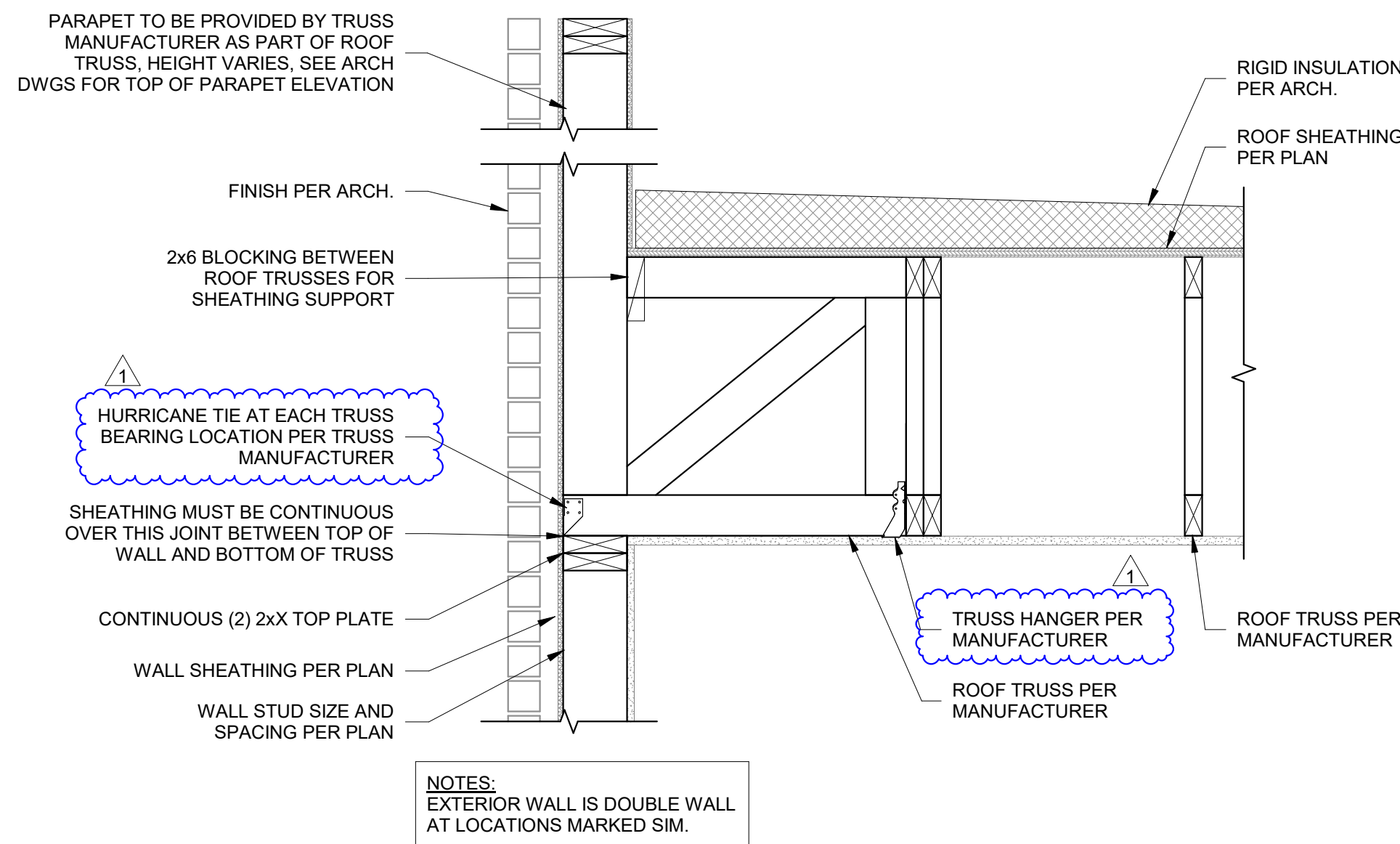
3 FRAMING AT EXTERIOR WALL AT ROOF
1" = 1'-0"



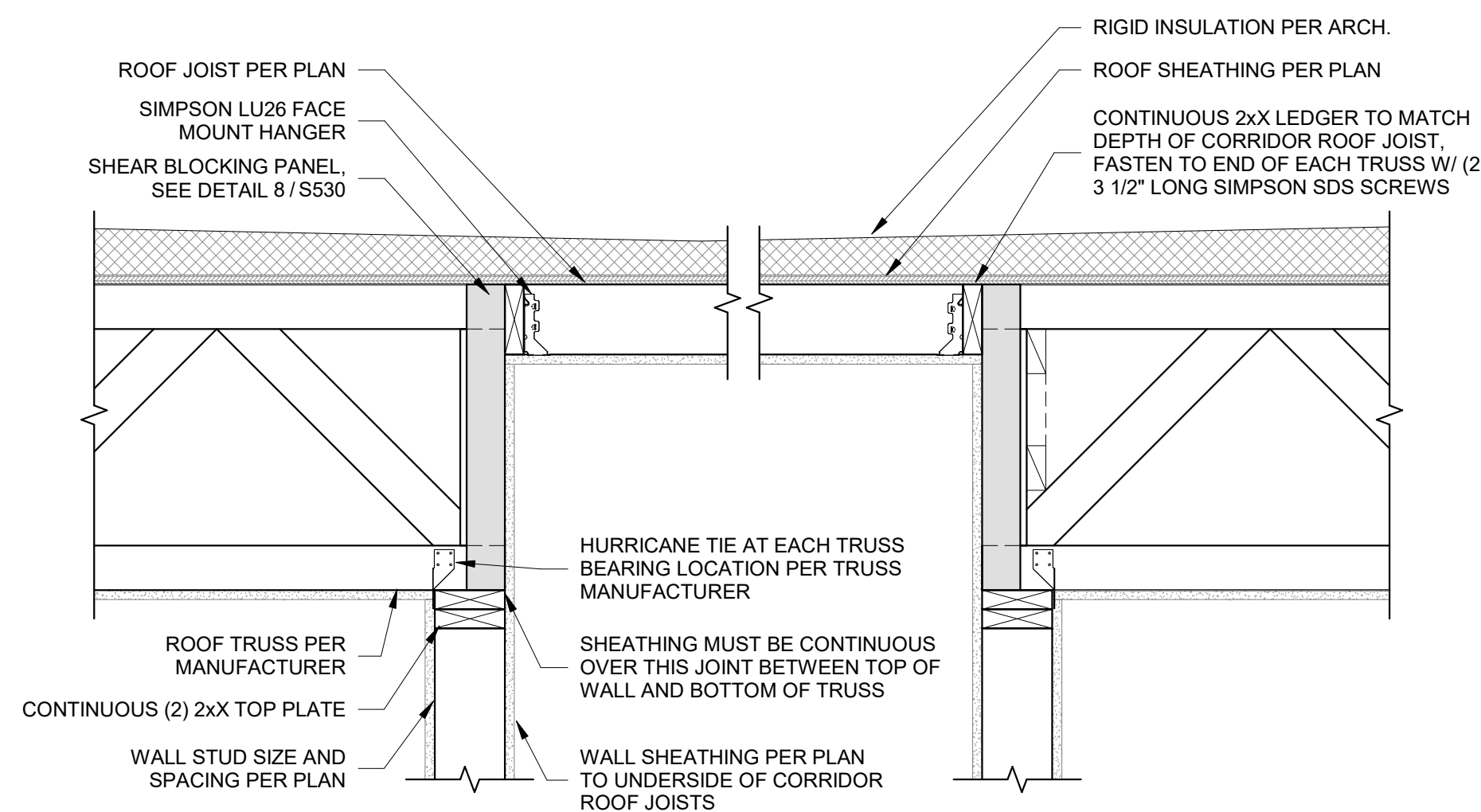
4 FRAMING AT CORRIDOR AT ROOF
1" = 1'-0"



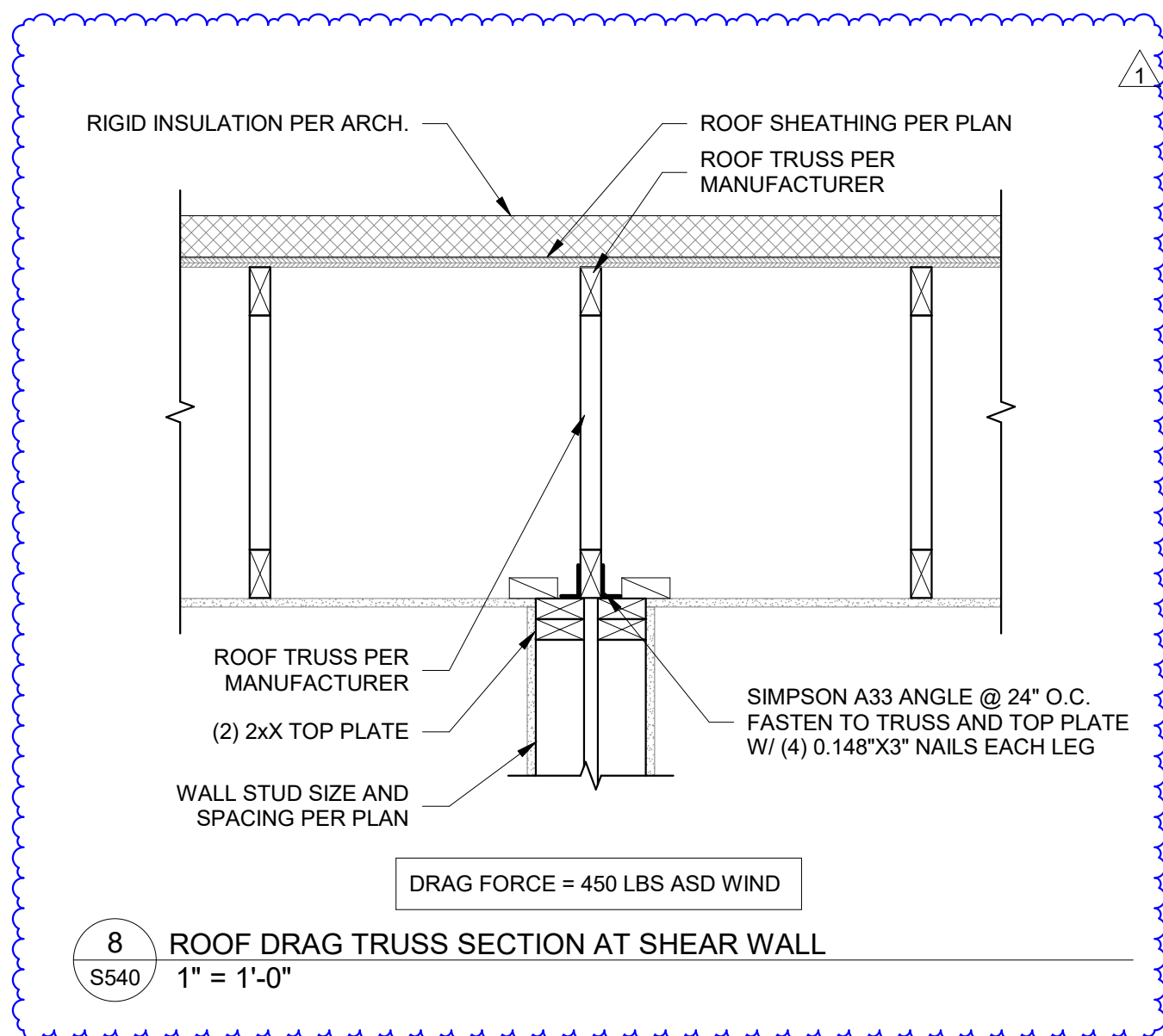
5 ROOF TRUSS BEARING ON INTERIOR WALL
1" = 1'-0"



6 ROOF TRUSS PARALLEL AT EXTERIOR WALL
1" = 1'-0"



7 ROOF TRUSS AT CORRIDOR WITH BUMP UP
1" = 1'-0"



8 ROOF DRAG TRUSS SECTION AT SHEAR WALL
1" = 1'-0"

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THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

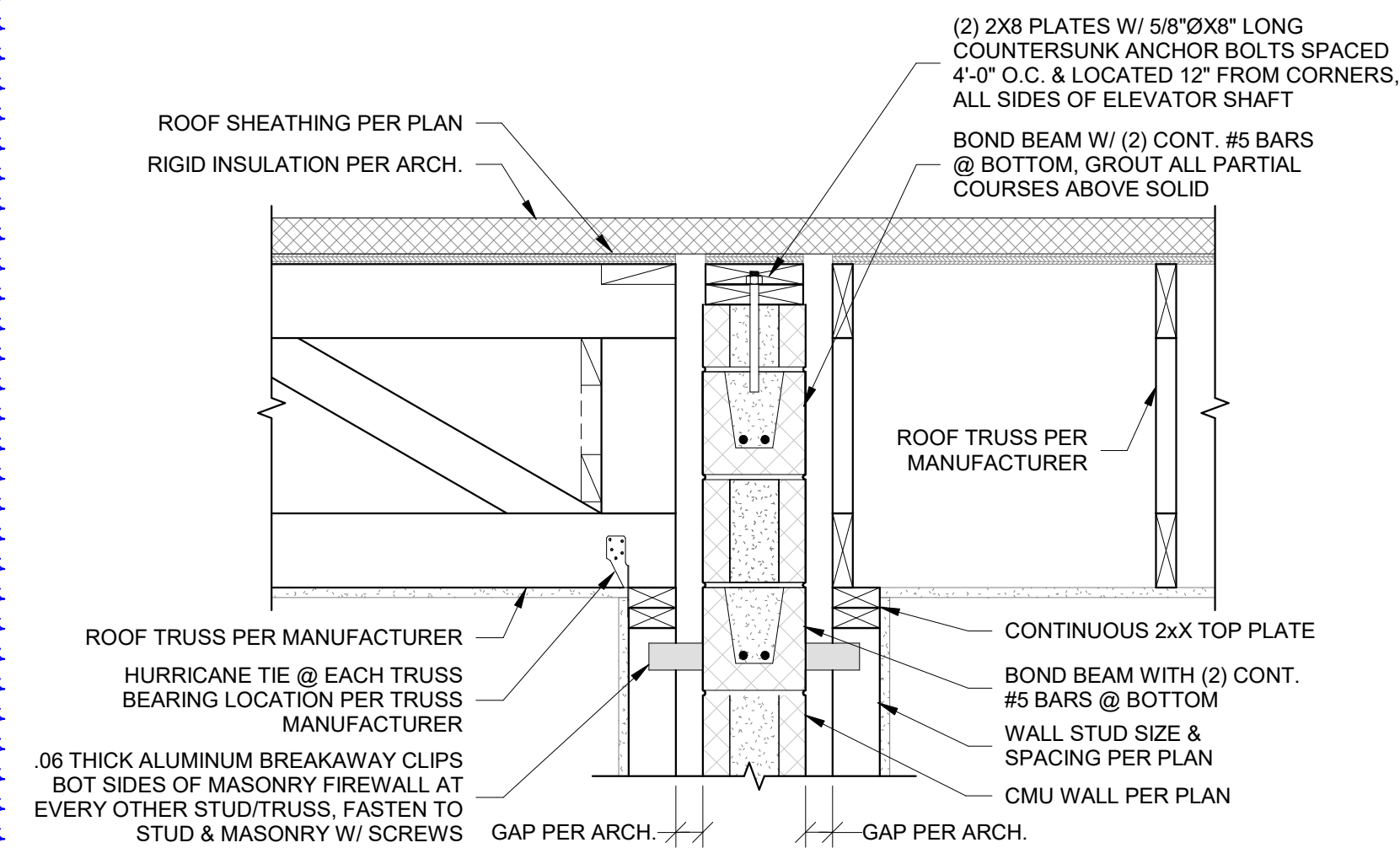
SHEET TITLE
WOOD ROOF FRAMING DETAILS

PROJECT NUMBER: 2023000333

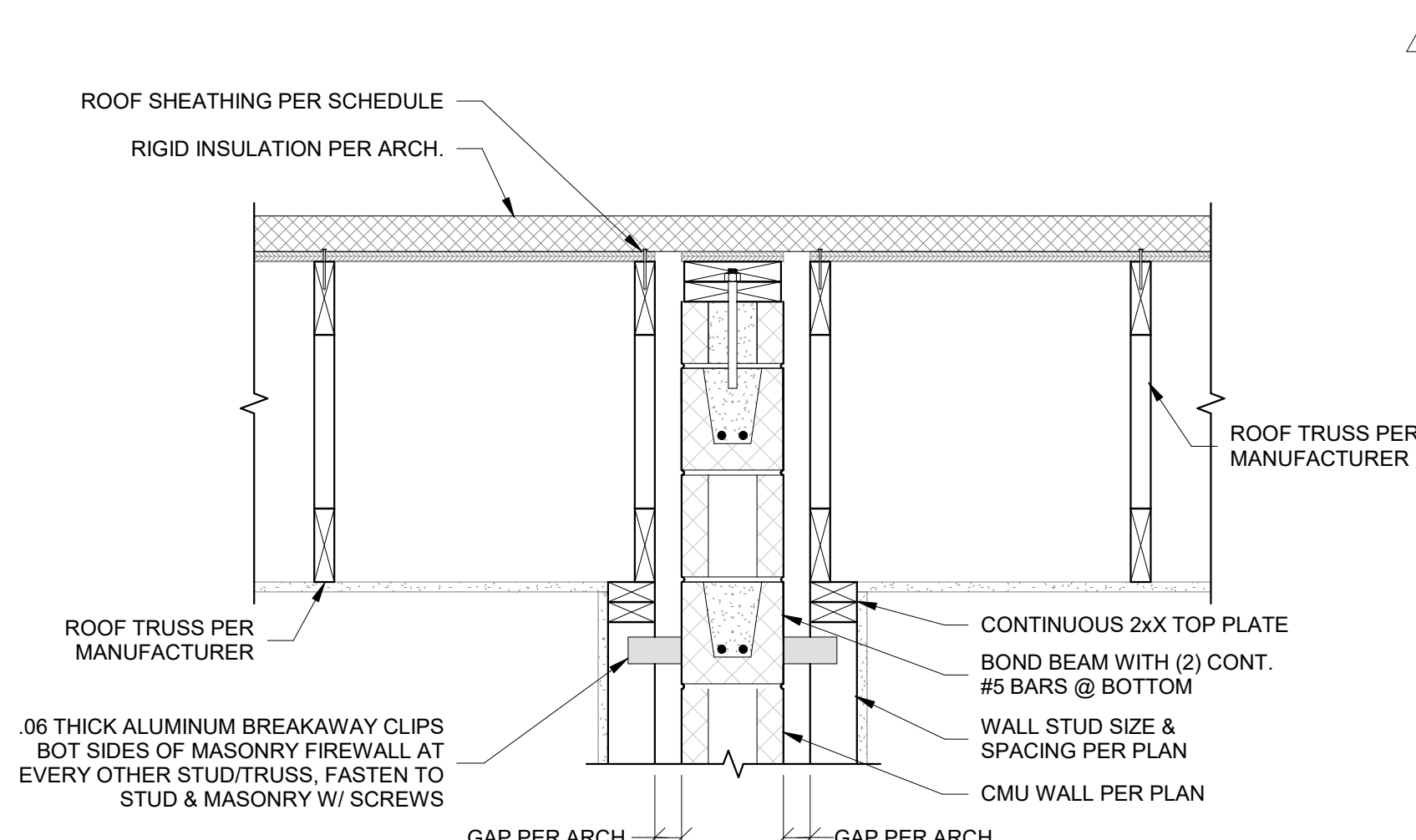
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S540
RENUMBERED SHEET
(FORMERLY S520)

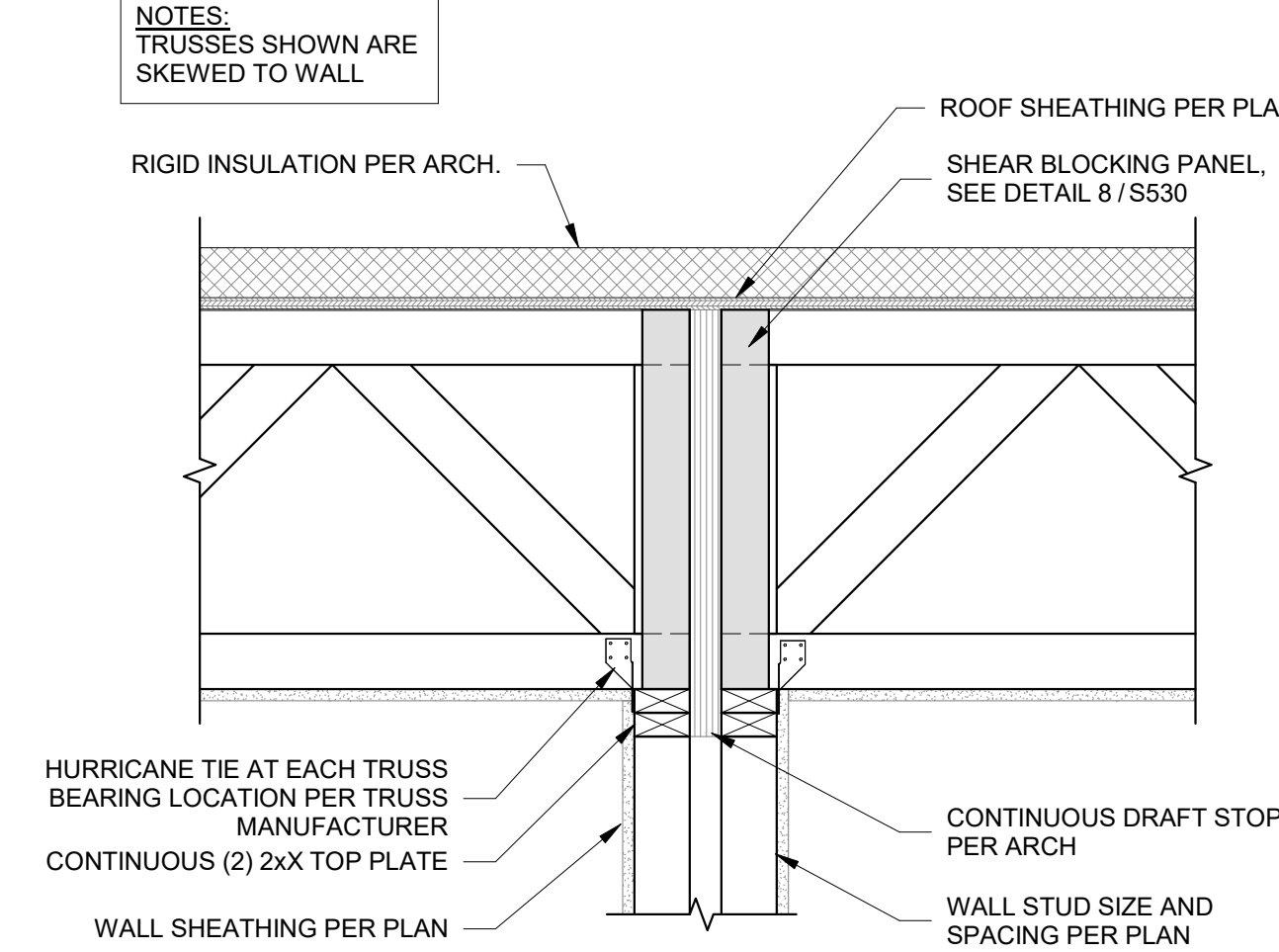
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Autodesk License: 2023000333
Discovery Plan, Lee's Summit 2023000333
Residential - Lot 4, 2024



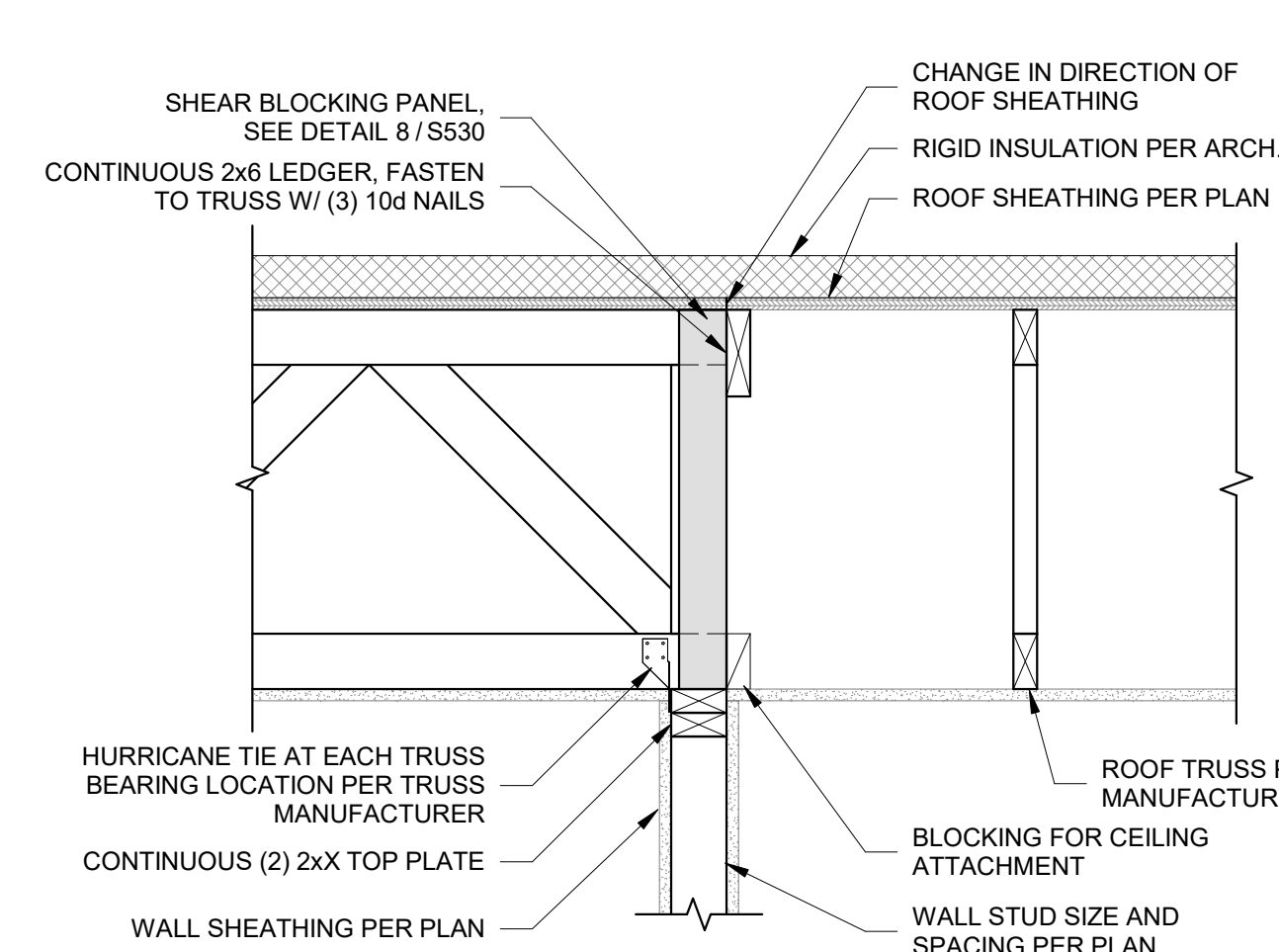
1 ROOF SECTION AT FIRE WALL - TRUSS TRANSITION
S541 1" = 1'-0"



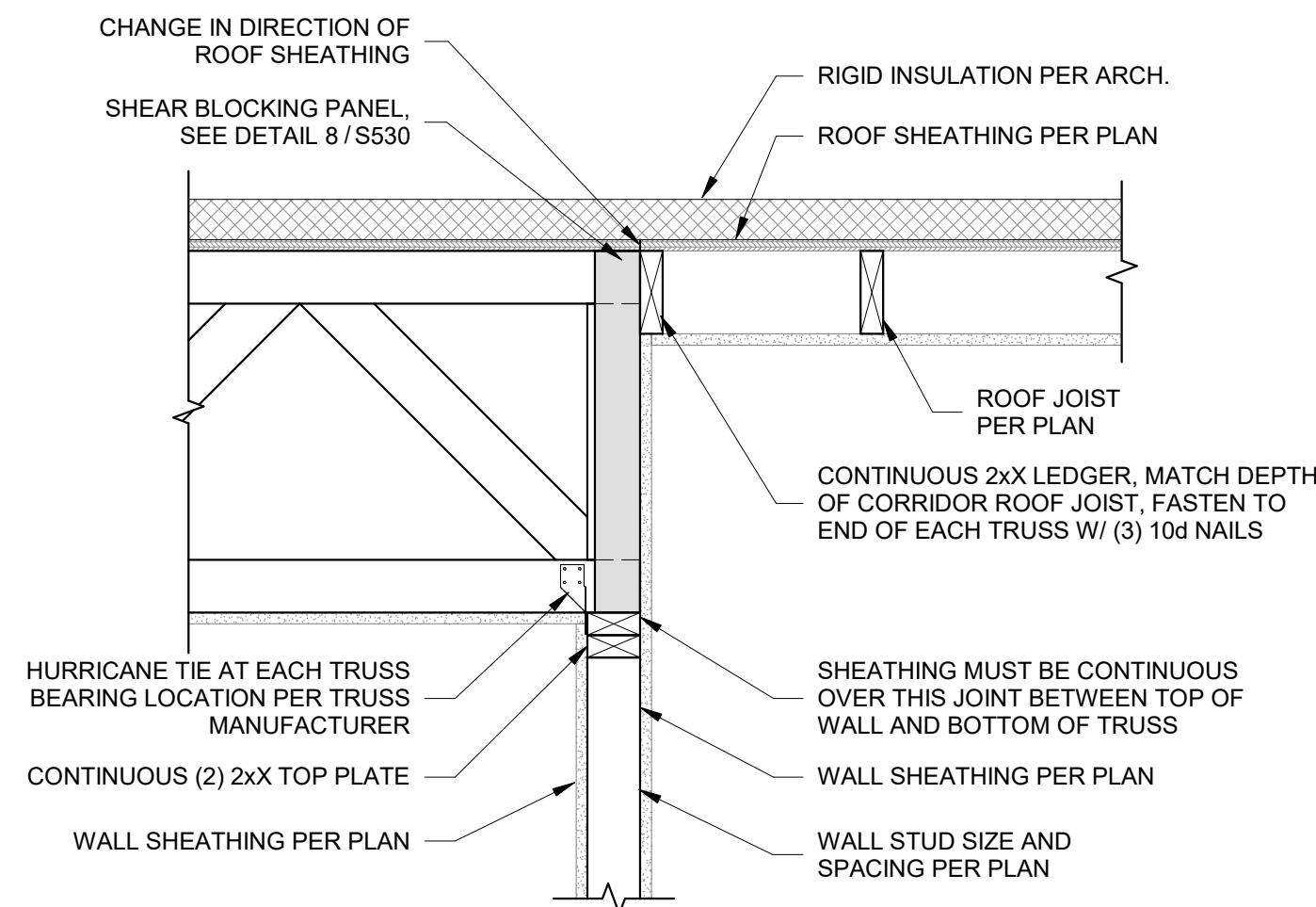
2 ROOF SECTION AT FIRE WALL - TRUSSES PARALLEL
S541 1" = 1'-0"



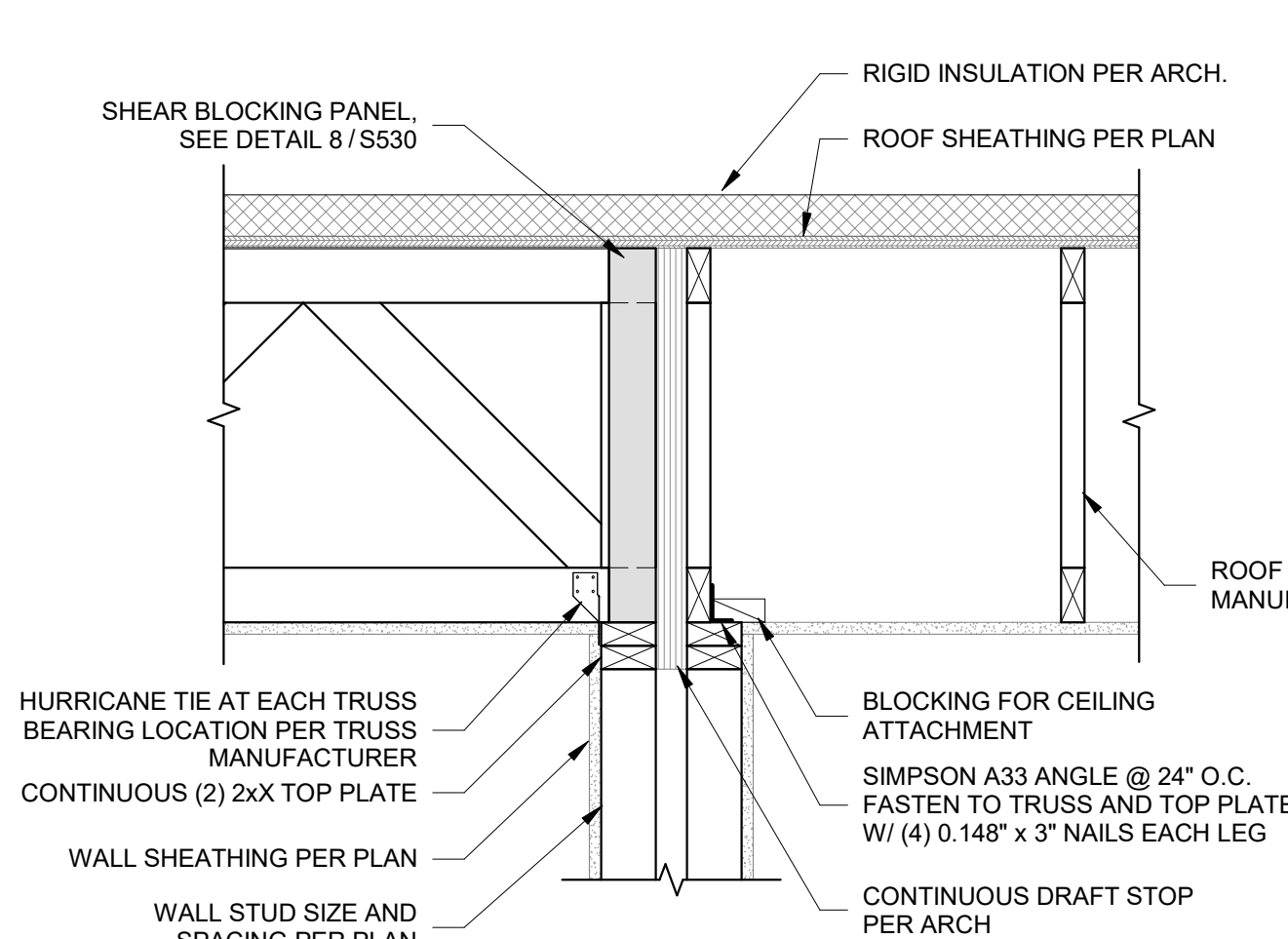
3 ROOF TRUSS BEARING AT INTERIOR DEMISING WALL
S541 1" = 1'-0"



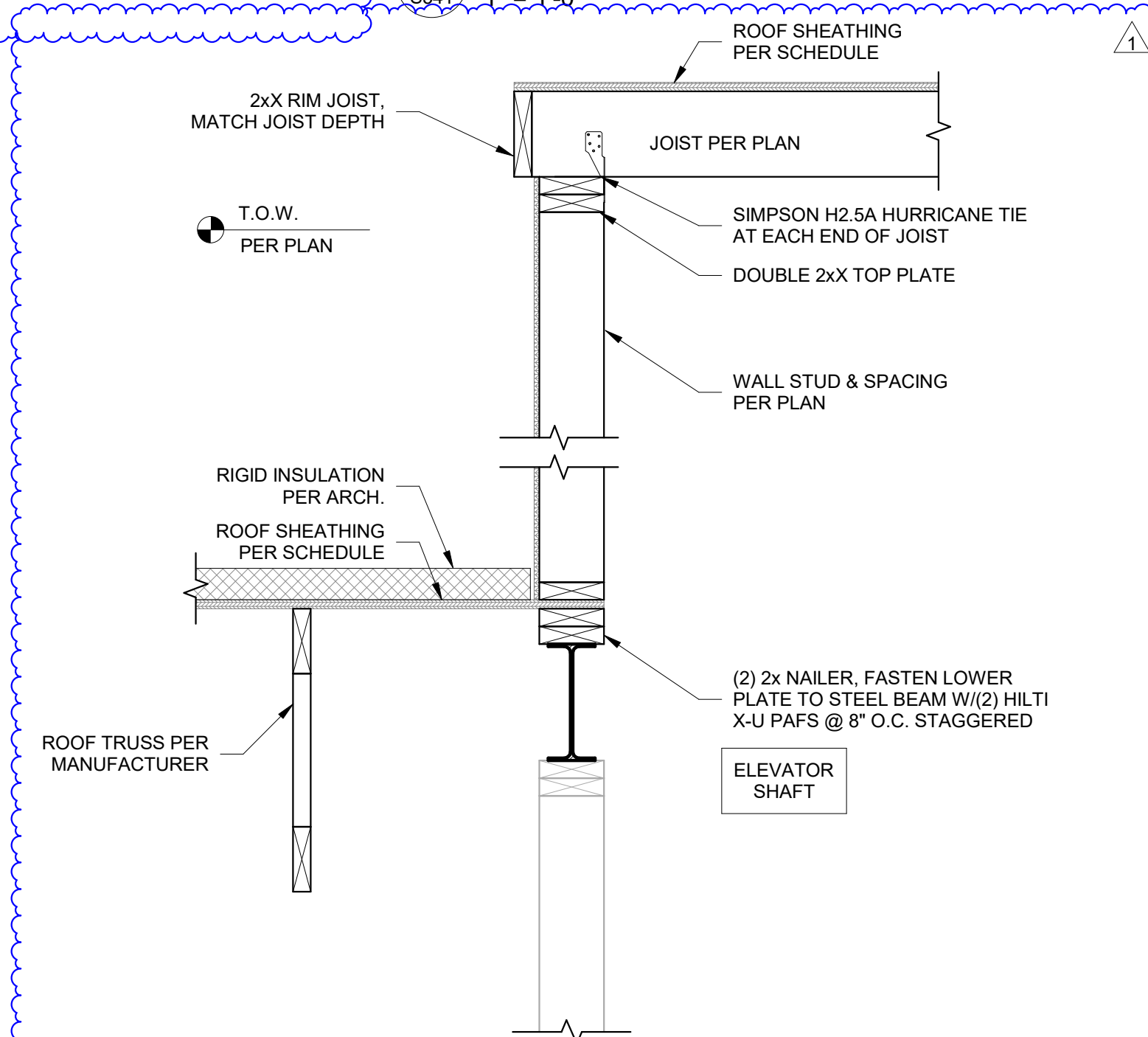
4 ROOF TRUSS BEARING TRANSITION
S541 1" = 1'-0"



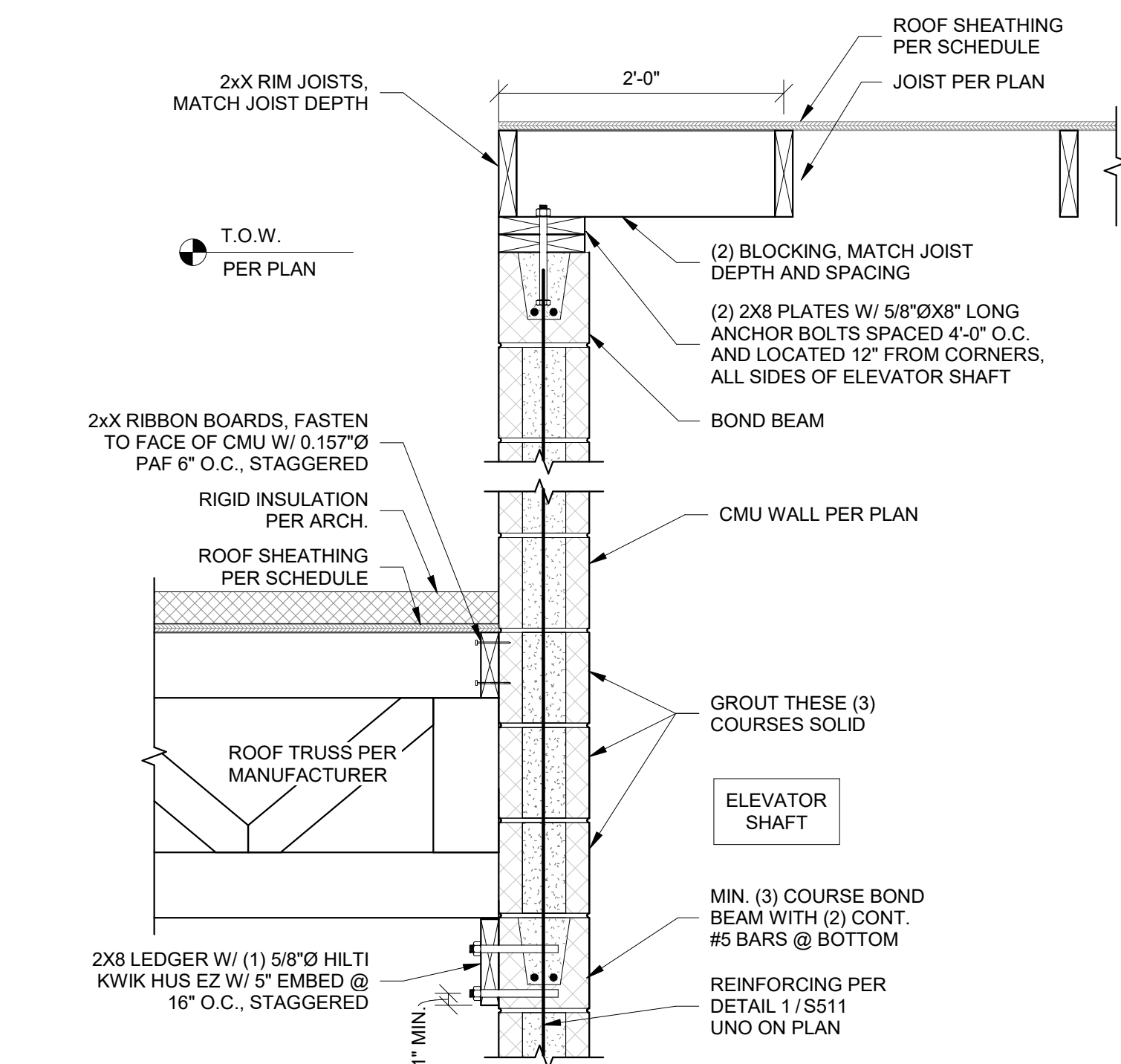
5 ROOF TRUSS BEARING TRANSITION
S541 1" = 1'-0"



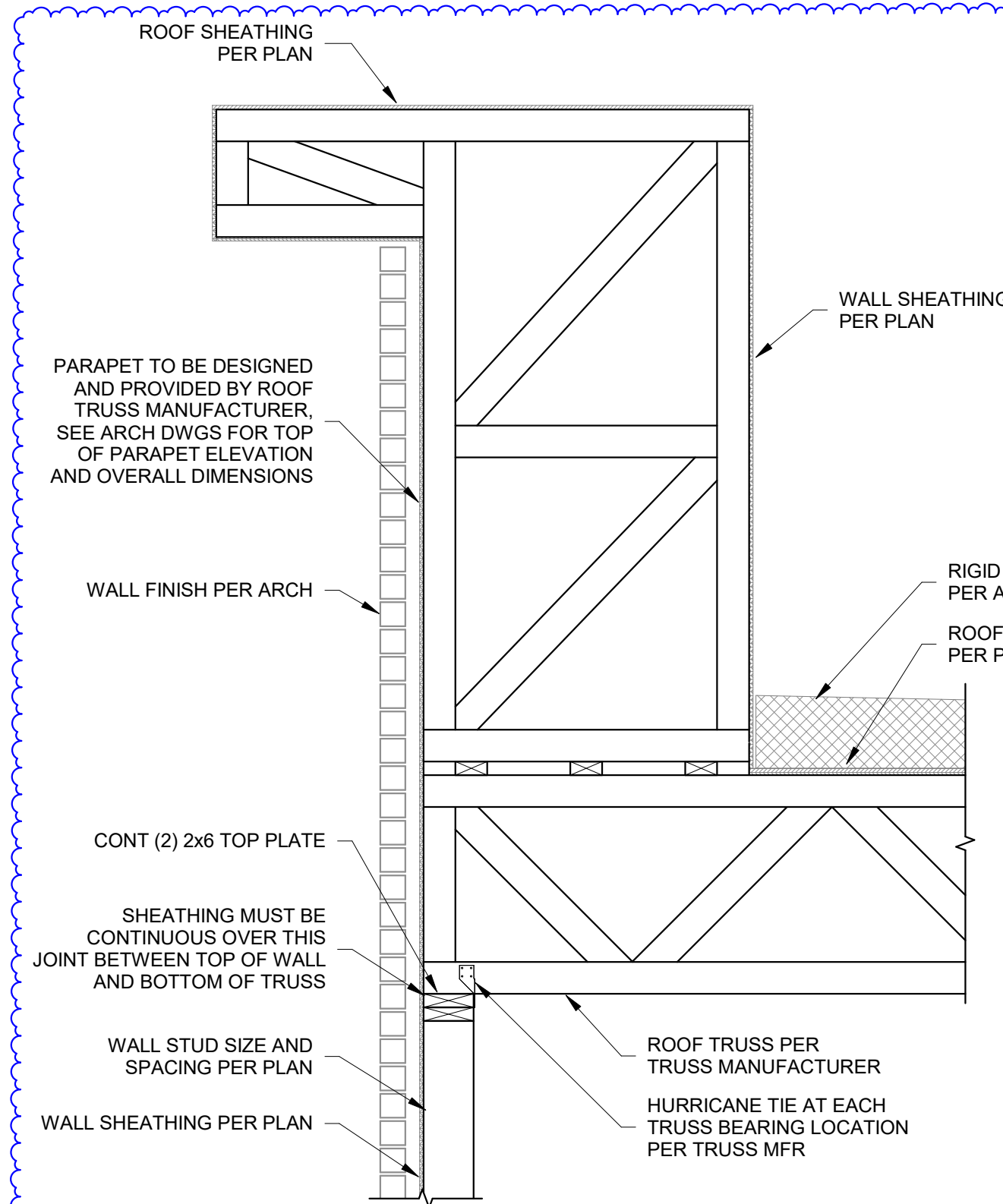
6 ROOF TRUSS BEARING TRANSITION AT DEMISING WALL
S541 1" = 1'-0"



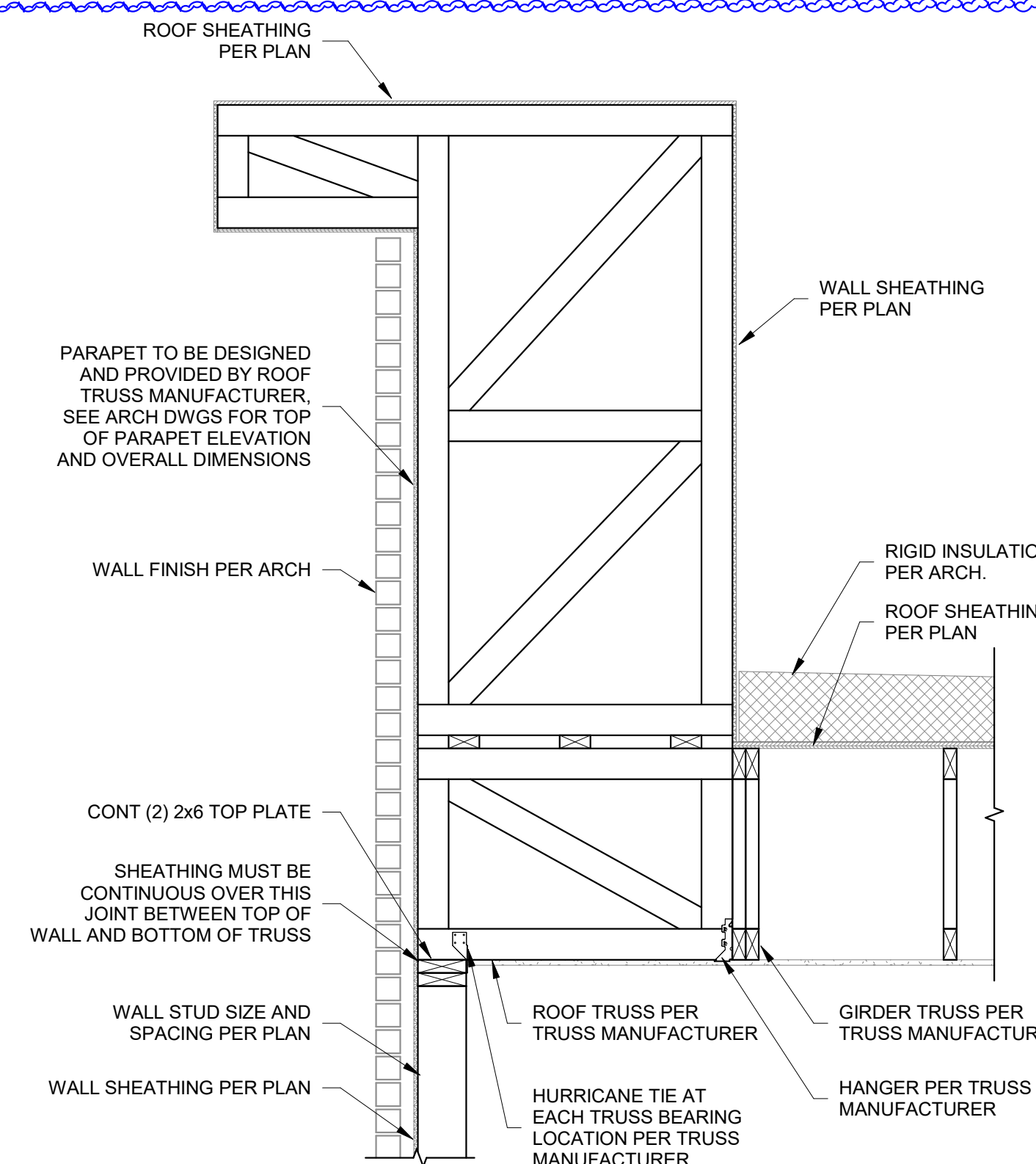
7 SECTION AT ELEVATOR AT ROOF
S541 1" = 1'-0"



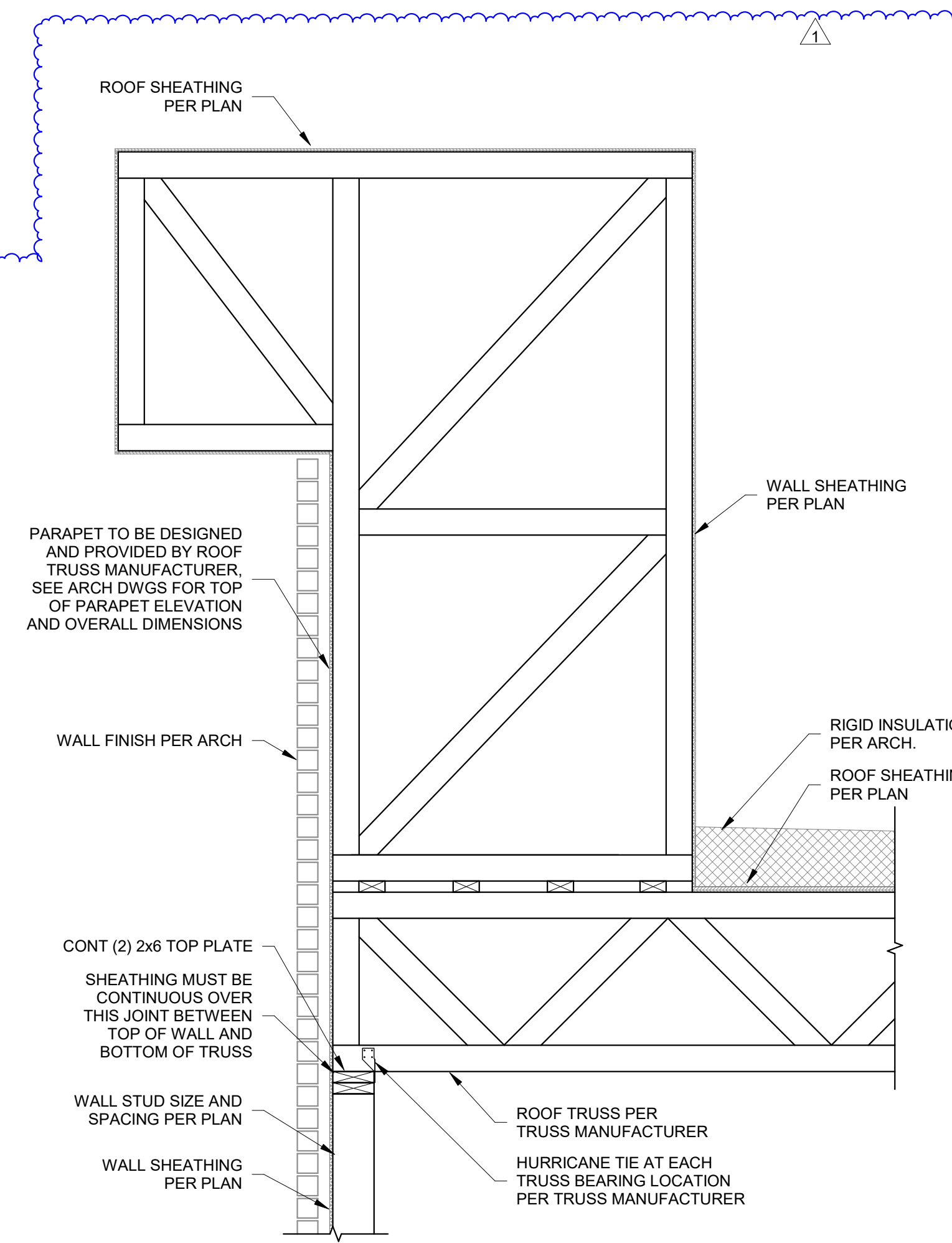
8 SECTION AT ELEVATOR AT ROOF
S541 1" = 1'-0"



9A SECTION AT BUILT-UP PARAPET
S541 3/4" = 1'-0"



9B SECTION AT BUILT-UP PARAPET PERP TO TRUSSES
S541 3/4" = 1'-0"



10 SECTION AT BUILT-UP PARAPET GRID 21
S541 3/4" = 1'-0"

NOTES:
TRUSSES SHOWN ARE
SKEWED TO WALL

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EXPIRES: DECEMBER 31, 2024

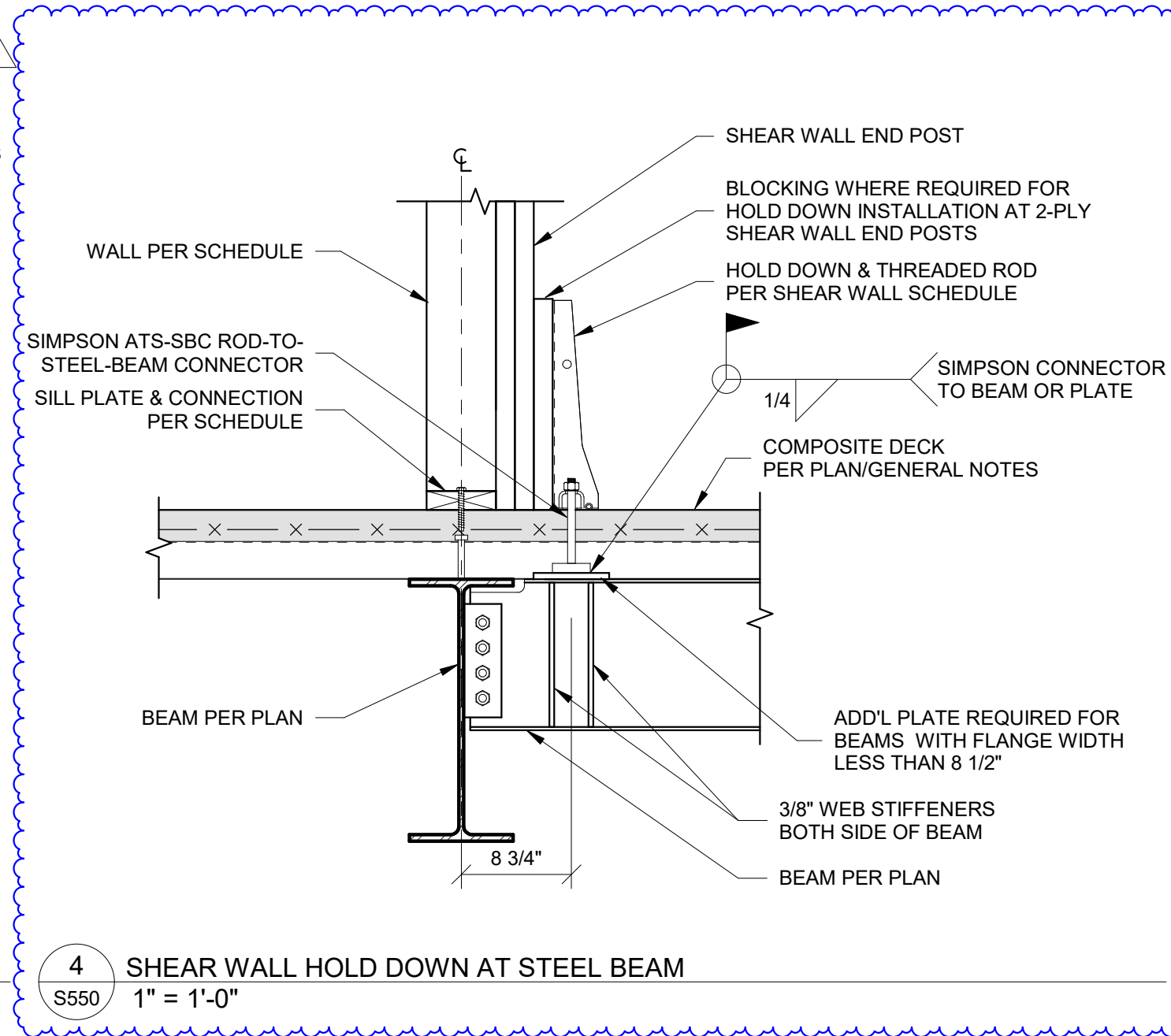
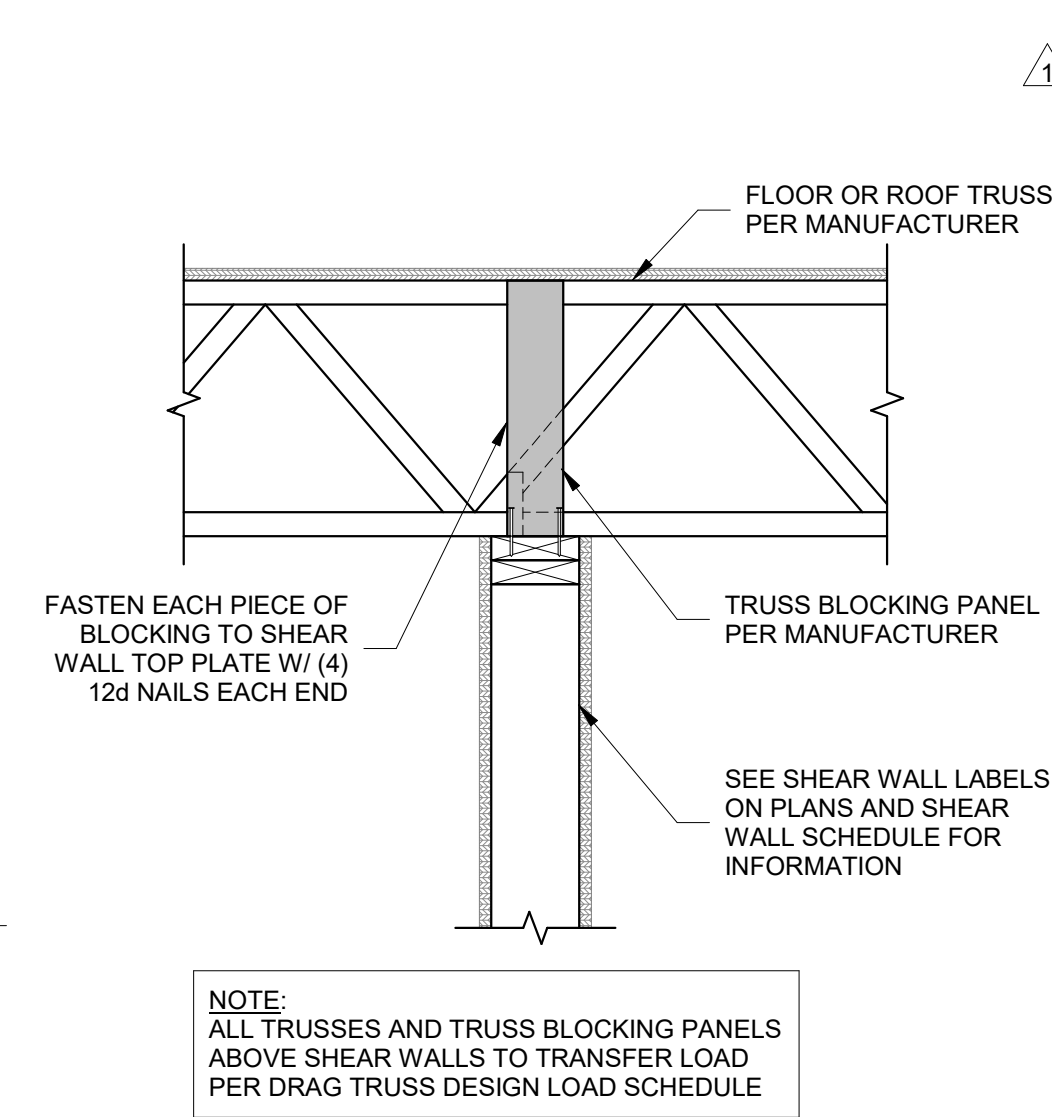
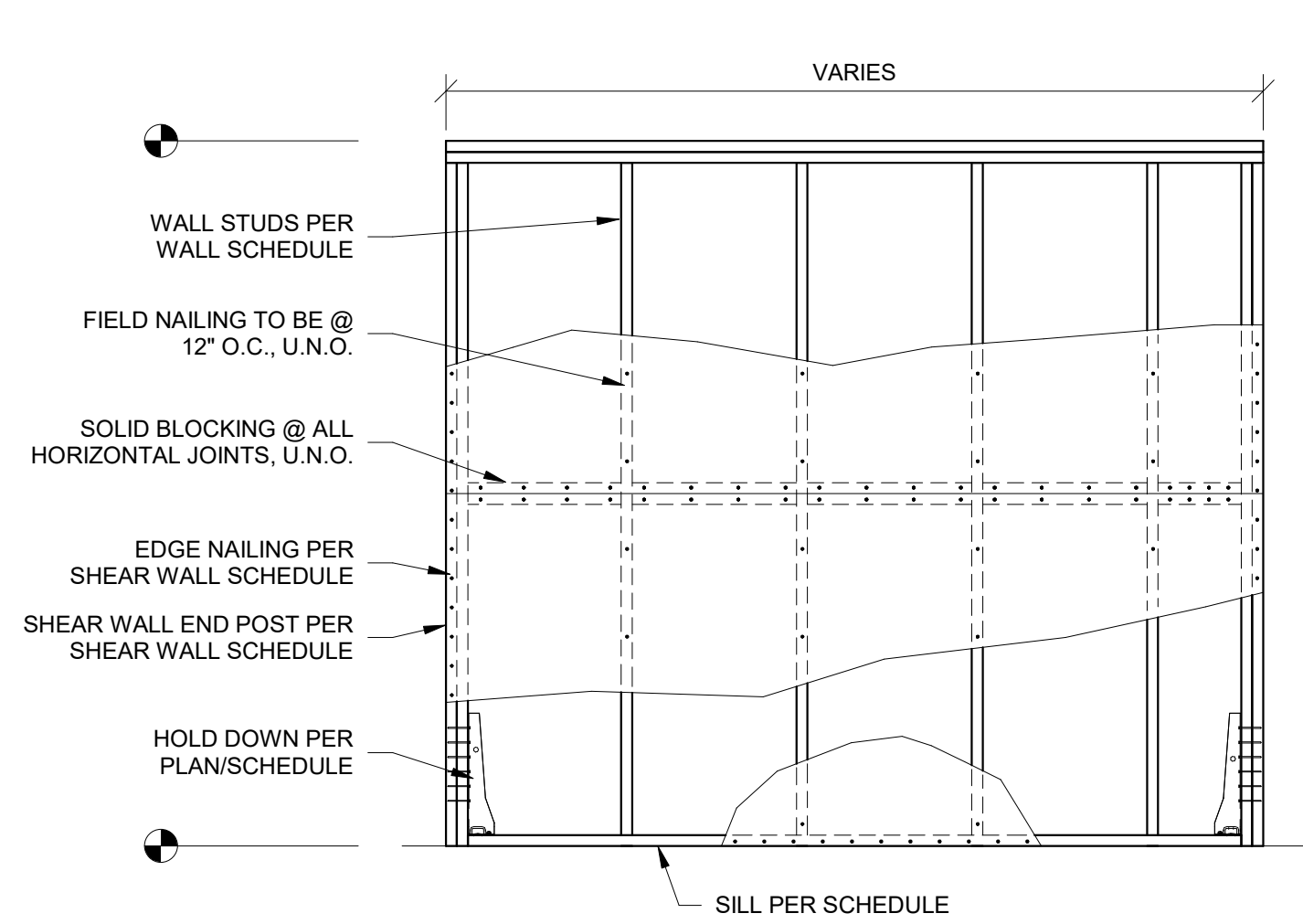
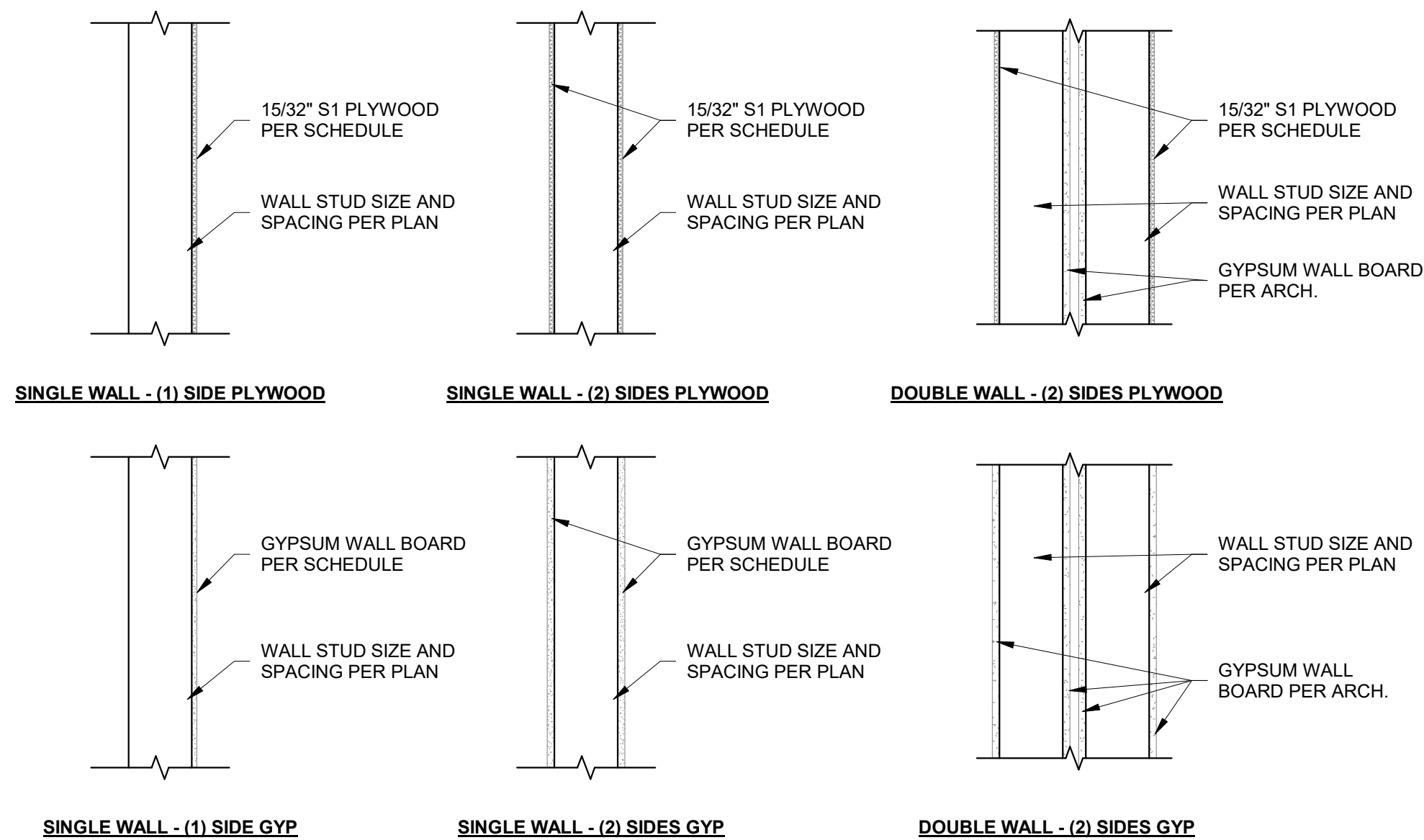
THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

SHEET TITLE
WOOD ROOF FRAMING DETAILS

PROJECT NUMBER: 2023000333

SHEET NUMBER:

S541
RENUMBERED SHEET
(FORMERLY S520)

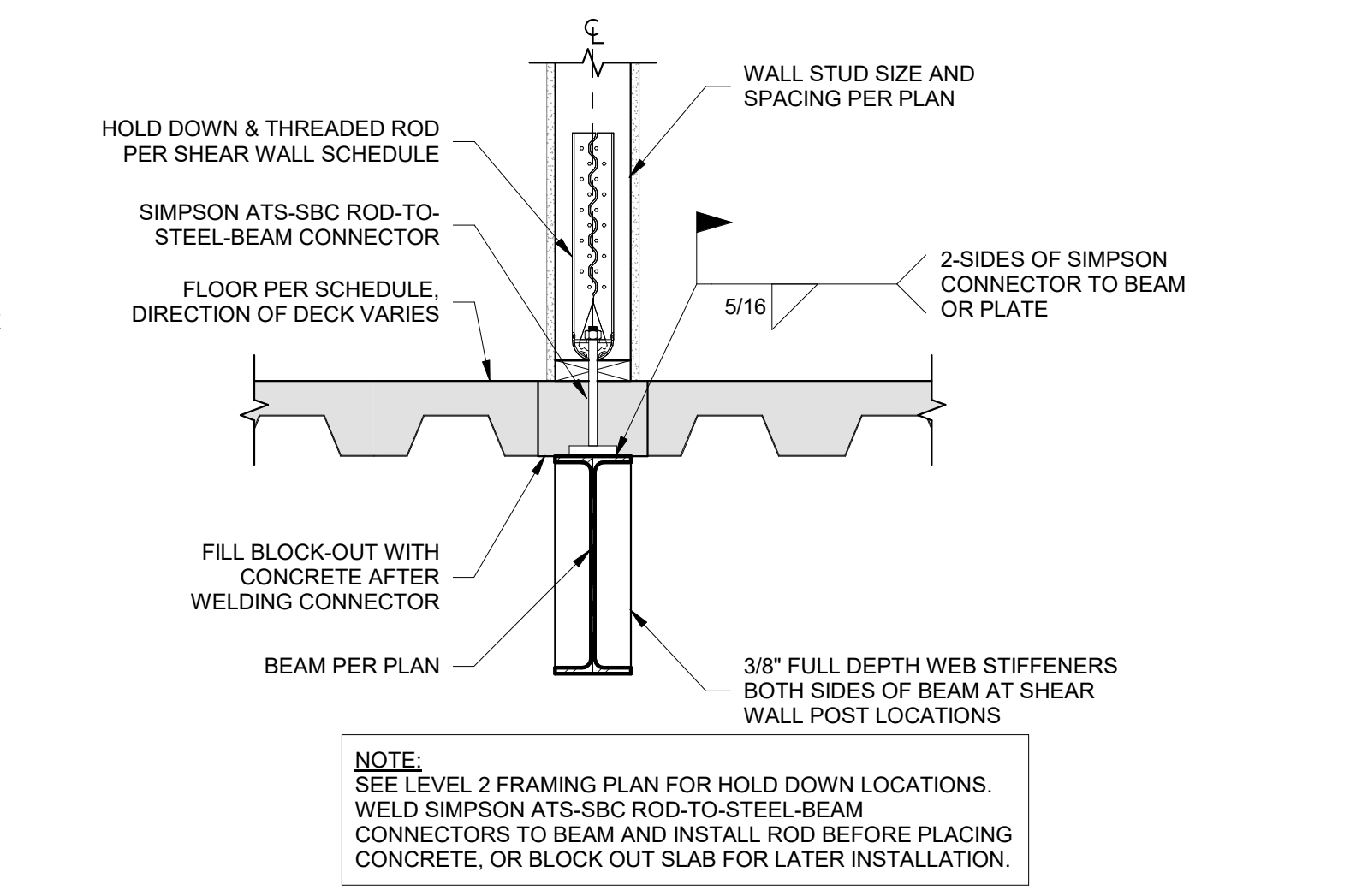
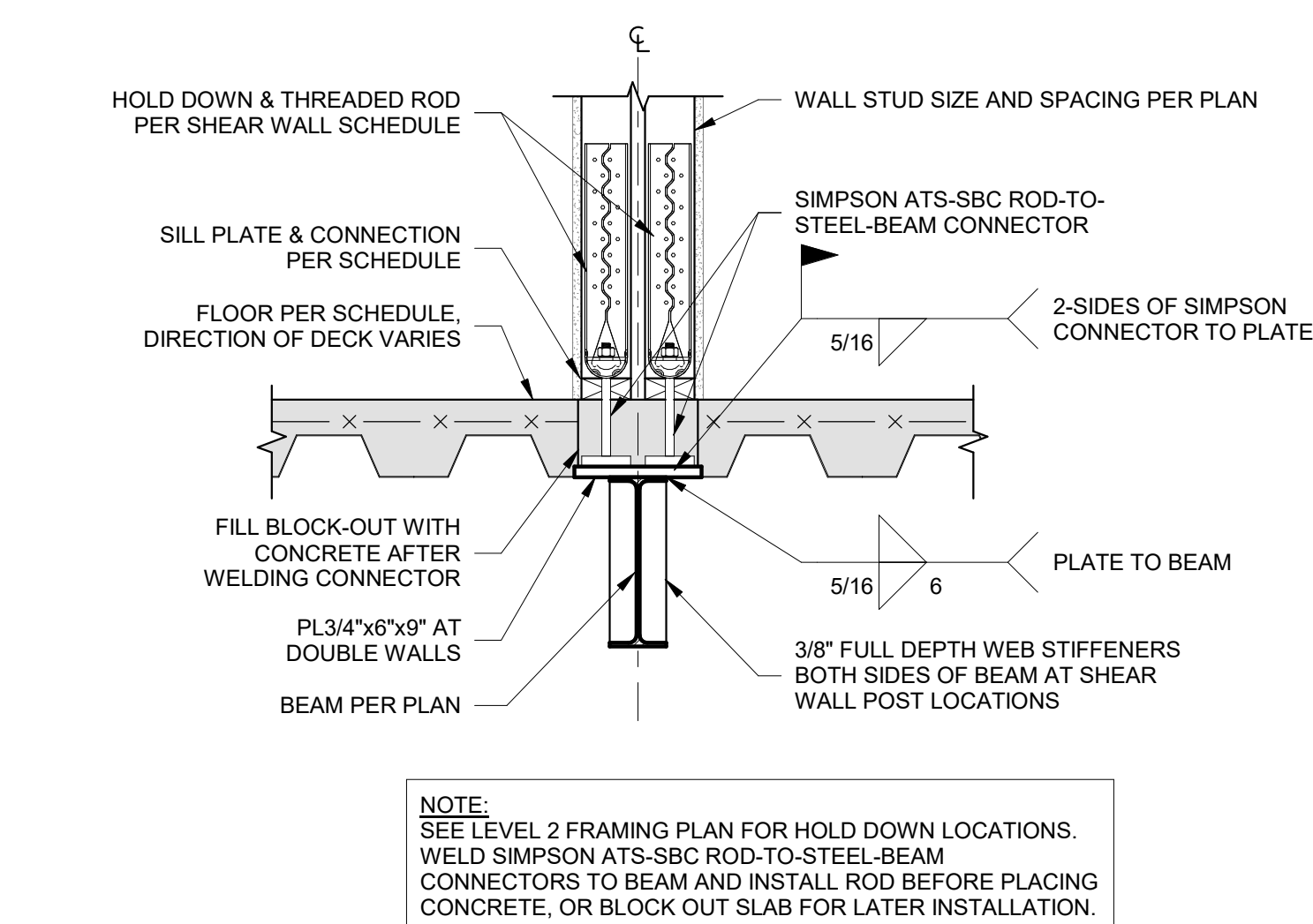
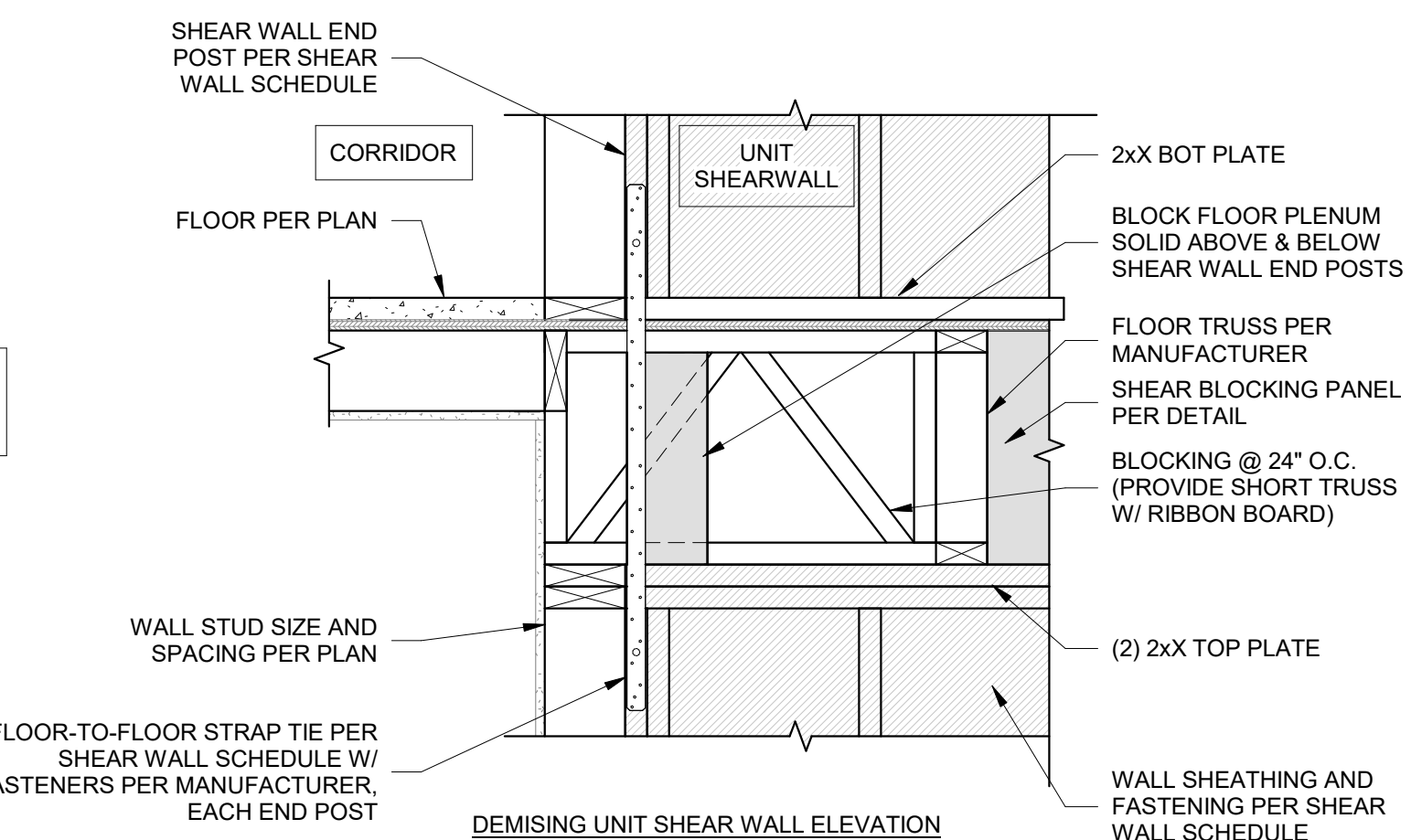
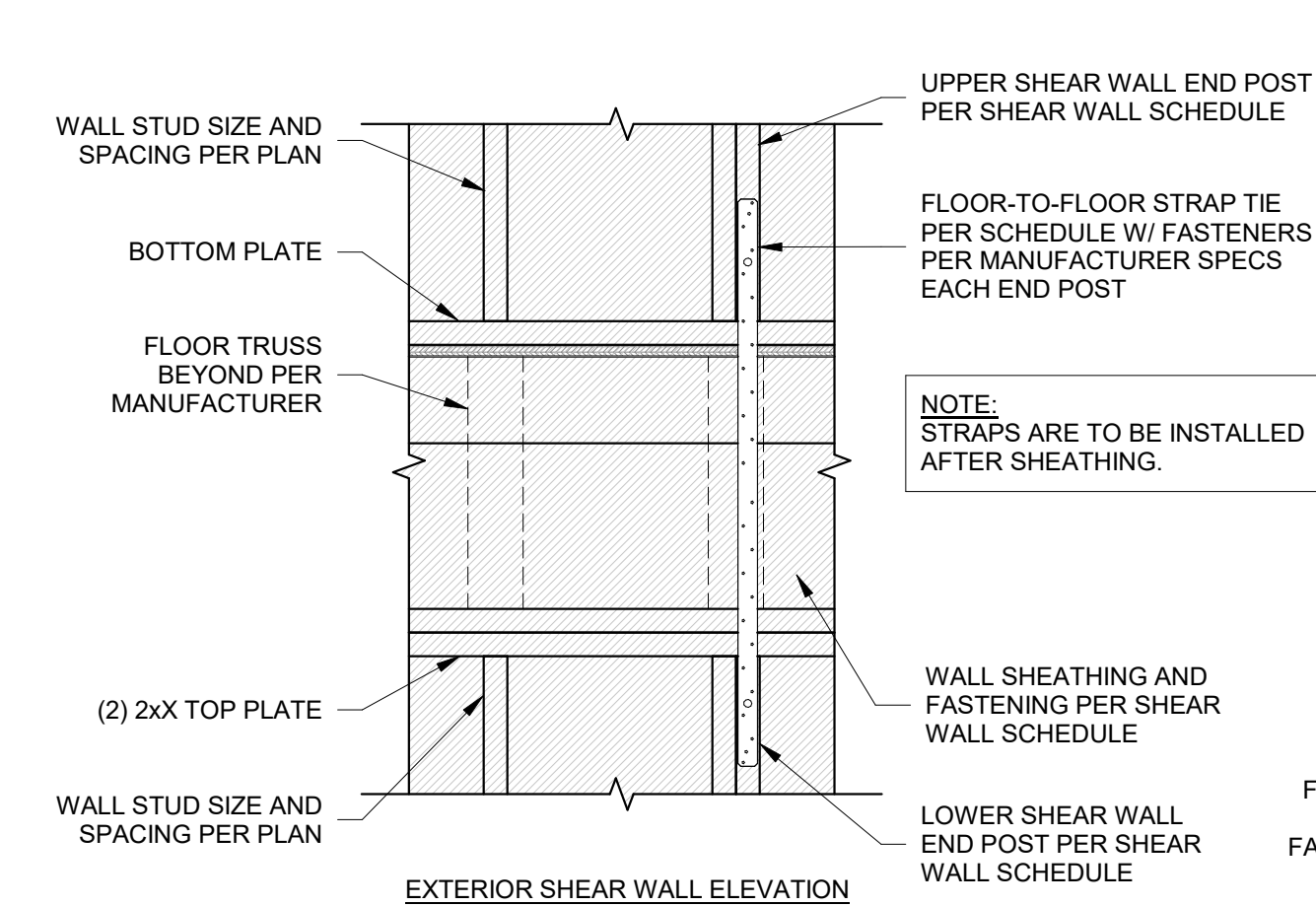


1
S550
TYPICAL SHEARWALL SECTIONS
1" = 1'-0"

2
S550
SHEAR WALL NAILING
1/2" = 1'-0"

3
S550
SHEAR WALL FASTENING TO TRUSS
1" = 1'-0"

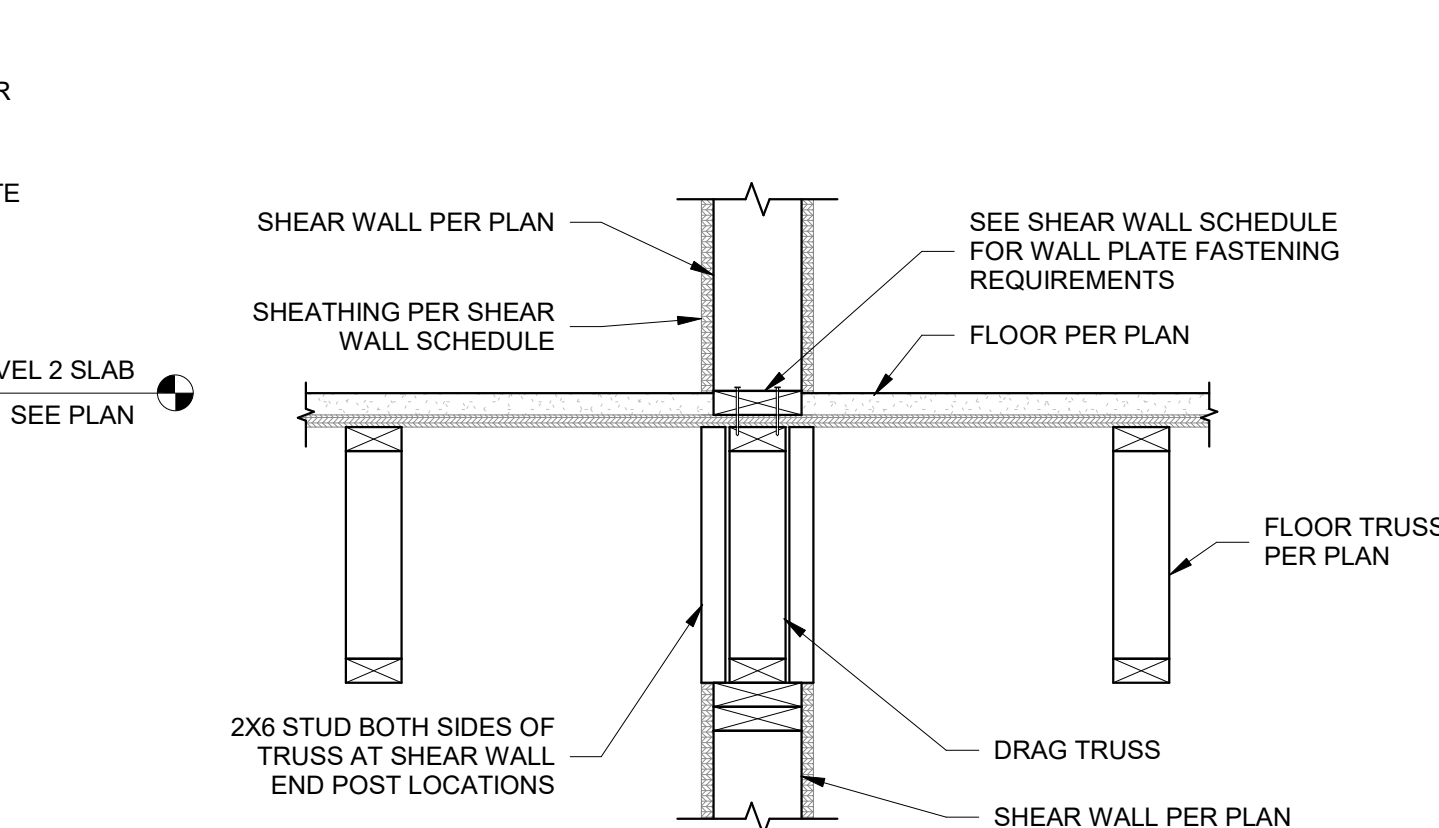
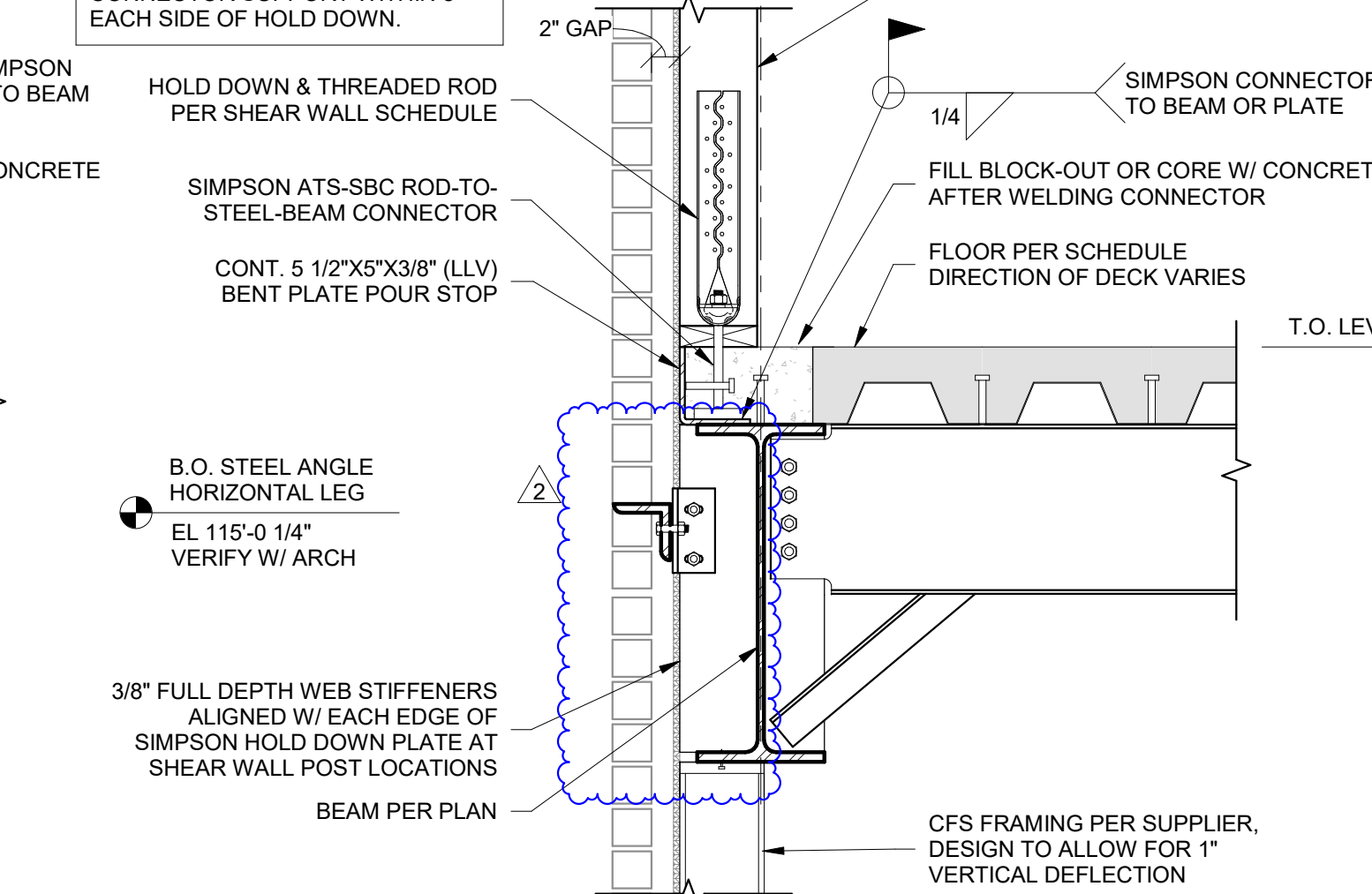
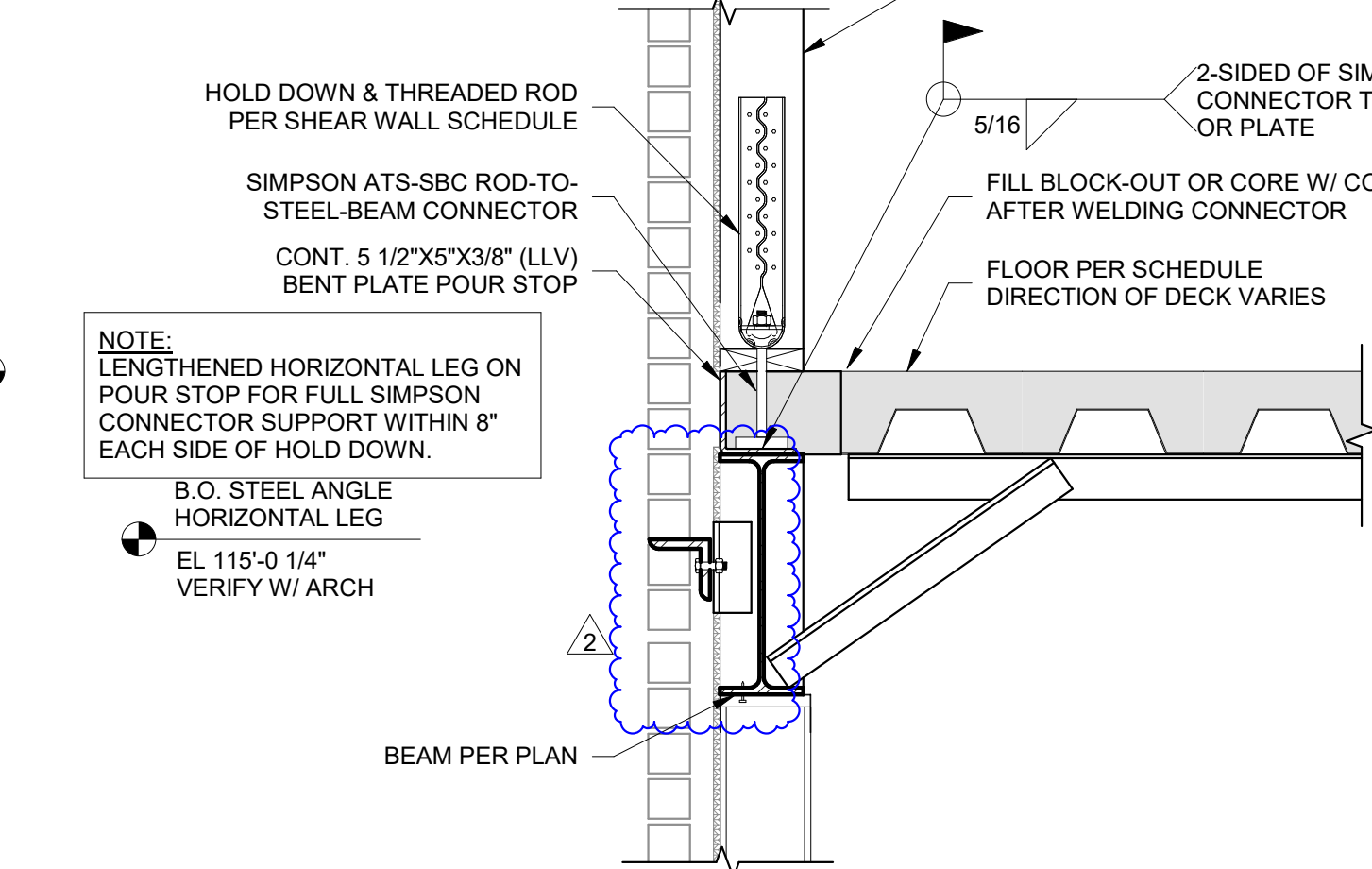
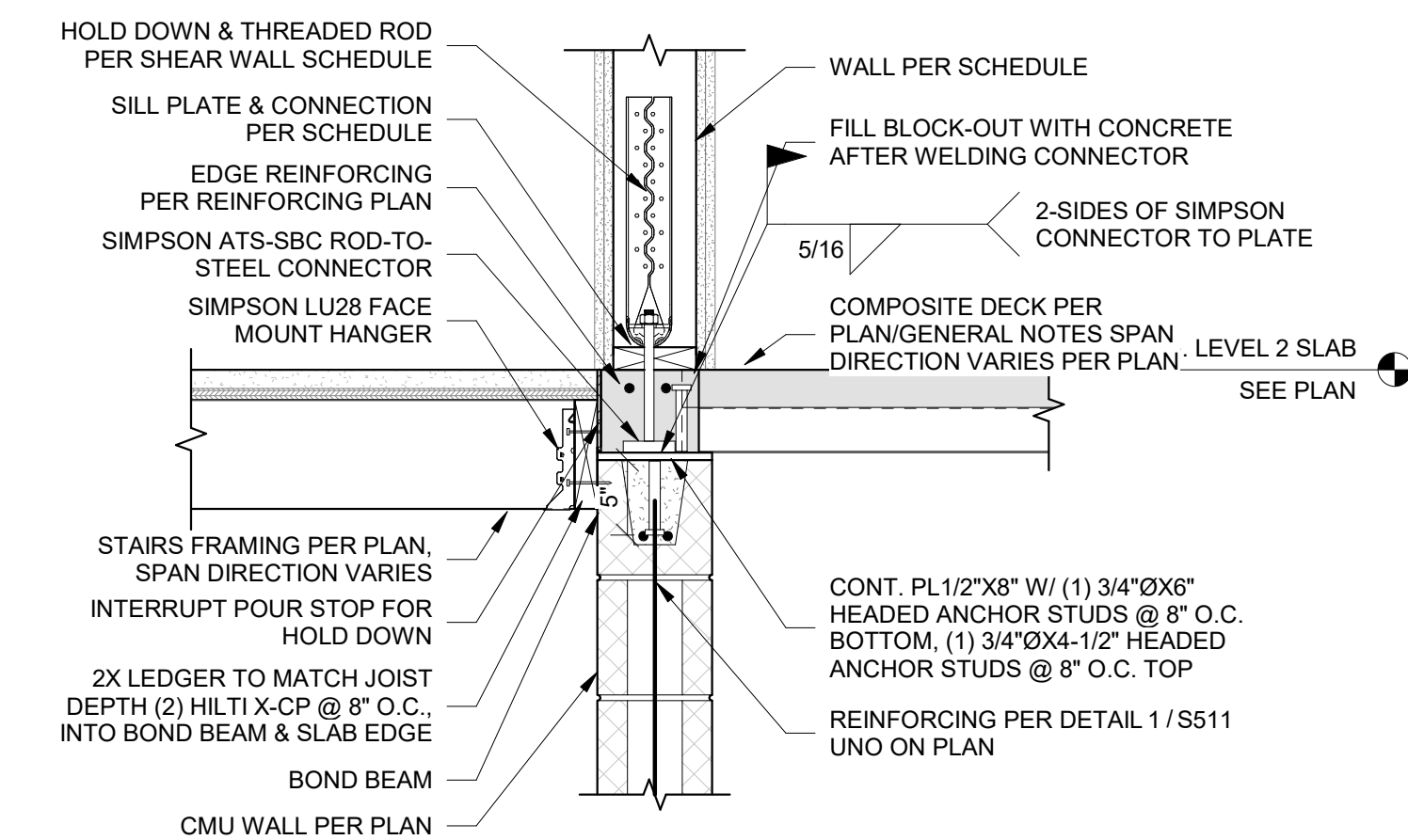
4
S550
SHEAR WALL HOLD DOWN AT STEEL BEAM
1" = 1'-0"



5
S550
FLOOR-TO-FLOOR STRAP TIE
1" = 1'-0"

6
S550
DEMISING WALL SHEAR WALL HOLD DOWN AT STEEL BEAMS
1" = 1'-0"

7
S550
SHEAR WALL HOLD DOWN AT STEEL BEAM
1" = 1'-0"



8
S550
SHEAR WALL HOLD DOWN AT CMU
1" = 1'-0"

9
S550
SHEAR WALL HOLD DOWN AT EXTERIOR BEAM
1" = 1'-0"

10
S550
SHEAR WALL HOLD DOWN AT OFFSET BEAM
1" = 1'-0"

11
S550
SHEAR WALL PARALLEL TO FLOOR TRUSSES AT SINGLE WALL
1" = 1'-0"

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THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

SHEET TITLE
SHEAR WALL DETAILS

PROJECT NUMBER: 2023000333

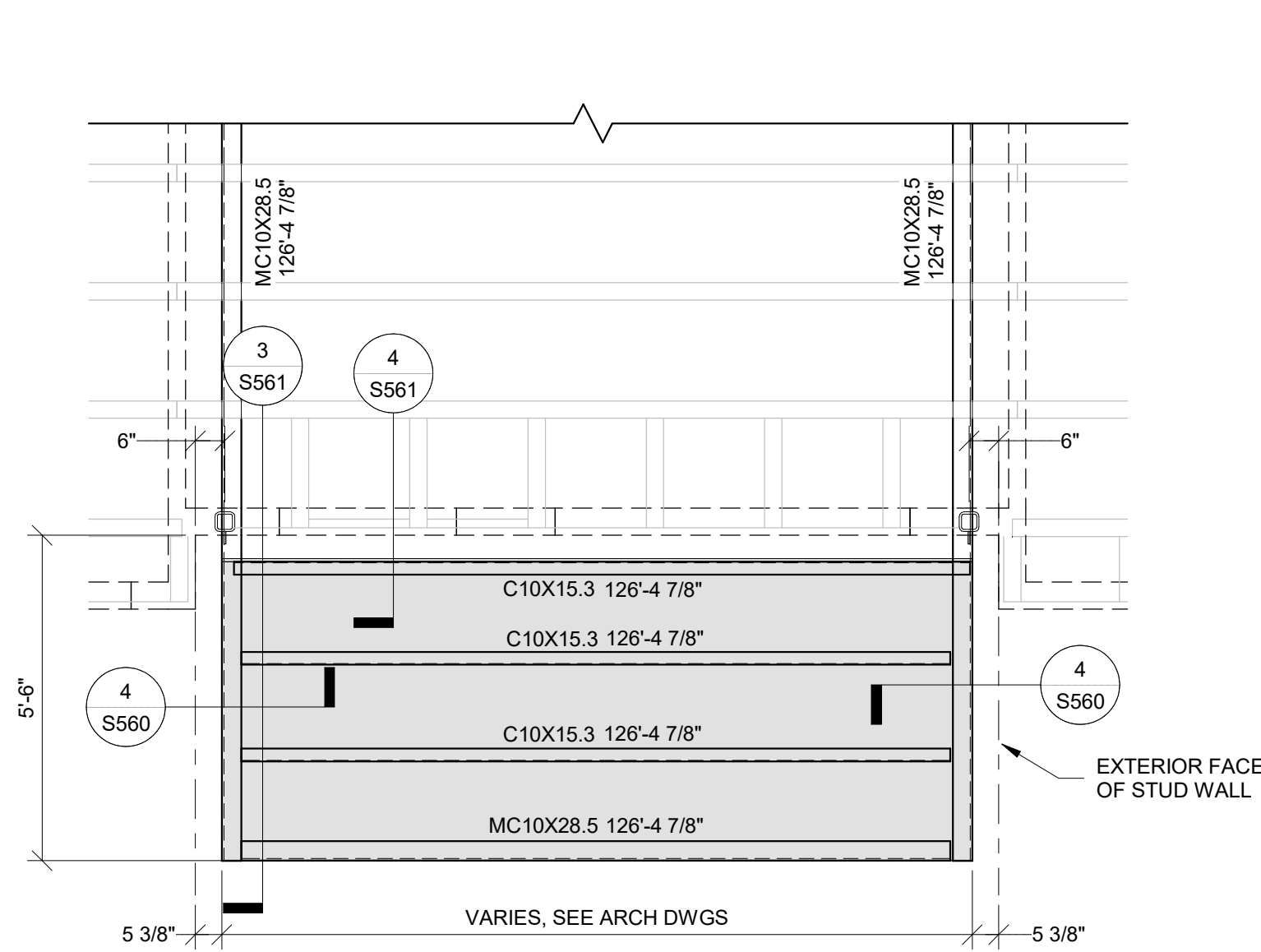
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RENUMBERED SHEET
(FORMERLY S530)

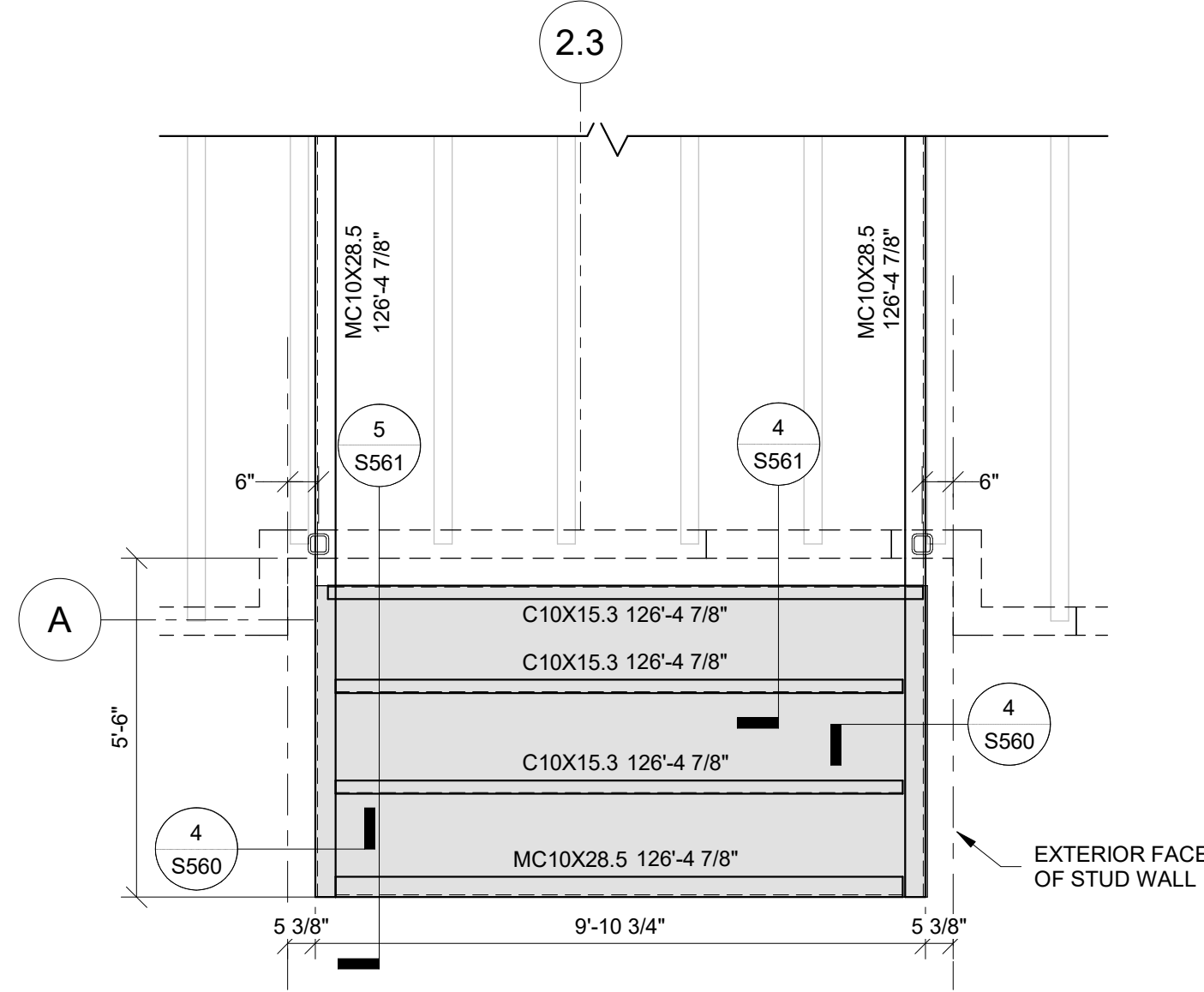
PROJECT NUMBER: 2023000333

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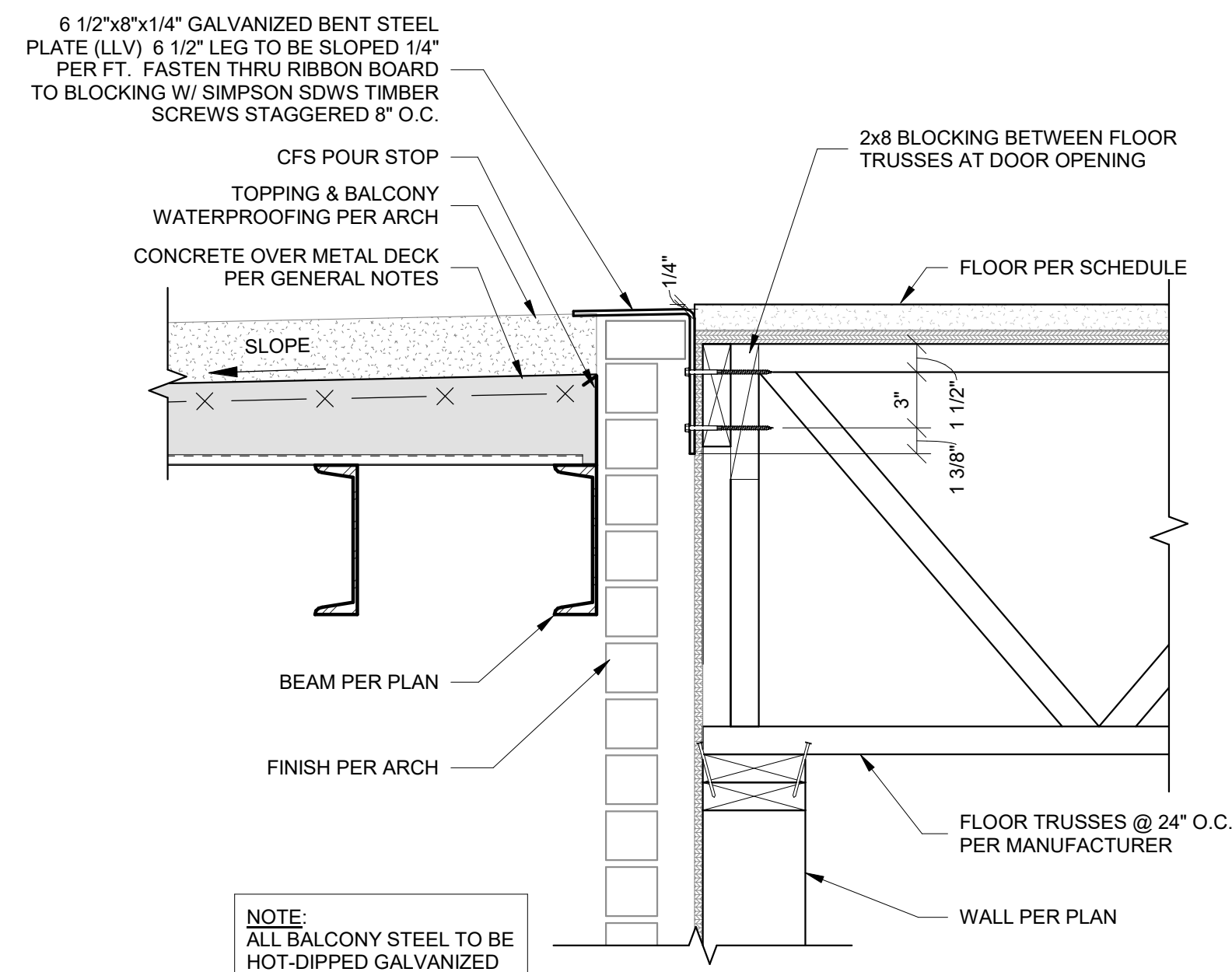




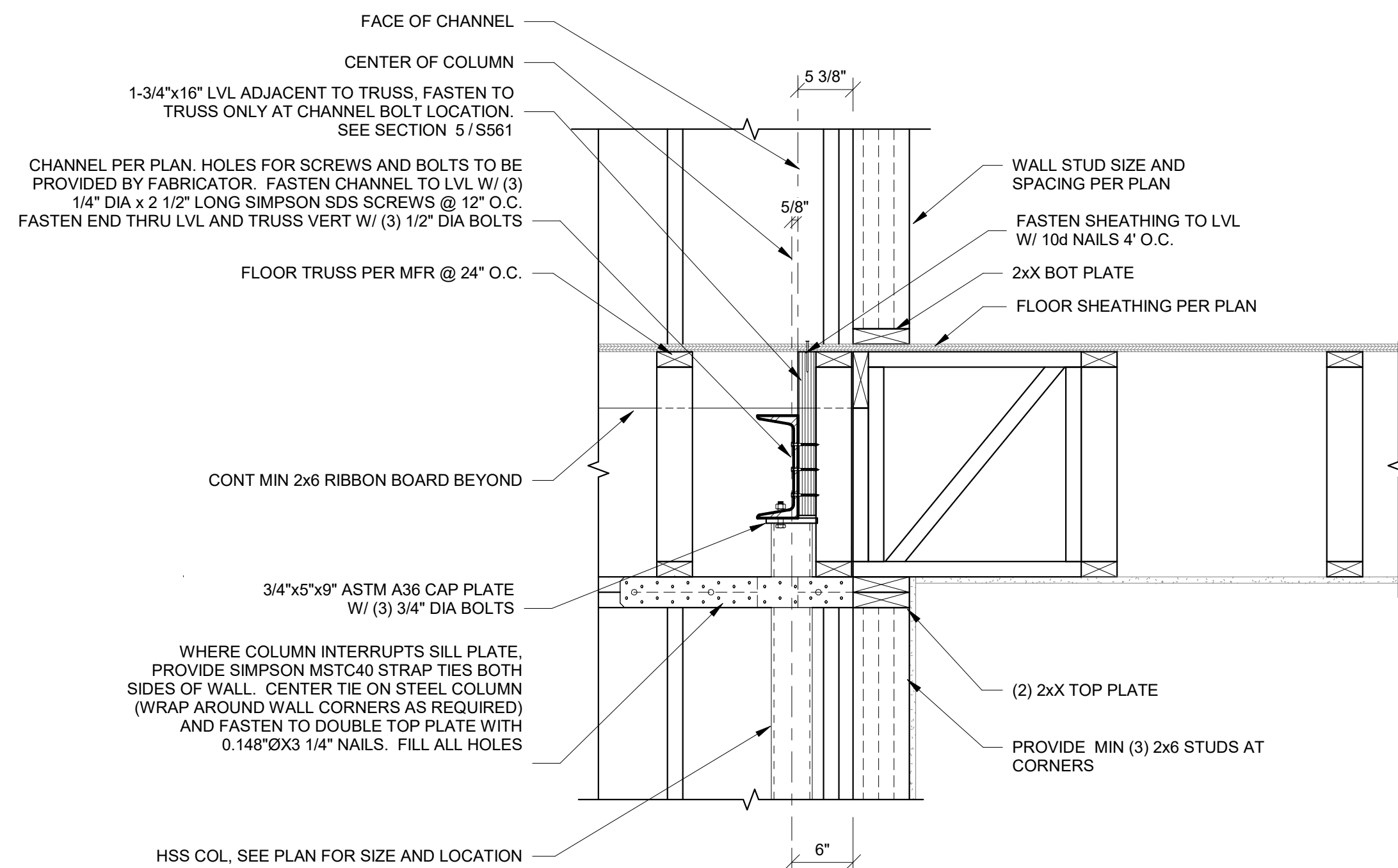
1
S561
TYPICAL BALCONY TRUSSES PARALLEL TO WALL - LEVEL 3
3/8" = 1'-0"



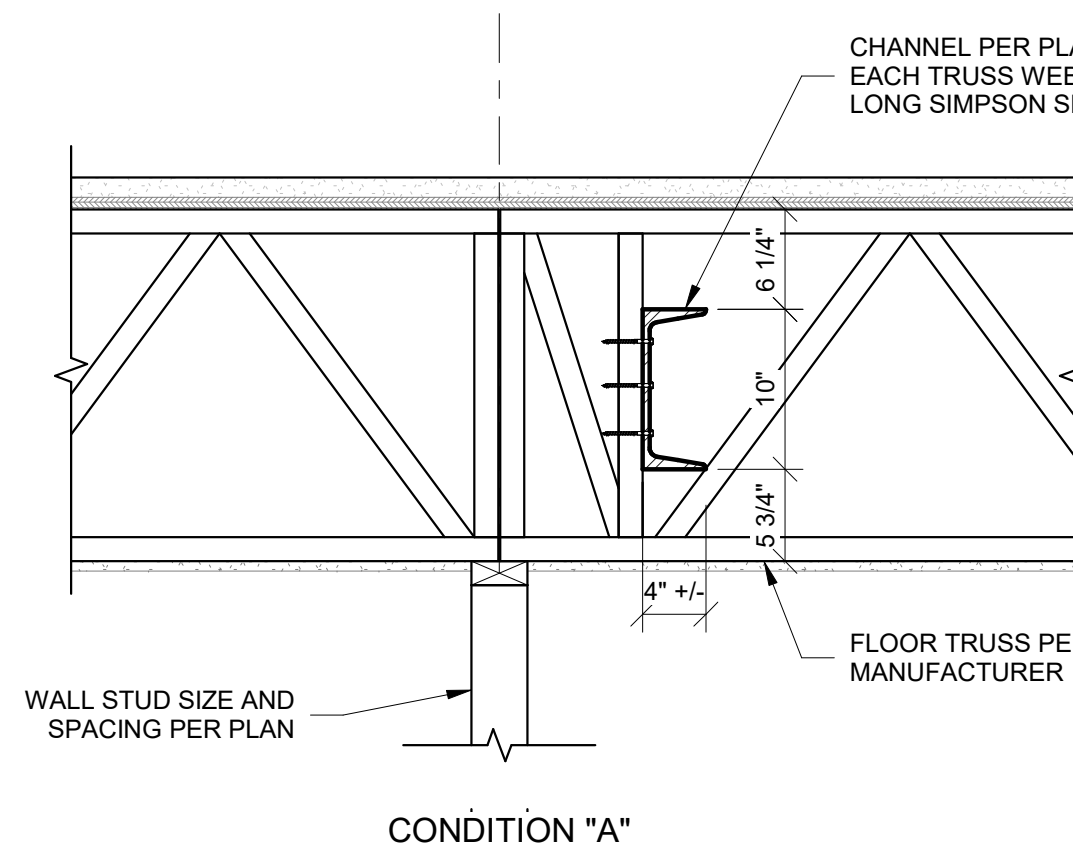
2
S561
BALCONY NEAR GRID INTERSECTION A-2.3 TRUSSES PERPENDICULAR TO WALL - LEVEL 3
3/8" = 1'-0"



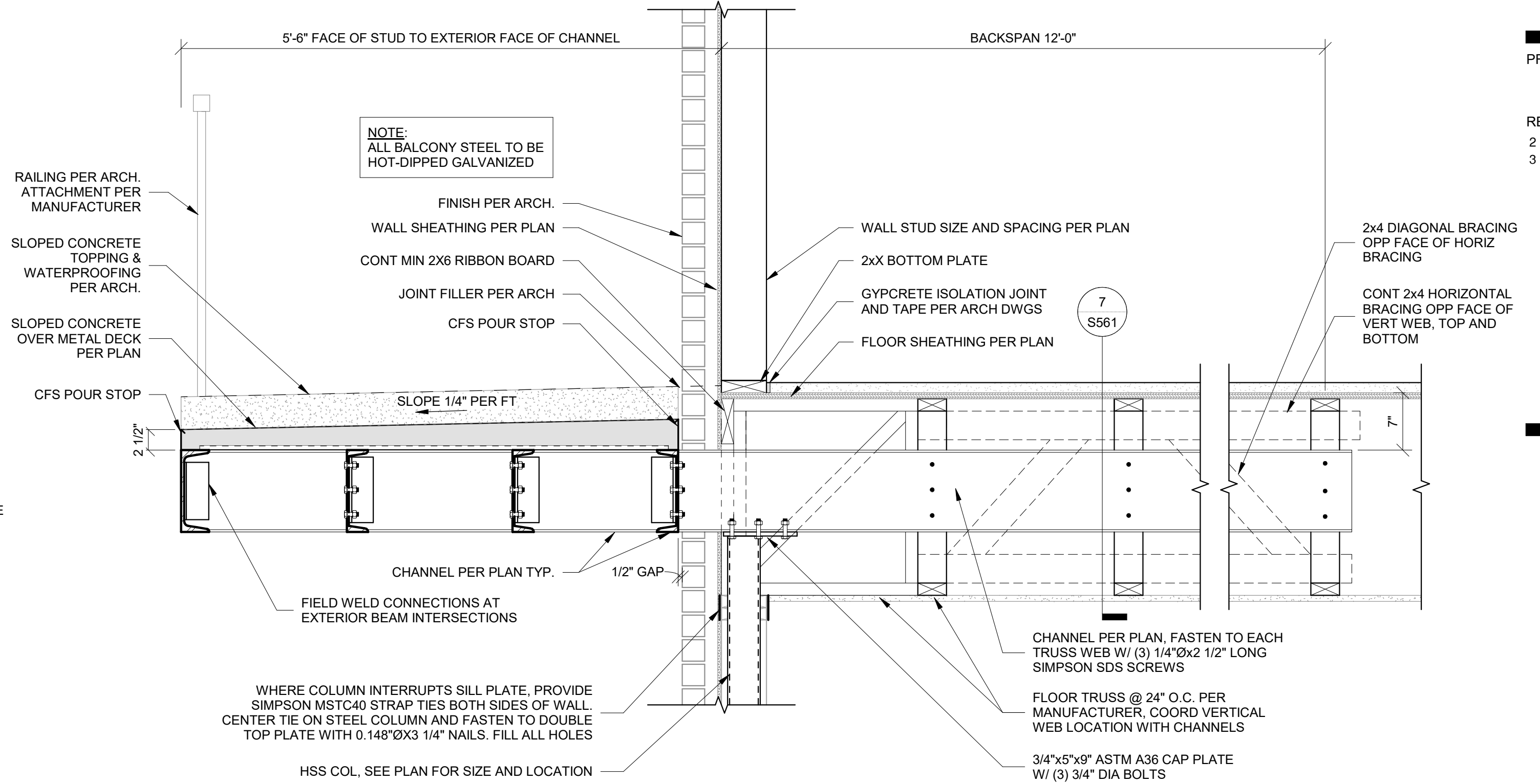
4
S561
BALCONY SECTION AT DOOR THRESHOLD - LEVEL 3
1 1/2" = 1'-0"



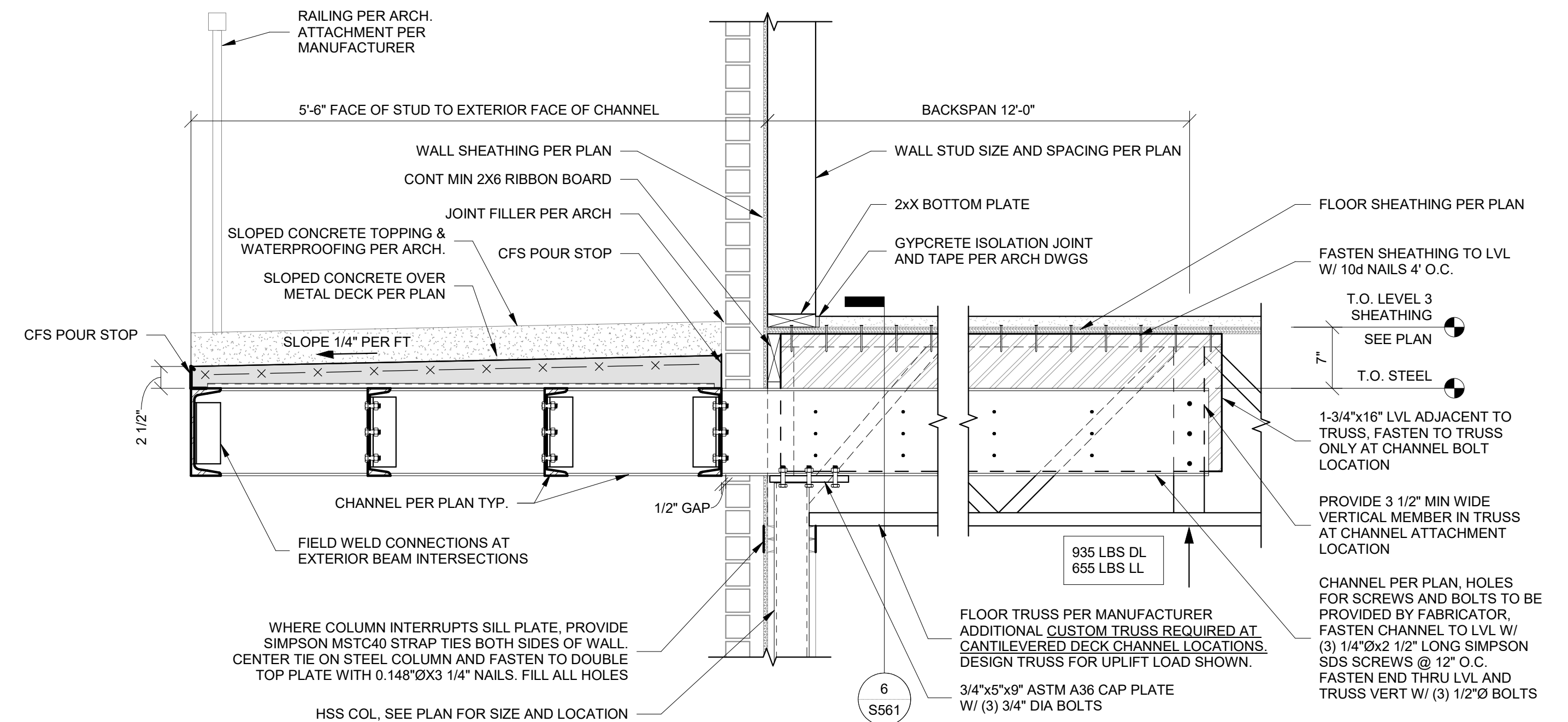
6
S561
BALCONY FRAMING SECTION - CHANNEL BEARING ON COL
1" = 1'-0"



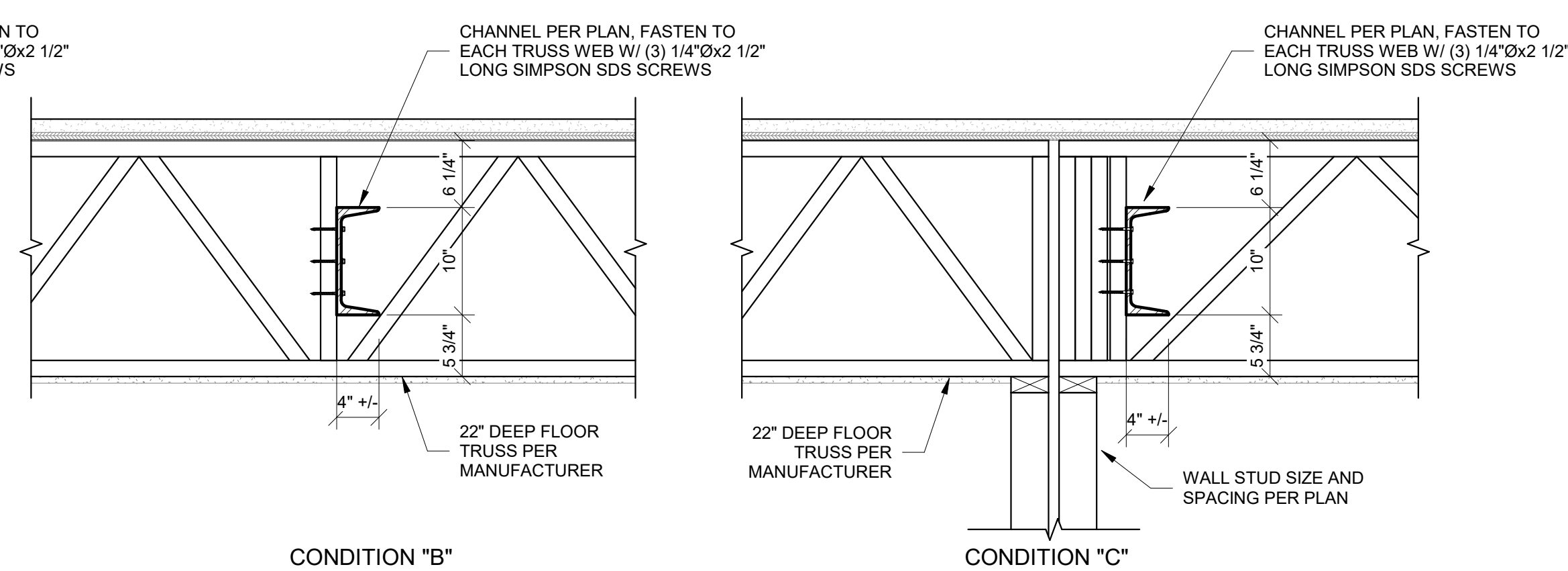
7
S561
BALCONY BEAM PERPENDICULAR TO TRUSS CONNECTION
1" = 1'-0"



3
S561
BALCONY FRAMING SECTION AT CHANNEL - LEVEL 3
1" = 1'-0"



5
S561
BALCONY FRAMING SECTION - AT CHANNEL
1" = 1'-0"



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THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

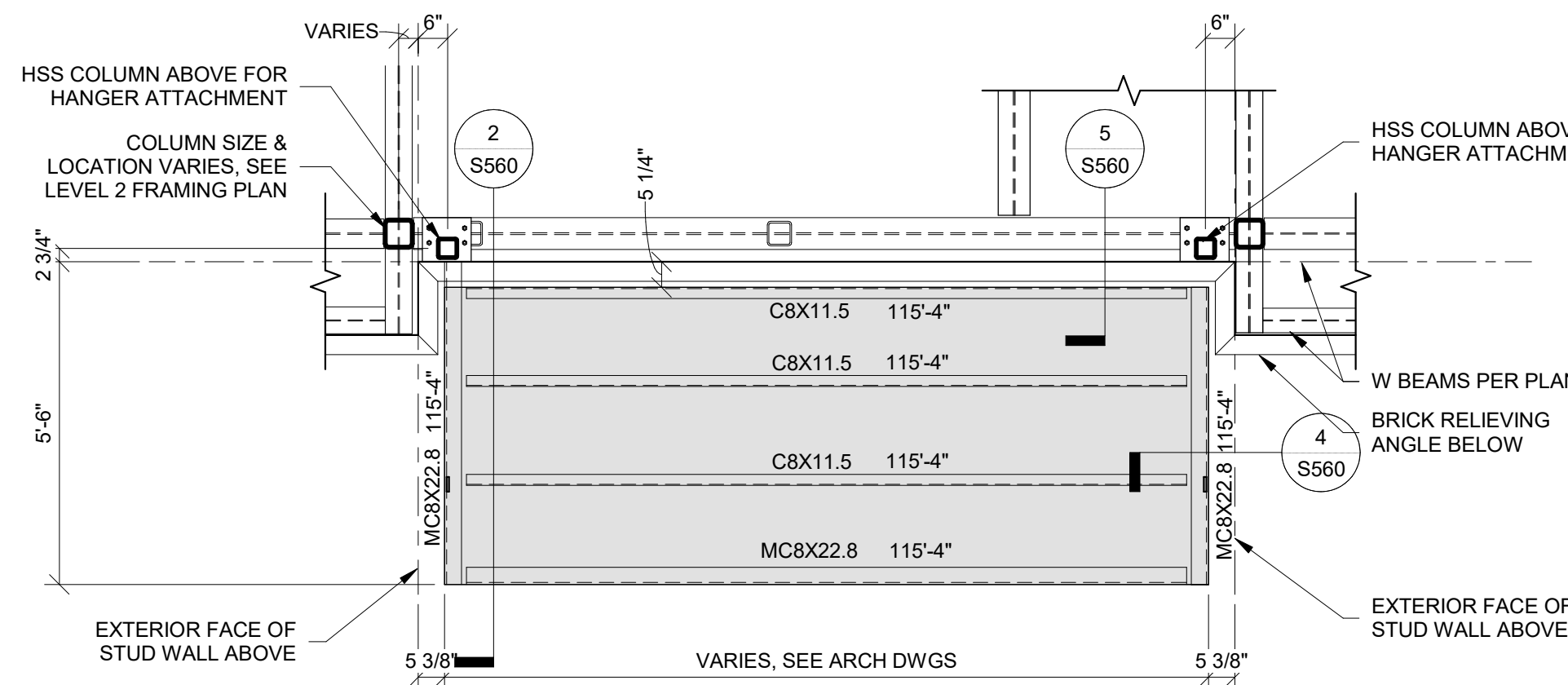
SHEET TITLE
TYPICAL BALCONY PLANS AND DETAILS - LEVEL 3

PROJECT NUMBER: 2023000333

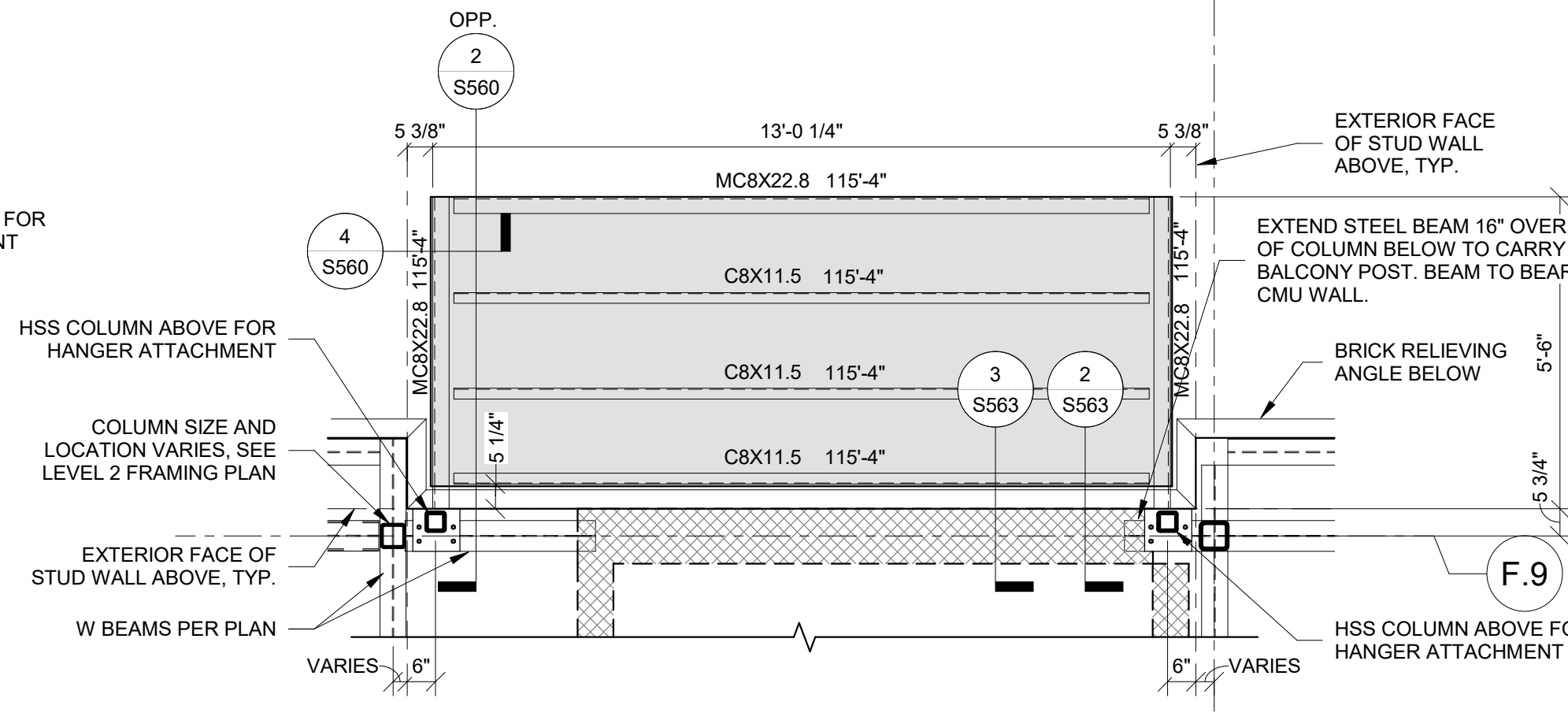
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S561

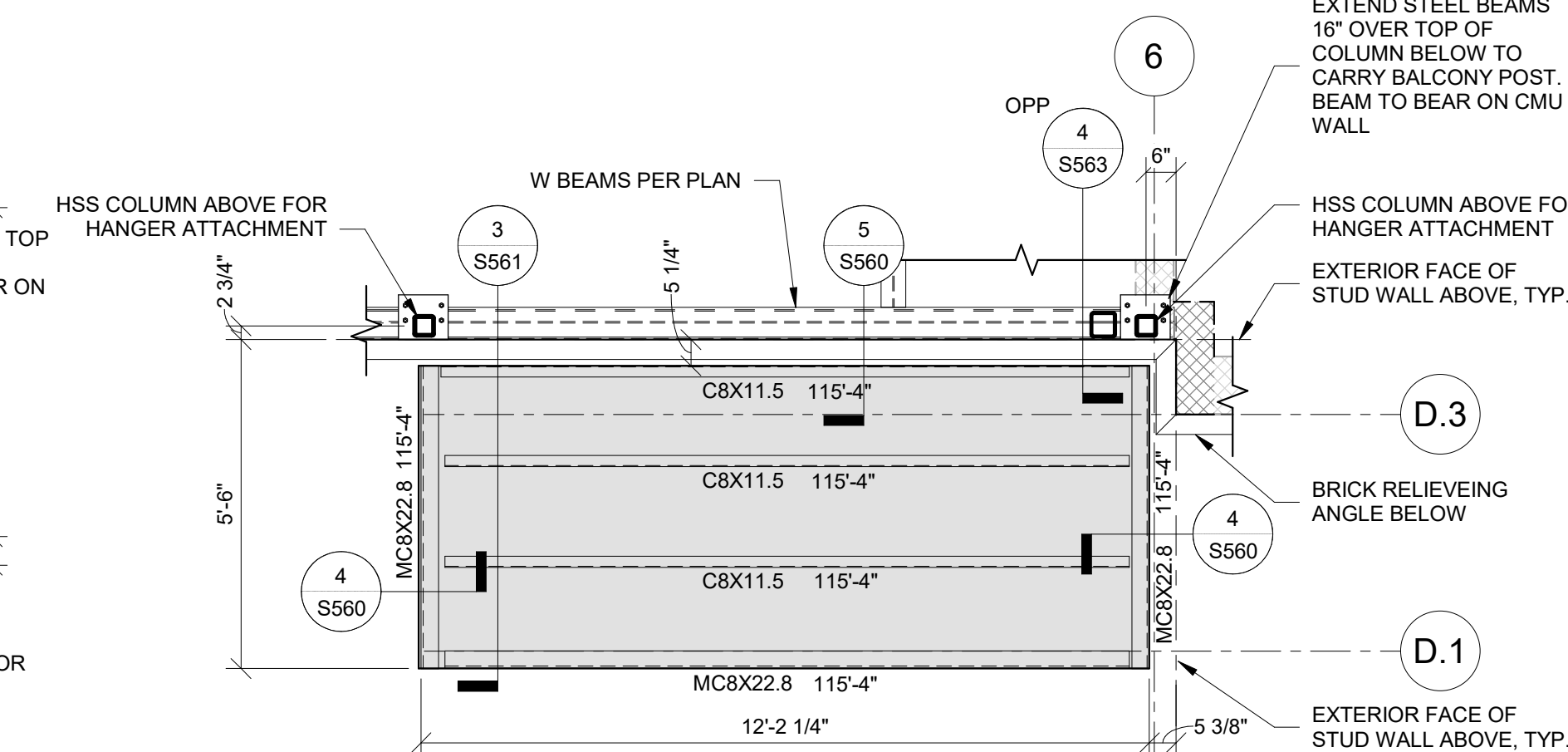
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Audrey Lora 202300033
Discovery Park, Lee's Summit 202300033
Roumanian - Lot 4, 2024



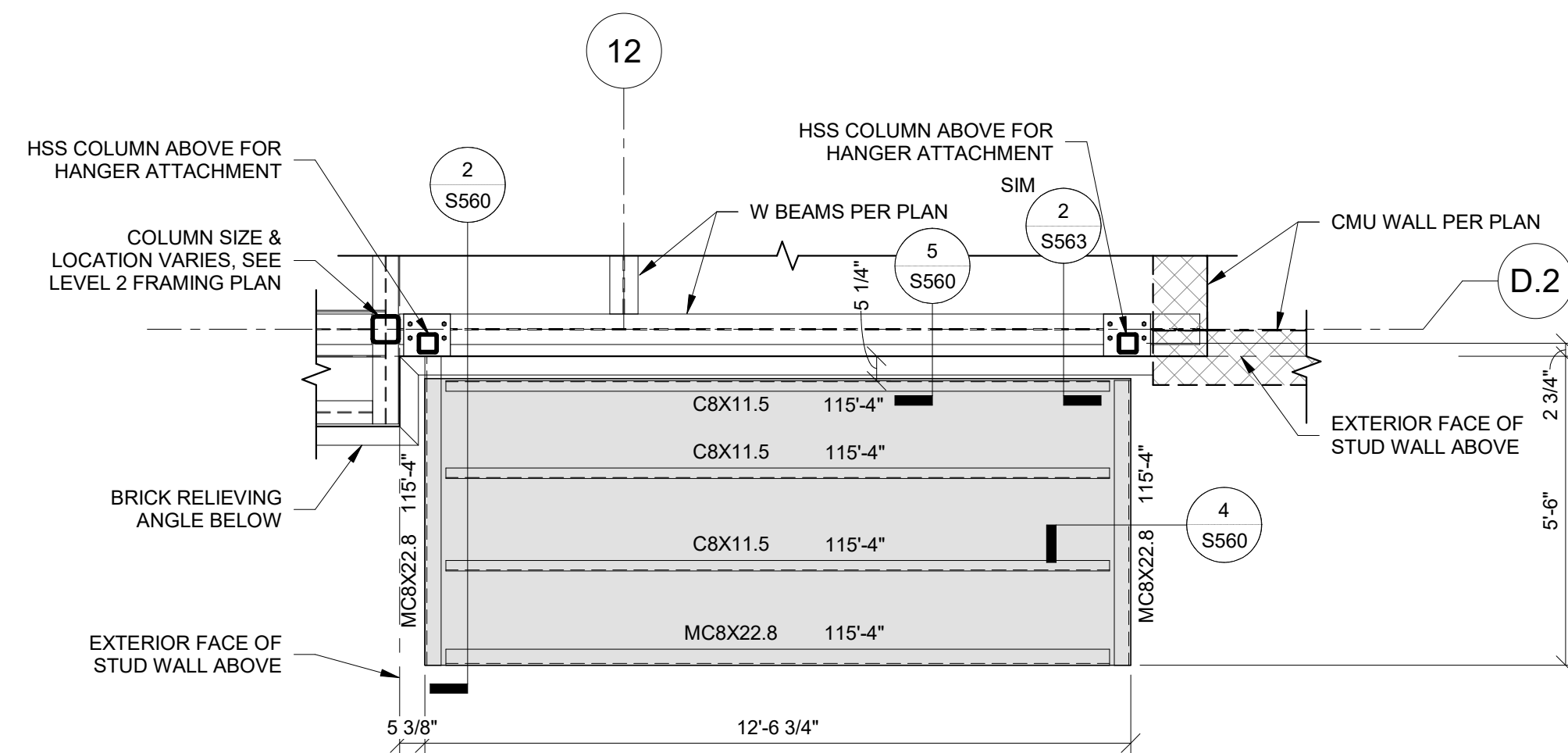
1
S562
TYPICAL BALCONY EAST OF GRID 5.1 AT LEVEL 2
3/8" = 1'-0"



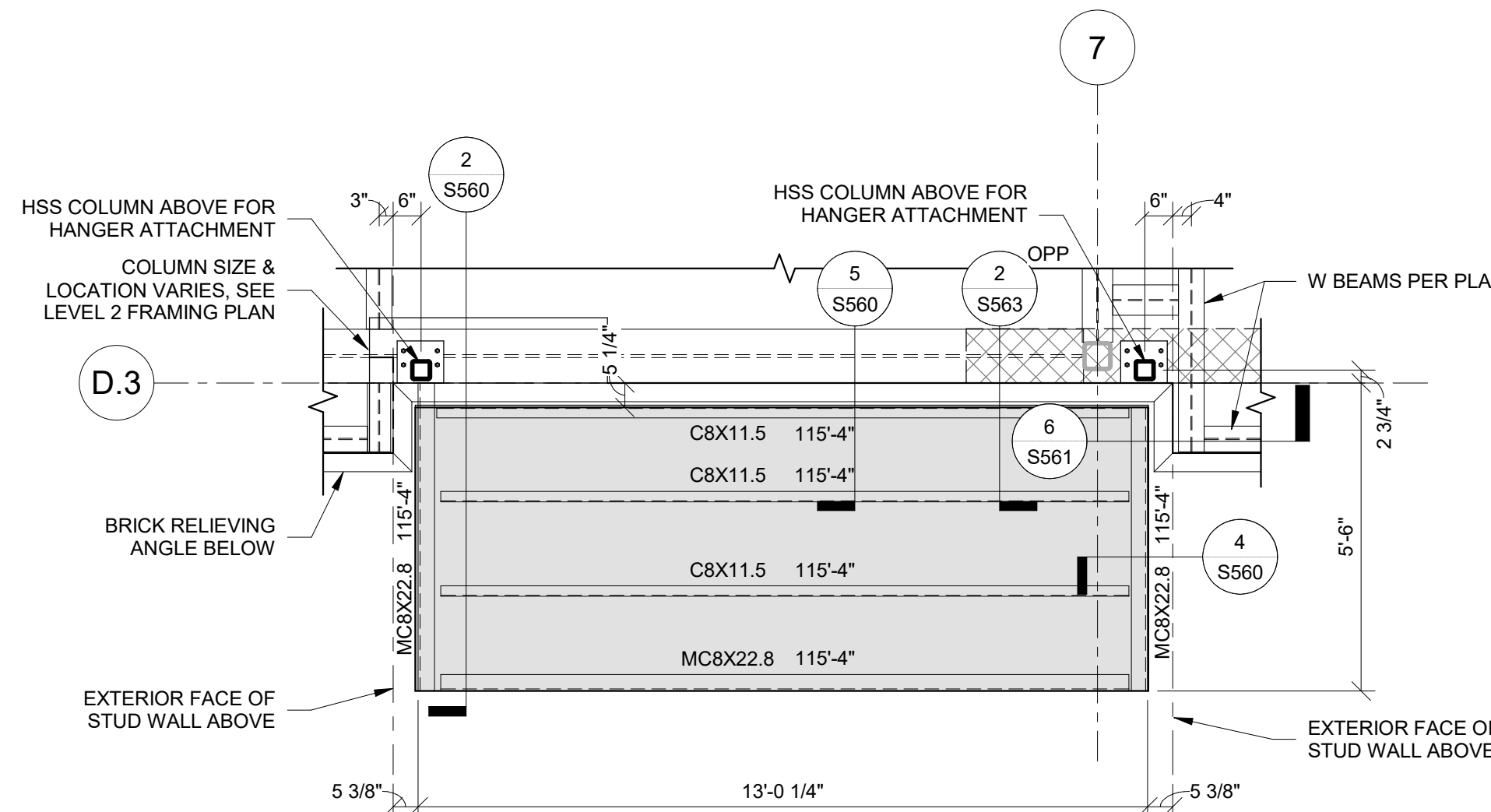
2
S562
NON-TYPICAL BALCONY NEAR GRID INTERSECTION 6.6-F.9 AT LEVEL 2
3/8" = 1'-0"



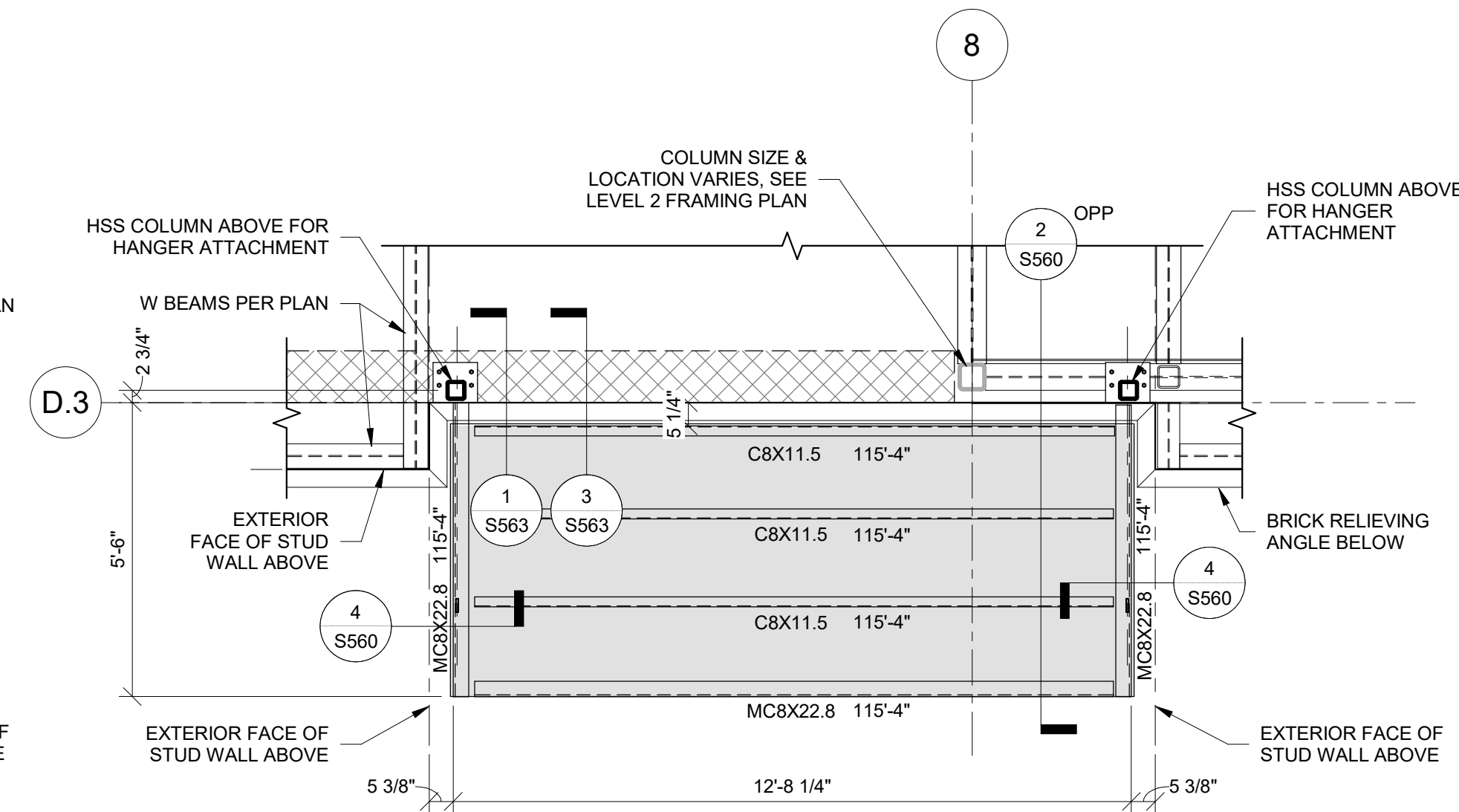
3
S562
NON-TYPICAL BALCONY NEAR GRID INTERSECTION 6-D.1 AT LEVEL 2
3/8" = 1'-0"



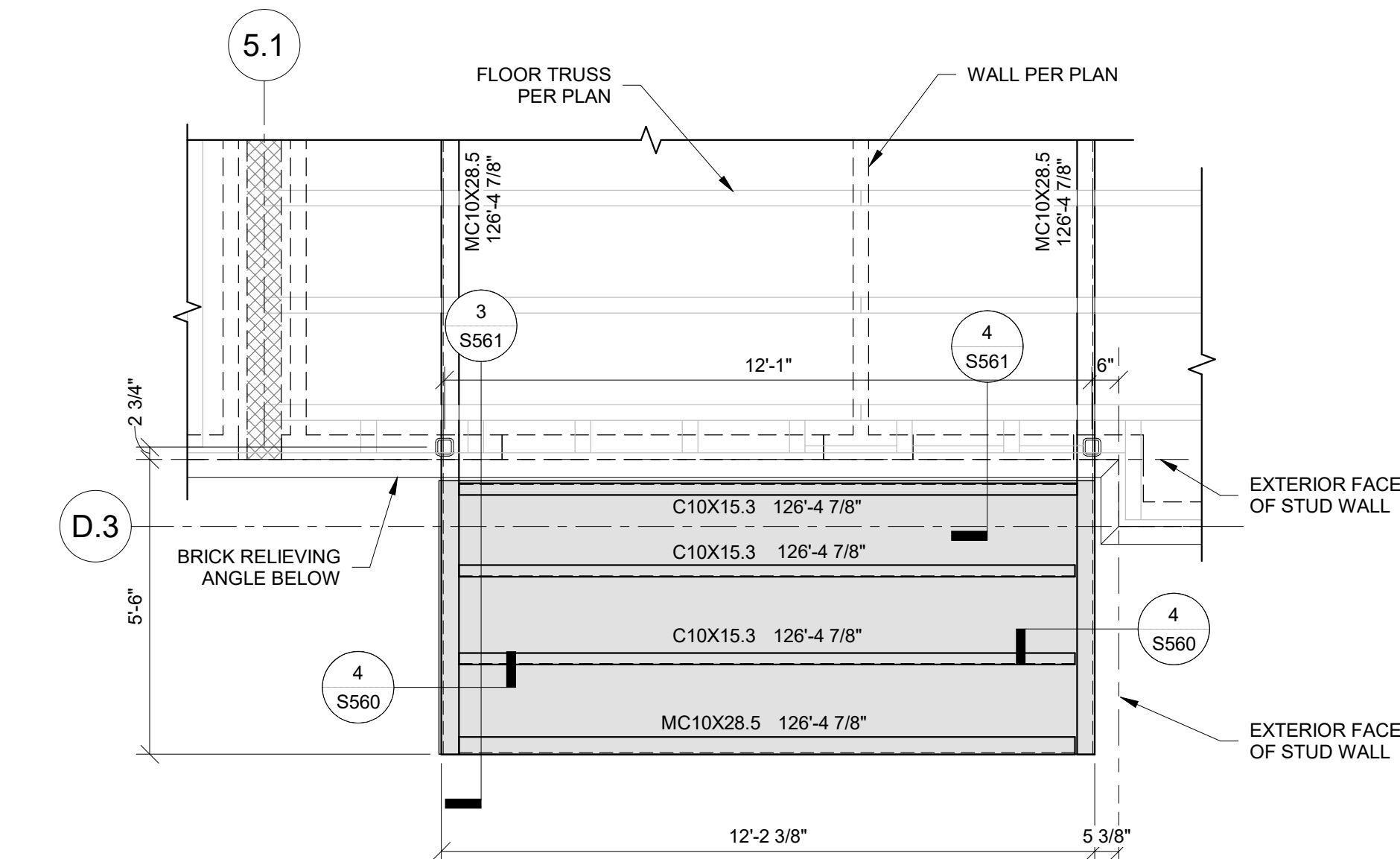
4
S562
NON-TYPICAL BALCONY NEAR GRID INTERSECTION 12-D.2 AT LEVEL 2
3/8" = 1'-0"



5
S562
NON-TYPICAL BALCONY NEAR GRID INTERSECTION 7-C.3 AT LEVEL 2
3/8" = 1'-0"



6
S562
NON-TYPICAL BALCONY NEAR GRID INTERSECTION 8-D.3 AT LEVEL 2
3/8" = 1'-0"



7
S562
NON-TYPICAL BALCONY NEAR GRID INTERSECTION 5.1-D.3 AT LEVEL 3
3/8" = 1'-0"

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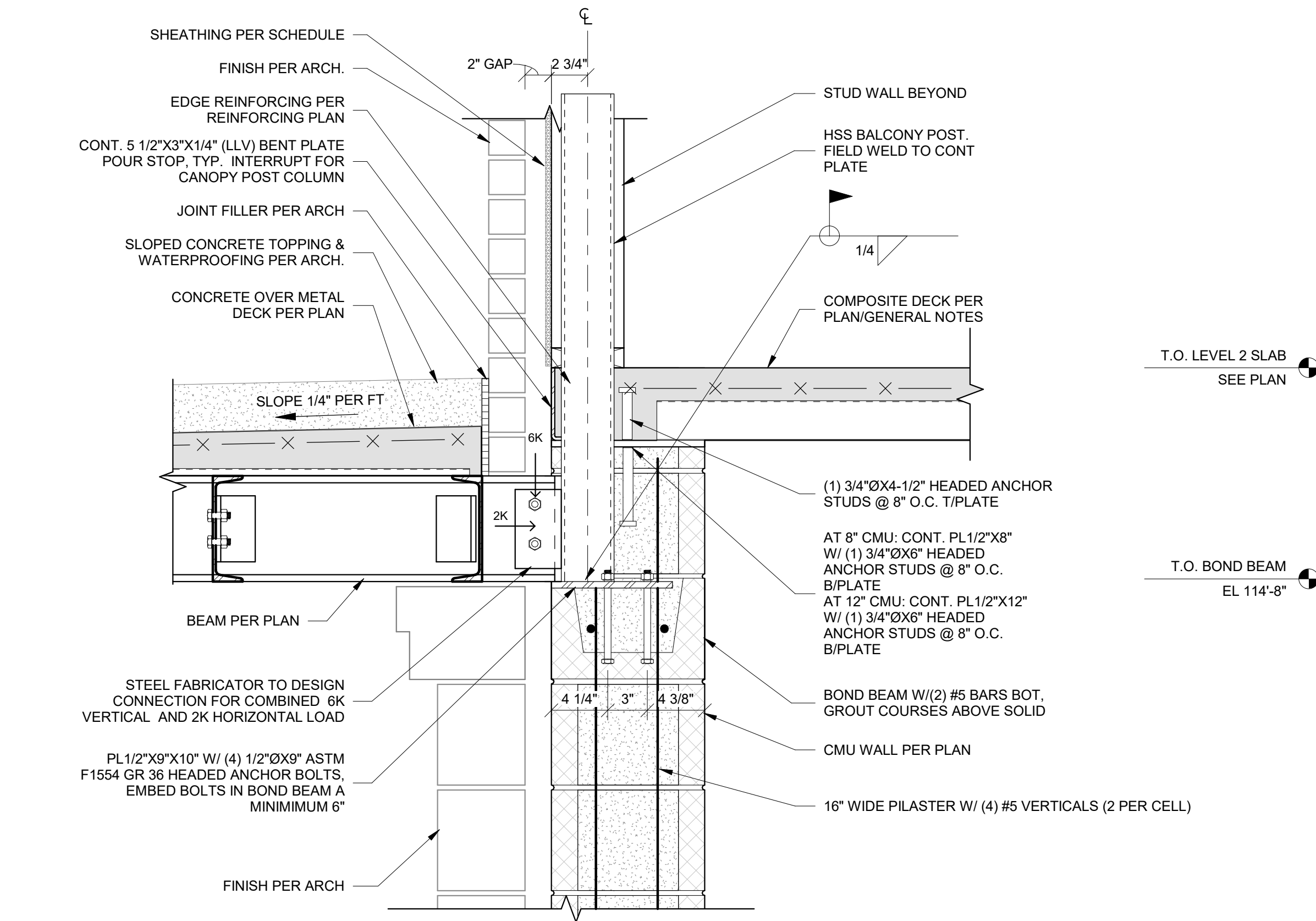
THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

SHEET TITLE
ADDITIONAL BALCONY PLANS
LEVELS 2 AND 3

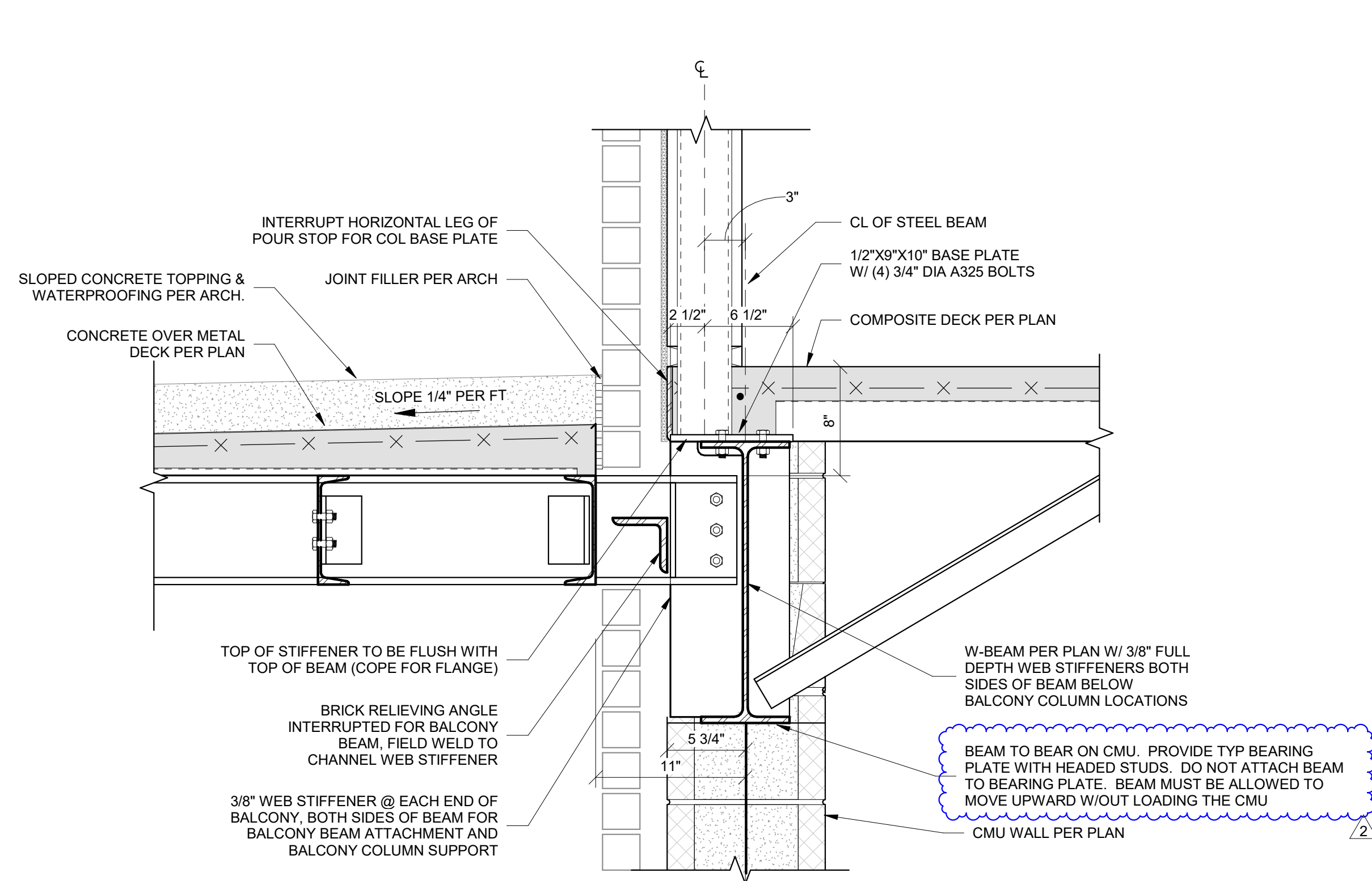
PROJECT NUMBER: 2023000333

SHEET NUMBER:

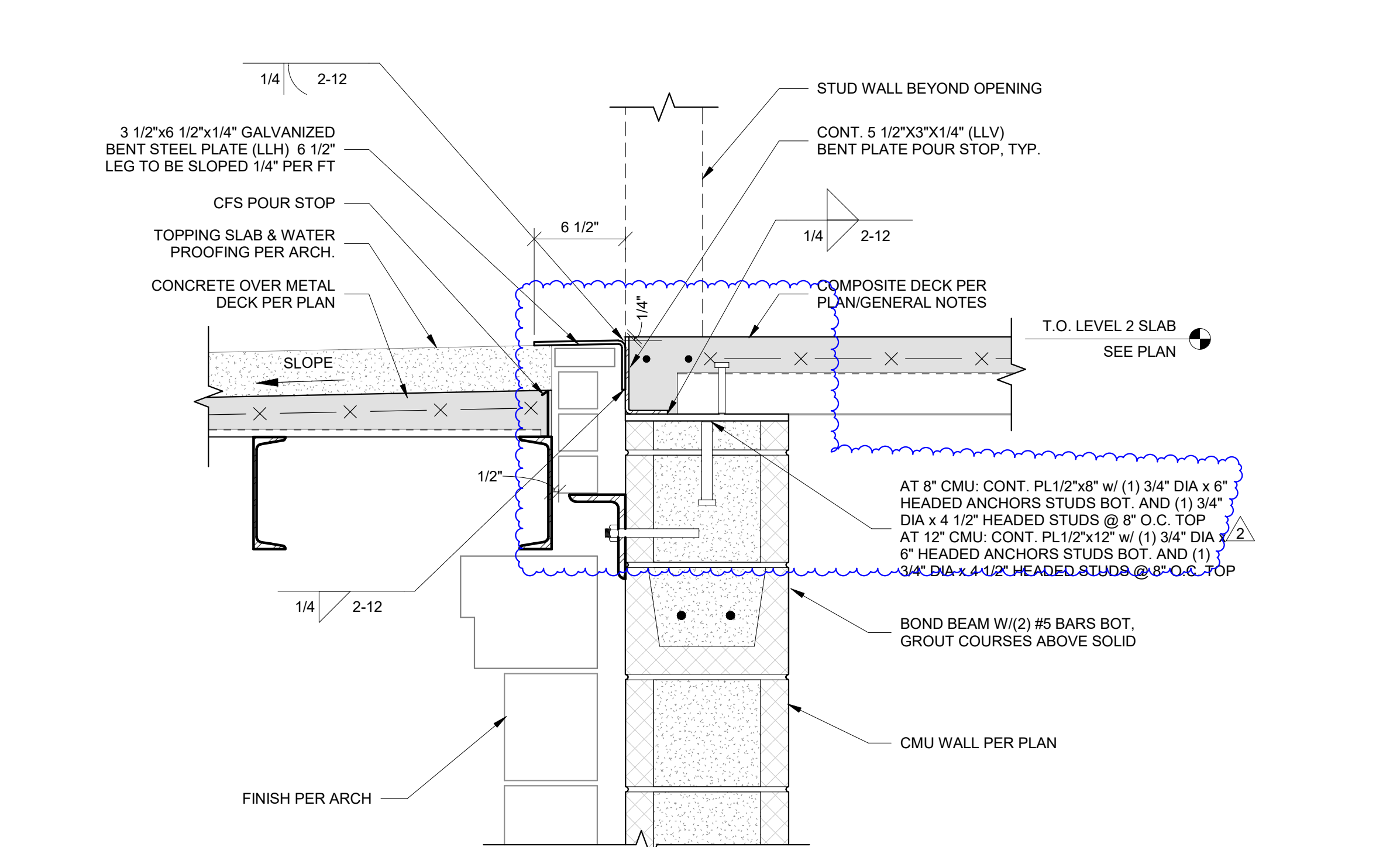
S562



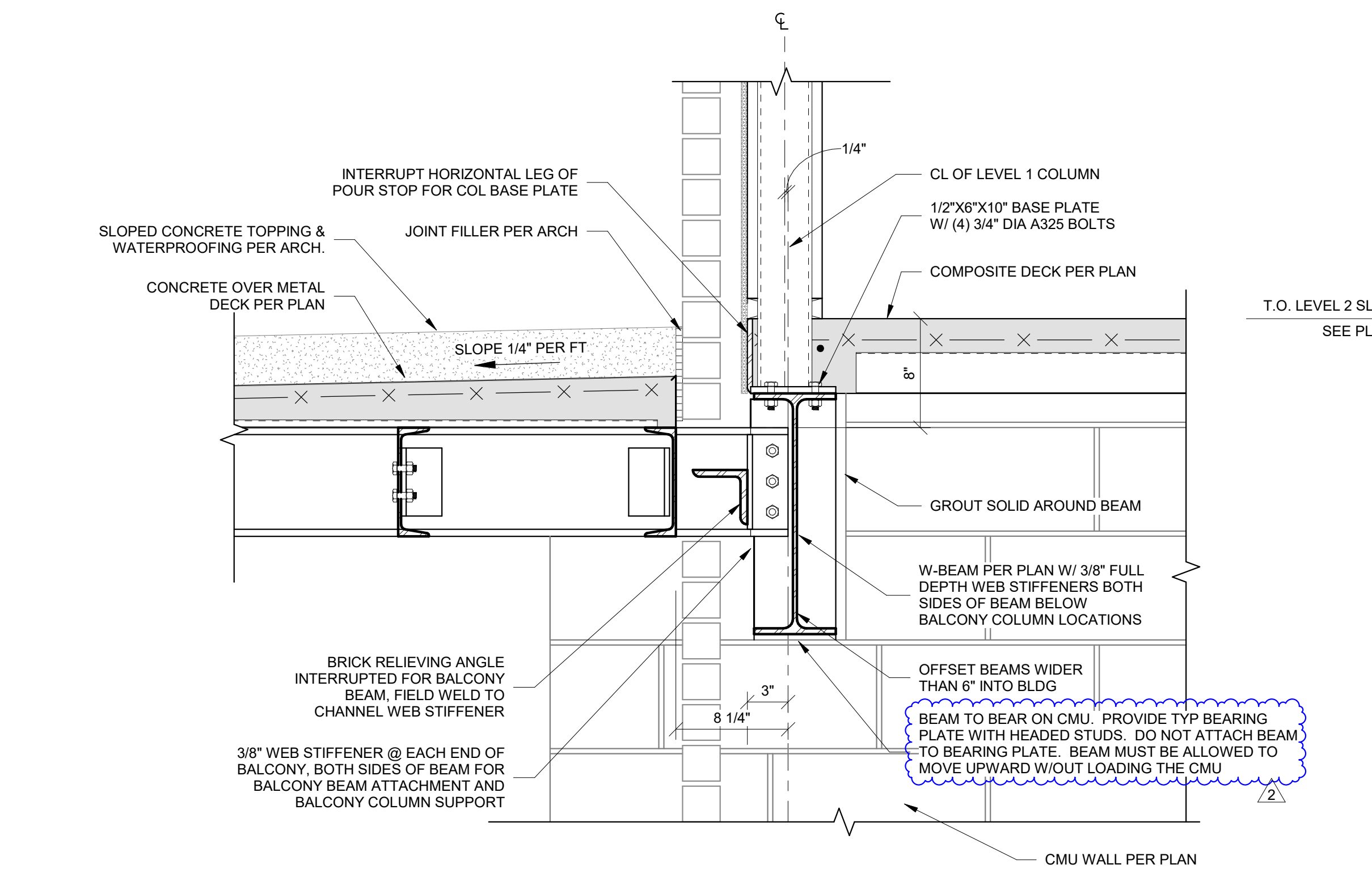
1 BALCONY ATTACHMENT TO CMU
S563 1 1/2" = 1'-0"



2 BALCONY ATTACHMENT TO BEAM OVER CMU
S563 1 1/2" = 1'-0"



3 BALCONY SECTION AT DOOR THRESHOLD - LEVEL 2
S563 1 1/2" = 1'-0"



4 BALCONY ATTACHMENT TO BEAM OVER CMU
S563 1 1/2" = 1'-0"

THE VILLAGE AT DISCOVERY -
LOT 4
1921 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

SHEET TITLE
ADDITIONAL BALCONY DETAILS -
LEVEL 3

PROJECT NUMBER: 2023000333

SHEET NUMBER:

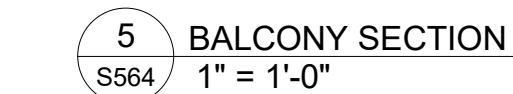
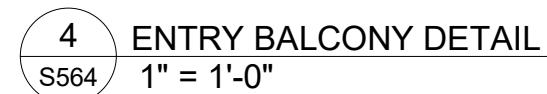
S563

REVISIONS:

2	11/11/2024	Addendum #2
3	12/26/2024	Addendum #3



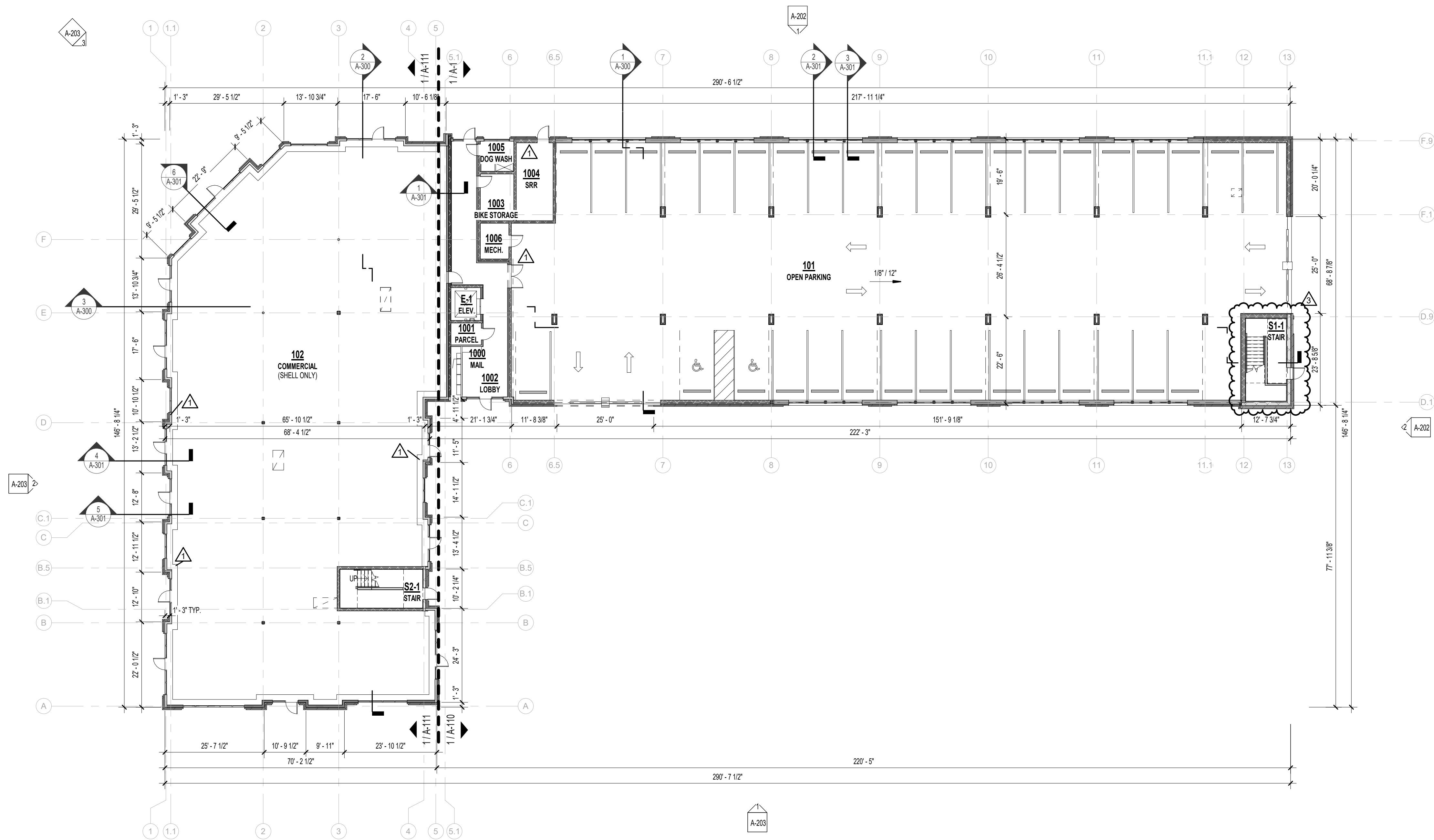
S564



REFERENCE G-003 FOR GENERAL NOTES

PLAN LEGEND

- PARTIAL HEIGHT PARTITION
NON-RATED PARTITION; SEE ASSEMBLIES
1 HR RATED PARTITION; SEE ASSEMBLIES
2 HR RATED PARTITION; SEE ASSEMBLIES
WINDOW TYPE; SEE WINDOW SCHEDULE
DOOR TYPE; SEE DOOR SCHEDULE
PARTITION TYPE; SEE ASSEMBLIES
FRAMING DIMENSIONS
LAYOUT LINE DIMENSIONS



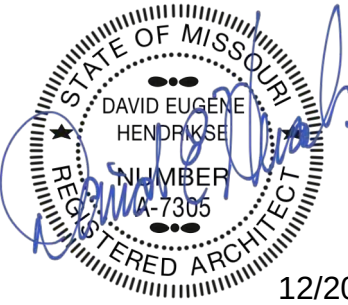
1 1ST FLOOR PLAN
1/16" = 1'-0"



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01/25/2024 - CITY SUBMITTAL

REVISIONS:
1 10/21/24 ADDENDUM #1
3 12/20/24 ADDENDUM #3

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THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
FIRST FLOOR PLAN

PROJECT NUMBER: 23099

SHEET NUMBER:

A-101

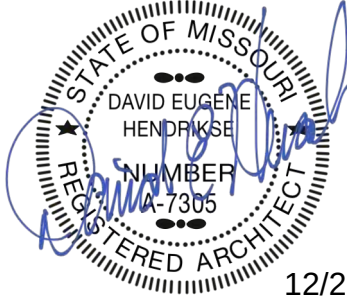
REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-101 FOR PLAN LEGEND

UNITS - SHEET REFERENCE	
NAME	SHEET NO.
ABERDEEN "A"	A-400
ABERDEEN "B"	A-402
ABERDEEN - ALT	A-401
ADRIAN	A-403
ADRIAN CORNER	A-404
ARA	A-406
ARA - ALT	A-405
ARA CORNER	A-407
DELTA	A-408
HURLEY	A-409
LANA	A-410

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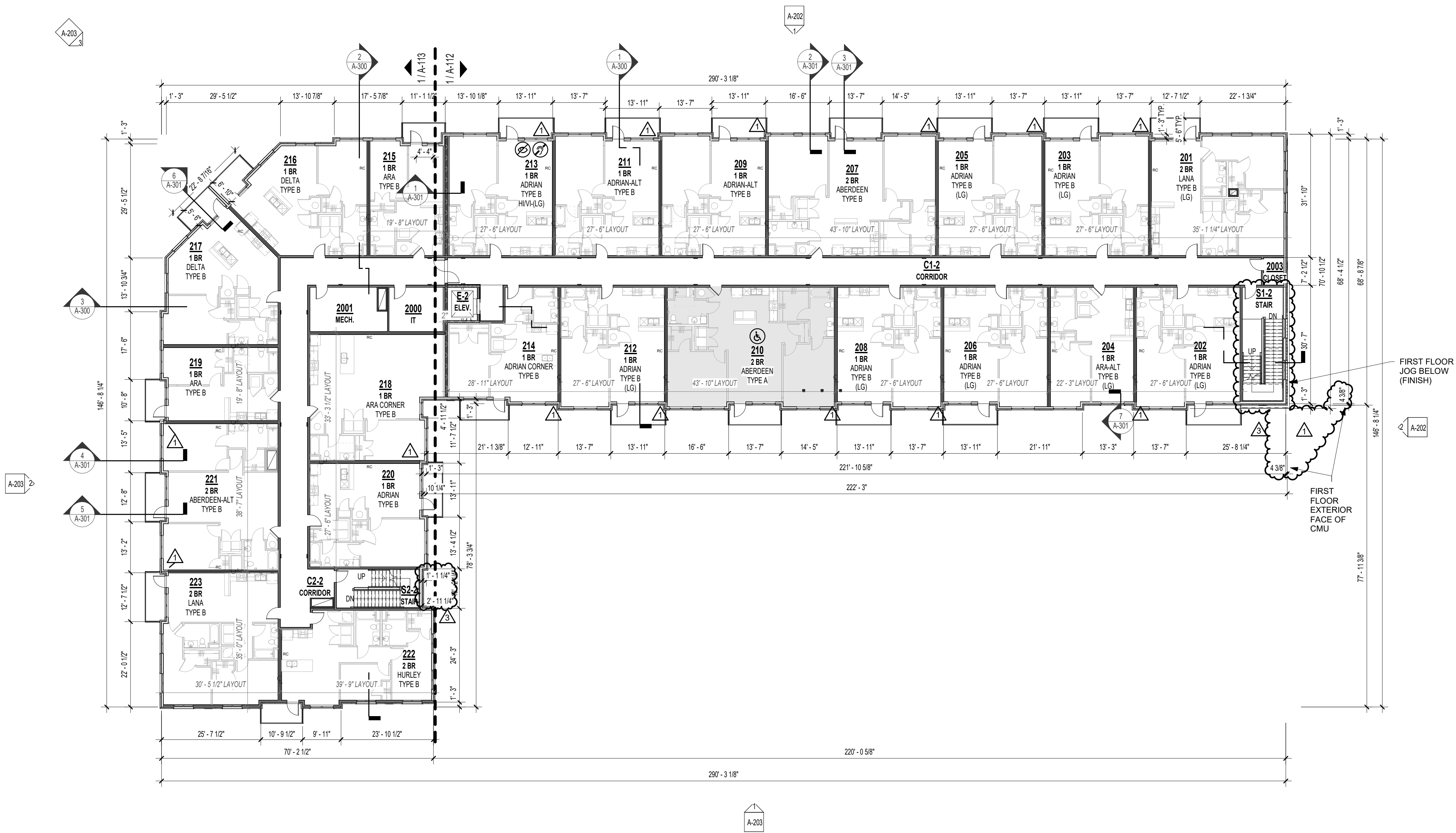
THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
SECOND FLOOR PLAN

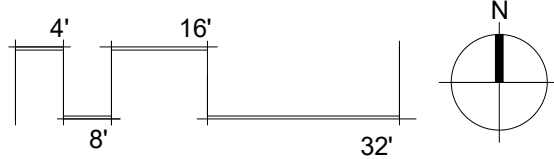
PROJECT NUMBER: 23099

SHEET NUMBER:

A-102



1 SECOND FLOOR PLAN
1/16" = 1'-0"

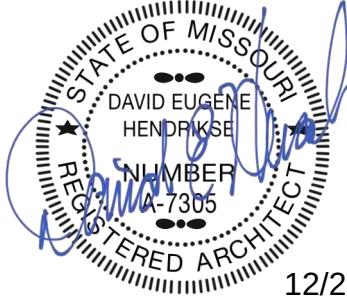


REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-101 FOR PLAN LEGEND
REFERENCE A-102 FOR UNIT SHEET REFERENCE

PRINTS ISSUED
01/25/2024 - CITY SUBMITTAL

REVISIONS:
1 10/21/24 ADDENDUM #1
3 12/20/24 ADDENDUM #3

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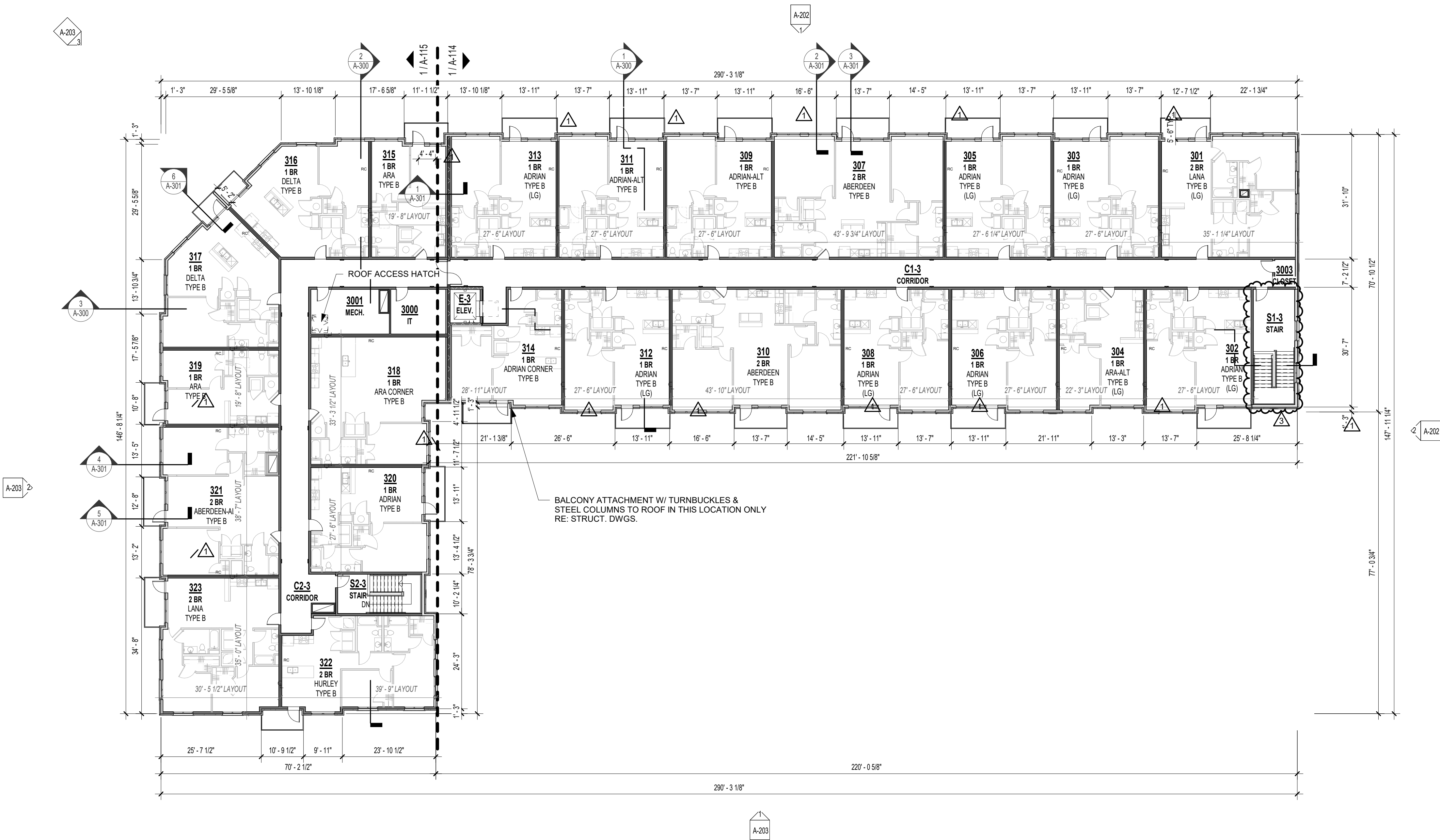
THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
THIRD FLOOR PLAN

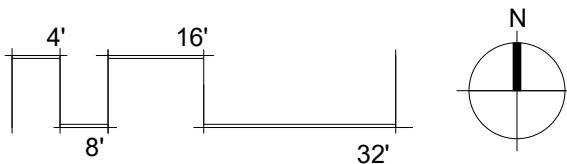
PROJECT NUMBER: 23099

SHEET NUMBER:

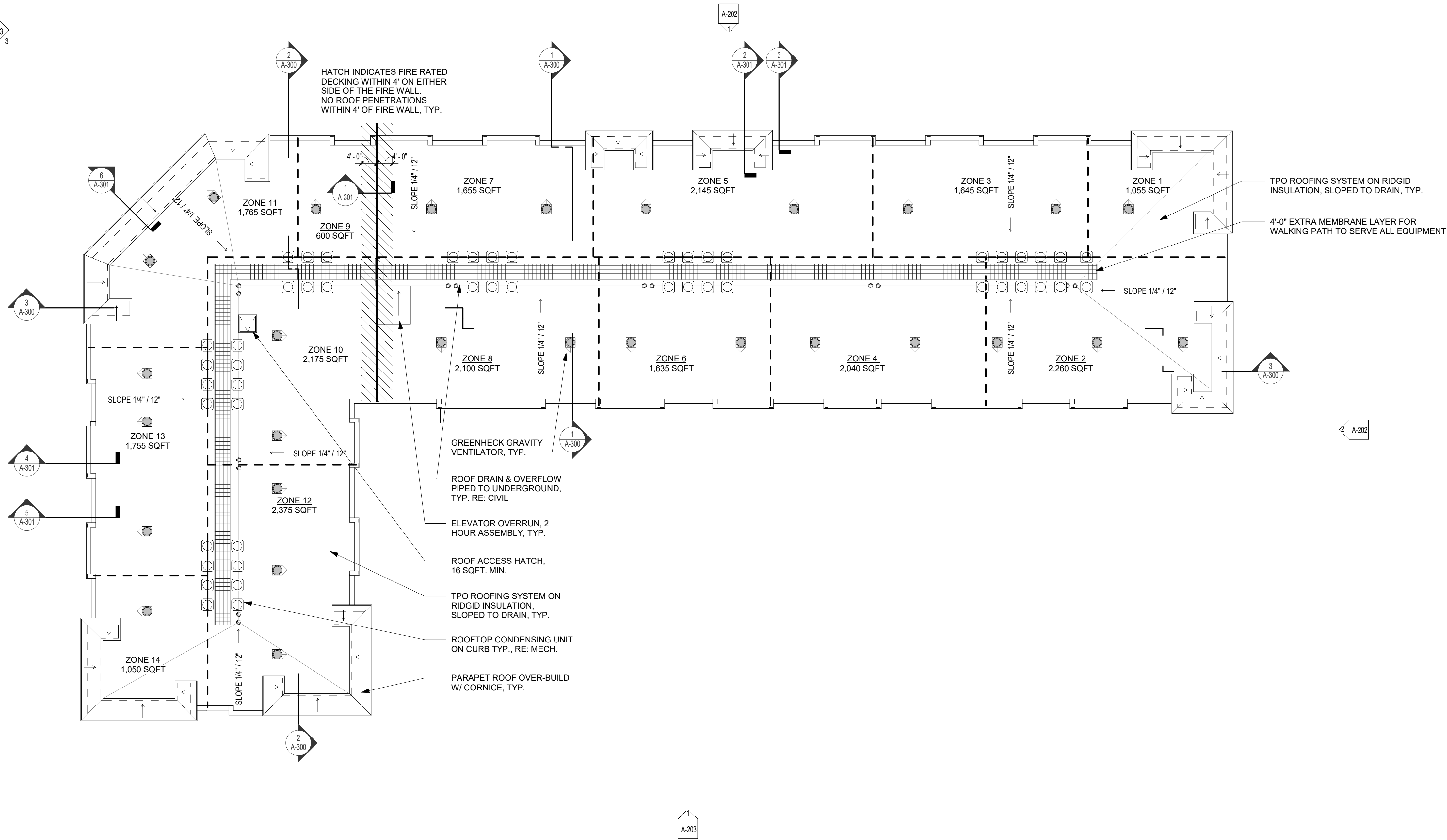
A-103



1 THIRD FLOOR PLAN
1/16" = 1'-0"



ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5
AREA TO BE VENTED1055 S.F.	AREA TO BE VENTED2260 S.F.	AREA TO BE VENTED1645 S.F.	AREA TO BE VENTED2040 S.F.	AREA TO BE VENTED2145 S.F.
VENTING CALCULATION FACTOR PER 2018 IBC300	VENTING CALCULATION FACTOR PER 2018 IBC300	VENTING CALCULATION FACTOR PER 2018 IBC300	VENTING CALCULATION FACTOR PER 2018 IBC300	VENTING CALCULATION FACTOR PER 2018 IBC300
TOTAL REQUIRED VENTING = (1055 S.F. x 144) / 300 = 506 SQ.IN.	TOTAL REQUIRED VENTING = (2260 S.F. x 144) / 300 = 1085 SQ.IN.	TOTAL REQUIRED VENTING = (1645 S.F. x 144) / 300 = 790 SQ.IN.	TOTAL REQUIRED VENTING = (2040 S.F. x 144) / 300 = 979 SQ.IN.	TOTAL REQUIRED VENTING = (2145 S.F. x 144) / 300 = 1030 SQ.IN.
HIGH ROOF VENTING = 506 SQ.IN. x 1 = 506 SQ.IN.	HIGH ROOF VENTING = 1085 SQ.IN. x 1 = 1085 SQ.IN.	HIGH ROOF VENTING = 790 SQ.IN. x 1 = 790 SQ.IN.	HIGH ROOF VENTING = 979 SQ.IN. x 1 = 979 SQ.IN.	HIGH ROOF VENTING = 1030 SQ.IN. x 1 = 1030 SQ.IN.
LOW ROOF VENTING = 506 SQ.IN. x 0 = 0 SQ.IN.	LOW ROOF VENTING = 1085 SQ.IN. x 0 = 0 SQ.IN.	LOW ROOF VENTING = 790 SQ.IN. x 0 = 0 SQ.IN.	LOW ROOF VENTING = 979 SQ.IN. x 0 = 0 SQ.IN.	LOW ROOF VENTING = 1030 SQ.IN. x 0 = 0 SQ.IN.
HIGH ROOF VENTING506 SQ.IN. REQUIRED	HIGH ROOF VENTING1085 SQ.IN. REQUIRED	HIGH ROOF VENTING790 SQ.IN. REQUIRED	HIGH ROOF VENTING979 SQ.IN. REQUIRED	HIGH ROOF VENTING1030 SQ.IN. REQUIRED
PROVIDED HIGH ROOF VENTING535 SQ.IN. PROVIDED	PROVIDED HIGH ROOF VENTING1605 SQ.IN. PROVIDED	PROVIDED HIGH ROOF VENTING1070 SQ.IN. PROVIDED	PROVIDED HIGH ROOF VENTING1070 SQ.IN. PROVIDED	PROVIDED HIGH ROOF VENTING1070 SQ.IN. PROVIDED
(1) High Vent Type 1 @ 535 NFA = 535 SQ.IN./FT NFA	(3) High Vent Type 1 @ 535 NFA = 1605 SQ.IN./FT NFA	(2) High Vent Type 1 @ 535 NFA = 1070 SQ.IN./FT NFA	(2) High Vent Type 1 @ 535 NFA = 1070 SQ.IN./FT NFA	(2) High Vent Type 1 @ 535 NFA = 1070 SQ.IN./FT NFA
TOTAL ROOF VENTING PROVIDED535 SQ.IN. PROVIDED	TOTAL ROOF VENTING PROVIDED1605 SQ.IN. PROVIDED	TOTAL ROOF VENTING PROVIDED1070 SQ.IN. PROVIDED	TOTAL ROOF VENTING PROVIDED1070 SQ.IN. PROVIDED	TOTAL ROOF VENTING PROVIDED1070 SQ.IN. PROVIDED
ZONE 6	ZONE 7	ZONE 8	ZONE 9	ZONE 10
AREA TO BE VENTED1635 S.F.	AREA TO BE VENTED1655 S.F.	AREA TO BE VENTED2100 S.F.	AREA TO BE VENTED600 S.F.	AREA TO BE VENTED2175 S.F.
VENTING CALCULATION FACTOR PER 2018 IBC300	VENTING CALCULATION FACTOR PER 2018 IBC300	VENTING CALCULATION FACTOR PER 2018 IBC300	VENTING CALCULATION FACTOR PER 2018 IBC300	VENTING CALCULATION FACTOR PER 2018 IBC300
TOTAL REQUIRED VENTING = (1635 S.F. x 144) / 300 = 785 SQ.IN.	TOTAL REQUIRED VENTING = (1655 S.F. x 144) / 300 = 794 SQ.IN.	TOTAL REQUIRED VENTING = (2100 S.F. x 144) / 300 = 1008 SQ.IN.	TOTAL REQUIRED VENTING = (600 S.F. x 144) / 300 = 288 SQ.IN.	TOTAL REQUIRED VENTING = (2175 S.F. x 144) / 300 = 1044 SQ.IN.
HIGH ROOF VENTING = 785 SQ.IN. x 1 = 785 SQ.IN.	HIGH ROOF VENTING = 794 SQ.IN. x 1 = 794 SQ.IN.	HIGH ROOF VENTING = 1008 SQ.IN. x 1 = 1008 SQ.IN.	HIGH ROOF VENTING = 288 SQ.IN. x 1 = 288 SQ.IN.	HIGH ROOF VENTING = 1044 SQ.IN. x 1 = 1044 SQ.IN.
LOW ROOF VENTING = 785 SQ.IN. x 0 = 0 SQ.IN.	LOW ROOF VENTING = 794 SQ.IN. x 0 = 0 SQ.IN.	LOW ROOF VENTING = 1008 SQ.IN. x 0 = 0 SQ.IN.	LOW ROOF VENTING = 288 SQ.IN. x 0 = 0 SQ.IN.	LOW ROOF VENTING = 1044 SQ.IN. x 0 = 0 SQ.IN.
HIGH ROOF VENTING785 SQ.IN. REQUIRED	HIGH ROOF VENTING794 SQ.IN. REQUIRED	HIGH ROOF VENTING1008 SQ.IN. REQUIRED	HIGH ROOF VENTING288 SQ.IN. REQUIRED	HIGH ROOF VENTING1044 SQ.IN. REQUIRED
PROVIDED HIGH ROOF VENTING1070 SQ.IN. PROVIDED	PROVIDED HIGH ROOF VENTING1070 SQ.IN. PROVIDED	PROVIDED HIGH ROOF VENTING1070 SQ.IN. PROVIDED	PROVIDED HIGH ROOF VENTING535 SQ.IN. PROVIDED	PROVIDED HIGH ROOF VENTING1070 SQ.IN. PROVIDED
(2) High Vent Type 1 @ 535 NFA = 1070 SQ.IN./FT NFA	(2) High Vent Type 1 @ 535 NFA = 1070 SQ.IN./FT NFA	(2) High Vent Type 1 @ 535 NFA = 1070 SQ.IN./FT NFA	(1) High Vent Type 1 @ 535 NFA = 535 SQ.IN./FT NFA	(2) High Vent Type 1 @ 535 NFA = 1070 SQ.IN./FT NFA
TOTAL ROOF VENTING PROVIDED1070 SQ.IN. PROVIDED	TOTAL ROOF VENTING PROVIDED1070 SQ.IN. PROVIDED	TOTAL ROOF VENTING PROVIDED1070 SQ.IN. PROVIDED	TOTAL ROOF VENTING PROVIDED535 SQ.IN. PROVIDED	TOTAL ROOF VENTING PROVIDED1070 SQ.IN. PROVIDED
ZONE 11	ZONE 12	ZONE 13	ZONE 14	
AREA TO BE VENTED1765 S.F.	AREA TO BE VENTED2375 S.F.	AREA TO BE VENTED1755 S.F.	AREA TO BE VENTED1050 S.F.	
VENTING CALCULATION FACTOR PER 2018 IBC300	VENTING CALCULATION FACTOR PER 2018 IBC300	VENTING CALCULATION FACTOR PER 2018 IBC300	VENTING CALCULATION FACTOR PER 2018 IBC300	
TOTAL REQUIRED VENTING = (1765 S.F. x 144) / 300 = 847 SQ.IN.	TOTAL REQUIRED VENTING = (2375 S.F. x 144) / 300 = 1140 SQ.IN.	TOTAL REQUIRED VENTING = (1755 S.F. x 144) / 300 = 842 SQ.IN.	TOTAL REQUIRED VENTING = (1050 S.F. x 144) / 300 = 504 SQ.IN.	
HIGH ROOF VENTING = 847 SQ.IN. x 1 = 847 SQ.IN.	HIGH ROOF VENTING = 1140 SQ.IN. x 1 = 1140 SQ.IN.	HIGH ROOF VENTING = 842 SQ.IN. x 1 = 842 SQ.IN.	HIGH ROOF VENTING = 504 SQ.IN. x 1 = 504 SQ.IN.	
LOW ROOF VENTING = 847 SQ.IN. x 0 = 0 SQ.IN.	LOW ROOF VENTING = 1140 SQ.IN. x 0 = 0 SQ.IN.	LOW ROOF VENTING = 842 SQ.IN. x 0 = 0 SQ.IN.	LOW ROOF VENTING = 504 SQ.IN. x 0 = 0 SQ.IN.	
HIGH ROOF VENTING847 SQ.IN. REQUIRED	HIGH ROOF VENTING1140 SQ.IN. REQUIRED	HIGH ROOF VENTING842 SQ.IN. REQUIRED	HIGH ROOF VENTING504 SQ.IN. REQUIRED	
PROVIDED HIGH ROOF VENTING1070 SQ.IN. PROVIDED	PROVIDED HIGH ROOF VENTING1605 SQ.IN. PROVIDED	PROVIDED HIGH ROOF VENTING1070 SQ.IN. PROVIDED	PROVIDED HIGH ROOF VENTING535 SQ.IN. PROVIDED	
(2) High Vent Type 1 @ 535 NFA = 1070 SQ.IN./FT NFA	(3) High Vent Type 1 @ 535 NFA = 1605 SQ.IN./FT NFA	(2) High Vent Type 1 @ 535 NFA = 1070 SQ.IN./FT NFA	(1) High Vent Type 1 @ 535 NFA = 535 SQ.IN./FT NFA	
TOTAL ROOF VENTING PROVIDED1070 SQ.IN. PROVIDED	TOTAL ROOF VENTING PROVIDED1605 SQ.IN. PROVIDED	TOTAL ROOF VENTING PROVIDED1070 SQ.IN. PROVIDED	TOTAL ROOF VENTING PROVIDED535 SQ.IN. PROVIDED	



REFERENCE G-003 FOR GENERAL NOTES

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01/25/2024 - CITY SUBMITTAL

REVISIONS:

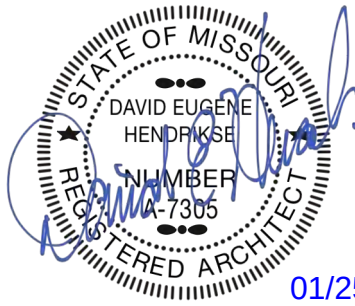


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01/25/24

THE VILLAGE AT DISCOVERY -
LOT 4

LEE'S SUMMIT, MO

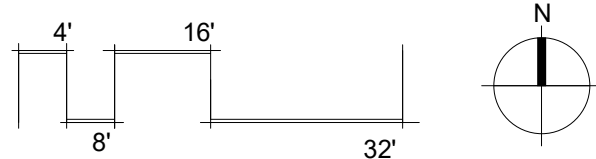
SHEET TITLE
ROOF PLAN

PROJECT NUMBER: 23099

SHEET NUMBER:

A-105

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



NOTE: DETAILS PROVIDED FOR REFERENCE ONLY.
FOLLOW MANUF. RECOMMENDED DETAILS FOR
FLASHING/PENETRATION/SEALING DETAILS, TYP.

PRINTS ISSUED

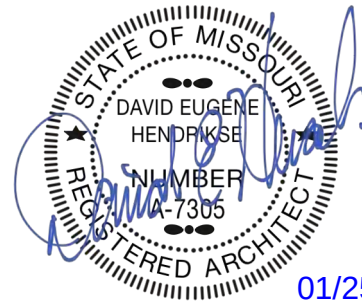
01/25/2024 - CITY SUBMITTAL

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01/25/24

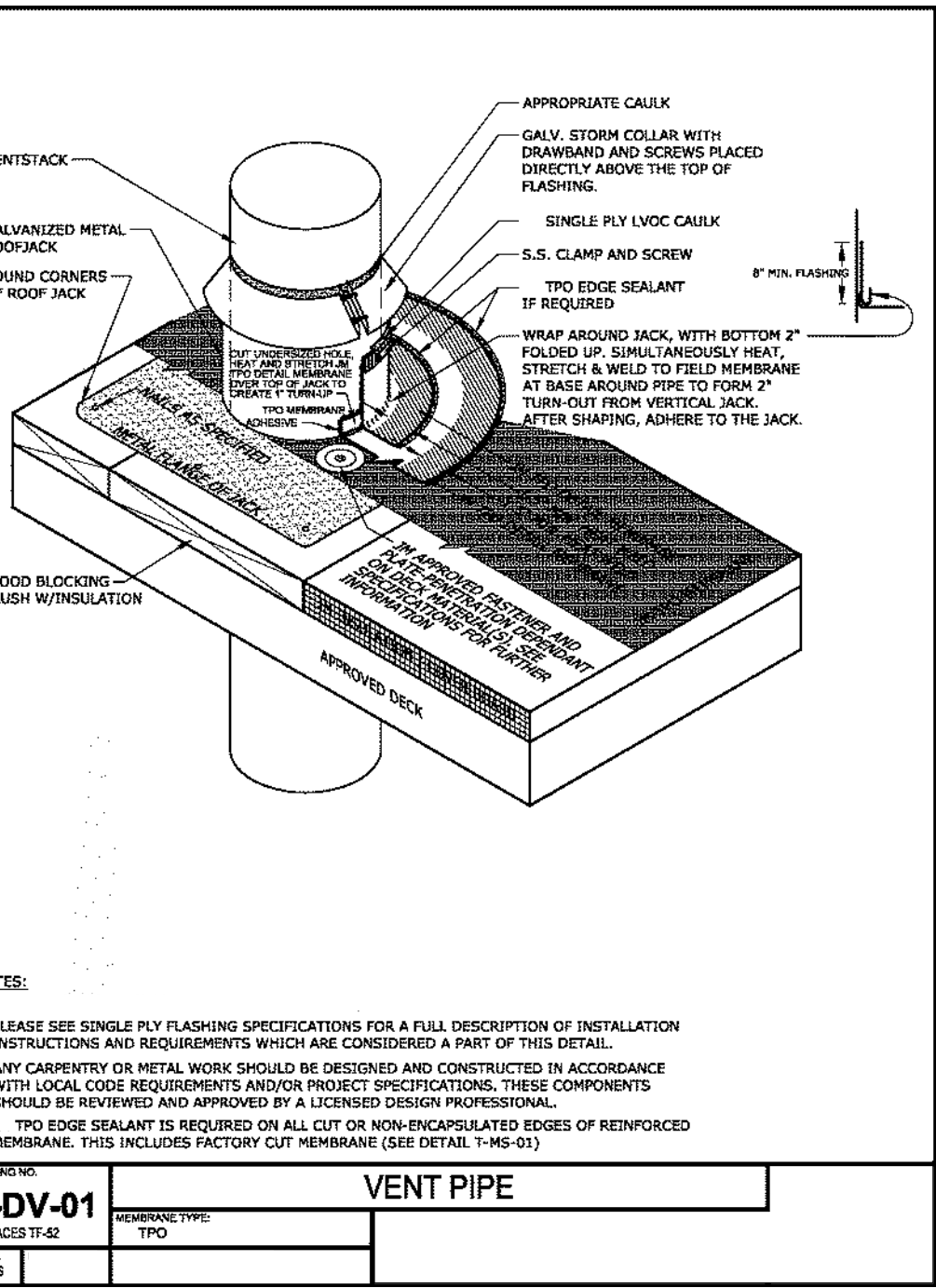
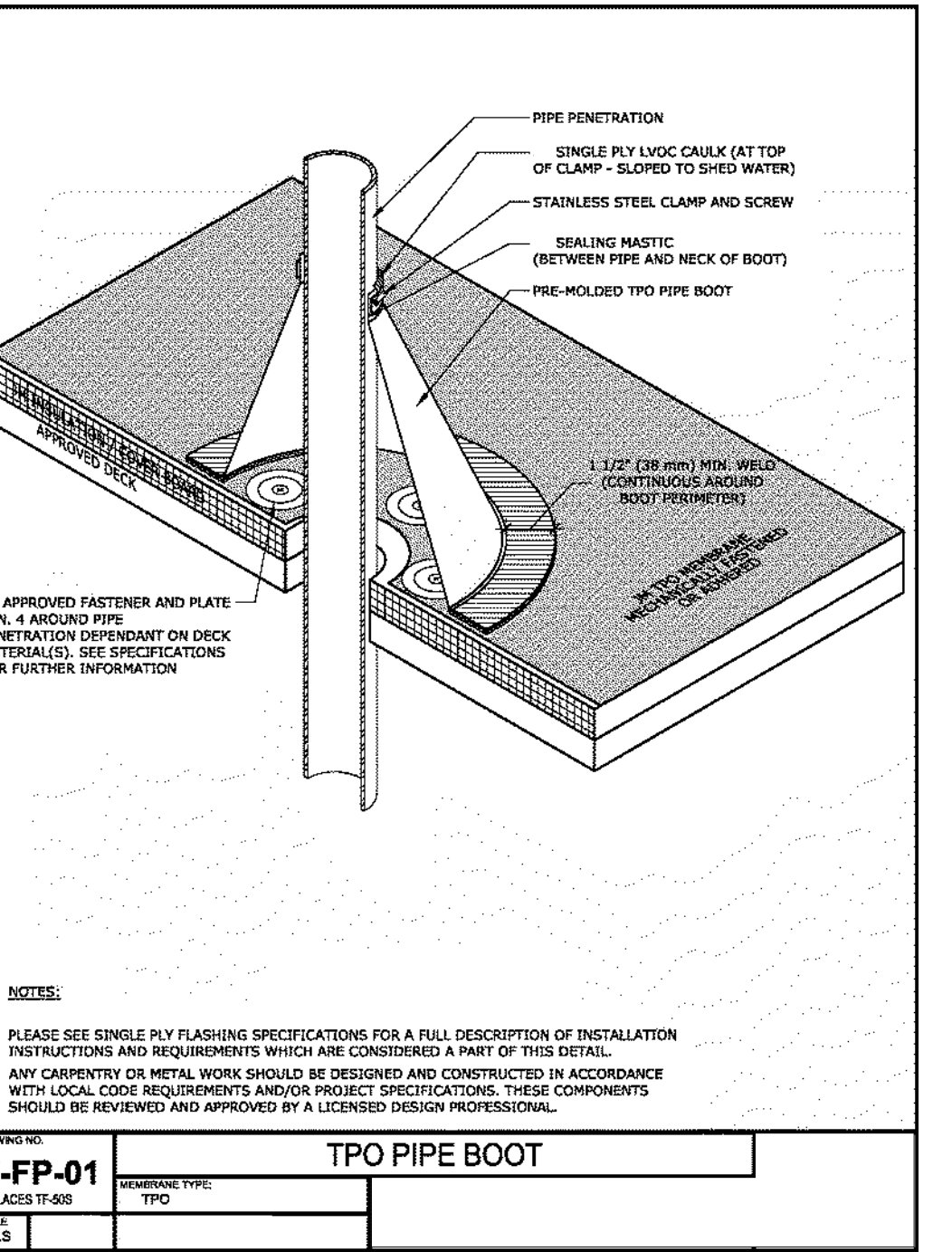
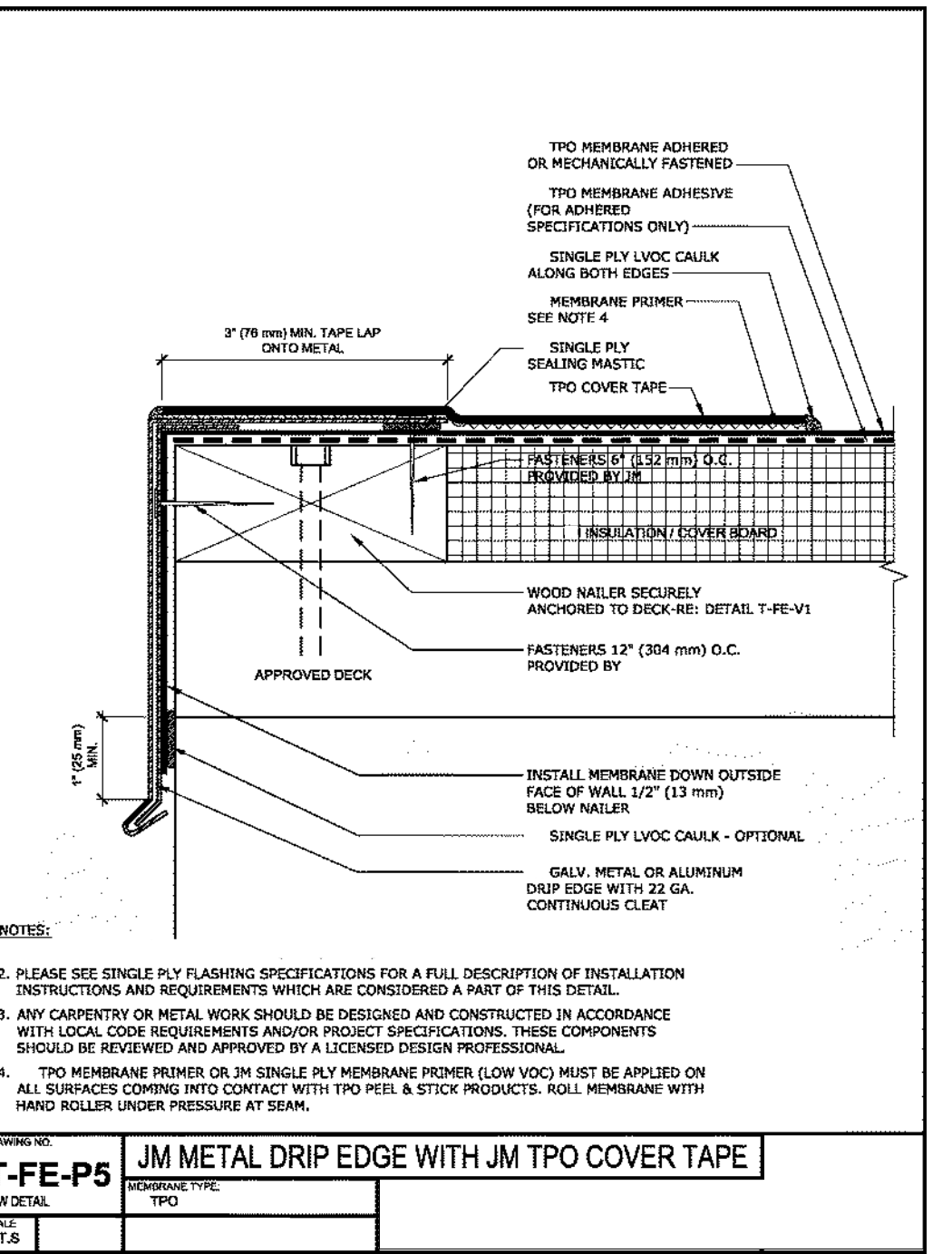
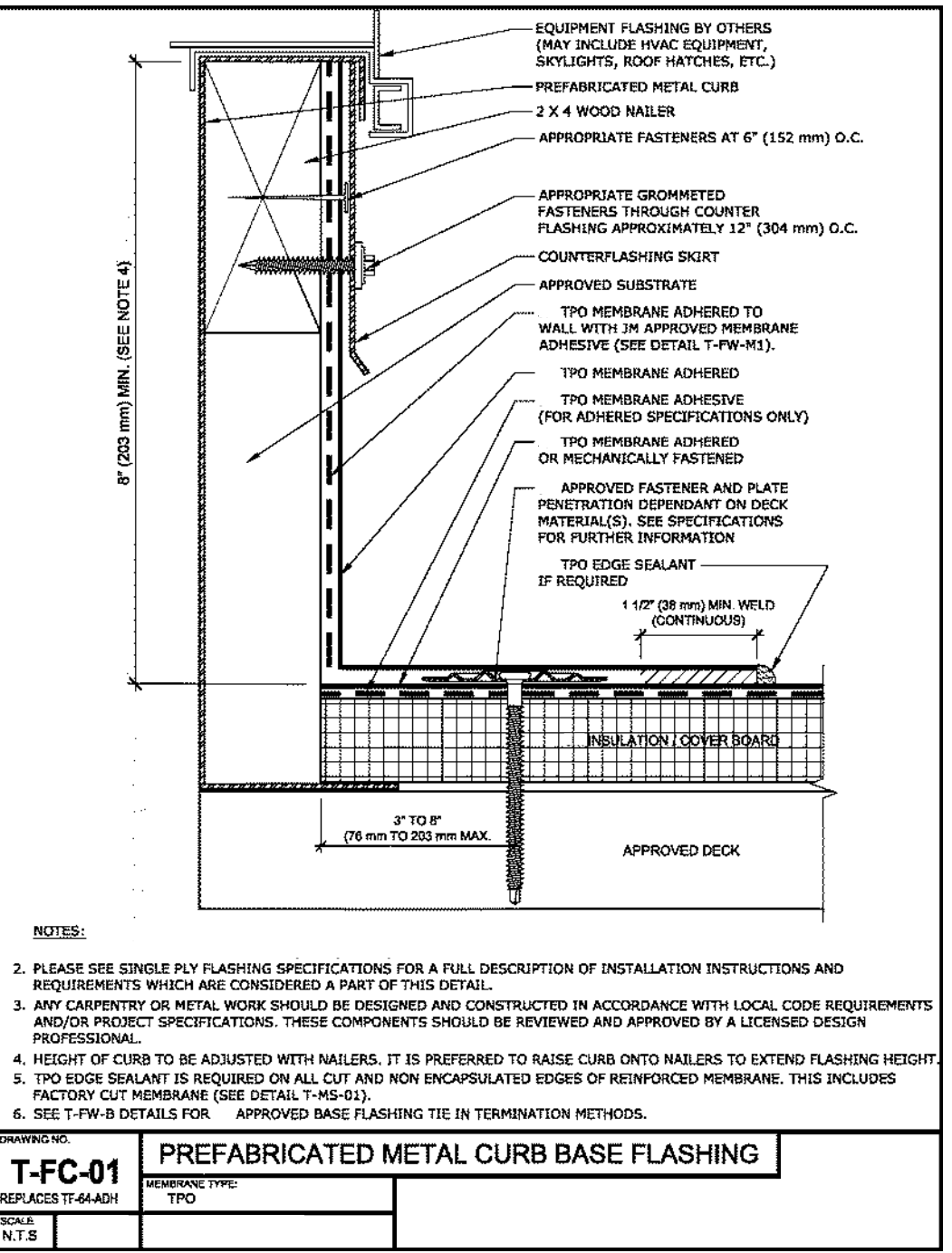
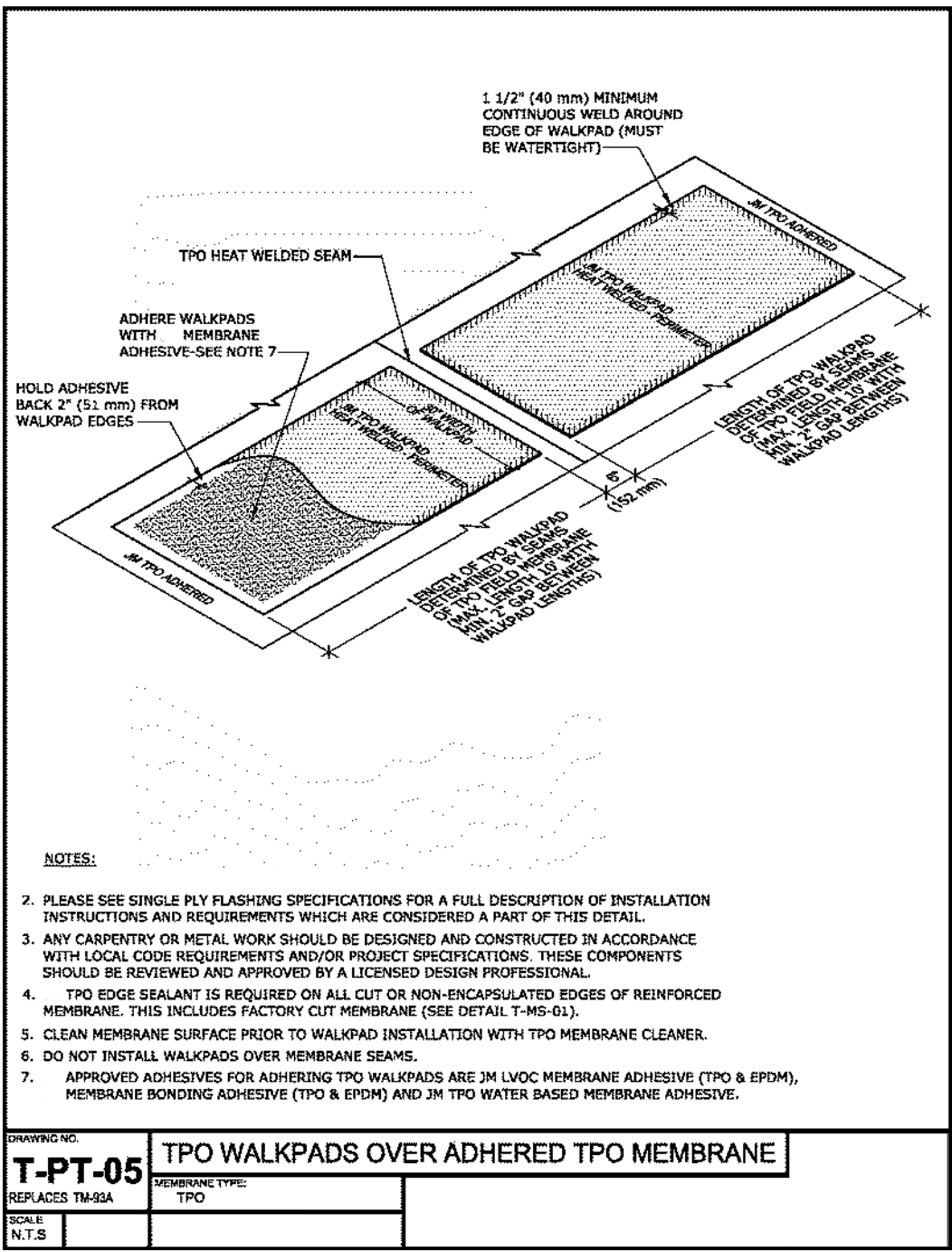
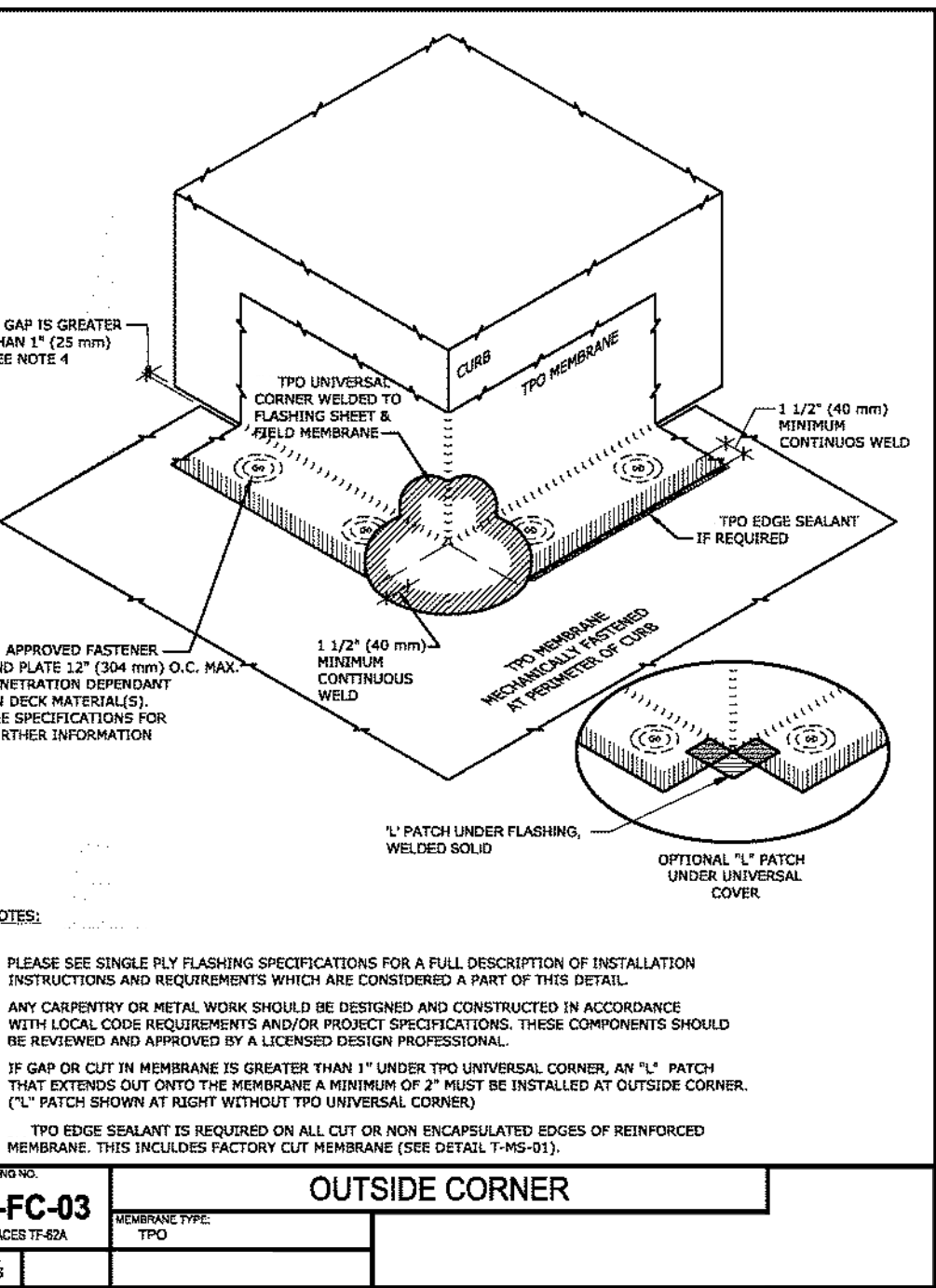
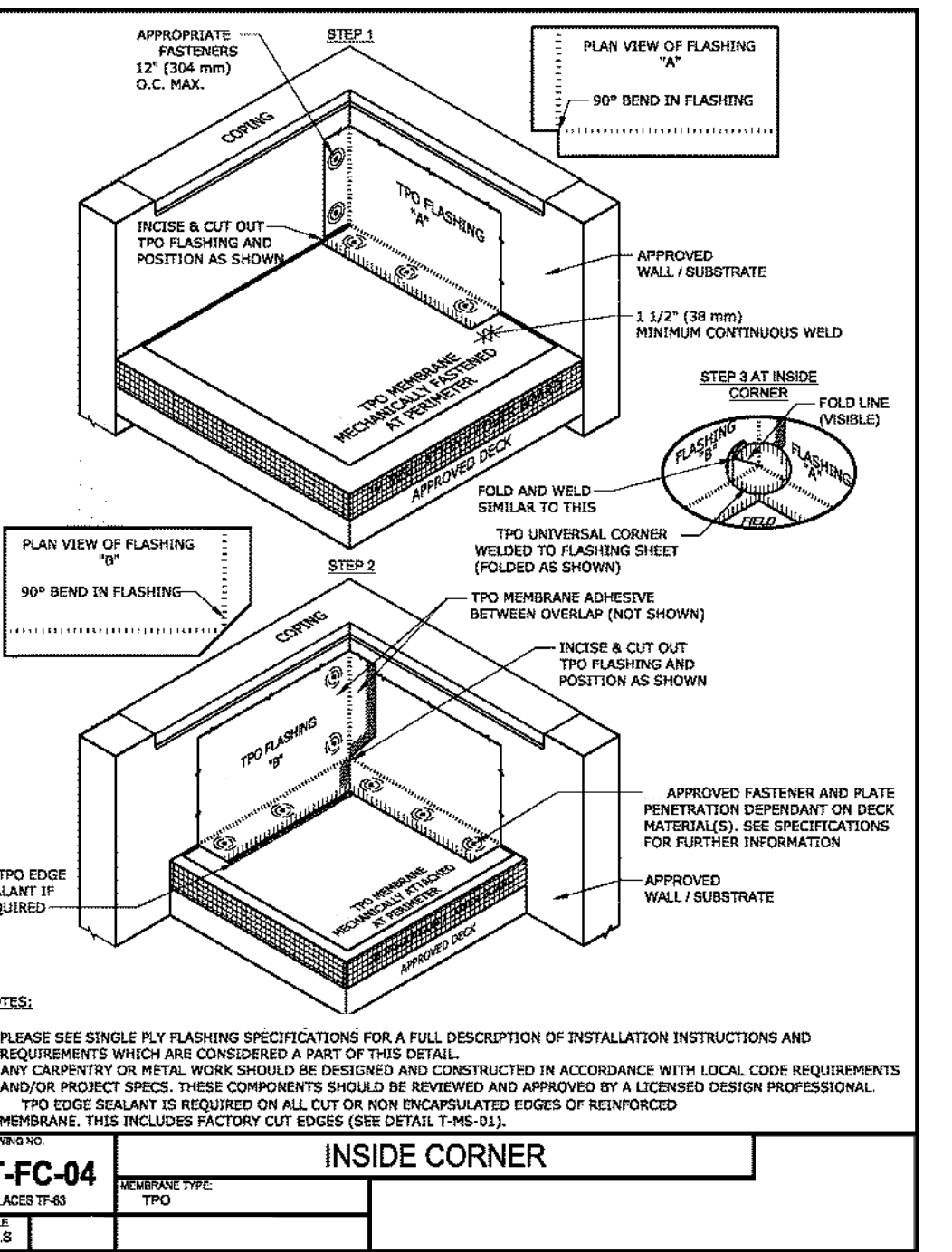
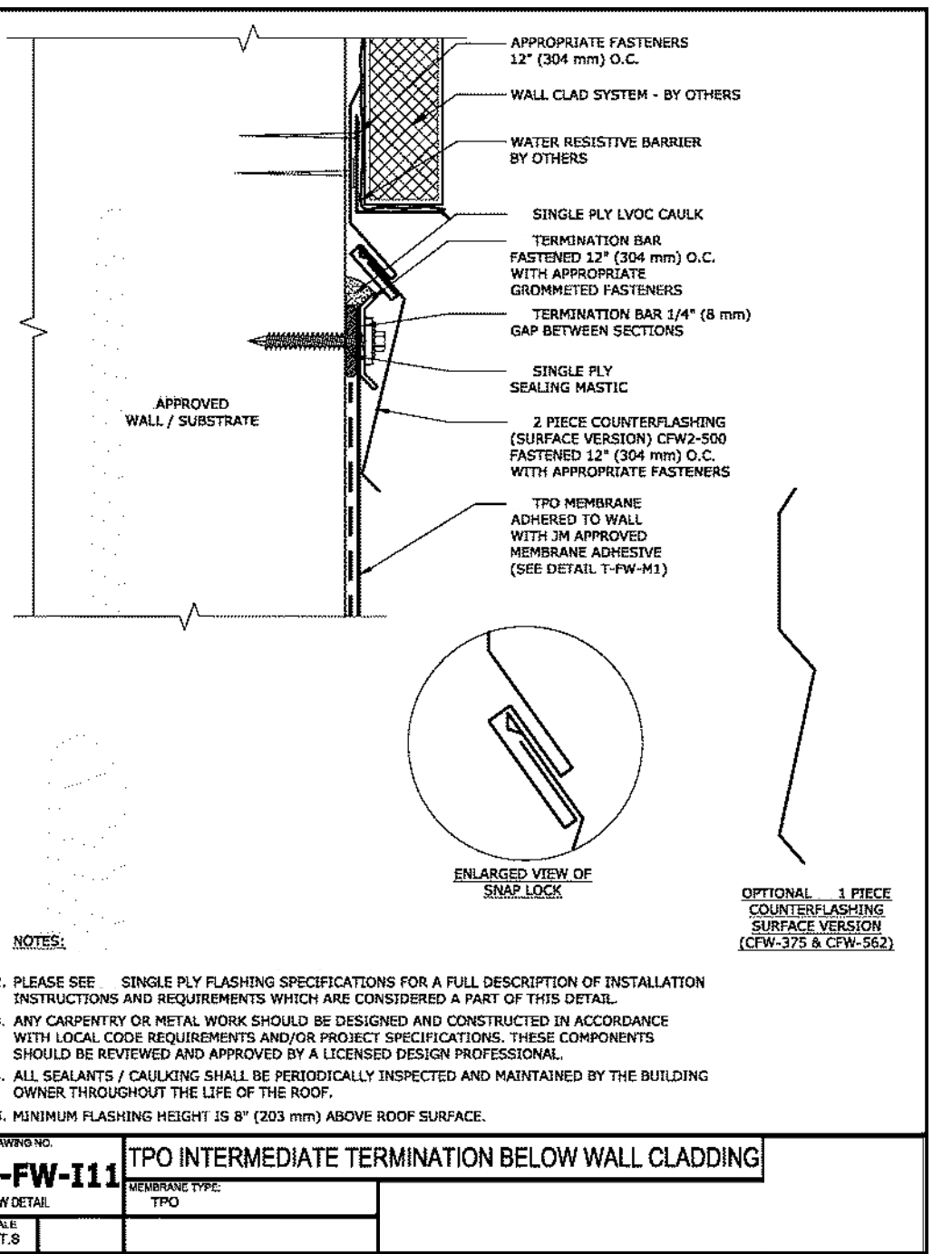
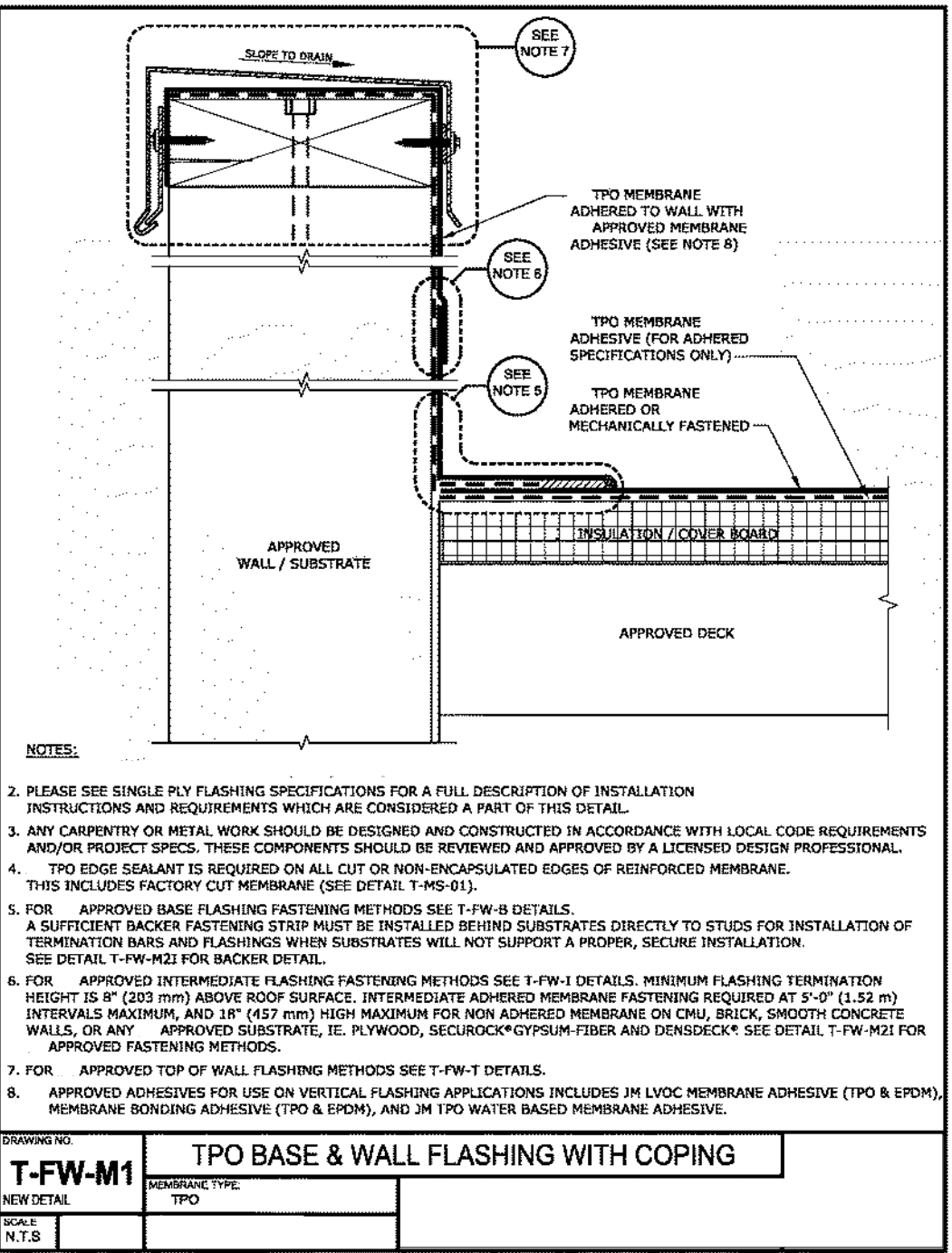
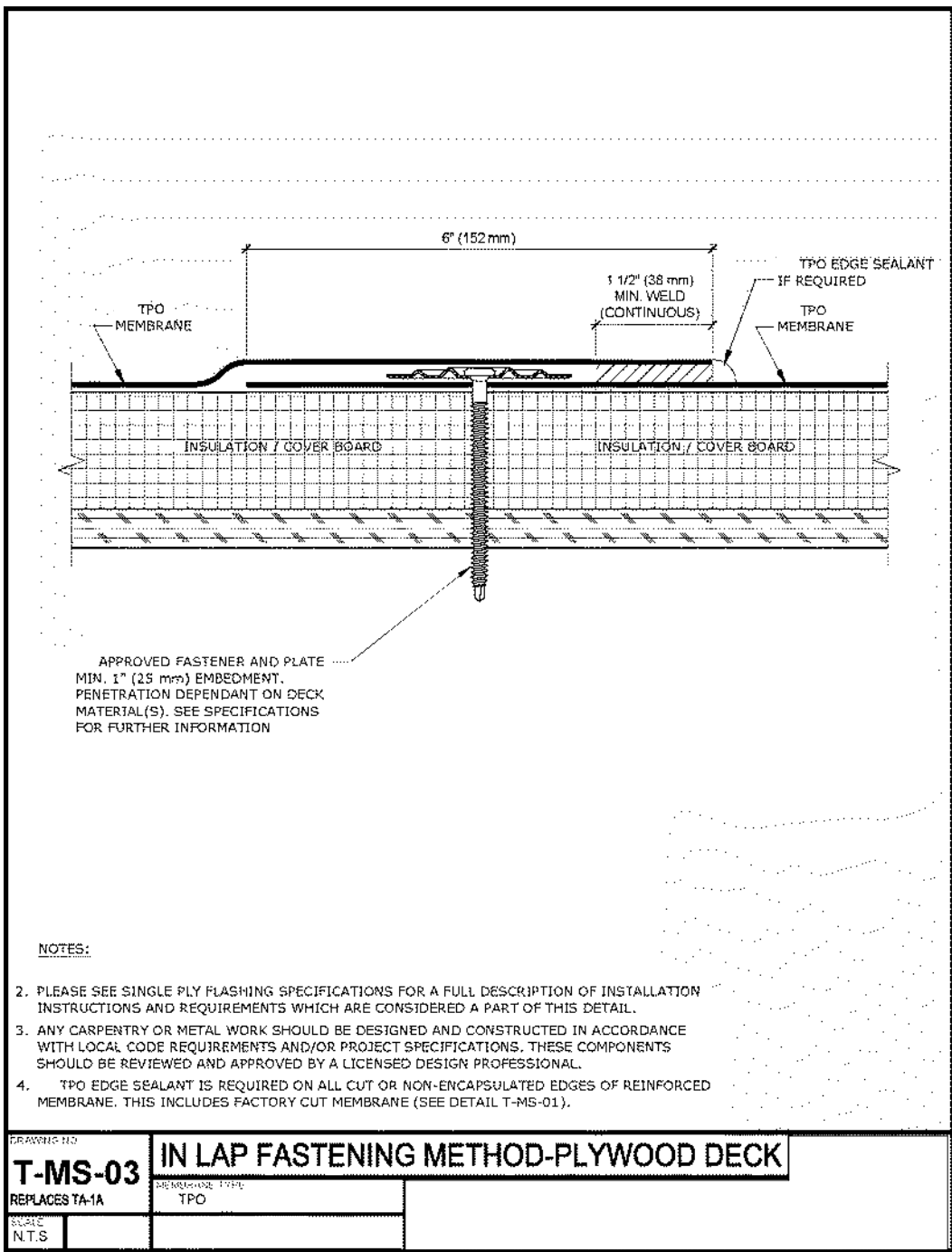
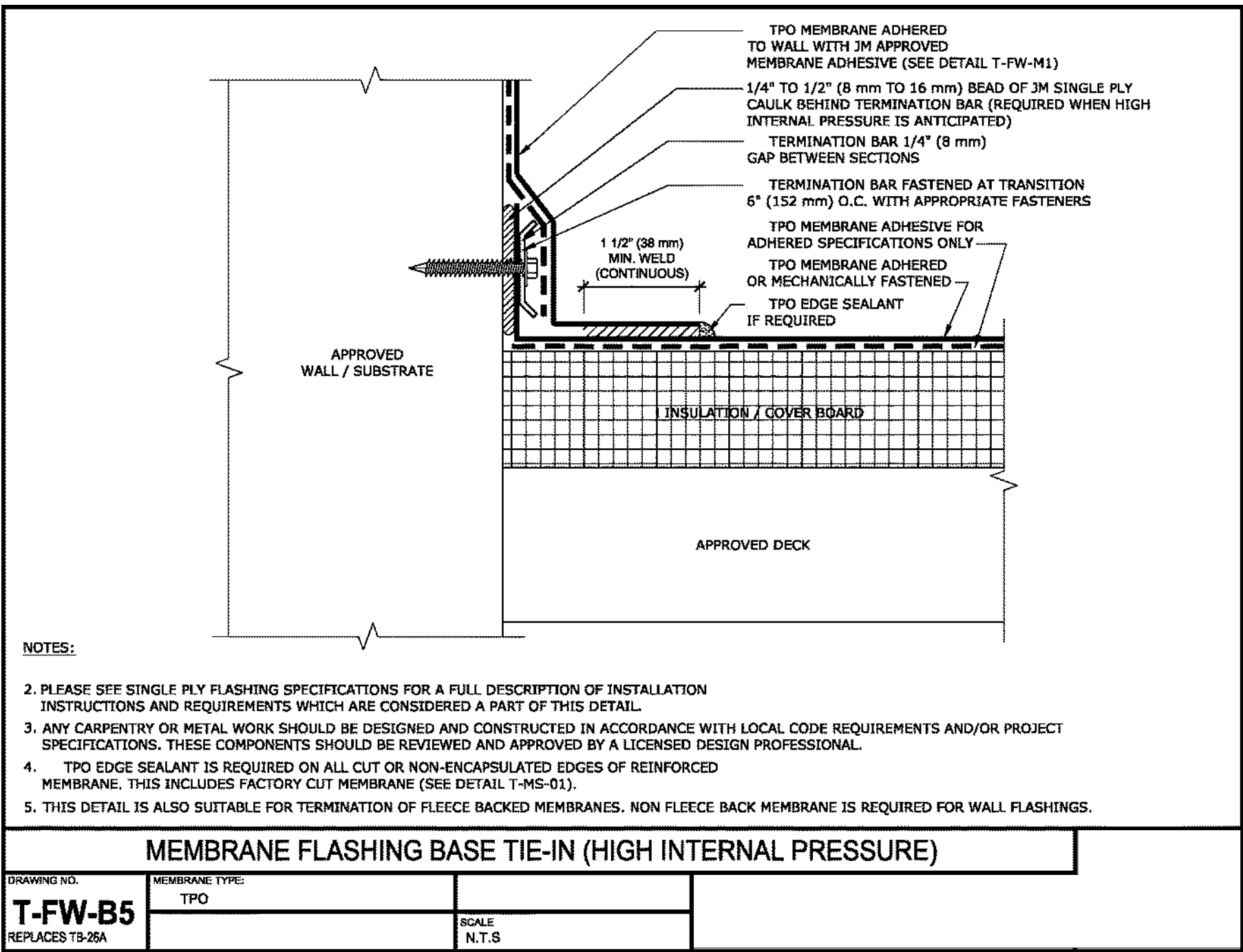
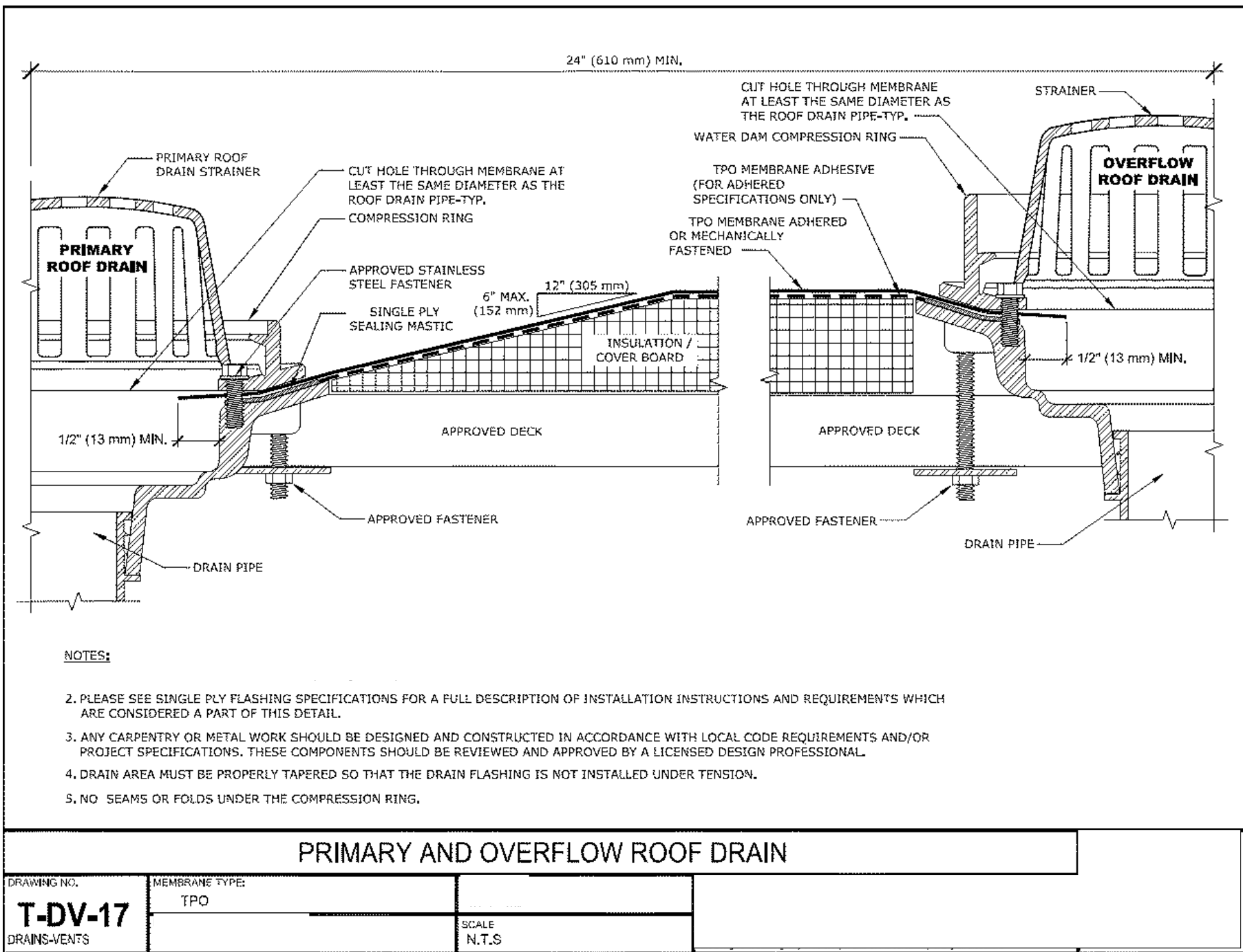
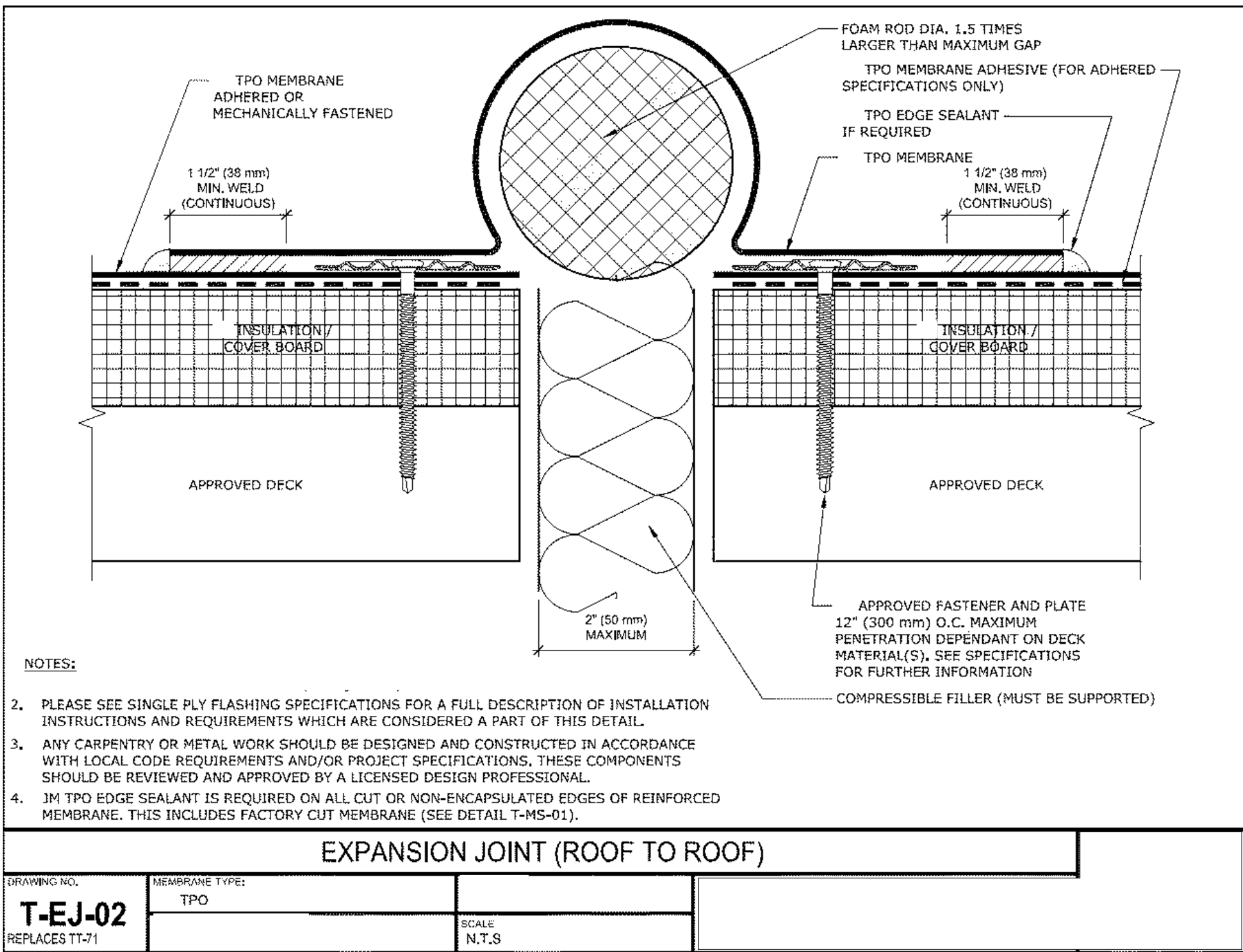
THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
ROOFING & FLASHING DETAILS

PROJECT NUMBER: 23099

SHEET NUMBER:

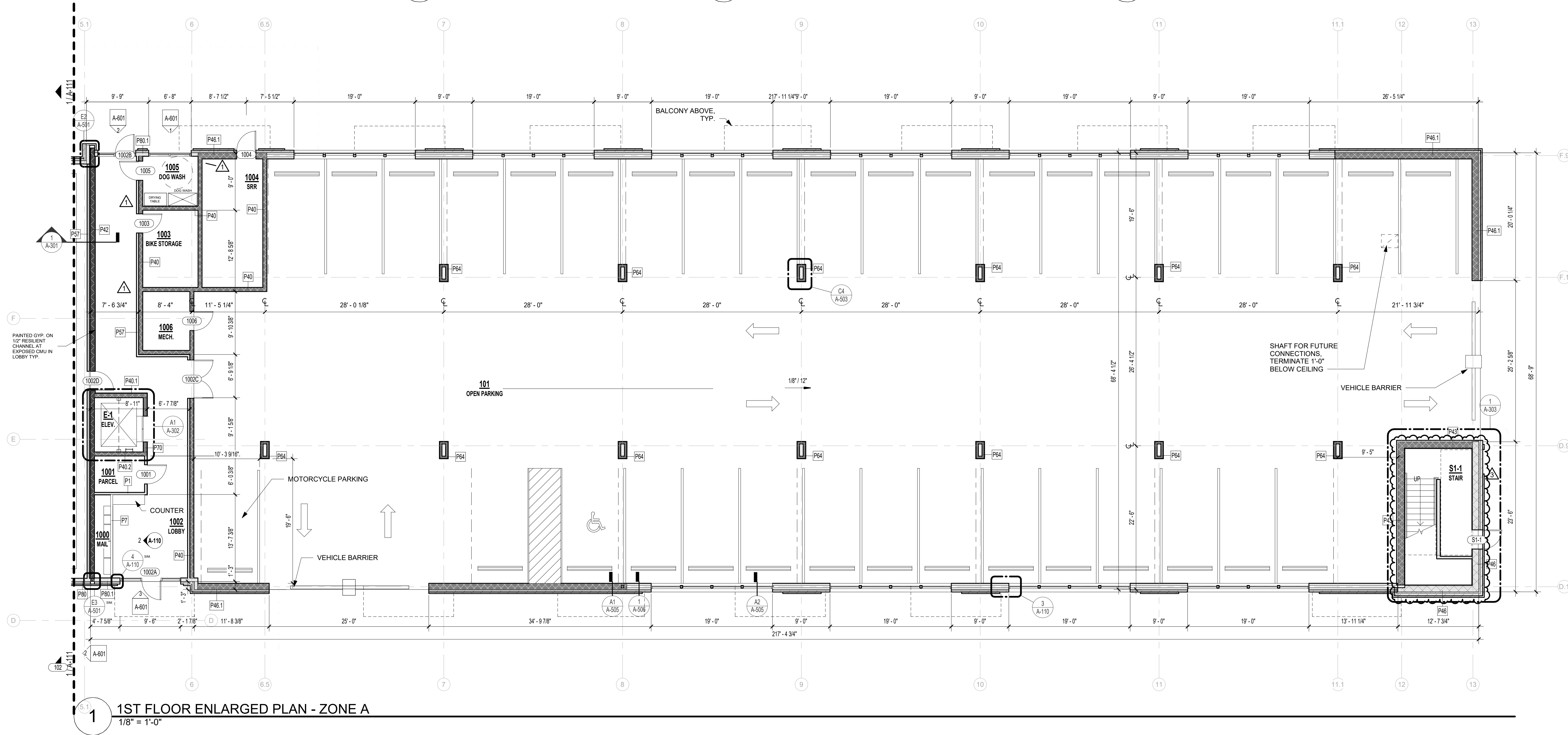
A-106



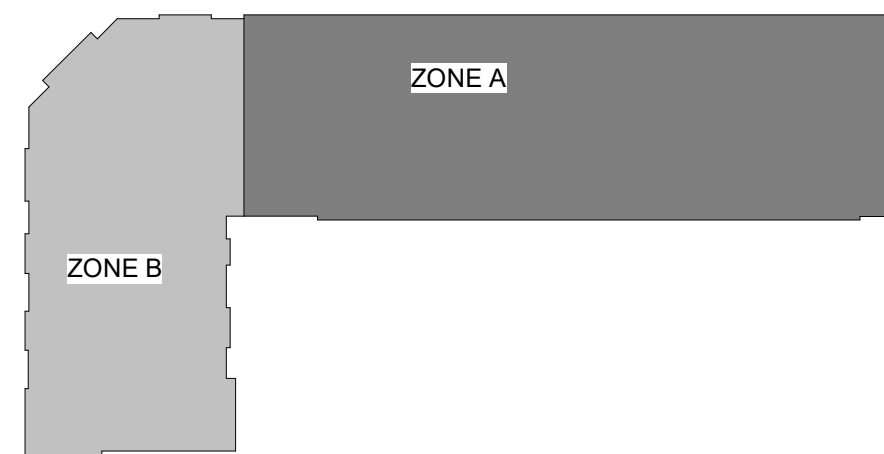
4 BRICK TRANSITION @
STOREFRONT (PLAN)
1" = 1'-0"

3 BRICK TRANSITION @ SCREEN
(PLAN)
1" = 1'-0"

2 MAILBOXES
3/8" = 1'-0"



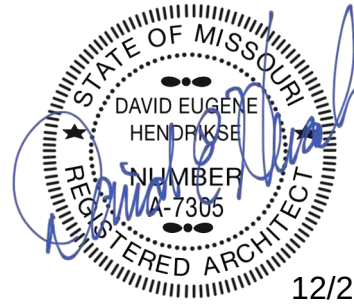
1 1ST FLOOR ENLARGED PLAN - ZONE A
1/8" = 1'-0"



PRINTS ISSUED
01/25/2024 - CITY SUBMITTAL

REVISIONS:
1 10/21/24 ADDENDUM #1
3 12/20/24 ADDENDUM #3

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12/20/24

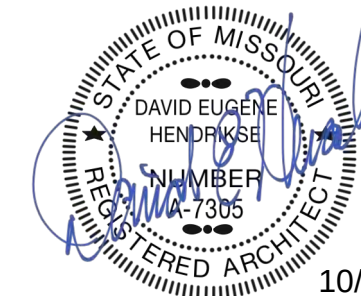
THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
ENLARGED PLAN - 1ST FLOOR
ZONE A

PROJECT NUMBER: 23099

SHEET NUMBER:

A-110



10/21/24

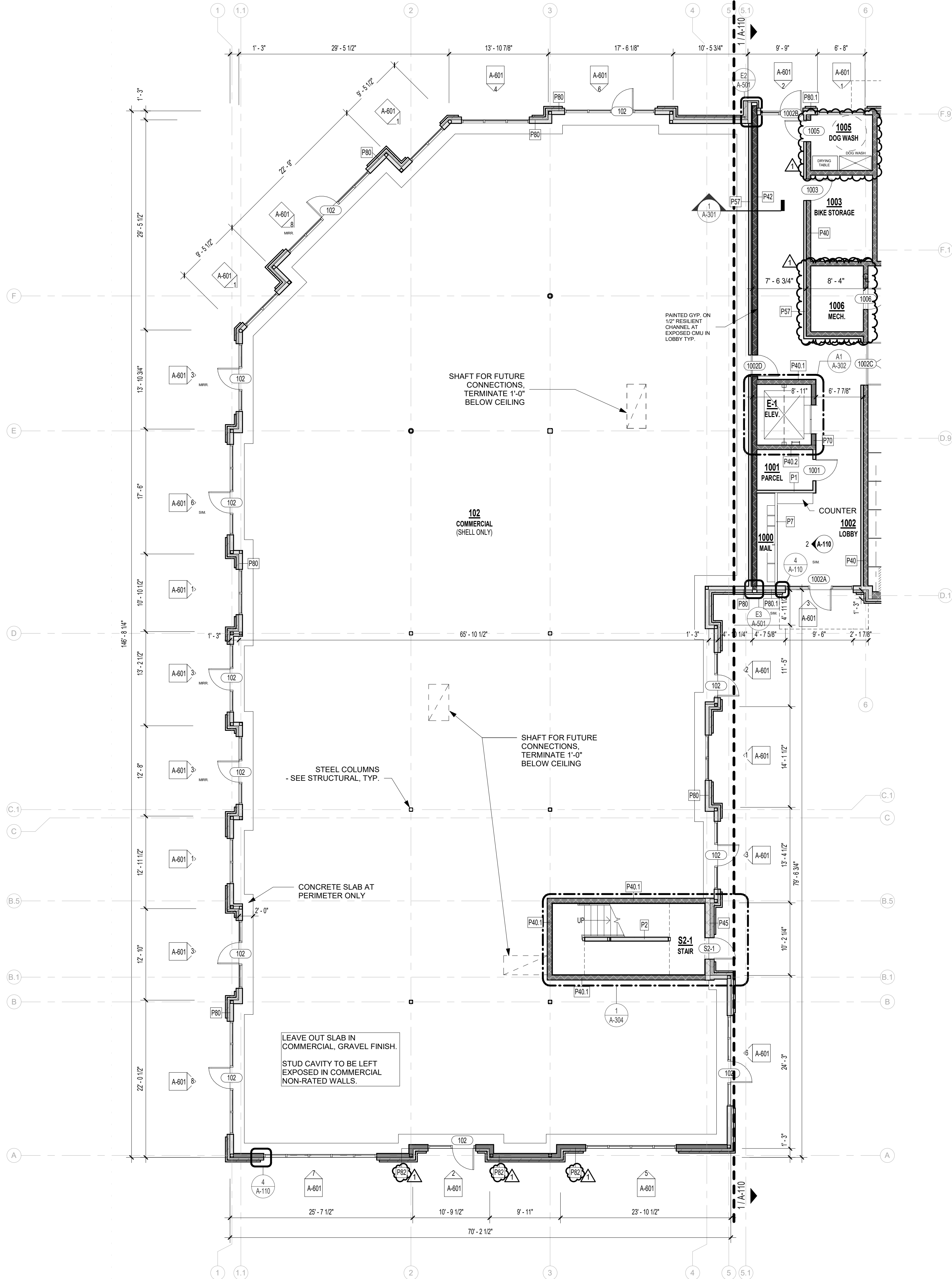
THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
ENLARGED PLAN - 1ST FLOOR
ZONE B

PROJECT NUMBER: 23099

SHEET NUMBER:

A-111



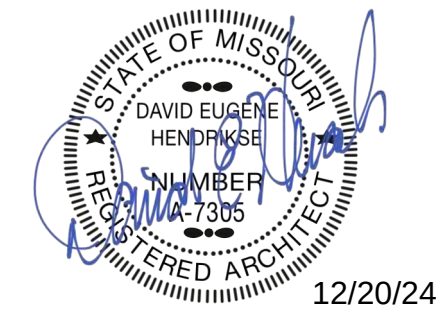
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1ST FLOOR ENLARGED PLAN - ZONE B

1/8" = 1'-0"

ZONE B

ZONE A



12/20/24

THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
ENLARGED PLAN - 2ND FLOOR
ZONE A

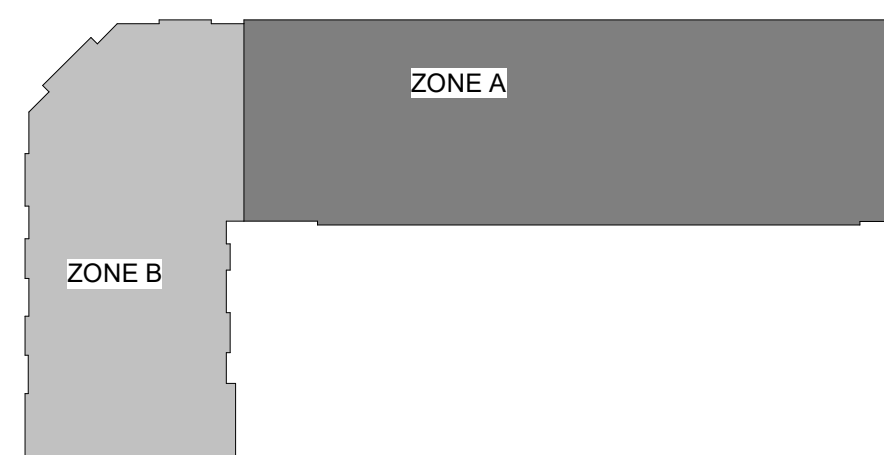
PROJECT NUMBER: 23099

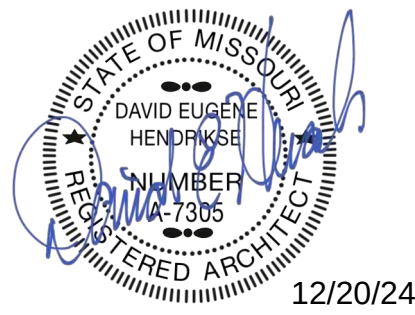
SHEET NUMBER:

A-112



1 SECOND FLOOR ENLARGED PLAN - ZONE A
1/8" = 1'-0"





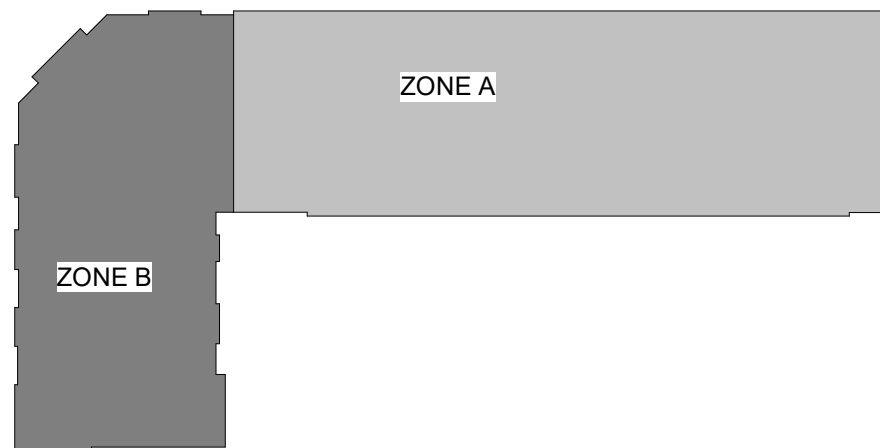
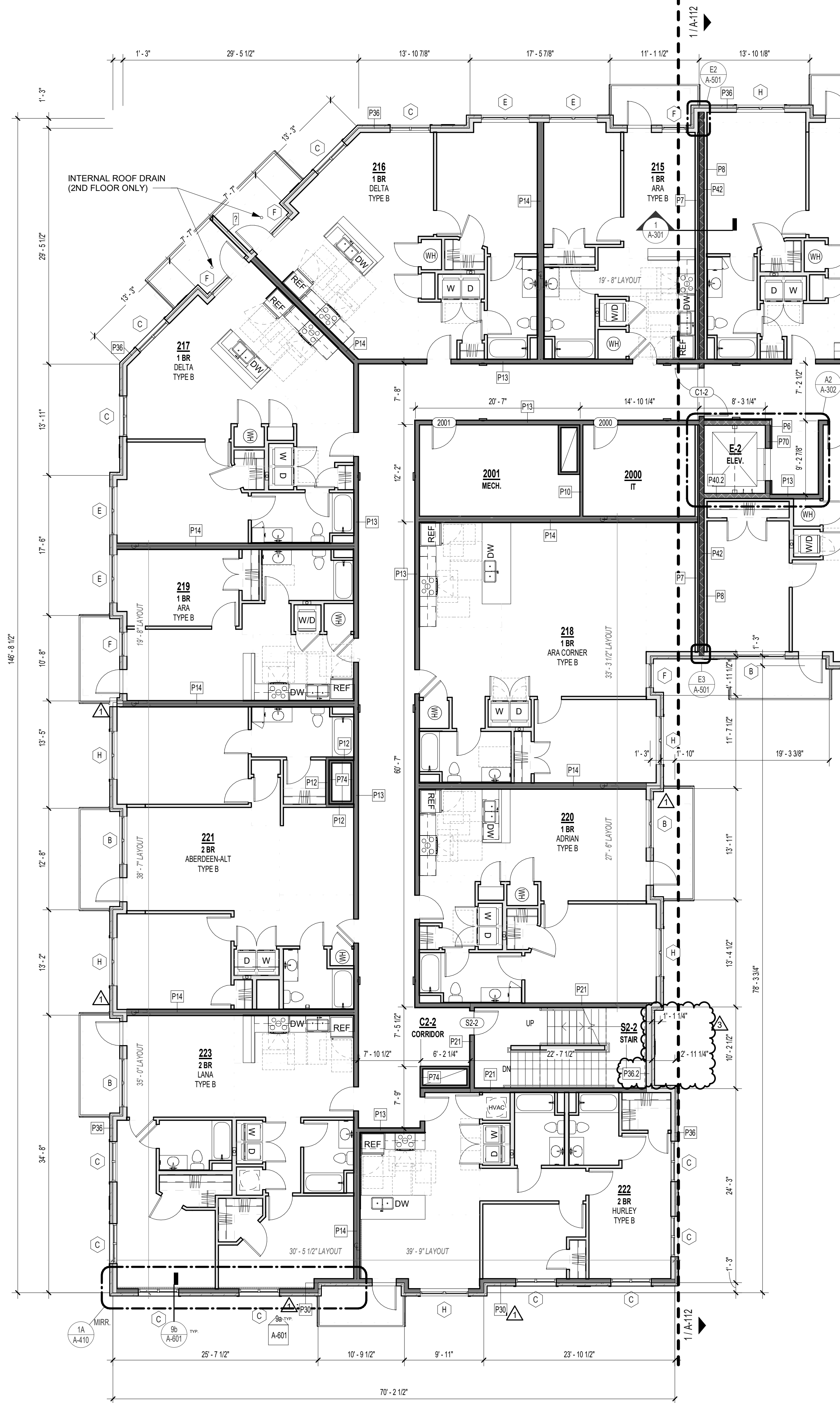
THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
ENLARGED PLAN - 2ND FLOOR
ZONE B

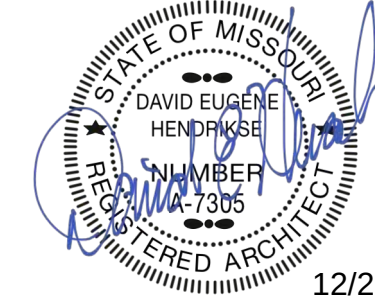
PROJECT NUMBER: 23099

SHEET NUMBER:

A-113



1 SECOND FLOOR ENLARGED PLAN - ZONE B
1/8" = 1'-0"



THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
ENLARGED PLAN - 3RD FLOOR
ZONE A

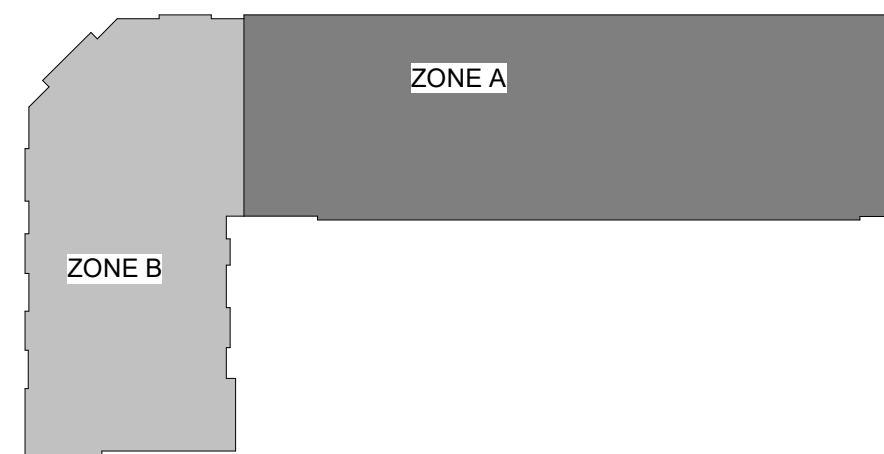
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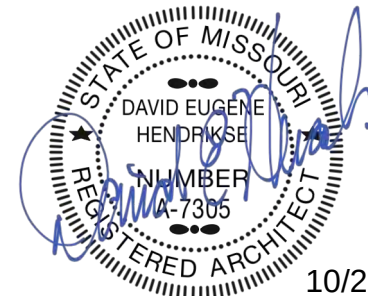
SHEET NUMBER:

A-114



1 THIRD FLOOR ENLARGED PLAN - ZONE A
1/8" = 1'-0"





10/21/24

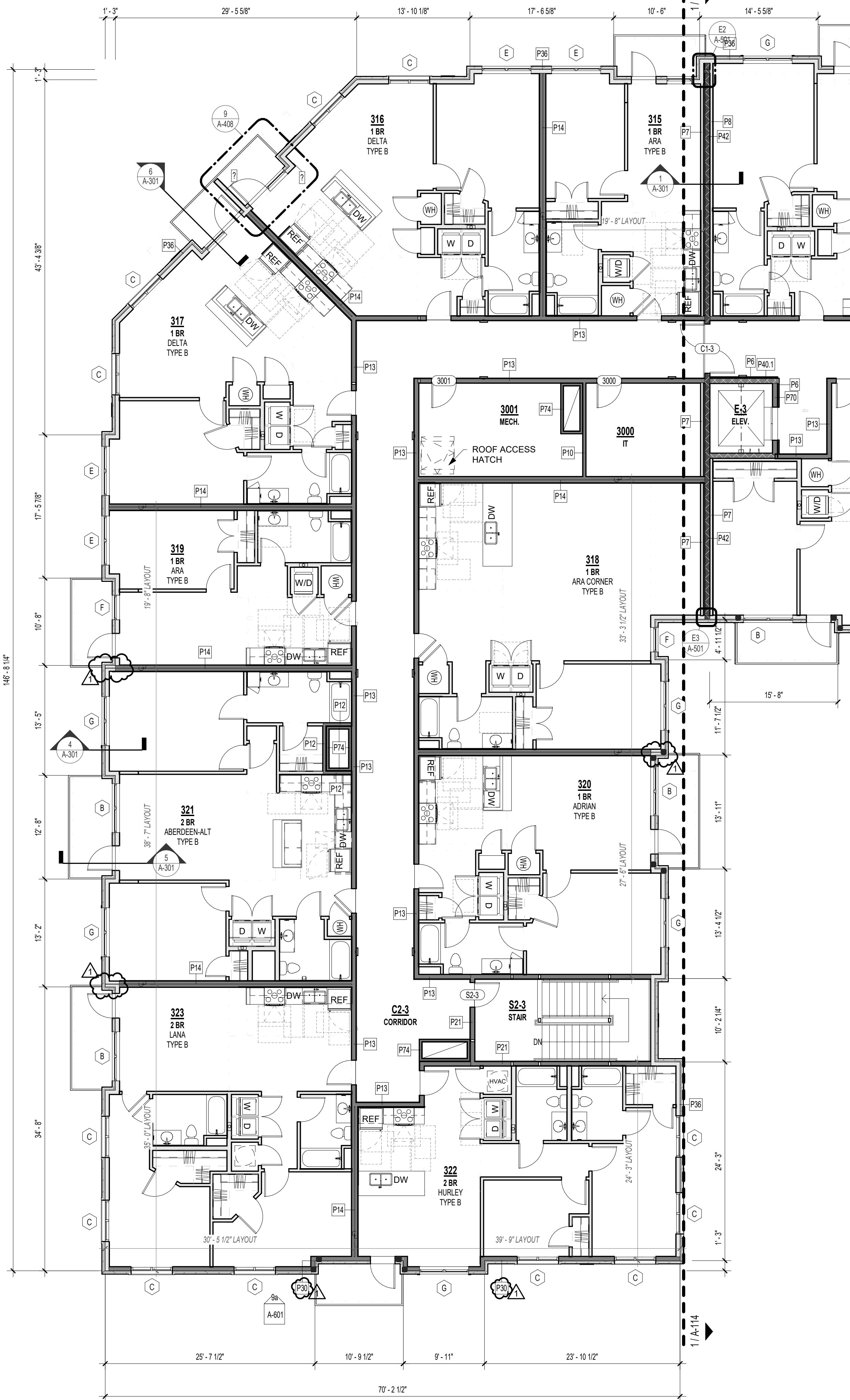
THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
ENLARGED PLAN - 3RD FLOOR
ZONE B

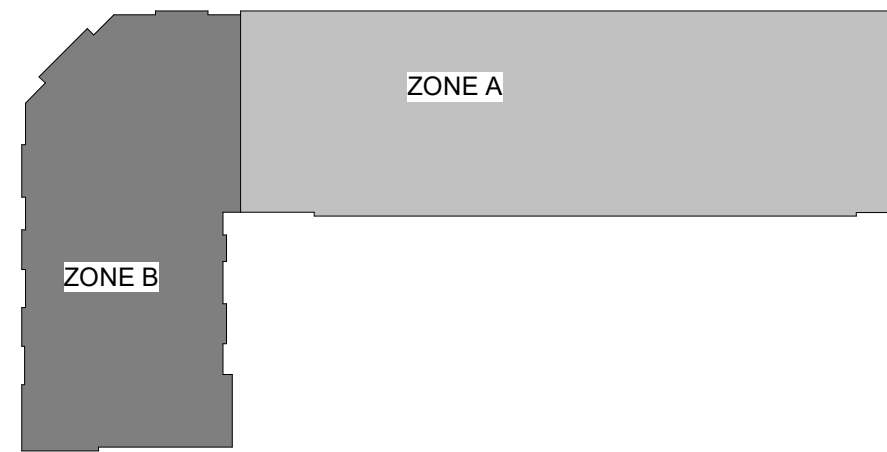
PROJECT NUMBER: 23099

SHEET NUMBER:

A-115



1 THIRD FLOOR ENLARGED PLAN - ZONE B
1/8" = 1'-0"



ZONE B

ZONE A

REFERENCE G-003 FOR GENERAL NOTES

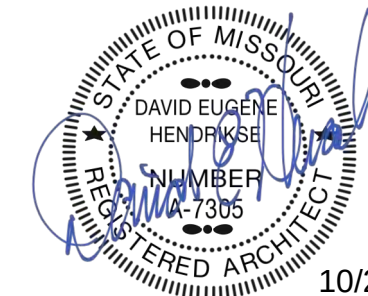
RCP LEGEND

- C1 - 2' X 2' ACT SYSTEM 15/16" THICKNESS- ANGULAR REGULAR EDGE, PER 095113
- C3 - GWB ON METAL STUD
- C4 - FIBERCEMENT BOARD
- C8 - GWB ON METAL STUD (EXTERIOR)
- (9'-0") INDICATES CEILING HEIGHT

PRINTS ISSUED
01/25/2024 - CITY SUBMITTAL

REVISIONS:
1 10/21/24 ADDENDUM #1

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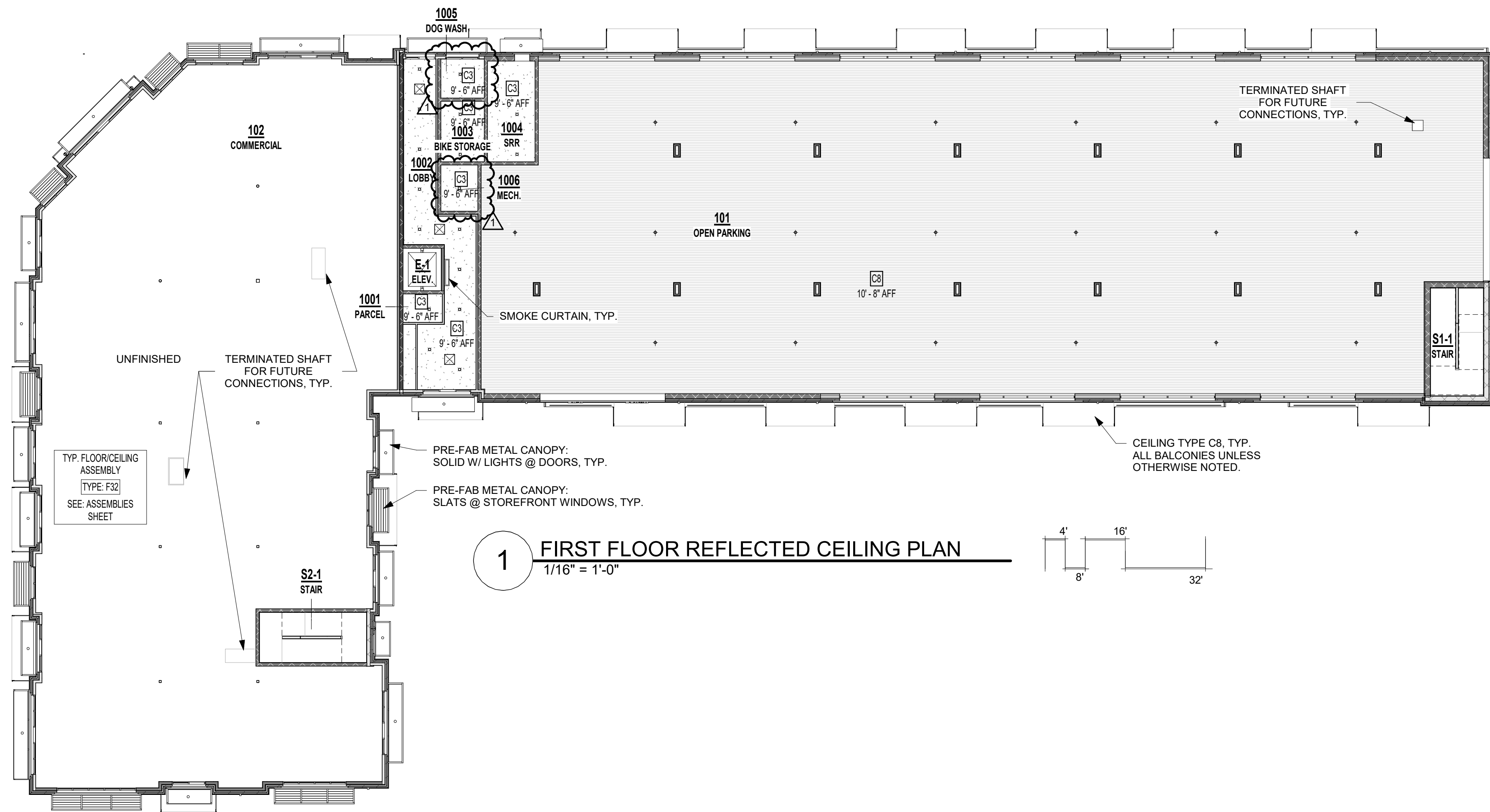
10/21/24



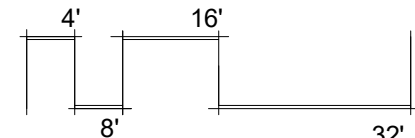
3 THIRD FLOOR REFLECTED CEILING PLAN
1/16" = 1'-0"



2 SECOND FLOOR REFLECTED CEILING PLAN
1/16" = 1'-0"



1 FIRST FLOOR REFLECTED CEILING PLAN
1/16" = 1'-0"



THE VILLAGE AT DISCOVERY -
LOT 4

LEE'S SUMMIT, MO

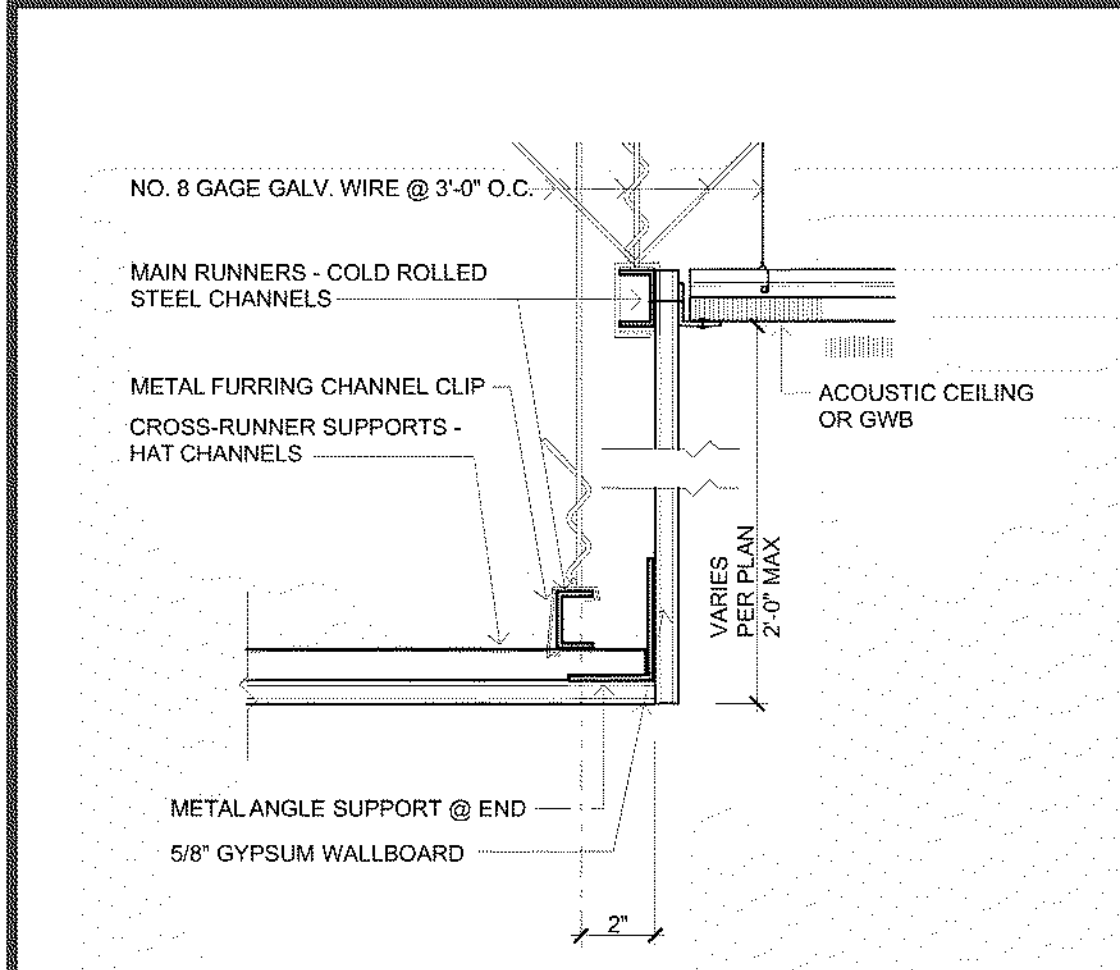
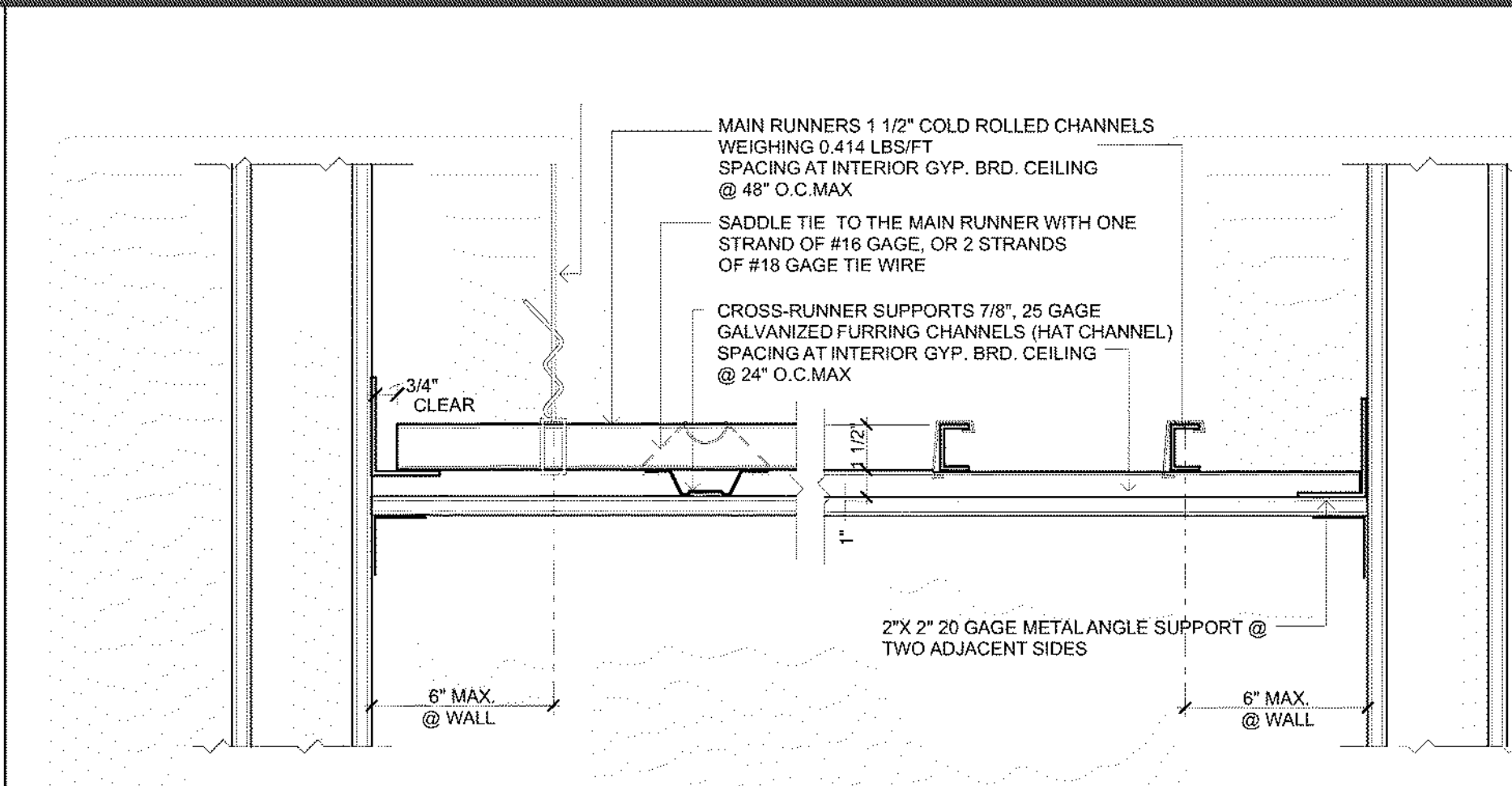
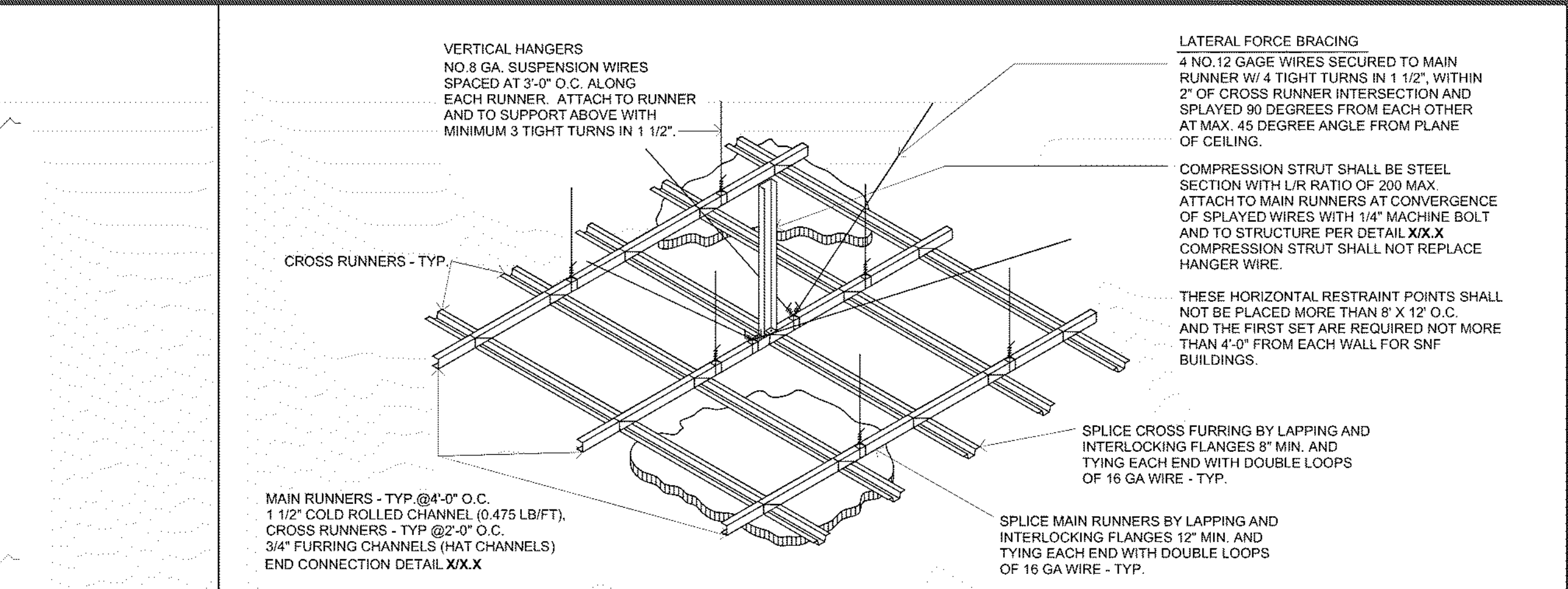
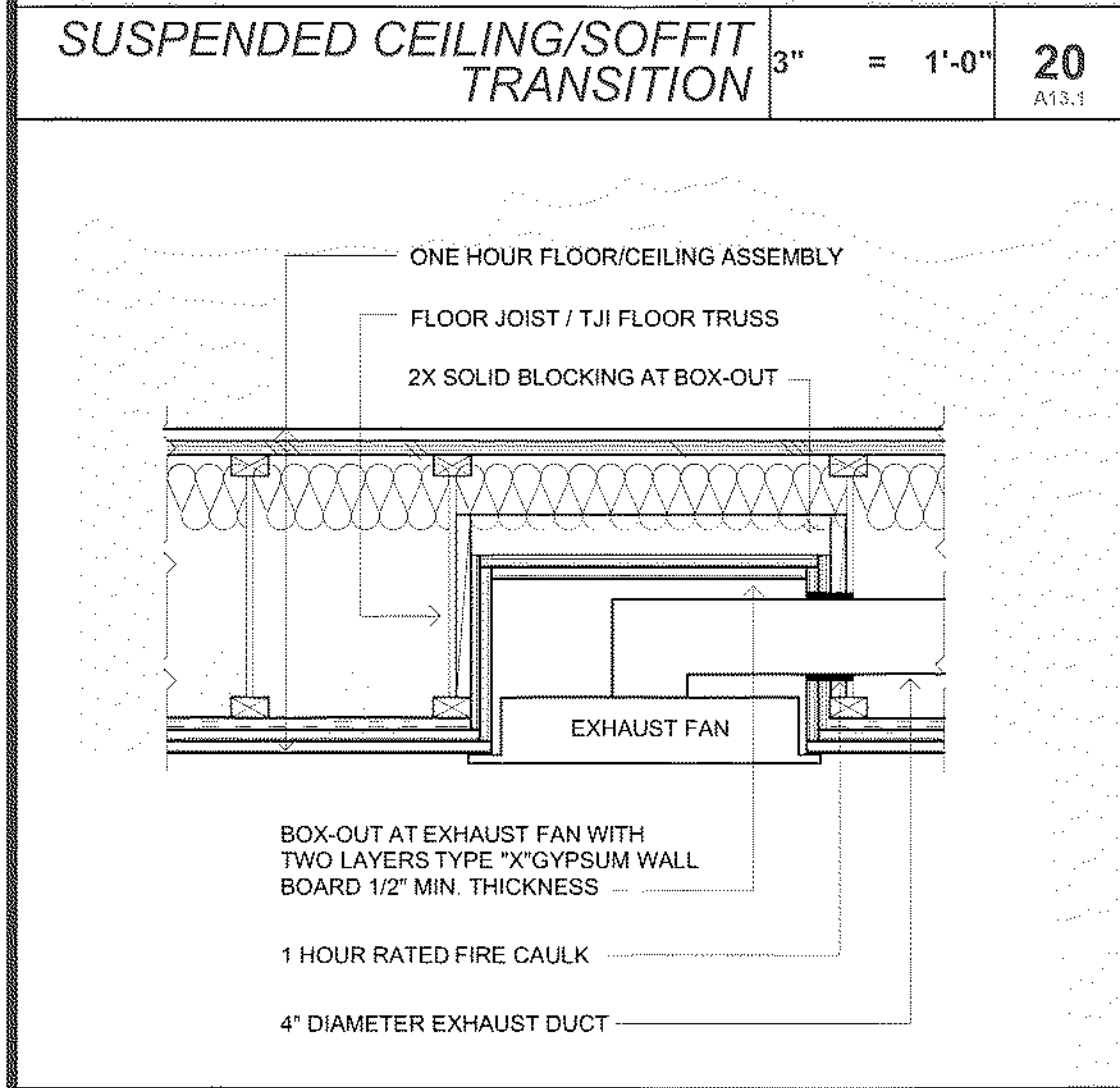
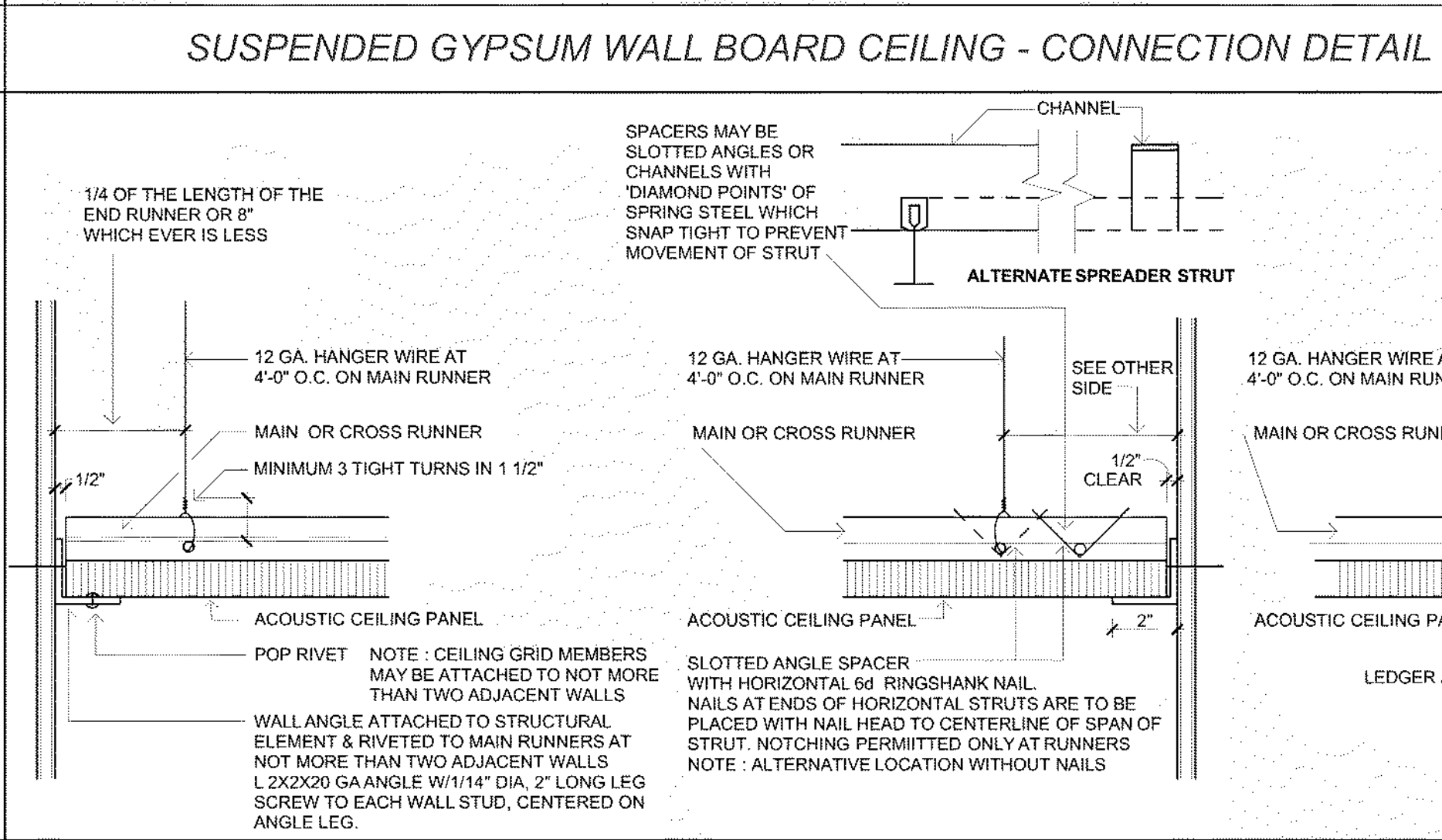
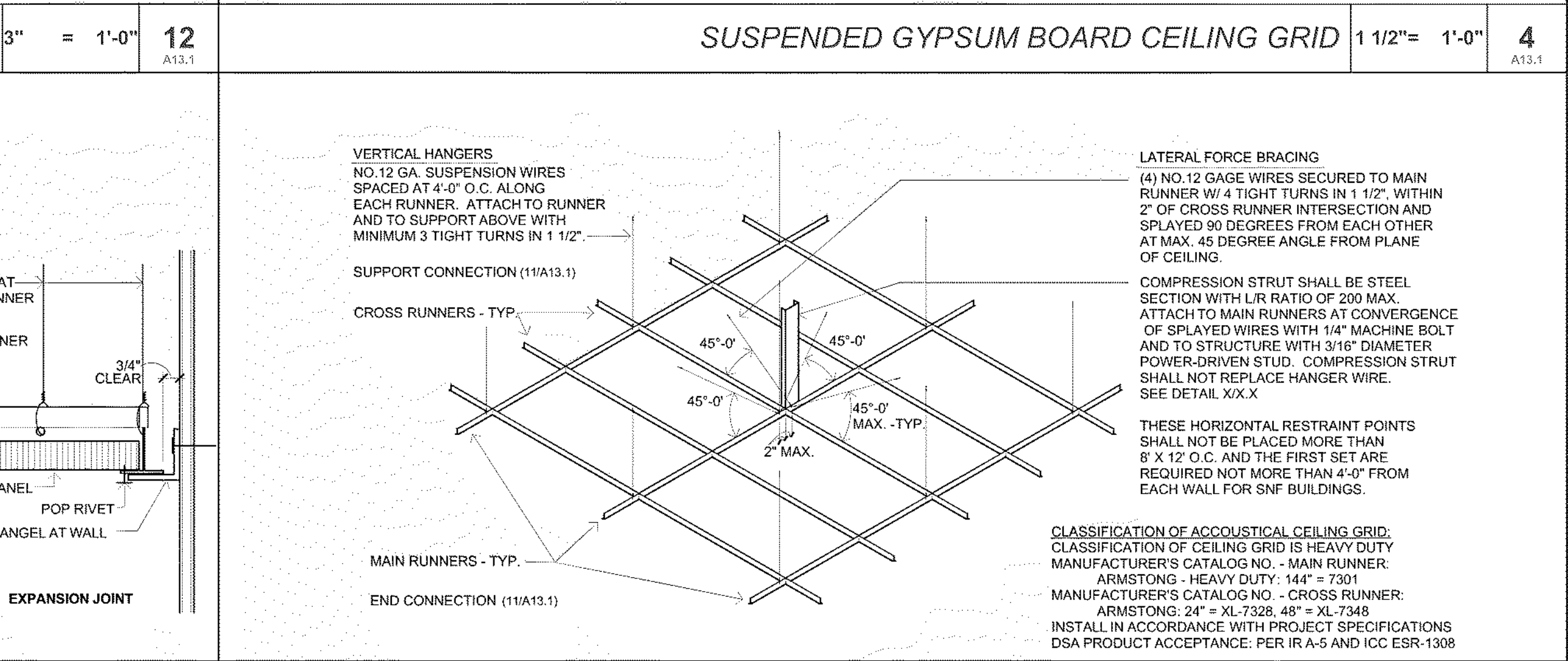
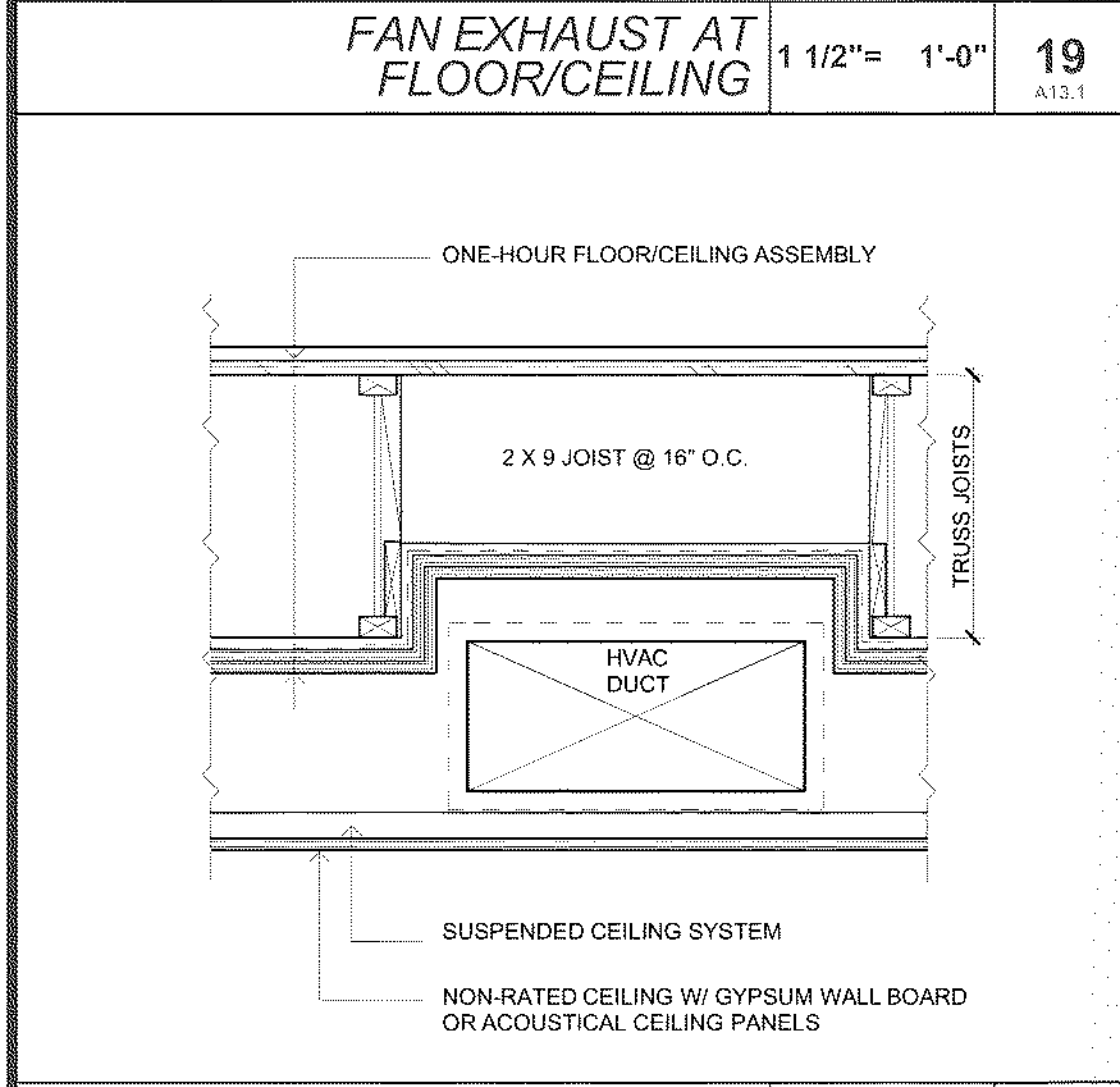
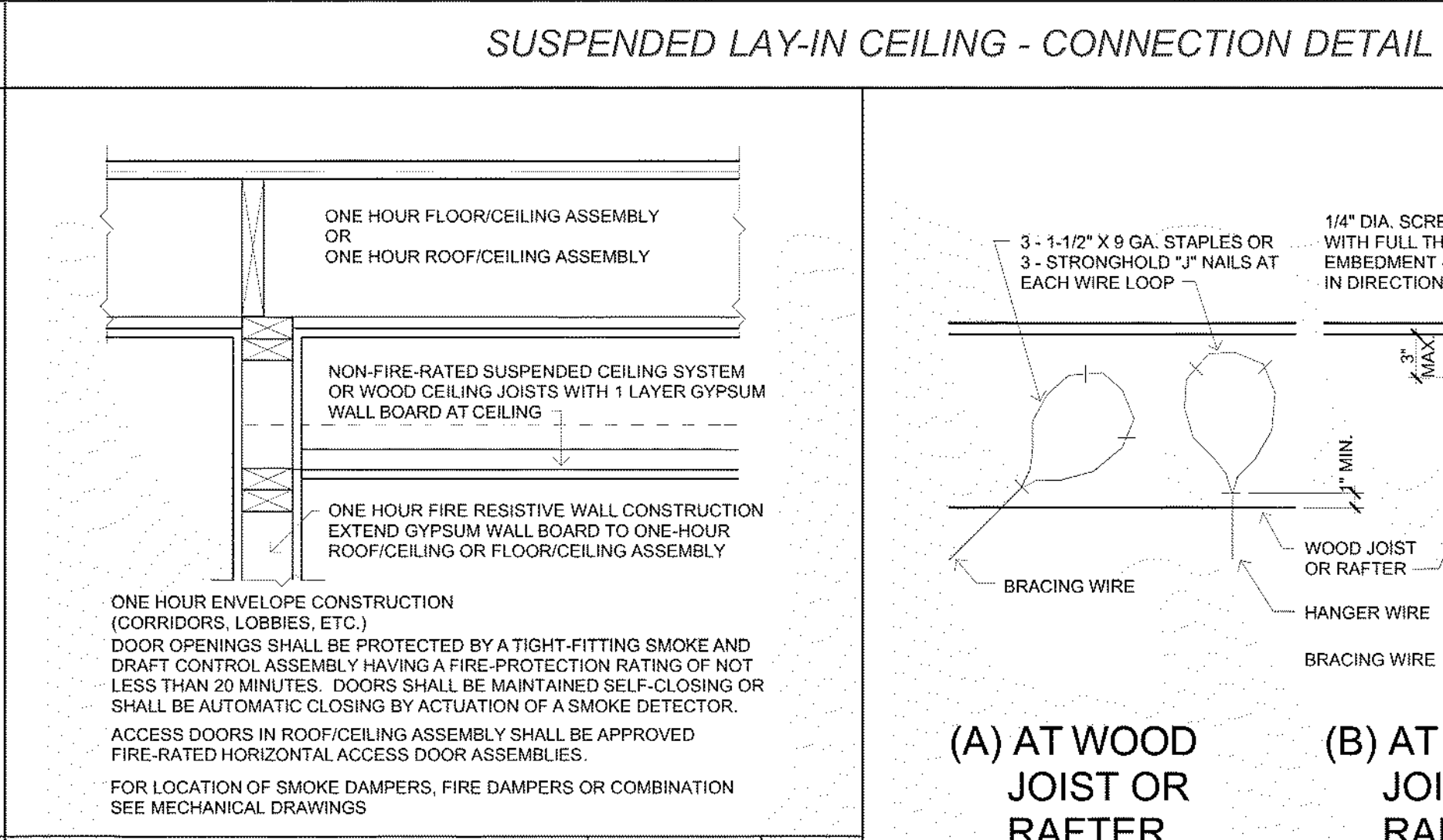
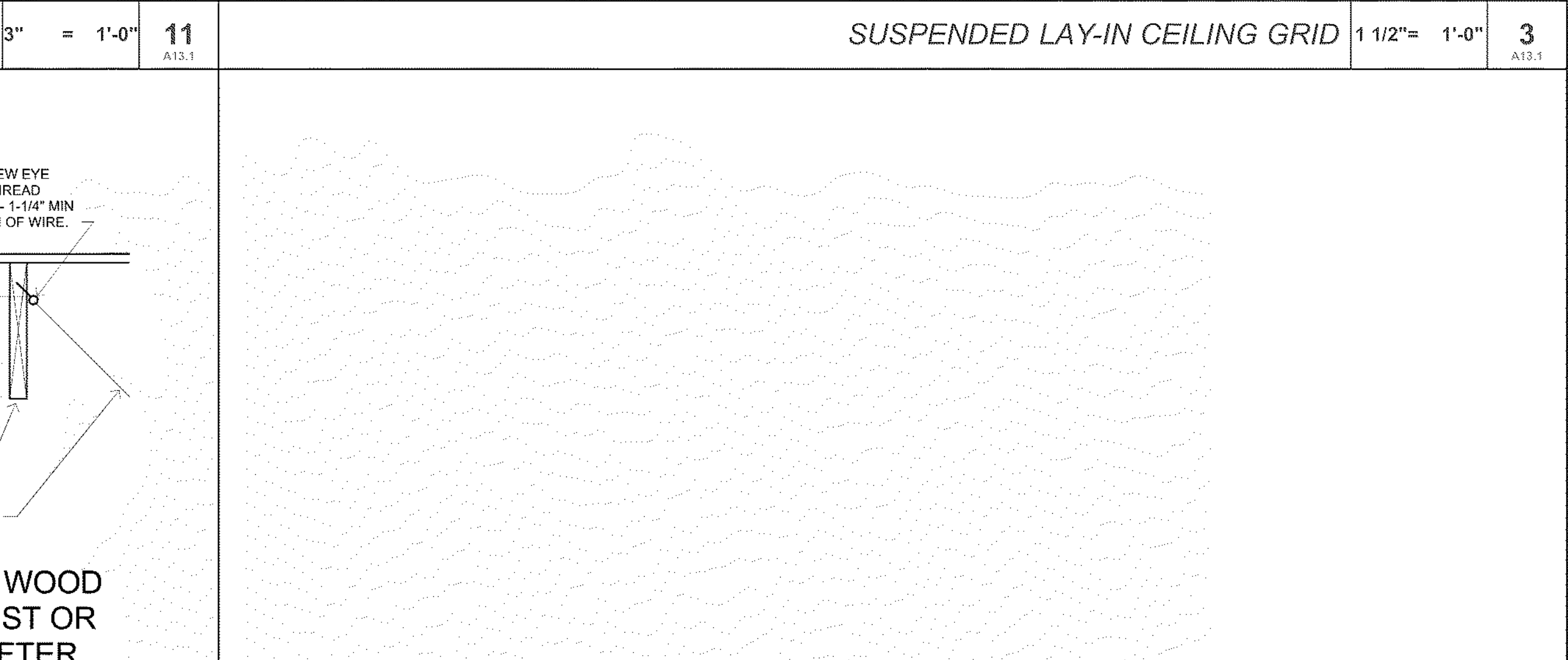
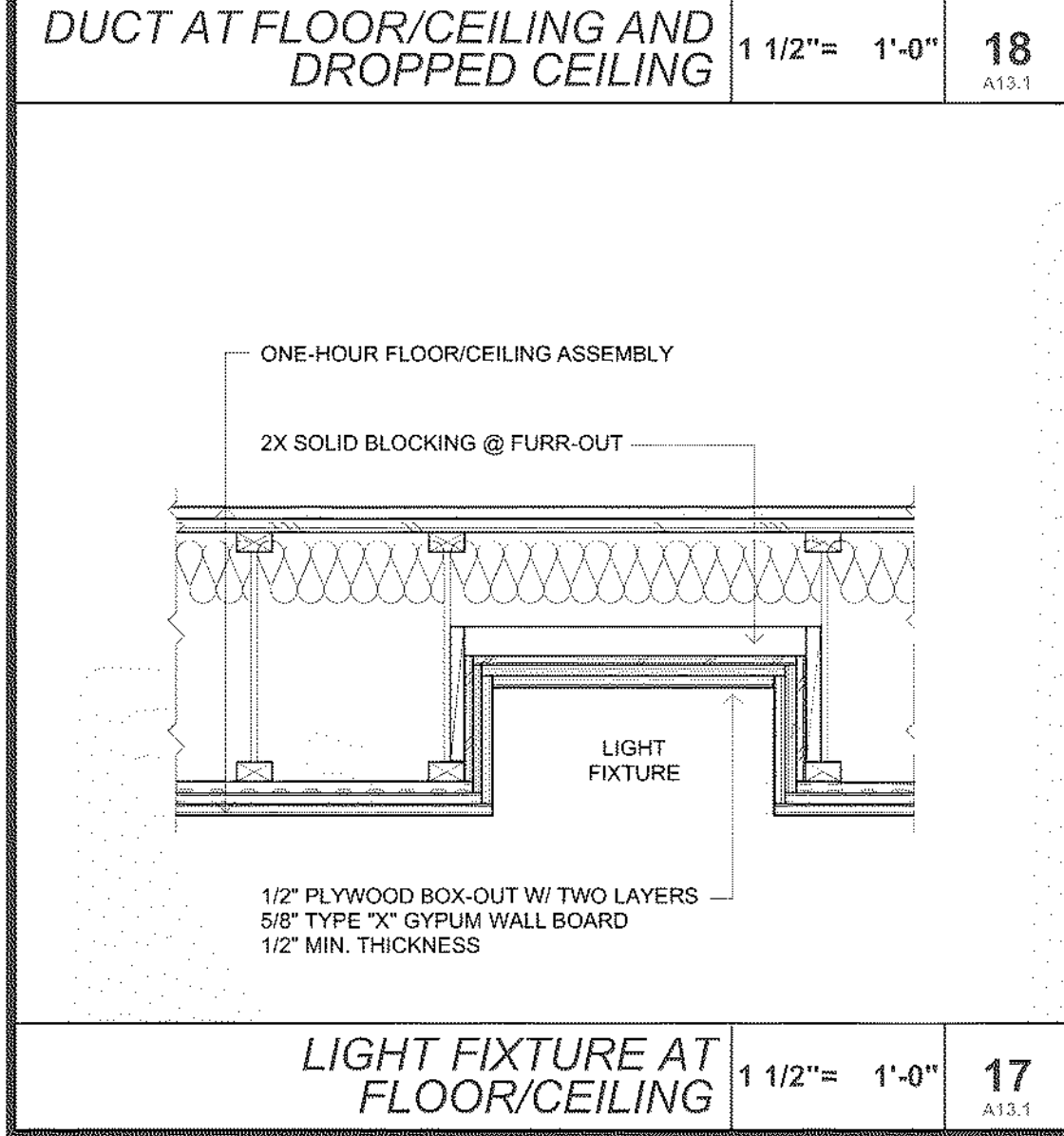
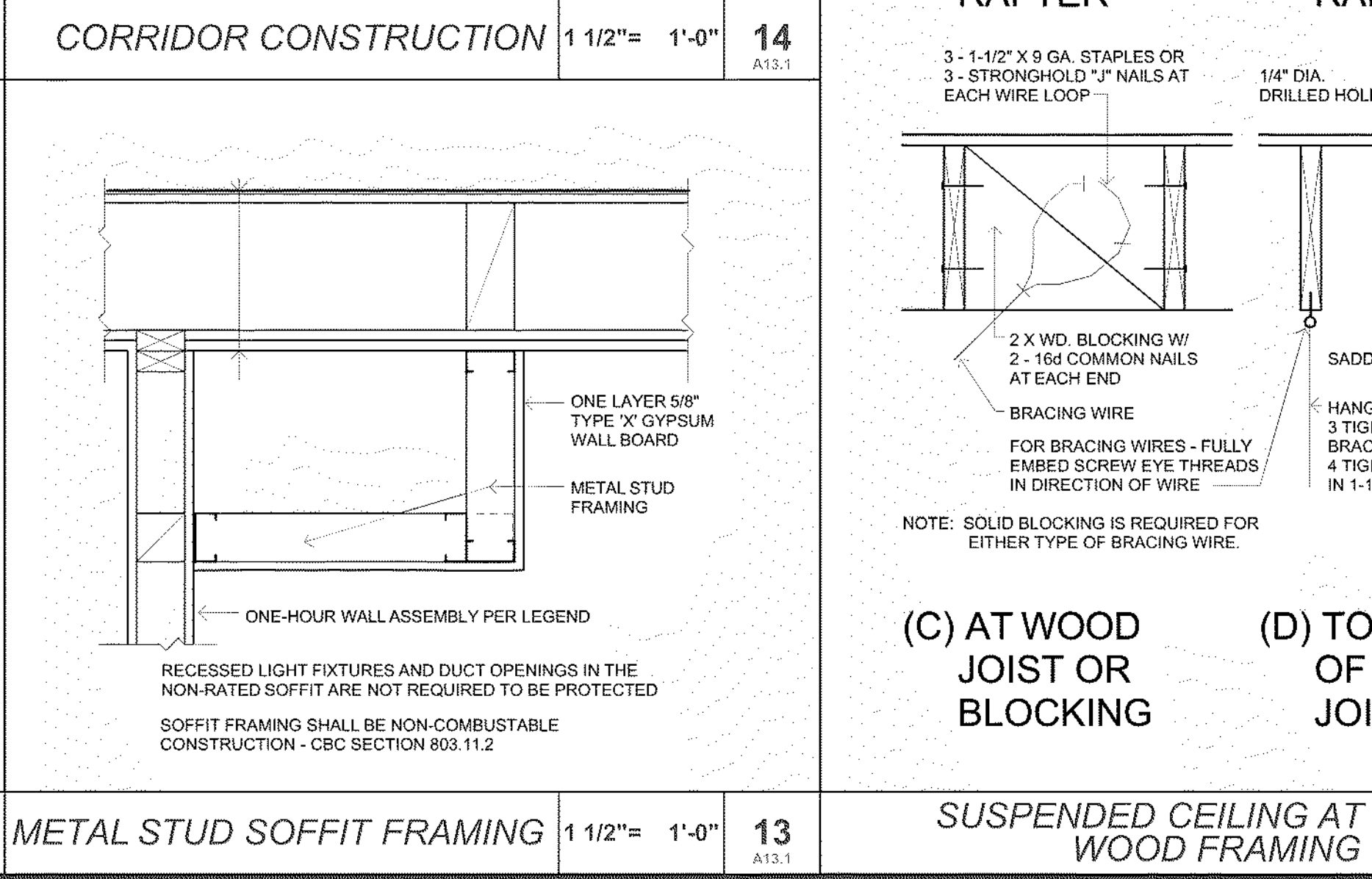
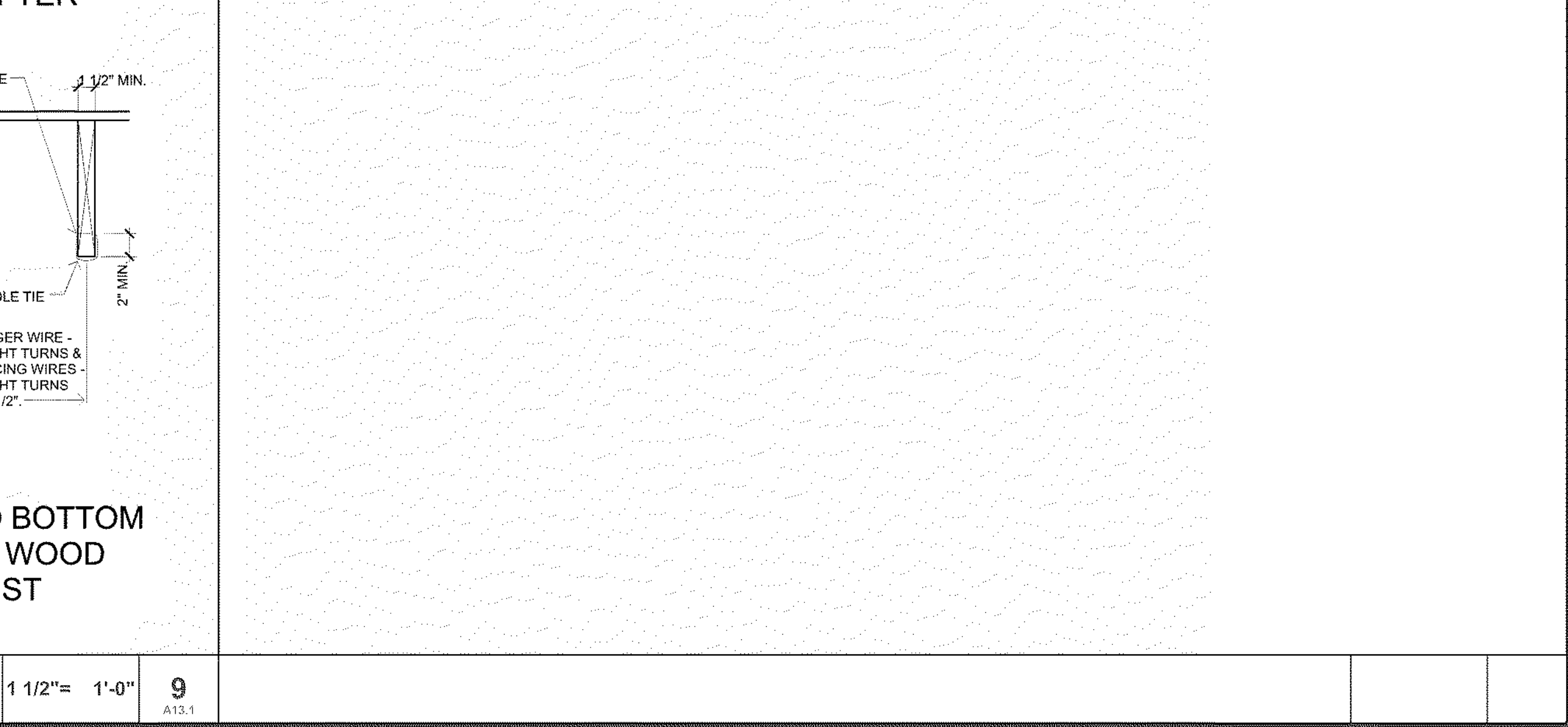
SHEET TITLE
REFLECTED CEILING PLANS

PROJECT NUMBER: 23099

SHEET NUMBER:

A-120

1/25/2024 1:00:28 AM
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 NO. 8 GAGE GALV. WIRE @ 3'-0" O.C. MAIN RUNNERS - COLD ROLLED STEEL CHANNELS METAL FURRING CHANNEL CLIP CROSS-RUNNER SUPPORTS - HAT CHANNELS ACOUSTIC CEILING OR GWB VARIES PER PLAN 2'-0" MAX METAL ANGLE SUPPORT @ END 5/8" GYPSUM WALLBOARD 2"	SUSPENDED CEILING/SOFFT TRANSITION 3" = 1'-0" 20 A13.1	 MAIN RUNNERS 1 1/2" COLD ROLLED CHANNELS WEIGHING 0.414 LBS/FT SPACING AT INTERIOR GYP. BRD. CEILING @ 48" O.C. MAX SADDLE TIE TO THE MAIN RUNNER WITH ONE STRAND OF #16 GAGE, OR 2 STRANDS OF #18 GAGE TIE WIRE CROSS-RUNNER SUPPORTS 7/8", 25 GAGE GALVANIZED FURRING CHANNELS (HAT CHANNEL) SPACING AT INTERIOR GYP. BRD. CEILING @ 24" O.C. MAX 3/4" CLEAR 2" X 2" 20 GAGE METAL ANGLE SUPPORT @ TWO ADJACENT SIDES 6" MAX. @ WALL 6" MAX. @ WALL	SUSPENDED GYPSUM WALL BOARD CEILING - CONNECTION DETAIL 3" = 1'-0" 12 A13.1	 VERTICAL HANGERS NO. 8 GA. SUSPENSION WIRES SPACED AT 3'-0" O.C. ALONG EACH RUNNER. ATTACH TO RUNNER AND TO SUPPORT ABOVE WITH MINIMUM 3 TIGHT TURNS IN 1 1/2". CROSS RUNNERS - TYP. MAIN RUNNERS - TYP. @ 4'-0" O.C. 1 1/2" COLD ROLLED CHANNEL (0.475 LBS/FT). CROSS RUNNERS - TYP. @ 2'-0" O.C. 3/4" FURRING CHANNELS (HAT CHANNELS) END CONNECTION DETAIL XXX LATERAL FORCE BRACING 4 NO. 12 GAGE WIRES SECURED TO MAIN RUNNER W/ 4 TIGHT TURNS IN 1 1/2", WITHIN 2" OF CROSS RUNNER INTERSECTION AND SPLAYED 90 DEGREES FROM EACH OTHER AT MAX. 45 DEGREE ANGLE FROM PLANE OF CEILING. COMPRESSION STRUT SHALL BE STEEL SECTION WITH L/R RATIO OF 200 MAX. ATTACH TO MAIN RUNNERS AT CONVERGENCE OF SPLAYED WIRES WITH 1/4" MACHINE BOLT AND TO STRUCTURE PER DETAIL XXX. COMPRESSION STRUT SHALL NOT REPLACE HANGER WIRE. THESE HORIZONTAL RESTRAINT POINTS SHALL NOT BE PLACED MORE THAN 8' X 12' O.C. AND THE FIRST SET ARE REQUIRED NOT MORE THAN 4'-0" FROM EACH WALL FOR SNF BUILDINGS. SPlice CROSS FURRING BY LAPPING AND INTERLOCKING FLANGES 8" MIN. AND TYING EACH END WITH DOUBLE LOOPS OF 16 GA WIRE - TYP. SPlice MAIN RUNNERS BY LAPPING AND INTERLOCKING FLANGES 12" MIN. AND TYING EACH END WITH DOUBLE LOOPS OF 16 GA WIRE - TYP.	SUSPENDED GYPSUM BOARD CEILING GRID 1 1/2" = 1'-0" 4 A13.1
 ONE HOUR FLOOR/CEILING ASSEMBLY FLOOR JOIST / TJI FLOOR TRUSS 2X SOLID BLOCKING AT BOX-OUT EXHAUST FAN BOX-OUT AT EXHAUST FAN WITH TWO LAYERS TYPE "X" GYPSUM WALL BOARD 1/2" MIN. THICKNESS 1 HOUR RATED FIRE CAULK 4" DIAMETER EXHAUST DUCT	FAN EXHAUST AT FLOOR/CEILING 1 1/2" = 1'-0" 19 A13.1	 1/4 OF THE LENGTH OF THE END RUNNER OR 8" WHICH EVER IS LESS 12 GA. HANGER WIRE AT 4'-0" O.C. ON MAIN RUNNER MAIN OR CROSS RUNNER MINIMUM 3 TIGHT TURNS IN 1 1/2" ACOUSTIC CEILING PANEL POP RIVET NOTE : CEILING GRID MEMBERS MAY BE ATTACHED TO NOT MORE THAN TWO ADJACENT WALLS WALL ANGLE ATTACHED TO STRUCTURAL ELEMENT & RIVETED TO MAIN RUNNERS AT NOT MORE THAN TWO ADJACENT WALLS L 2X2X20 GA ANGLE W/ 1/4" DIA. 2" LONG LEG SCREW TO EACH WALL STUD, CENTERED ON ANGLE LEG. SPACERS MAY BE SLOTTED ANGLES OR CHANNELS WITH 'DIAMOND POINTS' OF SPRING STEEL WHICH SNAP TIGHT TO PREVENT MOVEMENT OF STRUT CHANNEL ALTERNATE SPREADER STRUT 12 GA. HANGER WIRE AT 4'-0" O.C. ON MAIN RUNNER MAIN OR CROSS RUNNER 1/2" CLEAR 2" ACOUSTIC CEILING PANEL SLOTTED ANGLE SPACER WITH HORIZONTAL 6d RINGSHANK NAIL. NAILS AT ENDS OF HORIZONTAL STRUTS ARE TO BE PLACED WITH NAIL HEAD TO CENTERLINE OF SPAN OF STRUT. NOTCHING PERMITTED ONLY AT RUNNERS NOTE : ALTERNATIVE LOCATION WITHOUT NAILS EXPANSION JOINT LEDGER ANGLE AT WALL POP RIVET	SUSPENDED LAY-IN CEILING - CONNECTION DETAIL 3" = 1'-0" 11 A13.1	 VERTICAL HANGERS NO. 12 GA. SUSPENSION WIRES SPACED AT 4'-0" O.C. ALONG EACH RUNNER. ATTACH TO RUNNER AND TO SUPPORT ABOVE WITH MINIMUM 3 TIGHT TURNS IN 1 1/2". SUPPORT CONNECTION (11/A13.1) CROSS RUNNERS - TYP. MAIN RUNNERS - TYP. END CONNECTION (11/A13.1) LATERAL FORCE BRACING (4) NO. 12 GAGE WIRES SECURED TO MAIN RUNNER W/ 4 TIGHT TURNS IN 1 1/2", WITHIN 2" OF CROSS RUNNER INTERSECTION AND SPLAYED 90 DEGREES FROM EACH OTHER AT MAX. 45 DEGREE ANGLE FROM PLANE OF CEILING. COMPRESSION STRUT SHALL BE STEEL SECTION WITH L/R RATIO OF 200 MAX. ATTACH TO MAIN RUNNERS AT CONVERGENCE OF SPLAYED WIRES WITH 1/4" MACHINE BOLT AND TO STRUCTURE WITH 3/16" DIAMETER POWER-DRIVEN STUD. COMPRESSION STRUT SHALL NOT REPLACE HANGER WIRE. SEE DETAIL XXX. THESE HORIZONTAL RESTRAINT POINTS SHALL NOT BE PLACED MORE THAN 8' X 12' O.C. AND THE FIRST SET ARE REQUIRED NOT MORE THAN 4'-0" FROM EACH WALL FOR SNF BUILDINGS. CLASSIFICATION OF ACOUSTICAL CEILING GRID: CLASSIFICATION OF CEILING GRID IS HEAVY DUTY MANUFACTURER'S CATALOG NO. - MAIN RUNNER: ARMSTRONG - HEAVY DUTY - 144" = 7301 MANUFACTURER'S CATALOG NO. - CROSS RUNNER: ARMSTRONG - 24" = XL-7328, 48" = XL-7348 INSTALL IN ACCORDANCE WITH PROJECT SPECIFICATIONS DSA PRODUCT ACCEPTANCE: PER IR A-5 AND ICC ESR-1308	SUSPENDED LAY-IN CEILING GRID 1 1/2" = 1'-0" 3 A13.1
 ONE-HOUR FLOOR/CEILING ASSEMBLY 2 X 9 JOIST @ 16" O.C. HVAC DUCT SUSPENDED CEILING SYSTEM NON-RATED CEILING W/ GYPSUM WALL BOARD OR ACOUSTICAL CEILING PANELS	DUCT AT FLOOR/CEILING AND DROPPED CEILING 1 1/2" = 1'-0" 18 A13.1	 ONE HOUR FLOOR/CEILING ASSEMBLY OR ONE HOUR ROOF/CEILING ASSEMBLY NON-FIRE-RATED SUSPENDED CEILING SYSTEM OR WOOD CEILING JOISTS WITH 1 LAYER GYPSUM WALL BOARD AT CEILING ONE HOUR FIRE RESISTIVE WALL CONSTRUCTION EXTEND GYPSUM WALL BOARD TO ONE-HOUR ROOF/CEILING OR FLOOR/CEILING ASSEMBLY ONE HOUR ENVELOPE CONSTRUCTION (CORRIDORS, LOBBIES, ETC.) DOOR OPENINGS SHALL BE PROTECTED BY A TIGHT-FITTING SMOKE AND DRAFT CONTROL ASSEMBLY HAVING A FIRE-PROTECTION RATING OF NOT LESS THAN 20 MINUTES. DOORS SHALL BE MAINTAINED SELF-CLOSING OR SHALL BE AUTOMATIC CLOSING BY ACTUATION OF A SMOKE DETECTOR. ACCESS DOORS IN ROOF/CEILING ASSEMBLY SHALL BE APPROVED FIRE-RATED HORIZONTAL ACCESS DOOR ASSEMBLIES. FOR LOCATION OF SMOKE DAMPERS, FIRE DAMPERS OR COMBINATION SEE MECHANICAL DRAWINGS	CORRIDOR CONSTRUCTION 1 1/2" = 1'-0" 14 A13.1	 3 - 1-1/2" X 9 GA. STAPLES OR 3 - STRONGHOLD "J" NAILS AT EACH WIRE LOOP 1/4" DIA. SCREW EYE WITH FULL THREAD EMBEDMENT - 1-1/4" MIN IN DIRECTION OF WIRE. BRACING WIRE WOOD JOIST OR RAFTER HANGER WIRE BRACING WIRE (A) AT WOOD JOIST OR RAFTER (B) AT WOOD JOIST OR RAFTER	
 ONE-HOUR FLOOR/CEILING ASSEMBLY 2X SOLID BLOCKING @ FURR-OUT LIGHT FIXTURE 1/2" PLYWOOD BOX-OUT W/ TWO LAYERS 5/8" TYPE "X" GYPSUM WALL BOARD 1/2" MIN. THICKNESS	LIGHT FIXTURE AT FLOOR/CEILING 1 1/2" = 1'-0" 17 A13.1	 ONE HOUR FLOOR/CEILING ASSEMBLY ONE LAYER 5/8" TYPE "X" GYPSUM WALL BOARD METAL STUD FRAMING ONE-HOUR WALL ASSEMBLY PER LEGEND RECESSED LIGHT FIXTURES AND DUCT OPENINGS IN THE NON-RATED SOFFIT ARE NOT REQUIRED TO BE PROTECTED SOFFIT FRAMING SHALL BE NON-COMBUSTABLE CONSTRUCTION - CBC SECTION 803.11.2	METAL STUD SOFFIT FRAMING 1 1/2" = 1'-0" 13 A13.1	 3 - 1-1/2" X 9 GA. STAPLES OR 3 - STRONGHOLD "J" NAILS AT EACH WIRE LOOP 1/4" DIA. DRILLED HOLE 2" MIN. 2" MIN. 2 X WD. BLOCKING W/ 2 - 16d COMMON NAILS AT EACH END BRACING WIRE FOR BRACING WIRES - FULLY EMBED SCREW EYE THREADS IN DIRECTION OF WIRE SADDLE TIE HANGER WIRE - 3 TIGHT TURNS & BRACING WIRES 4 TIGHT TURNS IN 1-1/2". (C) AT WOOD JOIST OR BLOCKING (D) TO BOTTOM OF WOOD JOIST	SUSPENDED CEILING AT WOOD FRAMING 1 1/2" = 1'-0" 9 A13.1

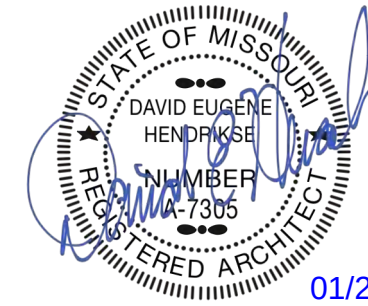
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01/25/2024 - CITY SUBMITTAL

REVISIONS:

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01/25/24

THE VILLAGE AT DISCOVERY -
LOT 4

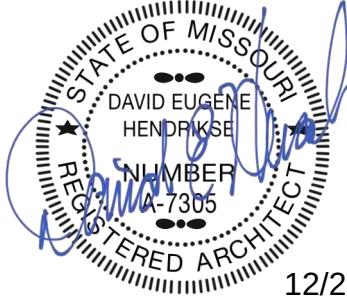
LEE'S SUMMIT, MO

SHEET TITLE
CEILING DETAILS

PROJECT NUMBER: 23099

SHEET NUMBER:

A-125



2 EAST ELEVATION
3/32" = 1'-0"



1 NORTH ELEVATION
3/32" = 1'-0"

THE VILLAGE AT DISCOVERY -
LOT 4

LEE'S SUMMIT, MO

SHEET TITLE
EXTERIOR ELEVATIONS

PROJECT NUMBER: 23099

SHEET NUMBER:

A-200

THE VILLAGE AT DISCOVERY -
LOT 4

LEE'S SUMMIT, MO

SHEET TITLE
EXTERIOR ELEVATIONS
PROJECT NUMBER: 23099
SHEET NUMBER:

A-201



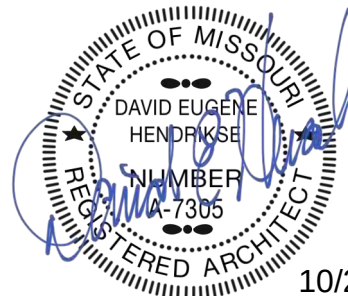
3 CORNER ELEVATION
3/32" = 1'-0"



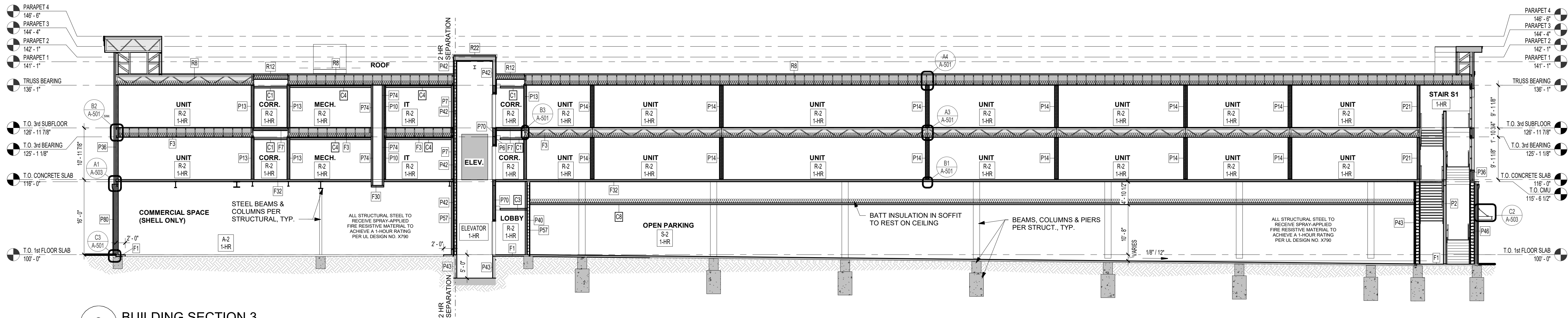
2 WEST ELEVATION
3/32" = 1'-0"



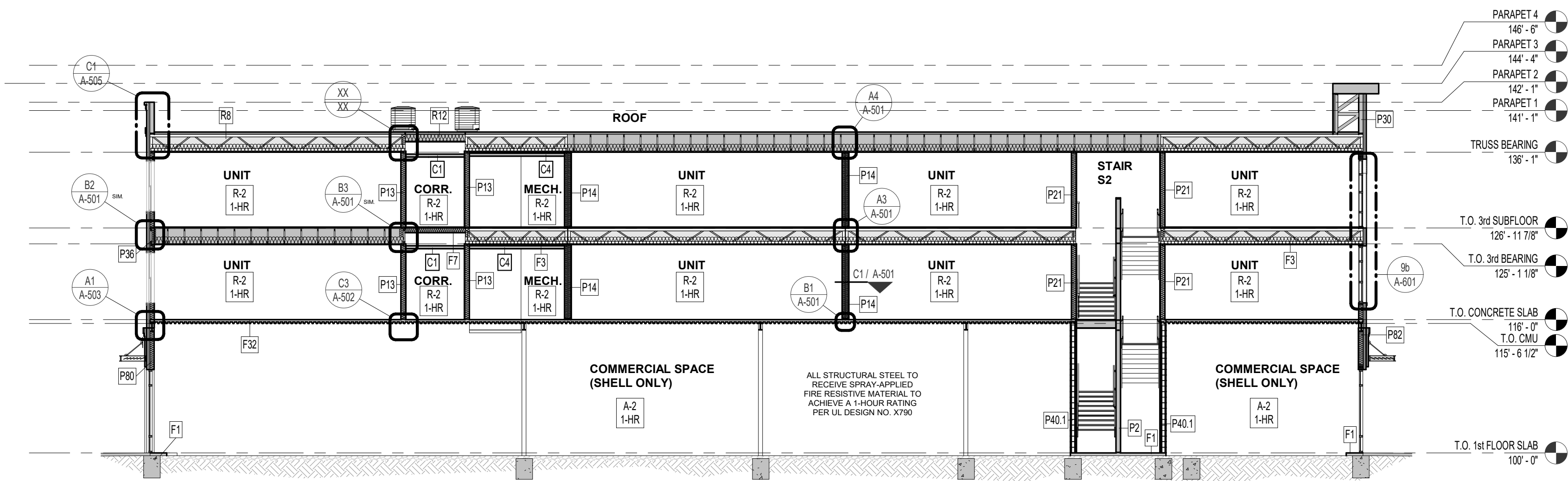
1 SOUTH ELEVATION
3/32" = 1'-0"



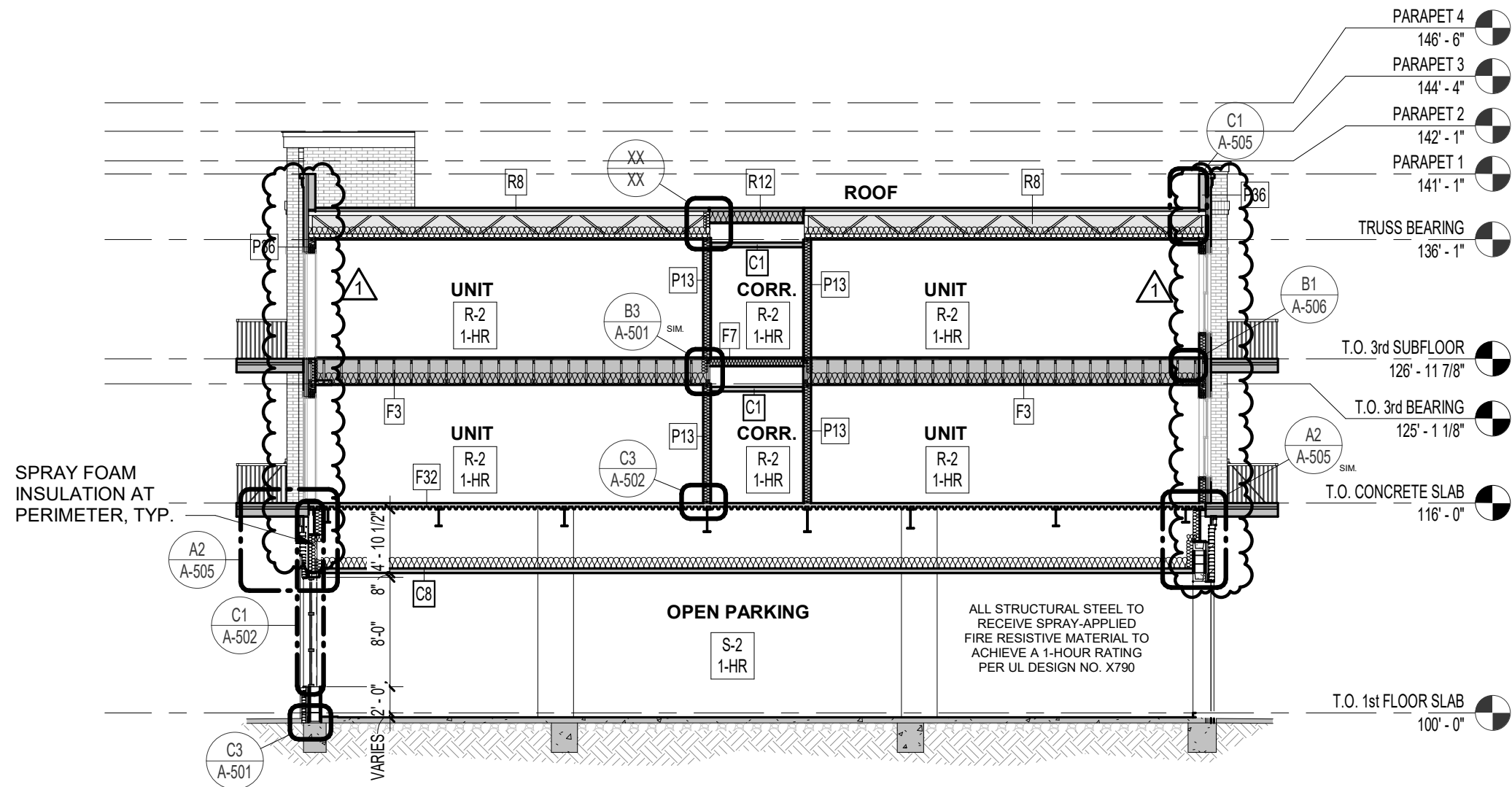
10/21/24



3 BUILDING SECTION 3
3/32" = 1'-0"



2 BUILDING SECTION 2
3/32" = 1'-0"



1 BUILDING SECTION 1
3/32" = 1'-0"

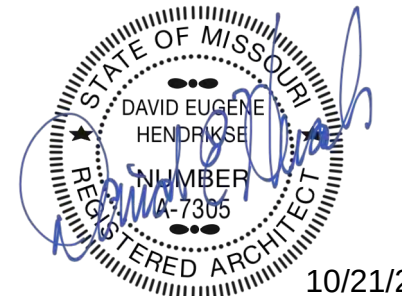
THE VILLAGE AT DISCOVERY -
LOT 4

LEE'S SUMMIT, MO

SHEET TITLE
BUILDING SECTIONS

PROJECT NUMBER: 23099
SHEET NUMBER:

A-300

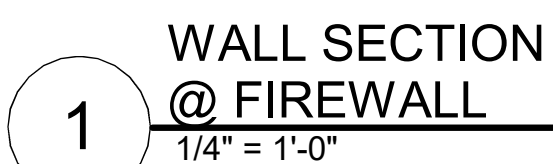


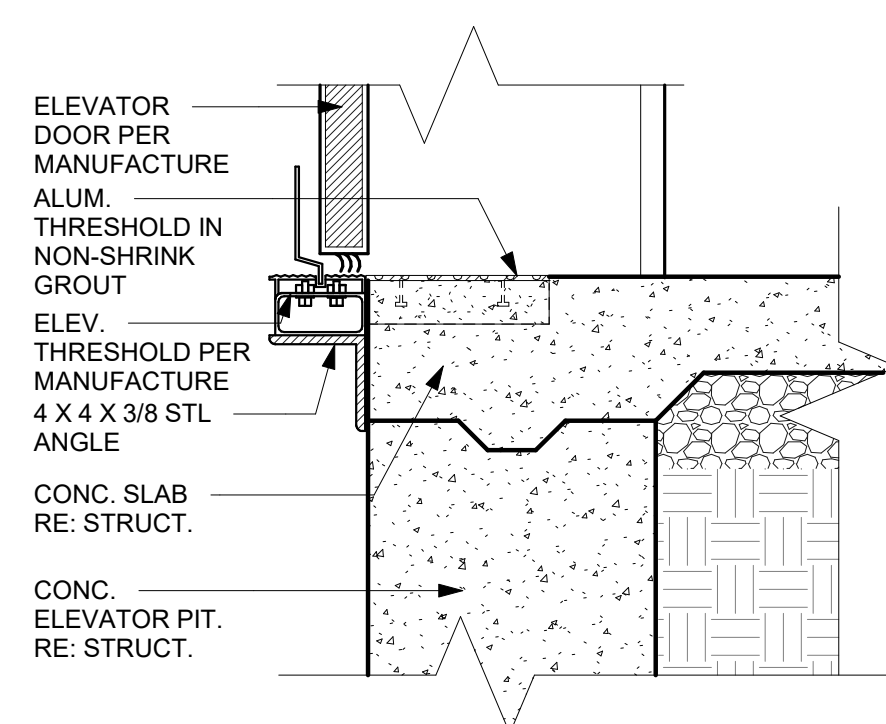
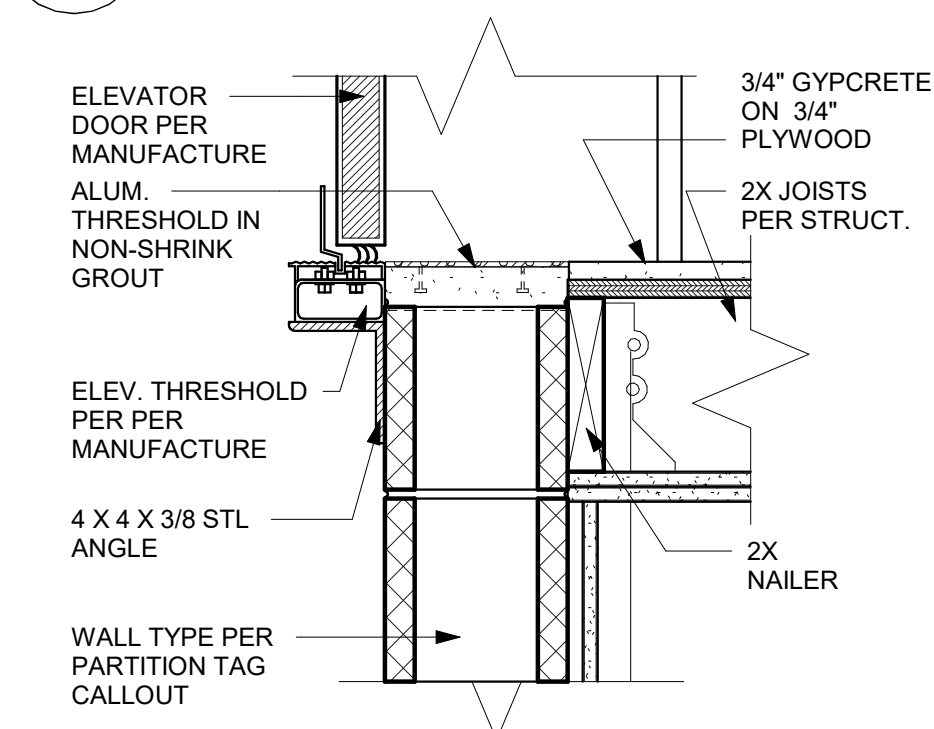
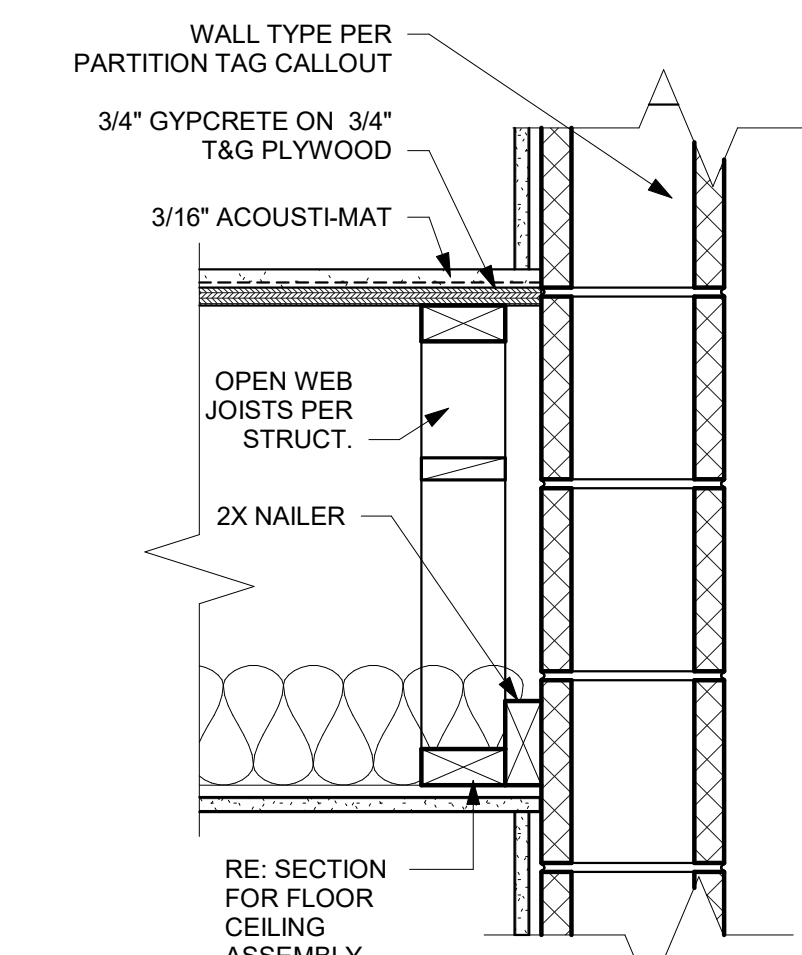
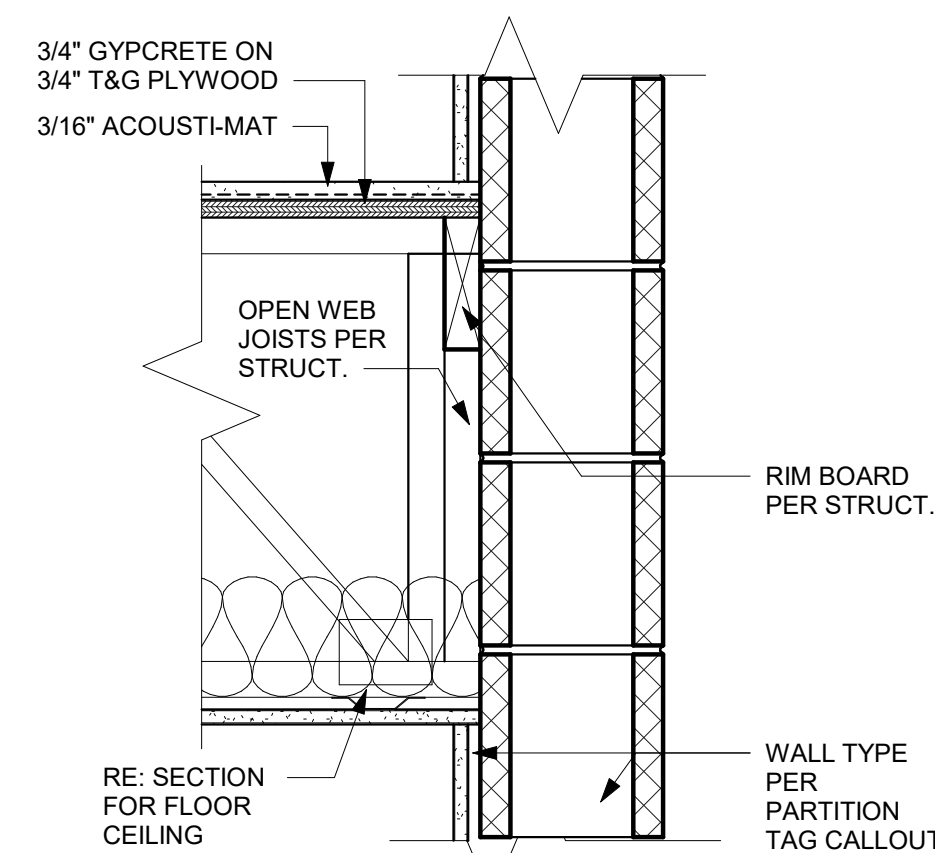
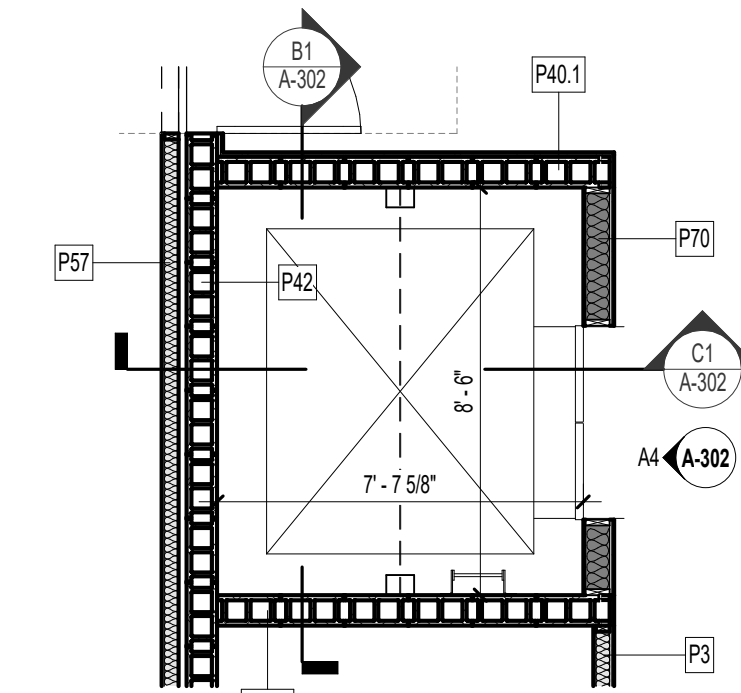
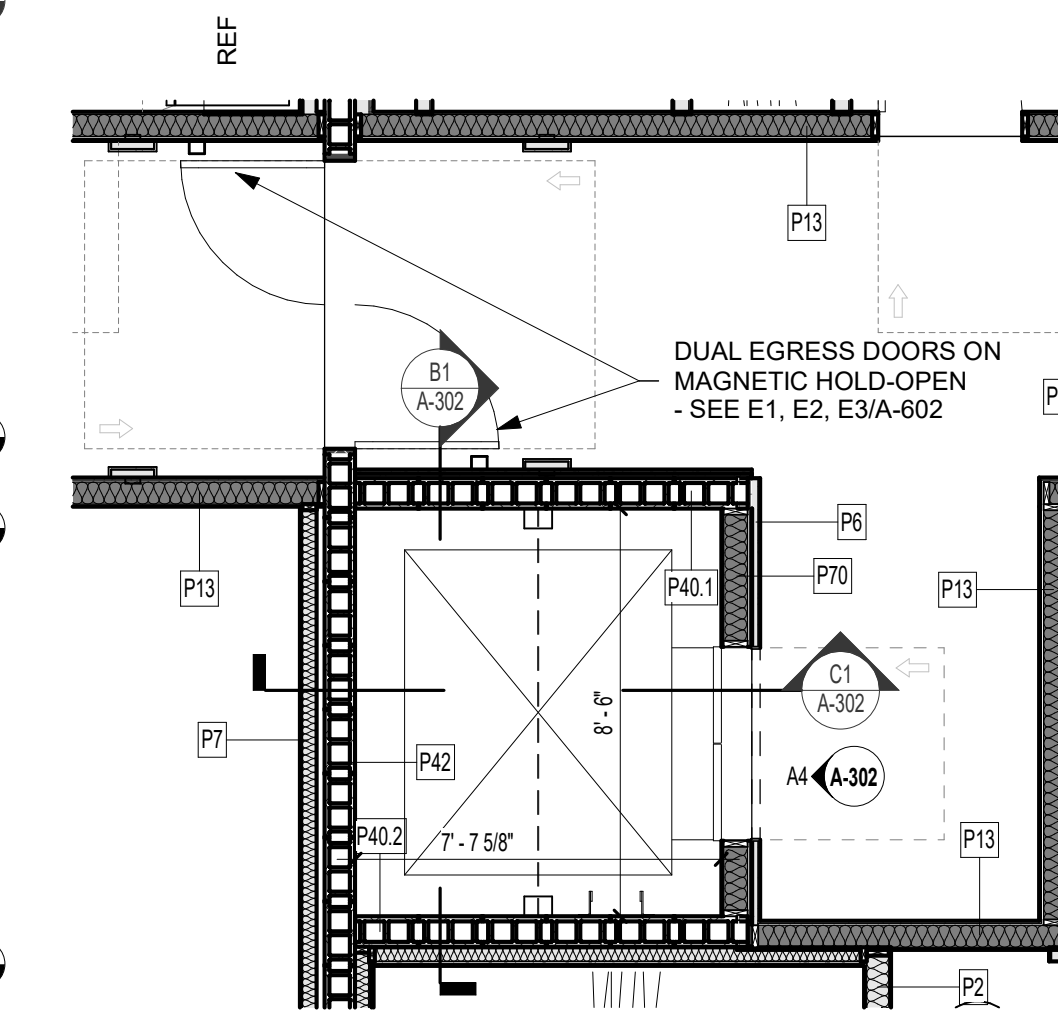
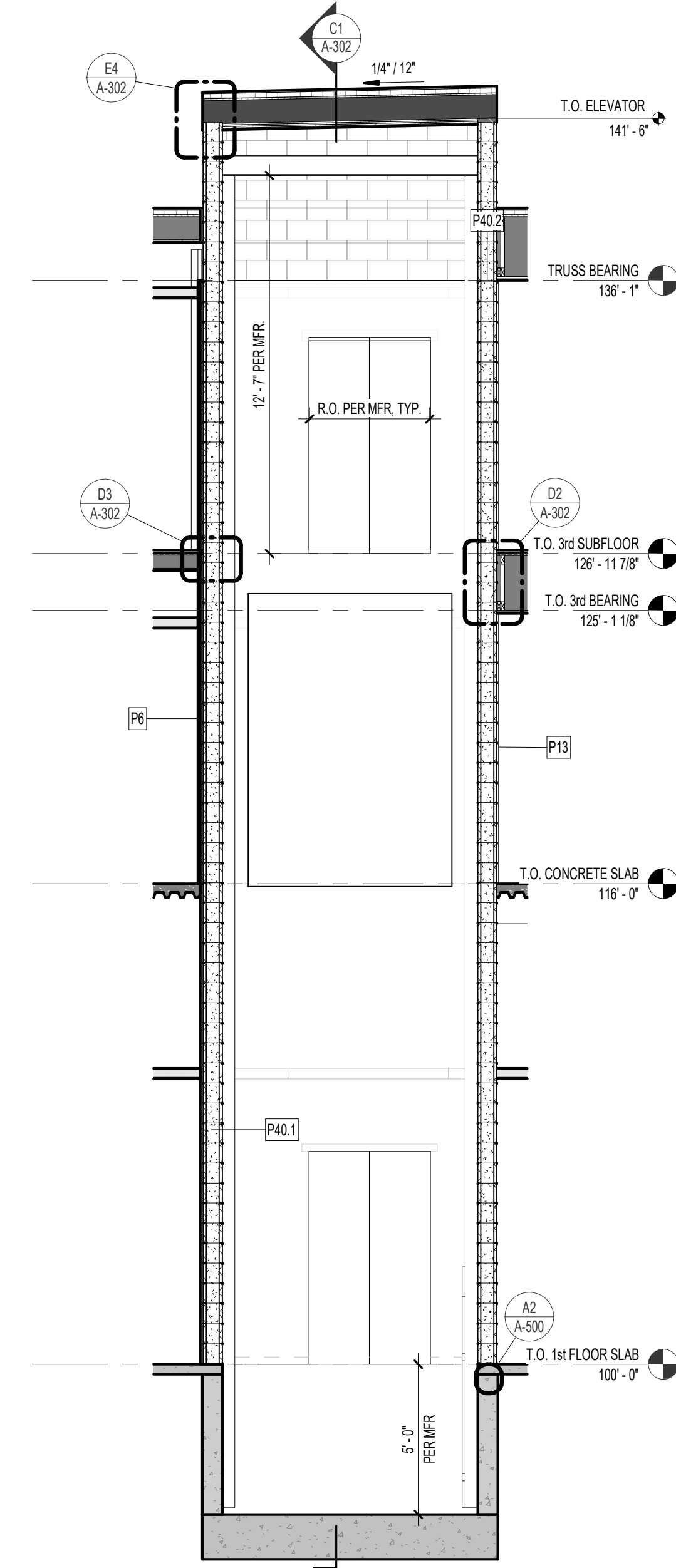
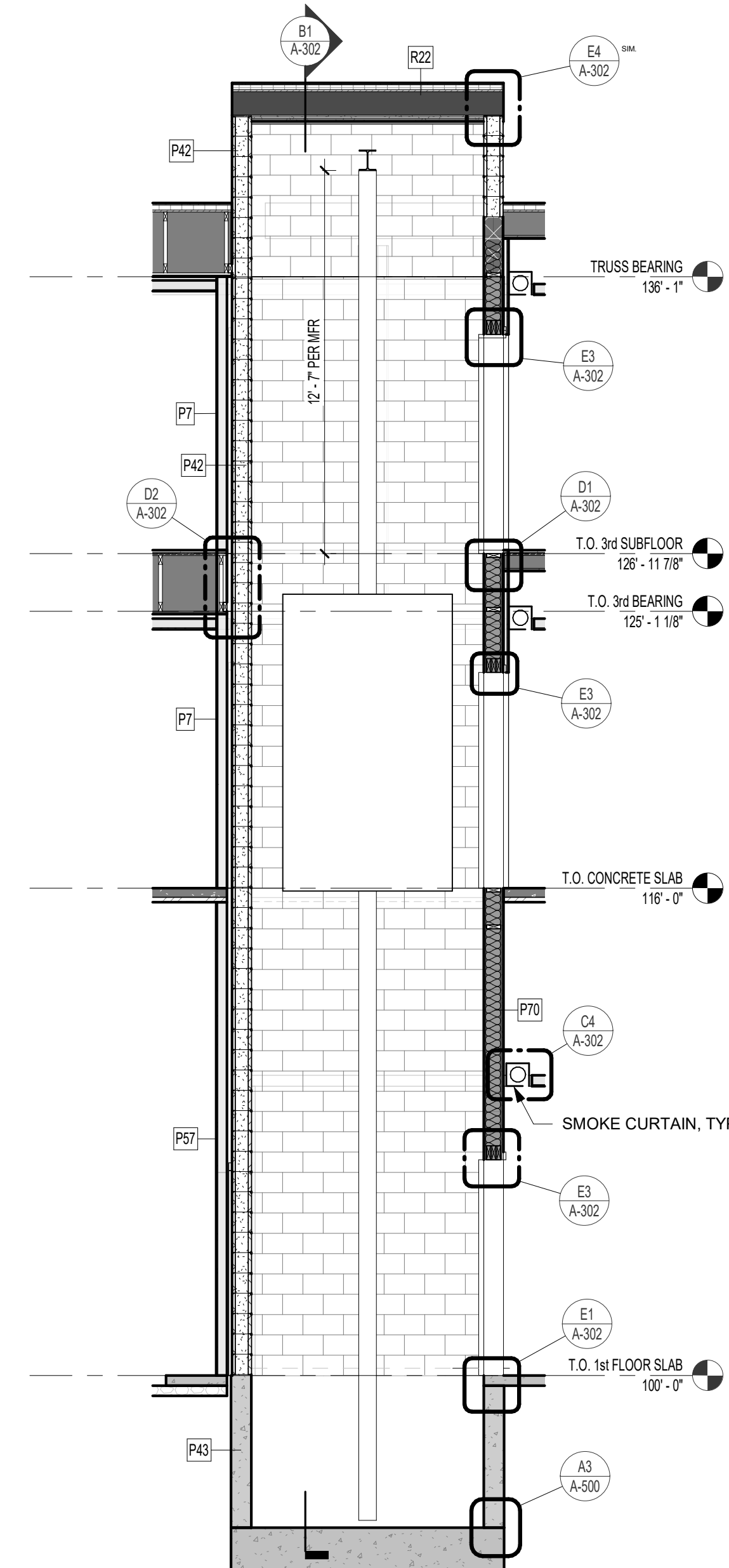
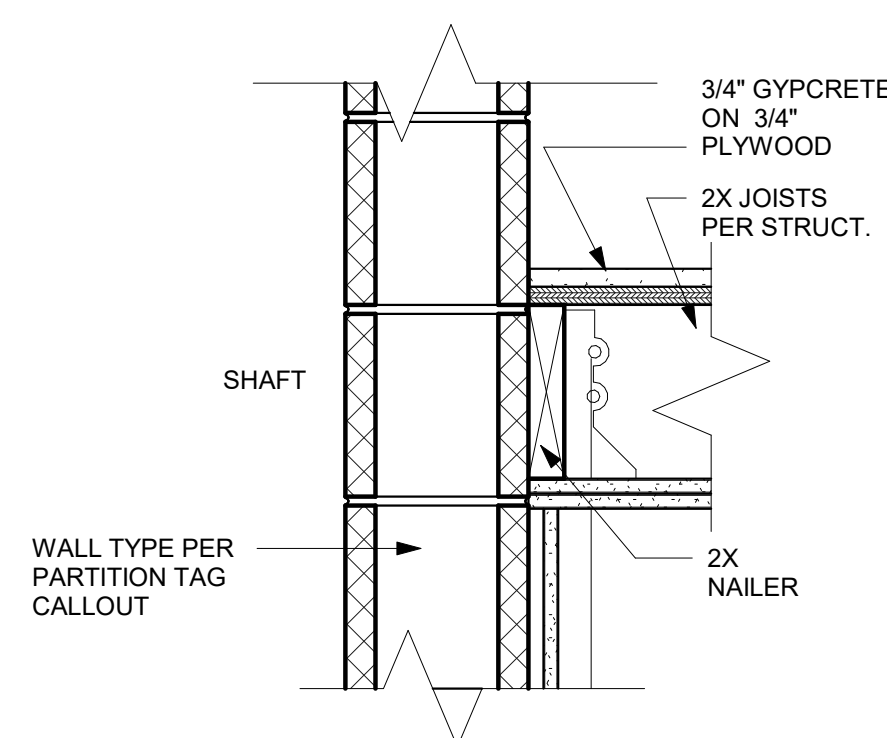
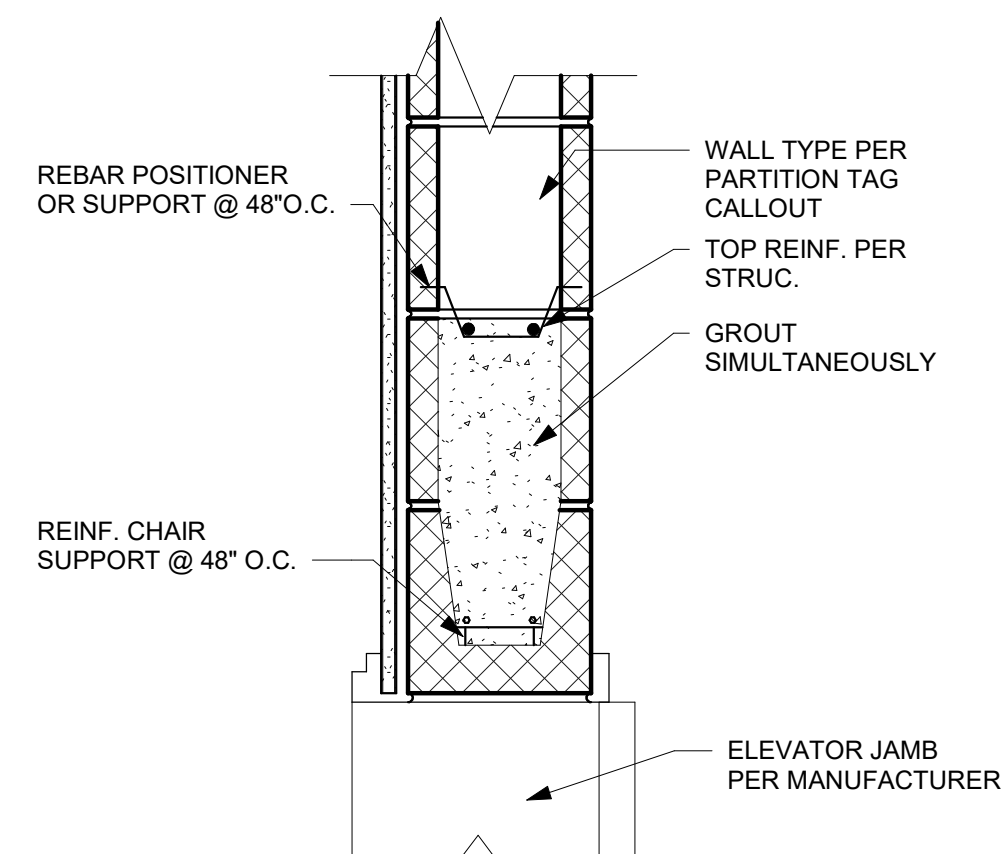
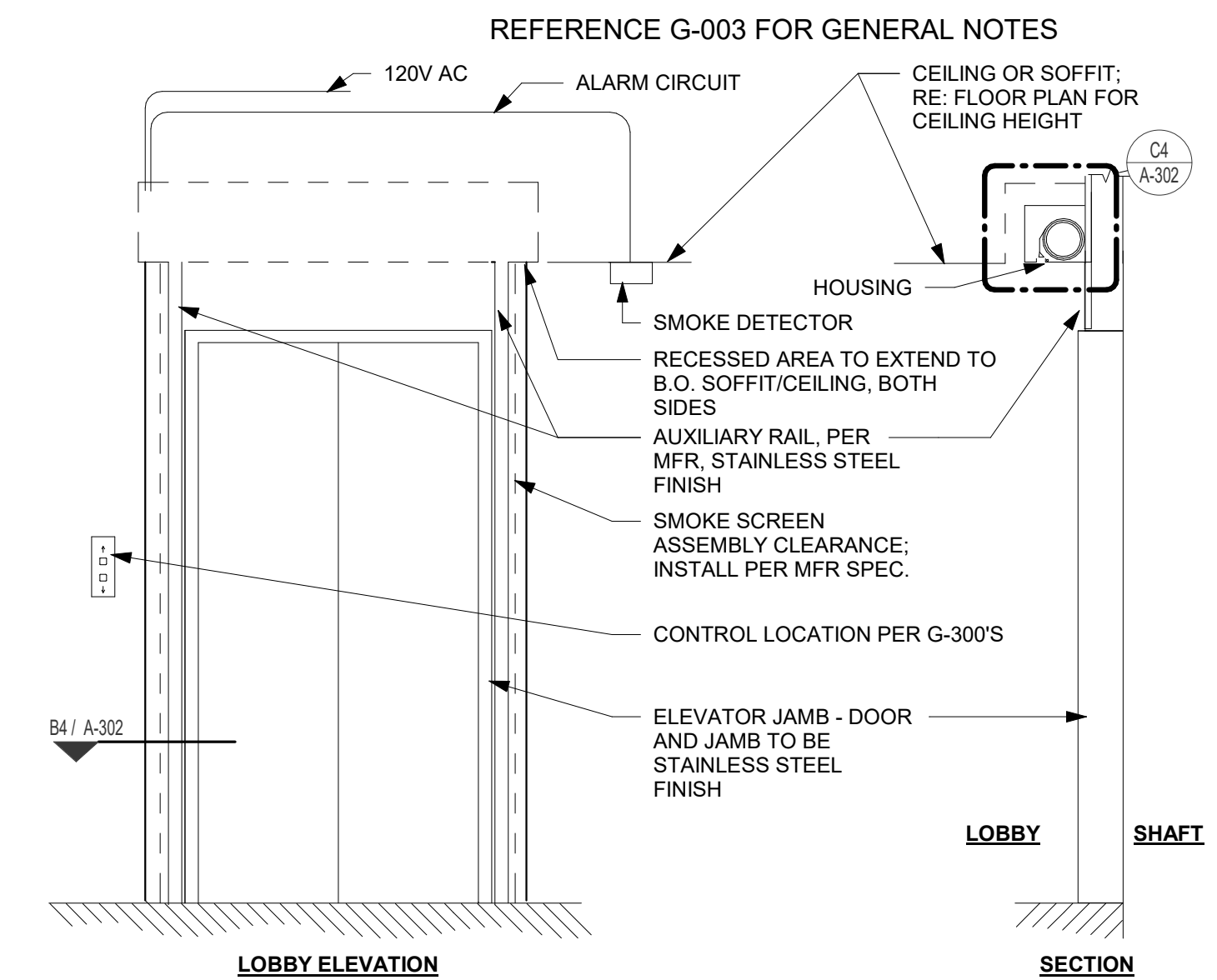
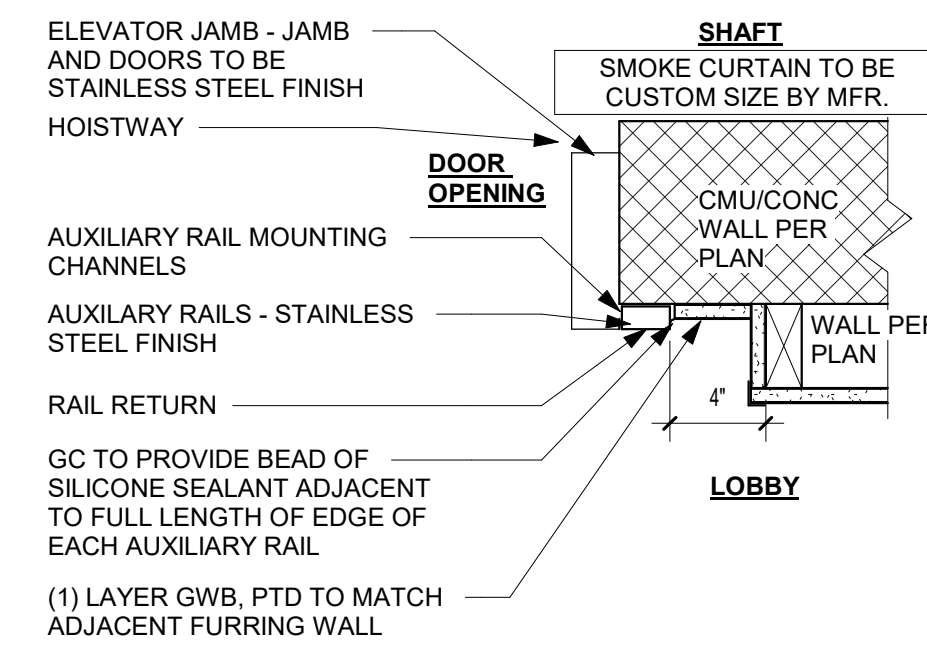
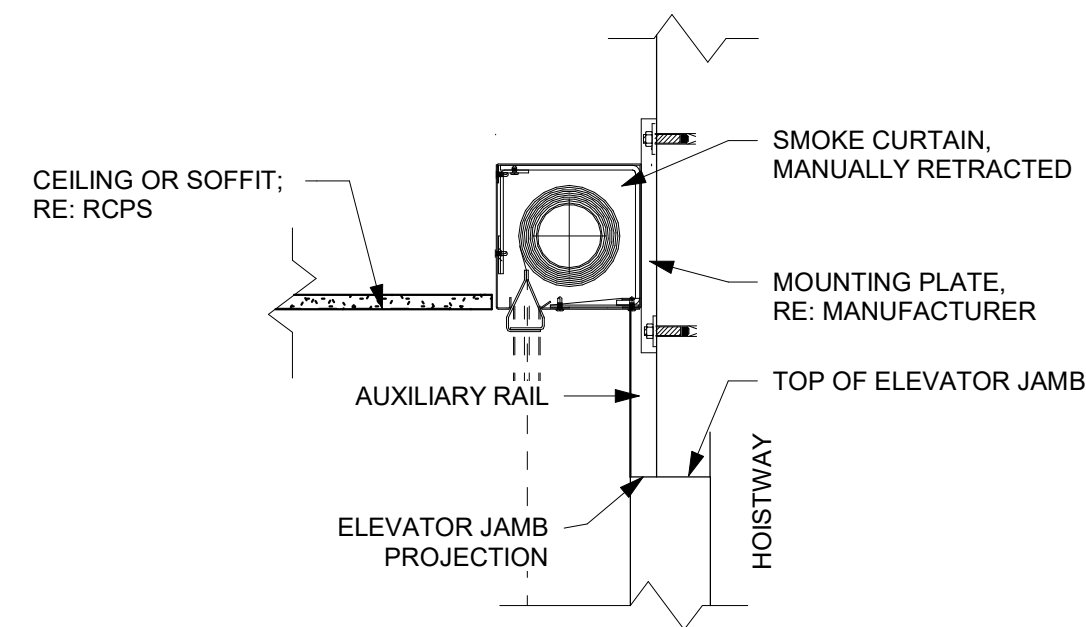
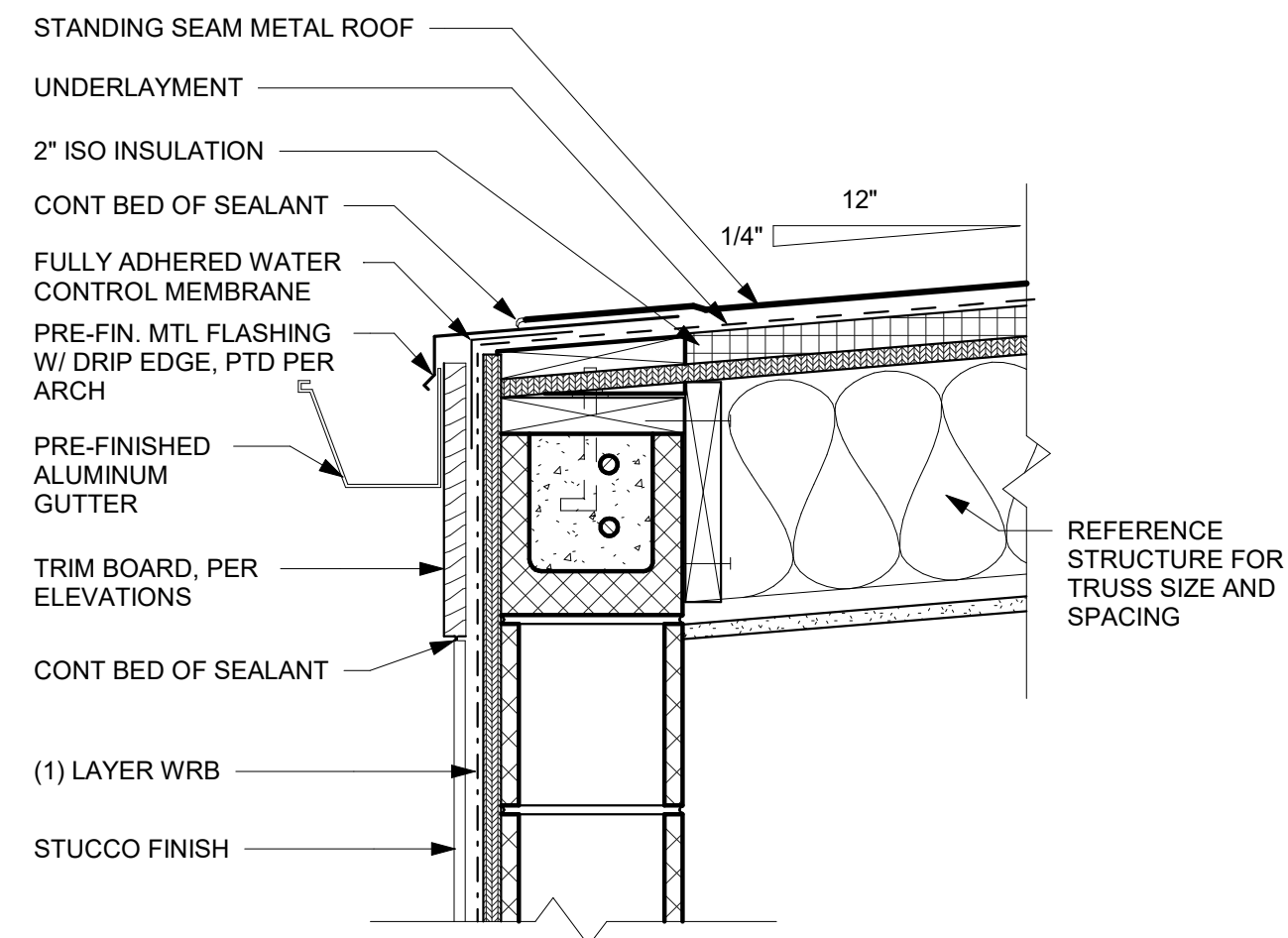
LEE SUMMIT, MO

THE VILLAGE AT DISCOVERY -
LOT 4

PROJECT NUMBER: 23099
SHEET NUMBER:

A-301





PRINTS ISSUED
01/25/2024 - CITY SUBMITTAL

REVISIONS:

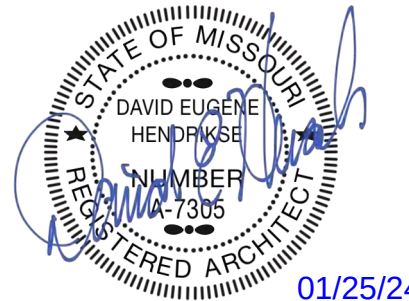
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THE VILLAGE AT DISCOVERY -
LOT 4

LEE'S SUMMIT, MO

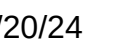
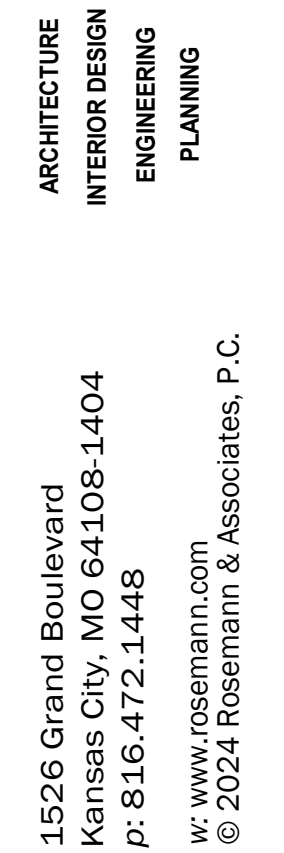
SHEET TITLE
ELEVATOR PLANS, SECTIONS &
DETAILS

PROJECT NUMBER: 23099

SHEET NUMBER:

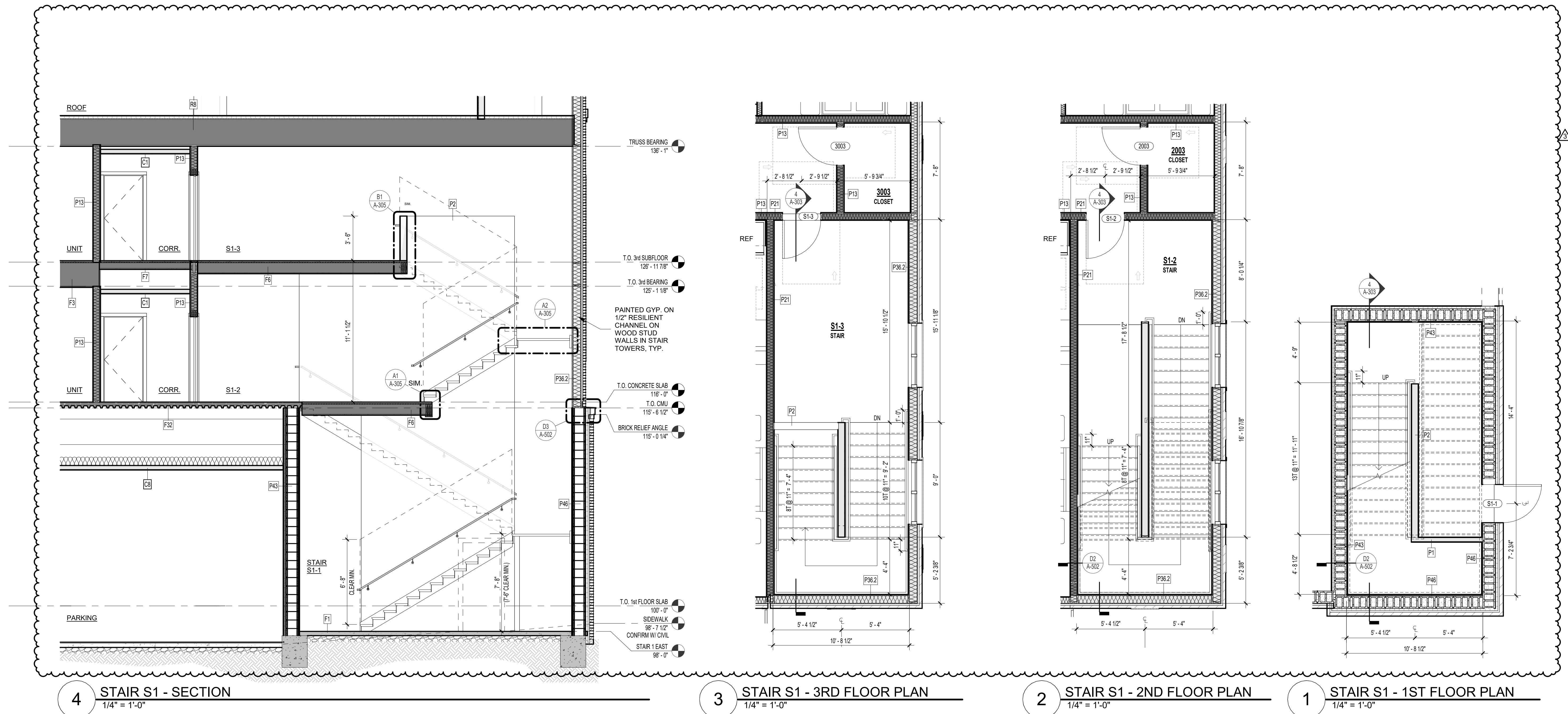
A-302

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SHEET NUMBER:

A-303

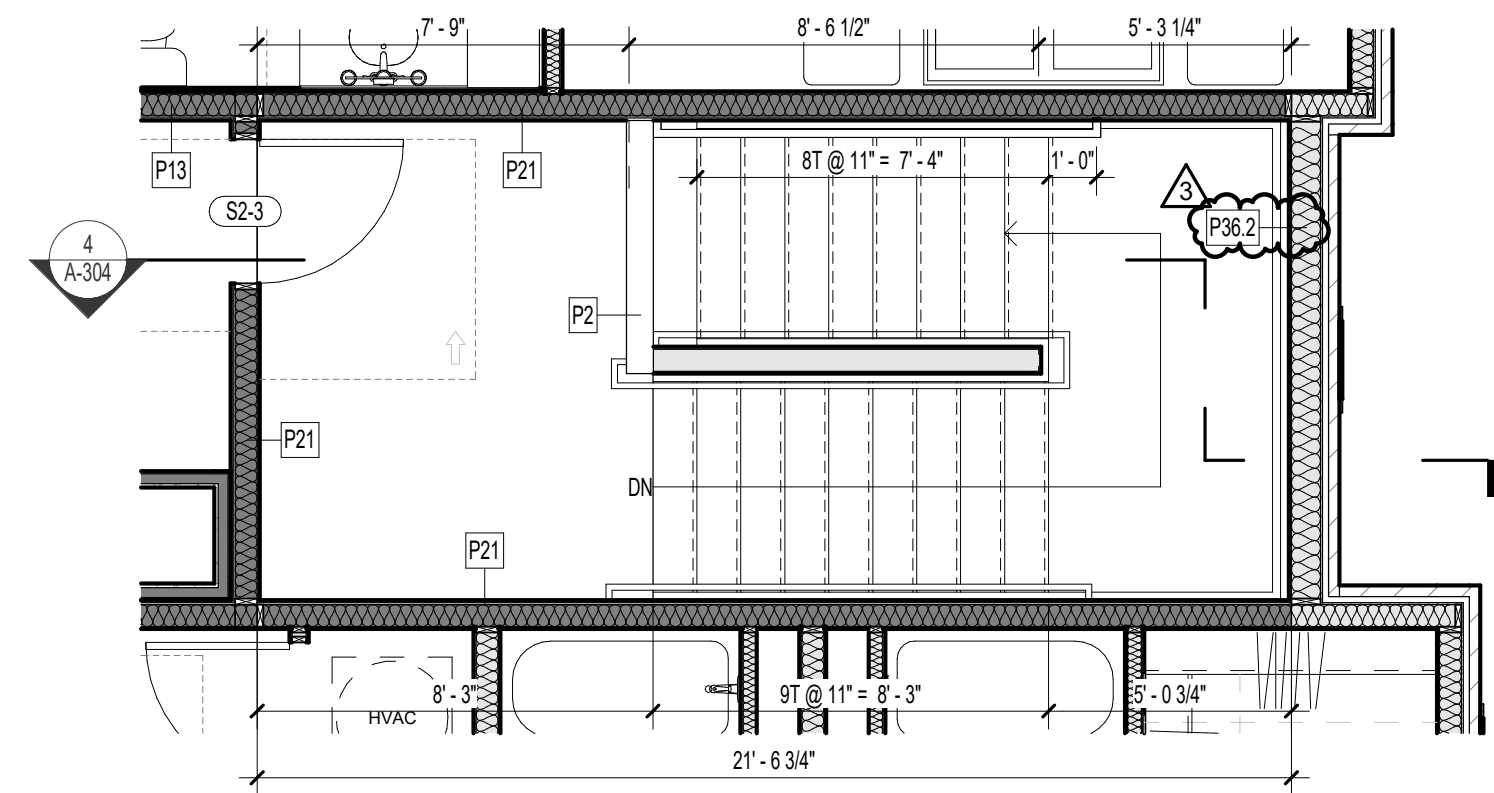




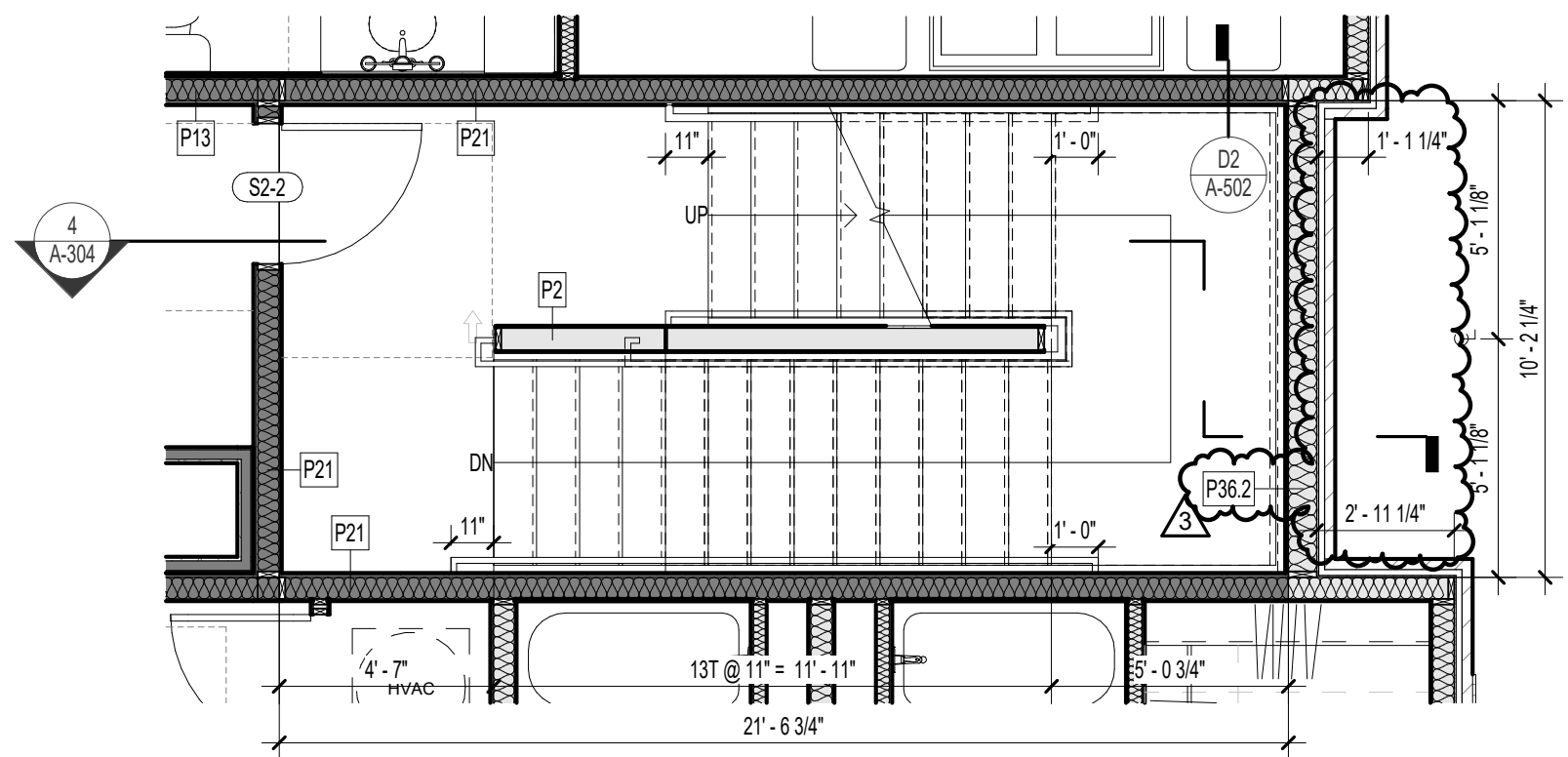
THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
STAIR 2 - PLANS AND SECTION
PROJECT NUMBER: 23099
SHEET NUMBER:

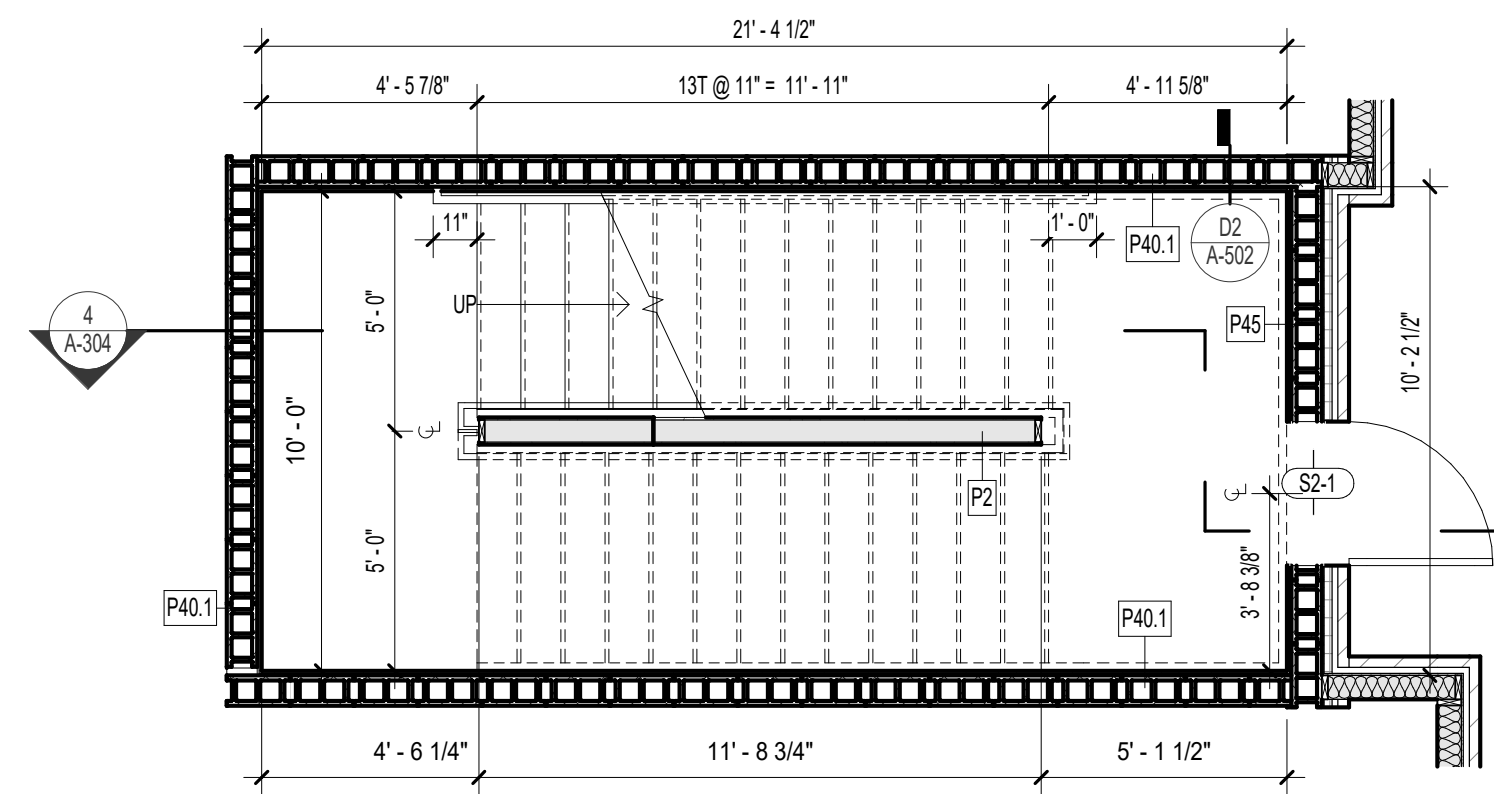
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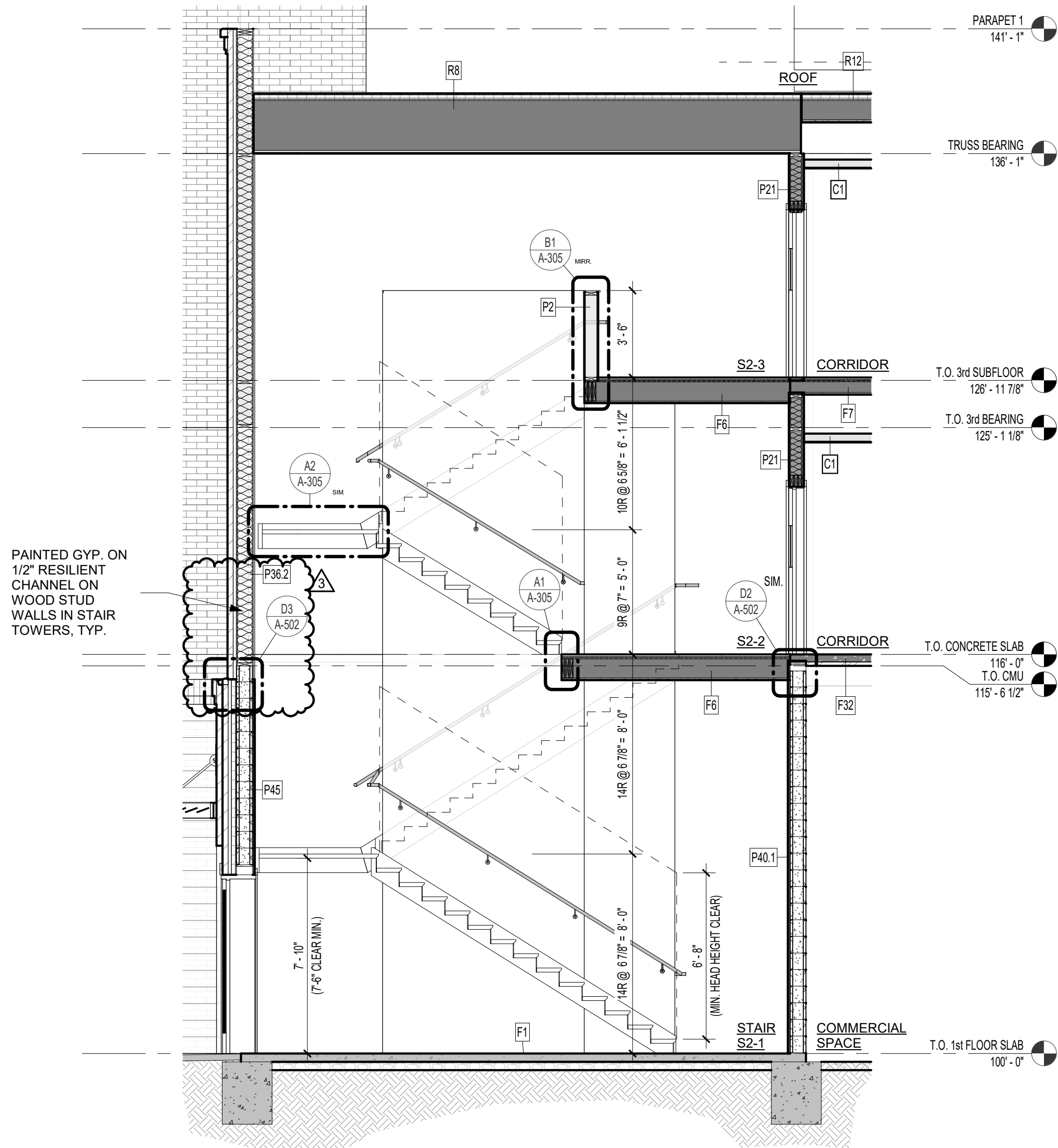
3 STAIR S2 - 3RD FLOOR PLAN
1/4" = 1'-0"



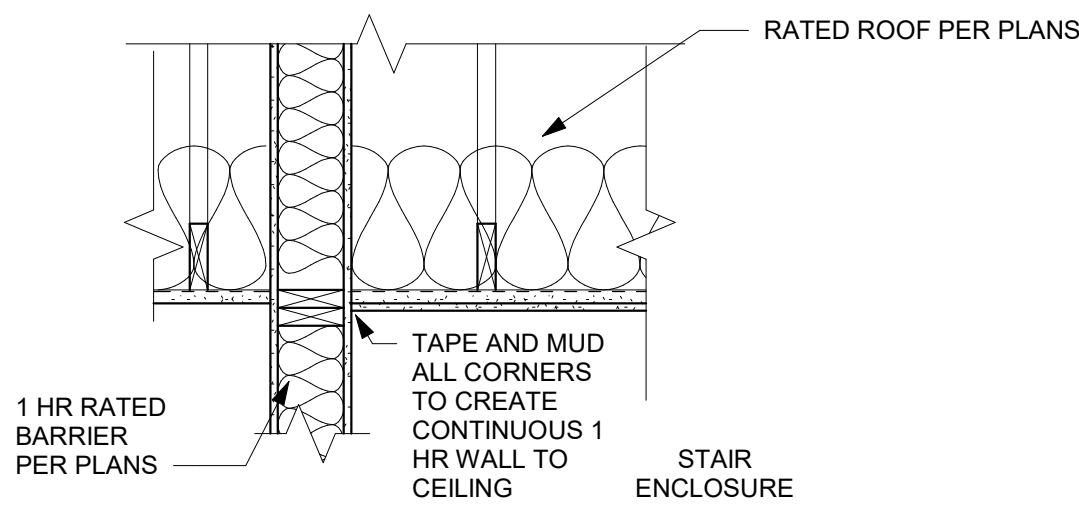
2 STAIR S2 - 2ND FLOOR PLAN
1/4" = 1'-0"



1 STAIR S2 - 1ST FLOOR PLAN
1/4" = 1'-0"



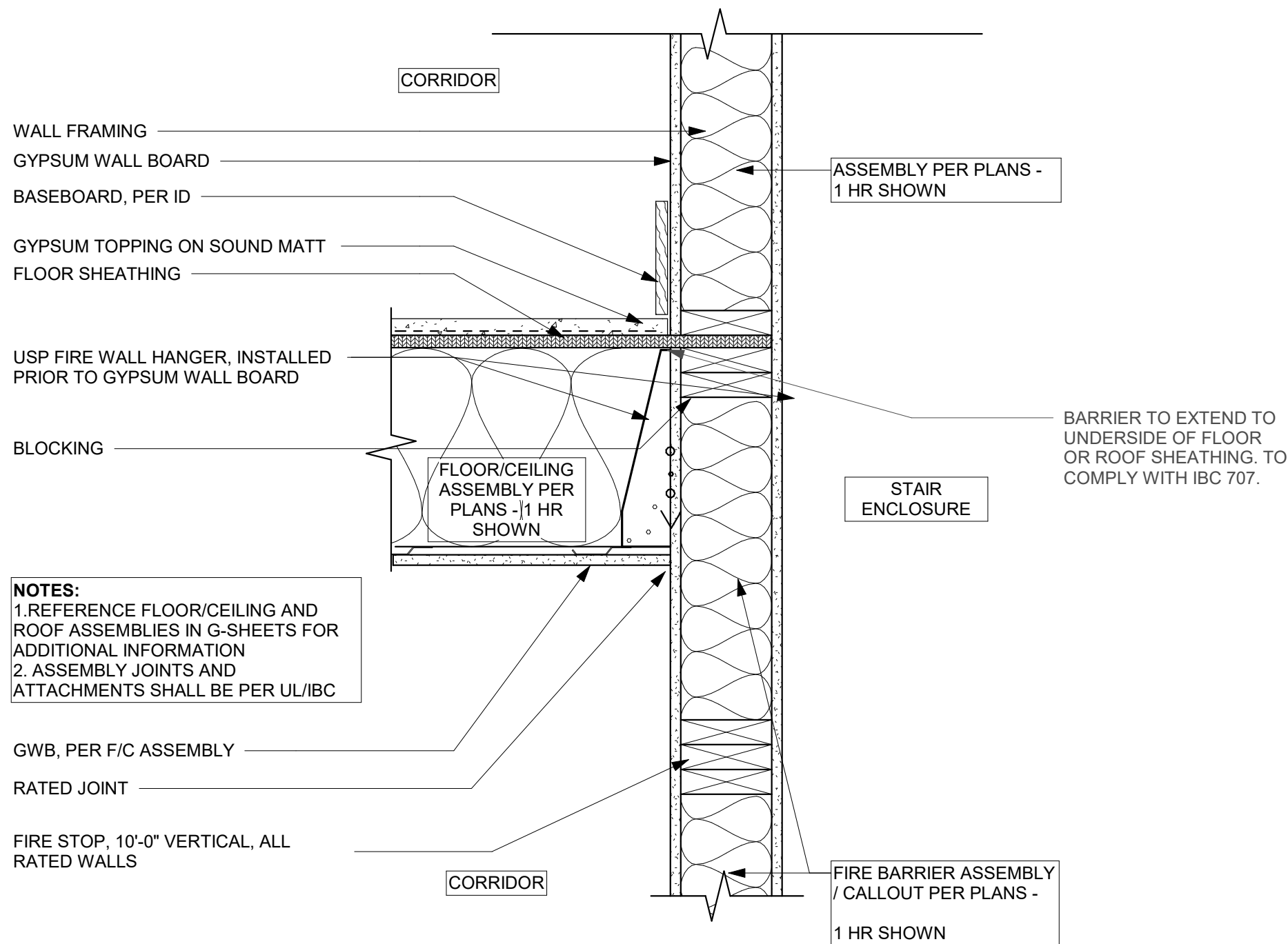
4 STAIR S2 - SECTION
1/4" = 1'-0"



STAIR ENCAPSULATION - 1 HR:

(2) LAYERS 5/8" TYPE "X" GWB. TO MEET IBC CHAPTER 722.6.2. VERTICAL DRYWALL AT BARRIER TO EXTEND UP TO B.O. R/C ASSEMBLY DECK. STAIR ENCLOSURE TO BE 1 HR RATED, CONTINUOUSLY.

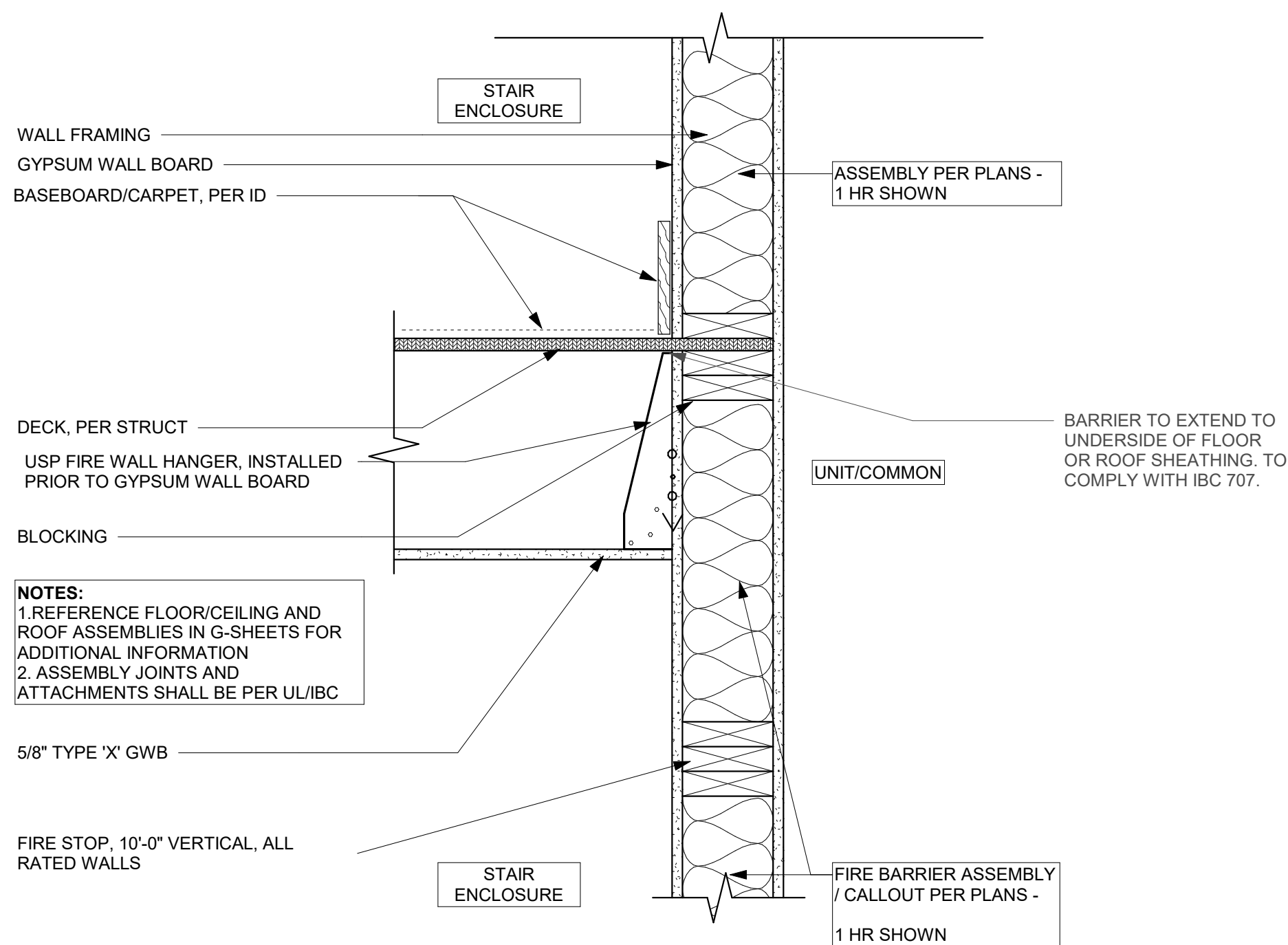
D3 STAIR - WOOD FRAMED 1 RATED CEILING (SECTION)
3/4" = 1'-0"



NOTES:
1. REFERENCE FLOOR/CEILING AND ROOF ASSEMBLIES IN G-SHEETS FOR ADDITIONAL INFORMATION
2. ASSEMBLY JOINTS AND ATTACHMENTS SHALL BE PER UL/IBC

GWb, PER F/C ASSEMBLY
RATED JOINT
FIRE STOP, 10'-0" VERTICAL, ALL RATED WALLS

D2 STAIR - WOOD FRAMED RATED WALL (SECTION) 1
1 1/2" = 1'-0"



NOTES:
1. REFERENCE FLOOR/CEILING AND ROOF ASSEMBLIES IN G-SHEETS FOR ADDITIONAL INFORMATION
2. ASSEMBLY JOINTS AND ATTACHMENTS SHALL BE PER UL/IBC

5/8" TYPE 'X' GWB

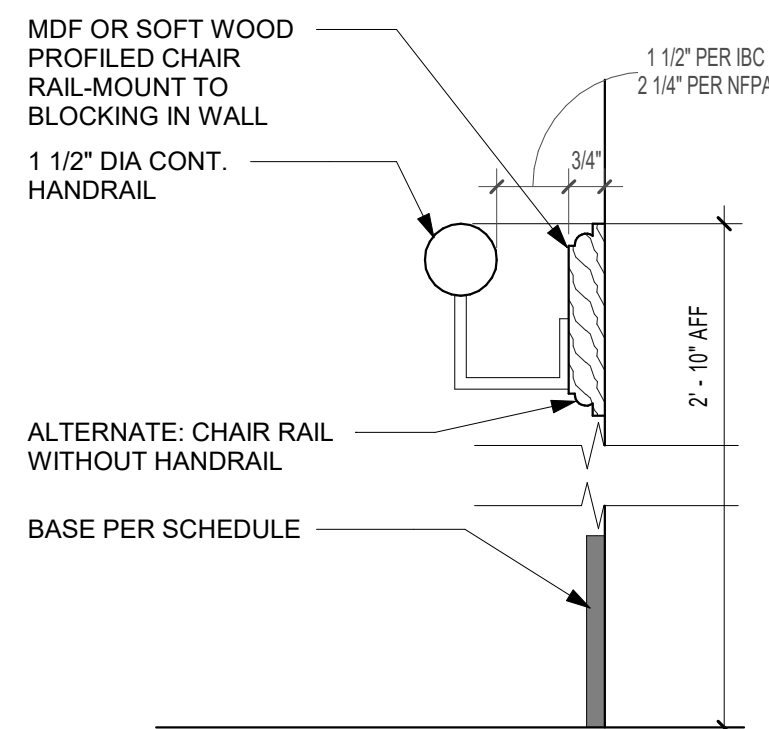
FIRE STOP, 10'-0" VERTICAL, ALL RATED WALLS

D1 STAIR - WOOD FRAMED AT LANDING (SECTION)
1 1/2" = 1'-0"

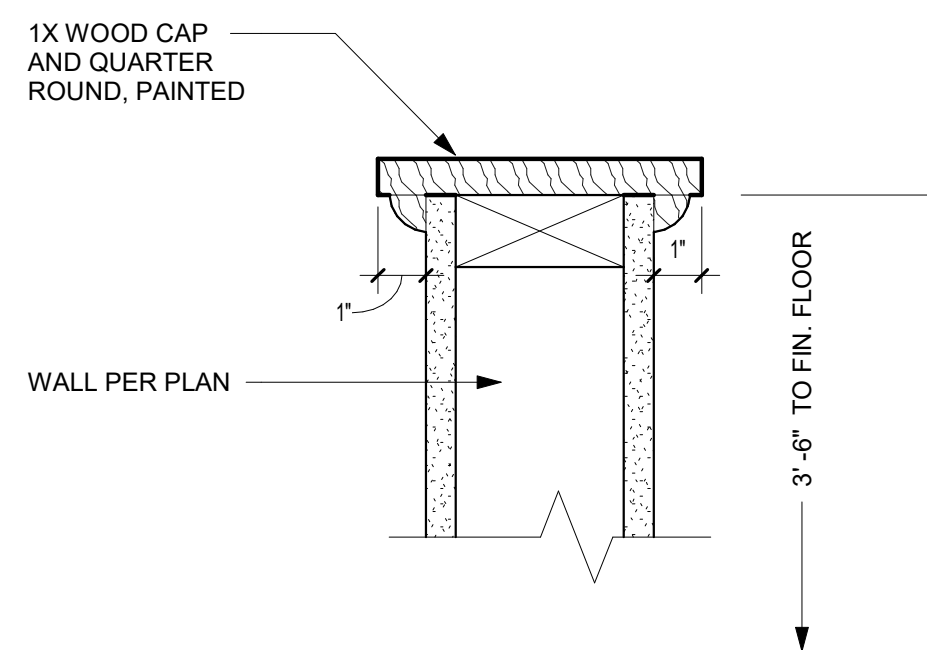
NOTE: Floor identification signs.
- A sign shall be provided at each floor landing in exit enclosures designating the floor level, the terminus of the top and bottom of the exit enclosure and the identification of the stair.
- story number
- the direction to the exit discharge
- and the availability of roof access from the enclosure for the fire department.

- Located 5 feet above the floor landing in a position that is readily visible when the doors are in the open and closed positions.
- Floor level identification signs in tactile characters complying with ICC A117.1 shall be located at each floor level landing adjacent to the door leading from the enclosure into the corridor to identify the floor level.

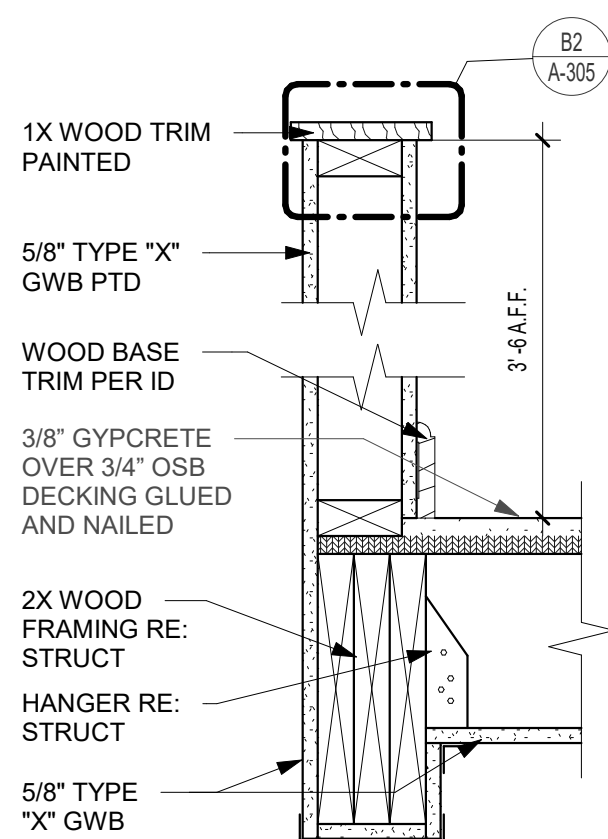
NOTE:
Stairway identification signs shall comply with all of the following requirements:
1. The signs shall be a minimum size of 18 inches by 12 inches.
2. The letters designating the identification of the stair enclosure shall be a minimum of 1 1/2 inches (38 mm) in height.
3. The number designating the floor level shall be a minimum of 5 inches (127 mm) in height and located in the center of the sign.
4. All other lettering and numbers shall be a minimum of 1 inch (25 mm) in height.
5. Characters and their background shall have a nonglare finish. Characters shall contrast with their background, with either light characters on a dark background or dark characters on a light background.



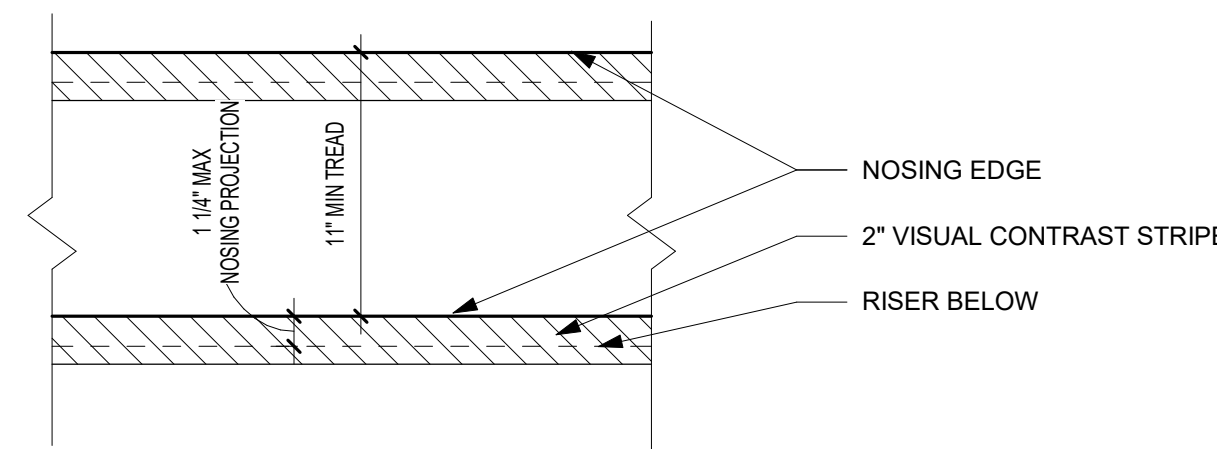
B3 FINISHES - MDF @ HANDRAIL
3" = 1'-0"



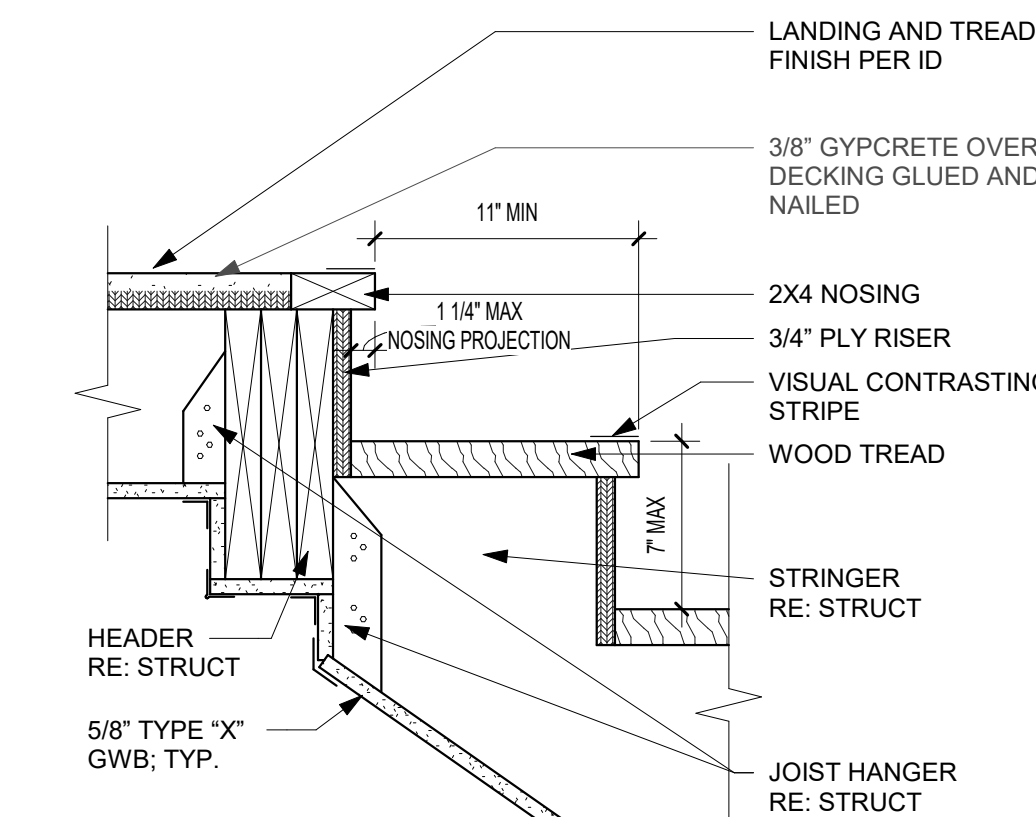
B2 STAIR - WOOD FRAMED KNEE WALL TOP
3" = 1'-0"



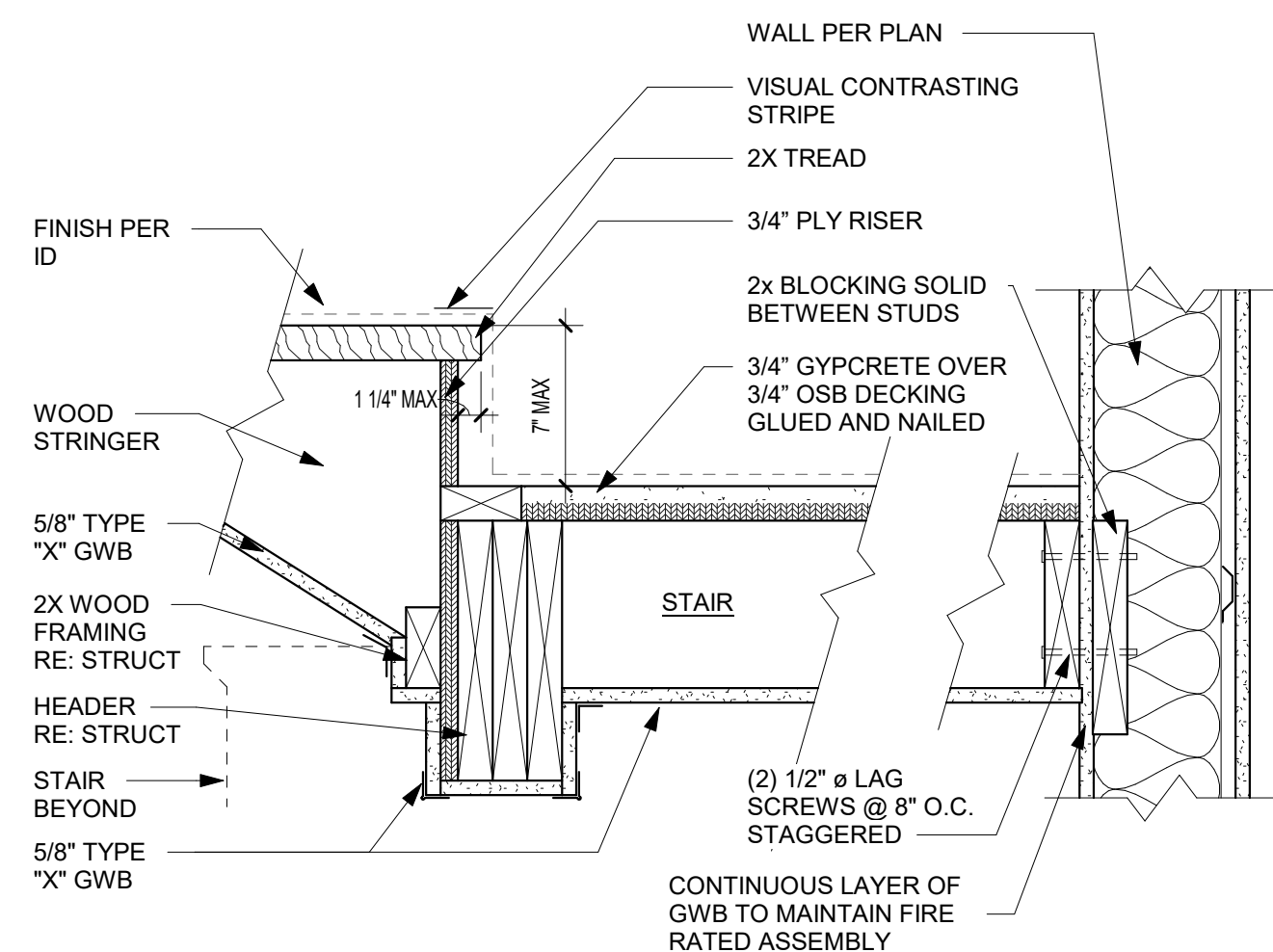
B1 STAIR - WOOD FRAMED KNEE WALL
1 1/2" = 1'-0"



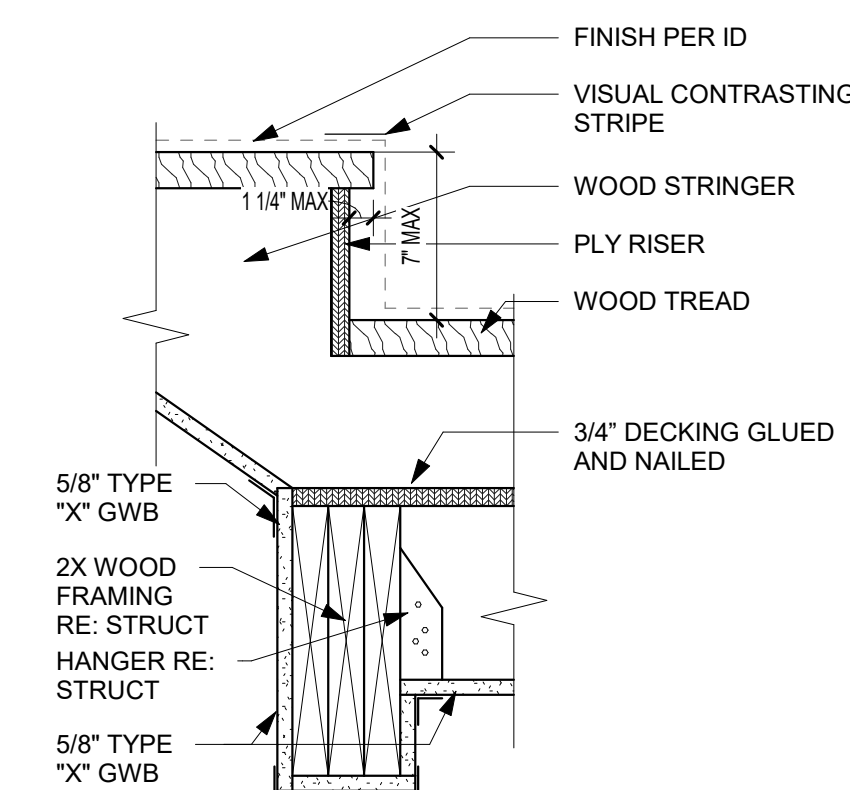
A4 STAIR - (WOOD) - PLAN W. VISUAL CONTRAST
1 1/2" = 1'-0"



A3 STAIR - (WOOD) TOP @ FLOOR
1 1/2" = 1'-0"

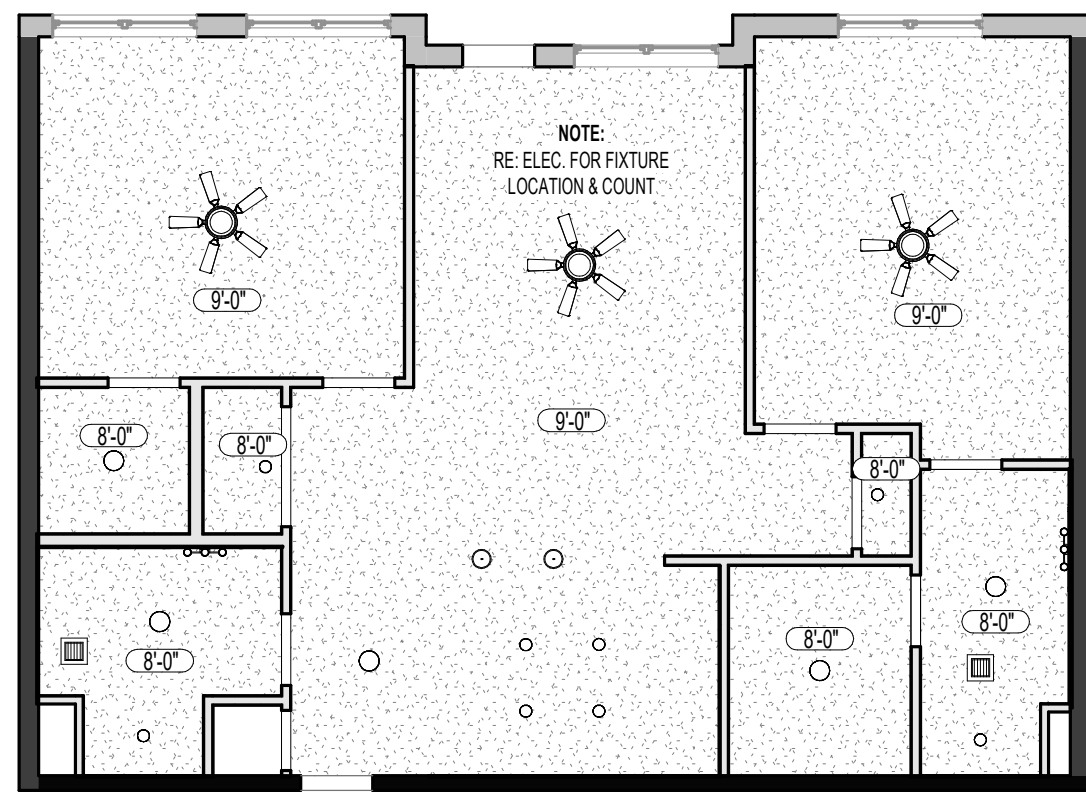


A2 STAIR - (WOOD) BASE @ PLATFORM
1 1/2" = 1'-0"

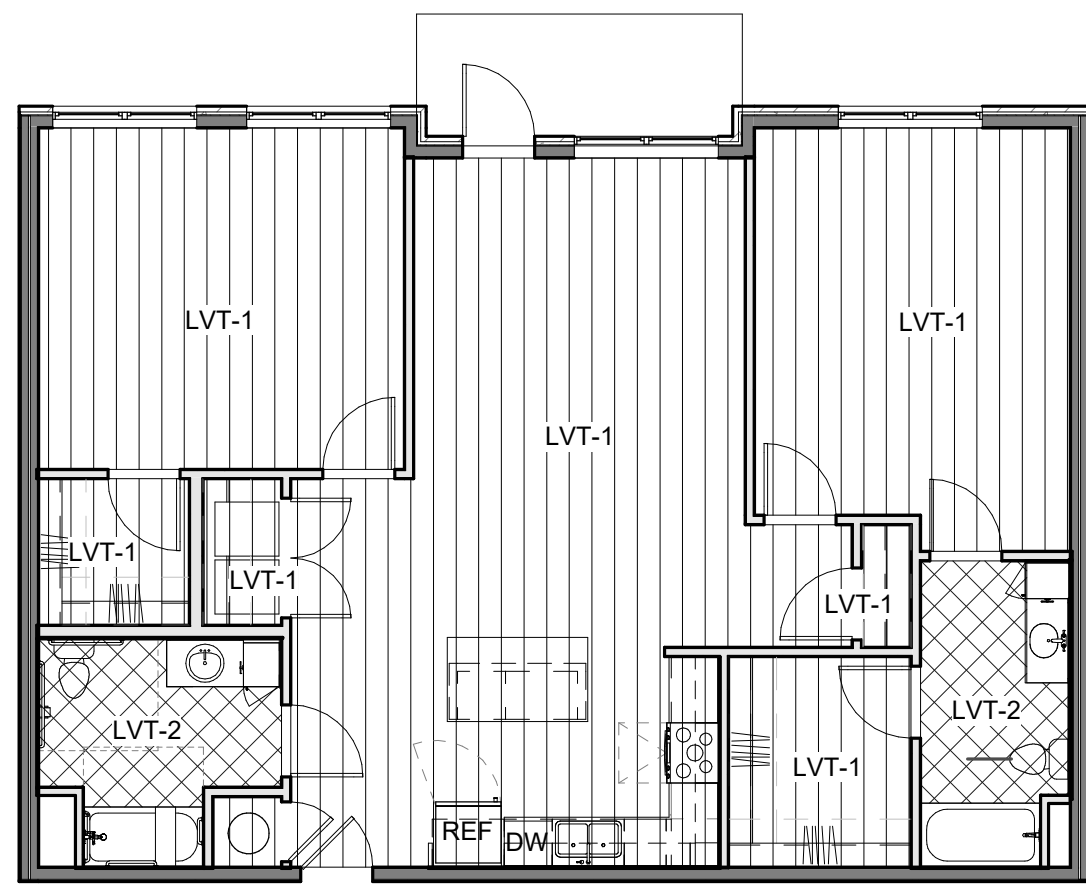


A1 STAIR - (WOOD) BASE @ LANDING
1 1/2" = 1'-0"

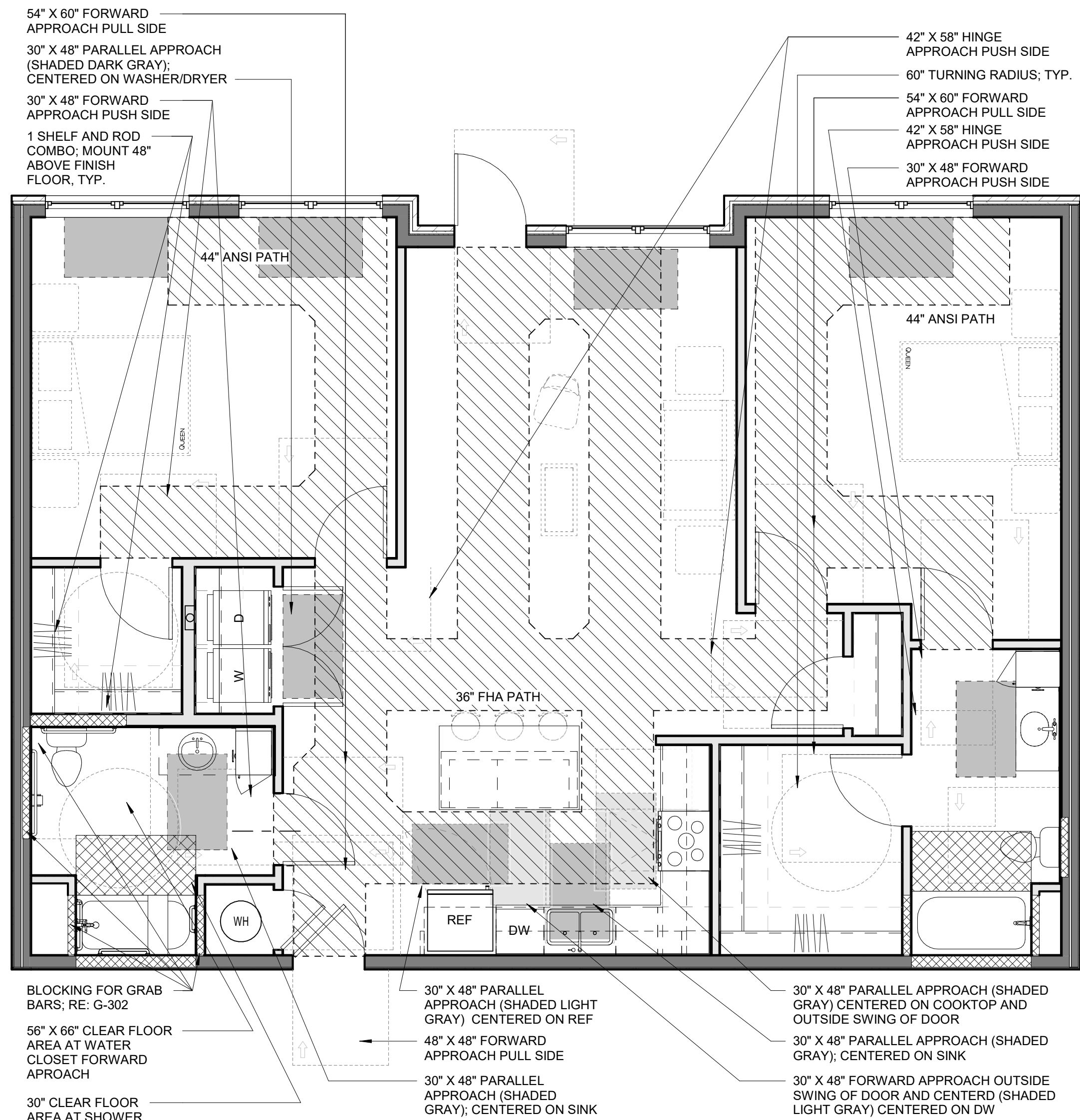
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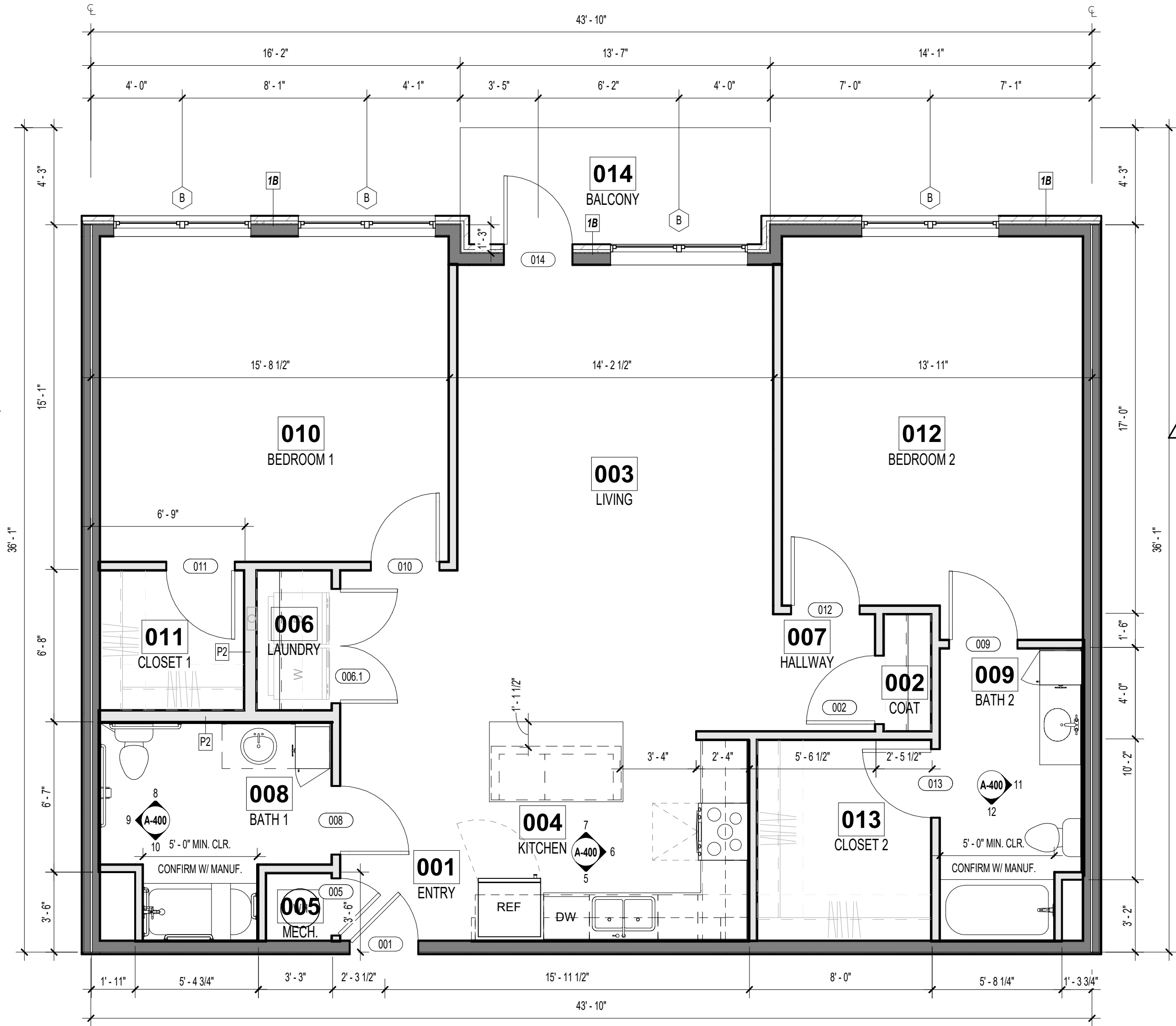
3 UNIT RCP - ABERDEEN (2 BR) - TYPE A
1/8" = 1'-0"



4 UNIT FINISH PLAN - ABERDEEN (2 BR) - TYPE A
1/8" = 1'-0"

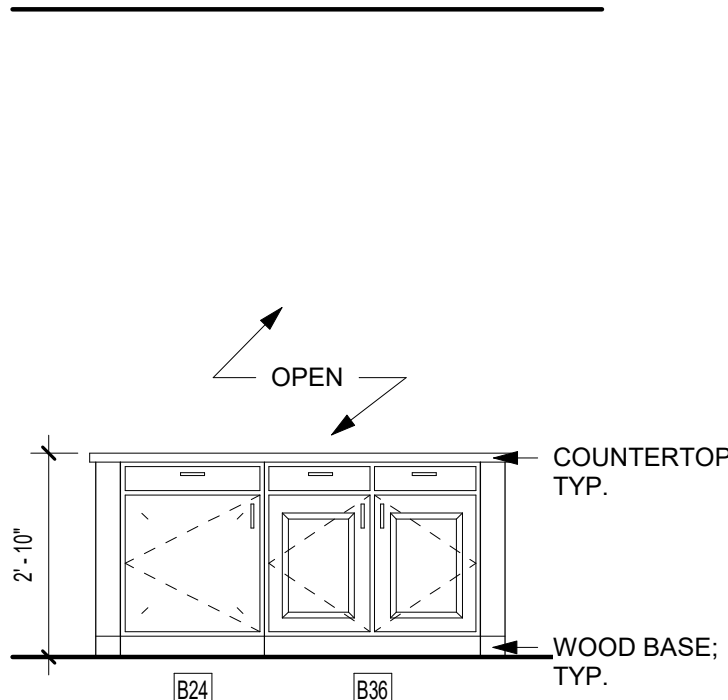


2 UNIT CLEAR SPACE PLAN - ABERDEEN (2 BR) - TYPE A
1/4" = 1'-0"

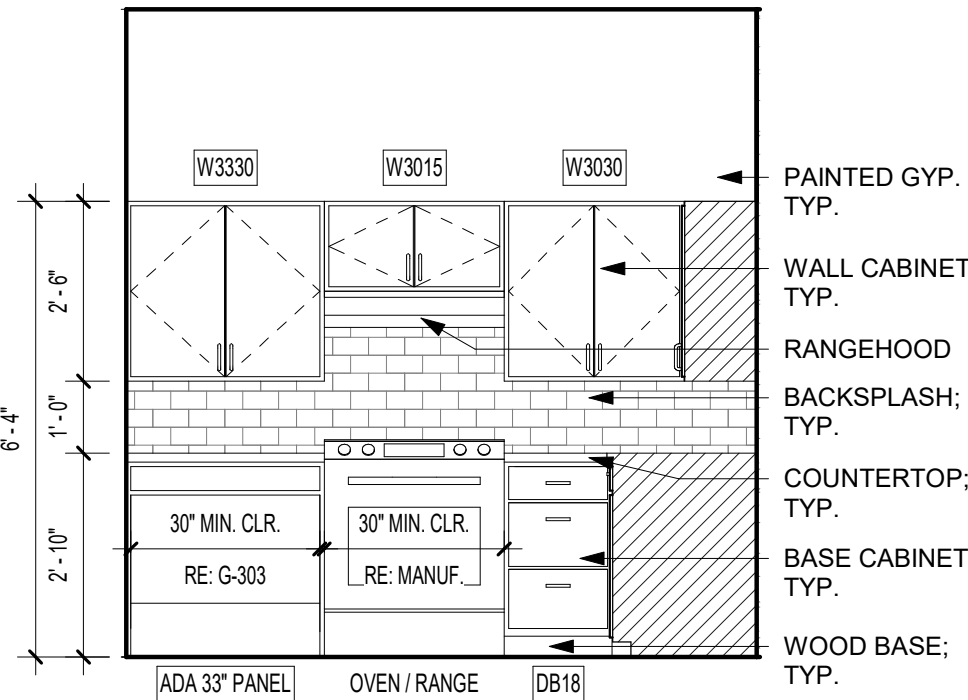


1 UNIT FLOOR PLAN - ABERDEEN (2 BR) - TYPE A
1/4" = 1'-0"

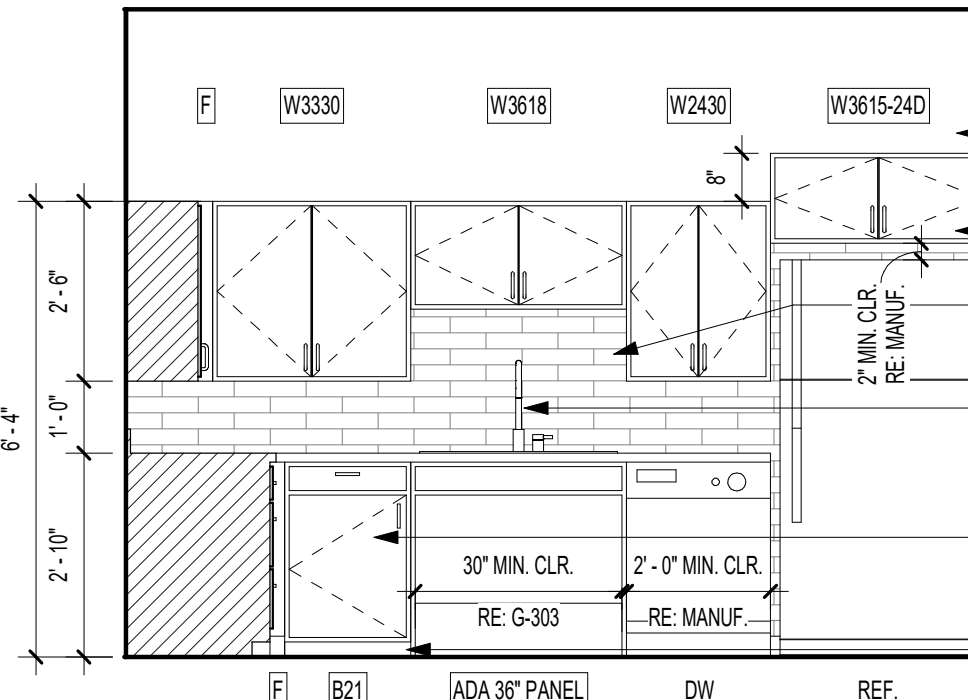
Room Finish Schedule - Units					
Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish
001	ENTRY	LVT1	WB, PT3	PT1	PT4
002	COAT	LVT1	WB, PT3	PT1	PT4
003	LIVING	LVT1	WB, PT3	PT1	PT4
004	KITCHEN	LVT1	WB, PT3	PT1	PT4
005	MECH.	LVT1	WB, PT3	PT1	PT4
006	LAUNDRY	LVT1	WB, PT3	PT1	PT4
007	HALLWAY	LVT1	WB, PT3	PT1	PT4
008	BATH 1	LVT1 OR LVT2	WB, PT3	PT1	PT4
009	BATH 2	LVT1 OR LVT2	WB, PT3	PT1	PT4
010	BEDROOM 1	LVT1	WB, PT3	PT1	PT4
011	CLOSET 1	LVT1	WB, PT3	PT1	PT4
012	BEDROOM 2	LVT1	WB, PT3	PT1	PT4
013	CLOSET 2	LVT1	WB, PT3	PT1	PT4
014	BALCONY	CONCRETE			



7 ABERDEEN KITCHEN ELEV. 3
3/8" = 1'-0"



6 ABERDEEN KITCHEN ELEV. 2
3/8" = 1'-0"



5 ABERDEEN KITCHEN ELEV. 1
3/8" = 1'-0"

12 ABERDEEN BATH 2 ELEV. 2
3/8" = 1'-0"

11 ABERDEEN BATH 2 ELEV. 1
3/8" = 1'-0"

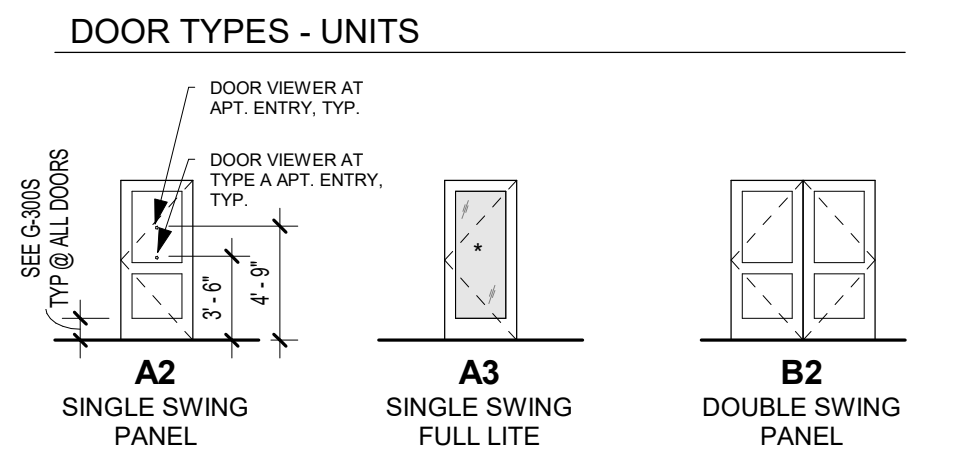
10 ABERDEEN BATH 1 ELEV. 3
3/8" = 1'-0"

9 ABERDEEN BATH 1 ELEV. 2
3/8" = 1'-0"

8 ABERDEEN BATH 1 ELEV. 1
3/8" = 1'-0"

DOOR SCHEDULE - UNIT DOORS									
Mark	Location	Width	Height	Thickness	Fire Rating	Door Type	Frame	Comments	
001	ENTRY	3'-0"	6'-8"	1 3/4"	20	A2	TIMELY	SPRING HINGES (CLOSER) SMOKE SEAL	
002	COAT	3'-0"	6'-8"	1 3/8"		A2	PH		
005	MECH.	3'-0"	6'-8"	1 3/8"		A2	PH	UNDERCUT IF REQ'D	
006	LAUNDRY	3'-0"	6'-8"	1 3/8"		A2	PH	UNDERCUT IF REQ'D	
006.1	LAUNDRY	6'-0"	6'-8"	1 3/8"		B2	PH	UNDERCUT IF REQ'D	
008	BATH 1	3'-0"	6'-8"	1 3/8"		A2	PH		
009	BATH 2	3'-0"	6'-8"	1 3/8"		A2	PH		
010	BEDROOM 1	3'-0"	6'-8"	1 3/8"		A2	PH		
011	CLOSET	3'-0"	6'-8"	1 3/8"		A2	PH		
011.1	CLOSET	6'-0"	6'-8"	1 3/8"		B2	PH		
012	BEDROOM 2	3'-0"	6'-8"	1 3/8"		A2	PH		
013	CLOSET	3'-0"	6'-8"	1 3/8"		A2	PH		
014	BALCONY	3'-0"	8'-0"	1 3/4"		A3	TIMELY		

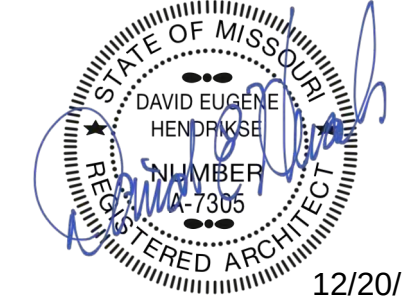
UNIT PLAN LEGEND	
	PARTIAL HEIGHT PARTITION
	P1 WALL (UNLESS NOTED OTHERWISE); SEE PARTITION SCHEDULE FOR ASSEMBLY INFORMATION
	CASEWORK TAG
	DOOR TAG
	ACCESSIBLE ROUTE (36" CLEAR; 32" MIN REQ'D @ DOOR OPENING PER ANSI A117.1)
	DRYER BOX LOCATION; COORD WITH MECH



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12/20/24

THE VILLAGE AT DISCOVERY -
LOT 4

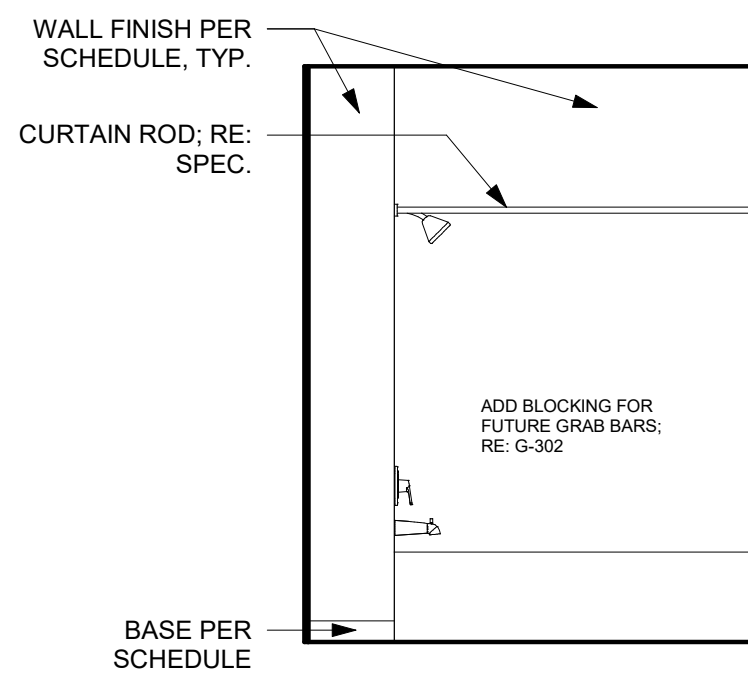
LEE'S SUMMIT, MO

SHEET TITLE
ABERDEEN (2 BR) UNIT PLAN -
TYPE A

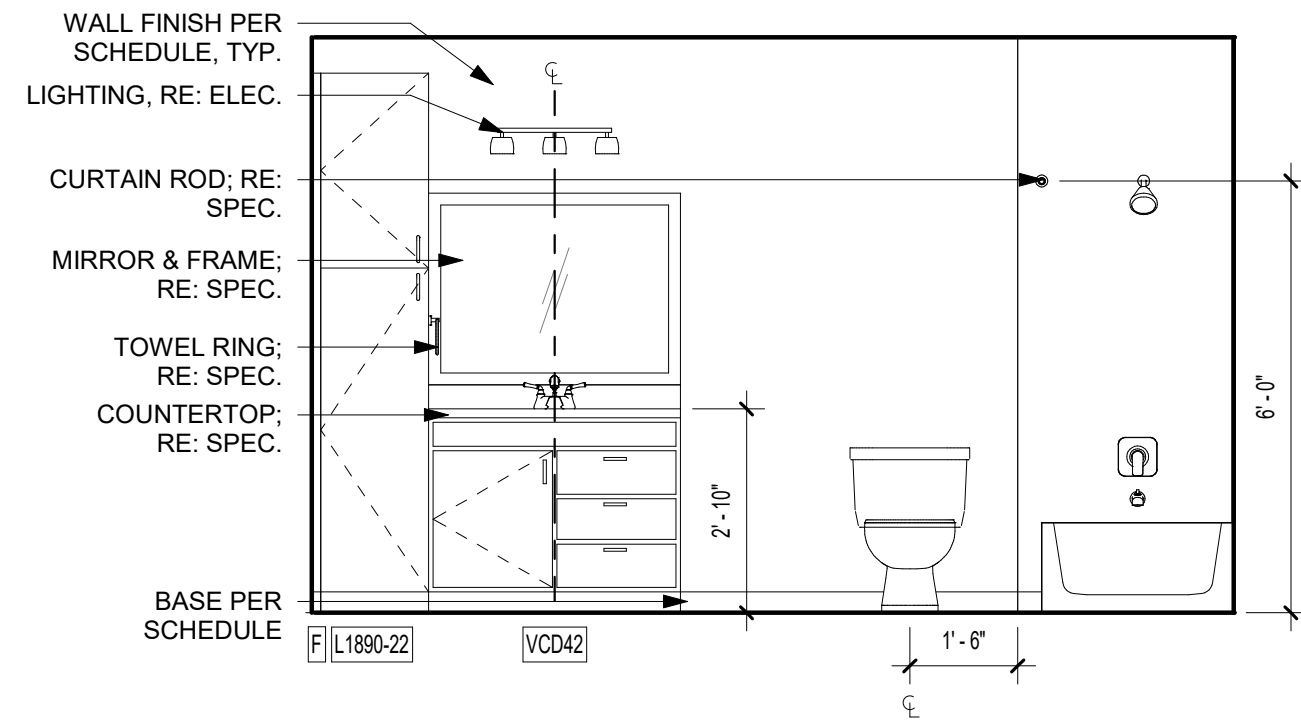
PROJECT NUMBER: 23099

SHEET NUMBER:

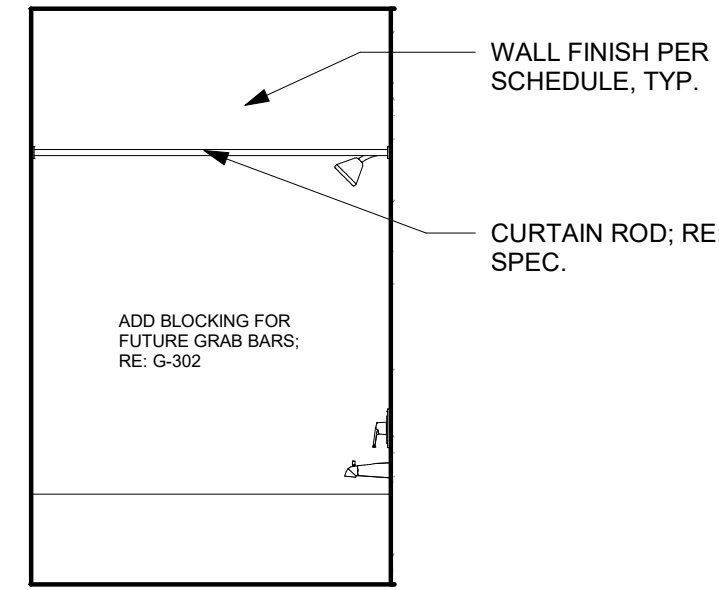
A-400



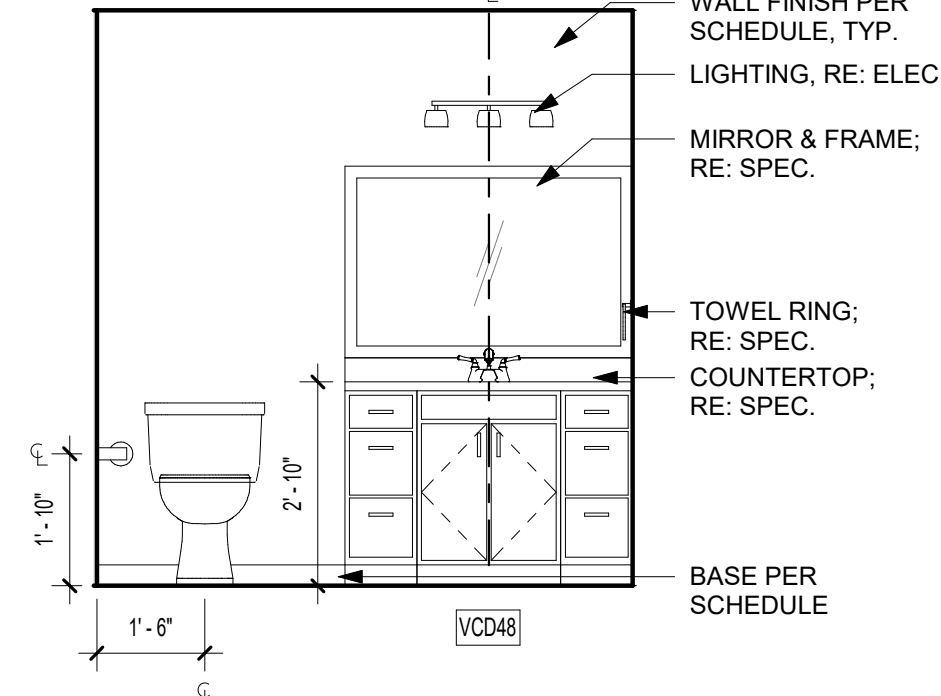
11 ABERDEEN ALT BATH 2 ELEV. 2
3/8" = 1'-0"



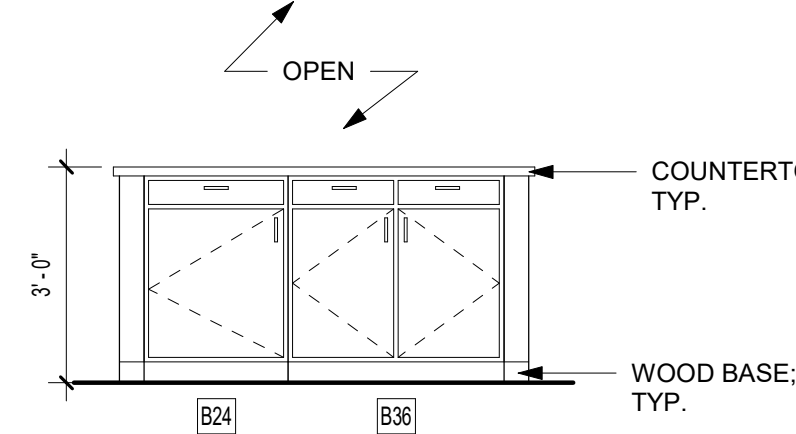
10 ABERDEEN ALT BATH 2 ELEV. 1
3/8" = 1'-0"



9 ABERDEEN ALT BATH 1 ELEV. 2
3/8" = 1'-0"



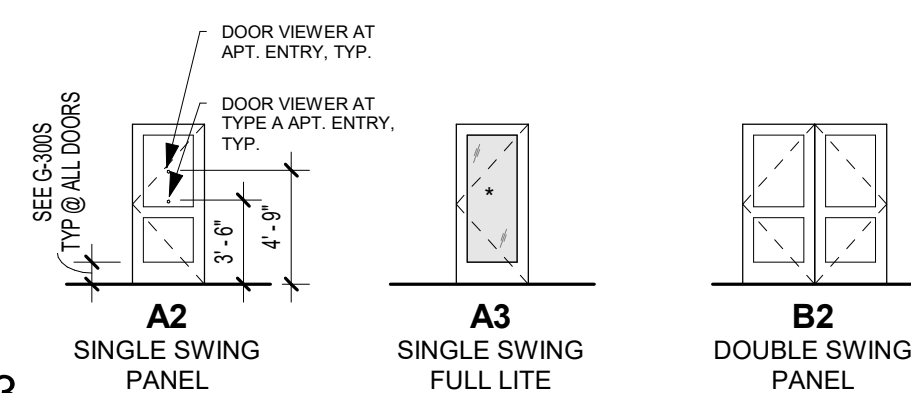
8 ABERDEEN ALT BATH 1 ELEV. 1
3/8" = 1'-0"



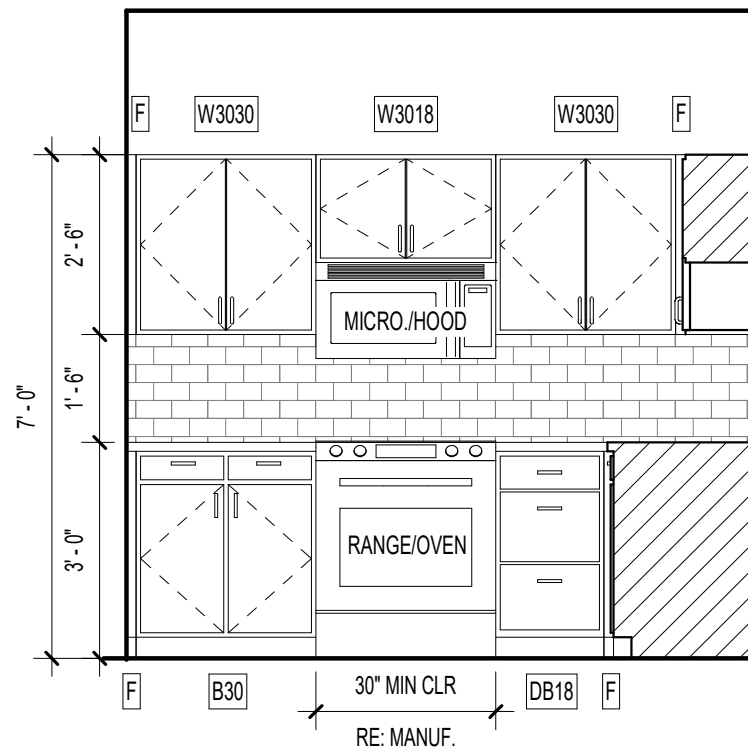
7 ABERDEEN ALT KITCHEN ELEV. 3
3/8" = 1'-0"

REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-120 FOR RCP LEGEND
REFERENCE A-400 FOR UNIT PLAN LEGEND
REFERENCE A-102 & A-103 FOR RC LOCATIONS

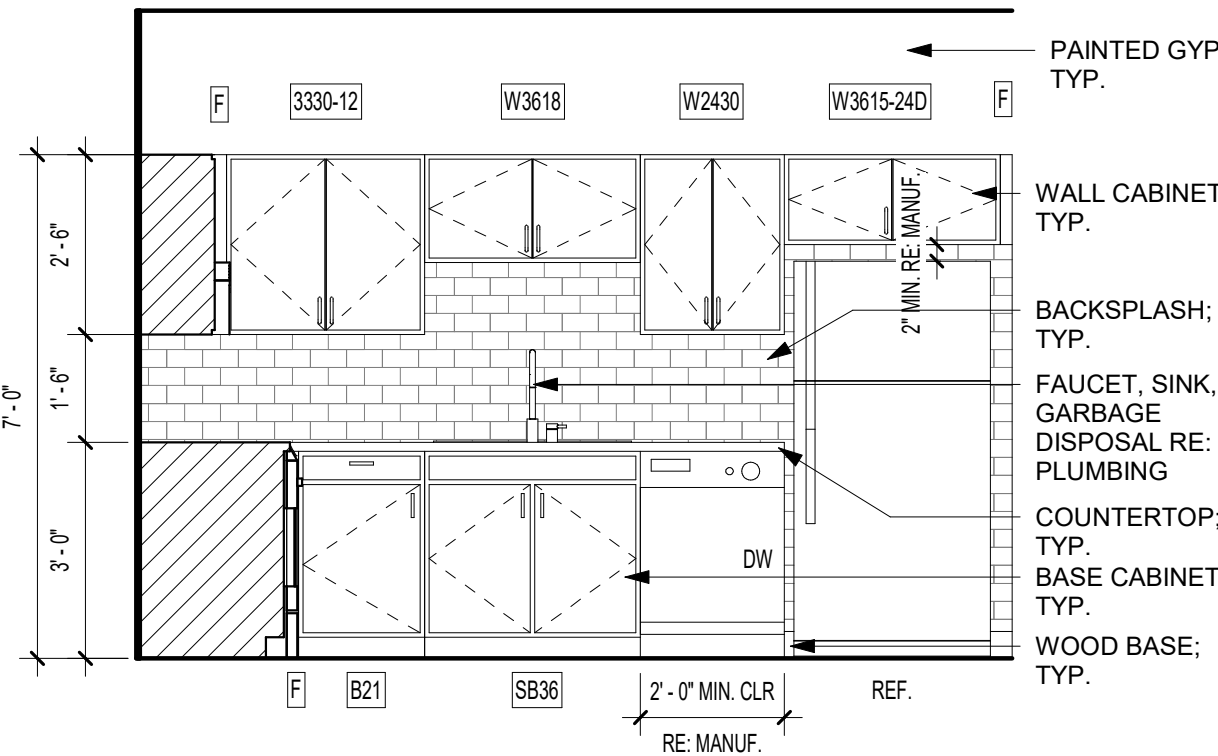
DOOR TYPES - UNITS



Room Finish Schedule - Units						
Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
001	ENTRY	LVT1	WB, PT3	PT1	PT4	
002	COAT	LVT1	WB, PT3	PT2	PT4	
003	LIVING	LVT1	WB, PT3	PT1	PT4	
004	KITCHEN	LVT1	WB, PT3	PT1	PT4	
005	MECH.	LVT1		PT2	PT4	
006	LAUNDRY	LVT1		PT2	PT4	
007	HALLWAY	LVT1	WB, PT3	PT1	PT4	
008	BATH 1	LVT1 OR LVT2		PT1	PT4	LVT2 IN TYPE A UNITS ONLY
009	BATH 2	LVT1 OR LVT2		PT1	PT4	LVT2 IN TYPE A UNITS ONLY
010	BEDROOM 1	LVT1	WB, PT3	PT1	PT4	
011	CLOSET 1	LVT1		PT2	PT4	
012	BEDROOM 2	LVT1	WB, PT3	PT1	PT4	
013	CLOSET 2	LVT1		PT2	PT4	
014	BALCONY	CONCRETE				

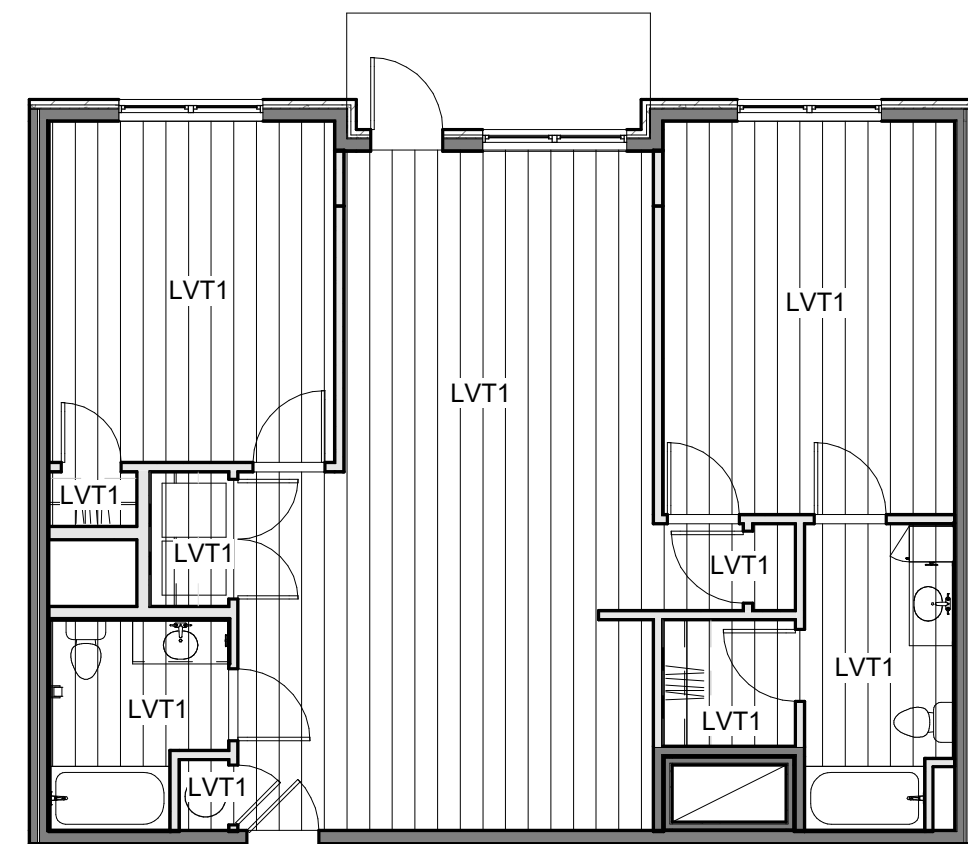


6 ABERDEEN ALT KITCHEN ELEV. 2
3/8" = 1'-0"

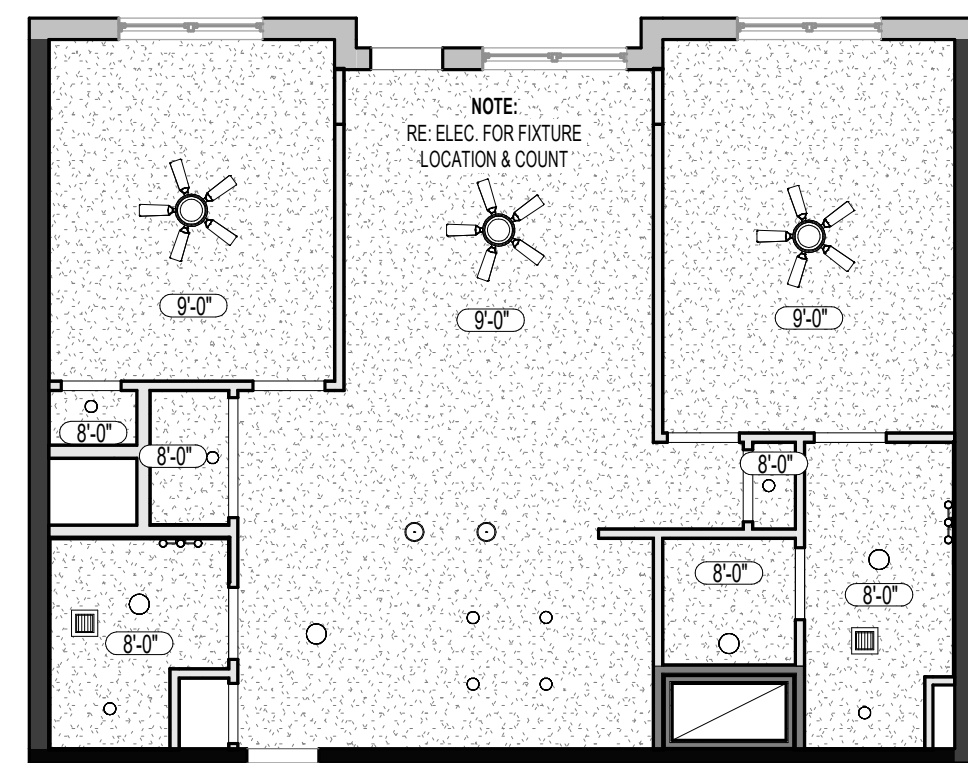


5 ABERDEEN ALT KITCHEN ELEV. 1
3/8" = 1'-0"

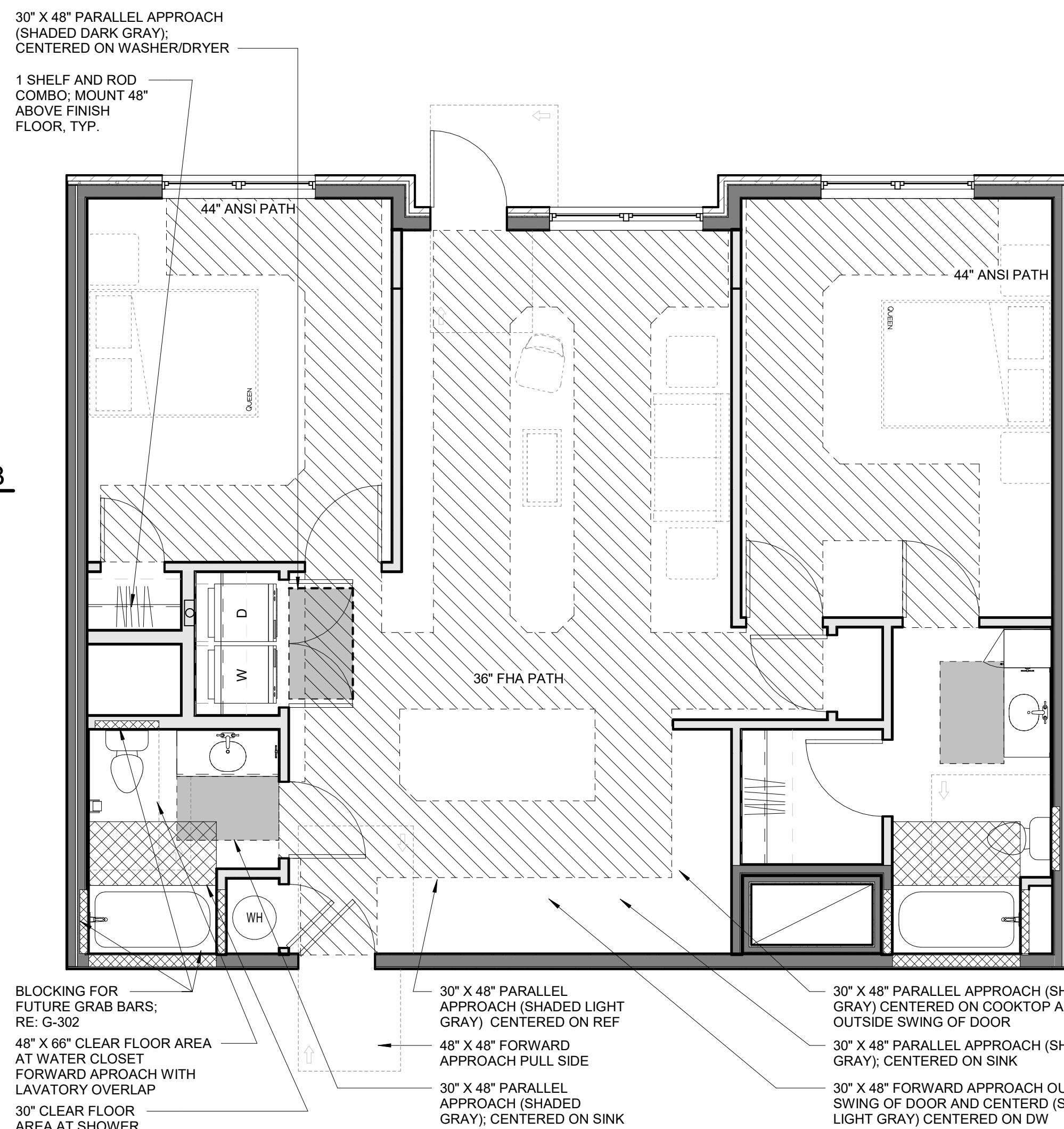
DOOR SCHEDULE - UNIT DOORS							
Mark	Location	Width	Height	Thickness	Fire Rating	Door Type	Comments
001	ENTRY	3'-0"	6'-8"	1 3/4"	20	A2	TIMELY SPRING HINGES (CLOSER) SMOKE SEAL
002	COAT	3'-0"	6'-8"	1 3/8"		A2	PH
005	MECH.	3'-0"	6'-8"	1 3/8"		A2	PH UNDERCUT IF REQ'D
006	LAUNDRY	3'-0"	6'-8"	1 3/8"		A2	PH UNDERCUT IF REQ'D
006.1	LAUNDRY	6'-0"	6'-8"	1 3/8"		B2	PH UNDERCUT IF REQ'D
008	BATH 1	3'-0"	6'-8"	1 3/8"		A2	PH
009	BATH 2	3'-0"	6'-8"	1 3/8"		A2	PH
010	BEDROOM 1	3'-0"	6'-8"	1 3/8"		A2	PH
011	CLOSET	3'-0"	6'-8"	1 3/8"		A2	PH
011.1	CLOSET	6'-0"	6'-8"	1 3/8"		B2	PH
012	BEDROOM 2	3'-0"	6'-8"	1 3/8"		A2	PH
013	CLOSET	3'-0"	6'-8"	1 3/8"		A2	PH
014	BALCONY	3'-0"	8'-0"	1 3/4"		A3	TIMELY



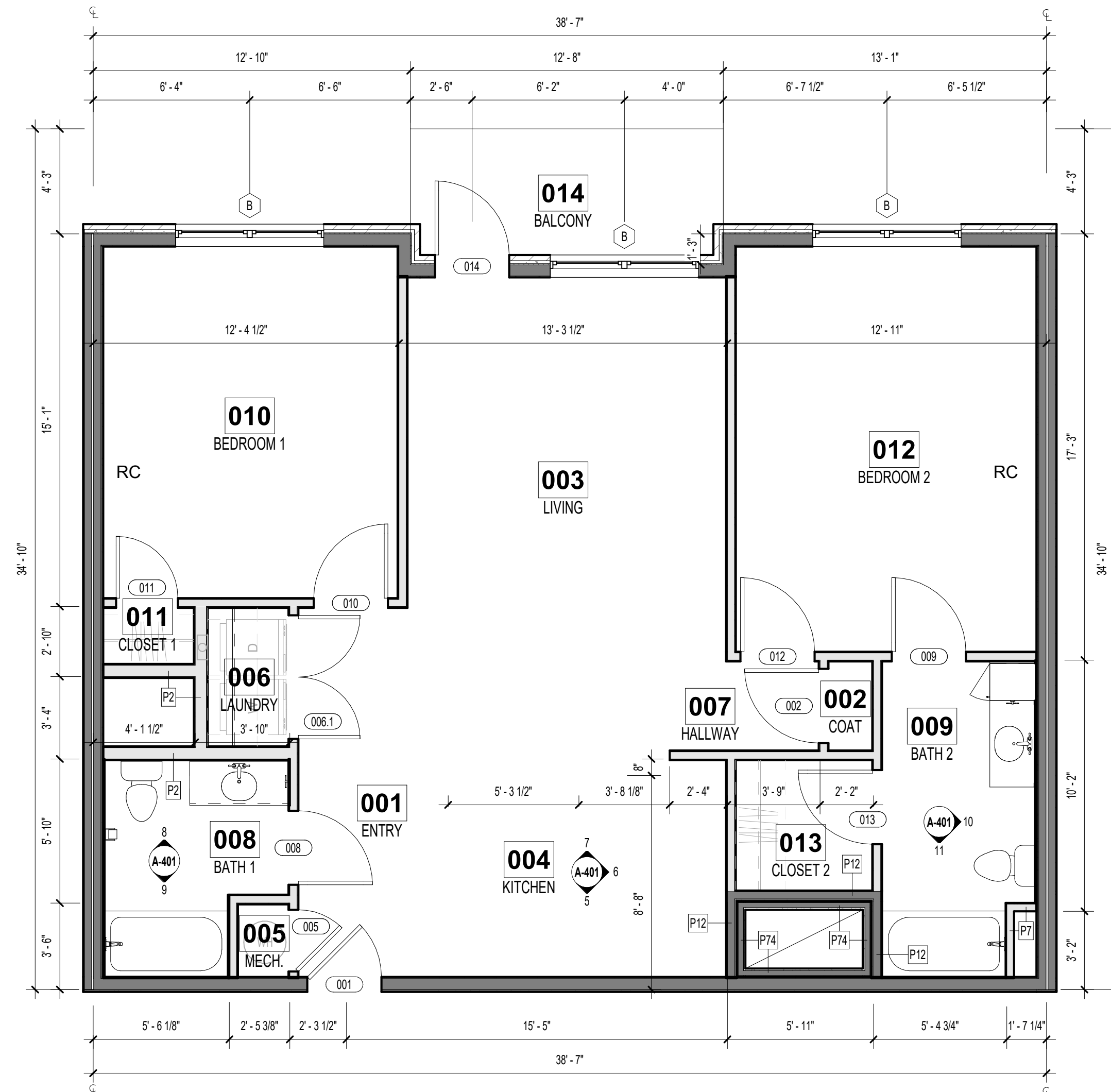
4 UNIT FINISH PLAN - ABERDEEN - ALT - TYPE B
1/8" = 1'-0"



3 UNIT RCP - ABERDEEN - ALT - TYPE B
1/8" = 1'-0"

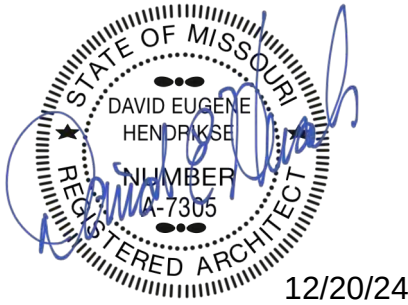


2 UNIT CLEAR SPACE PLAN - ABERDEEN - ALT - TYPE B
1/4" = 1'-0"



1 UNIT FLOOR PLAN - ABERDEEN - ALT - TYPE B
1/4" = 1'-0"

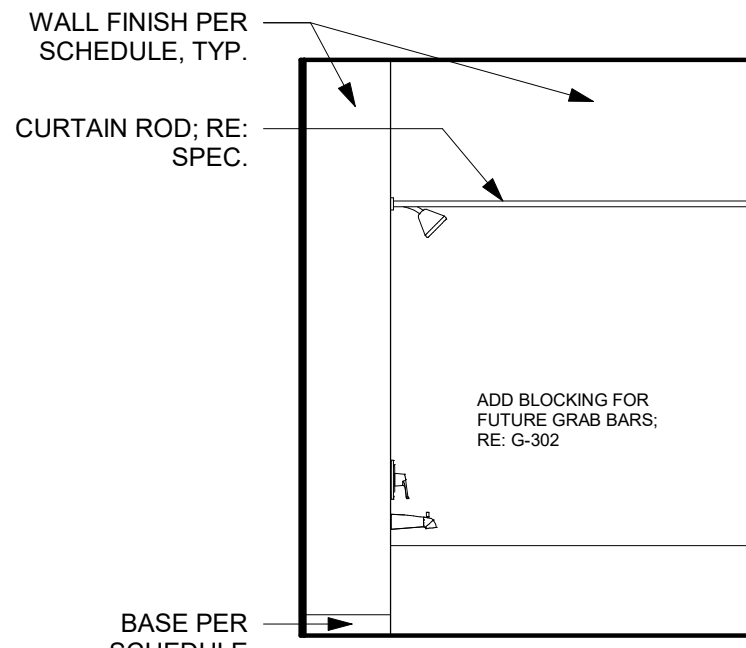
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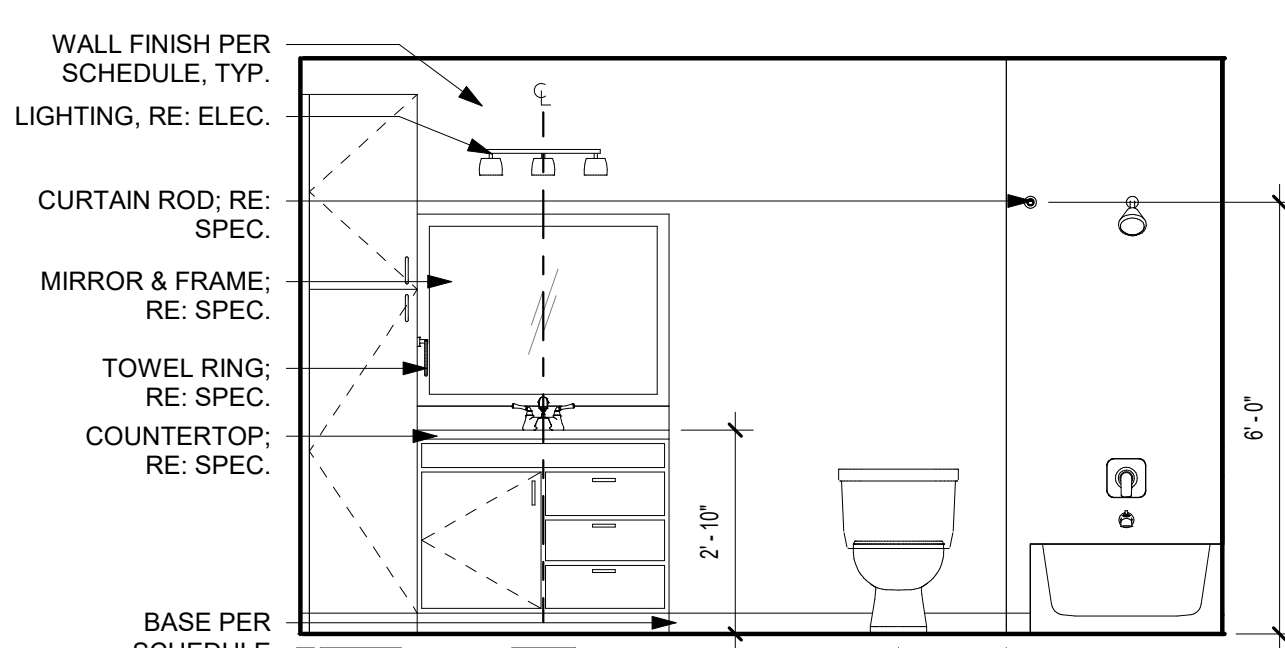
THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
ABERDEEN (2 BR) ALT UNIT PLAN
PROJECT NUMBER: 23099
SHEET NUMBER:

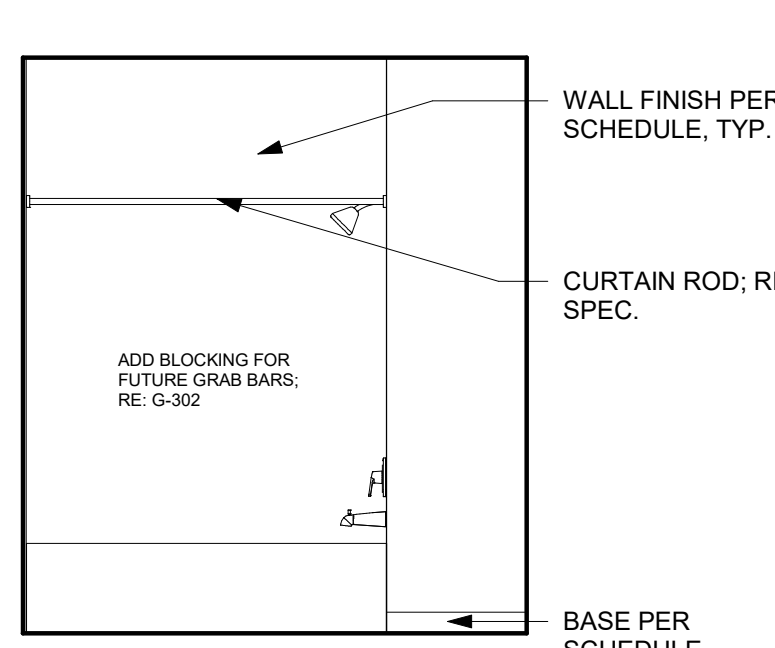
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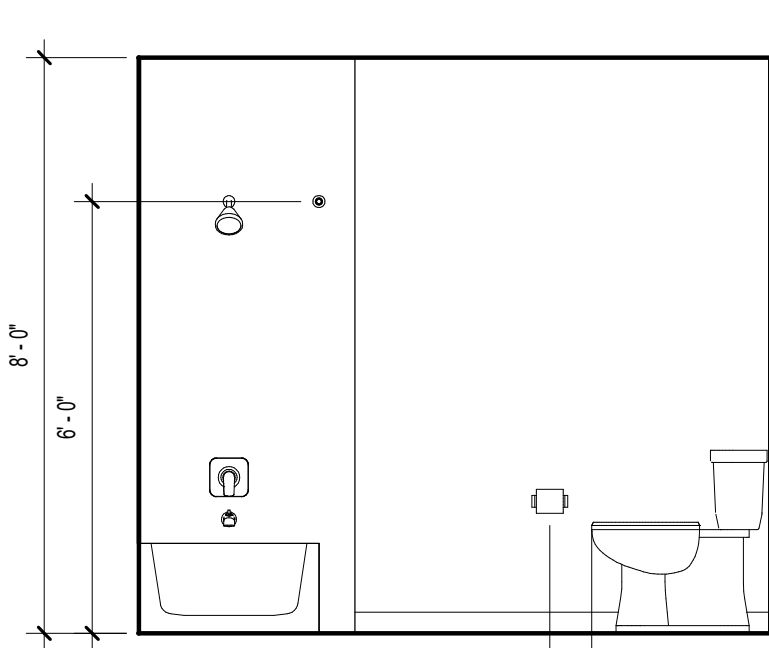
12 ABERDEEN BATH 2 ELEV. 2
3/8" = 1'-0"



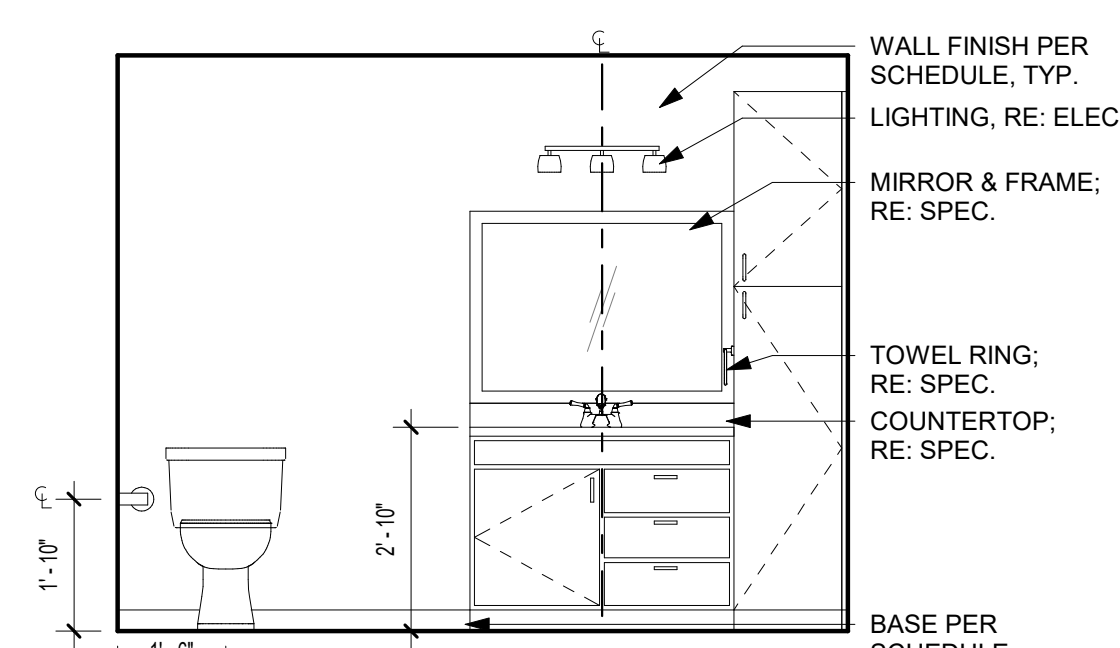
11 ABERDEEN BATH 2 ELEV. 1
3/8" = 1'-0"



10 ABERDEEN BATH 1 ELEV. 3
3/8" = 1'-0"



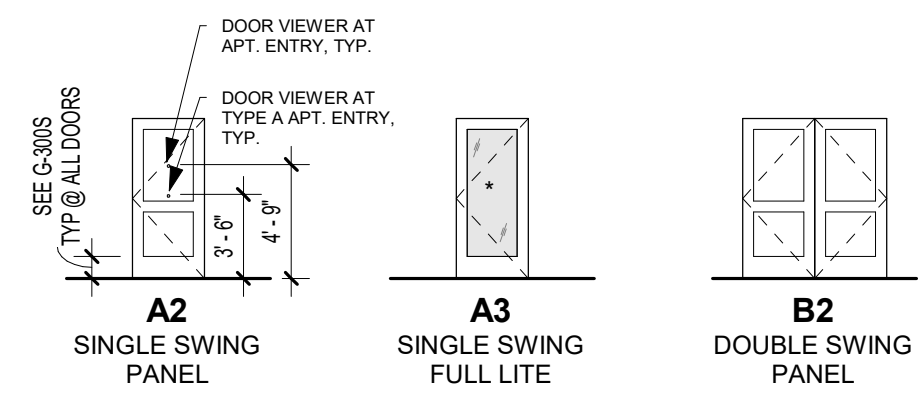
9 ABERDEEN BATH 1 ELEV. 2
3/8" = 1'-0"



8 ABERDEEN BATH 1 ELEV. 1
3/8" = 1'-0"

REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-120 FOR RCP LEGEND
REFERENCE A-400 FOR UNIT PLAN LEGEND
REFERENCE A-102 & A-103 FOR RC LOCATIONS

DOOR TYPES - UNITS

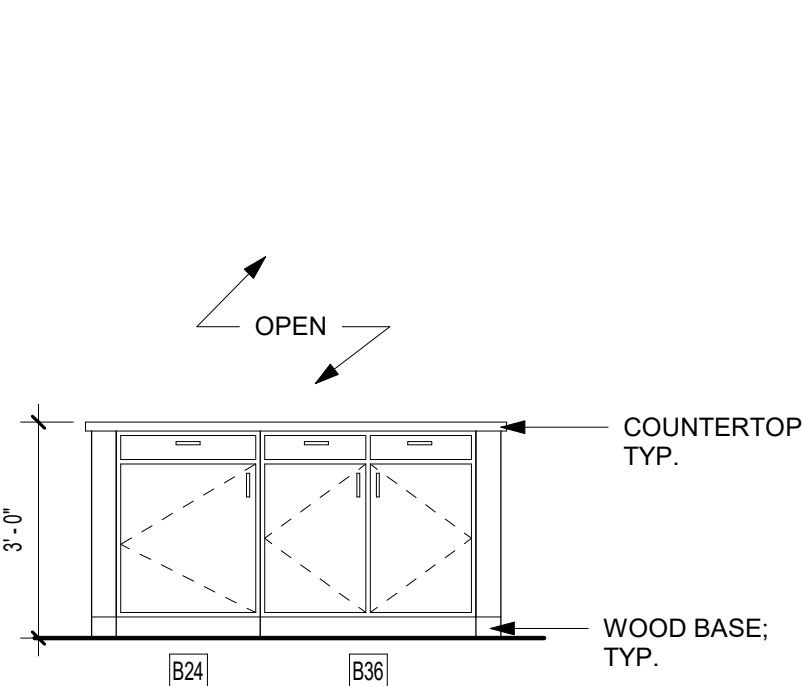


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01/25/2024 - CITY SUBMITTAL

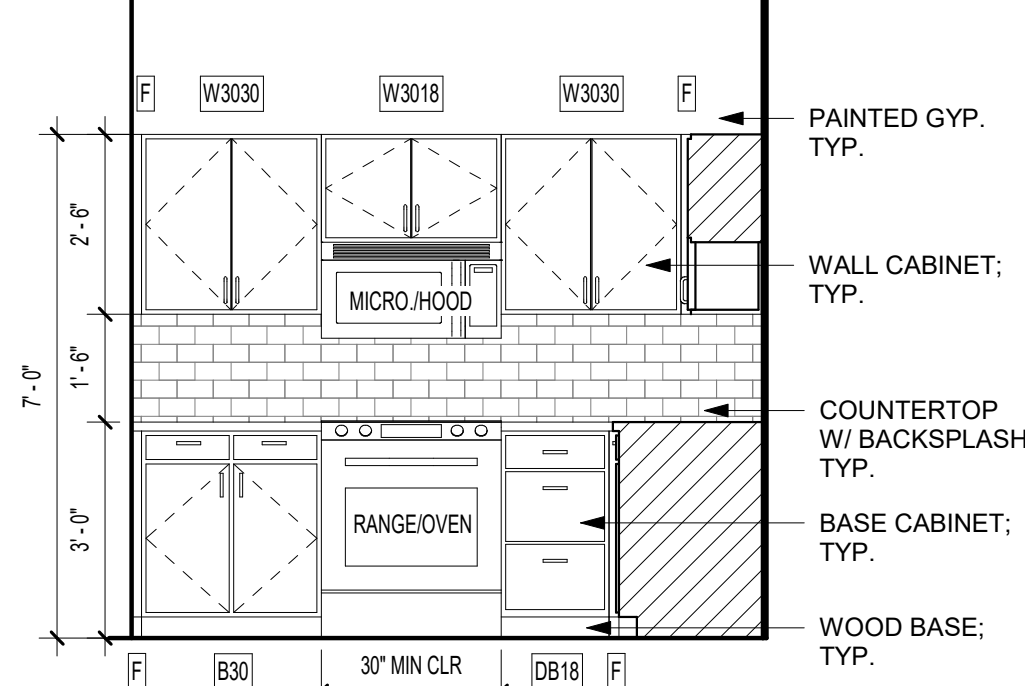
REVISIONS:
1 10/21/24 ADDENDUM #1
3 12/20/24 ADDENDUM #3

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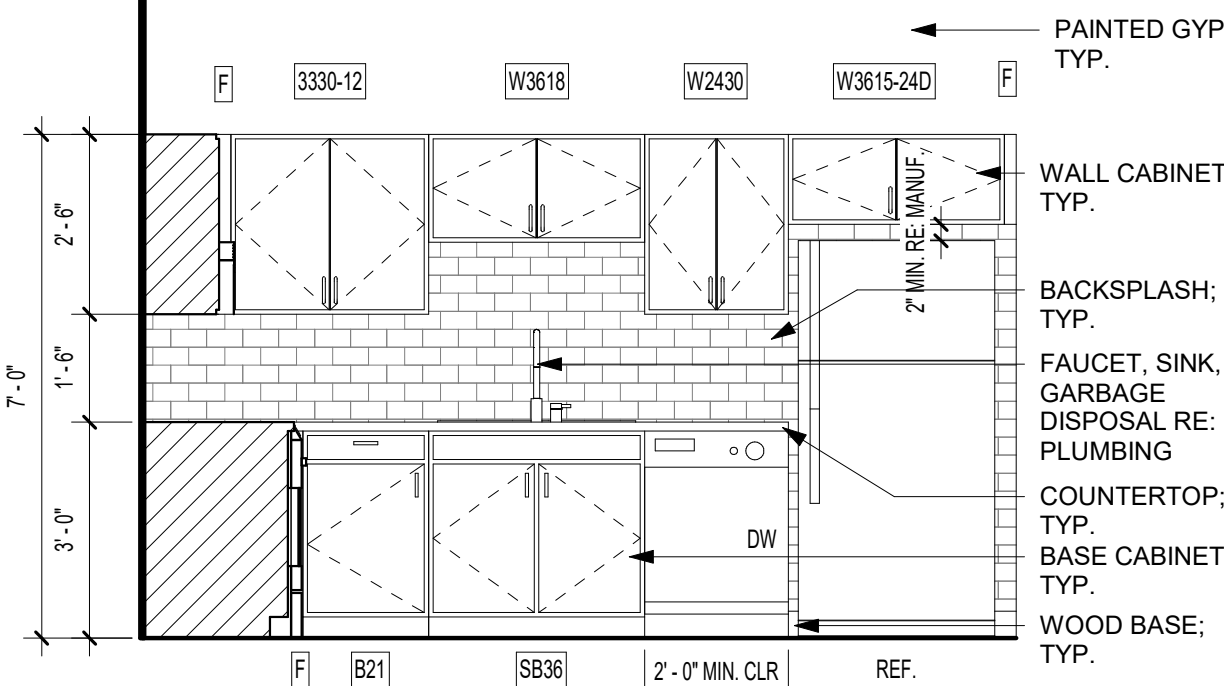
Room Finish Schedule - Units						
Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
001	ENTRY	LVT1	WB, PT3	PT1	PT4	
002	COAT	LVT1	WB, PT3	PT1	PT4	
003	LIVING	LVT1	WB, PT3	PT1	PT4	
004	KITCHEN	LVT1	WB, PT3	PT1	PT4	
005	MECH.	LVT1	WB, PT3	PT1	PT4	
006	LAUNDRY	LVT1	WB, PT3	PT1	PT4	
007	HALLWAY	LVT1	WB, PT3	PT1	PT4	
008	BATH 1	LVT1 OR LVT2	WB, PT3	PT1	PT4	LVT2 IN TYPE A UNITS ONLY
009	BATH 2	LVT1 OR LVT2	WB, PT3	PT1	PT4	LVT2 IN TYPE A UNITS ONLY
010	BEDROOM 1	LVT1	WB, PT3	PT1	PT4	
011	CLOSET 1	LVT1	WB, PT3	PT1	PT4	
012	BEDROOM 2	LVT1	WB, PT3	PT1	PT4	
013	CLOSET 2	LVT1	WB, PT3	PT1	PT4	
014	BALCONY	CONCRETE				



7 ABERDEEN KITCHEN ELEV. 3
3/8" = 1'-0"

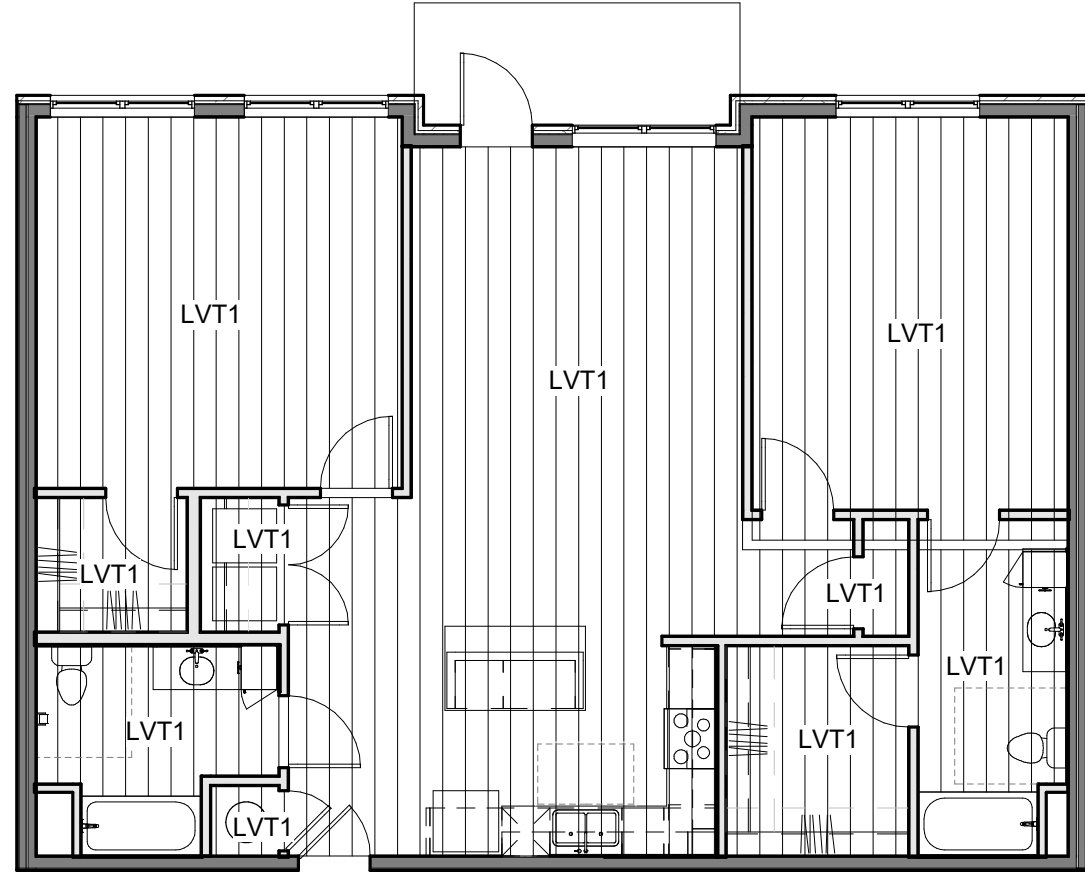


6 ABERDEEN KITCHEN ELEV. 2
3/8" = 1'-0"

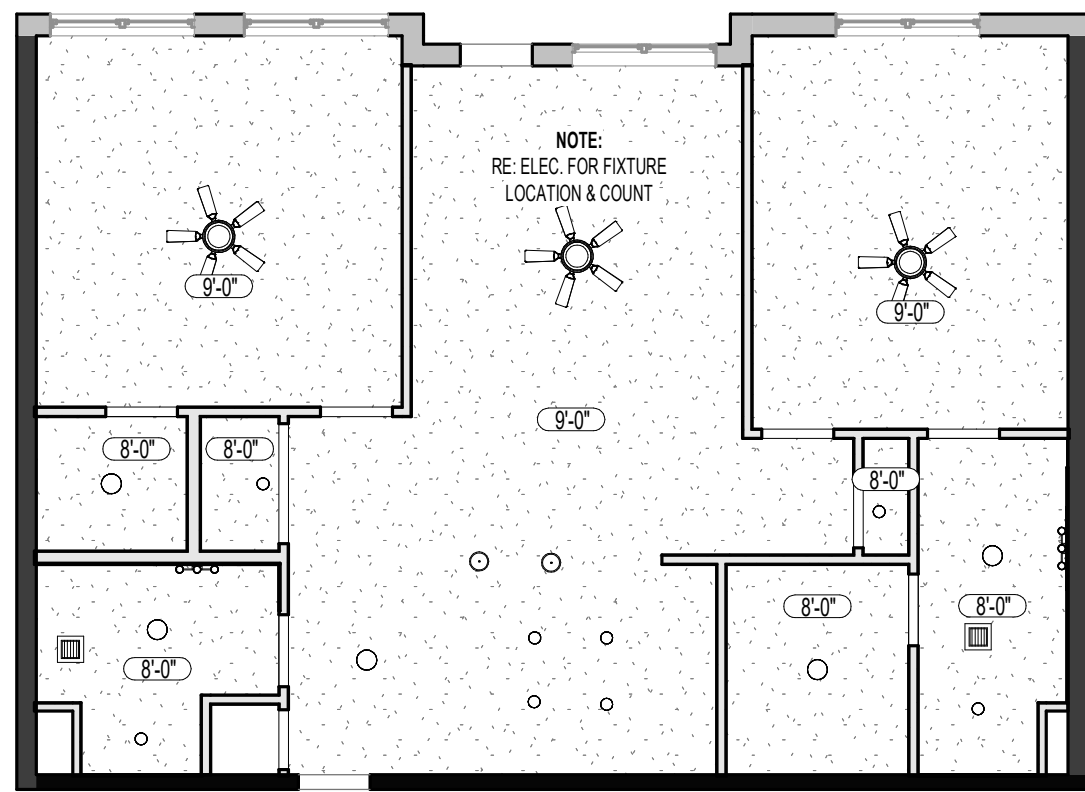


5 ABERDEEN KITCHEN ELEV. 1
3/8" = 1'-0"

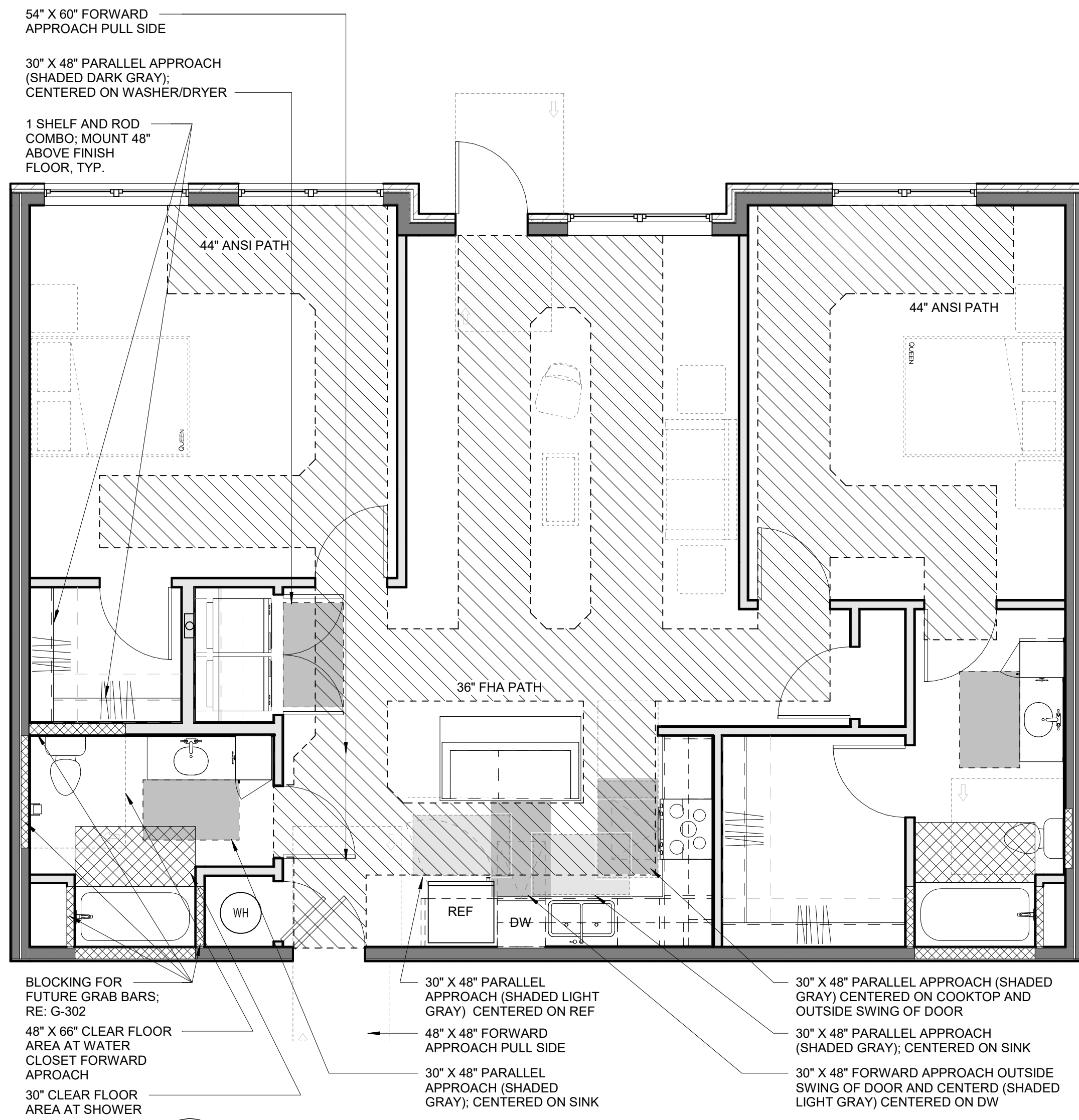
DOOR SCHEDULE - UNIT DOORS									
Mark	Location	Width	Height	Thickness	Fire Rating	Door Type	Frame	Comments	
001	ENTRY	3'-0"	6'-8"	1 3/4"	20	A2	TIMELY	SPRING HINGES (CLOSER) SMOKE SEAL	
002	COAT	3'-0"	6'-8"	1 3/8"		A2	PH		
005	MECH.	3'-0"	6'-8"	1 3/8"		A2	PH	UNDERCUT IF REQ'D	
006	LAUNDRY	3'-0"	6'-8"	1 3/8"		A2	PH	UNDERCUT IF REQ'D	
006.1	LAUNDRY	6'-0"	6'-8"	1 3/8"		B2	PH	UNDERCUT IF REQ'D	
008	BATH 1	3'-0"	6'-8"	1 3/8"		A2	PH		
009	BATH 2	3'-0"	6'-8"	1 3/8"		A2	PH		
010	BEDROOM 1	3'-0"	6'-8"	1 3/8"		A2	PH		
011	CLOSET 1	3'-0"	6'-8"	1 3/8"		A2	PH		
011.1	CLOSET	6'-0"	6'-8"	1 3/8"		B2	PH		
012	BEDROOM 2	3'-0"	6'-8"	1 3/8"		A2	PH		
013	CLOSET	3'-0"	6'-8"	1 3/8"		A2	PH		
014	BALCONY	3'-0"	8'-0"	1 3/4"		A3	TIMELY		



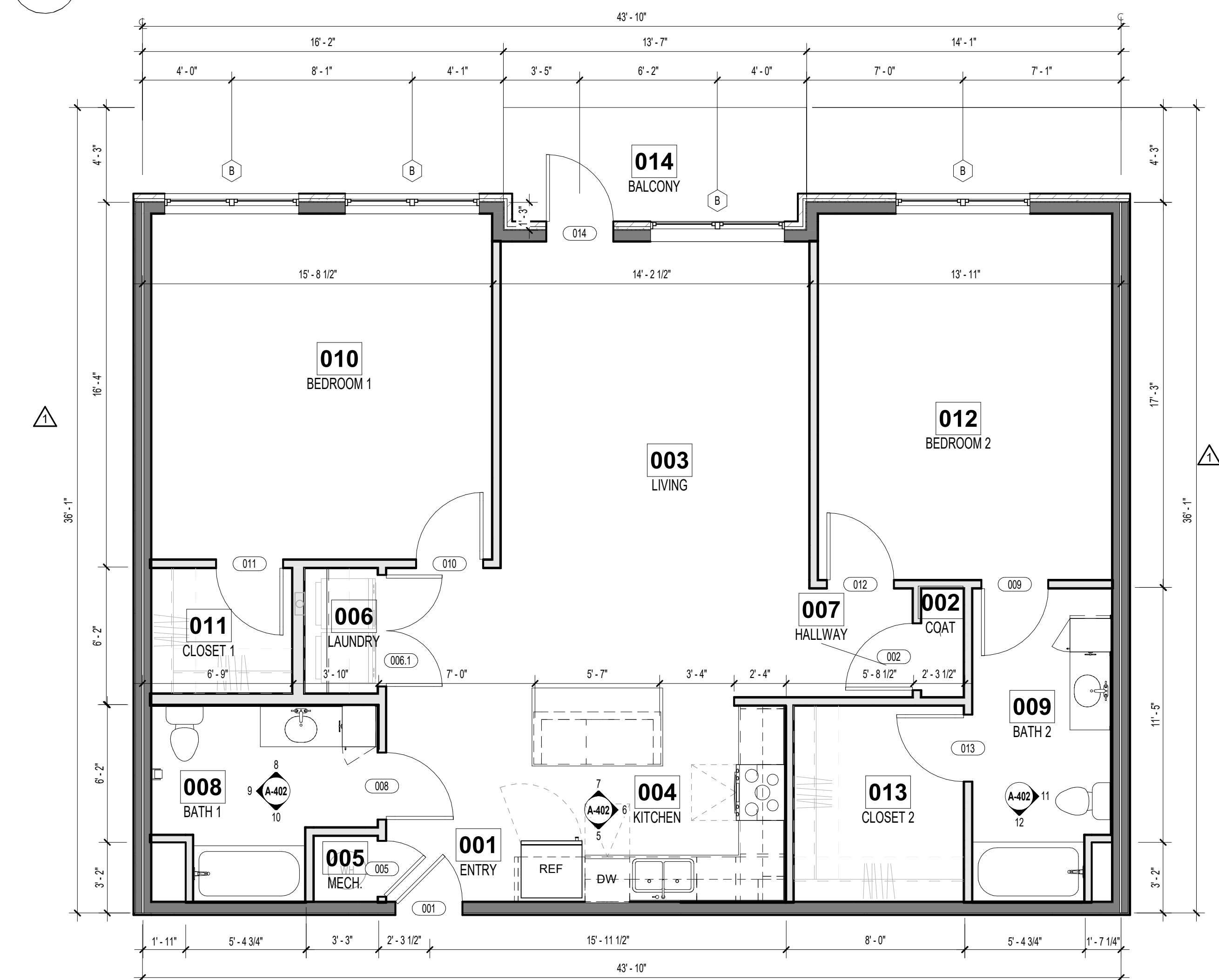
4 UNIT FINISH PLAN - ABERDEEN (2 BR) - TYPE B
1/8" = 1'-0"



3 UNIT RCP - ABERDEEN (2 BR) - TYPE B
1/8" = 1'-0"



2 UNIT CLEAR SPACE PLAN - ABERDEEN (2 BR) - TYPE B
1/4" = 1'-0"



1 UNIT FLOOR PLAN - ABERDEEN (2 BR) - TYPE B
1/4" = 1'-0"

THE VILLAGE AT DISCOVERY -
LOT 4

SHEET TITLE
ABERDEEN (2 BR) UNIT PLAN -
TYPE B

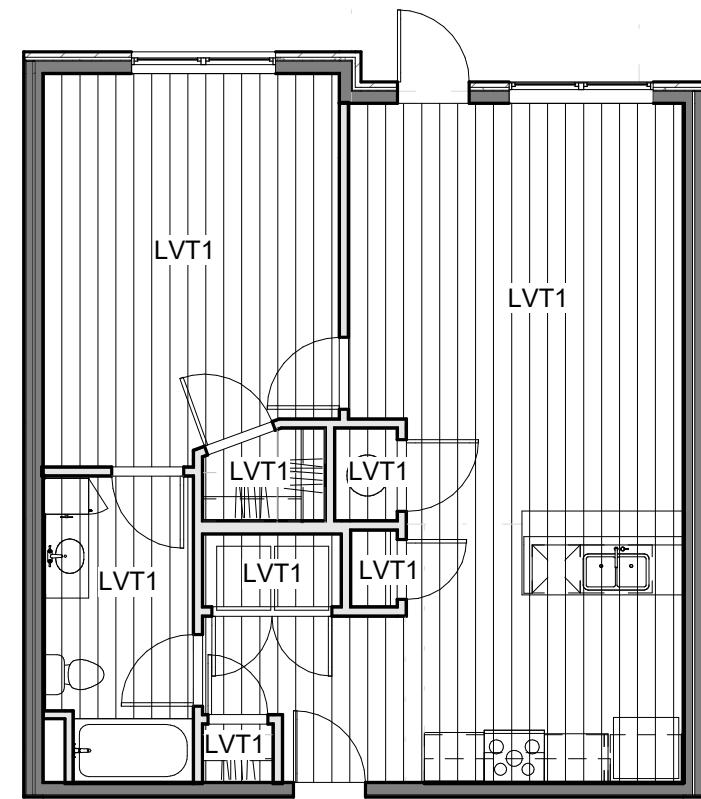
PROJECT NUMBER: 23099
SHEET NUMBER:

A-402

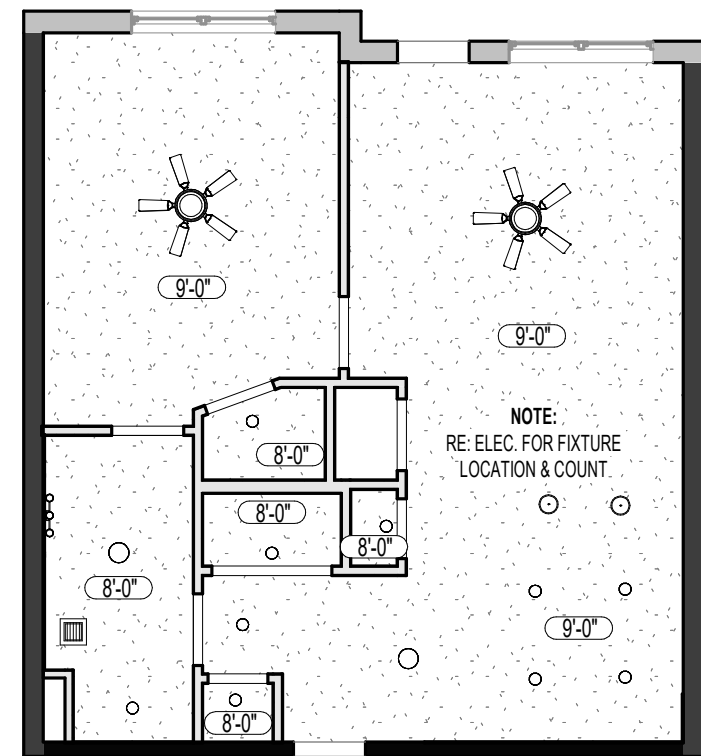
LEE'S SUMMIT, MO

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Room Finish Schedule - Units						
Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
001	ENTRY	LVT1	WB, PT3	PT1	PT4	
002	COAT	LVT1	WB, PT3	PT1	PT4	
003	LIVING	LVT1	WB, PT3	PT1	PT4	
004	KITCHEN	LVT1	WB, PT3	PT1	PT4	
005	MECH.	LVT1	WB, PT3	PT1	PT4	
006	LAUNDRY	LVT1	WB, PT3	PT1	PT4	
007	HALLWAY	LVT1	WB, PT3	PT1	PT4	
008	BATH 1	LVT1 OR LVT2		PT1	PT4	LVT2 IN TYPE A UNITS ONLY
009	BATH 2	LVT1 OR LVT2		PT1	PT4	LVT2 IN TYPE A UNITS ONLY
010	BEDROOM 1	LVT1	WB, PT3	PT1	PT4	
011	CLOSET 1	LVT1	WB, PT3	PT1	PT4	
012	BEDROOM 2	LVT1	WB, PT3	PT1	PT4	
013	CLOSET 2	LVT1	WB, PT3	PT1	PT4	
014	BALCONY	CONCRETE				



4 UNIT FINISH PLAN - ADRIAN (1 BR) - TYPE B
1/8" = 1'-0"



3 UNIT RCP - ADRIAN (1 BR) - TYPE B
1/8" = 1'-0"

1 SHELF AND ROD COMBO, MOUNT 48" ABOVE FINISH FLOOR, TYP.

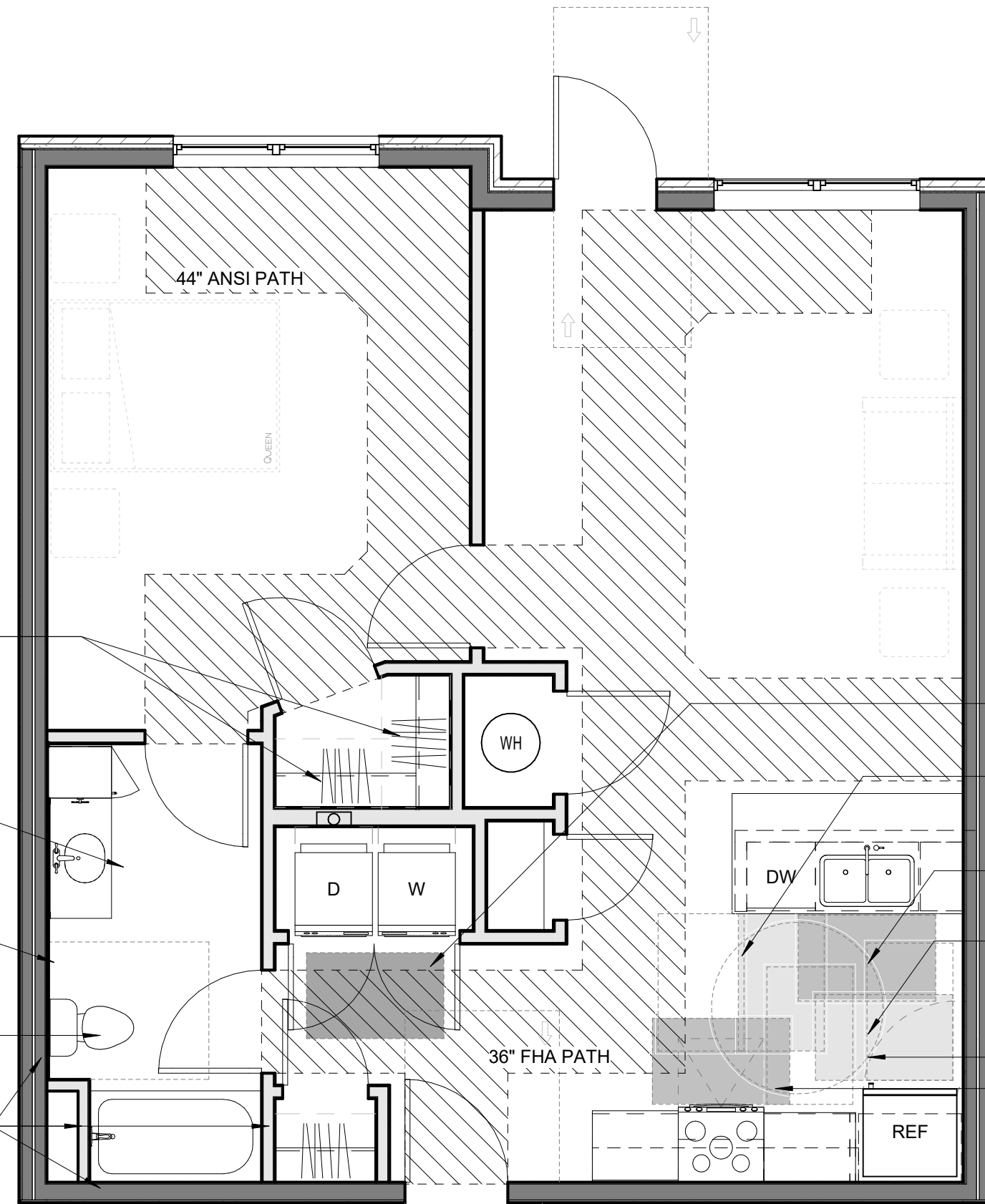
30" X 48" PARALLEL APPROACH (SHADED GRAY); CENTERED ON SINK

48" X 66" CLEAR FLOOR AREA AT WATER CLOSET FORWARD APPROACH

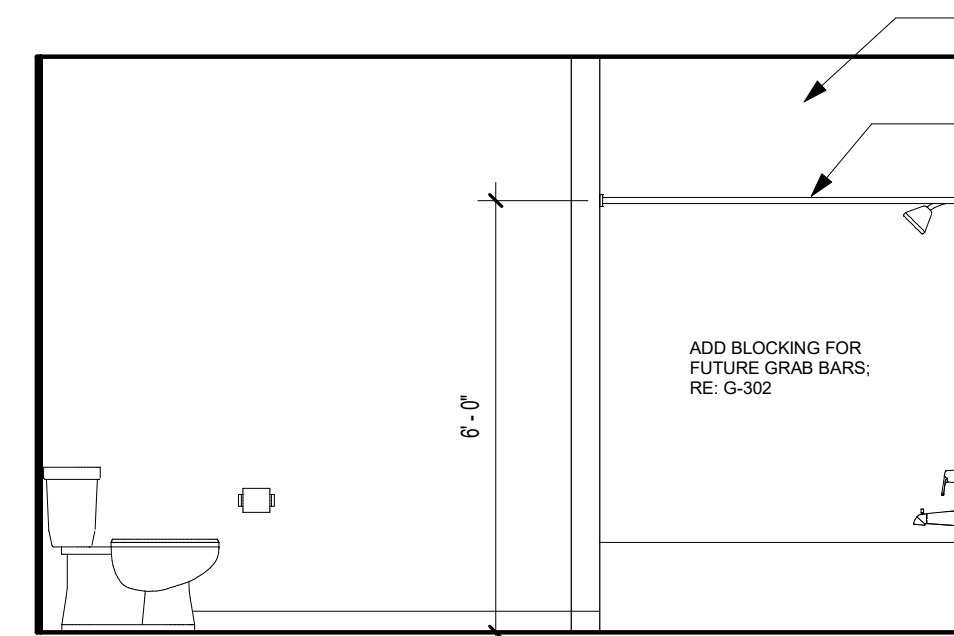
30" CLEAR FLOOR AREA AT SHOWER

BLOCKING FOR FUTURE GRAB BARS; RE: G-302

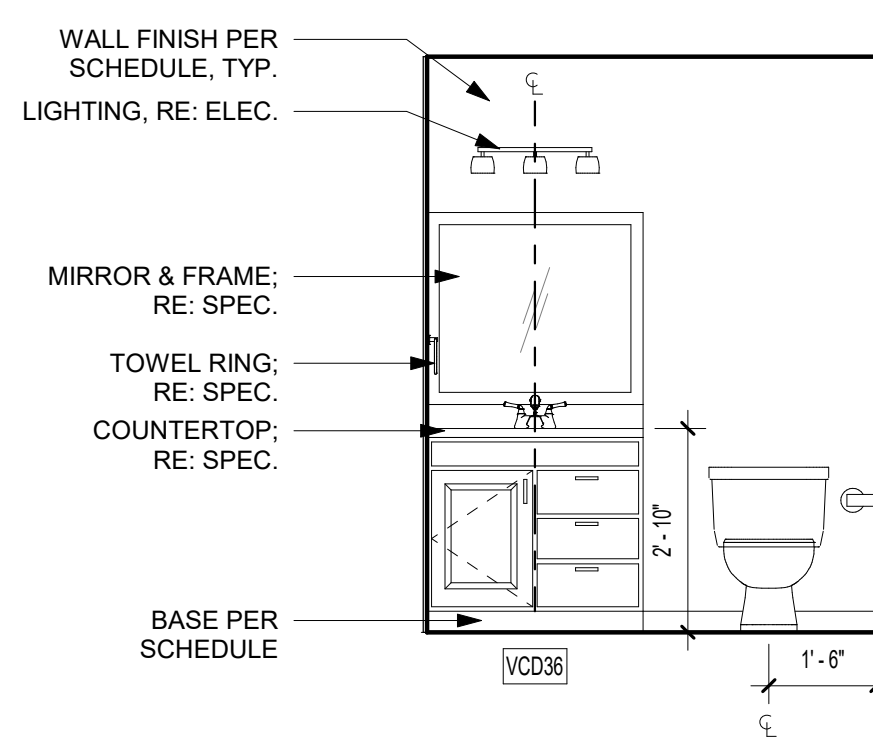
48" X 48" FORWARD APPROACH PUSH SIDE



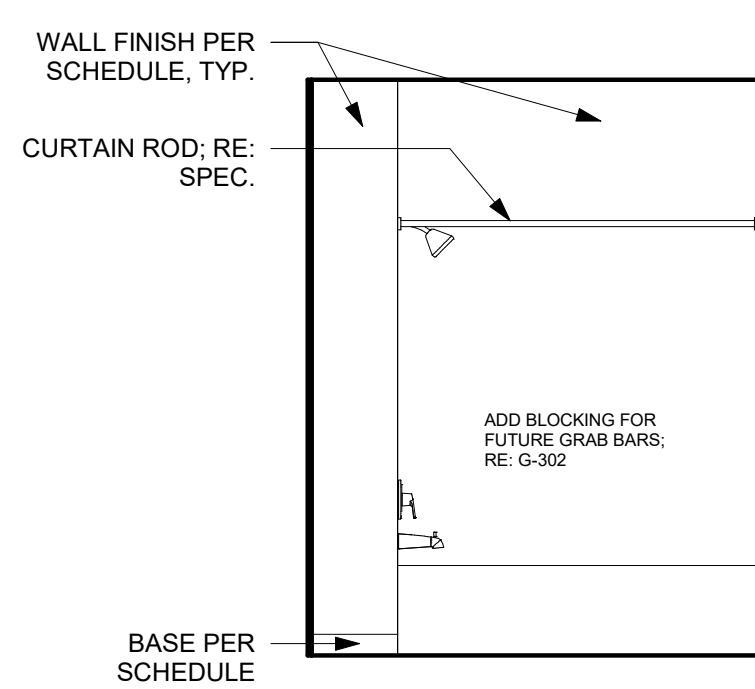
2 UNIT CLEAR SPACE PLAN - ADRIAN (1 BR) - TYPE B
1/4" = 1'-0"



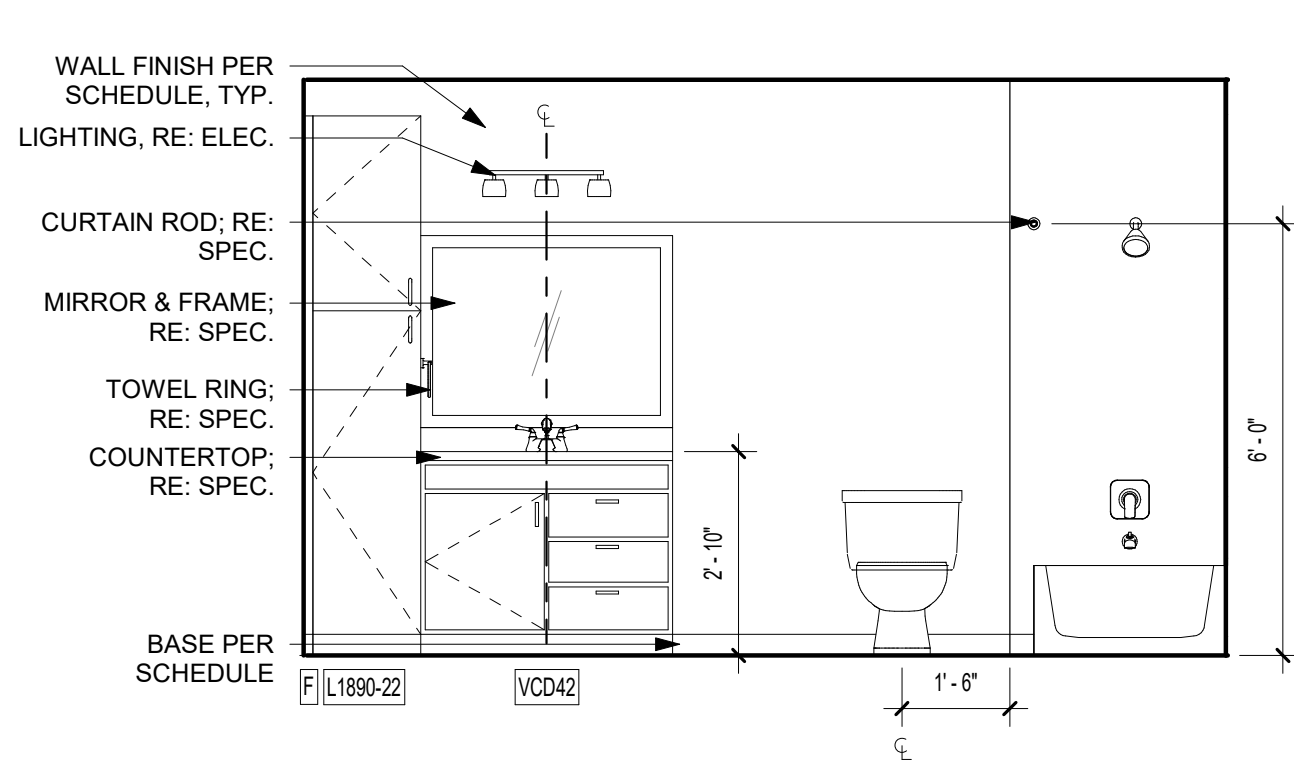
11 ADRIAN ALT BATH ELEV. 2
3/8" = 1'-0"



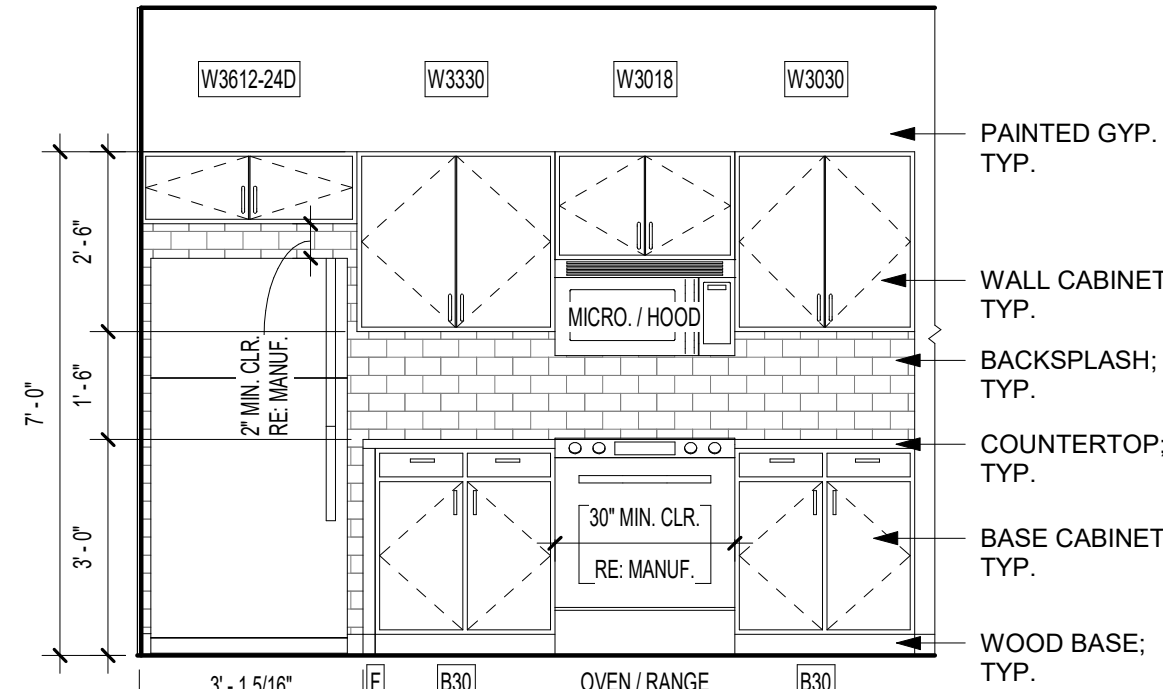
10 ADRIAN ALT BATH ELEV. 1
3/8" = 1'-0"



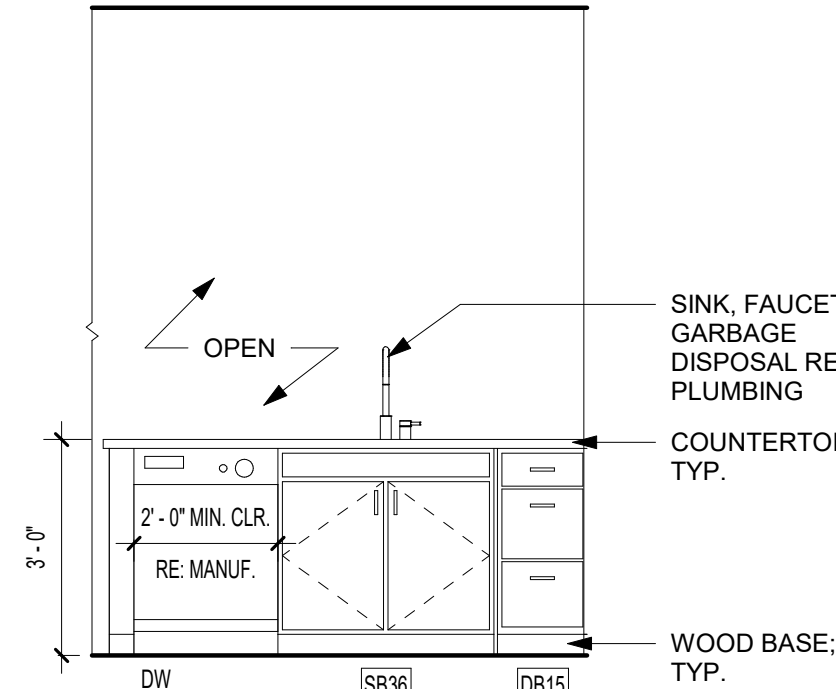
8 ADRIAN BATH ELEV. 2
3/8" = 1'-0" (MIRRORED)



7 ADRIAN BATH ELEV. 1
3/8" = 1'-0" (MIRRORED)

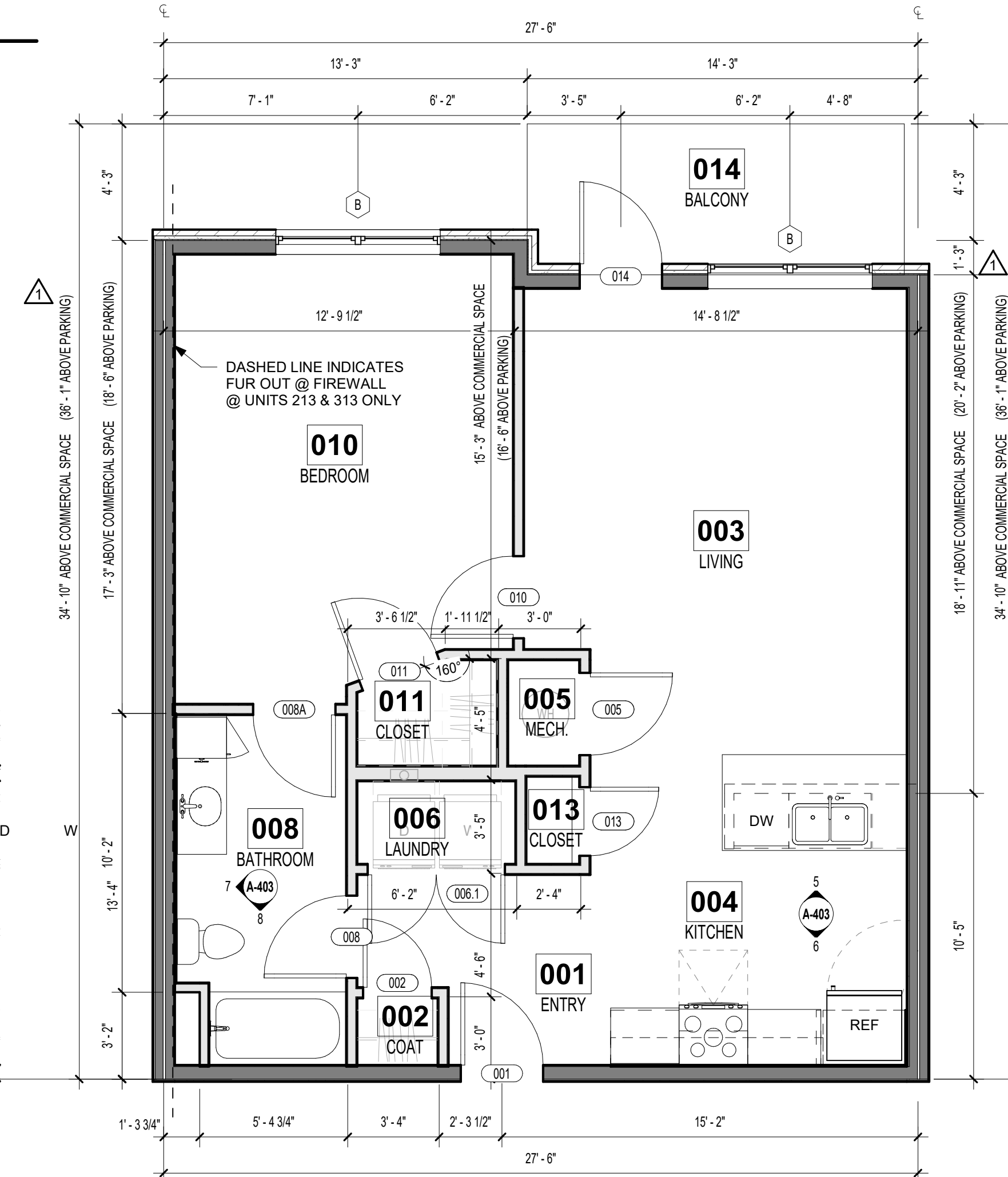


6 ADRIAN KITCHEN ELEV. 2
3/8" = 1'-0"

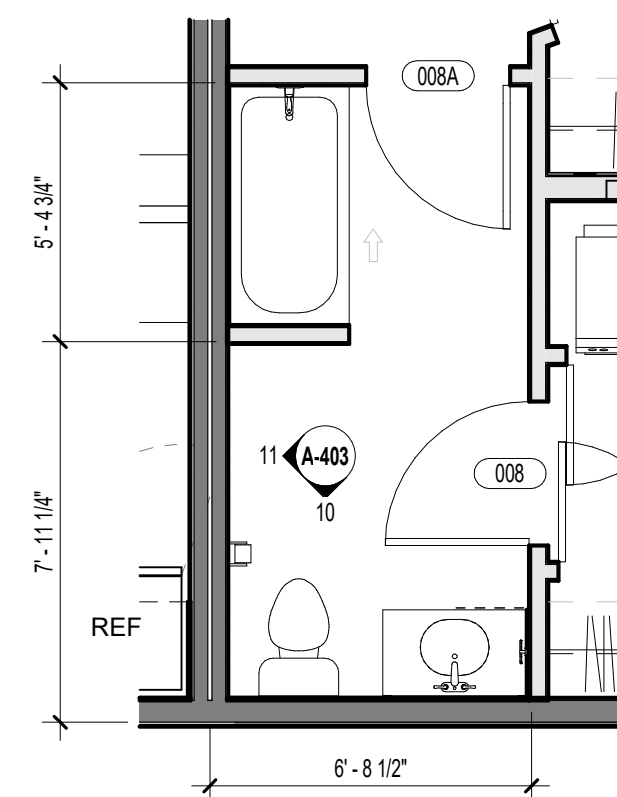


5 ADRIAN KITCHEN ELEV. 1
3/8" = 1'-0"

DOOR SCHEDULE - UNIT DOORS							
Mark	Location	Width	Height	Thickness	Fire Rating	Door Type	Comments
001	ENTRY	3'-0"	6'-8"	1 3/4"	20	A2	SPRING HINGES (CLOSER) SMOKE SEAL
002	COAT	3'-0"	6'-8"	1 3/8"		A2	PH
005	MECH.	3'-0"	6'-8"	1 3/8"		A2	PH
006	LAUNDRY	3'-0"	6'-8"	1 3/8"		A2	PH
006.1	LAUNDRY	6'-0"	6'-8"	1 3/8"		B2	PH
008	BATH 1	3'-0"	6'-8"	1 3/8"		A2	PH
009	BATH 2	3'-0"	6'-8"	1 3/8"		A2	PH
010	BEDROOM 1	3'-0"	6'-8"	1 3/8"		A2	PH
011	CLOSET	3'-0"	6'-8"	1 3/8"		A2	PH
011.1	CLOSET	6'-0"	6'-8"	1 3/8"		B2	PH
012	BEDROOM 2	3'-0"	6'-8"	1 3/8"		A2	PH
013	CLOSET	3'-0"	6'-8"	1 3/8"		A2	PH
014	BALCONY	3'-0"	8'-0"	1 3/4"		A3	TIMELY



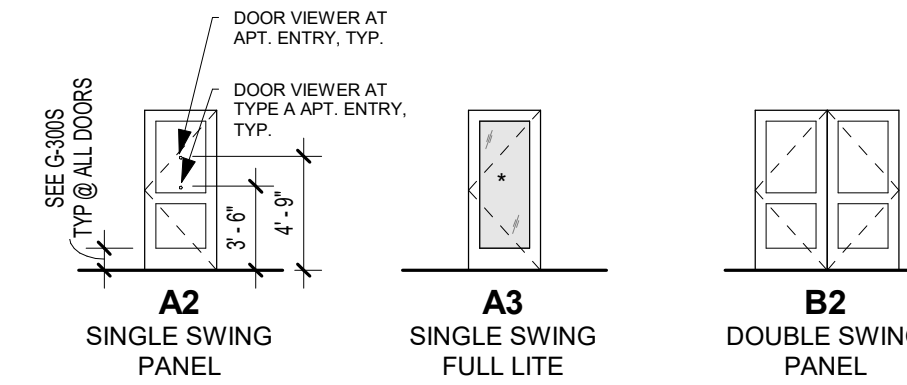
1 UNIT FLOOR PLAN - ADRIAN (1 BR) - TYPE B
1/4" = 1'-0"



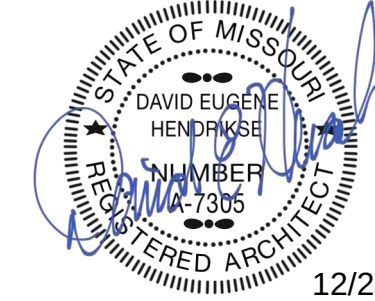
9 ADRIAN ALT BATH
1/4" = 1'-0" (UNITS 209 & 211 ONLY)

REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-120 FOR RCP LEGEND
REFERENCE A-400 FOR UNIT PLAN LEGEND
REFERENCE A-102 & A-103 FOR RC LOCATIONS

DOOR TYPES - UNITS



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12/20/24

THE VILLAGE AT DISCOVERY -
LOT 4

LEE'S SUMMIT, MO

SHEET TITLE
ADRIAN (1 BR) UNIT PLAN

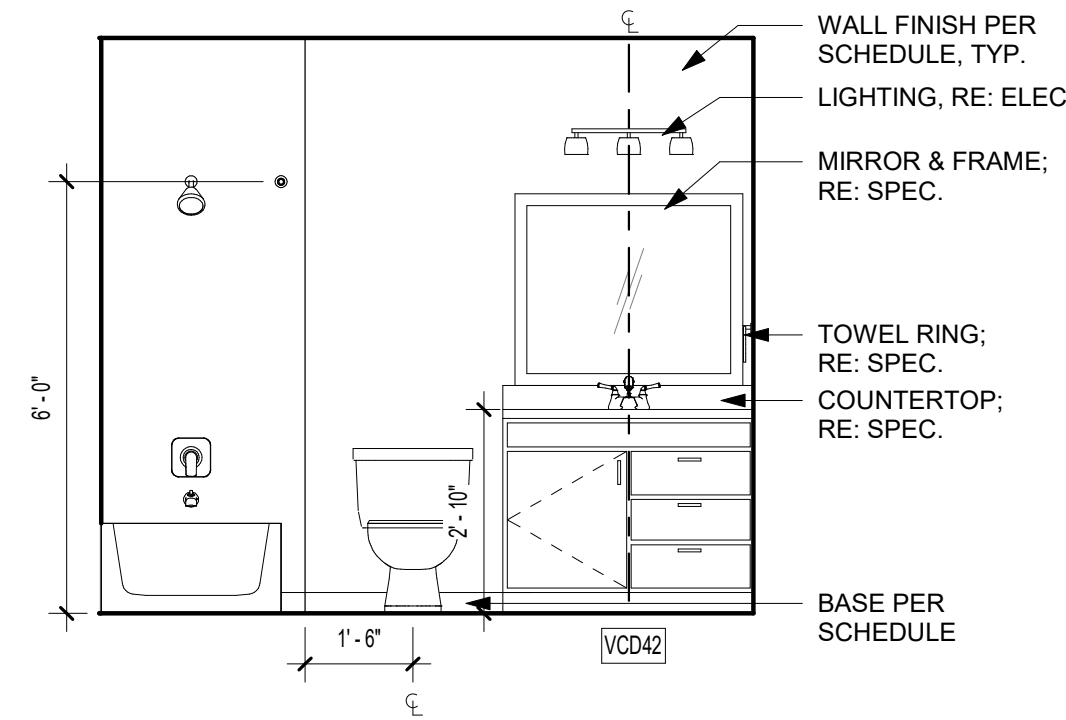
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SHEET NUMBER:

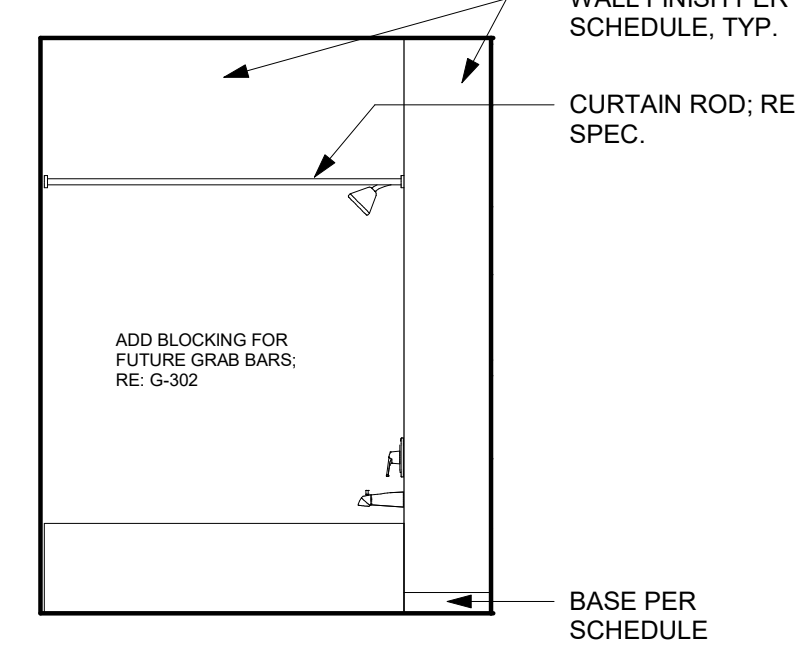
A-403

REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-120 FOR RCP LEGEND
REFERENCE A-400 FOR UNIT PLAN LEGEND
REFERENCE A-102 & A-103 FOR RC LOCATIONS

PRINTS ISSUED
01/25/2024 - CITY SUBMITTAL
REVISIONS:
3 12/20/24 ADDENDUM #3

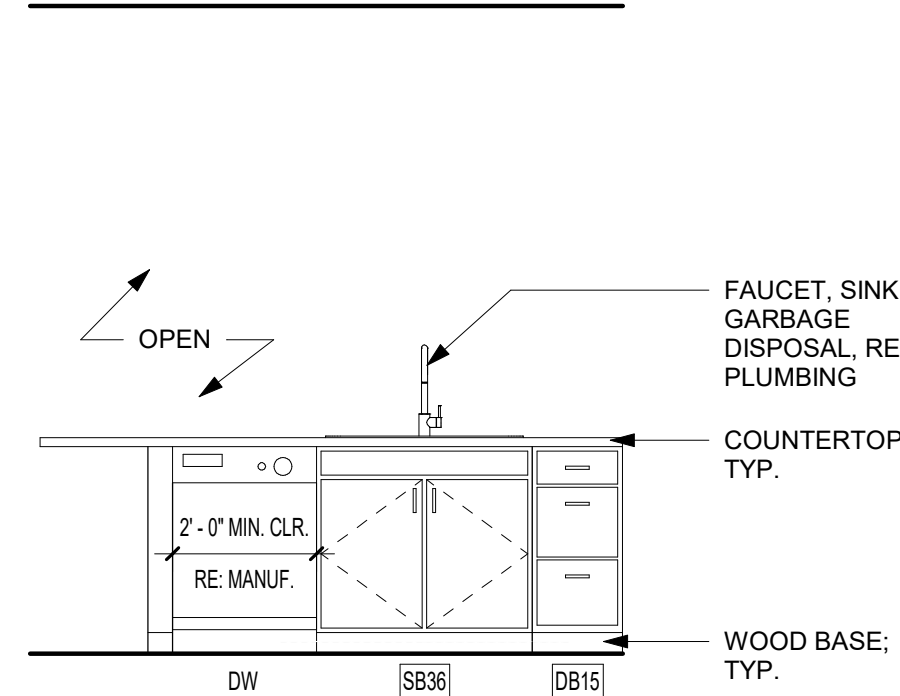


8 ADRIAN CORNER BATH ELEV. 2
3/8" = 1'-0"

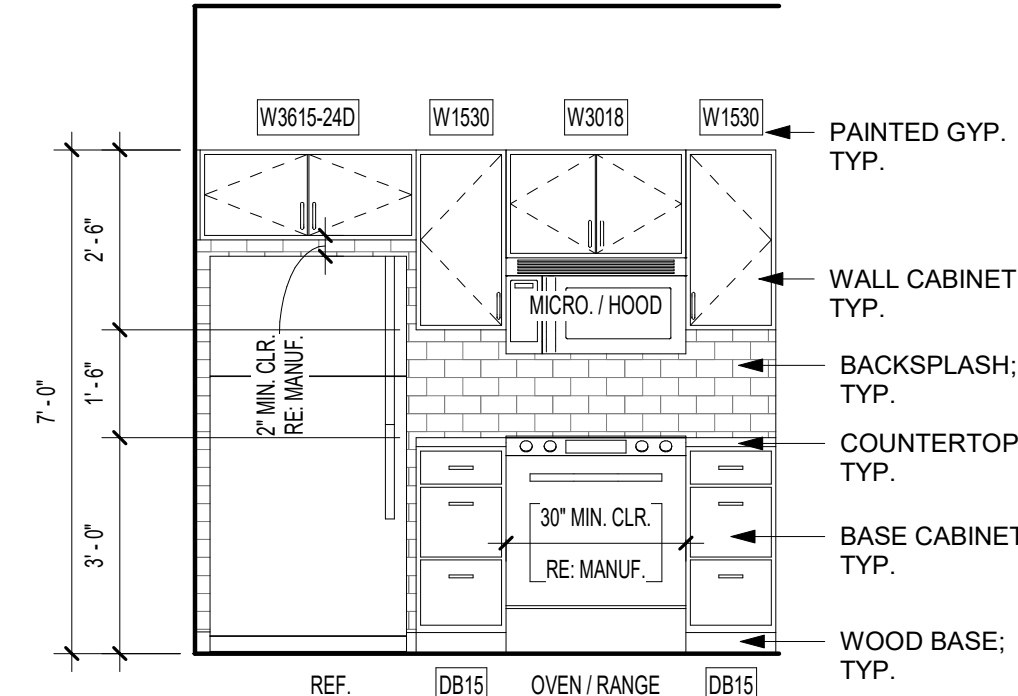


7 ADRIAN CORNER BATH ELEV. 1
3/8" = 1'-0"

Room Finish Schedule - Units						
Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
001	ENTRY	LVT1	WB, PT3	PT1	PT4	
002	COAT	LVT1	WB, PT3	PT1	PT4	
003	LIVING	LVT1	WB, PT3	PT1	PT4	
004	KITCHEN	LVT1	WB, PT3	PT1	PT4	
005	MECH.	LVT1	WB, PT3	PT1	PT4	
006	LAUNDRY	LVT1	WB, PT3	PT1	PT4	
007	HALLWAY	LVT1	WB, PT3	PT1	PT4	
008	BATH 1	LVT1 OR LVT2	WB, PT3	PT1	PT4	LVT2 IN TYPE A UNITS ONLY
009	BATH 2	LVT1 OR LVT2	WB, PT3	PT1	PT4	LVT2 IN TYPE A UNITS ONLY
010	BEDROOM 1	LVT1	WB, PT3	PT1	PT4	
011	CLOSET 1	LVT1	WB, PT3	PT1	PT4	
012	BEDROOM 2	LVT1	WB, PT3	PT1	PT4	
013	CLOSET 2	LVT1	WB, PT3	PT1	PT4	
014	BALCONY	CONCRETE				

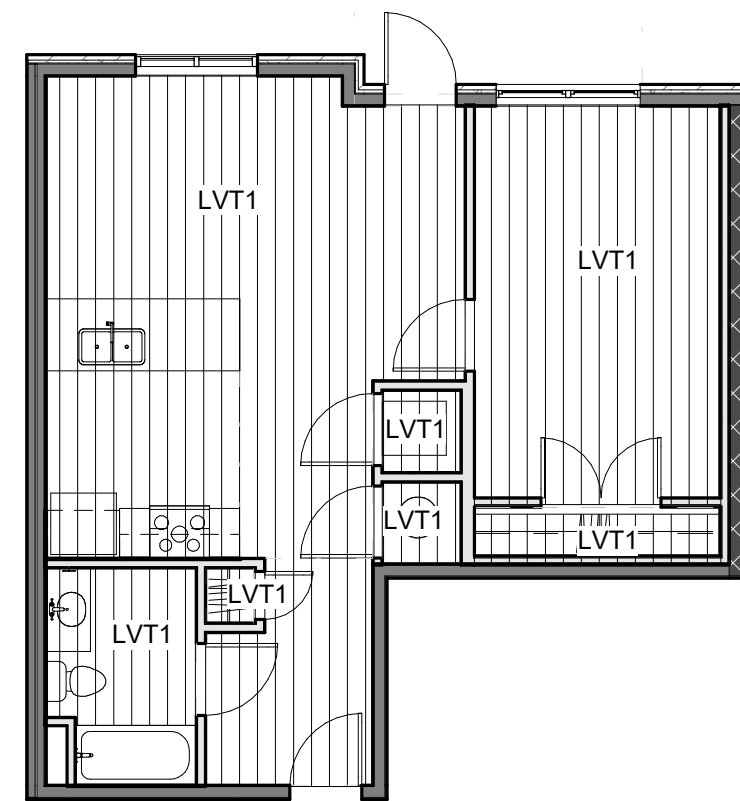


6 ADRIAN CORNER KIT. ELEV. 2
3/8" = 1'-0" (MIRRORED)

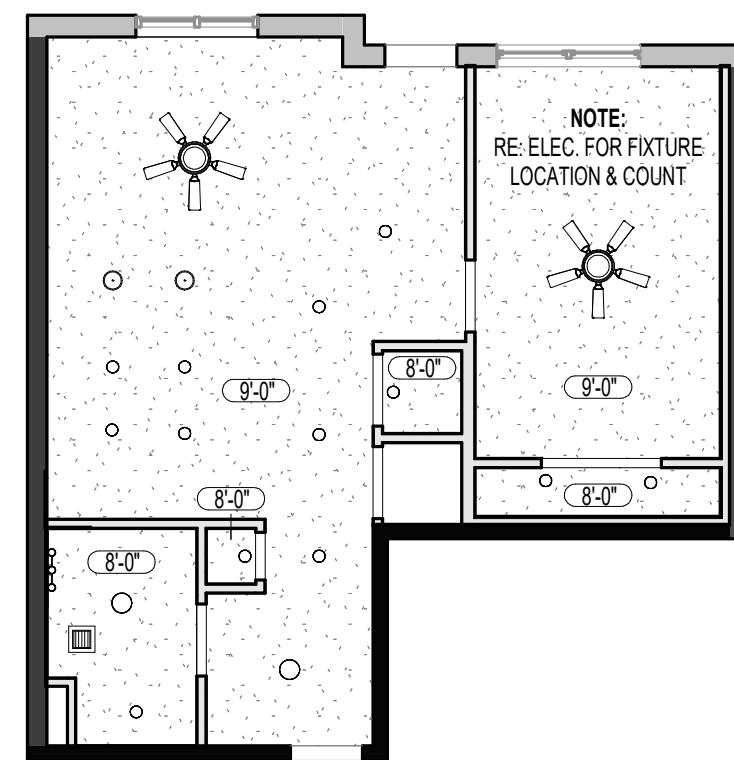


5 ADRIAN CORNER KIT. ELEV. 1
3/8" = 1'-0" (MIRRORED)

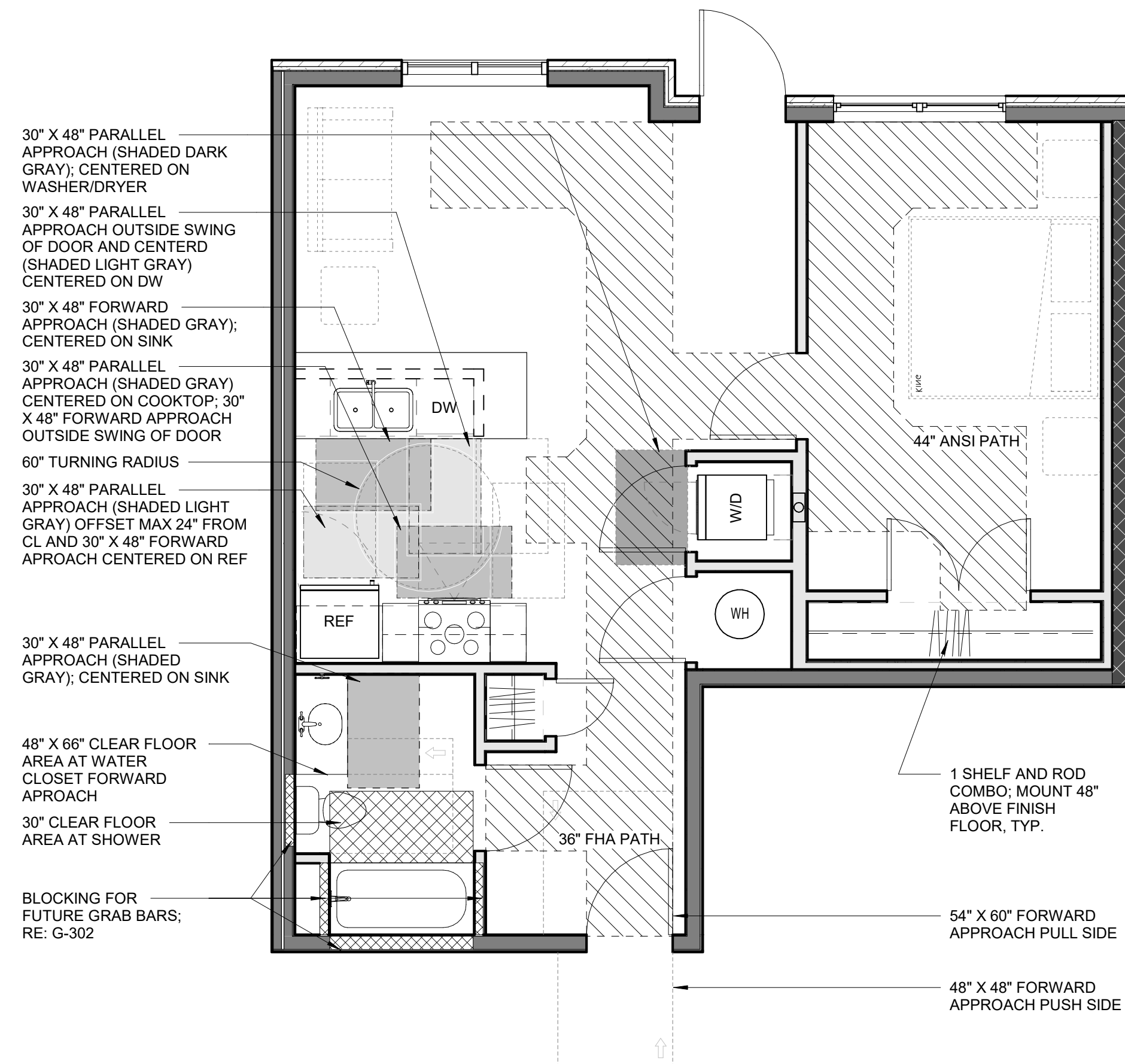
DOOR SCHEDULE - UNIT DOORS									
Mark	Location	Width	Height	Thickness	Fire Rating (Minutes)	Door Type	Frame Type	Comments	
001	ENTRY	3'-0"	6'-8"	1 3/4"	20	A2	TIMELY	SPRING HINGES (CLOSER) SMOKE SEAL	
002	COAT	3'-0"	6'-8"	1 3/8"		A2	PH		
005	MECH.	3'-0"	6'-8"	1 3/8"		A2	PH	UNDERCUT IF REQ'D	
006	LAUNDRY	3'-0"	6'-8"	1 3/8"		A2	PH	UNDERCUT IF REQ'D	
006.1	LAUNDRY	6'-0"	6'-8"	1 3/8"		B2	PH	UNDERCUT IF REQ'D	
008	BATH 1	3'-0"	6'-8"	1 3/8"		A2	PH		
009	BATH 2	3'-0"	6'-8"	1 3/8"		A2	PH		
010	BEDROOM 1	3'-0"	6'-8"	1 3/8"		A2	PH		
011	CLOSET	3'-0"	6'-8"	1 3/8"		A2	PH		
011.1	CLOSET	6'-0"	6'-8"	1 3/8"		B2	PH		
012	BEDROOM 2	3'-0"	6'-8"	1 3/8"		A2	PH		
013	CLOSET	3'-0"	6'-8"	1 3/8"		A2	PH		
014	BALCONY	3'-0"	8'-0"	1 3/4"		A3	TIMELY		



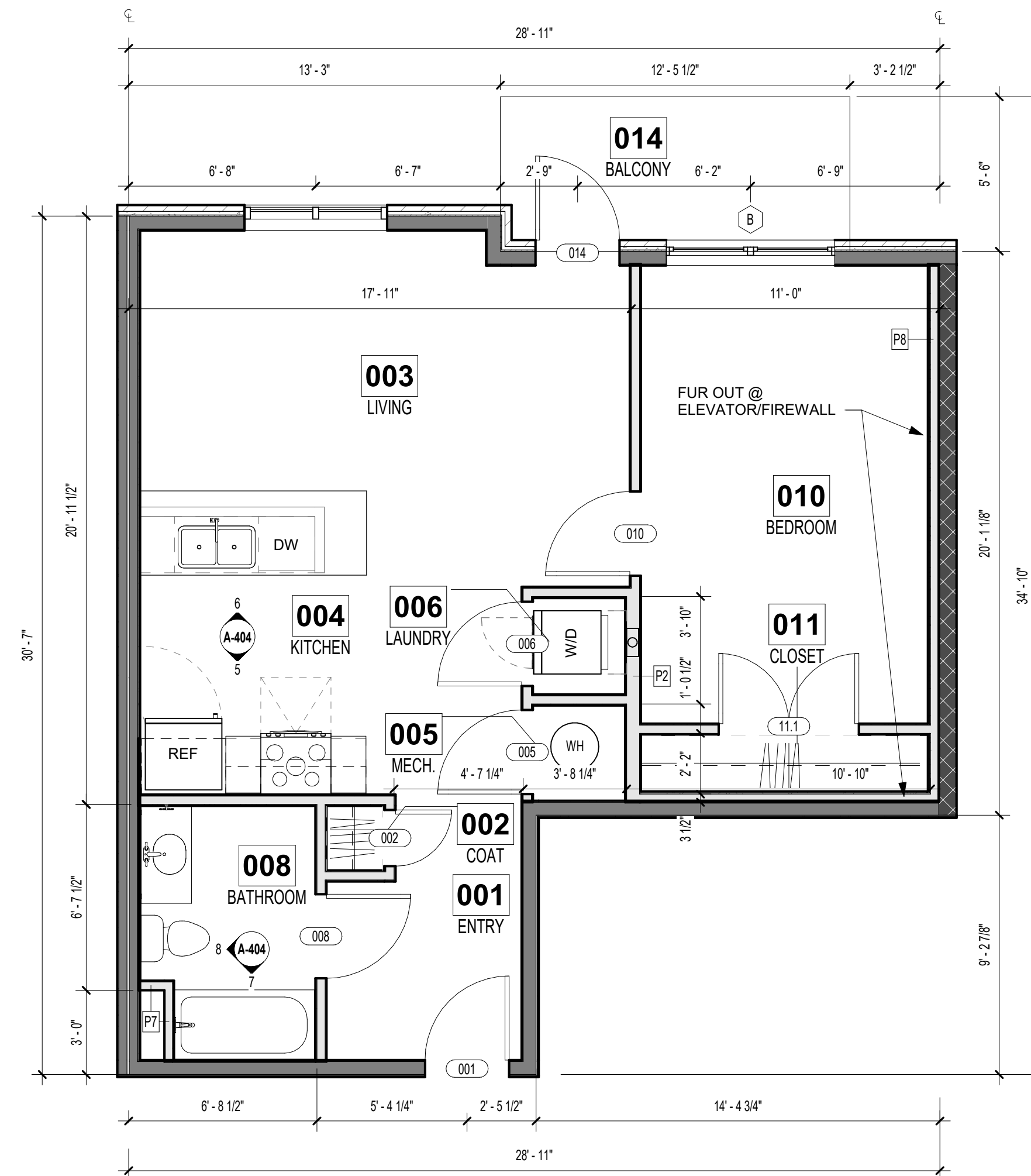
4 UNIT FINISH PLAN - ADRIAN CORNER (1 BR) - TYPE B
1/8" = 1'-0"



3 UNIT RCP - ADRIAN CORNER (1 BR) - TYPE B
1/8" = 1'-0"

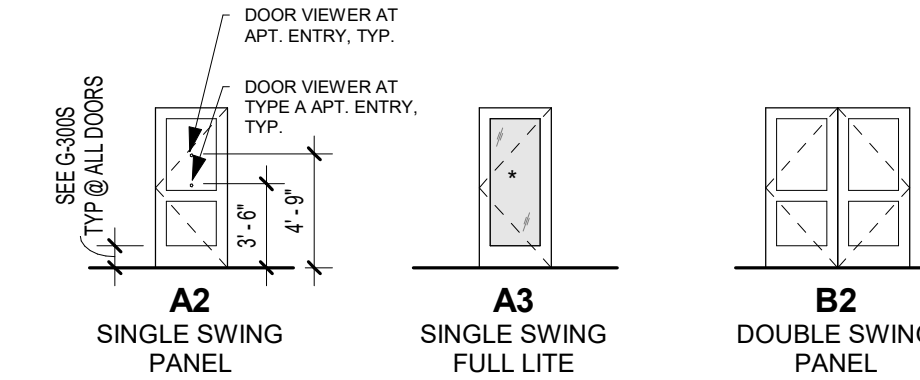


2 UNIT CLEAR SPACE PLAN - ADRIAN CORNER (1 BR) - TYPE B
1/4" = 1'-0"

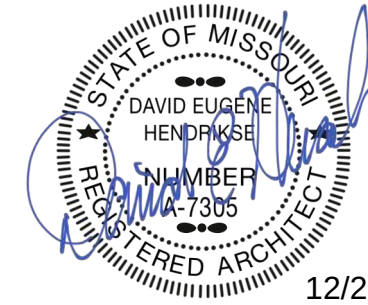


1 UNIT FLOOR PLAN - ADRIAN CORNER (1 BR) - TYPE B
1/4" = 1'-0"

DOOR TYPES - UNITS



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12/20/24

THE VILLAGE AT DISCOVERY -
LOT 4

LEE'S SUMMIT, MO

SHEET TITLE
ADRIAN CORNER (1 BR) UNIT PLAN

PROJECT NUMBER: 23099

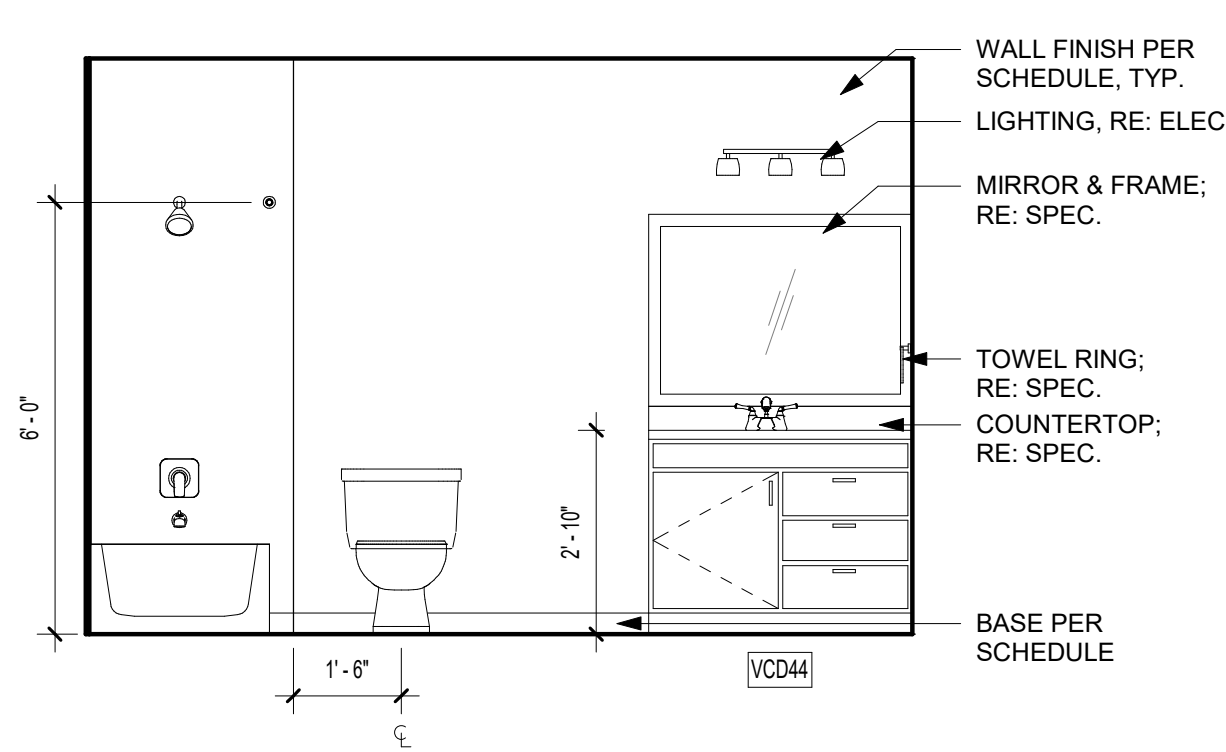
SHEET NUMBER:

A-404

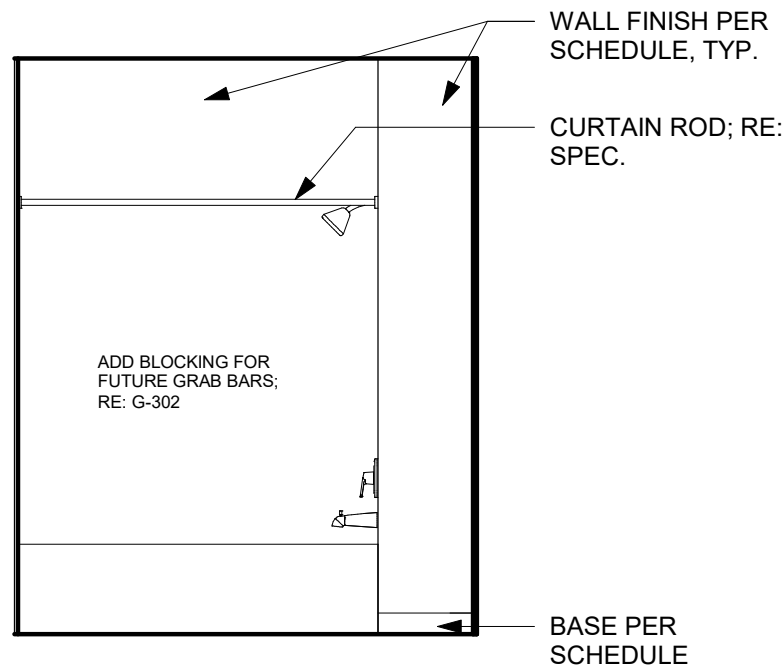
REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-120 FOR RCP LEGEND
REFERENCE A-400 FOR UNIT PLAN LEGEND
REFERENCE A-102 & A-103 FOR RC LOCATIONS

PRINTS ISSUED
01/25/2024 - CITY SUBMITTAL

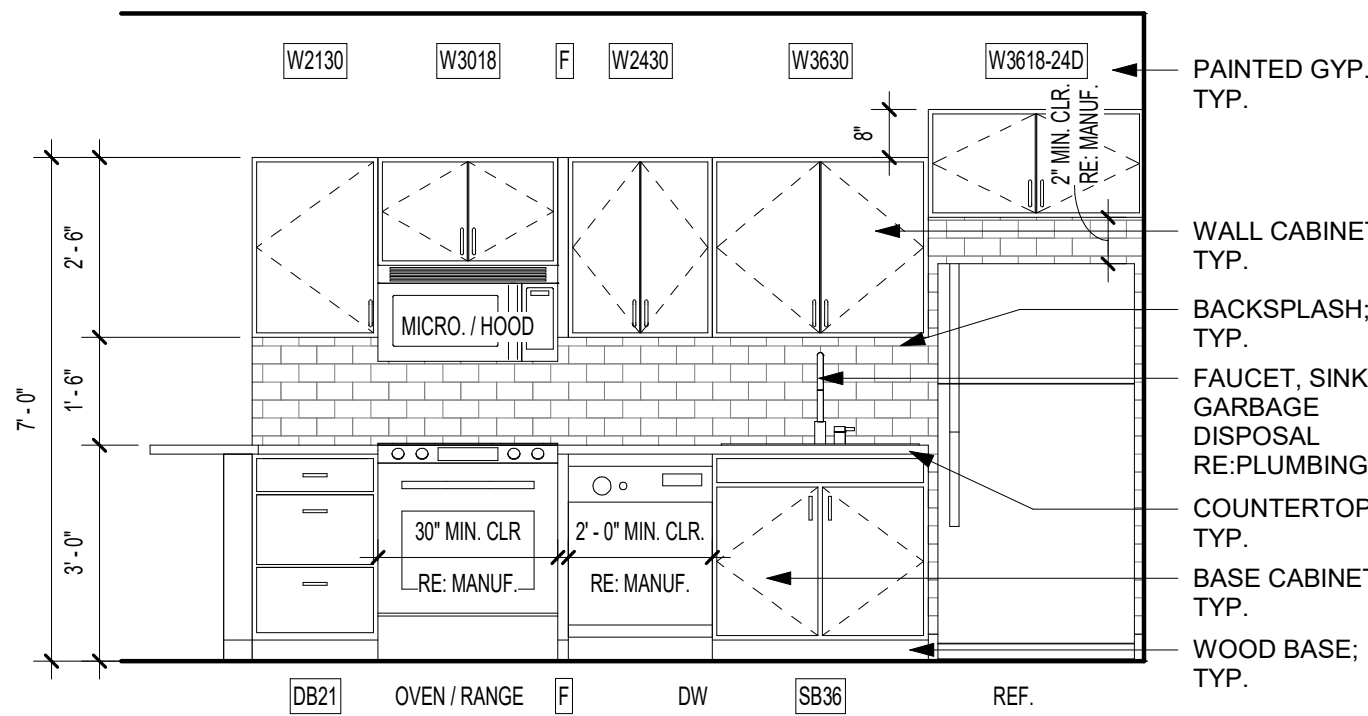
REVISIONS:
1 10/21/24 ADDENDUM #1
3 12/20/24 ADDENDUM #3



7 ARA ALT BATH ELEV. 2
3/8" = 1'-0"

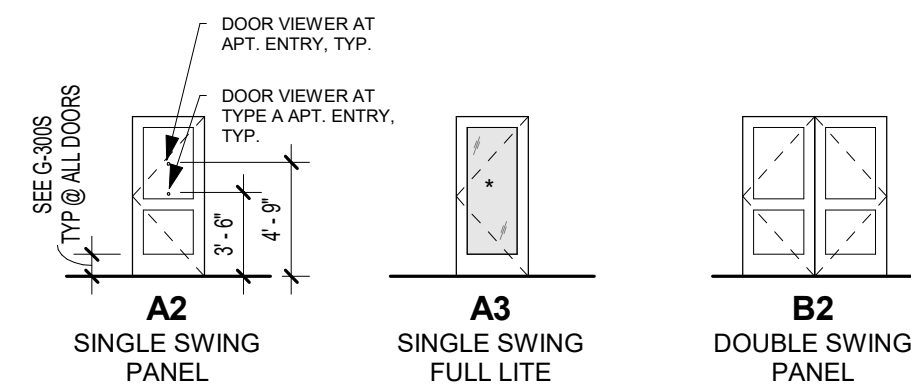


6 ARA ALT BATH ELEV. 1
3/8" = 1'-0"



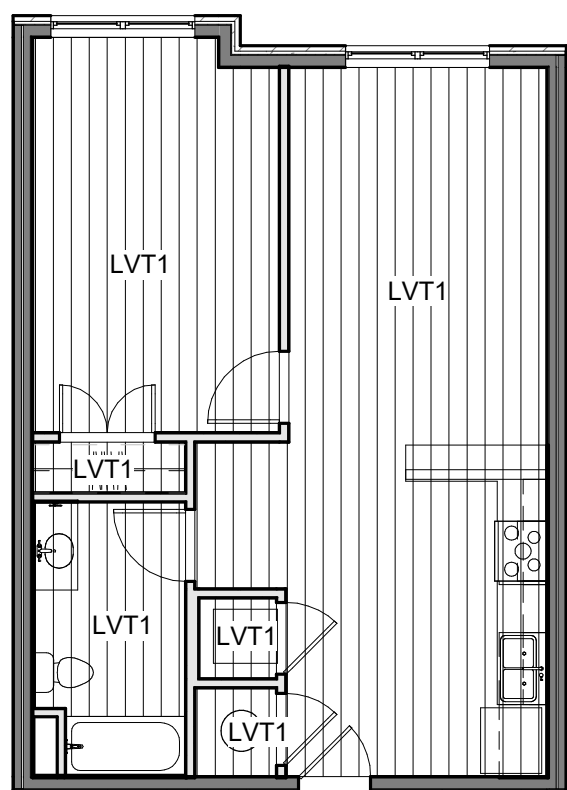
5 ARA ALT KITCHEN ELEV. 1
3/8" = 1'-0"

DOOR TYPES - UNITS

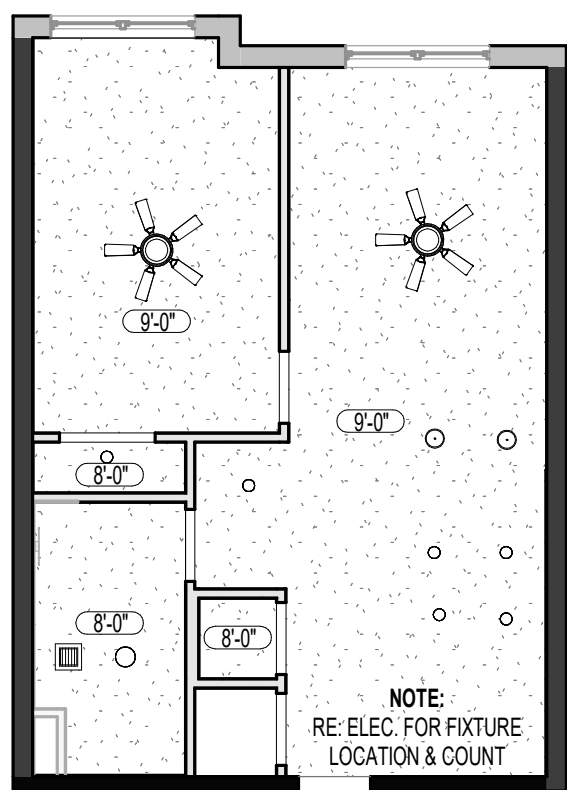


Room Finish Schedule - Units					
Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish
001	ENTRY	LVT1	WB, PT3	PT1	PT4
002	COAT	LVT1		PT2	PT4
003	LIVING	LVT1	WB, PT3	PT1	PT4
004	KITCHEN	LVT1	WB, PT3	PT1	PT4
005	MECH.	LVT1		PT2	PT4
006	LAUNDRY	LVT1		PT2	PT4
007	HALLWAY	LVT1	WB, PT3	PT1	PT4
008	BATH 1	LVT1 OR LVT2		PT1	PT4
009	BATH 2	LVT1 OR LVT2		PT1	PT4
010	BEDROOM 1	LVT1	WB, PT3	PT1	PT4
011	CLOSET 1	LVT1		PT2	PT4
012	BEDROOM 2	LVT1	WB, PT3	PT1	PT4
013	CLOSET 2	LVT1		PT2	PT4
014	BALCONY	CONCRETE			

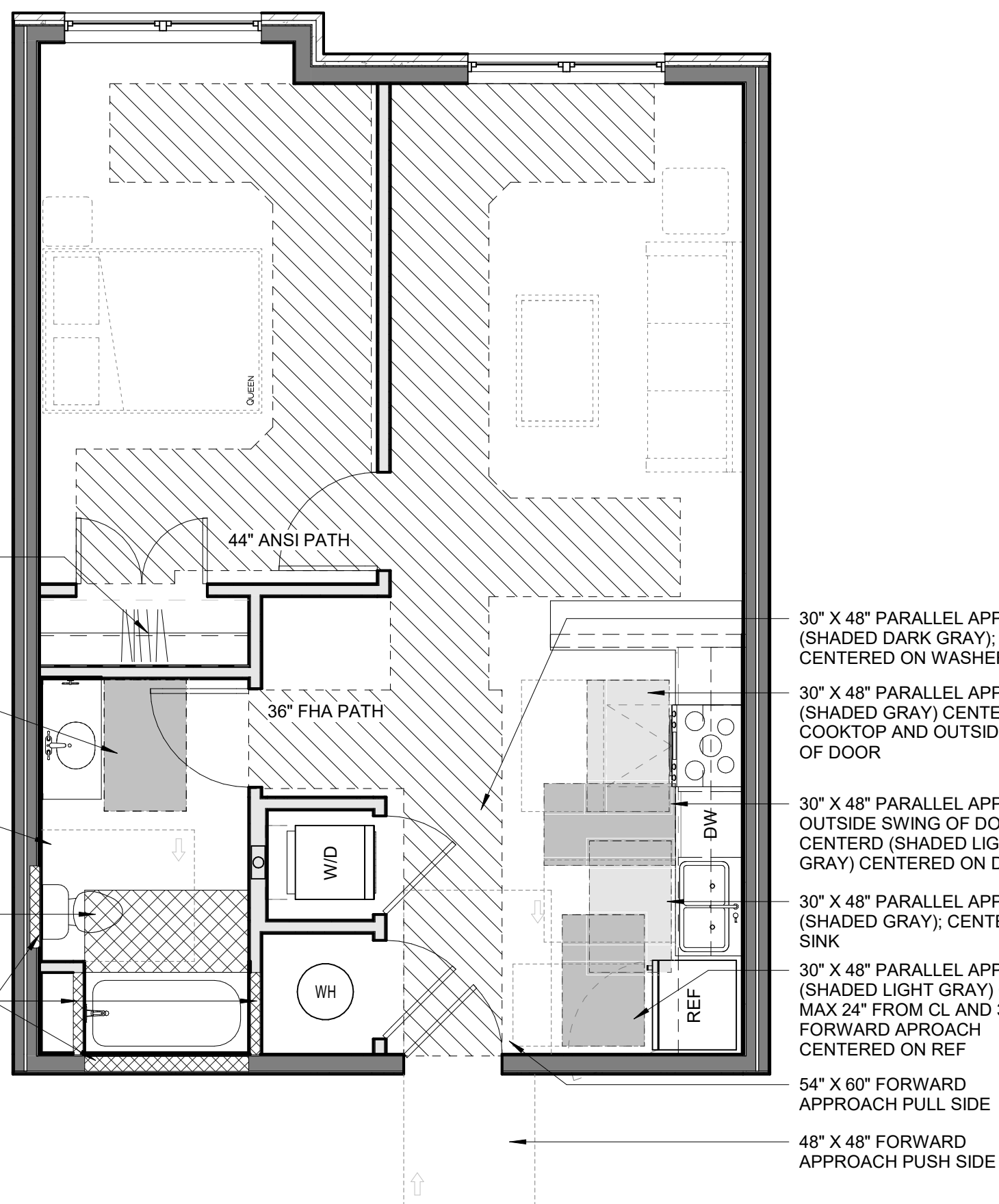
DOOR SCHEDULE - UNIT DOORS									
Mark	Location	Width	Height	Thickness	Fire Rating (Minutes)	Door Type	Frame Type	Comments	
001	ENTRY	3'-0"	6'-8"	1 3/4"	20	A2	TIMELY	SPRING HINGES (CLOSER) SMOKE SEAL	
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005	MECH.	3'-0"	6'-8"	1 3/8"		A2	PH	UNDERCUT IF REQ'D	
006	LAUNDRY	3'-0"	6'-8"	1 3/8"		A2	PH	UNDERCUT IF REQ'D	
006.1	LAUNDRY	6'-0"	6'-8"	1 3/8"		B2	PH	UNDERCUT IF REQ'D	
008	BATH 1	3'-0"	6'-8"	1 3/8"		A2	PH		
009	BATH 2	3'-0"	6'-8"	1 3/8"		A2	PH		
010	BEDROOM 1	3'-0"	6'-8"	1 3/8"		A2	PH		
011	CLOSET	3'-0"	6'-8"	1 3/8"		A2	PH		
011.1	CLOSET	6'-0"	6'-8"	1 3/8"		B2	PH		
012	BEDROOM 2	3'-0"	6'-8"	1 3/8"		A2	PH		
013	CLOSET	3'-0"	6'-8"	1 3/8"		A2	PH		
014	BALCONY	3'-0"	8'-0"	1 3/4"		A3	TIMELY		



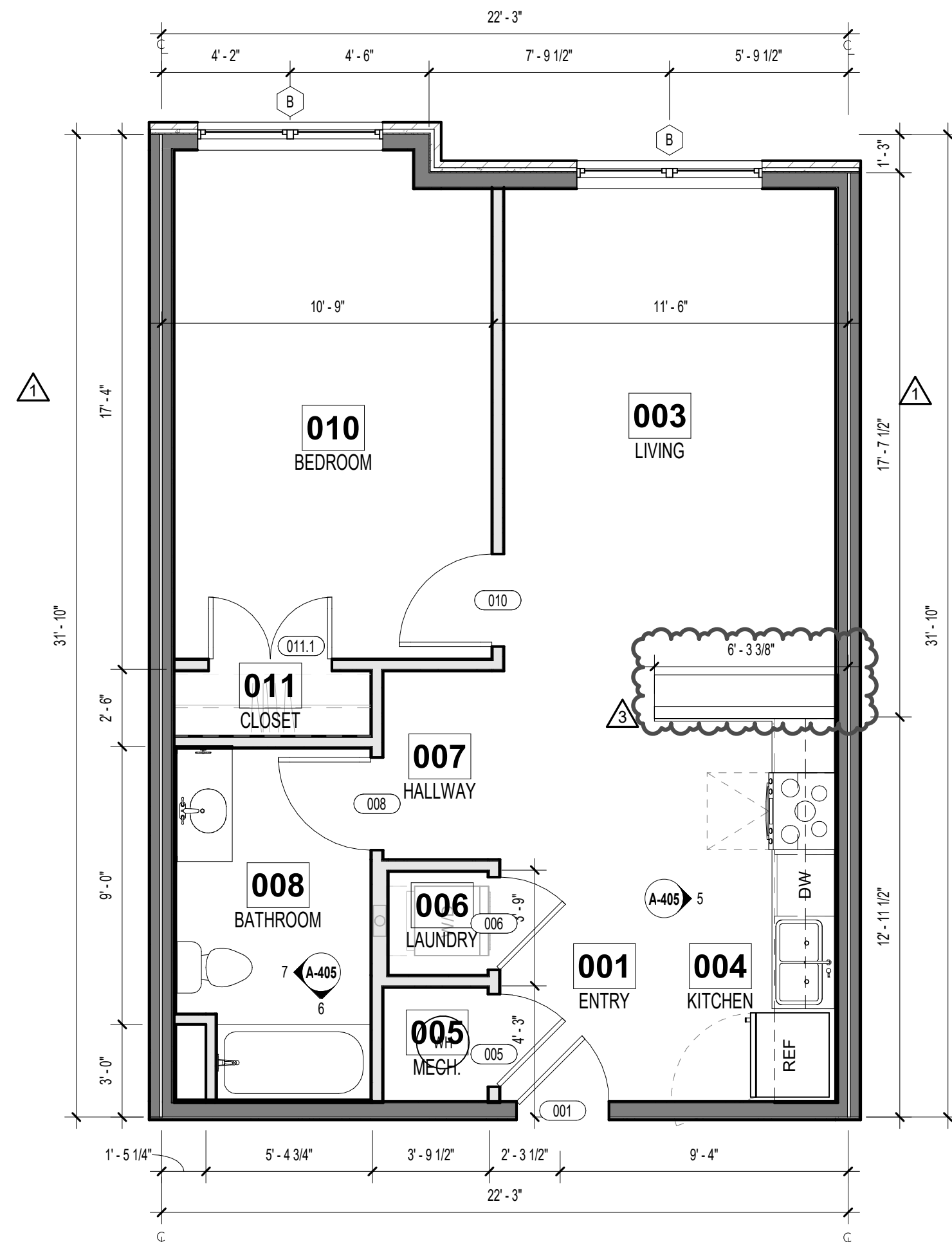
4 UNIT FINISH PLAN - ARA - ALT (1 BR) - TYPE B
1/8" = 1'-0"



3 UNIT RCP - ARA - ALT (1 BR) - TYPE B
1/8" = 1'-0"

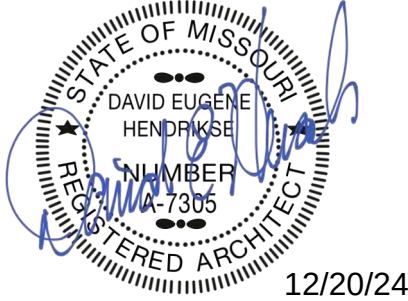


2 UNIT CLEAR SPACE PLAN - ARA - ALT (1 BR) - TYPE B
1/4" = 1'-0"



1 UNIT FLOOR PLAN - ARA - ALT (1 BR) - TYPE B
1/4" = 1'-0"

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THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
ARA ALT (1 BR) UNIT PLAN

PROJECT NUMBER: 23099

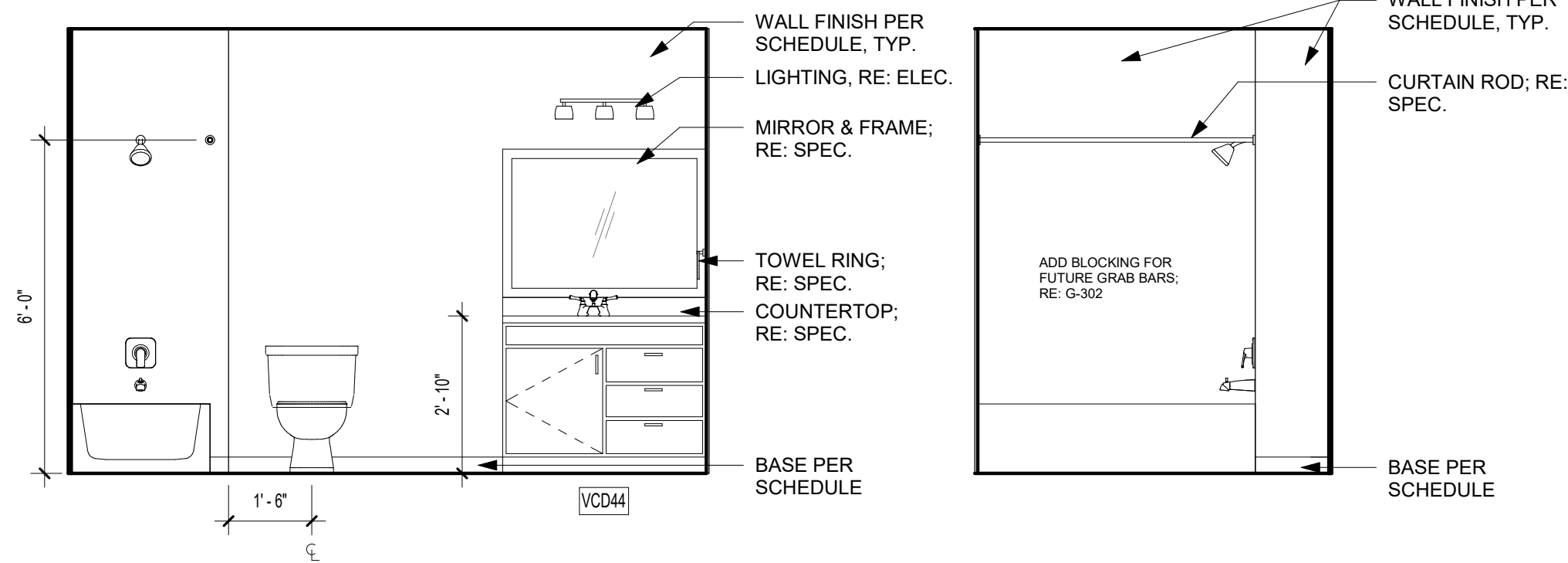
SHEET NUMBER:

A-405

REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-120 FOR RCP LEGEND
REFERENCE A-400 FOR UNIT PLAN LEGEND
REFERENCE A-102 & A-103 FOR RC LOCATIONS

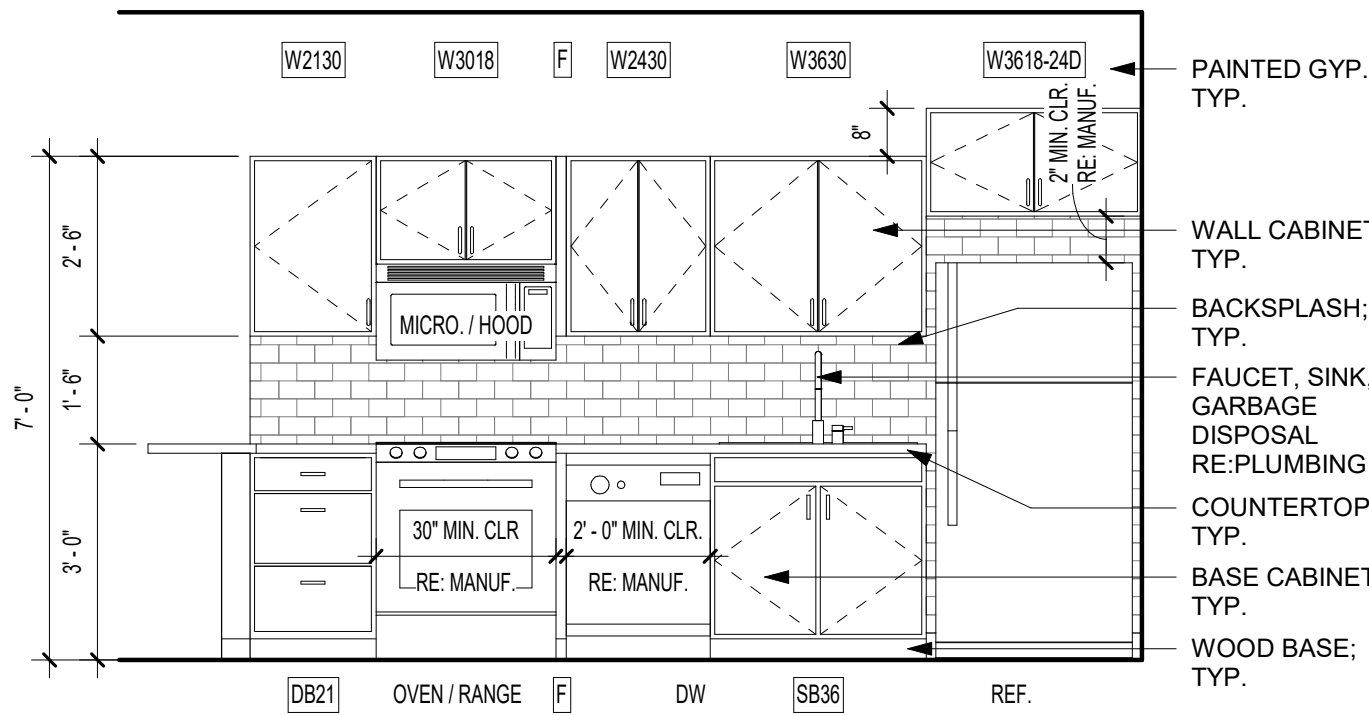
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3 12/20/24 ADDENDUM #3



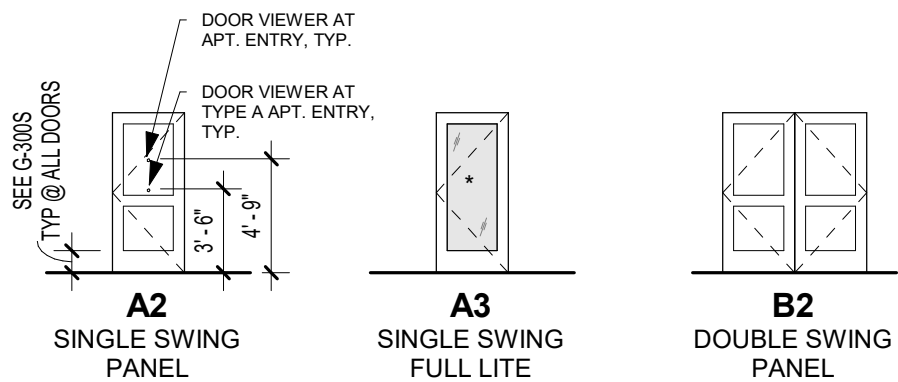
7 ARA BATH ELEV. 2
3/8" = 1'-0"

6 ARA BATH ELEV. 1
3/8" = 1'-0"



5 KITCHEN - TYPE 1 - STOVE SINK
3/8" = 1'-0"

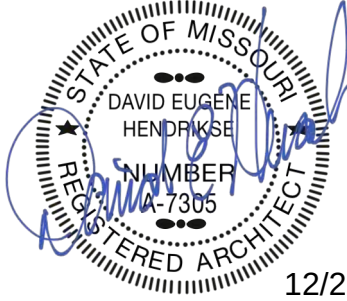
DOOR TYPES - UNITS



Room Finish Schedule - Units					
Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish
001	ENTRY	LVT1	WB, PT3	PT1	PT4
002	COAT	LVT1		PT2	PT4
003	LIVING	LVT1	WB, PT3	PT1	PT4
004	KITCHEN	LVT1	WB, PT3	PT1	PT4
005	MECH.	LVT1		PT2	PT4
006	LAUNDRY	LVT1		PT2	PT4
007	HALLWAY	LVT1	WB, PT3	PT1	PT4
008	BATH 1	LVT1 OR LVT2		PT1	PT4
009	BATH 2	LVT1 OR LVT2		PT1	PT4
010	BEDROOM 1	LVT1	WB, PT3	PT1	PT4
011	CLOSET 1	LVT1		PT2	PT4
012	BEDROOM 2	LVT1	WB, PT3	PT1	PT4
013	CLOSET 2	LVT1		PT2	PT4
014	BALCONY	CONCRETE			

DOOR SCHEDULE - UNIT DOORS								
Mark	Location	Width	Height	Thickness	Fire Rating	Door Type	Frame	Comments
001	ENTRY	3'-0"	6'-8"	1 3/4"	20	A2	TIMELY	SPRING HINGES (CLOSER) SMOKE SEAL
002	COAT	3'-0"	6'-8"	1 3/8"		A2	PH	
005	MECH.	3'-0"	6'-8"	1 3/8"		A2	PH	UNDERCUT IF REQ'D
006	LAUNDRY	3'-0"	6'-8"	1 3/8"		A2	PH	UNDERCUT IF REQ'D
006.1	LAUNDRY	6'-0"	6'-8"	1 3/8"		B2	PH	UNDERCUT IF REQ'D
008	BATH 1	3'-0"	6'-8"	1 3/8"		A2	PH	
009	BATH 2	3'-0"	6'-8"	1 3/8"		A2	PH	
010	BEDROOM 1	3'-0"	6'-8"	1 3/8"		A2	PH	
011	CLOSET	3'-0"	6'-8"	1 3/8"		A2	PH	
011.1	CLOSET	6'-0"	6'-8"	1 3/8"		B2	PH	
012	BEDROOM 2	3'-0"	6'-8"	1 3/8"		A2	PH	
013	CLOSET	3'-0"	6'-8"	1 3/8"		A2	PH	
014	BALCONY	3'-0"	8'-0"	1 3/4"		A3	TIMELY	

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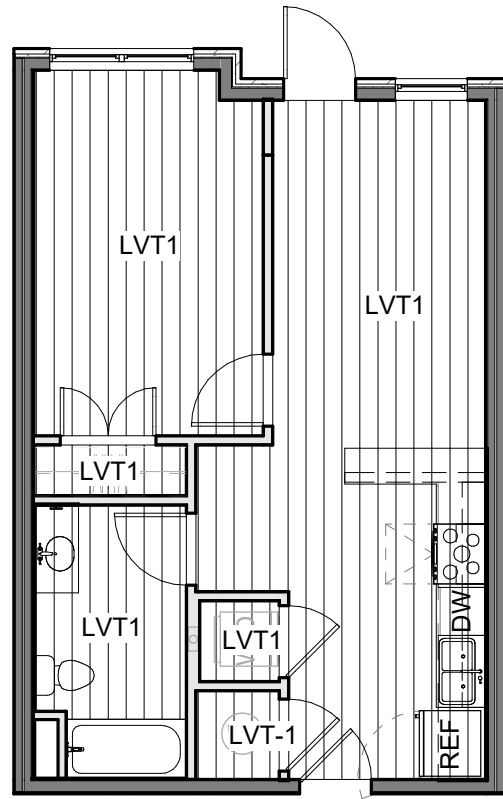
THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
ARA (1 BR) UNIT PLAN

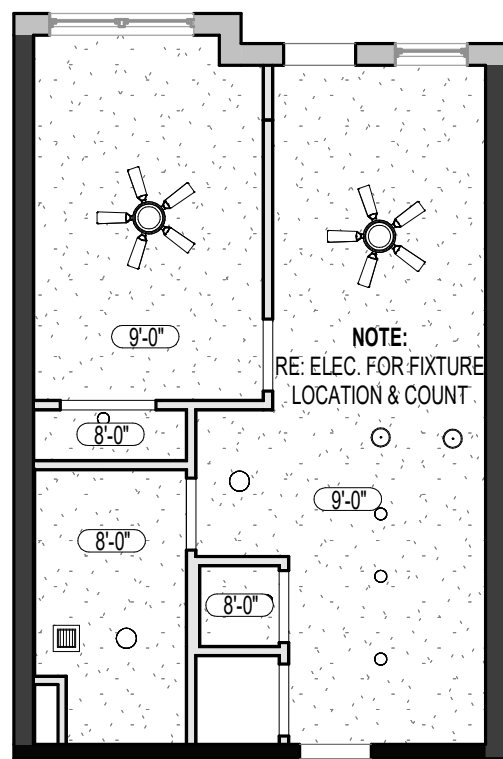
PROJECT NUMBER: 23099

SHEET NUMBER:

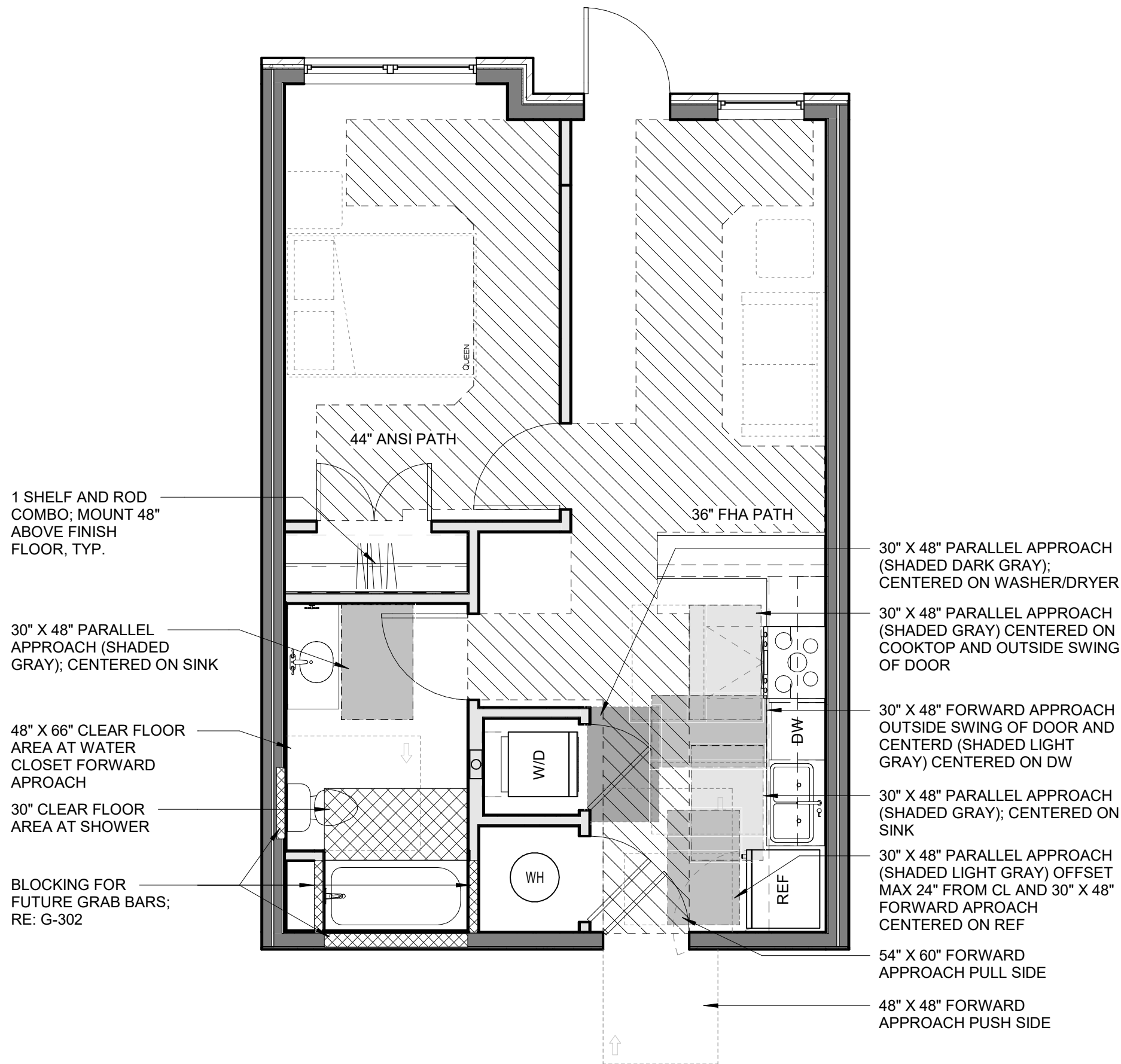
A-406



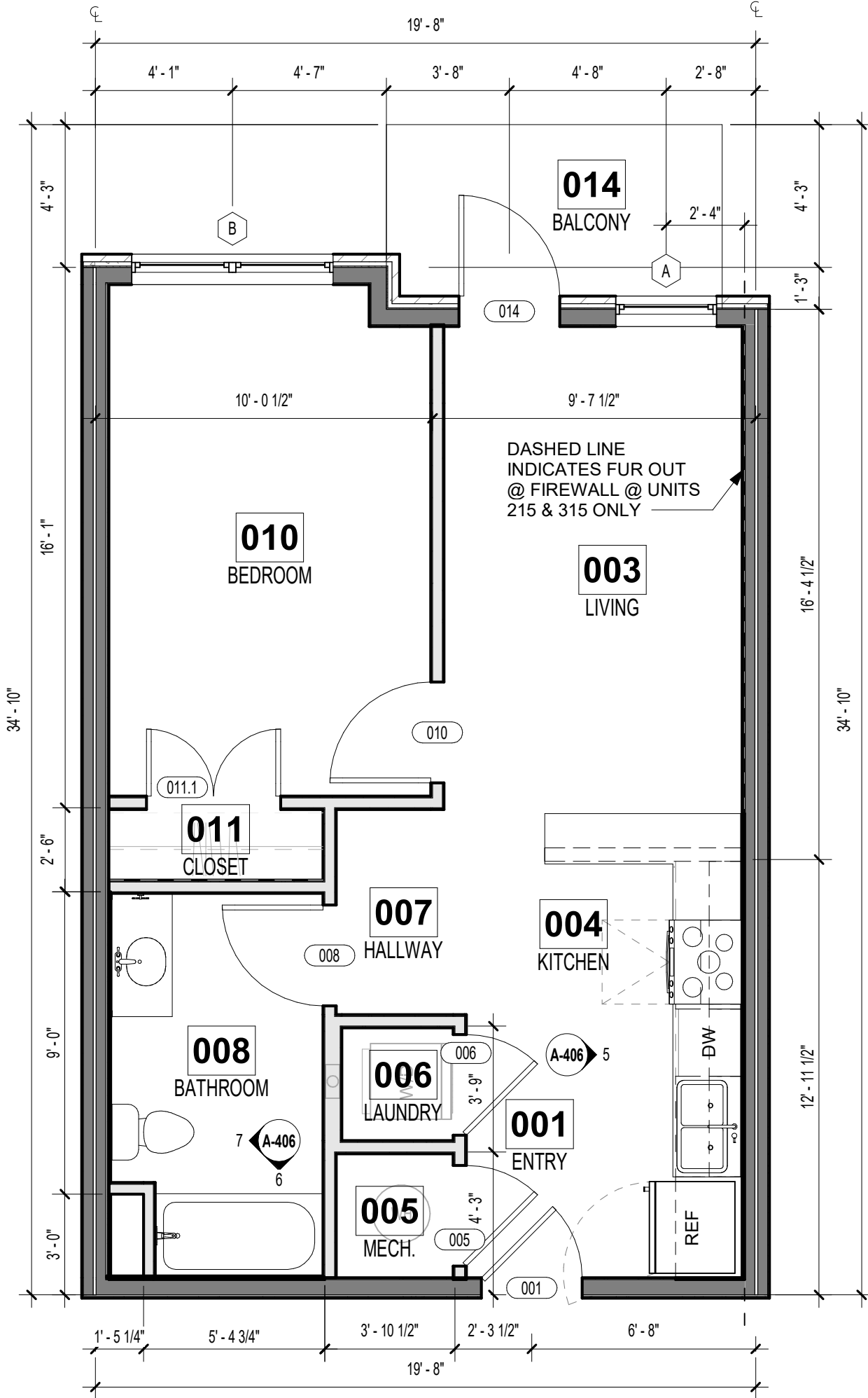
4 UNIT FINISH PLAN - ARA (1 BR) - TYPE B
1/8" = 1'-0"



3 UNIT RCP - ARA (1 BR) - TYPE B
1/8" = 1'-0"



2 UNIT CLEAR SPACE PLAN - ARA (1 BR) - TYPE B
1/4" = 1'-0"



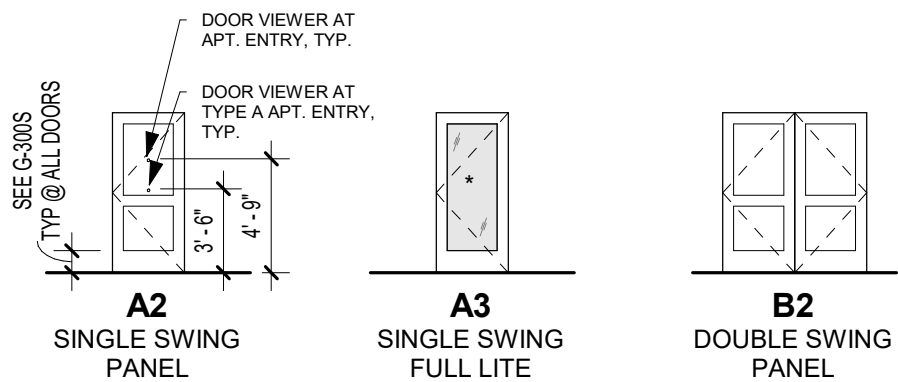
1 UNIT FLOOR PLAN - ARA (1 BR) - TYPE B
1/4" = 1'-0"

REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-120 FOR RCP LEGEND
REFERENCE A-400 FOR UNIT PLAN LEGEND
REFERENCE A-102 & A-103 FOR RC LOCATIONS

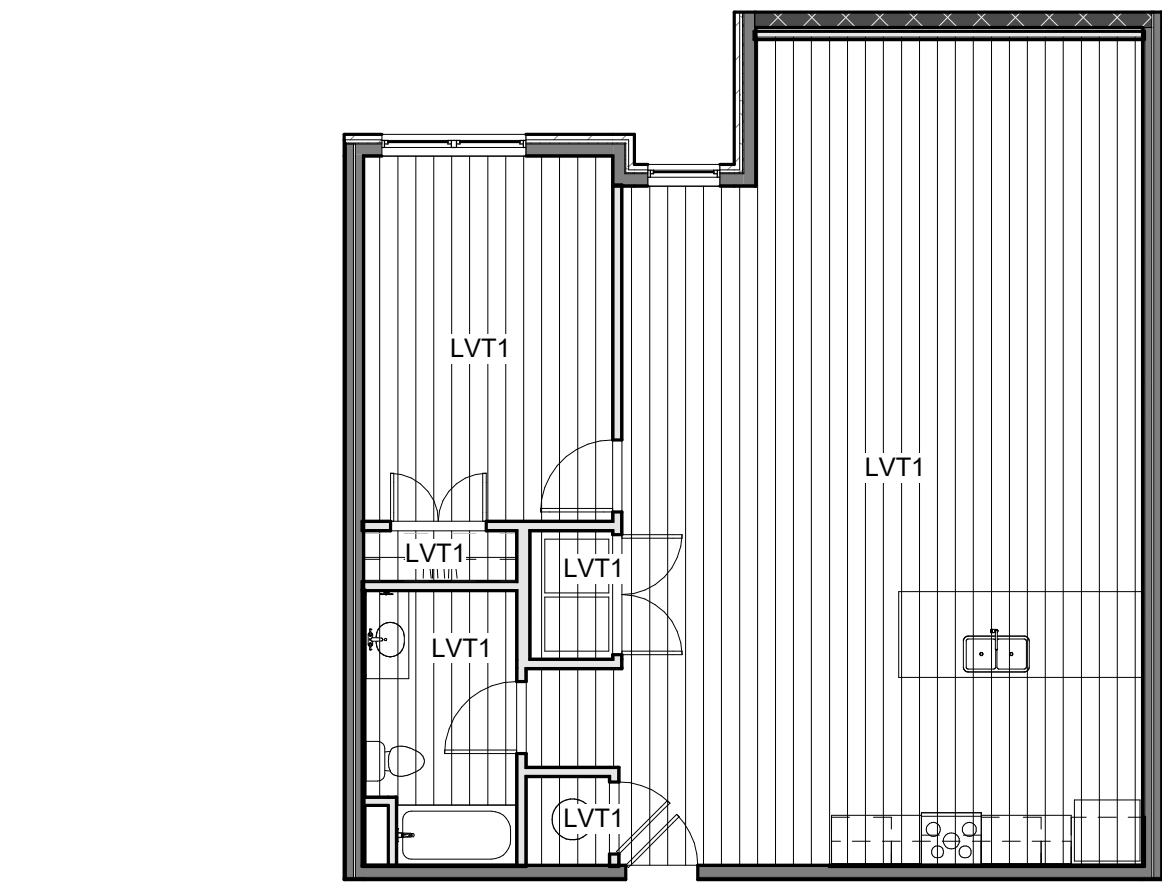
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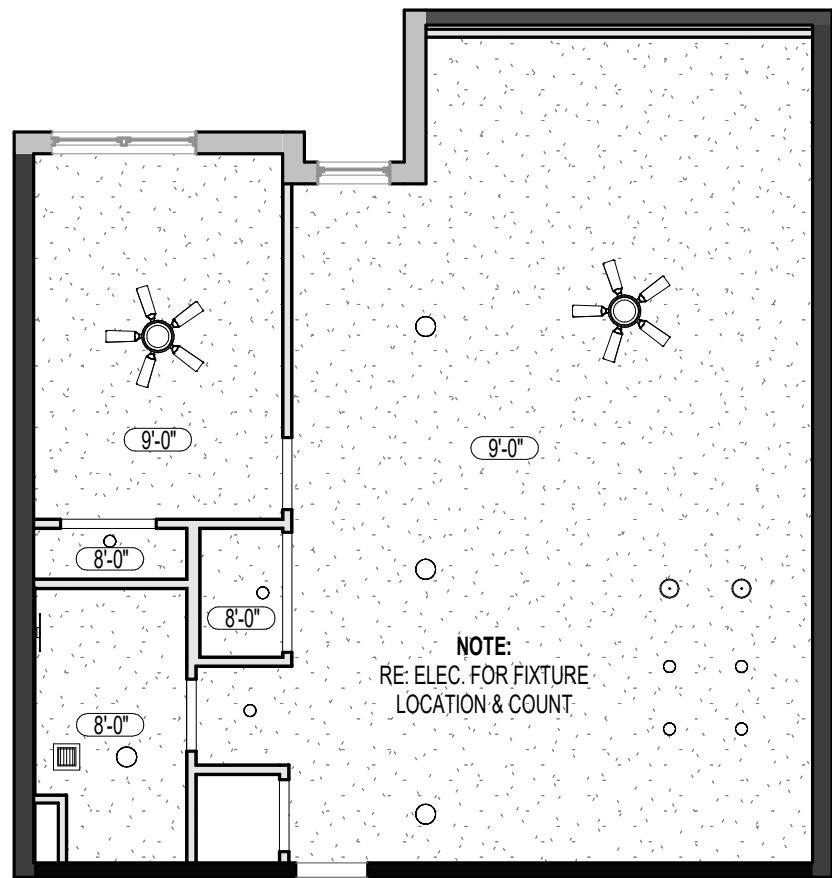
DOOR TYPES - UNITS



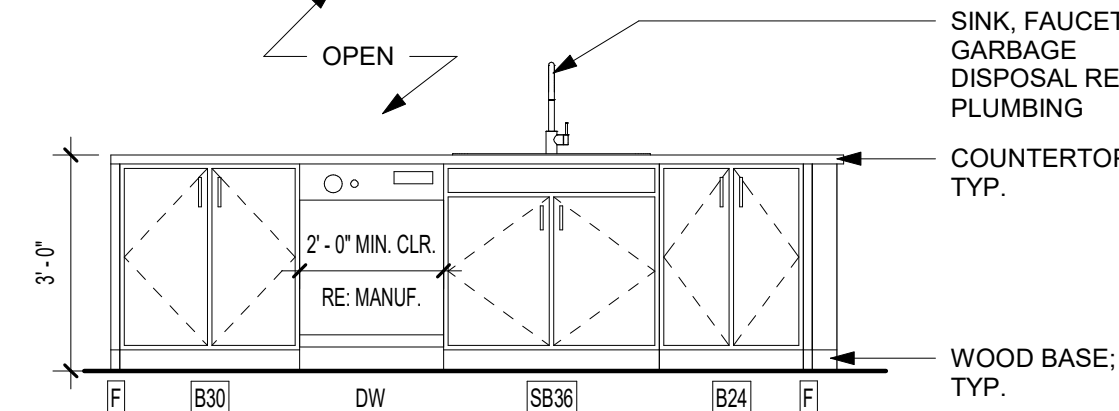
Room Finish Schedule - Units						
Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
001	ENTRY	LVT1	WB, PT3	PT1	PT4	
002	COAT	LVT1		PT2	PT4	
003	LIVING	LVT1	WB, PT3	PT1	PT4	
004	KITCHEN	LVT1	WB, PT3	PT1	PT4	
005	MECH.	LVT1		PT2	PT4	
006	LAUNDRY	LVT1		PT2	PT4	
007	HALLWAY	LVT1	WB, PT3	PT1	PT4	
008	BATH 1	LVT1 OR LVT2		PT1	PT4	LVT2 IN TYPE A UNITS ONLY
009	BATH 2	LVT1 OR LVT2		PT1	PT4	LVT2 IN TYPE A UNITS ONLY
010	BEDROOM 1	LVT1	WB, PT3	PT1	PT4	
011	CLOSET 1	LVT1		PT2	PT4	
012	BEDROOM 2	LVT1	WB, PT3	PT1	PT4	
013	CLOSET 2	LVT1		PT2	PT4	
014	BALCONY	CONCRETE				



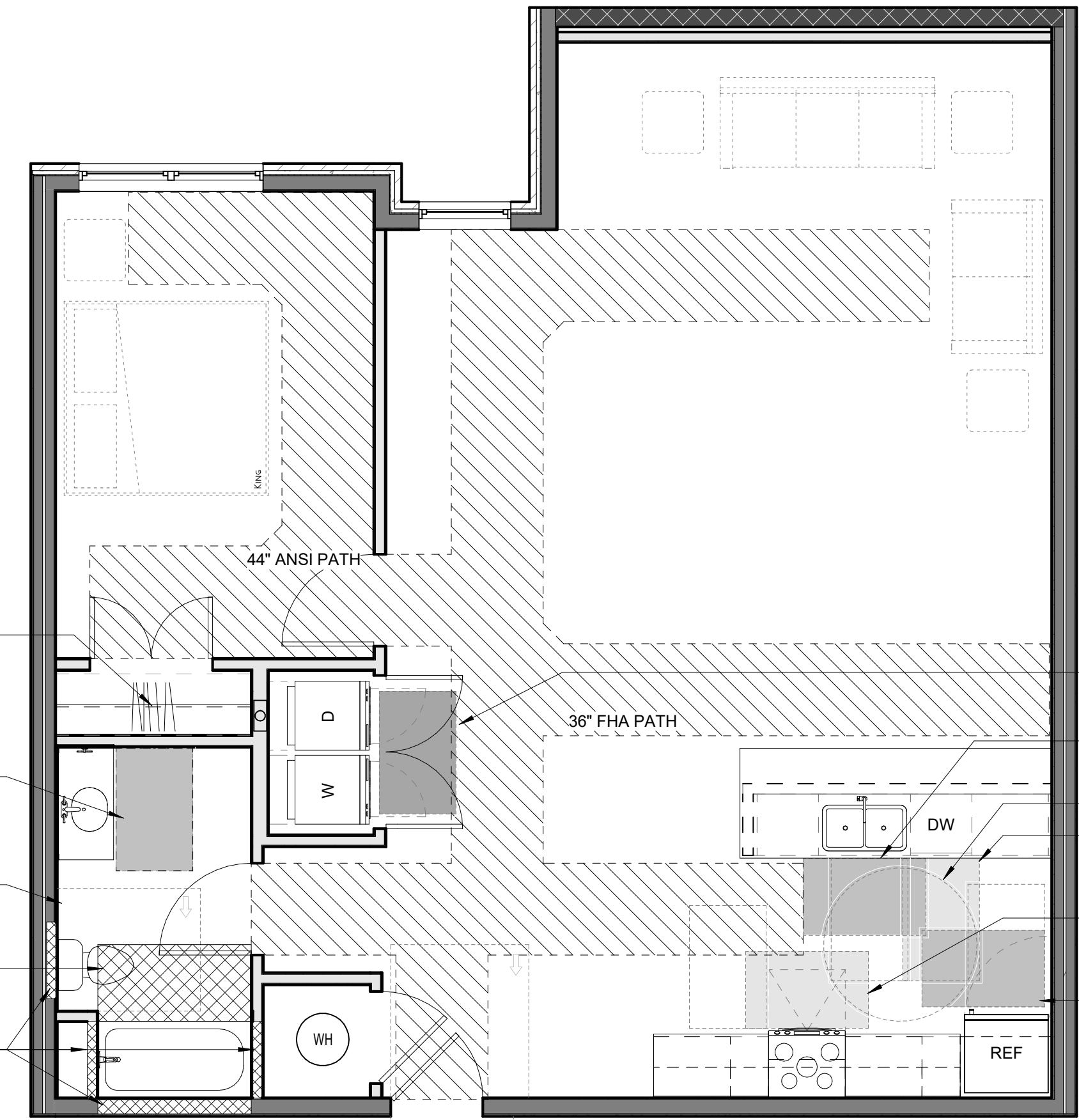
UNIT FINISH PLAN - ARA CORNER
(1 BR) - TYPE B
1/8" = 1'-0"



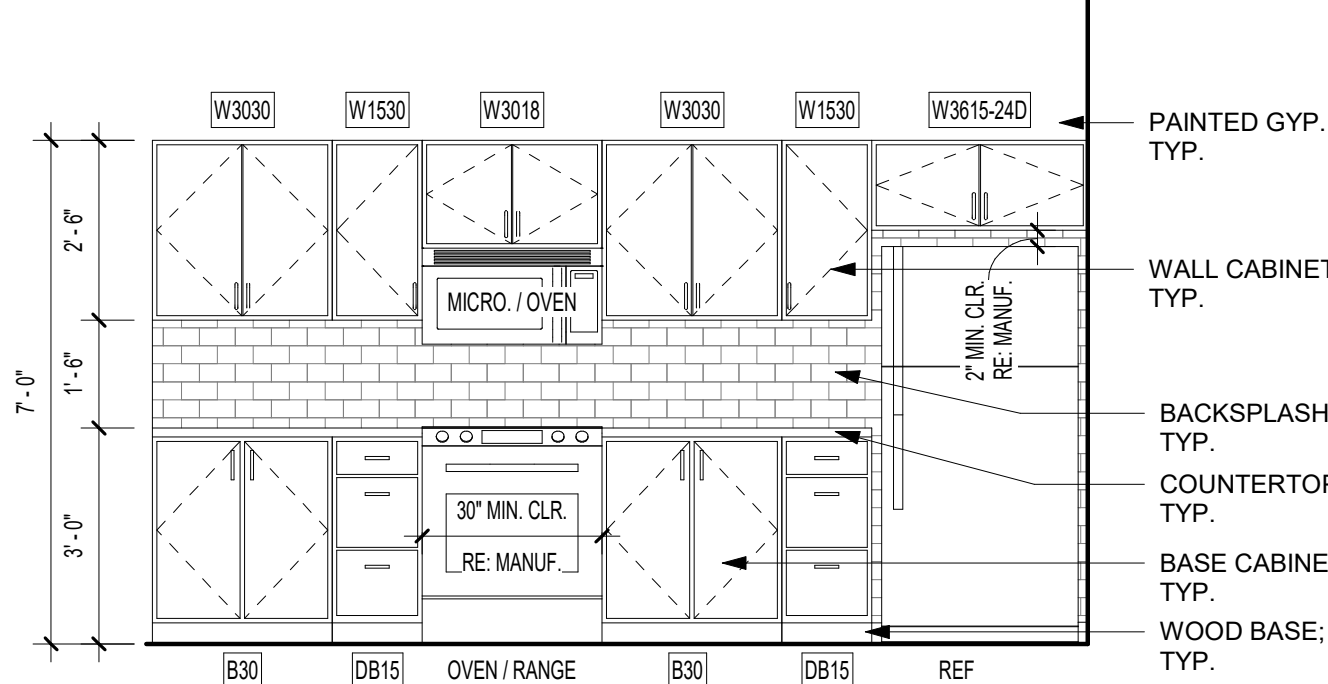
UNIT RCP - ARA CORNER (1 BR) -
TYPE B
1/8" = 1'-0"



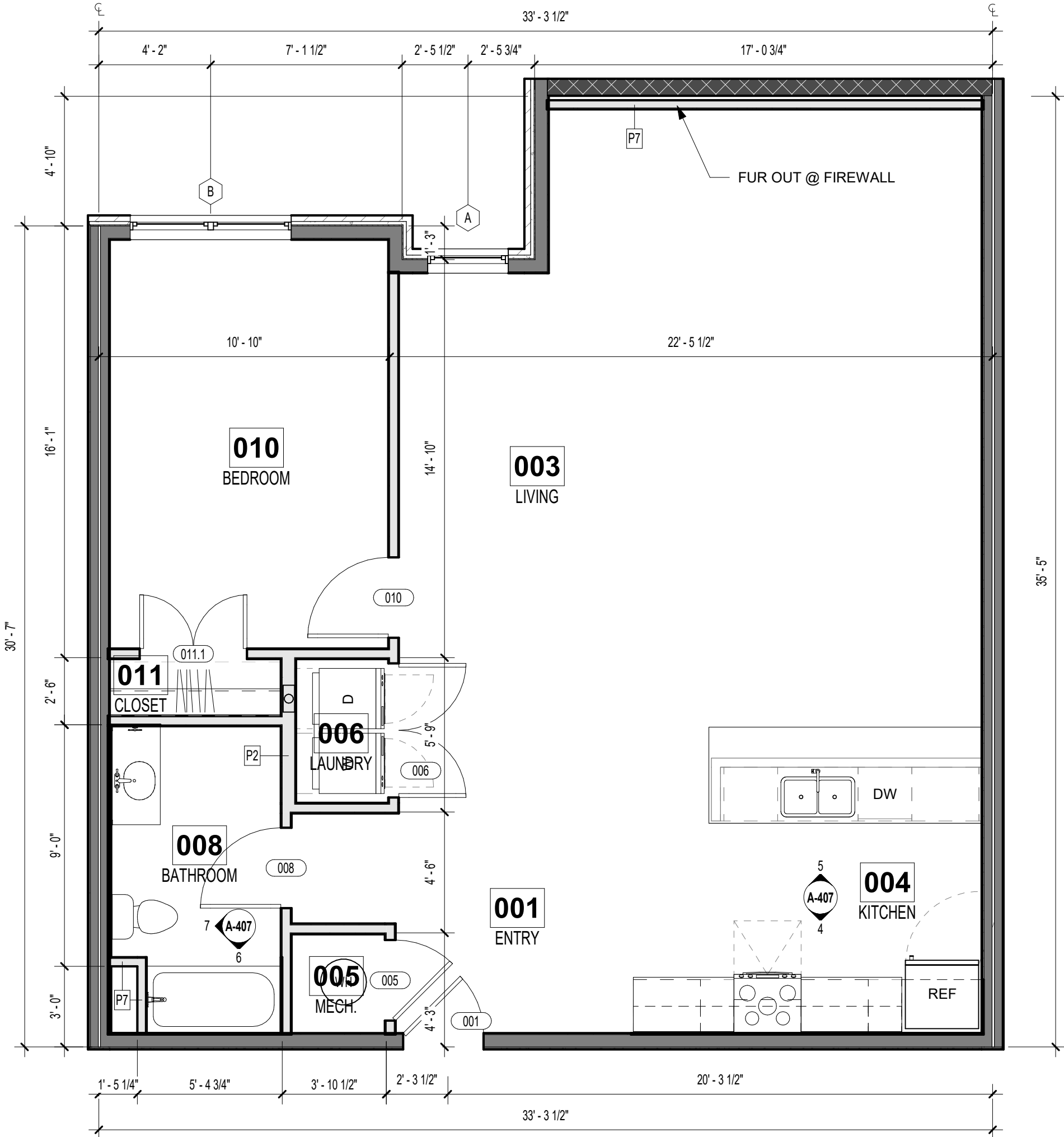
ARA CORNER KITCHEN ELEV. 2
3/8" = 1'-0" (MIRRORED)



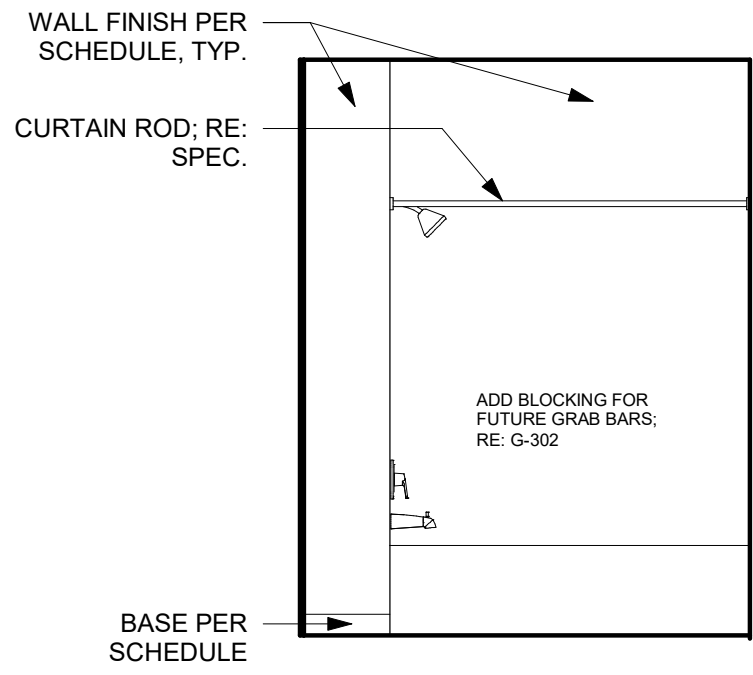
UNIT CLEAR SPACE PLAN - ARA CORNER (1 BR) - TYPE B
1/4" = 1'-0"



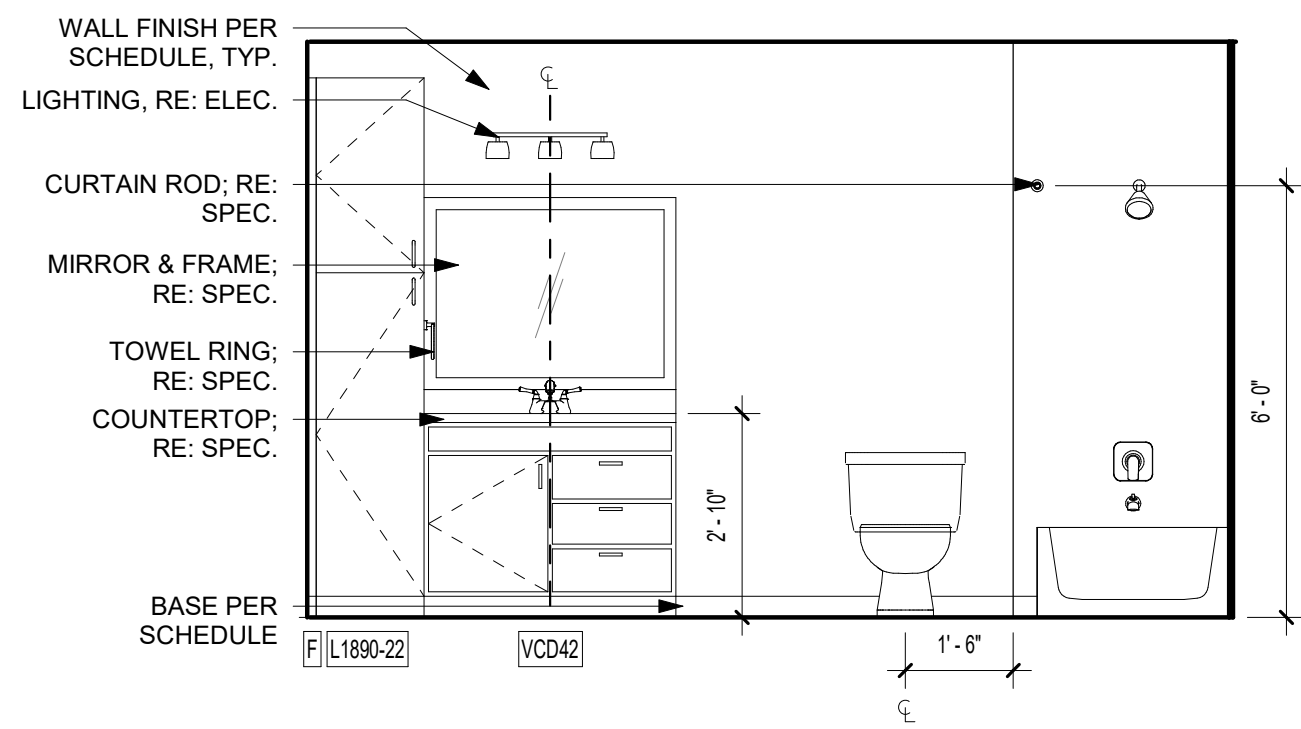
ARA CORNER KITCHEN ELEV. 1
3/8" = 1'-0" (MIRRORED)



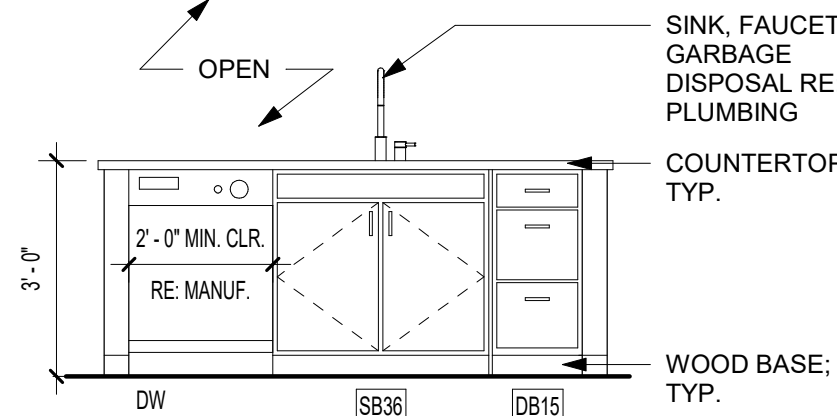
UNIT FLOOR PLAN - ARA CORNER (1 BR) - TYPE B
1/4" = 1'-0"



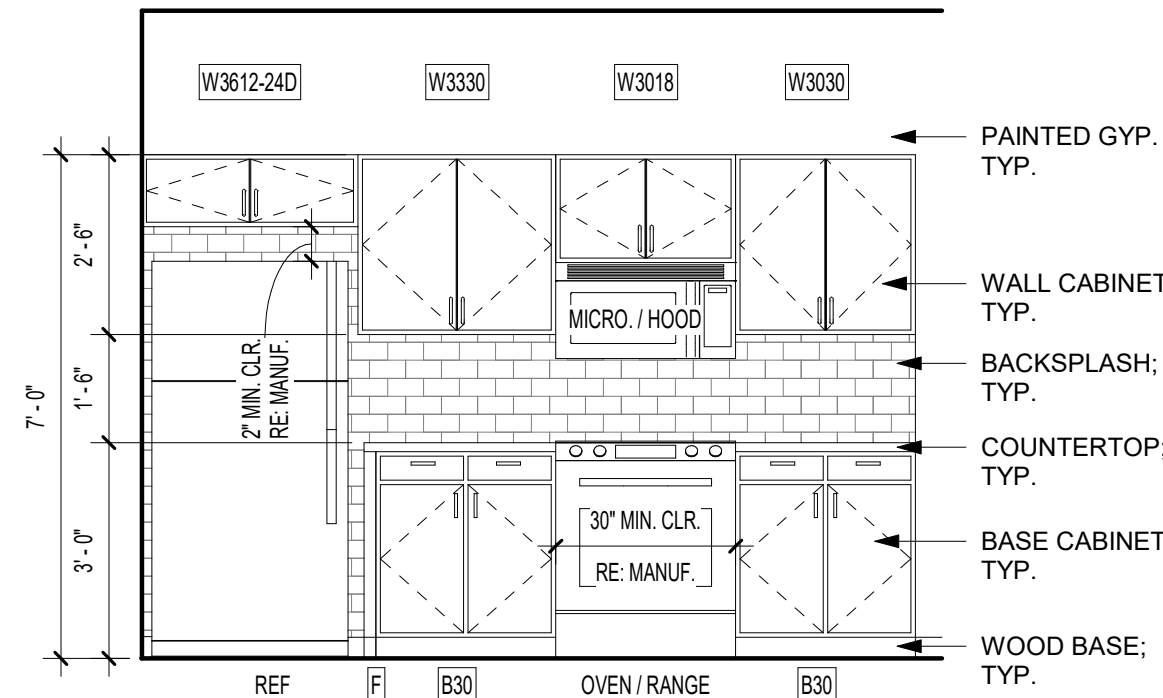
8 DELTA BATH ELEV. 2
3/8" = 1'-0"



7 DELTA BATH ELEV. 1
3/8" = 1'-0"



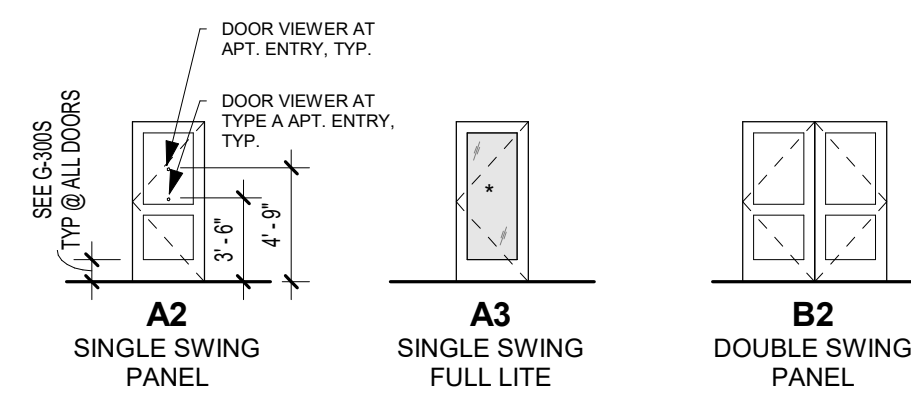
6 DELTA KITCHEN ELEV. 2
3/8" = 1'-0" (MIRRORED)



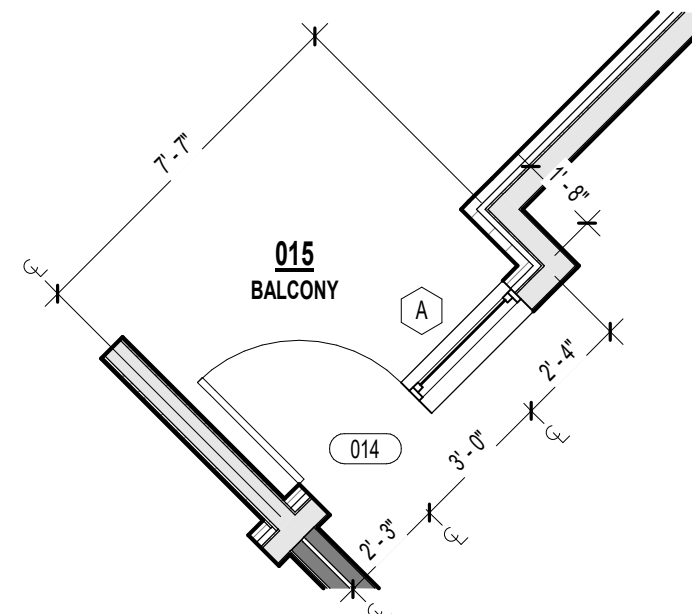
5 DELTA KITCHEN ELEV. 1
3/8" = 1'-0" (MIRRORED)

REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-120 FOR RCP LEGEND
REFERENCE A-400 FOR UNIT PLAN LEGEND
REFERENCE A-102 & A-103 FOR RC LOCATIONS

DOOR TYPES - UNITS

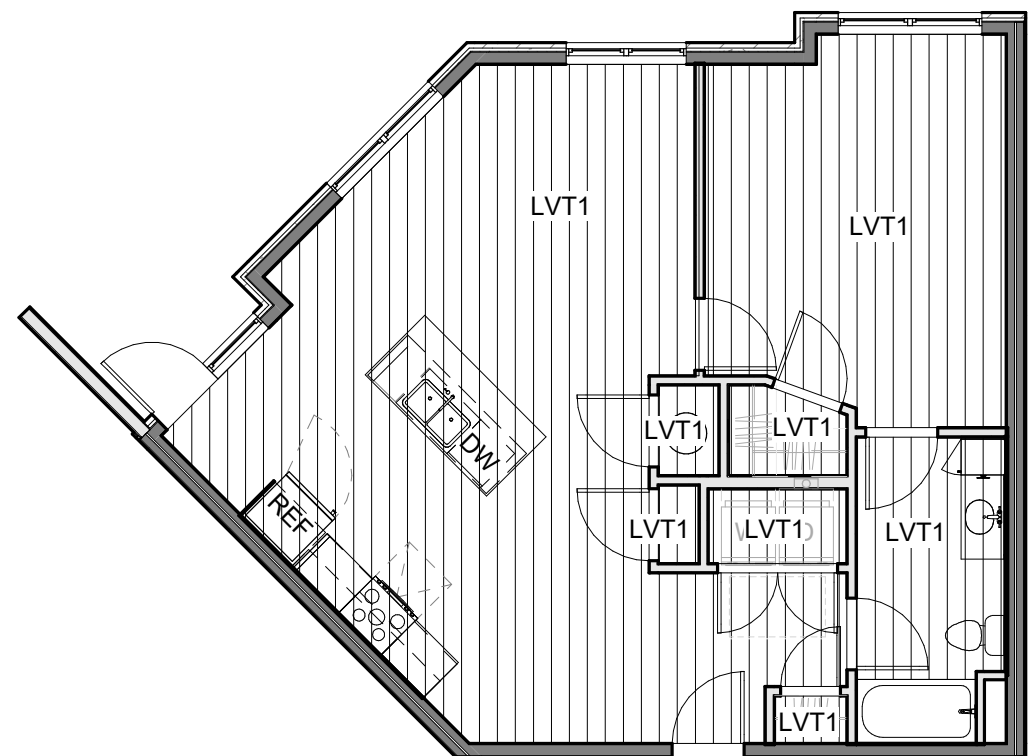


Room Finish Schedule - Units						
Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
001	ENTRY	LVT1	WB, PT3	PT1	PT4	
002	COAT	LVT1		PT2	PT4	
003	LIVING	LVT1	WB, PT3	PT1	PT4	
004	KITCHEN	LVT1	WB, PT3	PT1	PT4	
005	MECH.	LVT1		PT2	PT4	
006	LAUNDRY	LVT1		PT2	PT4	
007	HALLWAY	LVT1	WB, PT3	PT1	PT4	
008	BATH 1	LVT1 OR LVT2		PT1	PT4	LVT2 IN TYPE A UNITS ONLY
009	BATH 2	LVT1 OR LVT2		PT1	PT4	LVT2 IN TYPE A UNITS ONLY
010	BEDROOM 1	LVT1	WB, PT3	PT1	PT4	
011	CLOSET 1	LVT1		PT2	PT4	
012	BEDROOM 2	LVT1	WB, PT3	PT1	PT4	
013	CLOSET 2	LVT1		PT2	PT4	
014	BALCONY	CONCRETE				

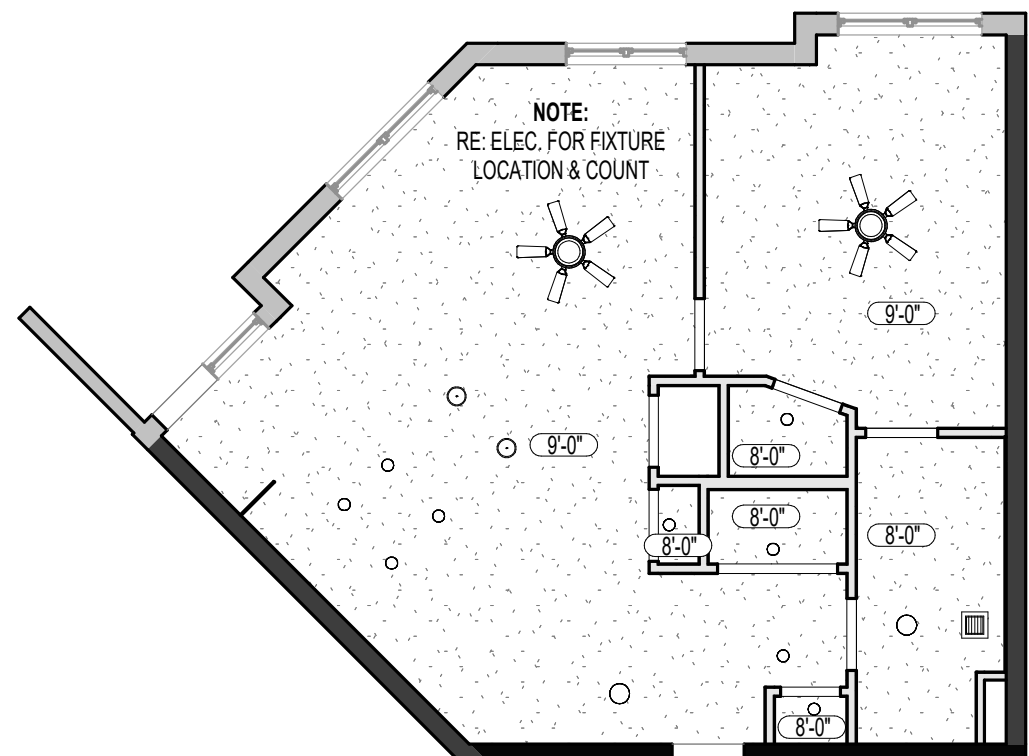


9 DELTA ALT BALCONY PLAN
1/4" = 1'-0" (3RD FLOOR ONLY)

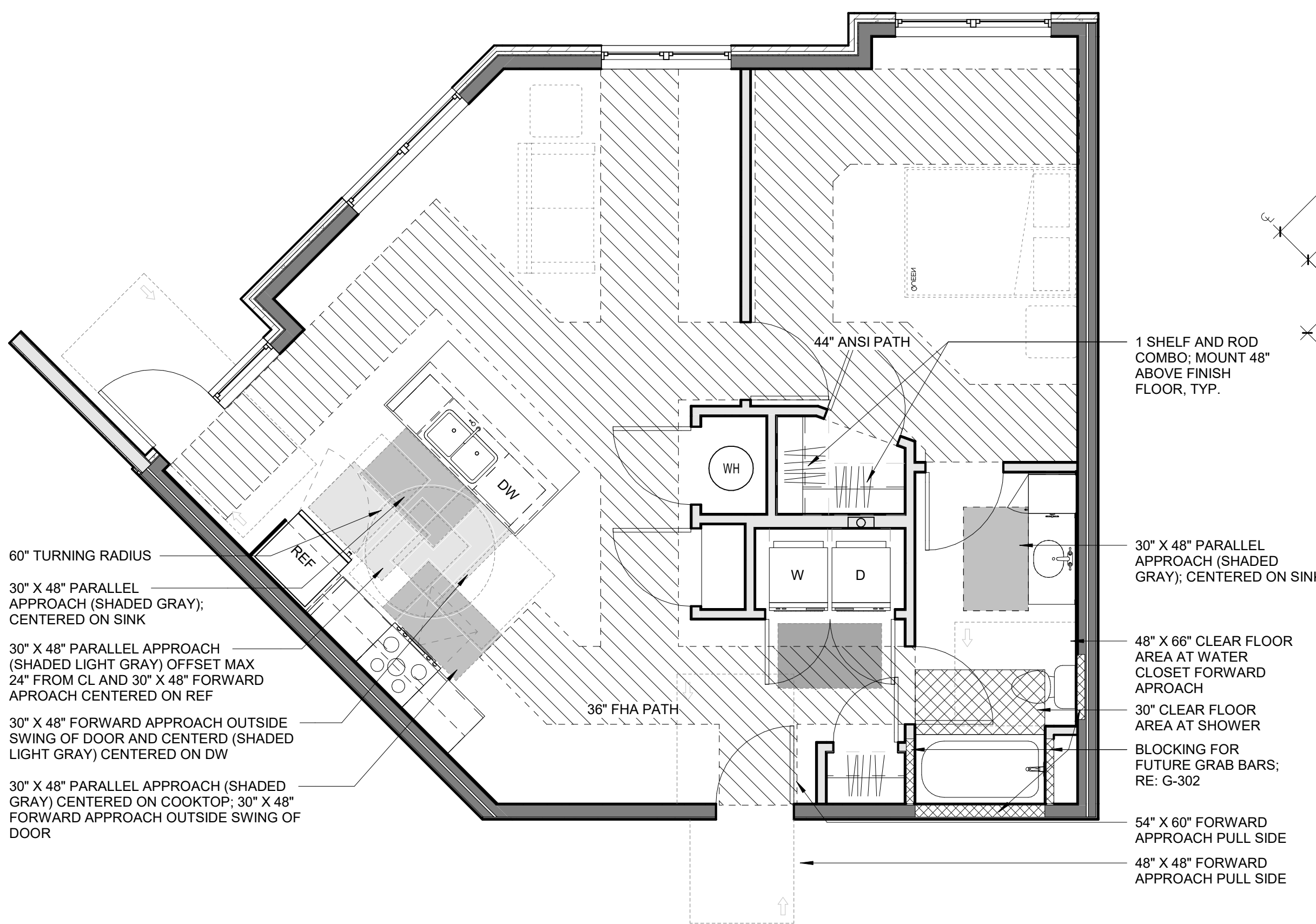
DOOR SCHEDULE - UNIT DOORS									
Mark	Location	Width	Height	Thickness	Fire Rating (Minutes)	Door Type	Frame Type	Comments	
001	ENTRY	3'-0"	6'-8"	1 3/4"	20	A2	TIMELY	SPRING HINGES (CLOSER) SMOKE SEAL	
002	COAT	3'-0"	6'-8"	1 3/8"		A2	PH	UNDERCUT IF REQ'D	
005	MECH.	3'-0"	6'-8"	1 3/8"		A2	PH	UNDERCUT IF REQ'D	
006	LAUNDRY	3'-0"	6'-8"	1 3/8"		A2	PH	UNDERCUT IF REQ'D	
006.1	LAUNDRY	6'-0"	6'-8"	1 3/8"		B2	PH	UNDERCUT IF REQ'D	
008	BATH 1	3'-0"	6'-8"	1 3/8"		A2	PH		
009	BATH 2	3'-0"	6'-8"	1 3/8"		A2	PH		
010	BEDROOM 1	3'-0"	6'-8"	1 3/8"		A2	PH		
011	CLOSET	3'-0"	6'-8"	1 3/8"		A2	PH		
011.1	CLOSET	6'-0"	6'-8"	1 3/8"		B2	PH		
012	BEDROOM 2	3'-0"	6'-8"	1 3/8"		A2	PH		
013	CLOSET 2	3'-0"	6'-8"	1 3/8"		A2	PH		
014	BALCONY	3'-0"	8'-0"	1 3/4"		A3	TIMELY		



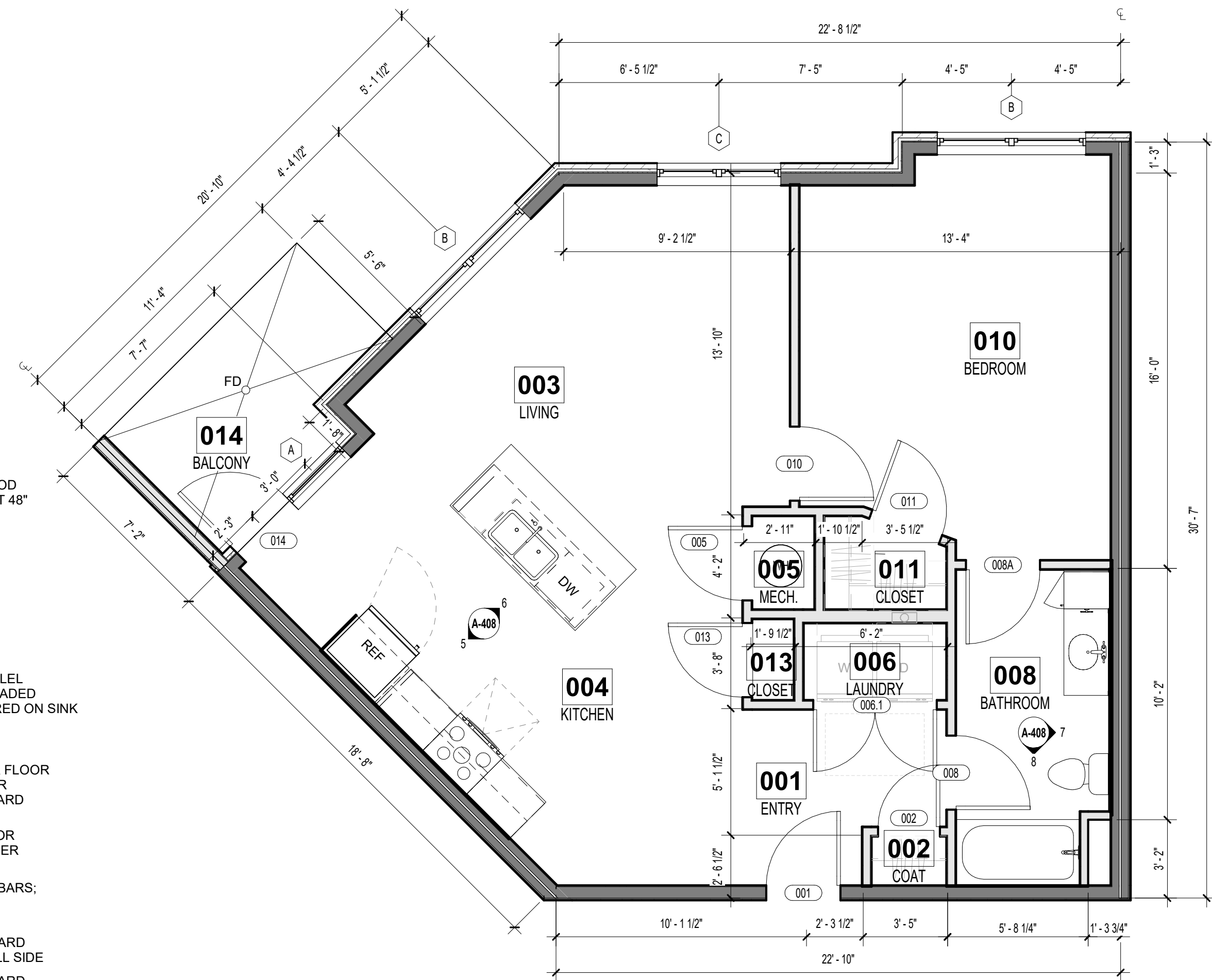
4 UNIT FINISH PLAN - DELTA (1 BR) - TYPE B
1/8" = 1'-0"



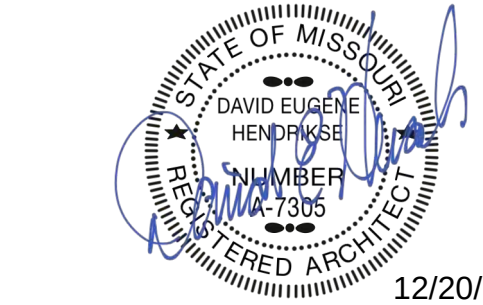
3 UNIT RCP - DELTA (1 BR) - TYPE B
1/8" = 1'-0"



2 UNIT CLEAR SPACE PLAN - DELTA (1 BR) - TYPE B
1/4" = 1'-0"



1 UNIT FLOOR PLAN - DELTA (1 BR) - TYPE B
1/4" = 1'-0"



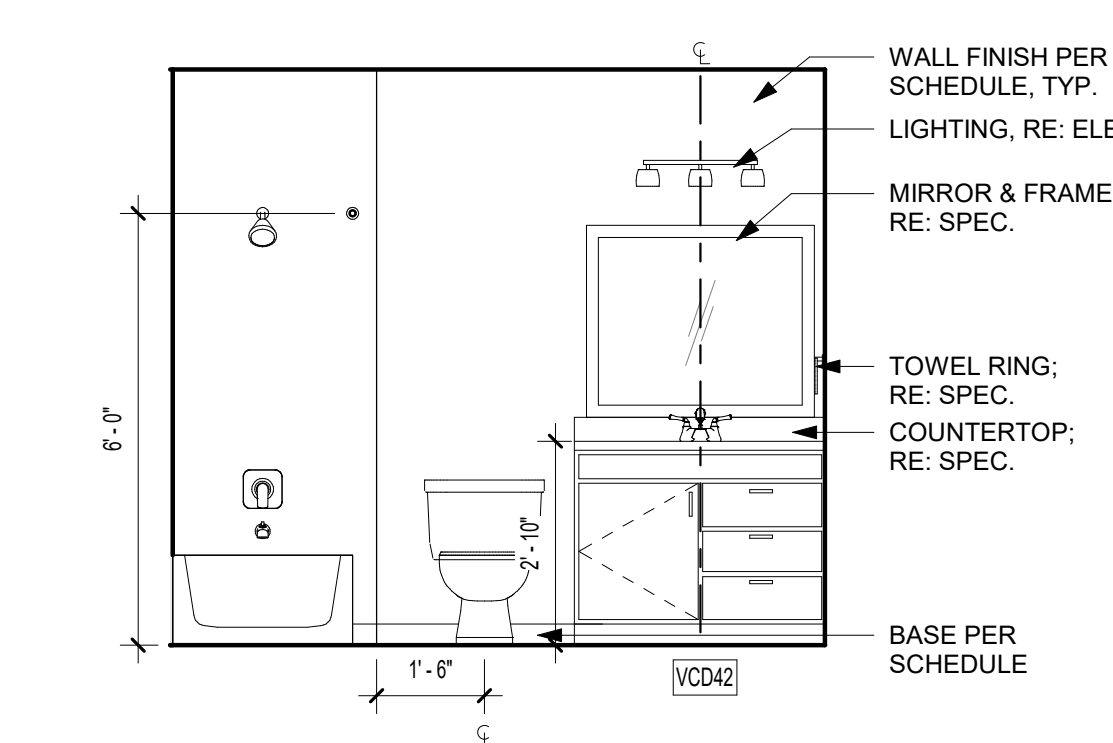
THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
DELTA (1 BR) UNIT PLAN
PROJECT NUMBER: 23099
SHEET NUMBER:

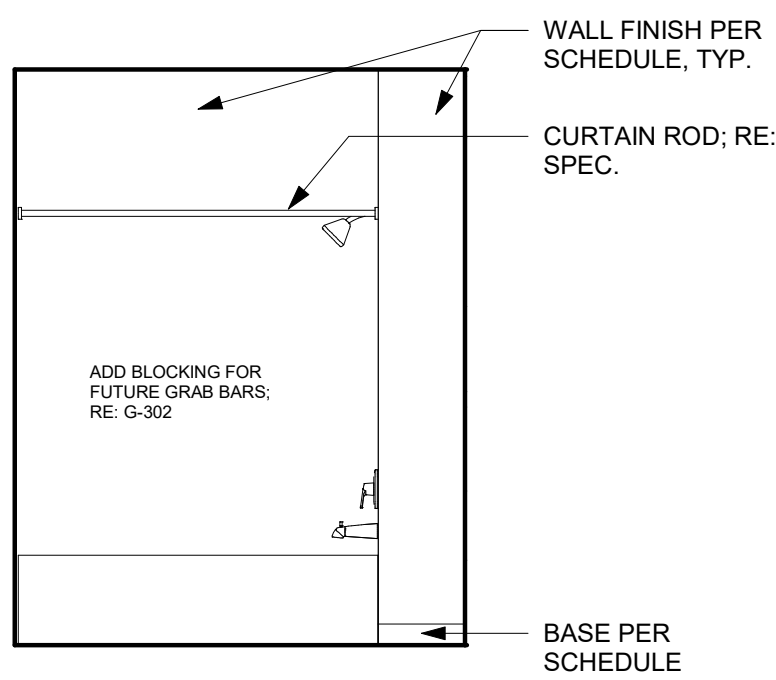
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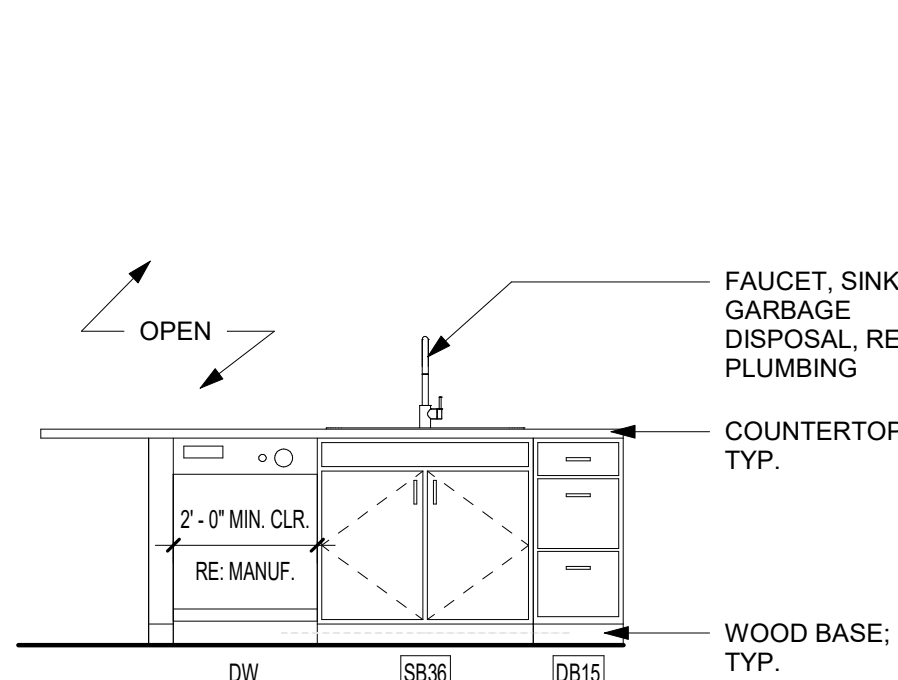
A-408



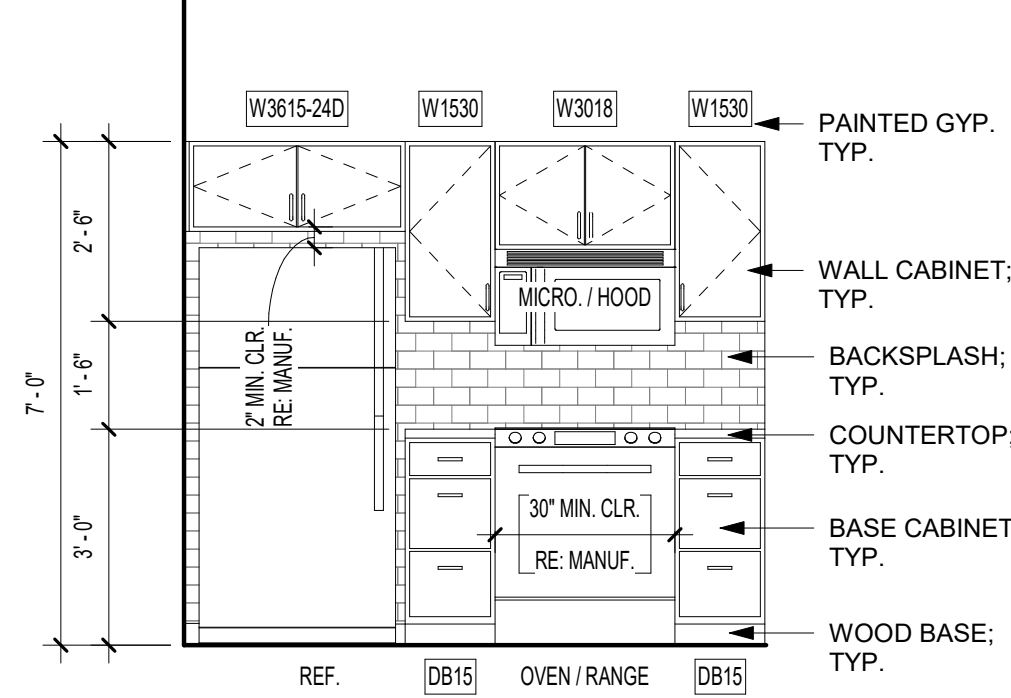
8 HURLEY BATH ELEV. 2
3/8" = 1'-0" (MIRRORED IN BATHROOM 2)



7 HURLEY BATH ELEV. 1
3/8" = 1'-0" (MIRRORED IN BATHROOM 2)



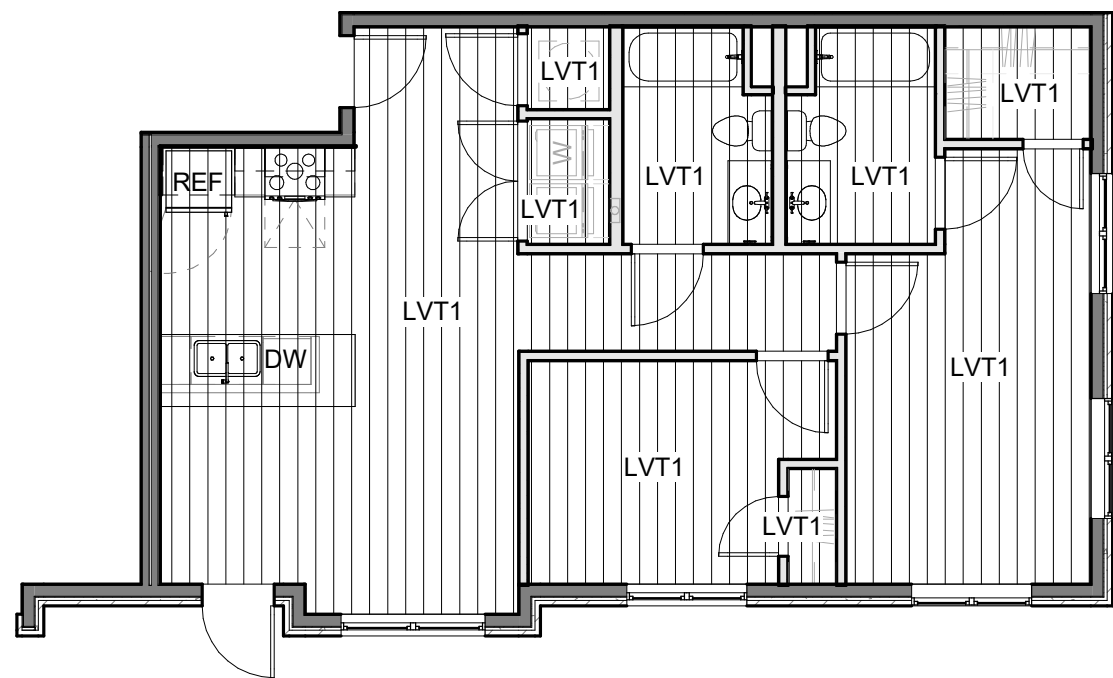
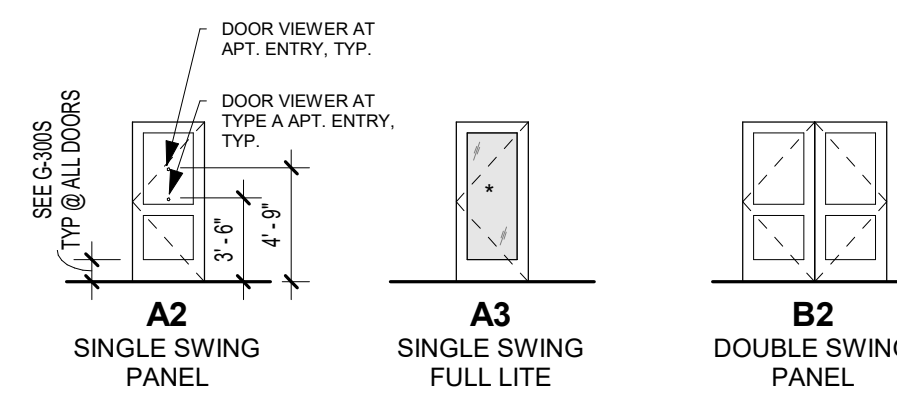
6 HURLEY KITCHEN ELEV. 2
3/8" = 1'-0"



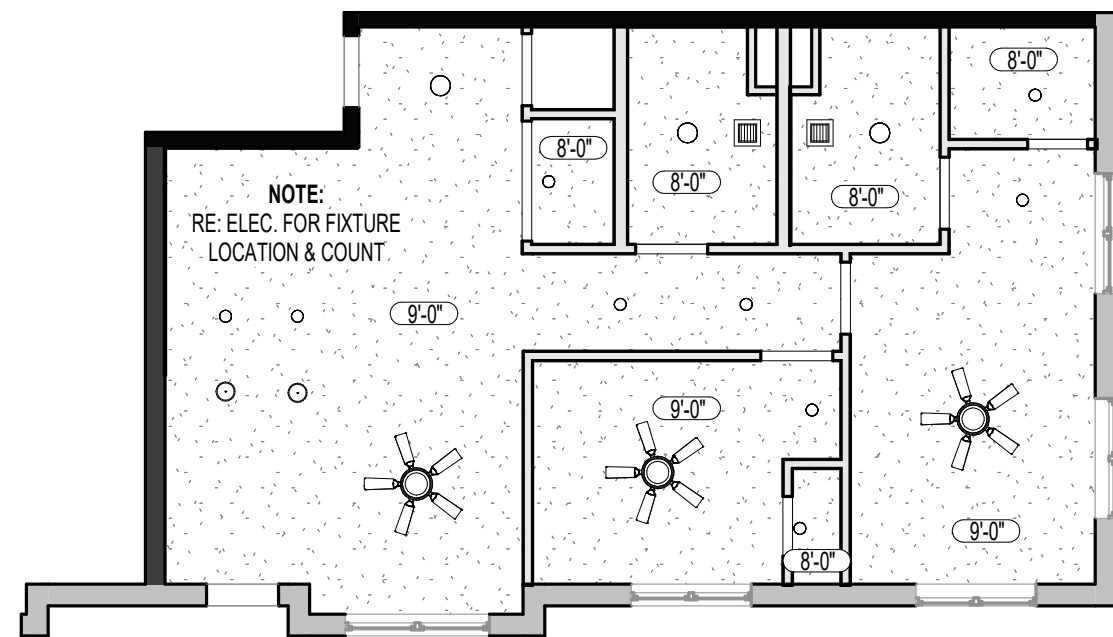
5 HURLEY KITCHEN ELEV. 1
3/8" = 1'-0"

REFERENCE G-003 FOR GENERAL NOTES
REFERENCE A-120 FOR RCP LEGEND
REFERENCE A-400 FOR UNIT PLAN LEGEND
REFERENCE A-102 & A-103 FOR RC LOCATIONS

DOOR TYPES - UNITS



4 UNIT FINISH PLAN - HURLEY (2 BR) - TYPE B
1/8" = 1'-0"

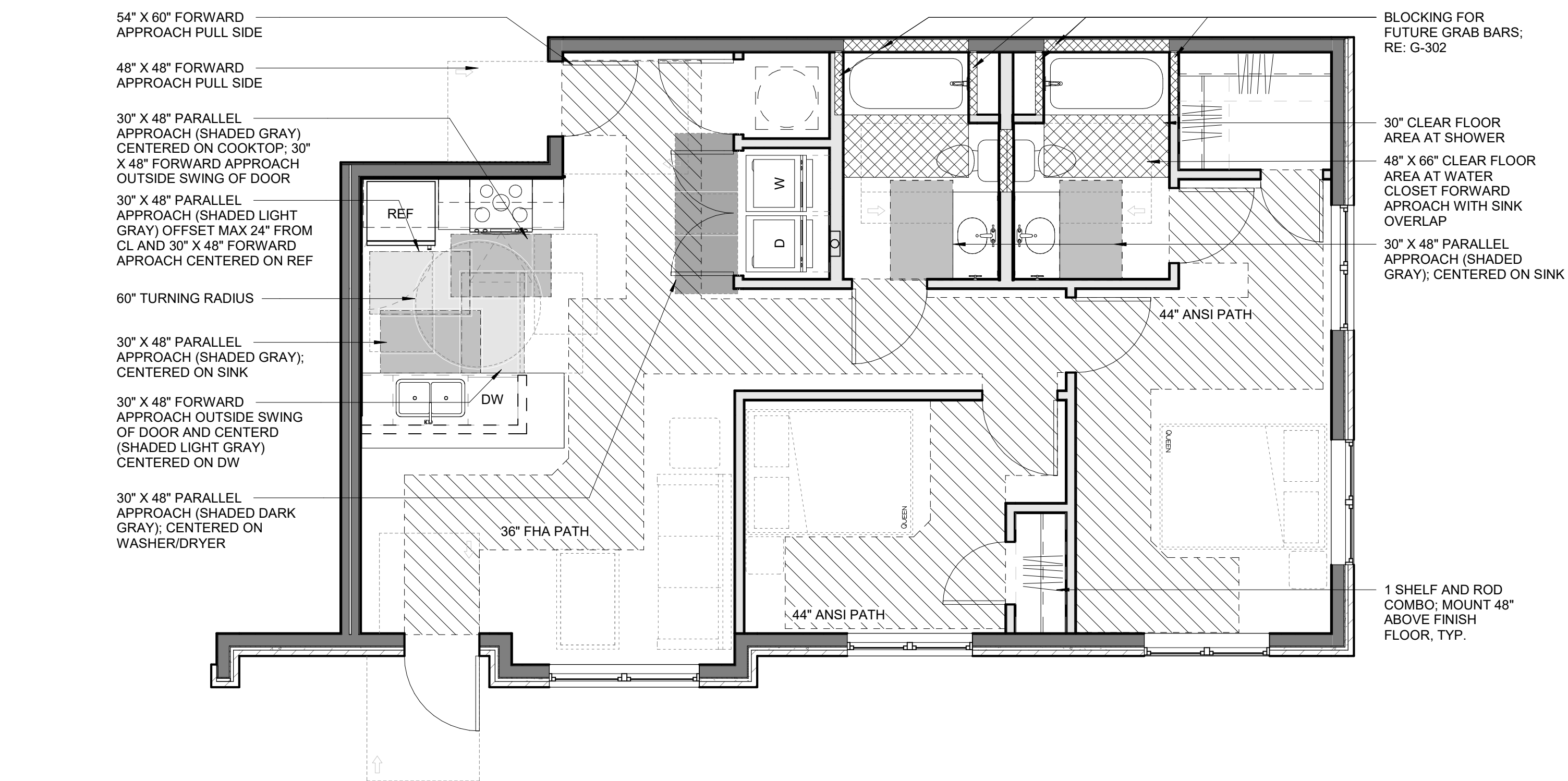
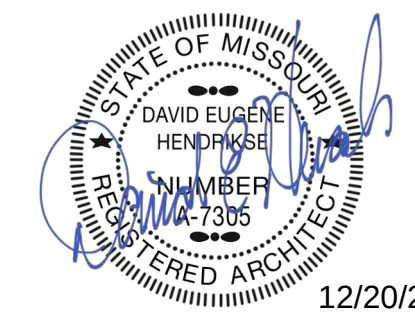


3 UNIT RCP - HURLEY (2 BR) - TYPE B
1/8" = 1'-0"

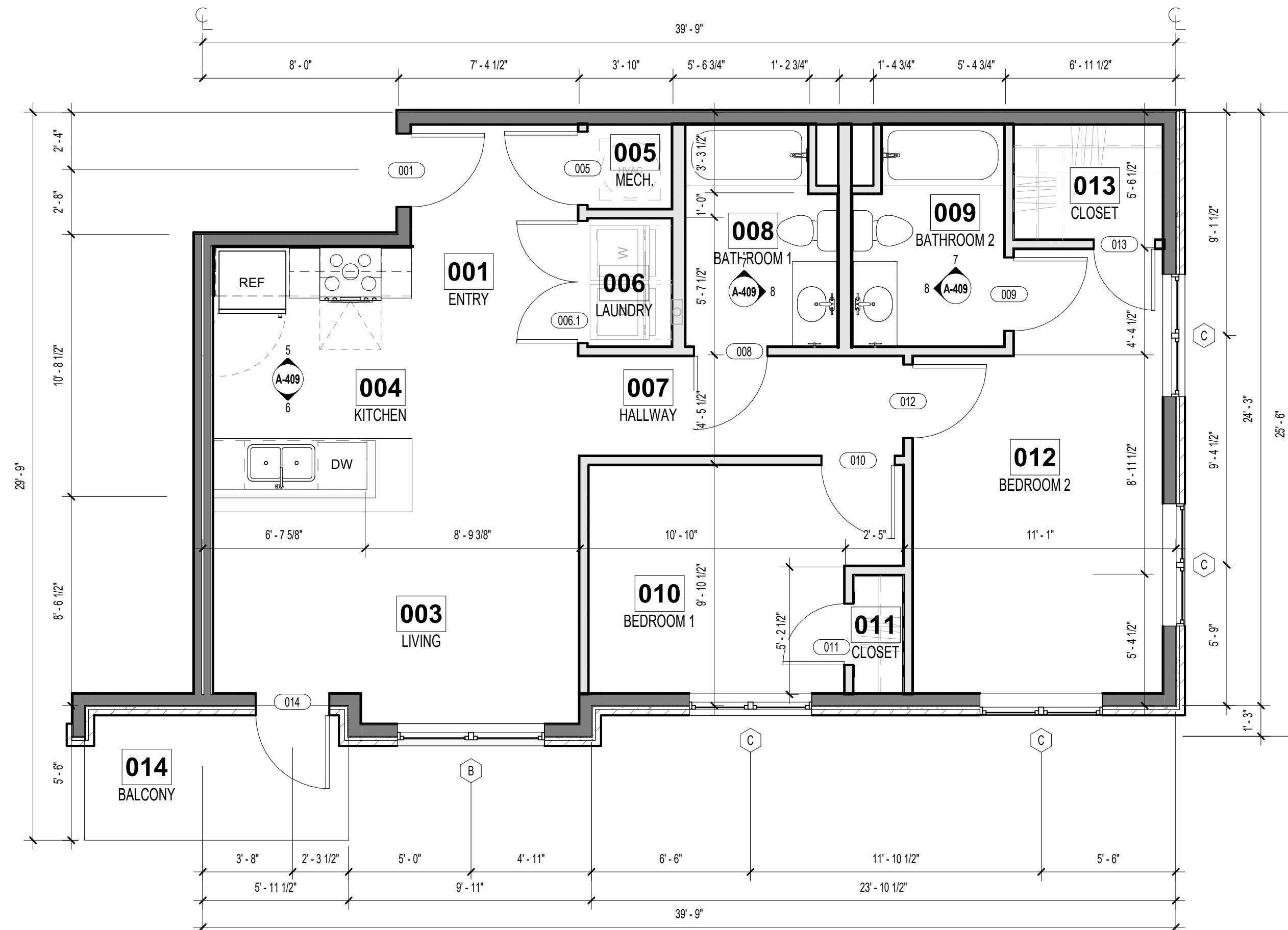
Room Finish Schedule - Units						
Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
001	ENTRY	LVT1	WB, PT3	PT1	PT4	
002	COAT	LVT1	WB, PT3	PT2	PT4	
003	LIVING	LVT1	WB, PT3	PT1	PT4	
004	KITCHEN	LVT1	WB, PT3	PT1	PT4	
005	MECH.	LVT1	WB, PT3	PT2	PT4	
006	LAUNDRY	LVT1	WB, PT3	PT2	PT4	
007	HALLWAY	LVT1	WB, PT3	PT1	PT4	
008	BATH 1	LVT1 OR LVT2	WB, PT3	PT1	PT4	LVT2 IN TYPE A UNITS ONLY
009	BATH 2	LVT1 OR LVT2	WB, PT3	PT1	PT4	LVT2 IN TYPE A UNITS ONLY
010	BEDROOM 1	LVT1	WB, PT3	PT1	PT4	
011	CLOSET 1	LVT1	WB, PT3	PT2	PT4	
012	BEDROOM 2	LVT1	WB, PT3	PT1	PT4	
013	CLOSET 2	LVT1	WB, PT3	PT2	PT4	
014	BALCONY	CONCRETE			PT4	

DOOR SCHEDULE - UNIT DOORS							
Mark	Door	Width	Height	Thickness	Fire Rating	Door Type	Comments
001	ENTRY	3'-0"	6'-8"	1 3/4"	20	A2	PH TIMELY SPRING HINGES (CLOSER) SMOKE SEAL
002	COAT	3'-0"	6'-8"	1 3/8"		A2	PH
005	MECH.	3'-0"	6'-8"	1 3/8"		A2	PH
006	LAUNDRY	3'-0"	6'-8"	1 3/8"		A2	PH
006.1	LAUNDRY	6'-0"	6'-8"	1 3/8"		B2	PH
008	BATH 1	3'-0"	6'-8"	1 3/8"		A2	PH
009	BATH 2	3'-0"	6'-8"	1 3/8"		A2	PH
010	BEDROOM 1	3'-0"	6'-8"	1 3/8"		A2	PH
011	CLOSET	3'-0"	6'-8"	1 3/8"		A2	PH
011.1	CLOSET	6'-0"	6'-8"	1 3/8"		B2	PH
012	BEDROOM 2	3'-0"	6'-8"	1 3/8"		A2	PH
013	CLOSET	3'-0"	6'-8"	1 3/8"		A2	PH
014	BALCONY	3'-0"	8'-0"	1 3/4"		A3	PH TIMELY

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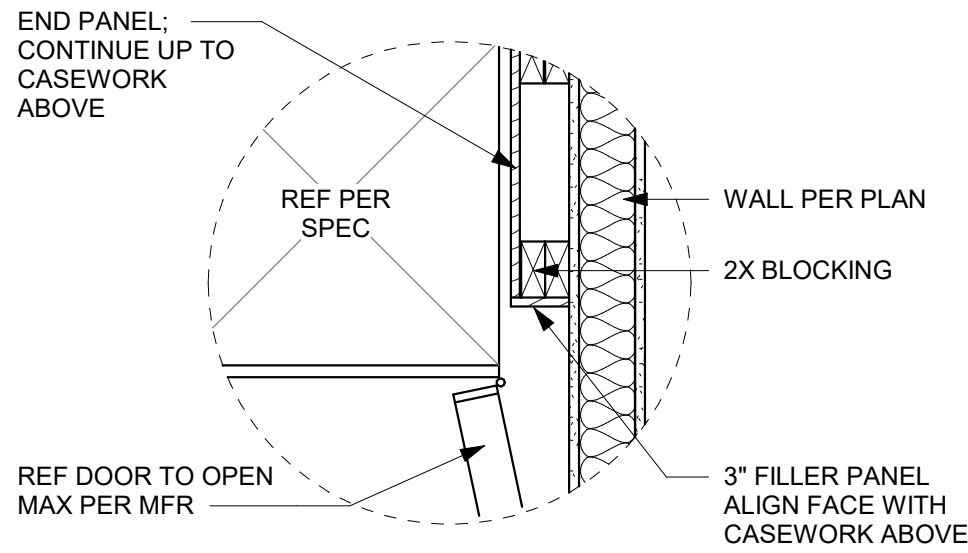


2 UNIT CLEAR SPACE PLAN - HURLEY (2 BR) - TYPE B
1/4" = 1'-0"

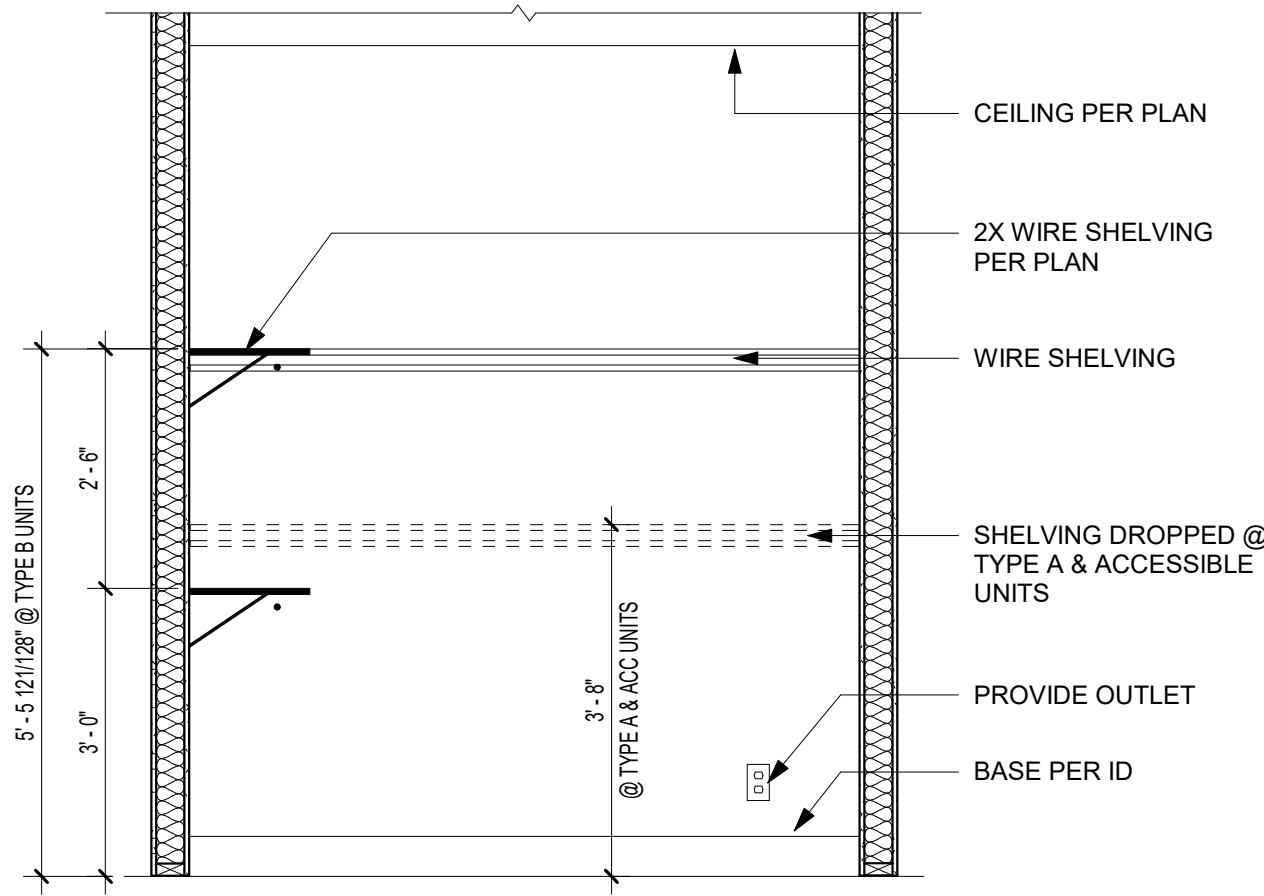


1 UNIT FLOOR PLAN - HURLEY (2 BR) - TYPE B
1/4" = 1'-0"

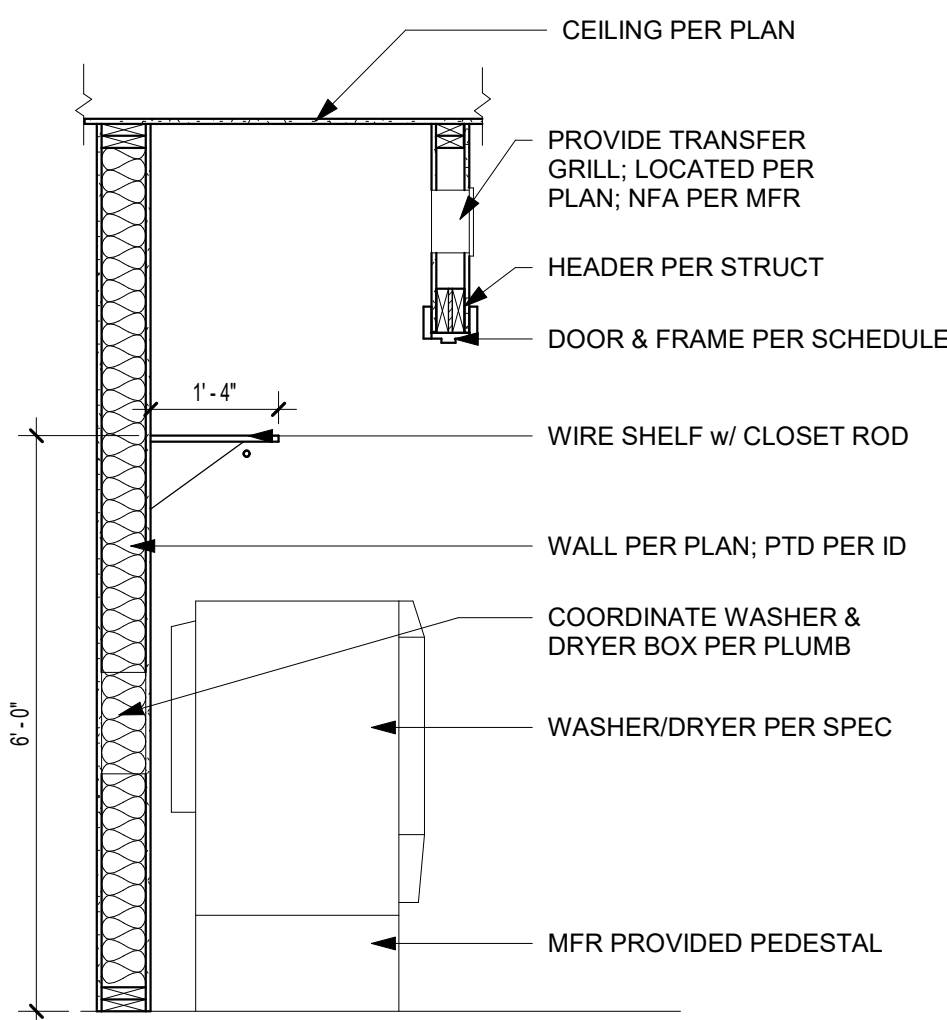
THE VILLAGE AT DISCOVERY - LOT 4
LEE'S SUMMIT, MO
SHEET TITLE
HURLEY (2 BR) UNIT PLAN
PROJECT NUMBER: 23099
SHEET NUMBER:
A-409



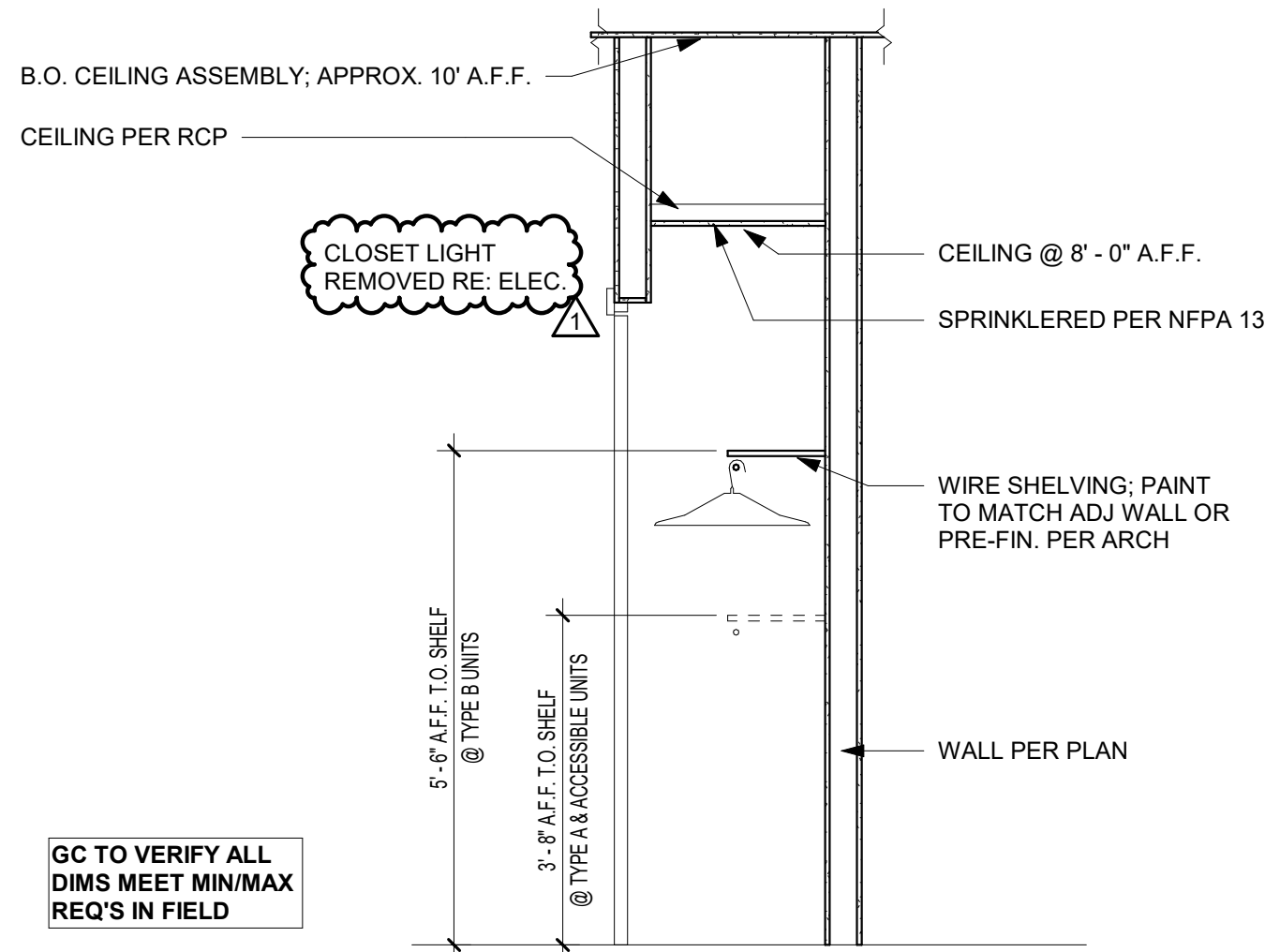
D4 UNIT DETAIL - REF FILLER
1" = 1'-0"



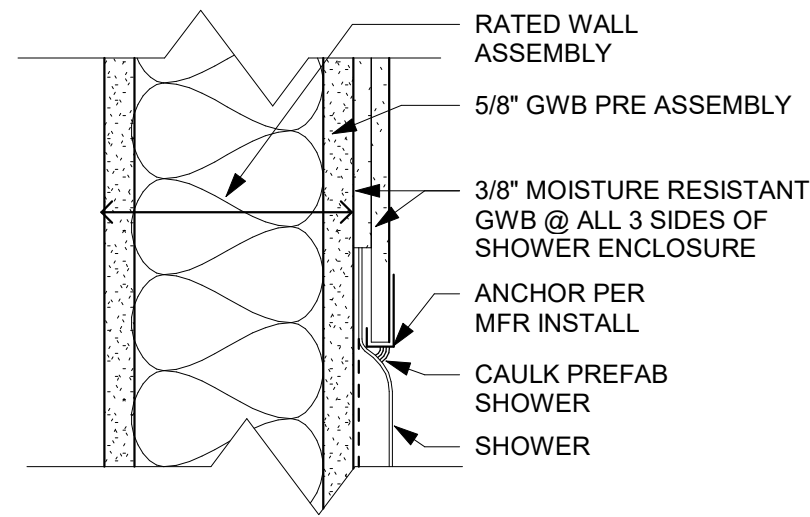
D3 UNIT DETAIL - TYPICAL WALK-IN CLOSET
1/2" = 1'-0"



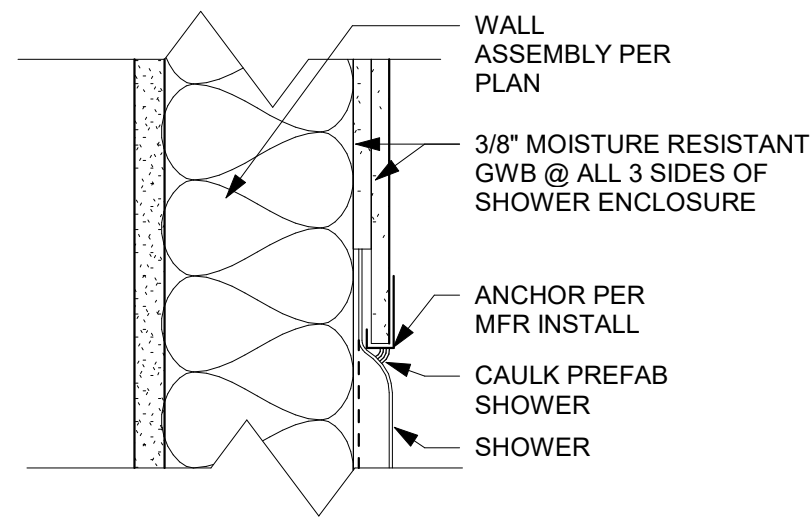
D2 UNIT DETAIL - TYP W/D CLOSET SECTION
1/2" = 1'-0"



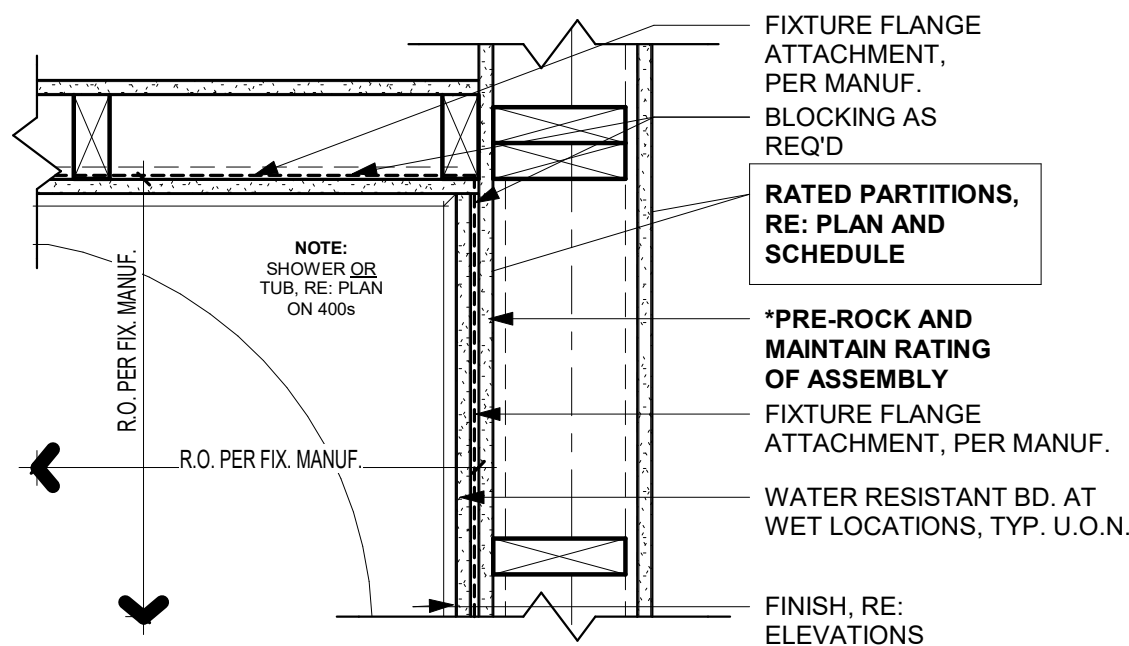
D1 UNIT DETAIL - TYPICAL CLOSET SECTION
1/2" = 1'-0"



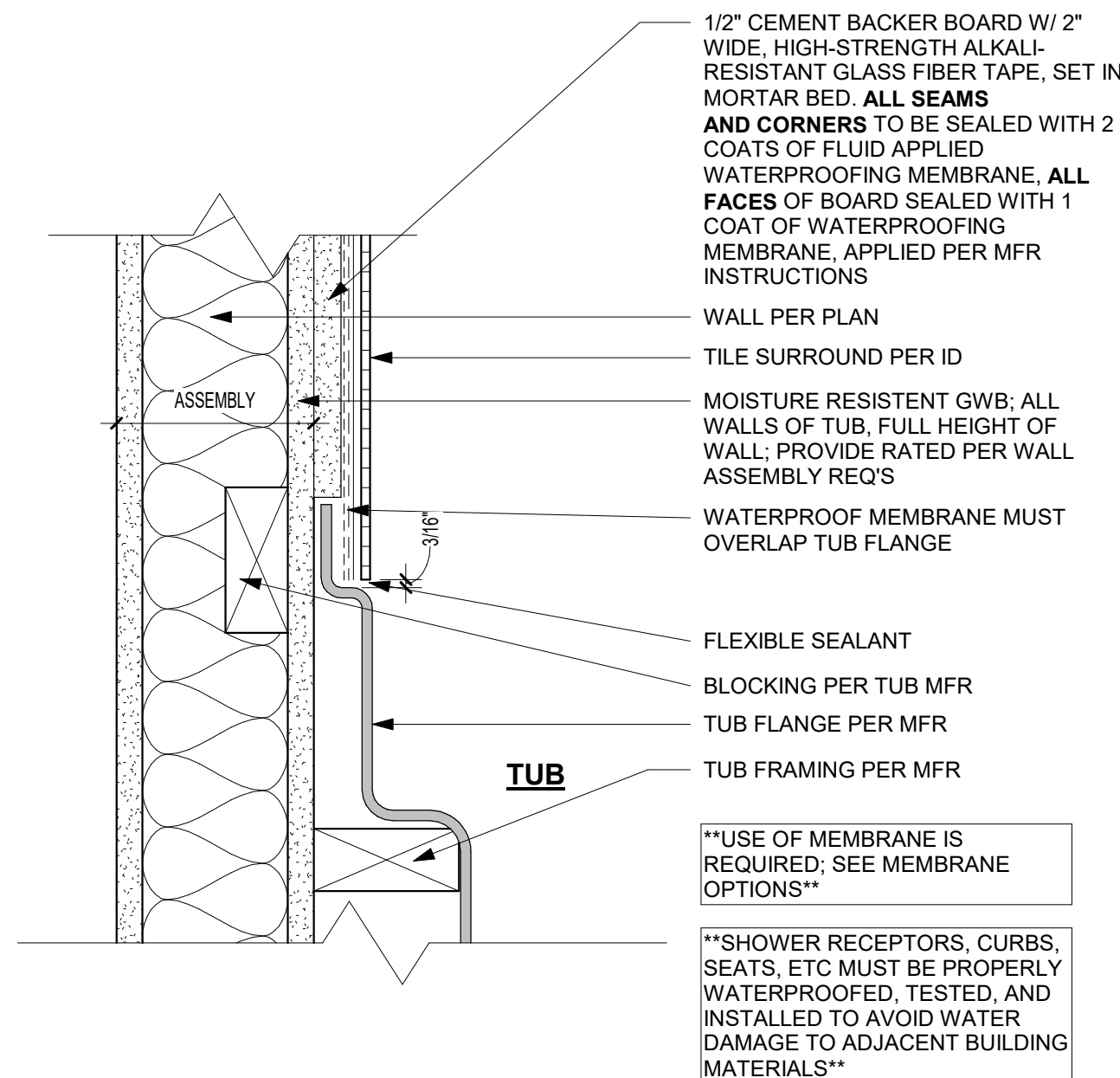
C3 UNIT DETAIL - SHOWER @ RATED WALL @ HEAD/JAMB
3" = 1'-0"



C2 UNIT DETAIL - SHOWER @ NON RATED WALL @ HEAD/JAMB
3" = 1'-0"



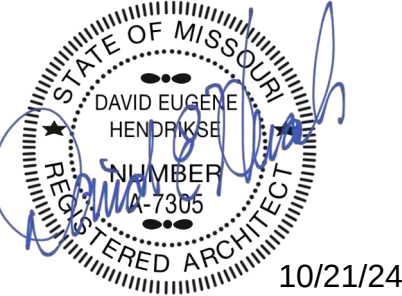
C1 FRAMING - RATED WALL TUB/SHOWER
1 1/2" = 1'-0"



B1 UNIT DETAIL - TUB SURROUND DETAIL
3" = 1'-0"

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1 10/21/24 ADDENDUM #1

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THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
UNIT DETAILS

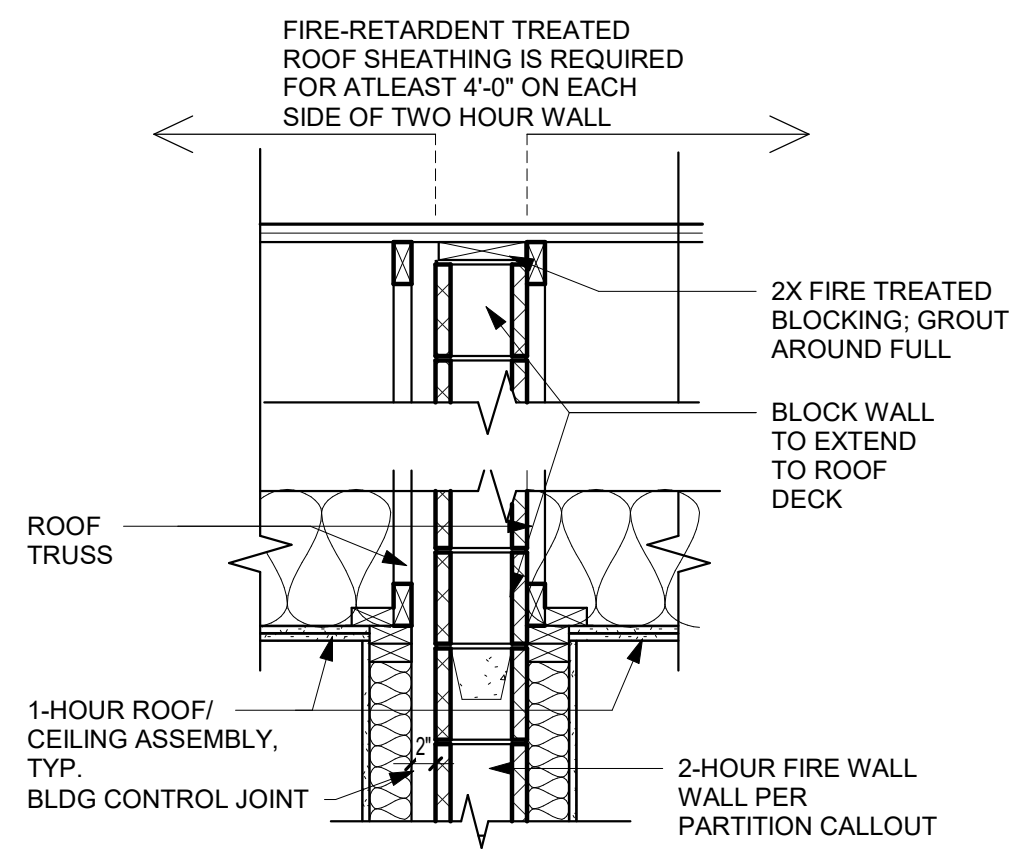
PROJECT NUMBER: 23099
SHEET NUMBER:

A-415

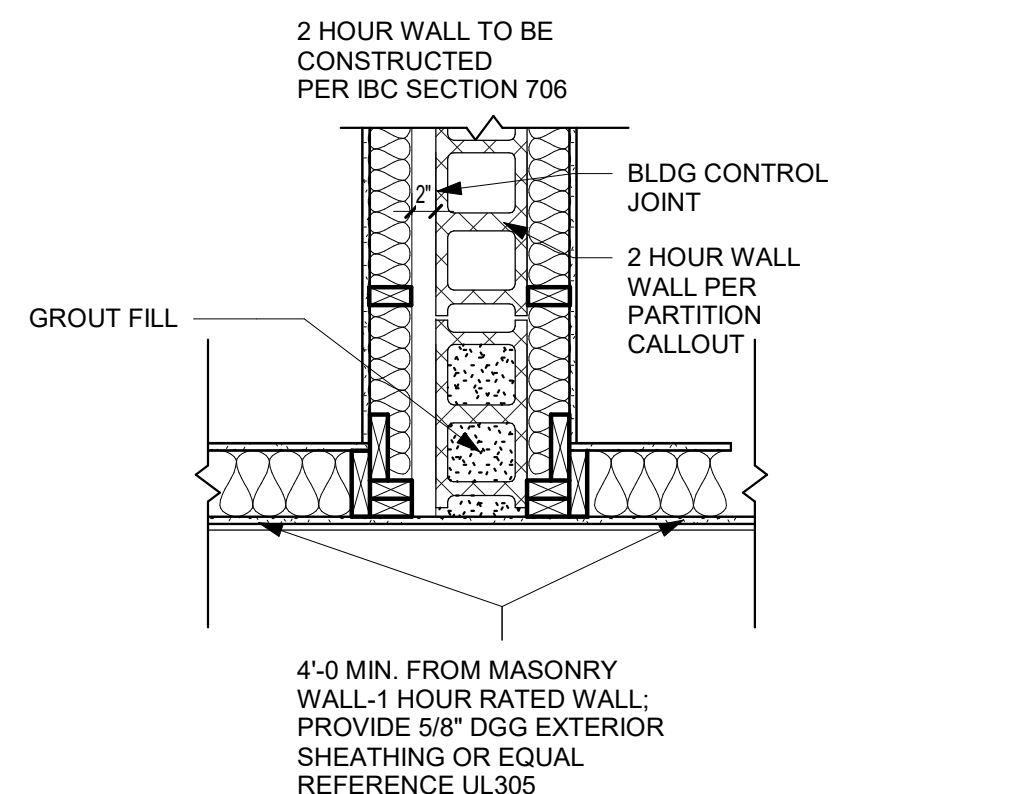


A-500

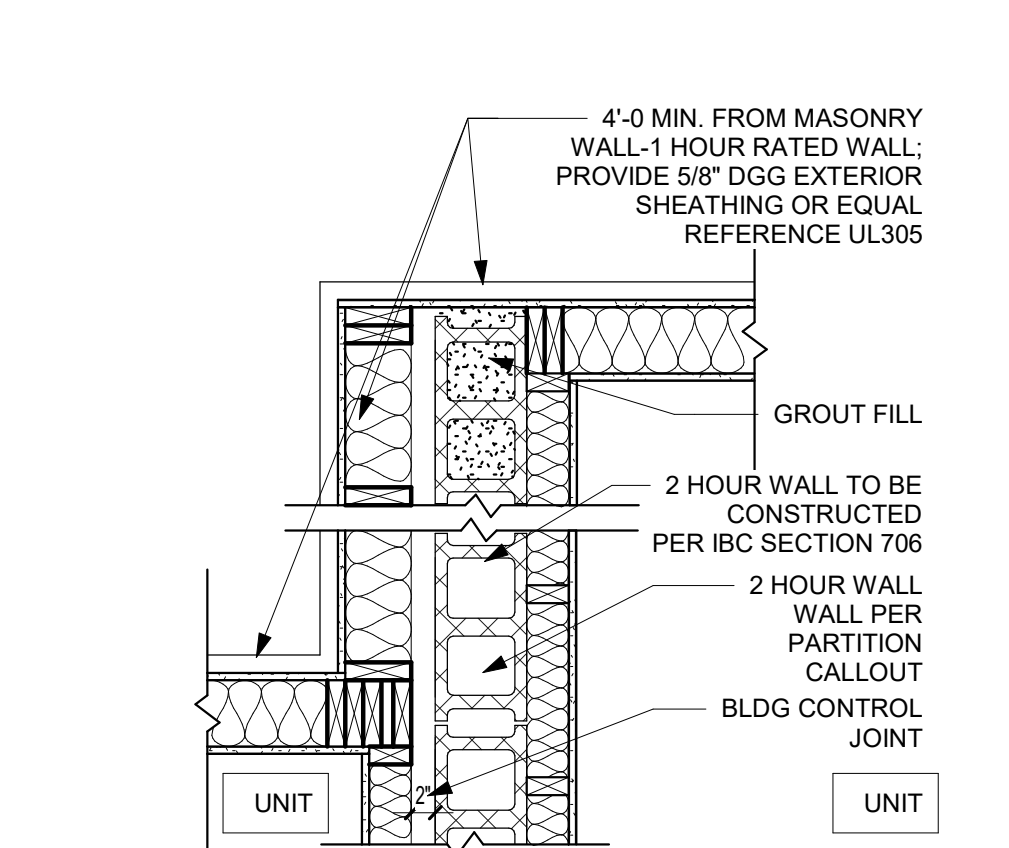
LEE'S SUMMIT, MO



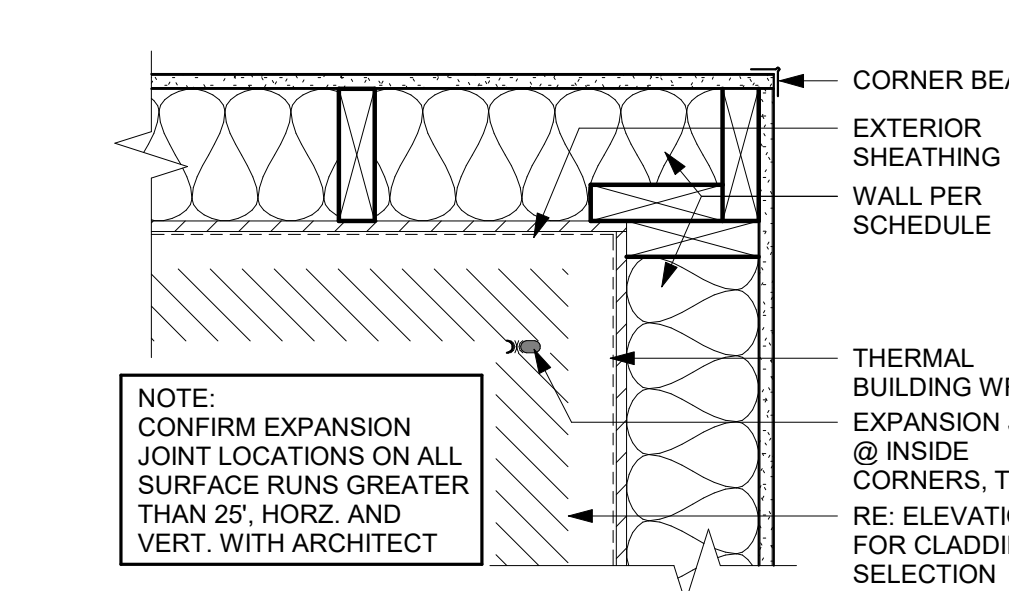
E4 SECT. @ 2 HR WALL @ ROOF
3/4" = 1'-0"



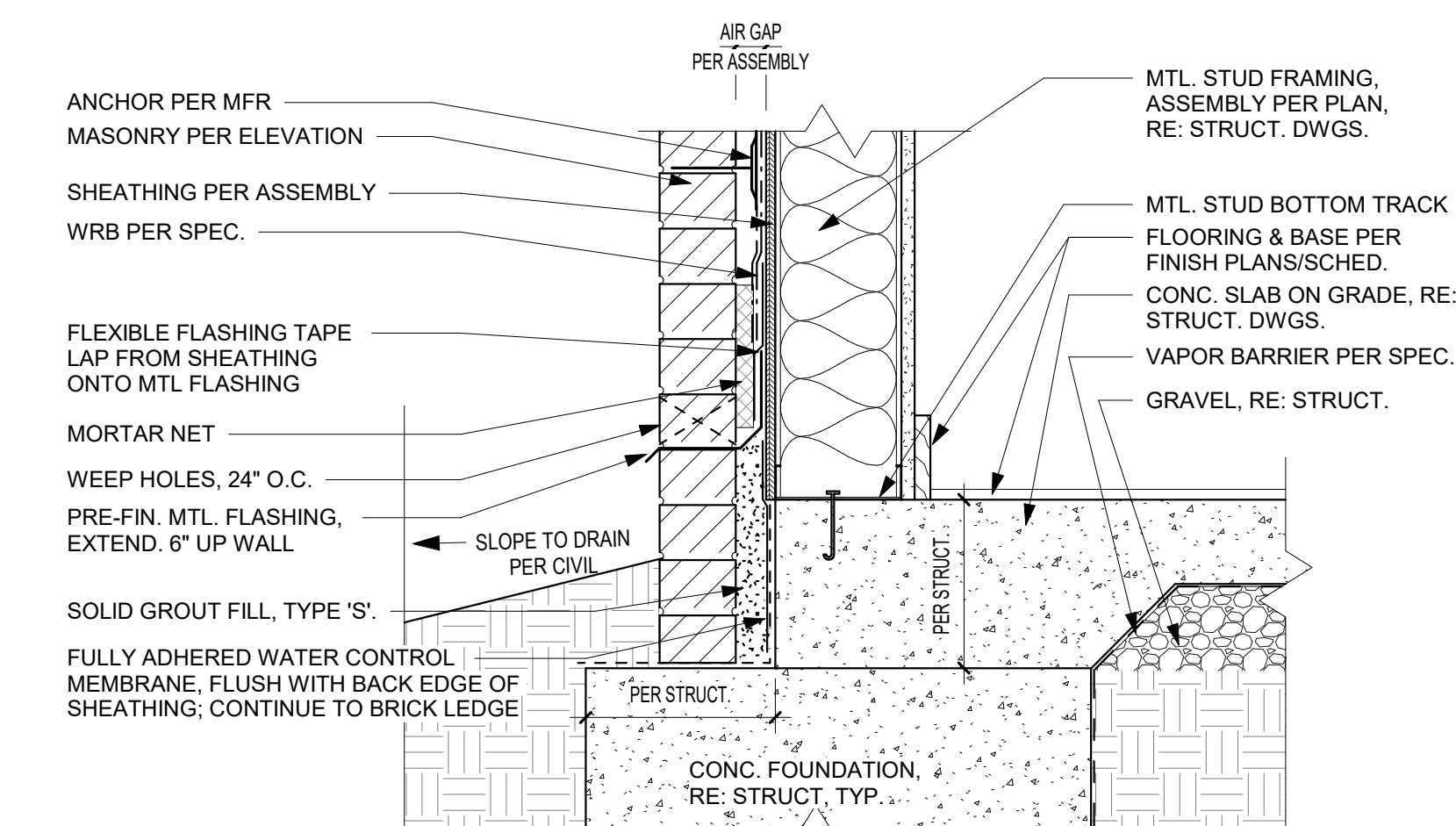
E3 2 HOUR WALL DETAIL 2 (PLAN)
3/4" = 1'-0"



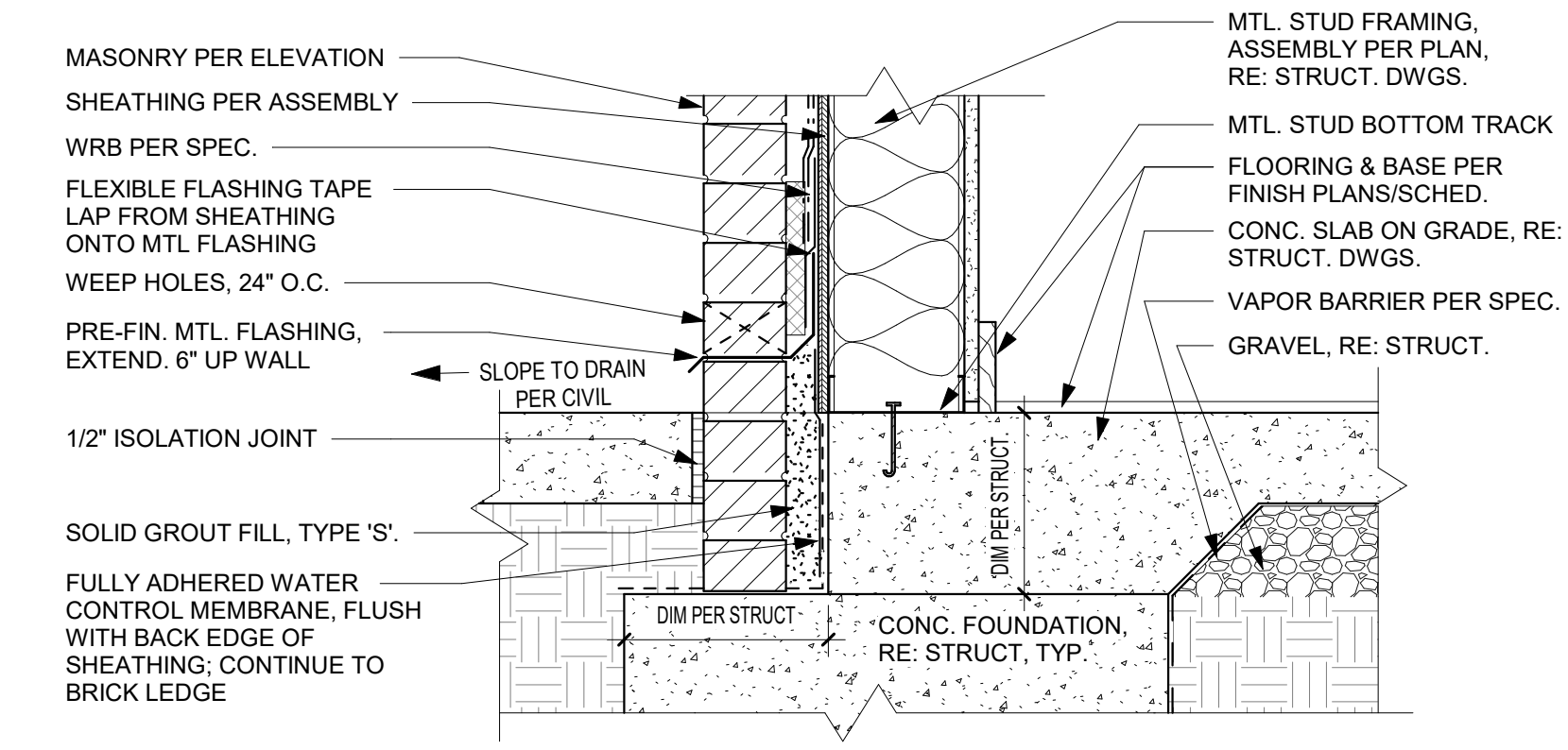
E2 2 HOUR WALL DETAIL 1 (PLAN)
3/4" = 1'-0"



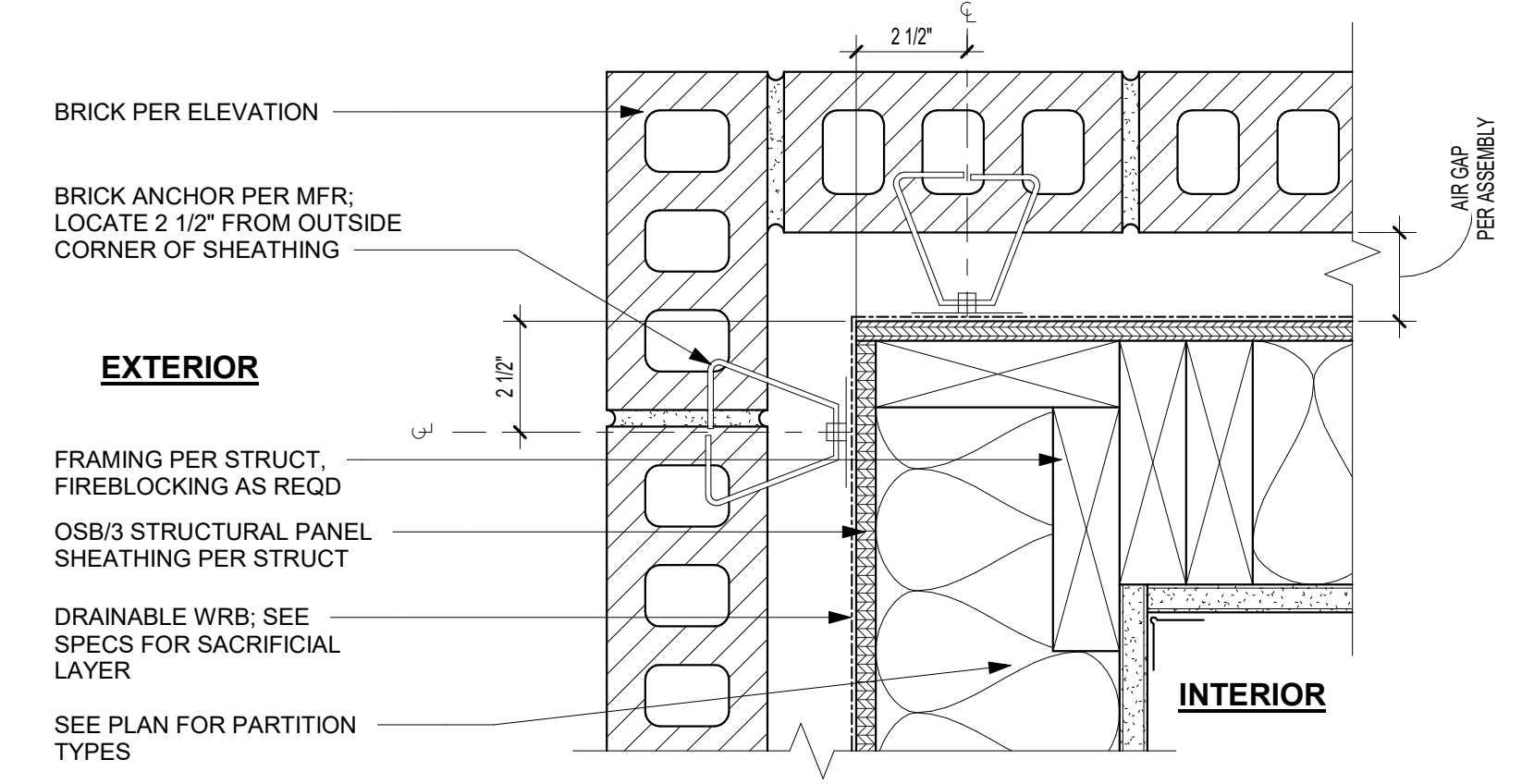
E1 FRAMING INSIDE CORNER (PLAN)
1 1/2" = 1'-0"



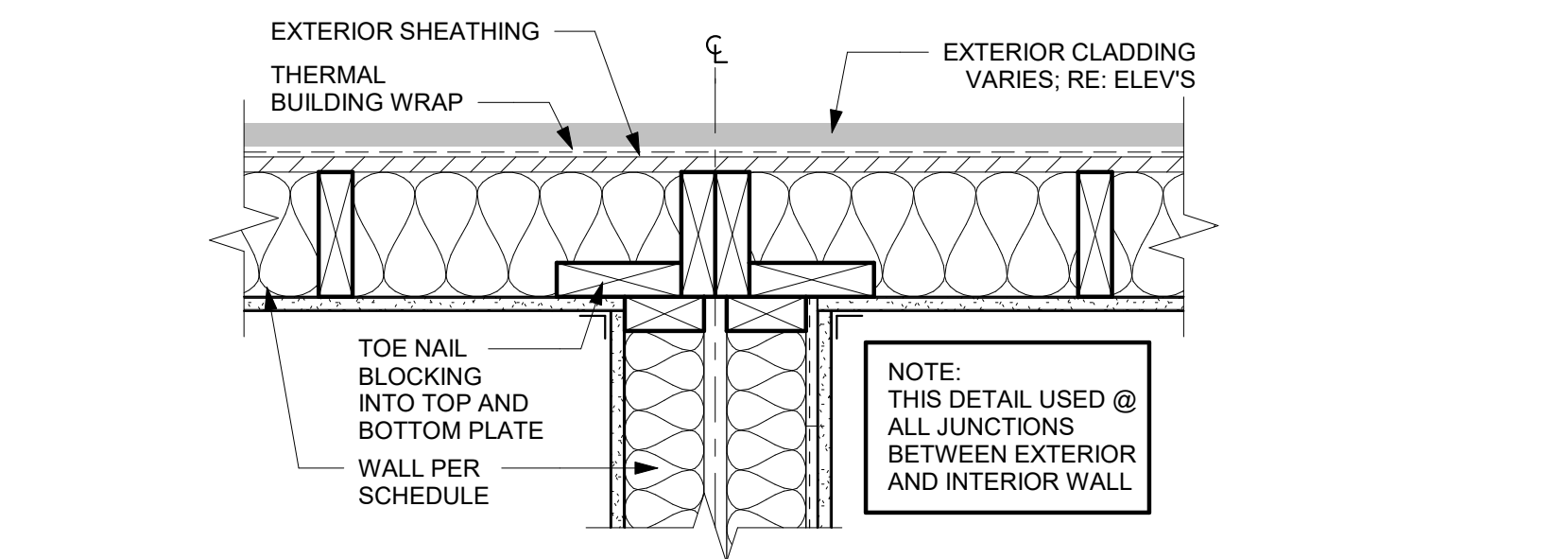
C4 FOUNDATION AT GRADE
1 1/2" = 1'-0"



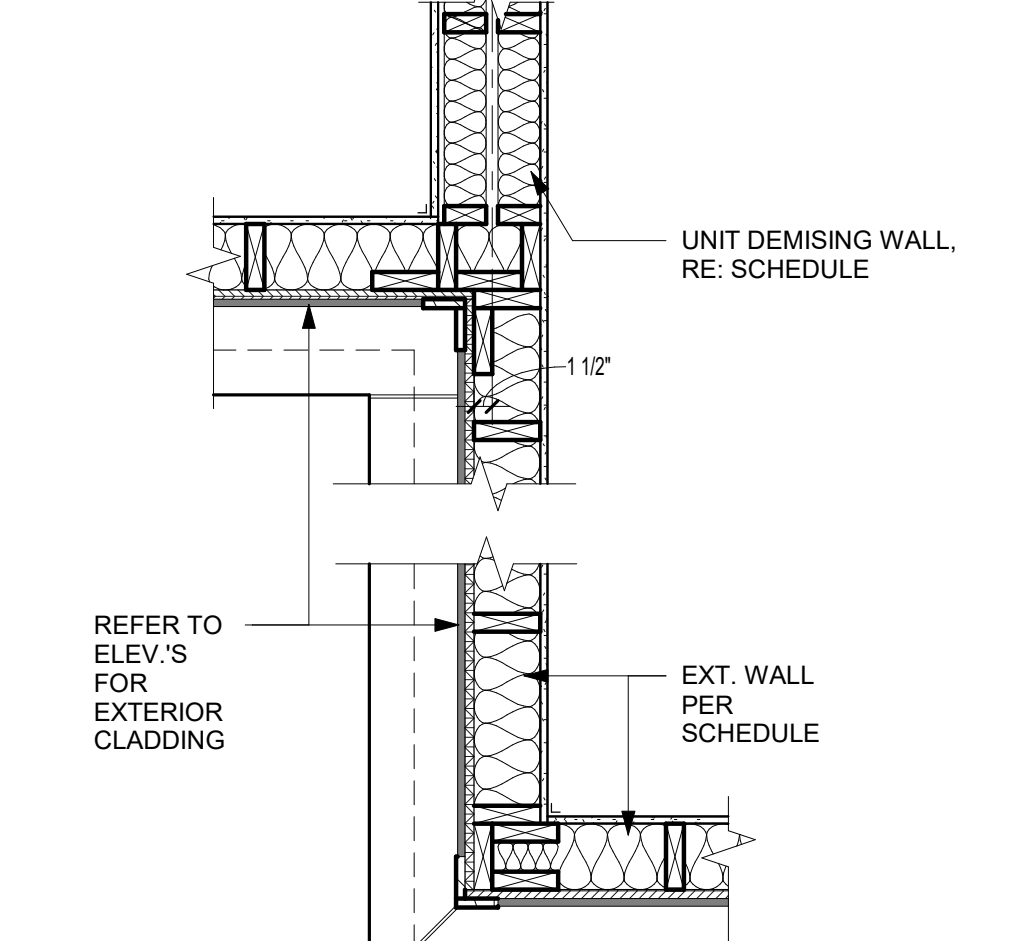
C3 FOUNDATION AT HARDSCAPE
1 1/2" = 1'-0"



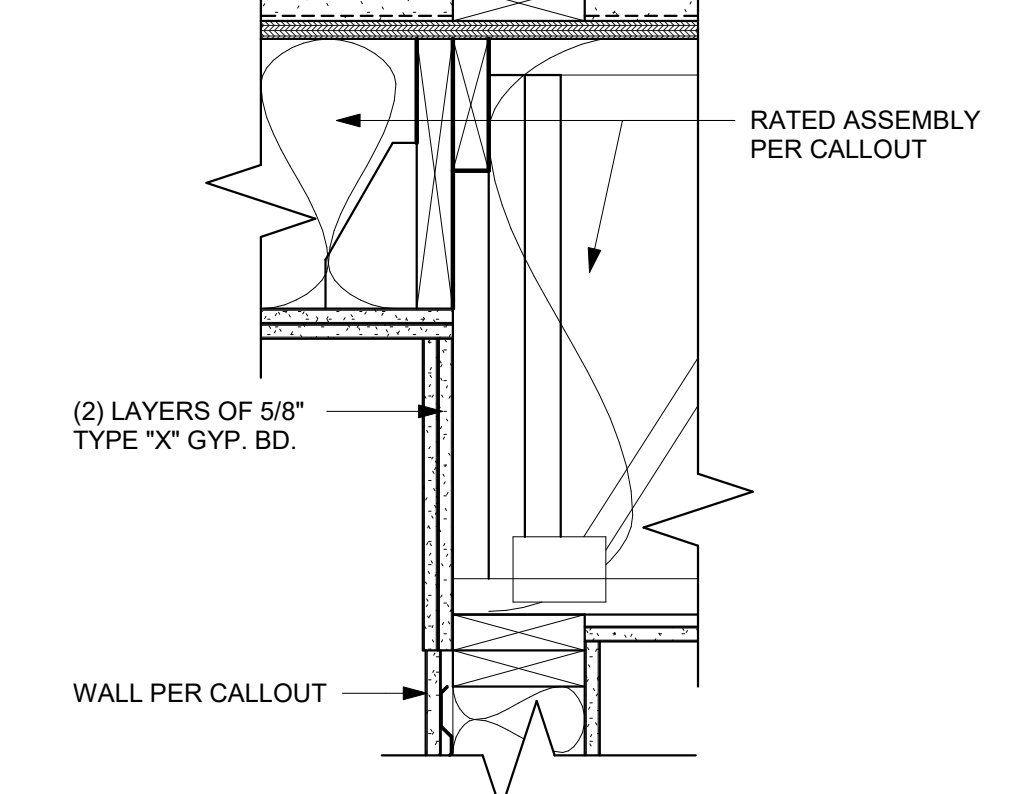
C2 BRICK - OUTSIDE CORNER (PLAN)
3" = 1'-0"



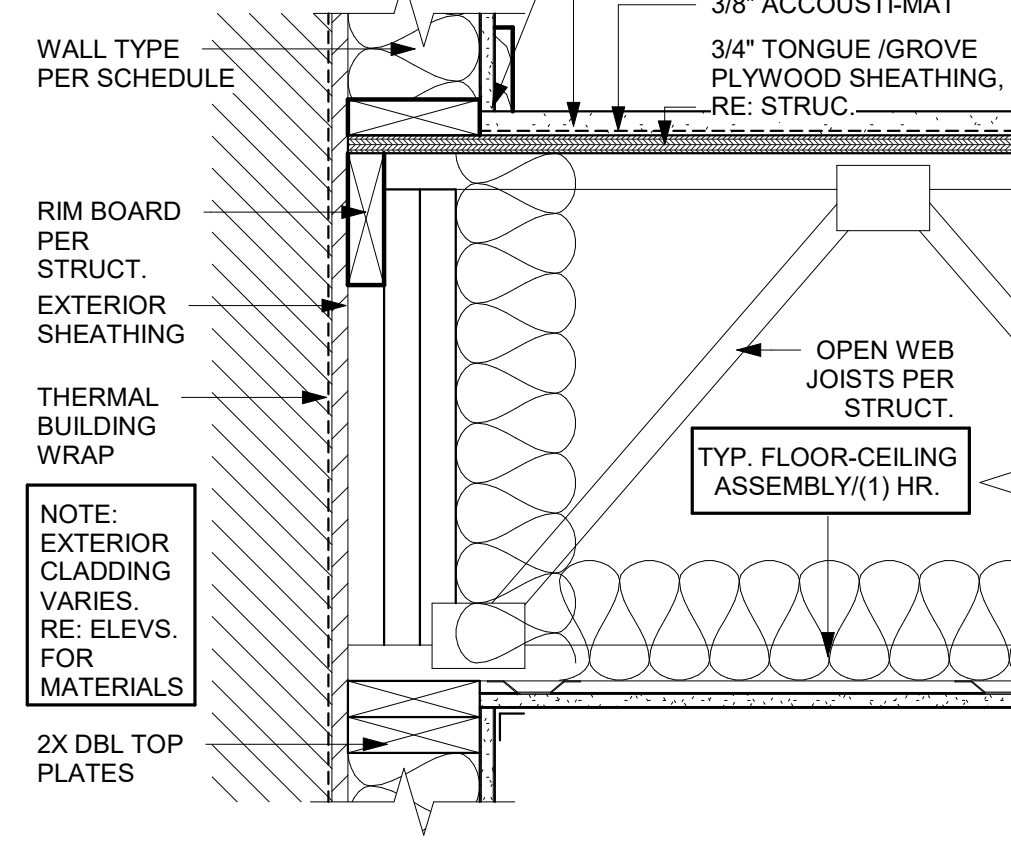
C1 PARTY WALL (PLAN)
1 1/2" = 1'-0"



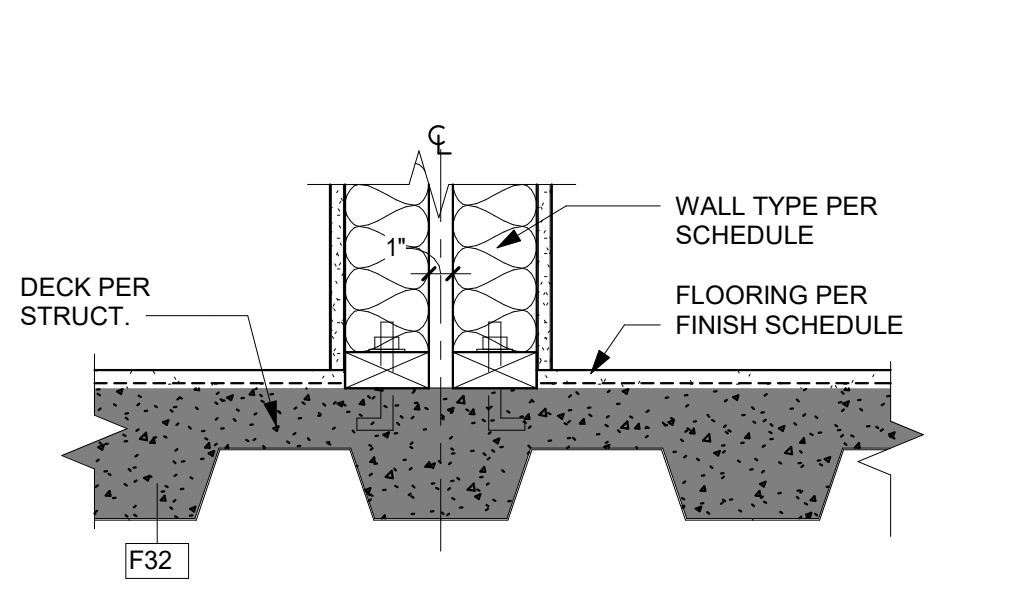
B4 CORNER FRAMING DETAIL - PLAN
3/4" = 1'-0"



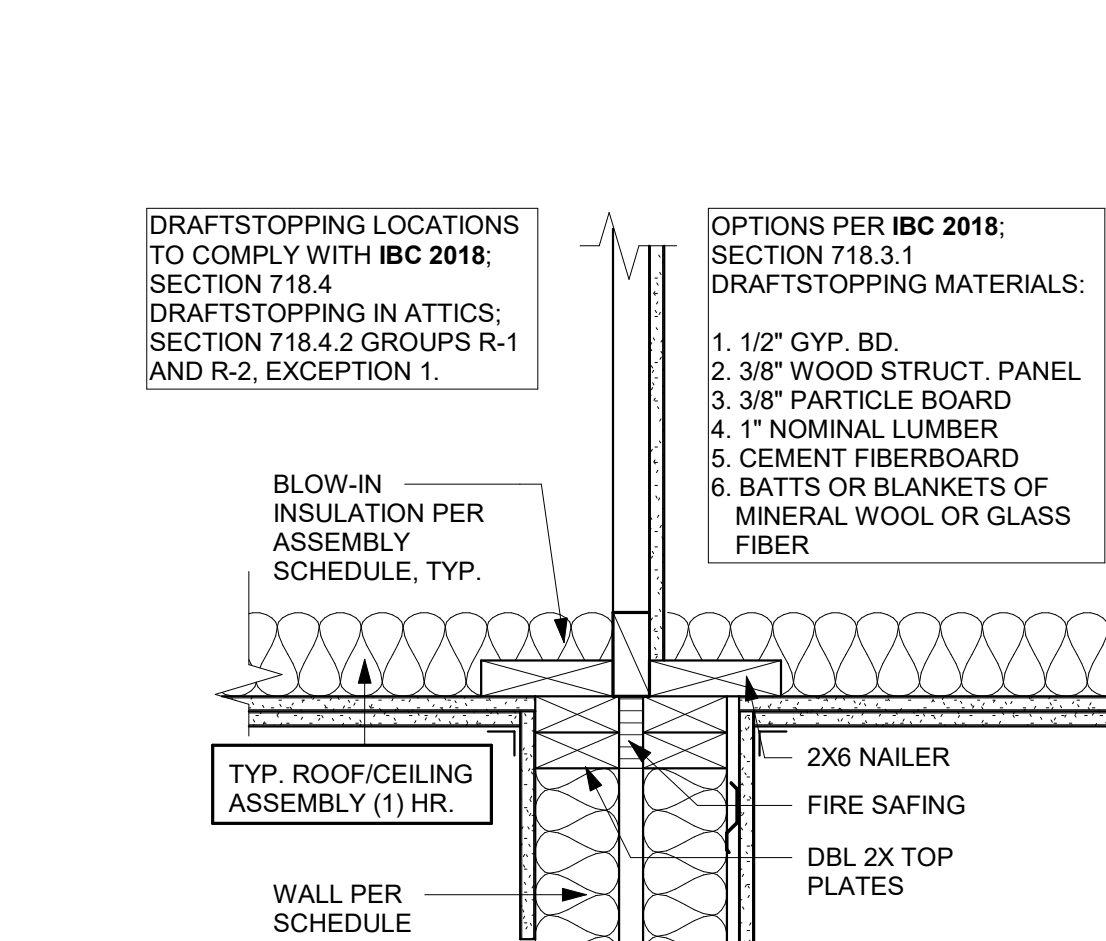
B3 FRAMING UPSET @ CORRIDORS
1 1/2" = 1'-0"



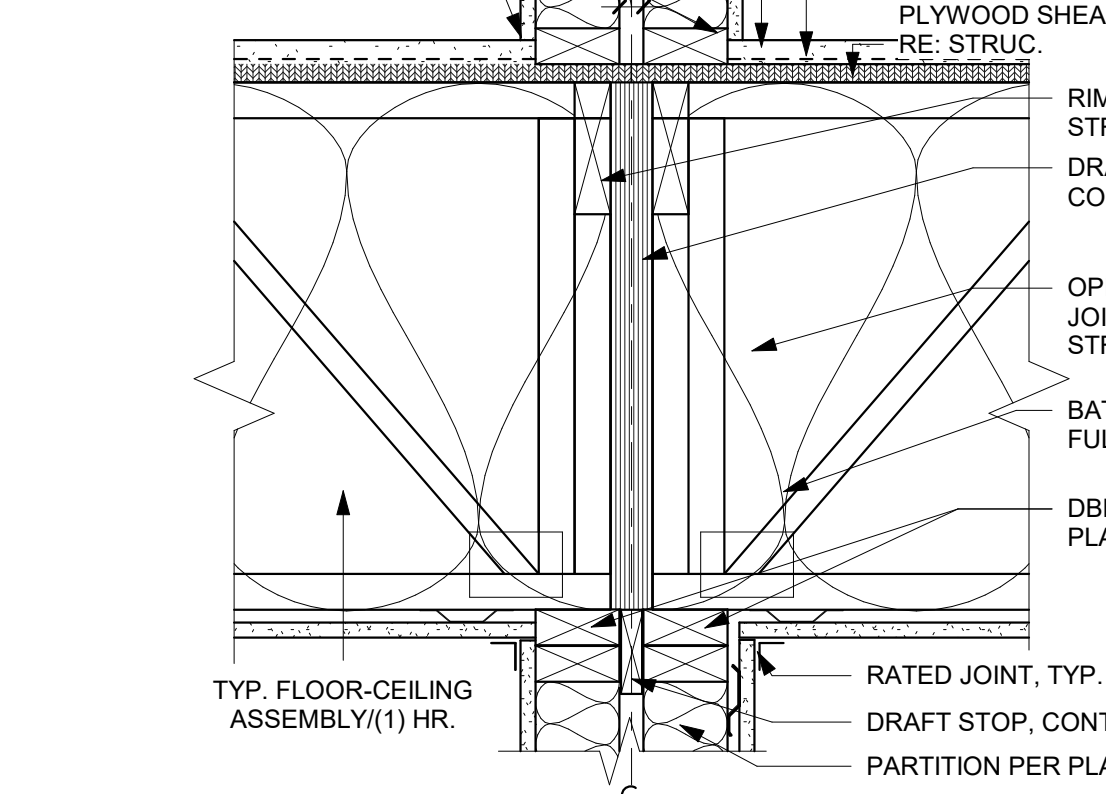
B2 FRAMING FLOOR/CLG DTL.
1 1/2" = 1'-0"



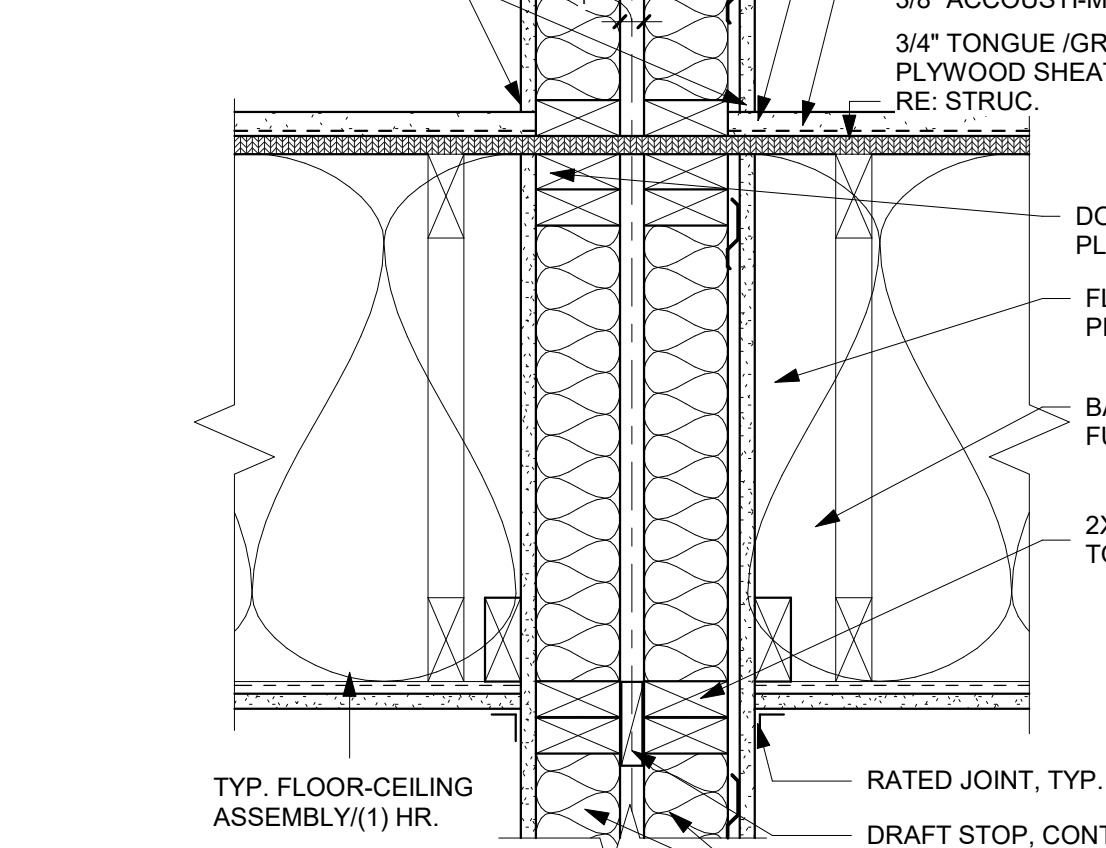
B1 PARTY WALL @ DECK
1 1/2" = 1'-0"



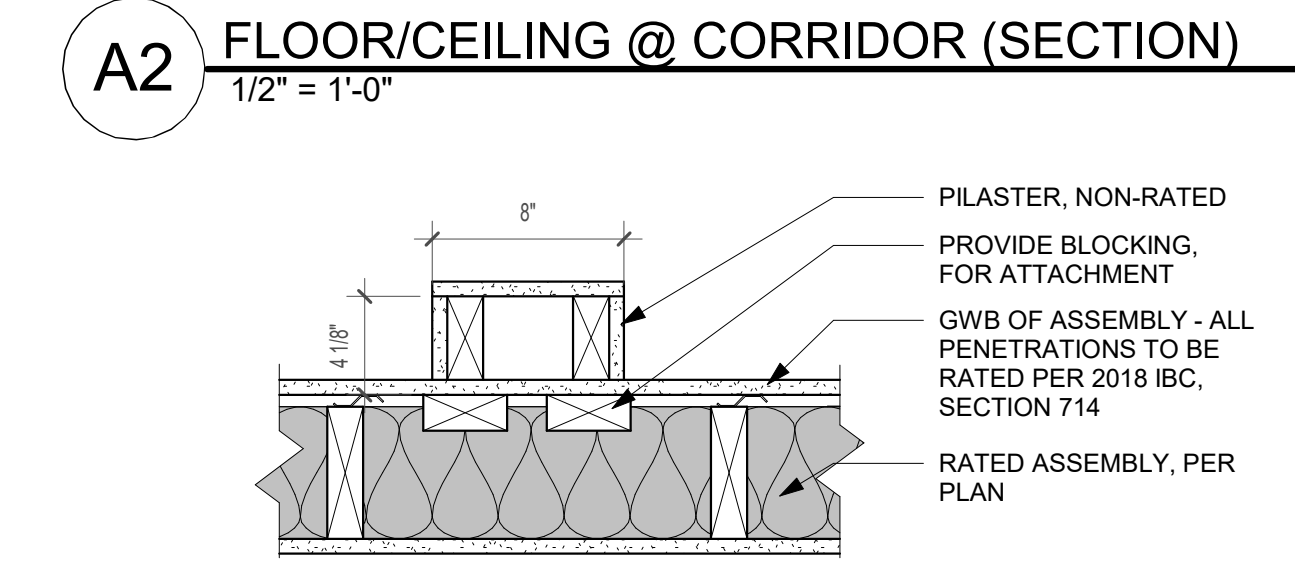
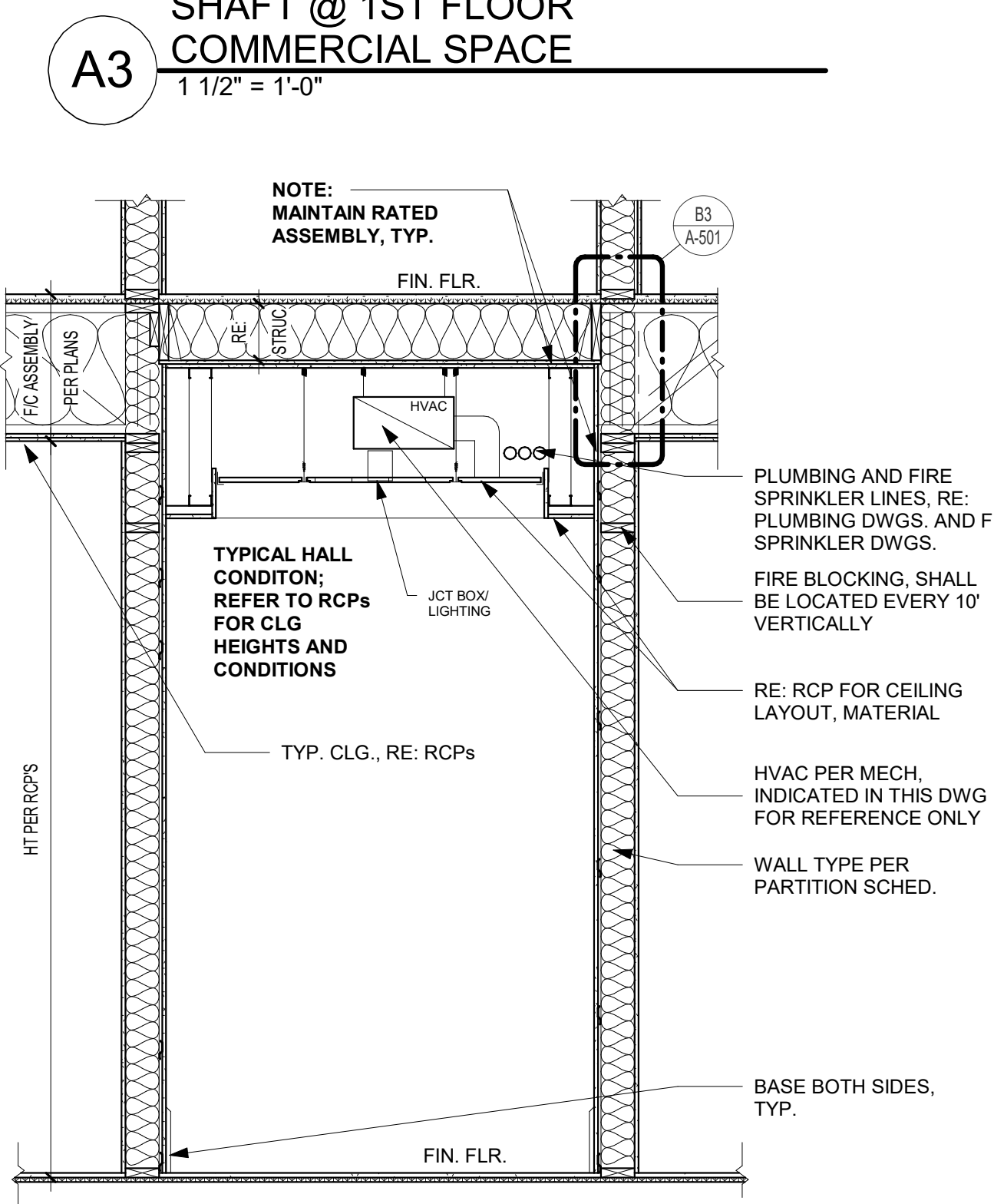
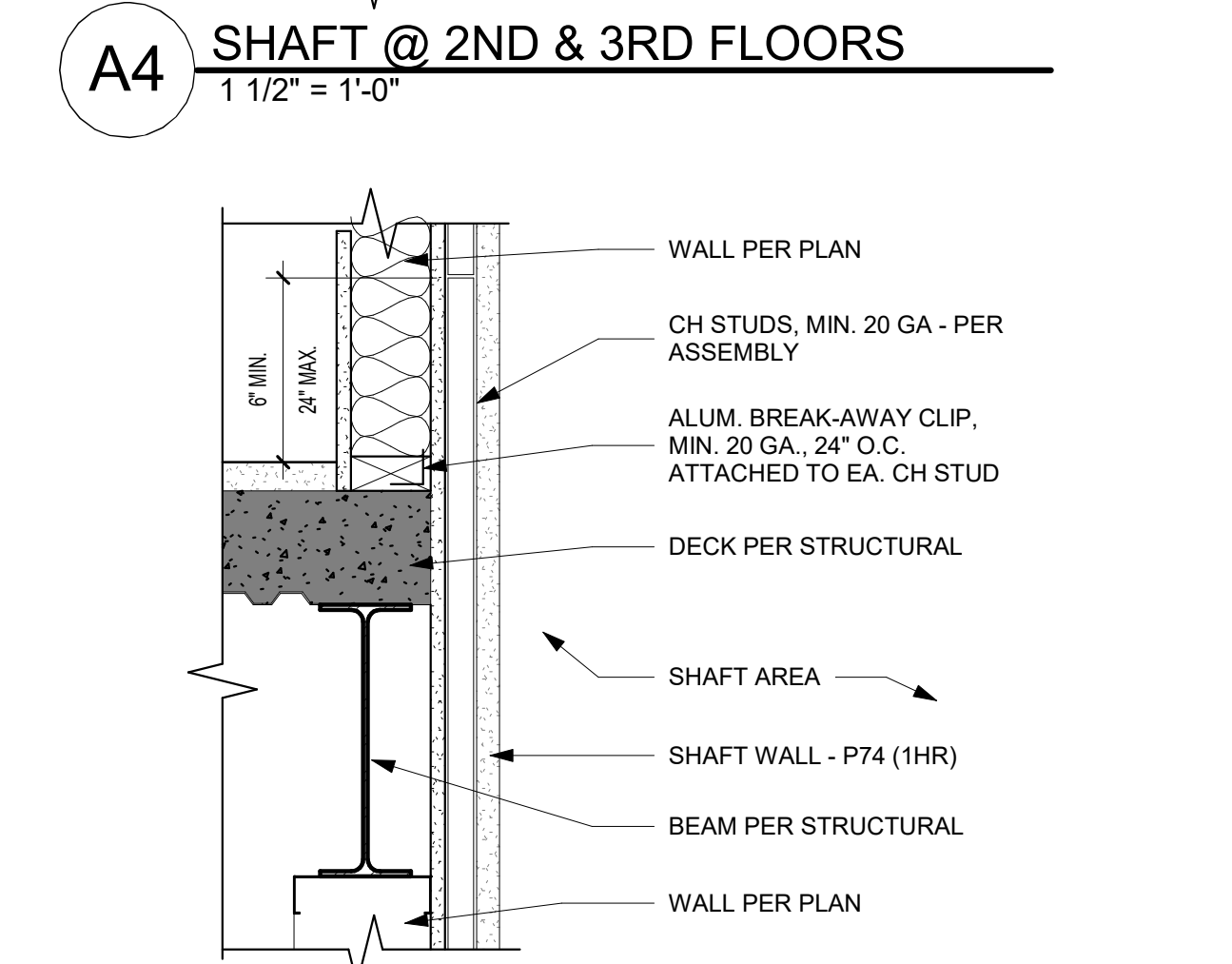
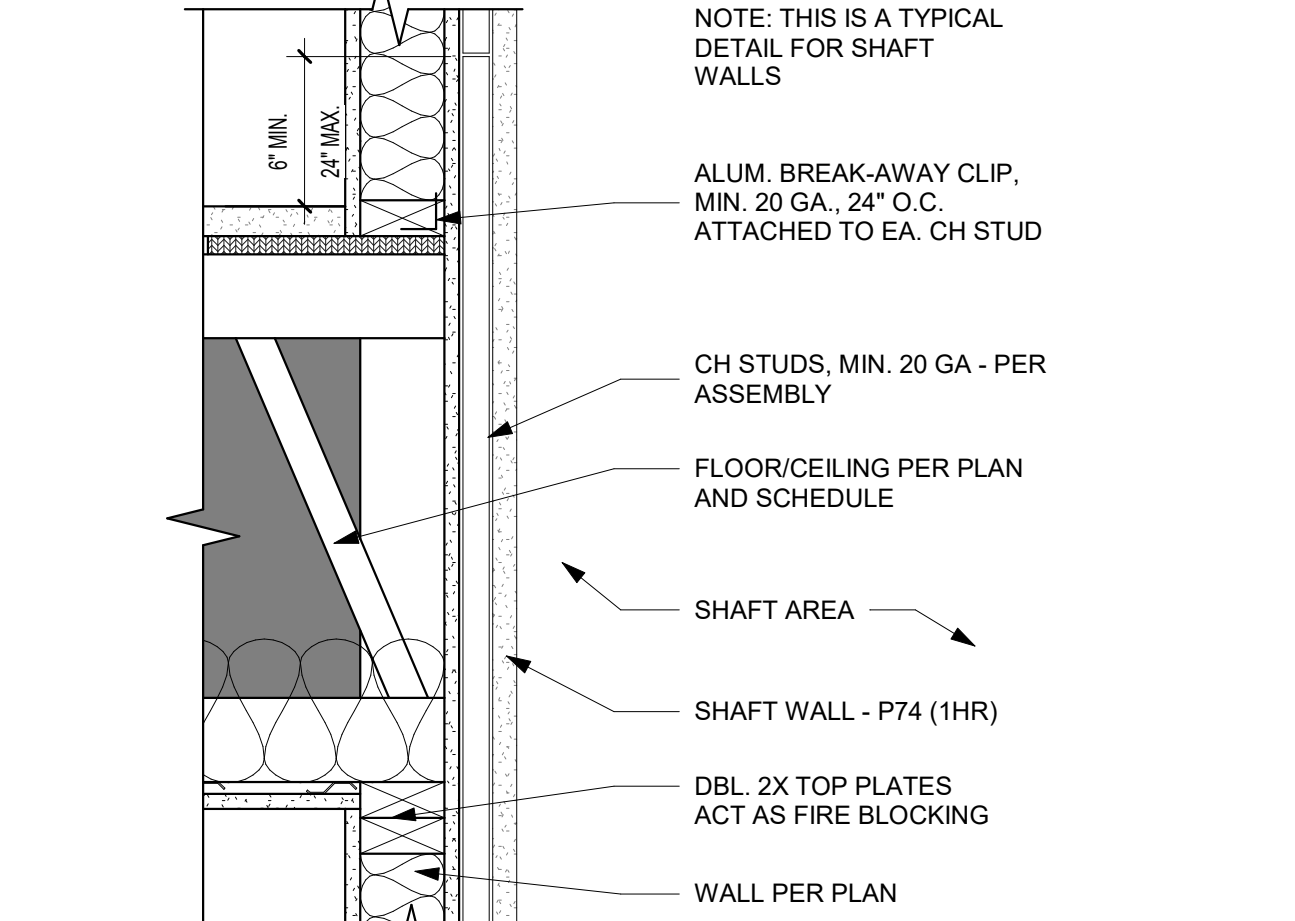
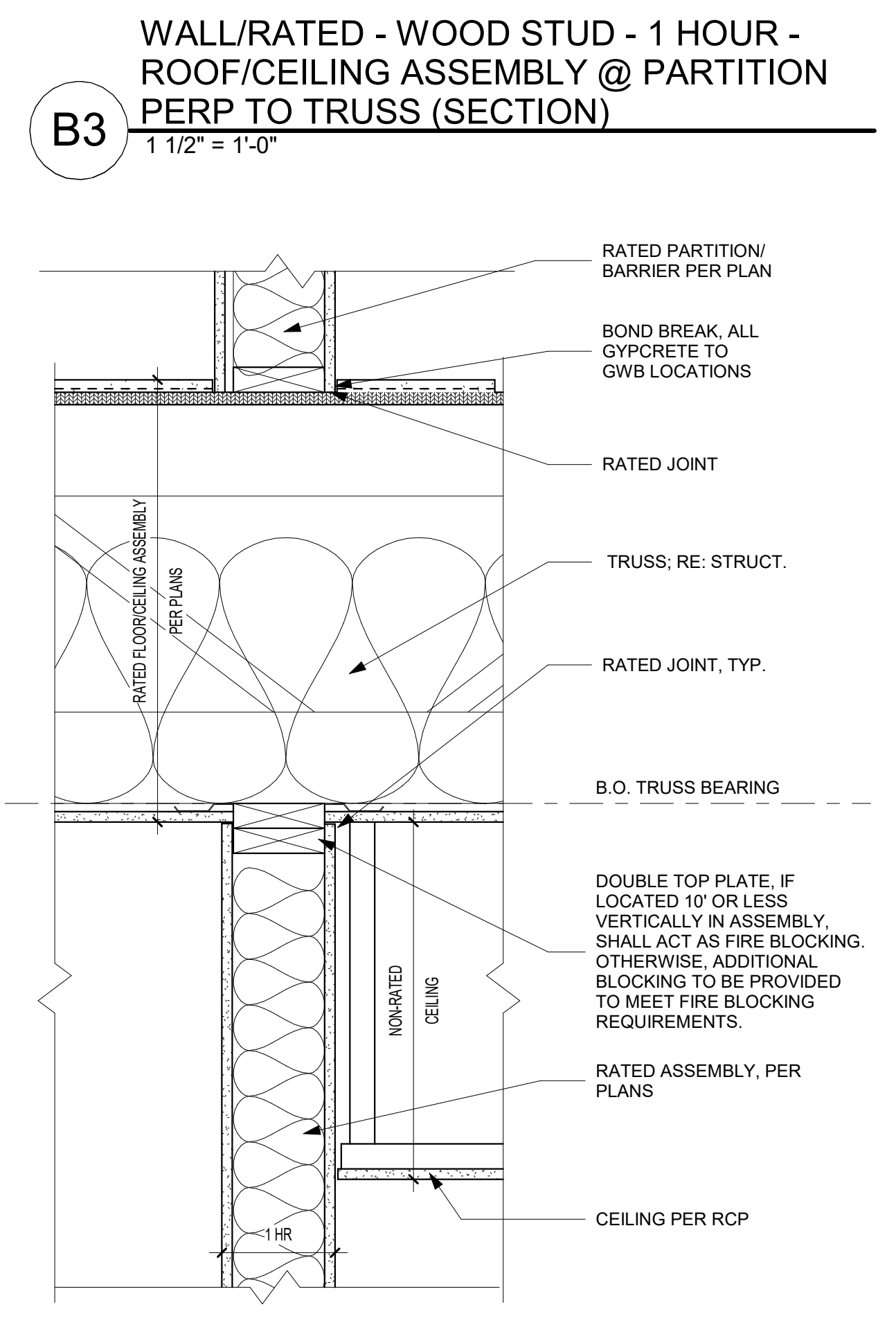
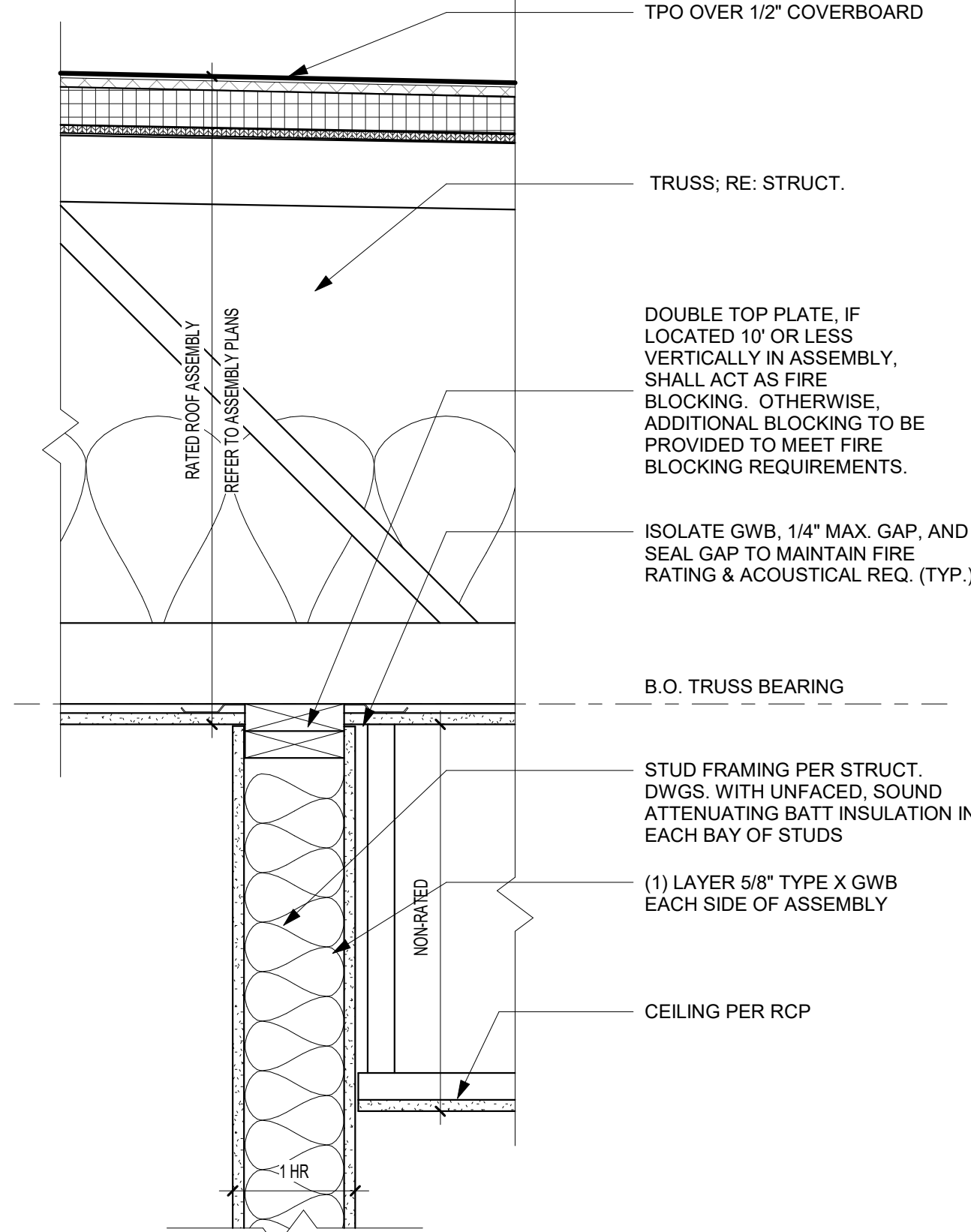
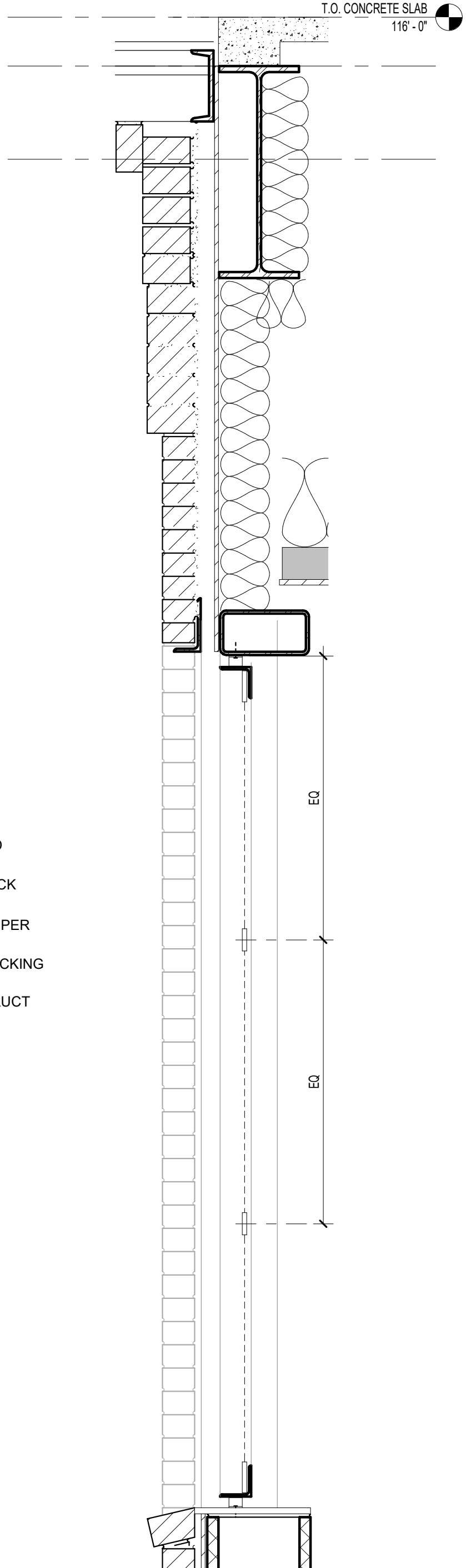
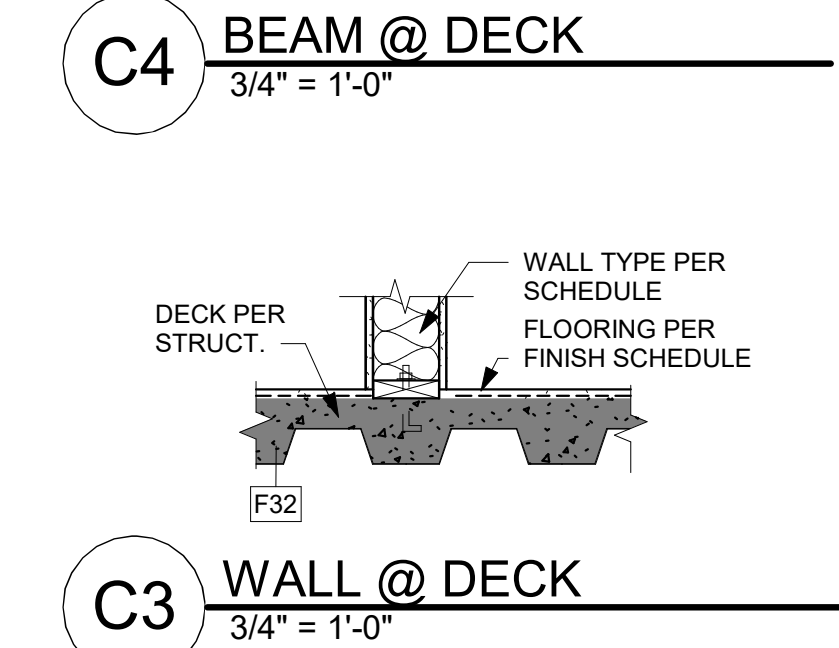
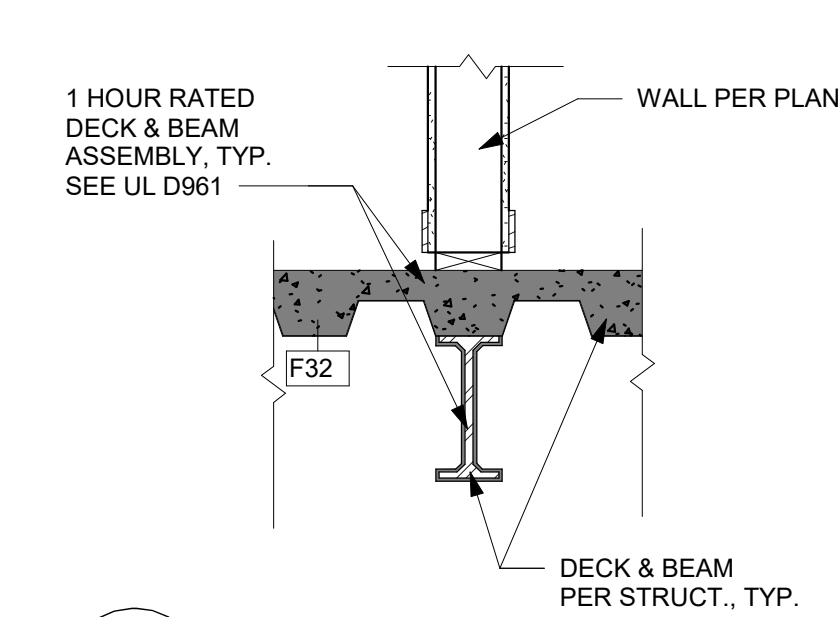
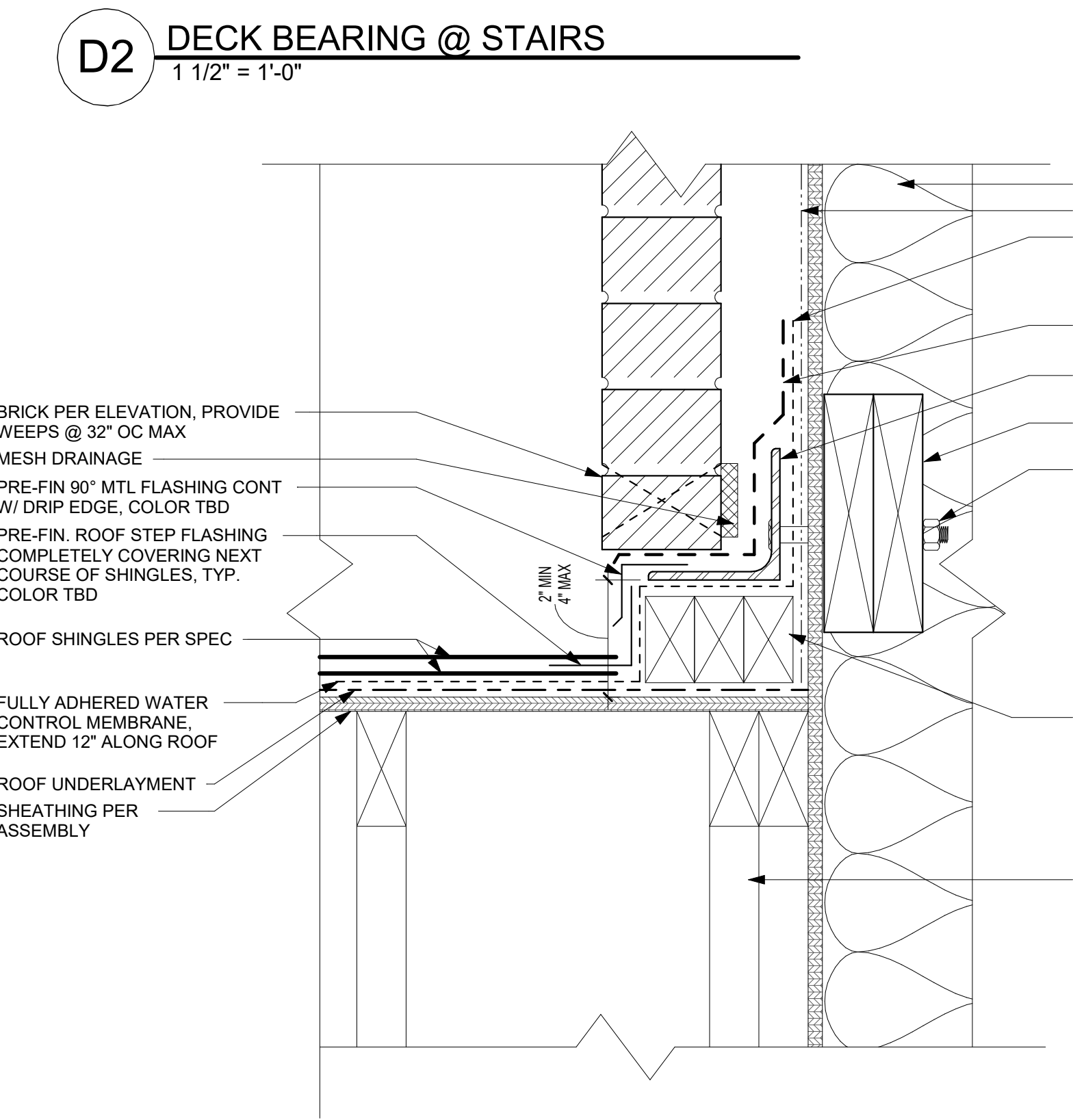
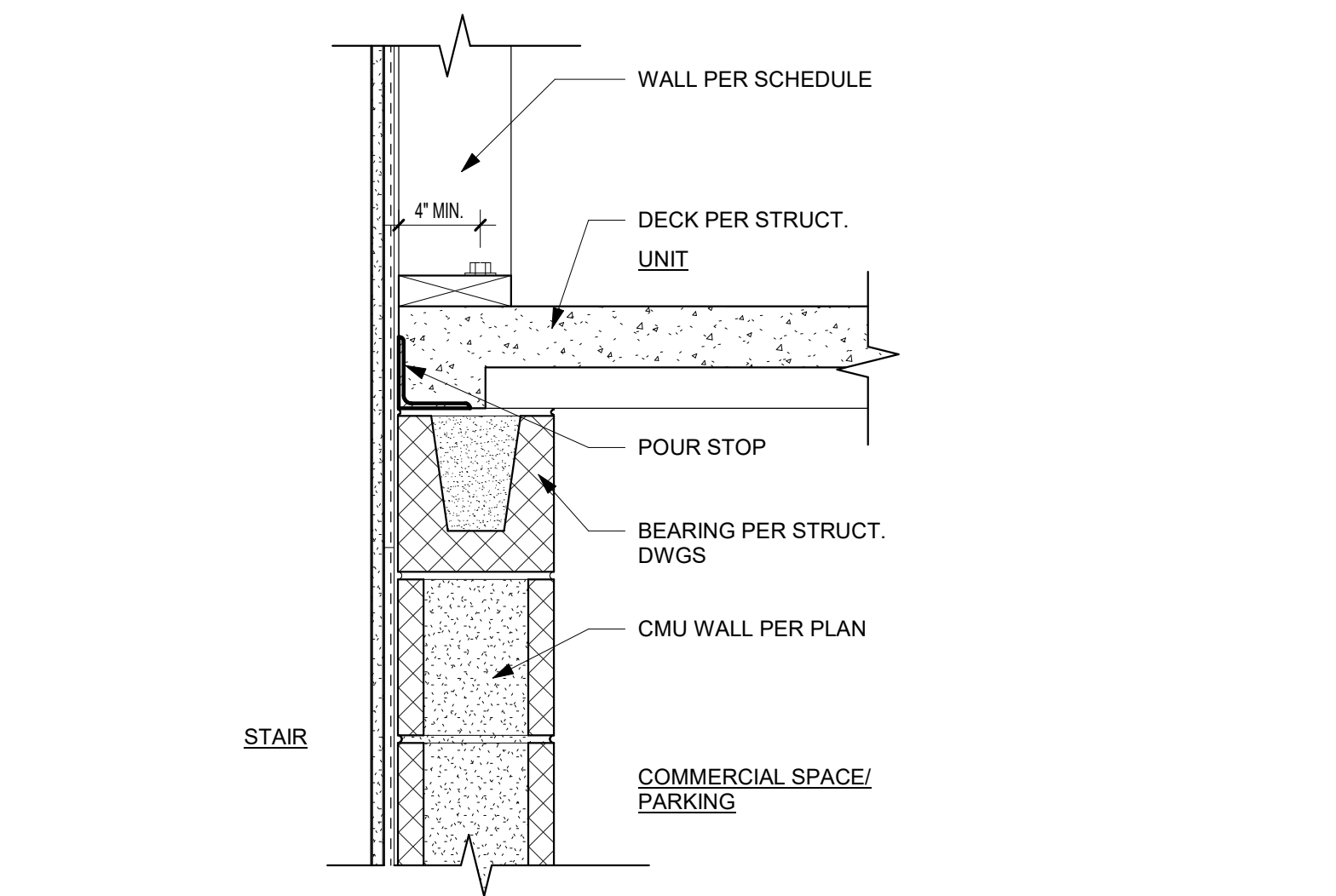
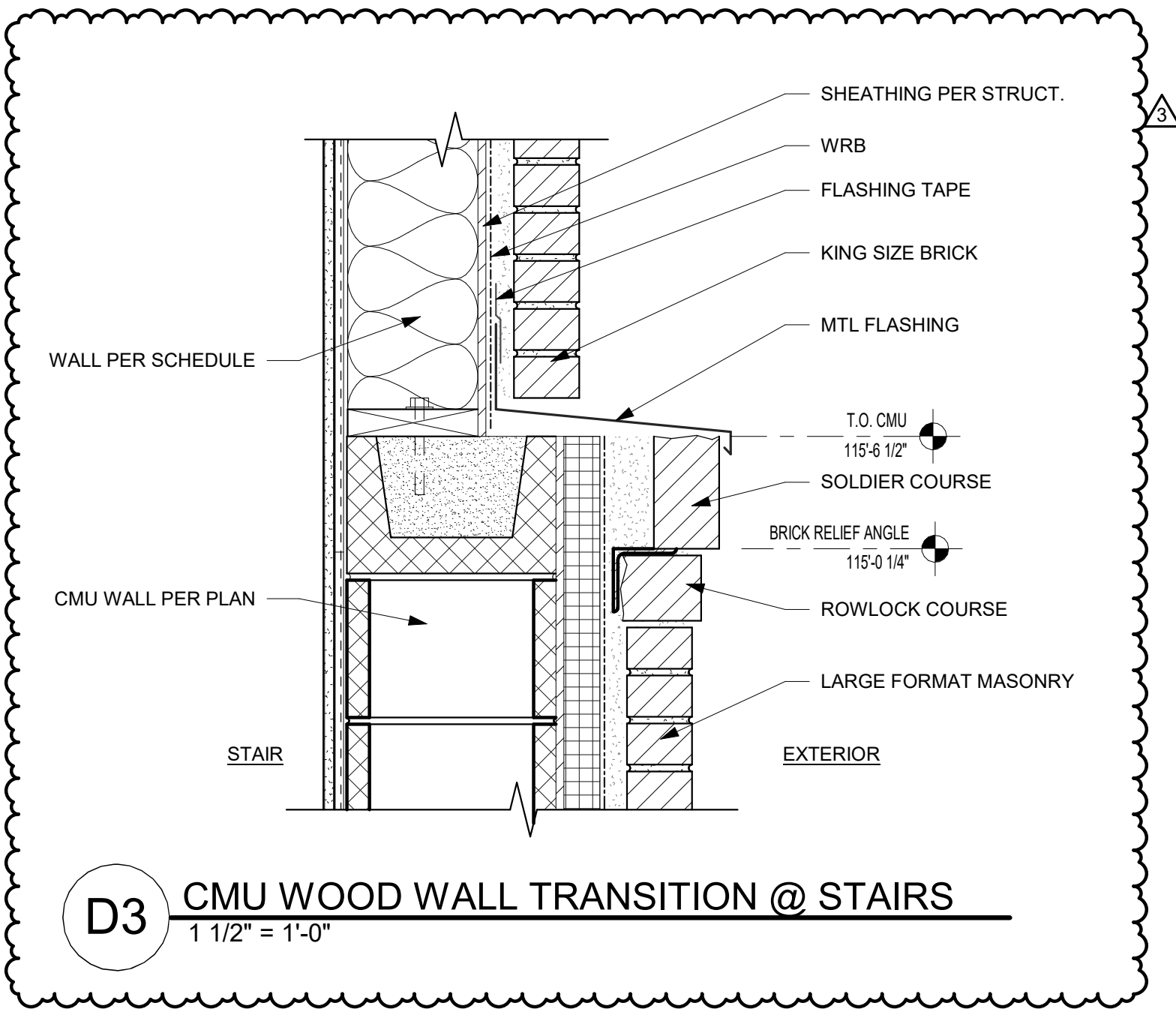
A4 PARTY WALL - DRAFTSTOP
1 1/2" = 1'-0"

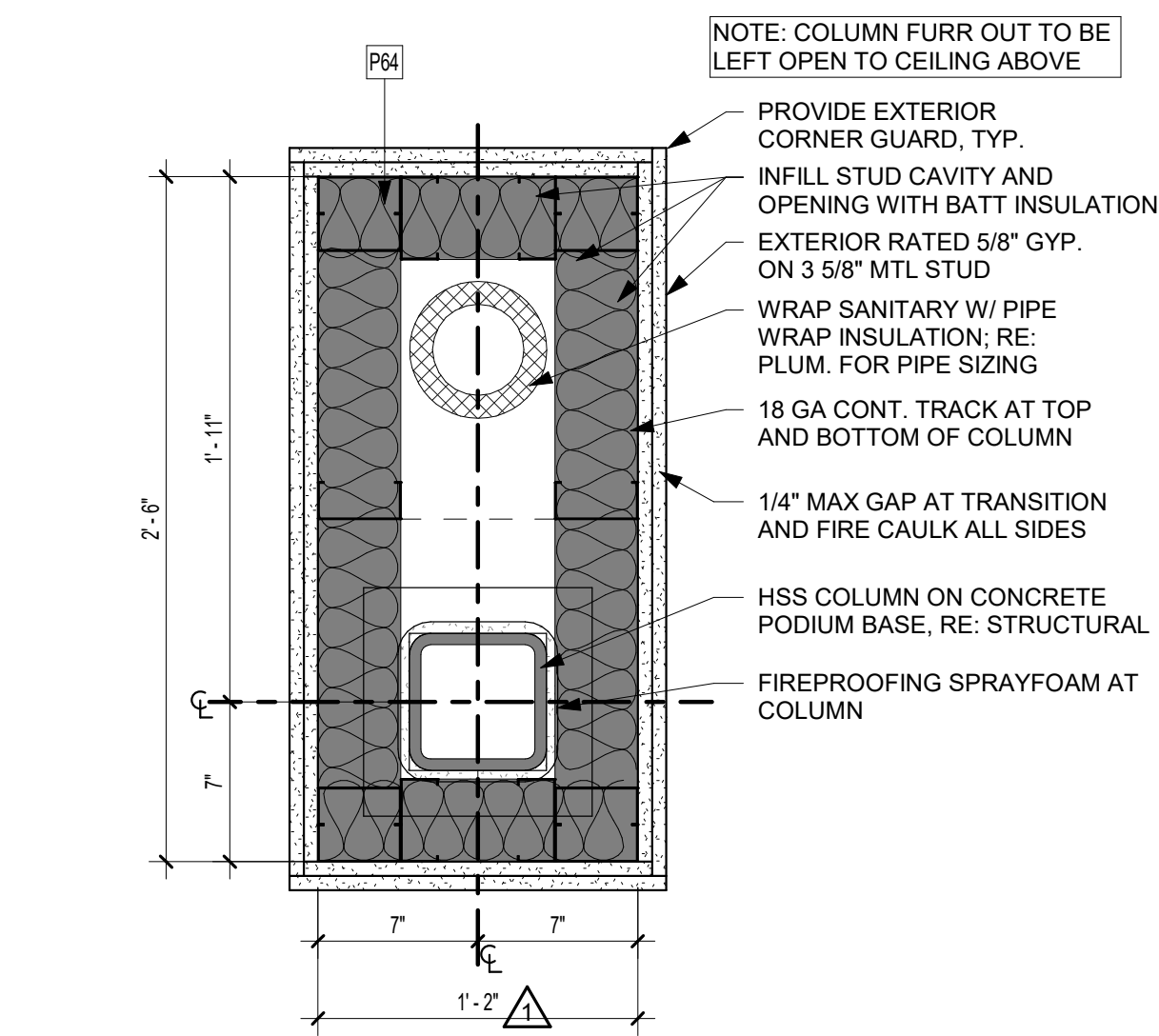


A3 PARTY WALL - SECTION 2
1 1/2" = 1'-0"

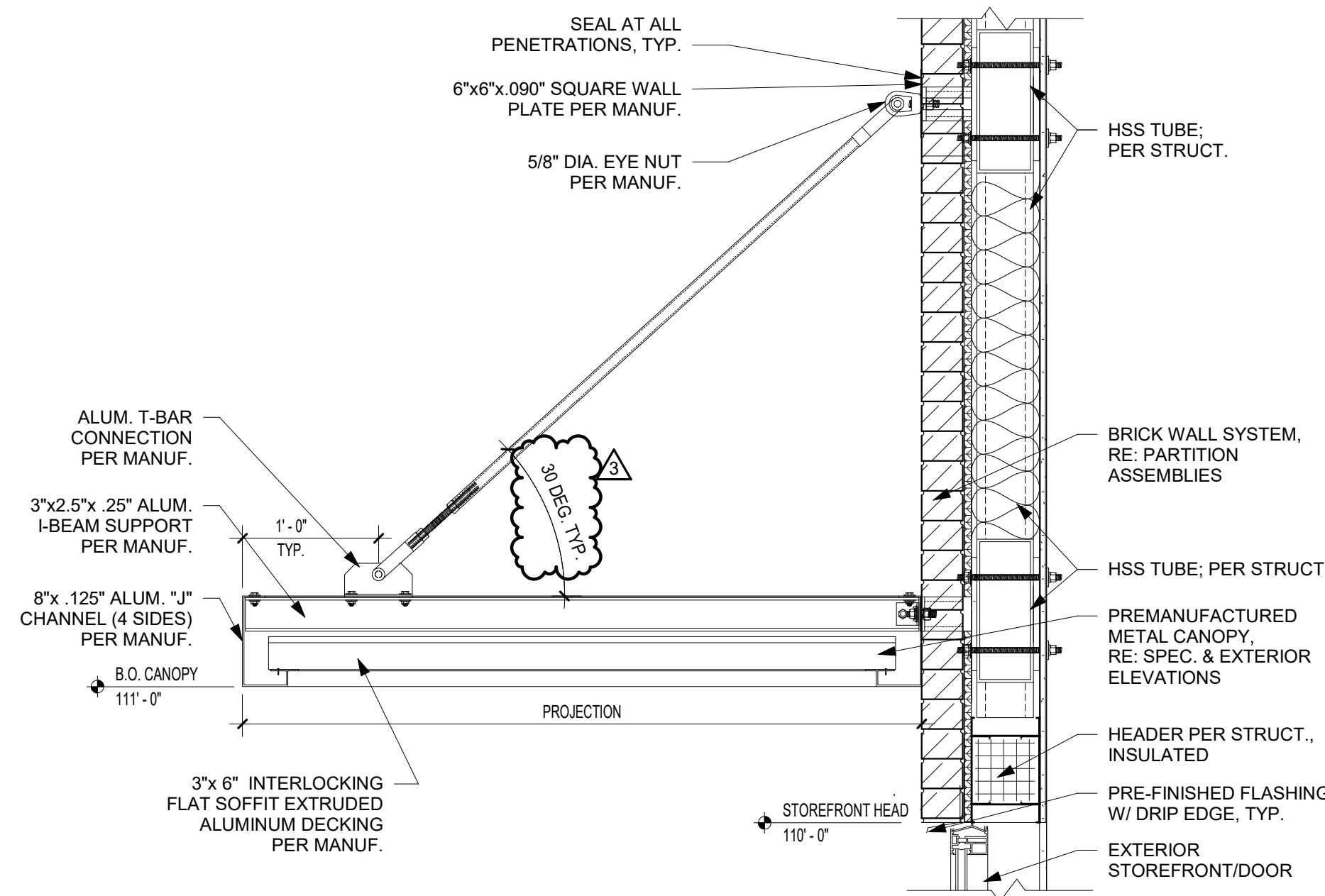


A2 PARTY WALL - SECTION
1 1/2" = 1'-0"

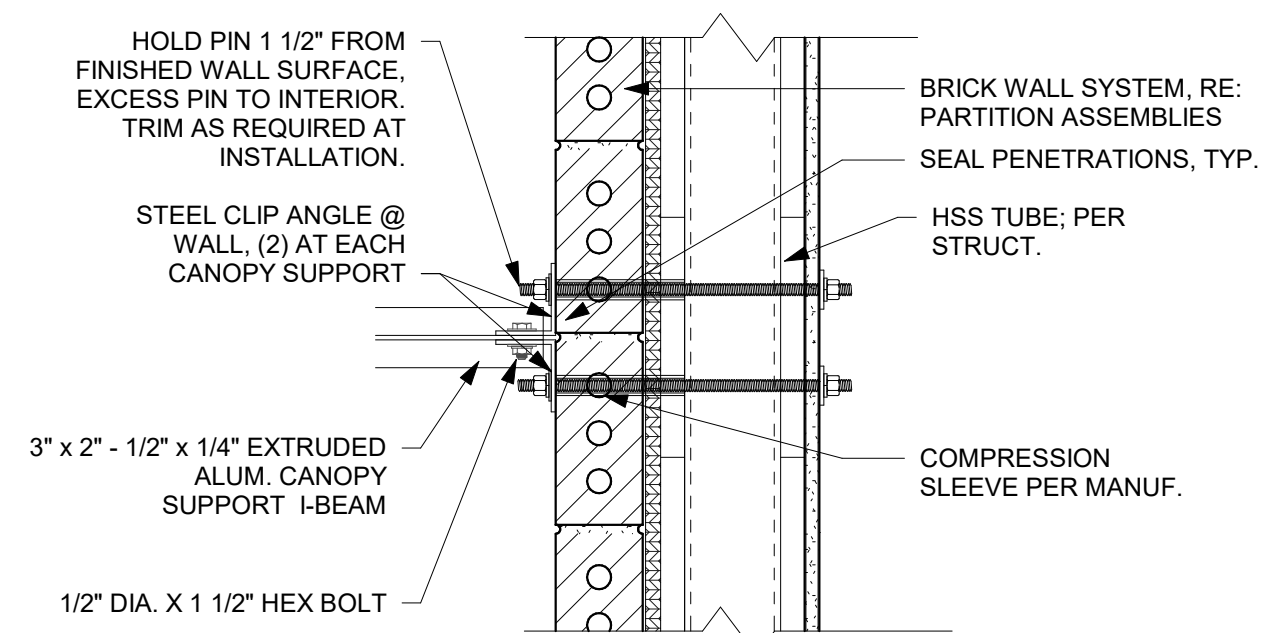




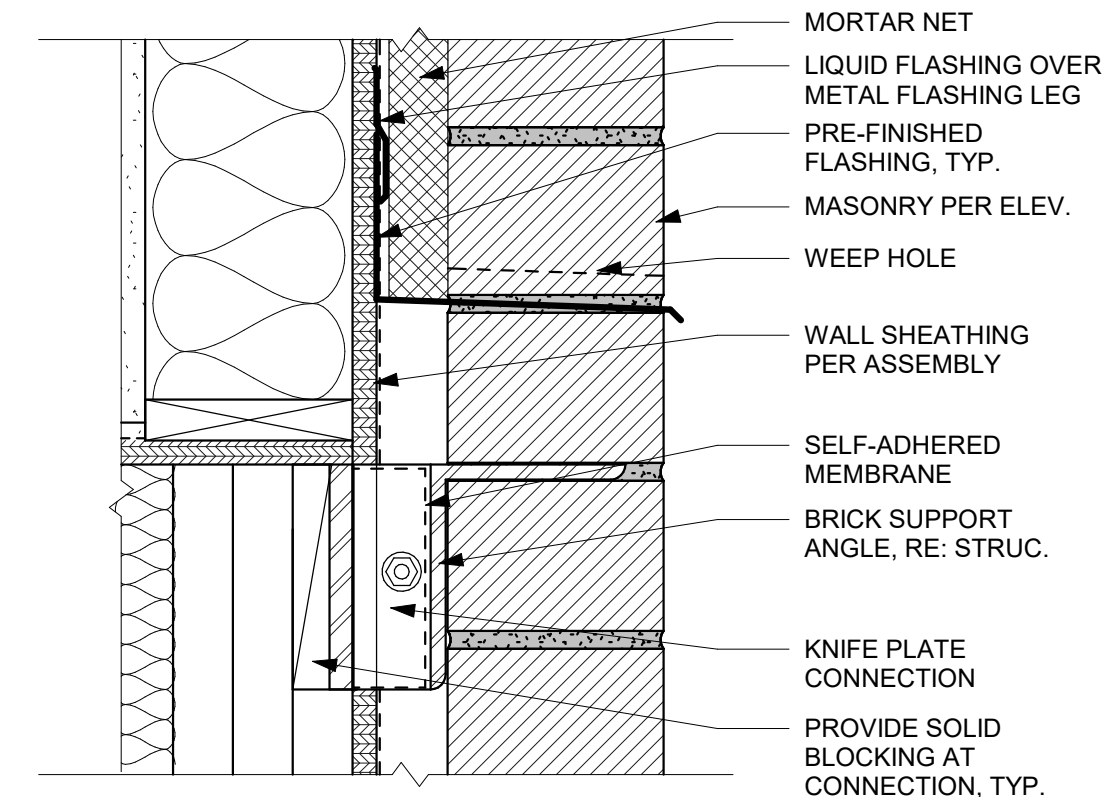
C4 FUR OUT AT COLUMN (PLAN)
1 1/2" = 1'-0"



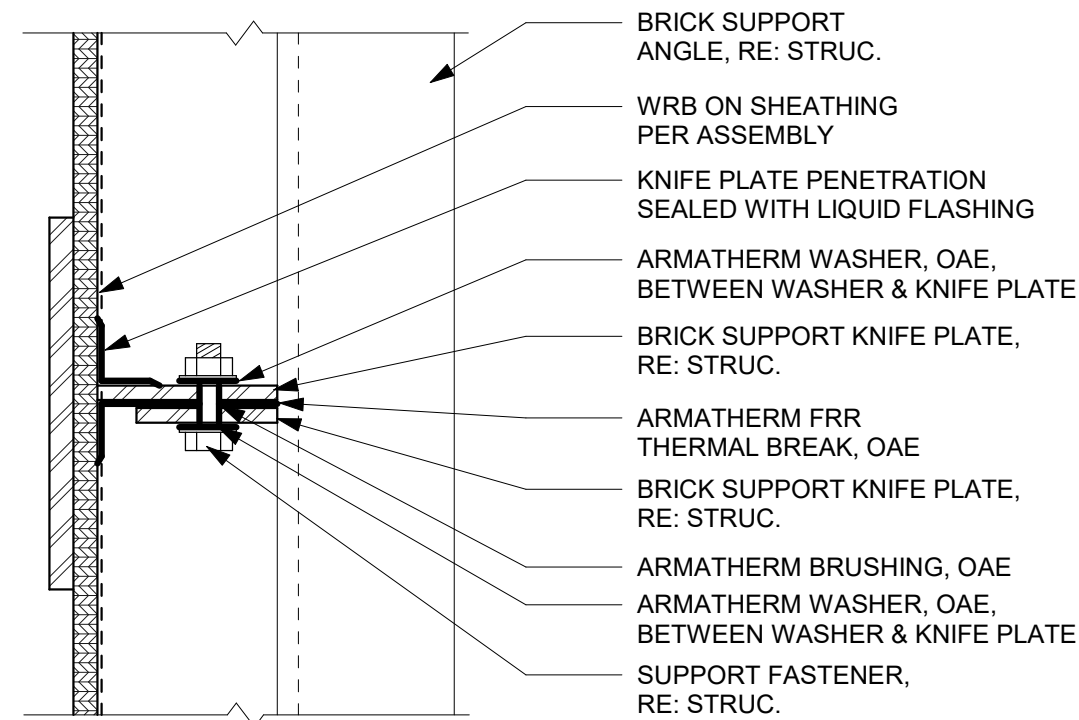
C2 CANOPY @ STEEL (SECTION)
1" = 1'-0"



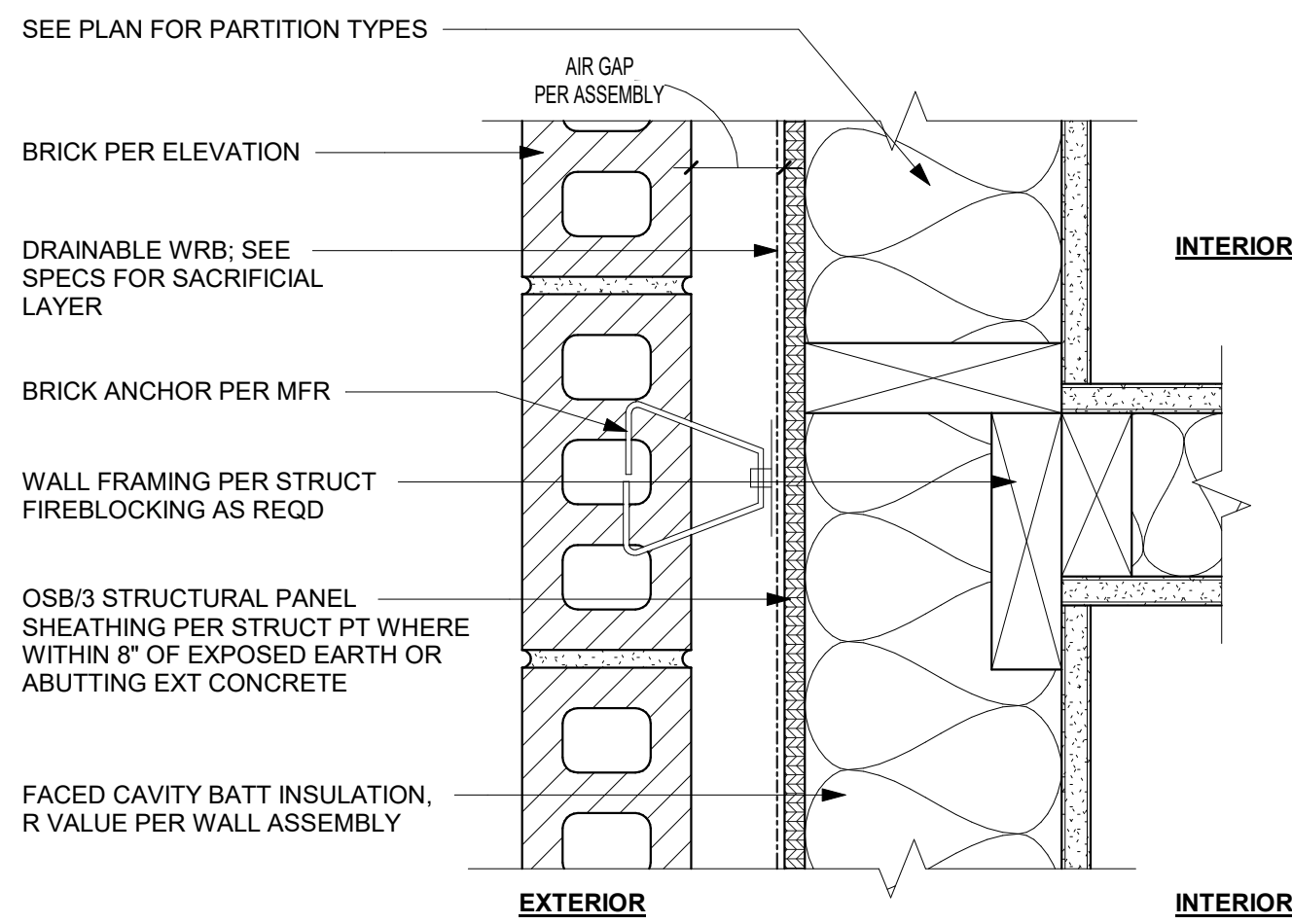
C1 CANOPY DETAIL @ STEEL (PLAN)
1 1/2" = 1'-0"



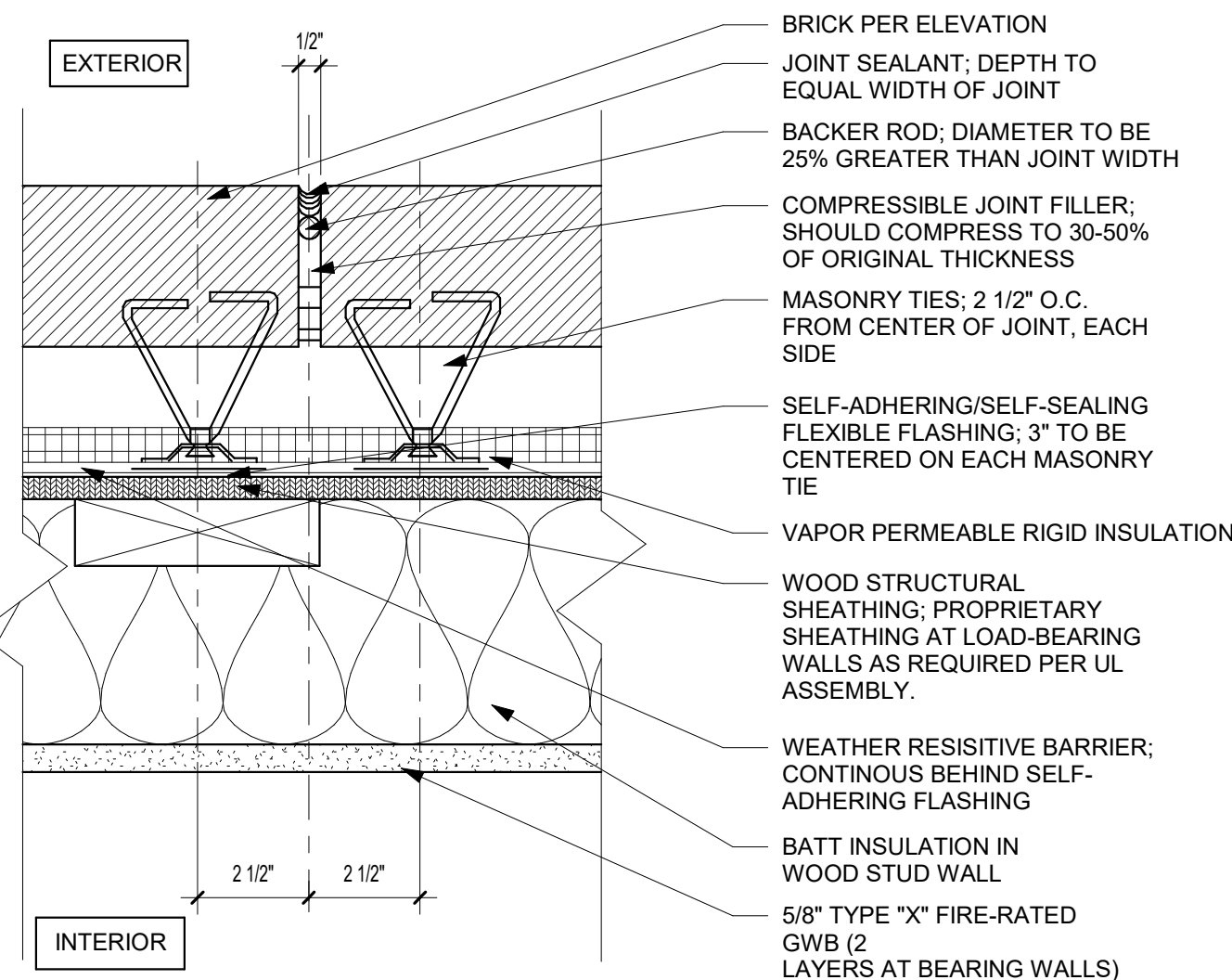
B4 BRICK SUPPORT ANGLE
N.T.S.



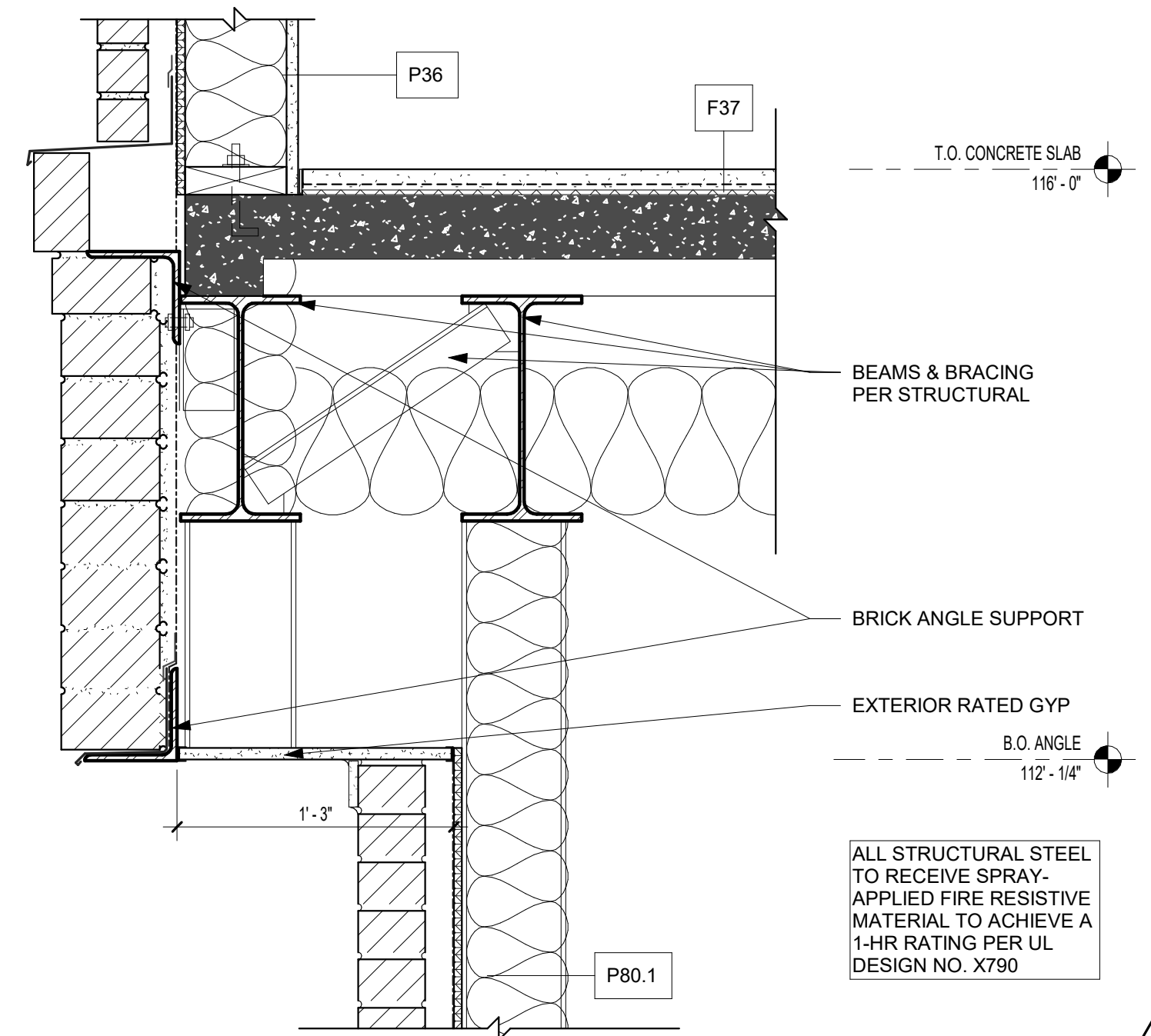
B3 KNIFE PLATE CONNECTION
N.T.S.



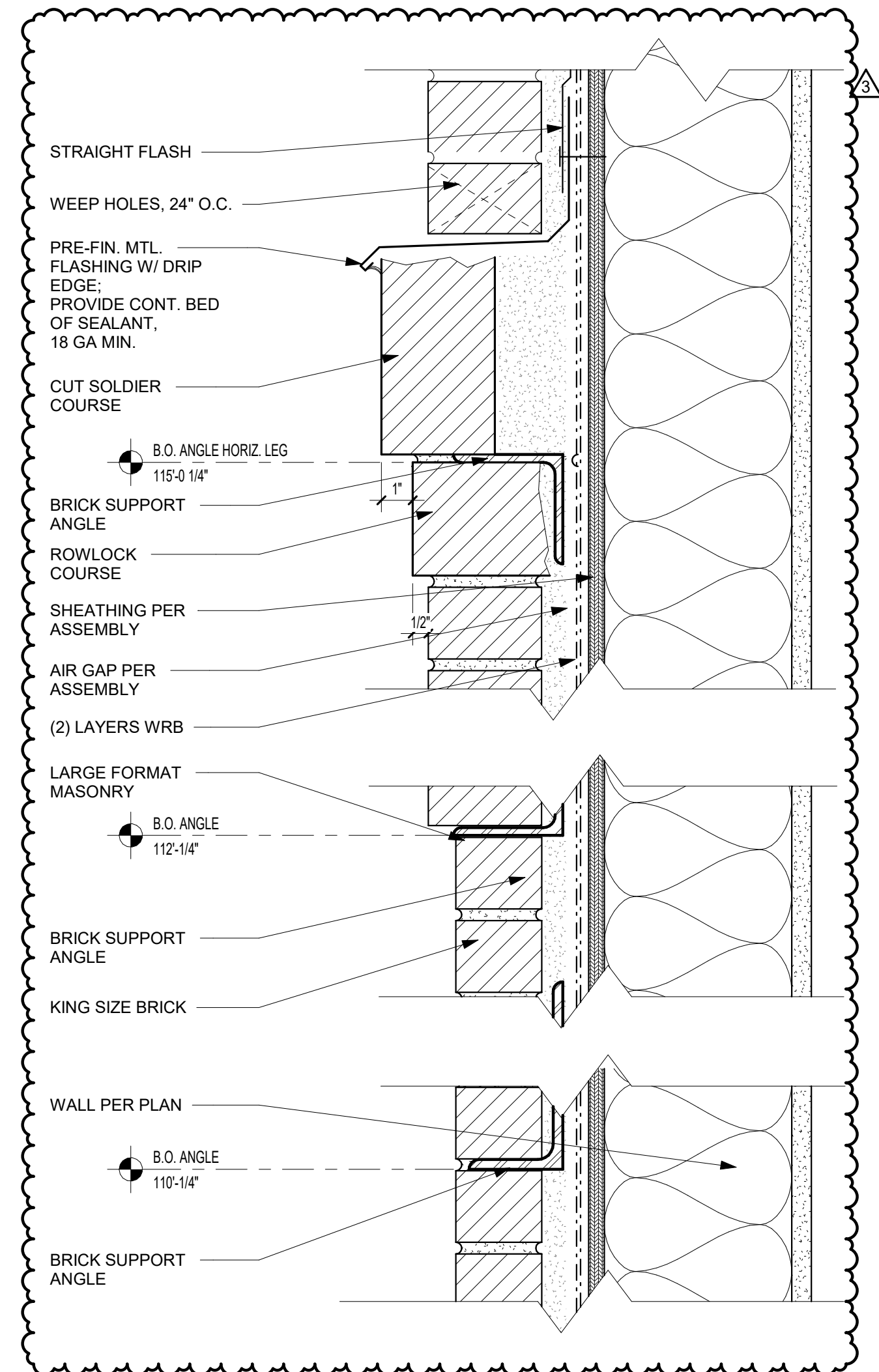
B2 BRICK - INTERIOR PARTITION TO EXTERIOR WALL (PLAN)
3" = 1'-0"



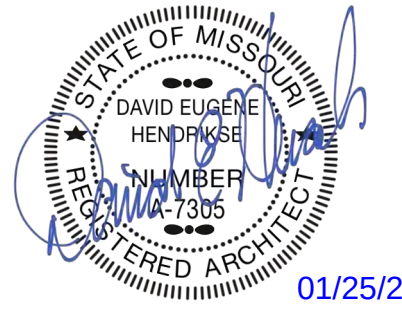
B1 WALL/EXTERIOR - WOOD STUD/BRICK @ VERTICAL CONTROL JOINT (PLAN)
3" = 1'-0"



A3 BRICK OVERHANG AT BUMPOUT AT PARKING
1 1/2" = 1'-0"



1 WALL/EXTERIOR - BRICK BAND DETAIL
3" = 1'-0"



THE VILLAGE AT DISCOVERY -
LOT 4

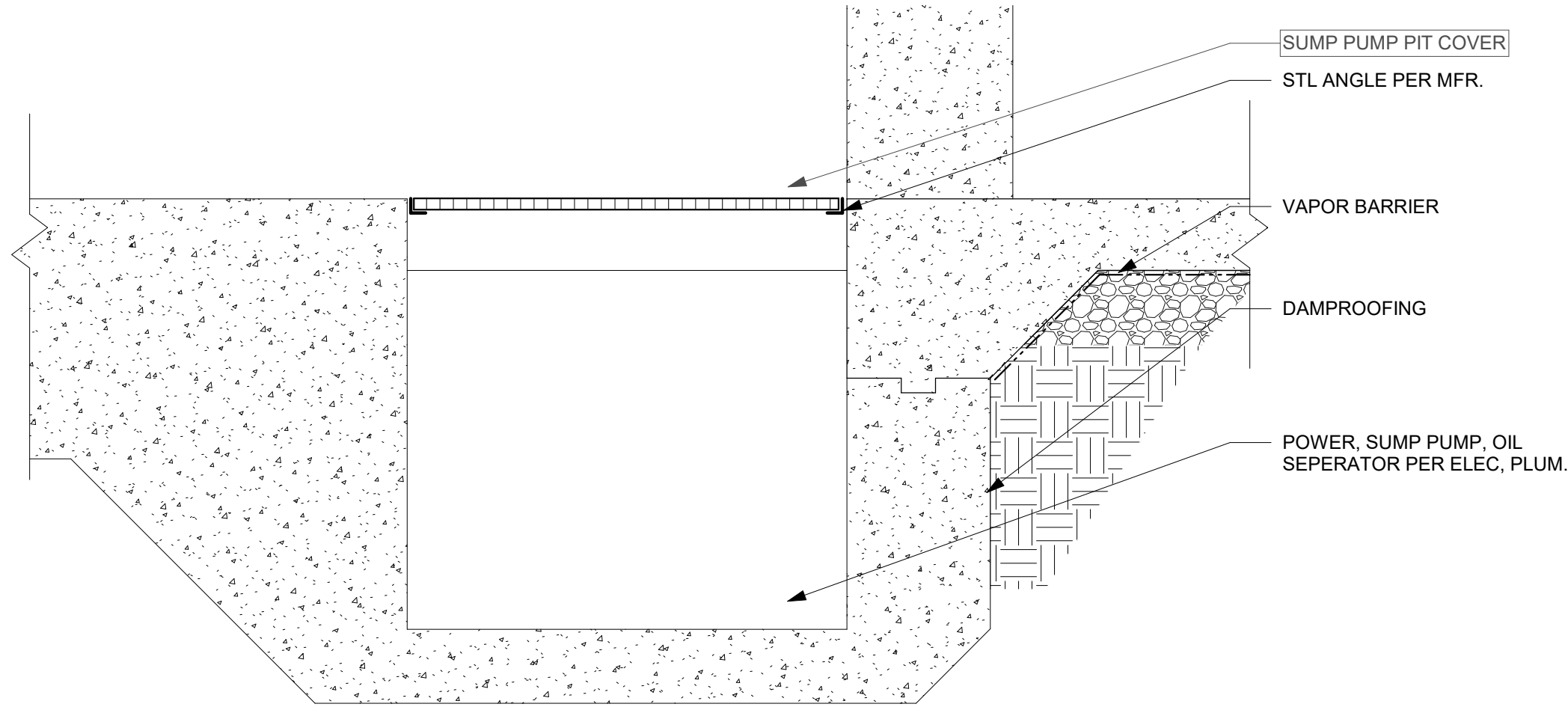
LEE'S SUMMIT, MO

SHEET TITLE
ELEVATOR DETAILS

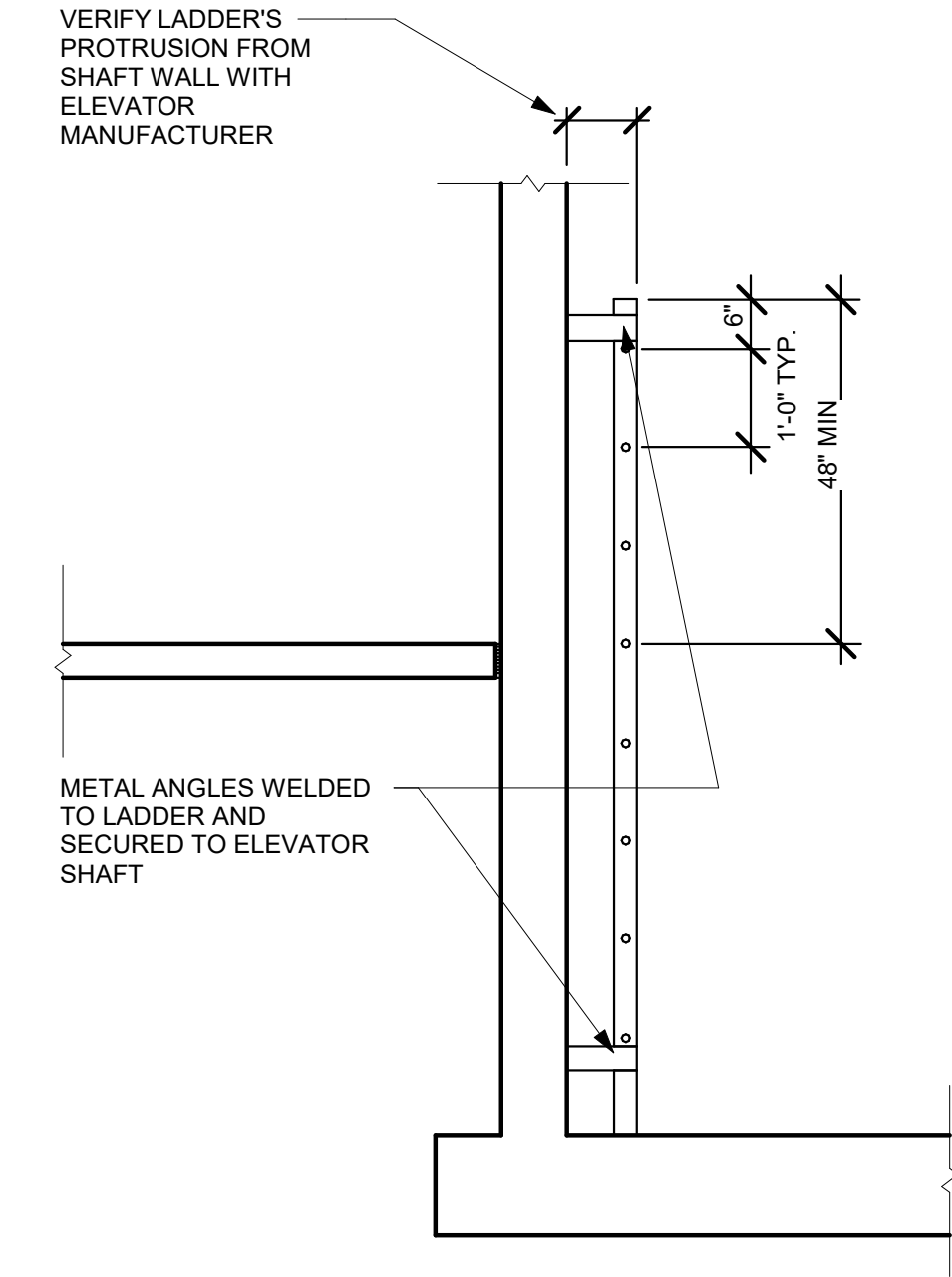
PROJECT NUMBER: 23099

SHEET NUMBER:

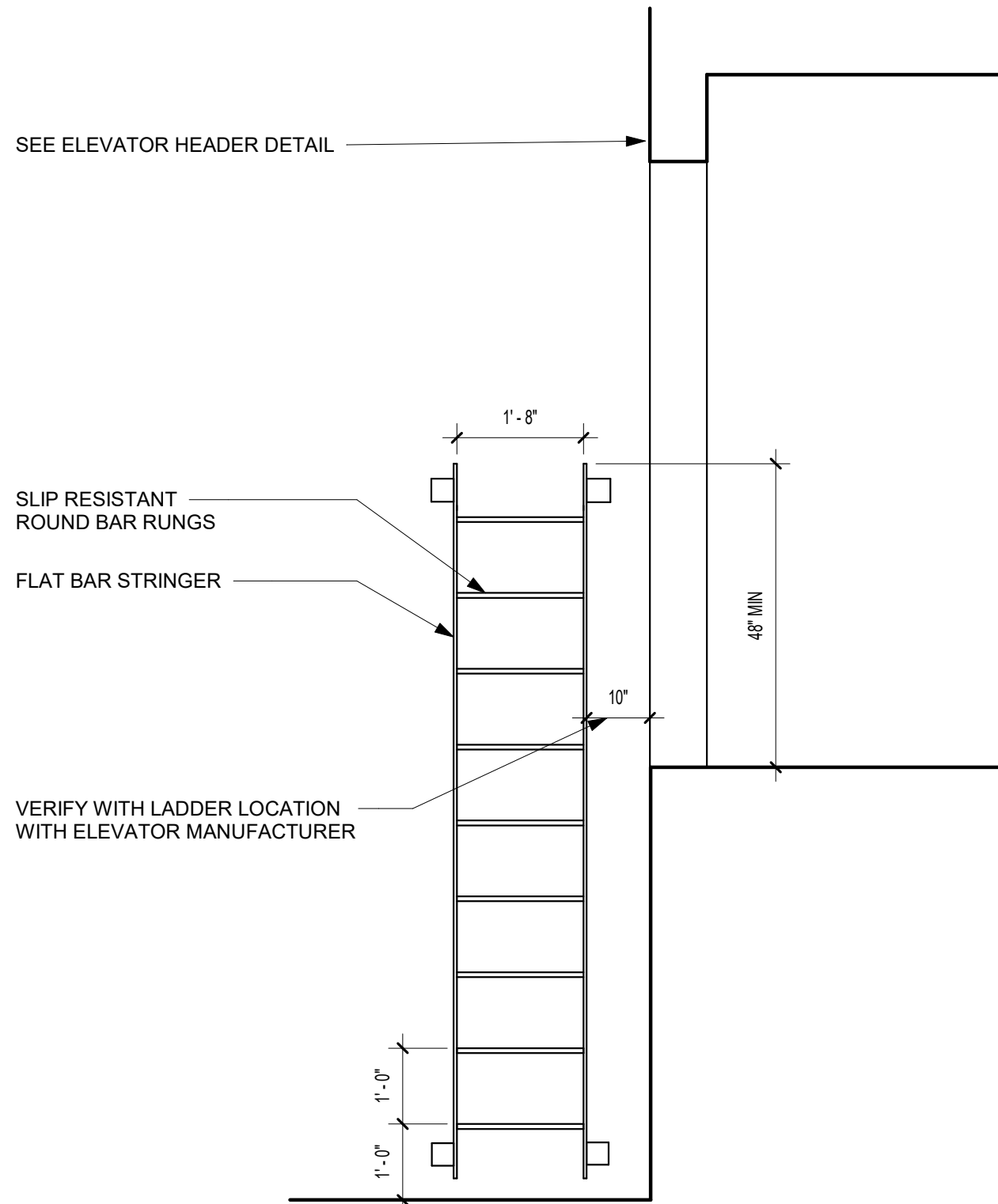
A-504



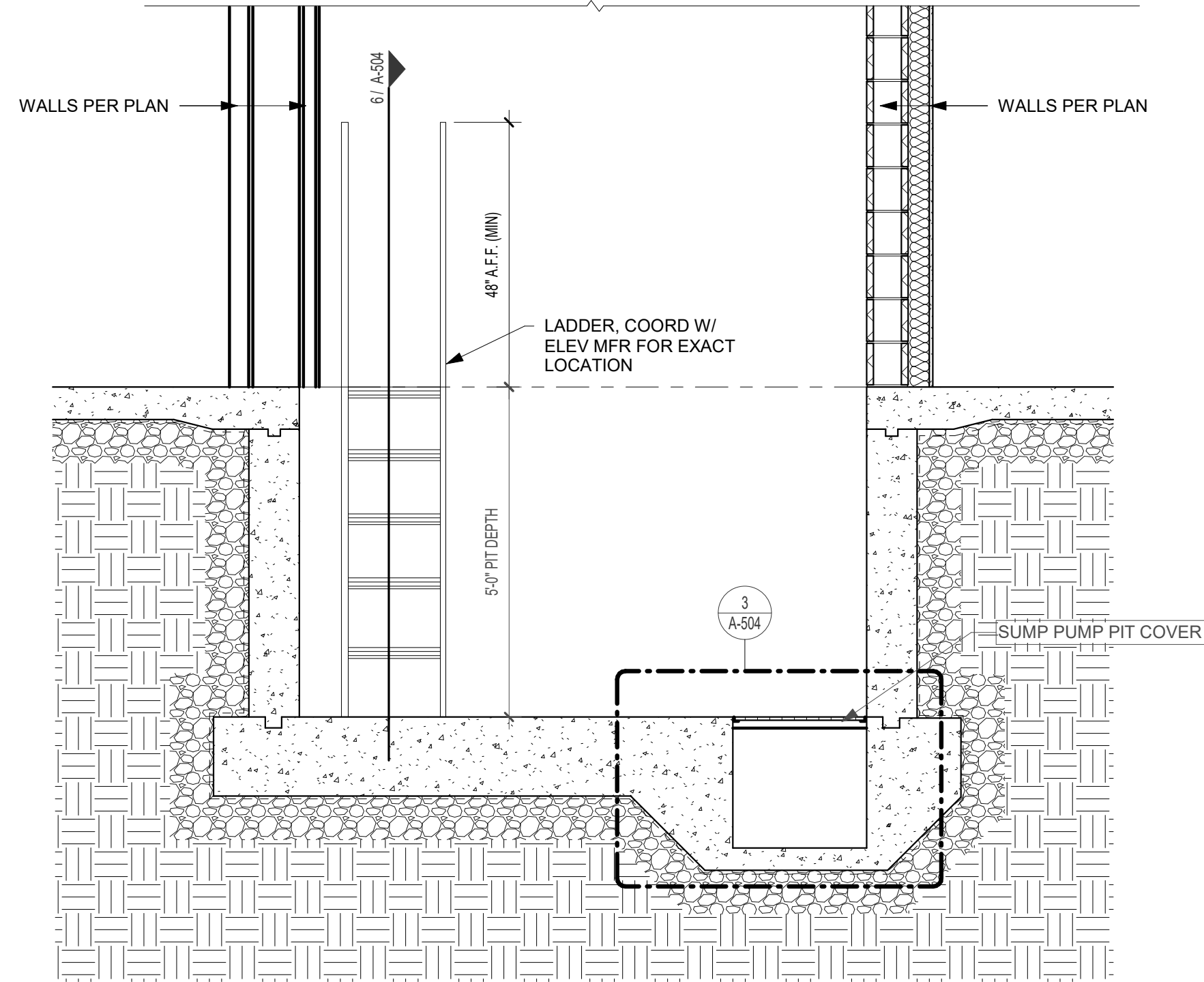
3 ELEVATOR - CONC/PIT @ SUMP
1 1/2" = 1'-0"



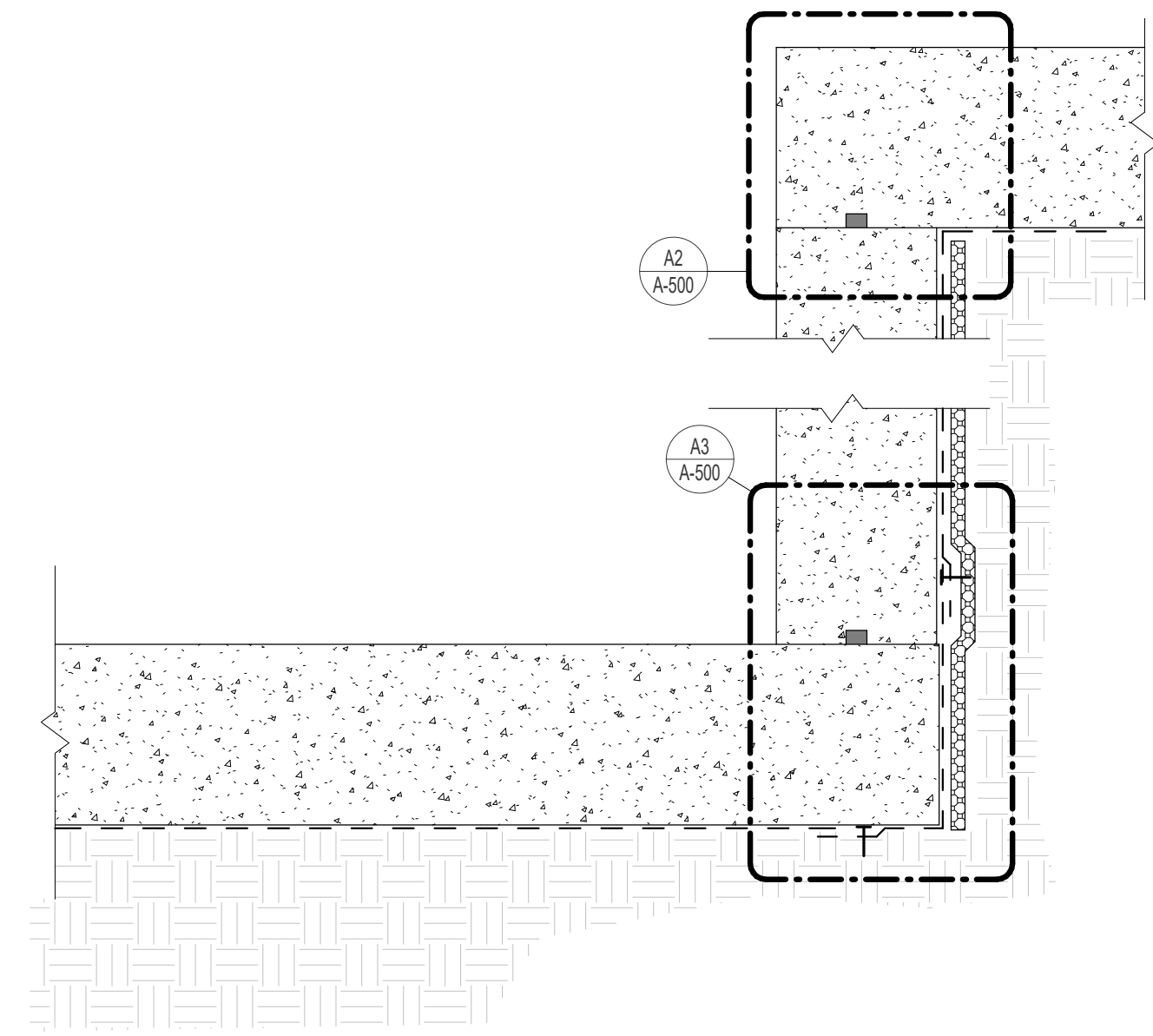
6 ELEVATOR - CONC/PIT @ LADDER
(SECTION)
1/2" = 1'-0"



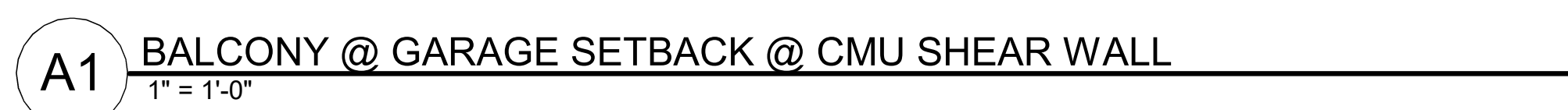
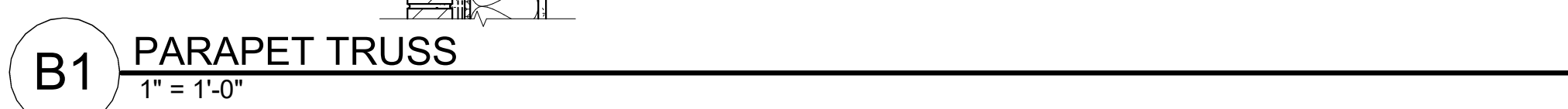
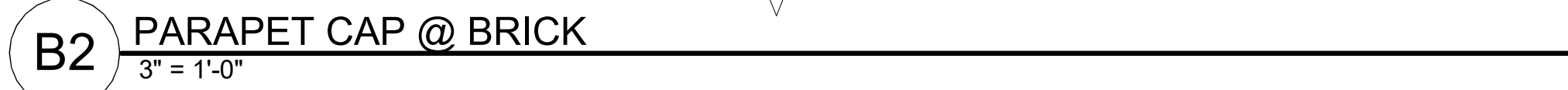
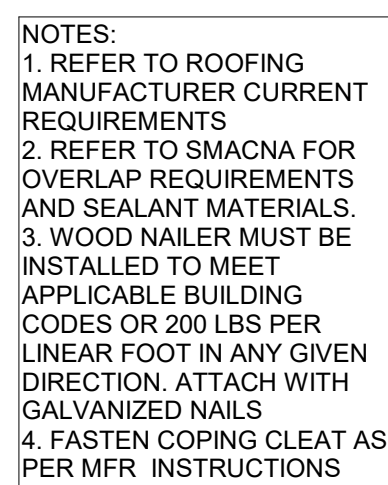
5 ELEVATOR - CONC/PIT @ LADDER
(ELEVATION)
1/2" = 1'-0"



4 ELEVATOR - CONC/PIT (SECTION)
1/2" = 1'-0"

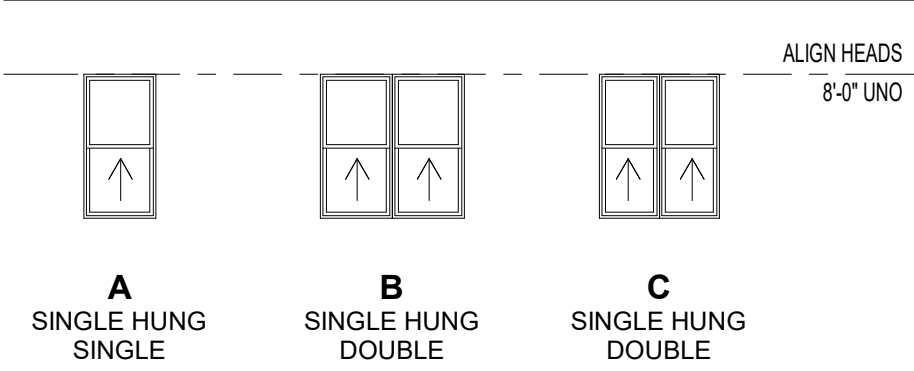


1 ELEVATOR PIT WATERPROOFING
N.T.S.





WINDOW TYPES



WINDOW SCHEDULE			
Type Mark	Width	Height	Comments
A	3'- 0"	6'- 0"	
B	6'- 0"	6'- 0"	
C	5'- 0"	6'- 0"	
E	6'- 0"	6'- 0"	
F	3'- 0"	6'- 0"	
G	6'- 0"	6'- 0"	
H	6'- 0"	6'- 0"	
I	6'- 0"	6'- 0"	
J	6'- 0"	6'- 0"	

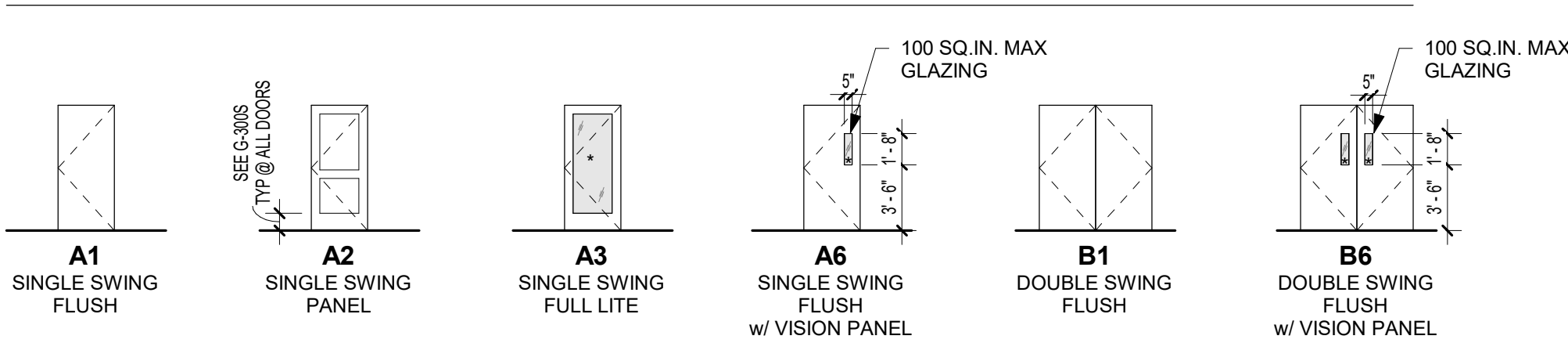
WINDOW COMMENTS:

- GLAZING DEEMED TO BE IN A HAZARDOUS LOCATION SHALL BE TEMPERED / SAFETY GLAZING.
- EACH PANE OF SAFETY GLAZING INSTALLED IN HAZARDOUS LOCATIONS SHALL BE IDENTIFIED BY MFR'S DESIGNATION.
- CONFIRM OPERATION OF SASH LOCKS AT "TYPE A" UNITS WILL BE WITHIN 48" REQUIRED REACH RANGE PER A4 / G-300
- ALL WINDOWS IN PUBLIC SPACES SHALL RECEIVE TRIM PER XX / XX
- SEE XX / XX FOR EXTERIOR WINDOW & DOOR TRIM
- REFER TO CODE SHEET FOR ALL FIRE RATINGS
- WINDOWS ON AND ABOVE SECOND FLOOR MUST HAVE WINDOW LIMITERS PER
- WINDOW LOCATIONS PER PLANS
- OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5.0 POUNDS (22.2 N) MAXIMUM
- PROVIDE WINDOW OPENING CONTROL DEVICES (WOCDs) THAT COMPLY WITH ASTM F2090
- WINDOW HEADERS TO ALIGN WITH ADJACENT DOOR HEADERS; UNO

DOOR COMMENTS:

- BOTTOM RAIL TO BE MINIMUM 10" TO ALLOW FOR A 10" KICK PLATE; TYPICALLY ALL DOORS.
- ALL DOORS TO BE 1-3/4" THICK, UNO.
- SEE SPECIFICATIONS FOR DOOR HARDWARE SCHEDULE; FINAL HARDWARE SCHEDULE AND FINAL GROUPS TO BE DETERMINED BY DOOR SUB-CONTRACTOR. VERIFY FINAL HARDWARE INSTALLATION WITH CLIENT AND ARCHITECT.
- DOOR HARDWARE SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPERATE.
- ALL DOOR HARDWARE TO BE LEVER TYPE HARDWARE, UNO.
- DOOR HARDWARE TO BE CENTERED ON RAIL OF PANEL DOORS.
- DOOR FRAMES TO BE FINISHED PER SCHEDULE.
- TOPS AND BOTTOMS OF ALL HOLLOW METAL DOORS EXPOSED TO WEATHER TO BE PATINED.
- VERIFY KEYING SCHEDULE WITH OWNER. ALL KEYS TO BE GIVEN TO OWNER AT SUBSTANTIAL COMPLETION.
- ALL COMMON AREA RATED DOORS TO HAVE SMOKE SEALS (GASKETS), CLOSURES, AND LATCH HARDWARE.
- UNIT ENTRY DOORS TO HAVE SPRING HINGES & LATCH HARDWARE, TYP UNO.
- ALL DOORS INTENDED FOR PASSAGE TO HAVE 32" MIN. CLEAR WIDTH PER ICC ANSI A117.1

DOOR TYPES - COMMON AREA DOORS



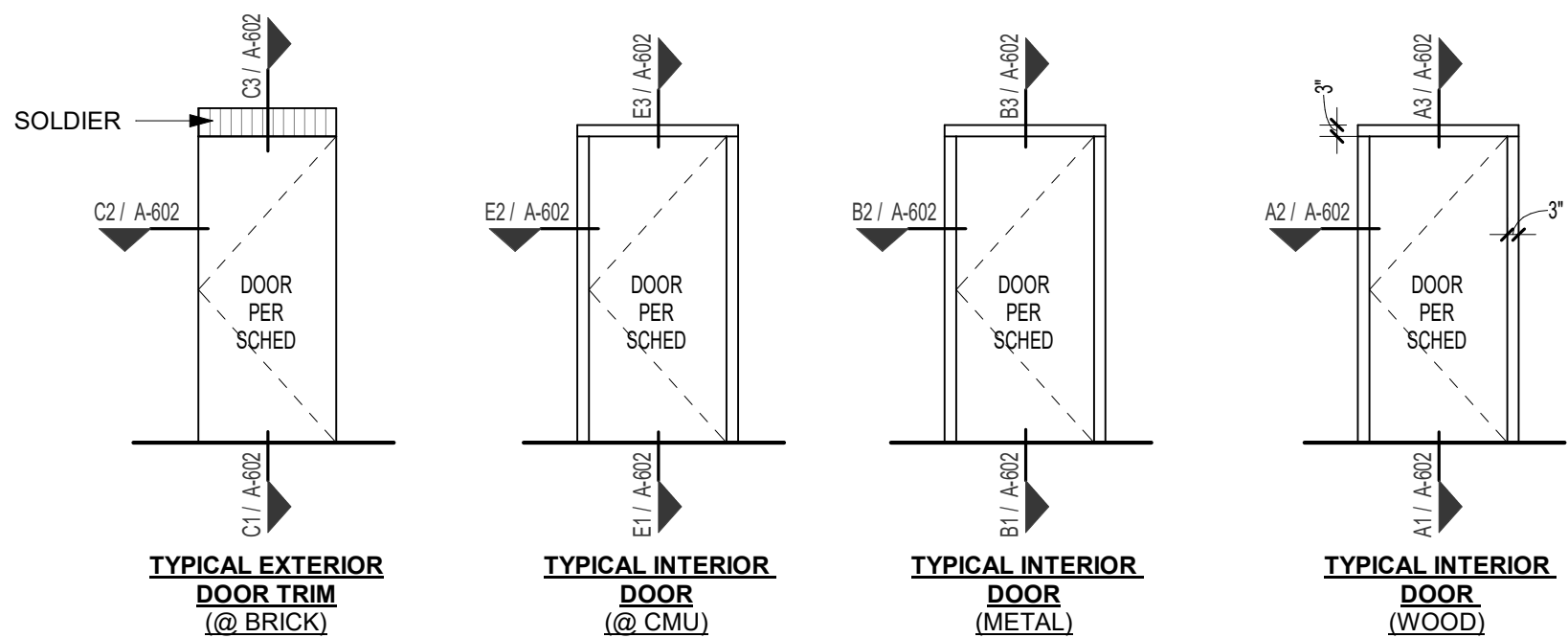
DOOR SCHEDULE ABBREVIATIONS:

ALUM	ALUMINUM	FGL / FBG	FIBERGLASS	N/A	NOT APPLICABLE	STL	NOT APPLICABLE
ANO	ANODIZED	HC WOOD / HCWD	HOLLOW CORE WOOD	PER MFR	PER MANUFACTURER	WD CLAD	WOOD CLAD
BLK	BLACK	HM	HOLLOW METAL	PRE-FIN	PRE-FINISHED		
BRZ	BRONZE	INSUL MTL	INSULATED METAL	PT / PTD	PAINTED		
CLR	CLEAR	MTL	METAL	SC WOOD / SCWD	SOLID CORE WOOD		

DOOR SCHEDULE - COMMON AREA DOORS.

Mark	Width	Height	Thickness	Fire Rating (Minutes)	Access Control (AC)	Door			Frame		Comments
Type	Material	Finish	Type	Finish							
T.O. 1st FLOOR SLAB											
102	3'- 0"	8'- 0"	1 3/4"		01	A3	ALUM	PRE-FIN	ALUM	PRE-FIN	
1002A	3'- 0"	8'- 0"	1 3/4"		02	A3	ALUM	PRE-FIN	ALUM	PRE-FIN	
1002B	3'- 0"	8'- 0"	1 3/4"		02	A3	ALUM	PRE-FIN	ALUM	PRE-FIN	
1002C	6'- 0"	6'- 8"	1 3/4"	45	03	B2	HM	PTD	HM	PTD	
1002D	3'- 0"	6'- 8"	1 3/4"	90	03	A1	HM	PTD	STEEL	PTD	
1003	3'- 0"	6'- 8"	1 3/4"	45	03	A1	HM	PTD	HM	PTD	
1004	3'- 0"	8'- 0"	1 3/4"		04	A1	HM	PTD	HM	PTD	
1005	3'- 0"	6'- 8"	1 3/4"	45	03	A1	HM	PTD	HM	PTD	ADDED IN ADDENDUM #1
1006	3'- 0"	6'- 8"	1 3/4"	45	03	A1	HM	PTD	HM	PTD	ADDED IN ADDENDUM #1
S1-1	3'- 0"	7'- 0"	1 3/4"		02	B7	ALUM	PRE-FIN	ALUM	PRE-FIN	
S2-1	3'- 0"	7'- 0"	1 3/4"		02	B7	ALUM	PRE-FIN	ALUM	PRE-FIN	
T.O. CONCRETE SLAB											
2000	3'- 0"	6'- 8"	1 3/4"	45	03	A2	HM	PTD	HM	PTD	
2001	3'- 0"	6'- 8"	1 3/4"	45	03	A2	HM	PTD	HM	PTD	
2003	3'- 0"	6'- 8"	1 3/4"	45	03	A1	HM	PTD	HM	PTD	
E1-2	6'- 0"	7'- 0"	1 3/4"	90	06	A6	HM	PTD	HM	PTD	DUAL EGRESS DOORS ON MAGNETIC HOLD-OPENS
S1-2	3'- 0"	6'- 8"	1 3/4"	60	05	A6	HM	PTD	HM	PTD	
S2-2	3'- 0"	6'- 8"	1 3/4"	60	05	A6	HM	PTD	HM	PTD	
T.O. 3rd GYPCRETE											
3000	3'- 0"	6'- 8"	1 3/4"	45	03	A2	HM	PTD	HM	PTD	
3001	3'- 0"	6'- 8"	1 3/4"	45	03	A2	HM	PTD	HM	PTD	
3003	3'- 0"	6'- 8"	1 3/4"	45	03	A1	HM	PTD	HM	PTD	
E1-3	6'- 0"	7'- 0"	1 3/4"	90	06	A6	HM	PTD	HM	PTD	DUAL EGRESS DOORS ON MAGNETIC HOLD-OPENS
S1-3	3'- 0"	6'- 8"	1 3/4"	60	05	A6	HM	PTD	HM	PTD	
S2-3	3'- 0"	6'- 8"	1 3/4"	60	05	A6	HM	PTD	HM	PTD	

DOOR TRIM & CASING - TYPICAL



PRINTS ISSUED

01/25/2024 - CITY SUBMITTAL

REVISIONS:

1 10/21/24 ADDENDUM #1



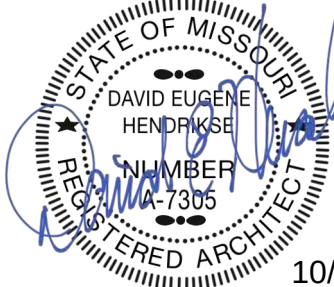
ROSEMAN & ASSOCIATES, P.C.

ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING

1526 Grand Boulevard
Kansas City, MO 64108-1404
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10/21/24

THE VILLAGE AT DISCOVERY -
LOT 4

LEE'S SUMMIT, MO

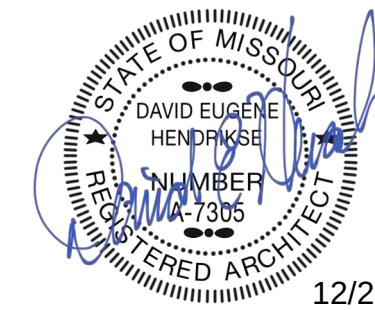
SHEET TITLE

WINDOW AND DOOR SCHEDULES

PROJECT NUMBER: 23099

SHEET NUMBER:

A-600



12/20/24

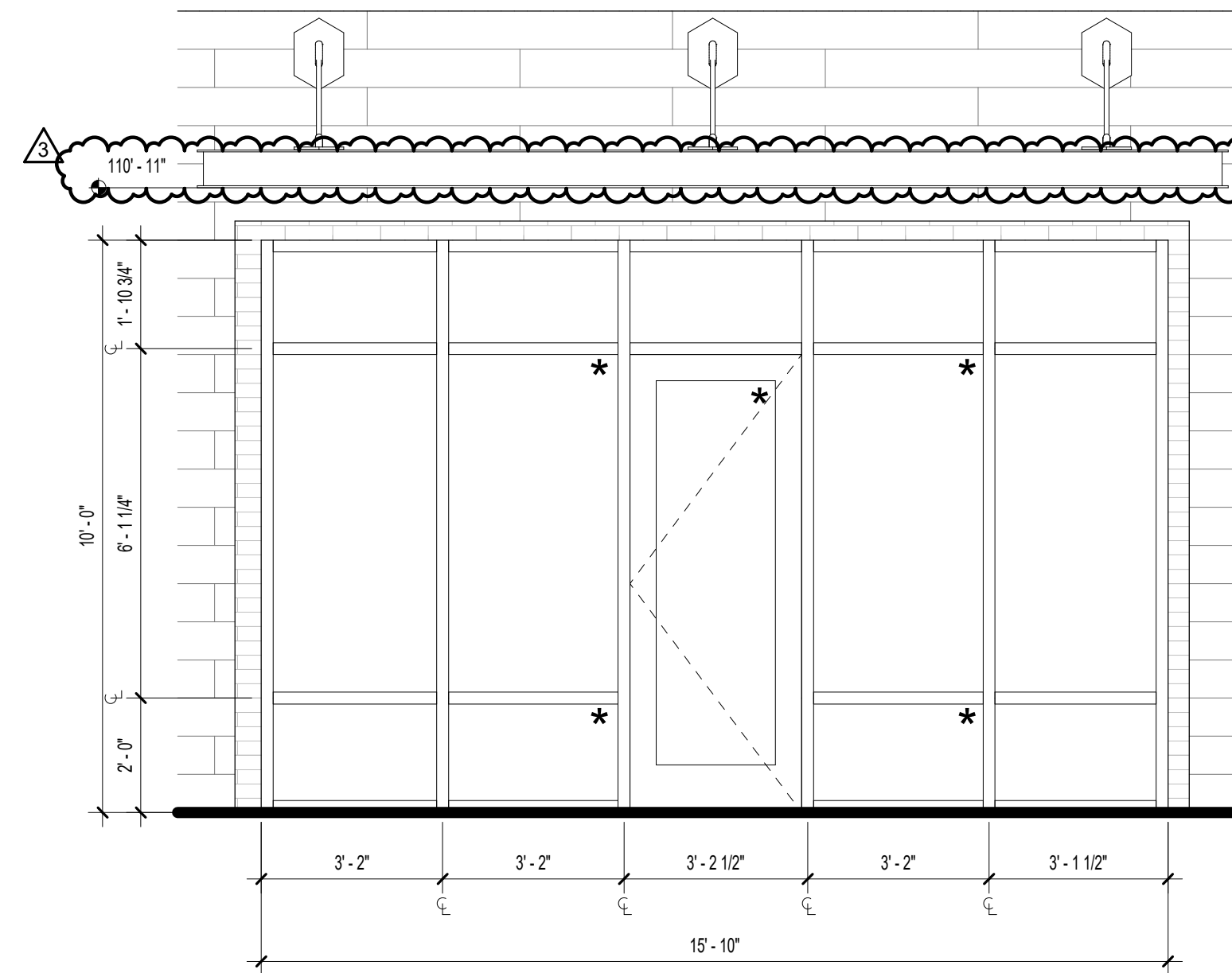
THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
TYPICAL STOREFRONT
ELEVATIONS

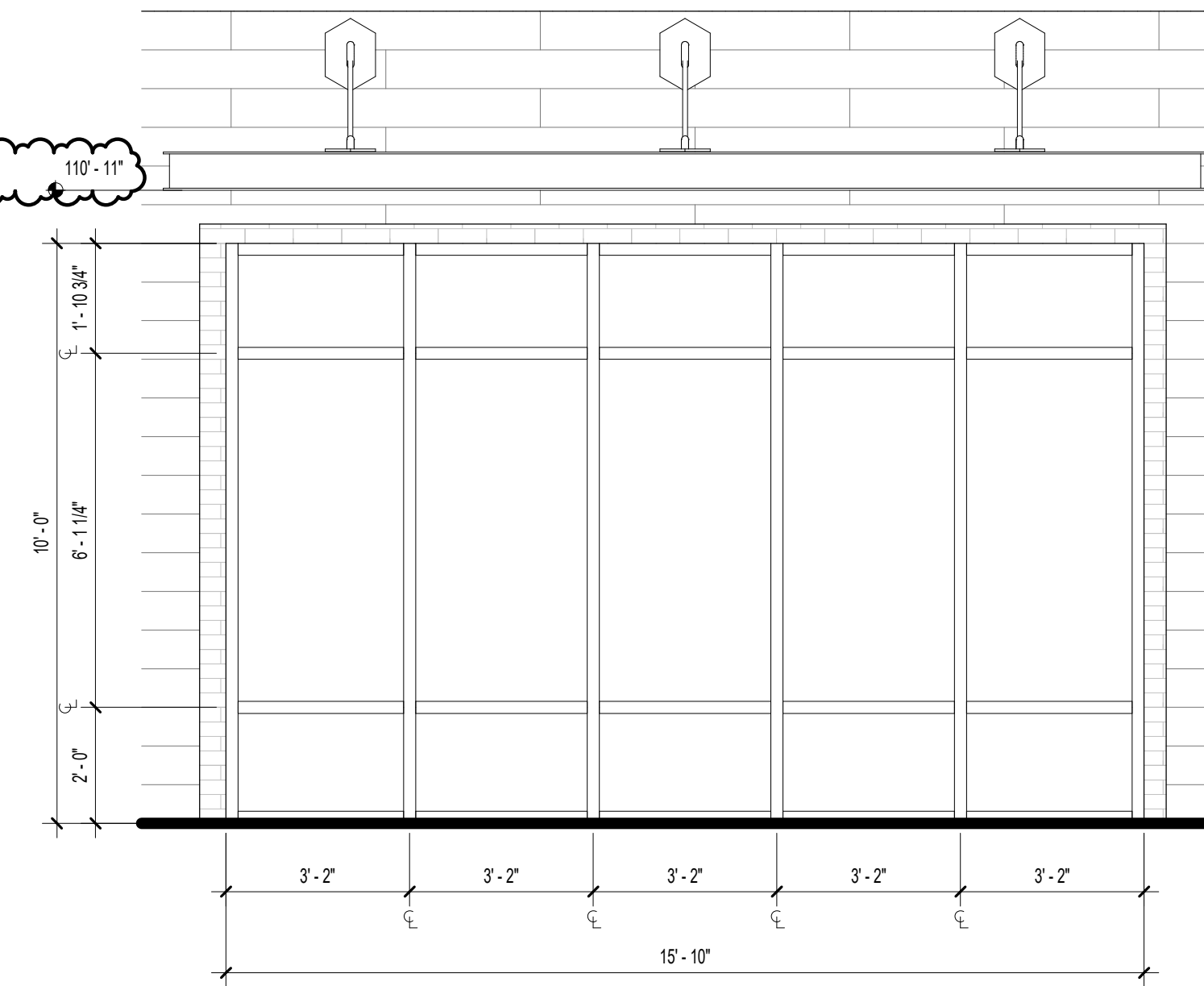
PROJECT NUMBER: 23099

SHEET NUMBER:

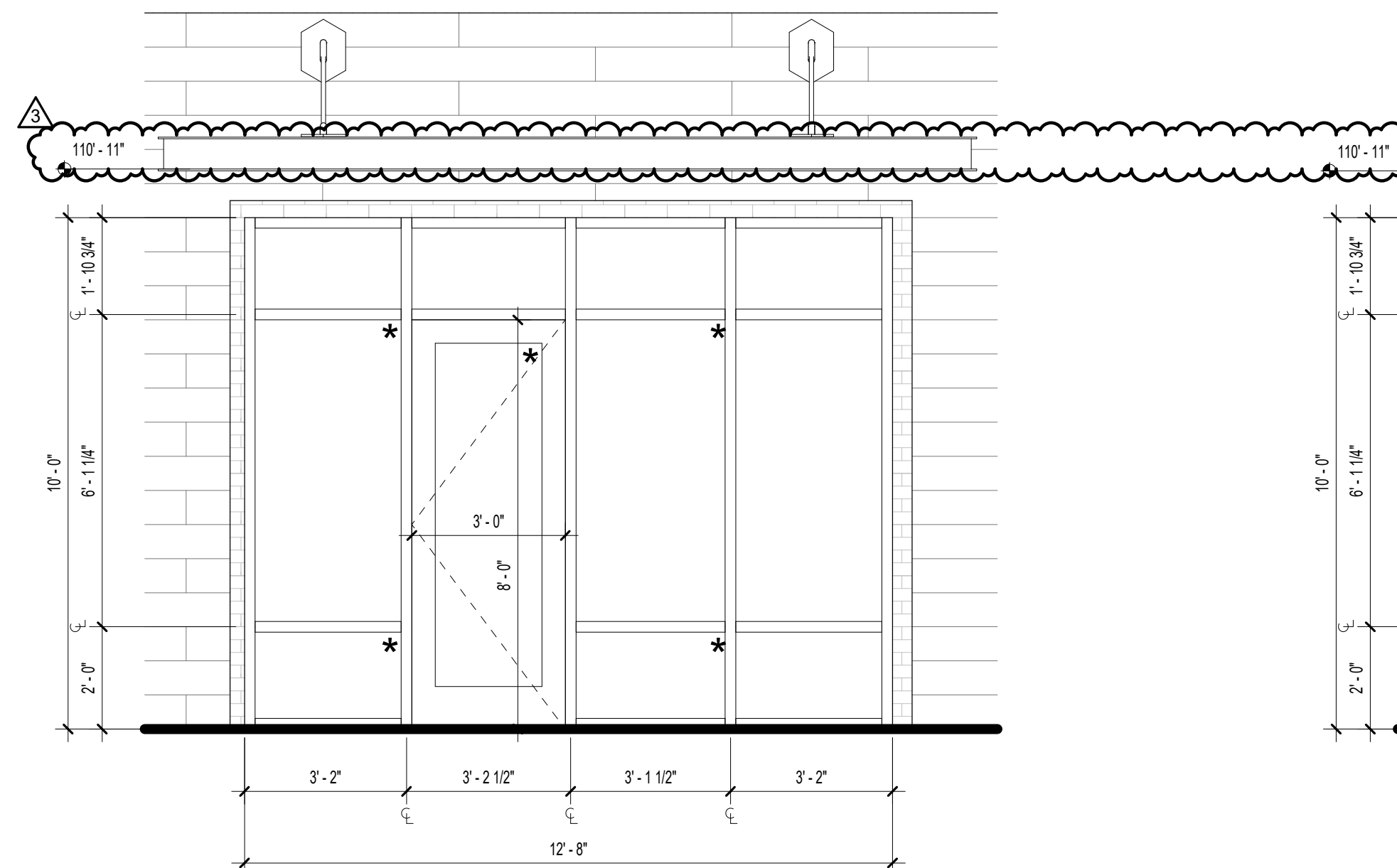
A-601



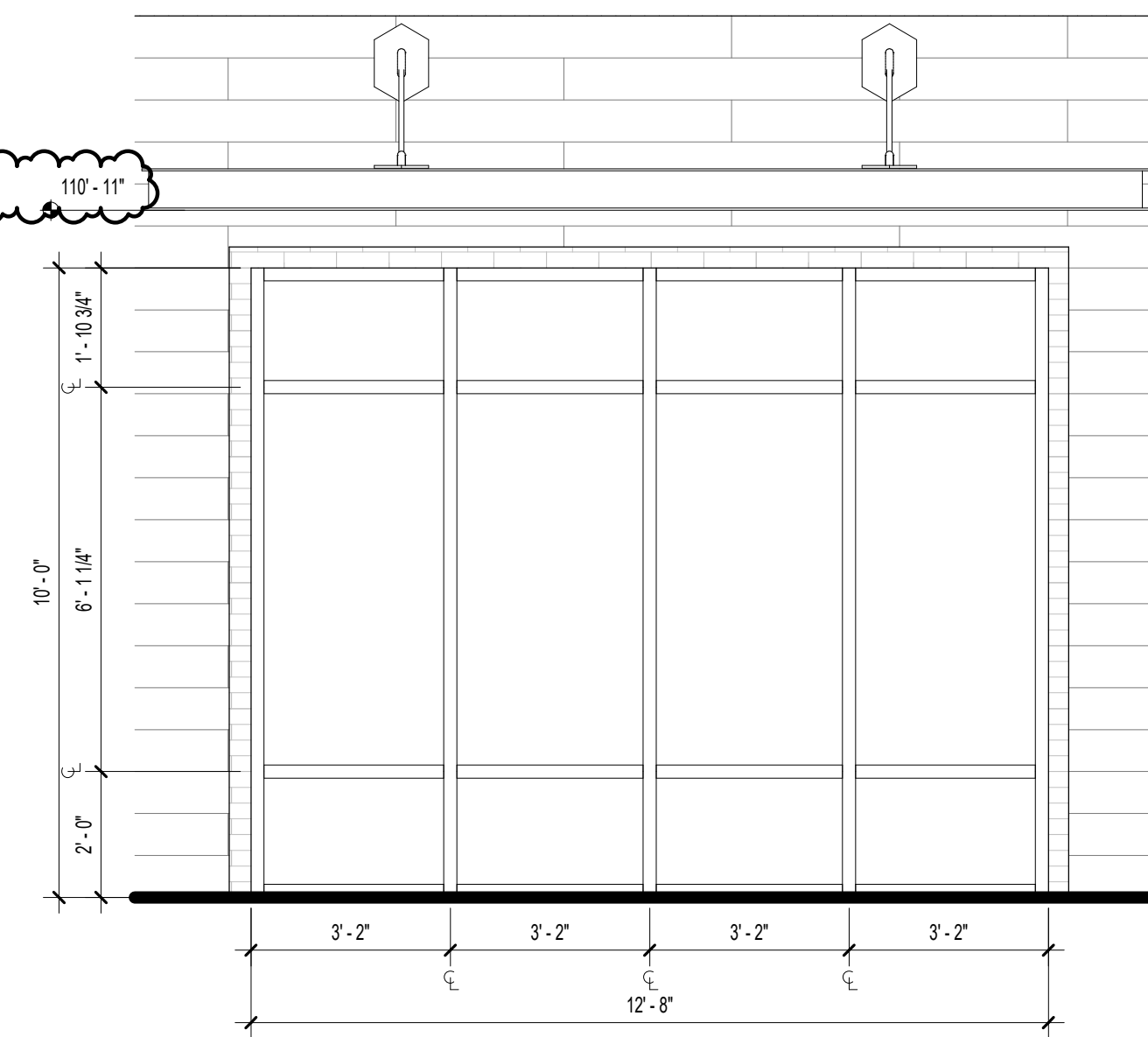
8 SF - 5 PANEL W/ DOOR
3/8" = 1'-0"



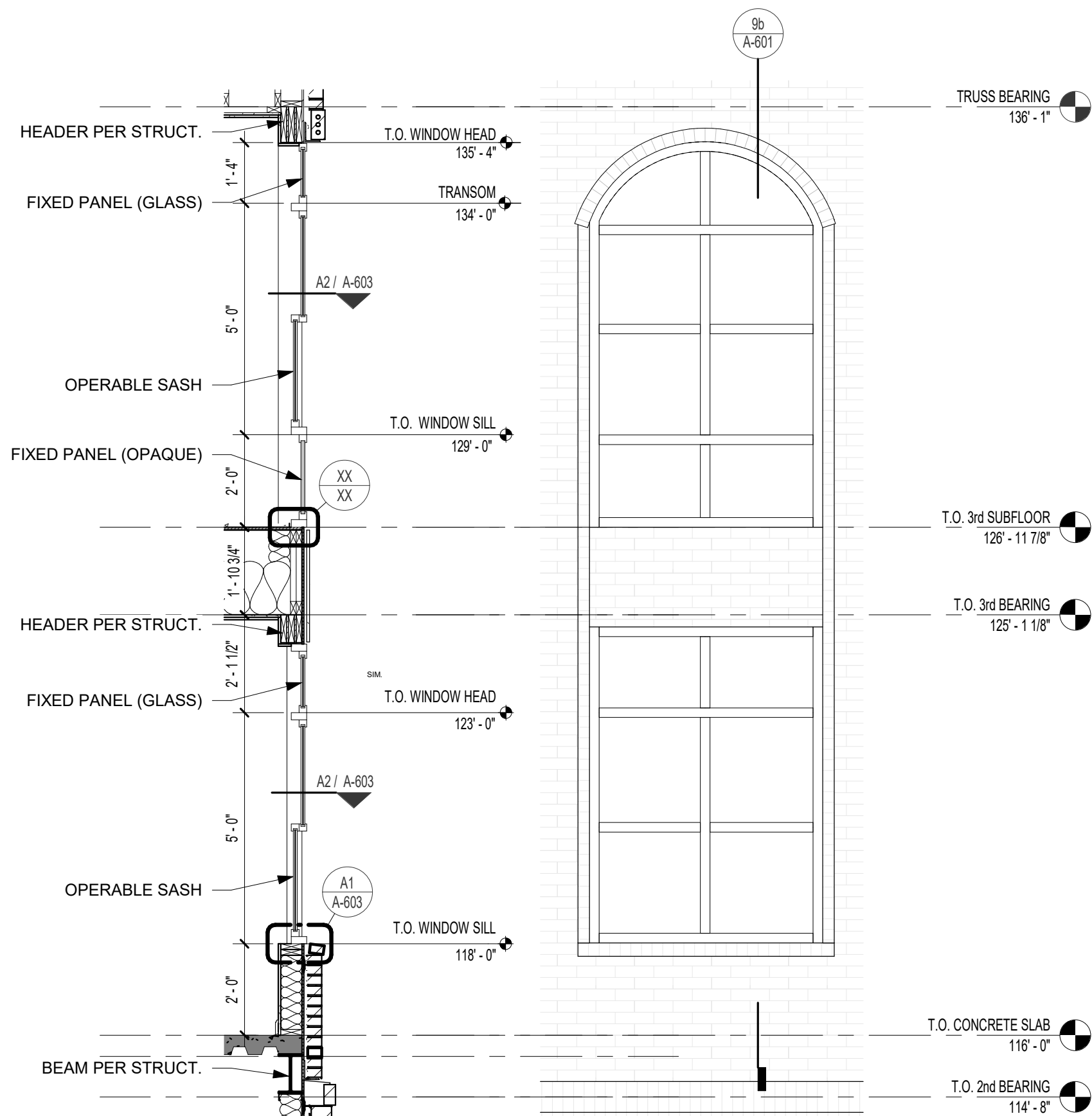
7 SF - 5 PANEL
3/8" = 1'-0"



6 SF - 4 PANEL W/ DOOR
3/8" = 1'-0"

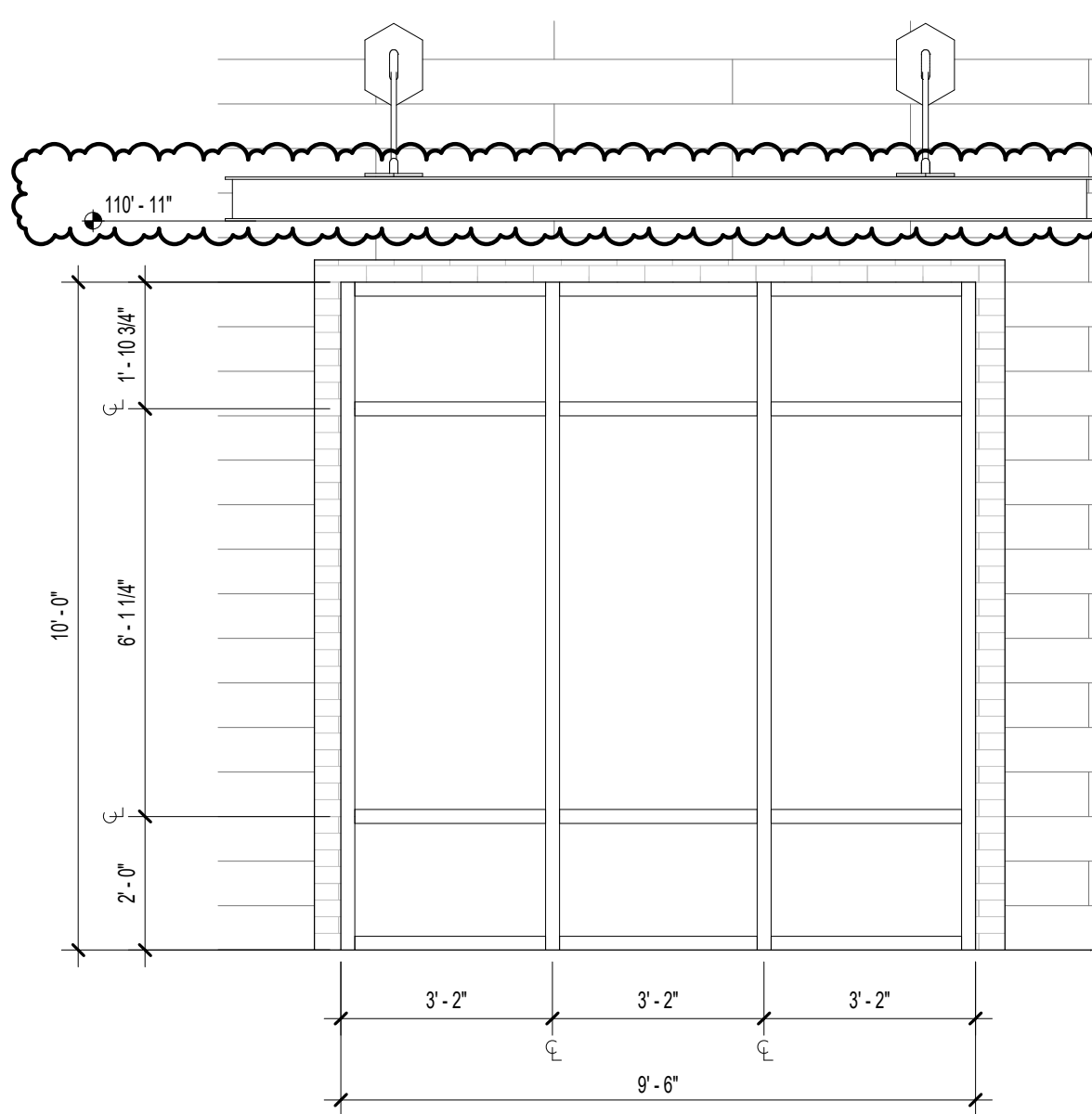


5 SF - 4 PANEL
3/8" = 1'-0"

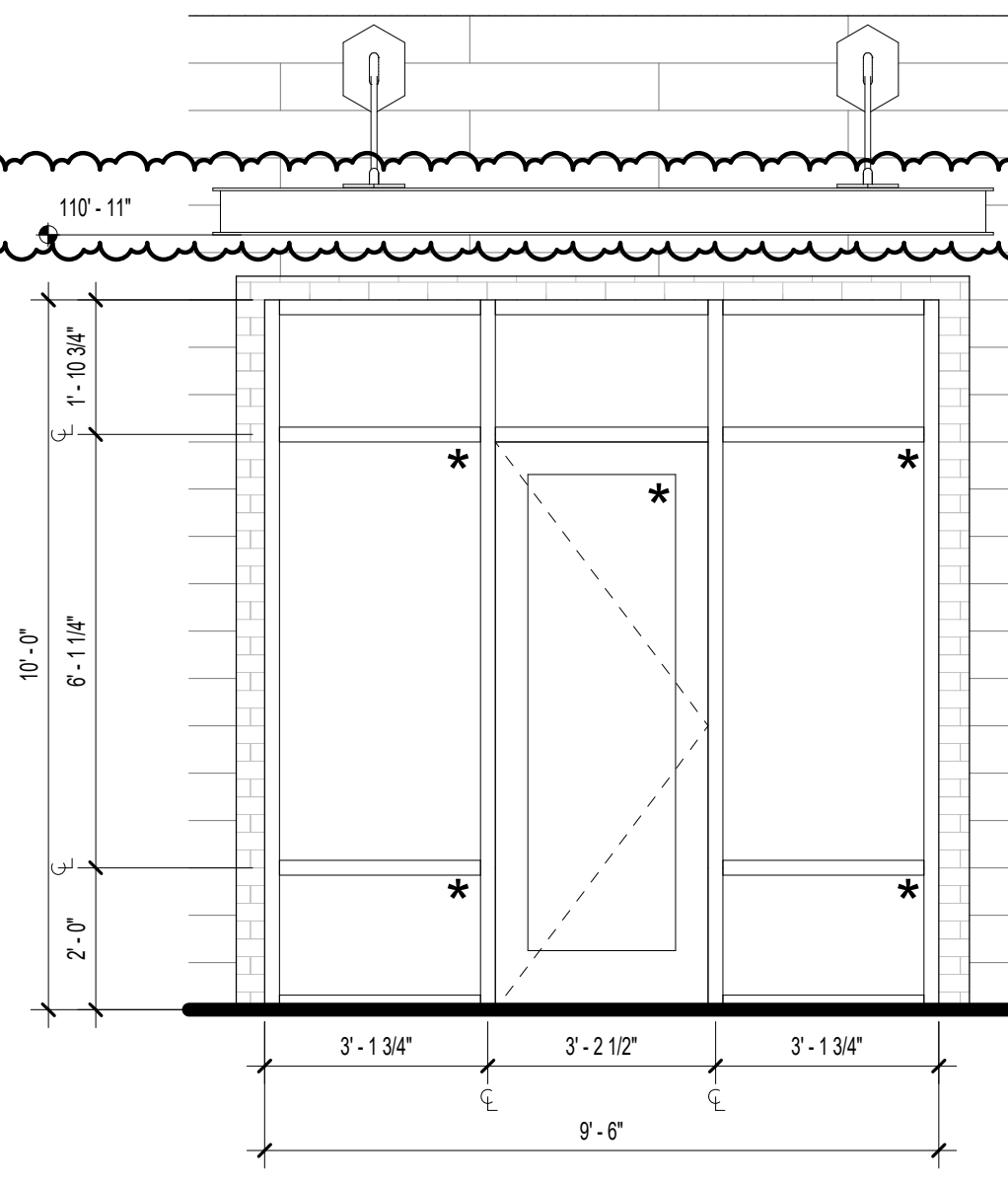


9b SECTION
3/8" = 1'-0"

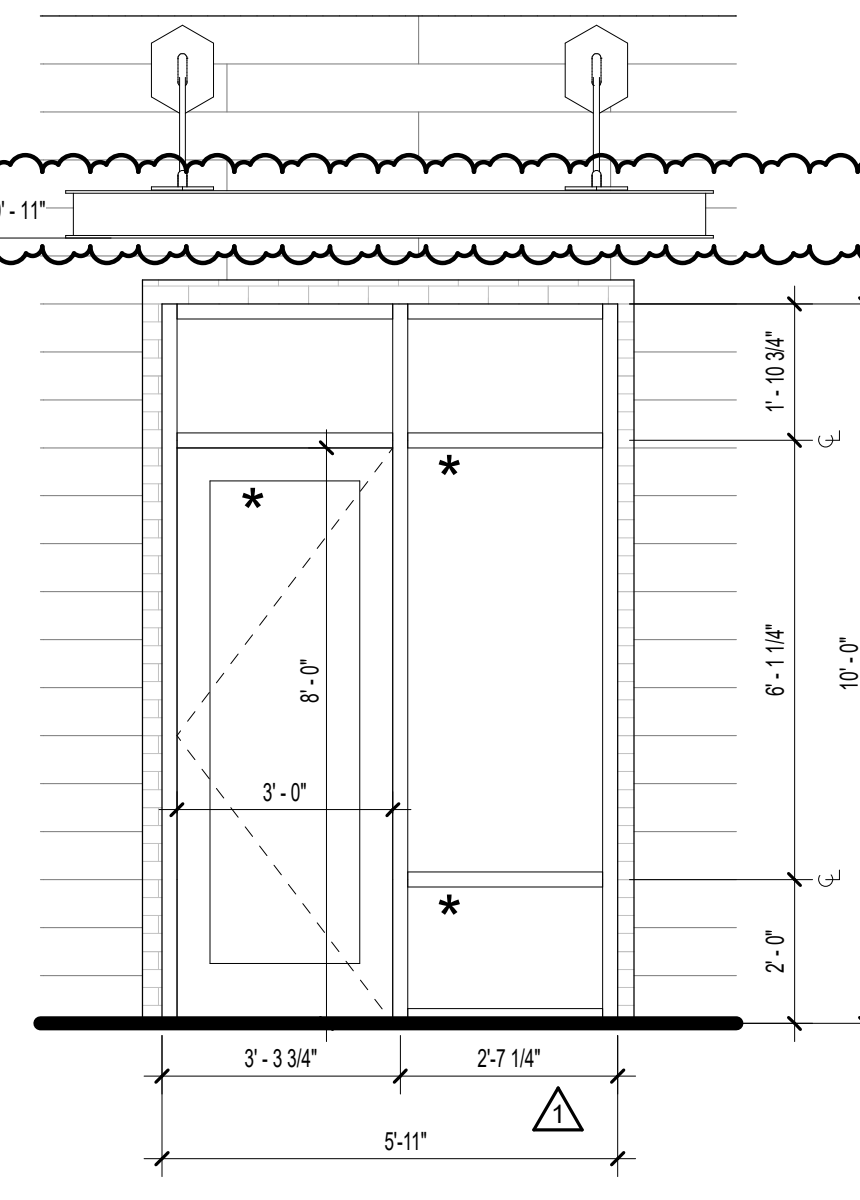
9a SF - UPPER FLOORS (WINDOW C)
- ELEVATION
3/8" = 1'-0"



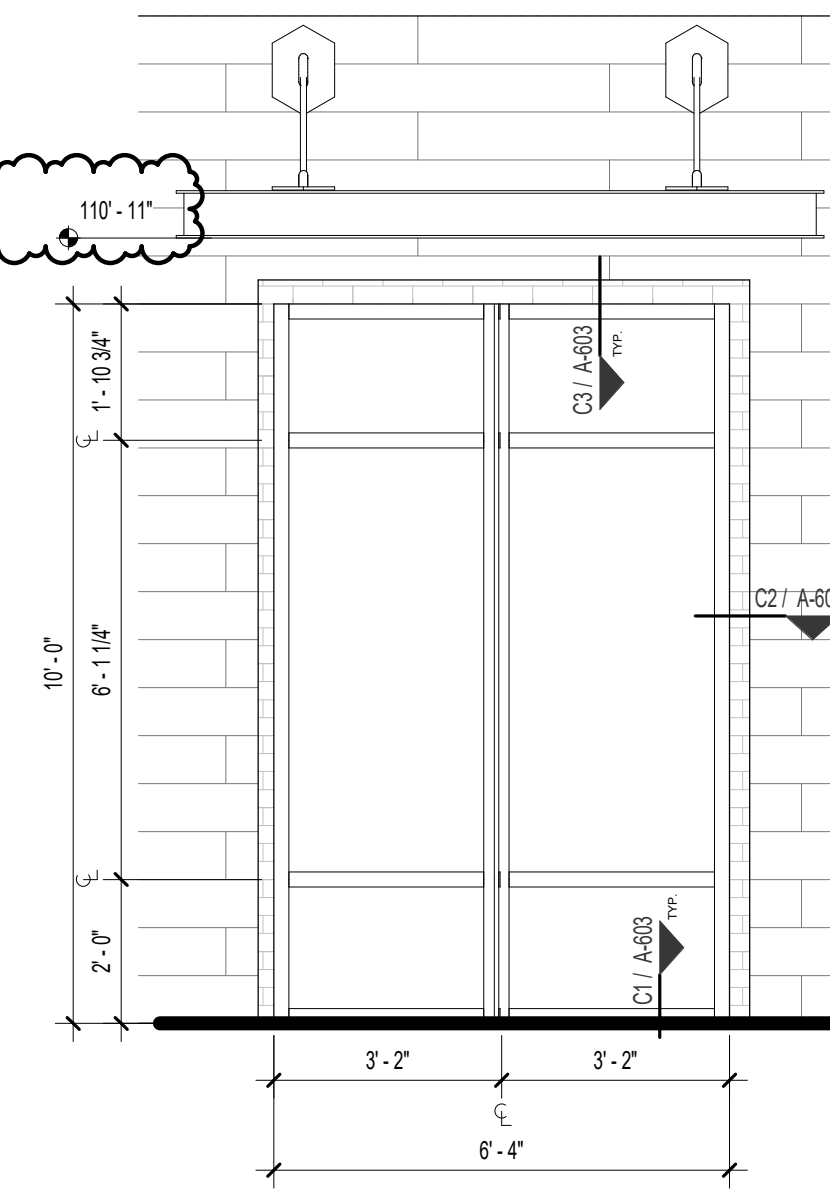
4 SF - 3 PANEL
3/8" = 1'-0"



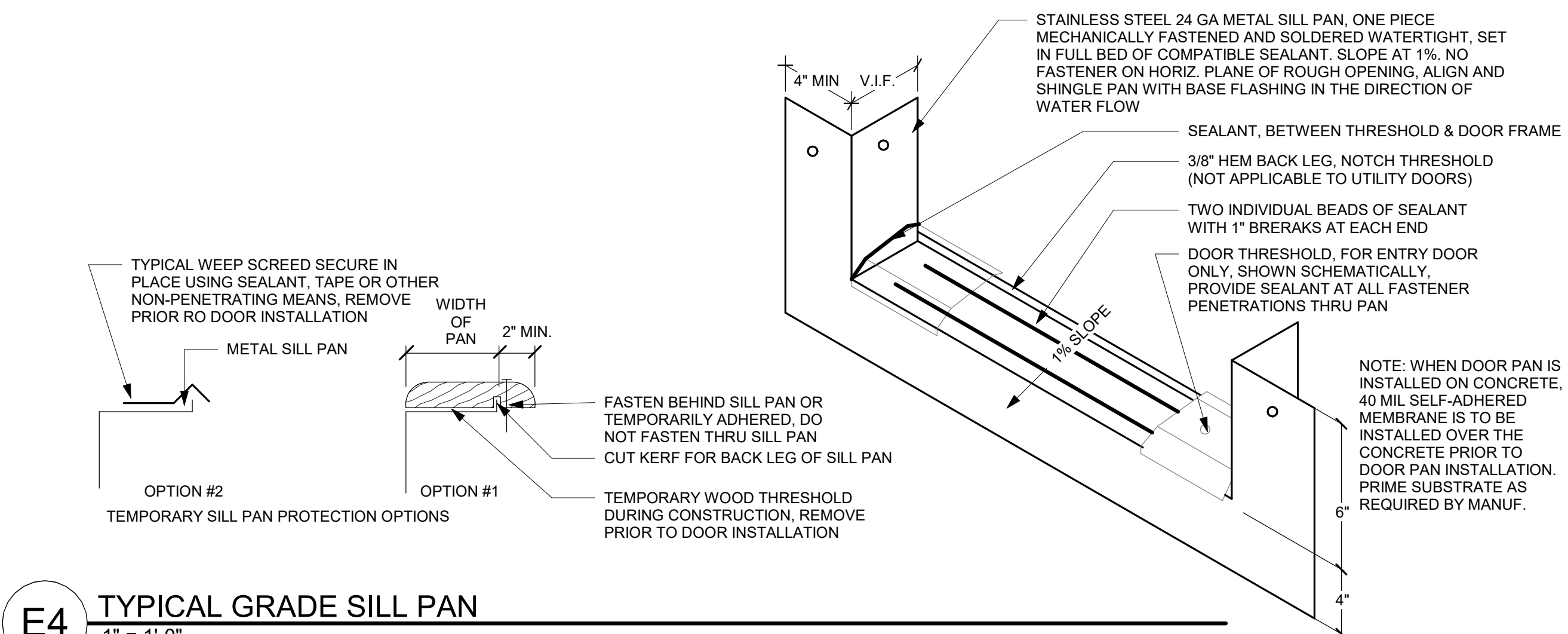
3 SF - 3 PANEL W/ DOOR
3/8" = 1'-0"



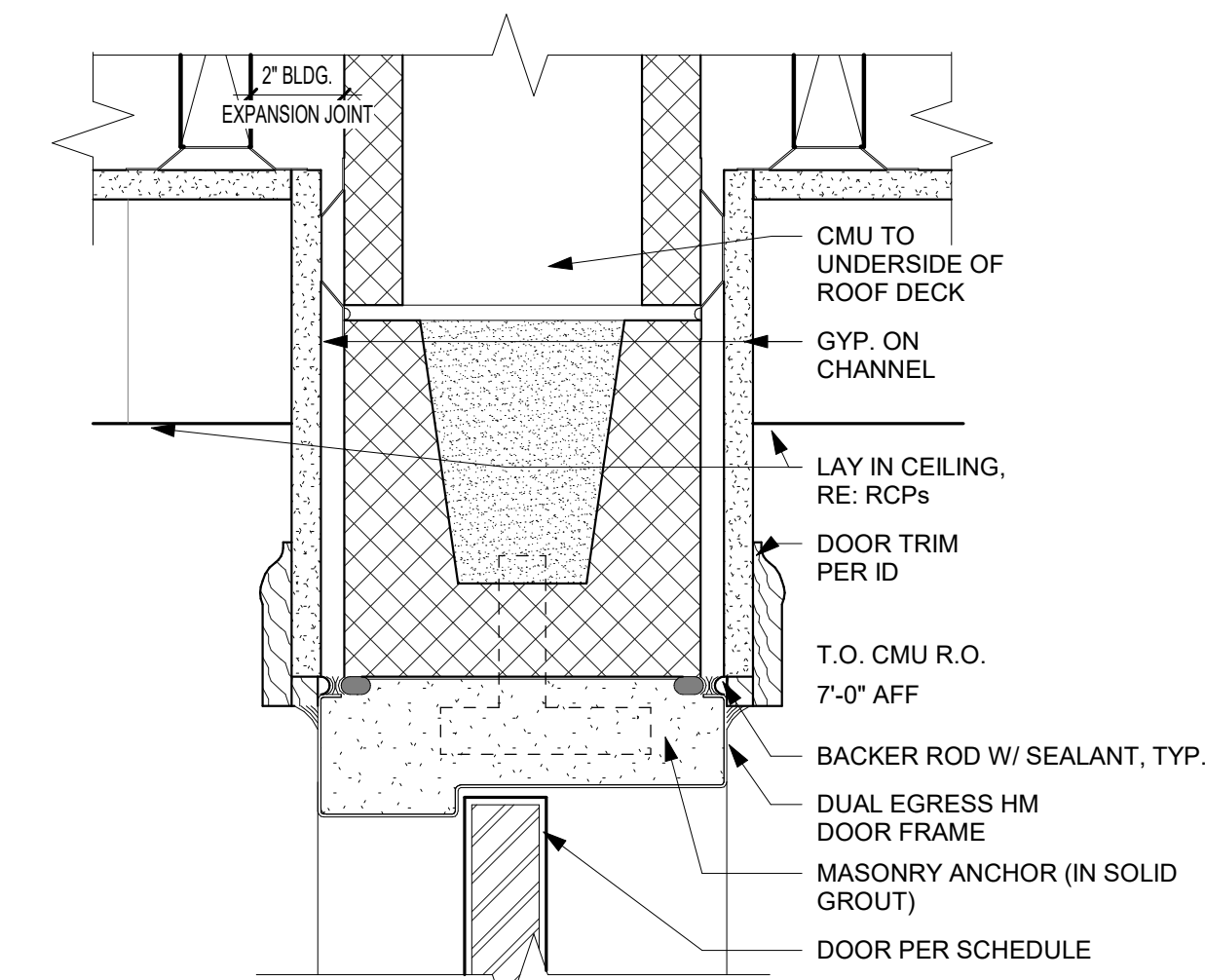
2 SF - 2 PANEL W/ DOOR
3/8" = 1'-0"



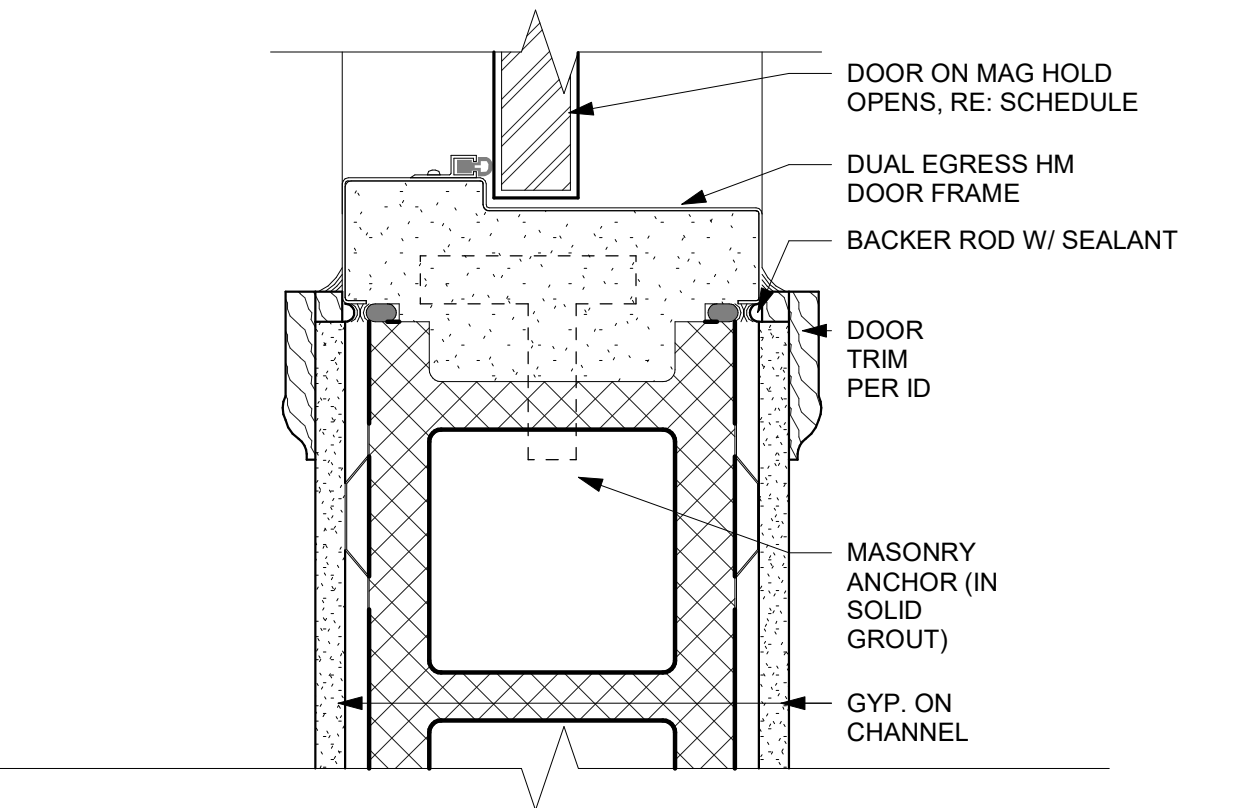
1 SF - 2 PANEL
3/8" = 1'-0"



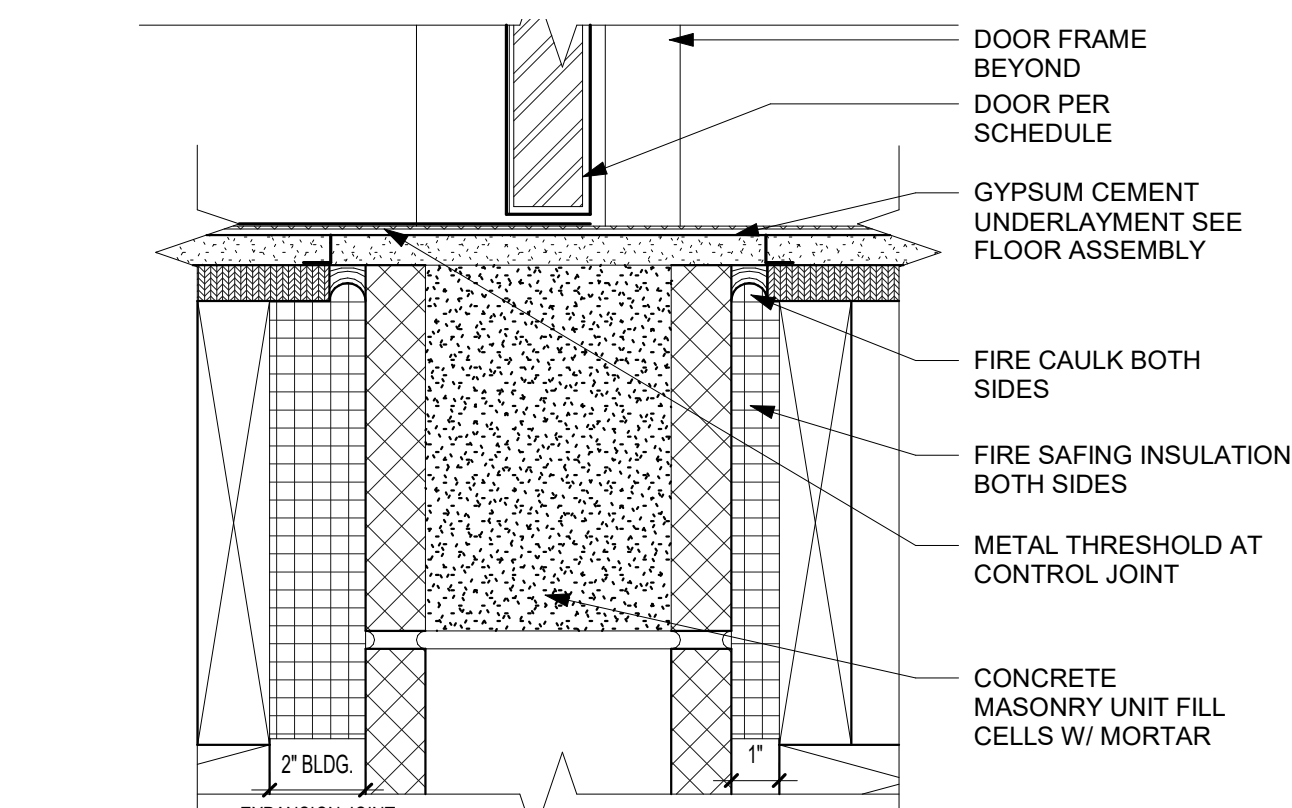
E4 TYPICAL GRADE SILL PAN
1" = 1'-0"



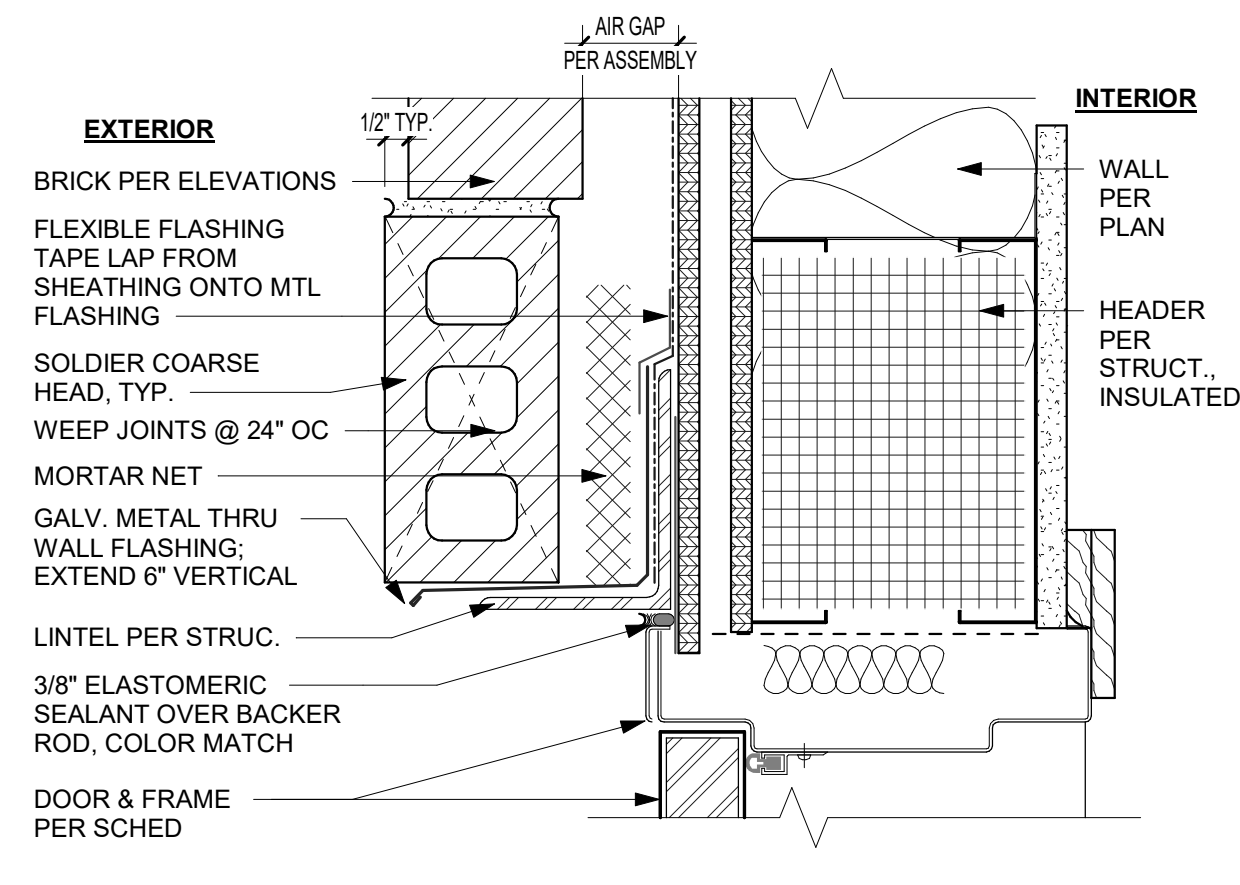
E3 INTERIOR DOOR HEAD - CMU FIREWALL
3" = 1'-0"



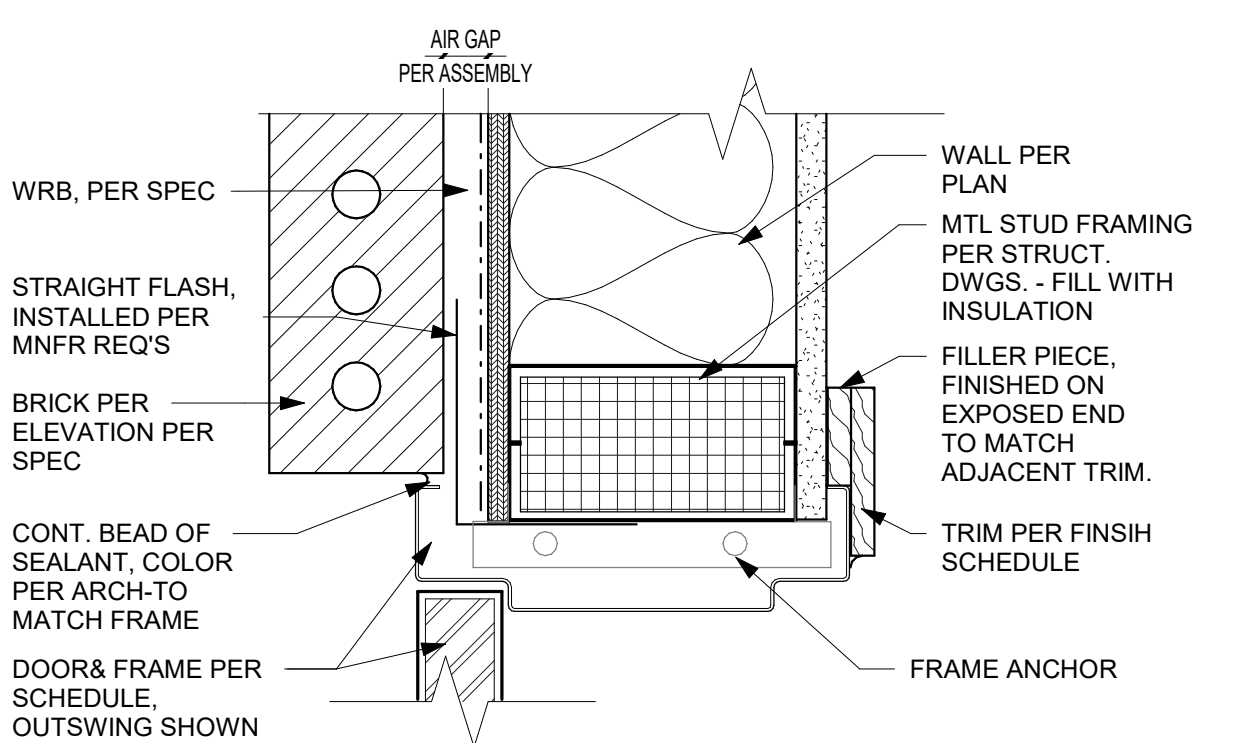
E2 INTERIOR DOOR JAMB - CMU FIREWALL
3" = 1'-0"



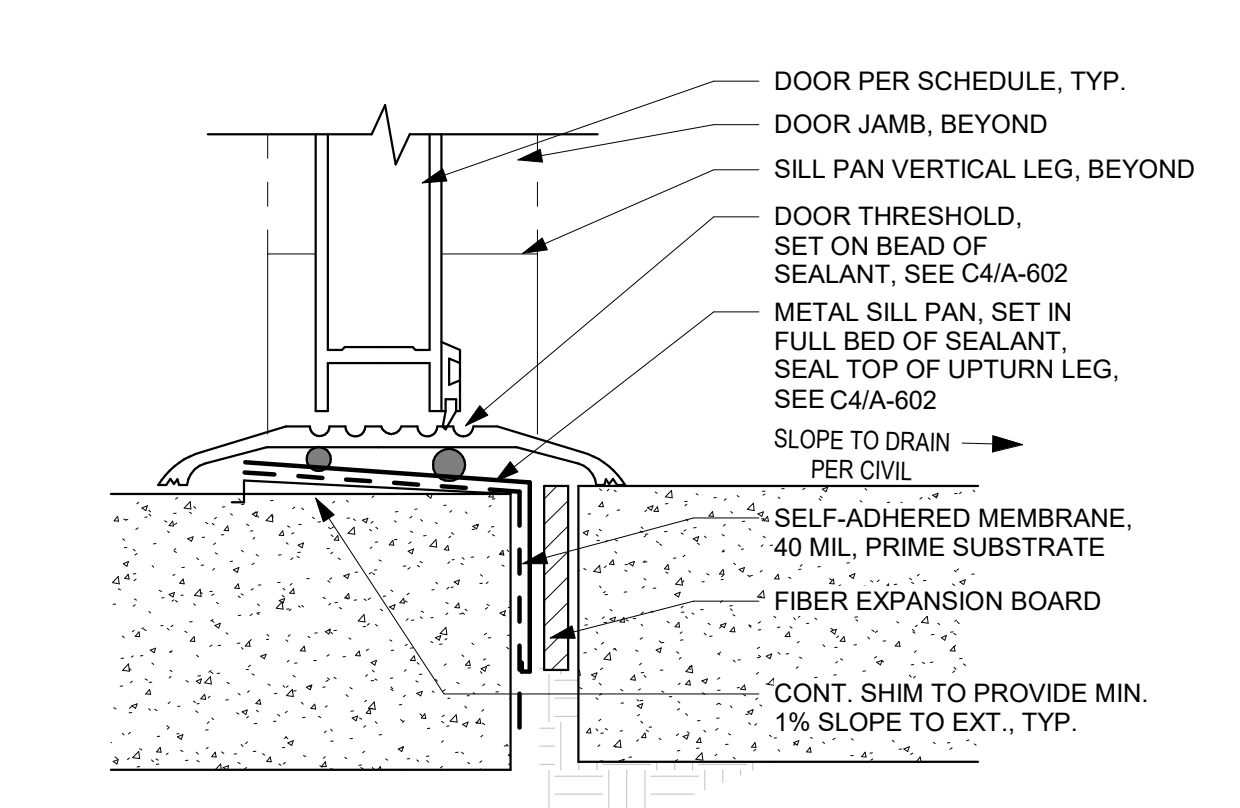
E1 INTERIOR DOOR SILL - CMU THRESHOLD
3" = 1'-0"



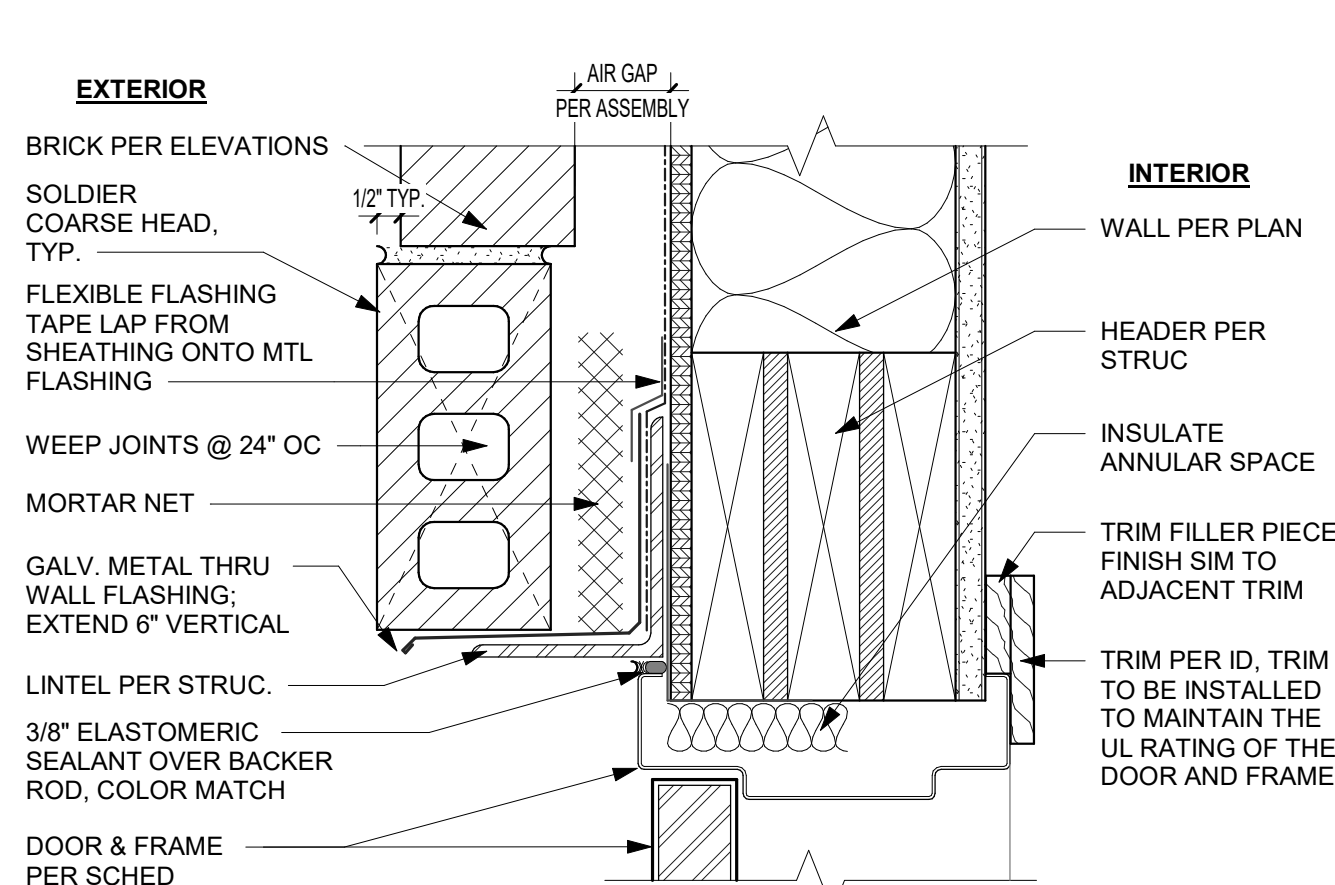
D3 EXTERIOR MTL DOOR HEAD- BRICK
3" = 1'-0"



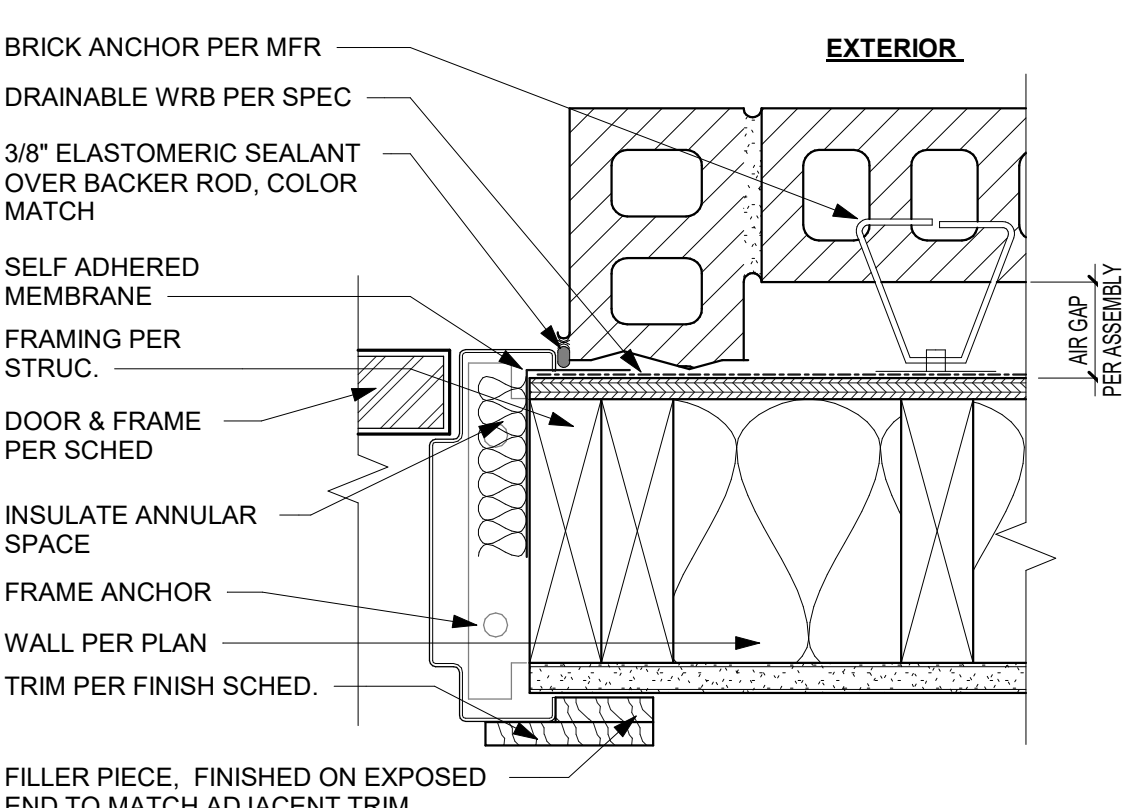
D2 EXTERIOR MTL DOOR JAMB - BRICK
3" = 1'-0"



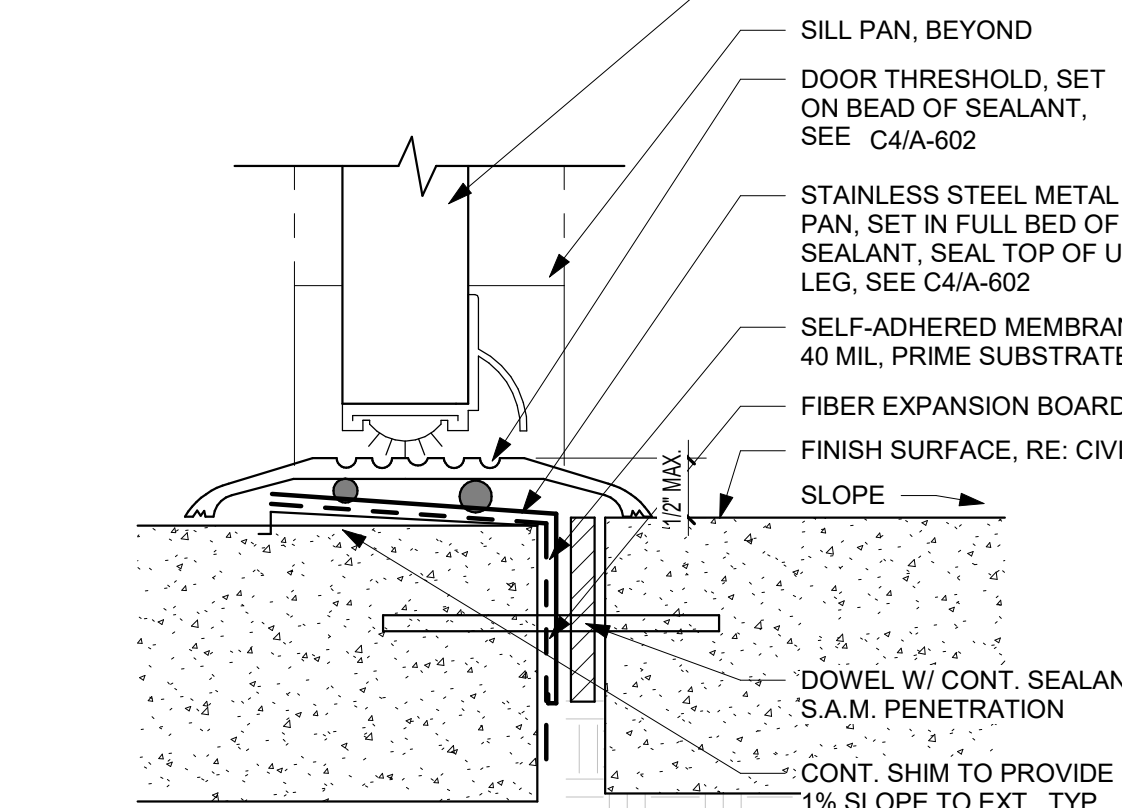
D1 EXTERIOR STOREFRONT DOOR THRESHOLD
1" = 1'-0"



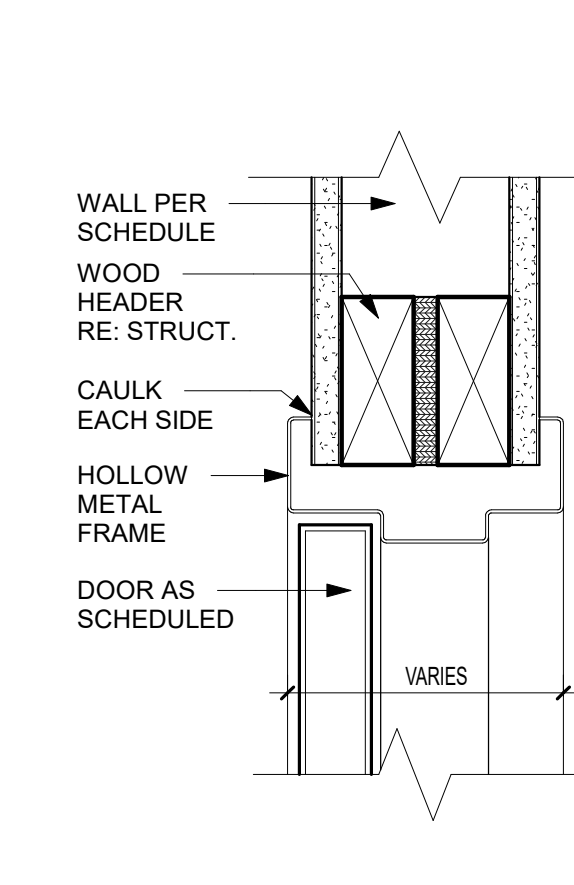
C3 EXTERIOR DOOR HEAD - BRICK
3" = 1'-0"



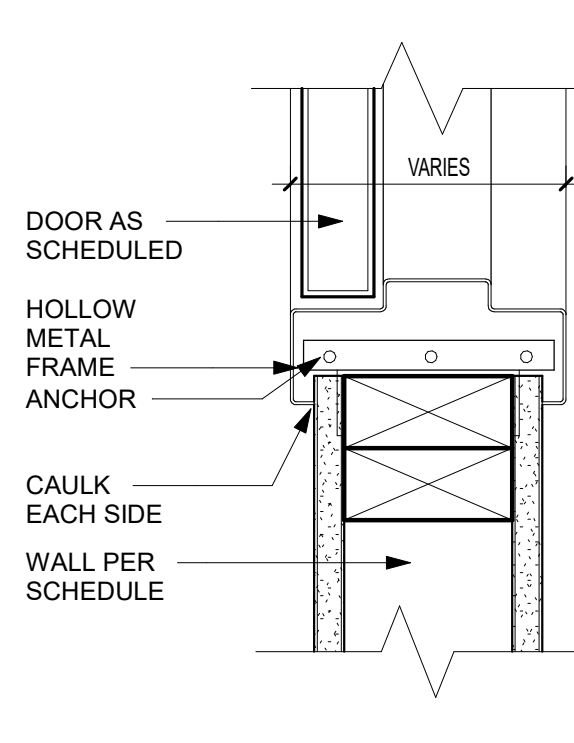
C2 EXTERIOR DOOR JAMB - BRICK
3" = 1'-0"



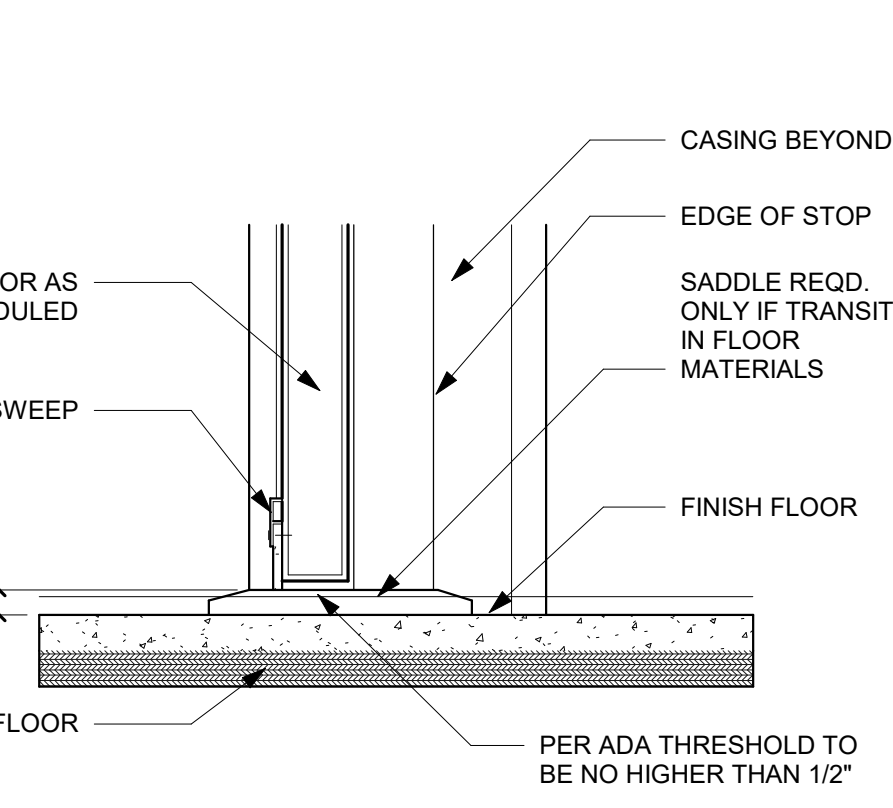
C1 EXTERIOR DOOR THRESHOLD
1" = 1'-0"



B3 INTERIOR DOOR HEAD - METAL
3" = 1'-0"

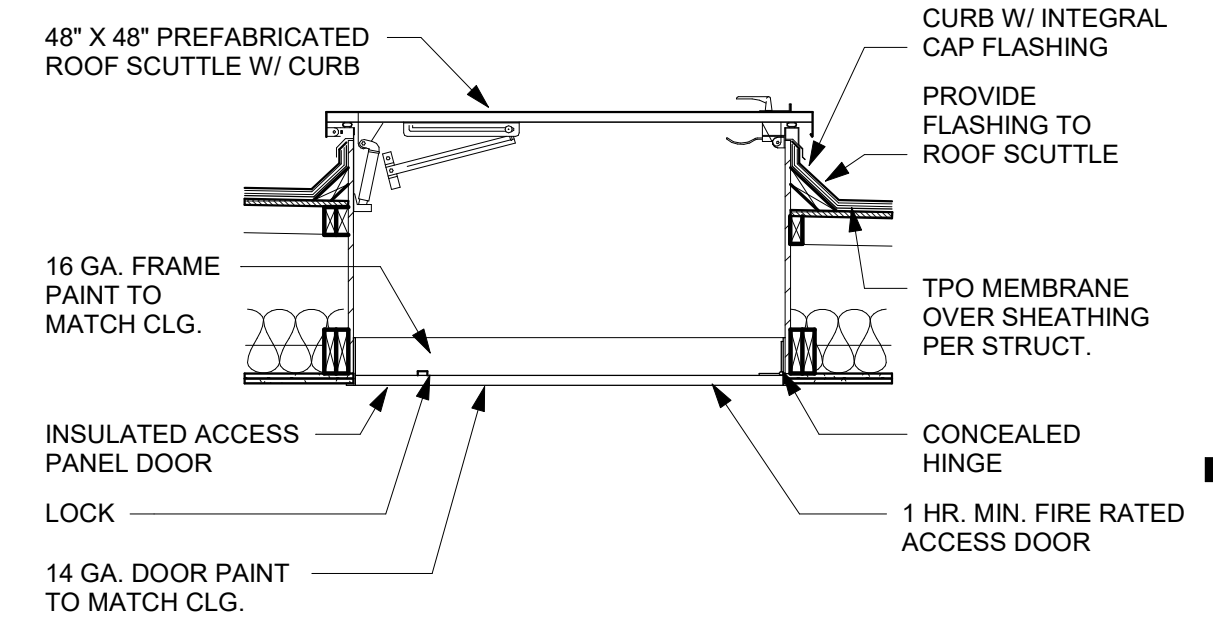


B2 INTERIOR DOOR JAMB - METAL
3" = 1'-0"

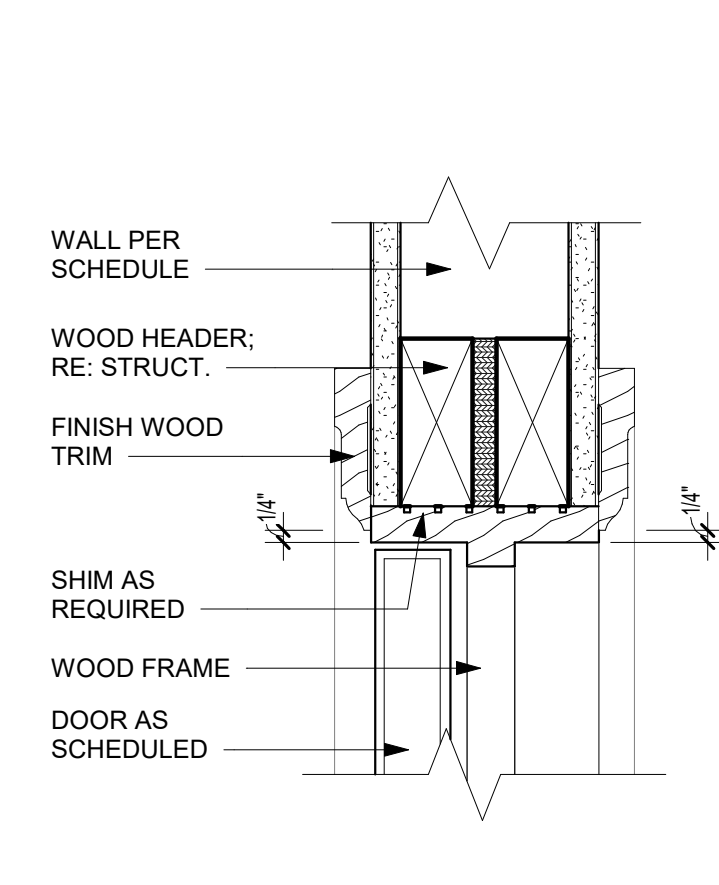


B1 INTERIOR RATED DOOR SILL
3" = 1'-0"

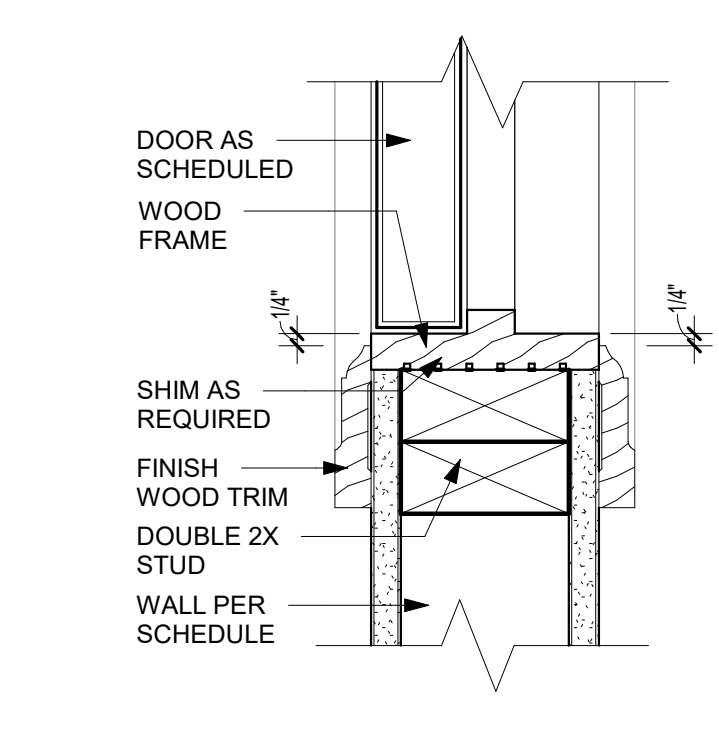
REFERENCE A-602 & A-603 FOR DOOR AND WINDOW DETAILS



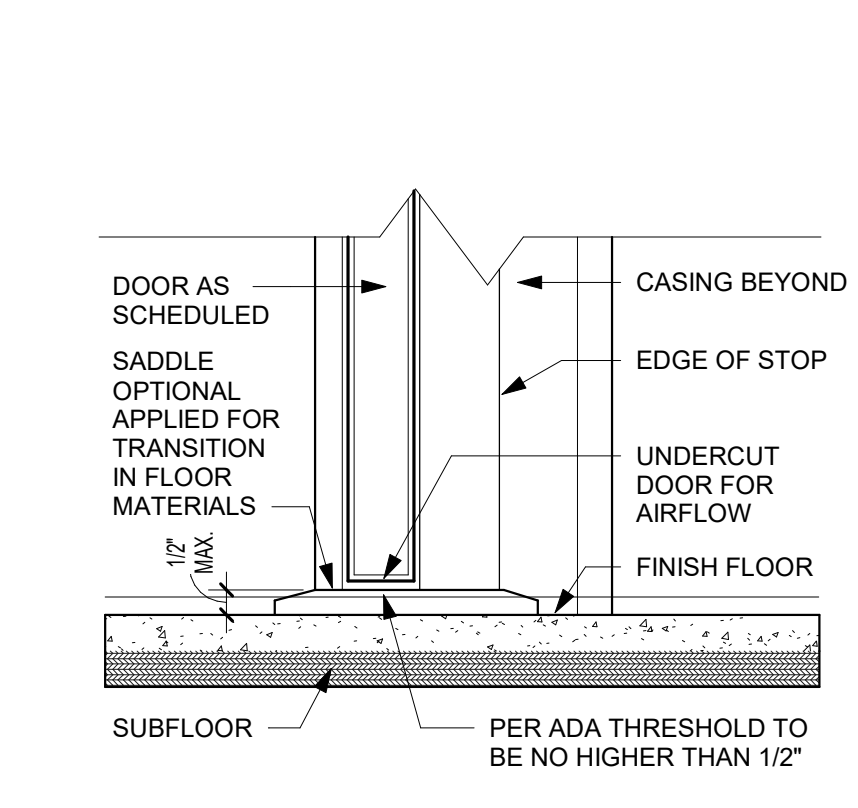
A4 ROOF SCUTTLE
1/2" = 1'-0"



A3 INTERIOR DOOR HEAD - WOOD
3" = 1'-0"



A2 INTERIOR DOOR JAMB - WOOD
3" = 1'-0"

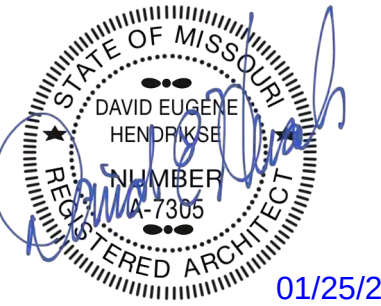


A1 INTERIOR DOOR SILL
3" = 1'-0"

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01/25/24

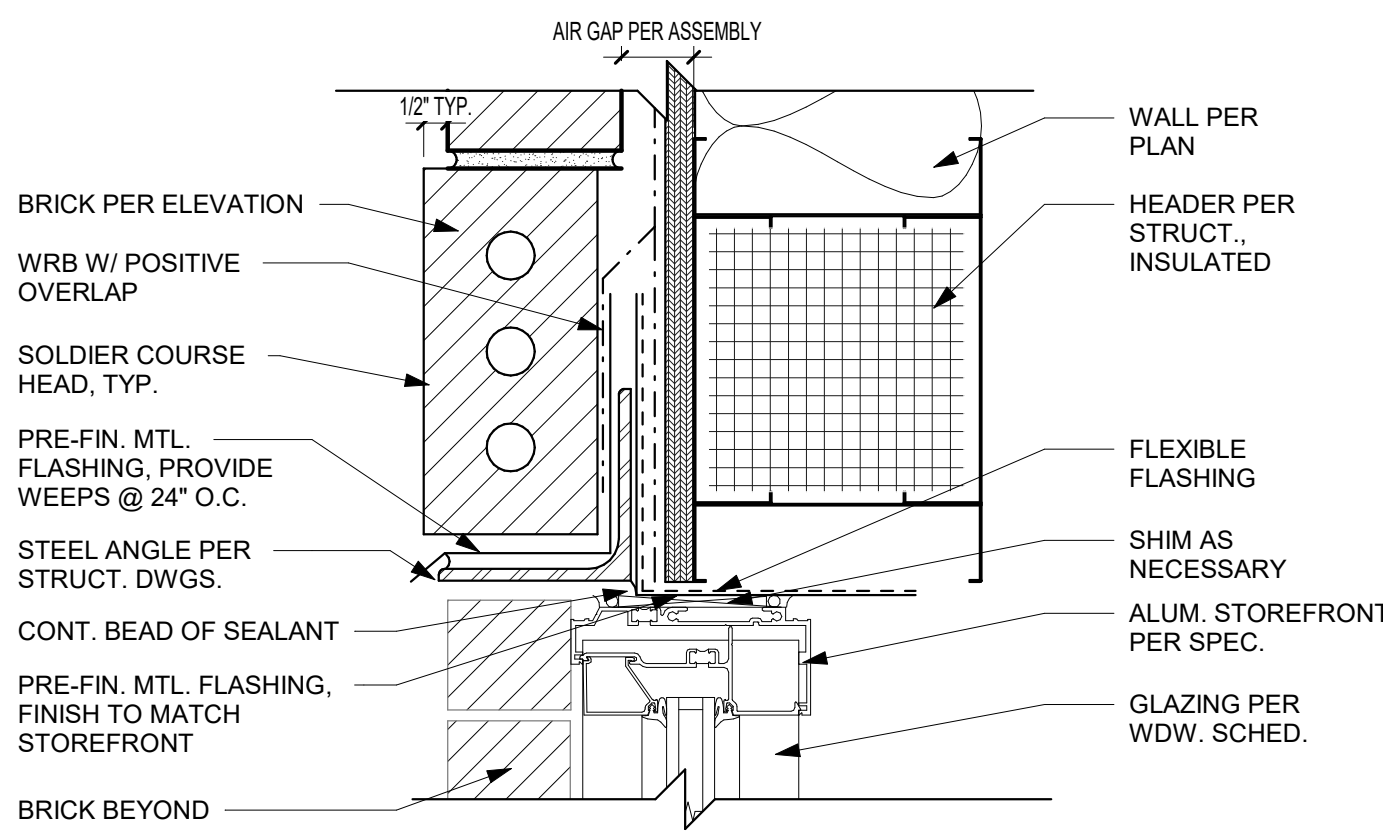
THE VILLAGE AT DISCOVERY -
LOT 4
LEE'S SUMMIT, MO

SHEET TITLE
DOOR DETAILS

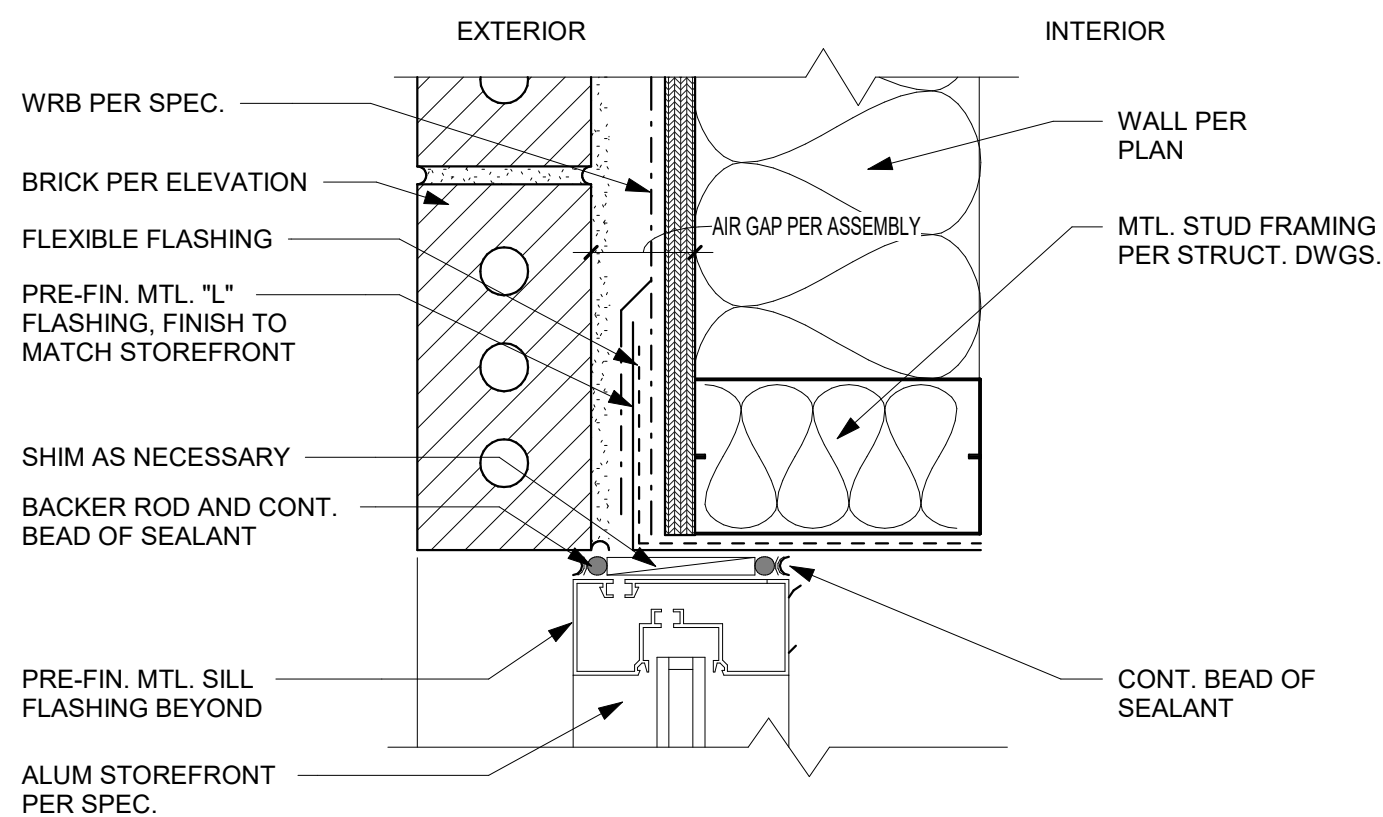
PROJECT NUMBER: 23099

SHEET NUMBER:

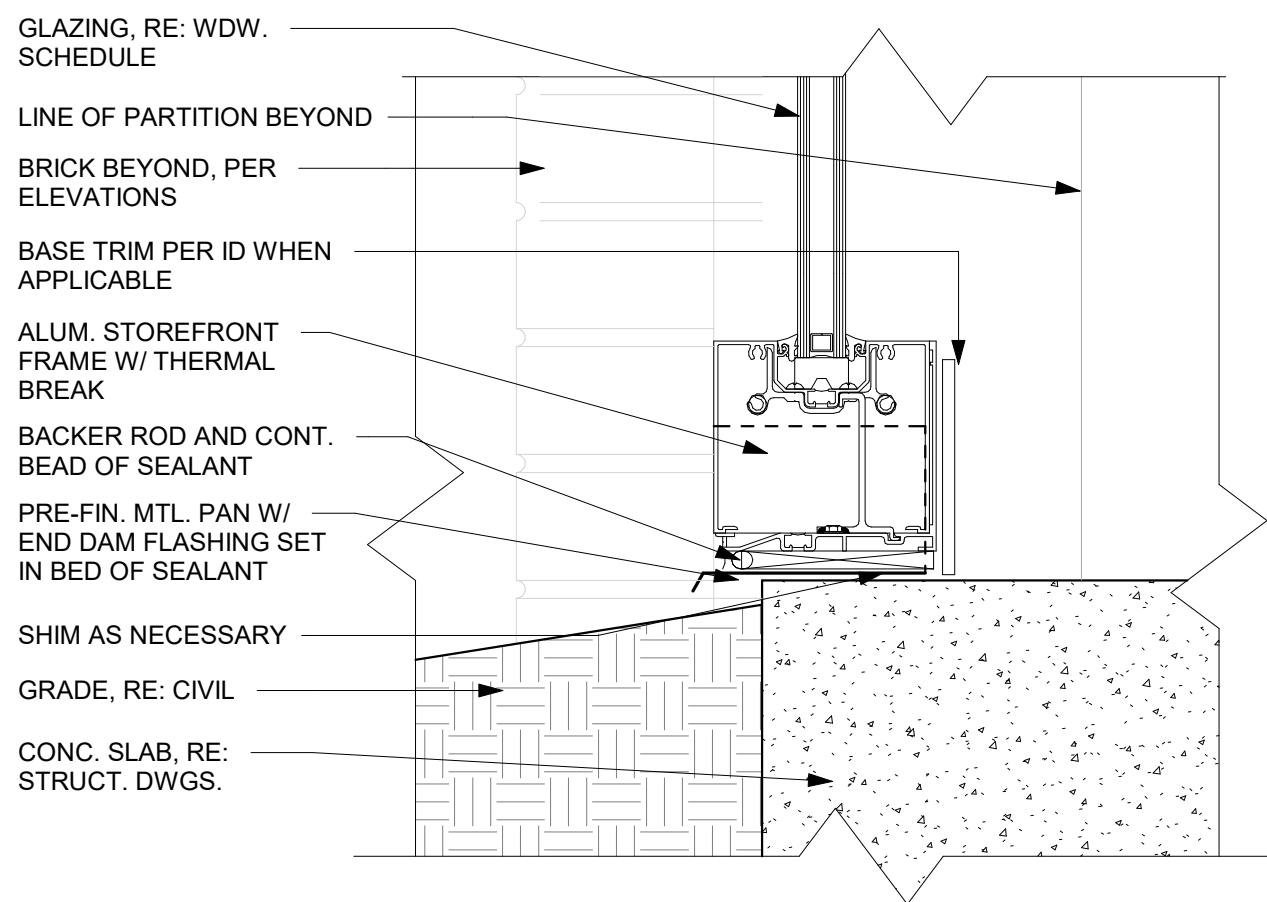
A-602



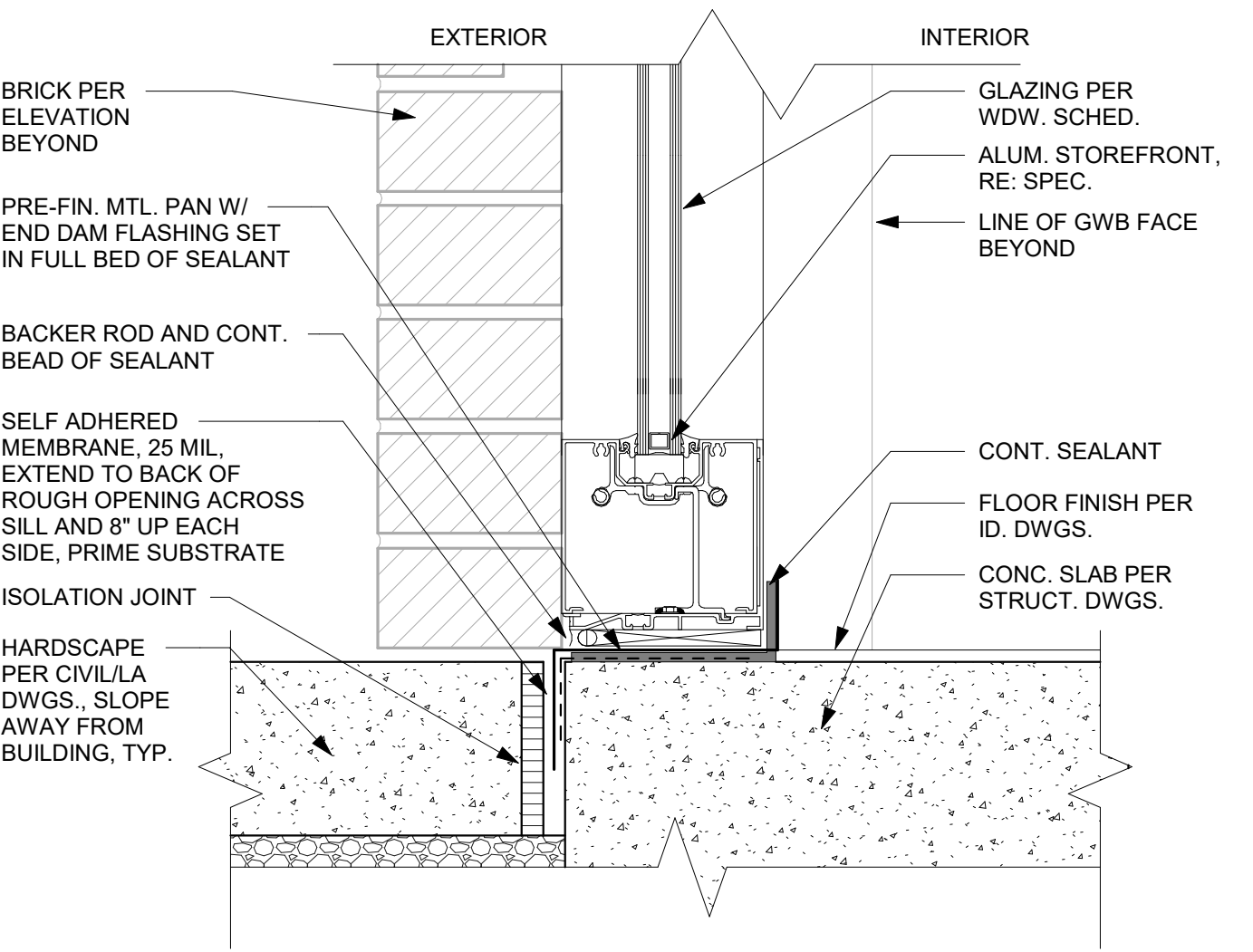
C3 STOREFRONT MTL HEAD - BRICK
3" = 1'-0"



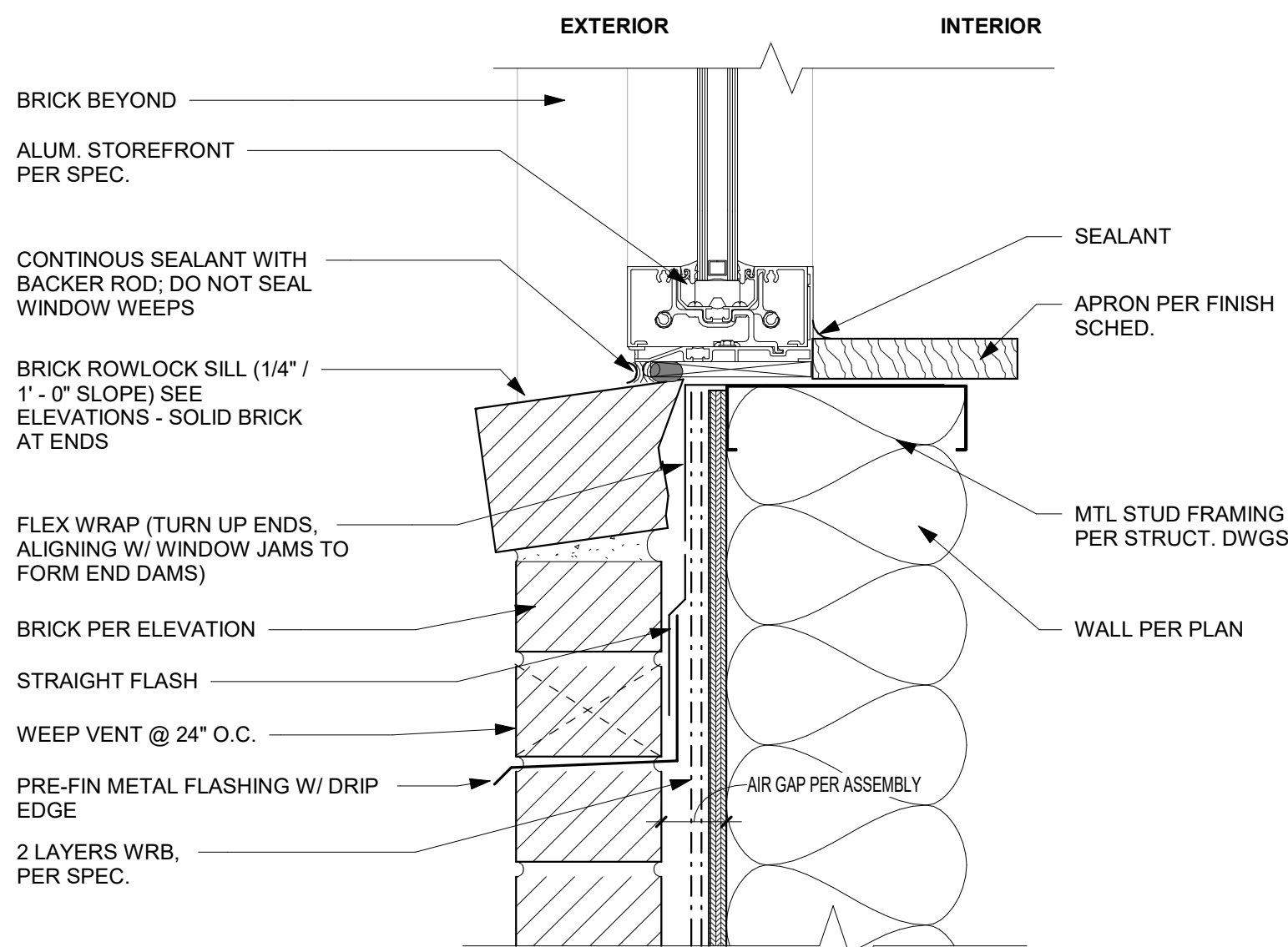
C2 STOREFRONT MTL JAMB - BRICK
3" = 1'-0"



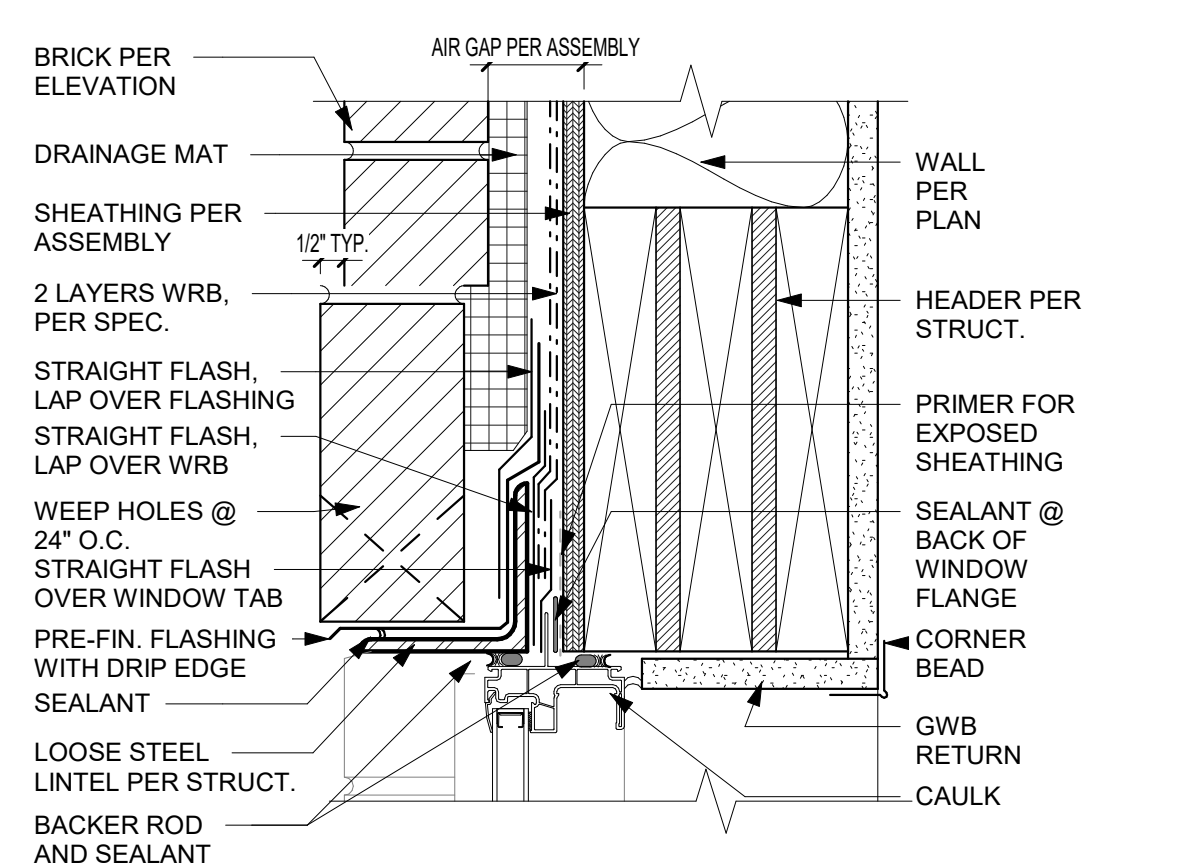
D1 STOREFRONT THRESHOLD - GRADE
3" = 1'-0"



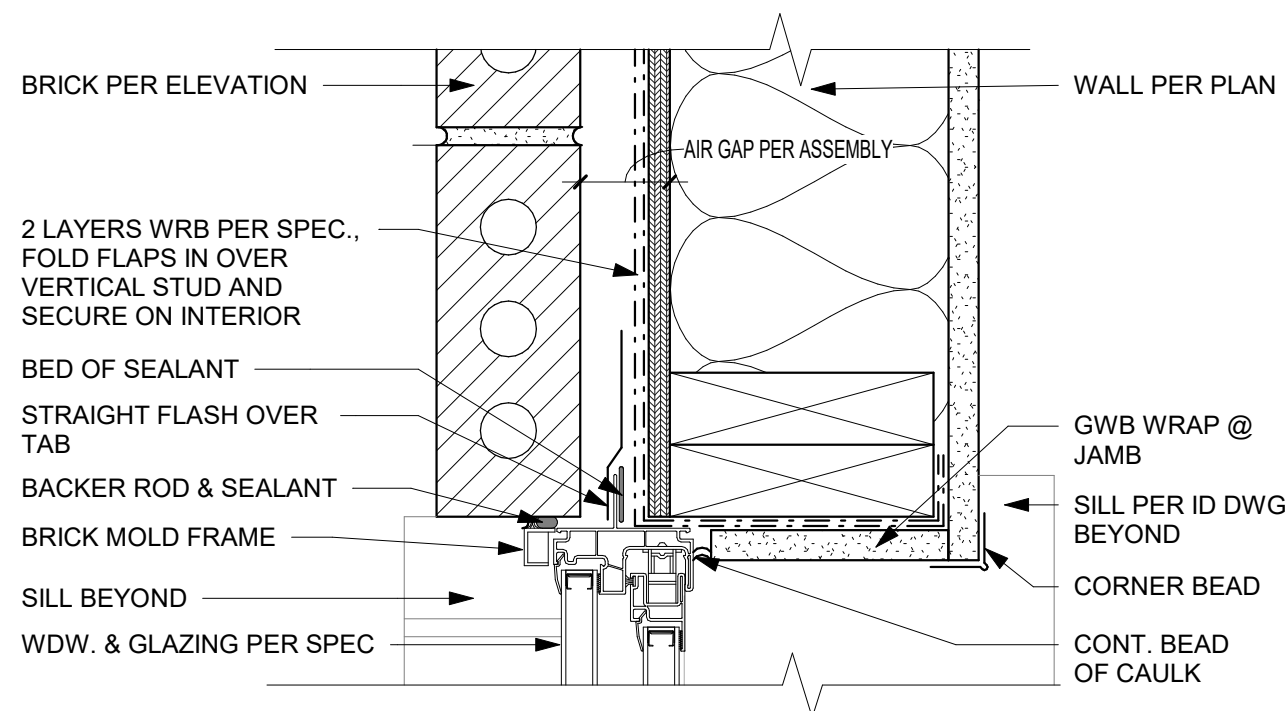
C1 STOREFRONT THRESHOLD - HARDSCAPE
3" = 1'-0"



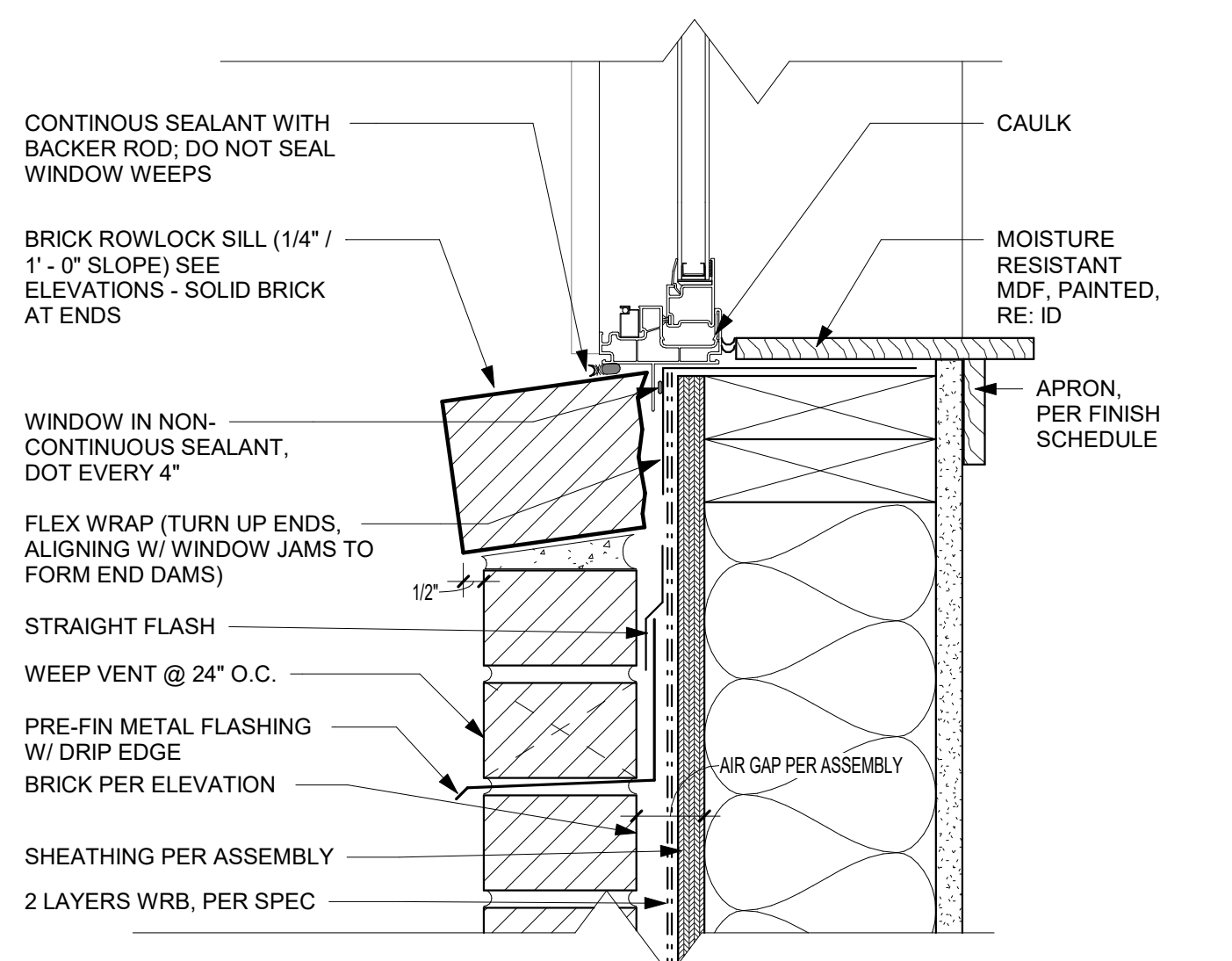
B1 STOREFRONT MTL SILL - BRICK
3" = 1'-0"



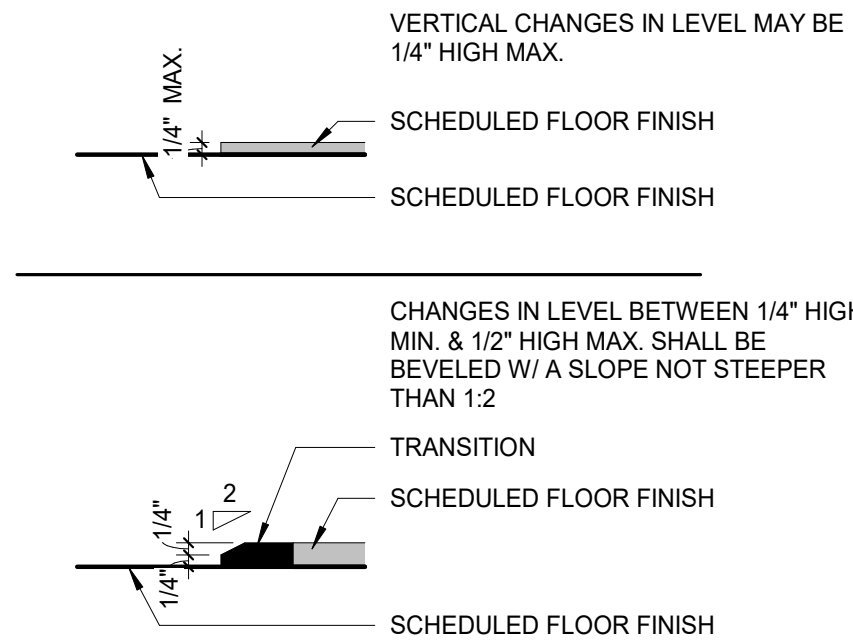
A3 WINDOW HEAD - BRICK
3" = 1'-0"



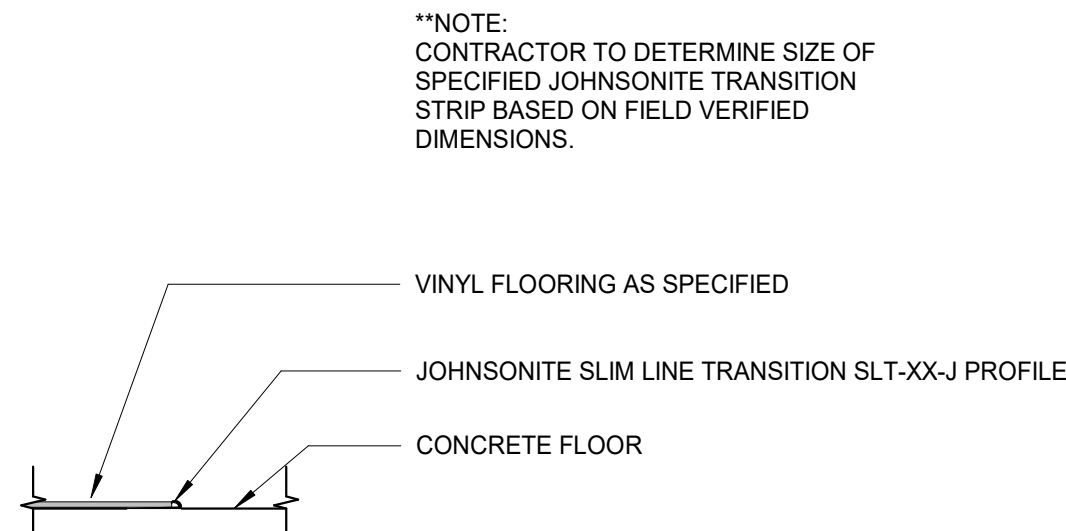
A2 WINDOW JAMB - BRICK
3" = 1'-0"



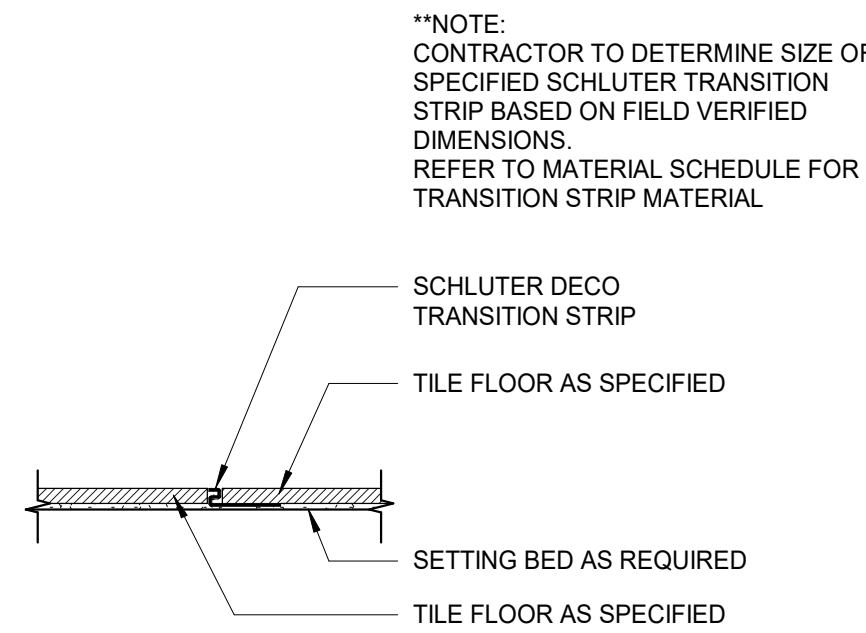
A1 WINDOW SILL - BRICK
3" = 1'-0"



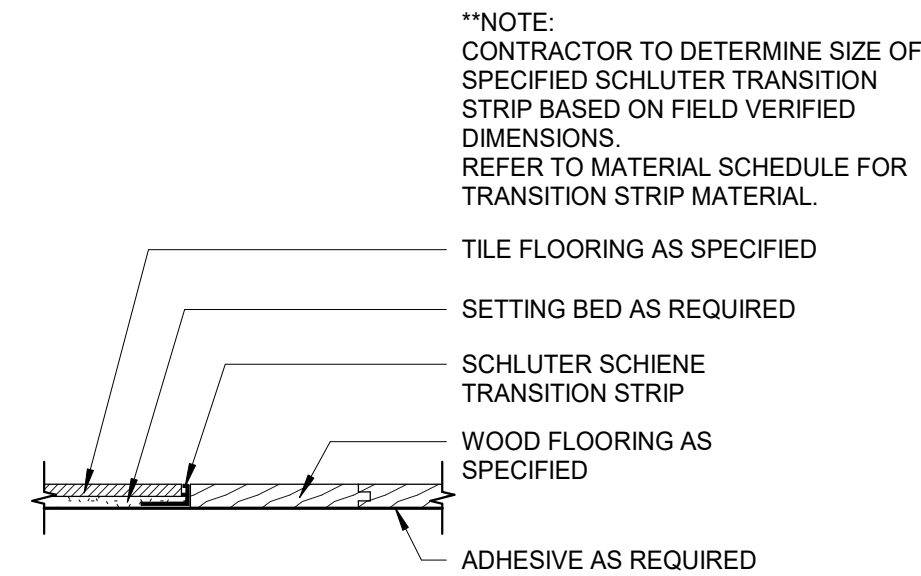
D4 FLOOR FINISH TRANSITION-CHANGE IN LEVEL
SCALE: 3" = 1'-0"



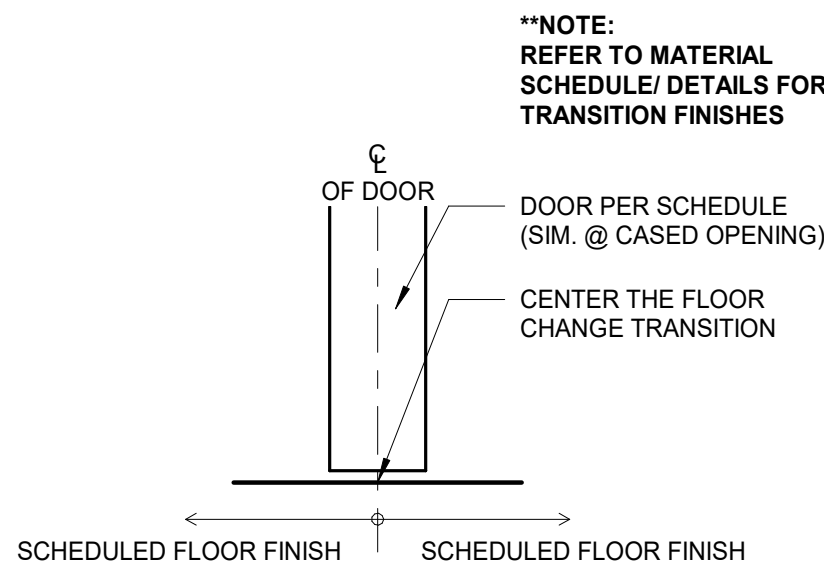
C4 VINYL / CONCRETE TRANSITION
SCALE: 3" = 1'-0"



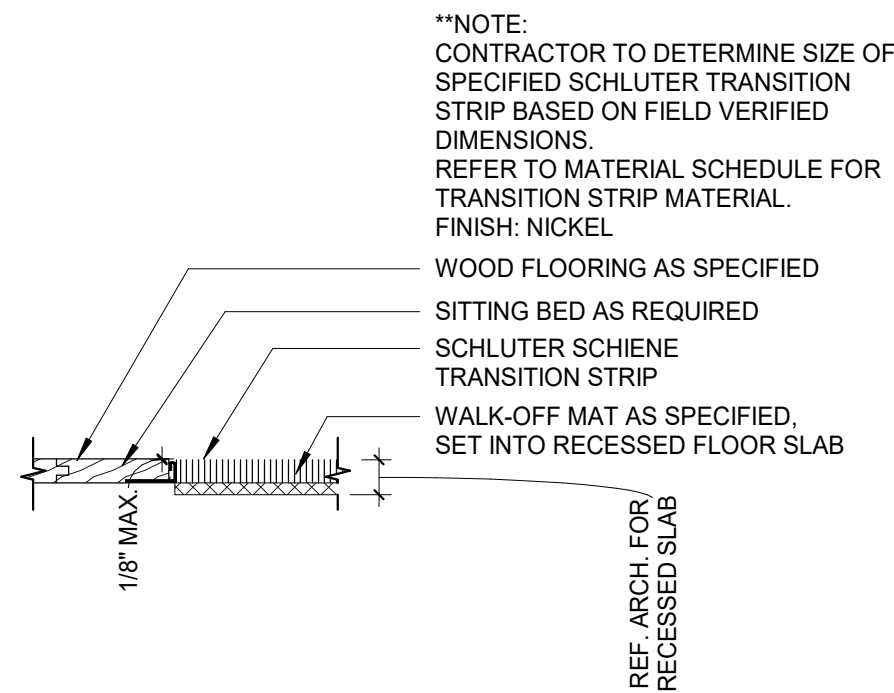
B4 TILE / TILE TRANSITION
SCALE: 3" = 1'-0"



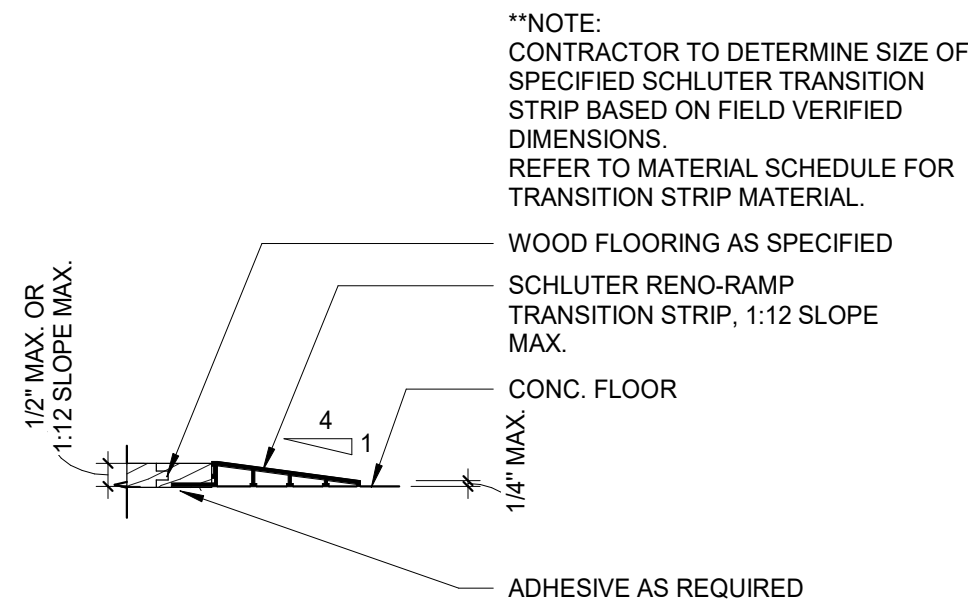
A4 TILE / WOOD TRANSITION
SCALE: 3" = 1'-0"



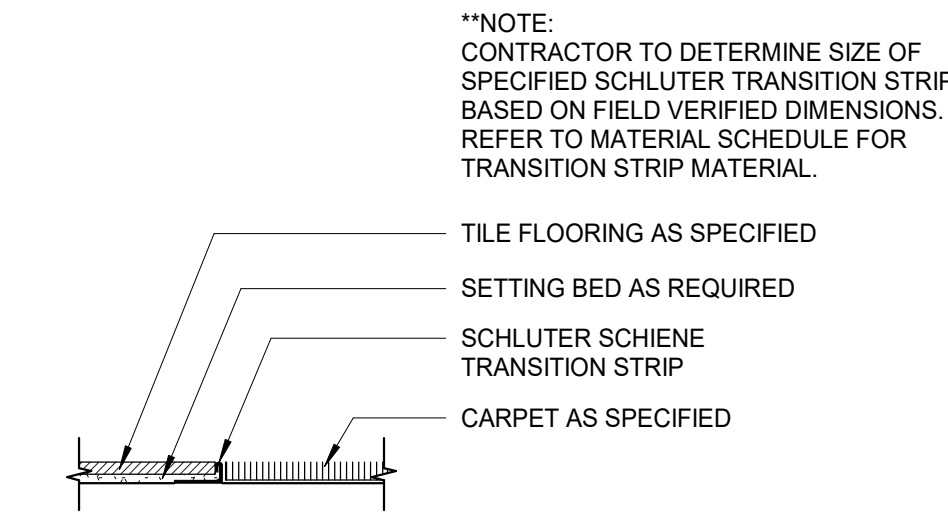
D3 FLOOR FINISH TRANSITION LOCATION
SCALE: 3" = 1'-0"



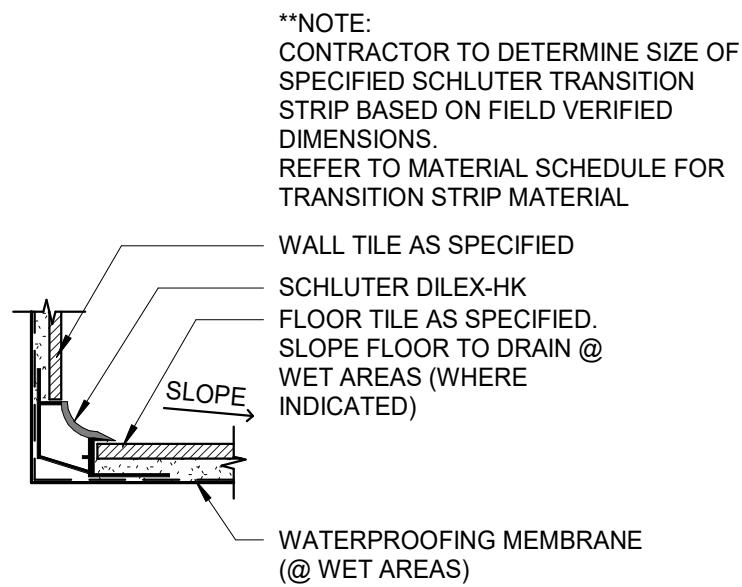
C3 WOOD / WALK-OFF MAT TRANSITION
SCALE: 3" = 1'-0"



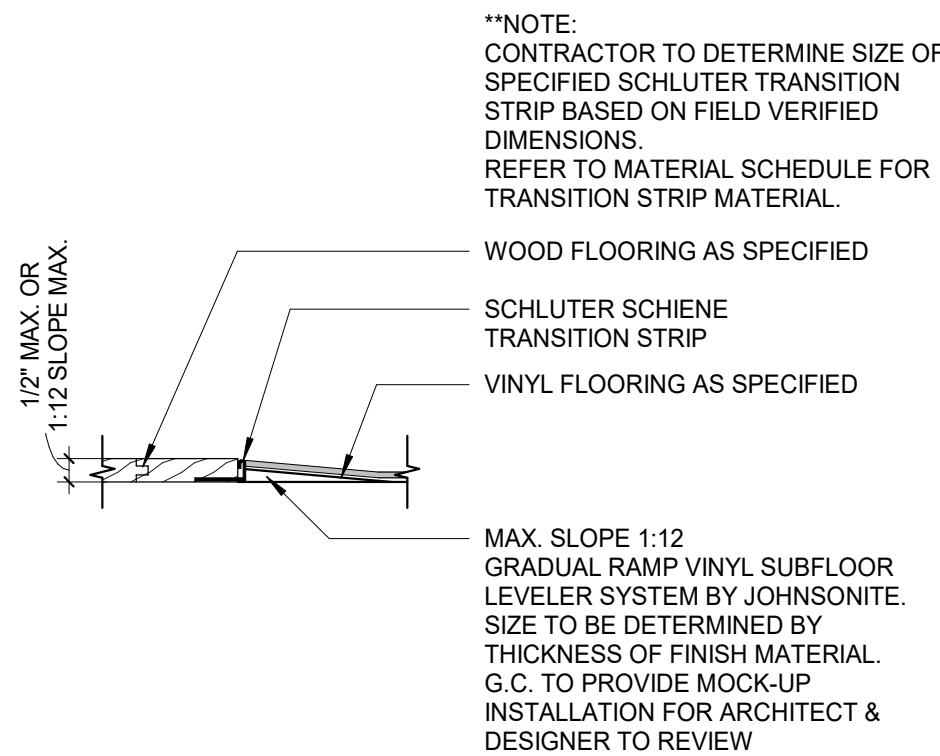
B3 WOOD / CONC. TRANSITION
SCALE: 3" = 1'-0"



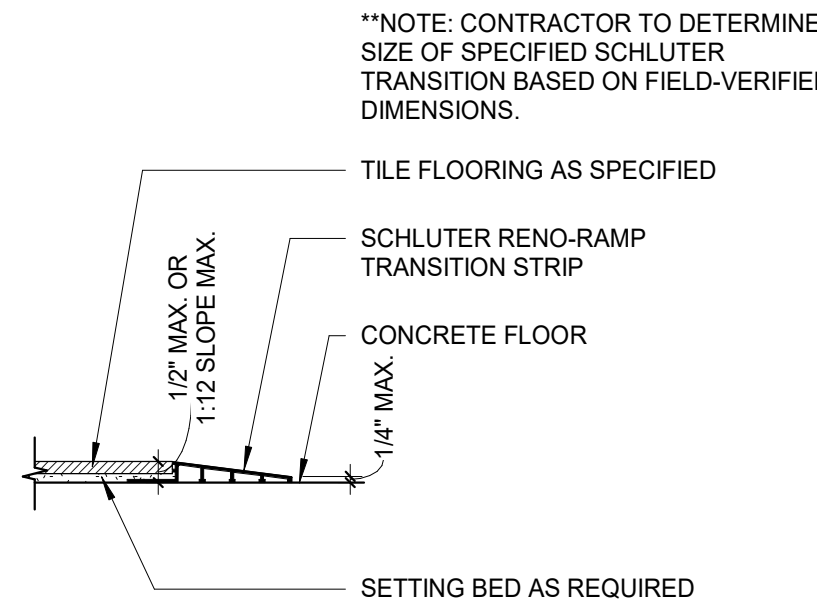
A3 TILE / CARPET TRANSITION
SCALE: 3" = 1'-0"



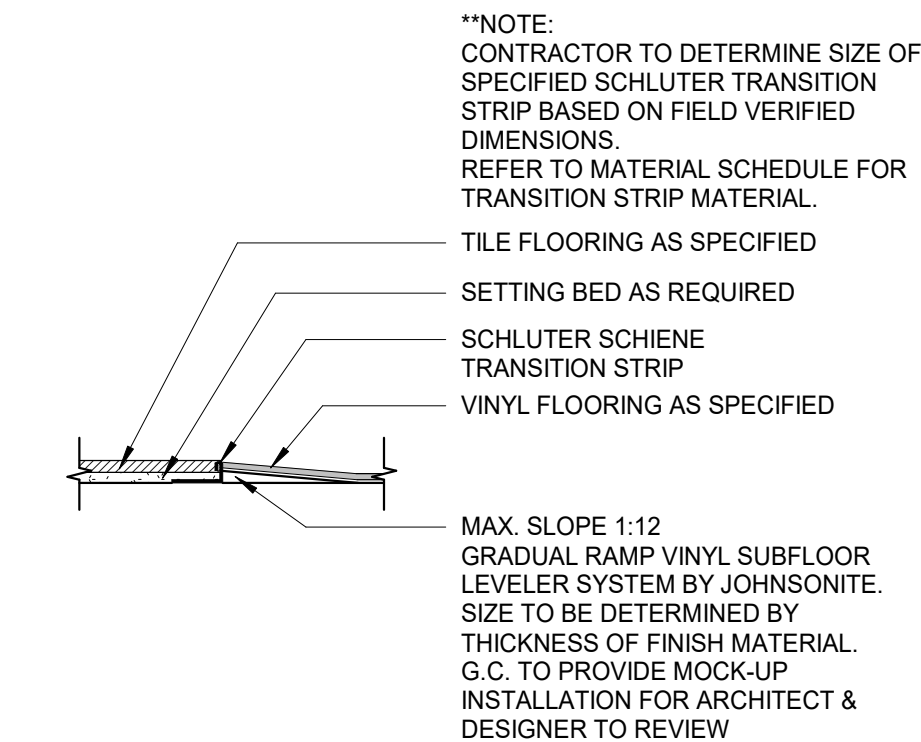
D2 FLOOR TILE TO WALL TILE TRANSITION
SCALE: 3" = 1'-0"



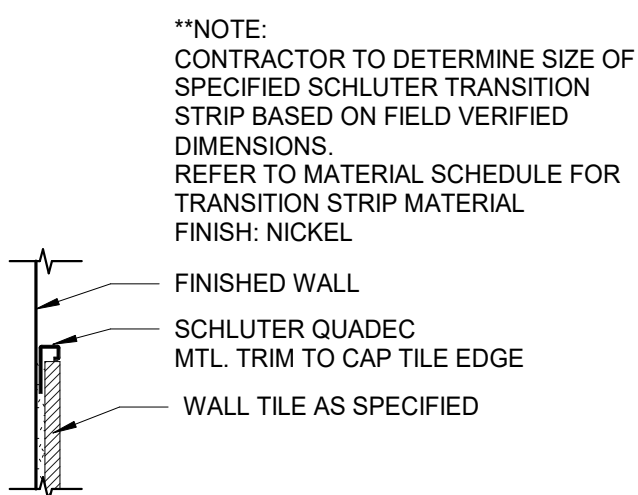
C2 WOOD / VINYL TRANSITION
SCALE: 3" = 1'-0"



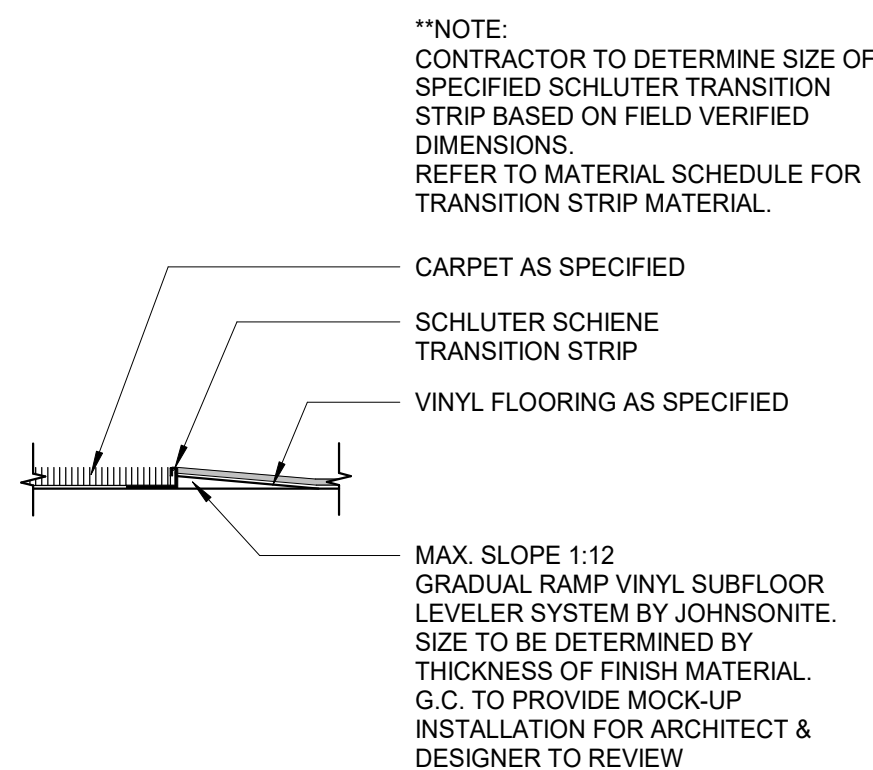
B2 TILE / CONC. TRANSITION
SCALE: 3" = 1'-0"



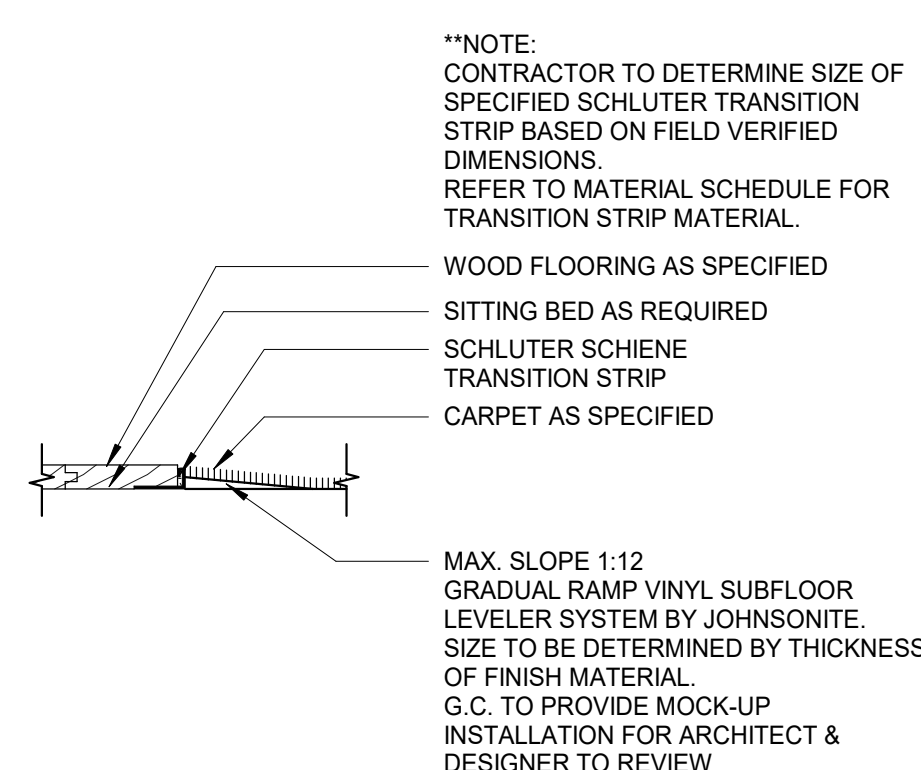
A2 TILE / VINYL TRANSITION
SCALE: 3" = 1'-0"



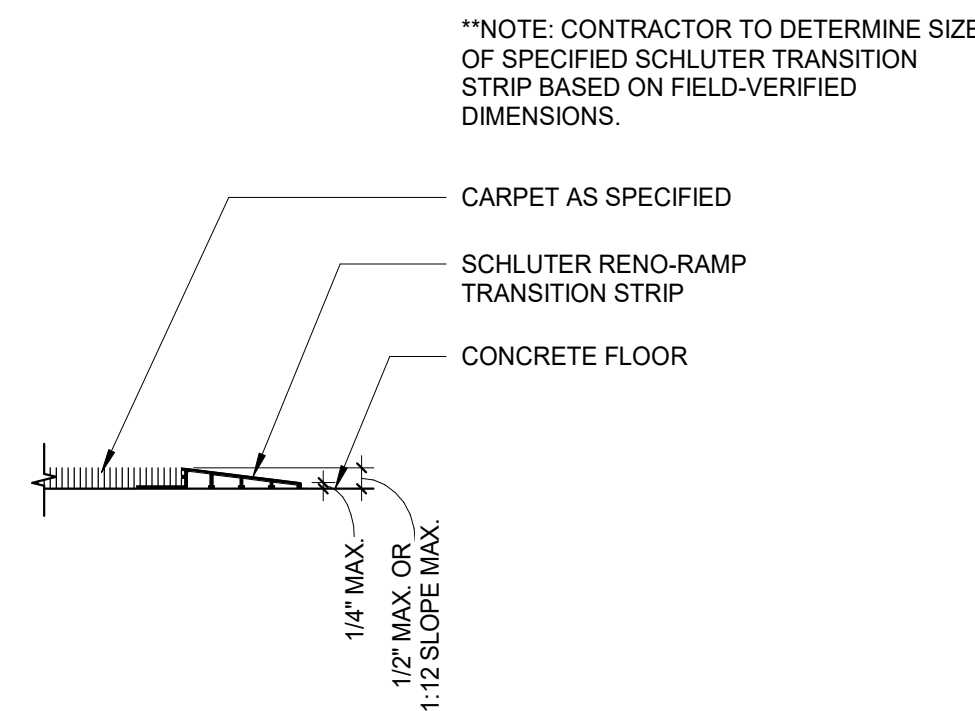
D1 WALL TILE EDGE AT BASE (VERT. & HORIZ.)
SCALE: 3" = 1'-0"



C1 CARPET / VINYL TRANSITION
SCALE: 3" = 1'-0"



B1 WOOD / CARPET TRANSITION
SCALE: 3" = 1'-0"



A1 CARPET / CONC. TRANSITION
SCALE: 3" = 1'-0"

REFERENCE G-003 FOR GENERAL NOTES

FINISH LEGEND

	VINYL PLANK FLOORING
	CARPET TILE 1
	CARPET TILE 2
	WALK OFF MAT

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REVISIONS:

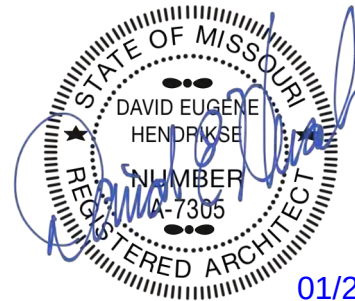
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01/25/24

THE VILLAGE AT DISCOVERY -
LOT 4

LEE'S SUMMIT, MO

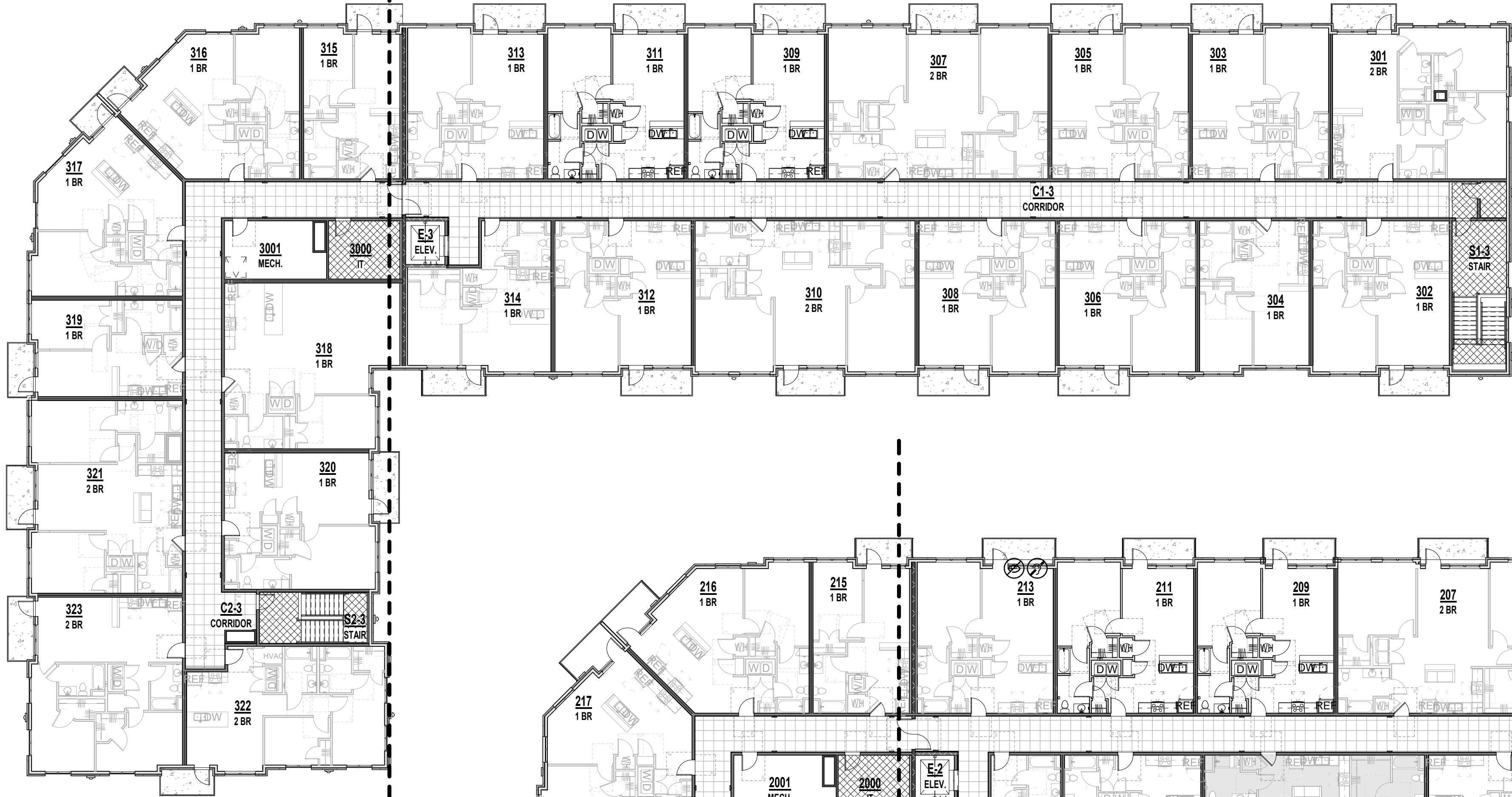
SHEET TITLE
FIRST & SECOND FLOOR FINISH
PLAN

PROJECT NUMBER: 23099

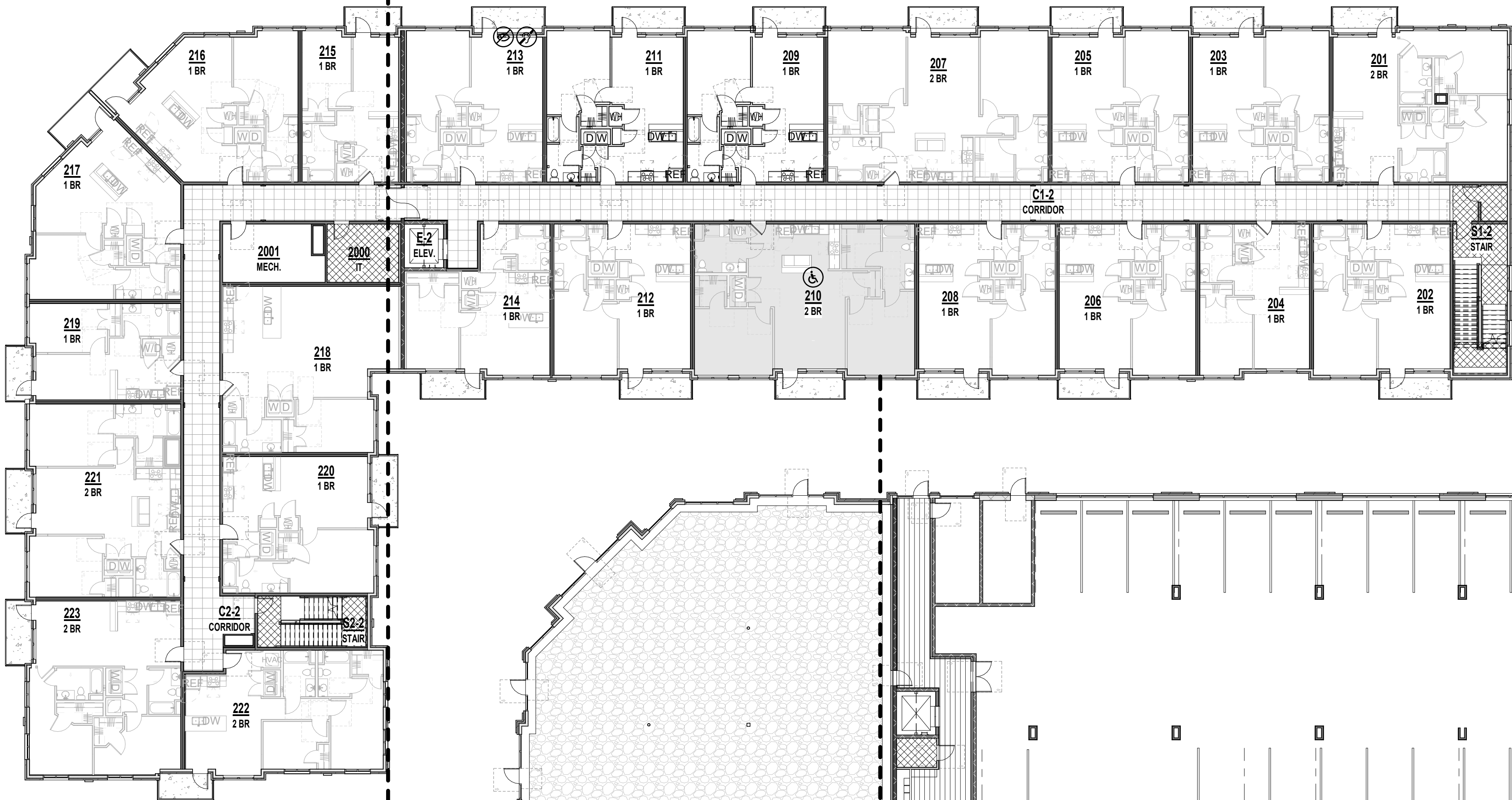
SHEET NUMBER:

A-711

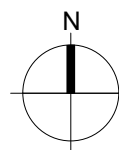
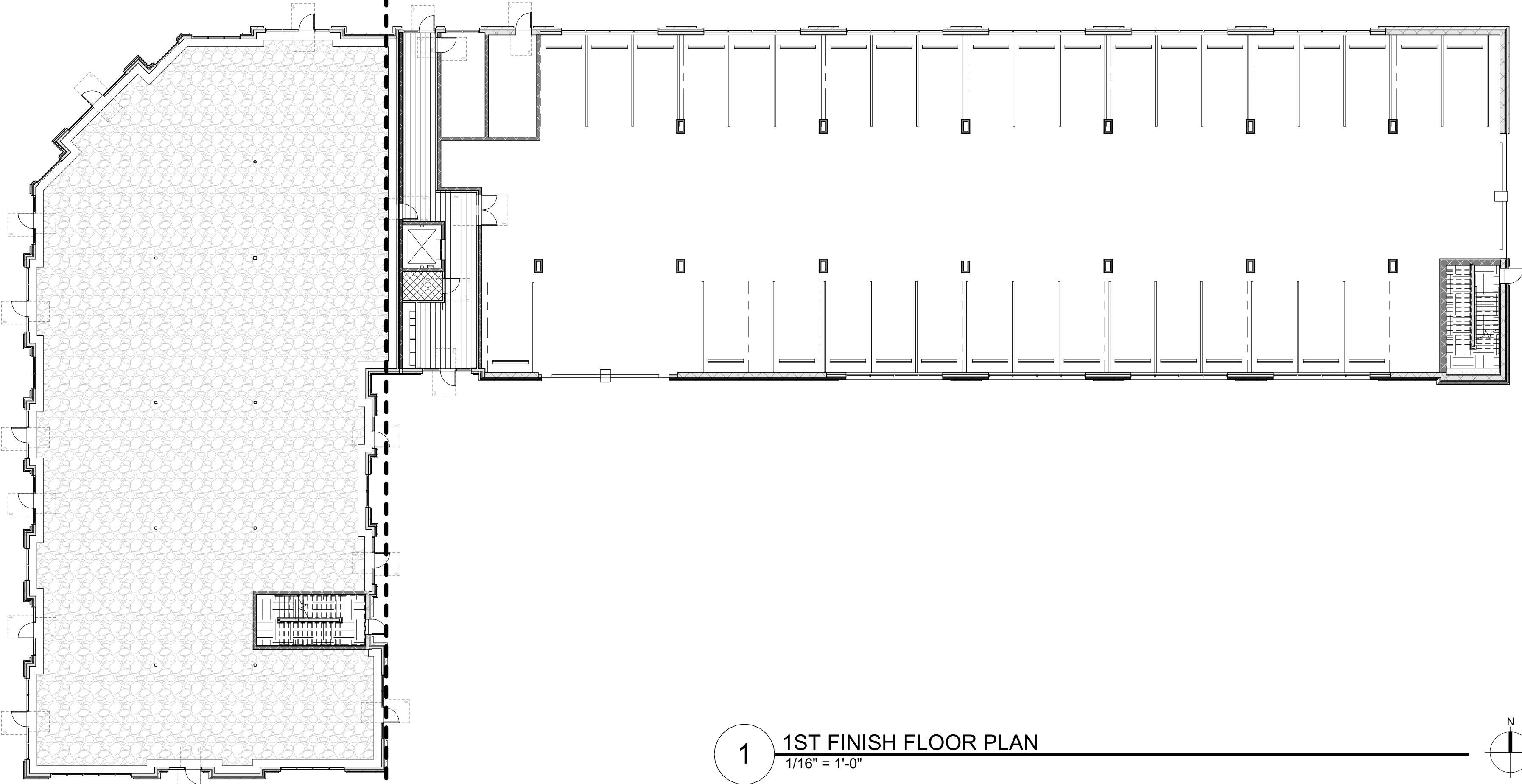
3 THIRD FLOOR PLAN
1/16" = 1'-0"



2 SECOND FLOOR PLAN
1/16" = 1'-0"



1 1ST FINISH FLOOR PLAN
1/16" = 1'-0"



Mechanical - Electrical - Plumbing Design Drawings for

The Village at Discovery - Lot 4

1921 Northeast Discovery Avenue
Lee's Summit, Jackson County, MO

GENERAL MEP SPECIFICATIONS

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW AND UNDERSTAND ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENTS. EACH CONTRACTOR IS RESPONSIBLE FOR ALL WORK ASSOCIATED WITH HIS TRADE REGARDLESS OF WHERE THE WORK IS DEPICTED IN THE DRAWINGS OR SPECIFICATIONS.
- THE LAYOUT OF SYSTEMS SHOWN ON PLANS ARE APPROXIMATE AND WILL NEED TO BE COORDINATED IN FIELD. THE CONTRACTOR SHALL INCLUDE THIS COORDINATION IN HIS SCOPE AND INCLUDE ALL COSTS OF MODIFYING THE LAYOUT AS REQUIRED IN HIS BID.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY PARTS AND LABOR TO PRODUCE A COMPLETE AND FULLY OPERATIONAL SYSTEM UNLESS STATED OTHERWISE ON PLANS.
- ALL MATERIALS TO BE NEW, FIRST CLASS, AND INSTALLED PER MANUFACTURE'S PUBLISHED INSTRUCTIONS.
- ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH LOCALLY ADOPTED CODES AND ORDINANCES.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATING EQUIPMENT LOCATIONS AND SYSTEM ROUTING WITH OTHER TRADES PRIOR TO INSTALLATION.
- CONTRACTOR TO GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE THE PROJECT IS TURN OVER TO THE OWNER, UNLESS NOTED OTHERWISE.
- CONTRACTOR IS TO INCLUDE IN THEIR SCOPE THE COST OF ALL PERMITS, INSPECTIONS, METERING, AND TAPS ASSOCIATED WITH THEIR WORK.
- CONTRACTOR IS RESPONSIBLE FOR ALL EXCAVATION, CUTTING, CORING, PATCHING, AND BACKFILL REQUIRED TO COMPLETE THEIR WORK, UNLESS NOTED OTHERWISE.
- THESE PLANS ARE NOT TO BE SCALED. SEE ARCHITECTURAL PLANS FOR DIMENSIONS. WHERE THERE IS A CONFLICT BETWEEN ARCHITECTURAL DIMENSIONS AND MEP DIMENSION, ARCHITECTURAL SHALL GOVERN.
- SEE DISCIPLINE SHEETS FOR ADDITIONAL DISCIPLINE SPECIFIC SPECIFICATIONS.

REFERENCED CODES IN EFFECT

2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL FUEL GAS CODE
2018 INTERNATIONAL FIRE CODE
2017 NATIONAL ELECTRIC CODE

DEFERRED SUBMITTAL NOTES

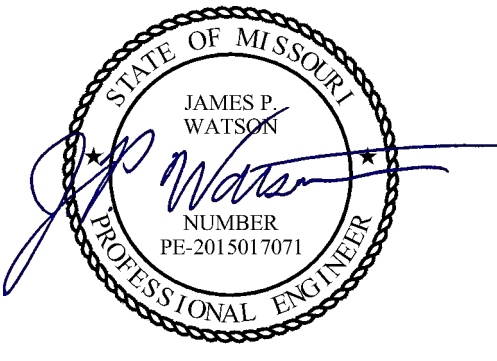
- FIRE ALARM CONTRACTOR TO PROVIDE DEFERRED SUBMITTAL FOR FIRE ALARM SYSTEM. SUBMITTAL TO INCLUDE BATTERY CALCULATION, VOLTAGE DROP CALCULATIONS, AND DEVICE CUT SHEETS FOR DEVICES AND PANELS.
- FIRE SPRINKLER CONTRACTOR TO PROVIDE DEFERRED SUBMITTAL FOR FIRE SPRINKLER SYSTEM. SUBMITTAL TO INCLUDE HYDRAULIC CALCULATIONS AND SPRINKLER DRAWINGS SEALED BY A QUALIFIED DESIGN PROFESSIONAL LICENSED BY THE STATE.

SHEET LIST TABLE

SHEET #	SHEET TITLE
MEP1	MECHANICAL ELECTRICAL PLUMBING COVER SHEET
MEP2	SITE UTILITIES PLAN
MEP3	SITE LIGHTING PLAN
MEP4	ROOF MEP PLAN
M101	HVAC PLAN - FIRST FLOOR - AREA A
M102	HVAC PLAN - SECOND FLOOR - AREA A
M103	HVAC PLAN - THIRD FLOOR - AREA A
M111	HVAC PLAN - FIRST FLOOR - AREA B
M112	HVAC PLAN - SECOND FLOOR - AREA B
M113	HVAC PLAN - THIRD FLOOR - AREA B
M501	HVAC DETAILS & SCHEDULES
EP101	POWER PLAN - FIRST FLOOR - AREA A
EP102	POWER PLAN - SECOND FLOOR - AREA A
EP103	POWER PLAN - THIRD FLOOR - AREA A
EP111	POWER PLAN - FIRST FLOOR - AREA B
EP112	POWER PLAN - SECOND FLOOR - AREA B
EP113	POWER PLAN - THIRD FLOOR - AREA B
EL101	LIGHTING PLAN - FIRST FLOOR - AREA A
EL102	LIGHTING PLAN - SECOND FLOOR - AREA A
EL103	LIGHTING PLAN - THIRD FLOOR - AREA A
EL111	LIGHTING PLAN - FIRST FLOOR - AREA B
EL112	LIGHTING PLAN - SECOND FLOOR - AREA B
EL113	LIGHTING PLAN - THIRD FLOOR - AREA B
E501	ELECTRICAL DETAILS
E601	ELECTRICAL SCHEDULES AND SPECIFICATION
FS101	FIRE ALARM & SECURITY PLAN - FIRST FLOOR - AREA A
FS102	FIRE ALARM & SECURITY PLAN - SECOND FLOOR - AREA A
FS103	FIRE ALARM & SECURITY PLAN - THIRD FLOOR - AREA A
FS111	FIRE ALARM & SECURITY PLAN - FIRST FLOOR - AREA B
FS112	FIRE ALARM & SECURITY PLAN - SECOND FLOOR - AREA B
FS113	FIRE ALARM & SECURITY PLAN - THIRD FLOOR - AREA B
PS101	SANITARY SEWER PLAN - FIRST FLOOR - AREA A
PS102	SANITARY SEWER PLAN - SECOND FLOOR - AREA A
PS103	SANITARY SEWER PLAN - THIRD FLOOR - AREA A

SHEET LIST TABLE

SHEET #	SHEET TITLE
PS111	SANITARY SEWER PLAN - FIRST FLOOR - AREA B
PS112	SANITARY SEWER PLAN - SECOND FLOOR - AREA B
PS113	SANITARY SEWER PLAN - THRID FLOOR - AREA B
PW101	WATER PLAN - FIRST FLOOR - AREA A
PW102	WATER PLAN - SECOND FLOOR - AREA A
PW103	WATER PLAN - THIRD FLOOR - AREA A
PW111	WATER PLAN - FIRST FLOOR - AREA B
PW112	WATER PLAN - SECOND FLOOR - AREA B
PW113	WATER PLAN - THIRD FLOOR - AREA B
P501	PLUMBING DETAILS & SCHEDULES
UMEP1.1	UNIT TYPE ARA MEP PLAN
UMEP1.2	UNIT TYPE ARA-ALT MEP PLAN
UMEP1.3	UNIT TYPE ARA-CORNER MEP PLAN
UMEP1.4	UNIT TYPE ADRIAN MEP PLAN
UMEP1.5	UNIT TYPE ADRIAN-ALT MEP PLAN
UMEP1.6	UNIT TYPE ADRIAN-CORNER MEP PLAN
UMEP1.7	UNIT TYPE DELTA MEP PLAN
UMEP2.1.1	UNIT TYPE ABERDEEN-A HVAC & WATER PLAN
UMEP2.1.2	UNIT TYPE ABERDEEN-A POWER & LIGHTING PLAN
UMEP2.2.1	UNIT TYPE ABERDEEN-B HVAC & WATER PLAN
UMEP2.2.2	UNIT TYPE ABERDEEN-B POWER & LIGHTING PLAN
UMEP2.3.1	UNIT TYPE ABERDEEN-ALT HVAC & WATER PLAN
UMEP2.3.2	UNIT TYPE ABERDEEN-ALT POWER & LIGHTING PLAN
UMEP2.4.1	UNIT TYPE HURLEY HVAC & WATER PLAN
UMEP2.4.2	UNIT TYPE HURLEY POWER & LIGHTING PLAN
UMEP2.5.1	UNIT TYPE LANA HVAC & WATER PLAN
UMEP2.5.2	UNIT TYPE LANA POWER & LIGHTING PLAN



James Watson, P.E. January 25, 2024
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J2 PROJECT No:	J21007
J2 DESIGN:	JAP
ISSUE TITLE	DATE
CITY SUBMITTAL	01 / 25 / 2024

Mechanical - Electrical - Plumbing Design Drawings for

The Village at Discovery - Lot 4

Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

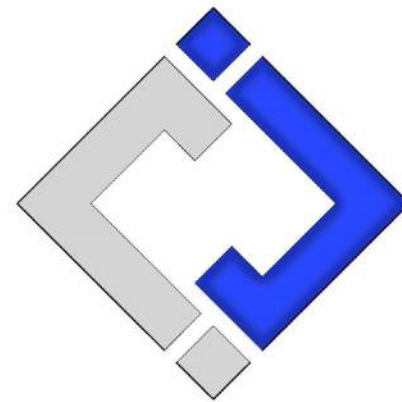
MECHANICAL
ELECTRICAL
PLUMBING
COVER SHEET

SHEET NUMBER

MEP1



James Watson, P.E. October 30, 2024
PE-2015017071
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REVISION 2 10 / 30 / 2024

Mechanical - Electrical - Plumbing Design Drawings for

The Village at Discovery - Lot 4

Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

**SITE UTILITIES
PLAN**

SHEET NUMBER

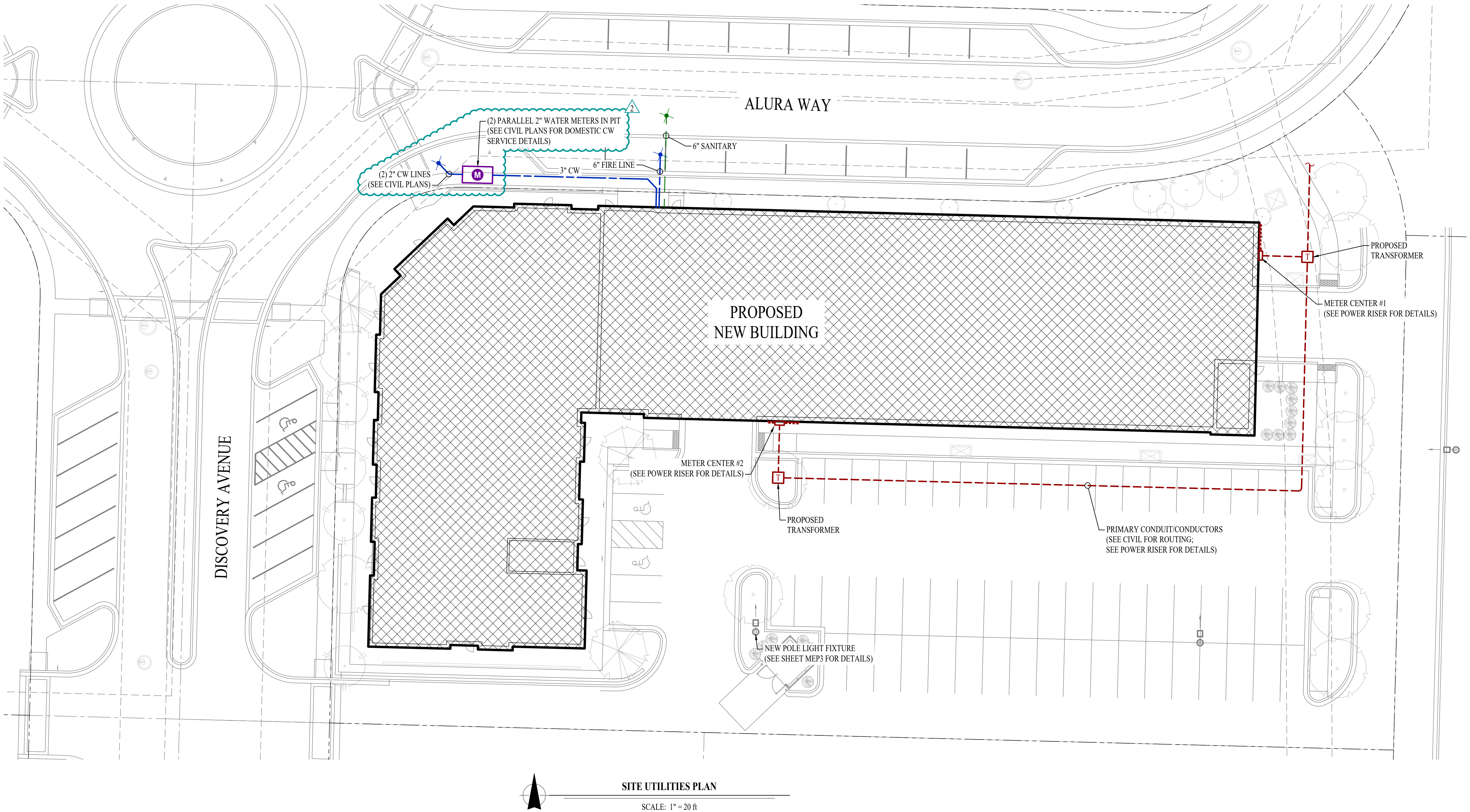
MEP2

SITE UTILITIES PLAN SYMBOL LEGEND

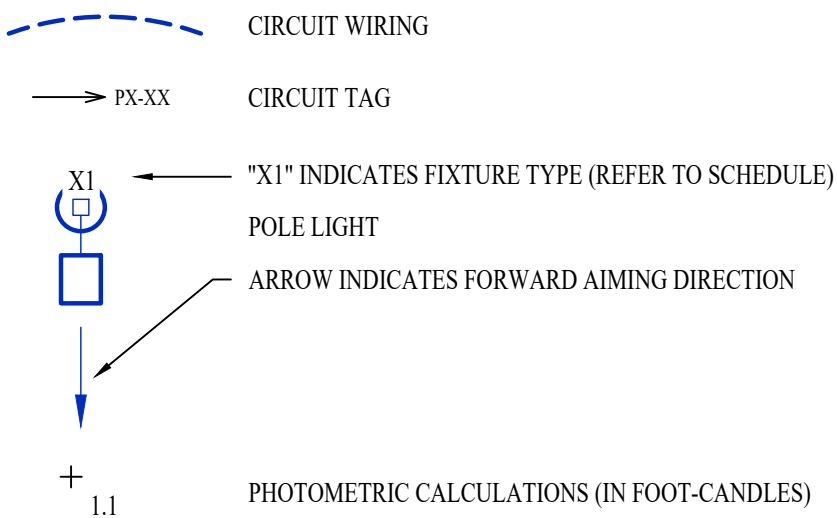
- SANITARY SEWER PIPING
- COLD WATER LINE
- WATER METER
- VALVE
- GAS LINE
- GAS METER
- TIE INTO EXISTING
- ELECTRIC

SITE UTILITIES PLAN GENERAL NOTES:

- REFER TO CIVIL PLANS FOR EXACT UTILITY LOCATIONS, CONNECTIONS, DETAILS, ETC.
- COORDINATE EXACT LOCATIONS OF ALL ELECTRICAL CONDUITS & EQUIPMENT WITH EVERGY.



SITE LIGHTING PLAN SYMBOL LEGEND



SITE LIGHTING PLAN GENERAL NOTES:

- SITE PHOTOMETRIC VALUES SHOWN HAVE BEEN CALCULATED PER SPECIFIED LIGHT FIXTURES AT INDICATED MOUNTING HEIGHTS. ANY CHANGES OR ALTERATIONS TO LIGHTING LAYOUT SHOWN WILL REQUIRE RECALCULATING SITE PHOTOMETRICS AND WILL THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR / EQUIPMENT SUPPLIER.
- PHOTOMETRIC CALCULATIONS SHOWN DO NOT INCLUDE EXISTING LIGHT FIXTURE(S), ONLY NEW POLE LIGHT FIXTURE(S) SHOWN.

SITE LIGHTING PLAN KEY NOTES:

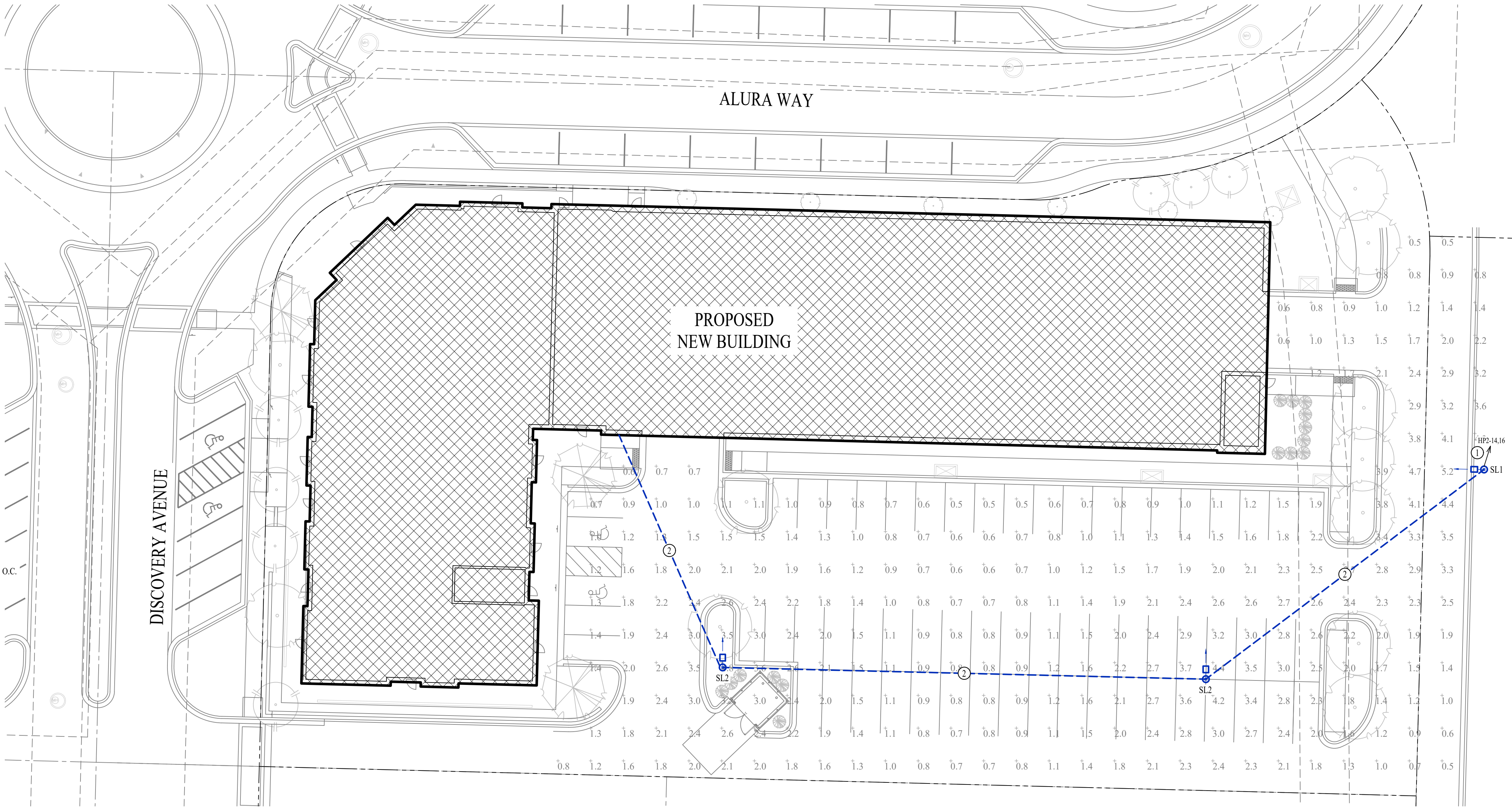
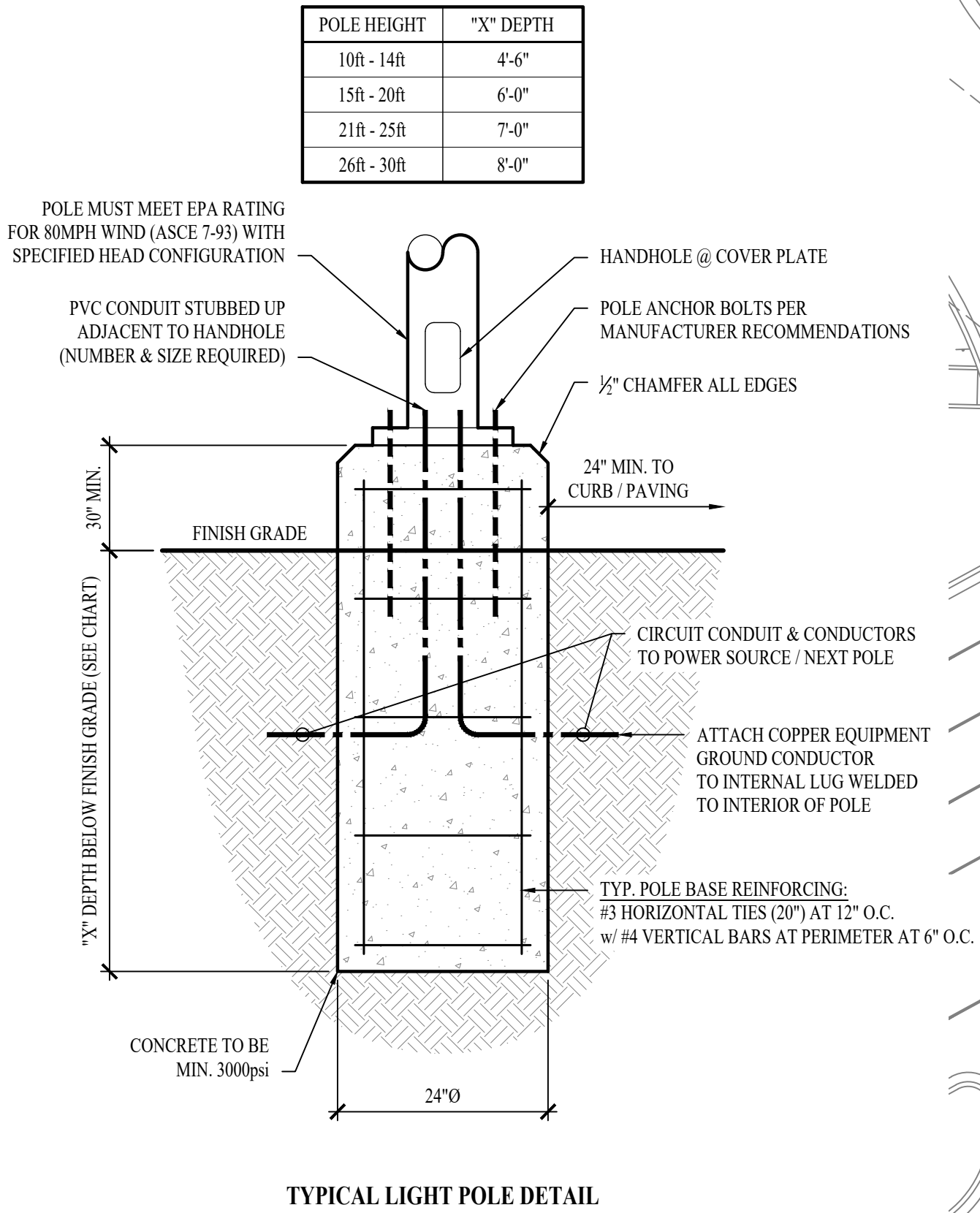
- WIRE THRU 'LCPI' RELAYS #1 & #2
- 1" CONDUIT WITH (2) #10 CU. & (1) #10 CU. EQ. GRD.

SITE LIGHTING FIXTURE SCHEDULE

TAG	MANUFACTURER (OR EQUAL)	MODEL NUMBER (OR EQUAL)	DESCRIPTION	MOUNTING	LUMEN OUTPUT	CCT (°K)	CRI	VOLTS	WATTS	NOTES
SL1	LUMARK	PRV-XL-PA3B-740-U-T4W-HSS	LED SITE LUMINAIRE	20' #SSS POLE ON 30" BASE	30,161	4000	70	208	234	SEE POLE BASE DETAIL
SL2	LUMARK	PRV-XL-PA3B-740-U-5WQ	LED SITE LUMINAIRE	20' #SSS POLE ON 30" BASE	31,559	4000	70	208	234	SEE POLE BASE DETAIL

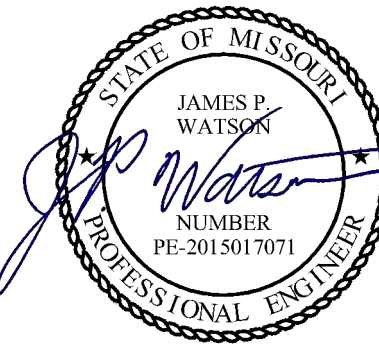
NOTES:

- LIGHT FIXTURES PROVIDED BY OWNER THRU NATIONAL ACCOUNT AND INSTALLED BY ELECTRICAL CONTRACTOR.
- ALL FIXTURE QUANTITIES TO BE VERIFIED BY ELECTRICAL CONTRACTOR PRIOR TO ORDERING.
- CONTACT JUSTIN HATHFIELD (573) 289-0880 (JHATHFIELD@LAJWELINEI) OR PAUL WARNER (314) 531-3500 (PWARNER@LAJWELINEI) AT LIGHTING ASSOCIATES FOR NATIONAL ACCOUNT DETAILS.
- CONTACT TRAVIS VOGT (417) 621-5210 (TVOGT@CED1135.COM) AT CED-PHILLIPS & COMPANY FOR NATIONAL ACCOUNT DETAILS.



SITE LIGHTING PLAN

SCALE: 1" = 20 ft



James Watson, P.E. January 25, 2024
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CITY SUBMITTAL 01 / 25 / 2024

Mechanical - Electrical - Plumbing Design Drawings for

The Village at Discovery - Lot 4

Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

SITE LIGHTING
PLAN

SHEET NUMBER

MEP3



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ROOF MEP PLAN SYMBOL LEGEND

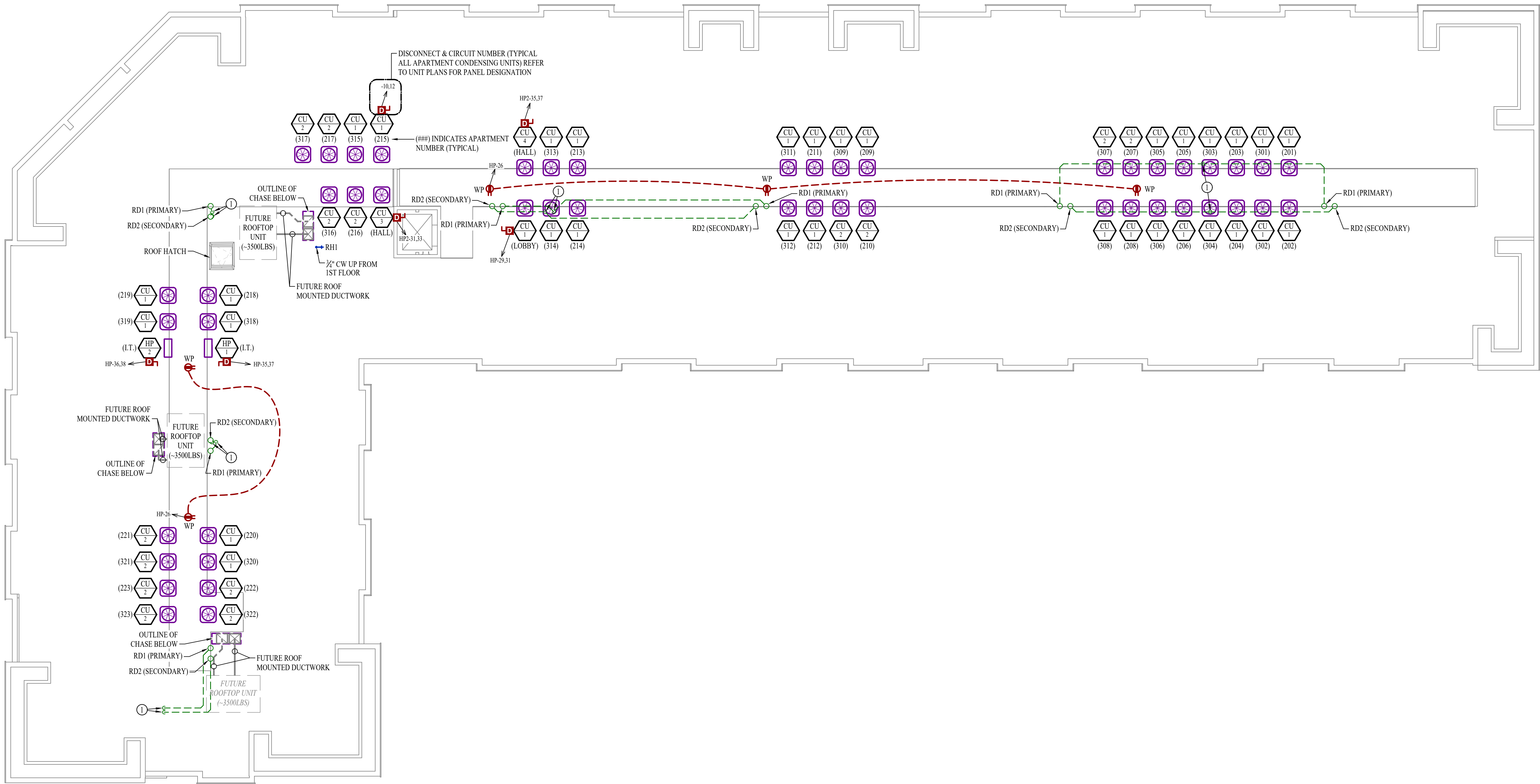
- CIRCUIT WIRING
- CIRCUIT TAG
- JUNCTION BOX
- RECEPTACLE
- INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
- "WP" = WEATHERPROOF OUTDOOR RECEPTACLE
- "AW" = ABOVE WINDOW RECEPTACLE
- "AC" = ABOVE CEILING RECEPTACLE
- "EX" = EXISTING RECEPTACLE TO REMAIN
- GFCI DUPLEX CONVENIENCE RECEPTACLE
- DISCONNECT
- CONDENSING UNIT
- STORM DRAIN PIPING

ROOF MEP PLAN GENERAL NOTES:

- REFER TO TRADE SPECIFIC SHEETS FOR ADDITIONAL INFORMATION.

ROOF MEP PLAN KEY NOTES:

- 6" PRIMARY & 6" SECONDARY STORM DRAIN DOWN TO LEVEL BELOW.



ROOF MEP PLAN

SCALE: 3/32" = 1'-0"

Mechanical - Electrical - Plumbing Design Drawings for
The Village at Discovery - Lot 4

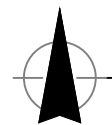
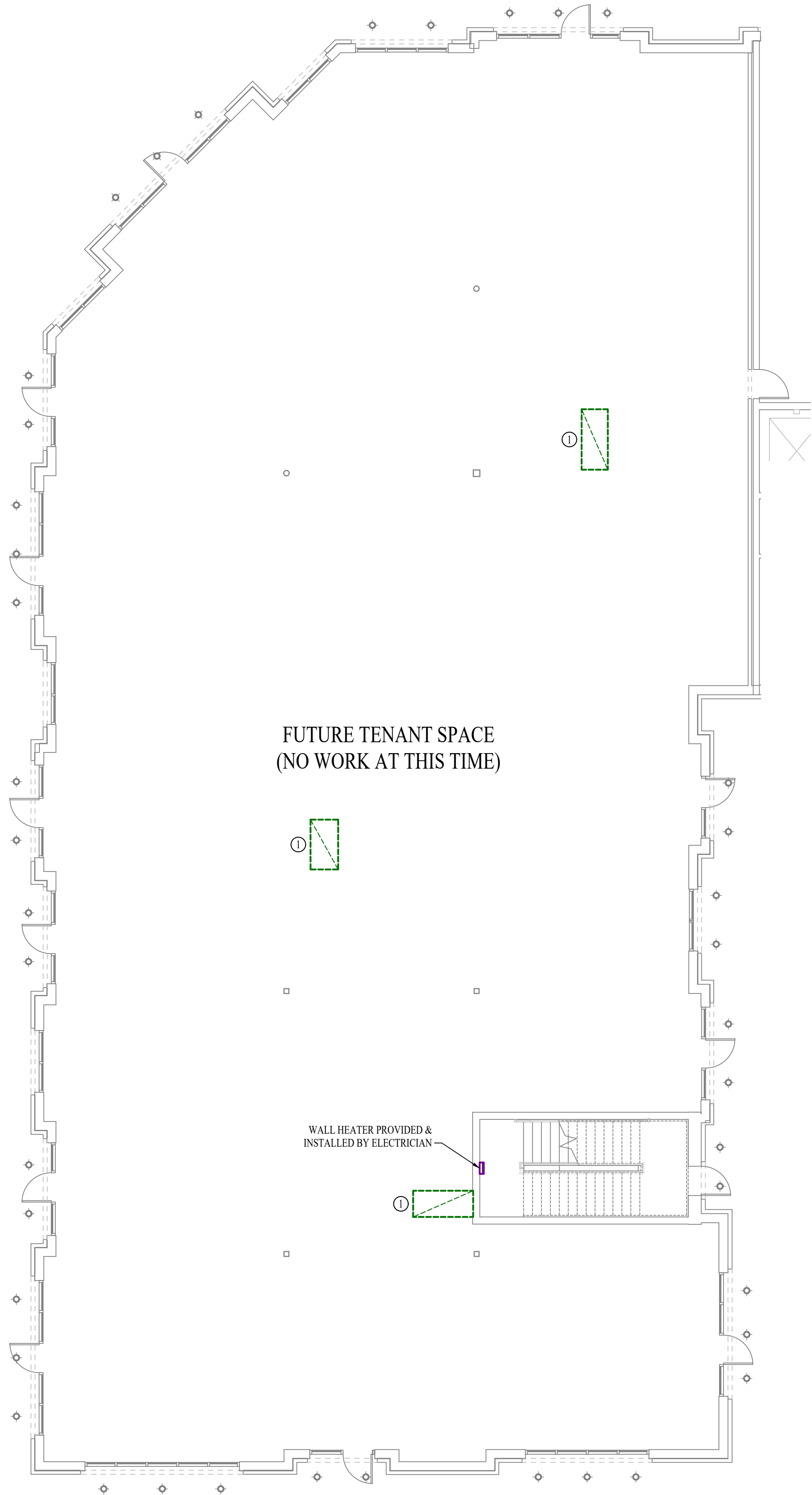
Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

ROOF MEP PLAN

SHEET NUMBER

MEP4



HVAC PLAN - FIRST FLOOR - AREA A

SCALE: 1/8" = 1'-0"

HVAC PLAN SYMBOL LEGEND

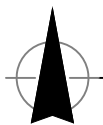
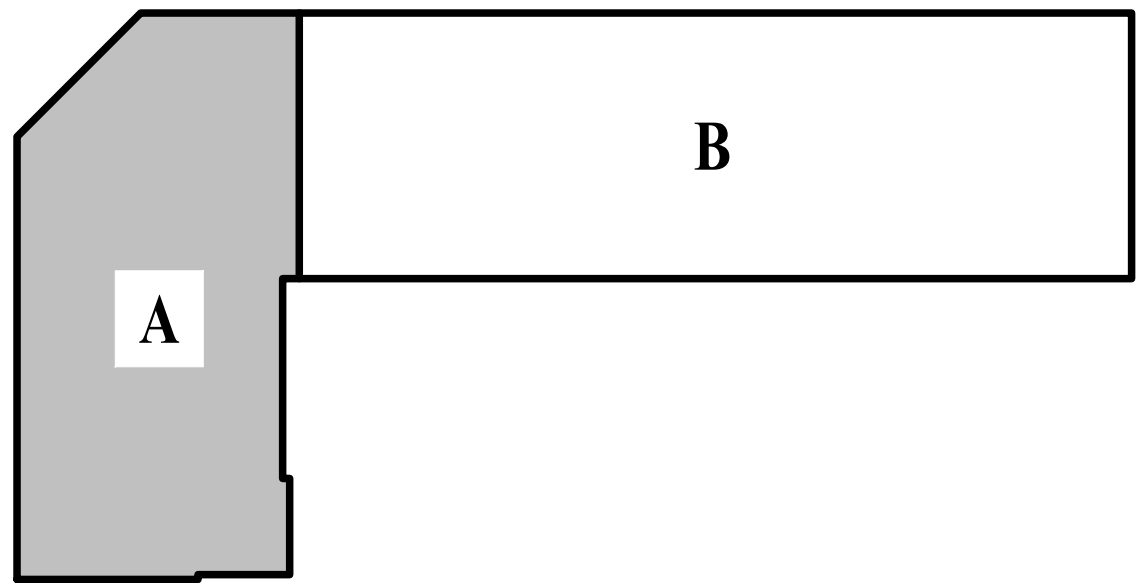
- EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)
- EQUIPMENT REFERENCE NUMBER
- DIFFUSER/GRILLE TYPE (REFER TO SCHEDULE)
- CUBIC FEET PER MINUTE (CFM) / FACE SIZE
- SUPPLY DUCTWORK
- RETURN DUCTWORK
- EXHAUST DUCTWORK
- OUTSIDE AIR DUCTWORK
- FLEX DUCT
- VENT / COMBUSTION AIR
- CONDENSATION LINE
- REFRIGERANT LINE
- TIE INTO EXISTING
- SUPPLY DIFFUSER (HATCH INDICATES "NO FLOW ZONE")
- RETURN DIFFUSER
- BALANCE DAMPER
- MOTORIZED DAMPER
- CEILING RADIATION DAMPER
- FIRE RATED DAMPER
- SMOKE DAMPER
- THERMOSTAT
- CO2 DETECTOR
- RETURN DUCT SMOKE DETECTOR
WIRED TO FAN STARTER TO SHUT UNIT(S) DOWN AND SEND ALARM SIGNAL
TO FIRE ALARM SYSTEM (IF PRESENT) OR TO REMOTE SOUNDER
LOCATED IN AN OCCUPIED SPACE (EQUAL TO SYSTEM SENSOR #D4120)
- REMOTE TEMPERATURE SENSOR

HVAC PLAN GENERAL NOTES:

- SEE M500 & M600 SERIES SHEETS FOR ADDITIONAL HVAC NOTES, DETAIL, AND SCHEDULES.

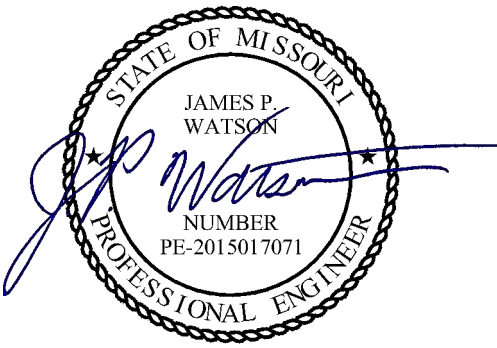
HVAC PLAN KEY NOTES:

- SHAFT TO ROOF FOR FUTURE USE.



KEY PLAN

SCALE: NTS



James Watson, P.E. January 25, 2024
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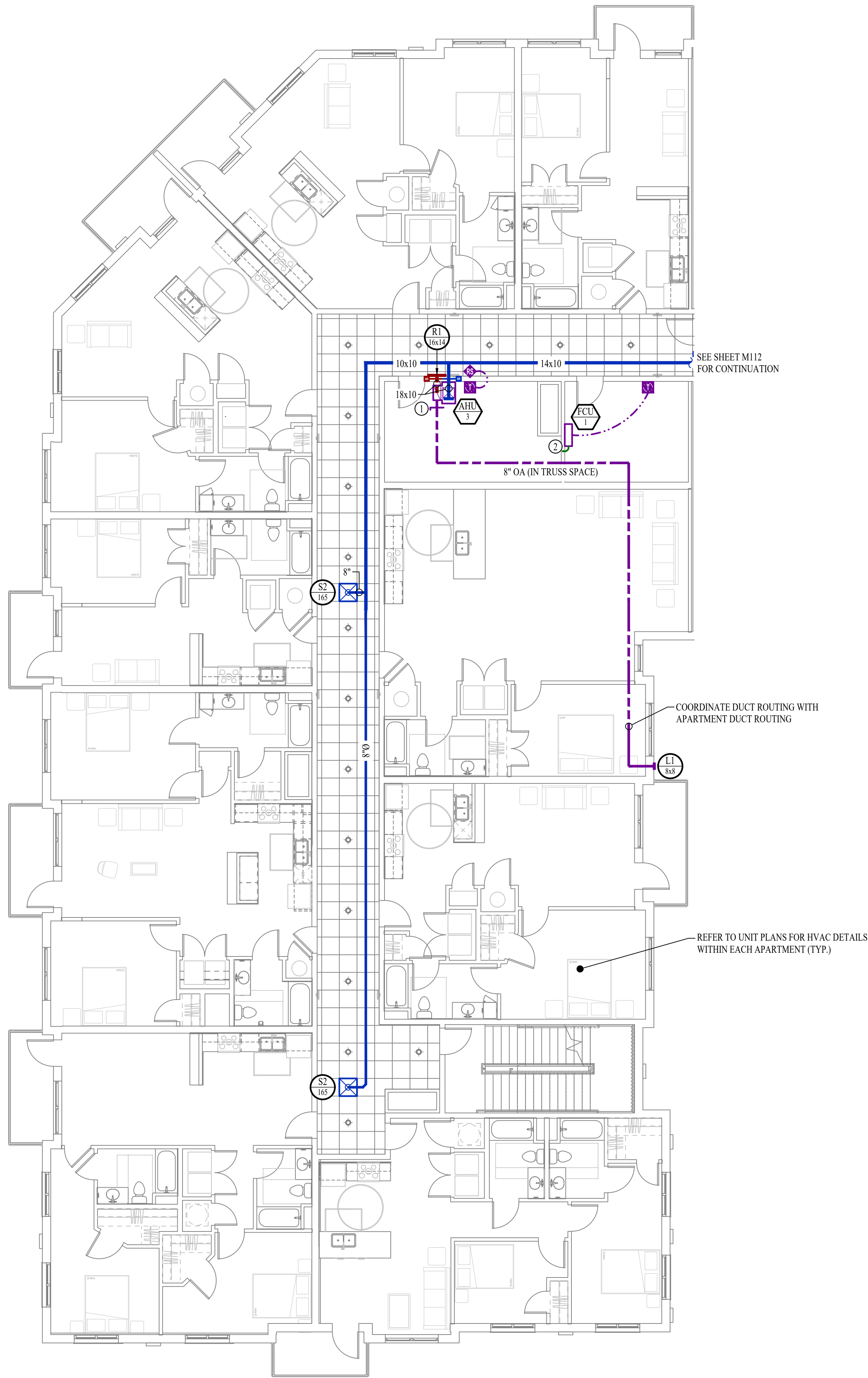
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J2 DESIGN: JAP

ISSUE TITLE DATE

CITY SUBMITTAL 01 / 25 / 2024



HVAC PLAN - SECOND FLOOR - AREA A
SCALE: 1/8" = 1'-0"

HVAC PLAN SYMBOL LEGEND

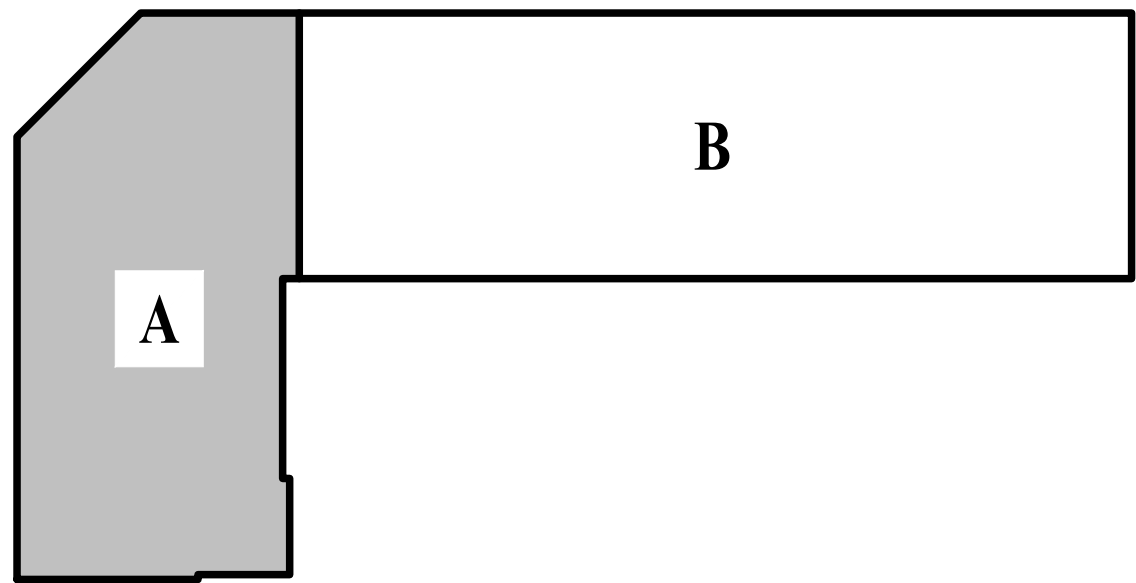
- EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)
- EQUIPMENT REFERENCE NUMBER
- DIFFUSER/GRILLE TYPE (REFER TO SCHEDULE)
- CUBIC FEET PER MINUTE (CFM) / FACE SIZE
- SUPPLY DUCTWORK
- RETURN DUCTWORK
- EXHAUST DUCTWORK
- OUTSIDE AIR DUCTWORK
- FLEX DUCT
- VENT / COMBUSTION AIR
- CONDENSATION LINE
- REFRIGERANT LINE
- TIE INTO EXISTING
- SUPPLY DIFFUSER (HATCH INDICATES "NO FLOW ZONE")
- RETURN DIFFUSER
- BALANCE DAMPER
- MOTORIZED DAMPER
- CEILING RADIATION DAMPER
- FIRE RATED DAMPER
- SMOKE DAMPER
- THERMOSTAT
- CO2 DETECTOR
- RETURN DUCT SMOKE DETECTOR
WIRED TO FAN STARTER TO SHUT UNIT(S) DOWN AND SEND ALARM SIGNAL
TO FIRE ALARM SYSTEM (IF PRESENT) OR TO REMOTE SOUNDER
LOCATED IN AN OCCUPIED SPACE (EQUAL TO SYSTEM SENSOR #D4120)
- REMOTE TEMPERATURE SENSOR

HVAC PLAN GENERAL NOTES:

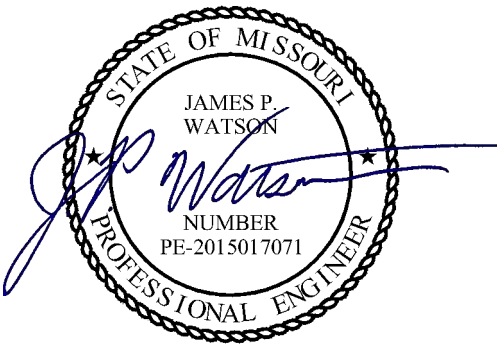
- SEE M500 & M600 SERIES SHEETS FOR ADDITIONAL HVAC NOTES, DETAIL, AND SCHEDULES.

HVAC PLAN KEY NOTES:

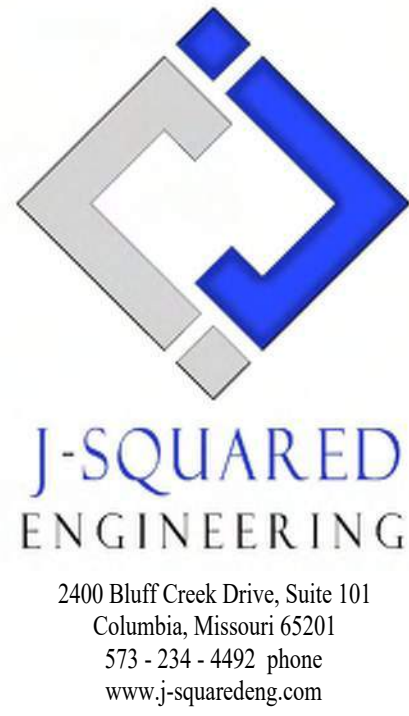
- BALANCE OUTSIDE AIR (OA) TO 130 CFM.
- 3/4" CONDENSATE TO DISCHARGE INTO HUB DRAIN IN ACCESSIBLE LOCATION.



KEY PLAN
SCALE: NTS



James Watson, P.E. January 25, 2024
PE-2015017071
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J2 PROJECT No: J21007
J2 DESIGN: JAP

ISSUE TITLE	DATE
CITY SUBMITTAL	01 / 25 / 2024

The Village at Discovery - Lot 4

Mechanical - Electrical - Plumbing Design Drawings for

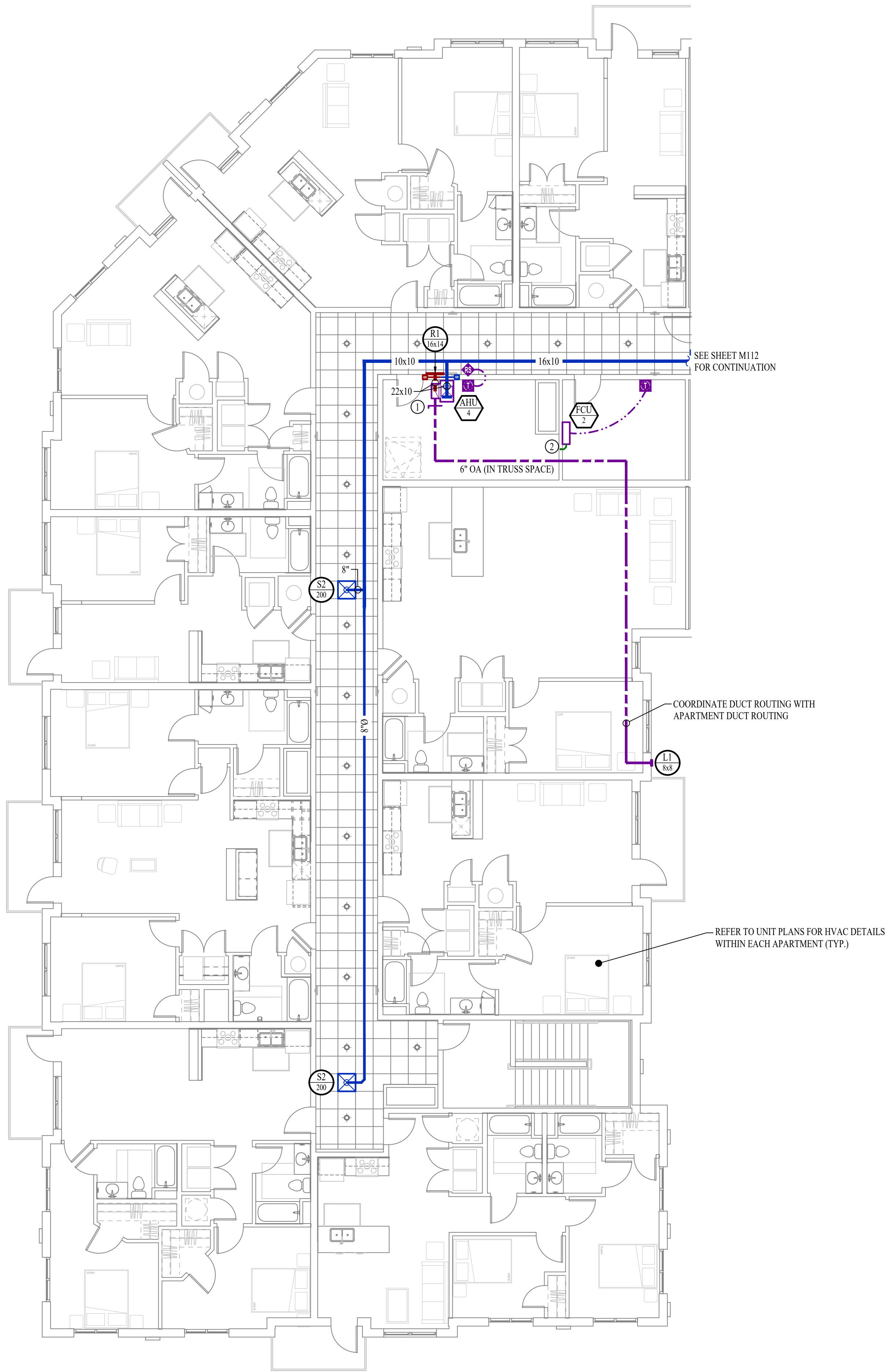
Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

HVAC PLAN -
SECOND FLOOR -
AREA A

SHEET NUMBER

M102



HVAC PLAN - THIRD FLOOR - AREA A
SCALE: 1/8" = 1'-0"

HVAC PLAN SYMBOL LEGEND

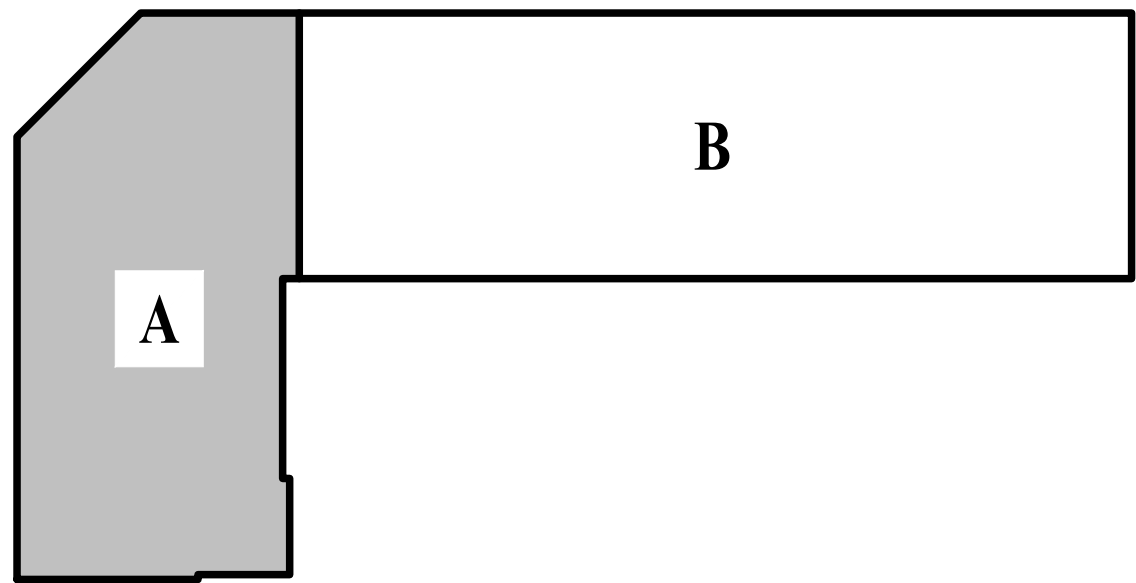
- EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)
EQUIPMENT REFERENCE NUMBER
DIFFUSER/GRILLE TYPE (REFER TO SCHEDULE)
CUBIC FEET PER MINUTE (CFM) / FACE SIZE
- SUPPLY DUCTWORK
RETURN DUCTWORK
EXHAUST DUCTWORK
OUTSIDE AIR DUCTWORK
FLEX DUCT
VENT / COMBUSTION AIR
CONDENSATION LINE
REFRIGERANT LINE
- TIE INTO EXISTING
SUPPLY DIFFUSER (HATCH INDICATES "NO FLOW ZONE")
RETURN DIFFUSER
BALANCE DAMPER
MOTORIZED DAMPER
CEILING RADIATION DAMPER
FIRE RATED DAMPER
SMOKE DAMPER
THERMOSTAT
CO2 DETECTOR
RETURN DUCT SMOKE DETECTOR
WIRED TO FAN STARTER TO SHUT UNIT(S) DOWN AND SEND ALARM SIGNAL TO FIRE ALARM SYSTEM (IF PRESENT) OR TO REMOTE SOUNDER LOCATED IN AN OCCUPIED SPACE (EQUAL TO SYSTEM SENSOR #D4120)
REMOTE TEMPERATURE SENSOR

HVAC PLAN GENERAL NOTES:

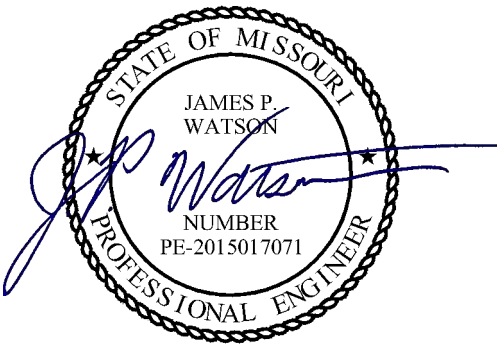
1. SEE M500 & M600 SERIES SHEETS FOR ADDITIONAL HVAC NOTES, DETAIL, AND SCHEDULES.

HVAC PLAN KEY NOTES:

- ① BALANCE OUTSIDE AIR (OA) TO 100 CFM.
② 3/4" CONDENSATE TO DISCHARGE INTO HUB DRAIN IN ACCESSIBLE LOCATION.



KEY PLAN
SCALE: NTS



James Watson, P.E. January 25, 2024
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ISSUE TITLE DATE

CITY SUBMITTAL 01 / 25 / 2024

HVAC PLAN SYMBOL LEGEND

- X

1

→

EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)
-
- EQUIPMENT REFERENCE NUMBER
- A

1

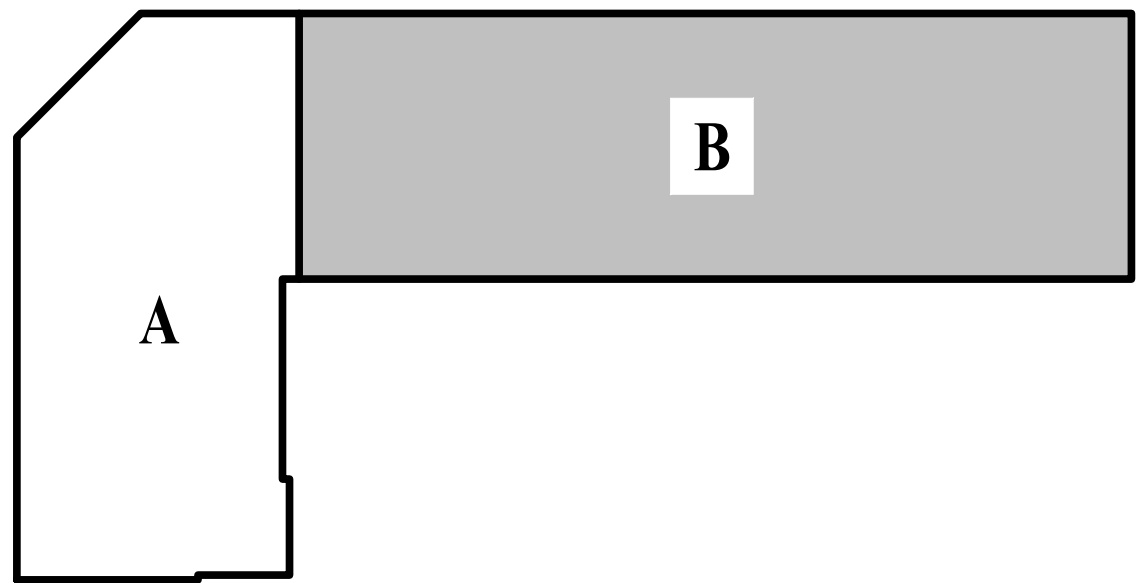
→
- DIFFUSER/GRILLE TYPE (REFER TO SCHEDULE)
-
- CUBIC FEET PER MINUTE (CFM) / FACE SIZE
-
- SUPPLY DUCTWORK
-
- RETURN DUCTWORK
-
- EXHAUST DUCTWORK
-
- OUTSIDE AIR DUCTWORK
-
- FLEX DUCT
-
- VENT / COMBUSTION AIR
-
- CONDENSATION LINE
-
- REFRIGERANT LINE
-
-
- TIE INTO EXISTING
-
- SUPPLY DIFFUSER (HATCH INDICATES "NO FLOW ZONE")
-
- RETURN DIFFUSER
-
- BALANCE DAMPER
-
- MOTORIZED DAMPER
-
- CEILING RADIATION DAMPER
-
- FIRE RATED DAMPER
-
- SMOKE DAMPER
-
- THERMOSTAT
-
- CO2 DETECTOR
-
-
- RETURN DUCT SMOKE DETECTOR
WIRED TO FAN STARTER TO SHUT UNIT(S) DOWN AND SEND ALARM SIGNAL
TO FIRE ALARM SYSTEM (IF PRESENT) OR TO REMOTE SOUNDER
LOCATED IN AN OCCUPIED SPACE (EQUAL TO SYSTEM SENSOR #D4120)
-
- REMOTE TEMPERATURE SENSOR

HVAC PLAN GENERAL NOTES:

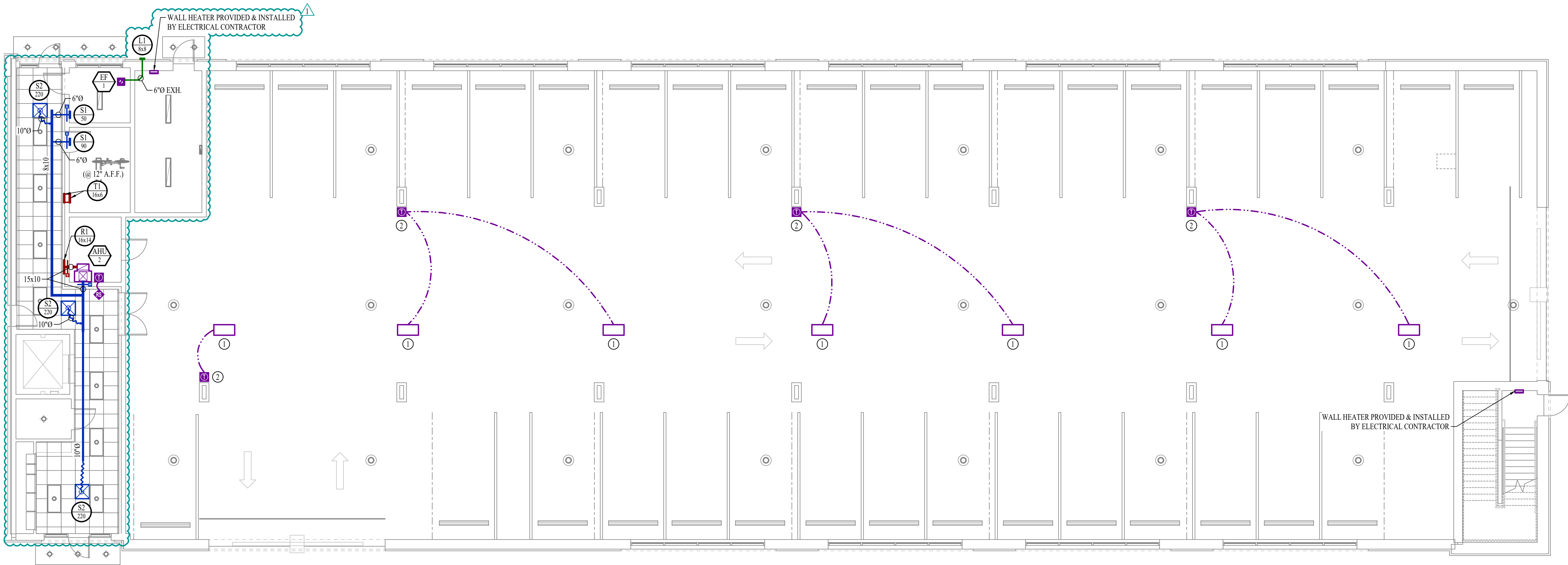
1. SEE M500 & M600 SERIES SHEETS FOR ADDITIONAL HVAC NOTES, DETAIL, AND SCHEDULES.

HVAC PLAN KEY NOTES:

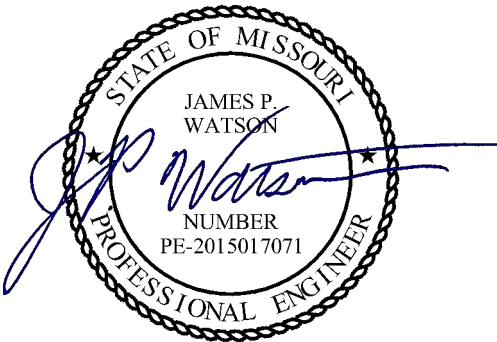
- ① 208V 3-PH 5kW ZERO CLEARANCE PLENUM UNIT HEATER ABOVE CEILING (EQUAL TO MARLEY #BPH158324) PROVIDE & INSTALL ACCESS PANEL.
- ② THERMOSTAT IN PLENUM SPACE FOR PLENUM HEATERS. SET TO 55°F. PROVIDE & INSTALL ACCESS PANEL.



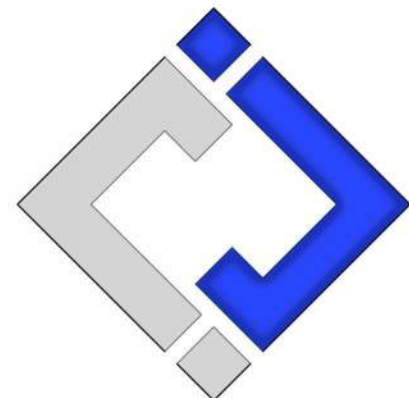
KEY PLAN
SCALE: NTS



HVAC PLAN - FIRST FLOOR - AREA B
SCALE: 1/8" = 1'-0"



James Watson, P.E. October 21, 2024
PE-2015017071
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ISSUE TITLE DATE

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REVISION 1 10 / 21 / 2024

Mechanical - Electrical - Plumbing Design Drawings for

The Village at Discovery - Lot 4

Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

HVAC PLAN -
FIRST FLOOR -
AREA B

SHEET NUMBER

M111

HVAC PLAN SYMBOL LEGEND

- X

1

→

EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)
- 1

→

EQUIPMENT REFERENCE NUMBER
- A

→

DIFFUSER/GRILLE TYPE (REFER TO SCHEDULE)
- →

CUBIC FEET PER MINUTE (CFM) / FACE SIZE

→

→

SUPPLY DUCTWORK

→

→

RETURN DUCTWORK

→

→

EXHAUST DUCTWORK

→

→

OUTSIDE AIR DUCTWORK

→

→

FLEX DUCT

→

→

VENT / COMBUSTION AIR

→

→

CONDENSATION LINE

→

→

REFRIGERANT LINE

→

→

TIE INTO EXISTING

→

→

SUPPLY DIFFUSER (HATCH INDICATES "NO FLOW ZONE")

→

→

RETURN DIFFUSER

→

→

BALANCE DAMPER

→

→

MOTORIZED DAMPER

→

→

CEILING RADIATION DAMPER

→

→

FIRE RATED DAMPER

→

→

SMOKE DAMPER

→

→

THERMOSTAT

→

→

CO2 DETECTOR

→

→

RETURN DUCT SMOKE DETECTOR
WIRED TO FAN STARTER TO SHUT UNIT(S) DOWN AND SEND ALARM SIGNAL
TO FIRE ALARM SYSTEM (IF PRESENT) OR TO REMOTE SOUNDER
LOCATED IN AN OCCUPIED SPACE (EQUAL TO SYSTEM SENSOR #D4120)

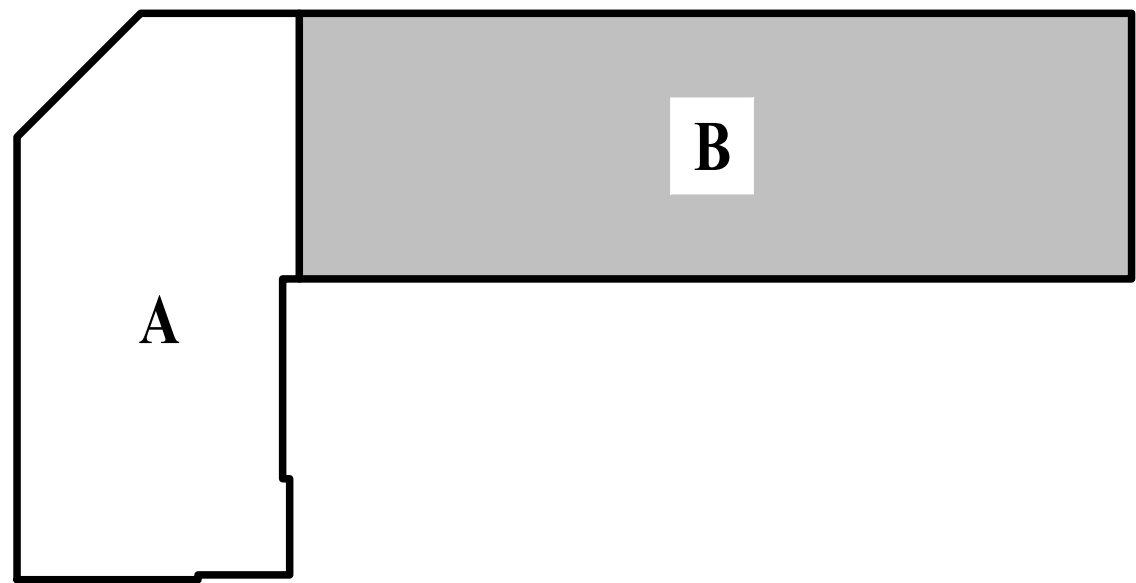
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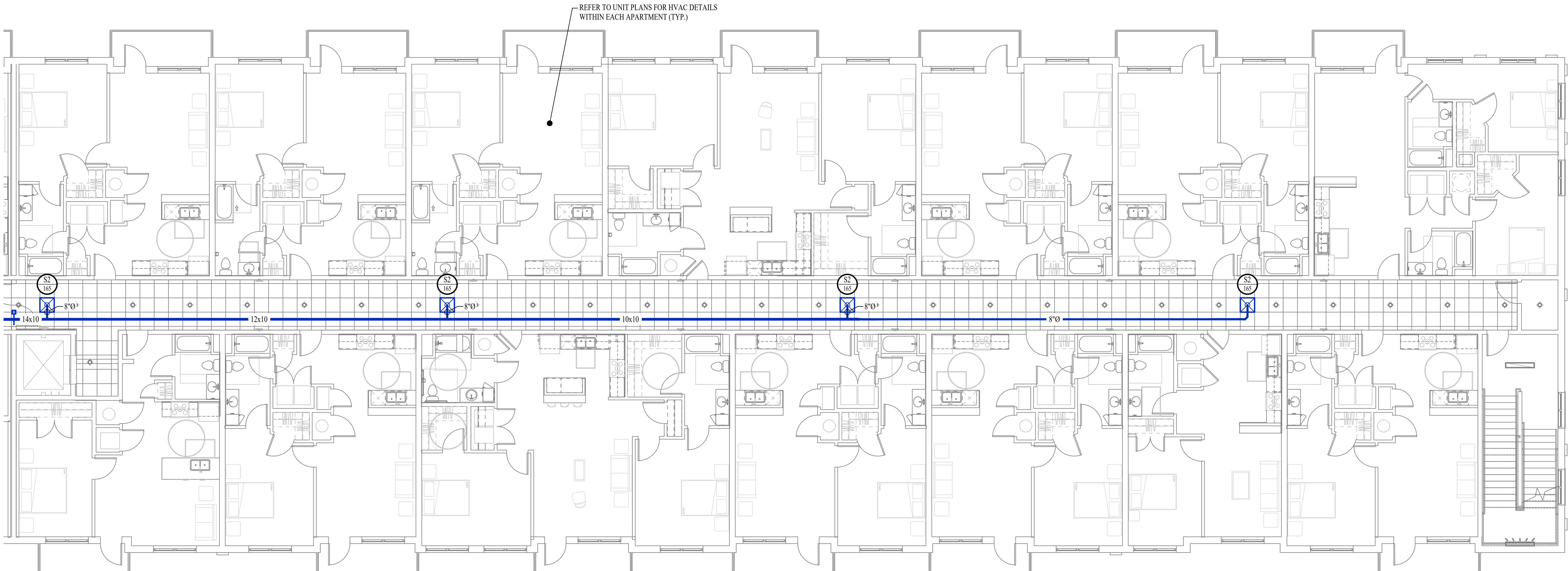
REMOTE TEMPERATURE SENSOR

HVAC PLAN GENERAL NOTES:

1. SEE M500 & M600 SERIES SHEETS FOR ADDITIONAL HVAC NOTES, DETAIL, AND SCHEDULES.



KEY PLAN
SCALE: NTS



HVAC PLAN - SECOND FLOOR - AREA B
SCALE: 1/8" = 1'-0"

HVAC PLAN SYMBOL LEGEND

- X

1

→

EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)
- 1

→

EQUIPMENT REFERENCE NUMBER
- A

→

DIFFUSER/GRILLE TYPE (REFER TO SCHEDULE)
- →

CUBIC FEET PER MINUTE (CFM) / FACE SIZE

→

→

SUPPLY DUCTWORK

→

→

RETURN DUCTWORK

→

→

EXHAUST DUCTWORK

→

→

OUTSIDE AIR DUCTWORK

→

→

FLEX DUCT

→

→

VENT / COMBUSTION AIR

→

→

CONDENSATION LINE

→

→

REFRIGERANT LINE

→

→

TIE INTO EXISTING

→

→

SUPPLY DIFFUSER (HATCH INDICATES "NO FLOW ZONE")

→

→

RETURN DIFFUSER

→

→

BALANCE DAMPER

→

→

MOTORIZED DAMPER

→

→

CEILING RADIATION DAMPER

→

→

FIRE RATED DAMPER

→

→

SMOKE DAMPER

→

→

THERMOSTAT

→

→

CO2 DETECTOR

→

→

RETURN DUCT SMOKE DETECTOR
WIRED TO FAN STARTER TO SHUT UNIT(S) DOWN AND SEND ALARM SIGNAL
TO FIRE ALARM SYSTEM (IF PRESENT) OR TO REMOTE SOUNDER
LOCATED IN AN OCCUPIED SPACE (EQUAL TO SYSTEM SENSOR #D4120)

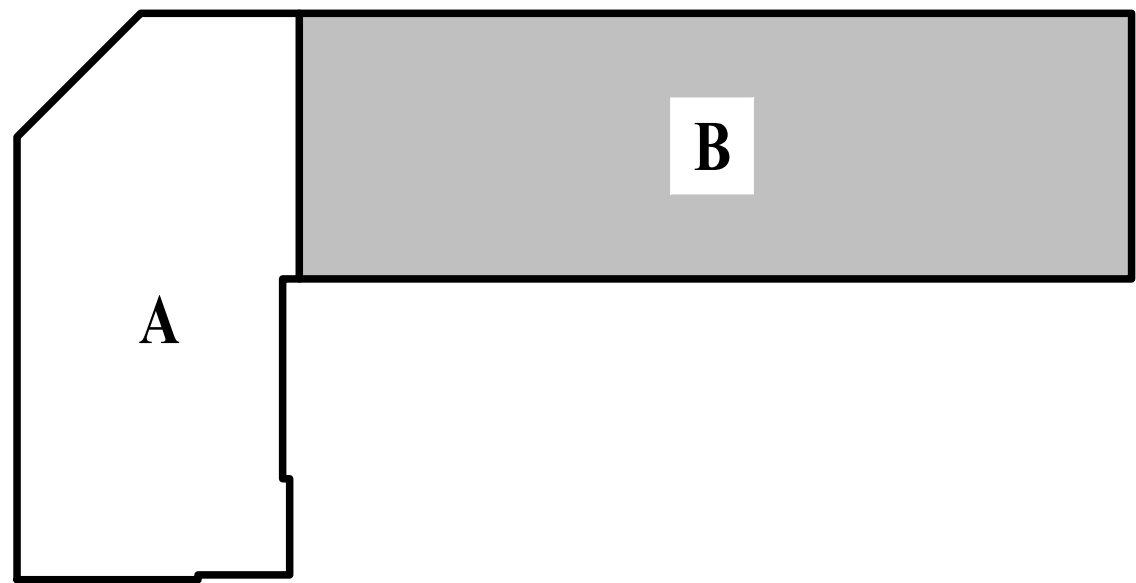
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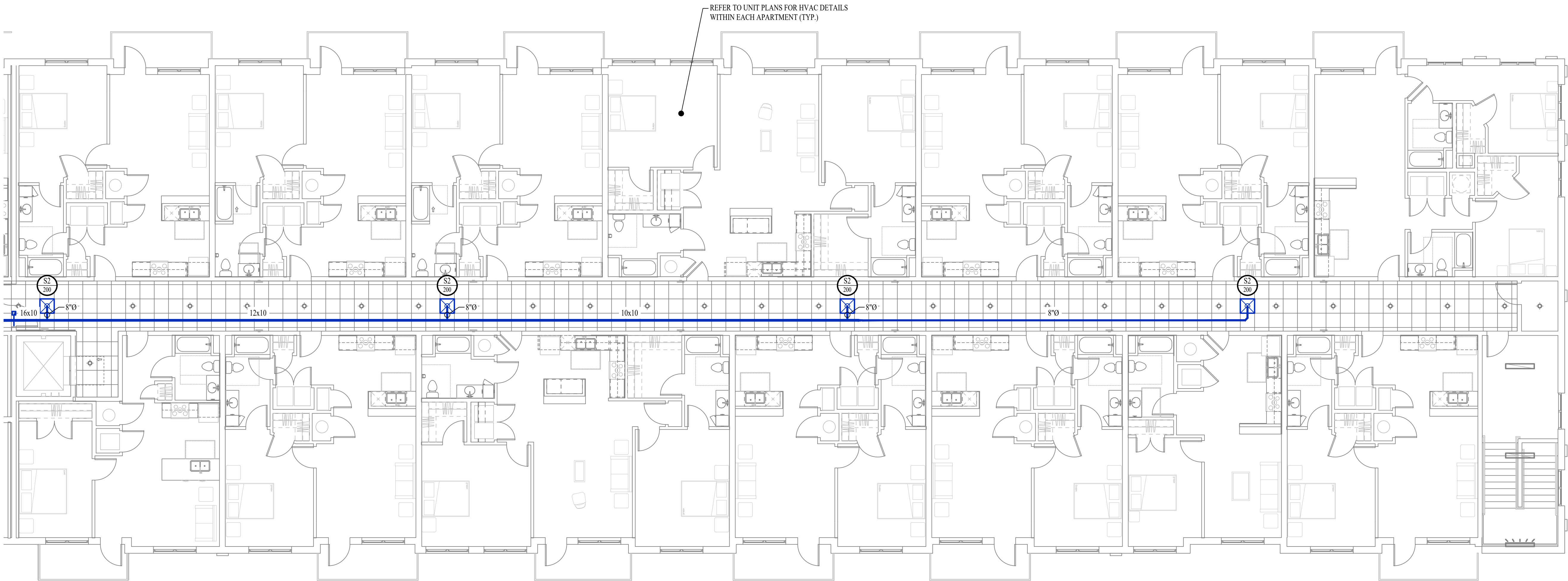
REMOTE TEMPERATURE SENSOR

HVAC PLAN GENERAL NOTES:

1. SEE M500 & M600 SERIES SHEETS FOR ADDITIONAL HVAC NOTES, DETAIL, AND SCHEDULES.



KEY PLAN
SCALE: NTS



HVAC PLAN - THIRD FLOOR - AREA B
SCALE: 1/8" = 1'-0"

STATE OF MISSOURI

JAMES P. WATSON

James P. Watson

NUMBER

PE-2015017071

PROFESSIONAL ENGINEER

James Watson, P.E.

January 25, 2024

PE-2015017071

MO Certificate of Authority # 2018029680

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J2 PROJECT No:	J21007
J2 DESIGN:	JAP

ISSUE TITLE	DATE
CITY SUBMITTAL	01 / 25 / 2024

Mechanical - Electrical - Plumbing Design Drawings for

The Village at Discovery - Lot 4

Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

HVAC PLAN -
THIRD FLOOR -
AREA B

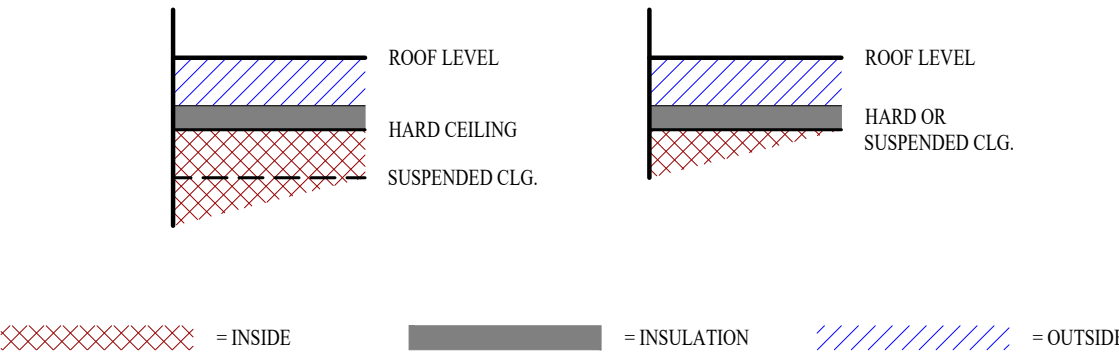
SHEET NUMBER

M113

HVAC SPECIFICATIONS

1. EQUIPMENT
- 1.1. ALL EQUIPMENT MUST PROVIDE THE PERFORMANCE SPECIFIED ON PLANS. WHERE SPECIFIC MAKES AND MODELS ARE INDICATED ON PLAN, CONTRACTOR TO PROVIDE MODEL INDICATED OR APPROVED EQUAL.
- 1.2. CONTRACTOR TO SUPPLY SUBMITTALS FOR ALL EQUIPMENT FOR REVIEW BY ARCHITECT AND ENGINEER PRIOR TO PURCHASE.
- 1.3. ALL HORIZONTAL FURNACES WITH AC COILS TO BE EQUIPPED WITH CORROSION RESISTANT DRAIN PAN. DRAIN PAN TO DISCHARGE TO SANITARY WASTE VIA INDIRECT CONNECTION WITH AIR GAP. DRAIN PAN TO PROVIDE SECONDARY OVERFLOW OR FLOAT SWITCH INTERLOCKED WITH UNIT TO SHUT DOWN UNIT ON HIGH WATER SIGNAL.
- 1.4. ALL EXTERIOR REFRIGERANT COILS TO BE PROTECTED BY FACTORY EQUIPPED HAIL GUARDS.
- 1.5. REFRIGERANT PIPING TO BE ACR COPPER OR TYPE L COPPER.
2. DUCTWORK
- 2.1. DUCTWORK TO BE GALVANIZED STEEL, SEAL CLASS B, CONSTRUCTED PER SMACNA STANDARDS.
- 2.2. 26 GA. MINIMUM UP TO 16" DUCT, 24 GA. UP TO 20", 22 GA. UP TO 24", 20 GA. UP TO 28", AND 18 GA. UP TO 36".
- 2.3. TURNING VANES TO BE PROVIDED AND INSTALLED AT ALL 90° BENDS AND TEES.
- 2.4. DUCT DIMENSIONS LISTED ARE TO INTERIOR OF DUCT LINER.
- 2.5. BALANCE DAMPERS MUST BE PROVIDED TO ALLOW ADJUSTMENT AT EACH AIR TERMINAL.
- 2.5.1. WHERE BRANCH TAKEOFF IS ACCESSIBLE (ABOVE LAY-IN CEILING OR EXPOSED DUCT), THE BALANCE DAMPER IS TO BE INSTALLED AT TAKEOFF.
- 2.5.2. WHERE TAKEOFF IS INACCESSIBLE (IN ATTIC OR SOFFIT), THE BALANCE DAMPER IS TO BE LOCATED SO IT IS ACCESSIBLE FROM FACE OF AIR DEVICE.
- 2.6. HVAC CONTRACTOR RESPONSIBLE FOR ALL DUCTWORK TRANSITIONS AND FITTINGS AS REQUIRED FOR FINAL CONNECTIONS TO HVAC EQUIPMENT.
3. INSULATION
- 3.1. DUCTWORK
- 3.1.1. SEE "TYPICAL DUCT INSULATION DIAGRAM" FOR INSTALLATION SPECIFIC REQUIREMENTS.
- 3.1.2. INTERNAL DUCT LINER TO BE EQUAL TO JOHNS MANVILLE LINACOUSTIC R-300.
- 3.1.3. EXTERNAL DUCT WRAP TO INCLUDE VAPOR BARRIER. EQUAL TO JOHNS MANVILLE MICROLITE WITH FSK JACKET.
- 3.2. REFRIGERANT PIPING
- 3.2.1. SPLIT SYSTEM (SUCTION LINE ONLY) - 1" CLOSED CELL ELASTOMERIC FOAM (EQUAL TO ARMAFLEX AP).
- 3.3. VRV/VRF SYSTEMS (BOTH SUCTION AND HOT GAS LINES) 1½" EPDM (EQUAL TO AEROFLEX AEROCEL AC) WITHIN CONDITIONED SPACES & 2" EPDM (EQUAL TO AEROFLEX AEROCEL AC) IN UNCONDITIONED SPACES, AND WITH BANDED ALUMINUM SHIELDING IN EXTERIOR SPACES.
- 3.4. CONDENSATE PIPING
- 3.4.1. SPLIT SYSTEMS - WHERE CONDENSATE PIPING IS LOCATED IN UNCONDITIONED SPACE, INSULATE WITH ½" ELASTOMERIC. NO INSULATION REQUIRED IN CONDITIONED SPACES.
- 3.4.2. VRV/VRF - INSULATE WITH ½" ELASTOMERIC.
4. WORKMANSHIP
- 4.1. COORDINATE WITH OTHER TRADES SO THAT HVAC EQUIPMENT AND DUCT WORK DOES NOT BLOCK REQUIRED ACCESS OR CLEARANCE TO EQUIPMENT.
- 4.2. ALL HVAC EQUIPMENT IS TO BE INSTALLED PER MANUFACTURER'S PUBLISHED RECOMMENDATIONS.
- 4.3. ALL EQUIPMENT TO BE INSTALLED LEVEL AND PLUMB.
- 4.4. ROOFTOP MOUNTED RTUS TO BE INSTALLED ON CURBS PER MANUFACTURES INSTRUCTIONS.
- 4.5. GRADE MOUNTED RTUS, CONDENSING UNITS, AND HEAT PUMPS TO BE INSTALLED ON 4" REINFORCED CONCRETE PAD EXTENDING 4" BEYOND EACH EDGE OF THE EQUIPMENT, OR A MANUFACTURER APPROVED PRE-MANUFACTURED BASE.
5. TESTING AND BALANCING
- 5.1. ALL SYSTEMS MUST BE BALANCED TO WITHIN 10% OF VALUES INDICATED ON PLAN.
- 5.2. HVAC CONTRACTOR TO PROVIDE WRITTEN BALANCE REPORT INCLUDING FLOW VALUES INDICATED ON PLAN AND ACTUAL MEASURED VALUES.
- 5.3. THIRD PARTY CERTIFIED TEST AND BALANCE NOT REQUIRED.

EXHAUST FAN SCHEDULE									
TAG	EQUIPMENT TYPE	MANUFACTURER (OR EQUAL)	MODEL (OR EQUAL)	FLOW		ELECTRICAL			NOTES
				CFM	S.P.	VOLT/PH	MCA	OCF	
EF-1	EXHAUST FAN	BROAN / NUTONE	AE50	50	1/8"	120	1	20	1, 2
NOTES:									
1. WITH BACKDRAFT DAMPER									
2. WITH CEILING RADIATION DAMPER									



DUCT **INSIDE** THERMAL ENVELOPE INSULATION REQUIREMENTS

- RECTANGULAR
- SUPPLY = 1" LINER
 - RETURN = 1" LINER
 - EXHAUST = 1" LINER
 - OUTSIDE AIR = 2" WRAP

- ROUND
- SUPPLY = 1½" WRAP
 - RETURN = NONE
 - EXHAUST = NONE
 - OUTSIDE AIR = 2" WRAP

- SPIRAL
- SUPPLY = NONE
 - RETURN = NONE
 - EXHAUST = NONE
 - OUTSIDE AIR = 2" WRAP

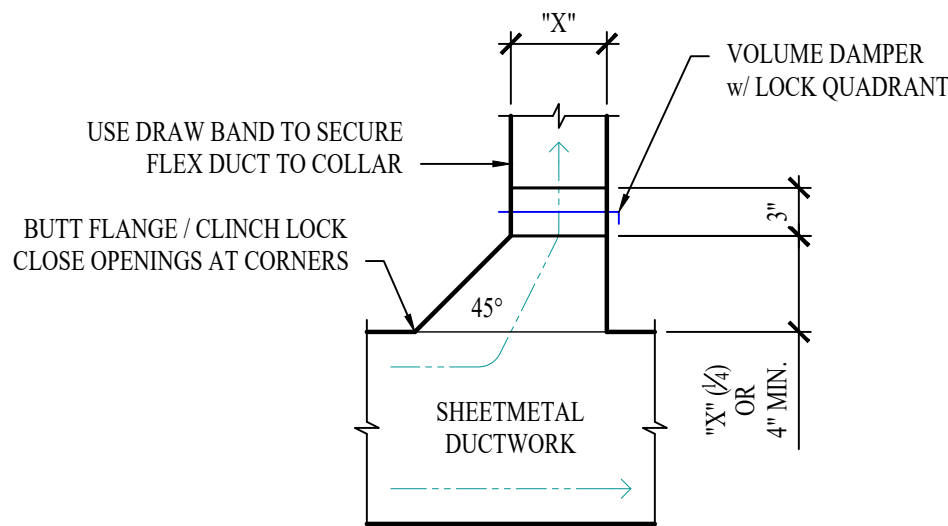
DUCT **OUTSIDE** THERMAL ENVELOPE INSULATION REQUIREMENTS

- RECTANGULAR
- SUPPLY = 1" LINER & ½" WRAP
 - RETURN = 1" LINER & ½" WRAP
 - EXHAUST = ½" WRAP
 - OUTSIDE AIR = NONE

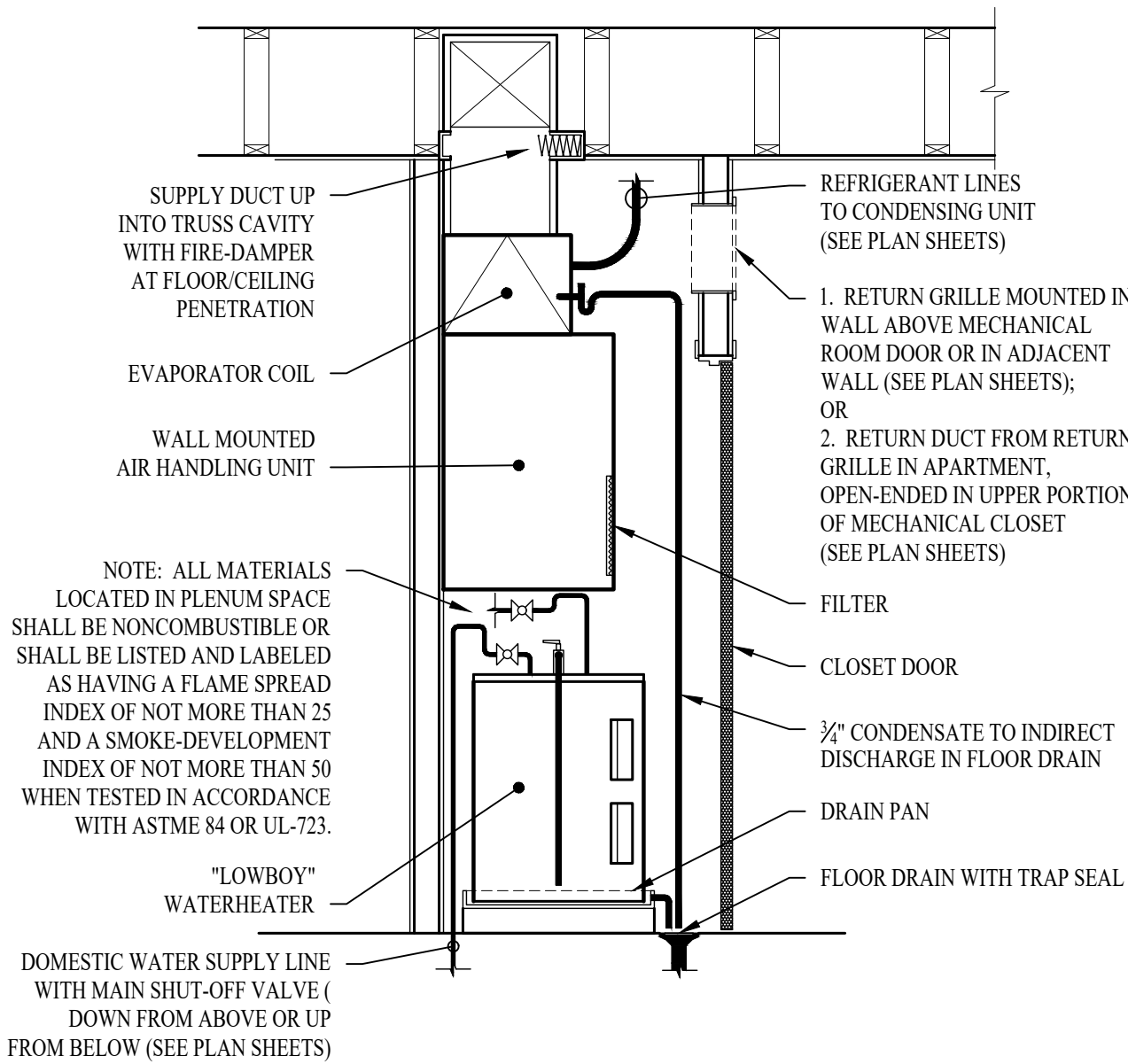
- ROUND
- SUPPLY = 2" WRAP
 - RETURN = 2" WRAP
 - EXHAUST = ½" WRAP
 - OUTSIDE AIR = NONE

- SPIRAL
- SUPPLY = 2" WRAP
 - RETURN = 2" WRAP
 - EXHAUST = ½" WRAP
 - OUTSIDE AIR = NONE

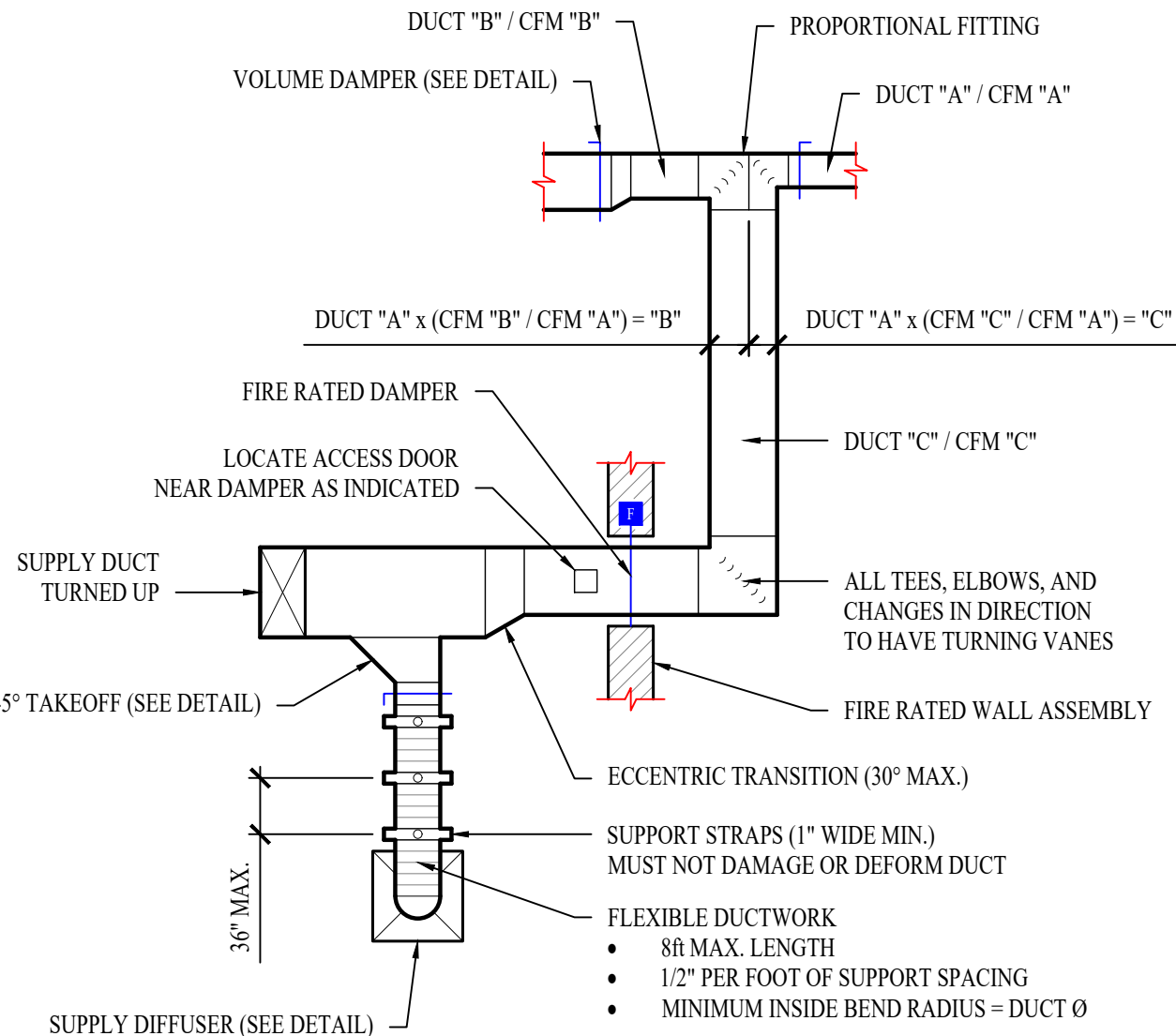
TYPICAL BUILDING INTERIOR DUCT INSULATION DIAGRAM



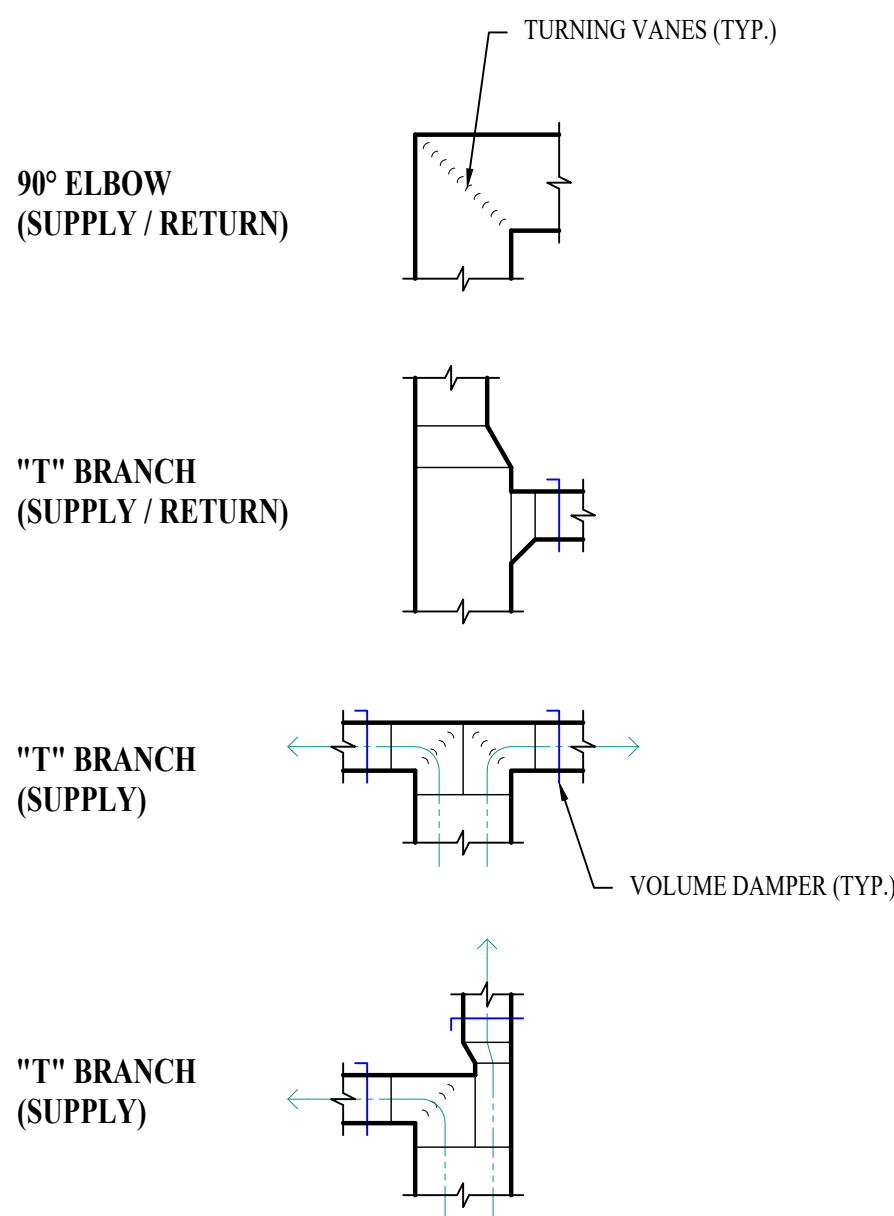
TYPICAL 45° TAKEOFF DETAIL



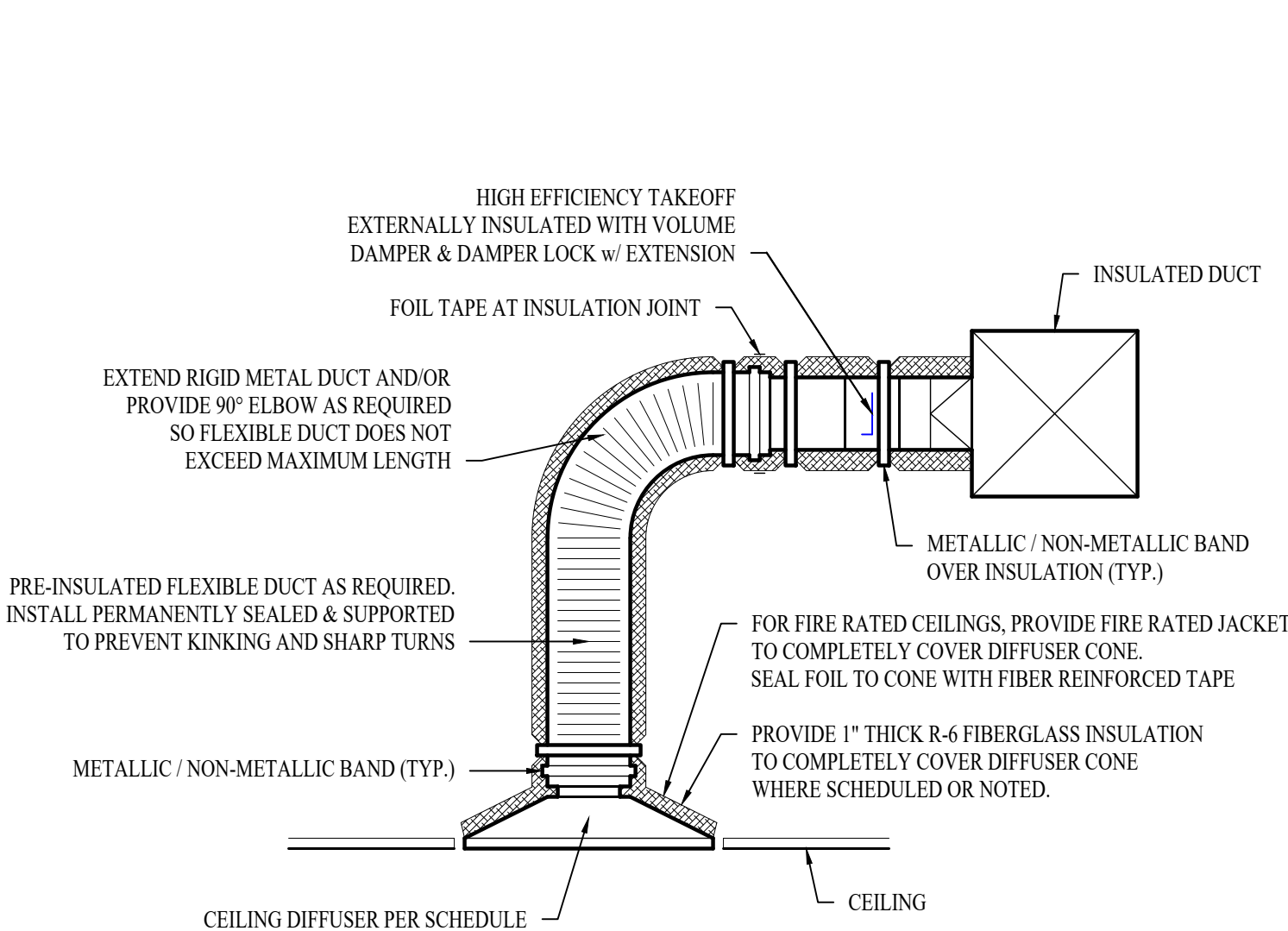
STACKED WATER HEATER / AHU DETAIL



TYPICAL DUCTWORK DETAIL



TYPICAL DUCTWORK FITTINGS DETAIL



TYPICAL LAY-IN DIFFUSER DETAIL

MINI-SPLIT SYSTEM SCHEDULE														
TAG	EQUIPMENT DESCRIPTION	MANUFACTURER (OR EQUAL)	MODEL (OR EQUAL)	SIZE (TONS)	ORIENTATION	TOTAL AIRFLOW (CFM)	HEATING (IA: 70 DB, OA: 17 DB)	COOLING (IA: 80 DB/67 WB, OA: 95 DB)			ELECTRICAL			NOTES
							TOTAL (KBTU)	SENSIBLE (KBTU)	TOTAL (KBTU)	MIN EFF. (SEER)	VOLTS/PH	MCA	OCF	
FCU-1	WALL-MOUNT FAN COIL UNIT	DAIKIN	FXA18HA7	1.5	STANDARD	425 - 290	-	-	-	-	POWERED THRU HP-1			1.3
HP-1	HEAT PUMP	DAIKIN	PUY-A18HA17	1.5	STANDARD	-	COOLING ONLY	12.2	18.0	18	208/1	11	20-2	2.4
FCU-2	WALL-MOUNT FAN COIL UNIT	DAIKIN	PKA-A18HA7	1.5	STANDARD	425 - 290	-	-	-	-	POWERED THRU HP-2			1.3
HP-2	HEAT PUMP	DAIKIN	PUY-A18HA17	1.5	STANDARD	-	COOLING ONLY	12.2	18.0	18	208/1	11	20-2	2.4
NOTES:														
1. PROVIDE AND INSTALL 7 DAY PROGRAMABLE WIRED REMOTE CONTROLLER WITH PASSCODE PROTECTION OR PHYSICAL LOCKING COVER. COORDINATE EXACT MOUNTING LOCATION WITH OWNER.														
2. WITH WIND BAFFLE.														
3. WITH FIELD INSTALLED CONDENSATE PUMP.														
4. WITH DIVERSITECH QUIK-SLING MOUNTING SYSTEM														

SPLIT SYSTEM SCHEDULE													
TAG	EQUIPMENT DESCRIPTION	SIZE (TONS)	ORIENTATION	TOTAL AIRFLOW (CFM)	OA AIRFLOW MAX/MIN (CFM)	HEATING ELECTRIC (KW)	COOLING (IA: 80 DB/67 WB, OA: 95 DB)			ELECTRICAL			NOTES
							SENSIBLE (KBTU)	TOTAL (KBTU)	MIN EFF. (SEER)	VOLTS/PH	MCA	OCF	
AHU-1	AIR HANDLER	1.5	UPFLOW	600	-	8	-	-	-	208/1	44	45	1.2
AHU-2	AIR HANDLER	2.0	UPFLOW	800	-	8	-	-	-	208/1	44	45	1.2
AHU-3	AIR HANDLER	2.5	UPFLOW	1000	130 / 130	10	-	-	-	208/1	51	60	1.2
AHU-4	AIR HANDLER	3.0	UPFLOW	1200	100 / 100	15	-	-	-	208/1	51.22	60.25	1.2
CU-1	CONDENSING UNIT	1.5	-	-	-	-	13.2	17.8	13	208/1	12	20	3.4
CU-2	CONDENSING UNIT	2.0	-	-	-	-	17.2	23.0	13	208/1	18	30	3.4
CU-3	CONDENSING UNIT	2.5	-	-	-	-	21.5	28.4	13	208/1	17	25	3.4
CU-4	CONDENSING UNIT	3.0	-	-	-	-	24.5	33.6	13	208/1	19	30	3.4
NOTES: 1. PROVIDE AND INSTALL 7 DAY PROGRAMABLE HONEYWELL THERMOSTAT. COORDINATE EXACT MOUNTING LOCATION WITH OWNER. 2. INCLUDE CORROSION RESISTANT DRAIN PAN WITH OVERFLOW SWITCH WIRED TO SHUT DOWN UNIT. 3. WITH FACTORY HAIL GUARD. 4. LOW AMBIENT PACKAGE FOR OPERATION TO 0°F.													

AIR DEVICE SCHEDULE						
TAG	SERVICE	MANUFACTURER (OR EQUAL)	MODEL (OR EQUAL)	SIZE	COLOR / FINISH	NOTES
L1	OA / EXH	POTTERFF	EFD	AS INDICATED	PRIMED	PAINT TO MATCH EXTERIOR
R1	RETURN	PRICE	530	AS INDICATED	WHITE	
R2	RETURN	PRICE	80	24x24	WHITE	
S1	SUPPLY	PRICE	520	12x6	WHITE	WITH CEILING RADIATION DAMPER
S2	SUPPLY	PRICE	SPD	24x24	WHITE	
S3	SUPPLY	PRICE	SPD	12x12	WHITE	WITH DRYWALL MOUNTING KIT
NOTES: 1. VERIFY AIR DEVICE FINISHES WITH OWNER/ARCHITECT PRIOR TO INSTALLATION						



James Watson, P.E. January 25, 2024
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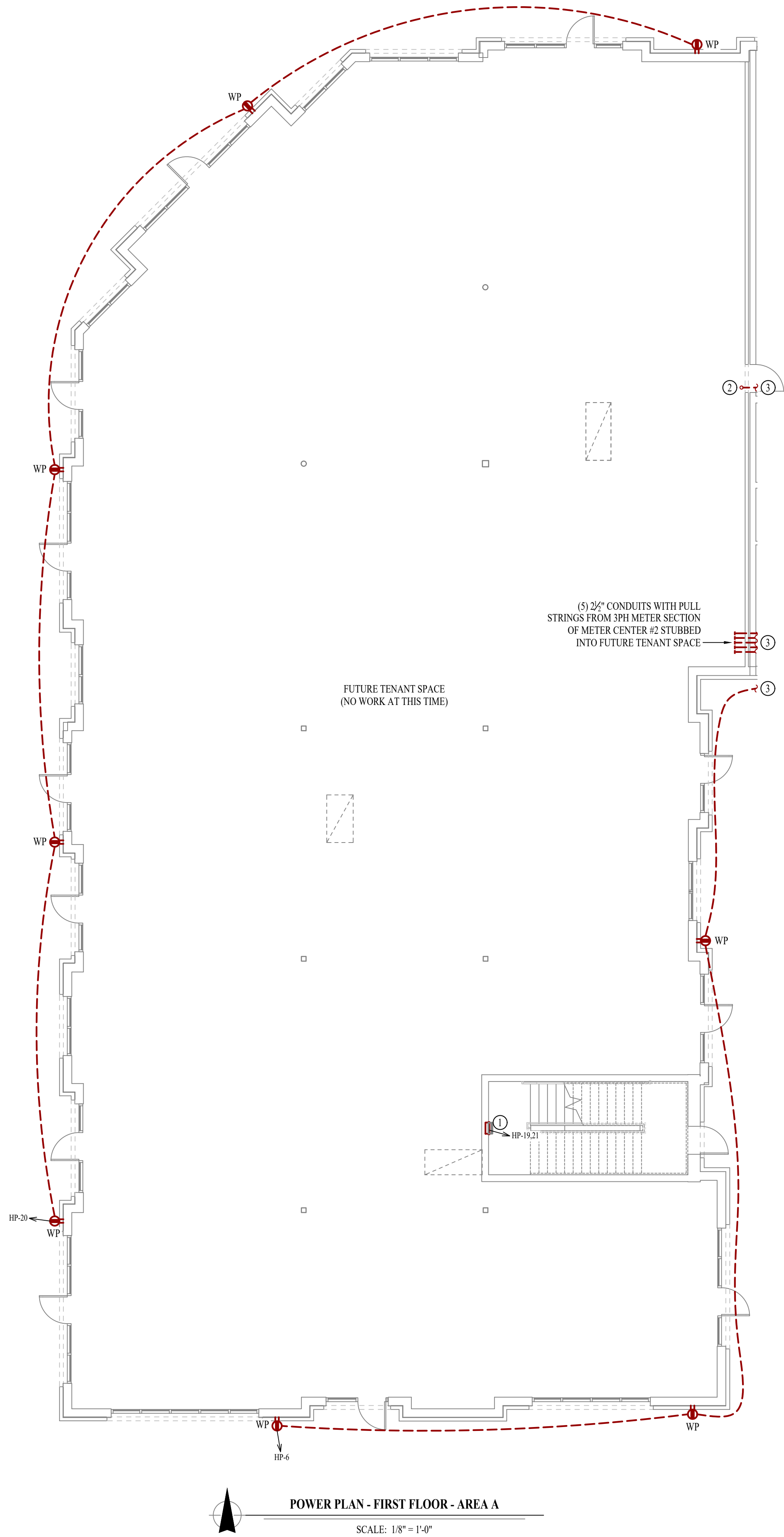
2400 Bluff Creek Drive, Suite 101
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J2 PROJECT No: J21007

J2 DESIGN: JAP

ISSUE TITLE DATE

CITY SUBMITTAL 01 / 25 / 2024



POWER PLAN SYMBOL LEGEND

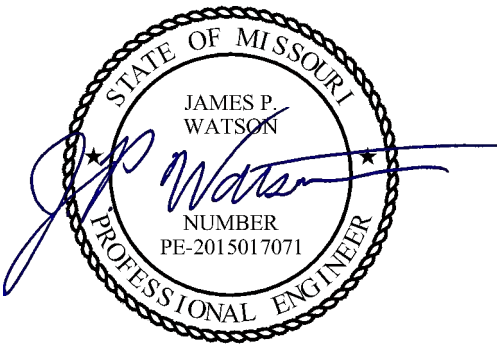
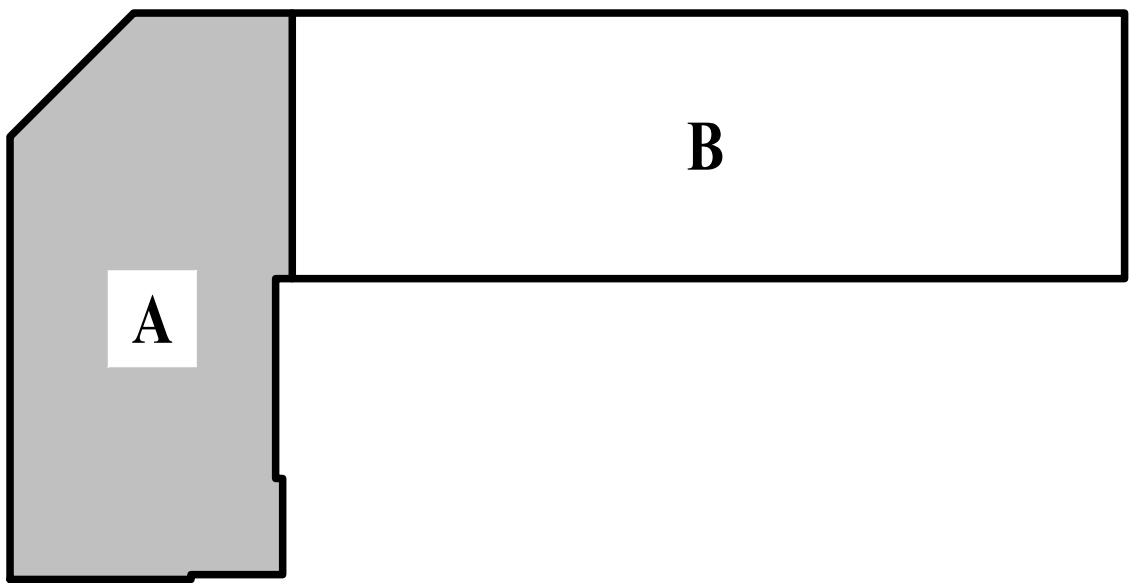
- CIRCUIT WIRING
- CIRCUIT TAG
- JUNCTION BOX
- RECEPTACLE
 - INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
 - "WP" = WEATHERPROOF OUTDOOR RECEPTACLE
 - "AW" = ABOVE WINDOW RECEPTACLE
 - "AC" = ABOVE CEILING RECEPTACLE
 - "EX" = EXISTING RECEPTACLE TO REMAIN
- GFCI DUPLEX CONVENIENCE RECEPTACLE
- 208V RECEPTACLE
- QUADPLEX CONVENIENCE RECEPTACLE
- USB OUTLET WITH USB-A & USB-C CHARGING PORT
- DATA / PHONE JACK BOX WITH 1" CONDUIT & PULL STRING UP TO CEILING SPACE (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
- WIRELESS ACCESS POINT, CEILING MOUNTED
- FLOOR RECEPTACLE
- FLOOR DATA
- DISCONNECT
- FUSED DISCONNECT
- FUSED SWITCH
- STARTER / DISCONNECT
- TIE INTO EXISTING

POWER PLAN GENERAL NOTES:

- SEE E500 & E600 SERIES SHEETS FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.

POWER PLAN KEY NOTES:

- RECESSED WALL HEATER (EQUAL TO MARLEY #VFK408FC) WITH BACK BOX FOR RECESSED INSTALL.
- 4" EMT CONDUIT WITH PULL STRING STUBBED UP TO LT. ROOM.
- SEE SHEET EP111 FOR CONTINUATION.



James Watson, P.E. January 25, 2024
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Mechanical - Electrical - Plumbing Design Drawings for
The Village at Discovery - Lot 4

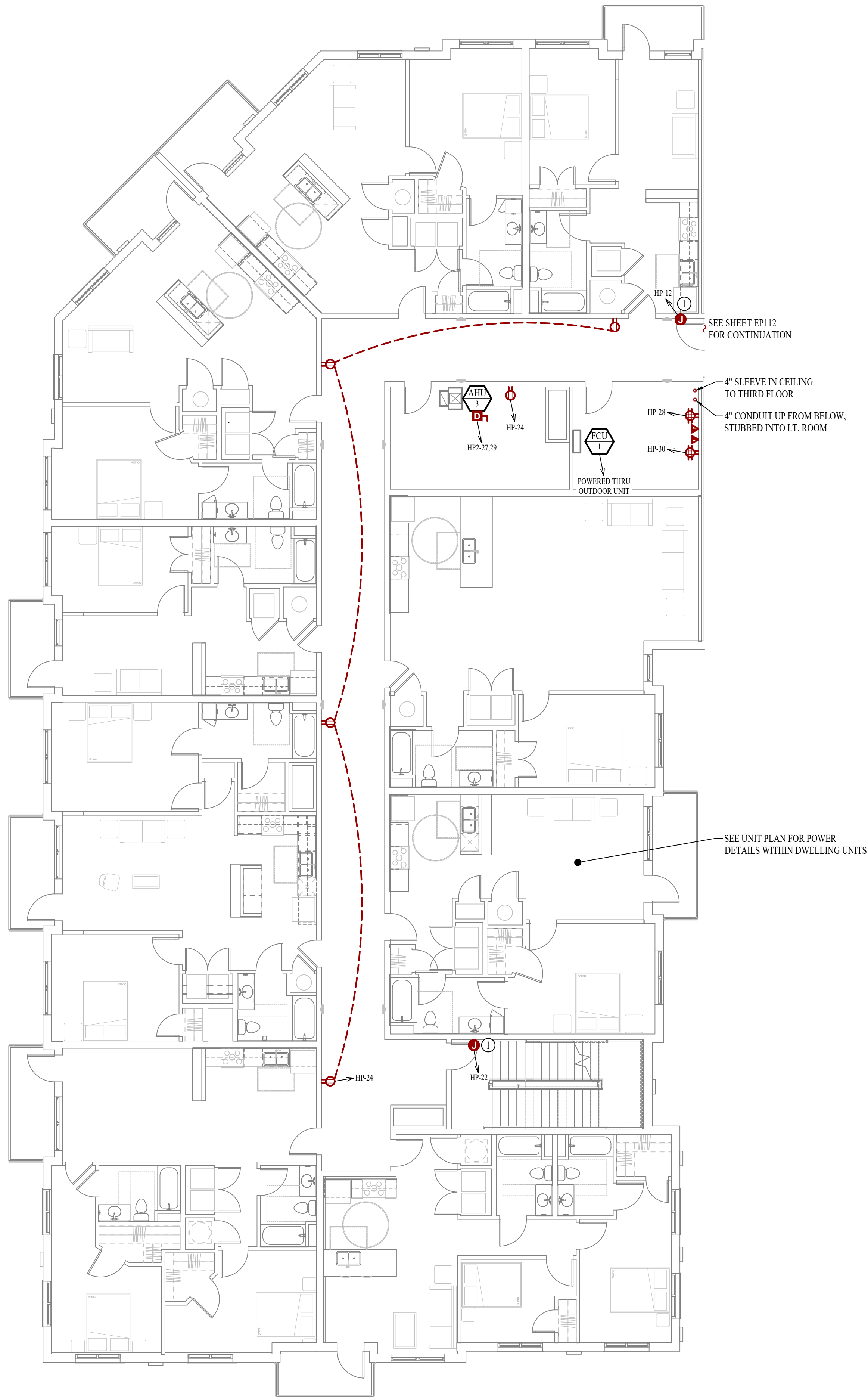
Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

**POWER PLAN -
FIRST FLOOR -
AREA A**

SHEET NUMBER

EP101



POWER PLAN - SECOND FLOOR - AREA A
SCALE: 1/8" = 1'-0"

POWER PLAN SYMBOL LEGEND

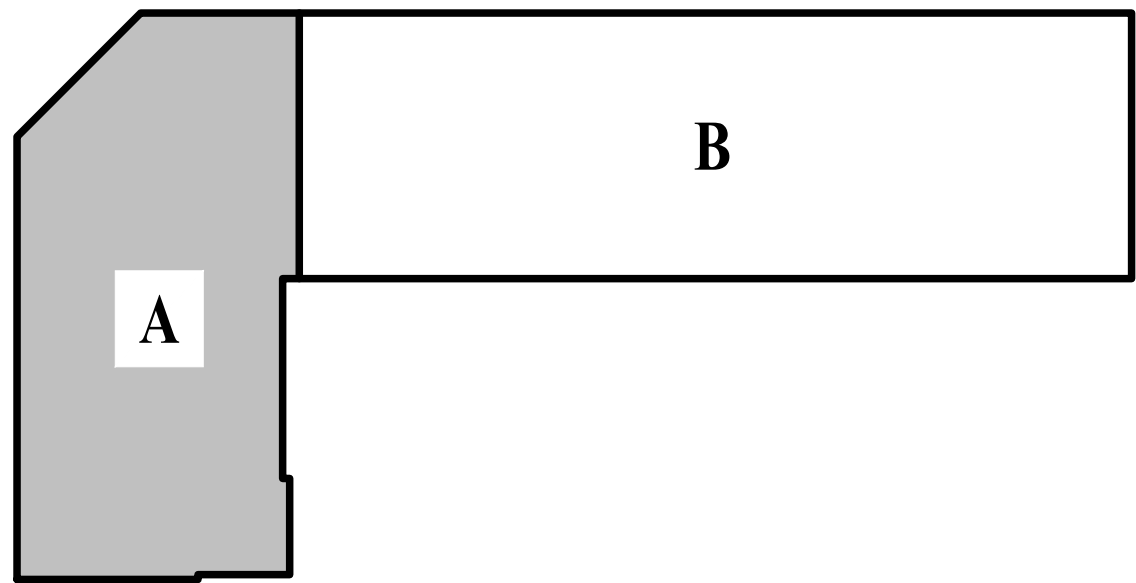
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- CIRCUIT TAG
- JUNCTION BOX
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- GFCI DUPLEX CONVENIENCE RECEPTACLE
- 208V RECEPTACLE
- QUADPLEX CONVENIENCE RECEPTACLE
- USB OUTLET WITH USB-A & USB-C CHARGING PORT
- DATA / PHONE JACK BOX WITH 1" CONDUIT & PULL STRING UP TO CEILING SPACE (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
- WIRELESS ACCESS POINT, CEILING MOUNTED
- FLOOR RECEPTACLE
- FLOOR DATA
- DISCONNECT
- FUSED DISCONNECT
- FUSED SWITCH
- STARTER / DISCONNECT
- TIE INTO EXISTING

POWER PLAN GENERAL NOTES:

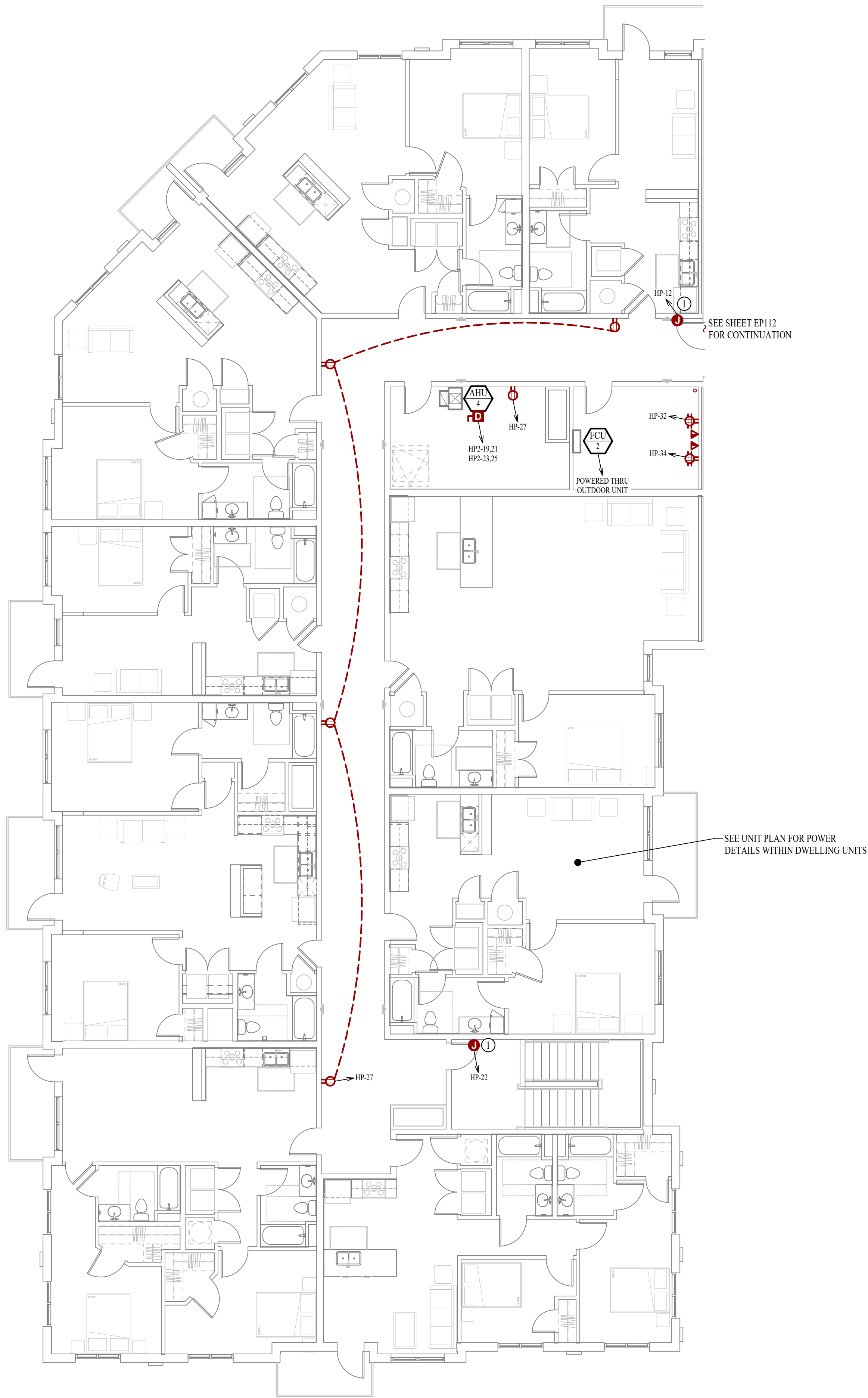
- SEE E500 & E600 SERIES SHEETS FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.

POWER PLAN KEY NOTES:

- POWER FOR MAG HOLD. WIRE THRU FIRE ALARM.



KEY PLAN
SCALE: NTS



POWER PLAN - THIRD FLOOR - AREA A
SCALE: 1/8" = 1'-0"

POWER PLAN SYMBOL LEGEND

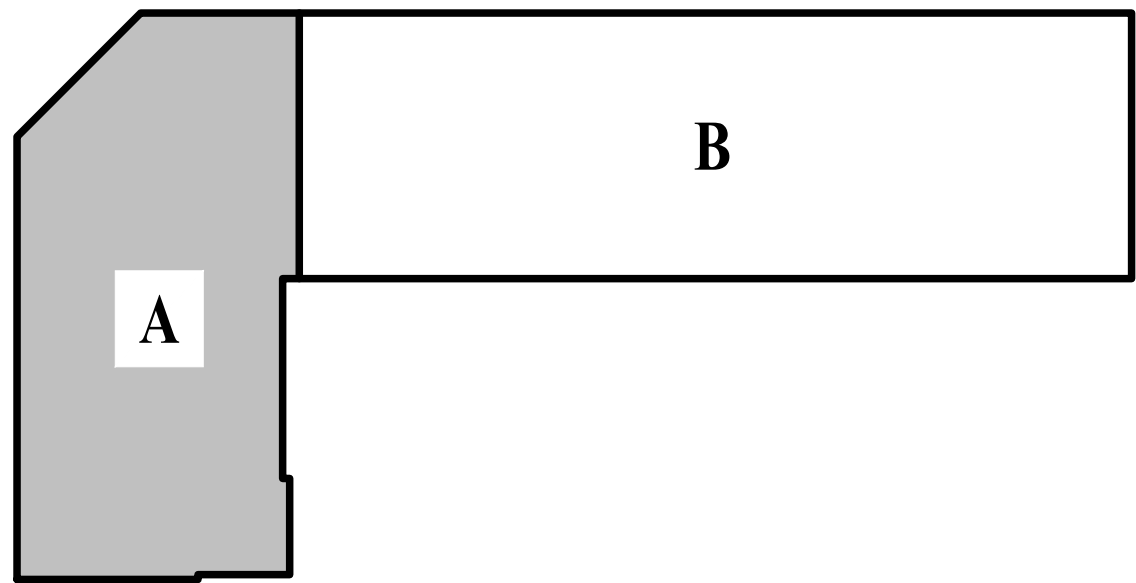
- CIRCUIT WIRING
- CIRCUIT TAG
- JUNCTION BOX
- RECEPTACLE
INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX
(STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
"WP" = WEATHERPROOF OUTDOOR RECEPTACLE
"AW" = ABOVE WINDOW RECEPTACLE
"AC" = ABOVE CEILING RECEPTACLE
"EX" = EXISTING RECEPTACLE TO REMAIN
- GFCI DUPLEX CONVENIENCE RECEPTACLE
- 208V RECEPTACLE
- QUADPLEX CONVENIENCE RECEPTACLE
- USB OUTLET
WITH USB-A & USB-C CHARGING PORT
- DATA / PHONE JACK
BOX WITH 1" CONDUIT & PULL STRING UP TO CEILING SPACE
(STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
- WIRELESS ACCESS POINT, CEILING MOUNTED
- FLOOR RECEPTACLE
- FLOOR DATA
- DISCONNECT
- FUSED DISCONNECT
- FUSED SWITCH
- STARTER / DISCONNECT
- TIE INTO EXISTING

POWER PLAN GENERAL NOTES:

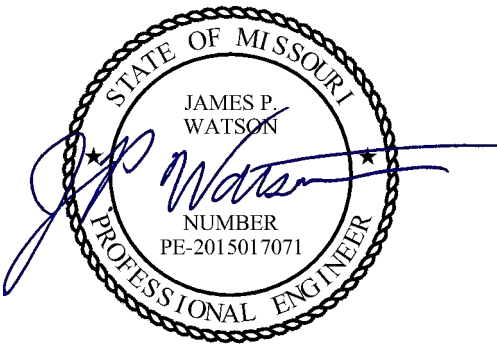
- SEE E500 & E600 SERIES SHEETS FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.

POWER PLAN KEY NOTES:

- POWER FOR MAG HOLD. WIRE THRU FIRE ALARM.



KEY PLAN
SCALE: NTS



James Watson, P.E. January 25, 2024
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J2 DESIGN:	JAP

ISSUE TITLE	DATE
CITY SUBMITTAL	01 / 25 / 2024

Mechanical - Electrical - Plumbing Design Drawings for

The Village at Discovery - Lot 4

Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

POWER PLAN -
THIRD FLOOR -
AREA A

SHEET NUMBER

EP103

POWER PLAN SYMBOL LEGEND

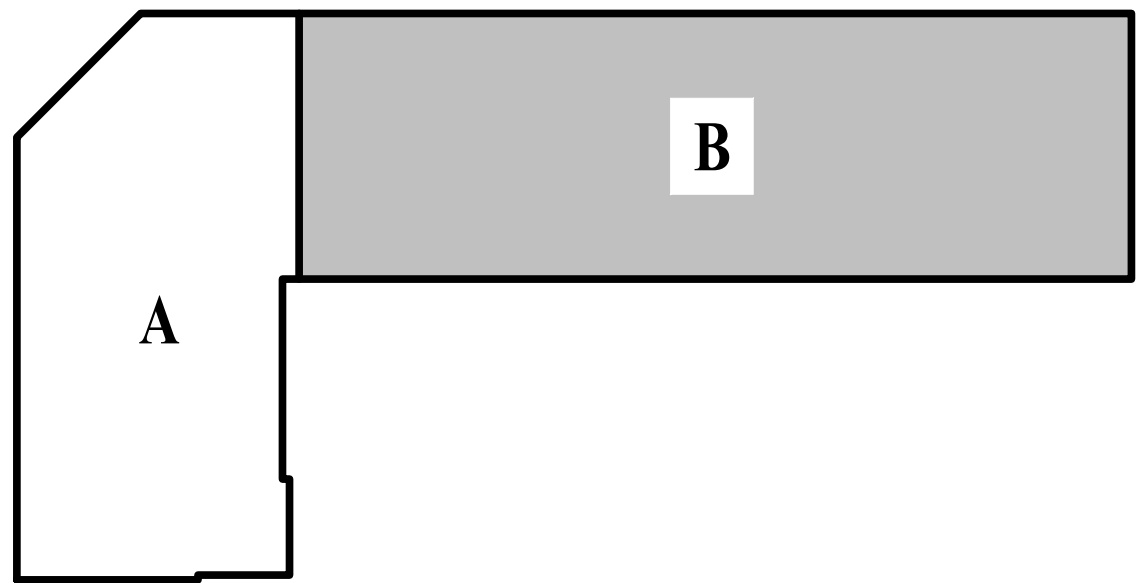


POWER PLAN GENERAL NOTES:

- SEE E500 & E600 SERIES SHEETS FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.
- CONTRACTOR TO PROVIDE SELECTIVE COORDINATION STUDY PRIOR TO ORDERING ELECTRICAL EQUIPMENT. CONTRACTOR TO ENSURE 10KA SCCR OR LESS AT ELEVATOR DISCONNECT.
- ELEVATOR CONTRACTOR TO PROVIDE CONTROLLER CAPABLE OF 10KA SCCR.

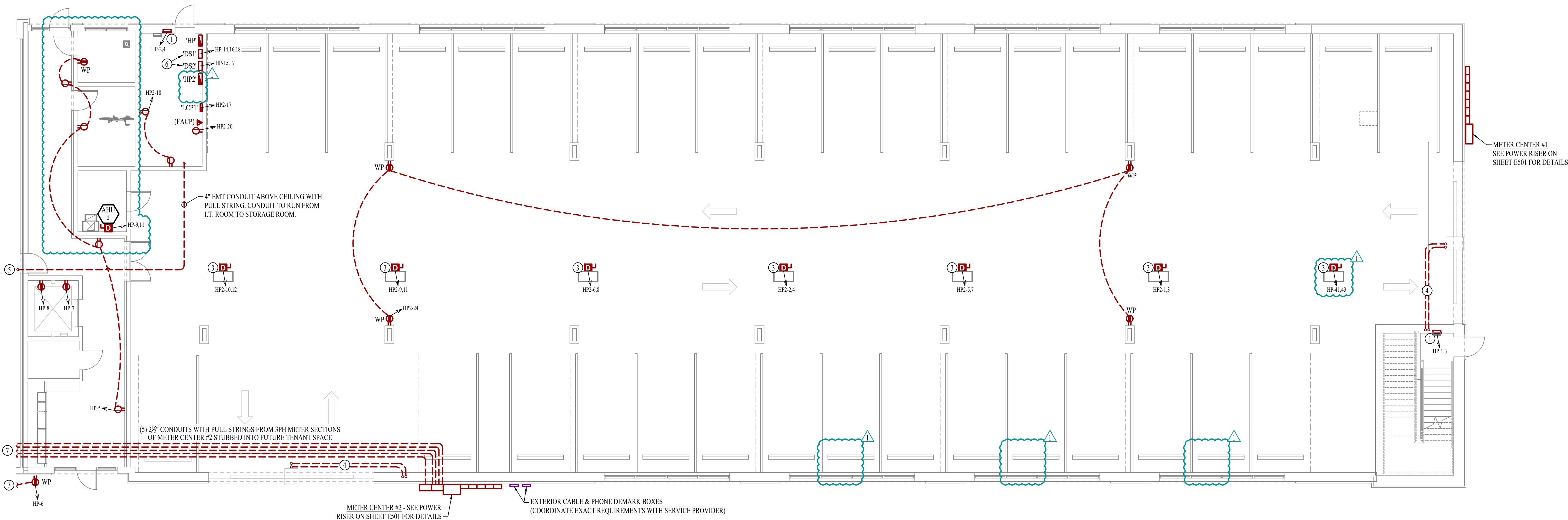
POWER PLAN KEY NOTES:

- RECESSED WALL HEATER (EQUAL TO MARLEY #VFK408FC) WITH BACK BOX FOR RECESSED INSTALL.
- 40A LEVEL 2 DUAL CONNECTOR EV CHARGING STATION (EQUAL TO JUICEBAR #JB3.0-402).
- POWER FOR PLENUM HEATER. COORDINATE WITH HVAC CONTRACTOR.
- (2) ½" UNDERGROUND PVC CONDUITS FOR POWER & COMMUNICATION FOR FUTURE ACCESS CONTROL/GATE OPERATOR. COORDINATE WITH G.C.
- 4" EMT CONDUIT WITH PULL STRING STUBBED UP TO LT. ROOM.
- DS1 208V 3-PH FUSED DISCONNECT FOR ELEVATOR. FUSE AT 60 AMPS. PROVIDE (2) NORMALLY OPEN CONTACTS & (2) NORMALLY CLOSED CONTACTS. DS2 FUSED DISCONNECT FOR ELEVATOR CAB LIGHTS. FUSE AT 15 AMPS.
- SEE SHEET EP101 FOR CONTINUATION.



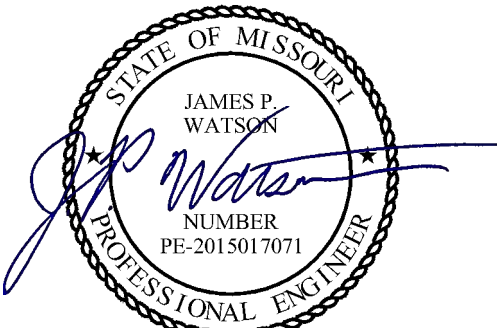
KEY PLAN

SCALE: NTS

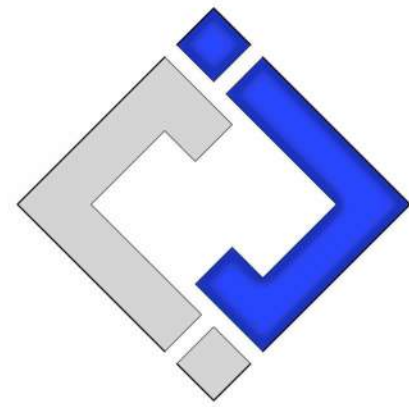


POWER PLAN - FIRST FLOOR - AREA B

SCALE: 1/8" = 1'-0"



James Watson, P.E. October 21, 2024
PE-2015017071
MO Certificate of Authority # 2018029680



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REVISION 1 10 / 21 / 2024

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Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

POWER PLAN -
FIRST FLOOR -
AREA B

SHEET NUMBER

EP111

POWER PLAN SYMBOL LEGEND

- CIRCUIT WIRING
- CIRCUIT TAG
- JUNCTION BOX
- RECEPTACLE

INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX
(STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)

"WP" = WEATHERPROOF OUTDOOR RECEPTACLE

"AW" = ABOVE WINDOW RECEPTACLE

"AC" = ABOVE CEILING RECEPTACLE

"EX" = EXISTING RECEPTACLE TO REMAIN
- GFCI DUPLEX CONVENIENCE RECEPTACLE
- 208V RECEPTACLE
- QUADPLEX CONVENIENCE RECEPTACLE
- USB OUTLET

WITH USB-A & USB-C CHARGING PORT
- DATA / PHONE JACK

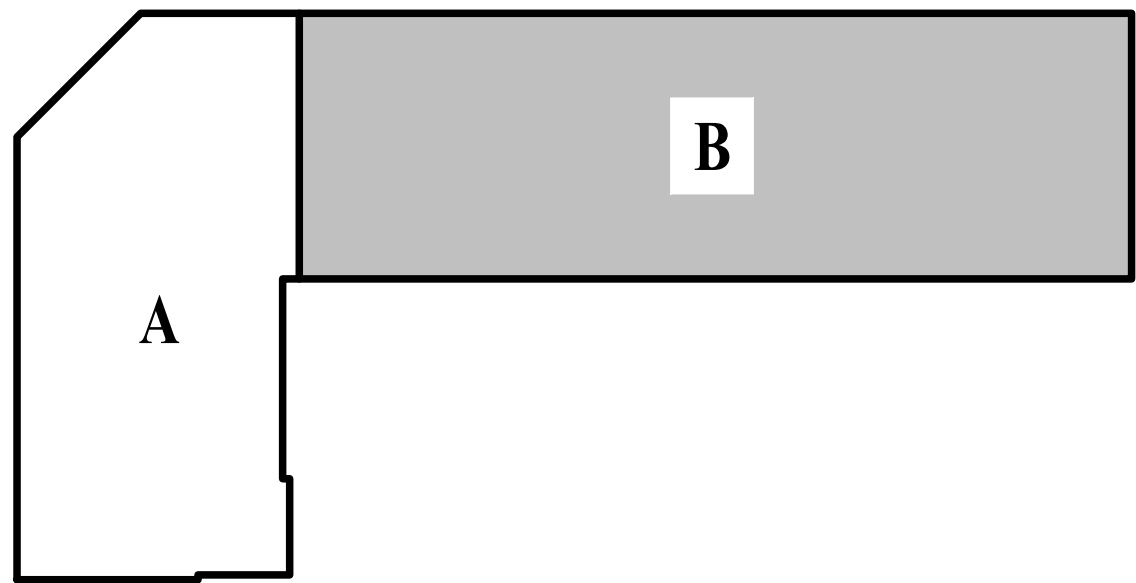
BOX WITH 1" CONDUIT & PULL STRING UP TO CEILING SPACE
(STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
- WIRELESS ACCESS POINT, CEILING MOUNTED
- FLOOR RECEPTACLE
- FLOOR DATA
- DISCONNECT
- FUSED DISCONNECT
- FUSED SWITCH
- STARTER / DISCONNECT
- TIE INTO EXISTING

POWER PLAN GENERAL NOTES:

1. SEE E500 & E600 SERIES SHEETS FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.

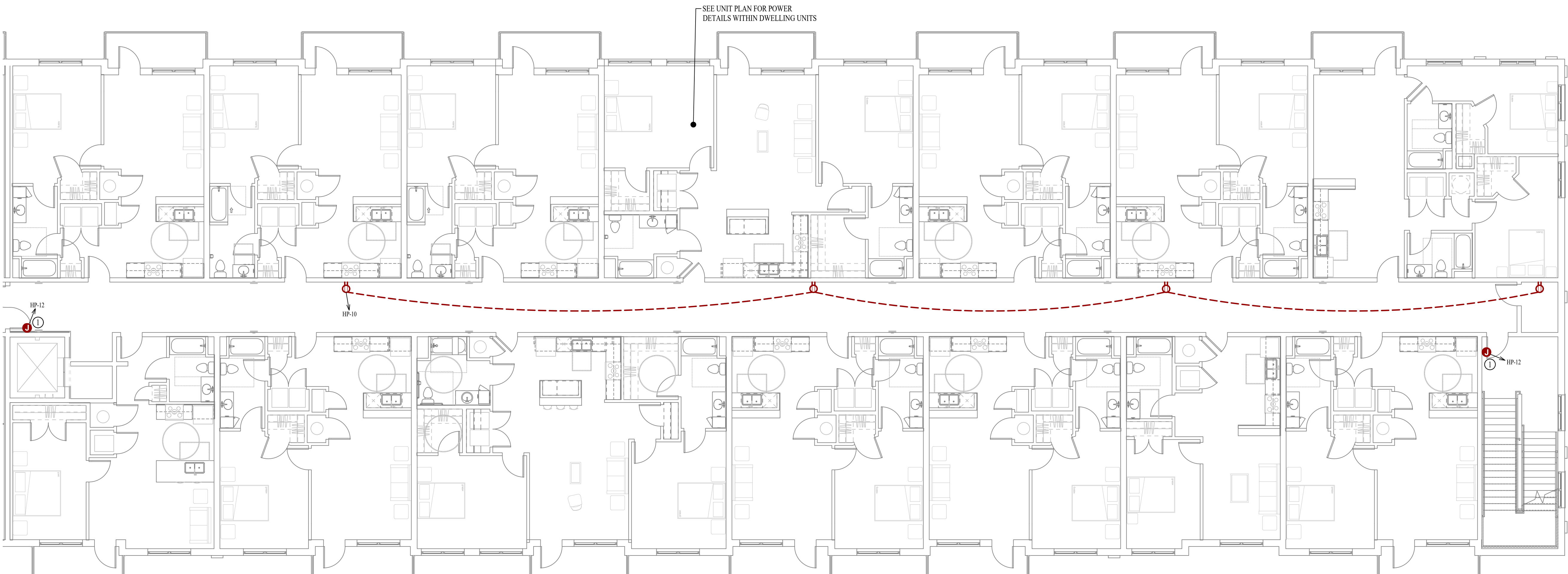
POWER PLAN KEY NOTES:

- ① POWER FOR MAG HOLD. WIRE THRU FIRE ALARM.



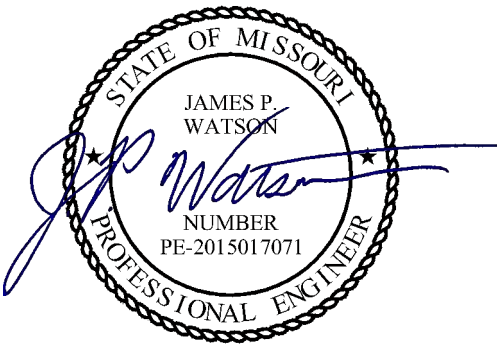
KEY PLAN

SCALE: NTS



POWER PLAN - SECOND FLOOR - AREA B

SCALE: 1/8" = 1'-0"



James Watson, P.E. January 25, 2024
PE-2015017071
MO Certificate of Authority # 2018029680



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J2 PROJECT No: J21007

J2 DESIGN: JAP

ISSUE TITLE DATE

CITY SUBMITTAL 01 / 25 / 2024

POWER PLAN SYMBOL LEGEND

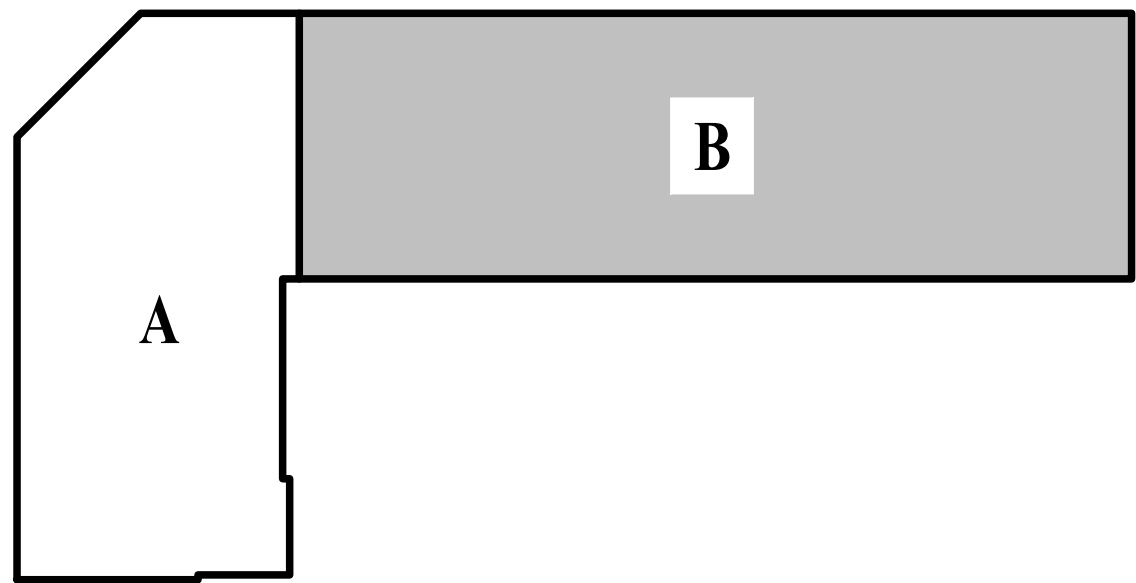
- CIRCUIT WIRING
- PX-XX
- JUNCTION BOX
- RECEPTACLE
- INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX
(STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
- "WP" = WEATHERPROOF OUTDOOR RECEPTACLE
- "AW" = ABOVE WINDOW RECEPTACLE
- "AC" = ABOVE CEILING RECEPTACLE
- "EX" = EXISTING RECEPTACLE TO REMAIN
- GFCI DUPLEX CONVENIENCE RECEPTACLE
- 208V RECEPTACLE
- QUADPLEX CONVENIENCE RECEPTACLE
- USB OUTLET
- WITH USB-A & USB-C CHARGING PORT
- DATA / PHONE JACK
- BOX WITH 1" CONDUIT & PULL STRING UP TO CEILING SPACE
(STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
- WIRELESS ACCESS POINT, CEILING MOUNTED
- FLOOR RECEPTACLE
- FLOOR DATA
- DISCONNECT
- FUSED DISCONNECT
- FUSED SWITCH
- STARTER / DISCONNECT
- TIE INTO EXISTING

POWER PLAN GENERAL NOTES:

1. SEE E500 & E600 SERIES SHEETS FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.

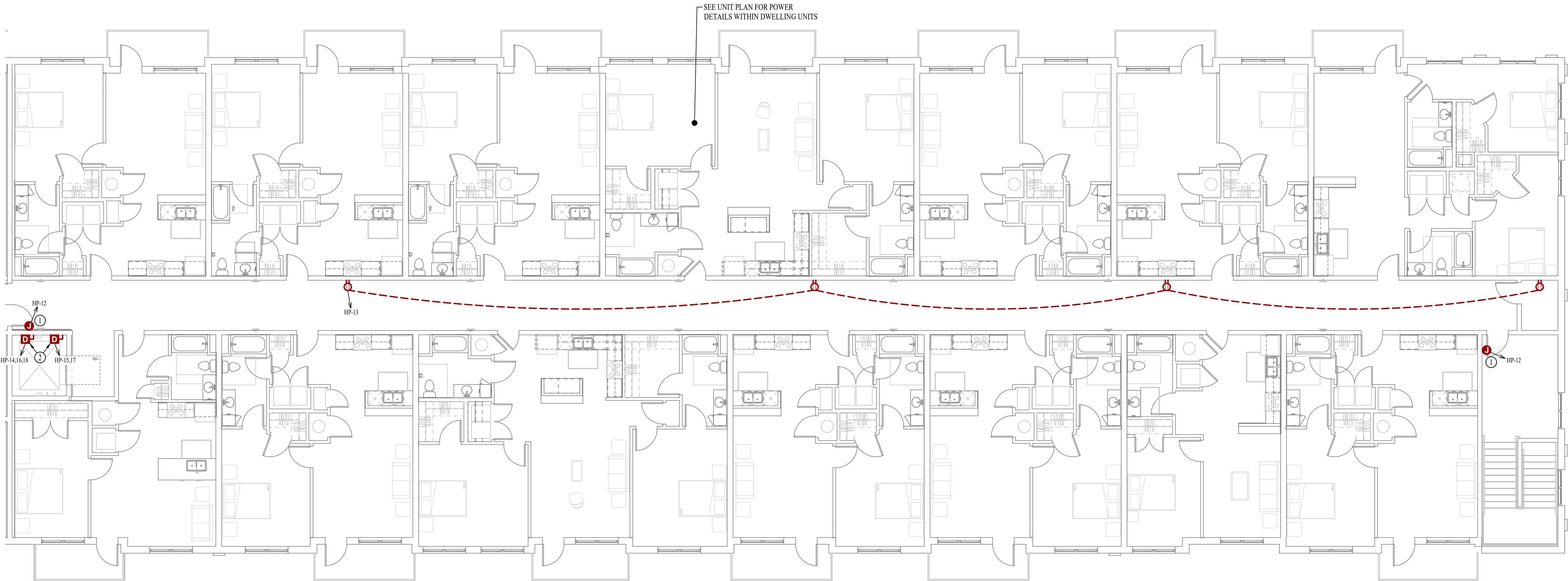
POWER PLAN KEY NOTES:

- ① POWER FOR MAG HOLD. WIRE THRU FIRE ALARM.
- ② ELEVATOR SERVICE DISCONNECT(S), WIRE THRU 'DS1' / 'DS2' IN MECHANICAL ROOM (SEE SHEET EP111); COORDINATE EXACT LOCATION & REQUIREMENTS WITH ELEVATOR EQUIPMENT SUPPLIER.



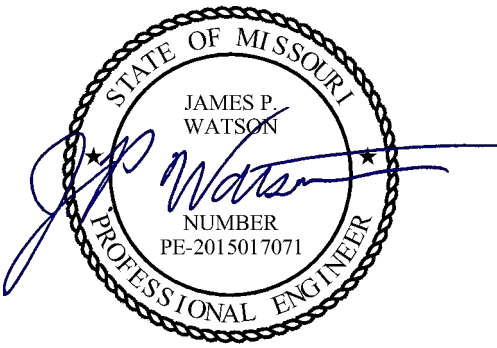
KEY PLAN

SCALE: NTS



POWER PLAN - THIRD FLOOR - AREA B

SCALE: 1/8" = 1'-0"



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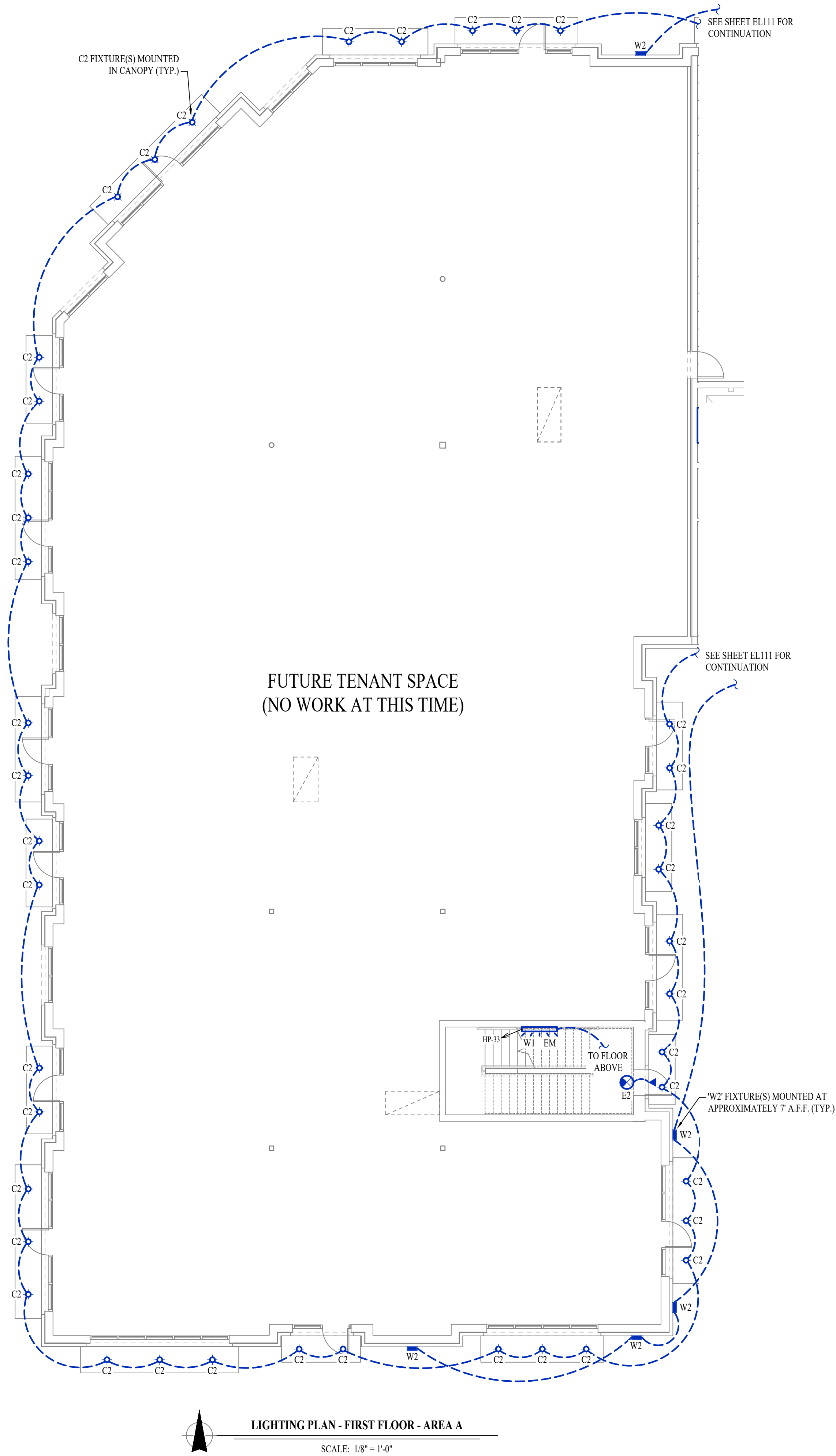
2400 Bluff Creek Drive, Suite 101
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J2 PROJECT No: J21007

J2 DESIGN: JAP

ISSUE TITLE DATE

CITY SUBMITTAL 01 / 25 / 2024



LIGHTING PLAN SYMBOL LEGEND

- X1

EM

NL
- X1" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)
- LIGHTING FIXTURE
- "EM" INDICATES EMERGENCY BATTERY BACKUP
- "NL" INDICATES UN-SWITCHED NIGHT LIGHT
- EXIT LIGHT

INDICATES REQUIRED REMOTE HEAD
- EMERGENCY EGRESS LIGHT

SWITCH (WALL MOUNTED)

SWITCH TYPE:
 - 3 = 3-WAY
 - 4 = 4-WAY
 - OP = PASSIVE INFRARED OCCUPANCY SENSOR
 - OU = ULTRASONIC OCCUPANCY SENSOR
 - OT = DUAL-TECHNOLOGY OCCUPANCY SENSOR
 - VP = PASSIVE INFRARED VACANCY SENSOR
 - VU = ULTRASONIC VACANCY SENSOR
 - VT = DUAL-TECHNOLOGY VACANCY SENSOR
 - M = MOMENTARY SWITCH
 - SS = SCENE SWITCH
- DIMMER SWITCH (WALL MOUNTED)

SWITCH TYPE:
 - SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS
- SWITCH (CEILING MOUNTED)

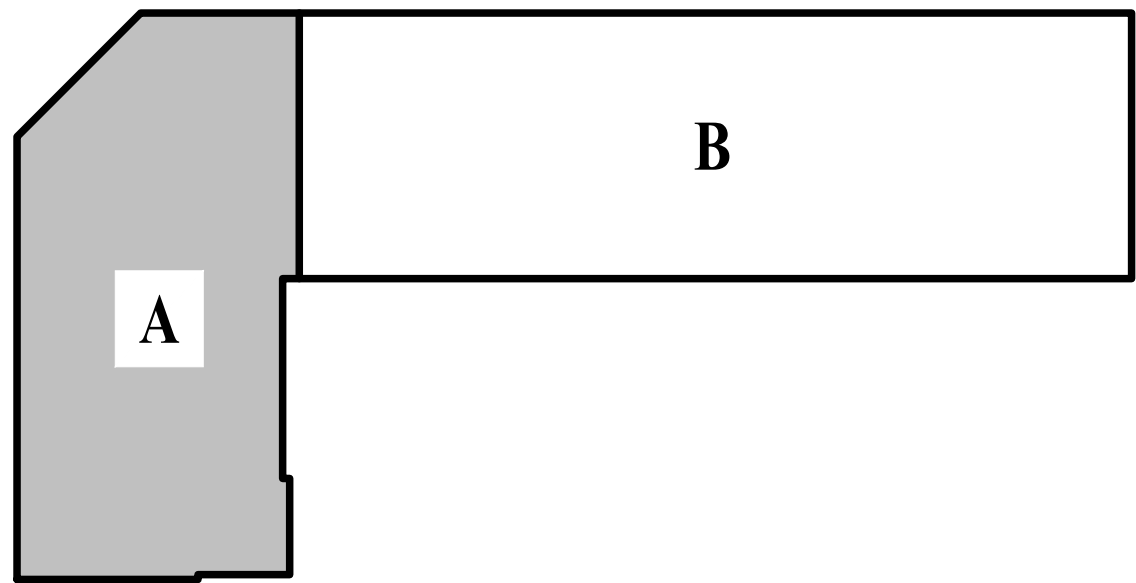
SWITCH TYPE:
 - SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS
- POWER PACK
- OCCUPANCY SENSOR

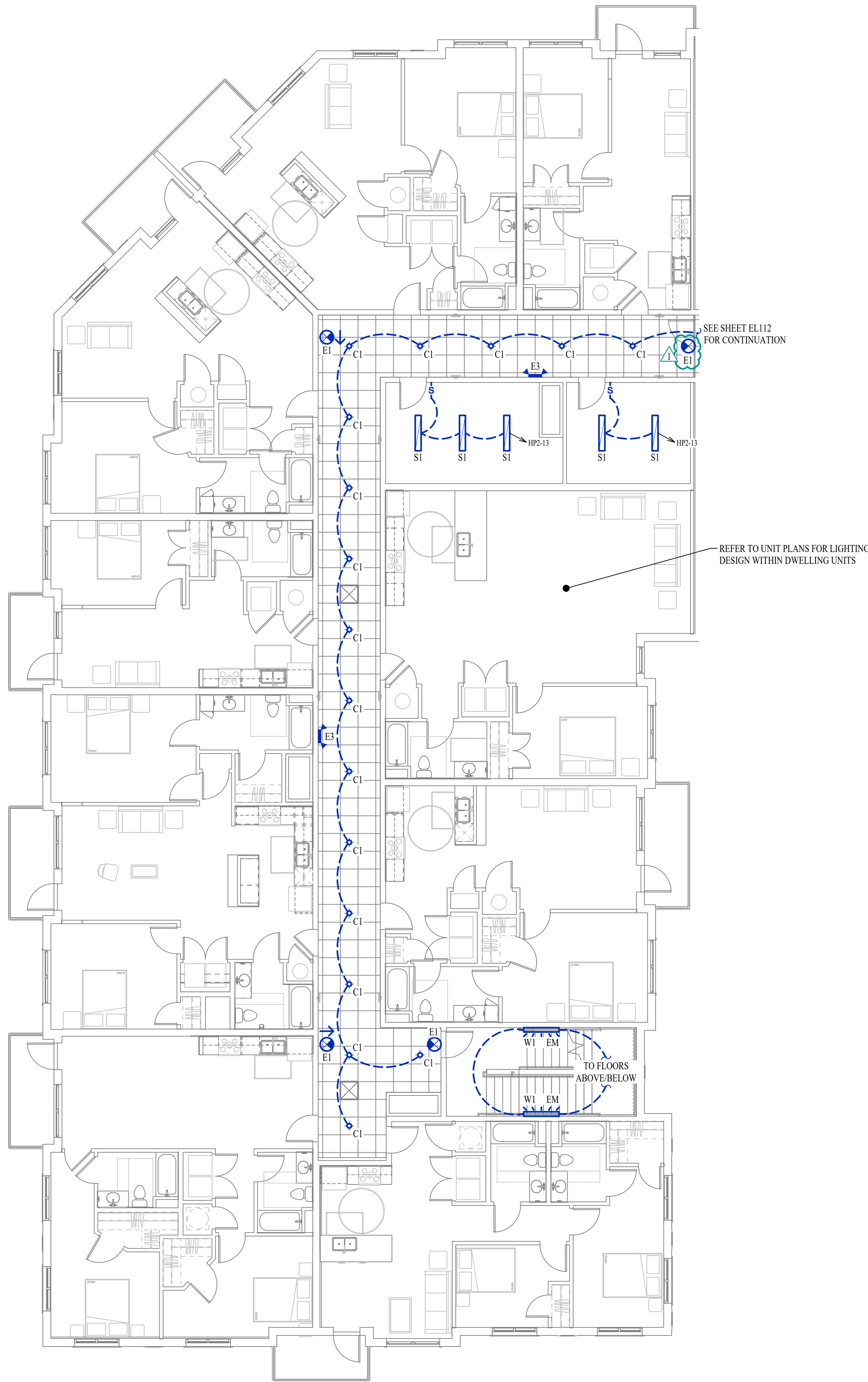
- AUTO FULL-ON (OR 50% IF NOTED)
 - AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
 - WITH MANUAL OVERRIDE CONTROL (IF NOTED)
- VACANCY SENSOR

- MANUAL FULL-ON
 - AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
 - WITH MANUAL OVERRIDE CONTROL (IF NOTED)

LIGHTING PLAN GENERAL NOTES:

- SEE E500 & E600 SERIES SHEETS FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.
- OCCUPANCY / VACANCY SENSOR QUANTITIES AND GENERAL LOCATIONS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO PROVIDE AND INSTALL SENSOR WITH SPACING PER MANUFACTURER SPECIFICATIONS AND INCLUDE ADDITIONAL SENSORS IF NECESSARY. CEILING-MOUNTED SENSORS SHALL BE INSTALLED WITHIN MANUFACTURE'S ACCEPTABLE MOUNTING HEIGHT RANGE.
- "W2" UP/DOWN WALL-SCONCE FIXTURES SHALL BE DIRECTED ONTO BUILDING FACADE TO MINIMIZE ANY UPWARD GLARE IN COMPLIANCE WITH CITY OF LEE'S SUMMIT UDC 8-270(B) ACCENT LIGHTING.





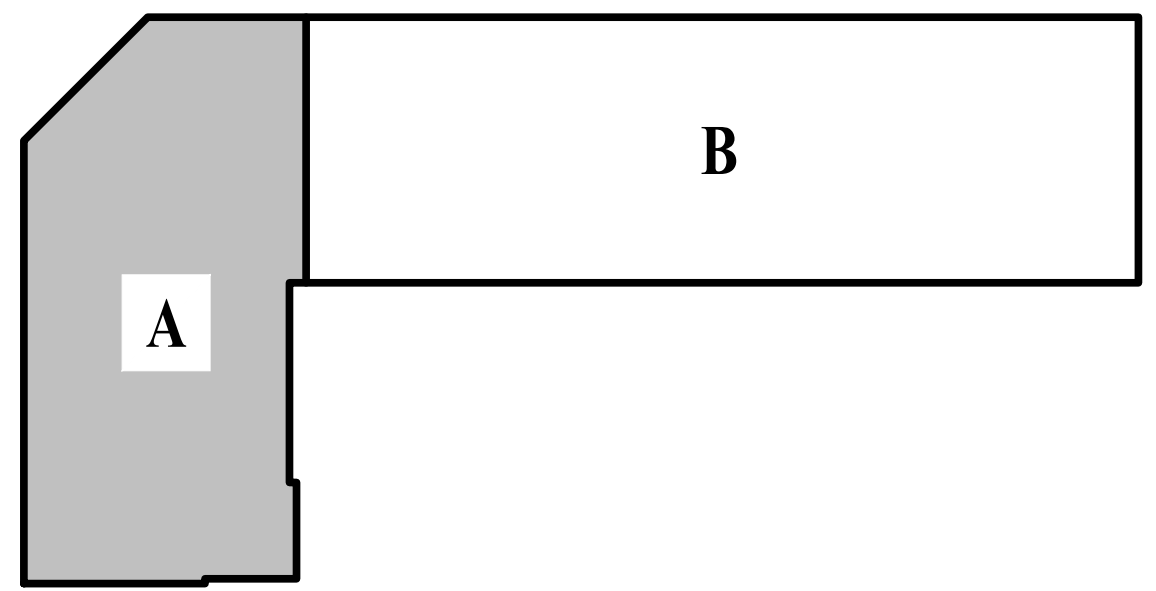
LIGHTING PLAN - SECOND FLOOR - AREA A
SCALE: 1/8" = 1'-0"

LIGHTING PLAN SYMBOL LEGEND

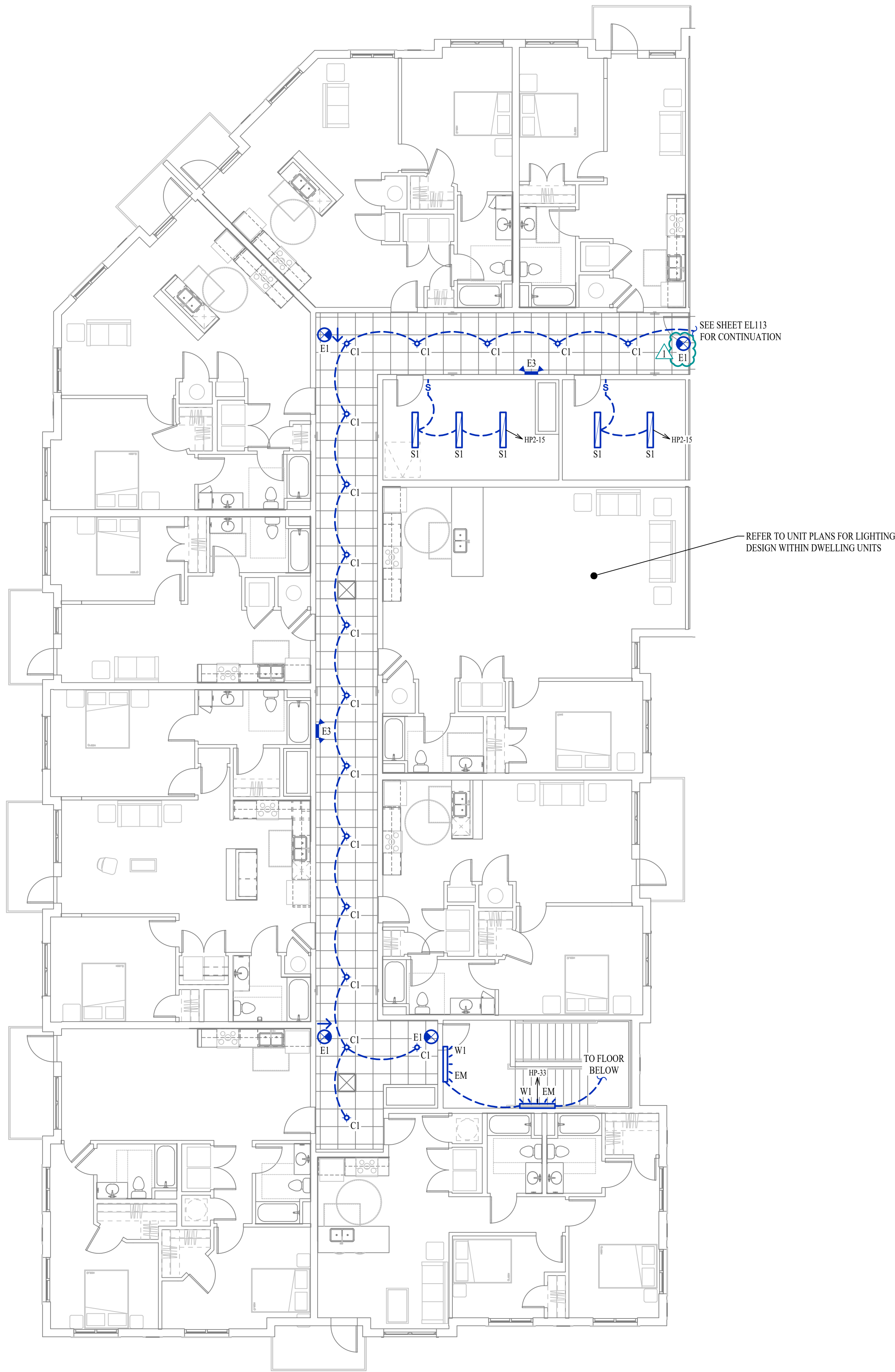
- X1 — "X1" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)
LIGHTING FIXTURE
EM — "EM" INDICATES EMERGENCY BATTERY BACKUP
NL — "NL" INDICATES UN-SWITCHED NIGHT LIGHT
- EXIT LIGHT
INDICATES REQUIRED REMOTE HEAD
- EMERGENCY EGRESS LIGHT
- SWITCH (WALL MOUNTED)
SWITCH TYPE:
• 3 = 3-WAY
• 4 = 4-WAY
• OP = PASSIVE INFRARED OCCUPANCY SENSOR
• OU = ULTRASONIC OCCUPANCY SENSOR
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• VP = PASSIVE INFRARED VACANCY SENSOR
• VU = ULTRASONIC VACANCY SENSOR
• VT = DUAL-TECHNOLOGY VACANCY SENSOR
• M = MOMENTARY SWITCH
• SS = SCENE SWITCH
- DIMMER SWITCH (WALL MOUNTED)
SWITCH TYPE:
• SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS
- SWITCH (CEILING MOUNTED)
SWITCH TYPE:
• SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS
- POWER PACK
- OCCUPANCY SENSOR**
• AUTO FULL-ON (OR 50% IF NOTED)
• AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
• WITH MANUAL OVERRIDE CONTROL (IF NOTED)
- VACANCY SENSOR**
• MANUAL FULL-ON
• AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
• WITH MANUAL OVERRIDE CONTROL (IF NOTED)

LIGHTING PLAN GENERAL NOTES:

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KEY PLAN
SCALE: NTS



LIGHTING PLAN - THIRD FLOOR - AREA A
SCALE: 1/8" = 1'-0"

LIGHTING PLAN SYMBOL LEGEND

- X1

EM

NL
- "X1" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)
- LIGHTING FIXTURE
- "EM" INDICATES EMERGENCY BATTERY BACKUP
- "NL" INDICATES UN-SWITCHED NIGHT LIGHT
- EXIT LIGHT

INDICATES REQUIRED REMOTE HEAD
- EMERGENCY EGRESS LIGHT

SWITCH (WALL MOUNTED)

SWITCH TYPE:
 - 3 = 3-WAY
 - 4 = 4-WAY
 - OP = PASSIVE INFRARED OCCUPANCY SENSOR
 - OU = ULTRASONIC OCCUPANCY SENSOR
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 - VP = PASSIVE INFRARED VACANCY SENSOR
 - VU = ULTRASONIC VACANCY SENSOR
 - VT = DUAL-TECHNOLOGY VACANCY SENSOR
 - M = MOMENTARY SWITCH
 - SS = SCENE SWITCH
- DIMMER SWITCH (WALL MOUNTED)

SWITCH TYPE:
 - SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS
- SWITCH (CEILING MOUNTED)

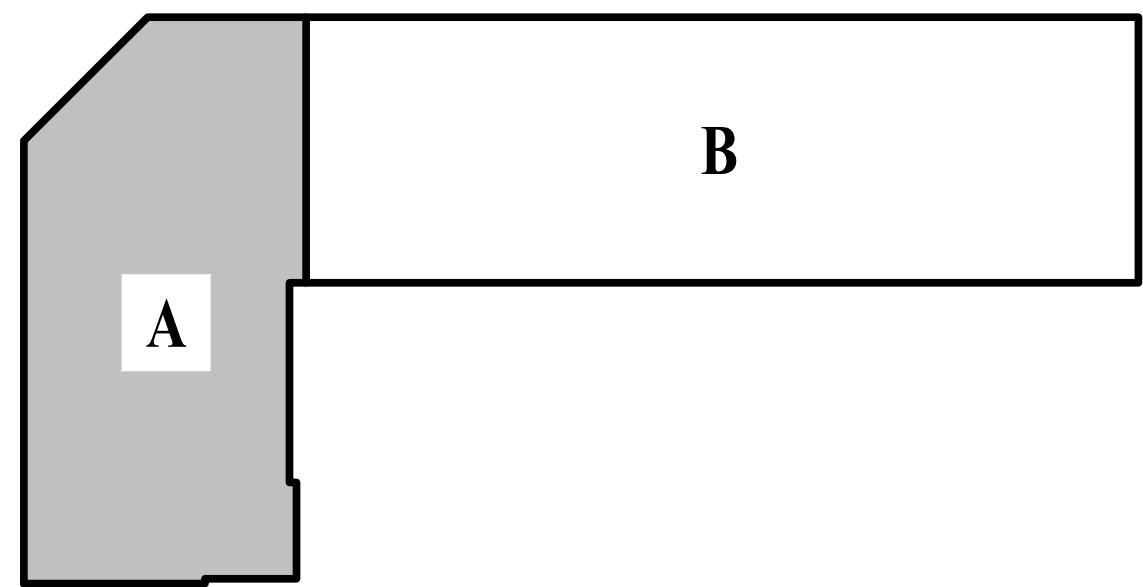
SWITCH TYPE:
 - SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS
- POWER PACK
- OCCUPANCY SENSOR

- AUTO FULL-ON (OR 50% IF NOTED)
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LIGHTING PLAN GENERAL NOTES:

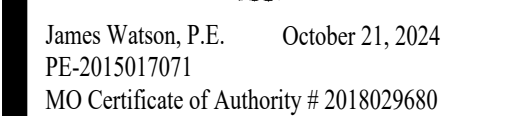
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KEY PLAN
SCALE: NTS

J2 PROJECT No:	J21007
J2 DESIGN:	JAP

ISSUE TITLE	DATE
CITY SUBMITTAL	01 / 25 / 2024
REVISION 1	10 / 21 / 2024



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ISSUE TITLE	DATE
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Mechanical - Electrical - Plumbing Design Drawings for

The Village at Discovery - Lot 4

**Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO**

**LIGHTING PLAN -
FIRST FLOOR -
AREA B**

EL111

XI ← "XI" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)

 LIGHTING FIXTURE
 ← "EM" INDICATES EMERGENCY BATTERY BACKUP
 ← "NL" INDICATES UN-SWITCHED NIGHT LIGHT

 EXIT LIGHT
 → INDICATES REQUIRED REMOTE HEAD

 EMERGENCY EGRESS LIGHT

 SWITCH (WALL MOUNTED)

SWITCH TYPE:

- 3 = 3-WAY
- 4 = 4-WAY
- OP = PASSIVE INFRARED OCCUPANCY SENSOR
- OU = ULTRASONIC OCCUPANCY SENSOR
- OT = DUAL-TECHNOLOGY OCCUPANCY SENSOR
- VP = PASSIVE INFRARED VACANCY SENSOR
- VU = ULTRASONIC VACANCY SENSOR
- VT = DUAL-TECHNOLOGY VACANCY SENSOR
- M = MOMENTARY SWITCH
- SS = SCENE SWITCH

 DIMMER SWITCH (WALL MOUNTED)

SWITCH TYPE:

- SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS

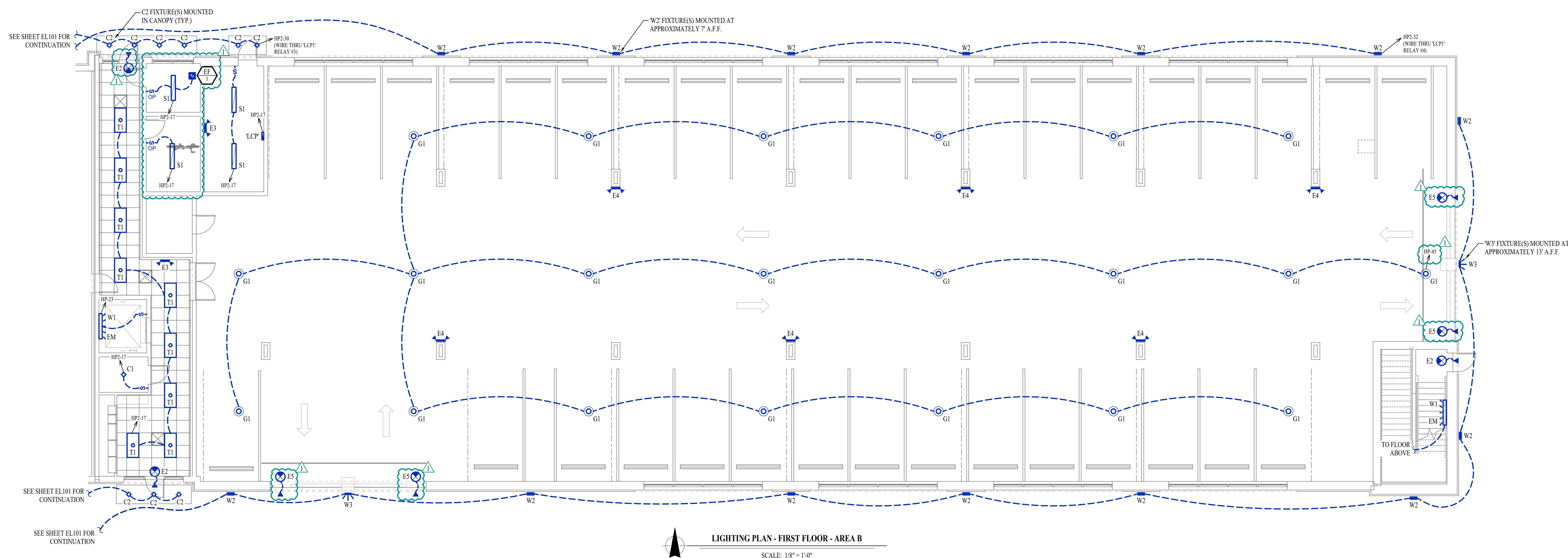
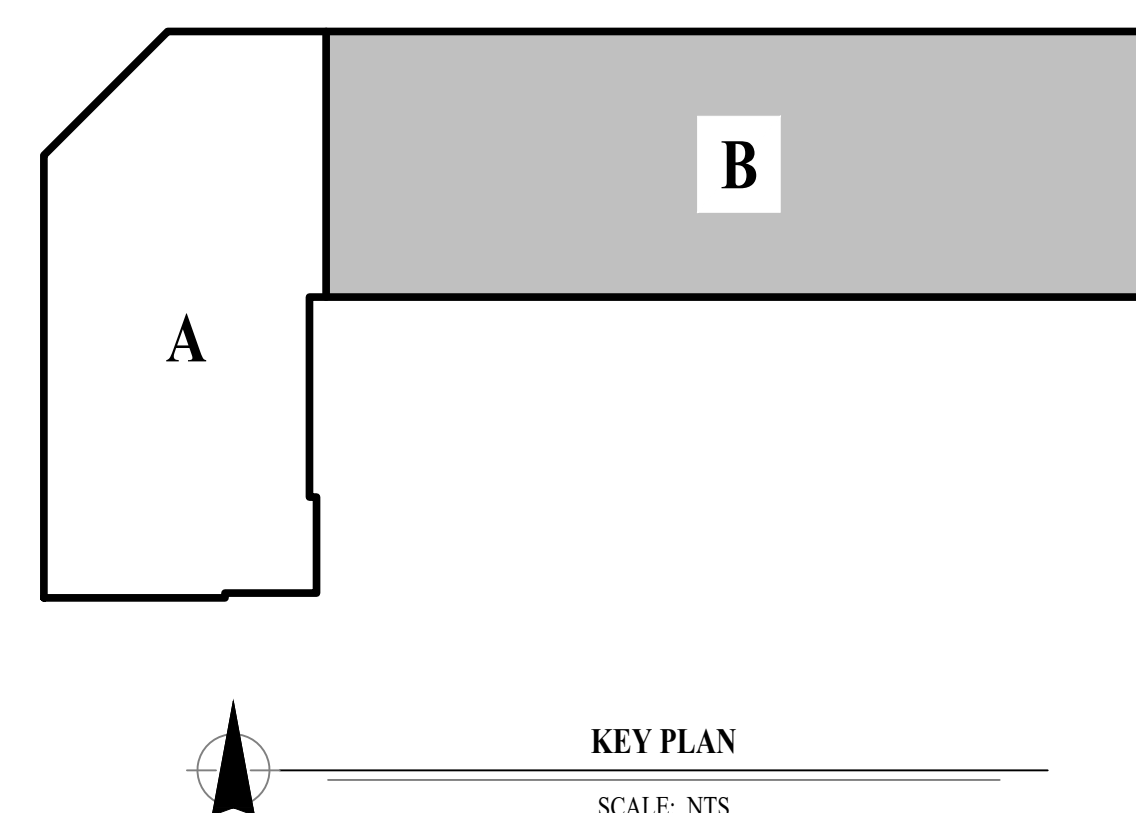
 SWITCH (CEILING MOUNTED)

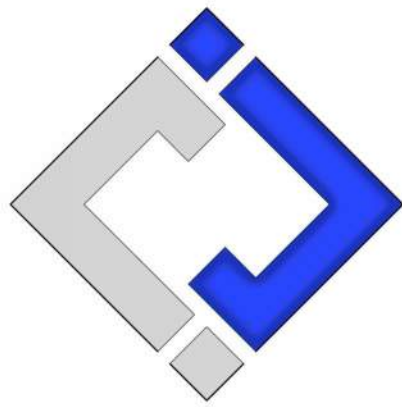
SWITCH TYPE:

- SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS

 POWER PACK

1. SEE E500 & E600 SERIES SHEETS FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.
2. OCCUPANCY / VACANCY SENSOR QUANTITIES AND GENERAL LOCATIONS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO PROVIDE AND INSTALL SENSOR WITH SPACING PER MANUFACTURER SPECIFICATIONS AND INCLUDE ADDITIONAL SENSORS IF NECESSARY. CEILING-MOUNTED SENSORS SHALL BE INSTALLED WITHIN MANUFACTURER'S ACCEPTABLE MOUNTING HEIGHT RANGE.
3. 'W2' UPDOWN WALL-SCENCE FIXTURES SHALL BE DIRECTED ONTO BUILDING FACADE TO MINIMIZE ANY UPWARD GLARE IN COMPLIANCE WITH CITY OF LEE'S SUMMIT UDC 8-270(b) ACCENT LIGHTING





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J2 PROJECT No: J21007

J2 DESIGN: JAP

ISSUE TITLE DATE

CITY SUBMITTAL 01 / 25 / 2024

REVISION 1 10 / 21 / 2024

Mechanical - Electrical - Plumbing Design Drawings for

The Village at Discovery - Lot 4

Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

LIGHTING PLAN -
SECOND FLOOR -
AREA B

SHEET NUMBER

EL112

LIGHTING PLAN SYMBOL LEGEND

- XI ← "XI" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)
LIGHTING FIXTURE
EM ← "EM" INDICATES EMERGENCY BATTERY BACKUP
NL ← "NL" INDICATES UN-SWITCHED NIGHT LIGHT
- EXIT LIGHT
INDICATES REQUIRED REMOTE HEAD
- EMERGENCY EGRESS LIGHT
- S_X ← SWITCH (WALL MOUNTED)
SWITCH TYPE:
• 3 = 3-WAY
• 4 = 4-WAY
• OP = PASSIVE INFRARED OCCUPANCY SENSOR
• OU = ULTRASONIC OCCUPANCY SENSOR
• OT = DUAL-TECHNOLOGY OCCUPANCY SENSOR
• VP = PASSIVE INFRARED VACANCY SENSOR
• VU = ULTRASONIC VACANCY SENSOR
• VT = DUAL-TECHNOLOGY VACANCY SENSOR
• M = MOMENTARY SWITCH
• SS = SCENE SWITCH
- D_X ← DIMMER SWITCH (WALL MOUNTED)
SWITCH TYPE:
• SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS
- S_X ← SWITCH (CEILING MOUNTED)
SWITCH TYPE:
• SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS
- PP POWER PACK

OCCUPANCY SENSOR

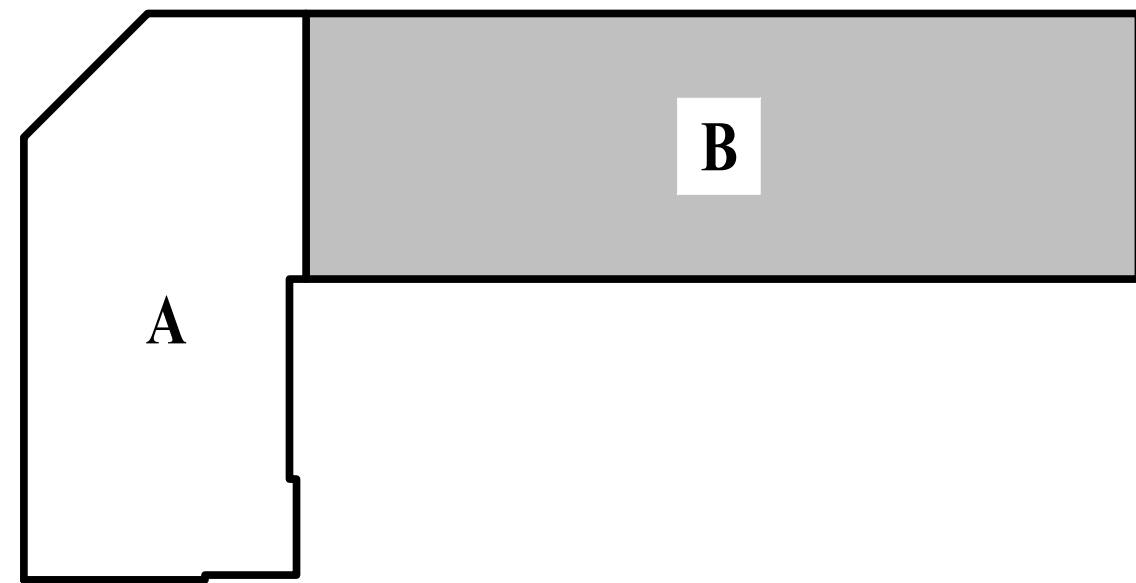
- AUTO FULL-ON (OR 50% IF NOTED)
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

VACANCY SENSOR

- MANUAL FULL-ON
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

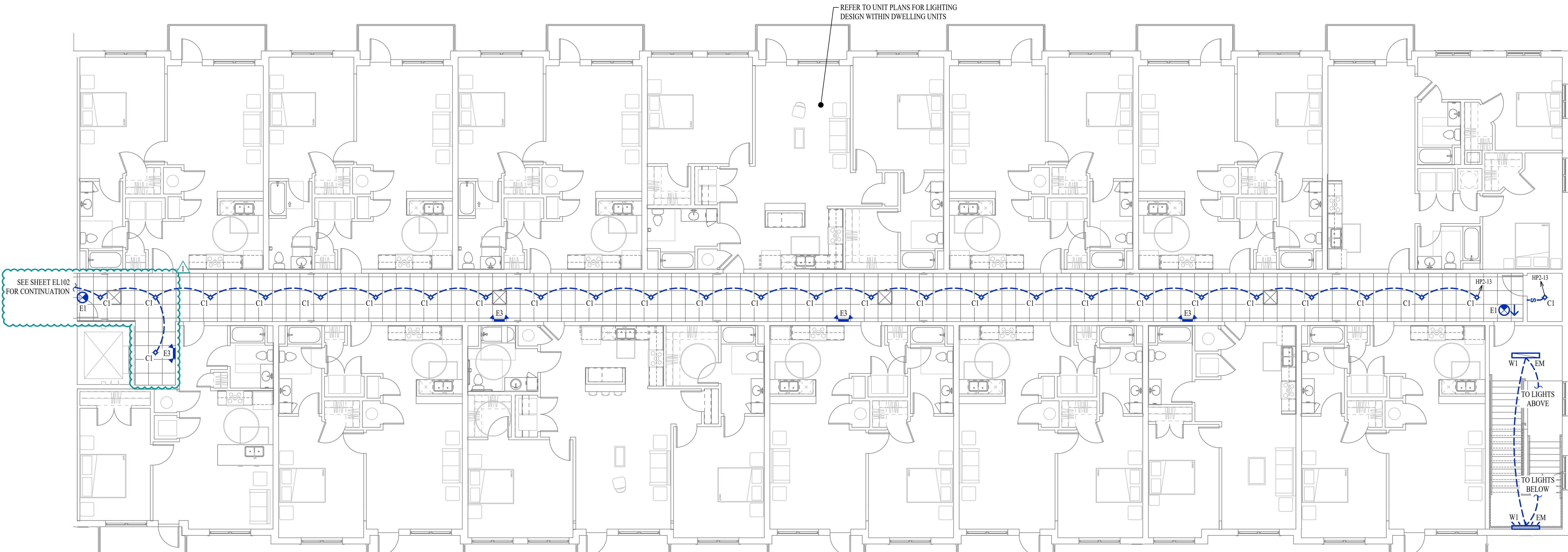
LIGHTING PLAN GENERAL NOTES:

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- OCCUPANCY / VACANCY SENSOR QUANTITIES AND GENERAL LOCATIONS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO PROVIDE AND INSTALL SENSOR WITH SPACING PER MANUFACTURER SPECIFICATIONS AND INCLUDE ADDITIONAL SENSORS IF NECESSARY. CEILING-MOUNTED SENSORS SHALL BE INSTALLED WITHIN MANUFACTURE'S ACCEPTABLE MOUNTING HEIGHT RANGE.



KEY PLAN

SCALE: NTS



LIGHTING PLAN - SECOND FLOOR - AREA B

SCALE: 1/8" = 1'-0"

LIGHTING PLAN SYMBOL LEGEND

- XI

←

"XI" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)
- ←

LIGHTING FIXTURE
- EM

←

"EM" INDICATES EMERGENCY BATTERY BACKUP
- NL

←

"NL" INDICATES UN-SWITCHED NIGHT LIGHT
- ←

EXIT LIGHT
- ←

INDICATES REQUIRED REMOTE HEAD
- ←

EMERGENCY EGRESS LIGHT
- ←

SWITCH (WALL MOUNTED)

SWITCH TYPE:

- 3 = 3-WAY
 - 4 = 4-WAY
 - OP = PASSIVE INFRARED OCCUPANCY SENSOR
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 - VU = ULTRASONIC VACANCY SENSOR
 - VT = DUAL-TECHNOLOGY VACANCY SENSOR
 - M = MOMENTARY SWITCH
 - SS = SCENE SWITCH
- ←

DIMMER SWITCH (WALL MOUNTED)

SWITCH TYPE:

- SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS
- ←

SWITCH (CEILING MOUNTED)

SWITCH TYPE:

- SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS
- ←

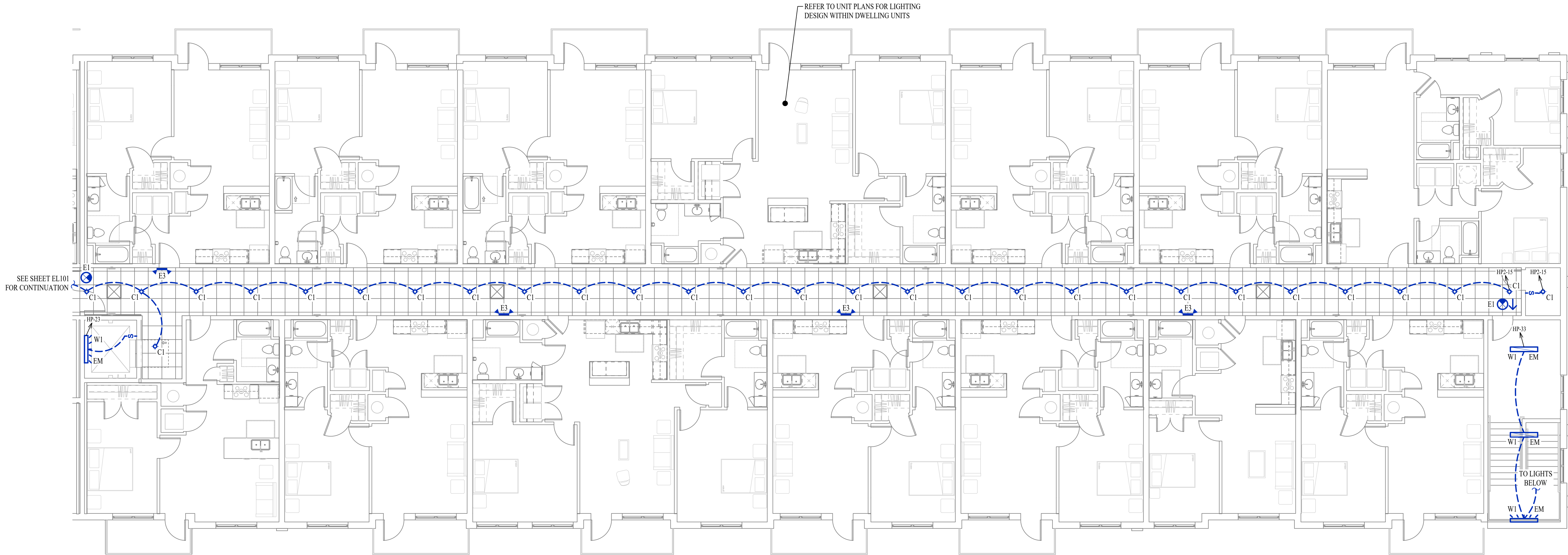
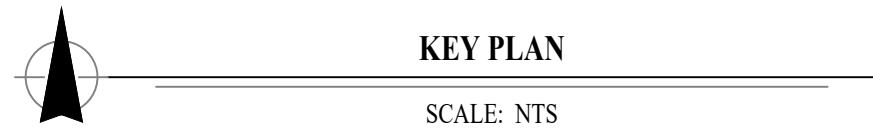
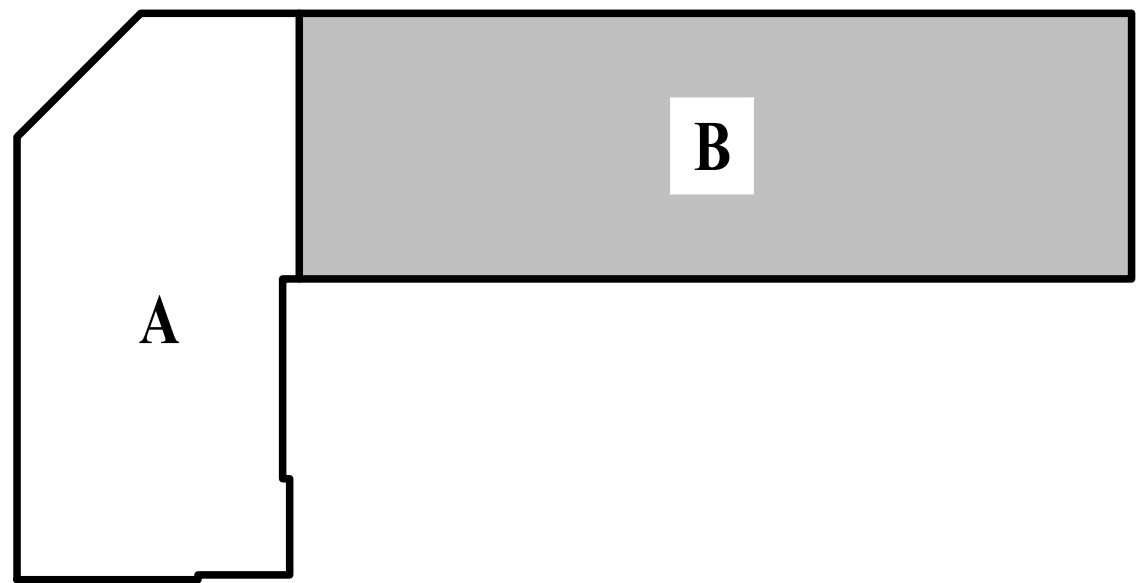
POWER PACK
- OCCUPANCY SENSOR**

- AUTO FULL-ON (OR 50% IF NOTED)
 - AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
 - WITH MANUAL OVERRIDE CONTROL (IF NOTED)
- VACANCY SENSOR**

- MANUAL FULL-ON
 - AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
 - WITH MANUAL OVERRIDE CONTROL (IF NOTED)

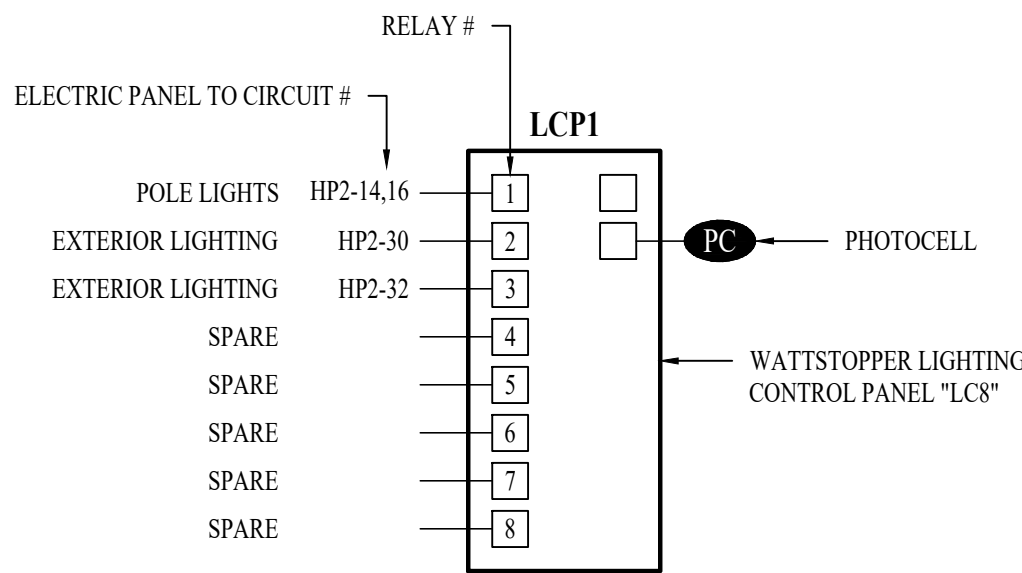
LIGHTING PLAN GENERAL NOTES:

- SEE E500 & E600 SERIES SHEETS FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.
- OCCUPANCY / VACANCY SENSOR QUANTITIES AND GENERAL LOCATIONS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO PROVIDE AND INSTALL SENSOR WITH SPACING PER MANUFACTURER SPECIFICATIONS AND INCLUDE ADDITIONAL SENSORS IF NECESSARY. CEILING-MOUNTED SENSORS SHALL BE INSTALLED WITHIN MANUFACTURE'S ACCEPTABLE MOUNTING HEIGHT RANGE.



LIGHTING PLAN - THIRD FLOOR - AREA B

SCALE: 1/8" = 1'-0"



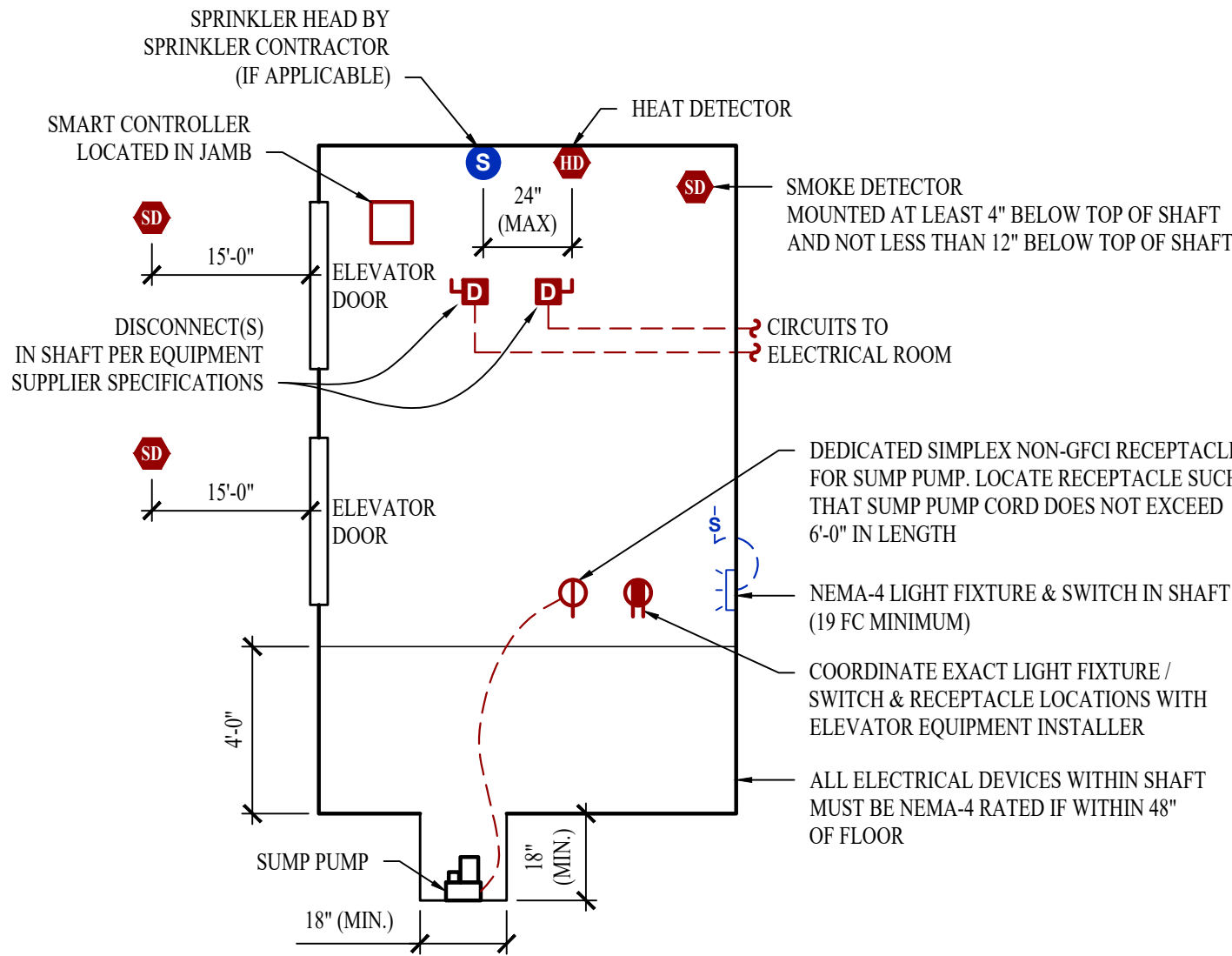
LIGHTING CONTROL PANEL SCHEDULE

RELAY #	OVERRIDE SWITCH	OPERATIONAL SCHEDULE
1	NO	ON DURING NIGHT HOURS (PHOTOCELL INPUT)
2	NO	ON DURING NIGHT HOURS (PHOTOCELL INPUT)
3	NO	ON DURING NIGHT HOURS (PHOTOCELL INPUT)
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-

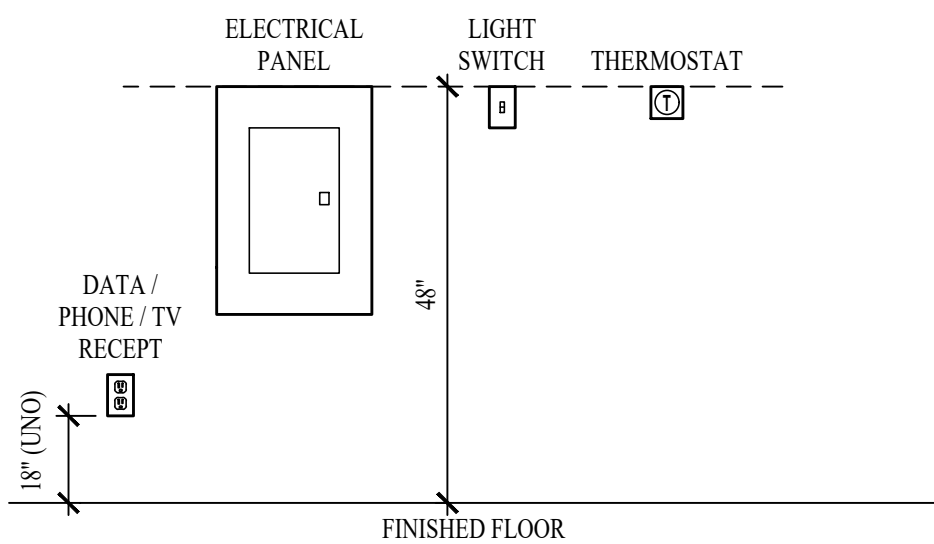
LIGHTING CONTROL PANEL

NOTES:

- ALL ELECTRICAL CONDUCTORS WITHIN ELEVATOR PIT MUST COMPLY WITH NEC 620.21.
- SUMP PUMP RECEPTACLE, SHAFT / PIT RECEPTACLES, & SHAFT LIGHTING TO ALL BE ON EMERGENCY POWER IF ELEVATOR IS ON EMERGENCY POWER.
- ADDITIONAL SMOKE DETECTOR REQUIRED IN ELEVATOR MACHINE ROOM (IF APPLICABLE).
- IN CASES WHERE ELEVATOR IS NOT SHUNT-TRIP PROTECTED, A LABELED SPRINKLER SHUT-OFF MUST BE LOCATED OUTSIDE THE ELEVATOR HOISTWAY AND/OR EQUIPMENT ROOM.
- PERMANENTLY LABEL ALL CIRCUITS AND FEEDERS.
- SUMP PUMP DISCHARGE LINE SHALL BE HARD PIPED (NO PVC).



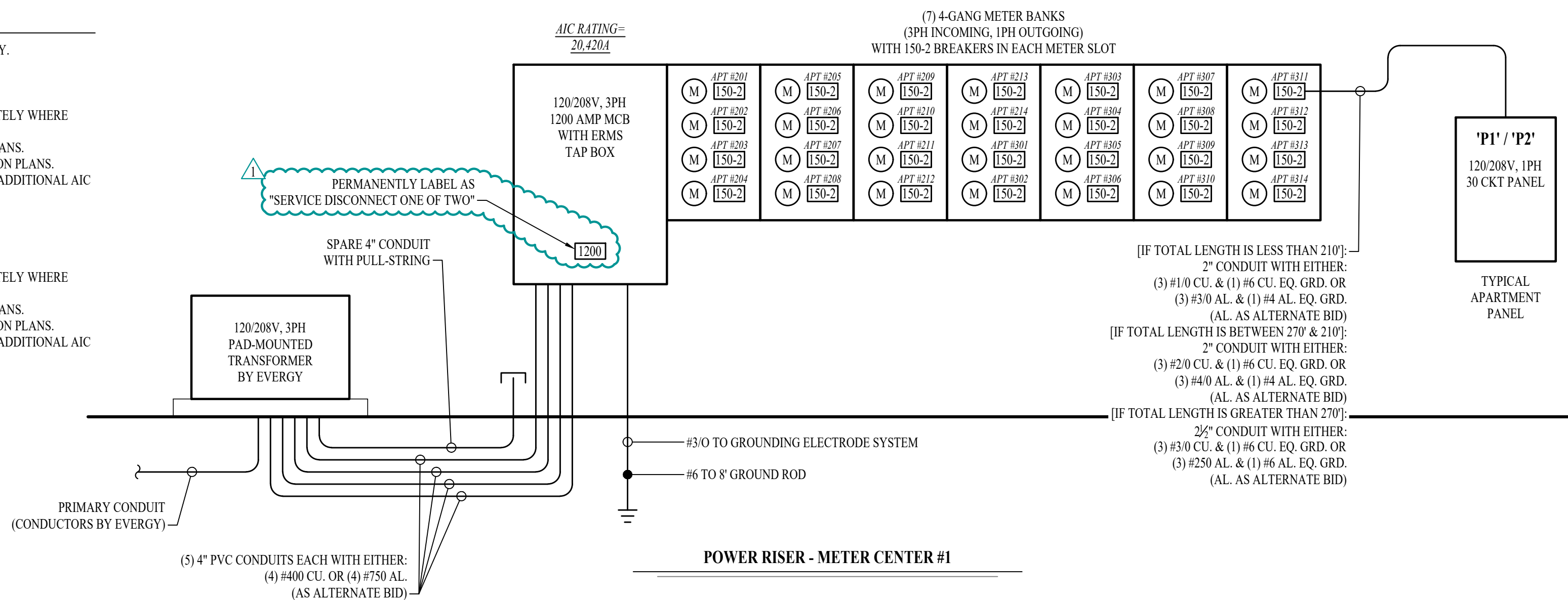
MACHINE - ROOM - LESS ELEVATOR DETAIL



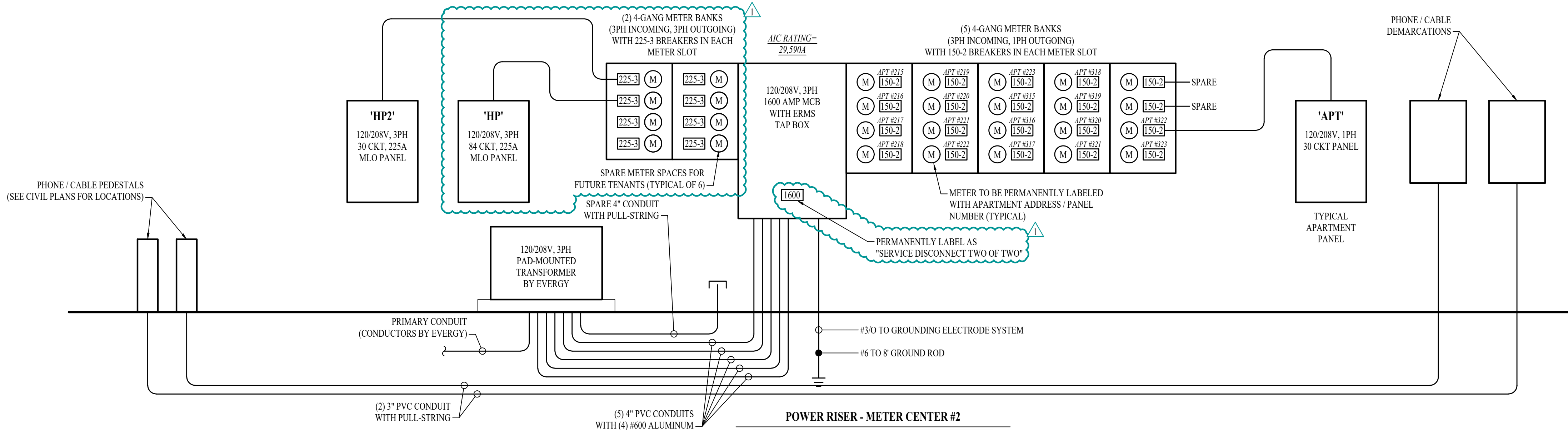
TYPICAL ADA MOUNTING HEIGHTS DETAIL

POWER RISER NOTES:

- COORDINATE DETAILS & REQUIREMENTS OF NEW ELECTRIC SERVICE WITH EVERY.
- ALL NEW METERING EQUIPMENT MUST BE APPROVED BY EVERY.
- EACH METER PERMANENTLY LABELED.
- METER CENTER #1 AIC-RATINGS BASED ON:
 - TRANSFORMER: 300 kVA, 100% POWER FACTOR, 4.00% Z, LOCATED APPROXIMATELY WHERE SHOWN ON PLANS.
 - METER CENTER LOCATION INSTALLED APPROXIMATELY WHERE SHOWN ON PLANS.
 - ELECTRICAL PANEL LOCATIONS INSTALLED APPROXIMATELY WHERE SHOWN ON PLANS.
 - CONTRACTOR TO FIELD VERIFY FINAL EQUIPMENT LOCATIONS AND PERFORM ADDITIONAL AIC RATING CALCULATIONS IF NECESSARY.
- APARTMENT ELECTRICAL PANELS SHALL HAVE AIC RATINGS AS FOLLOWS:
 - 10,000 IF LOCATED GREATER THAN 50' FROM METER CENTER.
 - 22,000 A IF LOCATED LESS THAN 50' FROM METER CENTER.
- METER CENTER #2 AIC-RATINGS BASED ON:
 - TRANSFORMER: 500 kVA, 100% POWER FACTOR, 4.00% Z, LOCATED APPROXIMATELY WHERE SHOWN ON PLANS.
 - METER CENTER LOCATION INSTALLED APPROXIMATELY WHERE SHOWN ON PLANS.
 - ELECTRICAL PANEL LOCATIONS INSTALLED APPROXIMATELY WHERE SHOWN ON PLANS.
 - CONTRACTOR TO FIELD VERIFY FINAL EQUIPMENT LOCATIONS AND PERFORM ADDITIONAL AIC RATING CALCULATIONS IF NECESSARY.
- APARTMENT ELECTRICAL PANELS SHALL HAVE AIC RATINGS AS FOLLOWS:
 - 10,000 IF LOCATED GREATER THAN 45' FROM METER CENTER.
 - 22,000 A IF LOCATED LESS THAN 50' FROM METER CENTER.



POWER RISER - METER CENTER #1



POWER RISER - METER CENTER #2

BRANCH CIRCUIT CONDUCTOR SCHEDULE

AMPACITY	COPPER AWG SIZE	MAXIMUM DISTANCE (FEET)				MINIMUM CONDUIT SIZE
		1Ø		3Ø		
		120V	277V	208V	480V	
20	12	55'	130'	115'	260'	1/2"
	10	90'	205'	180'	415'	3/4"
30	10	60'	135'	120'	275'	3/4"
	8	95'	220'	190'	445'	1"
35	8	80'	190'	165'	380'	1"
	6	130'	300'	260'	605'	1"
40	8	70'	165'	145'	330'	1"
	6	110'	260'	225'	525'	1"
45	6	100'	235'	200'	470'	1"
	4	160'	370'	325'	750'	1-1/4"
50	6	90'	210'	180'	420'	1-1/4"
	4	145'	335'	290'	675'	1-1/4"
60	6	75'	175'	150'	350'	1-1/4"
	4	120'	280'	240'	560'	1-1/4"
70	4	105'	240'	205'	480'	1-1/4"
	3	130'	300'	260'	605'	1-1/4"
80	4	55'	210'	180'	420'	1-1/4"
	3	90'	260'	230'	530'	1-1/4"
90	3	100'	235'	200'	470'	1-1/4"
	2	125'	295'	255'	595'	1-1/4"
100	3	90'	210'	180'	420'	1-1/4"
	2	115'	265'	230'	535'	1-1/4"

NOTES:

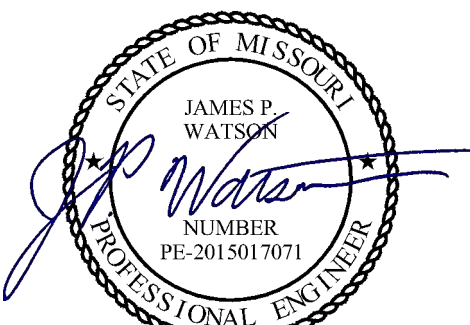
- ALL BRANCH CIRCUIT CONDUCTORS SHALL BE COPPER. ALL WIRE SIZES SHOWN ARE BASED ON CONDUCTOR TEMPERATURE RATING OF 75°C & AMBIENT TEMPERATURE OF 30°C PER NEC.
- DISTANCE SHOWN ABOVE IS LENGTH FROM OVERCURRENT PROTECTION TO DEVICE/EQUIPMENT.
- REFER TO PLAN SHEETS FOR BRANCH CONDUCTOR SIZING LENGTHS GREATER THAN SHOWN ABOVE.
- VOLTAGE DROP CALCULATIONS BASED ON 3% DROP, 80% CIRCUIT LOAD, THIN/THIN INSULATION, 100% POWER FACTOR, BALANCED LOAD, NEGLECTIBLE REACTANCE, & SIX OR LESS CURRENT-CARRYING CONDUCTORS IN RACEWAY.

FEEDER CONDUCTOR SCHEDULE

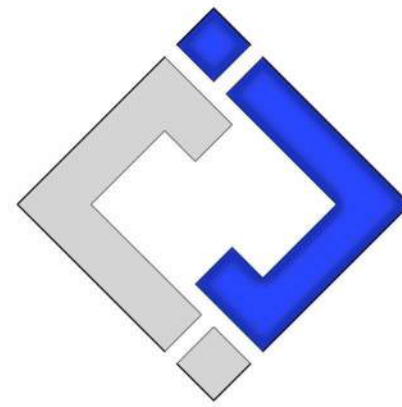
AMPACITY	# OF SETS	CONDUCTORS				EQUIPMENT GROUND		MINIMUM CONDUIT SIZE (PER SET)
		QUANTITY PER SET		AWG SIZE		AWG SIZE		
		30' WYE	10 OR 30▲	COPPER	ALUMINUM	COPPER	ALUMINUM	
30	1	4	3	10	8	10	8	3/4"
40	1	4	3	8	8	8	8	1"
45	1	4	3	8	6	8	8	1"
50	1	4	3	8	6	10	8	1"
60	1	4	3	6	4	10	6	1"
70	1	4	3	4	2	8	6	1-1/4"
80	1	4	3	4	2	8	6	1-1/4"
90	1	4	3	3	2	8	6	1-1/4"
100	1	4	3	3	1	8	6	1-1/4"
110	1	4	3	2	1/0	6	4	1-1/4"
125	1	4	3	1	2/0	6	4	2"
150	1	4	3	1/0	3/0	6	4	2"
175	1	4	3	2/0	4/0	6	4	2"
200	1	4	3	3/0	250	6	4	2-1/2"
225	1	4	3	4/0	300	4	2	2-1/2"
250	1	4	3	250	350	4	2	3"
300	1	4	3	350	500	4	2	4"
350	1	4	3	400	600	3	1	4"
400	1	4	3	500	750	3	1	4"
500	2	4	3	250	350	2	1/0	4"
600	2	4	3	350	500	1	2/0	4"
800	2	4	3	500	750	1/0	3/0	4"
1000	3	4	3	400	500	2/0	4/0	4"
1200	4	4	3	350	500	3/0	250	4"
1600	5	4	3	400	750	4/0	350	4"
2000	6	4	3	400	750	250	400	4"

NOTES:

- ALL WIRE SIZES SHOWN ARE BASED ON CONDUCTOR TEMPERATURE RATING OF 75°C & AMBIENT TEMPERATURE RATING OF 30°C PER NEC.
- MAXIMUM ALLOWABLE VOLTAGE DROP FOR FEEDER CONDUCTORS SHALL BE 2%.
- ELECTRICAL CONTRACTOR TO ADJUST CONDUCTOR SIZES FOR LONG CIRCUIT LENGTHS & AMBIENT TEMPERATURES HIGHER THAN 30°C.



James Watson, P.E. October 21, 2024
PE-2015017071
MO Certificate of Authority # 2018029680



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J2 PROJECT No: J21007

J2 DESIGN: JAP

ISSUE TITLE DATE

CITY SUBMITTAL 01 / 25 / 2024

REVISION 1 10 / 21 / 2024

ELECTRICAL SPECIFICATIONS

1. GENERAL
- 1.1. THE ENTIRE ELECTRICAL SYSTEM SHALL BE CONTINUOUSLY GROUNDED. EVERY BRANCH CONDUIT SHALL INCLUDE A GREEN GROUND CONDUCTOR SIZED PER NEC.
- 1.2. ARC-FAULT CIRCUITS SHALL BE RUN WITH A DEDICATED NEUTRAL AS REQUIRED BY MANUFACTURER.
- 1.3. PROVIDE PERMANENT ARC-FLASH LABEL AFFIXED TO EVERY DISCONNECT AND PANEL.
- 1.4. PROVIDE TYPE WRITTEN PANEL SCHEDULE FOR EACH PANEL.
2. MATERIALS
- 2.1. CONDUIT & CONDUCTORS
- 2.1.1. ALL CONDUCTORS SIZES INDICATED ON PLANS ARE COPPER UNLESS NOTED OTHERWISE.
- 2.1.2. ABOVE GRADE CONDUCTORS SHALL BE THIN COPPER. BELOW GRADE CONDUCTORS SHALL BE XHHW-2.
- 2.1.3. MINIMUM CONDUCTOR SIZE SHALL BE #12 UNLESS NOTED OTHERWISE. 120V, 20 AMP CIRCUITS WITH CONDUCTOR LENGTH GREATER THAN 100' SHALL BE MINIMUM #10. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR MEASURING ACTUAL CONDUCTOR LENGTH AND INCREASING CONDUCTOR SIZE TO COMPENSATE FOR VOLTAGE DROP AS REQUIRED BY NEC.
- 2.1.4. RIGID GALVANIZED OR SCHEDULE 40 PVC CONDUIT SHALL BE USED FOR SERVICE WIRING, BELOW GRADE INSTALLATIONS, OR WHERE EXPOSED TO WEATHER.
- 2.1.5. IN APPLICATIONS OTHER THAN THOSE LISTED IN 2.1.4, EMT OR MC CABLE IS ACCEPTABLE. WHERE CONDUCTORS ARE PROTECTED FROM DAMAGE, ENCLOSED IN BUILDING MATERIALS, AND CONSTRUCTION IS OF A PERMITTED TYPE, NM CABLE MAY BE USED.
- 2.2. DEVICES
- 2.2.1. CONTRACTOR TO PROVIDE J-BOXES, COVER PLATES, AND ANY ACCESSORIES REQUIRED TO PROVIDE A COMPLETE SYSTEM. SEE ARCHITECTURAL PLANS FOR DEVICE COLORS.
- 2.2.1. DUPLEX RECEPTACLES SHALL BE TAMPER RESISTANT, 20 AMP, EQUAL TO LEVITON C820.
- 2.2.2. TOGGLE WALL SWITCHES SHALL BE EQUAL TO LEVITON CS120-2
- 2.2.3. DIMMER SWITCHES SHALL BE TESTED WITH FIXTURES AND LAMPS FOR COMPATIBILITY.
3. EMERGENCY LIGHTING
- 3.1. THE BRANCH CIRCUIT FEEDING THE EMERGENCY FIXTURE SHALL BE THE SAME BRANCH CIRCUIT AS THAT SERVING THE NORMAL LIGHTING IN THE AREA AND CONNECTED AHEAD OF ANY LOCAL SWITCHES.

PANEL 'HP1'
OMITTED

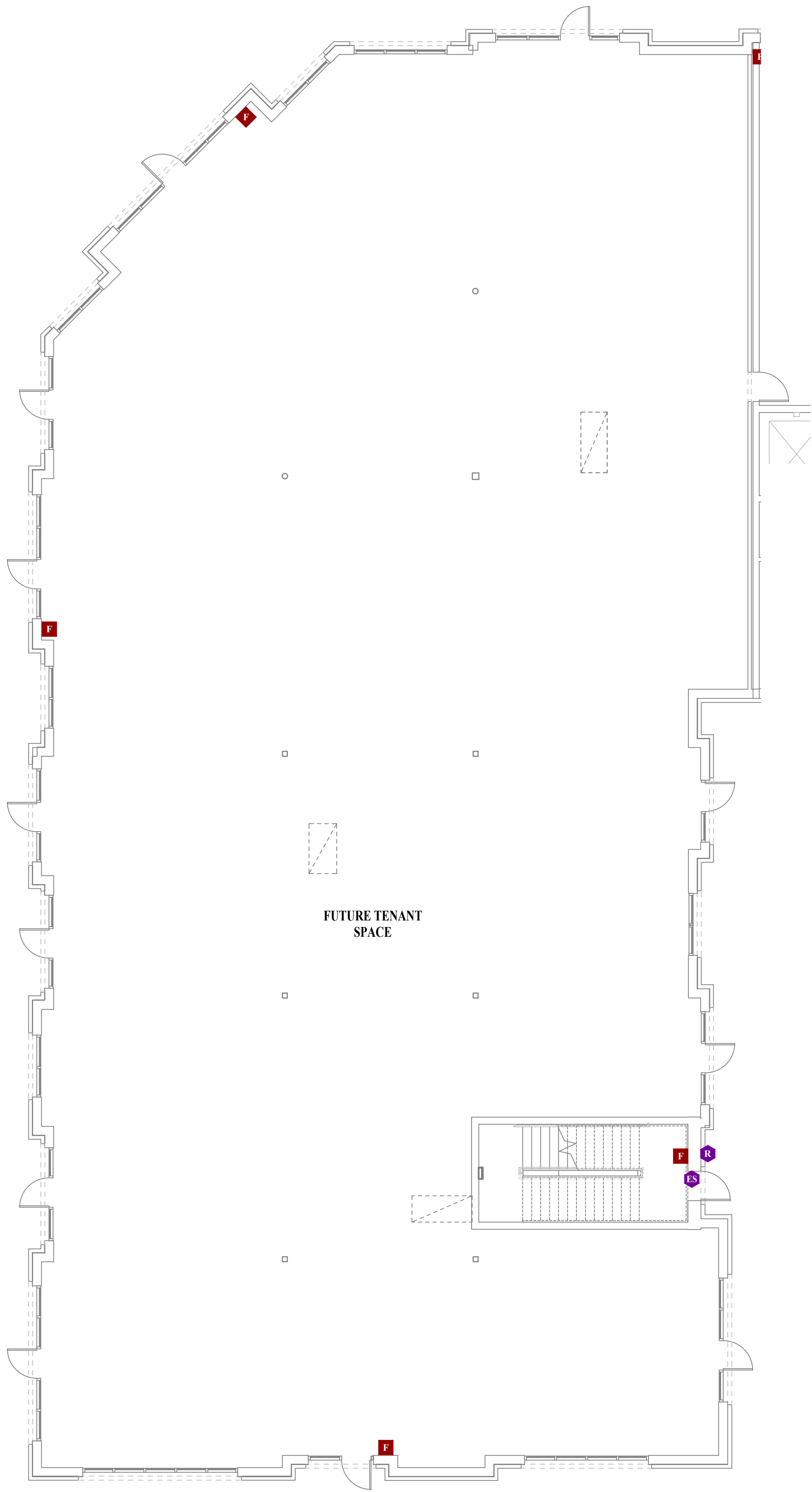
PANEL 'HP' SCHEDULE								
VOLTAGE		PANEL SIZE		MOUNTING		AIC RATING		
208Y/120V 3-PH		225A MLO		SURFACE		22,000		PHASE "A" LOAD 179.5
								PHASE "B" LOAD 176
NEMA RATING: 1								PHASE "C" LOAD 163.5
CIRCUIT NUMBER	DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION	CIRCUIT NUMBER
1	WALL HEATER	25-2	19	A	19	25-2	WALL HEATER	2
3	-	-	19	B	19	-	-	4
5	OUTLETS	20-1	4.5	C	6	20-1	EXTERIOR OUTLETS	6
7	ELEVATOR PIT CONV OUTLET	20-1	1.5	A	1.5	20-1	ELEVATOR SUMP PUMP OUTLET	8
9	AHU-2	45-2	44	B	6	20-1	2ND FLOOR CORRIDOR OUTLETS	10
11	-	-	44	C	1	20-1	EAST STAIR TOWER MAG HOLDS	12
13	3RD FLOOR CORRIDOR OUTLETS	20-1	6	A	42	60-3	ELEVATOR	14
15	ELEVATOR CAB LIGHTS	30-2	3	B	42	-	-	16
17	-	-	3	C	42	-	-	18
19	WALL HEATER	25-2	19	A	7.5	20-1	EXTERIOR OUTLETS	20
21	-	-	19	B	1	20-1	WEST STAIR TOWER MAG HOLDS	22
23	ELEVATOR PIT LIGHT	20-1	0.5	C	6	20-1	2ND FLOOR CORRIDOR OUTLETS	24
25	SPARE	20-1		A	7.5	20-1	ROOF OUTLETS	26
27	3RD FLOOR CORRIDOR OUTLETS	20-1	6	B	1.5	20-1	IT ROOM OUTLET	28
29	CU-2	30-2	18	C	1.5	20-1	IT ROOM OUTLET	30
31	-	-	18	A	1.5	20-1	IT ROOM OUTLET	32
33	SOUTH STAIR TOWER LIGHTS	20-1	4	B	1.5	20-1	IT ROOM OUTLET	34
35	HP-1	20-2	11	C	11	20-2	HP-2	36
37	-	-	11	A	11	-	-	38
39	OPEN			B			OPEN	40
41	PLENUM HEATER	20-2	15	C			OPEN	42
43	-		15	A			OPEN	44
45	GARAGE LIGHTING	20-1	10	B			OPEN	46
47	SPARE			C			OPEN	48
49	SPARE			A			OPEN	50
51	SPARE			B			OPEN	52
53	SPARE			C			OPEN	54
55	SPARE			A			OPEN	56
57	SPARE			B			OPEN	58
59	SPARE			C			OPEN	60
61	SPARE			A			OPEN	62
63	SPARE			B			OPEN	64
65	SPARE			C			OPEN	66
67	SPARE			A			OPEN	68
69	SPARE			B			OPEN	70
71	SPARE			C			OPEN	72
73	SPARE			A			OPEN	74
75	SPARE			B			OPEN	76
77	SPARE			C			OPEN	78
79	SPARE			A			OPEN	80
81	SPARE			B			OPEN	82
83	SPARE			C			OPEN	84
NOTES:								
A: PANEL SHALL BE EQUAL TO SQUARE D MODEL "QO"								
B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.								
C: AFTER COMPLETION OF WORK, ELECTRICIAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.								

TYPICAL APARTMENT PANEL 'P1' SCHEDULE								
VOLTAGE		PANEL SIZE		MOUNTING		AIC RATING		
120/208V 1-PH		150A MLO		RECESSED		SEE RISER		PHASE "A" LOAD 167.5
								PHASE "B" LOAD 164.5
NEMA RATING: 1								
CIRCUIT NUMBER	DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION	CIRCUIT NUMBER
1	REFRIGERATOR	20-1	8	A	44	45-2	AHU-4	2
3	STOVE	50-2	30	B	44	-	-	4
5	-	-	30	A	22	30-2	WATER HEATER	6
7	RANGE HOOD / MICROWAVE	20-1	8	B	22	-	-	8
9	KITCHEN RECEPTS,	20-1	4.5	A	12	20-2	CU-4	10
11	DISHWASHER	20-1	8	B	12	-	-	12
13	KITCHEN RECEPTS,	20-1	4.5	A		20-1	SPARE	14
15	LIVING ROOM RECEPTS,	15-1	12	B	6	15-1	LIGHTING	16
17	BEDROOM RECEPTS,	15-1	9	A	4	20-1	DISPOSAL	18
19	BATHROOM RECEPT,	20-1	1.5	B			OPEN	20
21	SPARE	15-1		A			OPEN	22
23	SPARE	20-1		B			OPEN	24
25	WASHING MACHINE	20-1	8	A	1.5	20-1	MEDIA PANEL	26
27	DRYER	30-2	20	B	1	15-1	SMOKE DETECTORS	28
29	-	-	20	A			OPEN	30
NOTES:								
A: PANEL SHALL BE EQUAL TO SQUARE D MODEL "HOMELINE"								
B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.								
C: AFTER COMPLETION OF WORK, ELECTRICIAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.								
D: CIRCUIT BREAKERS SHOWN ABOVE IN BOLD UNDERLINED TEXT SHALL BE ARC-FAULT CIRCUIT INTERRUPTER (AFCI) PER NEC 210.12.								
E: TOTAL SIMULTANEOUS PHASE LOADS SHOWN MAY EXCEED PANEL AMPACITY AS SERVICE LOADS HAVE BEEN CALCULATED IN ACCORDANCE WITH NEC 220.82								

PANEL 'HP2' SCHEDULE								
VOLTAGE		PANEL SIZE		MOUNTING		AIC RATING		
208Y/120V 3-PH		225A MLO		SURFACE		22,000		PHASE "A" LOAD 182
								PHASE "B" LOAD 189
NEMA RATING: 1								PHASE "C" LOAD 172
CIRCUIT NUMBER	DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION	CIRCUIT NUMBER
1	PLENUM HEATER	25-2	19	A	19	25-2	PLENUM HEATER	2
3	-	-	19	B	19	-	-	4
5	PLENUM HEATER	25-2	19	C	19	25-2	PLENUM HEATER	6
7	-	-	19	A	19	-	-	8
9	PLENUM HEATER	25-2	19	B	19	25-2	PLENUM HEATER	10
11	-	-	19	C	19	-	-	12
13	2ND FLOOR CORRIDOR LIGHTING	20-1	7	A	4	20-2	POLE LIGHTS	14
15	3RD FLOOR CORRIDOR LIGHTING	20-1	7	B	4	-	-	16
17	LIGHTING CONTROL PANEL & 1ST FLR LTG	20-1	6	C	3	20-1	RISER ROOM RECEPTS	18
19	AHU-4	60-2	51	A	1	20-1	FIRE ALARM CONTROL PANEL	20
21	-	-	51	B		20-1	SPARE	22
23	AHU-4	25-2	22	C	6	20-1	GARAGE RECEPTS	24
25	-	-	22	A		20-1	SPARE	26
27	AHU-3	60-2	51	B		20-1	SPARE	28
29	-	-	51	C	8	20-1	EXTERIOR LIGHTING	30
31	CU-3	25-2	17	A	4	20-1	EXTERIOR LIGHTING	32
33	-	-	17	B		20-1	SPARE	34
35	CU-4	25-2	19	C		20-1	SPARE	36
37	-	-	19	A		20-1	SPARE	38
39	SPARE	20-1		B		20-1	SPARE	40
41	SPARE	20-1		C		20-1	SPARE	42
NOTES:								
A: PANEL SHALL BE EQUAL TO SQUARE D MODEL "QO"								
B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.								
C: AFTER COMPLETION OF WORK, ELECTRICIAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.								

TYPICAL APARTMENT PANEL 'P2' SCHEDULE								
VOLTAGE		PANEL SIZE		MOUNTING		AIC RATING		
120/208V 1-PH		150A MLO		RECESSED		SEE RISER		PHASE "A" LOAD 188.5
								PHASE "B" LOAD 178
NEMA RATING: 1								
CIRCUIT NUMBER	DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION	CIRCUIT NUMBER
1	REFRIGERATOR	20-1	8	A	51	60-2	AHU-5	2
3	STOVE	50-2	30	B	51	-	-	4
5	-	-	30	A	22	30-2	WATER HEATER	6
7	RANGE HOOD / MICROWAVE	20-1	8	B	22	-	-	8
9	KITCHEN RECEPTS,	20-1	4.5	A	17	25-2	CU-5	10
11	DISHWASHER	20-1	8	B	17	-	-	12
13	KITCHEN RECEPTS,	20-1	4.5	A		20-1	SPARE	14
15	LIVING ROOM RECEPTS,	15-1	12	B	6	15-1	LIGHTING	16
17	BEDROOM RECEPTS,	15-1	9	A	4	20-1	DISPOSAL	18
19	BATHROOM RECEPT,	20-1	1.5	B			OPEN	20
21	BEDROOM RECEPTS,	15-1	9	A			OPEN	22
23	BATHROOM RECEPT,	20-1	1.5	B			OPEN	24
25	WASHING MACHINE	20-1	8	A	1.5	20-1	MEDIA PANEL	26
27	DRYER	30-2	20	B	1	15-1	SMOKE DETECTORS	28
29	-	-	20	A			OPEN	30
NOTES:								
A: PANEL SHALL BE EQUAL TO SQUARE D MODEL "HOMELINE"								
B: ELECTRICIAN SHALL VERIFY BREAKER WITH EQUIPMENT PRIOR TO PURCHASE & INSTALL.								
C: AFTER COMPLETION OF WORK, ELECTRICIAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.								
D: CIRCUIT BREAKERS SHOWN ABOVE IN BOLD UNDERLINED TEXT SHALL BE ARC-FAULT CIRCUIT INTERRUPTER (AFCI) PER NEC 210.12.								
E: TOTAL SIMULTANEOUS PHASE LOADS SHOWN MAY EXCEED PANEL AMPACITY AS SERVICE LOADS HAVE BEEN CALCULATED IN ACCORDANCE WITH NEC 220.82								

LIGHT FIXTURE SCHEDULE										
TAG	MANUFACTURER (OR EQUAL)	MODEL NUMBER (OR EQUAL)	DESCRIPTION	MOUNTING	LUMEN OUTPUT	CCT (*K)	CRI	VOLTS	WATTS	NOTES
C1	HALO	HLS9129301EWH	9" LED SURFACE CAN	SURFACE / CEILING	1,200	3000	90	120	18	
C2	HALO	SLD6129S1EMW	6" LED SURFACE CAN	SURFACE / CANOPY	1,200	4000	90	120	16	WITH PAINTABLE TRIM - PAINT TO MATCH UNDERSIDE OF CANOPY
E1	SURE LITES	APC7R	INTERIOR EXIT LIGHT WITH HEADS	WALL / CEILING	-	-	-	120	1	WITH RED LETTERS
E2	SURE LITES	APCH7R WITH APWR1	INTERIOR EXIT LIGHT WITH EXTERIOR REMOTE HEAD	CEILING	-	-	-	120	1	WITH RED LETTERS
E3	SURE LITES	SEL50	EMERGENCY EGRESS LIGHT	INTERIOR WALL	-	-	-	120	1	
E4	SURE LITES	SEL D W 60 SD	EXTERIOR EMERGENCY EGRESS LIGHT	WALL	-	-	-	120	5	
E5	RP LIGHTING	RXEL25	EXTERIOR EXIT LIGHT WITH RMT HD	SURFACE / CEILING	-	-	-	120	1	WITH #RH19 REMOTE HEAD
F1	MONTE CARLO	5HV52BS	CEILING FAN W/ LED LIGHT KIT	SURFACE / CEILING	1,275	3000	80	120	21	WITH #MC261BS LIGHT KIT
G1	MCGRAW-EDISON	TT-D4-740-U-MQ	LED PARKING GARAGE LIGHT	SURFACE / CEILING	8,002	4000	70	120	58	
P1	RP LIGHTING	4430-BN	LED PENDANT	SURFACE / CEILING	600	3000	80	120	8	
S1	METALUX	4SNX-SL3-L-W-UNV-CR83-CD-1-FKO-U	4" LED STRIP	SURFACE / CEILING	4,511	4000	70	120	38	WITH 'EL14W' EMERGENCY BATTERY BACKUP WHERE INDICATED
T1	METALUX	24FPL25CT3	2x4 LED FLAT PANEL	ACT GRID / SURFACE	4,500	3000	80	120	40	
V1	RP LIGHTING	4904-BN-4	LED VANITY	SURFACE / WALL	2,110	3000	80	120	30	
T2	METALUX	22FP423SC	2x2 LED FLAT PANEL	ACT GRID / SURFACE	4,641	3500	80	120	39	
W1	METALUX	4SNX-SL3-L-W-UNV-CR83-CD-1-FKO-U	4" LED WALL BRACKET	INTERIOR WALL	4,000	4000	85	120	42	WITH 'EL14W' EMERGENCY BATTERY BACKUP WHERE INDICATED & WITH DECORATIVE END COVERS
W2	TECH LIGHTING	7000W VEX9042UNV	UP / DOWN WALL SCONCE	EXTERIOR WALL	554	4000	90	120	19	
W3	LUMARK	XTOR4B-W	LED WALLPACK	EXTERIOR WALL	3,995	4000	70	120	38	
W4	TERON LIGHTING	MTG-L13.0-120V-TR1AC-XX-40K	PATIO SCONCE	EXTERIOR WALL	1,140	4000	80	120	13	
NOTES:										
1. LIGHT FIXTURES PROVIDED BY OWNER THRU NATIONAL ACCOUNT AND INSTALLED BY ELECTRICAL CONTRACTOR.										
2. ALL FIXTURE QUANTITIES TO BE VERIFIED BY ELECTRICAL CONTRACTOR PRIOR TO ORDERING.										
3. CONTACT JUSTIN HATHFIELD (573) 289-0880 (JHATHFIELD@LAIWEB.NET) OR PAUL W ARNER (314) 531-3500 (PW ARNER@LAIWEB.NET) AT LIGHTING ASSOCIATES FOR NATIONAL ACCOUNT DETAILS.										
4. CONTACT TRAVIS VOGT (417) 621-5210 (TVOGT@CED1135.COM) AT CED-PHILLIPS & COMPANY FOR NATIONAL ACCOUNT DETAILS.										



FIRE ALARM & SECURITY PLAN - FIRST FLOOR - AREA A
SCALE: 1/8" = 1'-0"

FIRE ALARM SYSTEM SPECIFICATIONS

1. FIRE ALARM SYSTEM SHALL BE AN ADDRESSABLE SYSTEM THAT IS NONCODED, UL-LISTED, WITH MULTIPLEX SIGNAL TRANSMISSION AND HORN/STROBE EVACUATION.
2. EVERY FIRE ALARM SYSTEM COMPONENT SHALL BE UL-LISTED AND UL-CERTIFIED, TESTED BY MANUFACTURERS AS A COMPLETE SYSTEM, AND MEET ALL APPLICABLE REQUIREMENTS OF NFPA 72.
3. ALL FIRE ALARM WIRING TO BE PLENUM RATED.
4. ALL INITIATING DEVICES INSTALLED IN UNCONDITIONED SPACES SHALL BE CONVENTIONAL DEVICES SUITABLE FOR USE IN EXTREME HIGH AND LOW TEMPERATURES AND HIGH HUMIDITY. SUCH DEVICES SHALL BE SUPERVISED BY ADDRESSABLE MONITOR MODULES LOCATED IN CONDITIONED SPACES.
5. QUANTITIES, TYPES, AND LOCATIONS OF INITIATING DEVICES AND OUTPUT MODULES FOR INTERCONNECTION WITH FIRE SUPPRESSION MUST BE COORDINATED WITH CONTRACTORS THAT ARE RESPONSIBLE FOR THOSE SYSTEMS.

FIRE ALARM DEVICE TYPICAL LOCATIONS:

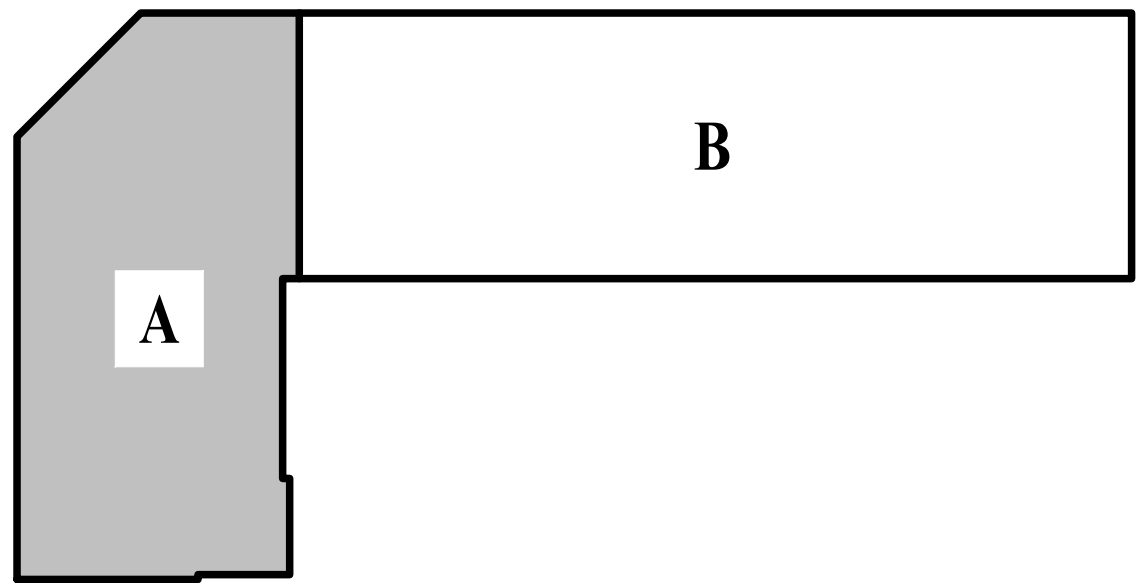
1. VERIFY EXACT LOCATIONS WITH LATEST NFPA REQUIREMENTS.
2. CEILING MOUNTED SMOKE / HEAT DETECTORS:
 - 2.1. MUST BE MOUNTED AT LEAST 36" FROM HVAC GRILLES / DIFFUSERS
 - 2.2. MUST BE LOCATED AT LEAST 4" FROM WALL/CEILING INTERSECTIONS (MEASURED FROM EDGE OF DEVICE)
3. WALL MOUNTED SMOKE / HEAT DETECTORS:
 - 3.1. MUST BE LOCATED AT LEAST 4" FROM WALL/CEILING INTERSECTIONS (MEASURED FROM EDGE OF DEVICE)
 - 3.2. MUST BE LOCATED WITHIN AT LEAST 12" FROM WALL/CEILING INTERSECTION (MEASURED FROM EDGE OF DEVICE)
4. MANUAL PULL STATIONS:
 - 4.1. MUST BE LOCATED WITHIN 5' OF EXTERIOR DOORWAY (MEASURED FROM CENTER OF PULL STATION TO NEAREST EDGE OF DOOR)
 - 4.2. MUST BE LOCATED BETWEEN 42" AND 54" A.F.F. (MEASURED FROM FINISH FLOOR TO CENTER OF PULL STATION)
5. MAGNETIC DOOR HOLDER:
 - 5.1. MUST BE LOCATED 6" BELOW TOP OF DOOR (MEASURED FROM TOP OF DOOR TO TOP OF DOOR HOLDER)
 - 5.2. MUST BE LOCATED DOOR WIDTH MINUS THREE INCHES FROM DOOR (MEASURED FROM NEAREST EDGE OF HOLDER TO NEAREST EDGE OF DOOR).
6. FIRE ALARM CONTROL PANEL:
 - 6.1. MUST BE LOCATED AT MAXIMUM OF 72" A.F.F. (MEASURED FROM FINISH FLOOR TO TOP OF FIRE ALARM CONTROL PANEL)
7. FIRE ALARM ANNUNCIATOR:
 - 7.1. MUST BE LOCATED AT MAXIMUM OF 60" A.F.F. (MEASURED FROM FINISH FLOOR TO TOP OF FIRE ALARM ANNUNCIATOR PANEL)
8. WALL MOUNTED STROBE DEVICES (VISUAL ONLY):
 - 8.1. MUST BE LOCATED AT 84" A.F.F. (MEASURED FROM FINISH FLOOR TO BOTTOM OF BACK BOX)
 - 8.2. MUST BE LOCATED AT MOST 24" FROM WALL/CEILING INTERSECTION WITHIN HANDICAP BEDROOMS (MEASURED FROM WALL/CEILING INTERSECTION TO BOTTOM OF BACK BOX)
9. WALL-MOUNTED HORN / STROBE DEVICES (AUDIBLE & VISUAL):
 - 9.1. MUST BE LOCATED AT 84" A.F.F. (MEASURED FROM FINISH FLOOR TO BOTTOM OF BACK BOX)

FIRE ALARM PLAN SYMBOL LEGEND

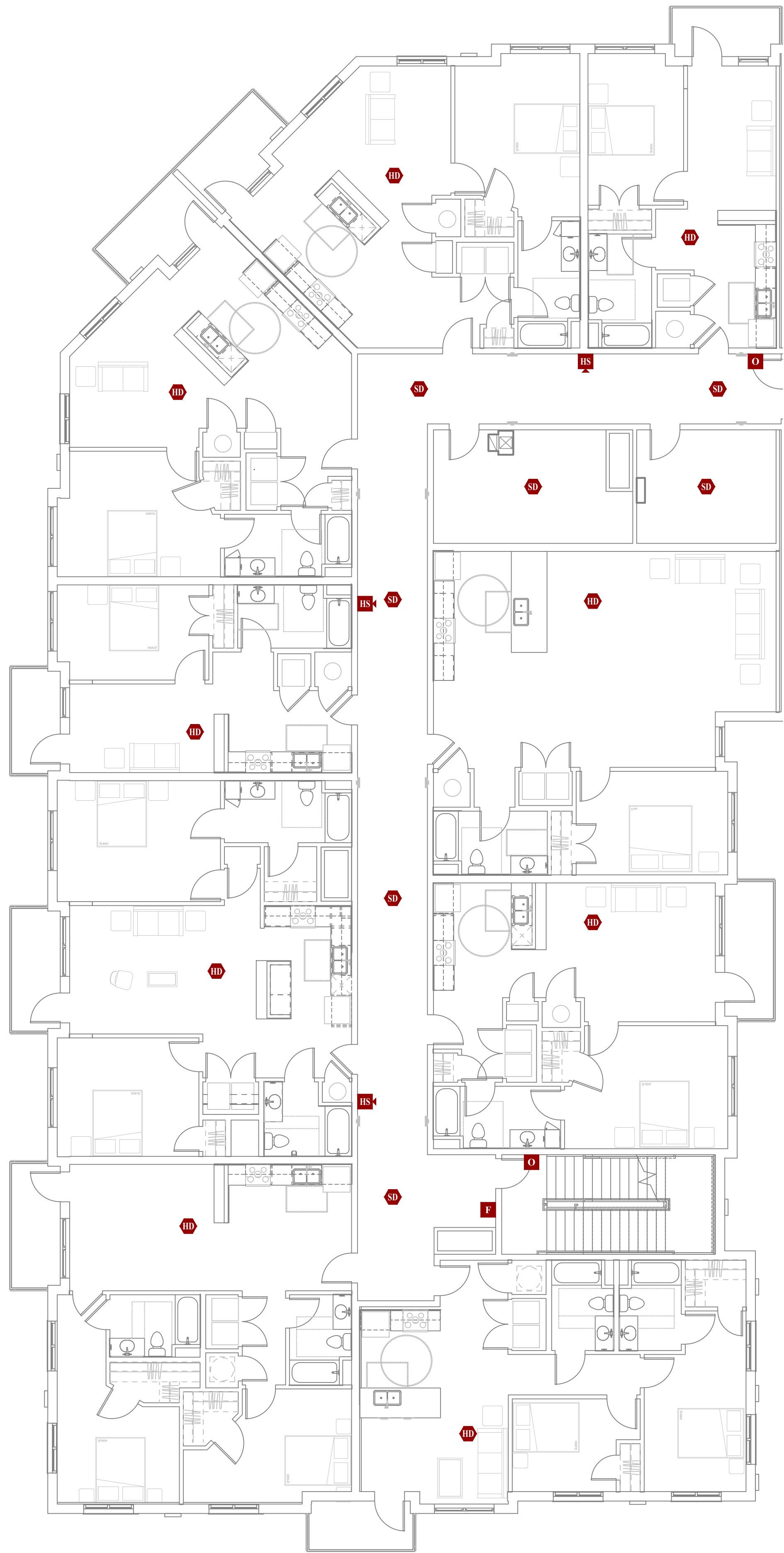
- | | |
|------|--------------------------------|
| F | MANUAL PULL STATION |
| M | MODULE |
| O | OUTPUT MODULE |
| SD | SMOKE DETECTOR |
| HD | HEAT DETECTOR |
| S | STROBE - CEILING MOUNT |
| S | STROBE - WALL MOUNT |
| HS | HORN STROBE - WALL MOUNT |
| HS | HORN STROBE - CEILING MOUNT |
| SS | SPEAKER STROBE - WALL MOUNT |
| SS | SPEAKER STROBE - CEILING MOUNT |
| T | TAMPER SWITCH |
| WF | WATER FLOW SWITCH |
| FACP | FIRE ALARM CONTROL PANEL |
| ANS | FIRE ALARM ANNUNCIATOR |

SECURITY PLAN SYMBOL LEGEND

- | | |
|----------------|--|
| R | READER |
| M | MOTION DETECTOR |
| KP | ALARM KEYPAD |
| DC | DOOR CONTACT |
| P | PANIC |
| GB | GLASS BREAK SENSOR |
| ES | ELECTRIC STRIKE |
| BURG | BURGLAR PANEL |
| C _W | WALL MOUNT CAMERA
(ARROW INDICATES VIEW DIRECTION) |
| C _C | CEILING MOUNT CAMERA
(ARROW INDICATES VIEW DIRECTION) |



KEY PLAN
SCALE: NTS



FIRE ALARM & SECURITY PLAN - SECOND FLOOR - AREA A
SCALE: 1/8" = 1'-0"

FIRE ALARM PLAN SYMBOL LEGEND

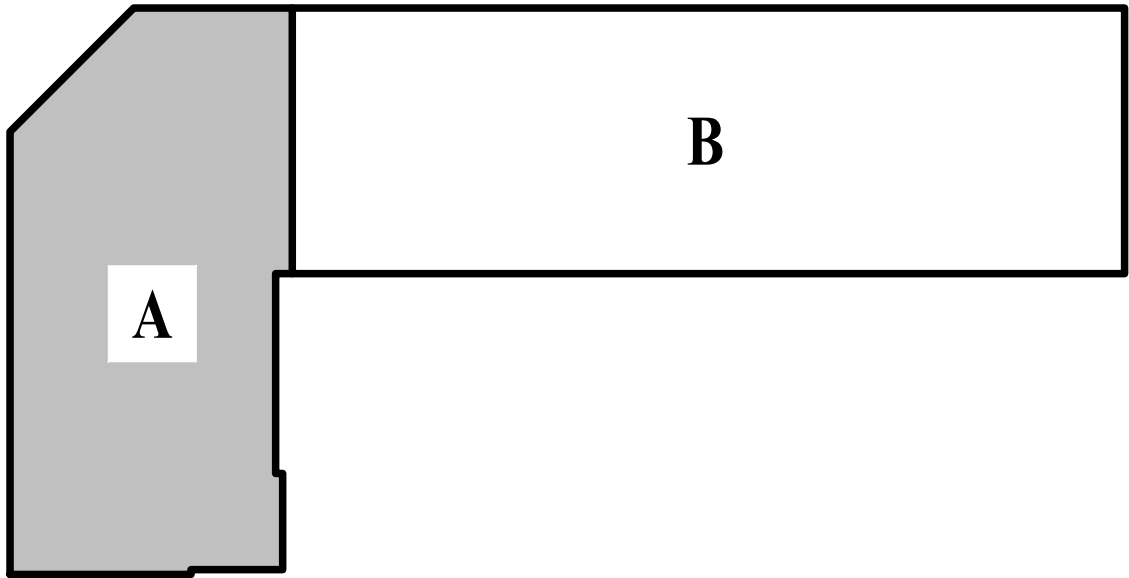
- F** MANUAL PULL STATION
- M** MODULE
- O** OUTPUT MODULE
- SD** SMOKE DETECTOR
- HD** HEAT DETECTOR
- S** STROBE - CEILING MOUNT
- S** STROBE - WALL MOUNT
- HS** HORN STROBE - WALL MOUNT
- HS** HORN STROBE - CEILING MOUNT
- SS** SPEAKER STROBE - WALL MOUNT
- SS** SPEAKER STROBE - CEILING MOUNT
- T** TAMPER SWITCH
- WF** WATER FLOW SWITCH
- FACP** FIRE ALARM CONTROL PANEL
- ANS** FIRE ALARM ANNUNCIATOR

SECURITY PLAN SYMBOL LEGEND

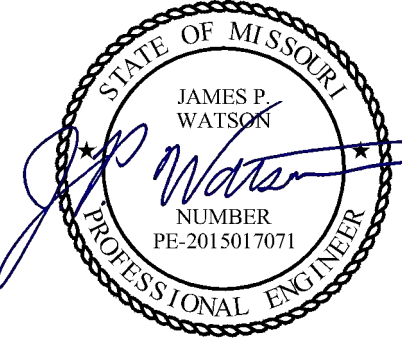
- R** READER
- M** MOTION DETECTOR
- KP** ALARM KEYPAD
- DC** DOOR CONTACT
- P** PANIC
- GB** GLASS BREAK SENSOR
- ES** ELECTRIC STRIKE
- BURG** BURGLAR PANEL
- C_w** WALL MOUNT CAMERA (ARROW INDICATES VIEW DIRECTION)
- C_c** CEILING MOUNT CAMERA (ARROW INDICATES VIEW DIRECTION)

FIRE ALARM PLAN GENERAL NOTES:

- SEE SHEET F101 FOR ADDITIONAL FIRE ALARM NOTES, DETAILS, & SCHEDULES.



KEY PLAN
SCALE: NTS



James Watson, P.E. January 25, 2024
PE-2015017071
MO Certificate of Authority # 2018029680



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J2 PROJECT No: J21007

J2 DESIGN: JAP

ISSUE TITLE DATE

CITY SUBMITTAL 01 / 25 / 2024

Mechanical - Electrical - Plumbing Design Drawings for

The Village at Discovery - Lot 4

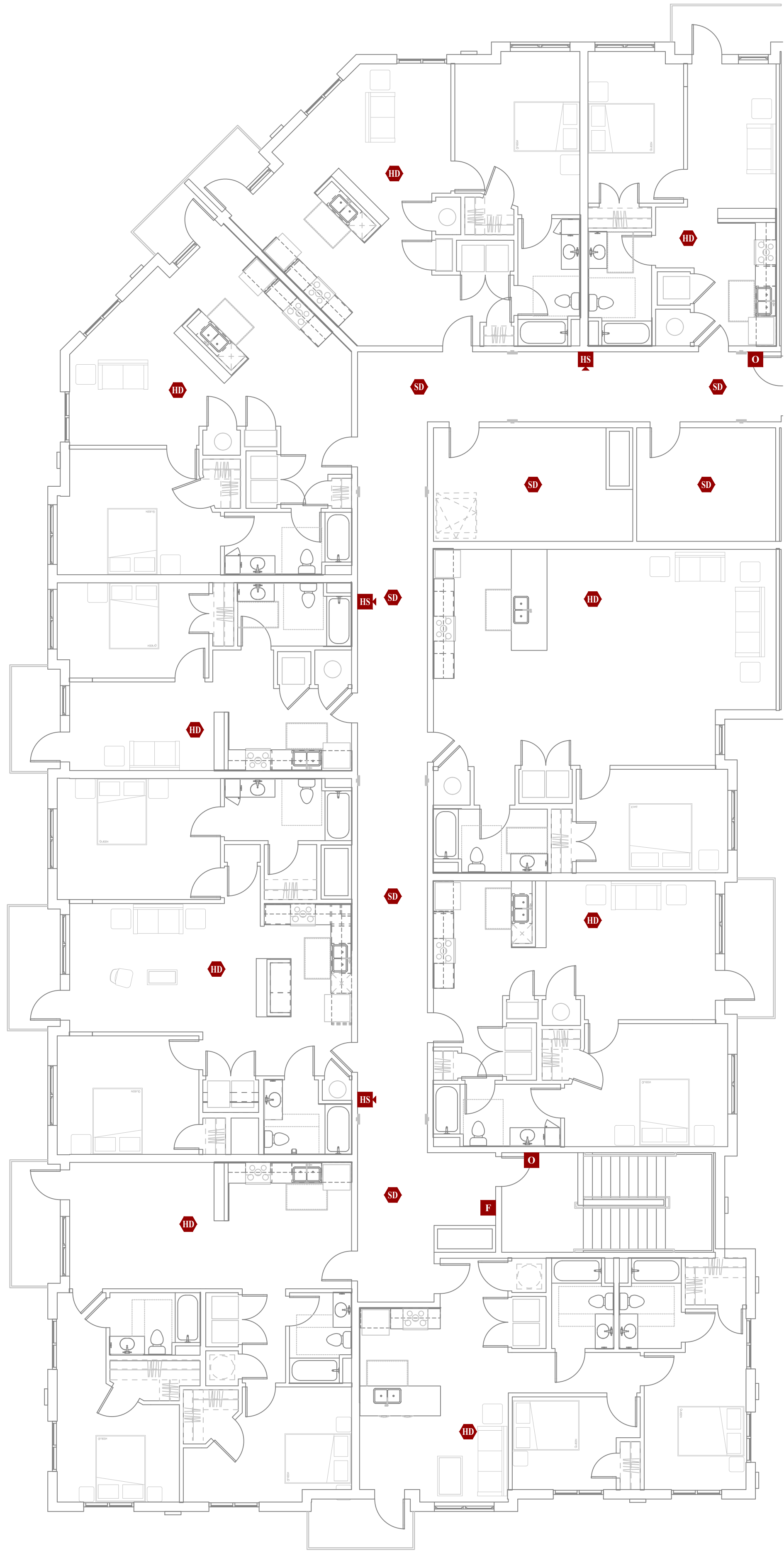
Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

**FIRE ALARM &
SECURITY PLAN -
SECOND FLOOR -
AREA A**

SHEET NUMBER

FS102



FIRE ALARM & SECURITY PLAN - THIRD FLOOR - AREA A
SCALE: 1/8" = 1'-0"

FIRE ALARM PLAN SYMBOL LEGEND

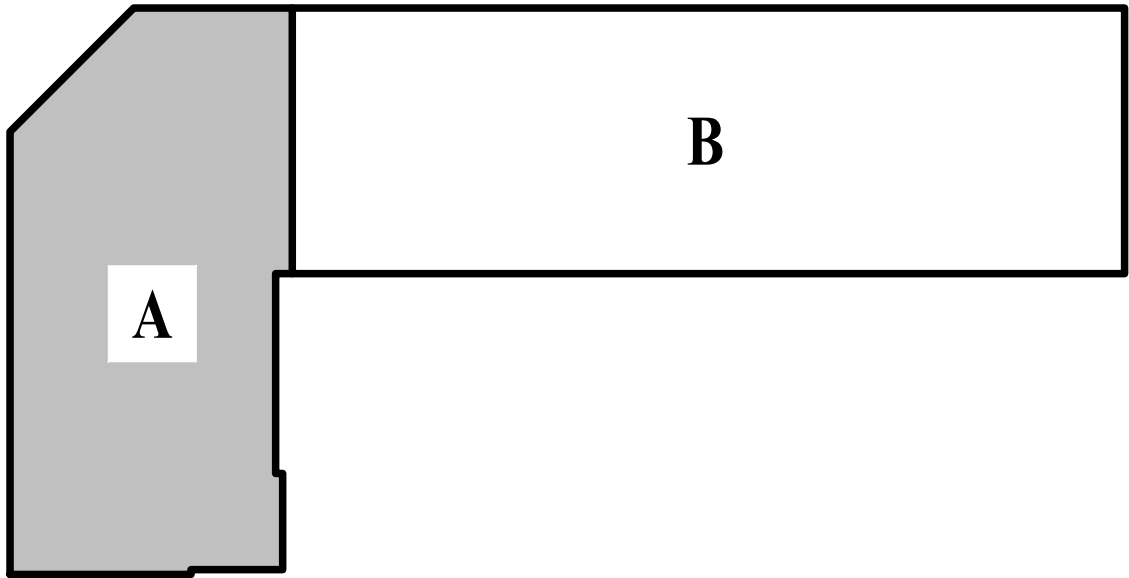
- F** MANUAL PULL STATION
- M** MODULE
- O** OUTPUT MODULE
- SD** SMOKE DETECTOR
- HD** HEAT DETECTOR
- S** STROBE - CEILING MOUNT
- S** STROBE - WALL MOUNT
- HS** HORN STROBE - WALL MOUNT
- HS** HORN STROBE - CEILING MOUNT
- SS** SPEAKER STROBE - WALL MOUNT
- SS** SPEAKER STROBE - CEILING MOUNT
- T** TAMPER SWITCH
- WF** WATER FLOW SWITCH
- FACP** FIRE ALARM CONTROL PANEL
- ANS** FIRE ALARM ANNUNCIATOR

SECURITY PLAN SYMBOL LEGEND

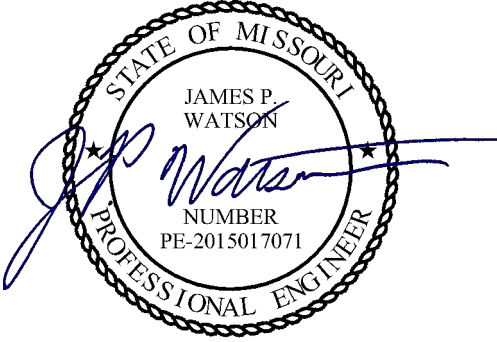
- R** READER
- M** MOTION DETECTOR
- KP** ALARM KEYPAD
- DC** DOOR CONTACT
- P** PANIC
- GB** GLASS BREAK SENSOR
- ES** ELECTRIC STRIKE
- BURG** BURGLAR PANEL
- C_w** WALL MOUNT CAMERA (ARROW INDICATES VIEW DIRECTION)
- C_c** CEILING MOUNT CAMERA (ARROW INDICATES VIEW DIRECTION)

FIRE ALARM PLAN GENERAL NOTES:

- SEE SHEET F101 FOR ADDITIONAL FIRE ALARM NOTES, DETAILS, & SCHEDULES.



KEY PLAN
SCALE: NTS



James Watson, P.E. January 25, 2024
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Mechanical - Electrical - Plumbing Design Drawings for

The Village at Discovery - Lot 4

Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

**FIRE ALARM &
SECURITY PLAN -
THIRD FLOOR -
AREA A**

SHEET NUMBER

FS103

FIRE ALARM PLAN SYMBOL LEGEND

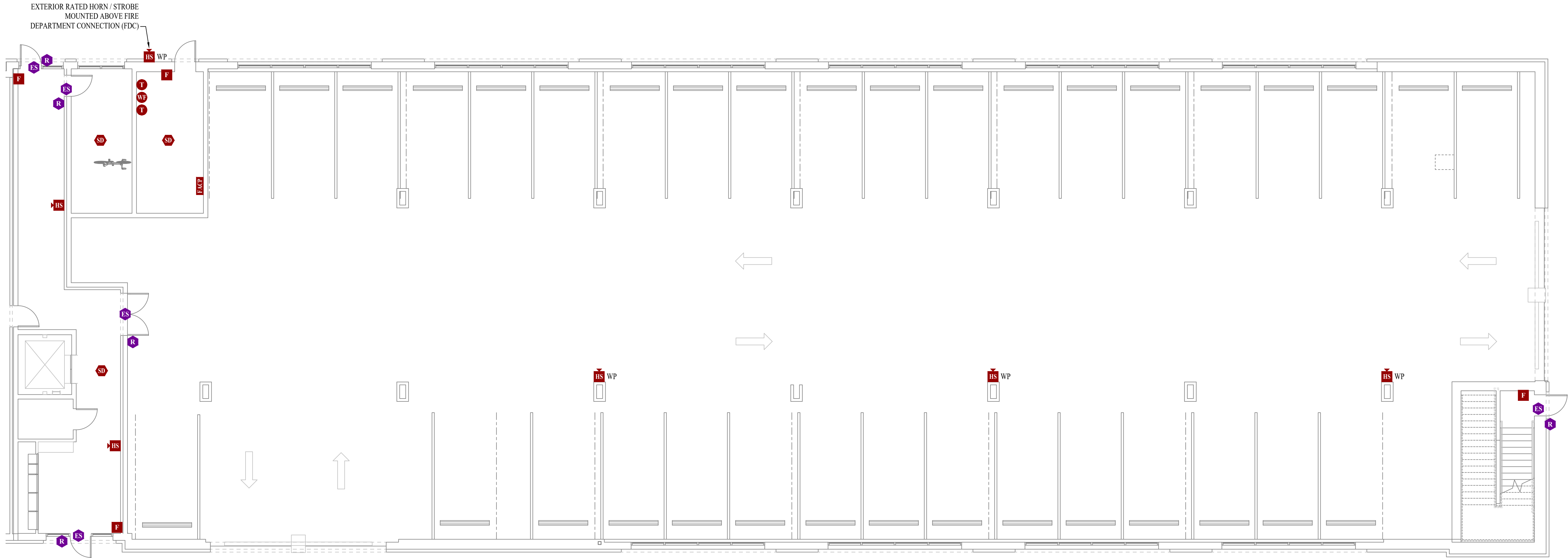
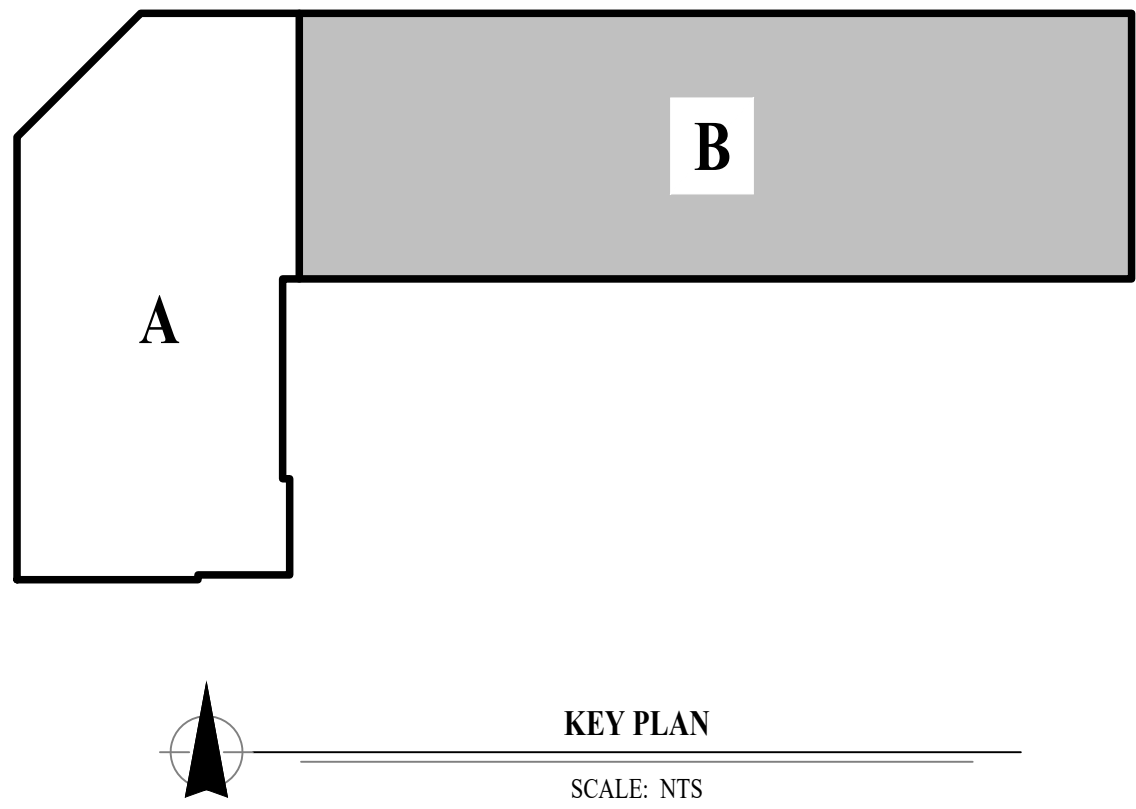
- F MANUAL PULL STATION
- M MODULE
- O OUTPUT MODULE
- SD SMOKE DETECTOR
- HD HEAT DETECTOR
- STROBE - CEILING MOUNT
- STROBE - WALL MOUNT
- HS HORN STROBE - WALL MOUNT
- HS HORN STROBE - CEILING MOUNT
- SS SPEAKER STROBE - WALL MOUNT
- SS SPEAKER STROBE - CEILING MOUNT
- T TAMPER SWITCH
- WP WATER FLOW SWITCH
- FACP FIRE ALARM CONTROL PANEL
- ASN FIRE ALARM ANNUNCIATOR

SECURITY PLAN SYMBOL LEGEND

- R READER
- M MOTION DETECTOR
- KP ALARM KEYPAD
- DC DOOR CONTACT
- P PANIC
- GB GLASS BREAK SENSOR
- ES ELECTRIC STRIKE
- BURG BURGLAR PANEL
- CW WALL MOUNT CAMERA (ARROW INDICATES VIEW DIRECTION)
- CC CEILING MOUNT CAMERA (ARROW INDICATES VIEW DIRECTION)

FIRE ALARM PLAN GENERAL NOTES:

1. SEE SHEET F101 FOR ADDITIONAL FIRE ALARM NOTES, DETAILS, & SCHEDULES.



FIRE ALARM & SECURITY PLAN - FIRST FLOOR - AREA B
SCALE: 1/8" = 1'-0"

ISSUE TITLE	DATE
CITY SUBMITTAL	01 / 25 / 2024

Mechanical - Electrical - Plumbing Design Drawings for
The Village at Discovery - Lot 4

Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

FIRE ALARM PLAN SYMBOL LEGEND

- F** MANUAL PULL STATION
- M** MODULE
- O** OUTPUT MODULE
- SD** SMOKE DETECTOR
- HD** HEAT DETECTOR
- ST** STROBE - CEILING MOUNT
- SW** STROBE - WALL MOUNT
- HS** HORN STROBE - WALL MOUNT
- HC** HORN STROBE - CEILING MOUNT
- SS** SPEAKER STROBE - WALL MOUNT
- SC** SPEAKER STROBE - CEILING MOUNT
- T** TAMPER SWITCH
- WF** WATER FLOW SWITCH
- FACP** FIRE ALARM CONTROL PANEL
- ASN** FIRE ALARM ANNUNCIATOR

SECURITY PLAN SYMBOL LEGEND

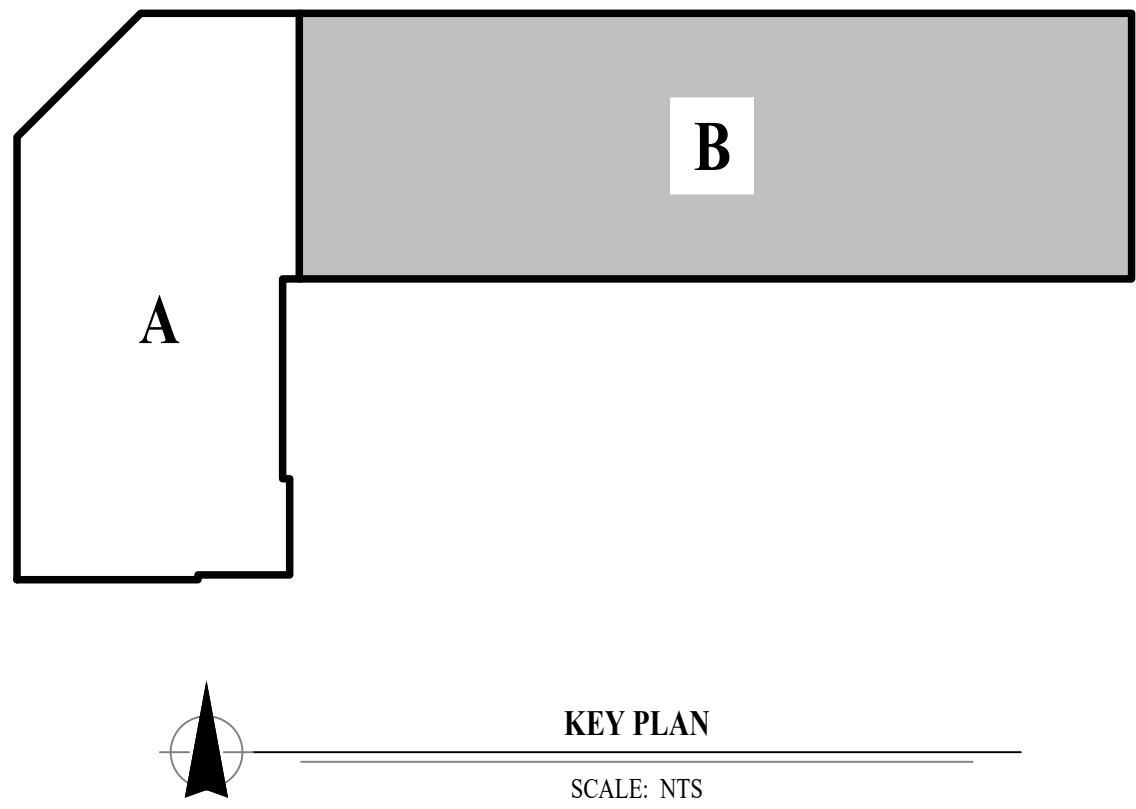
- R** READER
- M** MOTION DETECTOR
- KP** ALARM KEYPAD
- DC** DOOR CONTACT
- P** PANIC
- GB** GLASS BREAK SENSOR
- ES** ELECTRIC STRIKE
- BURG** BURGLAR PANEL
- CW** WALL MOUNT CAMERA (ARROW INDICATES VIEW DIRECTION)
- CC** CEILING MOUNT CAMERA (ARROW INDICATES VIEW DIRECTION)

FIRE ALARM PLAN GENERAL NOTES:

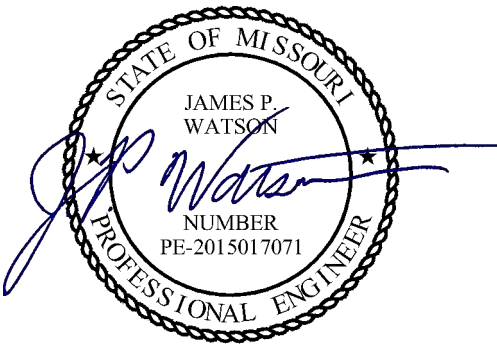
1. SEE SHEET F101 FOR ADDITIONAL FIRE ALARM NOTES, DETAILS, & SCHEDULES.

FIRE ALARM & SECURITY PLAN KEY NOTES:

① ADDITIONAL NOTIFICATION DEVICES REQUIRED IN DESIGNATED AUDIO/VISUAL IMPAIRMENT UNITS; SEE ARCHITECTURAL PLANS FOR EXACT UNIT LOCATIONS.



FIRE ALARM & SECURITY PLAN - SECOND FLOOR - AREA B
SCALE: 1/8" = 1'-0"



James Watson, P.E. January 25, 2024
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J2 PROJECT No: J21007
J2 DESIGN: JAP

ISSUE TITLE	DATE
CITY SUBMITTAL	01 / 25 / 2024

Mechanical - Electrical - Plumbing Design Drawings for
The Village at Discovery - Lot 4
Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE
FIRE ALARM & SECURITY PLAN - SECOND FLOOR - AREA B
SHEET NUMBER
FS112

FIRE ALARM PLAN SYMBOL LEGEND

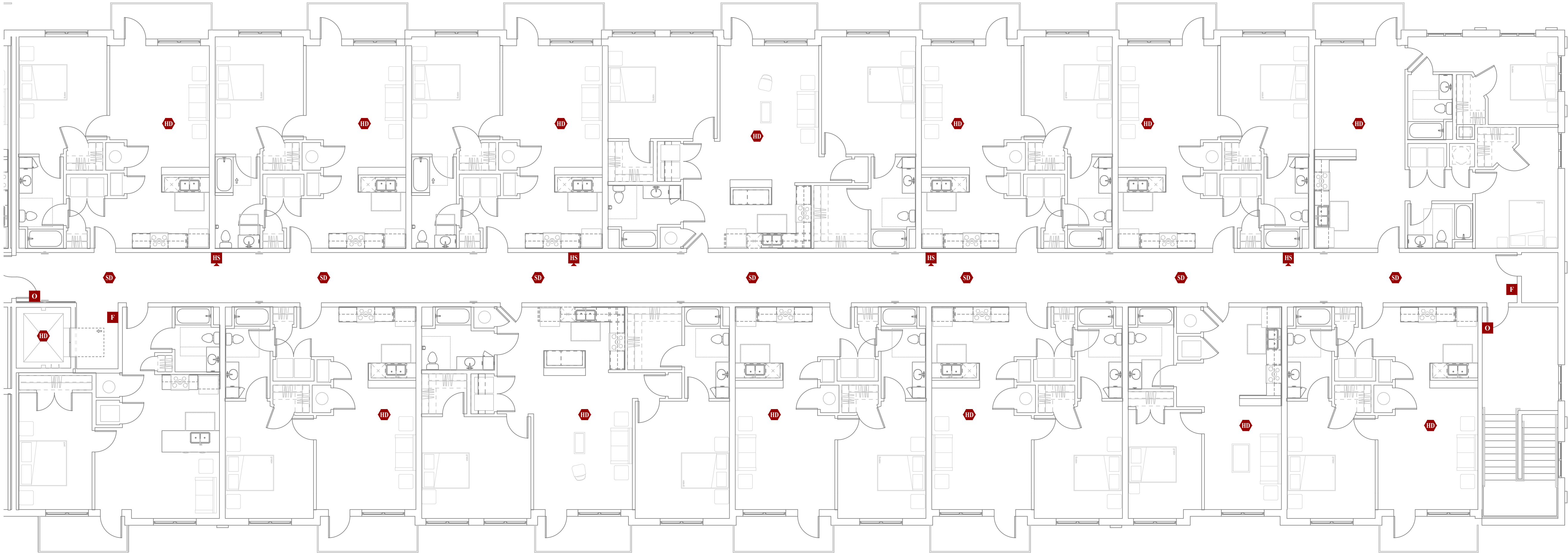
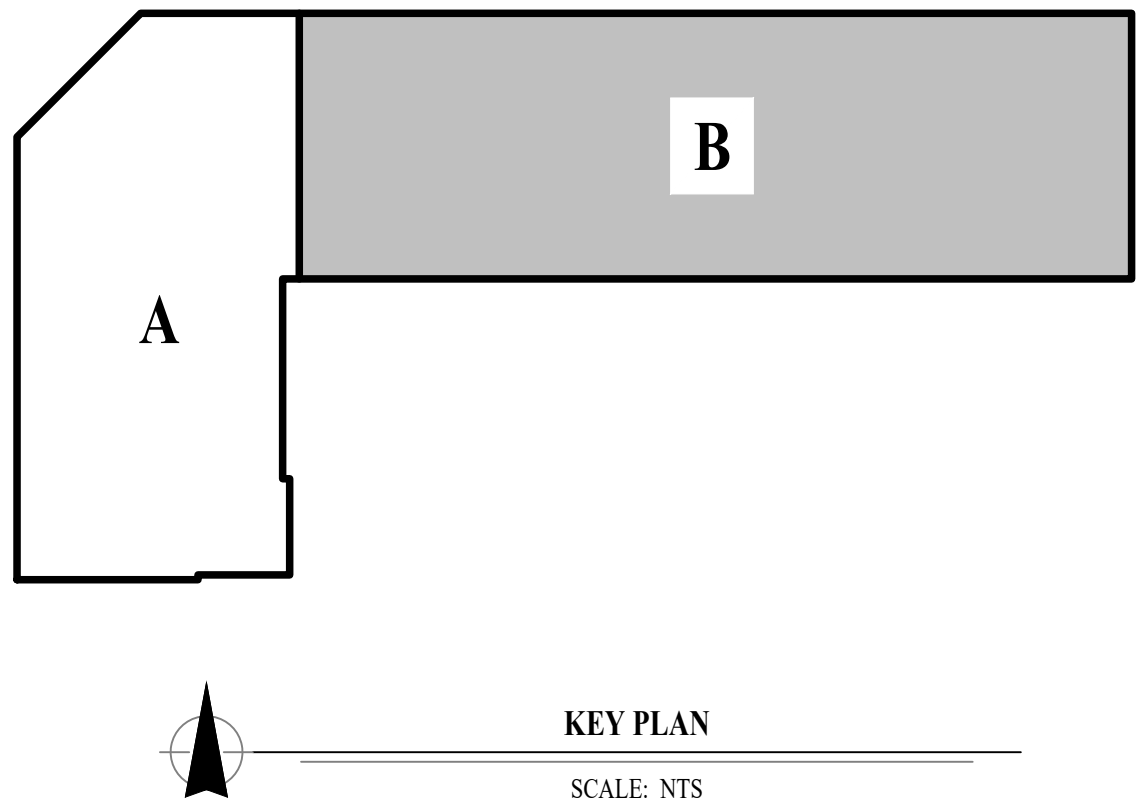
-  MANUAL PULL STATION
-  MODULE
-  OUTPUT MODULE
-  SMOKE DETECTOR
-  HEAT DETECTOR
-  STROBE - CEILING MOUNT
-  STROBE - WALL MOUNT
-  HORN STROBE - WALL MOUNT
-  HORN STROBE - CEILING MOUNT
-  SPEAKER STROBE - WALL MOUNT
-  SPEAKER STROBE - CEILING MOUNT
-  TAMPER SWITCH
-  WATER FLOW SWITCH
-  FIRE ALARM CONTROL PANEL
-  FIRE ALARM ANNUNCIATOR

SECURITY PLAN SYMBOL LEGEND

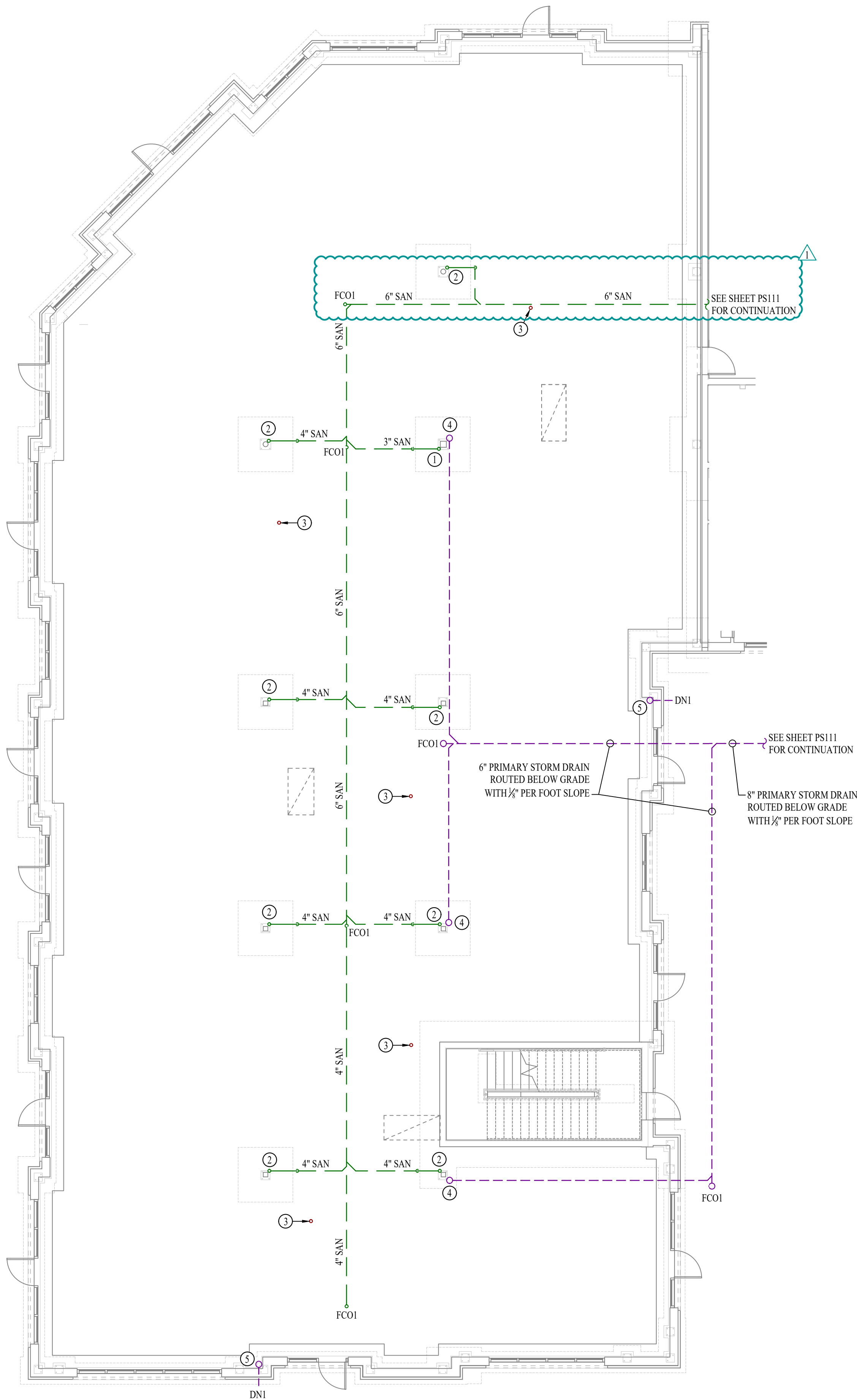
-  READER
-  MOTION DETECTOR
-  ALARM KEYPAD
-  DOOR CONTACT
-  PANIC
-  GLASS BREAK SENSOR
-  ELECTRIC STRIKE
-  BURGLAR PANEL
-  WALL MOUNT CAMERA (ARROW INDICATES VIEW DIRECTION)
-  CEILING MOUNT CAMERA (ARROW INDICATES VIEW DIRECTION)

FIRE ALARM PLAN GENERAL NOTES:

1. SEE SHEET F101 FOR ADDITIONAL FIRE ALARM NOTES, DETAILS, & SCHEDULES.



FIRE ALARM & SECURITY PLAN - THIRD FLOOR - AREA B
SCALE: 1/8" = 1'-0"



SANITARY SEWER PLAN - FIRST FLOOR - AREA A
SCALE: 1/8" = 1'-0"

SANITARY SEWER PLAN SYMBOL LEGEND

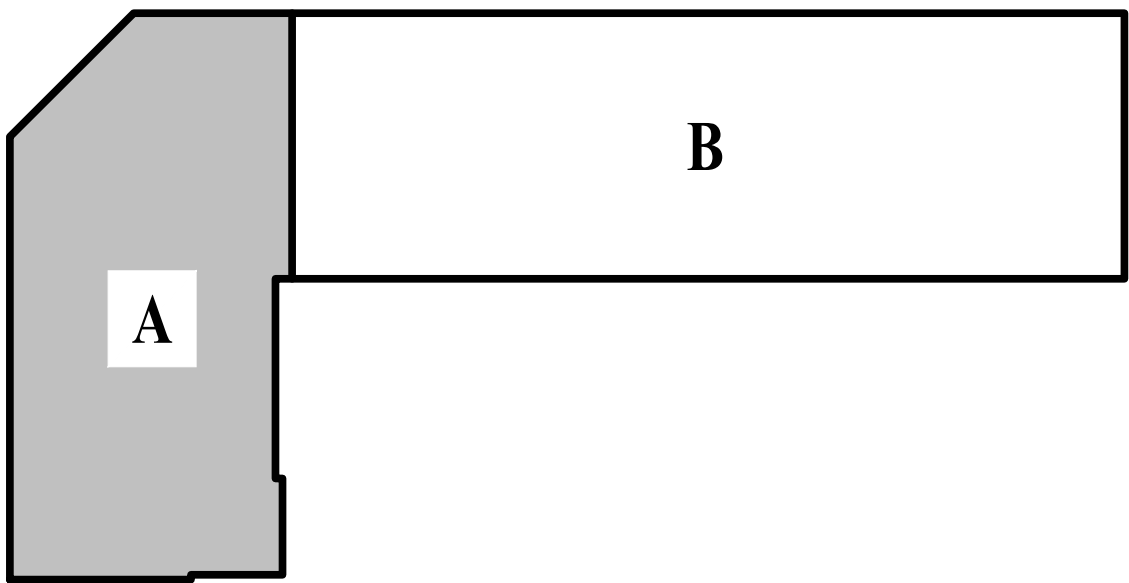
- SANITARY SEWER PIPING
- VENT PIPING
- STORM DRAIN PIPING
- PIPING TURNED DOWN / TURNED UP
- TIE INTO EXISTING

SANITARY SEWER PLAN GENERAL NOTES:

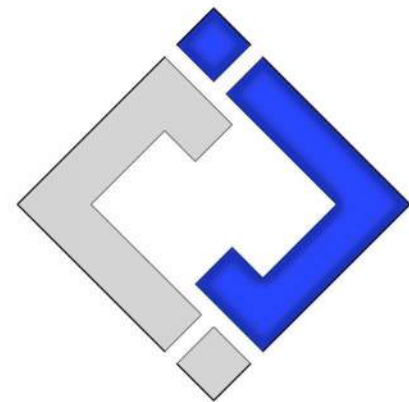
1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.

SANITARY SEWER PLAN KEY NOTES:

- 1 3" SANITARY STACK DOWN FROM SECOND FLOOR, TIGHT TO COLUMN, THEN DOWN BELOW SLAB.
- 2 4" SANITARY STACK DOWN FROM SECOND FLOOR, TIGHT TO COLUMN, THEN DOWN BELOW SLAB.
- 3 3" VENT (CAPPED FOR FUTURE CONNECTION); SEE SHEET PS102 FOR CONTINUATION.
- 4 6" PRIMARY STORM DRAIN PIPING DOWN FROM LEVEL ABOVE.
- 5 6" SECONDARY STORM DRAIN PIPING DOWN FROM LEVEL ABOVE TO DOWNSPOUT NOZZLE 'DN1' AT 18" A.F.F.



KEY PLAN
SCALE: NTS



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J2 PROJECT No: J21007

J2 DESIGN: JAP

ISSUE TITLE DATE

CITY SUBMITTAL 01 / 25 / 2024

REVISION 1 10 / 21 / 2024

Mechanical - Electrical - Plumbing Design Drawings for
The Village at Discovery - Lot 4

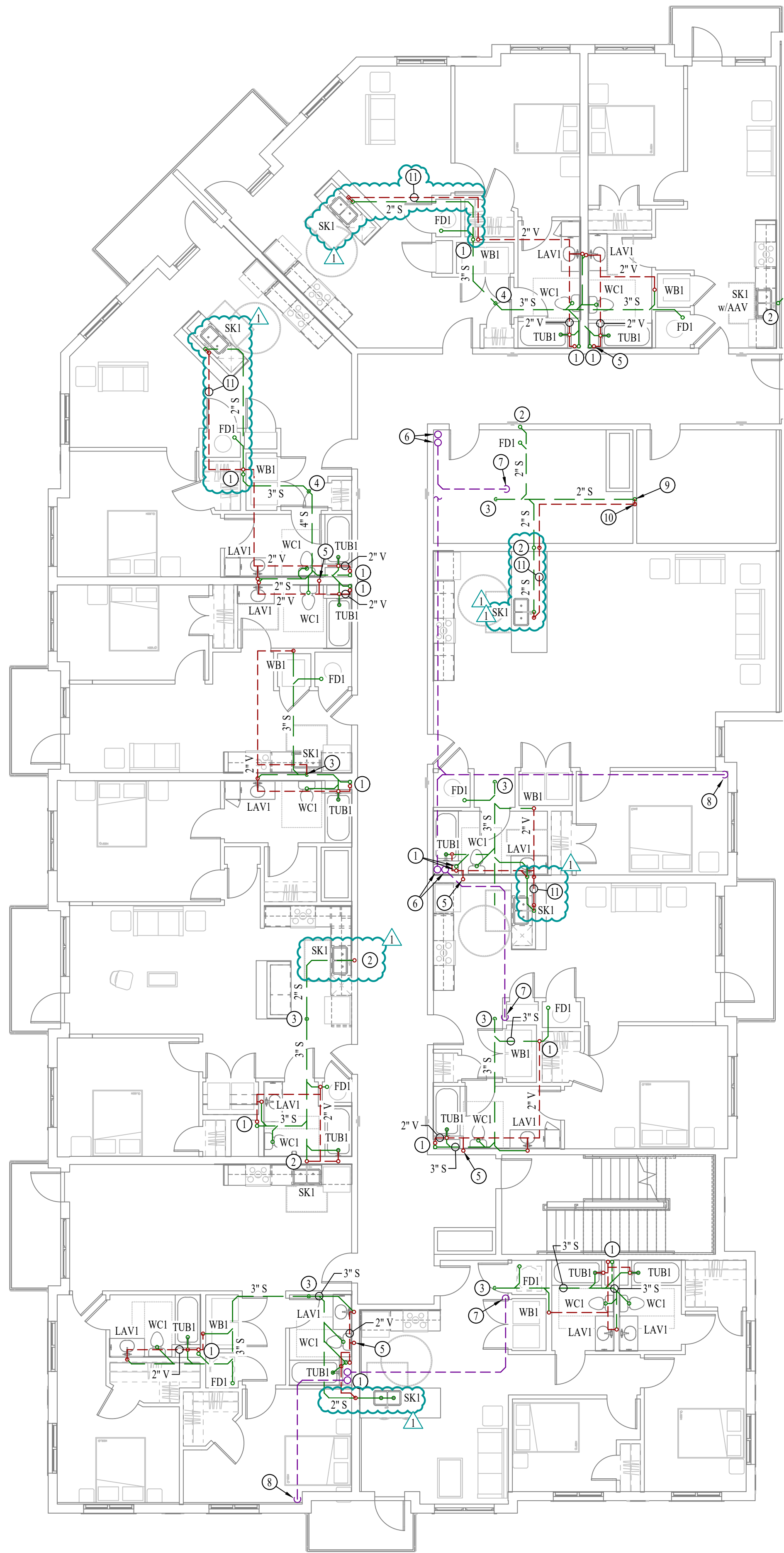
Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

**SANITARY SEWER
PLAN - FIRST FLOOR -
AREA A**

SHEET NUMBER

PS101



SANITARY SEWER PLAN - SECOND FLOOR - AREA A
SCALE: 1/8" = 1'-0"

SANITARY SEWER PLAN SYMBOL LEGEND

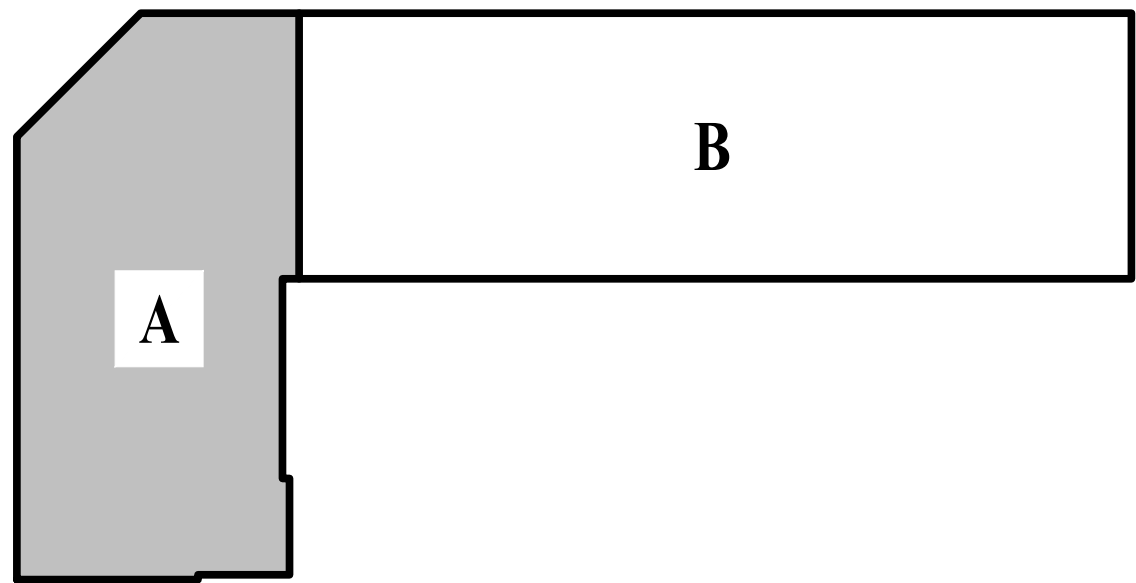
- SANITARY SEWER PIPING
- VENT PIPING
- STORM DRAIN PIPING
- PIPING TURNED DOWN / TURNED UP
- TIE INTO EXISTING

SANITARY SEWER PLAN GENERAL NOTES:

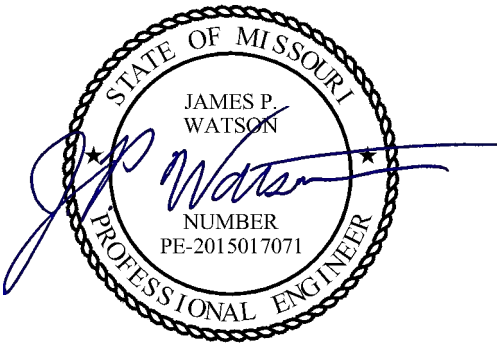
- SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.

SANITARY SEWER PLAN KEY NOTES:

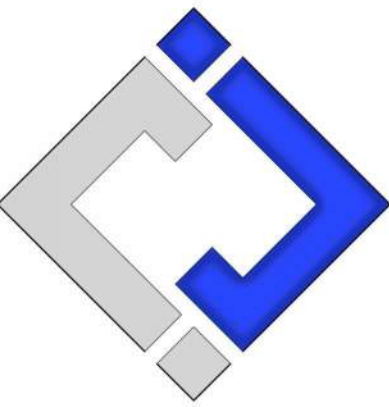
- 3" SANITARY STACK DOWN FROM THIRD FLOOR / 3" VENT UP TO THIRD FLOOR.
- 2" SANITARY STACK DOWN FROM THIRD FLOOR.
- 3" SANITARY STACK DOWN TO FIRST FLOOR.
- 4" SANITARY STACK DOWN TO FIRST FLOOR.
- 3" VENT (CAPPED FOR FUTURE CONNECTION) UP FROM LEVEL BELOW; SEE SHEET PS101.
- 6" PRIMARY & 6" SECONDARY STORM DRAIN DOWN FROM LEVEL ABOVE.
- 6" PRIMARY DOWN TO 1ST FLOOR. SEE SHEET PS101 FOR CONTINUATION.
- 6" SECONDARY DOWN TO 1ST FLOOR. SEE SHEET PS101 FOR CONTINUATION.
- HUB DRAIN IN WALL WITH ACCESS PANEL & AAV FOR CONDENSATE DISCHARGE. COORDINATE WITH HVAC CONTRACTOR.
- 2" VENT UP IN WALL TO LEVEL ABOVE.
- ISLAND SINK VENT BELOW FLOOR PER 2018 IPC SECTION 916.



KEY PLAN
SCALE: NTS



James Watson, P.E. October 21, 2024
PE-2015017071
MO Certificate of Authority # 2018029680



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J2 PROJECT No: J21007

J2 DESIGN: JAP

ISSUE TITLE DATE

CITY SUBMITTAL 01 / 25 / 2024

REVISION 1 10 / 21 / 2024

The Village at Discovery - Lot 4

Mechanical - Electrical - Plumbing Design Drawings for

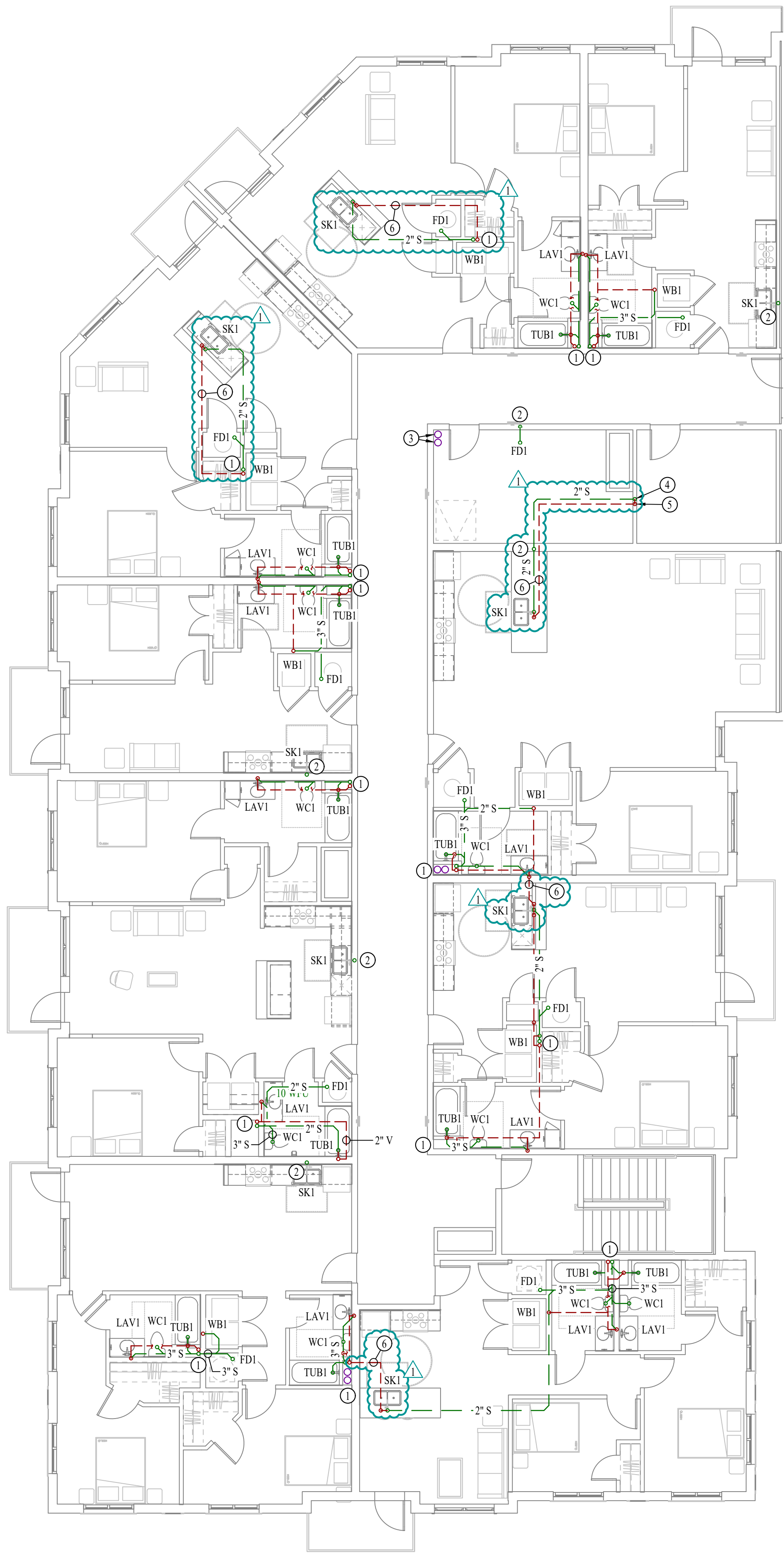
Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

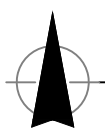
SHEET TITLE

**SANITARY
SEWER PLAN -
SECOND FLOOR -
AREA A**

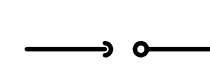
SHEET NUMBER

PS102



 **SANITARY SEWER PLAN - THIRD FLOOR - AREA A**
SCALE: 1/8" = 1'-0"

SANITARY SEWER PLAN SYMBOL LEGEND

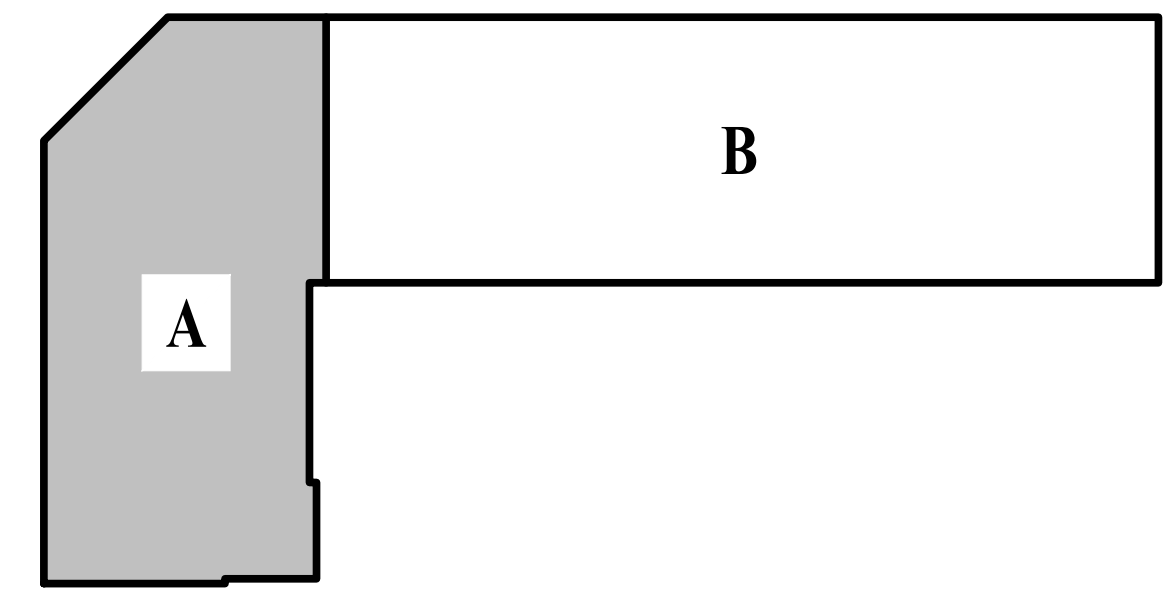
-  SANITARY SEWER PIPING
-  VENT PIPING
-  STORM DRAIN PIPING
-  PIPING TURNED DOWN / TURNED UP
-  TIE INTO EXISTING

SANITARY SEWER PLAN GENERAL NOTES:

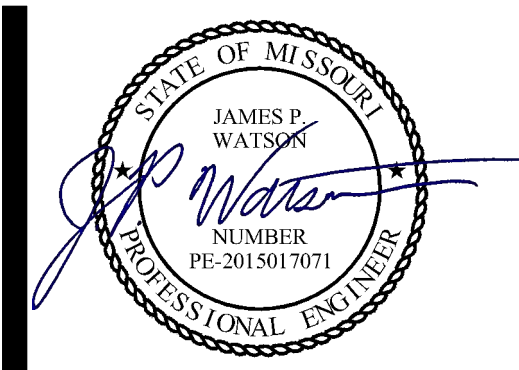
- SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.

SANITARY SEWER PLAN KEY NOTES:

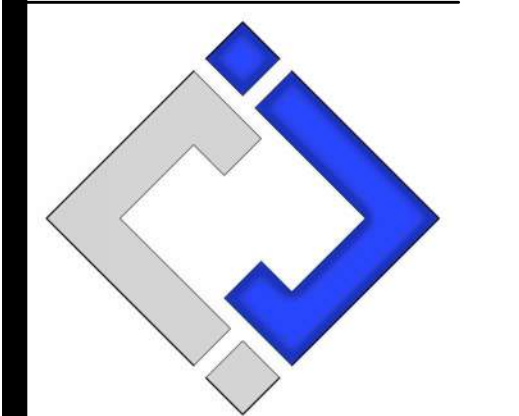
- 3" SANITARY STACK DOWN / 3" VENT UP FROM BELOW TO VENT THRU ROOF.
- 2" SANITARY STACK DOWN / 2" VENT UP TO VENT THRU ROOF.
- 6" PRIMARY & 6" SECONDARY STORM DRAIN PIPING DOWN FROM ROOF & CONTINUES DOWN TO SECOND FLOOR.
- HUB DRAIN IN WALL WITH ACCESS PANEL & AAV FOR CONDENSATE DISCHARGE. COORDINATE WITH HVAC CONTRACTOR.
- 2" VENT UP FROM LEVEL BELOW; CONTINUES UP TO 2" VTR.
- ISLAND SINK VENT BELOW FLOOR PER 2018 IPC SECTION 916.



 **KEY PLAN**
SCALE: NTS



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REVISION 1	10 / 21 / 2024

Mechanical - Electrical - Plumbing Design Drawings for
The Village at Discovery - Lot 4
Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SANITARY SEWER PLAN SYMBOL LEGEND

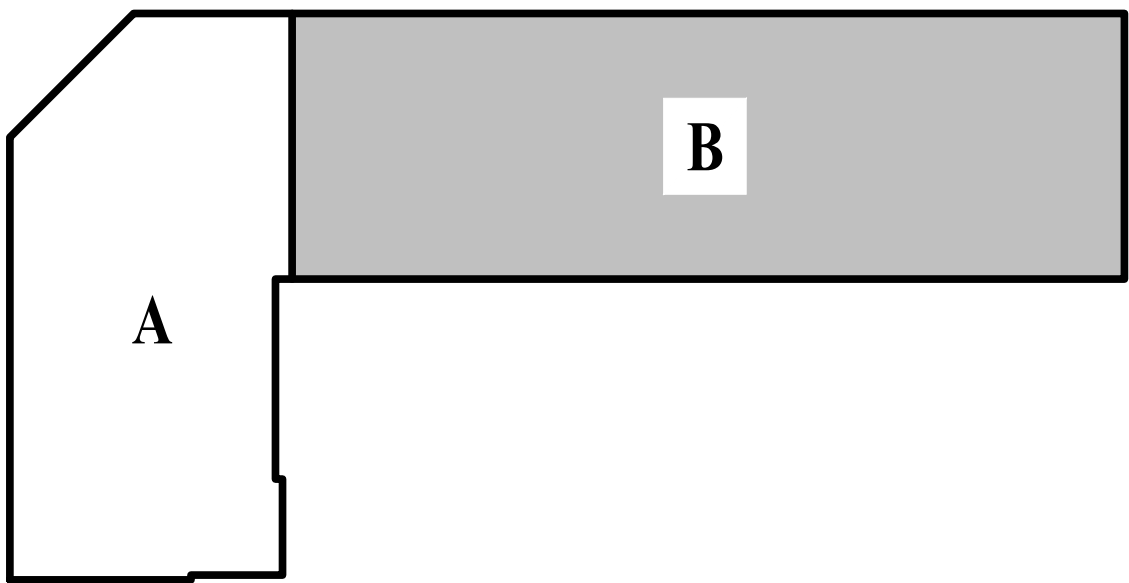
- SANITARY SEWER PIPING
- VENT PIPING
- STORM DRAIN PIPING
- PIPING TURNED DOWN / TURNED UP
- TIE INTO EXISTING

SANITARY SEWER PLAN GENERAL NOTES:

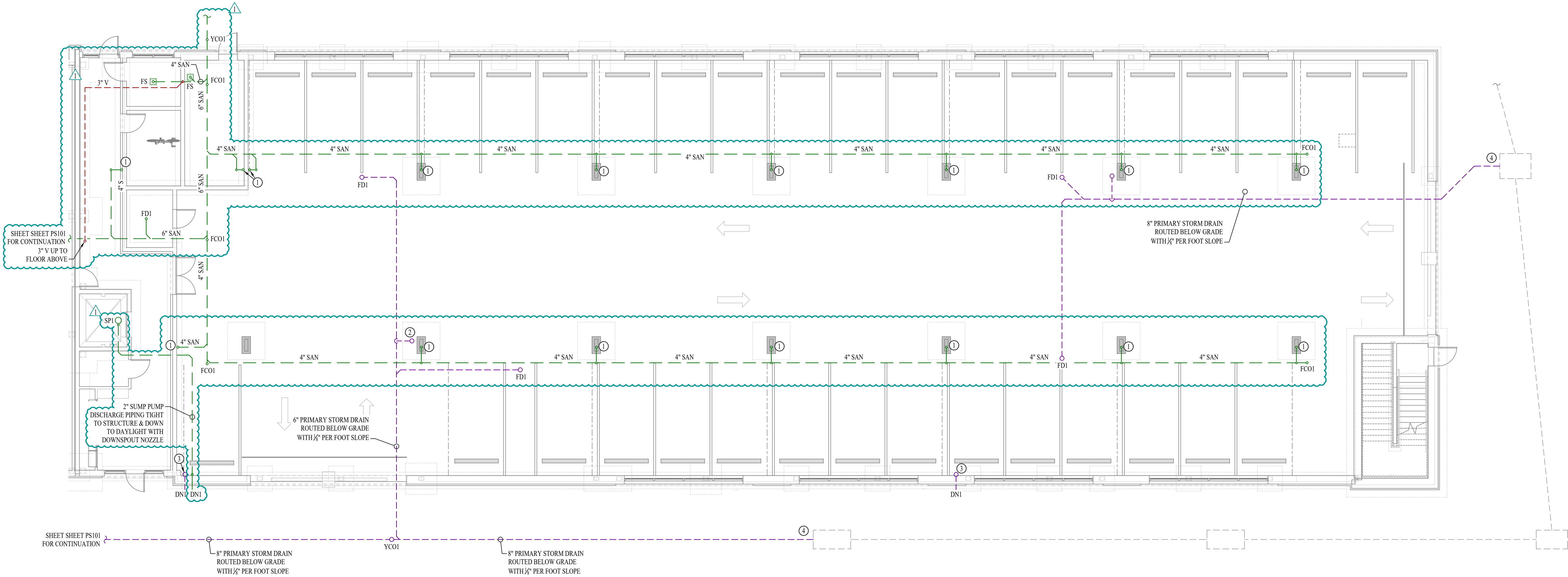
1. SEE SHEET PS01 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.

SANITARY SEWER PLAN KEY NOTES:

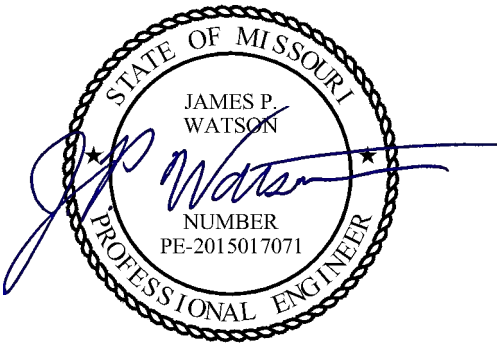
- ① 4" SAN DOWN FROM SECOND FLOOR
- ② 6" PRIMARY STORM DRAIN PIPING DOWN FROM LEVEL ABOVE.
- ③ 6" SECONDARY STORM DRAIN PIPING DOWN FROM LEVEL ABOVE TO DOWNSPOUT NOZZLE 'DNI' AT 18" A.F.F.
- ④ TIE INTO EXISTING SITE STORM DRAINAGE, SEE CIVIL PLANS.



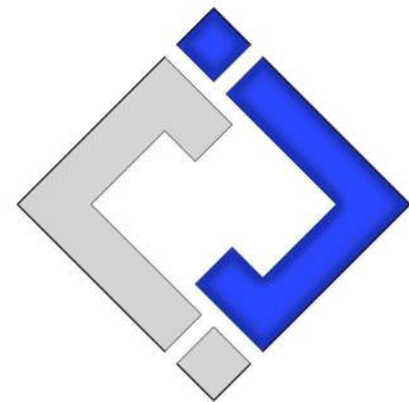
KEY PLAN
SCALE: NTS



SANITARY SEWER PLAN - FIRST FLOOR - AREA B
SCALE: 1/8" = 1'-0"



James Watson, P.E. October 21, 2024
PE-2015017071
MO Certificate of Authority # 2018029680



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J2 PROJECT No:	J21007
J2 DESIGN:	JAP

ISSUE TITLE	DATE
CITY SUBMITTAL	01 / 25 / 2024
REVISION 1	10 / 21 / 2024

Mechanical - Electrical - Plumbing Design Drawings for
The Village at Discovery - Lot 4

Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SANITARY
SEWER PLAN -
FIRST FLOOR -
AREA B

SHEET NUMBER
PS111

SANITARY SEWER PLAN SYMBOL LEGEND

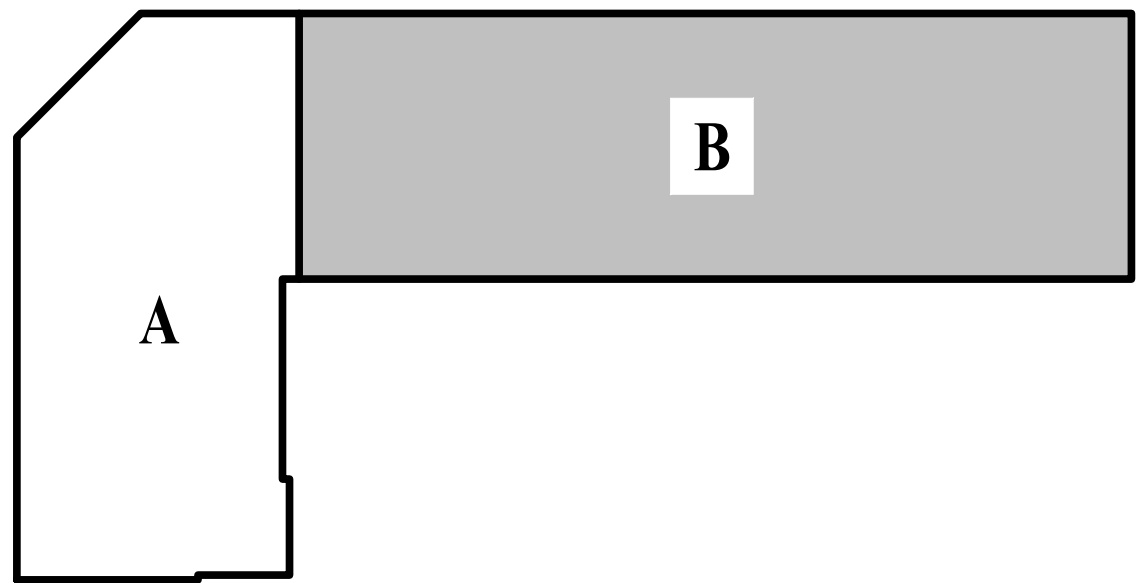
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SANITARY SEWER PLAN GENERAL NOTES:

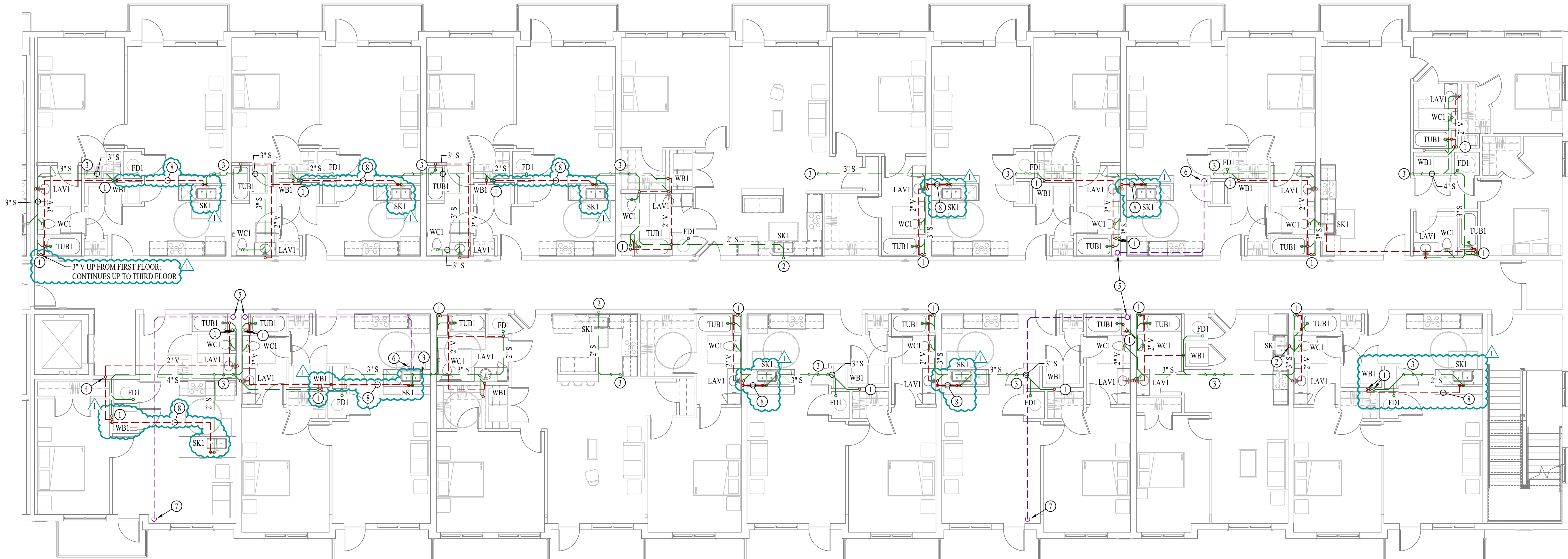
1. SEE SHEET PS01 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.

SANITARY SEWER PLAN KEY NOTES:

- 3" SANITARY STACK DOWN FROM THIRD FLOOR / 3" VENT UP TO THIRD FLOOR.
- 2" SANITARY STACK DOWN FROM THIRD FLOOR.
- 4" SANITARY STACK DOWN TO FIRST FLOOR.
- 2" VENT UP FROM LEVEL BELOW; SEE SHEET PS101.
- 6" PRIMARY & 6" SECONDARY STORM DRAIN DOWN FROM LEVEL ABOVE.
- 6" PRIMARY DOWN TO 1ST FLOOR. SEE SHEET PS101 FOR CONTINUATION.
- 6" SECONDARY DOWN TO 1ST FLOOR. SEE SHEET PS101 FOR CONTINUATION.
- ISLAND SINK VENT BELOW FLOOR PER 2018 IPC SECTION 916.



KEY PLAN
SCALE: NTS



SANITARY SEWER PLAN - SECOND FLOOR - AREA B
SCALE: 1/8" = 1'-0"

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J2 DESIGN:	JAP

ISSUE TITLE	DATE
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Mechanical - Electrical - Plumbing Design Drawings for
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Lee's Summit, Jackson County, MO

SANITARY
SEWER PLAN -
SECOND FLOOR -
AREA B

PS112

SANITARY SEWER PLAN SYMBOL LEGEND

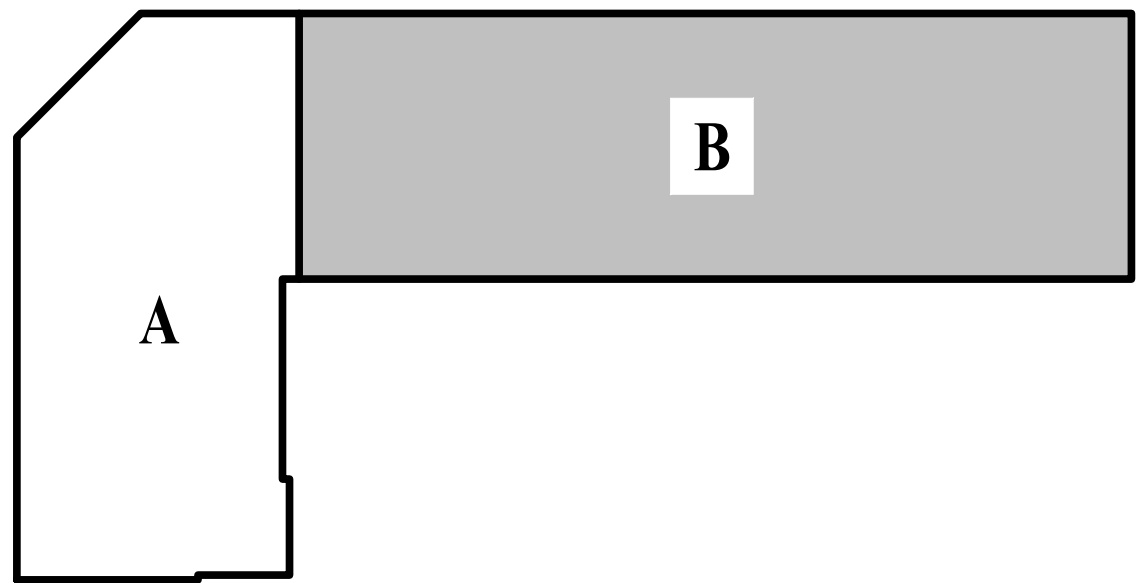
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- VENT PIPING
- STORM DRAIN PIPING
- PIPING TURNED DOWN / TURNED UP
- TIE INTO EXISTING

SANITARY SEWER PLAN GENERAL NOTES:

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.

SANITARY SEWER PLAN KEY NOTES:

- 1 3" SANITARY STACK DOWN / 3" VENT UP FROM BELOW TO VENT THRU ROOF.
- 2 2" SANITARY STACK DOWN / 2" VENT UP TO VENT THRU ROOF.
- 3 6" PRIMARY & 6" SECONDARY STORM DRAIN PIPING DOWN FROM ROOF & CONTINUES DOWN TO SECOND FLOOR.
- 4 ISLAND SINK VENT BELOW FLOOR PER 2018 IPC SECTION 916



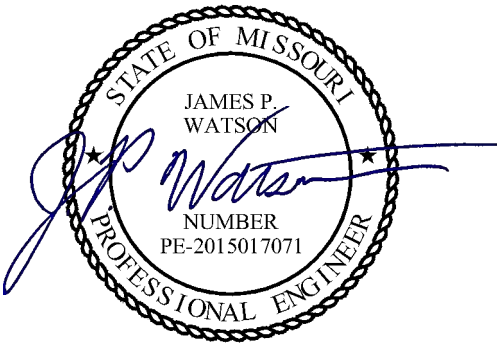
KEY PLAN

SCALE: NTS

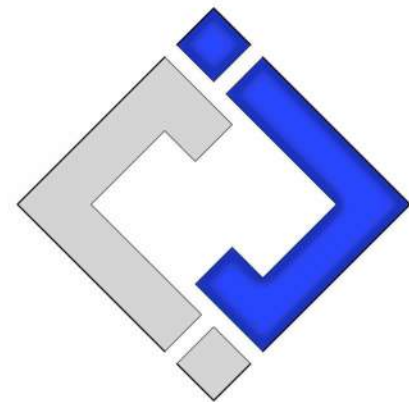


SANITARY SEWER PLAN - THRID FLOOR - AREA B

SCALE: 1/8" = 1'-0"



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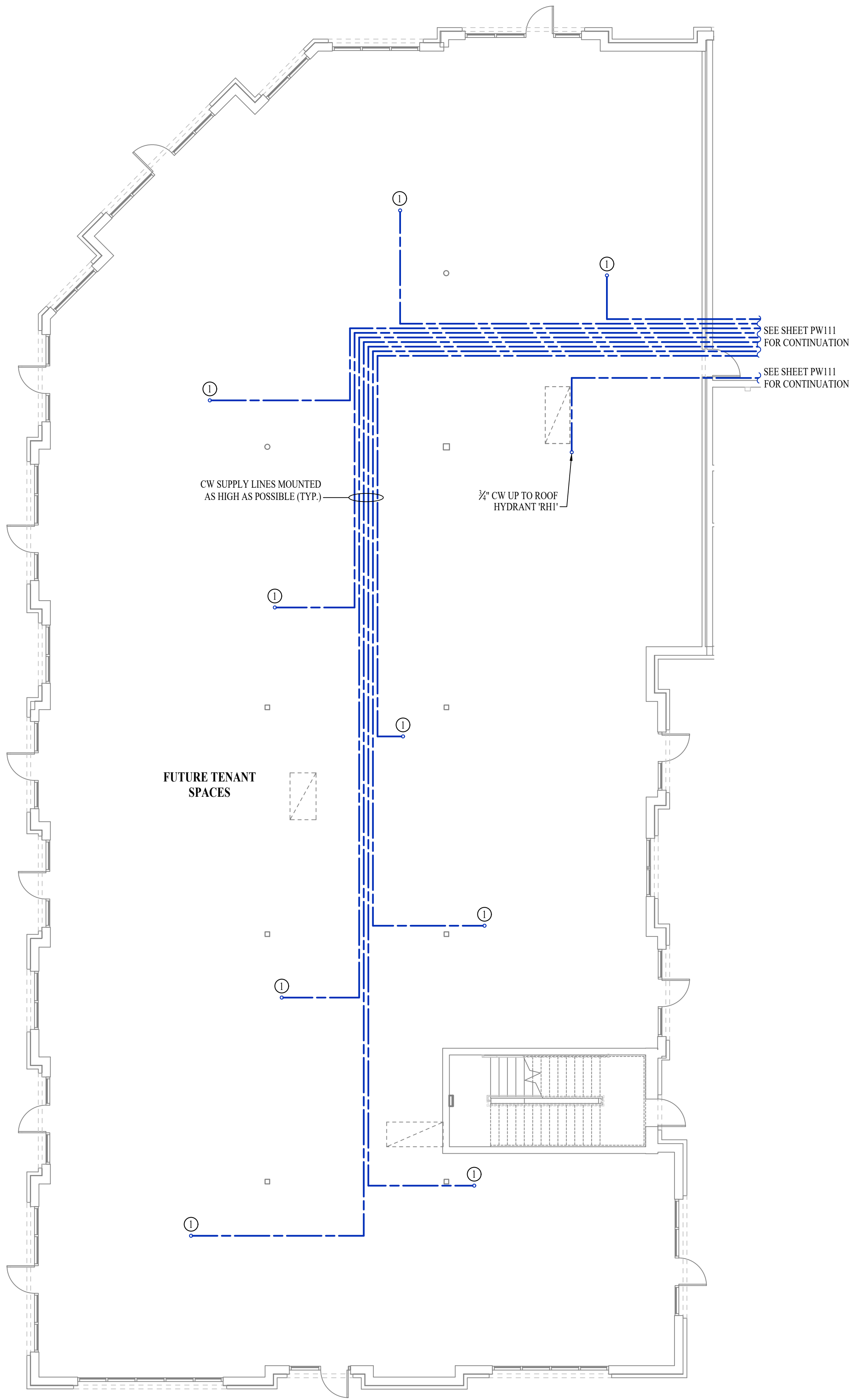
Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

SANITARY
SEWER PLAN -
THRID FLOOR -
AREA B

SHEET NUMBER

PS113



WATER PLAN - FIRST FLOOR - AREA A
SCALE: 1/8" = 1'-0"

WATER PLAN SYMBOL LEGEND

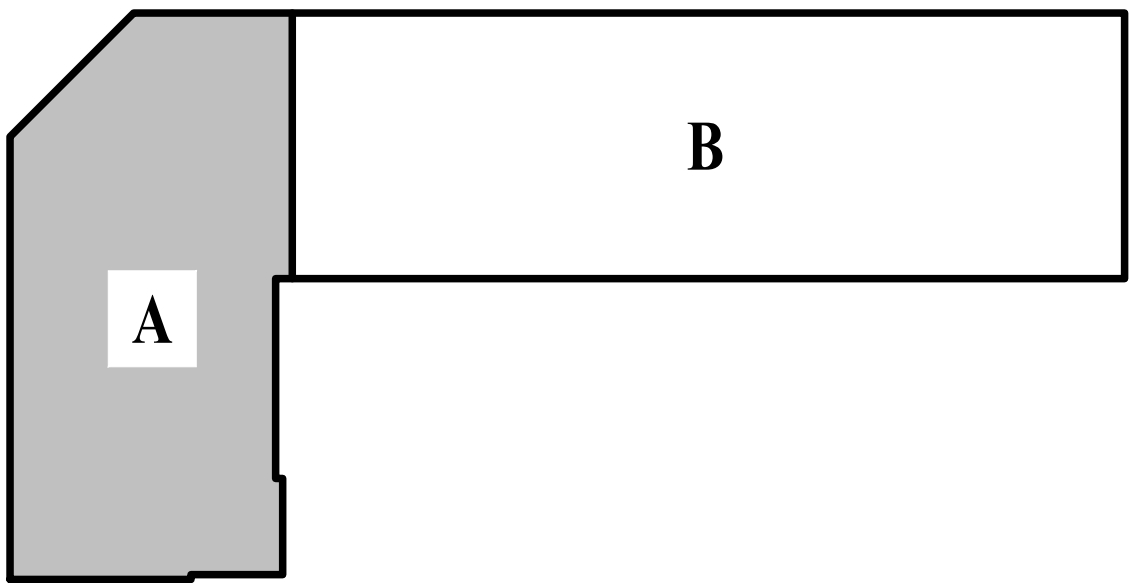
- COLD WATER LINE
- HOT WATER LINE
- HOT WATER RECIRCULATION LINE
- FILTERED WATER LINE
- WATER METER
- VALVE
- PUMP
- PIPING TURNED DOWN / TURNED UP
- TIE INTO EXISTING

WATER PLAN GENERAL NOTES:

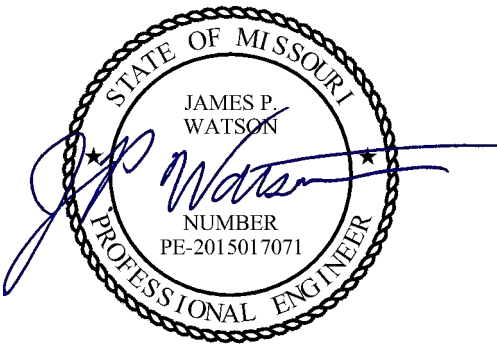
1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.

WATER PLAN KEY NOTES:

- (1) (2) 1" CW UP INTO WALL ON SECOND LEVEL FOR APARTMENTS (SEE SHEET PW102 FOR CONTINUATION)



KEY PLAN
SCALE: NTS



James Watson, P.E. January 25, 2024
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WATER PLAN - SECOND FLOOR - AREA A
SCALE: 1/8" = 1'-0"

WATER PLAN SYMBOL LEGEND

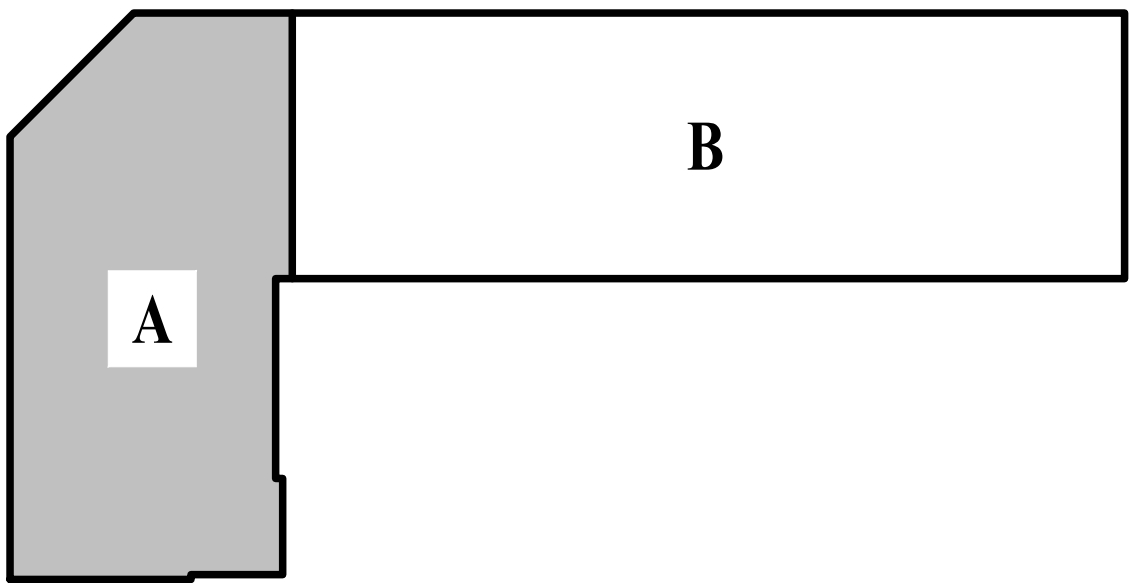
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WATER PLAN GENERAL NOTES:

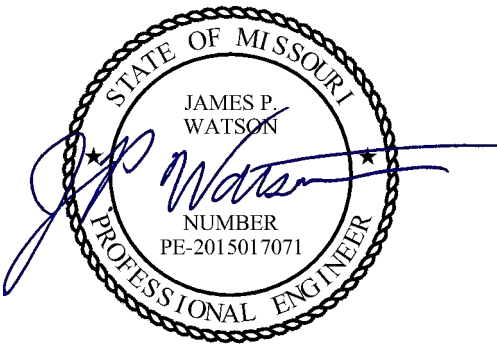
- SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.

WATER PLAN KEY NOTES:

- (2) 1" CW UP INTO WALL FROM FIRST FLOOR
 - (1) 1" CW TO SERVE APARTMENT ON SECOND FLOOR
 - (1) 1" CW CONTINUES UP TO THIRD FLOOR (SEE SHEET PW103 FOR CONTINUATION).



KEY PLAN
SCALE: NTS



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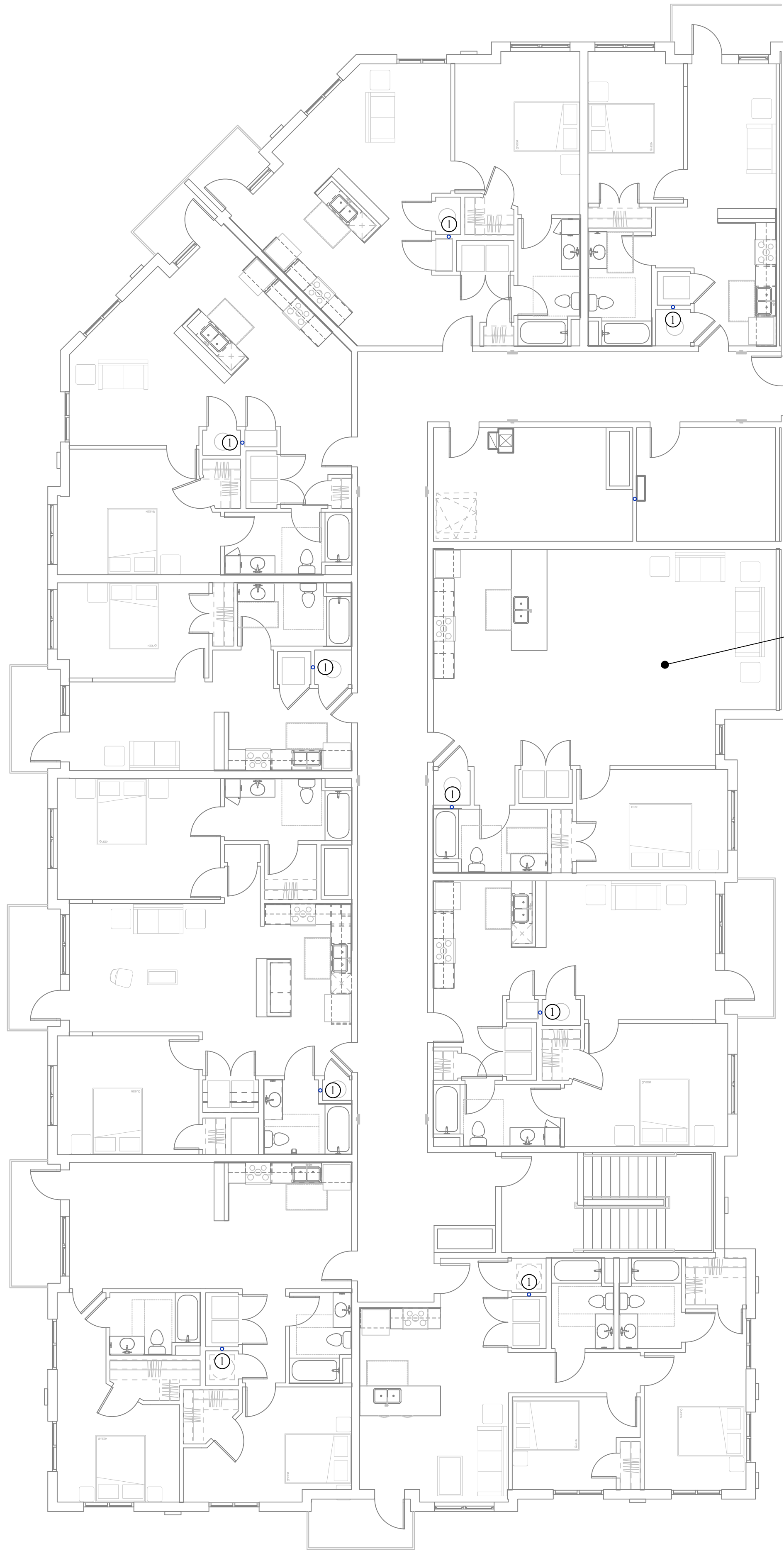
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CITY SUBMITTAL 01 / 25 / 2024



WATER PLAN - THIRD FLOOR - AREA A
SCALE: 1/8" = 1'-0"

WATER PLAN SYMBOL LEGEND

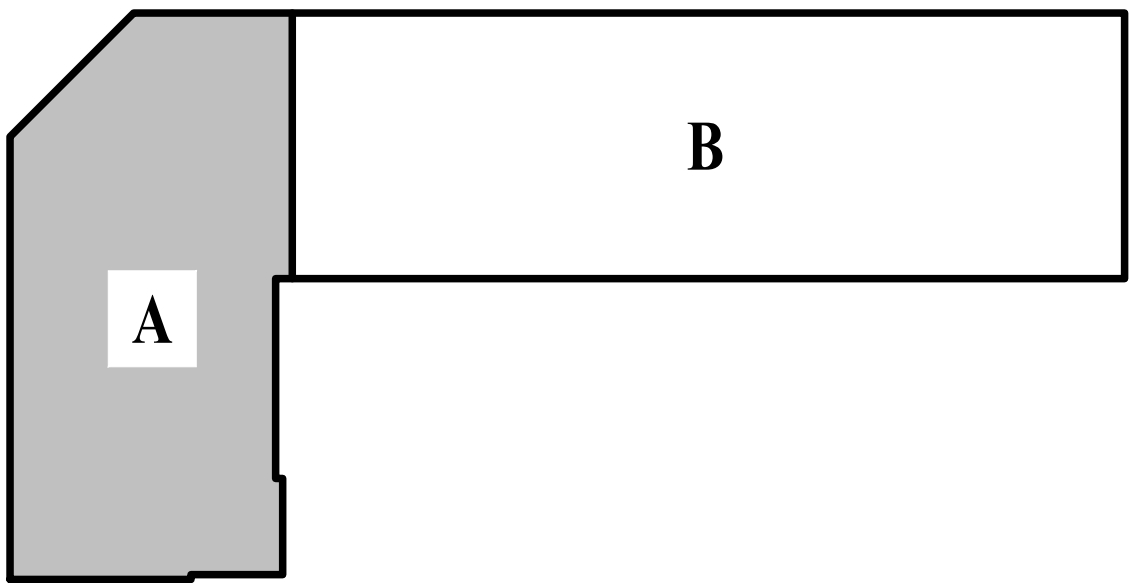
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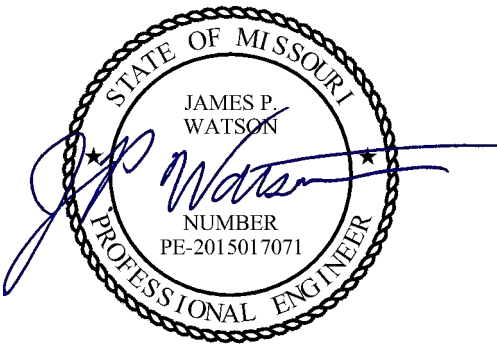
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WATER PLAN KEY NOTES:

- (1) 1" CW UP FROM SECOND FLOOR TO SERVE APARTMENT ON THIRD FLOOR.



KEY PLAN
SCALE: NTS



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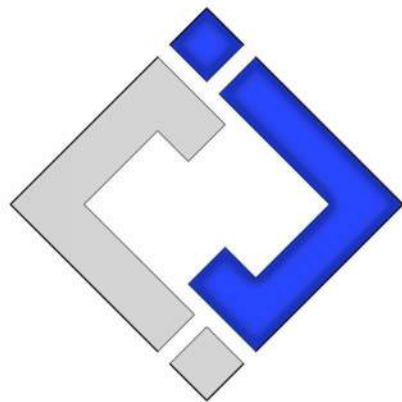
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The Village at Discovery - Lot 4

Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

**WATER PLAN -
FIRST FLOOR -
AREA B**

SHEET NUMBER

PW111

WATER PLAN SYMBOL LEGEND

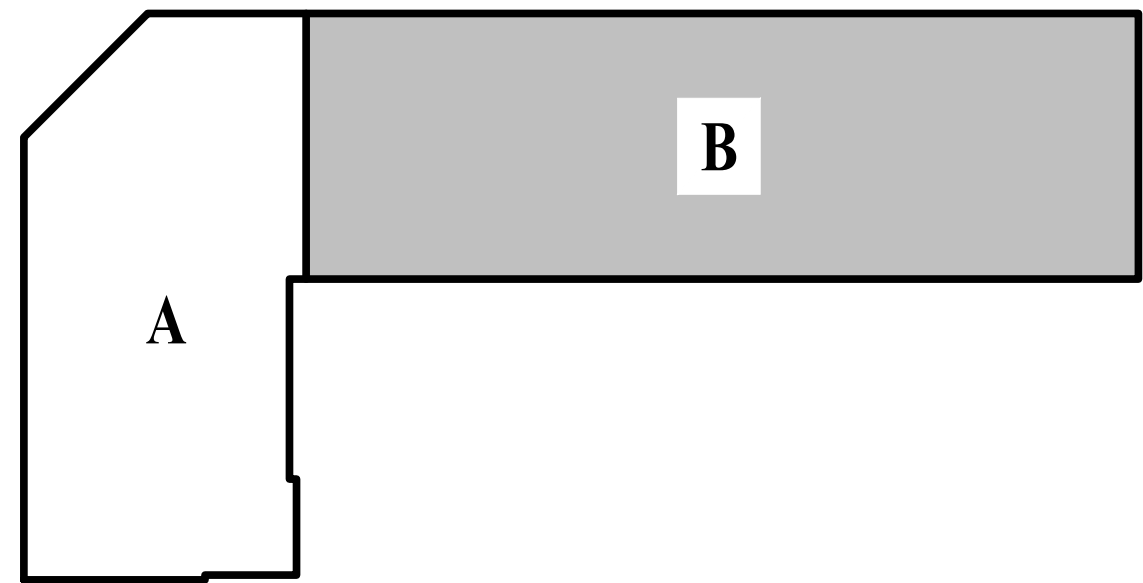
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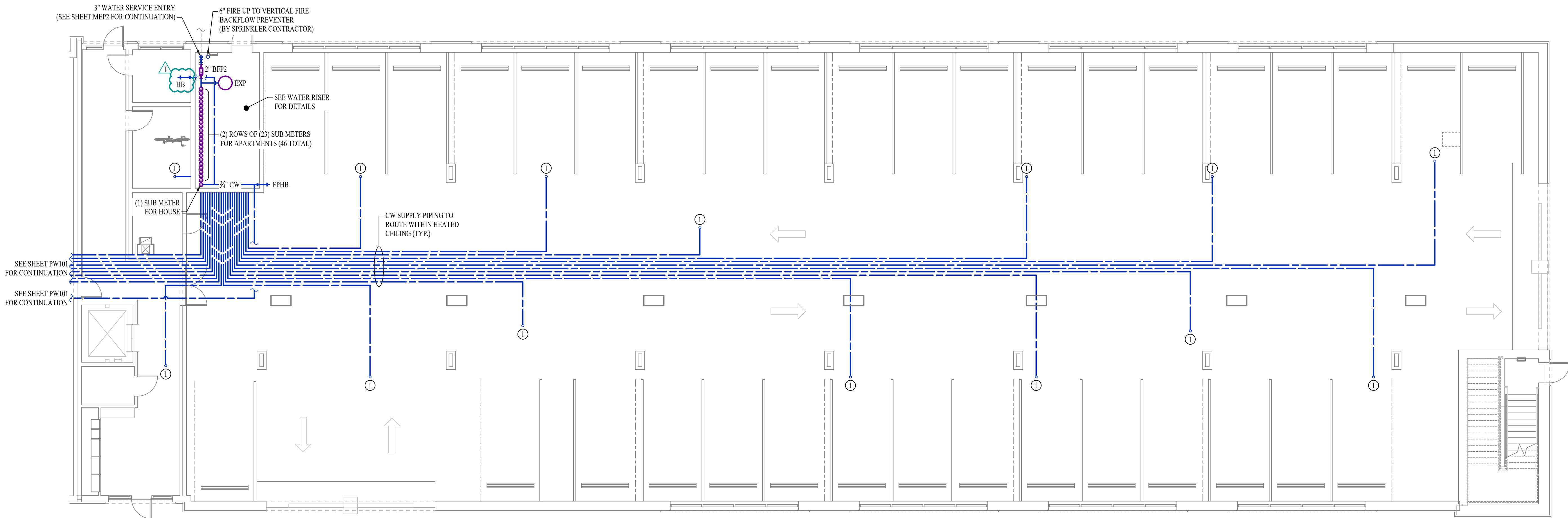
WATER PLAN KEY NOTES:

- (2) 1" CW UP INTO WALL ON SECOND LEVEL FOR APARTMENTS (SEE SHEET PW112 FOR CONTINUATION)



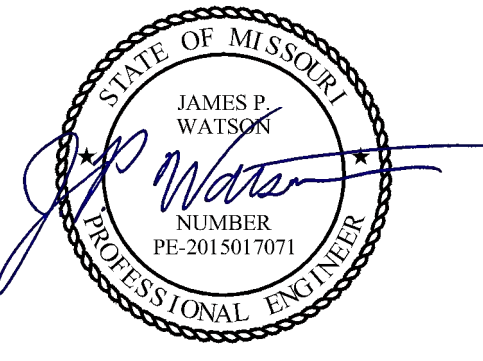
KEY PLAN

SCALE: NTS



WATER PLAN - FIRST FLOOR - AREA B

SCALE: 1/8" = 1'-0"



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SHEET TITLE

**WATER PLAN -
SECOND FLOOR -
AREA B**

SHEET NUMBER

PW112

WATER PLAN SYMBOL LEGEND

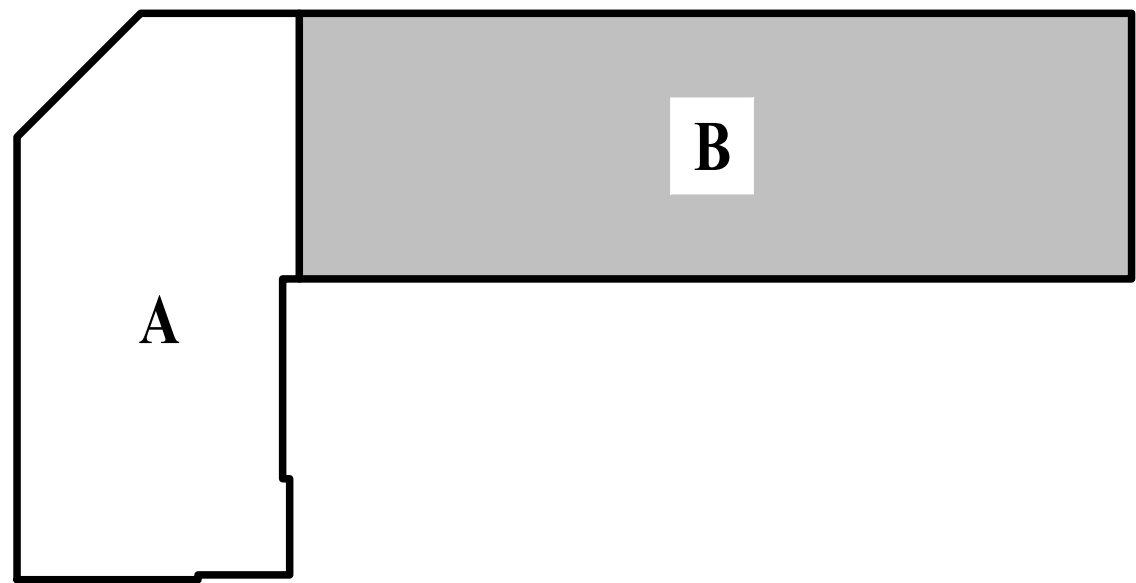
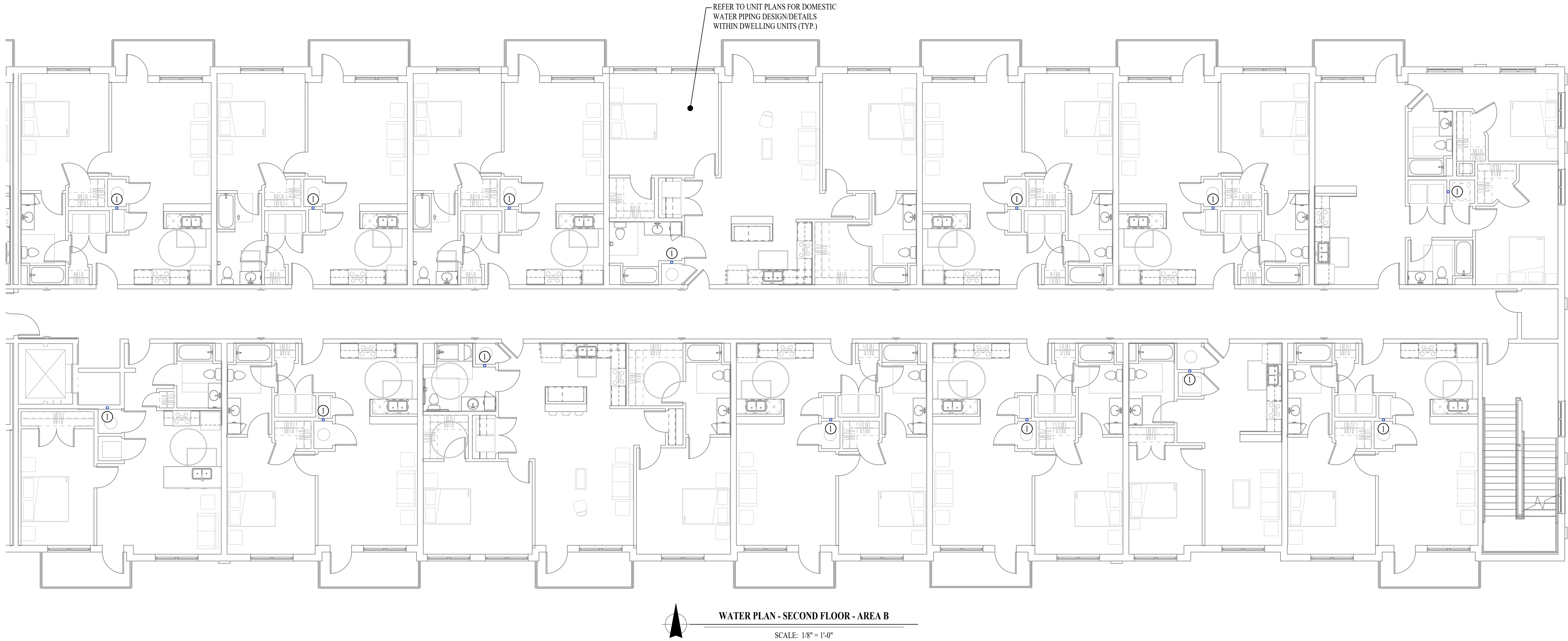
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WATER PLAN GENERAL NOTES:

- SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.

WATER PLAN KEY NOTES:

- ① (2) 1" CW UP INTO WALL FROM FIRST FLOOR
 - (1) 1" CW TO SERVE APARTMENT ON SECOND FLOOR
 - (1) 1" CW CONTINUES UP TO THIRD FLOOR (SEE SHEET PW103 FOR CONTINUATION).



KEY PLAN
SCALE: NTS



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The Village at Discovery - Lot 4

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SHEET TITLE

WATER PLAN -
THIRD FLOOR -
AREA B

SHEET NUMBER

PW113

WATER PLAN SYMBOL LEGEND

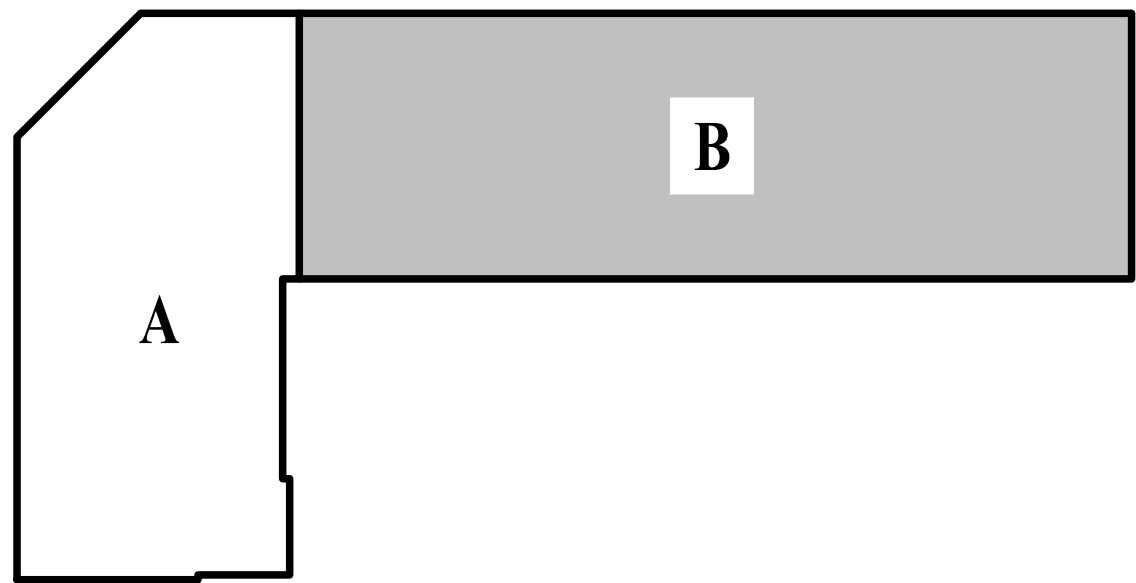
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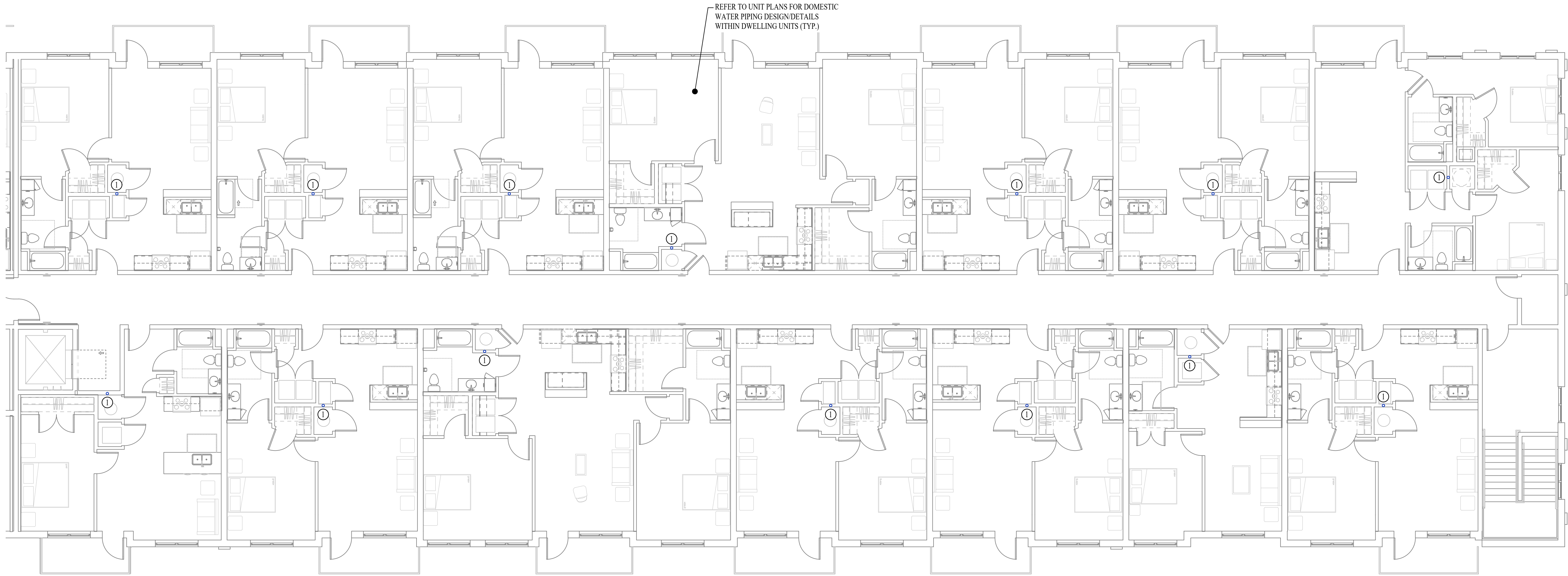
1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.

WATER PLAN KEY NOTES:

- (1) (1) 1" CW UP FROM SECOND FLOOR TO SERVE APARTMENT ON THIRD FLOOR.



KEY PLAN
SCALE: NTS



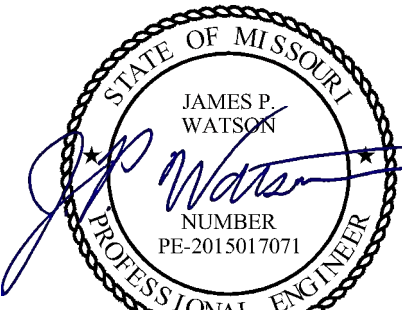
WATER PLAN - THIRD FLOOR - AREA B
SCALE: 1/8" = 1'-0"

PLUMBING SPECIFICATIONS

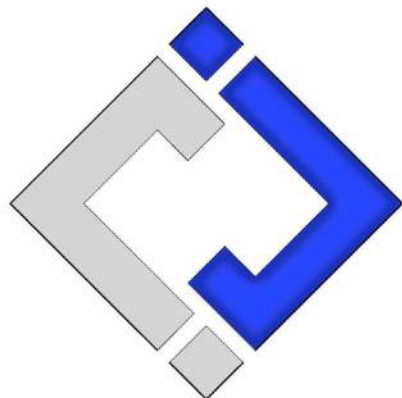
1. GENERAL
- 1.1. PLUMBING CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL ESCUTCHEONS, ¼ TURN STOPS, P-TRAPS, AND SUPPLY LINES TO PROVIDE A COMPLETE SYSTEM AT EACH FIXTURE INDICATED ON PLANS UNLESS NOTED OTHERWISE.
2. SANITARY
- 2.1. BELOW AND ABOVE GRADE WASTE AND VENT PIPING IN BUILDING TO BE SOLID CORE SCH. 40 PVC DWV.
- 2.2. NO PIPE SMALLER THAN 2" BELOW GRADE.
- 2.3. WASTE AND VENT PIPING IN PLENUMS TO BE CAST IRON, OR PVC WITH AN INSULATION WRAP LISTED FOR USE AS SUCH AN ASSEMBLY.
- 2.4. ALL VENT PIPE TERMINATIONS ARE TO BE LOCATED EITHER 10' HORIZONTALLY OR 3' ABOVE MECHANICAL AIR INTAKE LOCATIONS.
3. DOMESTIC WATER
- 3.1. DOMESTIC WATER PIPING TO BE EITHER COPPER OR PEX. WHERE PEX PIPING IS USED, IT SHALL BE INCREASED ONE PIPE SIZE FROM WHAT IS INDICATED ON PLANS FOR ALL PORTIONS OF THE SYSTEM.
- 3.2. PEX-A MAY BE INSTALLED AT SIZES INDICATED ON PLANS IF AN ENGINEERED PLAN IS SUBMITTED SHOWING ACCEPTABLE PRESSURE DROPS AND FLUID VELOCITIES. APPROVAL MUST BE GRANTED PRIOR TO PURCHASE AND INSTALLATION.
- 3.3. COPPER WATER PIPING BELOW GRADE SHALL BE TYPE "K". BELOW GRADE JOINTS SHALL BE SILVER SOLDERED. THERE SHALL BE NO JOINTS IN WATER PIPING LOCATED BENEATH BUILDING SLAB.
- 3.4. COPPER WATER PIPING ABOVE GRADE SHALL BE TYPE "L".
- 3.5. PROVIDE WATER HAMMER ARRESTORS AT ALL QUICK-CLOSE VALVES. FIXTURES REQUIRING WATER HAMMER ARRESTORS INCLUDE BUT ARE NOT LIMITED TO FLUSH VALVES, SENSOR FAUCETS, AND WASHING MACHINE BOXES. AIR CHAMBERS ARE NOT ACCEPTABLE.
- 3.6. ALL DOMESTIC WATER PIPING SHALL BE ROUTED WITHIN THERMAL ENVELOPE AND WITHIN WALL CAVITIES, ABOVE FINISHED CEILINGS, OR BELOW SLAB TO REMAIN CONCEALED UNLESS OTHERWISE NOTED. NOTIFY ENGINEER OF ANY NECESSARY ADJUSTMENTS THAT REQUIRE PIPING TO BE EXPOSED.
- 3.7. DOMESTIC WATER PIPING INSULATION
- 3.7.1. ALL HW PIPING, WHETHER COPPER OR PEX, SHALL BE INSULATED WITH PLENUM RATED CLOSED CELL ELASTOMERIC INSULATION. FOR PIPING LESS THAN ½", INSULATION THICKNESS TO BE 1". FOR PIPING ½" OR GREATER, INSULATION THICKNESS SHALL BE ½".
- 3.7.2. CW COPPER PIPING TO INSULATED WITH ½" PLENUM RATED CLOSED CELL ELASTOMERIC INSULATION. CW PEX NEED NOT BE INSULATED UNLESS NOTED OTHERWISE.

PLUMBING CONNECTION SIZING SCHEDULE					
FIXTURE		SANITARY PIPING		SUPPLY PIPING	
TYPE	TYPICAL ABBREVIATION	WASTE CONNECTION	VENT CONNECTION	COLD WATER CONNECTION	HOT WATER CONNECTION
DRINKING FOUNTAIN	DF	1-1/2"	1-1/4"	1/2"	-
FLOOR DRAIN	FD	3"	2"	-	-
HAND / HAIR SINK	HS / SK	2"	1-1/4"	1/2"	1/2"
HOSE BIBB	HB	-	-	3/4"	-
LAVATORY	LAV	1-1/2"	1-1/4"	1/2"	1/2"
MOP SINK	MS	3"	1-1/2"	1/2"	1/2"
ICE MAKER OUTLET BOX	REF	-	-	1/2"	-
SHOWER	SH	3"	1-1/2"	1/2"	1/2"
URINAL	UR	2"	1-1/4"	3/4"	-
WATER CLOSET (FLUSH TANK)	WC	3"	2"	1/2"	-
WATER CLOSET (FLUSH VALVE)	WC	3"	2"	1"	-
NOTES: 1. SIZES SHOWN ABOVE ARE TYPICAL UNLESS NOTED OTHERWISE ON PLANS					

TAG	DESCRIPTION	MANUFACTURER (OR EQUAL)	MODEL (OR EQUAL)	NOTES
AAV	AIR ADMITTANCE VALVE	OATEY	39020	1.5" - 6 DFM MAX
BFP1	BACKFLOW PREVENTER	WILKINS	975X1.2	RPZ - SIZE AS INDICATED ON PLANS
DN1	DOWNSPOUT NOZZLE	ZURN	Z199	
EXP	EXPANSION TANK	WATTS	DETA-100	
FCO	FLOOR CLEAN OUT	ZURN	Z1400	
FD1	FLOOR DRAIN	ZURN	Z4154Z	WITH Z1072 TRAP SEAL
FPHB	FROST PROOF HOSE BIBB	WOODFORD	MODEL 67	
FPRH	FROST PROOF ROOF HYDRANT	WOODFORD	SRH-MS	
FS	FLOOR SINK	ZURN	FD2370	
HB	HOSE BIBB	JR SMITH	5670-H	INTERIOR HOSE BIBB WITH VACUUM BREAKER
LA V1	LAVATORY - INTEGRAL BOWL	-	-	WITH PEISTER #G142-8000 CHROME FAUCET
LA V2	LAVATORY (WALL HUNG W/MANUAL FAUCET)	AMERICAN STANDARD	0355.012	WITH ZURN Z81104-XL FAUCET, 1/4 TURN STOPS, BRAIDED STAINLESS STEEL SUPPLIES, TRUBRO LAV GUARD 2, & 'TMV'
RD1	ROOF DRAIN	ZURN	Z100	
REF1	REFRIGERATOR BOX	SIoux CHIEF	696-G1000	
REF1	REFRIGERATOR BOX	SIoux CHIEF	696-G1000	
RH1	ROOF HYDRANT	WOODFORD	SRH-MS	
SK1	KITCHEN SINK	DAYTON	DSISR12722	WITH PEISTER #F-529-CRS FAUCET,ISE DISPOSAL #BADGER-1 & STS-00 AIR SWITCH
SP1	SUMP PUMP	ZOELLER	153-0002	120V, 1/2 HP WITH "OIL MINDER" CONTROLS
TMV1	THERMOSTATIC MIXING VALVE - POINT OF USE	WATTS	LFUSG	
TUB1	TUB / SHOWER	AQUARIS	G6030TS	WITH PEISTER R89-0300 SHOWER TRIM KIT
TUB2	ADA TUB / SHOWER	AQUATIC	2603SMTE	WITH GRAB BARS & ADA HANDHELD SHOWER ASSEMBLY
WB1	WASHER BOX	SIoux CHIEF	696-G2303	
WC1	WATER CLOSET - STANDARD HEIGHT - TANK	AMERICAN STANDARD	215CA.004	WITH CHURCH 7200SLC SEAT AND COVER, STAINLESS BRAIDED SUPPLY, AND 1/4 TURN SHUT-OFF.
WC2	WATER CLOSET - ADA HEIGHT - TANK	AMERICAN STANDARD	215AA.004	WITH CHURCH 7200SLC SEAT AND COVER, STAINLESS BRAIDED SUPPLY, AND 1/4 TURN SHUT-OFF.
WH1	WATER HEATER - ELECTRIC - LOWBOY	AO SMITH	ECLB-40	38 GALLON, 208V 1PH, 4500W; WITH 'EXP'
WH2	WATER HEATER - ELECTRIC - POINT OF USE	AO SMITH	EGSP6	6 GALLON, 120V, 1500W WITH HOLDRITE #40-SWHP-W WALL HUNG PLATFORM; WITH 'EXP'
YCO	YARD CLEAN OUT	ZURN	Z1400	
NOTES: 1. VERIFY NECESSARY FIXTURES MEET ADA REQUIREMENTS WITH ARCHITECT PRIOR TO INSTALLATION				



James Watson, P.E. October 30, 2024
PE-2015017071
MO Certificate of Authority # 2018029680



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573 - 234 - 4492 phone
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J2 PROJECT No: J21007

J2 DESIGN: JAP

ISSUE TITLE DATE

CITY SUBMITTAL 01 / 25 / 2024

REVISION 1 10 / 21 / 2024

REVISION 2 10 / 30 / 2024



Mechanical - Electrical - Plumbing Design Drawings for
The Village at Discovery - Lot 4

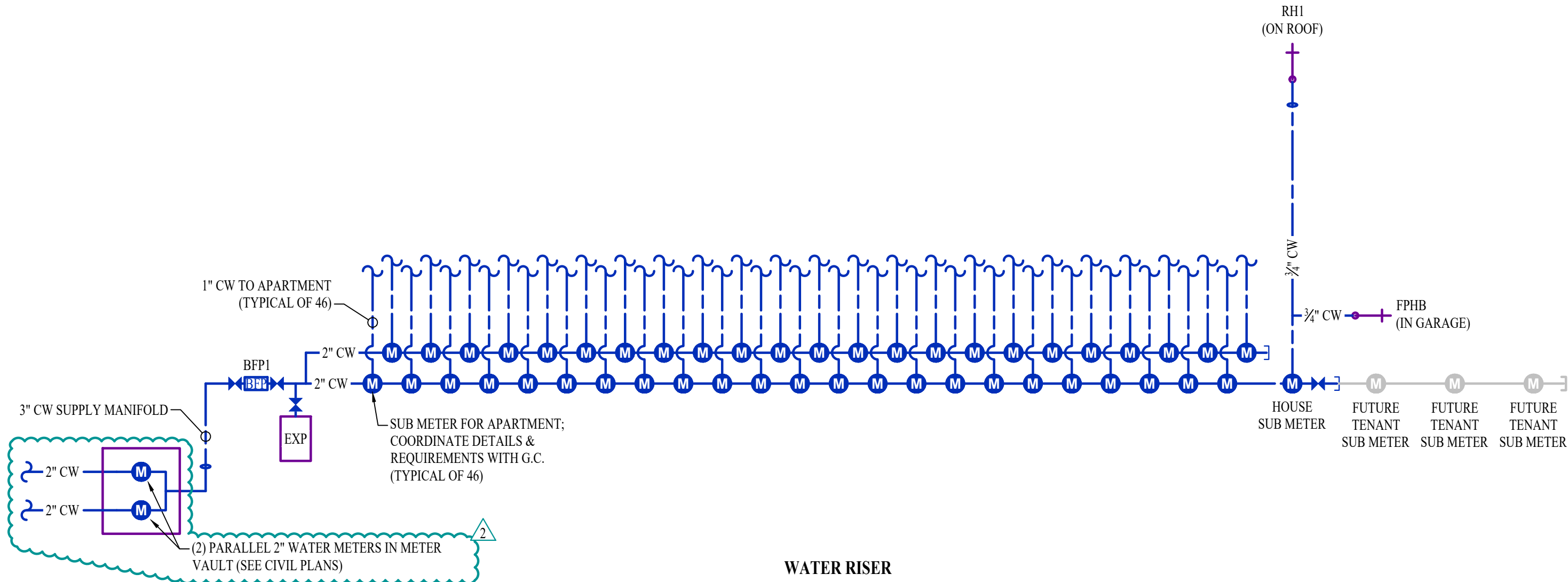
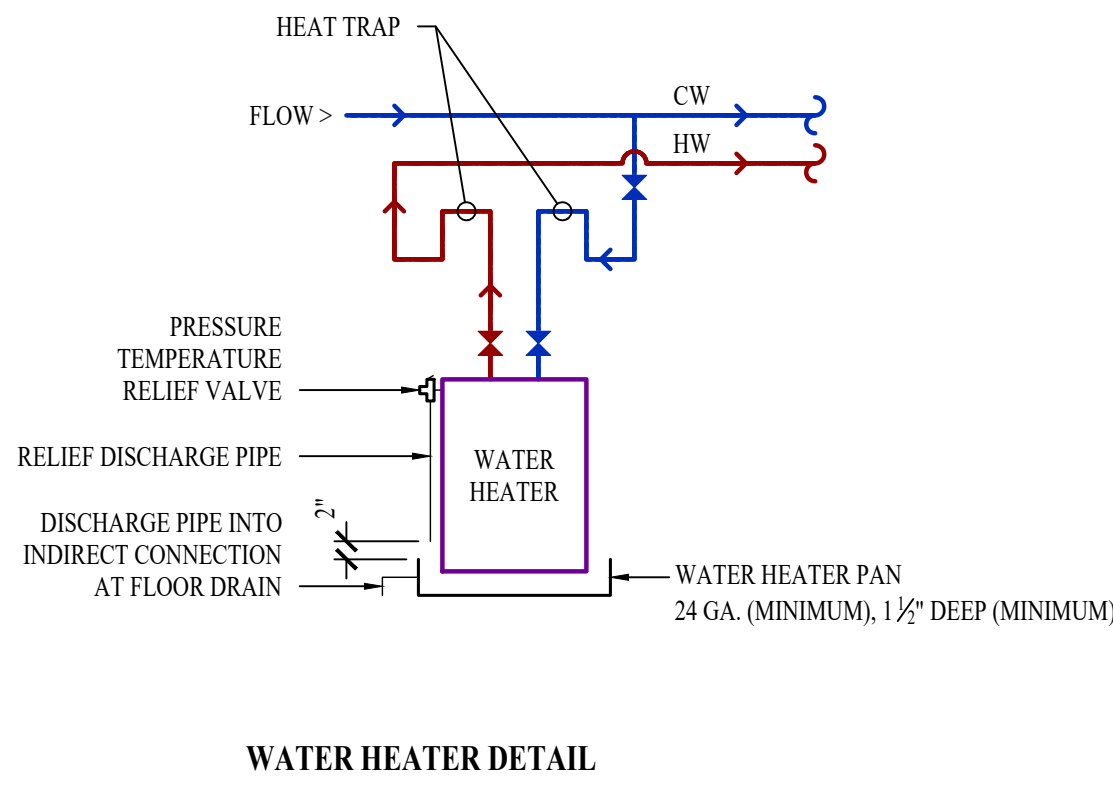
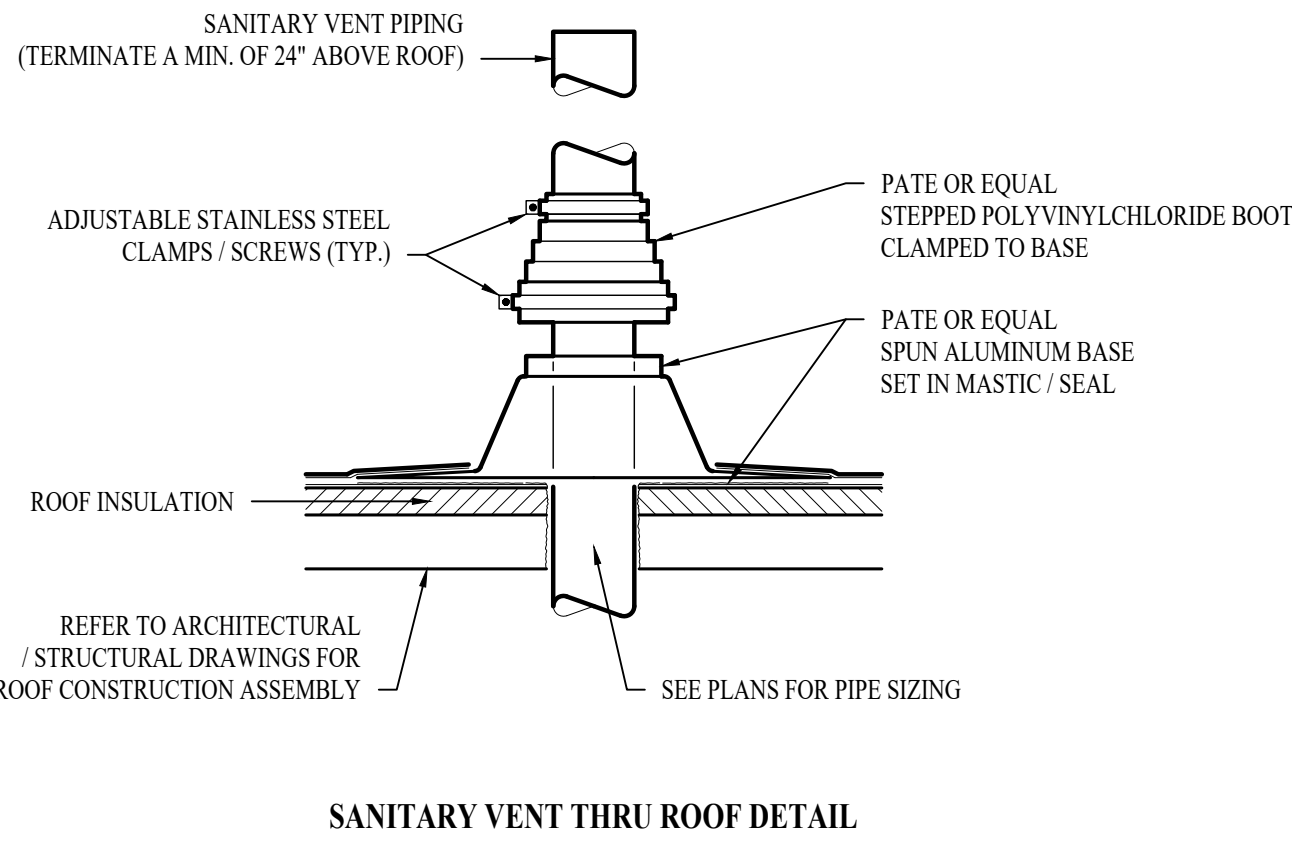
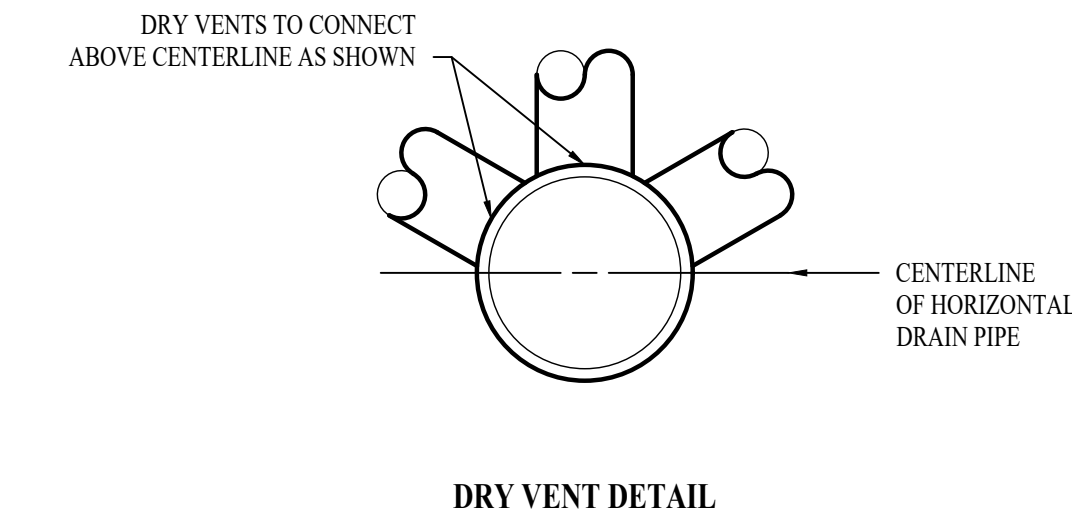
Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

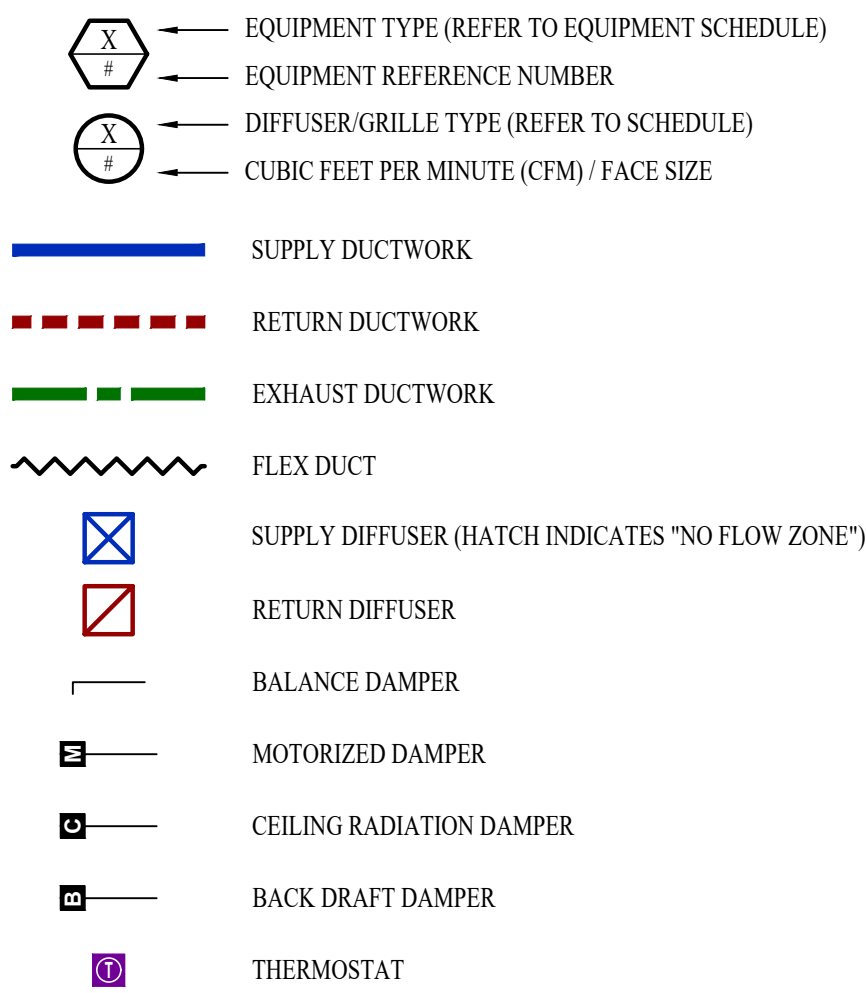
**PLUMBING DETAILS
& SCHEDULES**

SHEET NUMBER

P501



HVAC PLAN SYMBOL LEGEND

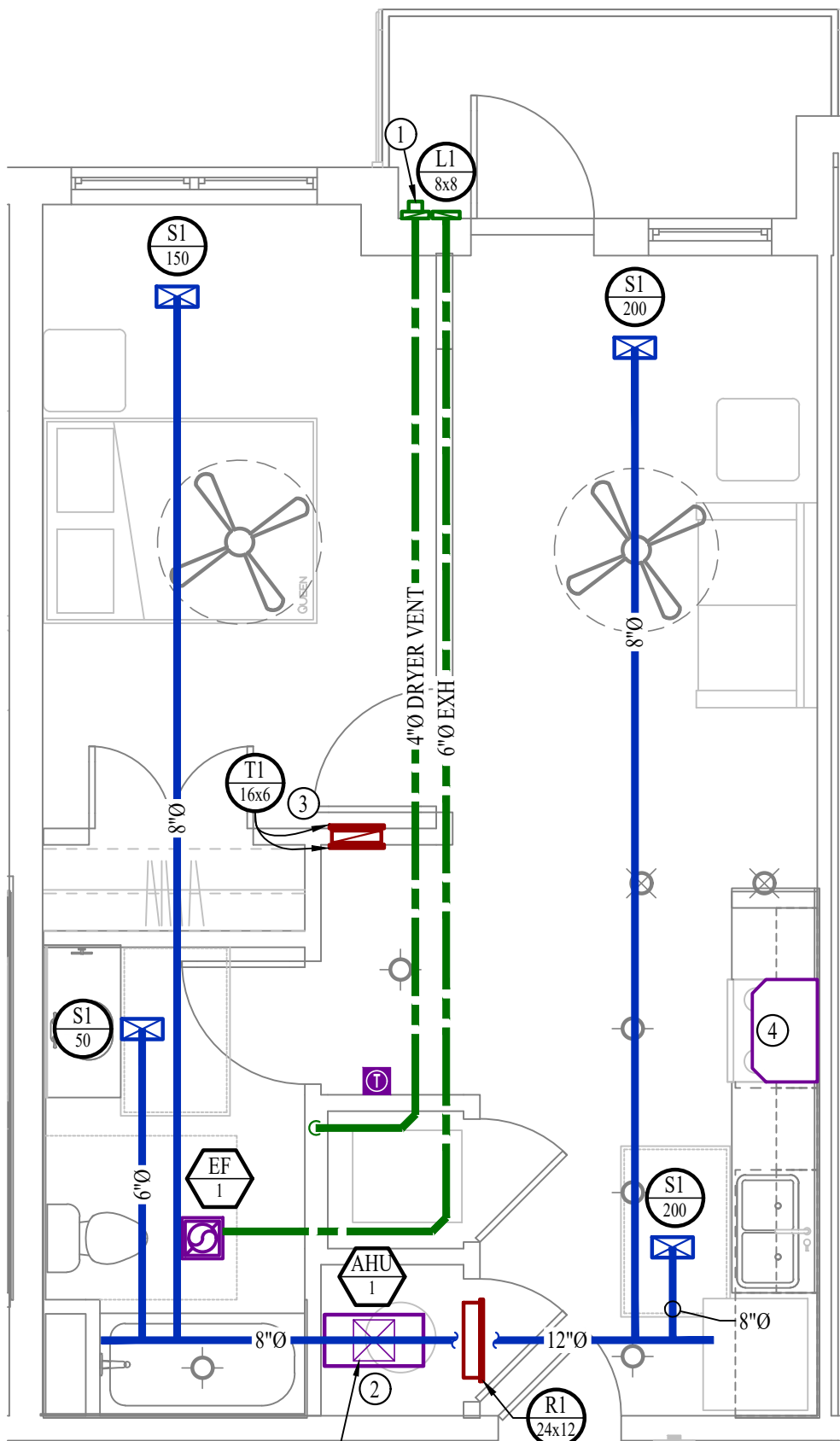


HVAC PLAN GENERAL NOTES:

- SEE SHEET M501 FOR HVAC SCHEDULES, DETAILS, REQUIREMENTS, ETC.
- SEE SHEET MEP4 FOR CONDENSING UNIT LOCATIONS. REFRIGERANT PIPING SHALL ROUTE IN SPACES ABOVE FINISHED CEILINGS AND WITHIN WALL CAVITIES TO REMAIN CONCEALED.
- SUPPLY DUCTWORK FROM AHU AT FLOOR/CEILING PENETRATION SHALL BE PROTECTED BY A FIRE DAMPER. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
- WRAP ALL DRYER DUCTS WITH FIREMASTER (OR EQUAL) DUCT WRAP.
- TOTAL DEVELOPED LENGTH OF EXHAUST DUCT SHALL BE INDICATED ON A PERMANENT LABEL WITHIN 6' OF DRYER VENT CONNECTION. DRYER DUCT ROUTING SHOWN IS FOR REFERENCE ONLY. OVERALL DUCT LENGTH SHALL BE CALCULATED BY HVAC CONTRACTOR PER 2018 IMC 504.8.4.
- LOCATE ALL EXHAUST / DRYER VENT TERMINATIONS AT LEAST 36" FROM OPERABLE OPENINGS INTO APARTMENTS (WINDOWS, DOORS, ETC.).
- ALL DUCTWORK SHOWN SHALL ROUTE IN SPACE BETWEEN / THRU TRUSSES UNLESS NOTED OTHERWISE. SEE STRUCTURAL DRAWINGS FOR DETAILS.

HVAC PLAN KEY NOTES:

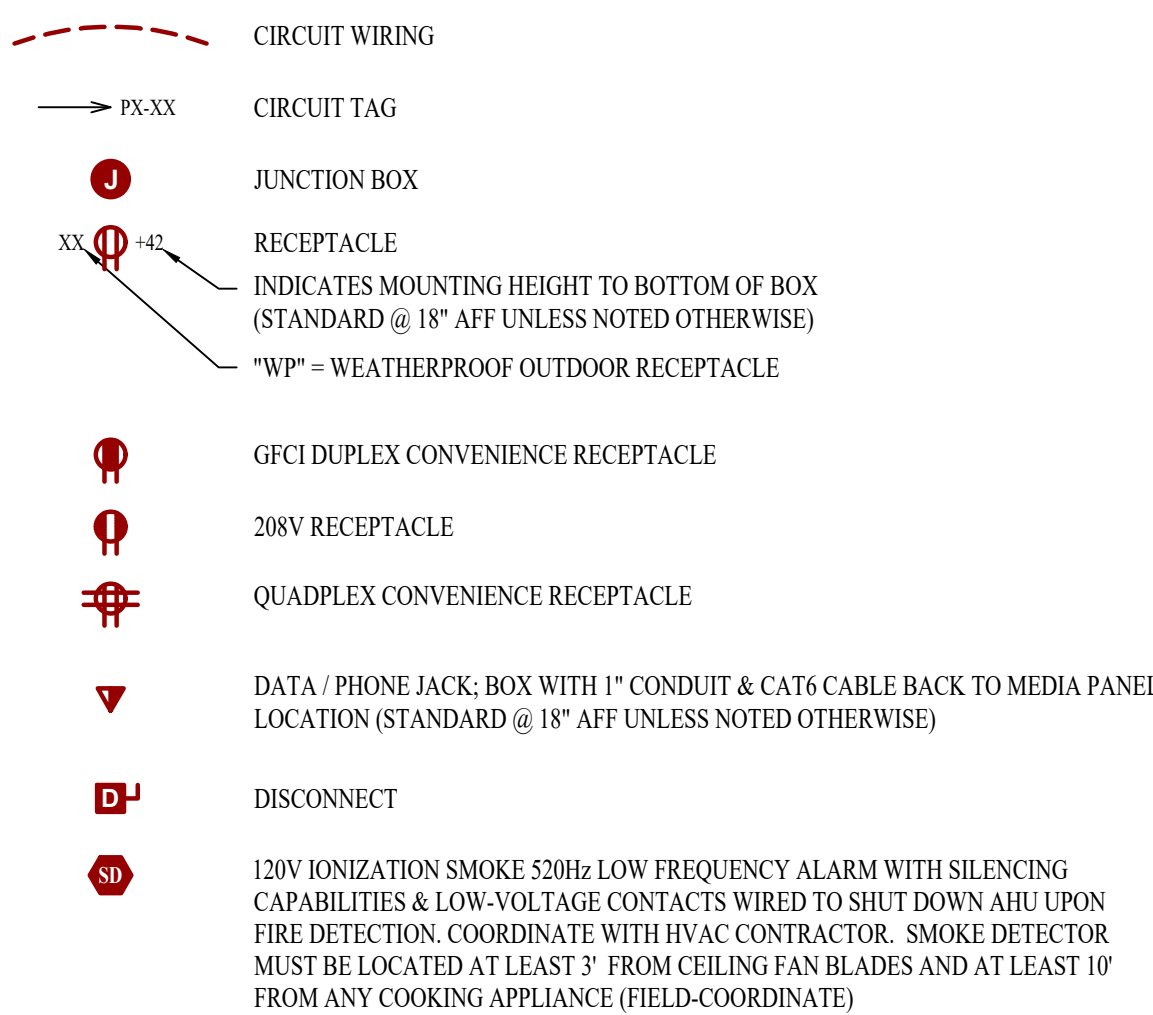
- TERMINATE 4" DRYER EXHAUST WITH VENT EQUAL TO DRYER WALL VENT #DWV4.
- AHU WALL MOUNTED ABOVE WATER HEATER. COORDINATE WITH PLUMBING CONTRACTOR. CONDENSATE TO DISCHARGE IN FLOOR DRAIN WITHIN CLOSET.
- H/L LOW TRANSFER GRILLE (12" A.F.F. ON BEDROOM SIDE OF WALL; 84" A.F.F. ON OPPOSITE SIDE OF WALL).
- RESIDENTIAL RECIRCULATION HOOD TO BE SUPPLIED & INSTALLED BY GC.



HVAC PLAN - ARA

SCALE: 1/4" = 1'-0"

POWER PLAN SYMBOL LEGEND

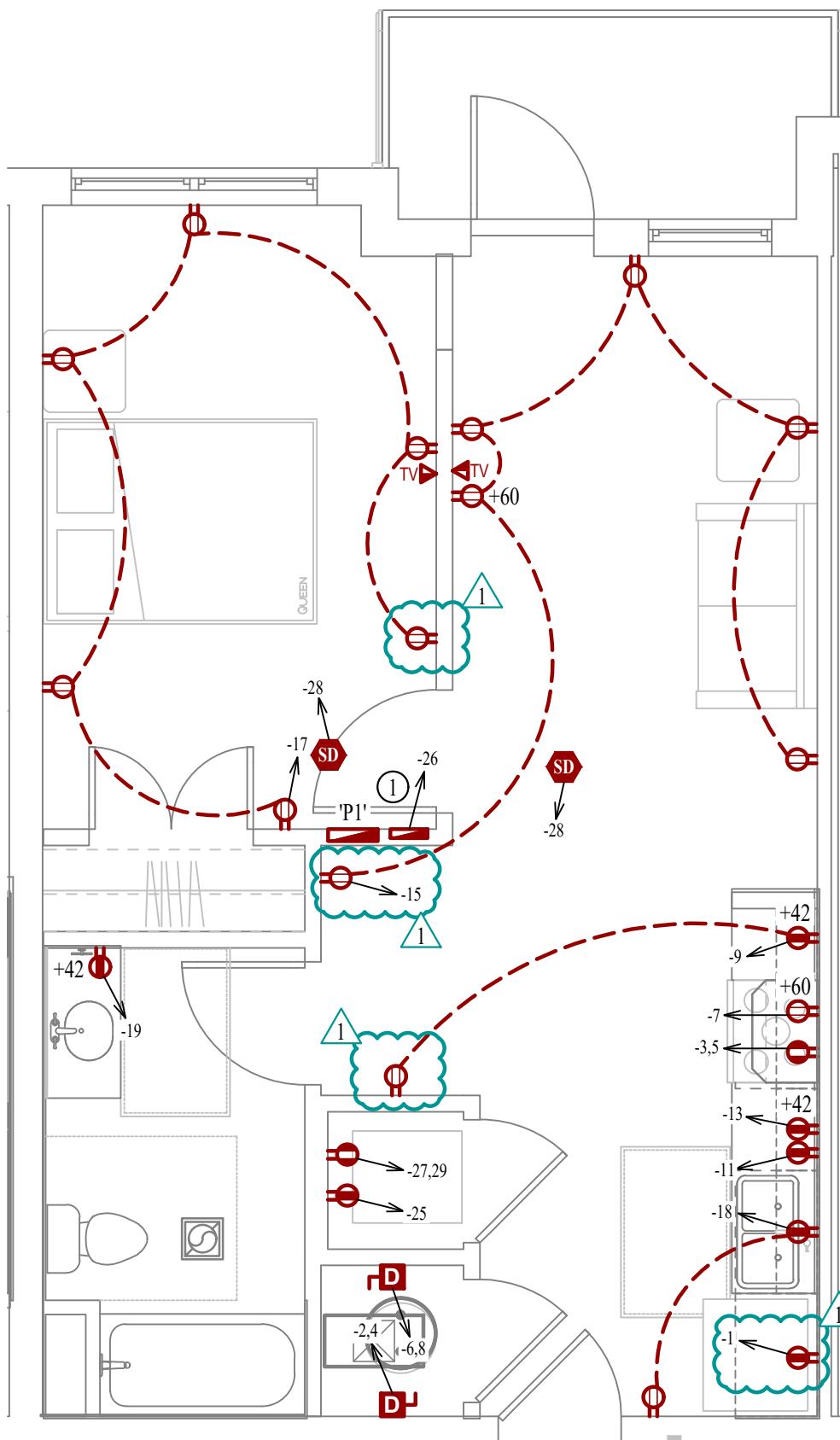


POWER PLAN GENERAL NOTES:

- SEE E500 & E600 SERIES SHEETS FOR POWER SCHEDULES, DETAILS, REQUIREMENTS, ETC.
- SEE SHEET MEP4 FOR CONDENSING UNIT LOCATIONS.
- VERIFY EACH DATA/RECEPTACLE LOCATION WITH OWNER PRIOR TO INSTALLATION.
- REFER TO "TYPICAL ADA MOUNTING HEIGHTS DETAIL", SHEET E501, FOR MOUNTING HEIGHTS OF DEVICES IN "ANSI A" UNITS.

POWER PLAN KEY NOTES:

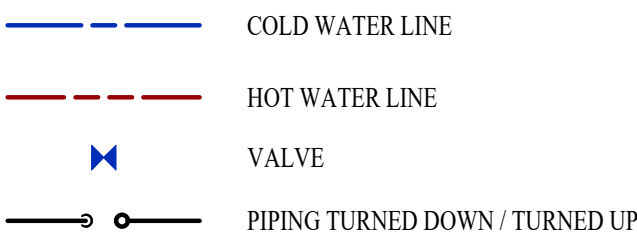
- MEDIA PANEL LOCATION; DATA/TV WIRING TO TERMINATE AT THIS LOCATION. DETERMINE EXACT LOCATION & DETAILS WITH OWNER PRIOR TO INSTALLATION.



POWER PLAN - ARA

SCALE: 1/4" = 1'-0"

PLUMBING PLAN SYMBOL LEGEND

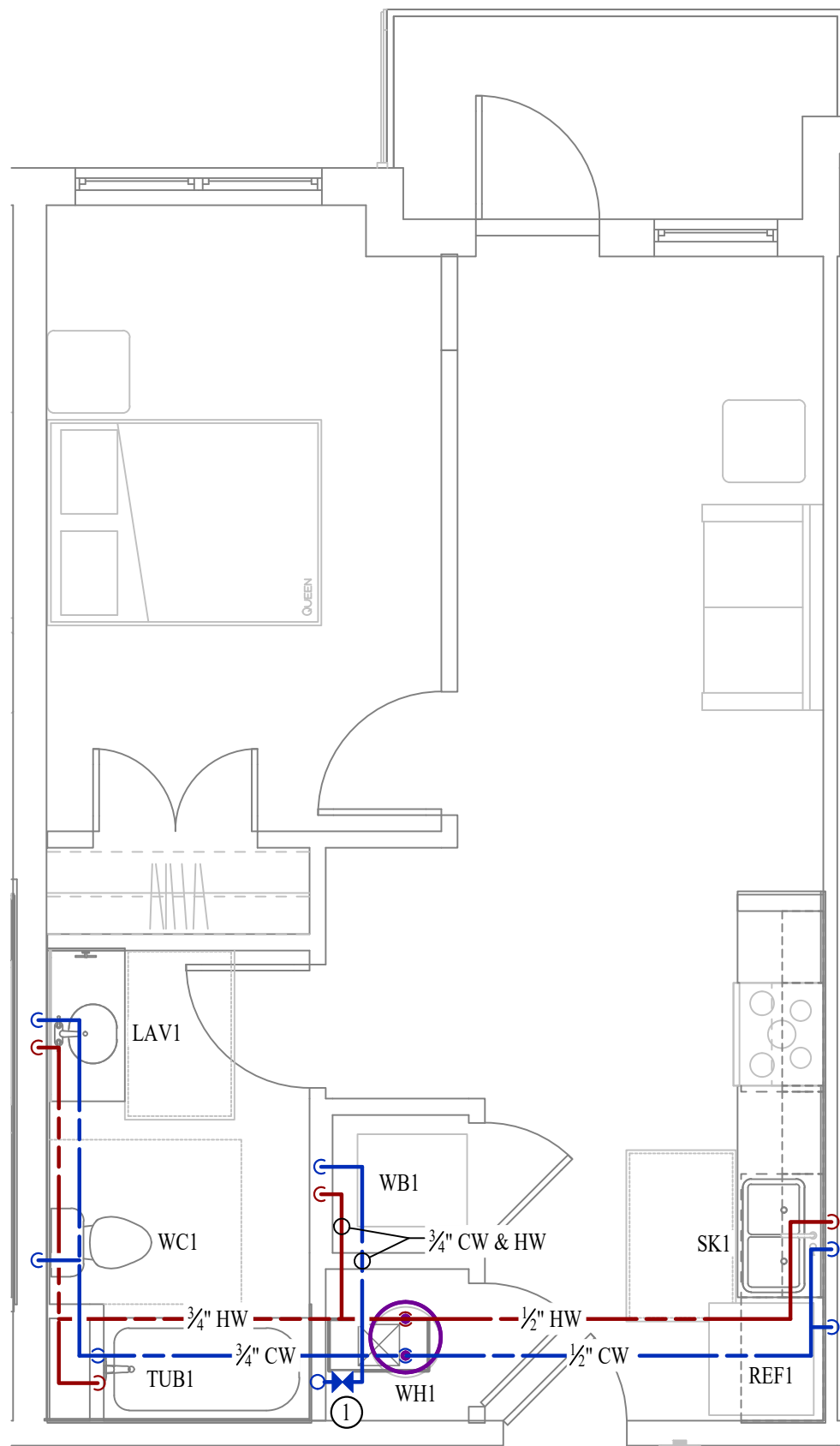


WATER PLAN GENERAL NOTES:

- SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.
- ALL PLUMBING LOCATED ON EXTERIOR WALLS SHALL ROUTE WITHIN INSULATION BARRIER.
- ALL DOMESTIC SUPPLY LINES SERVING MORE THAN (1) FIXTURE SHALL BE 1/2" UNLESS NOTED OTHERWISE.

WATER PLAN KEY NOTES:

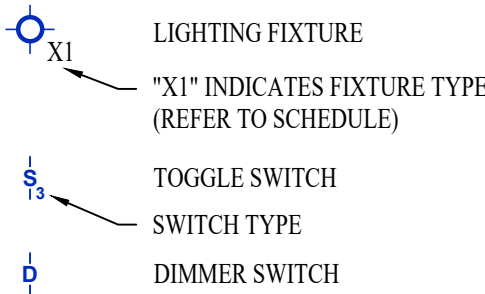
- 1" CW PIPE UP FROM BELOW WITH SHUT-OFF VALVE IN ACCESSIBLE LOCATION. SEE OVERALL PLUMBING PLANS FOR DETAILS.



WATER PLAN - ARA

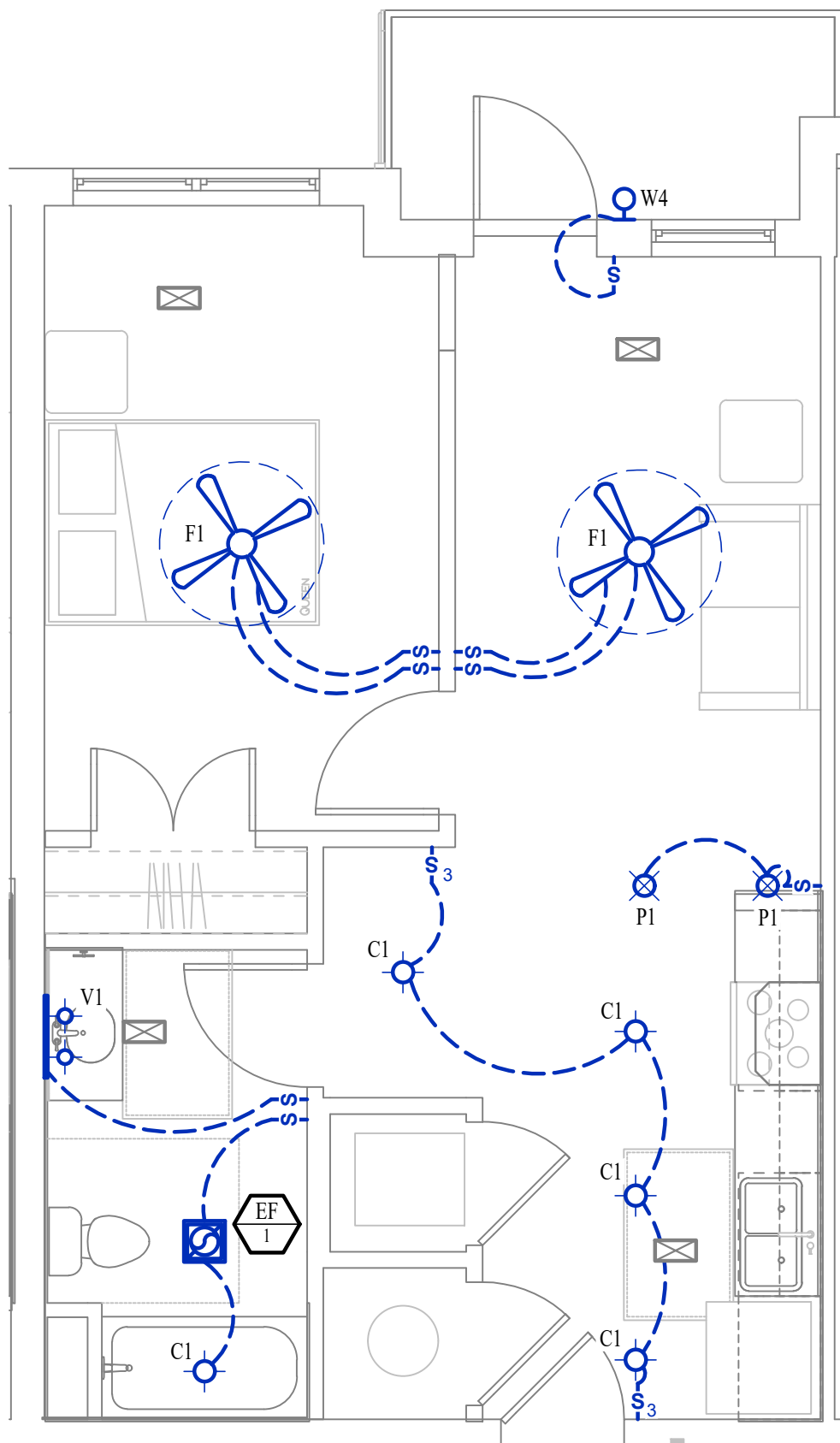
SCALE: 1/4" = 1'-0"

LIGHTING PLAN SYMBOL LEGEND



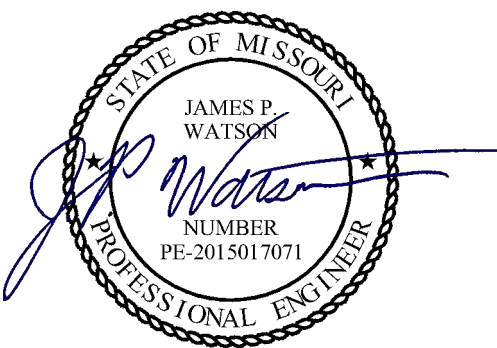
LIGHTING PLAN GENERAL NOTES:

- SEE E500 & E600 SERIES SHEETS FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.
- ALL LIGHTING SHOWN SHALL BE ON CIRCUIT -16 UNLESS NOTED OTHERWISE.

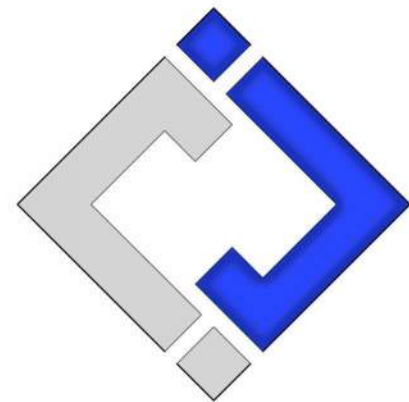


POWER PLAN - ARA

SCALE: 1/4" = 1'-0"



James Watson, P.E. October 21, 2024
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J2 PROJECT No: J21007

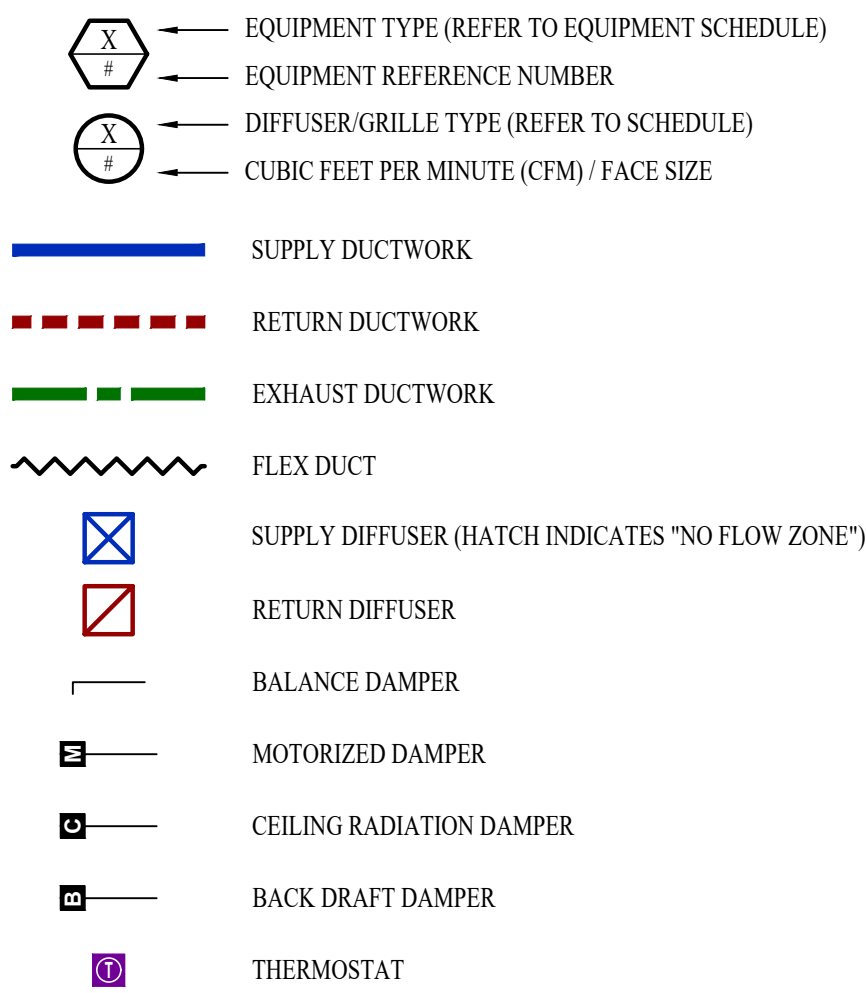
J2 DESIGN: JAP

ISSUE TITLE DATE

CITY SUBMITTAL 01 / 25 / 2024

REVISION 1 10 / 21 / 2024

HVAC PLAN SYMBOL LEGEND

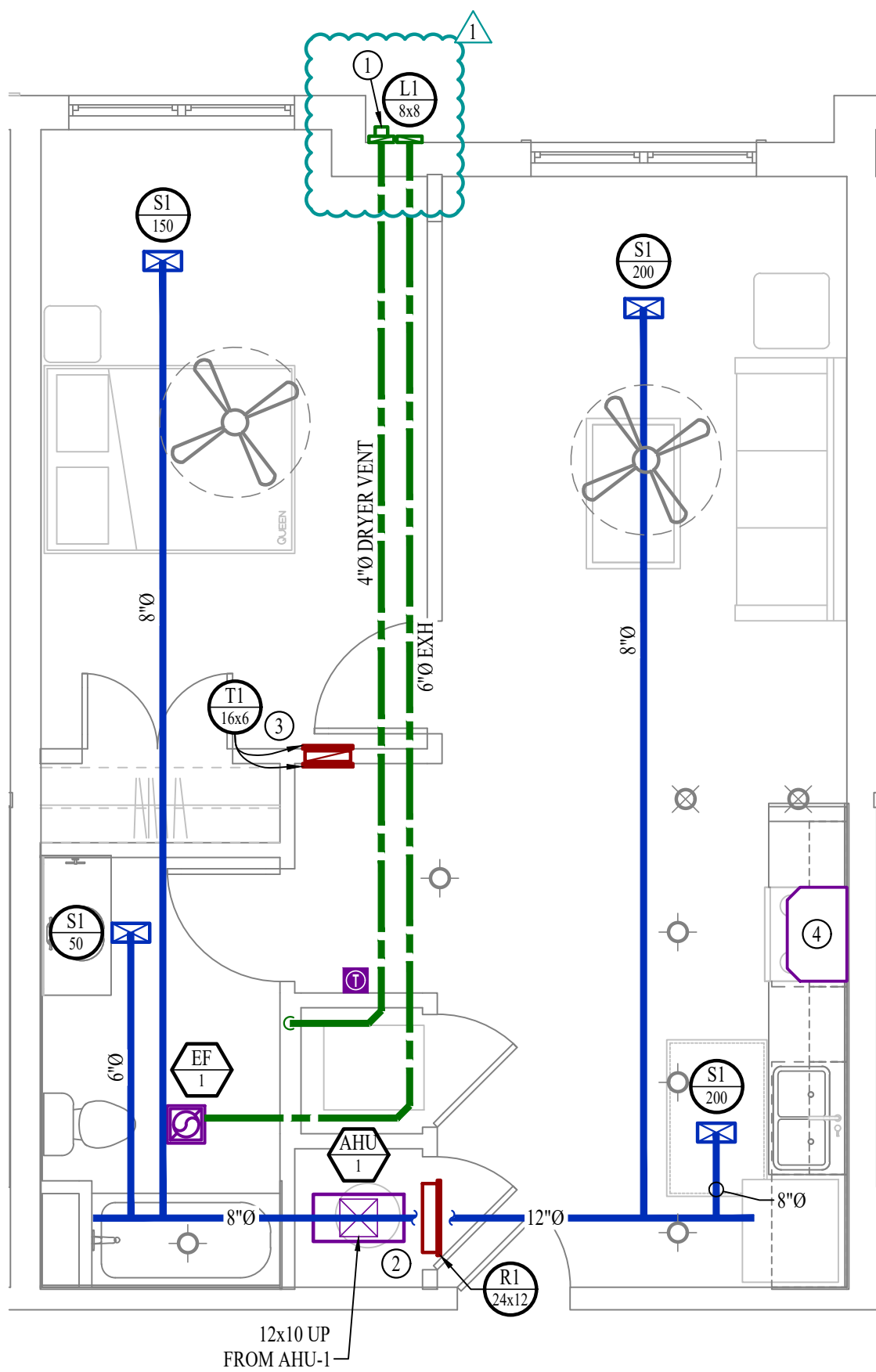


HVAC PLAN GENERAL NOTES:

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HVAC PLAN KEY NOTES:

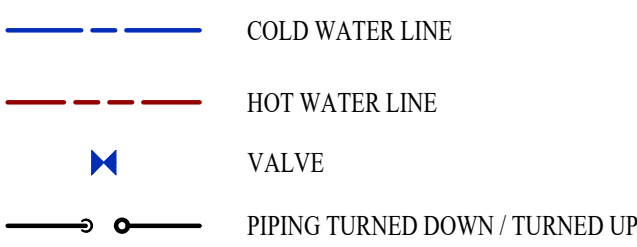
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- H/L LOW TRANSFER GRILLE (12" A.F.F. ON BEDROOM SIDE OF WALL; 84" A.F.F. ON OPPOSITE SIDE OF WALL).
- RESIDENTIAL RECIRCULATION HOOD TO BE SUPPLIED & INSTALLED BY GC.



HVAC PLAN - ARA - ALT

SCALE: 1/4" = 1'-0"

PLUMBING PLAN SYMBOL LEGEND

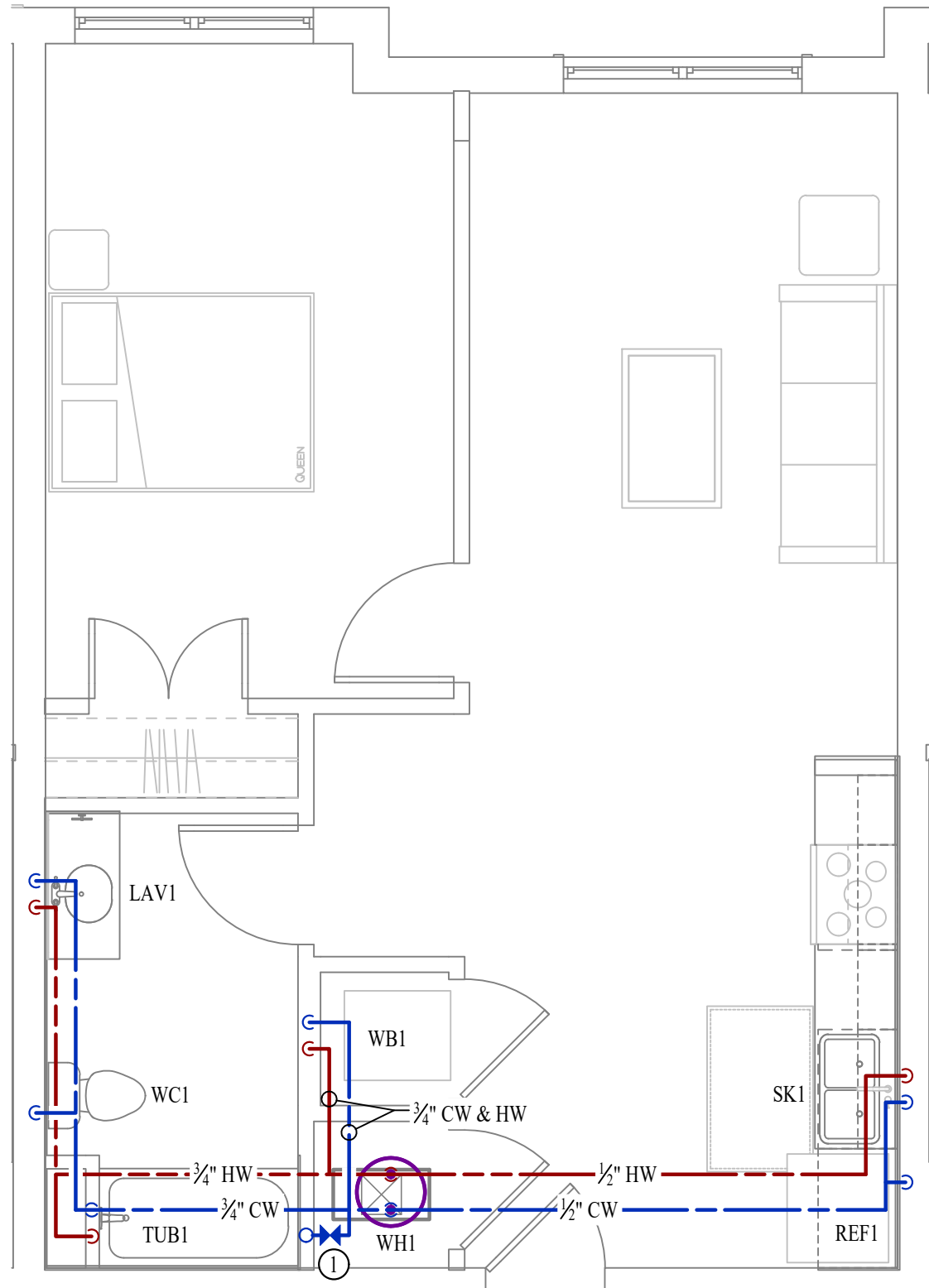


WATER PLAN GENERAL NOTES:

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WATER PLAN KEY NOTES:

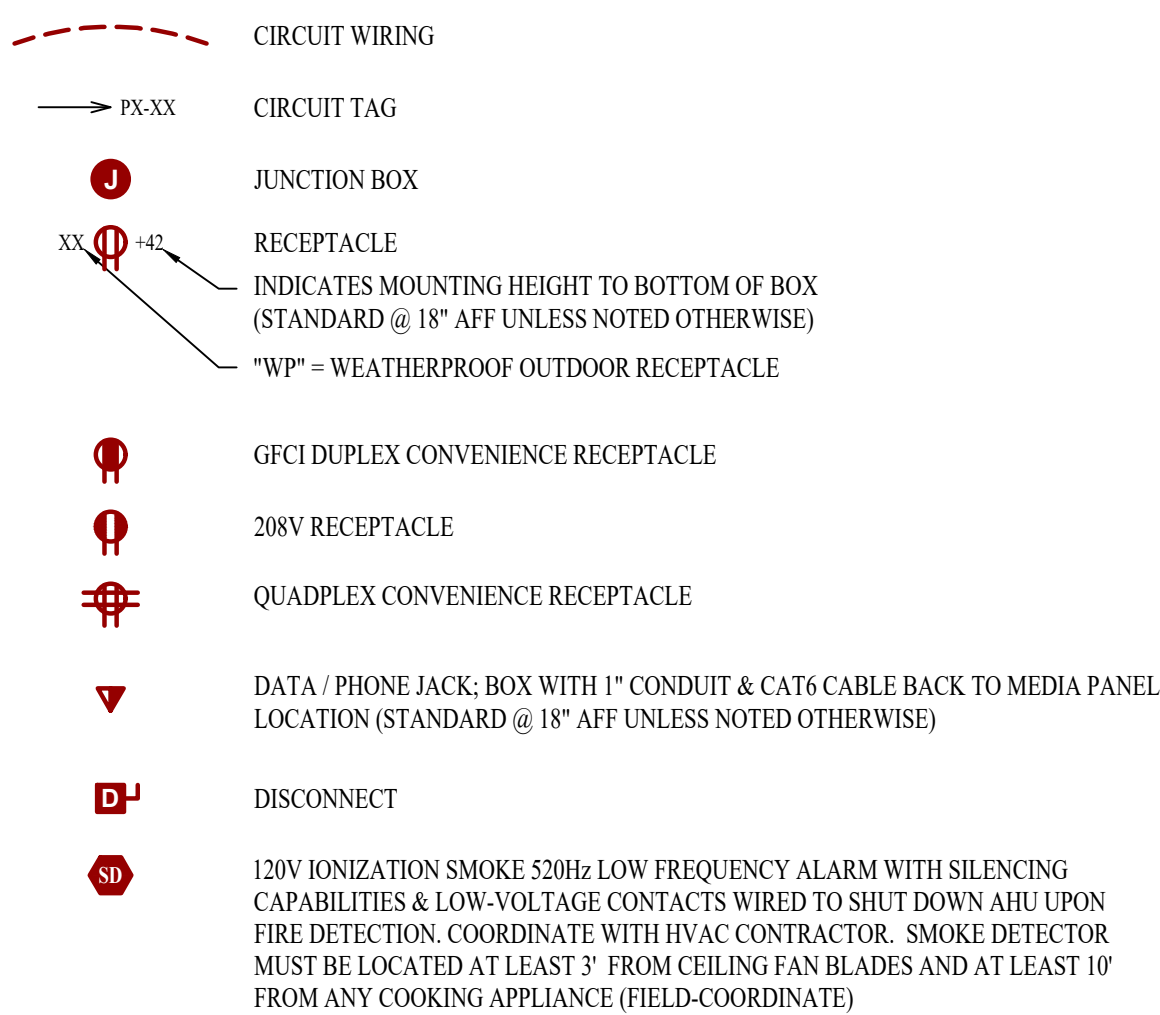
- 1" CW PIPE UP FROM BELOW WITH SHUT-OFF VALVE IN ACCESSIBLE LOCATION. SEE OVERALL PLUMBING PLANS FOR DETAILS.



WATER PLAN - ARA - ALT

SCALE: 1/4" = 1'-0"

POWER PLAN SYMBOL LEGEND

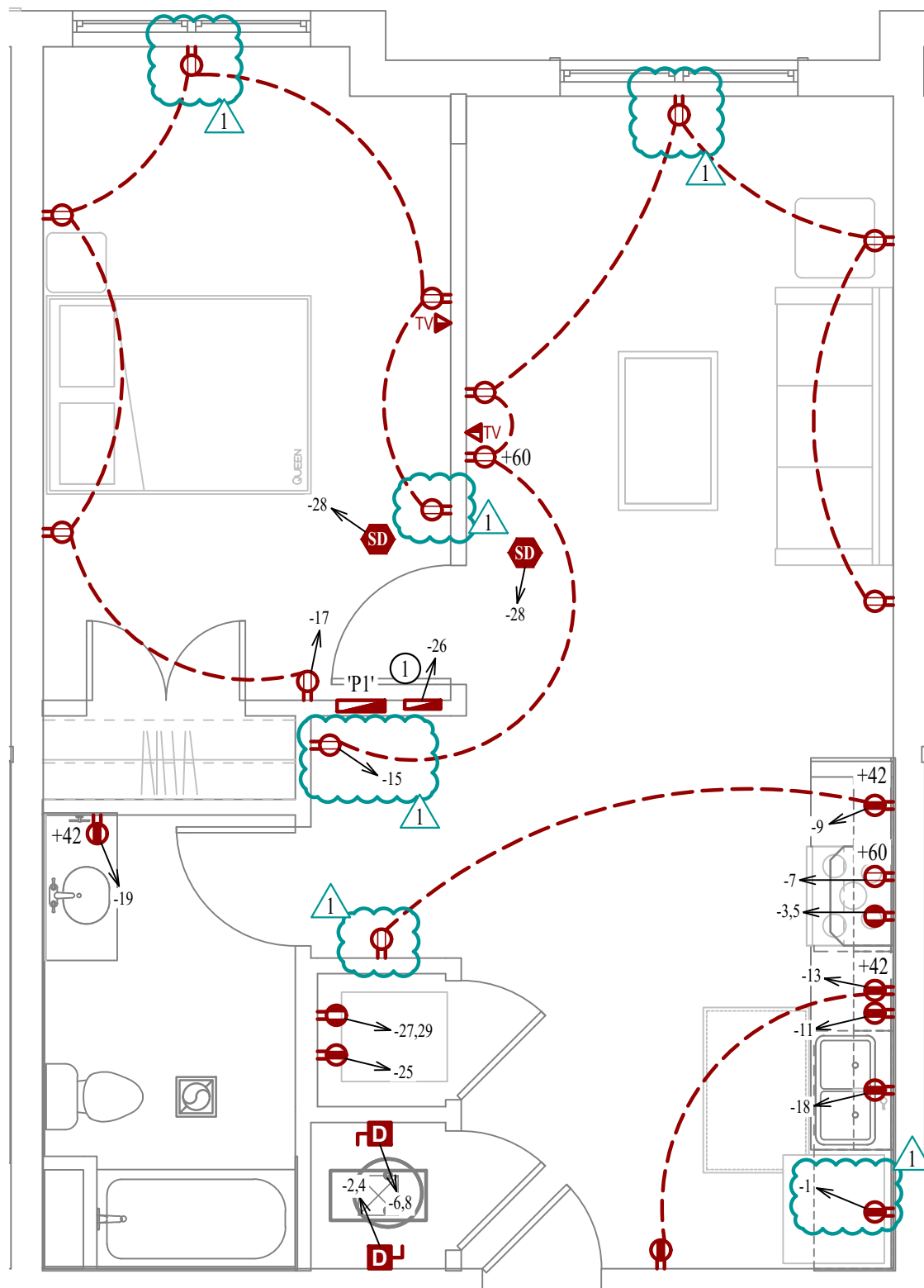


POWER PLAN GENERAL NOTES:

- SEE E500 & E600 SERIES SHEETS FOR POWER SCHEDULES, DETAILS, REQUIREMENTS, ETC.
- SEE SHEET MEP4 FOR CONDENSING UNIT LOCATIONS.
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- REFER TO "TYPICAL ADA MOUNTING HEIGHTS DETAIL", SHEET E501, FOR MOUNTING HEIGHTS OF DEVICES IN "ANSI A" UNITS.

POWER PLAN KEY NOTES:

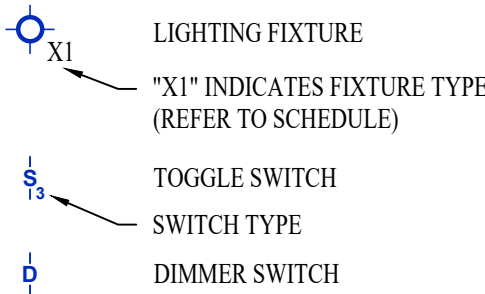
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POWER PLAN - ARA - ALT

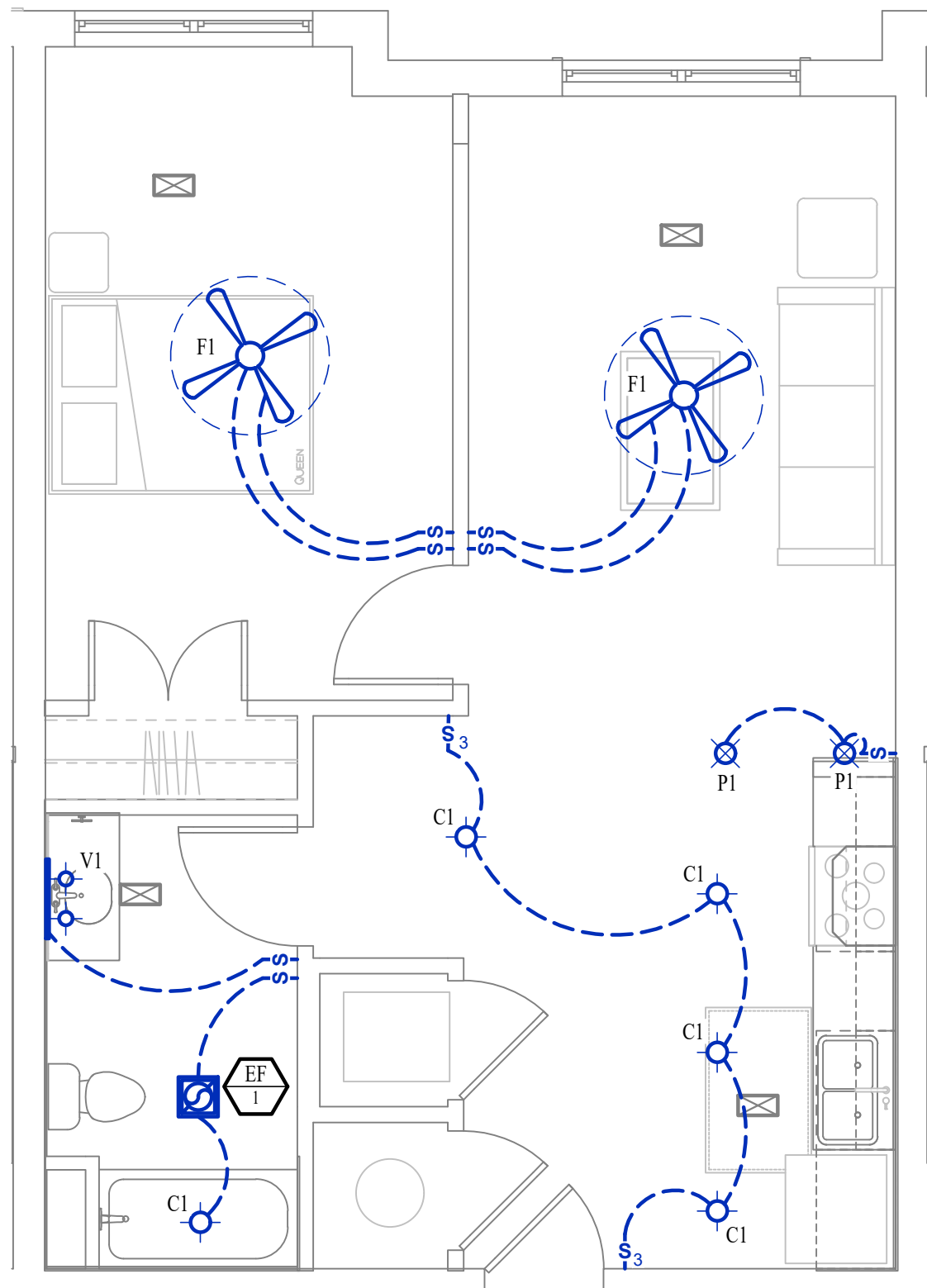
SCALE: 1/4" = 1'-0"

LIGHTING PLAN SYMBOL LEGEND



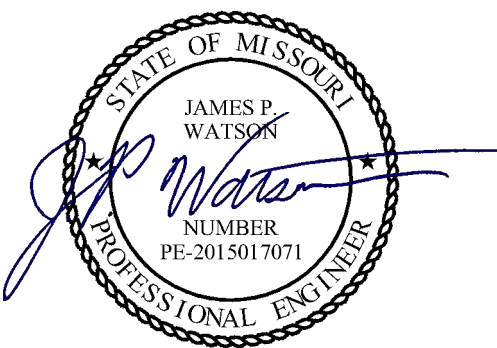
LIGHTING PLAN GENERAL NOTES:

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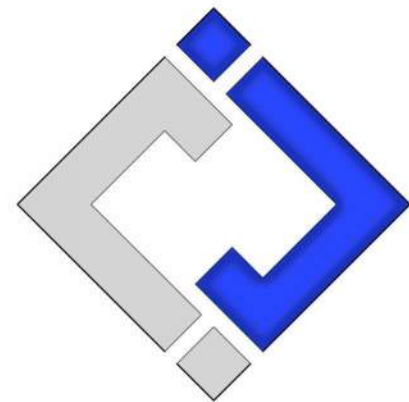


POWER PLAN - ARA - ALT

SCALE: 1/4" = 1'-0"



James Watson, P.E. October 21, 2024
PE-2015017071
MO Certificate of Authority # 2018029680



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www.j-squaredeng.com

J2 PROJECT No: J21007

J2 DESIGN: JAP

ISSUE TITLE DATE

CITY SUBMITTAL 01 / 25 / 2024

REVISION 1 10 / 21 / 2024

Mechanical - Electrical - Plumbing Design Drawings for

The Village at Discovery - Lot 4

Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

UNIT TYPE
ARA-ALT
MEP PLAN

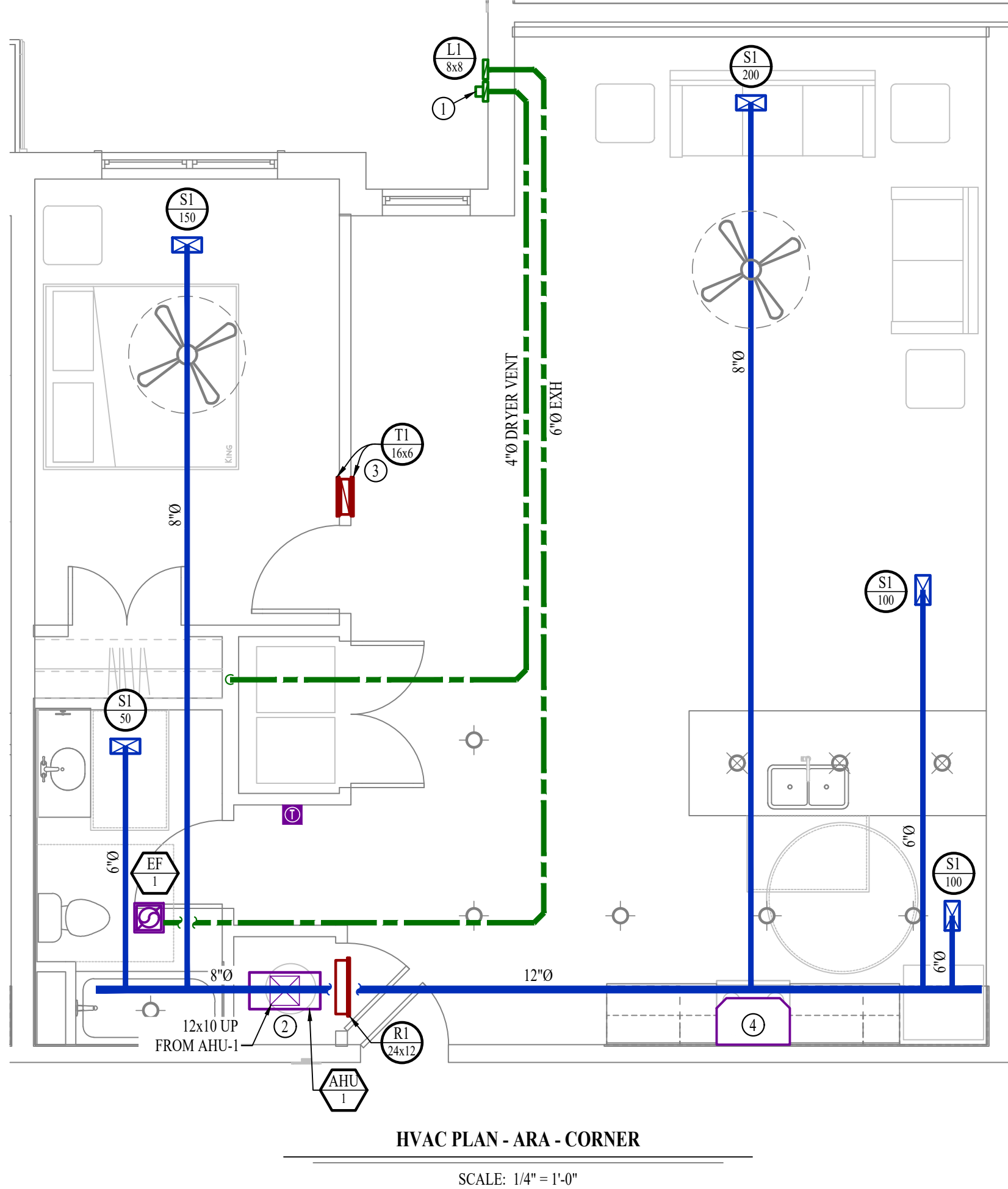
SHEET NUMBER

UMEP1.2

	→	EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)
	→	EQUIPMENT REFERENCE NUMBER
	→	DIFFUSER/GRILLE TYPE (REFER TO SCHEDULE)
	→	CUBIC FEET PER MINUTE (CFM) / FACE SIZE
		SUPPLY DUCTWORK
		RETURN DUCTWORK
		EXHAUST DUCTWORK
		FLEX DUCT
		SUPPLY DIFFUSER (HATCH INDICATES "NO FLOW ZONE")
		RETURN DIFFUSER
		BALANCE DAMPER
	→	MOTORIZED DAMPER
	→	CEILING RADIATION DAMPER
	→	BACK DRAFT DAMPER
		THERMOSTAT

1. SEE SHEET M501 FOR HVAC SCHEDULES, DETAILS, REQUIREMENTS, ETC.
2. SEE SHEET M501 FOR CONDENSING UNIT LOCATIONS. REFRIGERANT PIPING SHALL ROUTE IN SPACES ABOVE FINISHED CEILINGS AND WITHIN WALL CAVITIES TO REMAIN CONCEALED.
3. SUPPLY DUCTWORK FROM AHU AT FLOOR/CEILING PENETRATION SHALL BE PROTECTED BY A FIRE DAMPER. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
4. WRAP ALL DRYER DUCTS WITH FIREMASTER (OR EQUAL) DUCT WRAP.
5. TOTAL DEVELOPED LENGTH OF EXHAUST DUCT SHALL BE INDICATED ON A PERMANENT LABEL WITHIN THE EXHAUST DUCT. EXHAUST DUCT ROUTING SHALL BE FOR REFERENCE ONLY.
6. OVERALL DUCT LENGTH SHALL BE CALCULATED BY HVAC CONTRACTOR PER 2018 IMC 504.8.4.
7. LOCATE ALL EXHAUST/ DRYER VENT TERMINATIONS AT LEAST 36" FROM OPERABLE OPENINGS INTO APARTMENTS (WINDOWS, DOORS, ETC.).
8. ALL DUCTWORK SHOWN SHALL ROUTE IN SPACE BETWEEN / THRU TRUSSES UNLESS NOTED OTHERWISE. SEE STRUCTURAL DRAWINGS FOR DETAILS.

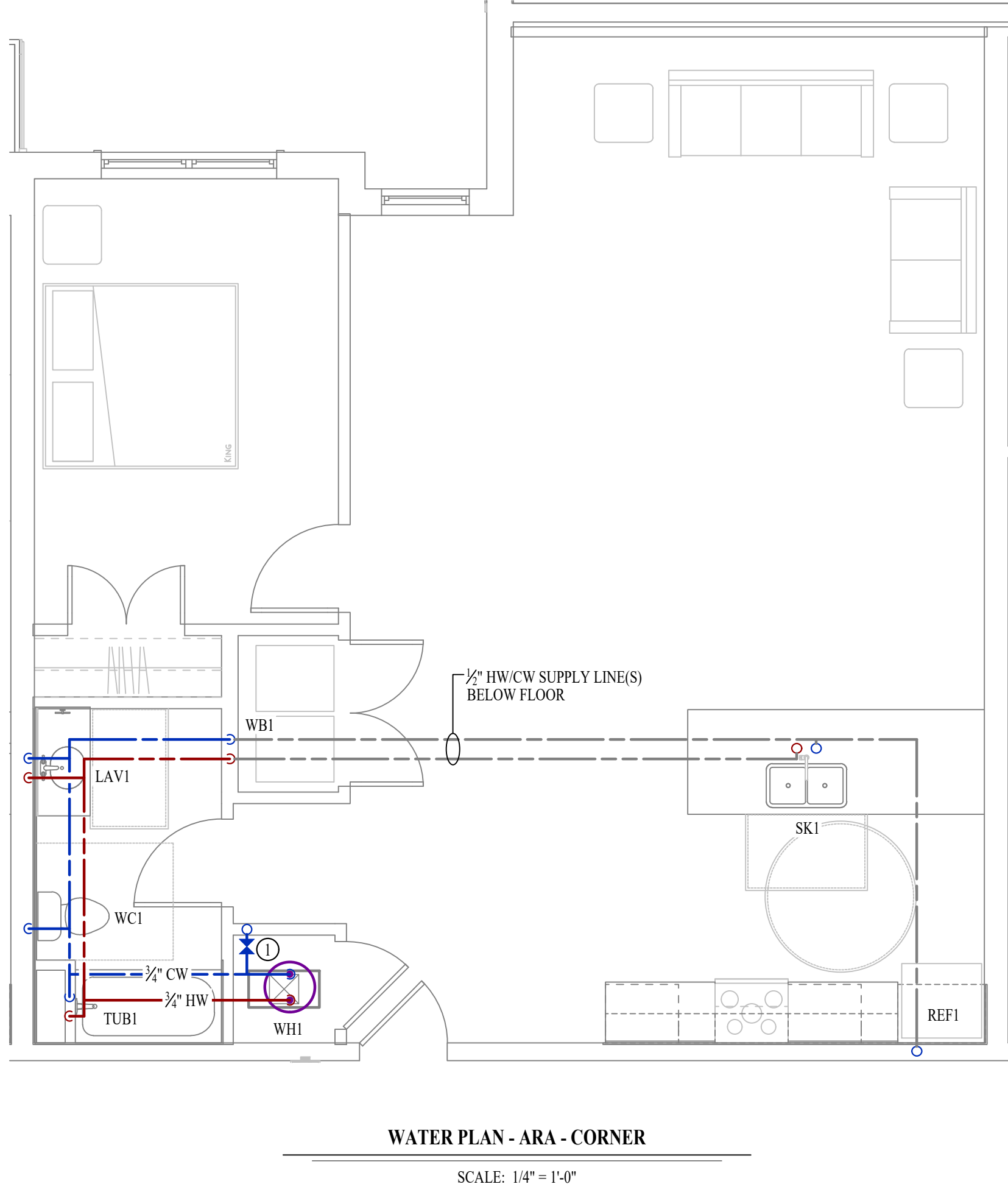
- ① TERMINATE 4" DRYER EXHAUST WITH VENT EQUAL TO DRYER WALL VENT #DWV4.
- ② AHU WALL MOUNTED ABOVE WATER HEATER, COORDINATE WITH PLUMBING CONTRACTOR. CONDENSATE TO DISCHARGE IN FLOOR DRAIN WITHIN CLOSET.
- ③ HI/LOW TRANSFER GRILLE (12" A.F.F. ON BEDROOM SIDE OF WALL; 84" A.F.F. ON OPPOSITE SIDE OF WALL).
- ④ RESIDENTIAL RECIRCULATION HOOD TO BE SUPPLIED & INSTALLED BY GC.



	COLD WATER LINE
	HOT WATER LINE
	VALVE
	PIPING TURNED DOWN / TURNED UP

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.
2. ALL PLUMBING LOCATED ON EXTERIOR WALLS SHALL ROUTE WITHIN INSULATION BARRIER.
3. ALL DOMESTIC SUPPLY LINES SERVING MORE THAN (1) FIXTURE SHALL BE $\frac{3}{4}$ " UNLESS NOTED OTHERWISE.

① 1" CW PIPE UP FROM BELOW WITH SHUT-OFF VALVE IN ACCESSIBLE LOCATION. SEE OVERALL PLUMBING PLANS FOR DETAILS.

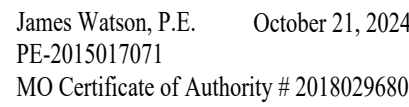
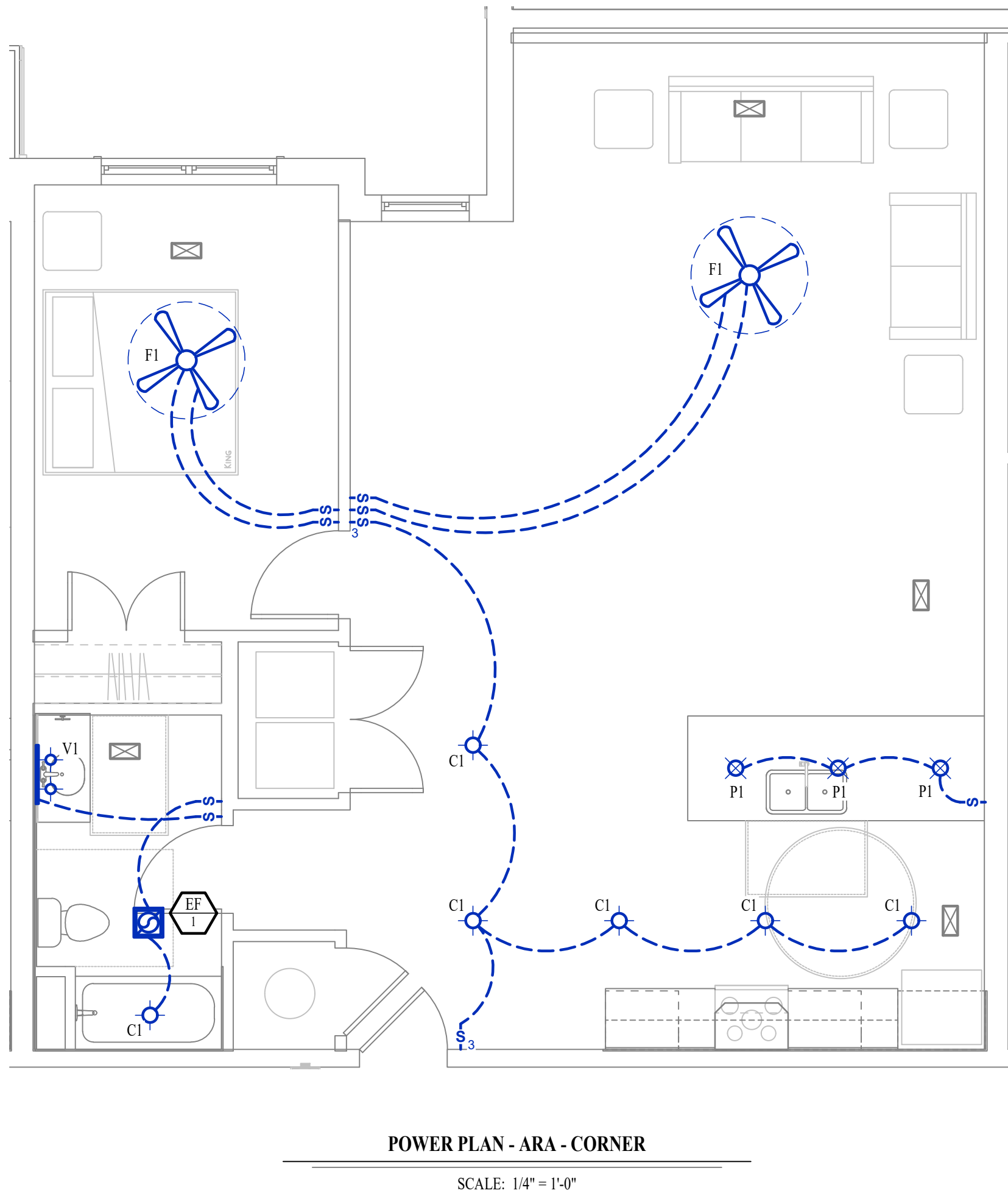
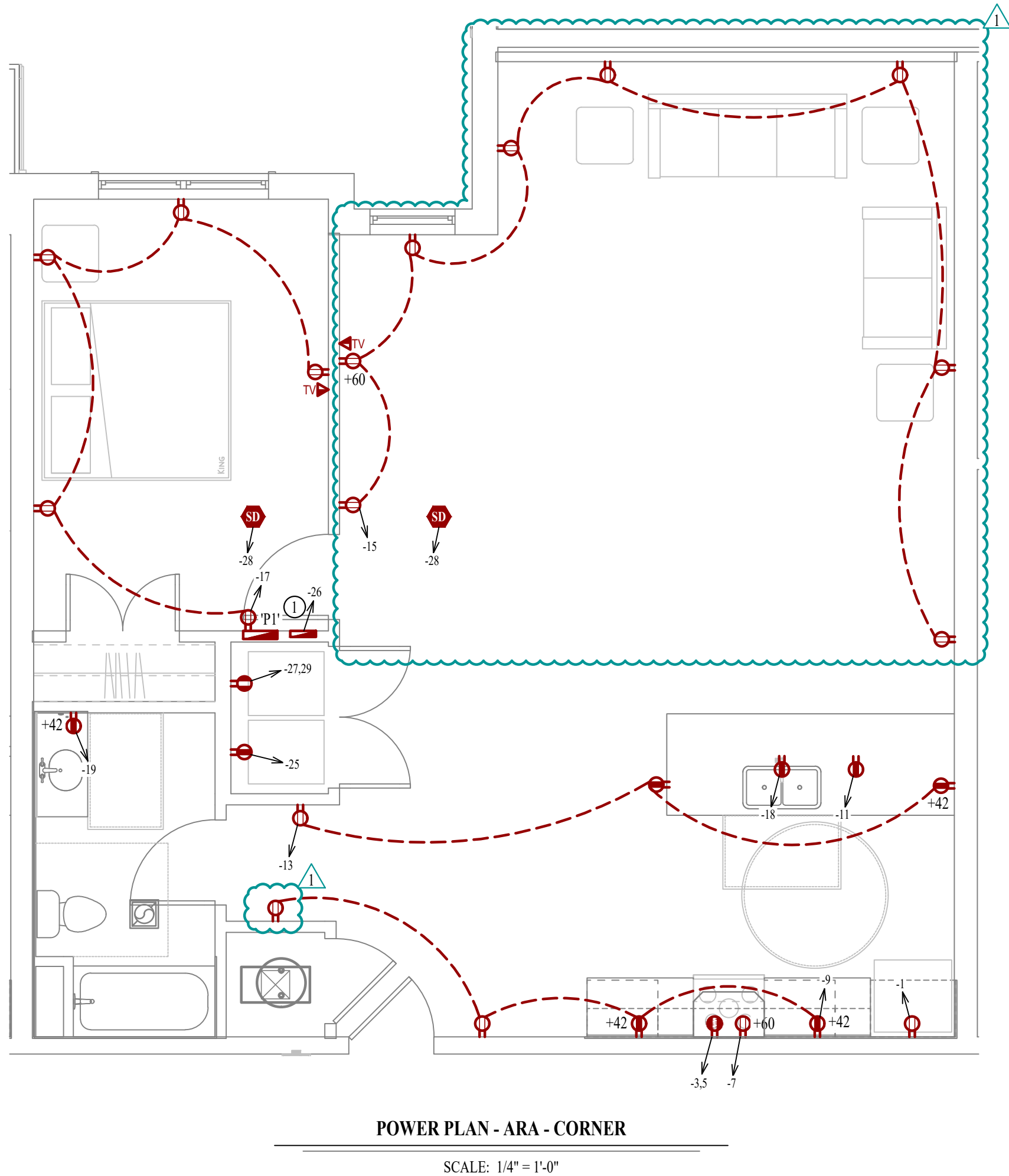


 X1 LIGHTING FIXTURE
 "X1" INDICATES FIXTURE TYPE
 (REFER TO SCHEDULE)

 T3 TOGGLE SWITCH
 SWITCH TYPE

 D DIMMER SWITCH

1. SEE E500 & E600 SERIES SHEETS FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.
2. ALL LIGHTING SHOWN SHALL BE ON CIRCUIT -16 UNLESS NOTED OTHERWISE.



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J2 PROJECT No:	J21007
J2 DESIGN:	JAP

ISSUE TITLE	DATE
CITY SUBMITTAL	01 / 25 / 2024
REVISION 1	10 / 21 / 2024

SHEET TITLE

UNIT TYPE
ARA-CORNER
MEP PLAN

SHEET NUMBER

UMEP1.3

Mechanical - Electrical - Plumbing Design Drawings for

The Village at Discovery - Lot 4

**Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO**

HVAC PLAN SYMBOL LEGEND

- ← EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)
← EQUIPMENT REFERENCE NUMBER
← DIFFUSER/GRILLE TYPE (REFER TO SCHEDULE)
← CUBIC FEET PER MINUTE (CFM) / FACE SIZE

- SUPPLY DUCTWORK
- - - RETURN DUCTWORK
- - - EXHAUST DUCTWORK
~ FLEX DUCT
[X] SUPPLY DIFFUSER (HATCH INDICATES "NO FLOW ZONE")
[X] RETURN DIFFUSER
[] BALANCE DAMPER
[M] MOTORIZED DAMPER
[R] CEILING RADIATION DAMPER
[B] BACK DRAFT DAMPER
[T] THERMOSTAT

HVAC PLAN GENERAL NOTES:

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- SEE SHEET MEP4 FOR CONDENSING UNIT LOCATIONS. REFRIGERANT PIPING SHALL ROUTE IN SPACES ABOVE FINISHED CEILINGS AND WITHIN WALL CAVITIES TO REMAIN CONCEALED.
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HVAC PLAN KEY NOTES:

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- H/L/W TRANSFER GRILLE (12" A.F.F. ON BEDROOM SIDE OF WALL; 84" A.F.F. ON OPPOSITE SIDE OF WALL).
- RESIDENTIAL RECIRCULATION HOOD TO BE SUPPLIED & INSTALLED BY GC.

POWER PLAN SYMBOL LEGEND

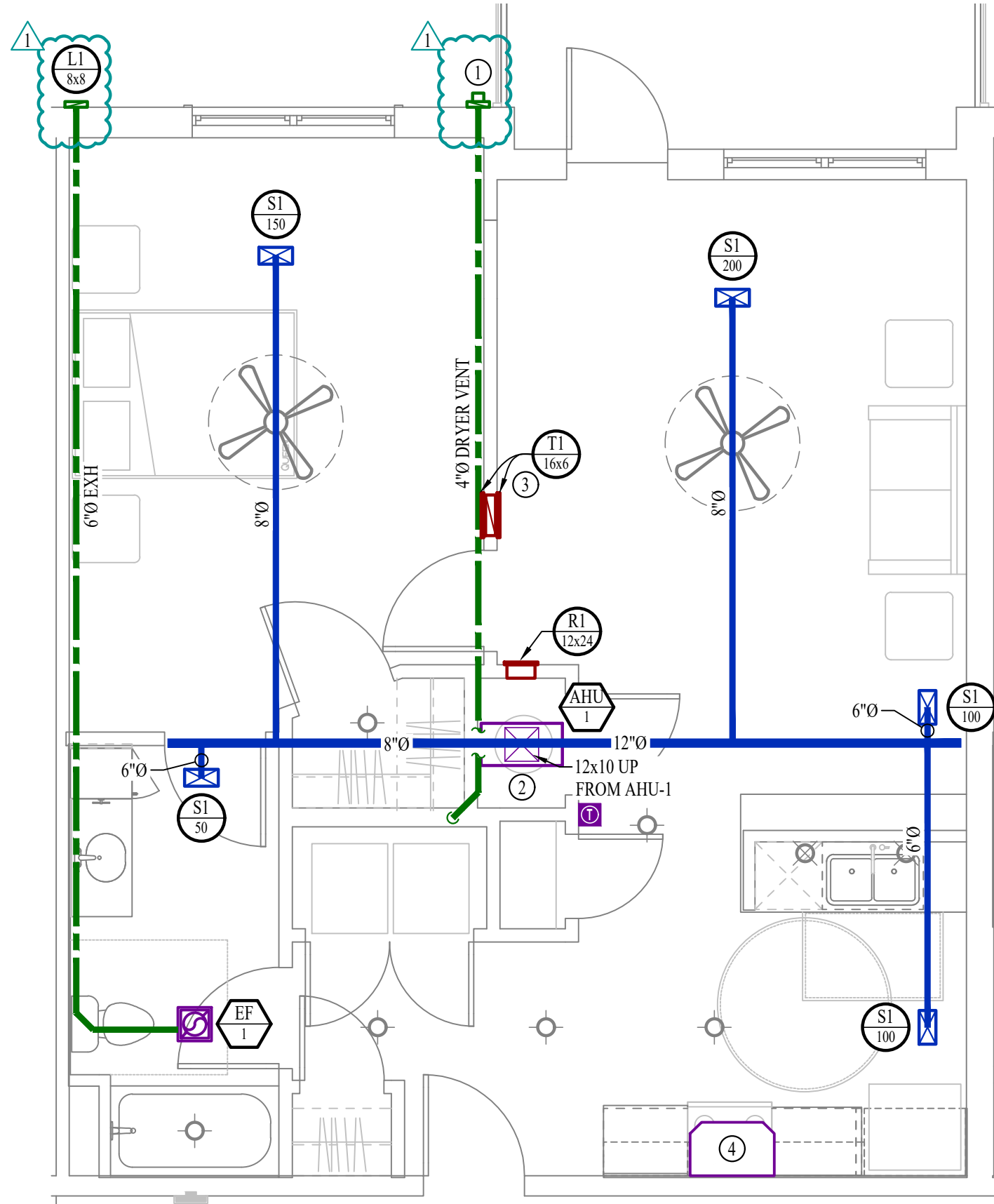
- - - CIRCUIT WIRING
→ PX-XX CIRCUIT TAG
[J] JUNCTION BOX
[R] RECEPTACLE
[R] INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
[WP] = WEATHERPROOF OUTDOOR RECEPTACLE
[GFCI] GFCI DUPLEX CONVENIENCE RECEPTACLE
[208V] 208V RECEPTACLE
[QUAD] QUADPLEX CONVENIENCE RECEPTACLE
[DATA] DATA / PHONE JACK; BOX WITH 1" CONDUIT & CAT6 CABLE BACK TO MEDIA PANEL LOCATION (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
[DISC] DISCONNECT
[SM] 120V IONIZATION SMOKE 520Hz LOW FREQUENCY ALARM WITH SILENCING CAPABILITIES & LOW-VOLTAGE CONTACTS WIRED TO SHUT DOWN AHU UPON FIRE DETECTION. COORDINATE WITH HVAC CONTRACTOR. SMOKE DETECTOR MUST BE LOCATED AT LEAST 3" FROM CEILING FAN BLADES AND AT LEAST 10' FROM ANY COOKING APPLIANCE (FIELD-COORDINATE)

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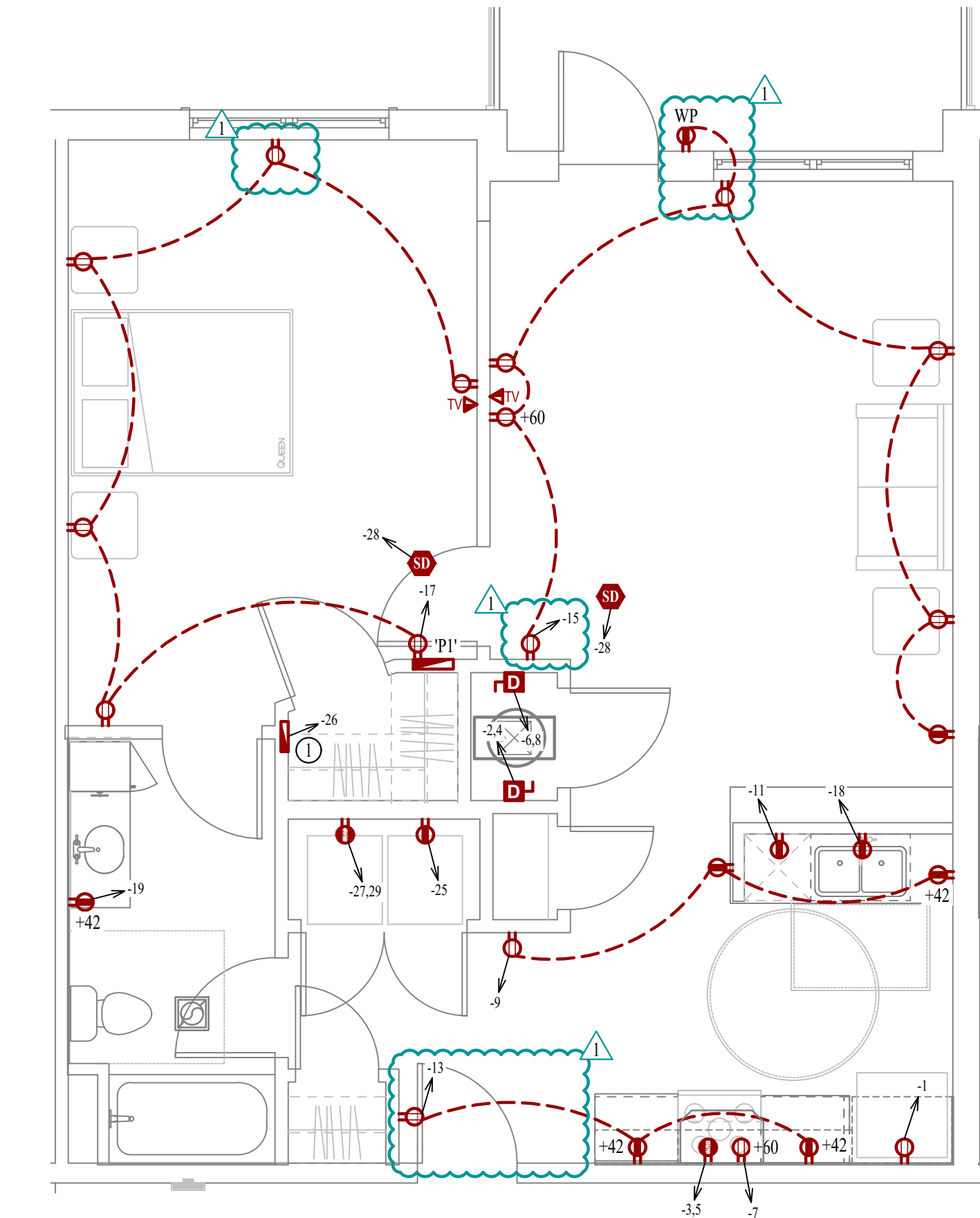
POWER PLAN KEY NOTES:

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HVAC PLAN - ADRIAN

SCALE: 1/4" = 1'-0"



POWER PLAN - ADRIAN

SCALE: 1/4" = 1'-0"

PLUMBING PLAN SYMBOL LEGEND

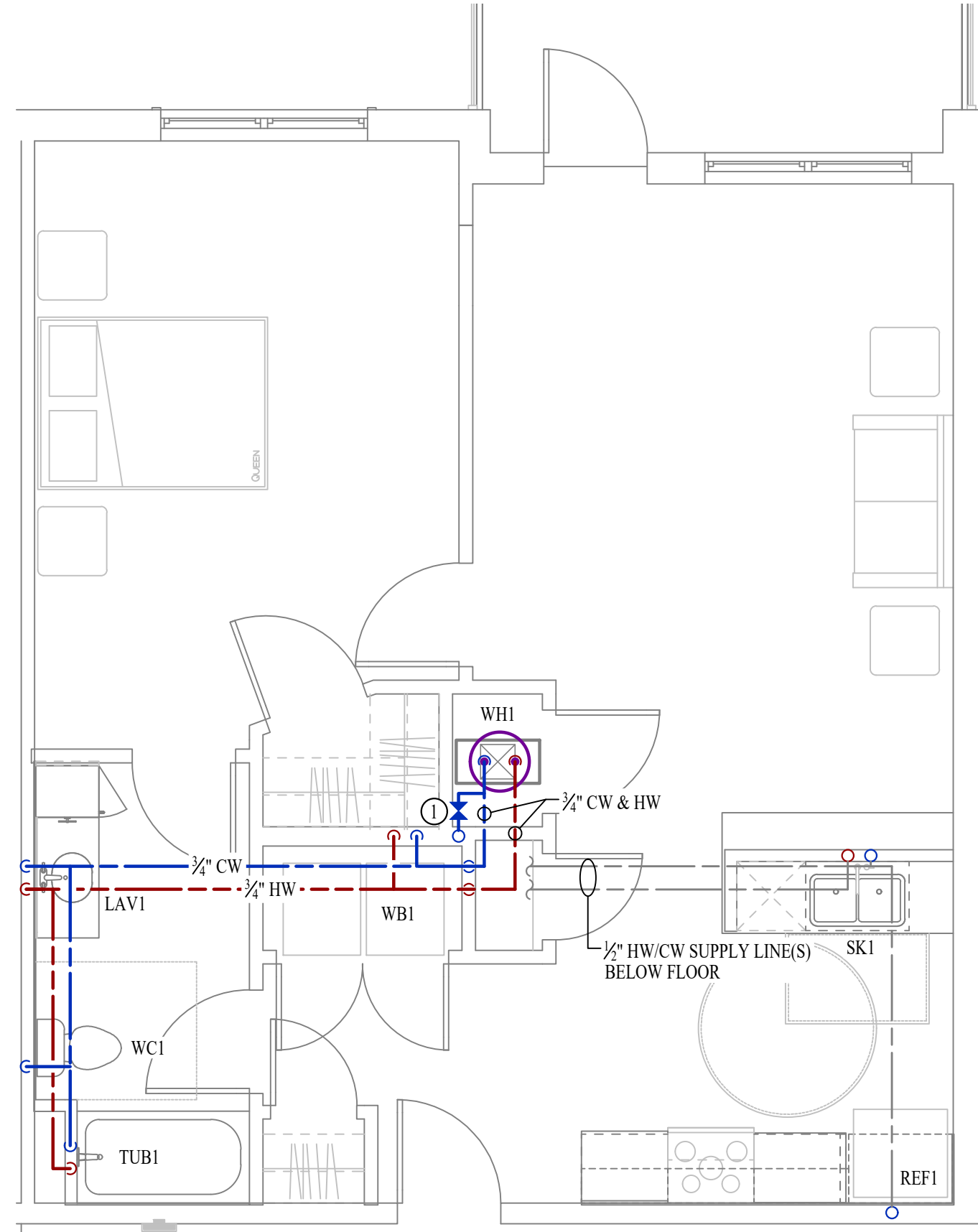
- COLD WATER LINE
— HOT WATER LINE
[V] VALVE
— PIPING TURNED DOWN / TURNED UP

WATER PLAN GENERAL NOTES:

- SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.
- ALL PLUMBING LOCATED ON EXTERIOR WALLS SHALL ROUTE WITHIN INSULATION BARRIER.
- ALL DOMESTIC SUPPLY LINES SERVING MORE THAN (1) FIXTURE SHALL BE 3/4" UNLESS NOTED OTHERWISE.

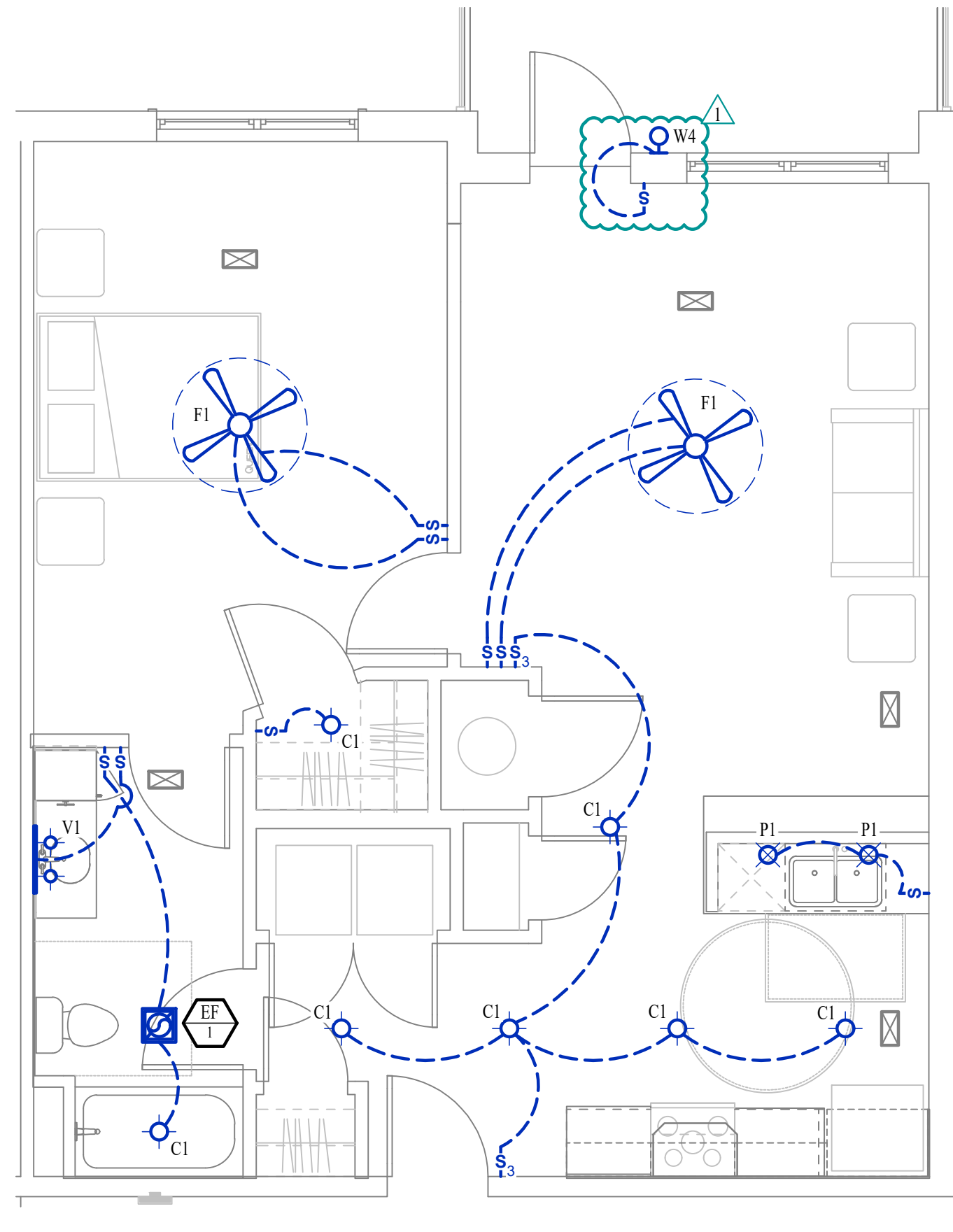
WATER PLAN KEY NOTES:

- 1" CW PIPE UP FROM BELOW WITH SHUT-OFF VALVE IN ACCESSIBLE LOCATION. SEE OVERALL PLUMBING PLANS FOR DETAILS.



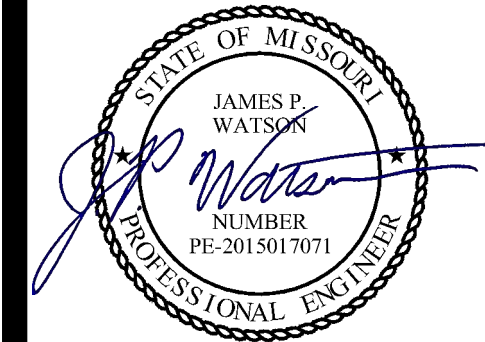
WATER PLAN - ADRIAN

SCALE: 1/4" = 1'-0"

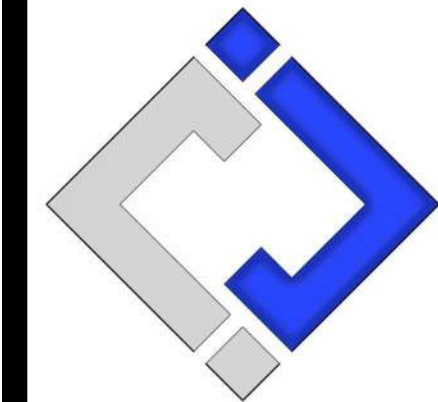


POWER PLAN - ADRIAN

SCALE: 1/4" = 1'-0"



James Watson, P.E. October 21, 2024
PE-2015017071
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J2 PROJECT No: J21007

J2 DESIGN: JAP

ISSUE TITLE DATE

CITY SUBMITTAL 01 / 25 / 2024

REVISION 1 10 / 21 / 2024

HVAC PLAN SYMBOL LEGEND

- ← EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)
← EQUIPMENT REFERENCE NUMBER
← DIFFUSER/GRILLE TYPE (REFER TO SCHEDULE)
← CUBIC FEET PER MINUTE (CFM) / FACE SIZE

- SUPPLY DUCTWORK
RETURN DUCTWORK
EXHAUST DUCTWORK
FLEX DUCT
SUPPLY DIFFUSER (HATCH INDICATES "NO FLOW ZONE")
RETURN DIFFUSER
BALANCE DAMPER
MOTORIZED DAMPER
CEILING RADIATION DAMPER
BACK DRAFT DAMPER
THERMOSTAT

HVAC PLAN GENERAL NOTES:

- SEE SHEET M501 FOR HVAC SCHEDULES, DETAILS, REQUIREMENTS, ETC.
- SEE SHEET MEP4 FOR CONDENSING UNIT LOCATIONS. REFRIGERANT PIPING SHALL ROUTE IN SPACES ABOVE FINISHED CEILINGS AND WITHIN WALL CAVITIES TO REMAIN CONCEALED.
- SUPPLY DUCTWORK FROM AHU AT FLOOR/CEILING PENETRATION SHALL BE PROTECTED BY A FIRE DAMPER. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
- WRAP ALL DRYER DUCTS WITH FIREMASTER (OR EQUAL) DUCT WRAP.
- TOTAL DEVELOPED LENGTH OF EXHAUST DUCT SHALL BE INDICATED ON A PERMANENT LABEL WITHIN 6' OF DRYER VENT CONNECTION. DRYER DUCT ROUTING SHOWN IS FOR REFERENCE ONLY. OVERALL DUCT LENGTH SHALL BE CALCULATED BY HVAC CONTRACTOR PER 2018 IMC §04.8.4.
- LOCATE ALL EXHAUST / DRYER VENT TERMINATIONS AT LEAST 36" FROM OPERABLE OPENINGS INTO APARTMENTS (WINDOWS, DOORS, ETC.).
- ALL DUCTWORK SHOWN SHALL ROUTE IN SPACE BETWEEN / THRU TRUSSES UNLESS NOTED OTHERWISE. SEE STRUCTURAL DRAWINGS FOR DETAILS.

HVAC PLAN KEY NOTES:

- TERMINATE 4" DRYER EXHAUST WITH VENT EQUAL TO DRYER WALL VENT #DWV4.
- AHU WALL MOUNTED ABOVE WATER HEATER. COORDINATE WITH PLUMBING CONTRACTOR. CONDENSATE TO DISCHARGE IN FLOOR DRAIN WITHIN CLOSET.
- H/LOW TRANSFER GRILLE (12" A.F.F. ON BEDROOM SIDE OF WALL; 84" A.F.F. ON OPPOSITE SIDE OF WALL).
- RESIDENTIAL RECIRCULATION HOOD TO BE SUPPLIED & INSTALLED BY GC.

POWER PLAN SYMBOL LEGEND

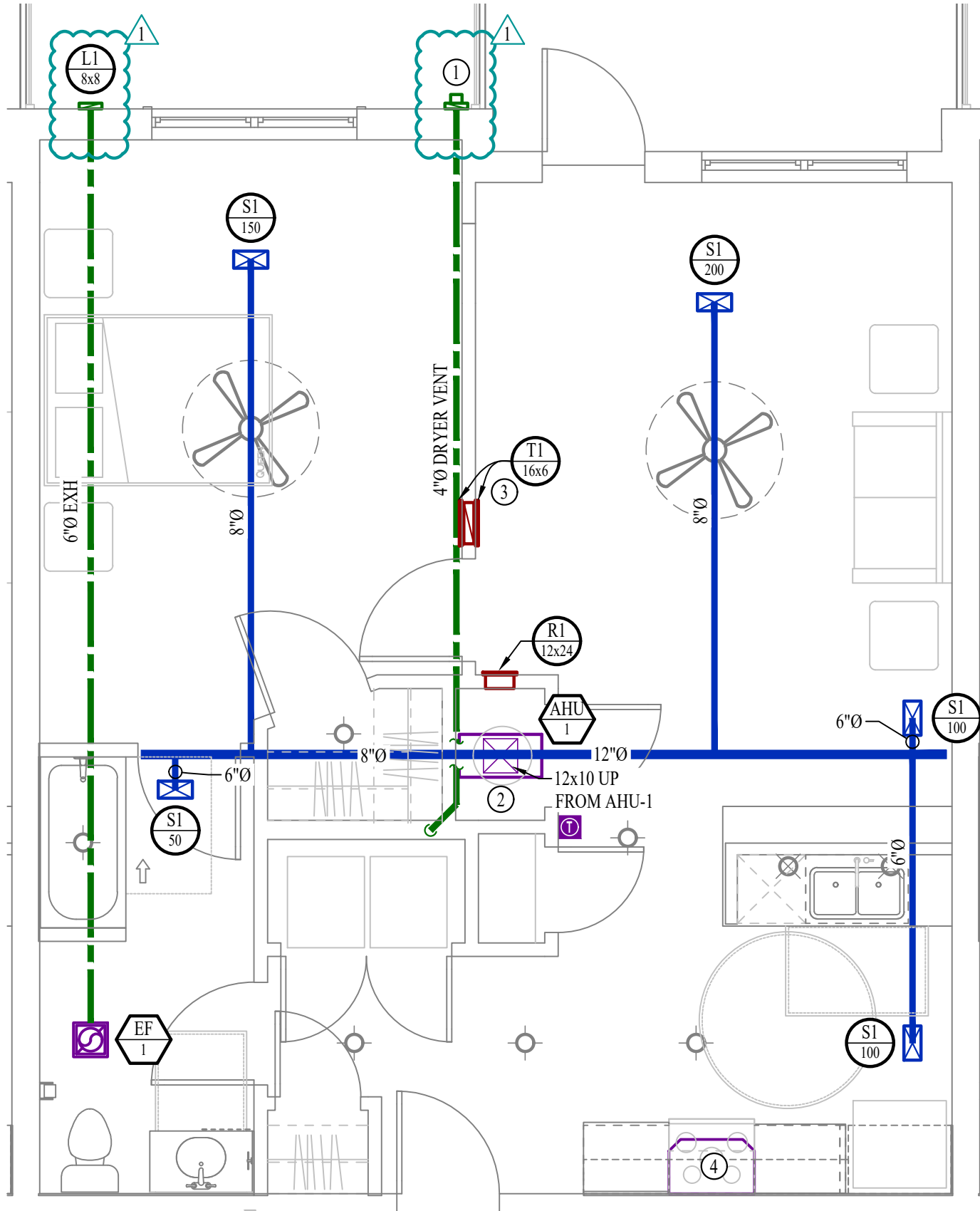
- CIRCUIT WIRING
CIRCUIT TAG
JUNCTION BOX
RECEPTACLE
INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
"WP" = WEATHERPROOF OUTDOOR RECEPTACLE
GFCI DUPLEX CONVENIENCE RECEPTACLE
208V RECEPTACLE
QUADPLEX CONVENIENCE RECEPTACLE
DATA / PHONE JACK; BOX WITH 1" CONDUIT & CAT6 CABLE BACK TO MEDIA PANEL LOCATION (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
DISCONNECT
120V IONIZATION SMOKE 520Hz LOW FREQUENCY ALARM WITH SILENCING CAPABILITIES & LOW-VOLTAGE CONTACTS WIRED TO SHUT DOWN AHU UPON FIRE DETECTION. COORDINATE WITH HVAC CONTRACTOR. SMOKE DETECTOR MUST BE LOCATED AT LEAST 3' FROM CEILING FAN BLADES AND AT LEAST 10' FROM ANY COOKING APPLIANCE (FIELD-COORDINATE)

POWER PLAN GENERAL NOTES:

- SEE E500 & E600 SERIES SHEETS FOR POWER SCHEDULES, DETAILS, REQUIREMENTS, ETC.
- SEE SHEET MEP4 FOR CONDENSING UNIT LOCATIONS.
- VERIFY EACH DATA/RECEPTACLE LOCATION WITH OWNER PRIOR TO INSTALLATION.
- REFER TO "TYPICAL ADA MOUNTING HEIGHTS DETAIL", SHEET E501, FOR MOUNTING HEIGHTS OF DEVICES IN "ANSI A" UNITS.

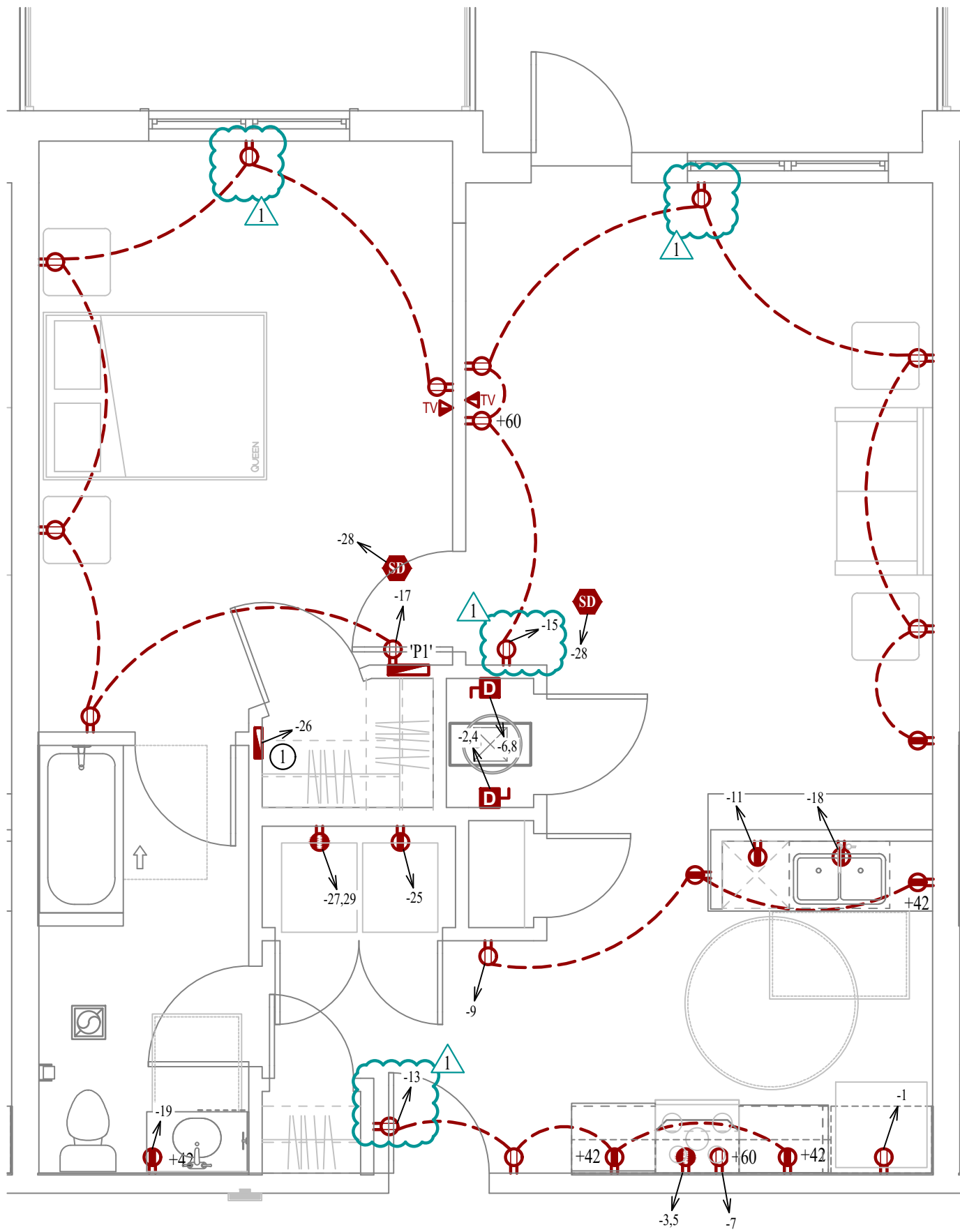
POWER PLAN KEY NOTES:

- MEDIA PANEL LOCATION; DATA/TV WIRING TO TERMINATE AT THIS LOCATION. DETERMINE EXACT LOCATION & DETAILS WITH OWNER PRIOR TO INSTALLATION.



HVAC PLAN - ADRIAN-ALT

SCALE: 1/4" = 1'-0"



POWER PLAN - ADRIAN-ALT

SCALE: 1/4" = 1'-0"

PLUMBING PLAN SYMBOL LEGEND

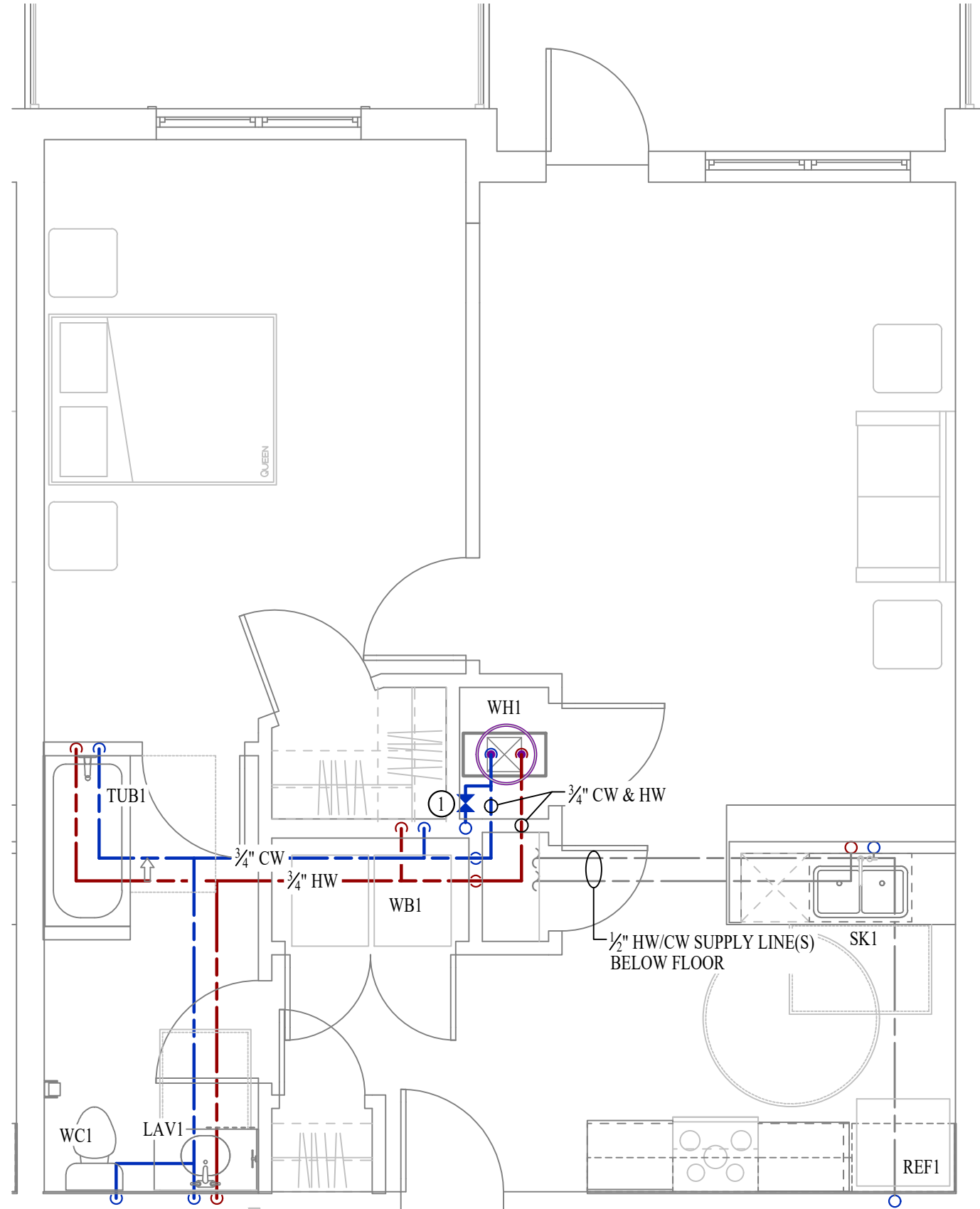
- COLD WATER LINE
HOT WATER LINE
VALVE
PIPING TURNED DOWN / TURNED UP

WATER PLAN GENERAL NOTES:

- SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.
- ALL PLUMBING LOCATED ON EXTERIOR WALLS SHALL ROUTE WITHIN INSULATION BARRIER.
- ALL DOMESTIC SUPPLY LINES SERVING MORE THAN (1) FIXTURE SHALL BE 3/2" UNLESS NOTED OTHERWISE.

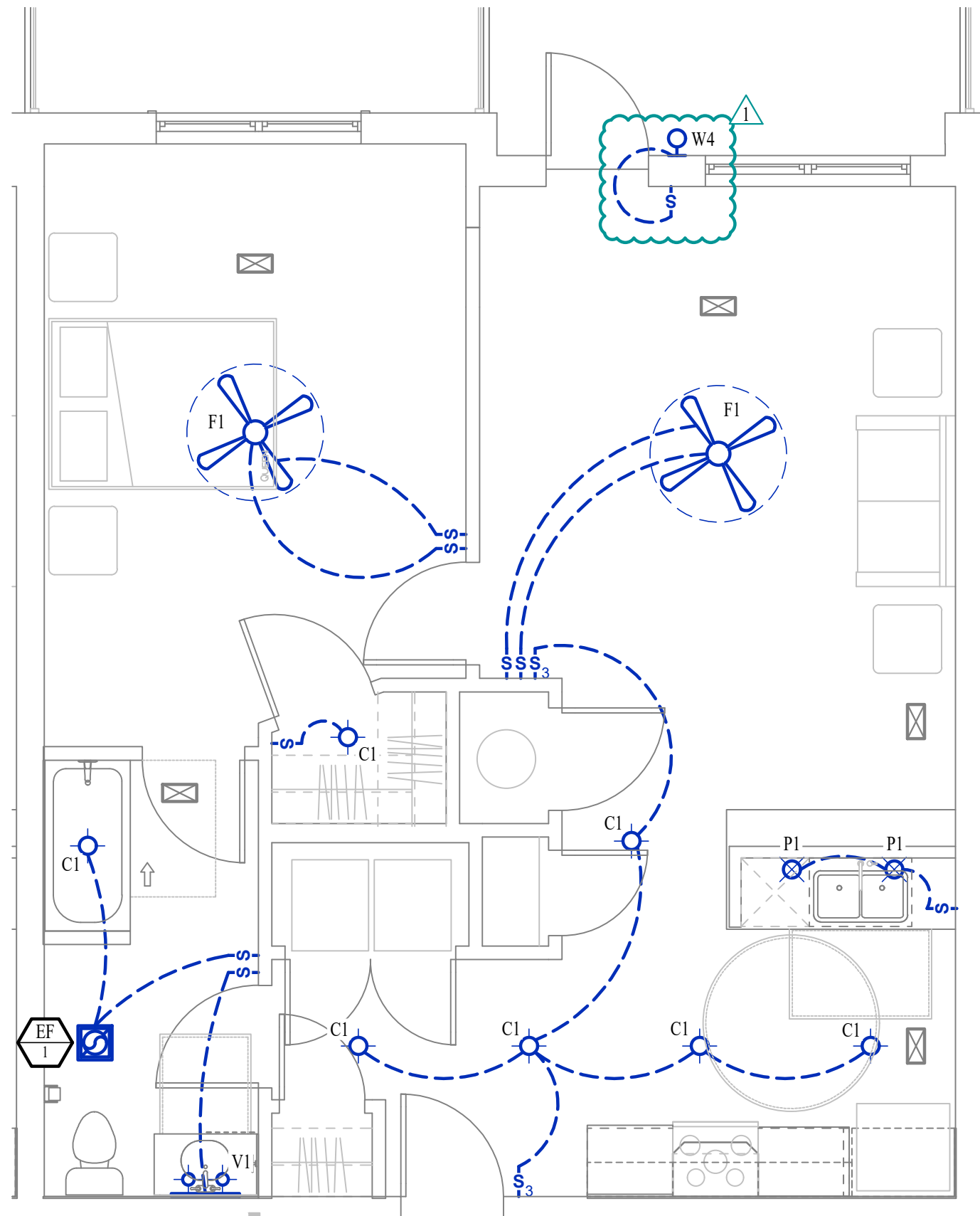
WATER PLAN KEY NOTES:

- 1" CW PIPE UP FROM BELOW WITH SHUT-OFF VALVE IN ACCESSIBLE LOCATION. SEE OVERALL PLUMBING PLANS FOR DETAILS.



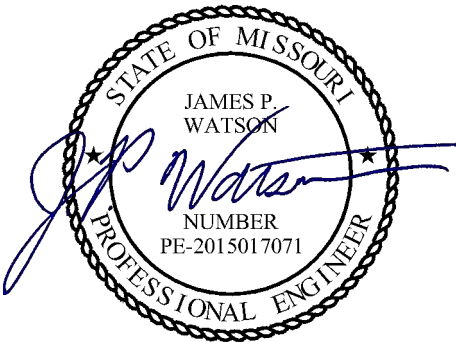
WATER PLAN - ADRIAN-ALT

SCALE: 1/4" = 1'-0"

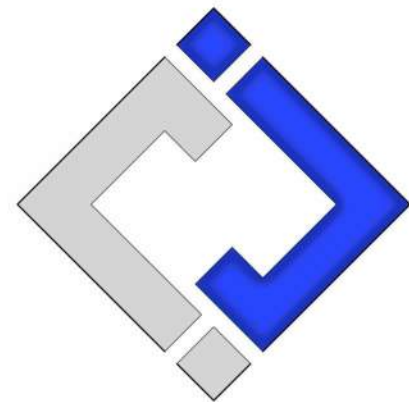


POWER PLAN - ADRIAN-ALT

SCALE: 1/4" = 1'-0"



James Watson, P.E. October 21, 2024
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HVAC PLAN SYMBOL LEGEND

- ← EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)
← EQUIPMENT REFERENCE NUMBER
← DIFFUSER/GRILLE TYPE (REFER TO SCHEDULE)
← CUBIC FEET PER MINUTE (CFM) / FACE SIZE

- SUPPLY DUCTWORK
RETURN DUCTWORK
EXHAUST DUCTWORK
FLEX DUCT
SUPPLY DIFFUSER (HATCH INDICATES "NO FLOW ZONE")
RETURN DIFFUSER
BALANCE DAMPER
MOTORIZED DAMPER
CEILING RADIATION DAMPER
BACK DRAFT DAMPER
THERMOSTAT

HVAC PLAN GENERAL NOTES:

- SEE SHEET M501 FOR HVAC SCHEDULES, DETAILS, REQUIREMENTS, ETC.
- SEE SHEET MEP4 FOR CONDENSING UNIT LOCATIONS. REFRIGERANT PIPING SHALL ROUTE IN SPACES ABOVE FINISHED CEILINGS AND WITHIN WALL CAVITIES TO REMAIN CONCEALED.
- SUPPLY DUCTWORK FROM AHU AT FLOOR/CEILING PENETRATION SHALL BE PROTECTED BY A FIRE DAMPER. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
- WRAP ALL DRYER DUCTS WITH FIREMASTER (OR EQUAL) DUCT WRAP.
- TOTAL DEVELOPED LENGTH OF EXHAUST DUCT SHALL BE INDICATED ON A PERMANENT LABEL WITHIN 6' OF DRYER VENT CONNECTION. DRYER DUCT ROUTING SHOWN IS FOR REFERENCE ONLY. OVERALL DUCT LENGTH SHALL BE CALCULATED BY HVAC CONTRACTOR PER 2018 IMC §04.8.4.
- LOCATE ALL EXHAUST / DRYER VENT TERMINATIONS AT LEAST 36" FROM OPERABLE OPENINGS INTO APARTMENTS (WINDOWS, DOORS, ETC.).
- ALL DUCTWORK SHOWN SHALL ROUTE IN SPACE BETWEEN / THRU TRUSSES UNLESS NOTED OTHERWISE. SEE STRUCTURAL DRAWINGS FOR DETAILS.

HVAC PLAN KEY NOTES:

- TERMINATE 4" DRYER EXHAUST WITH VENT EQUAL TO DRYER WALL VENT #DWV4.
- AHU WALL MOUNTED ABOVE WATER HEATER. COORDINATE WITH PLUMBING CONTRACTOR. CONDENSATE TO DISCHARGE IN FLOOR DRAIN WITHIN CLOSET.
- H/L/W TRANSFER GRILLE (12" A.F.F. ON BEDROOM SIDE OF WALL; 84" A.F.F. ON OPPOSITE SIDE OF WALL).
- RESIDENTIAL RECIRCULATION HOOD TO BE SUPPLIED & INSTALLED BY GC.

POWER PLAN SYMBOL LEGEND

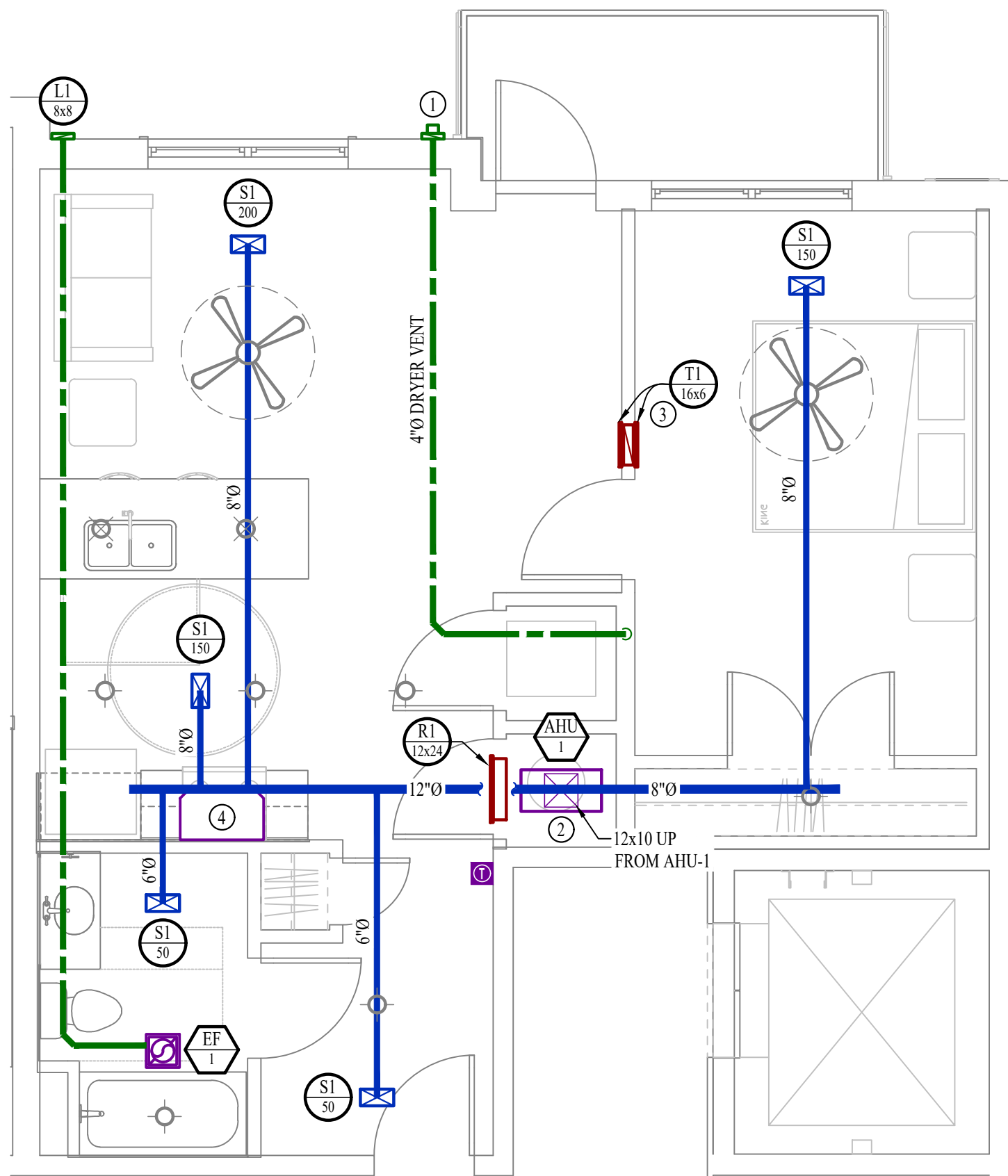
- CIRCUIT WIRING
CIRCUIT TAG
JUNCTION BOX
RECEPTACLE
INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
"WP" = WEATHERPROOF OUTDOOR RECEPTACLE
GFCI DUPLEX CONVENIENCE RECEPTACLE
208V RECEPTACLE
QUADPLEX CONVENIENCE RECEPTACLE
DATA / PHONE JACK; BOX WITH 1" CONDUIT & CAT6 CABLE BACK TO MEDIA PANEL LOCATION (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
DISCONNECT
120V IONIZATION SMOKE 520Hz LOW FREQUENCY ALARM WITH SILENCING CAPABILITIES & LOW-VOLTAGE CONTACTS WIRED TO SHUT DOWN AHU UPON FIRE DETECTION. COORDINATE WITH HVAC CONTRACTOR. SMOKE DETECTOR MUST BE LOCATED AT LEAST 3' FROM CEILING FAN BLADES AND AT LEAST 10' FROM ANY COOKING APPLIANCE (FIELD-COORDINATE)

POWER PLAN GENERAL NOTES:

- SEE E500 & E600 SERIES SHEETS FOR POWER SCHEDULES, DETAILS, REQUIREMENTS, ETC.
- SEE SHEET MEP4 FOR CONDENSING UNIT LOCATIONS.
- VERIFY EACH DATA/RECEPTACLE LOCATION WITH OWNER PRIOR TO INSTALLATION.
- REFER TO "TYPICAL ADA MOUNTING HEIGHTS DETAIL", SHEET E501, FOR MOUNTING HEIGHTS OF DEVICES IN "ANSI A" UNITS.

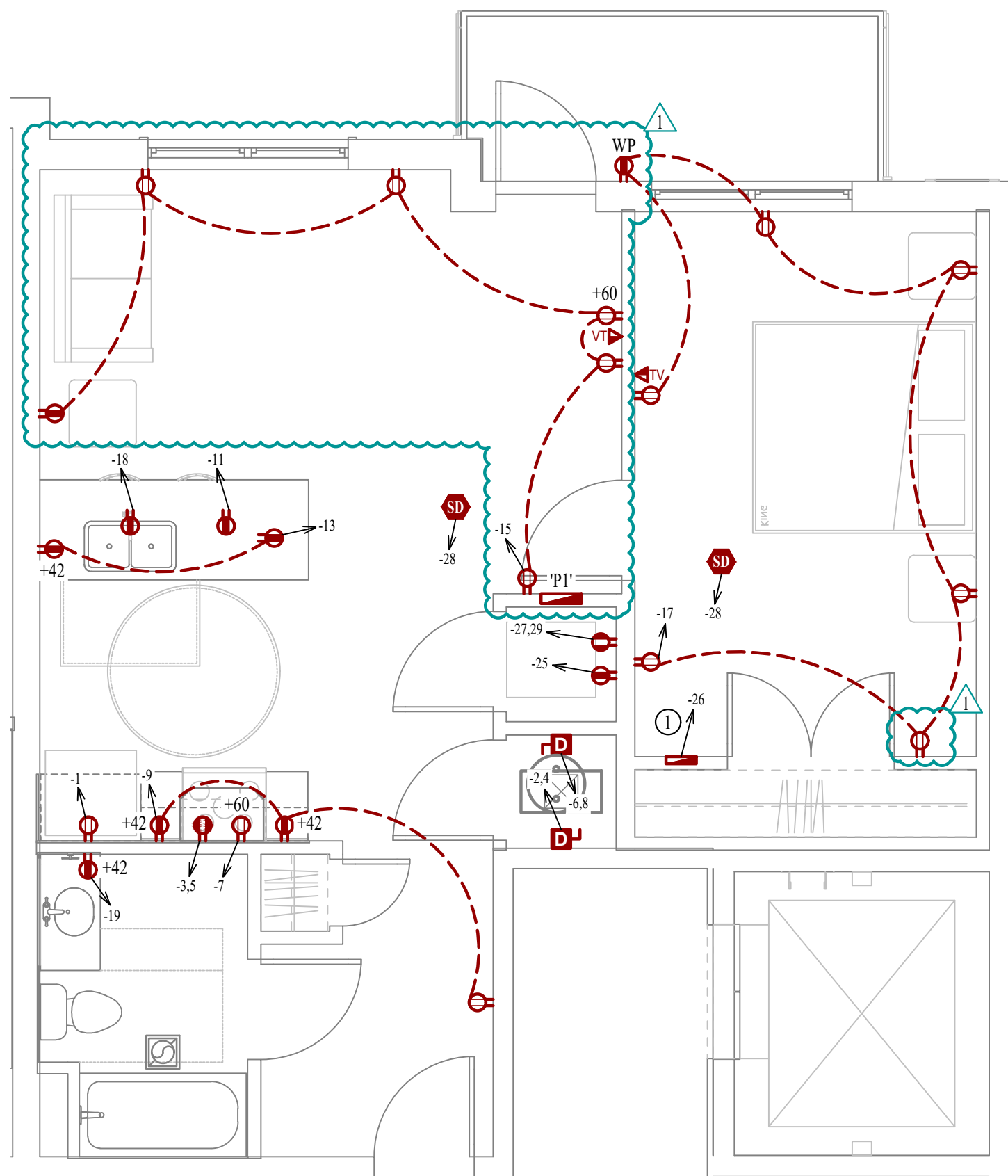
POWER PLAN KEY NOTES:

- MEDIA PANEL LOCATION; DATA/TV WIRING TO TERMINATE AT THIS LOCATION. DETERMINE EXACT LOCATION & DETAILS WITH OWNER PRIOR TO INSTALLATION.



HVAC PLAN - ADRIAN - CORNER

SCALE: 1/4" = 1'-0"



POWER PLAN - ADRIAN - CORNER

SCALE: 1/4" = 1'-0"

PLUMBING PLAN SYMBOL LEGEND

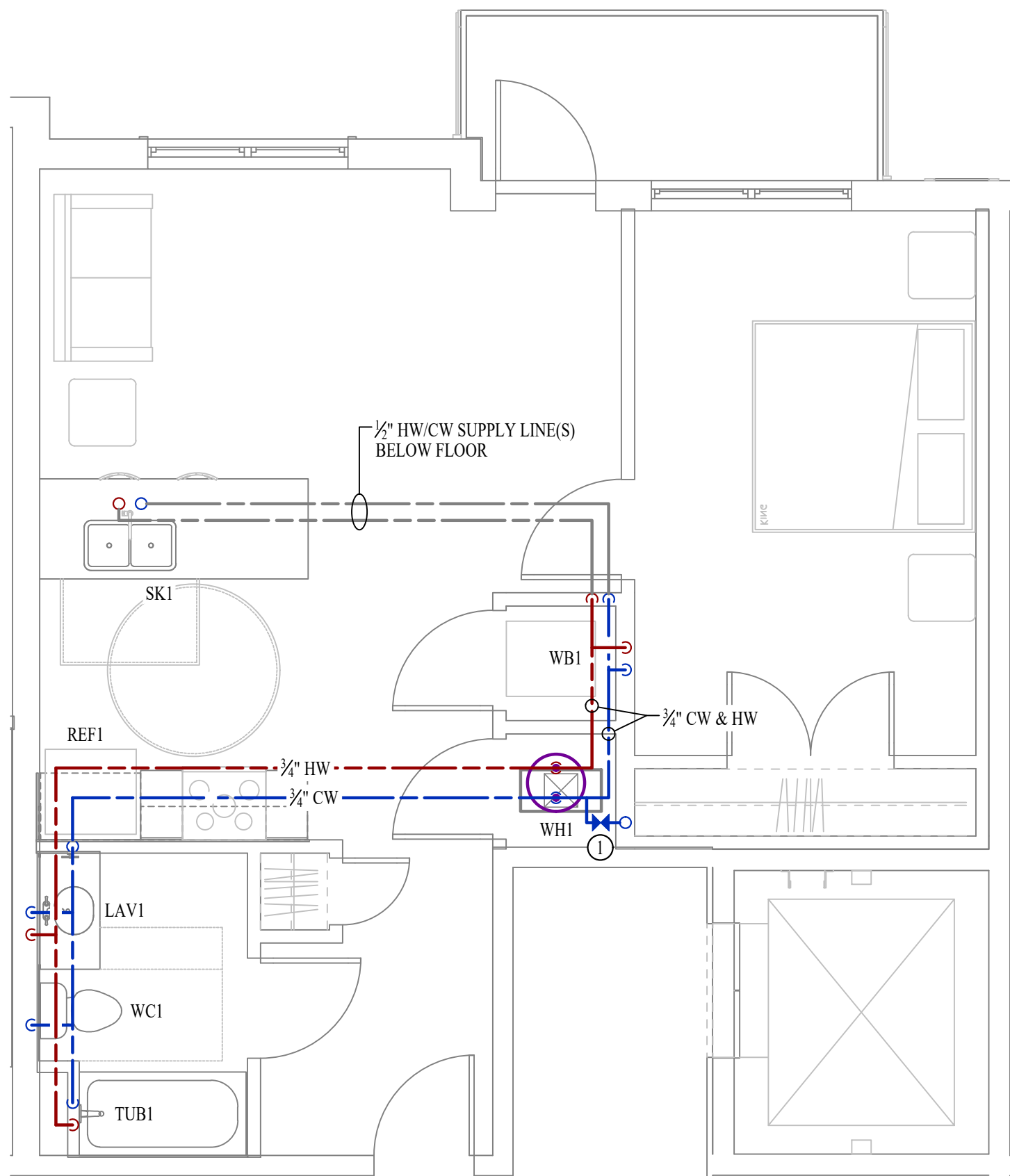
- COLD WATER LINE
HOT WATER LINE
VALVE
PIPING TURNED DOWN / TURNED UP

WATER PLAN GENERAL NOTES:

- SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.
- ALL PLUMBING LOCATED ON EXTERIOR WALLS SHALL ROUTE WITHIN INSULATION BARRIER.
- ALL DOMESTIC SUPPLY LINES SERVING MORE THAN (1) FIXTURE SHALL BE 3/4" UNLESS NOTED OTHERWISE.

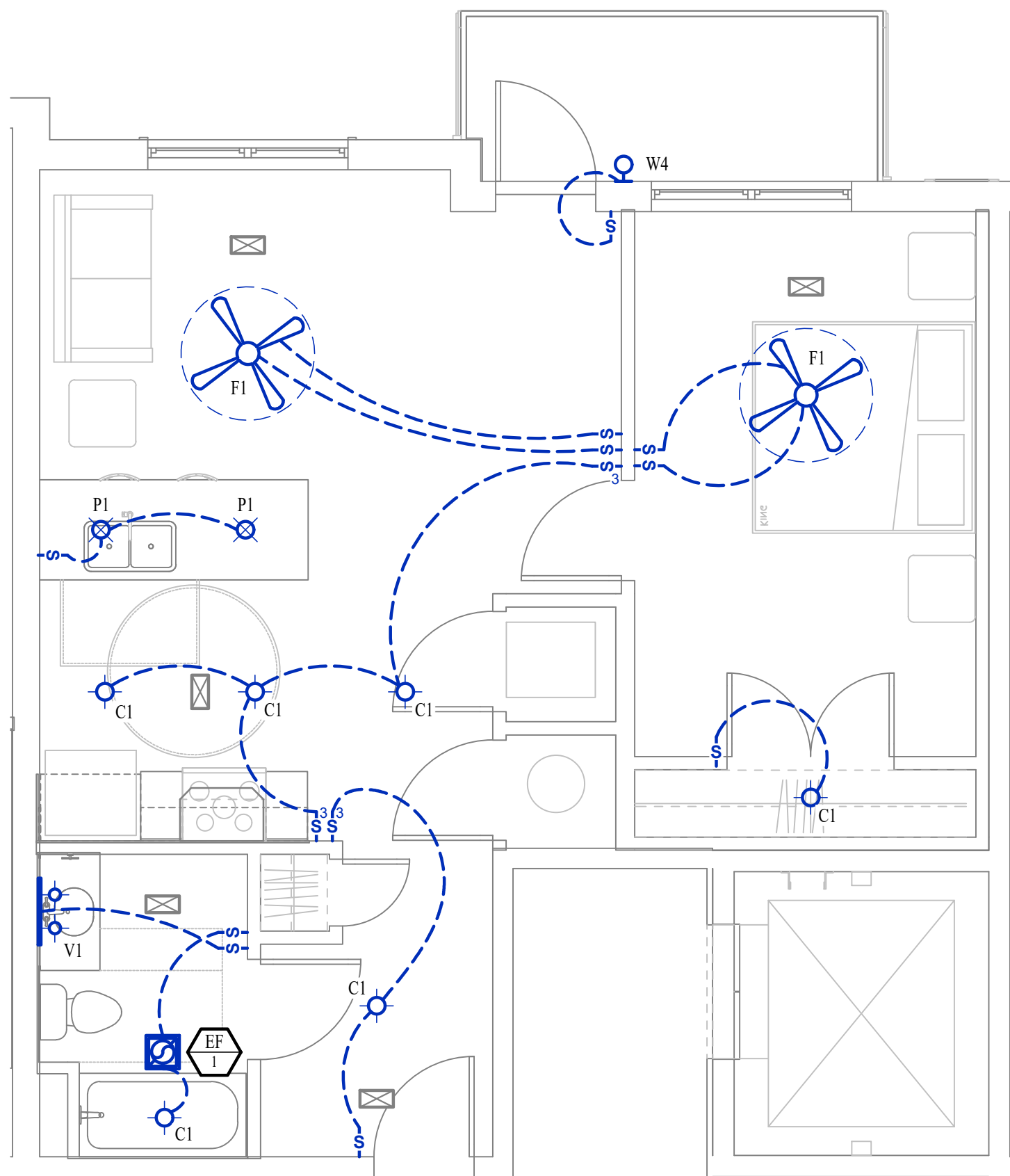
WATER PLAN KEY NOTES:

- 1" CW PIPE UP FROM BELOW WITH SHUT-OFF VALVE IN ACCESSIBLE LOCATION. SEE OVERALL PLUMBING PLANS FOR DETAILS.



WATER PLAN - ADRIAN - CORNER

SCALE: 1/4" = 1'-0"



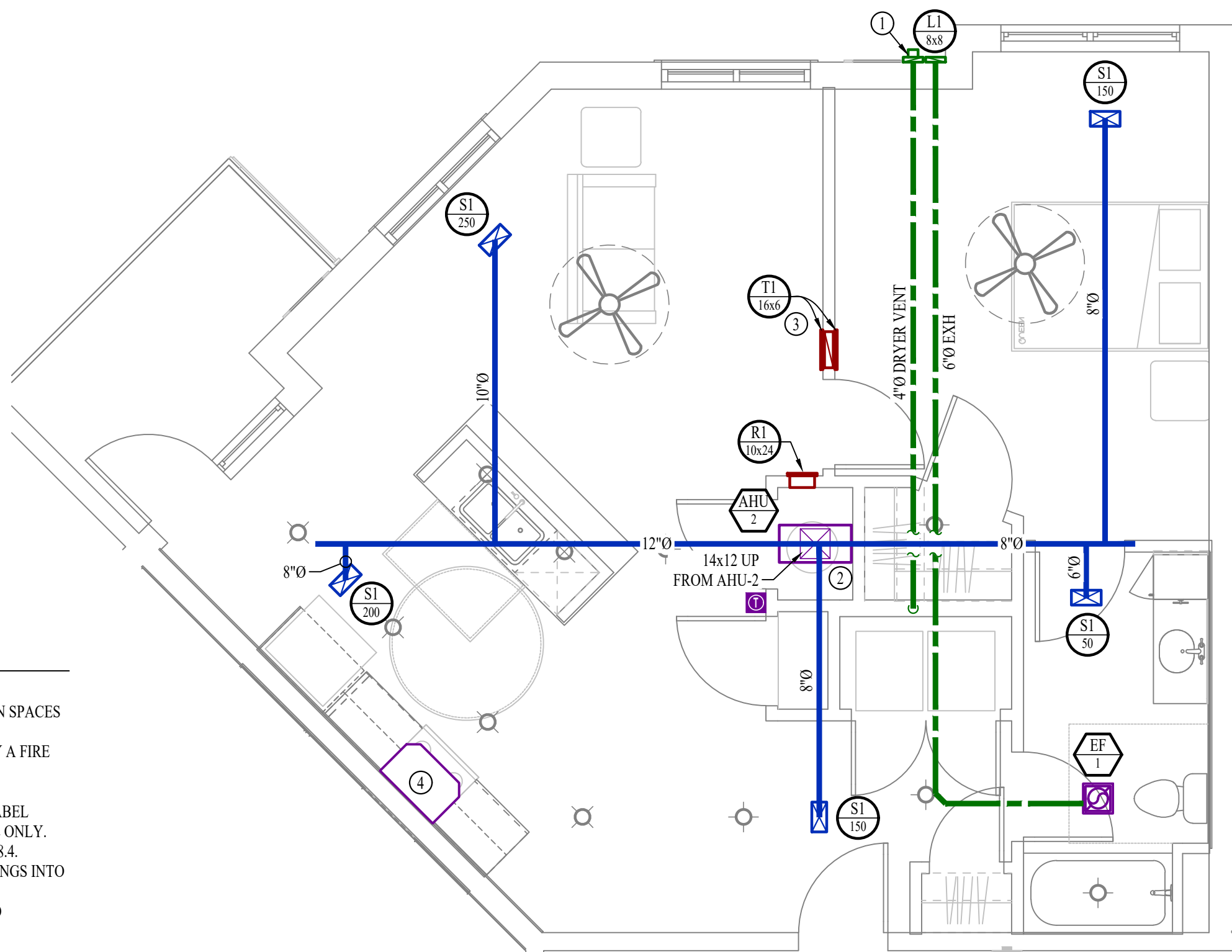
POWER PLAN - ADRIAN - CORNER

SCALE: 1/4" = 1'-0"

	EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)
	EQUIPMENT REFERENCE NUMBER
	DIFFUSER/GRILLE TYPE (REFER TO SCHEDULE)
	CUBIC FEET PER MINUTE (CFM) / FACE SIZE
	SUPPLY DUCTWORK
	RETURN DUCTWORK
	EXHAUST DUCTWORK
	FLEX DUCT
	SUPPLY DIFFUSER (HATCH INDICATES "NO FLOW ZONE")
	RETURN DIFFUSER
	BALANCE DAMPER
	MOTORIZED DAMPER
	CEILING RADIATION DAMPER
	BACK DRAFT DAMPER
	THERMOSTAT

1. SEE SHEET M501 FOR HVAC SCHEDULES, LOADS, REQUIREMENTS, ETC.
2. SEE SHEET M04 FOR CONDENSING UNIT LOCATIONS. REFRIGERANT PIPING SHALL ROUTE IN SPACES ABOVE FINISHED CEILINGS AND WITHIN WALL CAVITIES TO REMAIN CONCEALED.
3. SUPPLY DUCTWORK FROM AHU AT FLOOR/CEILING PENETRATION SHALL BE PROTECTED BY A FIRE DAMPER. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
4. WRAP ALL DRYER DUCTS WITH FIREMASTER (OR EQUAL) DUCT WRAP.
5. TOTAL DEVELOPED LENGTH OF EXHAUST DUCT SHALL BE INDICATED ON A PERMANENT LABEL WITHIN 6' OF DRYER VENT CONNECTION. DRYER DUCT ROUTING SHOWN IS FOR REFERENCE ONLY.
6. ALL DUCT LENGTH SHALL BE CALCULATED BY HVAC CONTRACTOR PER 2015 IM 9.6.4.8.4.
7. LOCATE ALL EXHAUST / DRYER VENT TERMINATIONS AT LEAST 36" FROM OPENING INTO APARTMENTS (WINDOWS, DOORS, ETC.).
8. ALL DUCTWORK SHOWN SHALL ROUTE IN SPACE BETWEEN / THRU TRUSSES UNLESS NOTED OTHERWISE. SEE STRUCTURAL DRAWINGS FOR DETAILS.

- ① TERMINATE 4" DRYER EXHAUST WITH VENT EQUAL TO DRYER WALL VENT #DWV4.
- ② A/HU WALL MOUNTED ABOVE WATER HEATER. COORDINATE WITH PLUMBING CONTRACTOR. CONDENSATE TO DISCHARGE IN FLOOR DRAIN WITHIN CLOSET.
- ③ HI/LOW TRANSFER GRILLE (12" A.F.F. ON BEDROOM SIDE OF WALL; 84" A.F.F. ON OPPOSITE SIDE OF WALL).
- ④ RESIDENTIAL RECIRCULATION HOOD TO BE SUPPLIED & INSTALLED BY GC.



SCALE: 1/4" = 1'-0"

	CIRCUIT WIRING
PX-XX	CIRCUIT TAG
	JUNCTION BOX
XX 42	RECEPTACLE
	INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
	"WP" = WEATHERPROOF OUTDOOR RECEPTACLE
	GFCI DUPLEX CONVENIENCE RECEPTACLE
	208V RECEPTACLE
	QUADPLEX CONVENIENCE RECEPTACLE
	DATA / PHONE JACK, BOX WITH 1" CONDUIT & CAT6 CABLE BACK TO MEDIA PANEL LOCATION (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
	DISCONNECT
	120V IONIZATION SMOKE 520Hz LOW FREQUENCY ALARM WITH SILENCING CAPABILITIES & LOW-VOLTAGE CONTACTS WIRED TO SHUT DOWN AHU UPON FIRE DETECTION. COORDINATE WITH HVAC CONTRACTOR. SMOKE DETECTOR MUST BE LOCATED AT LEAST 3' FROM CEILING FAN BLADES AND AT LEAST 10' FROM ANY COOKING APPLIANCE (FIELD-COORDINATE)

1. SEE E500 & E600 SERIES SHEETS FOR POWER SCHEDULES, DETAILS, REQUIREMENTS, ETC.
2. SEE SHEET MEP4 FOR CONDENSING UNIT LOCATIONS.
3. VERIFY EACH DATA/RECEPTACLE LOCATION WITH OWNER PRIOR TO INSTALLATION.
4. REFER TO "TYPICAL ADA MOUNTING HEIGHTS DETAIL", SHEET E501, FOR MOUNTING HEIGHTS OF DEVICES IN "ANSI A" UNITS.

① MEDIA PANEL LOCATION; DATA/TV WIRING TO TERMINATE AT THIS LOCATION. DETERMINE EXACT LOCATION & DETAILS WITH OWNER PRIOR TO INSTALLATION.

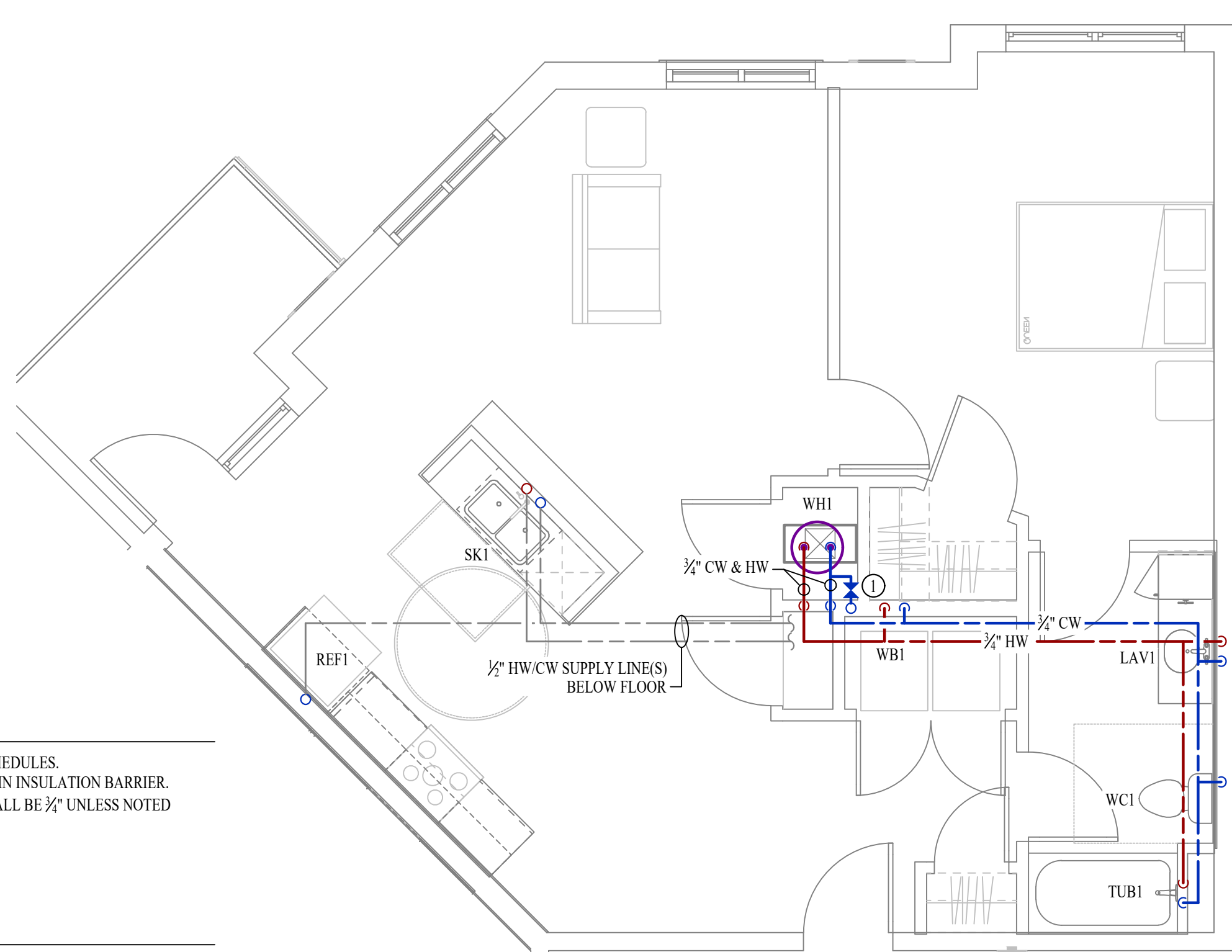


SCALE: 1/4" = 1'-0"

	COLD WATER LINE
	HOT WATER LINE
	VALVE
	PIPING TURNED DOWN / TURNED UP

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.
2. ALL PLUMBING LOCATED ON EXTERIOR WALLS SHALL ROUTE WITHIN INSULATION BARRIER.
3. ALL DOMESTIC SUPPLY LINES SERVING MORE THAN (1) FIXTURE SHALL BE $\frac{3}{4}"$ UNLESS NOTED OTHERWISE.

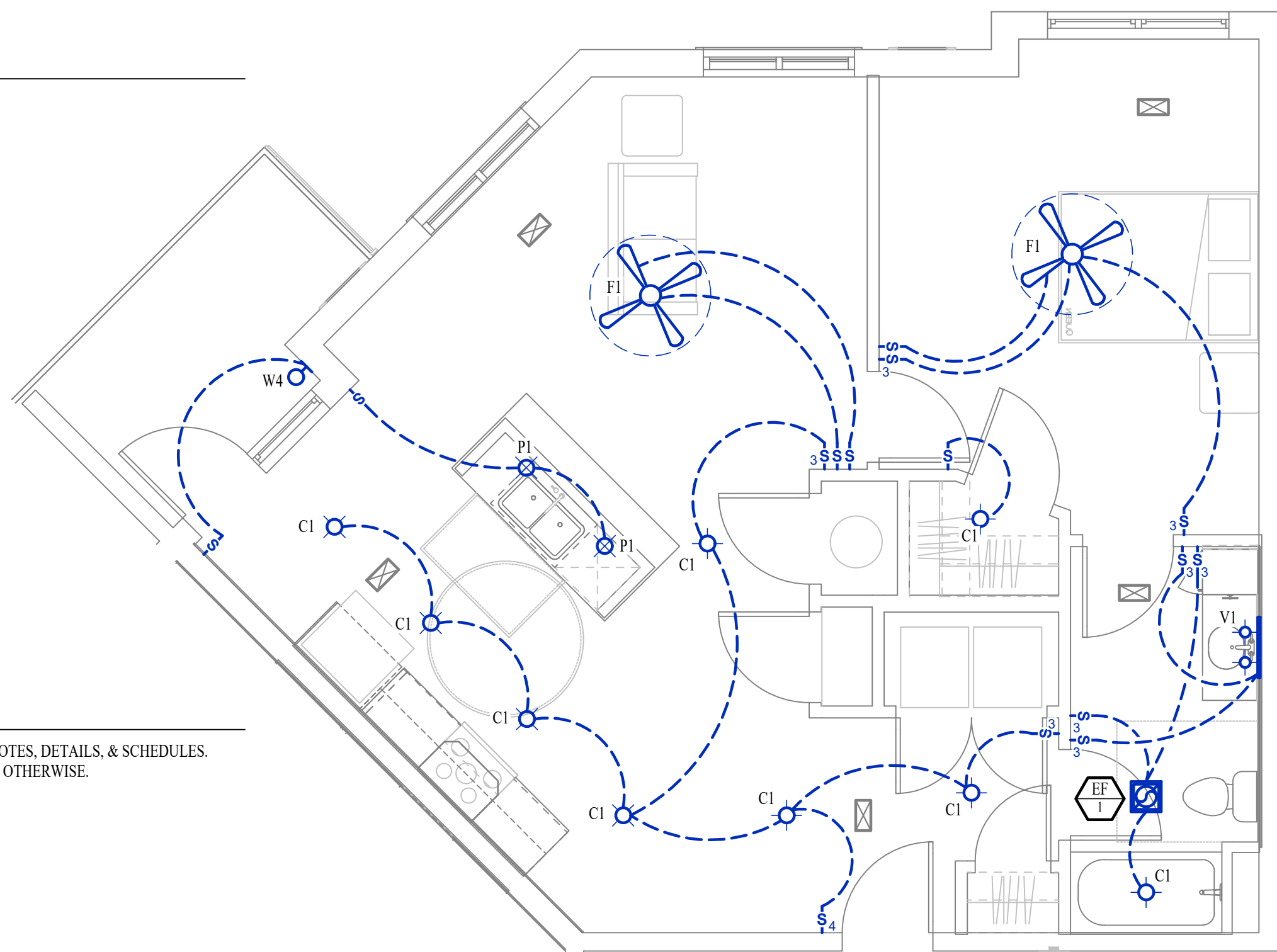
① 1" CW PIPE UP FROM BELOW WITH SHUT-OFF VALVE IN ACCESSIBLE LOCATION. SEE OVERALL PLUMBING PLANS FOR DETAILS.



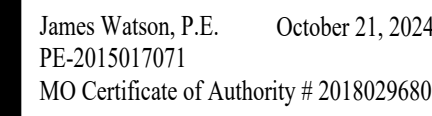
SCALE: 1/4" = 1'-0"

	X1	LIGHTING FIXTURE	"X1" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)
	S3	TOGGLE SWITCH	
		SWITCH TYPE	
		DIMMER SWITCH	

1. SEE E500 & E600 SERIES SHEETS FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.
2. ALL LIGHTING SHOWN SHALL BE ON CIRCUIT -16 UNLESS NOTED OTHERWISE.



SCALE: 1/4" = 1'-0"



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J2 PROJECT No:	J21007
J2 DESIGN:	JAF

ISSUE TITLE	DATE
CITY SUBMITTAL	01 / 25 / 2024
REVISION 1	10 / 21 / 2024

HVAC PLAN SYMBOL LEGEND

- X

#

← EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)
- X

#
- ← EQUIPMENT REFERENCE NUMBER

X

#

X

#

HVAC PLAN GENERAL NOTES:

1. SEE SHEET M501 FOR HVAC SCHEDULES, DETAILS, REQUIREMENTS, ETC.
2. SEE SHEET MEP4 FOR CONDENSING UNIT LOCATIONS. REFRIGERANT PIPING SHALL ROUTE IN SPACES ABOVE FINISHED CEILINGS AND WITHIN WALL CAVITIES TO REMAIN CONCEALED.
3. SUPPLY DUCTWORK FROM AHU AT FLOOR/CEILING PENETRATION SHALL BE PROTECTED BY A FIRE DAMPER. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
4. WRAP ALL DRYER DUCTS WITH FIREMASTER (OR EQUAL) DUCT WRAP.
5. TOTAL DEVELOPED LENGTH OF EXHAUST DUCT SHALL BE INDICATED ON A PERMANENT LABEL WITHIN 6' OF DRYER VENT CONNECTION. DRYER DUCT ROUTING SHOWN IS FOR REFERENCE ONLY. OVERALL DUCT LENGTH SHALL BE CALCULATED BY HVAC CONTRACTOR PER 2018 IMC 504.8.4.
6. LOCATE ALL EXHAUST / DRYER VENT TERMINATIONS AT LEAST 36" FROM OPERABLE OPENINGS INTO APARTMENTS (WINDOWS, DOORS, ETC.).
7. ALL DUCTWORK SHOWN SHALL ROUTE IN SPACE BETWEEN / THRU TRUSSES UNLESS NOTED OTHERWISE. SEE STRUCTURAL DRAWINGS FOR DETAILS.

HVAC PLAN KEY NOTES:

- ① TERMINATE 4" DRYER EXHAUST WITH VENT EQUAL TO DRYER WALL VENT #DWV4.
- ② AHU WALL MOUNTED ABOVE WATER HEATER, COORDINATE WITH PLUMBING CONTRACTOR. CONDENSATE TO DISCHARGE IN FLOOR DRAIN WITHIN CLOSET.
- ③ HI/LOW TRANSFER GRILLE (12" A.F.F. ON BEDROOM SIDE OF WALL; 84" A.F.F. ON OPPOSITE SIDE OF WALL).
- ④ RESIDENTIAL RECIRCULATION HOOD TO BE SUPPLIED & INSTALLED BY GC.

PLUMBING PLAN SYMBOL LEGEND

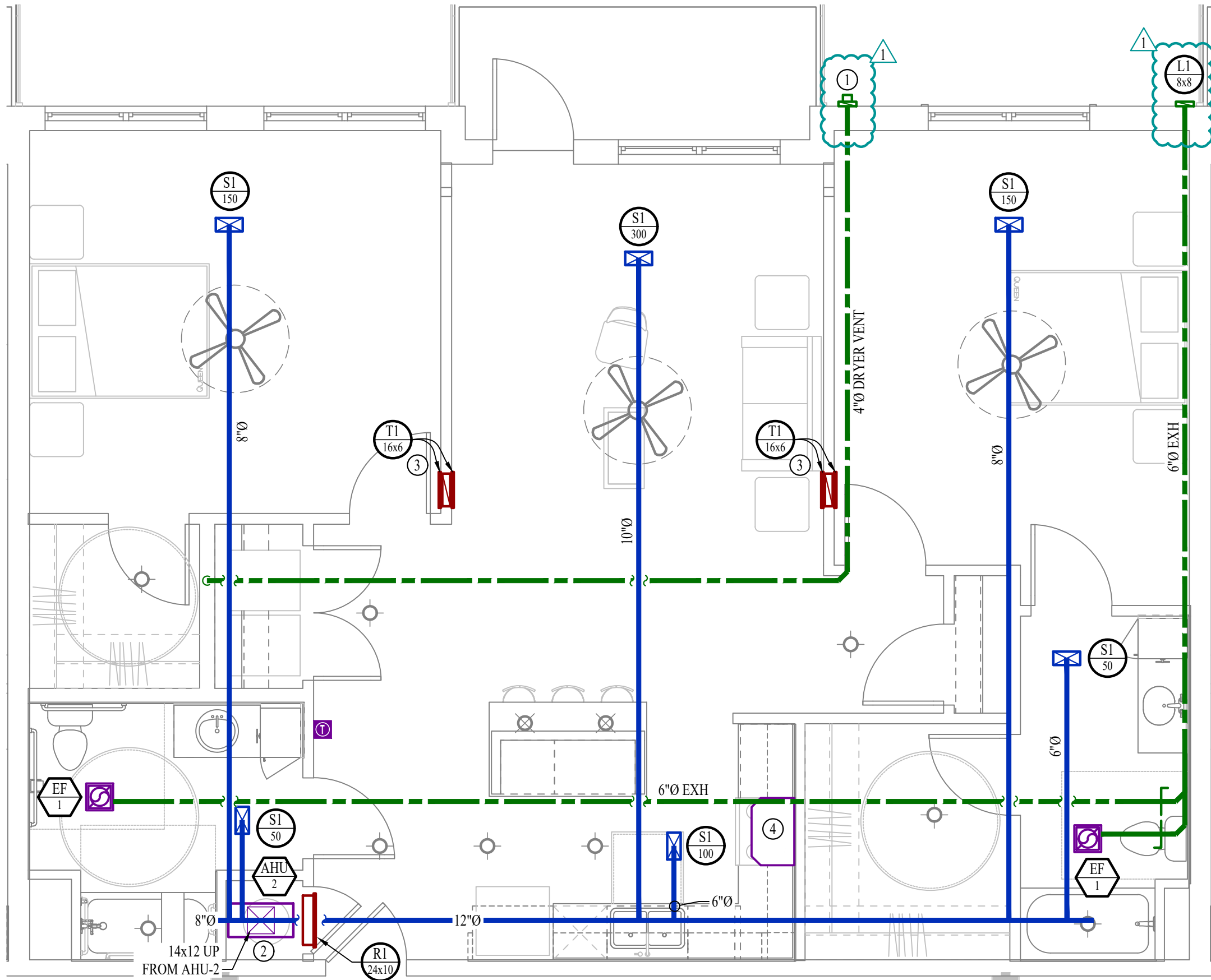
-
- COLD WATER LINE

WATER PLAN GENERAL NOTES:

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.
2. ALL PLUMBING LOCATED ON EXTERIOR WALLS SHALL ROUTE WITHIN INSULATION BARRIER.
3. ALL DOMESTIC SUPPLY LINES SERVING MORE THAN (1) FIXTURE SHALL BE ½" UNLESS NOTED OTHERWISE.

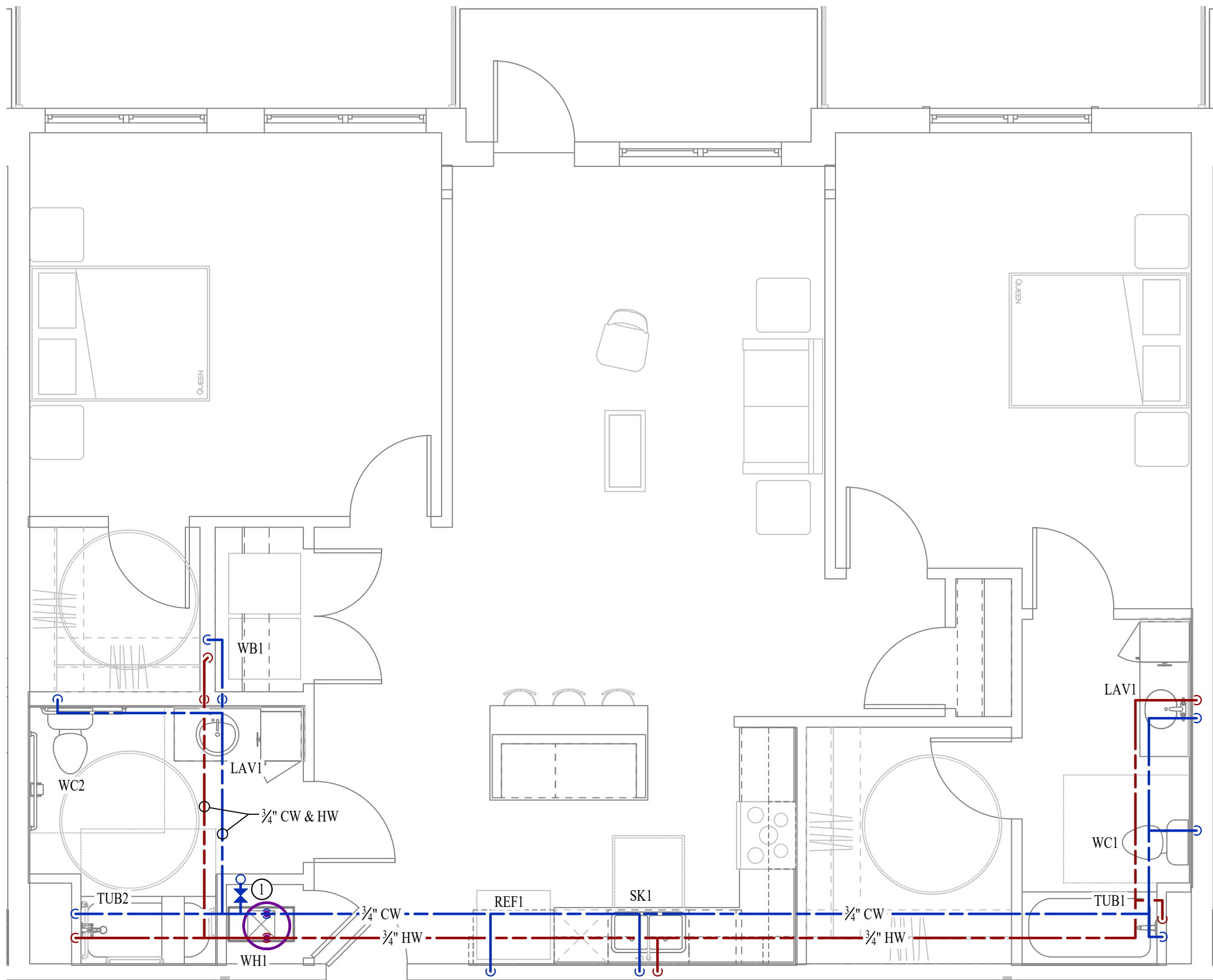
WATER PLAN KEY NOTES:

- ① 1" CW PIPE UP FROM BELOW WITH SHUT-OFF VALVE IN ACCESSIBLE LOCATION. SEE OVERALL PLUMBING PLANS FOR DETAILS.



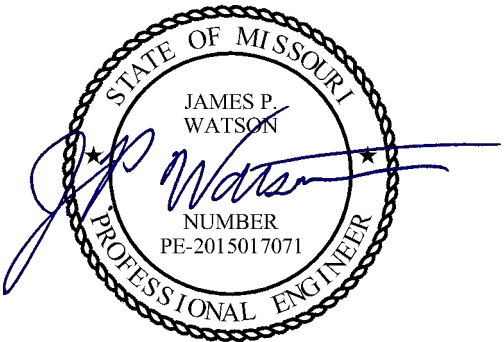
HVAC PLAN - ABERDEEN - TYPE A

SCALE: 1/4" = 1'-0"

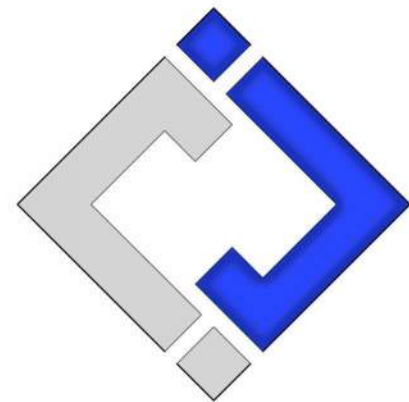


WATER PLAN - ABERDEEN - TYPE A

SCALE: 1/4" = 1'-0"



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REVISION 1 10 / 21 / 2024

Mechanical - Electrical - Plumbing Design Drawings for

The Village at Discovery - Lot 4

Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

UNIT TYPE
ABERDEEN-A
HVAC & WATER
PLAN

SHEET NUMBER

UMEP2.1.1

POWER PLAN SYMBOL LEGEND

- CIRCUIT WIRING
- CIRCUIT TAG
- JUNCTION BOX
- RECEPTACLE
- INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX
(STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
- "WP" = WEATHERPROOF OUTDOOR RECEPTACLE
- GFCI DUPLEX CONVENIENCE RECEPTACLE
- 208V RECEPTACLE
- QUADPLEX CONVENIENCE RECEPTACLE
- DATA / PHONE JACK: BOX WITH 1" CONDUIT & CAT6 CABLE BACK TO MEDIA PANEL
LOCATION (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
- DISCONNECT
- 120V IONIZATION SMOKE 520Hz LOW FREQUENCY ALARM WITH SILENCING
CAPABILITIES & LOW-VOLTAGE CONTACTS WIRED TO SHUT DOWN AHU UPON
FIRE DETECTION. COORDINATE WITH HVAC CONTRACTOR. SMOKE DETECTOR
MUST BE LOCATED AT LEAST 3' FROM CEILING FAN BLADES AND AT LEAST 10'
FROM ANY COOKING APPLIANCE (FIELD-COORDINATE)

POWER PLAN GENERAL NOTES:

1.

SEE E500 & E600 SERIES SHEETS FOR POWER SCHEDULES, DETAILS, REQUIREMENTS, ETC.
2.

SEE SHEET MEP4 FOR CONDENSING UNIT LOCATIONS.
3.

VERIFY EACH DATA/RECEPTACLE LOCATION WITH OWNER PRIOR TO INSTALLATION.
4.

REFER TO "TYPICAL ADA MOUNTING HEIGHTS DETAIL", SHEET E501, FOR MOUNTING HEIGHTS OF
DEVICES IN "ANSI A" UNITS.

POWER PLAN KEY NOTES:

- ①

MEDIA PANEL LOCATION; DATA/TV WIRING TO TERMINATE AT THIS LOCATION. DETERMINE EXACT
LOCATION & DETAILS WITH OWNER PRIOR TO INSTALLATION.

LIGHTING PLAN SYMBOL LEGEND

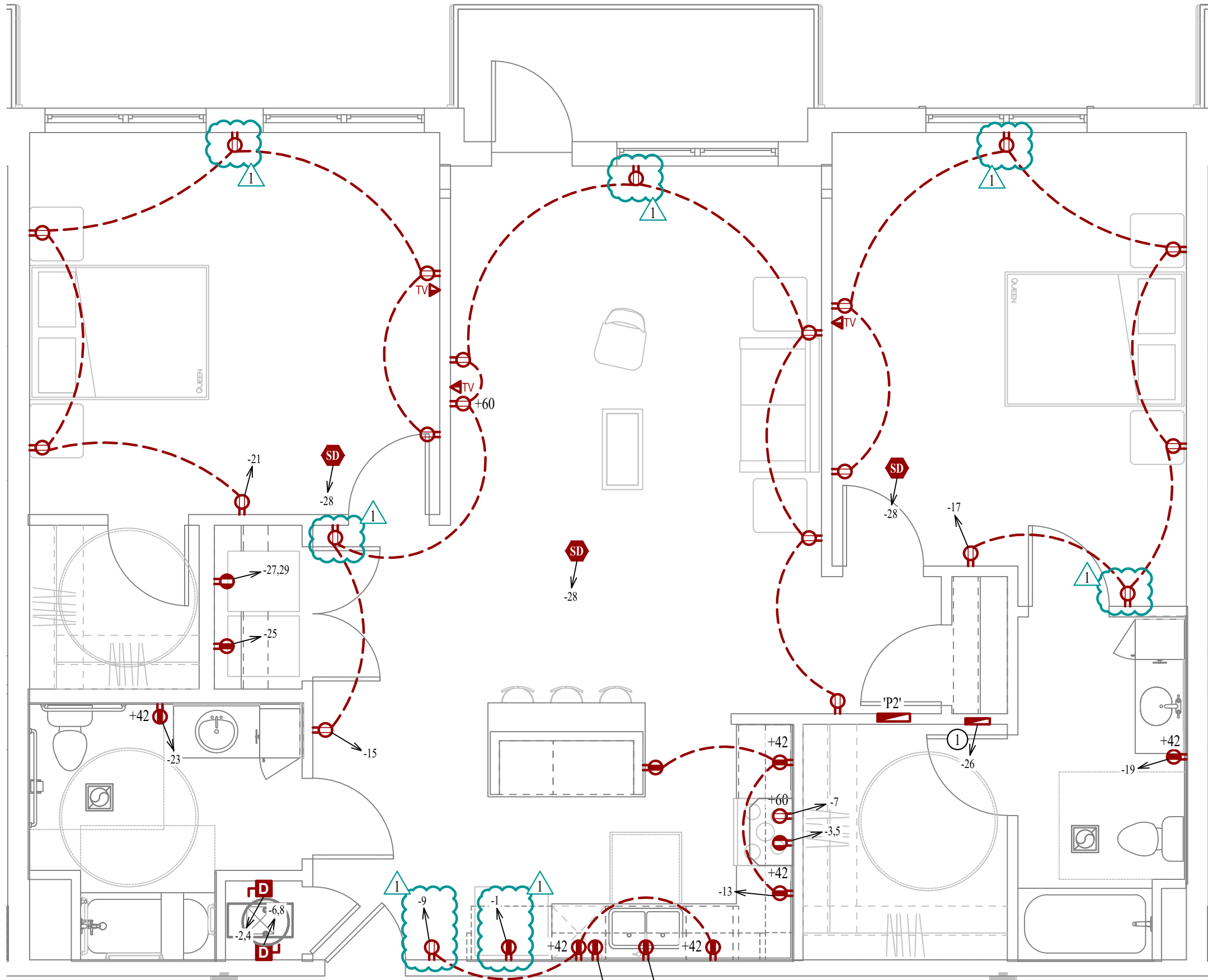
- LIGHTING FIXTURE
- "X1" INDICATES FIXTURE TYPE
(REFER TO SCHEDULE)
- TOGGLE SWITCH
- SWITCH TYPE
- DIMMER SWITCH

LIGHTING PLAN GENERAL NOTES:

1.

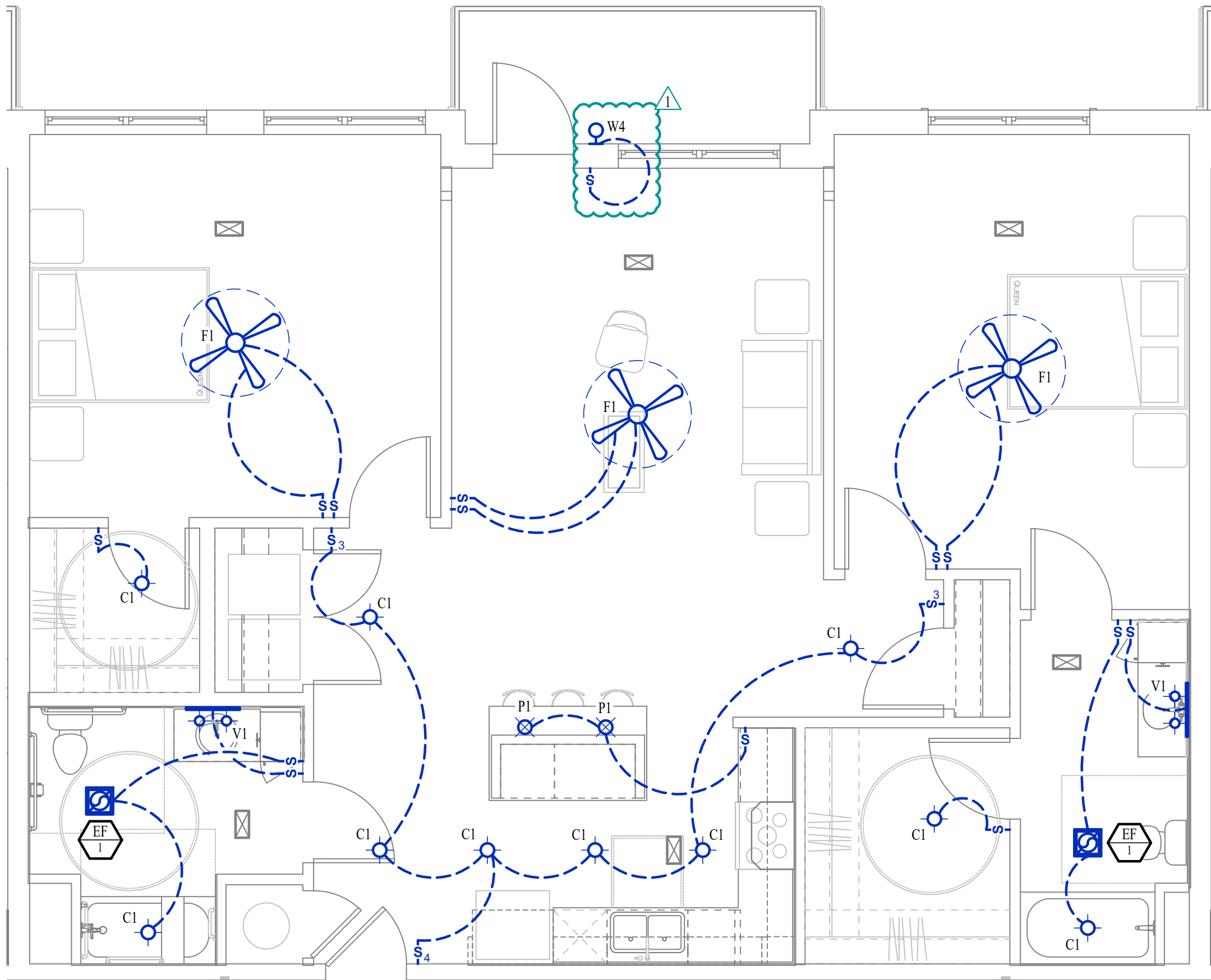
SEE E500 & E600 SERIES SHEETS FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.
2.

ALL LIGHTING SHOWN SHALL BE ON CIRCUIT -16 UNLESS NOTED OTHERWISE.



POWER PLAN - ABERDEEN - TYPE A

SCALE: 1/4" = 1'-0"



HVAC PLAN SYMBOL LEGEND

- X

#

←

EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)
- X

#

←

EQUIPMENT REFERENCE NUMBER
- X

#

←

DIFFUSER/GRILLE TYPE (REFER TO SCHEDULE)
- X

#

←

CUBIC FEET PER MINUTE (CFM) / FACE SIZE
- SUPPLY DUCTWORK
- RETURN DUCTWORK
- EXHAUST DUCTWORK
- FLEX DUCT
- SUPPLY DIFFUSER (HATCH INDICATES "NO FLOW ZONE")
- RETURN DIFFUSER
- BALANCE DAMPER
- MOTORIZED DAMPER
- CEILING RADIATION DAMPER
- BACK DRAFT DAMPER
- THERMOSTAT

HVAC PLAN GENERAL NOTES:

1. SEE SHEET M501 FOR HVAC SCHEDULES, DETAILS, REQUIREMENTS, ETC.
2. SEE SHEET MEP4 FOR CONDENSING UNIT LOCATIONS. REFRIGERANT PIPING SHALL ROUTE IN SPACES ABOVE FINISHED CEILINGS AND WITHIN WALL CAVITIES TO REMAIN CONCEALED.
3. SUPPLY DUCTWORK FROM AHU AT FLOOR/CEILING PENETRATION SHALL BE PROTECTED BY A FIRE DAMPER. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
4. WRAP ALL DRYER DUCTS WITH FIREMASTER (OR EQUAL) DUCT WRAP.
5. TOTAL DEVELOPED LENGTH OF EXHAUST DUCT SHALL BE INDICATED ON A PERMANENT LABEL WITHIN 6' OF DRYER VENT CONNECTION. DRYER DUCT ROUTING SHOWN IS FOR REFERENCE ONLY. OVERALL DUCT LENGTH SHALL BE CALCULATED BY HVAC CONTRACTOR PER 2018 IMC 504.8.4.
6. LOCATE ALL EXHAUST / DRYER VENT TERMINATIONS AT LEAST 36" FROM OPERABLE OPENINGS INTO APARTMENTS (WINDOWS, DOORS, ETC.).
7. ALL DUCTWORK SHOWN SHALL ROUTE IN SPACE BETWEEN / THRU TRUSSES UNLESS NOTED OTHERWISE. SEE STRUCTURAL DRAWINGS FOR DETAILS.

HVAC PLAN KEY NOTES:

- ① TERMINATE 4" DRYER EXHAUST WITH VENT EQUAL TO DRYER WALL VENT #DWV4.
- ② AHU WALL MOUNTED ABOVE WATER HEATER, COORDINATE WITH PLUMBING CONTRACTOR. CONDENSATE TO DISCHARGE IN FLOOR DRAIN WITHIN CLOSET.
- ③ HI/LOW TRANSFER GRILLE (12" A.F.F. ON BEDROOM SIDE OF WALL; 84" A.F.F. ON OPPOSITE SIDE OF WALL).
- ④ RESIDENTIAL RECIRCULATION HOOD TO BE SUPPLIED & INSTALLED BY GC.

PLUMBING PLAN SYMBOL LEGEND

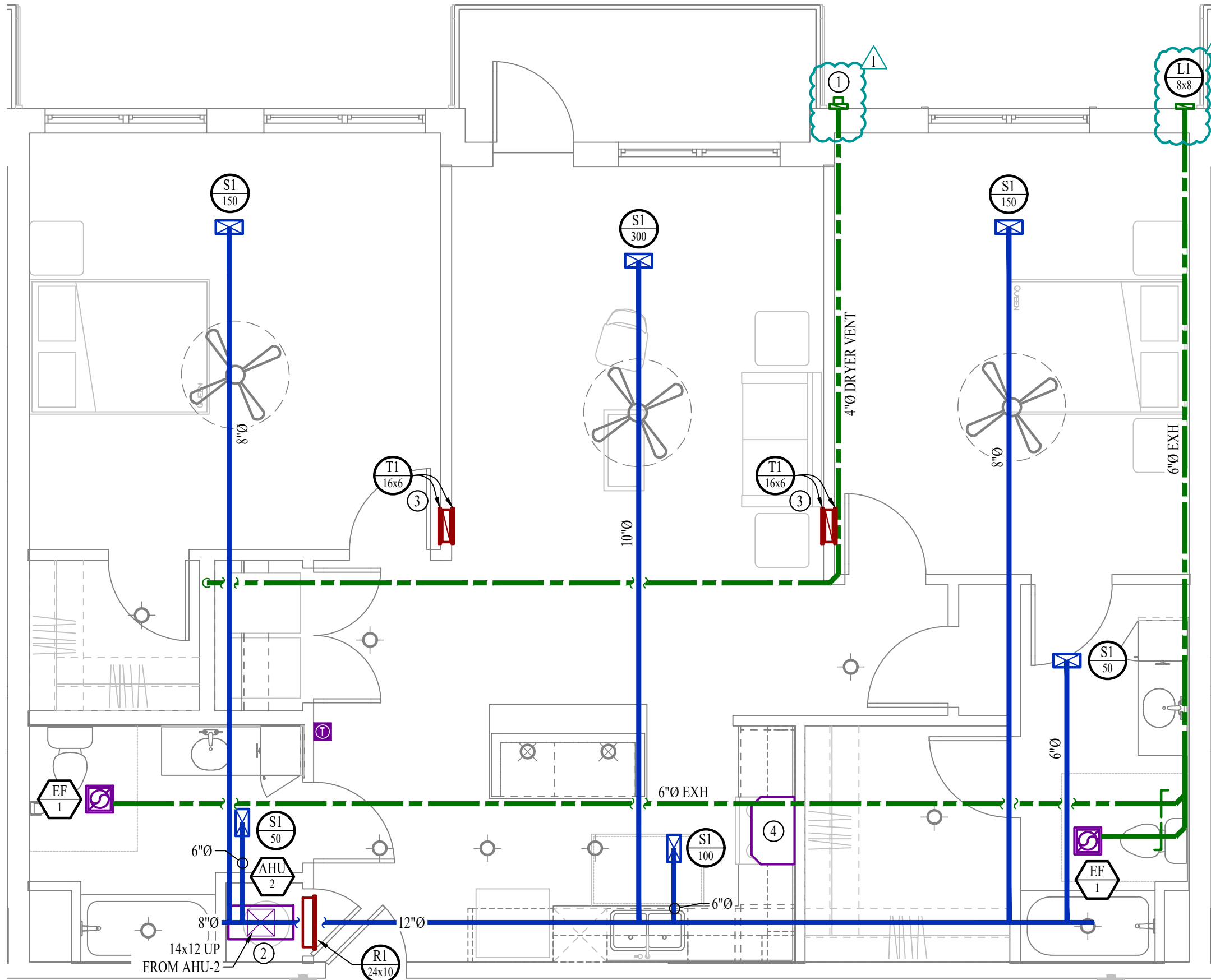
- COLD WATER LINE
- HOT WATER LINE
- VALVE
- PIPING TURNED DOWN / TURNED UP

WATER PLAN GENERAL NOTES:

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.
2. ALL PLUMBING LOCATED ON EXTERIOR WALLS SHALL ROUTE WITHIN INSULATION BARRIER.
3. ALL DOMESTIC SUPPLY LINES SERVING MORE THAN (1) FIXTURE SHALL BE ½" UNLESS NOTED OTHERWISE.

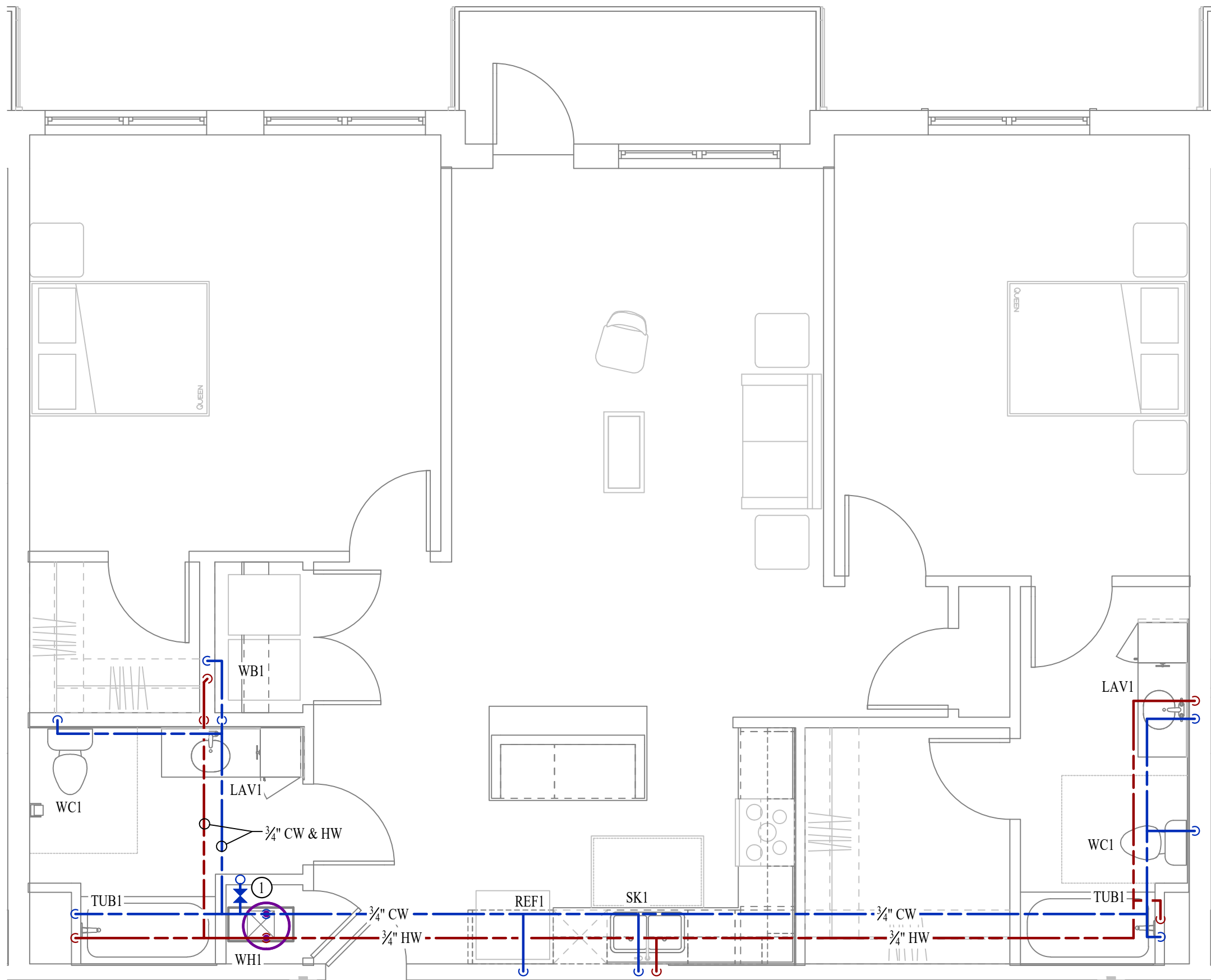
WATER PLAN KEY NOTES:

- ① 1" CW PIPE UP FROM BELOW WITH SHUT-OFF VALVE IN ACCESSIBLE LOCATION. SEE OVERALL PLUMBING PLANS FOR DETAILS.



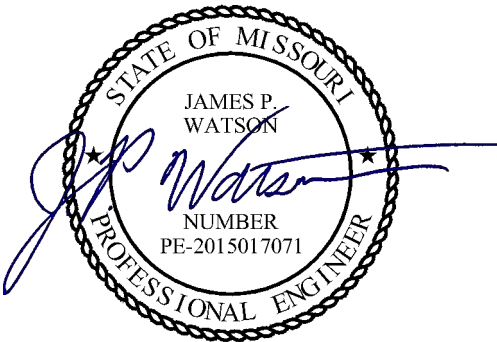
HVAC PLAN - ABERDEEN - TYPE B

SCALE: 1/4" = 1'-0"

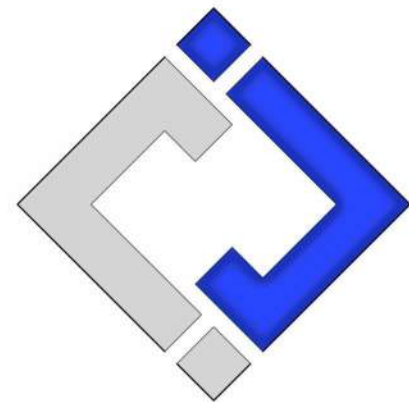


WATER PLAN - ABERDEEN - TYPE B

SCALE: 1/4" = 1'-0"



James Watson, P.E. October 21, 2024
PE-2015017071
MO Certificate of Authority # 2018029680



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J2 PROJECT No:	J21007
J2 DESIGN:	JAP

ISSUE TITLE	DATE
CITY SUBMITTAL	01 / 25 / 2024
REVISION 1	10 / 21 / 2024

Mechanical - Electrical - Plumbing Design Drawings for

The Village at Discovery - Lot 4

Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

UNIT TYPE
ABERDEEN-B
HVAC & WATER
PLAN

SHEET NUMBER

UMEP2.2.1

POWER PLAN SYMBOL LEGEND

- CIRCUIT WIRING
- CIRCUIT TAG
- JUNCTION BOX
- RECEPTACLE
- INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX
(STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
- "WP" = WEATHERPROOF OUTDOOR RECEPTACLE
- GFCI DUPLEX CONVENIENCE RECEPTACLE
- 208V RECEPTACLE
- QUADPLEX CONVENIENCE RECEPTACLE
- DATA / PHONE JACK: BOX WITH 1" CONDUIT & CAT6 CABLE BACK TO MEDIA PANEL
LOCATION (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
- DISCONNECT
- 120V IONIZATION SMOKE 520Hz LOW FREQUENCY ALARM WITH SILENCING
CAPABILITIES & LOW-VOLTAGE CONTACTS WIRED TO SHUT DOWN AHU UPON
FIRE DETECTION. COORDINATE WITH HVAC CONTRACTOR. SMOKE DETECTOR
MUST BE LOCATED AT LEAST 3' FROM CEILING FAN BLADES AND AT LEAST 10'
FROM ANY COOKING APPLIANCE (FIELD-COORDINATE)

POWER PLAN GENERAL NOTES:

1.

SEE E500 & E600 SERIES SHEETS FOR POWER SCHEDULES, DETAILS, REQUIREMENTS, ETC.
2.

SEE SHEET MEP4 FOR CONDENSING UNIT LOCATIONS.
3.

VERIFY EACH DATA/RECEPTACLE LOCATION WITH OWNER PRIOR TO INSTALLATION.
4.

REFER TO "TYPICAL ADA MOUNTING HEIGHTS DETAIL", SHEET E501, FOR MOUNTING HEIGHTS OF
DEVICES IN "ANSI A" UNITS.

POWER PLAN KEY NOTES:

- ①

MEDIA PANEL LOCATION; DATA/TV WIRING TO TERMINATE AT THIS LOCATION. DETERMINE EXACT
LOCATION & DETAILS WITH OWNER PRIOR TO INSTALLATION.

LIGHTING PLAN SYMBOL LEGEND

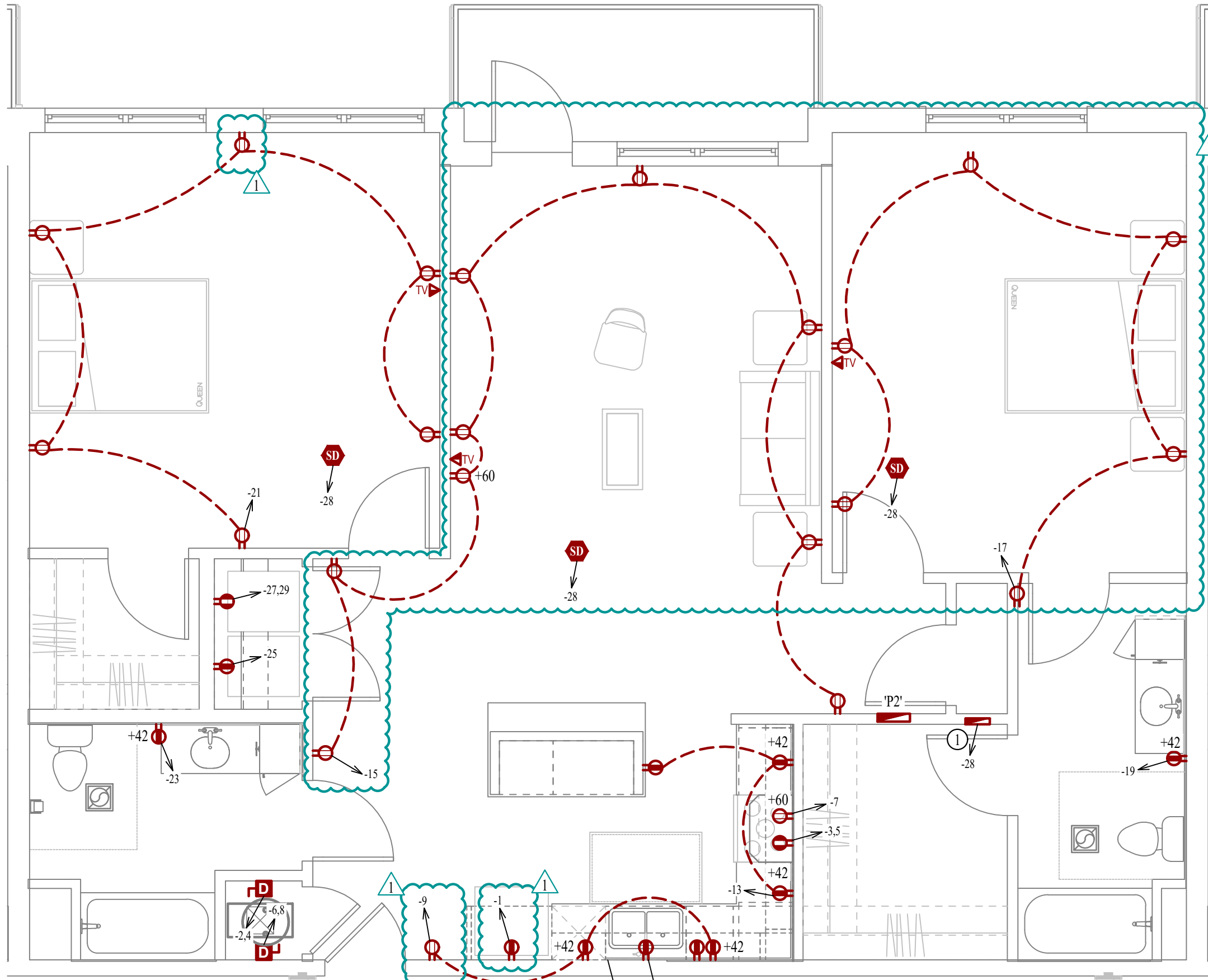
- LIGHTING FIXTURE
- "X1" INDICATES FIXTURE TYPE
(REFER TO SCHEDULE)
- TOGGLE SWITCH
- SWITCH TYPE
- DIMMER SWITCH

LIGHTING PLAN GENERAL NOTES:

1.

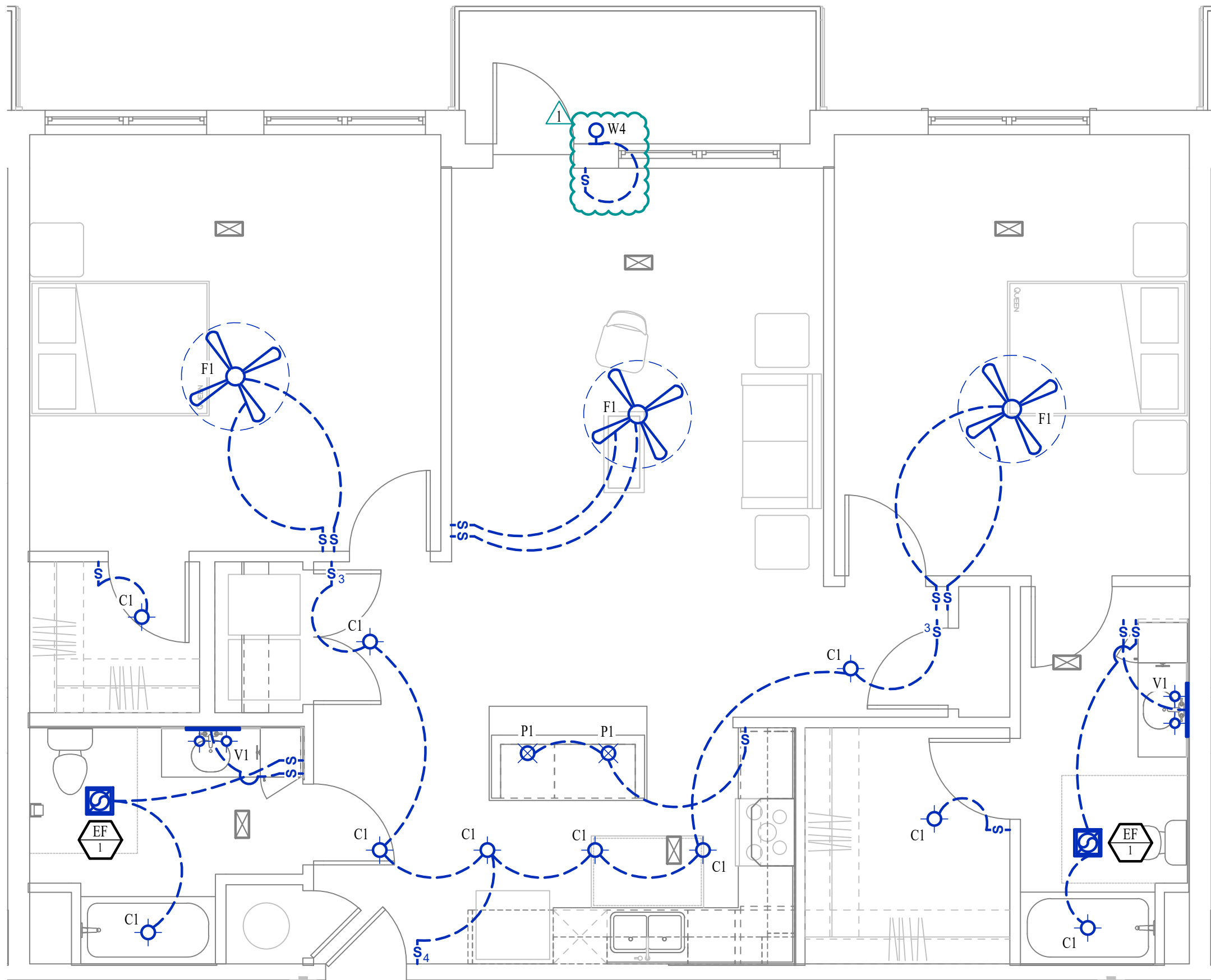
SEE E500 & E600 SERIES SHEETS FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.
2.

ALL LIGHTING SHOWN SHALL BE ON CIRCUIT -16 UNLESS NOTED OTHERWISE.



POWER PLAN - ABERDEEN - TYPE B

SCALE: 1/4" = 1'-0"



HVAC PLAN SYMBOL LEGEND

- X

#

← EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)
- X

#
- ← EQUIPMENT REFERENCE NUMBER

X

#

X

#

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HVAC PLAN GENERAL NOTES:

1. SEE SHEET M501 FOR HVAC SCHEDULES, DETAILS, RFOUREMENTS, ETC.
2. SEE SHEET MEP4 FOR CONDENSING UNIT LOCATIONS. REFRIGERANT PIPING SHALL ROUTE IN SPACES ABOVE FINISHED CEILINGS AND WITHIN WALL CAVITIES TO REMAIN CONCEALED.
3. SUPPLY DUCTWORK FROM AHU AT FLOOR/CEILING PENETRATION SHALL BE PROTECTED BY A FIRE DAMPER. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
4. WRAP ALL DRYER DUCTS WITH FIREMASTER (OR EQUAL) DUCT WRAP.
5. TOTAL DEVELOPED LENGTH OF EXHAUST DUCT SHALL BE INDICATED ON A PERMANENT LABEL WITHIN 6' OF DRYER VENT CONNECTION. DRYER DUCT ROUTING SHOWN IS FOR REFERENCE ONLY. OVERALL DUCT LENGTH SHALL BE CALCULATED BY HVAC CONTRACTOR PER 2018 IMC 504.8.4.
6. LOCATE ALL EXHAUST / DRYER VENT TERMINATIONS AT LEAST 36" FROM OPERABLE OPENINGS INTO APARTMENTS (WINDOWS, DOORS, ETC.).
7. ALL DUCTWORK SHOWN SHALL ROUTE IN SPACE BETWEEN / THRU TRUSSES UNLESS NOTED OTHERWISE. SEE STRUCTURAL DRAWINGS FOR DETAILS.

HVAC PLAN KEY NOTES:

- ① TERMINATE 4" DRYER EXHAUST WITH VENT EQUAL TO DRYER WALL VENT #DWV4.
- ② AHU WALL MOUNTED ABOVE WATER HEATER, COORDINATE WITH PLUMBING CONTRACTOR. CONDENSATE TO DISCHARGE IN FLOOR DRAIN WITHIN CLOSET.
- ③ HI/LOW TRANSFER GRILLE (12" A.F.F. ON BEDROOM SIDE OF WALL; 84" A.F.F ON OPPOSITE SIDE OF WALL).
- ④ RESIDENTIAL RECIRCULATION HOOD TO BE SUPPLIED & INSTALLED BY GC.

PLUMBING PLAN SYMBOL LEGEND

- 
- COLD WATER LINE

- - -

⋈

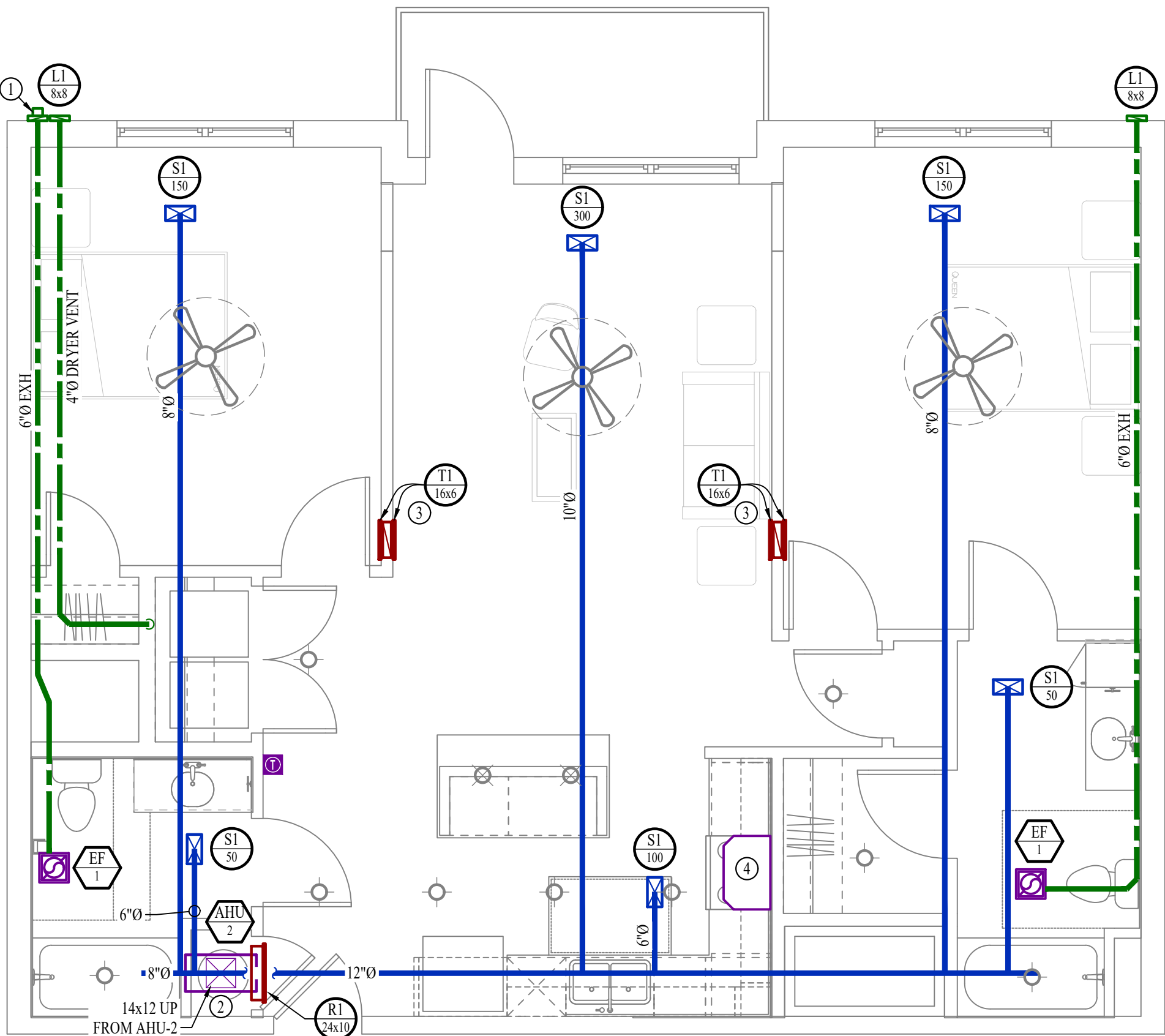
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WATER PLAN GENERAL NOTES:

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.
2. ALL PLUMBING LOCATED ON EXTERIOR WALLS SHALL ROUTE WITHIN INSULATION BARRIER.
3. ALL DOMESTIC SUPPLY LINES SERVING MORE THAN (1) FIXTURE SHALL BE ½" UNLESS NOTED OTHERWISE.

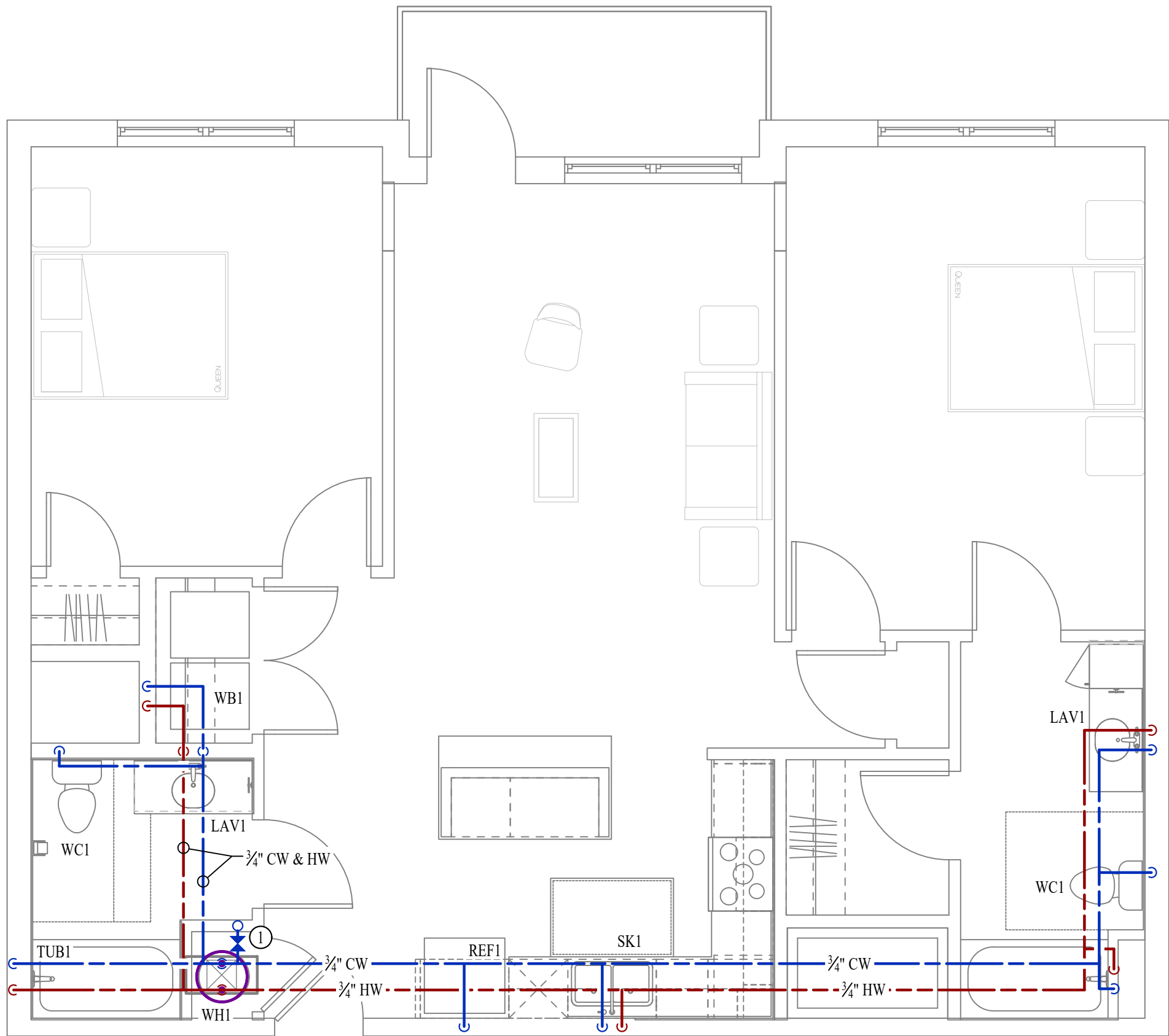
WATER PLAN KEY NOTES:

- ① 1" CW PIPE UP FROM BELOW WITH SHUT-OFF VALVE IN ACCESSIBLE LOCATION. SEE OVERALL PLUMBING PLANS FOR DETAILS.



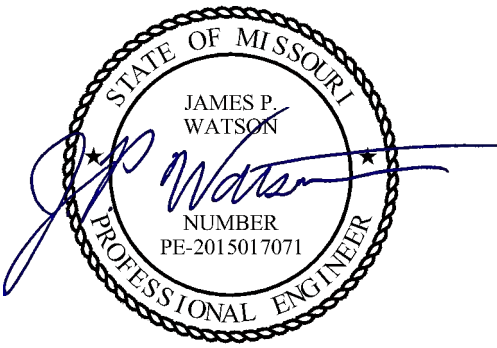
HVAC PLAN - ABERDEEN - ALT

SCALE: 1/4" = 1'-0"



WATER PLAN - ABERDEEN - ALT

SCALE: 1/4" = 1'-0"



James Watson, P.E. January 25, 2024  
PE-2015017071  
MO Certificate of Authority # 2018029680



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J2 PROJECT No: J21007

J2 DESIGN: JAP

ISSUE TITLE DATE

CITY SUBMITTAL 01 / 25 / 2024



POWER PLAN SYMBOL LEGEND

- CIRCUIT WIRING
- CIRCUIT TAG
- JUNCTION BOX
- RECEPTACLE
- INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX  
(STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
- "WP" = WEATHERPROOF OUTDOOR RECEPTACLE
- GFCI DUPLEX CONVENIENCE RECEPTACLE
- 208V RECEPTACLE
- QUADPLEX CONVENIENCE RECEPTACLE
- DATA / PHONE JACK: BOX WITH 1" CONDUIT & CAT6 CABLE BACK TO MEDIA PANEL  
LOCATION (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
- DISCONNECT
- 120V IONIZATION SMOKE 520Hz LOW FREQUENCY ALARM WITH SILENCING  
CAPABILITIES & LOW-VOLTAGE CONTACTS WIRED TO SHUT DOWN AHU UPON  
FIRE DETECTION. COORDINATE WITH HVAC CONTRACTOR. SMOKE DETECTOR  
MUST BE LOCATED AT LEAST 3' FROM CEILING FAN BLADES AND AT LEAST 10'  
FROM ANY COOKING APPLIANCE (FIELD-COORDINATE)

POWER PLAN GENERAL NOTES:

1.

SEE E500 & E600 SERIES SHEETS FOR POWER SCHEDULES, DETAILS, REQUIREMENTS, ETC.
2.

SEE SHEET MEP4 FOR CONDENSING UNIT LOCATIONS.
3.

VERIFY EACH DATA/RECEPTACLE LOCATION WITH OWNER PRIOR TO INSTALLATION.
4.

REFER TO "TYPICAL ADA MOUNTING HEIGHTS DETAIL", SHEET E501, FOR MOUNTING HEIGHTS OF  
DEVICES IN "ANSI A" UNITS.

POWER PLAN KEY NOTES:

- ①

MEDIA PANEL LOCATION; DATA/TV WIRING TO TERMINATE AT THIS LOCATION. DETERMINE EXACT  
LOCATION & DETAILS WITH OWNER PRIOR TO INSTALLATION.

LIGHTING PLAN SYMBOL LEGEND

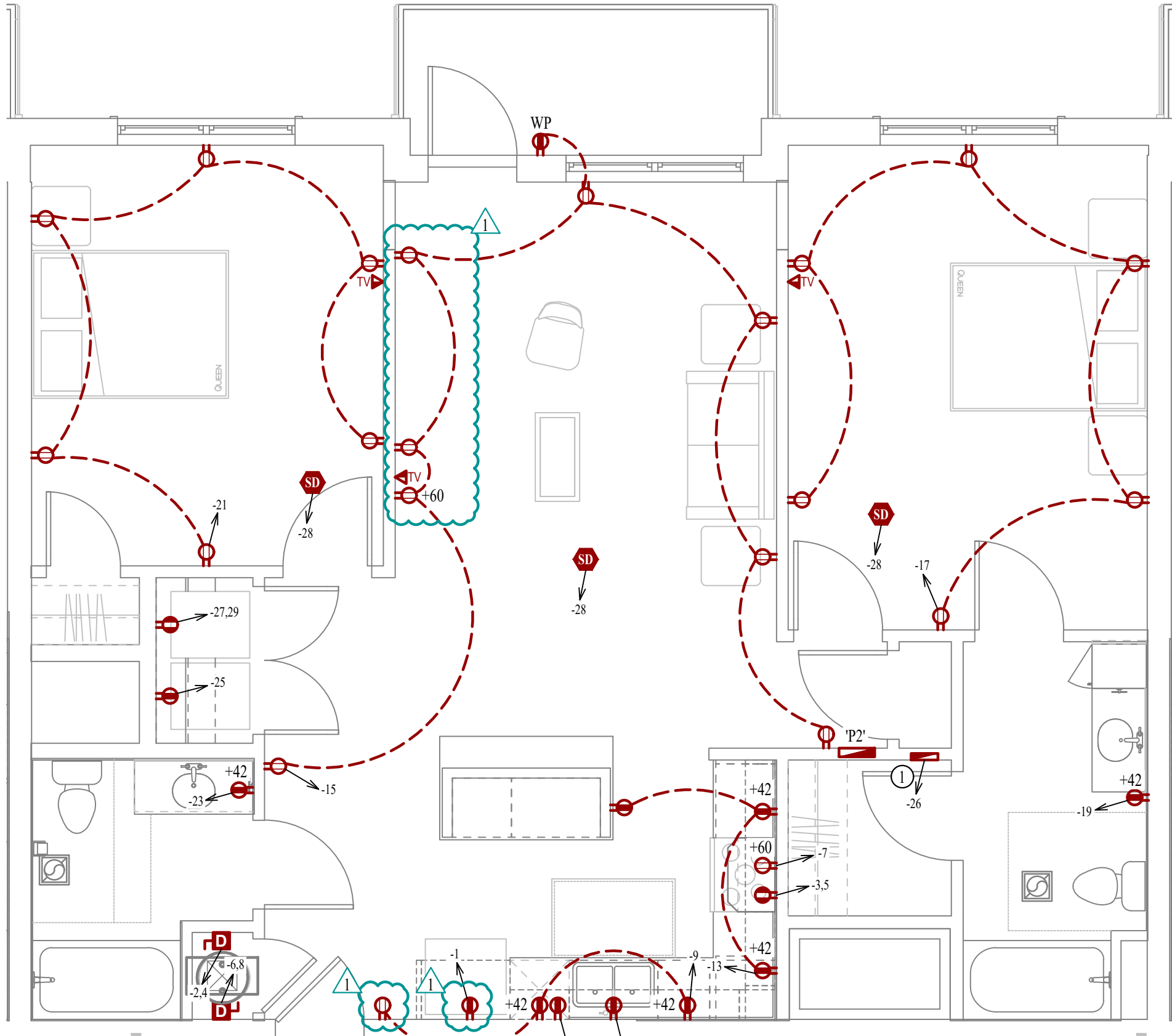
- LIGHTING FIXTURE
- "X1" INDICATES FIXTURE TYPE  
(REFER TO SCHEDULE)
- TOGGLE SWITCH
- SWITCH TYPE
- DIMMER SWITCH

LIGHTING PLAN GENERAL NOTES:

1.

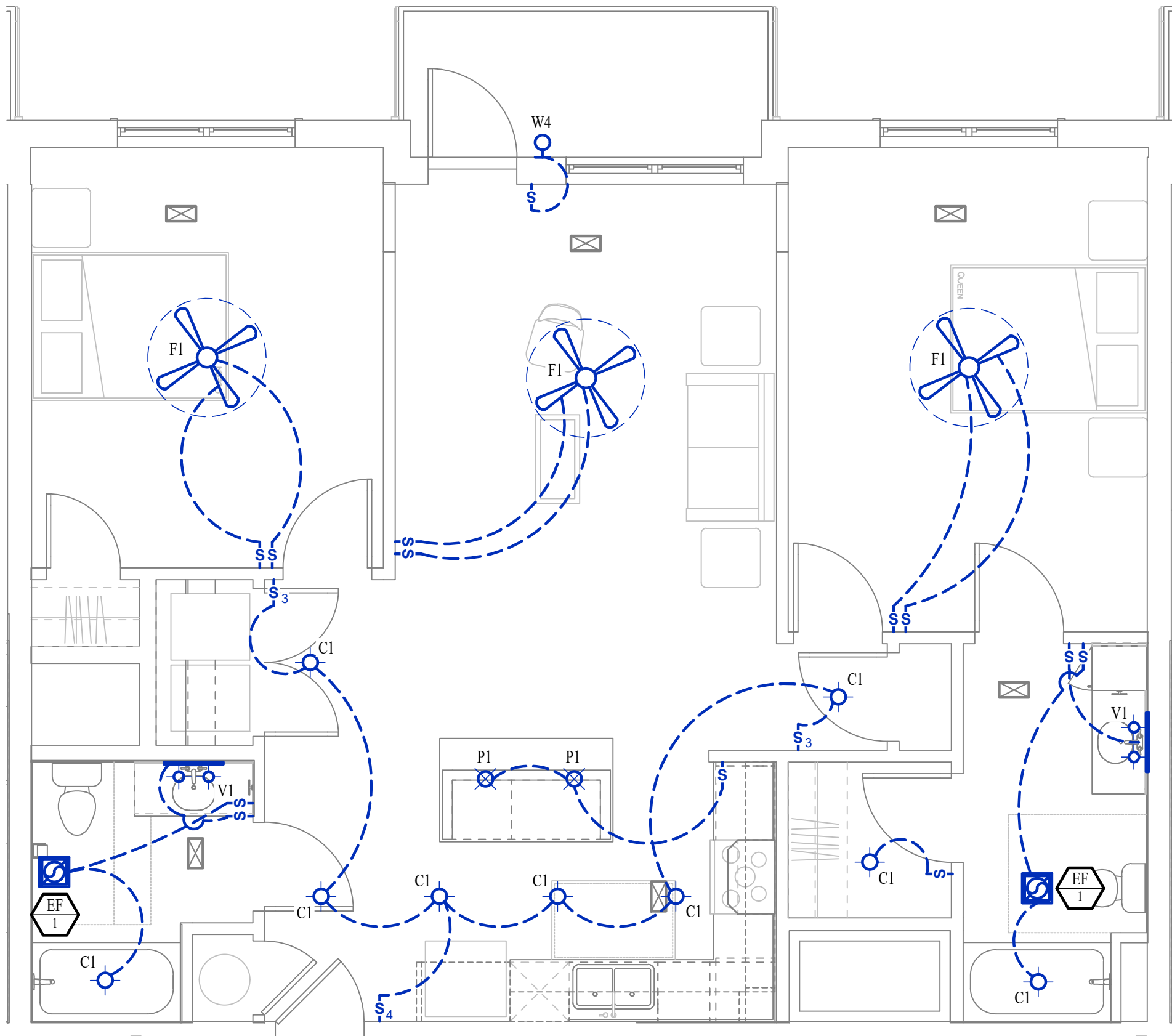
SEE E500 & E600 SERIES SHEETS FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.
2.

ALL LIGHTING SHOWN SHALL BE ON CIRCUIT -16 UNLESS NOTED OTHERWISE.



POWER PLAN - ABERDEEN - ALT

SCALE: 1/4" = 1'-0"



LIGHTING PLAN - ABERDEEN - ALT

SCALE: 1/4" = 1'-0"

|                |        |
|----------------|--------|
| J2 PROJECT No: | J21007 |
| J2 DESIGN:     | JAP    |

| ISSUE TITLE    | DATE           |
|----------------|----------------|
| CITY SUBMITTAL | 01 / 25 / 2024 |
| REVISION 1     | 10 / 21 / 2024 |
|                |                |
|                |                |
|                |                |



HVAC PLAN SYMBOL LEGEND

- X

#

←

EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)
- X

#

←

EQUIPMENT REFERENCE NUMBER
- X

#

←

DIFFUSER/GRILLE TYPE (REFER TO SCHEDULE)
- X

#

←

CUBIC FEET PER MINUTE (CFM) / FACE SIZE
- SUPPLY DUCTWORK
- - -

RETURN DUCTWORK
- - -

EXHAUST DUCTWORK
- ~~~~~

FLEX DUCT
- ⊠

SUPPLY DIFFUSER (HATCH INDICATES "NO FLOW ZONE")
- ⊞

RETURN DIFFUSER
- |

BALANCE DAMPER
- |

MOTORIZED DAMPER
- |

CEILING RADIATION DAMPER
- |

BACK DRAFT DAMPER
- |

THERMOSTAT

HVAC PLAN GENERAL NOTES:

1. SEE SHEET M501 FOR HVAC SCHEDULES, DETAILS, RFOUREMENTS, ETC.
2. SEE SHEET MEP4 FOR CONDENSING UNIT LOCATIONS. REFRIGERANT PIPING SHALL ROUTE IN SPACES ABOVE FINISHED CEILINGS AND WITHIN WALL CAVITIES TO REMAIN CONCEALED.
3. SUPPLY DUCTWORK FROM AHU AT FLOOR/CEILING PENETRATION SHALL BE PROTECTED BY A FIRE DAMPER. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
4. WRAP ALL DRYER DUCTS WITH FIREMASTER (OR EQUAL) DUCT WRAP.
5. TOTAL DEVELOPED LENGTH OF EXHAUST DUCT SHALL BE INDICATED ON A PERMANENT LABEL WITHIN 6' OF DRYER VENT CONNECTION. DRYER DUCT ROUTING SHOWN IS FOR REFERENCE ONLY. OVERALL DUCT LENGTH SHALL BE CALCULATED BY HVAC CONTRACTOR PER 2018 IMC 504.8.4.
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HVAC PLAN KEY NOTES:

- ① TERMINATE 4" DRYER EXHAUST WITH VENT EQUAL TO DRYER WALL VENT #DWV4.
- ② AHU WALL MOUNTED ABOVE WATER HEATER, COORDINATE WITH PLUMBING CONTRACTOR. CONDENSATE TO DISCHARGE IN FLOOR DRAIN WITHIN CLOSET.
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- ④ RESIDENTIAL RECIRCULATION HOOD TO BE SUPPLIED & INSTALLED BY GC.

PLUMBING PLAN SYMBOL LEGEND

- - -

COLD WATER LINE
- - -

HOT WATER LINE
- ⋈

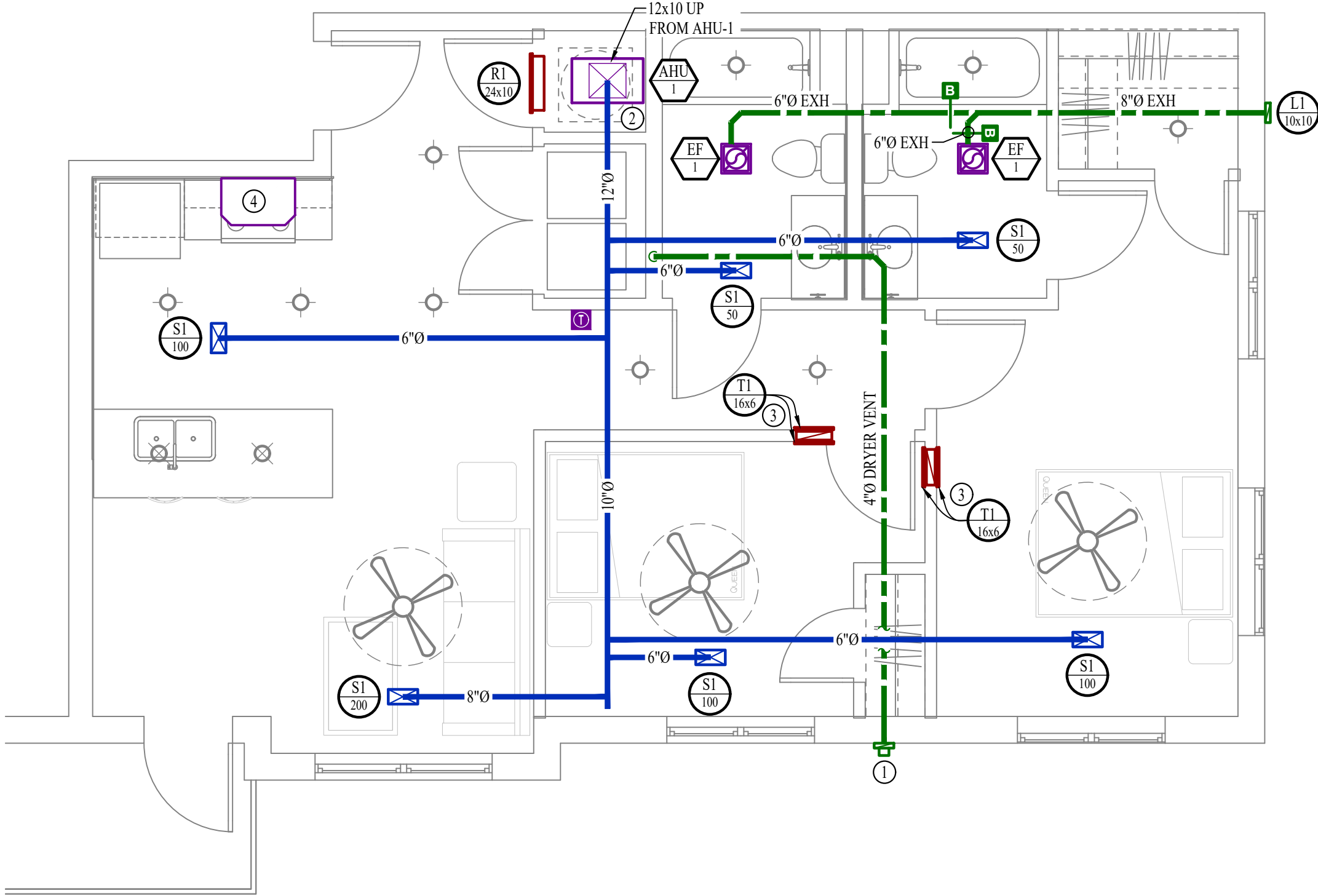
VALVE
- PIPING TURNED DOWN / TURNED UP

WATER PLAN GENERAL NOTES:

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.
2. ALL PLUMBING LOCATED ON EXTERIOR WALLS SHALL ROUTE WITHIN INSULATION BARRIER.
3. ALL DOMESTIC SUPPLY LINES SERVING MORE THAN (1) FIXTURE SHALL BE ½" UNLESS NOTED OTHERWISE.

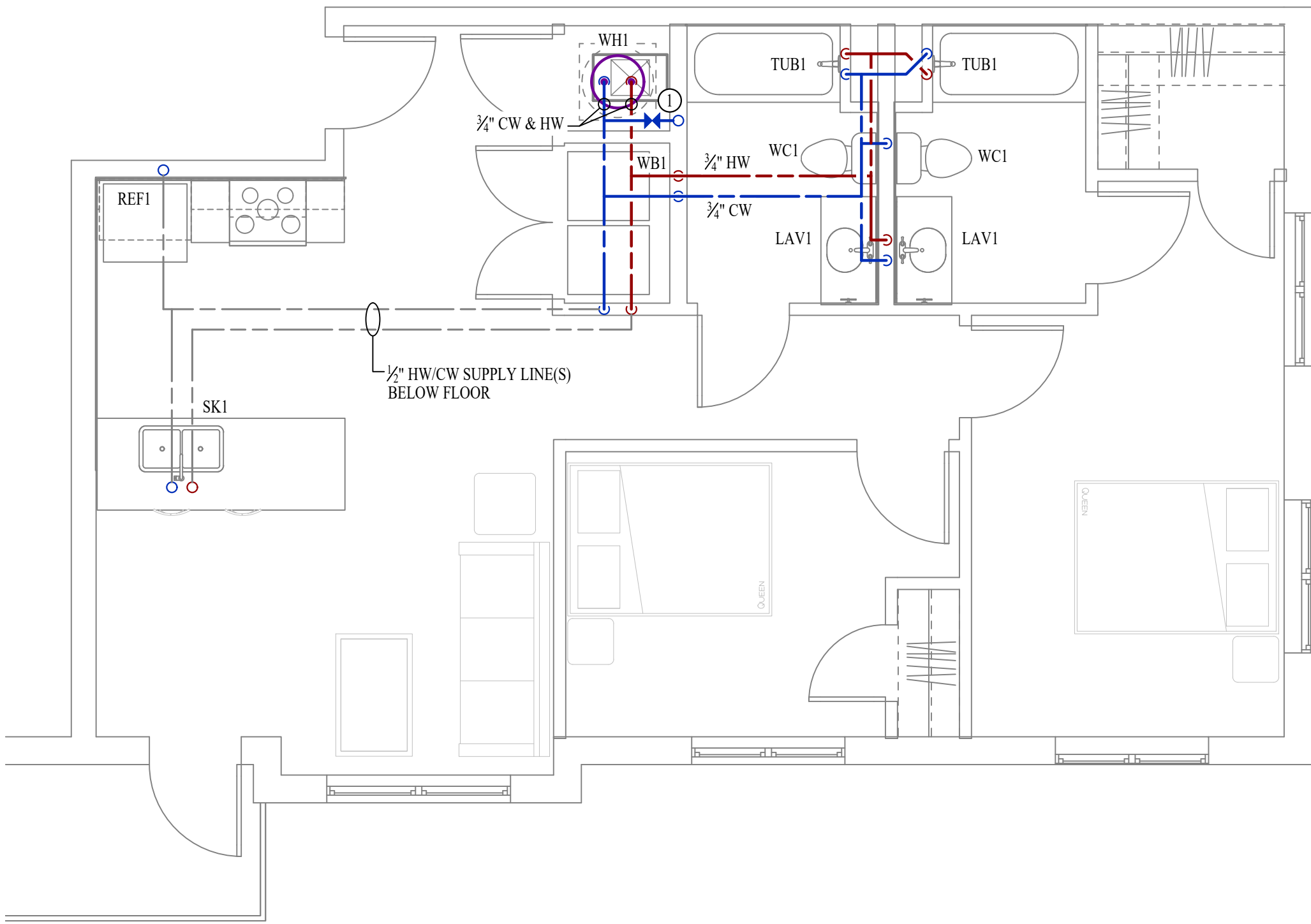
WATER PLAN KEY NOTES:

- ① 1" CW PIPE UP FROM BELOW WITH SHUT-OFF VALVE IN ACCESSIBLE LOCATION. SEE OVERALL PLUMBING PLANS FOR DETAILS.



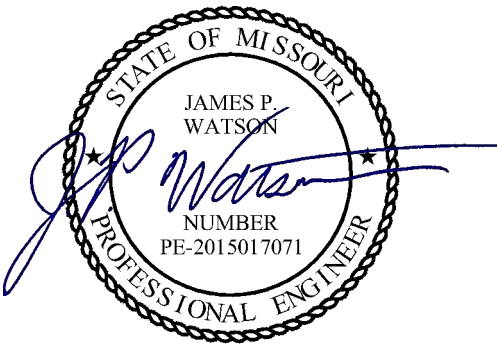
HVAC PLAN - HURLEY

SCALE: 1/4" = 1'-0"



WATER PLAN - HURLEY

SCALE: 1/4" = 1'-0"



James Watson, P.E. January 25, 2024  
PE-2015017071  
MO Certificate of Authority # 2018029680



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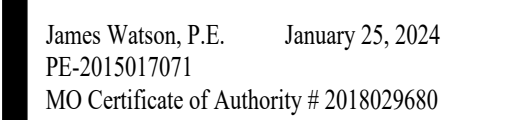
J2 PROJECT No: J21007

J2 DESIGN: JAP

ISSUE TITLE DATE

CITY SUBMITTAL 01 / 25 / 2024





|                |                |
|----------------|----------------|
| J2 PROJECT No: | J21007         |
| J2 DESIGN:     | JAP            |
| ISSUE TITLE    | DATE           |
| CITY SUBMITTAL | 01 / 25 / 2024 |
|                |                |
|                |                |
|                |                |
|                |                |

Mechanical - Electrical - Plumbing Design Drawings for

**The Village at Discovery - Lot 4**

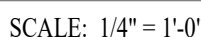
**Discovery Avenue & Alura Way  
Lee's Summit, Jackson County, MO**

Legend for symbols used in the wiring diagram:

- CIRCUIT WIRING
- PX-XX
- CIRCUIT TAG
- JUNCTION BOX
- RECEPTACLE
- INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)  
"WIP" = WEATHERPROOF OUTDOOR RECEPTACLE
- GFCI DUPLEX CONVENIENCE RECEPTACLE
- 208V RECEPTACLE
- QUADPLEX CONVENIENCE RECEPTACLE
- DATA / PHONE JACK; BOX WITH 1" CONDUIT & CAT6 CABLE BACK TO MEDIA PANEL LOCATION (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
- DISCONNECT
- 120V IONIZATION SMOKE 520Hz LOW FREQUENCY ALARM WITH SILENCING CAPABILITIES & LOW-VOLTAGE CONTACTS WIRED TO SHUT DOWN AHU UPON FIRE DETECTION. COORDINATE WITH HVAC CONTRACTOR. SMOKE DETECTOR MUST BE LOCATED AT LEAST 3' FROM CEILING FAN BLADES AND AT LEAST 10' FROM ANY COOKING APPLIANCE (FIELD-COORDINATE)

1. SEE E500 & E600 SERIES SHEETS FOR POWER SCHEDULES, DETAILS, REQUIREMENTS, ETC.
2. SEE SHEET MEP4 FOR CONDENSING UNIT LOCATIONS.
3. VERIFY EACH DATA/RECEPTACLE LOCATION WITH OWNER PRIOR TO INSTALLATION.
4. REFER TO "TYPICAL ADA MOUNTING HEIGHTS DETAIL", SHEET E501, FOR MOUNTING HEIGHTS OF DEVICES IN "ANSI A" UNITS.

① MEDIA PANEL LOCATION; DATA/TV WIRING TO TERMINATE AT THIS LOCATION. DETERMINE EXACT LOCATION & DETAILS WITH OWNER PRIOR TO INSTALLATION.

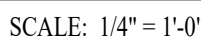


 X1 LIGHTING FIXTURE  
 "X1" INDICATES FIXTURE TYPE  
 (REFER TO SCHEDULE)

 S13 TOGGLE SWITCH  
 SWITCH TYPE

 D DIMMER SWITCH

1. SEE E500 & E600 SERIES SHEETS FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.  
2. ALL LIGHTING SHOWN SHALL BE ON CIRCUIT -16 UNLESS NOTED OTHERWISE.



SHEET TITLE

### UNIT TYPE HURLEY POWER & LIGHTING PLAN

SHEET NUMBER

## UMEP2.4.2



HVAC PLAN SYMBOL LEGEND

- X

#

← EQUIPMENT TYPE (REFER TO EQUIPMENT SCHEDULE)
- X

#
- ← EQUIPMENT REFERENCE NUMBER

X

#

X

#

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HVAC PLAN GENERAL NOTES:

1. SEE SHEET M501 FOR HVAC SCHEDULES, DETAILS, REQUIREMENTS, ETC.
2. SEE SHEET MEP4 FOR CONDENSING UNIT LOCATIONS. REFRIGERANT PIPING SHALL ROUTE IN SPACES ABOVE FINISHED CEILINGS AND WITHIN WALL CAVITIES TO REMAIN CONCEALED.
3. SUPPLY DUCTWORK FROM AHU AT FLOOR/CEILING PENETRATION SHALL BE PROTECTED BY A FIRE DAMPER. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
4. WRAP ALL DRYER DUCTS WITH FIREMASTER (OR EQUAL) DUCT WRAP.
5. TOTAL DEVELOPED LENGTH OF EXHAUST DUCT SHALL BE INDICATED ON A PERMANENT LABEL WITHIN 6' OF DRYER VENT CONNECTION. DRYER DUCT ROUTING SHOWN IS FOR REFERENCE ONLY. OVERALL DUCT LENGTH SHALL BE CALCULATED BY HVAC CONTRACTOR PER 2018 IMC 504.8.4.
6. LOCATE ALL EXHAUST / DRYER VENT TERMINATIONS AT LEAST 36" FROM OPERABLE OPENINGS INTO APARTMENTS (WINDOWS, DOORS, ETC.).
7. ALL DUCTWORK SHOWN SHALL ROUTE IN SPACE BETWEEN / THRU TRUSSES UNLESS NOTED OTHERWISE. SEE STRUCTURAL DRAWINGS FOR DETAILS.

HVAC PLAN KEY NOTES:

- ① TERMINATE 4" DRYER EXHAUST WITH VENT EQUAL TO DRYER WALL VENT #DWV4.
- ② AHU WALL MOUNTED ABOVE WATER HEATER, COORDINATE WITH PLUMBING CONTRACTOR. CONDENSATE TO DISCHARGE IN FLOOR DRAIN WITHIN CLOSET.
- ③ HI/LOW TRANSFER GRILLE (12" A.F.F. ON BEDROOM SIDE OF WALL; 84" A.F.F. ON OPPOSITE SIDE OF WALL).
- ④ RESIDENTIAL RECIRCULATION HOOD TO BE SUPPLIED & INSTALLED BY GC.
- ⑤ TRANSFER GRILLE CENTERED ABOVE DOOR.

PLUMBING PLAN SYMBOL LEGEND

- · —
- COLD WATER LINE

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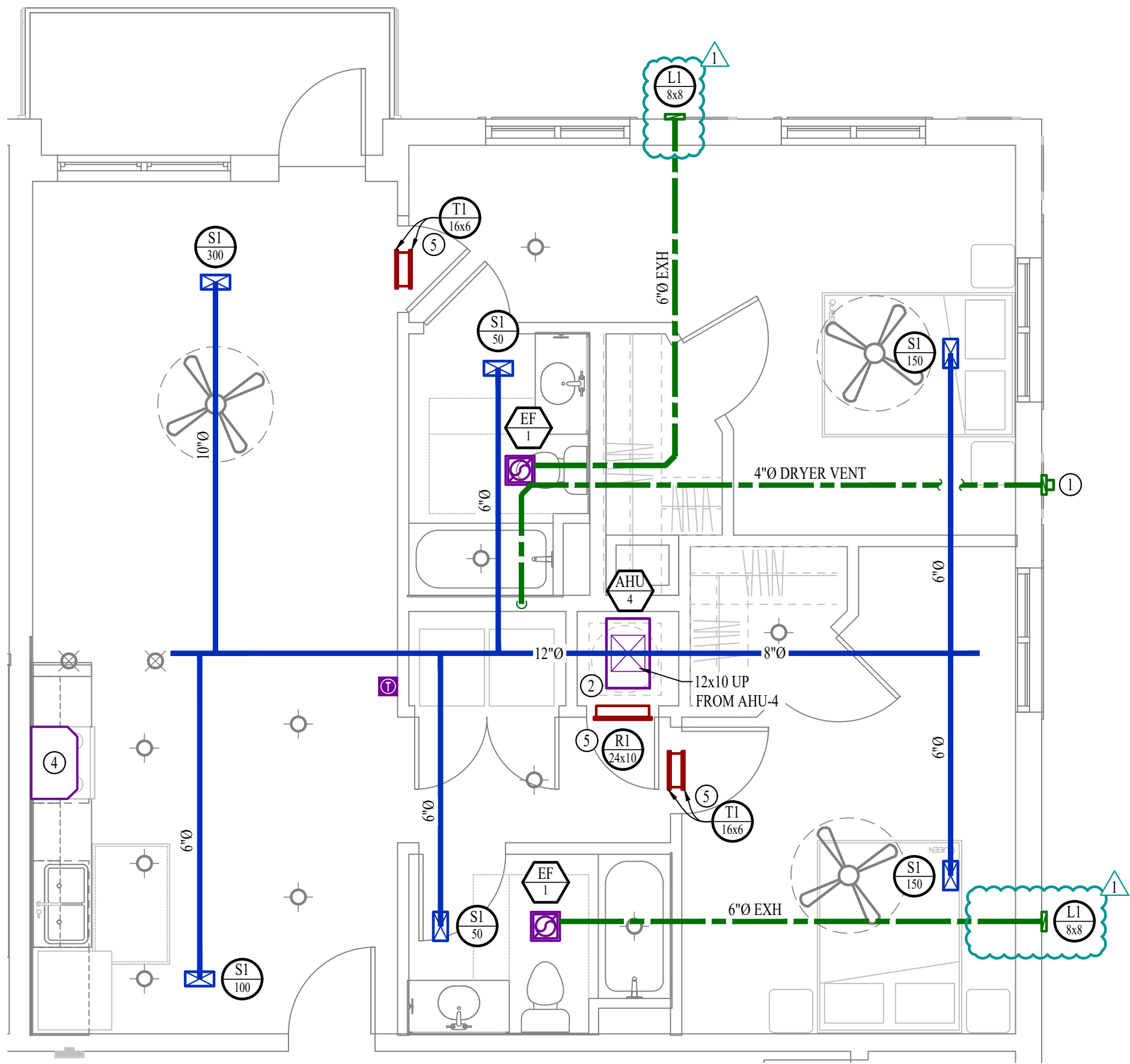
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WATER PLAN GENERAL NOTES:

1. SEE SHEET P501 FOR ADDITIONAL PLUMBING NOTES, DETAILS, & SCHEDULES.
2. ALL PLUMBING LOCATED ON EXTERIOR WALLS SHALL ROUTE WITHIN INSULATION BARRIER.
3. ALL DOMESTIC SUPPLY LINES SERVING MORE THAN (1) FIXTURE SHALL BE ½" UNLESS NOTED OTHERWISE.

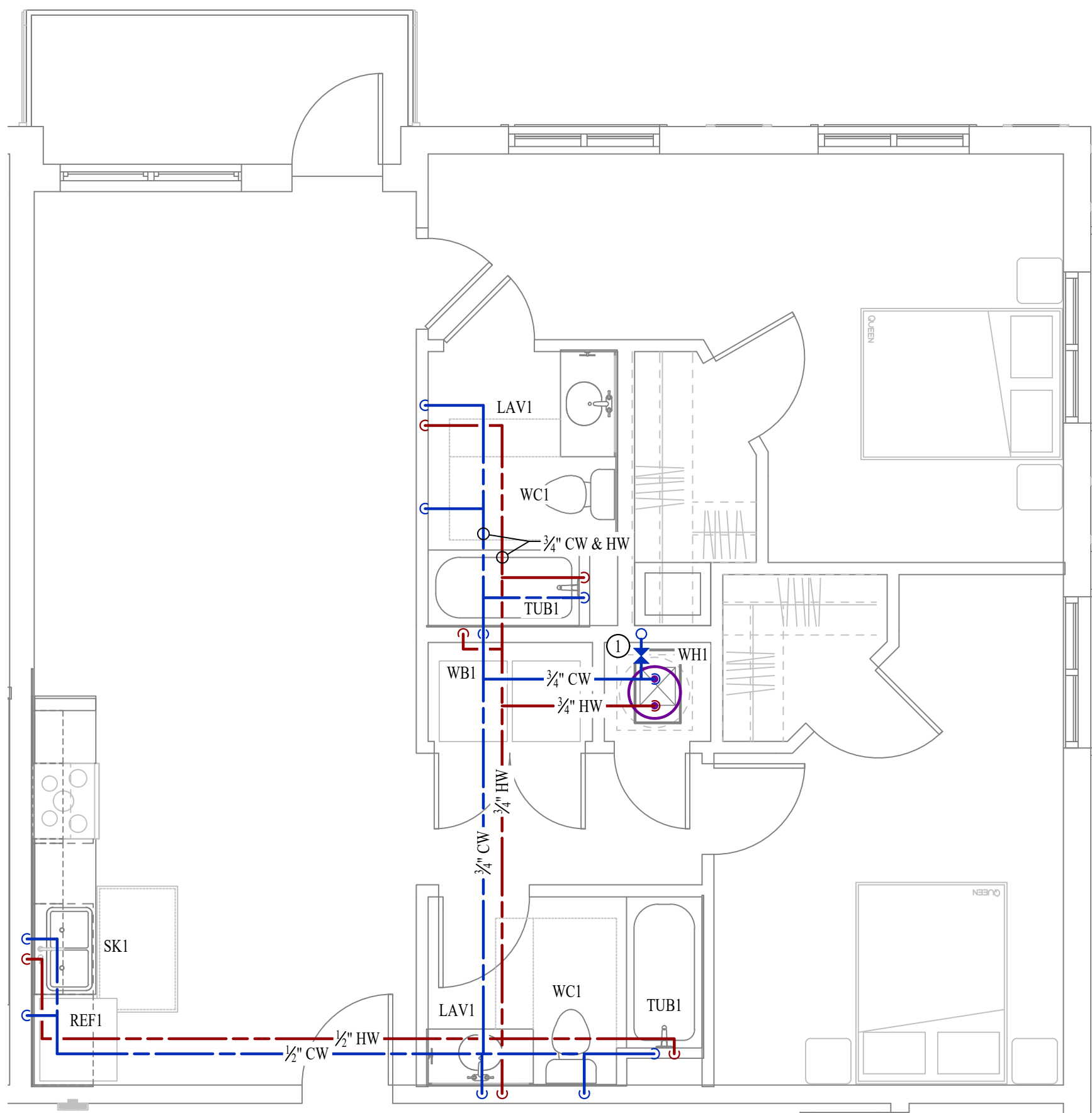
WATER PLAN KEY NOTES:

- ① 1" CW PIPE UP FROM BELOW WITH SHUT-OFF VALVE IN ACCESSIBLE LOCATION. SEE OVERALL PLUMBING PLANS FOR DETAILS.



HVAC PLAN - LANA

SCALE: 1/4" = 1'-0"



WATER PLAN - LANA

SCALE: 1/4" = 1'-0"

J2 PROJECT No: J21007

J2 DESIGN: JAP

ISSUE TITLE DATE

CITY SUBMITTAL 01 / 25 / 2024

REVISION 1 10 / 21 / 2024

Mechanical - Electrical - Plumbing Design Drawings for
The Village at Discovery - Lot 4

Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

UNIT TYPE LANA
HVAC & WATER
PLAN

SHEET NUMBER

UMEP2.5.1

