

Firestone
COMPLETE AUTO CARE™

REVISION LOG		
REV	DATE	DESCRIPTION
1	ADD#1	04/16/20
2	CB#1	06/30/20
3	IFC	07/23/20
4	CB 2	09/09/20

**RELEASE FOR
CONSTRUCTION**

**AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI**

09/21/2020

BUILDING DRAWING INDEX					PUBLICATION INDEX				BUILDING DRAWING INDEX					PUBLICATION INDEX			
SHT.	TITLE	DWG. DATE	REV. NO.	REV. DATE	FOR LEASE DOC.	FOR PERMIT	FOR BIDS	FOR CONST.	SHT.	TITLE	DWG. DATE	REV. NO.	REV. DATE	FOR LEASE DOC.	FOR PERMIT	FOR BIDS	FOR CONST.
GENERAL INFORMATION (FOR REFERENCE)									STRUCTURAL DRAWINGS								
T1	TITLE SHEET	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -	S1	GENERAL NOTES	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
N1	GENERAL INFORMATION	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -	S2	FOUNDATION PLAN AND NOTES	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
LS1	LIFE SAFETY PLAN	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -	S3	FOUNDATION DETAILS	03/26/20	4	09/09/20	- / - / -	03/26/20	- / - / -	- / - / -
PSL1	PHOTOMETRIC SITE LIGHTING	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -									
STORE PLANNING (FOR REFERENCE)									FIRE PROTECTION DRAWINGS								
F1	FIXTURE PLAN & NOTES	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -	FP1	FIRE SPRINKLER PLAN	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
F2	SHOWROOM FIXTURE PLAN & ELEVATIONS	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -	FP2	FIRE SPRINKLER NOTES AND DETAILS	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
ARCHITECTURAL DRAWINGS									FIRE ALARM DRAWINGS								
A1	METAL BUILDING PLAN & NOTES	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -	FA1	FIRE ALARM PLAN AND MATRIX	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
A1.1	FLOOR PLAN & NOTES	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -	FA2	FIRE ALARM NOTES, PROGRAMMING AND CALCULATIONS	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
A1.2	ENLARGED PLAN DETAILS	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -	FA3	FIRE ALARM DETAILS	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
A2	REFLECTED CEILING & FINISH PLAN	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -	FA4	FIRE ALARM CONTROL PANEL LAYOUT	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
A3	ROOF PLAN & DETAILS	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -									
A4	EXTERIOR ELEVATIONS & DETAILS	03/26/20	4	09/09/20	- / - / -	03/26/20	- / - / -	- / - / -	BURGLAR ALARM DRAWINGS								
A5	BUILDING SECTIONS & DETAILS	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -	BA1	INTRUSION ALARM PLAN AND MATRIX	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
A5.1	WALL SECTIONS	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -	BA2	INTRUSION ALARM NOTES AND CALCULATIONS	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
A6	WALL SECTIONS & DETAILS	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -	BA3	INTRUSION ALARM CONTROL PANEL LAYOUT AND DETAILS	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
A6.1	TRASH/TIRE ENCLOSURE DETAILS	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -									
A7	INTERIOR ELEVS, SECTIONS & DETAILS	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -									
A8	ROOM FINISH & DOOR SCHEDULES	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -	MECHANICAL DRAWINGS								
DEFERRED SHOP DRAWING SUBMITTALS									M1	MECHANICAL PLAN AND NOTES	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
									M2	MECHANICAL DETAILS	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
									M3	MECHANICAL EQUIPMENT SCHEDULES	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
									PLUMBING DRAWINGS								
COPIES SUBMITTALS									P1	PLUMBING PLAN AND NOTES	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
									P2	ENLARGED RESTROOM PLUMBING PLANS	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
									P3	AIR PIPING PLAN AND NOTES	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
									P4	OIL PIPING DETAILS	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
3 FIRE ALARM									P5	PLUMBING DETAILS	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
									P6	PLUMBING SCHEDULES AND RISERS	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
									ELECTRICAL DRAWINGS								
									E1	ELECTRICAL SYMBOLS, NOTES AND SCHEDULES	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
1/2" DENSGLOSS GOLD IS AN ACCEPTED APPROVED ALTERNATE TO 1/2" EXTERIOR GRADE PLYWOOD.									E2	LIGHTING PLAN	03/26/20	4	09/09/20	- / - / -	03/26/20	- / - / -	- / - / -
									E3	POWER PLAN	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
									E4	ELECTRICAL DETAILS	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -
									E5	ONE-LINE DIAGRAM, PANEL SCHEDULES AND NOTES	03/26/20	4	09/09/20	- / - / -	03/26/20	- / - / -	- / - / -
									ESL1	SITE LIGHTING PLAN	03/26/20	3	07/23/20	- / - / -	03/26/20	- / - / -	- / - / -

SUBCONTRACTOR NOTES	
A	<ul style="list-style-type: none"> THE SUB CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. THE SUBCONTRACTOR SHALL EXAMINE ENTIRE SET PRIOR TO SUBMITTING BID.
	<p>ALL RFI'S AND SUBMITTALS SHALL BE SENT TO BSRO_Submittals_RFI@sgadesigngroup.com.</p>

NEW FCAC STOR

2020 ER

3561 SW MARKET ST

JACKSON COUNTY

LEE'S SUMMIT, MISSOURI 64082



09/09/2020

Mitchell Garrett

246 C-0162

Engr-mitchgarrett@gmail.com

C-016246 Engineer Online

Issue Date: 2020-09-09 11:14:41 -0500

MITCHELL RAY GARRETT - ARCHITECT

MO# A-007541

STIPULATION OF REUSE

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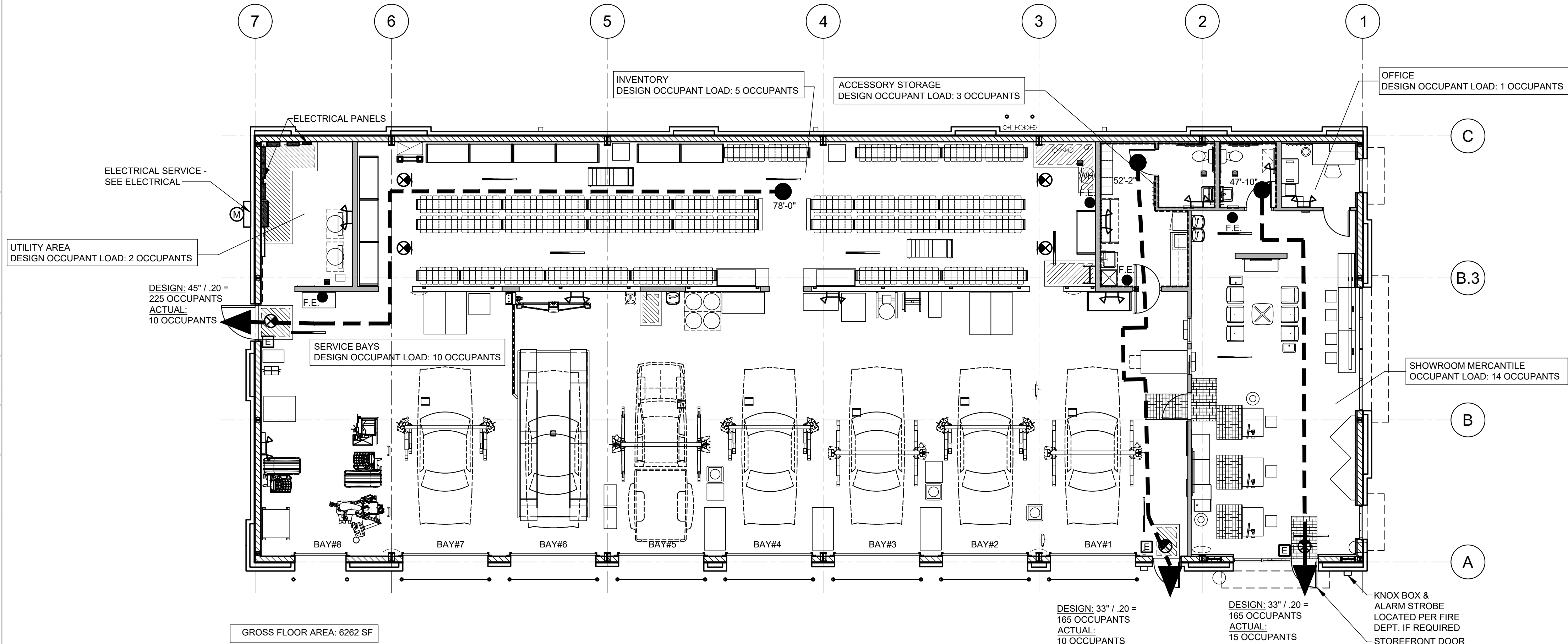
Jul 22, 2020 -- 8:41am -- USER: cderoh
P:\BRO Projects\Lee's Summit, MO -- 1955B71 -- CBT\B -- Drawings & Design\Building Drawings\03_FCAC_ER-LS1.dwg

16

LS1

LIFE SAFETY PLAN

SCALE: 1/8"=1'-0"



SHEET NOTES

- ALL EXIT SIGNS AND EMERGENCY LIGHTS ARE SHOWN ON SHEET A2, E1, (SYMBOL LEGEND ON E3), AND WILL BE SUBJECT TO INSPECTION FROM THE FIRE MARSHAL HAVING AUTHORITY PRIOR TO FINAL APPROVALS.
- TRAVEL DISTANCE IS SHOWN AS A DASHED LINE.
- COORDINATE TYPE, SIZE AND FINAL LOCATIONS OF FIRE EXTINGUISHERS WITH LOCAL FIRE OFFICIALS.

LEGEND

- F.E.

●

FIRE EXTINGUISHER
- TACTILE EXIT SIGNAGE
- ▲

EXIT WIDTH IN INCHES/NUMBER OF OCCUPANTS
- EMERGENCY LIGHTS
- ⊗

EXIT LIGHT

NEW FCAC STORE
2020 ER
3561 SW MARKET ST
JACKSON COUNTY
LEE'S SUMMIT, MISSOURI 64082



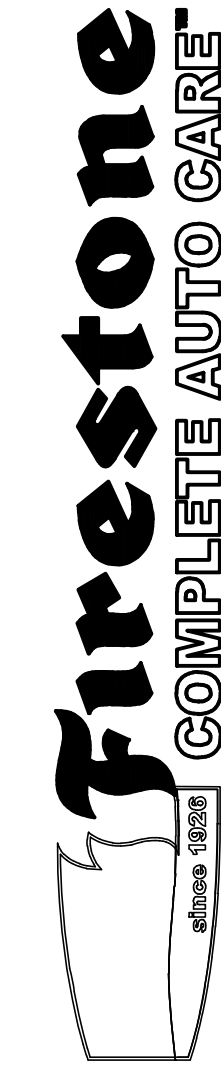
07/23/2020
Mitchel Garrett
Digitally signed by Mitchel Garrett
DN: cn=Mitchel Garrett, o=SGA Design Group, ou=Lee's Summit, Missouri, email=Mitchel.Garrett@sgadesign.com
Mitchel RAY GARRETT - ARCHITECT
MOP A-007541

ISSUE BLOCK		
Δ	04/16/20	ADD #1
Δ	07/23/20	IFC

PROPERTY NO.: 160085
6 DIGIT NO.: 906983
4 DIGIT NO.: 78C9
AOR PROJECT NUMBER: 1955B71
TO PERMIT: DATE: 03/26/2020
TO BID: DATE: ###-##-##
KMP

SHEET TITLE:
LIFE
SAFETY
PLAN

SHEET NUMBER:
LS1






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SGA Design Group, P.C.
1437 South Boulder, Suite 450
Tulsa, Oklahoma 74119-3809
P: 918.537.8800
F: 918.537.8811
www.sgadesigngroup.com
Certificate of Authority #A-2008031944
Architecture

Jul 22, 2020 -- 8:41am -- USER: cderoh
P:\BSRO Projects\Lee's Summit, MO -- 1955B71 -- GBT\B -- Drawings & Design\Building Drawings\04_FCAC_ER_PSL1.dwg

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	LMF	Lum. Lumens	Lum. Watts	Part Number
	3	P1	SINGLE	1.000	22330	160	OSQ-A-NM-4ME-T-57K-UL-BZ + OSQ-AABZ
	1	P2	2 @ 90 DEGREE	1.000	22330	160	OSQ-A-NM-4ME-T-57K-UL-BZ + OSQ-AABZ
	19	N	SINGLE	1.000	2490	19	XSPW-B-WM-3ME-2L-57K-UL-BK (Wall Light)

Calculation Summary						
Label	Units	Avg	Max	Min	Avg/Min	Max/Min
Off Parking lot calcs	Fc	0.60	7.8	0.0	N.A.	N.A.
Parking Lot	Fc	4.20	11.4	1.1	3.82	10.36

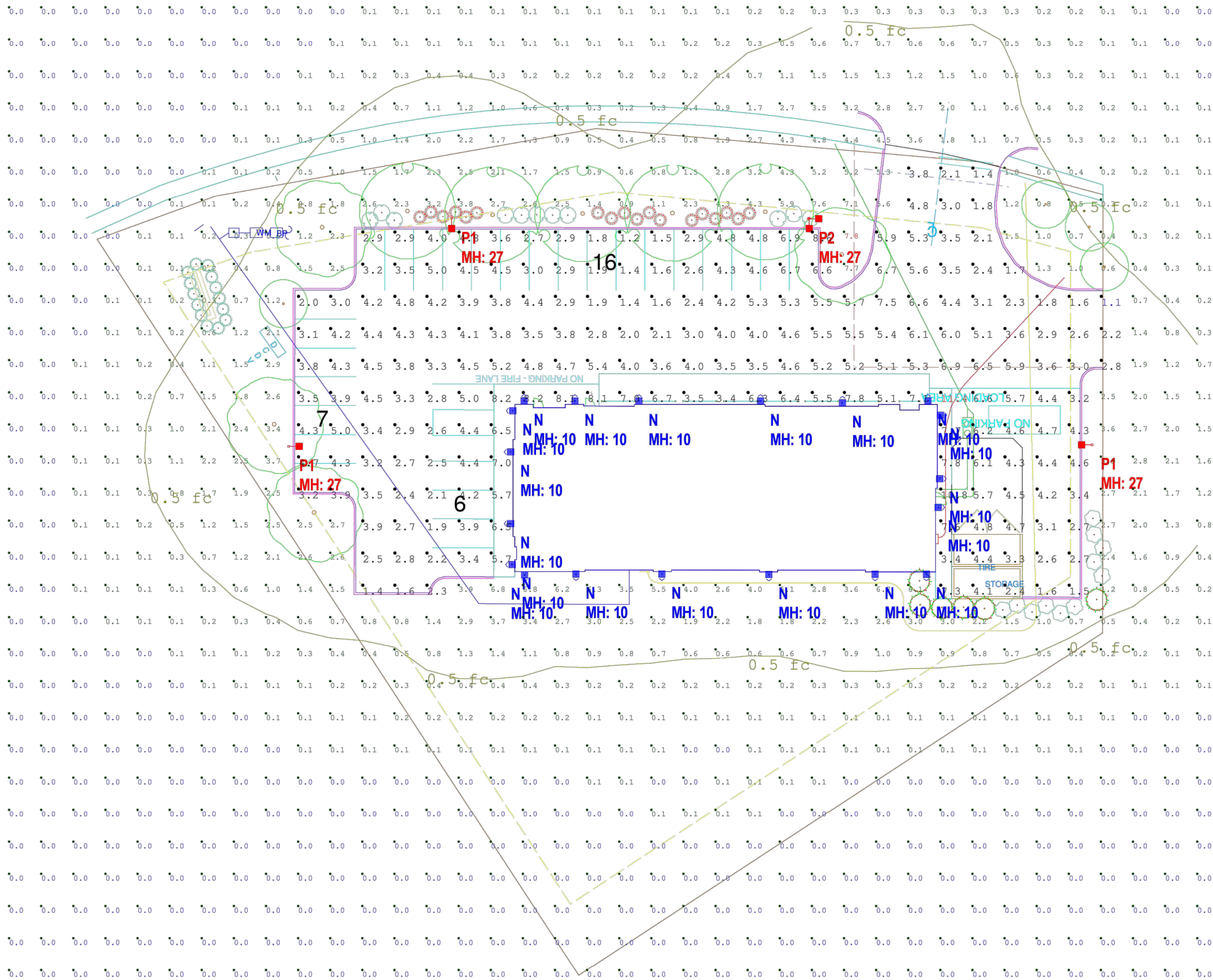
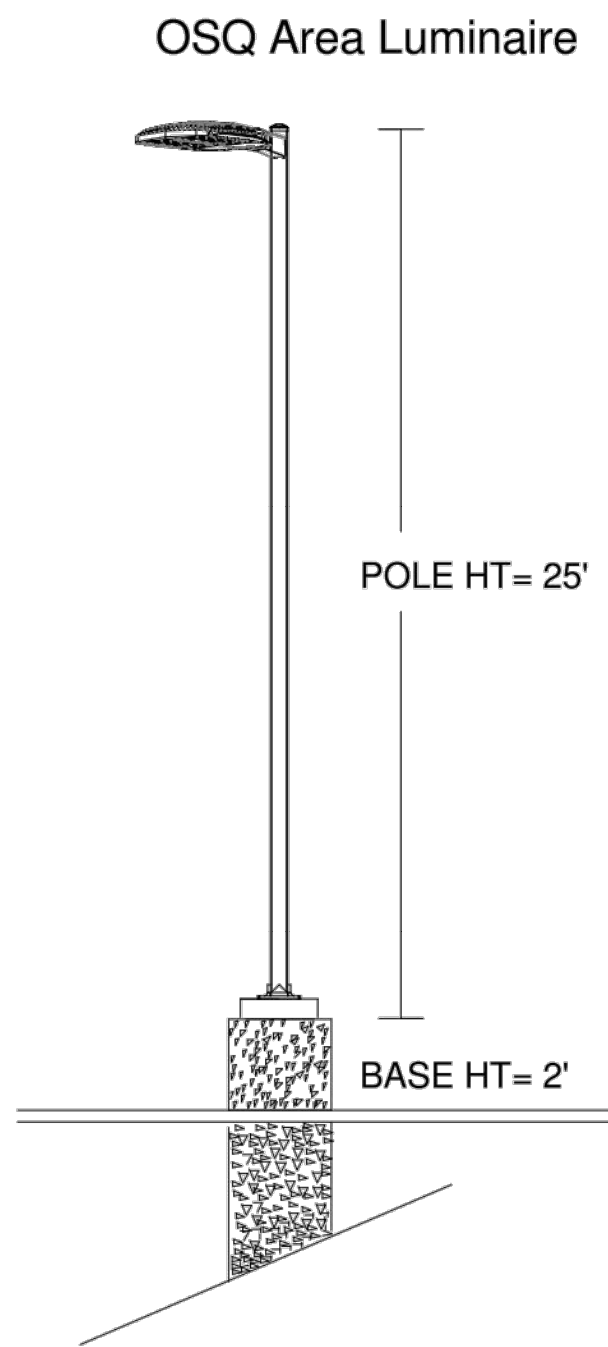
FIXTURE MOUNTING HEIGHTS AS SHOWN
POLES MOUNTED ON 2' BASE


POLE SCHEDULE:
(4) CL-SSP-4011-25-D6-BZ (25' x 4" STEEL SQUARE POLE, 11ga)

Additional Equipment
(5) OSQ-DABZ (Direct Arm Mount)
(1) PB-2A4 (Twin Mount Tenon)

PROPOSED POLES MEET 120 MPH SUSTAINED WINDS

***CUSTOMER TO VERIFY MOUNTING, VOLTAGE, AND COLOR
PRIOR TO PLACING ORDER





1200 92nd Street - Sturtevant, WI 53177
www.cree.com - (800) 236-6800

Project Name: BSRO Firestone - 3544 SW Market St Lee's Summit, MO

SR-40708

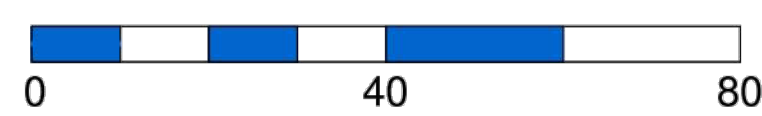
Footcandles calculated at grade

Filename: FRS-200212LSMOBAF.AGI

Layout By: Ben Foster

Date: 3/26/2020

Scale 1" = 20'



Illumination results shown on this lighting design are based on project parameters provided to Cree, Inc. used in conjunction with luminaire test procedures conducted under laboratory conditions. Actual project conditions differing from these design parameters may affect field results. The customer is responsible for verifying dimensional accuracy along with compliance with any applicable electrical, lighting or energy code.

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SGA Design Group, P.C.
1437 South Boulder, Suite 450
Tulsa, Oklahoma 74119-8409
P: 918.587.8400
F: 918.587.8401
www.sga-design.com
Certificate of Authority #A-2008031444
Architecture

Firestone
COMPLETE AUTO CARE

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NEW FCAC STORE
2020 ER
3561 SW MARKET ST
JACKSON COUNTY
LEE'S SUMMIT, MISSOURI 64082

PROVIDED BY
OTHERS FOR
REFERENCE ONLY

MITCHELL RAY GARRETT - ARCHITECT
MOP A-007541

ISSUE BLOCK		
Δ	04/16/20	ADD #1
Δ	07/23/20	IFC

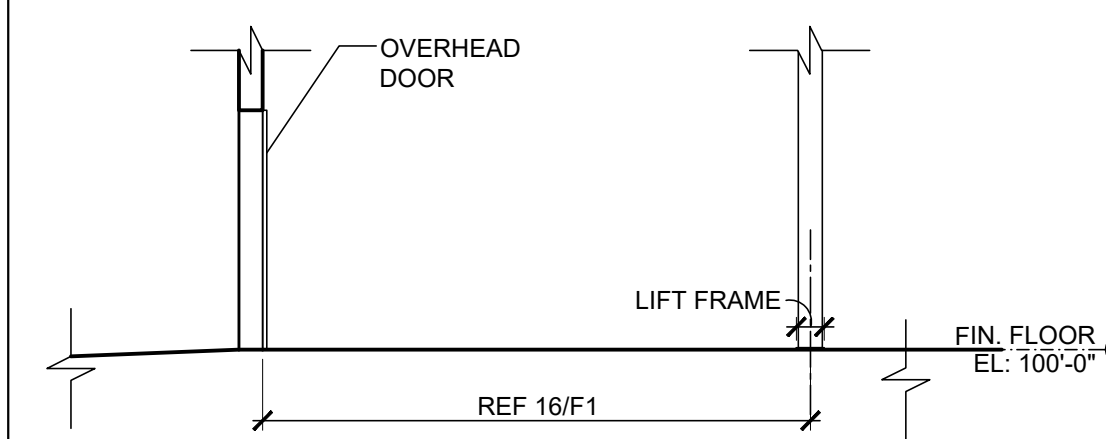
PROPERTY NO.: 160085
6 DIGIT NO.: 906983
4 DIGIT NO.: 78C9
AOR PROJECT NUMBER: 1955B71
TO PERMIT: DATE: 03/26/2020
TO BID: DATE: ###-###-###
KMP

SHEET TITLE:
PHOTOMETRIC
SITE LIGHTING

SHEET NUMBER:
PSL1

HOIST KEY

(H1)	SP010 10,000 lbs.	BSRO / ROTARY
(H2)	SP0A10 10,000 lbs.	BSRO / ROTARY
(H3)	SP012 12,000 lbs.	BSRO / ROTARY
(H7)	FLUSH-MOUNT SCISSOR LIFT (RX16)	BSRO / HUNTER



NOTES:
1) CONTRACTOR SHALL FIELD DETERMINE THE EXACT FINISH FLOOR ELEVATION AT THE HOIST, PER MANUFACTURERS RECOMMENDATION FLOOR SLOPE & JOIST LOCATIONS VARY.
2) HOIST INSTALLER TO BE CERTIFIED BY THE MANUFACTURER.
3) WHEEL SPOTTING DISH, REFER TO MANUFACTURERS RECOMMENDED INSTALLATION INSTRUCTIONS.

INVENTORY COUNT

1,182 - UNITS/TIRES (5 TIERS OF TIRES)
475 - LF PARTS

BUILDING AREAS	S.F.
SHOWROOM AREA	802
SERVICE AREA	3,421
INVENTORY AREA	1,508
ACCESSORY USE AREAS	531
FACADE UPGRADES	0
TOTAL BUILDING	6,262

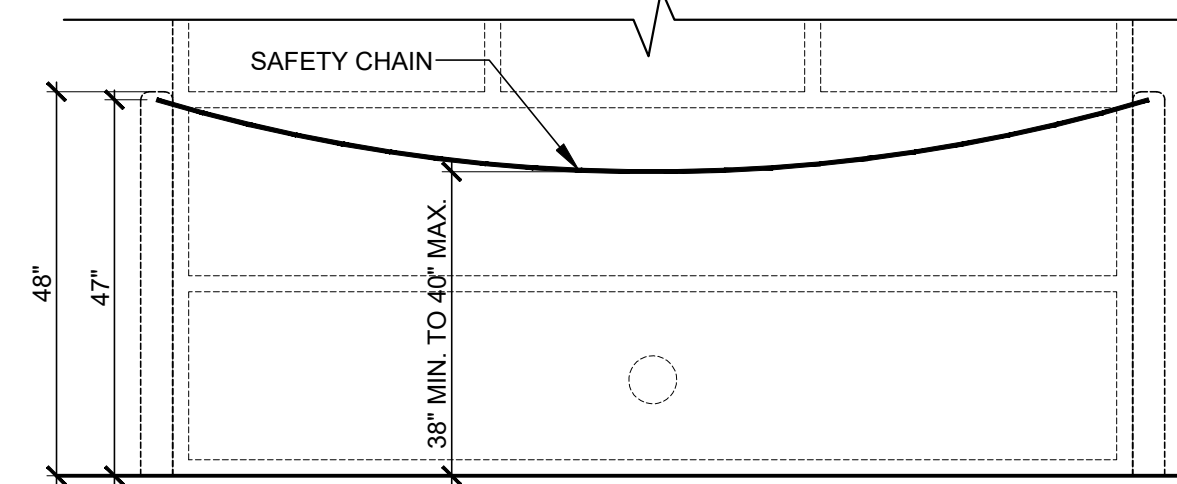
SHOP EQUIPMENT KEY:

FURNISHED BY BSRO U.N.O. ALL ITEMS INSTALLED BY G.C.
REFER TO P3/P4/E2/E3/E4/E5 SHEETS FOR FURTHER REQUIREMENTS.

#	QTY	DESCRIPTION
01	7	SETS (BANNER/ BRACKETS/CHAIN) SEE 20/F1 & 15/A7
02	8	O.H. CORD REEL LIGHT
03	11	O.H. AIR HOSE REEL
04	1	USED OIL FILTER CONTAINER (MOBILE)
05	1	SERVICE BENCH
06	2	BRAKE TOOL STAND (MOBILE)
07	1	FLAT REPAIR STATION
09	1	AIR DRYER
10	1	BRAKE SHOP (INSTALLED BY HUNTER)
13A	1	ELECTRONIC WHEEL BALANCER (INST. BY HUNTER), GSP9700 ROAD FORCE
13B	1	ELECTRONIC WHEEL BALANCER (INST. BY HUNTER), GSP9200 NON-ROAD FORCE
14	1	WHEEL ALIGNMENT COMPUTER (FLOOR MTD INSTALLED BY HUNTER)
15	1	USED OIL TANK / BENCH
17	2	HEAVY DUTY CORD REEL
18A	1	RIM CLAMP TIRE CHANGER
18B	1	TIRE CHANGER TCR1S REVOLUTION (INSTALLED BY HUNTER)
19	1	GAS CADDIE (25 GAL) SEE A1 FOR TOX ALERT OVERRIDE NOTE AT MVS DESK
21	4	MIRROR
22	1	BATTERY RACK
23	1	EYE WASH
24A	2	SPILL SKID 6"X26"WX52"L
25	1	COOLANT FLUSH MACHINE (MOBILE)
26	3	USED OIL RECEPTOR (MOBILE)
27	1	USED TIRE CART (MOBILE)
28	2	5 HP COMPRESSOR
29	1	SHOP PRESS
31	1	ELECTRICAL SYSTEM TESTER (MOBILE)
32C	1	65" MVS DESK
33	7	MECHANIC'S TOOL CABINETS (MOBILE)
34	1	WHEEL WEIGHT RACK
35	1	JOB BOARD 48" LONG
36	2	1 OF EACH NUT & BOLT BIN
38	1	STRUT COMPRESSOR (MOBILE)
39	1	REFRIGERANT CHARGER (MOBILE)
40	1	TIRE TEST TANK
43	1	SATELLITE DISH - VENDOR SUPPLIED REFER 14/A7
46A	2	5 TIER ROLLING LADDER
49	2	STACKABLE 2 TANK OIL SYSTEM
50	2	120/120 GALLON CONTAINMENT PAN
51	1	ECOBX OIL RACK
57	1	LOCKABLE TOOL CABINET
58	1	SPEED SCRUB 2001E
59	1	PROCUIT WARTHOG RMS
60	2	MOP & BROOM HOLDER - MOUNT AT 72" AFF
H1	2	SP010 10,000 LBS. (SEE HOIST KEY)
H2	3	SP0A10 10,000 LBS. (SEE HOIST KEY)
H3	1	SP012 12,000 LBS. (SEE HOIST KEY)
H7	1	ALIGNMENT RACK IN RECESSED SLAB (SEE HOIST KEY - INST. BY HUNTER)

SERVICE SAFETY CHAINS

GC TO INSTALL A BSRO PROVIDED YELLOW PLASTIC CHAIN AT ALL OVERHEAD DOORS ON THE OUTSIDE OF BUILDING. GC TO FURNISH AND INSTALL 1" LONG AND 1/4" DIA. CLOSED EYE BOLT HOOK ON BOLLARDS AT EVERY OVERHEAD DOOR MOUNTED 47" AFF (1" BELOW TOP OF BOLLARD). MOUNT BETWEEN THE WALL AND BACK SIDE OF BOLLARD THROUGH 1/4" HOLE IN BOLLARD AND BOLTED ON THE INSIDE PRIOR TO FILLING BOLLARD WITH CONCRETE. GC TO FURNISH A SPRING LOADED SNAP HOOK ON BOTH ENDS OF THE CHAIN. GC TO CUT THE CHAIN TO LENGTH SO THAT CENTER HANGS BETWEEN 38" AND 40" AFF (ALMOST HORIZONTAL) SO THAT THE APPEARANCE IS CONSISTENT AT ALL DOOR OPENINGS. GC TO FURNISH AND INSTALL A 1" LONG AND 1/4" DIA. CLOSED EYE SCREW HOOK AT 60" AFF INTO THE WOOD BUCK ON THE DRIVERS SIDE OF EVERY DOOR TO STORE THE LOOSE END OF THE CHAIN WITH THE SPRING LOADED SNAP HOOK. THIS ALLOWS THE OVERHEAD DOOR TO BE CLOSED AND STORED INSIDE THE BUILDING.

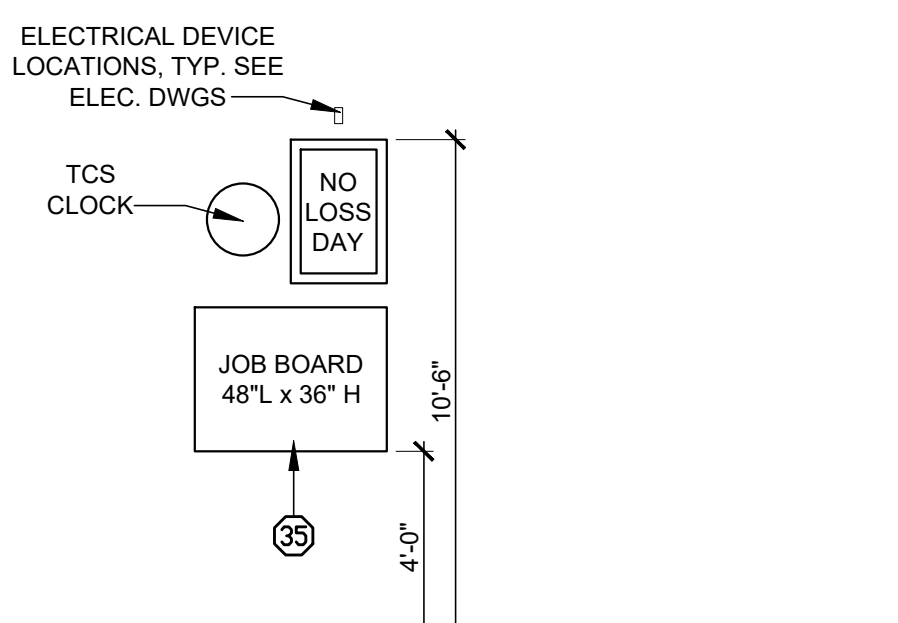


20 SERVICE BAY SAFETY CHAIN

SCALE: 1/2"=1'-0"

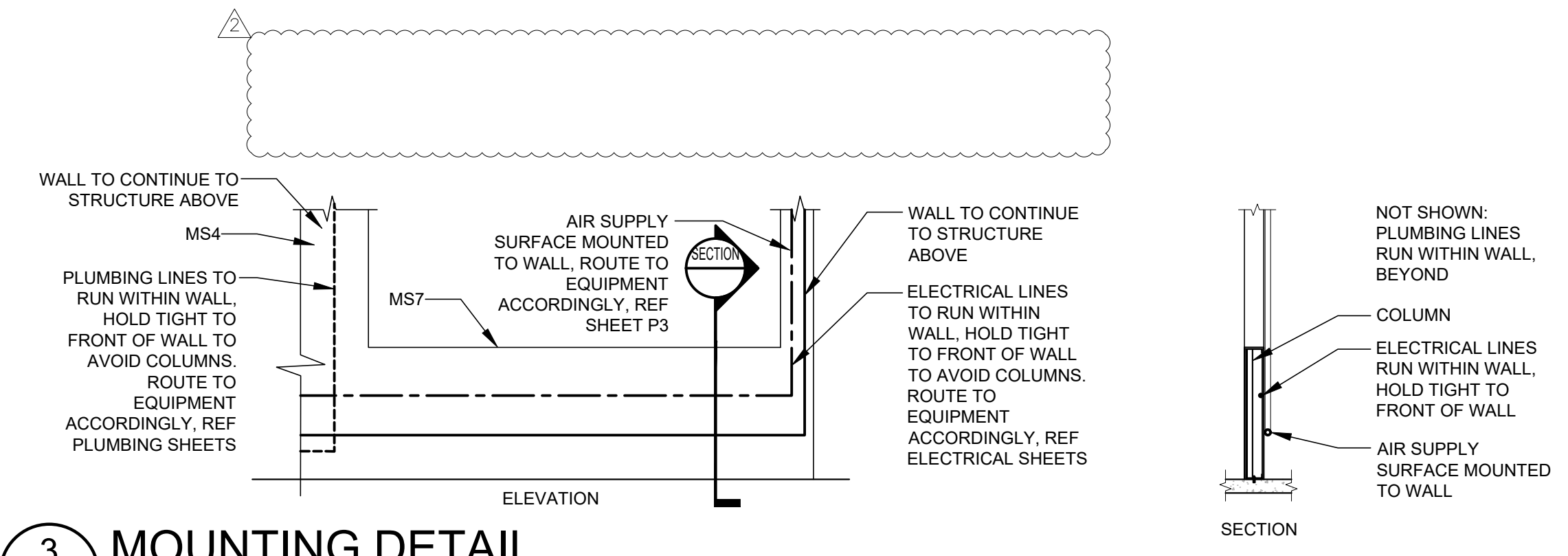
1 INTERIOR ELEVATION

SCALE: 1/4"=1'-0"



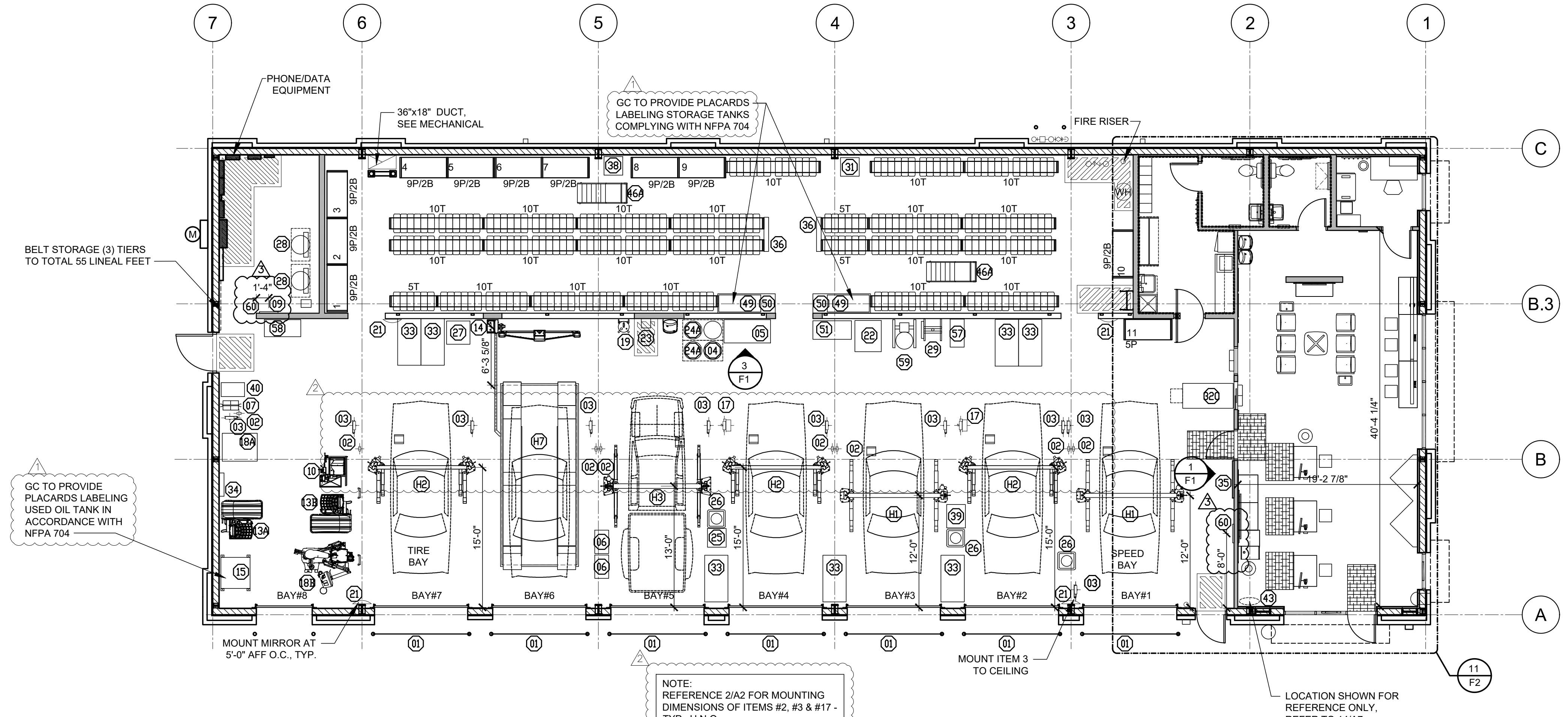
3 MOUNTING DETAIL

SCALE: 1/4"=1'-0"

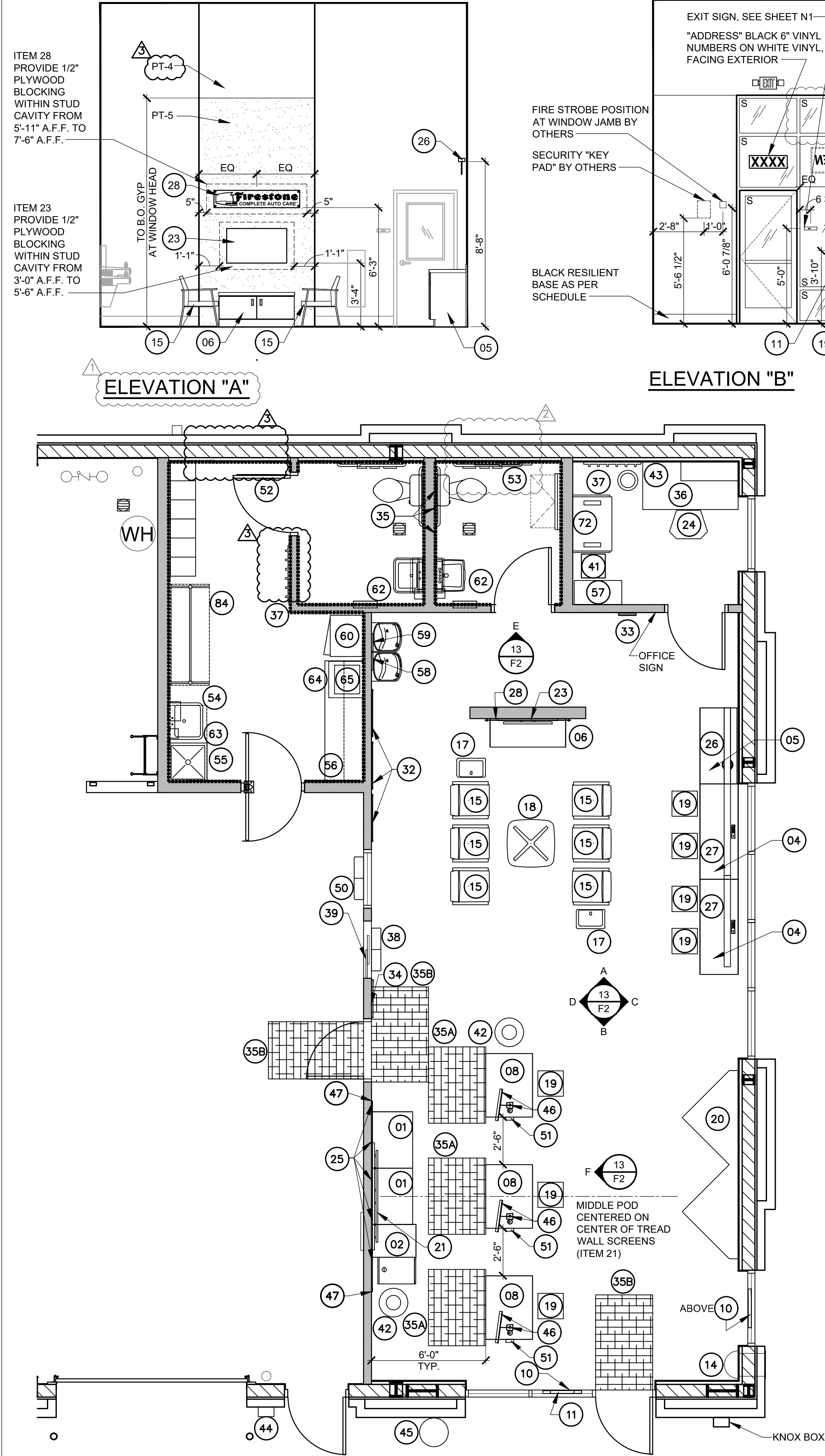


16 FIXTURE PLAN

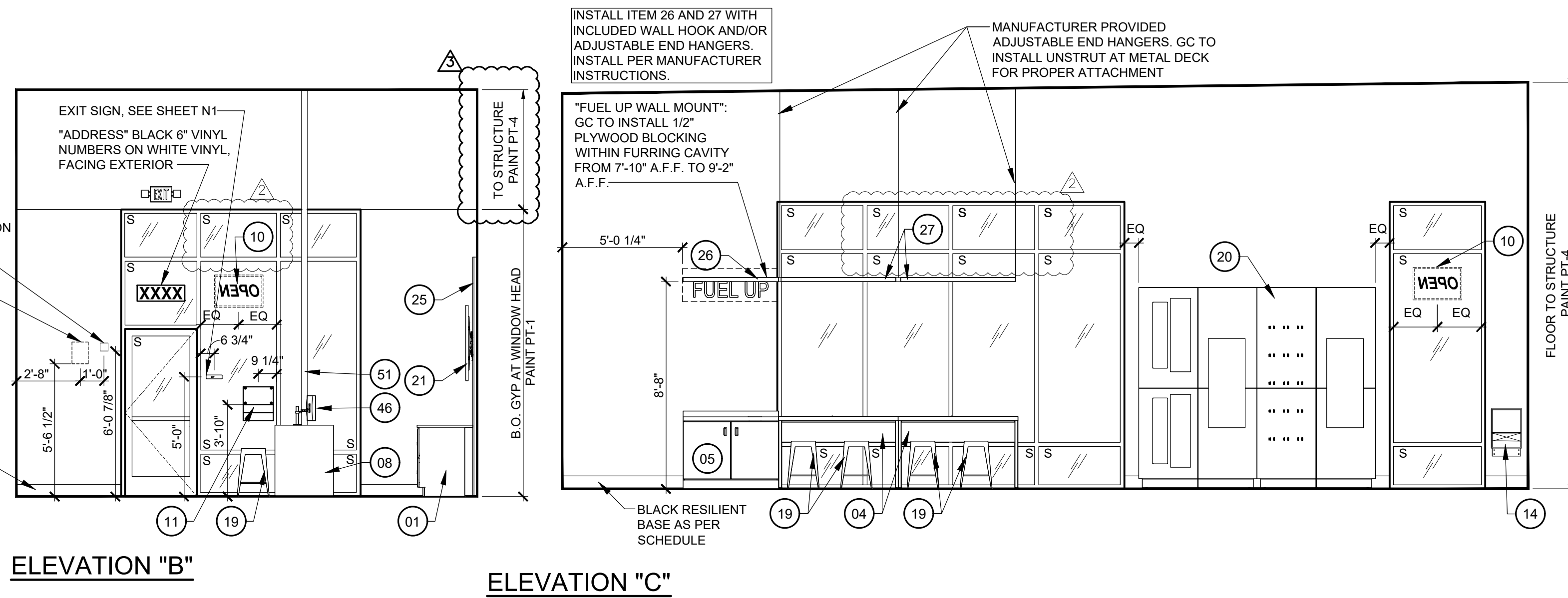
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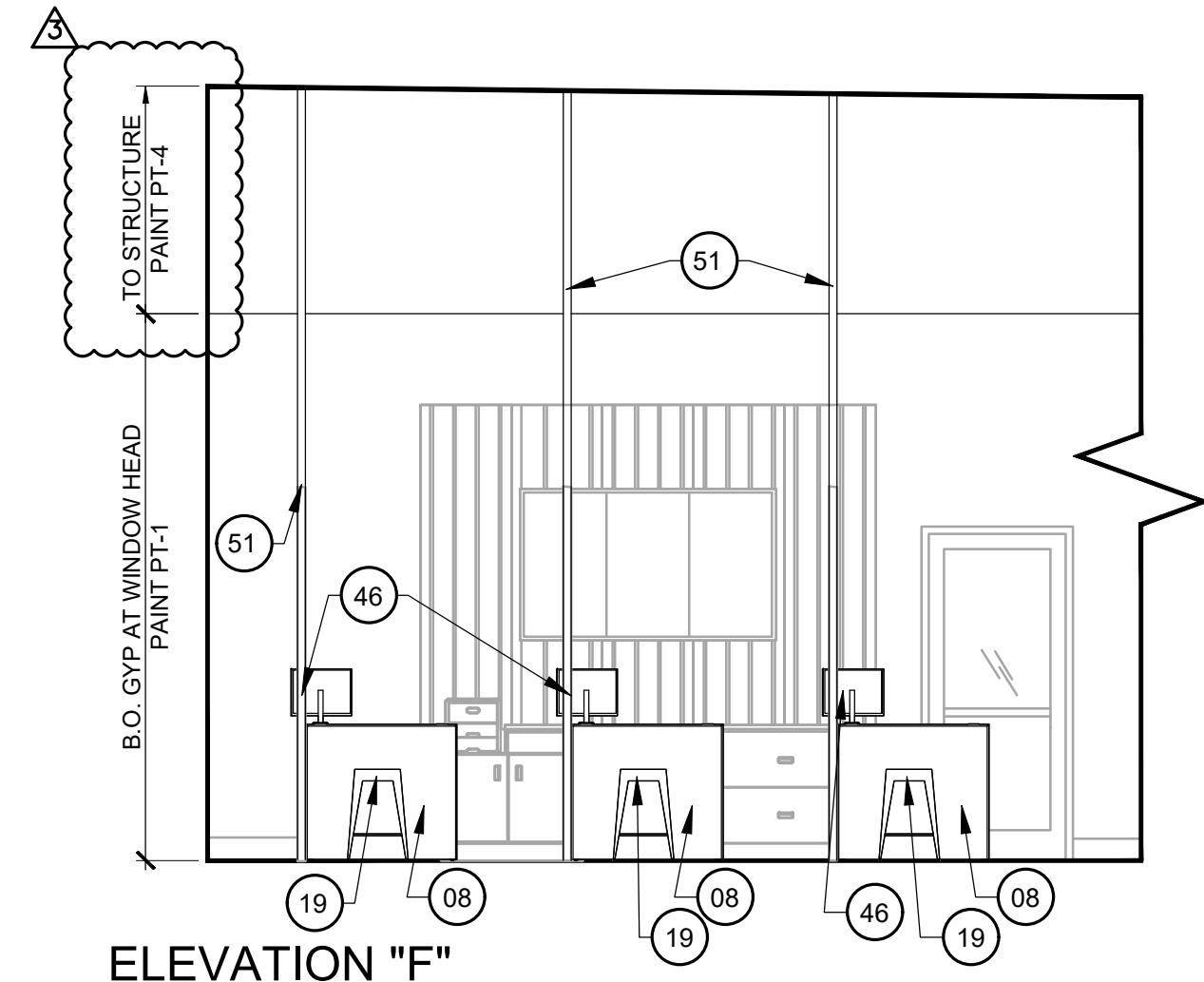
NOTE:
REFERENCE 2/A2 FOR MOUNTING
DIMENSIONS OF ITEMS #2, #3 & #17 -
TYP., U.N.O.



11 F2 ENLARGED SHOWROOM FIXTURE PLAN
SCALE: 1/4"=1'-0"

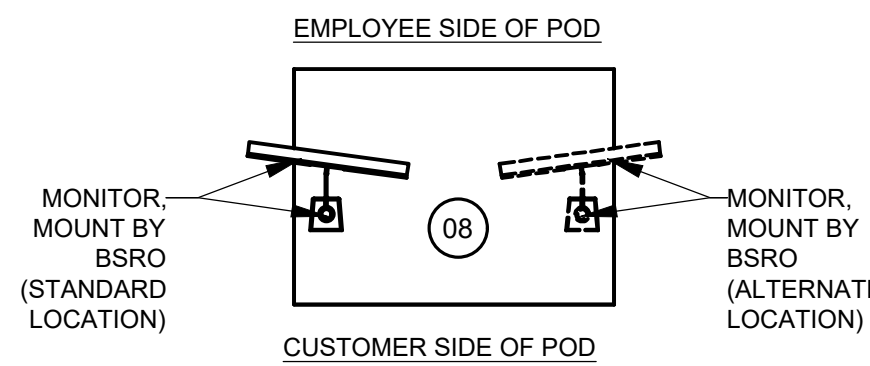


13 F2 INTERIOR ELEVATIONS
SCALE: 1/4"=1'-0"



15 F2 SALES POD PLAN
SCALE: 1/2"=1'-0"

DISPLAY FIXTURES & ACCESSORY KEY: FURNISHED BY BSRO U.N.O. ALL ITEMS INSTALLED BY G.C. REFER TO E2/E3/E4/E5 SHEETS FOR FURTHER REQUIREMENTS		
#	QTY	DESCRIPTION
01	2	2020 LATERAL FILE CREDENZA
02	1	2020 PRINTER CABINET CREDENZA
04	2	2020 PRODUCTIVITY COUNTER
05	1	2020 COFFEE BAR
06	1	2020 TV STAND
08	3	2020 CONSULT POD
10	2	2020 OPEN SIGN
11	1	2020 STORE HOURS SIGN KIT
14	1	KEY DROP BOX, SEE DETAIL 16/A7
15	6	2020 STD LOUNGE CHAIR
17	2	2020 SIDE TABLE
18	1	2020 COFFEE TABLE
19	7	2020 INDUSTRIAL STOOL
20	1	2020 MRT UNIT
21	1	2020 MENU BOARD 43" TV'S WITH 3 SCREEN TV BRACKETS
23	1	2020 LOUNGE SCREEN 43" TV WITH ARTICULATING TV BRACKET
24	1	MANAGER'S CHAIR
25	1	2020 TIRE TREAD WALL PANEL
26	1	2020 FUEL UP SHELF
27	2	2020 FUEL UP SHELF EXTENSION
28	1	2020 FIRESTONE WALL SIGN
32	1	2020 TRIPLE PROMISE WALL STAND OFF
33	1	2020 MAGAZINE RACK
34	1	2020 ASE WALL PLAQUE
35	1	2020 RESTROOM GRAPHICS
35A	3	2020 3 X 4 FATIGUE MAT
35B	3	2020 3 X 5 PERFORMANCE MAT
36	1	MANAGER'S DESK 5'-0"
37	2	COAT RACK
38	1	2020 JOB ENVELOPE WALL BOX
39	1	OVERFLOW BAR
41	1	ABOVE GROUND SAFE
42	2	2020 18 GALLON INSIDE TRASH CAN
43	1	2020 10 GALLON INSIDE TRASH CAN
44	1	EXTERIOR WALL MOUNTED SMOKER STATION, MOUNT 48" TO TOP
45	1	2020 34 GAL OUTDOOR TRASH CAN
46	3	2020 CONSULT POD MONITOR ARM & SCREEN
47	6	2020 TIRE TREAD TRIM CAP
50	1	SPECIAL ORDER & PENDING BIN
51	3	2020 15" POWER POLE QPA5210-BFRC
52	1	SAFETY GRAPHIC 24" X 36" MOUNTED 4'-7" A.F.F. ON DOOR
53	1	2020 FIRESTONE BOWTIE SIGN
54	1	PAPER TOWEL DISPENSER (ROLL)
55	1	GOVERNMENT POSTER
56	1	OSHA POSTER
57	1	FOUR DRAWER VERTICAL FILING CABINETS
58	1	WALL MOUNTED FRAME (CERTIFICATE OF OCCUPANCY)
59	1	WALL MOUNTED FRAME (BUSINESS LICENSE)
60	1	SOILED GARMENT CABINET
62	2	HAND SOAP DISPENSER
63	1	HAND GREASE CLEANER DISPENSER
64	1	COMPACT REFRIGERATOR
65	1	MICROWAVE
72	1	WALL MOUNTED IT SERVER CABINET
84	1	MOBILE COAT RACK



SGA Design Group, P.C.
1437 South Boulder, Suite 450
Tulsa, Oklahoma 74119-3609
P: 918.557.8600
F: 918.557.8601
www.sga-designgroup.com
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CONSTRUCTION

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2020 ER

3561 SW MARKET ST

JACKSON COUNTY

LEE'S SUMMIT, MISSOURI 64082

STATE OF MISSOURI

MITCH GARRETT

NUMBER A-007541

07/23/2020

Digitally signed by Mitchell Garrett
DN: cn=Mitch Garrett, email=mgarrett@sgadesigngroup.com, c=US, ou=SGA Design Group, O=SGA Design Group, OU=Lee's Summit, MO
Garrett Date: 2020.07.23 12:47:25-0500

Mitchell Ray Garrett - ARCHITECT
MO# A-007541

ISSUE BLOCK

		ADD #1
A	04/16/20	
B	06/30/20	CB#1
C	07/23/20	IFC

PROPERTY NO.: 160085

6 DIGIT NO.: 906983

4 DIGIT NO.: 78C9

AOR PROJECT NUMBER: 1955971

TO PERMIT: DATE: 03/26/2020

TO BID: DATE: ###-##-##

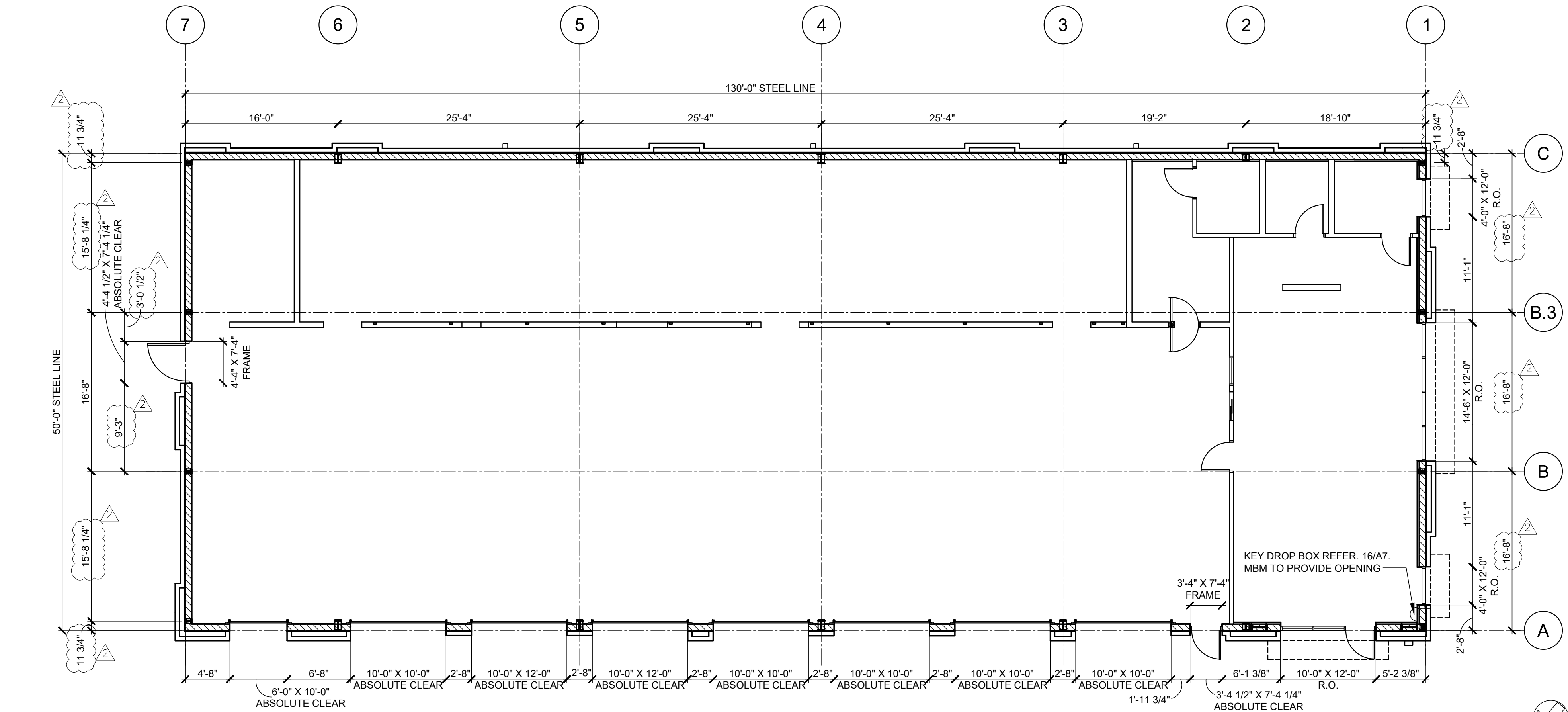
KMP

SHEET TITLE:

SHOWROOM
FIXTURE PLAN
& ELEVATIONS

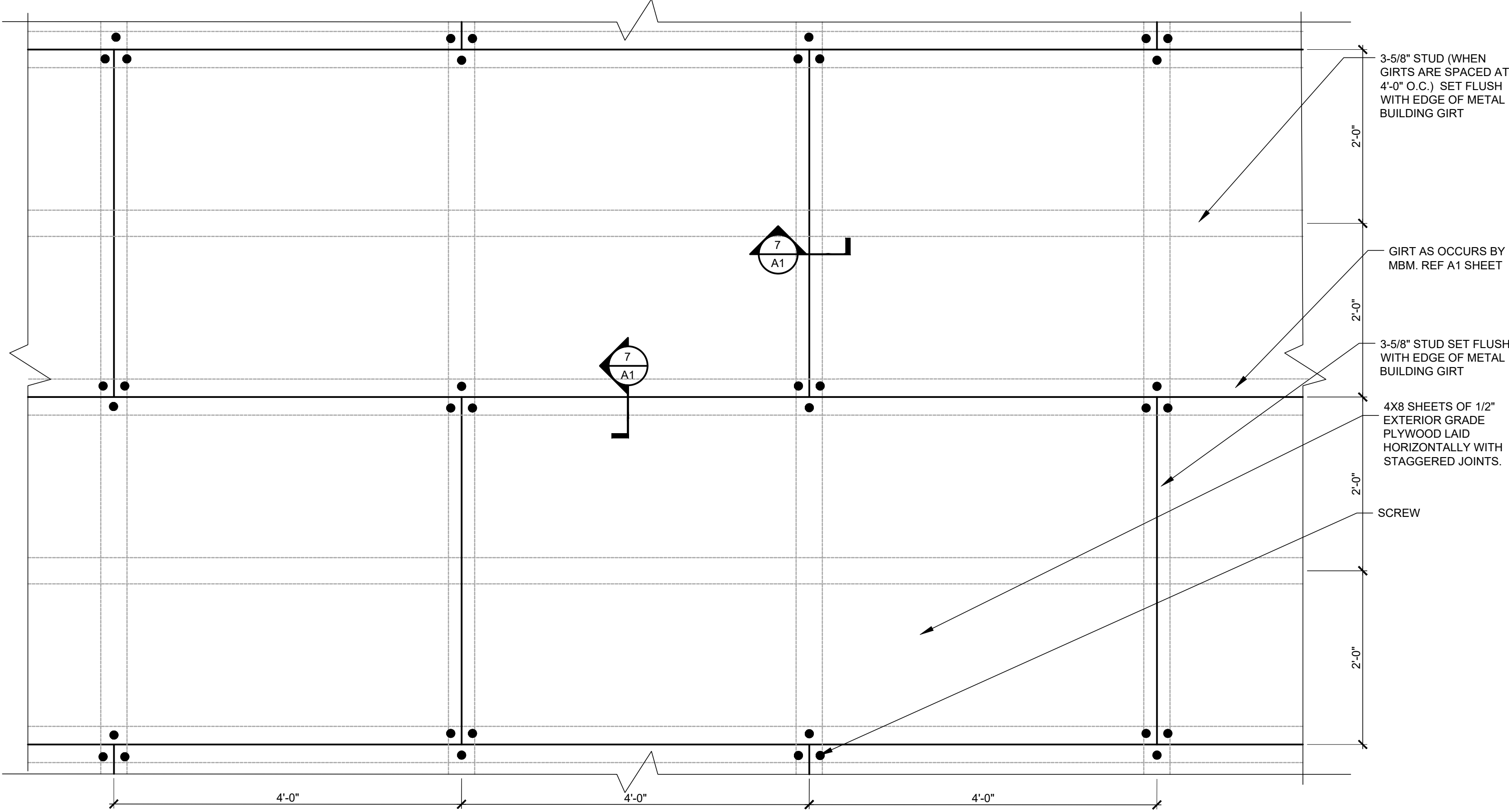
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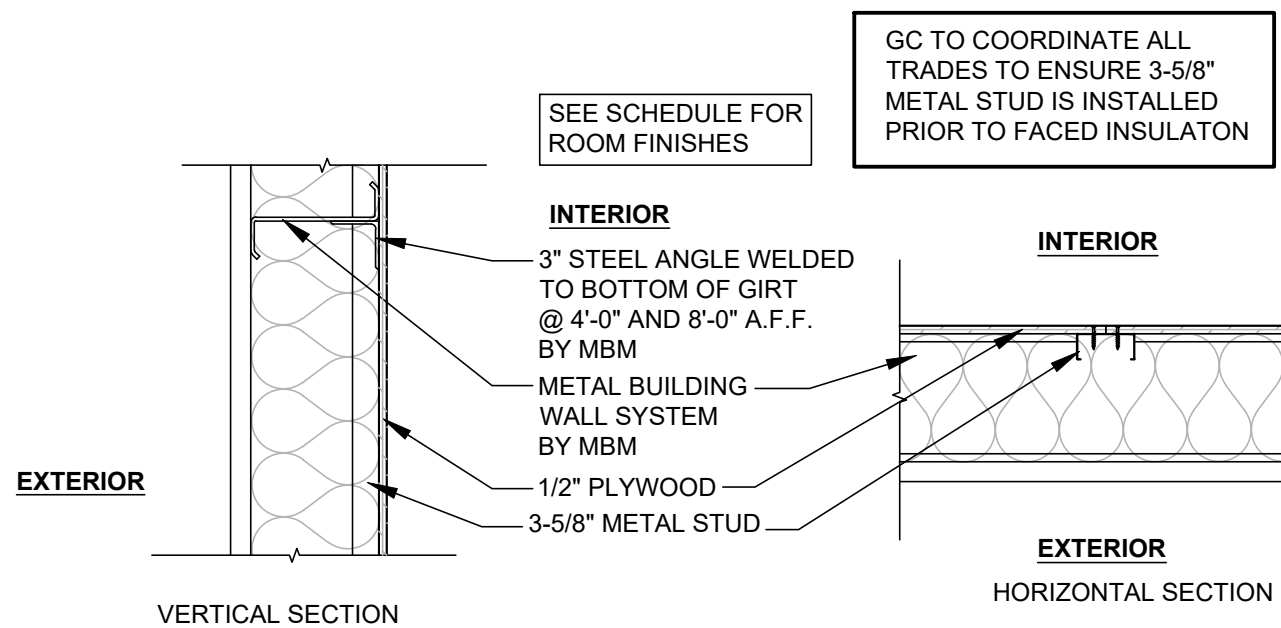
16
A1 FLOOR PLAN
SCALE: 1/8"=1'-0"

6
A1 PLYWOOD FRAMING LAYOUT
SCALE: 1"=1'-0"



SCREW PATTERN:
EACH 4X8 SHEET OF PLYWOOD TO HAVE SCREWS IN ALL
(4) CORNERS AND (1) AT TOP AND BOTTOM AT MIDPOINT
OF EACH SHEET. TOTAL (6) SCREWS PER 4X8 SHEET.

7
A1 PLYWOOD FRAMING DETAIL
SCALE: 1"=1'-0"



SEE SCHEDULE FOR
ROOM FINISHES

INTERIOR
3" STEEL ANGLE WELDED
TO BOTTOM OF GIRTS
@ 4'-0" AND 8'-0" A.F.F.
BY MBM
METAL BUILDING
WALL SYSTEM
BY MBM
1/2" PLYWOOD
3-5/8" METAL STUD

INTERIOR
EXTERIOR
HORIZONTAL SECTION
VERTICAL SECTION

GC NOTES AND REQUIREMENTS

- GC TO PROVIDE ANY NECESSARY INTERMEDIATE FRAMING FLUSH WITHIN GIRT CAVITY FOR ATTACHMENT OF INTERIOR FINISH MATERIAL.
- GC TO VERIFY THAT NO METAL BUILDING COMPONENTS ARE WARPED OR DAMAGED PRIOR TO ERECTION.

METAL BUILDING NOTES/REQUIREMENTS

WALL PANELS

- METAL BUILDING WALL PANELS: NRC (NUCOR REVERSE CLASSIC) 24-GAUGE PANEL MINIMUM, PAINTED GALVANIZED OR PAINTED GALVALUME. REFER ELEVATIONS ON SHEET A4.
- METAL BUILDING WALL INSULATION: SIMPLE SAVER, U-0.052
 - MBM CAN PROVIDE INSULATION, IF IT IS SIMPLE SAVER
- ON NON-INSULATED PANELS, MBM TO PROVIDE BASE CLOSURES, BUT NO BASE FLASHING.

ROOF PANELS

- METAL BUILDING ROOF PANELS: CFR 24 GALVANIZED
- METAL PARAPET BACKER PANELS: CFR 26 POLAR WHITE.
- METAL BUILDING ROOF INSULATION: SIMPLE SAVER, U-0.031. MBM TO PROVIDE ROOF CLIPS AND THERMAL BLOCKS AS REQUIRED.
 - MBM CAN PROVIDE INSULATION, IF IT IS SIMPLE SAVER
- MBM TO PROVIDE ROOF CURBS AND REINFORCING FOR ROOF TOP MECHANICAL EQUIPMENT (RTU, EXHAUST FAN, ETC), (14" HIGH CURB, REF MECHANICAL DRAWINGS)
- MBM TO PROVIDE ROOF HATCH AND CURB AND REINFORCING FOR HATCH. CURB TO BE 8" HIGH.

GIRTS

- GIRTS WITH NRC: 8" WIDE METAL BUILDING GIRTS MAXIMUM 2'-0" O.C., TO BE FLUSH WITHIN THE WALL CAVITY
- MBM TO TOE DOWN GIRTS AT 12' AFF. MBM TO PROVIDE 3" STEEL ANGLE ATTACHED TO GIRTS AT 4' AND 8' AFF GIRTS FOR INSTALLATION OF PLYWOOD.
- WITH PARAPET GUTTER, GIRTS MUST BE PLACED TO ALLOW PLACEMENT FOR SCUPPERS AND OVERFLOW SCUPPERS. REFER TO A4 SHEET.
- C CHANNEL AT PARAPET CAP TO BE PROVIDED TOE DOWN.
- MBM TO PROVIDE CONTINUOUS C CHANNEL AT CONCRETE SLAB - INCLUDING BETWEEN THE COLUMNS AND O.H. DOOR JAMBS.
- MBM TO ENSURE ACCURACY OF THE ALIGNMENT OF THE C CHANNELS THE COLUMN FACE.
- MBM TO PROVIDE HORIZONTAL GIRTS BETWEEN O.H. DOORS.
- GIRTS MUST BE PROVIDED CONSISTENTLY AROUND THE BUILDING.

COLUMNS & BRACING

- COLUMN LINE 2 - ALL COLUMNS IN SHOWROOM TO BE STRAIGHT COLUMNS. COLUMNS IN BATHROOMS TO BE SUPERMARKET COLUMNS THAT START TAPERING AT MINIMUM 10'-0" AFF.
- ALL METAL BUILDING COLUMNS AS SHOWN ON SHEETS A1 AND S2 ARE SET AND TO BE PROVIDED AS NOTED. NO COLUMN CHANGES EXCEPT IF SPECIFIC SITE CONDITIONS REQUIRE CHANGES.
- ALL METAL BUILDING MAINFRAME COLUMNS TO BE TAPERED UNLESS NOTED OTHERWISE AND HAVE A MAXIMUM BASE PLATE AT CONCRETE SLAB OF 14" DEEP.
- COLUMN LINES 3-6 (SERVICE BAY), PROVIDE OVERHEAD CLEARANCE OF 15'-6" MINIMUM ON HIGH EAVE, 14'-6" MINIMUM ON LOW EAVE.
- REFER TO SHEET S2 FOR BRACING LOCATIONS THAT WERE ASSUMED BY STRUCTURAL IN PRELIMINARY DESIGN. NO BRACING CHANGES EXCEPT IF SPECIFIC SITE CONDITIONS REQUIRE CHANGES.
- NO FIXED BASE BRACING ALLOWED.
- MBM TO CENTER ANCHOR BOLTS ON COLUMNS AT THE PORTAL FRAMES.
- ALL BRACING TO BE WITHIN THE GIRTS SPACING.
- NO FLANGE BRACES ALLOWED ON COLUMNS
- ENDWALL COLUMNS 8" DEEP MAX - FLUSH WITHIN GIRTS

FRAMING AND OPENINGS

- AT ALL AWNING/CANOPY LOCATIONS, MBM TO PROVIDE MINIMUM OF ONE BOX BEAM AT TOP AND BOTTOM. REFER TO A4 SHEET.
- INTERMEDIATE SUPPORTS FOR ALL EXTERIOR WALL LOUVER/VENT OPENINGS TO BE PROVIDED BY MBM.
- MBM TO PROVIDE STEEL ANGLE ATTACHED TO TOP OF O.H. DOOR FRAMING MEMBER FOR ATTACHMENT OF O.H. DOOR BLOCKING. REFER TO DETAIL 15/A7.
- ENSURE OPENING IN METAL BUILDING IS PROVIDED FOR KEY DROP BOX. REFER TO F1 AND A1.1 SHEETS FOR LOCATION.
- ALL HOLLOW METAL DOOR OPENINGS TO BE 3'-4 1/2" OR 4'-4 1/2" WIDE BY 7'-4 1/4" TALL.
- ALL ROUGH OPENINGS AS NOTED ON SHEET A1.1 ARE NOT ALLOWED TO BE REDUCED FOR METAL BUILDING TRIM OR FLASHING.
- MBM TO PROVIDE NECESSARY ANGLES BETWEEN THE COLUMNS AND THE O.H. DOOR JAMBS.
- CONNECTIONS BETWEEN O.H. DOOR VERTICAL CHANNELS AND HEADER CHANNELS CANNOT BE EXPOSED.

WARRANTIES

- 20-YEAR WEATHER TIGHTNESS WARRANTY ON ROOF.
- 25-YEAR FINISH WARRANTY FOR GALVANIZED/GALVALUME PANELS.
- BUILDING WARRANTY - 1-YEAR.

MISCELLANEOUS

- MEET MBDP CRITERIA PROVIDED BY STRUCTURAL AT THE START OF THE PROJECT.
- MBM TO PROVIDE ROOF PIPE JACKS.
- MBM TO PROVIDE 2 INSPECTIONS: 1 PRE-ERECTION MEETING AND 1 FINAL INSPECTION OF THE METAL BUILDING (MIN. 30 DAYS FROM CONSTRUCTION COMPLETION), TO INCLUDE A PUNCH LIST OF ITEMS NOT ERECTED CORRECTLY.
- ALL SIGN LOCATIONS, GC TO PROVIDE BLOCKING FOR ATTACHMENT. MBM DOES NOT NEED TO PROVIDE ADDITIONAL GIRTS FOR SIGNAGE.
- RED OR GRAY PRIMER STRUCTURE.
- ALL GIRTS/CHANNELS/ETC. MUST BE STEEL.
- ON PROJECTS WITH NON-INSULATED PANELS, MBM TO PROVIDE STRAPS/CLIPS FOR THE INSULATION IN THE WALLS.

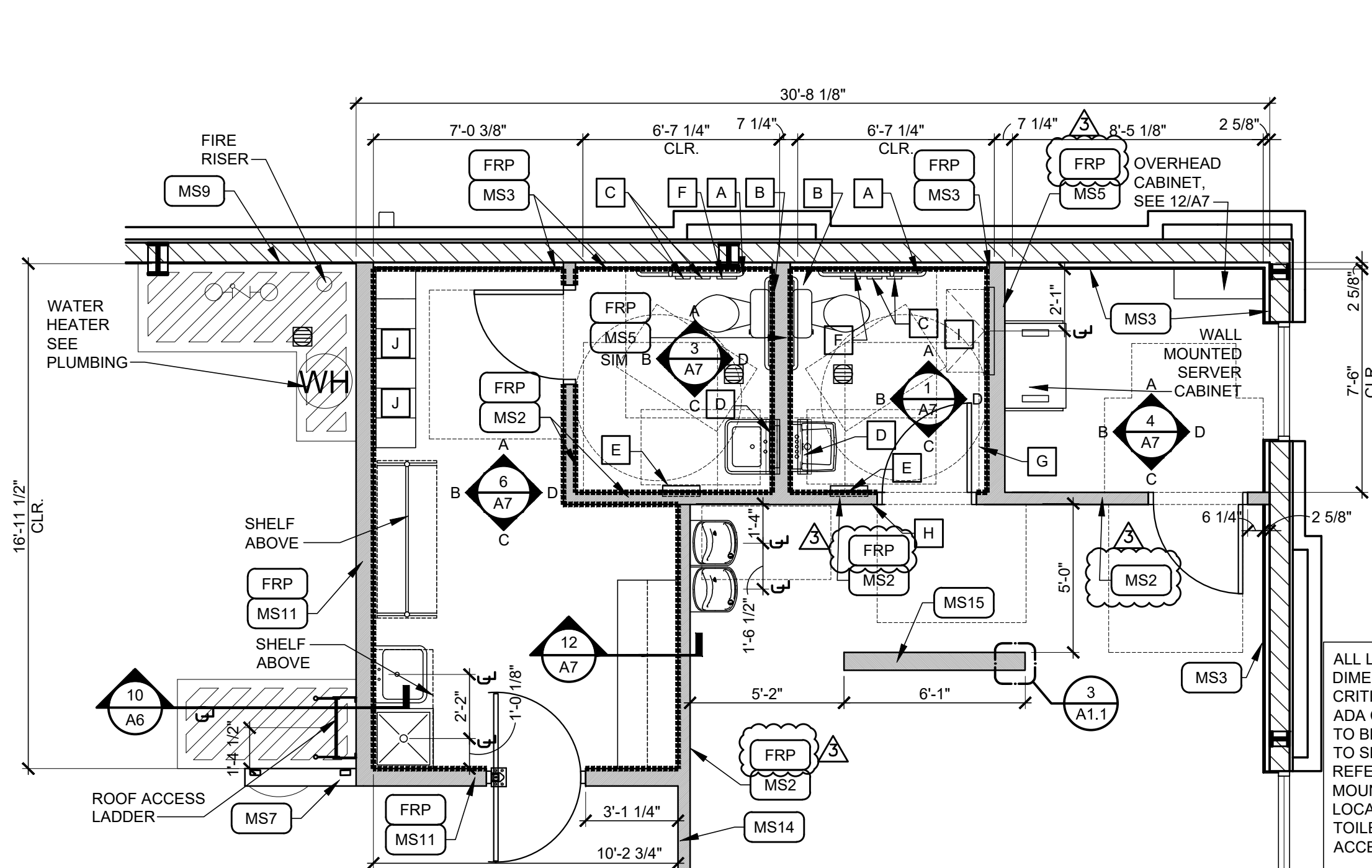
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Δ	06/30/20	CB#1
Δ	07/23/20	IFC

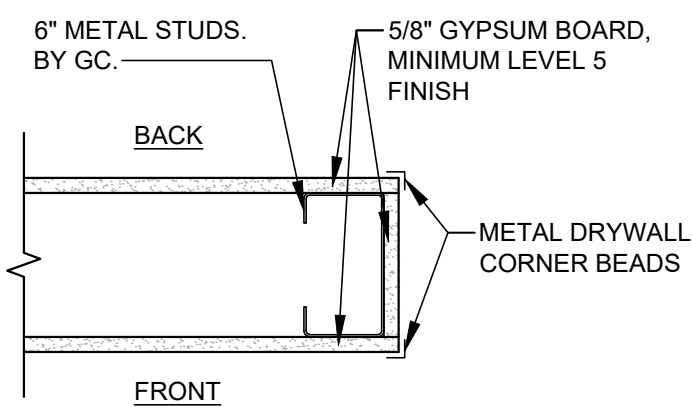
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6 DIGIT NO.: 906983
4 DIGIT NO.: 78C9
AOR PROJECT NUMBER: 1955B71
TO PERMIT: DATE: 03/26/2020
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SHEET TITLE:
METAL BUILDING
PLAN & NOTES

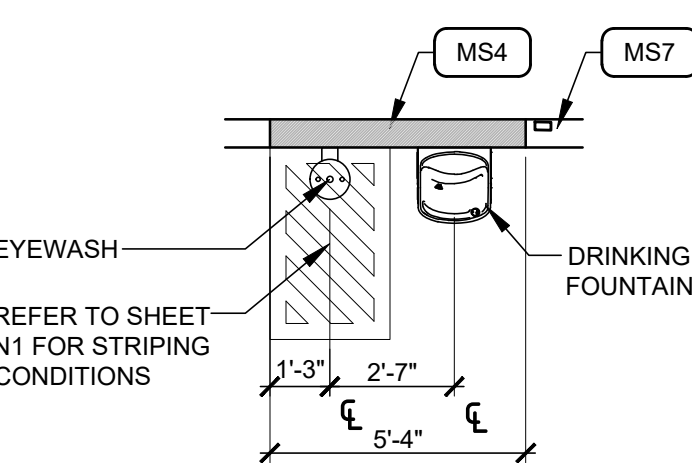
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A1



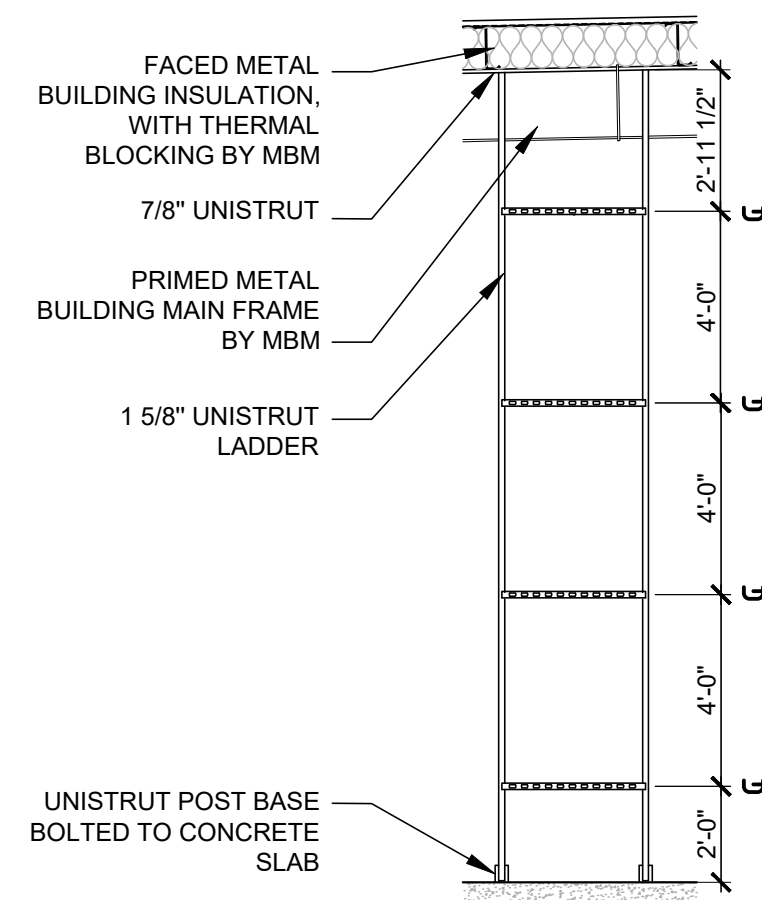
2 ENLARGED PLAN
A1.1 SCALE: 1/4"=1'-0"



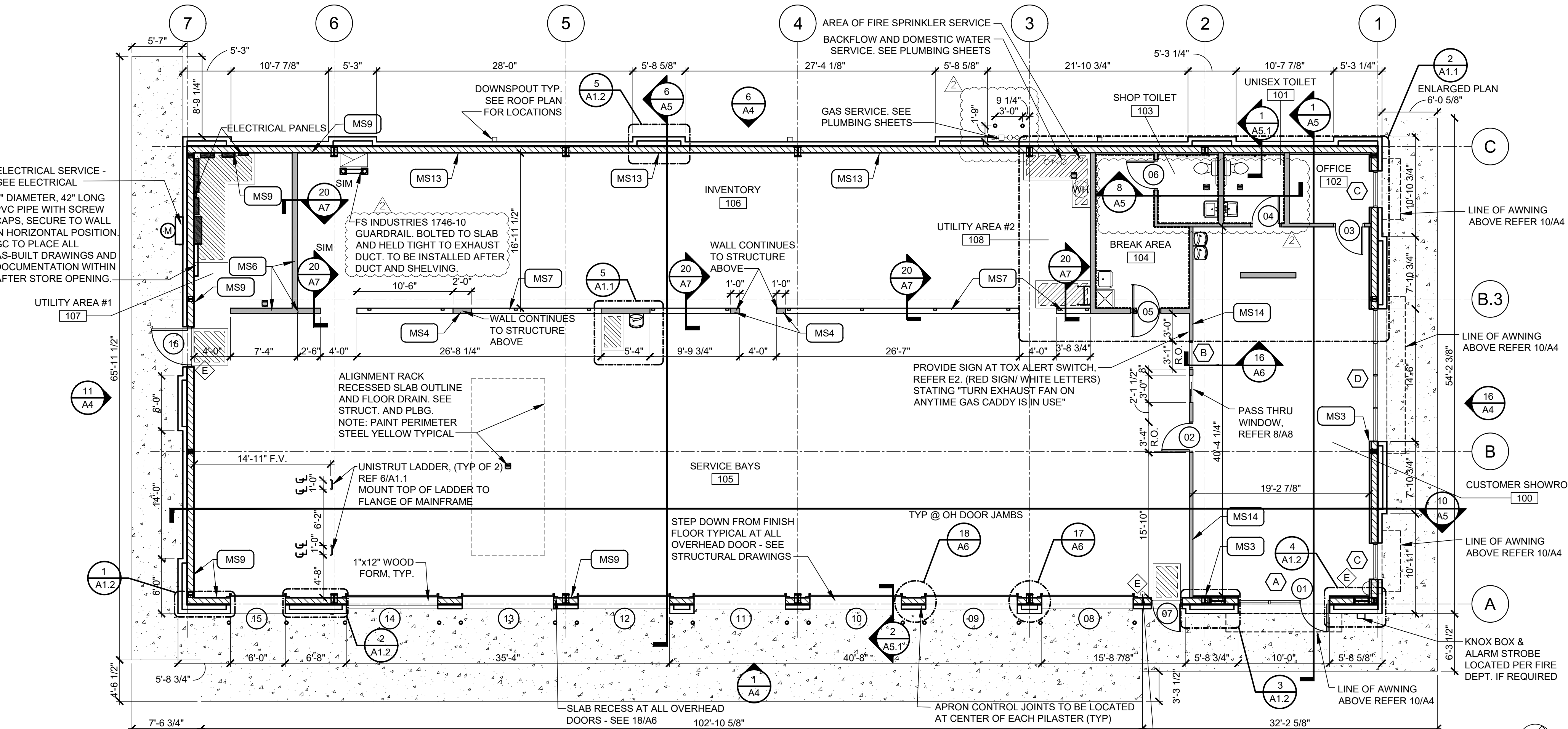
3 ENLARGED PLAN
A1.1 SCALE: 1-1/2"=1'-0"



5 ENLARGED PLAN
A1.1 SCALE: 1/4"=1'-0"



6 ENLARGED ELEVATION
A1.1 SCALE: 1/4"=1'-0"



16 FLOOR PLAN
A1.1 SCALE: 1/8"=1'-0"

STANDARD WALL TYPES

- NOTES:
- SOME WALL TYPES MAY NOT BE USED. REFER TO PLANS
 - REFER TO STRUCTURAL DRAWINGS FOR STUD GAUGES AND ADDITIONAL FRAMING INFORMATION.

MS1	3 5/8" METAL STUDS AT 16" O.C. WITH 5/8" GYPSUM BOARD BOTH SIDES. EXTEND PARTITION TO DECK (TYPICAL U.N.O.). USE MOISTURE RESISTANT GYPSUM BOARD ON INTERIOR SIDE OF TOILET AND MOP BASIN AREAS.
MS2	3 5/8" METAL STUDS AT 16" O.C. WITH 5/8" GYPSUM BOARD BOTH SIDES WITH SOUND ATTENUATION BLANKETS BETWEEN. EXTEND PARTITION TO DECK (TYPICAL U.N.O.) USE MOISTURE RESISTANT GYPSUM BOARD ON INTERIOR SIDE OF TOILET AND MOP BASIN AREAS AND BEHIND DRINKING FOUNTAINS.
MS3	(METAL BUILDING FRAME WALL SYSTEM) WITH 2" FURRING WITH 5/8" GYPSUM BOARD TO METAL DECK
MS4	6" METAL STUDS AT 16" O.C. WITH 1/2" PLYWOOD BOTH SIDES TO METAL DECK, PAINTED (TYPICAL UNLESS NOTED OTHERWISE).
MS5	6" METAL STUDS AT 16" O.C. WITH 5/8" GYPSUM BOARD BOTH SIDES WITH SOUND ATTENUATION BLANKETS BETWEEN. EXTEND PARTITION TO DECK (TYPICAL U.N.O.) AT SIM. CONDITION, EXTEND PARTITION 4" MIN. ABOVE CEILING. USE MOISTURE RESISTANT GYPSUM BOARD ON INTERIOR SIDE OF TOILET AND MOP BASIN AREAS.
MS6	6" METAL STUDS AT 16" O.C. TO DECK, WITH 1/2" PLYWOOD BOTH SIDES TO 8" A.F.F., PAINTED.
MS7	6" METAL STUDS TO 4" A.F.F. AT 16" O.C., STEEL COLUMNS WITHIN WALL FOR SUPPORT WITH 1/2" PLYWOOD BOTH SIDES, PAINTED. REFER STRUCTURAL DRAWINGS FOR STEEL COLUMNS.
MS8	3 5/8" METAL STUDS AT 16" O.C. WITH 5/8" GYPSUM BOARD BOTH SIDES, 4" TALL, 3/4" PLYWOOD ATTACHED TO WALL ON SHOP SIDE ONLY FOR ELECTRICAL PANEL MOUNTING.
MS9	METAL BUILDING FRAME WALL SYSTEM WITH 1/2" PLYWOOD TO 8'-0" A.F.F. ON INTERIOR SIDE. OPEN TO WALL STRUCTURE ABOVE.
MS10	2 1/2" METAL STUDS FURRING WITH 5/8" GYPSUM BOARD. EXTEND PARTITION 4" MIN. ABOVE CEILING (12'-0" A.F.F. IN CUSTOMER SHOWROOM). USE MOISTURE RESISTANT GYPSUM BOARD ON INTERIOR SIDE OF TOILET AREA. FIELD VERIFY EXACT EXTENTS AFTER TAPERED COLUMNS ARE PLACED IN ORDER TO COMPLETELY CONCEAL COLUMNS.
MS11	6" METAL STUDS AT 16" O.C. WITH 5/8" GYPSUM BOARD ON BREAK AREA SIDE AND 1/2" PLYWOOD ON UTILITY AREA OR SERVICE SIDE WITH SOUND ATTENUATION BLANKETS BETWEEN. EXTEND PARTITION AND FINISHES TO DECK (TYPICAL U.N.O.) AT SIM. CONDITION, EXTEND PARTITION 4" MIN. ABOVE CEILING. USE MOISTURE RESISTANT GYPSUM BOARD ON INTERIOR SIDE OF TOILET AND MOP BASIN AREAS.
MS12	2 1/2" METAL STUDS WITH 1/4" PLYWOOD ON OUTSIDE FACE. PAINT.
MS13	METAL BUILDING FRAME WALL SYSTEM WITH 1/2" PLYWOOD TO 12'-0" A.F.F. ON INTERIOR SIDE. OPEN TO WALL STRUCTURE ABOVE.
MS14	3 5/8" METAL STUDS AT 16" O.C. WITH 5/8" GYPSUM BOARD ON SHOWROOM AND BREAK AREA SIDE AND 1/2" PLYWOOD ON UTILITY AREA OR SERVICE SIDE WITH SOUND ATTENUATION BLANKETS BETWEEN. EXTEND PARTITION TO DECK (TYPICAL U.N.O.) USE MOISTURE RESISTANT GYPSUM BOARD ON INTERIOR SIDE OF TOILET AND MOP BASIN AREAS AND BEHIND DRINKING FOUNTAINS.
MS15	6" METAL STUDS AT 16" O.C. WITH 5/8" GYPSUM BOARD ALL SIDES. EXTEND PARTITION TO DECK (TYPICAL U.N.O.)
FRP	FRP BOARD GLUE EDGE TO EDGE OF SUBSTRATE. REFER TO INTERIOR ELEVATIONS ON SHEET A7 FOR HEIGHTS A.F.F.

ACCESSORIES

MARK	DESCRIPTION
A	42" GRAB BAR WITH WOOD BACKER, WITH 18" VERTICAL BAR AS REQUIRED.
B	36" GRAB BAR WITH WOOD BACKER
C	TOILET TISSUE DISPENSER
D	MIRROR - SEE ELEVATIONS FOR SIZE
E	PAPER TOWEL DISPENSER & DISPOSAL
F	SANITARY NAPKIN DISPOSAL UNIT
G	COAT HOOK
H	HANDICAP SIGN-MOUNT 5'-0" AFF TO CENTER: 8" EDGE TO JAMB EDGE.
I	BABY CHANGING STATION. SEE DETAIL 1/N1
J	6 HALF LOCKER UNIT QTY(2)(SECURE TO WALL)

- NOTES:
- PROVIDE WOOD BLOCKING AS REQUIRED FOR MOUNTING ACCESSORIES
 - ACCESSORY PACKAGE AVAILABLE FROM NATIONAL VENDOR.
 - REFER TO SHEET N1 FOR MOUNTING HEIGHTS, LOCATIONS, ETC OF TOILET ROOM ACCESSORIES.

GENERAL NOTES

- WALL DIMENSIONS ARE TO FINISH CLEAR DIMENSION. ALL MATERIALS MUST BE FIGURED INTO THE LAYOUT OF THE FRAMING.
- MASONRY OPENING SHALL BE COORDINATED WITH WINDOW OR DOOR MANUFACTURERS REQUIREMENTS.
- PLUMBING ROUGH INS ARE CRITICAL FOR ADA CLEARANCES, VERIFY ALL PLUMBING ROUGH INS PRIOR TO INSTALLING ROOM FINISHES.
- ALL MASONRY DIMENSIONS ARE NOMINAL DIMENSIONS, MASONRY CONTRACTOR TO ADJUST COURSING AS NEEDED.
- ALL GYP. BRD. WALLS SHALL HAVE LATERAL BRACING AND CONTROL JOINTS AS REQUIRED IN SPECIFICATION SECTION 092900.

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LEE'S SUMMIT, MISSOURI

09/21/2020
1437 South Boulder, Suite 450
Tulsa, Oklahoma 74119-3809
P: 918.587.8800
F: 918.587.8801
www.sga-design.com
Certificate of Authority #A-2008031444
Architecture

SGA Design Group, P.C.

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Tulsa, Oklahoma 74119-3809
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NEW FCAC STORE
2020 ER
3561 SW MARKET ST
JACKSON COUNTY
LEE'S SUMMIT, MISSOURI 64082

STATE OF MISSOURI
MITCH GARRETT
NUMBER
A-007541
07/23/2020

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DN: cn=Garrett, o=SGA Design Group, ou=Lee's Summit, Missouri
Mitchell Garrett
MITCHELL RAY GARRETT - ARCHITECT
MOP A-007541

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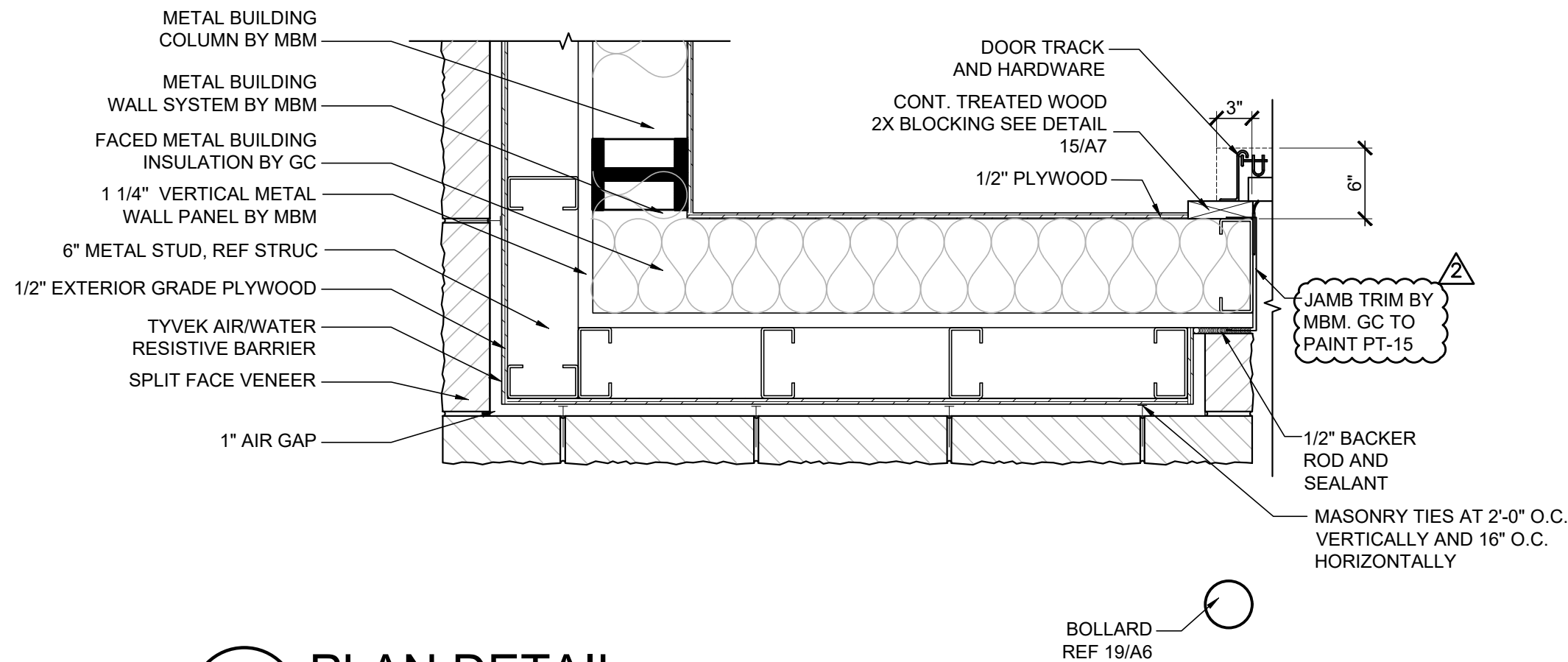
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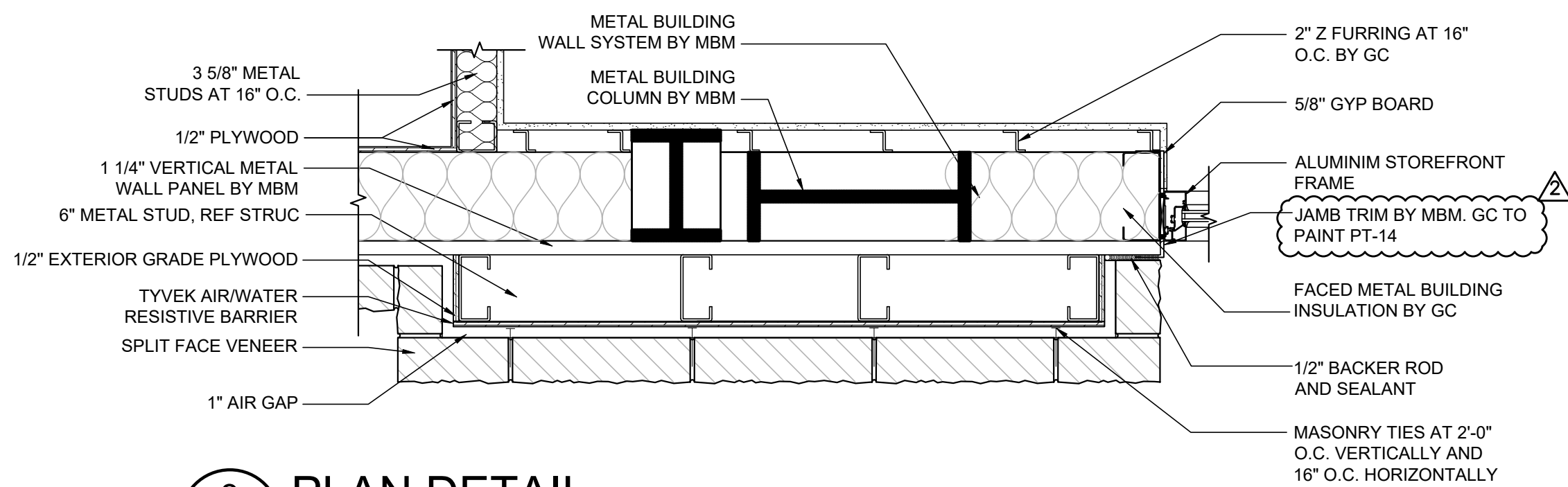
FLOOR PLAN & NOTES

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A1.1

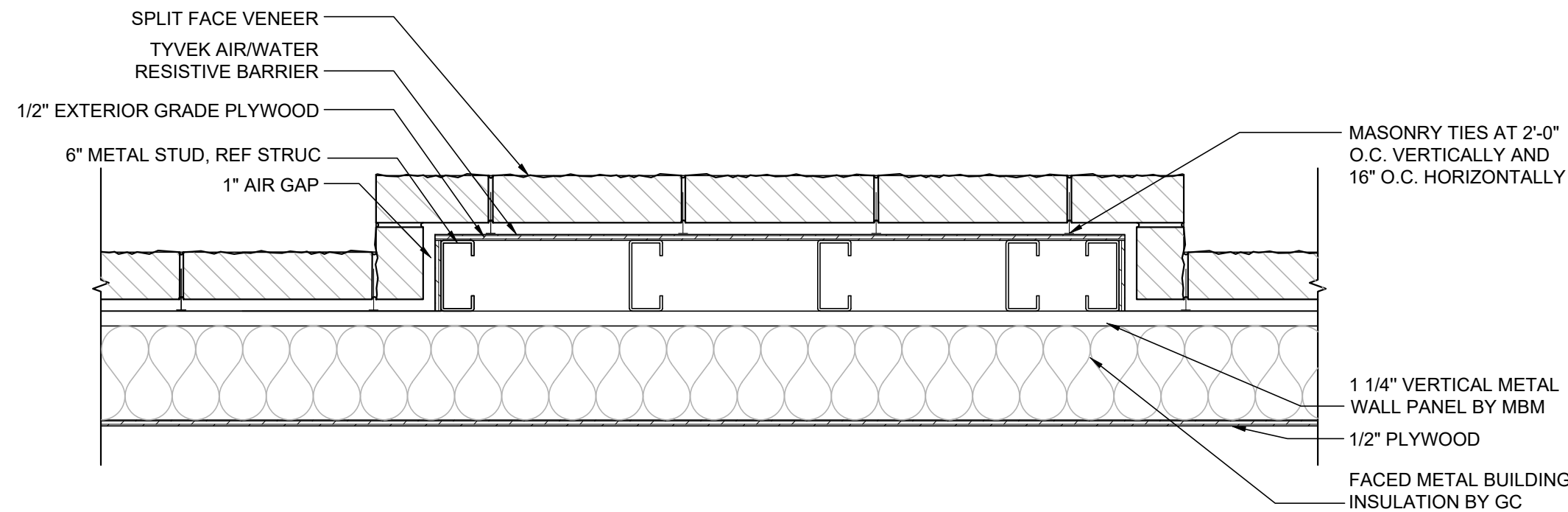
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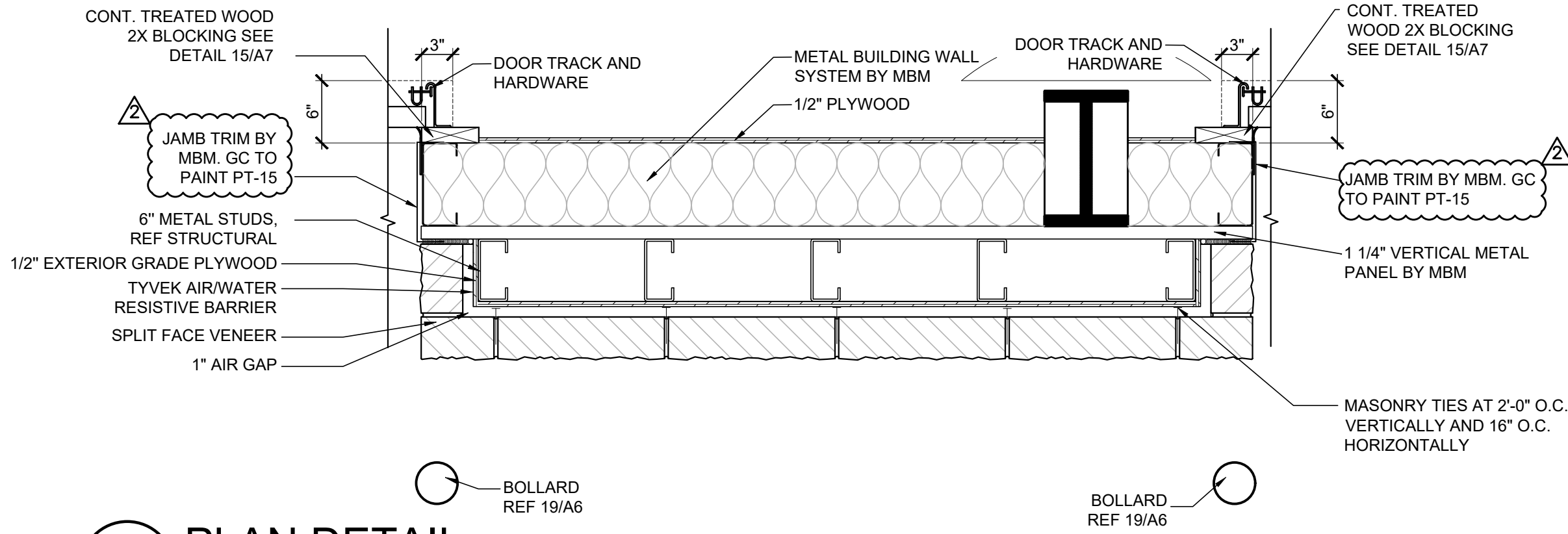
1 PLAN DETAIL
A1.2 SCALE: 1"=1'-0"



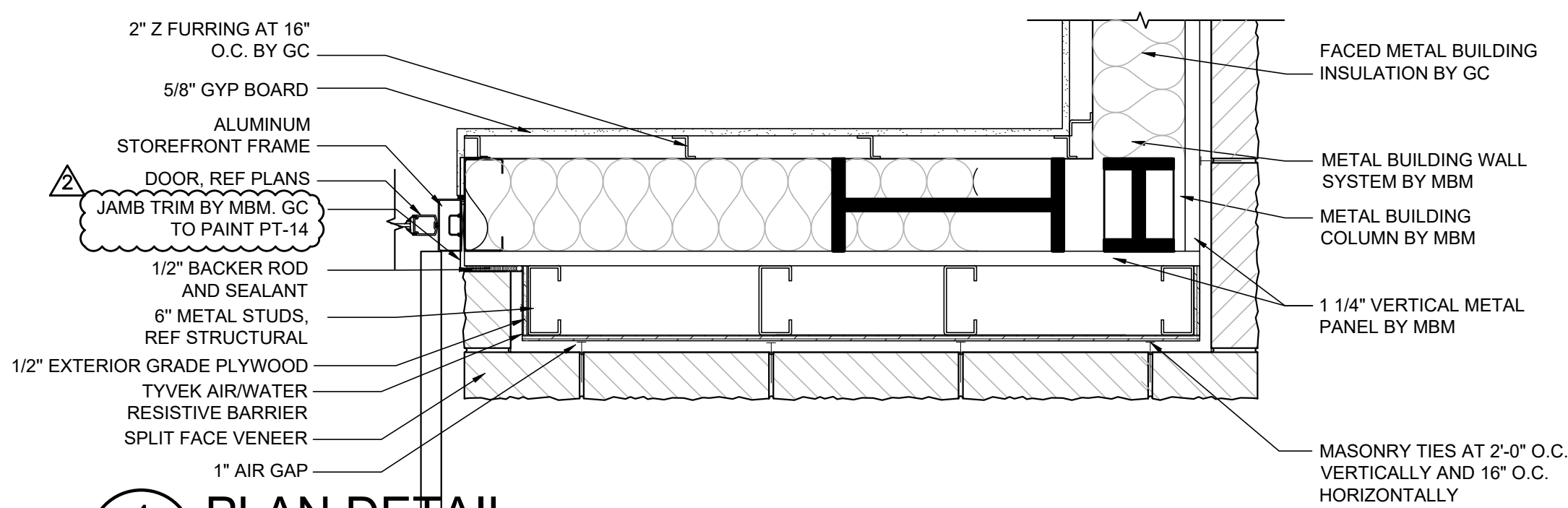
3 PLAN DETAIL
A1.2 SCALE: 1"=1'-0"



5 PLAN DETAIL
A1.2 SCALE: 1"=1'-0"



2 PLAN DETAIL
A1.2 SCALE: 1"=1'-0"



4 PLAN DETAIL
A1.2 SCALE: 1"=1'-0"

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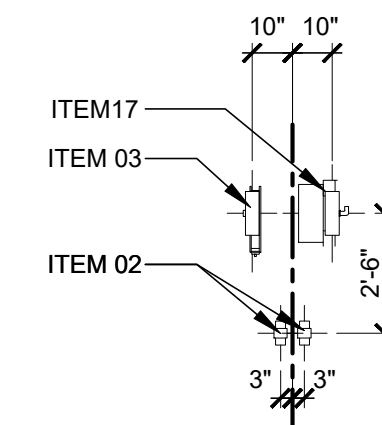
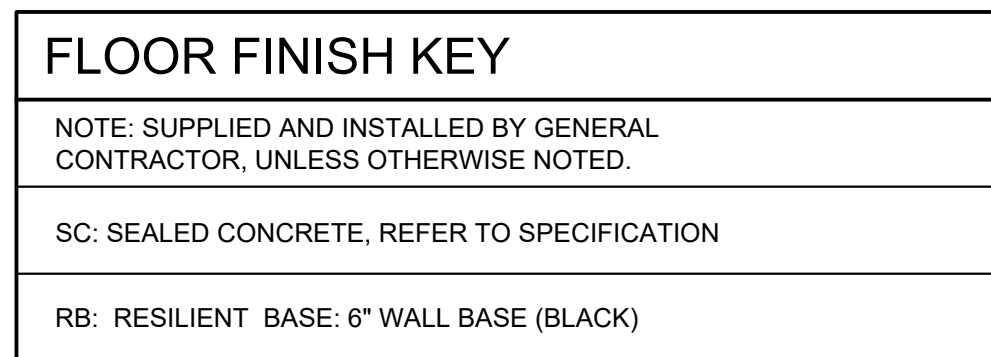
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NEW FCAC STORE
2020 ER
3561 SW MARKET ST
JACKSON COUNTY
LEE'S SUMMIT, MISSOURI 64082

STATE OF MISSOURI
MITCH GARRETT
NUMBER A-007541
07/23/2020
Digitally signed by Mitchell Garrett
DN: cn=MITCH GARRETT, email=mitchgarrett@sgadesign.com, c=US, o=SGA Design Group, ou=Architecture
Mitchell Garrett
MITCHELL RAY GARRETT - ARCHITECT
MOP A-007541

ISSUE BLOCK			
1	04/16/20	ADD #1	
2	06/30/20	CB#1	
3	07/23/20	IFC	
PROPERTY NO.: 160085			
6 DIGIT NO.: 906983			
4 DIGIT NO.: 78C9			
AOR PROJECT NUMBER: 1955B71			
TO PERMIT: DATE: 03/26/2020		TO BID: DATE: ###-##-##	
KMP			
SHEET TITLE: ENLARGED PLAN DETAILS			
SHEET NUMBER: A1.2			

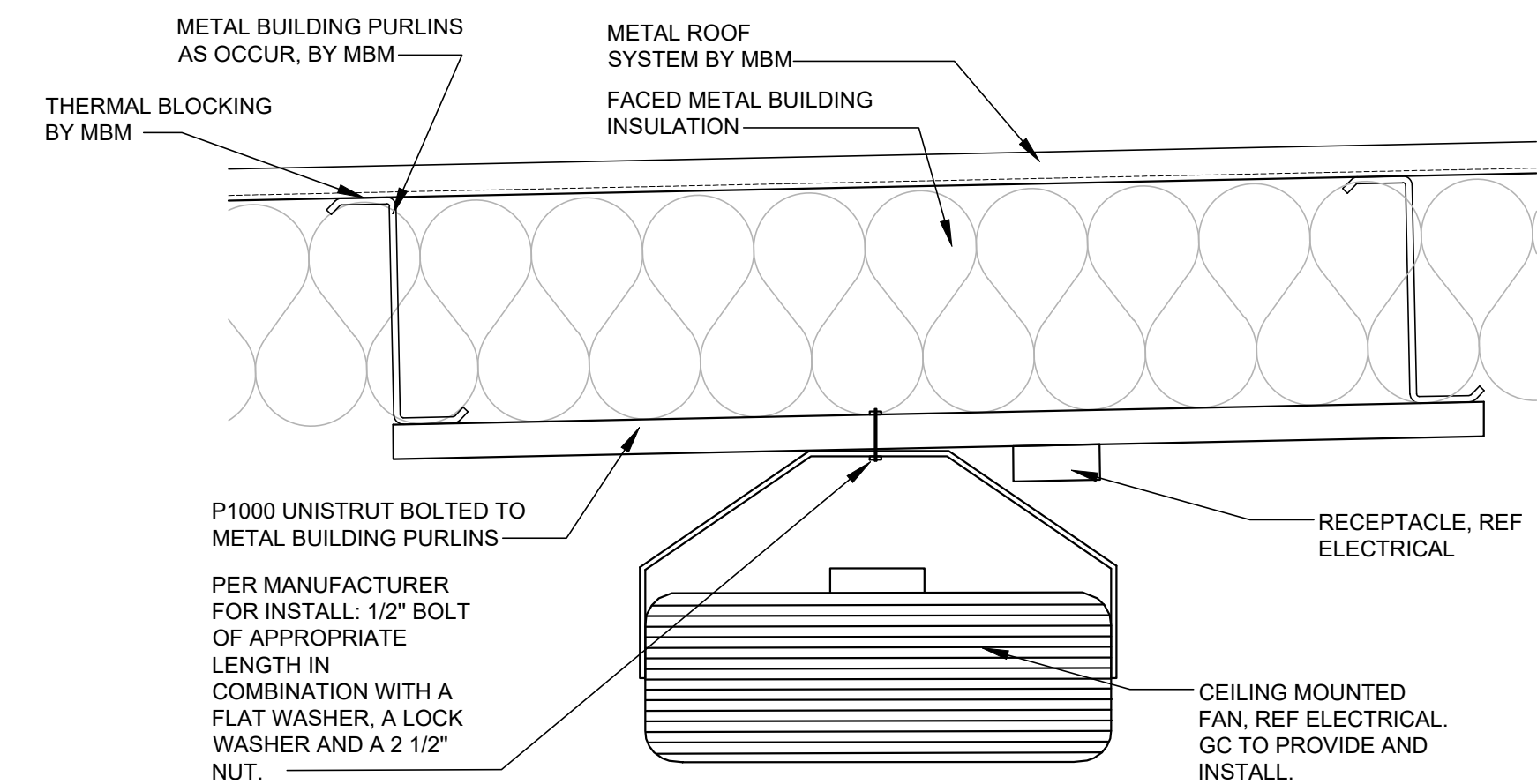
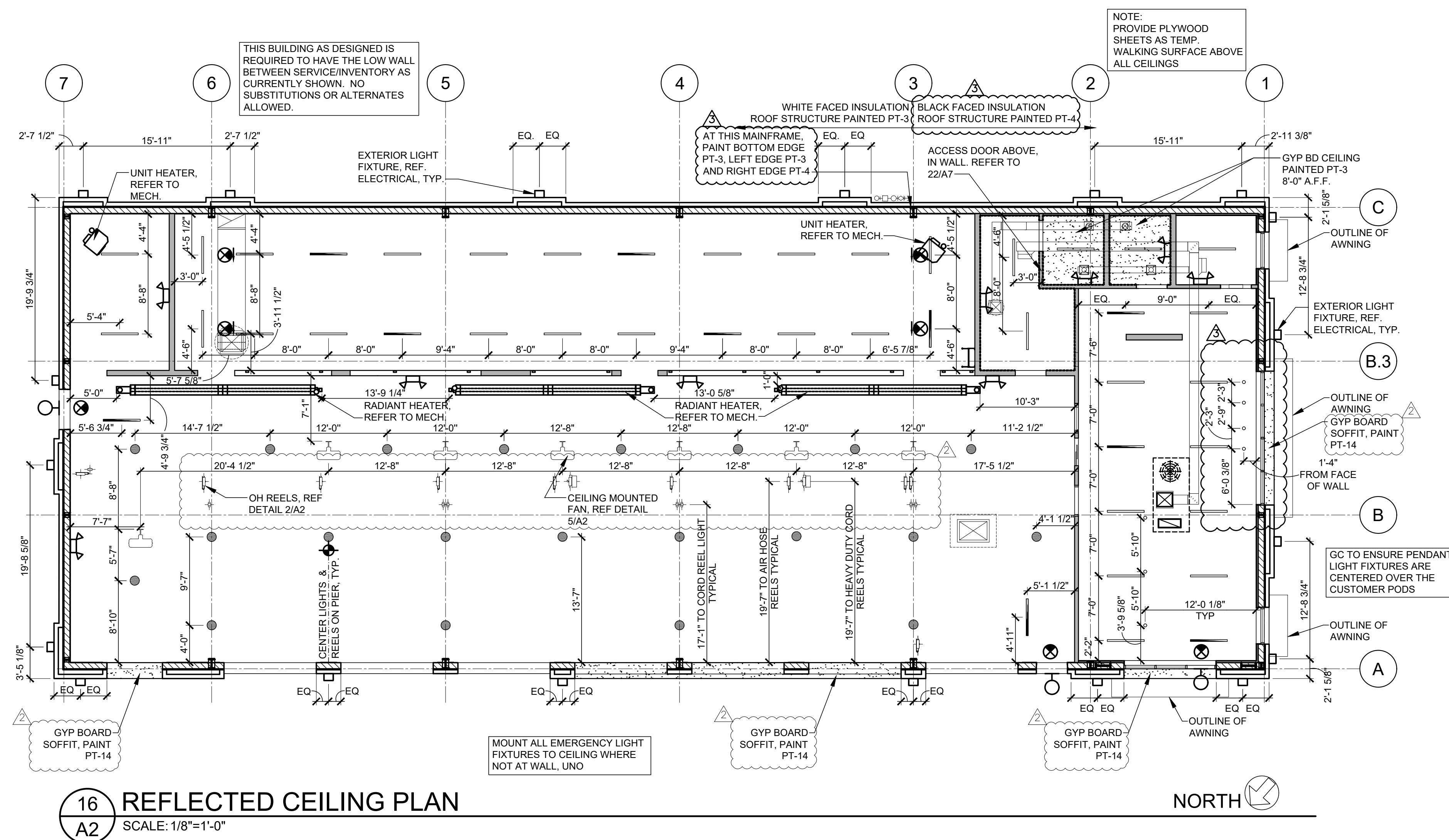


2 ENLARGED EQUIPMENT DETAIL
A2 SCALE: 1/4"=1'-0"

1 WALL/FLOOR FINISH PLAN

REFLECTED CEILING PLAN NOTES:

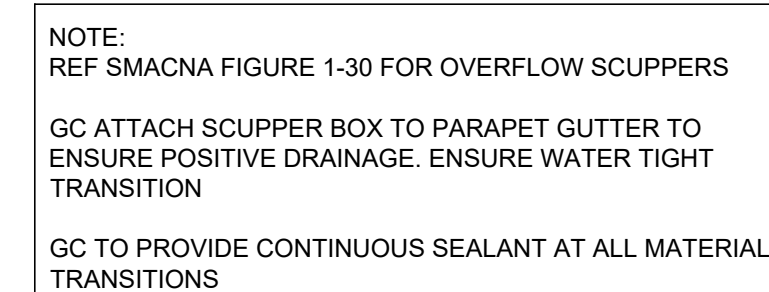
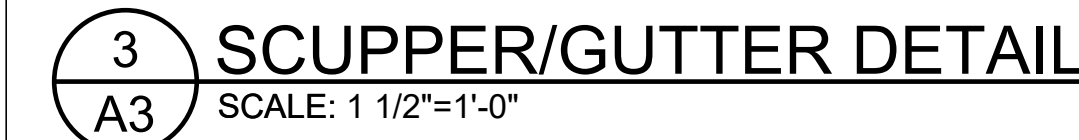
1. LOCATE LIGHT FIXTURES CENTERED IN THE ROOM OR OVER DOOR AS APPLIES, UNLESS DIMENSIONS NOTE OTHERWISE.
2. SEE MECHANICAL AND ELECTRICAL SHEETS FOR SYMBOL SPECIFICATION.



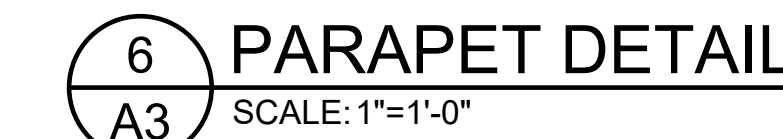
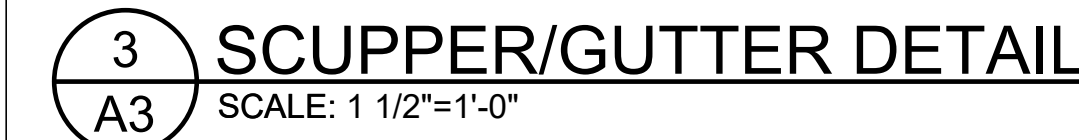
5 CEILING MOUNTED FAN
A2 SCALE: 1 1/2"=1'-0"

16 REFLECTED CEILING PLAN
A2 SCALE: 1/8"=1'-0"

SUE BLOCK		
1	04/16/20	ADD #1
2	06/30/20	CB#1
3	07/23/20	IFC

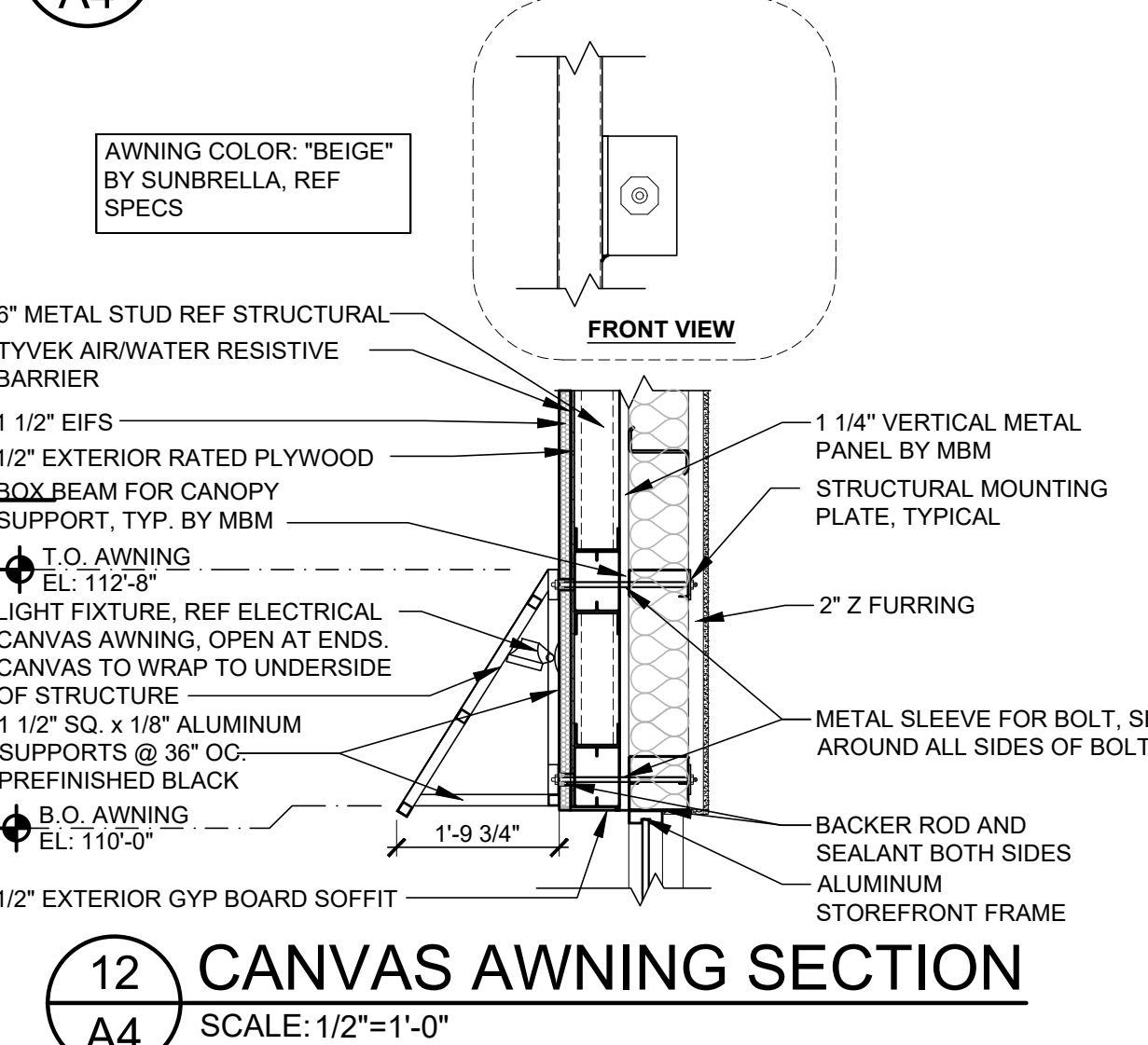


ROOF DRAINAGE CALCULATIONS PRIMARY AND SECONDARY DRAINS Based on 2018 IPC table 1106.3, 6" downspouts			
ZONE	AREA (SQ FT)	ACTUAL GPM CAPACITY	CAPACITY OF 6" DOWNSPOUT IN GPM PER TABLE 1106.2
ZONE 1	2221	272	538
ZONE 2	2221	252	538
ZONE 3	2221	275	538

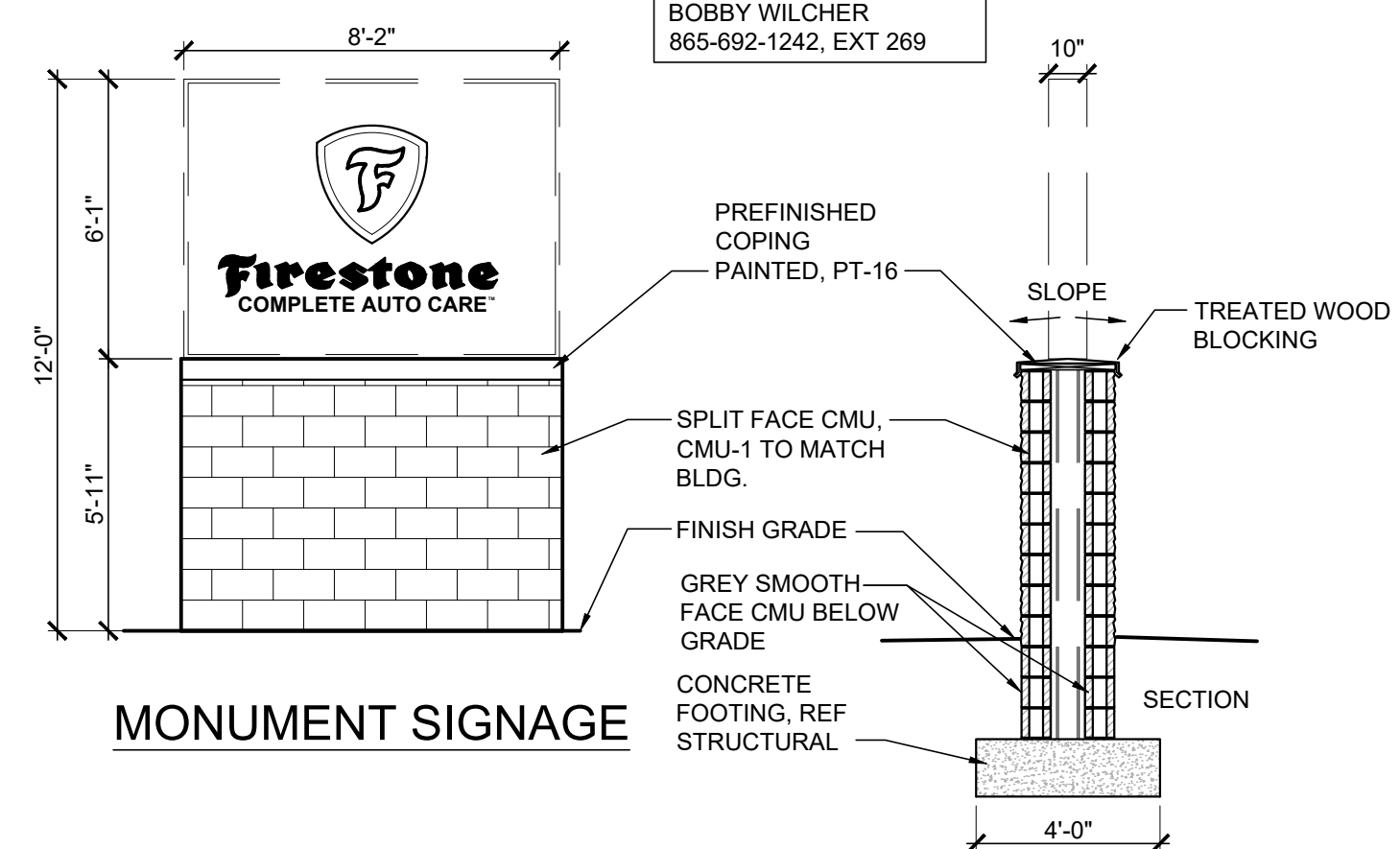


ROOF DRAINAGE CALCULATIONS
PRIMARY AND SECONDARY DRAINS
Based on 2018 IPC table 1106.3, 6" d

1. PROVIDE DRIP CAP OVER ALL MAN DOORS SEE DETAIL 1C/A8
2. PAINT ALL EXPOSED LINTELS & JAMBS TO MATCH ADJACENT BUILDING COLOR.
3. SEE ELECTRICAL FOR SIGNAGE OPERATING TIME SIGNAGE
4. INSTALLATION OF BUILDING SIGNS AND STREET SIGN BY SIGN VENDOR, G.C. TO PROVIDE WIRING. REFER ELECTRICAL.
5. REFER SHEET A8 FOR PAINT COLOR KEY.
6. ANY EXTERIOR CONSTRUCTION JOINT, EXPANSION JOINT, OR CRACK REPAIRS SHALL BE IDENTICAL OR SAME MATERIALS MUST HAVE APPROPRIATE PRODUCT APPLIED TO PROVIDE AN AIR, MOISTURE, AND WATER TIGHT EXTERIOR. REFER TO SPECIFICATION SECTION 079200 FOR PRODUCTS.
7. SIGNAGE INDICATED ON ELEVATIONS IS INTENDED TO BE APPROXIMATE. APPROXIMATE SIZE AND QUANTITY OF PROPOSED BUILDING SIGNAGE. REFER TO SIGNAGE PERMIT DRAWINGS FOR ACCURATE SIGNAGE INFORMATION.



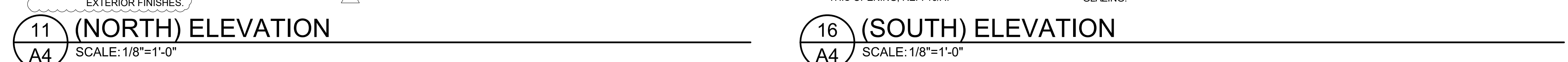
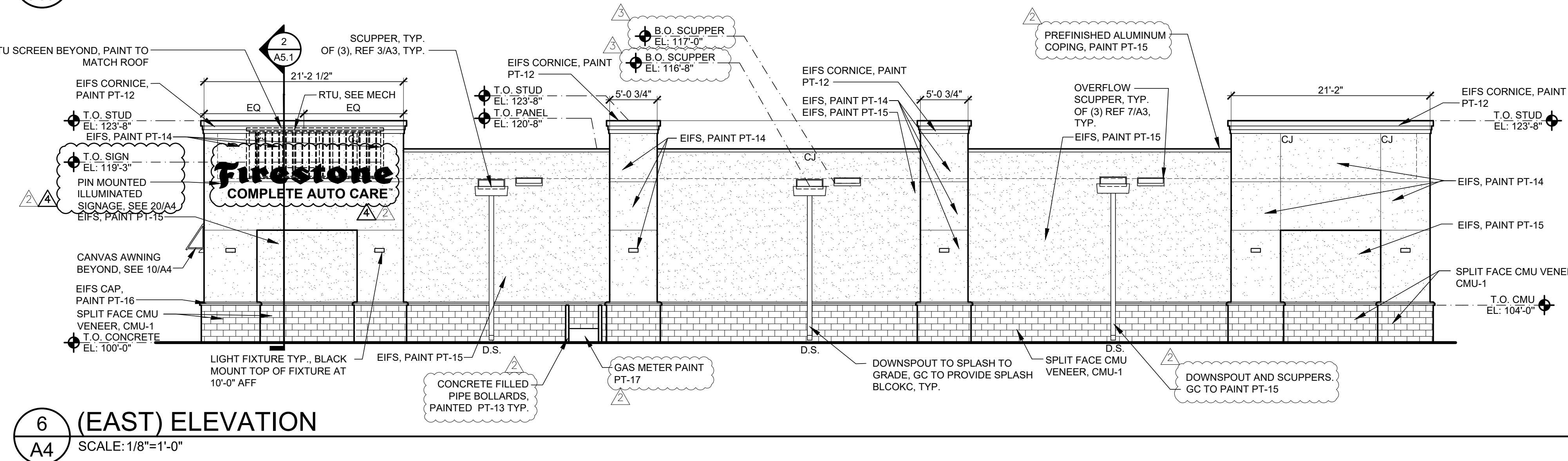
MONUMENT SIGN BASE
AND POWER FOR SIGN
BY GENERAL
CONTRACTOR.



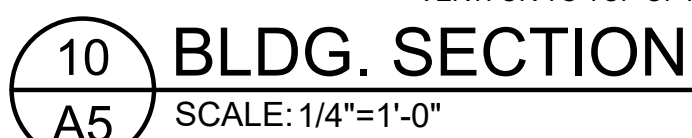
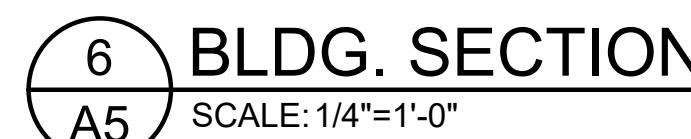
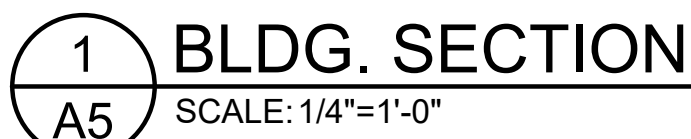
PIN MOUNTED ILLUMINATED
SIGNAGE ON RACEWAY, TYP. — 73 SF WEARABLE LETTERSET

BUILDING SIGNAGE

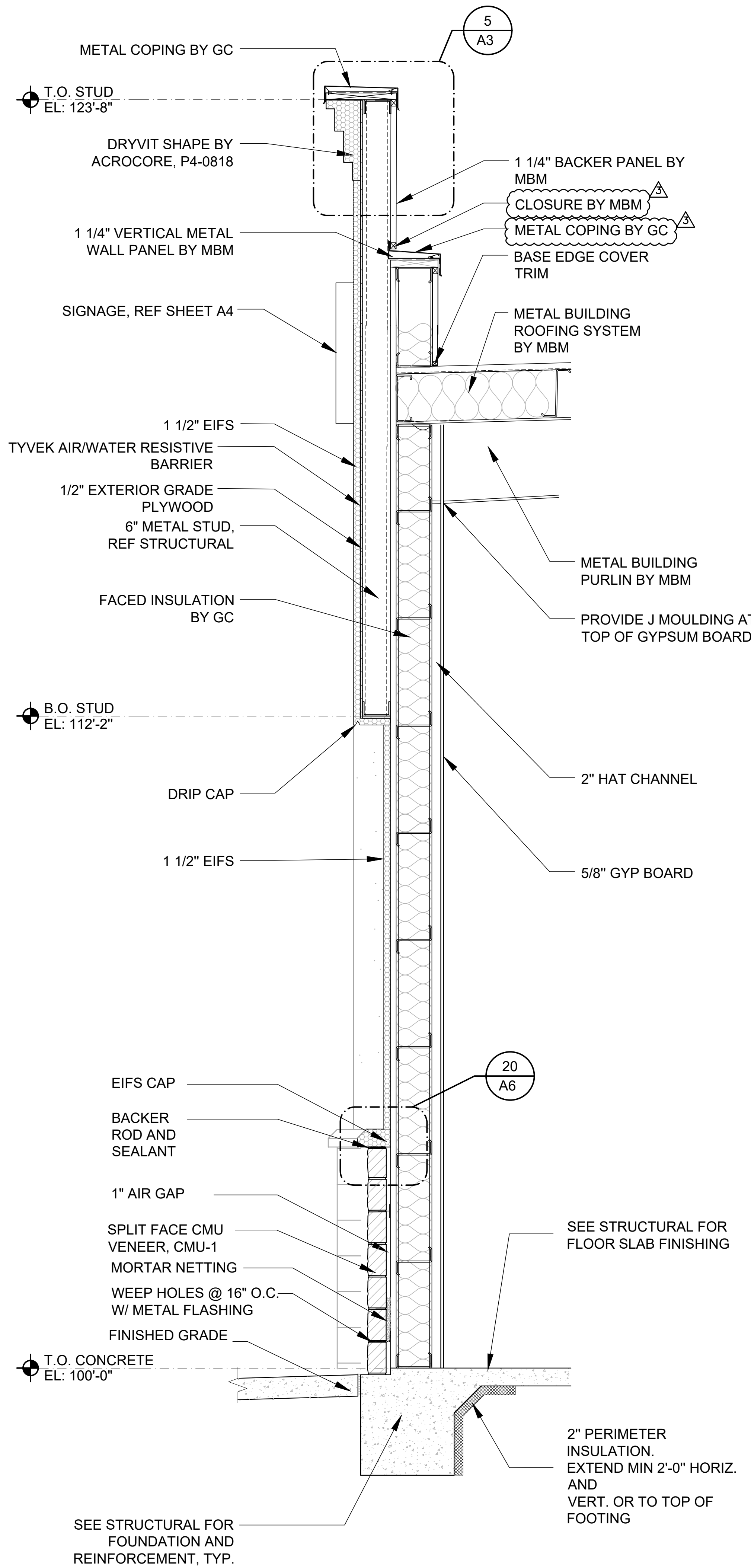
20 SIGNAGE DETAIL
A4 SCALE: 1/4"=1'-0"



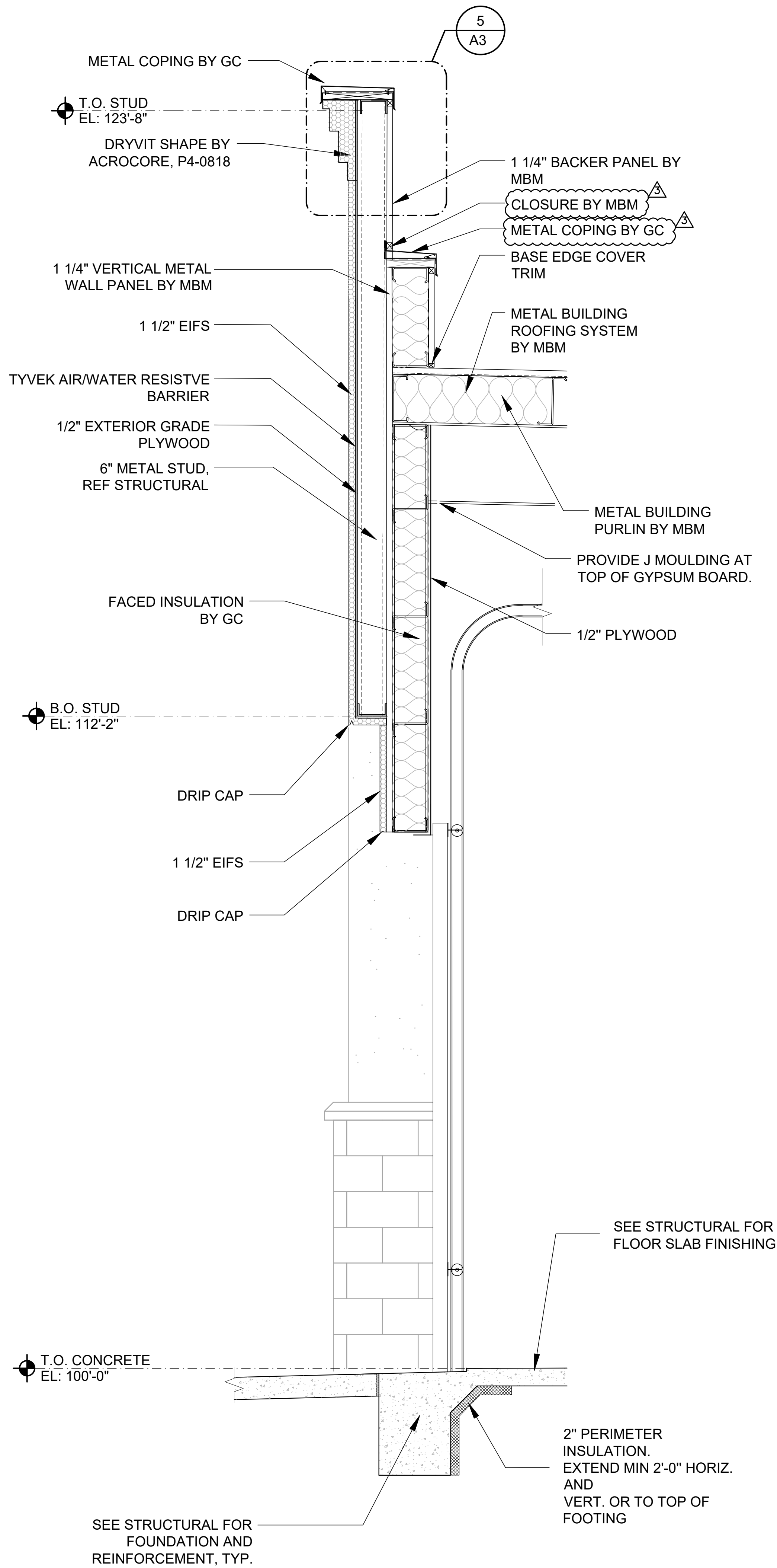
16 (SOUTH) ELEVATION
A4 SCALE: 1/8"=1'-0"



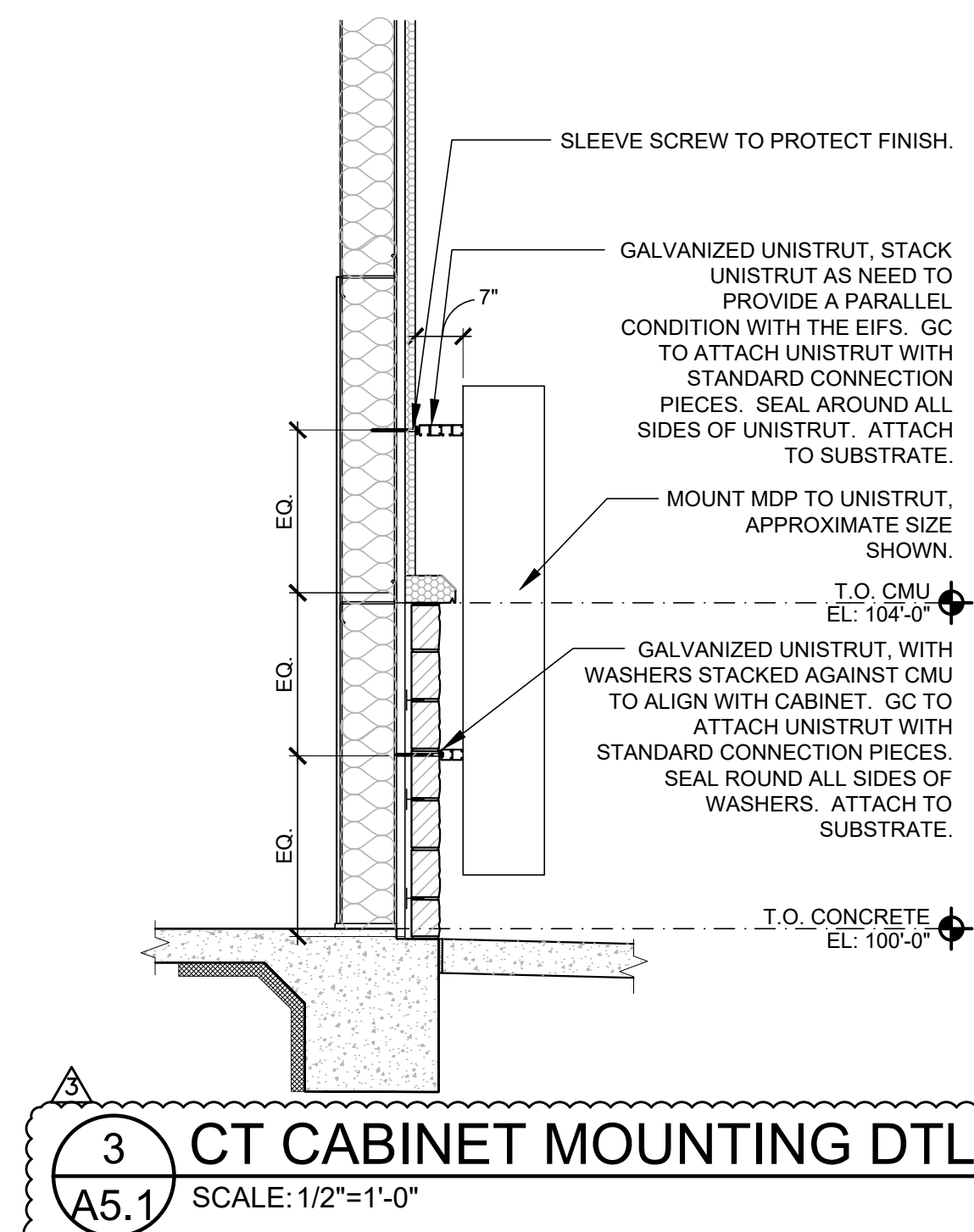
Jul 23, 2020 -- 8:43am -- USER: cderroh
P:\BRO Projects\Lee's Summit, MO -- 1955B71 -- Drawings & Design\Building Drawings\10_FCAC_ER-A051.dwg



1 WALL SECTION
A5.1 SCALE: 1/2"=1'-0"



2 WALL SECTION
A5.1 SCALE: 1/2"=1'-0"



3 CT CABINET MOUNTING DTL
A5.1 SCALE: 1/2"=1'-0"

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
SGA Design Group, P.C.
1437 South Boulder, Suite 450
Tulsa, Oklahoma 74119-8809
P: 918.587.8800
F: 918.587.8801
www.sga-design.com
Certificate of Authority #A-2008031944
Architecture

Firestone
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NEW FCAC STORE
2020 ER
3561 SW MARKET ST
JACKSON COUNTY
LEE'S SUMMIT, MISSOURI 64082

STATE OF MISSOURI
MITCH GARRETT
NUMBER A-007541
07/23/2020
Digitally signed by Mitchell Garrett
DN: cn=Garrett, o=SGA Design Group, ou=Architecture
Mitchell Garrett
MITCHELL RAY GARRETT - ARCHITECT
MOP A-007541

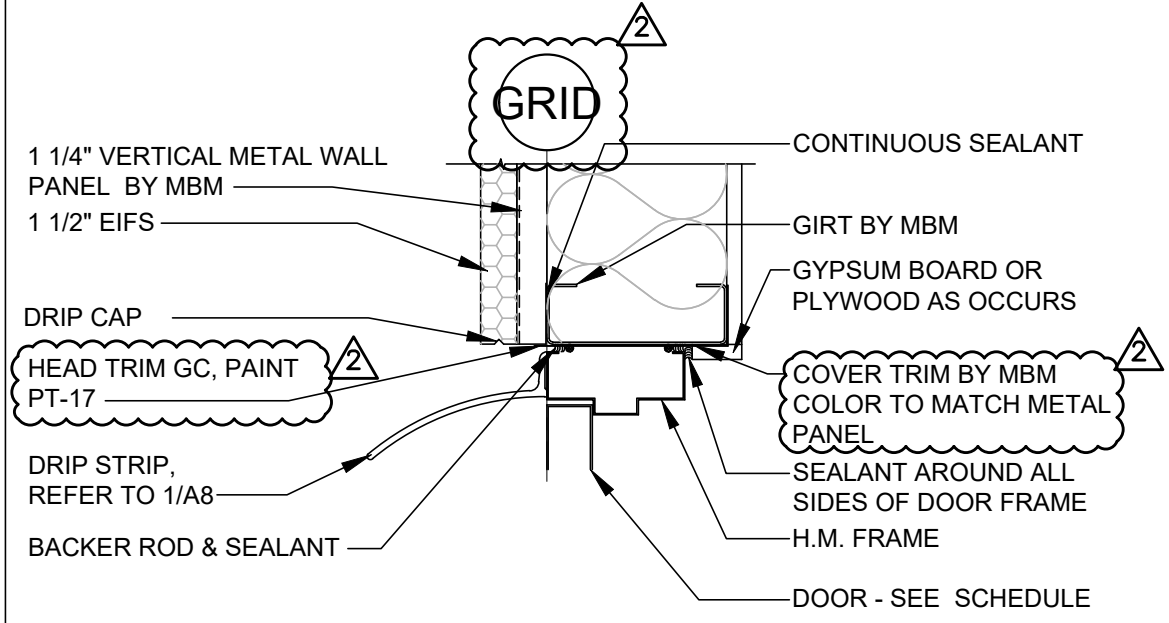
ISSUE BLOCK		
Δ	04/16/20	ADD #1
Δ	07/23/20	IFC
PROPERTY NO.: 160085		
6 DIGIT NO.: 906983		
4 DIGIT NO.: 78C9		
AOR PROJECT NUMBER: 1955B71		
TO PERMIT: DATE: 03/26/2020		
TO BID: DATE: ###-##-##		
SHEET TITLE: WALL SECTIONS		
SHEET NUMBER: A5.1		

JUL 22, 2020 - 8:44am - USER: darrch
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11_FCAC_ER-A06.dwg

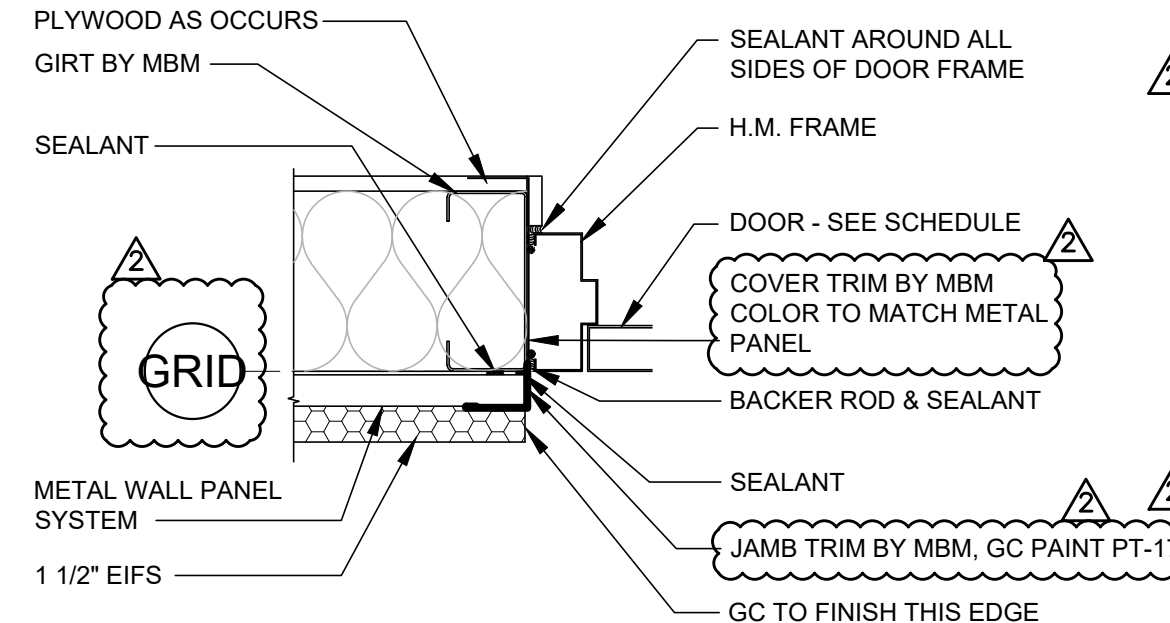
1 DOOR HEAD DETAIL

A6 SCALE: 1 1/2"=1'-0"



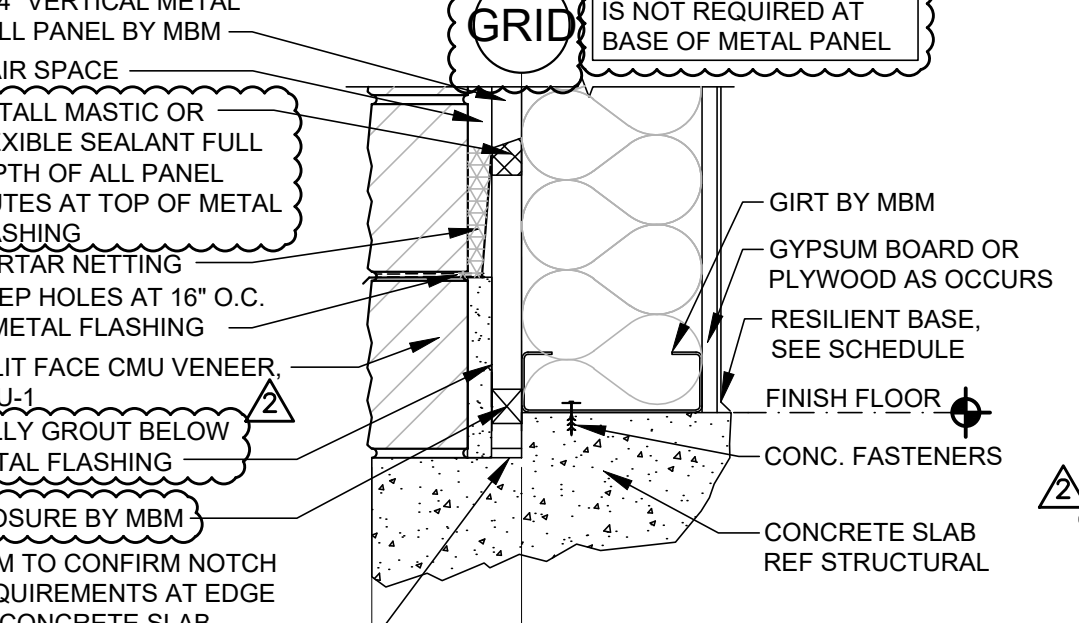
2 DOOR JAMB DETAIL

A6 SCALE: 1 1/2"=1'-0"



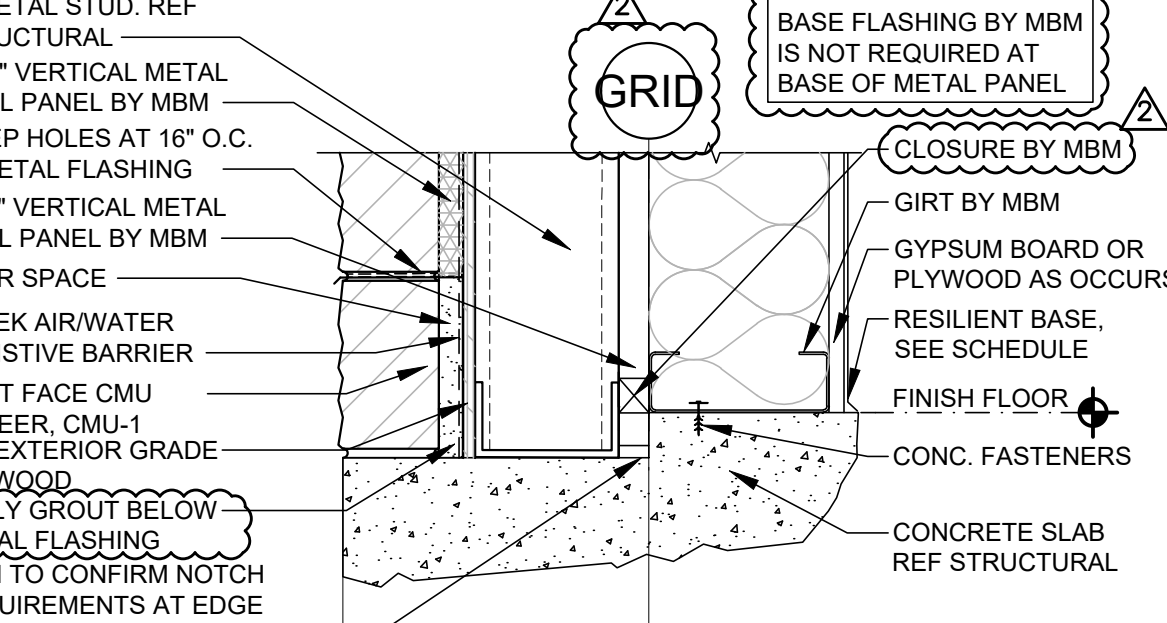
3 METAL PANEL BASE DETAIL

A6 SCALE: 1 1/2"=1'-0"



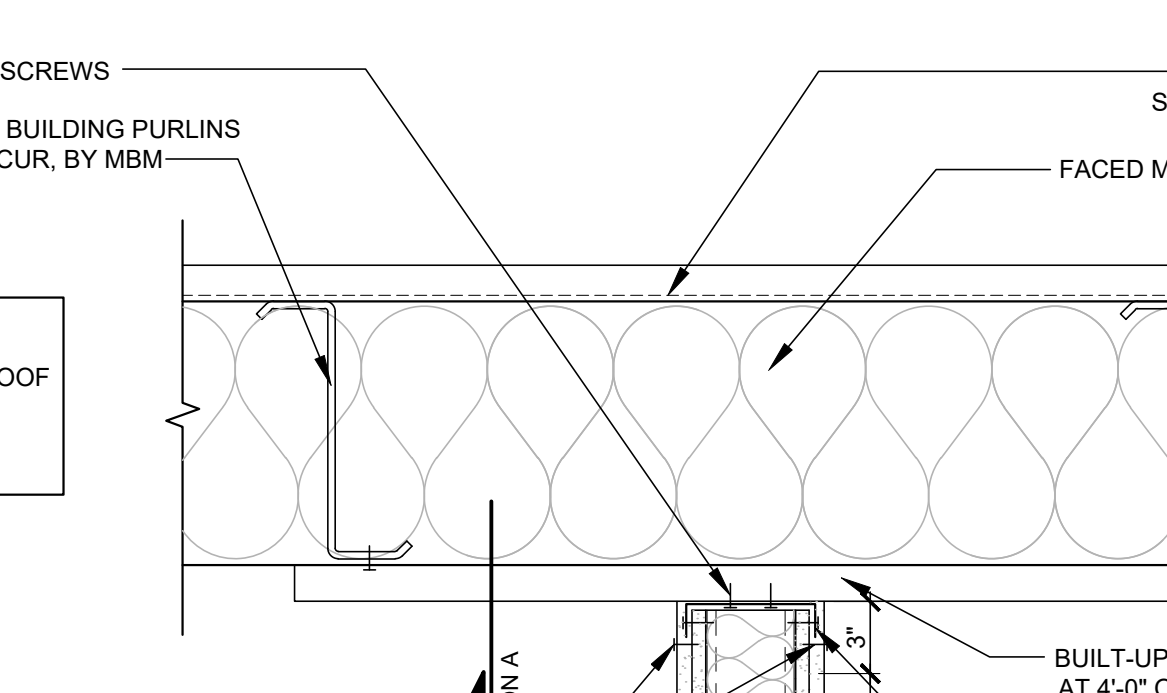
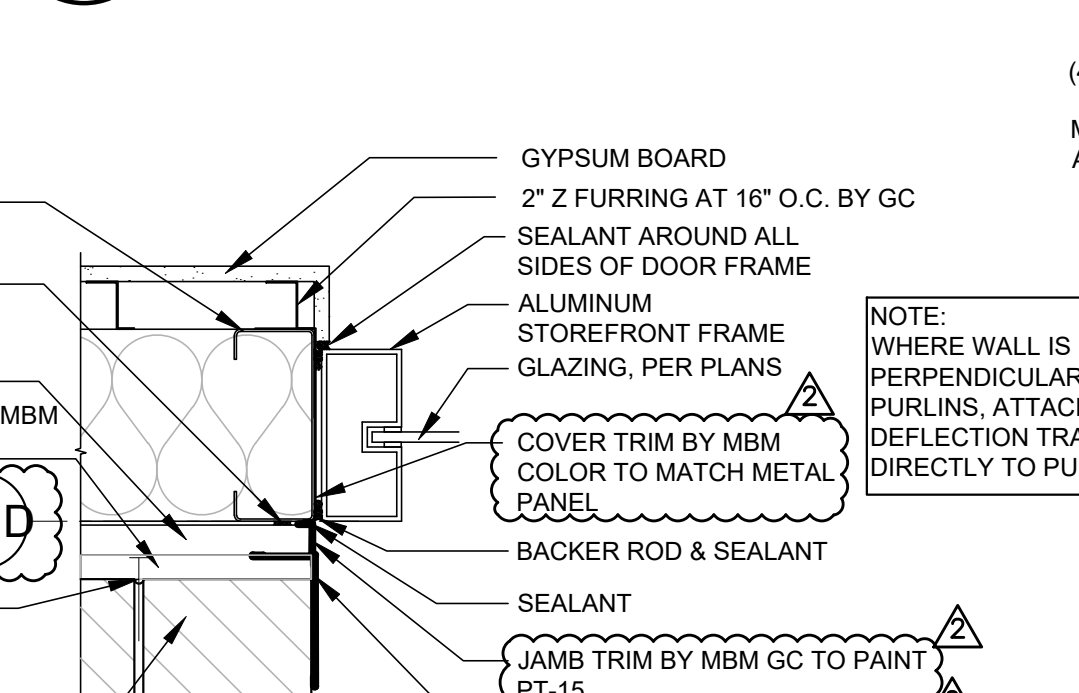
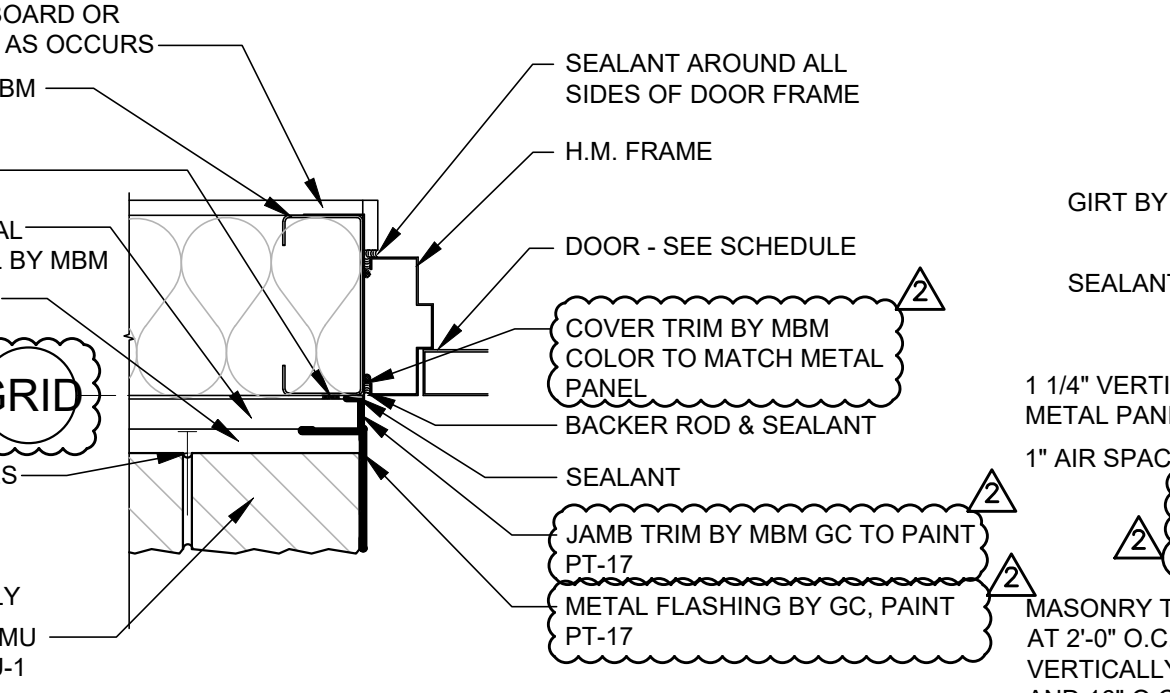
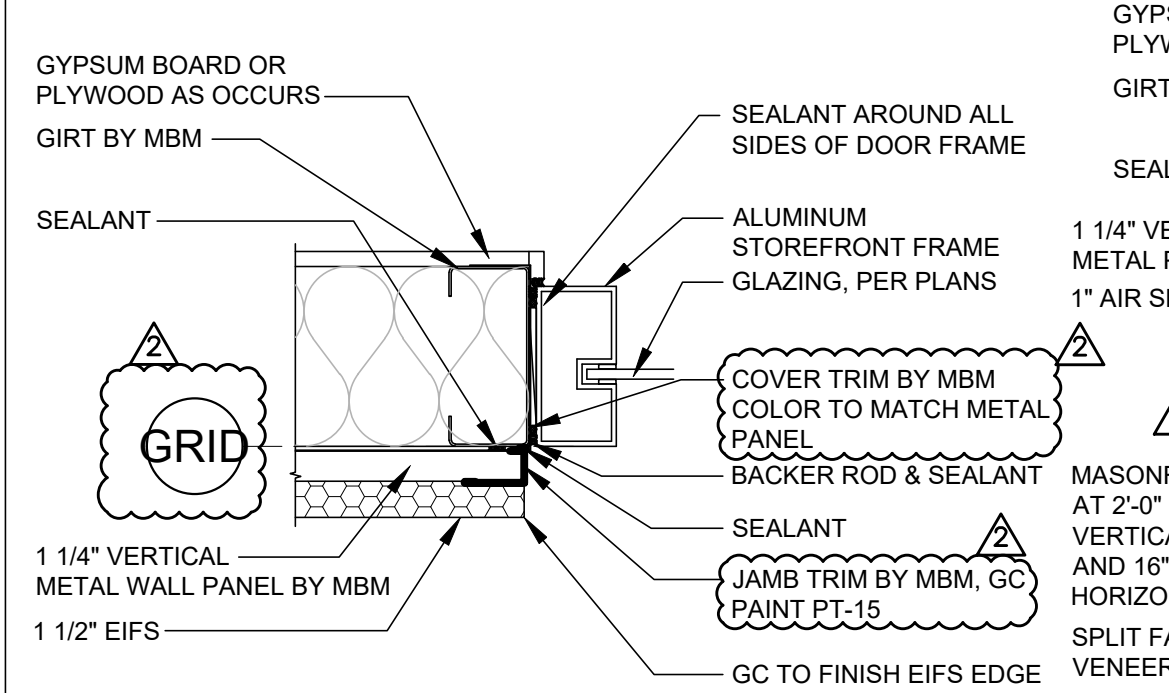
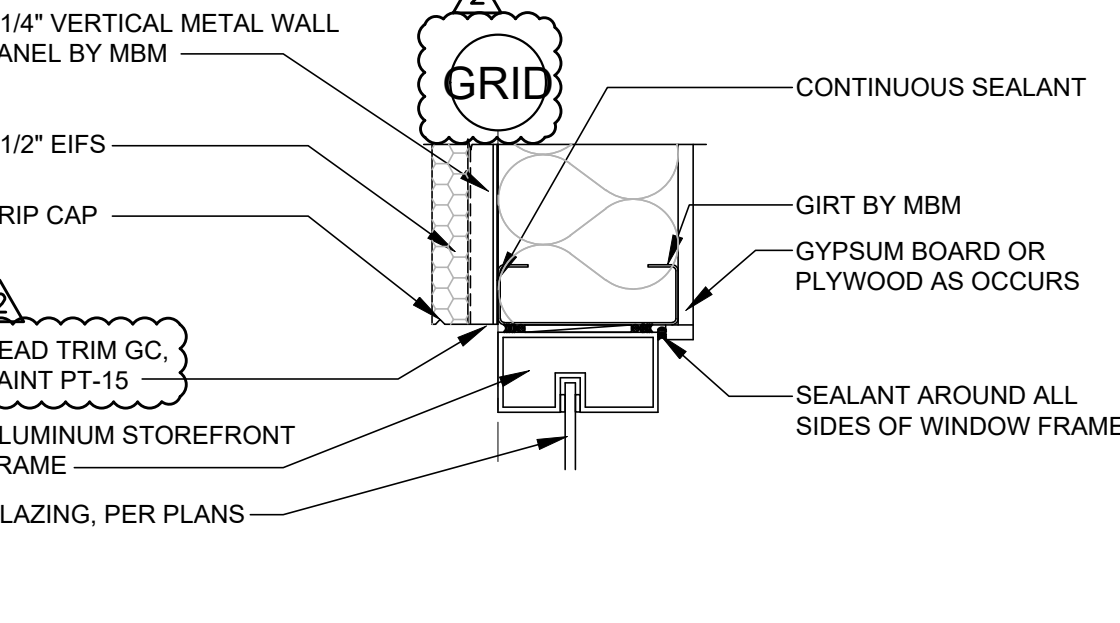
4 WINDOW HEAD DETAIL

A6 SCALE: 1 1/2"=1'-0"



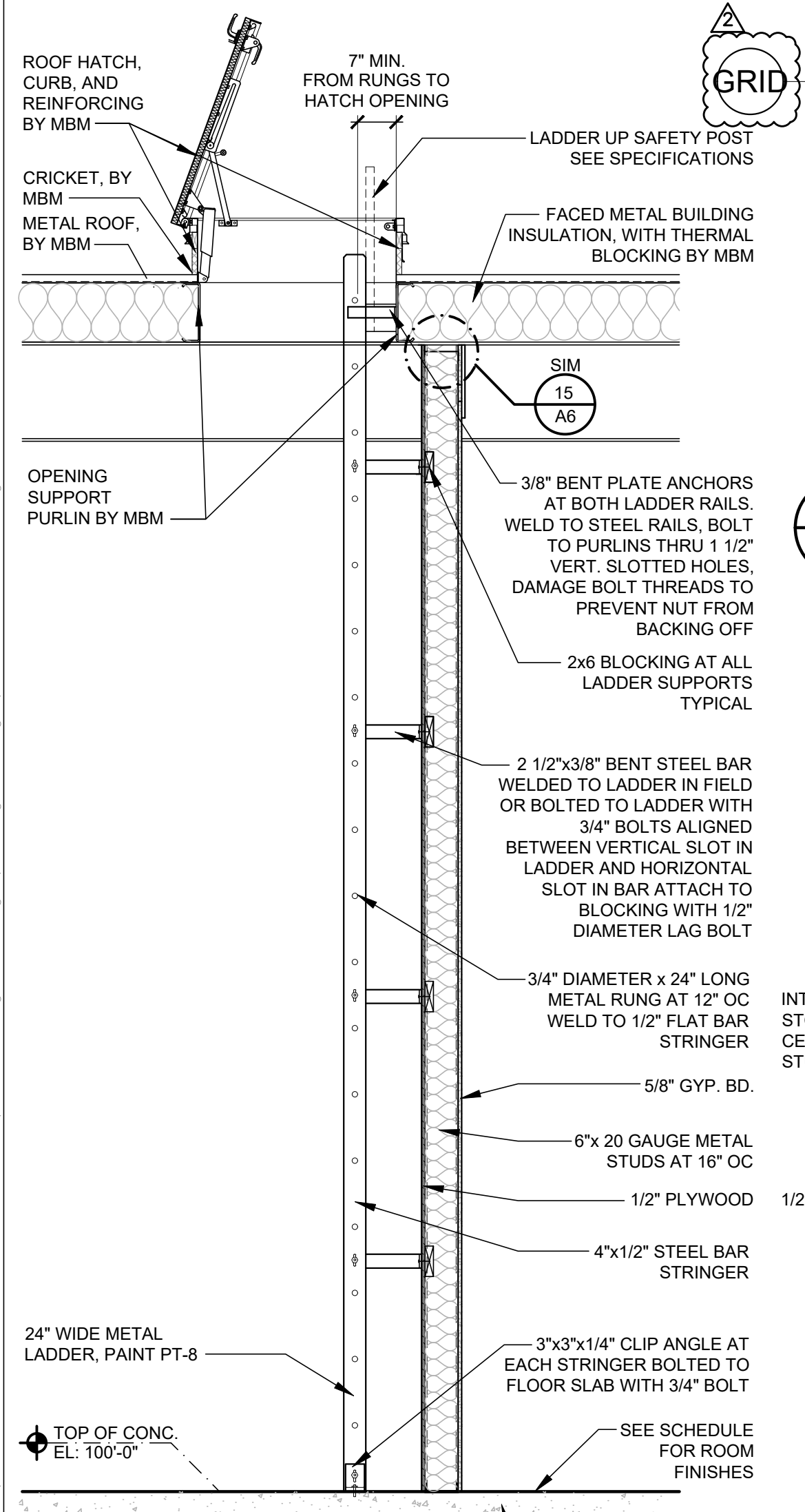
5 WINDOW JAMB DETAIL

A6 SCALE: 1 1/2"=1'-0"



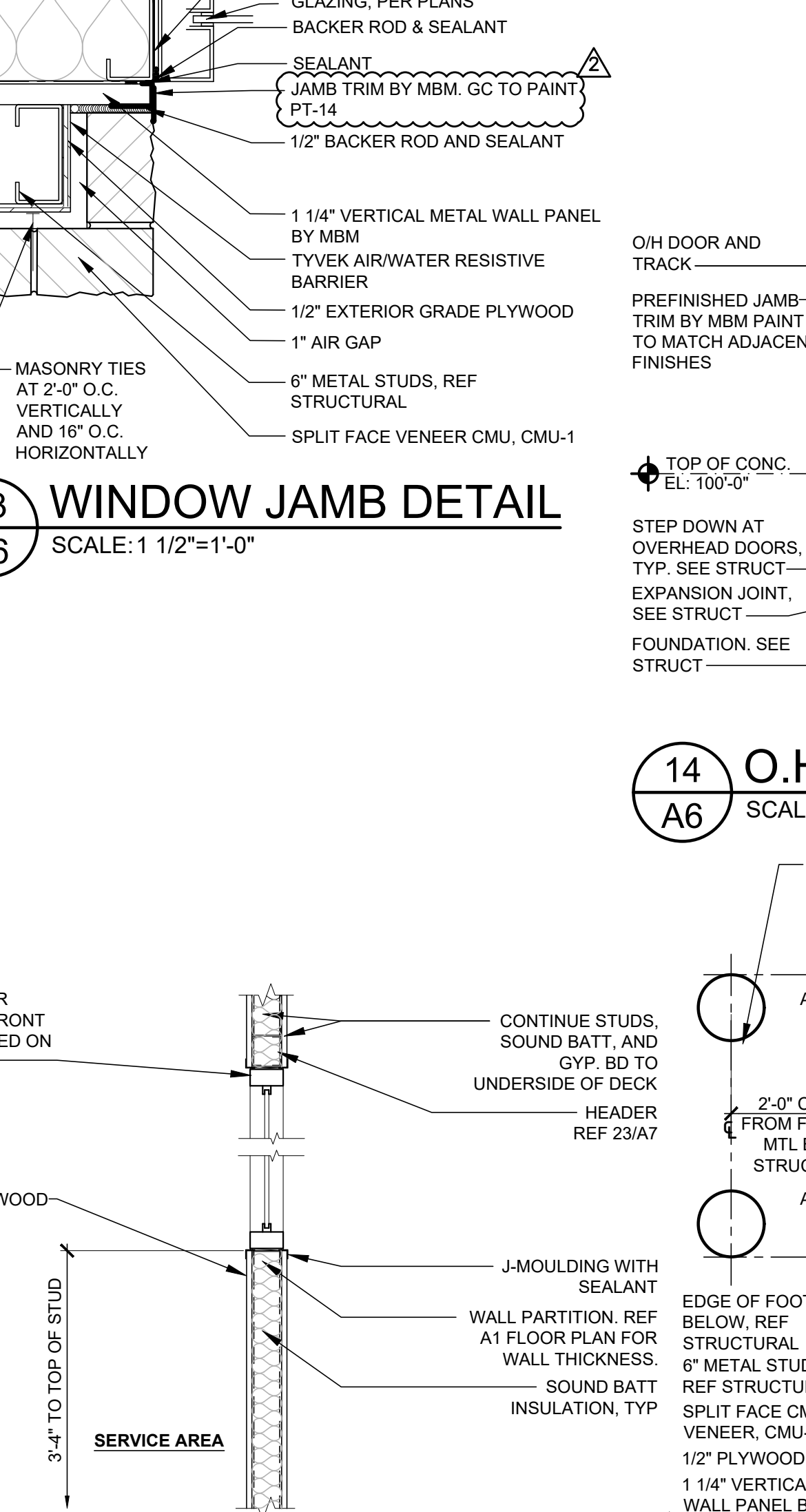
11 DOOR JAMB DETAIL

A6 SCALE: 1 1/2"=1'-0"



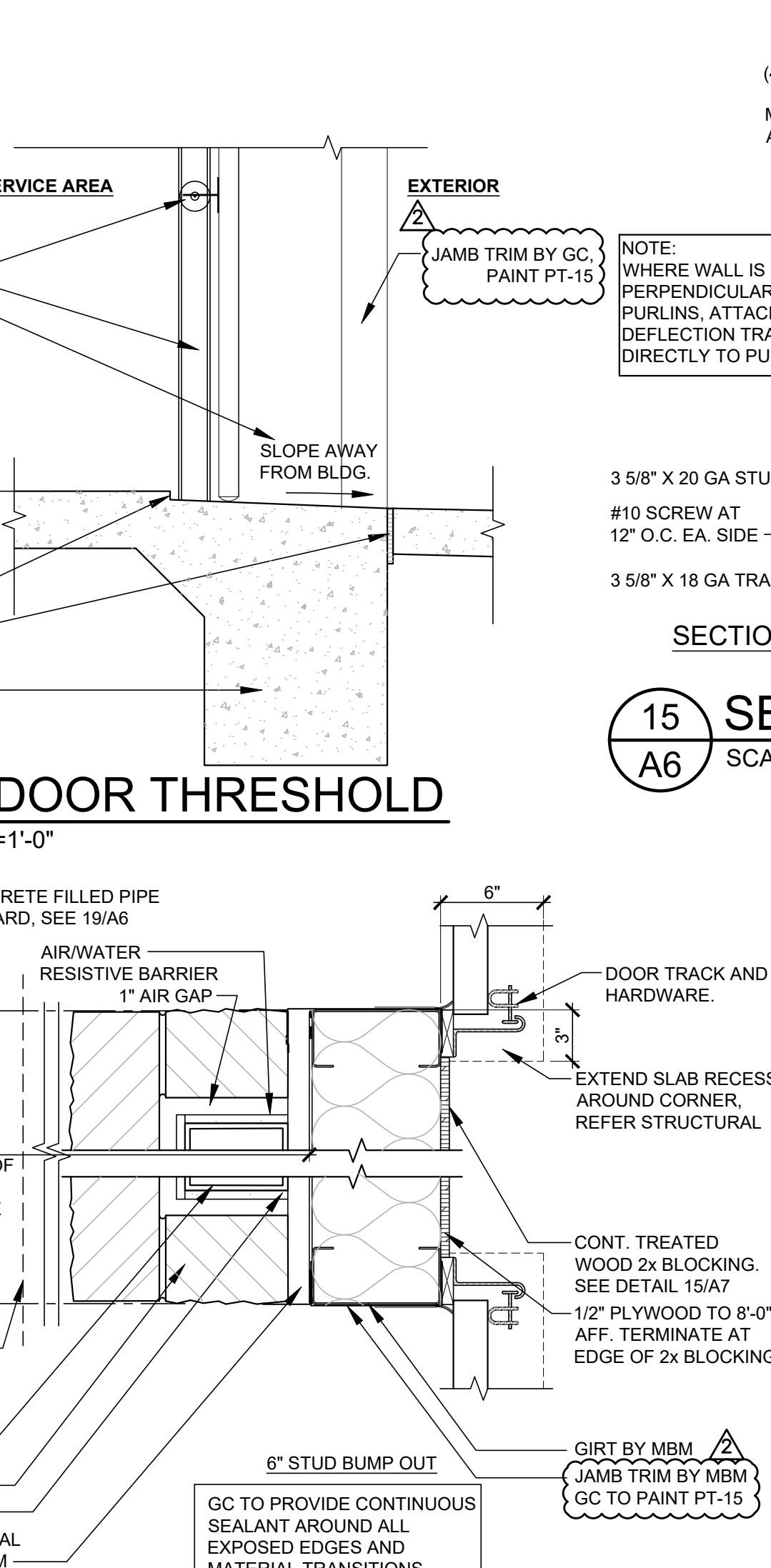
12 WINDOW JAMB DETAIL

A6 SCALE: 1 1/2"=1'-0"



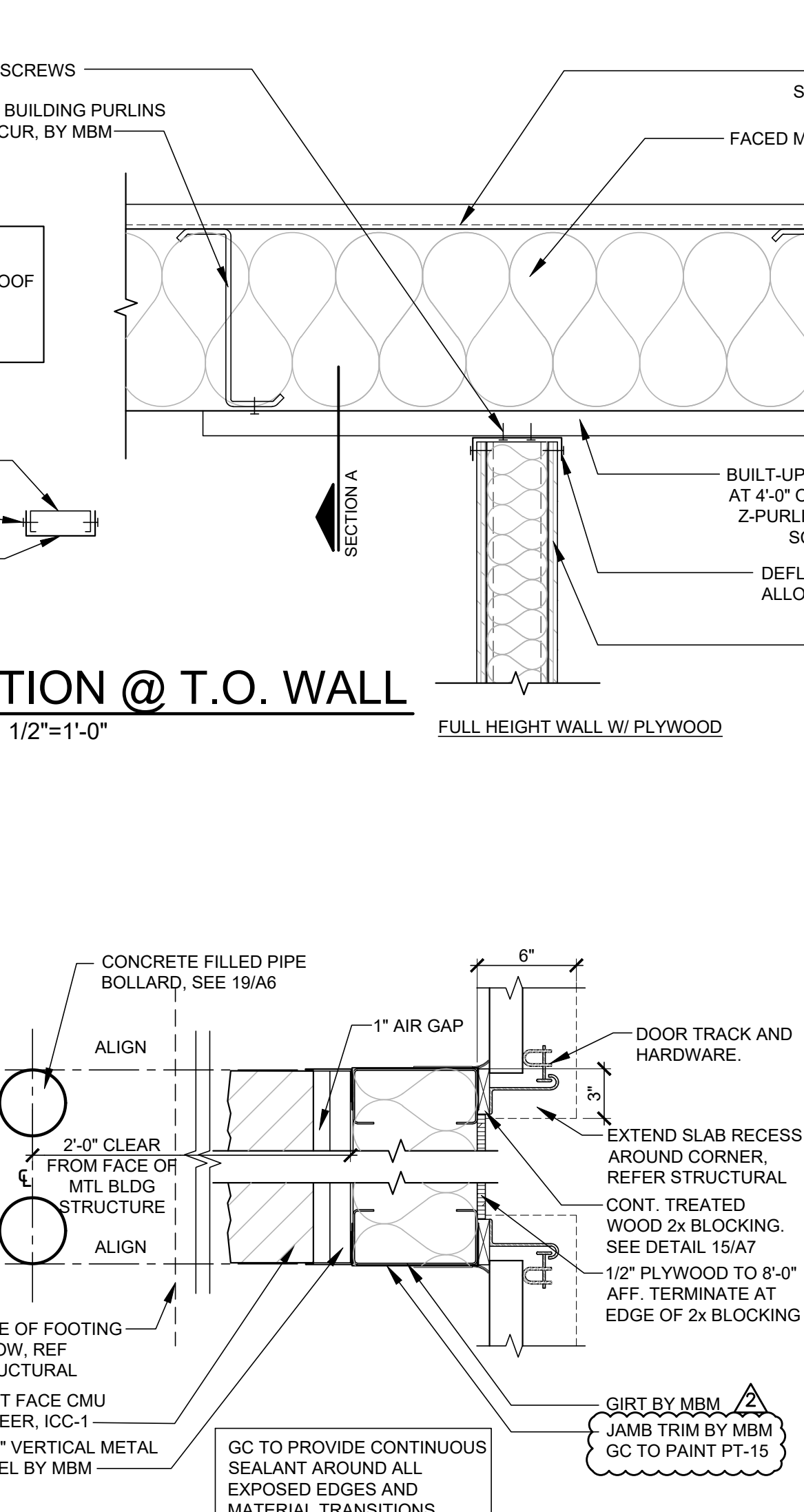
13 WINDOW JAMB DETAIL

A6 SCALE: 1 1/2"=1'-0"



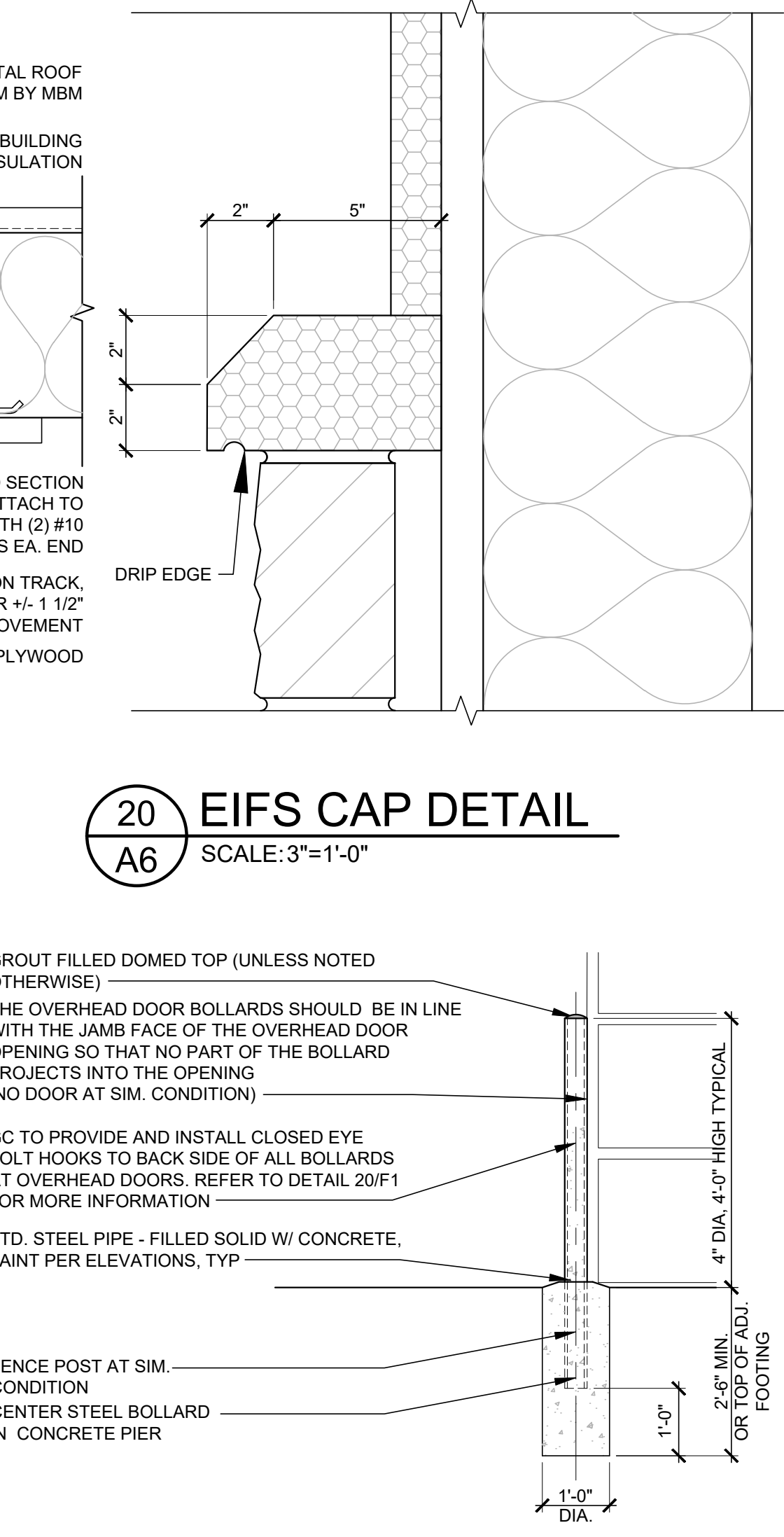
14 O.H. DOOR THRESHOLD

A6 SCALE: 1"=1'-0"



15 SECTION @ T.O. WALL

A6 SCALE: 1 1/2"=1'-0"



16 WALL SECTION

A6 SCALE: 1/2"=1'-0"



17 SECTION AT WINDOW

A6 SCALE: 3/4"=1'-0"



18 OVERHEAD DOOR PIER

A6 SCALE: 1 1/2"=1'-0"



19 BOLLARD DETAIL

A6 SCALE: 1/2"=1'-0"



20 EIFS CAP DETAIL

A6 SCALE: 3"=1'-0"



SGA Design Group, P.C.
1437 South Boulder, Suite 450
Tulsa, Oklahoma 74119-9809
P: 918.587.8800
F: 918.587.8811
www.sga-design.com
Certificate of Authority #A-2008031444
Architecture

09/21/2020
CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

1437 South Boulder, Suite 450
Tulsa, Oklahoma 74119-9809
P: 918.587.8800
F: 918.587.8811
www.sga-design.com
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Architecture

Firestone
COMPLETE AUTO CARE

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NEW FCAC STORE
2020 ER
3561 SW MARKET ST
JACKSON COUNTY
LEE'S SUMMIT, MISSOURI 64082

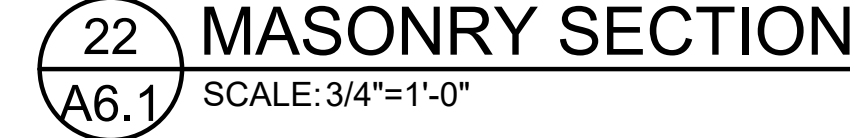
STATE OF MISSOURI
MITCH GARRETT
NUMBER
A-007541
ARCHITECT

07/23/2020
Digitally signed by Mitch Garrett
DN: cn=Garrett, o=SGA Design Group, ou=Architecture
Mitchell Garrett
MITCHELL RAY GARRETT - ARCHITECT
MOF A-007541

ISSUE BLOCK

	DATE	ADD #1
1	04/16/20	
2	06/30/20	CB#1
3	07/23/20	IFC

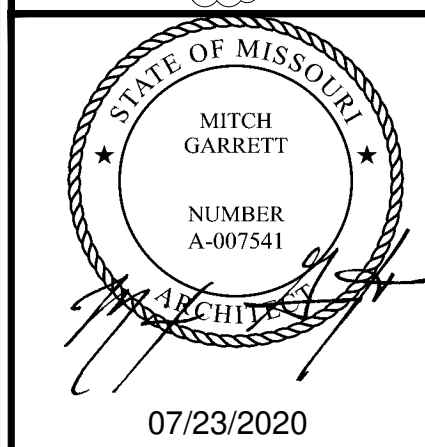
PROPERTY NO.: 160085
6 DIGIT NO.: 906983
4 DIGIT NO.: 78C9
AOR PROJECT NUMBER: 1955B71
TO PERMIT: DATE: 03/26/2020
TO BID: DATE: ###-###
KMP
SHEET TITLE:
WALL
SECTIONS
& DETAILS
SHEET NUMBER:
A6



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NEW FCAC STORE
2020 ER
3561 SW MARKET ST
JACKSON COUNTY
LEE'S SUMMIT, MISSOURI 64082



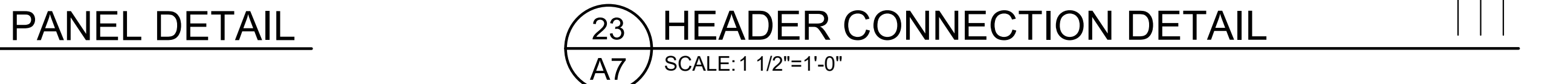
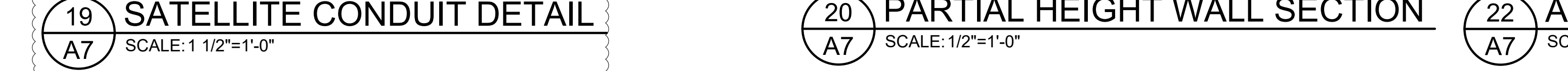
Mitchel Garrett

ISSUE BLOCK		
1	04/16/20	ADD #1
2	06/30/20	CB#1
3	07/23/20	IFC

PROPERTY NO.:	160085
6 DIGIT NO.:	906983
4 DIGIT NO.:	78C9
AOR PROJECT NUMBER:	1955B71
TO PERMIT:	DATE: 03/26/202
TO BID:	DATE: ##-##-##

SHEET TITLE:
**TRASH/TIRE
ENCLOSURE
DETAILS**

A6.1



Jul 20, 2020 - 1:22pm - USER Colby Brown
\\Struct-Server\Volume\BSRO\1912865 - Lee's Summit, MO\Struct\ER_L_S1.dwg

BUILDING DESIGN DATA			
GOVERNING BUILDING CODE: 2018 INTERNATIONAL BUILDING CODE (IBC)			
1.	ROOF DEAD LOADS		
A.	FRAMING AND ROOF PANEL WEIGHT	BY BLDG. MFR.	
B.	OTHER DEAD LOAD	=8 PSF	
2.	MINIMUM ROOF LIVE LOADS, L _r		= 20.0 PSF
3.	ROOF SNOW LOADS, S		
A.	GROUND SNOW LOAD, P _g	= 20 PSF	
B.	SNOW EXPOSURE FACTOR, C _e	= 1.0	
C.	SNOW LOAD IMPORTANCE FACTOR, I _s	= 1.0	
D.	THERMAL FACTOR, C _t	= 1.0	
E.	ALL APPLICABLE EFFECTS DUE TO SNOW DRIFTING		
4.	WIND LOADS, W		
A.	BASIC WIND SPEED (3 SECOND GUST), V	= 110 MPH	
B.	WIND LOAD IMPORTANCE FACTOR, I _w	= 1.0	
C.	BUILDING CATEGORY:	BY BUILDING MFR.	
D.	OVERALL EXPOSURE CATEGORY:	= C	
E.	HEIGHT AND EXPOSURE ADJUSTMENT COEFFICIENT, K _z	BY BUILDING MFR.	
F.	INTERNAL PRESSURE COEFFICIENT, Gc _{pi}	BY BUILDING MFR.	
G.	WIDTH OF EDGE/CORNER ZONE, a	BY BUILDING MFR.	
H.	COMPONENT AND CLADDING WALL DESIGN PRESSURES	BY BUILDING MFR.	
I.	COMPONENT AND CLADDING ROOF DESIGN PRESSURES (NET)	BY BUILDING MFR.	
5.	SEISMIC DESIGN DATA		
A.	OCCUPANCY CATEGORY	= II	
B.	MAPPED SPECTRAL RESPONSE COEFFICIENTS		
S _s		= 0.101	
S ₁		= 0.069	
C.	SITE CLASS	= C	
D.	SPECTRAL RESPONSE COEFFICIENTS		
S _{DS}		= 0.096	
S _{D1}		= 0.068	
E.	SEISMIC DESIGN CATEGORY	= B	
F.	BASIC SEISMIC-FORCE-RESISTING SYSTEM:	BY BUILDING MFR.	
G.	RESPONSE MODIFICATION COEFFICIENT, R	BY BUILDING MFR.	
H.	ANALYSIS PROCEDURE:	BY BUILDING MFR.	
I.	SEISMIC RESPONSE COEFFICIENT, C _s	BY BUILDING MFR.	
J.	BASE SHEAR, V	BY BUILDING MFR.	
6.	FOUNDATION DESIGN DATA		
A.	ALLOWABLE BEARING PRESSURE	= 3000 PSF (NET)	
B.	MINIMUM BEARING DEPTH	= 36 IN	
C.	FREEZE-THAW EXPOSURE SEVERITY:	SEVERE	
D.	SLAB SUBGRADE REACTION MODULUS	= 140 PCI	

FOUNDATIONS, SLAB-ON-GRADE - GENERAL

- THE FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS MADE IN THE GEOTECHNICAL REPORT BY PROFESSIONAL SERVICE INDUSTRIES, INC. DATED JULY 24, 2019 (PROJECT NO. 0331847).
- SPREAD FOOTINGS SHALL BEAR ON SOIL CAPABLE OF SUSTAINING AN ALLOWABLE BEARING PRESSURE AS NOTED ABOVE FOR FOOTINGS UNDER FULL SERVICE DEAD AND LIVE LOADS.
- ALL BEARING MATERIAL SHALL BE INSPECTED BY THE DESIGN TESTING AGENCY PRIOR TO CONCRETE PLACEMENT. THE INDEPENDENT TESTING AGENCY SHALL BE THE SOLE JUDGE AS TO THE SUITABILITY OF THE BEARING MATERIAL. FOOTING ELEVATIONS SHALL BE ADJUSTED AS REQUIRED.
- FOOTINGS MAY BE POURED INTO AN EARTH-FORMED TRENCH IF SOIL CONDITIONS PERMIT. THE TOP OF EXTERIOR FOOTING ELEVATION SHALL BE SET A MINIMUM OF 8" BELOW LOWEST FINAL ADJACENT EXTERIOR GRADE AND A MINIMUM OF 8" BELOW FINISH FLOOR. THE BOTTOM OF EXTERIOR FOOTINGS SHALL BEAR AT MINIMUM BEARING DEPTH BELOW LOWEST FINAL ADJACENT EXTERIOR GRADE.
- FOUNDATION WALLS THAT RETAIN EARTH SHALL BE BRACED AGAINST BACKFILLING PRESSURES UNTIL FLOOR SLABS AT TOP AND BOTTOM ARE IN PLACE, OR UNTIL THE CONCRETE OR MASONRY HAS ATTAINED ITS FULL COMPRESSIVE STRENGTH FOR CANTILEVER WALLS.
- WHERE FOUNDATION WALLS ARE TO HAVE EARTH PLACED ON EACH SIDE, PLACE FILL SIMULTANEOUSLY SO AS TO MAINTAIN A COMMON ELEVATION ON EACH SIDE OF THE WALL. VERIFY THE USE AND EXTENT OF PERIMETER INSULATION WITH THE ARCHITECTURAL DRAWINGS PRIOR TO THE INSTALLATION OF FOUNDATIONS. INSTALL PERIMETER INSULATION AS REQUIRED. STANDARD PROCEDURES OF FROST PROTECTION FOR FOUNDATIONS AND EXCAVATIONS SHALL BE EMPLOYED FOR WINTER CONSTRUCTION. BACK FILLING OF EXCAVATIONS SHALL BE DONE AS SOON AS POSSIBLE TO PROTECT FOUNDATIONS FROM FROST.
- HORIZONTAL BARS IN FOOTINGS AND CONCRETE WALLS SHALL BE CONTINUOUS. PROVIDE CORNER BARS AT ALL CORNERS AND INTERSECTIONS. UNO.
- FOUNDATION PENETRATIONS SHALL BE SUBJECT TO APPROVAL BY THE ARCHITECT/ENGINEER. PENETRATIONS SHALL BE FOUNDATION STEM WALL OR 6" CLEAR BELOW FOOTING.

CONCRETE

- ALL CONCRETE SHALL BE NORMAL-WEIGHT (DENSITY=145 PCF) AND SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF AS NOTED IN THE FOLLOWING TABLE:

CONCRETE USE	SPECIFIED COMPRESSIVE STRENGTH (PSI)	MAXIMUM W/C RATIO
COLUMN FOOTINGS	3,000 PSI	PER SPECIFICATIONS
EXTERIOR STRUCTURAL CONCRETE	4,500 PSI	PER SPECIFICATIONS
INTERIOR SLAB ON GRADE AND PERIMETER BEAM/FOOTING	4,000 PSI	PER SPECIFICATIONS
EXTERIOR SLAB ON GRADE	4,500 PSI	PER SPECIFICATIONS
SIDEWALKS	3,500 PSI	PER SPECIFICATIONS

- FOR ALL OTHER CONCRETE PROPERTIES SEE THE PROJECT SPECIFICATIONS.
- ALL EXTERIOR CONCRETE SHALL BE AIR-ENTRAINED PER ACI-318, LATEST EDITION, BASED ON FREEZE-THAW EXPOSURE SEVERITY AND AGGREGATE SIZE.
- ALL REINFORCED CONCRETE WORK SHALL BE PER "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" ACI 318, LATEST EDITION.
- THE CONTRACTOR SHALL SUBMIT CONCRETE DESIGNS FOR REVIEW A MINIMUM OF TWO WEEKS PRIOR TO THE PLACEMENT OF ANY CONCRETE. THE CONCRETE MIX DESIGNS SHALL INCLUDE ALL DATA NECESSARY TO SHOW COMPLIANCE WITH THE PROJECT SPECIFICATIONS. CONCRETE REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE.
- CONCRETE REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A706. HOOK ENDS OF BARS INTERRUPTED BY OPENINGS, HOOK TOP BARS AT ALL EDGES, AT ALL WALL AND SLAB OPENINGS, PROVIDE 2 - #8BARS x OPENING WIDTH PLUS 4 FEET(EACH SIDE) EACH FACE UNLESS SHOWN OTHERWISE.
- ALL REINFORCING SHALL BE DETAIL, FABRICATED, AND PLACED IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN CONCRETE INSTITUTE DETAILING MANUAL.
- ALL REINFORCING SHALL BE SUPPORTED IN FORMS, SPACED WITH NECESSARY ACCESSORIES AND SHALL BE SECURELY WIRED TOGETHER, IN ACCORDANCE WITH THE LATEST EDITION OF THE CRSI "MANUAL OF STANDARD PRACTICE".
- THE MINIMUM CONCRETE CLEAR COVER OVER REINFORCING STEEL, UNLESS NOTED OTHERWISE, SHALL BE:
UNFORMED SURFACE IN CONTACT WITH THE GROUND.....3 IN.
FORMED SURFACES EXPOSED TO EARTH OR WEATHER:
#6 BARS AND LARGER.....2 IN.
#8 BARS AND SMALLER.....1 1/2 IN.
FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER:
BEAMS, GIRDERS, AND COLUMNS.....1 1/2 IN.
SLABS, WALLS, AND JOISTS.....3/4 IN.
#11 BARS AND SMALLER.....1 1/2 IN.
#14 AND #18 BARS.....1 1/2 IN.
- ALL LAP SPLICES SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE.

CONCRETE REINFORCING LAP SPLICE SCHEDULE		
TENSION SPLICES (IN.)		
BAR SIZE	TOP BARS	OTHER BARS
#3	16	16
#4	20	16
#5	25	19
#6	29	23

-COMPRESSION DOWEL EMBEDMENT: 22 BAR DIAMETERS LAP
-WELDED WIRE FABRIC: ONE SPACING OF CROSS WIRES PLUS 2" LAP

- LEAN CONCRETE - MIN 2 1/2 SACKS PORTLAND CEMENT PER CUBIC YARD.

REINFORCED MASONRY

- MASONRY WALLS HAVE BEEN DESIGNED TO SPAN VERTICALLY, AS SIMPLE SPANS, FROM FOUNDATION TO ROOF, AND ARE DEPENDENT UPON THE COMPLETED ROOF STRUCTURE, ROOF SHEATHING, AND COMPLETION OF ALL MASONRY WALLS FOR STABILITY AND FOR RESISTANCE TO WIND AND SEISMIC FORCES. THE GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING ALL NECESSARY BRACING AS REQUIRED FOR STABILITY, RESISTANCE OF CONSTRUCTION LOADS, AND FOR RESISTANCE TO WIND AND SEISMIC FORCES UNTIL THE ENTIRE STRUCTURE IS COMPLETE. THE SHORING SHALL NOT RELY ON ANY MOMENT RESISTANCE CAPACITY OF THE FOOTINGS.
- REINFORCED MASONRY SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH, f_m = 2000 PSI. MASONRY UNITS SHALL BE NORMAL WEIGHT BLOCK CONFORMING TO ASTM C90, GRADE N, TYPE 1, AND SHALL HAVE A MINIMUM NET AREA COMPRESSIVE STRENGTH OF 2800 PSI. MORTAR SHALL CONFORM TO ASTM C270, TYPE S. PORTLAND CEMENT TYPE 1 OR 2, LOW ALKALI PER ASTM C150 NON AIR ENTRAINED OR HYDRATED LIME PER ASTM C207 TYPES. GROUT SHALL CONFORM TO ASTM C476 AND SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2000 PSI. GROUT SHALL BE MECHANICALLY CONSOLIDATED USING A VIBRATOR WITH A MAXIMUM 3/4" DIAMETER HEAD.
- PROVIDE VERTICAL CONTROL JOINTS IN MASONRY WALLS AT LOCATIONS NOTED ON PLANS. HORIZONTAL BOND BEARING SHALL BE CONTINUOUS ACROSS VERTICAL CONTROL JOINTS. JOINT REINFORCING SHALL BE STOPPED EITHER SIDE OF VERTICAL CONTROL JOINTS.
- MORTAR SHALL MEET THE PROPORTION SPECIFICATIONS OF ASTM C270 TYPE "S" MORTAR. MASONRY CEMENT SHALL NOT BE USED FOR MORTAR.
- MASONRY REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE.
- CONTINUOUS WIRE REINFORCING (JOINT REINFORCING) SHALL BE GALVANIZED TRUSS OR LADDER TYPE FORMED FROM 9 GAUGE COLD-DRAWN STEEL WIRE COMPLYING WITH ASTM A82. JOINT REINFORCING SHALL BE SPACED AT 16" O.C. VERTICALLY IN ALL MASONRY WALLS.
- ALL REINFORCED CELLS AND ALL CELLS BELOW THE FINISHED FLOOR ELEVATION SHALL BE GROUTED SOLID. CONCRETE MASONRY BELOW FINISHED FLOOR SHALL BE NORMAL WEIGHT UNITS. CONCRETE MASONRY UNITS ABOVE FINISHED FLOOR SHALL BE LIGHT WEIGHT OR NORMAL WEIGHT.
- GROUTING SHALL BE STOPPED 1 1/2" BELOW THE TOP OF A COURSE SO AS TO FORM A KEY AT THE POUR JOINT.
- GROUTING OF MASONRY BEAMS AND LINTELS OVER OPENINGS SHALL BE DONE IN ONE CONTINUOUS OPERATION.
- ALL BOLTS, ANCHORS, ETC., INSERTED IN THE WALLS, SHALL BE GROUTED SOLID INTO POSITION. COORDINATE LOCATIONS OF EMBEDDED STEEL ITEMS FOR OVERHEAD DOORS WITH DOOR MANUFACTURER.
- ALL REINFORCING LAP SPLICES SHALL BE PER THE FOLLOWING TABLE. UNLESS NOTED OTHERWISE.

MASONRY REINFORCING LAP SPLICE SCHEDULE		
BAR SIZE	SPLICE (IN.)	
#3	20	
#4	26	
#5	32	
#6	39	
#7	45	

- USE OPEN KNOCK OUT BOND BEAM BLOCK. DO NOT USE TROUGH TYPE BLOCKS FOR BOND BEAMS.

STRUCTURAL STEEL

- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING GRADES:
ALL CHANNELS, ANGLES, PLATES, ETC. (U.N.O.).....A36 (Fy=36 KSI)
ALL WIDE FLANGES (U.N.O.).....A992 (Fy=50 KSI)
HOLLOW STRUCTURAL SECTIONS (SHAPED).....A500 GRADE B (Fy=46 KSI)
HOLLOW STRUCTURAL SECTIONS (ROUND).....A500 GRADE B (Fy=42 KSI)
STEEL PIPE.....A53 GRADE B (Fy=35 KSI)
BOLTS.....A325 (U.N.O.)
ANCHOR RODS.....F1554 (GRADE 36)
WELDING ELECTRODES.....E70XX, LOW HYDROGEN
- ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE, EXCEPT AS MODIFIED IN THESE NOTES AND THE PROJECT SPECIFICATIONS.
- ALL WELDING SHALL CONFORM TO AMERICAN WELDING SOCIETY "STRUCTURAL WELDING CODE" AWS D1.1. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS. ALL WELDING SHALL BE TO CLEAN BARE STEEL.
- SPLICING OF STEEL MEMBERS, UNLESS SHOWN ON THE DRAWINGS, IS PROHIBITED WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER-OF-RECORD.
- PROVIDE SUB-FRAMING FOR EQUIPMENT SUPPORTED ON OR SUSPENDED FROM THE STRUCTURE. ALL SHALL BE SHOP COATED WITH PRIME PAINT AS SPECIFIED, MASK SURFACES TO BE WELDED AND AT BOLT HOLES IN FAYING SURFACES OF FRICTION CONNECTIONS.

DEFERRED STRUCTURAL SUBMITTALS

- THE FOLLOWING STRUCTURAL COMPONENTS SHALL BE DESIGNED AND SUBMITTED BY OTHERS FOR APPROVAL IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS.
A. PRE-MANUF. METAL BUILDINGS.
- 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 AND BEEN FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED.
- STRUCTURAL FOUNDATION DESIGN WAS BASED ON FOUNDATION REACTIONS FROM ONE PRE-MANUF. BUILDING MANUFACTURER. ALTERATIONS MAY BE NECESSARY IF A DIFFERENT BUILDING MANUFACTURER IS SELECTED OR DIFFERENT REQUIREMENTS ARE PROVIDED IN THE BUILDING SUBMITTAL. BASED ON THE EXTENT OF THE CHANGES, ADDITIONAL SERVICES FOR STRUCTURAL REDESIGN AND COSTS OF ADDITIONAL OR MODIFIED FOUNDATIONS MAY BE REQUIRED. DURING SELECTION OF BUILDING SUPPLIER, GENERAL CONTRACTOR SHALL INCLUDE A CONTINGENCY TO COVER THESE FEES AND COSTS. COSTS OF THE DESIGN AND CONSTRUCTION REVISIONS SHALL BE BORNE BY THE CONTRACTOR.

PRE-MANUF. METAL BUILDING

- PRE-MANUF. METAL BUILDING ELEMENTS SHALL BE DESIGNED BY THE MANUFACTURER AND SHALL COMPLY WITH THE REQUIREMENTS OF LOCAL BUILDING CODES AS LISTED IN "BUILDING DESIGN DATA" AND THE METAL BUILDING MANUFACTURERS' ASSOCIATION DESIGN MANUAL. IN ADDITION, THE METAL BUILDING ELEMENTS SHALL BE DESIGNED FOR ALL LOADS INDICATED ON THE DRAWINGS.
- THE METAL BUILDING MANUFACTURER IS RESPONSIBLE FOR PROVIDING THE MATERIAL TYPE, DIAMETER, AND LOCATION OF ANCHOR BOLTS FOR THE METAL BUILDING COLUMNS.
- THE METAL BUILDING COLUMNS SHALL BEAR AS INDICATED ON PLANS.
- REFER TO 1-S1 FOR DEFLECTION LIMITS.
- SHOP DRAWING SUBMITTALS (INCLUDING DRAWINGS AND CALCULATIONS) SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED.
- INCLUDE FOUNDATION REACTIONS OF ALL FRAMING MEMBERS ON THE SHOP DRAWINGS FOR ALL LOAD COMBINATIONS. INDICATE WHETHER THESE LOADS ARE ULTIMATE OR SERVICE LOADS.
- INDICATE WHICH LOAD COMBINATION APPLIES THE LARGEST LOAD TO FOUNDATIONS.
- 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. A 1/3 INCREASE IN ALLOWABLE STRESS SHALL NOT BE USED FOR DESIGN. HOWEVER, A LOAD REDUCTION SHALL BE ALLOWED IN ACCORDANCE WITH ASCE-7 WHEN TWO OR MORE TRANSIENT LOADS IN COMBINATION WITH DEAD LOADS ARE APPLIED.
- METAL BUILDING MANUFACTURER SHALL PROVIDE ROOF BRACING, WALL BRACING AND/OR PORTAL FRAMES AS REQUIRED TO ADEQUATELY RESIST WIND AND SEISMIC LOADS. THEIR LOCATIONS AND SIZES SHALL BE COORDINATED WITH THE ARCHITECTURAL DRAWINGS AND INTENT.
- 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, A MECHANICAL/ELECTRICAL EQUIPMENT SUPPORT, ALL SUPERJACENTAL FRAMING SHALL MEET OR EXCEED THE LOAD AND DEFLECTION REQUIREMENTS OF THE MANUFACTURER.
- THE METAL BUILDING MANUFACTURER IS RESPONSIBLE FOR COORDINATING METAL BUILDING ELEMENTS WITH THE CONSTRUCTION DRAWINGS AND INTENT.
- NO OVERSTRESS OF METAL BUILDING MEMBERS IS ALLOWED.

MISCELLANEOUS

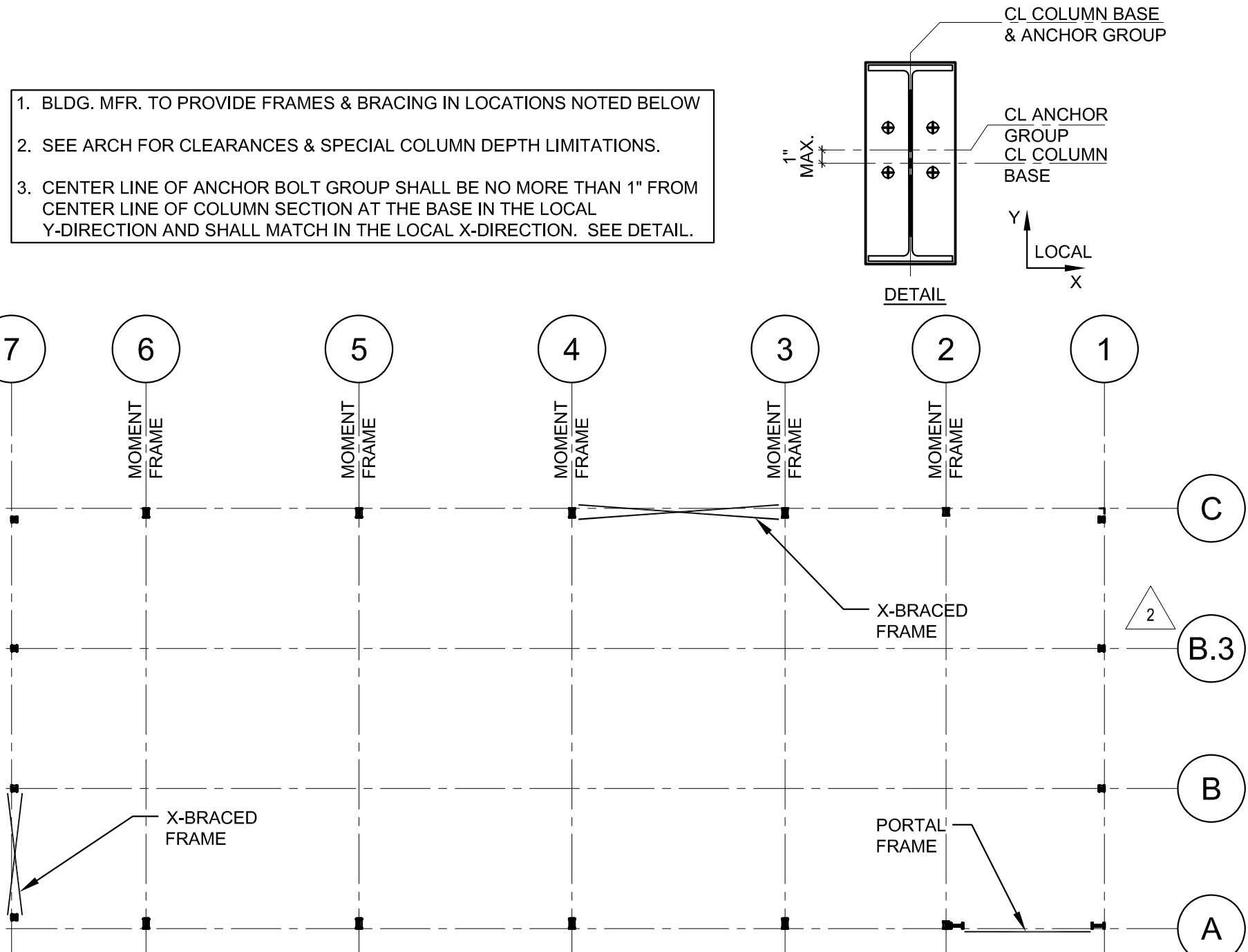
- THESE GENERAL NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- THE STRUCTURAL DRAWINGS ARE INTENDED TO BE USED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING REQUIREMENTS FROM SUCH DRAWINGS INTO THEIR SHOP DRAWINGS AND WORK.
- NO OPENINGS SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT THE WRITTEN APPROVAL OF THE PROFESSIONAL-OF-RECORD.
- NO CHANGE IN SIZE OR DIMENSION OF STRUCTURAL MEMBERS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE PROFESSIONAL-OF-RECORD.
- DO NOT SCALE THESE DRAWINGS. USE SPECIFIED DIMENSIONS.
- STEEL FRAMING IS NON-SELF SUPPORTING AND REQUIRES INTERACTION WITH OTHER ELEMENTS NOT CLASSIFIED AS STRUCTURAL STEEL TO PROVIDE THE REQUIRED STABILITY AND RESISTANCE TO LATERAL FORCE.
- THE STEEL FRAMING AND ALL CONCRETE AND CMU WALLS SHALL BE TEMPORARILY BRACED UNTIL ALL STEEL BRACING, FLOOR AND ROOF DECKS, AND CONCRETE AND CMU WALLS HAVE BEEN INSTALLED AND ALL CONNECTIONS BETWEEN THESE ELEMENTS HAVE BEEN MADE.

SPECIAL INSPECTIONS

- THE OWNER WILL EMPLOY THE SERVICES OF ONE OR MORE SPECIAL INSPECTORS TO PROVIDE SPECIAL INSPECTIONS DURING CONSTRUCTION FOR THE REQUIRED SPECIAL INSPECTION ITEMS.
- THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, AND THE REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN OF THE STRUCTURE, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
- DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
A. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS. THE INSPECTOR MAY NOT ALTER, MODIFY, ENLARGE OR WAVE ANY OF THE REQUIREMENTS OF THE DOCUMENTS.
B. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE PROFESSIONAL-OF-RECORD, AND THE CONTRACTOR. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. THEN, IF UNCORRECTED, SUBMIT A COMPLETE LIST OF ALL OUTSTANDING DISCREPANCIES ON A WEEKLY BASIS TO THE OWNER, THE BUILDING OFFICIAL, AND THE PROFESSIONAL-OF-RECORD, UNTIL ALL CORRECTIONS HAVE BEEN COMPLETED.
C. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE BUILDING CODE.
D. SPECIAL INSPECTIONS SHALL BE REQUIRED FOR THE FOLLOWING GENERAL AREAS. REFERENCE THE FOLLOWING TABLE FOR MORE DETAILED INSPECTION REQUIREMENTS IN EACH AREA.
A. INSPECTION OF FABRICATORS: PER IBC SECTION 1704.2.
B. STEEL CONSTRUCTION: PER IBC SECTION 1704.3 AND IBC TABLE 1704.03.
C. CONCRETE: PER IBC SECTION 1704.4 AND IBC TABLE 1704.4.
D. MASONRY CONSTRUCTION: PER IBC SECTION 1704.5, AND IBC TABLE 1704.5.1.
E. SOILS: PER IBC SECTION 1704.7 AND THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT.
F. STRUCTURAL OBSERVATION (AS DEFINED IN CHAPTER 17 OF THE BUILDING CODE) IS NOT REQUIRED, UNLESS SPECIFICALLY REQUIRED BY THE BUILDING OFFICIAL.

MAXIMUM DEFLECTION AND DRIFT LIMITS		
MEMBER	VERTICAL DEFLECTION	HORIZONTAL DEFLECTION
PURLINS	L/240	---
RAFTERS	L/240	---
METAL ROOF PANELS	L/240	---
METAL WALL PANELS	---	L/240
GIRTS	---	L/240

- DESIGN SECONDARY-FRAMING SYSTEM TO ACCOMMODATE DEFLECTION OF PRIMARY FRAMING AND CONSTRUCTION TOLERANCES AND TO MAINTAIN CLEARANCES AT OPENINGS.
- LATERAL DRIFT: MAXIMUM OF L/200 OF BUILDING HEIGHT.
- L = MEMBER SPAN



1 S1 SCALE: 1/16" = 1'-0"

SPECIAL INSPECTIONS SCHEDULE		
SPECIAL INSPECTION	FREQ.	REFERENCED STANDARD(S)
SOILS:		
1. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	PERIODIC	IBC 1705.6
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	PERIODIC	
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	PERIODIC	
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	CONT.	
5. PRIOR TO THE PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT THE SITE HAS BEEN PREPARED PROPERLY.	PERIODIC	
CONCRETE (NOT APPLICABLE TO ISOLATED SPREAD FOOTINGS OR NON-STRUCTURAL SLABS ON GROUND):		
1. INSPECTION OF REINFORCING STEEL, SIZE AND PLACEMENT	PERIODIC	ACI 318: 3.5, 7.1-7.7
2. VERIFYING USE OF REQUIRED DESIGN MIX	PERIODIC	ACI 318: Ch. 4, 5.2-5.4
3. SAMPLING FRESH CONCRETE AND PERFORMING SLUMP, AIR CONTENT, AND DETERMINING THE TEMPERATURE OF FRESH CONCRETE AT THE TIME OF MAKING SPECIMENS FOR STRENGTH TESTS.	CONT.	ASTM C 172; ASTM C 31; ACI 318: 5.6, 5.8
4. INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	CONT.	ACI 318: 5.9, 5.10
5. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	PERIODIC	ACI 318: 5.11-5.13
STEEL CONSTRUCTION:		
1. MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS, AND WASHERS, HIGH-STRENGTH BOLTING:		
A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	PERIODIC	APPLICABLE ASTM MATERIAL SPECIFICATIONS; AISC 360, SEC. A3.4
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED	PERIODIC	
2. INSPECTION OF BEARING-TYPE CONNECTIONS	PERIODIC	AISC LRFD Sec. M2.5
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD FORMED METAL DECK:		
A. FOR STRUCTURAL STEEL IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	---	AISC 360, SEC. M5.5; ASTM A-6 OR ASTM A-568
B. FOR OTHER STEEL IDENTIFICATION MARKING TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	---	APPLICABLE ASTM MATERIAL STANDARDS
C. MANUFACTURER'S CERTIFIED MILL TEST REPORTS REQUIRED		
4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS:		
A. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS	PERIODIC	AISC 360, SECTION A3.5 AND APPLICABLE AWS A5 DOCUMENTS
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED	PERIODIC	
5. INSPECTION OF WELDING:		
A. SINGLE-PASS FILLET WELDS ≤ 5/16"	PERIODIC	AWS D.1.1
B. ROOF DECK WELDS	PERIODIC	AWS D.1.3
MASONRY CONSTRUCTION		
1. AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:		
A. PROPORTIONS OF SITE PREPARED MORTAR.	PERIODIC	ACI 530.1/ASCE 6/TMS 602: Art. 2.6A
B. CONSTRUCTION OF MORTAR JOINTS.		ACI 530.1/ASCE 6/TMS 602: Art. 3.3B
C. LOCATION OF REINFORCEMENT AND CONNECTORS.		ACI 530.1/ASCE 6/TMS 602: Art. 3.4, 3.6A
D. VERIFICATION OF f _m .		ACI 530.1/ASCE 6/TMS 602: Art. 1.5
2. DURING CONSTRUCTION THE INSPECTION PROGRAM SHALL VERIFY:		
A. SIZE AND LOCATION OF STRUCTURAL ELEMENTS.	PERIODIC	ACI 530.1/ASCE 6/TMS 602: Art. 3.3F
B. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION.		ACI 530.1/ASCE 5/TMS 402: Sec. 1.2.2(e), 1.16.1
C. SPECIFIED SIZE, GRADE, AND TYPE OF REINFORCEMENT AND ANCHOR BOLTS		ACI 530.1/ASCE 6/TMS 402: Sec. 1.15; ACI 530.1/ASCE 6/TMS 602: Art. 2.4, 3.4
E. PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40° F) OR HOT WEATHER (TEMPERATURE ABOVE 90° F)		ACI 530.1/ASCE 6/TMS 602: Art. 1.6c, 1.8D IBC SECTION 2104.3.2:104.4
3. PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:		
A. GROUT SPACE IS CLEAN.	PERIODIC	ACI 530.1/ASCE 6/TMS 602: Art. 3.2D
B. PLACEMENT OF REINFORCEMENT AND CONNECTORS.		ACI 530.1/ASCE 6/TMS 602: Art. 3.13; ACI 530.1/ASCE 6/TMS 602: Art. 3.4
C. PROPORTIONS OF SITE PREPARED GROUT.		ACI 530.1/ASCE 6/TMS 602: Art. 2.6B
D. CONSTRUCTION OF MORTAR JOINTS.		ACI 530.1/ASCE 6/TMS 602: Art. 3.3B
4. GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE WITH CODE AND CONSTRUCTION DOCUMENT PROVISIONS.	CONT.	ACI 530.1/ASCE 6/TMS 602: Art. 3.5
5. PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS SHALL BE OBSERVED.	PERIODIC	IBC SECTION 2105.2.2, 2105.3; ACI 530.1/ASCE 6/TMS 602: Art. 1.4
6. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED.	PERIODIC	ACI 530.1/ASCE 6/TMS 602: Art. 1.5
ADHESIVE ANCHORS/REINFORCEMENT:		
1. DURING PLACEMENT OF ADHESIVE ANCHORS OR REINFORCEMENT EMBEDDED WITH ADHESIVE (AS SPECIFIED ON THE CONSTRUCTION DOCUMENTS) IN MASONRY AND CONCRETE:		
A. SIZE AND EMBEDMENT OF ANCHORS/REINF.	CONTINUOUS	MANUFACTURERS INSTALLATION INSTRUCTIONS
B. ANCHORS/REINFORCEMENT INSTALLED PER MANUFACTURERS RECOMMENDATIONS.	CONTINUOUS	

RELEASE FOR CONSTRUCTION

AS NOTED ON PLANS REVIEW

DESIGN/INSTRUMENT SERVICES

LEE'S SUMMIT, MISSOURI

04/17/2020

wallace

Wallace Engineering

Structural Consultants, Inc.

1220 Main Line Highway - Blvd.

Lee's Summit, Missouri 64086

913.343.5838, 800.343.5858

Firestone

COMPLETE AUTO CARE

Missouri 64086

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NEW FCAC STORE

2020 ER

3561 SW MARKET ST

JACKSON COUNTY

LEE'S SUMMIT, MISSOURI 64082

MISSOURI

STATE OF MISSOURI

PROFESSIONAL ENGINEERING CORPORATION

MISSOURI CERTIFICATE OF AUTHORIZATION

#001268

2020.07.21 15:24:14-05'00'

ISSUE BLOCK

ADD #1

04/16/20

CB#1

06/30/20

IFC

07/23/20

PROPERTY NO.:

160085

6 DIGIT NO.:

906983

4 DIGIT NO.:

78C9

AOR PROJECT NUMBER:

1955871

TO PERMIT:

DATE: 03/26/2020

TO BID:

DATE: ##-##-##

SHEET TITLE:

GENERAL NOTES

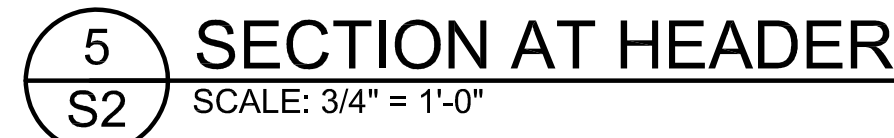
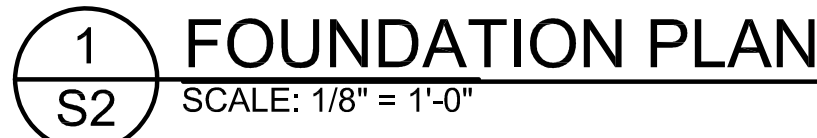
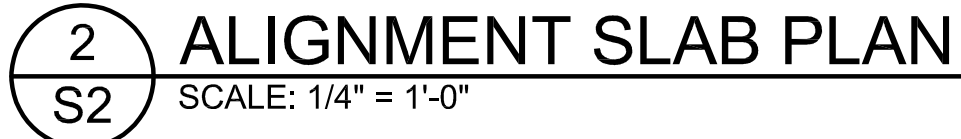
SHEET NUMBER:

S1

1. SEE SHEET S1 FOR GENERAL NOTES AND S3 FOR TYPICAL DETAILS
2. ALL ELEVATIONS BASED ON FINISH FLOOR ELEVATION = 100'-0" FOR REFERENCE ONLY. SEE SITE PLAN FOR ACTUAL FINISH FLOOR ELEVATIONS.
3. SEE PLAN AND GENERAL STRUCTURAL NOTES FOR TOP OF EXTERIOR FOOTING ELEVATIONS. THE EXISTING CONTRACTOR SHALL COORDINATE ALL TOP OF FOOTING ELEVATIONS WITH THE CIVIL ENGINEERING DRAWINGS AND SITE CONDITIONS.
4. PROVIDE CORNER BARS IN ALL CORNERS AND INTERSECTIONS PER 5-S3. LAP SPICE FOOTING CORNER BAR REINFORCING PER TABLE ON SHEET S1.
5. REFER TO MECHANICAL DRAWINGS FOR ALL DRAIN LOCATIONS AND SLOPES TO DRAINS.

- * THICKNESS OF SLABS AS SPECIFIED IN SCHEDULE ARE MINIMUMS. THERE SHALL BE NO TOLERANCE FOR SLABS THINNER THAN THOSE SPECIFIED IN SCHEDULE.
- * COORDINATE LOCATIONS AND EXTENTS OF EXTERIOR CONCRETE SLAB WITH ARCH. AND CIVIL DRAWINGS.
- * SEE ARCH AND SPECIFICATIONS FOR SLAB FINISH REQUIREMENTS.
- * CONTRACTOR SHALL OBTAIN FLOOR FLATNESS AND LEVELNESS TESTING (FF & FL) AND PROVIDE FINAL REPORT TO OWNER. SEE SPECIFICATIONS.

MARK	SIZE	REINFORCING
F1	* 4'-0" x 4'-0" x 1'-0"	(4) #5 - EACH WAY, BOTTOM
F2	* 5'-0" x 5'-0" x 1'-0"	(5) #5 - EACH WAY, BOTTOM
F3	* 6'-0" x 6'-0" x 1'-0"	(6) #5 - EACH WAY, BOTTOM

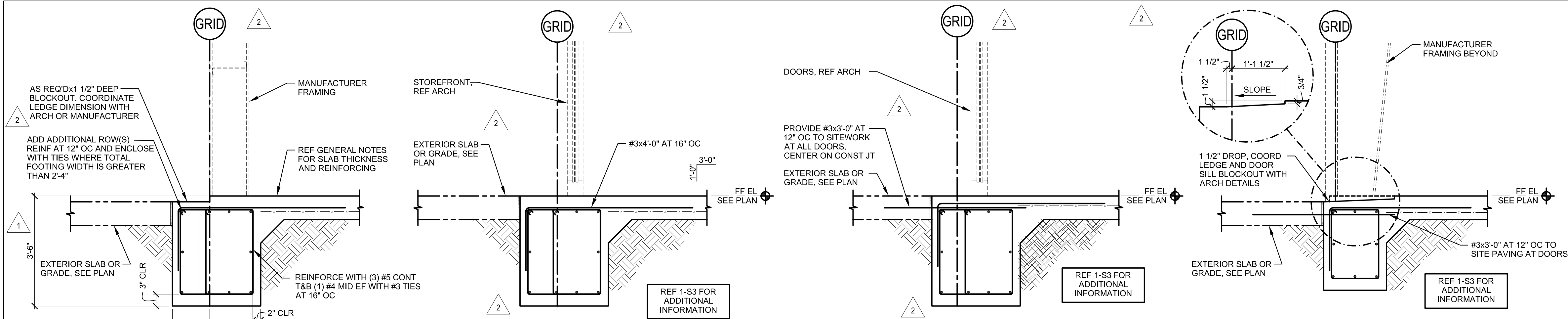


REF 15/S3 FOR LIGHT POLE FOUNDATION. REF ARCH FOR LOCATION AND CONFIGURATION

REF 16/S3 FOR MONUMENT SIGN WALL/FOOTING. REF ARCH FOR LOCATION AND CONFIGURATION

REF 14/S3 FOR TRASH ENCLOSURE WALL/FOOTING. REF ARCH FOR LOCATION AND CONFIGURATION

EXTERIOR LIGHT GAGE STUDS SHALL BE 60S162-54 AT 16" C.C. TYP. UNO. REF ARCH FOR LOCATIONS. STUDS SHALL BE ATTACHED TO EACH METAL BUILDING GIRTH WITH 16 GA CLIP ANGLES WITH (2) #10 SCREWS EACH LEG.



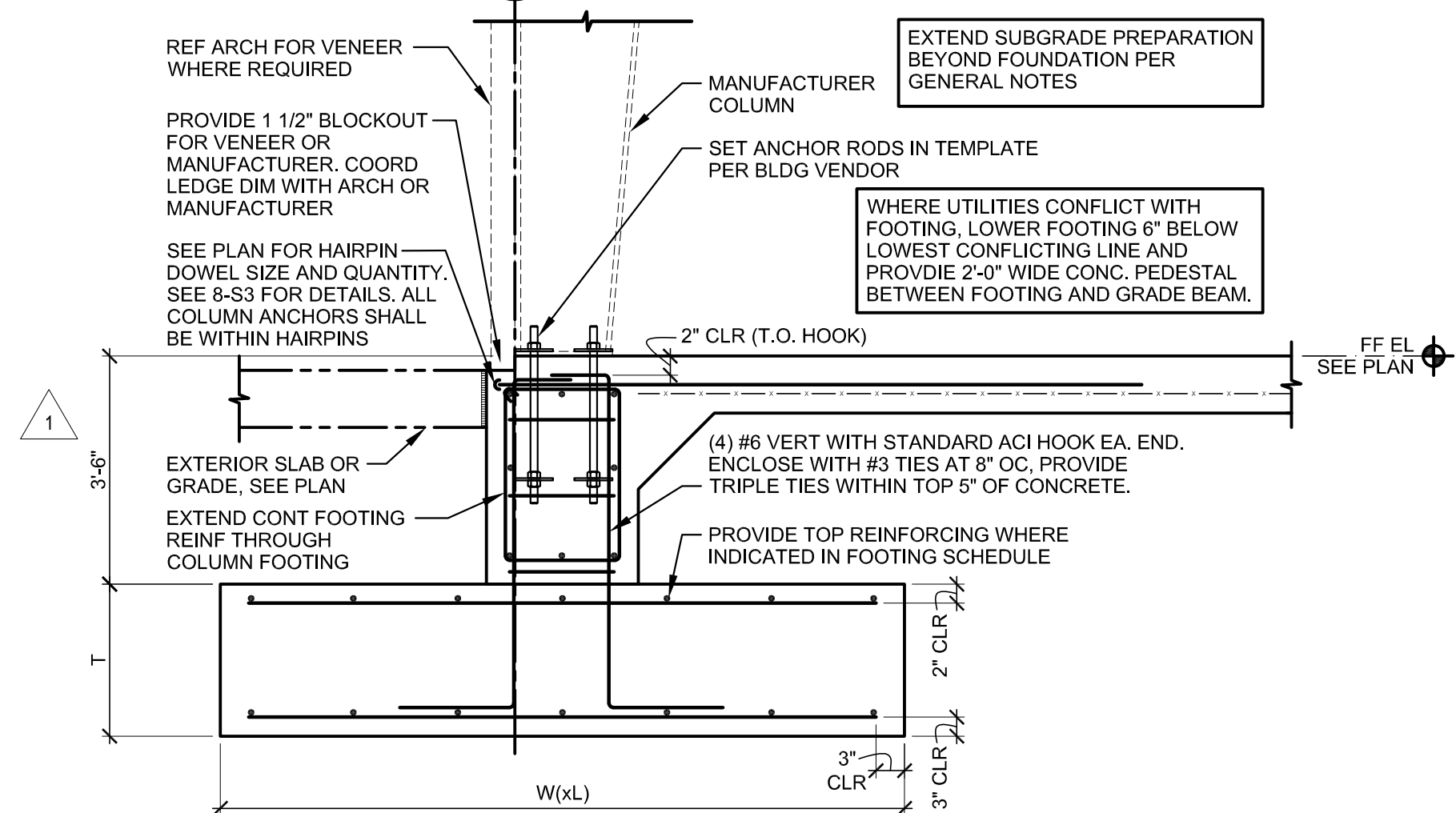
1
S3
EXTERIOR FOOTING DETAIL
SCALE: 3/4" = 1'-0"

2
S3
EXTERIOR FOOTING DETAIL
SCALE: 3/4" = 1'-0"

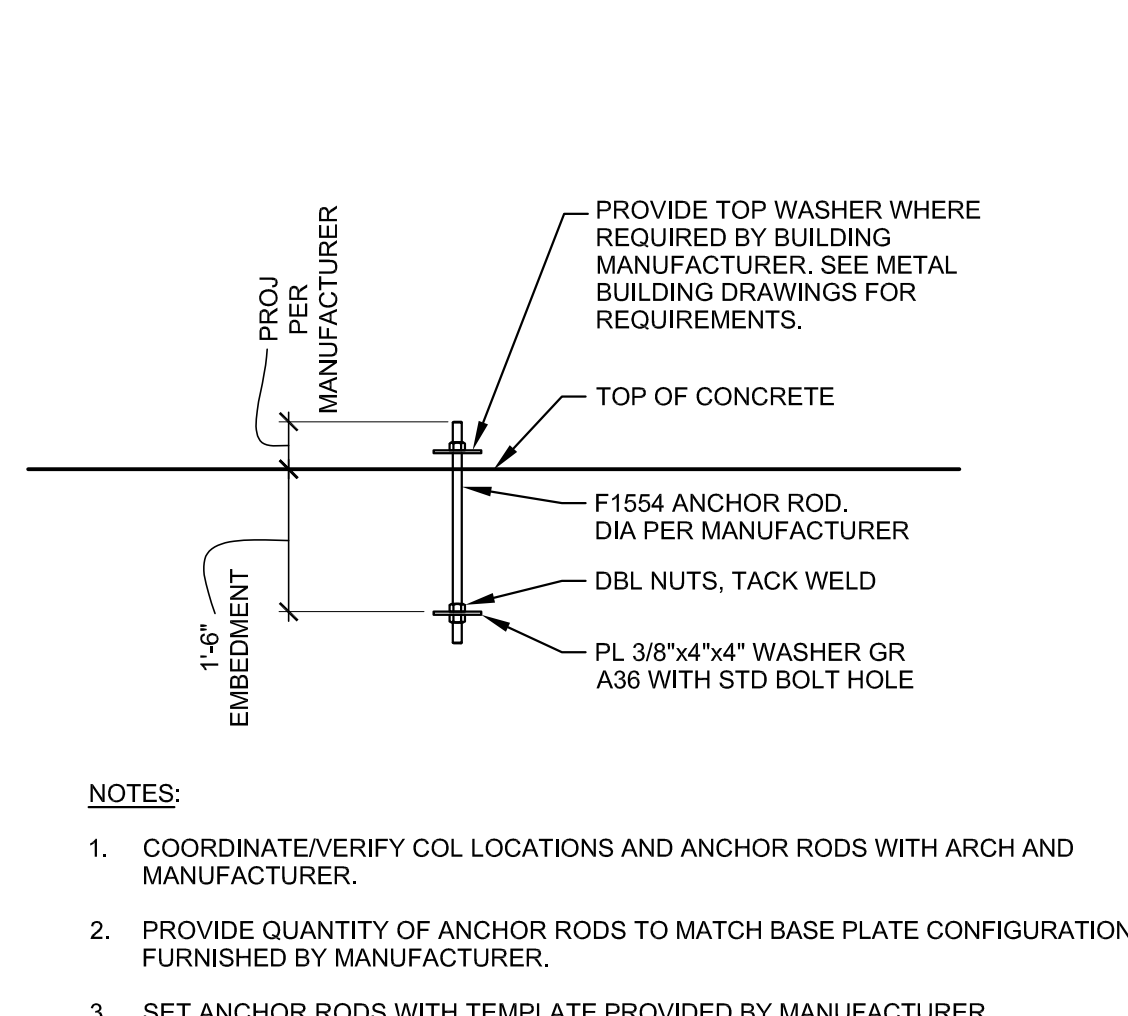
3
S3
DOOR SECTION
SCALE: 3/4" = 1'-0"

4
S3
OVERHEAD DOOR SECTION
SCALE: 3/4" = 1'-0"

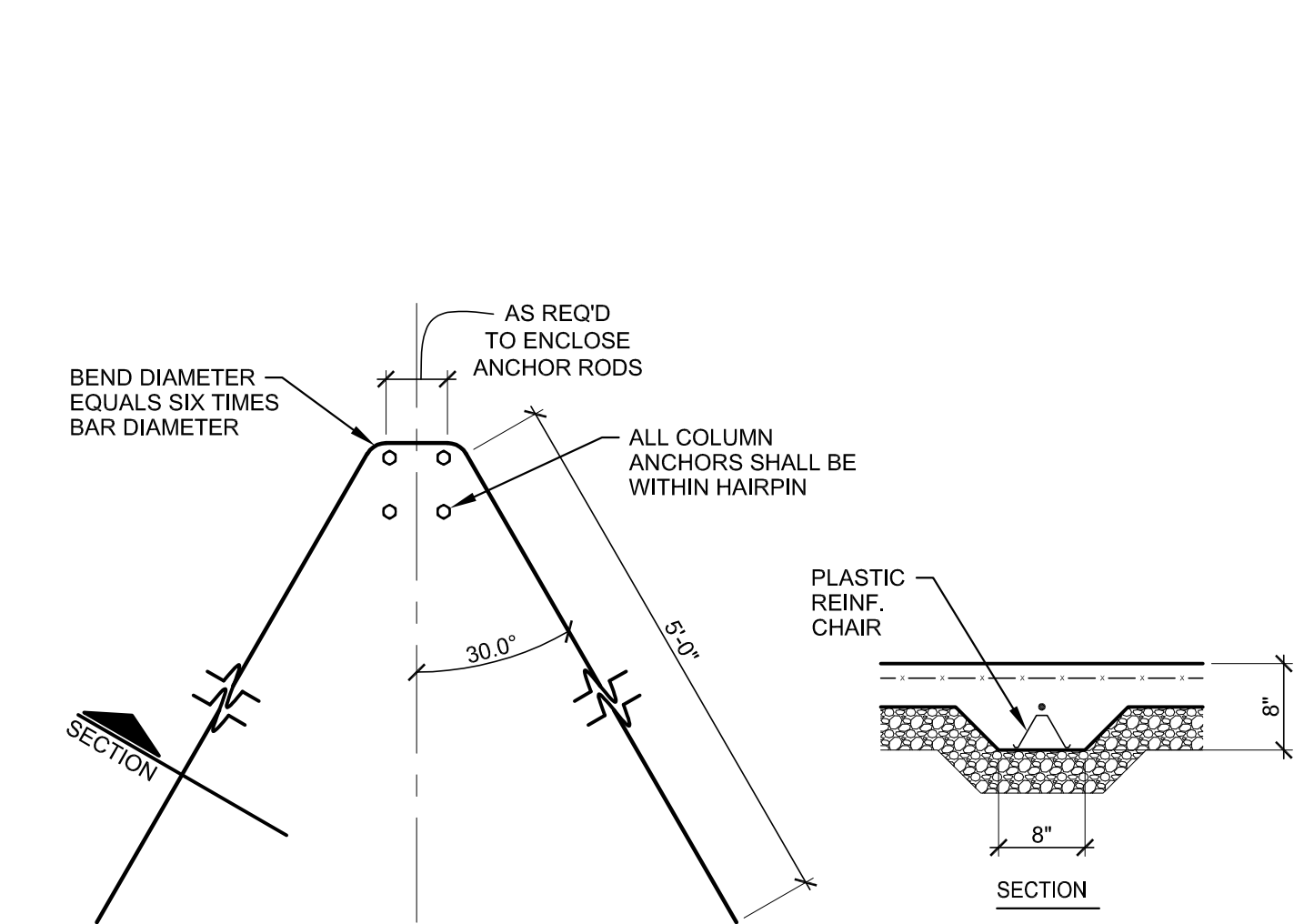
5
S3
CORNER BAR REINFORCING
SCALE: 3/4" = 1'-0"



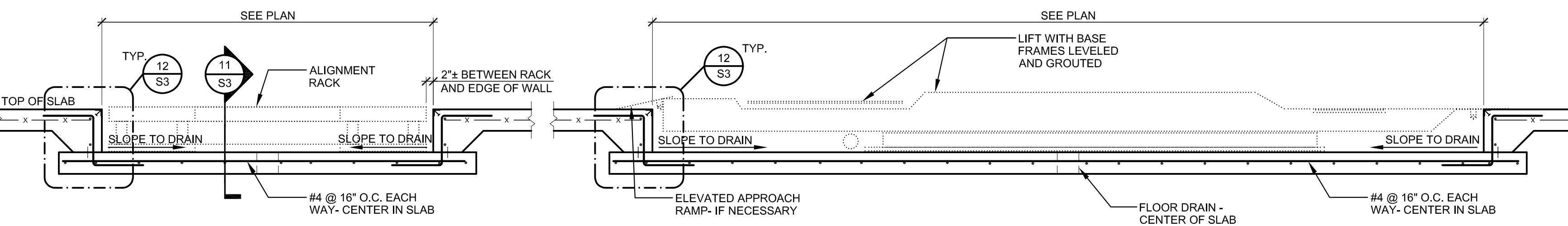
6
S3
SECTION AT PERIMETER COLUMN FOOTING
SCALE: 3/4" = 1'-0"



7
S3
TYPICAL ANCHOR RODS
SCALE: 3/4" = 1'-0"



8
S3
TYPICAL HAIRPIN DETAIL
SCALE: 3/4" = 1'-0"

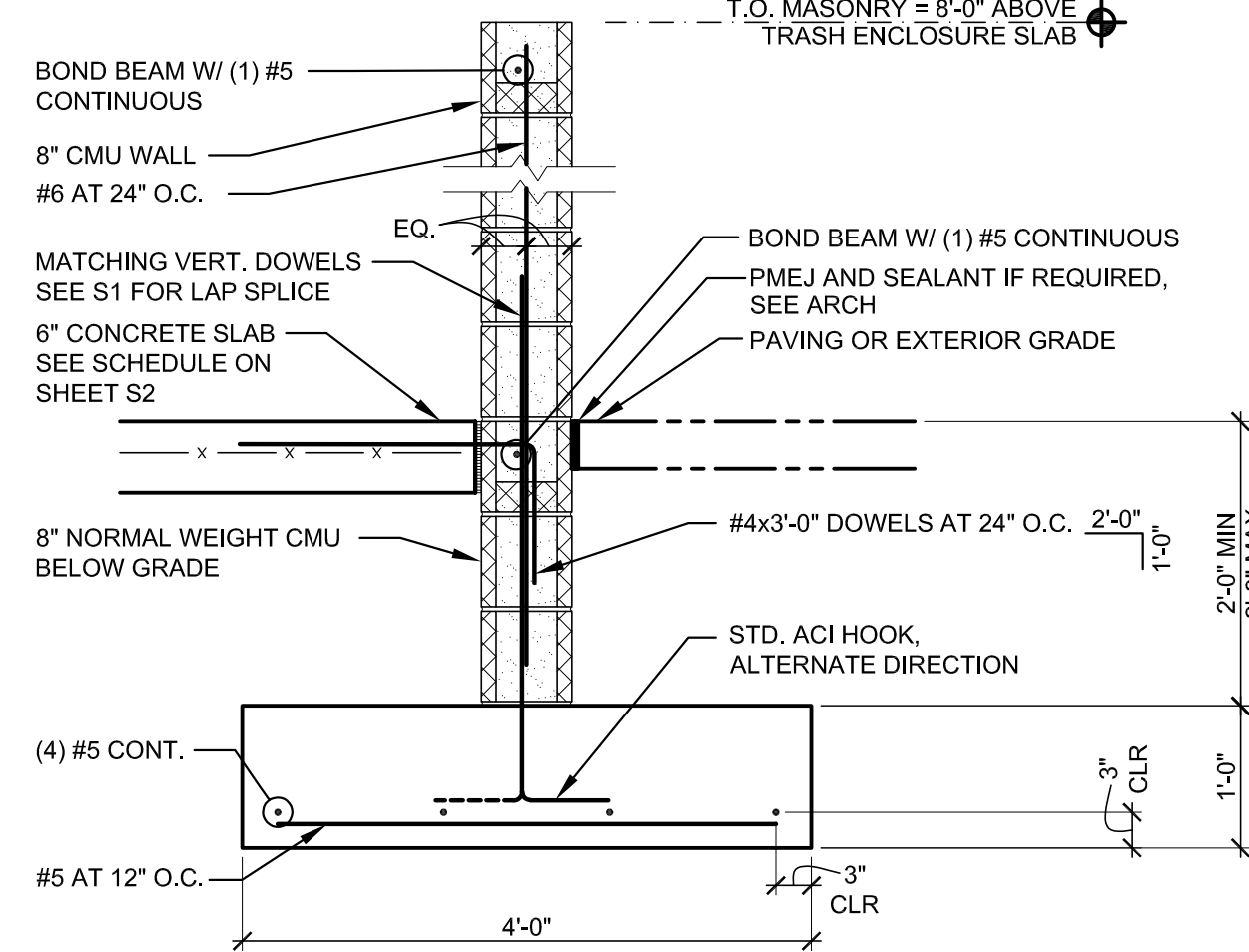


9
S3
SECTION AT PERIMETER COLUMN FOOTING
SCALE: 3/4" = 1'-0"

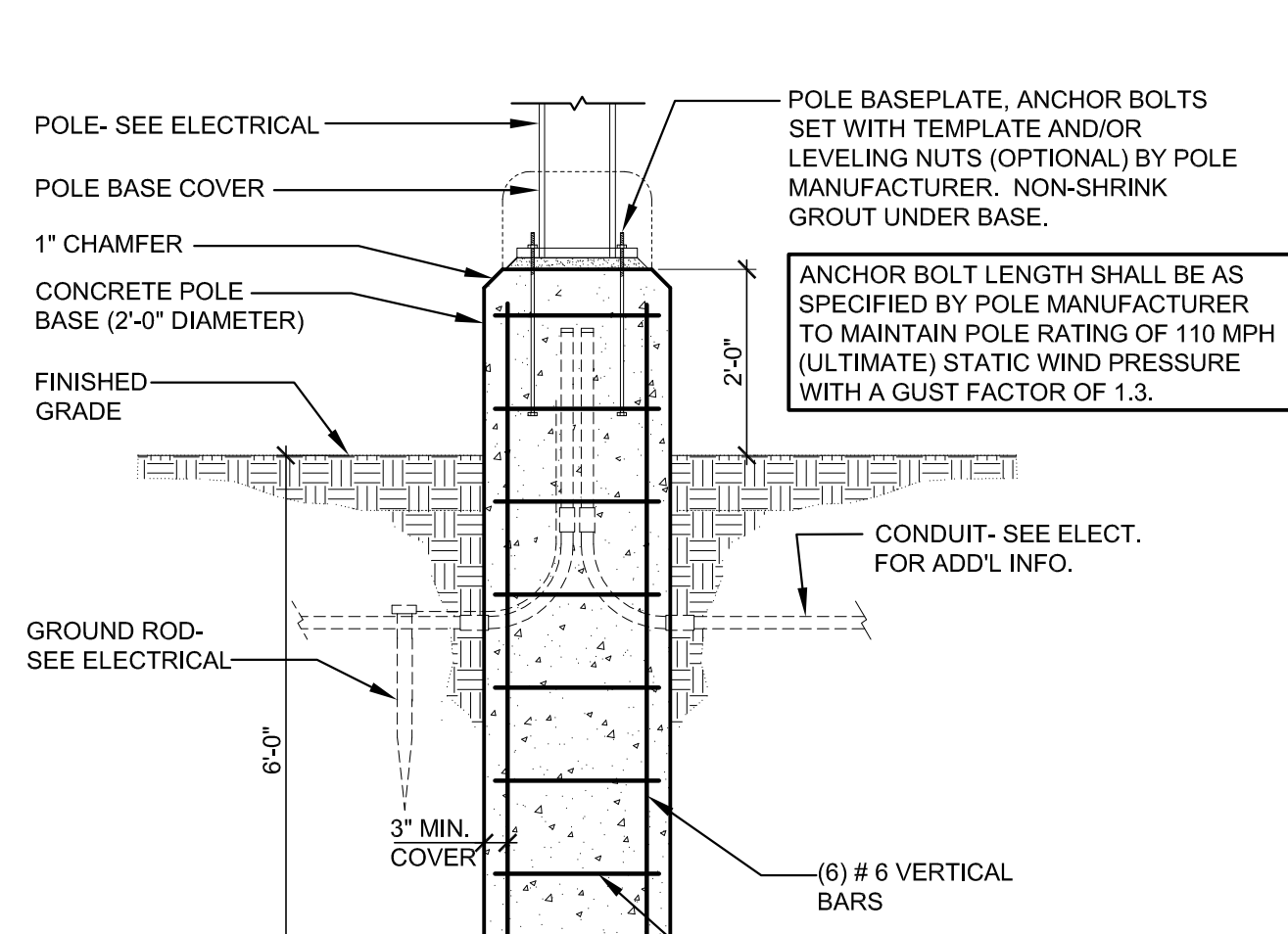
10
S3
SECTION AT ALIGNMENT SLAB
SCALE: 1/2" = 1'-0"

11
S3
SECTION AT ALIGNMENT SLAB
SCALE: 1/2" = 1'-0"

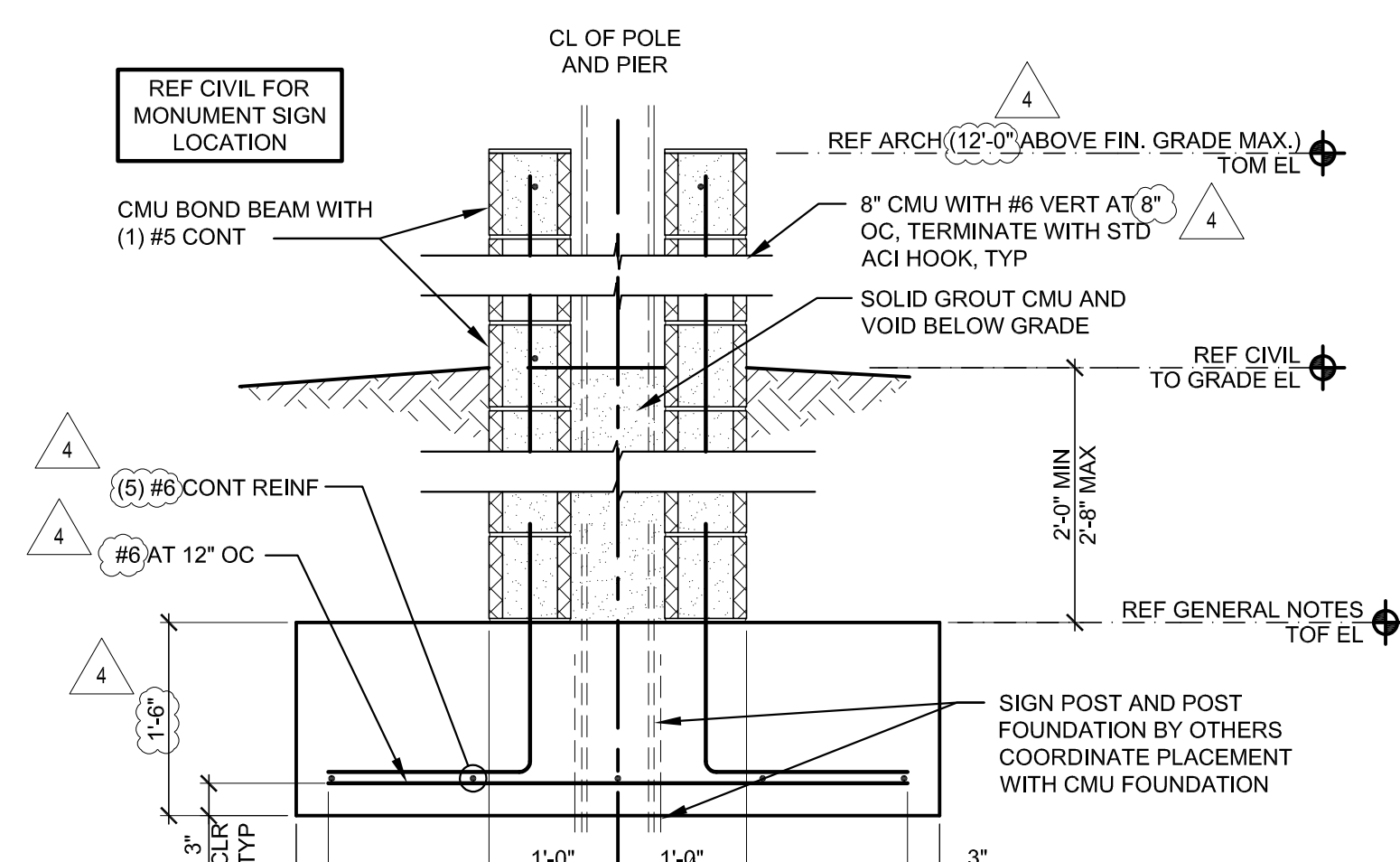
12
S3
SECTION DETAIL
SCALE: 3/4" = 1'-0"



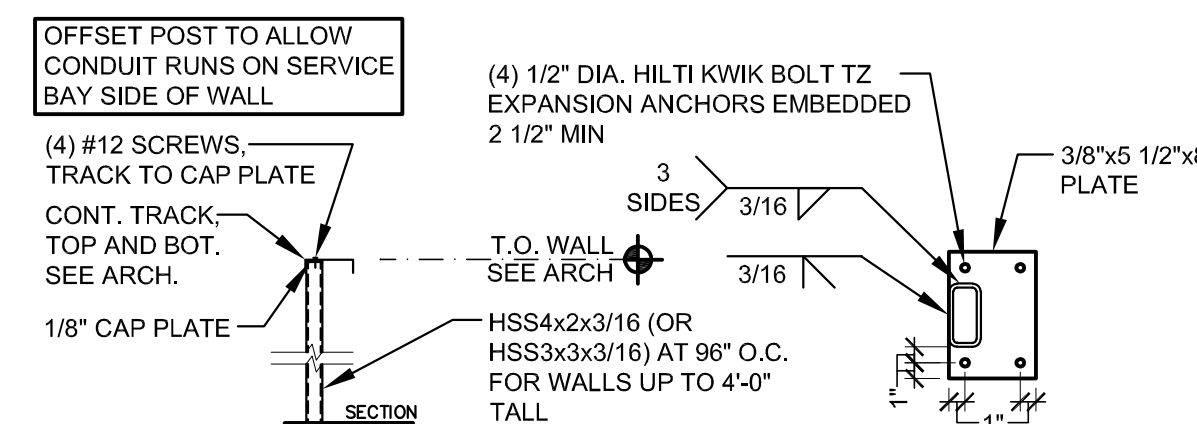
13
S3
TRASH ENCLOSURE
SCREEN WALL SECTION
SCALE: 3/4" = 1'-0"



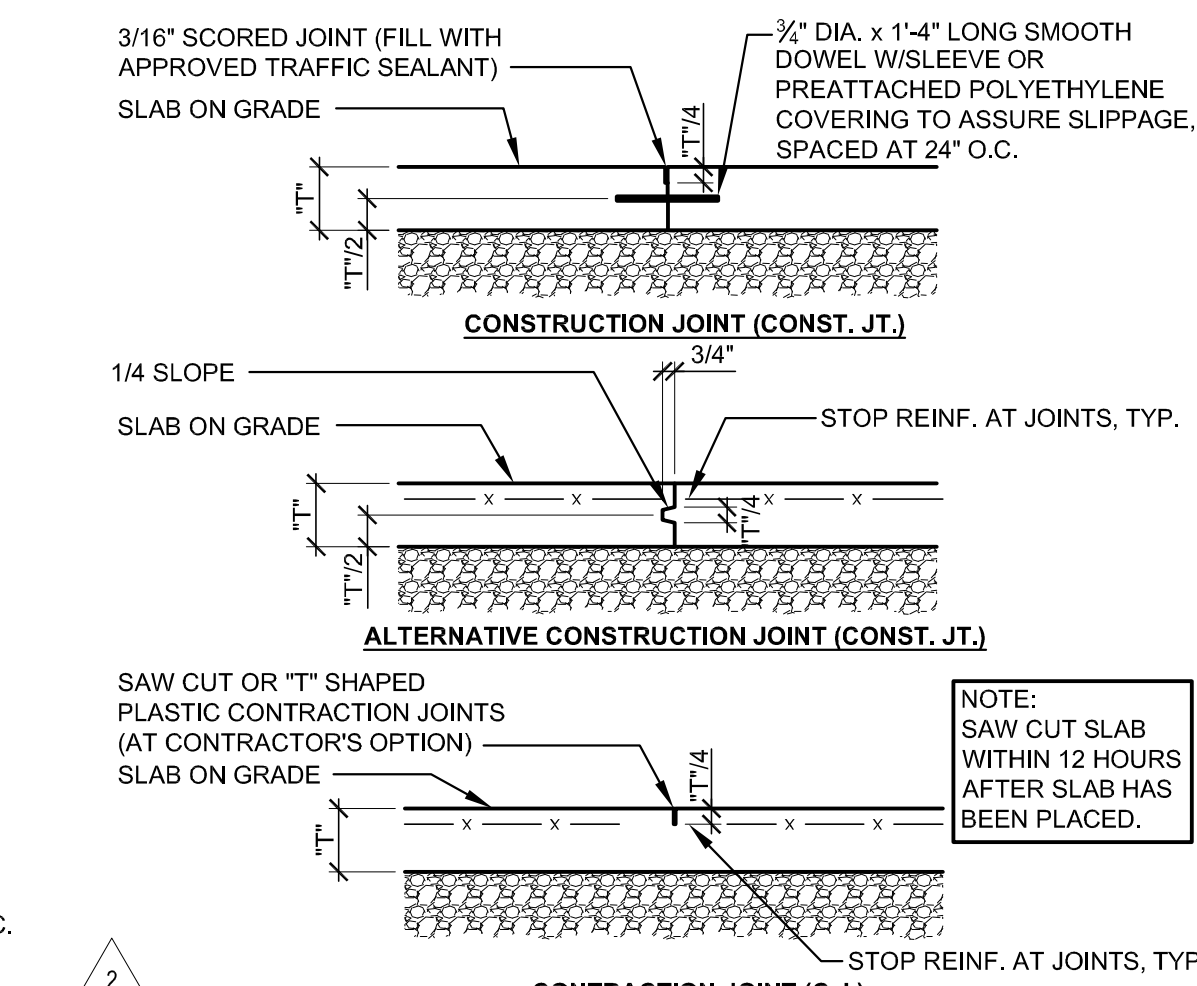
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S3
LIGHT POLE FOUNDATION
SCALE: 1/2" = 1'-0"



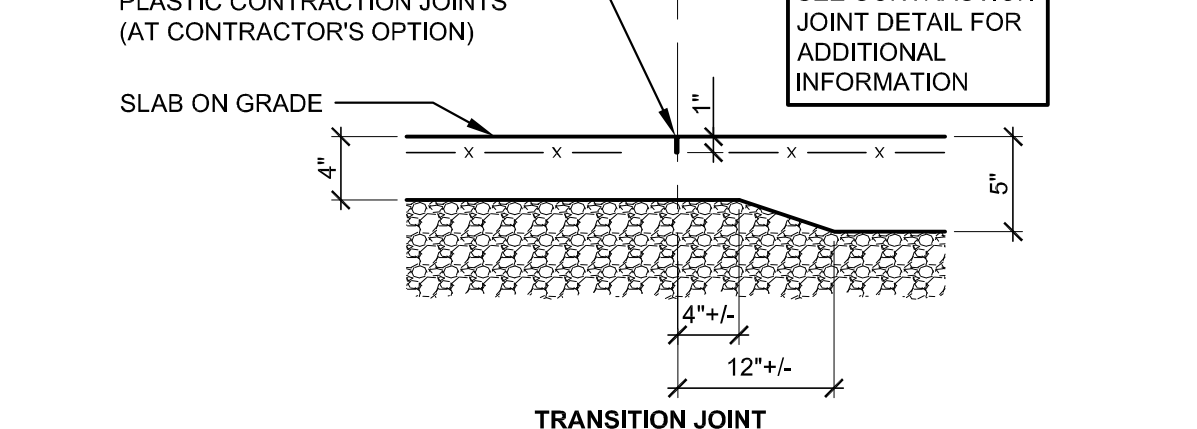
15
S3
CMU BASE AT MONUMENT SIGN
SCALE: 3/4" = 1'-0"



16
S3
KNEE WALL SECTION
SCALE: 1/2" = 1'-0"



17
S3
SECTION AT ALIGNMENT SLAB
SCALE: 1/2" = 1'-0"



18
S3
SECTION DETAIL
SCALE: 3/4" = 1'-0"

13
S3
TYP. SLAB JOINT DETAILS
SCALE: 1" = 1'-0"

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
OVERLAPMENT DRAWINGS
LEE'S SUMMIT, MISSOURI
09/21/2020

wallace
Wallace Engineering
Structural Consultants, Inc.
Seymour and Call Consultants
123 N. Main Street, Suite 100
Lee's Summit, MO 64063
913.384.8558

Firestone
COMPLETE AUTO CARE

THIS DRAWING IS THE PROPERTY OF BRIDGESTONE RETAIL OPERATIONS, LLC AND IS LOANED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED IN ANY WAY DELETTERIOUS TO THE INTERESTS OF BRIDGESTONE RETAIL OPERATIONS, LLC. ADMISSION TO THE EXCLUSIVE OWNERSHIP PLAN AND TO THE DRAWING BY BRIDGESTONE RETAIL OPERATIONS, LLC.

NEW FCAC STORE
2020 ER
3561 SW MARKET ST
JACKSON COUNTY
LEE'S SUMMIT, MISSOURI 64082

WALLACE ENGINEERING -
STRUCTURAL CONSULTANTS, INC.
PROFESSIONAL ENGINEERING CORPORATION
MISSOURI CERTIFICATE OF AUTHORIZATION
#072458

2020.09.08 13:33:37-05'00'

ISSUE BLOCK		
1	ADD #1	04/16/20
2	CB#1	06/30/20
3	IFC	07/23/20
4	CB#2	09/09/20

PROPERTY NO.: 160085
6 DIGIT NO.: 906983
4 DIGIT NO.: 78C9
AOR PROJECT NUMBER: 1955871
TO PERMIT: DATE: 03/26/2020
TO BID: DATE: ##-##-##

SHEET TITLE:
**FOUNDATION
DETAILS**

SHEET NUMBER:
S3

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

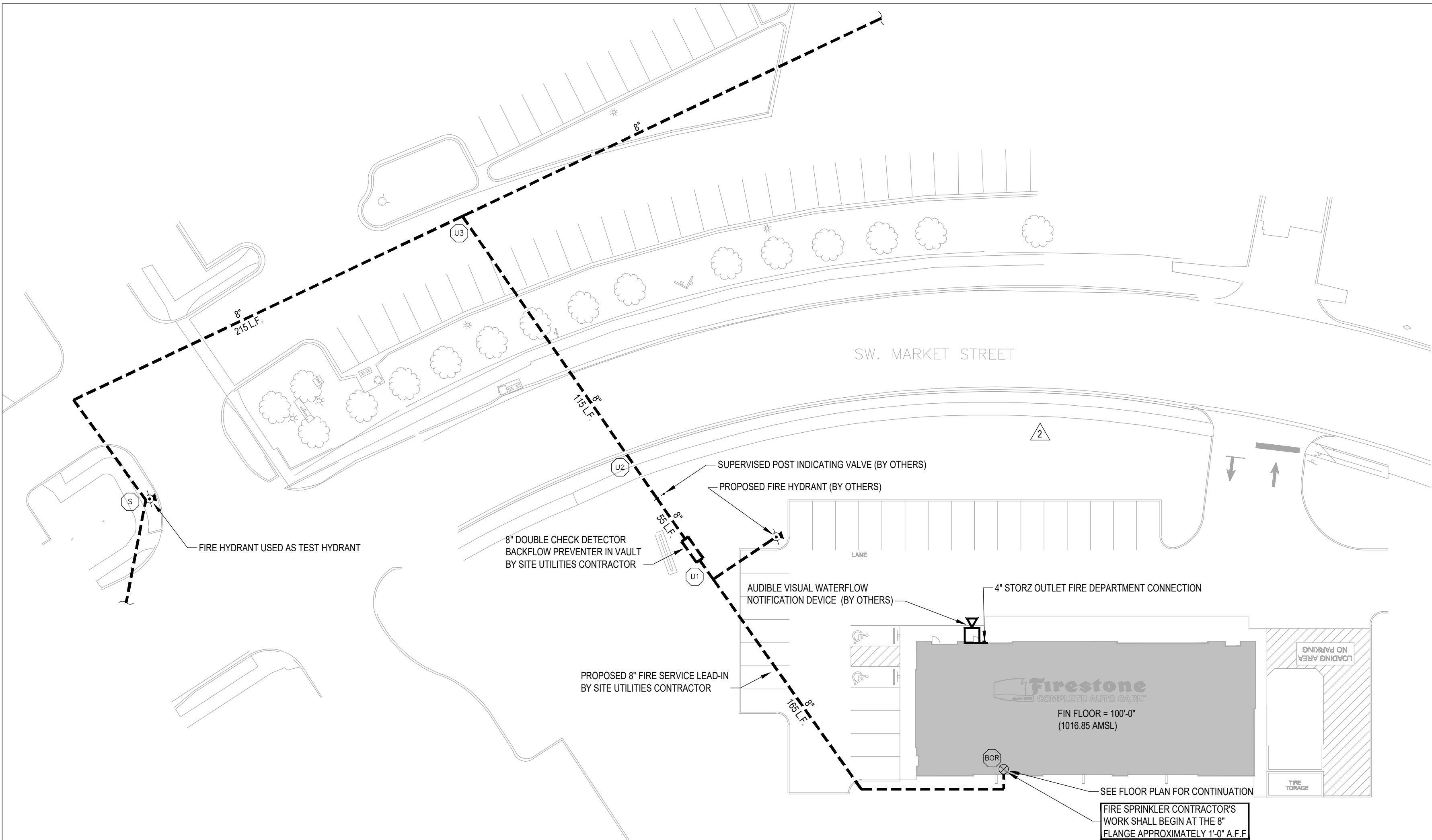
09/21/2020

CCI

CODE CONSULTANTS, INC.
2043 WOODLAND PKWY, SUITE 300
ST. LOUIS, MISSOURI 63146-4235
314-991-2633
www.codeconsultants.com

Firestone
COMPLETE AUTO CARE

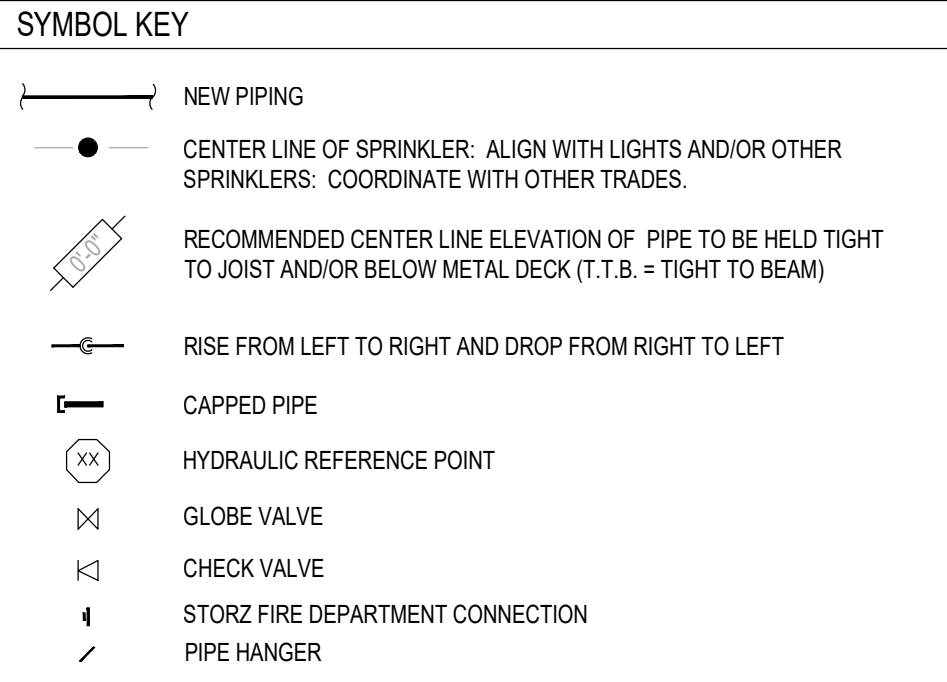
THIS DRAWING IS THE PROPERTY OF BRIDGESTONE RETAIL OPERATIONS, LLC AND IS LOANED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED IN ANY WAY RELATIVE TO THE INTERESTS OF BRIDGESTONE RETAIL OPERATIONS, LLC. CONSTRUCTION OF THIS PROJECT SHALL BE IN ACCORDANCE WITH THE DRAWING BY BRIDGESTONE RETAIL OPERATIONS, LLC. ADMISION TO THE EXCLUSIVE OWNERSHIP IN AND TO THE DRAWING BY BRIDGESTONE RETAIL OPERATIONS, LLC.



FIRE PROTECTION SITE PLAN
SCALE 1" = 30'-0"
FFE: 1,016.85 FT AMSL

UNDERGROUND PIPING NOTE
ALL UNDERGROUND PIPING, VALVES, FITTINGS, DIMENSIONS, ETC. ARE SHOWN FOR REFERENCE ONLY. REFER TO CIVIL DRAWINGS FOR EXACT LOCATIONS, TYPES, AND SIZES OF ALL COMPONENTS IN ADDITION TO DETAILS OF CONSTRUCTION.

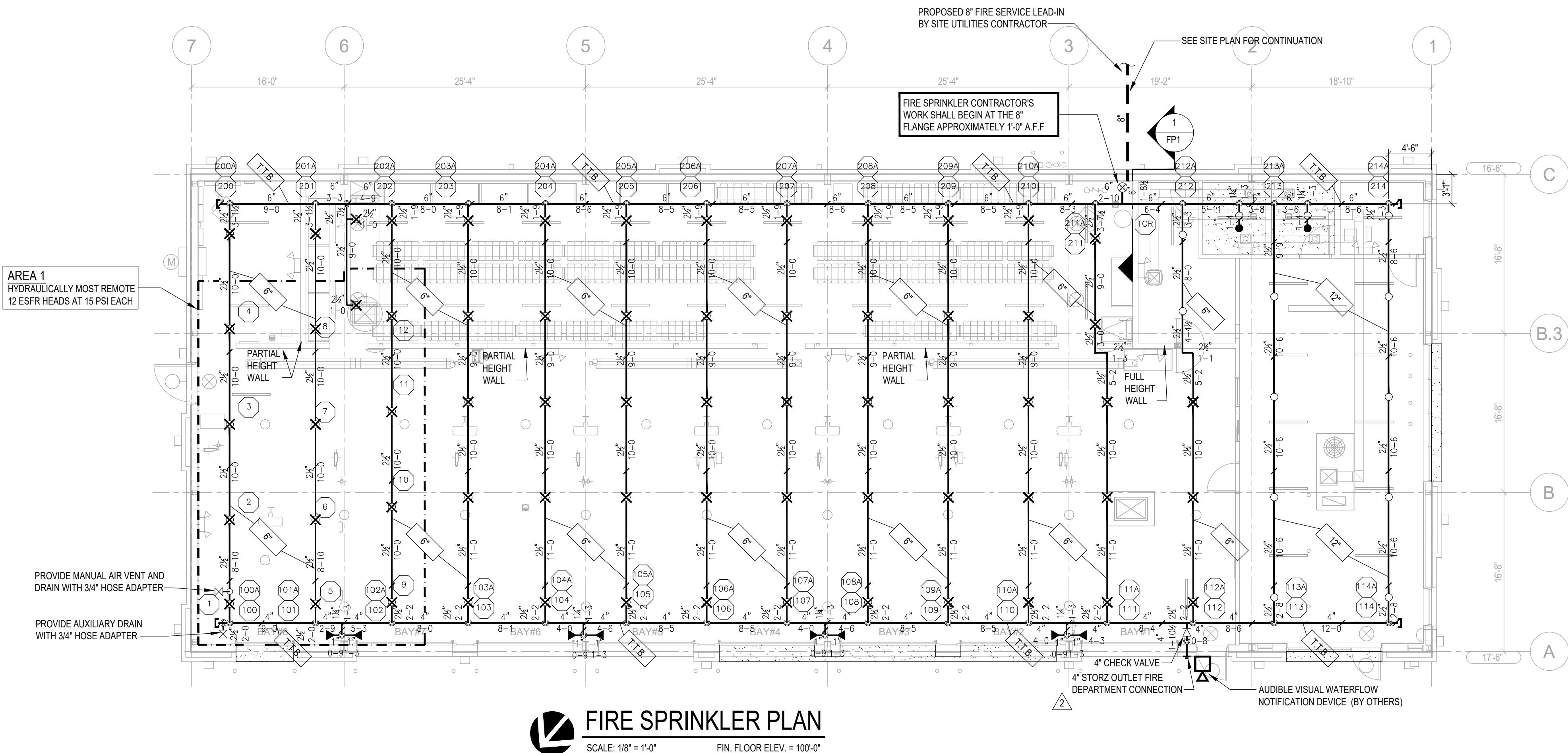
- FIRE SPRINKLER CONTRACTOR (FSC) BIDDING AND INSTALLATION TIMELINE**
- FIRE SPRINKLER CONTRACTORS SHALL PREPARE SPRINKLER BID BASED ON THESE CONTRACT DOCUMENTS (CDS). THE FSC SHALL DELIVER THEIR SHOP DRAWING SUBMITTAL (SDS) TO ARCHITECT FOR REVIEW NO MORE THAN TWO (2) WEEKS PRIOR TO THE START OF THE FSC'S WORK. SEE SPECIFICATION FOR ADDITIONAL DETAILS REGARDING THE FSC'S SDS.
 - THE ELECTRONIC VERSIONS (AUTOCAD) AND HYDRAULIC CALCULATION FILES WILL BE MADE AVAILABLE TO THE SUCCESSFUL FIRE SPRINKLER CONTRACTOR (FSC) FOR USE IN PREPARING THE SHOP DRAWING SUBMITTAL. THE FSC'S REQUEST SHALL BE MADE WITHIN TWO (2) WEEK OF SPRINKLER CONTRACT AWARD. ELECTRONIC DATA FILES WILL BE ELECTRONICALLY TRANSMITTED TO THE FSC UPON RECEIPT OF SIGNED ELECTRONIC RELEASE FORM. NOTE: THE FSC MAY UTILIZE OTHER HYDRAULIC CALCULATION PROGRAMS TO PRODUCE SHOP DRAWING SUBMITTAL.
 - AFTER SATISFACTORY REVIEW OF THE SDS, THE FSC SHALL SUBMIT TO ALL AUTHORITIES HAVING JURISDICTION FOR INSTALLATION PERMIT APPROVAL. WHERE APPLICABLE, THE FSC SHALL ALSO SUBMIT TO THE INSURANCE UNDERWRITER FOR INSURANCE PURPOSES. SUBMITTALS MAY OCCUR CONCURRENTLY WHERE SCHEDULES REQUIRE, BUT FIRE PROTECTION ENGINEER OF RECORDS REVIEW SHALL TAKE PRECEDENCE OVER ALL OTHER SUBMITTAL REVIEWS (NO EXCEPTIONS).
 - THE FSC SHALL BE RESPONSIBLE FOR RESPONDING, IN WRITING, TO ANY COMMENTS FROM ALL AUTHORITIES HAVING JURISDICTION WITHIN TEN (10) WORKING DAYS AFTER THE RECEIPT OF THEIR COMMENTS. COPIES OF THE RESPONSE SHALL BE SENT TO FIRE PROTECTION ENGINEER OF RECORD, ARCHITECT AND OWNER REPRESENTATIVES.
 - THE FSC SHALL COMPLETE ALL PRELIMINARY TESTING PROCEDURES PRIOR TO FINAL TESTING. SEE SPECIFICATION FOR ADDITIONAL DETAILS ON PRELIMINARY AND FINAL TESTING.
 - THE FSC SHALL COMPLETE AND SUBMIT ALL CONTRACTOR'S MATERIAL AND TEST CERTIFICATES (INCLUDE UNDERGROUND PIPING CERTIFICATE WHERE APPLICABLE) TO OWNER REPRESENTATIVE, PRIOR TO FINAL SYSTEM ACCEPTANCE.
 - THE FSC SHALL SUBMIT ALL PROJECT CLOSE-OUT DOCUMENTS TO OWNER REPRESENTATIVE, PRIOR TO FINAL SYSTEM ACCEPTANCE, IN ACCORDANCE WITH PROJECT REQUIREMENTS IN HARD COPY AND ELECTRONIC FILE FORMAT INCLUDING THE FOLLOWING ITEMS:
 - OPERATING AND MAINTENANCE INSTRUCTIONS.
 - AS-BUILT DOCUMENTS.
 - WARRANTY INFORMATION.



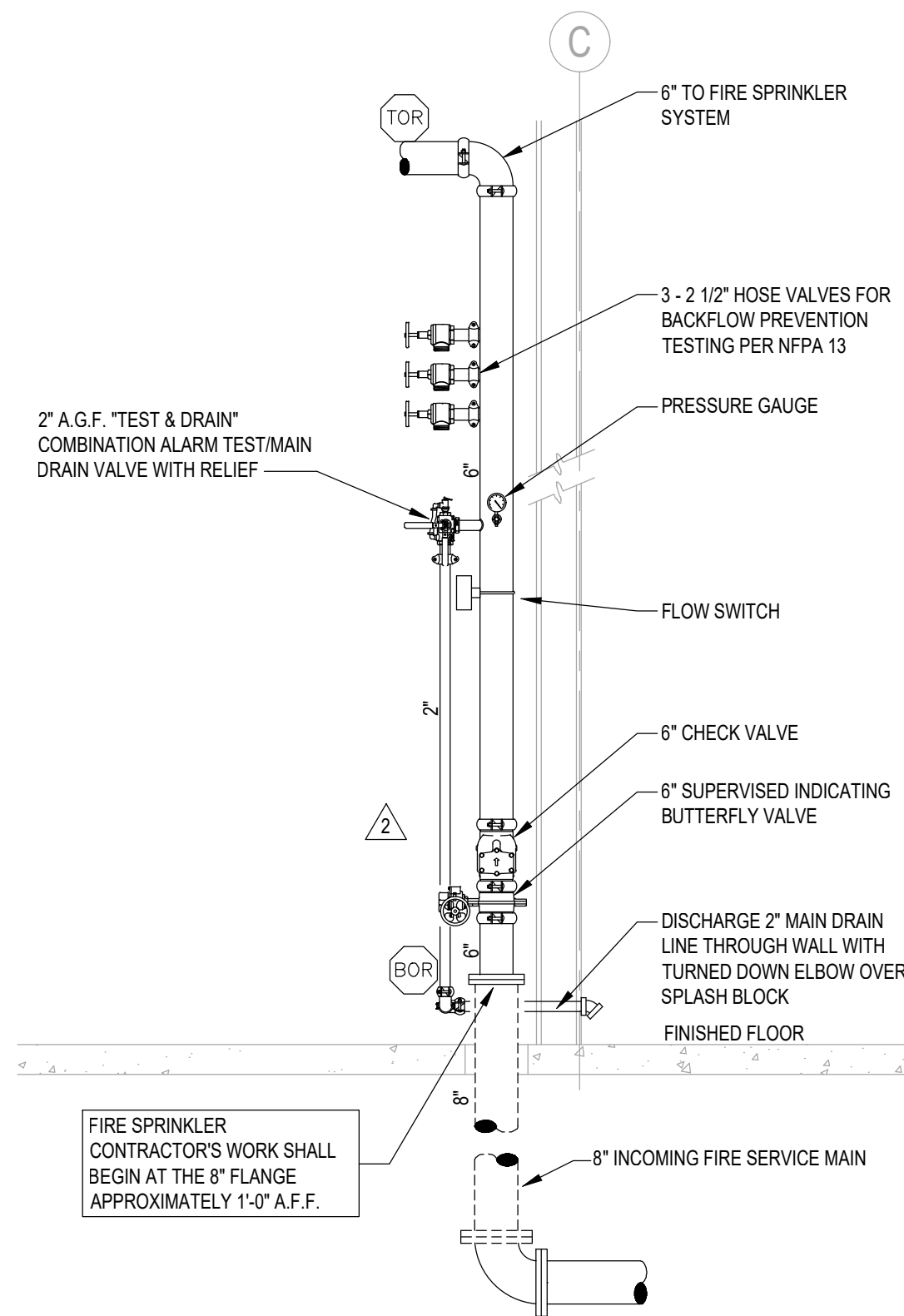
SPRINKLER LEGEND

SYMBOL	SPRINKLER TYPE	TEMP.	K	FINISH	RESP.	QTY.
●	CHROME PENDENT WITH 2 PIECE ESCUTCHEON	ORD	5.6	CHROME	QR	2
○	UPRIGHT	INT	5.6	BRASS	QR	13
⊗	ESFR K25.2 PENDENT	INT	25.2	BRASS	ESFR	65
◀	BRASS HORIZONTAL SIDEWALL WITH GUARD	INT	5.6	BRASS	QR	8

ESFR SPRINKLER SYSTEM SHALL COMPLY WITH ALL OBSTRUCTION REQUIREMENTS WITHIN NFPA 13. COORDINATION WITH ALL TRADES WILL BE REQUIRED TO COMPLY



FIRE SPRINKLER PLAN
SCALE: 1/8" = 1'-0"
FIN. FLOOR ELEV. = 100'-0"



FIRE SPRINKLER RISER ELEVATION
1
FP1
NOT TO SCALE

NEW FCAC STORE
2020 ER
3561 SW MARKET ST
JACKSON COUNTY
LEE'S SUMMIT, MISSOURI 64082

STATE OF MISSOURI
WILLIAM B. SMITH
NUMBER
PE-2008019735
PROFESSIONAL ENGINEER

09-22-2020

FIRE PROTECTION ENGINEER OF RECORD:
WILLIAM B. SMITH, PE
LICENSE NO. PE-2008019735
CODE CONSULTANTS, INC.
2043 WOODLAND PKWY, SUITE 300
ST. LOUIS, MO 63146-4235
PHONE: 314-991-2633
CORPORATE CERTIFICATE OF AUTHORITY
NO. 000419

ISSUE BLOCK

#	DATE	ADD #1
1	04/16/20	
2	06/30/20	CB #1
3	07/23/20	IFC SET

PROPERTY NO.: 160085
6 DIGIT NO.: 906983
4 DIGIT NO.: 78C9
AOR PROJECT NUMBER: 1955B71
TO PERMIT: DATE: 03/26/2020
TO BID: DATE: ###-##-##

SHEET TITLE:
FIRE SPRINKLER PLAN
SHEET NUMBER:
FP1

GENERAL NOTES

1. PROVIDE ALL NECESSARY OFFSETS, RAISES OR DROPS IN PIPING AND AUXILIARY DRAINS REQUIRED BY BUILDING CONDITIONS WHETHER OR NOT SHOWN ON THE DRAWINGS.
2. EXAMINE THE JOB CONDITIONS AND VERIFY ALL MEASUREMENTS, DISTANCES, ELEVATIONS, CLEARANCES, PIPE SIZES, ETC.
3. ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, AND ELECTRICAL BACKGROUND INFORMATION IS SHOWN FOR COORDINATION PURPOSES ONLY. REFER TO THE PROPER DRAWINGS FOR EXACT LOCATIONS, SIZES, AND QUANTITIES OF OTHER TRADES' WORK.
4. THE ENGINEERING DRAWINGS HAVE BEEN PREPARED USING AUTOCAD. THE DRAWINGS ARE 100% CAD. THE HYDRAULIC CALCULATIONS HAVE BEEN PREPARED USING HYDRACAD. THESE DOCUMENTS WILL BE MADE AVAILABLE TO THE SUCCESSFUL FIRE SPRINKLER CONTRACTOR IN EITHER ELECTRONIC FORM OR HARD COPY.
5. SUPPLY ONLY ONE (1) SPRINKLER FROM A SINGLE BRANCH LINE OUTLET. PROVIDE NEW BRANCH LINES AS REQUIRED.
6. SPRINKLERS NEAR A HEAT SOURCE (UNIT HEATERS, DIFFUSERS, STEAM MAINS, SKYLIGHTS, ETC.) SHALL HAVE TEMPERATURE RATINGS IN ACCORDANCE WITH NFPA 13.
7. IT IS UNDERSTOOD, UNLESS SPECIFICALLY INDICATED OTHERWISE, THAT THE PIPE SIZES AS SHOWN ON THE BID DOCUMENTS WILL BE USED.

PIPING/FITTING NOTES

1. ALL PIPING AND FITTINGS SHALL BE NEW UNLESS NOTED OTHERWISE ON THE DRAWINGS.
2. MAINS SHALL BE SCHEDULE 10 ASTM A795, A53, OR A135 PER NFPA 13.
3. BRANCH LINES SHALL BE SCH 10 EXCEPT WHERE THREADED FITTINGS ARE USED. PIPE FOR THREADED FITTING SHALL BE SCH 40 ASTM A795, A53, OR A135 PER NFPA 13.
4. ALL PIPING SHALL HAVE A CORROSION RESISTANCE RATIO (CRR) OF 1.0 OR GREATER.
5. GROOVED FITTINGS AND COUPLINGS SHALL BE OF THE SAME MANUFACTURER.
6. THREADED FITTINGS SHALL BE CAST IRON OR MALLEABLE IRON.
7. ALL PIPING AND FITTINGS SHALL BE U.L. LISTED AND/ OR F.M. APPROVED.
8. HEX BUSHINGS SHALL NOT BE USED.

HANGER NOTES

1. COORDINATE ALL HANGER TYPES AND LOCATIONS WITH THE STRUCTURAL ENGINEER OF RECORD.
2. COORDINATE ALL HANGER TYPES AND LOCATIONS WITH THE METAL BUILDING MANUFACTURER.
3. PIPES LARGER THAN 4 IN. RUNNING PARALLEL TO BAR JOISTS SHALL BE HUNG FROM TRAPEZE HANGERS SUPPORTED NEARLY EQUALLY BY TWO JOISTS.
4. ONLY ONE PIPE SHALL BE SUPPORTED FROM A SINGLE TRAPEZE HANGER UNLESS OTHERWISE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD.

DESIGN CRITERIA

OFFICE AREAS, BREAK ROOM, TOILETS (LIGHT HAZARD WET PIPE FIRE SPRINKLER SYSTEM);

DENSITY - 0.10 GPM/SQ FT

OPERATING AREA - 1,500 SQ FT

OFFICE AREAS AND BREAK ROOM: STANDARD COVERAGE SPACING
TEMP. CLASSIFICATION / NOMINAL K-FACTOR / RESPONSE TYPE - INT / 5.6 / QR

TOILET: STANDARD COVERAGE SPACING
TEMP. CLASSIFICATION / NOMINAL K-FACTOR / RESPONSE TYPE - ORD / 5.6 / QR

HOSE STREAM ALLOWANCE - 100 GPM

DURATION - 0.5 HOUR

CUSTOMER SHOWROOM (ORDINARY GROUP II, WET PIPE FIRE SPRINKLER SYSTEM):

DENSITY - 0.20 GPM/SQ FT

OPERATING AREA - 1,500 SQ FT

TEMP. CLASSIFICATION / NOMINAL K-FACTOR / RESPONSE TYPE - INT / 5.6 / QR

HOSE STREAM ALLOWANCE - 250 GPM

DURATION - 1.0 HOUR

MECHANICAL BAYS, INVENTORY AND USED INVENTORY (15 PSI) ESFR WET PIPE FIRE SPRINKLER SYSTEM:

MINIMUM END HEAD PRESSURE - 15 PSI

MINIMUM NUMBER OF SPRINKLERS CALCULATED - TWELVE (12) HYDRAULICALLY MOST REMOTE SPRINKLERS, FOUR (4) PER BRANCH LINE.

TEMP. CLASS / NOMINAL K-FACTOR / SPRINKLER TYPE - INT / 25.2 / ESFR

HOSE STREAM ALLOWANCE - 250 GPM

DURATION - 1.0 HOUR

SPRINKLER SPACING SHALL BE AS SHOWN ON THE ENGINEERING DRAWINGS.

HARD CEILINGS - LOCATE SPRINKLERS IN ACCORDANCE WITH THE ENGINEERING DRAWINGS. SPRINKLERS SHALL BE IN LINE WITH LIGHT FIXTURES AND OTHER SPRINKLERS WHERE INDICATED ON THE DRAWINGS. COORDINATE CLOSELY WITH THE ELECTRICAL CONTRACTOR.

UNFINISHED AREAS - LOCATE SPRINKLERS AS SHOWN ON THE ENGINEERING DRAWINGS.

WATER SUPPLY:

FIRE PROTECTION WATER SUPPLY HAS BEEN OBTAINED FROM A HYDRANT FLOW TEST PERFORMED ON 11/07/2019 BY LEE'S SUMMIT WATER UTILITY. THE WATER SUPPLY SHALL BE CONSIDERED EFFECTIVE AT THE BASE OF THE TEST HYDRANT. THE APPROXIMATE WATER SUPPLY ELEVATION IS 1,012 FT AMSL OR 4 FT BELOW FINISH FLOOR. NO SUBSTITUTIONS OF WATER SUPPLY DATA OR ITS EFFECTIVE POINT WILL BE ALLOWED.

ACTUAL STATIC: 78 PSI
ACTUAL RESIDUAL: 50 PSI
ACTUAL FLOW: 1,775 GPM

THE ABOVE WATER SUPPLY COORDINATES DO NOT INCLUDE THE REQUIRED 10% OF THE STATIC PRESSURE SAFETY FACTOR THAT SHALL BE ENFORCED. THE FOLLOWING WATER SUPPLY COORDINATES HAVE BEEN ADJUSTED -8 PSI FOR THE REQUIRED SAFETY FACTOR.

DESIGN STATIC: 70 PSI
DESIGN RESIDUAL: 42 PSI
DESIGN FLOW: 1,775 GPM

PROVIDE FIRE DEPARTMENT CONNECTION AS REQUIRED.

REFERENCED STANDARDS

- INTERNATIONAL BUILDING CODE 2018 EDITION
- INTERNATIONAL FIRE CODE 2018 EDITION
- NFPA 13 - AUTOMATIC SPRINKLER SYSTEMS 2016 EDITION

TESTING/FLUSHING NOTES

1. ALL SYSTEMS SHALL BE TESTED PER NFPA 13.
2. UNDERGROUND SHALL BE FLUSHED IN ACCORDANCE WITH NFPA PRIOR TO CONNECTING TO THE OVERHEAD SYSTEM.
3. TESTING SHALL BE COORDINATED WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND COMPLY WITH ALL LOCAL REQUIREMENTS.

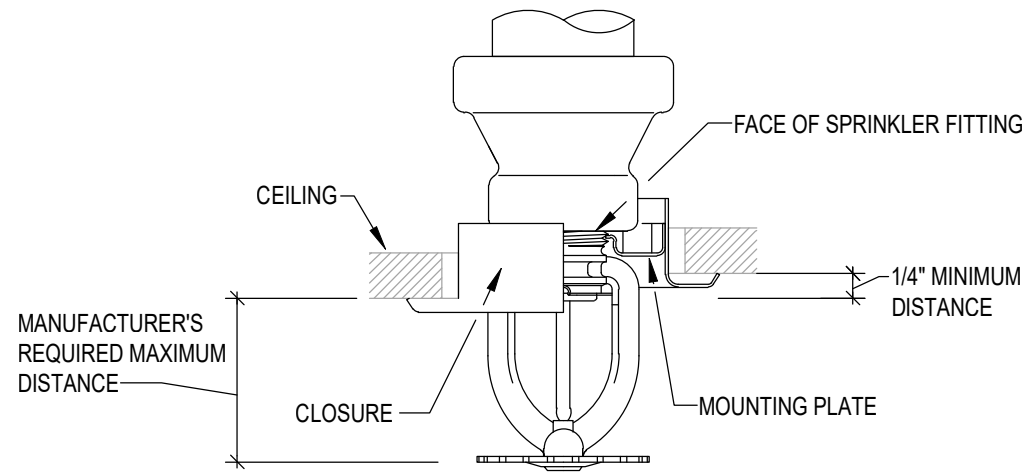
INSTALLATION NOTES

1. PROVIDE SPRINKLER PROTECTION BELOW DUCTS IN EXPOSED STRUCTURE AREAS PER NFPA-13.
2. ALL LIGHTING AND CONDUIT RUNS SHALL BE LOCATED SUCH THAT THE LEADING EDGE OF ANY OBSTRUCTION IS A MINIMUM OF 1'-0" (MEASURED HORIZONTALLY) FROM THE CENTERLINE OF ALL ESFR SPRINKLERS. COORDINATE EXACT LOCATIONS OF SPRINKLERS WITH OTHER DISCIPLINES PRIOR TO INSTALLATION. NO VARIATION FROM THIS MINIMUM CLEARANCE WILL BE PERMITTED.

MANUAL AIR RELEASE NOTE

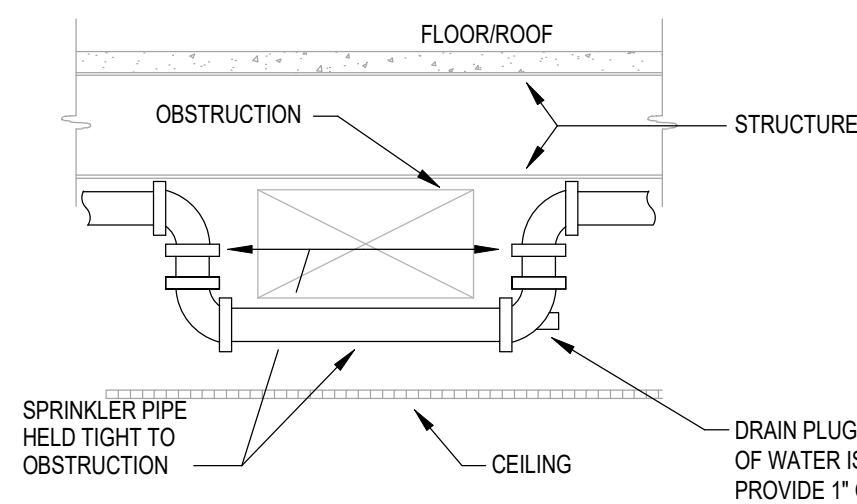
CONTRACTOR SHALL VENT AIR MANUALLY OUT OF PIPE.

CONTRACTOR SHALL PROVIDE NECESSARY EQUIPMENT AND MATERIALS TO DISCHARGE WATER TO EXTERIOR OR SUITABLE DRAIN LOCATION.



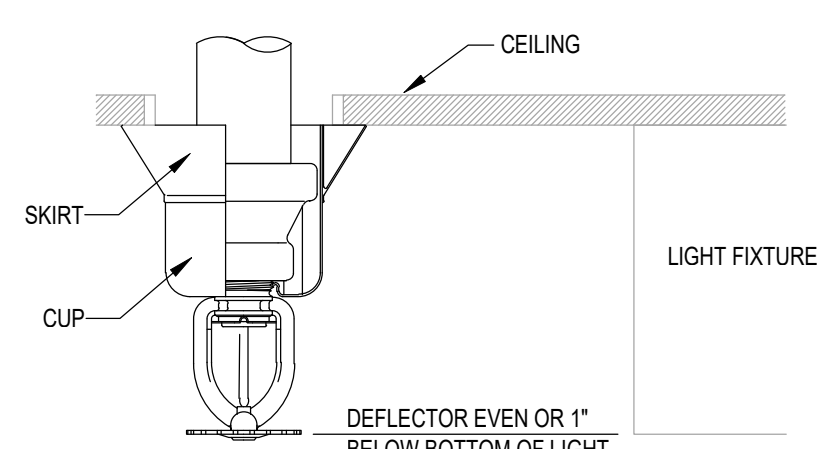
VERTICAL TOLERANCE FOR RECESSED SPRINKLERS

NOT TO SCALE



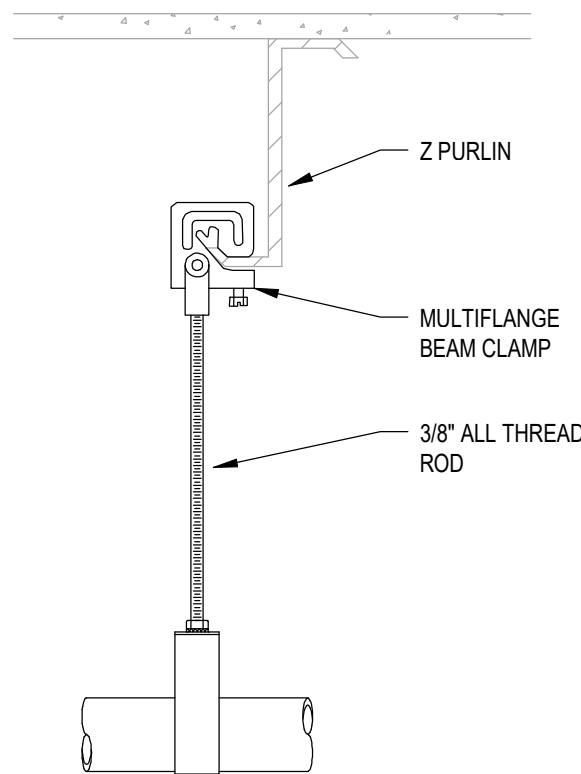
TYPICAL OFFSET AT OBSTRUCTION

NOT TO SCALE



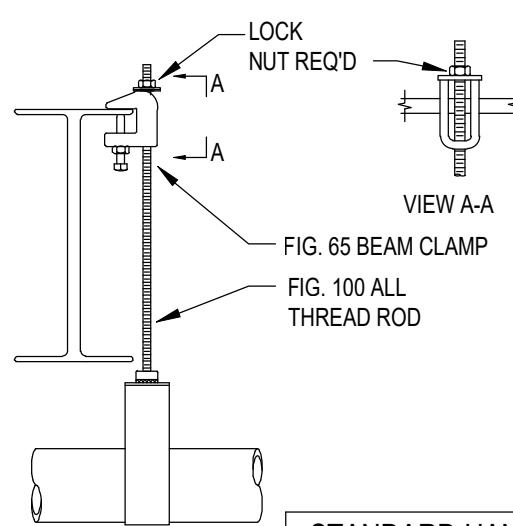
2 PIECE TELESCOPING ESCUTCHEON DETAIL

NOT TO SCALE



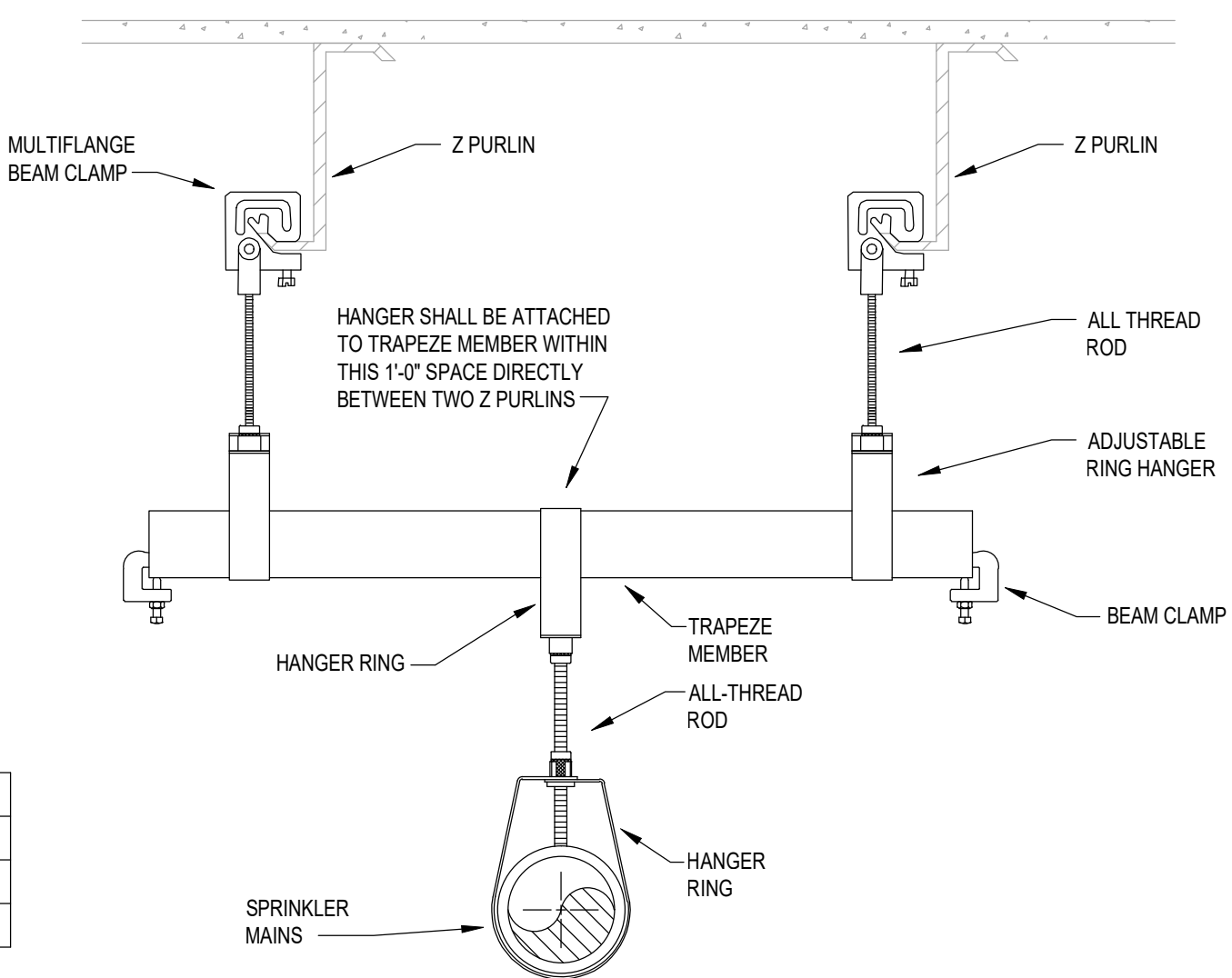
Z PURLIN CLAMP AND ROD

NOT TO SCALE



TOP BEAM CLAMP, ROD, AND RING

NOT TO SCALE

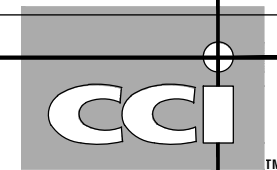


TRAPEZE HANGER

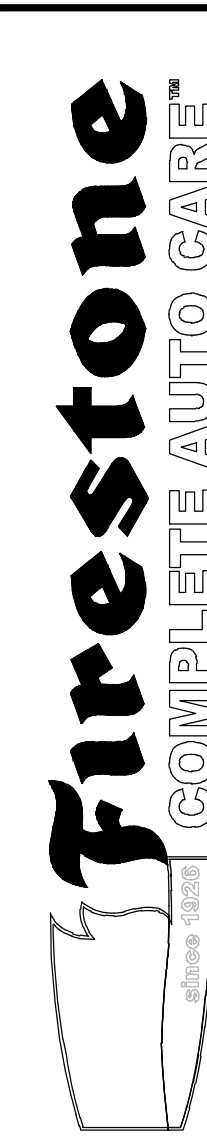
NOT TO SCALE

RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

09/21/2020

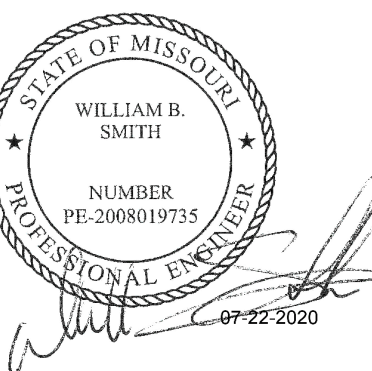


CODE CONSULTANTS, INC.
2043 WOODLAND PKWY, SUITE 300
ST. LOUIS, MISSOURI 63146-4235
314-991-2633
www.codeconsultants.com



STIPULATION OF REUSE
THIS DRAWING WAS PREPARED FOR USE ON
A SPECIFIC SITE AT LEE'S SUMMIT, MO.
CONTRACT NO. 2019-001. ANY REUSE OF
DATE ON 09/22/2020 AND IT IS NOT SUITABLE
FOR USE ON A DIFFERENT PROJECT SITE OR
AT A LATER TIME. USE OF THIS DRAWING FOR
REFERENCE (FOR EXAMPLE, ON ANOTHER
PROJECT) REQUIRES THE SERVICES OF
PROPERLY LICENSED ARCHITECTS AND
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PROJECT IS NOT AUTHORIZED AND MAY BE
CONTRARY TO THE LAW.

NEW FCAC STORE
2020 ER
3561 SW MARKET ST
JACKSON COUNTY
LEE'S SUMMIT, MISSOURI 64082



**FIRE PROTECTION
ENGINEER OF RECORD:**
WILLIAM B. SMITH, PE
LICENSE NO. PE-00061075
CODE CONSULTANTS, INC.
2043 WOODLAND PKWY, SUITE 300
ST. LOUIS, MO 63146-4235
PHONE: 314-991-2633
CORPORATE CERTIFICATE OF AUTHORITY
NO. 000419

ISSUE BLOCK

Δ	04/16/20	ADD #1
Δ	07/23/20	IFC SET

PROPERTY NO.: 160085
6 DIGIT NO.: 906983
4 DIGIT NO.: 78C9

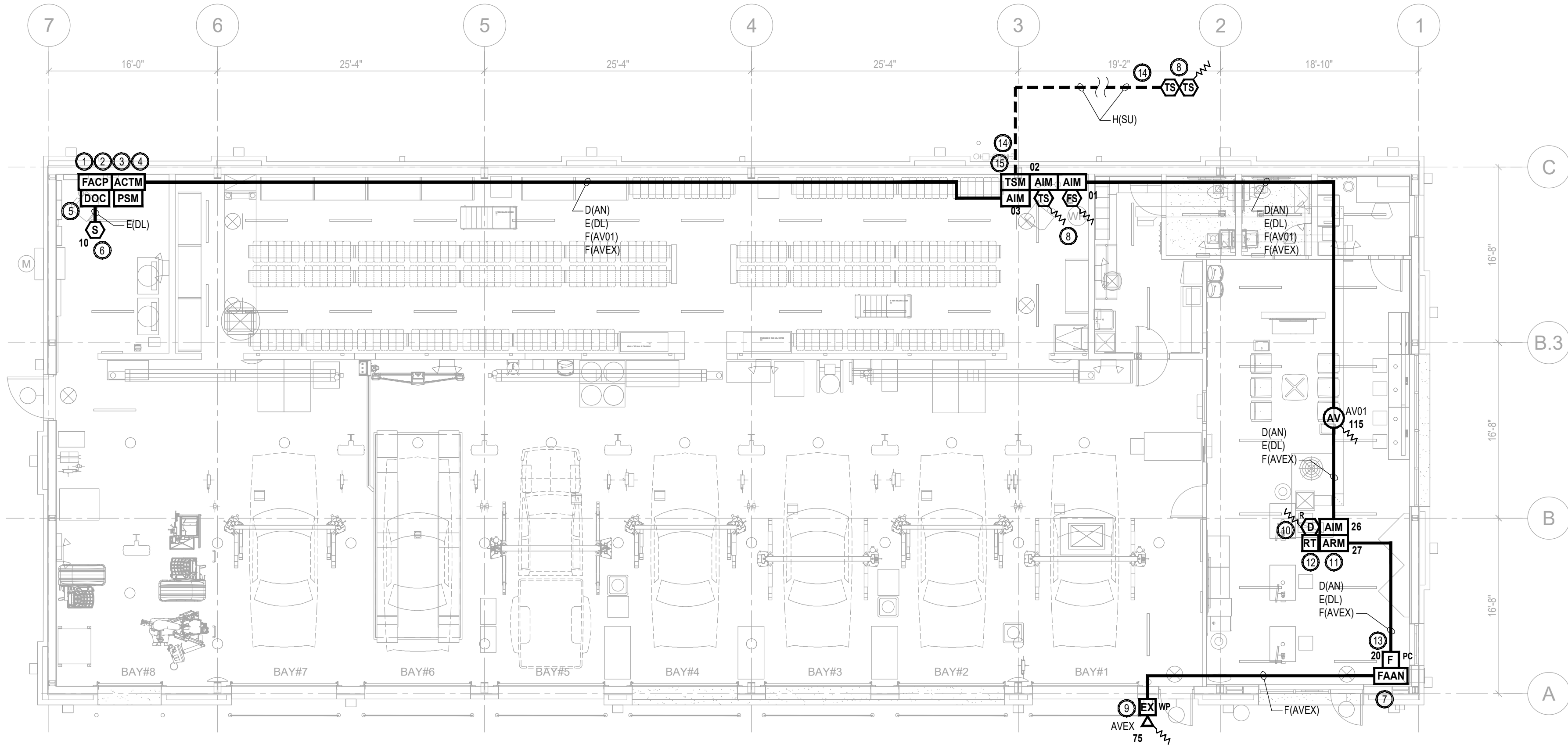
AOR PROJECT NUMBER: 1955871
TO PERMIT: DATE: 03/26/2020
TO BID: DATE: ###-##-

SHEET TITLE:

**FIRE SPRINKLER
NOTES AND
DETAILS**

SHEET NUMBER:

FP2



FIRE ALARM PLAN
SCALE 1/8"=1'-0"
2 1 0 4 8

FIRE ALARM MATRIX

	ACTIVATES ALARM CONDITION AT FIRE ALARM CONTROL PANEL	ANNUNCIATES ALARM CONDITION AT REMOTE FIRE ALARM ANNUNCIATOR STATION	TRANSmits GENERAL ALARM SIGNAL TO APPROVED REMOTE SUPERVISING STATION	ACTIVATES SUPERVISORY CONDITION AT FIRE ALARM CONTROL PANEL	ANNUNCIATES SUPERVISORY CONDITION AT REMOTE FIRE ALARM ANNUNCIATOR STATION	TRANSmits GENERAL SUPERVISORY SIGNAL TO APPROVED REMOTE SUPERVISING STATION	ACTIVATES TROUBLE CONDITION AT FIRE ALARM CONTROL PANEL	ANNUNCIATES TROUBLE CONDITION AT REMOTE FIRE ALARM ANNUNCIATOR STATION	TRANSmits GENERAL TROUBLE SIGNAL TO APPROVED REMOTE SUPERVISING STATION	ACTIVATES INTERIOR AUDIBLE/VISUAL NOTIFICATION APPLIANCE	ACTIVATES EXTERIOR AUDIBLE/VISUAL NOTIFICATION APPLIANCE	SHUTS DOWN HVAC UNIT			
FIRE SPRINKLER SYSTEMS															
- WATERFLOW SWITCHES	●	●	●		●	●				●	●				
- CONTROL VALVE TAMPER SWITCHES				●	●	●									
MANUAL PULL STATION															
- ADJACENT TO THE FAAN	●	●	●							●					
SMOKE DETECTION DEVICES															
- ABOVE FACP	●	●	●							●					
- AIR HANDLING UNIT - RETURN SIDE				●	●	●						●			
LOSS OF PRIMARY POWER AT THE FACP							●	●	●						
ABNORMAL CIRCUIT (OPEN, GROUND FAULT, SHORT) OR DEVICE							●	●	●						

SCOPE OF WORK

- A DEDICATED FUNCTION FIRE ALARM SYSTEM SHALL BE PROVIDED THROUGHOUT THE BRIDGESTONE.
- THE FIRE ALARM SYSTEM SHALL REPORT ALL ALARM, SUPERVISORY, AND TROUBLE SIGNAL TO A REMOTE SUPERVISING STATION.
- THE FIRE ALARM SYSTEM SHALL CONSIST OF THE FOLLOWING:
 - ONE (1) INTERIOR AUDIBLE/VISUAL WITHIN THE SHOWROOM
 - ONE (1) EXTERIOR AUDIBLE/VISUAL APPLIANCE ABOVE THE FIRE DEPARTMENT CONNECTION
 - ONE (1) MANUAL PULL STATION WITH PROTECTIVE COVER ADJACENT TO THE FAAN
 - ONE (1) SMOKE DETECTOR ABOVE THE FACP
 - DUCT DETECTORS IN THE RETURN SIDE OF THE RTU
 - REMOTE TEST STATIONS FOR THE DUCT DETECTOR
 - SHUTDOWN THE AFFECTED RTU
 - FIRE ALARM ANNUNCIATOR ADJACENT TO THE FRONT ENTRANCE
 - POWER-LIMITED FIRE ALARM CABLING
 - MONITORING OF THE FIRE SPRINKLER CONTROL VALVES AND WATERFLOW SWITCHES
 - MONITORING OF THE EXTERIOR CONTROL VALVES TAMPER SWITCHES

PROJECT INFORMATION

PROJECT NAME: BRIDGESTONE LEE'S SUMMIT, MISSOURI
LOCATION: 3561 SOUTHWEST MARKET STREET
LEE'S SUMMIT, MO 64082
CONSTRUCTION TYPE: V-B
SQUARE FOOTAGE: 6,262 SQ. FT. 1-STORY
FIRE PROTECTION: SPRINKLERED
BUILDING OCCUPANCY: MIXED USE - MERCANTILE (SHOWROOM)
S-1 (INVENTORY AND SERVICE AREA)
OCCUPANT LOAD: 42 PERSONS
SYSTEM TYPE: DEDICATED FUNCTION FIRE ALARM SYSTEM

APPLICABLE CODES

ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REFERENCED DESIGN STANDARDS.

2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL FIRE CODE
2018 INTERNATIONAL MECHANICAL CODE
2017 NATIONAL ELECTRICAL CODE
2016 EDITION NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE

CONFLICTS BETWEEN THE REFERENCE NFPA STANDARDS, FEDERAL OR STATE CODES, SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF FIRE PROTECTION ENGINEER (CCE) FOR RESOLUTION.

FIRE ALARM SYMBOL KEY

		QTY.
FACP	ADDRESSABLE FIRE ALARM CONTROL PANEL (FIRE-LITE ES-50X) (IN RED ENCLOSURE)	1
FAAN	FIRE ALARM LCD ANNUNCIATOR (FIRE-LITE ANN-80)	1
DOC	DOCUMENTATION CABINET (SPACE AGE ELECTRONIC FAD ACE-11)	1
AIM	ADDRESSABLE INPUT MODULE (FIRE-LITE MMF-300)	4
ARM	ADDRESSABLE RELAY MODULE (FIRE-LITE CRF-300)	1
TSM	TRANSIENT SUPPRESSION MODULE (DITEK DTK-1LVLP-X)	1
ACTM	120 VAC TRANSIENT SUPPRESSION MODULE (DITEK DTK-120HW)	1
PSM	PHONE LINE SUPPRESSION MODULE (ELK-955 OR EQUAL)	1
FPC	ADDRESSABLE DUAL ACTION MANUAL PULL STATION WITH PROTECTIVE COVER AND INTEGRAL SOUNDER (FIRELITE BG-12LX) (STI-1100 STOPPER II WITH SOUNDER)	1
SD	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR (FIRE-LITE SD365)	1
DSR	DUCT-TYPE PHOTOELECTRIC SMOKE DETECTOR (FACTORY PROVIDED AND POWERED BY RTU) (R = RETURN SIDE)	1
RT	REMOTE TEST STATION / ANNUNCIATOR (SYSTEM SENSOR RTS15 KEY)	1
FS	FLOW SWITCH (BY OTHERS)	1
TS	TAMPER SWITCH (BY OTHERS)	4
AVXX	CEILING MOUNTED RED AUDIBLE/VISUAL APPLIANCE (XX = CANDELA RATING) (SYSTEM SENSOR PC2RL)	1
EXXX	WALL MOUNTED RED EXTERIOR AUDIBLE/VISUAL APPLIANCE (XX = CANDELA RATING) (WP = WEATHERPROOF) (SYSTEM SENSOR P2RK)	1
—	FIRE ALARM CONDUCTORS (RED IN COLOR)	
- - -	FIRE ALARM CONDUCTORS LISTED FOR WET LOCATION IN UNDERGROUND CONDUIT (1 INCH MINIMUM)	
~ ~ ~	END OF LINE RESISTOR	

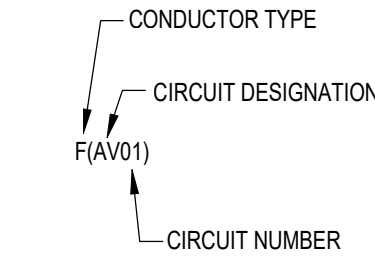
FIRE ALARM SHEET INDEX

SHEET #	DESCRIPTION
FA1	FIRE ALARM PLAN AND MATRIX
FA2	FIRE ALARM NOTES, PROGRAMMING AND CALCULATIONS
FA3	FIRE ALARM DETAILS
FA4	FIRE ALARM CONTROL PANEL LAYOUT

FIRE ALARM WIRING LEGEND

CONDUCTOR TYPE: D = 18/4 TP
E = 18/2 TP
F = 14/2 TP
G = AS REQ'D BY MANF.
H = 18/2 WET LOCATION
J = 14/2 WET LOCATION

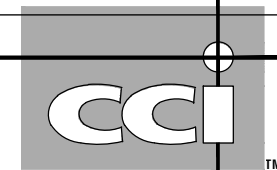
CIRCUIT DESIGNATION: AN = ANNUNCIATOR KEYPAD CIRCUIT
AV = AUDIBLE/VISUAL NOTIFICATION CIRCUIT
DL = INITIATION DATA CIRCUIT
PW = LOW VOLTAGE POWER CIRCUIT
RC = RELAY CONTROL CIRCUIT
RT = REMOTE TEST STATION POWER
SU = SUPERVISORY CIRCUIT
ZN = INITIATION ZONE CIRCUIT



SHOULD MANUFACTURER OF FIRE ALARM EQUIPMENT REQUIRE A DIFFERENT TYPE OR SIZE OF CABLE THAN HEREIN SPECIFIED, THE LARGER OR MORE STRINGENT TYPE OF CABLE SHALL BE USED.

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

09/21/2020



CODE CONSULTANTS, INC.
2043 WOODLAND PKWY, SUITE 300
ST. LOUIS, MISSOURI 63146-4235
314-991-2633
www.codeconsultants.com



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LEE'S SUMMIT, MISSOURI 64082



FIRE PROTECTION
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CODE CONSULTANTS, INC.
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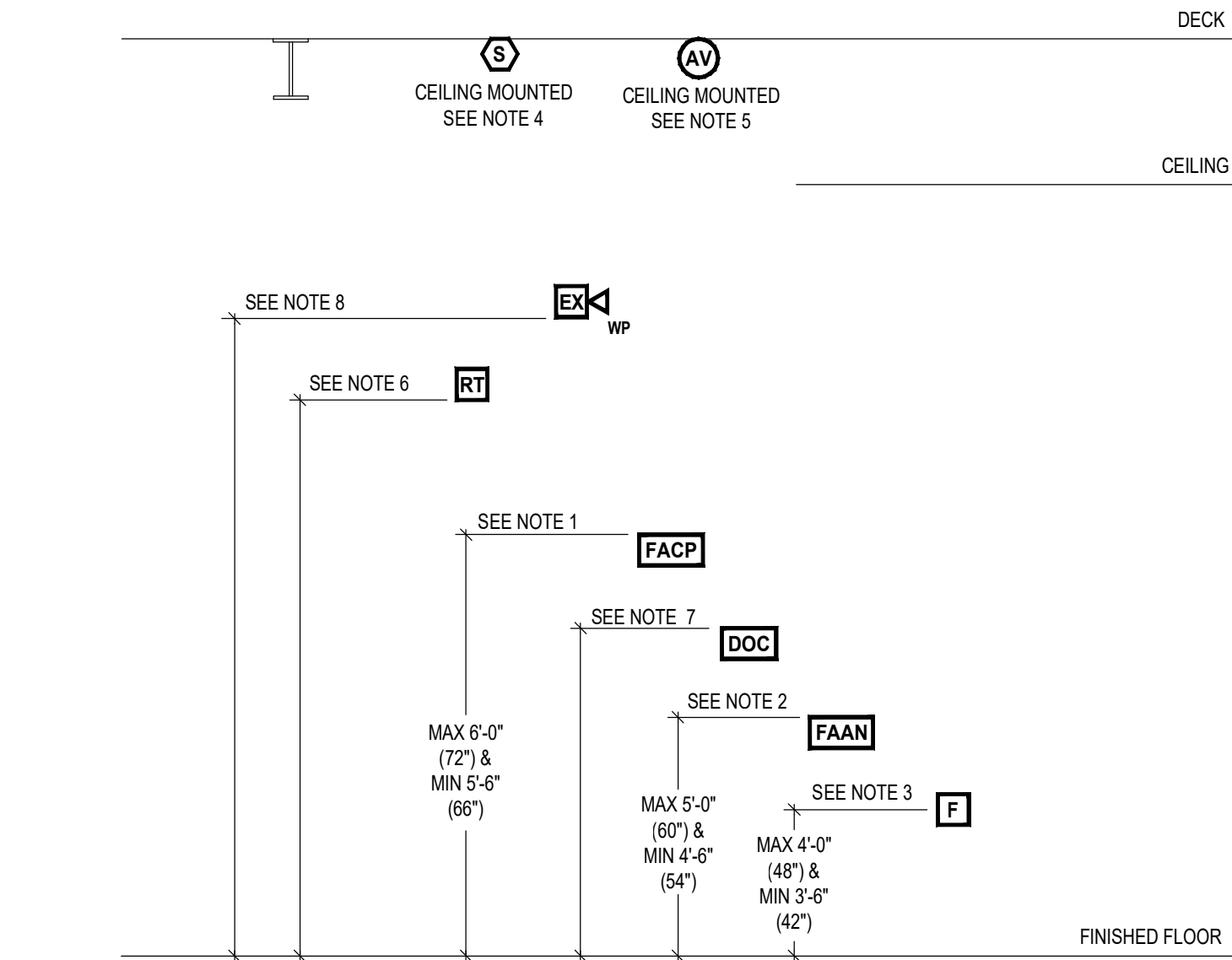
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2	06/30/20	CB #1
3	07/23/20	IFC SET

PROPERTY NO.: 160085
6 DIGIT NO.: 906983
4 DIGIT NO.: 78C9

AOR PROJECT NUMBER: 1955B71
TO PERMIT: DATE: 03/26/2020
TO BID: DATE: ###-##-##

SHEET TITLE:
FIRE ALARM PLAN
AND MATRIX

SHEET NUMBER:
FA1

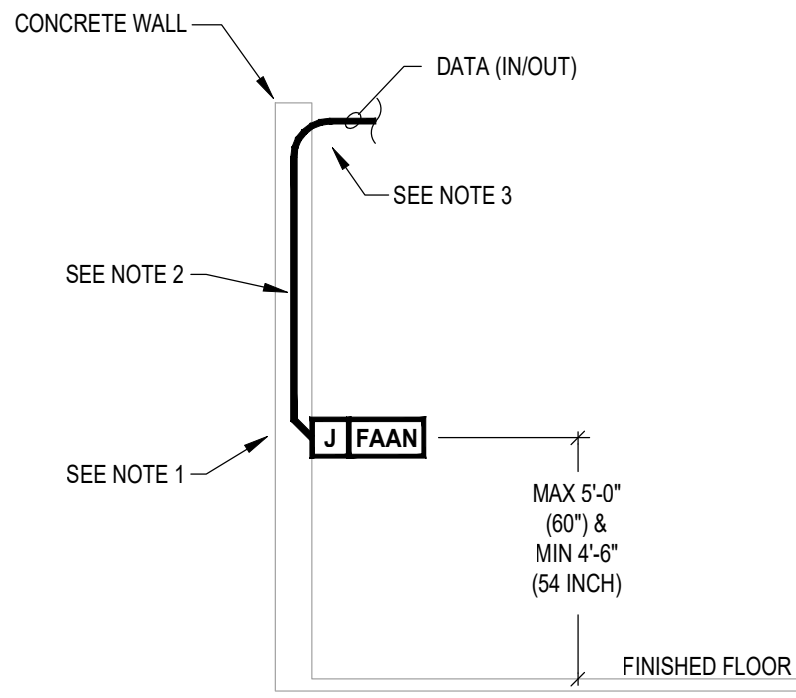


NOTES:

- COORDINATE EXACT MOUNTING HEIGHT OF CONTROL PANELS WITH THE OWNER'S REPRESENTATIVE, ELECTRICAL CONTRACTOR, AND AHJ PRIOR TO INSTALLATION.
- COORDINATE EXACT MOUNTING HEIGHT OF ANNUNCIATOR AT THE FRONT ENTRANCE WITH THE OWNER'S REPRESENTATIVE, ELECTRICAL CONTRACTOR, AND AHJ PRIOR TO INSTALLATION.
- COORDINATE EXACT MOUNTING HEIGHT OF MANUAL PULL STATION WITH THE OWNER'S REPRESENTATIVE, ELECTRICAL CONTRACTOR, AND AHJ PRIOR TO INSTALLATION. MEASURED TO THE OPERABLE PART OF THE PULL STATION.
- WHERE REQUIRED - LOCATE CEILING MOUNTED SMOKE DETECTORS ON THE BOTTOM OF DECK (NOT ON BOTTOM OF STRUCTURAL MEMBERS), AND AS INDICATED IN NFPA 72. THE SMOKE AND/OR HEAT DETECTORS AND FIRE ALARM CABLING SHALL BE INSTALLED AND SUPPORTED A MINIMUM 1-1/2 INCHES FROM THE LOWEST SURFACE OF THE ROOF DECKING IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE.
- WHERE REQUIRED - THE CEILING MOUNTED NOTIFICATION APPLIANCES SHALL BE INSTALLED ON THE BOTTOM OF JOIST / DECK IN ACCORDANCE WITH NFPA 72. THE CEILING MOUNTED NOTIFICATION APPLIANCES AND FIRE ALARM CABLING SHALL BE INSTALLED AND SUPPORTED A MINIMUM 1-1/2 INCHES FROM THE LOWEST SURFACE OF THE ROOF DECKING IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE.
- MOUNT THE REMOTE TEST STATION / ANNUNCIATORS ON AN ADJACENT COLUMN OR WALL AND AT AN ACCESSIBLE LOCATION THAT DOES NOT CONFLICT WITH STORE FIXTURES. COORDINATE EXACT MOUNTING LOCATION AND HEIGHT OF THE REMOTE TEST STATIONS / ANNUNCIATOR WITH THE OWNER'S REPRESENTATIVE, ELECTRICAL CONTRACTOR, AND AHJ PRIOR TO INSTALLATION.
- THE DOCUMENTATION CABINET SHALL BE INSTALLED WITHIN SIX (6) INCHES FROM THE BOTTOM OF THE FIRE ALARM CONTROL PANEL CABINET. COORDINATE EXACT MOUNTING LOCATION AND HEIGHT OF THE DOCUMENTATION CABINET WITH THE OWNER'S REPRESENTATIVE AND LOCAL AHJ PRIOR TO INSTALLATION.
- COORDINATE EXACT MOUNTING LOCATION AND HEIGHT OF THE EXTERIOR NOTIFICATION APPLIANCE WITH THE WITH THE OWNER'S REPRESENTATIVE, ELECTRICAL CONTRACTOR, AND AHJ PRIOR TO INSTALLATION.

1 TYPICAL FIRE ALARM MOUNTING HEIGHT DETAIL

FA3 NOT TO SCALE

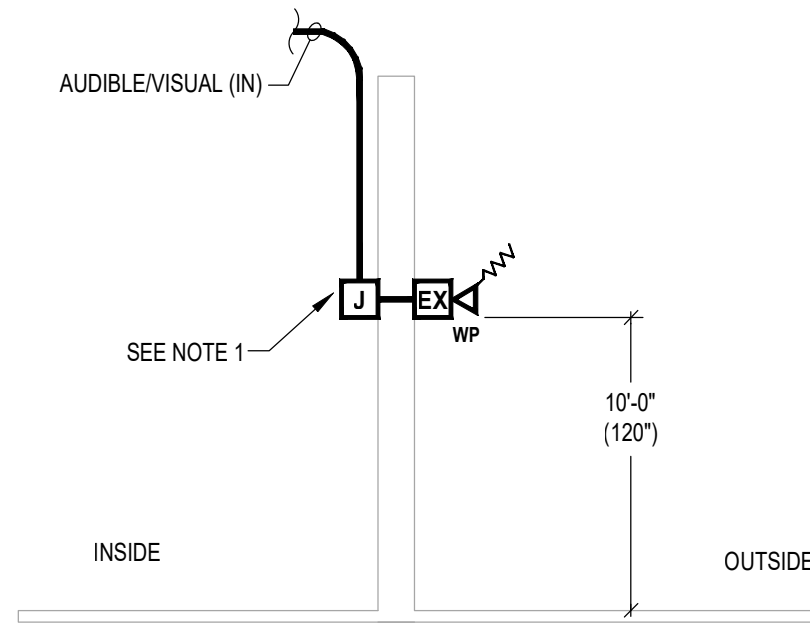


NOTES:

- PROVIDE AN APPROVED BACKBOX PER THE MANUFACTURER SPECIFICATIONS BETWEEN 54 INCHES AND 60 INCHES ABOVE FINISHED FLOOR.
- PROVIDE FIRE ALARM CABLING WITHIN 1/2 INCH CONDUIT INSIDE WALL (EXPOSED CONDUIT NOT ACCEPTABLE).
- PROVIDE FIRE ALARM CABLING STUB-UP INTO CEILING JOIST AREA 6 INCHES ABOVE CEILING OR BOTTOM OF JOISTS AND TURN OUT WITH INSULATED BUSHING.

2 FIRE ALARM ANNUNCIATOR DETAIL

FA3 NOT TO SCALE

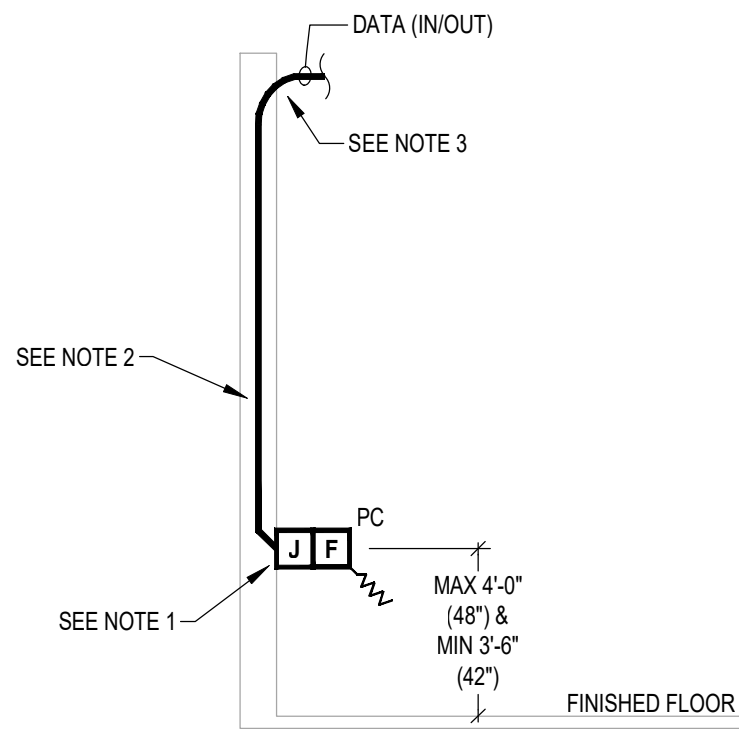


NOTES:

- PROVIDE A BACK BOX PER THE MANUFACTURER SPECIFICATIONS ON THE INSIDE WALL AT 10 FEET ABOVE FINISHED FLOOR. STUB A CONDUIT THROUGH EXTERIOR WALL TO NOTIFICATION APPLIANCE SURFACE MOUNTED BACKBOX.

3 WEATHERPROOF EXTERIOR NOTIFICATION DETAIL

FA3 NOT TO SCALE

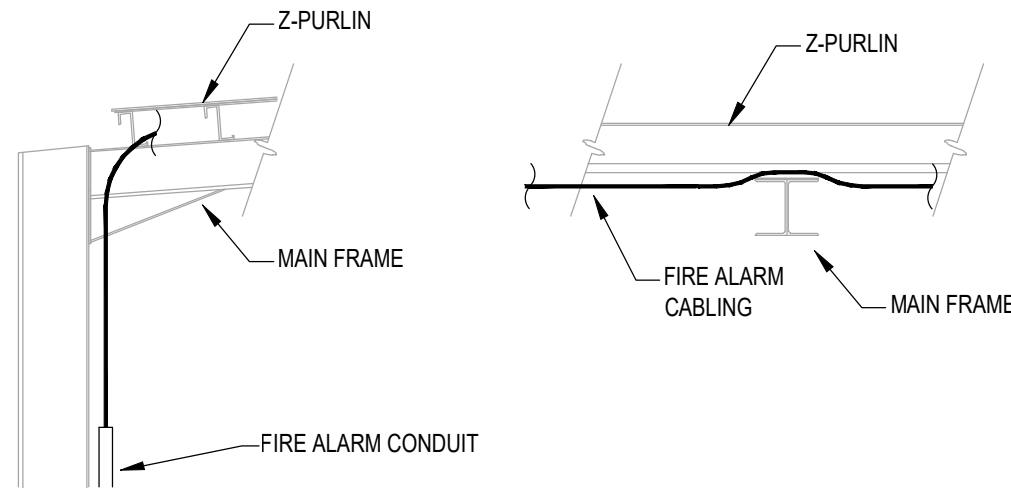


NOTES:

- PROVIDE AN APPROVED BACKBOX PER THE MANUFACTURER SPECIFICATIONS BETWEEN 42 INCHES AND 48 INCHES ABOVE FINISHED FLOOR.
- PROVIDE FIRE ALARM CABLING WITHIN 1/2 INCH CONDUIT INSIDE WALL (EXPOSED CONDUIT NOT ACCEPTABLE).
- PROVIDE FIRE ALARM CONDUIT STUB-UP INTO CEILING JOIST AREA 6 INCHES ABOVE CEILING OR BOTTOM OD JOISTS AND TURN OUT WITH INSULATED BUSHING.

4 MANUAL PULL STATION DETAIL

FA3 NOT TO SCALE

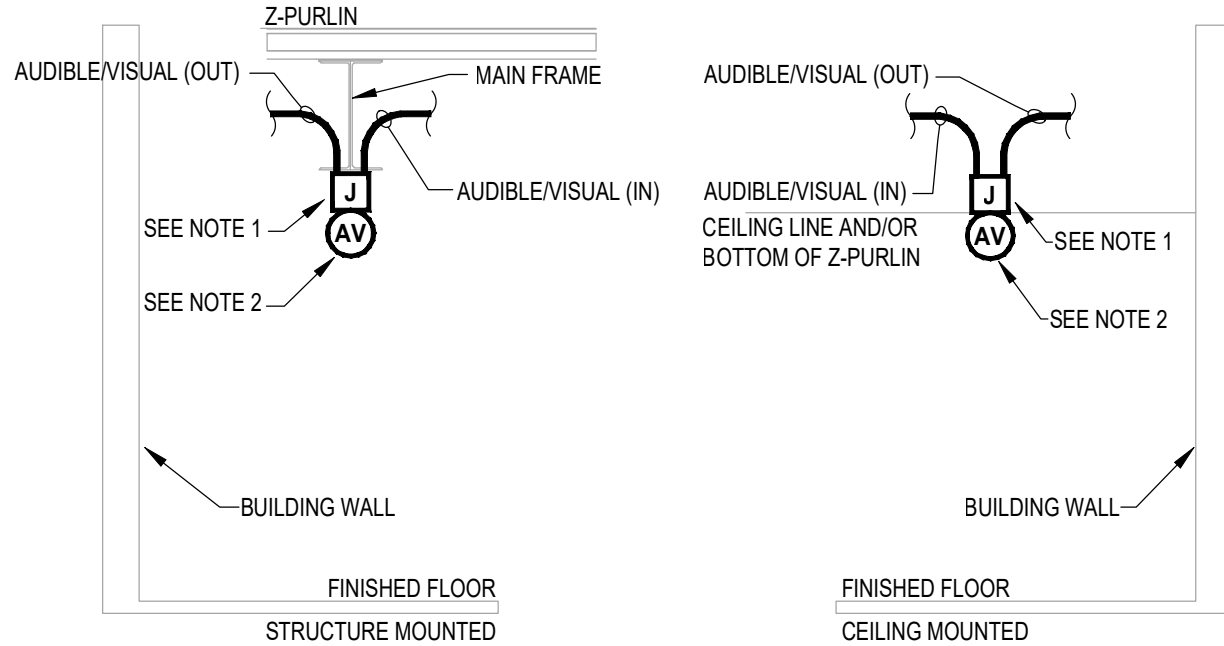


NOTES:

- ALL OPEN FIRE ALARM CABLING SHALL BE CONCEALED FROM PUBLIC VIEW.
- ROUTE ALL OPEN CABLE OVER SOLID MAIN FRAME STRUCTURE.

5 OPEN FIRE ALARM CABLING DETAIL

FA3 NOT TO SCALE

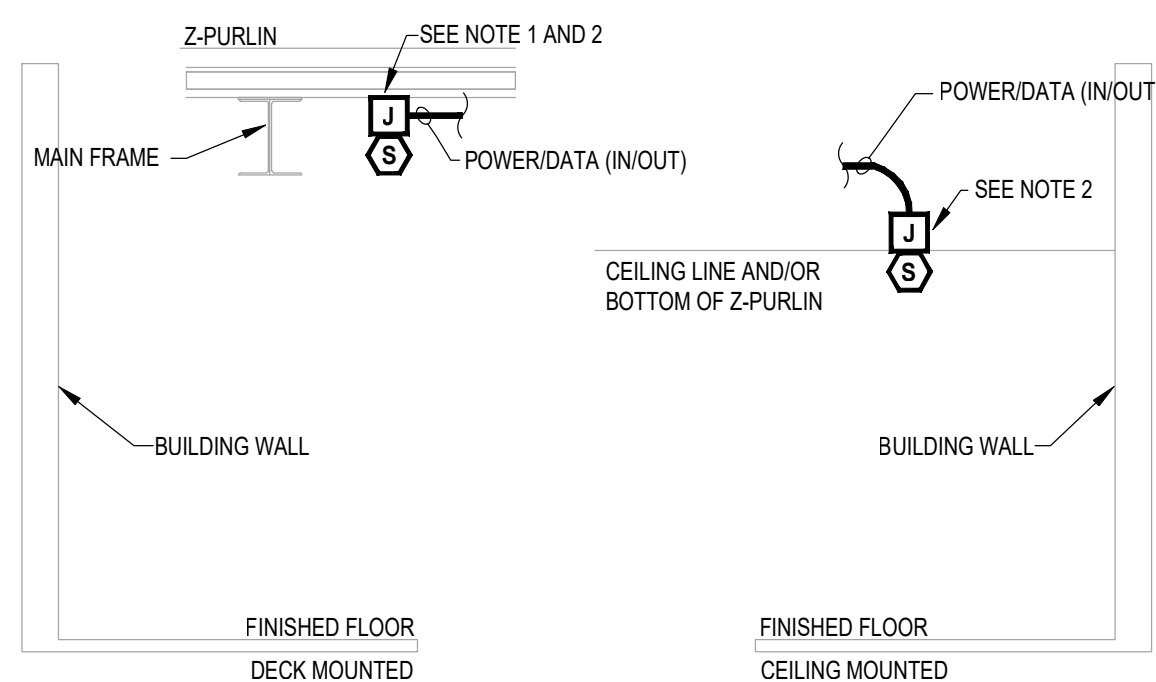


NOTES:

- PROVIDE AN APPROVED BACK BOX PER THE MANUFACTURER SPECIFICATIONS ON BOTTOM OF Z-PURLIN, AWAY FROM OBSTRUCTIONS, AND AS INDICATED ON FLOOR PLANS.
- THE CEILING MOUNTED NOTIFICATION APPLIANCES SHALL BE INSTALLED ALIGNED AESTHETICALLY WITH THE CEILING LIGHTING, AND OTHER FIXTURES. COORDINATE INSTALLATION OF ALL CEILING MOUNTED FIRE ALARM NOTIFICATION APPLIANCES WITH THE ARCHITECTURAL DRAWINGS AND ALL OTHER TRADES PRIOR TO INSTALLATION.

6 CEILING MOUNTED NOTIFICATION APPLIANCE DETAIL

FA3 NOT TO SCALE

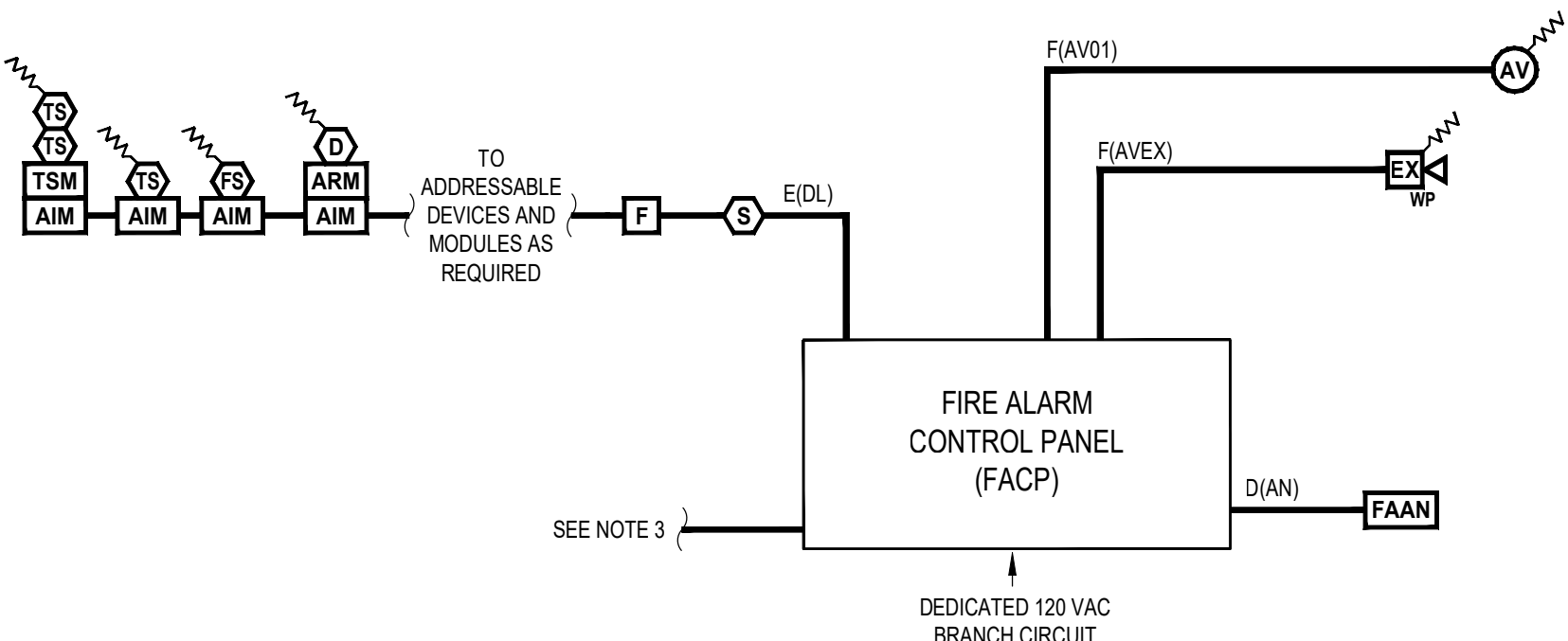


NOTES:

- PROVIDE AN APPROVED BACKBOX PER THE MANUFACTURER SPECIFICATIONS ON BOTTOM OF DECK, AWAY FROM OBSTRUCTIONS, AND AS INDICATED ON FLOOR PLANS.
- THE SMOKE DETECTOR AND FIRE ALARM CABLING INSTALLED AND SUPPORTED A MINIMUM 1-1/2 INCHES FORM THE LOWEST SURFACE OF THE ROOF DECKING IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE.

7 SMOKE DETECTOR DETAIL

FA3 NOT TO SCALE

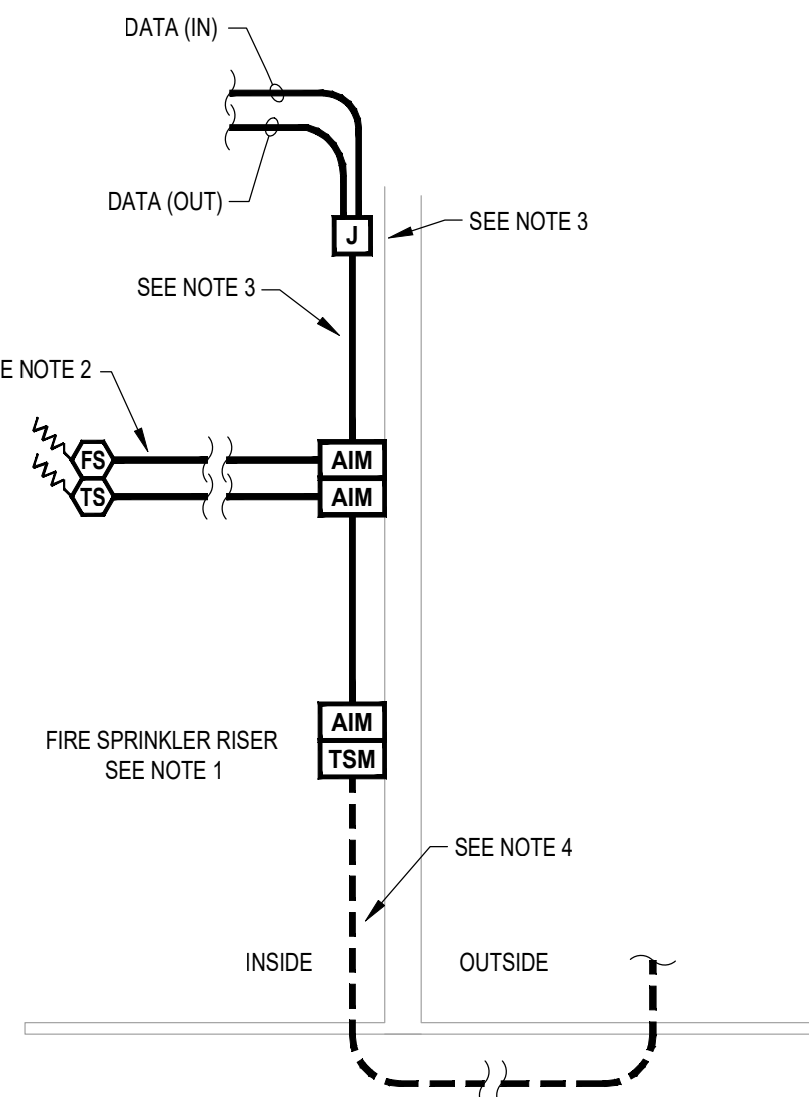


NOTES:

- PROVIDE DEDICATED 120 VAC CIRCUITS, AND BATTERY BACKUP IN THE FACP.
- PROVIDE SYNCHRONIZATION OF ALL REQUIRED VISUAL NOTIFICATION APPLIANCES AND CIRCUITS THROUGHOUT THE STORE.
- PROVIDE TWO (2) MEANS OF SIGNAL TRANSMISSION TO THE OFF-SITE MONITORING FACILITY. PROVIDE A DEDICATED PHONE LINE FOR THE PRIMARY MEANS OF TRANSMISSION. THE SECONDARY MEANS SHALL UTILIZE A VoIP/ SIP CONNECTION TO OWNER'S NETWORK.
- PROVIDE ALL REQUIRED CIRCUITS, MODULES, AND CONNECTIONS TO CONTROL AUDIBLE AND VISUAL NOTIFICATION APPLIANCES.
- PROVIDE SUPERVISION OF ALL 120 VAC POWER AND ALL NOTIFICATION APPLIANCE CIRCUITS.

8 TYPICAL FIRE ALARM SYSTEM RISER DIAGRAM

FA3 NOT TO SCALE

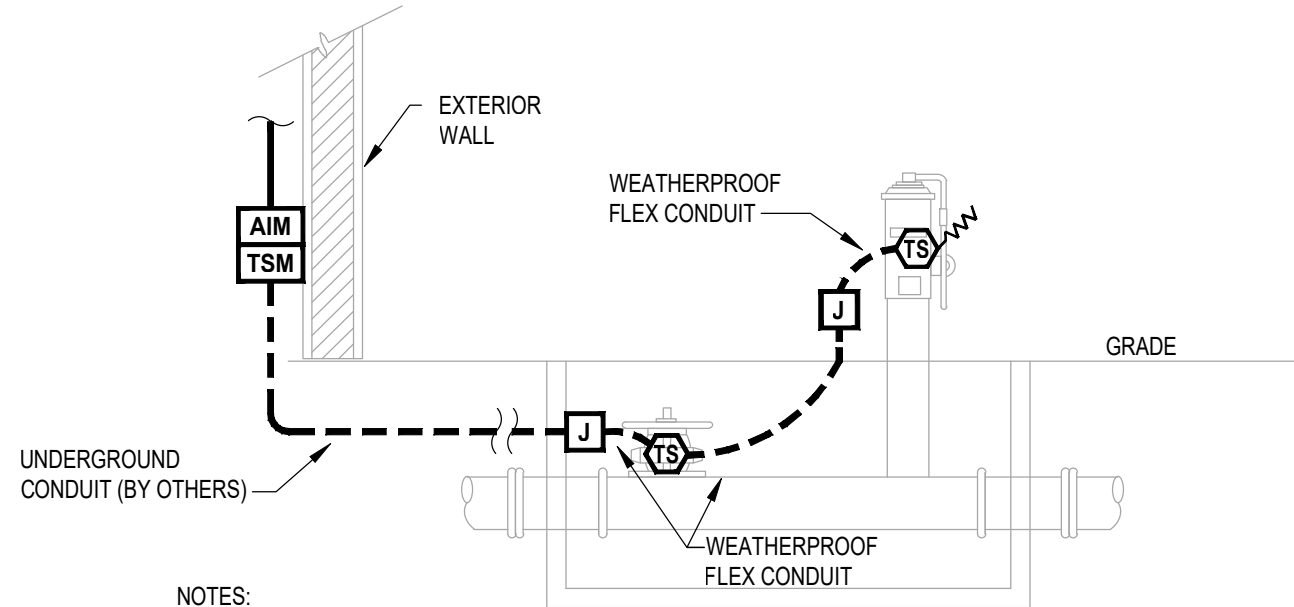


NOTES:

- COORDINATE EXACT LOCATION AND QUANTITIES OF CONTROL VALVES AND WATERFLOW SWITCHES WITH THE FIRE SPRINKLER CONTRACTOR PRIOR TO INSTALLATION. PROVIDE ADDITIONAL ADDRESSABLE INPUT MODULES AS NEEDED TO ELECTRONICALLY MONITOR ALL SPRINKLER WATERFLOW AND TAMPER SWITCHES.
- PROVIDE 1/2 INCH FLEXIBLE METALLIC CONDUIT FROM EACH WATERFLOW SWITCH AND GROUP OF TAMPER SWITCHES.
- STUB A 1/2 INCH CONDUIT TO A JUNCTION BOX WITH BLANK COVER.
- PROVIDE MONITORING CONNECTIONS TO ALL EXTERIOR SPRINKLER CONTROL VALVE SWITCHES (SWITCHES PROVIDED BY OTHERS). COORDINATE LOCATION OF ANY EXTERIOR UNDERGROUND CONDUIT TO ALL EXTERIOR SPRINKLER CONTROL VALVE SWITCHES WITH ELECTRICAL CONTRACTOR (CONDUIT PROVIDED BY OTHERS). PROVIDE ALL CABLING TO SWITCHES. FINAL WIRING CONNECTIONS AT SWITCHES, AND SUPERVISION OF ALL WIRING CONNECTIONS. TRANSIENT SUPPRESSION SHALL BE PROVIDED ON ALL FIRE ALARM CIRCUITS LOCATED IN UNDERGROUND OR EXTERIOR CONDUIT. COORDINATE ALL CONNECTIONS WITH THE SPRINKLER CONTRACTOR.

9 TYPICAL SPRINKLER DETAIL

FA3 NOT TO SCALE



NOTES:

- COORDINATE INSTALLATION OF A MINIMUM ONE (1) INCH UNDERGROUND CONDUIT, WITH PULL STRING, FOR FIRE ALARM CABLING CONNECTIONS TO THE EXTERIOR BACKFLOW PREVENTER. SEE ELECTRICAL DRAWINGS FOR DETAILS ON UNDERGROUND CONDUIT.
- PROVIDE MONITORING OF ALL TAMPER SWITCHES (BY OTHERS) ON THE EXTERIOR BACKFLOW PREVENTER. COORDINATE WIRING CONNECTIONS WITH THE GENERAL CONTRACTOR AND SITE CIVIL CONTRACTOR.
- PROVIDE TRANSIENT SUPPRESSION ON ALL FIRE ALARM CIRCUITS LOCATED IN UNDERGROUND CONDUIT. PROVIDE ONE (1) TRANSIENT SUPPRESSION MODULE FOR EACH FIRE ALARM CIRCUIT.
- FIRE ALARM CABLING IN UNDERGROUND CONDUIT SHALL BE LISTED FOR WET LOCATIONS.
- THE EXTERIOR JUNCTION BOXES SHALL BE TAMPER-RESISTANT SCREWS OR OTHER APPROVED MECHANICAL MEANS FOR PREVENTING ACCESS TO JUNCTION BOXES AND DEVICE COVERS INSTALLED OUTSIDE OF THE BUILDING IN ACCORDANCE WITH NFPA 72.

10 EXTERIOR BACKFLOW MONITORING DETAIL

FA3 NOT TO SCALE

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COMPLETE AUTO CARE

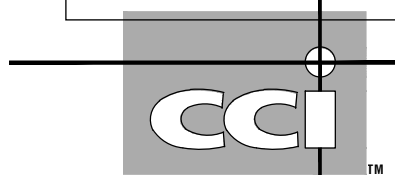
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FIRE PROTECTION
ENGINEER OF RECORD:
JACOB P. HENKE, PE
LICENSE NO. PE-2004000793
CODE CONSULTANTS, INC.
2043 WOODLAND PKWY, SUITE 300
ST. LOUIS, MO 63146-4235
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ISSUE BLOCK		
1	04/16/20	ADD #1
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PROPERTY NO.: 160085		
6 DIGIT NO.: 906983		
4 DIGIT NO.: 78C9		
AOR PROJECT NUMBER: 1955B71		
TO PERMIT: DATE: 03/26/2020		
TO BID: DATE: ###-###-###		
SHEET TITLE: FIRE ALARM DETAILS		
SHEET NUMBER: FA3		



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2043 WOODLAND PKWY, SUITE 300
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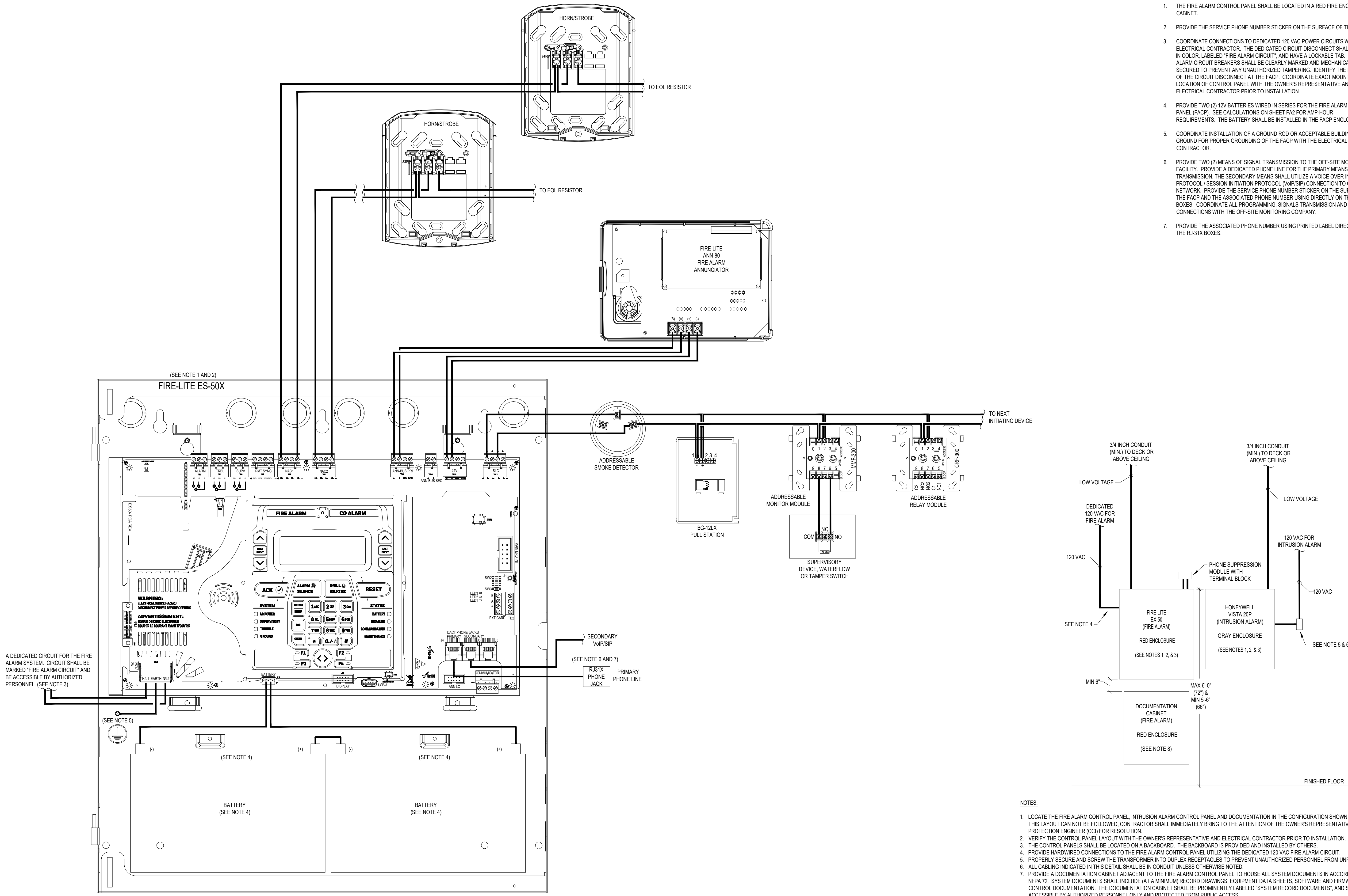
SHEET TITLE:
FIRE ALARM CONTROL
PANEL LAYOUT

SHEET NUMBER:

FA4

FIRE ALARM CONTROL PANEL LAYOUT NOTES

1. THE FIRE ALARM CONTROL PANEL SHALL BE LOCATED IN A RED FIRE ENCLOSURE CABINET.
2. PROVIDE THE SERVICE PHONE NUMBER STICKER ON THE SURFACE OF THE FACP.
3. COORDINATE CONNECTIONS TO DEDICATED 120 VAC POWER CIRCUITS WITH THE ELECTRICAL CONTRACTOR. THE DEDICATED CIRCUIT DISCONNECT SHALL BE RED IN COLOR, LABELED "FIRE ALARM CIRCUIT", AND HAVE A LOCKABLE TAB. ALL FIRE ALARM CIRCUIT BREAKERS SHALL BE CLEARLY MARKED AND MECHANICALLY SECURED TO PREVENT ANY UNAUTHORIZED TAMPERING. IDENTIFY THE LOCATION OF THE CIRCUIT DISCONNECT AT THE FACP. COORDINATE EXACT MOUNTING LOCATION OF CONTROL PANEL WITH THE OWNER'S REPRESENTATIVE AND ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION.
4. PROVIDE TWO (2) 12V BATTERIES WIRED IN SERIES FOR THE FIRE ALARM CONTROL PANEL (FACP). SEE CALCULATIONS ON SHEET FA2 FOR AMP-HOUR REQUIREMENTS. THE BATTERY SHALL BE INSTALLED IN THE FACP ENCLOSURE.
5. COORDINATE INSTALLATION OF A GROUND ROD OR ACCEPTABLE BUILDING GROUND FOR PROPER GROUNDING OF THE FACP WITH THE ELECTRICAL CONTRACTOR.
6. PROVIDE TWO (2) MEANS OF SIGNAL TRANSMISSION TO THE OFF-SITE MONITORING FACILITY. PROVIDE A DEDICATED PHONE LINE FOR THE PRIMARY MEANS OF TRANSMISSION. THE SECONDARY MEANS SHALL UTILIZE A VOICE OVER INTERNET PROTOCOL / SESSION INITIATION PROTOCOL (VoIP/SIP) CONNECTION TO OWNERS NETWORK. PROVIDE THE SERVICE PHONE NUMBER STICKER ON THE SURFACE OF THE FACP AND THE ASSOCIATED PHONE NUMBER USING DIRECTLY ON THE RJ-31X BOXES. COORDINATE ALL PROGRAMMING, SIGNALS TRANSMISSION AND CONNECTIONS WITH THE OFF-SITE MONITORING COMPANY.
7. PROVIDE THE ASSOCIATED PHONE NUMBER USING PRINTED LABEL DIRECTLY ON THE RJ-31X BOXES.

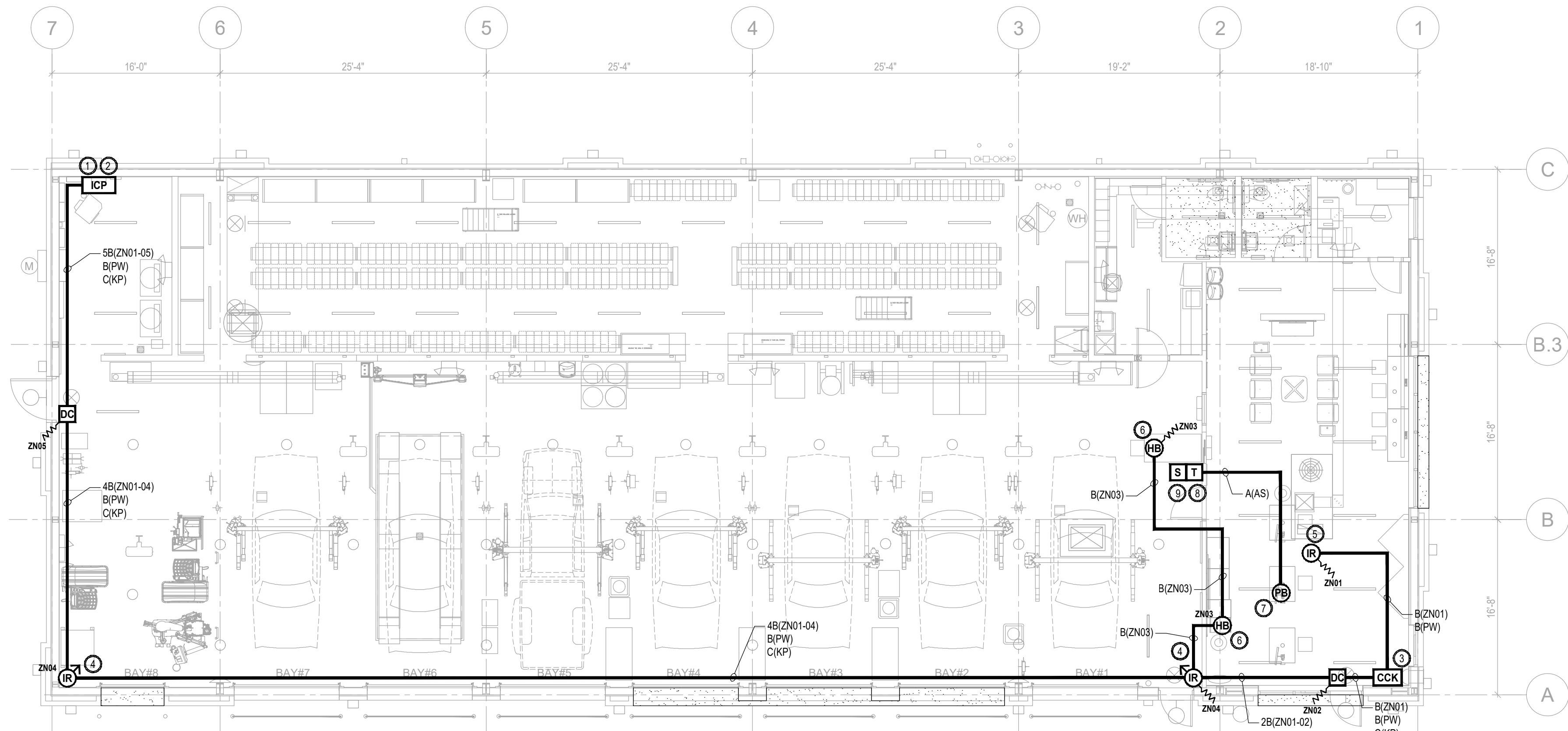


NOTES:

1. LOCATE THE FIRE ALARM CONTROL PANEL, INTRUSION ALARM CONTROL PANEL AND DOCUMENTATION IN THE CONFIGURATION SHOWN ABOVE. IF THIS LAYOUT CAN NOT BE FOLLOWED, CONTRACTOR SHALL IMMEDIATELY BRING TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE AND FIRE PROTECTION ENGINEER (CPI) FOR RESOLUTION.
2. VERIFY THE CONTROL PANEL LAYOUT WITH THE OWNER'S REPRESENTATIVE AND ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION.
3. THE CONTROL PANELS SHALL BE LOCATED ON A BACKBOARD. THE BACKBOARD IS PROVIDED AND INSTALLED BY OTHERS.
4. PROVIDE HARDWIRED CONNECTIONS TO THE FIRE ALARM CONTROL PANEL UTILIZING THE DEDICATED 120 VAC FIRE ALARM CIRCUIT.
5. PROPERLY SECURE AND SCREW THE TRANSFORMER INTO DUPLEX RECEPTACLES TO PREVENT UNAUTHORIZED PERSONNEL FROM UNPLUGGING.
6. ALL CABLING INDICATED IN THIS DETAIL SHALL BE IN CONDUIT UNLESS OTHERWISE NOTED.
7. PROVIDE A DOCUMENTATION CABINET ADJACENT TO THE FIRE ALARM CONTROL PANEL TO HOUSE ALL SYSTEM DOCUMENTS IN ACCORDANCE WITH NFPA 72. SYSTEM DOCUMENTS SHALL INCLUDE (AT A MINIMUM) RECORD DRAWINGS, EQUIPMENT DATA SHEETS, SOFTWARE AND FIRMWARE CONTROL DOCUMENTATION. THE DOCUMENTATION CABINET SHALL BE PROMINENTLY LABELED "SYSTEM RECORD DOCUMENTS", AND SHALL BE ACCESSIBLE BY AUTHORIZED PERSONNEL ONLY AND PROTECTED FROM PUBLIC ACCESS.






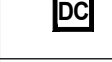


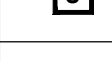
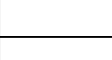


2 TYPICAL CONTROL PANEL LAYOUT FA4 NOT TO SCALE

1 FIRE ALARM CONTROL PANEL LAYOUT FA4 NOT TO SCALE





 **INTRUSION ALARM PLAN**
SCALE: 1/8" = 1'-0"

	INTRUSION ALARM MATRIX									
	ACTUATES ALARM CONDITION AT INTRUSION ALARM CONTROL PANEL	ANNUNCIATES ALARM CONDITION AT COMMAND CENTER KEYPAD	TRANSMITS ALARM SIGNAL TO AN APPROVED REMOTE MONITORING STATION	ACTUATES TROUBLE CONDITION AT INTRUSION ALARM CONTROL PANEL	ANNUNCIATES TROUBLE CONDITION AT COMMAND CENTER KEYPAD	TRANSMITS TROUBLE SIGNAL TO AN APPROVED REMOTE MONITORING STATION	TRANSMITS CLOSING SIGNAL TO APPROVED OFF-SITE SUPERVISING STATION	TRANSMITS OPENING SIGNAL TO APPROVED OFF-SITE SUPERVISING STATION	INITIATES ENTRY DELAY TIMER	ACTIVATES ASSISTANCE SYSTEM SIREN
DOOR CONTACTS										
- SHOWROOM DOOR	●	●	●						●	
- SERVICE BAY DOOR	●	●	●							
MOTION DETECTORS										
- SHOWROOM	●	●	●						●	
- SERVICE BAY AREA	●	●	●							
HOLD-UP BUTTON	●	●	●							
ARM SYSTEM THROUGH COMMAND CENTER KEYPADS							●		●	
DISARM SYSTEM THROUGH COMMAND CENTER KEYPADS							●		●	
LOSS OF PRIMARY POWER AT THE CONTROL PANEL				●	●	●				
ABNORMAL CIRCUIT OR DEVICE				●	●	●				
ASSISTANCE SYSTEM PUSH BUTTON										●

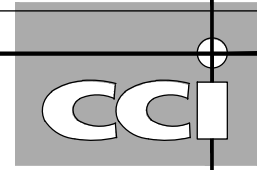
INTRUSION ALARM SYMBOL KEY		QTY.
	INTRUSION ALARM CONTROL PANEL (HONEYWELL VISTA 20P) (IN GRAY ENCLOSURE)	1
	COMMAND CENTER KEYPAD (HONEYWELL 6150)	1
	PLUG-IN TRANSFORMER (MB-MGT121AR)	1
	CEILING MOUNTED MOTION DETECTOR - 360° (HONEYWELL DT7360)	1
	PASSIVE INFRARED LONG RANGE MOTION DETECTOR (HONEYWELL IS25100TC)	2
	DOOR CONTACT (HONEYWELL MPS80WGK)	2
	ASSISTANCE SYSTEM PUSH BUTTON (AC-TS18)	1
	HOLD-UP BUTTON SWITCH MOUNTED UNDER DESK (HONEYWELL 270R) (IN PLASTIC CASE)	2
	INTERIOR SIREN (0E-2T0NESIRN)	1
	INTRUSION ALARM PLENUM RATED CONDUCTORS (GRAY IN COLOR)	
	JUNCTION BOX	
	END OF LINE RESISTOR	

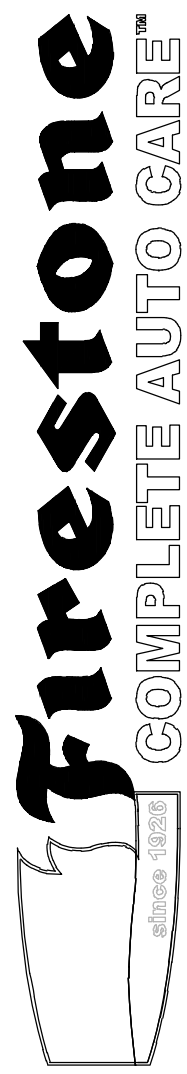
INTRUSION ALARM SHEET INDEX	
SHEET #	DESCRIPTION
BA1	INTRUSION ALARM PLAN AND MATRIX
BA2	INTRUSION ALARM NOTES AND CALCULATIONS
BA3	INTRUSION ALARM CONTROL PANEL LAYOUT AND DETAILS

INTRUSION ALARM WIRING LEGEND	
CONDUCTOR TYPE:	CIRCUIT DESIGNATION:
A = 16/2	AS = SOUNDER CIRCUIT
B = 18/2	DL = DATA LOOP CIRCUIT
C = 16/4	KP = KEYPAD / ANNUNCIATOR CIRCUIT
	PW = MOTION DETECTOR POWER
	RC = RELAY CIRCUIT
	ZN = ZONE CIRCUIT
	

ON-BOARD ZONE LISTING	
PANEL	ALPHANUMERIC LABEL
POPITS	
ZONE 01	SHOW ROOM MOTION DETECTOR
ZONE 02	SHOW ROOM DOOR CONTACT
ZONE 03	HOLD UP BUTTONS
ZONE 04	SERVICE BAY MOTION DETECTORS
ZONE 05	UTILITY ROOM DOOR CONTACT
ZONE 06	
ZONE 07	
ZONE 08	


RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
09/21/2020

**CODE CONSULTANTS, INC.**
2043 WOODLAND PKWY, SUITE 300
ST. LOUIS, MISSOURI 63146-4235
314-991-2633
www.codeconsultants.com

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NEW FCAC STORE
2020 ER
3561 SW MARKET ST
JACKSON COUNTY
LEE'S SUMMIT, MISSOURI 64082

**FIRE PROTECTION
ENGINEER OF RECORD:**
JACOB P. HENKE, PE
LICENSE NO. PE-2004000793
CODE CONSULTANTS, INC.
2043 WOODLAND PKWY, SUITE 300
ST. LOUIS, MO 63146-4235
PHONE: 314-991-2633
CORPORATE CERTIFICATE OF AUTHORITY
NO. 000419
2020-07-22

ISSUE BLOCK

1	04/16/20	ADD #1
3	07/23/20	IFC SET

PROPERTY NO.: 160085
6 DIGIT NO.: 906983
4 DIGIT NO.: 78C9
AOR PROJECT NUMBER: 1955B71
TO PERMIT: DATE: 03/26/2020
TO BID: DATE: ###-##-##

SHEET TITLE:
INTRUSION ALARM PLAN
AND MATRIX

SHEET NUMBER:
BA1

MODEL NUMBER	DESCRIPTION	QUANTITY	STANDBY POWER		IN ALARM		STANDBY BATTERIES (12VOLT)	CURRENT (mA)
			CURRENT PER DEVICE (mA)	TOTAL CURRENT (mA)	CURRENT PER DEVICE (mA)	TOTAL CURRENT (mA)		
VISTA-20P	INTRUSION ALARM CONTROL PANEL	1	190	190	265	265	STANDBY CURRENT	271
HW-6150	KEYPAD	1	40	40	70	70	HOURS	4
DT7360	CEILING MOUNTED MOTION DETECTOR	1	5	5	20	20	STANDBY mA	1,084
ISC25100TC	WALL MOUNTED MOTION DETECTOR	2	18	36	26	52	ALARM CURRENT	407
							HOURS	0.25
							ALARM mA	102
							TOTAL mA	1,186
							TOTAL AH	1.2
							CONTINGENCY	20%
							BATTERY TOTAL	1.4
TOTAL				271		407	BATTERY PROVIDED	7

NOTES:

1. PROVIDE ONE (1) 12 VOLT 7 AH BATTERY.
2. MOUNT THE BATTERY WITHIN THE INTRUSION ALARM CONTROL PANEL ENCLOSURE AND PERMANENTLY MARKED WITH THE MONTH AND YEAR FROM THE MANUFACTURER.

INTRUSION ALARM GENERAL NOTES

1. UPON LOSS OF BUILDING POWER, THE ENTIRE SYSTEM SHALL TRANSFER TO SECONDARY POWER SOURCE AND WITHOUT LOSS OF SIGNALS. THE SYSTEM SHALL OPERATE UNDER SECONDARY POWER IN NORMAL OR TROUBLE CONDITIONS FOR FOUR (4) HOURS AND HAVE SUFFICIENT POWER TO SUPPORT COMPLETE ALARM OPERATION FOR A SUBSEQUENT FIFTEEN (15) MINUTES AT MAXIMUM CONNECTED LOAD.
2. COORDINATE INSTALLATION OF A GROUND ROD OR ACCEPTABLE BUILDING GROUND FOR PROPER GROUNDING OF THE ICP WITH THE ELECTRICAL CONTRACTOR.
3. COORDINATE INSTALLATION OF ALL WALL MOUNTED MOTION DETECTORS AND SIRENS WITH THE ARCHITECTURAL DRAWINGS AND ALL OTHER TRADES PRIOR TO INSTALLATION.
4. ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL BACKGROUND INFORMATION IS SHOWN FOR COORDINATION PURPOSES ONLY. REFER TO THE PROPER DRAWINGS FOR EXACT LOCATIONS, SIZES AND QUANTITIES OF OTHER TRADES WORK.
5. VERIFY ALL EQUIPMENT QUANTITIES, LOCATIONS, AND REQUIREMENTS. IF DISCREPANCIES ARE FOUND, CONTRACTOR SHALL IMMEDIATELY BRING THEM TO THE ATTENTION OF THE FIRE PROTECTION ENGINEER (CFC) FOR RESOLUTION.
6. ENSURE THAT OPENING / CLOSING REPORTING METHODS ARE ENABLED FOR ALL USER CODES OF THE INTRUSION ALARM SYSTEM.
7. CONTRACTOR SHALL PROVIDE A MINIMUM OF ONE (1) HOUR TRAINING FOR ALL FUNCTIONS OF THE INTRUSION ALARM SYSTEM TO OWNER'S REPRESENTATIVE.

FIRESTOP NOTES

1. ALL THROUGH-PENETRATIONS OF FIRE-RATED WALLS AND FLOORS SHALL BE FIRE-STOPPED.
2. FIRE-RATED GYPSUM BOARD WALLS CONSTRUCTED AS DESCRIBED IN THE INDIVIDUAL U300, U400, OR V400 SERIES DESIGNS IN THE U.L. FIRE RESISTANCE DIRECTORY (GENERALLY DOUBLE THICKNESS WALLBOARD) SHALL BE FIRE-STOPPED WITH U.L. SYSTEMS.
3. ALL REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOORS OR WALLS, AND ALL U.L. CLASSIFIED CONCRETE BLOCK WALLS SHALL BE FIRE-STOPPED WITH U.L. SYSTEMS.

FIREPROOFING NOTES (WHERE REQUIRED)

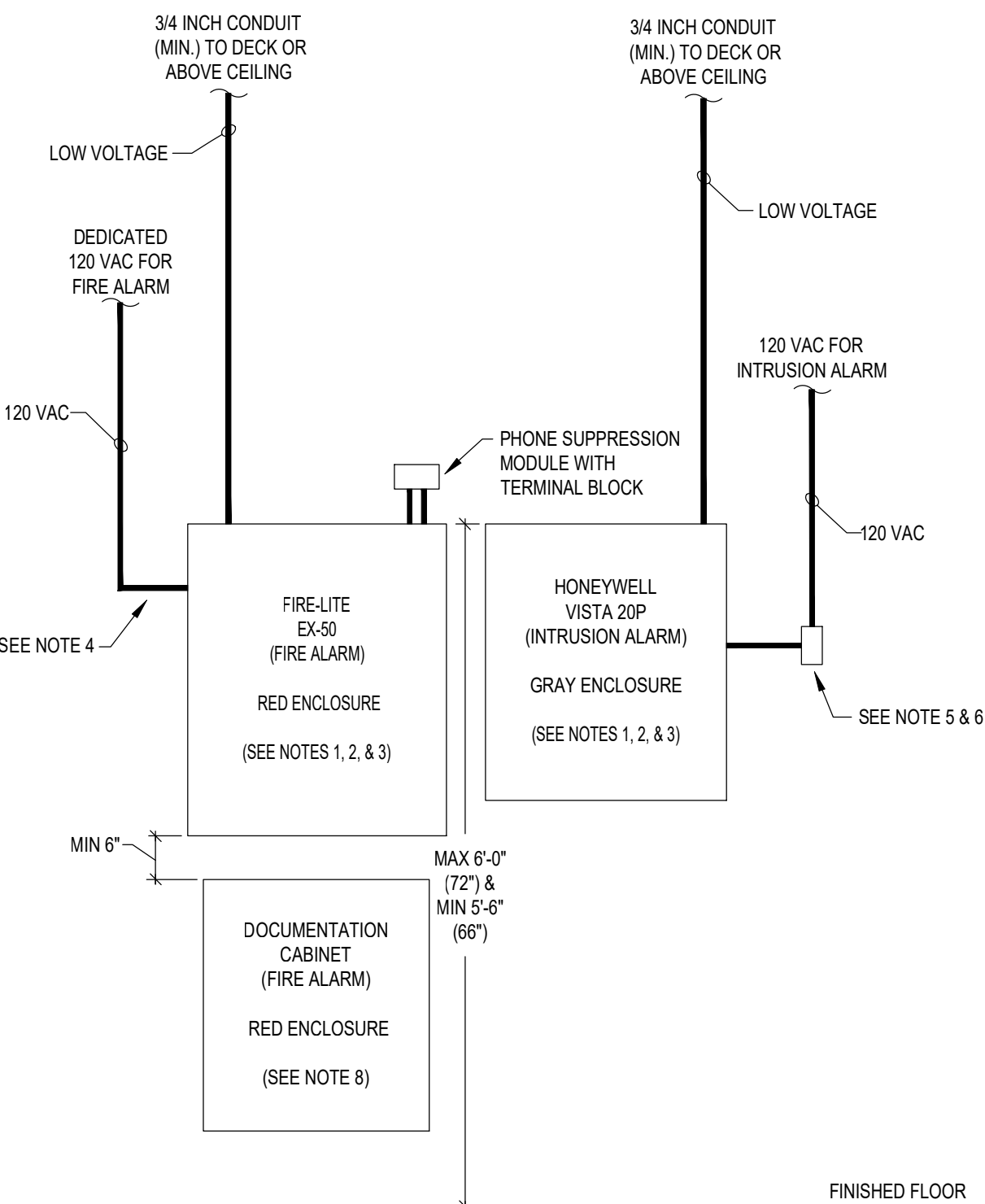
1. INSTALL ALL HANGERS, CLAMPS, CONDUIT, AND BACK BOXES FOR THE FIRE ALARM SYSTEM PRIOR TO THE APPLICATION OF FIREPROOFING ON STRUCTURAL MEMBERS.
2. INSTALL ALL HANGERS, CLAMPS, AND BACK BOXES FOR THE FIRE ALARM SYSTEM ON THE EDGE OF ANY JOIST REQUIRING FIREPROOFING. BACK BOXES SHALL BE FASTENED TO THE FLANGE OF THE JOIST UTILIZING BEAM CLAMPS, AND SHALL NOT BE ATTACHED DIRECTLY TO THE JOIST.
3. ANY DAMAGE TO FIREPROOFING ON THE BUILDING STRUCTURE AS A RESULT OF THE FIRE ALARM SYSTEM INSTALLATION SHALL BE REPAIRED BY A QUALIFIED FIREPROOFING CONTRACTOR. ALL DAMAGE AND REPAIR OF FIREPROOFING SHALL BE REPORTED TO AND COORDINATED THROUGH THE OWNER'S REPRESENTATIVE. THE FIRE ALARM CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIREPROOFING REPAIRS AT NO ADDITIONAL COST TO THE OWNER.
4. VERIFY THE LOCATIONS OF ALL FIREPROOFING, PRIOR TO THE INSTALLATION OF ANY FIRE ALARM CONDUIT AND BACKBOXES.

INTRUSION ALARM INSTALLATION NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH OWNER'S DESIGN CRITERIA AND LOCAL ADOPTED CODES.
2. INTRUSION ALARM CABLING SHALL BE ACCEPTABLE TO THE INTRUSION ALARM EQUIPMENT MANUFACTURER FOR THE INTENDED PURPOSE. SHOULD MANUFACTURER OF INTRUSION ALARM EQUIPMENT REQUIRE DIFFERENT TYPE OR SIZE OF CABLE THAN HEREIN SPECIFIED, THE LARGER OR MORE STRINGENT TYPE OF CABLE SHALL BE USED.
3. ALL INTRUSION ALARM CABLING SHALL BE CM, CMR OR CMP AS REQUIRED BY THE ELECTRICAL CODE. SEE WIRING LEGEND FOR CABLE TYPES AND SIZES.
4. INTRUSION ALARM CABLING SHALL BE GRAY IN COLOR.
5. PROVIDE ALL CONDUIT, BACKBOXES, AND FITTINGS FOR THE INTRUSION ALARM SYSTEM CABLING AS REQUIRED BY ALL APPLICABLE CODES AND THE LOCAL JURISDICTION.
6. INTRUSION ALARM CABLING SHALL NOT BE PAINTED.
7. EXACT CABLE ROUTING SHALL BE COORDINATED WITH OTHER TRADES IN THE FIELD. SEE DRAWING NOTES AND DETAILS FOR CABLE INSTALLATION METHODS.
8. T-TAPPING THE WIRING IS NOT PERMITTED. CIRCUITS SHALL WIRE IN CLASS B CONFIGURATION. PROVIDE CLASS A WIRING ONLY IF REQUIRED BY LOCAL ADOPTED CODES.
9. ALL CABLE RUNS SHALL BE NEATLY BUNDLED, WRAPPED TIGHT AND PROPERLY SECURED. ANY CABLE NOT INSTALLED IN A NEAT AND PROFESSIONAL MANNER SHALL BE PULLED OUT AND RE-RUN BY INSTALLER AT NO ADDITIONAL COST TO OWNER.
10. CONTRACTOR RUNNING CABLING MUST MARK BOTH ENDS OF CABLING, PROVIDE A WIRE LEGEND FOR ALL LOCATIONS, AND PROVIDE A CONTINUITY TEST LOG FOR EACH CABLE.
11. EXPOSED CABLING SHALL BE RUN PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE. EXPOSED CABLING SHALL NOT BE RUN IN A "SPAN" FASHION BETWEEN BAR JOISTS OR BEAMS (I.E. CABLING SHALL BE ROUTED ALONG PATH OF JOISTS AND BEAMS). ALL CABLING SHALL BE SECURED TO THE STRUCTURAL CEILING BETWEEN JOISTS OR BEAMS.
12. ALL CABLING SHALL BE SUPPORTED FROM BUILDING STRUCTURE AND NOT FROM GRID, TILES, OR SUPPORT WIRES. EXPOSED CABLING SHALL BE SUPPORTED BY BUILDING STRUCTURE AT NO MORE THAN FIVE (5) FOOT INTERVALS.
13. ALL WIRING BELOW THE STRUCTURE, CONCEALED IN CEILINGS OR PARTITIONS, SUBJECT TO PHYSICAL DAMAGE, NON-POWER LIMITED OR WHERE REQUIRED BY APPLICABLE CODES SHALL BE INSTALLED IN METALLIC CONDUIT.
14. CONDUIT FILL SHALL NOT EXCEED 40%.
15. ALL CONDUIT SHALL BE TERMINATED AT THE BAR JOIST LEVEL WITH SOME FORM OF GROMMET OR BOX CONNECTOR.
16. ALL CONDUIT LOCATED IN DRYWALL SHALL BE TERMINATED NO LESS THAN SIX (6) INCHES ABOVE THE CEILING TIE.
17. FOR DRYWALL APPLICATIONS, ALL CONDUIT AND BACKBOXES SHALL BE RECESSED INTO THE WALL.
18. COORDINATE DRILLING OF ANY HOLES (I.E. COLUMN PENETRATIONS) WITH THE OWNER'S REPRESENTATIVE AND ALL OTHER TRADES PRIOR TO INSTALLATION.
19. ALL INTRUSION ALARM DETECTORS AND CONTACTS SHALL BE INSTALLED IN OR ON A PROPER BACKBOX. NO MOTION DETECTORS OR CONTACTS SHALL BE INSTALLED WITHOUT A BACKBOX.
20. ALL CABLING, CONDUIT, AND BACKBOXES SHALL BE PROPERLY SUPPORTED AND SEISMICALLY BRACED, AS REQUIRED BY ALL APPLICABLE CODES AND THE LOCAL JURISDICTION.
21. CONDUIT AND CABLING SHALL ENTER INTO THE ICP ONLY AS APPROVED BY THE EQUIPMENT MANUFACTURER.

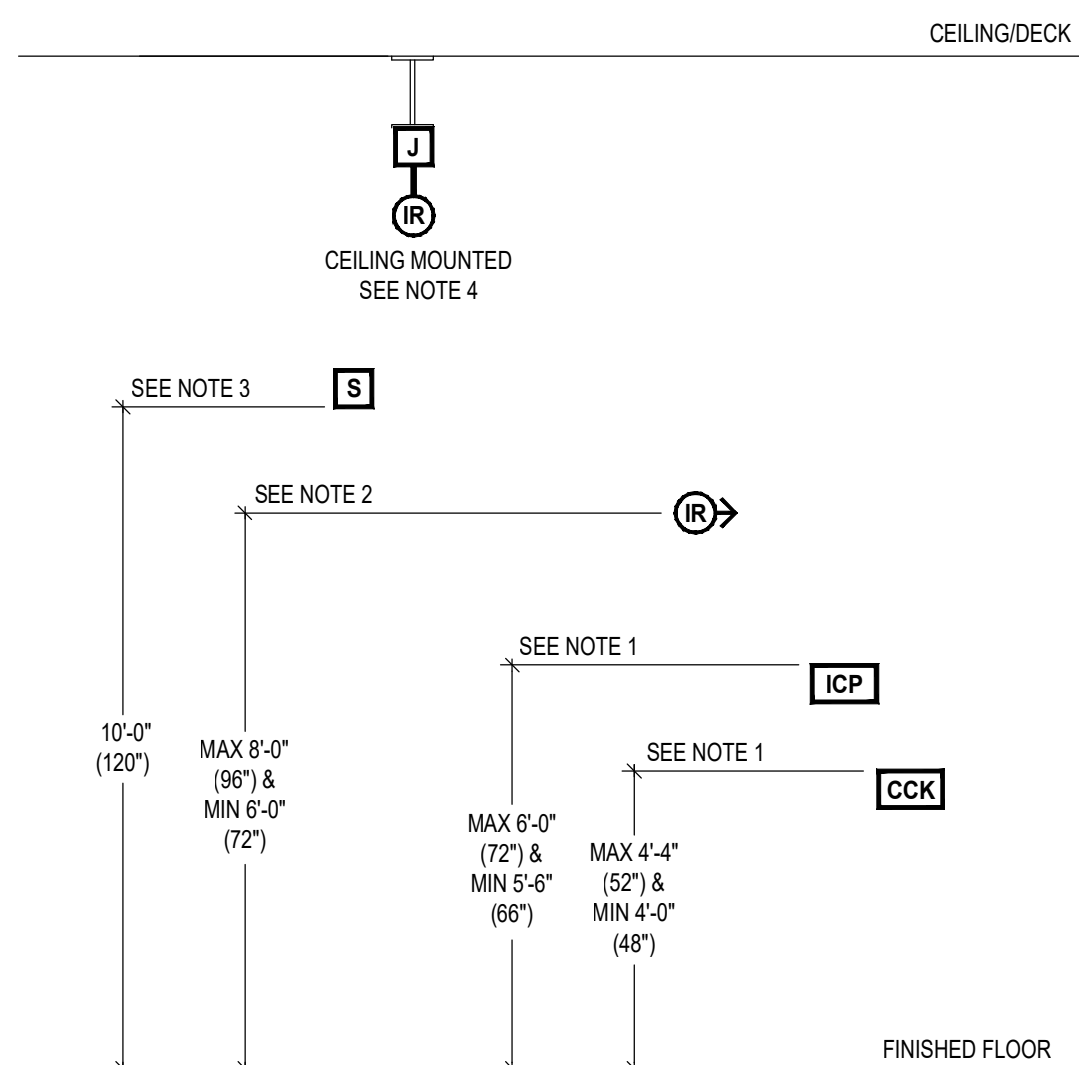
INTRUSION ALARM KEYED NOTES

- 1 PROVIDE A 120V (16.9kVA/220V) TRANSFORMER CONNECTED TO A DEDICATED 120/240 VOLT DUPLEX OUTLET FOR THE INTRUSION ALARM CONTROL PANEL (ICP). LABEL THE CIRCUITS "INTRUSION ALARM CIRCUIT". THE LOCATION OF THE CIRCUIT DISCONNECT SHALL BE IDENTIFIED AT THE ICP. PROVIDE THE SERVICE PHONE NUMBER STICKER ON THE SURFACE OF THE ICP. ALL CIRCUIT BREAKERS SHALL BE CLEARLY MARKED AND MECHANICALLY SECURED TO PREVENT ANY UNAUTHORIZED TAMPERING.
- 2 PROVIDE TWO (2) MEANS OF SIGNAL TRANSMISSION TO THE OFF-SITE MONITORING FACILITY. PROVIDE A DEDICATED PHONE LINE FOR THE PRIMARY MEANS OF TRANSMISSION. THE SECONDARY MEANS SHALL UTILIZE A VOICE OVER INTERNET PROTOCOL. SEQUENCE INITIATION PROTOCOL (VARIABLE) CONNECTION TO OWNERS NETWORK. PROVIDE THE SERVICE PHONE NUMBER STICKER ON THE SURFACE OF THE ICP AND THE ASSOCIATED PHONE NUMBER USING DIRECTLY ON THE RJ-31X BOXES. COORDINATE ALL PROGRAMMING, SIGNALS TRANSMISSION AND CONNECTIONS WITH THE OFF-SITE MONITORING COMPANY.
- 3 PROVIDE A COMMAND CENTER KEYPAD (CCK) ADJACENT TO THE FRONT ENTRANCE DOOR DIRECTLY BELOW THE FIRE ALARM ANNUNCIATOR. COORDINATE EXACT MOUNTING LOCATION OF THE CCK WITH THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
- 4 THE WALL MOUNTED MOTION DETECTOR SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTALLATION INSTRUCTIONS WHERE SHOWN ON DRAWING. COORDINATE EXACT MOUNTING LOCATION OF THE FLUSH MOUNTED MOTION DETECTOR WITH THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. APPLY MASKING OR SENSITIVITY ADJUSTMENTS AS NECESSARY TO ENSURE THAT THE MOTION COVERAGE AREA DOES NOT EXCEED THE BUILDING (REDUCING THE POSSIBILITY OF FALSE ALARMS).
- 5 THE CEILING MOUNTED 360 DEGREE MOTION DETECTOR SHALL BE PLUGGED MOUNTED FROM THE BOTTOM OF STRUCTURE (MAXIMUM OF 18'-0" AFF) IN ACCORDANCE WITH THE MANUFACTURERS INSTALLATION INSTRUCTIONS, WHERE SHOWN ON DRAWING. COORDINATE EXACT MOUNTING LOCATION OF THE CEILING MOUNTED 360 DEGREE MOTION DETECTOR WITH THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. APPLY MASKING OR SENSITIVITY ADJUSTMENTS AS NECESSARY TO ENSURE THAT THE MOTION COVERAGE AREA DOES NOT EXCEED THE PROTECTED SPACE (REDUCING THE POSSIBILITY OF FALSE ALARMS).
- 6 PROVIDE A HOLD-UP BUTTON SWITCH UNDER SERVICE DESK IN THE SERVICE BAY AREA AND SHOWROOM AREA. COORDINATE EXACT MOUNTING LOCATION OF THE HOLD-UP BUTTON SWITCH WITH THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
- 7 PROVIDE A PUSH BUTTON SWITCH IN SHOWROOM AREA TO ACTIVATE THE SIREN IN THE SERVICE AREA TO SUMMON FOR ASSISTANCE. LOCATE THE PUSH BUTTON ON THE POWER POLE OF THE MIDDLE SHOWROOM POD. COORDINATE EXACT MOUNTING LOCATION OF THE PUSH BUTTON SWITCH WITH THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
- 8 PROVIDE A TRANSFORMER TO ACTIVATE THE SERVICE DESK SIREN AS SHOWN ON THE FLOOR PLANS. THE TRANSFORMER SHALL BE SECURED AND PLUGGED INTO THE RECEPTACLE BELOW SERVICE DESK IN SERVICE BAY AREA. RECEPTACLE AT THE SERVICE DESK. THE TRANSFORMER SHALL BE SECURED TO PREVENT ANY UNAUTHORIZED TAMPERING.
- 9 PROVIDE A WALL MOUNTED SIREN ADJACENT TO THE SHOWROOM DOOR FROM THE SERVICE AREA. THE SIREN SHALL BE SURFACE MOUNTED. COORDINATE EXACT MOUNTING LOCATION OF THE PUSH BUTTON SWITCH WITH THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.



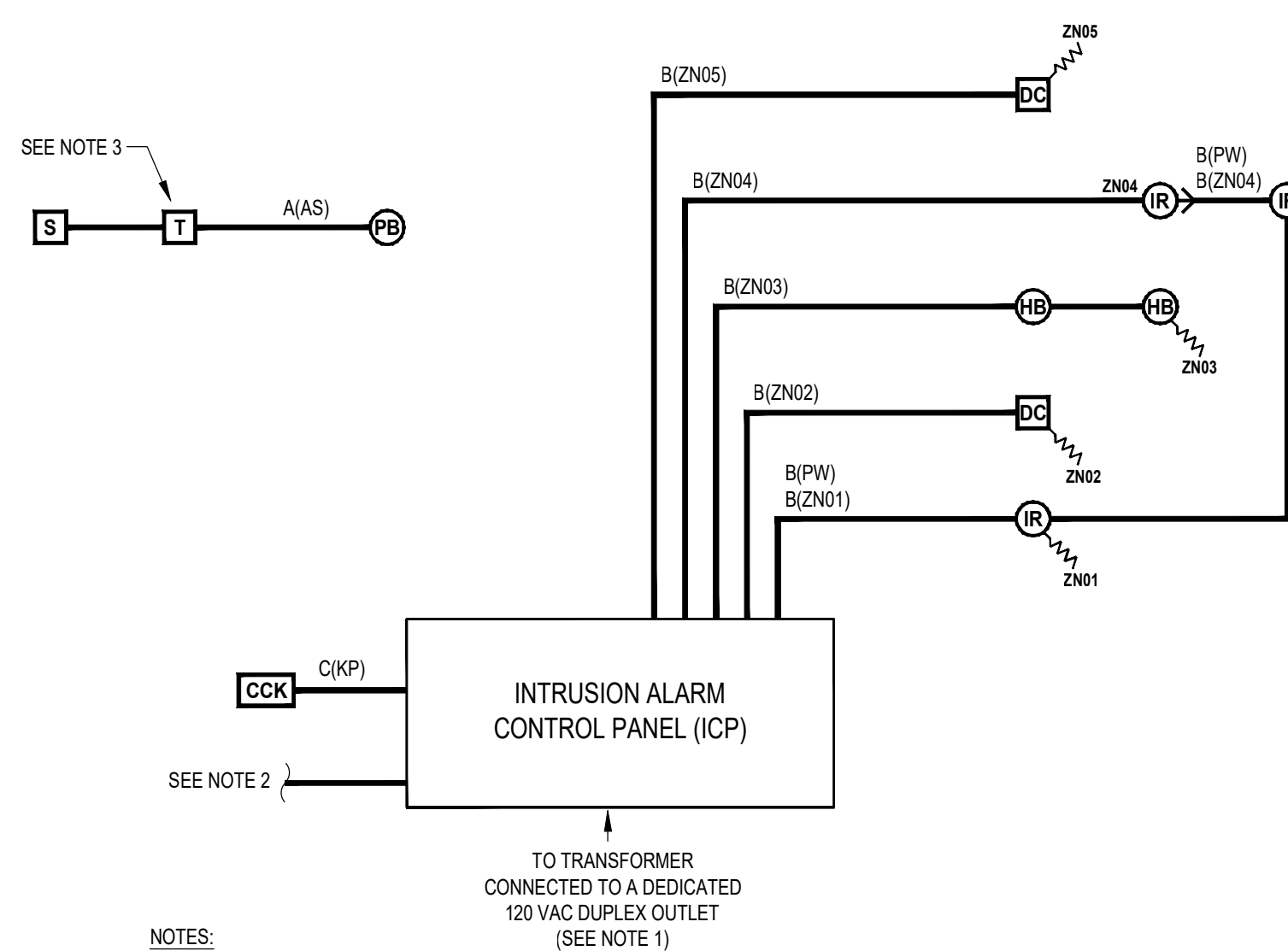
NOTES:

1. LOCATE THE FIRE ALARM CONTROL PANEL, INTRUSION ALARM CONTROL PANEL AND DOCUMENTATION IN THE CONFIGURATION SHOWN ABOVE. IF THIS LAYOUT CAN NOT BE FOLLOWED, CONTRACTOR SHALL IMMEDIATELY BRING TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE AND FIRE PROTECTION ENGINEER (CQ) FOR RESOLUTION.
2. VERIFY THE CONTROL PANEL LAYOUT WITH THE OWNER'S REPRESENTATIVE AND ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION.
3. PROVIDE A CONTROL PANEL ON A BACKBOARD. THE BACKBOARD IS PROVIDED AND INSTALLED BY INSTALLATION.
4. PROVIDE HARDWIRED CONNECTIONS TO THE FIRE ALARM CONTROL PANEL UTILIZING THE DEDICATED 120 VAC FIRE ALARM CIRCUIT.
5. PROVIDE A DB004 ENCLOSURE FOR THE DUPLEX RECEPTACLE. COORDINATE INSTALLATION OF DUPLEX RECEPTABLES WITH THE ELECTRICAL CONTRACTOR CONNECTED TO A 120 VAC CIRCUIT FOR THE SYSTEM. REFER TO THE DB004 TRANSFORMER ENCLOSURE INSTALLATION INSTRUCTIONS FOR THE WIRING DETAIL.
6. PROPERLY SECURE AND SCREW THE TRANSFORMER INTO DUPLEX RECEPTABLES TO PREVENT UNAUTHORIZED PERSONNEL FROM UNPLUGGING.
7. ALL CABLED INCLUDING IN THIS DETAIL SHALL BE IN CONDUIT UNLESS OTHERWISE NOTED.
8. PROVIDE A DOCUMENTATION CABINET ADJACENT TO THE FIRE ALARM CONTROL PANEL TO HOUSE ALL SYSTEM DOCUMENTS IN ACCORDANCE WITH NFPA 72. SYSTEM DOCUMENTS SHALL INCLUDE (AT A MINIMUM) RECORD DRAWINGS, EQUIPMENT DATA SHEETS, SOFTWARE AND FIRMWARE DOCUMENTATION. THE DOCUMENTATION SHALL BE KEPT IN A SYSTEM DOCUMENT LABELLED "SYSTEM RECORD DOCUMENTS" AND SHALL BE ACCESSIBLE BY AUTHORIZED PERSONNEL ONLY AND PROTECTED FROM PULLING, EQUIPMENT DAMAGE.



NOTES:

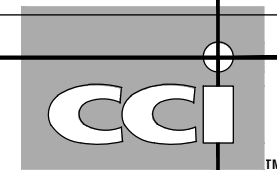
1. COORDINATE EXACT MOUNTING HEIGHT AND LOCATION OF THE INTRUSION ALARM CONTROL PANEL AND COMMAND CENTER KEYPAD WITH THE OWNER'S REPRESENTATIVE ELECTRICAL CONTRACTOR, AND AHJ PRIOR TO INSTALLATION.
2. COORDINATE EXACT MOUNTING HEIGHT (WHERE POSSIBLE INSTALL AT 7'-6" ABOVE FINISHED FLOOR) AND LOCATION OF THE WALL MOUNTED INFRARED MOTION DETECTORS WITH THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. MOTION DETECTOR SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. COORDINATE EXACT LOCATION OF THE WALL MOUNTED SIREN, SOUNDER AND VISUAL WITH BLUE LENS WITH THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. PROVIDE AN APPROVED BACKBOX AS REQUIRED PER THE MANUFACTURER SPECIFICATIONS.
4. COORDINATE EXACT LOCATION OF THE CEILING MOUNTED INFRARED MOTION DETECTORS WITH THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. MOTION DETECTOR SHALL BE PENDANT MOUNTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.



NOTES:

1. PROVIDE DEDICATED 120 VAC CIRCUITS, AND BATTERY BACKUP IN THE ICP AND PS.
2. PROVIDE TWO (2) MEANS OF SIGNAL TRANSMISSION TO THE OFF-SITE MONITORING FACILITY. PROVIDE A DEDICATED PHONE LINE FOR THE PRIMARY MEANS OF TRANSMISSION. THE SECONDARY MEANS SHALL UTILIZE A VoIP/ SIP CONNECTION TO OWNER'S NETWORK.
3. THE TRANSFORMER SHALL BE INSTALLED AND PLUGGED INTO THE RECEPTACLE BELOW SERVICE DESK IN SERVICE BAY AREA





CODE CONSULTANTS, INC.
2043 WOODLAND PKWY, SUITE 300
ST. LOUIS, MISSOURI 63146-4235
314-991-2633
www.codeconsultants.com



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NEW FCAC STORE
2020 ER
3561 SW MARKET ST
JACKSON COUNTY
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JACOB P. HENKE, PE
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CORPORATE CERTIFICATE OF AUTHORITY
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ISSUE BLOCK		
1	04/16/20	ADD #1
3	07/23/20	IFC SET

PROPERTY NO.: 160085
6 DIGIT NO.: 906983
4 DIGIT NO.: 78C9

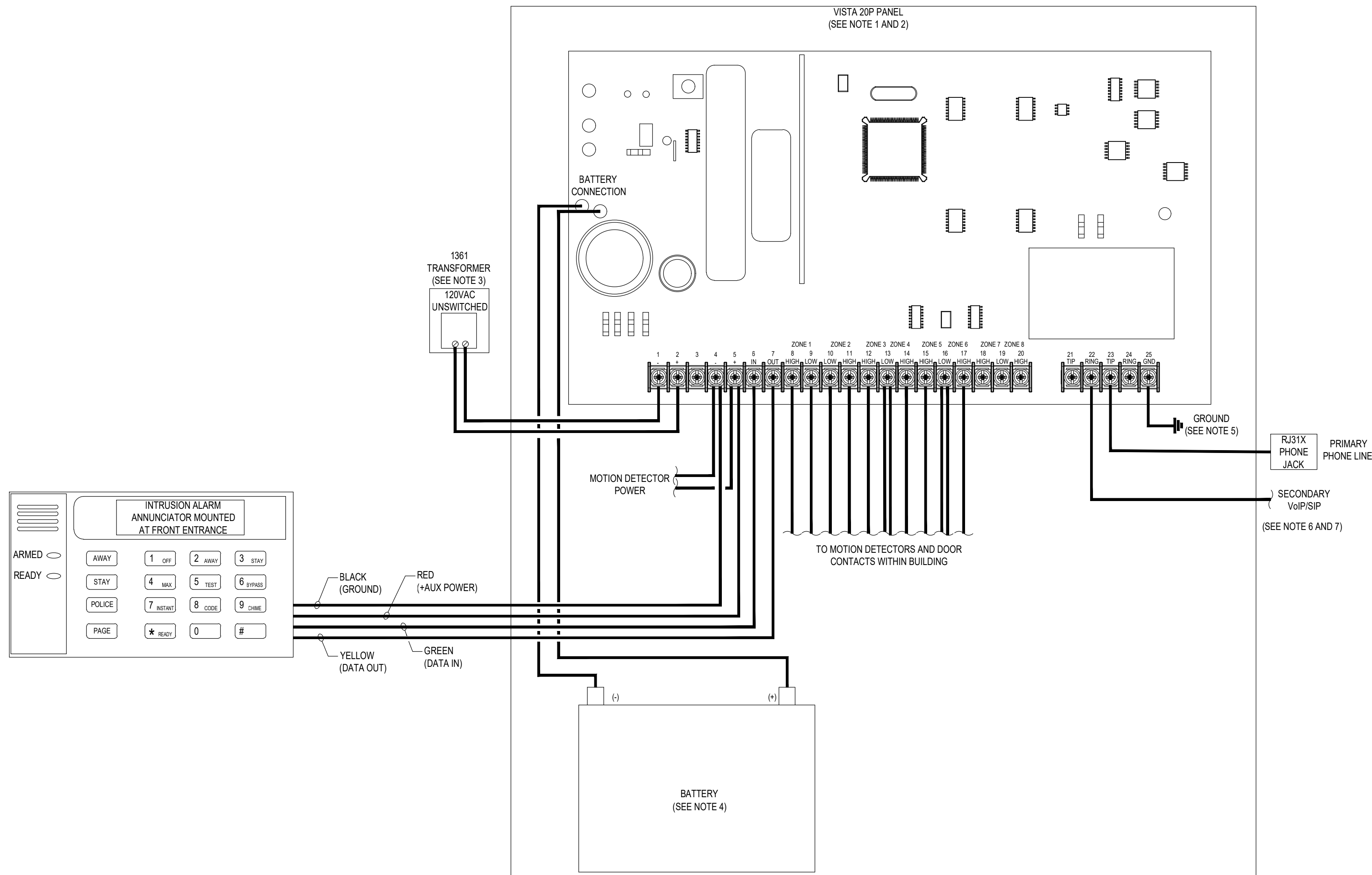
AOR PROJECT NUMBER: 1955B71
TO PERMIT: DATE: 03/26/2020
TO BID: DATE: ###-##-##

SHEET TITLE:
INTRUSION ALARM CONTROL
PANEL LAYOUT AND DETAILS

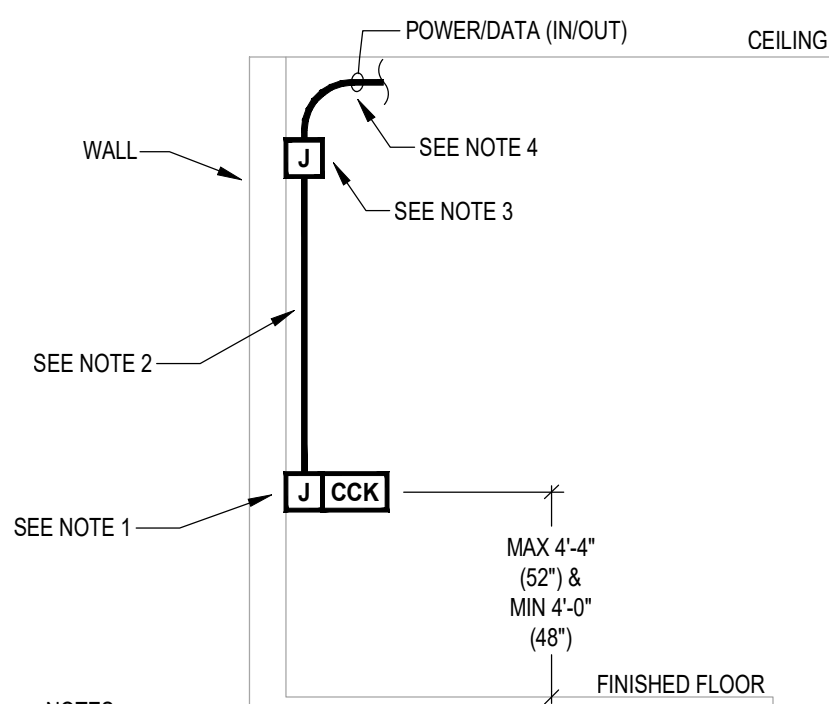
SHEET NUMBER:
BA3

INTRUSION ALARM CONTROL PANEL LAYOUT NOTES

1. THE INTRUSION ALARM CONTROL PANEL SHALL BE LOCATED IN A GRAY ENCLOSURE CABINET.
2. PROVIDE THE SERVICE PHONE NUMBER STICKER ON THE SURFACE OF THE ICP.
3. PROVIDE 1361 TRANSFORMER CONNECTED TO A 120 VAC DUPLEX OUTLET FOR THE INTRUSION ALARM CONTROL PANEL (ICP). LABEL THE CIRCUIT BREAKER "INTRUSION ALARM CIRCUIT". THE LOCATION OF THE CIRCUIT DISCONNECT SHALL BE IDENTIFIED AT THE ICP. ALL CIRCUIT BREAKERS SHALL BE CLEARLY MARKED AND MECHANICALLY SECURED TO PREVENT ANY UNAUTHORIZED TAMPERING.
4. PROVIDE ONE (1) 12V BATTERY FOR THE INTRUSION ALARM CONTROL PANEL (ICP). SEE CALCULATIONS ON SHEET BAZ FOR AMP-HOUR REQUIREMENTS THE BATTERY SHALL BE INSTALLED WITHIN THE ICP CABINET.
5. COORDINATE INSTALLATION OF A GROUND ROD OR ACCEPTABLE BUILDING GROUND FOR PROPER GROUNDING OF THE ICP AND PS WITH THE ELECTRICAL CONTRACTOR.
6. PROVIDE TWO (2) MEANS OF SIGNAL TRANSMISSION TO THE OFF-SITE MONITORING FACILITY. PROVIDE A DEDICATED PHONE LINE FOR THE PRIMARY MEANS OF TRANSMISSION. THE SECONDARY MEANS SHALL UTILIZE A VOICE OVER INTERNET PROTOCOL / SESSION INITIATION PROTOCOL (VoIP/SIP) CONNECTION TO OWNERS NETWORK. PROVIDE THE SERVICE PHONE NUMBER STICKER ON THE SURFACE OF THE ICP AND THE ASSOCIATED PHONE NUMBER USING DIRECTLY ON THE RJ-31X BOXES. COORDINATE ALL PROGRAMMING, SIGNALS TRANSMISSION AND CONNECTIONS WITH THE OFF-SITE MONITORING COMPANY.
7. PROVIDE THE ASSOCIATED PHONE NUMBER USING PRINTED LABEL DIRECTLY ON THE RJ-31X BOXES.



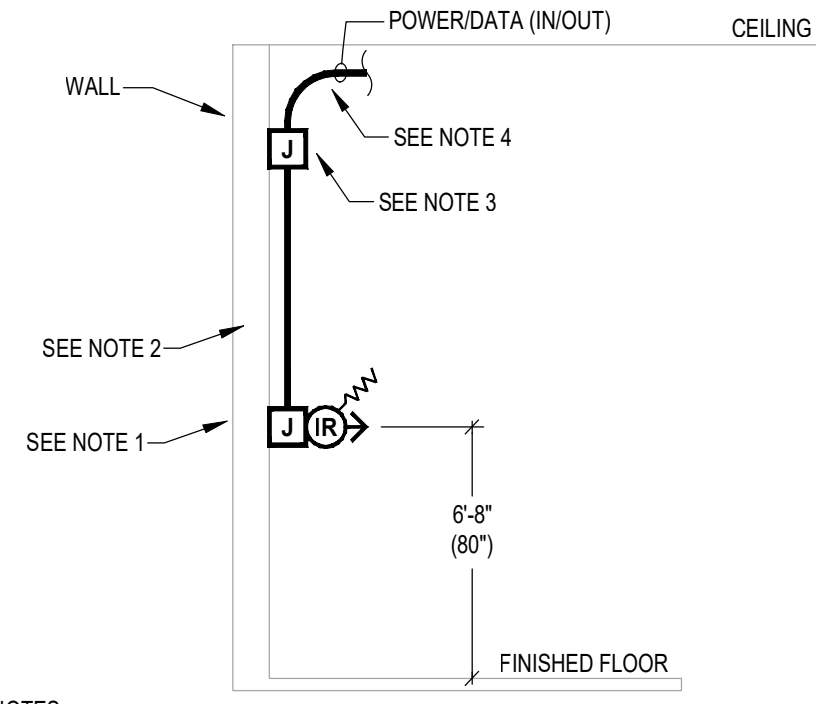
1
BA3
INTRUSION ALARM CONTROL PANEL LAYOUT
NOT TO SCALE



NOTES:

1. PROVIDE AN APPROVED BACKBOX PER THE MANUFACTURER SPECIFICATIONS BETWEEN 48 INCHES AND 52 INCHES ABOVE FINISHED FLOOR.
2. PROVIDE INTRUSION ALARM CABLING WITHIN 1/2 INCH CONDUIT INSIDE WALL (EXPOSED CONDUIT NOT ACCEPTABLE).
3. INTRUSION ALARM CABLING AND CONDUIT SHALL BE STUB-UP TO THE CEILING JOIST AREA 6 INCHES TO THE BOTTOM OF JOISTS AND TURN OUT WITH INSULATED BUSHING.
4. PROVIDE EXPOSED CABLING PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE.
5. COORDINATE EXACT MOUNTING LOCATION OF THE CCK WITH THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

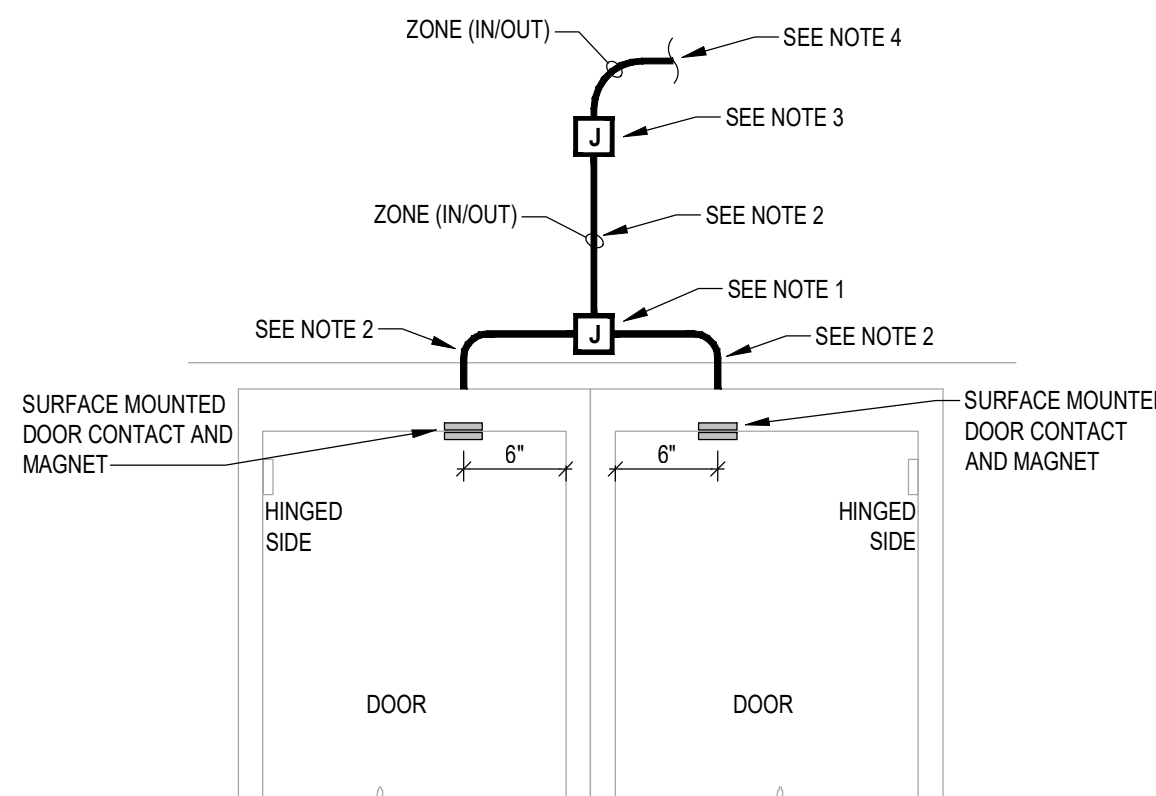
2
BA3
COMMAND CENTER KEYPAD DETAIL
NOT TO SCALE



NOTES:

1. PROVIDE AN APPROVED BACKBOX PER THE MANUFACTURER SPECIFICATIONS (RECOMMENDED TO BE INSTALLED AT 80 INCHES ABOVE FINISHED FLOOR).
2. PROVIDE FIRE ALARM CABLING WITHIN 1/2 INCH CONDUIT INSIDE WALL (EXPOSED CONDUIT NOT ACCEPTABLE).
3. INTRUSION ALARM CABLING AND CONDUIT SHALL BE STUB-UP TO THE CEILING JOIST AREA 6 INCHES TO THE BOTTOM OF JOISTS AND TURN OUT WITH INSULATED BUSHING.
4. PROVIDE EXPOSED CABLING PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE.
5. COORDINATE EXACT MOUNTING LOCATION OF THE MOTION DETECTORS WITH THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

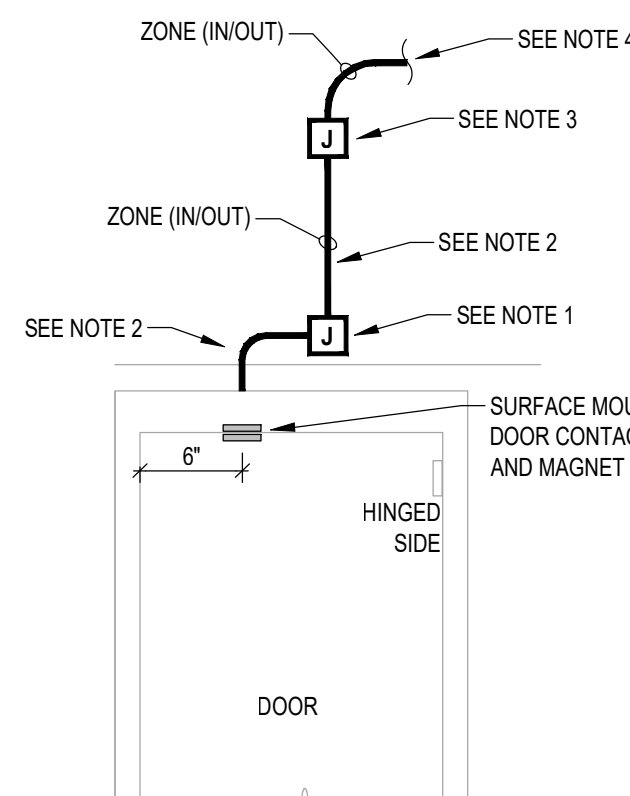
3
BA3
PIR MOTION DETECTOR DETAIL
NOT TO SCALE



NOTES:

1. INSTALL A RECESSED 4 INCH SQUARE BOX ABOVE CENTERED 4 INCHES ABOVE THE DOOR OPENING. PROVIDE A SURFACED MOUNTED COVER PLATE FOR JUNCTION BOX.
2. PROVIDE INTRUSION ALARM CABLING WITHIN 1/2 INCH CONDUIT INSIDE WALL (EXPOSED CONDUIT NOT ACCEPTABLE).
3. INTRUSION ALARM CABLING AND CONDUIT SHALL BE STUB-UP TO THE CEILING JOIST AREA 6 INCHES TO THE BOTTOM OF JOISTS AND TURN OUT WITH INSULATED BUSHING.
4. PROVIDE EXPOSED CABLING PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE.
5. COORDINATE EXACT MOUNTING LOCATION OF THE DOOR CONTACTS WITH THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

4
BA3
DOUBLE DOOR CONTACT DETAIL
NOT TO SCALE



NOTES:

1. INSTALL A RECESSED 4 INCH SQUARE BOX ABOVE CENTERED 4 INCHES ABOVE THE DOOR OPENING. PROVIDE A SURFACED MOUNTED COVER PLATE FOR JUNCTION BOX.
2. PROVIDE INTRUSION ALARM CABLING WITHIN 1/2 INCH CONDUIT INSIDE WALL (EXPOSED CONDUIT NOT ACCEPTABLE).
3. INTRUSION ALARM CABLING AND CONDUIT SHALL BE STUB-UP TO THE CEILING JOIST AREA 6 INCHES TO THE BOTTOM OF JOISTS AND TURN OUT WITH INSULATED BUSHING.
4. PROVIDE EXPOSED CABLING PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE.
5. COORDINATE EXACT MOUNTING LOCATION OF THE DOOR CONTACTS WITH THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

5
BA3
SINGLE DOOR CONTACT DETAIL
NOT TO SCALE

MECHANICAL SYMBOLS LIST			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY DUCTWORK		MANUAL VOLUME DAMPER
	RETURN DUCTWORK		FIRE DAMPER
	EXHAUST DUCTWORK		MOTOR OPERATED DAMPER M.O.D.
	SUPPLY DIFFUSER		FRESH AIR INTAKE
	RETURN GRILLE		TURNING VANES IN ELBOW
	EXHAUST GRILLE		SMOKE DETECTOR
	THERMOSTAT		DIFFUSER TYPE DIFFUSER AIR QUANTITY
	RISE IN DUCTWORK		EQUIPMENT TYPE EQUIPMENT TAG
	DROP IN DUCTWORK		

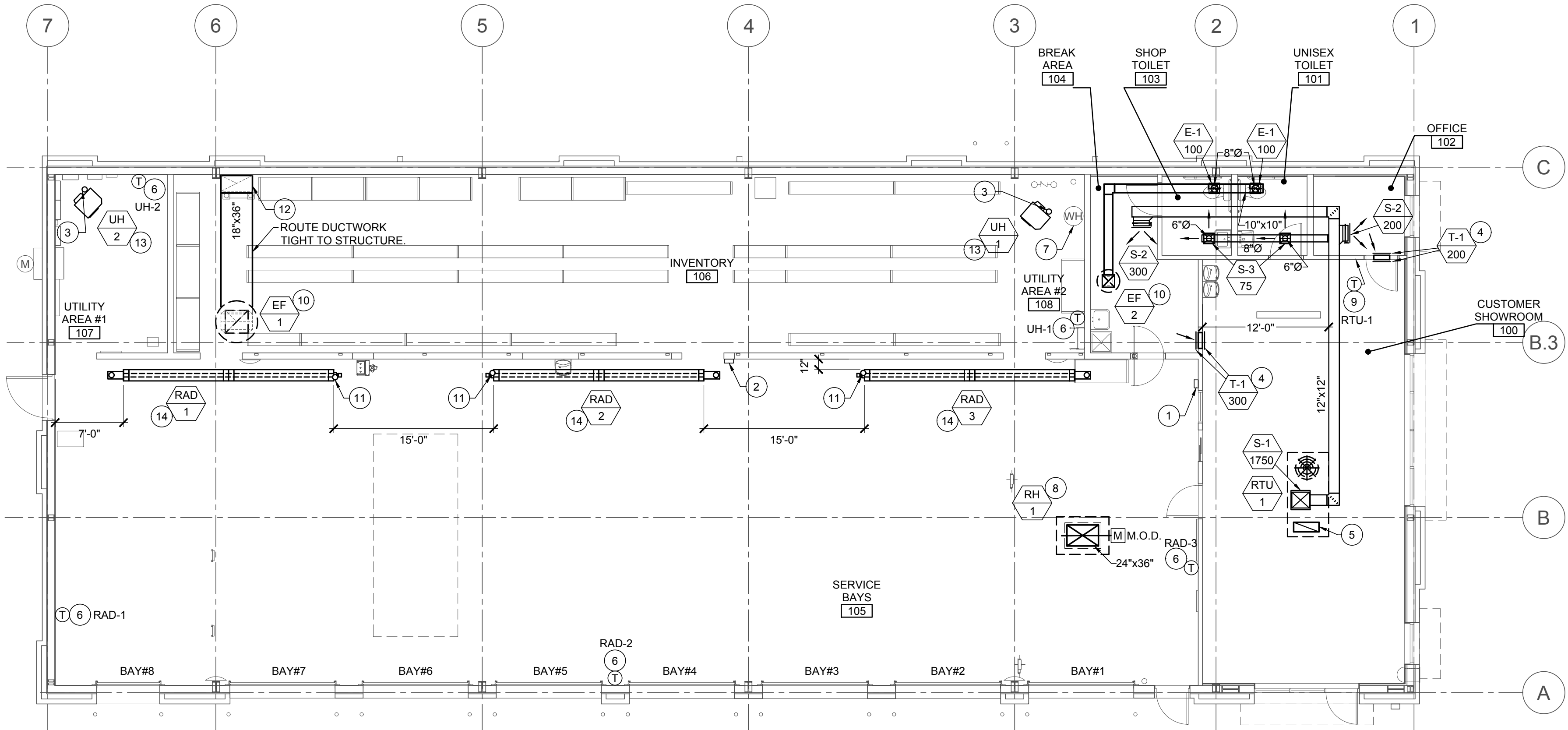
NOTE:
CONTRACTOR SHALL REFER TO SHEET A3 -
ROOF PLAN FOR ACCEPTABLE APPROXIMATE
LOCATIONS OF ROOF PENETRATIONS.

MECHANICAL GENERAL NOTES

1. PROVIDE TOXALERT, INC. VENTILATION CONTROL SYSTEM. COMPLETE WITH (1) CONTROL UNIT, MODEL (GVU-1) AND (1) CO SENSOR, MODEL (GVU-CO), (RANGE 0 TO 250 PPM). PROVIDE OPTIONAL AUDIBLE ALARM WITH SILENCE SWITCH FOR SECOND STAGE ALARM LEVELS; MANUAL OVERRIDE "PURGE" SWITCH OPTION; AND LABELED LED INDICATORS ON FACE OF CONTROLLER (POWER ON, FAN ON AND POWER TO SENSOR). REMOTE SENSOR SHALL BE TEMPERATURE AND HUMIDITY COMPENSATED AND COMPLETE WITH LED'S INDICATING: NORMAL OPERATION, HIGH CO AND MALFUNCTION.
2. VERIFY DIMENSIONS OF UNIT HEATER AND RADIANT HEATER LOCATIONS WITH MANUFACTURER BEFORE INSTALLATION AND COORDINATE WITH LIFT INSTALLER.
3. NO GOOSE NECK OR DOWNTURNS ON LOUVERS OR VENT COVERS TO BE USED.
4. COORDINATE ALL VENT AND EXHAUST FAN PENETRATIONS THRU THE ROOF, WALLS AND FLOORS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.
5. REFER TO FIXTURE PLAN SHEET FOR FINAL LOCATIONS AND QUANTITIES OF ALL OPERATIONS EQUIPMENT.
6. ALL DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED STEEL SHEET METAL, AND SHALL BE FABRICATED ACCORDING TO THE LATEST EDITION OF THE SMACNA HVAC DUCT CONSTRUCTION STANDARD OF METAL AND FLEXIBLE DUCTWORK. UNDER NO CIRCUMSTANCE SHALL DUCT BOARD BE ALLOWED.
7. ALL DUCTWORK DIMENSIONS SHOWN ON PLANS ARE CLEAR DIMENSIONS. WHERE INTERNAL DUCT LINER IS REQUIRED BY SPECIFICATIONS, CONTRACTOR SHALL ADJUST DUCTWORK SIZES ACCORDINGLY.
8. ALL INSULATION, JOINING MATERIALS, SEALER, ETC. SHALL HAVE A U.L. FLAME SPREAD CLASSIFICATION OF NO MORE THAN 25 AND A SMOKE DEVELOPMENT RATING NOT MORE THAN 50.
9. ALL EXPOSED DUCTWORK SHALL BE INTERNALLY LINED. REFER TO SPECIFICATIONS FOR DUCT LINER SPECIFIC REQUIREMENTS.
10. SERVICE BAYS SHALL HAVE BSRO PROVIDED CRUSHPROOF TUBING CO. EXHAUST SOURCE CAPTURE SYSTEM. SYSTEM SHALL BE OUT-THE-DOOR WITH ALL REQUIRED FITTINGS AND ADAPTORS.

KEYED PLAN NOTES - THIS SHEET

1. TOXALERT CONTROLLER. SEE MECHANICAL GENERAL NOTES FOR FURTHER INFORMATION.
2. TOXALERT REMOTE CO SENSOR. MOUNT AT 6'-0" A.F.F. SET SENSOR AT 50 ppm. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
3. PROVIDE WITH UNIT HEATER MANUFACTURER'S CONCENTRIC VENT KIT UP THRU ROOF. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS AND CONCENTRIC FLUE DETAIL ON SHEET M2 FOR FURTHER INFORMATION.
4. MOUNT TRANSFER GRILLE AT 12'-0" AFF MINIMUM.
5. ROUTE FULL SIZE RETURN AIR DUCT 6" BELOW DECK. END OPEN AND COVER WITH 1/2"x1/2" GALVANIZED HARDWARE CLOTH.
6. THERMOSTAT SUPPLIED BY MANUFACTURER WITH EACH PIECE OF EQUIPMENT. THERMOSTAT TO BE INSTALLED ON AN INSULATED SUBBASE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND MOUNTED SO THAT THE HIGHEST OPERABLE CONTROL IS NOT MORE THAN 48" AFF. COORDINATE MOUNTING LOCATION SO THERMOSTAT IS NOT LOCATED BEHIND SERVICE EQUIPMENT.
7. ROUTE WATER HEATER FLUE AND INTAKE TIGHT TO WALL. TERMINATE THROUGH ROOF WITH CONCENTRIC VENT KIT. INSTALL PER MANUFACTURER'S INSTRUCTIONS AND PROVIDE REQUIRED CLEARANCES FROM WALL AND ROOF.
8. PROVIDE ROOF MOUNTED INTAKE HOOD AS SCHEDULED AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
9. THE CONTRACTOR SHALL FURNISH HONEYWELL T7351 THERMOSTAT (OR EQUAL) WITH INSULATED SUBBASE. THERMOSTAT TO BE 7 DAY PROGRAMMABLE WITH 4 SETBACK PERIODS PER DAY. THERMOSTAT TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. MOUNT THERMOSTAT SO THAT THE HIGHEST OPERABLE CONTROL IS NOT MORE THAN 48" AFF. PROVIDE WITH LOCKABLE COVER.
10. PROVIDE ROOF MOUNTED EXHAUST FAN AS SCHEDULED AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS. TRANSITION EXHAUST DUCT AS REQUIRED TO MAKE CONNECTION TO EXHAUST FAN.
11. ROUTE 4"Ø FLUE SEPARATELY THRU ROOF FOR EACH RADIANT HEATER. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS AND DETAIL ON SHEET M2 FOR FURTHER INFORMATION. COORDINATE PENETRATIONS WITH ARCHITECTURAL ROOF PLAN.
12. DROP 36"x18" EXHAUST DUCT DOWN IN LOCATION SHOWN. MOUNT DUCTWORK TO WALL PER SMACNA REQUIREMENTS AND TRANSITION AS REQUIRED TO FAN. TERMINATE AT 3' A.F.F. REFER TO DETAIL ON SHEET M2 FOR FURTHER INFORMATION.
13. SUSPEND GAS FIRED UNIT HEATER FROM ROOF STRUCTURE PER MANUFACTURER'S RECOMMENDATIONS. MOUNT AT 13'-0" AFF. REFER TO DETAIL ON SHEET M2 FOR ADDITIONAL INFORMATION.
14. SUSPEND GAS FIRED RADIANT HEATER FROM ROOF STRUCTURE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. MOUNT AT 13'-4" AFF. REFER TO DETAIL ON SHEET M2 AND SERVICE BAY SECTION ON ARCHITECTURAL DRAWINGS FOR FURTHER INFORMATION.



1
M1 MECHANICAL PLAN
SCALE: 1/8" = 1'-0"

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

ACERTUS
CONSULTING GROUP, LLC
1487 West Park Street
P.O. Box 322
Lee's Summit, MO 64082
P 913.322.5150
F 913.322.5155
www.AcertusGroup.com
Proj# 202.0075

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Firestone
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STATE OF MISSOURI
RANDALL A. NELSON
NUMBER
PE-2007003990
07/22/2020

NEW FCAC STORE
2020 ER
3561 SW MARKET ST
JACKSON COUNTY
LEE'S SUMMIT, MISSOURI 64082

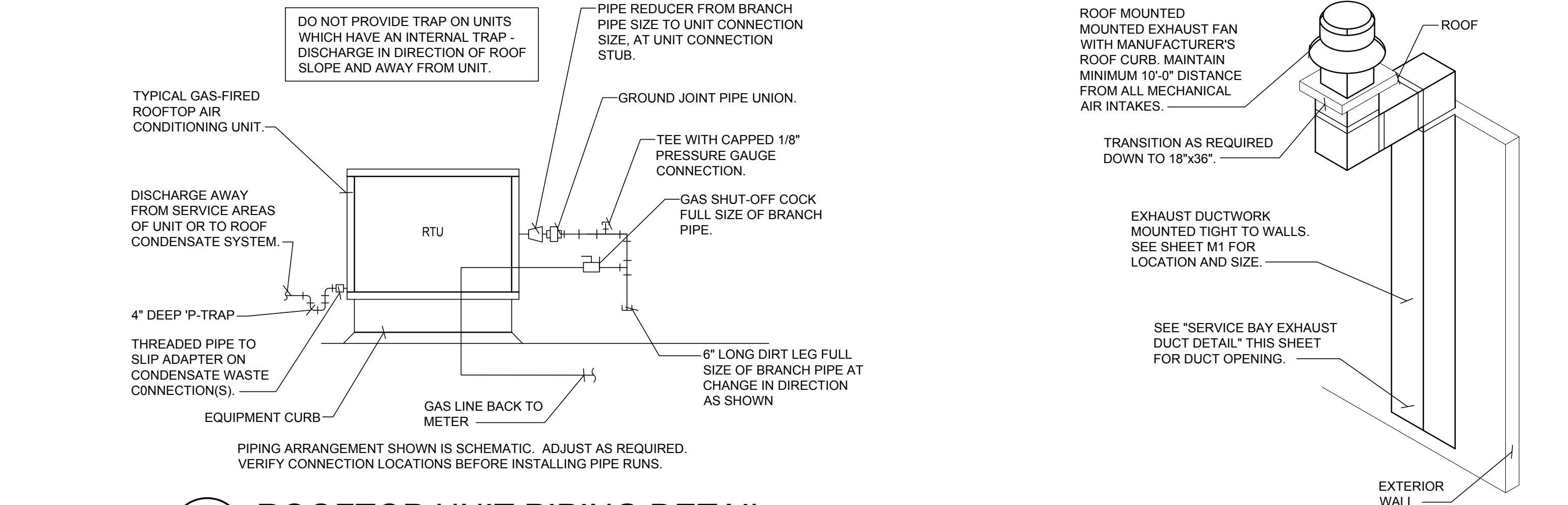
ISSUE BLOCK

1	04/16/20	ADD	#1
2	06/30/20	CB	#1
3	07/23/20	IFC	

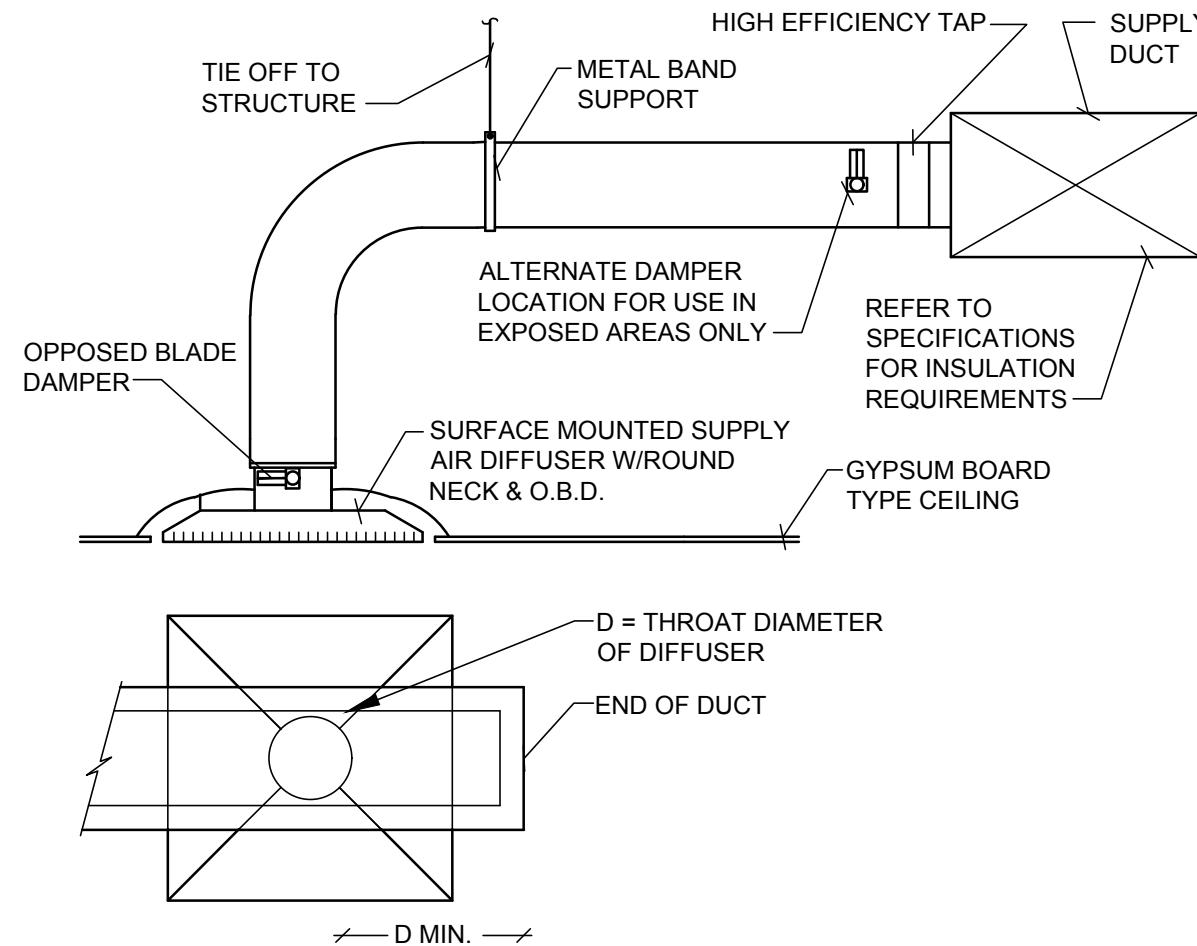
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SHEET TITLE:
MECHANICAL PLAN
AND NOTES

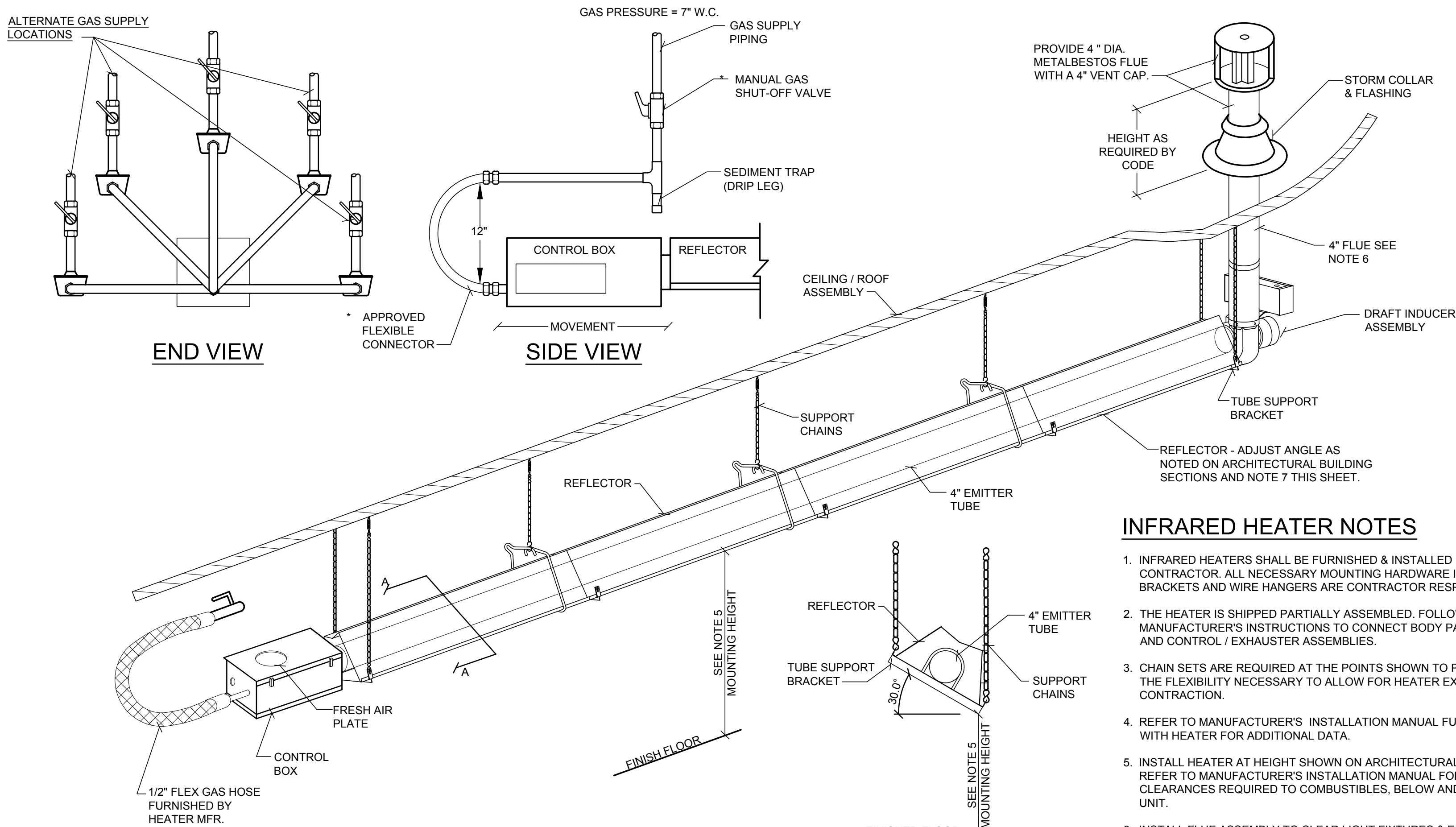
SHEET NUMBER:
M1



1 ROOFTOP UNIT PIPING DETAIL
M2 N.T.S.



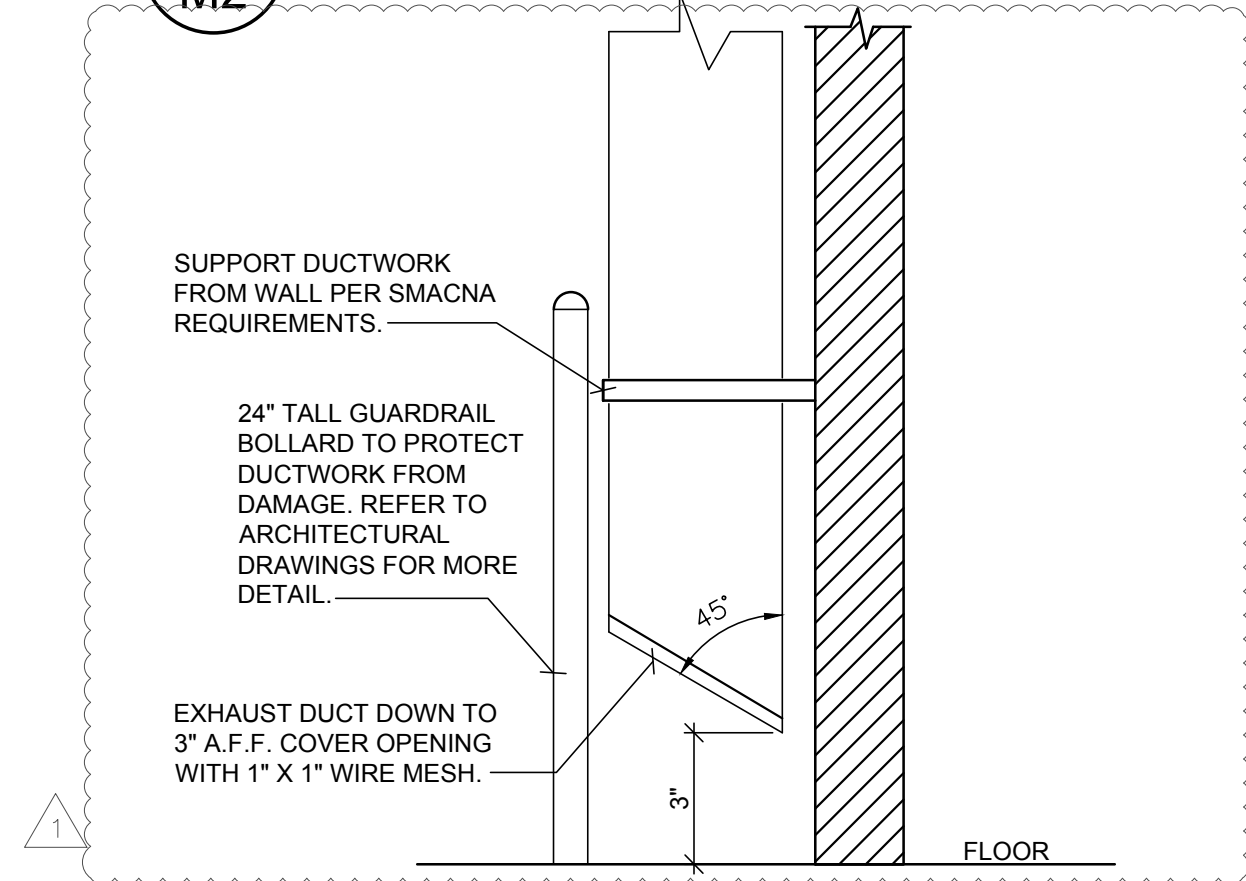
5 SUPPLY AIR DIFFUSER DETAIL
M2 N.T.S.



8 GAS FIRED INFRA-RED STRAIGHT TUBE HEATER DETAIL
M2 N.T.S.

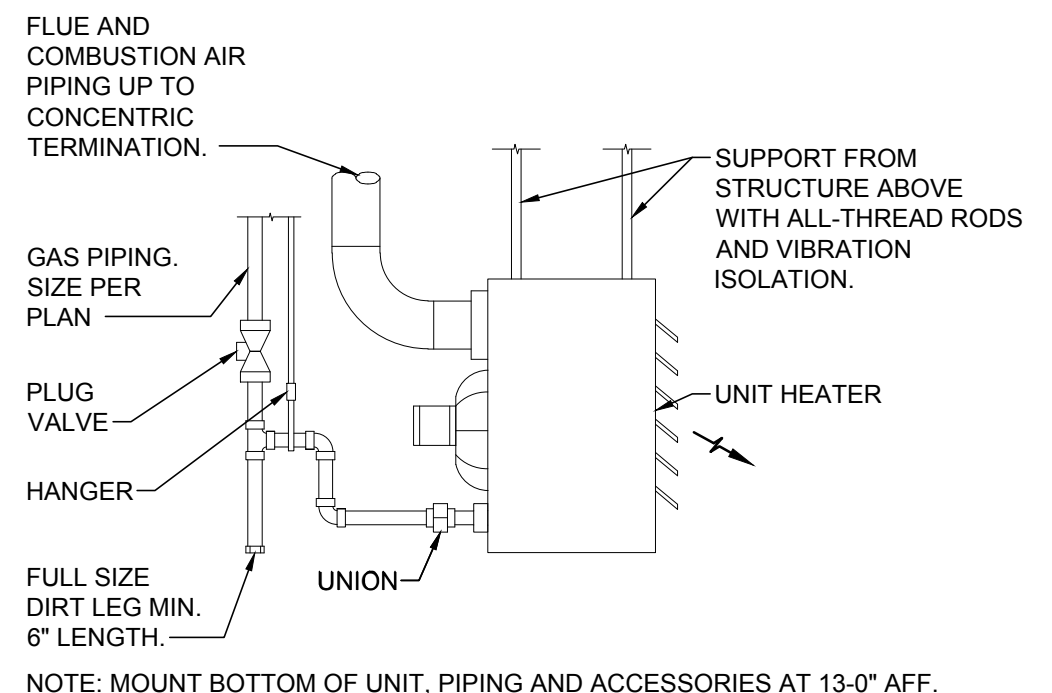
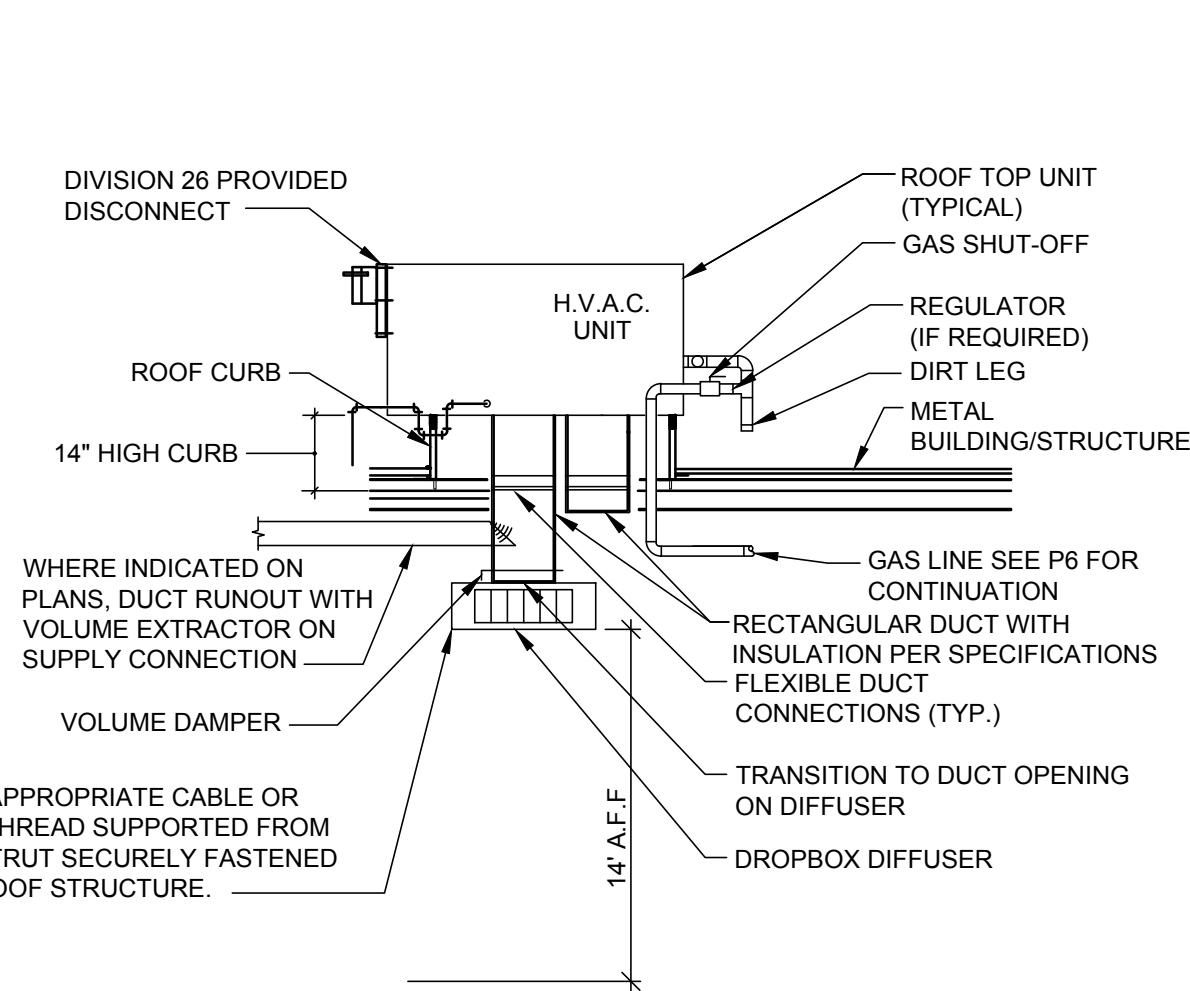
DETAIL BY MANUFACTURER FOR REFERENCE ONLY.

2 SERVICE BAY EXHAUST FAN
M2 N.T.S.



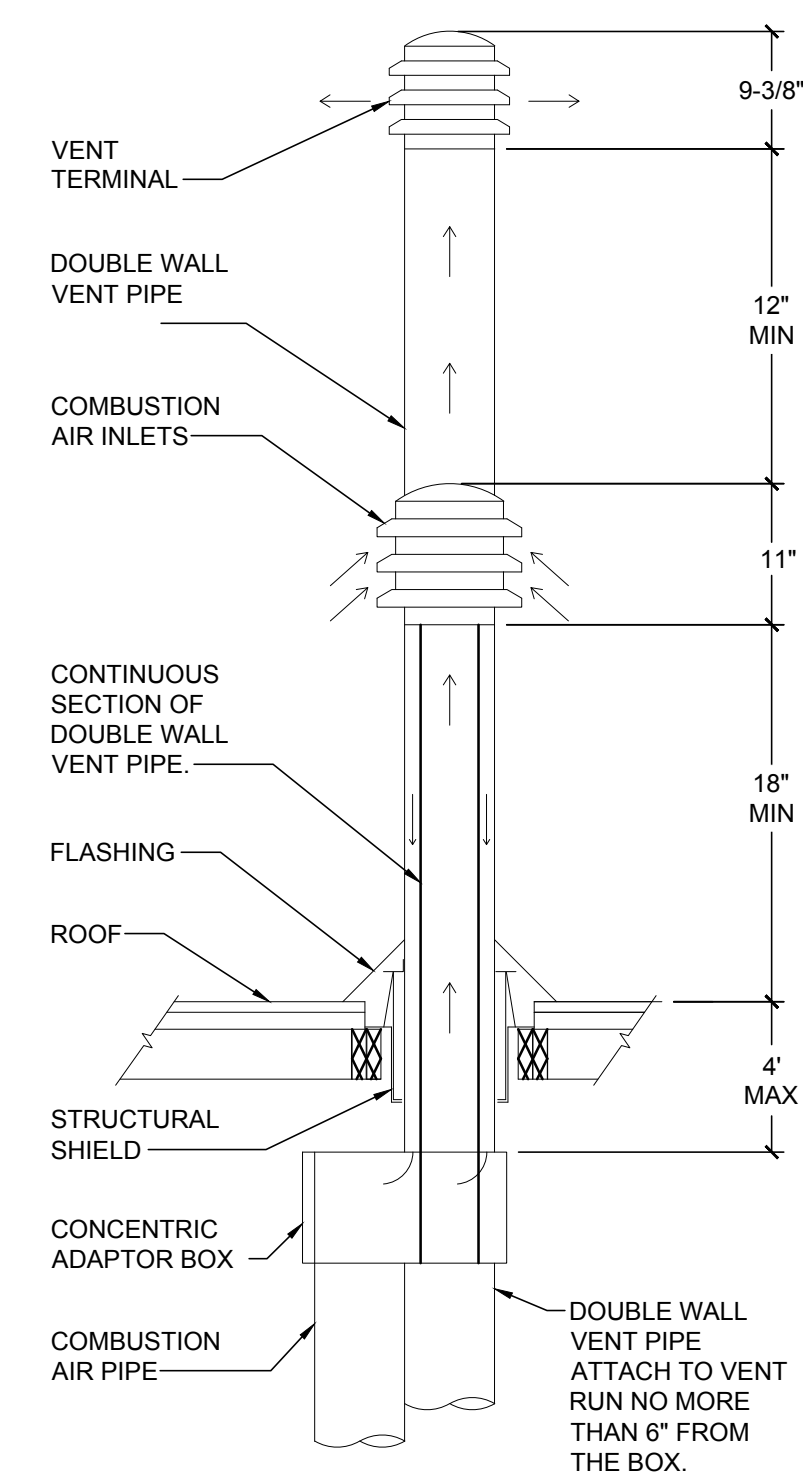
6 SERVICE BAY EXHAUST DUCT DETAIL
M2 N.T.S.

3 RTU PACKAGE HVAC DETAIL
M2 N.T.S.



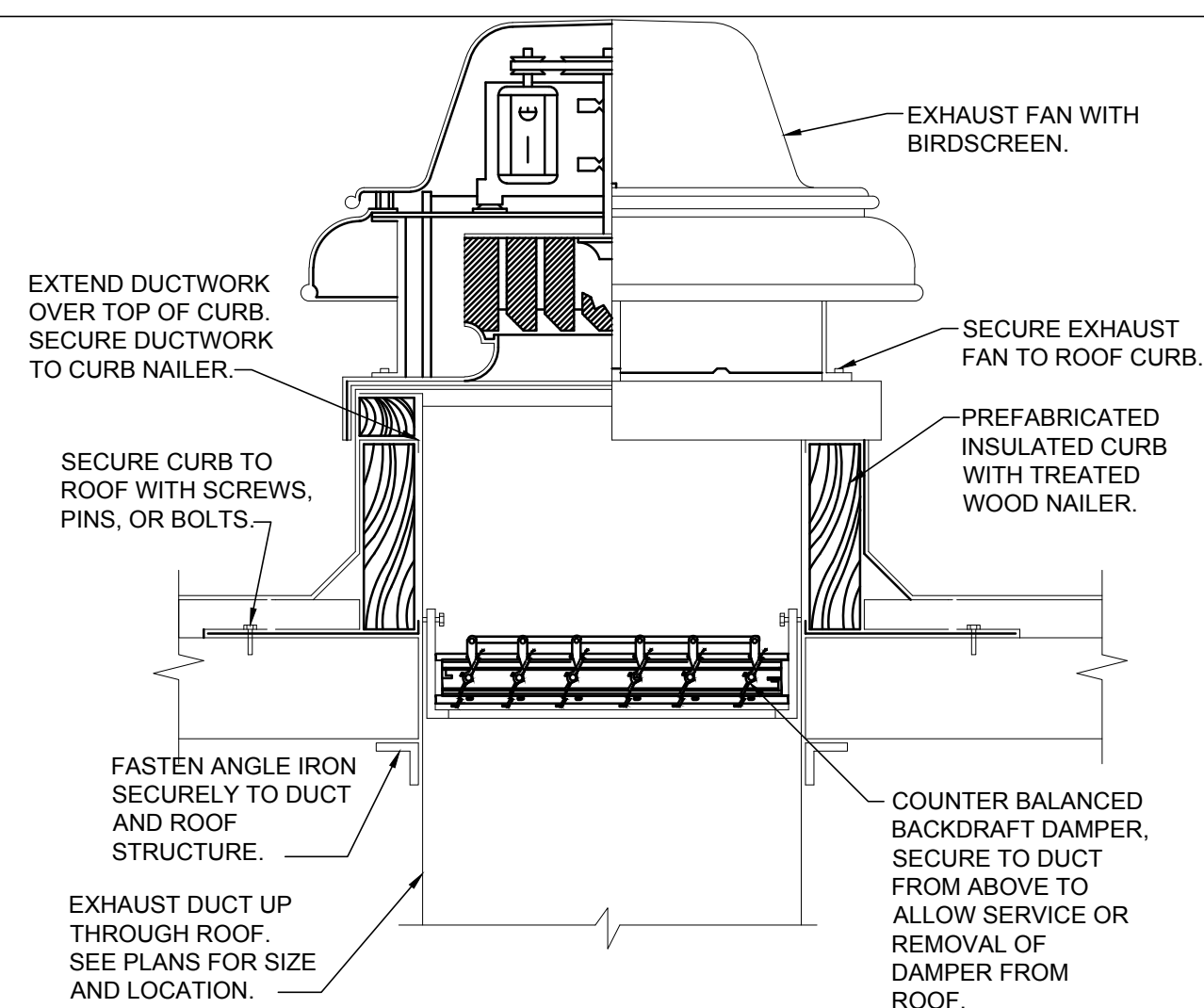
SHOWN FOR REFERENCE ONLY. REFER TO MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION DETAILS.

7 GAS FIRED UNIT HEATER DETAIL
M2 N.T.S.



NOTES:
1. ALL MINIMUM METAL GAUGES TO MEET CODE REQUIREMENTS.
2. SUPPORT VERTICALLY AND HORIZONTALLY AS NECESSARY.

9 CONCENTRIC FLUE DETAIL
M2 N.T.S.



4 ROOF MOUNTED EXHAUST FAN DETAIL
M2 N.T.S.

GENERAL DETAIL NOTES

- SUSPEND UNIT HEATERS FROM UNISTRUT CHANNELS MOUNTED TO STRUCTURE WITH VIBRATION ISOLATORS EQUIPPED HANGER RODS OR AN APPROVED EQUAL METHOD.
- ALL EQUIPMENT FURNISHED BY CONTRACTOR SHALL HAVE MAGNETIC STARTERS OF SIZE AND CAPACITIES AS REQD. FOR PROPER EQUIPMENT OPERATION. FURNISH WEATHERPROOF BOXES (NEMA 3R) FOR EXTERIOR USE.
- EXTEND ALL METALBESTOS FLUES OF DIAMETERS SHOWN THROUGH ROOF TO HEIGHT REQUIRED BY CODE WITH ALUMINUM ROUND TOP. PROVIDE VENTILATING THIMBLE THROUGH ROOF FOR CLEARANCE AROUND STACK AND SUPPORT SECURELY. PROVIDE WEATHER TIGHT RAIN COLLAR AND FLASHING AT PENETRATION.
- ALL THERMOSTATS TO BE FURNISHED BY HVAC CONTRACTOR TO ELECTRICAL CONTRACTOR FOR INSTALLATION.
- FURNISH AND INSTALL UL RATED FIRE DAMPERS W/FUSIBLE LINKS AND ACCESS PANELS IN DUCT WORK AT PENETRATIONS OF FIRE RATE ASSEMBLIES AS REQUIRED BY CODE.
- WIRING SCHEMATICS OF ALL HVAC EQUIPMENT SHALL BE FURNISHED BY HVAC CONTRACTOR TO ELECTRICAL CONTRACTOR.
- ADJUST ALL FANS TO PROPER RPM TO ASSURE CFM REQUIRED AND BALANCE ALL GRILLES AND DIFFUSERS TO CFM SHOWN ON DRAWINGS. (±5%)
- WHERE DRAWINGS AND SPECIFICATIONS EXCEED GOVERNING CODE REQUIREMENTS, DESIGN SHALL GOVERN. INSTALL NO WORK CONTRARY TO OR BELOW MINIMUM LEGAL STANDARDS, WHETHER DRAWINGS AND SPECIFICATIONS FULLY COMPLY OR NOT.
- ROUTE ALL PIPING TIGHT TO CEILING AND WALLS, PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE WHERE POSSIBLE.
- ALL SHUT OFF VALVES TO BE ACCESSIBLE TO ASSOCIATES WITHOUT THE USE OF A LADDER OR STEP-STOOL.

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

ACERTUS CONSULTING GROUP LLC
1487 West 20th Street • Lees Summit, MO 64063
P 913.322.5150 • F 913.322.5155
www.acertusgroup.com
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TO PERMIT: DATE: 03/26/2020
TO BID: DATE: ##-##-##

SHEET TITLE:
MECHANICAL DETAILS
SHEET NUMBER:
M2

VENTILATION SCHEDULE PER 2018 INTERNATIONAL MECHANICAL CODE													
ROOM No.	ROOM NAME	CATEGORY	FLOOR AREA SQ. FT.	ORDINANCE REQUIREMENT				ACTUAL VENT.			EXHAUST FAN NUMBER	SUPPLY UNIT NUMBER	REMARKS
				NUMBER OF OCCUPANTS AND/OR FIXTURES	AREA OUTDOOR AIRFLOW RATE	PEOPLE OUTDOOR AIRFLOW RATE	REQUIRED VENTILATION OR EXHAUST (CFM)	SUPPLY CFM	OUTSIDE AIR CFM	EXHAUST CFM			
100	CUSTOMER SHOWROOM	RETAIL	777	12	0.12 CFM PER SQUARE FEET	7.5 CFM PER PERSON	184	1750	300	---	---	RTU-1	
101	UNISEX TOILET	TOILET ROOMS	50	1 FIXTURE	70 CFM PER FIXTURE	---	70	75	---	100	EF-2	RTU-1	EF-2 CONTROLLED BY TOILET ROOM LIGHTS
102	OFFICE	OFFICE	63	1	0.06 CFM PER SQUARE FEET	5 CFM PER PERSON	9	200	20	---	---	RTU-1	
103	SHOP TOILET	TOILET ROOMS	50	1 FIXTURE	70 CFM PER FIXTURE	---	70	75	---	100	EF-2	RTU-1	EF-2 CONTROLLED BY TOILET ROOM LIGHTS
104	BREAK AREA	DINING ROOM	143	4	0.18 CFM PER SQUARE FEET	7.5 CFM PER PERSON	56	300	80	---	---	RTU-1	
105	SERVICE BAYS	AUTOMOTIVE SERVICE STATION	3375	----	1.5 CFM PER SQUARE FEET	---	5063	---	5200	5200	EF-1	---	EF-1 CONTROLLED BY CO SENSOR
106	INVENTORY	UNOCCUPIED	1470	----	---	---	--	---	--	--	--	---	UNOCCUPIED - NO REQUIREMENT
107	UTILITY AREA #1	UNOCCUPIED	182	----	---	---	--	---	---	---	---	---	UNOCCUPIED - NO REQUIREMENT
108	UTILITY AREA #2	UNOCCUPIED	30	----	---	---	--	---	---	---	---	---	UNOCCUPIED - NO REQUIREMENT
	TOTAL		--				5452	2400	5600	5400			

AIR DISTRIBUTION DEVICE SCHEDULE							
MARK	TYPE	MANUFACTURER	MODEL #	FACE	STYLE	BORDER TYPE	FINISH
S-1	SUPPLY	AES	ADB-1	6x12	DROP BOX	DUCT MOUNT	PAINT PER ARCHITECTURAL PLANS
S-2	SUPPLY	TITUS	300RL	20x8	LOUVERED	DUCT MOUNT	PAINT PER ARCHITECTURAL PLANS
S-3	SUPPLY	TITUS	TMS	12x12	LOUVERED	SURFACE MOUNT (TYPE 1)	PAINT PER ARCHITECTURAL PLANS
T-1	TRANSFER	TITUS	350RL	20x8	LOUVERED	SURFACE MOUNT (TYPE 1)	PAINT PER ARCHITECTURAL PLANS
E-1	EXHAUST	TITUS	350	12x12	LOUVERED	SURFACE MOUNT (TYPE 1)	PAINT PER ARCHITECTURAL PLANS
ACCEPTABLE MANUFACTURERS FOR EQUIVALENT OF SCHEDULE PRODUCT (NO OTHER SUBSTITUTIONS WILL BE ALLOWED): * KRUEGER * TUTTLE & BAILEY * MESTEK * CARNES							
NOTES: - ROUND CONNECTION TO MATCH ROUND DUCT DIMENSION AS SHOWN ON FLOOR PLAN. - SUPPLY AND RETURN AIR DIFFUSERS SHALL BE SELECTED AT A MAX NOISE CRITERIA OF 30.							

GAS FIRED UNIT HEATER SCHEDULE												
TAG	AREA SERVING	MFR.	MODEL	MBH INPUT	MBH OUTPUT	AFUE	CFM	WEIGHT	MOTOR			
									FLA	MOCP	PHASE	VOLTS
UH-1	INVENTORY	REZNOR	UDAS30	30	26.4	82	456	55	1.9	15	1	115
UH-2	UTILITY AREA	REZNOR	UDAS30	30	26.4	82	456	55	1.9	15	1	115
ACCEPTABLE MANUFACTURERS FOR EQUIVALENT OF SCHEDULE PRODUCT (NO OTHER SUBSTITUTIONS WILL BE ALLOWED): * STERLING * LENNOX * MODINE												
NOTES: 1. UNIT SHALL BE COMPLETE WITH CONTROL TRANSFORMER RELAY PACKAGE, 24V REVERSE ACTING THERMOSTAT WITH NIGHT SETBACK. 2. PROVIDE SHUTOFF COCK AT EACH BURNER. 3. UNIT TO HAVE VERTICAL VENT TERMINAL AND CONCENTRIC ADAPTER. 4. VIBRATION ISOLATION HANGER RODS OR APPROVED EQUAL.												

GAS FIRED STRAIGHT TUBE RADIANT HEATER SCHEDULE										
TAG	MANUFACTURER	MODEL	INPUT MBH	GAS CONNECTION	ELECTRICAL DATA				TUBE TYPE	TUBE LENGTH
					VOLTS	PHASE	START DRAW	RUN DRAW		
RAD-1,2,3	SPACE RAY	ETS75	75	1/2" Ø	120	1Ø	3.0 AMP	2.6 AMP	STRAIGHT	20 FT
ACCEPTABLE MANUFACTURERS FOR EQUIVALENT OF SCHEDULE PRODUCT (NO OTHER SUBSTITUTIONS WILL BE ALLOWED): * DETROIT RADIANT PRODUCTS / RE-VERBER-RAY * ROBERTS / GORDON, INC.										
NOTES: 1. HEATERS SHALL BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. 2. EACH HEATER SHALL BE CONTROLLED BY A MANUFACTURER SUPPLIED NIGHT SETBACK DIGITAL THERMOSTATS, MOUNTED 4'-0" ABOVE THE FINISHED FLOOR. SEE MECHANICAL PLAN FOR LOCATIONS. 3. HEATERS SHALL BE "PULL (NEGATIVE PRESSURE OR VACUUM) THROUGH" SYSTEMS WITH CAST IRON BURNERS AND CALORIZED EMITTER TUBES (ALC OPTION). THE EMITTER TUBES SHALL BE CALORIZED FOR LONGEVITY, CORROSION RESISTANCE AND HIGH RADIANT EFFICIENCY. HOT ROLLED EMITTER TUBES ARE NOT ALLOWED. 4. HEATERS SHALL OPERATE UNDER A NEGATIVE PRESSURE AT ALL TIMES TO PRECLUDE THE ESCAPE OF COMBUSTION GASSES INSIDE OF THE BUILDING. 5. UNIT TO BE SHUT OFF WHEN TOX ALERT IS ACTIVATED. (BY C.O. SENSOR.) 6. HEATERS SHALL BE FURNISHED WITH END REFLECTORS (2 - PAIRS).										

GAS FIRED ROOFTOP UNIT SCHEDULE																	
TAG	MFR.	MODEL	NOMINAL TON	ENTERING AIR CONDITIONS	ARI EER	SUPPLY CFM	RETURN CFM	O.A. CFM	TOTAL S.P.	FAN MOTOR HP	GAS MBH		ELECTRICAL DATA				WT.
											INPUT	OUTPUT	VOLTS	PHASE	FLA	MOCP	
RTU-1	LENNOX	KGA072	6	78.5°F DB 62.2°F WB @ 105°F AMBIENT	11.2	2400	2000	400	0.8	2	108	86	208	3Ø	29.5	50	1100
ACCEPTABLE MANUFACTURERS FOR EQUIVALENT OF SCHEDULE PRODUCT (NO OTHER SUBSTITUTIONS WILL BE ALLOWED): * CARRIER * YORK * TRANE																	
NOTES: 1. MECHANICAL UNIT SHALL BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. 2. PROVIDE UNIT WITH UNPOWERED GFCI CONVENIENCE OUTLET. 3. PROVIDE NEW FILTERS IN UNIT AFTER ALL DUCTWORK HAS BEEN COMPLETED AND PRIOR TO TEST AND BALANCING OF UNIT. 4. PROVIDE WITH DIFFERENTIAL ENTHALPY TYPE ECONOMIZER WITH BAROMETRIC RELIEF DAMPER. 5. PROVIDE UNIT WITH 14" HIGH ROOF CURB WITH SECURITY BARS. 6. PROVIDE UNIT WITH FACTORY INSTALLED HINGED ACCESS PANELS. 7. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH. 8. PROVIDE WITH FACTORY MOUNTED SUPPLY AND RETURN AIR SMOKE DETECTORS. 9. PROVIDE UNIT WITH WATER SENSING SWITCH IN CONDENSATE PAN. HIGHER THAN PRIMARY DRAIN LINE CONNECTION AND BELOW THE OVERFLOW RIM. UNIT SHALL SHUT DOWN UPON ALARM FROM SWITCH.																	

EXHAUST FAN SCHEDULE									
TAG	DESCRIPTION	MFR.	MODEL	CFM	ESP	MOTOR			NOTES
						HP / WATTS	PHASE	VOLTS	
EF-1	SERVICE AREA EXHAUST FAN	COOK	ACE-210C9B	5200	1.0	2.0	3	208	1,2,4,5,6
EF-2	TOILET EXHAUST FAN	COOK	ACE-60C3B	200	.5	0.25	1	115	1,3,5,6
ACCEPTABLE MANUFACTURERS FOR EQUIVALENT OF SCHEDULE PRODUCT (NO OTHER SUBSTITUTIONS WILL BE ALLOWED): * GREENHECK * PENN									
NOTES: 1. PROVIDE WITH 14" ROOF CURB, BACKDRAFT DAMPER AND BIRD SCREEN. 2. ALL THREE PHASE EXHAUST FANS ARE TO BE COMPLETE WITH COMBINATION MAGNETIC MOTOR STARTER. PROVIDED BY ELECTRICAL CONTRACTOR. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION. 3. INTERLOCKED WITH TOILET ROOM LIGHTING. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION. 4. ACTIVATED BY TOXALERT C.O. SENSOR. MOUNT FAN AS HIGH AS POSSIBLE. 5. ALL DISCONNECTS PROVIDED BY ELECTRICAL CONTRACTOR. 6. ALL SWITCHES, INTERLOCKS, RELAYS, TRANSFORMERS, TIMECLOCKS, ETC., SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. SEE ELECTRICAL PLANS.									

ROOF HOOD SCHEDULE									
TAG	DESCRIPTION	MFR.	MODEL	CFM	NECK SIZE (IN)	DAMPER			
						HP	PHASE	VOLTS	MODEL
RH-1	TOX ALERT INTAKE ROOF HOOD	COOK	24x36GI	5200	24 x 36	FRAC.	1	115	---
ACCEPTABLE MANUFACTURERS FOR EQUIVALENT OF SCHEDULE PRODUCT (NO OTHER SUBSTITUTIONS WILL BE ALLOWED): * GREENHECK									
NOTES: 1. PROVIDE WITH BIRD / INSECT SCREEN. 2. PROVIDE WITH 120 VOLT MOTORIZED DAMPER INTERLOCKED WITH EF-1. 3. ALL MOTORIZED DAMPERS SHALL BE WIRED TO BE OPEN WHEN CORRESPONDING EQUIPMENT IS ENERGIZED. 4. ALL DAMPERS SHALL DEFAULT TO SPRING SHUT WHEN POWER LOSS OCCURS OR WHEN NOT IN USE. 5. PROVIDE WITH MANUFACTURER'S 14" ROOF CURB.									

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AS NOTED ON PLANS REVIEW

DEVELOPMENT SERVICES

LEE'S SUMMIT, MISSOURI

ACERTUS CONSULTING GROUP LLC

1487 West 29th Street ♦ Lees Summit, MO 64063-2000

P 913.322.5150 ♦ F 913.322.5155

www.acertusgroup.com

Proj# 202.0075

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NEW FCAC STORE

2020 ER

3561 SW MARKET ST

JACKSON COUNTY

LEE'S SUMMIT, MISSOURI 64082

STATE OF MISSOURI

RANDALL A. NELSON

NUMBER

PE-2007003990

PROF. ASS. NO. 1636

07/22/2020

ISSUE BLOCK

1

04/16/20

ADD #1

2

06/30/20

CB #1

3

07/23/20

IFC

PROPERTY NO.: 160085

6 DIGIT NO.: 906983

4 DIGIT NO.: 78C9

AOR PROJECT NUMBER: 1955871

TO PERMIT: DATE: 03/26/2020

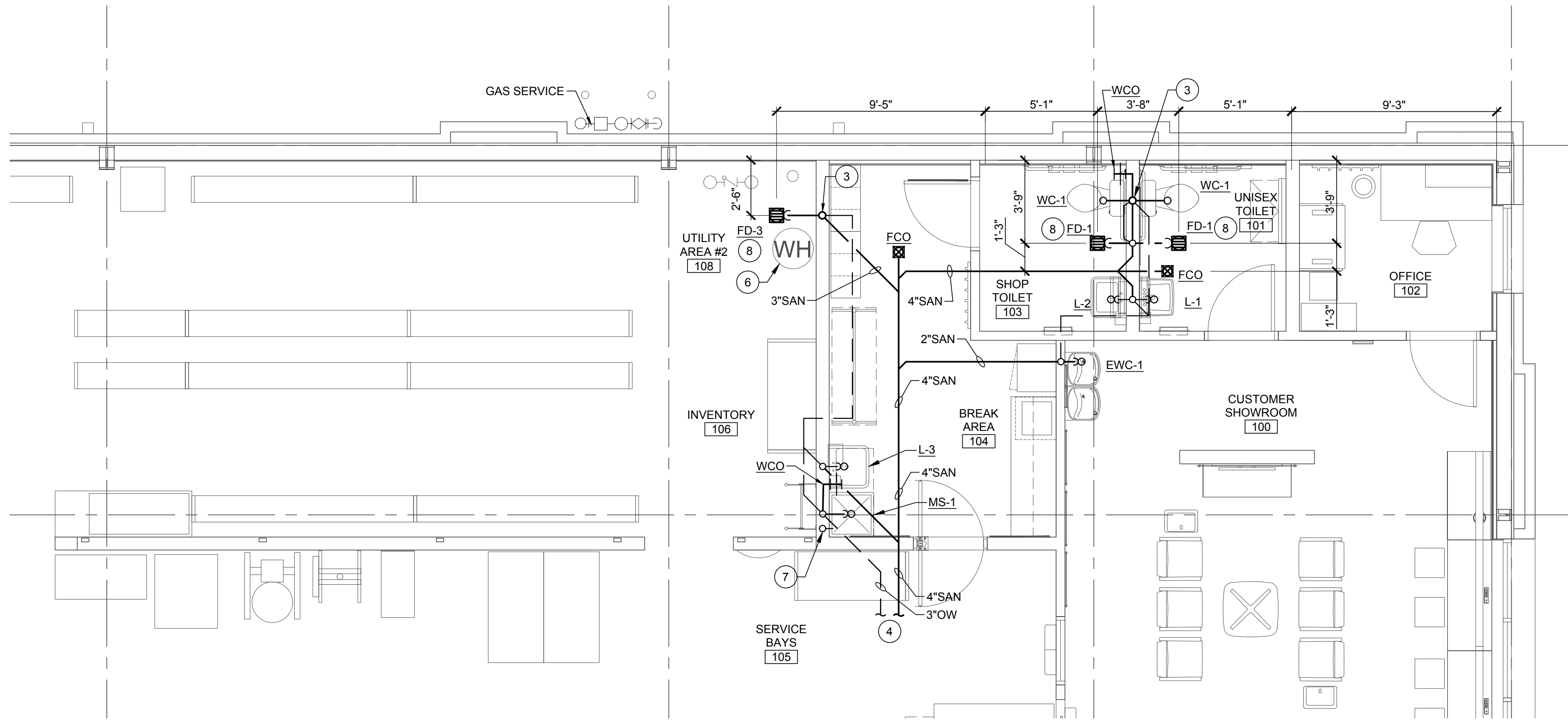
TO BID: DATE: ##-##-##

SHEET TITLE:

MECHANICAL EQUIPMENT SCHEDULES

SHEET NUMBER:

M3



1
P2 RESTROOM ENLARGED SANITARY PLAN
SCALE: 1/4" = 1'-0"

KEYED PLAN NOTES (THIS SHEET ONLY)

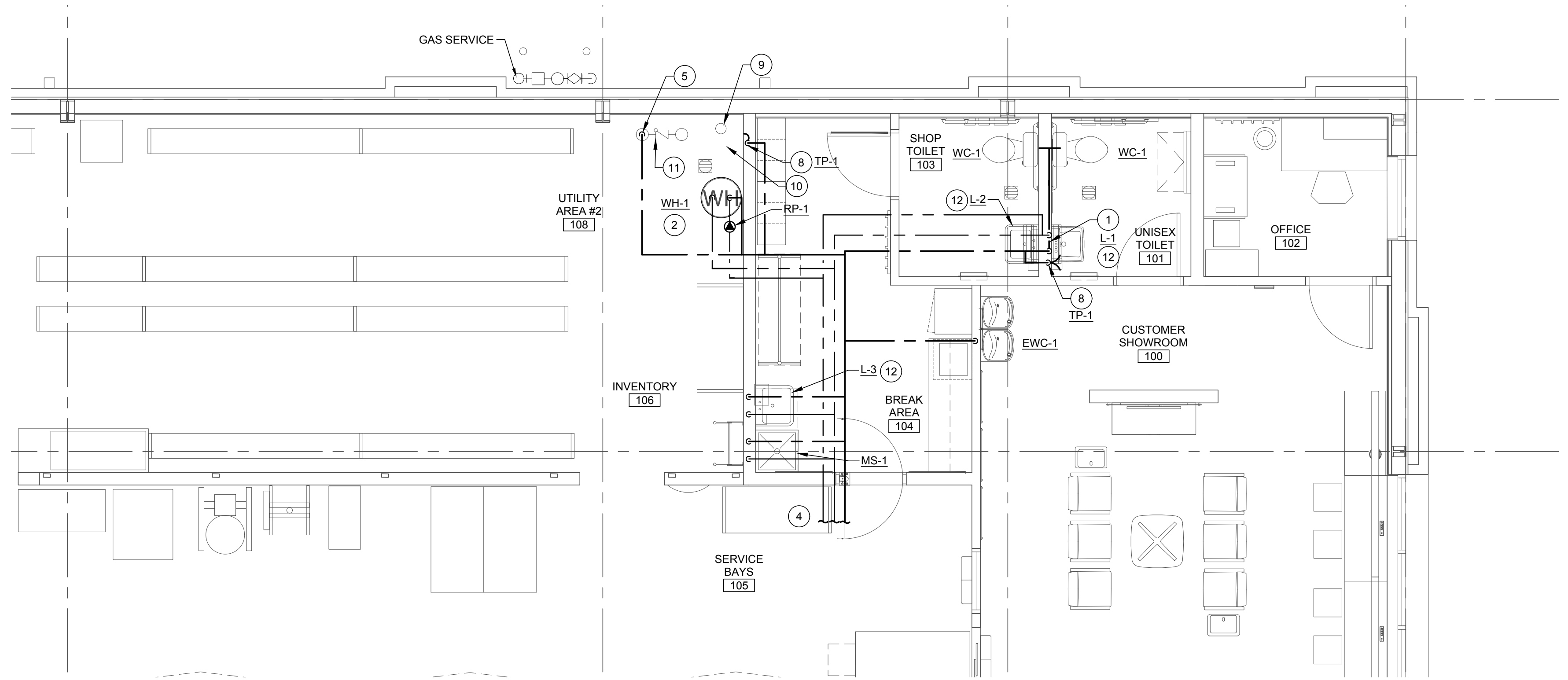
- ROUTE DOMESTIC WATER DOWN WITH-IN WALL TO FIXTURES.
- WATER HEATER LOCATED ON 18" STAND IN INVENTORY ROOM.
- 3" VENT UP IN WALL TO 4" VENT THRU ROOF.
- SEE PLUMBING PLAN ON SHEET P1 FOR CONTINUATION
- DOMESTIC WATER SERVICE, EXTEND OUT 5'-0" FROM BUILDING. REFER TO CIVIL DRAWINGS FOR COORDINATION.
- DRAIN PAN DRAIN LINE AND T&P DRAIN LINE FROM WATER HEATER WH-1. ROUTE DOWN TO FLOOR DRAIN, TERMINATE OVER FLOOR DRAIN WITH CODE REQUIRED AIR GAP.
- VERIFY LOCAL REQUIREMENTS FOR CONDENSATE DISPOSAL. ROUTE FULL SIZE OF RTU CONNECTION TO NEAREST ROOF DOWNSPOUT WITH 1/8" PER FOOT SLOPE AND TERMINATE WITH AIR GAP PER CODE. IF CITY REQUIRES CONDENSATE DISPOSAL TO SANITARY, ROUTE FULL SIZE CONDENSATE LINE TO MOP SINK. ROUTE PIPE AT AN 1/8" PER FOOT SLOPE HORIZONTALLY AND TIGHT TO WALL VERTICALLY. PROVIDE CODE REQUIRED AIR GAP.
- ROUTE 1/2" COPPER LINE AS NEEDED UNDER SLAB FROM TRAP PRIMER DISTRIBUTION UNIT, LOCATED IN ACCESS PANEL IN WALL OPEN TO UTILITY AREA AND RESTROOM, TO APPROPRIATE FLOOR DRAINS. REFER TO PLUMBING ISOMETRIC ON SHEET P6 AND DETAIL ON SHEET P5 FOR MORE INFORMATION.
- FIRE RISER INLET. REFER TO SPECIFICATIONS, FIRE PROTECTION DRAWINGS AND CIVIL DRAWINGS FOR MORE INFORMATION.
- FIRE RISER FLOOR AREA. REFER TO SPECIFICATIONS AND FIRE PROTECTION DRAWINGS FOR MORE INFORMATION.
- AMES MODEL LF4000B REDUCED PRESSURE BACKFLOW PREVENTOR. SEE DETAIL ON SHEET P5 FOR ADDITIONAL INFORMATION.
- PROVIDE MIXING VALVE TMV-1 SET AT 110° F. INSTALL MIXING VALVE UNDER SINK.

SLOPE OF HORIZONTAL DRAINAGE PIPE	
SIZE	MINIMUM SLOPE
2-1/2" OR LESS	1/4" / ft OR 2%
3" TO 6"	1/8" / ft OR 1%

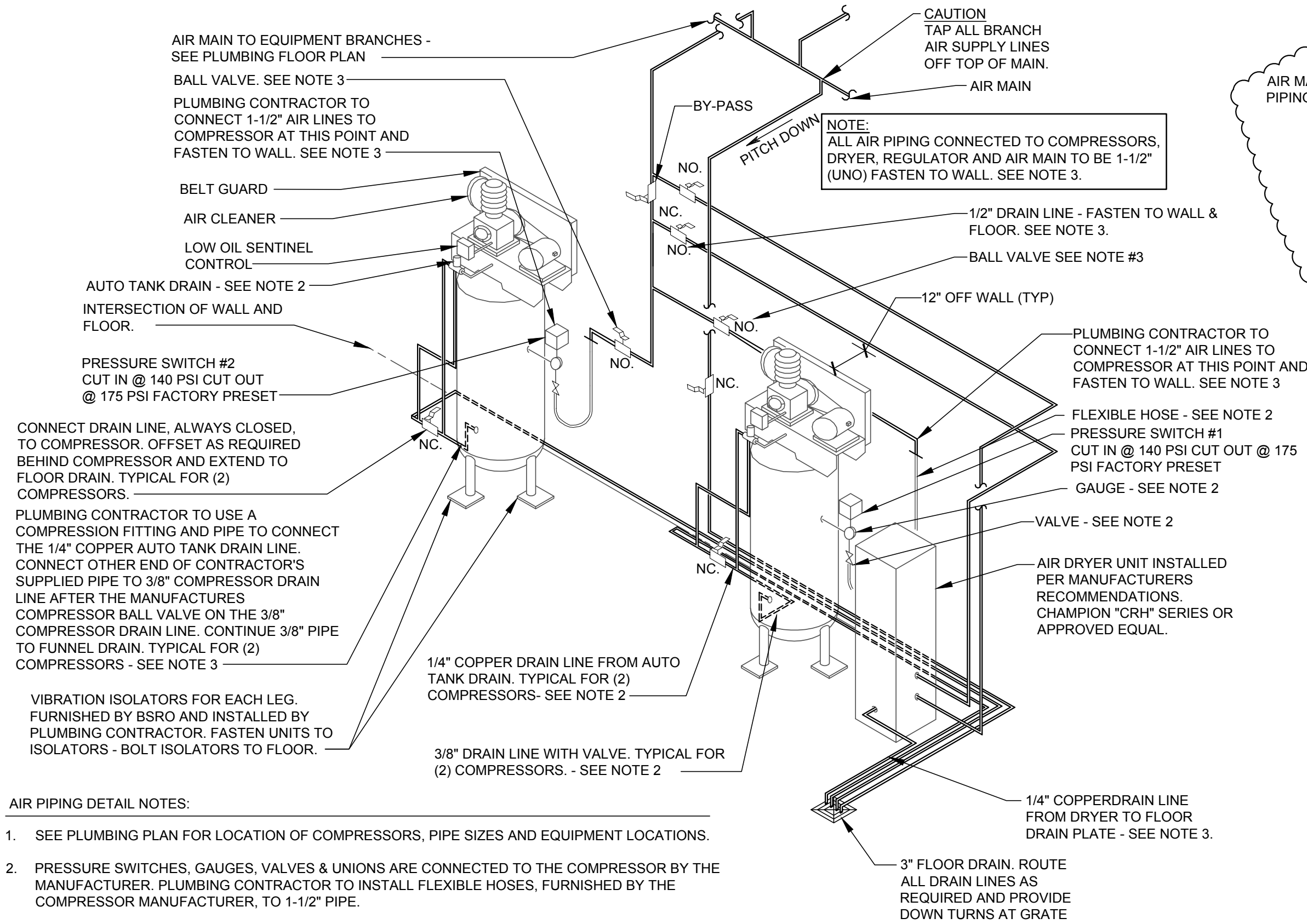
NOTE:
SCHEDULE BASED ON 2018 INTERNATIONAL PLUMBING CODE, SECTION 704 - TABLE 704.1.

NOTE:
ROUTE ALL WATER PIPING TIGHT TO CEILING AND WALLS WHERE POSSIBLE. NO PIPING SHALL BE ROUTED IN UNCONDITIONED SPACES. ALL PIPING SHALL BE INSULATED AND LABELED.

NOTE:
SANITARY AND DOMESTIC WATER PIPE ROUTING ARE DIAGRAMMATIC ONLY. CONTRACTOR SHALL COORDINATE EXACT ROUTING WITH FIELD CONDITIONS. REFER TO PIPING DIAGRAMS ON SHEET P6 FOR PIPE SIZES.



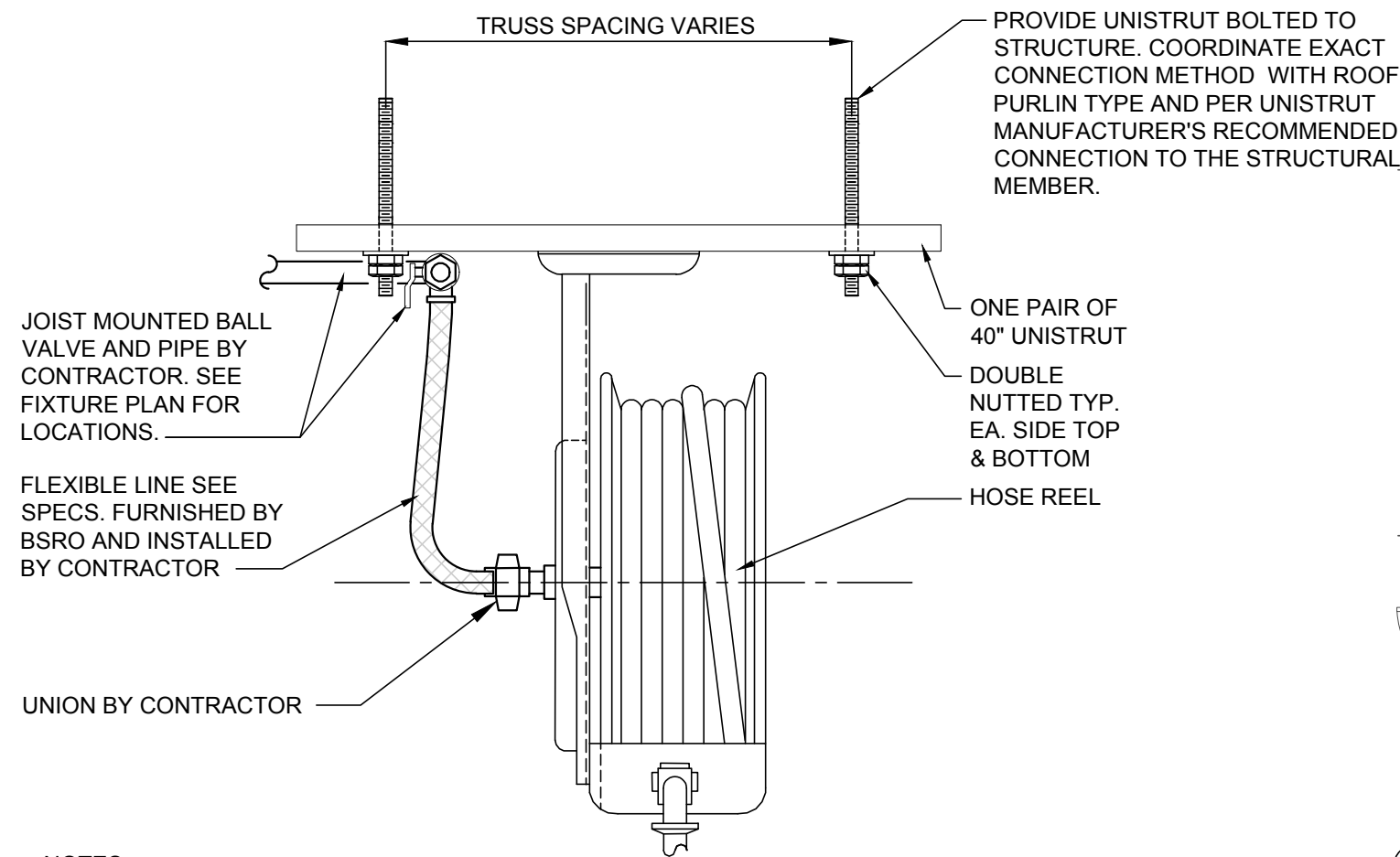
2
P2 RESTROOM ENLARGED WATER PLAN
SCALE: 1/4" = 1'-0"



- AIR PIPING DETAIL NOTES:
- SEE PLUMBING PLAN FOR LOCATION OF COMPRESSORS, PIPE SIZES AND EQUIPMENT LOCATIONS.
 - PRESSURE SWITCHES, GAUGES, VALVES & UNIONS ARE CONNECTED TO THE COMPRESSOR BY THE MANUFACTURER. PLUMBING CONTRACTOR TO INSTALL FLEXIBLE HOSES, FURNISHED BY THE COMPRESSOR MANUFACTURER, TO 1-1/2" PIPE.
 - SEE SPECIFICATIONS FOR TYPE OF PIPE, VALVES, UNIONS & CHECK VALVES FURNISHED & INSTALLED BY PLUMBING CONTRACTOR
 - TYPICAL DETAIL - PIPING CONNECTIONS AT COMPRESSORS MAY VARY ACCORDING TO MANUFACTURER. COMPRESSORS ARE TO BE FURNISHED BY BSRO AND INSTALLED BY CONTRACTOR.
 - COMPRESSORS TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
 - DRYER TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
 - ALL PIPING IS LOCATED / INSTALLED BETWEEN COMPRESSORS AND WALL. MOUNT TIGHT TO WALL.
 - ALL VALVES SHALL BE NORMALLY OPEN (NO.) UNLESS NOTED OTHERWISE.

AIR PIPING DETAIL - TWO VERTICAL COMPRESSORS

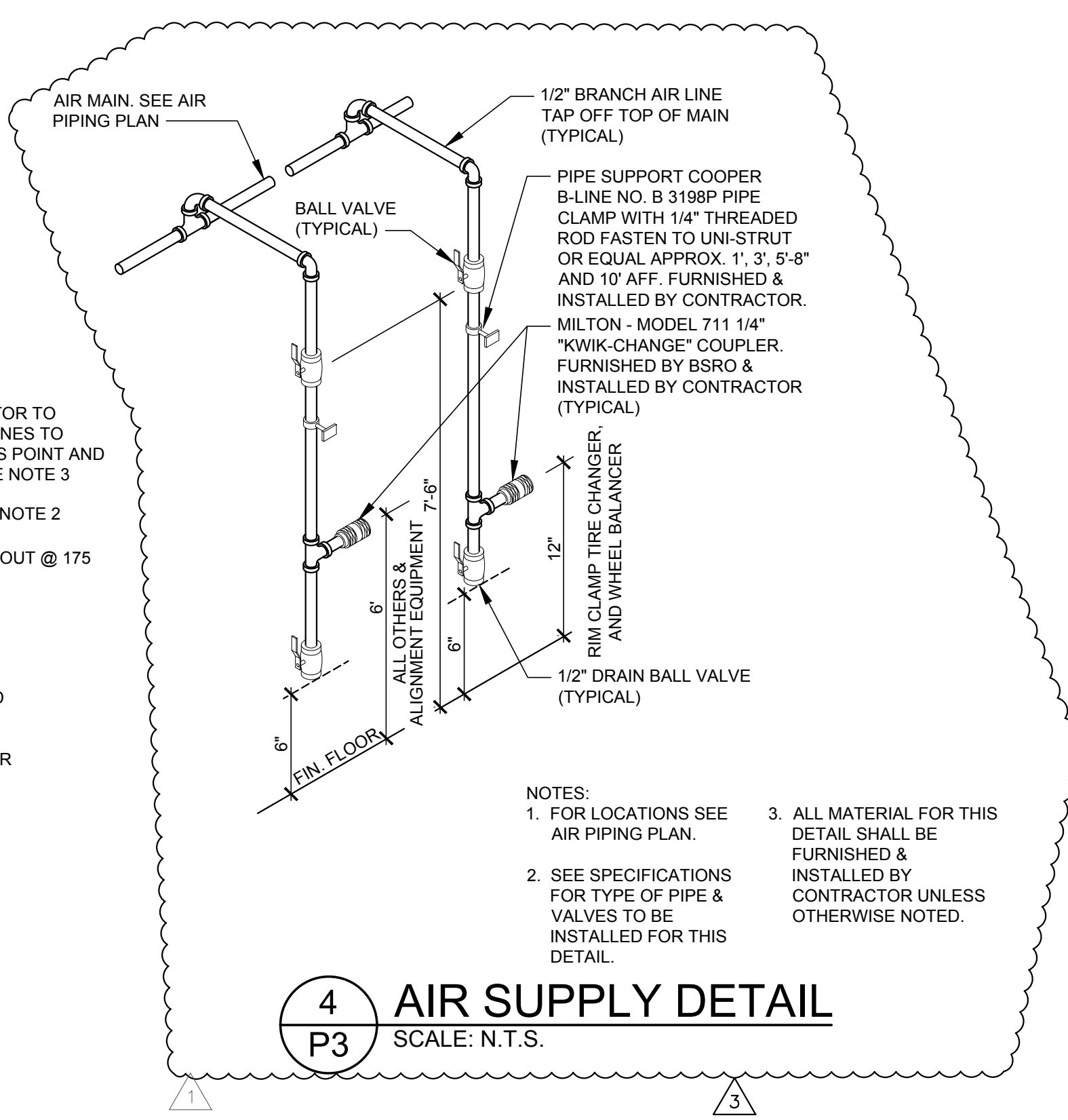
SCALE: N.T.S.



- NOTES:
- ALL REELS ARE FURNISHED BY BSRO AND INSTALLED BY CONTRACTOR
 - ALL REEL SUPPORTS ARE FURNISHED AND INSTALLED BY CONTRACTOR.
 - 2 PIECE 40" LONG UNISTRUT TO BE MOUNTED ON THE BOTTOM OF THE STRUCTURAL MEMBER AND SECURED WITH ALL-THREAD AND BOLTS. UNISTRUT SHALL BE CENTERED WITH PILASTER BETWEEN OVERHEAD DOORS. REFER TO SHEET A2 FOR LOCATIONS.
 - FOUR PIECES OF ALL-THREAD EXTENDED BEYOND THE BOTTOM OF THE STRUCTURAL MEMBER FOR ATTACHMENT OF TWO 40" LONG PIECES OF UNISTRUT. EACH END OF THE ALL-THREAD TO BE DOUBLE NUTTED TYPICAL.
 - UNISTRUT TO BE INSTALLED WITH THE OPEN PORTION OF THE CHANNEL FACING THE SERVICE BAY FLOOR.
 - WHERE AIR REEL OCCURS AT A MAIN BEAM LINE, MOUNT UNI-STRUT TO BOTTOM OF MAIN ROOF BEAM. SUPPORT UNISTRUT AT EACH END WITH ALL THREAD BACK UP TO A UNISTRUT MOUNTED AT THE BOTTOM OF THE ROOF PURLIN. PROVIDE ALL SECONDARY UNISTRUT AS NECESSARY TO ATTACHED UNISTRUT AS SHOWN.

PRE-ENGINEERED BUILDING AIR HOSE REEL DETAIL

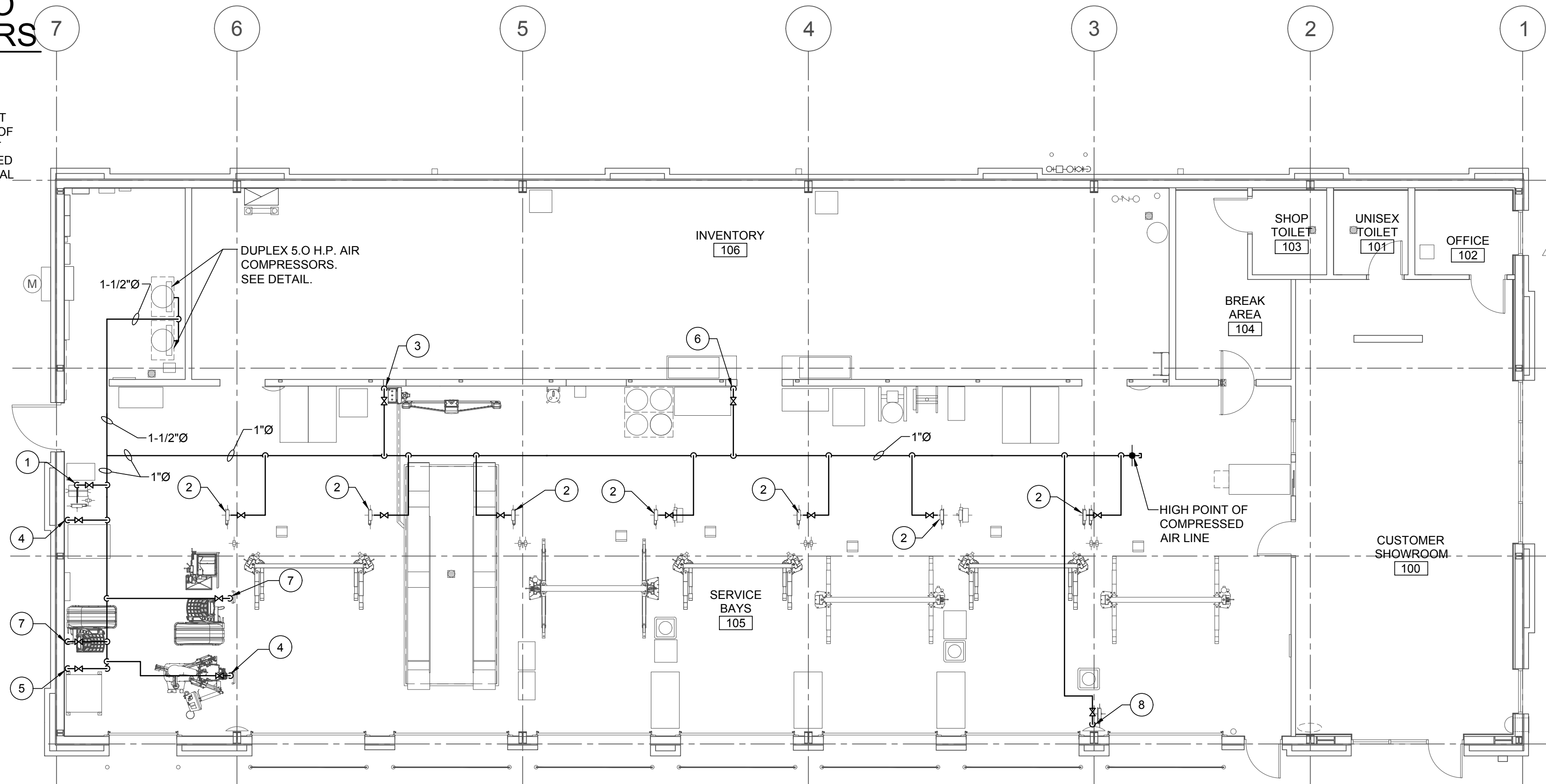
SCALE: N.T.S.



- NOTES:
- FOR LOCATIONS SEE AIR PIPING PLAN.
 - SEE SPECIFICATIONS FOR TYPE OF PIPE & VALVES TO BE INSTALLED FOR THIS DETAIL.
 - ALL MATERIAL FOR THIS DETAIL SHALL BE FURNISHED & INSTALLED BY CONTRACTOR UNLESS OTHERWISE NOTED.

4 P3 AIR SUPPLY DETAIL

SCALE: N.T.S.



NOTE:
VERIFY FINAL LOCATION OF AIR PIPING WITH ARCHITECTURAL DRAWINGS AND SHEET F1. COORDINATE EXACT AIR DROP LOCATIONS WITH ARCHITECT PRIOR TO FINAL INSTALLATION.

1 P3 AIR PIPING PLAN

SCALE: 1/8" = 1'-0"

KEYED PLAN NOTES

- FLAT REPAIR STATION 1/2" PIPE TO OVERHEAD AIR HOSE REEL. SEE DETAIL ON THIS SHEET FOR MOUNTING. COORDINATE EXACT LOCATION WITH FIXTURE PLAN.
- 1/2" PIPE TO OVERHEAD AIR HOSE REEL. SEE DETAIL ON THIS SHEET FOR MOUNTING. COORDINATE EXACT LOCATION WITH FIXTURE PLAN.
- 1/2" PIPE DOWN TO ALIGNMENT RACK. MAKE FINAL HARD PIPE CONNECTION TO ALIGNMENT CONTROLLER BOX. COORDINATE EXACT LOCATION WITH FIXTURE PLAN. REFER TO AIR SUPPLY DETAIL THIS SHEET FOR MOUNTING HEIGHT.
- 1/2" PIPE DROP FOR RIM CLAMP TIRE CHANGER. COORDINATE EXACT LOCATION WITH FIXTURE PLAN. REFER TO AIR SUPPLY DETAIL ON THIS SHEET FOR MOUNTING HEIGHT.
- 1/2" PIPE DROP FOR TANK MOUNTED AIR POWERED OIL PUMP. REFER TO AIR SUPPLY DETAIL THIS SHEET FOR MOUNTING HEIGHT. COORDINATE EXACT LOCATION OF AIR DROP WITH FIXTURE PLAN AND USED OIL STORAGE SYSTEM DETAIL ON SHEET P4.
- 1/2" PIPE DOWN TO WORKBENCH. COORDINATE EXACT LOCATION WITH FIXTURE PLAN. REFER TO AIR SUPPLY DETAIL ON THIS SHEET FOR MOUNTING HEIGHT.
- 1/2" PIPE DOWN TO ELECTRONIC WHEEL BALANCER. COORDINATE EXACT LOCATION WITH FIXTURE PLAN. REFER TO AIR SUPPLY DETAIL ON THIS SHEET FOR MOUNTING HEIGHT. COORDINATE WITH BSRO FOR FUTURE LOCATION OF AIR POWERED WHEEL BALANCER AND ELECTRONIC WHEEL BALANCER.
- 1/2" PIPE TO OVERHEAD AIR HOSE REEL. SEE DETAIL ON THIS SHEET FOR MOUNTING. COORDINATE EXACT LOCATION WITH FIXTURE PLAN.

AIR PIPING NOTES

- PROVIDE SHUTOFF VALVES IN EACH BRANCH USING BALL VALVES. REFER TO AIR SUPPLY DETAIL ON THIS SHEET FOR MOUNTING HEIGHT.
- INSTALL/ROUTE ALL PIPING TIGHT TO UNDERSIDE OF SERVICE BAY ROOF STRUCTURE.
- MAKE FINAL CONNECTIONS TO ALL EQUIPMENT FURNISHED BY OTHERS PER MANUFACTURER'S INSTRUCTIONS.
- PITCH PIPING BACK TO AIR COMPRESSOR. TAP ALL BRANCH PIPING TAKE-OFFS FROM TOP OF MAIN.
- RUN 1/2" PIPING FROM SUPPLY MANIFOLD TO TIRE CHANGERS AND CONNECT PER MANUFACTURER'S INSTRUCTIONS. SEE MANUFACTURER'S DRAWINGS FOR DETAIL OF SUPPLY MANIFOLD.
- ALL EQUIPMENT, MATERIAL AND LABOR NECESSARY FOR COMPLETION OF COMPRESSED AIR SYSTEM SHOWN ON DRAWINGS OR REFERRED TO IN SPECIFICATIONS TO BE FURNISHED AND INSTALLED BY CONTRACTOR UNLESS NOTED OTHERWISE.
- WHERE DRAWINGS OR SPECIFICATIONS EXCEED GOVERNING CODE REQUIREMENTS, DESIGN SHALL GOVERN. INSTALL NO WORK CONTRARY TO OR BELOW MINIMUM LEGAL STANDARDS. WHETHER DRAWINGS AND SPECIFICATIONS FULLY COMPLY OR NOT.
- CAUTION: ALL AIR LINES SHALL BE PROPERLY CLEANED AND BLOWN OUT PRIOR TO CONNECTING TO ANY OF THE EQUIPMENT SHOWN ON THIS SHEET.
- PROVIDE TIRE BALANCING UNIT AIR SUPPLY.

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ACERTUS
CONSULTING GROUP, LLC
1487 West Park Street • Kansas City, MO 64116
P 913.322.5150 • F 913.322.5155
www.acertusgroup.com
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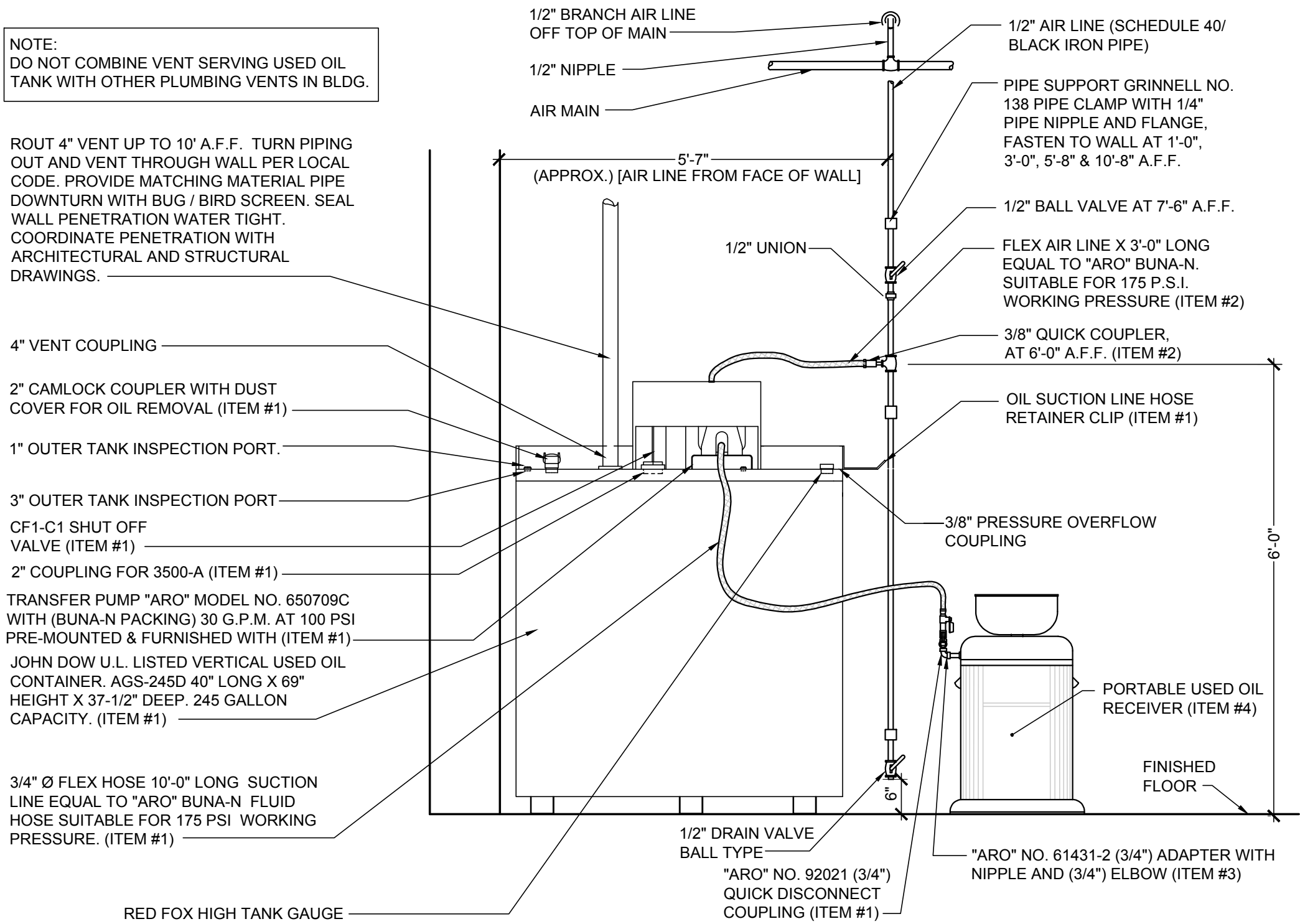
ISSUE BLOCK		
	04/16/20	ADD #1
	06/30/20	CB #1
	07/23/20	IFC

PROPERTY NO.: 160085
6 DIGIT NO.: 906983
4 DIGIT NO.: 78C9

AOR PROJECT NUMBER: 1955B71
TO PERMIT: DATE: 03/26/2020
TO BID: DATE: ##-##-##

SHEET TITLE:
AIR PIPING PLAN AND NOTES
SHEET NUMBER:
P3

USED OIL STORAGE SYSTEM INSTALLATION	
BILL OF MATERIAL - OWNER FURNISHED ITEMS	
ITEM#	DESCRIPTION
1	JOHN DOW DOUBLE WALL WASTE OIL TANK COMPLETE WITH AIR OPERATED "ARO" DIAPHRAGM PUMP, AUTOMATIC AIR SHUTOFF, LIQUID LEVEL GAUGE, 2" CAMLOCK COUPLER, 10" X 3/4" INLET HOSE WITH QUICK DISCONNECT COUPLER, QUICK DISCONNECT ADAPTER KIT, AND AIR FILTER REGULATOR. SIZE 40" L X 37-1/2" W X 69" H. WEIGHT : 1100 LBS. NOTE: TANK ASSEMBLY IS U.L. LISTED (MEETS UL-142 SPECIFICATIONS)
2	1/4"Ø FLEX HOSE 3'-0" LONG (175 P.S.I.) AND 1/4" QUICK COUPLER("JOHNDOW" NO. 421-QUICK).
3	JOHN DOW NO. 61431-2 (3/4" ADAPTER) WITH 3/4" NIPPLE AND 3/4" ELBOW. (1) REQUIRED FOR EACH ITEM #4 FURNISHED.
4	PORTABLE USED OIL RECEIVER (STORE EQUIPMENT ITEM) QUANTITY TO BE DETERMINED. SEE BUILDING STORE PLANNING LAYOUT - SHEET F1.



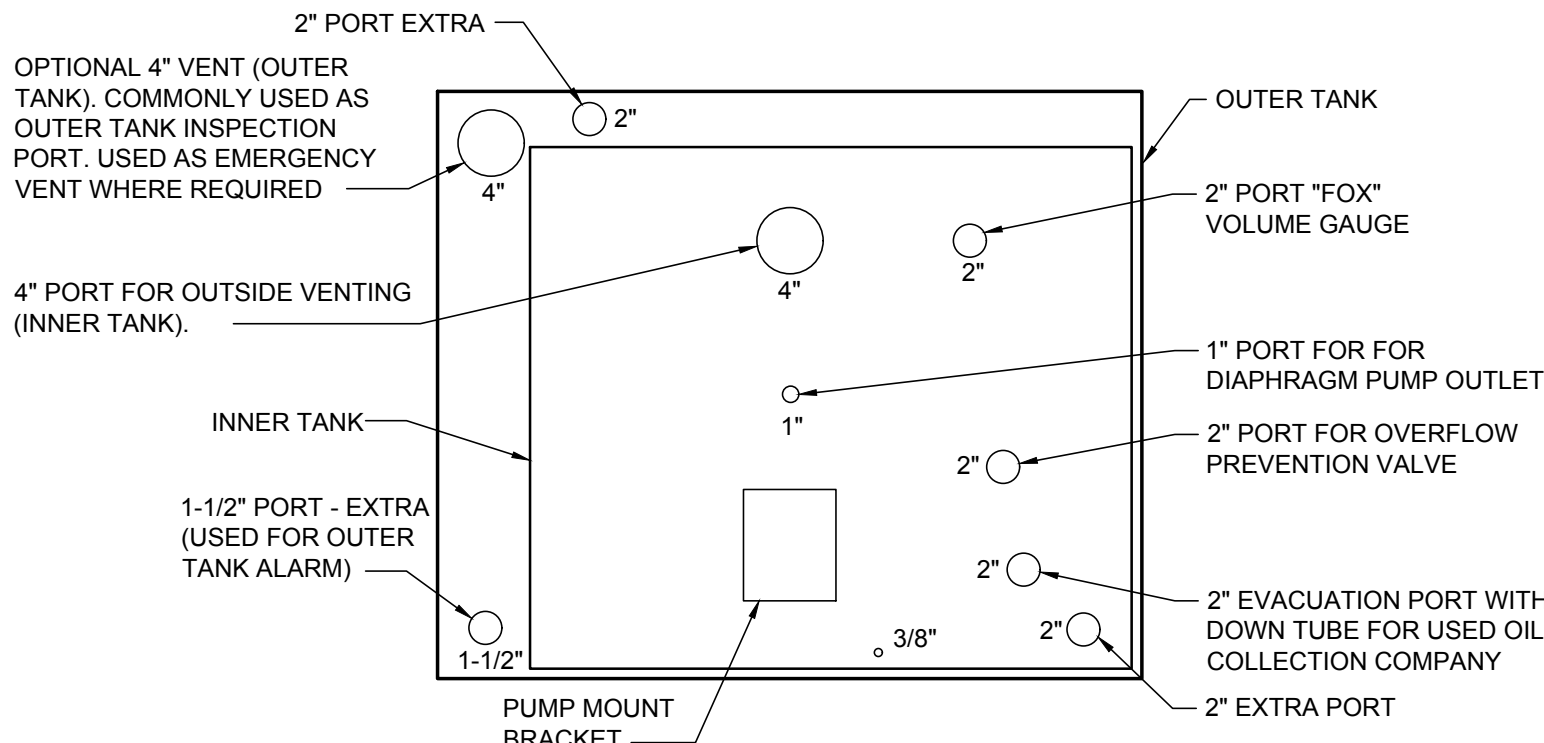
1
P4 USED OIL STORAGE SYSTEM ELEVATION VIEW
SCALE: N.T.S.

GENERAL NOTES:

- UNLESS OTHERWISE NOTED, ALL OTHER MATERIAL FOR THIS DETAIL SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR.
- SEE SPECIFICATIONS FOR TYPE OF PIPE & FITTINGS TO BE FURNISHED & INSTALLED.
- PROVIDE EARTH GROUND TO AIR OPERATED OIL PUMP PER MANUFACTURER'S SPECIFICATION AND/OR PER N.E.C. CODE REQUIREMENTS.

INSTALLATION NOTES:

- CONTACT LOCAL FIRE MARSHAL AND OBTAIN INSTALLATION PERMISSION AND/OR PERMITS.
- DETERMINE INSTALLATION LOCATION BY EITHER, REVIEWING BUILDING STORE PLANNING LAYOUT (SHEET F1), FOR NEW STORES, OR BY STORE MANAGER SELECTION AT EXISTING STORES.
- UNCRATE PRE-ASSEMBLED TANK (ITEM #1) AND MOVE INTO POSITION.
- INSTALL AIR LINE FROM MAIN AND INSTALL FLEX HOSE (ITEM #2) CONNECTION TO TANK.
- CONNECT VENT LINE TO TANK AND RUN VENT TO EXTERIOR THROUGH WALL. INSTALL WALL FLASHING AND WEATHER CAP AS NOTED.
- CONNECT QUICK DISCONNECTS (ITEM #3) TO EACH PORTABLE USED OIL COLLECTION RECEIVER AT THE STORE.
- VENT PIPING MATERIAL TO BE GALVANIZED STEEL, BLACK IRON, OR CAST IRON.



2
P4 USED OIL STORAGE SYSTEM - PORT LAYOUT
SCALE: N.T.S.

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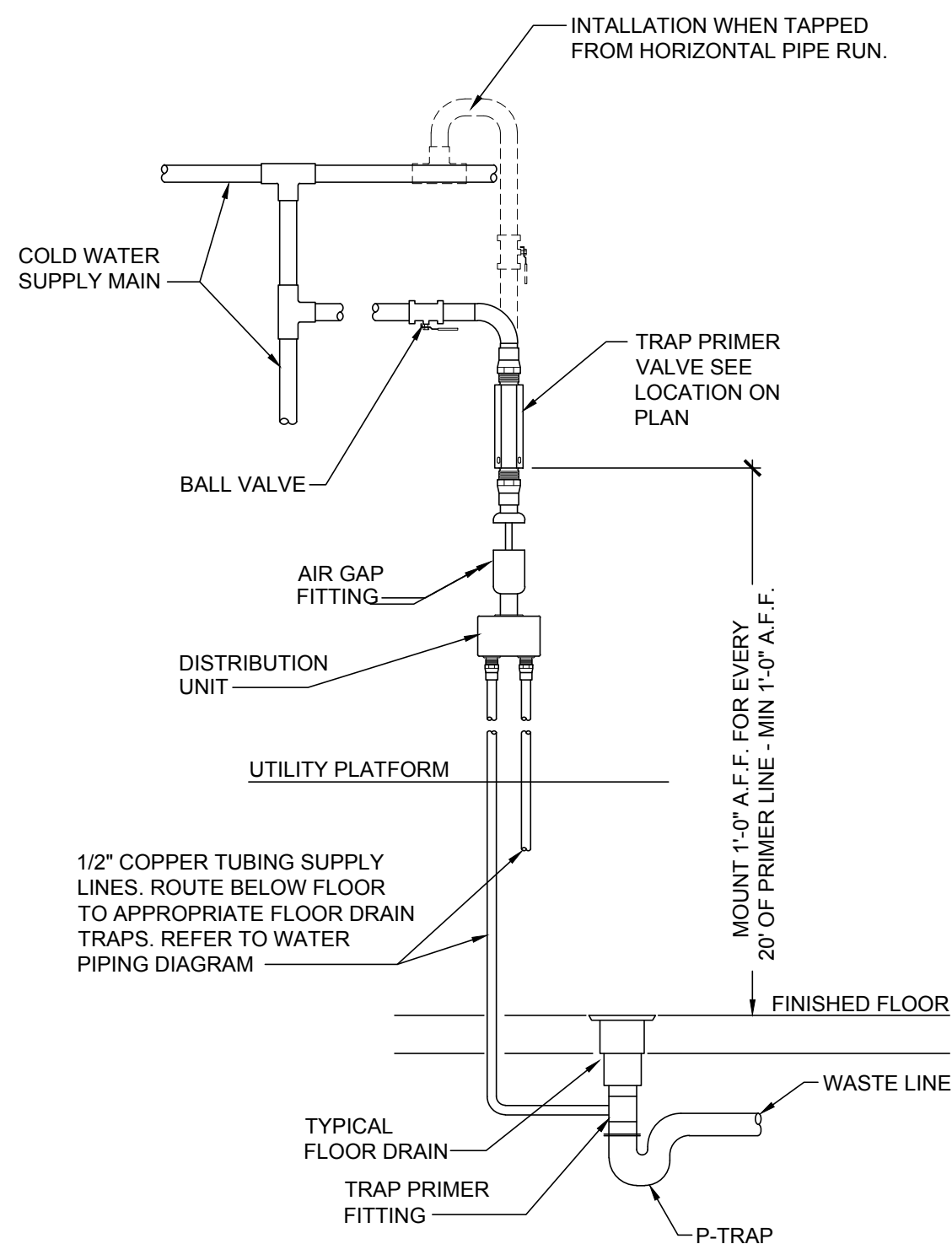
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ISSUE BLOCK			
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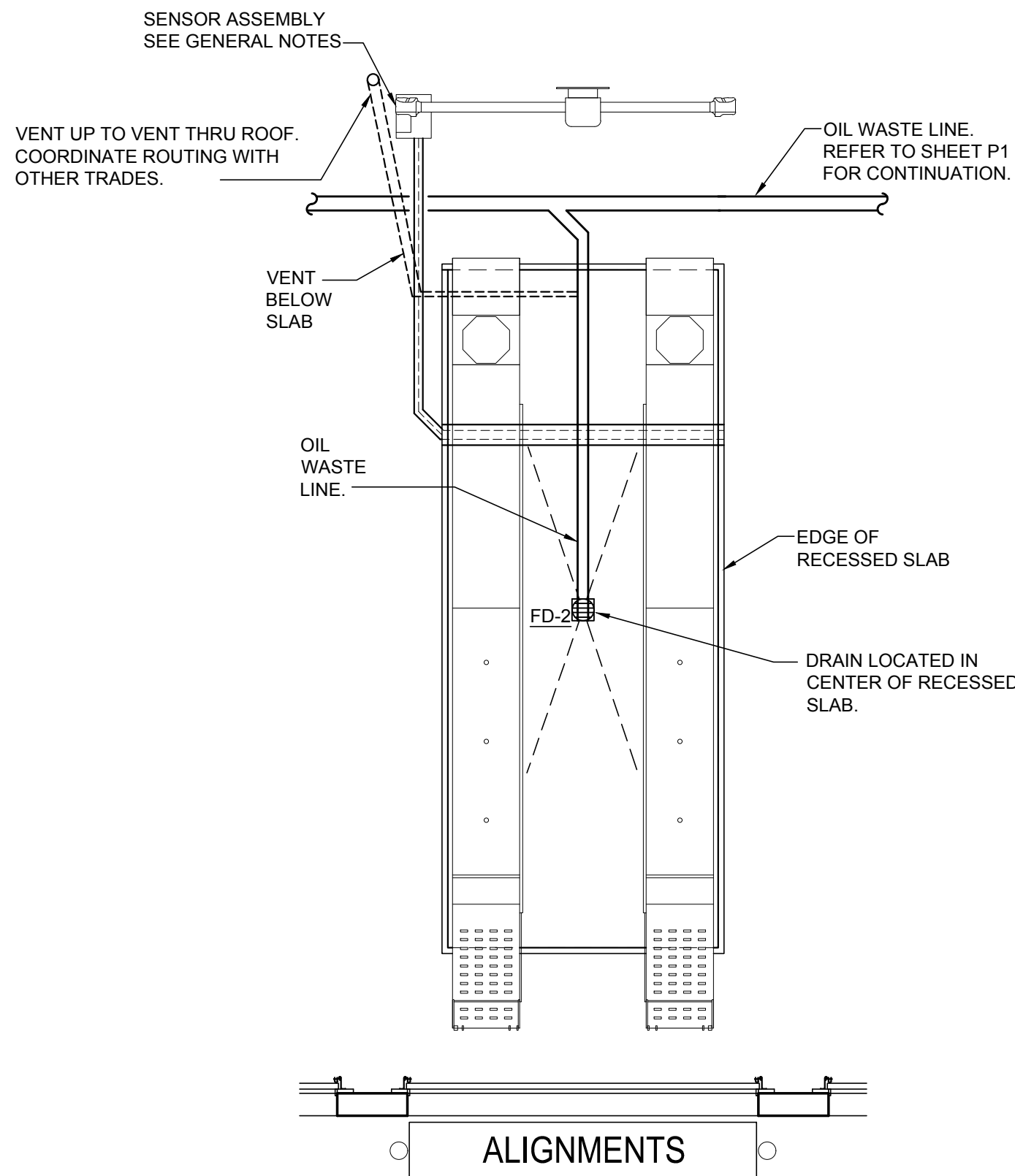
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6 DIGIT NO.: 906983
4 DIGIT NO.: 78C9
AOR PROJECT NUMBER: 1955B71
TO PERMIT: DATE: 03/26/2020
TO BID: DATE: ##-##-##

SHEET TITLE:
OIL PIPING DETAILS
SHEET NUMBER:
P4

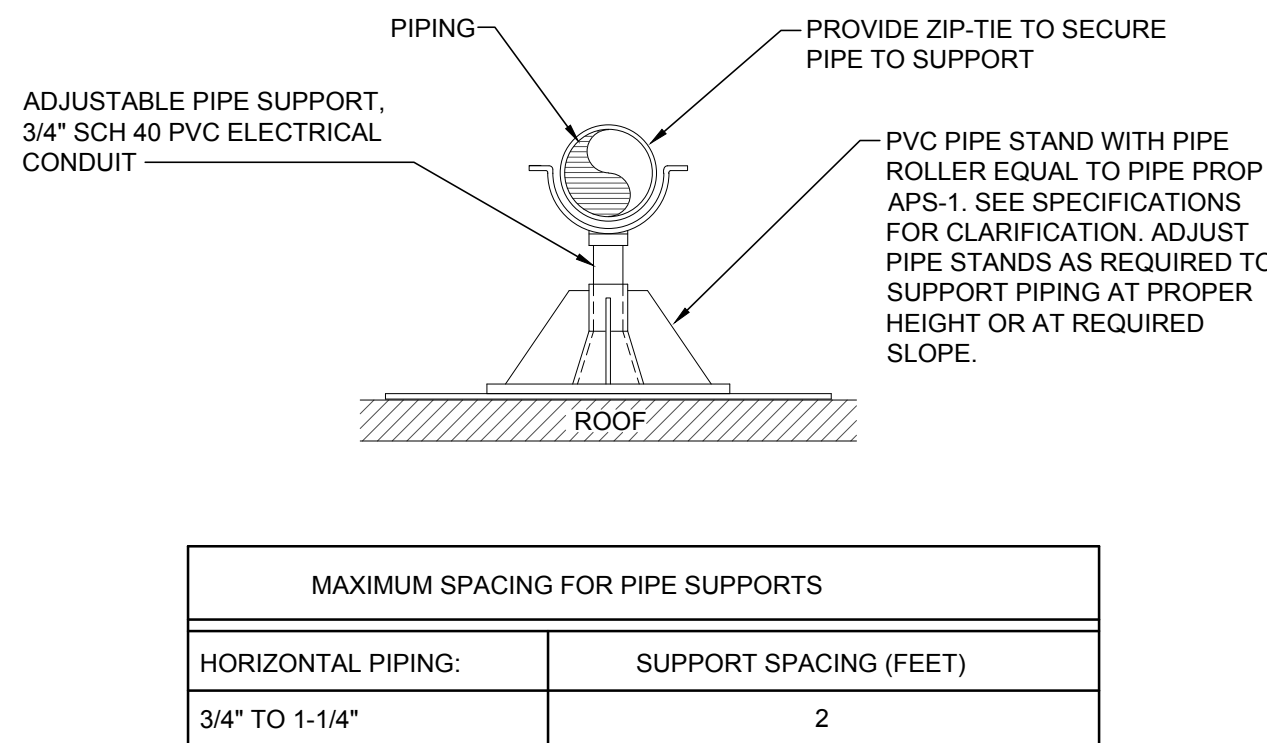


1
P5 TRAP PRIMER DETAIL (TP-1)
SCALE: N.T.S.

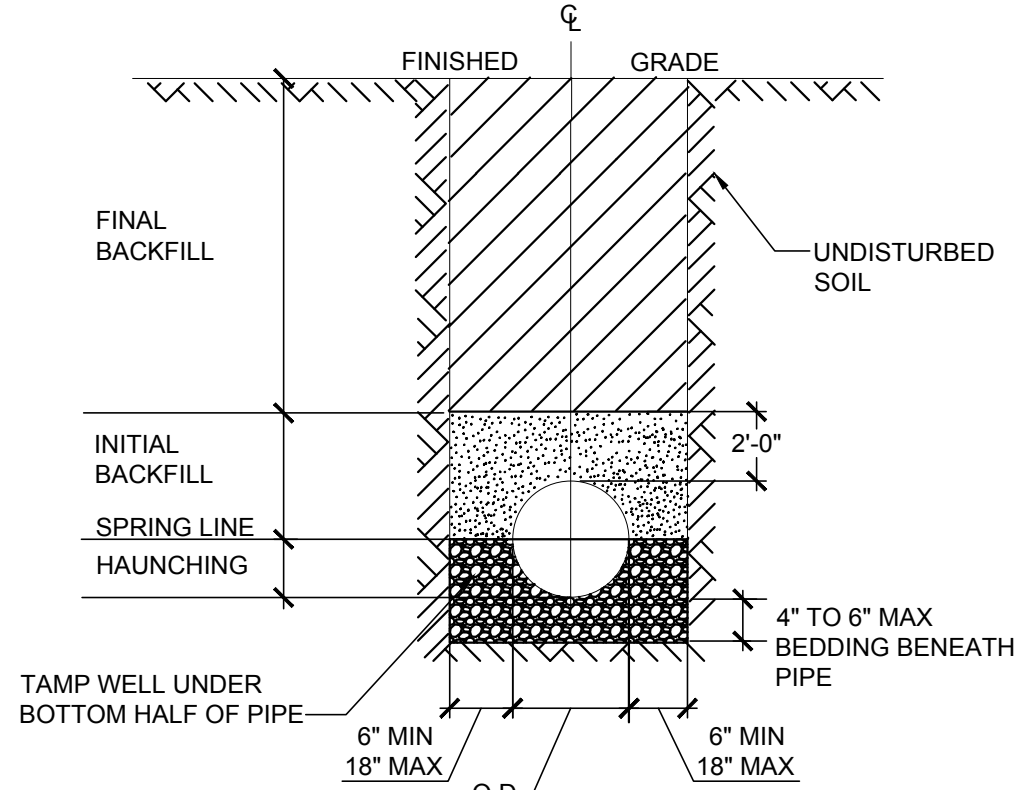
NOTE:
DETAILS SHOWN HERE ARE DIAGRAMMATICAL ONLY AND ARE NOT INTENDED TO SHOW EVERY FITTING AND/OR OFFSET. SEE MANUFACTURER'S SPECIFIC INSTALLATION INSTRUCTIONS AND DETAILS. INSTALLATION CONTRACTOR IS TO BE CERTIFIED AND AUTHORIZED BY THE MANUFACTURER.



7
P5 ALIGNMENT RACK PIPING DETAIL
SCALE: N.T.S.

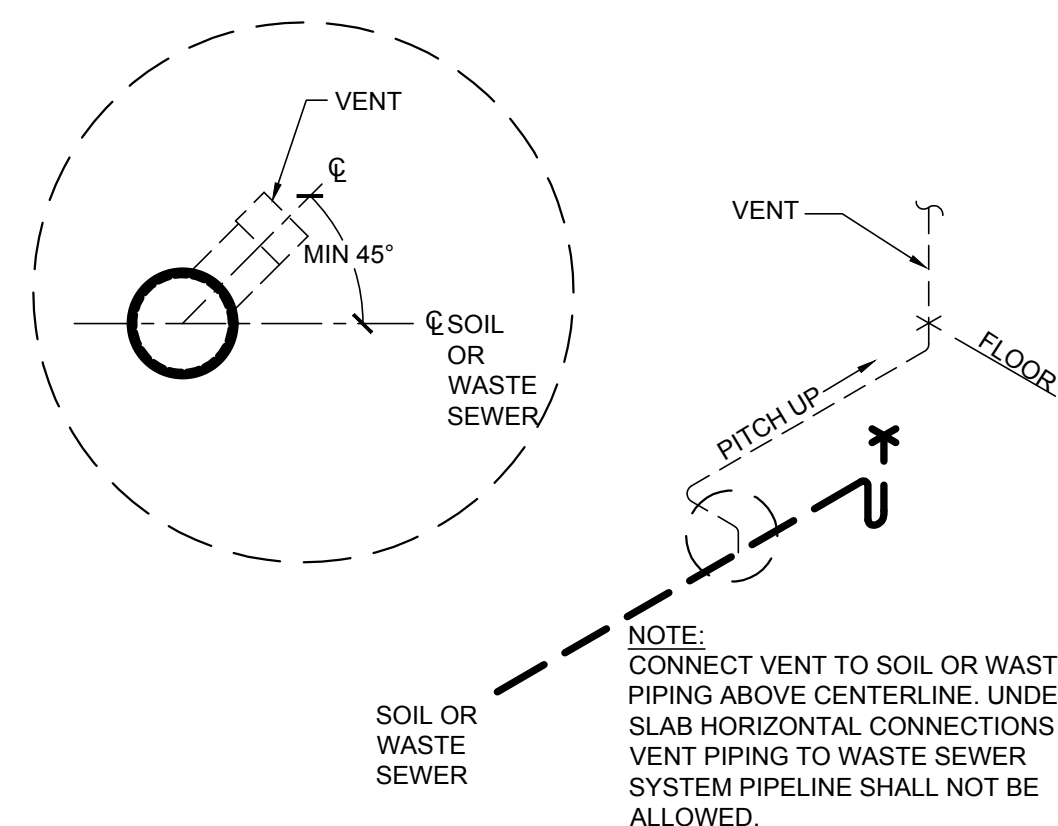


2
P5 ROOF MOUNTED PIPING
SUPPORT DETAIL
SCALE: N.T.S.

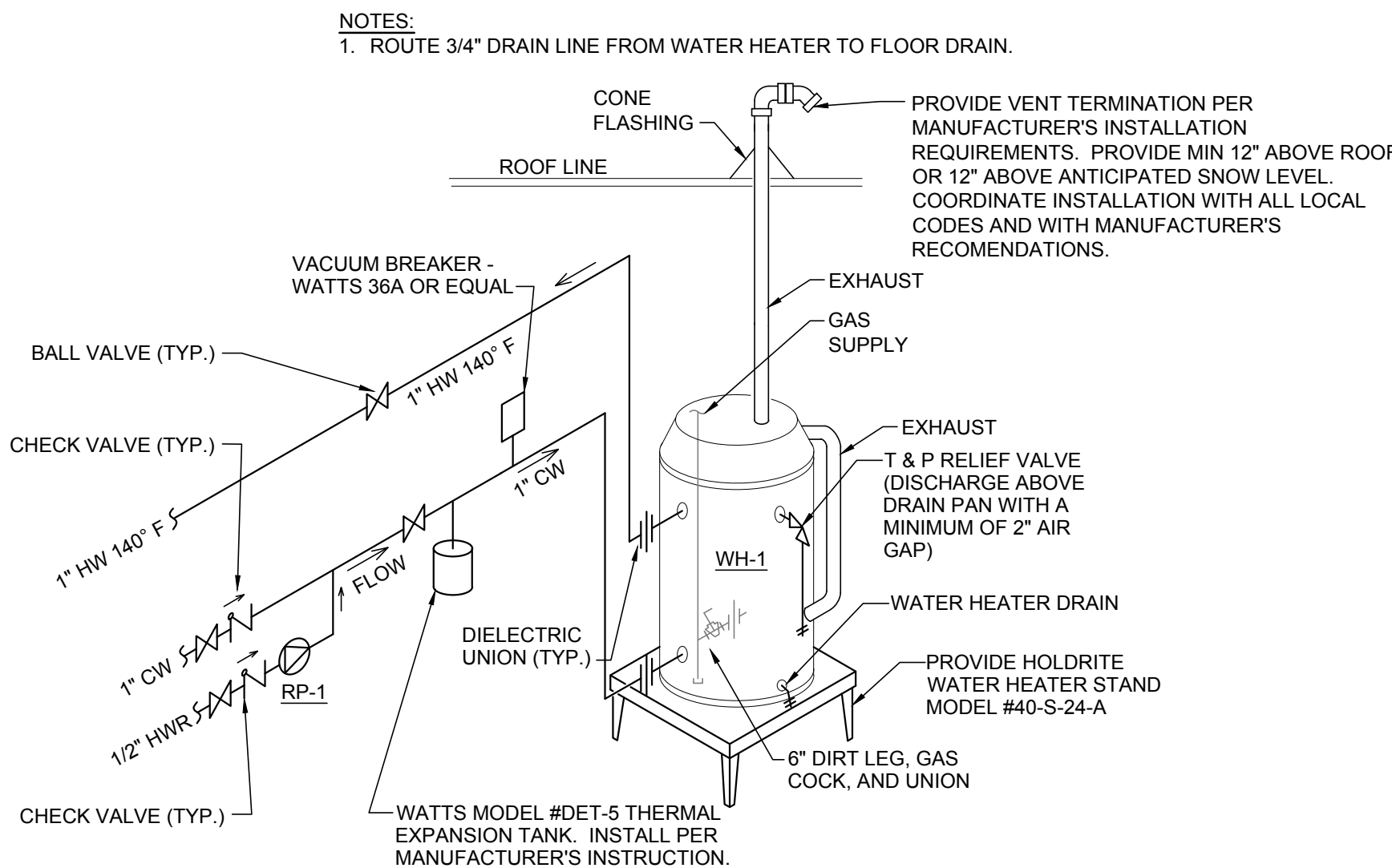


- NOTE:
- BEDDING SHALL BE IN CLASS I-A WORKED BY HAND, IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I-B COMPACTED TO 85% STANDARD PROCTOR.
 - HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I-A OR CLASS I-B OR CLASS II COMPACTED TO 85% PROCTOR.
 - INITIAL BACKFILL SHALL BE CLASS I-A WORKED BY HAND OR CLASS I-B OR CLASS II COMPACTED TO 85% STANDARD PROCTOR.
 - FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTE 3.
 - ALL BACKFILL MATERIALS SHALL BE IN ACCORDANCE WITH ASTM D 2321.
 - ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 6" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS II AND IV-A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
 - FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS, ROCKS, AND ICE LARGER THAN 3".
 - ALL TRENCH EXCAVATIONS SHALL BE SLOPED SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES.
 - COORDINATE WITH ALL STATE AND LOCAL CODE RECOMMENDATIONS ON TRENCHING AND BACKFILLING SANITARY PIPE. INSTALL PER ANY LOCAL OR STATE REGULATION THAT SUPERSEDES ABOVE DETAIL OR INFORMATION.

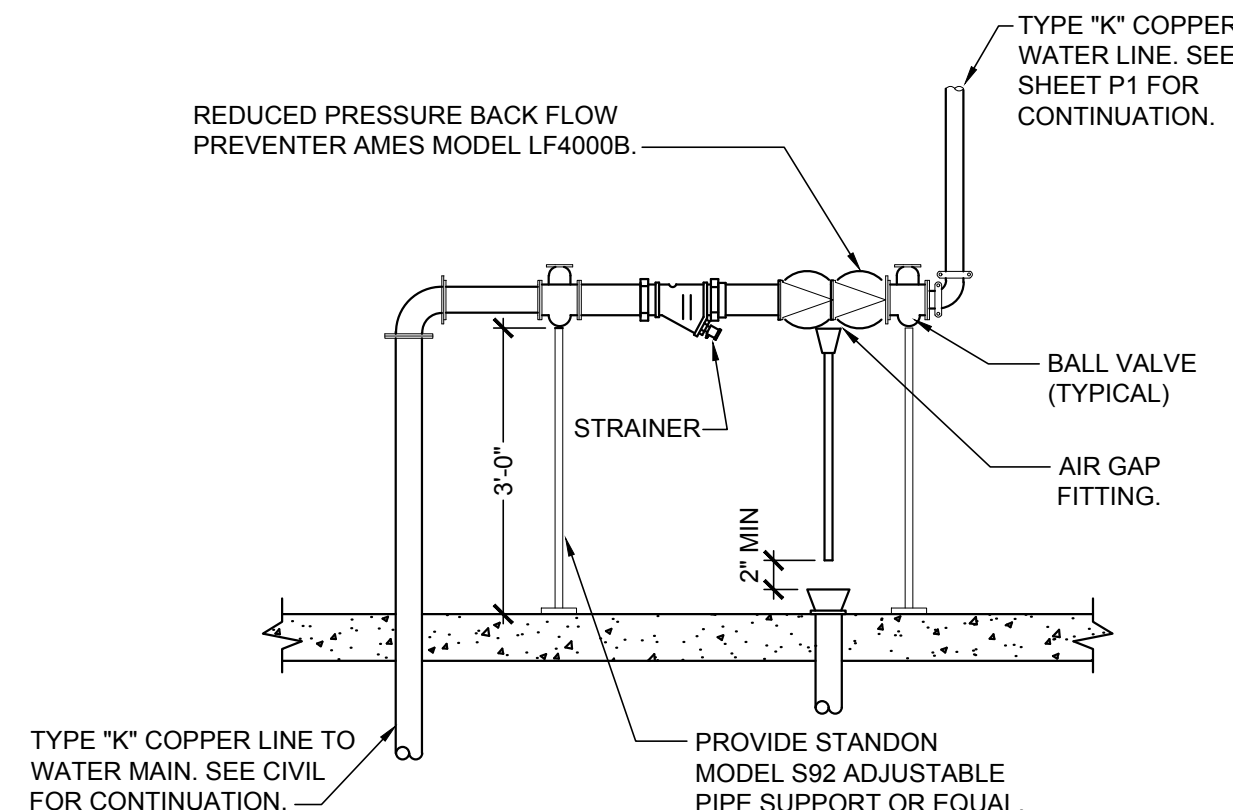
6
P5 SANITARY SEWER
BACKFILL DETAIL
SCALE: N.T.S.



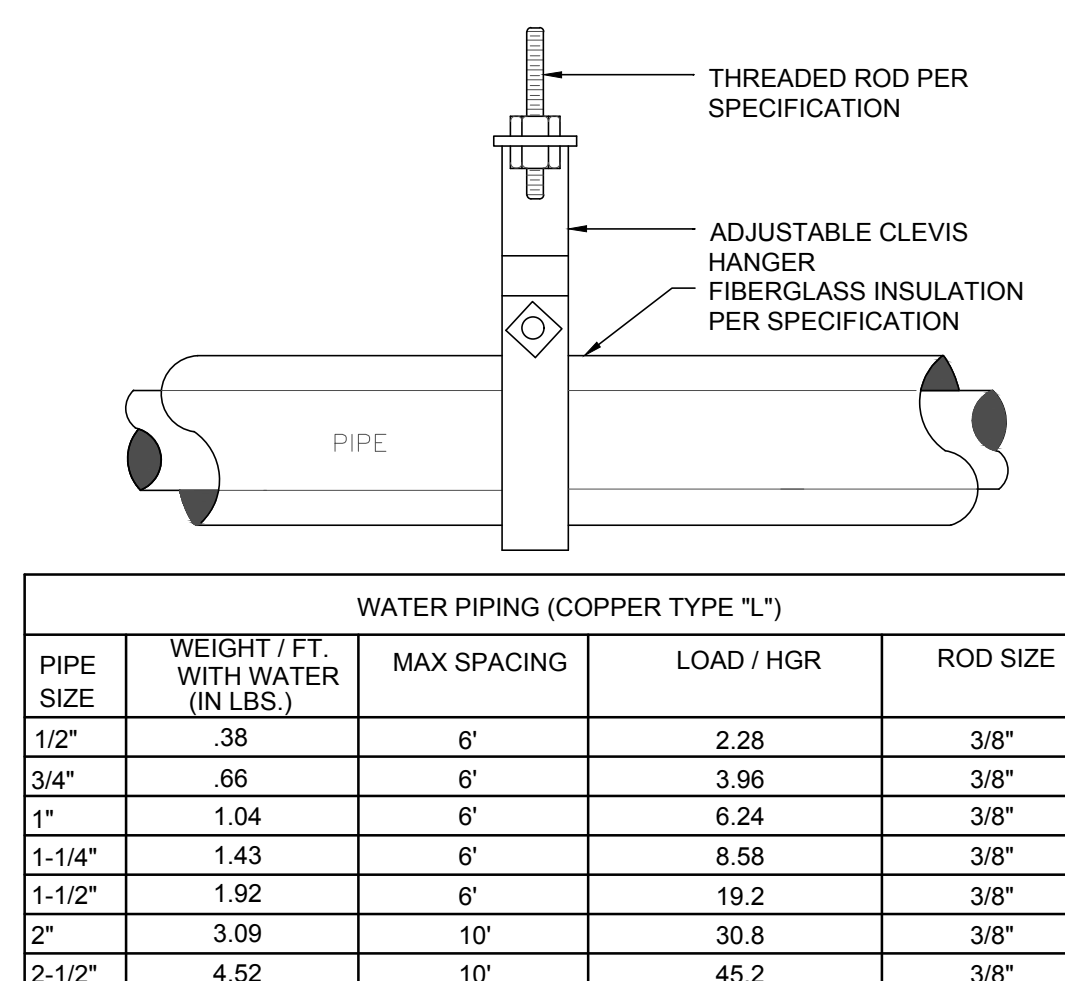
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P5 VENT PIPING INSTALLATION
SCALE: N.T.S.



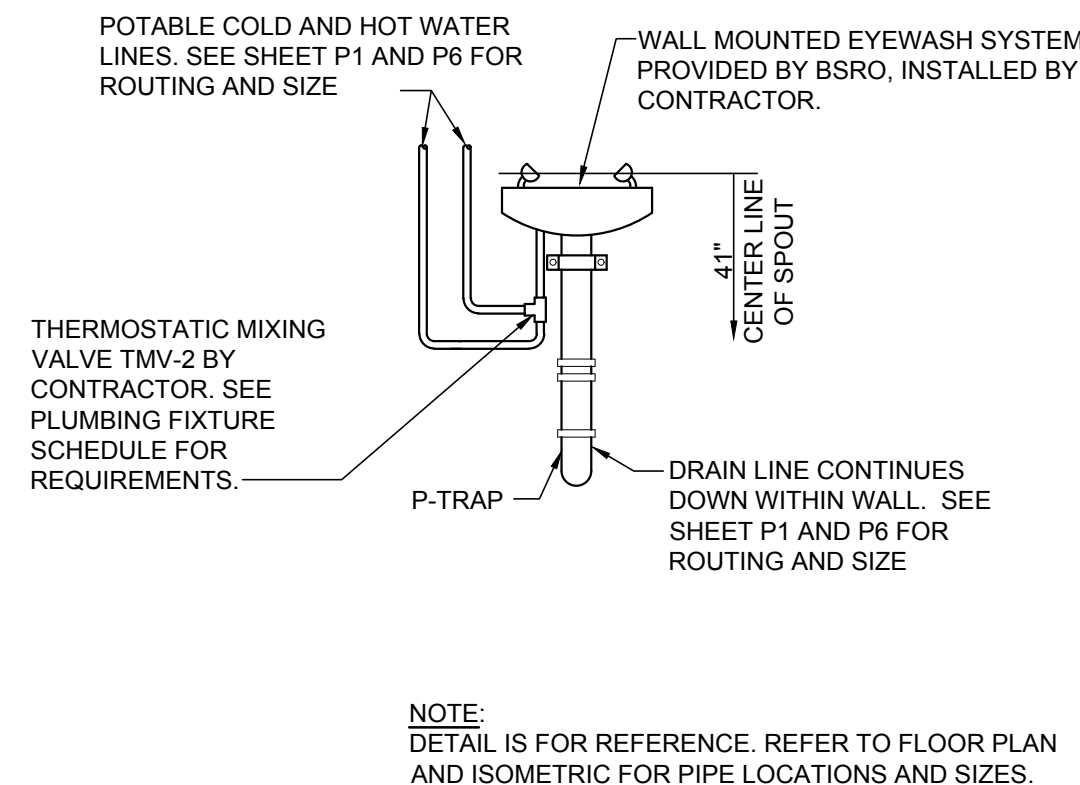
3
P5 GAS FIRED WATER
HEATER DETAIL
SCALE: N.T.S.



5
P5 WATER SERVICE DIAGRAM
SCALE: N.T.S.

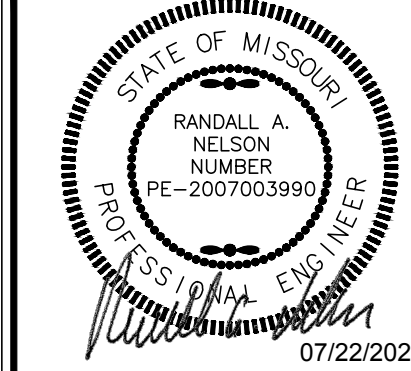


9
P5 PIPE SUPPORT DETAIL
SCALE: N.T.S.



4
P5 EYEWASH PIPING DETAIL
SCALE: N.T.S.

NEW FCAC STORE
2020 ER
3561 SW MARKET ST
JACKSON COUNTY
LEE'S SUMMIT, MISSOURI 64082



ISSUE BLOCK			
1	04/16/20	ADD	#1
2	06/30/20	CB	#1
3	07/23/20	IFC	

PROPERTY NO.: 160085
6 DIGIT NO.: 906983
4 DIGIT NO.: 78C9

AOR PROJECT NUMBER: 1955B71
TO PERMIT: DATE: 03/26/2020
TO BID: DATE: ##-##-##

SHEET TITLE:

PLUMBING
DETAILS

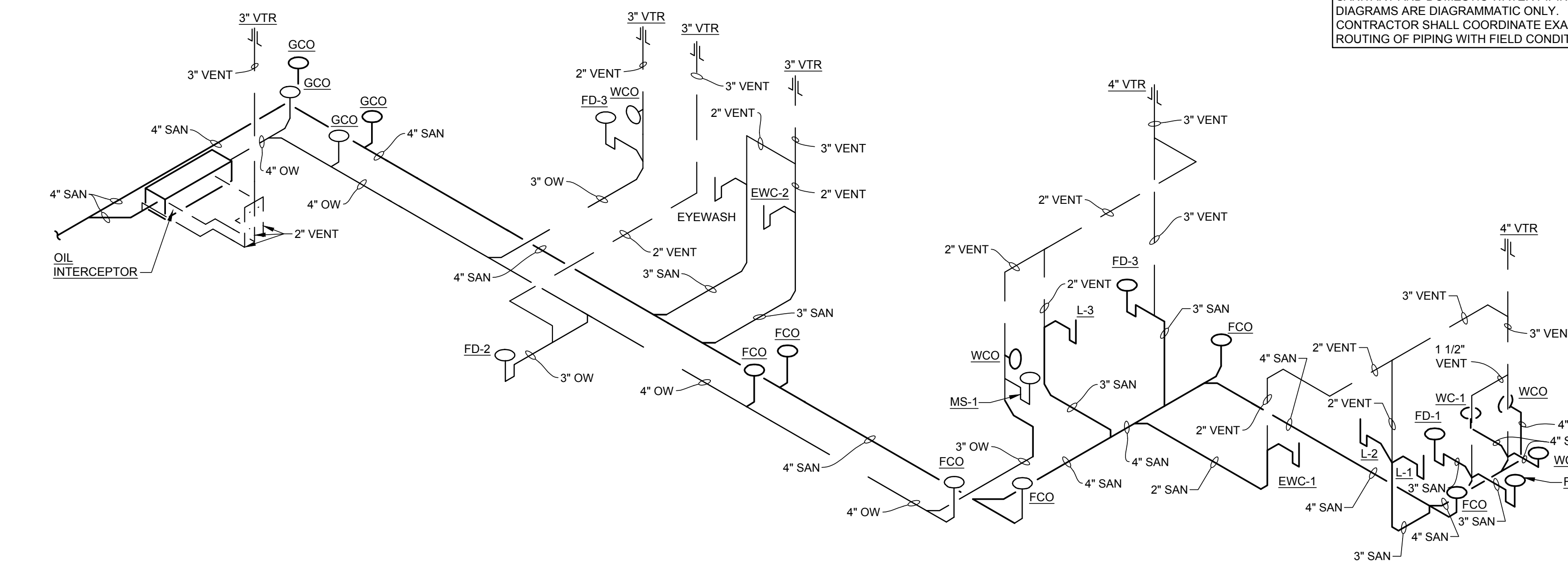
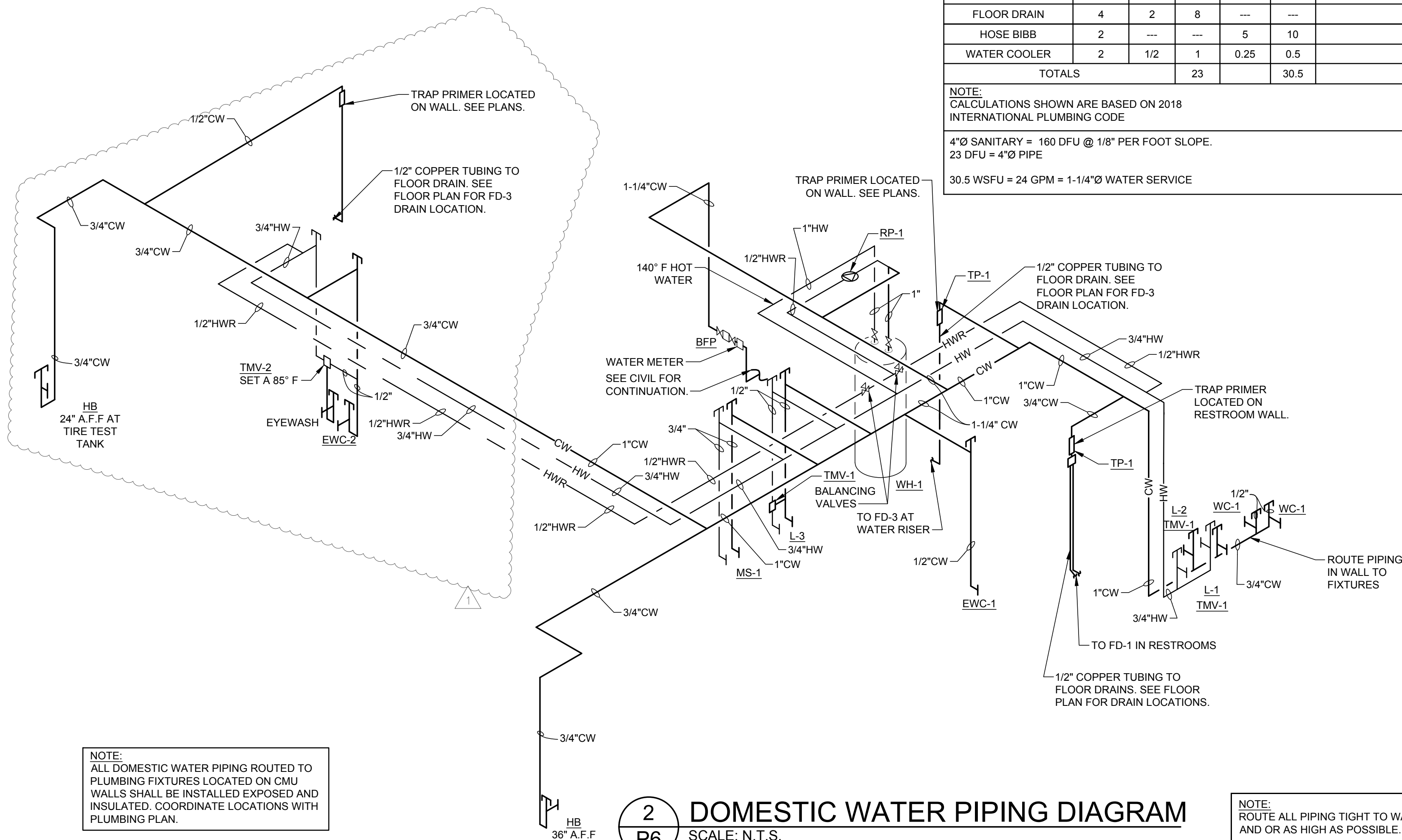
SHEET NUMBER:
P5



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STATEMENT OF RELEASE
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CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
ACERTUS
CONSULTING GROUP, LLC
14817 Main Park Street • Lees Summit, MO 64063
P 913.322.5150 • F 913.322.5155
www.AcertaGroup.com
Proj# 202.0075



PLUMBING FIXTURE AND PIPING CONNECTION SCHEDULE									
TAG	DESCRIPTION	MANUFACTURER MODEL	SIZE	VALVE/ FAUCET	CONNECTIONS				REMARKS
					DRAIN	VENT	C.W.	H.W.	
WC-1	WATER CLOSET FLOOR MTD. FLUSH TANK	AMERICAN STANDARD #2467.016	ELONGATED	INTEGRAL WITH TANK	4	2	1/2		MOUNT 18" A.F.F HANDICAP
L-1	LAVATORY HANDICAP-CENTERSET	AMERICAN STANDARD #0124.024	20"x18" VITREOUS CHINA	CHICAGO FAUCET 802-V317CP	1 1/2	1 1/2	1/2	1/2	MOUNT 34" A.F.F HANDICAP 0.5 GPM AERATOR - CHICAGO FAUCET - E2805JKCP
L-2	LAVATORY HANDICAP-CENTERSET	ELKAY ELVW02219CS	22"x18" STAINLESS STEEL	CHICAGO FAUCET 802-V317CP	1 1/2	1 1/2	1/2	1/2	MOUNT 34" A.F.F HANDICAP 0.5 GPM AERATOR - CHICAGO FAUCET - E2805JKCP
L-3	SERVICE AREA FLOOR MOUNTED SINK	FIAT #FL-1	23"x22"x14" PLASTIC	A-1 FAUCET	1 1/2	1 1/2	1/2	1/2	DECK MOUNTED FAUCET PROVIDED WITH SINK
MS-1	FLOOR MOUNTED MOP SINK	FIAT #MSB-2424	24"x24"	MODEL 830-AA FAUCET W / INTEGRAL VACUUM BREAKER	2	1 1/2	3/4	3/4	889-CC 24" MOP BRACKET, 1453-BB STRAINER
FD-1	FLOOR DRAIN	J.R. SMITH #2010CA-NB	6" ROUND TOP		3	2			CAST IRON BODY W/ TRAP PRIMER CONNECTION
FD-2	FLOOR DRAIN	J.R. SMITH #2350-NB	8 1/2" ROUND WITH SEDIMENT BUCKET		3	2			CAST IRON BODY PROVIDE SURE SEAL SS3000
FD-3	FLOOR DRAIN	J.R. SMITH #3061	12 1/2"Ø WITH SEDIMENT BUCKET		3	2			CAST IRON BODY W/ TRAP PRIMER ADAPTOR #2695S
WCO	WALL CLEANOUT	J.R. SMITH #4472T	STAINLESS STEEL COVER PLATE		SEE PLANS				
FCO	FLOOR CLEANOUT	J.R. SMITH #4020	5 3/4"Ø ROUND "TWIST TO FLOOR" ADJUSTABLE TOP		SEE PLANS				NICKEL BRONZE TOP
GCO	GRADE CLEANOUT	J.R. SMITH #4250	8 3/4"Ø ROUND CLEAN OUT FOR UNFINISHED AREA		SEE PLANS				CAST IRON TOP
HB	HOSE BIBB WITH INTEGRAL VACUUM BREAKER SPOUT	ARROWHEAD BRASS HOSE BIBB 361 WITH NIBCO 90° ELBOW 707-3-5-LF	3/4" MALE HOSE THREAD OUTLET				3/4		90° ELBOW WITH 3/4" SOLDER INLET AND 3/4" THREADED OUTLET, AND INTEGRATED VACUUM BREAKER MOUNT 36" AFF - UNO
EW-1	BOTTLE FILLING BI-LEVEL WATER COOLER	ELKAY EZSTL8WSLK	---		1 1/2	1 1/4	3/8		38 3/8" ORIFICE HEIGHT AFF FOR HIGH FOUNTAIN; PROVIDE W/ APRON MODEL #LKAPREZL
EW-2	WATER COOLER	ELKAY E28	---		1 1/4	1 1/4	3/8		32 7/8" ORIFICE HEIGHT A.F.F.
TMV-1	THERMOSTATIC MIXING VALVE	POWERS LFLM495-2	1/2"				1/2	1/2	SET FOR 110° F HOT WATER ASSE 1070 CERTIFIED
TMV-2	THERMOSTATIC MIXING VALVE	POWERS ES-150-10	1/2"				1/2	1/2	SET FOR 85° F HOT WATER ASSE 1071 CERTIFIED
TP-1	TRAP PRIMER	MIFAB MR-500	1/2"				1/2		MI-DU-500 DISTRIBUTION UNIT & MI-600 TRAP FITTING
RP-1	RECIRCULATION PUMP	GRUNDFOS UP15-10 B5/TLC	3 FT HEAD AT 3 GPM				1/2		SINGLE PHASE, 115 V 6W. PROVIDE WITH TIMER AND HONEYWELL AQUASTAT L6006C

ACCEPTABLE MANUFACTURERS FOR EQUIVALENT OF SCHEDULE PRODUCT (NO OTHER SUBSTITUTIONS WILL BE ALLOWED):
* SEE SPECIFICATIONS

NOTES & REMARKS:

- COLOR OF FIXTURES SHALL BE WHITE, UNLESS NOTED OTHERWISE.
- ALL SINKS AND LAVATORIES SHALL HAVE MINIMUM 17 GAUGE TRAPS, WITH CLEAN OUT PLUGS AND WALL ESCUTCHEONS, CHROME PLATED, OFFSET TRAP ON DRAIN LINE, TAILPIECE WITH STRAINER, HANDI-SHIELD VINYL COVERED PIPE INSULATION WITH HOOD OVER NEW DRAIN LINE AND HOT AND COLD WATER LINES.
- ALL FIXTURES SHALL HAVE INDIVIDUAL WALL SUPPLY STOPS, LOOSE KEY OPERATED, WITH WALL ESCUTCHEONS, CHROME PLATED.
- TOILET SEATS: ELONGATED WITH OPEN FRONT AND CONTAINING ANTI-MICROBIAL AGENT, BEMIS MODEL #3155CT.
- WATER COOLERS FURNISHED WITH INTEGRAL VOLUME REGULATORS, HANGERS, WALL MOUNTING PLATE AND 5 YEAR WARRANTY. PROVIDE BOTTLE FILLER ON LOW WATER COOLER
- LAVATORIES L-1 AND L-2 SHALL BE PROVIDED WITH A VANDAL RESISTANT 0.5 GPM AERATOR - CHICAGO FAUCET MODEL E2805JKCP.
- ALL TOILET FLUSH CONTROLS SHALL BE PROVIDED ON THE WIDE SIDE OF THE FIXTURE, (AWAY FROM WALL)
- PROVIDE WALL MOUNTED SERVICE FAUCET, MOP HANGER BRACKET AND STAINLESS STEEL STRAINER AT MS-1 LOCATION.
- ALL FIXTURES SHALL BE SUBMITTED AND APPROVED BY ENGINEER.
- PROVIDE 4" DEEP-SEAL TRAP FOR ALL FLOOR DRAINS.

GAS FIRED WATER HEATER SCHEDULE							
TAG	AREA SERVED	MANUFACTURER	MODEL NUMBER	STORAGE CAPACITY	RECOVERY CAPACITY	MBH INPUT	VOLTS/ PHASE
WH-1	BUILDING	A. O. SMITH	BTX-80	50 GAL	83 GPH @ 100° TEMP RISE	76	120/1

ACCEPTABLE MANUFACTURERS FOR EQUIVALENT OF SCHEDULE PRODUCT (NO OTHER SUBSTITUTIONS WILL BE ALLOWED):
* SEE SPECIFICATIONS

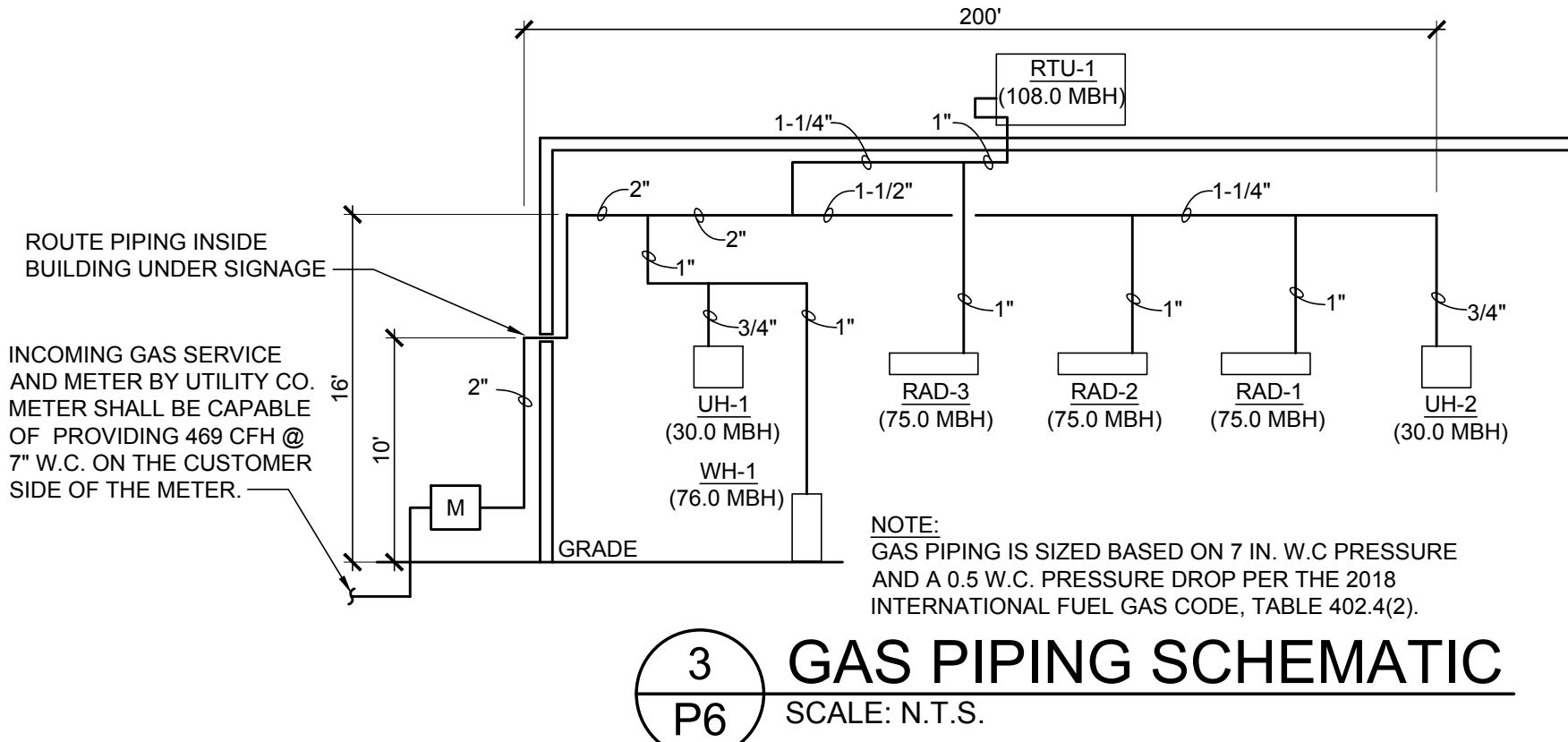
NOTES:

- WATER HEATER FURNISHED AND INSTALLED BY CONTRACTOR.
- PROVIDE THROUGH ROOF VENT TERMINATION PER MANUFACTURER'S RECOMMENDATIONS.
- SET DISCHARGE TEMPERATURE OF WATER HEATER TO OPERATE AT 140 DEG F MAX. (FOR MOP SINK USE ONLY, SEE PLUMBING NOTES AND WATER PIPING DIAGRAM).
- ROUTE T&P RELIEF DRAIN AND OTHER DRAIN PIPING TO FLOOR DRAIN. TERMINATE 2" ABOVE RIM LEVEL.
- PROVIDE PRE-MANUFACTURED 18" HEIGHT STEEL WATER HEATER STAND RATED FOR A 50 GALLON WATER HEATER.

GAS PRESSURE REGULATOR SCHEDULE					
MANUFACTURER	MODEL NUMBER	CFH CAPACITY	INLET PRESSURE	OUTLET PRESSURE	SPRING COLOR RANGE-ORIFICE
ACTARIS	B-31R 3/4"x3/4"	UP TO 150	2 P.S.I.G.	7 INCHES W.C.	LT. GREEN 5.5 TO 8.0 INCHES W.C.-1/8"
ACTARIS	B-31R 3/4"x1"	150 TO 400	2 P.S.I.G.	7 INCHES W.C.	LT. GREEN 5.5 TO 8.0 INCHES W.C.-1/4"
ACTARIS	B-31R 1"x1"	400 TO 800	2 P.S.I.G.	7 INCHES W.C.	LT. GREEN 5.5 TO 8.0 INCHES W.C.-3/8"

NOTES:

- REGULATOR ARE FULL CAPACITY INTERNAL RELIEF TYPE.
- REGULATOR TO BE INSTALLED WITH RELIEF VENT IN POSITION TO PREVENT ENTRANCE OF WATER (PROVIDE SCREENED VENT ELBOW AS REQUIRED).
- TAG REGULATOR WITH INLET AND OUTLET SETTINGS, AFFIX WARNING 'DO NOT REMOVE'.



RELEASE FOR CONSTRUCTION

ACERTUS CONSULTING GROUP, LLC

1487 West Park Street • Lees Summit, MO 64063

P 913.322.5150 • F 913.322.5155

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NEW FCAC STORE

2020 ER

3561 SW MARKET ST

JACKSON COUNTY

LEE'S SUMMIT, MISSOURI 64082

STATE OF MISSOURI

RANDALL A. NELSON

PROFESSIONAL ENGINEER

PE-2007003990

07/22/2020

ISSUE BLOCK

1	04/16/20	ADD	#1
2	06/30/20	CB	#1
3	07/23/20	IFC	

PROPERTY NO.: 160085

6 DIGIT NO.: 906983

4 DIGIT NO.: 78C9

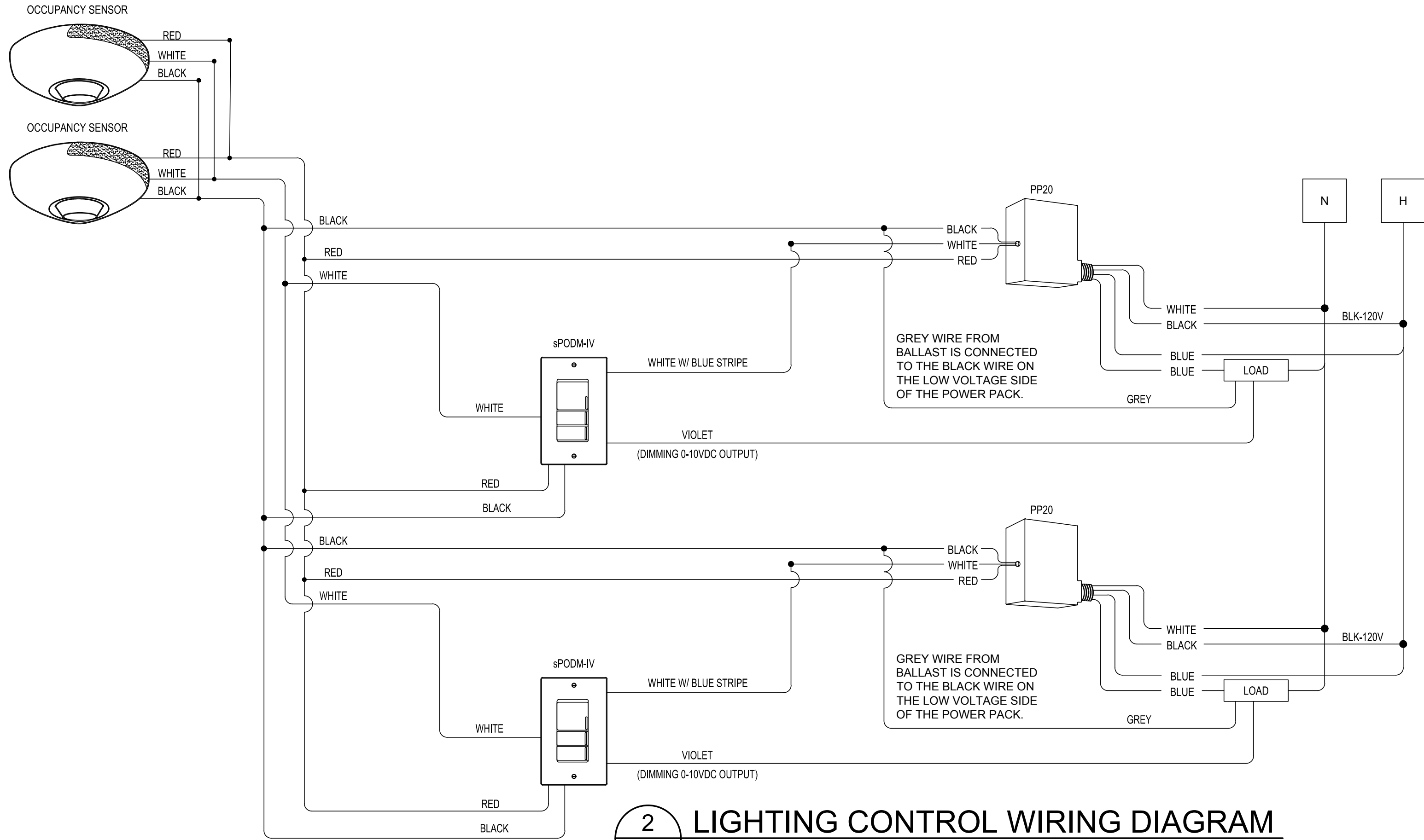
AOR PROJECT NUMBER: 1955B71

TO PERMIT: DATE: 03/26/2020

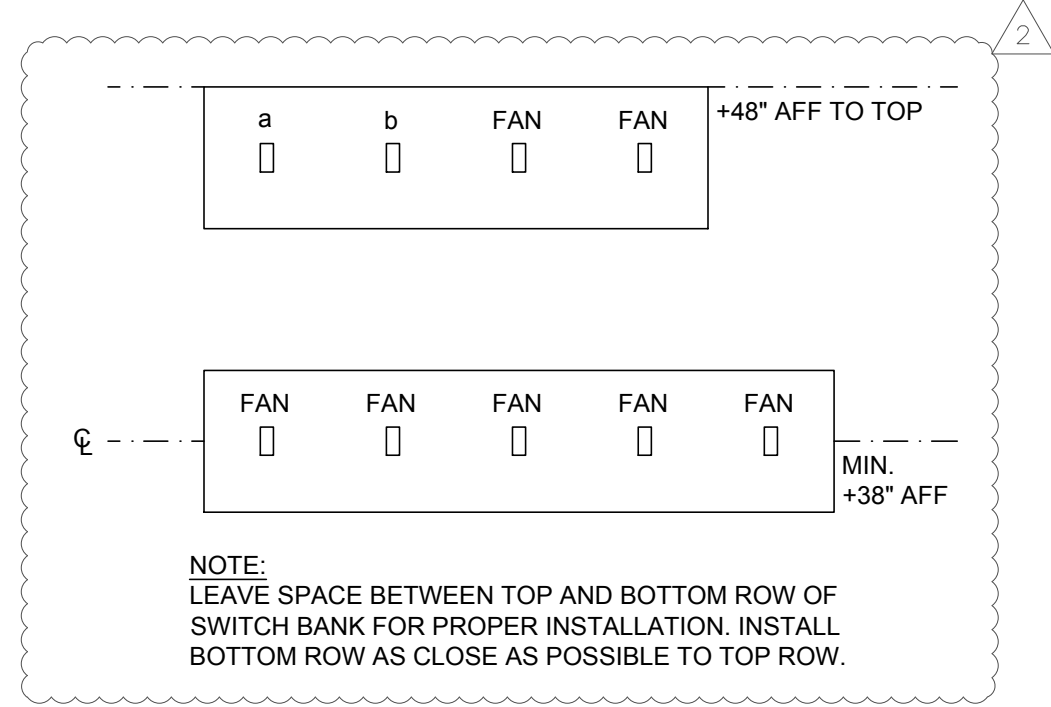
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SHEET TITLE: PLUMBING SCHEDULES AND RISERS

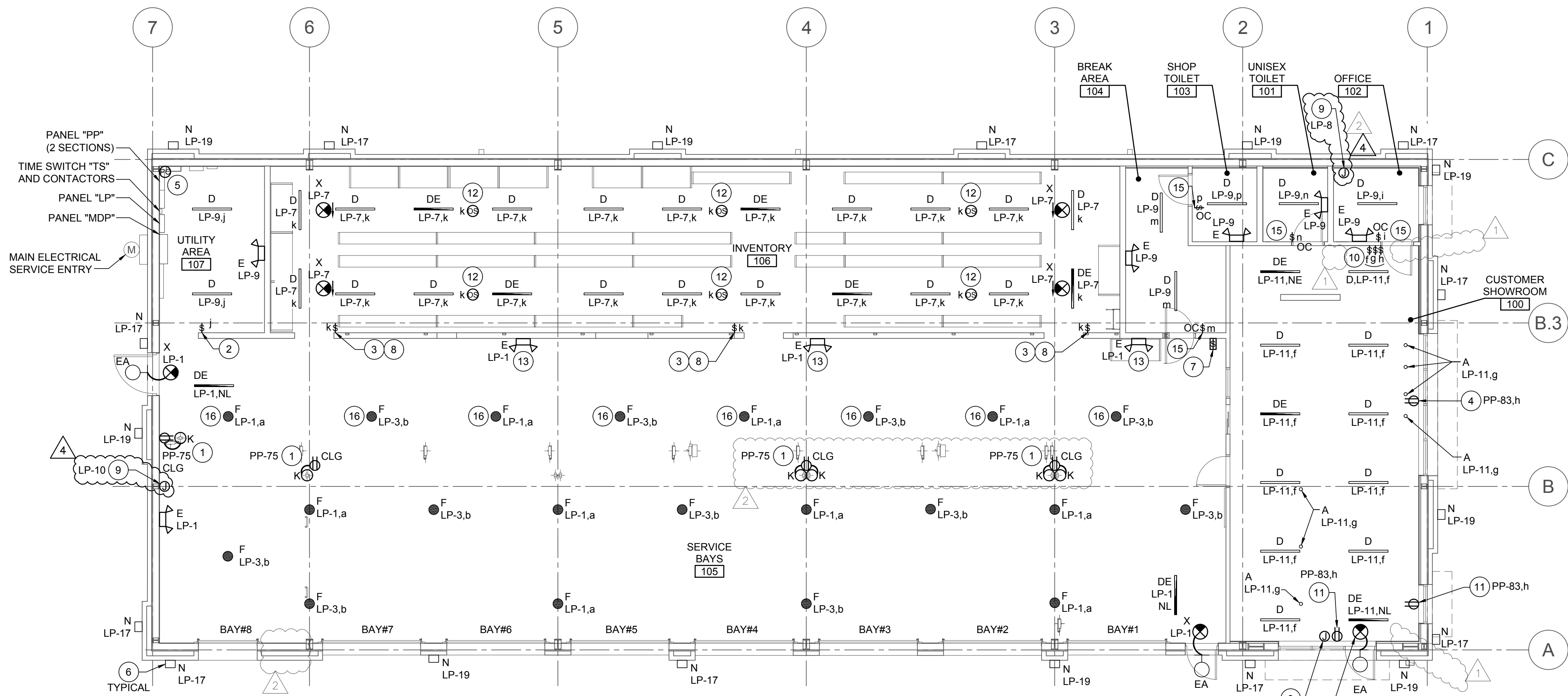
SHEET NUMBER: P6



2
E2 LIGHTING CONTROL WIRING DIAGRAM
SCALE: N.T.S.



3
E2 SWITCH BANK ELEVATION
SCALE: N.T.S.



1
E2 LIGHTING PLAN
SCALE: 1/8" = 1'-0"

LIGHTING PLAN GENERAL NOTES

- ALL BATTERY EMERGENCY LIGHTING UNITS SHALL BE WIRED AHEAD OF THE SWITCH(ES) WHICH CONTROLS THE LIGHTING WHERE UNIT IS LOCATED. THE UNIT SHALL OPERATE WHEN THE NORMAL LIGHTING FAILS.
- SEE "ARCHITECTURAL REFLECTED CEILING PLAN" FOR ALL LIGHTING FIXTURES LOCATION DIMENSIONS.
- SEE "FIXTURE PLAN" SHEET F1 FOR ALL EQUIPMENT LOCATIONS AND QUANTITIES.
- ALL WIRING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE NEC AND LOCAL CODE AUTHORITIES HAVING JURISDICTION. SEE "GENERAL ELECTRICAL NOTES" ON SHEET E1.
- FOR MOUNTING HEIGHTS OF ALL LIGHT FIXTURE TYPES SEE "LIGHT FIXTURE SCHEDULE" ON SHEET E1, UNLESS NOTED OTHERWISE.

LIGHTING PLAN KEYNOTES

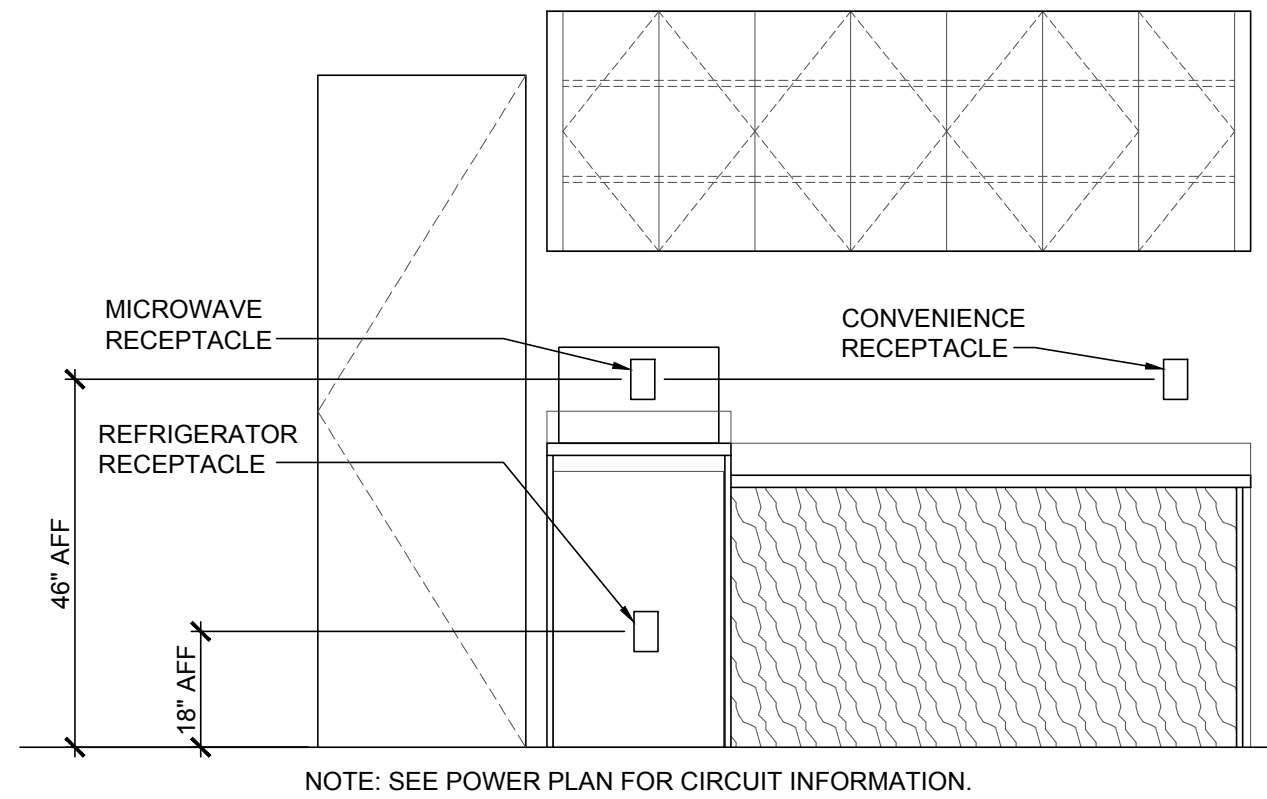
- CORD REEL LIGHT (FIXTURE TYPE "K"), MOUNTED TO ROOF STRUCTURE AT LOCATION SHOWN. COORDINATE INSTALLATION TO AVOID CONFLICT WITH OTHER EQUIPMENT. SEE "CORD REEL LIGHT DETAIL" ON SHEET E4 FOR ADDITIONAL INFORMATION AND COORDINATE WITH SHEET F1 FOR EXACT LOCATION.
- PROVIDE TOGGLE SWITCH FOR MANUAL CONTROL OF LIGHTING FIXTURES AS INDICATED. MANUAL CONTROL IS FOR OCCUPANT SAFETY NEAR ELECTRICAL GEAR.
- PROVIDE POWERPACK(S) (SENSOR SWITCH #PP20) AS REQUIRED FOR LIGHTING CONTROLS IN THIS AREA. REFER TO DETAIL 2 (THIS SHEET) FOR ADDITIONAL INFORMATION.
- PROVIDE RECEPTACLE 6" ABOVE SHOW WINDOW TO MEET NEC SHOW WINDOW REQUIREMENTS.
- PROVIDE PHOTOCELLS. SEE "CONTACTOR DIAGRAM" AND "CONTACTOR NOTES" ON SHEET E5 FOR ADDITIONAL INFORMATION. PHOTOCELL TO FACE NORTH. PROVIDE A WEATHERTIGHT CONDUIT BODY ON INSIDE FACE OF BUILDING PARAPET WITH 1" RIGID CONDUIT TO 36" ABOVE ROOFLINE FOR PHOTOCELL. WHERE PARAPET DOES NOT EXIST, PROVIDE FREESTANDING RIGID CONDUIT WITH WEATHERPROOF ROOF PENETRATION. VERIFY LOCATION AND REQUIREMENTS IN FIELD.
- ROUTE DESIGNATED CIRCUITS VIA TIME SWITCH "TS" AND CONTACTORS, AS NOTED IN THE "CONTACTOR DIAGRAM" AND "CONTACTOR NOTES" ON SHEET E5.
- PROVIDE ONE (1) FOUR-GANG BOX AND (1) FIVE-GANG BOX WITH TWO (2) TOGGLE SWITCHES TO CONTROL SWITCH-LEGS (a,b) AND SEVEN (7) TOGGLE SWITCHES FOR THE CONTROL OF SHOP FANS. LABEL ALL SWITCHES TO CORRESPOND WITH THE CONTROLLED SWITCH-LEG OR FAN. PROVIDE MATCHING COVER PLATE. VERIFY SWITCHING ARRANGEMENT IN FIELD. ROUTE CONDUIT UP INSIDE FACE OF WALL FOR RECESSED BOX. SEE SWITCH BANK ELEVATION (THIS SHEET) FOR MORE INFO.
- PROVIDE SWITCH (SENSOR SWITCH SP0DM-IV) FOR MANUAL CONTROL OF LIGHTING FIXTURES AS INDICATED.
- PROVIDE JUNCTION BOX ON BACK SIDE OF PARAPET FOR BUILDING MOUNTED SIGNAGE. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN. DISCONNECT IS PROVIDED BY SIGNAGE VENDOR. ROUTE DESIGNATED CIRCUITS VIA TIME SWITCH "TS" AND CONTACTORS, AS NOTED IN THE "CONTACTOR DIAGRAM" AND "CONTACTOR NOTES" ON SHEET E5.
- PROVIDE THREE (3) RECESSED SINGLE-GANG BOXES WITH (3) TOGGLE SWITCHES FOR (f,g,h): ALL WITH MATCHING COVER PLATES FOR SWITCHES LOCATED IN CUSTOMER SHOWROOM AREA. VERIFY SWITCHING ARRANGEMENT IN FIELD. ROUTE CONDUIT UP INSIDE FACE OF WALL.
- INSTALL RECEPTACLE 6" ABOVE SHOW WINDOW (TO MEET NEC SHOW WINDOW REQUIREMENTS) FOR "OPEN" SIGN. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN. SEE SHEET F2 FOR ADDITIONAL INFORMATION. SECURE THE SMALL LOW VOLTAGE TRANSFORMER WHICH PLUGS INTO THE RECEPTACLE SO THAT THE TRANSFORMER CAN NOT COME OUT OF THE PLUG VIA GRAVITY.
- PROVIDE CEILING MOUNTED HIGH BAY AISLE OCCUPANCY SENSOR (SENSOR SWITCH #CM-6) TO CONTROL LIGHTING IN INVENTORY AREA. PENDANT MOUNT ON CONDUIT BETWEEN LIGHT FIXTURES AT STRUCTURE.
- FIXTURE TO BE PENDANT MOUNTED FROM CONDUIT AT STRUCTURE. SEE LIGHT FIXTURE SCHEDULE FOR MORE INFORMATION.
- NOT USED
- PROVIDE OCCUPANCY SENSOR WITH SWITCH (SENSOR SWITCH #WSX-PDT). INSTALL ON WALL 46" AFF (TO TOP) IN ALL LOCATIONS. COORDINATE FINAL LOCATION WITH BSRO. ROOM LAYOUT MUST BE TAKEN INTO ACCOUNT BEFORE INSTALLATION.
- THESE LIGHT FIXTURES ONLY TO BE MOUNTED AT 14'-6" AFF TO MAINTAIN CLEARANCE FROM RADIANT HEATER OUTPUT.

ISSUE BLOCK		
04/16/20	ADD	#1
06/30/20	CB	#1
07/23/20	IFC	
09/09/20	CB	#2

PROPERTY NO.: 160085
6 DIGIT NO.: 906983
4 DIGIT NO.: 78C9
AOR PROJECT NUMBER: 1955B71
TO PERMIT: DATE: 03/26/2020
TO BID: DATE: ##-##-##

SHEET TITLE:
LIGHTING PLAN

SHEET NUMBER:
E2



2 BREAK COUNTER ELEVATION
SCALE: N.T.S.

# ELECTRICAL SHOP EQUIPMENT SCHEDULE						
ITEM #	QUANTITY	DESCRIPTION	VOLTS	PHASE	POLE	AMPS
9	1	AIR DRYER CHAMPION #CRH35	120	1	1	20
10	1	BRAKE SHOP #BL505-AB (INSTALLED BY HUNTER)	120	1	1	20
13A	1	ELECTRONIC WHEEL BALANCER #RFE13 (INSTALLED BY HUNTER)	208	1	2	20
13B	1	ELECTRONIC WHEEL BALANCER #SWT33 (INSTALLED BY HUNTER)	208	1	2	20
17	2	CORD REEL POWER DROP	120	1	1	20
18B	1	TIRE CHANGER #TCR1S (INSTALLED BY HUNTER)	208	1	2	30
28	2	5 HP AIR COMPRESSOR CHAMPION #VRS-8	208	3	3	30
NOTES: VERIFY ALL ELECTRICAL REQUIREMENTS AND NEMA CONFIGURATIONS TO ACTUAL EQUIPMENT SUPPLIED PRIOR TO ROUGH-IN.						

POWER PLAN GENERAL NOTES

- ALL DEVICES LOCATED IN SERVICE AREA SHALL BE MOUNTED AT 48" AFF TO TOP OF BOX, UNLESS NOTED OTHERWISE.
- ALL DEVICES LOCATED IN THE FOLLOWING ROOMS: CUSTOMER SHOW ROOM, OFFICE, BREAK AREA, EMPLOYEE TOILET, AND UNISEX TOILET, SHALL BE MOUNTED AT 24" AFF TO CENTER, UNLESS NOTED OTHERWISE.
- ALL WIRING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE NEC AND LOCAL CODE AUTHORITIES HAVING JURISDICTION FOR ROUTING OF ALL CONDUITS, SEE "GENERAL ELECTRICAL NOTES" ON SHEET E1.
- WIRE ALL HVAC CONTROL DEVICES, AND COORDINATE WITH OTHERS, SEE "GENERAL ELECTRICAL NOTES" ON SHEET E1 FOR ADDITIONAL INFORMATION.

DATA REQUIREMENTS

THERE ARE A TOTAL OF EIGHT (8) LINES THAT SERVICE EACH STORE FOR PHONE AND DATA. INTERNET SERVICE VIA LOCAL CABLE SERVICE WILL BE INSTALLED POST OPENING. ALL LINES TERMINATE AT "D-MARC" BOARD IN UTILITY AREA.

PROVIDE ALL POWER AND LOW VOLTAGE CONDUITS, PER CODE, AND THIS INCLUDES OPTIONAL STATE INSPECTIONS EQUIPMENT.

CLEAR ACCESS WILL BE MAINTAINED IN ORDER FOR BSRO "IT" DEPARTMENT TO INSTALL ALL NECESSARY WIRING. BSRO "IT" DEPARTMENT WILL INSTALL ALL WIRING AND EQUIPMENT UNLESS OTHERWISE NOTED.

"MVS" STATION REQUIREMENTS IN SERVICE AREA:
INSTALL ONE (1) QUAD RECEPTACLE IN THE MIDDLE OF THE CABINET. THE POWER SHOULD TERMINATE IN A JUNCTION BOX MOUNTED ON THE WALL ADJACENT TO THE STATION. ASSOCIATED DATA BOXES SHOULD TERMINATE IN A JUNCTION BOX ADJACENT TO STATION. CONDUIT ASSOCIATED WITH DATA BOX SHALL BE EXTENDED TO SERVER CABINET. PROVIDE PULL STRINGS IN CONDUIT. COORDINATE WITH OTHER SERVER CONDUITS.

"POD" REQUIREMENTS IN CUSTOMER SHOWROOM:
PROVIDE ONE (1) QUAD RECEPTACLE WHICH SHOULD TERMINATE IN A JUNCTION BOX MOUNTED ON THE BACK SIDE OF THE PANEL, BELOW THE LOWEST ADJUSTABLE SHELF AND KNOCK OUT PANEL.

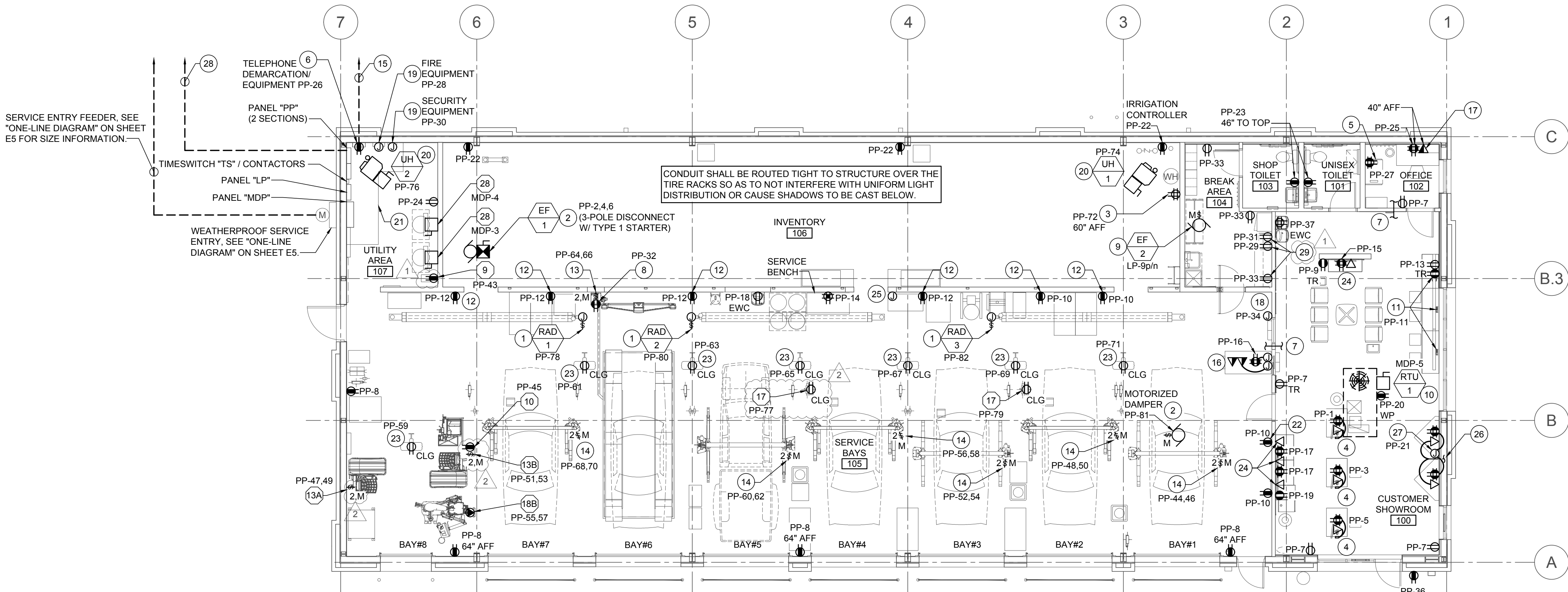
SERVER CABINET POWER REQUIREMENTS:
PROVIDE ONE (1) QUAD RECEPTACLE ON RIGHT SIDE OF SERVER CABINET MOUNTED AT 11'-0" AFF AND CIRCUIT AS SHOWN. REFER TO SHEET A7 FOR ADDITIONAL INFORMATION.

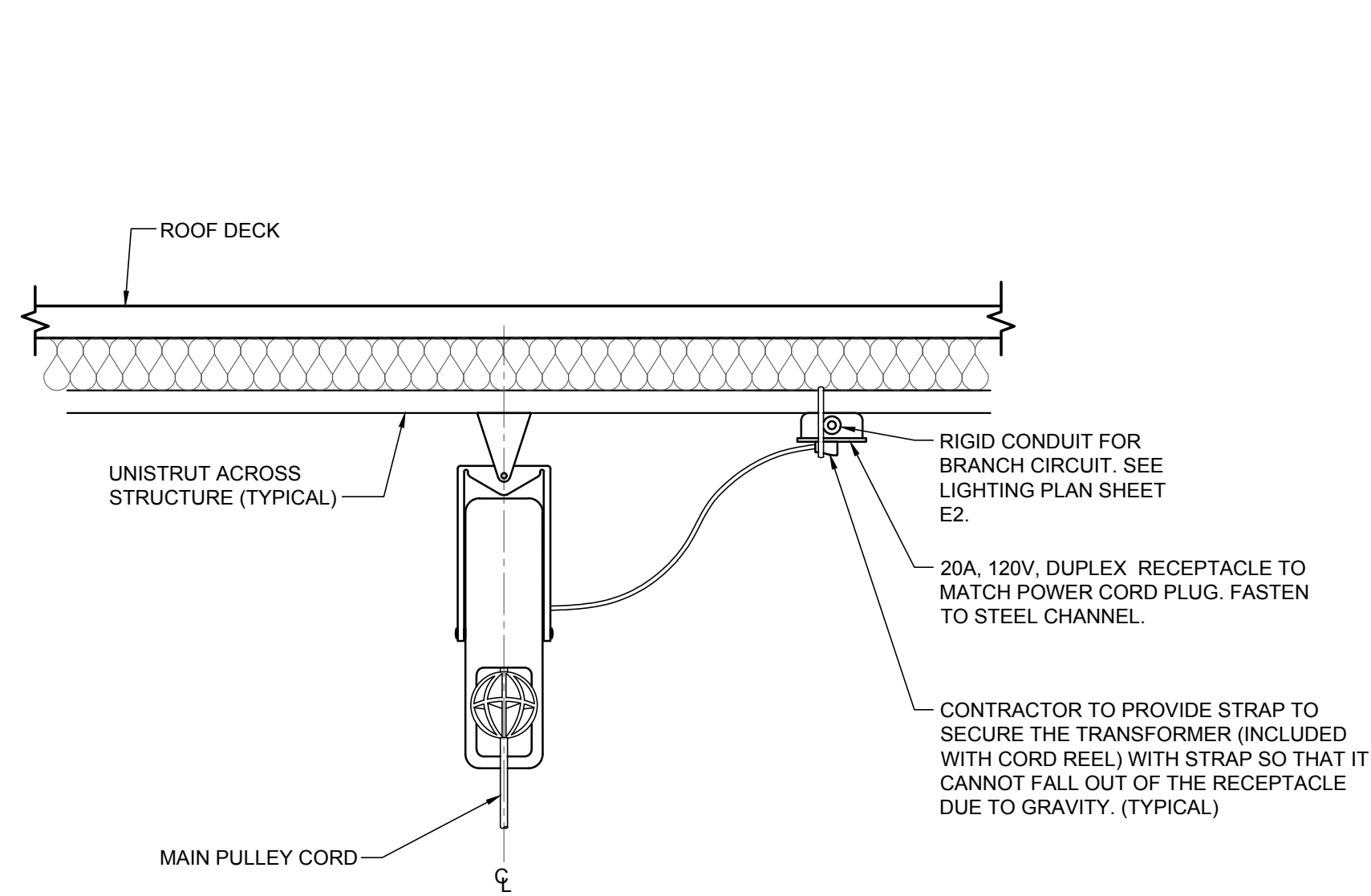
SERVER CABINET LEFT SIDE CONDUIT:
PROVIDE ONE (1) 2" CONDUIT FROM 13'-0" AFF ABOVE THE LEFT SIDE OF SERVER CABINET TO INVENTORY 10'-0" AFF ABOVE TELEPHONE EQUIPMENT RECEPTACLE.

UTILITY ROOM AND EXTERIOR SITE CONDUIT:
PROVIDE SUFFICIENT LENGTH OF 2" CONDUIT AND EXTEND THE ONE (1) 2" CONDUIT FROM THE EXTERIOR TO THE "D-MARC" LOCATION ON THE UTILITY ROOM BOARD. SEE NOTE 15.

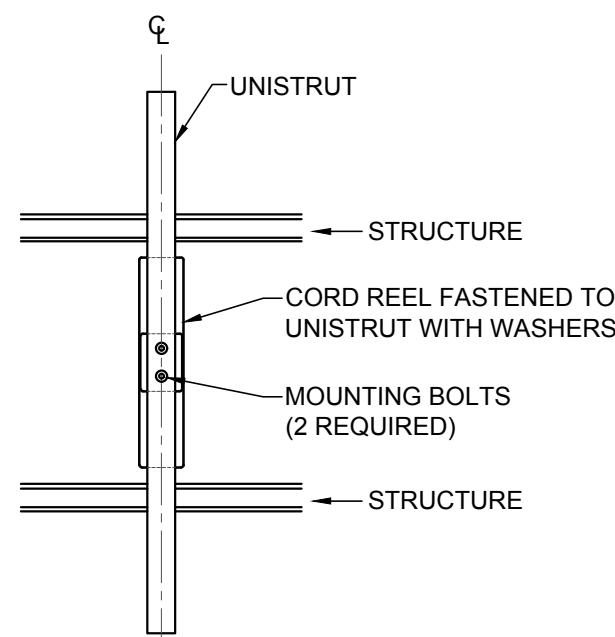
POWER PLAN KEYNOTES

- JUNCTION BOX WITH TOGGLE SWITCH DISCONNECT MOUNTED AT CEILING FOR GAS FIRED RADIANT HEAT CONTROLS. PROVIDE ALL REQUIRED DEVICES AND EQUIPMENT TO MAKE A COMPLETE WORKING SYSTEM. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
- INTERLOCK MOTORIZED DAMPER ON "RH-1" AND "EF-1" SUCH THAT WHEN "EF-1" IS IN RUN MODE, DAMPER IS OPEN. DAMPER AND "EF-1" TO BE CONTROLLED BY TOXALERT SYSTEM.
- PROVIDE DOUBLE DUPLEX RECEPTACLE FOR "RP-1" AND "WH-1". COORDINATE LOCATION OF "WH-1" AND "RP-1" WITH PLUMBING CONTRACTOR.
- TELE-POWER POLE. EXTEND POLE FROM SALES POD AND OR DESKS AS SHOWN UP TO STRUCTURE. SEE DETAIL ON SHEET E4 FOR ADDITIONAL INFORMATION. FLEX FROM POLE AND MOUNT AND WIRE DEVICES IN DESKS AS SHOWN. VERIFY REQUIREMENTS WITH MILLWORK VENDOR. COORDINATE EXACT POWER POLE DROP LOCATION PRIOR TO ROUGH-IN.
- REFER TO "DATA REQUIREMENTS" (THIS SHEET) FOR POWER AND CONDUIT INFORMATION IN SERVER CABINET.
- PLYWOOD BACKBOARD. SEE "TELEPHONE GROUNDING DIAGRAM" ON SHEET E1.
- PROVIDE 8" LONG, 2" DIAMETER PVC CONDUIT THRU WALL AS SHOWN. MOUNT CONDUIT AT SAME HEIGHT AS BOTTOM OF STRUCTURE. RUN CONDUIT AS CLOSE AS POSSIBLE TO STRUCTURE. PROVIDE GROMMET ON BOTH ENDS OF PVC. REFER TO ARCHITECTURAL SHEETS FOR ADDITIONAL INFORMATION.
- DEDICATED LINE ISOLATED GROUND RECEPTACLE MOUNTED AT 48" ON FULL-HEIGHT WALL FOR WHEEL ALIGNMENT COMPUTER. COORDINATE EXACT LOCATION AND CONNECTION REQUIRED WITH OWNER. REFER TO STRUCTURAL DRAWINGS FOR UNDER SLAB CONDUIT LOCATION FROM THE ALIGNMENT PIT TO THE ALIGNMENT CONTROLLER.
- RESTROOM EXHAUST FAN. PROVIDE ALL ACCESSORIES AS REQUIRED TO CONTROL EXHAUST FAN FROM OCCUPANCY SENSORS IN RESTROOMS.
- SEE "ONE-LINE DIAGRAM" ON SHEET E5 FOR ADDITIONAL INFORMATION. PROVIDE POWER CONNECTION TO FACTORY MOUNTED DISCONNECT AND WP/GFCI RECEPTACLE AS SHOWN ON PLAN.
- ROUTE CORDS FOR POWER STRIPS TO RECEPTACLE SHOWN. CONCEAL ALL CORDS IN NEAT AND CLEAN MANNER.
- MOUNT RECEPTACLE ON PLYWOOD AT 48" AFF FOR TEMPORARY POWER FOR SMALL HAND TOOL BATTERY RECHARGING.
- PROVIDE 30A, 2-POLE, NON-FUSED, LOCKABLE (WITH LOCK PROVIDED) DISCONNECT SWITCH (SIEMENS #MMSKG1) FOR ALIGNMENT LIFT EQUIPMENT CONTROL UNIT AT 48" AFF, UNLESS NOT ALLOWED BY AHJ. INSTALL DISCONNECT ON WALL BESIDE ALIGNMENT EQUIPMENT CONSOLE CABINET. PROVIDE ALL POWER AND SIGNAL WIRING AND CIRCUITING. CIRCUIT AS SHOWN. VERIFY ALL REQUIREMENTS WITH VENDOR. ROUTE CONDUIT FROM STRUCTURE TO DISCONNECT DOWN THE SIDE OF THE CABINET. CABINET MUST BE IN PLACE PRIOR TO CONDUIT DROP TO ENSURE CONDUIT ROUTING DOES NOT INTERFERE WITH PROPER EQUIPMENT OPERATION.
- PROVIDE 30A, 2-POLE, NON-FUSED, LOCKABLE (WITH LOCK PROVIDED) DISCONNECT SWITCH (SIEMENS #MMSKG1) FOR ROTARY LIFT EQUIPMENT CONTROL UNIT, UNLESS NOT ALLOWED BY AHJ. INSTALL DISCONNECT BELOW DECAL ON LIFT POST SO THAT CONDUIT AND DO NOT OBSCURE ANY SAFETY DECALS. DO NOT USE "THROUGH BOLTS" AS THIS TYPE OF BOLT MAY INTERFERE WITH EQUIPMENT OPERATION. ANCHORS FOR DISCONNECT SHALL BE IN THE CENTER OF THE LIFT POST. PROVIDE ALL POWER, SIGNAL, AND LIFT SAFETY SWITCH WIRING AND CIRCUITING. CIRCUIT AS SHOWN. VERIFY ALL REQUIREMENTS WITH VENDOR. ROUTE CONDUIT FROM STRUCTURE TO DISCONNECT DOWN THE SIDE OF THE EQUIPMENT POST. LIFT EQUIPMENT MUST BE IN PLACE PRIOR TO CONDUIT DROP TO ENSURE CONDUIT ROUTING DOES NOT INTERFERE WITH PROPER EQUIPMENT OPERATION.
- PROVIDE CONDUIT WITH PULL WIRE FOR TELEPHONE SERVICE. PROVIDE CONDUIT SEAL AT 18" AFF. COORDINATE ROUTING AND TERMINATION POINTS WITH SITE UTILITIES. VERIFY EXACT REQUIREMENTS WITH LOCAL PHONE COMPANY. REFER TO CIVIL PLANS FOR MORE INFORMATION.
- REFER TO "DATA REQUIREMENTS" (THIS SHEET) FOR POWER AND CONDUIT INFORMATION IN "MVS" STATION.
- CONDUIT ASSOCIATED WITH DATA BOX SHALL BE EXTENDED TO SERVER CABINET. PROVIDE PULL STRINGS IN CONDUIT.
- PROVIDE 120V POWER CONNECTION FOR TOXALERT SYSTEM CONTROL PANEL.
- PROVIDE JUNCTION BOX FOR FIRE ALARM EQUIPMENT AND OPTIONAL SECURITY CONTROL PANEL. VERIFY EXACT ELECTRICAL CONNECTION OF EQUIPMENT IN FIELD AND PROVIDE RECEPTACLE AS REQUIRED. COORDINATE EXACT REQUIREMENTS WITH OWNER.
- PROVIDE POWER TO FACTORY MOUNTED DISCONNECT SWITCH. COORDINATE ALL WORK WITH MECHANICAL CONTRACTOR.
- MEET ALL ELECTRICAL EQUIPMENT CLEARANCES BOTH HORIZONTALLY AND VERTICALLY IN THIS SPACE.
- PROVIDE RECEPTACLE FOR "NO LOSS DAYS" SIGN AT 11'-0" AFF. VERIFY EXACT LOCATION WITH CONSTRUCTION MANAGER PRIOR TO ROUGH-IN.
- PROVIDE WORKSTATION FAN (ULINE #H-4082). RECEPTACLE FOR WORKSTATION FAN IS SHOWN FOR STRUCTURE. CIRCUIT WILL HAVE GFCI PROTECTION AT BREAKER. SEE SHEET E2 FOR CONTROLS AND SHEET E4 FOR MOUNTING INFORMATION.
- CONDUIT ASSOCIATED WITH DATA BOX SHALL BE EXTENDED TO SERVER CABINET. PROVIDE PULL STRINGS IN CONDUIT. REFER TO DETAIL ON SHEET E4 FOR INFORMATION ON MOUNTING LOCATION OF DATA BOX AND POWER BEHIND DEVICES IN THIS AREA.
- PROVIDE JUNCTION BOX FOR TOXALERT INSTALL SENSOR AND PROVIDE WIRING BETWEEN TOXALERT PANEL AND SENSOR. COORDINATE LOCATIONS WITH MECHANICAL CONTRACTOR.
- PROVIDE JUNCTION BOX FOR DATA CONNECTION AT MRT DISPLAY. MOUNT DATA BOX INSIDE MRT SECTION SO THAT IT IS ACCESSIBLE THROUGH THE MONITOR OPENINGS. EXTEND DATA CABLEING FROM JUNCTION BOX IN WALL TO EACH DATA BOX MOUNTED INSIDE MRT CABINET. ROUTE DATA CONDUIT FROM MRT CABINET BACK TO SERVER CABINET LOCATED IN OFFICE.
- PROVIDE JUNCTION BOX FOR POWER CONNECTION AT MRT DISPLAY. MOUNT RECEPTACLE INSIDE MRT SECTION SO THAT IT IS ACCESSIBLE THROUGH THE MONITOR OPENINGS. EXTEND MC CABLEING FROM J-BOX IN WALL TO EACH RECEPTACLE MOUNTED INSIDE MRT CABINET. COORDINATE EXACT CONNECTION MILLWORK PRIOR TO ROUGH IN.
- PROVIDE MINIMUM 1" CONDUIT WITH PULL WIRE BACK TO PANEL "PP" FOR CONNECTIONS TO EACH OF (2) EXTERIOR HOT BOXES. CONNECT TO SPARE IN PANELBOARD. VERIFY LOCATION WITH ARCHITECT.
- REFER TO "BREAK COUNTER ELEVATION" (THIS SHEET) FOR MORE INFORMATION.



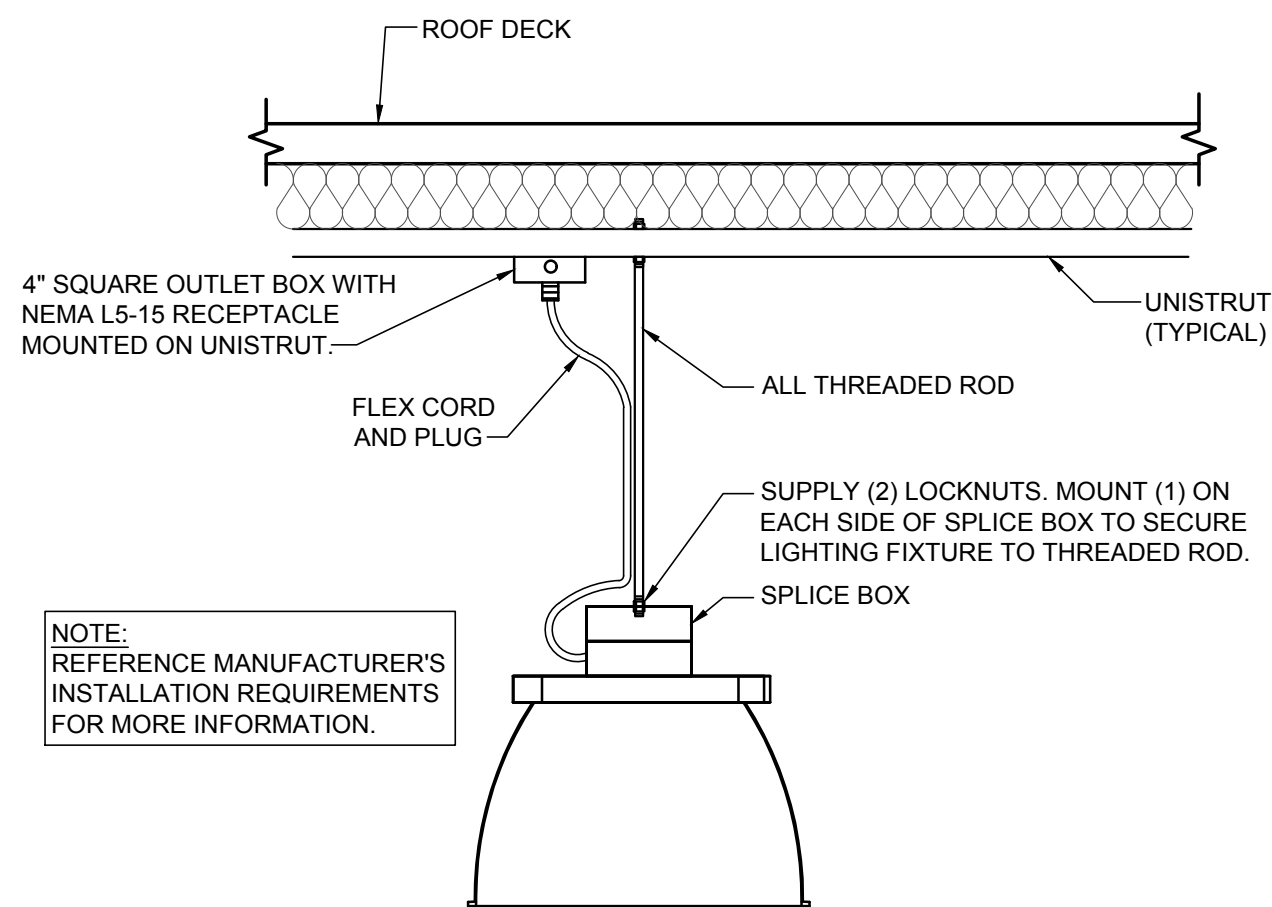


1
E4 CORD REEL LIGHT DETAIL
SCALE: NONE

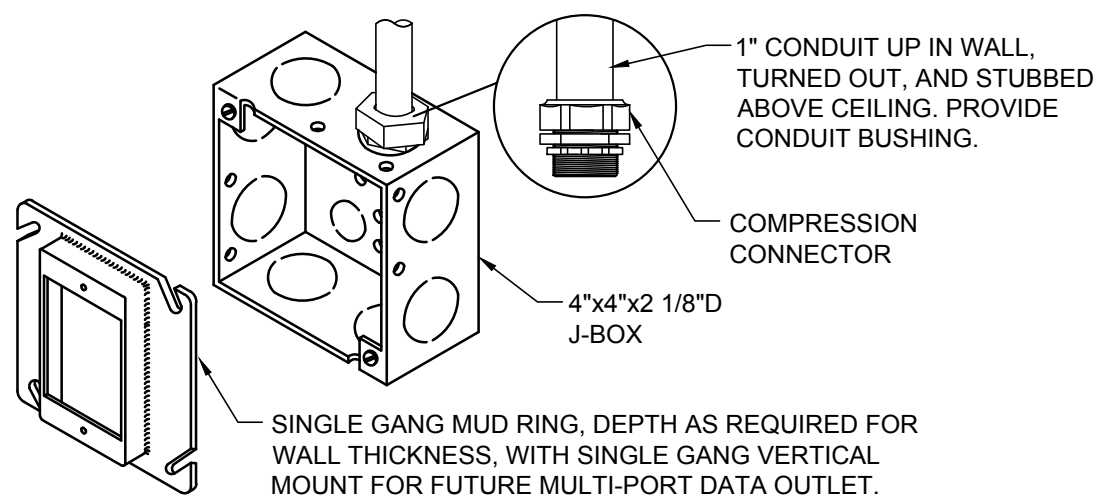


- NOTES:
1. POWER CORD REEL TO BE FURNISHED BY BSRO AND INSTALLED BY CONTRACTOR.
 2. ALL MATERIALS FOR THIS DETAIL SHALL BE FURNISHED & INSTALLED BY CONTRACTOR UNLESS OTHERWISE NOTED.

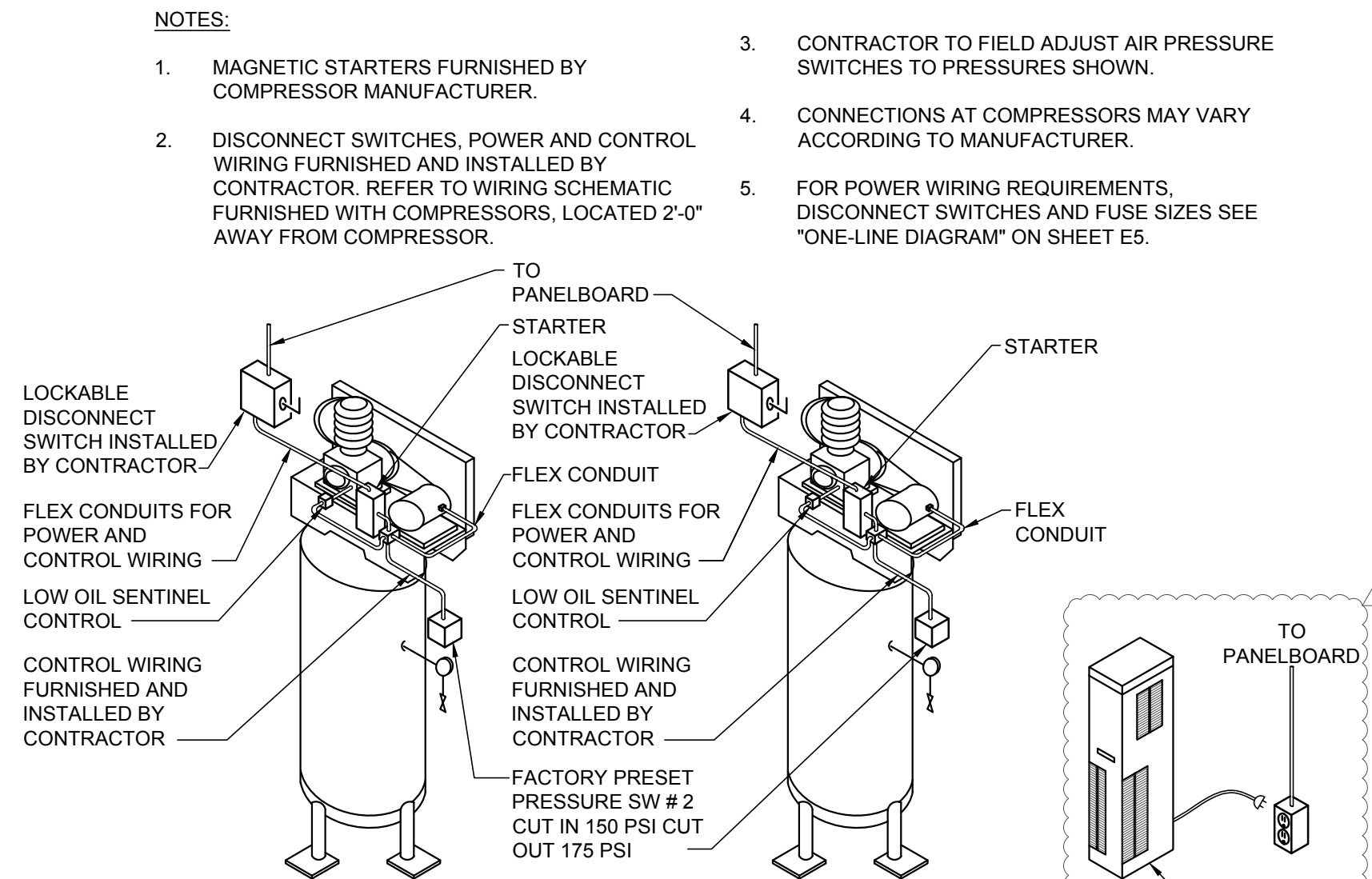
2
E4 POWER CORD REEL DETAIL
SCALE: NONE



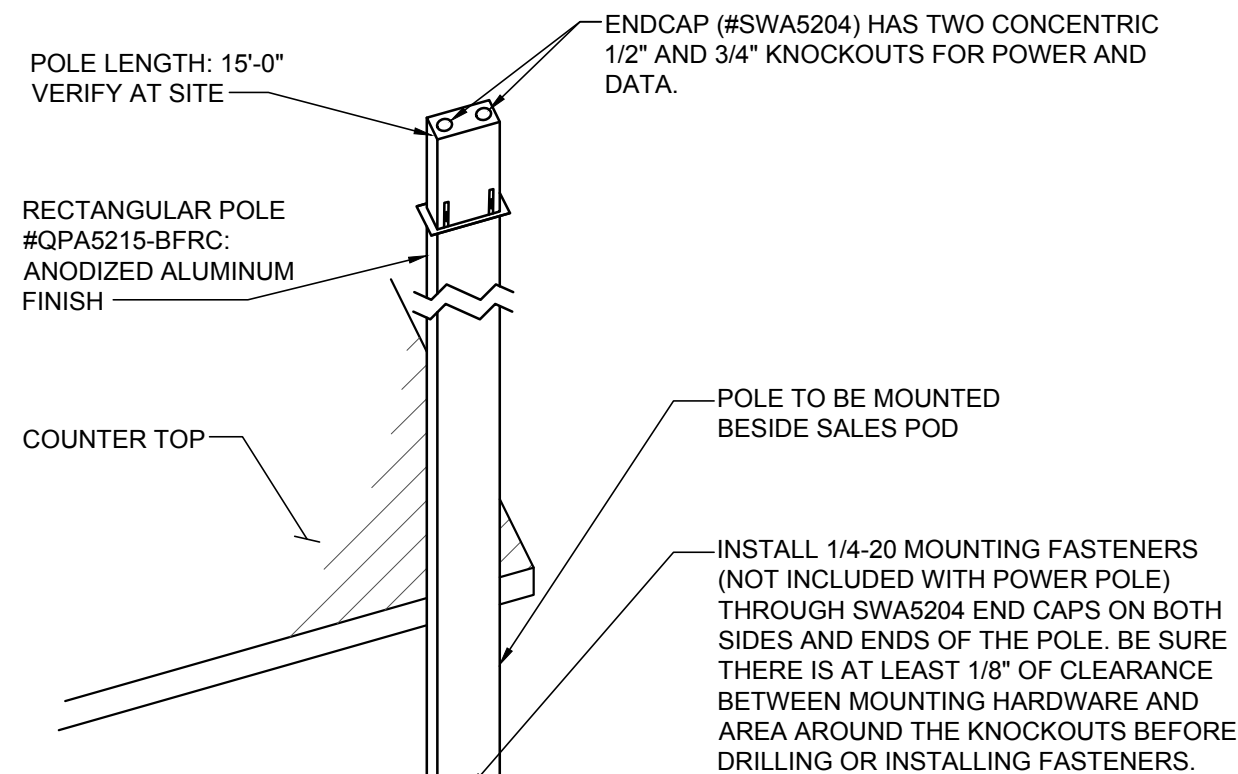
3
E4 TYPICAL LIGHT TYPE "F" MOUNTING DETAIL
SCALE: NONE



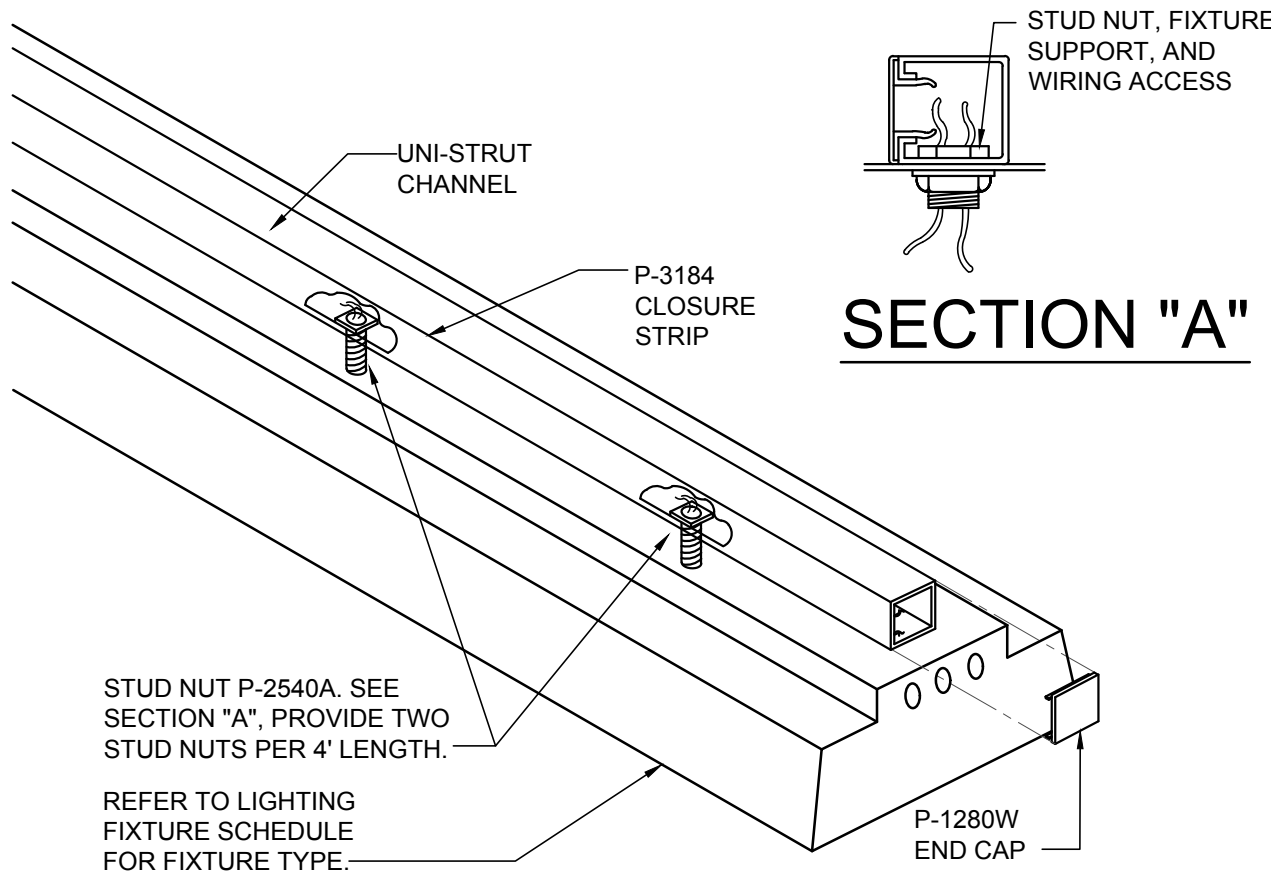
4
E4 TYPICAL MUD RING JUNCTION BOX DETAIL
SCALE: NONE



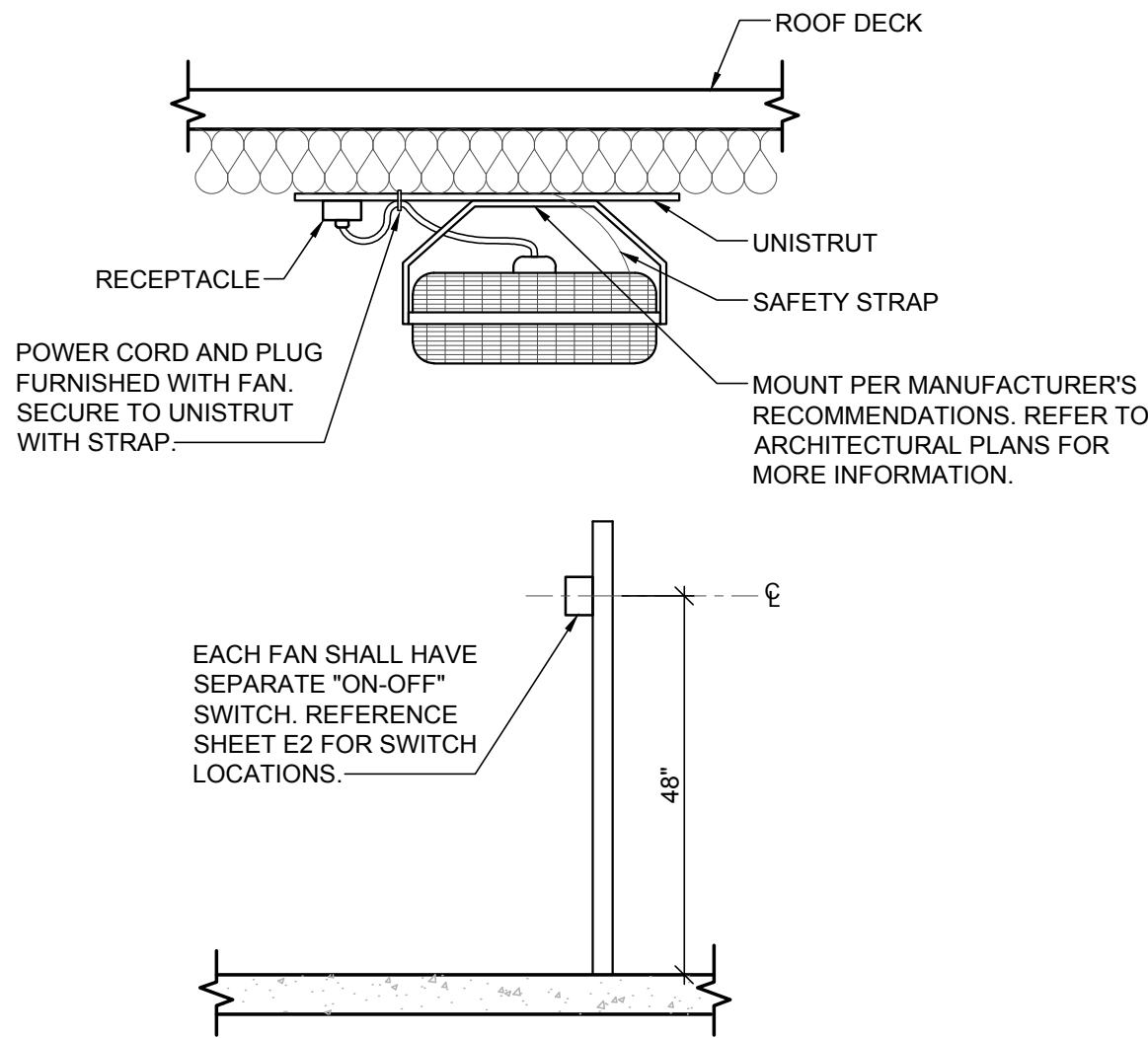
5
E4 VERTICAL AIR COMPRESSOR DETAIL
SCALE: NONE



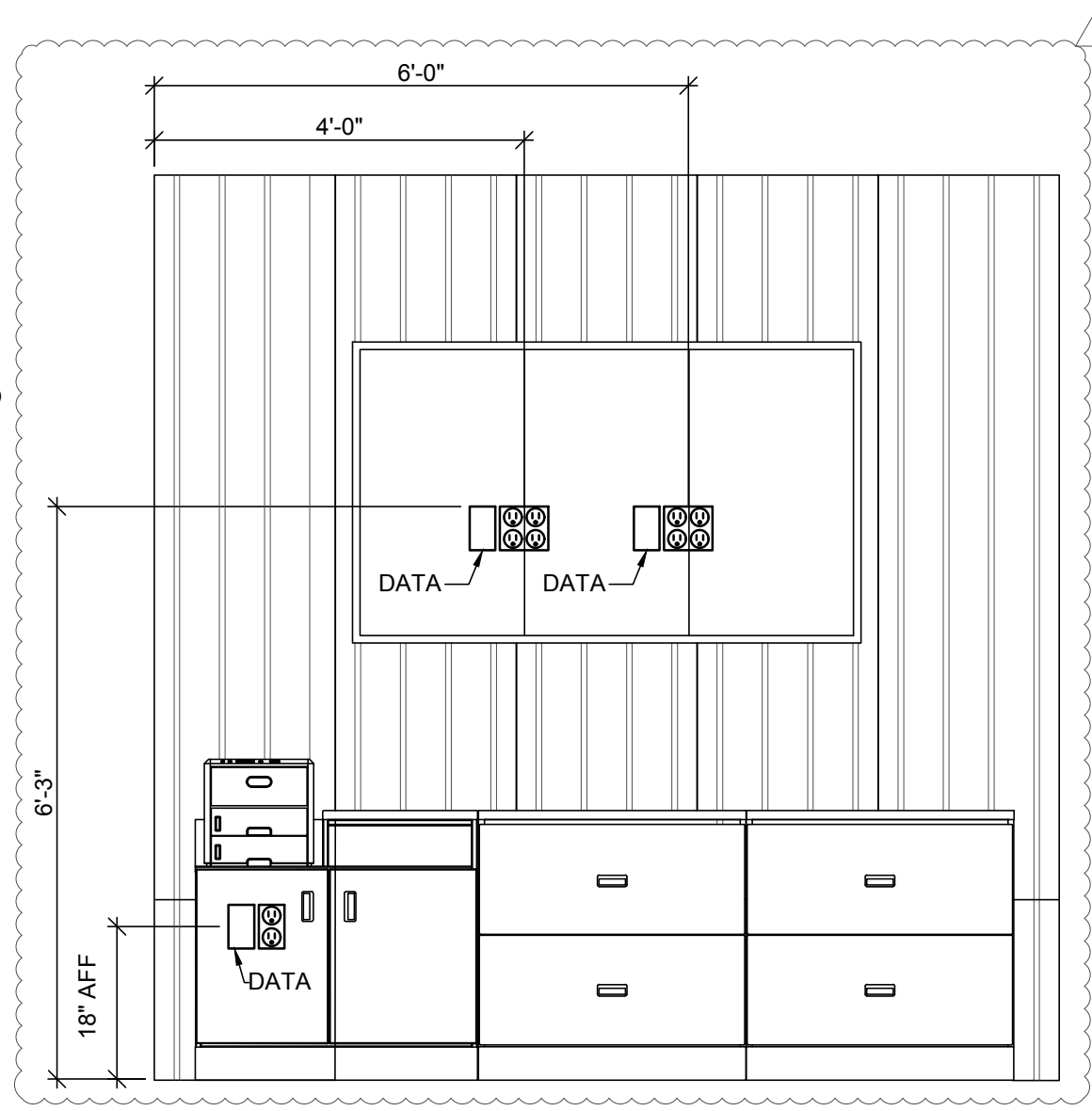
6
E4 DATA/POWER POLE DETAIL
SCALE: NONE



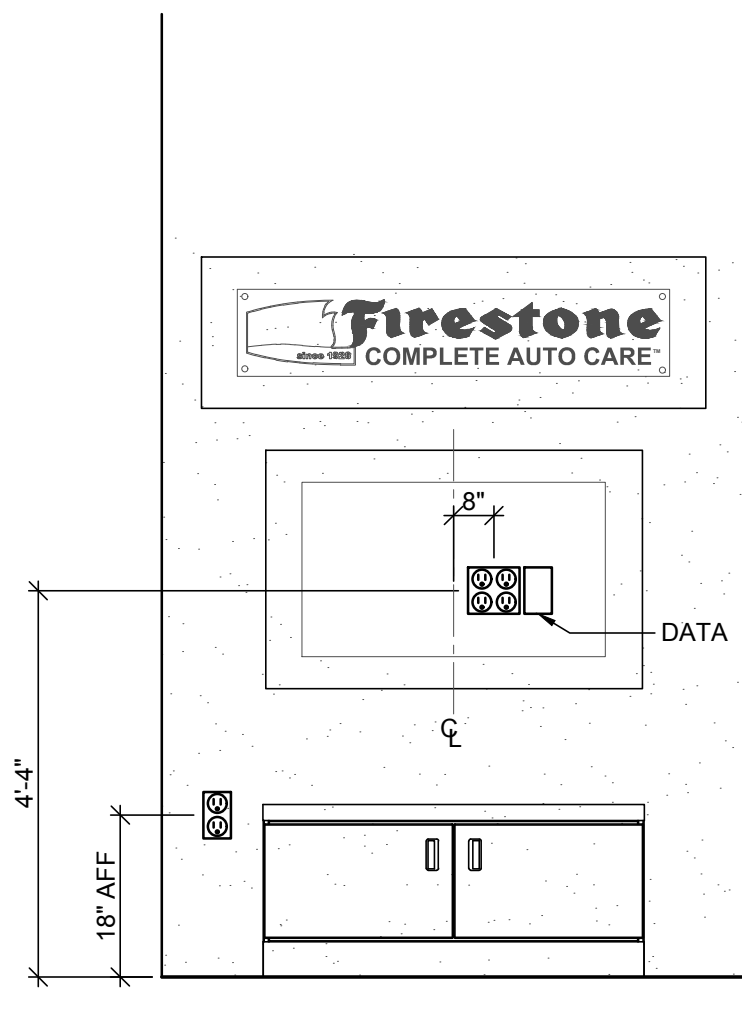
7
E4 TYPICAL LIGHT FIXTURE MOUNTING DETAIL
SCALE: NONE



8
E4 TYPICAL FAN MOUNTING DETAIL
SCALE: NONE



9
E4 DISPLAY SCREENS DETAIL
SCALE: NONE



10
E4 TV WALL DETAIL
SCALE: NONE

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

ACERTUS
CONSULTING GROUP, LLC
14817 Main Street • Lees Summit, MO 64020
P 913.322.5150 • F 913.322.5155
www.AcertusGroup.com
Proj# 202.0075

Firestone
COMPLETE AUTO CARE

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NEW FCAC STORE
2020 ER
3561 SW MARKET ST
JACKSON COUNTY
LEE'S SUMMIT, MISSOURI 64082

ISSUE BLOCK		
1	04/16/20	ADD #1
2	06/30/20	CB #1
3	07/23/20	IFC

PROPERTY NO.:	160085
6 DIGIT NO.:	906983
4 DIGIT NO.:	78C9
AOR PROJECT NUMBER:	1955B71
TO PERMIT:	DATE: 03/26/2020
TO BID:	DATE: ##-##-##

SHEET TITLE:	
ELECTRICAL DETAILS	
SHEET NUMBER:	
E4	

COMMERCIAL LOAD SUMMARY									
BUILDING AREA:		6,537 SQ. FT.		VOLTAGE:		208Y/120V, 3PH, 4W			
LOAD DESCRIPTION	CONNECTED LOAD (VA)		DEMAND FACTOR						DEMAND LOAD (VA)
LIGHTING	INTERIOR LIGHTING	4,775	x	125%	=				0
	EXTERIOR LIGHTING	768	x	125%	=				960
	SIGNAGE	4,800	x	125%	=				6,000
	MINIMUM GENERAL LIGHTING PER NEC-220 x 125%								19,113
MINIMUM TRACK LIGHTING/SHOW WINDOW PER NEC-220 x 125%									7,500
POWER & HVAC									
EXISTING	0	x	100%	=					0
RECEPTACLES	13,260	x	100%/50%	=					11,630
MISCELLANEOUS EQUIPMENT	33,120	x	100%	=					33,120
REFRIGERATION EQUIPMENT	0	x	100%	=					0
KITCHEN	0	x	100%	=					0
HVAC - SUMMER	7,926	x	100%	=					7,926
HVAC - WINTER	0	x	100%	=					0
SUPP. ELECTRIC HEAT	400	x	100%	=					400
MOTORS	32,656	x	100%	=					32,656
LARGEST MOTOR	7,061	x	25%	=					1,765
SUB-TOTAL (VA)		104,966							121,271
SUB-TOTAL (AMPS)		291							337
									SERVICE SIZE (AMPS) 400
									SPARE CAPACITY (AMPS) 63

PANELBOARD AFC VALUES ARE BASED ON AN ASSUMED TRANSFORMER AFC VALUE OF 50,000A AND A FEEDER LENGTH OF 90 FT. CONTRACTOR TO FIELD VERIFY ALL ASSUMPTIONS LISTED AND ALERT ENGINEER IF ACTUAL INFORMATION DIFFERS.

SERVICE DISCONNECT SIZED BASED ON LOAD SUMMARY PER THE NEC.

PANELBOARD MDP														
BUS AMPS: 400A				LOCATION: UTILITY AREA				GROUND BUS: YES						
MAIN SIZE / TYPE: MLO				NEMA RATING: NEMA 1				ISOL. GROUND BUS: YES						
VOLTS/PHASE: 208Y/120V, 3PH, 4W				AFC VALUE: 20,335A				FEED THRU LUGS: NO						
MOUNTING: SURFACE				AIC RATING: 22,000 A FULLY RATED				SECTIONS: 1						
CKT #	CIRCUIT DESCRIPTION	BREAKER		WIRE SIZE	LOAD (VA)	CONNECTED PER PHASE (VA)			LOAD (VA)	WIRE SIZE	BREAKER		CIRCUIT DESCRIPTION	CKT #
		AMPS	P			A	B	C			P	AMPS		
1	PANELBOARD "PP"	OL	3	OL	23,087	28,139			5,052	OL	3	OL	PANELBOARD "LP"	2
					22,319		26,015		3,696					
					20,989			24,080	3,091					
					1,825	3,651			1,825					
3	5HP AIR COMPRESSOR (HACR BREAKER)	OL	3	OL	1,825		3,651		1,825	OL	3	OL	5HP AIR COMPRESSOR (HACR BREAKER)	4
					1,825			3,651	1,825					
					3,543	3,543			0					
					3,543		3,543		0					
5	RTU-1 (HACR BREAKER)	OL	3	OL	3,543			3,543	0				SPACE ONLY	6
PER PHASE SUB-TOTALS						35,332	33,208	31,273	LEGEND:					
TOTAL CONNECTED PANELBOARD (VA)						99,813			TS - VIA TIME SWITCH					
TOTAL CONNECTED PANELBOARD (AMPS)						277			GF - GROUND FAULT INTERRUPTER					
TOTAL PANELBOARD DEMAND (VA)						111,558			FA - FIRE ALARM / RED / LOCKING TAB					
TOTAL PANELBOARD DEMAND (AMPS)						310			EM - EMERGENCY LTG. / LOCKING TAB					
									ST - SHUNT TRIP					
									LCK - LOCKING TAB					
									IG - ISOLATED GROUND					
									OL - REFER TO ONE-LINE DIAGRAM					

PANELBOARD LP															
		BUS AMPS:		100A		LOCATION:		UTILITY AREA		GROUND BUS:		YES			
		MAIN SIZE / TYPE:		MLO		NEMA RATING:		NEMA 1		ISOL. GROUND BUS:		NO			
		VOLTS/PHASE:		208Y/120V, 3PH, 4W		AFC VALUE:		19,077A		FEED THRU LUGS:		NO			
		MOUNTING:		SURFACE		AIC RATING:		22,000 A FULLY RATED		SECTIONS:		1			
CKT #	CIRCUIT DESCRIPTION	BREAKER AMPS	P	WIRE SIZE	LOAD (VA)	CONNECTED PER PHASE (VA)			LOAD (VA)	WIRE SIZE	BREAKER P	BREAKER	CIRCUIT DESCRIPTION	CKT #	
						A	B	C							
EM	3 SERVICE AREA / EM LTG	20	1	12	1,488	2,488			1,200	12	1	20	TIME SWITCH AND CONTACTORS	1	
	3 SERVICE AREA LTG	20	1	12	1,562		1,562					1	20	SPARE	2
	5 SPARE	20	1	0					1,200	12	1	20	BUILDING SIGN	3	
EM	7 INVENTORY / UTILITY RM / EM LTG	20	1	12	748	1,948			1,200	12	1	20	BUILDING SIGN	6	
EM	9 OFFICE / TOILET / BREAK / EM LTG & EF-2	20	1	12	934	2,134			1,200	12	1	20	BUILDING SIGN	8	
M,TS	11 CUSTOMER SHOWROOM / EM LTG	20	1	12	539			539	0		1	20	SPARE	10	
TS	13 SITE LIGHTING	20	1	SL	430	430			0		1	20	SPARE	14	
	15 SPARE	20	1	0				0			1	20	SPARE	16	
	17 EXTERIOR LIGHTING	20	1	12	152			1,352	1,200	SL	1	20	MONUMENT SIGN	18	
TS	19 EXTERIOR LIGHTING	20	1	12	186	186			0		1	20	SPARE	20	
	21 SPARE	20	1	0			0		0		1	20	SPARE	22	
	23 SPARE	20	1	0				0	0		1	20	SPARE	24	
	25 SPARE	20	1	0		0			0		1	20	SPARE	26	
	27 SPARE	20	1	0		0			0		1	20	SPARE	28	
	29 SPARE	20	1	0				0	0		1	20	SPARE	30	
PER PHASE SUB-TOTALS						5,052	3,696	3,091	LEGEND:						
TOTAL CONNECTED PANELBOARD (VA)						11,839			TS - VIA TIME SWITCH			ST - SHUNT TRIP			
TOTAL CONNECTED PANELBOARD (AMPS)						33			GF - GROUND FAULT INTERRUPTER			LCK - LOCKING TAB			
TOTAL PANELBOARD DEMAND (VA)						14,549			FA - FIRE ALARM / RED / LOCKING TAB			IG - ISOLATED GROUND			
TOTAL PANELBOARD DEMAND (AMPS)						40			EM - EMERGENCY LTG. / LOCKING TAB			OL - REFER TO ONE-LINE DIAGRAM			
						SL - REFER TO SITE LIGHTING PLAN ESL1									

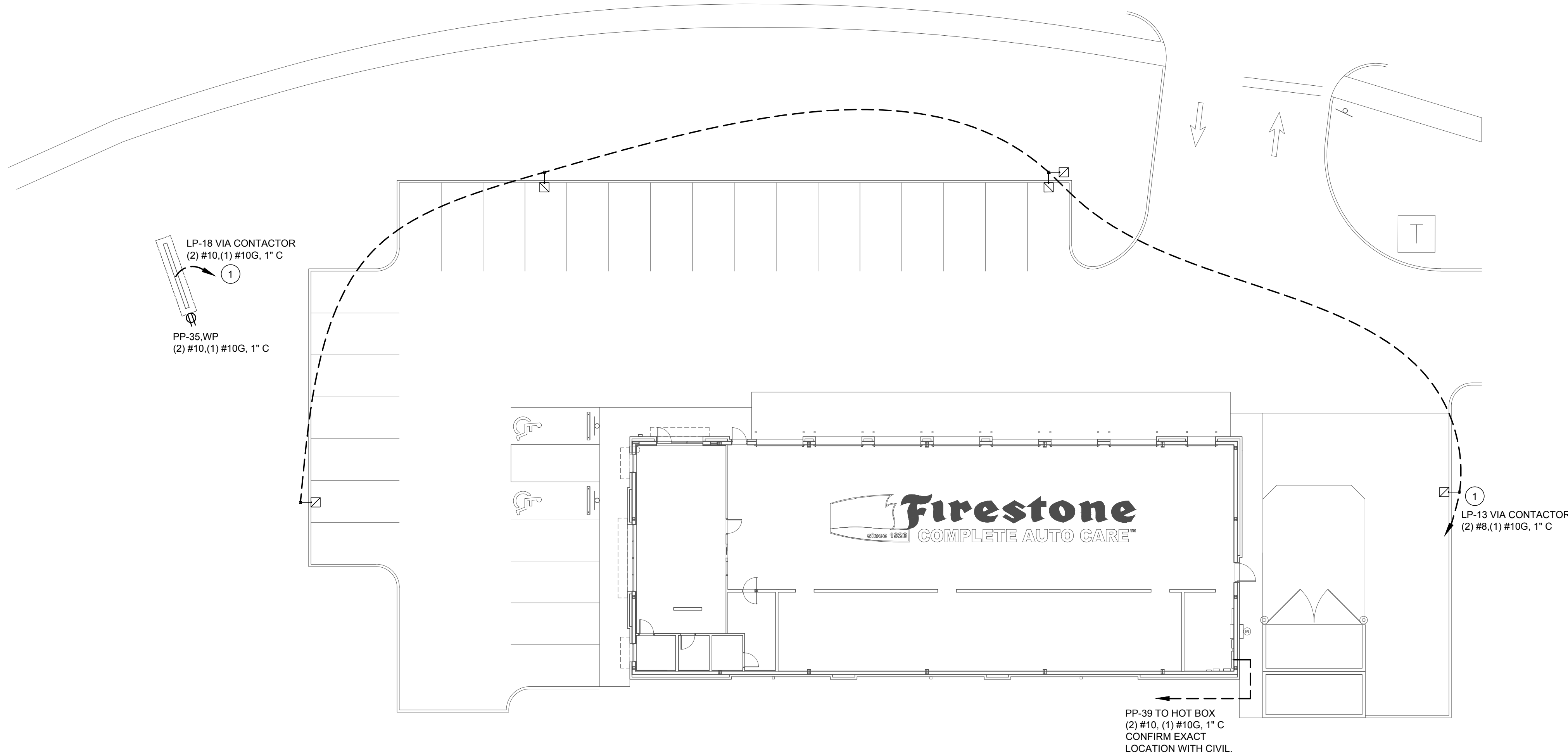
PANELBOARD PP														
BUS AMPS: MAIN SIZE / TYPE: VOLTS/PHASE: MOUNTING:				200A MLO 208Y/120V, 3PH, 4W SURFACE		LOCATION: NEMA RATING: AFC VALUE: AIC RATING:		UTILITY AREA NEMA 1 17,264A 22,000 A FULLY RATED		GROUND BUS: ISOL. GROUND BUS: FEED THRU LUGS: SECTIONS:		YES YES YES 2		
CKT #	CIRCUIT DESCRIPTION	BREAKER AMPS	P	WIRE SIZE	LOAD (VA)	CONNECTED PER PHASE (VA)			LOAD (VA)	WIRE SIZE	BREAKER P	AMPS	CIRCUIT DESCRIPTION	CKT #
1	SALES POD IG RCPT	20	1	12	360	1,297			937	12	3	20	EF-1	2
3	SALES POD IG RCPT	20	1	12	360	1,297			937	12	3	20		3
5	SALES POD IG RCPT	20	1	12	360			1,297	937	12	3	20		4
7	CUSTOMER SHOWROOM / OFFICE RCPTS	20	1	12	720	1,440			720	12	1	20	SERVICE AREA RCPTS	8
9	CUSTOMER SHOWROOM IG RCPT	20	1	12	180		900		720	12	1	20	SERVICE AREA RCPTS	10
11	CHARGING STATION	20	1	12	720			1,440	720	12	1	20	SERVICE AREA RCPTS	12
13	COFFEE BAR	20	1	12	180	540			360	12	1	20	SERVICE AREA WORK BENCH	14
15	BOSS TV	20	1	12	1,600			860	360	12	1	20	MVS DESK IG RCPT	16
17	MENU BOARDS	20	1	8	1,500			2,300	800	12	1	20	SERVICE AREA EWC	18
19	SHOWROOM PRINTER	20	1	12	500	680			180	12	1	20	ROOF CONVENIENCE RCPT	20
21	MRT DISPLAY	20	1	12	500		1,040		540	12	1	20	INVENTORY RCPT	22
23	TOILET RCPTS	20	1	12	360			540	180	12	1	20	UTILITY AREA RCPT	24
25	OFFICE IG RCPTS	20	1	12	360	720			360	12	1	20	TELEPHONE SERVICE	26
27	SERVER CABINET IG RCPT	20	1	12	360		720		360	12	1	20	FIRE SERVICE PANEL	28
29	MICROWAVE	20	1	8	1,200			1,560	360	12	1	20	OPTIONAL SECURITY SYSTEM	30
31	REFRIGERATOR	20	1	8	1,000	2,200			1,200	12	1	20	ALIGNMENT COMPUTER	32
33	BREAK RCPTS	20	1	12	540		740		200	12	1	20	TOXALERT SYSTEM	34
35	SIGNAGE CONVENIENCE RCPT	20	1	SL	180			360	180	12	1	20	EXTERIOR FRONT RCPT	36
37	SHOWROOM EWC	20	1	12	500	500			0	1	20	SPARE	38	
39	HOT BOX ON SITE	20	1	SL	200		200		0	1	20	SPARE	40	
41	SPARE	20	1	12	0		0	0	0	1	20	SPARE	42	
SECTION 2														
43	AIR DRYER #9	20	1	12	948	2,548			1,600	8	2	20	SMART LIFT (BAY #1)	44
45	BRAKE SHOP #10	20	1	12	1,800		3,400		1,600					46
47	ELECTRONIC WHEEL BALANCER	20	2	10	1,200			2,800	1,600	8	2	20	SMART LIFT (BAY #2)	48
49	#13A	20	2	10	1,200	2,800			1,600					50
51	BALANCER NON-ROAD FORCE	20	2	10	1,200		2,800		1,600	10	2	20	SMART LIFT (BAY #3)	52
53	#13B	20	2	10	1,200			2,800	1,600					54
55	RIM CLAMP TIRE CHANGER	30	2	8	2,760	4,360			1,600	10	2	20	SMART LIFT (BAY #4)	56
57	#10B	20	1	12	2,760		4,360		1,600					58
59	SHOP FAN #42	20	1	12	264			1,864	1,600	10	2	20	SMART LIFT (BAY #5)	60
61	SHOP FAN #42	20	1	12	264	1,864			1,600					62
63	SHOP FAN #42	20	1	12	264		2,964		2,700	8	2	30	ALIGNMENT LIFT (BAY #6)	64
65	SHOP FAN #42	20	1	12	264			2,964	1,600					66
67	SHOP FAN #42	20	1	12	264	1,864			1,600	10	2	20	SMART LIFT (BAY #7)	68
69	SHOP FAN #42	20	1	12	264		1,864		1,600					70
71	SHOP FAN #42	20	1	12	264			664	400	12	1	20	WATER HEATER / RECIRC. PUMP	72
73	SPARE	20	1	12	0	414			414	12	1	15	UNIT HEATER UH-1	74
75	OVERHEAD DROP LIGHTS #2	20	1	12	200		614		414	12	1	15	UNIT HEATER UH-2	76
77	POWER CORD REEL #17	20	1	10	1,500			1,860	360	12	1	20	RADIANT HEATER RAD-1	78
79	POWER CORD REEL #17	20	1	10	1,500	1,860			360	12	1	20	RADIANT HEATER RAD-2	80
81	MOTORIZED DAMPER	20	1	12	200		560		360	12	1	20	RADIANT HEATER RAD-3	82
83	SHOW WINDOW RCPTS	20	1	12	540			540	0	1	20	SPARE		84
PER PHASE SUB-TOTALS						23,087	22,319	20,989	LEGEND:					
TOTAL CONNECTED PANELBOARD (VA)						66,394			TS - VIA TIME SWITCH			ST - SHUNT TRIP		
TOTAL CONNECTED PANELBOARD (AMPS)						66,184			CF - GROUND FAULT INTERRUPTER			LOK - LOCKING TAB		
TOTAL PANELBOARD DEMAND (VA)						66,184			AF - FIRE ALARM / RED / LULLING TAB			IG - ISOLATED GROUND		
TOTAL PANELBOARD DEMAND (AMPS)						184			EM - EMERGENCY LTG. / LOCKING TAB			OL - REFER TO ONE-LINE DIAGRAM		
									SL - REFER TO SITE LIGHTING PLAN ESL1					

SITE LIGHTING PLAN GENERAL NOTES

- FURNISH AND INSTALL ALL CONDUIT, WIRE AND DEVICES REQUIRED FOR MONUMENT SIGN. VERIFY LOCATION AND REQUIREMENTS WITH SIGN MANUFACTURER PRIOR TO ROUGH-IN.
- PROVIDE ALL GROUNDING FOR MONUMENT SIGN PER MANUFACTURER'S AND LOCAL CODE REQUIREMENTS.
- REFERENCE PHOTOMETRIC SITE LIGHTING SHEET FOR THE FOLLOWING INFORMATION:
 - POLE SPECIFICATIONS
 - LIGHTING FIXTURE MOUNTING HEIGHT
 - LIGHTING FIXTURE SPECIFICATIONS
 - LIGHTING FIXTURE DESIGNATIONS
- REFER TO SHEET E2 FOR BUILDING MOUNTED LIGHT FIXTURE LOCATIONS AND DESIGNATIONS

SITE LIGHTING PLAN KEYNOTES

- REFERENCE SHEET E5 FOR CONTACTOR DIAGRAM AND PANELBOARD SCHEDULES.



1
ESL1

ELECTRICAL SITE PLAN

SCALE: 1/16" = 1'-0"

RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

ACERTUS
CONSULTING GROUP, LLC
14817 West 29th Street • Kansas City, MO 64116
P 913.322.5150 • F 913.322.5155
www.AcertaGroup.com
Proj# 202.0075

Firestone
COMPLETE AUTO CARE

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NEW FCAC STORE
2020 ER
3561 SW MARKET ST
JACKSON COUNTY
LEE'S SUMMIT, MISSOURI 64082



ISSUE BLOCK			
1	04/16/20	ADD	#1
2	06/30/20	CB	#1
3	07/23/20	IFC	
PROPERTY NO.: 160085			
6 DIGIT NO.: 906983			
4 DIGIT NO.: 78C9			
AOR PROJECT NUMBER: 1955B71			
TO PERMIT:		DATE: 03/26/2020	
TO BID:		DATE: ##-##-##	
SHEET TITLE:			
SITE LIGHTING PLAN			
SHEET NUMBER:			

ESL1