

Cherokee Nation Businesses

CNFO Owasso Campus Improvements Phase II

16990 East 116th Street North
Owasso, Oklahoma 74055



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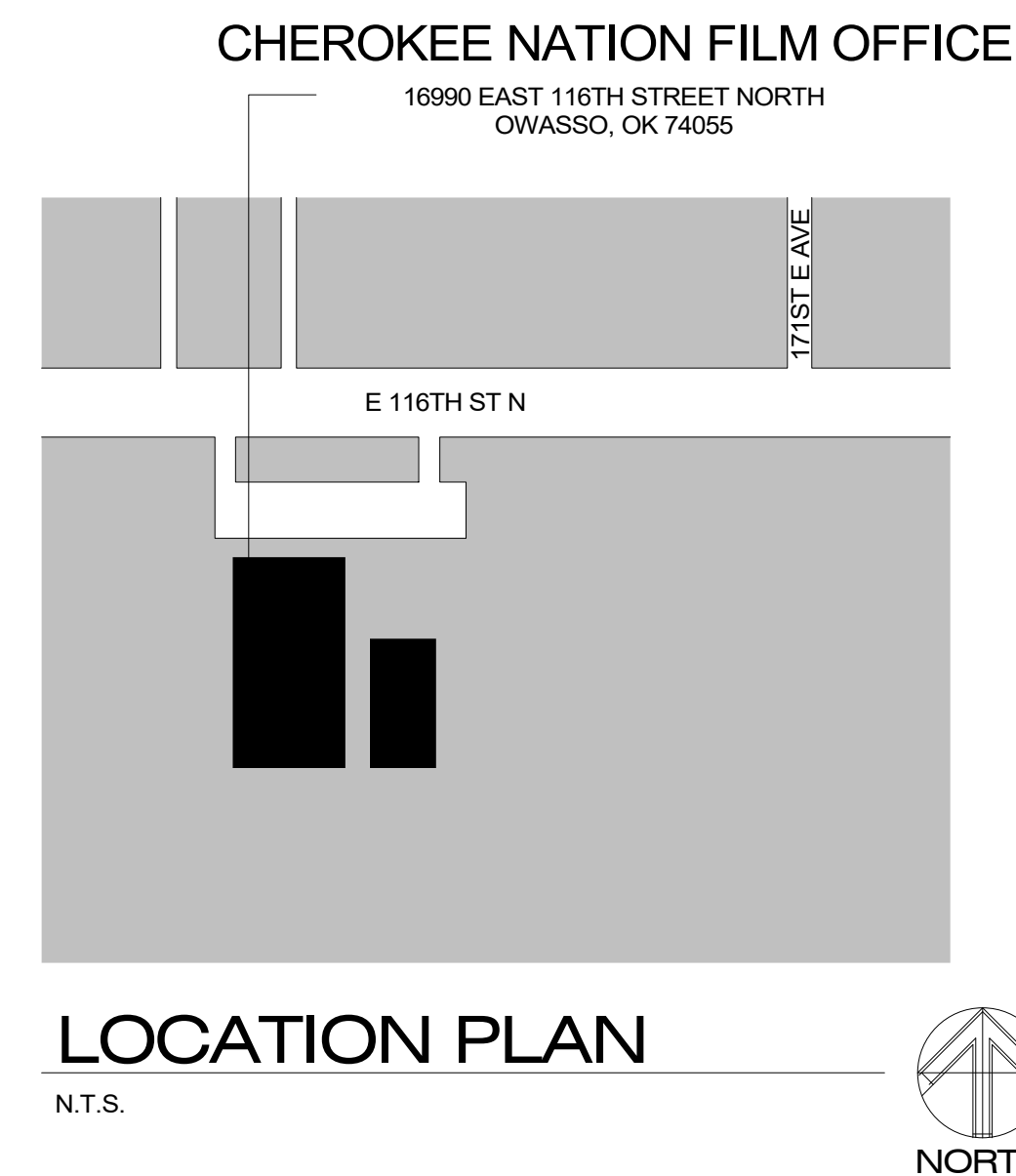
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Project Directory

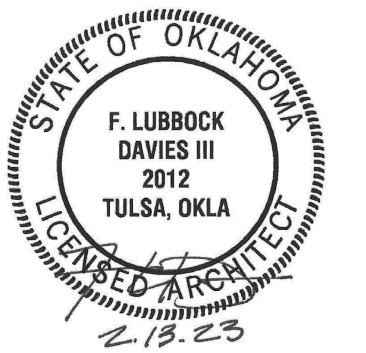
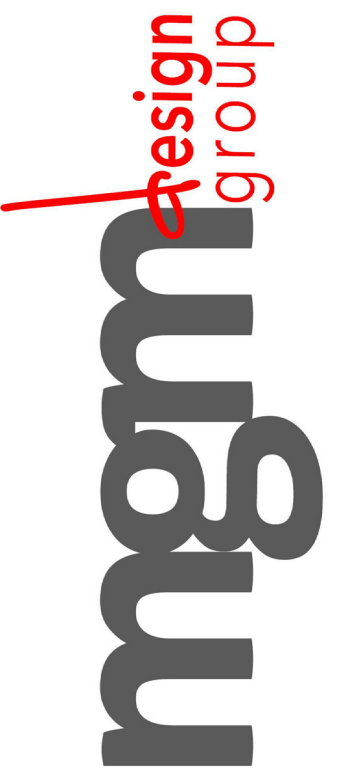
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Architect: MGM Design Group
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Tulsa, Oklahoma 74119
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**Structural
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(918) 584-5858


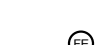

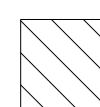


Cherokee Nation Businesses
**CNFO Owasso Campus
Improvements Phase II**
16990 East 116th Street North Owasso, Oklahoma 74055

REVISIONS

DATE: 02.13.23
SHEET: Cover Sheet

G1.0

-  FIRE EXTINGUISHER AND CABINET
-  WALL MOUNTED FIRE EXTINGUISHER
-  EXIT SIGNAGE LIGHTING WITH BACK UP POWER
-  EXISTING CONSTRUCTION (NOT IN SCOPE)

STUDIO A - DESIGN DATA

BUILDING CODE	OKLAHOMA UNIFORM BUILDING CODE - 2015 INTERNATIONAL BUILDING CODE - 2018 INTERNATIONAL PLUMBING CODE - 2018 INTERNATIONAL MECHANICAL CODE - 2018 NATIONAL ELECTRICAL CODE - 2018
ZONING CLASSIFICATION	COMMERCIAL C-4
OCCUPANCY CLASSIFICATION	USE GROUP F-1 (MOTION PICTURE & TELEVISION FILMING)
CONSTRUCTION CLASSIFICATION (IBC CHAPTER 3)	TYPE IIB
GENERAL AREAS AND BUILDING HEIGHTS (IBC CHAPTER 5)	
CONSTRUCTION SQUARE FOOTAGE CALCULATIONS	
TOTAL BUILDING AREA: 27,071 SF	CONSTRUCTION AREA: 9,713 SF
ALLOWABLE STORIES (IBC 504.4) GROUP F - TYPE IIB - FULLY SPRINKLERED ALLOWABLE: TWO STORY - 1 PROVIDED	ALLOWABLE BUILDING HEIGHTS (IBC 504.3) ALLOWABLE: 75' - 0" ACTUAL: 35' - 0"
ALLOWABLE AREA (IBC 506.2) GROUP F - TYPE IIB - FULLY SPRINKLERED ALLOWABLE AREA: 62,000 SF	

TYPES OF CONSTRUCTION (CHAPTER 6)			
BUILDING ELEMENT	HOURLY RATING REQUIRED	HOURLY RATING PROVIDED	METHOD OF ACHIEVING RATING
EXTERIOR BEARING WALLS	0	0	N/A
INTERIOR BEARING WALLS	0	0	N/A
EXTERIOR NON-BEARING WALLS	0	0	N/A
INTERIOR NON-BEARING WALLS	0	0	N/A
FLOOR CONSTRUCTION AND SECONDARY MEMBERS	0	0	N/A
ROOF CONSTRUCTION AND SECONDARY MEMBERS	0	0	N/A

INTERIOR FINISHES (IBC 803.11)			
FULLY SPRINKLERED			
GROUP	EXITS	CORRIDORS	ROOMS
BUSINESS	CLASS C	CLASS C	CLASS C

FIRE PROTECTION SYSTEMS (IBC CHAPTER 9)
AUTOMATIC FIRE EXTINGUISHING SYSTEM (IBC 903) BUILDING IS FULLY SPRINKLERED

PORTABLE FIRE EXTINGUISHERS (IBC 906.3(1))		
	ORDINARY LOW HAZARD OCCUPANCY	EXTINGUISHERS AS PROVIDED
MIN. RATED SINGLE EXTINGUISHER: MAXIMUM FLOOR AREA PER UNIT OF A: MAXIMUM FLOOR AREA FOR EXTINGUISHER: MAXIMUM TRAVEL DISTANCE TO AN EXTINGUISHER:	2-A 3,000 SQ. FT. 11,250 SQ. FT. 75 FT.	27,071 SF. / 3,000 SF. = 10 MIN.

FIRE ALARM AND DETECTION SYSTEMS (IBC 907.2.2)
GROUP B - BUSINESS
FIRE ALARM SYSTEM: FIRE ALARM IN PLACE
SMOKE DETECTION SYSTEM: NOT REQUIRED
OCCUPANCY NOTIFICATION SYSTEM: NOT REQUIRED

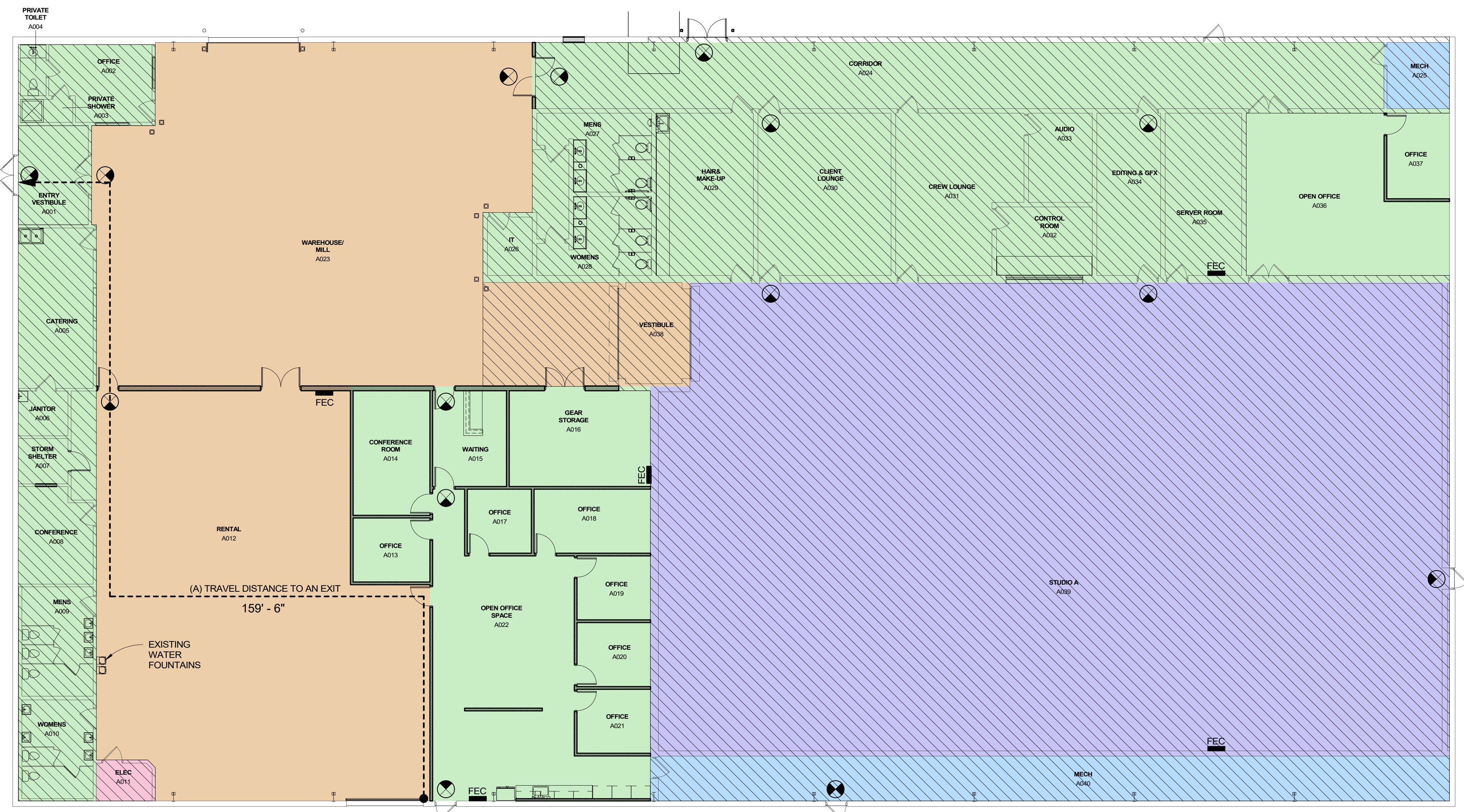
BUILDING A - OCCUPANT LOAD CALCULATIONS (IBC 1004.1.2)

ROOM NO.	ROOM NAME	OCCUPANCY FUNCTION	ROOM AREA	SF PER PERSON	AREA TYPE	OCCUPANT LOAD
A001	ENTRY VESTIBULE	BUSINESS	168 SF	100 SF	GROSS	2
A002	OFFICE	BUSINESS	178 SF	100 SF	GROSS	2
A003	PRIVATE SHOWER	BUSINESS	29 SF	100 SF	GROSS	1
A004	PRIVATE TOILET	BUSINESS	32 SF	100 SF	GROSS	1
A005	CATERING	BUSINESS	293 SF	100 SF	GROSS	3
A006	JANITOR	BUSINESS	54 SF	100 SF	GROSS	1
A007	STORM SHELTER	BUSINESS	85 SF	100 SF	GROSS	1
A008	CONFERENCE	BUSINESS	168 SF	100 SF	GROSS	2
A009	MENS	BUSINESS	190 SF	100 SF	GROSS	2
A010	WOMENS	BUSINESS	172 SF	100 SF	GROSS	2
A011	ELEC	STORAGE	51 SF	300 SF	GROSS	1
A012	RENTAL	WAREHOUSE	2969 SF	500 SF	GROSS	6
A013	OFFICE	BUSINESS	120 SF	100 SF	GROSS	2
A014	CONFERENCE ROOM	BUSINESS	234 SF	100 SF	GROSS	3
A015	WAITING	BUSINESS	173 SF	100 SF	GROSS	2
A016	GEAR STORAGE	STORAGE	330 SF	300 SF	GROSS	2
A017	OFFICE	BUSINESS	100 SF	100 SF	GROSS	1
A018	OFFICE	BUSINESS	182 SF	100 SF	GROSS	2
A019	OFFICE	BUSINESS	115 SF	100 SF	GROSS	2
A020	OFFICE	BUSINESS	115 SF	100 SF	GROSS	2
A021	OFFICE	BUSINESS	115 SF	100 SF	GROSS	2
A022	OPEN OFFICE SPACE	BUSINESS	970 SF	100 SF	GROSS	10
A023	WAREHOUSE/ MILL	WAREHOUSE	3747 SF	500 SF	GROSS	8
A024	CORRIDOR/ MILL	BUSINESS	1178 SF	100 SF	GROSS	12
A025	MECH	MECH	101 SF	300 SF	GROSS	1
A026	IT	BUSINESS	64 SF	100 SF	GROSS	1
A027	MENS	BUSINESS	178 SF	100 SF	GROSS	2
A028	WOMENS	BUSINESS	178 SF	100 SF	GROSS	2
A029	HAIR & MAKE-UP	BUSINESS	385 SF	100 SF	GROSS	4
A030	CLIENT LOUNGE	BUSINESS	527 SF	100 SF	GROSS	6
A031	CREW LOUNGE	BUSINESS	451 SF	100 SF	GROSS	5
A032	CONTROL ROOM	BUSINESS	160 SF	100 SF	GROSS	2
A033	AUDIO	BUSINESS	130 SF	100 SF	GROSS	2
A034	EDITING & GFX	BUSINESS	252 SF	100 SF	GROSS	3
A035	SERVER ROOM	BUSINESS	303 SF	100 SF	GROSS	4
A036	OPEN OFFICE	BUSINESS	664 SF	100 SF	GROSS	7
A037	OFFICE	BUSINESS	131 SF	100 SF	GROSS	2
A038	VESTIBULE	WAREHOUSE	139 SF	500 SF	GROSS	1
A039	STUDIO A	STAGE	8654 SF	15 SF	NET	561
A040	MECH	MECH	865 SF	300 SF	GROSS	3
TOTAL OCCUPANT LOAD:						708

NUMBER OF EXITS AND EXIT ACCESS DOORWAYS (1006)		
OCCUPANT LOAD PER EXIT ACCESS DOOR WITH OCCUPANT LOAD FACTOR		
SPACES WITH ONE EXIT ACCESS DOORWAY (IBC 1006.2.1)		
OCCUPANCY	MAXIMUM OCCUPANCY LOAD OF SPACE	COMMON PATH OF EGRESS MAX W/ AUTOMATIC SPRINKLER
FACTORY	708	100

REQUIRED NUMBER OF EXITS (1006.3.1)
FIRST STORY = REQUIRED NUMBER OF EXITS (1006.3.1) 501-1,000 OCCUPANTS PER STORY = 3 TOTAL EXITS
MAXIMUM TRAVEL DISTANCE TO AN EXIT (1017.2) 300 FT WITH SPRINKLER SYSTEM

ACCESSIBLE PARKING SPACES (1106.1)				
PARKING REQUIREMENTS	REQUIRED		PROVIDED	
	BUILDING AREA	SPACES	BUILDING AREA	SPACES
GROUP - COMMERCIAL C4 - LIGHT MANUFACTURING (MOTION PICTURE PRODUCTION USE UNIT 27)	UP TO 30,000 SF	1 SPACE / 800 SF	27,071 SF	50 TOTAL
	ACCESSIBLE REQUIRED		ACCESSIBLE PROVIDED	
	TOTAL SPACES	REQUIRED MINIMUM	TOTAL SPACES	SPACES
	34	2	26 - 50	2



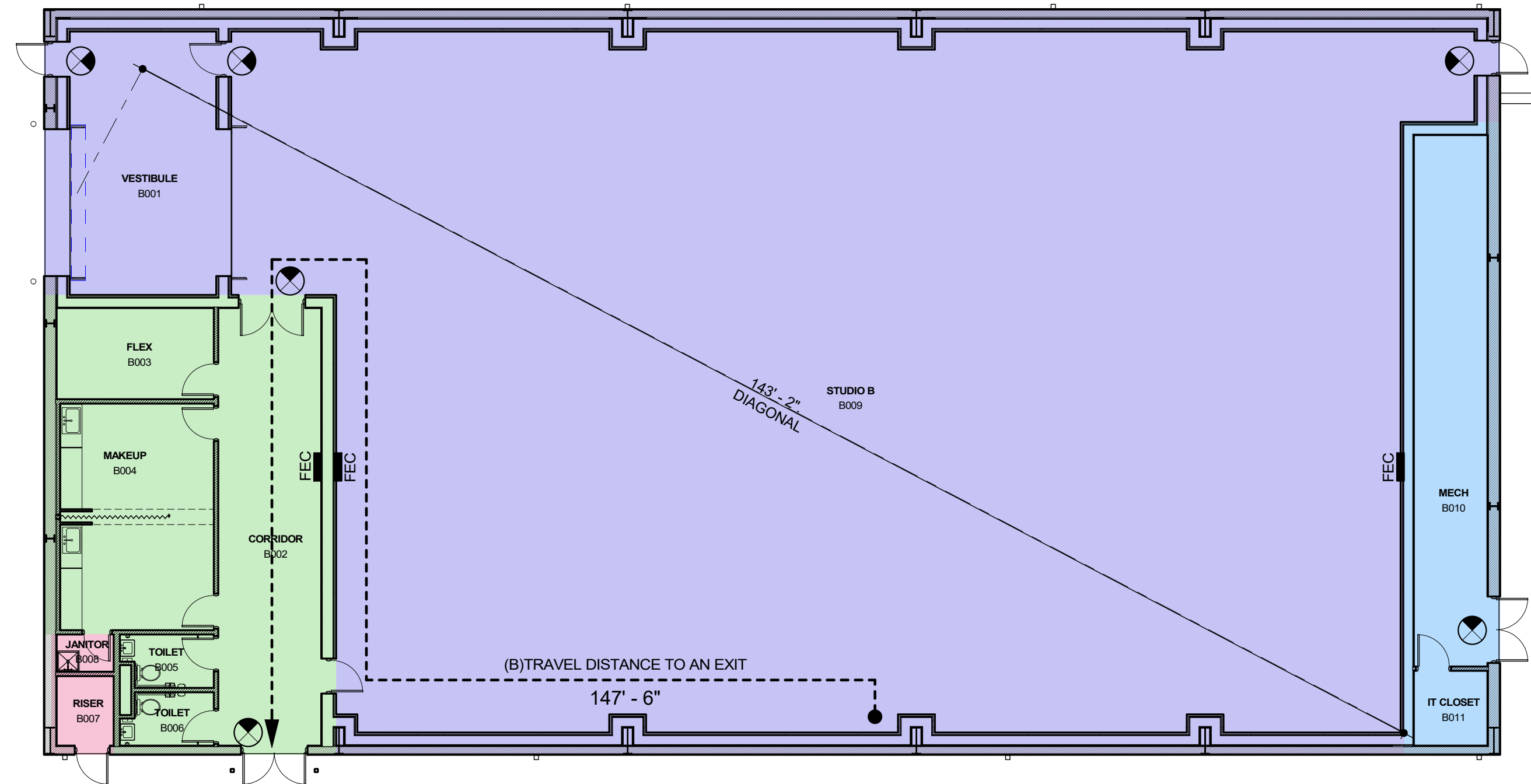
STUDIO A
1 LIFE SAFETY PLAN
3/32" = 1'-0"
0 5'-4" 10'-8" 21'-4"
NORTH



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G1.1.1



STUDIO B
1 LIFE SAFETY PLAN
 3/32" = 1'-0"
 0 5'-4" 10'-8" 21'-4"
 NORTH

BUILDING B - DESIGN DATA

BUILDING CODE		OKLAHOMA UNIFORM BUILDING CODE - 2015				
		INTERNATIONAL BUILDING CODE - 2018				
		INTERNATIONAL PLUMBING CODE - 2018				
		INTERNATIONAL MECHANICAL CODE - 2018				
		NATIONAL ELECTRICAL CODE - 2018				
ZONING CLASSIFICATION		COMMERCIAL C-4				
OCCUPANCY CLASSIFICATION		USE GROUP F-1 (MOTION PICTURE & TELEVISION FILMING)				
CONSTRUCTION CLASSIFICATION (IBC CHAPTER 3)		TYPE IIB				
GENERAL AREAS AND BUILDING HEIGHTS (IBC CHAPTER 5)						
CONSTRUCTION SQUARE FOOTAGE CALCULATIONS						
TOTAL BUILDING AREA:		CONSTRUCTION AREA:				
9,797 SF		9,797 SF				
ALLOWABLE STORIES (IBC 504.4)						
GROUP F - TYPE IIB - FULLY SPRINKLERED						
ALLOWABLE: TWO STORY						
ALLOWABLE AREA (IBC 506.2)						
GROUP B - TYPE IIB - FULLY SPRINKLERED						
ALLOWABLE AREA: 62,000 SF						
ALLOWABLE BUILDING HEIGHTS (IBC 504.3)						
ALLOWABLE: 75' - 0"						
ACTUAL: 43' - 10"						
FRONTAGE INCREASE (IBC 506.3)		N/A				
TYPES OF CONSTRUCTION (CHAPTER 6)						
BUILDING ELEMENT	HOURLY RATING REQUIRED	HOURLY RATING PROVIDED	METHOD OF ACHIEVING RATING			
EXTERIOR BEARING WALLS	0	0	N/A			
INTERIOR BEARING WALLS	0	0	N/A			
EXTERIOR NON-BEARING WALLS	0	0	N/A			
INTERIOR NON-BEARING WALLS	0	0	N/A			
FLOOR CONSTRUCTION AND SECONDARY MEMBERS	0	0	N/A			
ROOF CONSTRUCTION AND SECONDARY MEMBERS	0	0	N/A			
INTERIOR FINISHES (IBC 803.11)						
FULLY SPRINKLERED						
GROUP	EXITS	CORRIDORS	ROOMS			
BUSINESS	CLASS C	CLASS C	CLASS C			
FIRE PROTECTION SYSTEMS (IBC CHAPTER 9)						
AUTOMATIC FIRE EXTINGUISHING SYSTEM (IBC 903)		BUILDING IS FULLY SPRINKLERED				
PORTABLE FIRE EXTINGUISHERS (IBC 906.3(1))						
	ORDINARY LOW HAZARD OCCUPANCY	EXTINGUISHERS AS PROVIDED				
MIN. RATED SINGLE EXTINGUISHER:	2-A	9,797 SF. / 3,000 SF. = 4 MIN.				
MAXIMUM FLOOR AREA PER UNIT OF A:	3,000 SQ. FT.					
MAXIMUM FLOOR AREA FOR EXTINGUISHER:	11,250 SQ. FT.					
MAXIMUM TRAVEL DISTANCE TO AN EXTINGUISHER:	75 FT.					
FIRE ALARM AND DETECTION SYSTEMS (IBC 907.2.2)						
GROUP B - BUSINESS						
FIRE ALARM SYSTEM:		FIRE ALARM IN PLACE				
SMOKE DETECTION SYSTEM:		NOT REQUIRED				
OCCUPANCY NOTIFICATION SYSTEM:		NOT REQUIRED				
BUILDING B - OCCUPANT LOAD CALCULATIONS (IBC 1004.1.2)						
ROOM NO.	ROOM NAME	OCCUPANCY FUNCTION	ROOM AREA	SF PER PERSON	AREA TYPE	OCCUPANT LOAD
B001	VESTIBULE	STAGE	350 SF	15 SF	NET	23
B002	CORRIDOR	BUSINESS	409 SF	100 SF	GROSS	5
B003	FLEX	BUSINESS	130 SF	100 SF	GROSS	2
B004	MAKEUP	BUSINESS	315 SF	100 SF	GROSS	4
B005	TOILET	BUSINESS	42 SF	100 SF	GROSS	1
B006	TOILET	BUSINESS	42 SF	100 SF	GROSS	1
B007	RISER	STORAGE	36 SF	300 SF	GROSS	1
B008	JANITOR	STORAGE	19 SF	300 SF	GROSS	1
B009	STUDIO B	STAGE	7038 SF	15 SF	NET	476
B010	MECH	MECH	362 SF	300 SF	GROSS	2
B011	IT CLOSET	MECH	50 SF	300 SF	GROSS	1
TOTAL OCCUPANT LOAD:						517
NUMBER OF EXITS AND EXIT ACCESS DOORWAYS (1006)						
OCCUPANT LOAD PER EXIT ACCESS DOOR WITH OCCUPANT LOAD FACTOR						
SPACES WITH ONE EXIT ACCESS DOORWAY (IBC 1006.2.1)						
OCCUPANCY	MAXIMUM OCCUPANCY LOAD OF SPACE	COMMON PATH OF EGRESS MAX W/ AUTOMATIC SPRINKLER				
FACTORY	497	100				
REQUIRED NUMBER OF EXITS (1006.3.1)						
FIRST STORY = REQUIRED NUMBER OF EXITS (1006.3.1) 501-1,000 OCCUPANTS PER STORY = 3 TOTAL EXITS						
MAXIMUM TRAVEL DISTANCE TO AN EXIT (1017.2) 300 FT WITH SPRINKLER SYSTEM						
ACCESSIBLE PARKING SPACES (1106.1)						
PARKING REQUIREMENTS			REQUIRED		PROVIDED	
GROUP - COMMERCIAL C4 - LIGHT MANUFACTURING (MOTION PICTURE PRODUCTION USE UNIT 27)	BUILDING AREA	SPACES	BUILDING AREA	SPACES		
	UP TO 30,000 SF	1 SPACE / 800 SF	9,797 SF	52 TOTAL		
ACCESSIBLE REQUIRED			ACCESSIBLE PROVIDED			
TOTAL SPACES	REQUIRED MINIMUM	TOTAL SPACES	SPACES			
13	1	26 - 50	2			



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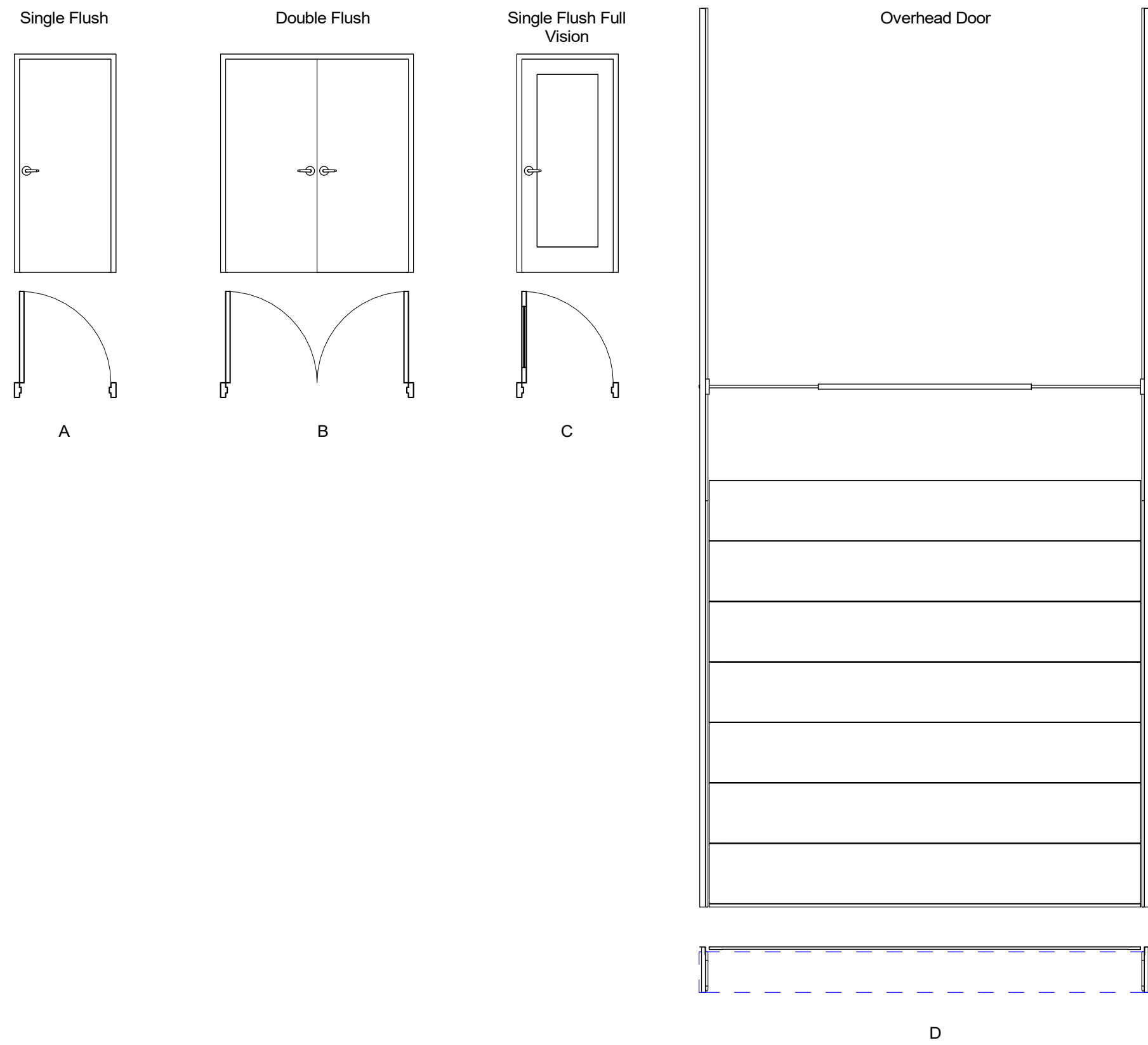
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 Life Safety Plan - Studio B

G1.1.2

DOOR TYPES



DOOR HARDWARE

- SET#01**
 - VERTICAL RODS
 - PANIC BAR
 - ENTRY LEVER
 - KEY CYLINDER
 - HINGES
 - WEATHER SEAL KIT
 - CLOSERS
 - KICK PLATES
 - MAG LOCKS
 - CARD READER
- SET#02**
 - VERTICAL RODS
 - PANIC BAR
 - ENTRY LEVER
 - KEY CYLINDER
 - HINGES
 - WEATHER SEAL KIT
 - CLOSERS
 - KICK PLATES
- SET#03**
 - VERTICAL RODS
 - PANIC BAR
 - ENTRY LEVER
 - KEY CYLINDER
 - HINGES
 - CLOSERS
 - KICK PLATES
 - MAG LOCKS
 - CARD READER
- SET#04**
 - LEVER ACTION KEYED LOCKSET
 - HINGES
 - DOOR SILENCERS
 - CLOSER
- SET#05**
 - VERTICAL RODS
 - PANIC BAR
 - ENTRY LEVER
 - KEY CYLINDER
 - HINGES
 - ACOUSTICAL DOOR SEAL KIT
 - CLOSERS
 - KICK PLATES
- SET#06**
 - LEVER ACTION PASSAGE SET
 - HINGES
 - DOOR SILENCERS
- SET#07**
 - LEVER ACTION PASSAGE SET
 - HINGES
 - ACOUSTICAL DOOR SEAL KIT
- SET#08**
 - VERTICAL RODS
 - PANIC BAR
 - ENTRY LEVER
 - KEY CYLINDER
 - HINGES
 - ACOUSTICAL DOOR SEAL KIT
 - CLOSERS
 - KICK PLATES
- SET#09**
 - LEVER ACTION PRIVACY SET
 - HINGES
 - DOOR SILENCERS
- SET#10**
 - LEVER ACTION LOCKSET
 - KEY CYLINDER
 - HINGES
 - WEATHER SEAL KIT
 - CLOSER
 - MAG LOCKS
 - CARD READER
 - THRESHOLD
- SET#11**
 - VERTICAL RODS
 - PANIC BAR
 - ENTRY LEVER
 - KEY CYLINDER
 - HINGES
 - ACOUSTICAL DOOR SEAL KIT
 - CLOSERS
 - KICK PLATES
 - THRESHOLD
- SET#12**
 - OVERHEAD LATCH
 - HOLD OPEN DEVICE
 - ENTRY LEVEL
 - KEY CYLINDER
 - HINGES
 - WEATHER SEAL KIT
 - CLOSERS
 - KICK PLATES
 - DOOR SILENCERS
 - CLOSERS
- SET#13**
 - LEVER ACTION KEYED LOCKSET
 - HINGES
 - DOOR SILENCERS
 - ACOUSTICAL DOOR SEAL KIT
- SET#14**
 - OVERHEAD LATCH
 - HOLD OPEN DEVICE
 - ENTRY LEVEL
 - KEY CYLINDER
 - HINGES
 - CLOSERS
 - KICK PLATES
 - DOOR SILENCERS
 - CLOSERS
- ACOUSTICAL DOOR SEAL KIT**
PROVIDE ZERO INTERNATIONAL SOUNDTRAP SYSTEM
 - INTERIOR HEAD AND JAMB = MODEL #870
 - EXTERIOR HEAD AND JAMB = MODEL #119W
 - THRESHOLD = #564 (SET IN FULL BED OF SEALANT)
 - PROVIDE STRIKEPLATE MOUNTING KIT AT ALL CLOSERS
 - BYPASS SEAL KIT MODEL #70SBP
 - DOUBLE ACTIVE DOORS PROVIDE #326AA ASTREGALS

NOTE:
CARD READERS (BY OTHERS) RETRACTS ELECTRONIC LOCKING DEVICE FOR AUTHORIZED ENTRY. FREE EGRESS IS PROVIDED AT ALL TIMES BY MANUAL OPERATION OF EXIT DEVICES.

DOOR SCHEDULE

DOOR#	W	H	T	MATERIAL	FRAME	TYPE	HARDWARE SET	RATING	NOTE
A007	3'-0"	7'-0"	1 3/4"	EXISTING	EXISTING	EXISTING	-		
A012A	3'-0"	7'-0"	1 3/4"	WD	HM	A	04		
A012D	3'-0"	7'-0"	1 3/4"	WD	HM	A	13		
A013	3'-0"	7'-0"	1 3/4"	WD	HM	A	04		
A014A	3'-0"	7'-0"	1 3/4"	WD	HM	A	06		
A015A	3'-0"	7'-0"	1 3/4"	WD	HM	A	13		
A015B	3'-0"	7'-0"	1 3/4"	WD	HM	A	04		
A016	6'-0"	8'-0"	1 3/4"	WD	HM	B	14		
A017	3'-0"	7'-0"	1 3/4"	WD	HM	A	04		
A018	3'-0"	7'-0"	1 3/4"	WD	HM	A	04		
A019	3'-0"	7'-0"	1 3/4"	WD	HM	A	04		
A020	3'-0"	7'-0"	1 3/4"	WD	HM	A	04		
A021	3'-0"	7'-0"	1 3/4"	WD	HM	A	04		
A023A	14'-0"	14'-0"	1"	AL	STEEL	D	-		INSULATED DOOR
A023B	6'-0"	8'-0"	1 3/4"	WD	HM	A	01		
A024A	6'-0"	7'-0"	1 3/4"	HM	HM	B	03		INSULATED DOOR
A024B	6'-0"	7'-0"	1 3/4"	HM	HM	B	01		INSULATED DOOR
A037	3'-0"	7'-0"	1 3/4"	WD	HM	A	04		
B001A	14'-0"	14'-0"	1"	AL	STEEL	D	-		INSULATED DOOR
B001B	14'-0"	14'-0"	1"	AL	STEEL	D	-		INSULATED DOOR
B001C	3'-0"	7'-0"	1 3/4"	HM	HM	C	11		INSULATED DOOR
B001D	3'-0"	7'-0"	1 3/4"	HM	HM	C	07		INSULATED DOOR
B002A	6'-0"	7'-0"	1 3/4"	HM	HM	B	01		INSULATED DOOR
B002B	6'-0"	7'-0"	1 3/4"	WD	HM	B	08		
B003	3'-0"	6'-8"	1 3/4"	WD	HM	A	04		
B004A	3'-0"	7'-0"	1 3/4"	WD	HM	A	06		
B004B	3'-0"	7'-0"	1 3/4"	WD	HM	A	06		
B005	3'-0"	7'-0"	1 3/4"	WD	HM	A	09		
B006	3'-0"	7'-0"	1 3/4"	WD	HM	A	09		
B007	3'-0"	7'-0"	1 3/4"	HM	HM	C	010		
B008	2'-6"	7'-0"	1 3/4"	WD	HM	A	04		
B009A	3'-0"	7'-0"	1 3/4"	WD	HM	A	07		
B009B	3'-0"	7'-0"	1 3/4"	HM	HM	A	11		INSULATED DOOR
B010	6'-0"	7'-0"	1 3/4"	HM	HM	B	012		INSULATED DOOR
B011	3'-0"	7'-0"	1 3/4"	HM	HM	A	04		

TOILET ACCESSORY SCHEDULE

ROOM #	ROOM NAME	ACCESSORY TYPE	QTY	INSTALLATION
A022	OPEN OFFICE SPACE	SOAP DISPENSER-1	1	
A022	OPEN OFFICE SPACE	TOWEL DISPENSER-2	1	
B004	MAKEUP	FRAMELESS MIRROR-1	4	
B004	MAKEUP	FRAMELESS MIRROR-2	2	
B005	TOILET	COAT HOOK-1	1	
B005	TOILET	FRAMED MIRROR-1	1	
B005	TOILET	GRAB BAR-1	1	
B005	TOILET	GRAB BAR-2	1	
B005	TOILET	GRAB BAR-3	1	
B005	TOILET	SANITARY NAPKIN DISPOSAL-1	1	
B005	TOILET	SEAT COVER DISPENSER-1	1	
B005	TOILET	SOAP DISPENSER-1	1	
B005	TOILET	TOILET TISSUE DISPENSER-1	1	
B005	TOILET	TOWEL DISPENSER-1	1	
B006	TOILET	COAT HOOK-1	1	
B006	TOILET	FRAMED MIRROR-1	1	
B006	TOILET	GRAB BAR-1	1	
B006	TOILET	GRAB BAR-2	1	
B006	TOILET	GRAB BAR-3	1	
B006	TOILET	SANITARY NAPKIN DISPOSAL-1	1	
B006	TOILET	SEAT COVER DISPENSER-1	1	
B006	TOILET	SOAP DISPENSER-1	1	
B006	TOILET	TOILET TISSUE DISPENSER-1	1	
B006	TOILET	TOWEL DISPENSER-1	1	



Cherokee Nation Businesses
CNFO Owasso Campus Improvements Phase II
 16990 East 116th Street North Owasso, Oklahoma 74055

REVISIONS

DATE
02.13.23
SHEET
Schedules

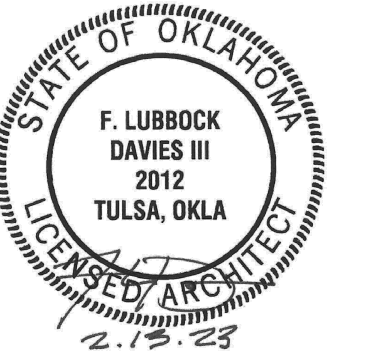
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MATERIAL FINISH SCHEDULE						
FINISH CODE	MATERIAL	MANUF	DESCRIPTION	SIZE	COMMENTS / INSTALLATION NOTES	
CEILING MATERIAL						
ACT1	ACOUSTIC CEILING TILE		OWNER/CONTRACTOR PROVIDED	24" X 24"		
FLOORING						
CPT1	CARPET	PATCRAFT	RISE 10465 - POINT 00599	12" X 48"	INSTALL 1/3 ASHLAR RUNNING EASTWEST	
LVT1	LUXURY VINYL TILE	PATCRAFT	CHARTED 1313V - EXLAMATION 00480	23.63" X 23.63"	INSTALL RANDOM	
LVT2	LUXURY VINYL TILE	BENTLEY	BATISTE - WEAVE 801841	18" X 36"	INSTALL ASHLAR RUNNING EASTWEST	
RF	RESONOUIIS FLOORING		BLACK		MATCH EXSITNG STUDIO A	
T1	PORCELAIN FLOOR TILE	INTERCERAMIC	CONCRETE - DARK GRAY, MATTE / GROUT: CUSTOM #335 WINTER GRAY	12" X 24"	INSTALL 1/3 BRICK LAY RUNNING EAST/WEST	
MILLWORK MATERIAL						
PL1	PLASTIC LAMINATE	FORMICA	WHITE TWILL, MATTE 9285-58			
PL2	PLASTIC LAMINATE	WILSONART	CRISP LINEN 4942-38			
PL3	PLASTIC LAMINATE	WILSONART	GRAPHITE NEBULA 4623-60			
SS1	SOLID SURFACE	WILSONART	FROSTY WHITE MIRAGE 1573MG			
SS1	SOLID SURFACE	WILSONART	COCONUT OIL 9100GS			
PAINT						
P1	PAINT	SHERWIN WILLIAMS	SW7649 SILVER PLATE			
P2	PAINT	SHERWIN WILLIAMS	SW6276 MYSTICAL SHADE			
P3	PAINT	SHERWIN WILLIAMS	SW7048 URBANE BRONZE			
P4	PAINT	SHERWIN WILLIAMS	SW7043 WORLDLY GRAY			
P5	PAINT	SHERWIN WILLIAMS	SW6772 CAY			
P6	PAINT	SHERWIN WILLIAMS	SW7069 IRON ORE			
TRANSITIONS						
TR1	METAL TRANSITION	SCHLUTER	JOLLY -ANODIZED ALUMINUM, POLISHED CHROME		FOR USE AT TILE/MIRROR SURROUNDS	
TR2	METAL TRANSITION	SCHLUTER	QUADEC - ANODIZED ALUMINUM, NICKEL		FOR USE AT PT2 TOP CAP	
TR3	RUBBER TRANSITION	ROPPE	EDGEGUARD #38, COLOR 100 BLACK		FOR USE WITH CPT1 AND LVT2	
TR4	RUBBER TRANSITION	ROPPE	EDGEGUARD #38, COLOR 100 BLACK		FOR USE WITH LVT1	
TR5	METAL TRANSITION	SCHLUTER	RENO - U, BRUSHED ANTIQUE BRONZE ANODIZED ALUMINUM (ABGB)		FOR USE AT RESTROOM THRESHOLDS WITH T1	
WALL BASE						
RB1	RUBBER BASE	ROPPE	4" STANDARD TOE RUBBER WALL BASE, COLOR 100 BLACK	4"		
RB2	RUBBER BASE	ROPPE	4" STANDARD TOE RUBBER WALL BASE, COLOR 177 STEEL BLUE	4"		
WALL COVERING						
WC1	WALL COVERING	KOROSEAL	HERITAGE WOOD/EBONY	---		
WALL PROTECTION						
CG1	CORNER GUARD	KOROSEAL	G100 SIMPLY WHITE		MOUNT AT TOP OF WALL BASE	
WALL TILE						
T2	PORCELAIN WALL TILE	CROSSVILLE	TWEED- TAUPE, DOMTWETP / GROUT: CUSTOM #335 WINTER GRAY, 1/8" JOINT	12" X 24"		
T3	PORCELAIN WALL TILE	CROSSVILLE	TWEED -SILVER, DOMTWESL / GROUT: CUSTOM #542 GRAYSTONE, 1/8" JOINT	12" X 24"		
T4	PORCELAIN WALL TILE	CROSSVILLE	TWEED -SILVER, DOMTWESL / GROUT: CUSTOM #542 GRAYSTONE, 1/8" JOINT	18" X 36"		
T5	GLASS WALL TILE	EMSER	EDGE -NAVY, W80EDGENA1212MCV / GROUT: CUSTOM #542 GRAYSTONE, 1/8" JOINT	12" X 12"		
T6	GLAZED CERAMIC WALL TILE	EMSER	EXPRESS - BURST WHITE, W37EXPRBUWH0312 / GROUT: CUSTOM #544 ROLLING FOG, 1/16" JOINT	3" X 12"		
T7	GLAZED CERAMIC WALL TILE	EMSER	EXPRESS - GLARE WHITE, W37EXPRGLWH0312 / GROUT: CUSTOM #544 ROLLING FOG, 1/16" JOINT	3" X 12"		
T8	GLAZED CERAMIC WALL TILE	EMSER	EXPRESS -LINEAR WHITE, W37EXPLIWH0312 / GROUT: CUSTOM #544 ROLLING FOG, 1/16" JOINT	3" X 12"		
T9	GLAZED CERAMIC WALL TILE	EMSER	EXPRESS -AGLOW WHITE, W37EXPRAGWH0312 / GROUT: CUSTOM #544 ROLLING FOG, 1/16" JOINT	3" X 12"		
Z-SPECIALTIES						
DLT1	DECORATIVE LIGHT FIXTURE	SHADES OF LIGHT	CYDNEY VANITY LIGHT - LARGE, CHROME & OPAL GLASS - BS20084 CH			
DLT2	DECORATIVE LIGHT FIXTURE	SHADES OF LIGHT	INDUSTRIAL CINCH CHANDELIER, BLACK & POLISHED NICKEL			
HDW1	CABINET HARDWARE	MY KNOBS	CONTEMPORARY EXPRESSION I - 7 9/16" CENTER LACONIA HANDLE IN CHROME & MATTE BLACK / RICHELIEU HARDWARE / MYKNOBS.COM	7 9/16"		

FINISH SCHEDULE												
REV #	ROOM #	ROOM NAME	FLOOR	BASE	WALLS				CEILING	MILLWORK		REMARKS
					NORTH WALL	EAST WALL	SOUTH WALL	WEST WALL		CABINETS	COUNTERS	
	A005	CATERING	EX		FRP1	FRP1	FRP1	FRP1				PAINTE CEILING P5
	A012	RENTAL	EX	RB1	P1	P1	P1	P1	-	-	-	
	A013	OFFICE	CPT1	RB1	P1	P1	P1	P1	ACT1	-	-	
	A014	CONFERENCE ROOM	CPT1	RB2	P1	P1	P1	P1	ACT1	-	-	
	A015	WAITING	CPT1	RB2	P1	P1	P1	P1	ACT1	PL1,P1	SS1,PL2	
	A016	GEAR STORAGE	EX	RB3	P1	P1	P1	P1	ACT1	-	-	
	A017	OFFICE	CPT1	RB2	P1	P1	P1	P1	ACT1	-	-	
	A018	OFFICE	CPT1	RB2	P1	P1	P1	P1	ACT1	-	-	
	A019	OFFICE	CPT1	RB2	P1	P1	P1	P1	ACT1	-	-	
	A020	OFFICE	CPT1	RB2	P1	P1	P1	P1	ACT1	-	-	
	A021	OFFICE	CPT1	RB2	P1	P1	P1	P1	ACT1	-	-	
	A022	OPEN OFFICE SPACE	CPT1	RB2	P1	P1	P1	P1	ACT1	PL1	SS1	
	A023	WAREHOUSE/ MILL	EX	RB3	P1	P1	P1	P1	-	-	-	
	B001	VESTIBULE	EX	-	AB	AB	AB	AB	ACT2/AB	-	-	AB (ACOUSTICAL BLANKET) RE: WALL TYPES AND SECTIONS
	B002	CORRIDOR	RF	RB2	P1	P1	P1	P1	ACT1	-	-	
	B003	FLEX	LVT1	RB2	P1	P1	P1	P1	ACT1	-	-	
	B004	MAKEUP	LVT1	RB2	T3,T4,T5	P4	P4	P4	ACT1	PL1	SS1	
	B005	TOILET	T1	T2	T2	T2	T2	T2	ACT1	-	-	WALLS TO BE T2 UP TO 7'-0" AFF. GYP. PAINTED PT2 ABOVE, U.N.O.
	B006	TOILET	T1	T2	T2	T2	T2	T2	ACT1	-	-	WALLS TO BE T2 UP TO 7'-0" AFF. GYP. PAINTED PT2 ABOVE, U.N.O.
	B007	RISER	EX	RB1	P1	P1	P1	P1	-	-	-	
	B008	JANITOR	SC		FRP1	FRP1	FRP1	FRP1	ACT3	-	-	
	B009	STUDIO B	RF	-	AB	AB	AB	AB	ACT2/AB	-	-	AB (ACOUSTICAL BLANKET) RE: WALL TYPES AND SECTIONS
	B010	MECH	SC	RB1	P1	P1	P1	P1	ACT1	-	-	
	B011	IT CLOSET	SC	SC	P1	P1	P1	P1	-	-	-	

GENERAL FINISH NOTES:


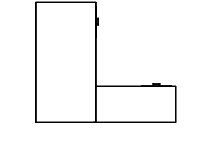

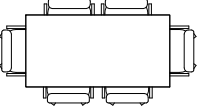







- COORDINATE INSTALLATION HEIGHTS OF ALL DECORATIVE LIGHT FIXTURES WITH DESIGNER PRIOR TO INSTALLATION. FIELD VERIFY.
- STAIN RESISTANT, NON SAG, HIGH PERFORMANCE GROUT REQUIRED AT ALL AREAS U.N.O.
- ARCHITECT/DESIGNER TO REVIEW ALL BLOCKING AND FRAMING LOCATIONS WITH GC, OWNER, AND MILLWORK SUBCONTRACTOR PRIOR TO CONCEALING.
- FIELD COORDINATE FINAL LOCATION OF ALL THERMOSTATS, FIRE ALARMS, AND SURFACE INSTALLED PANELS WITH DESIGNER AND ARCHITECT WITH PRE-INSTALLATION CONFERENCE TO AVOID UNSIGHTLY LOCATIONS WITH INTERIOR DESIGN.
- INSTALL APPROPRIATE TRANSITIONS AT FINISH TRANSITIONS. ALL TRANSITIONS TO BE REVIEWED BY DESIGNER IF THEY DIFFER FOR ANY REASON FROM SPECIFICATIONS IN THE MATERIAL FINISH LEGEND.
- ALL CEILING PAINT TO BE FLAT U.N.O.
- ALL WALL PAINT TO BE SATIN U.N.O.
- ALL HOLLOW METAL DOORS AND FRAMES PAINTED PT6 U.N.O.



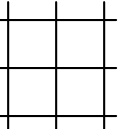
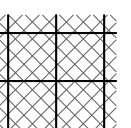
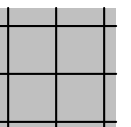
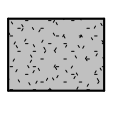
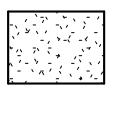
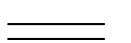
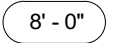
FURNITURE / EQUIPMENT GENERAL NOTES

1. THE FURNITURE AND EQUIPMENT ILLUSTRATED IN THIS PLAN INDICATES ALL NON-BUILDING SERVICE FIXED AND MOVEABLE EQUIPMENT. BUILDING SERVICE EQUIPMENT IS ILLUSTRATED ON THE MECHANICAL, PLUMBING, FIRE PROTECTION, AND ELECTRICAL DRAWINGS.
2. REFER TO INTERIOR ELEVATIONS FOR SPECIFIC LOCATION OF NON FLOOR MOUNTED EQUIPMENT.
3. FURNITURE IS ILLUSTRATED FOR INFORMATIONAL PURPOSES ONLY TO BE SELECTED AND PROVIDED BY THE OWNER.
4. PROVIDE AND INSTALL BLOCKING, FRAMING AND/OR BRACING AS REQUIRED TO SECURELY INSTALL ALL OWNER AND CONTRACTOR FURNISHED EQUIPMENT.

FURNITURE LEGEND

- | | | | |
|---|----------------------|---|----------------|
|  | SIDE CHAIR |  | DESK |
|  | TASK CHAIR |  | TABLE |
|  | WAITING CHAIR |  | TRASH CAN |
|  | COMPUTER WORKSTATION |  | COFFEE TABLE |
|  | TELEPHONE |  | FILING CABINET |
|  | BOOKCASE | | |

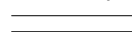
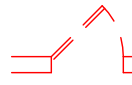


CEILING LEGEND

- | | |
|---|---|
|  | 2 X 2 LAY-IN CEILING GRID |
|  | 2 X 2 LAY-IN CEILING GRID WITH R30 ACOUSTICAL INSULATION AND ACOUSTICAL CEILING TILES |
|  | 2 X 2 LAY-IN CEILING GRID WITH 2" OWENS CORNING SELECTSOUND BLACK ACOUSTICAL BLANKETS OVER 1/2" GYPSUM BOARD CEILING TILES WITH 2 LAYERS R30 MINERAL WOOL INSULATION WITHIN CEILING CAVITY |
|  | 2" OWENS CORNING SELECTSOUND BLACK ACOUSTICAL BLANKETS OVER(2) TWO LAYERS 5/8" GYPSUM BOARD ON METAL FRAMING WITH 2 LAYERS R30 MINERAL WOOL INSULATION WITHIN CEILING CAVITY - INSTALL GREEN GLUE BETWEEN ALL LAYERS. |
|  | (2) TWO LAYERS 5/8" GYPSUM BOARD OVER METAL FRAMING - INSTALL GREEN GLUE BETWEEN ALL LAYERS |
|  | WALL PENETRATING CEILING |
|  | CEILING HEIGHT DESIGNATION |

CEILING CONSTRUCTION NOTES

1. UNLESS NOTED OTHERWISE INSTALL ALL CEILINGS AT 8' - 0" AFF.
2. CEILING HEIGHT INDICATED AT GYPSUM BOARD CEILING IS TO BOTTOM OF METAL FRAMING. (UNLESS NOTED OTHERWISE)
3. UNLESS NOTED OTHERWISE, CENTER CEILING GRID OR CEILING TILE WITHIN EACH ROOM AS ILLUSTRATED ON REFLECTED CEILING PLAN. CONSULT ARCHITECT WITH ANY DISCREPANCIES.

WALL LEGEND (NOTE ALL TYPES MAY NOT BE USED)

- | | |
|---|--|
|  | EXISTING CONSTRUCTION TO REMAIN. |
|  | EXISTING CONSTRUCTION TO BE REMOVED. |
|  | UNLESS INDICATED OTHERWISE, NEW WALL CONSTRUCTION CONSISTING OF ONE LAYERS 5/8" GYPSUM BOARD BOTH SIDES OF 3 5/8" 20 GA. METAL FRAMING AT 1' - 4" O.C. WITH 3 1/2" SOUND ATTENUATION INSULATION FULL HEIGHT. UNLESS NOTED OTHERWISE, EXTEND WALL TO 1" ABOVE HIGHEST ADJACENT CEILING HEIGHT. ADJUST METAL FRAMING AS REQUIRED TO ALIGN FINISH FACE OF NEW WALL WITH FINISH FACE OF EXISTING WALL WHERE EXTENDING OR CLOSING AN OPENING IN AN EXISTING WALL. |
|  | WHERE INDICATED WITHIN WALL ASSEMBLY, EXTEND WALL ASSEMBLY FROM TOP OF FLOOR SLAB TO BOTTOM OF FLOOR SLAB OR ROOF DECK ABOVE. |

GENERAL CONSTRUCTION NOTES

1. UNLESS INDICATED OTHERWISE, FLOOR PLAN DIMENSIONS ARE TO THE CENTER LINE OF NEW METAL STUD WALL CONSTRUCTION AND TO THE FINISHED FACE OF EXISTING CONSTRUCTION.
2. WHERE REQUIRED TO ENSURE WALL STABILITY, DIAGONALLY BRACE TOP OF WALL ABOVE CEILING AT 4'-0" ON CENTER AND EACH SIDE DOOR SECURED TO STRUCTURE ABOVE.
3. UNLESS INDICATED OTHERWISE, LOCATE HINGE SIDE OF DOOR OPENINGS 4" FROM FINISH FACE OF ADJACENT WALL.
4. FIELD VERIFY FINISHED CASEWORK OPENINGS PRIOR TO FABRICATION OF CASEWORK. NOTIFY THE ARCHITECT AND OBTAIN THE ARCHITECT'S DIRECTION SHALL VERIFIED CASEWORK OPENING REQUIRE DIMENSIONAL RECONFIGURATION OF THE CASEWORK INDICATED.
5. PROVIDE FRAMING AND BLOCKING AS REQUIRED BY MANUFACTURER FOR INSTALLATION OF ALL HANDRAIL, WALL PANEL AND CORNER GUARD LOCATIONS.
6. UNLESS INDICATED OTHERWISE, REFER TO REFLECTED CEILING PLANS FOR CEILING HEIGHT DESIGNATIONS.
7. WHERE NEW FINISH MATERIALS ARE SPECIFIED TO BE INSTALLED ON EXISTING SURFACES, PREPARE EXISTING SURFACE AS INDICATED BY FINISH MATERIAL MANUFACTURER TO RESULT IN AN APPROPRIATE, UNIFORM BASE SURFACE ON WHICH TO PLACE THE NEW FINISH MATERIAL.
8. PROVIDE AND INSTALL BLOCKING, FRAMING AND / OR BRACING AS REQUIRED TO SECURELY INSTALL ALL OWNER AND CONTRACTOR FURNISHED EQUIPMENT OR WALL PROTECTION ASSEMBLIES. VERIFY BLOCKING IS INSTALLED IN EXISTING WALLS TO RECEIVE OWNER OR CONTRACTOR FURNISHED EQUIPMENT OR WALL PROTECTION ASSEMBLIES.

GENERAL DEMOLITION NOTES

1. PRIOR TO INITIATING DEMOLITION ACTIVITIES INDICATED, ENSURE THAT NO JURISDICTIONALLY REGULATED HAZARDOUS SUBSTANCE IS PRESENT WITHIN THE CONSTRUCTION AREA. IF A HAZARDOUS SUBSTANCE IS FOUND, NOTIFY THE OWNER, AND OBTAIN THE OWNER'S DIRECTION CONCERNING DISPOSITION OF THE SUBSTANCE PRIOR TO PROCEEDING WITH THE WORK.
2. ALL DEMOLITION ACTIVITIES SHALL COMPLY WITH APPLICABLE PROVISIONS OF FEDERAL, STATE, COUNTY AND LOCAL JURISDICTIONAL REGULATORY REQUIREMENTS.
3. UNLESS INDICATED OTHERWISE, ALL DEMOLISHED MATERIAL EQUIPMENT AND RELATED ITEMS SHALL UPON REMOVAL BECOME THE PROPERTY OF THE CONTRACTOR AND BE DISPOSED OF IN STRICT ACCORDANCE WITH REGULATORY REQUIREMENTS.
4. PRIOR TO INITIATING DEMOLITION ACTIVITIES, FIELD VERIFY EXISTING SPACE CONFIGURATION AND COMPONENTS INDICATED ON THE DRAWINGS. SHALL DISCREPANCIES EXIST, NOTIFY THE ARCHITECT AND OBTAIN THE ARCHITECT'S DIRECTION CONCERNING DISPOSITION OF THE DISCREPANCY PRIOR TO PROCEEDING WITH THE WORK.
5. PROTECT EXISTING CONSTRUCTION TO REMAIN WITHIN CONSTRUCTION AREA AND BUILDING COMPONENTS OUTSIDE THE CONSTRUCTION AREA FROM DAMAGE DURING DEMOLITION ACTIVITIES. SHALL DAMAGE OCCUR, REPAIR DAMAGE AS REQUIRED TO RETURN THE DAMAGED COMPONENT TO ITS CONDITION PRIOR TO INITIATION OF THE WORK. SHALL REPAIR NOT BE FEASIBLE, CONSULT THE ARCHITECT FOR DISPOSITION OF THE DAMAGED COMPONENT.
6. SHALL DEMOLITION ACTIVITIES REQUIRE ACCESS TO OR THROUGH EXISTING OCCUPIED PUBLIC OR PRIVATE SPACES, CONSULT THE OWNER FOR SPECIFIC ACCESS REQUIREMENTS, AND ADHERE STRICTLY TO THE OWNER'S REQUIREMENTS.
7. WHERE REQUIRED TO PROTECT EXISTING SPACES FROM DAMAGE AND/OR CONSTRUCTION DEBRIS, PROVIDE TEMPORARY ENCLOSURES, BARRIERS, FILTERS AND OTHER TEMPORARY MEASURES REQUIRED TO PROVIDE PROTECTION. MAINTAIN REQUIRED EXIT ACCESS CORRIDORS AND EXITS FREE AND CLEAR AT ALL TIMES UNLESS TEMPORARY OBSTRUCTION IS APPROVED BY JURISDICTIONAL REGULATORY AGENCIES.
8. REFER TO MECHANICAL, AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION REQUIREMENTS WHERE INDICATED.



Cherokee Nation Businesses
**CNFO Owasso Campus
 Improvements Phase II**
 16990 East 116th Street North Owasso, Oklahoma 74055

REVISIONS

DATE
 02.13.23
 SHEET
 General Notes and
 Legends

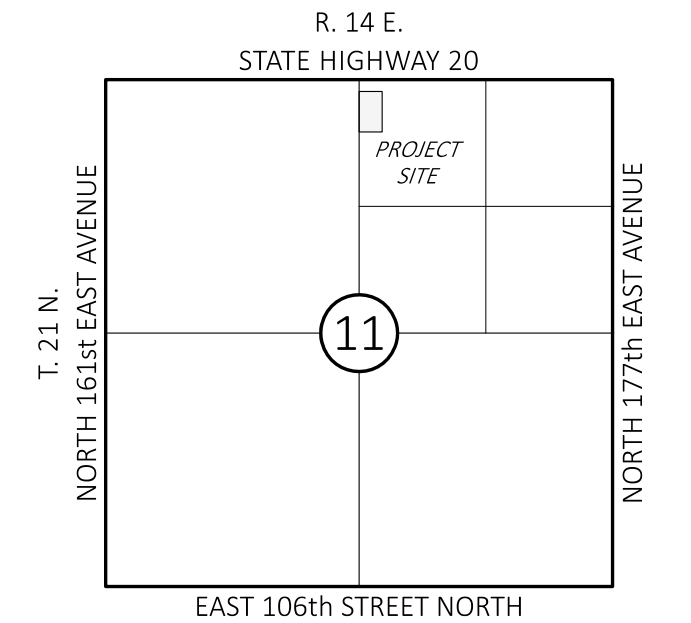
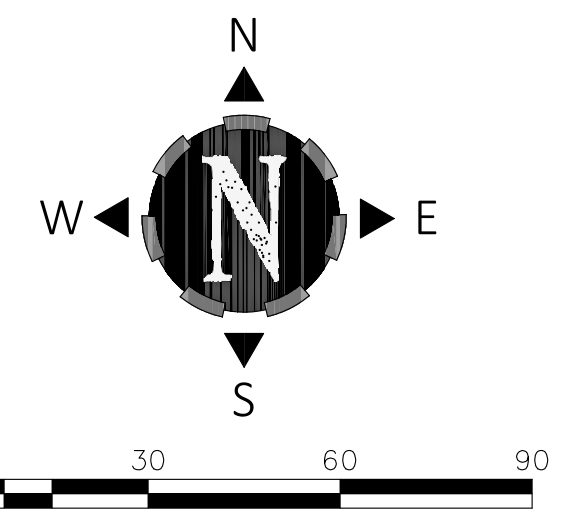
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GENERAL NOTES

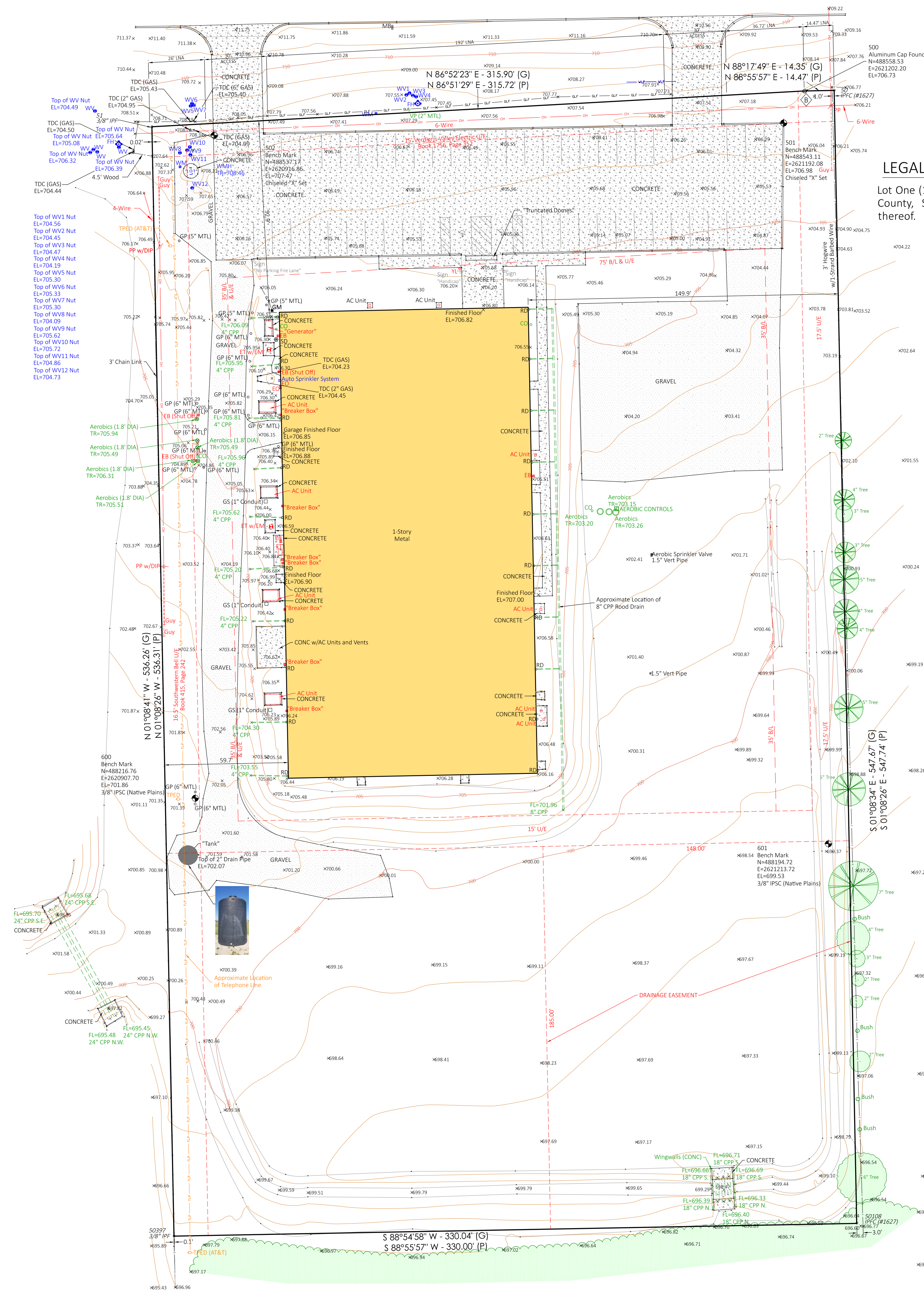
- A. The grid bearings shown hereon are based on the Oklahoma State Plane Coordinate System, North Zone 3501, NAD 1983 (1993).
- B. The elevations shown hereon are based on the Bench Mark provided on the recorded plat of "SCALONE ACRES".
- C. The property described hereon contains 178,949.52 sq.ft. or 4.11 acres, more or less.
- D. There are 46 marked parking spaces and 2 marked handicap spaces on the property described hereon.
- E. The property described hereon is located in flood zone "X-UNSHADED", as per Flood Insurance Rate Map, Community Panel No. 405379 0235H, effective date: April 3, 2012.
- F. Fieldwork completed June 28, 2022.

BOUNDARY SURVEY

OF: Lot One (1), Block One (1), SCALONE ACRES,
an Addition in Rogers County, State of Oklahoma



State Highway 20



LEGAL DESCRIPTION OF THE REAL PROPERTY

Lot One (1), Block One (1) SCALONE ACRES, an Addition in Rogers County, State of Oklahoma, according to the recorded Plat thereof.

SURVEY CONTROL TABLE

Point	Northing	Easting	Elevation	Description
50	488558.9574	2621216.5441	706.8269	Iron Pin Found w/Cap (#1627)
51	488541.2988	2620886.7704	708.3387	3/8" Iron Pin Found
500	488558.5310	2621202.2025	706.7300	Aluminum Cap Found
501	488543.1066	2621192.0792	706.9784	Bench Mark (Chiseled "X" Set)
502	488537.1669	2620916.8617	707.4714	Bench Mark (Chiseled "X" Set)
600	488216.7568	2620907.7034	701.864	Bench Mark (IPSC Native Plains)
601	488194.7220	2621213.7234	699.532	Bench Mark (IPSC Native Plains)
50108	488011.3929	2621227.4659	696.697	IPFC (PLS #1627)
50397	488005.1492	2620897.4843	697.198	3/8" IPF

SURVEYORS CERTIFICATE

I, Nathaniel J. Reed of the State of Oklahoma, and a Professional Surveyor, do hereby certify that the above shown survey is true and correct to the best of my knowledge.

WITNESS my hand and seal this 30th day of JUNE, 2022

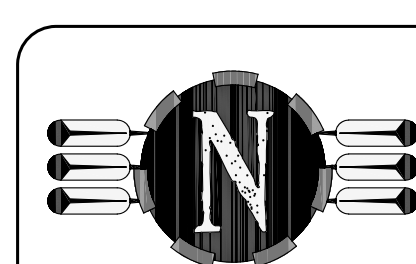
Nathaniel J. Reed
NATHANIEL J. REED
Registered Professional Land Surveyor #1744

SYMBOL LEGEND

- AC - Air Conditioning Unit
- FH - Fire Hydrant
- GM - Gas Meter
- GP - Guard Post
- GA - Guy Anchor
- HP - Handicap Parking
- MB - Mailbox
- PP - Power Pole
- SP - Sign (All Types)
- TPED - Telephone Pedestal
- VP - Vent Pipe
- WM - Water Meter
- WV - Water Valve
- YL - Yard Light (All Types)
- FL - Fence Line (All Types)
- GL - Gas Line Flagged
- GL - Gas Line Paint
- OU - Overhead Utility
- TL - Telephone Line Paint Marks
- WL - Water Line Paint Marks
- BM - Bench Mark
- SC - Survey Control Point Found
- SP - Survey Control Point Set
- B/L - Building Setback Line
- U/E - Utility Easement Line
- LNA - Limits of No Access



48 HOURS BEFORE YOU DIG... CALL OKIE
1-800-522-6543
Oklahoma One-Call System, Inc.



NATIVE PLAINS
Surveying & Mapping, LLC
A Native American Owned Business
5807 South Gamett Road, Suite K, Tulsa, Oklahoma, 74146
Telephone: 918.234.7596, Fax: 918.893.5552
Certificate of Authorization No. 4916 Expires June 30, 2023

REVISIONS	By	Date

Surveyed:	NP
Drawn:	JLN
Reviewed:	NJR
Checked:	NJR
Scale:	1"=30'
Date:	06/30/22

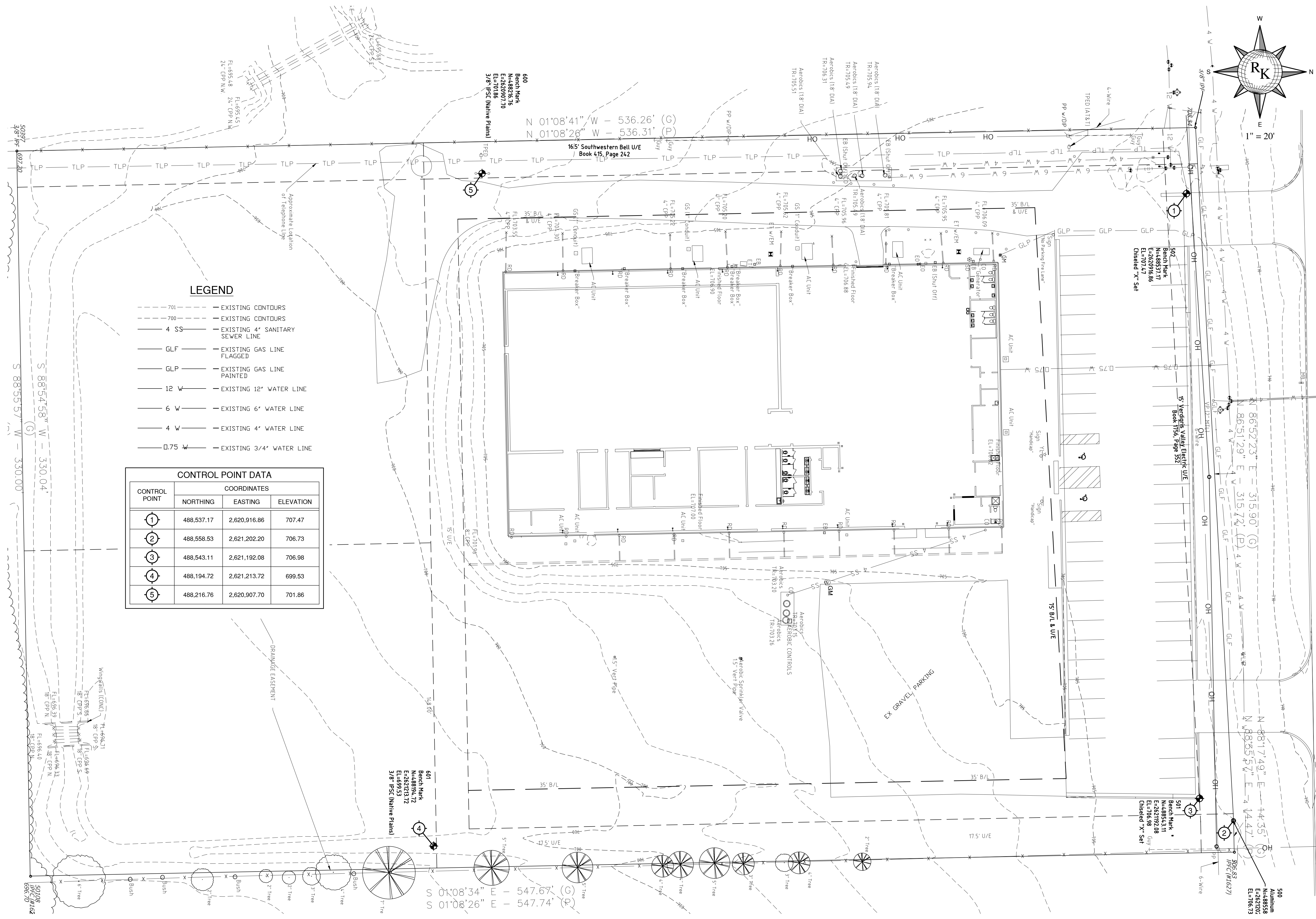
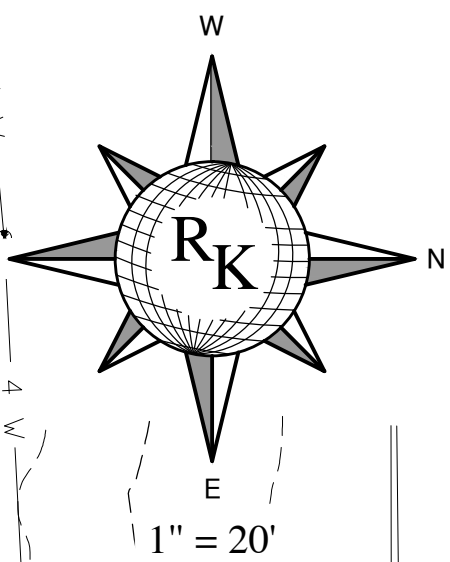
BOUNDARY SURVEY

Project No.: 206051

Sheet: 1 of 1

Cherokee Nation Business
Cherokee Nation Film Office
Owasso Campus Improvements
 16990 East 116th Street North Owasso, Oklahoma 74055

JOB NUMBER
 REVISIONS
 DATE February 13, 2023
 SHEET Existing Site Plan



- LEGEND**
- - - 701 - - - EXISTING CONTOURS
 - - - 700 - - - EXISTING CONTOURS
 - 4 SS - - - EXISTING 4" SANITARY SEWER LINE
 - GLF - - - EXISTING GAS LINE FLAGGED
 - GLP - - - EXISTING GAS LINE PAINTED
 - 12 W - - - EXISTING 12" WATER LINE
 - 6 W - - - EXISTING 6" WATER LINE
 - 4 W - - - EXISTING 4" WATER LINE
 - 0.75 W - - - EXISTING 3/4" WATER LINE

CONTROL POINT DATA

CONTROL POINT	COORDINATES		
	NORTHING	EASTING	ELEVATION
1	488,537.17	2,620,916.86	707.47
2	488,558.53	2,621,202.20	706.73
3	488,543.11	2,621,192.08	706.98
4	488,194.72	2,621,213.72	699.53
5	488,216.76	2,620,907.70	701.86

50208
 696.70
 50208
 697.30
 S 88°55'57" W - 330.00'
 S 88°54'58" W - 330.04'
 S 88°52'23" E - 315.90' (G)
 N 86°51'29" E - 315.74' (P)
 N 88°17'49" E - 144.35' (G)
 N 88°55'57" E - 144.47' (G)
 N 01°08'41" W - 536.26' (G)
 N 01°08'26" W - 536.31' (P)
 S 01°08'34" E - 547.67' (G)
 S 01°08'26" E - 547.74' (P)

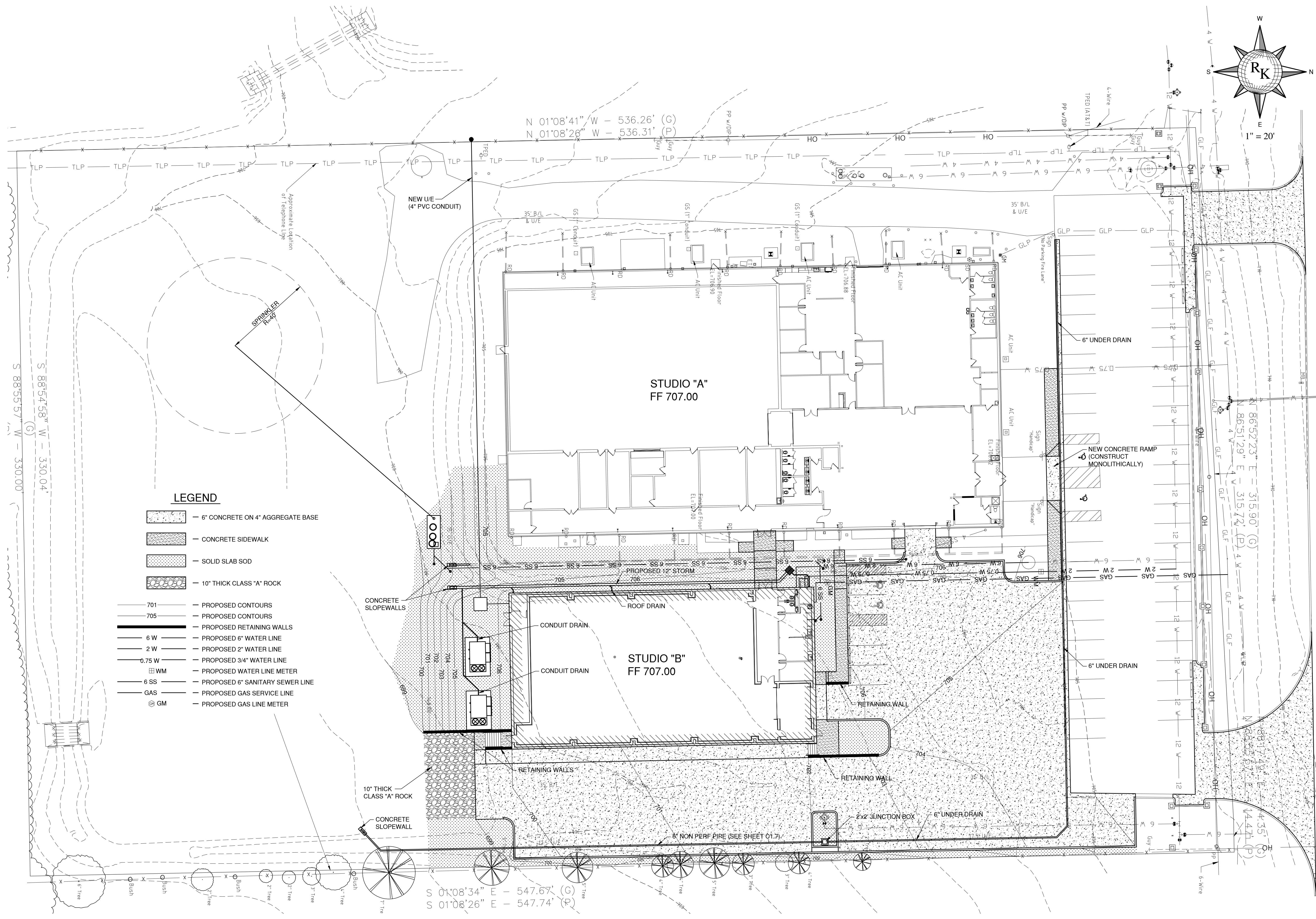
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 Bench Mark
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 E=2620907.70
 EL=701.86
 3/8" IPSC (Native Plans)

601
 Bench Mark
 N=488194.72
 E=2621213.72
 EL=699.53
 3/8" IPSC (Native Plans)

502
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 N=4883317
 E=2620916.86
 EL=707.47
 Chiseled "X" Set

501
 Bench Mark
 N=48834311
 E=2621922.08
 EL=706.98
 Chiseled "X" Set

500
 Benchmark
 N=4882020
 E=706.73



LEGEND

- 6" CONCRETE ON 4" AGGREGATE BASE
- CONCRETE SIDEWALK
- SOLID SLAB SOD
- 10" THICK CLASS "A" ROCK
- 701 — PROPOSED CONTOURS
- 705 — PROPOSED CONTOURS
- PROPOSED RETAINING WALLS
- 6 W — PROPOSED 6" WATER LINE
- 2 W — PROPOSED 2" WATER LINE
- 0.75 W — PROPOSED 3/4" WATER LINE
- WM — PROPOSED WATER LINE METER
- 6 SS — PROPOSED 6" SANITARY SEWER LINE
- GAS — PROPOSED GAS SERVICE LINE
- GM — PROPOSED GAS LINE METER

W
N
E
S

R_K

1" = 20'

mgm
design
group

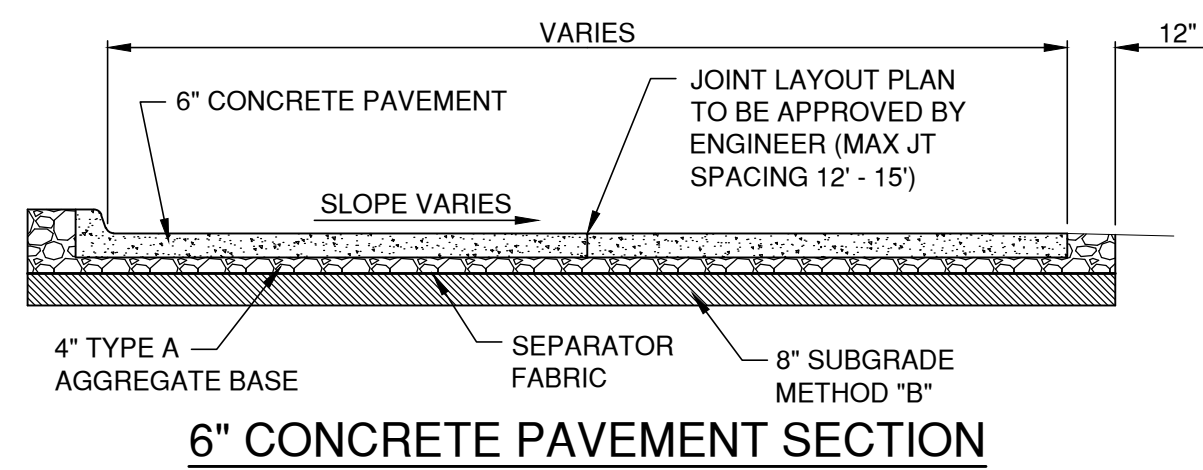
REGISTERED PROFESSIONAL ENGINEER
RICHARD L. KOSMAN
11234
OKLAHOMA 02/13/23

Cherokee Nation Businesses
Cherokee Nation Film Office
Owasso Campus Improvements

16990 East 116th Street North Owasso, Oklahoma 74055

JOB NUMBER
REVISIONS
DATE February 13, 2023
SHEET Layout Plan

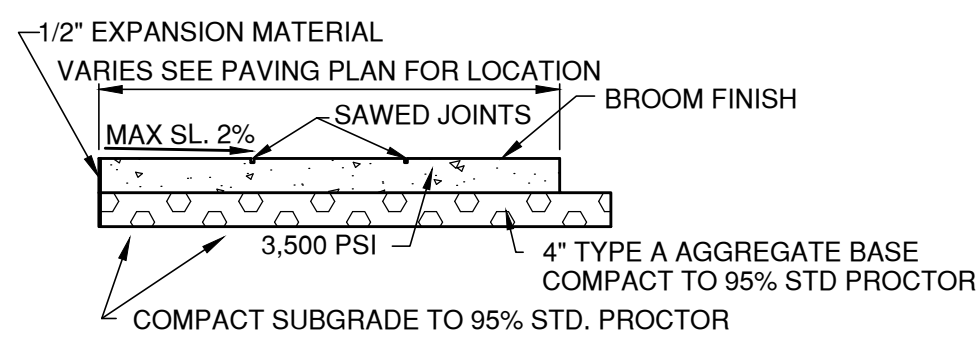
C1.1



6" CONCRETE PAVEMENT SECTION

SCALE: 1" = 4"

SEE GEO-TECH REPORT BY BUILDING & EARTH
PROJECT NO. : TU220196 OCTOBER 27, 2022

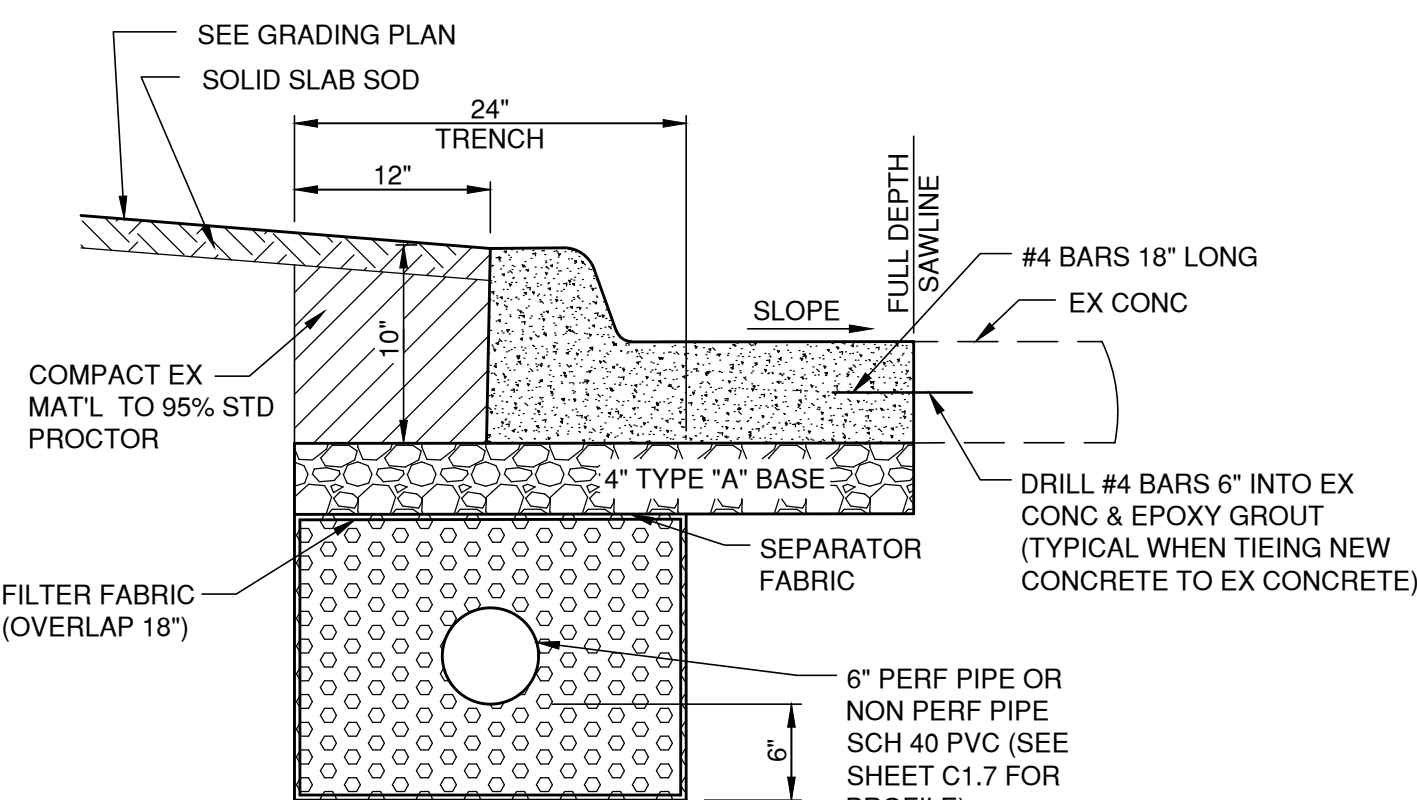


TYPICAL SECTION

NOT TO SCALE

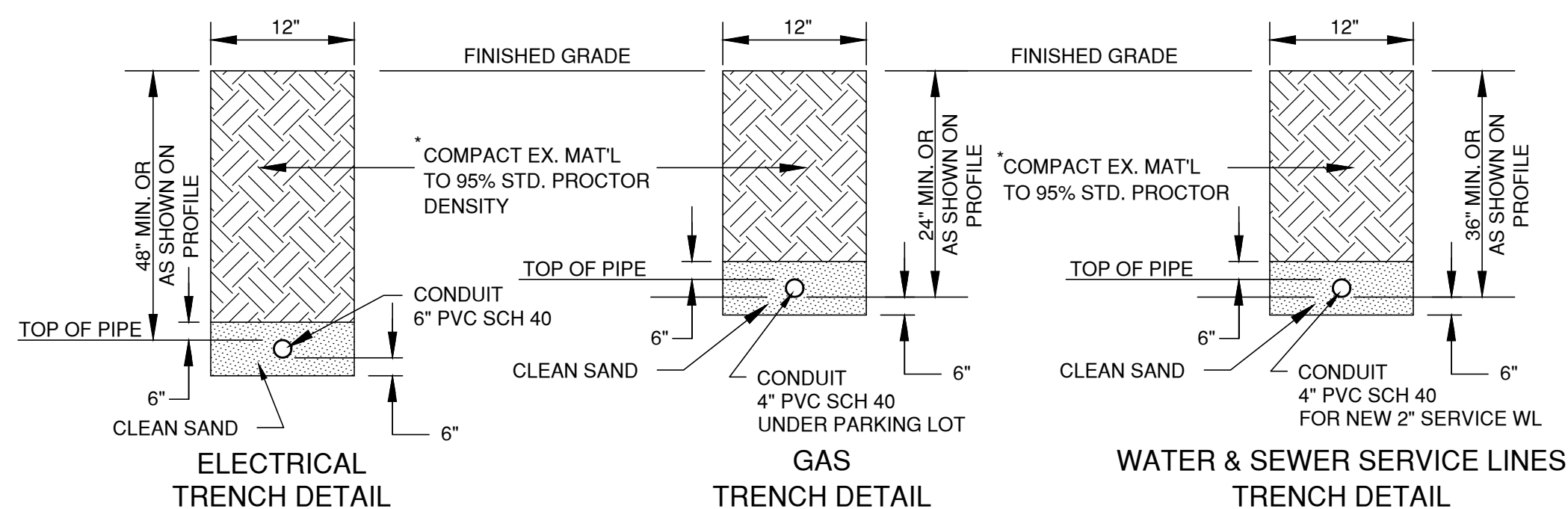
4" CONCRETE SIDEWALK

1. COST FOR NEW CONCRETE SIDEWALK SHALL INCLUDE ALL SAWING, COMPACTION OF SUBGRADE TO 95% STD. PROCTOR AND TYPE "A" AGGREGATE BASE.
2. CONTRACTOR TO PROVIDE 1/2" EXP. MAT'L. AT BUILDING.
3. SEE STANDARD FOR RAMPS.
4. USE SAME SECTION FOR MOTORCYCLE PARKING.
5. 1/2" EXPANSION JOINTS ARE TO BE INSTALLED AT LEAST EVERY 25'. THEY SHALL ALSO BE INSTALLED BETWEEN THE NEW SIDEWALK AND (A) CURBS, (B) INTERSECTING SIDEWALKS AND DRIVEWAYS, (C) STEPS, (D) RETAINING WALLS, (E) FIXED OBJECTS.
6. MAX. SLOPE 2%.
7. CONTRACTOR TO LAYOUT SIDEWALK JOINTS & GET APPROVAL FROM OWNER & ENGINEER BEFORE SAW CUTTING BEGINS.
8. SAW JOINTS SHALL 1" DEEP SHALL BE CUT AS SOON AS POSSIBLE AFTER MEDIUM BROOM FINISH WORK IS COMPLETE AND CONCRETE HAS CURED TO ACCEPT TYPE OF SAW EQUIPMENT.
9. PROPORTION CONCRETE TO PRODUCE A STRENGTH OF 3,500 PSI AT 28 DAYS WITH MINIMUM CEMENT CONTENT OF 5 1/2 SACKS PER CU. YD. AND 5 TO 7 PERCENT ENTRAINED AIR, EXCEPT WHERE OTHERWISE INDICATED ON DRAWINGS.



6" PERF PIPE UNDER DRAIN

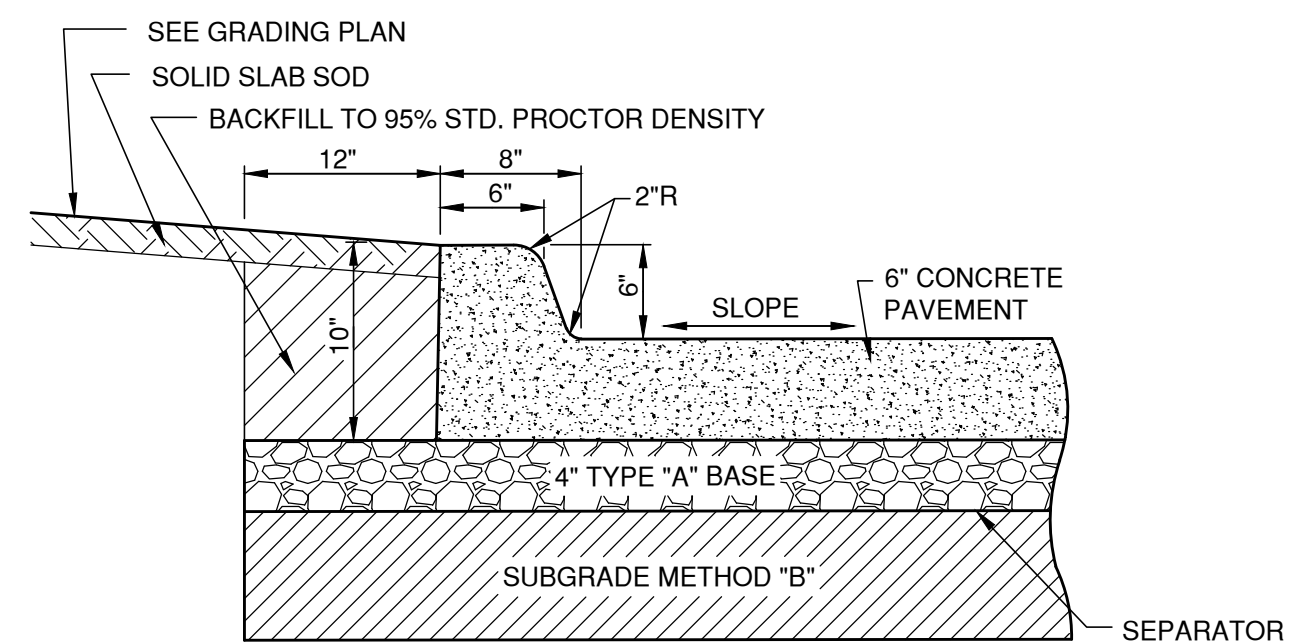
NOT TO SCALE



TYPICAL TRENCH DETAIL FOR CONDUITS

NOT TO SCALE

*USE TYPE "A" AGGREGATE BASE UNDER PARKING LOT, DRIVEWAY AND SIDEWALKS



6" MONOLITHIC CURB SECTION

NOT TO SCALE

UTILITY NOTES:

1. THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE AND EXCAVATION BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF EXISTING UTILITIES.
2. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES BEFORE CONNECTING TO ANY EXISTING LINES. CONTRACTOR SHALL COORDINATE AND SCHEDULE TIE-INS/CONNECTIONS WITH ALL UTILITY COMPANIES/OWNERS.
3. ALL UNDERGROUND LINES INSTALLED SHALL BE INSPECTED AND APPROVED BY THE TESTING LAB AND/OR UTILITY COMPANY HAVING AUTHORITY PRIOR TO BACKFILLING.
4. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICE.
5. THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE UTILITY COMPANY PRIOR TO CONSTRUCTION, ADJUSTMENT, OR RELOCATION OF EXISTING UTILITIES AS DESIGNATED ON THE PLANS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES REQUIRED.
7. CONTRACTOR SHALL PROVIDE ALL CONDUITS NECESSARY AS SHOWN ON THE PLANS. VERIFY LOCATION OF UTILITY TIE IN AND PROVIDE NYLON PULL CORDS INSIDE CONDUITS.
8. CONTRACTOR SHALL KEEP A DAILY AS-BUILT DRAWING ALONG WITH PICTURES OF ALL OF THE UNDERGROUND UTILITIES PRIOR TO BACKFILLING. PICTURES SHALL BE GIVEN TO ENGINEER, ARCHITECT AND OWNER'S REPRESENTATIVE ON A MONTHLY BASIS.

GRADING NOTES:

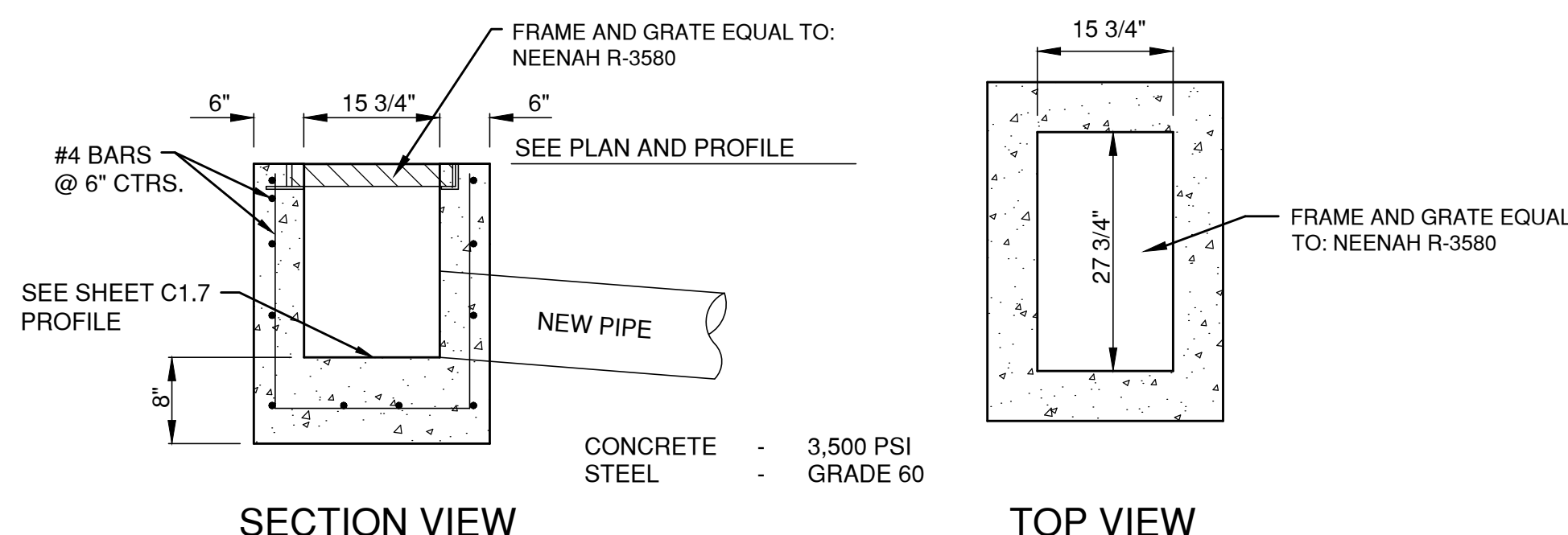
1. ALL GRADING, FINE GRADING, SUBGRADE COMPACTION, BASE MATERIAL, PAVING, SIDEWALKS AND EROSION CONTROL SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND CURRENT O.D.O.T. SPECIFICATIONS AND STANDARDS.
2. THE CONTRACTOR SHALL VERIFY UTILITY LOCATIONS BEFORE EXCAVATING.
3. STRIPPING, PROOF ROLLING, SUBGRADE SCARIFICATION AND COMPACTION, AND FILL CONSTRUCTION FOR THE SITE AND PAVING AREAS SHALL BE PERFORMED ACCORDING TO THE ODOT'S 2019 SPECIFICATIONS AND GEO-TECHNICAL REPORT.
4. CONTRACTOR SHALL PROVIDE WATER AS REQUIRED TO OBTAIN SPECIFIED COMPACTION REQUIREMENTS.
5. SUBGRADE STABILIZATION SHALL BE PER PLANS OR AS DIRECTED BY THE CONTRACTOR'S TESTING FIRM.
6. CIVIL ENGINEER WILL NOT INTERPRET SOILS REPORTS OR ACCEPT RESPONSIBILITY FOR ALTERNATIVE METHODS PROPOSED BY THE CONTRACTOR.
7. UNDERCUTTING OF SOFT SPOTS AND PLACEMENT OF EARTHWORK IS GOVERNED BY THE GEO-TECHNICAL REPORT FOR THE SITE.
8. CORRECTIVE MEASURES DIRECTED BY THE ENGINEER MAY INCLUDE COMPLETE REMOVAL AND REPLACEMENT AT NO COST TO THE OWNER IN CASES OF POOR WORKMANSHIP OR UNSATISFACTORY IN-PLACE CONDITIONS.
9. SITE GRADING SHALL NOT PROCEED UNTIL APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED.
10. THE CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS THROUGHOUT ALL PHASES OF CONSTRUCTION.

SITE NOTES:

1. THE WORK AND MATERIAL SHALL COMPLY WITH ALL CITY/COUNTY/STATE FEDERAL REGULATIONS CODES AND OSHA STANDARDS.
2. CONTRACTOR SHALL COORDINATE PLANS WITH OTHER ARCHITECTURAL AND SUB-CONSULTANT PLANS.
3. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE PROJECT SPECIFICATIONS
4. CONTRACTOR SHALL ENSURE ALL NECESSARY PERMITS ARE OBTAINED PRIOR TO CONSTRUCTION START.

GENERAL NOTES:

1. ALL GRADING, PAVING & STORM SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE OKLAHOMA DEPARTMENT OF TRANSPORTATION CURRENT STANDARD SPECIFICATIONS & STANDARDS AND ALL CITY OF STILLWELL CODES. ALL CONSTRUCTION TESTING SHALL BE IN ACCORDANCE WITH OKLAHOMA DEPARTMENT OF TRANSPORTATION (O.D.O.T.) 2019 MATERIAL AND TESTING e-Guide, FIELD SAMPLING, TESTING AND ACCEPTED GUIDES.
2. CONTRACTOR SHALL GIVE THE NOTIFICATION CENTER OF THE OKLAHOMA 'ONE-CALL SYSTEM INC'. NOTICE OF ANY EXCAVATION NO SOONER THAN TEN DAYS OR LATER THAN 72 HOURS (EXCLUDING SATURDAYS, SUNDAYS OR LEGAL HOLIDAYS), PRIOR TO COMMENCEMENT OF WORK. PHONE 1-800-522-6543.
3. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE DRAWINGS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE DRAWINGS AND WE ASSUME NO RESPONSIBILITY AS TO THE ACCURACY OF THEIR DEPICTED LOCATION ON THESE DRAWINGS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN, AND ALL OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE DRAWINGS BY VERIFICATION OF THEIR LOCATION IN THE FIELD PRIOR TO THE INITIATION OF THE ACTUAL PORTION OF THEIR WORK.
4. ALL CONSTRUCTION STAKING SHALL BE PERFORMED BY LICENSED SURVEYOR. ELECTRONIC DATA WILL BE MADE AVAILABLE TO THE SURVEYOR FOR HIS USE.
5. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS GOVERNING SAFETY, HEALTH, AND SANITATION. THE CONTRACTOR SHALL PROVIDE ALL SAFEGUARDS, SAFETY DEVICES AND PROTECTIVE EQUIPMENT, AND TAKE ANY OTHER NEEDED ACTIONS ON HIS OWN RESPONSIBILITY OR AS THE ENGINEER MANY DETERMINE REASONABLY NECESSARY TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF THE WORK COVERED BY THE CONTRACT. THE CONTRACTOR SHALL COMPLY WITH THE LATEST OSHA REGULATIONS.
6. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY AND ALL PERMITS REQUIRED.
7. ALL DIMENSIONS SHALL BE COORDINATED WITH ENGINEER. AN ELECTRONIC FORMAT WILL BE AVAILABLE TO SURVEYOR.
8. THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR CLARIFICATION IF A DISCREPANCY OR INCONSISTENCY IS IDENTIFIED ON THE PLANS AND/OR SPECIFICATIONS IMMEDIATELY.
9. CONTRACTOR SHALL KEEP ON SITE A CURRENT SET OF THE APPROVED CONSTRUCTION WORKING DRAWINGS AT ALL TIMES. THE CONTRACTOR SHALL MARK (IN RED) ALL APPROVED CHANGES INCURRED FOLLOWING APPROVAL OF THE INITIAL DRAWINGS. THESE CHANGES MAY BE INITIATED FROM FIELD CONDITIONS OR CHANGES MADE BY THE DESIGN ENGINEER. EXCEPT FOR MINOR FIELD ADJUSTMENTS, ALL CHANGES SHALL BE REVIEWED AND AGREED TO BY THE DESIGN ENGINEER PRIOR TO FINAL APPROVAL OF THE PROJECT. THE CONTRACTOR SHALL SUBMIT THE WORKING DRAWINGS TO THE DESIGN ENGINEER AFTER FINAL INSPECTION OF THE PROJECT TO SERVE AS A BASIS FOR DEVELOPMENT OF THE FINAL AS-BUILT RECORD DRAWINGS.
10. THE CONTRACTOR SHALL VERIFY UTILITY LOCATIONS BEFORE EXCAVATING.
11. ALL EXISTING TOPSOIL SHALL BE STRIPPED AND STOCKPILED IN AN AREA APPROVED BY THE OWNER.
12. STRIPPING, PROOF ROLLING, SUBGRADE SCARIFICATION, SUBGRADE MODIFICATION AND COMPACTION, AND FILL CONSTRUCTION FOR THE SITE AND PAVING AREAS AND SHALL BE PERFORMED ACCORDING TO THE ODOT'S 2019 SPECIFICATIONS AND A GEO-TECHNICAL REPORT SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL BY THE CONTRACTORS GEO-TECH LAB CONSULTANT.
13. CONTRACTOR SHALL PROVIDE WATER AS REQUIRED TO OBTAIN SPECIFIED COMPACTION REQUIREMENTS AND SHALL CONTACT THE CITY OF STILLWELL FOR METER PERMITS.
14. SUBGRADE STABILIZATION SHALL BE PER PLANS OR AS DIRECTED BY THE CONTRACTOR'S TESTING FIRM.
15. AN INDEPENDENT THIRD PARTY TESTING SHALL BE BY THE CONTRACTOR.
16. UNDERCUTTING OF SOFT SPOTS AND/OR USING STABILIZATION PER CONTRACTOR'S GEO-TECHNICAL FIRM RECOMMENDATION SHALL BE DETERMINED IN THE FIELD.
17. SITE GRADING SHALL NOT PROCEED UNTIL APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED.
18. ALL UNSURFACED AREAS DISTURBED BY GRADING OR FILLING OPERATIONS SHALL RECEIVE 3" OF TOPSOIL TO FINAL GRADE. THE TOPSOIL SHALL BE WATER FLOODED, DRIED AND PROOF-ROLLED PRIOR TO PLACEMENT OF SOLID SLAB SOD.
19. THE CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE THROUGHOUT ALL PHASES OF CONSTRUCTION.
20. ALL EXCESS MATERIAL SHALL BECOME THE PROPERTY OF AND BE DISPOSED OF BY THE CONTRACTOR IN A MANNER APPROVED BY THE ENGINEER.
21. THE CONTRACTOR SHALL PROVIDE A PROPOSED TRAFFIC CONTROL PLAN FOR APPROVAL BY THE ENGINEER PRIOR TO BEGINNING WORK. CONSTRUCTION TRAFFIC CONTROL WILL BE INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, AND APPLICABLE O.D.O.T. STANDARD DRAWINGS. PRICE BID FOR THIS ITEM SHALL BE PAYMENT IN FULL FOR THE INSTALLATION, MAINTENANCE AND SUBSEQUENT REMOVAL OF ALL NECESSARY CONSTRUCTION TRAFFIC CONTROL DEVICES REQUIRED FOR COMPLETION OF THE PROJECT.
22. USE CRAFTCO ACTION PAVEMENT LP. PRO OR EQUAL. PAVEMENT SEALER PER MANUFACTURER SPECIFICATIONS.

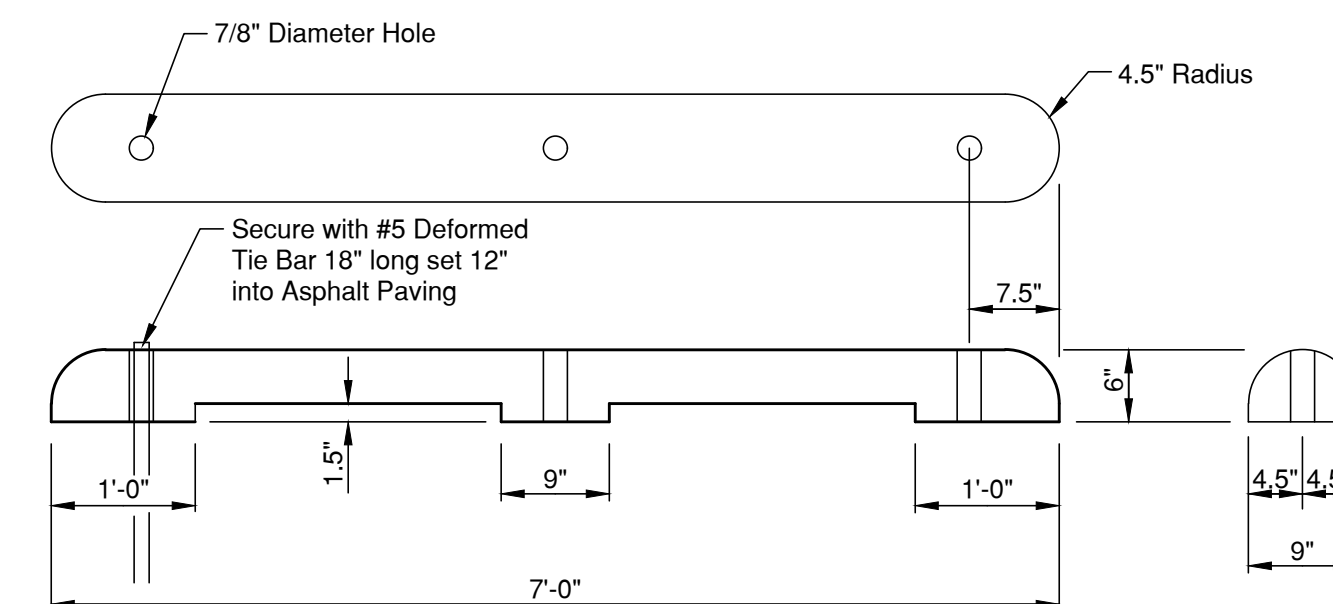


SECTION VIEW

TOP VIEW

AREA INLET DETAILS

NTS.



CONCRETE BUMPER DETAIL (TYPICAL)

NOT TO SCALE

Cherokee Nation Businesses
Cherokee Nation Film Office
Owasso Campus Improvements
 16990 East 116th Street North Owasso, Oklahoma 74055



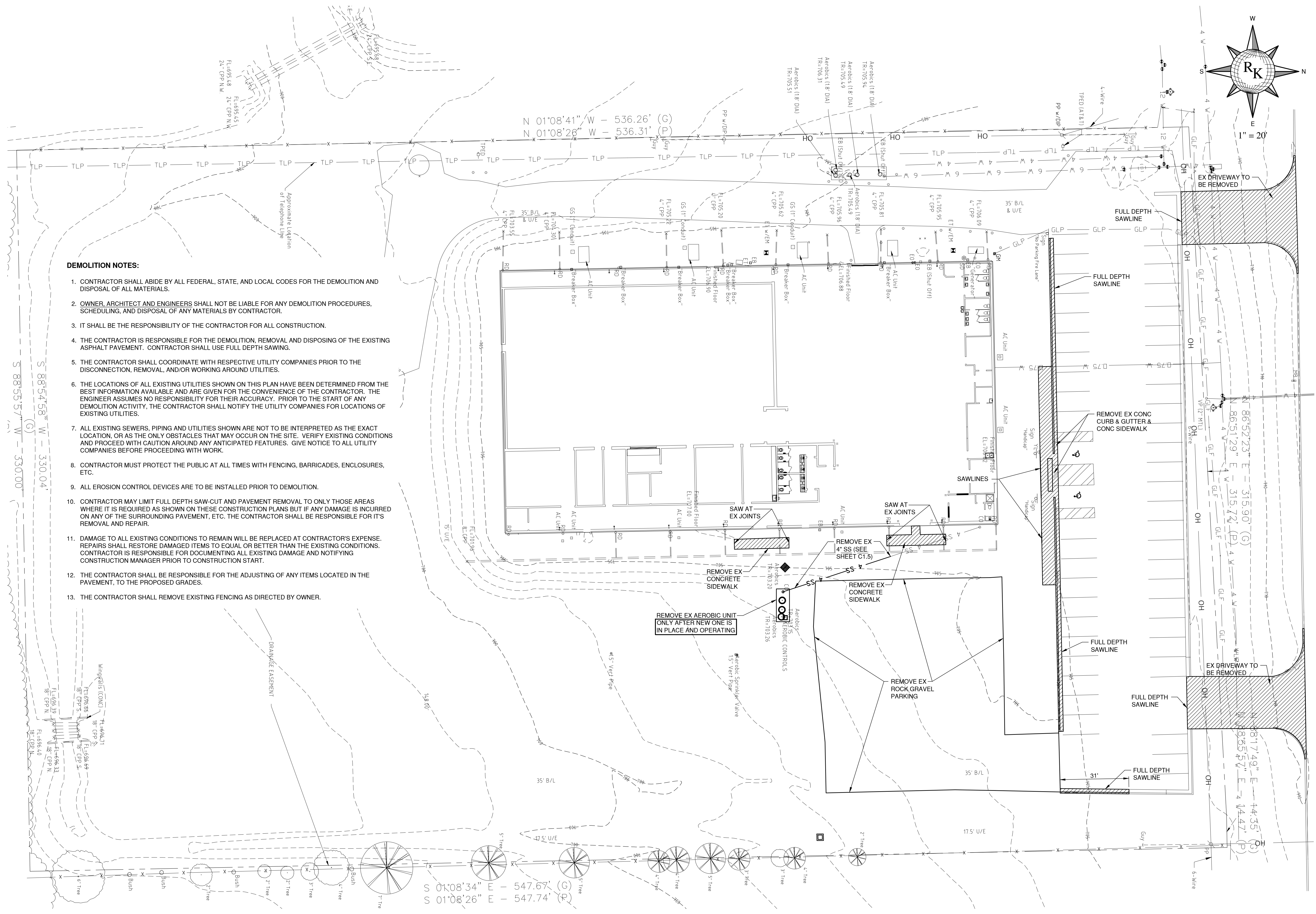
JOB NUMBER
 REVISIONS
 DATE February 13, 2023
 SHEET Typical Sections & Details

C1.2

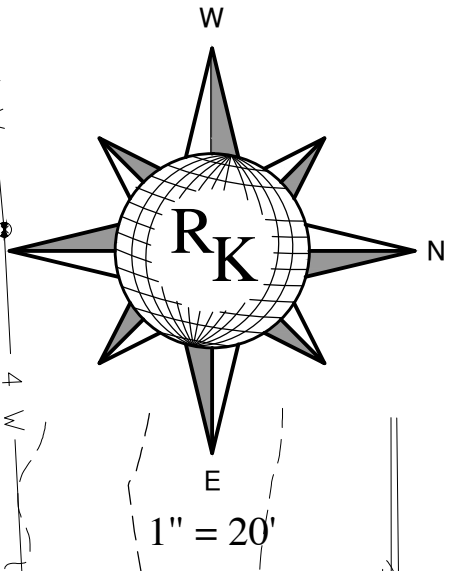
Cherokee Nation Businesses
Cherokee Nation Film Office
Owasso Campus Improvements
16990 East 116th Street North Owasso, Oklahoma 74055

JOB NUMBER
REVISIONS
DATE February 13, 2023
SHEET Demolition Plan

C1.3



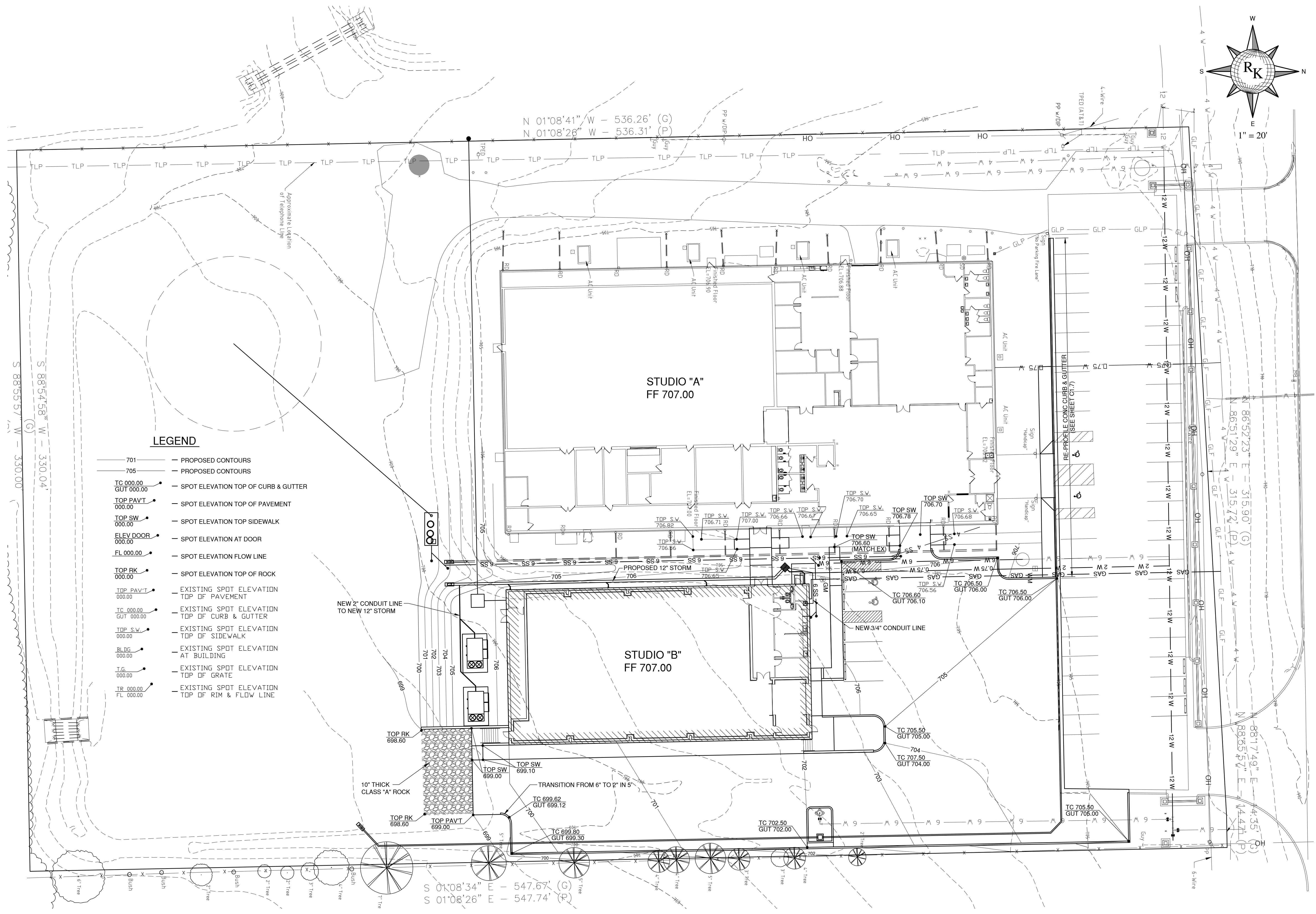
- DEMOLITION NOTES:**
- CONTRACTOR SHALL ABIDE BY ALL FEDERAL, STATE, AND LOCAL CODES FOR THE DEMOLITION AND DISPOSAL OF ALL MATERIALS.
 - OWNER, ARCHITECT AND ENGINEERS SHALL NOT BE LIABLE FOR ANY DEMOLITION PROCEDURES, SCHEDULING, AND DISPOSAL OF ANY MATERIALS BY CONTRACTOR.
 - IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR ALL CONSTRUCTION.
 - THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL AND DISPOSING OF THE EXISTING ASPHALT PAVEMENT. CONTRACTOR SHALL USE FULL DEPTH SAWING.
 - THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE DISCONNECTION, REMOVAL, AND/OR WORKING AROUND UTILITIES.
 - THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR LOCATIONS OF EXISTING UTILITIES.
 - ALL EXISTING SEWERS, PIPING AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES BEFORE PROCEEDING WITH WORK.
 - CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC.
 - ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED PRIOR TO DEMOLITION.
 - CONTRACTOR MAY LIMIT FULL DEPTH SAW-CUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE CONSTRUCTION PLANS BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR.
 - DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE. REPAIRS SHALL RESTORE DAMAGED ITEMS TO EQUAL OR BETTER THAN THE EXISTING CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING ALL EXISTING DAMAGE AND NOTIFYING CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION START.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ADJUSTING OF ANY ITEMS LOCATED IN THE PAVEMENT, TO THE PROPOSED GRADES.
 - THE CONTRACTOR SHALL REMOVE EXISTING FENCING AS DIRECTED BY OWNER.



N 01°08'41" W - 536.26' (G)
N 01°08'26" W - 536.31' (P)

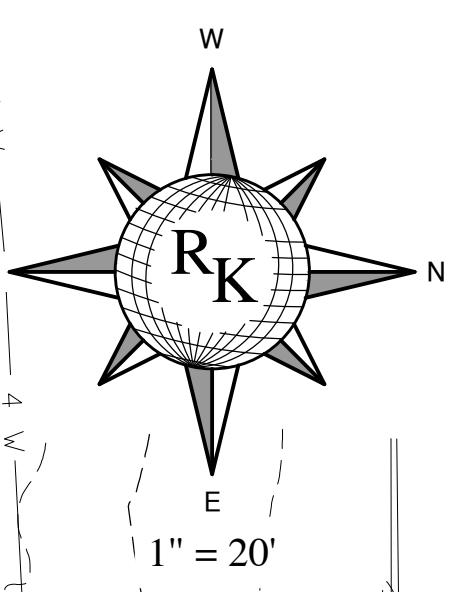
S 88°55'57" W - 330.04'
S 88°54'58" W - 330.04'

S 01°08'34" E - 547.67' (G)
S 01°08'26" E - 547.74' (P)



LEGEND

- 701 — PROPOSED CONTOURS
- 705 — PROPOSED CONTOURS
- TC 000.00 — SPOT ELEVATION TOP OF CURB & GUTTER
- GUT 000.00 — SPOT ELEVATION TOP OF PAVEMENT
- TOP PAVT 000.00 — SPOT ELEVATION TOP OF SIDEWALK
- TOP SW 000.00 — SPOT ELEVATION AT DOOR
- ELEV DOOR 000.00 — SPOT ELEVATION FLOW LINE
- FL 000.00 — SPOT ELEVATION TOP OF ROCK
- TOP RK 000.00 — EXISTING SPOT ELEVATION TOP OF PAVEMENT
- TC 000.00 — EXISTING SPOT ELEVATION TOP OF CURB & GUTTER
- TOP S.W. 000.00 — EXISTING SPOT ELEVATION TOP OF SIDEWALK
- BLDG 000.00 — EXISTING SPOT ELEVATION AT BUILDING
- T.G. 000.00 — EXISTING SPOT ELEVATION TOP OF GRATE
- TR 000.00 — EXISTING SPOT ELEVATION TOP OF RIM & FLOW LINE
- FL 000.00 —

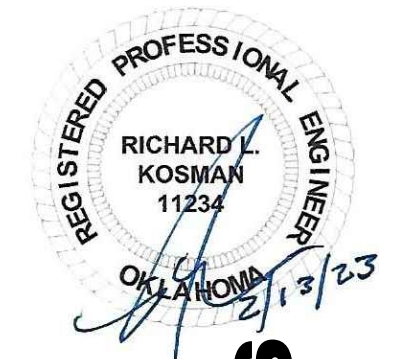



 REGISTERED PROFESSIONAL ENGINEER
 RICHARD L. KOSMAN
 11234
 OKLAHOMA 02/13/23

Cherokee Nation Businesses
Cherokee Nation Film Office
Owasso Campus Improvements
 16990 East 116th Street North Owasso, Oklahoma 74055

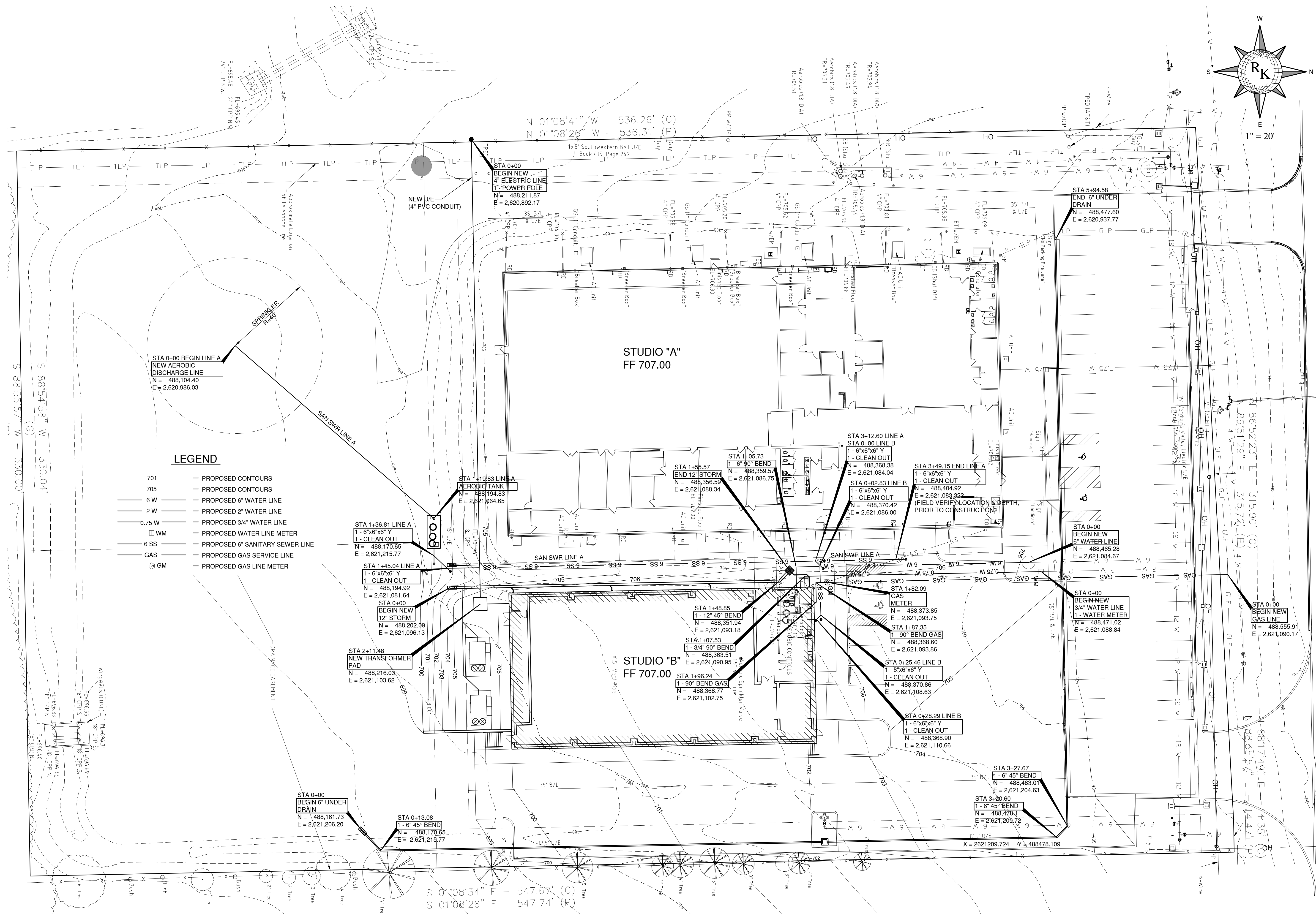
JOB NUMBER
 REVISIONS
 DATE February 13, 2023
 SHEET Grading Plan

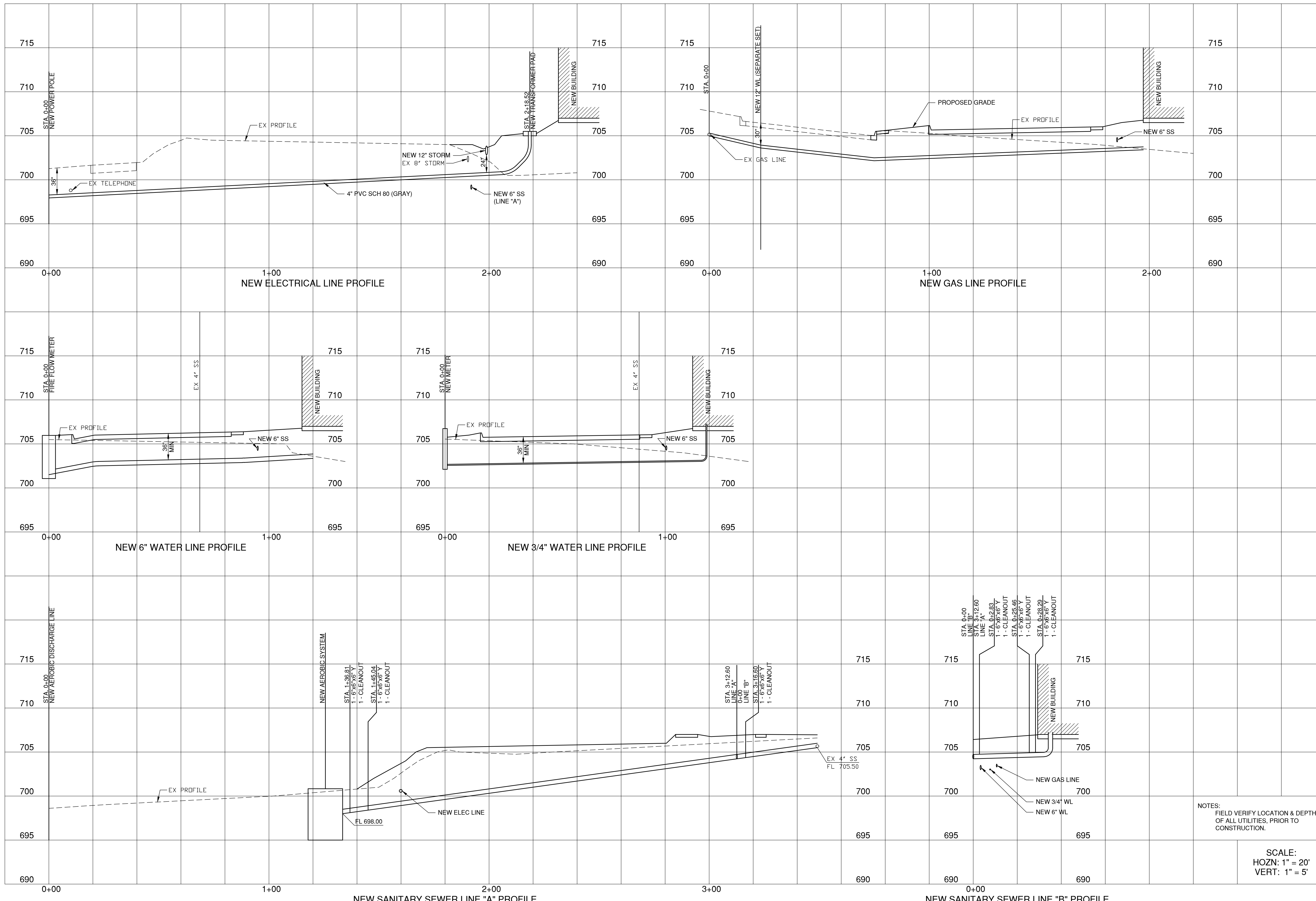
C1.4



**Cherokee Nation Film Office
Owasso Campus Improvements**
16990 East 116th Street North Owasso, Oklahoma 74055

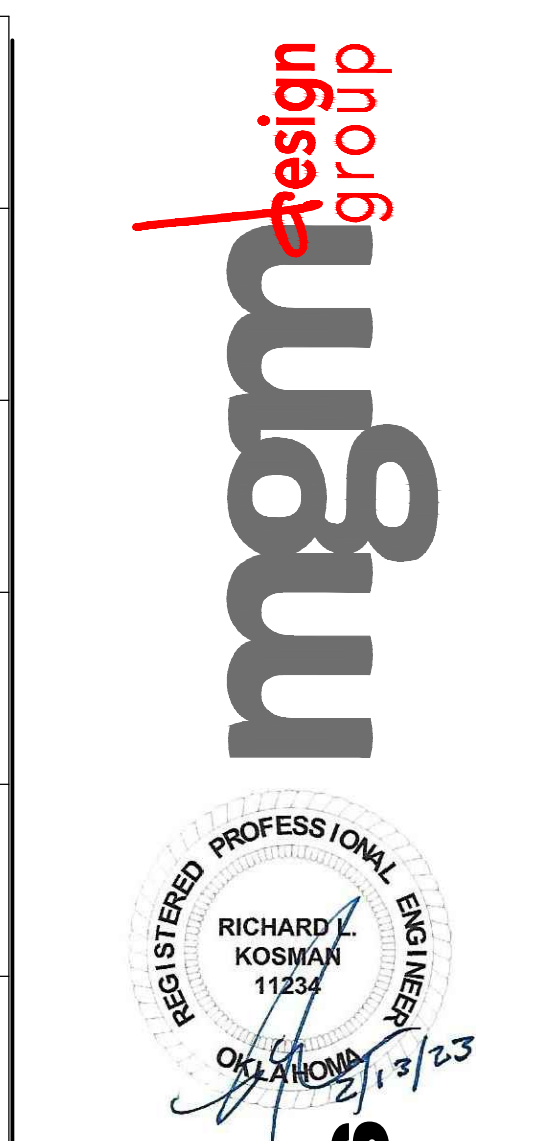
JOB NUMBER
REVISIONS
DATE February 13, 2023
SHEET Utility Plan





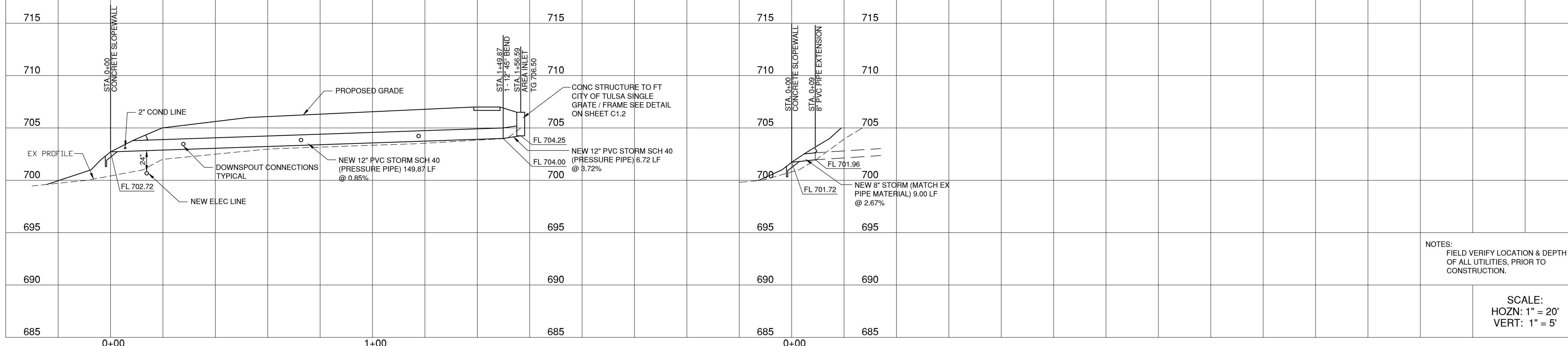
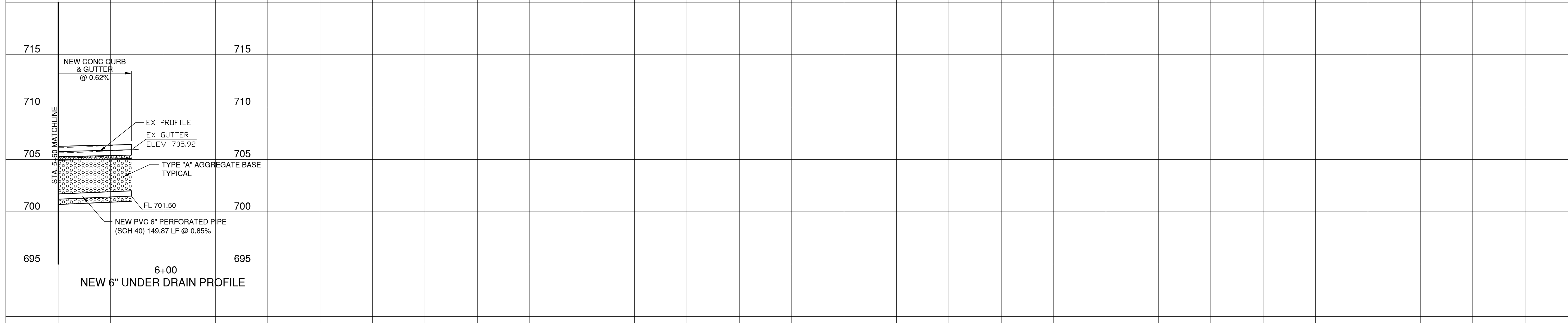
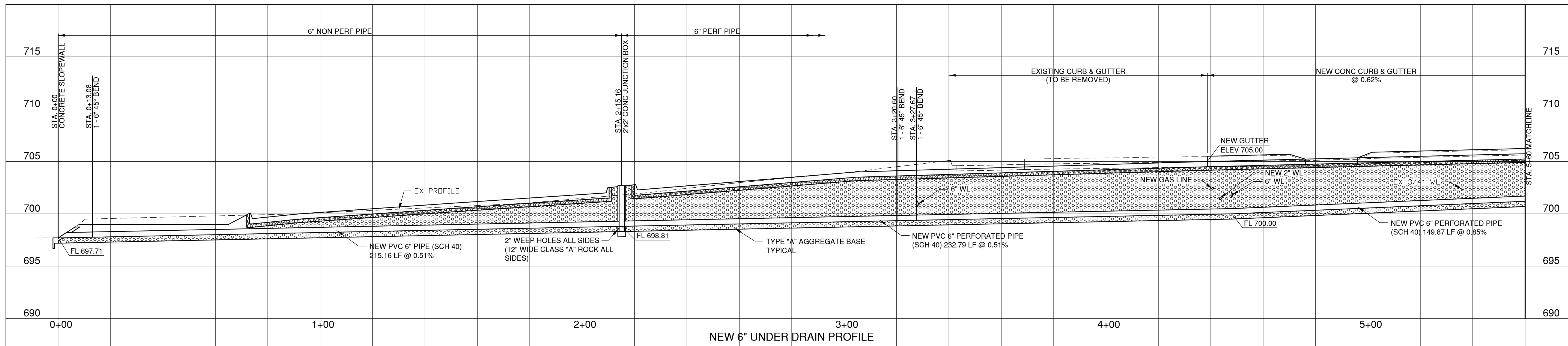
NOTES:
 FIELD VERIFY LOCATION & DEPTH
 OF ALL UTILITIES, PRIOR TO
 CONSTRUCTION.

SCALE:
 HOZN: 1" = 20'
 VERT: 1" = 5'



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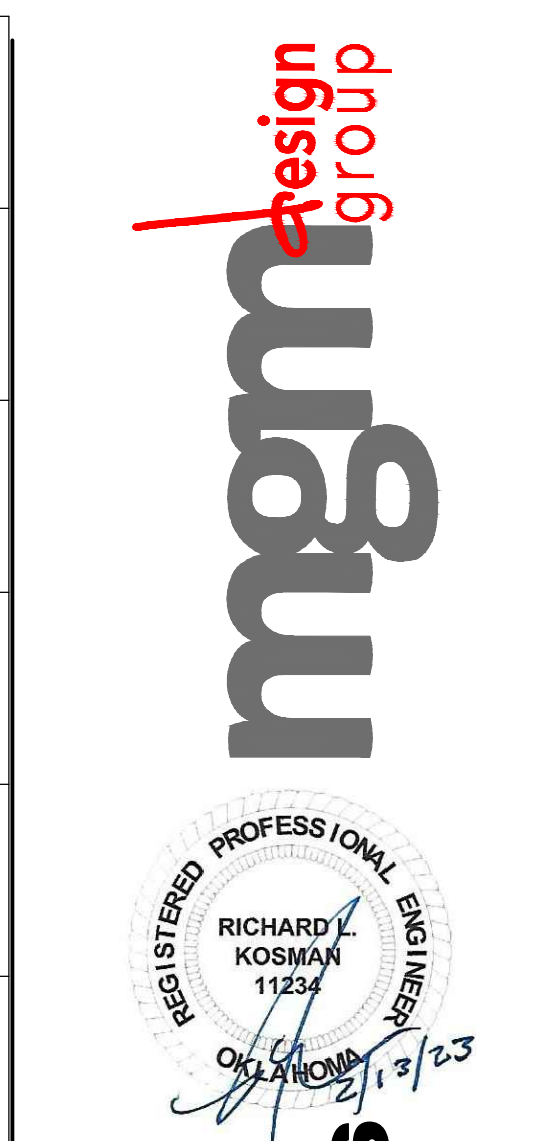
JOB NUMBER
 REVISIONS
 DATE February 13, 2023
 SHEET Utility Profiles



NEW 12" STORM SEWER PROFILE NEW 8" STORM SEWER EXTENSION PROFILE

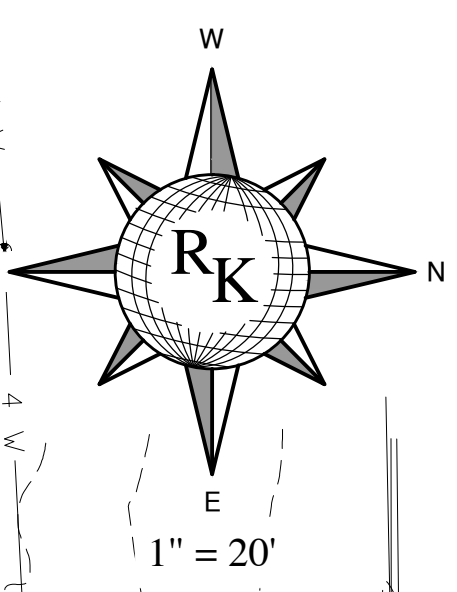
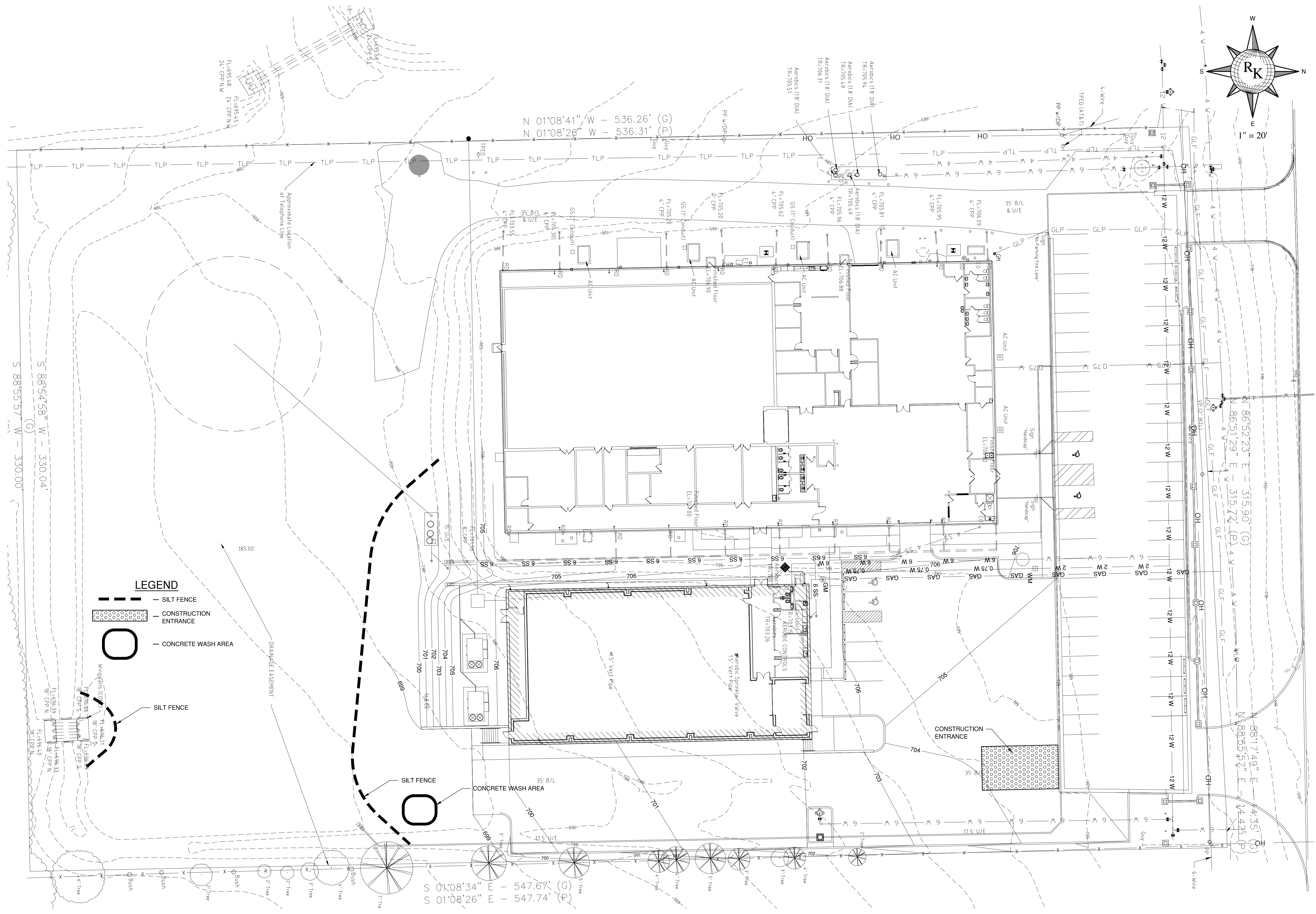
NOTES:
FIELD VERIFY LOCATION & DEPTH
OF ALL UTILITIES, PRIOR TO
CONSTRUCTION.

SCALE:
HOZN: 1" = 20'
VERT: 1" = 5'

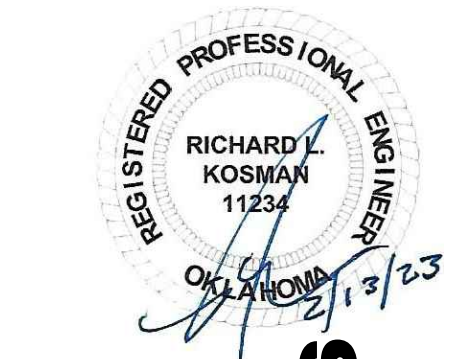


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JOB NUMBER
 REVISIONS
 DATE February 13, 2023
 SHEET Storm Sewer Profiles



- LEGEND**
- SILT FENCE
 - CONSTRUCTION ENTRANCE
 - CONCRETE WASH AREA

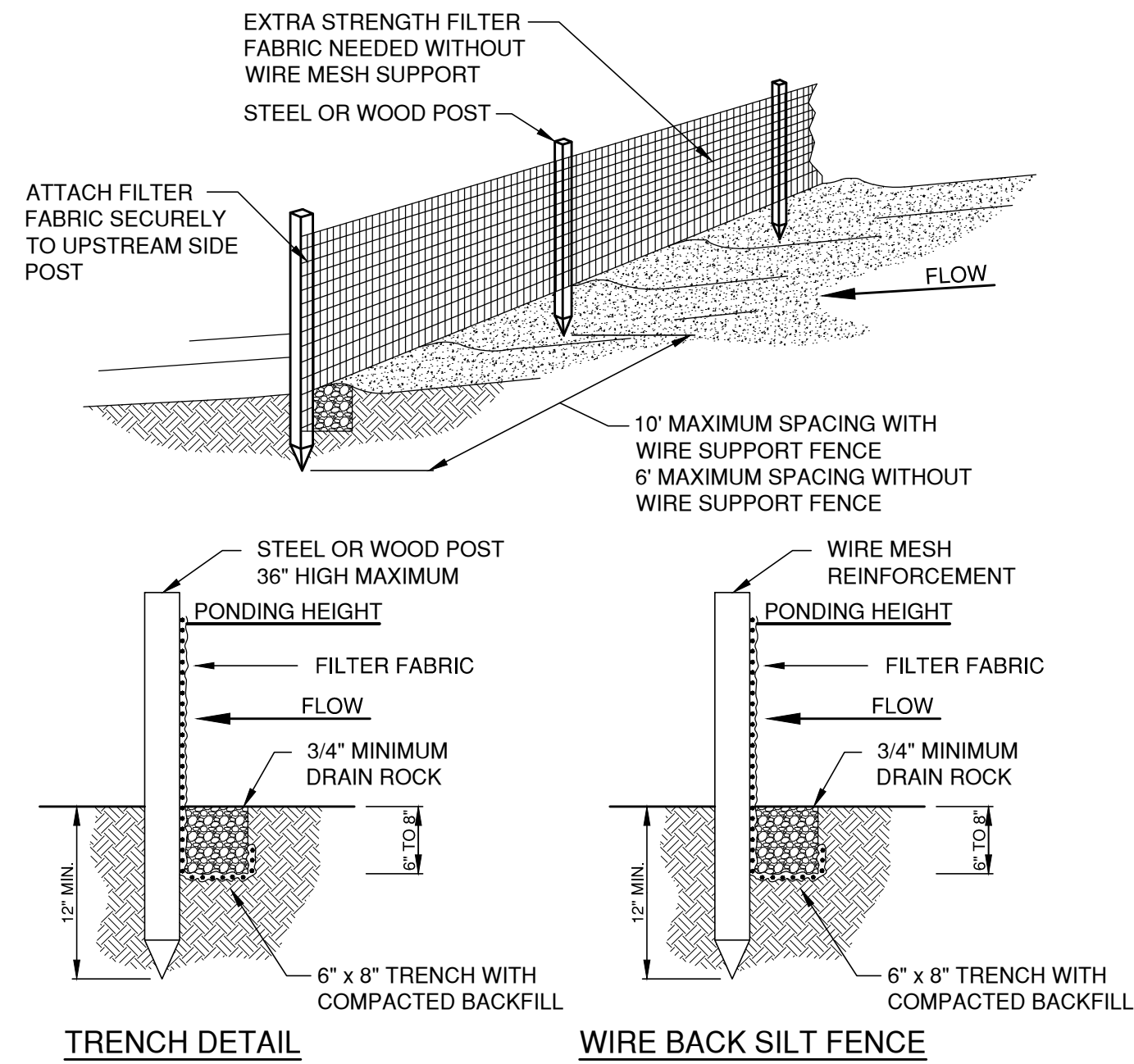


mgm
 design
 group

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JOB NUMBER
 REVISIONS
 DATE February 13, 2023
 SHEET Soil Erosion Control Plan

C1.8



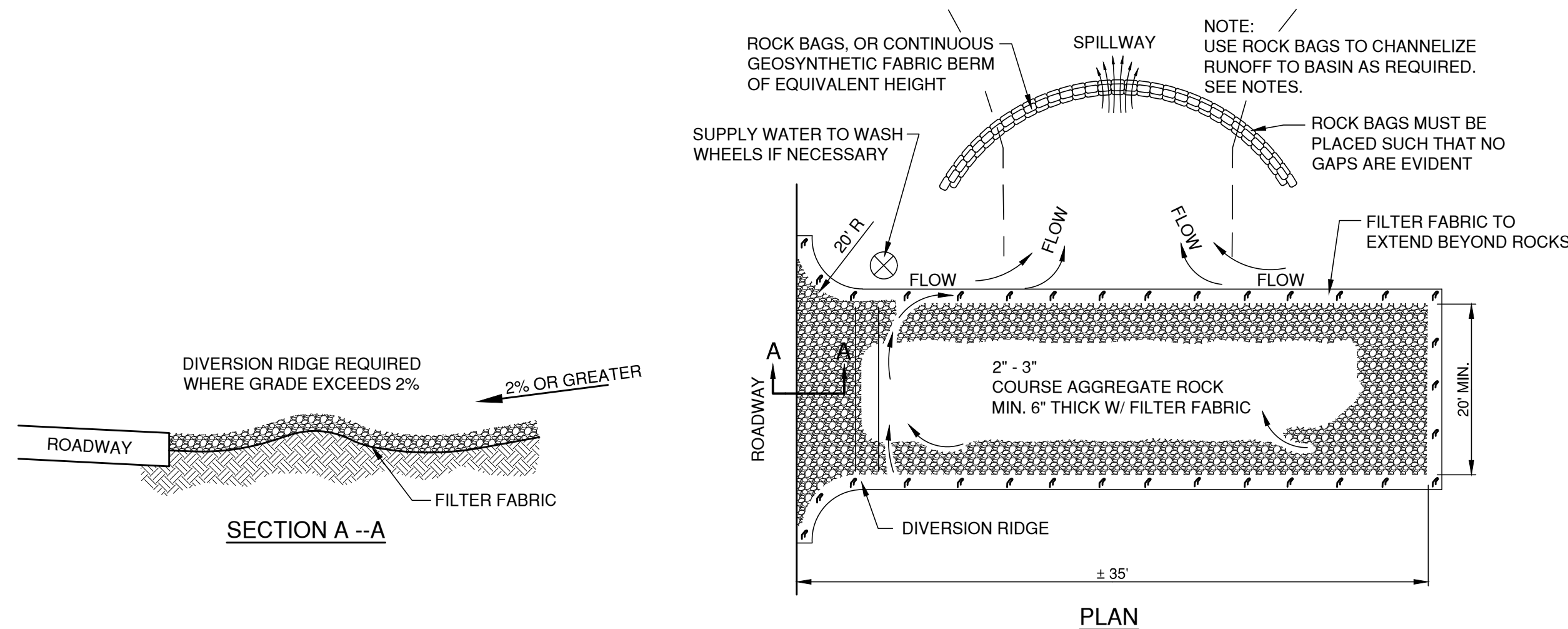
TRENCH DETAIL

WIRE BACK SILT FENCE

NOTES:

- MUST BE INSTALLED PROPERLY TO AVOID NOTICE OF VIOLATION.
- SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE POUNDING EFFICIENCY.
- INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. ACCUMULATED SEDIMENT SHOULD BE REMOVED FROM THE FENCE BASE WHEN THE SEDIMENT REACHES ONE-THIRD TO ONE-HALF THE FENCE HEIGHT.
- REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE TO SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

SILT FENCE

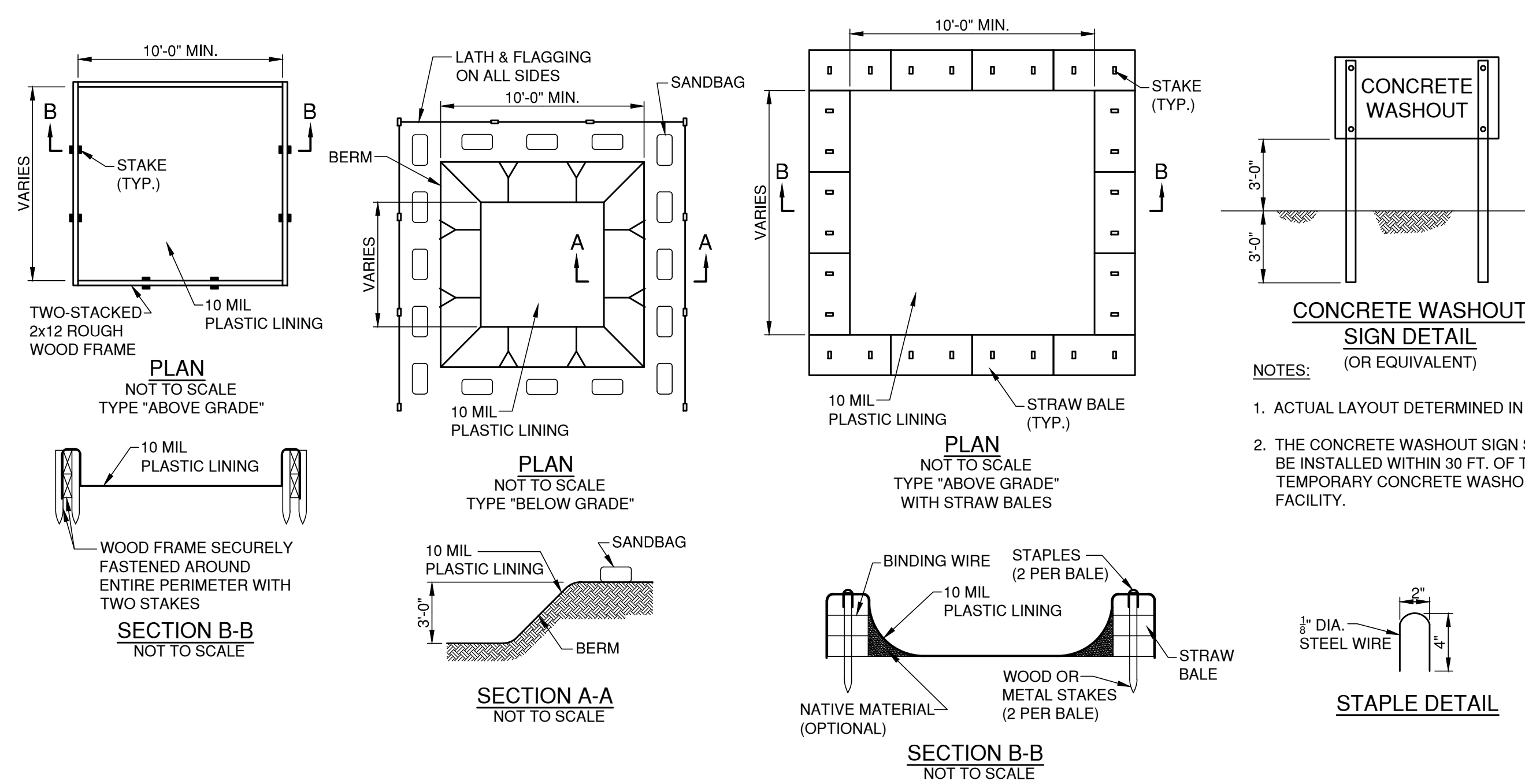


PLAN

NOTES:

- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
- WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
- BAGS OF WOVEN GEO-TEXTILE FABRIC, FILLED WITH GRAVEL MUST BE LAYERED SUCH THAT NO GAPS ARE EVIDENT.

TEMPORARY ROCK CONSTRUCTION ENTRANCE/EXIT



CONCRETE WASHOUT DETAILS

ONSITE TEMPORARY CONCRETE WASHOUT FACILITY, TRANSIT TRUCK WASHOUT PROCEDURES


- TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE LOCATED A MINIMUM OF 50 FT. FROM STORM DRAIN INLETS, OPEN DRAINAGE FACILITIES AND WATERCOURSES. EACH FACILITY SHOULD BE LOCATED AWAY FROM CONSTRUCTION TRAFFIC OR ACCESS AREAS TO PREVENT DISTURBANCE OR TRACKING.
- A SIGN SHOULD BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES.
- TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE CONSTRUCTED ABOVE GRADE OR BELOW GRADE AT THE OPTION OF THE CONTRACTOR. TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
- TEMPORARY WASHOUT FACILITIES SHOULD HAVE A TEMPORARY PIT OR BERMED AREAS OF SUFFICIENT VOLUME TO COMPLETELY CONTAIN ALL LIQUID AND WASTE CONCRETE MATERIALS GENERATED DURING WASHOUT PROCEDURES.
- WASHOUT OF CONCRETE TRUCKS SHOULD BE PERFORMED IN DESIGNATED AREAS ONLY.
- ONLY CONCRETE FROM MIXER TRUCK CHUTES SHOULD BE WASHED INTO CONCRETE WASHOUT.
- CONCRETE WASHOUT FROM CONCRETE PUMPER BINS CAN BE WASHED INTO CONCRETE PUMPER TRUCKS AND DISCHARGED INTO DESIGNATED WASHOUT AREA OR PROPERLY DISPOSED OF OFFSITE.
- ONCE CONCRETE WASTES ARE WASHED INTO THE DESIGNATED AREA AND ALLOWED TO HARDEN, THE CONCRETE SHOULD BE BROKEN UP, REMOVED AND DISPOSED OF OFFSITE IN A LEGAL MANNER. DISPOSE OF HARDENED CONCRETE ON A REGULAR BASIS.
- TEMPORARY CONCRETE WASHOUT FACILITY (TYPE ABOVE GRADE)
 - TEMPORARY WASHOUT FACILITY (TYPE ABOVE GRADE) SHOULD BE CONSTRUCTED AS SHOWN IN THE DETAILS ON THIS SHEET WITH A RECOMMENDED MINIMUM LENGTH AND MINIMUM WIDTH OF 10 FT., BUT WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
 - STRAW BALES, WOOD STAKES AND SANDBAG MATERIALS SHOULD CONFORM TO THE PROVISIONS IN THE EROSION AND SEDIMENT CONTROL PLAN.
 - PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.
- TEMPORARY CONCRETE WASHOUT FACILITY (TYPE BELOW GRADE)
 - TEMPORARY WASHOUT FACILITY (TYPE BELOW GRADE) SHOULD BE CONSTRUCTED AS SHOWN IN THE DETAILS ON THIS SHEET WITH A RECOMMENDED MINIMUM LENGTH AND MINIMUM WIDTH OF 10 FT., BUT WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
 - LATH AND FLAGGING SHOULD BE COMMERCIAL TYPE.
 - PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

REMOVAL OF TEMPORARY CONCRETE WASHOUT FACILITIES

- WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED SHALL BE REMOVED AND DISPOSED OF. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF
- HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED AND REPAIRED.

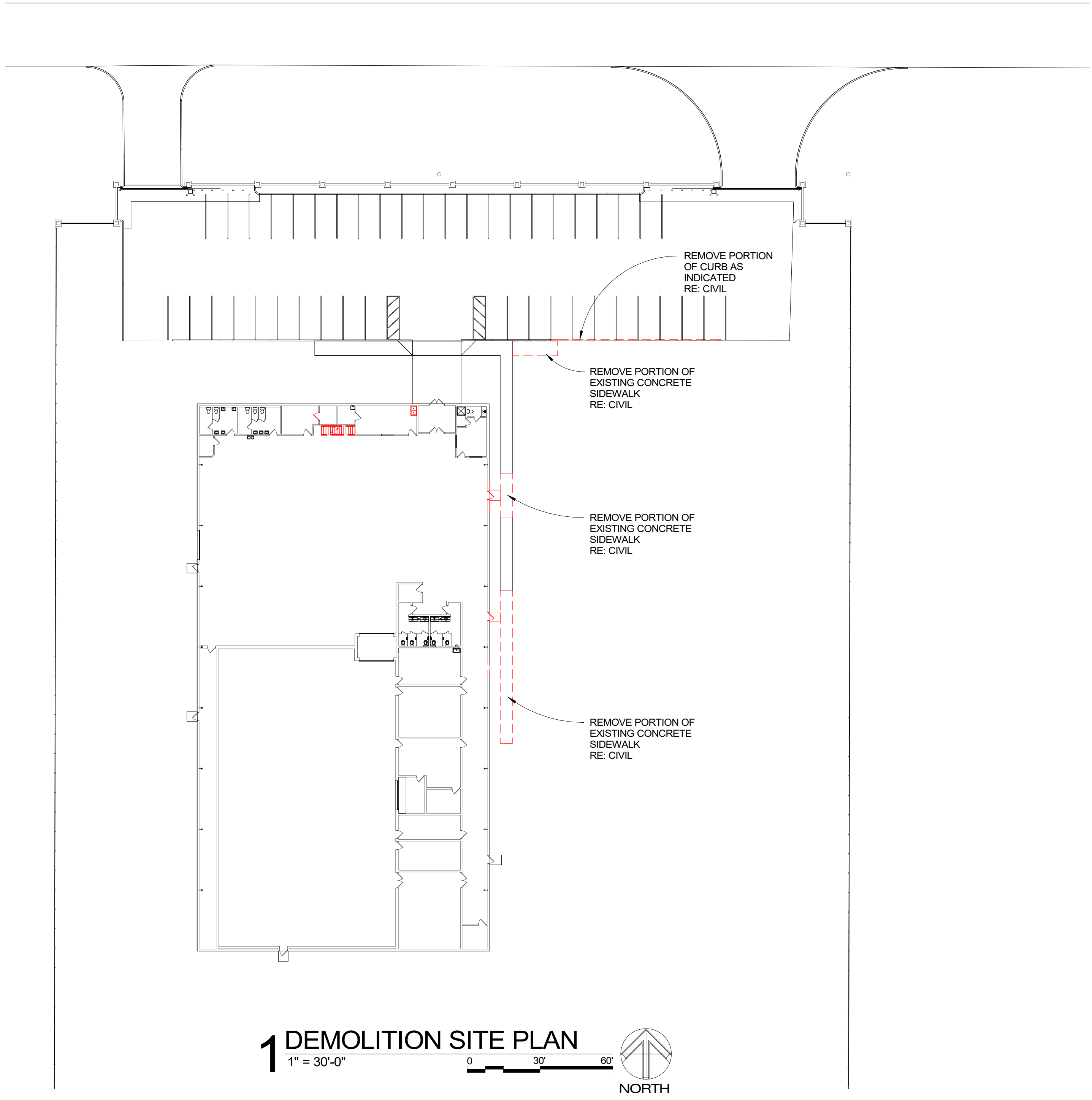
INSPECTION AND MAINTENANCE

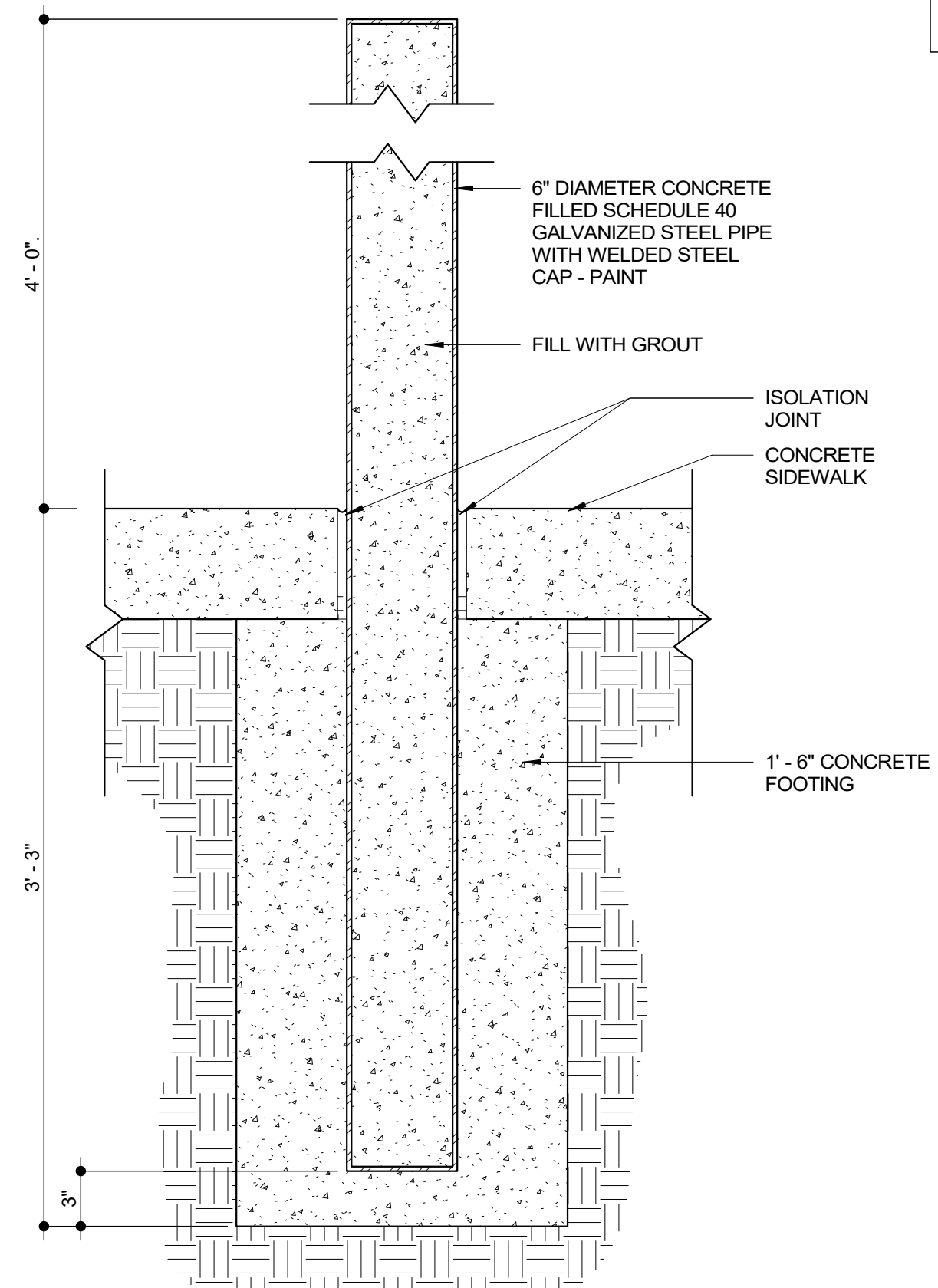
- INSPECT AND VERIFY THAT ACTIVITY-BASED BMPs ARE IN PLACE PRIOR TO THE COMMENCEMENT OF ASSOCIATED ACTIVITIES. WHEN ACTIVITIES ASSOCIATED WITH THE BMP ARE UNDER WAY, INSPECT WEEKLY DURING THE RAINY SEASON AND AT TWO WEEK INTERVALS IN THE NON-RAINY SEASON TO VERIFY CONTINUED BMP IMPLEMENTATION.
- TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE MAINTAINED TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM FREEBOARD OF 4 INCHES FOR ABOVE GRADE FACILITIES AND 12 INCHES FOR BELOW GRADE FACILITIES. MAINTAINING TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD INCLUDE REMOVING AND DISPOSING OF HARDENED CONCRETE AND RETURNING THE FACILITIES TO A FUNCTIONAL CONDITION. HARDENED CONCRETE MATERIALS SHALL BE REMOVED AND DISPOSED OF.
- WASHOUT FACILITIES SHALL BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75% FULL.


 REGISTERED PROFESSIONAL ENGINEER
 RICHARD L. KOSMAN
 11234
 OKLAHOMA 02/13/23

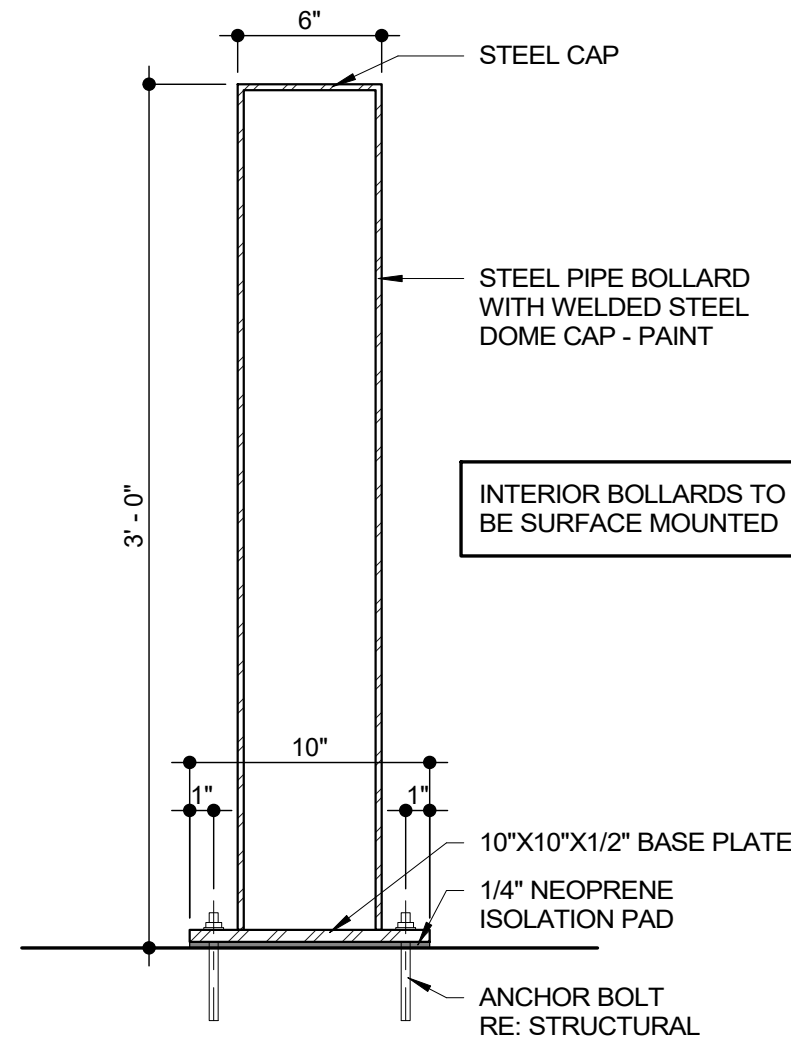
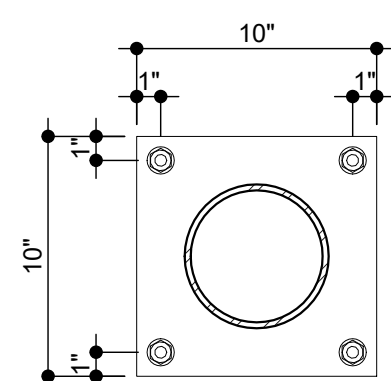
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Cherokee Nation Film Office
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JOB NUMBER
 REVISIONS
 DATE February 13, 2023
 SHEET Soil Erosion Control Details
C1.9

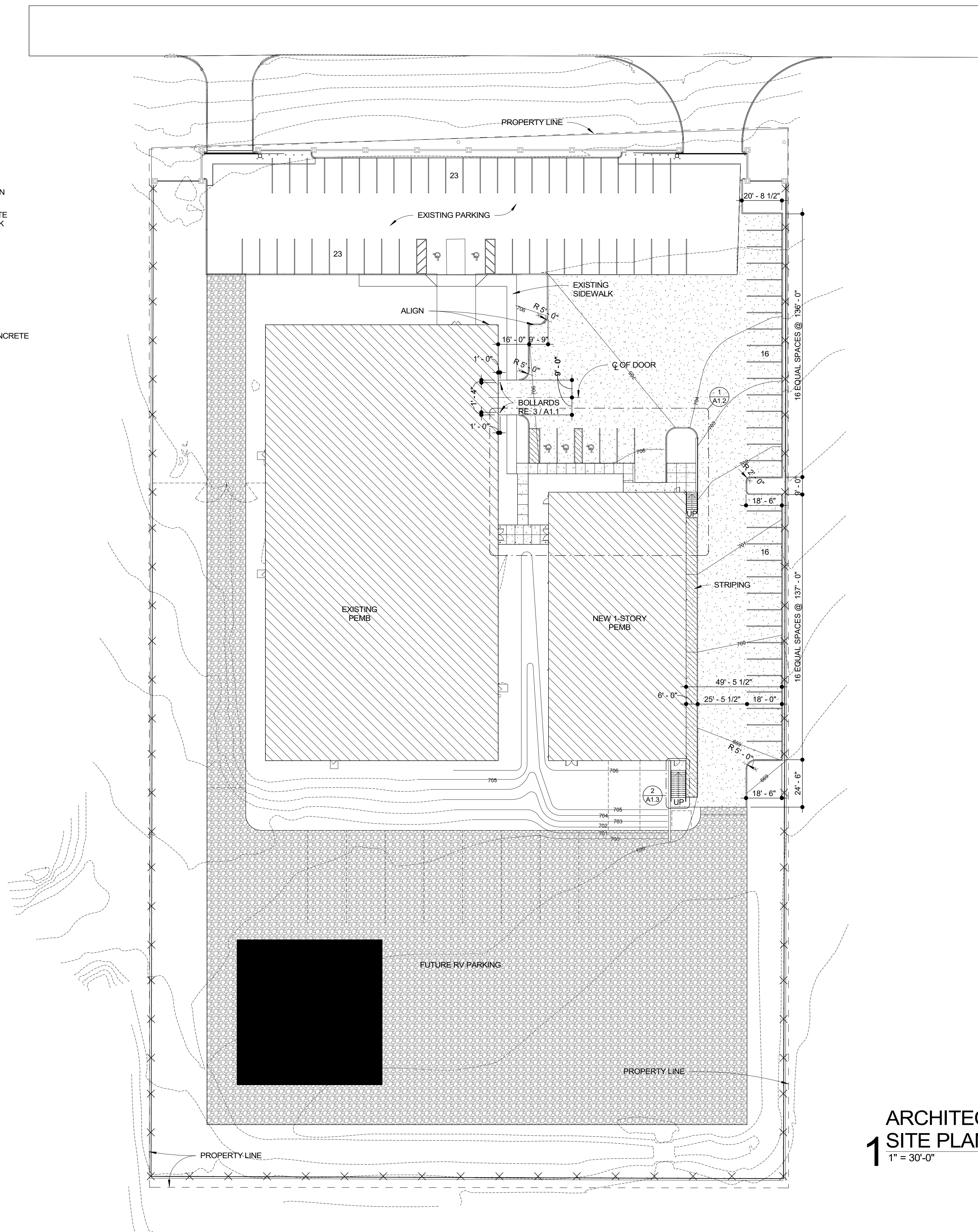




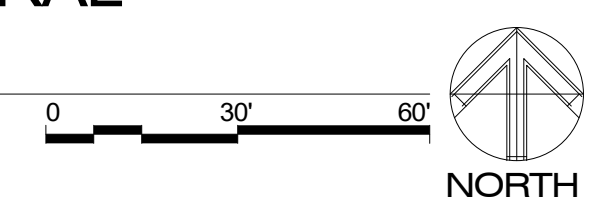
3 BOLLARD SECTION - EMBEDDED
 1 1/2" = 1'-0"

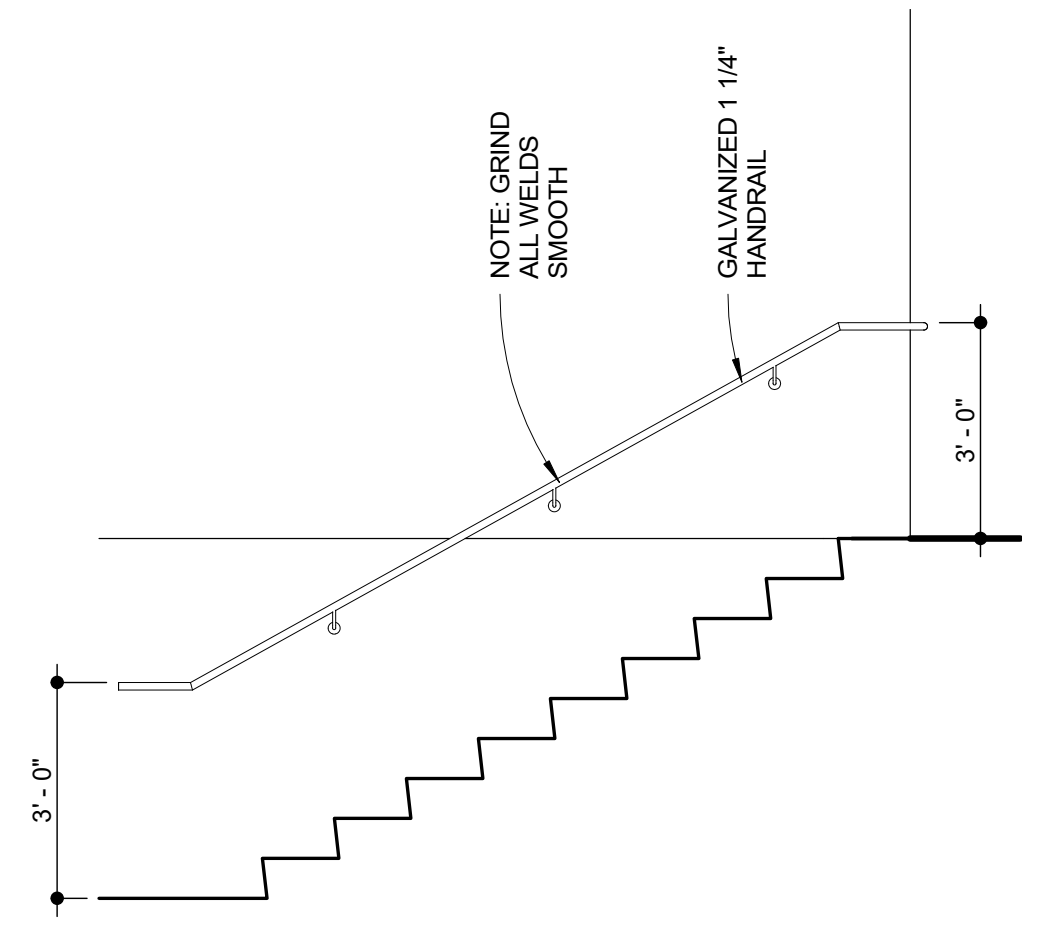


2 BOLLARD SECTION - SURFACE MOUNT
 1 1/2" = 1'-0"

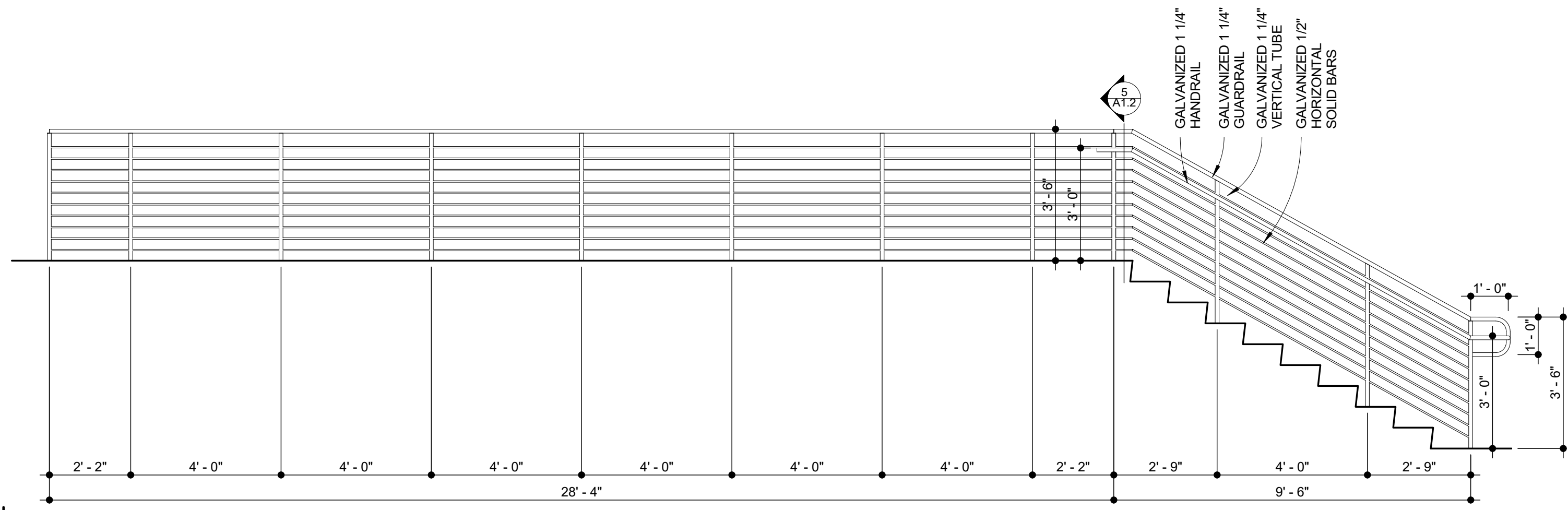


1 ARCHITECTURAL SITE PLAN
 1" = 30'-0"

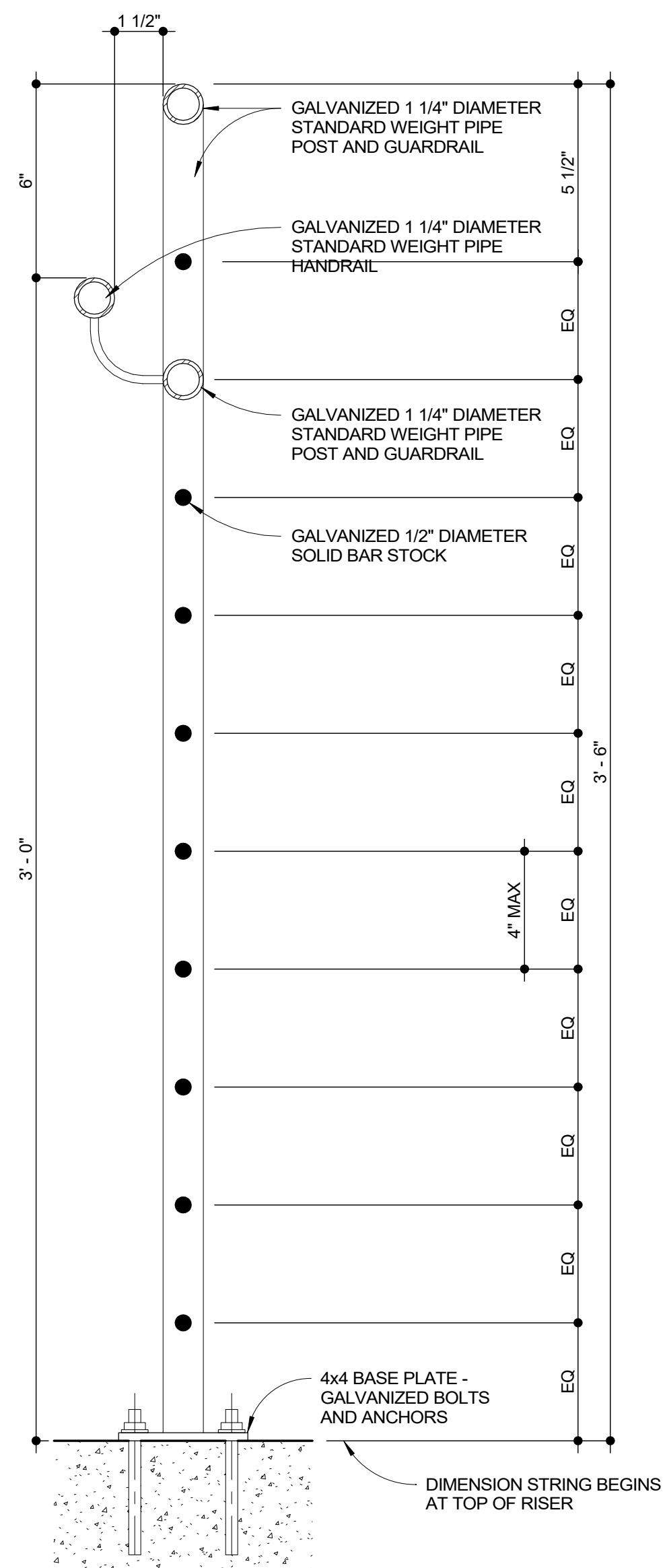




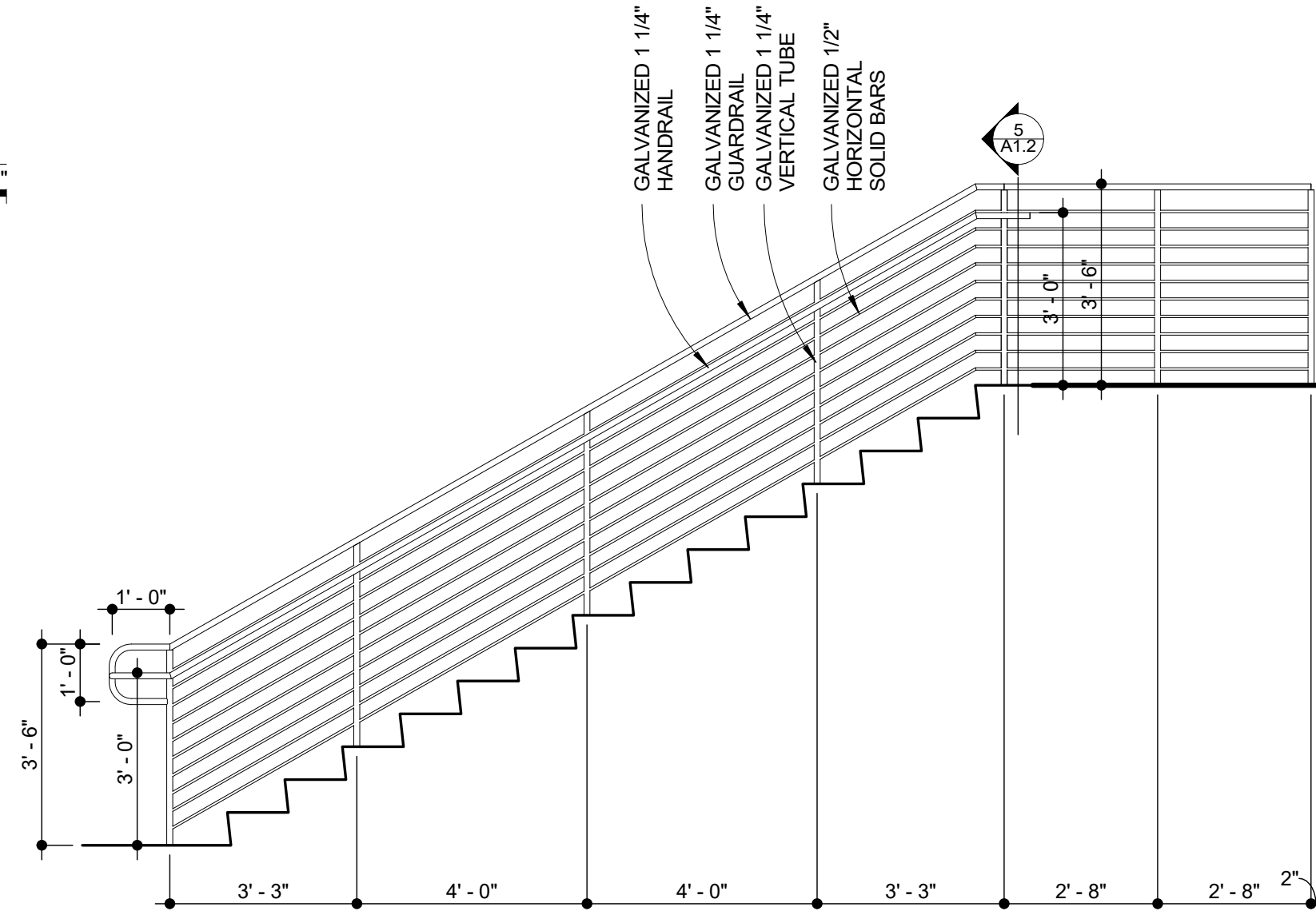
6 RAILING ELEVATION
3/8" = 1'-0"



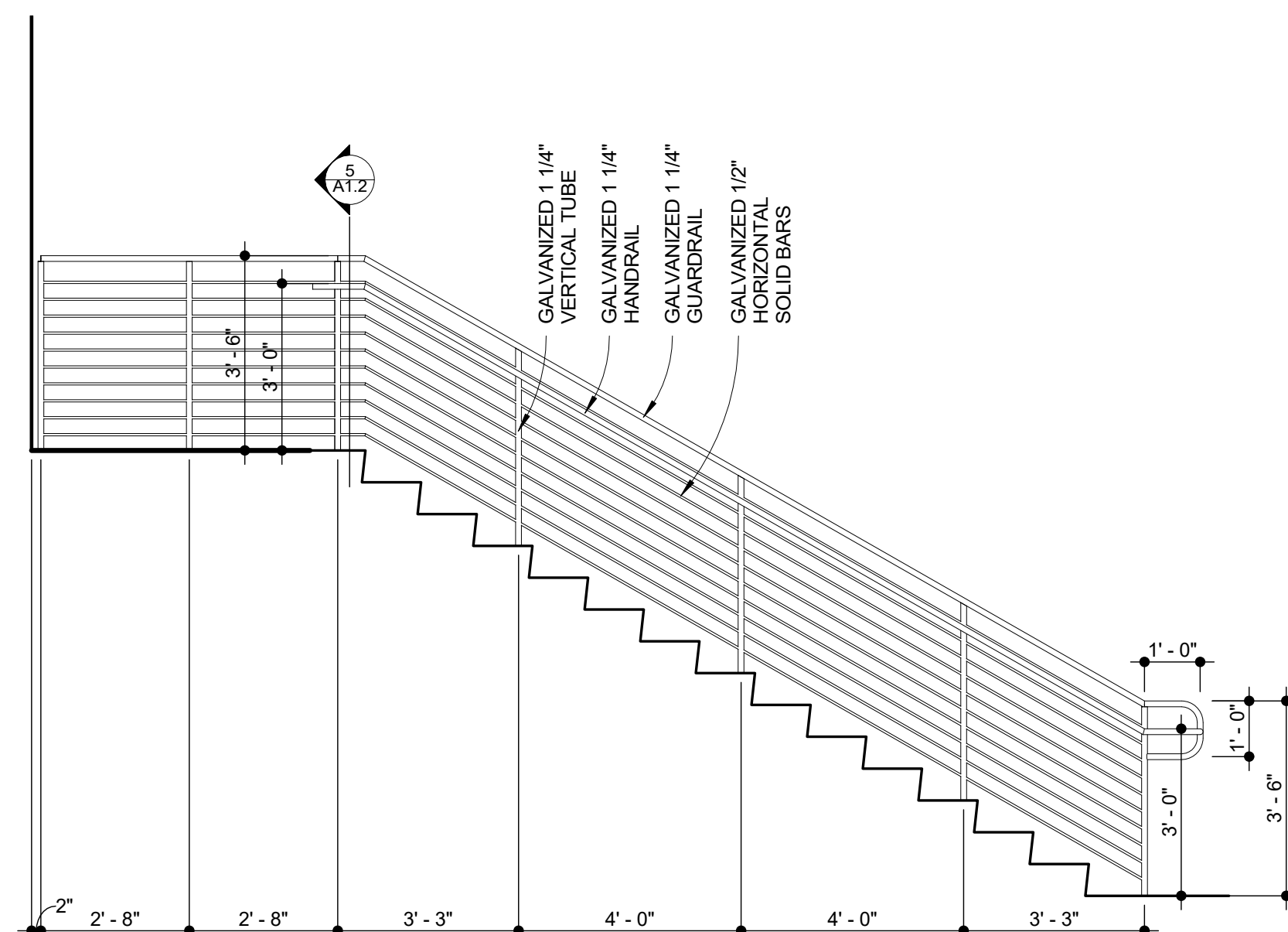
2 RAILING ELEVATION
3/8" = 1'-0"



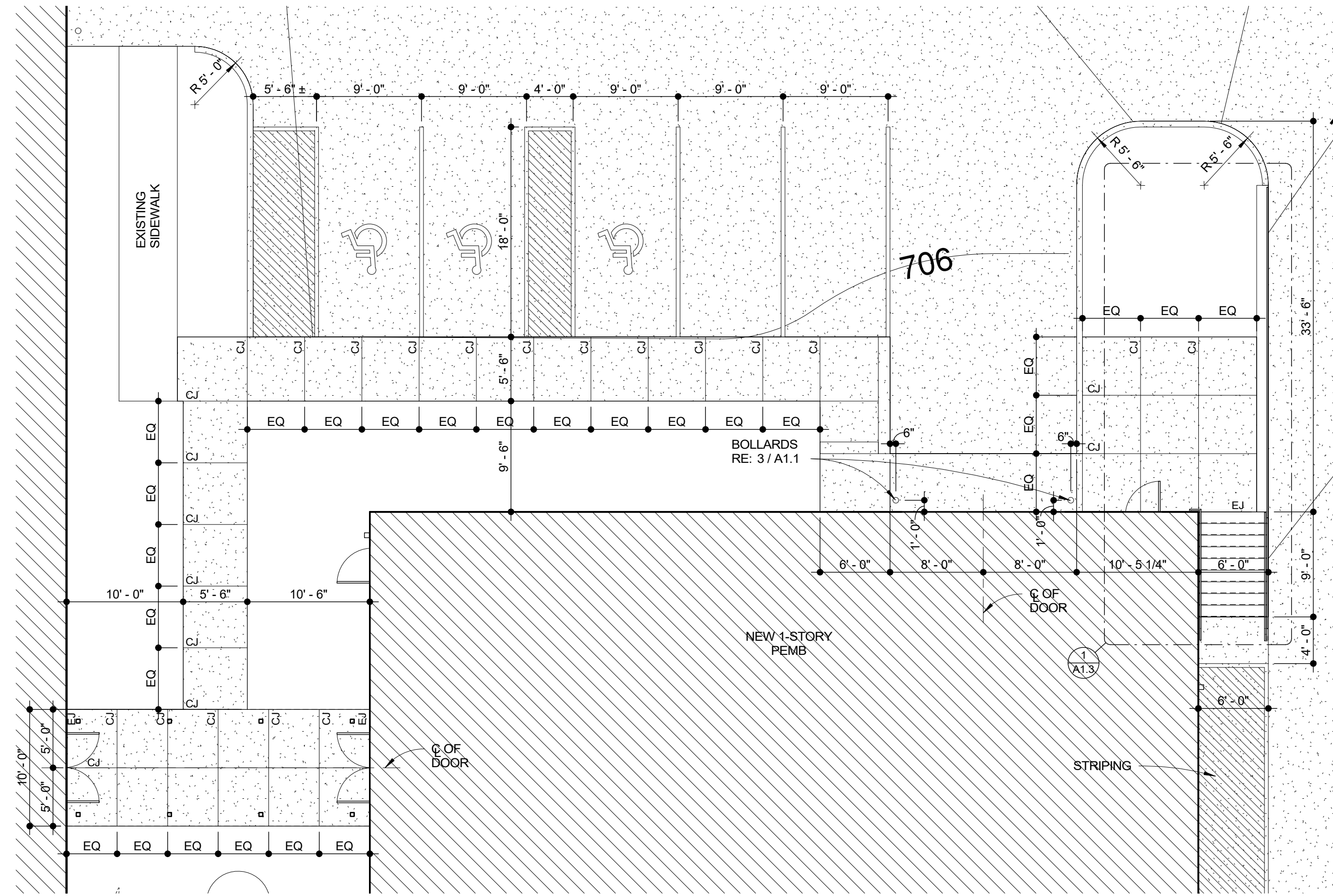
5 RAILING SECTION
3" = 1'-0"



4 RAILING ELEVATION
3/8" = 1'-0"



3 RAILING ELEVATION
3/8" = 1'-0"

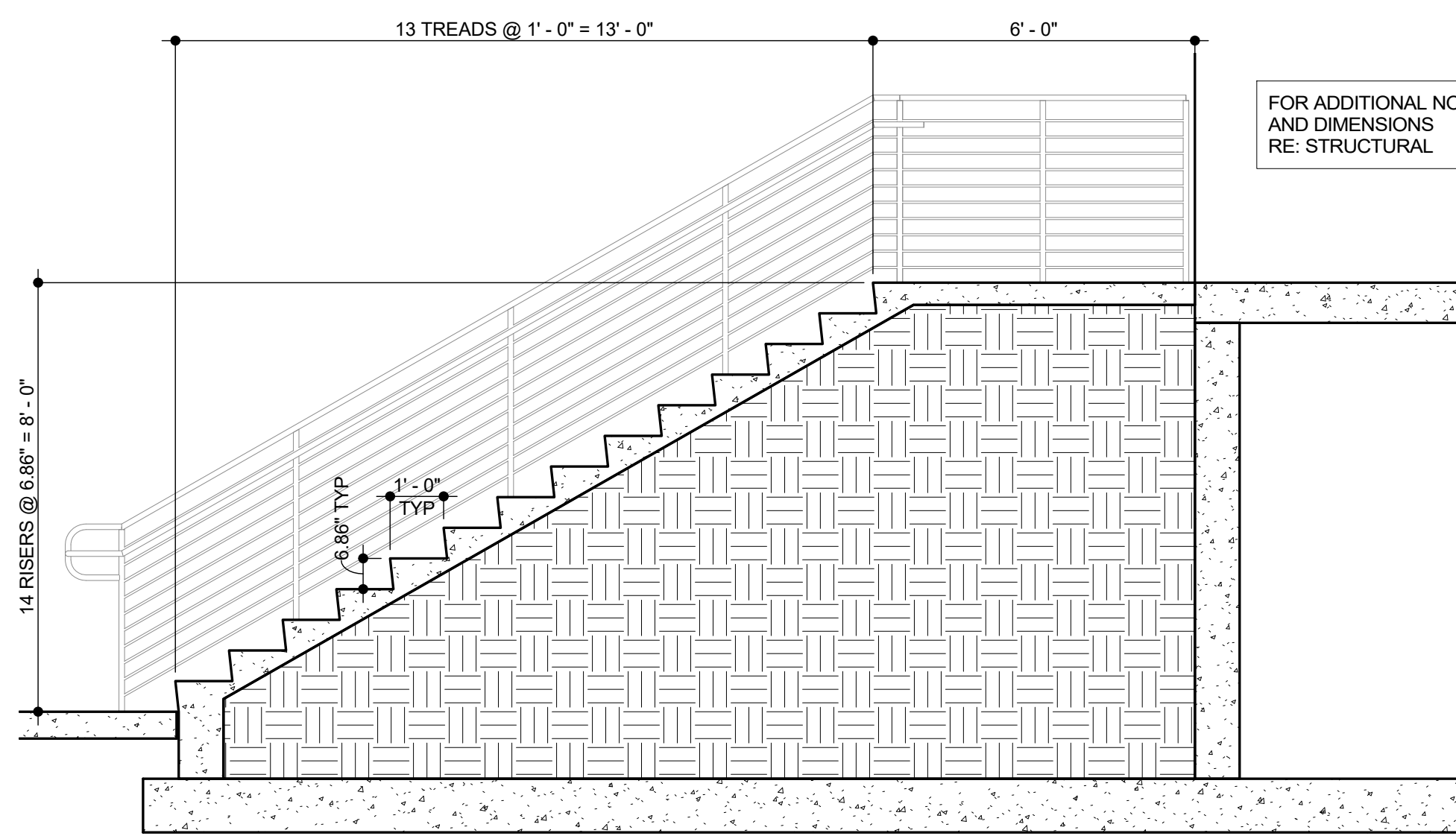


1 PARTIAL SITE PLAN
1/8" = 1'-0"

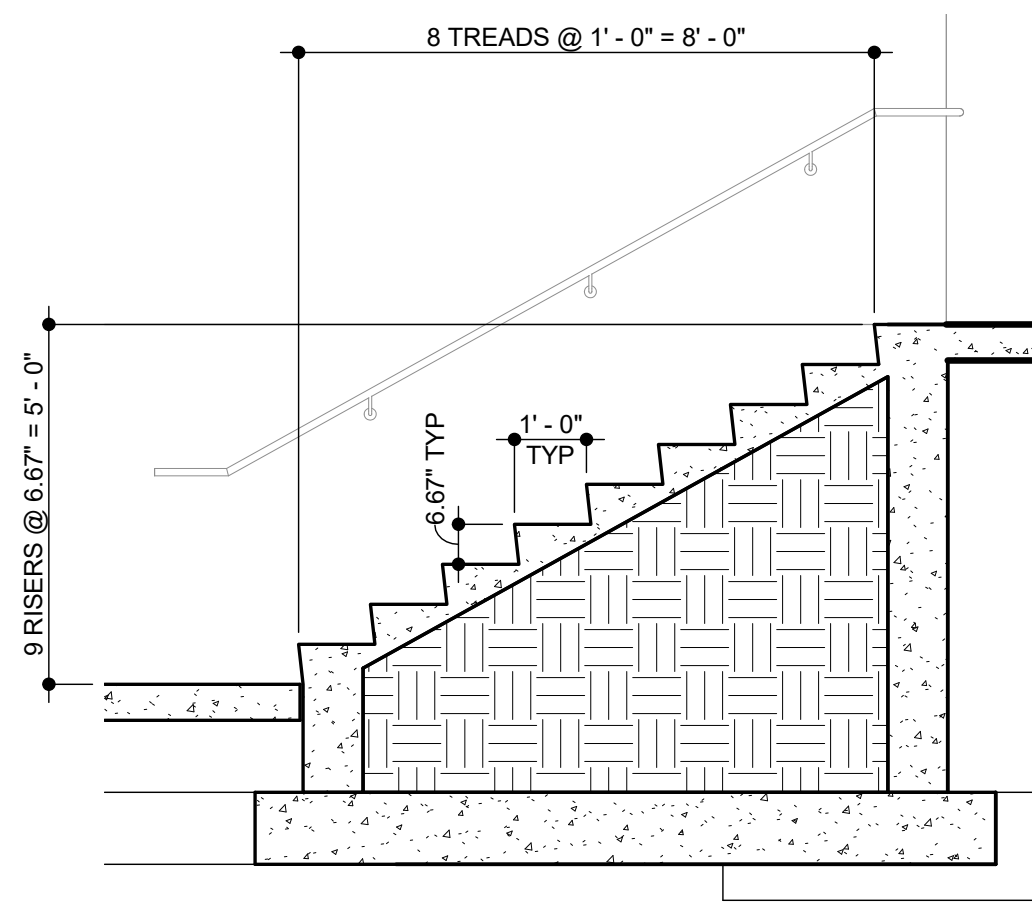
REVISIONS

DATE: 02.13.23
SHEET: Enlarged Site Plan and Details

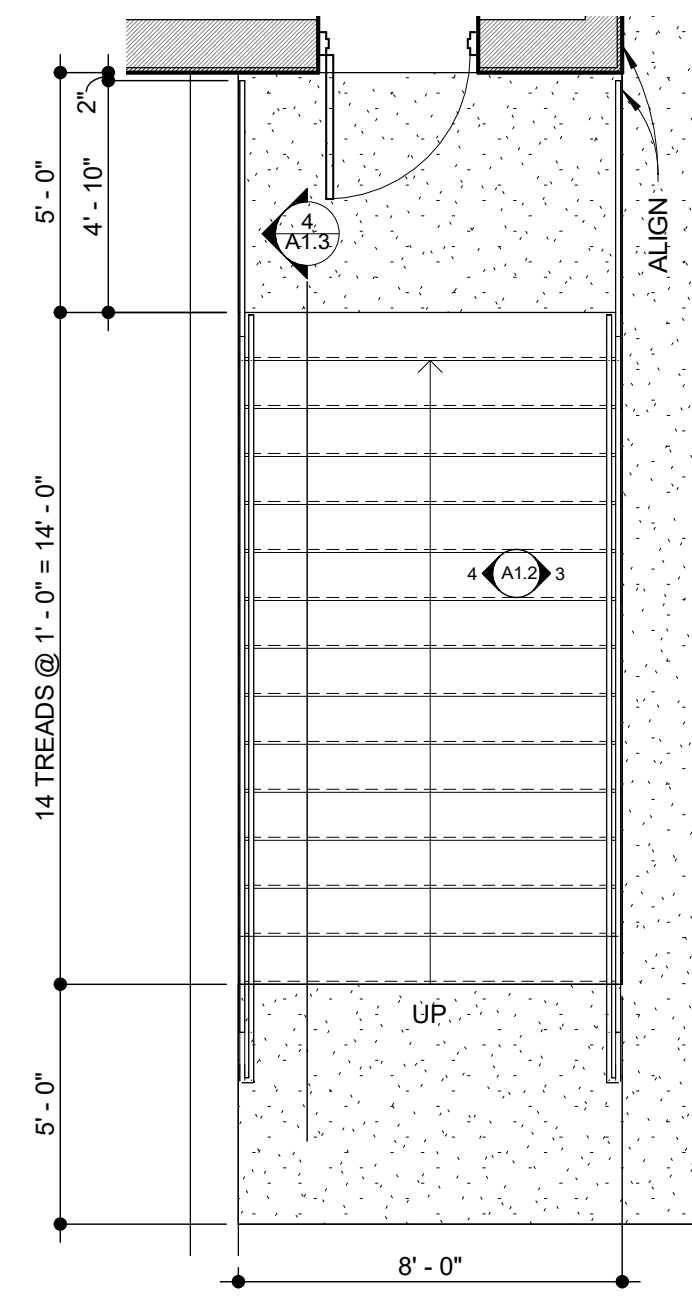
A1.2



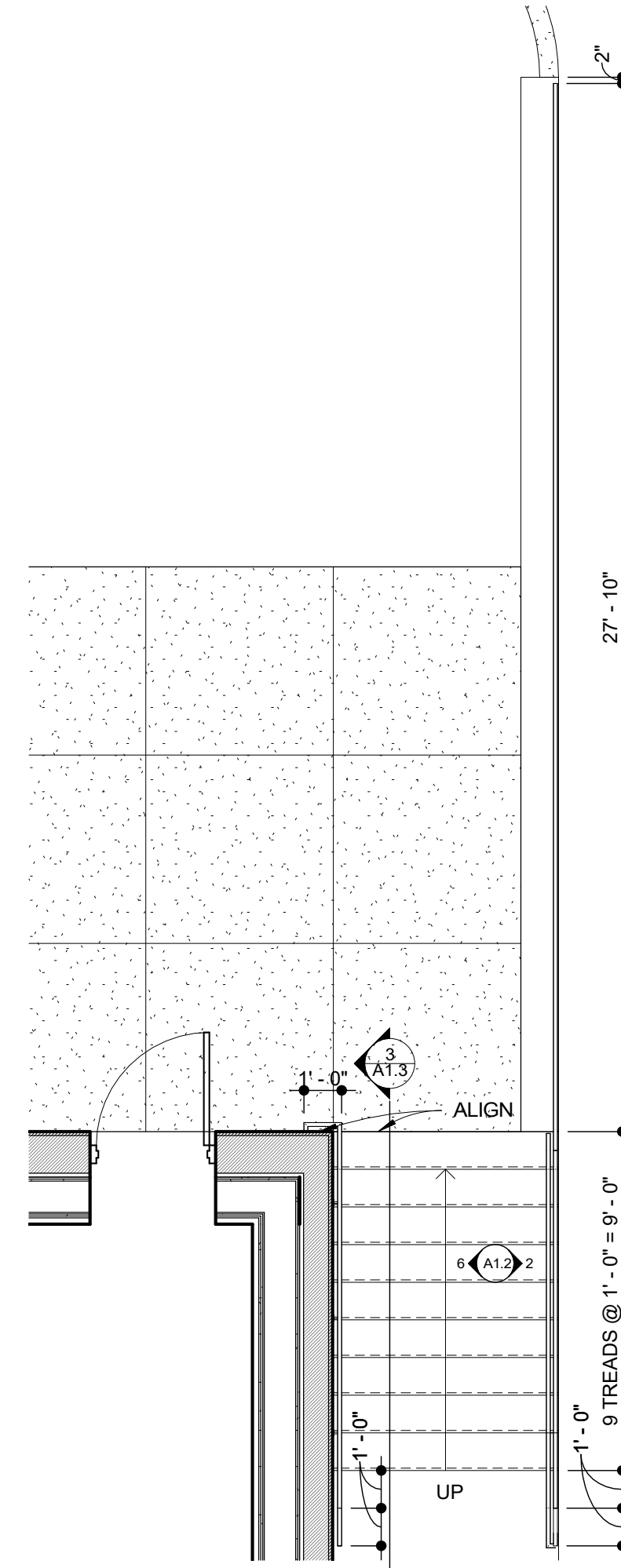
4 STAIR SECTION
 3/8" = 1'-0"
 0 1'-4" 2'-8" 5'-4"



3 STAIR SECTION
 3/8" = 1'-0"
 0 1'-4" 2'-8" 5'-4"

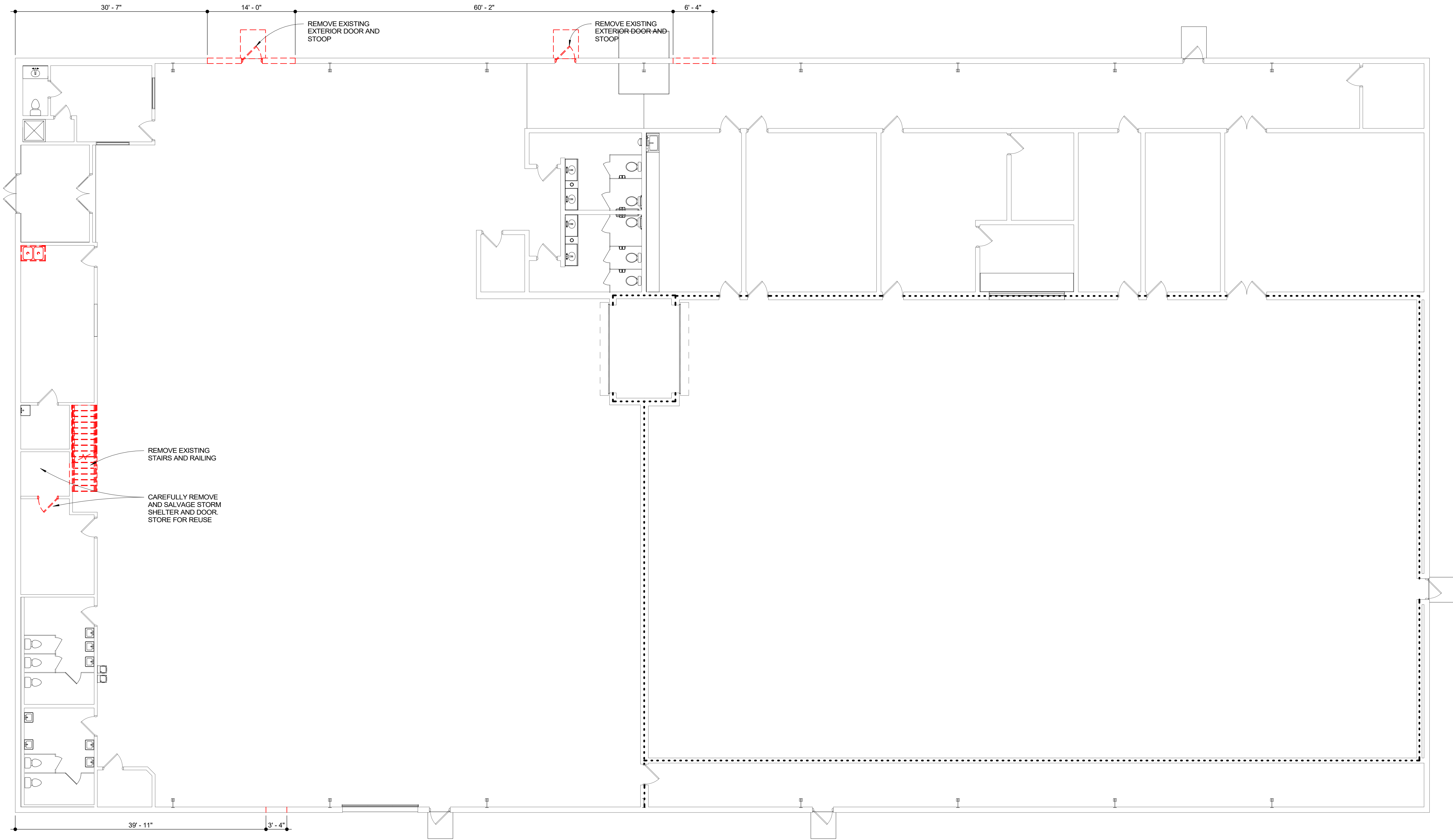


2 ENLARGED STAIR
 1/4" = 1'-0"
 0 2' 4' 8' NORTH



1 ENLARGED STAIR
 1/4" = 1'-0"
 0 2' 4' 8' NORTH

FOR GENERAL NOTES AND LEGENDS, RE: SHEET G1.4



REMOVE EXISTING EXTERIOR DOOR AND STOOP

REMOVE EXISTING EXTERIOR DOOR AND STOOP

REMOVE EXISTING STAIRS AND RAILING

CAREFULLY REMOVE AND SALVAGE STORM SHELTER AND DOOR. STORE FOR REUSE



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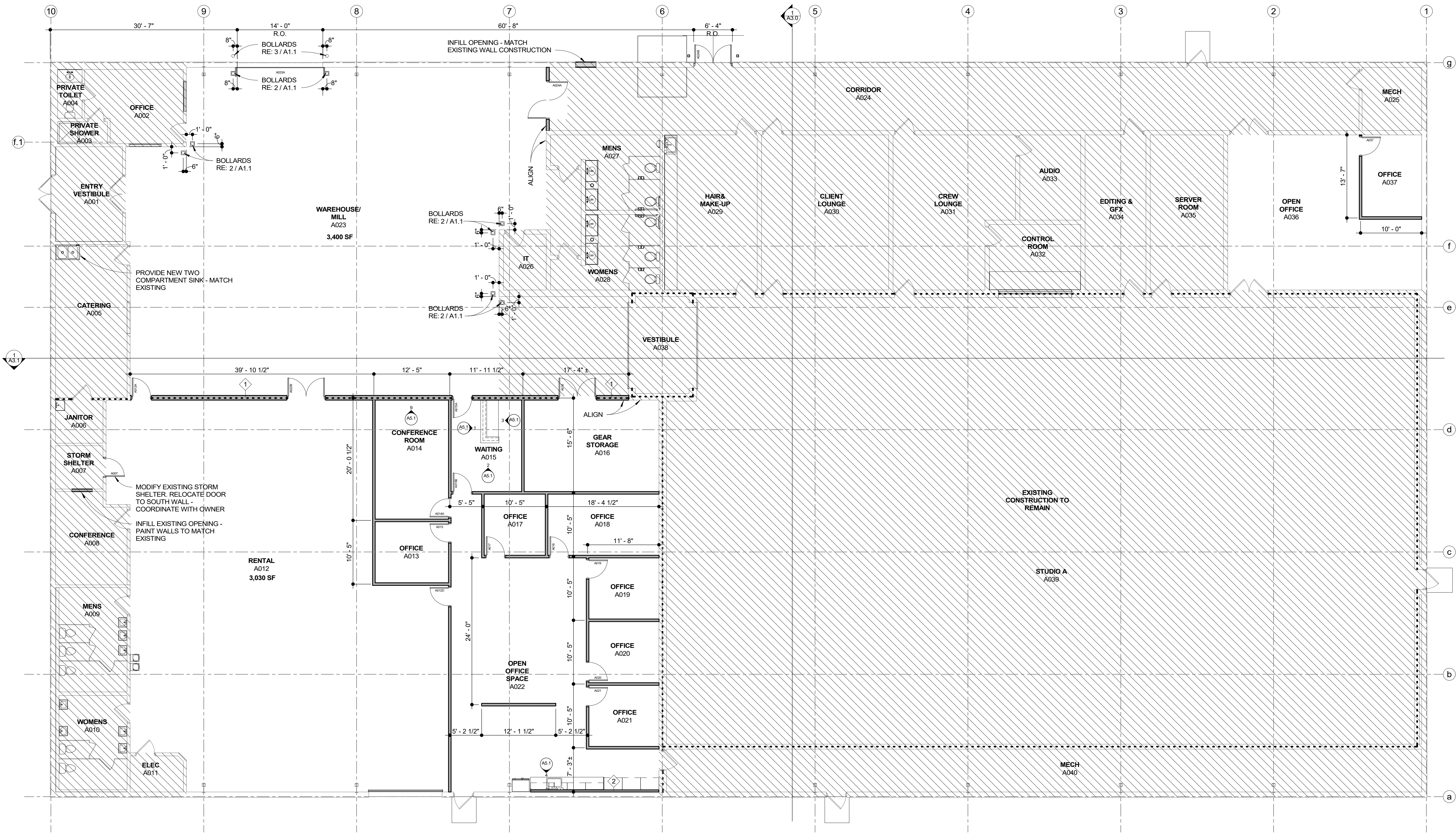
DATE 02.13.23
 SHEET Studio A - Demolition Plan

1 STUDIO A - 1ST FLOOR
 DEMOLITION PLAN
 1/8" = 1'-0"



A2.0

FOR GENERAL NOTES AND LEGENDS, RE: SHEET G1.4



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1 STUDIO A - FLOOR PLAN
 1/8" = 1'-0"
 0 4 8 16
 NORTH

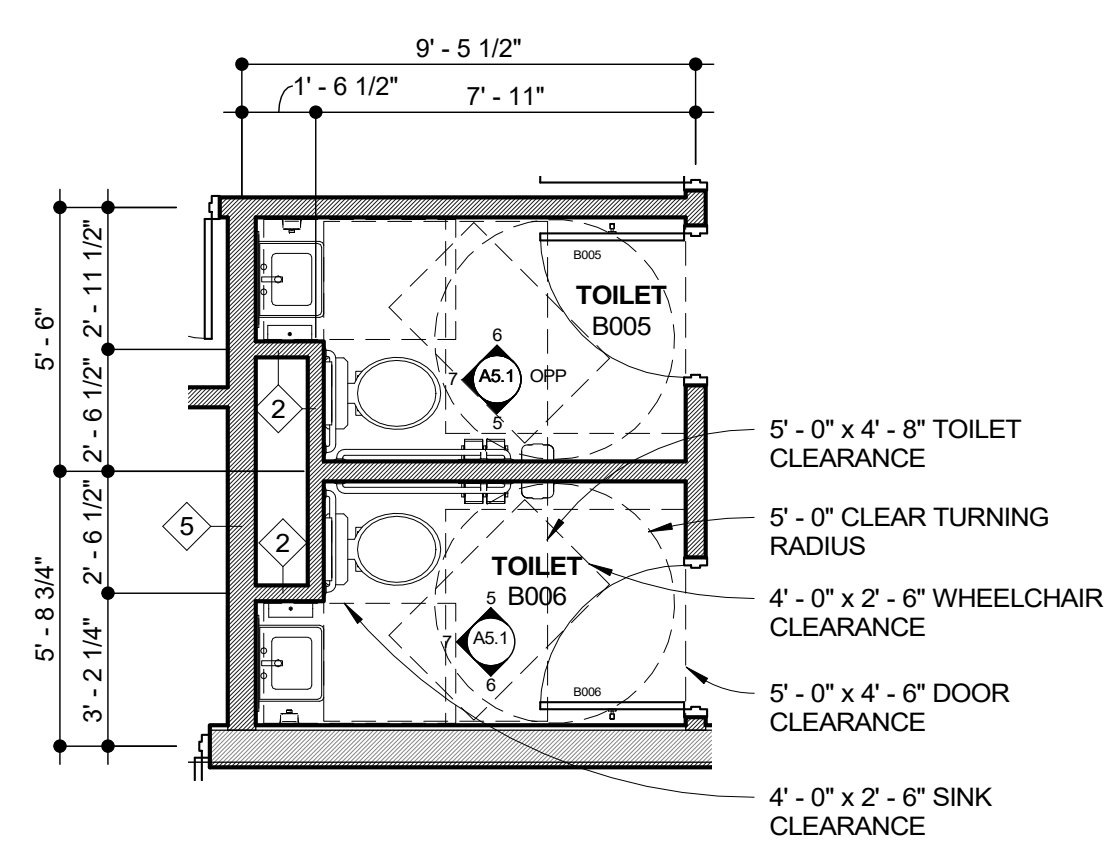
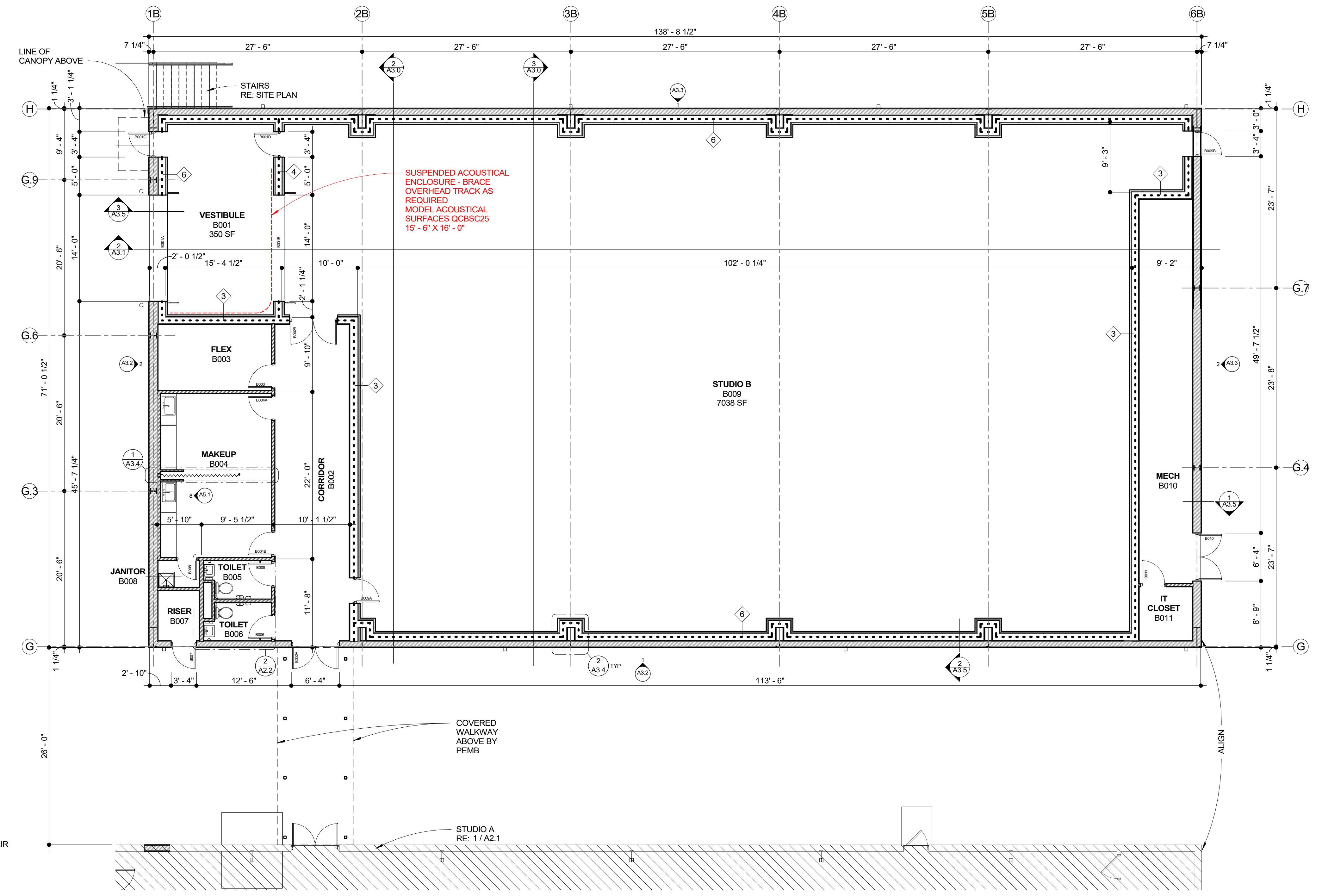
DATE
 02.13.23
 SHEET
 Studio A - Floor Plan

A2.1

REVISIONS

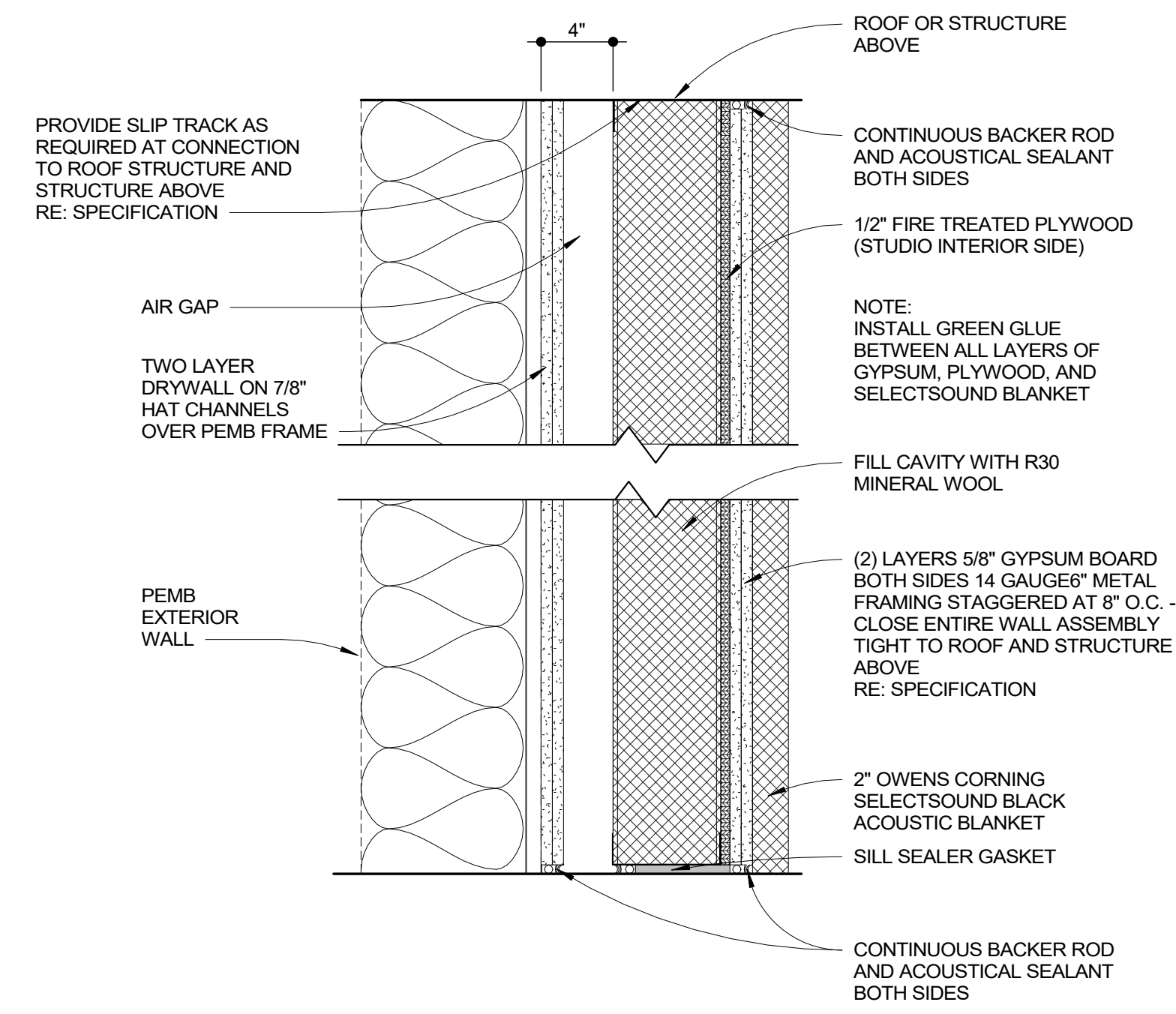
DATE: 02.13.23
 SHEET: Studio B - Floor Plan

A2.2

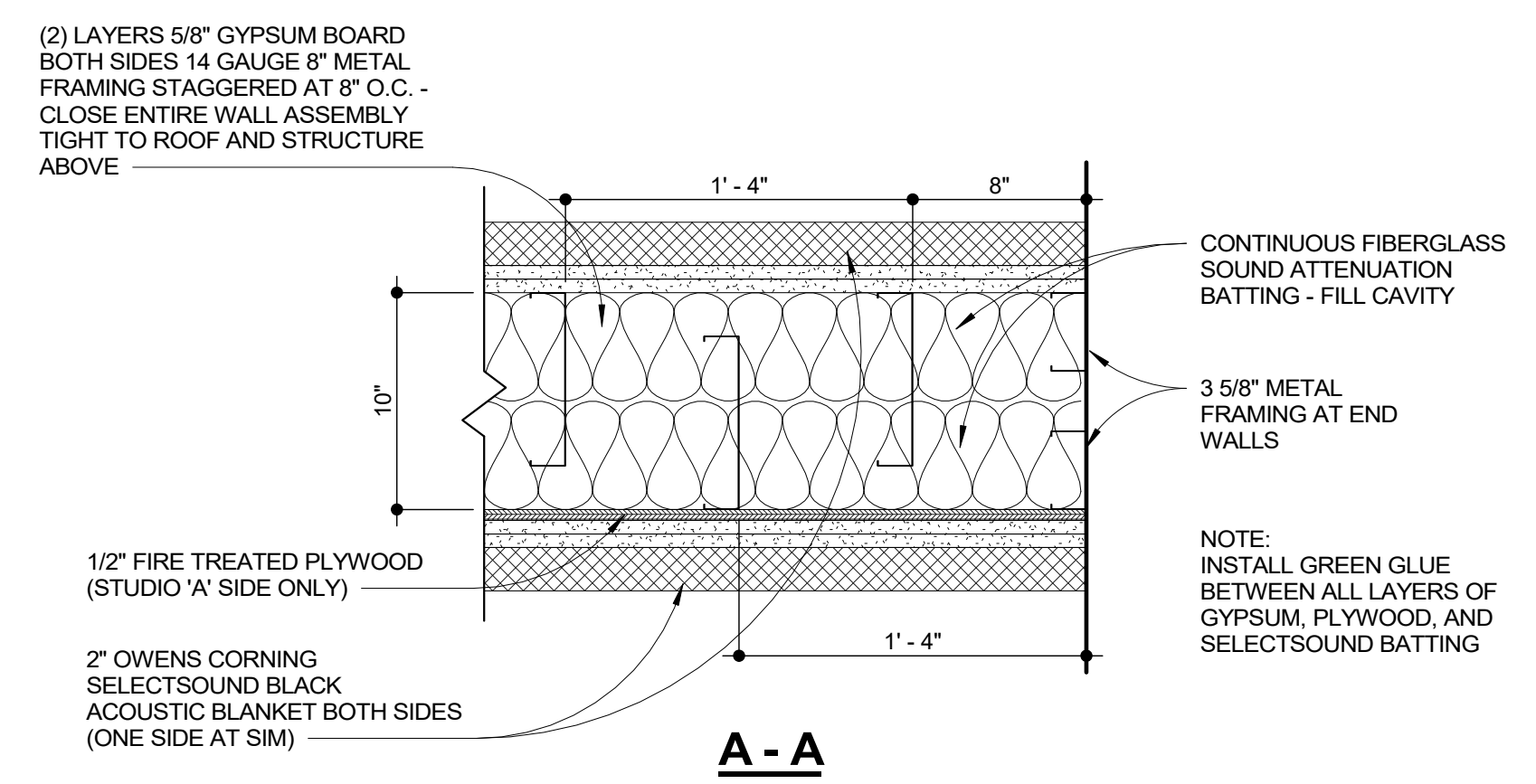


2 ENLARGED TOILET PLANS
 1/4" = 1'-0"
 0 2' 4' 8'
 NORTH

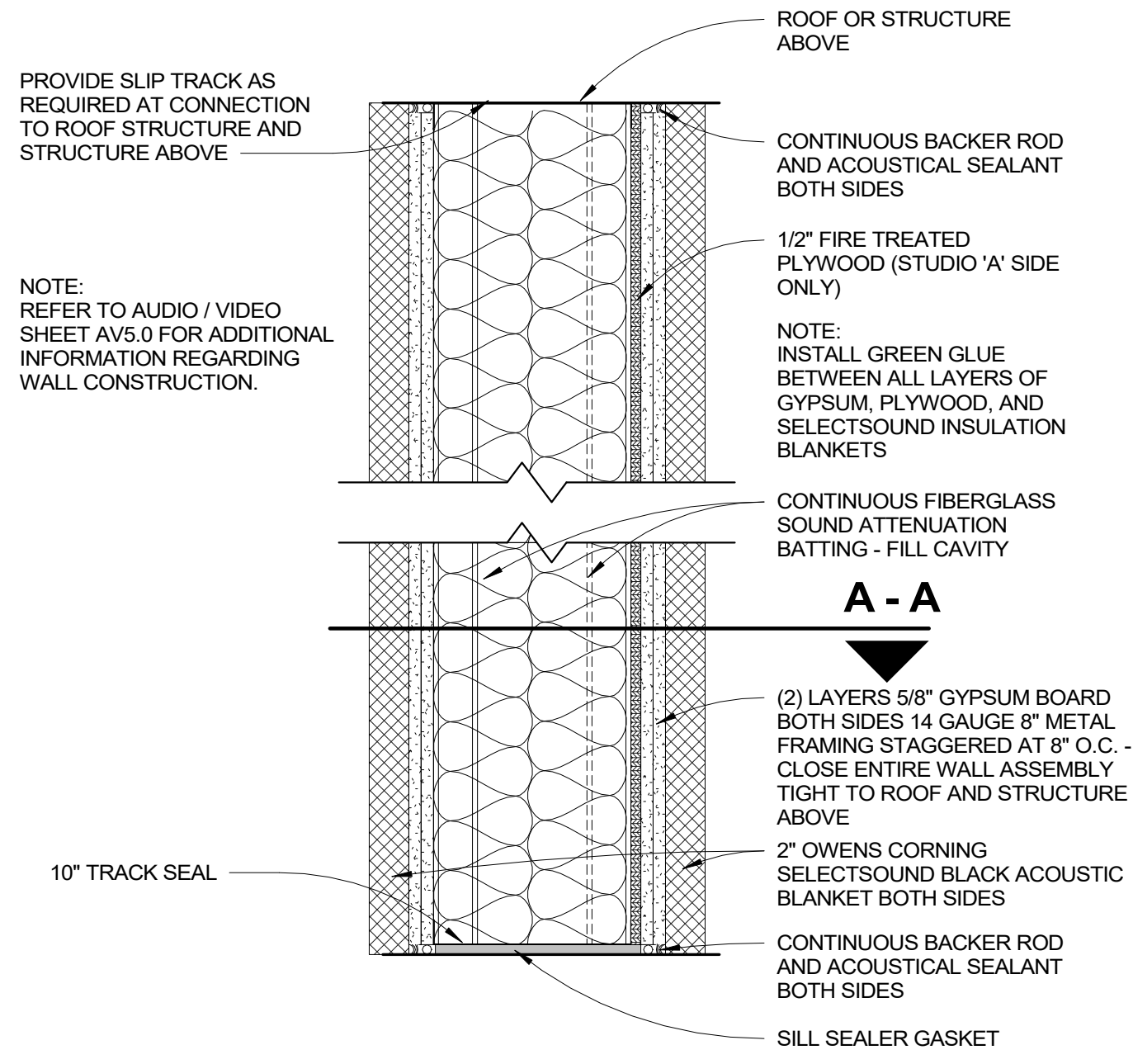
1 STUDIO B - FLOOR PLAN
 1/8" = 1'-0"
 0 4' 8' 16'
 NORTH



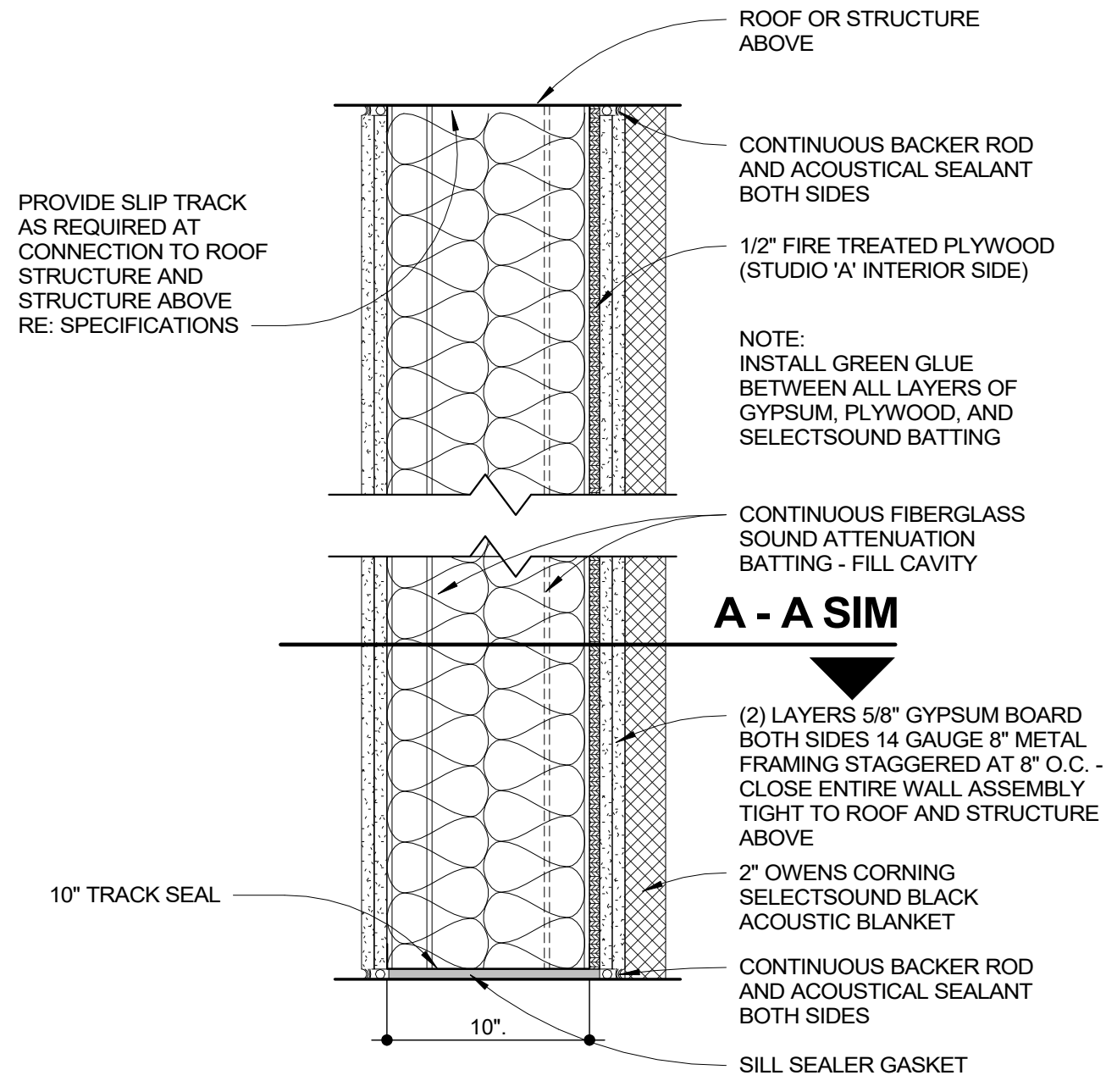
WALL TYPE 6
1 1/2" = 1'-0"



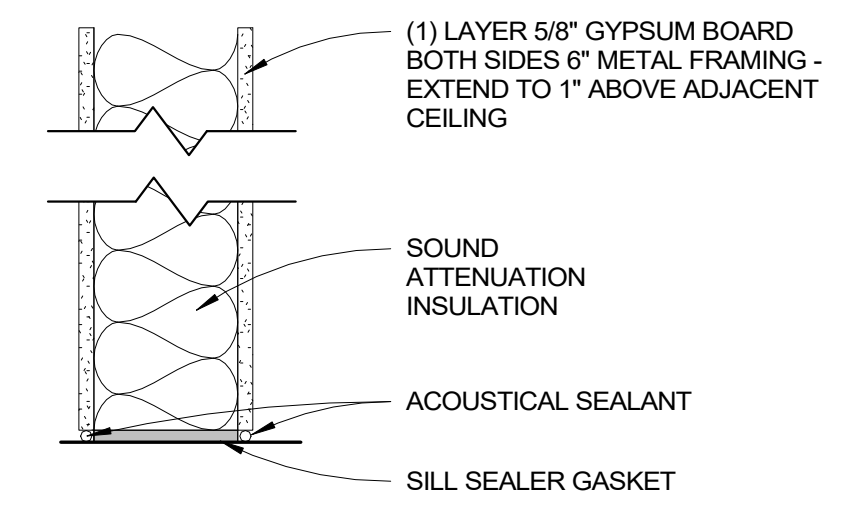
WALL TYPE 4
1 1/2" = 1'-0"



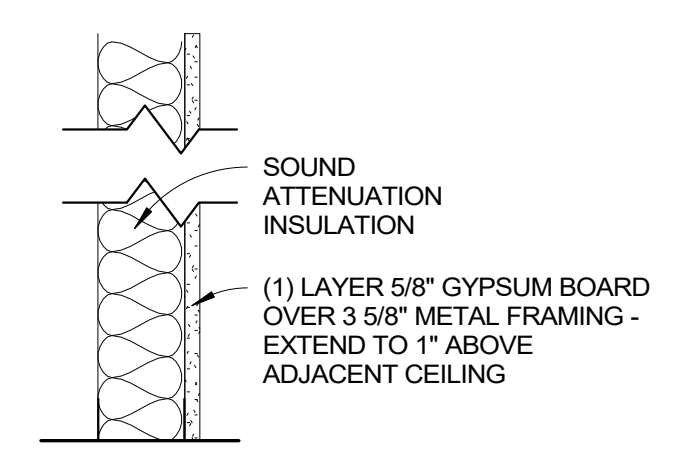
WALL TYPE 3
1 1/2" = 1'-0"



WALL TYPE 2
1 1/2" = 1'-0"



WALL TYPE 5
1 1/2" = 1'-0"



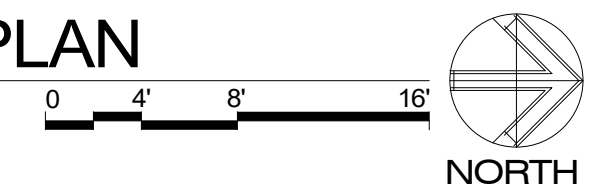
WALL TYPE 1
1 1/2" = 1'-0"

FOR GENERAL NOTES AND LEGENDS, RE: SHEET G1.4



FURNITURE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY.

STUDIO A
1 FURNITURE PLAN
 1/8" = 1'-0"



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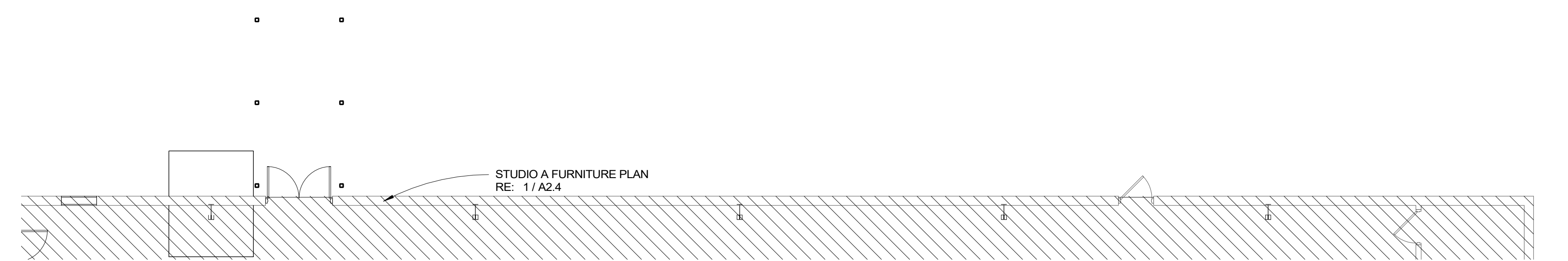
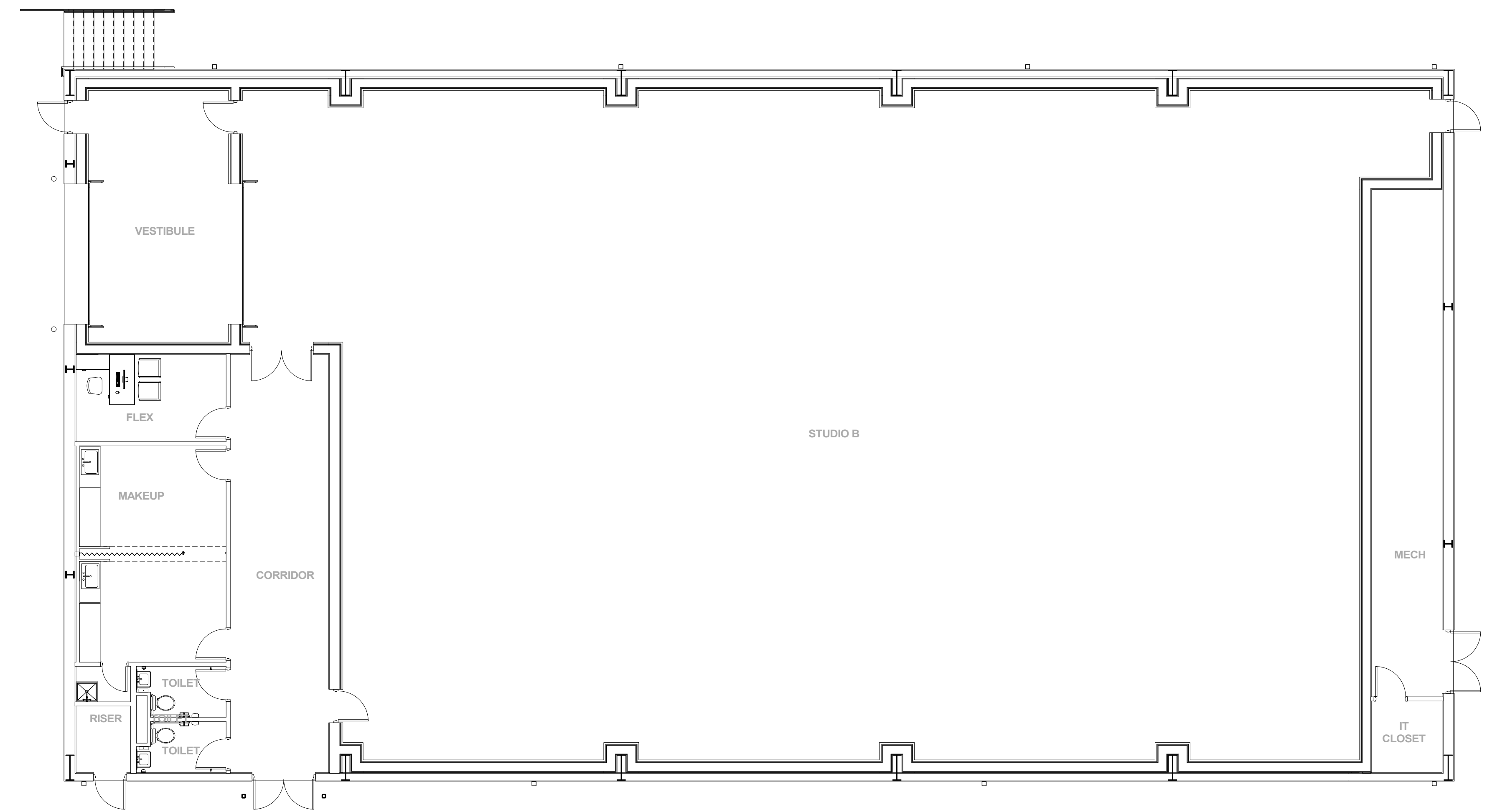
DATE 02.13.23
 SHEET Studio A - Furniture Plan

A2.4

FOR GENERAL NOTES AND LEGENDS, RE: SHEET G1.4



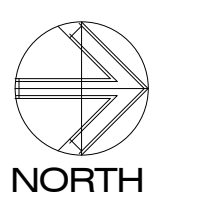
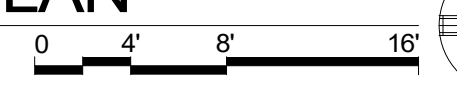
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STUDIO A FURNITURE PLAN
RE: 1/A2.4

FURNITURE PLANS ARE FOR
INFORMATIONAL PURPOSES ONLY.

STUDIO B
1 FURNITURE PLAN
1/8" = 1'-0"

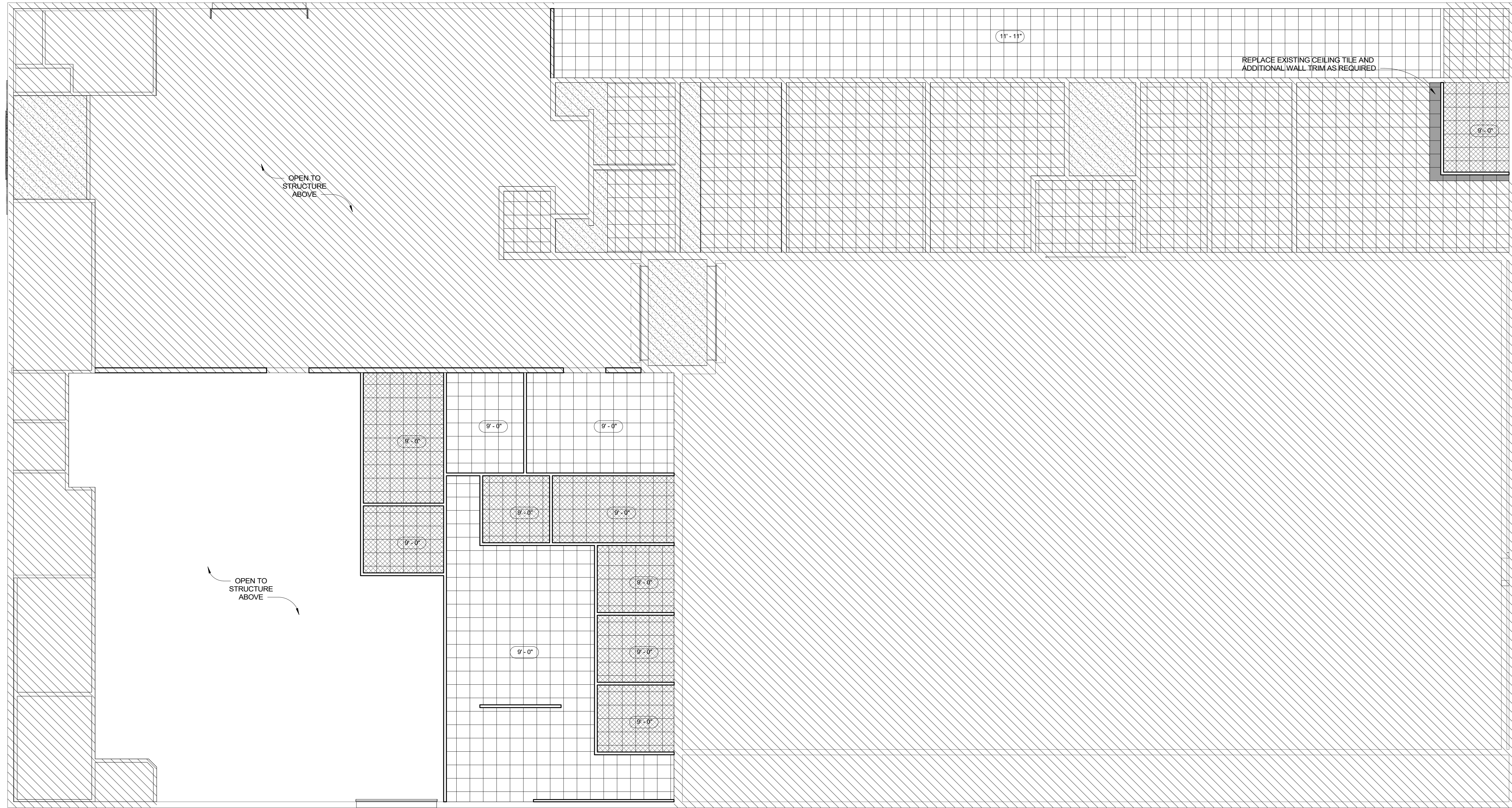


REVISIONS

DATE
02.13.23
SHEET
Studio B - Furniture
Plan

A2.5

FOR GENERAL NOTES AND LEGENDS, RE: SHEET G1.4

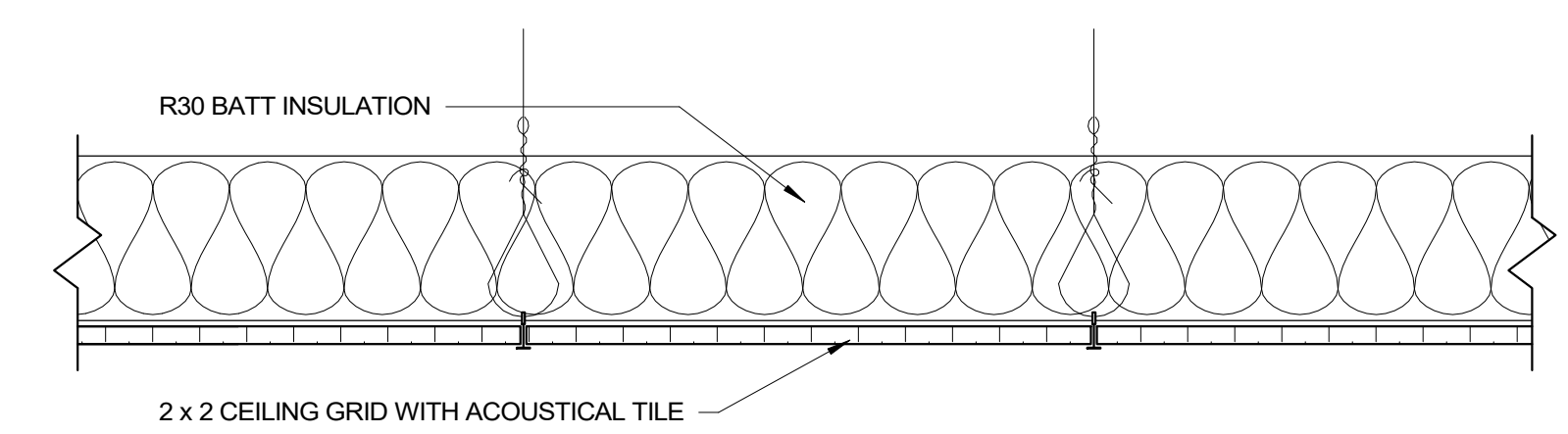


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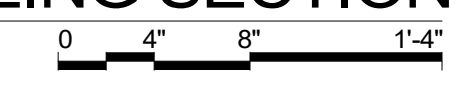
REVISIONS

STUDIO A
REFLECTED CEILING PLAN
 1/8" = 1'-0"
 0 4' 8' 16'
 NORTH

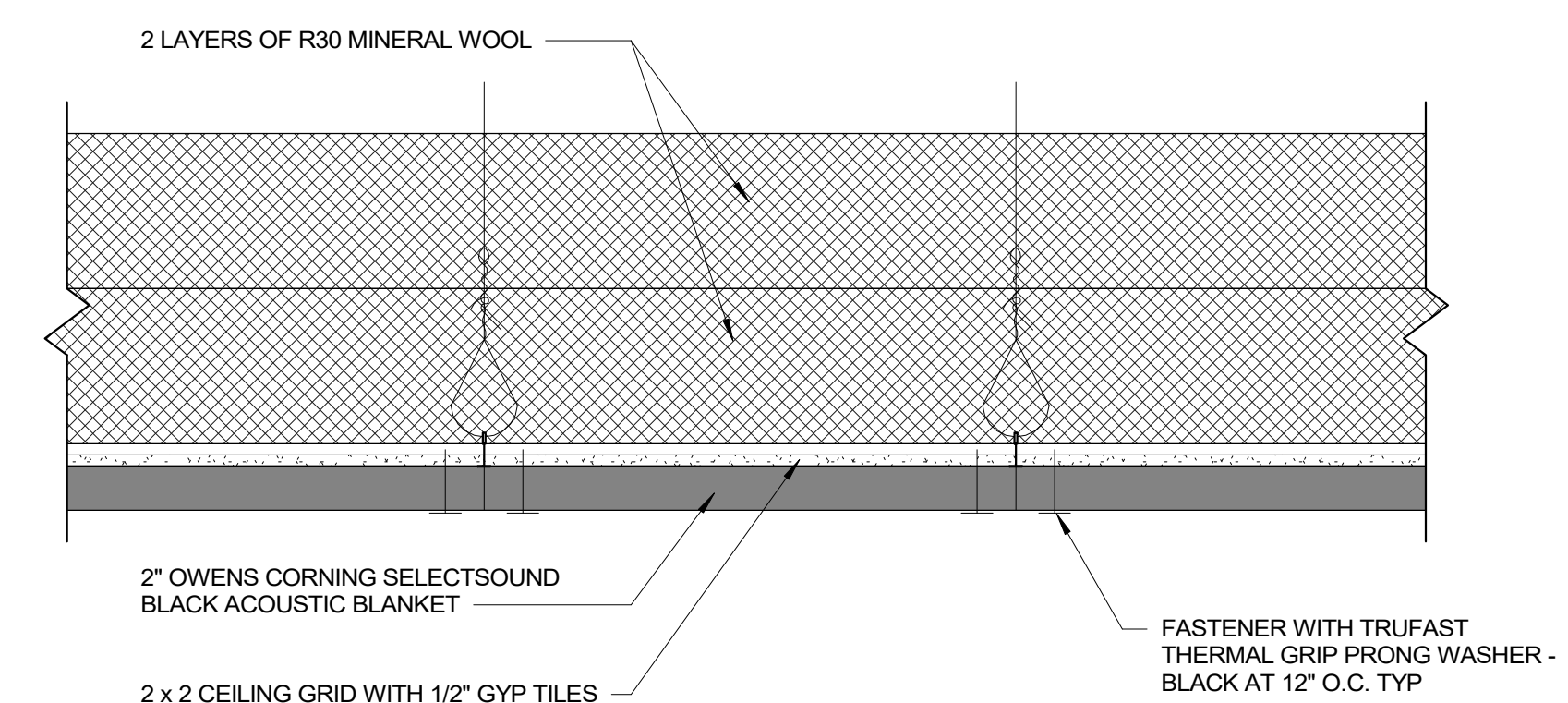
DATE: 02.13.23
 SHEET: Studio A - Reflected Ceiling Plan
A2.6



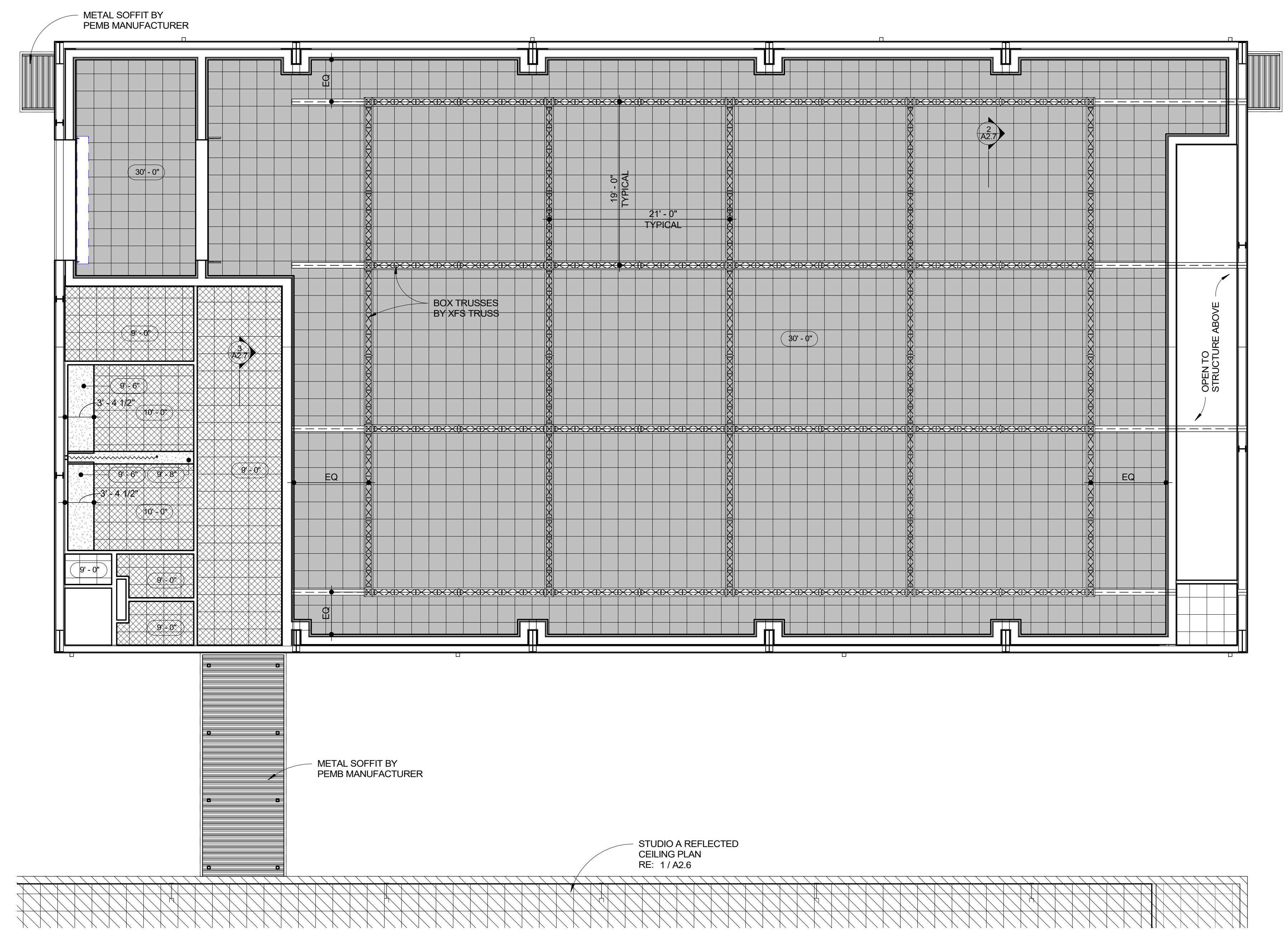
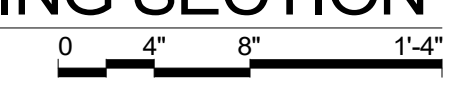
3 TYPICAL CEILING SECTION
1 1/2" = 1'-0"



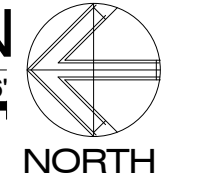
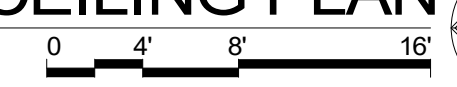
NOTE:
INSTALL GREEN GLUE BETWEEN ALL LAYERS OF GYPSUM AND SELECTSOUND BATTING

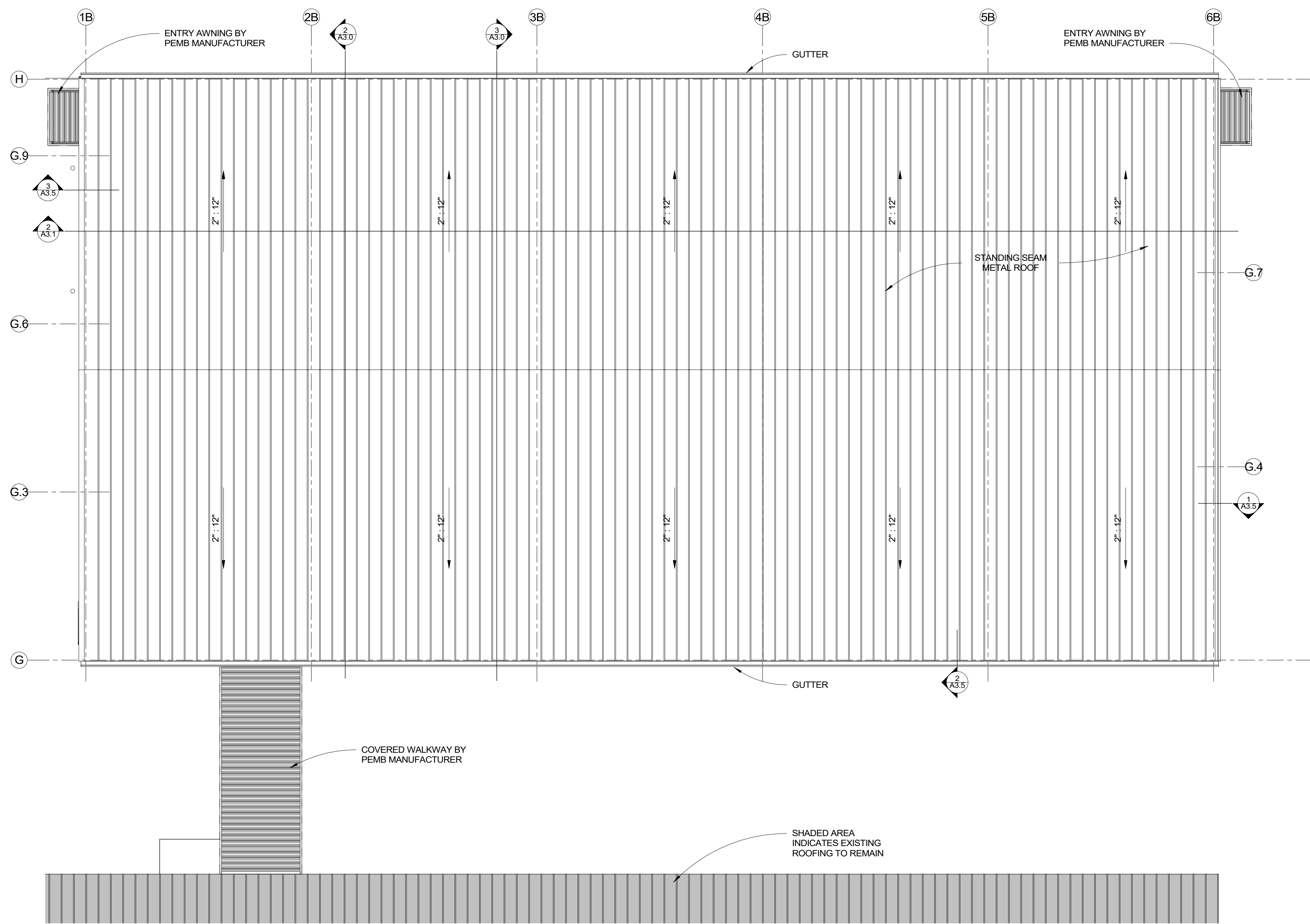


2 STUDIO CEILING SECTION
1 1/2" = 1'-0"



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

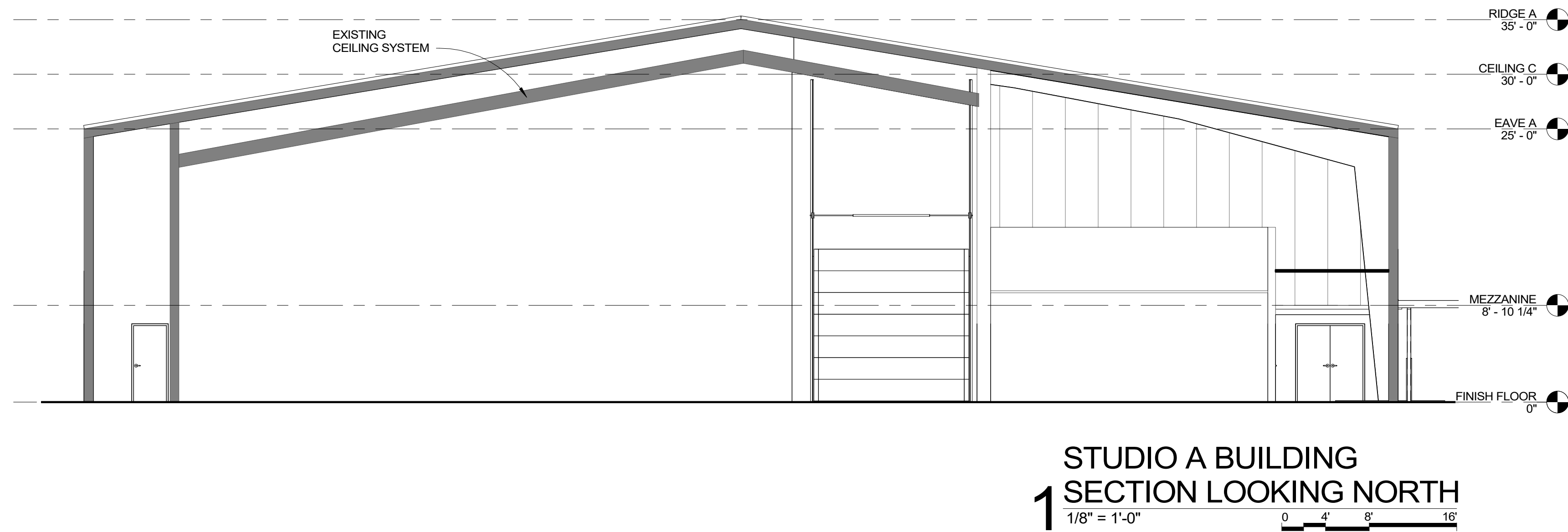
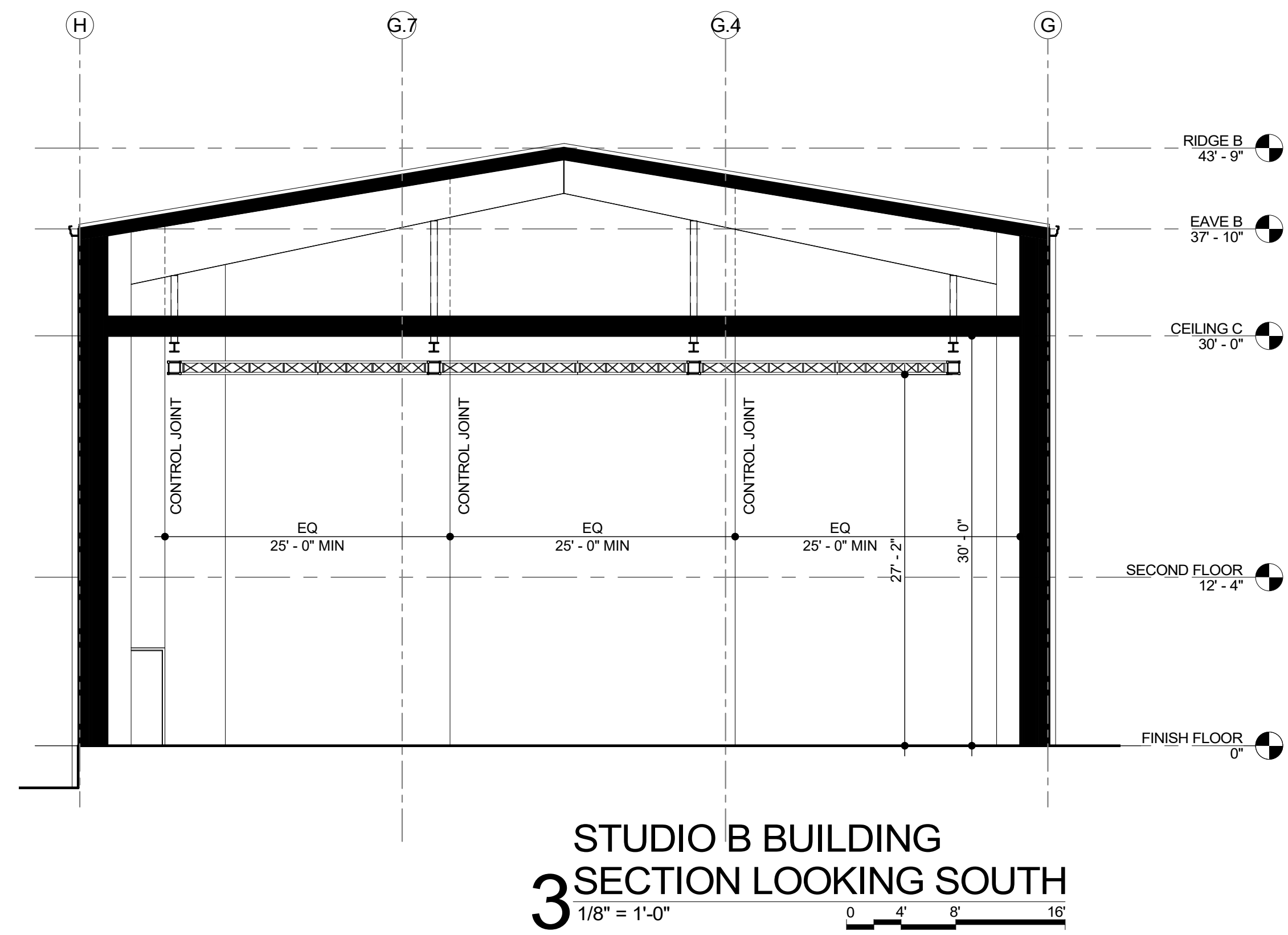
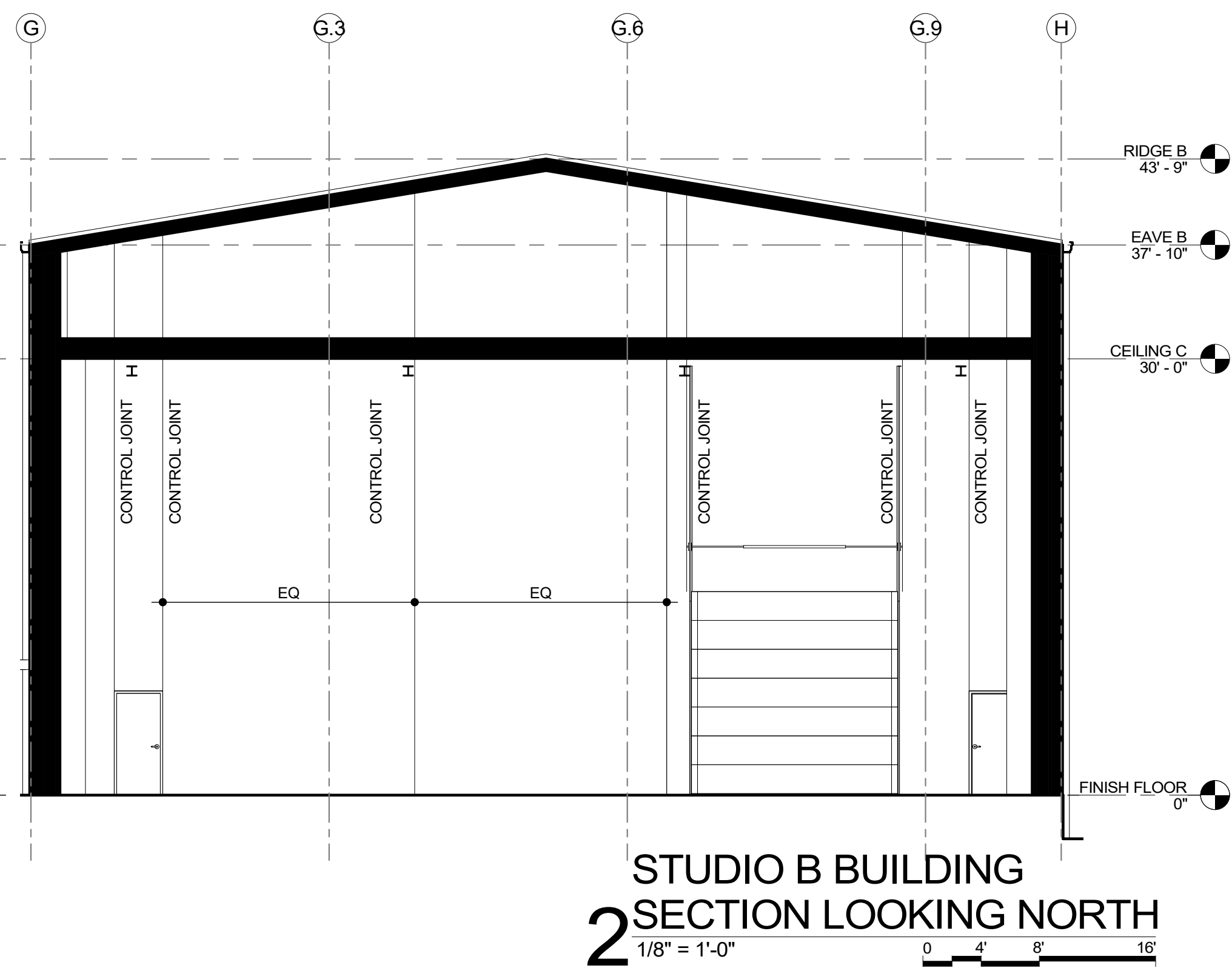


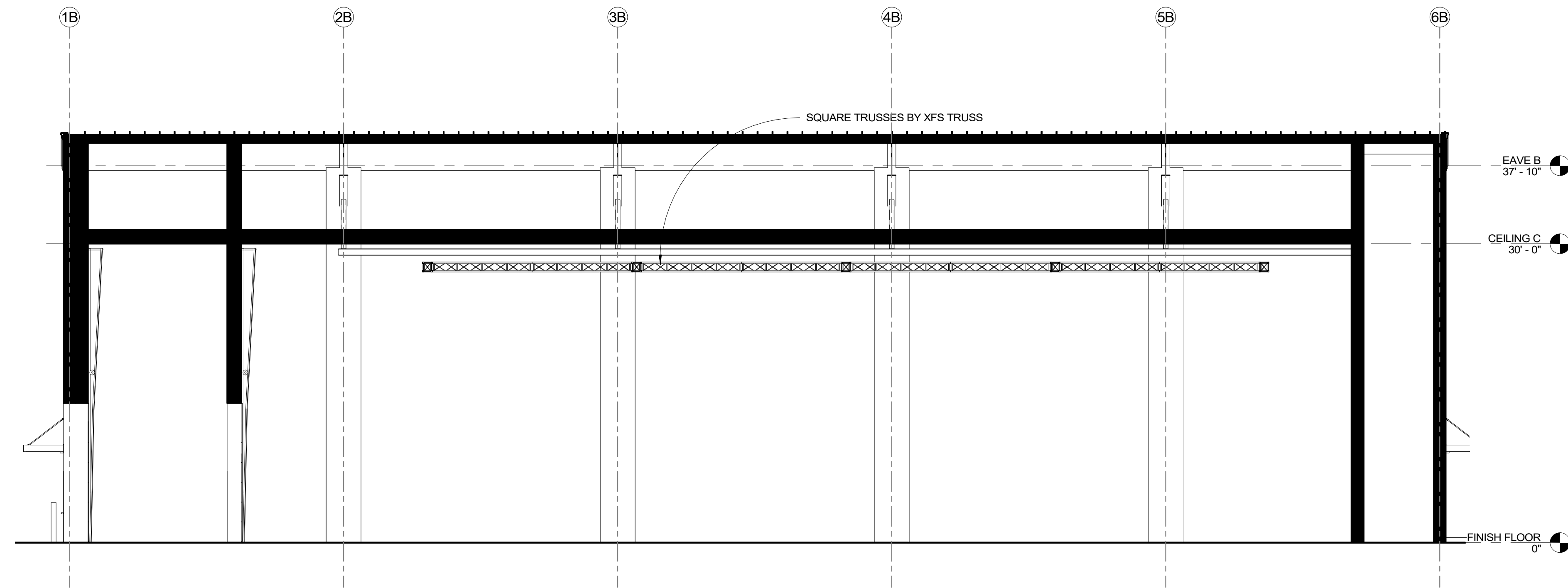


1 STUDIO B - ROOF PLAN
 1/8" = 1'-0"
 0 4' 8' 16'
 NORTH

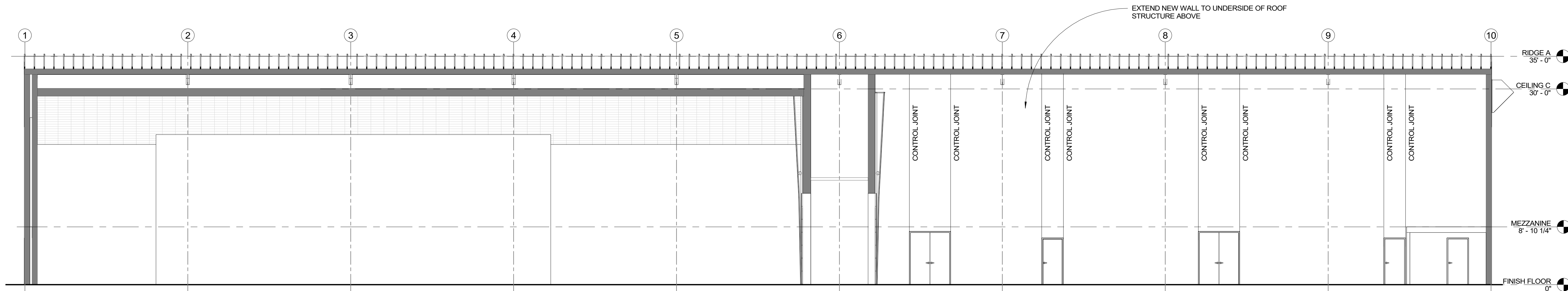
Cherokee Nation Businesses
**CNFO Owasso Campus
 Improvements Phase II**
 16990 East 116th Street North Owasso, Oklahoma 74055

REVISIONS

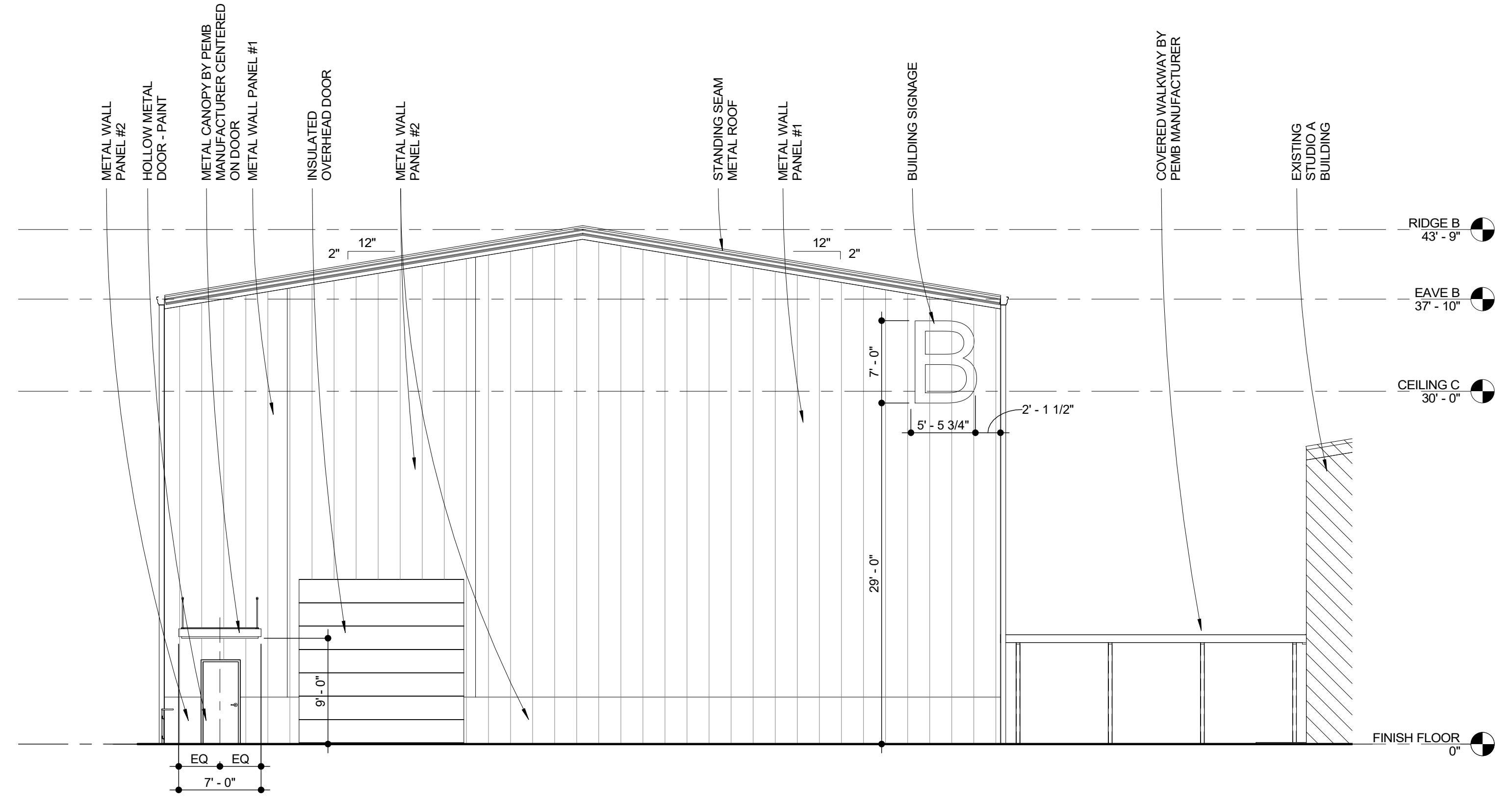
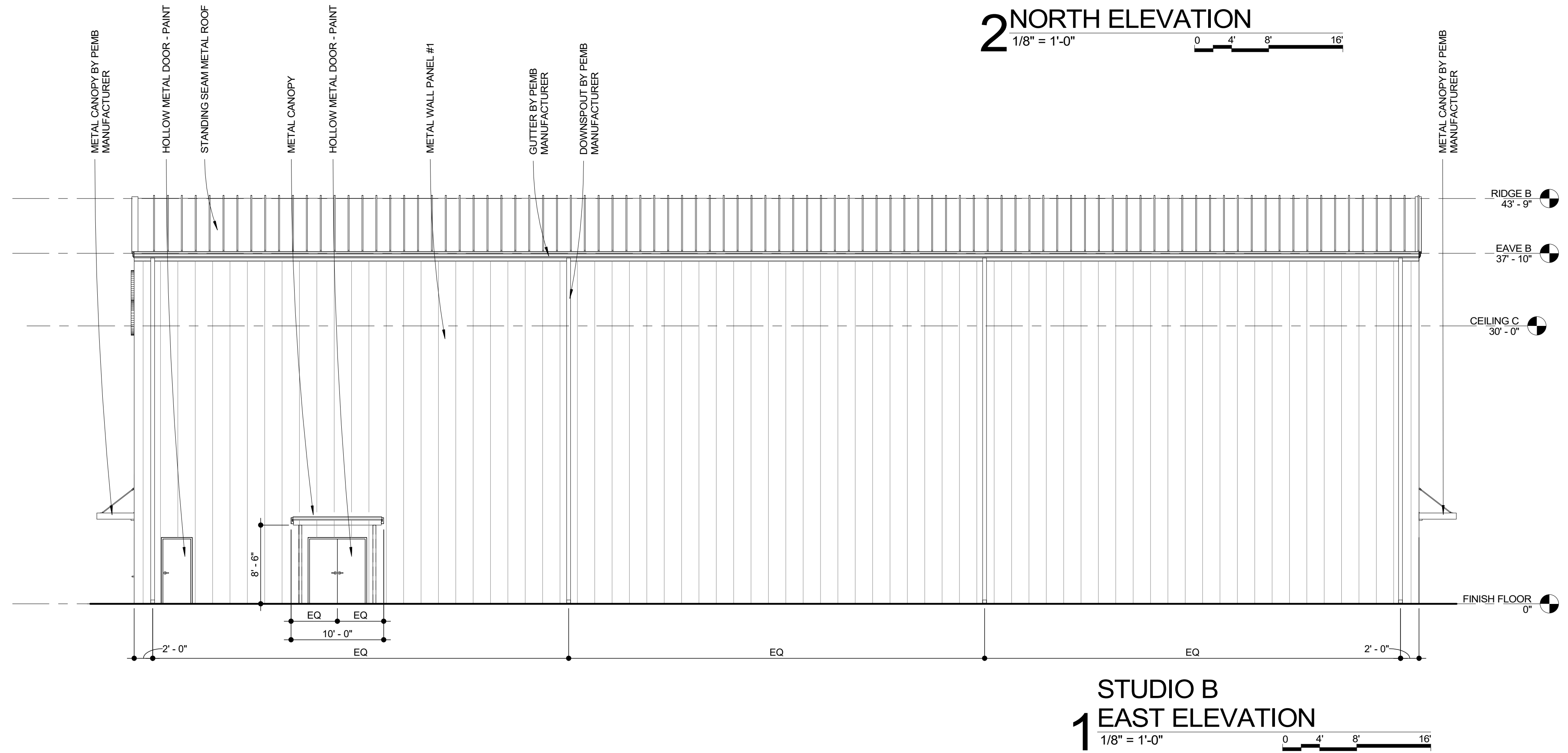




STUDIO B BUILDING
2 SECTION LOOKING EAST
 1/8" = 1'-0" 0 4' 8' 16'



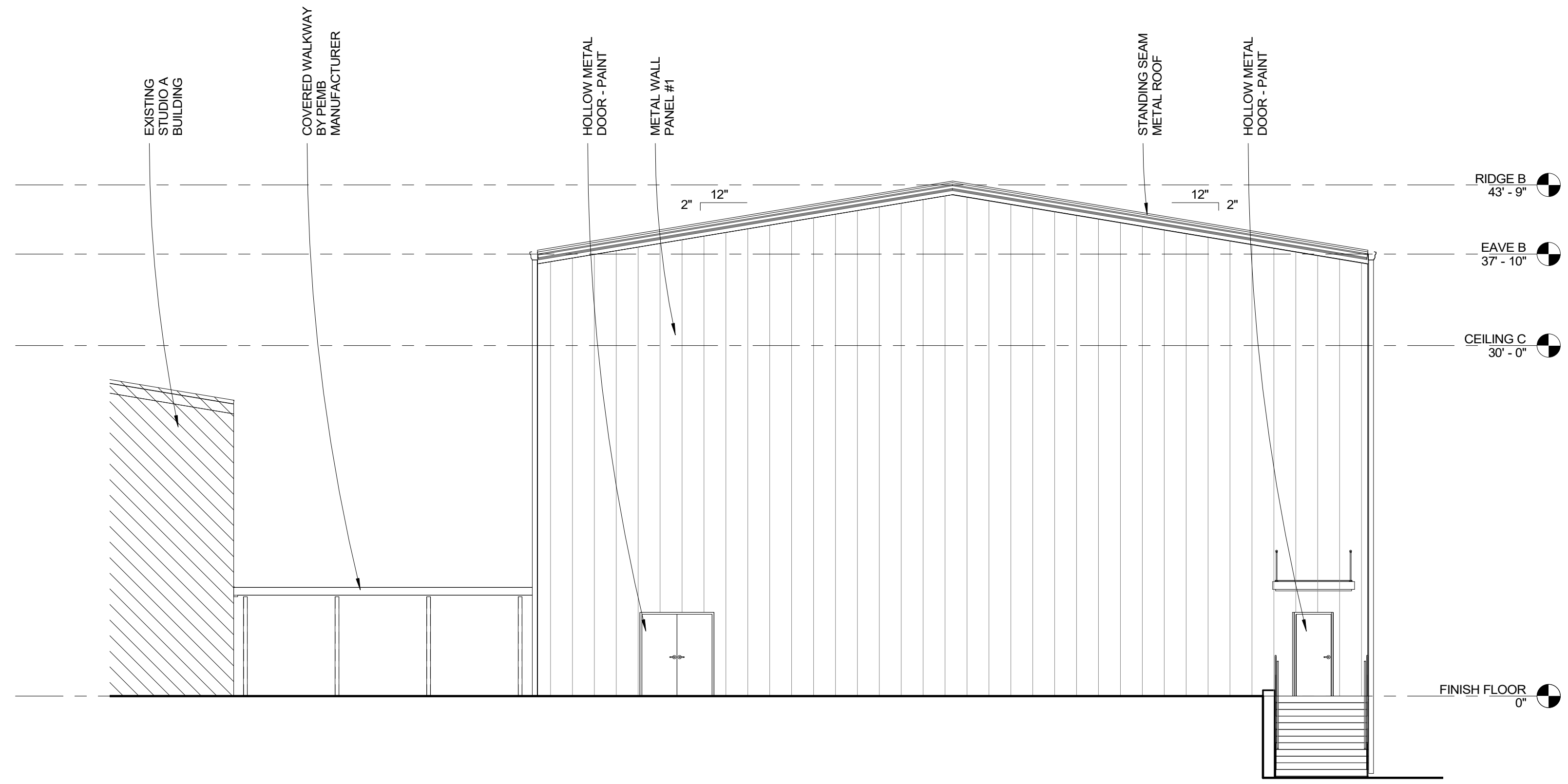
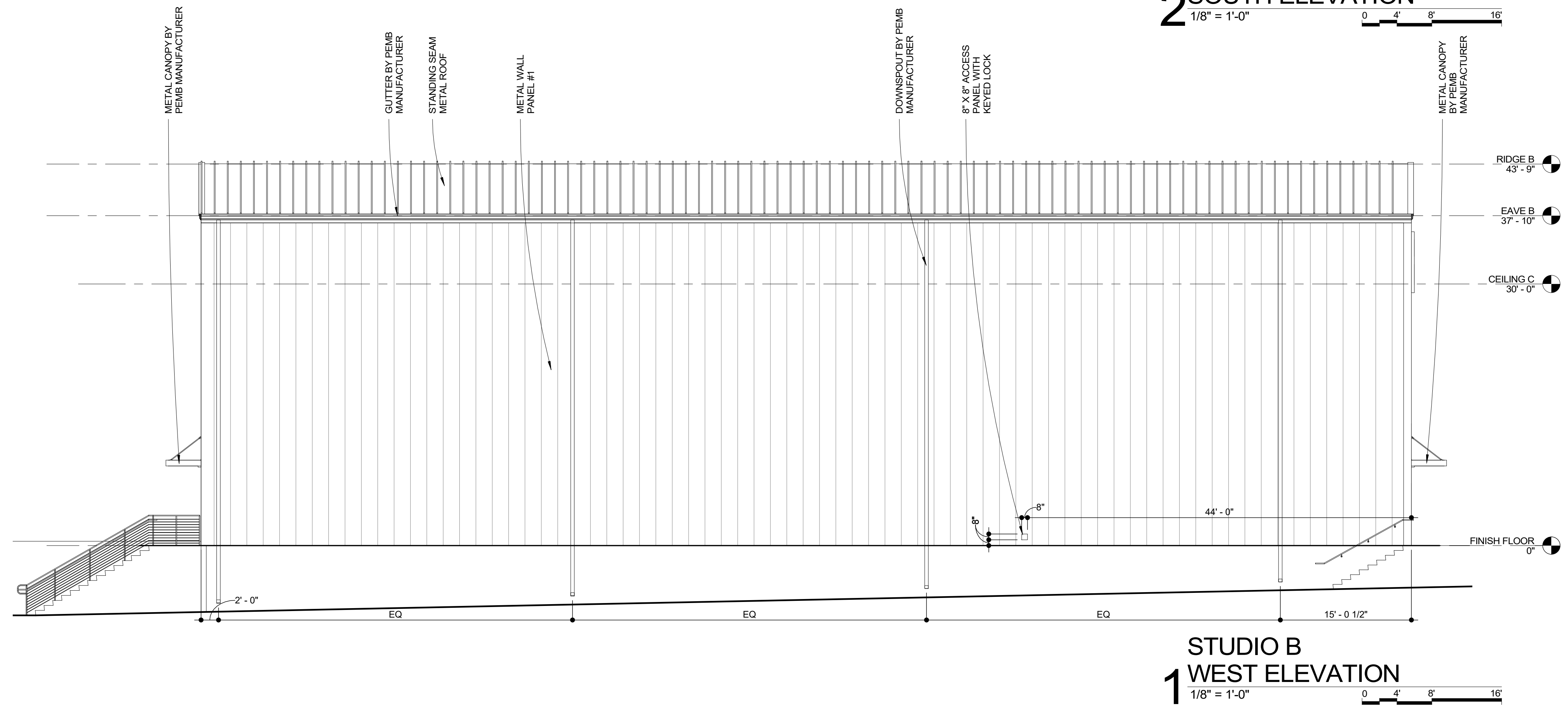
STUDIO A BUILDING
1 SECTION LOOKING WEST
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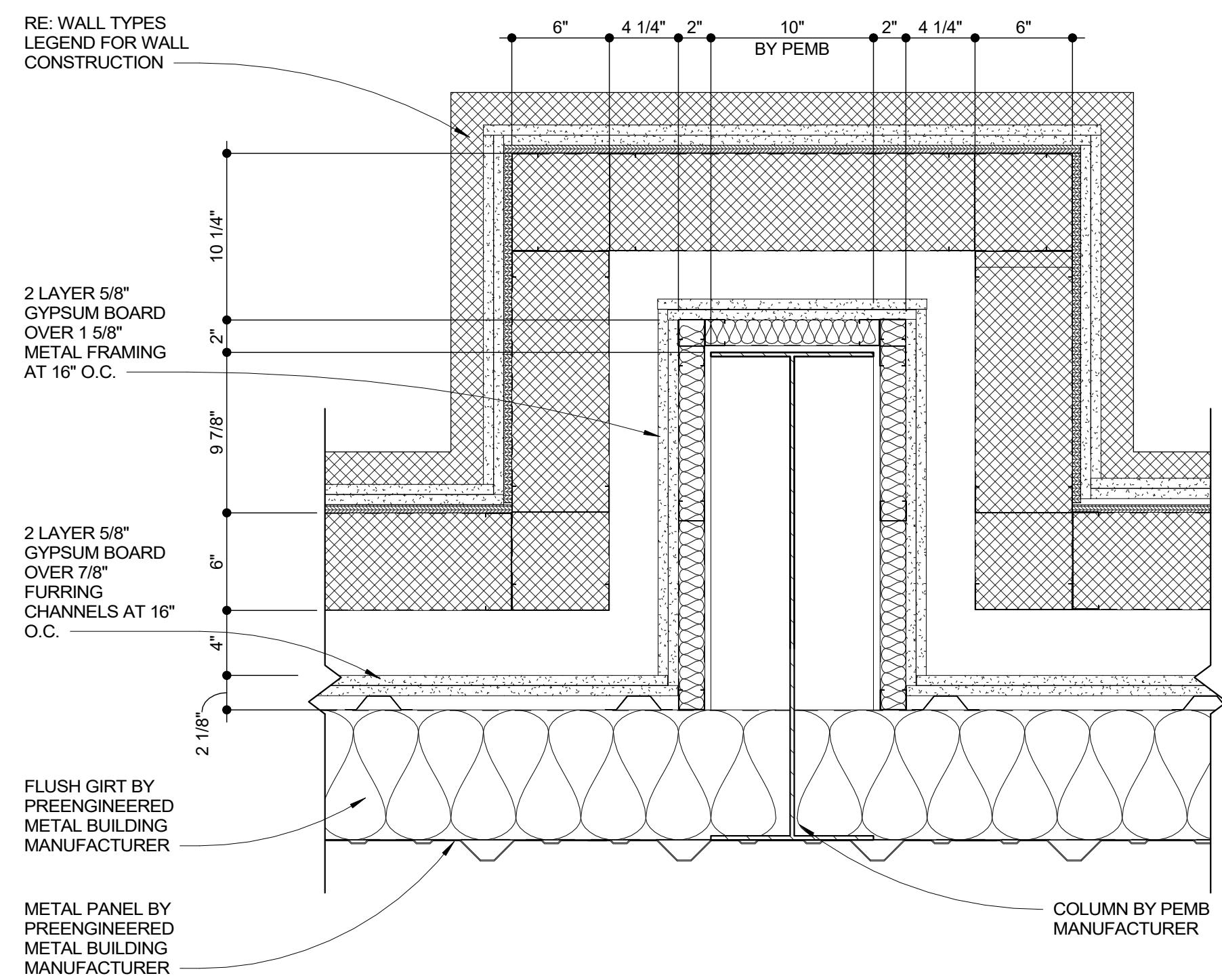


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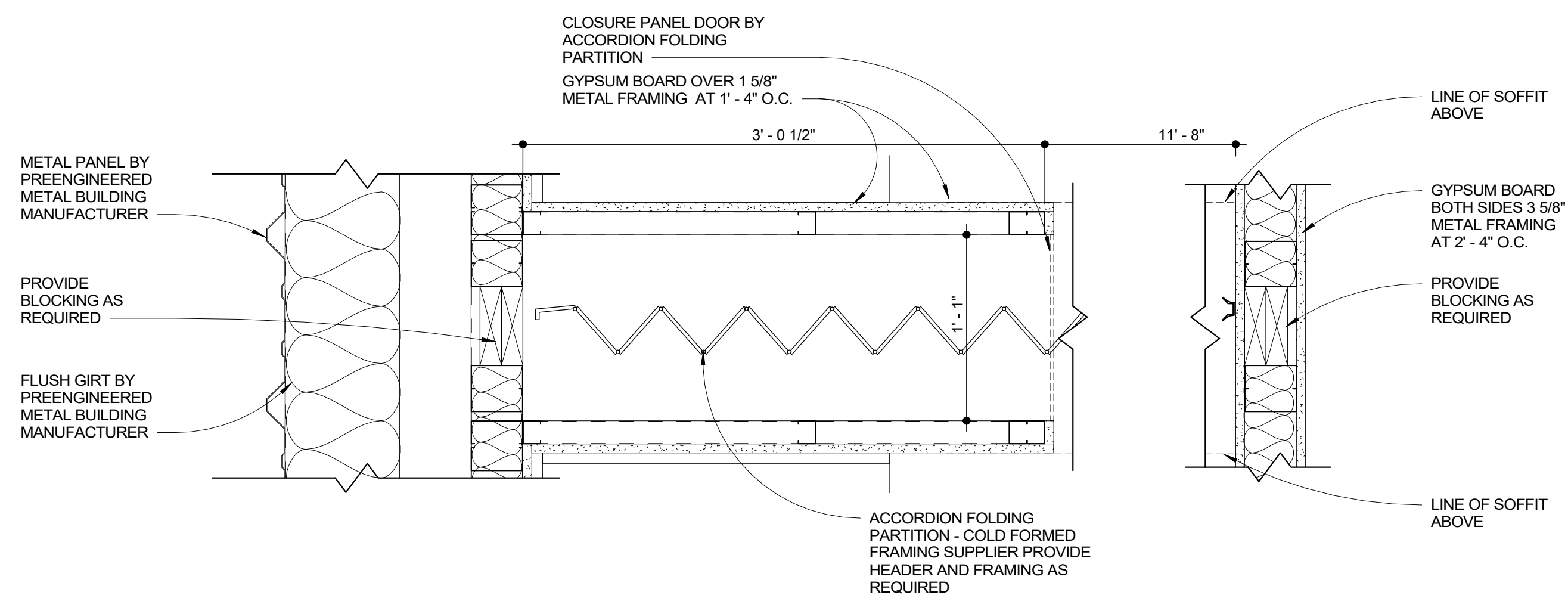
REVISIONS

DATE
02.13.23
SHEET
Exterior Elevations



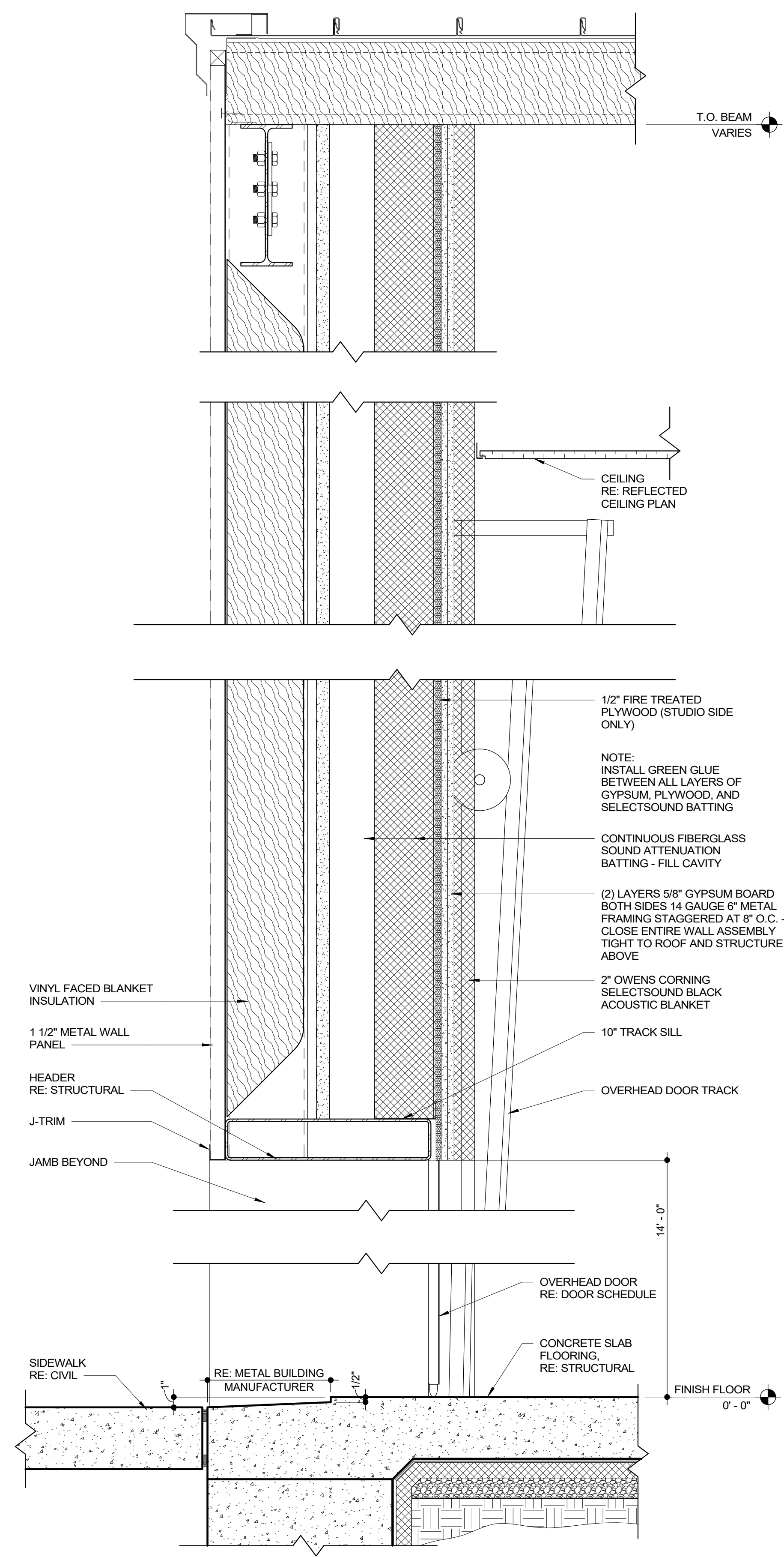


2 PLAN DETAIL
 1 1/2" = 1'-0"
 0 4" 8" 1'-4"
 NORTH

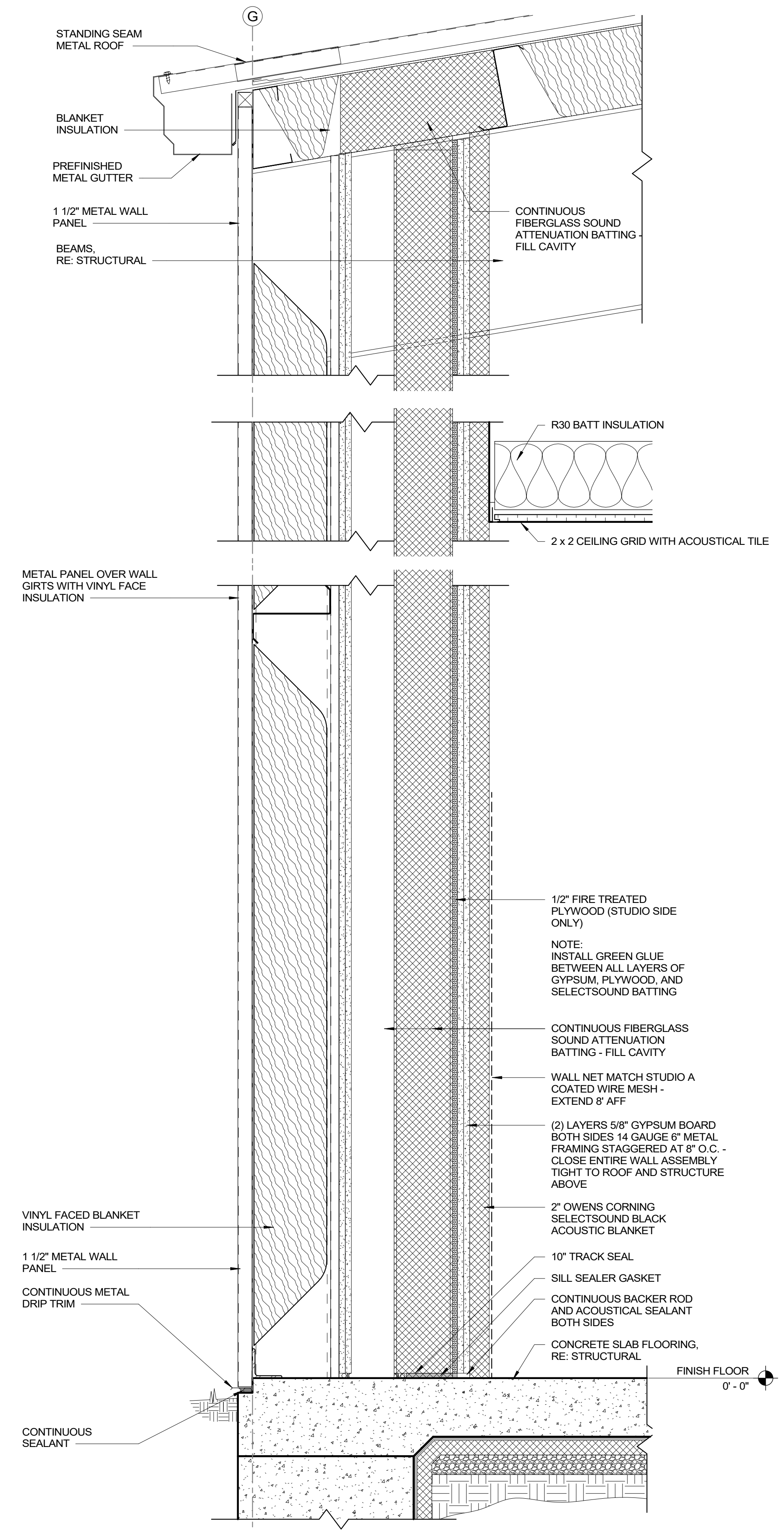


1 PLAN DETAIL
 1 1/2" = 1'-0"
 0 4" 8" 1'-4"
 NORTH

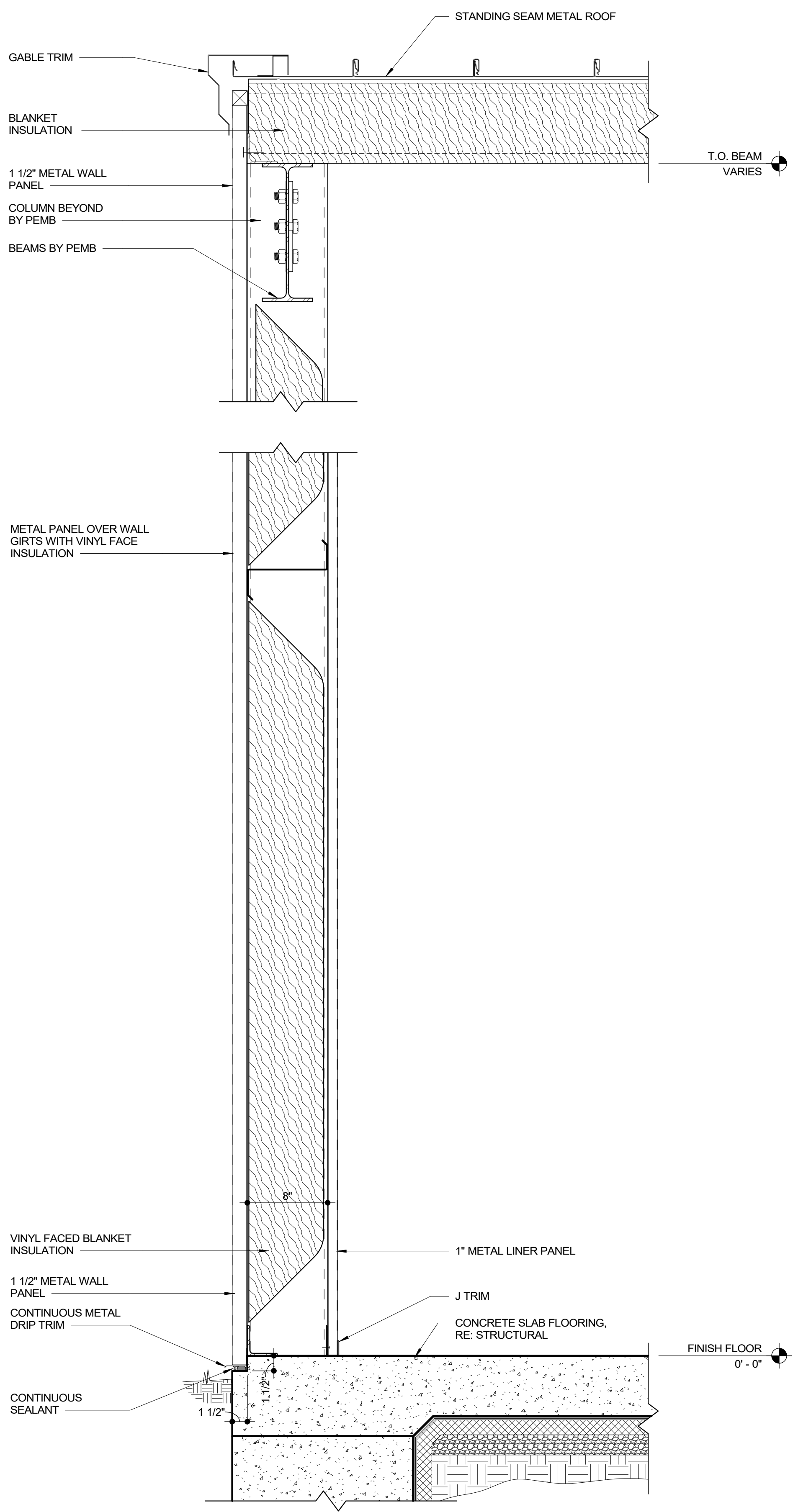
FOR TYPICAL NOTES AND DIMENSION RE: 1-A3.5



3 WALL SECTION
1 1/2" = 1'-0"
0 4" 8" 1'-4"



2 WALL SECTION
1 1/2" = 1'-0"
0 4" 8" 1'-4"



1 WALL SECTION
1 1/2" = 1'-0"
0 4" 8" 1'-4"

Cherokee Nation Businesses
CNFO Owasso Campus Improvements Phase II
16990 East 116th Street North Owasso, Oklahoma 74055

REVISIONS

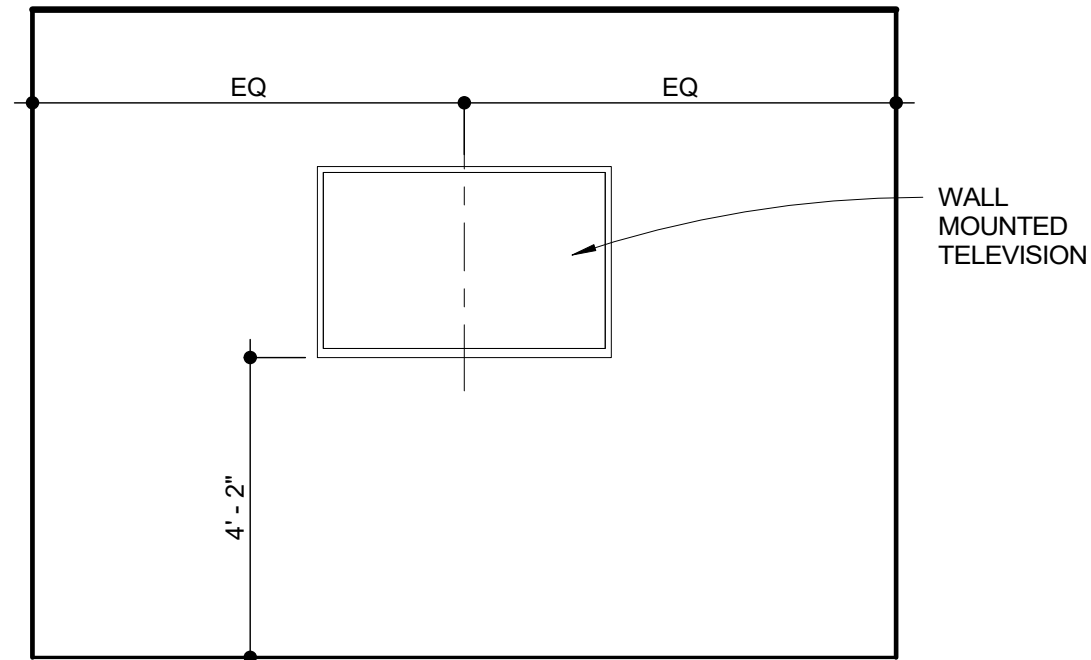
DATE: 02.13.23
SHEET: Wall Sections

MILLWORK NOTES

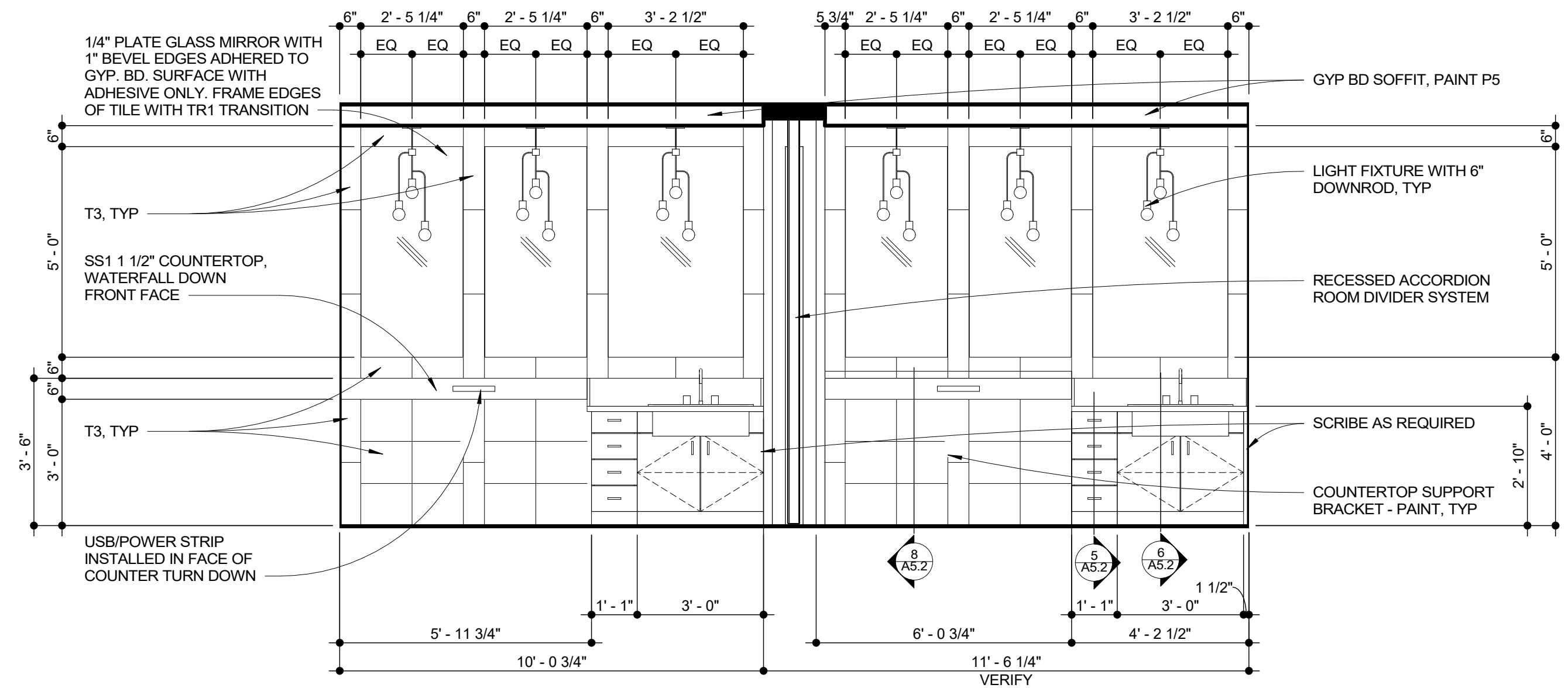
1. FIELD VERIFY ALL CASEWORK LOCATION DIMENSIONS PRIOR TO CONSTRUCTION OF CASEWORK. REVIEW ALL PLANS FOR MECHANICAL AND/OR ELECTRICAL EQUIPMENT TO BE INSTALLED AROUND OR WITHIN CASEWORK. NOTIFY THE ARCHITECT AND OBTAIN THE ARCHITECTS DIRECTION IF CASEWORK REQUIRES DIMENSIONAL RECONFIGURATION FOR ALL COMPONENTS TO FIT PROPERLY.
2. RETURN LIGHT VALANCE TO WALL WHERE END OF CABINET IS EXPOSED.
3. UNLESS INDICATED OTHERWISE PROVIDE 2" BACKSLASH AND ENDSPLASH AT ALL COUNTERTOPS.
4. PROVIDE GROMMETS NEAR BACK EDGE OF EACH BUILT-IN WORK SURFACE FOR ELECTRICAL, TELEPHONE AND/OR DATA CABLE REQUIRED TO SERVICE EQUIPMENT INDICATED OR IN LOCATION REQUESTED BY OWNER.
5. PROVIDE BLOCKING WITHIN WALL ASSEMBLY FOR ALL SURFACE MOUNTED CASEWORK, ACCESSORIES AND EQUIPMENT.
6. SCRIBE WALL CASEWORK TO ADJACENT WALL.

MILLWORK HARDWARE SCHEDULE

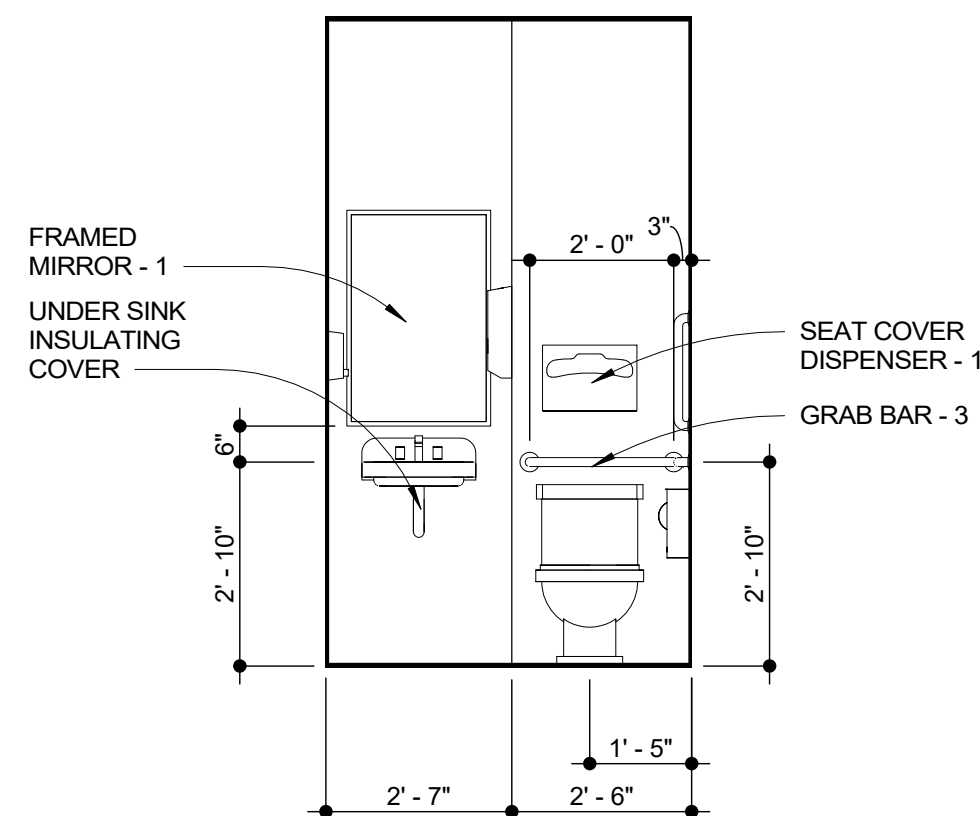
CABINET HARDWARE	MANUFACTURER AND MODEL	EXECUTION
EXPOSED HARDWARE FINISH	BRUSHED CHROME OR SATIN CHROME	
DOOR HINGE	BLUM: BLUMOTION 110 DEGREE WITH OPTIONAL 86 DEGREE RESTRICTION CLIP WHERE REQUIRED	1/8" MINIMUM REVEAL GAP ON DOUBLE DOORS, 1/16" MINIMUM REVEAL GAP ON SINGLE DOORS
DOOR / DRAWER PULL	STANLEY: MODEL NO. 4483	3 1/2" PULL
DRAWER SLIDE	METABOX DRAWER SYSTEM	DO NOT USE ON BOX DRAWERS EXCEEDING 8" HIGH, ON LATERAL FILES OR BOX DRAWERS EXCEEDING 24" IN WIDTH
FILE DRAWER SLIDE	KNAPE & VOGT: KV8505 SLIDE	SELECT MOUNTING HEIGHT BEST SUITED TO DRAWER HEIGHT
LATERAL FILE DRAWER SLIDE	KNAPE & VOGT: KV8525T SLIDE	FOR USE WIDER THAN 24", NOT TO EXCEED 42"
LOCKS	COMPX NATIONAL CAMLOCK	KEY EACH LOCK ALIKE UNLESS OTHERWISE DIRECTED BY OWNER
ADJUSTABLE SHELF SUPPORTS	KNAPE & VOGT: #333 ZC	STARTING 6" ABOVE THE LOWEST FIXED SURFACE
WIRE GROMMET	KNAPE & VOGT: KV734 / 735	
VENT GROMMET	DOUG MOCKETT: GT MESH VENT GROMMET	
TRASH GROMMET	DOUG MOCKETT: TRASH GROMMET STAINLESS RE: ELEVATIONS FOR SIZE	
EXPOSED FASTENERS	COMPLY WITH BHMA A156.18	
COUNTERTOP SUPPORT BRACKET	A&M 24" X 24" - WHITE 18" X 24" - WHITE	A&M 18" X 24" AT COUNTERTOPS UP TO 25" A&M 24" X 24" AT COUNTERTOPS EXCEEDING 25"
ADJUSTABLE SHELVING	KNAPE & VOGT: KV 186 / 187	MANUFACTURERS STANDARD LENGTH AS SUITED FOR SHELF WIDTH INDICATED
SPECIAL INSTRUCTIONS	1. ALL ITEMS LISTED MAY NOT BE REQUIRED.	



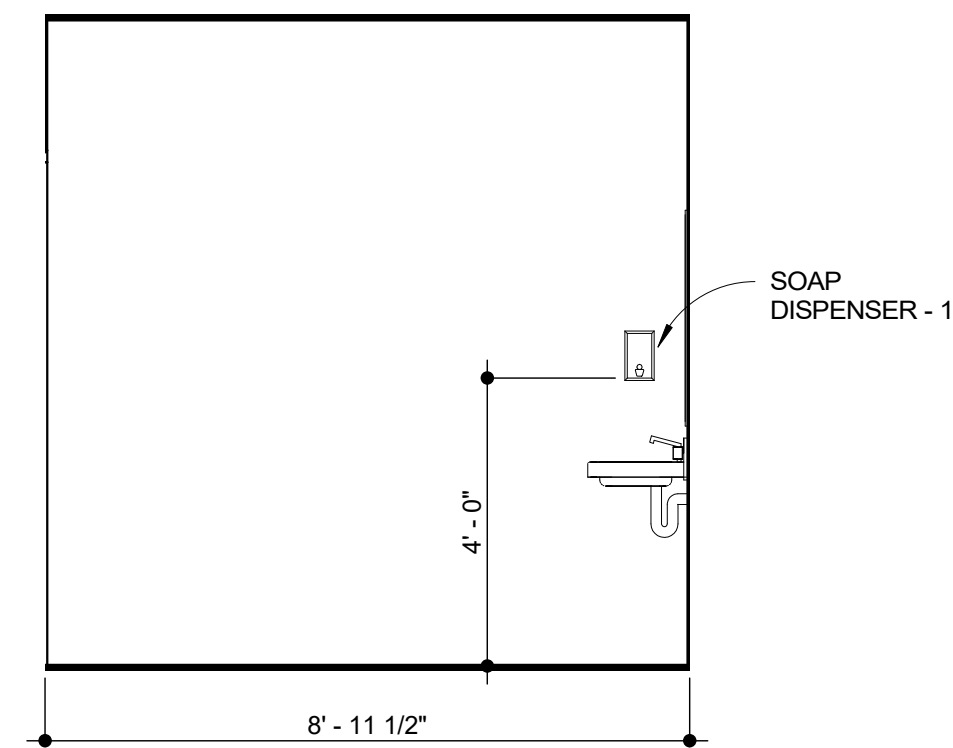
9 CONFERENCE ROOM
3/8" = 1'-0"



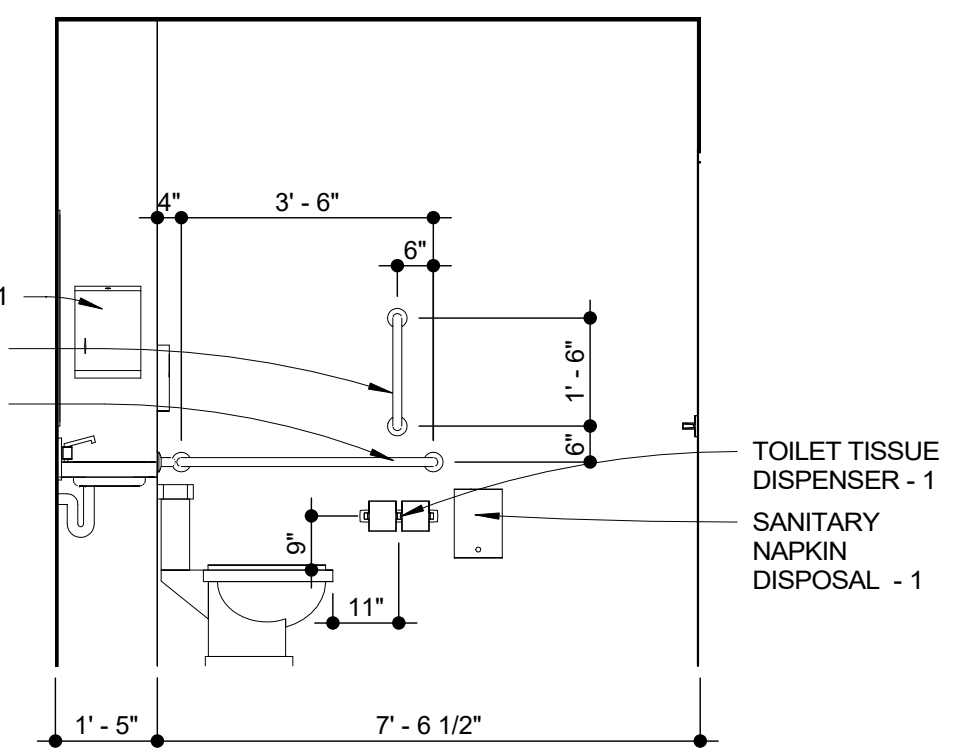
8 MAKEUP
3/8" = 1'-0"



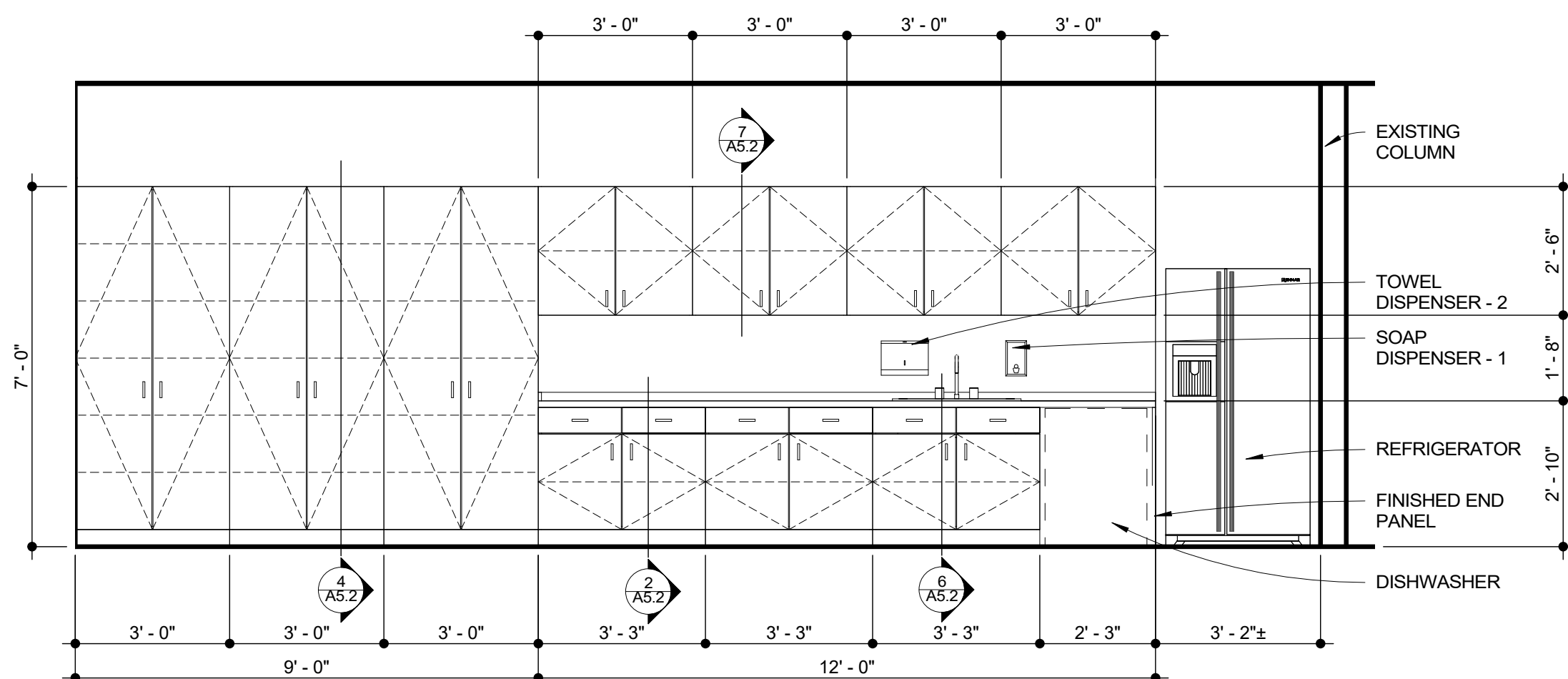
7 TOILET
3/8" = 1'-0"



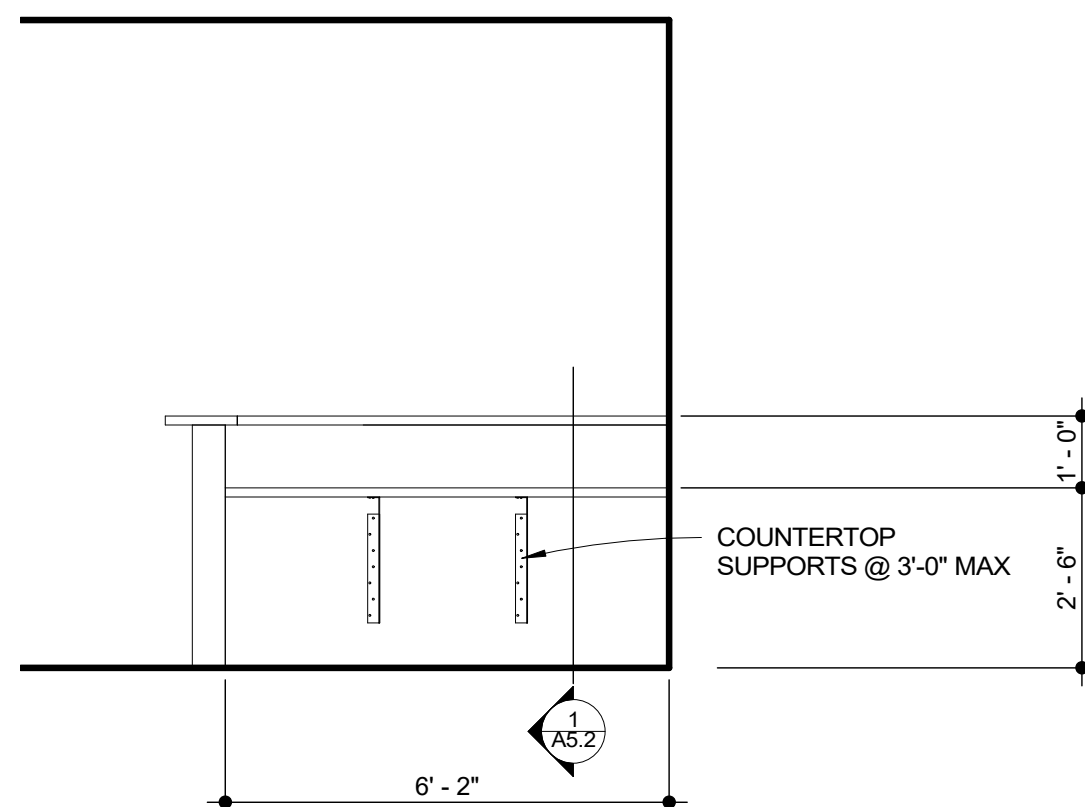
6 TOILET
3/8" = 1'-0"



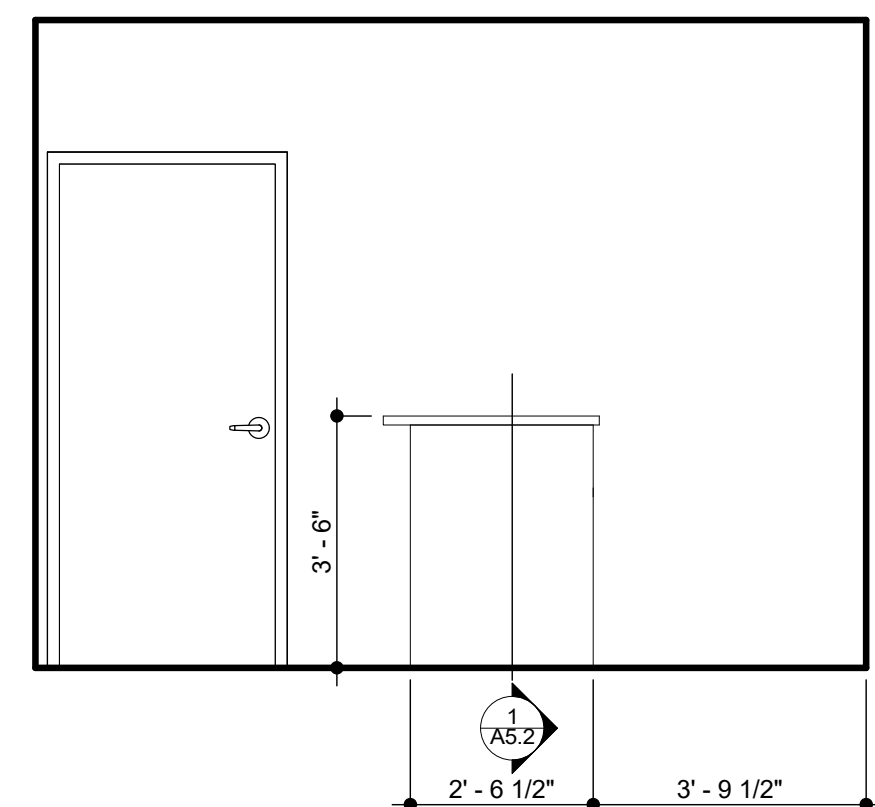
5 TOILET
3/8" = 1'-0"



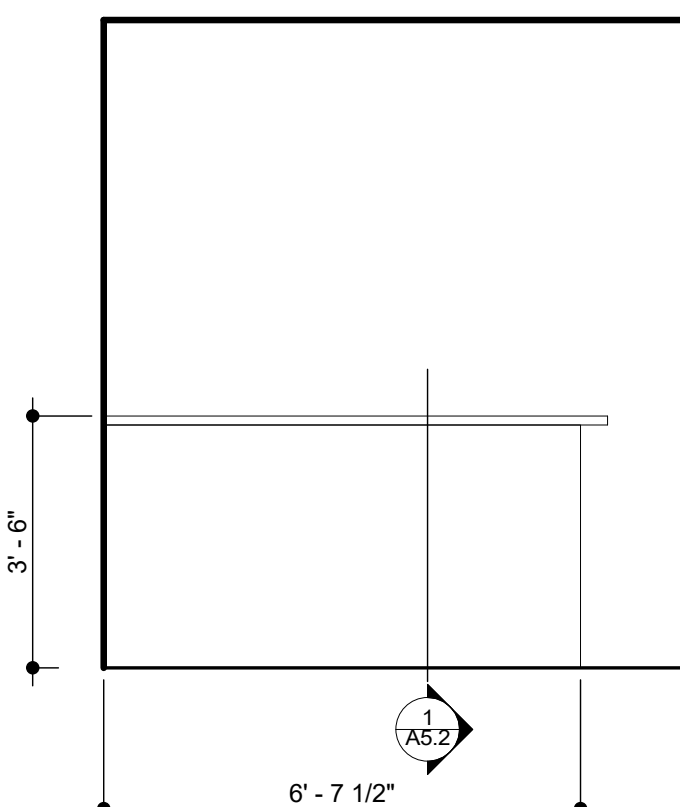
4 OPEN OFFICE
3/8" = 1'-0"



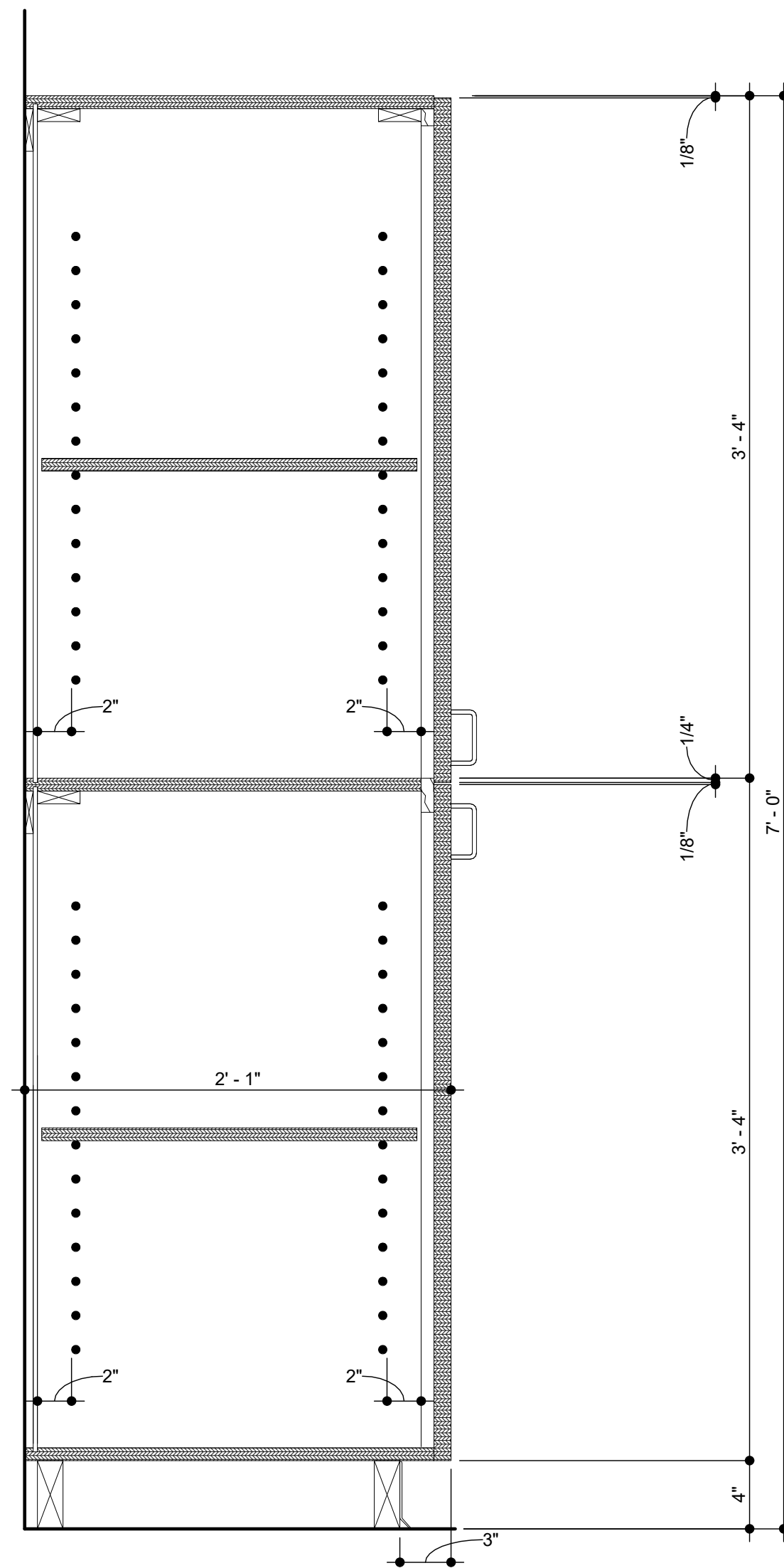
3 WAITING
3/8" = 1'-0"



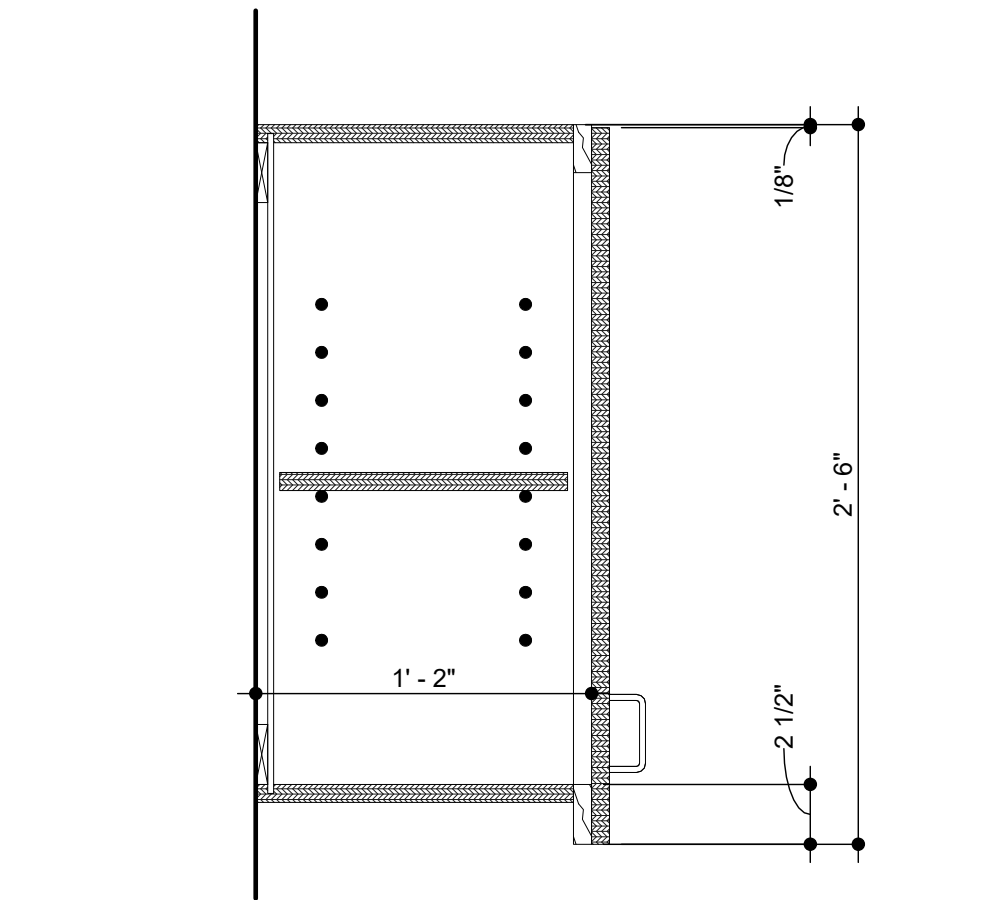
2 WAITING
3/8" = 1'-0"



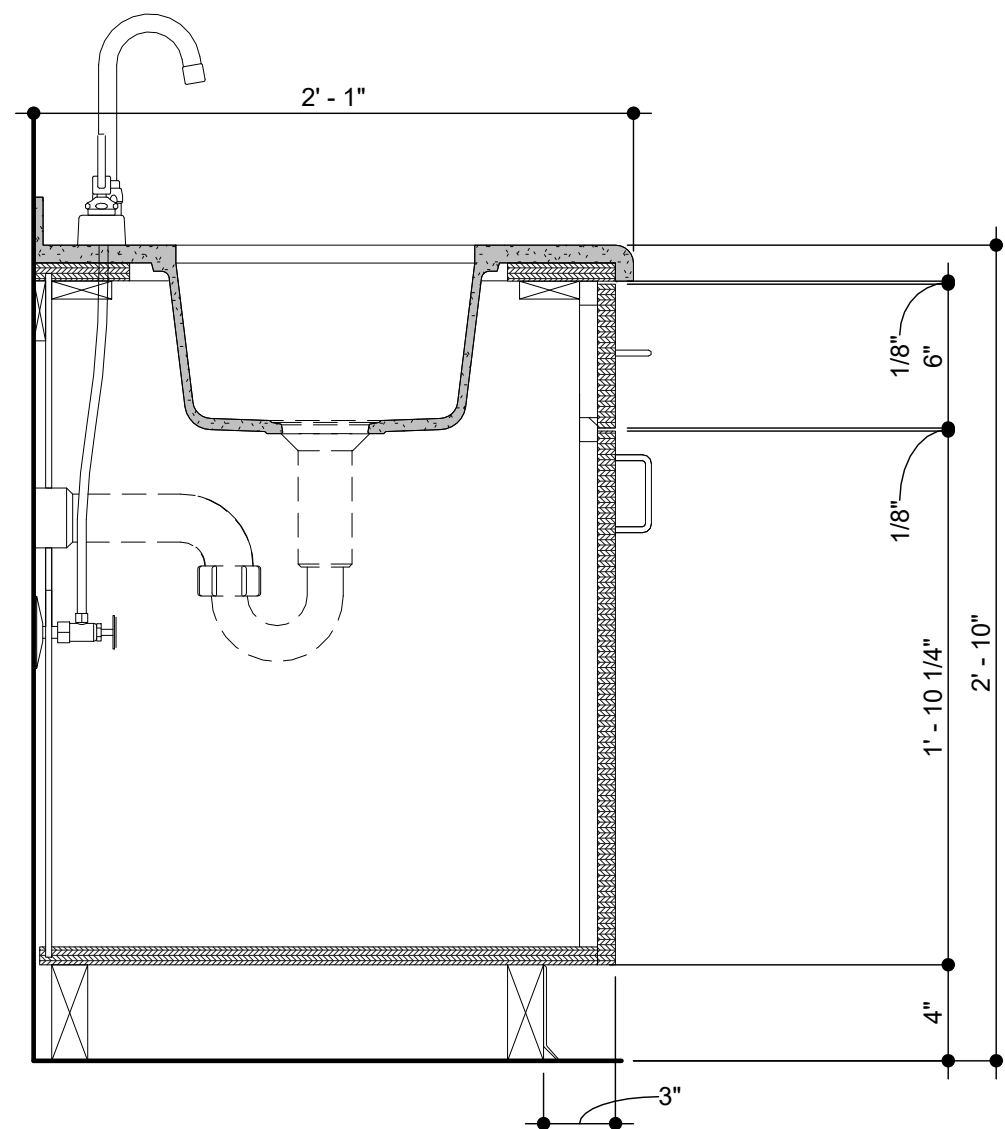
1 WAITING
3/8" = 1'-0"



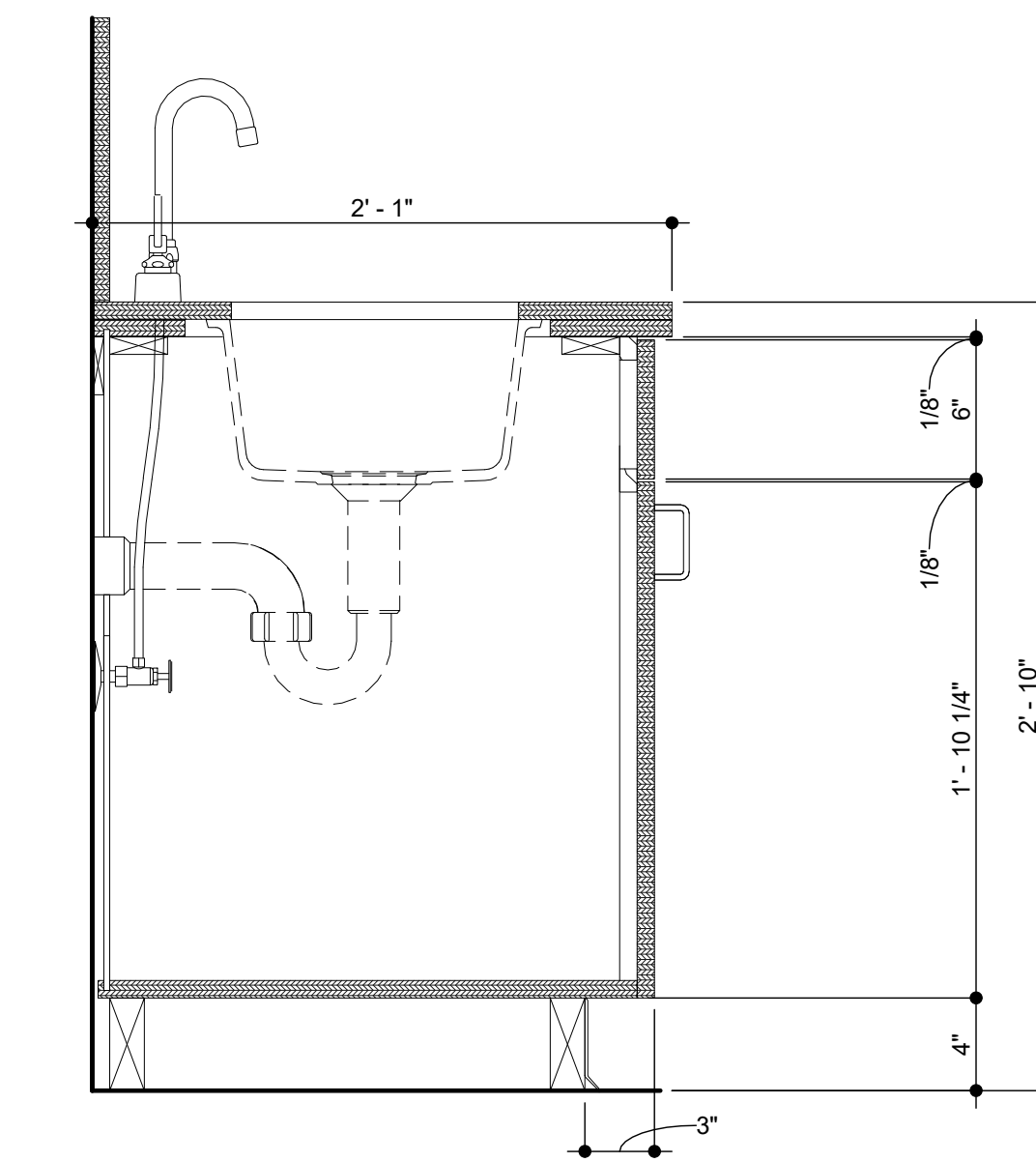
4 FULL HEIGHT CABINET
1 1/2" = 1'-0"



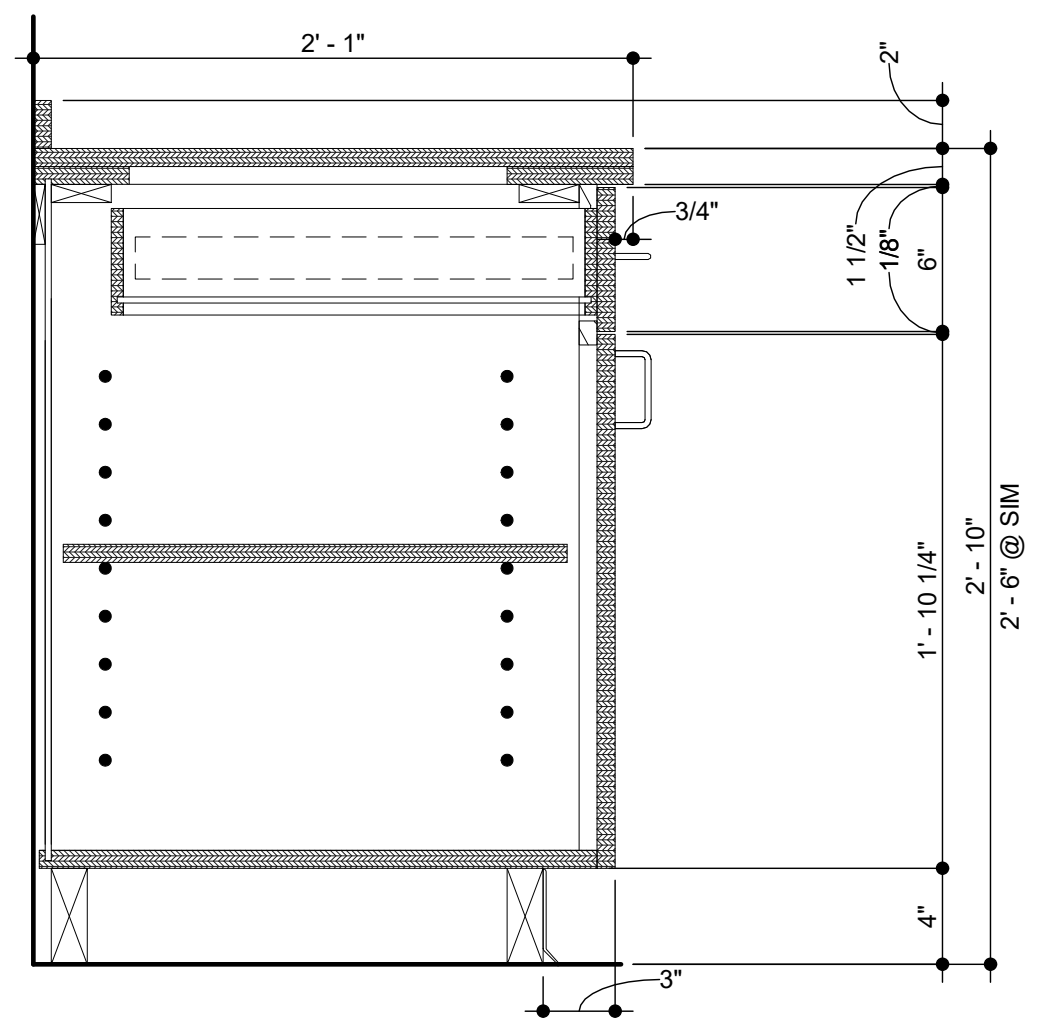
7 WALL CABINET
1 1/2" = 1'-0"



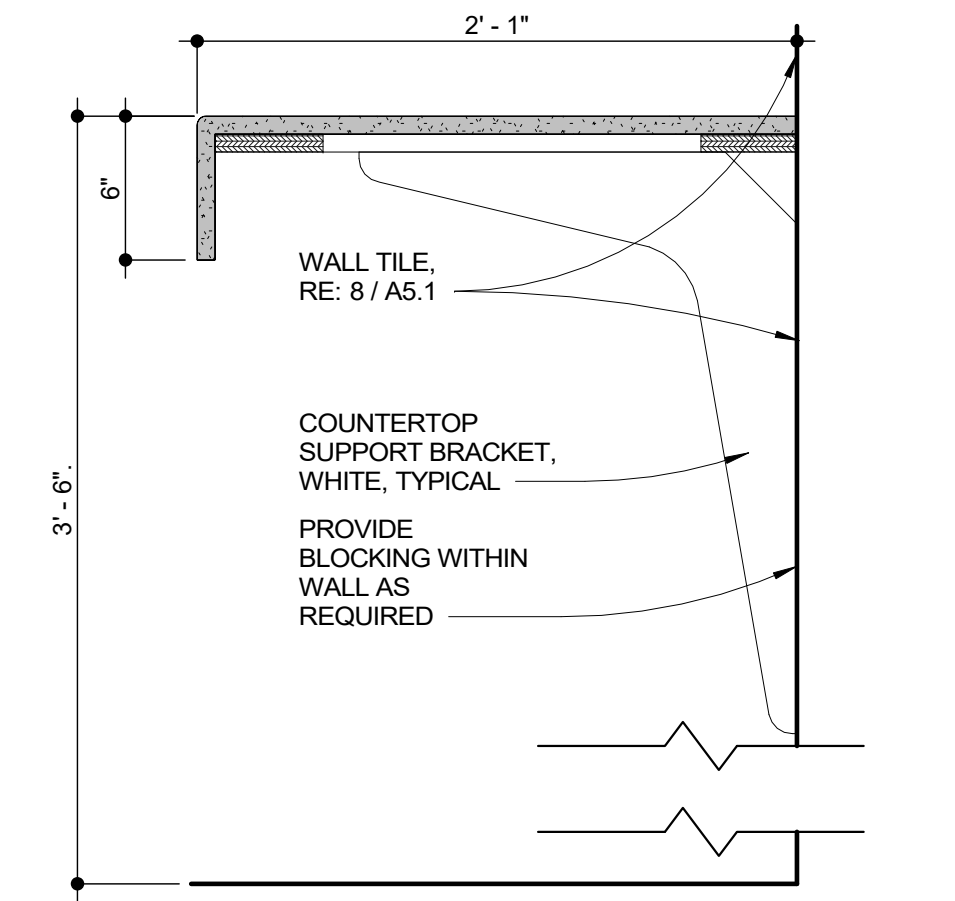
3 VANITY SINK
1 1/2" = 1'-0"



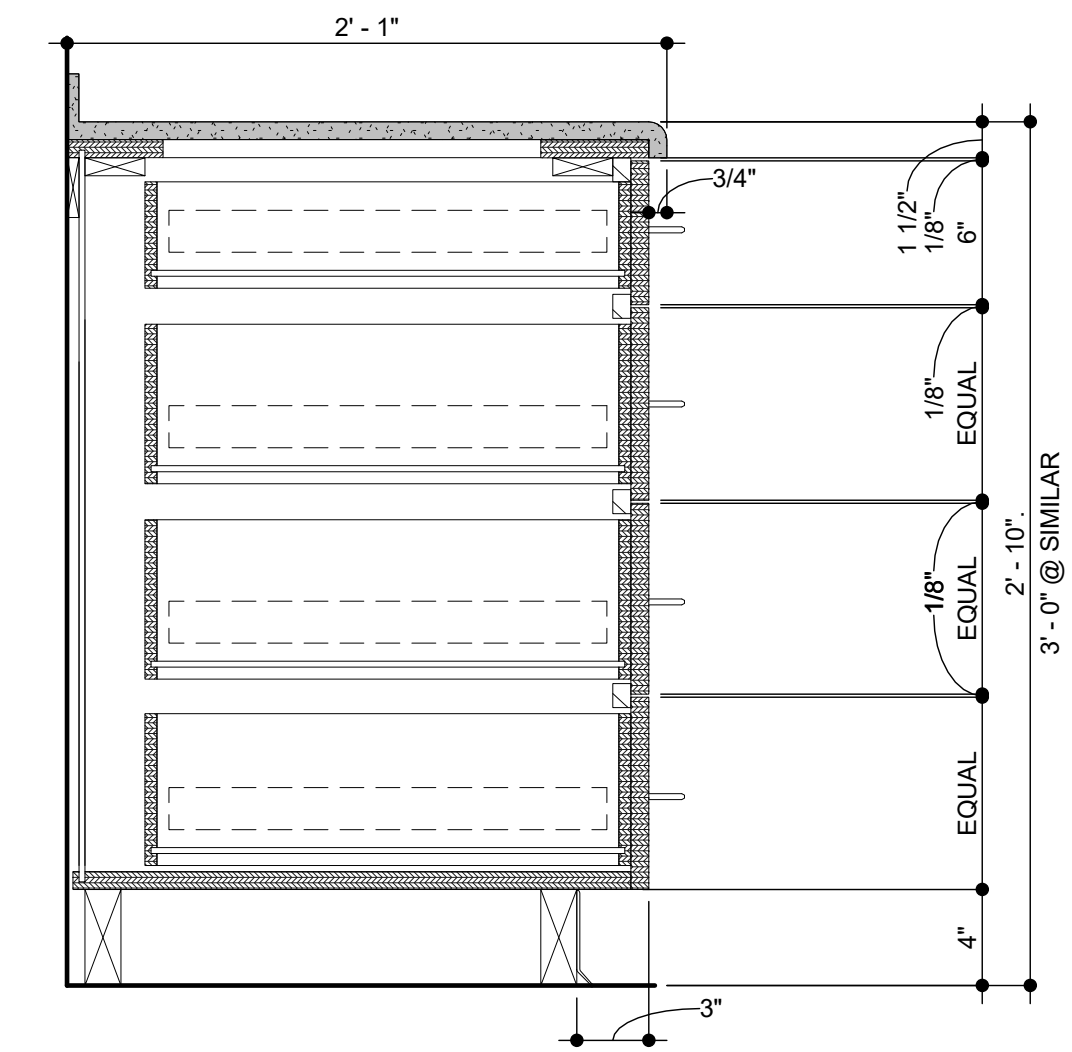
6 VANITY SINK
1 1/2" = 1'-0"



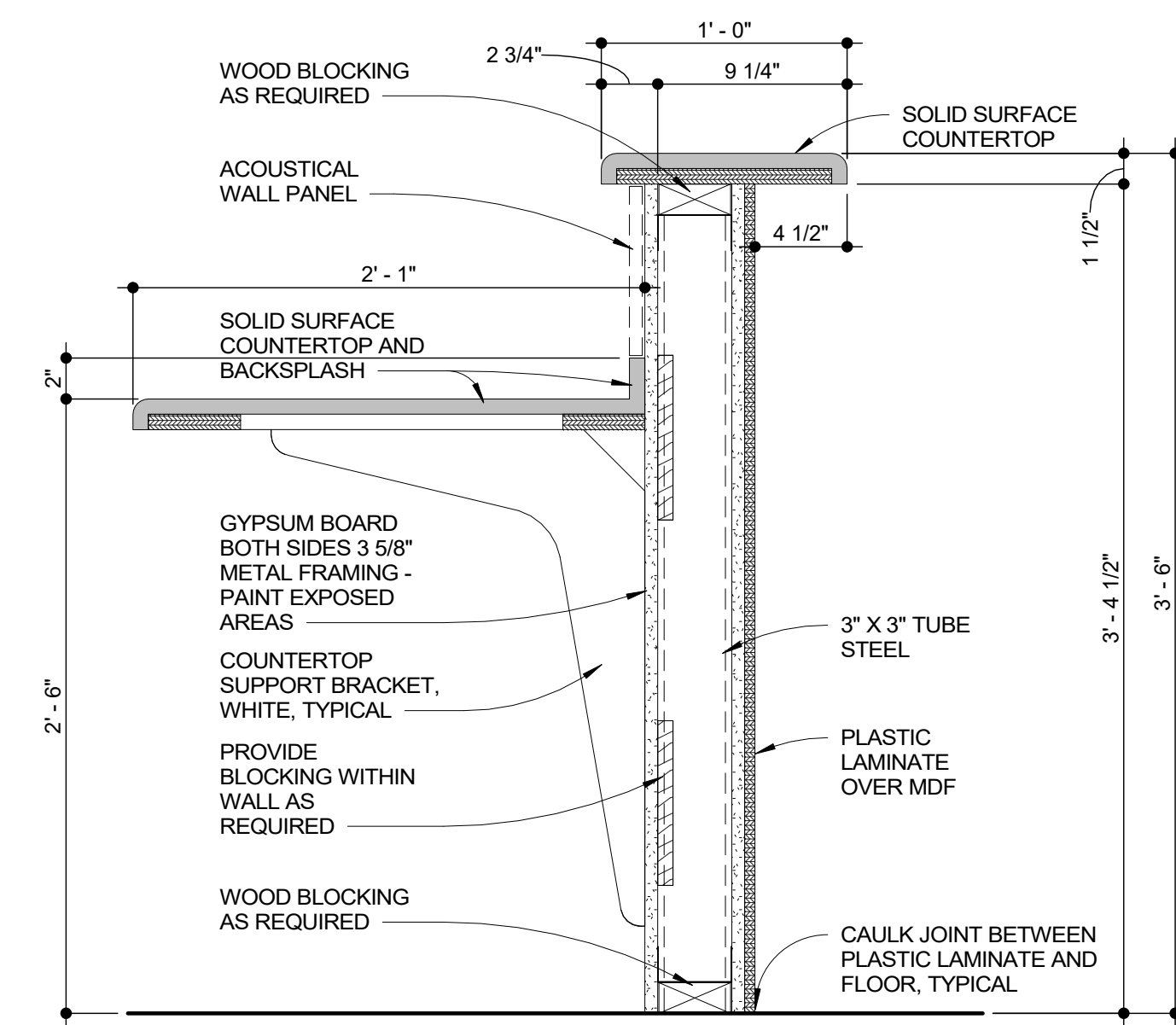
2 BASE CABINET
1 1/2" = 1'-0"



8 TRANSACTION TOP
1 1/2" = 1'-0"



5 BASE CABINET
1 1/2" = 1'-0"



1 TRANSACTION TOP
1 1/2" = 1'-0"

SECTION 21 13 00

FIRE SPRINKLER SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
1. Pipes, fittings, and specialties
 2. Fire-protection valves
 3. Fire-department connections
 4. Sprinklers
 5. Alarm devices
 6. Pressure Gauges

1.3 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Design sprinkler system(s), including comprehensive analysis by a qualified designer, using the performance requirements and design criteria indicated within this document. **CONTRACTOR TO PERFORM FLOW TEST.**
1. Available fire-hydrant flow test records indicate the following conditions:
 - a. Date: 10.28.2020
 - b. Time: 9:20 AM
 - c. Performed by: Sunbelt Fire
 - d. Location of Residual Fire Hydrant: 116th & 166th
 - e. Location of Flow Fire Hydrant: on site
 - f. Static Pressure at Residual Fire Hydrant: 54 psi
 - g. Measured Flow at Flow Fire Hydrant: 44 psi
 - h. Residual Pressure at Residual Fire Hydrant: 34 psi
 - B. Sprinkler system design shall be approved by authorities having jurisdiction.
 1. Margin of Safety for Available Water Flow and Pressure: Greater of 5 psi or 10 percent, including losses through water-service piping, valves, and backflow preventers.
 2. Sprinkler Occupancy Hazard Classifications:
 - a. General Storage Areas: Ordinary Hazard, Group 1 to include floor areas with racks or shelving below 8 feet in height.
 - b. Mechanical Equipment Rooms: Ordinary Hazard, Group 1.
 - c. Kitchen and Service Areas: Ordinary Hazard, Group 1
 - d. Office and Public Areas: Light Hazard.
 3. Minimum Density for Automatic-Sprinkler Piping Design:
 - a. Ordinary-Hazard, Group 2 Occupancy: 0.20 gpm over 1500-sq. ft.
 - b. Ordinary-Hazard, Group 1 Occupancy: 0.15 gpm over 1500 sq. ft.
 - c. Light-Hazard Occupancy: 0.10 gpm over 1500-sq. ft.
 - d. Design area may be reduced when allowed per NFPA 13 and authority having jurisdiction.
 4. Maximum Protection Area per Sprinkler:
 - a. The maximum protection area per sprinkler may be exceeded when extended coverage sprinklers are utilized where allowed by NFPA 13 and installed per their listing.
 - C. Provide sprinklers in exterior canopies and combustible concealed spaces where required by code or where storage of combustibles is present. Verify requirements with the authority having jurisdiction and provide protection for these areas when required.
 - D. If sprinkler system in any area is subject to freezing, then use non-freeze dry pipe system or dry sprinklers from a heated space.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated, provide manufacturers catalog information.
- B. Qualification Data: For qualified Installer.
- C. Approved Sprinkler Piping Drawings: Working plans, prepared according to NFPA 13, that have been approved by authorities having jurisdiction, including hydraulic calculations.
- D. Fire-Hydrant flow test report.
- E. Field Test Reports and Certifications: Indicate and interpret test results for Compliance performance requirements and as described in NFPA 13. Include "Contractor's Material and Test Certificate for Aboveground Piping."
- F. Operation and Maintenance Data: For sprinkler specialties to include in emergency, operation, and maintenance manuals to be submitted to owner upon completion.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications:
1. Qualifications (Installer): Company specializing in performing work of this Section with minimum three years experience and have a NICET Level III Fire Sprinkler Designer on staff
- B. NFPA Standards: Sprinkler system equipment, specialties, accessories, installation, and testing shall comply with the following:
1. NFPA 13, "Installation of Sprinkler Systems."
 2. NFPA 24, "Installation of Private Fire Service Mains and Their Appurtenances."
 3. NFPA 291, "Recommended Practice For Fire Flow Testing And Marking Of Hydrants."

1.6 COORDINATION

- A. Coordinate layout and installation of sprinklers with other construction, including partitions, ceilings, and structural elements. Location of mechanical, refrigeration, and electrical equipment shall be taken into consideration during design.

1.7 EXTRA MATERIALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
1. Sprinkler Cabinets: Finished, wall-mounted, steel cabinet with hinged cover, and with space for minimum of twelve spare sprinklers plus sprinkler wrench. Include number of sprinklers required by NFPA 13 and sprinkler wrenches for each type.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Provide UL Listed (for Fire Protection) or FM Approved (for Fire Protection) materials complying with NFPA 13, unless noted otherwise in Contract Documents

2.2 STEEL PIPE AND FITTINGS

- A. Schedule 40, Galvanized and Black Steel Pipe: ASTM A 53/A 53M. Threaded pipe ends.
- B. Schedule 10, Galvanized and Black Steel Pipe: ASTM A 135 or ASTM A 795/A 795M. Roll Grooved ends.
- C. Nonstandard OD, Thinwall Black Steel Pipe: ASTM A 135 or ASTM A 796. Roll Grooved ends.
- D. Fittings: Provide one of the following:
1. Cast-Iron Threaded Flanges: ASME B16.1
 2. Cast-Iron Threaded Fittings: ASME B16.4
 3. Malleable-Iron Threaded Fittings: ASME B16.3
 4. Steel, Threaded Couplings: ASTM A 865
 5. Steel Welding Fittings: ASTM A 234, ASME B 16.9, or ASME B16.11
 6. Steel Flanges and Flanged Fittings: ASME B16.5
 7. Steel, Grooved-End Fittings: UL-listed and FM-approved, ASTM A 47, malleable iron or ASTM A 546, ductile iron: with dimensions matching steel pipe and ends factory grooved according to AWWA C806. Roll groove only, cut groove unacceptable.
- E. Galvanized pipe, fittings, and hangers shall be used for dry pipe systems. Galvanized pipe, fittings, and hangers shall be used for wet pipe systems location in non-conditioned spaces.
- F. Fitting type shall match pipe type
- G. Crimp-type couplings shall not be used.

2.3 FIRE-PROTECTION VALVES

- A. General Requirements:
1. Standard: UL's "Fire Protection Equipment Directory" listing or "Approved Guide," published by FM Global, listing.
 2. Pressure Rating: 175 PSIG minimum

2.4 FIRE-DEPARTMENT CONNECTIONS

- A. It shall be the Contractors responsibility to confirm final location, type, and size of fire department connection with the authority having jurisdiction before proceeding with work. Provide the following:
- B. Storz Exposed-Type, Fire-Department Connection:
1. Type: Exposed, projecting, for wall mounting.
 2. Pressure Rating: 175 PSIG minimum
 3. Body Material: Corrosion-resistant metal
 4. Inlets: 5" Storz matching jurisdiction requirements, 30" Downturn.
 5. Caps: Storz cap with gasket and chain.
 6. Escutcheon Plate: Round, brass, wall type
 7. Outlet: Back with pipe threads
 8. Number of Inlets: Size per system demand.
 9. Escutcheon Plate Marking: Similar to "AUTO SPKR".

2.5 SPRINKLER SPECIALTY PIPE FITTINGS

- A. Flow Detection and Test Assemblies:
1. Standard: UL's "Fire Protection Equipment Directory" listing or "Approval Guide," published by FM Global, listing.
 2. Pressure Rating: 175 PSIG minimum
 3. Body Material: Cast or Ductile-iron housing with orifice, sight glass, and integral test valve.
 4. Size: Same as connected piping.
 5. Inlet and Outlet: Threaded.
- B. Flexible, Sprinkler Hose Fittings:
1. Standard: FM1637 or UL 2443.
 2. Type: Braided flexible hose for connection to sprinkler, and with bracket for connection to ceiling grid.
 3. Pressure Rating: 175 PSIG minimum
 4. Size: Same as connected piping, for sprinkler.

2.6 SPRINKLERS

- A. General Requirements:
1. Standard: UL's "Fire Protection Equipment Directory" listing or "Approval Guide," published by FM Global, listing.
 2. Pressure Rating for Automatic Sprinklers: 175 PSIG minimum.
 3. Characteristics: Nominal 1/2-inch orifice or larger with temperature classification rating as required by application.
 4. Finishes: Reference sprinkler schedule on drawings
- B. Sprinkler Escutcheons: Materials, types, and finished for the following sprinkler mounting applications.
1. Areas with Finished Ceilings: Chrome-plated steel, one piece, flat
 2. Sidewall Mounting: Chrome-plated steel, one piece, flat
- C. Temperature Rating:
1. Ordinary temperature rated sprinklers shall be used throughout the building unless otherwise required by code.
- D. Sprinkler Guards:
1. Standard: UL 199.
 2. Type: Wire cage with fastening devices for attaching to sprinkler.

2.7 ALARM DEVICES

- A. Alarm-device types shall match piping and equipment connections. Confirm requirement with authority having jurisdiction. Provide the following:
1. Electrically Operated Alarm Horn Strobe:
 - a. Standard: UL 464 & UL 1971.
 - b. Type: Electronic Horn with integral strobe light.
 - c. Finish: Red factory finish, suitable for outdoor use.
 - B. Water-Flow Indicators:
 1. Standard: UL 346
 2. Water-Flow Detector: Electrically supervised
 3. Components: Two single-pole, double-throw circuit switches for isolated alarm and auxiliary contacts, 7 a, 125-V ac and 0.25 A, 24-v dc: complete with factory-set, field-adjustable retard element to prevent false signals.
 4. Type: Padlock operated.
 5. Pressure Rating: 250 PSIG.
 6. Design Installation: Horizontal or vertical.
 - C. Pressure Switches:
 1. Standard: UL 346
 2. Type: Electrically Supervised.
 3. Components: Single-pole, double-throw switch with normally closed contacts.
 4. Design Operation: Rising pressure signals water flow.
 - D. Valve Supervisory Switches:
 1. Standard: UL 346
 2. Type: Electrically supervised.
 3. Components: Single-pole, double-throw switch with normally closed contacts
 4. Design: Signals that controlled valve is in other than fully open position.
 - E. Indicator-Post Supervisory Switches:
 1. Standard: UL 346
 2. Type: Electrically supervised
 3. Components: Single-pole, double-throw switch with normally closed contacts.
 4. Design: Signals that controlled indicator-post valve is in other than fully open position.

2.8 PRESSURE GAUGES

- A. Water or Air / Water pressure gauges.
1. Standard: UL 393.
 2. Dial Size: 3-1/2 to 4-1/2 inch diameter.
 3. Pressure Gauge Range: 0 to 250 PSIG minimum
 4. Gauge Label: Include "WATER" or "AIR/WATER" label on dial face.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Perform fire-hydrant flow test according to NFPA 13 and NFPA 291. Use results for system design calculations required in "Quality Assurance" Article. Report test results promptly and in writing.

3.2 SERVICE-ENTRANCE PIPING

- A. Connect sprinkler piping to water-service piping for service entrance to building. Comply with requirements for exterior piping.
- B. Install shutoff valve, backflow preventer (as required), pressure gauge, drain, and other accessories indicated at connection to water-service piping. Comply with local authority having jurisdiction's requirements for backflow prevention.
- C. Install Shutoff valve, check valve, pressure gauge, and drain at connection to water service.

3.3 PIPING INSTALLATION

- A. Locations and Arrangements: Drawing plans, schematics, and diagrams indicate general location and arrangement of piping. Install piping as indicated, as far as practical.
1. Deviations from approved working plans for piping require written approval from authorities having jurisdiction. File written approval with Architect before deviating from approved working plans.
- B. Piping Standard: Comply with requirements for installation of sprinkler piping in NFPA 13.
- C. Contractor shall confirm all local requirements for seismic restraints on piping. Comply with requirements for seismic-restrain device materials and installation in NFPA 13.
- D. Use listed fittings to make changes in direction, branch takeoffs from mains, and reductions in pipe sizes.
- E. Install "Inspector's Test Connections" in sprinkler system piping, complete with shutoff valve, and sized and located according to NFPA 13.
- F. Install sprinkler piping with drains for complete system drainage.
- G. Install alarm devices in piping systems.
- H. Install hangers and supports for sprinkler system piping according to NFPA 13. Comply with requirements for hanger materials in NFPA 13.
- I. Install pressure gauges on riser or feed main, at each sprinkler test connection, and at top of each standpipe. Include pressure gauges with connection not less than NPS 1/4 and with soft metal seated globe valve, arranged for draining pipe between gauge and valve. Install gauges to permit removal, and install where they will not be subject to freezing.

3.4 JOINT CONSTRUCTION

- A. Install couplings, flanges, flanged fittings, unions, nipples, and transition and special fittings that have finish and pressure ratings same as or higher than system's pressure rating for aboveground applications unless otherwise indicated.
- B. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
- C. Remove scale, slag, dirt, and debris from inside and outside of pipes, tubes, and fittings before assembly
- D. Flanged Joints: Select appropriate gasket material in size, type, and thickness suitable for water service. Join flanges with gasket and bolts according to ASME B31.9
- E. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using dies. Ream threaded pipe ends to remove burrs and restore full ID. Join Pipe Fittings and Valves as follows:
1. Apply appropriate tape or thread compound to external pipe threads.
 2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged.
- F. Welded Joints: Construct joints according to AWS D10.12/MD10.12, using qualified processes and welding operators according to "Quality Assurance" Article.
1. Shop weld pipe joints where welded piping is indicated. Do not use welded joints for galvanized-steel pipe.
- G. Steel-Piping, Rolled-Grooved Joints: Roll rounded-edge groove in end of pipe according to AWWA C606. Assemble coupling with housing, gasket, lubricant, and bolts. Join steel pipe and grooved-end fittings according to AWWA C606 for steel-pipe grooved joints.

3.5 VALVE AND SPECIALTIES INSTALLATION

- A. Install listed fire-protection valves, trim and drain valves, specialty valves and trim, controls, and specialties according to NFPA 13 and authorities having jurisdiction.
- B. Install listed fire-protection shutoff valves supervised open, located to control sources of water supply except from fire-department connections. Install permanent identification signs indicating portion of system controlled by each valve.

3.6 SPRINKLER INSTALLATION

- A. Factory applied protective guards or caps on sprinklers shall be left in place until sprinklers are permanently installed. Pendant and sidewall guards or caps shall be left in place pending installation of wall and ceiling systems and then removed as final finish escutcheons are being installed.
- B. Install sprinklers in suspended ceilings in center of acoustical ceiling panels where practical. Maintain a minimum distance of 6 inches from any ceiling rid at all times.
- C. Where sprinklers are subject to mechanical injury they shall be protected with permanent listed guards.
- D. Install dry-type sprinklers with water supply from heated space. Do not install pendant or sidewall, wet-type sprinklers in areas subject to freezing. The clearance around all dry type sprinkler penetrations shall have an airtight seal applied.
- E. Where flexible drops are used, attach sprinkler hose fittings and install hose into bracket on ceiling rid. Do not allow flexible fitting to hang unsupported or be left in a state where it will be damaged by other trades.

3.7 FIRE-DEPARTMENT CONNECTION INSTALLATION

- A. Install wall-type, fire-department connections in an accessible location approved by the local authority having jurisdiction.
- B. Install automatic (ball drip) drain valve at each check valve for fire-department connection, to drain piping between fire-department connection and check valve. Install drain piping to, and spill over floor drain or to outside building.

3.8 ESCUTCHEON INSTALLATION

- A. Install escutcheons for all penetrations of walls, ceilings, and floors.

3.9 IDENTIFICATION AND SIGNAGE

- A. Provide durable aluminum signs for all control, drain, test and alarm valves to identify their functions. Provide lettering sizes and styles per Authorities Having Jurisdiction. Provide hydraulic placard for each sprinkler system in accordance with NFPA 13.
- B. Where multiple risers are installed riser/zone numbers shall be stenciled and painted on each riser. Provide a sprinkler zone map that clearly identifies the location of all areas protected, control valves, dry pipe valve, inspector's test valves, auxiliary drains, pumps, and tanks. Sprinkler Zone Map shall be laminated in plastic. Permanently attach to wall in fire sprinkler riser room.

3.10 FIELD QUALITY CONTROL

- A. Perform tests and inspections
- B. Tests and Inspections:
1. Leak Test: After installation, charge systems and test for leaks. Repair leaks and retest until no leaks exist.
 2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
 3. Flush, test, and inspect sprinkler systems according to NFPA 13, "Systems Acceptance" Chapter.
 4. Coordinate with fire-alarm tests. Operate as required.
 5. Verify that equipment hose threads are same as local fire-department equipment.
- C. Sprinkler piping system will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports.

3.11 CLEANING

- A. Sprinklers shall be free from dirt, dust, and debris upon completion of installation. Sprinklers shall only be cleaned with a soft dry duster or cloth. No water or chemicals shall be used to remove debris from sprinklers.
- B. Remove and replace any sprinklers that are covered with paint other than factory finish during construction. Painted sprinklers shall not be cleaned.

3.12 DEMONSTRATION

- A. Train Owner's maintenance personnel to adjust, operate, and maintain completed system.

END OF SECTION

DESIGN PARAMETERS

- DESIGN CODES AND STANDARDS
 - BUILDING CODE: IBC 2015 RISK CATEGORY II
 - MATERIAL CODES AND STANDARDS DESIGN LOADS:
 - ASCE 7-10 - MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES CONCRETE:
 - ACI 318-14 - BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE MASONRY:
 - ACI 530-13 - BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES STEEL:
 - AISC 360-10 - SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS
 - AISC 341-10 - SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS
- GRAVITY LOADS
 - ROOF DEAD LOADS ACTUAL WEIGHT PER MBM
 - COLLATERAL DEAD LOADS 10 PSF
 - LIVE LOADS (UNIFORM/CONCENTRATED) ROOF 20 PSF / 300 LB
 - ROOF SNOW LOAD
 - GROUND SNOW LOAD, Pg 10 PSF
 - FLAT ROOF SNOW LOAD, Pf 10 PSF
 - SNOW EXPOSURE FACTOR, Ce 1.0
 - SNOW LOAD IMPORTANCE FACTOR, I 1.0
 - THERMAL FACTOR, Ct 1.0
- WIND DESIGN DATA
 - ULTIMATE DESIGN WIND SPEED (3 SECOND GUST), Vult 115 MPH
 - NOMINAL DESIGN WIND SPEED (3 SECOND GUST), Vasd 90 MPH
 - WIND EXPOSURE CATEGORY C
 - INTERNAL PRESSURE COEFFICIENT, Gcpi +/- 0.18
 - WIDTH OF END ZONE 5.0 FT
 - EARTHQUAKE DESIGN DATA
 - SEISMIC IMPORTANCE FACTOR, Ie 1.0
 - MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETER, Ss 0.127
 - MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETER, S1 0.069
 - SITE CLASS C
 - DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETER, Sds 0.101
 - DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETER, Sd1 0.078
 - SEISMIC DESIGN CATEGORY B
 - STRUCTURAL SYSTEM --
 - VERTICAL ELEMENT TYPE BUILDING FRAME SYSTEM
 - BASIC SEISMIC FORCE-RESISTING SYSTEM TYPE STRUCTURAL STEEL SYSTEM NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
 - RESPONSE MODIFICATION FACTOR, R 3
 - SEISMIC RESPONSE COEFFICIENT, Cs 0.034
 - DESIGN BASE SHEAR, 1.0E 0.034 W
 - ANALYSIS PROCEDURE EQUIVALENT LATERAL FORCE

ROOF PRESSURES (1.0W)		
	EFFECTIVE WIND AREA	
	≤10 SQ. FT.	≥100 SQ. FT.
ZONE 1	-26.4 PSF	-24.0 PSF
ZONE 2	-46.0 PSF	-33.8 PSF
ZONE 3	-68.0 PSF	-53.3 PSF
ZONE 1, 2 & 3	16.6 PSF	16.0 PSF

WALL PRESSURES (1.0W)		
	EFFECTIVE WIND AREA	
	≤10 SQ. FT.	≥100 SQ. FT.
ZONE 4	-31.3 PSF	-27.0 PSF
ZONE 5	-38.6 PSF	-30.0 PSF
ZONE 4 & 5	28.9 PSF	24.5 PSF

- NOTES:
- RE: ASCE 7-10 FIGURES 30.4-1 AND 30.4-2A
 - REFER TO CODE FOR EFFECTIVE TRIBUTARY AREAS NOT LISTED
 - POSITIVE VALUES SIGNIFY PRESSURES ACTING TOWARD THE NOTED SURFACE AND NEGATIVE VALUES SIGNIFY PRESSURES ACTING AWAY FOR THE NOTED SURFACE

GENERAL NOTES

- STRUCTURAL ELEMENTS ARE NON-SELF SUPPORTING AND REQUIRE INTERACTION WITH OTHER ELEMENTS FOR STABILITY AND RESISTANCE TO LATERAL FORCES. FRAMING AND WALLS SHALL BE TEMPORARILY BRACED BY THE CONTRACTOR UNTIL PERMANENT BRACING, FLOOR AND ROOF DECKS, AND WALLS HAVE BEEN INSTALLED AND CONNECTIONS BETWEEN THESE ELEMENTS HAVE BEEN MADE.
- THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION, UNLESS NOTED OTHERWISE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND OPERATION OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO.
- THE STRUCTURE HAS BEEN DESIGNED FOR THE INDICATED LOADS ONLY. USE OF HEAVY EQUIPMENT AND SCAFFOLDING, OR STORAGE OF MATERIALS THAT TRANSFER EXCESSIVE LOADS TO THE STRUCTURE SHALL BE VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE CALCULATIONS SIGN AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED TO VERIFY THE ADEQUACY OF THE STRUCTURE FOR ALL APPLIED CONSTRUCTION LOADS THAT EXCEED THE LOADS INDICATED IN THE CONSTRUCTION DOCUMENTS AND SHALL BE APPROVED BY THE ARCHITECT AND ENGINEER-OF-RECORD PRIOR TO ANY CONSTRUCTION ACTIVITY.
- THE SPECIFICATIONS ARE AN INTEGRAL PART OF THE CONTRACT DOCUMENTS AND SHALL BE USED IN CONJUNCTION WITH THE CONTRACT DRAWINGS. WHERE REQUIREMENTS INDICATED ON THE CONTRACT DRAWINGS DIFFER FROM THE SPECIFICATIONS, NOTIFY THE ARCHITECT AND THE ENGINEER-OF-RECORD.
- STRUCTURAL DRAWINGS ARE NOT STAND-ALONE DOCUMENTS AND ARE INTENDED TO BE USED IN CONJUNCTION WITH CIVIL ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND DRAWINGS FROM OTHER DISCIPLINES. THE CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS INTO SHOP DRAWINGS AND WORK.
- ALL WELDS SHALL BE PERFORMED BY QUALIFIED WELDERS IN ACCORDANCE WITH AMERICAN WELDING SOCIETY (A.W.S.) SPECIFICATIONS.

GENERAL NOTES

- THE SIZE AND LOCATION OF EQUIPMENT PADS AND PENETRATIONS THROUGH THE STRUCTURE FOR MECHANICAL, ELECTRICAL, AND PLUMBING WORK SHALL BE VERIFIED BY THE CONTRACTOR. PENETRATIONS SHALL BE SUBJECT TO APPROVAL BY THE ARCHITECT AND THE ENGINEER-OF-RECORD. REFERENCE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR OPENING LOCATIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
- USE ONLY DIMENSIONS INDICATED IN THE CONTRACT DOCUMENTS. DO NOT SCALE CONTRACT DOCUMENTS OR USE ANY DIMENSIONS TAKEN FROM ELECTRONIC DRAWING FILES. CONTRACTOR SHALL COORDINATE IN-PLACE DIMENSIONS BASED ON TOLERANCES OF THE RESPECTIVE TRADES.
- ASSUME EQUAL SPACING IF NOT INDICATED IN CONTRACT DOCUMENTS.
- ARCHITECTURAL, MECHANICAL AND ELECTRICAL COMPONENTS AND SYSTEMS SHALL BE DESIGNED AND CONSTRUCTED TO RESIST SEISMIC FORCES AS DETERMINED IN CHAPTER 13 OF ASCE 7.
- REFERENCE ARCHITECTURAL DRAWINGS FOR NON-LOAD BEARING PARTITION FRAMING. CONNECTION OF NON-LOAD BEARING PARTITION FRAMING TO THE PRIMARY STRUCTURE SHALL ALLOW FOR VERTICAL LIVE LOAD DEFLECTIONS OF THE FLOOR AND ROOF FRAMING.
- CONTRACTOR SHALL COORDINATE ALL DIMENSIONS, OPENING, BLOCKOUTS, RECESSES, ELEVATIONS, ANCHOR RODS AND EMBED LOCATIONS PRIOR TO CONSTRUCTION.
- FOUNDATIONS
 - FOUNDATION DESIGNS, SUBGRADE PREPARATION NOTES, AND STRUCTURAL EARTH MOVING SPECIFICATION ARE BASED ON THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT NUMBER TU220196, BY: BUILDING AND EARTH SCIENCES INC. DATED: OCTOBER 27, 2022.
 - FOOTING DESIGNS ARE BASED ON A NET [MAX] ALLOWABLE SOIL BEARING CAPACITY OF 2,500 PSF.
 - CONTRACTOR AND TESTING LABORATORY REPRESENTATIVE SHALL READ THE GEOTECHNICAL REPORT AND BECOME THOROUGHLY FAMILIAR WITH SITE AND SUBGRADE INFORMATION GIVEN THEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT QUANTITIES OF CUT AND FILL FOR ESTIMATING AND CONSTRUCTION. SUBGRADE SHALL BE PREPARED AS NOTED IN THE STRUCTURAL EARTH MOVING SPECIFICATION.
 - A QUALIFIED AND REGISTERED GEOTECHNICAL ENGINEER, LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED AND WORKING FOR THE TESTING LABORATORY, SHALL DETERMINE CONFORMANCE OF THE FOUNDATION BEARING STRATA WITH THE FOUNDATION DESIGN CRITERIA ABOVE, AND ALL OTHER CONTRACT DOCUMENTS. TESTING LABORATORY SHALL NOTIFY CONTRACTOR, ARCHITECT AND ENGINEER-OF-RECORD OF ANY CONDITIONS NOT IN ACCORDANCE WITH FOUNDATION DESIGN CRITERIA OR CONTRACT DOCUMENTS.
 - ALL VEGETATION, ROOTS, TOPSOIL AND ANY OTHER DELETERIOUS MATERIALS SHALL BE REMOVED FROM THE CONSTRUCTION AREA. MATERIALS DISTURBED DURING CLEARING OPERATIONS SHALL BE STABILIZED IN PLACE OR UNDERCUT TO UNDISTURBED MATERIALS AND BACKFILLED WITH PROPERLY COMPACTED, APPROVED STRUCTURAL FILL.
 - FOUNDATIONS, TANKS, BASEMENT WALLS AND ABANDONED UTILITY LINES FROM EXISTING STRUCTURES SHALL BE REMOVED.
 - THE EXPOSED GRADE SHALL BE SCARIFIED TO A DEPTH OF AT LEAST 8 INCHES AND PROOF-ROLLED USING A FULLY LOADED TANDEM AXLE DUMP TRUCK (20-TON MINIMUM), ANY SOFT / LOOSE SOILS, ORGANIC MATERIALS, DEBRIS, OVER-SIZED ROCK FRAGMENTS, OR ANY OTHER UNSUITABLE MATERIALS ENCOUNTERED SHALL BE REMOVED FROM THE PROPOSED BUILDING AREA AND REPLACED WITH APPROVED STRUCTURAL FILL.
 - PRIOR TO PLACEMENT OF NEW FILL, THE EXPOSED SUBGRADE SHALL BE MOISTURE CONDITIONED AND COMPACTED TO AT LEAST 95% STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698) [(ASTM D-1557) AT A MOISTURE CONTENTS WITHIN 2% BELOW TO 2% ABOVE THE OPTIMUM.
 - A REGISTERED GEOTECHNICAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED AND WORKING FOR THE TESTING LABORATORY SHALL VERIFY CONFORMANCE OF THE FOUNDATION BEARING STRATA TO THE CRITERIA LISTED AND SHALL VERIFY ALL FILL COMPACTION AND PLACEMENT.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT QUANTITIES OF CUT AND FILL FOR ESTIMATING AND CONSTRUCTION.
 - STRUCTURAL FILL SHALL CONSIST OF LOW-PLASTICITY APPROVED MATERIALS THAT ARE FREE OF VEGETATION, TOPSOIL AND OTHER DELETERIOUS MATERIALS. THE ORGANIC CONTENT SHALL BE LESS THAN 3 PERCENT. STRUCTURAL FILL SHALL HAVE A LIQUID LIMIT (LL) LESS THAN 40, A PLASTICITY INDEX (PI) LESS THAN 20, A MAXIMUM DRY DENSITY GREATER THAN 100 PCF AND MORE THAN 30% PASSING THE #200 SIEVE. FILL SHALL BE LABORATORY TESTED TO VERIFY CONFORMANCE.
 - FILL SHALL BE PLACED IN 8 INCH LOOSE LIFTS AND COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698) AT A MOISTURE CONTENT WITHIN 2% BELOW TO 2% ABOVE THE OPTIMUM. EACH LIFT OF COMPACTED ENGINEERED FILL SHALL BE TESTED BY A GEOTECHNICAL ENGINEER.
 - ALL BEARING MATERIAL SHALL BE INSPECTED BY THE INDEPENDENT TESTING AGENCY PRIOR TO CONCRETE PLACEMENT. THE INDEPENDENT TESTING AGENCY SHALL CONFIRM THE SUITABILITY OF THE BEARING MATERIAL.
 - FOUNDATION WALLS SHALL HAVE ADEQUATE TEMPORARY BRACING INSTALLED BY THE CONTRACTOR BEFORE BACKFILL IS PLACED AGAINST THEM. TEMPORARY BRACING SHALL NOT BE REMOVED UNTIL WALL IS PERMANENTLY BRACED.
 - AVOID DAMAGE TO UNDERGROUND UTILITIES INCLUDING, BUT NOT LIMITED TO, WATER MAINS, SANITARY SEWERS AND BURIED CABLES WHICH MIGHT EXTEND ACROSS OR ADJOIN SITE.
- CONCRETE
 - MINIMUM COMPRESSIVE STRENGTH (fc) AT THE END OF 28 DAYS SHALL BE AS FOLLOWS:

A. FOOTINGS [PIERS]	3000 PSI
B. FOUNDATION WALLS AND PEDESTALS	4000 PSI
C. INTERIOR SLABS-ON-GRADE	3000 PSI
D. SLABS ON COMPOSITE DECK	3000 PSI
E. EXTERIOR STRUCTURAL CONCRETE	4500 PSI
 - REFERENCE SPECIFICATIONS FOR MAXIMUM WATER/CEMENT RATIOS, MINIMUM CEMENT CONTENTS AND OTHER MIX DESIGN REQUIREMENTS. CONCRETE SHALL BE NORMAL WEIGHT (145 PCF), UNLESS NOTED OTHERWISE.
 - EXTERIOR CONCRETE AND CONCRETE EXPOSED TO FREEZE-THAW CYCLES SHALL BE AIR-ENTRAINED. REFERENCE CAST-IN-PLACE CONCRETE SPECIFICATION FOR AIR CONTENT.
 - MATERIALS OR ADMIXTURES SHALL NOT CONTAIN ANY CALCIUM CHLORIDE.
 - REINFORCING STEEL SHALL MEET THE FOLLOWING:

ASTM SPECIFICATION	
A. DEFORMED BARS	A615, GRADE 60
B. WELDABLE DEFORMED BARS	A706, GRADE 60
C. WELDED WIRE REINFORCEMENT	A1064
D. STEEL FIBERS	A820
 - PROVIDE MINIMUM CONCRETE CLEAR COVER FOR REINFORCEMENT PER ACI 318, UNLESS NOTED OTHERWISE.
 - WELDING SHALL MEET ANSI / AWS D1.1, STRUCTURAL WELDING CODE AND ANSI / AWS D1.4 "STRUCTURAL WELDING CODE FOR REINFORCING STEEL" LATEST REVISION. ELECTRODES FOR DEFORMED BAR ANCHORS SHALL BE 90 KSI, LOW HYDROGEN.
 - WHERE DOWELS ARE INDICATED BUT NOT SIZED, PROVIDE DOWELS THAT MATCH SIZE AND LOCATION OF MAIN REINFORCING STEEL AND LAP SPLICE WITH THE MAIN REINFORCING STEEL. REINFORCING STEEL SHALL BE SPLICED AS NOTED IN THE REINFORCING LAP SCHEDULE.
 - "C.I." INDICATES SAW CUT CONSTRUCTION JOINT OR DOWELED CONSTRUCTION JOINT IN SLAB-ON-GRADE. REFERENCE CAST-IN-PLACE CONCRETE SPECIFICATION FOR ACCEPTED SAW CUT METHODS. SLAB POURS SHALL BE SEPARATED BY A DOWELED CONSTRUCTION JOINT. CONSTRUCTION/CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER-OF-RECORD.
 - PROVIDE CORNER BARS THAT MATCH AND LAP CONTINUOUS REINFORCEMENT SIZE AND QUANTITY AT INTERSECTIONS AND CORNERS OF WALLS AND FOUNDATIONS.
 - PROVIDE #3 Z-BAR SPACERS AT 24 INCHES ON CENTER EACH WAY FOR CONCRETE WALLS HAVING REINFORCING STEEL IN BOTH FACES.
 - ANCHOR BOLTS AND EMBED PLATES SHALL BE TIED INTO THE REINFORCING STEEL CAGE AND HELD IN PLACE WITH A RIGID TEMPLATE TO PREVENT MOVEMENT DURING CONCRETE PLACEMENT.

GENERAL NOTES

- METAL BUILDING SYSTEMS
- THE METAL BUILDING SYSTEM ELEMENTS SHALL BE DESIGNED BY THE MANUFACTURER AND SHALL COMPLY WITH THE REQUIREMENTS OF LOCAL BUILDING CODES AS LISTED IN "DESIGN PARAMETERS" AND THE METAL BUILDING MANUFACTURERS' ASSOCIATION DESIGN MANUAL. IN ADDITION, THE METAL BUILDING ELEMENTS SHALL BE DESIGNED FOR ALL COLLATERAL LOADS INDICATED IN THE CONTRACT DOCUMENTS.
 - THE METAL BUILDING MANUFACTURER IS RESPONSIBLE FOR PROVIDING THE MATERIAL TYPE, DIAMETER, AND LOCATION OF ANCHOR RODS FOR THE METAL BUILDING COLUMNS.
 - THE METAL BUILDING COLUMNS SHALL BEAR AS INDICATED IN THE CONTRACT DOCUMENTS.
 - LIMIT LATERAL DEFLECTIONS OF FRAMES TO THE BUILDING EAVE HEIGHT DIVIDED BY 200.
 - LIMIT LATERAL DEFLECTIONS OF GIRTS TO THE SPAN DIVIDED BY 120.
 - LIMIT VERTICAL DEFLECTION OF ROOF FRAMING MEMBERS TO THE SPAN DIVIDED BY 240 FOR LIVE LOAD, AND TO THE SPAN DIVIDED BY 180 FOR TOTAL LOAD. AT SUPPLEMENTAL SUPPORT FRAMING, THE STRICTER OF THE PREVIOUSLY LISTED DEFLECTIONS AND THE MANUFACTURER'S DEFLECTION REQUIREMENTS SHALL CONTROL THE DESIGN.
 - SECONDARY FRAMING SHALL ACCOMMODATE DEFLECTION OF PRIMARY FRAMING AND CONSTRUCTION TOLERANCES AND MAINTAIN CLEARANCES AT OPENINGS.
 - METAL BUILDING MANUFACTURER SHALL SUBMIT STRUCTURAL DRAWINGS AND CALCULATIONS PREPARED, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED. THE MANUFACTURER SHALL PROVIDE UNFACTORED FOUNDATION REACTIONS FOR EACH LOAD TYPE (DEAD LOAD, LIVE LOAD, WIND LOAD, ETC.).
 - FOUNDATIONS PROVIDING SUPPORT TO THE METAL BUILDING FRAMES OF THE BUILDING HAVE BEEN DESIGNED FOR PINNED TYPE CONNECTIONS ONLY. DO NOT FIX THE BASE OF THE COLUMNS.
 - THE METAL BUILDING MANUFACTURER SHALL BE RESPONSIBLE FOR ALL FRAMING ABOVE SLAB. THIS INCLUDES, BUT IS NOT LIMITED TO, WIND GIRTS AND COLUMNS, EXTERIOR JAMBS AND LINTELS, SPECIALTY EQUIPMENT AND MECHANICAL/ELECTRICAL EQUIPMENT SUPPORT. ALL SUPPLEMENTAL FRAMING SHALL MEET OR EXCEED THE LOAD AND DEFLECTION REQUIREMENTS OF THE EQUIPMENT OR COMPONENT MANUFACTURER.
 - THE METAL BUILDING MANUFACTURER SHALL BE RESPONSIBLE FOR COORDINATING METAL BUILDING ELEMENTS WITH THE CONTRACT DOCUMENTS.
 - NO OVERSTRESS OF METAL BUILDING MEMBERS IS ALLOWED.
- POST INSTALLED ANCHORS
- ANCHORS SHALL ONLY BE INSTALLED WHERE SPECIFIED ON THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE STRUCTURAL ENGINEER PRIOR TO INSTALLING POST INSTALLED ANCHORS IN PLACE OF MISSING OR MIS-PLACED CAST-IN-PLACE ANCHORS. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REINFORCING. ANY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE EOR PRIOR TO COMPLETION OF WORK.
 - THE CONTRACTOR SHALL SUBMIT PRODUCT DATA WITH DESIGN VALUES AND PHYSICAL PROPERTIES FOR ALL POST INSTALLED ANCHORS. ADDITIONALLY, THE CONTRACTOR SHALL SUBMIT CERTIFIED ICC ES OR ESR REPORTS WHICH VERIFY COMPLIANCE WITH THE SPECIFIED CRITERIA.
 - SUBSTITUTION REQUESTS FOR PRODUCTS OTHER THAN THOSE SPECIFIED ON THE CONTRACT DRAWINGS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER ALONG WITH CALCULATIONS THAT ARE SIGNED AND SEALED BY A QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION AND LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERTINENT EQUIVALENT PERFORMANCE VALUES OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARDS AS REQUIRED BY THE BUILDING CODE.
 - ALL HOLES SHALL BE DRILLED, DRY AND CLEANED AND ANCHORS SHALL BE INSTALLED IN ACCORDANCE PER ANCHOR MANUFACTURER'S WRITTEN SPECIFICATIONS. THE LATEST VERSION OF THE WRITTEN SPECIFICATION SHALL BE ON-SITE AND FOLLOWED DURING THE INSTALLATION OF THE ANCHORS.
 - THE ANCHOR EMBEDMENT DEPTH SHALL BE DEFINED AS THE DEPTH FROM THE SURFACE FACE OF THE LOAD BEARING BASE MATERIAL TO THE DEEPEST PART OF THE ANCHOR AFTER THE ANCHOR HAS BEEN FULLY INSTALLED INTO THE HOLE PER MANUFACTURER'S SPECIFICATIONS.
 - ANCHORS EXPOSED TO WEATHER SHALL BE STAINLESS STEEL.
 - CONTRACTOR SHALL FOLLOW THE LATEST VERSION OF MANUFACTURER'S SPECIFICATION DURING INSTALLATION OF ANCHORS.
 - OVERHEAD ADHESIVE ANCHORS MUST BE INSTALLED BY PERSONNEL CERTIFIED BY THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM.
- STRUCTURAL OBSERVATION REQUIREMENTS (IBC 2015 SECTION 1704.6)
- A REPRESENTATIVE OF THE ENGINEER OF RECORD WILL PERFORM THE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE INSPECTION REQUIRED OF THE BUILDING OFFICIAL OR THE SPECIAL INSPECTOR.
 - A PRE-CONSTRUCTION MEETING SHALL BE HELD AND ATTENDED BY THE ARCHITECT, ENGINEER OF RECORD, GENERAL CONTRACTOR, SUBCONTRACTORS, AND SPECIAL INSPECTORS.
 - THE GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD AT LEAST 48 HOURS PRIOR TO COMPLETING CONSTRUCTION OPERATIONS THAT REQUIRE STRUCTURAL OBSERVATION (BY CALLING (918) 584-5858 TO SCHEDULE A SITE VISIT).
 - AT A MINIMUM, THE FOLLOWING SIGNIFICANT CONSTRUCTION STAGES REQUIRE A SITE VISIT AND AN OBSERVATION REPORT FROM THE STRUCTURAL OBSERVER:
 - AFTER INSTALLATION OF FIRST FOUNDATION REINFORCING AND BEFORE CONCRETE PLACEMENT.
 - AFTER INSTALLATION OF CONCRETE WALL REINFORCING AND BEFORE CONCRETE PLACEMENT.
 - AFTER ERECTION OF STRUCTURAL STEEL AND BEFORE METAL DECK PLACEMENT.
 - AFTER INSTALLATION AND FASTENING OF METAL DECK AND BEFORE PLACING INSULATION.
 - AT THE CONCLUSION OF THE WORK INCLUDED IN THE PERMIT, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.
- DEFERRED STRUCTURAL SUBMITTALS (IBC 2015 SECTION 107.3.4.1)
- THE FOLLOWING STRUCTURAL COMPONENTS SHALL BE DESIGNED AND SUBMITTED BY OTHERS FOR APPROVAL IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
 - PRE-ENGINEERED METAL BUILDING SYSTEM.
 - STEEL SELF-SUPPORTING STAIRS.
 - COLD FORMED METAL WALL FRAMING AND ATTACHMENTS TO STRUCTURE.
 - DOCUMENTS FOR DEFERRED STRUCTURAL SUBMITTAL ITEMS SHALL BE DESIGNED, SEALED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED. THE DEFERRED SUBMITTAL DOCUMENTS SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER-OF-RECORD WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL AS REQUESTED WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED FOR DESIGN LOADS AND BEEN FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN CRITERIA OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

ABBREVIATIONS

A.F.F.	ABOVE FINISHED FLOOR	LLH	LONG LEG HORIZONTAL
A.O.R.	ARCHITECT OF RECORD	LLV	LONG LEG VERTICAL
A.R.	ANCHOR RODS	LONG.	LONGITUDINAL
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	LSH	LONG SIDE HORIZONTAL
ARCH.	ARCHITECTURAL	LSL	LONG SLOT
B.L.	BLOCK LINTEL	LSV	LONG SIDE VERTICAL
B.O.D.	BOTTOM OF DECK	MAX.	MAXIMUM
B.O.S.	BOTTOM OF STEEL	MECH.	MECHANICAL
B.P.	BASE PLATE	MFP.	MECHANICAL/ELECTRICAL/PLUMBING
BAL.	BALANCE	MFR.	MANUFACTURER
BLDG.	BUILDING	MIN.	MINIMUM
BRG.	BEARING	MISC.	MISCELLANEOUS
C.J.	CONTRACTION JOINT	MTL.	METAL
C.L.	CENTER LINE	N.I.C.	NOT IN CONTRACT
CFMF	COLD FORMED METAL FRAMING	N.S.	NEAR SIDE
CLR.	CLEAR	N.T.S.	NOT TO SCALE
CMU	CONCRETE MASONRY UNIT	O.C.	ON CENTER
COL.	COLUMN	O.D.	OUTSIDE DIAMETER
CONC.	CONCRETE	O.F.	OPPOSITE FACE
CONST.	CONSTRUCTION	O.H.	OPPOSITE HAND
CONT.	CONTINUOUS	OPP.	OPPOSITE
D.B.A.	DEFORMED BAR ANCHOR	P.A.F.	POWER/POWDER ACTUATED FASTENER
D.B.E.	DECK BEARING ELEVATION	PCF	POUNDS PER CUBIC FOOT
DIA.	DIAMETER	PEMB	PRE-ENGINEERED METAL BUILDING
DTL.	DETAIL	PL	PLATE
DWG.	DRAWING	PLF	POUNDS PER LINEAR FOOT
E.F.	EACH FACE	PLUMB.	PLUMBING
E.J.	EXPANSION JOINT	PSF	POUNDS PER SQUARE FOOT
E.O.D.	EDGE OF DECK	PSI	POUNDS PER SQUARE INCH
E.O.R.	ENGINEER OF RECORD	R	RADIUS
E.O.S.	EDGE OF SLAB	R.O.	ROUGH OPENING
E.W.	EACH WAY	RE:	REFER
EA.	EACH	REINF.	REINFORCING
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM	REQD.	REQUIRED
ELEC.	ELECTRICAL	RTU	ROOF TOP UNIT
ELEV.	ELEVATION	S.D.S.	SELF-DRILLING SCREWS
EQ.	EQUAL	S.S.	STAINLESS STEEL
EXIST.	EXISTING	SCHED.	SCHEDULE
F.F.E.	FINISHED FLOOR ELEVATION	SIM.	SIMILAR
F.S.	FAR SIDE	SP.	SPACE/SPACING
F.V.	FIELD VERIFY	SPECS.	SPECIFICATIONS
FDN.	FOUNDATION	SSL	SHORT SLOT
FT.	FOOT/FEET	STD.	STANDARD
FTG.	FOOTING	STL.	STEEL
G.B.	GRADE BEAM	T&B	TOP AND BOTTOM
G.C.	GENERAL CONTRACTOR	T.O.F.	TOP OF
GAGE	GAGE	T.O.C.	TOP OF CONCRETE
GALV.	GALVANIZED	T.O.M.	TOP OF MASONRY
H.S.A.	HEADED STUD ANCHOR	T.O.P.	TOP OF PIER
HORIZ.	HORIZONTAL	T.O.S.	TOP OF STEEL
I.F.	INSIDE FACE	T.O.W.	TOP OF WALL
IN.	INCH/INCHES	TRANS.	TRANSVERSE
INFO.	INFORMATION	TYP.	TYPICAL
J.B.E.	JOIST BEARING ELEVATION	U.N.O.	UNLESS NOTED OTHERWISE
JT.	JOINT	VERT.	VERTICAL
K	UNIT OF 1,000 POUNDS (KIP)	W.P.	WORK POINT
KSI	KIPS PER SQUARE INCH	W.S.	WATERSTOP
LBS.	POUNDS	W.W.R.	WELDED WIRE REINFORCEMENT
		WT.	WEIGHT



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GENERAL NOTES

S0.1

SPECIAL INSPECTION REQUIREMENTS (2015)

SPECIAL INSPECTIONS REQUIREMENTS (IBC 2015 CHAPTER 17)

- THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS PER SECTION 1704 OF THE IBC. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. THESE INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS SPECIFIED IN THE PROJECT SPECIFICATIONS.
- SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO COMPLETION OF THAT PHASE OF WORK. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED AT A POINT IN TIME AGREED UPON BY THE PERMIT APPLICANT AND THE BUILDING OFFICIAL PRIOR TO THE START OF WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE SPECIAL INSPECTOR REGARDING INDIVIDUAL INSPECTION FOR ITEMS LISTED ON THE STATEMENT OF SPECIAL INSPECTIONS AND AS NOTED ON THE BUILDING DEPARTMENT APPROVED PLANS. ADEQUATE NOTICE AND ACCESS TO APPROVED PLANS SHALL BE PROVIDED SO THAT THE SPECIAL INSPECTOR HAS TIME TO BECOME FAMILIAR WITH THE PROJECT.
- FABRICATORS OF STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES SHALL CONFORM TO THE REQUIREMENTS OF SECTION 1704.2.5 OF THE IBC.

IBC 2015 REQUIRED SPECIAL INSPECTIONS			CONTINUOUS	PERIODIC
STEEL CONSTRUCTION - STRUCTURAL STEEL (IBC SECTION 1705.2.1)				
1.	SPECIAL INSPECTION AND NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL ELEMENTS IN BUILDINGS, STRUCTURES AND PORTIONS THEREOF SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360.			
STEEL CONSTRUCTION - COLD FORMED STEEL DECK (IBC SECTION 1705.2.2)				
1.	SPECIAL INSPECTION AND QUALIFICATIONS OF WELDING SPECIAL INSPECTORS FOR COLD-FORMED STEEL FLOOR AND ROOF DECK SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF SDI, QA/QC.			
STEEL CONSTRUCTION - OPEN-WEB STEEL JOISTS AND JOIST GIRDERS (IBC TABLE 1705.2.3)				
1.	INSTALLATION OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS			
A.	END CONNECTIONS - WELDING OR BOLTED			X
B.	BRIDGING - HORIZONTAL OR DIAGONAL			
	1. STANDARD BRIDGING			X
	2. BRIDGING THAT DIFFERS FROM THE SJJ SPECIFICATIONS LISTED IN SECTION 2207.1			X
STEEL CONSTRUCTION - COLD-FORMED STEEL TRUSSES (IBC SECTION 1705.2.4)				
1.	VERIFICATION THAT THE TEMPORARY INSTALLATION RESTRAINT/BRACING AND THE PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT/BRACING ARE INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE AT COLD-FORMED STEEL TRUSSES WITH A CLEAR SPAN OF 60'-0" OR GREATER.			X
CONCRETE CONSTRUCTION (IBC TABLE 1705.3)				
1.	INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.			X
2.	INSPECTION OF REINFORCING BAR WELDING IN ACCORDANCE WITH TABLE 1705.3 ITEM 2.	X		
3.	INSPECT ANCHORS CAST IN CONCRETE.			X
4.	INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.	X		
5.	VERIFY USE OF REQUIRED DESIGN MIX.			X
6.	PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X		
7.	INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X		
8.	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.			X
9.	INSPECT PRESTRESSED CONCRETE FOR:			
A.	APPLICATION OF PRESTRESSING FORCES; AND	X		
B.	GROUTING OF BONDED PRESTRESSING TENDONS.	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 SLABS.			X
12.	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.			X
SOILS (IBC TABLE 1705.6)				
1.	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.			X
2.	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.			X
3.	PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.			X
4.	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X		
5.	PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.			X
CAST-IN-PLACE DEEP FOUNDATION ELEMENTS (TABLE 1705.8)				
1.	INSPECT DRILLING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT.	X		
2.	VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM ELEMENT DIAMETERS, BELL DIAMETERS (IF APPLICABLE), LENGTHS, EMBEDMENT INTO BEDROCK (IF APPLICABLE) AND ADEQUATE END BEARING STRATA CAPACITY, RECORD CONCRETE OR GROUT VOLUMES.	X		
3.	FOR CONCRETE ELEMENTS, PERFORM ADDITIONAL INSPECTIONS IN ACCORDANCE WITH SECTION 1705.3			
	* CONTINUOUS SPECIAL INSPECTION: SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS PRESENT WHEN AND WHERE THE WORK TO BE INSPECTED IS BEING PERFORMED.			
	* PERIODIC SPECIAL INSPECTION: SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS INTERMITTENTLY PRESENT WHERE THE WORK TO BE INSPECTED HAS BEEN OR IS BEING PERFORMED.			

AISC 360-10 SPECIAL INSPECTION REQUIREMENTS

- QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE FABRICATOR AND ERECTOR.
- QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY OTHERS. NONDESTRUCTIVE TESTING (NDT) SHALL BE PERFORMED BY THE AGENCY OR FIRM RESPONSIBLE FOR QUALITY ASSURANCE.
- NONDESTRUCTIVE TESTING (NDT) SHALL BE PERFORMED BY THE AGENCY OR FIRM RESPONSIBLE FOR QUALITY ASSURANCE (QA).
- QUALITY ASSURANCE (QA) INSPECTION OF FABRICATED ITEMS SHALL BE MADE AT THE FABRICATOR'S PLANT.
- QA INSPECTION OF THE ERRECTED STEEL SYSTEM SHALL BE MADE AT THE PROJECT SITE.
- THE QUALITY ASSURANCE INSPECTOR (QAI) SHALL REVIEW MATERIAL TEST REPORTS AND CERTIFICATIONS AS LISTED IN SECTION N3.2 FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS.
- FOR WORK PERFORMED BY APPROVED FABRICATORS AND ERECTORS:
 - QA INSPECTIONS, EXCEPT NDT, MAY BE WAIVED WHEN THE WORK IS PERFORMED IN A FABRICATING SHOP OR BY AN ERECTOR APPROVED BY THE AUTHORITY HAVING JURISDICTION (AHJ) TO PERFORM THE WORK WITHOUT QA.
 - NDT OF WELDS COMPLETED IN AN APPROVED FABRICATOR'S SHOP MAY BE PERFORMED BY THAT FABRICATOR WHEN APPROVED BY THE AHJ. WHEN THE FABRICATOR PERFORMS THE NDT, THE QA AGENCY SHALL REVIEW THE FABRICATOR'S NDT REPORTS.
 - AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE AHJ STATING THAT THE MATERIALS SUPPLIED AND WORK PERFORMED BY THE FABRICATOR ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.
 - AT COMPLETION OF ERECTION, THE APPROVED ERECTOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE AHJ STATING THAT THE MATERIALS SUPPLIED AND WORK PERFORMED BY THE ERECTOR ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.

AISC 360-10, CHAPTER N SPECIAL INSPECTION REQUIREMENTS

		FREQUENCY OF INSPECTION	
		PERFORM	OBSERVE
N5.4 - INSPECTION OF WELDING			
AISC 360-10, TABLE N5.4.1 - INSPECTION TASKS PRIOR TO WELDING			
1.	WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE	X	
2.	MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	X	
3.	MATERIAL IDENTIFICATION (TYPE/GRADE)		X
4.	WELDER IDENTIFICATION SYSTEM (a)		X
5.	FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)		
A.	JOINT PREPARATION		X
B.	DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)		X
C.	CLEANLINESS (CONDITION OF STEEL SURFACES)		X
D.	TACKING (TACK WELD QUALITY AND LOCATION)		X
E.	BACKING TYPE AND FIT (IF APPLICABLE)		X
6.	CONFIGURATION AND FINISH OF ACCESS HOLES		X
7.	FIT-UP OF FILLET WELDS		
A.	DIMENSIONS (ALIGNMENT, GAPS AT ROOT)		X
B.	CLEANLINESS (CONDITION OF STEEL SURFACES)		X
C.	TACKING (TACK WELD QUALITY AND LOCATION)		X
AISC 360-10, TABLE N5.4.2 - INSPECTIONS DURING WELDING			
1.	USE OF QUALIFIED WELDERS		X
2.	CONTROL AND HANDLING OF WELDING CONSUMABLES		
A.	PACKAGING		X
B.	EXPOSURE CONTROL		X
3.	NO WELDING OVER CRACKED TACK WELDS		X
4.	ENVIRONMENTAL CONDITIONS		
A.	WIND SPEED WITHIN LIMITS		X
B.	PRECIPITATION AND TEMPERATURE		X
5.	WELDING PROCEDURE SPECIFICATION (WPS) FOLLOWED		
A.	SETTINGS ON WELDING EQUIPMENT		X
B.	TRAVEL SPEED		X
C.	SELECTED WELDING MATERIALS		X
D.	SHIELDING GAS TYPE / FLOW RATE		X
E.	PREHEAT APPLIED		X
F.	INTERPASS TEMPERATURE MAINTAINED (MIN./MAX.)		X
G.	PROPER POSITION (F, V, H, OH)		X
6.	WELDING TECHNIQUES		
A.	INTERPASS AND FINAL CLEANING		X
B.	EACH PASS WITHIN PROFILE LIMITATIONS		X
C.	EACH PASS MEETS QUALITY REQUIREMENTS		X
AISC 360-10, TABLE N5.4.3 - INSPECTIONS AFTER WELDING			
1.	WELDS CLEANED		X
2.	SIZE, LENGTH AND LOCATION OF WELDS	X	
3.	WELDS MEET VISUAL ACCEPTANCE CRITERIA		
A.	CRACK PROHIBITION	X	
B.	WELD/BASE-METAL FUSION	X	
C.	CRATER CROSS SECTION	X	
D.	WELD PROFILES	X	
E.	WELD SIZE	X	
F.	UNDERCUT	X	
G.	POROSITY	X	
4.	ARC STRIKES	X	
5.	k-AREA (b)	X	
6.	BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	X	
7.	REPAIR ACTIVITIES	X	
8.	DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	X	
9.	ULTRASONIC TESTING (UT) ON ALL CJP GROOVE WELDS IN BUTT, T- AND CORNER JOINTS, IN MATERIALS 5/16 INCH THICK OR GREATER (b) (required in Risk Category III or IV)	X	
10.	ULTRASONIC TESTING (UT) ON 10% OF CJP GROOVE WELDS IN BUTT, T- AND CORNER JOINTS, IN MATERIALS 5/16 INCH THICK OR GREATER (b) (required in Risk Category II)		X
11.	THERMALLY CUT SURFACES OF ACCESS HOLES SHALL BE TESTED USING MAGNETIC PARTICLE TESTING (MT) OR PENETRANT TESTING (PT), WHEN FLANGE THICKNESS EXCEEDS 2 INCHES FOR ROLLED SHAPES, OR WHEN THE WEB THICKNESS EXCEEDS 2 INCHES FOR BUILT-UP SHAPES (b)	X	
12.	(see AISC 360-10, section N5-5d for additional special inspections for welded joints subject to fatigue)		
(a)	THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEM BY WHICH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW STRESS TYPE.		
(b)	WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE k-AREA, VISUALLY INSPECT THE WEB k-AREA FOR CRACKS WITHIN 3 INCHES OF THE WELD.		
	** PERFORM - PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER.		
	** OBSERVE - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.		

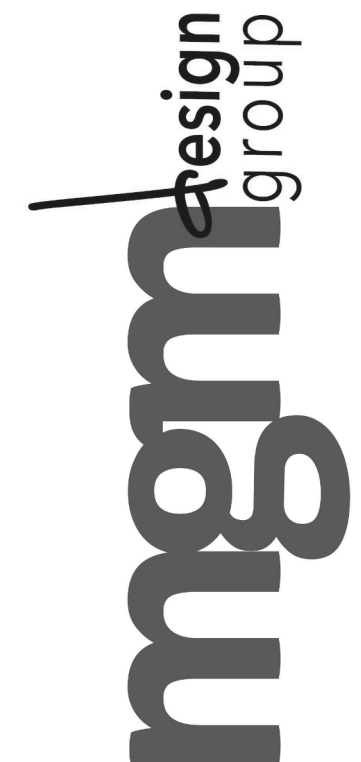
AISC 360-10, CHAPTER N SPECIAL INSPECTION REQUIREMENTS

		FREQUENCY OF INSPECTION	
		PERFORM	OBSERVE
N5.6 - INSPECTION OF HIGH-STRENGTH BOLTS			
AISC 360-10, TABLE N5.6.1 - INSPECTION TASKS PRIOR TO BOLTING			
1.	MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	X (QAI)	X (QCI)
2.	FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS		X
3.	PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH)		X
4.	PROPER BOLTING PROCEDURES SELECTED FOR JOINT DETAIL		X
5.	CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS		X
6.	PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED (a)	X	X
7.	PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS		X
AISC 360-10, TABLE N5.6.2 - INSPECTIONS DURING BOLTING			
1.	FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED		X
2.	JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION		X
3.	FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING (b)		X
4.	FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES (b)		X
AISC 360-10, TABLE N5.6.3 - INSPECTIONS AFTER BOLTING			
1.	DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	X	
(a)	NOT APPLICABLE FOR SNUG TIGHT JOINTS.		
(b)	FOR PRETENSIONED JOINTS AND SLIP-CRITICAL JOINTS, WHEN THE INSTALLER IS USING THE TURN-OF-NUT METHOD WITH MATCHMARKING TECHNIQUES, THE DIRECT-TENSION-INDICATOR METHOD, OR THE TWIST-OFF-TYPE TENSION CONTROL BOLT METHOD, THE QCI AND QAI NEED NOT BE PRESENT DURING THE INSTALLATION OF FASTENERS.		
	** PERFORM - PERFORM THESE TASKS FOR EACH BOLTED CONNECTION.		
	** OBSERVE - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.		
N5.7 - OTHER INSPECTION TASKS			
1.	INSPECT THE STEEL TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE CONSTRUCTION DOCUMENTS SUCH AS BRACES, STIFFENERS, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION	X	
2.	INSPECT THE PLACEMENT OF ANCHOR RODS AND OTHER EMBEDMENTS SUPPORTING STRUCTURAL STEEL FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS. THE DIAMETER, GRADE, TYPE AND LENGTH OF THE ANCHOR ROD OR EMBEDDED ITEM, AND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE, SHALL BE VERIFIED PRIOR TO PLACEMENT OF CONCRETE	X	
	** PERFORM - PERFORM THESE TASKS FOR EACH CONNECTION.		
N6 - INSPECTION OF COMPOSITE CONSTRUCTION			
INSPECTIONS OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT (AISC 360-10, TABLE N6.1)			
1.	PLACEMENT AND INSTALLATION OF STEEL DECK	X	
2.	PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	X	
3.	DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS	X	
	** PERFORM - PERFORM THESE TASKS FOR EACH STEEL ELEMENT.		



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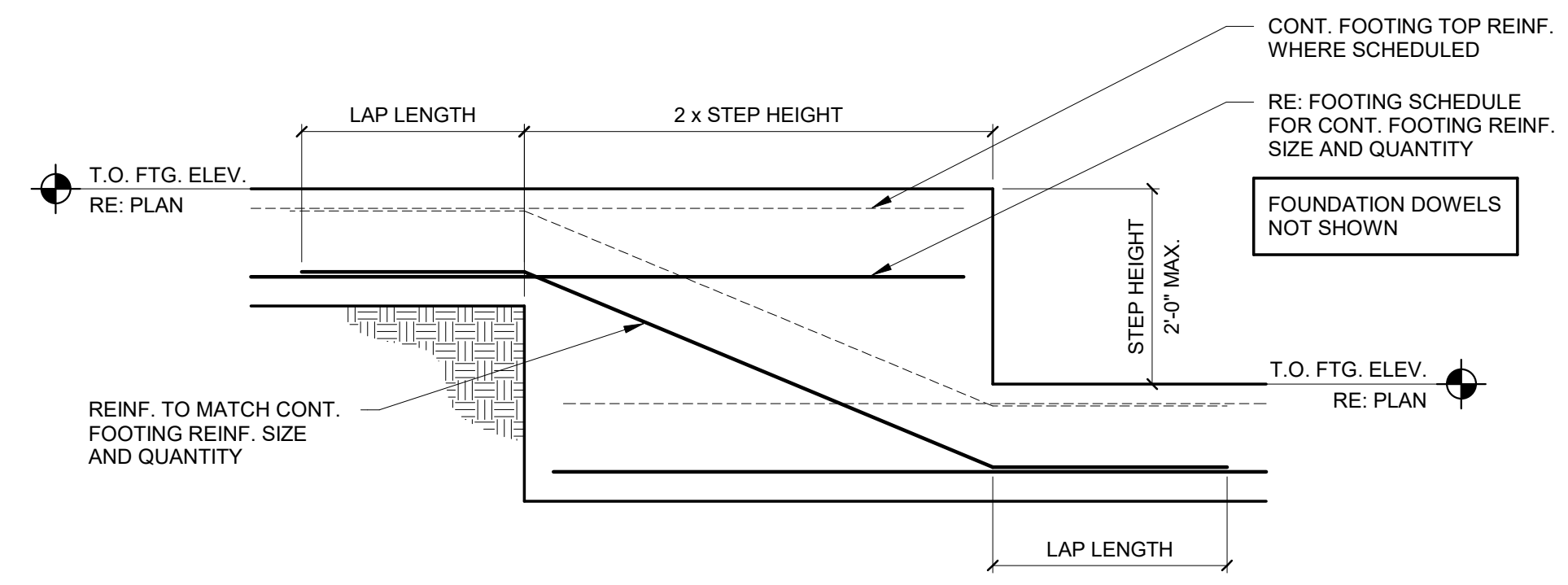
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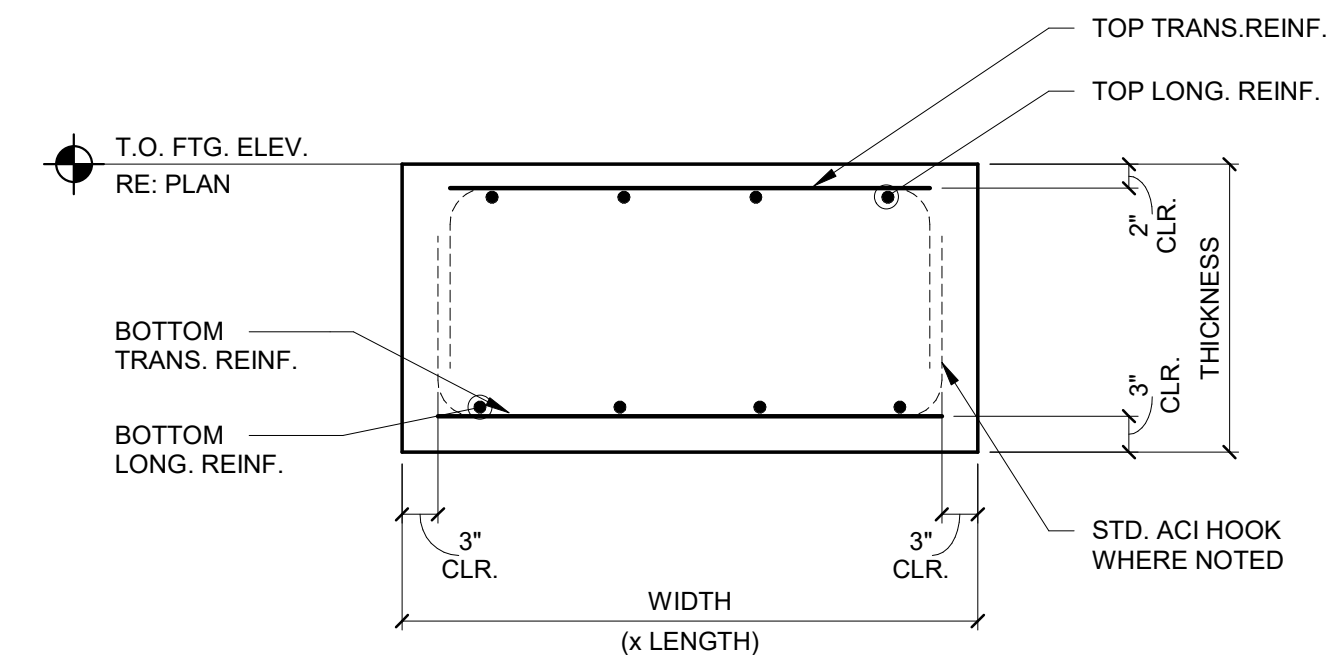
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STRUCTURAL
SPECIAL
INSPECTIONS



3 TYPICAL FOOTING STEP DETAIL
 3/4" = 1'-0"

FOOTING SCHEDULE							
MARK	SIZE			BOTTOM REINFORCING		TOP REINFORCING	NOTES
	LENGTH	WIDTH	THICKNESS	LONGITUDINAL	TRANSVERSE	LONGITUDINAL	
F1	6' - 0"	6' - 0"	1' - 6"	(6) - #6	(6) - #6		
F2	5' - 0"	5' - 0"	1' - 6"	(5) - #6	(5) - #6		
F3	3' - 6"	3' - 6"	1' - 6"	(4) - #6	(4) - #6		
F4	3' - 0"	3' - 0"	1' - 6"	(3) - #6	(3) - #6		

- NOTES:
 1. RE: PLAN FOR FOOTING ORIENTATION
 2. PROVIDE STD. ACI HOOK EA. END AT BOTTOM REINF.



1 TYPICAL FOOTING SCHEDULE AND DIAGRAM
 3/4" = 1'-0"

CONCRETE REINFORCING LAP LENGTH SCHEDULE										
BAR SIZE	STRUCTURAL ELEMENT MINIMUM COMPRESSIVE STRENGTH (f'c)									
	3000psi		4000psi		4500psi		5000psi		7000psi	
	TOP BARS	OTHER	TOP BARS	OTHER	TOP BARS	OTHER	TOP BARS	OTHER	TOP BARS	OTHER
#3	28"	22"	25"	19"	23"	18"	22"	17"	19"	14"
#4	38"	29"	33"	25"	31"	24"	29"	23"	25"	19"
#5	47"	36"	41"	31"	38"	30"	36"	28"	31"	24"
#6	56"	43"	49"	37"	46"	35"	44"	34"	37"	28"
#7	81"	63"	71"	54"	67"	51"	63"	49"	54"	41"
#8	93"	72"	81"	62"	76"	59"	72"	56"	61"	47"
#9	105"	81"	91"	70"	86"	66"	81"	63"	69"	53"
#10	118"	91"	102"	79"	96"	74"	92"	71"	77"	60"

- NOTES:
 1. LAP LENGTH FOR TOP BARS SHALL BE USED WHEN MORE THAN 12 INCHES OF FRESH CONCRETE IS PLACED BELOW HORIZONTAL REINFORCEMENT.

2 CONCRETE REINFORCING LAP SCHEDULE
 3/4" = 1'-0"

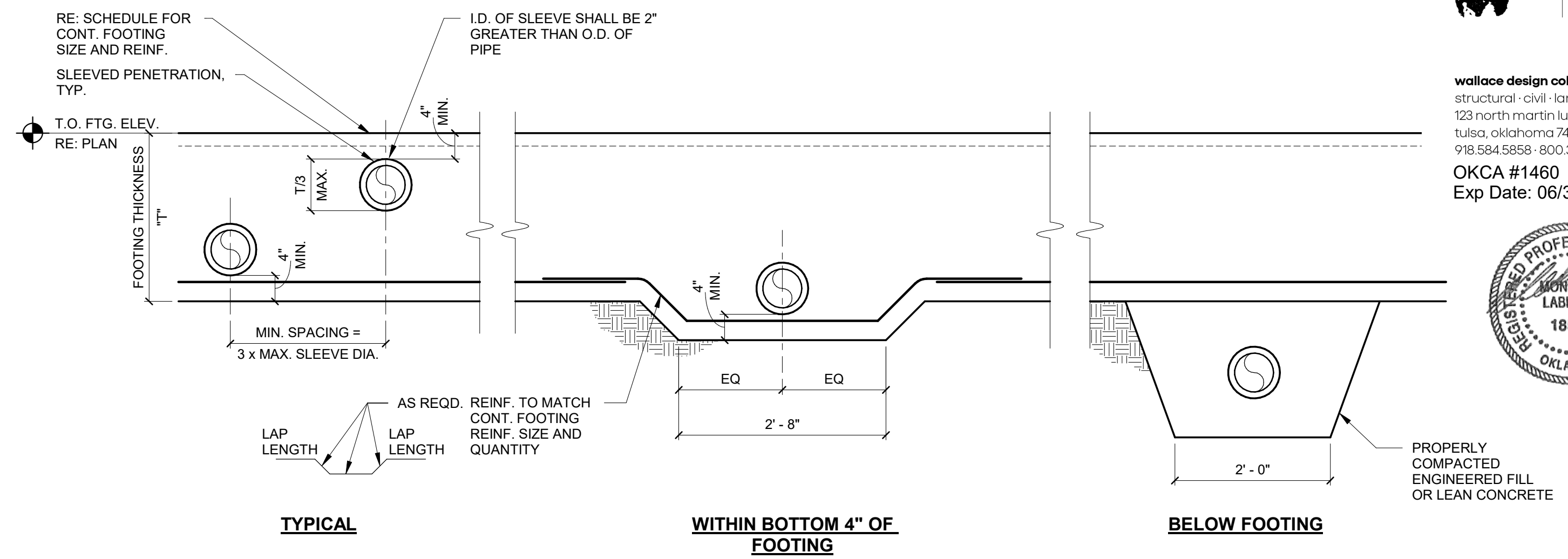
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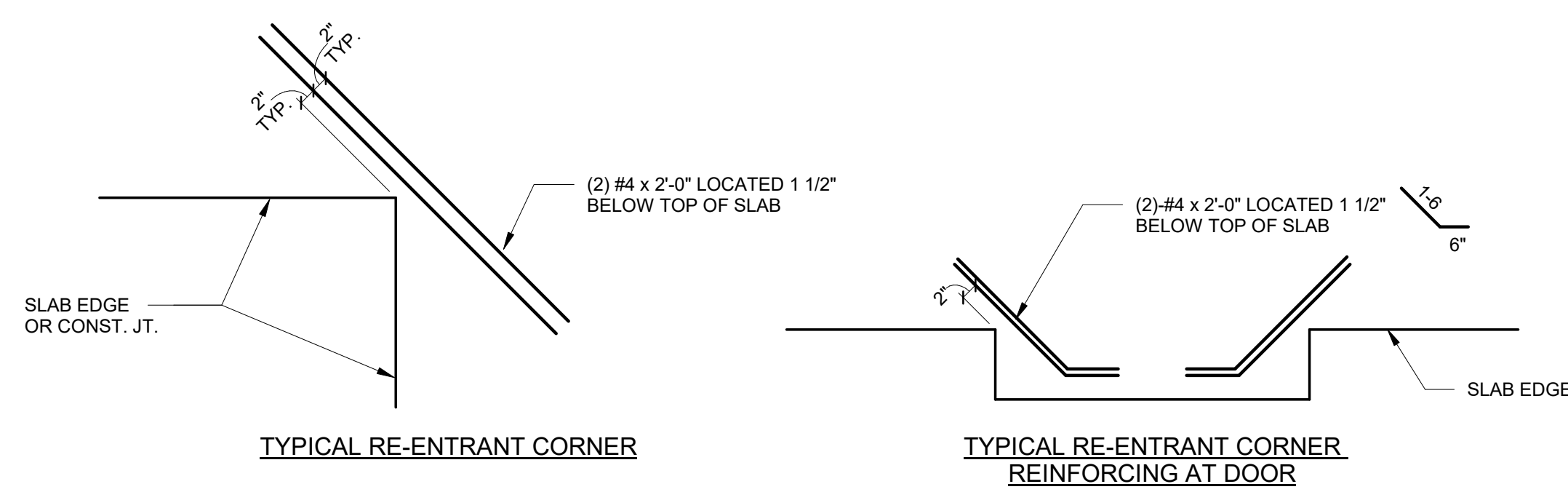
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 SCHEDULES AND TYPICAL DETAILS

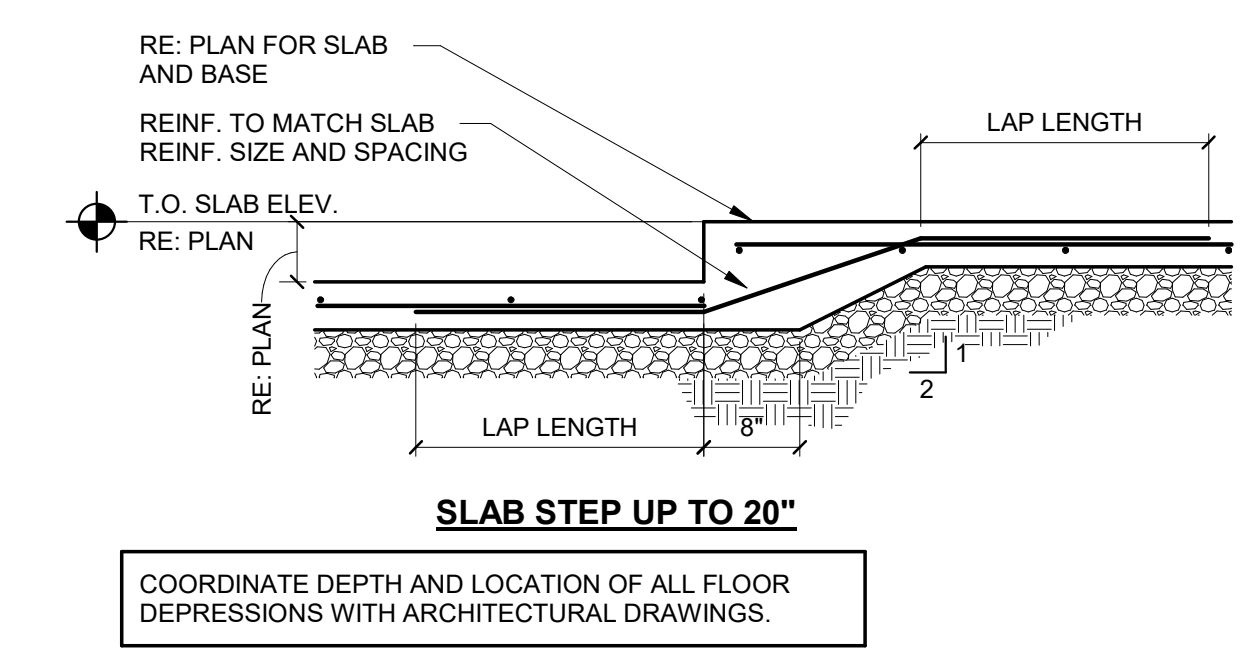


SLEEVE PENETRATIONS WITHIN THE TOP 4" OF FOOTING:
 LOWER SLEEVE TO PROVIDE THE MINIMUM CLEAR COVER AS SHOWN OR RAISE TO PENETRATE THROUGH THE STEM WALL.
 RE: TYPICAL PENETRATION THROUGH WALL DETAIL

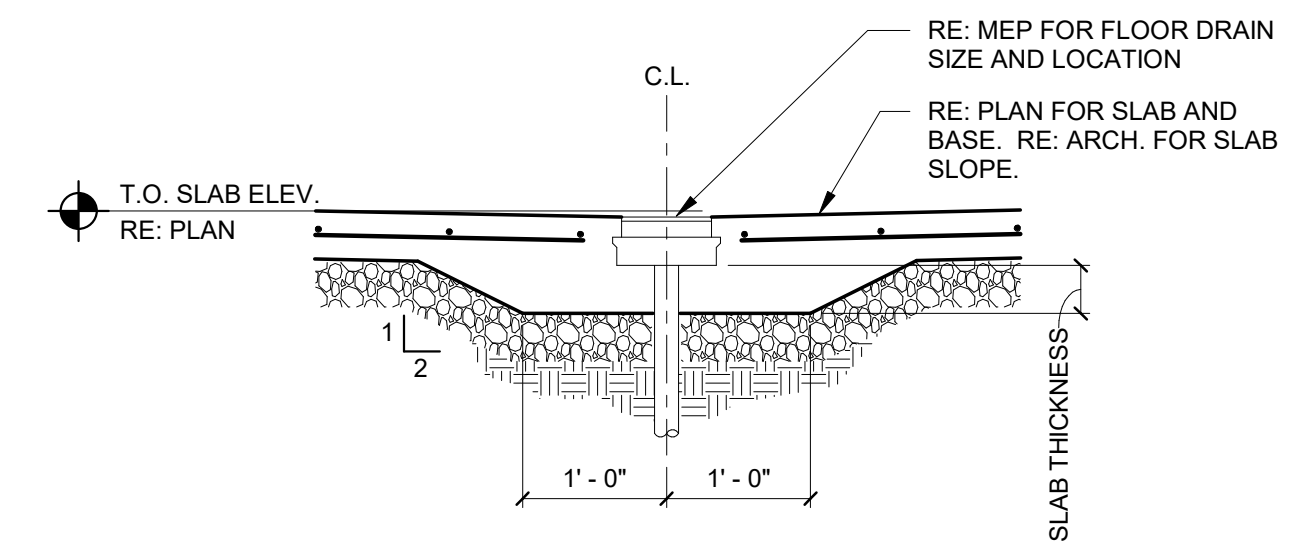
6 TYPICAL PENETRATION THROUGH FOOTING
 3/4" = 1'-0"



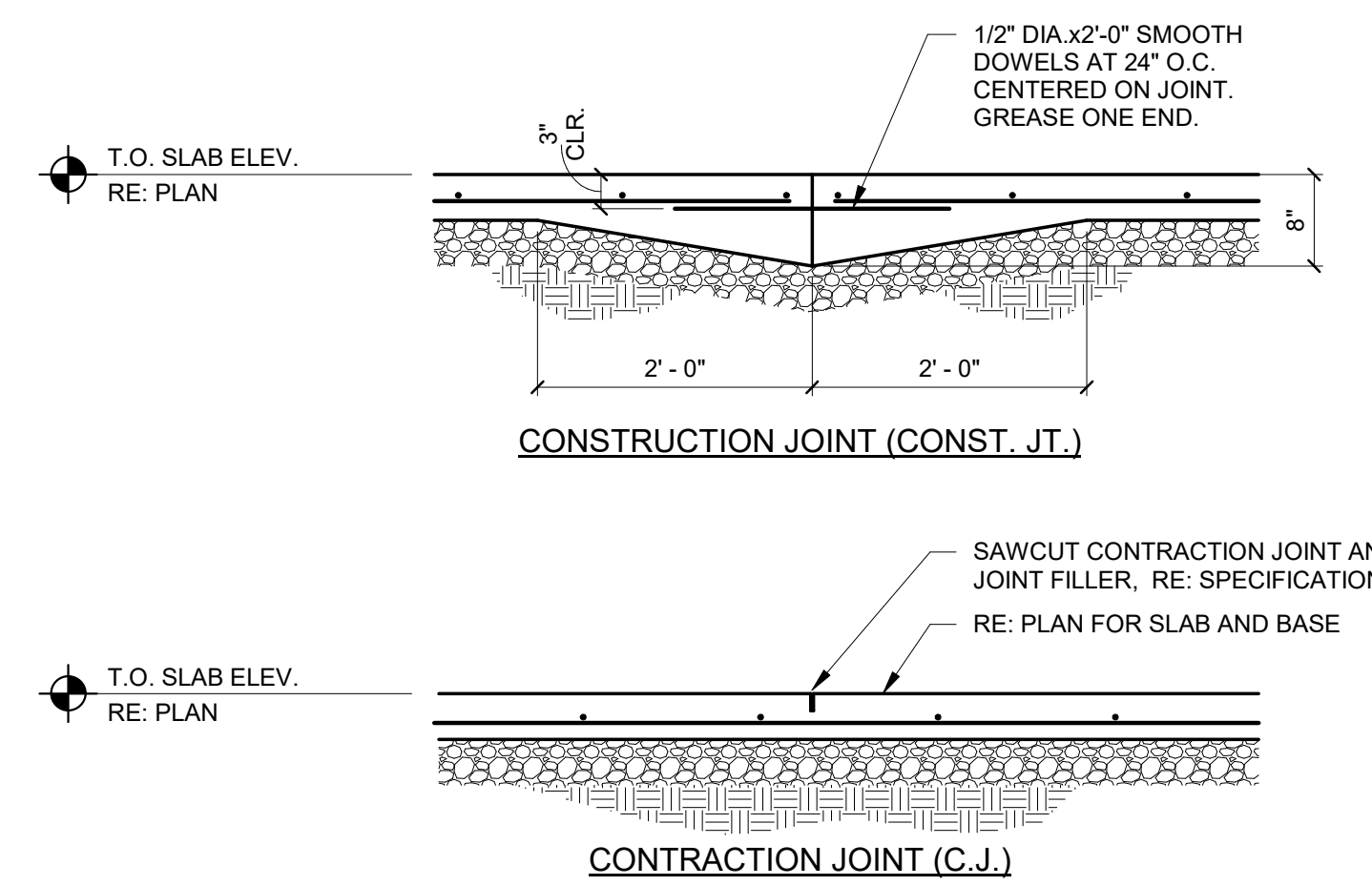
5 SLAB REINFORCEMENT
 3/4" = 1'-0"



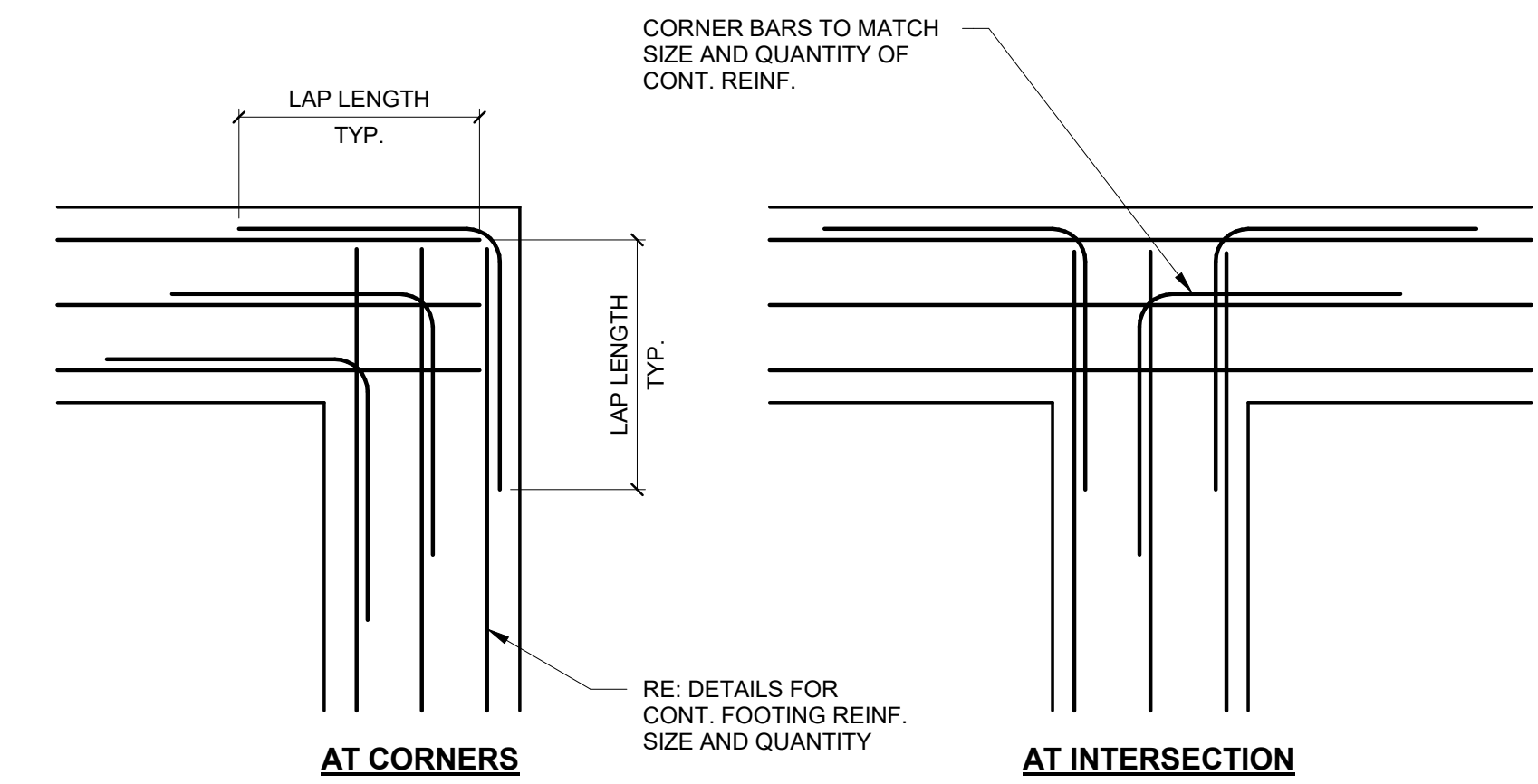
4 TYPICAL SLAB STEP DETAIL
 3/4" = 1'-0"



3 TYPICAL SLAB AT FLOOR DRAIN
 3/4" = 1'-0"



2 TYPICAL SLAB JOINT DETAILS
 3/4" = 1'-0"



1 TYPICAL CORNER BAR DETAIL
 3/4" = 1'-0"

Cherokee Nation Businesses

**Cherokee Nation Film Office
 Owasso Campus Improvements**

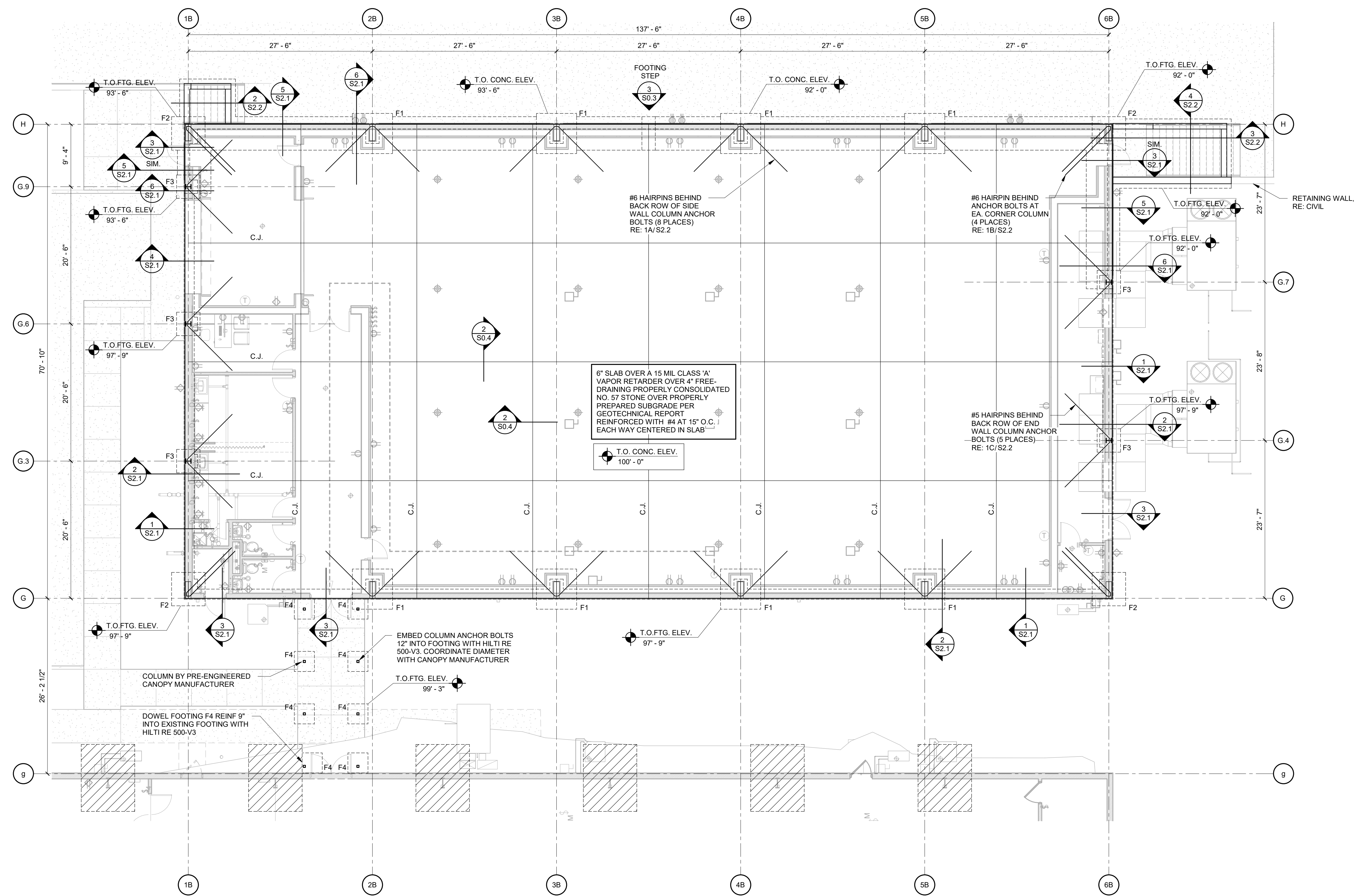
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JOB NUMBER
 2112025

REVISIONS

DATE
 02.13.23

SHEET
 SCHEDULES AND
 TYPICAL DETAILS



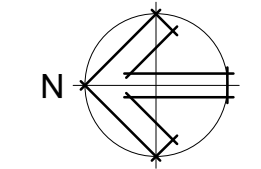
Cherokee Nation Businesses
Cherokee Nation Film Office
Owasso Campus Improvements
 16990 East 116th Street North Owasso, Oklahoma

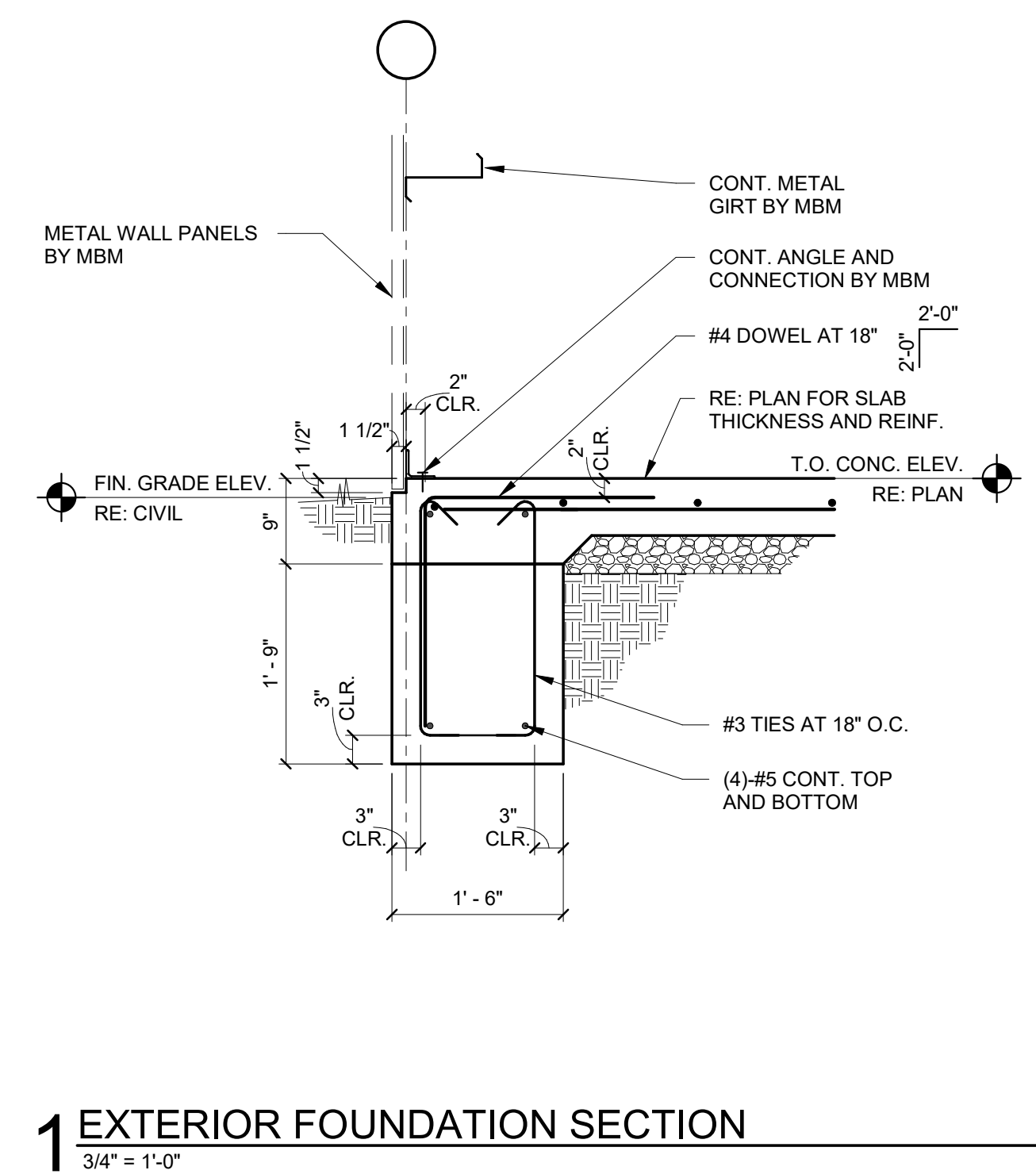
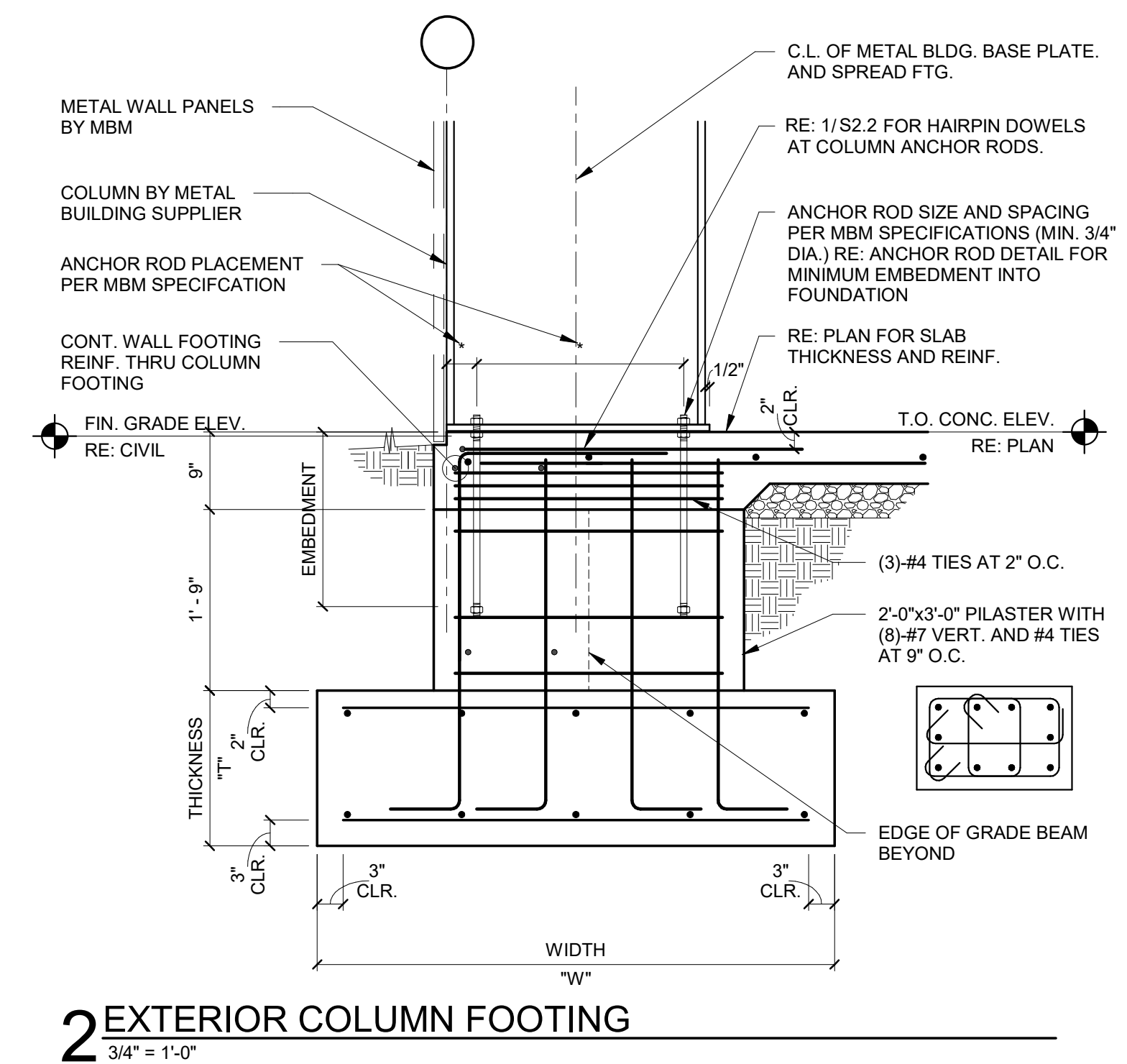
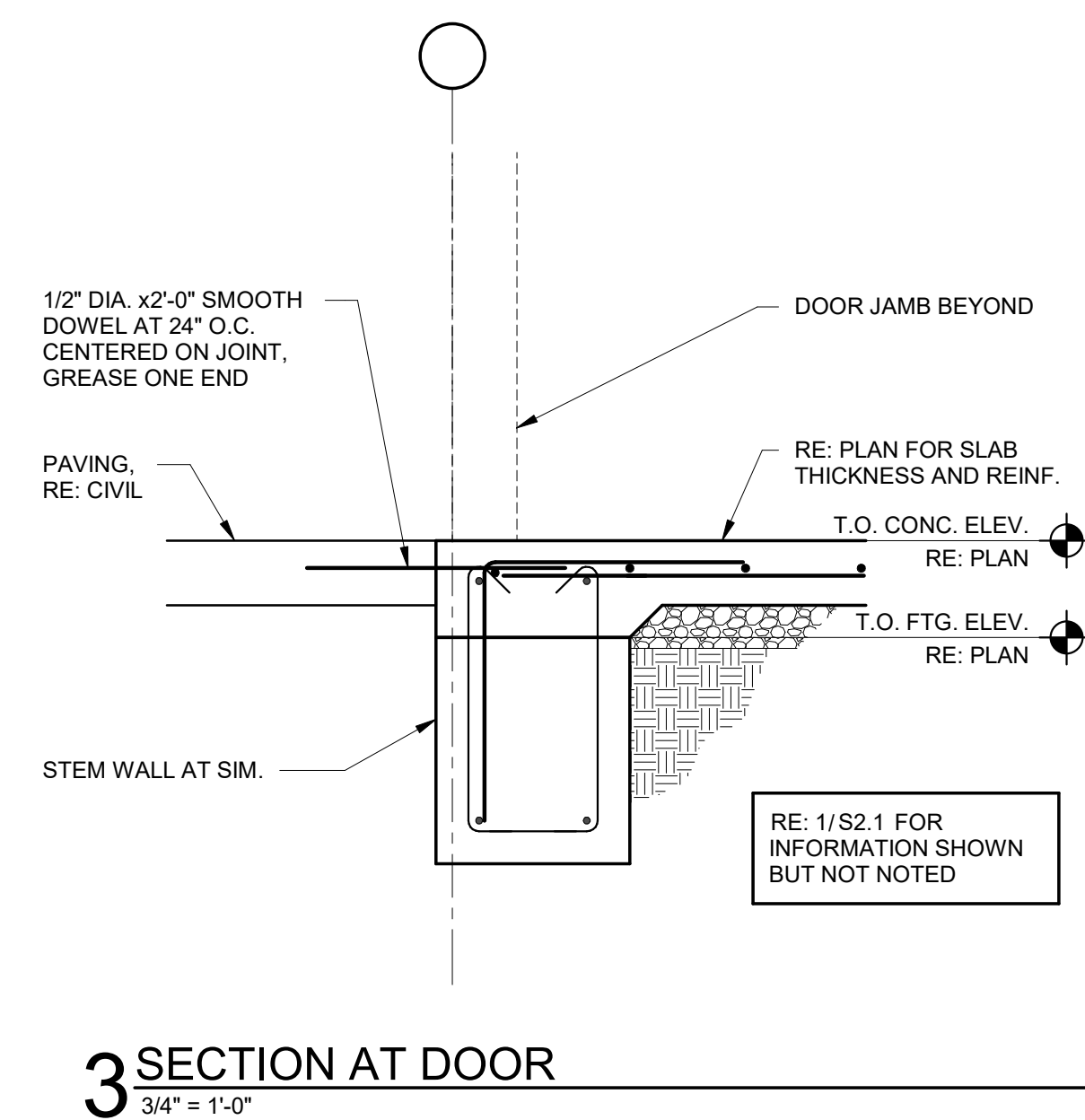
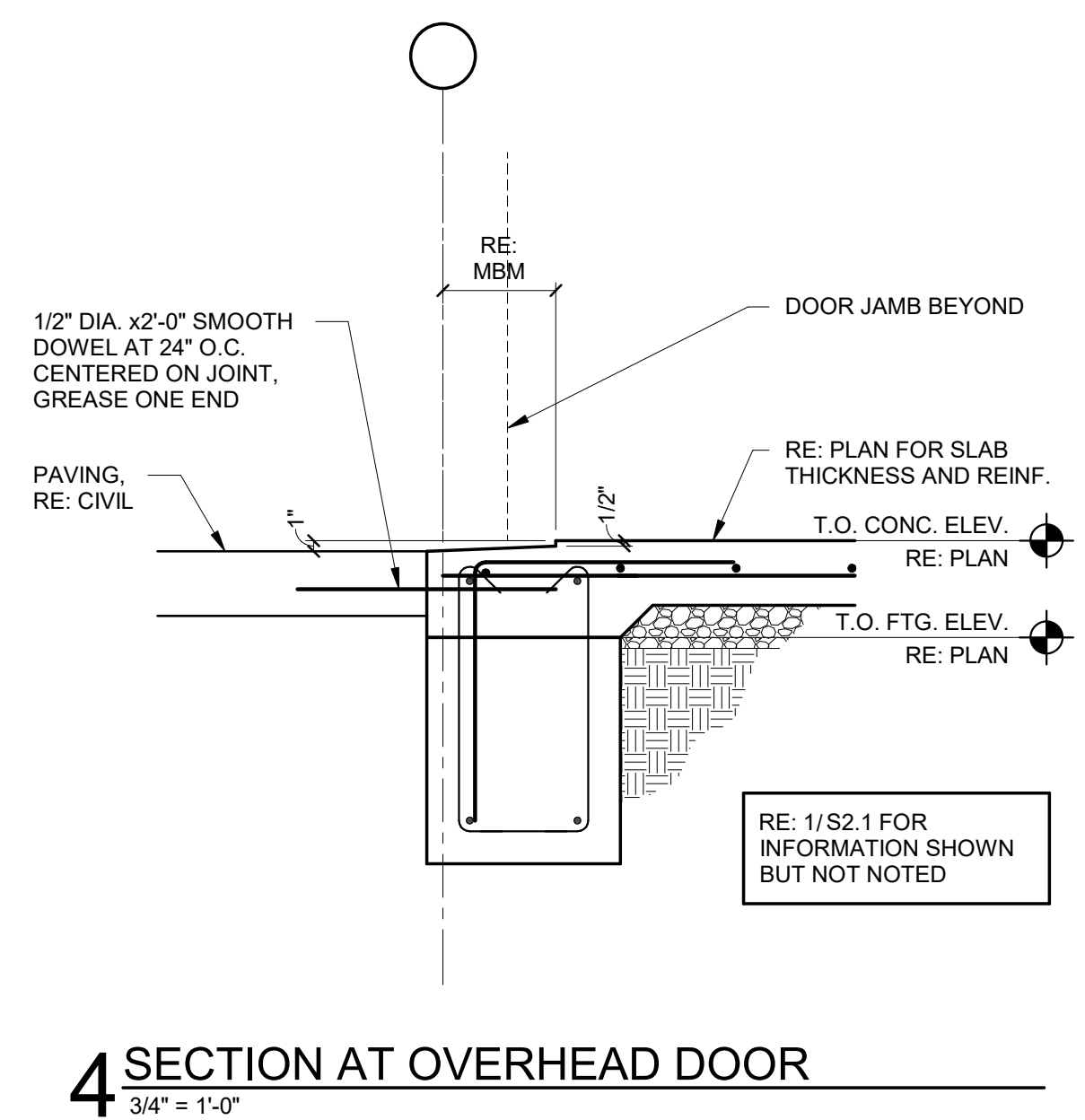
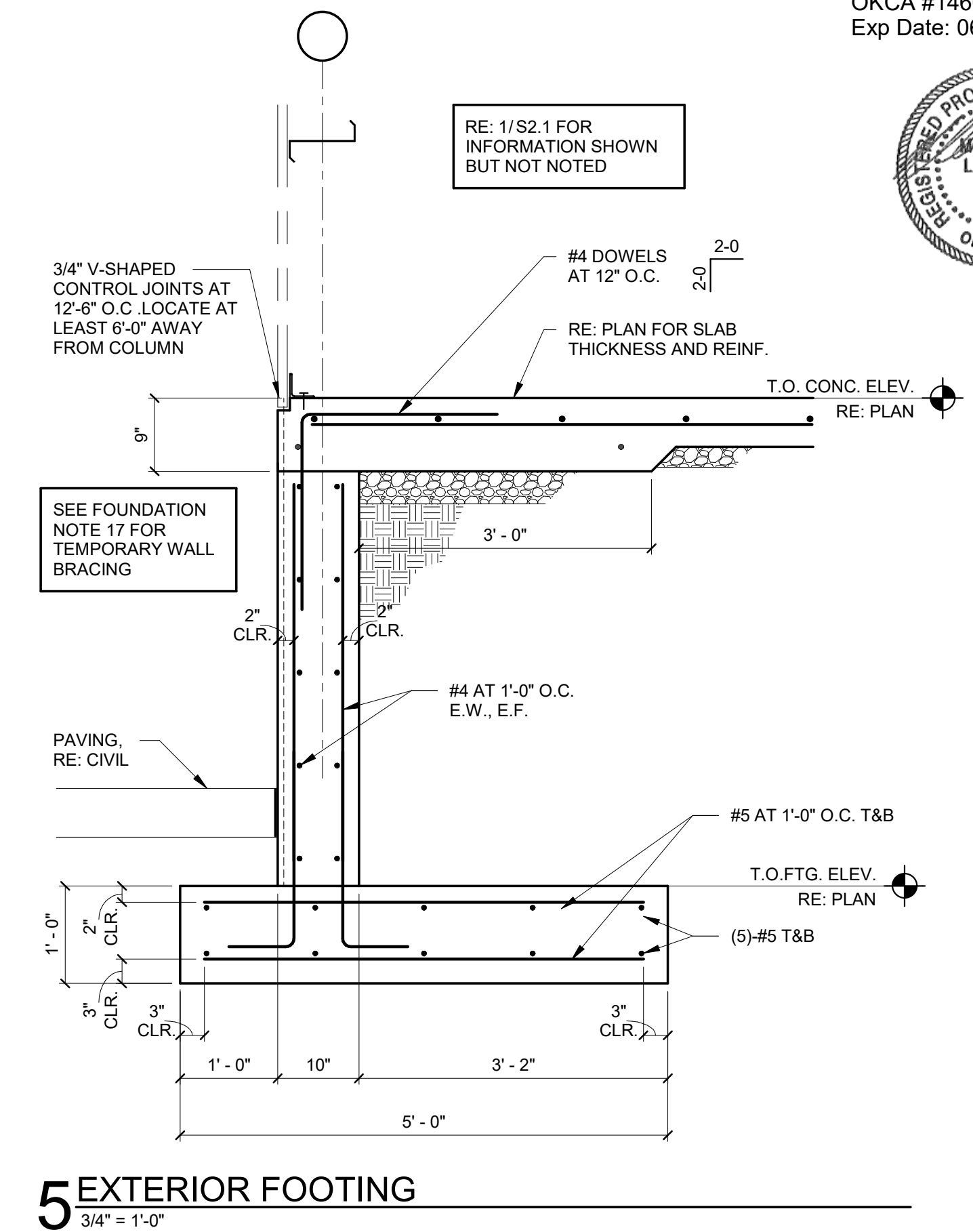
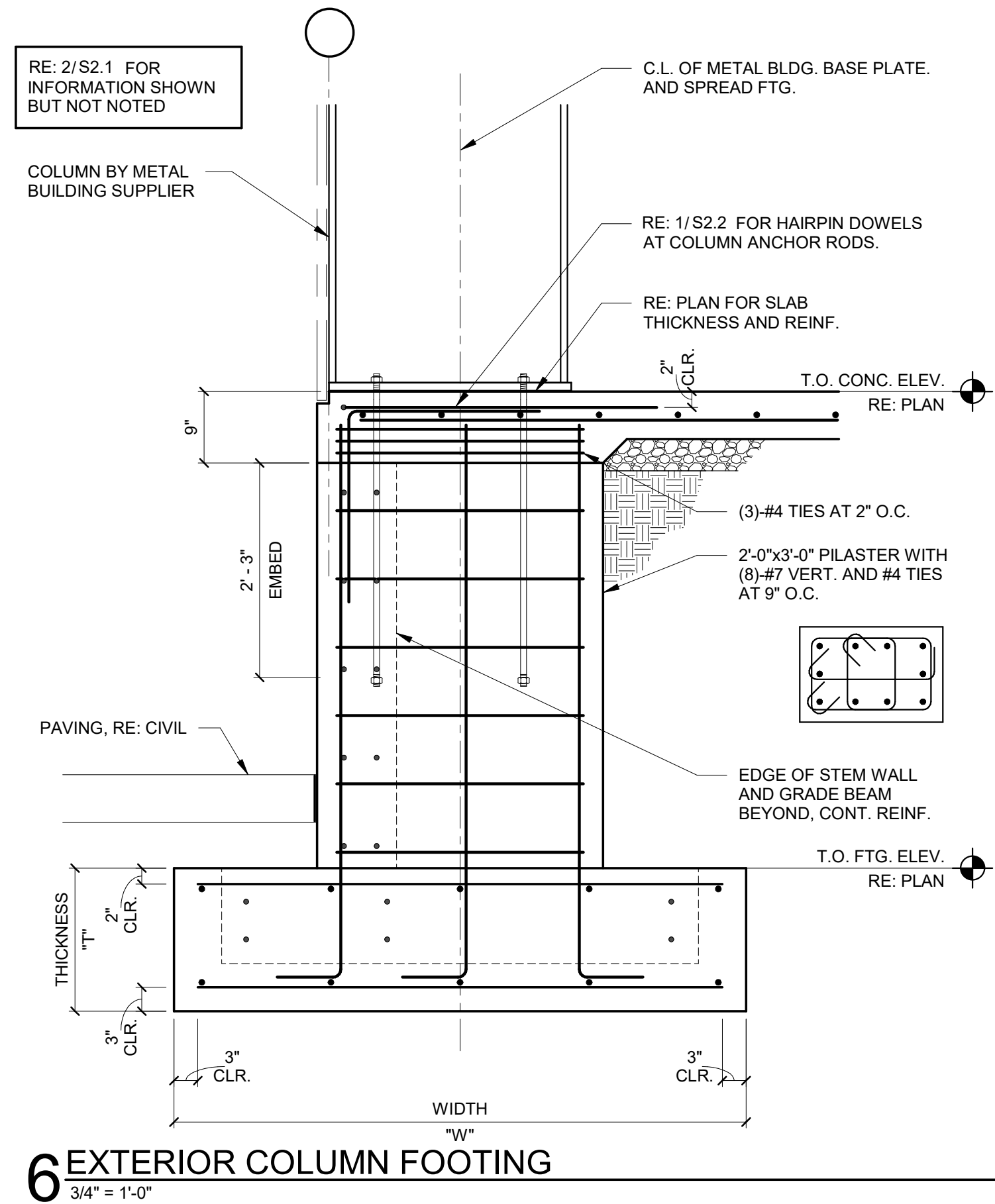
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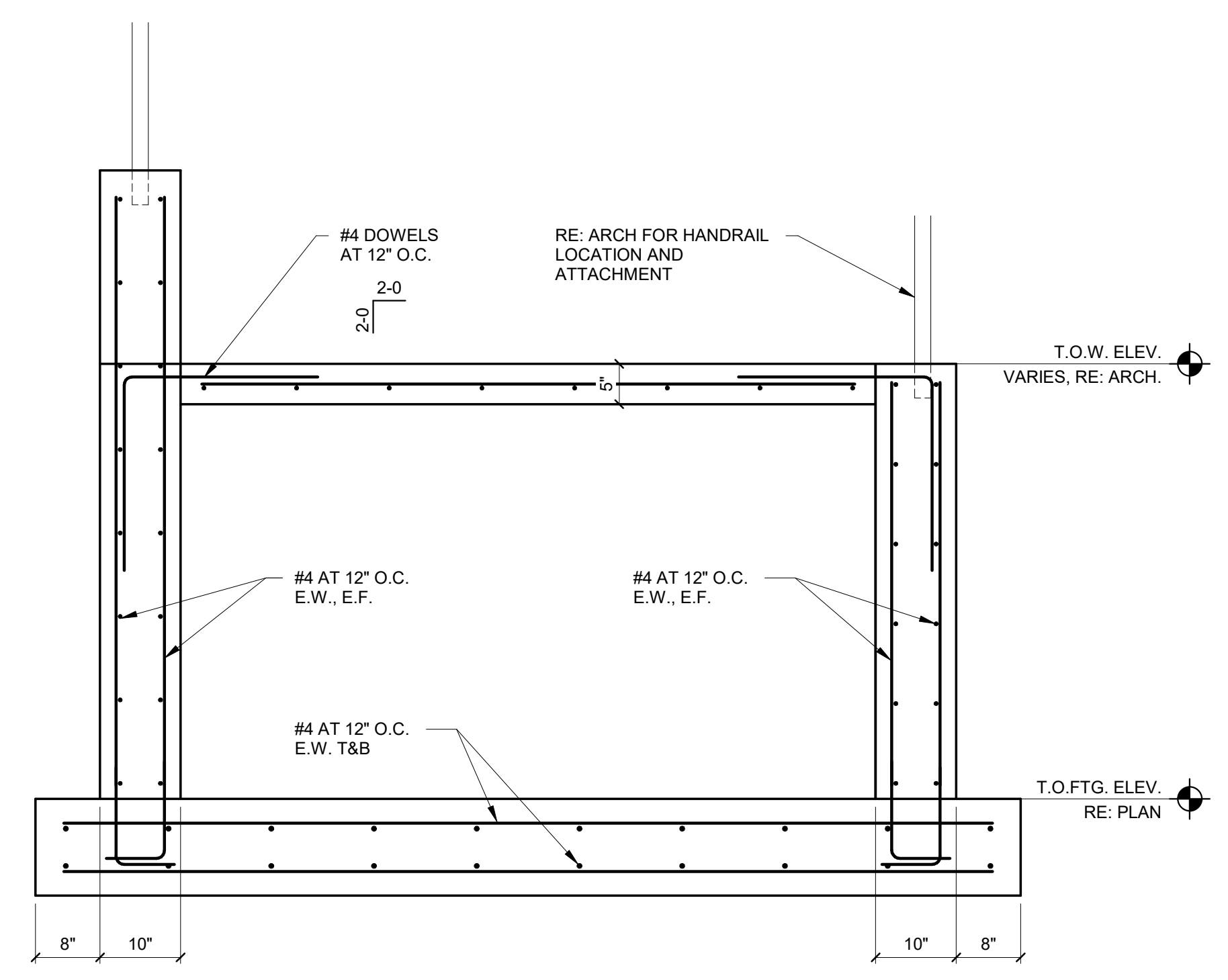
DATE
 02.13.23
 SHEET
 STUDIO B -
 FOUNDATION
 PLAN

1 STUDIO B - FOUNDATION PLAN
 1/8" = 1'-0"

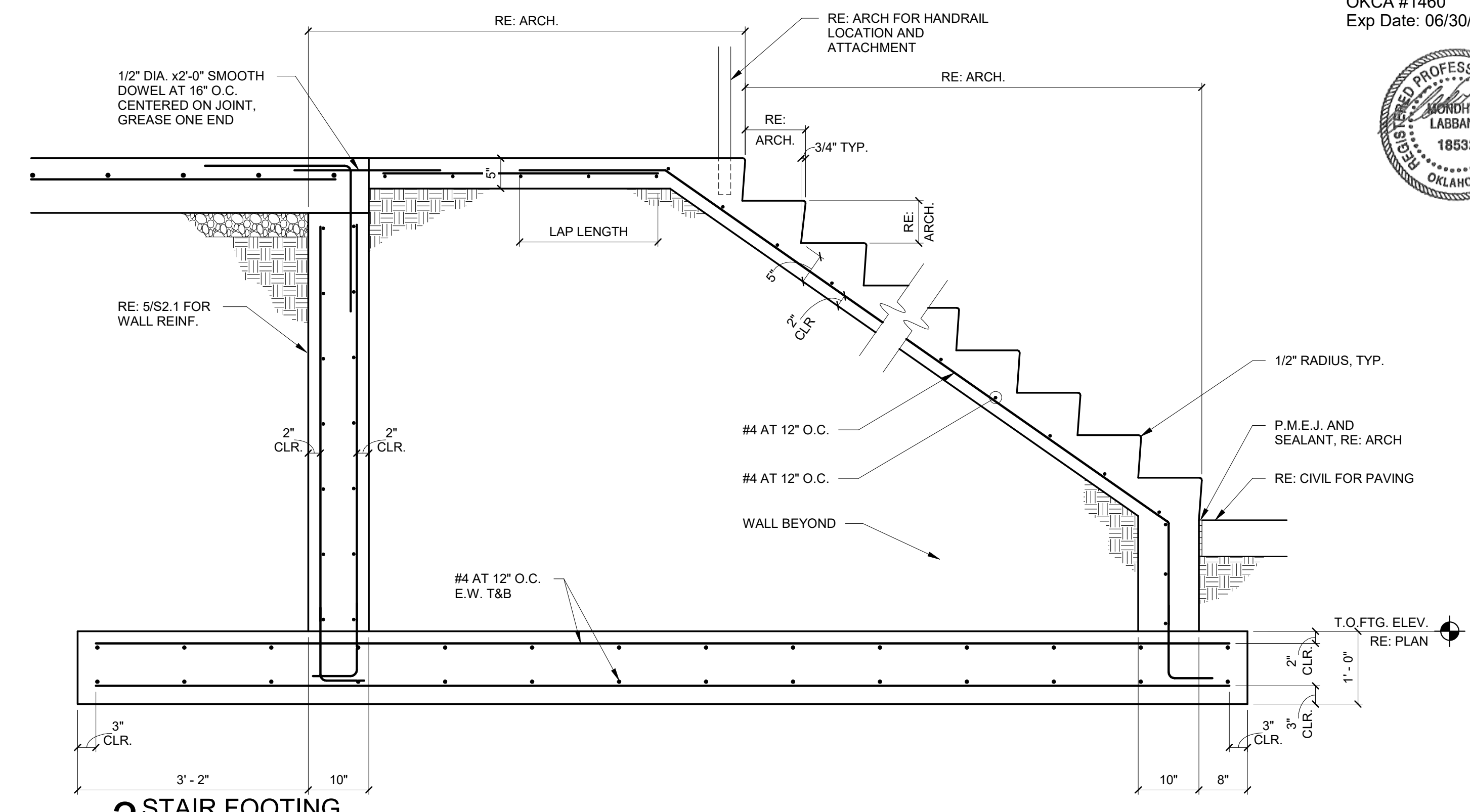
S1.2



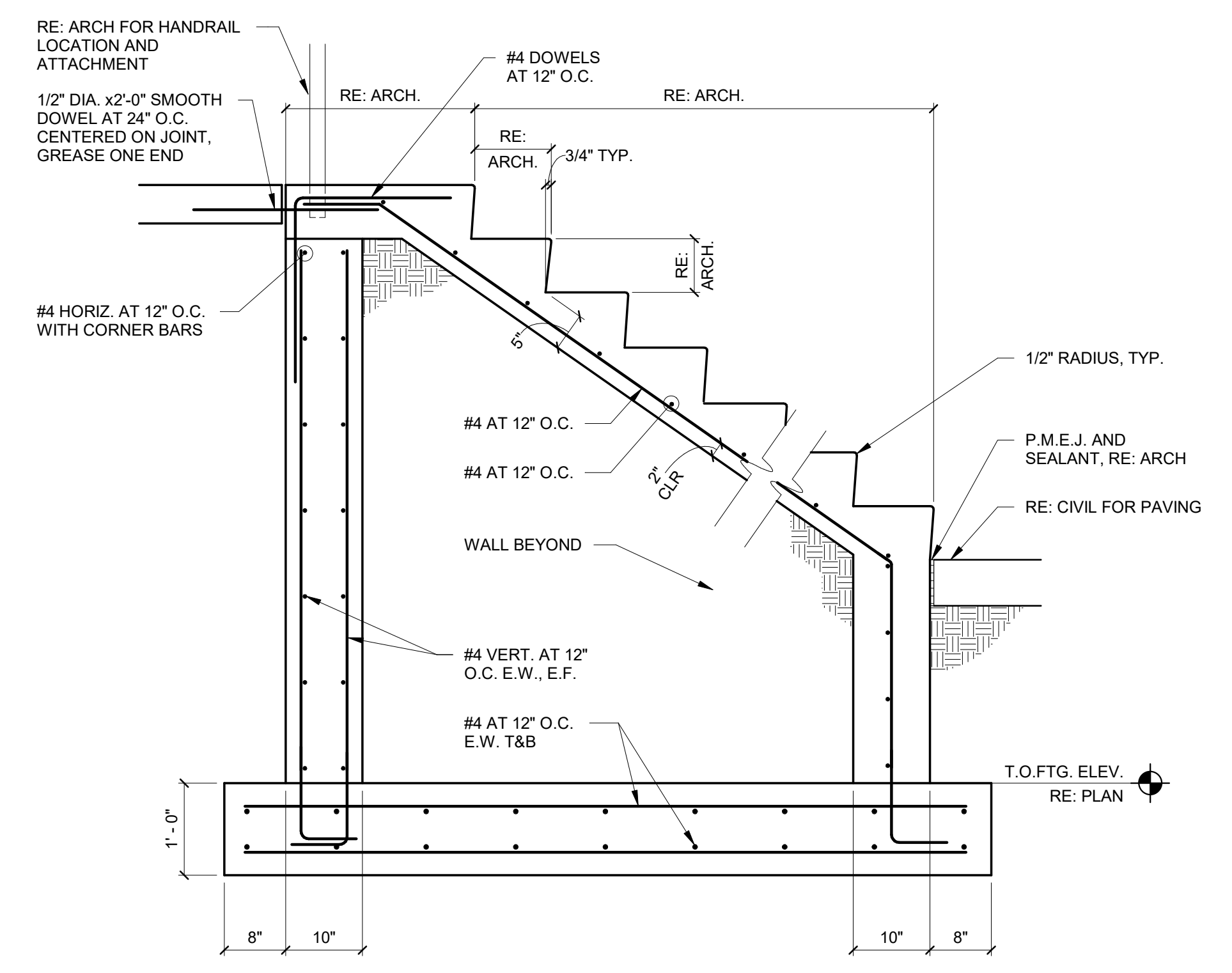




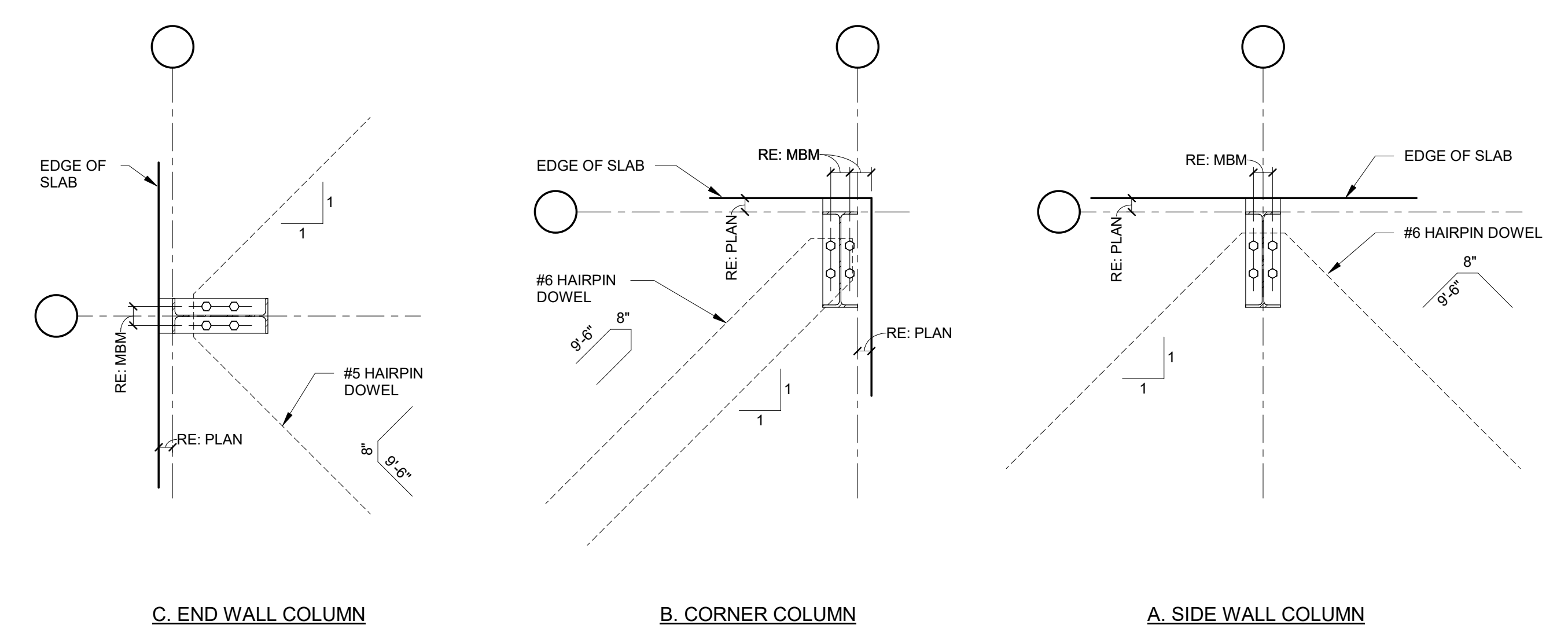
4 STAIR FOOTING
3/4" = 1'-0"



3 STAIR FOOTING
3/4" = 1'-0"



2 STAIR FOOTING
3/4" = 1'-0"

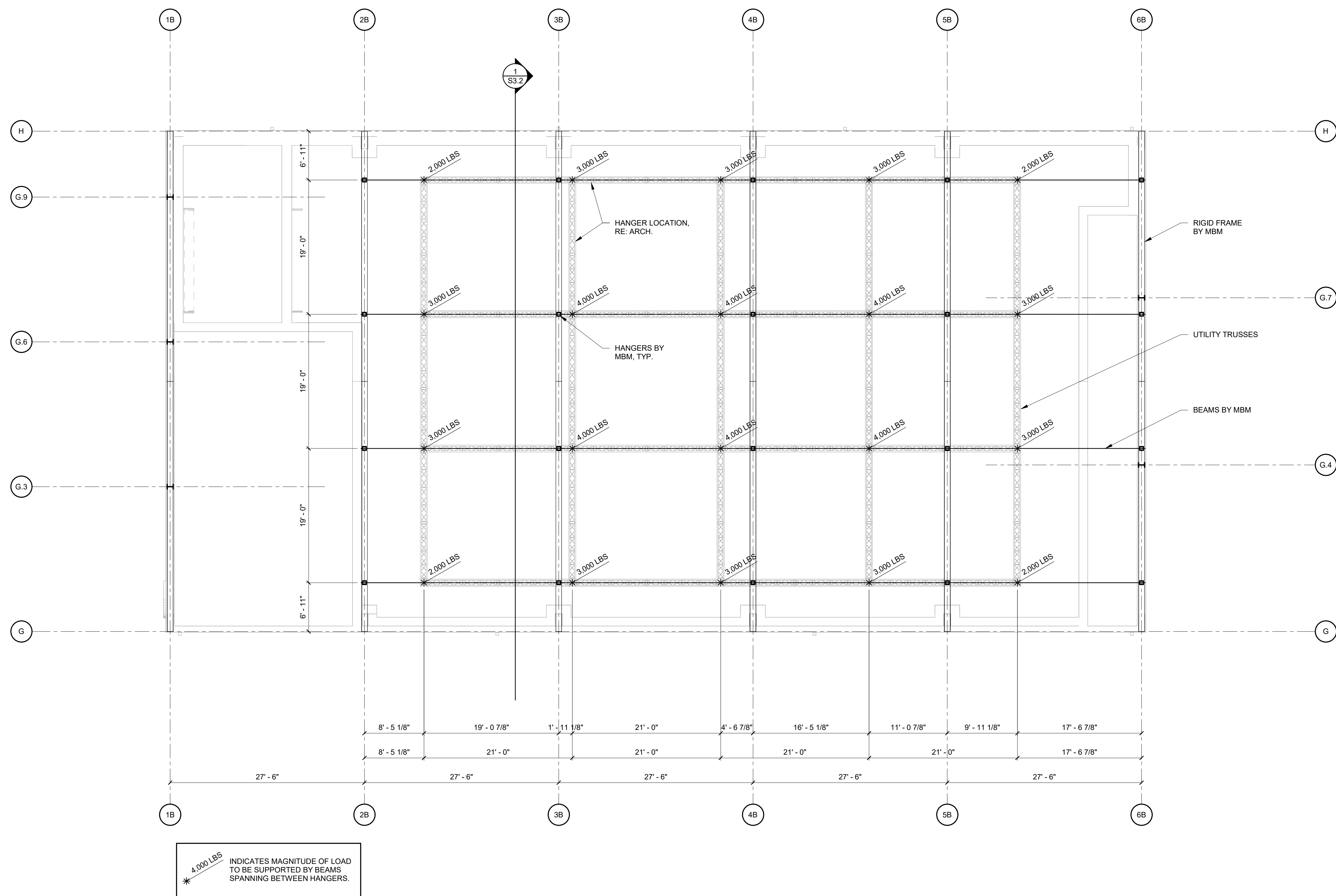


1 HAIRPIN SLAB DOWEL DIAGRAM
3/4" = 1'-0"

Cherokee Nation Businesses
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FOUNDATION
DETAILS

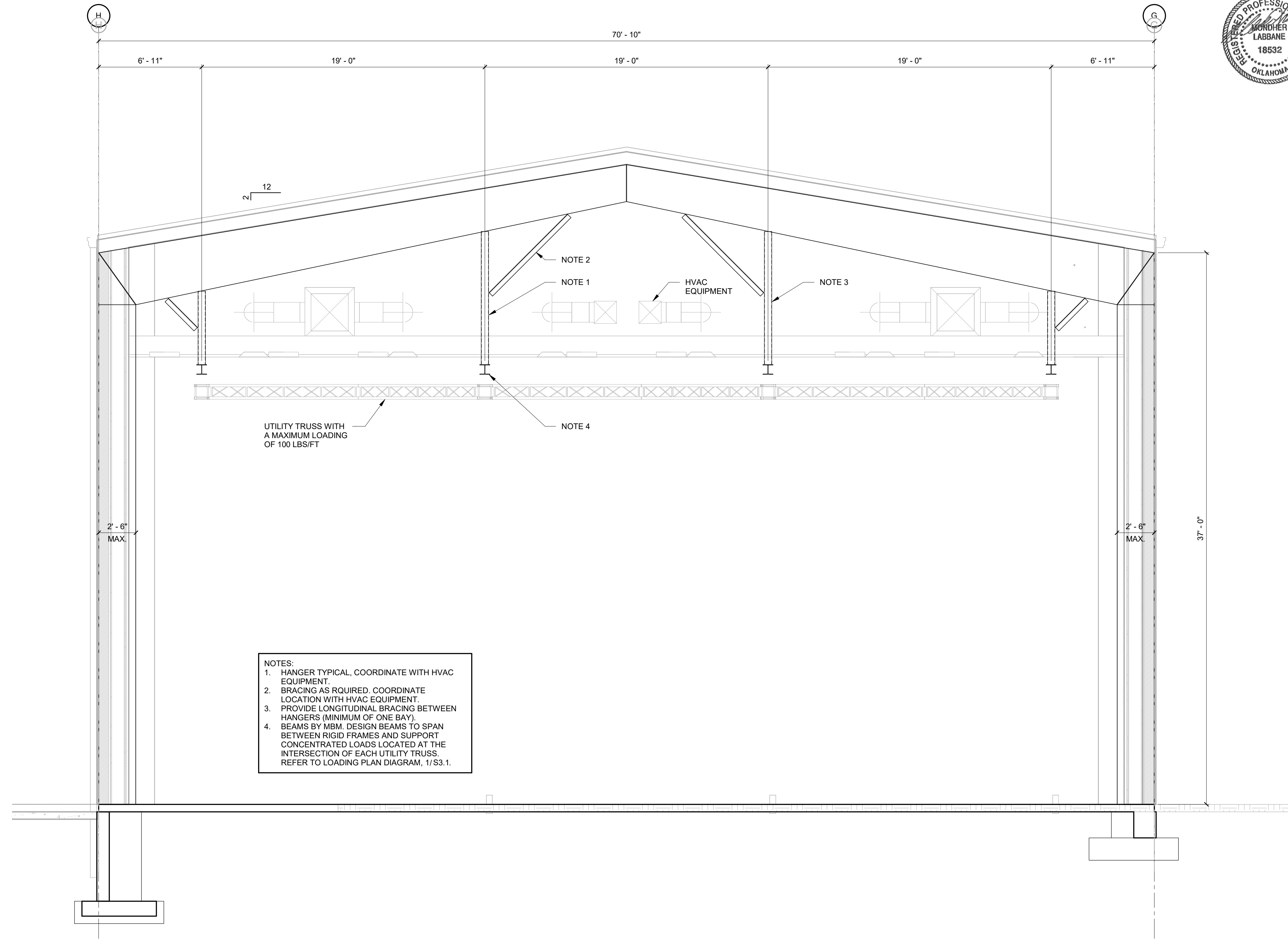


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Cherokee Nation Film Office
Owasso Campus Improvements
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JOB NUMBER
 2112025
 REVISIONS

DATE
 02.13.23
 SHEET
 UTILITY TRUSS
 LOADING PLAN

1 PLAN FOR CEILING UTILITY TRUSS LOADING
 1/8" = 1'-0"



NOTES:
 1. HANGER TYPICAL, COORDINATE WITH HVAC EQUIPMENT.
 2. BRACING AS REQUIRED, COORDINATE LOCATION WITH HVAC EQUIPMENT.
 3. PROVIDE LONGITUDINAL BRACING BETWEEN HANGERS (MINIMUM OF ONE BAY).
 4. BEAMS BY MBM. DESIGN BEAMS TO SPAN BETWEEN RIGID FRAMES AND SUPPORT CONCENTRATED LOADS LOCATED AT THE INTERSECTION OF EACH UTILITY TRUSS. REFER TO LOADING PLAN DIAGRAM, 1/S3.1.

1 RIGID FRAME LOADING DIAGRAM
 1/4" = 1'-0"

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Owasso Campus Improvements
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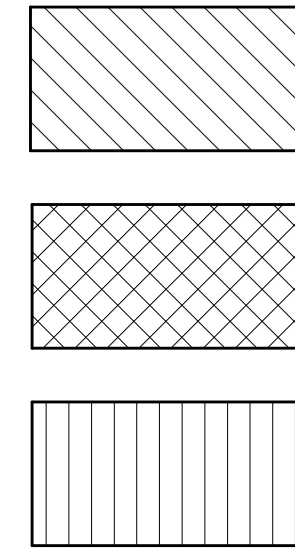
JOB NUMBER
 2112025
 REVISIONS

DATE
 02.13.23
 SHEET
 BUILDING
 ELEVATION

S3.2

SPRINKLER SCHEDULE

- A. USE SPRINKLER TYPES IN SUBPARAGRAPHS BELOW FOR THE FOLLOWING APPLICATIONS:
- ROOMS WITHOUT CEILINGS: UPRIGHT SPRINKLERS
 - ROOMS WITH SUSPENDED CEILINGS: CONCEALED SPRINKLERS
 - WALL MOUNTING: SIDEWALL SPRINKLERS
- B. PROVIDE SPRINKLER TYPES IN SUBPARAGRAPHS BELOW WITH FINISHES INDICATED:
- CONCEALED SPRINKLERS: ROUGH BRASS, WITH FACTORY-PAINTED WHITE COVER PLATE IN WHITE CEILINGS AND BLACK COVER IN BLACK CEILINGS.
 - UPRIGHT, PENDENT, AND SIDEWALL SPRINKLERS: CHROME PLATED IN FINISHED SPACES EXPOSED TO VIEW; ROUGH BRONZE IN UNFINISHED SPACES NOT EXPOSED TO VIEW; WAX COATED WHERE EXPOSED TO ACIDS, CHEMICALS, OR OTHER CORROSIVE FUMES.



PROVIDE FIRE SPRINKLERS PER THE CLASSIFICATIONS BELOW:

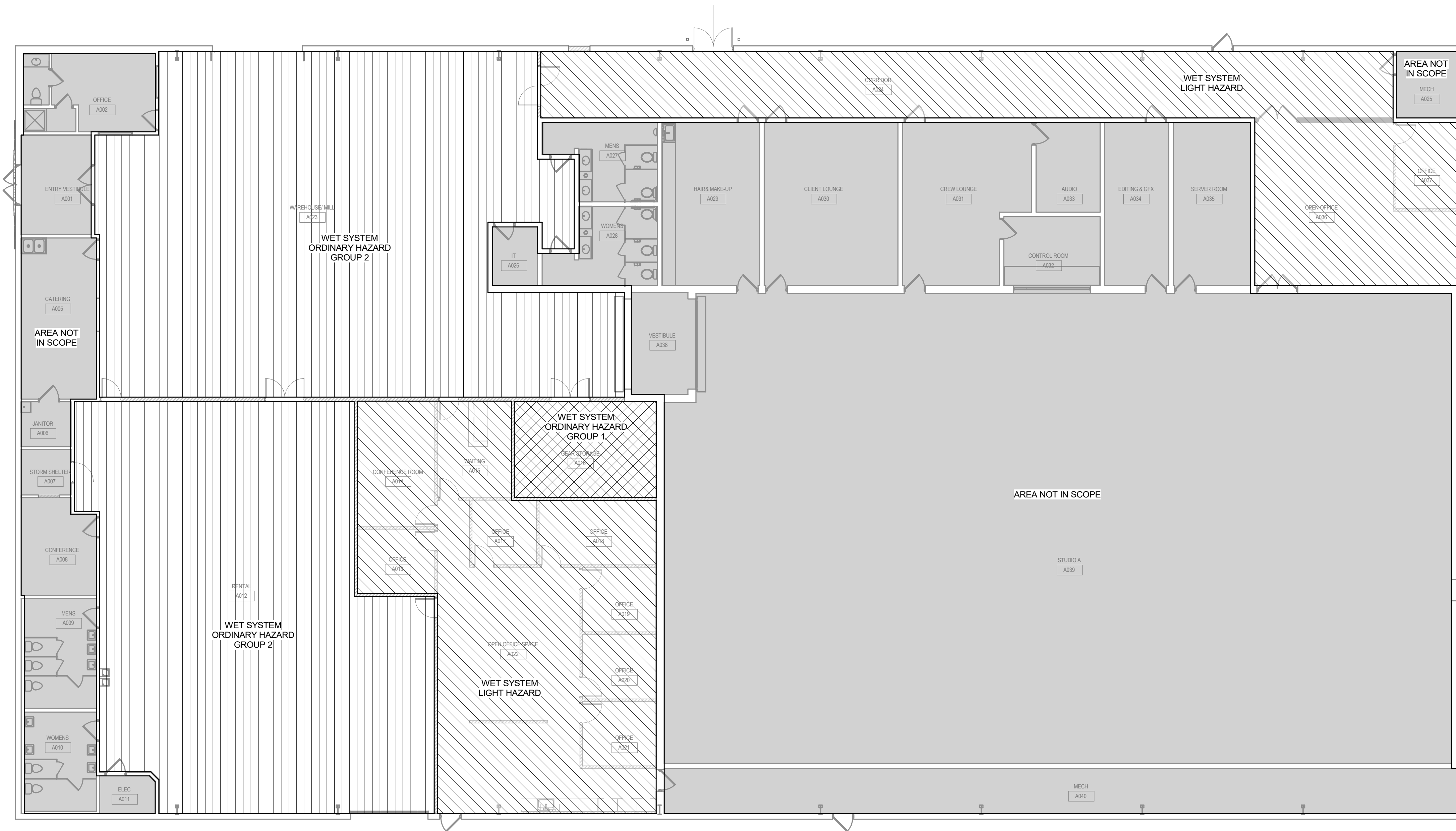
OFFICE, PUBLIC SPACES, BREAKROOM;
OCCUPANCY CLASSIFICATION: LIGHT HAZARD
DENSITY (GPM/SQFT) AND AREA: 0.10 / 1500 SQFT
HOSE ALLOWANCE: 100 GPM
DESIGN BASIS: LIGHT HAZARD, NFPA 13: 11.2.3.1 AND TABLE 11.2.3.1.2

STORAGE & MECHANICAL
OCCUPANCY CLASSIFICATION: ORDINARY HAZARD 1
DENSITY (GPM/SQFT) AND AREA: 0.15 / 1500 SQFT
HOSE ALLOWANCE: 250 GPM
DESIGN BASIS: ORDINARY HAZARD GROUP 1, NFPA 13: 11.2.3.1 AND TABLE 11.2.3.1.2

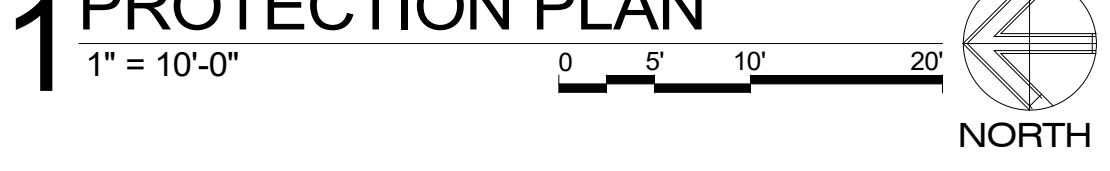
FILM STUDIOS, WORK AREAS, RENTAL SPACE
OCCUPANCY CLASSIFICATION: ORDINARY HAZARD 2
DENSITY (GPM/SQFT) AND AREA: 0.2 / 1500 SQFT
HOSE ALLOWANCE: 250 GPM
DESIGN BASIS: ORDINARY HAZARD GROUP 2, NFPA 13: 11.2.3.1 AND TABLE 11.2.3.1.2

FIRE PROTECTION NOTES:

- THE DESIGN SHOWN ON THESE CONTRACT DOCUMENTS HAS BEEN PREPARED FOR APPROVAL BY THE AUTHORITY HAVING JURISDICTION AND TO PROVIDE GUIDANCE FOR BIDDING. ADDITIONAL EQUIPMENT OR DEVICES NOT SHOWN ON THESE DOCUMENTS MAY BE REQUIRED FOR A COMPLETE SYSTEM. THE CONTRACTOR SHALL SUBMIT COMPLETE FOR SPRINKLER SHOP DRAWINGS AS REQUIRED BY SPECIFICATIONS. CONTRACTOR SHALL BASE SHOP DRAWING DESIGN ON THE FIRE PROTECTION DRAWINGS AND SPECIFICATIONS. SPRINKLER SHOP DRAWINGS SHALL INCLUDE ALL NECESSARY ELEVATIONS, HANGER LOCATIONS, PIPE LENGTHS, DIMENSIONS, FABRICATION METHODS/NOTES, MATERIAL DATA, CALCULATIONS AND ANY OTHER INFORMATION NECESSARY TO CLARIFY THE INTENT OF INSTALLATION. ANY ALTERNATIVES IN DESIGN OF THE SYSTEM OR IN MATERIALS OR EQUIPMENT MUST BE APPROVED IN WRITING BY THE FIRE PROTECTION ENGINEER OF RECORD PRIOR TO ANY BIDDING, FABRICATION, OR INSTALLATION. CONTRACTOR TO PROVIDE A COMPLETE FIRE SPRINKLER SYSTEM THROUGHOUT THE BUILDING. ALL SYSTEMS SHALL BE DESIGNED AND INSTALLED PER NFPA 13 AND NFPA 72.
- CONTRACTOR SHALL COORDINATE LOCATIONS OF FIRE PROTECTION COMPONENTS INCLUDING PIPING, ALARMS, DRAINS, TEST POINTS, ETC. WITH ALL ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS. DISCHARGES TO SPRINKLER DISCHARGE MUST BE CONSIDERED DURING SHOP DRAWING PRODUCTION AND INSTALLATION. EXTRA SPRINKLERS MAY BE REQUIRED AT NO ADDITIONAL COST TO OWNER. REFER TO SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
- CONTRACTOR SHALL OBTAIN CURRENT WATER FLOW TEST INFORMATION FROM WATER DEPARTMENT OR CONDUCT ADDITIONAL FLOW TESTING AS REQUIRED IN ACCORDANCE WITH NFPA 291. HYDRAULIC CALCULATIONS SHALL BE PROVIDED TO THE POINT OF TEST. COORDINATE TESTING AS REQUIRED WITH THE BUILDING MANAGEMENT, WATER DEPARTMENT, AND THE AHJ. A REQUEST FOR INFORMATION SHALL BE SUBMITTED FOR ANY QUESTIONS, COMMENTS, OR REVISIONS TO THE DOCUMENTS.
- IN OPEN CEILING AREAS ROUTE ALL SPRINKLER MAINS AS HIGH AS POSSIBLE IN STRUCTURE. ROUTE ABOVE THE BOTTOM CHORD WHEN OPEN WEB BAR JOISTS ARE PRESENT.
- SPRINKLER SYSTEMS SHALL BE MONITORED OFF-SITE INCLUDING TAMPER SWITCHES ON ALL CONTROL VALVES AND FLOW SWITCHES.
- PENETRATIONS OF RATED WALLS OR ASSEMBLIES SHALL BE FIRE STOPPED WITH APPROVED METHODS ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION, AND PROJECT SPECIFICATIONS.
- THE FIRE PROTECTION ENGINEER OF RECORD SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. NOR SHALL THEY BE REQUIRED TO SUPERVISE THE CONDUCT OF THE WORK. THE CONSTRUCTION PROCEDURES AS SET FORTH BY THE GENERAL CONTRACTOR, SUB-CONTRACTORS, THEIR RESPECTIVE EMPLOYEES, OR ANY OTHER PERSON AT THE JOBSITE OTHER THAN THE ENGINEERING FIRM'S OWN EMPLOYEES. SPRINKLER PROTECTION IS REQUIRED ABOVE THE ELECTRICAL ROOMS. NO MAIN PIPING SHALL PENETRATE OR PASS ABOVE THE ELECTRICAL ROOMS.
- THE CONTRACTOR SHALL REVIEW ALL CONSTRUCTION DOCUMENTS PRIOR TO BID. SHOULD MODIFICATION TO THESE PLANS BECOME NECESSARY TO PROPERLY COORDINATE THE SYSTEM WITH OTHER TRADES, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL OF THESE CHANGES BY THE AHJ, AND THE FIRE PROTECTION ENGINEER OF RECORD. IN ADDITION TO OBTAINING THE NECESSARY APPROVALS, THE CONTRACTOR SHALL MAKE NOTE OF ALL FIELD OR COORDINATION CHANGES ON THE INSTALLATION DRAWINGS. ONCE COMPLETE, THE CONTRACTOR SHALL SUPPLY AS-BUILT DRAWINGS TO THE FIRE PROTECTION ENGINEER OF RECORD AND THE OWNER FOR THEIR USE.
- THE CONTRACTOR SHALL DIVERT ALL DRAIN AND INSPECTORS TEST CONNECTION DISCHARGE AWAY FROM FINISHED SURFACES AND PIPE TO APPROVED DRAIN LOCATIONS. THE CONTRACTOR MAY BE BACK CHARGED FOR ANY REPAIR, REPLACEMENT, OR CLEANING OF RUST STAINS ON PAVEMENT/CONCRETE DUE TO WATER DISCHARGE FROM SPRINKLER SYSTEM DRAIN DOWNS.
- ALL HANGER CONNECTIONS SHALL BE MADE TO THE TOP CHORD OF STRUCTURAL JOIST UNLESS NOTED OTHERWISE. USE OF SAMMY SCREWS INTO ROOF DECK OR STRUCTURE IS PROHIBITED UNLESS APPROVED BY THE ENGINEER OF RECORD.
- BUILDING SHALL BE KEPT IN OPERATION. ARRANGE ALL WORK TO KEEP DISRUPTIONS TO THE OWNER OPERATIONS AT A MINIMUM. COORDINATE ALL DISRUPTIONS WITH THE AHJ, OWNERS REPRESENTATIVE AND GENERAL CONTRACTOR IN ADVANCE. THE CONTRACTOR SHALL ASSUME THAT SOME WORK MAY BE REQUIRED AFTER HOURS, AND INCLUDE SUCH PROVISIONS IN THE BASE BID. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION AND PAYMENT OF ANY FEES ASSOCIATED WITH ANY FIRE WATCH REQUIRED BY THE AHJ.
- COMPLETED TEST CERTIFICATES ARE TO BE FORWARDED TO THE FIRE MARSHAL AND FIRE PROTECTION ENGINEER OF RECORD.

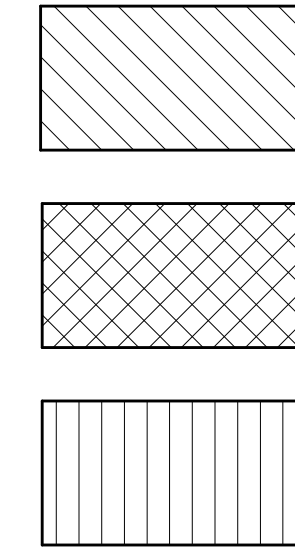


STUDIO A - FIRE PROTECTION PLAN



SPRINKLER SCHEDULE

- A. USE SPRINKLER TYPES IN SUBPARAGRAPHS BELOW FOR THE FOLLOWING APPLICATIONS:
 - 1. ROOMS WITHOUT CEILINGS: UPRIGHT SPRINKLERS
 - 2. ROOMS WITH SUSPENDED CEILINGS: CONCEALED SPRINKLERS
 - 3. WALL MOUNTING: SIDEWALL SPRINKLERS
- B. PROVIDE SPRINKLER TYPES IN SUBPARAGRAPHS BELOW WITH FINISHES INDICATED.
 - 1. CONCEALED SPRINKLERS: ROUGH BRASS, WITH FACTORY-PAINTED WHITE COVER PLATE IN WHITE CEILINGS AND BLACK COVER IN BLACK CEILINGS.
 - 2. UPRIGHT, PENDENT, AND SIDEWALL SPRINKLERS: CHROME PLATED IN FINISHED SPACES EXPOSED TO VIEW; ROUGH BRONZE IN UNFINISHED SPACES NOT EXPOSED TO VIEW; WAX COATED WHERE EXPOSED TO ACIDS, CHEMICALS, OR OTHER CORROSIVE FUMES.



PROVIDE FIRE SPRINKLERS PER THE CLASSIFICATIONS BELOW:

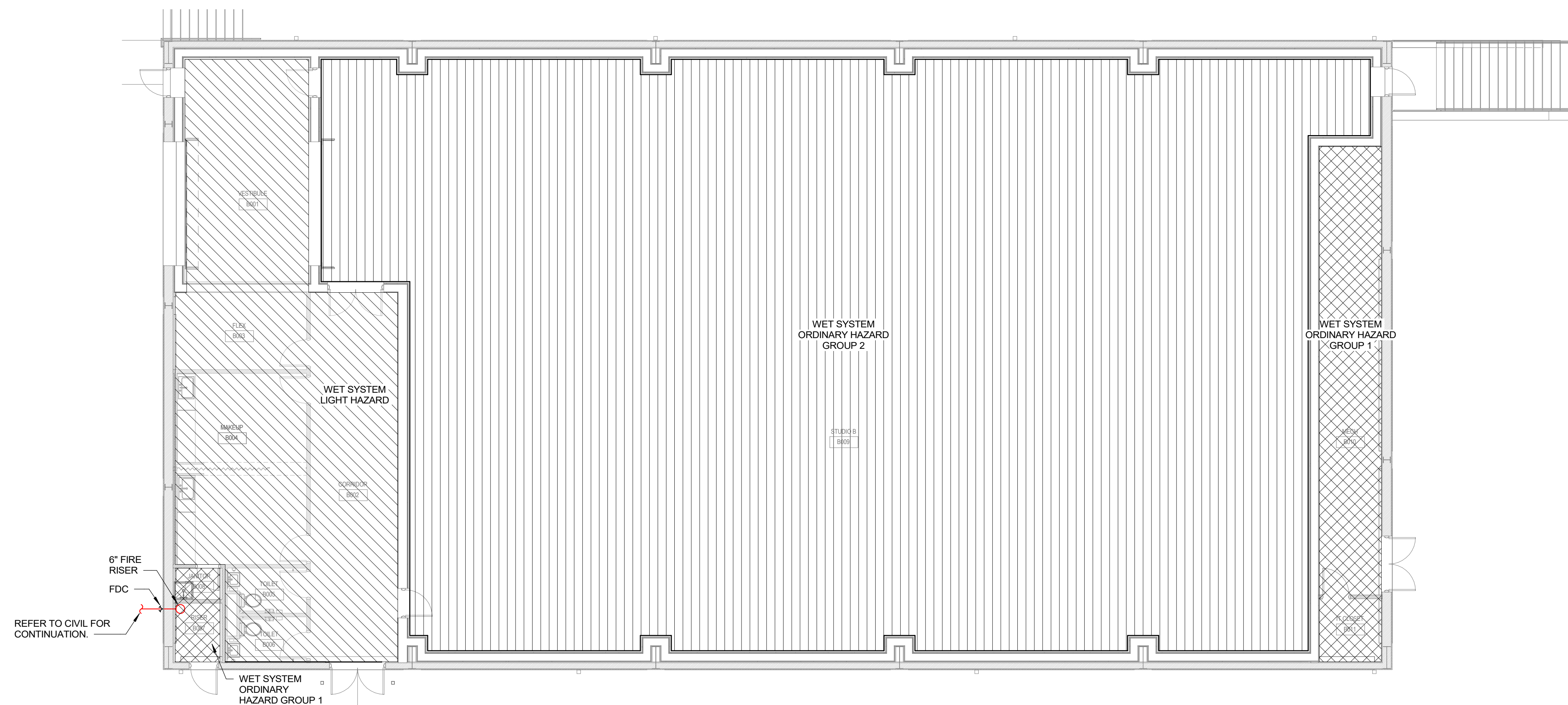
OFFICE, PUBLIC SPACES, BREAKROOM:
 OCCUPANCY CLASSIFICATION: LIGHT HAZARD
 DENSITY (GPM/SQFT) AND AREA: 0.10 / 1500 SQFT
 HOSE ALLOWANCE: 100 GPM
 MAXIMUM SPRINKLER SPACING: 225 SQFT
 DESIGN BASIS: LIGHT HAZARD, NFPA 13: 11.2.3.1 AND TABLE 11.2.3.1.2

STORAGE & MECHANICAL:
 OCCUPANCY CLASSIFICATION: ORDINARY HAZARD 1
 DENSITY (GPM/SQFT) AND AREA: 0.2 / 1500 SQFT
 HOSE ALLOWANCE: 250 GPM
 MAXIMUM SPRINKLER SPACING: 130 SQFT
 DESIGN BASIS: ORDINARY HAZARD GROUP 1, NFPA 13: 11.2.3.1 AND TABLE 11.2.3.1.2

FILM STUDIOS, WORK AREAS, RENTAL SPACE:
 OCCUPANCY CLASSIFICATION: ORDINARY HAZARD 2
 DENSITY (GPM/SQFT) AND AREA: 0.2 / 1500 SQFT
 HOSE ALLOWANCE: 250 GPM
 MAXIMUM SPRINKLER SPACING: 130 SQFT
 DESIGN BASIS: ORDINARY HAZARD GROUP 2, NFPA 13: 11.2.3.1 AND TABLE 11.2.3.1.2

FIRE PROTECTION NOTES:

1. THE DESIGN SHOWN ON THESE CONTRACT DOCUMENTS HAS BEEN PREPARED FOR APPROVAL BY THE AUTHORITY HAVING JURISDICTION AND TO PROVIDE GUIDANCE FOR BIDDING. ADDITIONAL EQUIPMENT OR DEVICES NOT SHOWN ON THESE DOCUMENTS MAY BE REQUIRED FOR A COMPLETE SYSTEM. THE CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS FOR SPRINKLER SHOP DRAWINGS AS REQUIRED BY SPECIFICATIONS. CONTRACTOR SHALL BASE SHOP DRAWING DESIGN ON THE FIRE PROTECTION DRAWINGS AND SPECIFICATIONS. SPRINKLER SHOP DRAWINGS SHALL INCLUDE ALL NECESSARY ELEVATIONS, HANGER LOCATIONS, PIPE LENGTHS, DIMENSIONS, FABRICATION METHODS/NOTES, MATERIAL DATA, CALCULATIONS AND ANY OTHER INFORMATION NECESSARY TO CLARIFY THE INTENT OF INSTALLATION. ANY ALTERNATIVES IN DESIGN OF THE SYSTEM OR IN MATERIALS OR EQUIPMENT USED MUST BE APPROVED IN WRITING BY THE FIRE PROTECTION ENGINEER OF RECORD PRIOR TO ANY BIDDING, FABRICATION, OR INSTALLATION.
2. CONTRACTOR TO PROVIDE A COMPLETE FIRE SPRINKLER SYSTEM THROUGHOUT THE BUILDING. ALL SYSTEMS SHALL BE DESIGNED AND INSTALLED PER NFPA 13 AND NFPA 72.
3. CONTRACTOR SHALL COORDINATE LOCATIONS OF FIRE PROTECTION COMPONENTS INCLUDING PIPING, ALARMS, DRAINS, TEST POINTS, ETC. WITH ALL ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS. CONSIDERATIONS TO SPRINKLER DISCHARGE MUST BE CONSIDERED DURING SHOP DRAWING PRODUCTION AND INSTALLATION. EXTRA SPRINKLERS MAY BE REQUIRED AT NO ADDITIONAL COST TO OWNER. REFER TO SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
4. CONTRACTOR SHALL OBTAIN CURRENT WATER FLOW TEST INFORMATION FROM WATER DEPARTMENT OR CONDUCT ADDITIONAL FLOW TESTING AS REQUIRED IN ACCORDANCE WITH NFPA 291. HYDRAULIC CALCULATIONS SHALL BE PROVIDED TO THE POINT OF TEST. COORDINATE TESTING AS REQUIRED WITH THE BUILDING MANAGEMENT, WATER DEPARTMENT, AND THE AHJ. A REQUEST FOR INFORMATION SHALL BE SUBMITTED FOR ANY QUESTIONS, COMMENTS, OR REVISIONS TO THE DOCUMENTS.
5. IN OPEN CEILING AREAS ROUTE ALL SPRINKLER MAINS AS HIGH AS POSSIBLE IN STRUCTURE. ROUTE ABOVE THE BOTTOM CHORD WHEN OPEN WEB BAR JOISTS ARE PRESENT.
6. SPRINKLER SYSTEMS SHALL BE MONITORED OFF-SITE INCLUDING TAMPER SWITCHES ON ALL CONTROL VALVES AND FLOW SWITCHES.
7. PENETRATIONS OF RATED WALLS OR ASSEMBLIES SHALL BE FIRE STOPPED WITH APPROVED METHODS ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION, AND PROJECT SPECIFICATIONS.
8. THE FIRE PROTECTION ENGINEER OF RECORD SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NOR SHALL THEY BE REQUIRED TO SUPERVISE THE CONDUCT OF THE WORK. THE CONSTRUCTION PROCEDURES AS SET FORTH BY THE GENERAL CONTRACTOR, SUB-CONTRACTORS, THEIR RESPECTIVE EMPLOYEES, OR ANY OTHER PERSON AT THE JOBSITE OTHER THAN THE ENGINEERING FIRM'S OWN EMPLOYEES. SPRINKLER PROTECTION IS REQUIRED ABOVE THE ELECTRICAL ROOMS, NO MAIN PIPING SHALL PENETRATE OR PASS ABOVE THE ELECTRICAL ROOMS.
9. THE CONTRACTOR SHALL REVIEW ALL CONSTRUCTION DOCUMENTS PRIOR TO BID. SHOULD MODIFICATION TO THESE PLANS BECOME NECESSARY TO PROPERLY COORDINATE THE SYSTEM WITH OTHER TRADES, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL OF THESE CHANGES BY THE AHJ, AND THE FIRE PROTECTION ENGINEER OF RECORD. IN ADDITION TO OBTAINING THE NECESSARY APPROVALS, THE CONTRACTOR SHALL MAKE NOTE OF ALL FIELD OR COORDINATION CHANGES ON THE INSTALLATION DRAWINGS. ONCE COMPLETE, THE CONTRACTOR SHALL SUPPLY AS-BUILT DRAWINGS TO THE FIRE PROTECTION ENGINEER OF RECORD AND THE OWNER FOR THEIR USE.
10. THE CONTRACTOR SHALL DIVERT ALL DRAIN AND INSPECTORS TEST CONNECTION DISCHARGE AWAY FROM FINISHED SURFACES AND PIPE TO APPROVED DRAIN LOCATIONS. THE CONTRACTOR MAY BE BACK CHARGED FOR ANY REPAIR, REPLACEMENT, OR CLEANING OF RUST STAINS ON PAVEMENT/CONCRETE DUE TO WATER DISCHARGE FROM SPRINKLER SYSTEM DRAIN DOWNS.
11. ALL HANGER CONNECTIONS SHALL BE MADE TO THE TOP CHORD OF STRUCTURAL JOIST UNLESS NOTED OTHERWISE. USE OF SAMMY SCREWS INTO ROOF DECK OR STRUCTURE IS PROHIBITED UNLESS APPROVED BY THE ENGINEER OF RECORD.
12. COMPLETED TEST CERTIFICATES ARE TO BE FORWARDED TO THE FIRE MARSHAL AND FIRE PROTECTION ENGINEER OF RECORD.



2 STUDIO B - FIRE PROTECTION PLAN
 1/8" = 1'-0"
 0 4' 8' 16'
 NORTH

PROJECT SCOPE NOTES-STUDIO A

THE SCOPE OF THIS PROJECT IS TO PROVIDE NEW PLUMBING SYSTEMS TO ACCOMMODATE THE RENOVATION AND NEW CONSTRUCTION OF CHEROKEE NATION FILM STUDIO A, OWASSO, OK.

- PROVIDE NEW PLUMBING FIXTURE, DOMESTIC WATER PIPING, SANITARY AND VENT LINES FOR OPEN OFFICE A022 KITCHEN SINK. REFER TO P2.1 - DOMESTIC PLUMBING PLAN. PROVIDE NEW 3/4" COLD WATER SUPPLY LINE FROM NEAREST DOMESTIC COLD WATER MAIN LINE OF EQUAL OR GREATER SIZE. FIELD VERIFY EXACT CONDITIONS PRIOR TO BID.
- PROVIDE NEW WASHING MACHINE BOX IN CATERING KITCHEN A005 STUDIO A. CONNECT INTO EXISTING DOMESTIC WATER ANGLE STOPS AND SANITARY STUB IN WALL.

PROJECT SCOPE NOTES-STUDIO B

THE SCOPE OF THIS PROJECT IS TO PROVIDE NEW PLUMBING SYSTEMS TO ACCOMMODATE THE NEW CONSTRUCTION OF CHEROKEE NATION FILM STUDIO B, OWASSO, OK.

- PROVIDE NEW PLUMBING FIXTURES, DOMESTIC WATER PIPING, SANITARY, AND VENT PIPING PER THE DRAWINGS.

STUDIO B SOUND CRITERIA

DOMESTIC WATER SYSTEMS OVER STUDIO B SHALL BE INSTALLED WITH THE FEWEST AMOUNT OF FITTINGS POSSIBLE. THESE SYSTEMS SHALL ALSO BE SUSPENDED FROM STRUCTURE UTILIZING SPRING ISOLATION HANGERS RATED FOR 1" MINIMUM DEFLECTION. AS DOMESTIC WATER PIPING ENTERS AND EXITS THE CEILING OF STUDIO B, BOTH ENDS OF THE PIPING SHALL BE ISOLATED WITH FLEXIBLE CONNECTIONS.

GENERAL PLUMBING NOTES

- DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. REVIEW THE GENERAL NOTES, AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY THE ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
- CONTRACTOR TO COMPLY WITH ALL LOCAL CODES AND REQUIREMENTS.
- FURNISH A CONSTRUCTION RECORD SET OF "AS-BUILT" DOCUMENTS TO THE OWNER REFLECTING ANY VARIANCES OF INSTALLED PIPING LOCATIONS OR EQUIPMENT CONTRARY TO THE CONSTRUCTION DOCUMENTS PREPARED BY THE ENGINEER-OF-RECORD AFTER FINAL INSPECTION OF INSTALLED PLUMBING SYSTEMS.
- FURNISH TO THE OWNER A COPY OF INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS.
- PLANS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
- REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES.
- DO NOT SCALE FLOOR PLANS FOR EXACT HORIZONTAL LOCATION OF PIPE ROUTING.
- VALVES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.
- PIPING IN FINISHED AREAS SHALL BE ROUTED CONCEALED; EXPOSED PIPING, WHERE NECESSARY, SHALL BE ROUTED AS HIGH AS POSSIBLE AND TIGHT TO WALLS.
- COORDINATE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
- COORDINATE PIPING INSTALLATION WITH STRUCTURAL GRADE BEAMS, FOOTINGS, COLUMN PIERS, ETC. SLEEVE PIPING THROUGH GRADE BEAMS, FOOTING, ETC. WHERE REQUIRED AND AS NOTED ON PLANS. COORDINATE SLEEVE INSTALLATIONS WITH THE ARCHITECT, STRUCTURAL ENGINEER, STRUCTURAL CONTRACTOR AND GENERAL CONTRACTOR BEFORE CONCRETE IS INSTALLED.
- CLEAN FAUCET AERATORS AND PIPE STRAINERS PRIOR TO TURNING BUILDING OVER TO THE OWNER.
- COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT ROUTE PIPING OVER ELECTRICAL PANELS.
- COORDINATE ALL ROOF AND WALL PENETRATIONS WITH OTHER TRADES. MAINTAIN 10' MINIMUM CLEARANCE FROM ALL AIR INTAKES. MAINTAIN 2' CLEARANCE FROM ALL OTHER EQUIPMENT.
- ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE INSTALLED AND SEALED TO MAINTAIN FIRE RATING WITH U.L. LISTED ASSEMBLIES, MATERIALS, AND SEALANTS.
- WHERE PVC PIPING PENETRATES A CONCRETE SLAB OR FLOOR ASSEMBLY IN AN EXPOSED AREA (NON-CONCEALED) PROVIDE A CAST IRON SLEEVE THAT EXTENDS 6" ABOVE FINISHED FLOOR TO PROTECT THE PIPE FROM BREAKING AT THE SLAB.
- PROVIDE SHIELDED ADAPTER COUPLINGS FOR CONNECTION OF PVC DWV TO CAST IRON AT SLAB ON GRADE.
- PROVIDE CHECK VALVES IN HOT AND COLD WATER SUPPLIES FOR MOP SINK FAUCETS DOWNSTREAM OF SHUTOFF VALVES.
- EXPOSED HOT WATER PIPES AND DRAINPIPES UNDER HANDICAPPED ACCESSIBLE LAVATORIES SHALL BE CONFIGURED OR INSULATED TO PROTECT AGAINST CONTACT.
- RPZ SHALL BE INSTALLED IN THE POTABLE WATER SUPPLY TO EACH LOCATION WHERE SANITIZING CHEMICALS OR DETERGENTS WILL BE ASPIRATED OR PUSHED BY WATER PRESSURE INTO CLEANSING/SANITIZING OPERATION.
- DRAINAGE AND VENT SYSTEM SHALL BE PRESSURE TESTED WITH WATER OR AIR.
- ALL RPZ ASSEMBLIES SHALL BE TESTED AND APPROVED BY A CROSS CONNECTION CONTROL DEVICE INSPECTOR BEFORE INITIAL OPERATION. RECORDS TO VERIFY THIS TESTING SHALL BE AVAILABLE ON SITE.
- ALL PENETRATIONS OF FLOOR/CEILING ASSEMBLIES SHALL BE FIRE STOPPED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE.
- ALL DRY VENTS SHALL RISE VERTICALLY TO A MINIMUM OF 6 INCHES ABOVE THE FLOOD LEVEL RIM OF THE HIGHEST TRAP OR TRAPPED FIXTURE BEING VENTED.
- CUTOFF VALVES AND STOPS SHALL BE PROVIDED AT FIXTURE CONNECTIONS.
- INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A WATER PRESSURE TEST FOR EVALUATING INCOMING DOMESTIC WATER SERVICE PRESSURES, AND REPORT BACK TO THE ENGINEER IF PRESSURE IS LESS THAN 60 PSI. IF INCOMING PRESSURE EXCEEDS 80 PSI, PROVIDE PRESSURE REDUCING VALVE TO REDUCE PRESSURE TO 70 PSI.
- PROVIDE SEWER CLEANOUTS AT LOCATIONS AND WITH CLEARANCES REQUIRED BY CODE, NOT EXCEEDING 50' IN HORIZONTAL RUNS AND AT EACH CHANGE OF DIRECTION GREATER THAN 45°.
- OUTDOOR SEWER PIPE SHALL BE INSTALLED NO LESS THAN 6" BELOW THE FROST LINE.
- CAULK AROUND ALL FIXTURES TO SEAL BETWEEN FIXTURE AND FLOOR OR WALL.
- SLOPE 3" AND 4" SANITARY SEWER AT 1/8" PER FOOT.
- SLOPE ALL SANITARY SEWER SMALLER THAN 3" AT 1/4" PER FOOT.
- SLOPE VENT PIPING AT 1/4" PER FOOT GRADED TO DRIP BACK TO SOIL OR WASTE PIPE BY GRAVITY.
- ALL SANITARY SEWER AND SANITARY VENT PIPING THAT IS NOT IN A CONDITIONED SPACE MUST BE BURIED BENEATH THE FROST LINE.

PIPING MATERIAL SCHEDULE


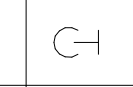
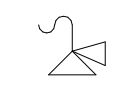

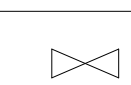





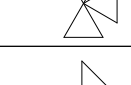

SYSTEM TAG	DESCRIPTION	PIPE SIZES	MATERIAL	FITTINGS	INSULATION	REMARKS
SS/V	SANITARY DRAINAGE & VENT (ABOVE GRADE)	ALL	CAST IRON	HUB & SPIGOT/HUBLESS	NONE	
			TYPE "L" COPPER	SOLDER/FLANGED		
			SCH. 40 PVC	SOLVENT		
SS/V	SANITARY DRAINAGE & VENT (BELOW GRADE)	ALL	CAST IRON	HUB & SPIGOT/HUBLESS	NONE	
			TYPE "L" COPPER	SOLDER/FLANGED		
			SCH. 40 PVC	SOLVENT		
CW	POTABLE COLD WATER (ABOVE GRADE)	ALL	TYPE "L" COPPER	SOLDER/MECHANICAL PRESS	3/4" FIBERGLASS/CLOSED CELL	1,2,3
HW	DOMESTIC HOT WATER SUPPLY & RETURN (ABOVE GRADE)	ALL	TYPE "L" COPPER	SOLDER/MECHANICAL PRESS	1" FIBERGLASS/CLOSED CELL	1,2

- REMARKS:**
- PROVIDE VAPOR BARRIER JACKET WHERE FIBERGLASS INSULATION IS USED.
 - PROVIDE PVC JACKETING FOR ALL EXPOSED PIPING. PROVIDE COLOR CHART AND COORDINATE WITH ARCHITECT.
 - INSULATE PIPING ROUTED IN EXTERIOR BUILDING WALLS WITH MINIMUM 2" BATT INSULATION TO PREVENT FREEZING.

PLUMBING ABBREVIATIONS

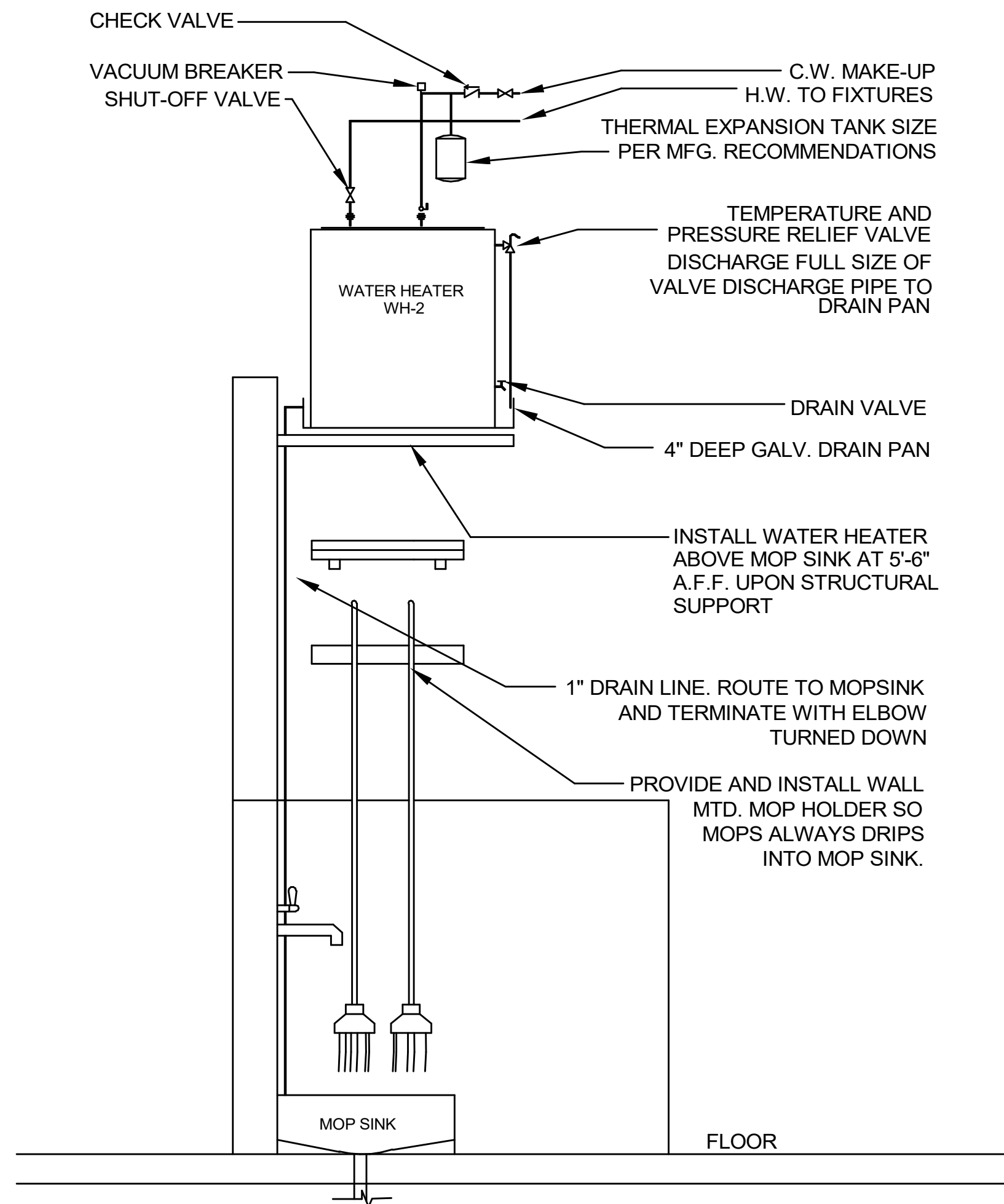
AFF	ABOVE FINISHED FLOOR
CFH	CUBIC FEET PER HOUR
CO	CLEANOUT
CONT	CONTINUATION
CP	CIRCULATION PUMP
CW	COLD WATER
DW	DISHWASHER
DWV	DRAIN, WASTE, VENT
EXIST	EXISTING
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FS	FLOOR SINK
GPM	GALLONS PER MINUTE
GV	GREASE VENT
GW	GREASE WASTE
HB	HOSE BIB
HW	HOT WATER
HS	HAND SINK
HWR	HOT WATER RETURN
LAV	LAVATORY
MAX	MAXIMUM
MS	MOP SINK
NG	NATURAL GAS
N.I.C	NOT IN CONTRACT
NTS	NOT TO SCALE
REF	REFERENCE
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
SK	SINK
SS	SANITARY SEWER
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
V	VENT
VTR	VENT TO ROOF
W/	WITH
WC	WATER CLOSET
WCO	WALL CLEANOUT
WF	WATER FOUNTAIN
WH	WATER HEATER
WHA	WATER HAMMER ARRESTOR

PLUMBING SYMBOL LEGEND

	ISOLATION VALVE		ELBOW DOWN
	PRESSURE RELIEF VALVE		CONNECT TO EXISTING
	ANGLE STOP		CONTINUATION
	CHECK VALVE		TEE DOWN
	MIXING VALVE		CIRCULATION PUMP
	PIPE SIZE REDUCER		PIPE SIZE INCREASE

WATER HEATER SCHEDULE (ELECTRIC)															
TAG		SERVICE	LOCATION	PERFORMANCE DATA			WATER CONN. SIZES		ELECTRICAL DATA			FILLED WEIGHT	MANUFACTURER	MODEL #	REMARKS
NAME	#			CAPACITY	RECOVERY	RISE	CW	HW	INPUT	SERVICE V/PH/Hz					
WH	1	DOMESTIC HOT WATER	OPEN OFFICE A022	6 gal	7 GPH	90 °F	3/4"	3/4"	1.5 kW	120/1/60	85 lb	AO SMITH	DEL-6	1-3	
WH	2	DOMESTIC HOT WATER	JANITOR ROOM	33 gal	23 GPH	90 °F	3/4"	3/4"	8 kW	208/1/60	400 lb	AO SMITH	DEL-30	1,4-7	

- REMARKS:
- PROVIDE T&P VALVE.
 - PROVIDE DRAIN PAN.
 - PROVIDE 1-1/4" P-TRAP PIPING AND WYE CONNECTION INTO OPEN OFFICE A022 (SK-1 SINK) DRAIN RISER. INDIRECTLY WASTE T&P PIPING INTO 1-1/4" DRAIN PIPE.
 - MOUNT ELECTRIC WATER HEATER @ 5' 6" AFF. ON STRUCTURAL SHELF. REF. 1/P1.1.
 - PROVIDE DRAIN PAN AND INDIRECTLY WASTE INTO MOP SINK BELOW.
 - PROVIDE EXPANSION TANK.
 - SIMULTANEOUS ELEMENT OPERATION, (2) 4 KW EACH.



1 PLATFORM MOUNTED WATER HEATER
NTS

PLUMBING FIXTURE SCHEDULE													
TAG	DESCRIPTION	RISER & AIR CHAMBER SIZES		NIPPLE & VALVE CONNECTION SIZES		CODE CONNECTION REQUIREMENTS		BASIS OF DESIGN		REMARKS			
		HW	CW	HW	CW	SS	VENT	MANUFACTURER	MODEL #				
FCO-1	FLOOR CLEANOUT	-	-	-	-	4"	-	ZURN	Z1400	DURA-COATED CAST IRON BODY WITH GAS AND WATERTIGHT ABS TAPERED THREAD PLUG AND ROUND SCORIATED NICKEL BRONZE TOP ADJUSTABLE TO FINISHED FLOOR			
FD-1	FLOOR DRAIN	-	-	-	-	2"	1-1/2"	ZURN	Z415B	DURA-COATED CAST IRON BODY WITH TYPE B' POLISHED NICKEL BRONZE, HEEL PROOF STRAINER. PROVIDE ZURN Z1072 ZSHIELD BARRIER TRAP SEAL DEVICE AND INSTALL PER MANUFACTURER INSTRUCTIONS. REF. 3&5/P5.1			
FD-2	RECESSED FLOOR DRAIN	-	-	-	-	3"	1-1/2"	ZURN	Z415I	PROVIDE FLOOR DRAIN WITH RECESSED TYPE I' POLISHED NICKEL BRONZE STRAINER, DURA-COATED CAST-IRON BODY. PROVIDE ZURN Z1072 ZSHIELD BARRIER TRAP SEAL DEVICE AND INSTALL PER MANUFACTURER INSTRUCTIONS. REF. 3&5/P5.1			
FPWH-1	FREEZEPROOF WALL HYDRANT	-	3/4"	-	3/4"	-	-	WOODFORD	MODEL B65	AUTOMATIC DRAINING FREEZELESS WALL HYDRANT WITH HOSE CONNECTION ANTI-SIPHON VACUUM BREAKER AND HOUSED IN A TAMPER RESISTANT BRASS BOX, HYDRANT STILL DRAINS AS HANDLE IS SHUT OFF WHILE HOSE IS CONNECTED, CHROME EXTERIOR FINISH. REF. 7/P5.1			
IMB-1	ICE MAKER BOX	-	3/4"	-	1/2"	-	-	OATEY	39145	ICE MAKER OUTLET BOX WITH 1/4 TURN BRASS BALL VALVES, HIGH IMPACT POLYSTYRENE, WHITE			
LAV-1	(ADA) WALL MOUNTED LAVATORY	3/4"	3/4"	1/2"	1/2"	1-1/4"	1-1/4"	AMERICAN STANDARD	DECORUM 9024.908EC	PROVIDE (ADA) 20" X 18" WALL HUNG LAVATORY, 3 HOLE ON 8" CENTERS, COLOR = WHITE, 20"x18" VITREOUS CHINA, GRID STRAINER DRAIN PROVIDE (ADA) AMERICAN STANDARD MONTERREY 6500.275, 3 HOLE DECK MOUNTED, 8" WIDESPREAD FAUCET, 0.5 GPM PROVIDE TRUBRO LAVGUARD2 PROVIDE ASSE 1070 MIXING VALVE PROVIDE WALL CARRIER PROVIDE PRECISION PLUMBING PRODUCTS SC-500 WATER HAMMER ARRESTOR FOR SINGLE USE FIXTURE LOCATION, INSTALL UNDER SINK AT ANGLE STOP.			
MSB-1	MOP SERVICE BASIN	3/4"	3/4"	1/2"	1/2"	3"	1-1/2"	FIAT	MSBID-2424	24"x24"x10" MOLDED STONE MOP SERVICE BASIN WITH INTEGRAL 3" DRAIN PROVIDE 830AA WALL MOUNTED SERVICE FAUCET WITH 3/4" HOSE CONNECTION, INTEGRAL STOPS, INTEGRAL VACUUM BREAKER, ADJUSTABLE WALL BRACE, AND PAIL HOOK. PROVIDE 832AA HOSE AND HOSE BRACKET, 889CC MOP HANGER, AND MSG2424 STAINLESS STEEL WALGUARD REF. 1/P1.1			
RPZ-1	REDUCED PRESSURE ZONE	-	1-1/4"	-	1-1/4"	-	-	WATTS	LF009	REDUCED PRESSURE ZONE BACKFLOW PREVENTION ASSEMBLY. THE ASSEMBLY SHALL CONSIST OF AN INTERNAL PRESSURE DIFFERENTIAL RELIEF VALVE LOCATED IN A ZONE BETWEEN TWO POSITIVE SEATING CHECK MODULES WITH CAPTURED SPRINGS AND SILICONE SEAT DISCS. PROVIDE QUARTER TURN BALL VALVES ON BOTH SIDES OF THE RPZ ASSEMBLY AND A Y-STRAINER UPSTREAM OF THE RPZ ASSEMBLY. ASSEMBLY SHALL BE CAPABLE OF 33 GPM WITH A MAXIMUM PRESSURE DROP OF 15 PSI. ASSEMBLY SHALL BE ASSE 1013 COMPLIANT AND BE LEAD FREE			
SK-1	DOUBLE BOWL DROP-IN SINK	3/4"	3/4"	1/2"	1/2"	1-1/2"	1-1/4"	DAYTON	DSE23319	PROVIDE 31" X 19" X 8", DOUBLE BOWL DROP-IN SINK, 300 STAINLESS STEEL, 20 GAUGE, SINGLE FAUCET HOLE, CENTER DRAIN PLACEMENT PROVIDE (ADA) AMERICAN STANDARD STUDIO S MODEL# 4803100 PULL-OUT DUAL SPRAY FAUCET, 9-1/16" FAUCET NECK, METAL LEVER HANDLE, 1 HOLE FAUCET, REFER TO ARCHITECT/OWNER FOR COLOR, 1.8 GPM PROVIDE DAYTON D1125 3-1/2" STAINLESS STEEL DRAIN WITH REMOVABLE BASKET STRAINER AND RUBBER STOP PROVIDE INSINKERATOR BADGER 5, 1/2 HP, 120V/60HZ, 6.3 AMP, 13 LBS, FACTORY INSTALLED POWER CORD, WALL SWITCH CONTROLLED. PROVIDE FOR OPEN OFFICE A022 ONLY. PROVIDE PRECISION PLUMBING PRODUCTS SC-500 WATER HAMMER ARRESTOR FOR SINGLE USE FIXTURE LOCATION, INSTALL UNDER SINK AT ANGLE STOP.			
SK-3	(ADA) UNDERMOUNT SINK	3/4"	3/4"	1/2"	1/2"	1-1/2"	1-1/4"	KOHLER	KATHRYN K-2297	PROVIDE (ADA) 23-7/8" X 15-5/8" X 6-1/4" VITREOUS CHINA, SINGLE BOWL UNDERMOUNT SINK, OVERFLOW DRAIN, NO FAUCET HOLES, COLOR-BLACK PROVIDE (ADA) KOHLER ARTIFACTS K-99259, PULL-DOWN KITCHEN SINK FAUCET WITH 3 FUNCTION SPRAYHEAD, 1.5 GPM, HIGH ARC 360 ROTATING SWING SPOUT, COLOR CHROME PROVIDE ASSE 1070 MIXING VALVE			
WC-1	(ADA) WATER CLOSET	-	3/4"	-	1/2"	4"	2"	AMERICAN STANDARD	2467.016	CADET PRESSURE-ASSISTED TOILET ADA, . ELONGATED, FLOOR MOUNT, TANK-TYPE, 1.6 GPF, VITREOUS CHINA, WHITE PROVIDE AMERICAN STANDARD 5503A SLOW-CLOSE SEAT, WHITE			
WCO-1	WALL CLEANOUT	-	-	-	-	2"	-	ZURN	Z1441	PROVIDE WALL CLEANOUT WITH SMOOTH STAINLESS STEEL ACCESS COVER			
WMB-1	WASHING MACHINE BOX	3/4"	3/4"	1/2"	1/2"	2"	1-1/2"	OATEY	38995	WASHING MACHINE OUTLET BOX WITH 1/4 TURN BRASS HAMMER BALL VALVES AND RUBBER TAILPIECE, WHITE			
YCO-1	YARD CLEANOUT	-	-	-	-	4"	-	ZURN	Z1400	DURA-COATED CAST IRON BODY WITH GAS AND WATERTIGHT ABS TAPERED THREAD PLUG AND ROUND CAST IRON TOP. REF. 9/P5.1			
YCO-2	YARD CLEANOUT	-	-	-	-	2"	-	ZURN	Z1400	DURA-COATED CAST IRON BODY WITH GAS AND WATERTIGHT ABS TAPERED THREAD PLUG AND ROUND CAST IRON TOP. REF. 8/P5.1			



Cherokee Nation Businesses
**CNFO Owasso Campus
Improvements Phase II**
16990 East 116th Street North Owasso, Oklahoma 74055

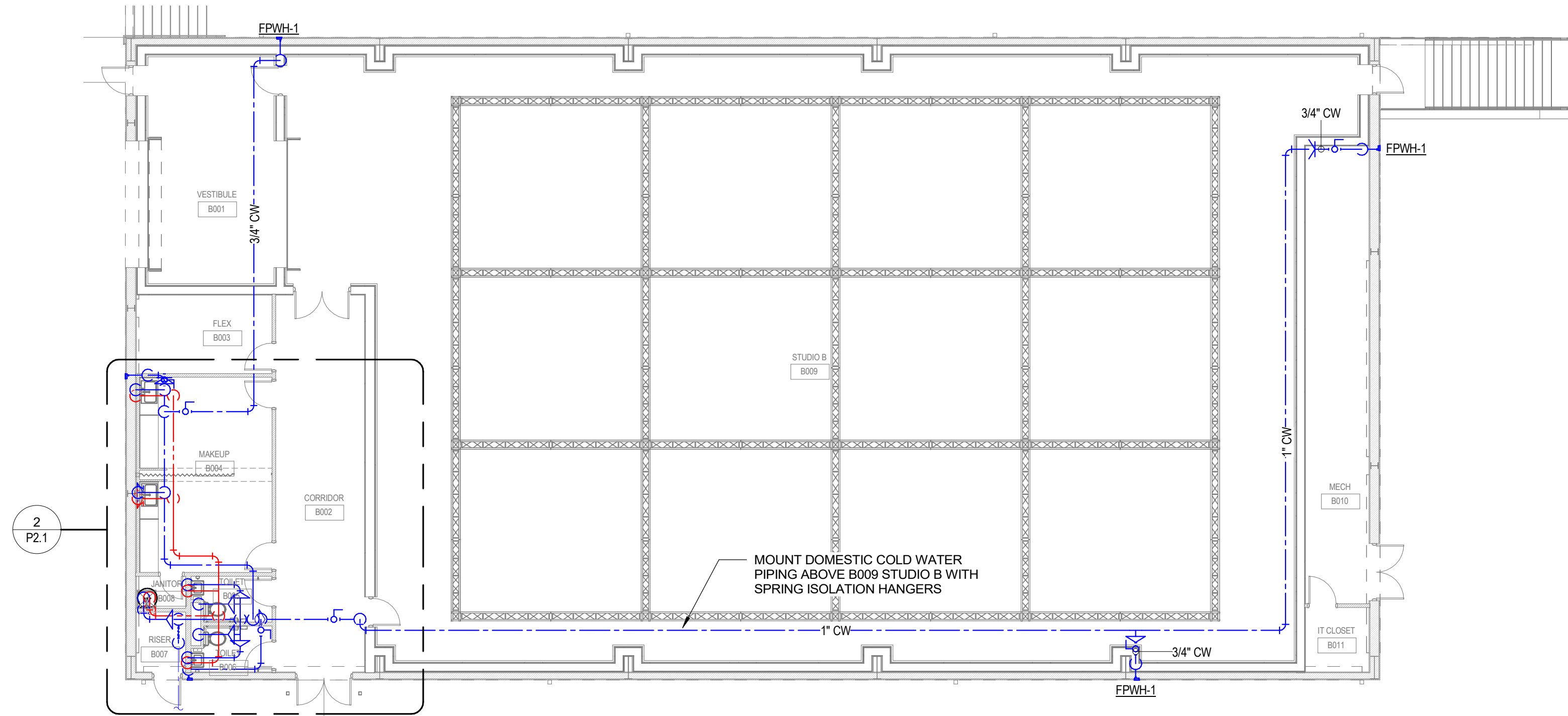
JOB NUMBER
1096.01

REVISIONS

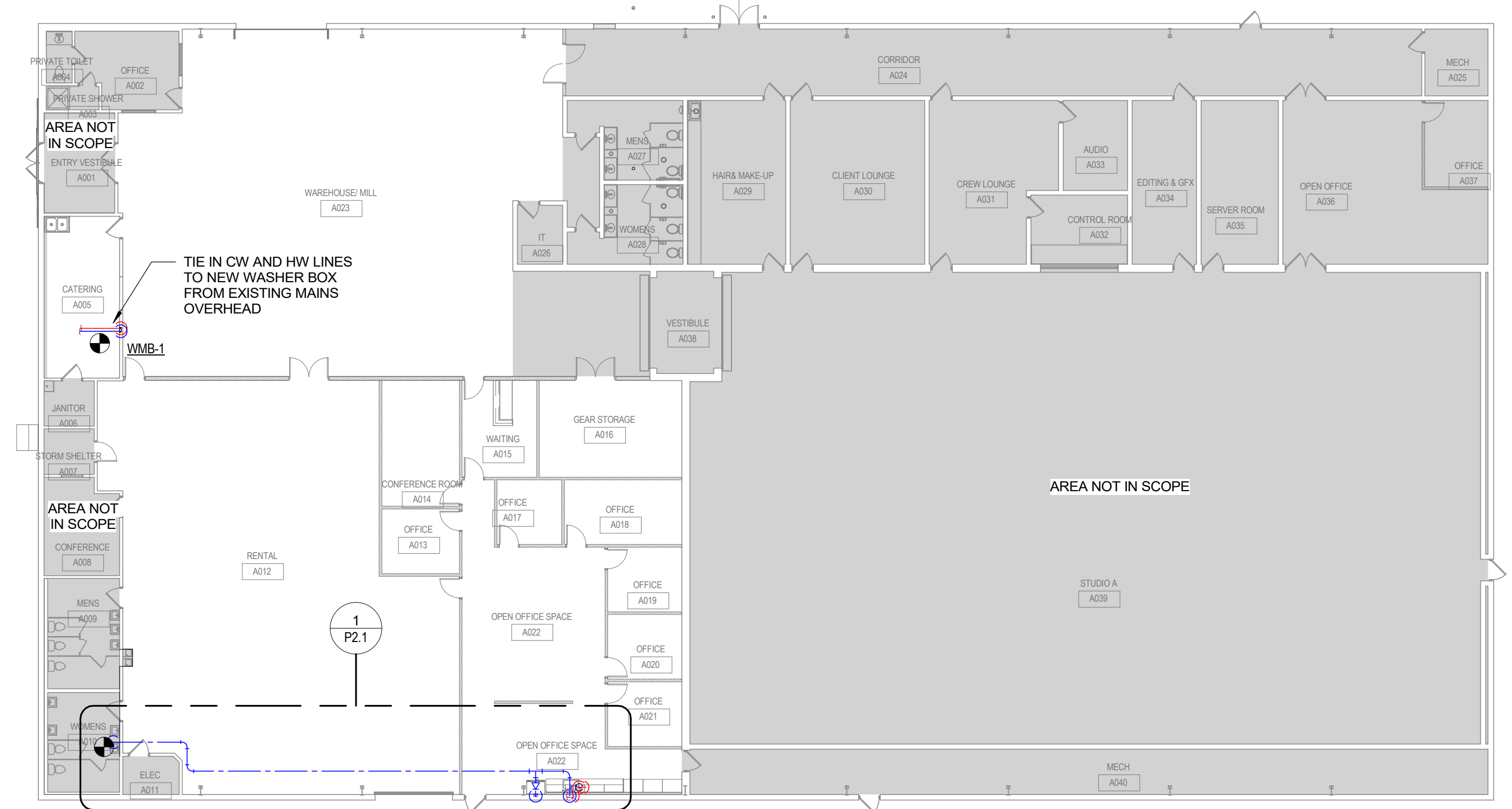
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DATE
2.13.23

SHEET
Plumbing Schedules & Details



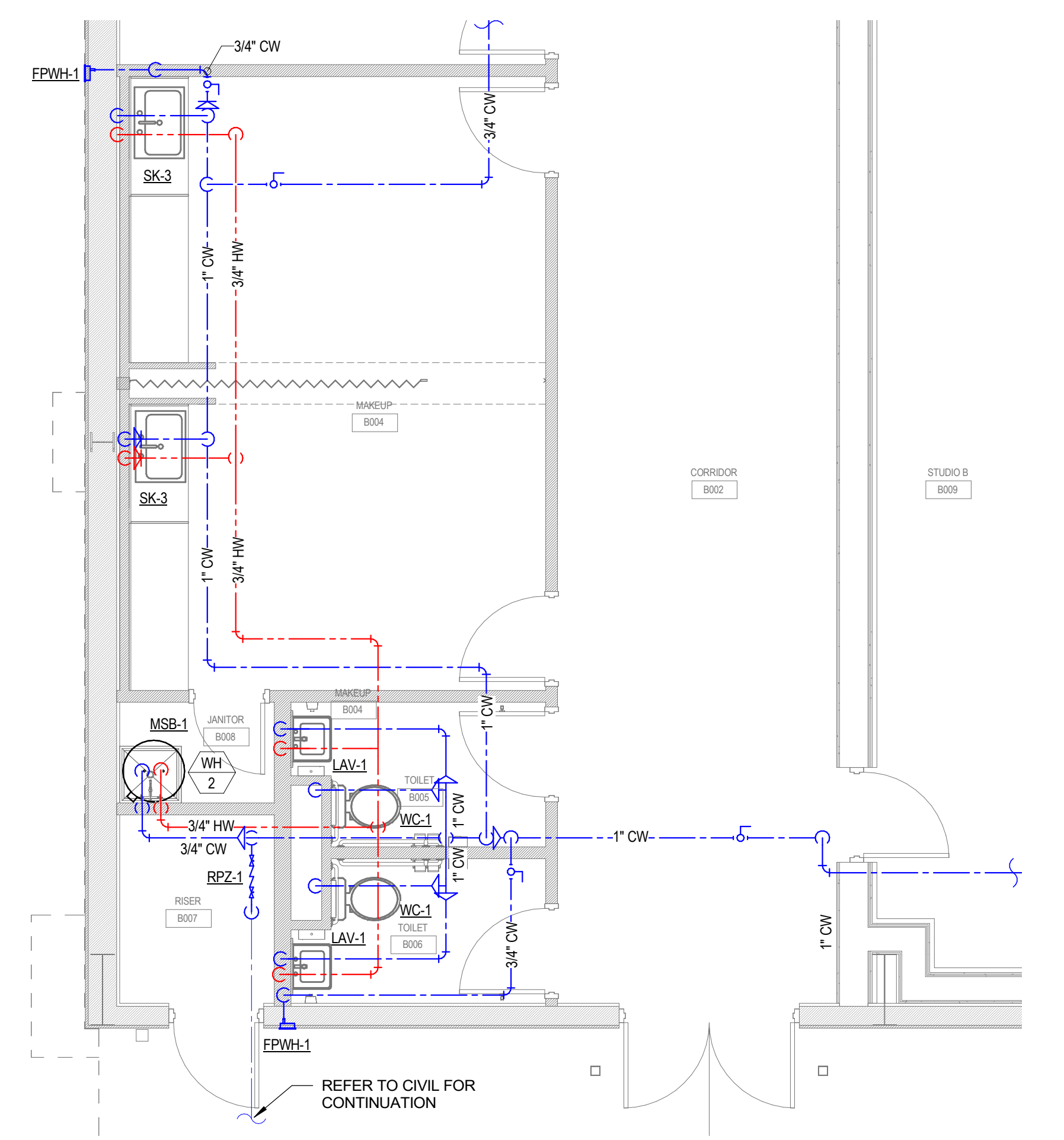
STUDIO B - OVERALL DOMESTIC WATER PLUMBING PLAN
4 3/32" = 1'-0" NORTH



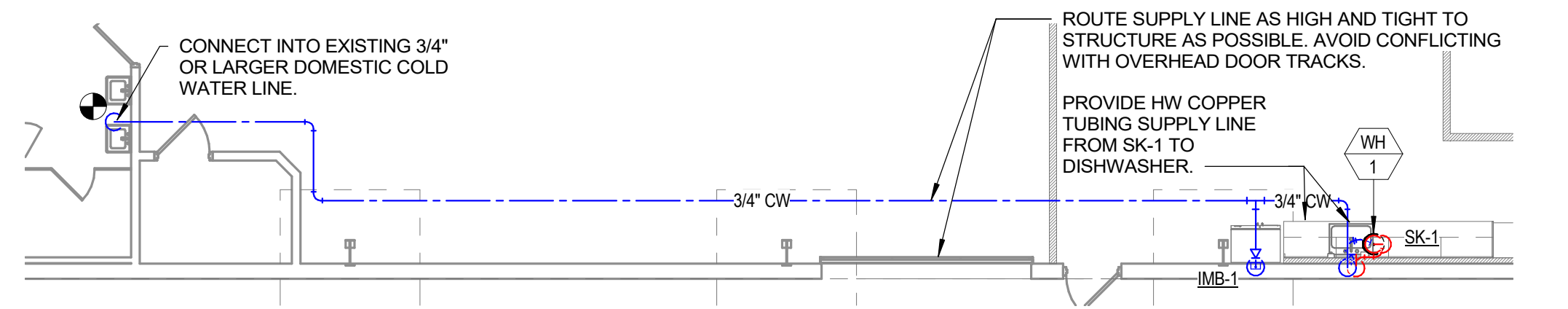
STUDIO A - OVERALL DOMESTIC WATER PLUMBING PLAN
3 1/16" = 1'-0" NORTH

PIPING LINE TYPE LEGEND

DOMESTIC COLD WATER	CW	
DOMESTIC HOT WATER	HW	

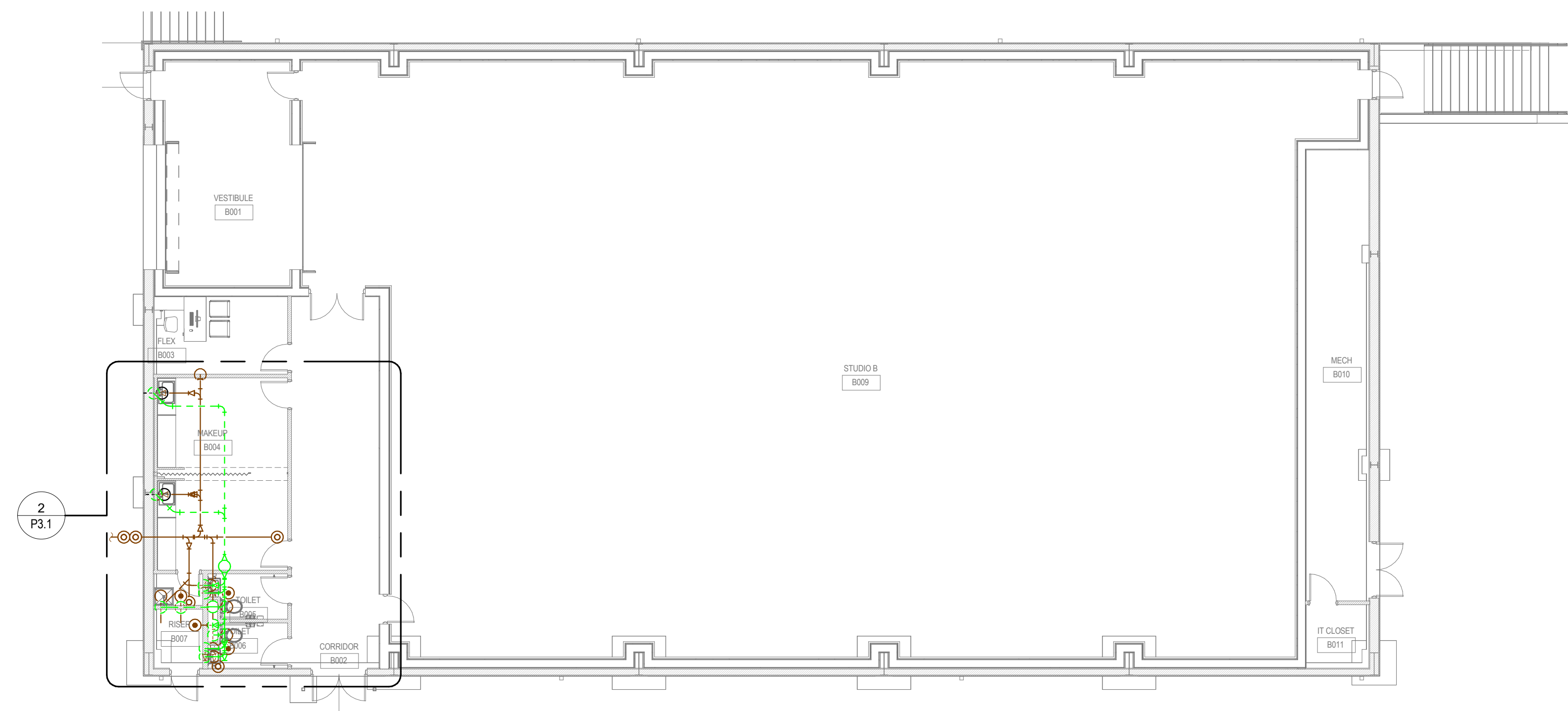


STUDIO B - ENLARGED DOMESTIC WATER PLUMBING PLAN
2 1/4" = 1'-0" NORTH

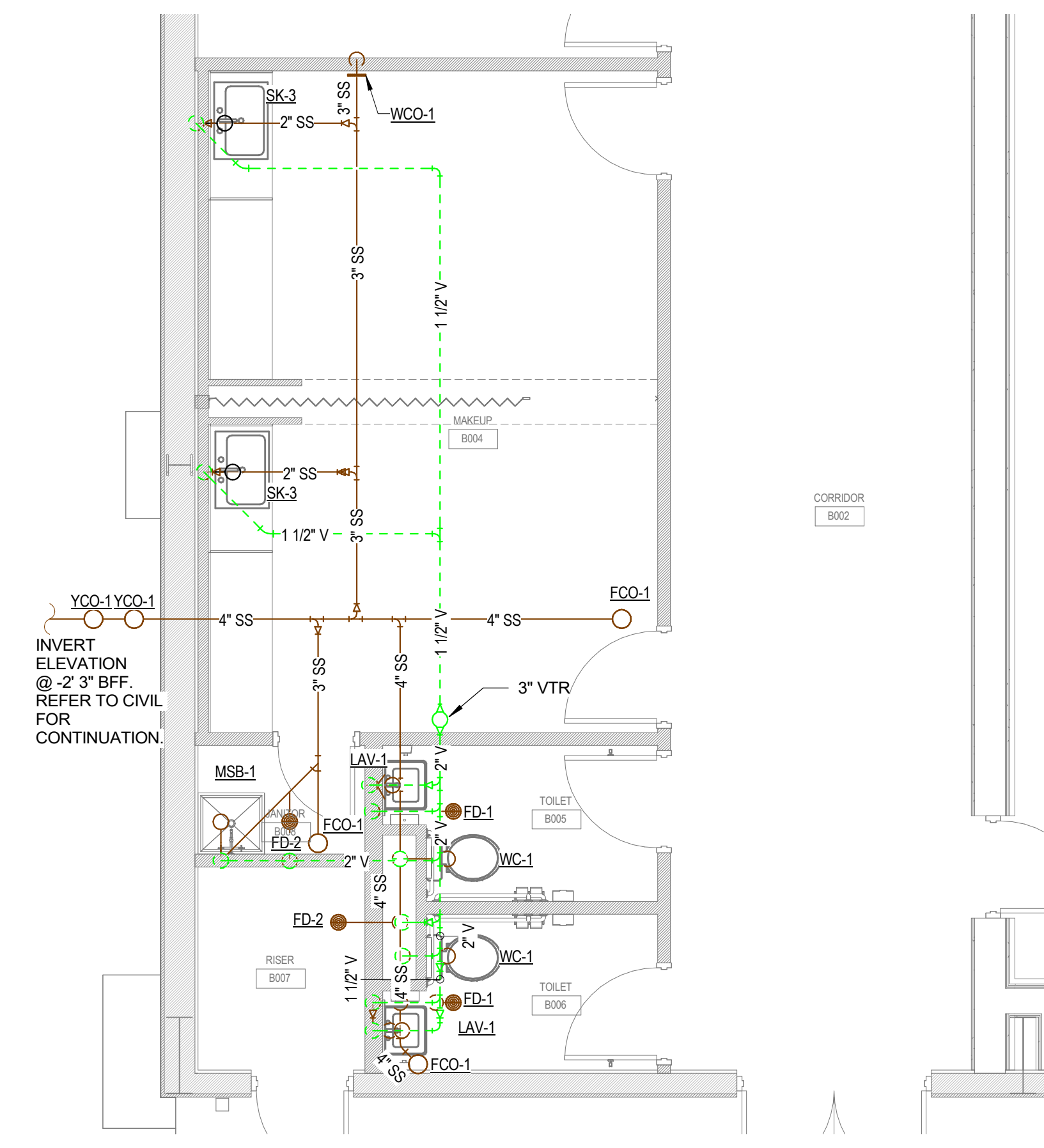


STUDIO A - ENLARGED DOMESTIC WATER PLUMBING PLAN
1 1/8" = 1'-0" NORTH

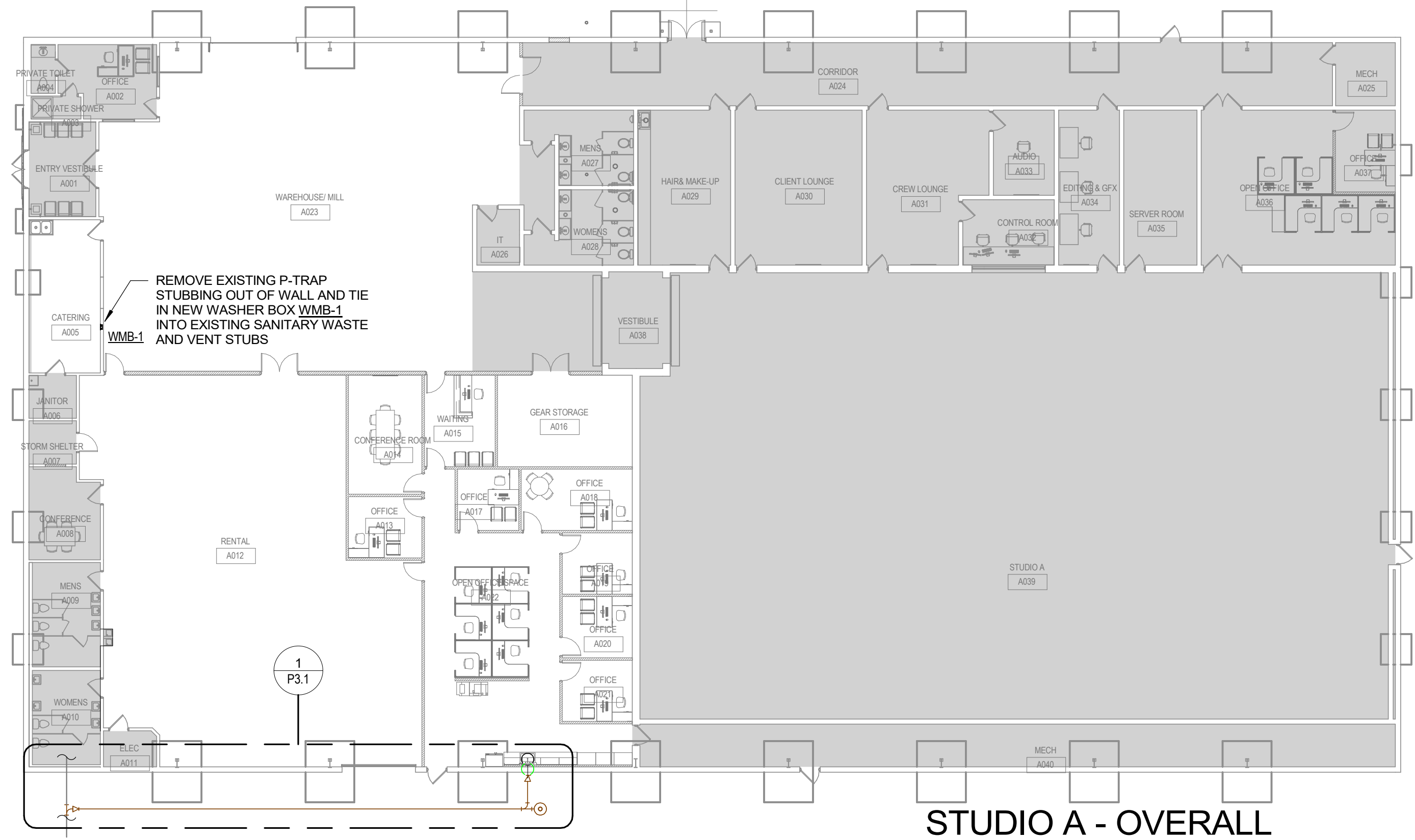
PIPING LINE TYPE LEGEND		
SANITARY SEWER	SS	
VENT	V	



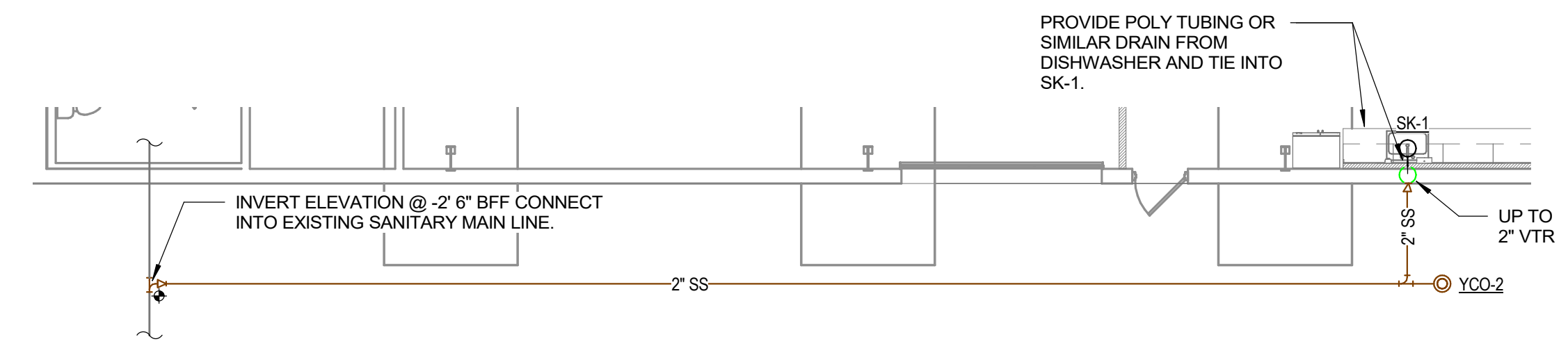
**STUDIO B - OVERALL
SANITARY PLUMBING
4 PLAN**
3/32" = 1'-0"
0 5'-4" 10'-8" 21'-4"
NORTH



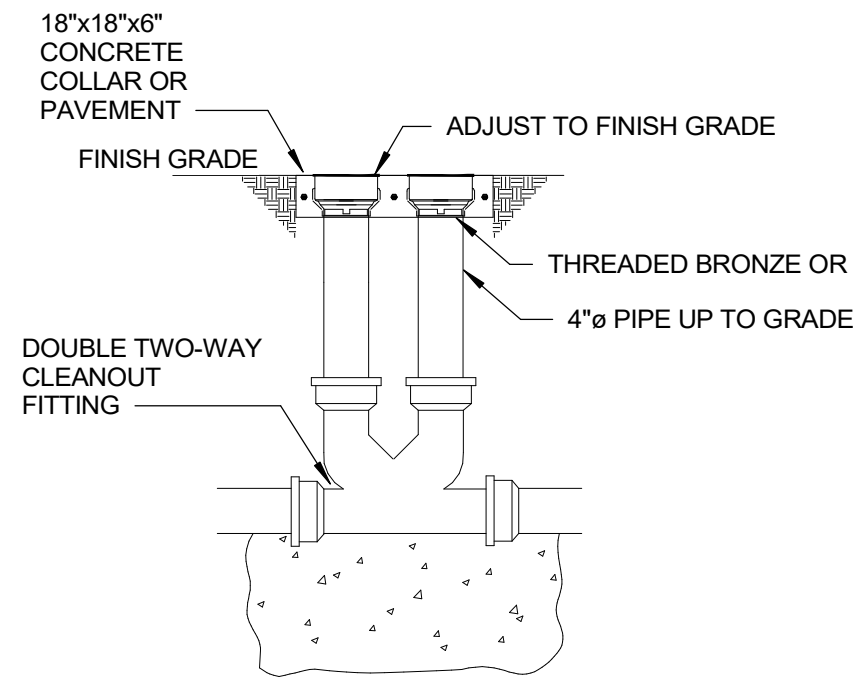
**STUDIO B - ENLARGED
DWV PLUMBING PLAN**
2 1/4" = 1'-0"
0 2' 4' 8'
NORTH



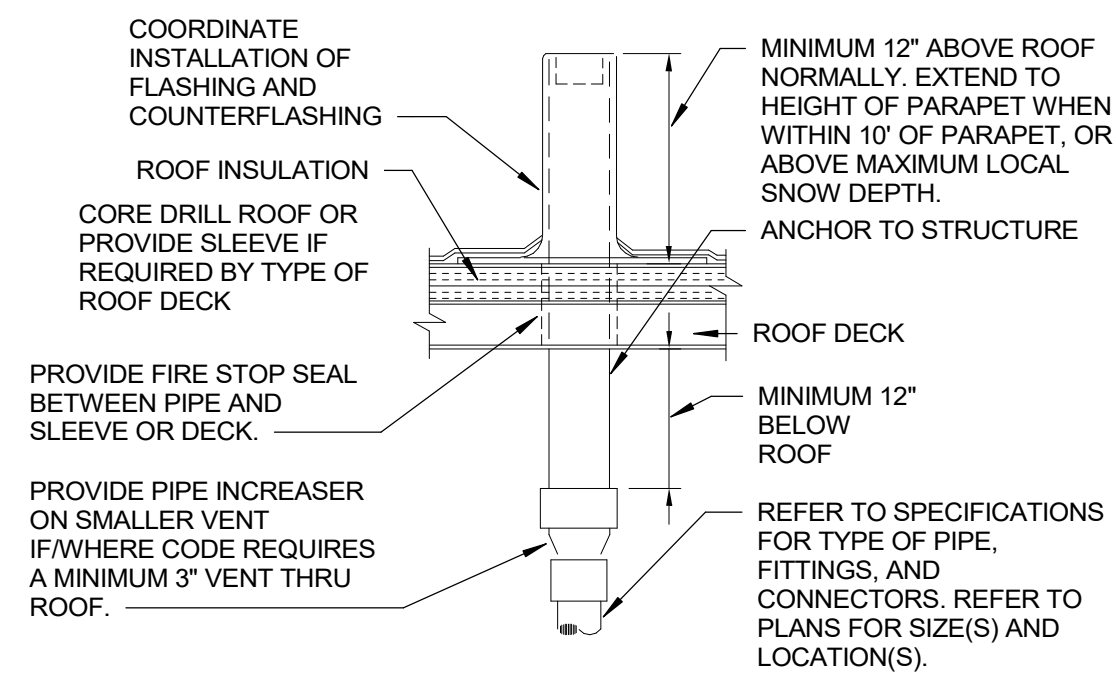
**STUDIO A - OVERALL
SANITARY PLUMBING
3 PLAN**
1/16" = 1'-0"
0 8' 16' 32'
NORTH



**STUDIO A - ENLARGED
DWV PLUMBING PLAN**
1 1/8" = 1'-0"
0 4' 8' 16'
NORTH

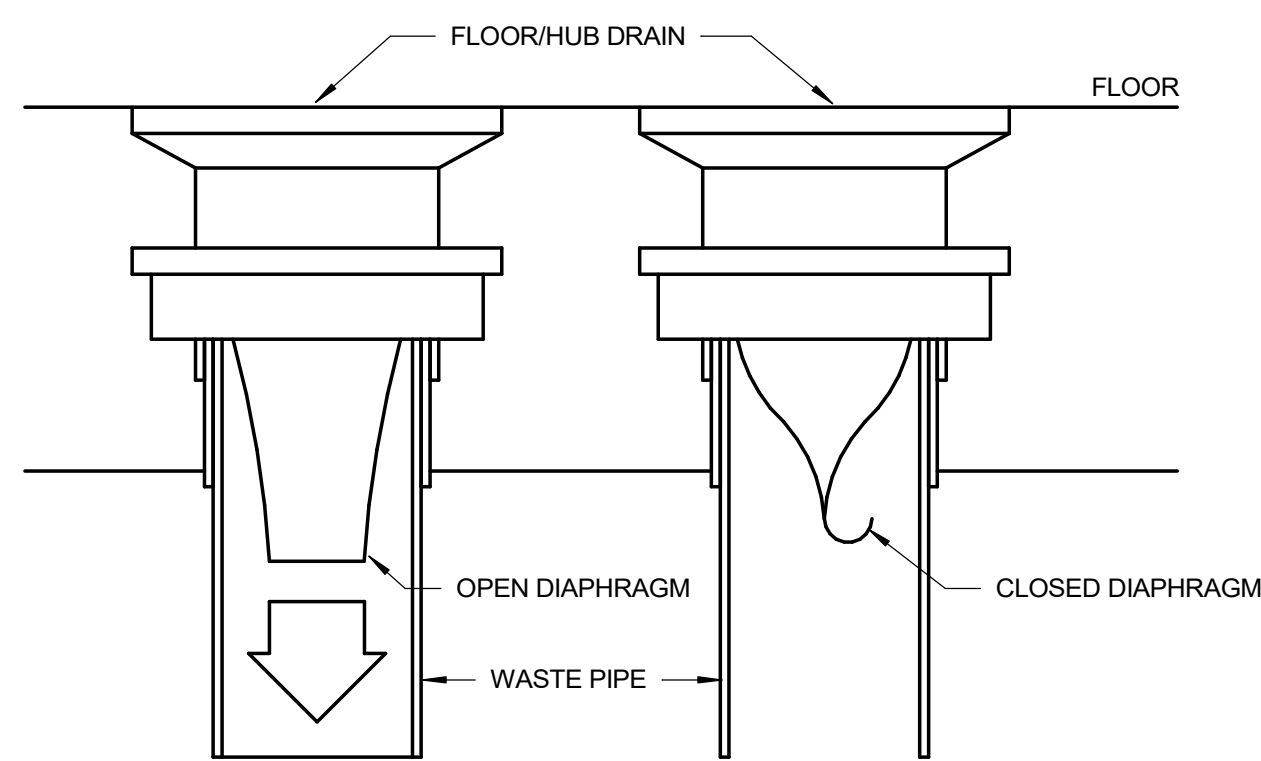


9 EXTERIOR TWO-WAY CLEANOUT
NTS



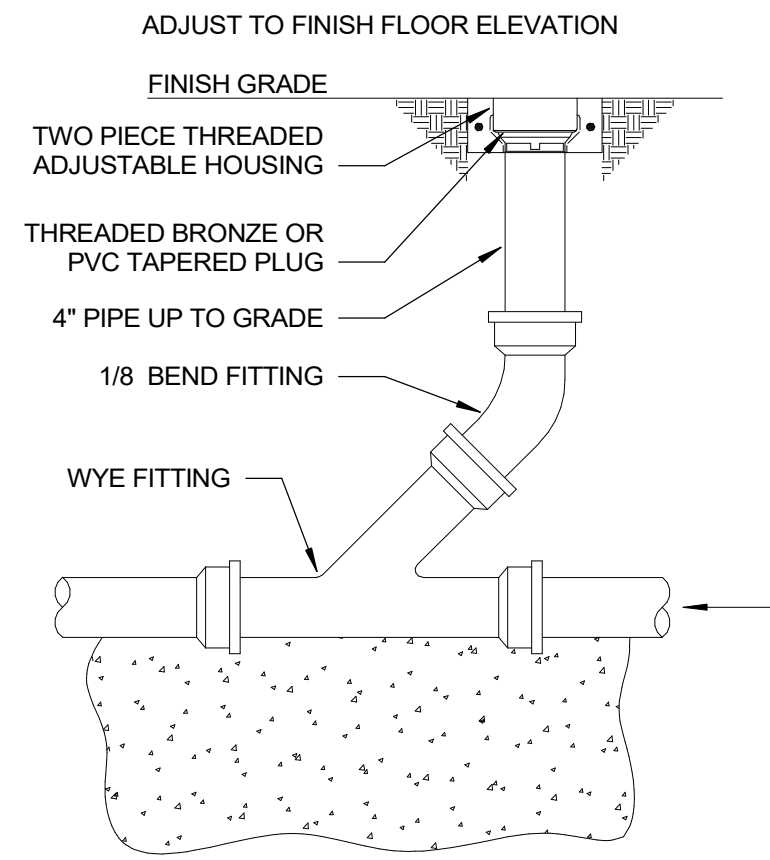
LOCATE VTR MINIMUM THREE FEET FROM PROPERTY LINE, TEN FEET HORIZONTAL OR THREE FEET VERTICAL ABOVE ANY BUILDING OPENING OR FRESH AIR INTAKE, TWENTY FIVE FEET FROM ANY OPENING OR FRESH AIR INTAKE IN MEDICAL FACILITIES AND ONE FOOT FROM ANY VERTICAL SURFACE. REFER TO LOCAL CODES FOR OTHER VENT TERMINATION REQUIREMENTS. LOCATE VTR MINIMUM 18" FROM ADJACENT WALL, PARAPET, EXPANSION JOINT, ROOF DRAIN, EQUIPMENT CURB, OR OTHER ROOF FEATURE. OFFSET IN CEILING SPACE WHERE REQUIRED TO MEET THESE CONDITIONS. INSULATE LAST SIX FEET OF VENT PIPE INSIDE BUILDING PER SPECIFICATIONS.

6 VENT THRU ROOF ("VTR")
NTS

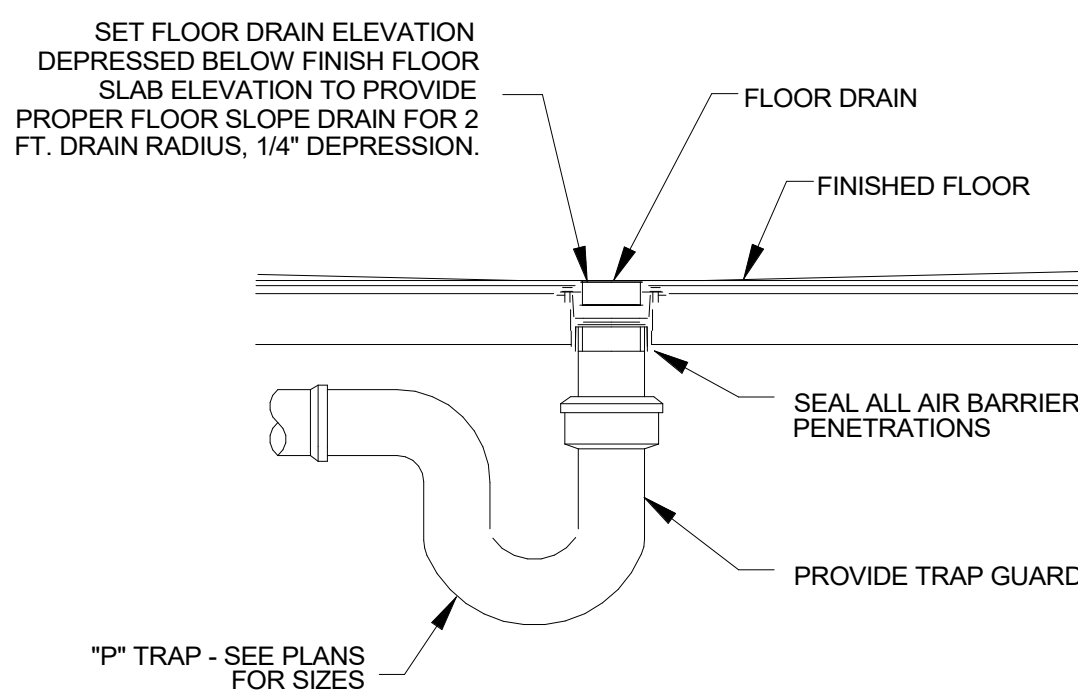


- NOTES:
- TRAP GUARD DIAPHRAGM AS MANUFACTURED BY PROSET SYSTEMS, INC. SURESEAL OR APPROVED EQUAL. SEE SPECIFICATIONS
 - WHERE ALLOWED BY LOCAL CODE, TRAP GUARD MAY BE USED IN LIEU OF TRAP PRIMER

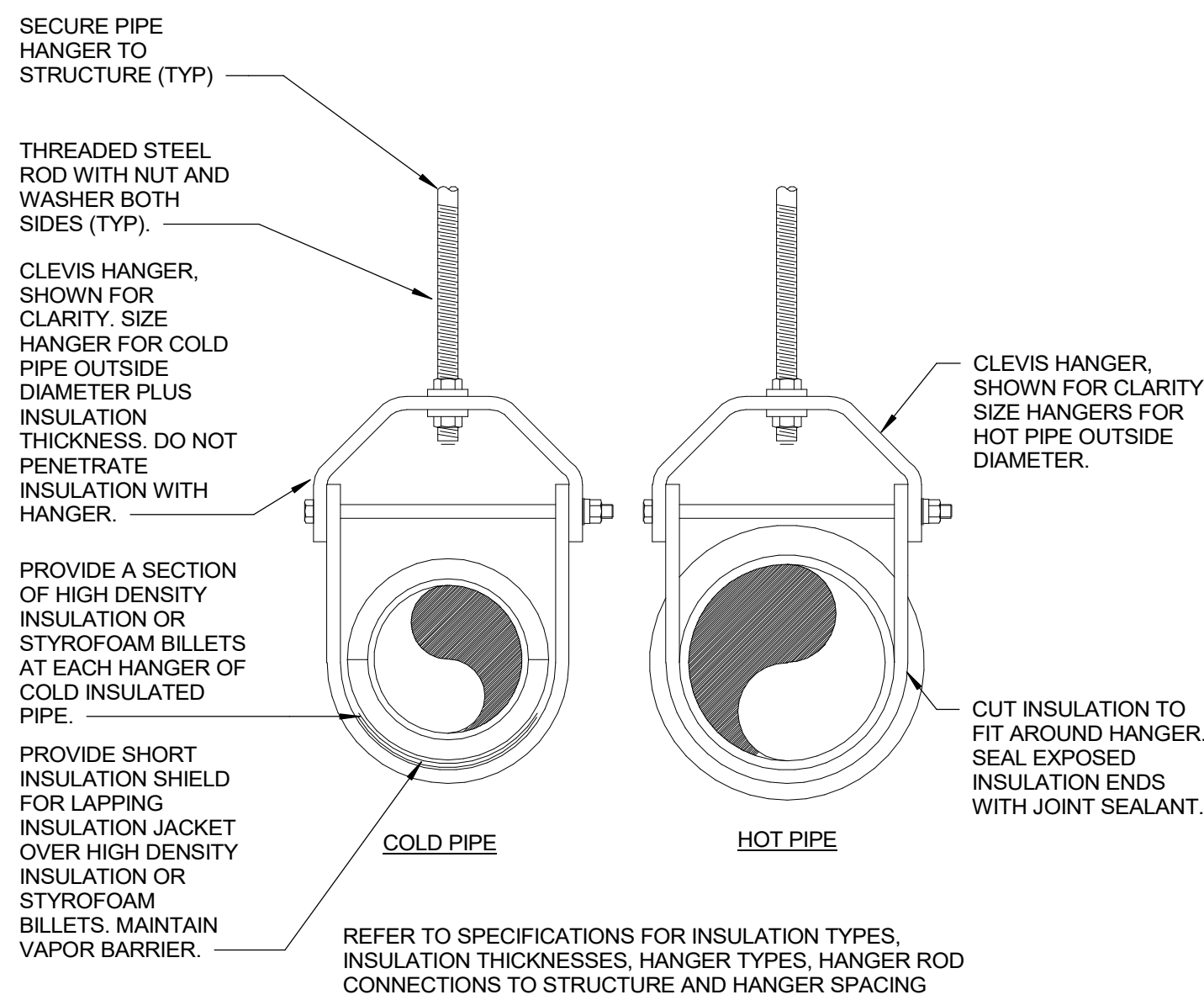
3 TRAP GUARD DETAIL
NTS



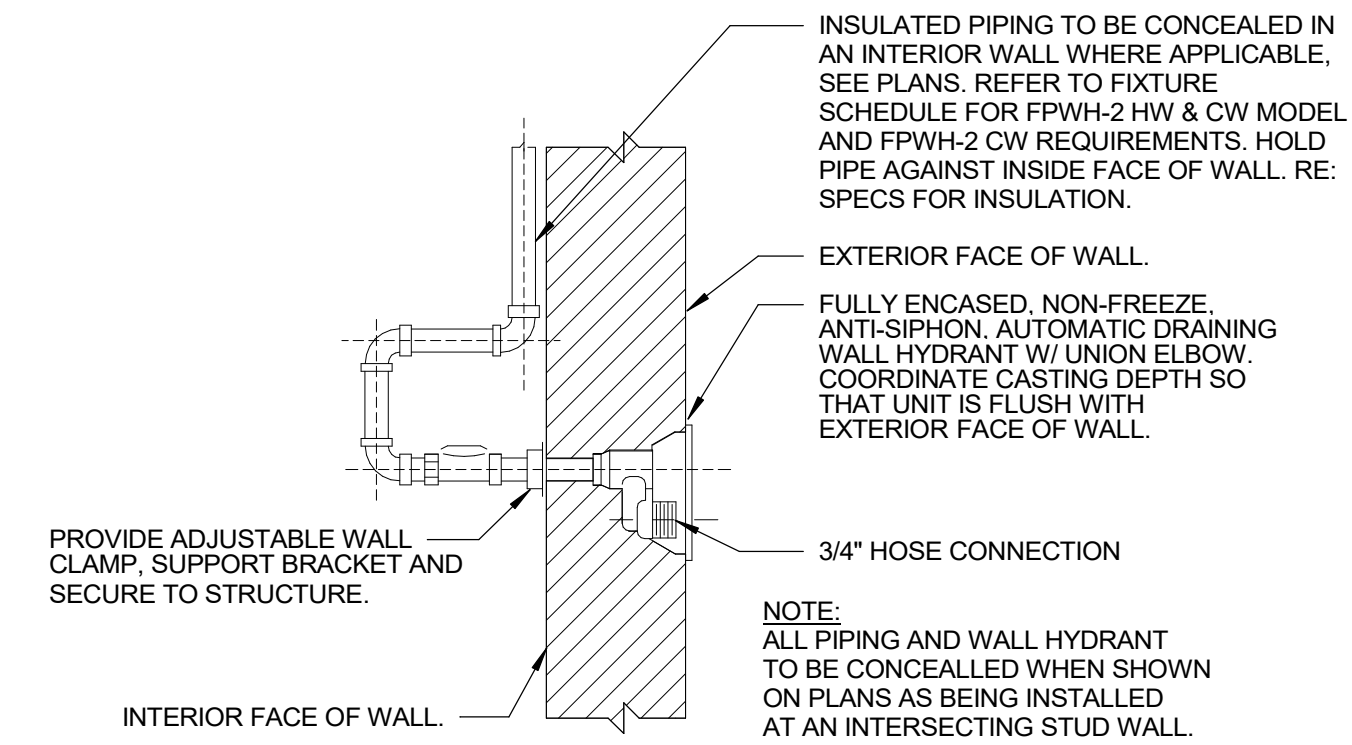
8 1-WAY GRADE CLEANOUT
NTS



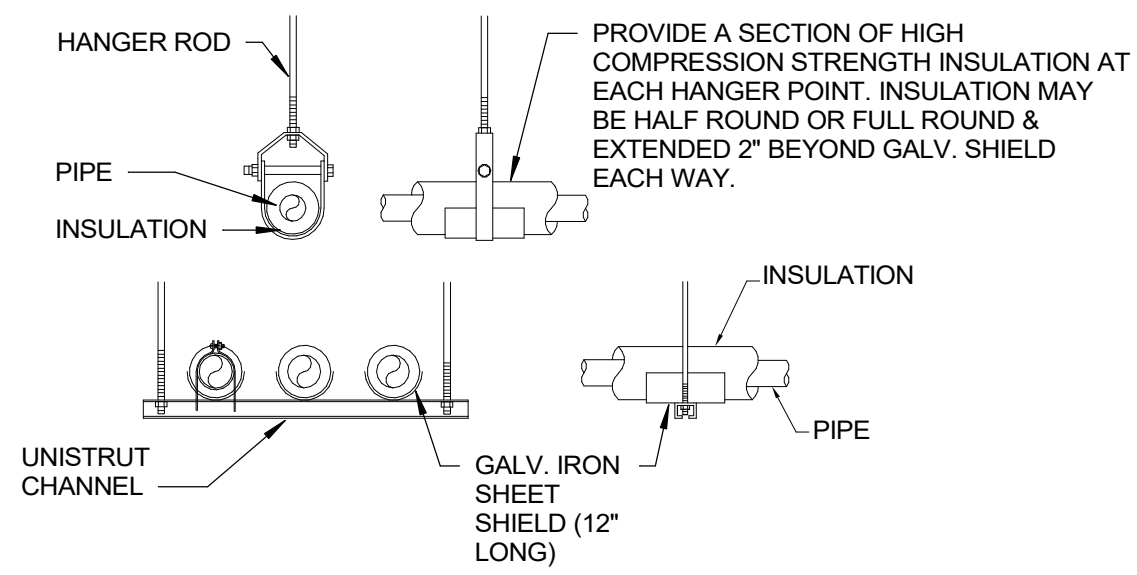
5 FLOOR DRAIN DETAIL
NTS



2 INSULATED PIPE HANGER DETAIL
NTS

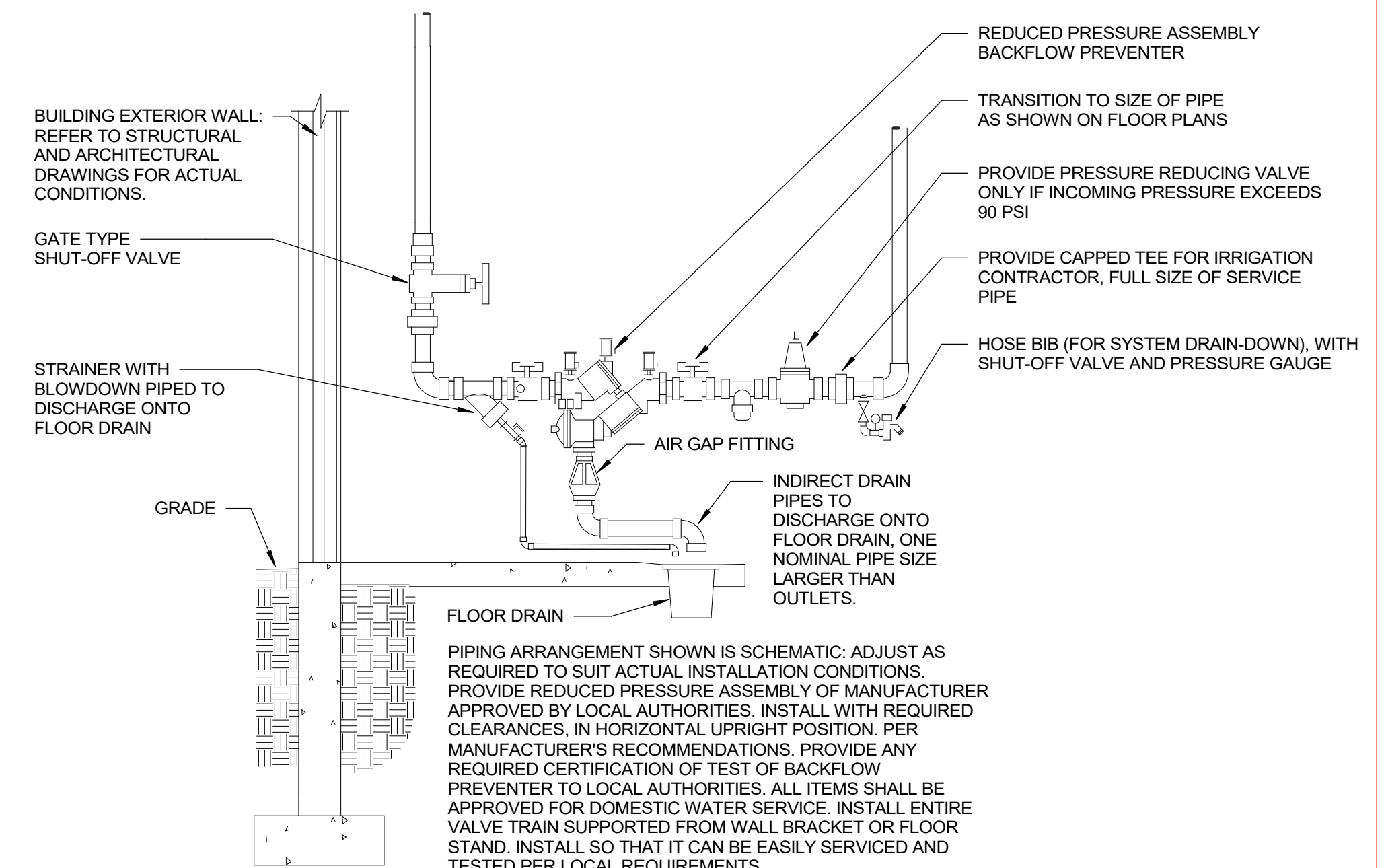


7 FREEZE PROOF WALL HYDRANT
NTS



- NOTES:
- ATTACH SUPPORTS FOR ALL PIPING SUSPENDED FROM THE STEEL STRUCTURE TO THE TOP CORN OF JOIST OR BEAMS.
 - PROVIDE COPPER OR PLASTIC COATED HANGERS FOR NON-INSULATED COPPER PIPE.

4 PIPE INSULATION DETAIL
NTS

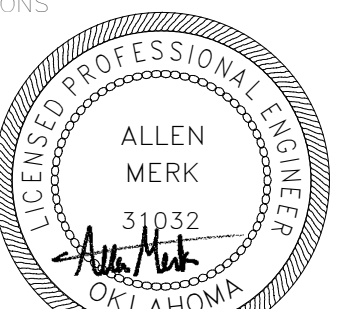


PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST AS REQUIRED TO SUIT ACTUAL INSTALLATION CONDITIONS. PROVIDE REDUCED PRESSURE ASSEMBLY OF MANUFACTURER APPROVED BY LOCAL AUTHORITIES. INSTALL WITH REQUIRED CLEARANCES. IN HORIZONTAL UPRIGHT POSITION. PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ANY REQUIRED CERTIFICATION OF TEST OF BACKFLOW PREVENTER TO LOCAL AUTHORITIES. ALL ITEMS SHALL BE APPROVED FOR DOMESTIC WATER SERVICE. INSTALL ENTIRE VALVE TRAIN SUPPORTED FROM WALL BRACKET OR FLOOR STAND. INSTALL SO THAT IT CAN BE EASILY SERVICED AND TESTED PER LOCAL REQUIREMENTS.

1 DOMESTIC WATER ENTRY
NTS

JOB NUMBER
1096.01

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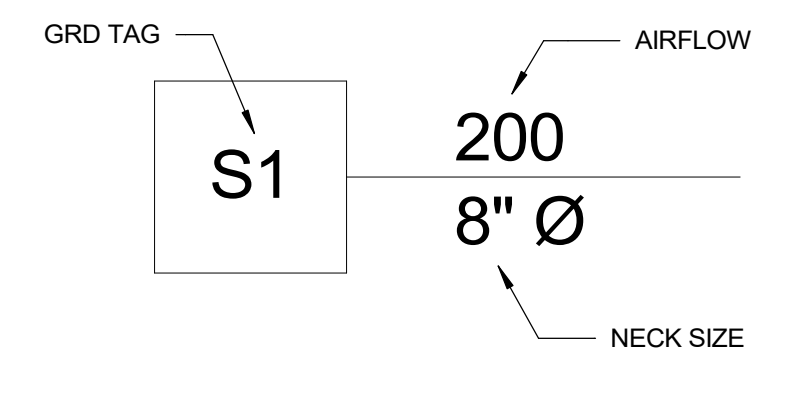


DATE
02.13.23 2/13/2023
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Plumbing Details

GENERAL MECHANICAL NOTES

- PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS INDICATED ON THE DRAWINGS AND AS REQUIRED BY CODE.
- DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY.
- INSTALL ALL MECHANICAL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS, AND APPLICABLE CODES AND REGULATIONS.
- COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL WORK, ETC., SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS.
- TESTING, ADJUSTING, AND BALANCING AGENCY SHALL BE A MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB). TESTING, ADJUSTING AND BALANCING SHALL BE PERFORMED IN ACCORDANCE WITH AABC STANDARDS.
- CONTRACTOR TO COMPLY WITH ALL LOCAL CODES AND REQUIREMENTS.
- ALL OUTSIDE AIR INTAKES TO BE A MINIMUM OF 10' FROM ANY MECHANICAL EXHAUST, OR PLUMBING VENTS.
- DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH MOST RECENT SMACNA STANDARDS.
- SUPPORTS FOR MECHANICAL SYSTEM PIPING MUST MEET THE HORIZONTAL AND VERTICAL SPACING PROVISIONS IN RESPECTIVE MECHANICAL CODE.
- EACH DUCT BRANCH TAKE-OFF SHALL HAVE A MANUAL VOLUME DAMPER.
- COORDINATE DIFFUSER, REGISTER, AND GRILLE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS, LIGHTING, AND OTHER CEILING ITEMS AND MAKE MINOR DUCT MODIFICATIONS TO SUIT.
- REFER TO SPECIFICATIONS AND PROJECT MANUAL FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- THESE DRAWINGS REFLECT A SYSTEM DESIGNED AROUND SPECIFIED REFERENCE PRODUCTS, THE SELECTION OF WHICH HAS INFLUENCED THE DESIGNS OF OTHER TRADES. IF SUBSTITUTE MANUFACTURERS, SIZES, OR MODEL NUMBERS ARE BID OR SUBMITTED, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL DIFFERENCES PRIOR TO BID. ALL COSTS OF ALL TRADES ASSOCIATION WITH THE SUBSTITUTIONS SHALL BE INCLUDED IN THE BID.
- COORDINATION OF ALL MODIFICATIONS TO EACH DISCIPLINE WHICH RESULT FROM SUBSTITUTION OF EQUIPMENT OR MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SUBSTITUTIONS WHICH ARE INSTALLED AND SUBSEQUENTLY ARE PROVEN UNSATISFACTORY BY OWNER AND/OR ENGINEER WITHIN THE WARRANTY PERIOD, SHALL BE REMOVED COMPLETELY BY THE CONTRACTOR AND REPLACED WITH THE ORIGINAL DESIGN OR CORRECTED AS DIRECTED BY THE ENGINEER WITHOUT ADDITIONAL COST TO OWNER.
- CONTRACTOR SHALL PROVIDE AND INSTALL ALL AIR DEVICES WITH MOUNTING SYSTEM DESIGNED FOR MOUNTING SURFACE TYPE.
- COORDINATE FINAL PLACEMENT OF ALL THERMOSTATS WITH WALL-MOUNTED DEVICES AND OWNER'S REPRESENTATIVE. MOUNT PER ADA REQUIREMENTS. ANY THERMOSTAT THAT IS REQUIRED TO BE MOUNTED ON AN EXTERIOR WALL SHALL BE MOUNTED ON AN INSULATED PAD.

GRD CALLOUT LEGEND



PROJECT SCOPE NOTES

THE SCOPE OF THIS PROJECT IS TO MODIFY EXISTING MECHANICAL SYSTEMS AND ADD NEW MECHANICAL SYSTEMS TO RENOVATE AN EXISTING BUILDING AND CONSTRUCT A NEW BUILDING AT CHEROKEE NATION FILM STUDIO IN OWASSO, OK.

- REMOVE AND RETAIN SUPPLY AND RETURN DIFFUSERS FROM FURNACE F-2 AND REINSTALL IN OFFICE A1037.
- REMOVE SUPPLY AND RETURN GRILLES FROM FURNACE F-1&2 IN CORRIDOR A024 AND PROVIDE NEW DUCT BRANCHES AND DIFFUSERS IN CEILING.
- REMOVE RTU-3&4 AND PROVIDE NEW RTU-3,4,6 WITH DISTRIBUTION DUCTWORK TO ACCOMMODATE NEW LAYOUT.
- INSTALL NEW MINI-SPLIT IN OPEN OFFICE A036.
- INSTALL NEW FURNACE AND PACKAGED UNITS WITH ASSOCIATED DUCTWORK TO SERVE NEW STUDIO B.
- INSTALL NEW TOILET EXHAUST FANS IN STUDIO B AND THE NORTHWEST RESTROOMS IN STUDIO A.

MECHANICAL PIPING MATERIAL SCHEDULE

SYSTEM TAG	DESCRIPTION	PIPE SIZES	MATERIAL	FITTINGS	INSULATION	REMARKS
CD	CONDENSATE DRAIN - INDOOR	ALL	TYPE "M" COPPER	SOLDER/MECHANICAL PRESS	1/2" ARMAFLEX	
	CONDENSATE DRAIN - OUTDOOR	ALL	SCH. 40 PVC	SOLVENT	NONE	
RL	REFRIGERANT LIQUID	ALL	TYPE "L" COPPER ACR	BRAZED	NONE	
		ALL	TYPE "L" COPPER ACR	BRAZED	3/4" ARMAFLEX	
RS	REFRIGERANT SUCTION	ALL	TYPE "L" COPPER ACR	BRAZED	3/4" ARMAFLEX	
NG	NATURAL GAS	2" & SMALLER	SCH. 40 BLACK STEEL	THREADED	NONE	1
		2-1/2" & LARGER	SCH. 40 BLACK STEEL	WELDED	NONE	

REMARKS:

- ALL EXTERIOR GAS PIPING AND EXPOSED INTERIOR GAS PIPING TO BE PAINTED YELLOW

NOTES:

- ALL PIPING REQUIRING INSULATION THAT IS EXPOSED TO VIEW SHALL HAVE PVC JACKETING. COORDINATE JACKET COLOR WITH ARCHITECT.
- PROVIDE PIPE LABELS AND FLOW ARROWS FOR ALL MECHANICAL PIPING. SUBMIT PIPE TAG PRODUCT DATA DURING SUBMITTAL PROCESS.

MECHANICAL ABBREVIATIONS:

AAV	AUTOMATIC AIR VENT (VALVE)	ID	INSIDE DIAMETER
AC	AIR CONDITIONING UNIT OR AIR COMPRESSOR	IN OR "	INCH
ACH	AIR CHANGES PER HOUR	IN W.C.	INCHES WATER COLUMN
AFF	ABOVE FINISHED FLOOR	IN W.G.	INCHES WATER GAUGE
AHU	AIR HANDLING UNIT	INSUL.	INSULATION
APD	AIR PRESSURE DROP	KW	KILOWATT
APPROX	APPROXIMATE	LAT	LEAVING AIR TEMPERATURE
ARCH	ARCHITECT/ARCHITECTURAL	LBS	POUNDS
AVG	AVERAGE	LDB	LEAVING DRY BULB TEMPERATURE
BAS	BUILDING AUTOMATION SYSTEM	LL	LEAVING
BDD	BACK DRAFT DAMPER	LVG	LEAVING WET BULB TEMPERATURE
BF	BOILER FEED	LWB	LEAVING WATER TEMPERATURE
BHP	BRAKE HORSEPOWER	LWT	LEAVING WATER TEMPERATURE
BOD	BOTTOM OF DUCT	MAINT	MAINTENANCE
BOP	BOTTOM OF PIPE	MAX	MAXIMUM
BTU/H	BRITISH THERMAL UNIT PER HOUR	MBH	THOUSAND BTU PER HOUR
CA	COMPRESSED AIR	MCA	MINIMUM CIRCUIT AMPACITY
CAV	CONSTANT AIR VOLUME TERMINAL UNIT	MD	MOTORIZED DAMPER
CBA	COMBUSTION AIR	MECH	MECHANICAL
CC	COOLING COIL	MIN	MINIMUM OR MINUTE(S)
CCW	COUNTER CLOCKWISE	MISC	MISCELLANEOUS
CD	CONDENSATE DRAIN	MOCP	MAXIMUM OVERCURRENT PROTECTION
CFH	CUBIC FEET PER HOUR	NC	NORMALLY CLOSED OR NOISE CRITERIA
CFM	CUBIC FEET PER MINUTE	NIC	NOT IN CONTRACT
CH	CAST IRON	NK	NECK
CI	CAST IRON	NO	NORMALLY OPEN
CL	CENTER LINE	NO. OR #	NUMBER
CONT	CONTINUOUS, CONTINUATION	NR	NOT REQUIRED
CR	CONDENSATE RETURN	NTS	NOT TO SCALE
CT	COOLING TOWER	OA	OUTSIDE AIR
CJ	CONDENSING/ER UNIT	OD	OPPOSED BLADE DAMPER
CU FT	CUBIC FEET	OD	OUTSIDE DIAMETER
CUH	CABINET UNIT HEATER	P	PUMP
CW	CLOCKWISE	PA	PASCAL
DB	DRY BULB TEMPERATURE	PC	PLUMBING CONTRACTOR
DDC	DIRECT DIGITAL CONTROL	PD	PRESSURE DROP
DEG.F	DEGREE FARENHEIT	PH	PHASE
DH	DUCT HEATER	PLBG	PLUMBING
DIA	DIAMETER	PRESS	PRESSURE
DIM	DIMENSION	PRV	PRESSURE REDUCING VALVE
DN	DOWN	R	RETURN
DP	DIFFERENTIAL PRESSURE	RA	RETURN AIR
DWG	DRAWING	RC	REHEAT COIL
DX	DIRECT EXPANSION	REQD	REQUIRED
(E)	EXISTING	RF	RETURN FAN
EA	EACH OR EXHAUST AIR	RH	RELATIVE HUMIDITY
EAT	ENTERING AIR TEMPERATURE	RM	ROOM
EBB	ELECTRIC BASEBOARD HEATER	RPM	REVOLUTIONS PER MINUTE
EC	ELECTRICAL CONTRACTOR	S	SUPPLY
EDB	ENTERING DRY BULB TEMPERATURE	SA	SUPPLY AIR OR SOUND ATTENUATOR
EER	ENERGY EFFICIENCY RATIO	SD	SMOKE DAMPER OR SMOKE DETECTOR
EFF	EXHAUST FAN	SF	SUPPLY FAN
ELEV	ELEVATION	SP	STATIC PRESSURE
ELEC	ELECTRIC/ELECTRICAL	SPECS	SPECIFICATIONS
ENT	ENTERING	SQ	SQUARE
EQUIP	EQUIPMENT	SQFT	SQUARE FEET
ESP	EXTERNAL STATIC PRESSURE	SS	STAINLESS STEEL
ET	EXPANSION TANK	STD	STANDARD
EUH	ELECTRIC UNIT HEATER	STM	STEAM
EWB	ENTERING WET BULB TEMPERATURE	STRUC	STRUCTURE/STRUCTURAL
EWT	ENTERING WATER TEMPERATURE	T	THERMOSTAT
EXIST	EXISTING	TEF	TOILET EXHAUST FAN
F&T	FLOAT & THERMOSTATIC STEAM TRAP	TEMP	TEMPERATURE
FC	FAN COIL	TSP	TOTAL STATIC PRESSURE
FD	FIRE DAMPER	TYP	TYPICAL
FLA	FULL LOAD AMPERES	UC	UNDER-CUT (DOOR)
FLEX	FLEXIBLE	UGRD	UNDERGROUND
FP	FIRE PROTECTION	UH	UNIT HEATER (HYDRONIC OR STEAM)
FPM	FAN POWERED TERMINAL UNIT	V	VOLT
FPS	FEET PER MINUTE	VAV	VARIABLE AIR VOLUME
FPS	FEET PER SECOND	VD	VOLUME DAMPER
FRP	FIBERGLASS REINFORCED PLASTIC	VEL	VELOCITY
FSD	FIRE/SMOKE DAMPER	VERT	VERTICAL
FT	FEET OR FLASH TANK	VFD	VARIABLE FREQUENCY DRIVE
FTR	FIN TUBE RADIATION (HOT WATER)	VSD	VARIABLE SPEED DRIVE
FV	FACE VELOCITY	VTR	VENT THROUGH ROOF
GAL	GALLON	W	WATT
GC	GENERAL CONTRACTOR	W/	WITH
GD	GRAVITY DAMPER	WB	WET BULB TEMPERATURE
GPH	GALLONS PER HOUR	WC	WATER COLUMN
GPM	GALLONS PER MINUTE	WMS	WIRE MESH SCREEN
H	HUMIDISTAT	WPD	WATER PRESSURE DROP
HC	HEATING COIL	WT	WEIGHT
HEPA	HIGH EFFICIENCY PARTICULATE AIR FILTER		
HP	HORSEPOWER OR HEAT PUMP		
HR	HYDRONIC RADIANT PANEL		
HRP	HEATING HUMIDIFIER		
HTG	HEATING		
HUM	HUMIDIFIER		
HVAC	HEATING, VENTILATION & AIR CONDITIONING		
HX	HEAT EXCHANGER		
HZ	HERTZ		

CONTROL NOTES

CONTROLS ARE DESIGN/BUILD WITH DESIGN OF THE CONTROL SYSTEM DELEGATED TO THE CONTRACTOR.

CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETELY FUNCTIONAL CONTROL SYSTEM THAT PERFORMS THE SERVICES BELOW. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL THE CONTROLS, ACTUATORS, DAMPERS, VALVES, AND ELECTRICAL POWER. CONTRACTOR TO PULL POWER REQUIRED FOR CONTROLS FROM SPARE BREAKERS.

RTUs:

- DURING OCCUPIED HOURS WHEN ECONOMICIZING IS NOT AVAILABLE, THE RTU SUPPLY FAN SHALL RUN CONSTANTLY. THE OUTSIDE AIR DAMPER SHALL BE AT THE MINIMUM OA POSITION TO DELIVER THE MINIMUM OA VOLUME SHOWN ON THE RTU SCHEDULE, AND STAGE HEATING/COOLING/REHEAT TO MAINTAIN SPACE TEMPERATURE OF 70°F (ADJ.) IN HEATING MODE AND 74°F (ADJ.) IN COOLING MODE.
- DURING OCCUPIED HOURS WHEN ECONOMICIZING IS AVAILABLE, THE RTU SUPPLY FAN SHALL RUN CONSTANTLY. THE OUTSIDE AIR DAMPER SHALL MODULATE TO MEET THE SPACE TEMPERATURE SETPOINT AND THE COOLING SHALL STAGE TO MAINTAIN SPACE TEMPERATURE OF 70°F (ADJ.) IN HEATING MODE AND 74°F (ADJ.) WITH 60% RH (ADJ.) IN COOLING MODE.
- DURING UNOCCUPIED HOURS WHEN ECONOMICIZING IS NOT AVAILABLE, THE OUTSIDE AIR DAMPER SHALL CLOSE, THE RTU SUPPLY FAN, HEATING, COOLING, AND REHEAT SHALL STAGE TO MAINTAIN SPACE TEMPERATURE OF 67°F (ADJ.) IN HEATING MODE AND 78°F (ADJ.) WITH 60% RH (ADJ.) IN COOLING MODE.
- DURING UNOCCUPIED HOURS WHEN ECONOMICIZING IS AVAILABLE, MODULE THE OUTSIDE AIR DAMPER AND STAGE THE RTU SUPPLY FAN, COOLING/REHEAT TO MAINTAIN SPACE TEMPERATURE OF 67°F (ADJ.) IN HEATING MODE AND 78°F (ADJ.) WITH 60% RH (ADJ.) IN COOLING MODE.

AC/Fs:

- DURING OCCUPIED HOURS, THE FURNACE SUPPLY FAN SHALL RUN CONSTANTLY. THE OUTSIDE AIR DAMPER SHALL BE AT THE MINIMUM OA POSITION TO DELIVER THE MINIMUM OA VOLUME SHOWN ON THE FURNACE SCHEDULE, AND STAGE HEATING/COOLING TO MAINTAIN SPACE TEMPERATURE OF 70°F (ADJ.) IN HEATING MODE AND 74°F (ADJ.) IN COOLING MODE.
- DURING UNOCCUPIED HOURS, THE FURNACE SUPPLY FAN SHALL RUN IN AUTO MODE, THE OUTSIDE AIR DAMPER SHALL BE AT THE MINIMUM OA POSITION, AND STAGE HEATING/COOLING TO MAINTAIN SPACE TEMPERATURE OF 66°F (ADJ.) IN HEATING MODE AND 78°F (ADJ.) IN COOLING MODE.

EF/TEFs:

EXHAUST FANS SHALL OPERATE DURING OCCUPIED HOURS BY TIME CLOCK. MOUNT TIME CLOCK AND SPEED CONTROLLER DIRECTLY TO FANS EF-1 & TEF-5,6,7. MOUNT TIME CLOCK AND SPEED CONTROLLER ON WALL OF A011 ELEC FOR FANS TEF-3,4.

JOB SPECIFIC MECHANICAL NOTES

- ROUTE CONDENSATE FROM RTUs TO NEAREST DRY SUMP PIT.
- ALL SUPPLY TAKE-OFFS SHALL HAVE MANUAL VOLUME DAMPERS.
- ALL RECTANGULAR DUCT WITH 90° BENDS SHALL HAVE TURNING VANES.
- ROUTE DUCWORK IN OPEN AREAS AS HIGH AS POSSIBLE. TYPICAL.
- ALL AIR HANDLING UNITS OVER 2000 CFM SHALL HAVE RETURN AIR SMOKE DETECTORS INTERLOCKED WITH FAN SHUTDOWN, AND SHALL BE TIED INTO THE FIRE ALARM SYSTEM.
- ALL DUCT DIMENSIONS ARE FREE AREA DIMENSIONS.

MECHANICAL SYMBOL LEGEND

	ISOLATION VALVE - BALL		EQUIPMENT TAG
	Y-STRAINER WITH VALVE & HOSE CONNECTION		SUPPLY DIFFUSER - CEILING
	THERMOMETER		RETURN GRILLE - CEILING
	CONTROL WELL / TEST PORT		EXHAUST GRILLE - CEILING
	TRIPLE DUTY VALVE - ISOLATION, CHECK, CIRCUIT SETTER		WALLE GRILLE
	REDUCER		MANUAL VOLUME DAMPER
	ELBOW DOWN		CONTINUATION
	PRESSURE GAUGE		FLOW ARROW
	AIR VENT		PUMP - FLOW IN DIRECTION OF ARROW
	MOTORIZED 3-WAY VALVE		THERMOSTAT
	CIRCUIT SETTER		TEMPERATURE SENSOR

DUCT CONSTRUCTION SCHEDULE

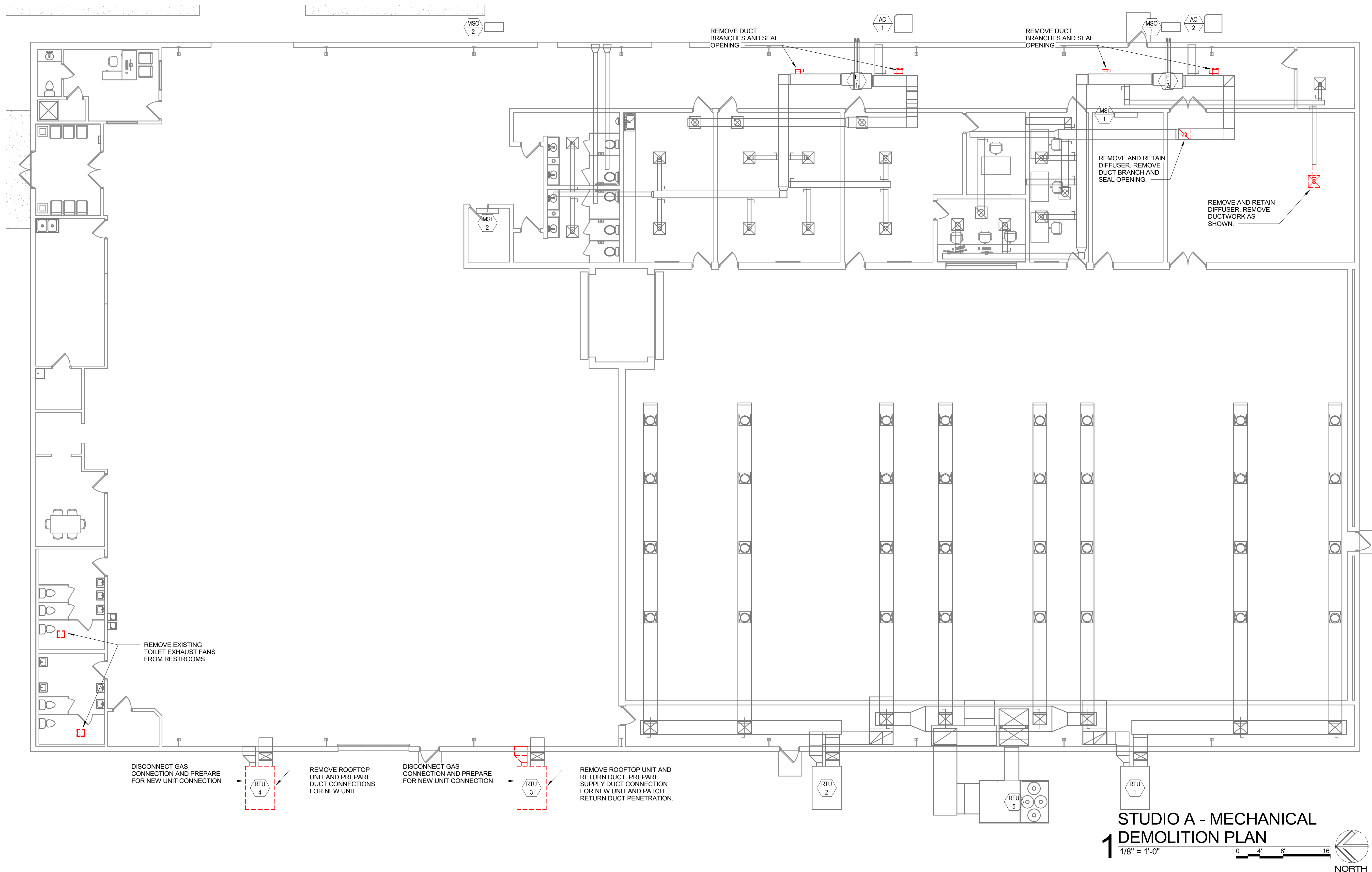
SYSTEM TAG	DESCRIPTION	LOCATION	MATERIAL	LINER / WRAP	PRESSURE CLASS	SEAL CLASS	LONGITUDINAL SEAM TYPE	REMARKS
SA-LP	LOW PRESSURE SUPPLY - RECTANGULAR	INTERIOR - CONCEALED	GALVANIZED	1" LINER (R-4)	2"	A	PITTSBURG LOCK	
SA-LP	LOW PRESSURE SUPPLY - RECTANGULAR	INTERIOR - EXPOSED	GALVANIZED	1" LINER (R-4)	2"	A	PITTSBURG LOCK	1
SA-LP	LOW PRESSURE SUPPLY - RECTANGULAR	EXTERIOR - ALL	GALVANIZED	2" LINER (R-8)	2"	A	PITTSBURG LOCK	
SA-LP	LOW PRESSURE SUPPLY - ROUND	INTERIOR - CONCEALED	GALVANIZED	1" WRAP (R-4)	2"	A	SPIRAL/SNAP LOCK	
SA-LP	LOW PRESSURE SUPPLY - ROUND	INTERIOR - EXPOSED	GALVANIZED	NONE	2"	A	SPIRAL	1
RA	RETURN - RECTANGULAR	INTERIOR - ALL	GALVANIZED	1/2" LINER (R-2)	2"	A	PITTSBURG LOCK	
RA	RETURN - RECTANGULAR	EXTERIOR - ALL	GALVANIZED	2" LINER (R-8)	2"	A	PITTSBURG LOCK	
RA	RETURN - ROUND	INTERIOR - CONCEALED	GALVANIZED	NONE	2"	A	SPIRAL/SNAP LOCK	
OA	OUTSIDE AIR - RECTANGULAR	INTERIOR - CONCEALED	GALVANIZED	2" WRAP (R-8)	2"	A	PITTSBURG LOCK	
OA	OUTSIDE AIR - ROUND	INTERIOR - CONCEALED	GALVANIZED	2" WRAP (R-8)	2"	A	SPIRAL/SNAP LOCK	
EA	EXHAUST - RECTANGULAR	INTERIOR - ALL	GALVANIZED	NONE	2"	A	PITTSBURG LOCK	
EA	EXHAUST - ROUND	INTERIOR - CONCEALED	GALVANIZED	NONE	2"	A	SPIRAL/SNAP LOCK	
TA	TRANSFER - RECTANGULAR	INTERIOR - ALL	GALVANIZED	1/2" ACOUSTICAL LINER	2"	A	PITTSBURG LOCK	

REMARKS:

- ALL EXPOSED DUCTWORK TO BE GALVANIZED FINISH

NOTES:

- ALL DUCTWORK TO BE CONSTRUCTED PER S.M.A.C.N.A. STANDARDS
- ALL LINER TO BE 1-1/2 LB/CF. FLAME SPREAD RATING OF 25, AND SMOKE DEVELOPMENT RATING OF 50



1 STUDIO A - MECHANICAL
DEMOLITION PLAN

1/8" = 1'-0" 0 4' 8' 16'



Cherokee Nation Businesses
**CNFO Owasso Campus
Improvements Phase II**
16990 East 116th Street North Owasso, Oklahoma 74055

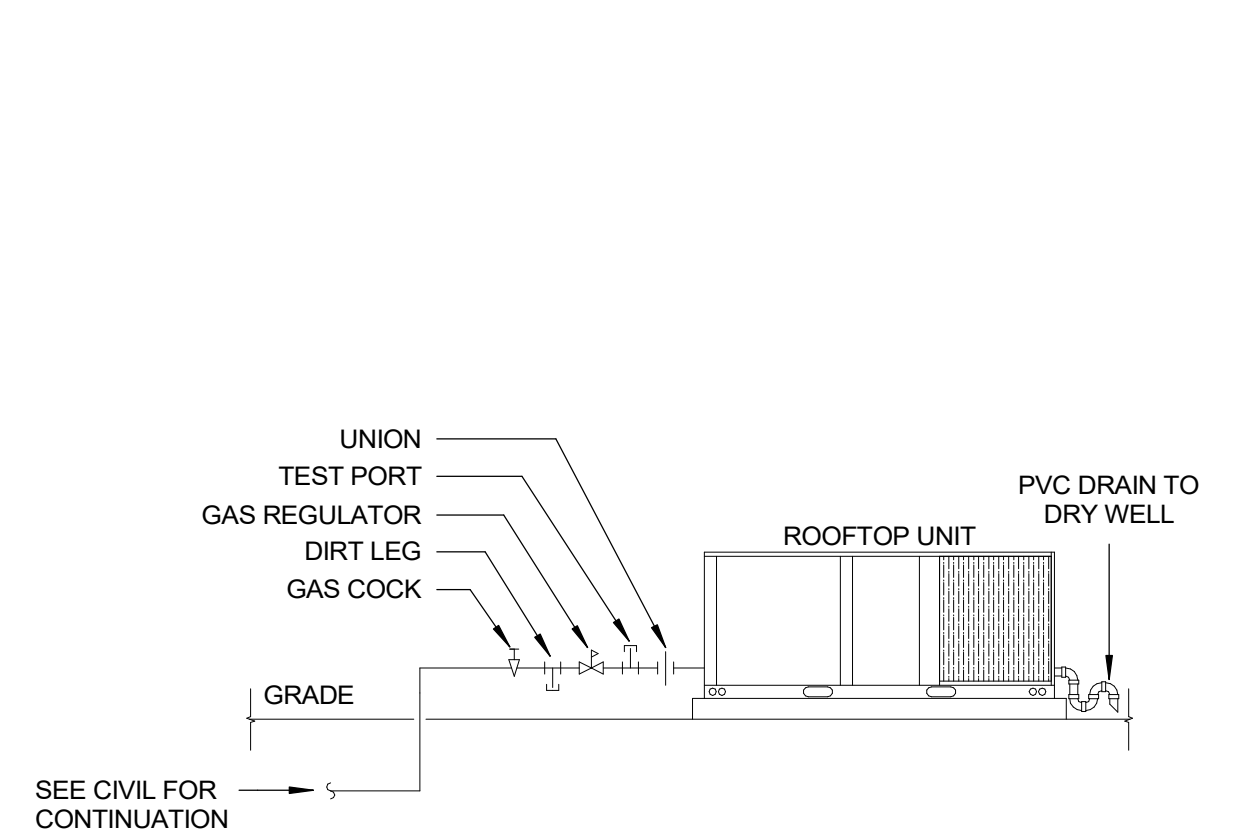
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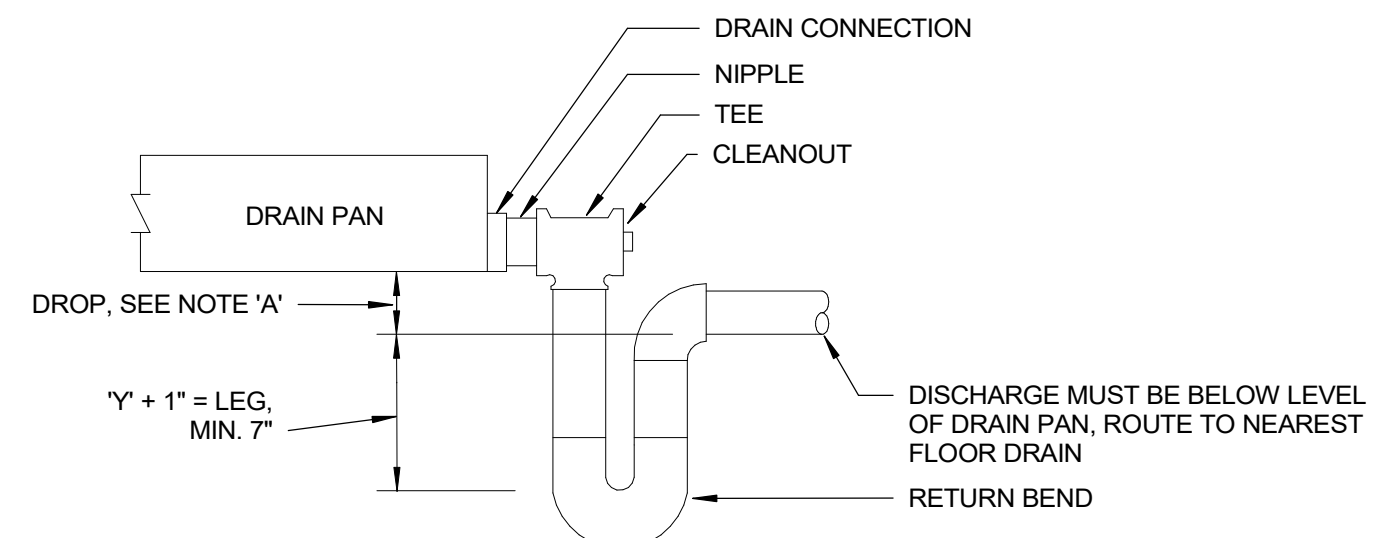
DATE
02.13.23 2/13/2023

SHEET
Studio A -
Mechanical
Demolition Plan

MD1.1



4 RTU GAS PIPING DETAIL LOW PRESSURE
NTS

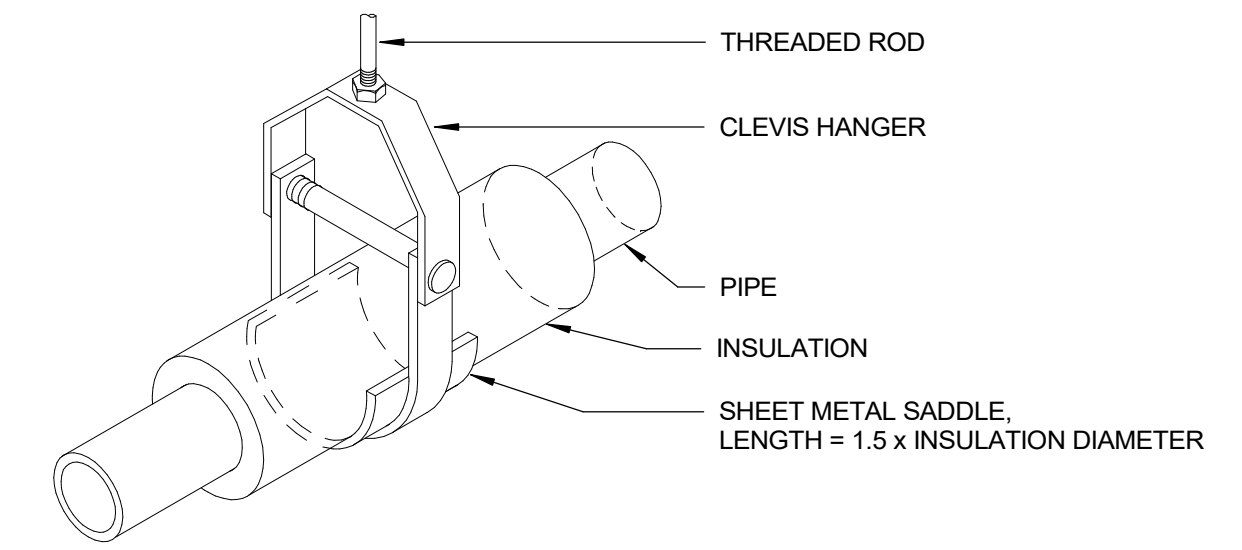


Y', BLOW-THRU = DISCHARGE TOTAL PRESS. (IN. W.G.) OF FAN
Y', DRAW-THRU = NEGATIVE INTERNAL STATIC PRESS. (IN. W.G.) AT FAN INLET

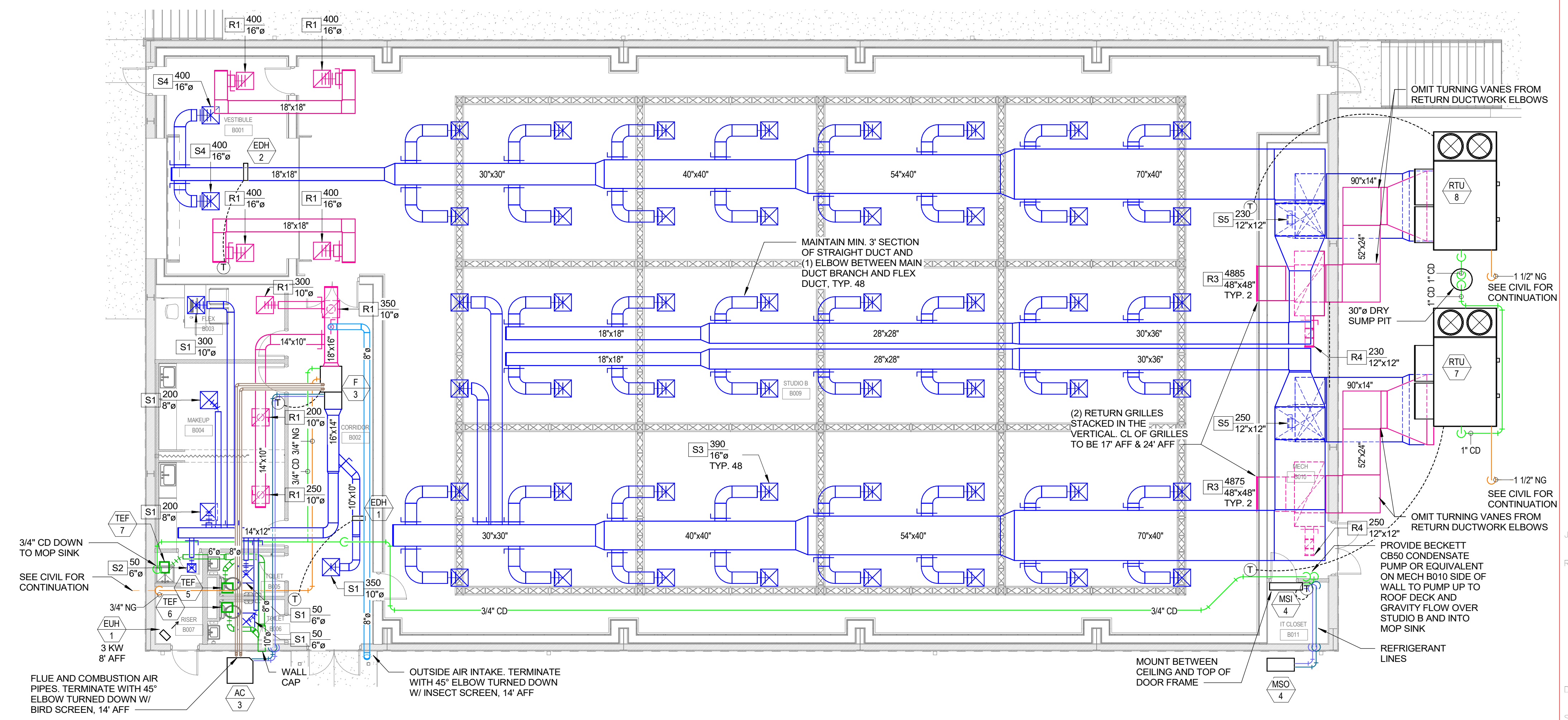
NOTE 'A':
1" MIN. DROP REQUIRED. USE OF STANDARD FITTINGS SHOWN EXCEEDS THIS MINIMUM.

NOTES:
1. ALLOW SUFFICIENT SPACE BELOW DRAIN PAN FOR TRAP.
2. PITCH DRAIN FOR PROPER RUN-OFF.
3. MANUALLY PRIME TRAP BEFORE STARTUP TO FORM INITIAL DRAIN SEAL.
4. SUPPORT DRAIN PIPING TO PREVENT SAG & CONDENSATE OVERFLOW.

3 DRAIN PAN PIPING DETAIL
NTS

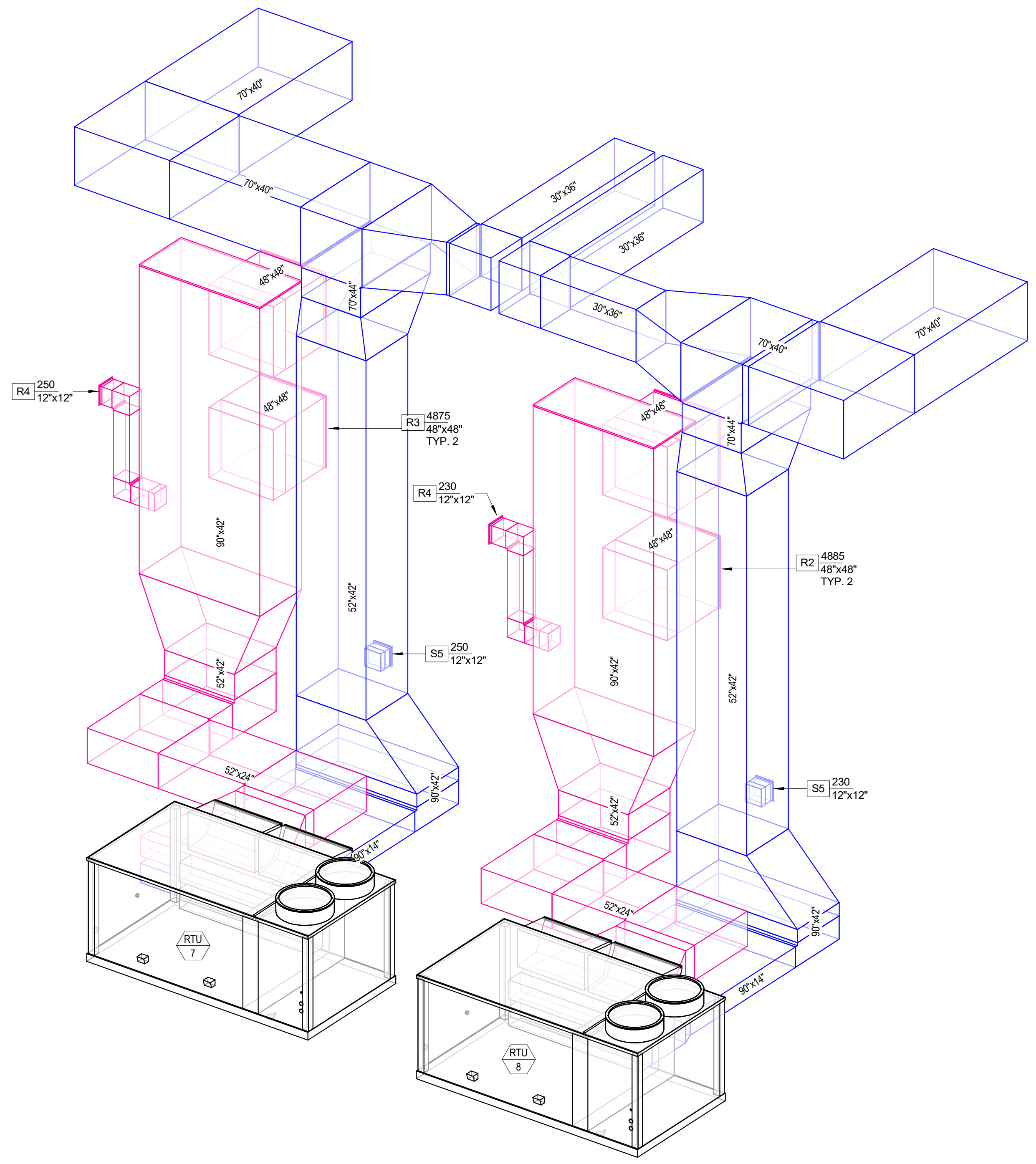


2 CLEVIS HANGER DETAIL - INSULATED PIPE
NTS



1 STUDIO B - HVAC PLAN
1/8" = 1'-0"
0 4 8 16
NORTH

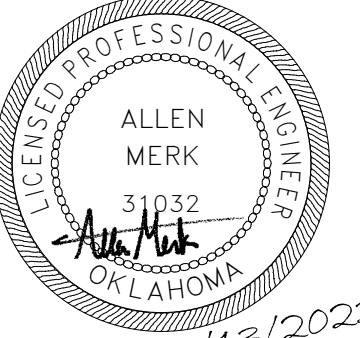




1 RTU SW ISOMETRIC VIEW

JOB NUMBER
 1096.01

REVISIONS



DATE
 02.13.23 2/13/2023

SHEET
 HVAC Enlarged
 Plans

PACKAGED ROOFTOP UNIT SCHEDULE (GAS HEAT)

TAG	NAME	#	SERVICE	LOCATION	NOMINAL TONS	SUPPLY FAN					COOLING PERFORMANCE							HEATING PERFORMANCE							ELECTRICAL DATA				REMARKS					
						AIRFLOW	MIN. OA	ESP	BHP	HP	CAPACITY		EAT		LAT			EFFICIENCY		COND. DRAIN	CAPACITY		EAT		LAT			GAS SIZE		STAGES		FILTER EFFICIENCY		MCA
RTU	3		OFFICE AREA	GRADE	6	2100 CFM	600 CFM	0.75 in-wg	1.2 hp	1.5 hp	67720 Btu/h	49020 Btu/h	81 °F	68 °F	58.9 °F	58 °F	2	15	11	3/4"	11000 Btu/h	88000 Btu/h	58 °F	97.7 °F	1/2"	1	MERV 8	33 A	50 A	208/3/60	754 lb	CARRIER	48FCRN07	ALL
RTU	4		A012 RENTAL	GRADE	8.5	2450 CFM	650 CFM	0.75 in-wg	1.08 hp	1.5 hp	93670 Btu/h	68230 Btu/h	84 °F	69 °F	58.7 °F	57.7 °F	2	15	11.2	3/4"	18000 Btu/h	148000 Btu/h	50 °F	104.9 °F	1/2"	2	MERV 8	41 A	50 A	208/3/60	1022 lb	CARRIER	48FCRN09	ALL
RTU	6		A023 WAREHOUSE/ MILL	GRADE	10	3400 CFM	1000 CFM	0.75 in-wg	1.72 hp	2 hp	116470 Btu/h	89390 Btu/h	83 °F	68 °F	58.1 °F	57.3 °F	2	15	11	3/4"	22400 Btu/h	181000 Btu/h	50 °F	100.4 °F	3/4"	2	MERV 8	45 A	60 A	208/3/60	1025 lb	CARRIER	48FCRN12	ALL
RTU	7		STUDIO B	GRADE	25	10000 CFM	500 CFM	1.00 in-wg	6.69 hp	10 hp	282860 Btu/h	207480 Btu/h	78 °F	66 °F	58.4 °F	56.9 °F	3	13.1	9.8	1"	525000 Btu/h	425300 Btu/h	65 °F	105.2 °F	1 1/2"	7	MERV 8	134 A	150 A	208/3/60	4520 lb	CARRIER	48A8W025	ALL
RTU	8		STUDIO B	GRADE	25	10000 CFM	500 CFM	1.00 in-wg	6.69 hp	10 hp	282860 Btu/h	207480 Btu/h	78 °F	66 °F	58.4 °F	56.9 °F	3	13.1	9.8	1"	525000 Btu/h	425300 Btu/h	65 °F	105.2 °F	1 1/2"	7	MERV 8	134 A	150 A	208/3/60	4520 lb	CARRIER	48A8W025	ALL

- REMARKS:**
- MOUNT ON 4" CONCRETE PAD
 - PROVIDE R/A SMOKE DETECTOR WIRED FOR FAN SHUTDOWN AND INTERLOCK WITH THE BUILDING SMOKE ALARM SYSTEM
 - PROVIDE ENTHALPY ECONOMIZER WITH BAROMETRIC RELIEF
 - PROVIDE 7-DAY PROGRAMMABLE WIFI THERMOSTAT/HUMIDISTAT. REFERENCE CONTROL NOTES FOR ADDITIONAL INFORMATION.
 - PROVIDE HOT GAS REHEAT FOR DEHUMIDIFICATION
 - PROVIDE CONDENSER COIL HAIL GUARDS FOR ALL VERTICAL CONDENSER COIL SURFACES
 - PROVIDE UNPOWERED CONVENIENCE OUTLET
 - PROVIDE INTEGRAL NON-FUSED DISCONNECT
 - PROVIDE STAINLESS STEEL HEAT EXCHANGER
 - PROVIDE ISOLATION VALVE, DIRT LEG, TEST PORT, PRESSURE REGULATOR, AND UNION AT NATURAL GAS CONNECTION
 - PROVIDE CONDENSATE TRAP AND SLOPE CONDENSATE PIPING TO NEAREST DRY SUMP PIT. DRY SUMP PIT SHALL BE A MINIMUM OF 24" LONG BY 24" WIDE BY 24" DEEP (OR EQUIVALENT VOLUME) FILLED WITH 1" WASHED ROCK. THE DRY SUMP PIT SHALL BE LOCATED A MINIMUM OF 30" FROM THE OUTER EDGE OF THE FOUNDATION.
 - PROVIDE CONDENSATE OVERFLOW SWITCH IN PRIMARY CONDENSATE PAN TO SHUT DOWN THE UNIT IF THE CONDENSATE DRAIN IS CLOGGED.

AC UNIT SCHEDULE (USED W/ GAS FURNACE)

TAG	NAME	#	SERVICE	LOCATION	NOMINAL TONS	AIRFLOW	AMBIENT DB	COOLING PERFORMANCE							PIPE SIZE			ELECTRICAL DATA				REMARKS				
								NET CAPACITY		EAT		LAT			# OF STAGES	SEER	LIQUID	SUCTION	COND. DRAIN	MCA	MOCP		SERVICE V/PH/Hz	WEIGHT	MANUFACTURER	CONDENSER MODEL #
AC	3		F-3	GRADE	3	2615 CFM	100 °F	3520 Btu/h	25770 Btu/h	79 °F	67 °F	59.1 °F	58.5 °F	1	15	3/4"	3/8"	3/4"	13 A	20 A	208/3/60	184 lb	CARRIER	24AHA436	CAPMP3717	ALL

- REMARKS:**
- MOUNT ON 4" CONCRETE PAD
 - PROVIDE REFRIGERANT PIPING AND REFRIGERANT PIPING SPECIALTIES AND INSTALL PER MANUFACTURER'S INSTRUCTIONS. PROVIDE LONG LINE ACCESSORIES IF NEEDED PER MANUFACTURER'S INSTRUCTIONS.
 - MOUNT EVAPORATOR COIL DIRECTLY TO FURNACE DISCHARGE. PROVIDE TRANSITION IF NECESSARY
 - PROVIDE CONDENSATE OVERFLOW SWITCH IN PRIMARY CONDENSATE PAN TO SHUT DOWN THE UNIT IF THE CONDENSATE DRAIN IS CLOGGED.

FURNACE SCHEDULE (GAS HEAT)

TAG	NAME	#	SERVICE	LOCATION	AIRFLOW	MIN. OA	ESP	HP	CAPACITY		EAT		LAT			GAS SIZE		STAGES		COND. DRAIN		FILTER EFFICIENCY		ELECTRICAL DATA		REMARKS
									INPUT	OUTPUT	DB	WB	DB	WB	DB	WB	DB	WB	DB	WB	MCA	MOCP	SERVICE V/PH/Hz	WEIGHT	MANUFACTURER	
F	3		STUDIO B SUPPORT	B002 CORRIDOR	1200 CFM	100 CFM	0.75 in-wg	0.75 hp	60000 Btu/h	58000 Btu/h	60 °F	104.7 °F	3/4"	1	3/4"	MERV 8	10 A	15 A	120/1/60	120 lb	CARRIER	59SC5B060		ALL		

- REMARKS:**
- HORIZONTAL CONFIGURATION
 - PROVIDE 7-DAY PROGRAMMABLE WIFI THERMOSTAT AND LOCKING ENCLOSURE
 - PROVIDE STAINLESS STEEL HEAT EXCHANGER
 - PROVIDE ISOLATION VALVE, DIRT LEG, TEST PORT, AND UNION AT NATURAL GAS CONNECTION
 - PROVIDE CONDENSATE NEUTRALIZER AND ROUTE CONDENSATE TO NEARBY FLOOR DRAIN
 - PROVIDE CONDENSATE OVERFLOW SWITCH IN PRIMARY CONDENSATE PAN TO SHUT DOWN THE UNIT IF THE CONDENSATE DRAIN IS CLOGGED.

AIR TERMINAL SCHEDULE

TAG	SERVICE	DESCRIPTION	MOUNTING	INLET SIZE	FACE SIZE	DAMPER IN NECK	MATERIAL / FINISH	MANUFACTURER	MODEL #	REMARKS
R1	RETURN	PERFORATED RETURN DIFFUSER	LAY-IN	SEE PLANS	24"x24"	N	STEEL / WHITE	TITUS	PAR	
R2	RETURN	35° SINGLE DEFLECTION GRILLE, 3/4" SPACING, BLADES PARALLEL TO LONG DIMENSION	SURFACE	SEE PLANS	INLET + 2"	N	STEEL / WHITE	TITUS	350RL	
R3	RETURN	35° SINGLE DEFLECTION GRILLE, 3/4" SPACING, BLADES PARALLEL TO LONG DIMENSION	SURFACE	SEE PLANS	INLET + 2"	N	STEEL / BLACK	TITUS	350RL	
R4	RETURN	35° SINGLE DEFLECTION GRILLE, 3/4" SPACING, BLADES PARALLEL TO LONG DIMENSION	SURFACE	SEE PLANS	INLET + 2"	N	STEEL / MILL	TITUS	350RL	
S1	SUPPLY	SQUARE PLAQUE DIFFUSER	LAY-IN	SEE PLANS	24"x24"	N	STEEL / WHITE	TITUS	OMNI	
S2	SUPPLY	SQUARE PLAQUE DIFFUSER	LAY-IN	SEE PLANS	12"x12"	N	STEEL / WHITE	TITUS	OMNI	
S3	SUPPLY	HIGH PERFORMANCE THREE CONE DIFFUSER	LAY-IN	SEE PLANS	24"x24"	N	STEEL / BLACK	TITUS	TMS	
S4	SUPPLY	ADJUSTABLE HIGH PERFORMANCE THREE CONE DIFFUSER	LAY-IN	SEE PLANS	24"x24"	N	STEEL / BLACK	TITUS	TMSA	
S5	SUPPLY	ADJUSTABLE DOUBLE DEFLECTION GRILLE, 3/4" SPACING, BLADES PARALLEL TO SHORT DIMENSION	SURFACE	SEE PLANS	INLET + 2"	N	STEEL / MILL	TITUS	300RS	
T1	TRANSFER	ADJUSTABLE DOUBLE DEFLECTION GRILLE, 3/4" SPACING, BLADES PARALLEL TO SHORT DIMENSION	SURFACE	SEE PLANS	INLET + 2"	N	STEEL / WHITE	TITUS	300RS	

DUCTLESS SPLIT INDOOR UNIT SCHEDULE

TAG	NAME	#	SERVICE	LOCATION	NOMINAL TONS	AIRFLOW	TOTAL CAPACITY		PIPE SIZE		ELECTRICAL DATA		REMARKS				
							COOLING	HEATING @ 17°F	LIQUID	SUCTION	COND. DRAIN	FLA		SERVICE V/PH/Hz	WEIGHT	MANUFACTURER	MODEL #
MSI	3		A036 OPEN OFFICE	CEILING	2	878 CFM	24000 Btu/h	14500 Btu/h	3/8"	5/8"	3/4"	0.3 A	208/1/60	57 lb	CARRIER	40MBCQ24	1-3
MSI	4		B011 IT CLOSET	WALL	2	870 CFM	24000 Btu/h	14400 Btu/h	3/8"	5/8"	3/4"	0.4 A	208/1/60	40 lb	CARRIER	40MAHBQ24	1,4

- REMARKS:**
- PROVIDE WIRED THERMOSTAT KIT
 - INTEGRAL CONDENSATE PUMP
 - FRESH AIR KNOCKOUT
 - PROVIDE EXTERNAL CONDENSATE PUMP, BECKETT CB50 OR EQUIVALENT

DUCTLESS SPLIT OUTDOOR UNIT SCHEDULE

TAG	NAME	#	SERVICE	LOCATION	NOMINAL TONS	AIRFLOW	AMBIENT DB	TOTAL CAPACITY		PIPE SIZE		ELECTRICAL DATA		REMARKS				
								COOLING	HEATING @ 17°F	LIQUID	SUCTION	MCA	MOCP		SERVICE V/PH/Hz	WEIGHT	MANUFACTURER	MODEL #
MSO	3		MSI-3	GRADE	25 A	2235 CFM	95 °F	24000 Btu/h	14500 Btu/h	3/8"	5/8"	25 A	30 A	208/1/60	135 lb	CARRIER	38MARBQ24	ALL
MSO	4		MSI-4	GRADE	2	2235 CFM	95 °F	24000 Btu/h	14400 Btu/h	3/8"	5/8"	25 A	30 A	208/1/60	135 lb	CARRIER	38MARBQ24	ALL

- REMARKS:**
- MOUNT ON 4" CONCRETE PAD
 - PROVIDE REFRIGERANT PIPING AND REFRIGERANT PIPING SPECIALTIES AND INSTALL PER MANUFACTURER'S INSTRUCTIONS
 - CRANKCASE HEAT & BASE PAN HEATER
 - LOW AMBIENT HEATING DOWN TO -10°F

FAN SCHEDULE

TAG	NAME	#	SERVICE	LOCATION	TYPE	AIRFLOW	ESP	MAXIMUM SONES	DAMPER	MOTOR DATA				ELECTRICAL DATA				REMARKS	
										DRIVE TYPE	SPEED	BHP	HP	FLA	SERVICE V/PH/Hz	WEIGHT	MANUFACTURER		MODEL #
EF	1		A023 WAREHOUSE/ MILL	WALL	PROPELLER	1900 CFM	0.20 in-wg	15	BACKDRAFT	DIRECT	1725	0.26 hp	0.33 hp	7.2 A	120/1/60	104 lb	COOK	14XP32D17	1-4
TEF	3		A009 MENS	CEILING	CENTRIFUGAL	200 CFM	0.25 in-wg	2	BACKDRAFT	DIRECT	1400	0.03 hp	0.05 hp	0.7 A	120/1/60	26 lb	COOK	GC-522	2-8
TEF	4		A010 WOMENS	CEILING	CENTRIFUGAL	150 CFM	0.25 in-wg	2	BACKDRAFT	DIRECT	1376	0.02 hp	0.03 hp	0.5 A	120/1/60	20 lb	COOK	GC-322	2-8
TEF	5		B005 TOILET	CEILING	CENTRIFUGAL	75 CFM	0.25 in-wg	2	BACKDRAFT	DIRECT	900	0.01 hp	0.01 hp	0.2 A	120/1/60	13 lb	COOK	GC-146	2-8
TEF	6		B006 TOILET	CEILING	CENTRIFUGAL	75 CFM	0.25 in-wg	2	BACKDRAFT	DIRECT	900	0.01 hp	0.01 hp	0.2 A	120/1/60	13 lb	COOK	GC-146	2-8
TEF	7		B005 TOILET	CEILING	CENTRIFUGAL	75 CFM	0.25 in-wg	2	BACKDRAFT	DIRECT	900	0.01 hp	0.01 hp	0.2 A	120/1/60	13 lb	COOK	GC-146	2-8

- REMARKS:**
- PROVIDE WEATHER HOOD DISCHARGE CONFIGURATION
 - FAN SHALL CONTROLLED BY TIMECLOCK TO OPERATE DURING OCCUPIED HOURS
 - BIRD SCREEN
 - PROVIDE ELECTRICAL DISCONNECT
 - PROVIDE RUBBER ISOLATOR HANGERS
 - PROVIDE FLEX CONNECTIONS ON ALL DUCT CONNECTIONS
 - PROVIDE SPEED CONTROLLER MOUNTED TO FAN FOR BALANCING
 - WRAP DUCTWORK BETWEEN BACKDRAFT DAMPER AND EXTERIOR LOUVER WITH 2" WRAP INSULATION

ELECTRIC HEATER SCHEDULE

TAG	NAME	#	LOCATION	MOUNTING	TYPE	AIRFLOW	HEATING INPUT	FLA	SERVICE V/PH/Hz	WEIGHT	MANUFACTURER	MODEL #	REMARKS
EWH	1		A002 OPEN OFFICE	RECESSED	FAN-FORCED WALL HEATER	100 CFM	4.8 kW	13 A	208/3/60	22 lb	QMARK	CWH35083F	ALL
EDH	1		B002 CORRIDOR	FLANGED	OPEN COIL DUCT HEATER	350 CFM	3 kW	8 A	208/3/60	18 lb	INDEECO	QUZ	1,4,5
EDH	2		B001 VESTIBULE	FLANGED	OPEN COIL DUCT HEATER	800 CFM	6 kW	17 A	208/3/60	34 lb	INDEECO	QUZ	1,4,5

- REMARKS:**
- INTEGRAL DISCONNECT
 - INTEGRAL THERMOSTAT
 - MOUNT 12" AFF
 - PROVIDE WIRED THERMOSTAT
 - AUTOMATIC THERMAL CUTOUPS

STUDIO B SOUND CRITERIA

TO COMPLY WITH FILM STUDIO SOUND LEVEL STANDARDS, FOLLOW THE FOLLOWING GUIDELINES:

- OVERALL NOISE CRITERIA LEVELS
 - STUDIO B SPACE: OVERALL NC15, AIR TERMINALS NC10
 - SUPPORTING SPACES: OVERALL NC25, AIR TERMINALS NC20
- DUCT VELOCITIES
 - EXTERIOR DUCTWORK: 1200 FPM
 - SUPPORTING SPACES DUCTWORK: 700 FPM
 - STUDIO CEILING SPACE DUCTWORK: 400 FPM
 - DUCTWORK WITHIN 10' OF AIR TERMINAL: 400 FPM
 - AIR TERMINAL NECK: 300 FPM
- LEAVE 5' SECTIONS OF STRAIGHT DUCT ON THE EXTERIOR SUPPLY AND RETURN DUCTING TO ALLOW FOR THE ADDITION OF SOUND ATTENUATORS IF THEY ARE REQUIRED AFTER THE BUILDING HAS BEEN IN SERVICE.
- ALL AIR TERMINALS IN STUDIO B SHALL HAVE A MINIMUM OF 3 DUCT CHANGES OF DIRECTION BETWEEN THEM.
- ALL AIR CONDITIONING UNITS SHALL HAVE CANVAS CONNECTIONS ON SUPPLY AND RETURN. HORIZONTAL FURNACES SHALL BE HUNG BY SPRING ISOLATION HANGERS WITH A MINIMUM OF 1" RATED DEFLECTION.
- CONDENSATE PUMP SHALL BE MOUNTED ON RUBBER ISOLATED WALL MOUNTS. DISCHARGE OF CONDENSATE PUMP SHALL BE THROUGH POLY TUBING UP TO THE ROOF DECK AND TAP INTO THE TOP OF A COPPER LINE THAT RUNS ACROSS THE CEILING SPACE OF STUDIO B.
- ALL SPRING HANGERS SHALL BE INSTALLED IN A STRAIGHT, VERTICAL FASHION. NO SPRING SHALL BE FULLY COMPRESSED OR UNCOMPRESSED. CONTRACTOR SHALL SUBMIT ON ALL VIBRATION EQUIPMENT PROPOSED TO BE USED.

GENERAL ELECTRICAL NOTES

- ALL WORK SHALL BE PERFORMED IN STRICT COMPLIANCE WITH LATEST ADOPTED VERSION OF THE NATIONAL ELECTRICAL CODE (NEC) (INCLUDING LOCAL AMENDMENTS), AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES. WHERE CONFLICTS ARISE, THE MOST STRINGENT REQUIREMENT SHALL APPLY.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE PROJECT SITE PRIOR TO SUBMITTING BID IN ORDER TO VERIFY THE EXTENT OF THE CONSTRUCTION WORK AND THE ACTUAL CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. SUBMITTAL OF BID SHALL BE CONSIDERED PROOF THAT THE CONTRACTOR HAS VISITED THE JOB SITE AND IS FAMILIAR WITH THE SITE SPECIFIC CONSTRUCTION REQUIREMENTS.
- CONTRACTOR IS RESPONSIBLE FOR PROCURING ALL NECESSARY PERMITS AND LICENSES REQUIRED FOR WORK. PAY ALL LAWFUL FEES, INCLUDING, BUT NOT LIMITED TO UTILITY DEPOSITS, INSPECTION FEES, AND TEMPORARY AND PERMANENT CONSTRUCTION FEES.
- CONTRACTOR SHALL COORDINATE INSTALLATION OF ELECTRICAL SYSTEMS WITH OTHER TRADES. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS OF MECHANICAL AND PLUMBING EQUIPMENT. FAILURE TO COORDINATE WITH OTHER TRADES SHALL NOT RESULT IN A CHANGE ORDER.
- NOTIFY ARCHITECT AND REQUEST ADDITIONAL INFORMATION FOR PROPOSED ALTERNATE OR ALTERNATE EQUIPMENT OTHER THAN LISTED IN CONTRACT DOCUMENTS OR SUBMITTED DURING PRODUCT REVIEW WHICH REQUIRES ADDITIONAL SPACE, SUPPORT, LAYOUT OR ELECTRICAL REQUIREMENT. PROVIDE WORK ONLY AFTER WRITTEN NOTICE TO PROCEED FROM ENGINEER OF RECORD.
- USE OF METALCLAD CABLE IS ACCEPTABLE FOR LIGHTING WHIPS. OTHER USES ARE SUBJECT TO APPROVAL BY ENGINEER OF RECORD PRIOR TO INSTALLATION.
- SERVICE EQUIPMENT SHALL BE MARKED WITH THE AVAILABLE FAULT CURRENT ON THE PANEL PER NEC 110.24. COORDINATE WITH LOCAL UTILITY.
- PROVIDE HANDLE TIES ON ALL MULTIWIRE BRANCH CIRCUITS TO MEET THE REQUIREMENTS OF NEC 210.4(B).
- PROVIDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR (SIZED PER NEC) IN ALL CONDUITS CONTAINING POWER CIRCUITS. CONDUIT SHALL BE SIZED PER NEC BASED ON THWN 600 VOLT COPPER SINGLE CONDUCTORS, PLUS THE EQUIPMENT GROUNDING CONDUCTOR.
- PROVIDE A COMPLETE TYPED PANELBOARD IDENTIFICATION SCHEDULE AND PANELBOARD NAMEPLATE FOR ALL PANELS.
- PROVIDE DEVICE LABELS (STICK ON MYLAR TAPE LABEL/ WITH PANEL AND BRANCH CIRCUIT -1/4" HIGH BLACK LETTER) FOR ALL ELECTRICAL DEVICES.
- BRANCH CIRCUIT CONDUCTORS SHALL BE MINIMUM #12 AWG IN 1/2" C UNLESS NOTED OTHERWISE IN SCHEDULES. WHERE 20A BRANCH CIRCUITS HAVE #8 AND LARGER WIRE SPECIFIED, #10 AWG WIRE MAY BE USED FOR THE FINAL 15-FT OF RUN.
- CONTRACTOR SHALL SIZE CONDUIT AND DERATE CURRENT CARRYING CONDUCTORS PER NEC 310.15(B)(3)(a) WHERE CIRCUITS ARE GROUPED.
- ALL FEEDER AND BRANCH CIRCUITS SHALL BE INSTALLED ABOVE GROUND, UNLESS SPECIFICALLY NOTED IN PLANS TO BE BELOW GRADE.
- PROVIDE ARC FLASH WARNING LABELS ON ALL REQUIRED EQUIPMENT.
- HOMERUNS ARE SHOWN SEPARATELY TO PRESERVE DRAWING CLARITY. CONTRACTOR IS PERMITTED TO COMBINE HOMERUNS SERVING LIGHTING AND WIRING DEVICES AS ALLOWED BY THE NEC.
- WIRING DEVICES: DEVICE MOUNTING HEIGHTS ARE FROM FINISHED FLOOR TO CENTER OF OUTLET BOX UNLESS NOTED OTHERWISE ON PLANS. COORDINATE THE STANDARD MOUNTING HEIGHTS WITH MASONRY.
 - LIGHTING DEVICES +48"
 - RECEPTACLES +18"
 - GFI RECEPTACLES +24"
 - TELEPHONE +48"
 - TELEPHONE/DATA +18"
 - DATA +18"
 - FIRE ALARM PULL STATION +48"

- PROVIDE SEALS AT RACEWAY PENETRATIONS AS FOLLOWS:
 - EXTERIOR: REFER TO ARCHITECTURAL DOCUMENTS FOR SEALING REQUIREMENTS AT ALL EXTERIOR MOUNTED DEVICES, FIXTURES, ENCLOSURES, AND RACEWAY PENETRATIONS AND EXACT LOCATIONS.
 - FIRE RATED WALLS: SEAL PER SPECIFICATIONS FOR FIRE STOPPING.
- UPON COMPLETION OF ELECTRICAL INSTALLATION AND PRIOR TO ENERGIZING THE CIRCUIT:
 - INSPECT WIRE AND CABLE FOR PHYSICAL DAMAGE.
 - PERFORM CONTINUITY TEST.
 - VERIFY PROPER PHASING CONNECTION TO ALL THREE PHASE MOTOR LOADS.
- ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ACCEPTABLE MANUFACTURERS SHALL BE AS INDICATED FOR EQUIPMENT SCHEDULED UNLESS OTHERWISE NOTED. CONTRACTOR SHALL PROVIDE ALL NECESSARY WIRING AND EQUIPMENT AND MAKE ALL FINAL CONNECTIONS FOR A COMPLETE AND OPERATIONAL SYSTEM.
- COORDINATE EXACT LOCATION OF ALL DEVICES WITH ARCHITECTURAL ELEVATIONS AND MILLWORK PRIOR TO ROUGH-IN.
- PROVIDE LIQUID-TIGHT FLEXIBLE METAL CONDUIT AND WIRING FROM DISCONNECT SWITCH OR JUNCTION BOX TO EQUIPMENT KNOCKOUT OR ELECTRICAL CONNECTION POINT FOR ALL OUTDOOR OR OTHER WET-LOCATION EQUIPMENT CONNECTIONS.
- WHERE PROVIDED EQUIPMENT NAMEPLATE PROTECTIVE DEVICE RATING DIFFERS FROM SIZE SPECIFIED, PROVIDE WIRING AND OVERCURRENT DEVICE WITH APPROPRIATE RATING PER NEC.
- MINIMIZE VISIBILITY OF SURFACE-MOUNTED CONDUIT. GROUP CONDUITS AND ROUTE HORIZONTALLY TO NEAREST BREAK IN WALL, TURN 90 DEGREES AND ROUTE TO STRUCTURE. GROUP BRANCH CIRCUITS WHEN POSSIBLE TO REDUCE CONDUITS. UTILIZE NEAREST WALL CHASES WHEN POSSIBLE.
- COORDINATE EXACT LOCATION AND REQUIREMENTS OF ALL APPLIANCES AND OTHER DEVICES WITH OTHER TRADES AND VENDORS PRIOR TO ROUGH-IN. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ELECTRICAL REQUIREMENTS AS REQUIRED BY EQUIPMENT PROVIDER AND/OR EQUIPMENT DRAWINGS. PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
- COORDINATE EXACT ELECTRICAL REQUIREMENTS OF ALL MECHANICAL AND PLUMBING EQUIPMENT PRIOR TO ROUGH-IN. ADJUST CIRCUITS AS REQUIRED.
- REFER TO MECHANICAL PLANS FOR CONTROL OF EXHAUST FANS, VRF SYSTEM, BRANCH CONTROLLERS, AHU'S, MAU'S ETC. PROVIDE ALL ELECTRICAL REQUIREMENTS INCLUDING DISCONNECT SWITCH, SPEED CONTROLLER, AND MOTOR STARTER.
- PROVIDE ELECTRICAL UTILITY WITH THE CONSTRUCTION SCHEDULE WHEN IT BECOMES AVAILABLE.
- EXTERIOR AND ROOF MOUNTED MAINTENANCE RECEPTACLES SHALL BE GFCI/WR TYPE. RECEPTACLES SHALL BE INSTALL IN METALLIC WP BOX WITH METALLIC IN-USE COVER.
- REFER TO ARCHITECTURAL ELEVATIONS AND DETAILS FOR EXACT LOCATIONS OF ELECTRICAL ITEMS. THESE SHALL TAKE PRECEDENCE OVER ANY INDICATIONS IN ELECTRICAL CONSTRUCTION DOCUMENTS.
- ALL PENETRATIONS THROUGH SIDE WALLS OR ROOF ARE TO BE COORDINATED WITH ARCHITECT AND SEALED IN A WAY THAT MAINTAINS MANUFACTURER'S WARRANTY.
- CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO ALL EQUIPMENT IN CONFORMANCE WITH EQUIPMENT MANUFACTURER WIRING DIAGRAMS.
- ACCESS CONTROL AND CCTV SYSTEM BY OTHERS. COORDINATE WITH VENDOR TO PROVIDE 120V POWER FOR SYSTEMS AS NEEDED.
- PROVIDE DATA ROUGH-IN, INCLUDING BACK BOXES, MINIMUM OF 1" EMT TURNED OUT 90 DEGREES IN CEILING SPACE, AND PULL STRING. PROVIDE BUSHINGS FOR ALL LOW-VOLTAGE CONDUITS. BUNDLE, TRAIN, AND ROUTE ALL CONDUCTORS UTILIZING CABLE TRAY OR J-HOOKS BACK TO SYSTEM HEAD-END EQUIPMENT.

GENERAL LIGHTING NOTES

- THE LOCATION OF DUCTS, PIPE AND EQUIPMENT AS SHOWN ON THE DRAWINGS IS DIAGRAMMATIC AND SCHEMATIC AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH ALL OTHER TRADES BEFORE INSTALLATION. LIGHT FIXTURE LOCATIONS SUPERSEDE HVAC DUCTWORK, GRILLES AND DIFFUSERS. OFFSET TO AVOID STRUCTURE AND/OR ANY OTHER PIPING.
- COORDINATE EXACT FIXTURE LOCATIONS WITH STRUCTURE, DIFFUSERS, ETC.
- WHERE FIELD CONDITIONS WILL INTERFERE WITH THE INTENDED LIGHTING LAYOUT, CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE ARCHITECT AND ENGINEER OF RECORD.
- EXIT LIGHTS AND EMERGENCY LIGHTS SHALL BE CONNECTED TO UNSWITCHED PORTION OF LIGHTING CIRCUIT SERVING AREA.
- LIGHT FIXTURES WITH EMERGENCY BATTERY BACKUP SHALL HAVE ADDITIONAL UNSWITCHED HOT CONDUCTOR ROUTED TO BATTERY PACK.
- PROVIDE ALL ACCESSORIES REQUIRED FOR FUNCTIONAL ELECTRICAL INSTALLATION AND SUPPORT.
- PROVIDE DRY WALL/PLASTER KIT FOR FIXTURES MOUNTED ON GYP. BOARD PER ARCHITECTURAL CEILING PLAN.
- EXIT SIGN MOUNTING:
 - WALL: CENTER 12" ABOVE DOOR OPENING.
 - CEILING/PENDANT: ON CEILING OR AT HEIGHT SPECIFIED ON DRAWINGS.
- EMERGENCY LIGHT MOUNTING:
 - COMPLY WITH MANUFACTURER'S REQUIREMENTS FOR MAINTAINED LIGHTING LEVELS AND COORDINATE ELEVATIONS WITH ARCHITECT AND ENGINEER.
- EMERGENCY LIGHT ELECTRICAL CONNECTION:
 - REFER TO MANUFACTURER'S WRITTEN INSTRUCTIONS. ALLOW BATTERY TO CHARGE CONTINUOUSLY FOR A MINIMUM OF 168 HOURS BEFORE INITIAL TESTING.
 - AFTER EMERGENCY LIGHT HAS BEEN POWERED DO NOT REMOVE POWER FOR EXTENDED PERIODS OF TIME.
- REFERENCE ARCHITECTURAL DRAWINGS FOR EXACT LIGHT FIXTURE LOCATIONS AND MOUNTING HEIGHTS.
- PROVIDE LIGHT FIXTURE SUPPORTS AND RESTRAINTS TO COMPLY WITH APPLICABLE SEISMIC ZONE REQUIREMENTS.
- PROVIDE TWO COPIES OF OPERATION AND MAINTENANCE MANUALS FOR ALL LIGHT FIXTURES TO OWNER.
- PROVIDE ALL NECESSARY CABLING AND CONNECTIONS FOR A COMPLETE, OPERATIONAL RELAY-BASED LIGHTING CONTROL SYSTEM

FIRE ALARM NOTE

IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MODIFICATIONS COMPLIANT WITH MFPA 72 TO THE EXISTING FIRE ALARM SYSTEM RESULTING IN A COMPLETE AND OPERABLE FIRE ALARM SYSTEM AND IS APPROVED BY THE OWNER AND THE AUTHORITIES HAVING JURISDICTION. FIRE ALARM CONTRACTOR SHALL SUBMIT FIRE DRAWINGS DESIGNED BY NICET LEVEL IV INDIVIDUAL EQUIPMENT CUT SHEETS, ETC. PER LOCAL CODE AND NFPA 72 TO LOCAL AUTHORITIES HAVING JURISDICTION AND ENGINEER FOR APPROVAL PRIOR TO ORDERING EQUIPMENT. INCLUDE IN BID ALL COSTS FOR PERMITS AND FEES. DEVICES SHALL BE STANDARD PRODUCT OF SINGLE MANUFACTURER, SHALL DISPLAY THE MANUFACTURER'S NAME ON EACH COMPONENT, AND SHALL BE COMPATIBLE WITH EXISTING SYSTEM. COORDINATE WITH OWNER FOR ACCEPTABLE MODELS AND DESIGN REQUIREMENTS.

PROJECT SCOPE NOTES

THE SCOPE OF THIS PROJECT IS TO MODIFY EXISTING ELECTRICAL SYSTEMS FOR ADDITIONAL FILL-IN OF EXISTING SPACE IN EXISTING BUILDING AND ADD NEW ELECTRICAL SYSTEMS IN NEW BUILDING AT CHEROKEE NATION FILM STUDIO IN OWASSO, OK.

EXISTING BUILDING:

- REMOVE EXISTING HIGH BAY LIGHT FIXTURES IN AREA NOTED ON DEMO PLANS.
- REMOVE EXISTING EXHAUST FANS IN TOILETS AS NOTED ON DEMO PLANS.
- PROVIDE NEW ELECTRICAL PANELS 'LP2' AND 'LWH'.
- PROVIDE POWER TO NEW PANELS AND RTU-6 FROM NEW BREAKERS IN EXISTING SPACE IN 'MDP'.
- PROVIDE NEW LIGHTING AND POWER IN FILL-IN SPACE PER DRAWINGS.

NEW BUILDING:

- PROVIDE NEW 'MDPB', ISOLATION TRANSFORMER, ISOLATION PANEL, NORMAL PANEL, AND 300A FUSED CAM-LOCK DISCONNECT SWITCH. PROVIDE POWER TO TRANSFORMER, PANELS, AND CAM-LOCK SWITCH FROM 'MDPB'.
- PROVIDE POWER TO MECHANICAL EQUIPMENT FROM 'MDPB'.
- PROVIDE POWER TO TRUSS MOUNTED DISCONNECT SWITCHES FOR STUDIO LIGHTING.
- PROVIDE POWER AND LIGHTING AS INDICATED IN DRAWINGS.

ELECTRICAL SYMBOL LEGEND

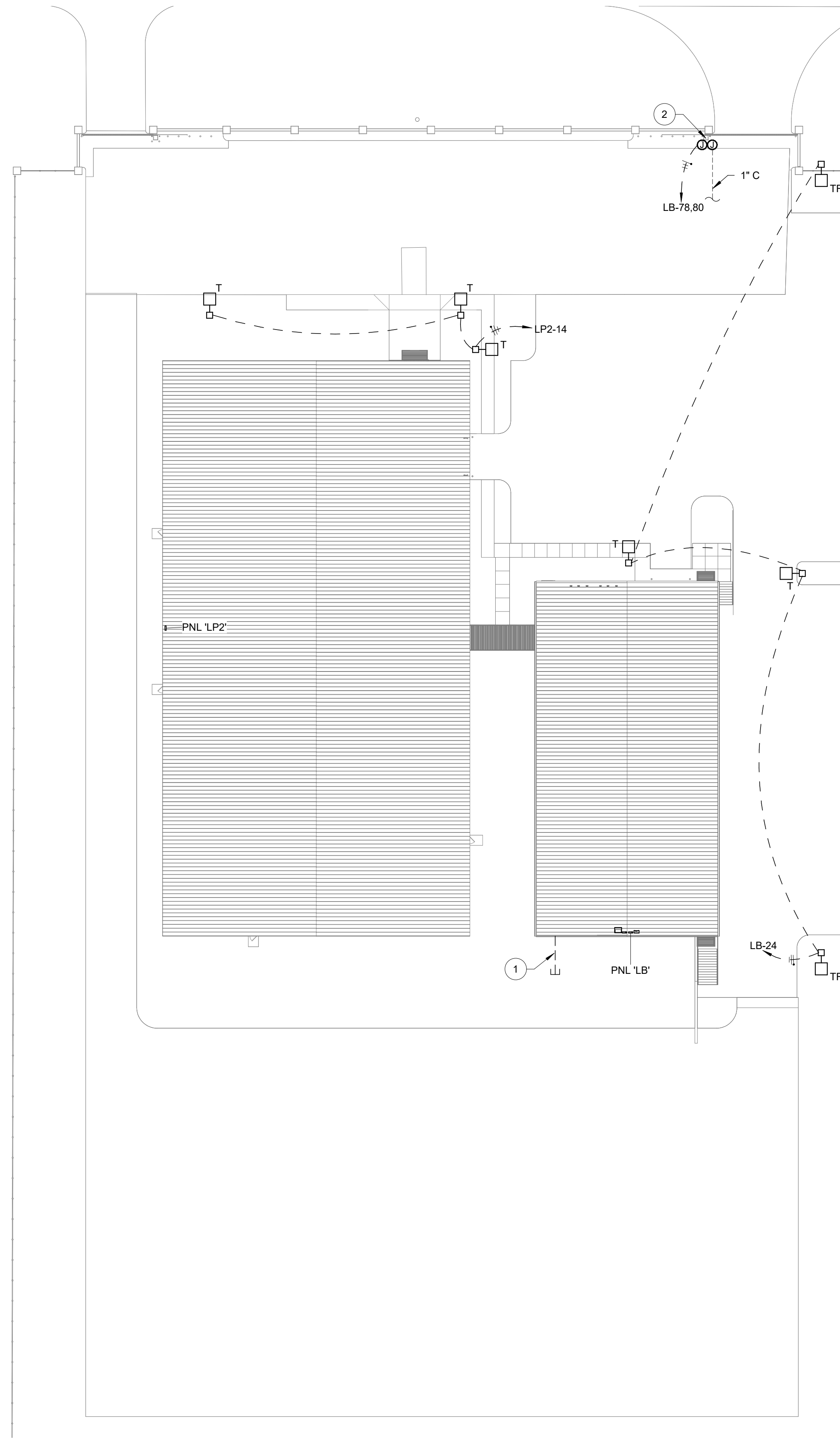
	ELECTRICAL SWITCHBOARD		ELECTRICAL JUNCTION BOX
	STRIP LIGHT FIXTURE		DUPLEX RECEPTACLE
	2x2' LIGHT FIXTURE		DOUBLE-DUPLEX RECEPTACLE
	DOWNLIGHT		6" ABOVE COUNTER, COORDINATE FINAL HEIGHTS WITH MILLWORK ELEVATIONS
	EMERGENCY FIXTURE		GFCI RECEPTACLE
	SINGLE POLE SWITCH		SIMPLEX RECEPTACLE, NEMA TYPE NOTED ON PLANS
	SWITCH - LOWER CASE INDICATES SWITCH GROUP		DUPLEX/USB COMBO RECEPTACLE
	INFRARED OCCUPANCY SENSOR SWITCH		ELECTRICAL DISCONNECT SWITCH
	INFRARED OCCUPANCY DIMMING SENSOR SWITCH		FUSED ELECTRICAL DISCONNECT SWITCH
	3-WAY SWITCH		COMBINATION MOTOR STARTER
	LOW-VOLTAGE SWITCH, COMPATIBLE WITH POWER PACK		MOTOR STARTER
	PHOTOCELL, 120V		MANUAL MOTOR STARTER SWITCH
	ELECTRICAL POINT OF CONNECTION OR GROUND ROD		ENCLOSED CIRCUIT BREAKER
	TV OUTLET		HOMERUN, CONCEALED IN WALLS AND CEILINGS
	DATA OUTLET		HOMERUN, CONCEALED IN SLAB OR BELOW GRADE
	SMOKE DETECTOR		CIRCUIT AND (assigned switch group)
	FLOOR BOX EQUAL TO LEGRAND RFBA SERIES.		LOW VOLTAGE WIRING

ABBREVIATIONS

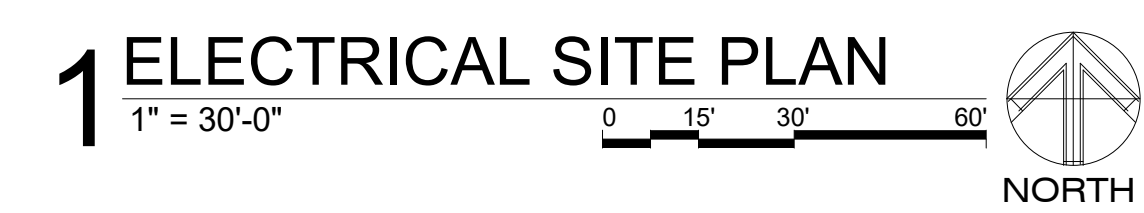
A	Amperes	IDF	Intermediate Distribution Frame
AC	Air Conditioning	IMC	Intermediate Metal Conduit
AIC	Amperes Interrupting Capacity	kV	Kilovolts
ATS	Automatic Transfer Switch	kVA	KiloVolt-Amperes
BAS	Building Automation System	kW	Kilowatts
BPS	Bolted Pressure Switch	LCD	Liquid Crystal Display
C	Conduit	LED	Light Emitting Diode
CB	Circuit Breaker	LV	Low Voltage
CDF	Cable Distribution Frame	MC	Momentary Contact
CKT	Circuit	MDF	Main Distribution Frame
conc	concrete encased	N	Neutral
ded	dedicated	O.C.	On Center
DP	Distribution Panel	P	Pole
EB	Electronic Ballast	PC	Photocell
EMT	Electric Metallic Tubing	PNL	Panel
fc	Footcandles	PVC	Polyvinyl Chloride
FU	Fused	SPD	Surge Protective Device
G	Ground	SW	Switch
GFI	Ground Fault Interrupter	SWBD	Switchboard
GFP	Ground Fault Protection	UPS	Uninterruptible Power Supply
GND	Ground	UTP	Unshielded Twisted Pair
GRC	Galvanized Rigid Conduit	V	Volts
HID	High Intensity Discharge	VA	Volt-Amperes
HVAC	Heating, Ventilation, and Air Conditioning	W	Watts
HWG	Heavy Wall Gauge	w/	with

LIGHT FIXTURE SCHEDULE							
TAG	MANUFACTURER	CATALOG NUMBER	VOLTAGE	WATTAGE	LIGHT SOURCE	MOUNTING	DESCRIPTION
A	LITHONIA	CPANL 2x4 40/50/60LM 50K M2	120V	53 W	LED, 5000K	CEILING, RECESSED	2x4' LED FLAT PANEL
AE	LITHONIA	CPANL 2x4 40/50/60LM 50K M2	120V	53 W	LED, 5000K	CEILING, RECESSED	2x4' LED FLAT PANEL, PROVIDE EMERGENCY BATTERY
C	LITHONIA	CNY P1 40K MVOLT WH	120V	36 W	LED, 4000K	CEILING, SURFACE	CANOPY SURFACE MOUNTED 4500L
D	LITHONIA	LDN4 35/20 L04 AR LD MVOLT GZ10	120V	22 W	LED, 3500K	CEILING, RECESSED	4" LED DOWNLIGHT, 2000L
DE	LITHONIA	LDN4 35/20 L04 AR LD MVOLT GZ10 EL	120V	22 W	LED, 3500K	CEILING, RECESSED	4" LED DOWNLIGHT, 2000L, BATTERY BACK-UP
P	--	RE: ARCH - MATERIAL FINISH / SPECIALTIES SCHEDULE	120V	180 W	E26, LED	CEILING, PENDANT	DECORATIVE 3-LAMP PENDANT, RE: A5.1 FOR MOUNTING DETAILS
P8	LITHONIA	CSS L96 AL04 MVOLT 50K 80CRI	120V	84 W	LED, 5000K	CEILING, PENDANT	PENDANT MOUNTED STRIP, 10000L
P8E	LITHONIA	CSS L96 AL04 MVOLT 50K 80CRI IE7WCP	120V	84 W	LED, 5000K	CEILING, PENDANT	PENDANT MOUNTED STRIP, BATTERY BACK-UP, 10000L
T	LITHONIA	DSX1LED P3 40K T4M MVOLT DDBXD G1	120V	102 W	LED, 4000K	POLE MOUNTED	POLE MOUNTED SITE LIGHT, 20'-0" POLE, TYPE 4 MEDIUM DISTRIBUTION
TR	LITHONIA	DSX1LED P10(R90) 40K T4M MVOLT DDBXD G1	120V	106 W	LED, 4000K	POLE MOUNTED	POLE MOUNTED SITE LIGHT, 20'-0" POLE, TYPE 4 MEDIUM DISTRIBUTION, ROTATED OPTICS
V	--	RE: ARCH - MATERIAL FINISH / SPECIALTIES SCHEDULE	120V	0 W	---	WALL, SURFACE	VANITY FIXTURE, RE: A5.1 FOR MOUNTING DETAILS
WPE	LITHONIA	DSXW1 LED 10C 350 40K T4M MVOLT E20WC DDBXD	120V	13 W	LED, 4000K	WALL, SURFACE +96"	1500L WALL PACK, EMERGENCY BACKUP
X	LITHONIA	EDG-1R-EL	120V	3 W	LED, RED	CEILING, SURFACE	EXIT LIGHT, BATTERY BACK-UP





- KEYNOTES**
- 1 PROVIDE CONDUIT STUB UP FOR FUTURE SITE LIGHTING.
 - 2 PROVIDE 208V POWER FOR GATE OPENER. PROVIDE 1" CONDUIT FOR DATA TO GATE OPENER.




mgm
 design
 group


 GREEN ACORN LLC
 1820 S BOULDER AVE, STE #300
 TULSA, OKLAHOMA 74119
 918-629-4291
 OK CA# 8292 exp. JUN-30-24
 www.GreenAcornLLC.com

Cherokee Nation Businesses
**CNFO Owasso Campus
 Improvements Phase II**
 16990 East 116th Street North Owasso, Oklahoma 74055

JOB NUMBER
1096.01

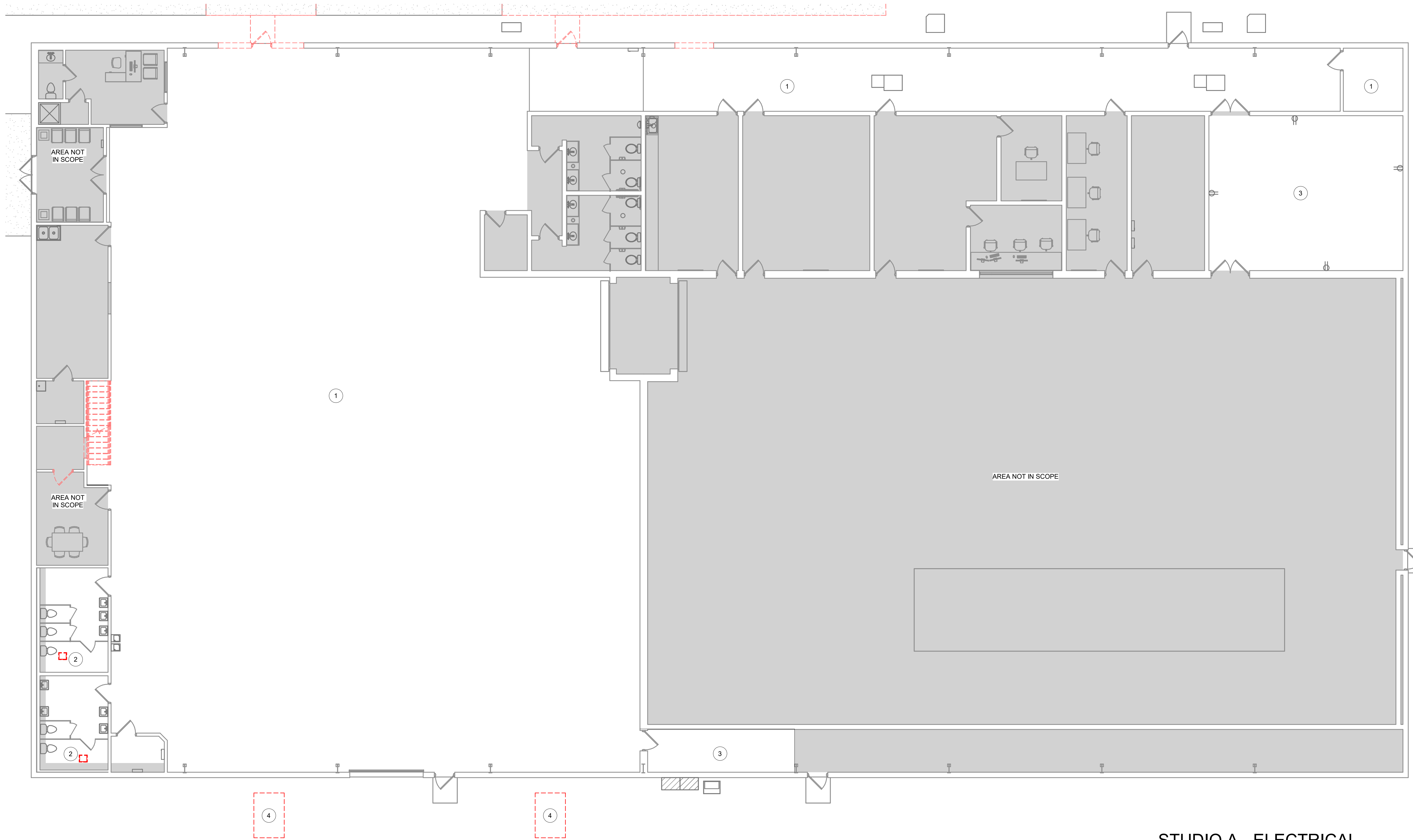


DATE
02.13.23
SHEET
Electrical Site Plan

E0.2

KEYNOTES

- 1 REMOVE EXISTING LIGHT FIXTURES SERVING THIS AREA.
- 2 REMOVE EXISTING EXHAUST FAN. RETAIN CIRCUITS FOR RE-USE.
- 3 NO DEMO SCOPE IN THIS AREA.
- 4 DISCONNECT EXISTING RTU'S. RETAIN CIRCUITS FOR REUSE.



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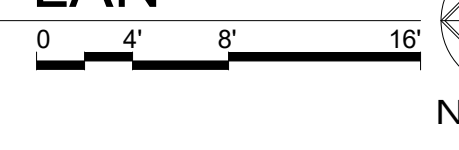


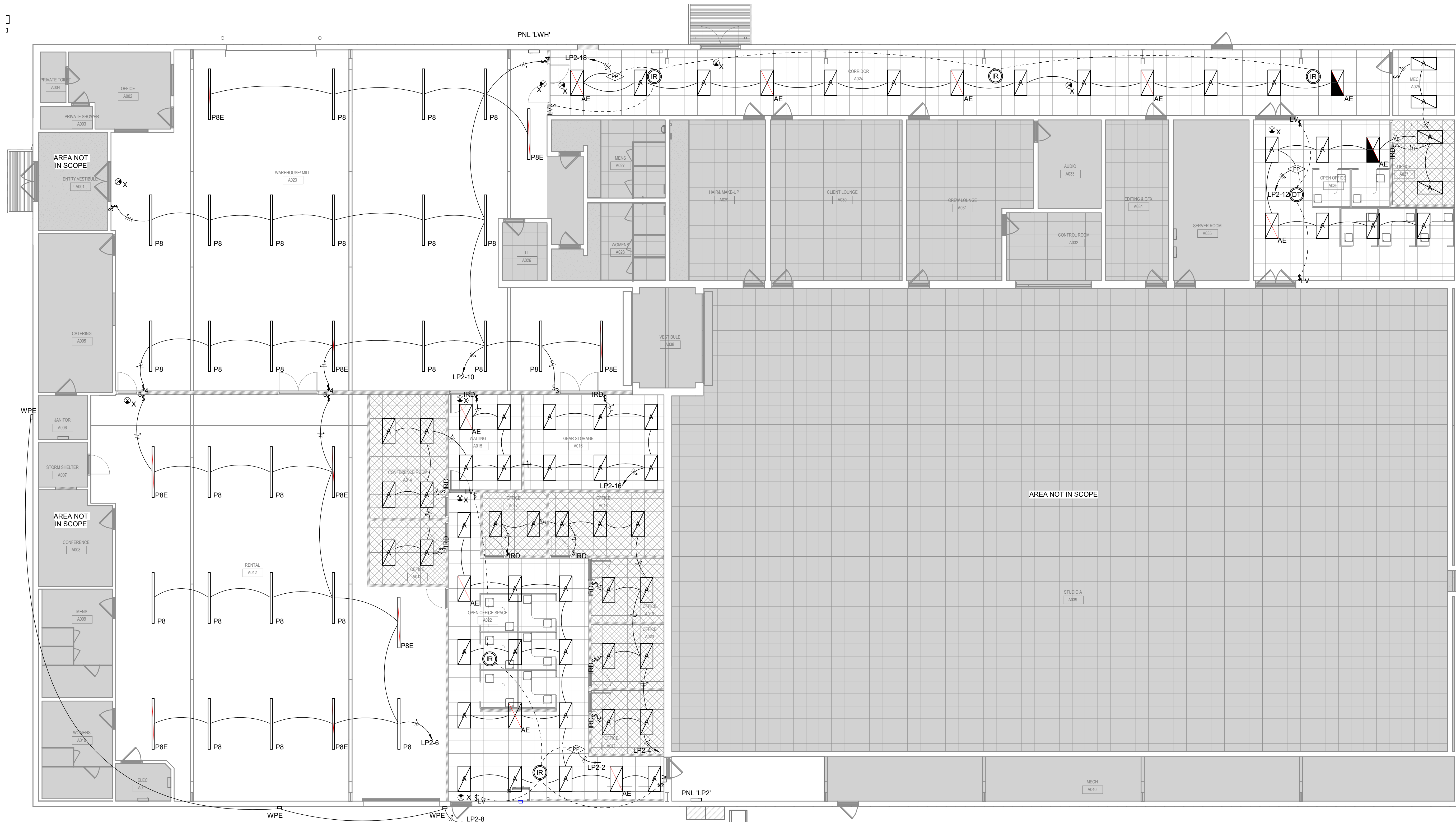
DATE
02.13.23

SHEET
Studio A -
Electrical
Demolition Plan

ED1.1

1 STUDIO A - ELECTRICAL
DEMOLITION PLAN
1/8" = 1'-0"





JOB NUMBER
 1096.01

REVISIONS



DATE
 02.13.23

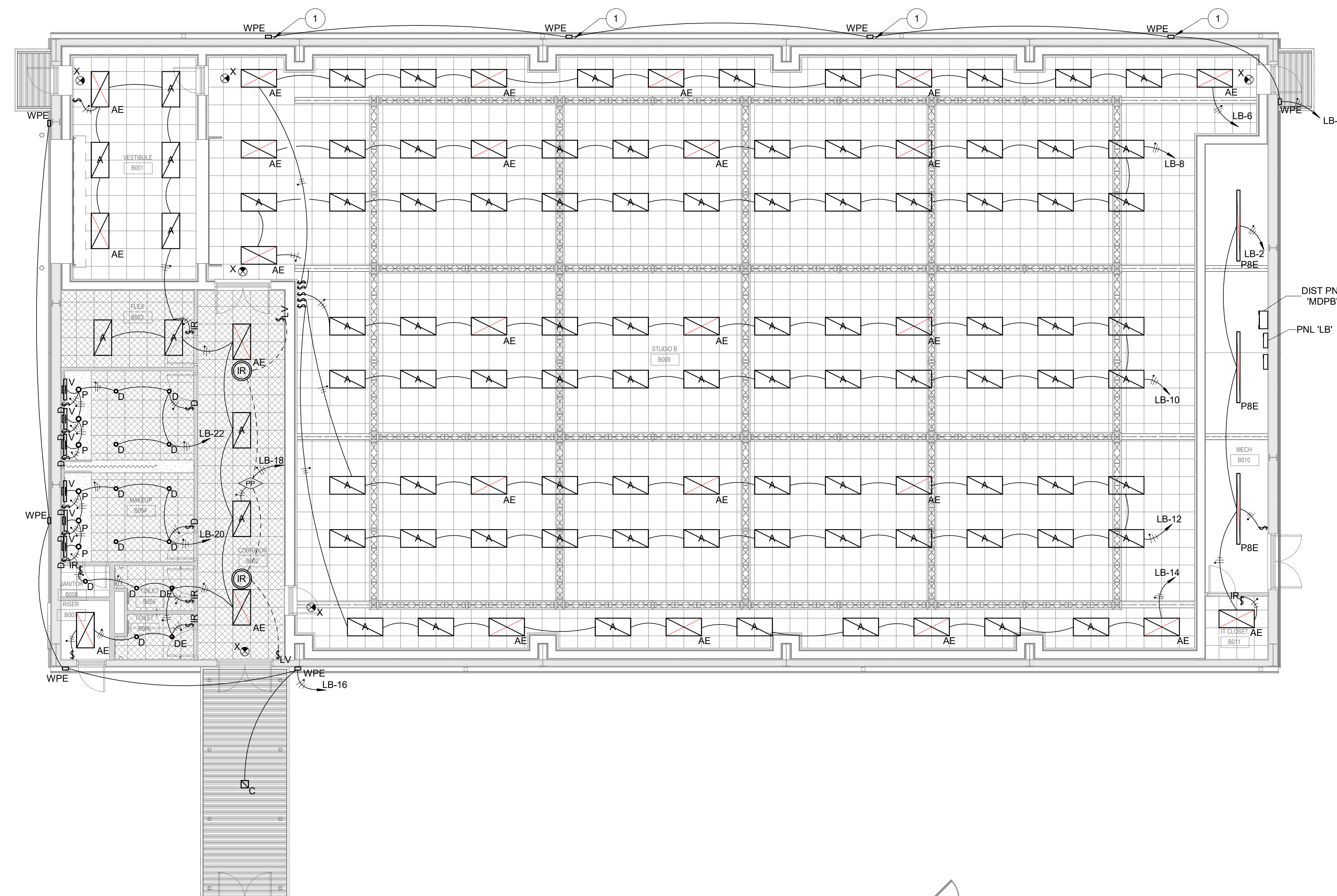
SHEET
 Studio A -
 Electrical Lighting
 Plan

E1.1

1 STUDIO A - LIGHTING PLAN
 1/8" = 1'-0" NORTH

KEYNOTES

1 FIXTURE WPE MOUNTED 16'-0" ABOVE FINISHED FLOOR.



1 STUDIO B - LIGHTING PLAN
 1/8" = 1'-0"
 0 4 8 16
 NORTH

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DATE
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 SHEET
 Studio B -
 Electrical Lighting
 Plan

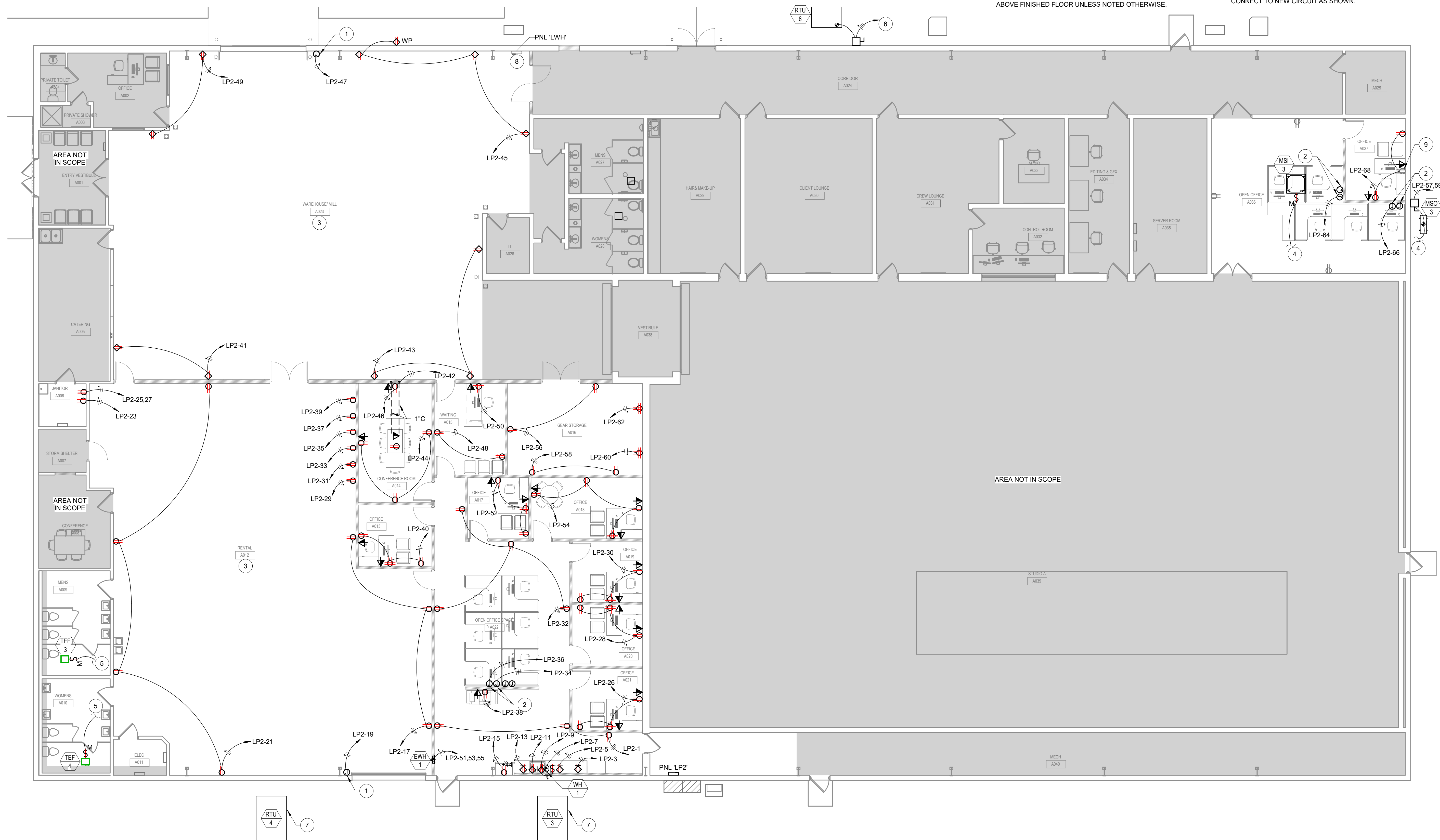
E1.2

KEYNOTES

- 1 PROVIDE 120V POWER FOR OVERHEAD DOOR. VERIFY FINAL LOCATION WITH OWNER PRIOR TO ROUGH-IN.
- 2 PROVIDE POWER AND DATA CONNECTIONS FOR MODULAR FURNITURE CONNECTION FROM OVERHEAD POWER POLE. PROVIDE POWER POLES COMPATIBLE WITH MODULAR FURNITURE SYSTEM. FINAL LOCATION AND COLOR OF POWER POLE TO BE COORDINATED WITH OWNER PRIOR TO ROUGH-IN.
- 3 ALL RECEPTACLES IN THIS ROOM TO BE MOUNTED ~48" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.

KEYNOTES

- 4 INDOOR UNIT MS13 POWERED BY OUTDOOR UNIT MS03.
- 5 CONNECT TO CIRCUIT PREVIOUSLY SERVING AREA.
- 6 CONNECT TO 200A/3P SPARE IN EXISTING MDP.
- 7 RECONNECT NEW RTU TO EXISTING CIRCUIT SERVING PREVIOUS RTU.
- 8 PROVIDE 200A MLO PANEL WITH 30 SPACES FOR PANEL 'LWH' FOR FUTURE USE.
- 9 DISCONNECT EXISTING RECEPTACLE FROM CIRCUIT. CONNECT TO NEW CIRCUIT AS SHOWN.



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DATE
 02.13.23
 SHEET
 Studio A -
 Electrical Power
 Plan

E2.1

1 STUDIO A - POWER PLAN
 1/8" = 1'-0"
 0 4' 8' 16'
 NORTH

GENERAL AV SYSTEM NOTES

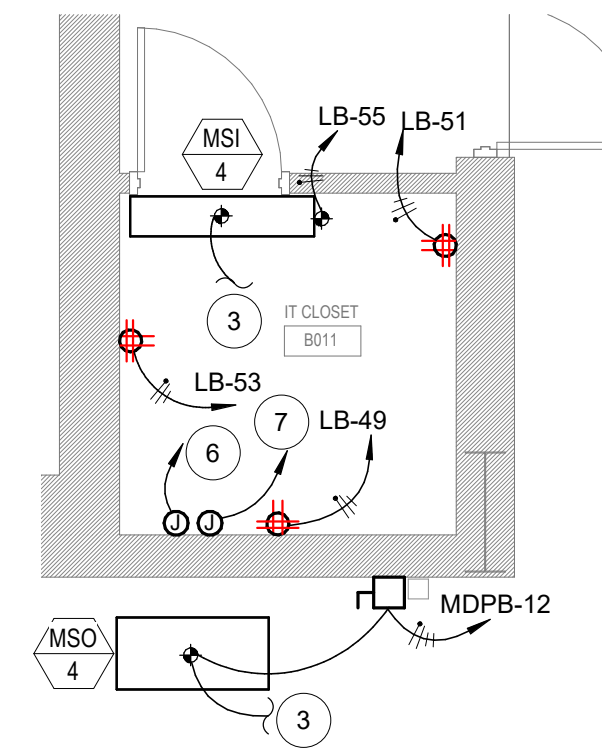
- ALL AV POWER TO USE A TECH POWER "SINGLE-POINT" ISOLATED GROUND SYSTEM USING A SEPARATE TECHNICAL (ISOLATED) GROUND BAR ON INSULATORS. A DEDICATED NEUTRAL ON INSULATORS AND SEPARATE SAFETY GROUND. THE PURPOSE IS TO PROVIDE A SEPARATE GROUND FOR THE SOUND SYSTEM, THAT BONDS TO THE BUILDING GROUND AT ONLY ONE SPECIFIED POINT, TO REDUCE THE POTENTIAL FOR GROUND LOOPS AND MINIMIZE NOISE.
- THE GROUNDING CONDUCTOR (SAFETY GROUND) AND THE GROUNDED CONDUCTOR (NEUTRAL) ARE TO BE BONDED TOGETHER ONLY AT THE MAIN SERVICE PANEL OR AT THE SEPARATELY DERIVED TRANSFORMER. NO FURTHER MECHANICAL CONNECTION OF THE NEUTRAL AND GROUND IS ALLOWED ON THE LOAD SIDE OF THE MAIN PANEL.
- ISOLATED GROUND CONDUCTORS SHALL HAVE GREEN INSULATION WITH YELLOW TRACER.
- ALL AV RELATED 120 VAC TECH POWER CIRCUITS SHALL HAVE SEPARATE NEUTRALS AND ISOLATED GROUNDS. DO NOT SHARE NEUTRALS BETWEEN LOADS.
- ALL TECHNICAL POWER NEUTRAL CONDUCTORS SHALL BE WHITE WITH BLACK TRACER.
- ALL TECH POWER CIRCUITS WILL BE 120 VAC, 20 AMP DEDICATED CIRCUITS UNLESS NOTED OTHERWISE.
- ALL CIRCUITS TO BE SIZED FOR A FULL LOAD VOLTAGE LOSS OF NO MORE THAN 3%.
- CONDUIT AND RACEWAY SYSTEMS MUST BE BONDED TO EARTH, BUILDING SAFETY GROUND, AND ALL PARTS TOGETHER. EXCEPTIONS ARE TECHNICAL EQUIPMENT RACKS THAT ARE TO BE ELECTRICALLY ISOLATED FROM THE CONDUIT SYSTEM AND THE BUILDING STRUCTURE.
- EQUIPMENT RACKS WILL BE BONDED TOGETHER AND TO THEIR INTERNAL BARE COPPER BUSS BARS. THE EQUIPMENT RACKS WILL BE BONDED TO THE SPECIFICALLY PROVIDED TECHNICAL GROUND THAT HAS BEEN PROVIDED IN ALLOWANCE WITH THE NEC. EQUIPMENT RACKS ARE TO BE ELECTRICALLY ISOLATED FROM THE CONDUIT SYSTEM USING NON-CONDUCTIVE MECHANICAL CONNECTIONS. THE EQUIPMENT RACK WILL BE ELECTRICALLY ISOLATED FROM THE FACILITY STRUCTURE BY NON-CONDUCTIVE MOUNTS OR SUPPORTS.
- ALL CONDUITS TO BE EMT ABOVE SLAB AND PVC BELOW SLAB. OBSERVE CONDUIT SEPARATION DISTANCES AT ALL TIMES.
- ALL CONDUIT CONNECTORS SHALL BE FURNISHED WITH NYLON BUSHINGS TO PREVENT DAMAGE TO CABLES FROM BURRED OR UNEVENLY CUT CONDUIT.
- USE INSULATED BUSHINGS TO CONNECT CONDUIT TO EQUIPMENT RACKS, TO INSULATE CONDUIT GROUND FROM EQUIPMENT RACK GROUND SYSTEM.
- KEEP 90° BENDS TO A MINIMUM. THE CONDUIT SYSTEM SHALL NOT HAVE MORE THAN THREE 90° BENDS OR THEIR EQUIVALENT BETWEEN PULL BOXES. ALL CONDUIT RUNS IN EXCESS OF 100 FEET SHALL HAVE INTERMEDIATE JUNCTION BOXES EVERY 100 FEET OR THREE BENDS, WHICHEVER COMES FIRST.
- CONDUIT FIELD BENDS AND OFFSETS SHALL BE AVOIDED WHENEVER POSSIBLE. BENDS SHALL BE MADE IN A MANNER WHICH AVOIDS CHANGING THE INTERNAL DIAMETER AND DOES NOT DAMAGE ANY PROTECTIVE COATINGS. ALL BENDS SHALL BE FREE FROM KINKS, INDENTATIONS, AND ANY FLATTENING. INDIVIDUAL BENDS SHALL NOT EXCEED 90° AND NOT MORE THAN 270° OF TOTAL BENDS SHALL BE ALLOWED IN ANY ONE CONDUIT.
- THE STANDARD SIZE FOR ALL AUDIO VISUAL CONDUIT SHALL BE 2" UNLESS NOTED OTHERWISE.
- ALL AUDIO VISUAL RELATED JUNCTION BOXES SHALL REMAIN ACCESSIBLE AT ALL TIMES.

SIGNAL SEPARATION

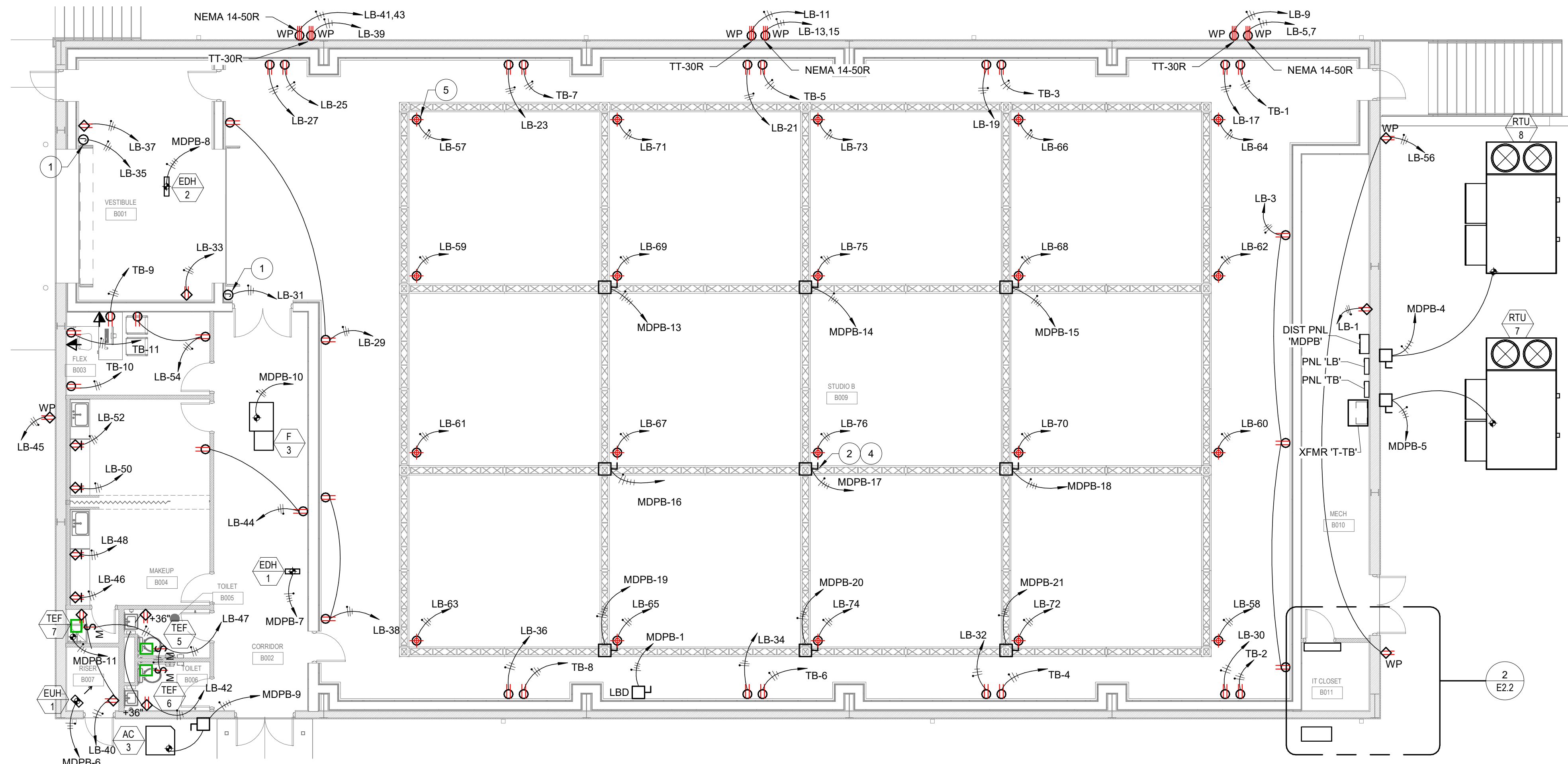
SPECIAL CARE IS TO BE TAKEN TO KEEP MINIMUM SEPARATIONS OF DIFFERENT SIGNAL TYPES AND LEVELS. THE FOLLOWING TABLE WILL CREATE GROUPS TO HELP DEFINE AND CONTROL THESE SEPARATIONS. CABLES OR WIRES MAY BE COMBINED WITHIN A GROUP BUT MUST NOT BE COMBINED WITH CABLES OF DIFFERENT GROUPS. THE GOAL IS TO KEEP EACH GROUP DISCRETE AND SEPARATE THROUGHOUT THE CONDUIT/RACEWAY SYSTEM. INDIVIDUAL CONDUIT SYSTEMS FOR EACH GROUP WILL BE PROVIDED. THERE SHALL NOT BE JUNCTION BOXES WHERE SIGNAL GROUPS ARE COMBINED, UNLESS NOTED OTHERWISE. COMBINATION WALL PLATES, FLOOR BOXES, OR INTERFACE SHOULD MAINTAIN CONDUIT SEPARATIONS AS MUCH AS POSSIBLE. METAL DIVIDERS SHALL BE USED TO KEEP WIRE GROUPS SEPARATE IN RACEWAYS. AT NO TIME SHALL ANY ELECTRICAL WIRING IN EXCESS OF 75 VOLTS BE PRESENT IN ANY RACEWAY CONTAINING ANY OF THESE SIGNAL GROUPS.

SIGNAL GROUPS ARE DEFINED AS FOLLOWS:
 GROUP - A = MICROPHONE CABLES, AND LOW LEVEL SIGNALS (0 TO 100 MILLIVOLTS)
 GROUP - B = LINE LEVEL AND INTERMEDIATE LEVELS (100 MILLIVOLT TO 10 VOLT)
 GROUP - C = LOUDSPEAKER AND CONTROL (10 TO 75 VOLTS)
 GROUP - D = TELEPHONE, VIDEO, CONTROL, AND DIGITAL SYSTEMS
 GROUP - E = FIBER OPTIC CABLES

	GROUP - A	GROUP - B	GROUP - C	GROUP - D	GROUP - E
GROUP - A	ADJACENT	6"	12"	12"	ADJACENT
GROUP - B	-	ADJACENT	12"	6"	ADJACENT
GROUP - C	-	-	ADJACENT	6"	ADJACENT
GROUP - D	-	-	-	ADJACENT	ADJACENT
GROUP - E	-	-	-	-	ADJACENT
DIMMER CONTROLLED LIGHTING	24"	12"	6"	12"	ADJACENT
SCR/RELAY CONTROLLED DEVICES	36"	12"	6"	6"	ADJACENT
208V POWER FEEDER CIRCUITS	72"	72"	60"	72"	ADJACENT
ALL OTHERS (PLUMBING, HEAT, ETC)	12"	12"	6"	12"	ADJACENT



ENLARGED POWER PLAN -
IT CLOSET B011
 1/4" = 1'-0"



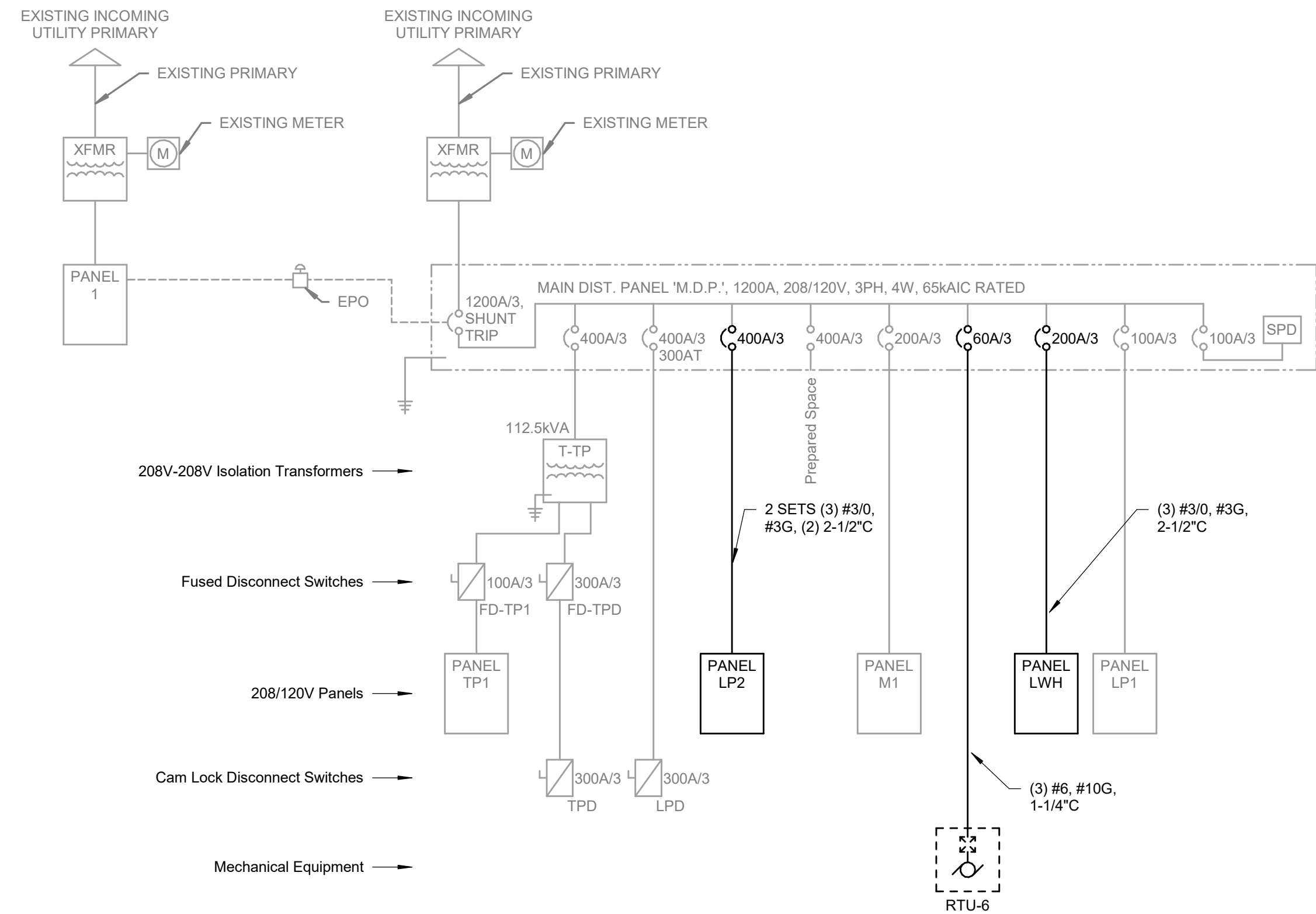
1 STUDIO B - POWER PLAN
 1/8" = 1'-0"

KEYNOTES

- PROVIDE 120V POWER FOR OVERHEAD DOOR. VERIFY FINAL LOCATION WITH OWNER PRIOR TO ROUGH-IN.
- PROVIDE 100A/2P POWER FOR LIGHTING LUNCHBOX CONNECTION. COORDINATE FINAL LOCATION PRIOR TO ROUGH-IN. (TYP OF 9)
- INDOOR UNIT MS4 POWERED BY OUTDOOR UNIT MSO4.
- PROVIDE PANTOGRAPH MOUNTED TO RIGGING TRUSS FOR LIGHTING LUNCH BOX CABLE MANAGEMENT. (TYP OF 9)
- PROVIDE CEILING MOUNTED RECEPTACLE FOR CHAIN HOIST FOR LIGHTING RIGGING. (TYP OF 4)
- ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL A 12"x12"x8" J-BOX 96" AFFD AND PULL WIRE TO TIE INTO TB CIRCUITS 35, 37, 39, 41. AV CONTRACTOR TO PROVIDE RECEPTACLES AND WIRE FROM AV RACK TO J-BOX.
- ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL A 12"x12"x8" J-BOX 96" AFFD AND PULL WIRE TO TIE INTO TB CIRCUITS 36, 38, 40, 42. AV CONTRACTOR TO PROVIDE RECEPTACLES AND WIRE FROM AV RACK TO J-BOX.

Dist. Panel: MDP									
Location: UTILITY XFMR					Volts/Phase: 120/208 Wye, 3PH, 4W				
Supply From: UTILITY XFMR					A.I.C. Rating: 65kAIC, Fully Rated				
Mounting: PAD					Mains Type: MCB				
Enclosure: NEMA 3R					Mains Rating: 1200 A				
CKT	Circuit Description	Wire Size (H,N,G) or (H,G)	Trip	Poles	Notes	A (kVA)	B (kVA)	C (kVA)	Remarks
1	XFMR 'T-TP' (FD-TPD & PANEL 'TP1')		400 A	3		34.86	35.04	34.86	
2	LPD (CAM LOCK DISCONNECT)		300 A	3		28.80	28.80	28.80	
3	PANEL LP2		400 A	3		16.56	18.16	16.51	
4	PREPARED SPACE		400 A	3	--	0.00	0.00	0.00	
5	PANEL 'M1'		200 A	3		8.15	9.45	10.59	
6	RTU-6		60 A	3		4.57	4.57	4.57	
7	PANEL 'LWH'		200 A	3		0.00	0.00	0.00	
8	PANEL 'LP1'		100 A	3		7.92	6.90	8.34	
9	SURGE PROTECTION DEVICE		100 A	3	--	0.00	0.00	0.00	
10									
11									
12									
13									
14									
						100.86 kVA	102.92 kVA	103.67 kVA	

Breaker Notes	Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
1) Shunt Trip	HVAC	43159 VA	100.00%	43159 VA	
2) Lock-out Breaker	Lighting	100645 VA	125.00%	125806 VA	Total Connected Load: 307 kVA
3) GFEP	Motor	7779 VA	124.74%	9704 VA	Total Estimated Demand: 330 kVA
4) GFCI	Receptacle	19940 VA	75.08%	14970 VA	Total Est. Demand Current: 915 A
5) AFCI (Dedicated Neutral Req'd)	Spare1	0 VA	0.00%	0 VA	
6) Existing Breaker	Misc Equip	135921 VA	100.00%	135921 VA	

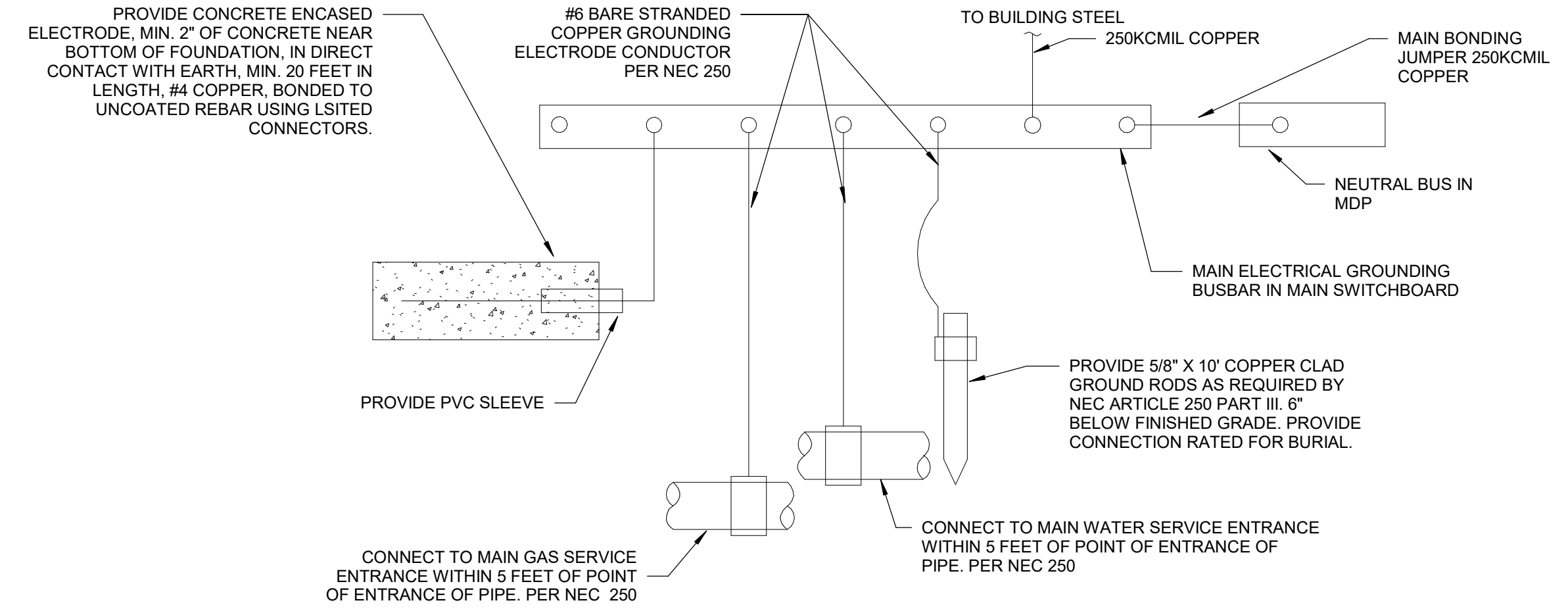


1 ELECTRICAL ONE LINE -
STUDIO A
N.T.S.

JOB NUMBER
1096.01



DATE
02.13.23
SHEET
Electrical Details



- NOTE:
1. PROVIDE GROUNDING OF TELECOMMUNICATIONS EQUIPMENT TO TELECOMMUNICATION MAIN GROUND BUSBAR PER TELECOMMUNICATION VENDOR'S DIRECTION.

ELECTRICAL GROUNDING
2 DETAIL
 N.T.S.

Dist. Panel: MDPB
 Location: MECH B010
 Supply From: UTILITY XFMR
 Mounting: Surface
 Enclosure: NEMA 1

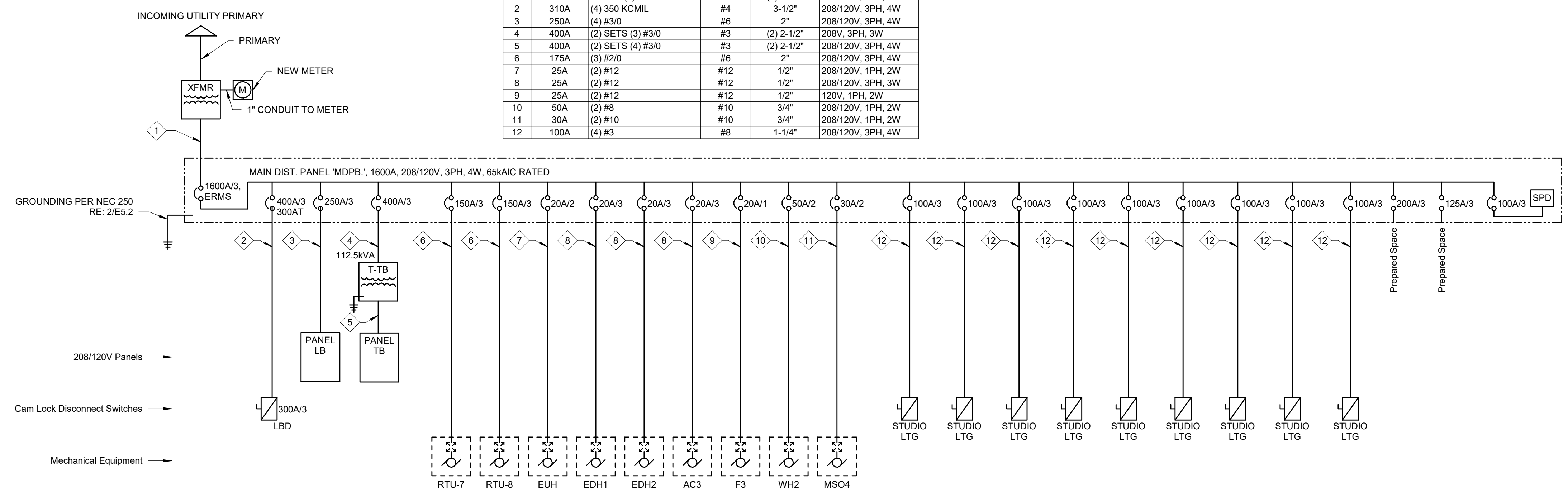
Volts/Phase: 208/120V, Wye, 3PH, 4W
 A.I.C. Rating: 65kAIC, Fully Rated
 Mains Type: MCB
 Mains Rating: 1600 A

CKT	Circuit Description	Trip	Poles	Notes	A	B	C	Remarks
1	LBD (CAM-LOCK)	300 A	3		5.55	5.55	5.55	
2	PANEL LB	250 A	3		23.10	24.86	23.41	
3	PANEL TB	100 A	3		3.92	3.92	6.94	
4	RTU-7	150 A	3		13.64	13.64	13.64	
5	RTU-8	150 A	3		13.64	13.64	13.64	
6	EUH	20 A	2	2	1.50	1.50		
7	EDH1	20 A	3	2	1.00	1.00	1.00	
8	EDH2	20 A	3	2	2.00	2.00	2.00	
9	AC3	20 A	3		0.72	0.72	0.72	
10	F3	20 A	1	2			0.96	
11	WH2	50 A	2	2		4.00	4.00	
12	MSO4	30 A	2		2.08		2.08	
13	LIGHTING LUNCH BOX	100 A	3		8.32	8.32	8.32	
14	LIGHTING LUNCH BOX	100 A	3		8.32	8.32	8.32	
15	LIGHTING LUNCH BOX	100 A	3		8.32	8.32	8.32	
16	LIGHTING LUNCH BOX	100 A	3		8.32	8.32	8.32	
17	LIGHTING LUNCH BOX	100 A	3		8.32	8.32	8.32	
18	LIGHTING LUNCH BOX	100 A	3		8.32	8.32	8.32	
19	LIGHTING LUNCH BOX	100 A	3		8.32	8.32	8.32	
20	LIGHTING LUNCH BOX	100 A	3		8.32	8.32	8.32	
21	LIGHTING LUNCH BOX	100 A	3		8.32	8.32	8.32	
22	PREPARED SPACE	200 A	3		0.00	0.00	0.00	
23	PREPARED SPACE	125 A	3		0.00	0.00	0.00	
24	SPD DISCONNECT	100 A	3		0.00	0.00	0.00	
25								
26								
					142.03 kVA	145.71 kVA	148.82 kVA	

Breaker Notes	Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
1) Shunt Trip	HVAC	95966 VA	100.00%	95966 VA	
2) Lock-out Breaker	Lighting	8175 VA	125.00%	10219 VA	Total Connected Load: 437 kVA
3) GFEP	Motor	29805 VA	125.00%	37256 VA	Total Estimated Demand: 479 kVA
4) GFCI	Receptacle	8460 VA	100.00%	8460 VA	Total Est. Demand Current: 1329 A
5) AFCI (Dedicated Neutral Req'd)	Misc Equip	45998 VA	100.00%	45998 VA	
6) Existing Breaker	Lighting (Non-Coincident)	248160 VA	113.15%	280802 VA	

Electrical Feeder Schedule

Mark	N.E.C. Amps	Wire	Ground	Conduit	Voltage
1	1675A	5 SETS (4) 400 KCML	--	(5) 3-1/2"	208/120V, 3PH, 4W
2	310A	(4) 350 KCML	#4	3-1/2"	208/120V, 3PH, 4W
3	250A	(4) #3/0	#6	2"	208/120V, 3PH, 4W
4	400A	(2) SETS (3) #3/0	#3	(2) 2-1/2"	208V, 3PH, 3W
5	400A	(2) SETS (4) #3/0	#3	(2) 2-1/2"	208/120V, 3PH, 4W
6	175A	(3) #2/0	#6	2"	208/120V, 3PH, 4W
7	25A	(2) #12	#12	1/2"	208/120V, 1PH, 2W
8	25A	(2) #12	#12	1/2"	208/120V, 3PH, 3W
9	25A	(2) #12	#12	1/2"	120V, 1PH, 2W
10	50A	(2) #8	#10	3/4"	208/120V, 1PH, 2W
11	30A	(2) #10	#10	3/4"	208/120V, 1PH, 2W
12	100A	(4) #3	#8	1-1/4"	208/120V, 3PH, 4W



ELECTRICAL ONE LINE -
1 STUDIO B
 N.T.S.



Cherokee Nation Businesses
CNFO Owasso Campus
Improvements Phase II
 16990 East 116th Street North Owasso, Oklahoma 74055

JOB NUMBER
 1096.01
 REVISIONS

 DATE
 02.13.23
 SHEET
 Electrical Details

Panelboard: LWH														
Location: WAREHOUSE/ MILL A023							Volts/Phase: 208/120V, Wye, 3PH, 4W							
Supply From:							A.I.C. Rating: 22kAIC, Fully Rated							
Mounting: Surface							Mains Type: MLO							
Enclosure: NEMA 1							Mains Rating: 200 A							
CKT	Circuit Description	Wire Size (H,N,G) or (H,G)	Notes	Trip	#	A (kVA)	B (kVA)	C (kVA)	#	Trip	Notes	Wire Size (H,N,G) or (H,G)	Circuit Description	CKT
1	SPACE	--	--	--	1	--	--	--	1	--	--	--	SPACE	2
3	SPACE	--	--	--	1	--	--	--	1	--	--	--	SPACE	4
5	SPACE	--	--	--	1	--	--	--	1	--	--	--	SPACE	6
7	SPACE	--	--	--	1	--	--	--	1	--	--	--	SPACE	8
9	SPACE	--	--	--	1	--	--	--	1	--	--	--	SPACE	10
11	SPACE	--	--	--	1	--	--	--	1	--	--	--	SPACE	12
13	SPACE	--	--	--	1	--	--	--	1	--	--	--	SPACE	14
15	SPACE	--	--	--	1	--	--	--	1	--	--	--	SPACE	16
17	SPACE	--	--	--	1	--	--	--	1	--	--	--	SPACE	18
19	SPACE	--	--	--	1	--	--	--	1	--	--	--	SPACE	20
21	SPACE	--	--	--	1	--	--	--	1	--	--	--	SPACE	22
23	SPACE	--	--	--	1	--	--	--	1	--	--	--	SPACE	24
25	SPACE	--	--	--	1	--	--	--	1	--	--	--	SPACE	26
27	SPACE	--	--	--	1	--	--	--	1	--	--	--	SPACE	28
29	SPACE	--	--	--	1	--	--	--	1	--	--	--	SPACE	30
Total Load:						0.00 kVA	0.00 kVA	0.00 kVA						
Breaker Notes		Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals								
1) Shunt Trip						Total Connected Load: 0.00 kVA								
2) Lock-out device						Total Estimated Demand: 0.00 kVA								
3) GFEP						Total Est. Demand Current: 0 A								
4) GFCI														
5) AFCI (Dedicated Neutral Required)														
6) Existing Circuit to Remain														
7) Through Relay Panel														
8) Through Lighting Inverter														

Panelboard: LP2																		
Location: MECH A040							Volts/Phase: 208/120V, Wye, 3PH, 4W											
Supply From: MDP							A.I.C. Rating: 22kAIC, Fully Rated											
Mounting: Surface							Mains Type: MLO											
Enclosure: NEMA 1							Mains Rating: 400 A											
CKT	Circuit Description	Wire Size (H,N,G) or (H,G)	Notes	Trip	#	A (kVA)	B (kVA)	C (kVA)	#	Trip	Notes	Wire Size (H,N,G) or (H,G)	Circuit Description	CKT				
1	RECEPTS, OPEN OFFICE	1-#12, 1-#12, 1-#12			20 A	1	0.54	0.80				1	20 A	1-#12, 1-#12, 1-#12	LIGHTING, OPEN OFFICE	2		
3	KITCHEN EQUIPMENT	1-#12, 1-#12, 1-#12			20 A	1		1.00	0.58			1	20 A	1-#12, 1-#12, 1-#12	LIGHTING, OFFICES	4		
5	KITCHEN EQUIPMENT	1-#12, 1-#12, 1-#12			20 A	1			1.00	1.18		1	20 A	1-#12, 1-#12, 1-#12	LIGHTING, RENTAL	6		
7	WH1	1-#12, 1-#12, 1-#12	2		20 A	1	1.50	0.04				1	20 A	6	1-#12, 1-#12, 1-#12	LIGHTING, EXTERIOR	8	
9	DISPOSAL	1-#12, 1-#12, 1-#12			20 A	1			1.00	1.60		1	20 A		1-#8, 1-#8, 1-#8	LIGHTING, WAREHOUSE	10	
11	DISHWASHER	1-#12, 1-#12, 1-#12			20 A	1						1	20 A		1-#12, 1-#12, 1-#12	LIGHTING, OPEN OFFICE	12	
13	KITCHEN EQUIPMENT	1-#12, 1-#12, 1-#12			20 A	1	1.00	0.31				1	20 A	6	1-#12, 1-#12, 1-#12	LIGHTING, SITE	14	
15	REFRIGERATOR	1-#12, 1-#12, 1-#12			20 A	1			1.00	0.85		1	20 A		1-#12, 1-#12, 1-#12	LIGHTING, OFFICES	16	
17	RECEPTS, RENTAL	1-#12, 1-#12, 1-#12			20 A	1			0.54	0.69		1	20 A		1-#10, 1-#10, 1-#10	LIGHTING, CORRIDOR	18	
19	OVERHEAD DOOR	1-#12, 1-#12, 1-#12			20 A	1	0.50	0.00				1	20 A	--	--	LIGHTING SPARE	20	
21	RECEPTS, RENTAL	1-#12, 1-#12, 1-#12			20 A	1			0.72	0.00		1	20 A	--	--	LIGHTING SPARE	22	
23	WASHER	1-#10, 1-#10, 1-#10			20 A	1			1.00	0.00		1	20 A	--	--	LIGHTING SPARE	24	
25	DRYER	2-#8, 1-#8			30 A	2	2.50	0.54				1	20 A		1-#12, 1-#12, 1-#12	RECEPTS, OFFICE	26	
27							2.50	0.54				1	20 A		1-#12, 1-#12, 1-#12	RECEPTS, OFFICE	28	
29	EQUIPMENT, RENTAL	1-#12, 1-#12, 1-#12			20 A	1				1.00	0.54		1	20 A		1-#12, 1-#12, 1-#12	RECEPTS, OFFICE	30
31	EQUIPMENT, RENTAL	1-#12, 1-#12, 1-#12			20 A	1	1.00	0.72				1	20 A		1-#12, 1-#12, 1-#12	RECEPTS, OPEN OFFICE	32	
33	EQUIPMENT, RENTAL	1-#12, 1-#12, 1-#12			20 A	1			1.00	0.18		1	20 A		1-#12, 1-#12, 1-#12	FURN FEED, OPEN OFFICE	34	
35	EQUIPMENT, RENTAL	1-#12, 1-#12, 1-#12			20 A	1				1.00	0.18		1	20 A		1-#12, 1-#12, 1-#12	FURN FEED, OPEN OFFICE	36
37	EQUIPMENT, RENTAL	1-#12, 1-#12, 1-#12			20 A	1	1.00	1.00				1	20 A		1-#12, 1-#12, 1-#12	COPIER, OPEN OFFICE	38	
39	EQUIPMENT, RENTAL	1-#12, 1-#12, 1-#12			20 A	1			1.00	0.54		1	20 A		1-#12, 1-#12, 1-#12	RECEPTS, OFFICE	40	
41	RECEPTS, WAREHOUSE	1-#10, 1-#10, 1-#10			20 A	1				1.18	0.18		1	20 A		1-#12, 1-#12, 1-#12	FLOOR BOX, CONF. RM	42
43	RECEPTS, WAREHOUSE	1-#12, 1-#12, 1-#12			20 A	1	0.54	0.54				1	20 A		1-#12, 1-#12, 1-#12	RECEPTS, CONF. RM	44	
45	RECEPTS, WAREHOUSE	1-#12, 1-#12, 1-#12			20 A	1			0.72	0.18		1	20 A		1-#12, 1-#12, 1-#12	TV, CONF. RM	46	
47	OVERHEAD DOOR	1-#12, 1-#12, 1-#12			20 A	1				0.50	0.36		1	20 A		1-#12, 1-#12, 1-#12	RECEPTS, WAITING	48
49	RECEPTS, WAREHOUSE	1-#12, 1-#12, 1-#12			20 A	1	0.36	0.18				1	20 A		1-#12, 1-#12, 1-#12	RECEPTS, WAITING	50	
51									1.60	0.54		1	20 A		1-#12, 1-#12, 1-#12	RECEPTS, OFFICE	52	
53	EW1	3-#12, 1-#12	2		20 A	3				1.60	0.72		1	20 A		1-#12, 1-#12, 1-#12	RECEPTS, OFFICE	54
55							1.60	0.36				1	20 A		1-#12, 1-#12, 1-#12	RECEPTS, GEAR STORAGE	56	
57	MISO3	2-#8, 1-#8			30 A	2			2.08	0.36		1	20 A		1-#12, 1-#12, 1-#12	RECEPTS, GEAR STORAGE	58	
59										2.08	1.00		1	20 A		1-#12, 1-#12, 1-#12	EQUIP, GEAR STORAGE	60
61	SPARE	--	--	--	20 A	1	0.00	1.00				1	20 A		1-#12, 1-#12, 1-#12	EQUIP, GEAR STORAGE	62	
63	SPARE	--	--	--	20 A	1			0.00	0.18		1	20 A		1-#12, 1-#12, 1-#12	FURN FEED, OPEN OFFICE	64	
65	SPARE	--	--	--	20 A	1					0.00	0.18	1	20 A		1-#12, 1-#12, 1-#12	FURN FEED, OPEN OFFICE	66
67	SPARE	--	--	--	20 A	1	0.00	0.54				1	20 A		1-#12, 1-#12, 1-#12	RECEPTS, OFFICE	68	
69	SPARE	--	--	--	20 A	1			0.00	0.00		1	20 A	--	--	SPARE	70	
71	SPARE	--	--	--	20 A	1				0.00	0.00		1	20 A	--	--	SPARE	72
73	SPARE	--	--	--	20 A	1	0.00	0.00				1	20 A	--	--	SPARE	74	
75	SPARE	--	--	--	20 A	1			0.00	0.00		1	20 A	--	--	SPARE	76	
77	SPARE	--	--	--	20 A	1				0.00	0.00	1	20 A	--	--	SPARE	78	
79	SPARE	--	--	--	20 A	1	0.00	0.00				1	20 A	--	--	SPARE	80	
81	SPARE	--	--	--	20 A	1			0.00	0.00		1	20 A	--	--	SPARE	82	
83	SPARE	--	--	--	20 A	1					0.00	0.00	1	20 A	--	--	SPARE	84
Total Load:						16.56 kVA	18.16 kVA	16.51 kVA										
Breaker Notes		Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals												
1) Shunt Trip		HVAC	8958 VA	100.00%	8958 VA	Total Connected Load: 51.23 kVA												
2) Lock-out device		Lighting	6615 VA	125.00%	8269 VA	Total Estimated Demand: 52.05 kVA												
3) GFEP		Receptacle	11660 VA	92.88%	10830 VA	Total Est. Demand Current: 144 A												
4) GFCI		Misc Equip	23992 VA	100.00%	23992 VA													
5) AFCI (Dedicated Neutral Required)																		
6) Controlled Via Time Clock																		
7) Through Relay Panel																		
8) Through Lighting Inverter																		



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CNFO Owasso Campus Improvements Phase II
 16990 East 116th Street North Owasso, Oklahoma 74055

JOB NUMBER
 1096.01

REVISIONS



DATE
 02.13.23

SHEET
 Electrical Schedules

E6.1

Panelboard: TB														
Location: MECH B010							Volts/Phase: 208/120V, Wye, 3PH, 4W							
Supply From: MDPB							A.I.C. Rating: 22kAIC, Fully Rated							
Mounting: Surface							Mains Type: MCB							
Enclosure: NEMA 1							Mains Rating: 400 A							
CKT	Circuit Description	Wire Size (H,N,G) or (H,G)	Notes	Trip	#	A (kVA)	B (kVA)	C (kVA)	#	Trip	Notes	Wire Size (H,N,G) or (H,G)	Circuit Description	CKT
1	RECEPTS, STUDIO B	1-#12, 1-#12, 1-#12		20 A	1	0.18	0.18			1	20 A	1-#12, 1-#12, 1-#12	RECEPTS, STUDIO B	2
3	RECEPTS, STUDIO B	1-#12, 1-#12, 1-#12		20 A	1		0.18	0.18		1	20 A	1-#12, 1-#12, 1-#12	RECEPTS, STUDIO B	4
5	RECEPTS, STUDIO B	1-#12, 1-#12, 1-#12		20 A	1			0.18	0.18	1	20 A	1-#12, 1-#12, 1-#12	RECEPTS, STUDIO B	6
7	RECEPTS, STUDIO B	1-#12, 1-#12, 1-#12		20 A	1	0.18	0.18			1	20 A	1-#12, 1-#12, 1-#12	RECEPTS, STUDIO B	8
9	RECEPT, FLEX	1-#12, 1-#12, 1-#12		20 A	1		0.18	0.18		1	20 A	1-#12, 1-#12, 1-#12	RECEPT, FLEX	10
11	RECEPT, FLEX	1-#12, 1-#12, 1-#12		20 A	1			0.18	0.00	1	20 A	--	SPARE	12
13	SPARE	--	--	20 A	1	0.00	0.00			1	20 A	--	SPARE	14
15	SPARE	--	--	20 A	1		0.00	0.00		1	20 A	--	SPARE	16
17	SPARE	--	--	20 A	1			0.00	0.00	1	20 A	--	SPARE	18
19	SPARE	--	--	20 A	1	0.00	0.00			1	20 A	--	SPARE	20
21	SPARE	--	--	20 A	1		0.00	0.00		1	20 A	--	SPARE	22
23	SPARE	--	--	20 A	1			0.00	0.00	1	20 A	--	SPARE	24
25	SPARE	--	--	20 A	1	0.00	0.00			1	20 A	--	SPARE	26
27	SPARE	--	--	20 A	1		0.00	0.00		1	20 A	--	SPARE	28
29	SPARE	--	--	20 A	1			0.00	0.00	1	20 A	--	SPARE	30
31	SPARE	--	--	20 A	1	0.00	0.00			1	20 A	--	SPARE	32
33	SPARE	--	--	20 A	1		0.00	0.00		1	20 A	--	SPARE	34
35	AV RACK - IT CLOSET	1-#12, 1-#12, 1-#12		20 A	1			1.60	1.60	1	20 A	1-#12, 1-#12, 1-#12	AV RACK - IT CLOSET	36
37	AV RACK - IT CLOSET	1-#12, 1-#12, 1-#12		20 A	1	1.60	1.60			1	20 A	1-#12, 1-#12, 1-#12	AV RACK - IT CLOSET	38
39	AV RACK - IT CLOSET	1-#12, 1-#12, 1-#12		20 A	1		1.60	1.60		1	20 A	1-#12, 1-#12, 1-#12	AV RACK - IT CLOSET	40
41	AV RACK - IT CLOSET	1-#12, 1-#12, 1-#12		20 A	1			1.60	1.60	1	20 A	1-#12, 1-#12, 1-#12	AV RACK - IT CLOSET	42
Total Load:						3.92 kVA	3.92 kVA	6.94 kVA						
Breaker Notes		Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals								
1) Shunt Trip		Receptacle	1980 VA	100.00%	1980 VA									
2) Lock-out device		Misc Equip	12800 VA	100.00%	12800 VA									
3) GFEP														
4) GFCI														
5) AFCI (Dedicated Neutral Required)														
6) Existing Circuit to Remain														
7) Through Relay Panel														
8) Through Lighting Inverter														

Panelboard: LB															
Location: MECH B010							Volts/Phase: 208/120V, Wye, 3PH, 4W								
Supply From: MDPB							A.I.C. Rating: 22kAIC, Fully Rated								
Mounting: Surface							Mains Type: MLO								
Enclosure: NEMA 1							Mains Rating: 250 A								
CKT	Circuit Description	Wire Size (H,N,G) or (H,G)	Notes	Trip	#	A (kVA)	B (kVA)	C (kVA)	#	Trip	Notes	Wire Size (H,N,G) or (H,G)	Circuit Description	CKT	
1	RECEPT, MECH	1-#12, 1-#12, 1-#12		20 A	1	0.18	0.31			1	20 A	1-#12, 1-#12, 1-#12	LIGHTING, MECH	2	
3	RECEPTS, STUDIO B	1-#12, 1-#12, 1-#12		20 A	1		0.54	0.07		1	20 A	6	1-#12, 1-#12, 1-#12	LIGHTING, EXTERIOR	4
5	RV HOOK UP - 50A	2-#6, 1-#10		50 A	2	2.66	1.43			1	20 A	1-#12, 1-#12, 1-#12	LIGHTING, STUDIO	6	
7	RV HOOK UP - 30A	1-#10, 1-#10, 1-#10		30 A	1		2.88	1.27		1	20 A	1-#10, 1-#10, 1-#10	LIGHTING, STUDIO	8	
9	RV HOOK UP - 30A	1-#10, 1-#10, 1-#10		30 A	1		2.88	1.27		1	20 A	1-#10, 1-#10, 1-#10	LIGHTING, STUDIO	10	
11	RV HOOK UP - 30A	1-#8, 1-#8, 1-#8		30 A	1			2.88	1.27	1	20 A	1-#10, 1-#10, 1-#10	LIGHTING, STUDIO	12	
13	RV HOOK UP - 50A	2-#6, 1-#10		50 A	2	2.66	0.58			1	20 A	1-#12, 1-#12, 1-#12	LIGHTING, STUDIO	14	
15	RECEPTS, STUDIO B	1-#12, 1-#12, 1-#12		20 A	1		2.66	0.09		1	20 A	6	1-#12, 1-#12, 1-#12	LIGHTING, EXTERIOR	16
17	RECEPTS, STUDIO B	1-#12, 1-#12, 1-#12		20 A	1			0.18	0.80	1	20 A	1-#10, 1-#10, 1-#10	LIGHTING, CORRIDOR	18	
19	RECEPTS, STUDIO B	1-#12, 1-#12, 1-#12		20 A	1	0.18	0.63			1	20 A	1-#12, 1-#12, 1-#12	LIGHTING, MAKE-UP	20	
21	RECEPTS, STUDIO B	1-#12, 1-#12, 1-#12		20 A	1		0.18	0.63		1	20 A	1-#12, 1-#12, 1-#12	LIGHTING, MAKE-UP	22	
23	RECEPTS, STUDIO B	1-#12, 1-#12, 1-#12		20 A	1			0.18	0.42	1	20 A	6	1-#10, 1-#10, 1-#10	LIGHTING, SITE	24
25	RECEPTS, STUDIO B	1-#12, 1-#12, 1-#12		20 A	1	0.18	0.00			1	20 A	--	--	LIGHTING SPARE	26
27	RECEPTS, STUDIO B	1-#12, 1-#12, 1-#12		20 A	1		0.18	0.00		1	20 A	--	--	LIGHTING SPARE	28
29	RECEPTS, STUDIO B	1-#12, 1-#12, 1-#12		20 A	1			0.36	0.18	1	20 A	1-#12, 1-#12, 1-#12	RECEPTS, STUDIO B	30	
31	OVERHEAD DOOR	1-#12, 1-#12, 1-#12		20 A	1	0.50	0.18			1	20 A	1-#12, 1-#12, 1-#12	RECEPTS, STUDIO B	32	
33	FORKLIFT CHARGER	1-#10, 1-#10, 1-#10		20 A	1		1.00	0.18		1	20 A	1-#12, 1-#12, 1-#12	RECEPTS, STUDIO B	34	
35	OVERHEAD DOOR	1-#12, 1-#12, 1-#12		20 A	1			0.50	0.18	1	20 A	1-#12, 1-#12, 1-#12	RECEPTS, STUDIO B	36	
37	RECEPTS, VESTIBULE	1-#12, 1-#12, 1-#12		20 A	1	0.18	0.36			1	20 A	1-#12, 1-#12, 1-#12	RECEPTS, STUDIO B	38	
39	RV HOOK UP - 30A	1-#6, 1-#6, 1-#6		30 A	1		2.88	0.36		1	20 A	1-#12, 1-#12, 1-#12	RECEPTS, RISER	40	
41	RV HOOK UP - 50A	2-#6, 1-#10		50 A	2	2.66	0.36			1	20 A	1-#12, 1-#12, 1-#12	RECEPTS, TOILET	42	
43	RECEPTS, EXTERIOR	1-#12, 1-#12, 1-#12		20 A	1		0.18	1.00		1	20 A	1-#10, 1-#10, 1-#10	RECEPT, MAKEUP	44	
45	TEFS, 6.7	1-#12, 1-#12, 1-#12		20 A	1			0.07	1.00	1	20 A	1-#10, 1-#10, 1-#10	RECEPT, MAKEUP	46	
47	RECEPTS, DATA RM	1-#12, 1-#12, 1-#12		20 A	1	0.36	1.00			1	20 A	1-#10, 1-#10, 1-#10	RECEPT, MAKEUP	48	
49	RECEPTS, DATA RM	1-#12, 1-#12, 1-#12		20 A	1		0.36	1.00		1	20 A	1-#10, 1-#10, 1-#10	RECEPT, MAKEUP	50	
51	RECEPTS, DATA RM	1-#12, 1-#12, 1-#12		20 A	1			0.36	0.36	1	20 A	1-#12, 1-#12, 1-#12	RECEPTS, FLEX	52	
53	CONDENSATE PUMP	1-#12, 1-#12, 1-#12		20 A	1	0.03	0.36			1	20 A	1-#12, 1-#12, 1-#12	RECEPTS, EXTERIOR	54	
55	RECEPT, CHAIN HOIST	1-#10, 1-#10, 1-#10		20 A	1		1.18	1.18		1	20 A	1-#12, 1-#12, 1-#12	RECEPT, CHAIN HOIST	56	
57	RECEPT, CHAIN HOIST	1-#10, 1-#10, 1-#10		20 A	1			1.18	1.18	1	20 A	1-#12, 1-#12, 1-#12	RECEPT, CHAIN HOIST	58	
59	RECEPT, CHAIN HOIST	1-#10, 1-#10, 1-#10		20 A	1	1.18	1.18			1	20 A	1-#12, 1-#12, 1-#12	RECEPT, CHAIN HOIST	60	
61	RECEPT, CHAIN HOIST	1-#10, 1-#10, 1-#10		20 A	1		1.18	1.18		1	20 A	1-#12, 1-#12, 1-#12	RECEPT, CHAIN HOIST	62	
63	RECEPT, CHAIN HOIST	1-#10, 1-#10, 1-#10		20 A	1			1.18	1.18	1	20 A	1-#12, 1-#12, 1-#12	RECEPT, CHAIN HOIST	64	
65	RECEPT, CHAIN HOIST	1-#10, 1-#10, 1-#10		20 A	1			1.18	1.18	1	20 A	1-#12, 1-#12, 1-#12	RECEPT, CHAIN HOIST	66	
67	RECEPT, CHAIN HOIST	1-#12, 1-#12, 1-#12		20 A	1	1.18	1.18			1	20 A	1-#12, 1-#12, 1-#12	RECEPT, CHAIN HOIST	68	
69	RECEPT, CHAIN HOIST	1-#12, 1-#12, 1-#12		20 A	1		1.18	1.18		1	20 A	1-#12, 1-#12, 1-#12	RECEPT, CHAIN HOIST	70	
71	RECEPT, CHAIN HOIST	1-#12, 1-#12, 1-#12		20 A	1			1.18	1.18	1	20 A	1-#12, 1-#12, 1-#12	RECEPT, CHAIN HOIST	72	
73	RECEPT, CHAIN HOIST	1-#12, 1-#12, 1-#12		20 A	1	1.18	1.18			1	20 A	1-#12, 1-#12, 1-#12	RECEPT, CHAIN HOIST	74	
75	RECEPT, CHAIN HOIST	1-#12, 1-#12, 1-#12		20 A	1		1.18	1.18		1	20 A	1-#12, 1-#12, 1-#12	RECEPT, CHAIN HOIST	76	
77	SPARE	--	--	20 A	1			0.00	1.25	2	20 A	2	2-#8, 1-#8	GATE OPENER	78
79	SPARE	--	--	20 A	1	0.00	1.25			1	20 A	--	--	SPARE	80
81	SPARE	--	--	20 A	1		0.00	0.00		1	20 A	--	--	SPARE	82
83	SPARE	--	--	20 A	1			0.00	0.00	1	20 A	--	--	SPARE	84
Total Load:						23.10 kVA	24.86 kVA	23.41 kVA							
Breaker Notes		Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals									
1) Shunt Trip		Lighting	8175 VA	125.00%	10219 VA										
2) Lock-out device		Motor	24 VA	125.00%	30 VA										
3) GFEP		Receptacle	6480 VA	100.00%	6480 VA										
4) GFCI		Misc Equip	33174 VA	100.00%	33174 VA										
5) AFCI (Dedicated Neutral Required)		Lighting (Non-Coincident)	23520 VA	125.00%	29400 VA										
6) Controlled Via Time Clock															
7) Through Relay Panel															
8) Through Lighting Inverter															



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E6.2