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STRUCTURAL DRAWINGS

FOUNDATION PLAN AND NOTES

FIRE PROTECTION DRAWINGS

FP2 | FIRE SPRINKLER NOTES AND DETAILS

FA4 FIRE ALARM CONTROL PANEL LAYOUT

**BURGLAR ALARM DRAWINGS** 

FIRE ALARM NOTES. PROGRAMMING AND

FIRE ALARM DRAWINGS

FA1 | FIRE ALARM PLAN AND MATRIX

**GENERAL NOTES** 

FOUNDATION DETAILS

P1 | FIRE SPRINKLER PLAN

**CALCULATIONS** 

FA3 | FIRE ALARM DETAILS

# NEW FIRESTONE STORE

**PUBLICATION INDEX** 

03/26/20

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# 3561 SW MARKET ST., JACKSON COUNTY LEE'S SUMMIT, MO 64082

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**BUILDING DRAWING INDEX** 

GENERAL INFORMATION (FOR REFERENCE)

STORE PLANNING (FOR REFERENCE)

SHOWROOM FIXTURE PLAN & ELEVATIONS

T1 TITLE SHEET

N1 GENERAL INFORMATION

PSL1 PHOTOMETRIC SITE LIGHTING

FIXTURE PLAN & NOTES

A1.1 FLOOR PLAN & NOTES

A1.2 ENLARGED PLAN DETAILS

ROOF PLAN & DETAILS

3 FIRE PROTECTION

ARCHITECTURAL DRAWINGS

METAL BUILDING PLAN & NOTES

REFLECTED CEILING & FINISH PLAN

LS1 LIFE SAFETY PLAN

EVISIO		D	
DATE	DESCRIPTION		2020 ER DCBS T
ADD#1	04/16/20		DCB#
CB#1	06/30/20		2019-001 2020-001
IFC	07/23/20		
CB 2	09/09/20		2020-0
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#### **CODE DATA SUMMARY** APPLICABLE CODES 2018 INTERNATIONAL BUILDING CODE (IBC) 2018 INTERNATIONAL MECHANICAL CODE (IMC) 2018 INTERNATIONAL PLUMBING CODE (IPC) 2017 NATIONAL ELECTRICAL CODE (NEC) 2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) 2018 INTERNATIONAL FIRE CODE (IFC) NFPA ANSI A117.1 - 2017 (2020 ER-LAYOUT) ONE STORY METAL BUILDING, MERCHANDISING, AUTO SERVICE (MINOR REPAIR). INCIDENTAL STORAGE AREA. ACCESSORY AREA (OFFICE, RESTROOMS) 531 SF 3,421 SF SERVICE AREA **INVENTORY AREA GROSS TOTAL**

Chapter 3 - OCCUPANCY CLASSIFICATION (MIXED 309.1 Occupancy Group M (Mercantile) - Showroom 311.2 Occupancy Group S-1 (Moderate Hazard) - Inventory

311.2 Occupancy Group S-1 (Moderate Hazard) - Service Areas

Chapter 5- GENERAL BUILDING HEIGHTS AND BUILDING AREAS Group M - Allowable area = 36,000 SF, Allowable height = 60' Group S-1 - Allowable area = 36,000 SF, Allowable height = 60'

Chapter 6 - TYPES OF CONSTRUCTION

602.5 Type V-B Table 601 - Type V-B- Groups M & S-1 Structural Frame:

0 hour rating Floor and Roof Construction: 0 hour rating Exterior Bearing Walls: 0 hour rating

Table 602 -Type V-B - Exterior wall based on fire separation distance: All sides >10,- 0 hour rating

Chapter 7 - FIRE RATED CONSTRUCTION

705.2.2 Projections from walls of Type V Construction shall be of any approved material. 720.2 Concealed insulation materials shall have a flame spread index of not more than 25 and a smoke-developed index of not more than 450.

903.2.9.1- Group S-1- Repair Garages- An automatic sprinkler system shall be provided	_
throughout all buildings used as repair garages in accordance with Section 406, as shown 1. Buildings having two or more stories above grade plan, including basements, with	
a fire area containing a repair garage exceeding 10,000 square feet.	N/A
2. Buildings not more than one story above grade plane, with a fire area containing	
a repair garage exceeding 12,000 square feet.	N/A
<ul><li>3. Buildings with repair garages servicing vehicles parked in basements.</li><li>4. A group S-1 fire area used for repair of commercial motor vehicles where the</li></ul>	N/A
fire area exceeds 5,000 square feet.	N/A
903.2.9.2 - Bulk storage of tires. Buildings and structures where the area for the storage of	
tires exceed 20,000 cubic feet shall be equipped throughout with an automatic sprinkler	
system in accordance with Section 903.3.1.1.	
Proposed tire storage = < 20,000 CU. FT. OF TIRES.	N/A
Tire Storage- On tread, in single and double row fixed stacks without solid shelves and 5 tiers.	
A FIRE PROTECTION SYSTEM AND FIRE ALARM SYSTEM WILL BE PROVIDED.	
hapter 10 - MEANS OF EGRESS	
Occupant load: Table 1004.1.2,	
Gross Floor Areas: 6.262 SF	

Egress width @ grade level doors = 0.20" per occupant, 35 occupants X 0.20 = 7" of Provided exit width - (3) doors = 111" (#01, #07, #16)

Chapter 11- ACCESSIBILITY 1103.2.9 - Equipment spaces frequented only by personnel for maintenance, repair or monitoring of equipment are not required to be accessible. 1104.1- Accessible routes within the site shall be provided from public transportation stops, accessible parking, accessible passenger loading zones; and public streets or sidewalks to the accessible building entrance served.

1104.3.1- Employee work areas. Common use Circulation paths within employee work areas shall be accessible. 1105.1- Public Entrances, At least 60 percent of all public entrances shall be accessible. Table 1106.1 - Accessible parking - 1 per 25 spaces.

Chapter 12 - INTERIOR ENVIRONMENT

Inventory (Storage 1,508 SF/300 gross) = 5 occupants TOTAL OCCUPANTS for means of egress = 35 occupants

Ventilation and Temperature control shall conform to the IMC. 1209.2.1 Toilet room floors shall have smooth, hard, nonabsorbent surface that extends upward onto the walls at least 4".

1209.2.2 Walls within 2 feet of urinals and water closets shall have a smooth, hard, nonabsorbent surface to 4 feet above the floor, and except for structural elements, the materials used in such walls shall be of a type that is not adversely affected by Accessories such as grab bars, towel dispensers, T.P. dispensers, etc, provided on or

in walls, shall be installed and sealed to protect structural elements from moisture.

## **GENERAL NOTES**

- 1. ALL ITEMS SHALL FULLY COMPLY WITH IBC ACCESSIBILITY GUIDELINES SECTION 1101.2 ACCESSIBLE BUILDINGS: NEW CONSTRUCTION
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF THE CONTRACT DOCUMENTS. THE OWNER SHALL BE NOTIFIED OF ANY UNFORESEEN CONDITIONS WHICH MAY AFFECT PROGRESS OR COST OF WORK PERFORMED.
- 3. FIRE EXTINGUISHERS SHALL BE LOCATED PER DIRECTION OF FIRE DEPARTMENT. REFER GENERAL NOTE #4 AND SHEET LS1 FOR REQUIRED F.E. LOCATIONS.
- 4. G.C. SHALL PROVIDE, INSTALL AND CERTIFY (4) DRY CHEMICAL (A, B, C) @ 10 lbs. FIRE EXTINGUISHERS. LOCATE 1 SALES, 1 BREAK AREA, 1 INVENTORY AT DOOR TO SERVICE (INVENTORY SIDE), AND 1 SERVICE AT DOOR TO INVENTORY (SERVICE SIDE). MINIMUM AMOUNT OF FIRE EXTINGUISHERS WILL BE REQUIRED WHETHER OR NOT CODE REQUIRES. IF CODE REQUIRES MORE THAN STATED HEREIN, G.C. SHALL FURNISH AND INSTALL THE ADDITIONAL REQUIRED.
- 5. ALL SIGNAGE, SHELVING, AND ALARMS SHALL BE DEFERRED SUBMITTALS UNDER SEPARATE PERMIT SUBMISSION.

- 6. THE OWNER WILL EMPLOY THE SERVICES OF ONE OR MORE SPECIAL INSPECTORS TO PROVIDE SPECIAL INSPECTIONS DURING CONSTRUCTION FOR THE REQUIRED SPECIAL INSPECTION ITEMS.
- . A VESTIBULE IS NOT INCLUDED ON THIS PROJECT BASED ON EXCEPTION 4 OF THE 2018 INTERNATIONAL ENERGY CONSERVATION CODE SECTION C402.5.7. DOORS THAT OPEN DIRECTLY FROM A SPACE LESS THAN 3,000 SQUARE FEET IN AREA.
- a. APPROVAL OF SPRINKLER DRAWINGS IS REQUIRED BY BRIDGESTONE CONSTRUCTION MANAGER.
- b. NO MAIN LINES RUN WITHIN THE PLAN AREA OF THE OPEN OR UP POSITION OF THE OVERHEAD DOOR. c. FIRE SPRINKLER TEST PIPE TO BE DIRECTED TO
- HARDSCAPE TO AVOID WASH OUT OF OTHER TYPE d. FIRE SPRINKLER MONITORING REQUIRED, WITH MINIMUM (1) MANUAL PULL STATION FOR FIRE
- e. ALL AUXILIARY DRAINS AND PIPING ARE TO BE ROUTED OUT THRU SERVICE BAYS.

SPRINKLER MONITORING.

9. DISTRICT/STORE MANAGER/NSC TO PROVIDE MAIL BOX TYPE AND LOCATION TO THE GENERAL CONTRACTOR'S SUPERINTENDENT APPROXIMATELY 2 WEEKS BEFORE TURNOVER FOR GC TO IMPLEMENT AS FIELD CHANGE ORDER.

A4	EXT	ERIOR ELEVATIONS & DETAILS	03/26/20	4	09/09/20	-/-/		
A5	BUIL	DING SECTIONS & DETAILS	03/26/20	3	07/23/20	-/-/		
A5.1	WAL	L SECTIONS	03/26/20	3	07/23/20	-/-/		
A6	WAL	L SECTIONS & DETAILS	03/26/20	3	07/23/20	-/-/		
A6.1	TRA	SH/TIRE ENCLOSURE DETAILS	03/26/20	3	07/23/20	-/-/		
A7	INTE	RIOR ELEVS, SECTIONS & DETAILS	03/26/20	3	07/23/20	-/-/		
A8	ROC	OM FINISH & DOOR SCHEDULES	03/26/20	3	07/23/20	-/-/		
DEF	ERF	RED SHOP DRAIWNG SUBMITTALS						
TO T OR I LICE	THE FOLLOWING SUBMITTALS ARE TO BE SUBMITTED BY THE GENERAL CONTRACTOR TO THE AUTHORITY HAVING JURISDICTION FOR APPROVAL PRIOR TO FABRICATION OR INSTALLATION. SUBMITTALS ARE TO BE SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE STATE OF MISSOURI OR AS REQUIRED BY THE AHJ. REFER SPECIFICATIONS.							
СОРІ	ES	SUBMITTALS						
3		FIRE ALARM						

1/2" DENSGLASS GOLD IS AN ACCEPTED APPROVED ALTERNATE TO 1/2" EXTERIOR GRADE PLYWOOD.

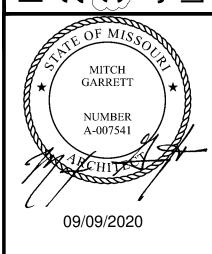
	BUNGLAN ALANWI DNAWINGS							
BA1	INTRUSION ALARM PLAN AND MATRIX	03/26/20	3	07/23/20	-/-/-	03/26/20	-/-/-	-/-/-
BA2	INTRUSION ALARM NOTES AND CALCULATIONS	03/26/20	3	07/23/20	-/-/-	03/26/20	-/-/-	-/-/-
ВА3	INTRUSION ALARM CONTROL PANEL LAYOUT AND DETAILS	03/26/20	3	07/23/20	-/-/-	03/26/20	-/-/-	-/-/-
					<u></u>			
	MECHANICAL DRAWINGS				<u> </u>			
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	-/-/-	-/-/-
МЗ	MECHANICAL EQUIPMENT SCHEDULES	03/26/20	3	07/23/20	-/-/-	03/26/20	-/-/-	-/-/-
	PLUMBING DRAWINGS		-		-			
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	-/-/-	-/-/-
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	-/-/-	-/-/-
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	-/-/-	-/-/-

•	THE SUBCONTRACTOR SHALL EXAMINE ENTIRE SET PRIOR TO SUBMITTING BID.
AL	L RFI'S AND SUBMITTALS SHALL BE SENT TO
	BSRO_Submittals_RFI@sgadesigngroup.com.

DEVELOPER CONTACT:	ARCHITECTURAL CONTACT:	STRUCTURAL:	FIRE PROTECTION	FIRE ALARM/BURGLAR ALARM:	MECHANICAL/PLUMBING/ELECTRICAL:	TENANT CONTACT:
FS LEE'S SUMMIT, LLC	SGA DESIGN GROUP, P.C.	WALLACE ENGINEERING - STRUCTURAL CONSULTANTS, INC.	CODE CONSULTANTS, INC.	CODE CONSULTANTS, INC.	ACERTUS CONSULTING GROUP, LLC	BRIDGESTONE RETAIL OPERATIONS, LLC
JASON HOROWITZ	OLIVIA GOOD	CARRIE JOHNSON	WILLIAM B. SMITH	JACOB P. HEMKE	RANDALL A. NELSON	BRANT HEFLIN
9010 OVERLOOK BLVD	1437 SOUTH BOULDER AVE, SUITE 550	MO STATE CERTIFICATE OF AUTHORITY #001268	MO ST. CERTIFICATE OF AUTHORITY: #000419	MO ST. CERTIFICATE OF AUTHORITY: #000419	14817 WEST 95TH ST.	200 4TH AVE. SOUTH
BRENTWOOD, TN 37027	TULSA, TULSA COUNTY, OK 74119	123 N. MARTIN LUTHER KING JR. BLVD.	2043 WOODLAND PARKWAY. SUITE 300	2043 WOODLAND PARKWAY. SUITE 300	LENEXA, JOHNSON COUNTY, KS 66215	NASHVILLE, TN 37201
PHONE: 615.370.0670		, ,	ST. LOUIS, ST. LOUIS COUNTY, MO 63143	ST. LOUIS, ST. LOUIS COUNTY, MO 63143	PHONE: 913.322.5150	PHONE: 615.937.9345
			PHONE: 314.991.2633	PHONE: 314.991.2633	FAX: 913.322.5155	
		FAX: 918.584.8689				

PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MACONTRARY TO THE LAW.

NEW 2020 3561 JACK LEE'S S .020 .566 .JAC .EE'S



Mitchel Garrett E=mitchg@sgadesigngroup.
O=SGA Design Group,
CN=Mitchel Garrett
Date: 2020.09.09 11:14:41-0 MITCHEL RAY GARRETT - ARCHITECT

SSUE	SSUE BLOCK					
/1	04/16/20	ADD #1				
/2\	06/30/20	CB#1				
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PROPERTY NO.: 906983 6 DIGIT NO.:

AOR PROJECT NUMBER: 1955B71 TO PERMIT: DATE: 03/26/202 DATE: ##-##-## TO BID:

SHEET TITLE: SHEET

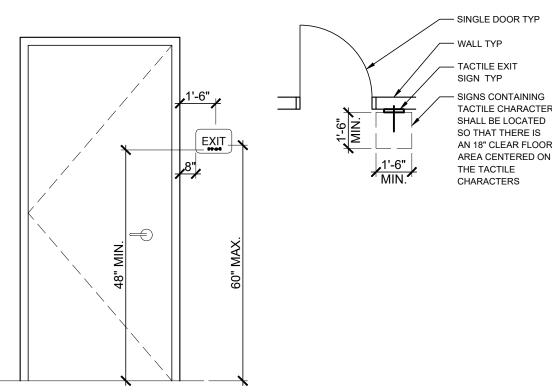
#### SIGNS & IDENTIFICATION

- THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL BE THE STANDARD USED TO IDENTIFY FACILITIES THAT ARE ACCESSIBLE TO AND USABLE BY PHYSICALLY DISABLED PERSONS AS SET FORTH IN TITLE III AND AS SPECIFICALLY
- THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL CONSIST OF A WHITE FIGURE ON A BLUE BACKGROUND. TH BLUE SHALL BE EQUAL TO COLOR NO. 15090 IN FEDERAL STANDARD 599B. PICTOGRAMS AND THEIR FIELDS SHALL HAVE A NON-GLARE FINISH. PICTOGRAMS SHALL CONTRAST THEIR FIELDS, WITH EITHER A LIGHT PICTOGRAM ON A DARK FIELD OR A DARK PICTOGRAM ON A LIGHT FIELD.
- ALL CHARACTERS OF A FONT. THE WIDTH OF THE UPPERCASE LETTER "O" OF THE FONT SHALL BE 55 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I" OF THE FONT. (ICC A117.1-201 703.3.6) CHARACTER HEIGHT MEASURED FROM THE BASELINE OF THE CHARACTER SHALL BE 5/8" (16 MM) MINIMUM AND 2 INCHES (51 MM) MAXIMUM BASED ON THE HEIGHT OF THE UPPERCASE LETTER "I".

FOR CHARACTER WIDTH, THE UPPERCASE LETTER "O" SHALL BE USED TO DETERMINE THE ALLOWABLE WIDTH OF

- MINIMUM CHARACTER HEIGHT SHALL COMPLY WITH ICC ANSI A117.1-2017: 703.3.5. VIEWING DISTANCE SHALL BE MEASURED AS THE HORIZONTAL DISTANCE BETWEEN THE CHARACTER AND AN OBSTRUCTION PREVENTING FURTHER APPROACH TOWARDS THE SIGN. CHARACTER HEIGHT SHALL BE BASED ON THE UPPERCASE LETTER "I".
- CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND
- WHEN RAISED CHARACTERS OR SYMBOLS ARE USED, THEY SHALL CONFORM TO THE FOLLOWING:
- A. LETTERS AND NUMBERS ON SIGNS SHALL BE RAISED 1/32" MINIMUM AND SHALL BE SANS-SERIF UPPERCASE
- B. RAISED CHARACTERS OR SYMBOLS SHALL BE A MINIMUM OF 5/8" HIGH AND 2" MAXIMUM BASED ON THE HEIGHT OF C. PICTORIAL SYMBOL SIGNS (PICTOGRAMS) SHALL BE ACCOMPANIED BY THE EQUIVALENT VERBAL DESCRIPTION
- PLACED DIRECTLY BELOW THE PICTOGRAM. THE BORDER DIMENSION OF THE PICTOGRAM SHALL BE A MINIMUM OF
- CONTRACTED GRADE 2 BRAILLE SHALL BE USED WHEREVER BRAILLE SYMBOLS ARE SPECIFICALLY REQUIRED IN OTHER PORTIONS OF THESE REGULATIONS. DOTS SHALL BE 0.090" (2.3 MM) TO 0.100" (2.5 MM) ON CENTER IN EACH CELL WITH 0.241" (6.1 MM) TO 0.300" (7.6 MM) SPACE BETWEEN CELLS. DOTS SHALL BE RAISED A MINIMUM OF 0.025 (0.6 MM) TO 0.037" (0.9 MM) ABOVE THE BACKGROUND.
- WHEN PERMANENT IDENTIFICATION IS PROVIDED FOR ROOMS AND SPACES, RAISED LETTERS SHALL BE ACCOMPANIED BY BRAILLE. SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOF WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE. INCLUDING DOUBLE LEAF DOORS. SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL, PREFERABLY ON THE RIGHT. MOUNTING HEIGHT SHALL BE LOCATED 48 INCHES 1220 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASE OF THE LOWEST TACTILE CHARACTER AND 60 INCHES (1525 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE. MEASURED FROM THE BASELINE OF THE HIGHEST TACTILE CHARACTER, WHERE A TACTILE SIGN IS PROVIDED AT A DOOR, THE SIGN SHALL BE LOCATED ALONGSIDE THE DOOR AT THE LATCH SIDE. WHERE A TACTILE SIGN IS A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH TWO ACTIVE LEAFS, THE SIGN SHALL BE LOCATED TO THE RIGHT OF THE RIGHT HAND DOOR, WHERE THERE IS NO WALL SPACE AT THE LATCH SIDE OF A SINGLE DOOR OR A THE RIGHT SIDE OF DOUBLE DOORS, SIGNS SHALL BE LOCATED ON THE NEAREST ADJACENT WALL, SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18 INCHES (455 MM) MINIMUM BY 18 INCHES (455 MM) MINIMUM, CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN POSITION. EXCEPTION: SIGNS WITH TACTILE CHARACTERS SHALL BE PERMITTED ON THE PUSH SIDE OF DOORS WITH CLOSERS AND WITHOUT HOLD-OPEN DEVICES.

## TACTILE EXIT SIGN



## TACTILE SIGN REQUIREMENTS

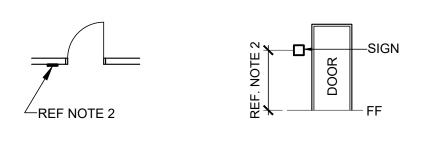
- A TACTILE SIGN STATING "EXIT" AND COMPLYING WITH ICC A117.1 SHALL BE PROVIDED ADJACENT TO EACH DOOR TO AN EXIT PASSAGEWAY AND THE EXIT DISCHARGE. REF DOOR SCHEDULE FOR LOCATIONS
- FOR CHARACTER WIDTH, THE UPPERCASE LETTER "O" SHALL BE USED TO DETERMINE THE ALLOWABLE WIDTH OF ALL CHARACTERS OF A FONT. THE WIDTH OF THE UPPERCASE LETTER "O" OF THE FONT SHALL BE 55 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE "I" OF THE FONT, (ICC A117.1-2017; 703.3.) CHARACTER HEIGHT MEASURED FROM THE BASELINE OF THE CHARACTER SHALL BE 5/8" (16 MM) MINIMUM AND 2 INCHES (51 MM) MAXIMUM BASED ON THE HEIGHT OF THE UPPERCASE LETTER "I".
- CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND
- CHARACTERS SHALL CONFORM TO THE FOLLOWING:
- A. LETTERS AND NUMBERS ON SIGNS SHALL BE RAISED 1/32" MINIMUM AND SHALL BE SANS-SERIF UPPERCASE CHARACTERS ACCOMPANIED BY GRADE 2 BRAILLE
- B. RAISED CHARACTERS OR SYMBOLS SHALL BE A MINIMUM OF 5/8" HIGH AND A MAXIMUM OF 2"
- CONTRACTED GRADE 2 BRAILLE SHALL BE USED. DOTS SHALL BE 0.090" (2.3 MM) TO 0.100" (2.5 MM) ON CENTER IN EACH CELL WITH 0.241" (6.1 MM) TO 0.300" (7.6 MM) SPACE BETWEEN CELLS. DOTS SHALL BE RAISED A MINIMUM OF 0.025" (0.6 MM) TO 0.037" (0.9 MM) ABOVE THE BACKGROUND.
- SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR. WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE, INCLUDING DOUBLE LEAF DOORS, SIGNS SHALL BE PLACED ON THE NEAREST ADJACEN' WALL, PREFERABLY ON THE RIGHT. MOUNTING HEIGHT SHALL BE LOCATED 48 INCHES (1220 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASE OF THE LOWEST TACTILÉ CHARACTER AND INCHES (1525 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE HIGHEST TACTILE CHARACTER, WHERE A TACTILE SIGN IS PROVIDED AT A DOOR, THE SIGN SHALL BE LOCATED ALONGSIDE THE DOOR AT THE LATCH SIDE. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH ONE ACTIVE LEAF, THE SIGN SHALL BE LOCATED ON THE INACTIVE LEAF. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH TWO ACTIVE LEAFS, THE SIGN SHALL BE LOCATED TO THE RIGHT OF THE RIGHT HAND DOOR. WHERE THERE IS NO WALL SPACE AT THE LATCH SIDE OF A SINGLE DOOR OR AT THE RIGHT SIDE OF DOUBLE DOORS, SIGN SHALL BE LOCATED ON THE NEAREST ADJACENT WALL, SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18 INCHES (455 MM) MINIMUM BY 18 INCHES (455 MM) MINIMUM, CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN POSITION. EXCEPTION: SIGNS WITH TACTILE CHARACTERS SHALL BE PERMITTED ON THE PUSH SIDE OF DOORS WITH CLOSERS AND WITHOUT HOLD-OPEN DEVICES.

ΓΑCTΙΙ	LE EXIT SIGN LEGEND					
F:TACTILE SIGN REQUIREMENTS AND DIMENSIONS OVE FOR ACCESSIBLE SIGNAGE PLACEMENT						
YNOTE SIGNAGE						

EXIT

# STRIPING CONDITIONS STRIPING REQUIREMENTS: 4" WIDE PAINTED STRIPES (YELLOW, REF SPECS) AT 12" O.C. AT 45 DEG. ANGLE WITH 4" WIDE BOUNDARY LINE CONTINUOUS AROUND PERIMETER. WALL LOCATION— -WALL LOCATION STRIPING AT WATER SERVICE WALL LOCATION— STRIPING AT ROOF LADDER WALL LOCATION -UTILITY / ELECTRICAL 2'-6" LOCATION-STRIPING AT EYEWASH STRIPING AT DOOR EXITS

# SIGNAGE LEGEND



REQUIRED ACCESSIBLE ELEMENTS SHALL BE IDENTIFIED BY THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AT THE FOLLOWING LOCATIONS

-ACCESSIBLE ENTRANCES WHERE NOT ALL ENTRANCES ARE ACCESSIBLE

-ACCESSIBLE CHECK-OUT AISLES WHERE NOT ALL AISLES ARE ACCESSIBLE. THE SIGN, WHERE PROVIDED, SHALL BE ABOVE THE CHECK-OUT AISLE IN THE SAME LOCATION AS THE CHECK-OUT AISLE NUMBER OR TYPE OF CHECK-OUT IDENTIFICATION

-ACCESSIBLE DRESSING, FITTING AND LOCKER ROOMS WHERE NOT ALL SUCH ROOMS ARE

- TACTILE SIGNAGE SHALL BE LOCATED 48 INCHES (1220 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASE OF THE LOWEST TACTILE CHARACTER AND 60 INCHES (1525 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE HIGHEST TACTILE CHARACTER. WHERE A TACTILE SIGN IS PROVIDED AT A DOOR, THE SIGN SHALL BE LOCATED ALONGSIDE THE DOOR AT THE LATCH SIDE. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH ONE ACTIVE LEAF, THE SIGN SHALL BE LOCATED ON THE INACTIVE LEAF. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH TWO ACTIVE LEAFS, THE SIGN SHALL BE LOCATED TO THE RIGHT OF THE RIGHT HAND DOOR. WHERE THERE IS NO WALL SPACE AT THE LATCH SIDE OF A SINGLE DOOR OR AT THE RIGHT SIDE OF DOUBLE DOORS, SIGNS SHALL BE LOCATED ON THE NEAREST ADJACENT WALL. SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18 INCHES (455 MM) MINIMUM BY 18 INCHES (455 MM) MINIMUM, CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN POSITION. EXCEPTION: SIGNS WITH TACTILE CHARACTERS SHALL BE PERMITTED ON THE PUSH SIDE OF DOORS WITH CLOSERS AND WITHOUT HOLD-OPEN DEVICES.
- CHARACTER AND SYMBOLS OF SIGNS SHALL BE IN CONTRAST WITH THEIR BACKGROUND AND SHALL BE EGGSHELL, MATTE, OR OTHER NON-GLARE MATERIALS OR FINISHES
- ACCESSIBLE SIGNAGE SHALL USE GRADE 2 BRAILLE AND MUST COMPLY WITH ICC ANSI A117.1-2017: 703.4.

# MOLD AND MILDEW NOTES

PROVIDE MATCHING

SKIRT ON UPPER

COMBINATION

**CHANGING** 

STATION

ACCESSIBLE WATER

CLOSET CLEARANCE

DISPENSER

FIXTURE HEIGHTS AND CLEARANCES

COMPLY WITH THIS CHART, ICC A117.1-2017, AND ADA STANDARDS FOR ACCESSIBLE DESIGN

**CLEARANCE** 

KNEE CLR.

ACCESSIBLE LAVATORY

SANITARY NAPKIN

**ELECTRIC WATER** 

SINGLE

**ACCESSIBLE** 

**COOLERS** 

DISPOSAL

THE FOLLOWING REQUIREMENTS SHALL APPLY TO ALL NEW AND REMODEL CONSTRUCTION PROJECTS THE CONTRACTOR SHALL COMPLY WITH FEDERAL ENVIRONMENTAL AND OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION REGULATIONS AND ALL LOCAL AND STATE HEALTH DEPARTMENT REQUIREMENTS AND RECOMMENDATIONS REGARDING MOLD

- IN THE EVENT THE CONTRACTOR DISCOVERS, AT ANY TIME THE PRESENCE OF MOLD AND / OR MILDEW, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE AND THE ARCHITECT / ENGINEER OF RECORD, IN WRITING, OF THE CONCERNS AND/OR SUSPICIONS
- CONCURRENTLY, THE CONTRACTOR SHALL BE RESPONSIBLE TO RETAIN A MOLD AND MILDEW CERTIFIED TESTING AGENCY TO PERFORM AN INVESTIGATION AND TESTING AS REQUIRED TO EVALUATE THE NATURE AND EXTENT OF THE PROBLEM. IF THE TESTING AGENCY CONFIRMS HAZARDS. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN A MINIMUM OF THREE (3) BIDS FROM COMPANIES QUALIFIED AND LICENSED TO PERFORM ALL NECESSARY REMEDIATION WORK, COMPLYING WITH ALL LOCAL, STATE AND FEDERAL ENVIRONMENTAL REGULATIONS, CODES, AND STATUTES.
- ONCE SUSPICION OF MOLD AND / OR MILDEW IS MADE, THE CONTRACTOR SHALL TAKE ALL REASONABLE AND PRACTICAL PRECAUTIONS TO PROTECT ALL CONSTRUCTION PERSONNEL AND THE PUBLIC FROM THE EXPOSURE TO MOLD AND / OR MILDEW. AND SUCH PRECAUTIONS SHALL REMAIN IN PLACE UNTIL SUCH TIME AS THE OWNER OR HEALTH AUTHORITY DIRECTS OTHERWISE. CONSTRUCTION OPERATIONS SHALL NOT BE STOPPED OR CURTAILED, EXCEPT IN THE AREA OF MOLD / MILDEW CONCERN, DUE TO THESE REQUIRED PRECAUTIONS.
- THE CONTRACTOR SHALL MAKE ALL REASONABLE EFFORTS TO AVOID CONDITIONS FAVORABLE TO THE DEVELOPMENT OF MOLD AND MILDEW, ESPECIALLY IN VOIDS WHICH WILL BE CONCEALED AND NOT VENTILATED. IN ALL CASES. INTERIOR SPACES AND INTERIOR FINISHED CONSTRUCTION SHALL BE MAINTAINED IN DRY AND WELL-VENTILATED CONDITIONS. a. PENETRATIONS SHALL BE SEALED WATER-TIGHT TO PREVENT MOISTURE
- MIGRATION FROM ENTERING THE BUILDING OR WALL CAVITIES. b. ALL CONDENSATE DRAIN PANS SHALL BE CLEANED AND KEPT FREE FROM DEBRIS UNTIL AND WHEN THE FACILITY IS TURNED OVER TO THE OWNER. INSURE POSITIVE DRAINAGE AT ALL DRAIN PANS. INSURE THAT ALL "COLD" SURFACES ARE INSULATED AND COVERED WITH A FULLY SEALED AND CONTINUOUS VAPOR BARRIER. ("COLD" SURFACES INCLUDE, BUT ARE NOT LIMITED TO, DOMESTIC COLD WATER PIPING, INTERIOR RAIN LEADERS, OUTDOOR AIR INTAKES, AND DUCTWORK CARRYING AIR
- CONDITIONED SUPPLY AIR.) c. ALL EXISTING SUPPLY AIR PATHS AND ALL EXISTING DUCTWORK TO BE RE-USED SHALL BE CLEANED AND TREATED AS REQUIRED TO REMOVE THE POTENTIAL FOR MOLD AND MILDEW. ALL DAMP AREAS SHALL BE DRIED THOROUGHLY PRIOR TO ENCLOSURE.

### **SYMBOLS** TITLE TITLE BUBBLE DETAIL NUMBER SCALE: FULL SHEET NUMBER SECTION CUT SECTION DETAIL SHEET NUMBER ELEVATION REFERENCE ELEVATION VIEW (OUTSIDE) DETAIL NUMBER SHEET NUMBER **REVISION CLOUD DATUM MARKS** TOP OF STEEL . . . . . . LOCATION **ELEVATION REFERENCE** DOOR INDICATOR WINDOW INDICATOR OFFICE ROOM NAME AND NUMBER INDICATOR 102 **EQUIPMENT INDICATOR** COLUMN LINE INDICATOR WALL TYPE INDICATOR

TOILET ACCESSORIES INDICATOR

FLOOR FINISH INDICATOR

STANDARD /

**ACCESSIBLE** 

- PROVIDE PIPE

**PROTECTION** 

PER ADA/ICC

LAVATORY AND DRINKING FOUNTAIN

CLEAR AND

LEVEL FLOO

SPACE

CLEAR AND LEVEL FLOOR SPACE

LAVATORY

**DISPENSER** 

**TURNING RADIUS** 

TURNAROUND

# **ABBREVIATIONS**

MAX.

M.H.

MISC

MOD

MATL.

N.T.S.

O.D.

OPP.

O.S.A.

O.S.B.

PLUMB.

PLYWD.

P.S.I.

REINF.

REQ'D.

RESLT.

SCHED

S.D.

SECT.

SHTG.

SIM.

S.J.

SPECS

SAN.

STD.

T.O.C.

T.O.P.

U.D.L.

VFRT

V.C.T.

V.W.C.

WCO

W.W.F.

- COAT HOOK

- MIRROR

DISPENSER

PROVIDE SHROUD OR

SAFETY PADS PER ICC

ANSI A117.1-2017: 606.6

PAPER TOWEL

DISPENSER &

DISPOSAL

S.F.

R.O.

S.A.

NO. OR # NUMBER

N.I.C.

MECH.

MASONRY

MAXIMUM

MANHOLE

MINIMUM

METAL

MECHANICAL

MANUFACTURER

MISCELLANEOUS

MOP SINK BASIN

NOT IN CONTRACT

MOUNTED

NOMINA

MATERIAL (S

NOT TO SCALE OIL LINE

ON CENTER (S)

OVERHEAD

OPPOSITE

OUTSIDE AIR

OUTSIDE DIAMETER

OPPOSITE HAND

ORIENTED STRAND

POLYETHYLENE

PROPERTY LINE

PLASTIC LAMINATE

PLATE

PLUMBING

PLYWOOD

RADIUS

RETURN AIR

REQUIRED

RESILIENT

SUPPLY AIR

SOLID CORE

SCHEDULE

SFALANT

SECTION

SHEET

SIMII AR

SQUARE

SANITARY

STANDARD

SUSPENDED

TREAD AND

THICKNESS

TRANSFORMER

TONGUE & GROOVE

CURB/CONCRETE

PAVEMENT/PARAPET

DISTRIBUTED LOAD

UNLESS NOTED

VOLTS AND VENT

VERIFY IN FIFI D

VINYL COMPOSITION

VENT THRU ROOF

VENT THRU WALL

WATER CLOSET

WALL CLEAN OUT

WATER HEATER

WATERPROOF

WELDED WIRE FABRIC

WITHOUT

WOOD

VINYL WALL COVERING

WATTS AND WATER

OTHERWISE

URINAL

VERTICAL

STEFL

TABLE

TOP OF

TOP OF

TOP OF

TYPICAL

UNIFORM

TUBE STEEL

STRUCT. STRUCTURA

SHEETING

SAW CUT JOINT

SPECIFICATIONS

STAINLESS STEEL

ROOM

RADIANT HEATER

REINFORCEMENT

ROUGH OPENING

SMOKE DETECTOR

SQUARE FOOT/FFFT

ROUND/ ROOF DRAIN

PANEL

PAIR

PRE-FIN. PRE-FINISHED

OPEN TO STRUCTURE

POUNDS PER SQUARE

POUNDS PER SQUARE

POLYVINYL CHLORIDE

MASONRY OPENING

MOTOR OPERATED

MOISTURE RESISTANT

CENTERLIN

AMPERE

ABOVE

DIAMETER OR ROUNI

AIR CONDITIONING

ACOUSTICAL TILE

AMERICANS W/

DISABILITIES AC

ALTERNATIVE

ARCHITECT

BOARD

BLOCK

BUILDING

BOTTOM OF

BOTTOM

BEARING

BUILT-UP

CEILING

CLEAN-OUT

COLUMN

CONTR.

CONCRETE

CONTINUOUS

CONTRACTOR

COLD WATER

CERAMIC TILE

DOUBLE

DIAMETER

DIMENSION

DRAWING

EXHAUST FAN

ELEVATION

ELECTRIC

FQUIPMENT

**EXPANSION** 

FXTFRIOR

FIRE ALARM

EQUAL

FINISH SYSTEM

EXPANSION JOINT

FLECTRIC WATER

FRESH AIR INTAKE

FLOOR CLEAN OUT

FIRE DEPARTMENT

FIRE EXTINGUISHER

FIBER REINFORCED

FIRE DAMPER

CONNECTION

FINISH FLOOR

FINISH (ED)

FLOOR (ING)

FOOT OR FFF

FACE OF

FOOTING

FURRING

GAUGE

GALL ON

GROUND

HOSE BIB

GALVANIZED

GROUND FAULT

INTERRUPTER

GYPSUM BOARD

HANDICAPPED

HIGH POINT AND

HORSE-POWER

INSIDE DIAMETER

INVERT FLEVATION

ISOLATED GROUND

HOT WATER

INSULATION

INTERIOR

LAMINATE

POUNDS

LAVATORY

INVFRT

HEATING VENTIL ATING

AND AIR CONDITIONING

GENERAL CONTRACTOR

FOUNDATION

FLOOR DRAIN

EXTERIOR INSULATION

EACH

DETAIL

CONDENSING UNIT

CLEAR

BASE OF CURB

CATCH BASIN

CONTROL JOINT

CONDUIT OR CELSIUS

CENTER TO CENTER

COMPRESSED AIR LINE

CUBIC FEET PER MINUTE

CONCRETE MASONRY UNIT

APPROX. APPROXIMATE

ARCH.

ABOVE FINISH FLOOP ALUMINUM

AUTHORITY HAVING

JURISDICTION

Group, 9 S

A SPECIFIC SITE AT LEE'S SUMMIT, MO CONTEMPORANEOUSLY WITH ITS ISSUE AT ALTER INITION. USE OF THIS DRAWN REFERENCE OR EXAMPLE ON ANOTHE! PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AN ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MACONTRARY TO THE LAW.

OR

MITCH GARRETT NUMBER 07/23/2020

MITCHEL RAY GARRETT - ARCHITECT MO# A-007541

SSUE BLOCK /1\ 04/16/20 ADD #1 /3\ 07/23/20

PROPERTY NO.: 6 DIGIT NO.:

4 DIGIT NO.: AOR PROJECT NUMBER: 1955B7 O PERMIT: DATE: 03/26/202 DATE: ##-##-##

906983

SHEET TITLE: GENERAL **INFORMATION** 

SHEET NUMBER:

18" GRAB BAR - 18" GRAB BAF 36" GRAB BAR **TOILET PAPER** CHANGING CRITICAL DISPENSER STATION MIRROR · SOAP DISPENSER -PLYWOOD \* BACKING -**TOWEL** DISPENSER & DISPOSAL 42" MAX SANITARY NAPKIN DISPOSAL-**BACKING** 

**TOILET PAPER** DISPENSER ·

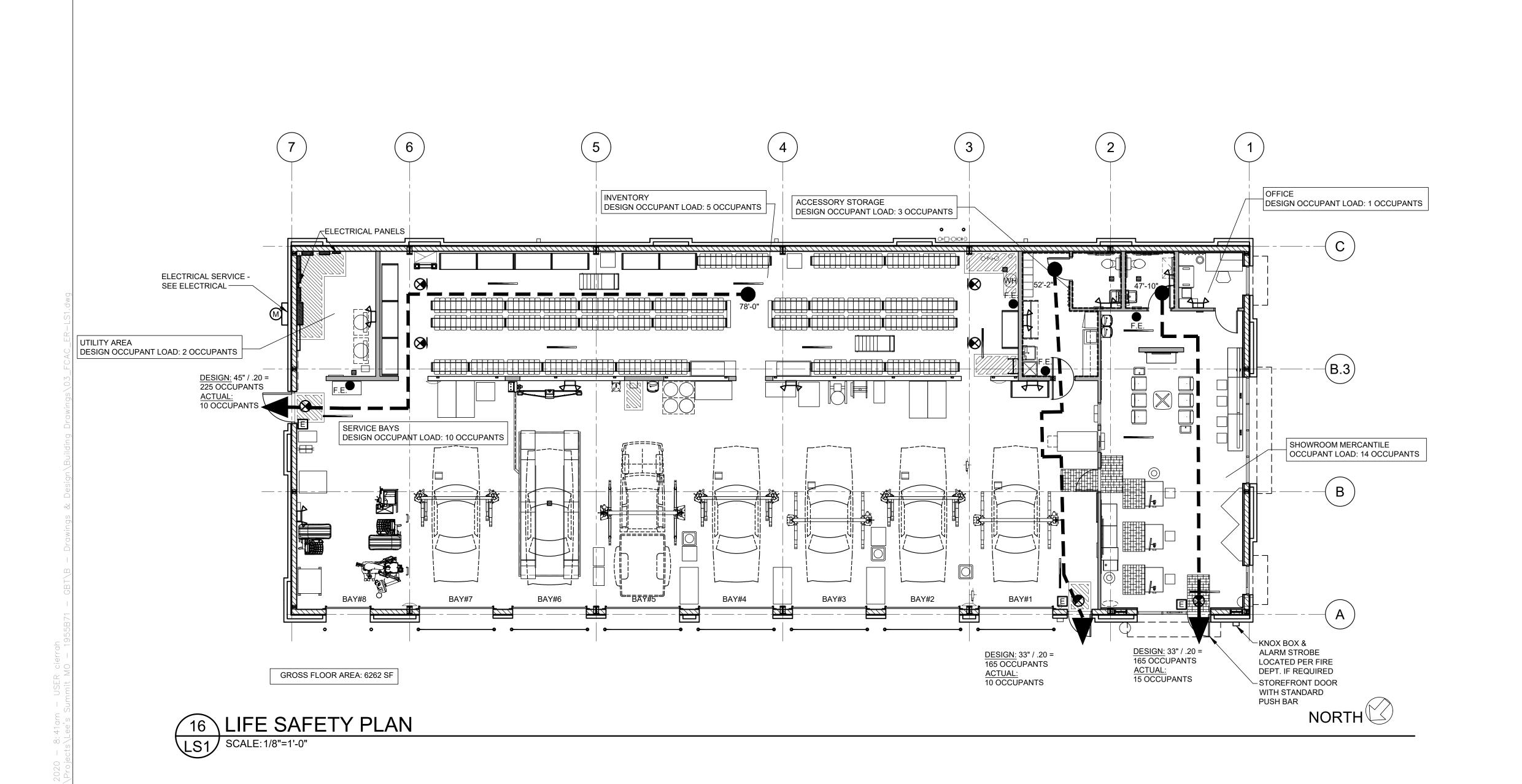
42" GRAB BAR PLYWOOD BACKING BEHIND GRAB BARS -

FIXTURES AND GRAB BAR LOCATIONS

CONT. SEALANT AT -PERIMETER **BABY CHANGING** 2x6 PRESSURE TREATED BLOCKING 6" METAL

BABY CHANGING STATION DETAIL

VCT



### SHEET NOTES

- 1. 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.
- 2. TRAVEL DISTANCE IS SHOWN AS A DASHED LINE.
- 3. COORDINATE TYPE, SIZE AND FINAL LOCATIONS OF FIRE EXTINGUISHERS WITH LOCAL FIRE OFFICIALS.

## LEGEND

FIRE EXTINGUISHER



TACTILE EXIT SIGNAGE

EXIT WIDTH IN INCHES/NUMBER
OF OCCUPANTS



EMERGENCY LIGHTS



**EXIT LIGHT** 

ۯ۠ۮؽ

Sign Group, P.C.
South Boulder, Suite 550
a, Oklahoma 74119.3609
p: 918.587.8600
f: 918.587.8601

SGA Design Grant 1437 South Bould Tulsa, Oklahoma p: 9 p: 9 f: 9 p: 9 f: 9

SOMIPLETE AUTO GARES CONDITORS ILC AND IS LOANED ON THE EXPRESS CONDITORS TO THE INTERESTS OF BRIDGESTONE RETAIL OPERATIONS, ILC. I'LL BE CONSTRUED AS AN ACCEPTANCE OF THE FOREGOING CONDITION AND AS

STIPULATION OF REUSE
THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE AT LEE'S SUMMIT, MO CONTEMPORANEOUSLY WITH ITS ISSUE DATE ON 03/26/2020 AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

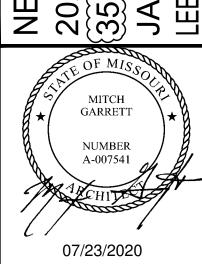
IEW FCAC STORE

020 ER

561 SW MARKET ST

ACKSON COUNTY

E'S SUMMIT, MISSOURI 64082



Digitally signed by Mitchel Garret Dix: C=US,
Mitchel Garrett = E-mitchg@sgadesigngroup.com,
O-SGA Design Group, CN=Mitch
Garrett
Date: 2020.07.23 10:47:22-05'00

MITCHEL RAY GARRETT - ARCHITECT MO# A-007541

ISSUE	BLOCK	
/1	04/16/20	ADD #1
3	07/23/20	IFC
DD∩DI	EDTV NO ·	160085

PROPERTY NO.:
6 DIGIT NO.:
4 DIGIT NO.:

AOR PROJECT NUMBER: 1955B71
TO PERMIT: DATE: 03/26/202
TO BID: DATE: ##-##-##

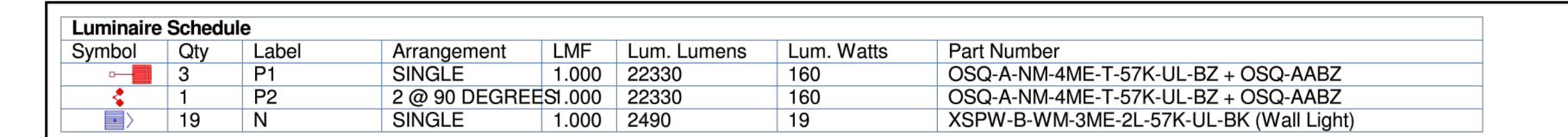
906983

SHEET TITLE:

LIFE
SAFETY

PLAN
SHEET NUMBER:

LS1



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

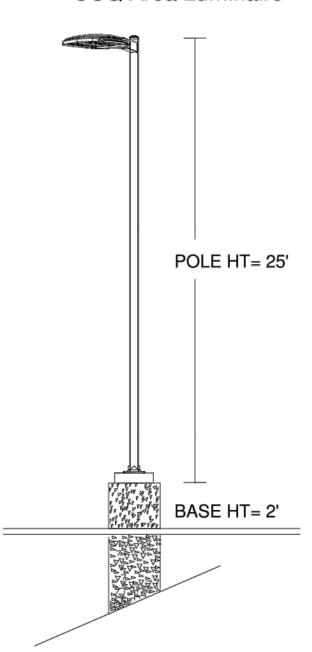
(5) OSQ-DABZ (Direct Arm Mount)

(1) PB-2A4 (Twin Mount Tenon)

PROPOSED POLES MEET 120 MPH SUSTAINED WINDS

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

#### OSQ Area Luminaire



0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1 0.3 0.5 1.0 1.4 2.0 2.2 1.7 1.3 0.9 0.5 0.4 0.5 0.8 1.9 2.7 4.3 4.8 4.4 4.5 3.6 1.8 1.1 0.7 0.5 0.3 0.2 0.1 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1 0.2 0.5 1.0 1.5 1.9 2.3 2,5 (2)1 1.7 1.5 (0.9 0.6 0.80 1.5 2.8 3.2 4.8 5.2 3/2 - 3/.8 2.1 1.4 1.0 0.6 0.4 0.2 0.2 0.1 0.1 1.1 2.3 4.3 5.9 7.6 7.1 5.6 4.8 3.0 1.8 1.2 0.8 D5.5 £C<sup>0.2</sup> 0.1 0.1 0.0 0.0 0.0 0.1 0.1 0.2 1.3 WM BR 1.2 2.3 2.9 2.9 4.0 PB 3.6 2.7 2.9 1.8 (1.2 1.5 2.9 4.8 4.8 6.8 8 P2 7.8 (3.9 5.3 3.5 2.1 1.5 1.0 0.7 0.4 0.3 0.2 0.1 0.0 0.0 0.0 0.1 0.1 0.2 0.7 1.2. 2.0 3.0 4.2 4.8 4.2 3.9 3.8 4.4 2.9 1.9 1.4 1.6 2.4 4.2 5.3 5.3 5.5 5.7 7.5 6.6 4.4 3.1 2.3 1.8 1.6 1.1 0.7 0.4 0.2 0.0 0.0 0.1 0.1 0.2 0.2 1.2 21 3.1 4.2 4.4 4.3 4.3 4.1 3.8 3.5 3.8 2.8 2.0 2.1 3.0 4.0 4.0 4.6 5.5 5 5 5.4 6.1 6.0 5.1 3.6 2.9 2.6 2.2 1.4 0.8 0.3 0.0 0.0 0.1 0.1 0.2 0.4 1.1 1.5 2.9 3.8 4.3 4.5 3.8 3.3 4.5 5.2 4.8 4.7 5.4 4.0 3.6 4.0 3.5 3.5 4.6 5.2 5.2 5.1 5.3 6.9 6.5 5.9 3.6 3.0 2.8 1.9 1.2 0.7 0.0 0.0 0.1 0.1 0.3 1.0 2.1 2.4 3.4 4.3 5.0 3.4 2.9 2.6 4.4 6.5 NMH; 10 MH: 10 7 0 1 2 4 0 4 7 4 3 3 6 2 7 2 0 1 . 5 MH. 10 • MH: 10 7 8 6.1 4.3 4.4 4 6 P1 2.8 2.1 1.6 0.0 0.0 0.1 0.1 0.3 1.1 2.2 2.5 3.7 1.3 3.2 2.7 2.5 4.4 7 0.0 0.0 0.1 0.1 0.30 058 £ 7 1.9 2.5 MH: 27 3.5 2.4 2.1 6.2 5.7 MH: 10 0.0 0.0 0.1 0.1 0.2 0.5 1.2 1.5 2.5 2.7 3.9 2.7 1.9 3.9 6.5 MH: 10 3 4 4.4 3.3 2.6 2 7.1.4 1.6 0.9 0.4 0.0 0.0 0.1 0.1 0.1 0.3 0.7 1.2 2.1 26 2.6 2.5 2.8 2.2 3.4 5. WH: 10 0.0 0.0 0.0 0.1 0.1 0.1 0.2 0.3 0.4 0.6 0.7 0.8 0.8 1.4 2.9 3. 0.0 0.0 0.0 0.0 0.1 0.1 0.1 0.2 0.3 0.4 0.4 0.5 0.8 1.3 1.4 1.1 0.8 0.9 0.8 0.7 0.6 0.6 0.6 0.6 0.7 0.9 1.0 0.9 0.9 0.8 0.7 0.5 0.4 5 0.5 0.2 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.1 0.1 0.1 0.1 0.2 0.2 0.3 0.4 0.4 0.4 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.2 0.2 0.2 0.2 0.10.0 $\frac{1}{2}$ 



Illumination results shown on this lighting design rom these design parameters may affect field verifying dimensional accuracy along with ompliance with any applicable electrica

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

SR-40708

Footcandles calculated at grade

Filename: FRS-200212LSMOBAF.A I Date:3/26/2020

Layout By: Ben Foster

Scale 1" = 20'

**PHOTOMETRIC** SITE LIGHTING

DATE: ##-##-##

PROVIDED BY

OTHERS FOR

REFERENCE ONLY

MITCHEL RAY GARRETT - ARCHITECT

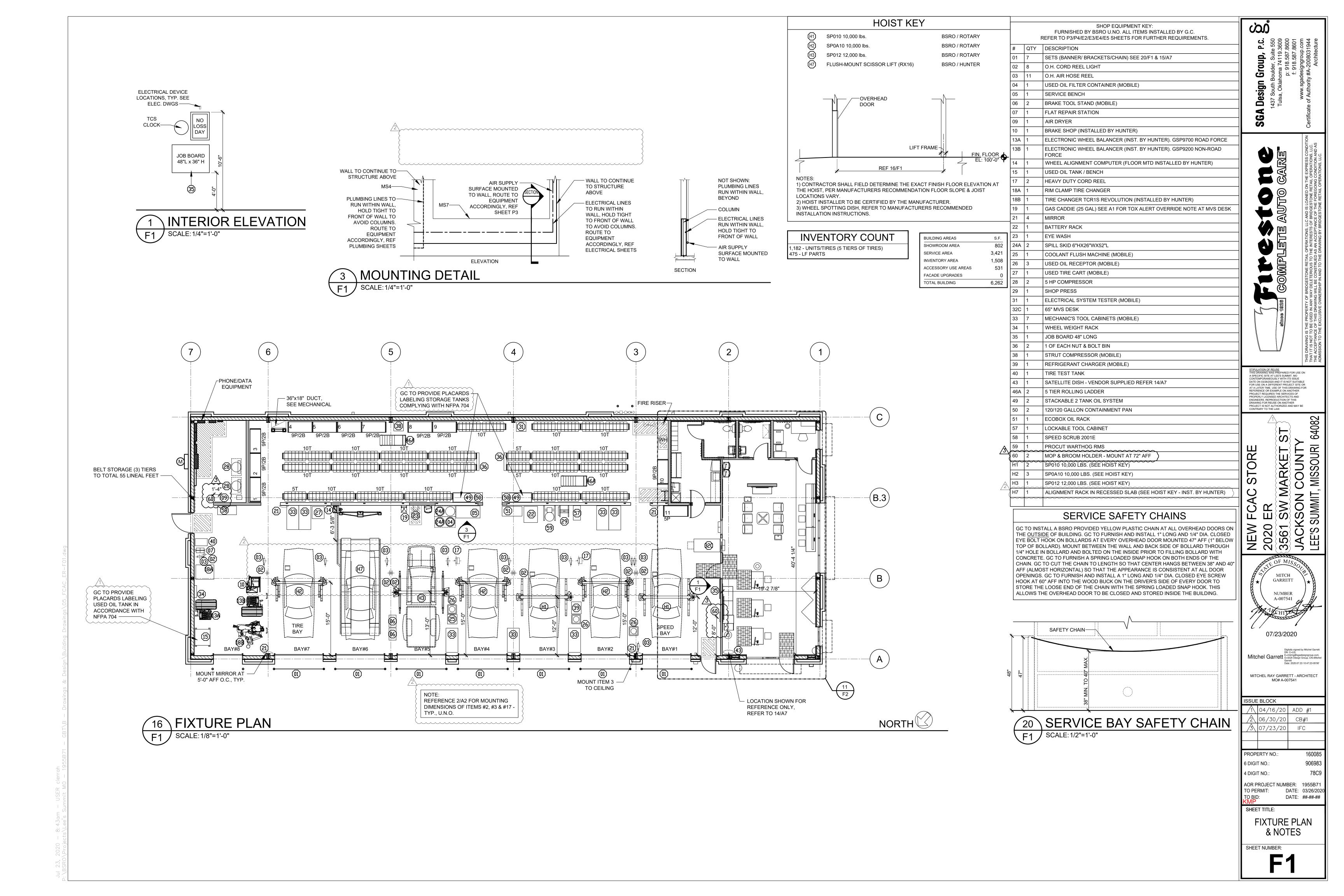
1 04/16/20 ADD #1 /3\ |07/23/20 | IFC

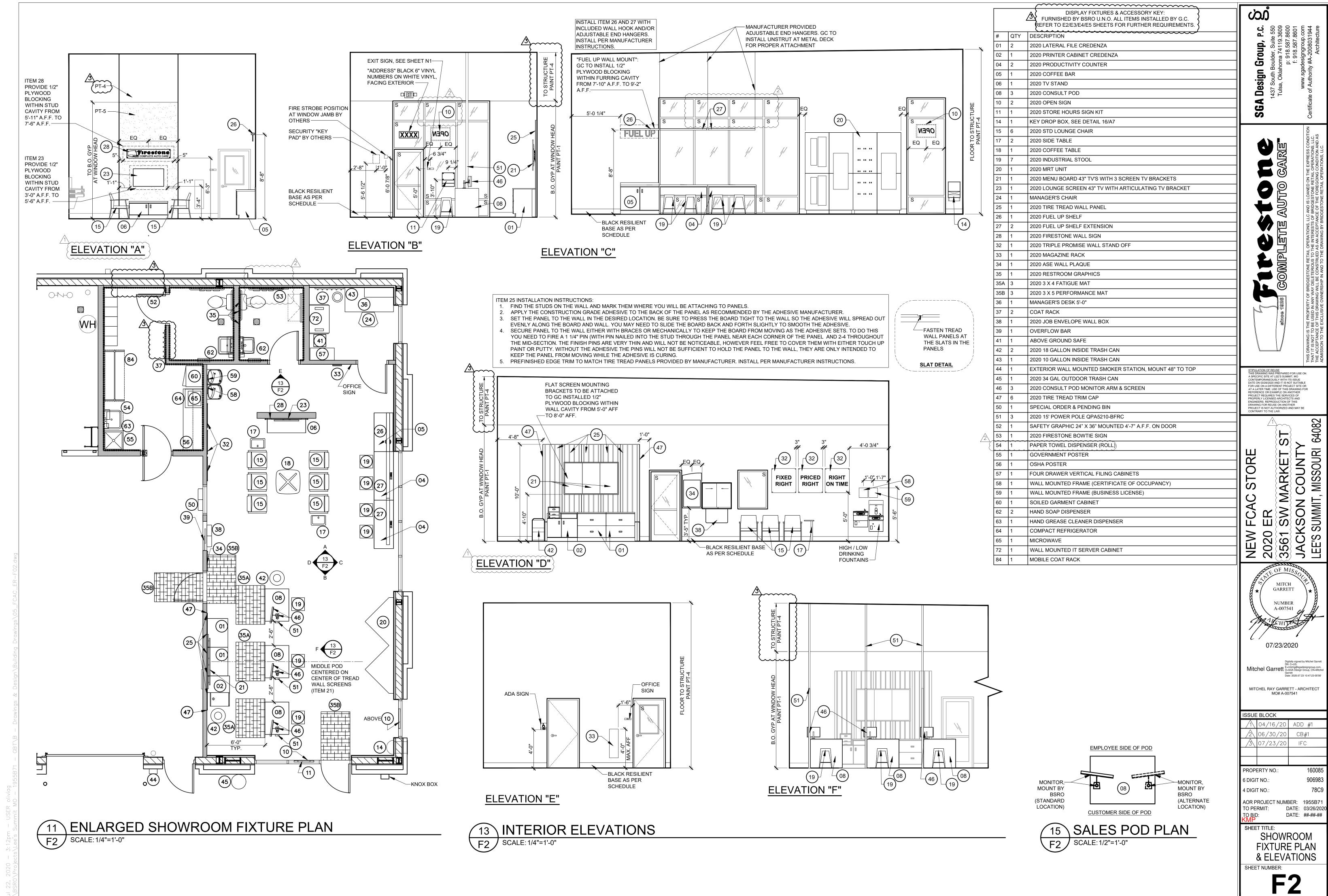
ISSUE BLOCK

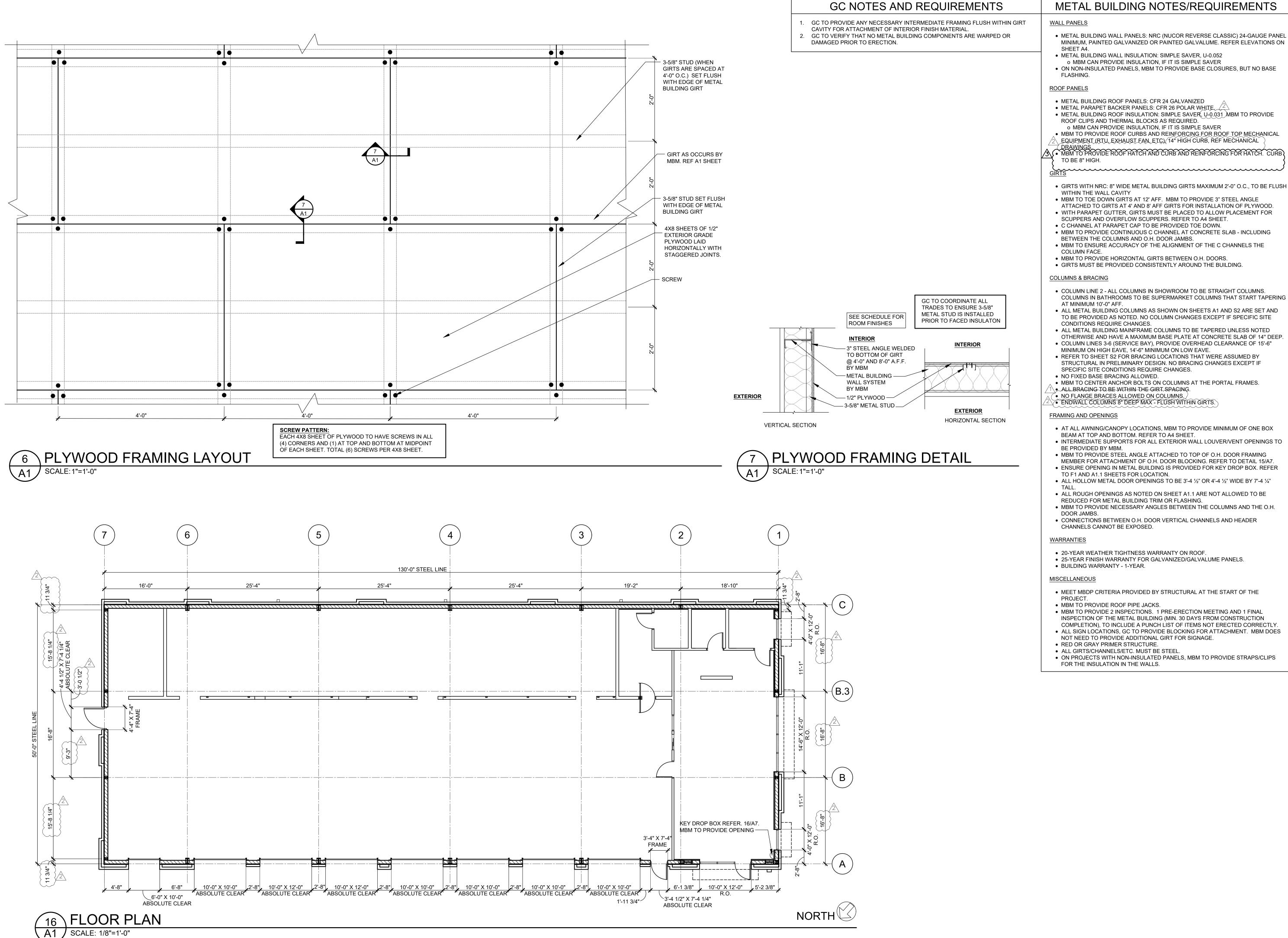
PROPERTY NO.:

SGA Design (

STORE







## METAL BUILDING NOTES/REQUIREMENTS

- MINIMUM, PAINTED GALVANIZED OR PAINTED GALVALUME. REFER ELEVATIONS ON
- METAL BUILDING WALL INSULATION: SIMPLE SAVER, U-0.052
- o MBM CAN PROVIDE INSULATION, IF IT IS SIMPLE SAVER
- ON NON-INSULATED PANELS, MBM TO PROVIDE BASE CLOSURES, BUT NO BASE
- METAL BUILDING ROOF PANELS: CFR 24 GALVANIZED
- METAL PARAPET BACKER PANELS: CFR 26 POLAR WHITE, 2
- METAL BUILDING ROOF INSULATION: SIMPLE SAVER, U-0.031 MBM TO PROVIDE ROOF CLIPS AND THERMAL BLOCKS AS REQUIRED.
- o 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" HÌGH CÙRB, RÈF MECHANICAL
- TO BE 8" HIGH.

## CIPTS

- 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.

- 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.
- 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.
- NO FLANGE BRACES ALLOWED ON COLUMNS. • ÉNDWÁLL COLÚMNS 8" DÉÉP MÁX - FLÚSH WÍTHIN GIRTS.

- 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 ½" OR 4'-4 ½" WIDE BY 7'-4 ¼"
- ALL ROUGH OPENINGS AS NOTED ON SHEET A1.1 ARE NOT ALLOWED TO BE REDUCED FOR METAL BUILDING TRIM OR FLASHING.
- CONNECTIONS BETWEEN O.H. DOOR VERTICAL CHANNELS AND HEADER CHANNELS CANNOT BE EXPOSED.

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

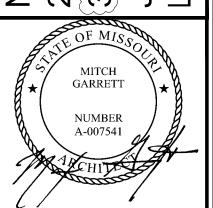
- MBM TO PROVIDE ROOF PIPE JACKS. • MBM TO PROVIDE 2 INSPECTIONS. 1 PRE-ERECTION MEETING AND 1 FINAL
- INSPECTION OF THE METAL BUILDING (MIN. 30 DAYS FROM CONSTRUCTION COMPLETION), TO INCLUDE A PUNCH LIST OF ITEMS NOT ERECTED CORRECTLY.
- ALL SIGN LOCATIONS, GC TO PROVIDE BLOCKING FOR ATTACHMENT. MBM DOES NOT NEED TO PROVIDE ADDITIONAL GIRT 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.

SG

Group,

A SPECIFIC SITE AT LEE'S SUMMIT, MO CONTEMPORANEOUSLY WITH ITS ISSUE CONTEMPORANEOUSLY WITH ITS ISSUE DATE ON 03/26/20/20 AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

STORE NEW 2020 3561 JACK LEE'S S



07/23/2020

Mitchel Garrett E=mitchg@sgadesigngroup. CN= MITCHEL RAY GARRETT - ARCHITECT

MO# A-007541

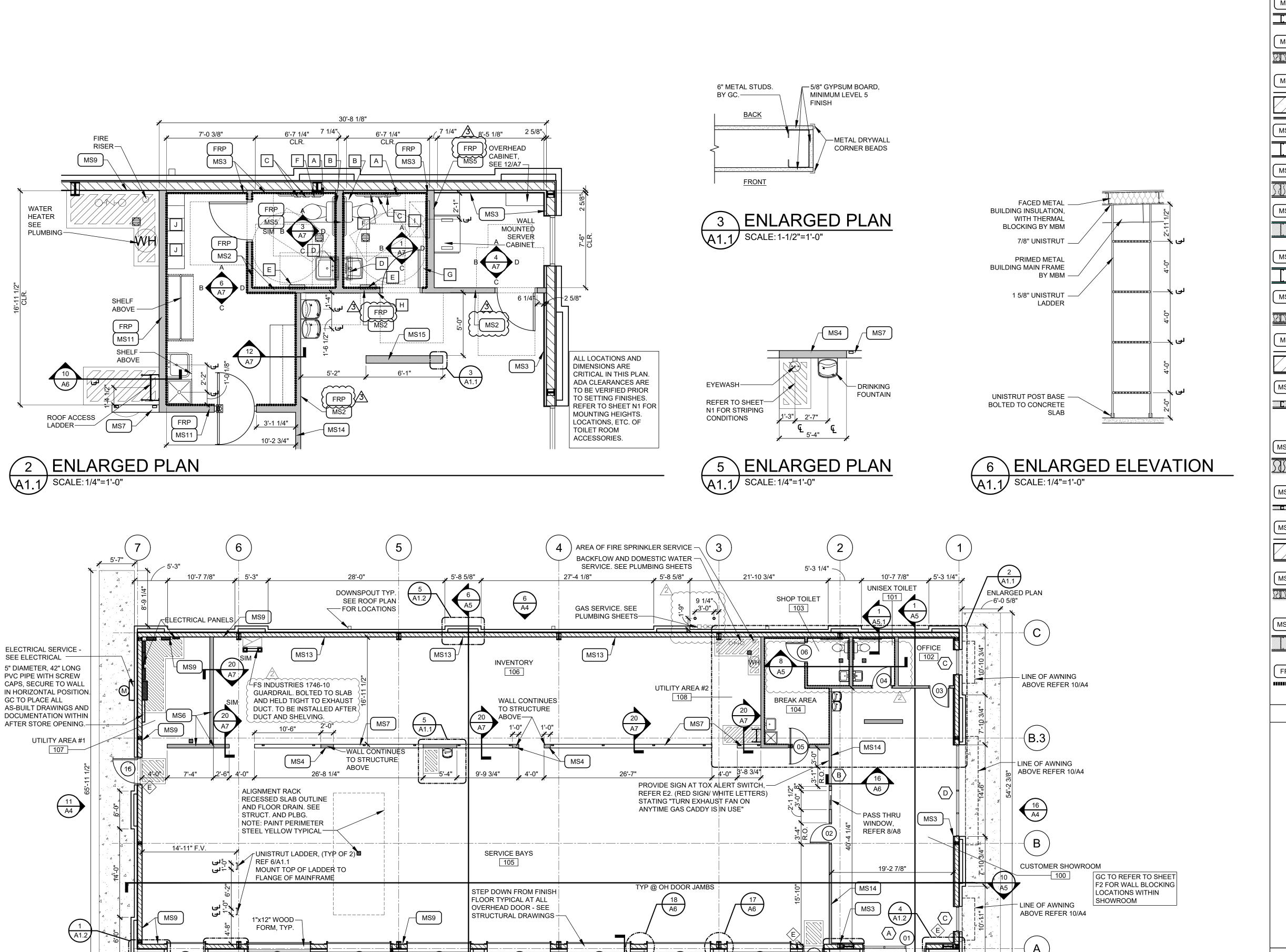
SSUE	SSUE BLOCK						
/1	04/16/20	ADD #1					
/2\	06/30/20	CB#1					
/3\	07/23/20	IFC					

906983

PROPERTY NO.: 6 DIGIT NO.:

4 DIGIT NO .: AOR PROJECT NUMBER: 1955B7 TO PERMIT: DATE: 03/26/202 DATE: ##-##-## ΓΟ BID:

SHEET TITLE: METAL BUILDING PLAN & NOTES



APRON CONTROL JOINTS TO BE LOCATED

AT CENTER OF EACH PILASTER (TYP)

-SLAB RECESS AT ALL OVERHEAD

DOORS - SEE 18/A6

-KNOX BOX &

LINE OF AWNING

 $\stackrel{+}{>}$  4" LINE FOR FDC, REF FIRE  $\stackrel{-}{>}$ 

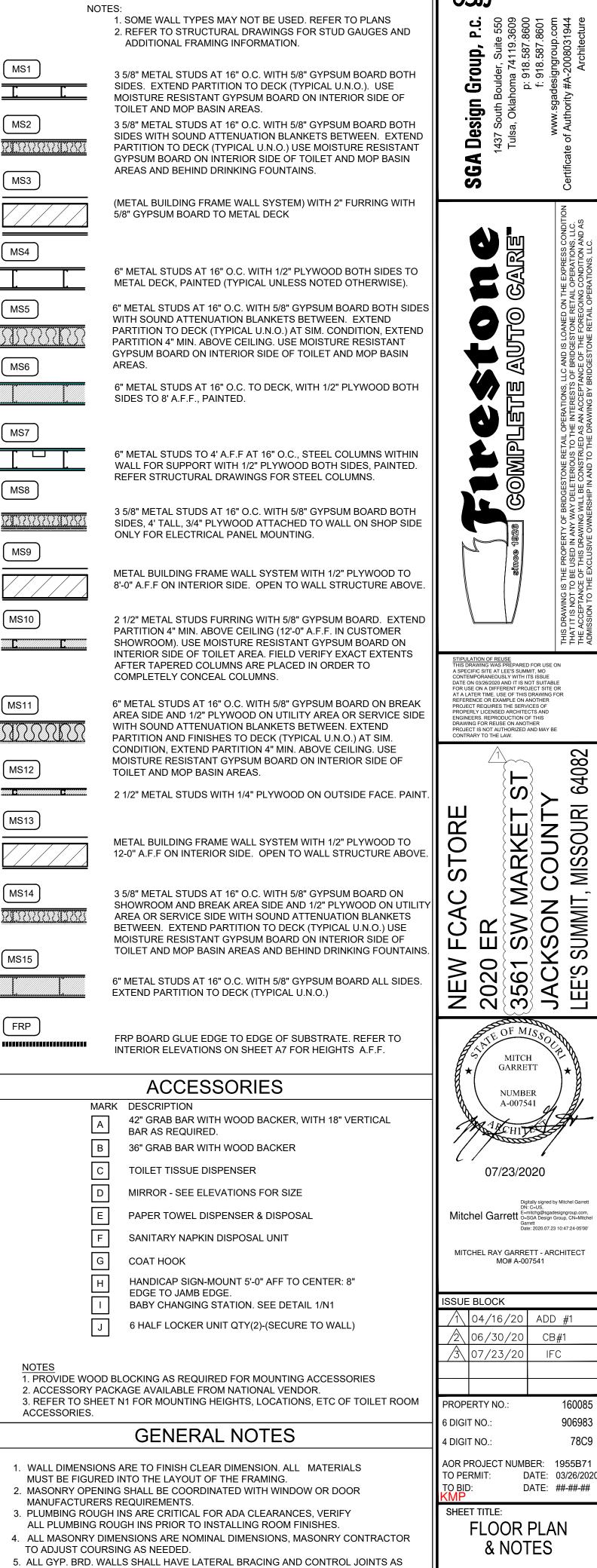
PROTECTION SHEETS

ABOVE REFER 10/A4

ALARM STROBE

DEPT. IF REQUIRED

LOCATED PER FIRE

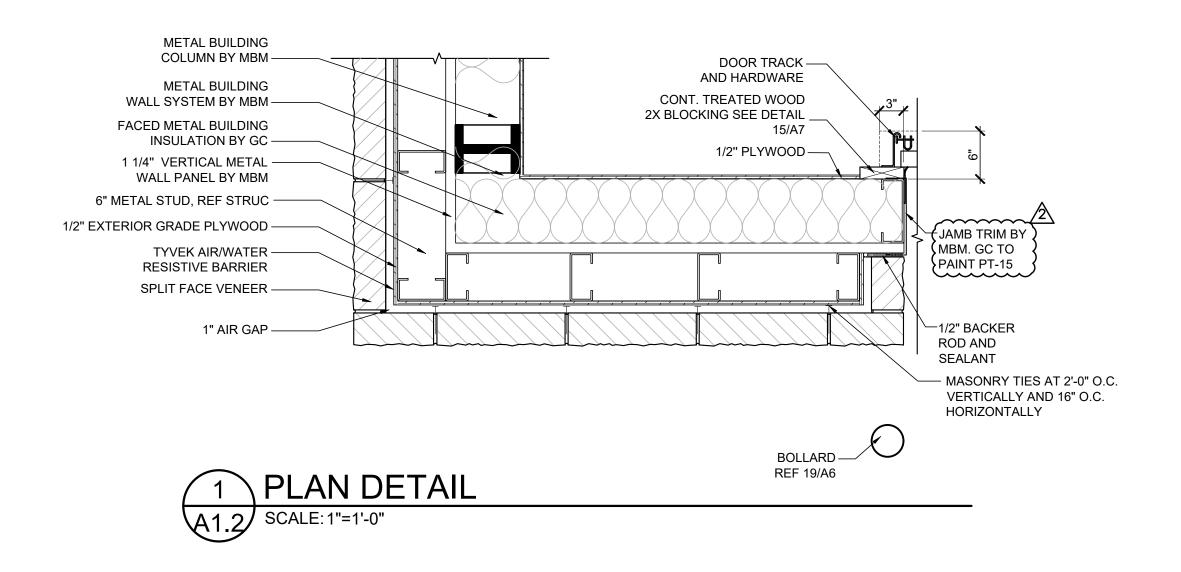


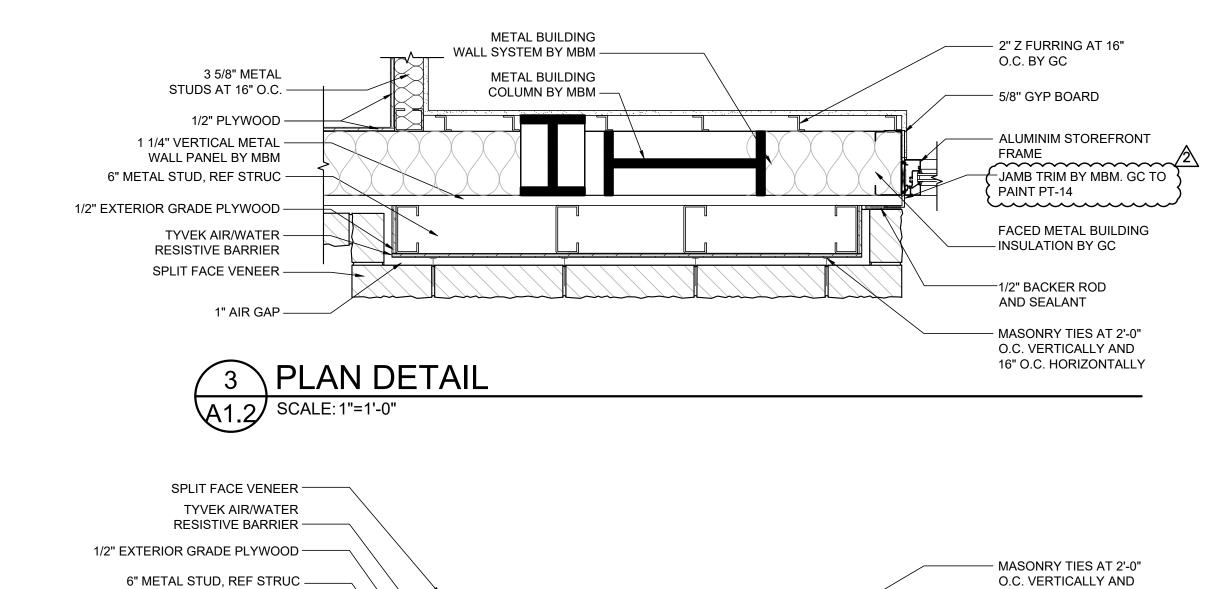
STANDARD WALL TYPES

ul zz, zozo – o. tzani – oszn. cierran NBSRO/Projects/Lee's Summit MO – 1955f

SHEET NUMBER:

REQUIRED IN SPECIFICATION SECTION 092900.



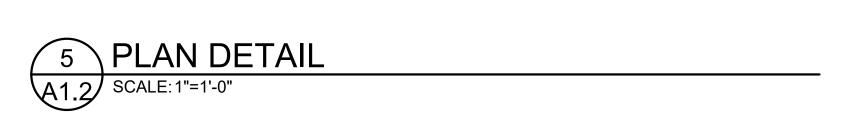


16" O.C. HORIZONTALLY

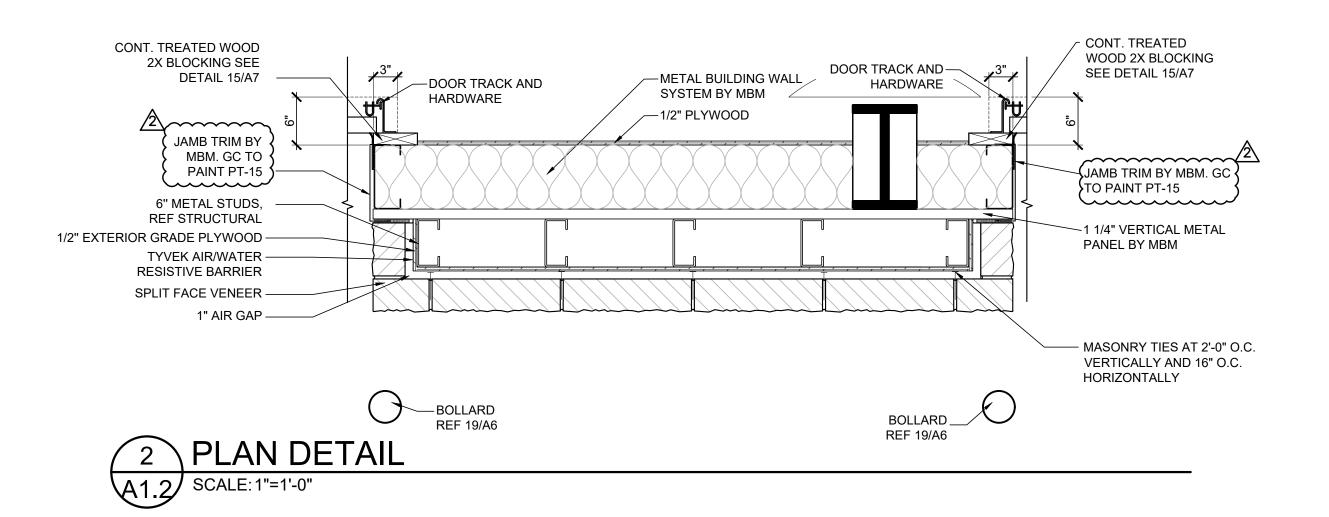
1 1/4" VERTICAL METAL
WALL PANEL BY MBM

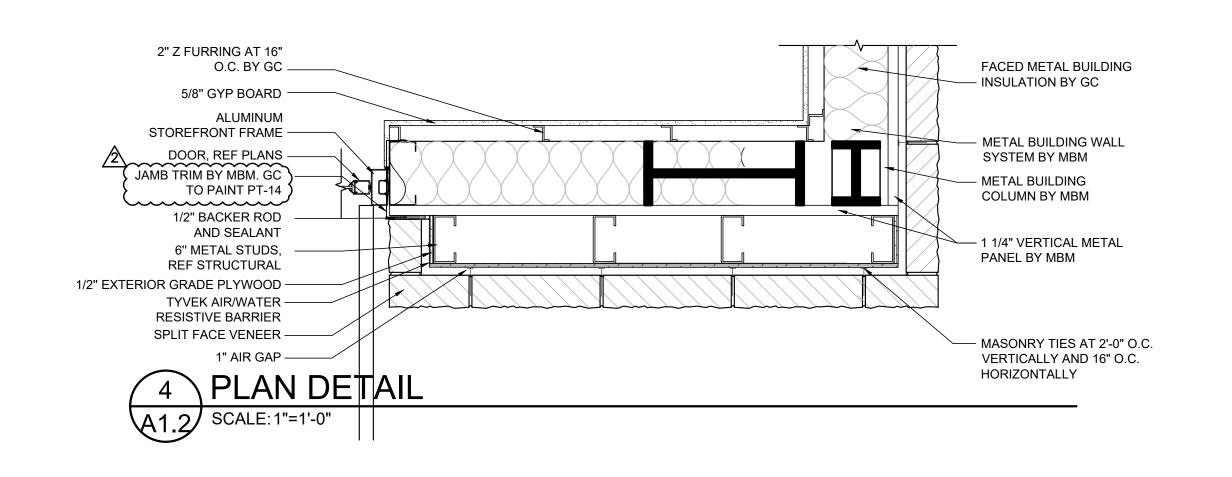
FACED METAL BUILDING
— INSULATION BY GC

1/2" PLYWOOD



1" AIR GAP —





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SGA Design Group, P.C.
1437 South Boulder, Suite 550
Tulsa, Oklahoma 74119.3609
p: 918.587.8600
f: 918.587.8601
www.sgadesigngroup.com

Tulsa, Oklahom

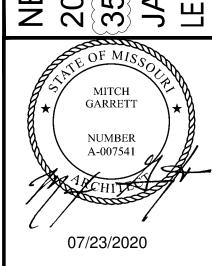
Tulsa, Oklahom

p:
f:
www.sgades

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CONTEMPORANEOUSLY WITH ITS ISSUE
DATE ON 03/26/2020 AND ITS NOT SUITABLE
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AT A LATER TIME. USE OF THIS DRAWING FOR
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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



Digitally signed by Mitchel Garret
Mitchel Garrett

Date: 2020.07.23 10:47:24-05'00

MITCHEL RAY GARRETT - ARCHITECT MO# A-007541

ISSUE BLOCK		
1	04/16/20	ADD #1
2	06/30/20	CB#1
3 07/23/20		IFC
PROPERTY NO.:		160085

PROPERTY NO.: 6 DIGIT NO.: 4 DIGIT NO.:

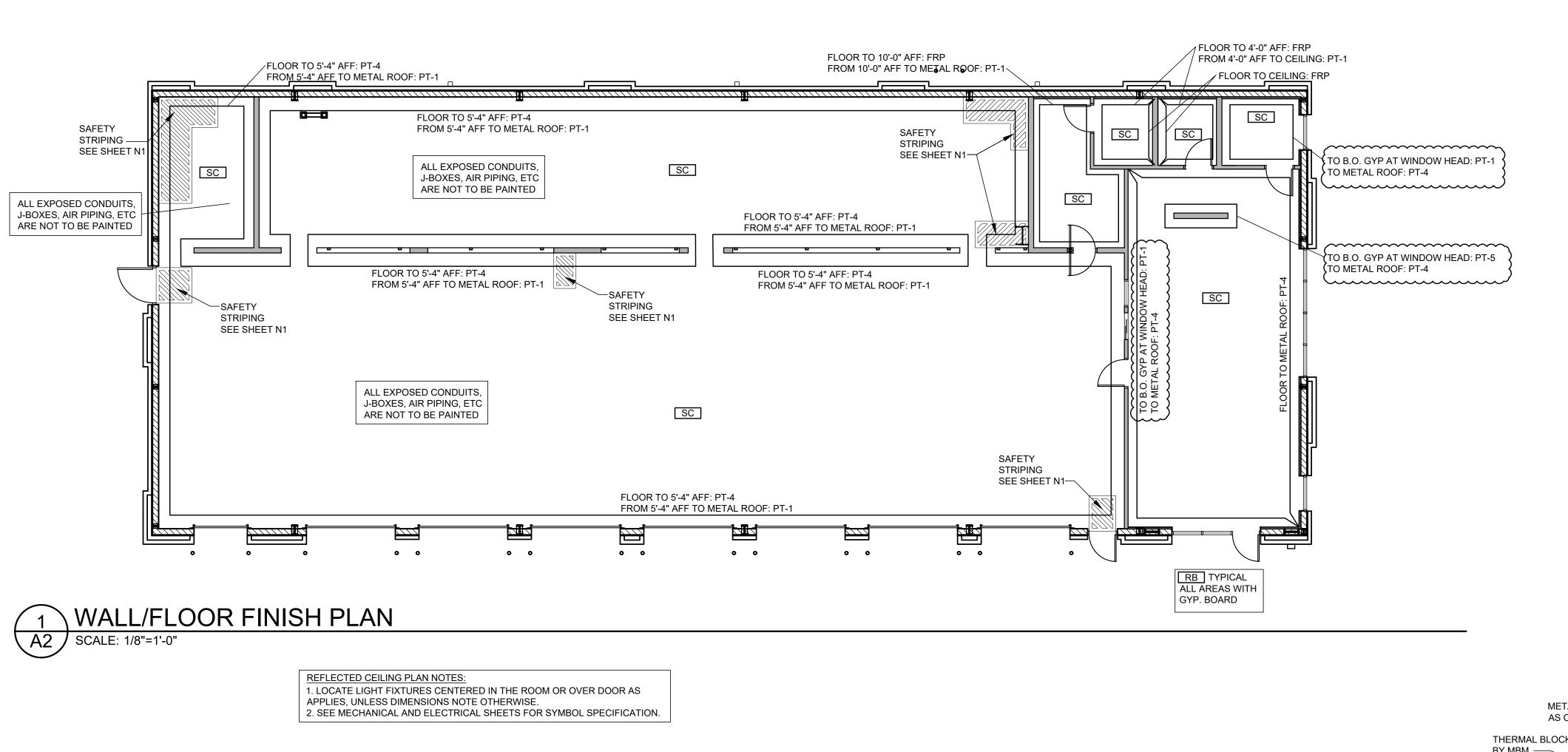
AOR PROJECT NUMBER: 1955B71
TO PERMIT: DATE: 03/26/202
TO BID: DATE: ##-##-##
KMP

906983

ENLARGED PLAN DETAILS

ET NUMBER:

A1.2



RADIANT HEATER,

-REFER TO MECH.

GYP BOARD-

PT-14 <

SOFFIT, PAINT

RADIANT HEATER,

12'-8"

CEILING MOUNTED FAN, REF DETAIL

5/A2

EQ

MOUNT ALL EMERGENCY LIGHT

FIXTURES TO CEILING WHERE

NOT AT WALL, UNO

REFER TO MECH

12'-8"

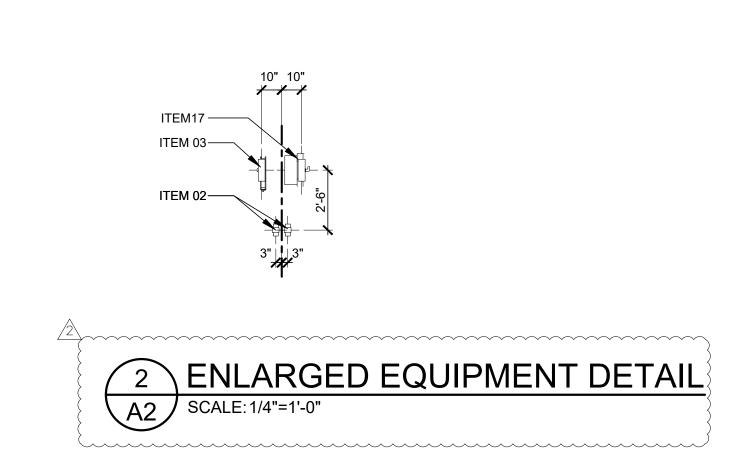
20'-4 1/2"

OH REELS, REF

EQ

REFLECTED CEILING PLAN

DETAIL 2/A2



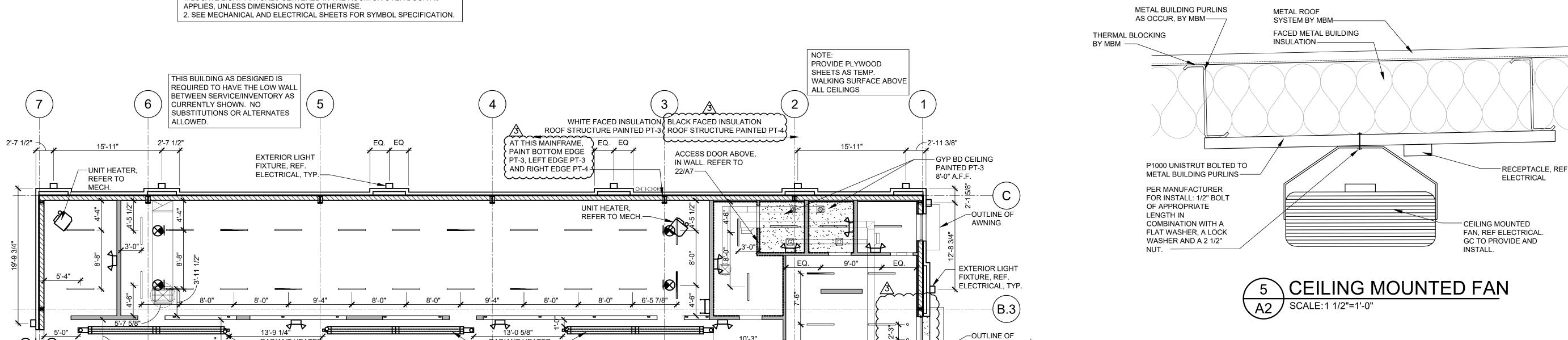
FLOOR FINISH KEY

NOTE: SUPPLIED AND INSTALLED BY GENERAL

SC: SEALED CONCRETE, REFER TO SPECIFICATION

CONTRACTOR, UNLESS OTHERWISE NOTED.

RB: RESILIENT BASE: 6" WALL BASE (BLACK)



EQ EQ

-OUTLINE OF

AWNING

NORTH 🕒

EQ EQ

GYP BOARD

PT-14 <

SOFFIT, PAINT

\_\_\_\_\_

11'-2 1/2"

17'-5 1/2"

AWNING

PT-14

1'-4"

FROM FACE

OF WALL

ĠYP BŎĂŖĎ

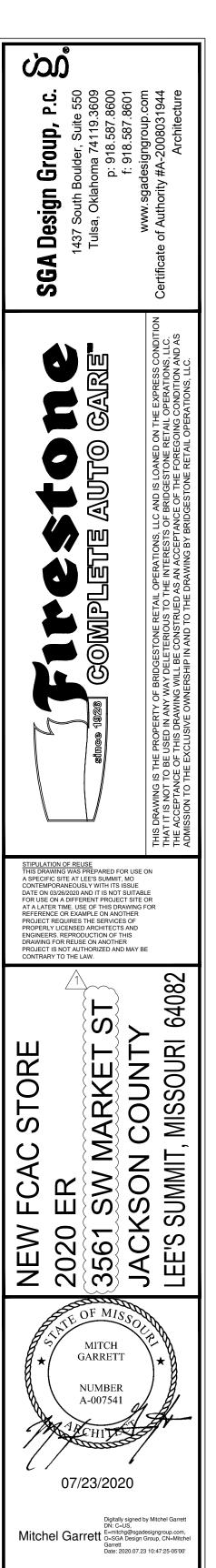
SOFFIT, PAINT

GC TO ENSURE PENDANT LIGHT FIXTURES ARE

CENTERED OVER THE CUSTOMER PODS

-OUTLINE OF

AWNING



MITCHEL RAY GARRETT - ARCHITECT MO# A-007541 ISSUE BLOCK  $\Lambda$  04/16/20 ADD #1

/2\ 06/30/20 CB#1 3 07/23/20 IFC PROPERTY NO.: 6 DIGIT NO.: 906983

4 DIGIT NO.: AOR PROJECT NUMBER: 1955B7 TO PERMIT: DATE: 03/26/202 TO BID: DATE: ##-##-##

SHEET TITLE: REFLECTED CEILING & FINISH PLAN

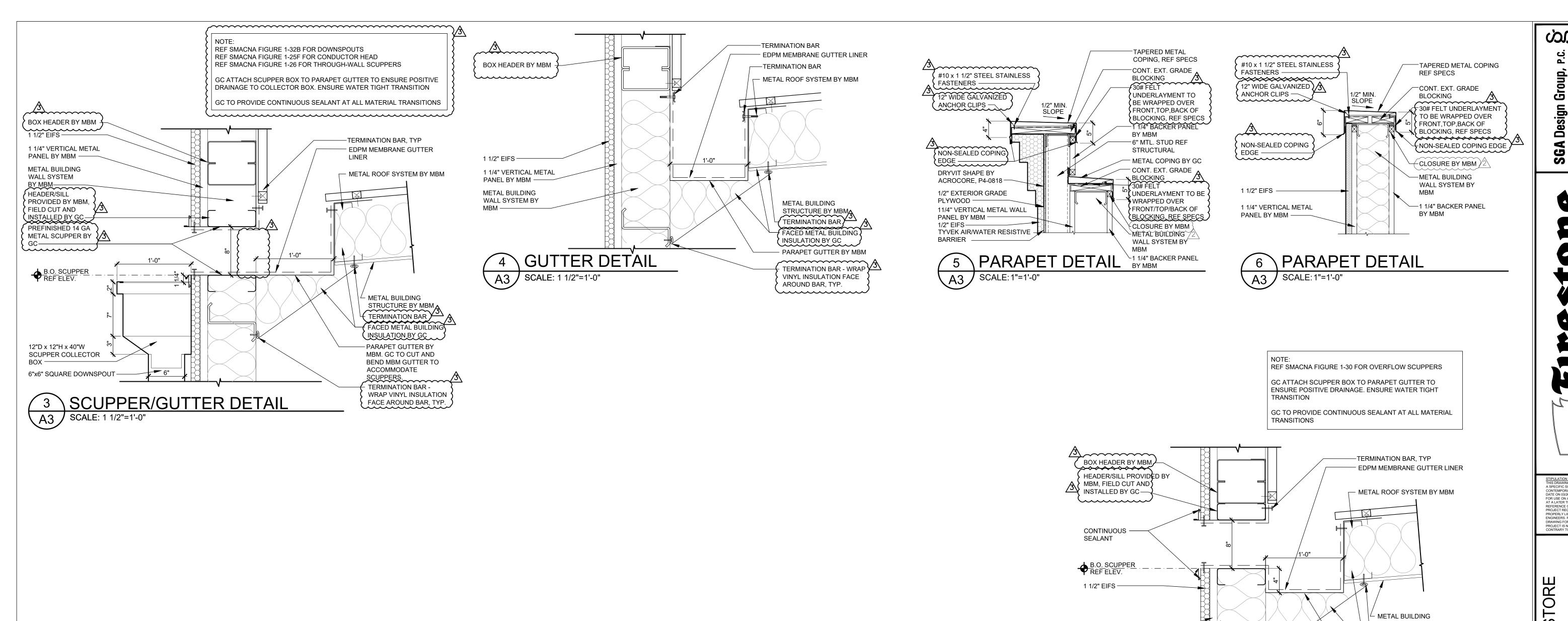
SHEET NUMBER:

GYP BOARD-

PT-14

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

SOFFIT, PAINT



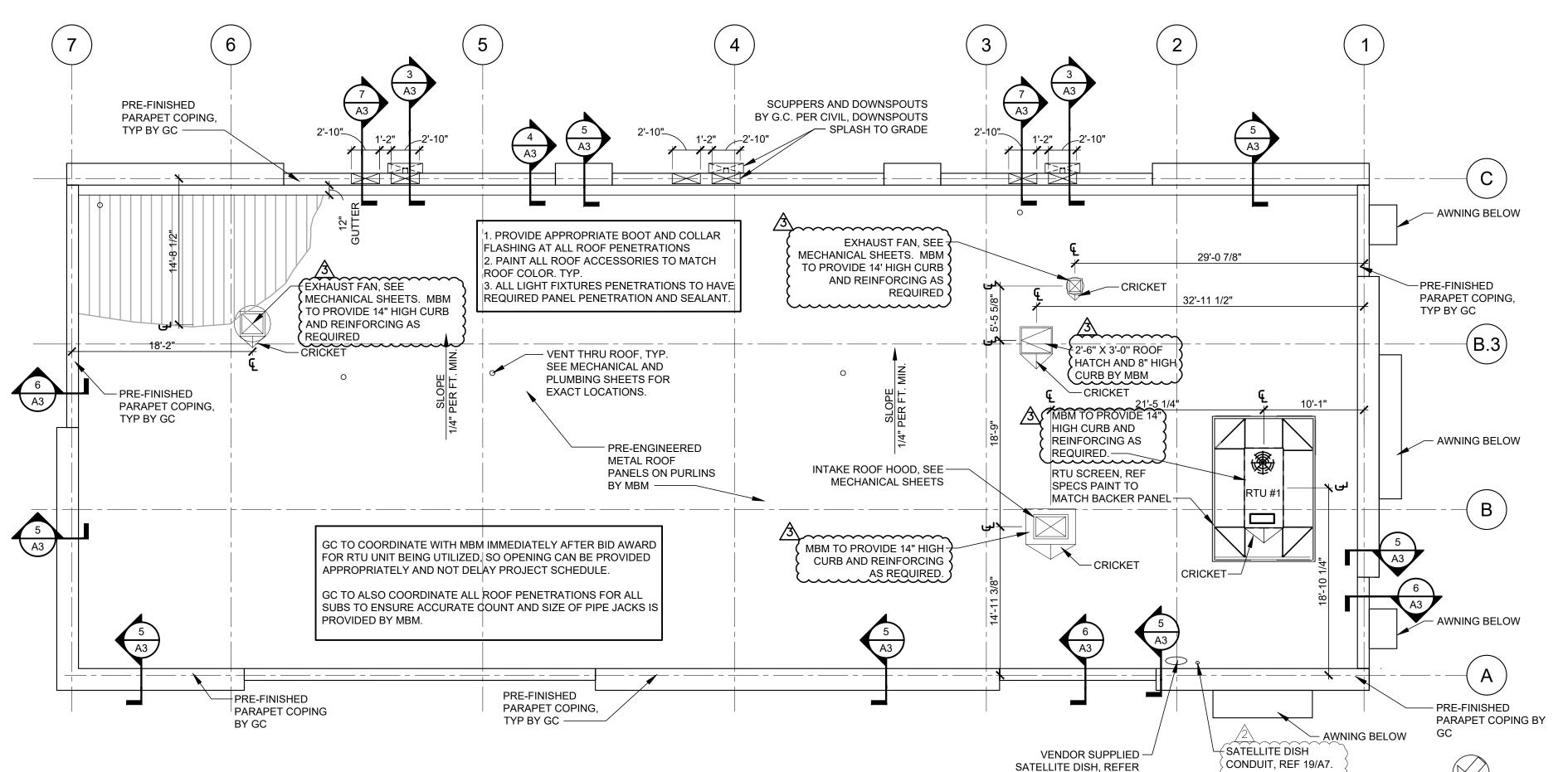
VERIFY CONDUIT

METAL ROOF.

angle INSTALLED ON PAN OF  $\langle$ 

TO F1 SHEET FOR

FURTHER INFORMATION



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

TERMINATION BAR

INSULATION BY GC

FACED METAL BUILDING

PARAPET GUTTER BY MBM

**TERMINATION BAR - WRAP** 

X VINYL INSULATION FACE

AROUND BAR, TYP.

1 1/4" VERTICAL METAL PANEL BY MBM -

GC TO PROVIDE "PIPE PROP" APS-1 WITH SADDLE

MANUFACTURER'S RECOMMENDATION. INSTALL

SUPPORT PER MANUFACTURER'S INSTALLATION

TO ROOF WITH MASTIC PER ROOFING

REQUIREMENTS.

SUPPORT FOR ALL GAS PIPING ON ROOF. SUPPORT

TO BE INSTALLED MINIMUM EVERY 2'-0" OC. INSTALL

OVERFLOW SCUPPER DETAIL

METAL BUILDING

WALL SYSTEM BY

Group,

A SPECIFIC SITE AT LEE'S SUMMIT, MO CONTEMPORANEOUSLY WITH ITS ISSUE DATE ON 03/26/2020 AND IT IS NOT SUITABLE AT A DATER TIME. USE OF THIS DRAWNIE OR ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWNING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

OURI STORE NEW 2020 3561 JACK LEE'S S

MITCH GARRETT NUMBER 07/23/2020

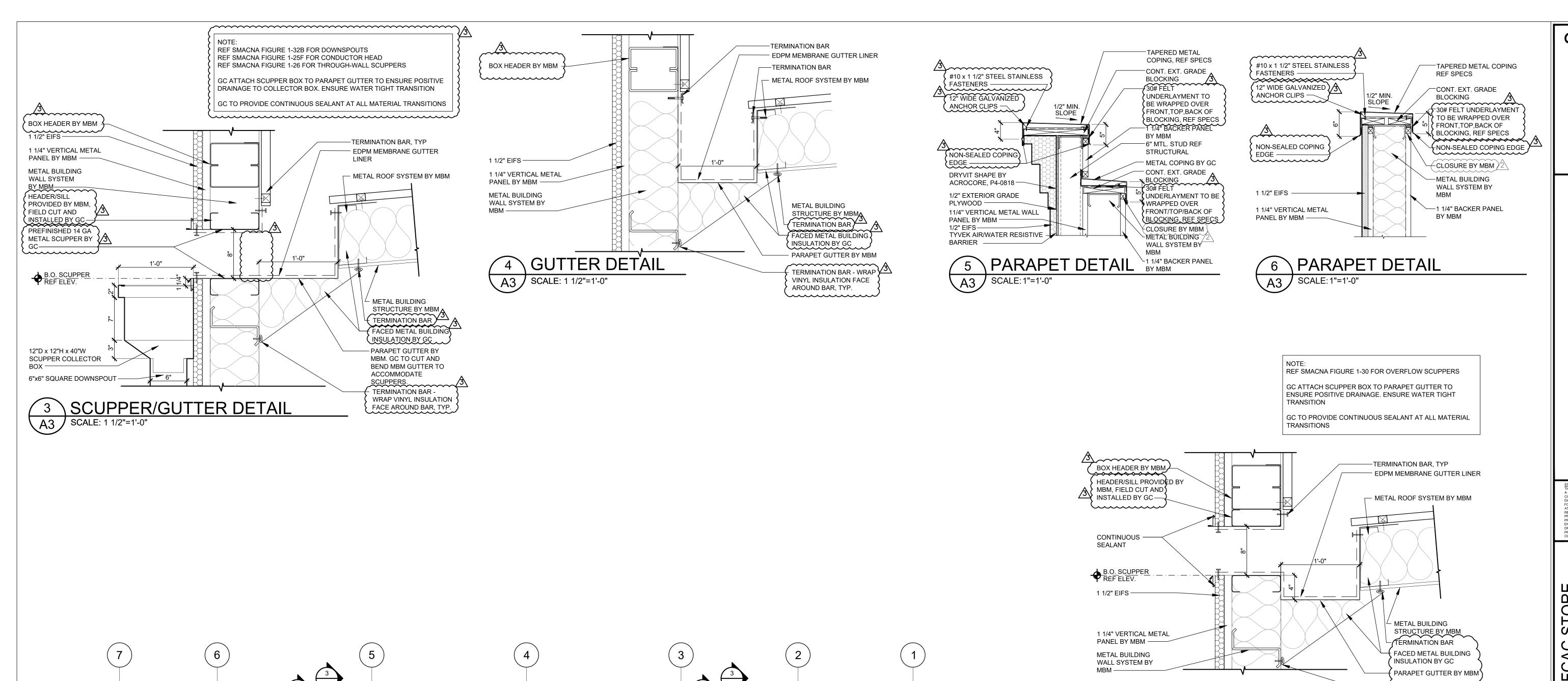
Mitchel Garrett Semitchg@sgadesigngroup.cn MITCHEL RAY GARRETT - ARCHITECT MO# A-007541

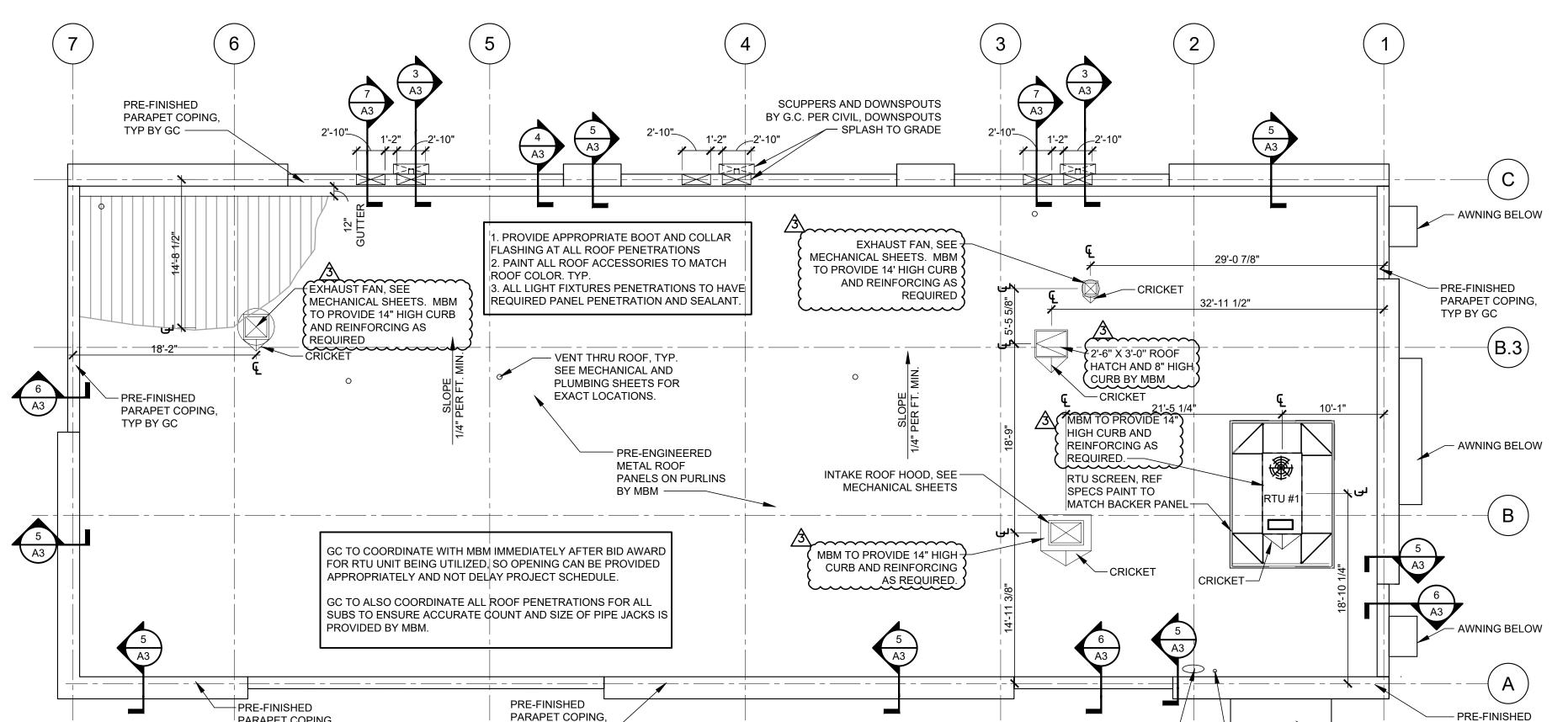
ISSUE BLOCK

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
	PROPI	/2\ 06/30/20 /3\ 07/23/20 PROPERTY NO.: 6 DIGIT NO.:

AOR PROJECT NUMBER: 1955B7 TO PERMIT: DATE: 03/26/20 O BID: DATE: ##-##-

SHEET TITLE: **ROOF PLAN** & DETAILS





PARAPET COPING

BY GC

TYP BY GC -

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

2221

ZONE 3

538

**TERMINATION BAR - WRAP** 

X VINYL INSULATION FACE

AROUND BAR, TYP.

OVERFLOW SCUPPER DETAIL

GC TO PROVIDE "PIPE PROP" APS-1 WITH SADDLE

MANUFACTURER'S RECOMMENDATION. INSTALL

SUPPORT PER MANUFACTURER'S INSTALLATION

TO ROOF WITH MASTIC PER ROOFING

REQUIREMENTS.

PARAPET COPING BY

SATELLITE DISH

VERIFY CONDUIT

METAL ROOF.

CONDUIT, REF 19/A7.

angle INSTALLED ON PAN OF  $\langle$ 

VENDOR SUPPLIED -

TO F1 SHEET FOR

SATELLITE DISH, REFER

FURTHER INFORMATION

SUPPORT FOR ALL GAS PIPING ON ROOF. SUPPORT

TO BE INSTALLED MINIMUM EVERY 2'-0" OC. INSTALL

Group, G S

A SPECIFIC SITE AT LEE'S SUMMIT, MO CONTEMPORANEOUSLY WITH ITS ISSUE DATE ON 03/26/2020 AND IT IS NOT SUITABLE AT A DATER TIME. USE OF THIS DRAWNIE OR ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWNING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

OURI STORE NEW 2020 3561 JACK LEE'S S

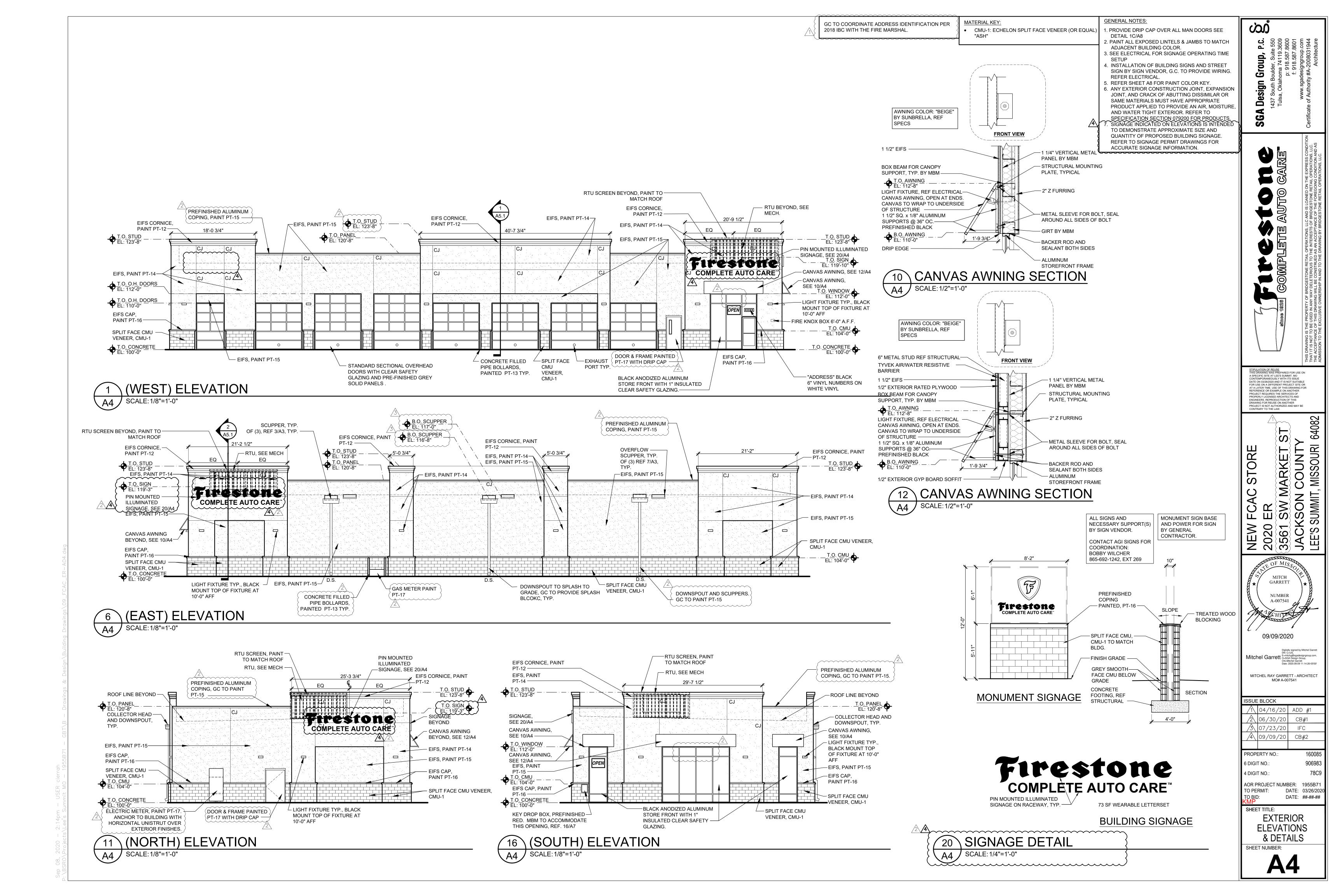
MITCH GARRETT NUMBER 07/23/2020

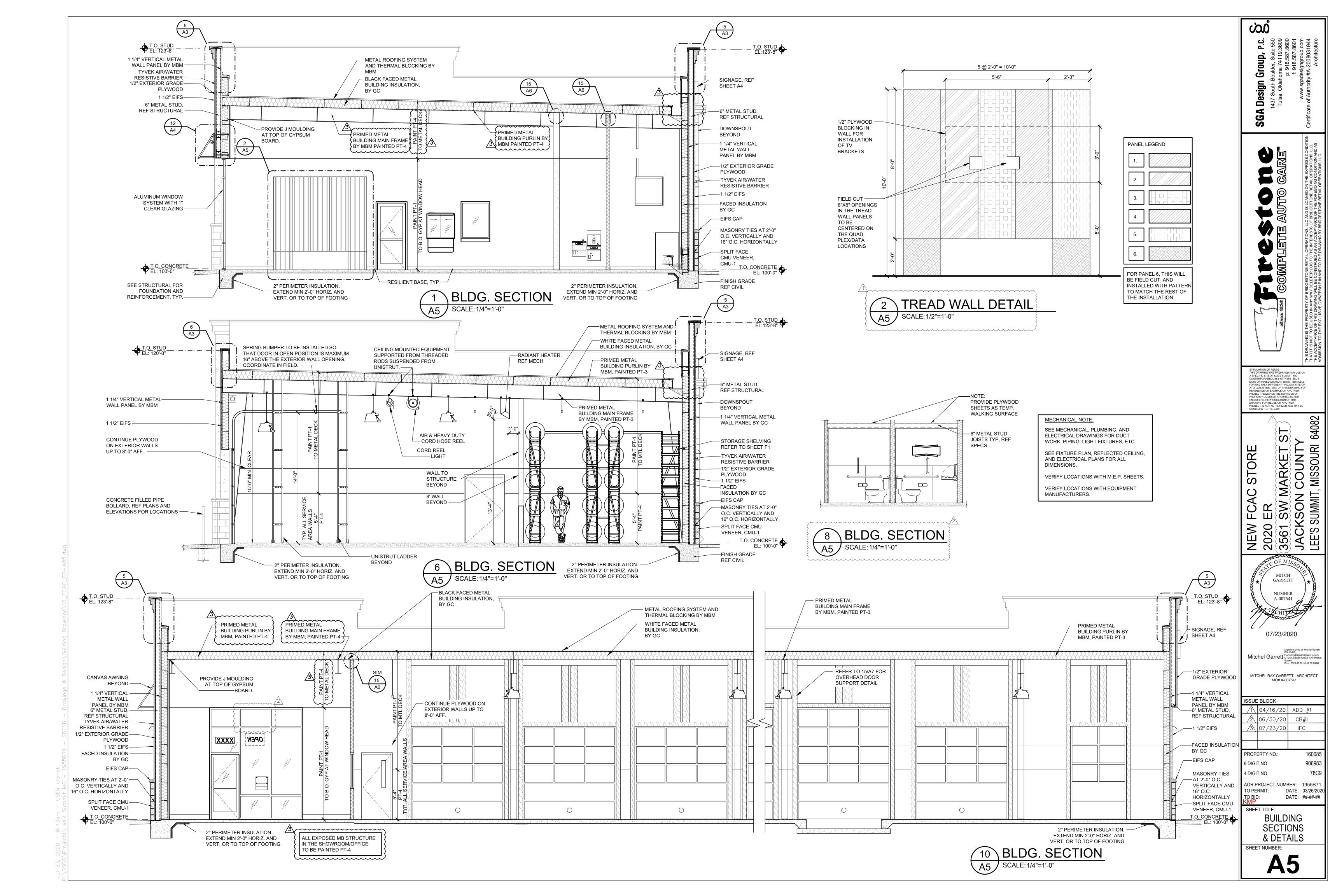
Mitchel Garrett Semitchg@sgadesigngroup.cn MITCHEL RAY GARRETT - ARCHITECT MO# A-007541

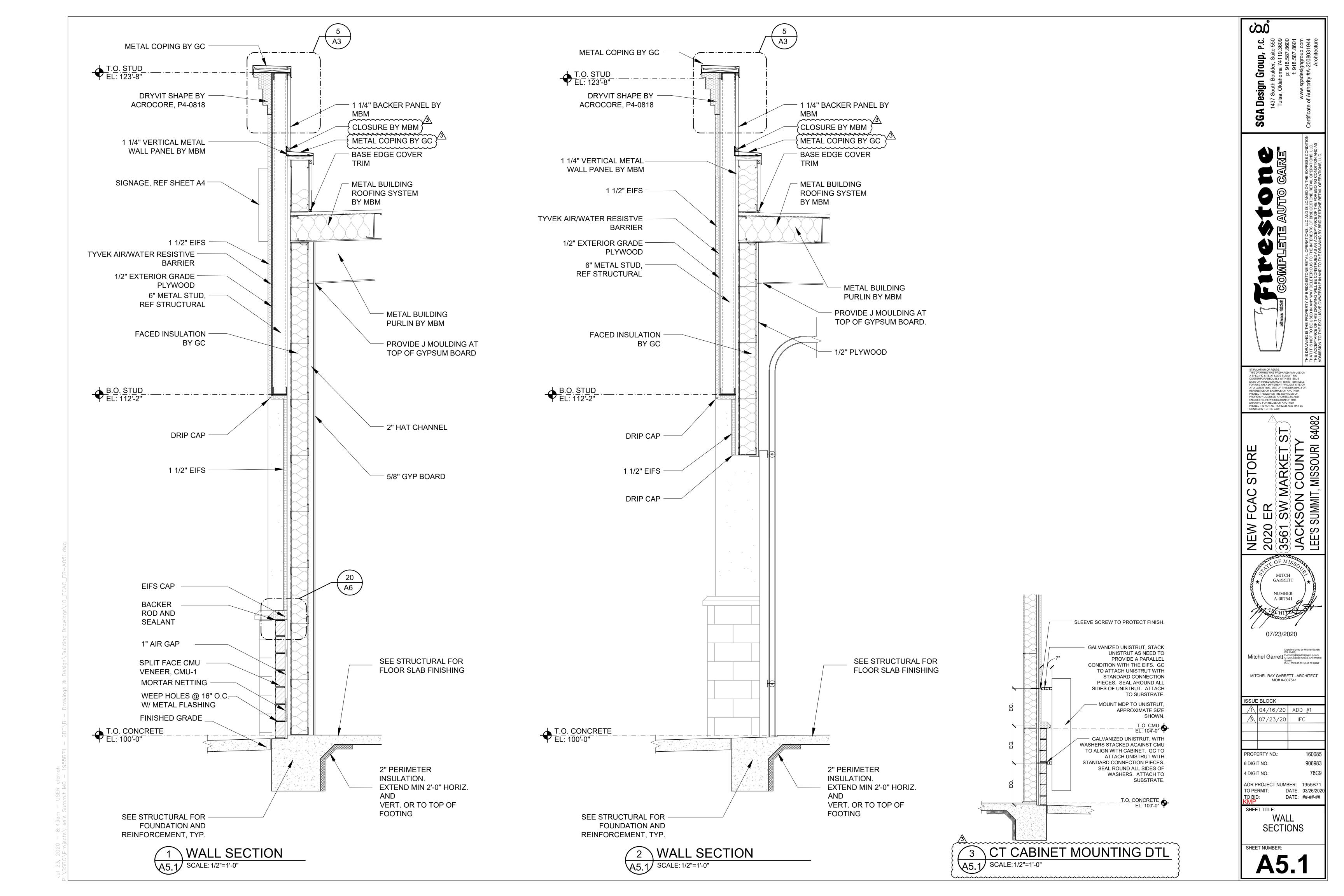
ISSUE BLOCK		
1	04/16/20	ADD #1
/2\	06/30/20	CB#1
3 07/23/20		IFC
PROPI	ERTY NO.:	160085
6 DIGI	T NO.:	906983
4 DIGIT NO.:		78C9

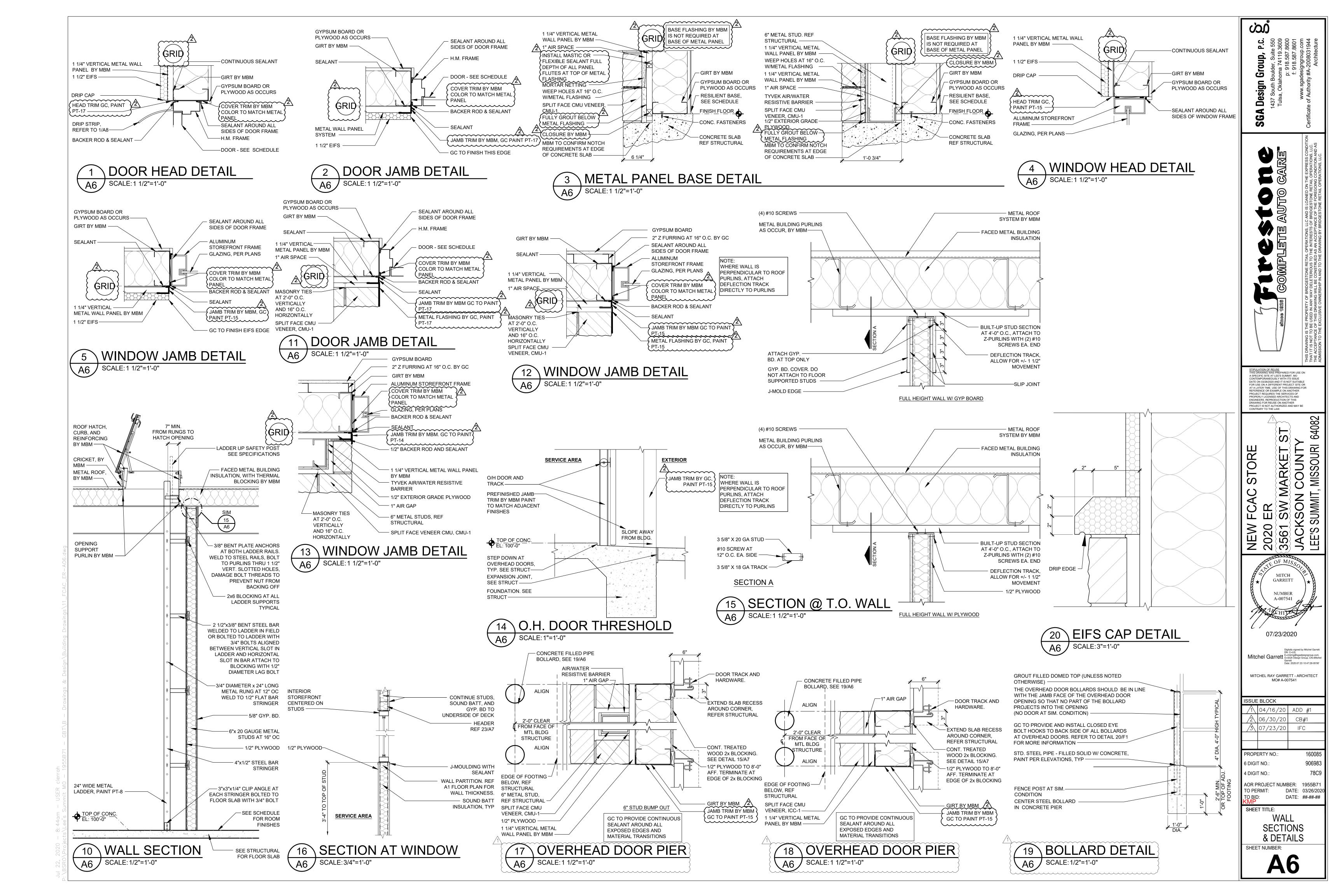
AOR PROJECT NUMBER: 1955B7 DATE: 03/26/202 TO PERMIT: DATE: ##-##-## O BID:

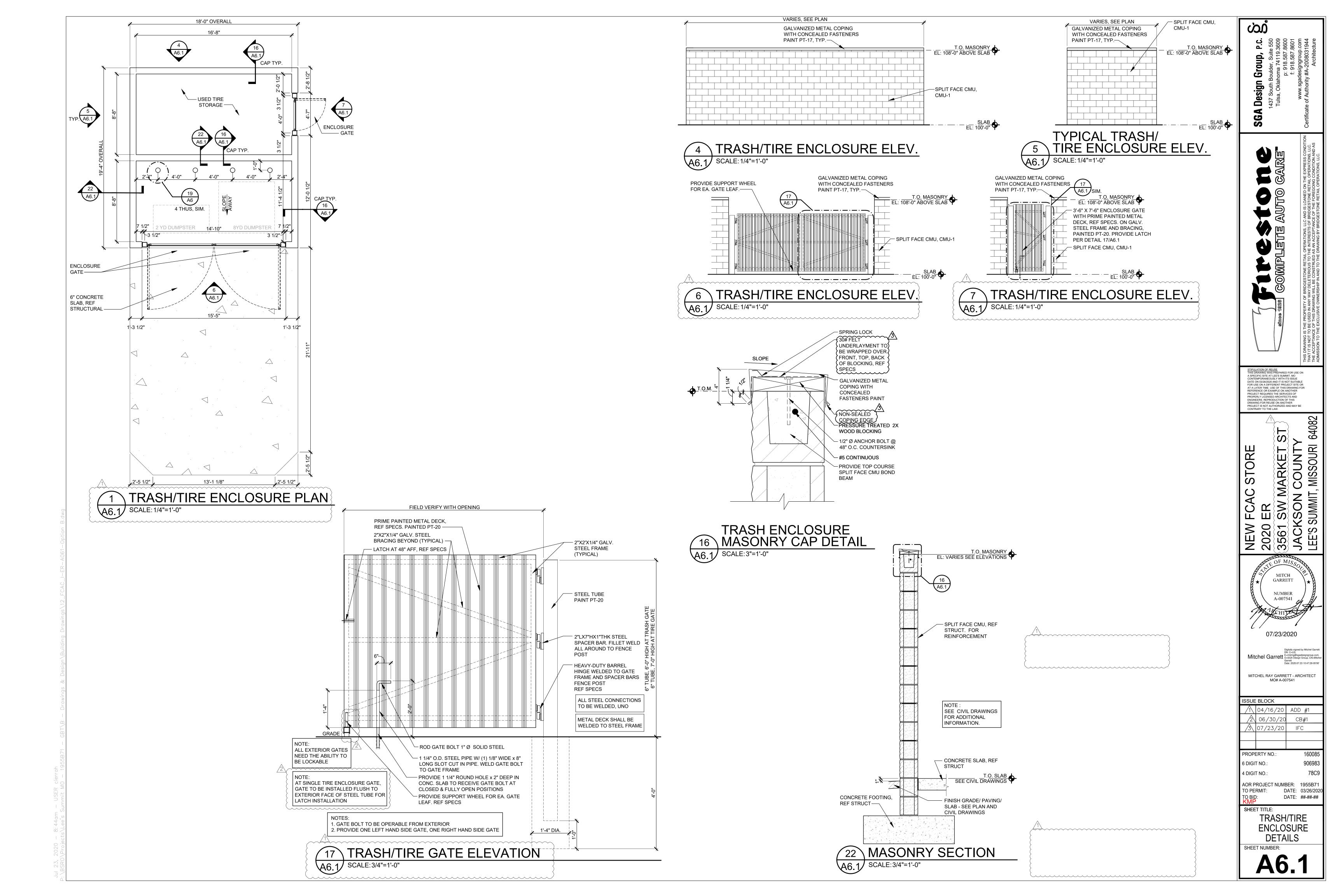
SHEET TITLE: **ROOF PLAN** & DETAILS

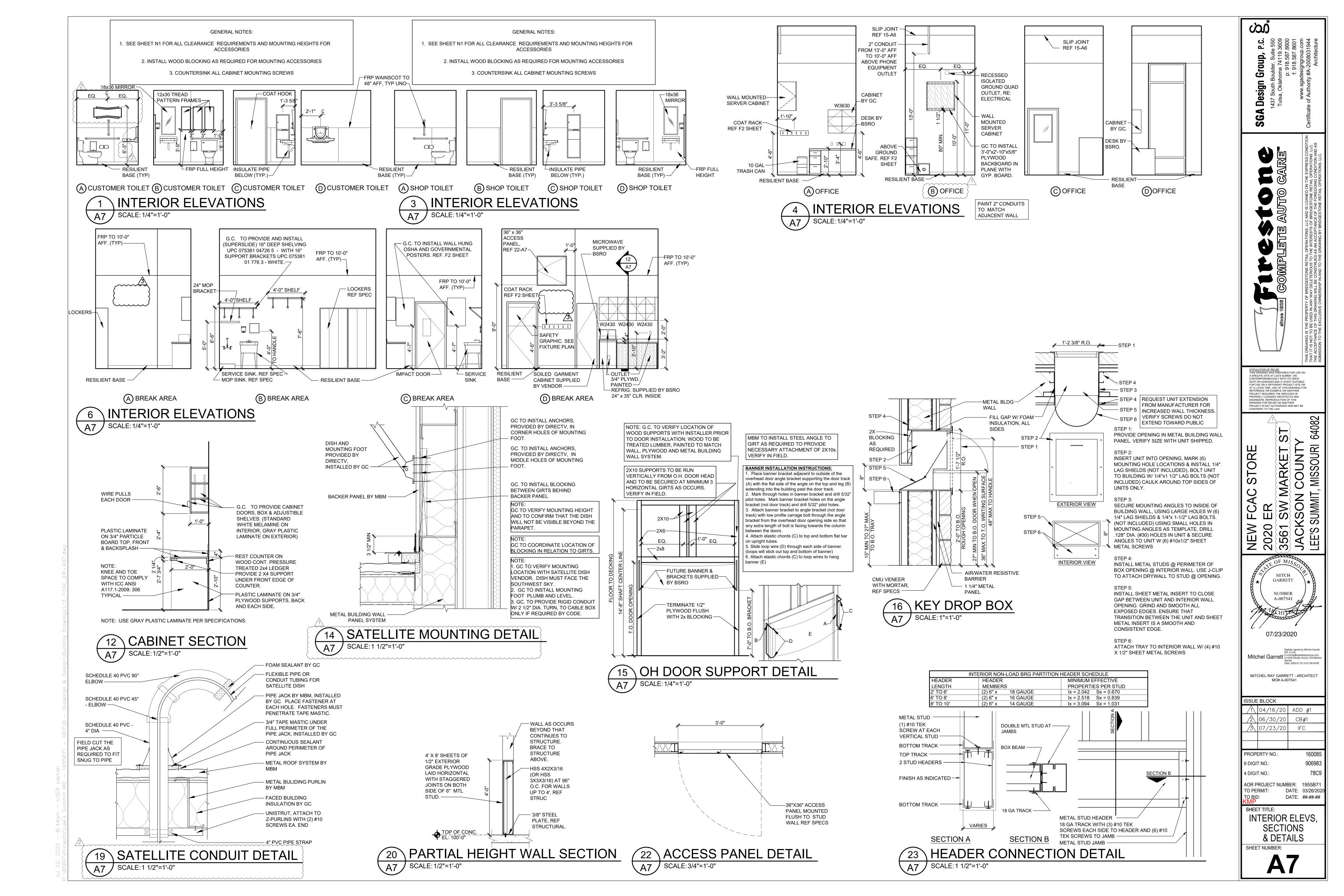


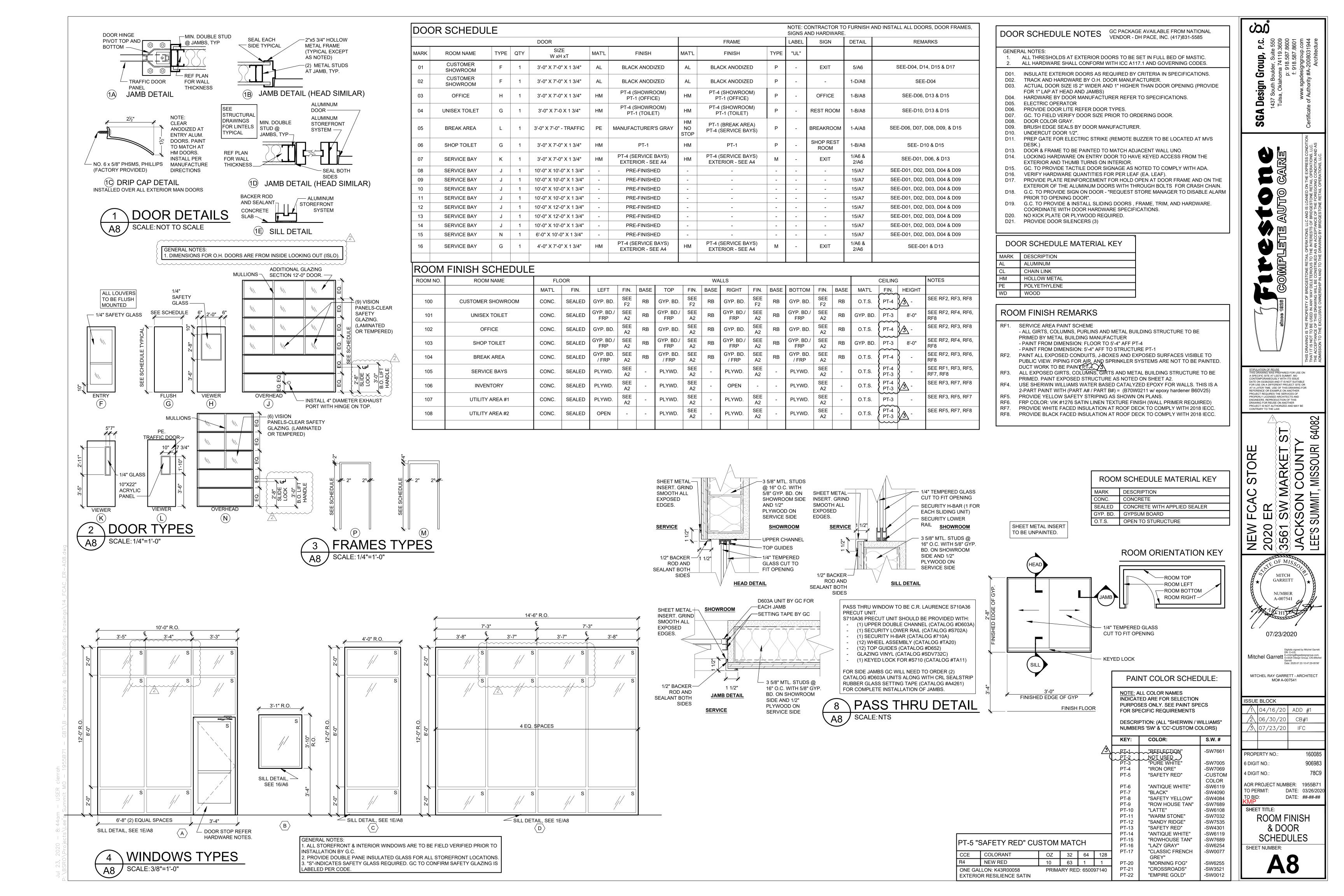












#### **FOUNDATIONS, SLAB-ON-GRADE - GENERAL**

FREEZE-THAW EXPOSURE SEVERITY

SLAB SUBGRADE REACTION MODULUS

AS POSSIBLE TO PROTECT FOUNDATIONS FROM FROST.

THE FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS MADE IN THE GEOTECHNICAL REPORT BY PROFESSIONAL SERVICE

SEVERE

= 140 PCI

- INDUSTRIES, INC. DATED JULY 24, 2019 (PROJECT No. 03381947) 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 INDEPENDENT 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 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
- 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.

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 MIX 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
- 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 - #5BARS x OPENING WIDTH PLUS 4 FEET(EACH SIDE)
- EACH FACE UNLESS SHOWN OTHERWISE. ALL REINFORCING SHALL BE DETAILED, 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 MINIMUM CONCRETE CLEAR COVER OVER REINFORCING STEEL, UNLESS NOTED OTHERWISE, SHALL BE UNFORMED SURFACE IN CONTACT WITH THE GROUND...

THE CRSI "MANUAL OF STANDARD PRACTICE".

#14 AND #18 BARS...

- FORMED SURFACES EXPOSED TO EARTH OR WEATHER: #6 BARS AND LARGER.. #5 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: #11 BARS AND SMALLER.
- ALL LAP SPLICES SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE, UNLESS NOTED

....1 1/2 IN

_			
	CING LAP ULE		
	TENS	ION SPLICE	S (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 1. 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, fm = 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 6. 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 BEAM AND LINTEL REINFORCING SHALL BE CONTINUOUS ACROSS VERTICAL CONTROL JOINTS. JOINT REINFORCING SHALL BE STOPPED EITHER SIDE OF VERTICAL CONTROL
- 4. 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
- 6. 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.
- 7. 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
- 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

11. 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		
- 1				

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

#### STRUCTURAL STEEL

1.	STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOW ALL CHANNELS, ANGLES, PLATES, ETC. (U.N.O.)	A36 (Fy=36 KSI) A992 (Fy=50 KSI) A500 GRADE B (Fy=46 KSI) A500 GRADE B (Fy=42 KSI) A53 GRADE B (Fy=35 KSI) A325 (U.N.O.) F1554 (GRADE 36)

- 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
- 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
- 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 AND MECHANICAL/ELECTRICAL EQUIPMENT SUPPORT. ALL SUPPLEMENTAL 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 FORCES
- 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.

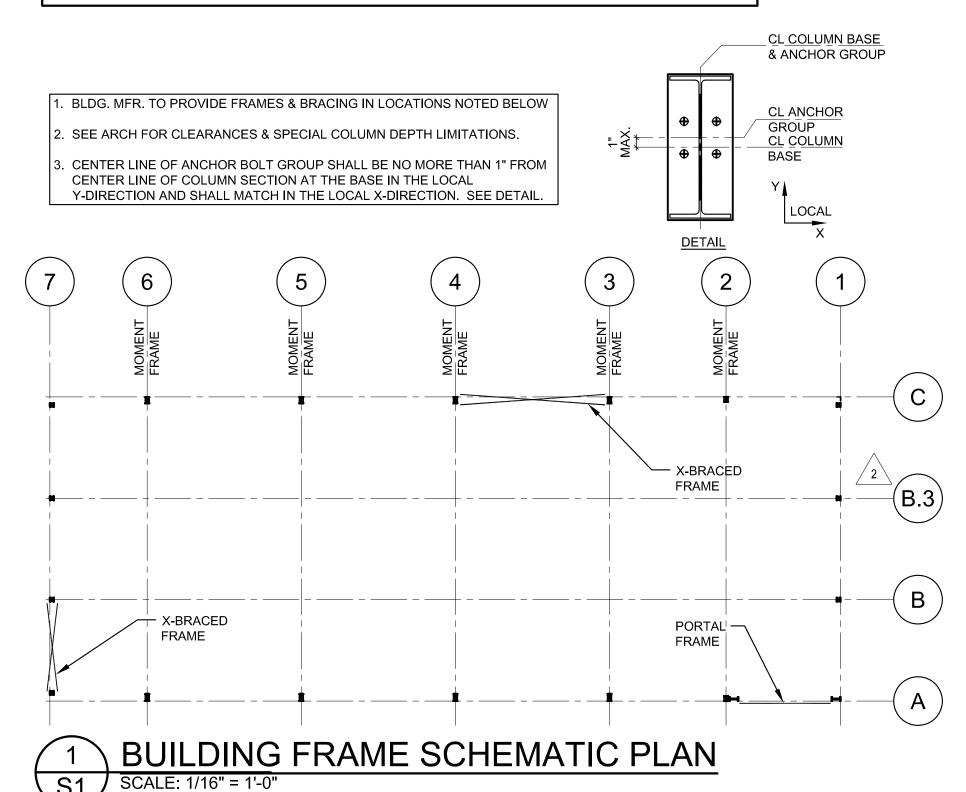
#### SPECIAL INSPECTIONS

- 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.
- 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. 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	HORIZONTAL DEFLECTION			
PURLINS	L/240			
RAFTERS	L/240			
METAL ROOF PANELS L/240				
METAL WALL PANELS L/240				
GIRTS L/240				
1 DESIGN SECONDARY-ERAMING SYSTEM TO ACCOMMODATE DEFLECTION OF PRIMARY FRAMING AND				

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

3. L = MEMBER SPAN



PERIODIC O ACHIEVE THE DESIGN BEARING CAPACITY. . VERIFY EXCAVATIONS ARE EXTENDED TO PROPER PERIODIC DEPTH AND HAVE REACHED PROPER MATERIAL. 3. PERFORM CLASSIFICATION AND TESTING OF PERIODIC COMPACTED FILL MATERIALS. IBC 1705.6 4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL. PRIOR TO THE PLACEMENT OF COMPACTED FILL, OBSERVE SUBGADE AND VERIFY THAT THE SITE HAS PERIODIC BEEN PREPARED PROPERLY CONCRETE (NOT APPLICABLE TO ISOLATED SPREAD FOOTINGS OR NON-STRUCTURAL SLABS ON GROUND): . INSPECTION OF REINFORCING STEEL, SIZE AND ACI 318: 3.5, 7.1-7.7 PERIODIC PLACEMENT ACI 318: Ch. 4, 5,2-5,4 L VERIFYING USE OF REQUIRED DESIGN MIX PERIODIC . SAMPLING FRESH CONCRETE AND PERFORMING SLUMP, AIR CONTENT, AND DETERMINING THE ASTM C 172: ASTM C 31; ACI 318: 5.6, 5.8 TEMPERATURE OF FRESH CONCRETE AT THE TIME OF MAKING SPECIMENS FOR STRENGTH TESTS. INSPECTION OF CONCRETE PLACEMENT FOR PROPER ACI 318: 5.9, 5.10 APPLICATION TECHNIQUES INSPECTION FOR MAINTENANCE OF SPECIFIED CURING PERIODIC ACI 318: 5.11-5.13 TEMPERATURE AND TECHNIQUES STEEL CONSTRUCTION: . MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS, AND WASHERS, HIGH-STRENGTH BOLTING: APPLICABLE A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM ASTM MATERIAL STANDARDS SPECIFIED IN THE APPROVED PERIODIC SPECIFICATIONS; CONSTRUCTION DOCUMENTS AISC 360, SEC. A3.4 B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE PERIODIC REQUIRED INSPECTION OF BEARING-TYPE CONNECTIONS 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 AISC 360, SEC. M5.5; SPECIFIED IN THE APPROVED CONSTRUCTION ASTM A-6 OR ASTM A-568 B. FOR OTHER STEEL. IDENTIFICATION MARKING TO APPLICABLE ASTM CONFORM TO ASTM STANDARDS SPECIFIED IN THE MATERIAL STANDARDS APPROVED CONSTRUCTION DOCUMENTS C. MANUFACTURER'S CERTIFIED MILL TEST REPORTS REQUIRED . MATERIAL VERIFICATION OF WELD FILLER MATERIALS: A. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION PERIODIC AISC 360. SECTION A3.5 DOCUMENTS AND APPLICABLE AWS A5 DOCUMENTS B. MANUFACTURER'S CERTIFICATE OF PERIODIC COMPLIANCE REQUIRED INSPECTION OF WELDING: A. SINGLE-PASS FILLET WELDS ≤ 5/16" AWS D1.1 PERIODIC **PERIODIC AWS D1.3** B. ROOF DECK WELDS MASONRY CONSTRUCTION 1. AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE: A. PROPORTIONS OF SITE PREPARED MORTAR. 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 PERIODIO ACI 530.1/ASCE 6/TMS 602: Art. C. LOCATION OF REINFORCEMENT AND CONNECTORS. D. VERIFICATION OF fm. ACI 530.1/ASCE 6/TMS 602: Art. 1.5 DURING CONSTRUCTION THE INSPECTION PROGRAM SHALL VERIFY A. SIZE AND LOCATION OF STRUCTURAL ELEMENTS. ACI 530.1/ASCE 6/TMS 602: Art. 3.3F B. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF ACI 530/ASCE 5/TMS 402: MASONRY TO STRUCTURAL MEMBERS, FRAMES, Sec. 1.2.2(e), 1.16.1 OR OTHER CONSTRUCTION. PERIODIC ACI 530.1/ASCE 6/TMS 402; Sec. 1.15: C. SPECIFIED SIZE, GRADE, AND TYPE OF REINFORCEMENT AND ANCHOR BOLTS ACI 530.1/ASCE 6/TMS 602: Art. 2.4, 3.4 E. PROTECTION OF MASONRY DURING COLD ACI 530.1/ASCE 6/TMS 602: Art. WEATHER (TEMPERATURE BELOW 40° F) OR HOT 1.8C. 1.8D WEATHER (TEMPERATURE ABOVE 90° F) IBC SECTION 2104.3:2104.4 . PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE: A. GROUT SPACE IS CLEAN. ACI 530.1/ASCE 6/TMS 602: Art. 3.2D B. PLACEMENT OF REINFORCEMENT AND ACI 530/ASCE 5/TMS 402: Sec. 1.13; CONNECTORS. ACI 530.1/ASCE 6/TMS 602: Art. 3.4 IC. 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 . GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE WITH CODE AND CONSTRUCTION ACI 530.1/ASCE 6/TMS 602: Art. 3.5 DOCUMENT PROVISIONS. . PREPARATION OF ANY REQUIRED GROUT SPECIMENS, IBC SECTION 2105.2.2, 2105.3 MORTAR SPECIMENS, AND/OR PRISMS SHALL BE PERIODIC ACI 530.1/ASCE 6/TMS 602: Art. 1.4 OBSERVED. 6. COMPLIANCE WITH REQUIRED INSPECTION ACI 530.1/ASCE 6/TMS 602; Art. 1.5 PROVISIONS OF THE CONSTRUCTION DOCUMENTS PERIODIC AND THE APPROVED SUBMITTALS SHALL BE VERIFIED. ADHESIVE ANCHORS/REINFORCEMENT: . 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. MANUFACTURERS INSTALLATION B. ANCHORS/REINFORCEMENT INSTALLED PE INSTRUCTIONS CONTINUOUS MANUFACTURERS RECOMMENDATIONS.

SPECIAL INSPECTIONS SCHEDULE

FREQ.

SPECIAL INSPECTION

. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE

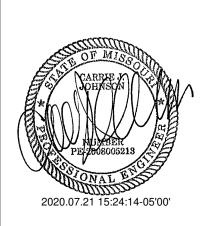
REFERENCED STANDARD(S)

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STIPULATION OF REUSE
THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE AT LEE'S SUMMIT, MO CONTEMPORANEOUSLY WITH ITS ISSUE CONTEMPORANEOUSLY WITH ITS ISSUE DATE ON 03/28/2020 AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

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WALLACE ENGINEERING STRUCTURAL CONSULTANTS. INC PROFESSIONAL ENGINEERING CORPORATION MISSOURI CERTIFICATE OF AUTHORIZATION



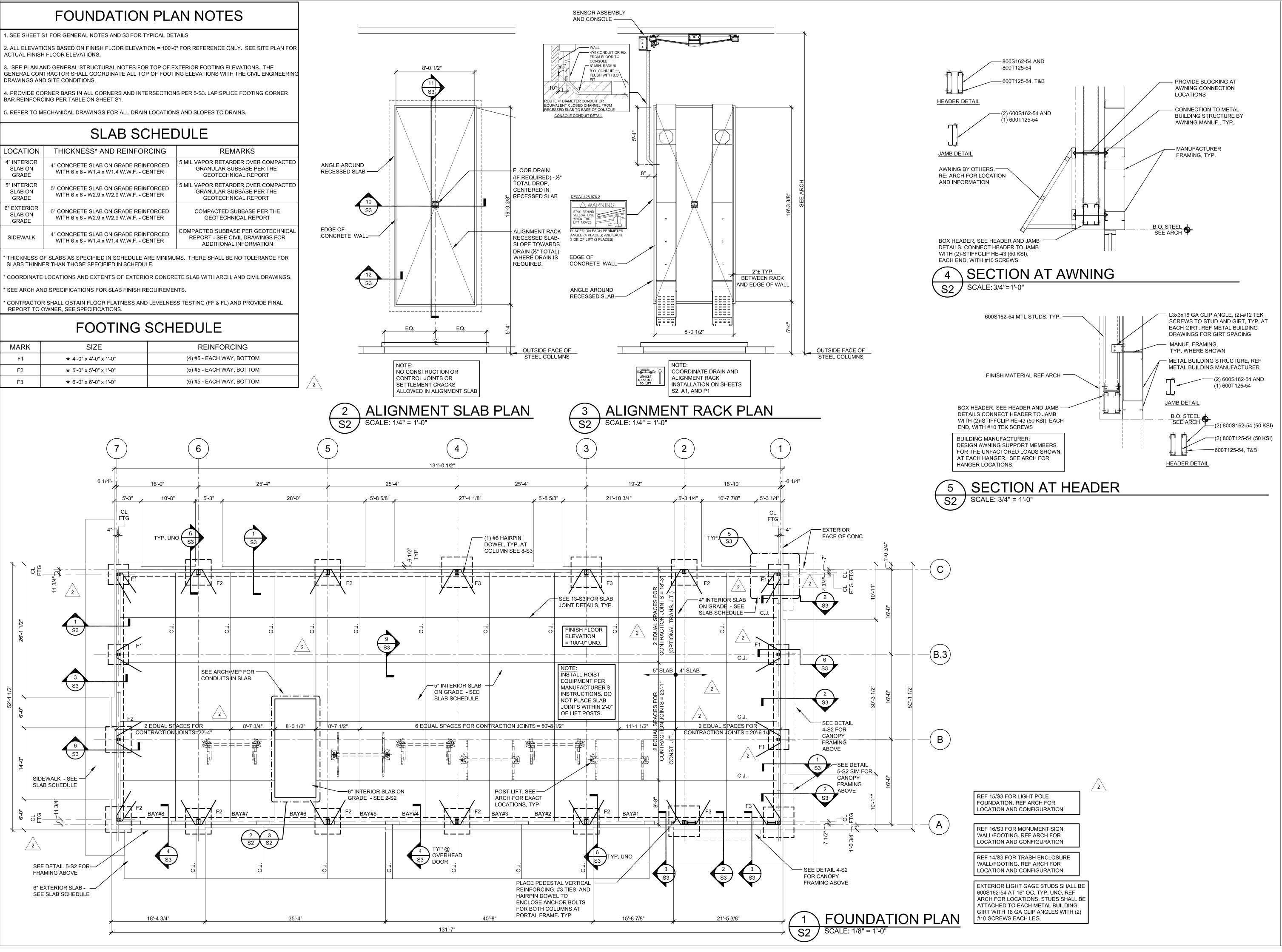
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2	CB#1	06/30/20		
3	IFC	07/23/20		

PROPERTY NO.: 906983 6 DIGIT NO.: 4 DIGIT NO.: AOR PROJECT NUMBER: 1955B71

ΓO BID: DATE: ##-##-## SHEET TITLE: **GENERAL NOTES** 

DATE: 03/26/202

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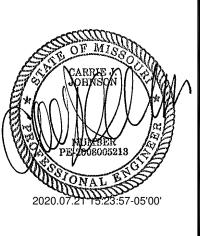




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PROFESSIONAL ENGINEERING CORPORATION
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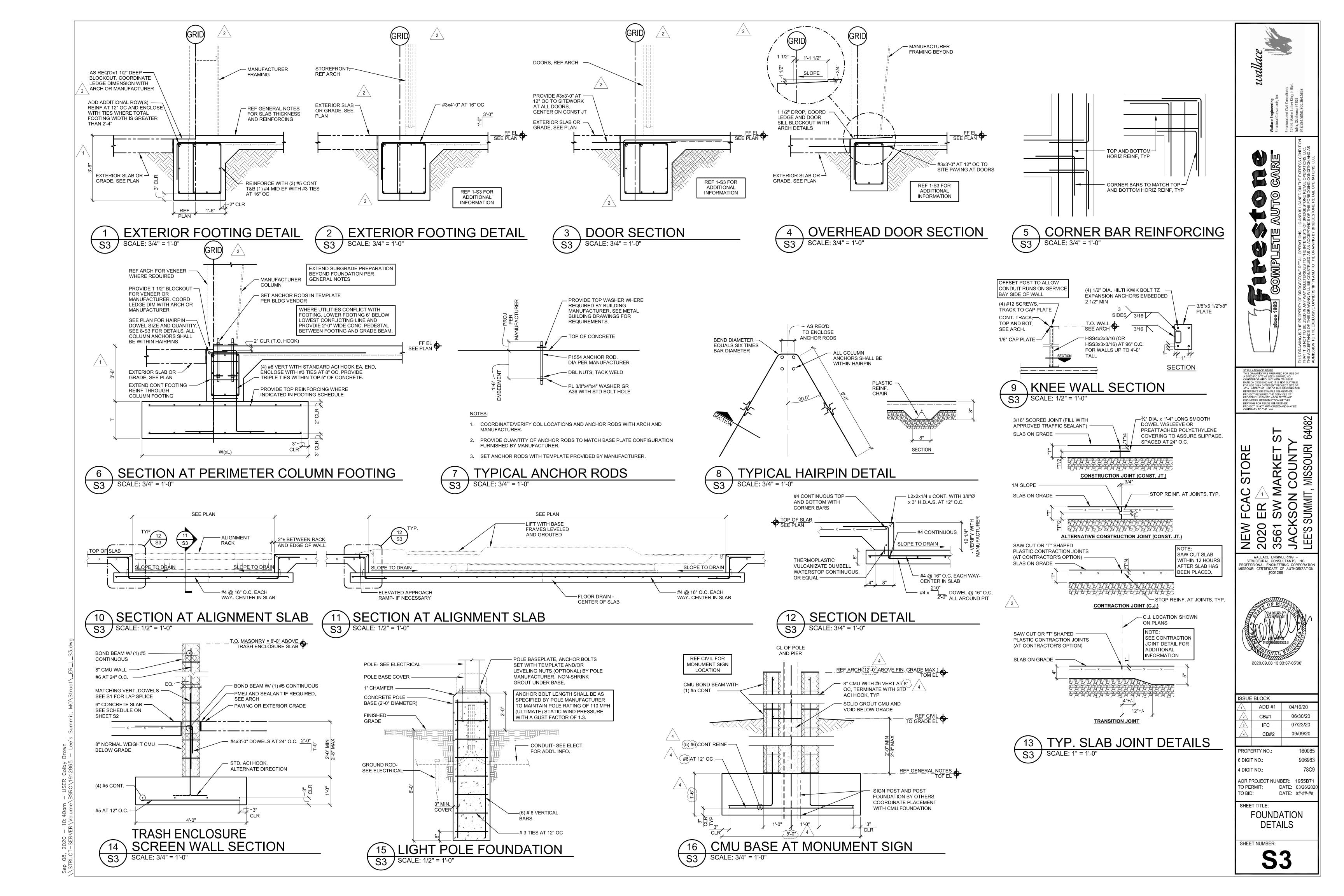


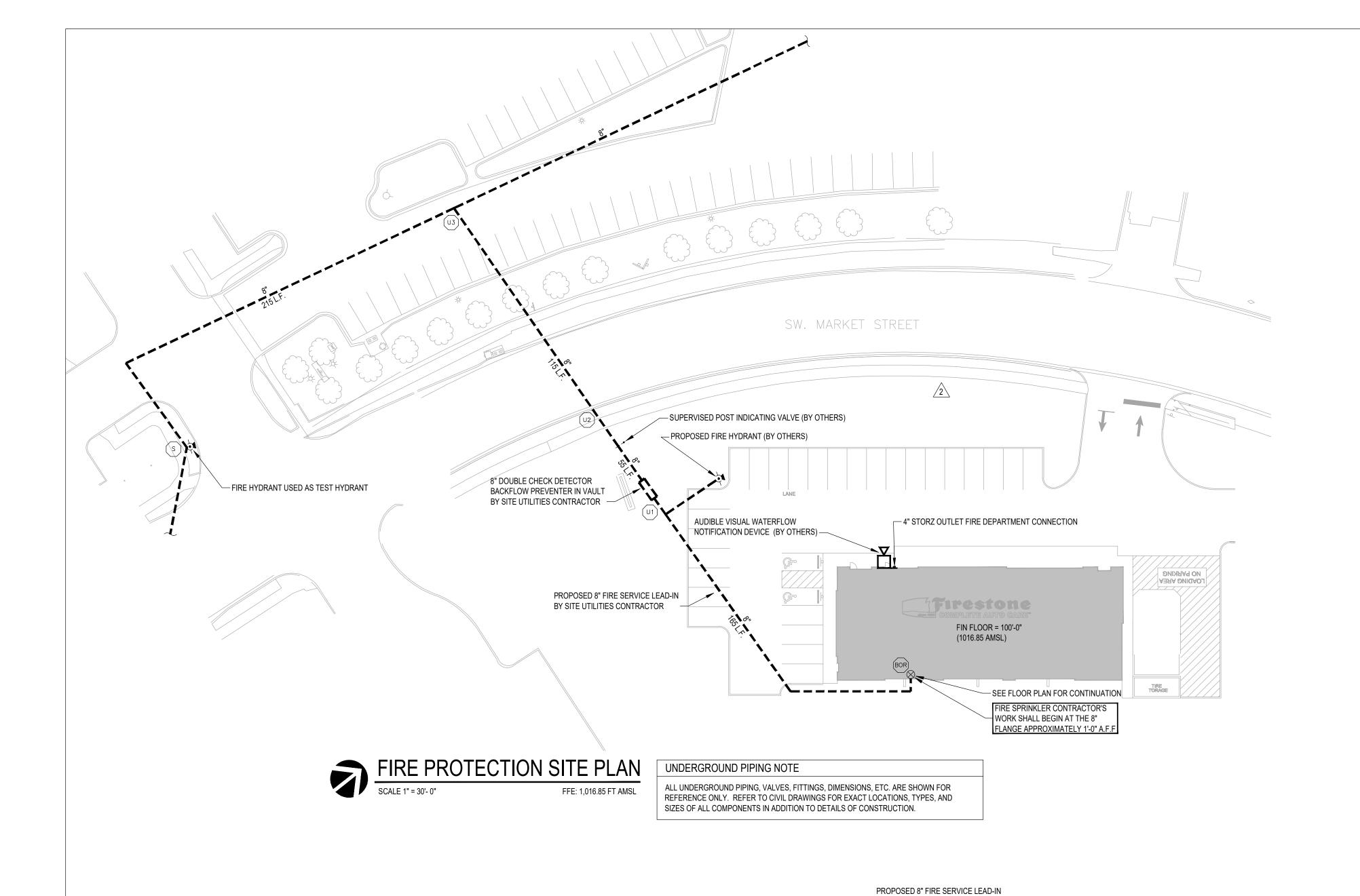
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6 DIGIT NO.: 906983 4 DIGIT NO.: AOR PROJECT NUMBER: 1955B71

DATE: 03/26/202 ΓΟ BID: DATE: ##-##-## SHEET TITLE:

**FOUNDATION PLAN** AND NOTES





HYDRAULICALLY MOST REMOTE

12 ESFR HEADS AT 15 PSI EACH

PROVIDE MANUAL AIR VENT AND

DRAIN WITH 3/4" HOSE ADAPTER-

PROVIDE AUXILIARY DRAIN

WITH 3/4" HOSE ADAPTER -

PARTIAL \

HEIGHT

WALL

PARTIAL

HEIGHT

WALL

BY SITE UTILITIES CONTRACTOR—

FIRE SPRINKLER CONTRACTOR'S

FLANGE APPROXIMATELY 1'-0" A.F.F

WORK SHALL BEGIN AT THE 8"

PARTIAL

HEIGHT

WALL

d=9 1=3

—SEE SITE PLAN FOR CONTINUATION

HEIGHT

WALL

4" CHECK VALVE —

NOTIFICATION DEVICE (BY OTHERS)

4" STORZ OUTLET FIRE DEPARTMENT CONNECTION—



- 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 REPRESNTATIVE, 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.

#### SYMBOL KEY

NEW PIPING

── CENTER LINE OF SPRINKLER: ALIGN WITH LIGHTS AND/OR OTHER SPRINKLERS: COORDINATE WITH OTHER TRADES.



RECOMMENDED CENTER LINE ELEVATION OF PIPE TO BE HELD TIGHT TO JOIST AND/OR BELOW METAL DECK (T.T.B. = TIGHT TO BEAM)

RISE FROM LEFT TO RIGHT AND DROP FROM RIGHT TO LEFT

HYDRAULIC REFERENCE POINT

PIPE HANGER

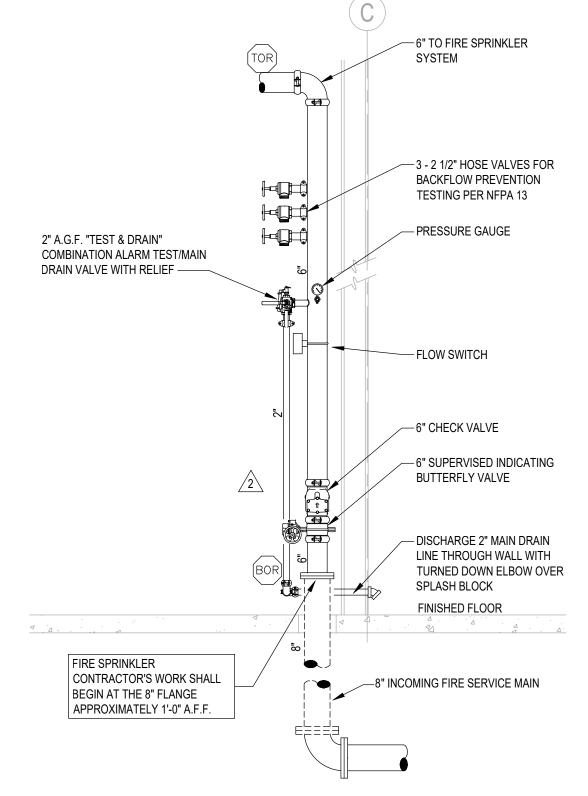
GLOBE VALVE CHECK VALVE

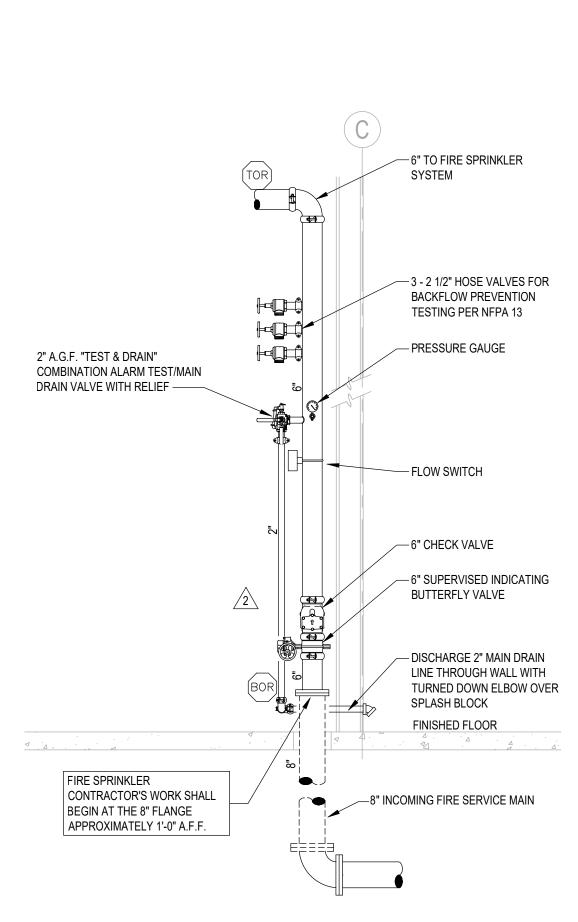
STORZ FIRE DEPARTMENT CONNECTION

#### SPRINKLER LEGEND

SYMBOL	SPRINKLER TYPE	TEMP.	K	FINISH	RESP.	Q
•	CHROME PENDENT WITH 2 PIECE ESCUTCHEON	ORD	5.6	CHROME	QR	
0	UPRIGHT	INT	5.6	BRASS	QR	
×	ESFR K25.2 PENDENT	INT	25.2	BRASS	ESFR	(
•	BRASS HORIZONTAL SIDEWALL WITH GUARD	INT	5.6	BRASS	QR	

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







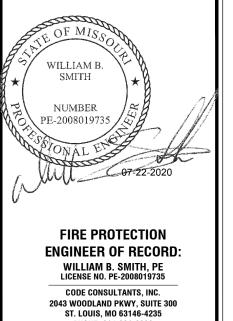


**CODE CONSULTANTS, INC.** 2043 WOODLAND PKWY, SUITE 300 ST. LOUIS, MISSOURI 63146-4235 314-991-2633 www.codeconsultants.com



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ORE NEW FCAC (2020 ER 3561 SW MAJACKSON CLEE'S SUMMIT, N



C	PHONE: 314-991-2633 CORPORATE CERTIFICATE OF AUTHORITY NO. 000419								
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PROPERTY NO.: 6 DIGIT NO.: 906983 4 DIGIT NO .:

AOR PROJECT NUMBER: 1955B7 TO PERMIT: DATE: 03/26/202 TO BID: DATE: ##-##-## SHEET TITLE:

FIRE SPRINKLER PLAN

#### **GENERAL NOTES**

- PROVIDE ALL NECESSARY OFFSETS, RAISES OR DROPS IN PIPING AND AUXILIARY DRAINS REQUIRED BY BUILDING CONDITIONS WHETHER OR NOT SHOWN ON THE
- EXAMINE THE JOB CONDITIONS AND VERIFY ALL MEASUREMENTS, DISTANCES, ELEVATIONS, CLEARANCES, PIPE SIZES, ETC.
- 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.
- 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.
- SUPPLY ONLY ONE (1) SPRINKLER FROM A SINGLE BRANCH LINE OUTLET. PROVIDE NEW BRANCH LINES AS REQUIRED.
- SPRINKLERS NEAR A HEAT SOURCE (UNIT HEATERS, DIFFUSERS, STEAM MAINS, SKYLIGHTS, ETC.) SHALL HAVE TEMPERATURE RATINGS IN ACCORDANCE WITH
- IT IS UNDERSTOOD, UNLESS SPECIFICALLY INDICATED OTHERWISE, THAT THE PIPE SIZES AS SHOWN ON THE BID DOCUMENTS WILL BE USED.

#### PIPING/FITTING NOTES

- ALL PIPING AND FITTINGS SHALL BE NEW UNLESS NOTED OTHERWISE ON THE
- MAINS SHALL BE SCHEDULE 10 ASTM A795, A53, OR A135 PER NFPA 13.
- 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
- . ALL PIPING SHALL HAVE A CORROSION RESISTANCE RATIO (CRR) OF 1.0 OR
- 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

- COORDINATE ALL HANGER TYPES AND LOCATIONS WITH THE STRUCTURAL ENGINEER OF RECORD.
- COORDINATE ALL HANGER TYPES AND LOCATIONS WITH THE METAL BUILDING MANUFACTURER.
- PIPES LARGER THAN 4 IN. RUNNING PARALLEL TO BAR JOISTS SHALL BE HUNG FROM TRAPEZE HANGERS SUPPORTED NEARLY EQUALLY BY TWO JOISTS.
- 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

DENSITY - 0.10 GPM/SQ FT

OPERATING AREA - 1,500 SQ FT

OFFICE AREAS AND BREAK ROOM: STANDARD COVERAGE SPACING

TOILET: STANDARD COVERAGE SPACING

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

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

NOTE: THIS DESIGN CRITERIA WILL PROTECT TIRE STORAGE ON TREAD UP TO 15FT IN AN 20FT BUILDING.

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.
- UNDERGROUND SHALL BE FLUSHED IN ACCORDANCE WITH NFPA PRIOR TO CONNECTING TO THE OVERHEAD SYSTEM.
- TESTING SHALL BE COORDINATED WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND COMPLY WITH ALL LOCAL REQUIREMENTS.

### **INSTALLATION NOTES**

- PROVIDE SPRINKLER PROTECTION BELOW DUCTS IN EXPOSED STRUCTURE AREAS PER NFPA-13.
- 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.

# XVVI 67-22-2020 **ENGINEER OF RECORD:** CODE CONSULTANTS, INC. 2043 WOODLAND PKWY, SUITE 300 PHONE: 314-991-2633 CORPORATE CERTIFICATE OF AUTHORITY NO. 000419 ISSUE BLOCK /1\ | 04/16/20 | ADD #1 /3\ | 07/23/20 | IFC SET

# PROPERTY NO.: 906983 6 DIGIT NO.:

**CODE CONSULTANTS, INC.** 

2043 WOODLAND PKWY. SUITE 300

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NEW 2020 3561 JACK LEE'S S

FIRE PROTECTION

WILLIAM B. SMITH, PE LICENSE NO. PE-2008019735

WILLIAM B.

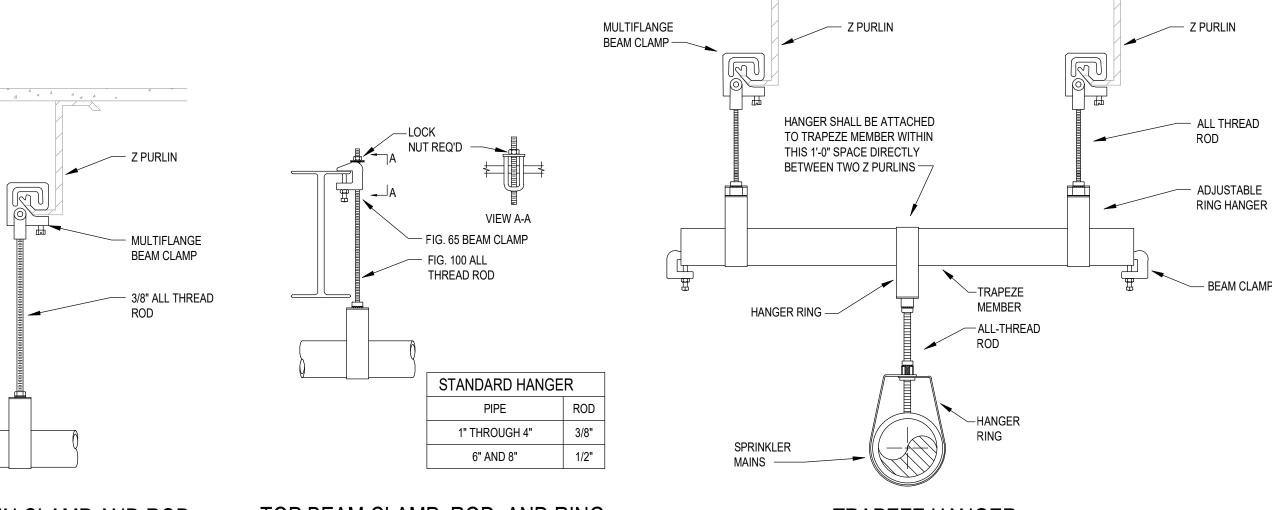
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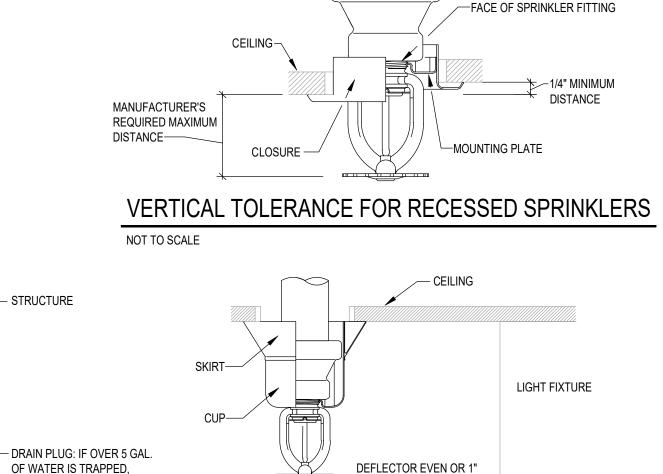
4 DIGIT NO.: AOR PROJECT NUMBER: 1955B71 TO PERMIT: DATE: 03/26/202

TO BID: DATE: ##-##-## SHEET TITLE:

FIRE SPRINKLER

NOTES AND **DETAILS** SHEET NUMBER:





OF WATER IS TRAPPED, OBSTRUCTION PROVIDE 1" GLOBE VALVE TYPICAL OFFSET AT OBSTRUCTION

SPRINKLER PIPE

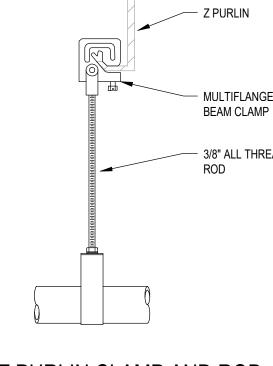
HELD TIGHT TO

NOT TO SCALE

FLOOR/ROOF

2 PIECE TELESCOPING ESCUTCHEON DETAIL NOT TO SCALE

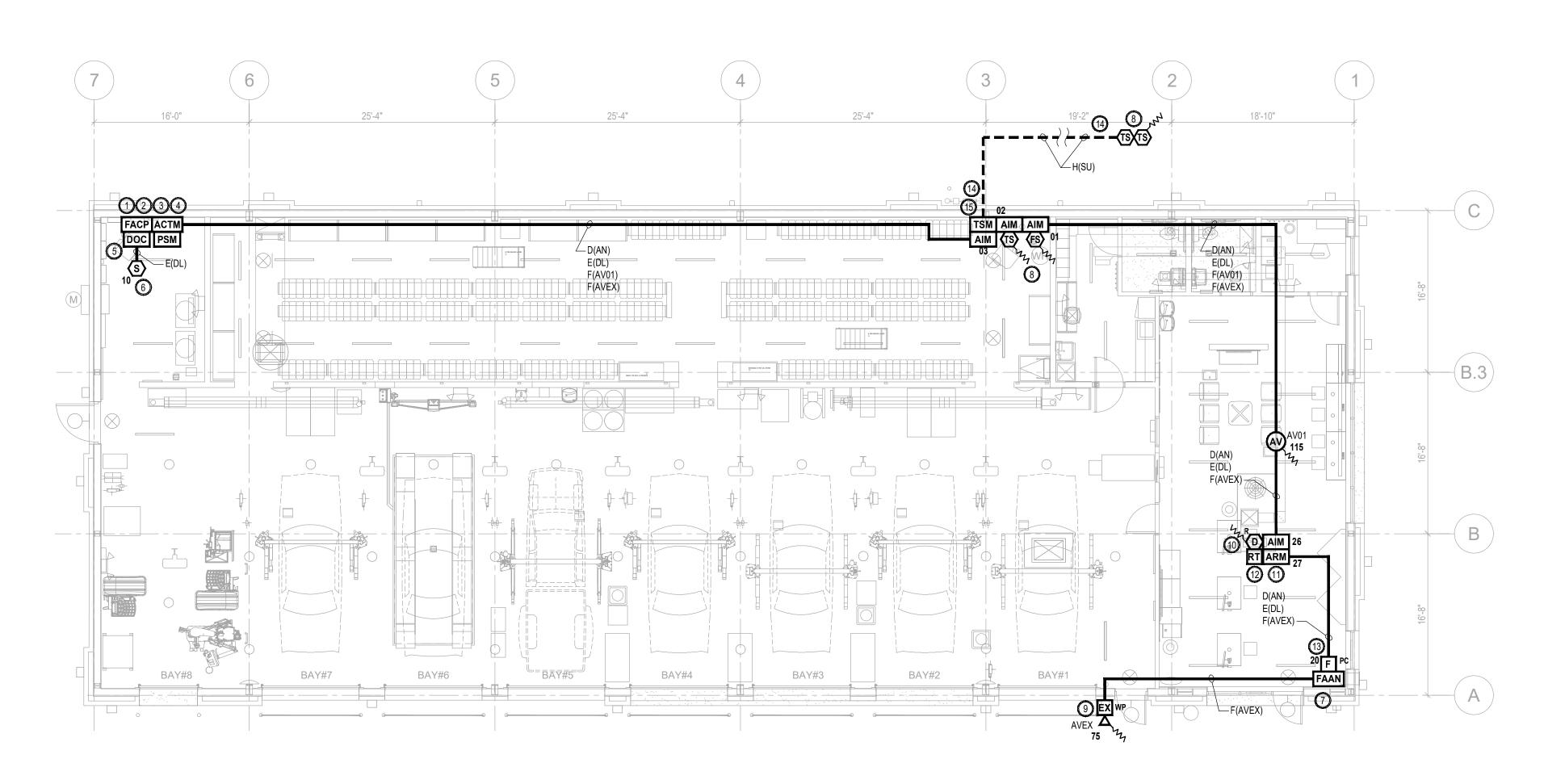
BELOW BOTTOM OF LIGHT



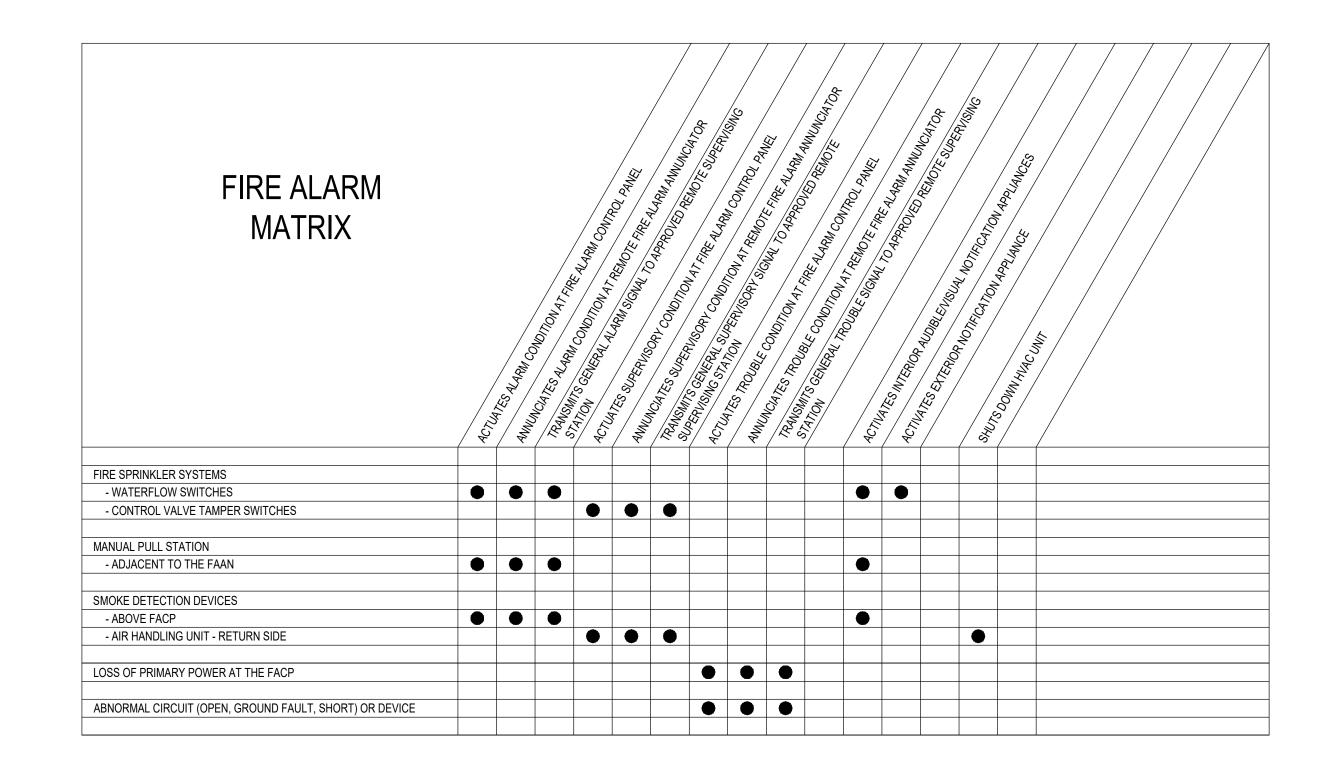
Z PURLIN CLAMP AND ROD NOT TO SCALE

TOP BEAM CLAMP, ROD, AND RING NOT TO SCALE

NOT TO SCALE







#### 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
- 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 1 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

#### APPLICABLE CODES

SYSTEM TYPE:

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

DEDICATED FUNCTION FIRE ALARM SYSTEM

- 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 (CCI) FOR RESOLUTION.

FIRE ALA	RM 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
F	ADDRESSABLE DUAL ACTION MANUAL PULL STATION WITH PROTECTIVE COVER AND INTEGRAL SOUNDER (FIRELITE BG-12LX) (STI-1100 STOPPER II WITH SOUNDER)	1
<b>(S)</b>	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR (FIRE-LITE SD365)	1
(D) <sub>R</sub>	DUCT-TYPE PHOTOELECTRIC SMOKE DETECTOR (FACTORY PROVIDED AND POWERED BY RTU) (R = RETURN SIDE)	1
RT	REMOTE TEST STATION / ANNUNCIATOR (SYSTEM SENSOR RTS151KEY)	1
(FS)	FLOW SWITCH (BY OTHERS)	1
(TS)	TAMPER SWITCH (BY OTHERS)	4
(AV) <sub>XX</sub>	CEILING MOUNTED RED AUDIBLE/VISUAL APPLIANCE (XX = CANDELA RATING) (SYSTEM SENSOR PC2RL)	1

#### 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					

WALL MOUNTED RED EXTERIOR AUDIBLE/VISUAL APPLIANCE

FIRE ALARM CONDUCTORS LISTED FOR WET LOCATION IN

(XX = CANDELA RATING) (WP = WEATHERPROOF)

WP XX (SYSTEM SENSOR P2RK)

FIRE ALARM CONDUCTORS (RED IN COLOR)

UNDERGROUND CONDUIT (1 INCH MINIMUM)

#### FIRE ALARM WIRING LEGEND

# CONDUCTOR TYPE:

H = 18/2 WET LOCATION

J = 14/2 WET LOCATION

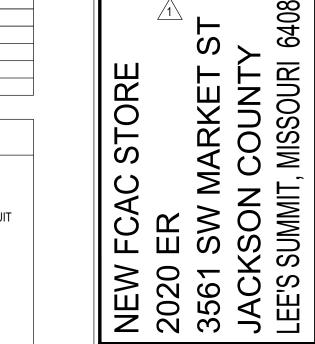
CIRCUIT DESIGNATION: AN = ANNUNCIATOR KEYPAD CIRCUIT D = 18/4 TP AV = AUDIBLE/VISUAL NOTIFICATION CIRCUIT E = 18/2 TP F = 14/2 TP DL = INITIATION DATA CIRCUIT G = AS REQ'D BY MANF.

PW = LOW VOLTAGE POWER CIRCUIT RC = RELAY CONTROL CIRCUIT RT = REMOTE TEST STATION POWER SU = SUPERVISORY CIRCUIT ZN = INITIATION ZONE CIRCUIT

CONDUCTOR TYPE CIRCUIT DESIGNATION F(AV01)

CIRCUIT NUMBER

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.



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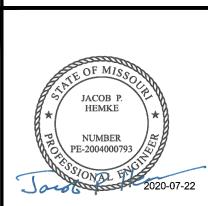
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FIRE PROTECTION **ENGINEER OF RECORD:** JACOB P. HEMKE, PE LICENSE NO. PE-2004000793 CODE CONSULTANTS, INC. 2043 WOODLAND PKWY, SUITE 300 ST. LOUIS, MO 63146-4235 PHONE: 314-991-2633

CORPORATE CERTIFICATE OF AUTHORITY
NO. 000419 ISSUE BLOCK

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

SHEET TITLE: FIRE ALARM PLAN

SHEET NUMBER:

AND MATRIX

FA1

			STANDBY POWER		IN ALARM			
MODEL NUMBER	DESCRIPTION	QUANTITY	CURRENT PER DEVICE (mA)	TOTAL CURRENT (mA)	CURRENT PER DEVICE (mA)	TOTAL CURRENT (mA)	STANDBY BATTERIES (24-VOLT)	CURRENT (mA)
FIRE-LITE ES-50X	FIRE ALARM CONTROL PANEL	1	141	141	257	257	STANDBY CURRENT	158.50
FIRE-LITE ANN-80	ANNUNCIATOR	1	15	15	40	40	HOURS	24
FIRE-LITE BG-12LX	MANUAL PULL STATION	1	0.30	0.30	SEE NOTE 1	SEE NOTE 1	STANDBY mA	3,804
FIRE-LITE SD355	SMOKE DETECTION	1	0.30	0.30	SEE NOTE 1	SEE NOTE 1	ALARM CURRENT	497.33
FIRE-LITE MMF-300	MONITOR MODULE	4	0.40	1.60	SEE NOTE 1	SEE NOTE 1	HOURS	0.083
FIRE-LITE CRF-300	CONTROL/RELAY MODULE	1	0.30	0.30	SEE NOTE 1	SEE NOTE 1	ALARM mA	41
							TOTAL mA	3,845
							TOTAL AH	3.8
AS INDICATED	MAX DRAIN ALL DEVICES	1	0	0	200	200	CONTINGENCY	20%
							BATTERY TOTAL	4.5
SYSTEM SENSOR	CIRCUIT AVEX	1	0	0	0.176	0.176		
SYSTEM SENSOR	CIRCUIT AV01	1	0	0	0.158	0.158		
					·			
TOTAL				158.50		497.33	BATTERY PROVIDED	7

ALARM CURRENT FOR ADDRESSABLE DEVICES IS CALCULATED BASED ON THE MAXIMUM CURRENT REQUIRED FOR ALL DEVICES. BATTERIES IN EXCESS OF 18 AH CANNOT BE INSTALLED IN THE FIRE-LITE ES-50X FACP ENCLOSURE AND MUST BE

INSTALLED IN A BATTERY BOX LISTED FOR THAT PURPOSE WITH A PROPERLY SIZED CHARGER

FIRE ALARM NOTIFICATION APPLIANCE CIRCUIT VOLTAGE DROP CALCULATIONS									
SIGNAL CIRCUIT	ADOIOIDOLIIT I OOATION	ACTUAL ALARM	MAXIMUM DISTANCE TO LAST APPLIANCE		CALCULATED VOLTAGE DROP USING 14 AWG CABLING (BASED ON 20.4 VDC SOURCE)				
DESCRIPTION	APS/CIRCUIT LOCATION	CURRENT (mA)	12 AWG CABLING (FEET)	14 AWG CABLING (FEET)	APPROX CIRCUIT LENGTH (FEET)	VOLTAGE AT LAST APPLIANCE (VOLTS)	VOLTAGE DROP (VOLTS)		
FACP	MAIN ELECTRICAL ROOM								
AVEX	EXTERIOR APPLIANCE	0.176	6,477	4,072	130	20.18	0.22		
AV01	SALES FLOOR	0.158	7,215	4,536	200	20.21	0.19		
NOTES:				•	•	•	•		

. NOTIFICATION APPLIANCE CIRCUITS (NAC) DESIGNED FOR A MAXIMUM 1.6 AMPS, MAXIMUM 4.4 VDC DROP, AND MINIMUM OPERATING VOLTAGE OF 16 VDC. 2. FIELD VERIFY ALL VOLTAGE DROP AND POWER REQUIREMENTS.

3. NOTIFICATION APPLIANCE CIRCUITS BASED UPON THE ABOVE CURRENT AND VOLTAGE CRITERIA USING SYSTEM SENSOR NOTIFICATION APPLIANCE CRITERIA.

		ZONING
ZONE NUMBER	ACTUATED DEVICES	ALPHANUMERIC LABEL OF ZONE
Z01	FACP / FAAN / DACT	ALARM CONDITION AT FACP, FAAN, AND OFF-SITE MONITORING STATION
Z02	FACP / FAAN / DACT	SUPERVISORY CONDITION AT FACP, FAAN, AND OFF-SITE MONITORING STATION
Z03	FACP / FAAN / DACT	TROUBLE CONDITION AT FACP, FAAN, AND OFF-SITE MONITORING STATION
Z04		
Z05		
Z06	FACP	ACTIVATES INTERIOR AUDIBLE/VISUAL NOTIFICATION APPLIANCES
Z07		
Z08	FACP	ACTIVATES EXTERIOR NOTIFICATION APPLIANCE
Z09		
Z10	27	SHUTS DOWN HVAC UNITS
THRU		
720		

		ADDRESSAE	BLE DEVICES
ADDRESS	TYPE I.D.	ACTUATED ZONES	ALPHANUMERIC LABEL OF DEVICE
01	MONITOR	Z01, Z06	WATERFLOW SWITCH
02	MONITOR	Z02	TAMPER SWITCH
03	MONITOR	Z02	EXTERIOR CONTROL VALVE TAMPER SWITCHES
04			
05			
06			
07			
08			
09			
10	SMOKE	Z01, Z06	UTILITY AREA - ABOVE FACP
11		,	
12			
13			
14			
15			
16			
17			
18			
19			
20	PULL	Z01, Z06	ADJACENT TO FAAN
21	-	. ,	
22			
23			
24			
25			
26	MONITOR	Z02, Z10	RTU 1 RETURN DUCT SMOKE DETECTOR
27	RELAY	- ,	RTU 1 SHUTDOWN
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#### FIRE ALARM INSTALLATION NOTES

- ALL WORK SHALL BE IN ACCORDANCE WITH NFPA STANDARDS AND ALL LOCAL ADOPTED CODES.
- FIRE ALARM CABLING SHALL BE ACCEPTABLE TO THE FIRE ALARM EQUIPMENT MANUFACTURER FOR THE INTENDED PURPOSE. SHOULD MANUFACTURER OF FIRE ALARM EQUIPMENT REQUIRE DIFFERENT TYPE OR SIZE OF CABLE THAN HEREIN SPECIFIED, THE LARGER OR MORE STRINGENT TYPE OF CABLE SHALL BE USED.
- ALL FIRE ALARM CABLING SHALL BE FPL, FPLR OR FPLP AS REQUIRED BY THE
- PROVIDE ALL REQUIRED CONDUIT, BACKBOXES, AND FITTINGS FOR THE FIRE ALARM SYSTEM CABLING.
- FIRE ALARM CABLING SHALL BE RED IN COLOR.
- 6. FIRE ALARM CABLING SHALL NOT BE PAINTED.

ELECTRICAL CODE.

- CABLE ROUTING SHOWN ON DRAWINGS IS FOR INTENT. EXACT ROUTING SHALL BE COORDINATED WITH OTHER TRADES IN THE FIELD. SEE DRAWING NOTES AND DETAILS FOR ACCEPTABLE INSTALLATION METHODS.
- ALL CABLING NOT IN RUNWAY SHALL BE NEATLY BUNDLED, WRAPPED TIGHT, AND PROPERLY SECURED. ANY CABLING NOT INSTALLED IN A NEAT AND PROFESSIONAL MANNER SHALL BE PULLED OUT AND RE-RUN BY INSTALLER AT NO ADDITIONAL COST TO OWNER.
- 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.
- . 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.
- ALL CABLING SHALL BE SUPPORTED FROM BUILDING STRUCTURE AND NOT FROM GRID, TILES, OR SUPPORT WIRES. ALL CABLING NOT IN RACEWAY SHALL BE SUPPORTED BY BUILDING STRUCTURE AT NO MORE THAN FIVE (5) FOOT INTERVALS.
- 2. ALL FIRE ALARM CABLING BELOW THE ROOF STRUCTURE, IN ELECTRICAL AND MECHANICAL ROOMS (SUBJECT TO PHYSICAL DAMAGE), CONCEALED ABOVE CEILINGS, OR IN PARTITIONS (SUBJECT TO PHYSICAL DAMAGE) SHALL BE INSTALLED IN METALLIC CONDUIT.
- 13. ALL POWER LIMITED FIRE ALARM CABLING ABOVE THE STRUCTURE, ABOVE LAY-IN CEILINGS, OR CONCEALED ABOVE CEILINGS (NOT SUBJECT TO PHYSICAL DAMAGE) ARE NOT REQUIRED TO BE INSTALLED IN CONDUIT.
- 14. ALL NON-POWER LIMITED FIRE ALARM CABLING FOR THE FIRE ALARM SYSTEM SHALL BE INSTALLED IN CONDUIT.
- 15. ALL CONDUIT SHALL BE TERMINATED ABOVE THE WALL AT THE ROOF STRUCTURE 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 TILE/ROOF STRUCTURE.
- 7. FOR DRYWALL APPLICATIONS, ALL CONDUIT AND BACKBOXES SHALL BE RECESSED INSIDE THE WALL.
- 18. EXPOSED CABLING OR CONDUIT IS NOT ALLOWED IN THE SHOWROOM.
- 19. ALL FIRE ALARM CABLING IN FINISHED AREAS SHALL BE CONCEALED.
- 20. COORDINATE DRILLING OF ANY HOLES (I.E. COLUMN PENETRATIONS) WITH THE OWNER'S REPRESENTATIVE AND ALL OTHER TRADES PRIOR TO INSTALLATION.

22. ALL CABLING, CONDUIT, AND BACKBOXES SHALL BE PROPERLY SUPPORTED AND

- 21. ALL FIRE ALARM DEVICES SHALL BE INSTALLED IN OR ON A PROPER BACKBOX. NO DEVICES SHALL BE INSTALLED WITHOUT A BACKBOX.
- SEISMICALLY BRACED, AS REQUIRED BY ALL APPLICABLE CODES AND THE LOCAL
- 23. CONDUIT AND CABLING SHALL ENTER INTO THE FACP ONLY AS APPROVED BY THE EQUIPMENT MANUFACTURER.
- 24. CONDUIT FILL SHALL NOT EXCEED 40%.
- 25. ALL FIRE ALARM JUNCTION BOXES SHALL BE RED IN COLOR.

#### FIRESTOP NOTES

- ALL THROUGH-PENETRATIONS OF FIRE-RATED WALLS AND FLOORS SHALL BE FIRE-STOPPED.
- 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.
- 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)

- INSTALL ALL HANGERS, CLAMPS, CONDUIT, AND BACK BOXES FOR THE FIRE ALARM SYSTEM PRIOR TO THE APPLICATION OF FIREPROOFING ON STRUCTURAL MEMBERS.
- 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.
- 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.
- VERIFY THE LOCATIONS OF ALL FIREPROOFING, PRIOR TO THE INSTALLATION OF ANY FIRE ALARM CONDUIT AND BACKBOXES.

#### FIRE ALARM GENERAL NOTES

- THE FIRE ALARM SYSTEM SHALL OPERATE AS A STANDALONE LOW VOLTAGE SYSTEM AND SHALL BE AN INTELLIGENT ADDRESSABLE SUPERVISED SYSTEM. CIRCUITS SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:
- INITIATING DEVICE CIRCUITS CLASS B
- NOTIFICATION APPLIANCE CIRCUITS CLASS B
- SIGNALING LINE CIRCUITS CLASS B CIRCUITS FOR RELAY COIL OPERATION SHALL BE 24 VDC MAXIMUM WITH A SEPARATE OR INTEGRAL FIELD COLLAPSING DIODE.
- THE FIRE ALARM CABINETS AND DOCUMENTATION CABINET SHALL HAVE A HINGED DOOR KEYED IN COMMON WITH ALL OTHER KEYED DEVICES THROUGHOUT THE
- COORDINATE INSTALLATION OF A GROUND ROD OR ACCEPTABLE BUILDING GROUND FOR PROPER GROUNDING OF THE FACP WITH THE ELECTRICAL
- UPON LOSS OF BUILDING POWER, THE ENTIRE SYSTEM SHALL TRANSFER TO SECONDARY POWER WITHIN TEN (10) SECONDS, AND WITHOUT LOSS OF SIGNALS. THE SYSTEM SHALL OPERATE UNDER SECONDARY POWER IN NORMAL OR TROUBLE CONDITIONS FOR TWENTY-FOUR (24) HOURS AND HAVE SUFFICIENT POWER TO SUPPORT COMPLETE ALARM CONDITION OPERATION FOR A SUBSEQUENT FIVE (5) MINUTES AT MAXIMUM CONNECTED LOAD.
- PROVIDE MONITORING CONNECTIONS TO SPRINKLER WATERFLOW SWITCHES AND TAMPER SWITCHES (BY OTHERS). PROVIDE ALL CABLING TO SWITCHES, FINAL WIRING CONNECTIONS AT SWITCHES, AND SUPERVISION OF ALL WIRING CONNECTIONS. COORDINATE ALL CONNECTIONS WITH THE SPRINKLER
- ALL SIGNALING LINE CIRCUITS, INITIATING DEVICE CIRCUITS, AND NOTIFICATION APPLIANCE CIRCUITS SHALL BE SUPERVISED IN ACCORDANCE WITH NFPA 72.
- PROVIDE END OF LINE RESISTORS FOR ALL INITIATING DEVICE CIRCUITS AND NOTIFICATION APPLIANCE CIRCUITS PER MANUFACTURER SPECIFICATIONS.
- PROVIDE A COMPUTER GENERATED PRINTED LABEL FOR EACH INITIATING DEVICE INDICATING THE SPECIFIC ADDRESS FOR THAT DEVICE. THE LABEL SHALL INCLUDE THE APPLIANCE AND DEVICE NUMBER. THE LABEL SHALL BE LOCATED ON THE BASE OF ALL DETECTORS.
- PROVIDE A COMPUTER GENERATED PRINTED LABEL FOR EACH NOTIFICATION APPLIANCE INDICATING THE SPECIFIC CIRCUIT NUMBER FOR THAT APPLIANCE. THE LABEL SHALL INCLUDE END OF LINE RESISTOR LOCATION, CIRCUIT NUMBER AND APPLIANCE NUMBER. THE LABEL SHALL BE LOCATED ON THE BASE OF ALL NOTIFICATION APPLIANCES.
- 10. NOTIFICATION APPLIANCE CIRCUITS (NAC) HAVE BEEN DESIGNED FOR A MAXIMUM 1.6 AMPS, MAXIMUM 4.4 VDC DROP, AND MINIMUM OPERATING VOLTAGE OF 16 VDC. SEE FIRE ALARM NAC VOLTAGE DROP CALCULATIONS ON THIS SHEET.
- ALL AUDIBLE APPLIANCES SHALL BE SET TO THE HIGH DBA SETTING AND SHALL SOUND A THREE-PULSE TEMPORAL PATTERN EVACUATION SIGNAL.
- PROVIDE SYNCHRONIZATION OF ALL AUDIBLE AND VISUAL NOTIFICATION APPLIANCE CIRCUITS THROUGHOUT. PROVIDE ALL REQUIRED SYNCHRONIZATION MODULES. PROVIDE MULTI-SYNC MODE SLAVE CONNECTIONS TO ALL AUXILIARY POWER SUPPLIES.
- THE AUDIBLE/VISUAL AND VISUAL NOTIFICATION APPLIANCES SHALL BE RED IN COLOR, AND LISTED FOR THE INTENDED APPLICATION.
- 14. NOTIFICATION APPLIANCE POLARITY SHALL BE OBSERVED.
- 15. WHERE POSSIBLE, PROVIDE FLUSH MOUNTING OF NOTIFICATION APPLIANCES. WHERE SURFACE-MOUNTED NOTIFICATION APPLIANCES ARE NECESSARY, PROVIDE DECORATIVE BACKBOX SKIRT COVERING THE APPLIANCE BACKBOX.
- MANUALLY ACTIVATING THE "ALARM SILENCE" AT THE FACP SHALL DE-ENERGIZE BOTH THE AUDIBLE AND VISUAL NOTIFICATION APPLIANCES. AN ADDITIONAL ALARM REPORTED TO THE FACP SUBSEQUENT TO ACTIVATING THE "ALARM SILENCE" SHALL RE-ENERGIZE THE AUDIBLE AND VISUAL NOTIFICATION APPLIANCES THROUGHOUT THE BRIDGESTONE SPACE.
- 17. THE CEILING MOUNTED DEVICES AND APPLIANCES SHALL BE INSTALLED ALIGNED AESTHETICALLY WITH THE CEILING LIGHTING, SPRINKLERS, AND OTHER FIXTURES. COORDINATE INSTALLATION OF ALL CEILING MOUNTED FIRE ALARM DEVICES AND NOTIFICATION APPLIANCES WITH THE ARCHITECTURAL DRAWINGS AND ALL OTHER TRADES PRIOR TO INSTALLATION.
- 18. DEVICES AND APPLIANCE LOCATIONS AS SHOWN ON THE FIRE ALARM PLANS ARE NOT DIMENSIONED FOR EXACT INSTALLATION. COORDINATE EXACT PLACEMENT OF ALL DEVICES AND APPLIANCES WITH THE ARCHITECTURAL PLANS, APPLICABLE TRADES, AND OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
- 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.
- 20. SMOKE DETECTOR HEADS SHALL NOT BE INSTALLED UNTIL AFTER THE CONSTRUCTION CLEAN-UP OF ALL TRADES IS COMPLETE AND FINAL.
- VERIFY ALL EQUIPMENT QUANTITIES, LOCATIONS, AND REQUIREMENTS. IF DISCREPANCIES ARE FOUND, CONTRACTOR SHALL IMMEDIATELY BRING THEM TO THE ATTENTION OF THE FIRE PROTECTION ENGINEER (CCI) FOR RESOLUTION.
- 22. CONTRACTOR SHALL EXECUTE ALL WORK NECESSARY FOR A COMPLETE AND OPERATIONAL FIRE ALARM SYSTEM PER APPLICABLE NATIONAL AND LOCAL CODES, AND AS REQUIRED BY THE AHJ AND BY THE CLIENT/OWNER OF THE FACILITY IN ACCORDANCE WITH THEIR NATIONAL CONTRACTOR WITH STANLEY
- BRIDGESTONE (BSRO) UTILIZES STANLEY SECURITY SOLUTIONS FOR THE PURPOSE OF MONITORING THE FIRE ALARM SYSTEM. THE CONTRACTOR SHALL CONTACT AL MAIER AT (617) 642-0817 OR AL.MAIER@SBDINC.COM WITH STANLEY SECURITY SOLUTIONS FOR THE SOLE PURPOSE OF ESTABLISHING MONITORING OF THE FIRE ALARM SYSTEM.

#### FIRE ALARM KEYED NOTES

- (1) 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.
- 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 / 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.
- (3) PROVIDE TRANSIENT SURGE SUPPRESSION MODULE (DTK-120HW OR EQUAL) AT ELECTRICAL PANEL. THE SURGE SUPPRESSION MODULE SHALL BE CONNECTED TO THE DEDICATED FIRE ALARM CIRCUIT PER MANUFACTURERS SPECIFICATION. COORDINATE WITH ELECTRICAL CONTRACTOR FOR INSTALLATION.
- (4) PROVIDE A PHONE SUPPRESSION MODULE (ELK-955 OR EQUAL) AT EACH PHONE LINE. THE PHONE SUPPRESSION MODULE SHALL BE CONNECTED TO THE PRIMARY AND SECONDARY PHONE LINE PER MANUFACTURERS SPECIFICATION. COORDINATE WITH ELECTRICAL CONTRACTOR FOR INSTALLATION.
- (5) PROVIDE A DOCUMENTATION CABINET (RED ENCLOSURE) 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.
- MOUNT SMOKE DETECTOR ON THE BOTTOM OF THE DECK (NOT ON THE BOTTOM OF STRUCTURAL MEMBERS) AND LOCATED MORE THAN THREE (3) FEET FROM ANY MECHANICAL DIFFUSERS, AS INDICATED IN NFPA 72. THE SMOKE DETECTOR 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.
- PROVIDE A FIRE ALARM ANNUNCIATOR (FAAN) ADJACENT TO THE FRONT ENTRANCE. THE FAAN SHALL BE FLUSH MOUNTED. COORDINATE EXACT MOUNTING LOCATION OF THE FIRE ALARM ANNUNCIATOR KEYPAD WITH THE OWNER'S REPRESENTATIVE AND AHJ PRIOR TO INSTALLATION.
- PROVIDE ELECTRONIC MONITORING OF ALL SPRINKLER WATERFLOW AND TAMPER SWITCHES (BY OTHERS). MONITOR ANY ADDITIONAL WATERFLOW SWITCHES WITH A SEPARATED ADDRESSABLE INPUT MODULE. COORDINATE EXACT QUANTITIES, LOCATION AND INTERFACE CONNECTIONS WITH THE SPRINKLER CONTRACTOR.
- 9 PROVIDE AN EXTERIOR NOTIFICATION APPLIANCE AT TEN (10) FEET ABOVE GRADE AND LOCATED ABOVE THE FIRE DEPARTMENT CONNECTION. COORDINATE EXACT MOUNTING LOCATION WITH THE OWNER'S REPRESENTATIVE AND AHJ PRIOR TO INSTALLATION.
- (10) PROVIDE MONITORING OF THE DUCT SMOKE DETECTOR (FACTORY PROVIDED, INSTALLED BY MECHANICAL CONTRACTOR, AND POWERED BY THE RTU). PROVIDE WIRING CONNECTIONS TO THE ALARM AND TROUBLE CONTACTS ON THE DUCT DETECTORS TO ALLOW AN ALARM CONDITION TO TAKE PRIORITY OVER A TROUBLE CONDITION. COORDINATE ALL CABLING / CONDUIT ROUTING AND WIRING CONNECTION WITH THE MECHANICAL AND ELECTRICAL CONTRACTORS PRIOR TO INSTALLATION.
- PROVIDE A SEPARATE ADDRESSABLE RELAY MODULE (ARM) FOR SHUTDOWN OF ASSOCIATED AHU. LOCATED ARM AT AN ACCESSIBLE LOCATION WITHIN THREE (3) FEET OF THE ASSOCIATED AHJ MOTOR CONTROLLER OR CONTROL CIRCUIT. PROVIDE ANY REQUIRED POWER CONNECTIONS AND SUPERVISION FOR DUCT DETECTOR AND ARM. COORDINATE ALL CABLING / CONDUIT ROUTING AND WIRING CONNECTION WITH THE MECHANICAL AND ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION.
- 12) PROVIDE A REMOTE TEST STATION / ANNUNCIATOR FOR EACH DUCT SMOKE DETECTOR. PROVIDE ALL REQUIRED CABLING CONNECTIONS AND CONDUIT FROM DETECTORS TO REMOTE TEST STATION / ANNUNCIATORS. MOUNT ALL REMOTE TEST STATION / ANNUNCIATORS ON AN ADJACENT COLUMN OR WALL AND AT AN ACCESSIBLE LOCATION THAT DOES NOT CONFLICT WITH STORE FIXTURES. COORDINATED EXACT MOUNTING LOCATIONS WITH THE OWNER'S REPRESENTATIVE AND LOCAL AHJ PRIOR TO INSTALLATION.
- (13) PROVIDE A MANUAL PULL STATION WITH A PROTECTIVE COVER (INTEGRAL SOUNDER) ADJACENT THE FAAN AND IN ACCORDANCE WITH NFPA 72. THE INTEGRAL SOUNDER SHALL BE POWERED BY A 9V BATTERY.
- (14) COORDINATE INSTALLATION OF A MINIMUM ONE (1) INCH UNDERGROUND CONDUIT, WITH PULL STRING, FOR FIRE ALARM CABLING CONNECTIONS TO ANY EXTERIOR BACKFLOW PREVENTER OR EXTERIOR POST INDICATOR VALVE (PIV) ASSOCIATED WITH THE BRIDGESTONE SPACE. PROVIDE MONITORING OF ALL TAMPER SWITCHES (BY OTHERS) ON THE ASSOCIATED BACKFLOW PREVENTER OR PIV. COORDINATE ANY REQUIRED UNDERGROUND CONDUIT AND INTERFACE CONNECTIONS WITH THE OWNER'S REPRESENTATIVE, ELECTRICAL CONTRACTOR, FIRE SPRINKLER CONTRACTOR, AND SITE CIVIL CONTRACTOR.
- (15) 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 OR EXTERIOR CONDUIT SHALL BE LISTED FOR WET LOCATIONS.

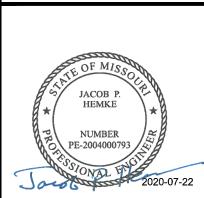


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FIRE PROTECTION **ENGINEER OF RECORD:** JACOB P. HEMKE, PE LICENSE NO. PE-2004000793 CODE CONSULTANTS, INC. 2043 WOODLAND PKWY, SUITE 300 ST. LOUIS, MO 63146-4235 PHONE: 314-991-2633

CORPORATE CERTIFICATE OF AUTHORITY NO. 000419 ISSUE BLOCK /3\ | 07/23/20 | IFC SET

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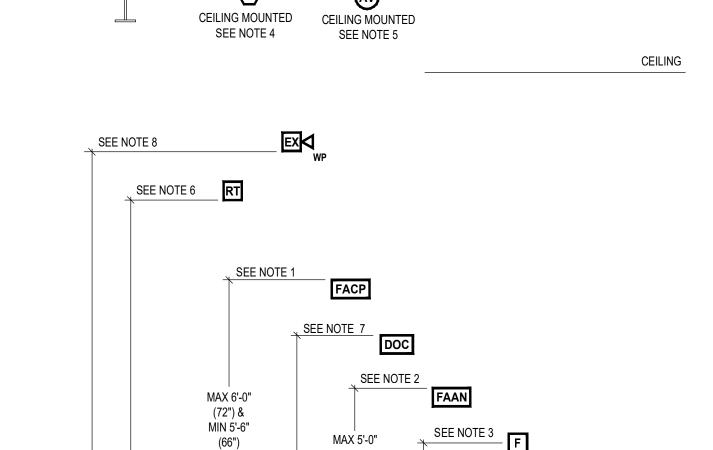
AOR PROJECT NUMBER: 1955B71 TO PERMIT: DATE: 03/26/2020 DATE: ##-##-## TO BID:

SHEET TITLE: FIRE ALARM NOTES, PROGRAMMING

AND CALCULATIONS

160085

906983



DECK

FINISHED FLOOR

#### NOTES:

1. COORDINATE EXACT MOUNTING HEIGHT OF CONTROL PANELS WITH THE OWNER'S REPRESENTATIVE, ELECTRICAL CONTRACTOR, AND AHJ PRIOR

(60") &

MIN 4'-6"

MAX 4'-0"

(48") & MIN 3'-6"

- COORDINATE EXACT MOUNTING HEIGHT OF ANNUNCIATOR AT THE FRONT ENTRANCE WITH THE OWNER'S REPRESENTATIVE, ELECTRICAL CONTRACTOR, AND AHJ PRIOR TO INSTALLATION.
- 3. 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.

  4. 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.

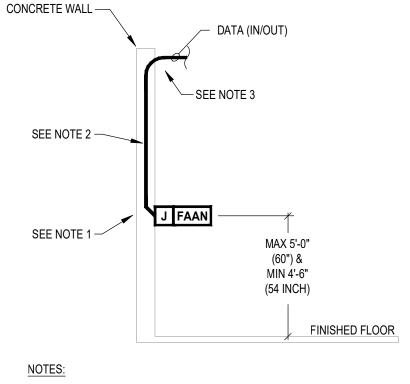
  5. WHERE REQUIRED -THE CEILING MOUNTED NOTIFICATION APPLIANCES SHALL BE INSTALLED ON THE BOTTOM OF JOIST / DECK IN ACCORDANCE WITH NEDA 72. THE CEILING MOUNTED NOTIFICATION APPLIANCES AND FIRE ALARM CARLING SHALL BE INSTALLED AND SUPPORTED A MINIMUM.
- WITH NFPA 72. THE CEILING MOUNTED NOTIFICATION APPLIANCES 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.

  6. 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.

  7. 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.

  8. 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.

TYPICAL FIRE ALARM MOUNTING HEIGHT DETAIL

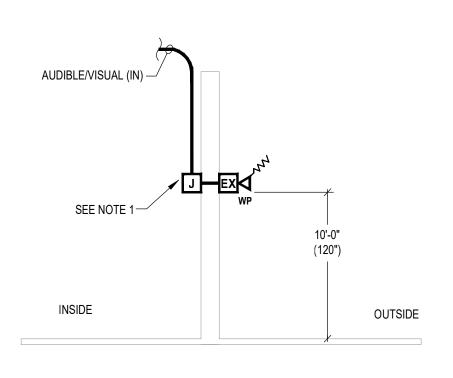


- 1. PROVIDE AN APPROVED BACKBOX PER THE MANUFACTURER SPECIFICATIONS BETWEEN 54
- INCHES AND 60 INCHES ABOVE FINISHED FLOOR.

  2. 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.

## FIRE ALARM ANNUNCIATOR DETAIL

A3 NOT TO SCALE

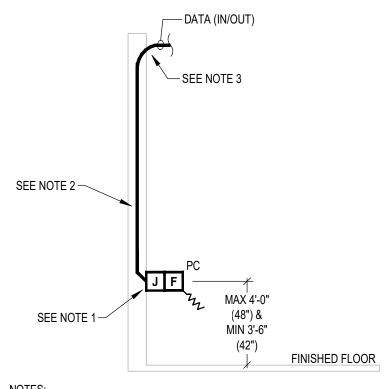


#### NOTES:

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 SUBFACE MOUNTED PACKED.

## WEATHERPROOF EXTERIOR NOTIFICATION DETAIL

FA3 NOT TO SCALE



#### NOTES:

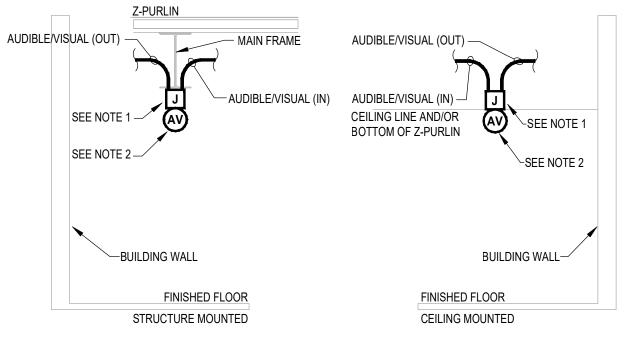
- PROVIDE AN APPROVED BACKBOX PER THE MANUFACTURER SPECIFICATIONS
- BETWEEN 42 INCHES AND 48 INCHES ABOVE FINISHED FLOOR.

  2. PROVIDE FIRE ALARM CABLING WITHIN 1/2 INCH CONDUIT INSIDE WALL (EXPOSED
- CONDUIT NOT ACCEPTABLE).

  3. PROVIDE FIRE ALARM CONDUIT STUB-UP INTO CEILING JOIST AREA 6 INCHES ABOVE CEILING OR BOTTOM OD JOISTS AND TURN OUT WITH INSULATED BUSHING.

MANUAL PULL STATION DETAIL

FA3 NOT TO SCALE

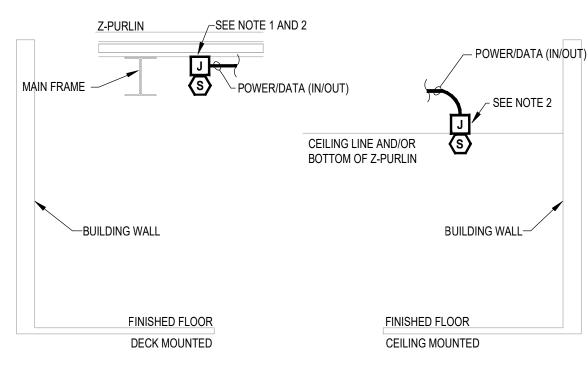


#### NOTES:

- PROVIDE AN APPROVED BACK BOX PER THE MANUFACTURER SPECIFICATIONS ON BOTTOM OF Z-PURLIN, AWAY FROM OBSTRUCTIONS, AND AS INDICATED ON FLOOR PLANS.
- 2. 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.

© CEILING MOUNTED NOTIFICATION APPLIANCE DETAIL

FA3 NOT TO SCALE

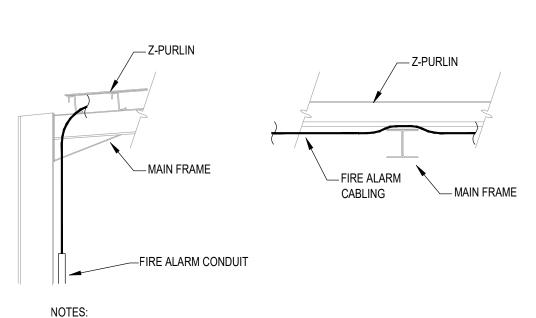


#### NOTES:

- 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.

SMOKE DETECTOR DETAIL

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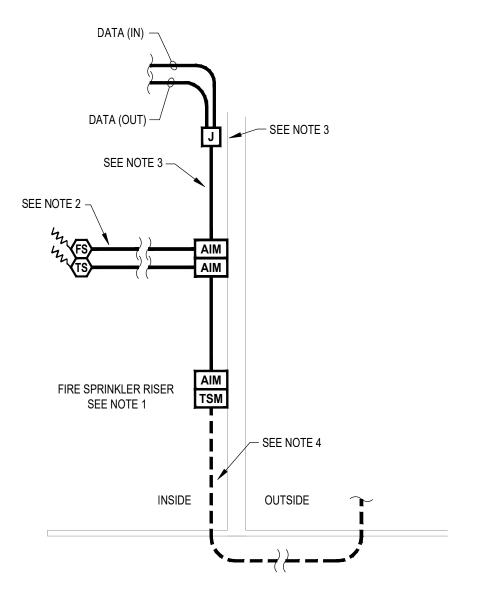


ALL OPEN FIRE ALARM CABLING SHALL BE CONCEALED FROM PUBLIC VIEW.

OPEN FIRE ALARM CABLING DETAIL

2. ROUTE ALL OPEN CABLE OVER SOLID MAIN FRAME STRUCTURE.

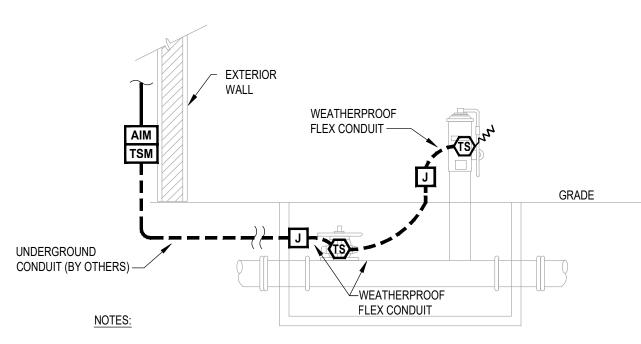
FA3 NOT TO SCALE



#### 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.
- 2. 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.





- 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.

  4. FIRE ALARM CABLING IN UNDERGROUND CONDUIT SHALL BE LISTED FOR WET LOCATIONS.

  5. THE EXTERIOR JUNCTION BOXES SHALL BE TAMPER-RESISTANT SCREWS OR OTHER APPROVED MECHANICAL MEANS FOR PREVENTING ACCESS TO JUNCTION BOXES AND DEVICE COVERS INSTALLED

EXTERIOR BACKFLOW MONITORING DETAIL

OUTSIDE OF THE BUILDING IN ACCORDANCE WITH NFPA 72.

/ NOT TO SCALE

JACOB P.
HEMKE

NUMBER
PE-2004000793

2020-07-22

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FIRE PROTECTION
ENGINEER OF RECORD:

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CORPORATE CERTIFICATE OF AUTHORITY

NO. 000419

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 BID: DATE: ##-##

SHEET TITLE:

FIRE ALARM

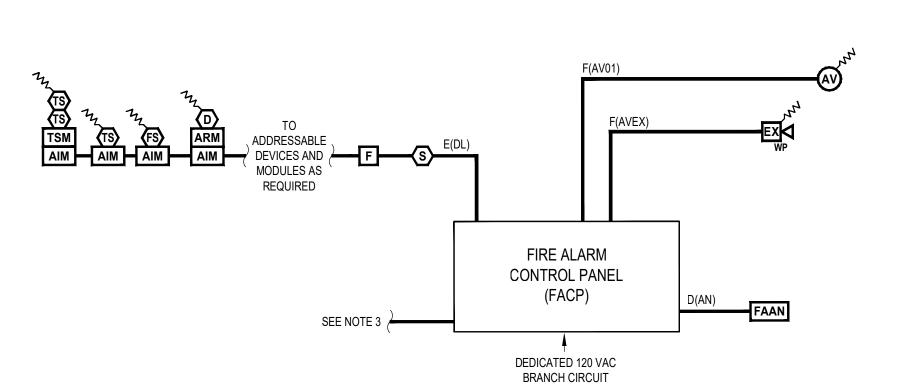
**DETAILS** 

DATE: 03/26/2020

SHEET NUMBER:

TO PERMIT:

FA3

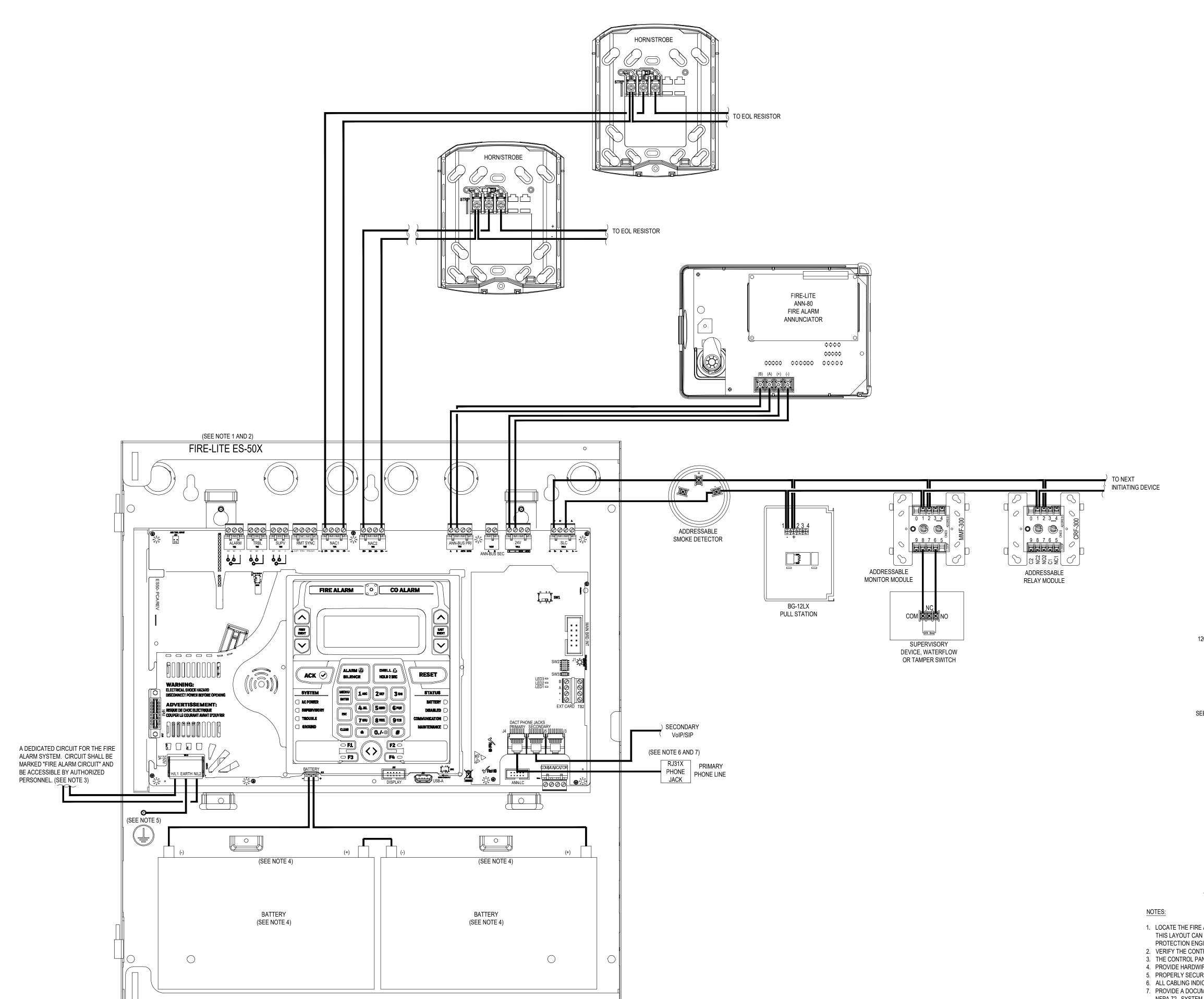


#### NOTES:

- 1. 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.
- 4. PROVIDE ALL REQUIRED CIRCUITS, MODULES, AND CONNECTIONS TO CONTROL AUDIBLE AND VISUAL NOTIFICATION APPLIANCES.

  5. PROVIDE SUPERVISION OF ALL 120 VAC POWER AND ALL NOTIFICATION APPLIANCE CIRCUITS.

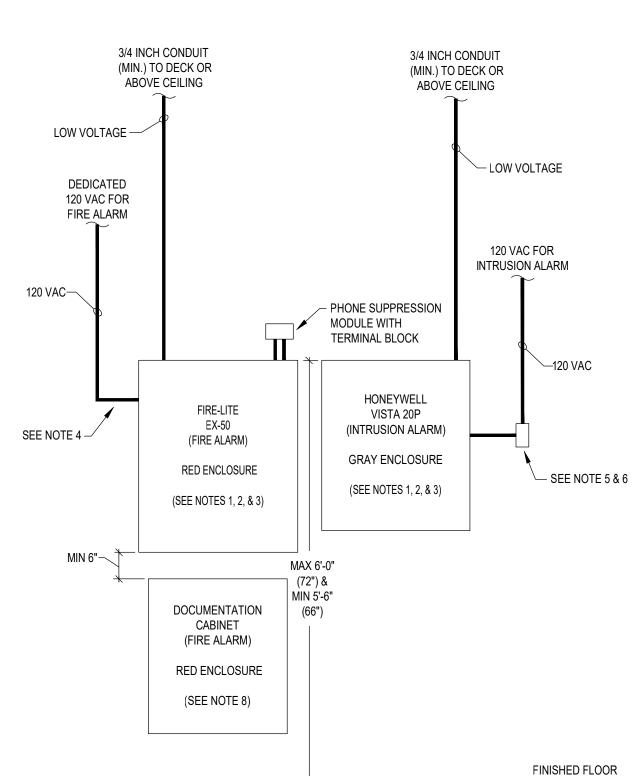
8 TYPICAL FIRE ALARM SYSTEM RISER DIAGRAM
FA3 NOT TO SCALE



FIRE ALARM CONTROL PANEL LAYOUT

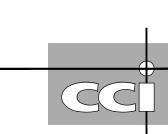
FIRE ALARM CONTROL PANEL LAYOUT NOTES

- THE FIRE ALARM CONTROL PANEL SHALL BE LOCATED IN A RED FIRE ENCLOSURE
- PROVIDE THE SERVICE PHONE NUMBER STICKER ON THE SURFACE OF THE FACP.
- 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.
- 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.
- COORDINATE INSTALLATION OF A GROUND ROD OR ACCEPTABLE BUILDING GROUND FOR PROPER GROUNDING OF THE FACP WITH THE ELECTRICAL CONTRACTOR.
- 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.
- PROVIDE THE ASSOCIATED PHONE NUMBER USING PRINTED LABEL DIRECTLY ON THE RJ-31X BOXES.



- 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 (CCI) 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.





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FIRE PROTECTION **ENGINEER OF RECORD:** JACOB P. HEMKE, 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

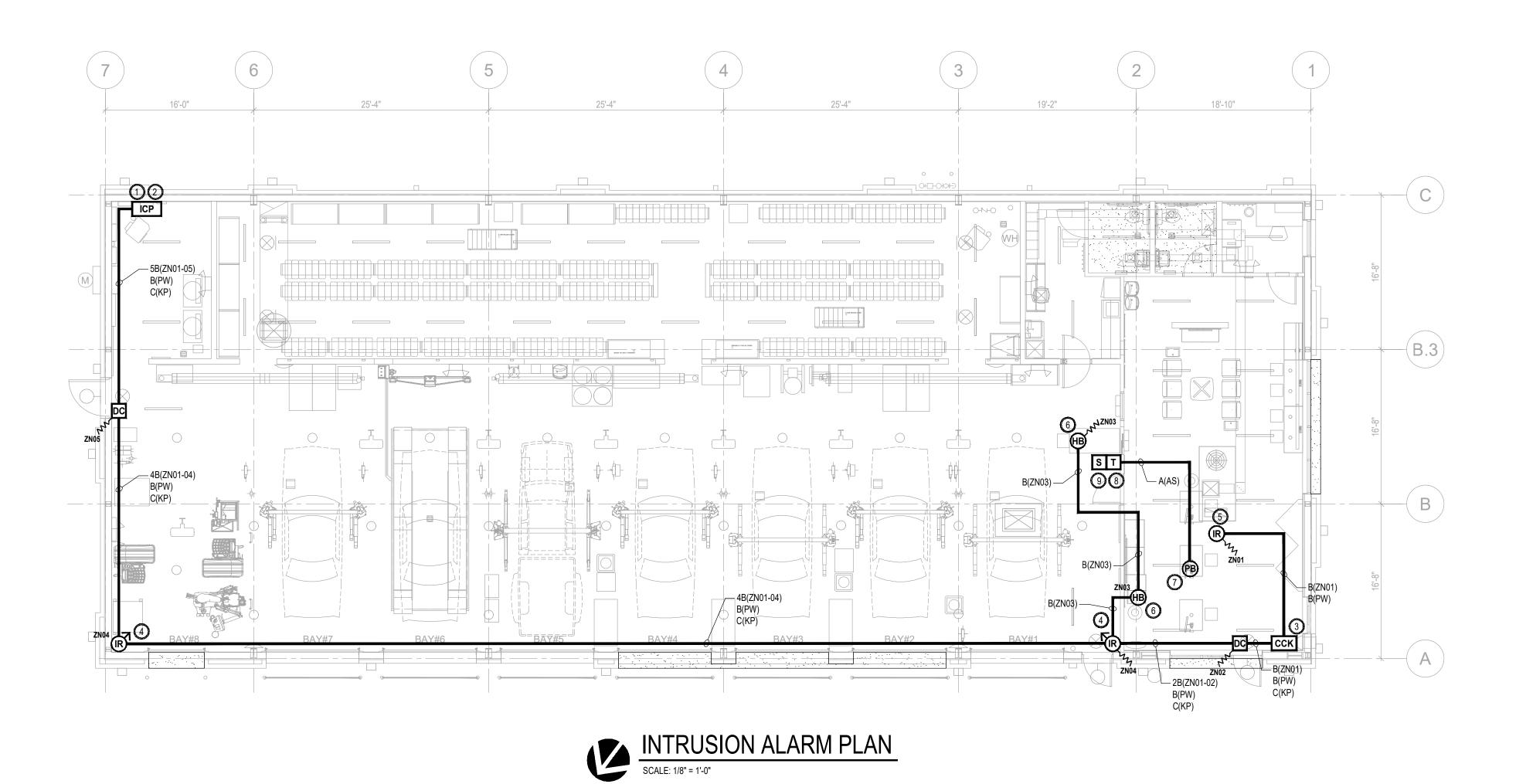
ISSUE	ISSUE BLOCK						
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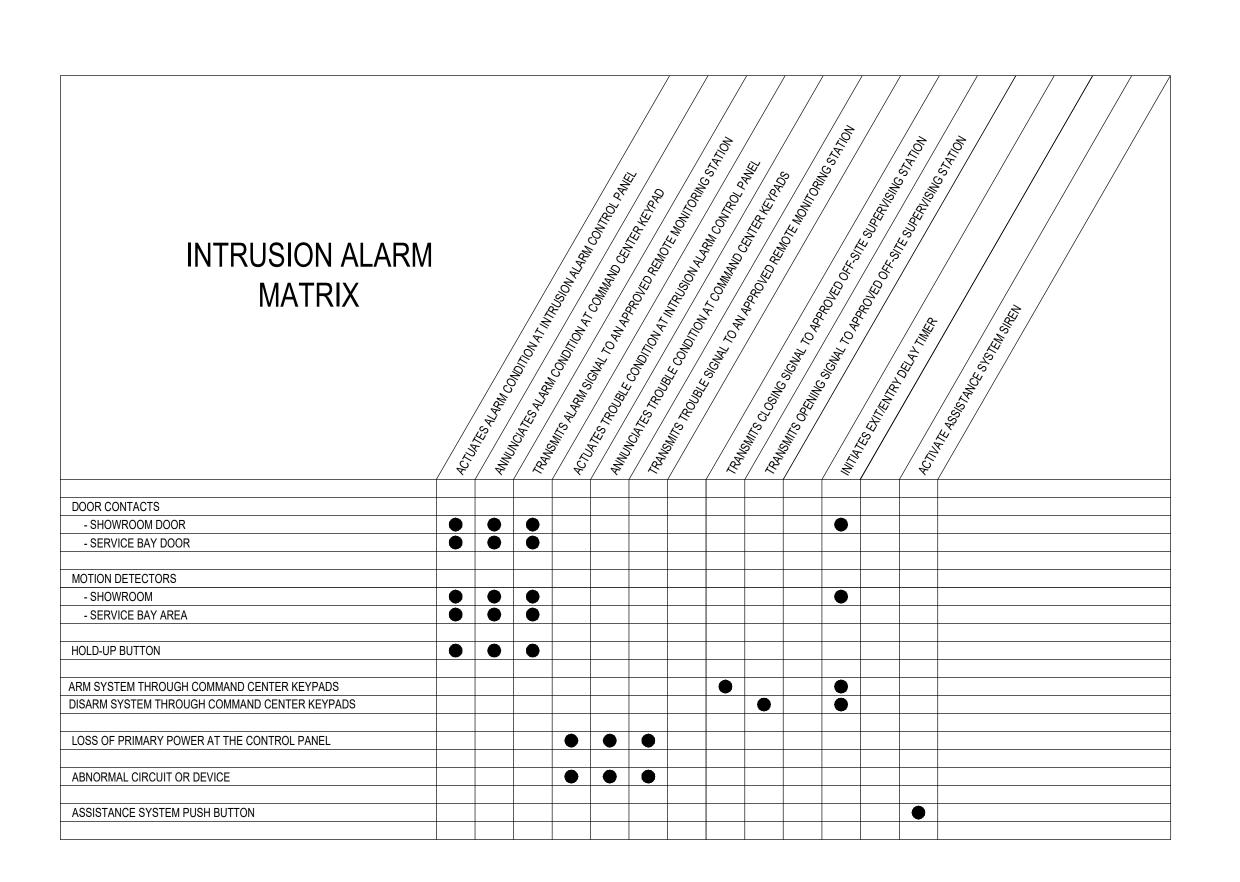
PROPERTY NO.: 160085 6 DIGIT NO.: 906983 4 DIGIT NO.:

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

SHEET TITLE: FIRE ALARM CONTROL

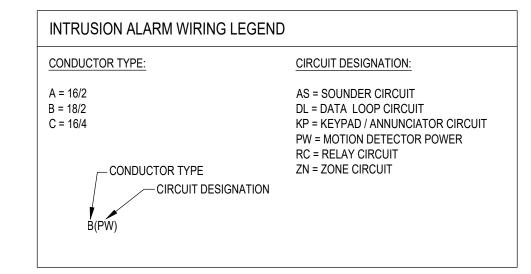
PANEL LAYOUT





INTRUSIC	N ALARM SYMBOL KEY	QTY.
ICP	INTRUSION ALARM CONTROL PANEL (HONEYWELL VISTA 20P) (IN GRAY ENCLOSURE)	1
сск	COMMAND CENTER KEYPAD (HONEYWELL 6150)	1
T	PLUG-IN TRANSFORMER (MB-MGT121AR)	1
R	CEILING MOUNTED MOTION DETECTOR - 360° (HONEYWELL DT7360)	1
® <del>&gt;</del>	PASSIVE INFRARED LONG RANGE MOTION DETECTOR (HONEYWELL IS25100TC)	2
DC	DOOR CONTACT (HONEYWELL MPS80WGX)	2
®	ASSISTANCE SYSTEM PUSH BUTTON (AC-TS18)	1
(HB	HOLD-UP BUTTON SWITCH MOUNTED UNDER DESK (HONEYWELL 270R) (IN PLASTIC CASE)	2
s	INTERIOR SIREN (0E-2TONESIRN)	1
	INTRUSION ALARM PLENUM RATED CONDUCTORS (GRAY IN COLOR)	
J	JUNCTION BOX	
<b>-</b> ~~	END OF LINE RESISTOR	

INTRUSIO	ON 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



	ON-BOARD ZONE LISTING
PANEL POPITS	ALPHANUMERIC LABEL
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	



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NEW FCAC STORE
2020 ER
3561 SW MARKET ST
JACKSON COUNTY
LEE'S SUMMIT, MISSOURI 6408



FIRE PROTECTION
ENGINEER OF RECORD:

JACOB P. HEMKE, PE
LICENSE NO. PE-2004000793

CODE CONSULTANTS, INC.
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ST. LOUIS, MO 63146-4235
PHONE: 314-991-2633

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906983

PROPERTY NO.: 6 DIGIT NO.: 4 DIGIT NO.:

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

SHEET TITLE:

INTRUSION ALARM PLAN AND MATRIX

			STANDR	Y POWER	IN A	ALARM		
MODEL NUMBER	DESCRIPTION	QUANTITY	CURRENT PER DEVICE (mA)	TOTAL CURRENT (mA)	CURRENT PER DEVICE (mA)	TOTAL CURRENT (mA)	STANDBY BATTERIES (12-VOLT)	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

2. MOUNT THE BATTERY WITHIN THE INTRUSION ALARM CONTROL PANEL ENCLOSURE AND PERMANETNLY MARKED WITH THE MONTH AND YEAR FROM THE MANUFACTURER.

#### 3/4 INCH CONDUIT 3/4 INCH CONDUIT (MIN.) TO DECK OR (MIN.) TO DECK OR ABOVE CEILING ABOVE CEILING ─ LOW VOLTAGE DEDICATED 120 VAC FOR FIRE ALARM 120 VAC FOR INTRUSION ALARM 120 VAC- PHONE SUPPRESSION MODULE WITH TERMINAL BLOCK \_\_\_120 VAC HONEYWELL VISTA 20P (INTRUSION ALARM) SEE NOTE 4 -(FIRE ALARM) **GRAY ENCLOSURE RED ENCLOSURE** - SEE NOTE 5 & 6 (SEE NOTES 1, 2, & 3) (SEE NOTES 1, 2, & 3) MIN 6"-) (72") & MIN 5'-6" DOCUMENTATION CABINET (FIRE ALARM) RED ENCLOSURE (SEE NOTE 8) FINISHED FLOOR

- 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 (CCI) 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.. PROVIDE A D8004 ENCLOSURE FOR THE DUPLEX RECEPTACLE. COORDINATE INSTALLATION OF DUPLEX RECEPTACLES WITH THE ELECTRICAL CONTRACTOR CONNECTED TO A 120 VAC CIRCUIT FOR THE SYSTEM. REFER TO THE D8004 TRANSFORMER ENCLOSURE INSTALLATION INSTRUCTIONS FOR FURTHER DETAIL.
- 6. PROPERLY SECURE AND SCREW THE TRANSFORMER INTO DUPLEX RECEPTACLES TO PREVENT UNAUTHORIZED PERSONNEL FROM UNPLUGGING.
- ALL CABLING INDICATED 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 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.

# TYPICAL CONTROL PANEL LAYOUT

#### INTRUSION ALARM GENERAL NOTES

- UPON LOSS OF BUILDING POWER, THE ENTIRE SYSTEM SHALL TRANSFER TO SECONDARY POWER 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 CONDITION OPERATION FOR A SUBSEQUENT FIFTEEN (15) MINUTES AT MAXIMUM CONNECTED LOAD.
- COORDINATE INSTALLATION OF A GROUND ROD OR ACCEPTABLE BUILDING GROUND FOR PROPER GROUNDING OF THE ICP WITH THE ELECTRICAL CONTRACTOR.
- COORDINATE INSTALLATION OF ALL WALL MOUNTED MOTION DETECTORS AND SIRENS WITH THE ARCHITECTURAL DRAWINGS AND ALL OTHER TRADES PRIOR TO INSTALLATION.
- 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. VERIFY ALL EQUIPMENT QUANTITIES, LOCATIONS, AND REQUIREMENTS. IF DISCREPANCIES ARE FOUND, CONTRACTOR SHALL IMMEDIATELY BRING THEM TO
- THE ATTENTION OF THE FIRE PROTECTION ENGINEER (CCI) FOR RESOLUTION. ENSURE THAT OPENING / CLOSING REPORTING METHODS ARE ENABLED FOR ALL USER CODES OF THE INTRUSION ALARM SYSTEM.
- CONTRACTOR SHALL PROVIDE A MINIMUM OF ONE (1) HOUR TRAINING FOR ALL FUNCTIONS OF THE INTRUSION ALARM SYSTEM TO OWNER'S REPRESENTATIVE.

#### FIRESTOP NOTES

CEILING MOUNTED

SEE NOTE 4

 $(\mathbb{R})$ 

SEE NOTE 1

ICP

ССК

FINISHED FLOOR

SEE NOTE 1

(72") & MAX 4'-4"

1. COORDINATE EXACT MOUNTING HEIGHT AND LOCATION OF THE INTRUSION ALARM CONTROL PANEL AND COMMAND CENTER KEYPAD

MOUNTED INFRARED MOTION DETECTORS WITH THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. MOTION DETECTOR SHALL BE

REPRESENTATIVE PRIOR TO INSTALLATION. PROVIDE AN APPROVED BACKBOX AS REQUIRED PER THE MANUFACTURER SPECIFICATIONS

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

TYPICAL INTRUSION ALARM MOUNTING HEIGHT DETAIL

COORDINATE EXACT MOUNTING HEIGHT (WHERE POSSIBLE INSTALL AT 7'-6" ABOVE FINISHED FLOOR) AND LOCATION OF THE WALL

COORDINATE EXACT LOCATION OF THE WALL MOUNTED SIREN, SOUNDER AND VISUAL WITH BLUE LENS WITH THE OWNER'S

(52") &

MIN 4'-0"

MAX 6'-0"

MIN 5'-6"

(66")

WITH THE OWNER'S REPRESENTATIVE ELECTRICAL CONTRACTOR, AND AHJ PRIOR TO INSTALLATION.

INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

SEE NOTE 3

MAX 8'-0"

(96") &

MIN 6'-0"

(72")

(120")

SEE NOTE 2

- ALL THROUGH-PENETRATIONS OF FIRE-RATED WALLS AND FLOORS SHALL BE FIRE-STOPPED.
- 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.
- 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)

- INSTALL ALL HANGERS, CLAMPS, CONDUIT, AND BACK BOXES FOR THE FIRE ALARM SYSTEM PRIOR TO THE APPLICATION OF FIREPROOFING ON STRUCTURAL
- 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.
- 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.
- VERIFY THE LOCATIONS OF ALL FIREPROOFING, PRIOR TO THE INSTALLATION OF ANY FIRE ALARM CONDUIT AND BACKBOXES.

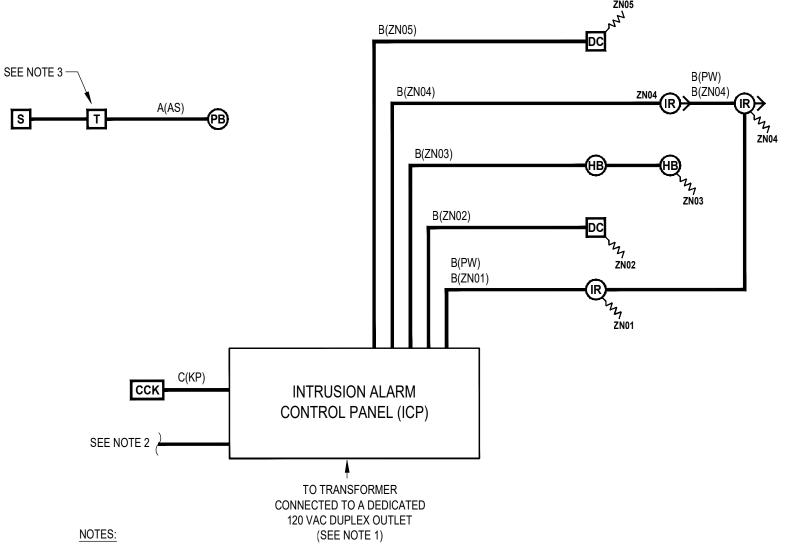
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#### INTRUSION ALARM INSTALLATION NOTES

- ALL WORK SHALL BE IN ACCORDANCE WITH OWNER'S DESIGN CRITERIA AND LOCAL ADOPTED CODES.
- 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.
- 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.
- PROVIDE ALL CONDUIT, BACKBOXES, AND FITTINGS FOR THE INTRUSION ALARM SYSTEM CABLING AS REQUIRED BY ALL APPLICABLE CODES AND THE LOCAL
- 6. INTRUSION ALARM CABLING SHALL <u>NOT</u> BE PAINTED.
- EXACT CABLE ROUTING SHALL BE COORDINATED WITH OTHER TRADES IN THE FIELD. SEE DRAWING NOTES AND DETAILS FOR ACCEPTABLE INSTALLATION METHODS.
- T-TAPPING THE WIRING IS NOT PERMITTED. CIRCUITS SHALL WIRED IN CLASS B CONFIGURATION. PROVIDE CLASS A WIRING ONLY IF REQUIRED BY LOCAL
- ALL CABLE RUNS SHALL BE NEATLY BUNDLED, WRAPPED TIGHT AND PROPERLY SECURED. ANY CABLING NOT INSTALLED IN A NEAT AND PROFESSIONAL MANNER SHALL BE PULLED OUT AND RE-RUN BY INSTALLER AT NO ADDITIONAL COST TO
- 10. CONTRACTOR RUNNING CABLING MUST MARK BOTH ENDS OF CABLING, PROVIDE A WIRE LEGEND FOR ALL LOCATIONS, AND PROVIDE A CONTINUITY TEST LOG FOR
- 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 TILE.
- 17. FOR DRYWALL APPLICATIONS, ALL CONDUIT AND BACKBOXES SHALL BE RECESSED INSIDE 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.
- 0. ALL CABLING, CONDUIT, AND BACKBOXES SHALL BE PROPERLY SUPPORTED AND SEISMICALLY BRACED, AS REQUIRED BY ALL APPLICABLE CODES AND THE LOCAL
- 21. CONDUIT AND CABLING SHALL ENTER INTO THE ICP ONLY AS APPROVED BY THE EQUIPMENT MANUFACTURER.

#### INTRUSION ALARM KEYED NOTES

- PROVIDE A 1361 (16.5VAC/25VA) TRANSFORMER CONNECTED TO A DEDICATED 120VAC 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 / 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.
- 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).
- THE CEILING MOUNTED 360 DEGREE MOTION DETECTOR SHALL BE PENDANT MOUNTED FROM THE BOTTOM OF STRUCTURE (MAXIMUM OF 18'-0" AFF) IN ACCORDANCE WITH THE MANUFACTURER'S 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
- 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.
- PROVIDE A TRANSFORMER TO ACTIVATE THE SERVICE DESK SIREN AS SHOWN ON THE FLOOR PLANS. THE TRANSFORMER SHALL BE INSTALLED 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.



PROVIDE DEDICATED 120 VAC CIRCUITS, AND BATTERY BACKUP IN THE ICP AND PS.

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

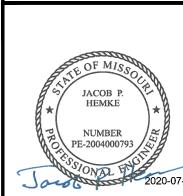
TYPICAL INTRUSION ALARM SYSTEM RISER DIAGRAM

BA2 NOT TO SCALE

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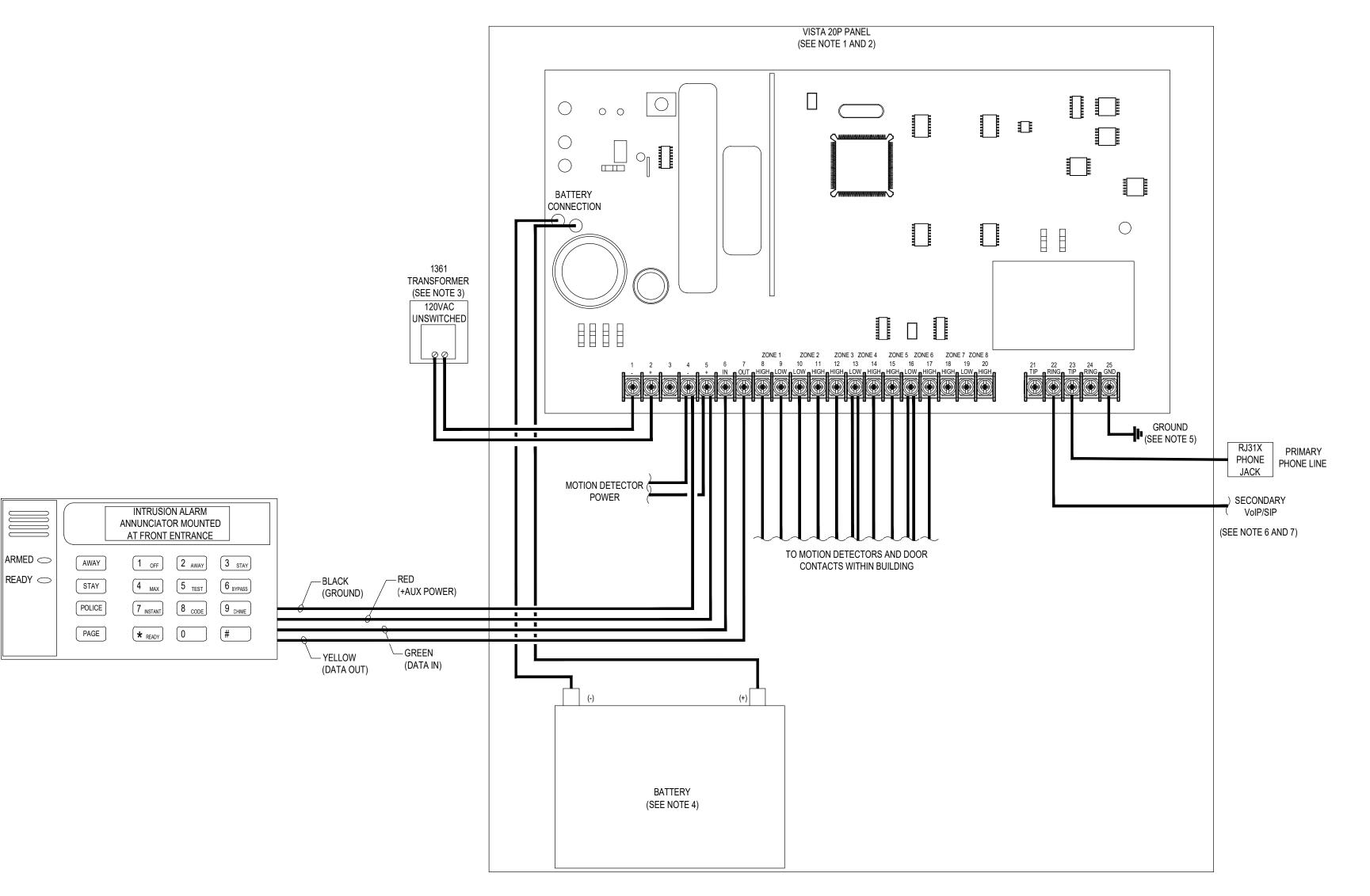
PHONE: 314-991-2633 CORPORATE CERTIFICATE OF AUTHORITY NO. 000419 SSUE BLOCK 3\ | 07/23/20 | IFC SET

PROPERTY NO.: 6 DIGIT NO.: 906983 4 DIGIT NO.:

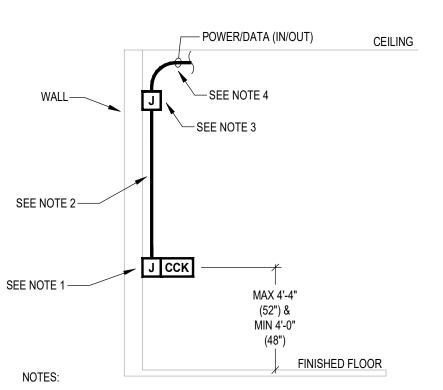
AOR PROJECT NUMBER: 1955B7 TO PERMIT: DATE: 03/26/202 DATE: ##-##-## TO BID:

SHEET TITLE: INTRUSION ALARM NOTES

AND CALCULATIONS

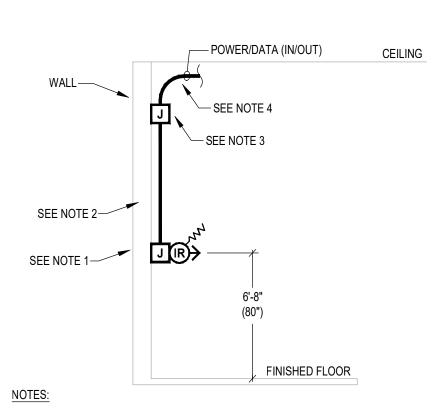


INTRUSION ALARM CONTROL PANEL LAYOUT



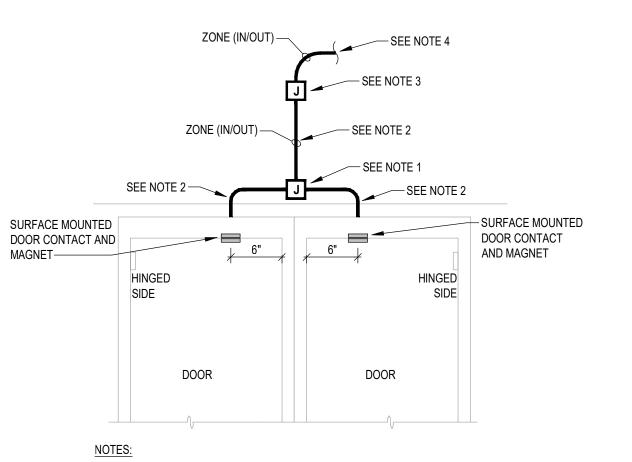
- 1. PROVIDE AN APPROVED BACKBOX PER THE MANUFACTURER SPECIFICATIONS BETWEEN
- 48 INCHES AND 52 INCHES ABOVE FINISHED FLOOR.
- 2. PROVIDE INTRUSION ALARM CABLING WITHIN 1/2 INCH CONDUIT INSIDE WALL (EXPOSED CONDUIT NOT ACCEPTABLE).
- 3. INTRUSION ALARM CABLING AND CONDUIT SHALL BE STUB-UP TO THE CEILING 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.

**COMMAND CENTER KEYPAD DETAIL** BA3 NOT TO SCALE



- 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.

### PIR MOTION DETECTOR DETAIL NOT TO SCALE



#### 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

REPRESENTATIVE PRIOR TO INSTALLATION.

- (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

4 DOUBLE DOOR CONTACT DETAIL BA3 NOT TO SCALE



#### NOTES:

1. INSTALL A RECESSED 4 INCH SQUARE BOX ABOVE CENTERED 4 INCHES ABOVE THE DOOR OPENING.

HINGED

SIDE

SEE NOTE 4

- SURFACE MOUNTED

DOOR CONTACT

AND MAGNET

— SEE NOTE 2

PROVIDE A SURFACED MOUNTED COVER PLATE FOR JUNCTION BOX

DOOR

2. PROVIDE INTRUSION ALARM CABLING WITHIN 1/2 INCH CONDUIT INSIDE WALL (EXPOSED CONDUIT NOT ACCEPTABLE).

ZONE (IN/OUT) —

ZONE (IN/OUT) ---

SEE NOTE 2

BA3 NOT TO SCALE

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.

REPRESENTATIVE PRIOR TO INSTALLATION. SINGLE DOOR CONTACT DETAIL

5. COORDINATE EXACT MOUNTING LOCATION OF THE DOOR CONTACTS WITH THE OWNER'S

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

www.codeconsultants.com

INTRUSION ALARM CONTROL PANEL LAYOUT NOTES

SHALL BE INSTALLED WITHIN THE ICP CABINET.

ENCLOSURE CABINET.

CONTRACTOR.

THE RJ-31X BOXES.

1. THE INTRUSION ALARM CONTROL PANEL SHALL BE LOCATED IN A GRAY

2. PROVIDE THE SERVICE PHONE NUMBER STICKER ON THE SURFACE OF THE ICP.

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.

PROVIDE ONE (1) 12V BATTERY FOR THE INTRUSION ALARM CONTROL PANEL (ICP).

SEE CALCULATIONS ON SHEET BA2 FOR AMP-HOUR REQUIREMENTS THE BATTERY

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

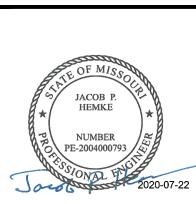
PROVIDE THE ASSOCIATED PHONE NUMBER USING PRINTED LABEL DIRECTLY ON

CONNECTIONS WITH THE OFF-SITE MONITORING COMPANY.

COORDINATE INSTALLATION OF A GROUND ROD OR ACCEPTABLE BUILDING GROUND FOR PROPER GROUNDING OF THE ICP AND PS WITH THE ELECTRICAL

THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE AT LEE'S SUMMIT, MO CONTEMPORANEOUSLY WITH ITS ISSUE DATE ON 03/26/2020 AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

STORE NEW 2020 3561 JACK LEE'S S



FIRE PROTECTION **ENGINEER OF RECORD:** JACOB P. HEMKE, PE LICENSE NO. PE-2004000793 CODE CONSULTANTS, INC. 2043 WOODLAND PKWY, SUITE 300 ST. LOUIS, MO 63146-4235 PHONE: 314-991-2633

CO	RPORATE CERTIFICAT No. 0004	
ISSUE	BLOCK	
1	04/16/20	ADD #1
3	07/23/20	IFC SET

PROPERTY NO .: 6 DIGIT NO.: 906983

4 DIGIT NO .: AOR PROJECT NUMBER: 1955B71 TO PERMIT: DATE: 03/26/202 TO BID: DATE: ##-##-##

SHEET TITLE: INTRUSION ALARM CONTROL

PANEL LAYOUT AND DETAILS

	MECHANICAL S	YMBOLS LIST	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY DUCTWORK	<b>L</b>	MANUAL VOLUME DAMPER
	RETURN DUCTWORK	F.D. 🔷	FIRE DAMPER
	EXHAUST DUCTWORK	M	MOTOR OPERATED DAMPER M.O.D.
<u>+</u> \( \bar{\bar{\bar{\bar{\bar{\bar{\bar{	SUPPLY DIFFUSER	F.A.I.	FRESH AIR INTAKE
<u> </u>			TURNING WANTS IN ELROW
	RETURN GRILLE		TURNING VANES IN ELBOW
	EXHAUST GRILLE	(SD)	SMOKE DETECTOR
T	THERMOSTAT		DIFFUSER TYPE
◆ UP →	RISE IN DUCTWORK	/	DIFFUSER AIR
DN	DROP IN DUCTWORK		EQUIPMENT TYPE

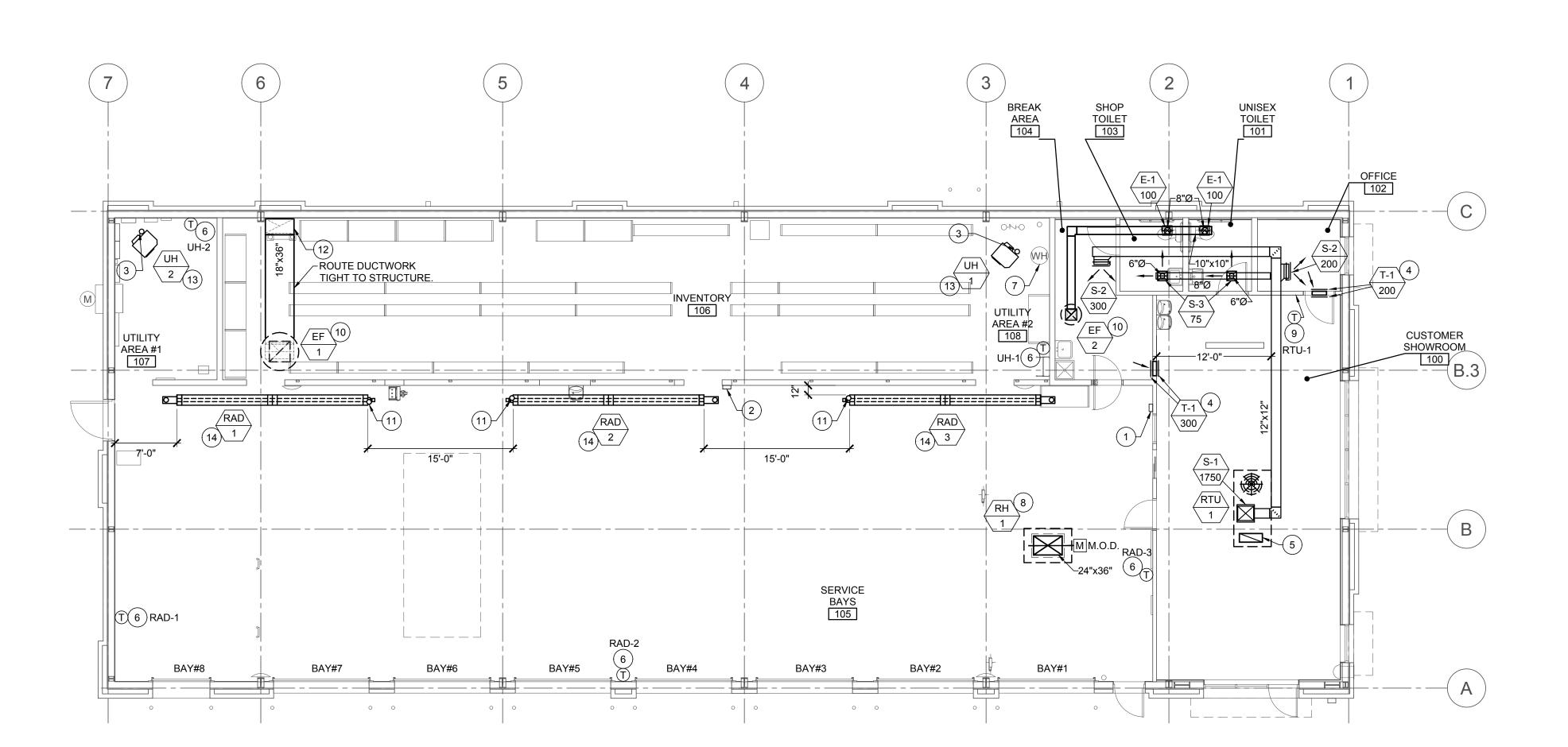
### MECHANICAL GENERAL NOTES

- 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.
- 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.
- COORDINATE ALL VENT AND EXHAUST FAN PENETRATIONS THRU THE ROOF, WALLS AND FLOORS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.
- 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.
- ALL DUCTWORK DIMENSIONS SHOWN ON PLANS ARE CLEAR DIMENSIONS. WHERE INTERNAL DUCT LINER IS REQUIRED BY SPECIFICATIONS, CONTRACTOR SHALL ADJUST DUCTWORK SIZES ACCORDINGLY.
- 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.
- 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

- 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 THAT 48" AFF. COORDINATE MOUNTING LOCATION SO
  THERMOSTAT IS NOT LOCATED BEHIND SERVICE EQUIPMENT.
- 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 THAT 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 MANUFACTUER'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.

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



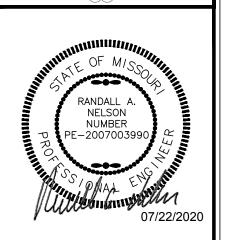




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THIS DRAWING WAS PREPARED FOR USE ON
A SPECIFIC SITE AT LEE'S SUMMIT, MO
CONTEMPORANEOUSLY WITH ITS ISSUE
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AT A LATER TIME. USE OF THIS DRAWING FOR
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NEW FCAC STORE
2020 ER
3561 SW MARKET ST
JACKSON COUNTY
LEE'S SUMMIT, MISSOURI 6408



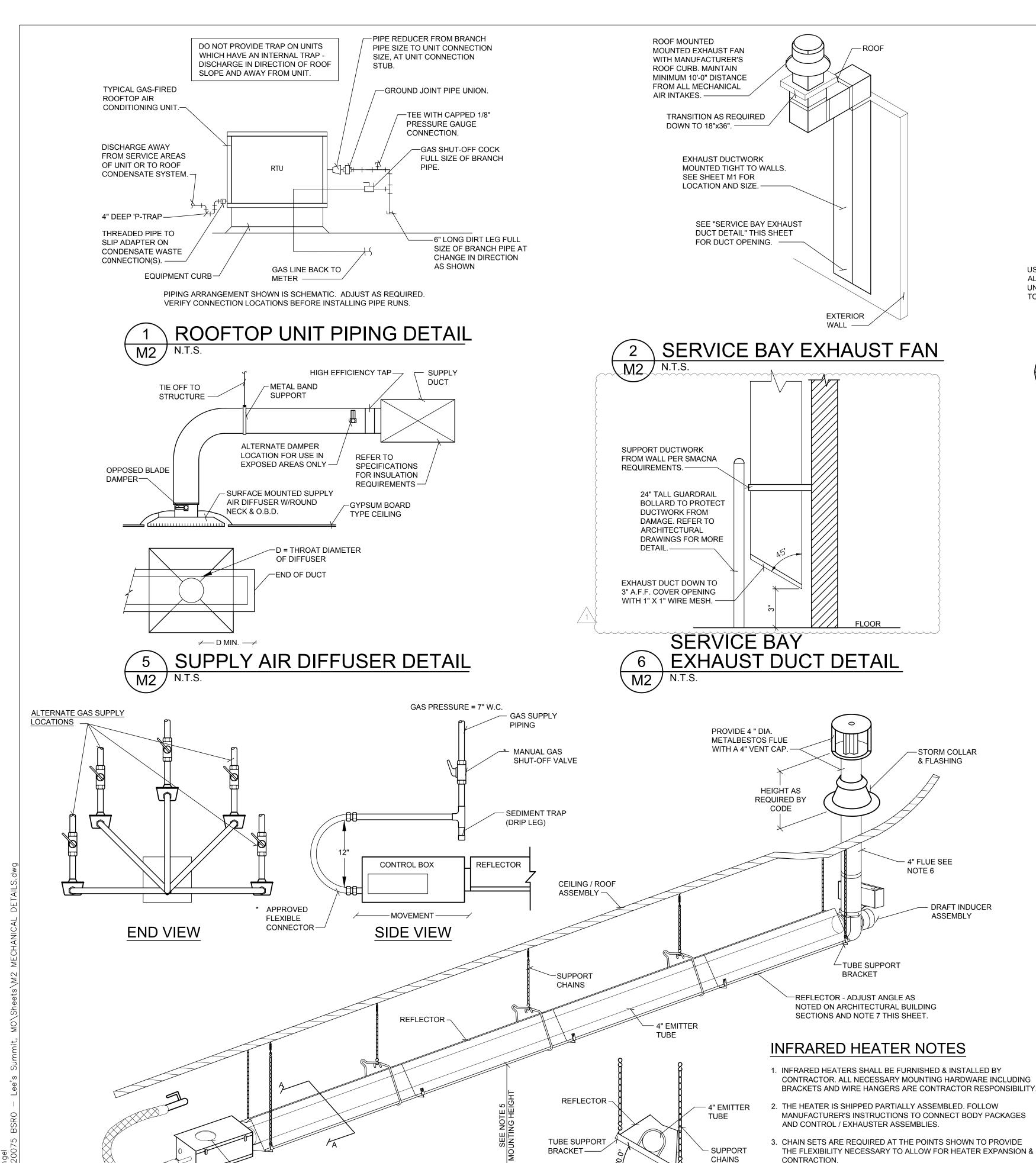
PROPERTY NO.
6 DIGIT NO.:
4 DIGIT NO.:

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

MECHANICAL PLAN AND NOTES

SHEET NUMBER:

**M1** 

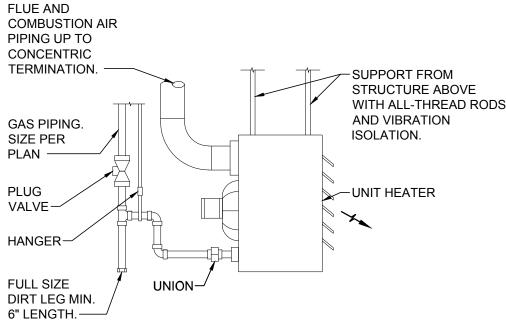


- CONTROL

**FURNISHED BY** HEATER MFR.

ROOF TOP UNIT **DIVISION 26 PROVIDED** (TYPICAL) DISCONNECT -- GAS SHUT-OFF H.V.A.C. - REGULATOR UNIT (IF REQUIRED) – DIRT LEG ROOF CURB -BUILDING/STRUCTURE 14" HIGH CURB - GAS LINE SEE P6 FOR WHERE INDICATED ON CONTINUATION PLANS, DUCT RUNOUT WITH RECTANGULAR DUCT WITH VOLUME EXTRACTOR ON SUPPLY CONNECTION -**INSULATION PER SPECIFICATIONS**  FLEXIBLE DUCT CONNECTIONS (TYP.) **VOLUME DAMPER -**TRANSITION TO DUCT OPENING USE APPROPRIATE CABLE OR ON DIFFUSER ALL-THREAD SUPPORTED FROM UNISTRUT SECURELY FASTENED - DROPBOX DIFFUSER TO ROOF STRUCTURE. -

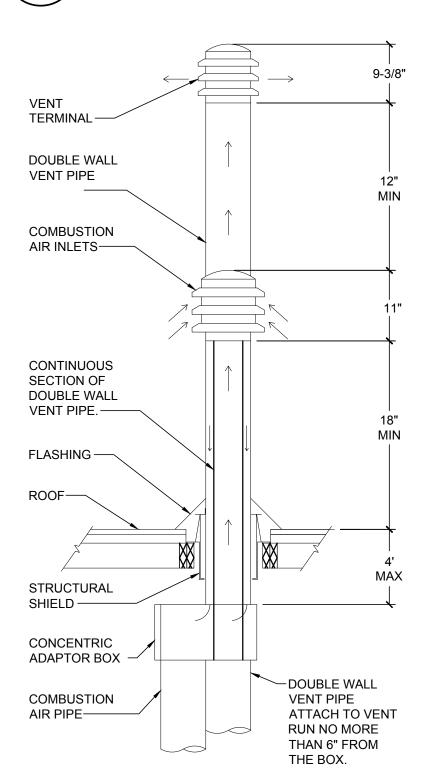
RTU PACKAGE HVAC DETAIL



NOTE: MOUNT BOTTOM OF UNIT, PIPING AND ACCESSORIES AT 13-0" AFF.

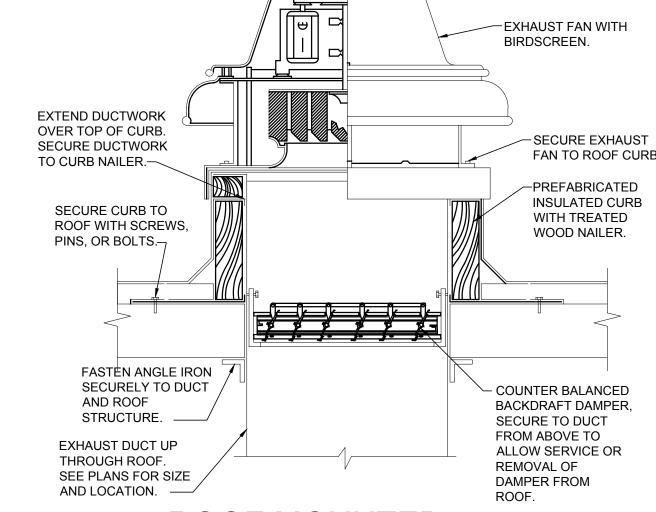
SHOWN FOR REFERENCE ONLY. REFER TO MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION DETAILS.

GAS FIRED UNIT HEATER DETAIL



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

CONCENTRIC FLUE DETAIL M2 N.T.S.



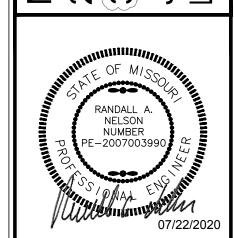
# ROOF MOUNTED EXHAUST FAN DETAIL

#### **GENERAL DETAIL NOTES**

- SUSPEND UNIT HEATERS FROM UNISTRUT CHANNELS MOUNTED TO STRUCTURE WITH VIBRATION ISOLATORS EQUIPPED HANGER RODS OR AN APPROVED EQUAL
- 2. ALL EQUIPMENT FURNISHED BY CONTRACTOR SHALL HAVE MAGNETIC STARTERS OF SIZE AND CAPACITIES AS REQ'D. FOR PROPER EQUIPMENT OPERATION. FURNISH WEATHERPROOF BOXES (NEMA 3R) FOR EXTERIOR USE
- 3. 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
- 4. ALL THERMOSTATS TO BE FURNISHED BY HVAC CONTRACTOR TO ELECTRICAL CONTRACTOR FOR INSTALLATION.
- 5. FURNISH AND INSTALL UL RATED FIRE DAMPERS W/FUSIBLE LINKS AND ACCESS PANELS IN DUCT WORK AT PENETRATIONS OF FIRE RATE ASSEMBLIES AS
- WIRING SCHEMATICS OF ALL HVAC EQUIPMENT SHALL BE FURNISHED BY HVAC CONTRACTOR TO ELECTRICAL CONTRACTOR.
- 7. 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
- 9. ROUTE ALL PIPING TIGHT TO CEILING AND WALLS, PARALLEL AND PERPENDICULAR
- 10. ALL SHUT OFF VALVES TO BE ACCESSIBLE TO ASSOCIATES WITHOUT THE USE OF A LADDER OR STEP-STOOL.

PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND PROFERET LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

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SSUE BLOCK /1\ | 04/16/20 | ADD #1 /2\ |06/30/20|CB #1 3\ 07/23/20 IFC PROPERTY NO.: 6 DIGIT NO.:

AOR PROJECT NUMBER: 1955B71 TO PERMIT: DATE: 03/26/202 DATE: ##-##-## ΓΟ BID: SHEET TITLE:

**MECHANICAL DETAILS** 

SHEET NUMBER:

GAS FIRED INFRA-RED SPACE-RAY STRAIGHT TUBE HEATER DETAIL DETAIL BY MANUFACTURER FOR REFERENCE ONLY.

4. REFER TO MANUFACTURER'S INSTALLATION MANUAL FURNISHED

5. INSTALL HEATER AT HEIGHT SHOWN ON ARCHITECTURAL SHEET A5.

CLEARANCES REQUIRED TO COMBUSTIBLES, BELOW AND ABOVE

6. INSTALL FLUE ASSEMBLY TO CLEAR LIGHT FIXTURES & EQUIPMENT

AND TO PENETRATE ROOF PAST THE RIDGE VENT. SEE ROOF PLAN.

7. CONTRACTOR SHALL ROTATE RADIANT HEATER TO A 30° DEG ANGLE

REFER TO MANUFACTURER'S INSTALLATION MANUAL FOR ALL

WITH HEATER FOR ADDITIONAL DATA.

		VENTILAT	ION SCI	HEDULE	PER 2018	3 INTERN	IATIONA	AL ME	CHAN	ICAL (	CODE		
					ORDINANCE REQUIREMENT					IT.			
ROOM No.	ROOM NAME	CATEGORY	FLOOR AREA SQ. FT.	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	EXHAUST FAN NUMBER	SUPPLY UNIT NUMBER	REMARKS
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	DISTRIE	BUTION	DEVICE SO	CHEDULE	
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

- 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	AG AREA SERVING MFR. MODEL WIRLE OUTPUT AFUE CFM WEIGHT MOTOR												
1710	AIREAGERANIA	IVII TX.	WODEL	INPUT	OUTPUT	711 012	01 111	WEIGHT	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

- UNIT SHALL BE COMPLETE WITH CONTROL TRANSFORMER RELAY PACKAGE, 24V REVERSE ACTING THERMOSTAT WITH NIGHT SETBACK.
- PROVIDE SHUTOFF COCK AT EACH BURNER.
- UNIT TO HAVE VERTICAL VENT TERMINAL AND CONCENTRIC ADAPTER. VIBRATION ISOLATION HANGER RODS OR APPROVED EQUAL.

G/	AS FIRED	STRAI	GHT T	UBE RA	ADIAI	NT H	IEAT	ER :	SCHE	DULE
TAG	MANUFACTURER	MODEL	INPUT MBH	GAS CONNECTION			START DRAW	RUN DRAW	TUBE TYPE	TUBE LENGTH
AD-1.2.3	SPACE RAY	FTS75	75	1/2" Ø	120	100	3.0	2.6	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.

- 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.
- 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	ENTERING AIR	ARI	SUPPLY	RETURN	O.A.	TOTAL	FAN MOTOR	GAS	MBH	El	ECTRIC	AL DATA	•	WT.
IAG	IVIFIX.	MODEL	TON	CONDITIONS	EER	CFM	CFM	CFM	S.P.	HP	INPUT	OUTPUT	VOLTS	PHASE	FLA	МОСР	VVI.
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

MECHANICAL UNIT SHALL BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

PROVIDE UNIT WITH UNPOWERED GFCI CONVIENCE OUTLET.

- PROVIDE NEW FILTERS IN UNIT AFTER ALL DUCTWORK HAS BEEN COMPLETED AND PRIOR TO TEST AND BALANCING OF UNIT.
- PROVIDE WITH DIFFERENTIAL ENTHALPY TYPE ECONOMIZER WITH BAROMETRIC RELIEF DAMPER.
- PROVIDE UNIT WITH 14" HIGH ROOF CURB WITH SECURITY BARS.
- PROVIDE UNIT WITH FACTORY INSTALLED HINGED ACCESS PANELS. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH.

PROVIDE WITH FACTORY MOUNTED SUPPLY AND RETURN AIR SMOKE DETECTORS.

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	TAG DESCRIPTION MFR. MODEL CFM ESP MOTOR NOTES												
	DESCRIPTION	IVII IX.	WODEL	OI W	LOI	HP / WATTS	PHASE	VOLTS	NOTES				
EF-1	SERVICE AREA EXHAUST FAN	соок	ACE-210C9B	5200	1.0	2.0	3	208	1,2,4,5,6				
EF-2	TOILET EXHAUST FAN	соок	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

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.
- . 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	CFM NECK SIZE (IN)			IPER	MODEL	NOTES
				0.== (,	HP	PHASE	VOLTS	MODEL		
RH-1	TOX ALERT INTAKE ROOF HOOD	соок	24x36GI	5200	24 x 36	FRAC.	1	115		1,2,3,4,5

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

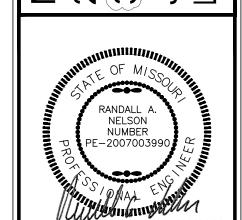
1. PROVIDE WITH BIRD / INSECT SCREEN.

- 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.



STIPULATION OF REUSE
THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE AT LEE'S SUMMIT, MO CONTEMPORANEOUSLY WITH ITS ISSUE DATE ON 03/26/2020 AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

ORE NEW FCAC STO 2020 ER 3561 SW MARKI JACKSON COUI LEE'S SUMMIT, MISSO



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

PROPERTY NO.: 6 DIGIT NO.: 4 DIGIT NO.:

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

906983

SHEET TITLE: **MECHANICAL EQUIPMENT** SCHEDULES

PLUMBING SYMBOLS LIST								
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION					
cw	COLD WATER LINE	AFF	ABOVE FINISHED FLOOR					
———— A ————	COMPRESSED AIR LINE	AHJ	AUTHORITY HAVING JURISDICTION					
——— G ———	GAS LINE	CONT	CONTRACTOR					
HW	HOT WATER LINE	EWC	ELECTRIC WATER COOLER					
	HOT WATER RECIRCULATION LINE	FDC	FIRE DEPARTMENT CONNECTION					
CON	MECHANICAL EQUIPMENT CONDENSATE LINE	GCO	GROUND CLEAN OUT					
o	OIL LINE	L	LAVATORY					
	PLUMBING VENT LINE	MS	MOP SINK					
ow	UNDERGROUND OIL WASTE LINE	NTS	NOT TO SCALE					
SAN	UNDERGROUND SANITARY DRAIN LINE	TP	TRAP PRIMER					
FCO 🔯	FCO-FLOOR CLEAN OUT	UNO	UNLESS NOTED OTHERWISE					
FD C+	FD-FLOOR DRAIN	UR	URINAL					
HB • •	HOSE BIBB	VIF	VERIFY IN FIELD					
WCO I	WALL CLEAN OUT	VTR	VENT THROUGH ROOF					
<b>───</b>	SHUT-OFF VALVE	WC	WATER CLOSET					
П	HAMMER ARRESTOR							

# CIVIL ENGINEERING DESIGN COORDINATION NOTICE

NOTICE TO ALL PARTIES HAVING AN INTEREST IN THIS CONSTRUCTION PROJECT

1.) CIVIL ENGINEERING FOR THIS PROJECT IS BEING PERFORMED BY OTHERS.

2.) CONTRACTORS RELYING ON DOCUMENTS NOT COORDINATED WITH THE CIVIL ENGINEERING WORK SHALL DO SO AT THEIR OWN RISK.

3.) COORDINATION WITH THE CIVIL ENGINEERING DOCUMENTS HAS BEEN COMPLETED ONLY AS SHOWN BELOW.

CIVIL ENGINEERING CONSULTANT IS: GRESHAM SIMTH

CIVIL SHT. CIVIL SHEET REV. NO. DATE NO. DATE NO. DATE NO. DATE

C500 UTILITY PLAN

COORDINATION CHECKED BY INITIAL DATE INITIAL DATE INITIAL DATE

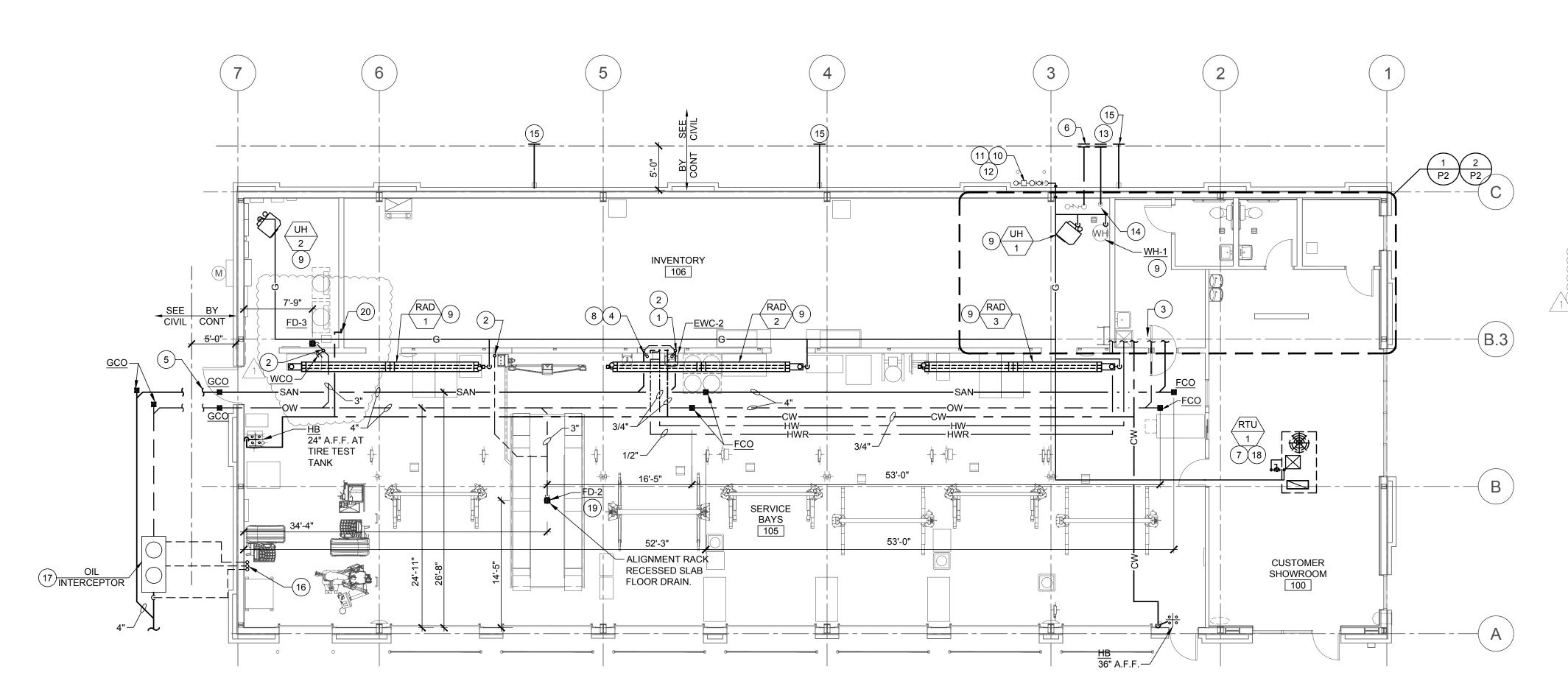
NOTE:
CONTRACTOR SHALL REFER TO SHEET A3 ROOF PLAN FOR ACCEPTABLE APPROXIMATE
LOCATIONS OF ROOF PENETRATIONS.

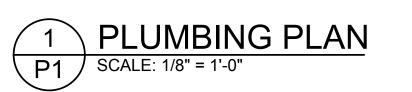
SLOPE OF HORIZONTAL DRAINAGE PIPE					
SIZE	MINIMUM SLOPE				
2-1/2" OR LESS	1/4 / ft OR 2%				
3" TO 6" 1/8 / ft OR 1%					
NOTE: SCHEDULE BASED ON 2018 INTERNATIONAL					

PLUMBING CODE, SECTION 704 - TABLE 704.1.

PLUMBING INVERTS: STARTING POINT: 0' - FINISHED FLOOR ENDING POINT: 5'-0" OUTSIDE BUILDING SANITARY: 44" OIL WASTE: 48" NOTE:
ROUTE ALL WATER AND GAS PIPING TIGHT TO
CEILING AND WALLS WHERE POSSIBLE. NO PIPING
SHALL BE ROUTED IN UNCONDITIONED SPACES. ALL
EXPOSED 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.





#### (#) KEYED PLAN NOTES - THIS SHEET

- . ROUTE COLD & HOT WATER PIPING IN SERVICE BAY WALL. ROUTE PIPING AS REQUIRED TO EWC AND EYEWASH BELOW. ALL PIPING SHALL BE INSULATED. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- 2" VENT UP TO 3" VENT THRU ROOF.
- 3. SEE ENLARGED PLANS SHEET P2 FOR CONTINUATION.
- 4. EYEWASH PROVIDED BY BSRO AND INSTALLED BY CONTRACTOR. PROVIDE 1/2" INSULATED WATER LINE TO FIXTURE. MOUNT EYEWASH AT 41" A.F.F. TO THE CENTERLINE OF THE SPOUT. REFER TO FIXTURE PLAN FOR LOCATION. REFERENCE DETAIL ON SHEET P5.
- 5. SANITARY LINE. EXTEND 5'-0" OUT FROM BUILDING. SEE CIVIL PLANS FOR CONTINUATION.
- 6. DOMESTIC WATER SERVICE TO MAIN. EXTEND 5'-0" OUT FROM BUILDING. SEE CIVIL PLANS FOR CONTINUATION.
- 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.
- B. EYEWASH DRAIN PIPE SHALL BE CONNECTED FULL SIZE OF FIXTURE BACK IN WALL AND DOWN BELOW SLAB. REFERENCE DETAIL ON SHEET P5.
- GAS PIPE DROP TO GAS FIRED EQUIPMENT. PROVIDE GAS COCK, DIRT LEG, FLEXIBLE CONNECTOR (WHERE APPROVED). ALL GAS PIPING AND ACCESSORIES SHALL NOT EXTEND BELOW THE BOTTOM OF THE UNIT.
- 10. GAS METER BY UTILITY. CONTRACTOR SHALL VERIFY THAT NEW GAS SERVICE IS REGULATED FOR 7 IN. W.C. AND THE GAS METER WILL HANDLE THE REQUIRED CAPACITY. ANY DISCREPANCIES IN THIS INFORMATION SHOULD BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND/OR PROJECT ENGINEER.
- 11. ROUTE GAS PIPE TIGHT TO WALL AND AS REQUIRED TO GAS METER. COORDINATE LOCATION OF ROUGH IN AND OR INSTALLATION OF GAS PIPE. GAS PIPING IS SIZED BASED ON 7 IN. W.C PRESSURE AND A 0.5 W.C. PRESSURE DROP PER THE 2108 INTERNATIONAL FUEL GAS CODE, TABLE 402.4(2).
- 12. CONTRACTOR SHALL PROVIDE GAS PRESSURE REGULATOR ON CUSTOMER SIDE OF METER TO SUPPLY BUILDING EQUIPMENT WITH 7" W.C. PRESSURE. REFER TO PRESSURE REGULATOR SCHEDULE ON SHEET P6 FOR SIZING REQUIREMENTS. REFER TO REGULATOR MANUFACTURER'S INSTALLATION INSTRUCTION.
- 13. FIRE RISER INLET. REFER TO SPECIFICATIONS, FIRE PROTECTION AND CIVIL DRAWINGS FOR MORE INFORMATION.
- 4. FIRE RISER FLOOR AREA. REFER TO SPECIFICATIONS AND FIRE PROTECTION DRAWINGS FOR MORE INFORMATION.
- 15. DOWNSPOUT (DS) TO EXTEND TO SPLASH BLOCKS. REFER TO ARCHITECTURAL DRAWINGS FOR DOWNSPOUT SIZE.
- 16. 2" UNDERGROUND VENTS UP ON INTERIOR FACE OF WALL. EXTEND UP 6" ABOVE FIXTURE RIM LEVEL. PROVIDE WCO ON EACH VENT LINE ONCE VENT LINES ARE ABOVE GROUND. COMBINE VENTS INTO (1) 3" VENT AND ROUTE UP IN WALL TO ROOF. PROVIDE 3" VENT THROUGH ROOF.
- 7. PROVIDE STRIEM MODEL OS-100 OIL/SAND SEPARATOR. MINIMUM BASIN SIZE: 250 GALLON STATIC LIQUID HOLDING CAPACITY. BASINS SHALL BE CONSTRUCTED OF POLYETHYPROPYLENE WITH BOLTED AND GASKETED TRAFFIC RATED CAST IRON COVERS. ALTERNATIVE BID: PRE-CAST CONCRETE TWO COMPARTMENT 350 GALLON STATIC HOLDING CAPACITY WITH BOLTED AND GASKETED TRAFFIC RATED CAST IRON COVERS. EXTEND 2" VENT LINE FROM EACH COMPARTMENT OR PER MANUFACTURER'S INSTRUCTIONS. INSURE THAT ALL UNDERGROUND PIPING AND OIL INTERCEPTOR PRESERVES THE ADJACENT BUILDING'S FOOTING. MAINTAIN A 6' MINIMUM DISTANCE FROM ADJACENT BUILDING'S FOOTING TO PRESERVE STRUCTURAL INTEGRITY. OIL INTERCEPTOR AND OIL INTERCEPTOR INSTALLATION SHALL COMPLY WITH INTERNATIONAL PLUMBING CODE AND ALL LOCAL AMENDMENTS.
- 18. ROUTE 1" GAS PIPE UP THROUGH BOTTOM CONNECTION POINT ON RTU. PROVIDE EXTERIOR GAS SHUT-OFF, DIRT LEG AND, UNION FITTING PRIOR TO CONNECTION TO UNIT. COORDINATE WITH RESPECTED TRADES AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- PROVIDE TRAP SEAL PROTECTION FOR FD-2 IN ALIGNMENT PIT. OBTAIN WRITTEN APPROVAL FROM AHJ FOR USE OF SURE SEAL #SS3000 INLINE FLOOR DRAIN TRAP SEALER. IF SURE SEAL TRAP GUARD NOT ALLOWED PROVIDE TRAP PRIMER.
- 20. ROUTE 1/2" COPPER LINE AS NEEDED UNDER SLAB FROM TRAP PRIMER
  DISTRIBUTION UNIT, LOCATED IN ACCESS PANEL MOUNTED ON WALL OPEN TO
  UTILITY AREA, TO APPROPRIATE FLOOR DRAIN. REFER TO PLUMBING ISOMETRIC
  ON SHEET P6 AND DETAIL ON SHEET P5 FOR MORE INFORMATION.

## PLUMBING GENERAL NOTES

- 1. SANITARY AND DOMESTIC WATER PIPE ROUTING ARE DIAGRAMMATIC ONLY. CONTRACTOR SHALL COORDINATE EXACT ROUTING OF PIPING WITH FIELD CONDITIONS.
- PROVIDE SHUTOFF VALVES IN EACH BRANCH USING BALL VALVES FOR WATER SUPPLY.
- B. ROUTE ALL PIPING TIGHT TO CEILING AND WALLS WHERE POSSIBLE. ALL PIPING SHALL BE ABOVE GROUND ONCE ENTERING BUILDING. NO PIPING SHALL BE ROUTED IN UNCONDITIONED SPACES. ALL PIPING SHALL BE INSULATED.
- 4. MAKE FINAL CONNECTIONS TO ALL EQUIPMENT FURNISHED BY OTHERS PER MANUFACTURER INSTALLATION INSTRUCTIONS.
- ALL EQUIPMENT, MATERIAL AND LABOR NECESSARY FOR COMPLETION OF PLUMBING SYSTEMS SHOWN ON DRAWINGS OR REFERRED TO IN SPECIFICATIONS TO BE FURNISHED AND INSTALLED BY PLUMBING 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 SPECIFICATION FULLY COMPLY OR NOT.
- 7. VERIFY FINAL LOCATIONS OF WATER SUPPLIES WITH FIXTURE PLAN AND CIVIL DRAWINGS
- VERIFY THAT ALL PLUMBING PIPING DOES NOT AFFECT ALIGNMENT RACK PADS. VERIFY LOCATION OF ALL PLUMBING PIPING WITH ALIGNMENT RACK MANUFACTURER PRIOR TO INSTALLATION. COORDINATE ALL PLUMBING PIPING AND ALIGNMENT RACK INSTALLATION WITH ALL DISCIPLINES PRIOR TO INSTALLATION.
- REFERENCE FIXTURE PLAN SHEET F1 FOR EQUIPMENT QUANTITIES AND LOCATIONS.



Since 1926 GOMPLETTE AUTO GAR

STIPULATION OF REUSE
THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE AT LEE'S SUMMIT, MO CONTEMPORANEOUSLY WITH ITS ISSUE DATE ON 03/20/200 AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER 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 64(



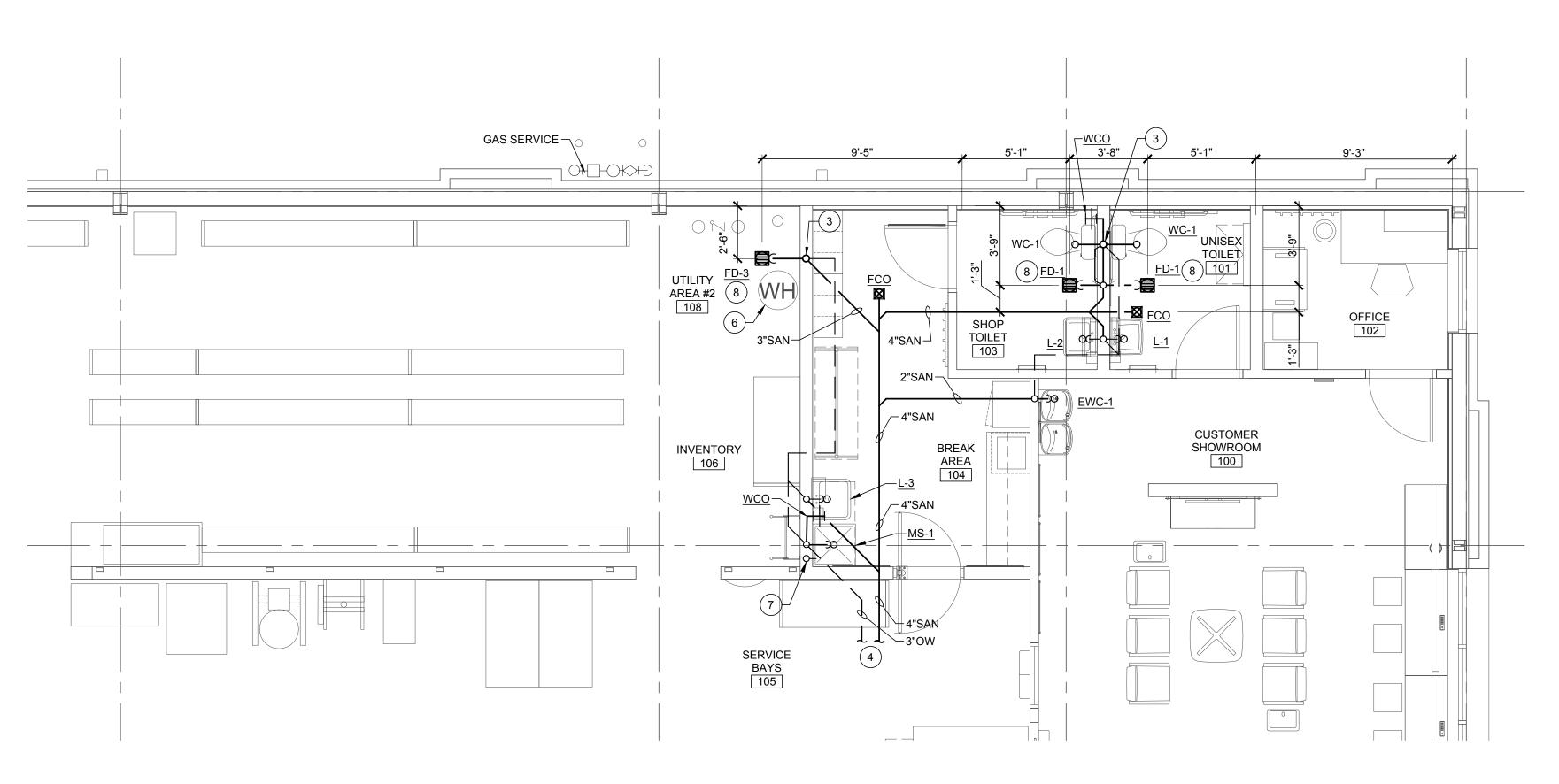
PROPERTY NO.: 160085
6 DIGIT NO.: 906983
4 DIGIT NO.: 78C9

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

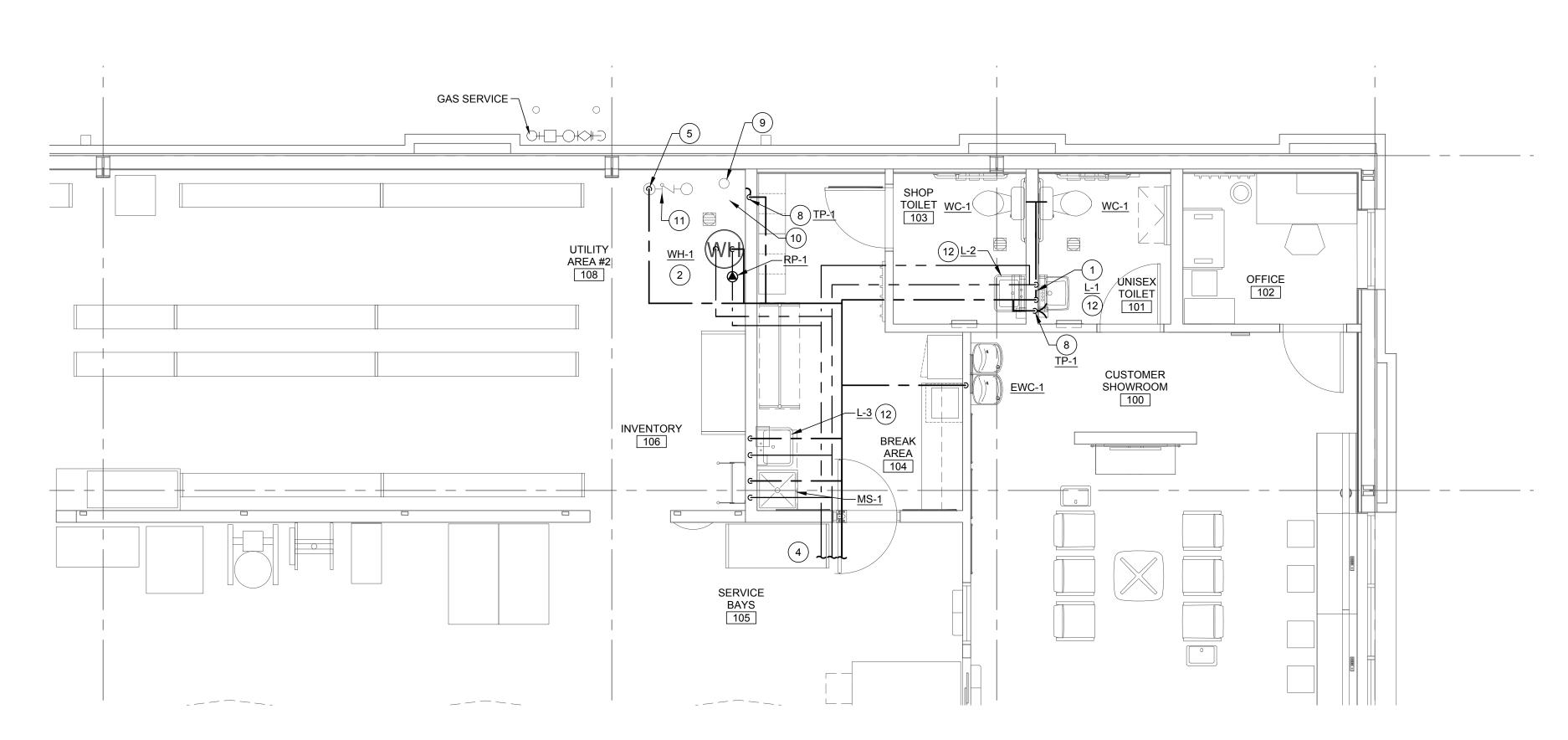
SHEET TITLE:

PLUMBING PLAN AND NOTES

**P1** 



# RESTROOM ENLARGED SANITARY PLAN



RESTROOM ENLARGED WATER 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
- 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.
- 0. 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.
- 12. 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.						

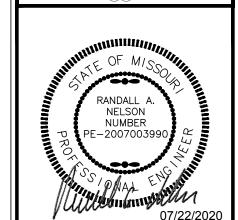
ROUTE ALL WATER PIPING TIGHT TO CEILING AND WALLS WHERE POSSIBLE. NO PIPING SHALL BE ROUTED IN UNCONDITIONED SPACES. ALL PIPING SHALL BE INSULATED AND LABELED.

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.



STIPULATION OF REUSE
THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE AT LEE'S SUMMIT, MO CONTEMPORANEOUSLY WITH ITS ISSUE DATE ON 03/28/2020 AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERTY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

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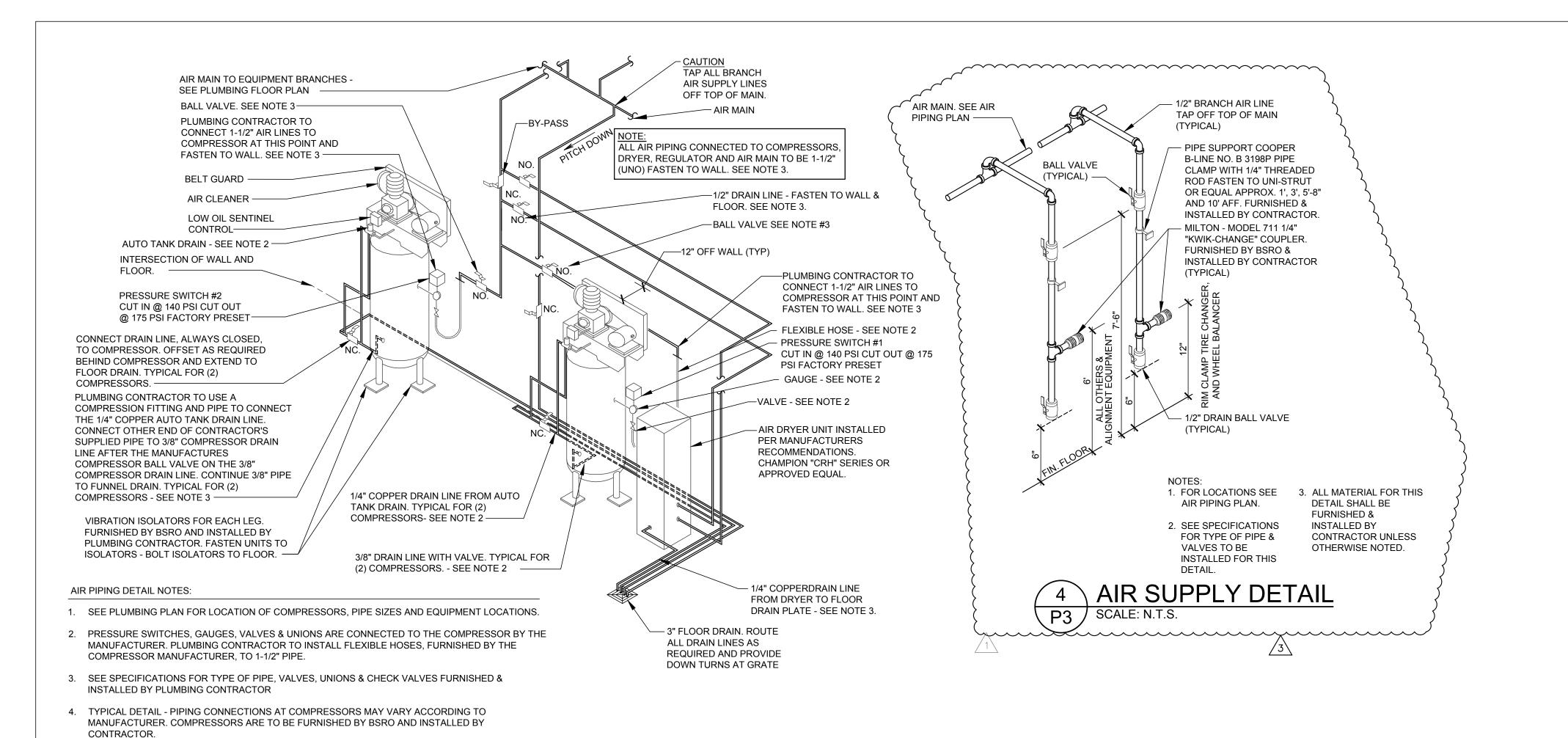
ISSUE BLOCK 1 04/16/20 ADD #1 2 06/30/20 CB #1 3 07/23/20 IFC

6 DIGIT NO.:

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

SHEET TITLE: **ENLARGED** RESTROOM PLUMBING PLANS

906983



# **# 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
- MOUNTING. COORDINATE EXACT LOCATION WITH FIXTURE PLAN. 1/2" PIPE DOWN TO ALIGNMENT RACK. MAKE FINAL HARD PIPE CONNECTION TO

1/2" PIPE TO OVERHEAD AIR HOSE REEL. SEE DETAIL ON THIS SHEET FOR

- 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 LOCATION OF AIR DROP WITH FIXTURE PLAN AND USED OIL STORAGE SYSTEM DETAIL OF 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.

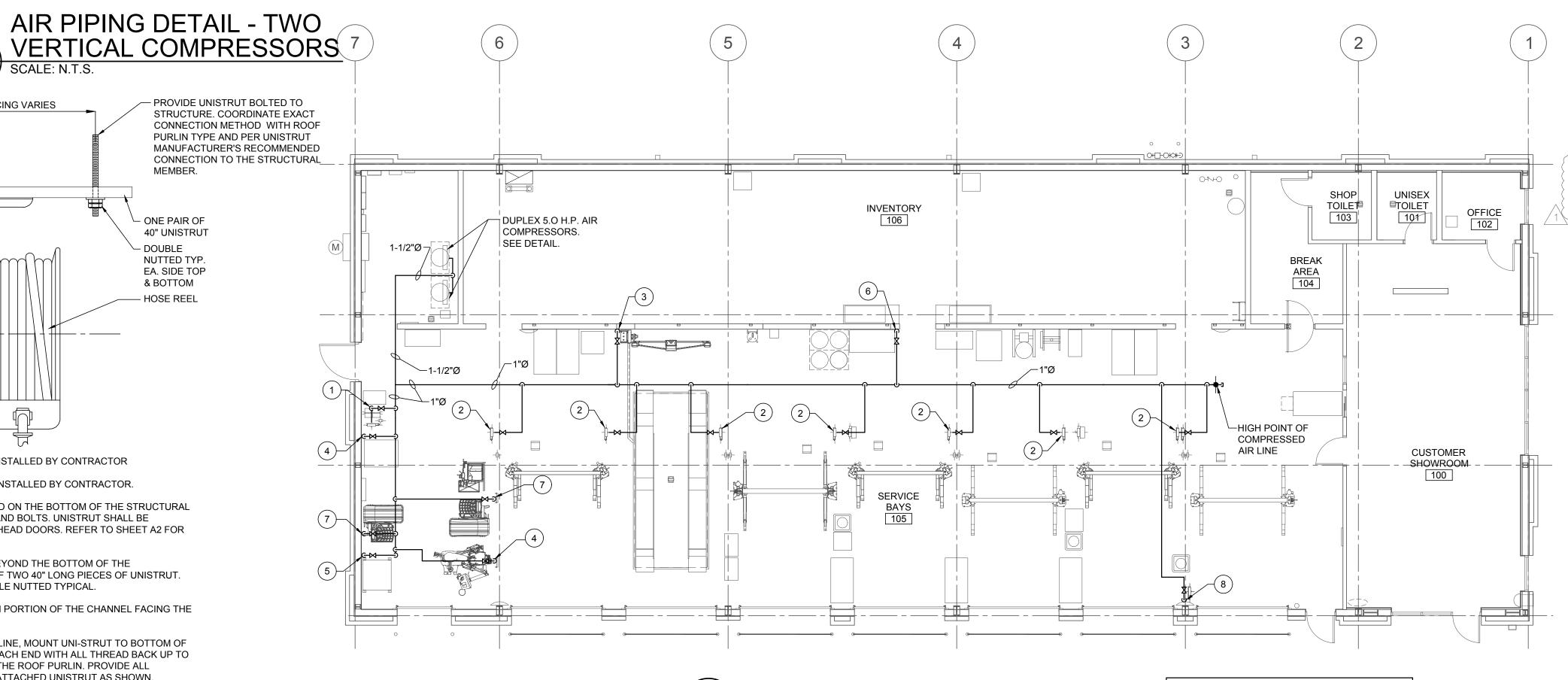
## AIR PIPING NOTES

- PROVIDE SHUTOFF VALVES IN EACH BRANCH USING BALL VALVES. REFER TO
- 2. INSTALL/ROUTE ALL PIPING TIGHT TO UNDERSIDE OF SERVICE BAY ROOF
- 3. MAKE FINAL CONNECTIONS TO ALL EQUIPMENT FURNISHED BY OTHERS PER
- I. PITCH PIPING BACK TO AIR COMPRESSOR. TAP ALL BRANCH PIPING TAKE-OFFS
- . RUN 1/2" PIPING FROM SUPPLY MANIFOLD TO TIRE CHANGERS AND CONNECT PER MANUFACTURER'S INSTRUCTIONS. SEE MANUFACTURER'S DRAWINGS FOR
- 6. ALL EQUIPMENT, MATERIAL AND LABOR NECESSARY FOR COMPLETION OF COMPRESSED AIR SYSTEM SHOWN ON DRAWINGS OR REFERRED TO IN
- WHERE DRAWINGS OR SPECIFICATIONS EXCEED GOVERNING CODE REQUIREMENTS, DESIGN SHALL GOVERN. INSTALL NO WORK CONTRARY TO OR
- B. CAUTION: ALL AIR LINES SHALL BE PROPERLY CLEANED AND BLOWN OUT PRIOR

VERIFY FINAL LOCATION OF AIR PIPING WITH

ARCHITECTURAL DRAWINGS AND SHEET F1. COORDINATE EXACT AIR DROP LOCATIONS WITH

ARCHITECT PRIOR TO FINAL INSTALLATION.



AIR SUPPLY DETAIL ON THIS SHEET FOR MOUNTING HEIGHT.

MANUFACTURER'S INSTRUCTIONS.

FROM TOP OF MAIN.

DETAIL OF SUPPLY MANIFOLD.

SPECIFICATIONS TO BE FURNISHED AND INSTALLED BY CONTRACTOR UNLESS

BELOW MINIMUM LEGAL STANDARDS, WHETHER DRAWINGS AND SPECIFICATIONS FULLY COMPLY OR NOT.

TO CONNECTING TO ANY OF THE EQUIPMENT SHOWN ON THIS SHEET.

PROVIDE TIRE BALANCING UNIT AIR SUPPLY.

NEW 2020 3561 JACK LEE'S S RANDALL NUMBER

PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND

ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER

PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

KSON SUMMIT.

ISSUE BLOCK 2 06/30/20 CB #1 /3\ 07/23/20 IFC

PROPERTY NO .: 6 DIGIT NO.: 906983

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

SHEET TITLE:

AIR PIPING PLAN AND NOTES SHEET NUMBER:

JOIST MOUNTED BALL

VALVE AND PIPE BY

CONTRACTOR. SEE

FIXTURE PLAN FOR

FLEXIBLE LINE SEE

SPECS. FURNISHED BY

BSRO AND INSTALLED BY CONTRACTOR

UNION BY CONTRACTOR

SERVICE BAY FLOOR.

LOCATIONS. \_

PRE-ENGINEERED BUILDING AIR HOSE REEL DETAIL P3 SCALE: N.T.S.

COMPRESSORS TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.

8. ALL VALVES SHALL BE NORMALLY OPEN (NO.) UNLESS NOTED OTHERWISE.

ALL REELS ARE FURNISHED BY BSRO AND INSTALLED BY CONTRACTOR

2 PIECE 40" LONG UNISTRUT TO BE MOUNTED ON THE BOTTOM OF THE STRUCTURAL

CENTERED WITH PILASTER BETWEEN OVERHEAD DOORS. REFER TO SHEET A2 FOR

STRUCTURAL MEMBER FOR ATTACHMENT OF TWO 40" LONG PIECES OF UNISTRUT.

UNISTRUT TO BE INSTALLED WITH THE OPEN PORTION OF THE CHANNEL FACING THE

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.

MEMBER AND SECURED WITH ALL-THREAD AND BOLTS. UNISTRUT SHALL BE

FOUR PIECES OF ALL-THREAD EXTENDED BEYOND THE BOTTOM OF THE

EACH END OF THE ALL-THREAD TO BE DOUBLE NUTTED TYPICAL.

2. ALL REEL SUPPORTS ARE FURNISHED AND INSTALLED BY CONTRACTOR

7. ALL PIPING IS LOCATED / INSTALLED BETWEEN COMPRESSORS AND WALL. MOUNT TIGHT TO WALL.

ONE PAIR OF

40" UNISTRUT

NUTTED TYP.

EA. SIDE TOP

& BOTTOM

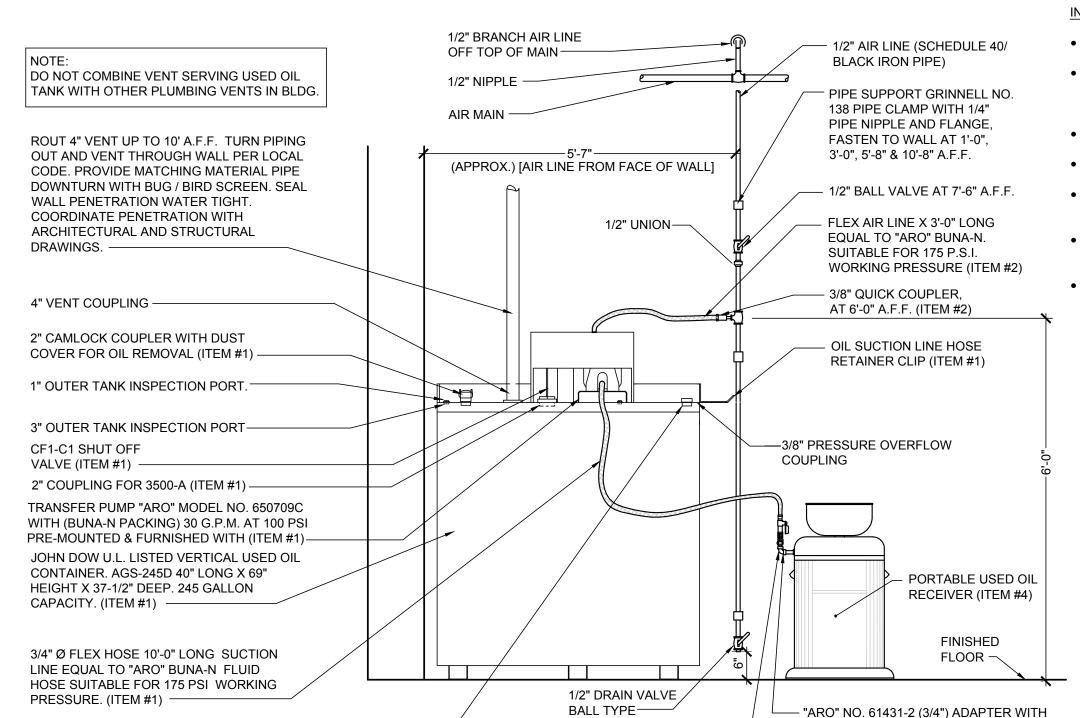
HOSE REEL

- DOUBLE

6. DRYER TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.

AIR PIPING PLAN
SCALE: 1/8" = 1'-0"

- 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.



"ARO" NO. 92021 (3/4")

COUPLING (ITEM #1)

QUICK DISCONNECT

NIPPLE AND (3/4") ELBOW (ITEM #3)

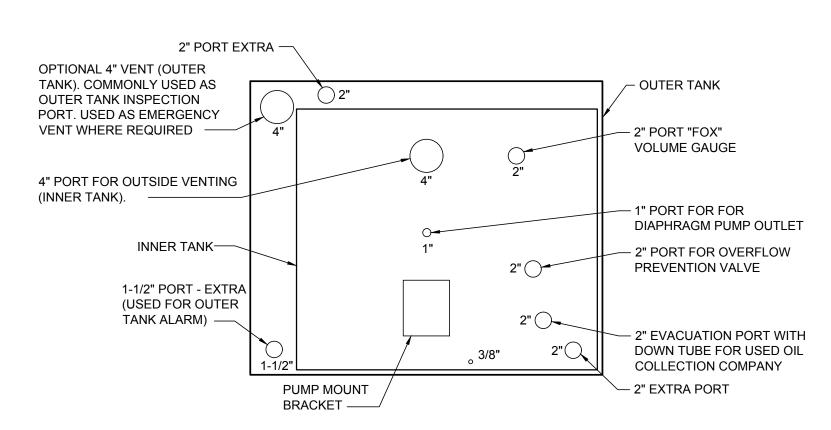
#### **GENERAL NOTES:**

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

TO BE FURNISHED & INSTALLED.

#### **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
- VENT PIPING MATERIAL TO BE GALVANIZED STEEL, BLACK IRON, OR CAST IRON.





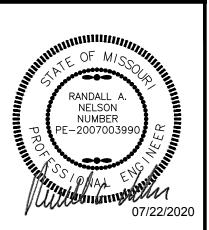


RED FOX HIGH TANK GAUGE -



STIPULATION OF REUSE
THIS DRAWING WAS PREPARED FOR USE ON
A SPECIFIC SITE AT LEE'S SUMMIT, MO
CONTEMPORANEOUSLY WITH ITS ISSUE
DATE ON 03/28/2020 AND IT IS NOT SUITABLE
FOR USE ON A DIFFERENT PROJECT SITE OR
AT A LATER TIME. USE OF THIS DRAWING FOR
REFERENCE OR EXAMPLE ON ANOTHER
PROJECT REQUIRES THE SERVICES OF
PROPERLY LICENSED ARCHITECTS AND
ENGINEERS. REPRODUCTION OF THIS
DRAWING FOR REUSE ON ANOTHER
PROJECT IS NOT AUTHORIZED AND MAY BE
CONTRARY TO THE LAW.

ORE NEW FCAC STO 2020 ER 3561 SW MARK JACKSON COUI LEE'S SUMMIT, MISSC



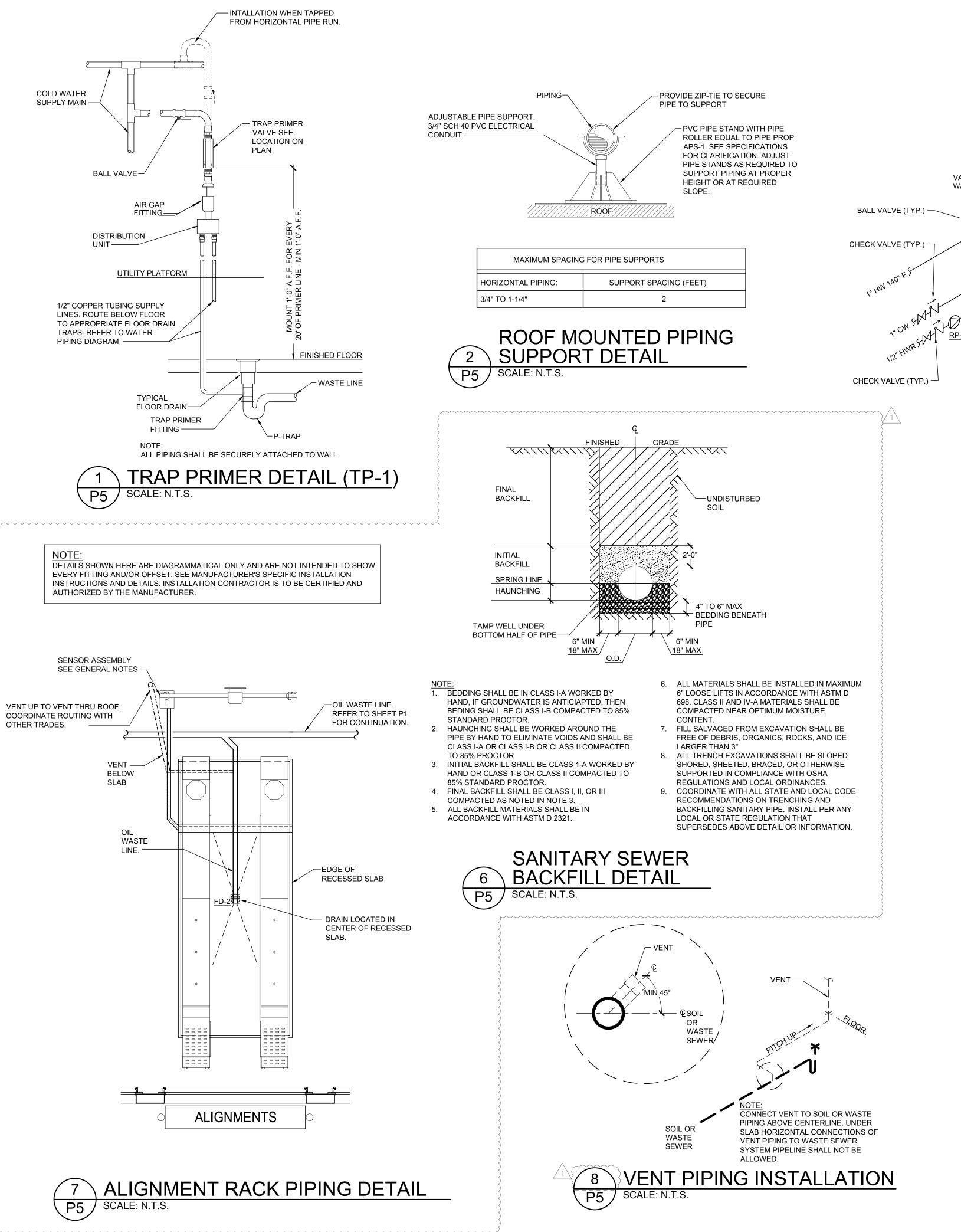
ISSUE BLOCK 1 04/16/20 ADD #1 2 06/30/20 CB #1 3 07/23/20 IFC 906983

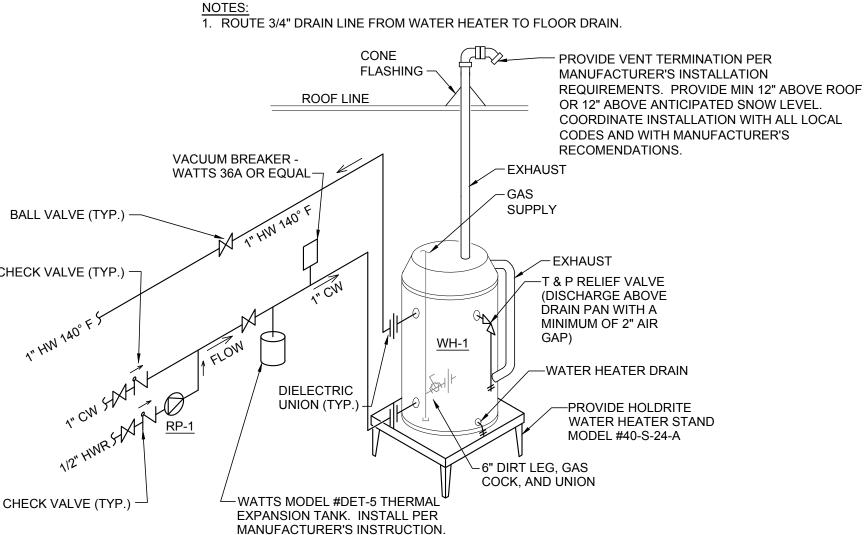
DATE: 03/26/2020 DATE: ##-##-##

SHEET TITLE:

**DETAILS** 

OIL PIPING

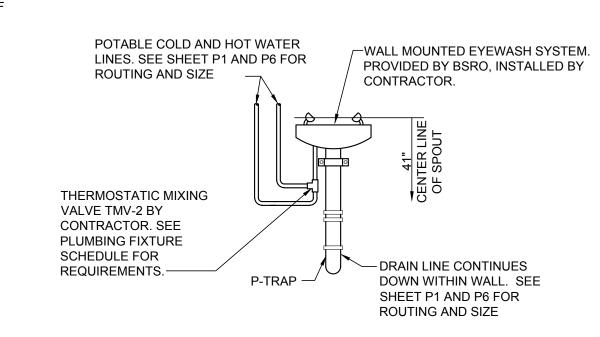




GAS FIRED WATER

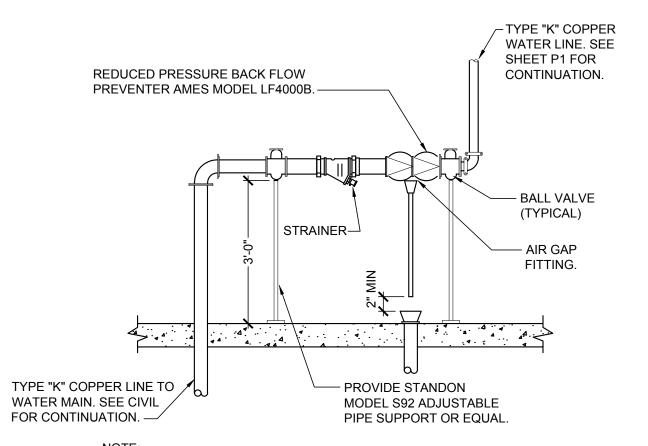
**HEATER DETAIL** 

SCALE: N.T.S.



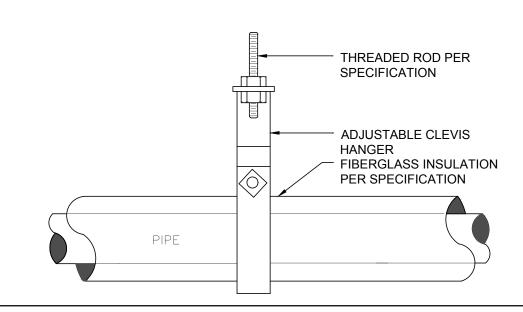
NOTE:
DETAIL IS FOR REFERENCE. REFER TO FLOOR PLAN
AND ISOMETRIC FOR PIPE LOCATIONS AND SIZES.



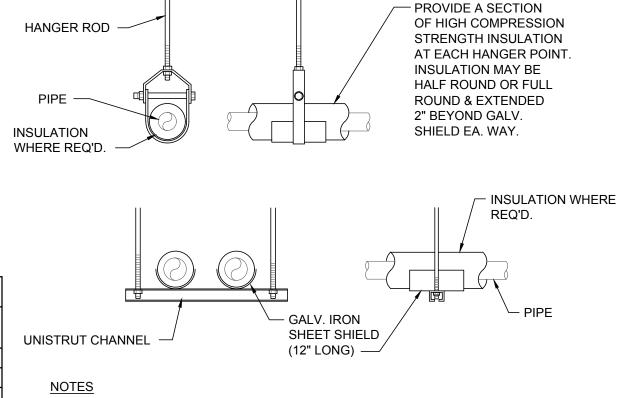


PROVIDE ADEQUATE CLEARANCES AS REQUIRED BY LOCAL CODE FOR DOMESTIC SERVICE.





	WATER PIPING (COPPER TYPE "L")							
PIPE SIZE	WEIGHT / FT. WITH WATER (IN LBS.)	MAX SPACING	LOAD / HGR	ROD SIZE				
1/2"	.38	6'	2.28	3/8"				
3/4"	.66	6'	3.96	3/8"				
1"	1.04	6'	6.24	3/8"				
1-1/4"	1.43	6'	8.58	3/8"				
1-1/2"	1.92	6'	19.2	3/8"				
2"	3.09	10'	30.8	3/8"				
2-1/2"	4.52	10'	45.2	3/8"				



STEEL STRUCTURE PER MANUFACTURER'S RECOMMENDATIONS.

2. PROVIDE COPPER OR PLASTIC COATED HANGERS FOR

NON-INSULATED COPPER PIPE.

1. ATTACH SUPPORTS FOR ALL PIPING SUSPENDED FROM THE

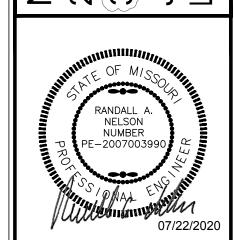
9 PIPE SUPPORT DETAIL
P5 SCALE: N.T.S.



SINGE 1926 GOMPLETE AUTO GARES CONDITIONS. LLC AND IS LOANED ON THE EXPRESS CONDITION.

STIPULATION OF REUSE
THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE AT LEE'S SUMMIT, MO CONTEMPORANEOUSLY WITH ITS ISSUE DATE ON 03/26/2020 AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENISED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER 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 6408



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

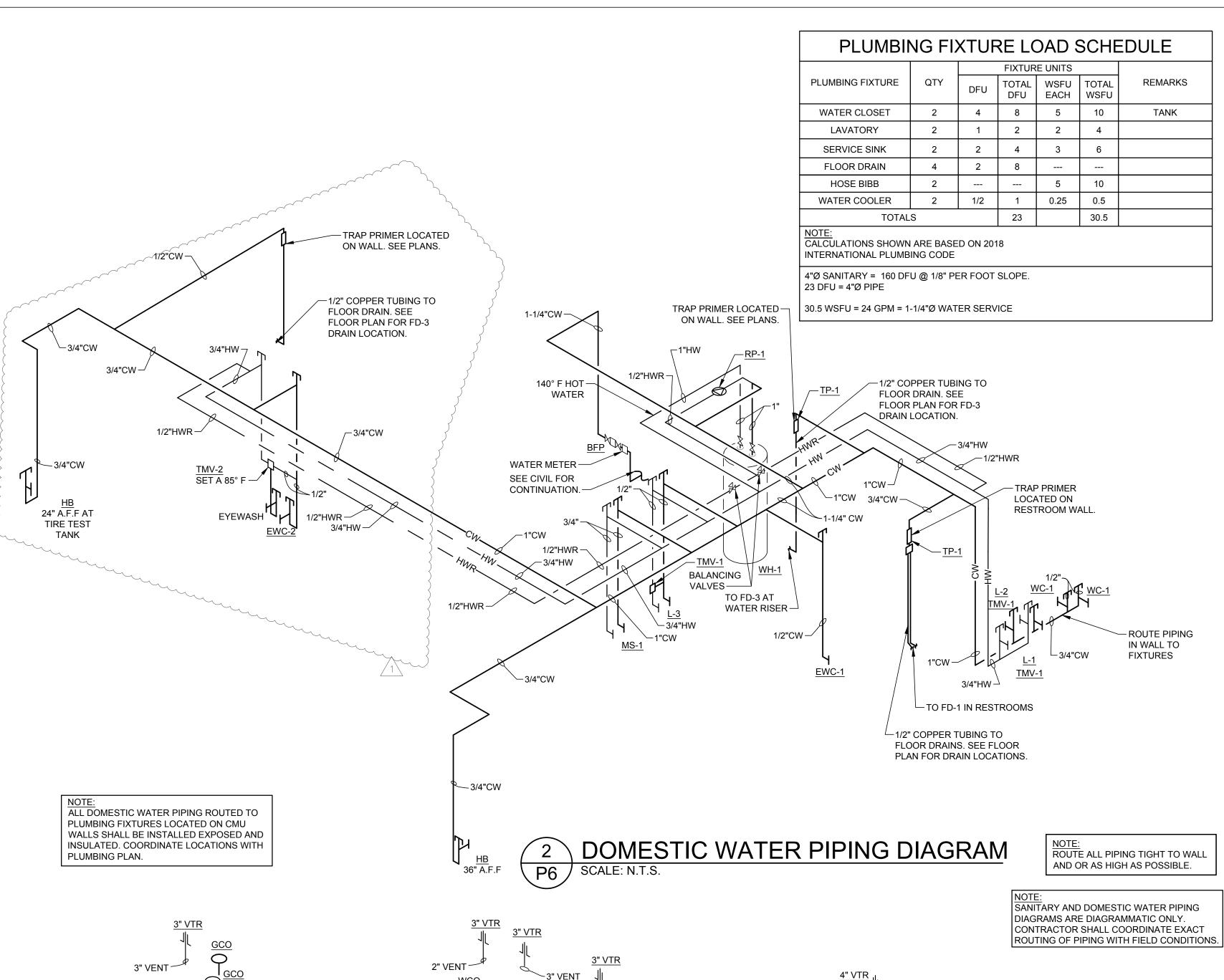
AOR PROJECT NUMBER: 1955B71
TO PERMIT: DATE: 03/26/2020
TO BID: DATE: ##-##-##

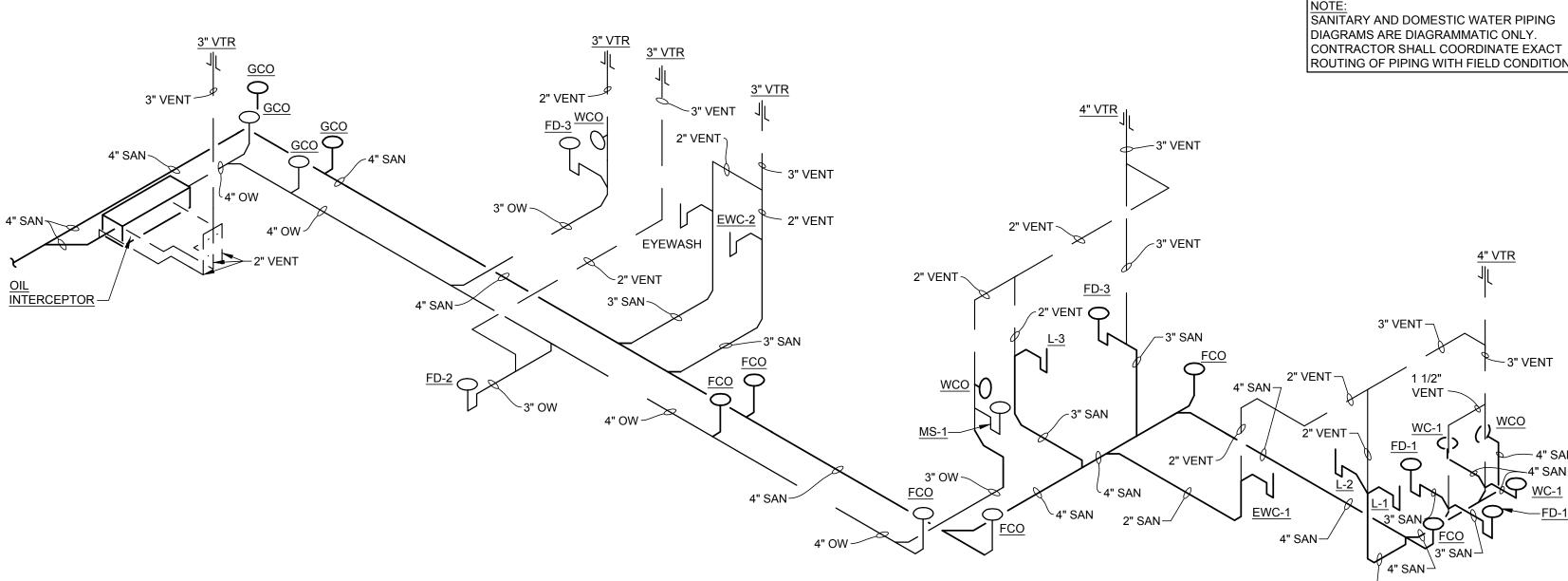
SHEET TITLE:

PLUMBING DETAILS

SHEET NUMBER:

**P5** 





WASTE & VENT PIPING DIAGRAM

OBTAIN WRITTEN APPROVAL FRO AHJ FOR USE WITH A SURE SEAL #SS3000 INLINE FLOOR DRAIN T SEALER FOR FD-2 IN ALIGNMEN

SLOPE OF HORIZONTAL DRAINAGE PIPE

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

2-1/2" OR LESS

3" TO 6"

MINIMUM SLOPE

1/4 / ft OR 2%

1/8 / ft OR 1%

OM L RAP T PIT.			

T40	DECODIBITION	MANUFACTURER	0175	\/\\\/\\\\\\	C	CONNEC	TIONS		DEMARKO
TAG	DESCRIPTION	MODEL	SIZE	VALVE/ FAUCET	DRAIN	VENT	C.W.	H.W.	REMARKS
<u>WC-1</u>	WATER CLOSET FLOOR MTD. FLUSH TANK	AMERICAN STANDARD #2467.016	ELONGATED	INTEGRAL WITH TANK	4	2	1/2		MOUNT 18" A.F.F HANDICAP
<u>L-1</u>	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.
<u>L-2</u>	LAVATORY HANDICAP-CENTERSET	ELKAY ELVWO2219CS	22"X19" 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.
<u>L-3</u>	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
<u>MS-1</u>	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
<u>FD-1</u>	FLOOR DRAIN	J.R. SMITH #2010CA-NB	6" ROUND TOP		3	2			CAST IRON BODY W/ TRAP PRIMER CONNECTION
<u>FD-2</u>	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
<u>WCO</u>	WALL CLEANOUT	J.R. SMITH #4472T	STAINLESS STEEL COVER PLATE		SEE PLANS				1
FCO	FLOOR CLEANOUT	J.R. SMITH #4020	5 3/4"Ø ROUND "TWIST TO FLOOR" ADJUSTABLE TOP		SEE PLANS				NICKEL BRONZE TOP
<u>GCO</u>	GRADE CLEANOUT	J.R. SMITH #4250	8 3/4"Ø ROUND CLEAN OUT FOR UNFINISHED AREA		SEE PLANS				CAST IRON TOP
<u>HB</u>	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 INL AND 3/4" THREADED OUTLET, AN INTEGRATED VACUUM BREAKEF MOUNT 36" AFF - UNO
EWC-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; PROVIDI W/ APRON MODEL #LKAPREZI
EWC-2	WATER COOLER	ELKAY EZ8			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
<u>TP-1</u>	TRAP PRIMER	MIFAB MR-500	1/2"				1/2		MI-DU-500 DISTRIBUTION UNIT & MI-600 TRAP FITTING
<u>RP-1</u>	RECIRCULATION PUMP	GRUNDFOS UP15-10 B5/TLC	3 FT HEAD AT 3 GPM					1/2	SINGLE PHASE, 115 V 6W. PROV WITH TIMER AND HONEYWEL 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 6. 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)

8. PROVIDE WALL MOUNTED SERVICE FAUCET, MOP HANGER BRACKET AND STAINLESS STEEL STRAINER AT MS-1 LOCATION.

9. ALL FIXTURES SHALL BE SUBMITTED AND APPROVED BY ENGINEER. 10. 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	
<u>WH-1</u>	BUILDING	A. O. SMITH	BTX-80	50 GAL	83 GPH @ 100° TEMP RISE	76	120/1	
ACCEPTABLE MANUEACTUREDS FOR FOLIVALENT OF SCHEDULE PRODUCT (NO OTHER SURSTITUTIONS WILL BE ALLOWER):								

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

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).

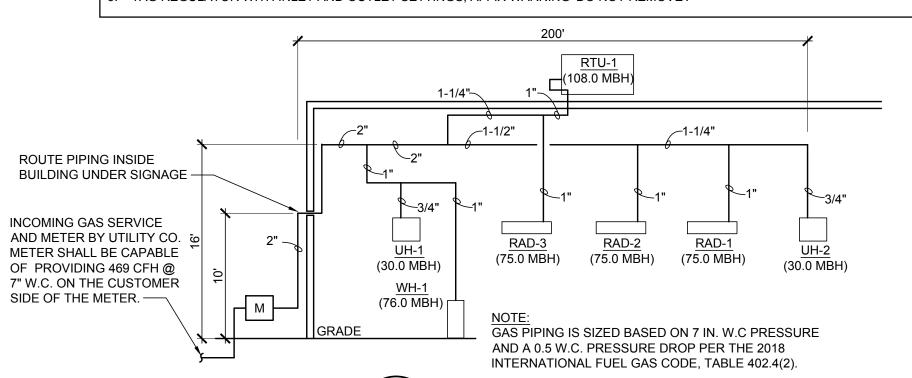
ROUTE T&P RELIEF DRAIN AND OTHER DRAIN PIPING TO FLOOR DRAIN. TERMINATE 2" ABOVE RIM LEVEL PROVIDE PRE-MANUFACTURED 18" HEIGHT STEEL WATER HEATER STAND RATED FOR A 50 GALLON WATER HEATER.

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.C1/8"			
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.C1/4"			
ACTARIS	B-31R 1"X1"	400 TO 800	2 P.S.I.G.	7 INCHES W.C.	LT.GREEN			

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).

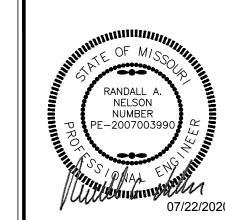
TAG REGULATOR WITH INLET AND OUTLET SETTINGS, AFFIX WARNING 'DO NOT REMOVE'.



GAS PIPING SCHEMATIC SCALE: N.T.S.

STIPULATION OF REUSE
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ORE NEW 2020 3561 JACK LEE'S S



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

PROPERTY NO .: 6 DIGIT NO.:

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

SHEET TITLE: **PLUMBING** SCHEDULES AND RISERS SHEET NUMBER:

NOT ALL SYMBOLS ARE NECESSARILY LISED ON DRAWINGS ALL MOUNTING HEIGHTS

SHTING F	FIXTURES	<u>SWITCHES</u>	
D	4' LINEAR LIGHT (UPPER CASE LETTER INDICATES FIXTURE TYPES,	\$ <sup>n</sup>	SINGLE-POLE SWITCH (MOUNTED AT 48" AFI (LOWER CASE LETTER INDICATES SWITCHIN
LP-21g	UPPER CASE LETTERING WITH HYPHEN FOLLOWED BY A NUMBER INDICATES PANEL AND CIRCUIT NUMBER, LOWER CASE LETTER INDICATES SWITCHING).	\$ <sup>PL</sup>	SINGLE-POLE SWITCH WITH PILOT LIGHT (MOUNTED AT 48" AFF)
		<b>\$</b> <sup>3</sup>	3-WAY SWITCH (MOUNTED AT 48" AFF)
	HIGH BAY LIGHT	\$ <sup>oc</sup>	OCCUPANCY SENSOR SWITCH
$\bigcirc$	PENDANT LIGHT	\$ <sup>M</sup>	SINGLE-POLE, MOTOR-RATED SWITCH
0	PENDANT LIGHT	M\$ <sup>2</sup>	2-POLE, MOTOR-RATED SWITCH
	REMOTE EMERGENCY HEAD	\$	SWITCH BANK WITH COVERPLATE
		POWER AND	CONTROL
	EXTERIOR WALL PACK	Т	TRANSFORMER
	POLE MOUNTED SITE LIGHT		PANEL
	□ 4' LINEAR LIGHT WITH EMERGENCY BATTERY BACKUP		MOTOR
	EMERGENCY LIGHT WITH BATTERY BACK-UP		DISCONNECT SWITCH (NON-FUSED EXCEPT AS NOTED)
	EXIT SIGN WITH EMERGENCY BATTERY BACKUP (HATCH INDICATES ILLUMINATED FACE; DIRECTIONAL ARROWS ON SIGN AS INDICATED)		COMBINATION STARTER DISCONNECT SWITCH
SCELLA	NEOUS	RECEPTACL	<u>ES</u> *
J	JUNCTION BOX		SINGLE RECEPTACLE (GROUND TYPE)
PC	EXTERIOR PHOTOCELL	+	DUDI EX DECEDTACI E (CDOUND TYPE)

<b>J</b>	JUNCTION BOX	$\bigoplus$	SINGLE RECEPTACLE (GROUND TYPE)
PC	EXTERIOR PHOTOCELL		DUPLEX RECEPTACLE (GROUND TYPE)
109	CEILING MOUNTED OCCUPANCY SENSOR (LOWER CASE LETTER INDICATES SWITCHING)	Ó	DUPLEX RECEPTACLE IG
	CORNER MOUNTED OCCUPANCY SENSOR (LOWER CASE LETTER INDICATES SWITCHING)		DUPLEX RECEPTACLE GFCI
	PUSH BUTTON STATION (MOUNTING HEIGHT 48" AFF)		QUAD RECEPTACLE
<b>A</b>	TELEPHONE OUTLET BOX, WALL-TYPE WITH 3/4" CONDUIT STUBBED UP IN WALL AND TURNED OUT IN CEILING AREA WITH INSULATED BUSHING. (MOUNTING HEIGHT 18" AFF)	<b>•</b>	QUAD RECEPTACLE IG
lack	TELEPHONE/DATA OUTLET BOX, WALL-TYPE WITH 3/4" CONDUIT STUBBED UP IN WALL AND TURNED OUT IN CEILING AREA WITH INSULATED BUSHING. (MOUNTING HEIGHT 18" AFF)		QUAD RECEPTACLE GFCI SPECIAL RECEPTACLE (AS NOTED)
$\triangle$	DATA OUTLET BOX, WALL-TYPE WITH 3/4" CONDUIT STUBBED UP IN WALL AND TURNED OUT IN CEILING AREA WITH INSULATED BUSHING. (MOUNTING HEIGHT 18" AFF)	•	* REFERENCE SHEET E3 FOR SPECIFIC ROOM MOUNTING HEIGHT REQUIREMENTS.

MECHANICAL EQUIPMENT TAG

(UPPER HALF INDICATES EQUIPMENT TYPE, BOTTOM HALF INDICATES EQUIPMENT NUMBER)

\*REFER TO MECHANICAL SCHEDULES ON SHEET M3.

	ELEC	CTRICA	L ABBREVIATI	ONS	
AFF	ABOVE FINISHED FLOOR	GFCI	GROUND FAULT INTERRUPTER	SW	SWITCH
BFC	BELOW FINISHED CEILING	IC	INTERRUPTING CAPACITY	TR	TAMPER RESISTANT
С	CONDUIT	IG	ISOLATED GROUND	TYP	TYPICAL
СВ	CIRCUIT BREAKER	MTD	MOUNT OR MOUNTED	UF	UNDER FLOOR
CLG	CEILING	NC (N.C.)	NORMALLY CLOSED	UG	UNDERGROUND
EC	EMPTY CONDUIT	NF	NON FUSED	UNO (U.N.O.)	UNLESS NOTED OTHERWISE
EOL	END OF LINE	NIC	NOT IN CONTRACT	WG	WIRE GUARD
EWL	ELECTRIC WATER COOLER	NL	NIGHT LIGHT	WP	WEATHERPROOF
(G)	GROUND (EQUIPMENT)	NO (N.O.)	NORMALLY OPEN	XFMR	TRANSFORMER

LIGHT FIXTURE SCHEDULE												
FIXTURE TAG	MANUFACTURER	MODEL#	LAMP	VOLTAGE	INSTALLATION	DESCRIPTION	WATTS	QUANTITY	NOTES			
А	CDS LIGHTING	KIRK-P-USV	LED BULB (50W PAR20 EQUIV)	120V	SUSPENDED	DECORATIVE LED PENDANT	12	7	8			
D	CREE	LS4C-40L-35K-10V-FD	LED	120V	CEILING AND SUSPENDED	4' LINEAR STRIP, 4,000 LUMENS, 3500K, 80 CRI	30	33	3,6,9			
DE	CREE	LS4C-40L-35K-10V-FD-EB14	LED	120V	CEILING AND SUSPENDED	4' LINEAR STRIP, 4,000 LUMENS, 3500K, 80 CRI WITH EMERGENCY BACKUP	30	10	3,6,9			
Е	CREE	E-XML1W	LED	120V	SEE NOTES	EMERGENCY DUAL HEAD LIGHTING UNIT	1.8	9	1			
EA	CREE	E-XHL2WG	LED	120V	WALL	EMERGENCY EXTERIOR REMOTE DUAL HEAD WET LOCATION LISTED	2	3	2			
F	CREE	KBL-A-UV-M-40K-8-UL-10V + ALR16; WG-A; AP-515P	LED	120V	SUSPENDED	HIGH BAY, 20900 LUMENS, 4000K, 80 CRI	142	21	3			
K	FURNISHED BY BSRO	FURNISHED BY BSRO	INTEGRAL LED	120V	SUSPENDED	FIRESTONE CORD REEL LIGHT	5	8	5			
N	CREE	XSPW-B-WM-3ME-2L-57K-UL	LED	120V	EXTERIOR WALL	EXTERIOR WALL PACK, TYPE III 2490 LUMENS, 5700K	19	19	7			
Х	CREE	E-XCL2RRCW	LED	120V	SEE NOTES	EXIT SIGN WITH TWO LAMP HEADS REMOTE CAPABILITY (SEE TYPE EA)	3.4	7	4			

- . FIXTURE MOUNTED 12" BELOW CEILING OR AT 13'-6" AFF IN ALL AREAS WITHOUT A CEILING. MOUNT TO STUDS AT 13'-6" AFF IN UTILITY ROOM.
- 2. MOUNT ON WALL MINIMUM OF 12" ABOVE DOOR JAMB. CONNECT TO BATTERY SIDE OF EXIT LIGHT.
- . INSTALL LIGHTS AT 13'-0" AFF IN THE SERVICE BAY, UNLESS NOTED OTHERWISE.
- ·. (MOUNT EXIT SIĞNS IN SHOWROOM AT 12'-0" AFF TO BOTTOM OF SIGN. IN ALL OTHER AREAS, MOUNT ON WALL 6" ABOVE DOOR OR MOUNT ON CEILING AS APPLICABLE (MAXIMUM 8'-0" AFF). i. COORDINATE EXACT FIXTURE PLACEMENT WITH ARCHITECTURAL DRAWINGS.
- (INSTALL LIGHTS AT STRUCTURE LEVEL IN THE FOLLOWING AREAS: INVENTORY. INSTALL LIGHTS AT 10'-0" AFF IN THE FOLLOWING AREAS: CUSTOMER SHOW ROOM AND OFFICE.
- IŅŞTAĻL LIGHTS AT 8'-0" AFF IŅ THE FOLLOWING AREAS: UTILITY AREA, BREAK ROOM, ŞHOP TOILET AND UNISEX TOILET
- REFERENCE ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHT FIXTURES ARE TO BE SUSPENDED FROM STRUCTURE AT 80" AFF TO BOTTOM. PROVIDE 10'-6" LONG CORD. SPECIFY CORD LENGHTH TO MANUFACTURER. REFER TO SPECS SECTION
- 265119-3.3H FOR MORE INFORMATION. FIXTURES ARE TO BE SUSPENDED FROM STRUCTURE WITH ALL-THREADED ROD. REFER TO SPECS SECTION 265119-3.3H FOR MORE INFORMATION

## LIGHTING GENERAL NOTES

- ALL LIGHTING FIXTURES SHALL BE RATED FOR BUILDING SYSTEM VOLTAGE. CONTRACTOR MUST VERIFY ALL LOCATIONS. CONTRACTOR SHALL FURNISH AND INSTALL EACH LIGHTING FIXTURE COMPLETE WITH PLASTER FRAMES AND ALL OTHER INSTALLATION AND HANGING HARDWARE AS REQUIRED FOR A COMPLETE AND FINISHED INSTALLATION AT EACH FIXTURE LOCATION.
- VERIFY AND COORDINATE ALL LIGHTING FIXTURE CATALOG NUMBERS AND LOCATIONS WITH THE INTENT OF FIXTURE DESCRIPTIONS LISTED AND VERIFY FIXTURE QUANTITIES. FIXTURE QUANTITIES SHOWN ARE FOR INFORMATION ONLY. ANY DISCREPANCY SHALL BE REPORTED IN WRITING TO THE ARCHITECT PRIOR TO INSTALLATION.
- ALL FIXTURES SHALL BE U.L. LABELED. ALL LIGHTING FIXTURES EXPOSED TO WEATHER OR MOISTURE SHALL BEAR U.L. "WET LOCATION" LABEL, AND LIGHTING FIXTURES EXPOSED TO DAMPNESS SHALL BEAR U.L. "DAMP LOCATION" LABEL.
- ALL EXIT SIGNS SHALL BE INSTALLED COMPLETE WITH ALL ACCESSORIES REQUIRED TO PROVIDE AN UNOBSTRUCTED VIEW OF EACH SIGN FACE. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION AND LOCATION OF ALL EXIT SIGNS WITH LOCAL AUTHORITIES. EXIT SIGNS WILL BE
- FIELD ADJUST AIMING PATTERN OF EXTERIOR LIGHTS AT NIGHT SESSION. BSRO TO DETERMINE TIME AND
- ALL EXIT SIGNS AND BATTERY EMERGENCY UNITS MUST BE APPROVED BY LOCAL CODE, MAINTAIN A MINIMUM OF 90 MINUTES OF CONTINUOUS ILLUMINATION, AND SHALL PROVIDE A MINIMUM OF 1 FOOT-CANDLE AT THE WALKING SURFACE LEVEL IN SPACES THAT REQUIRE TWO OR MORE MEANS OF EGRESS. THE CONTRACTOR WILL FURNISH AND INSTALL ANY ADDITIONAL EMERGENCY UNITS AS REQUESTED BY THE LOCAL AUTHORITY HAVING JURISDICTION AT THE FINAL INSPECTION ANY
- REFER TO APPLICABLE SECTIONS OF THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR LIGHTING FIXTURES.

ADDITIONAL COST TO BE APPROVED BY BSRO.

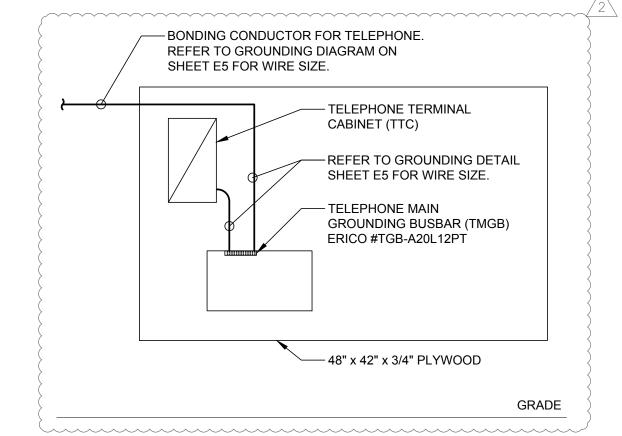
## GENERAL ELECTRICAL NOTES

- THESE GENERAL NOTES APPLY TO ALL WORK IN THIS PROJECT, AND THE WORD "PROVIDE" SHALL MEAN "FURNISH AND INSTALL".
- 2. REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ADDITIONAL GENERAL NOTES WHICH WILL APPLY
- NOTES ON DRAWINGS MAY APPLY TO ALL SIMILAR CONDITIONS WHETHER THEY ARE REPEATED OR NOT.
- 4. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE A.D.A.A.G. (AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES).
- CONTRACTOR MUST VISIT THE SITE TO FAMILIARIZE THEMSELVES WITH THE EXISTING SITE CONDITIONS WHICH WILL BE AFFECTED DURING CONSTRUCTION PRIOR TO SUBMITTING HIS BID PROPOSAL.
- 6. WHERE SEVERAL DEVICES ARE GANGED TOGETHER, THE COVER PLATE SHALL BE OF THE GANGED STYLE FOR THE NUMBER OF DEVICES USED.
- 7. THE COLOR OF ALL ISOLATED GROUND RECEPTACLES AND COVER PLATES SHALL MATCH THOSE OF OTHER DEVICES ON THE JOB.

- BOXES LOCATED ON OPPOSITE SIDES OF NON-FIRE RATED WALLS SHALL BE OFFSET A MINIMUM OF 6" HORIZONTALLY. BOXES ON OPPOSITE SIDES OF FIRE RATED WALL SHALL BE OFFSET A MINIMUM OF 24" HORIZONTALLY. "THRU-THE-WALL" BOXES SHALL NOT BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE
- VERIFY TOTAL CONNECTED LOADS AND HORSE POWER WITH OTHER TRADE'S CONTRACTORS PRIOR TO WIRING OF ALL EQUIPMENT. MAKE ANY CHANGES TO OVERCURRENT DEVICES OR FEEDER SIZE PER LOCAL ELECTRICAL CODE.
- 10. ALL TEMPERATURE CONTROL WIRING AND CONDUIT SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR. CONTRACTOR SHALL ADJUST CONDUIT ROUTING TO NOT 14. INTERFERE WITH ANY HANGING SIGNS OR BOARDS. COORDINATE ALL CONDUIT LOCATIONS WITH THE FIXTURE PLAN ON SHEET F1 PRIOR TO ROUGH-IN TO ENSURE NO ENCROACHMENT OF CONDUIT OR DEVICE WITH SIGNS OR BOARDS.
- 11. FIELD VERIFY LOCATION OF AREA SMOKE DETECTORS AND HEAT DETECTORS. DO NOT LOCATE WITHIN 36" OF AN HVAC DIFFUSER (SUPPLY OR RETURN), IN A DIRECT AIR FLOW OR WITHIN 36" OF A SPRINKLER HEAD. COORDINATE LOCATIONS WITH LIGHT FIXTURES.

ARCHITECT/ENGINEER.

- 12. VERIFY ALL FURNITURE, MODULAR FURNITURE AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS AND REVIEWED SHOP DRAWINGS. PRIOR TO MAKING THE ACTUAL ELECTRICAL INSTALLATION CONTRACTOR SHALL ADJUST RECEPTACLES, OUTLETS OR CONNECTION LOCATIONS TO ACCOMMODATE FURNITURE AND/OR EQUIPMENT.
- 13. ONLY IN SERVICE BAY AREA AND INVENTORY AREA CONDUIT SHOULD BE ROUTED 1-1/2" AWAY OR AS TIGHT AS POSSIBLE TO THE UNDERSIDE OF THE STRUCTURE. ROUTE CONDUIT AND UNISTRUT TIGHT TO BOTTOM OF STRUCTURE, IN A CLEAN AND ORDERLY MANNER. ABSOLUTELY NO CONDUITS ARE TO BE ROUTED UNDER OR IN THE BUILDING SLAB.
- ALL ELECTRICAL WORK AND MATERIALS SHALL COMPLY WITH LATEST NEC AND ALL LOCAL CODES AND ORDINANCES. IN CASE OF CONFLICT AMONG REQUIREMENTS THE MORE RESTRICTING SHALL APPLY. ALL WORKING CLEARANCES AROUND THE PANELS SHALL CONFORM TO NEC ARTICLE 110 WHICH INCLUDES ALL TRADES. CONTRACTOR MAY USE PULL BOXES, WIREWAYS ETC. AS NECESSARY TO MANAGE CONDUIT ROUTING CLEAR OF THE WORK SPACE AS DEFINED BY THE NEC. THIS SHALL BE CONSIDERED "MEANS AND METHODS"

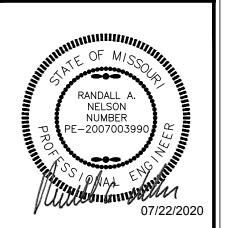


TELEPHONE GROUNDING DIAGRAM

- 1. AT ALL GROUND BARS INCLUDE NONMETALLIC LABEL: "WARNING IF THIS CONNECTOR ON CABLE IS LOOSE OR MUST BE REMOVED PLEASE CALL THE BUILDING
- RUN CONDUCTOR FROM GROUND TO TELEPHONE TERMINAL CABINET.
- 3. ALL CONNECTORS TO GROUND BARS SHALL BE 2 HOLE COMPRESSION TYPE.
- 4. GROUNDING BARS SHALL BE ELECTROLYTIC COPPER, MOUNTED ON FIBERGLASS INSULATORS, AND NEMA BOLT HOLE SIZING AND SPACING.
- ALL BONDING CONDUCTORS SHALL BE CONTINUOUS AND ROUTED IN THE SHORTEST POSSIBLE STRAIGHT LINE PATH.
- ROUTE GROUNDING WIRE FROM EACH "TMGB" AND "TTC" TO NEAREST VERTICAL STRUCTURAL STEEL MEMBER AND CADWELD.
- ROUTE CONDUCTOR FROM "TMGB" AND "TTC" TO RELAY RACK IN IT CLOSET AND CADWELD TO RACK.
- ALL TELEPHONE CLOSETS WITH MULTIPLE WIRE MANAGEMENT RACKS WILL HAVE BONDING JUMPER

PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

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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

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

SHEET TITLE:

**ELECTRICAL** SYMBOLS, NOTES, AND SCHEDULES SHEET NUMBER:

PROPERTY NO.: 6 DIGIT NO.:

4 DIGIT NO.: 78CS

AOR PROJECT NUMBER: 1955B71

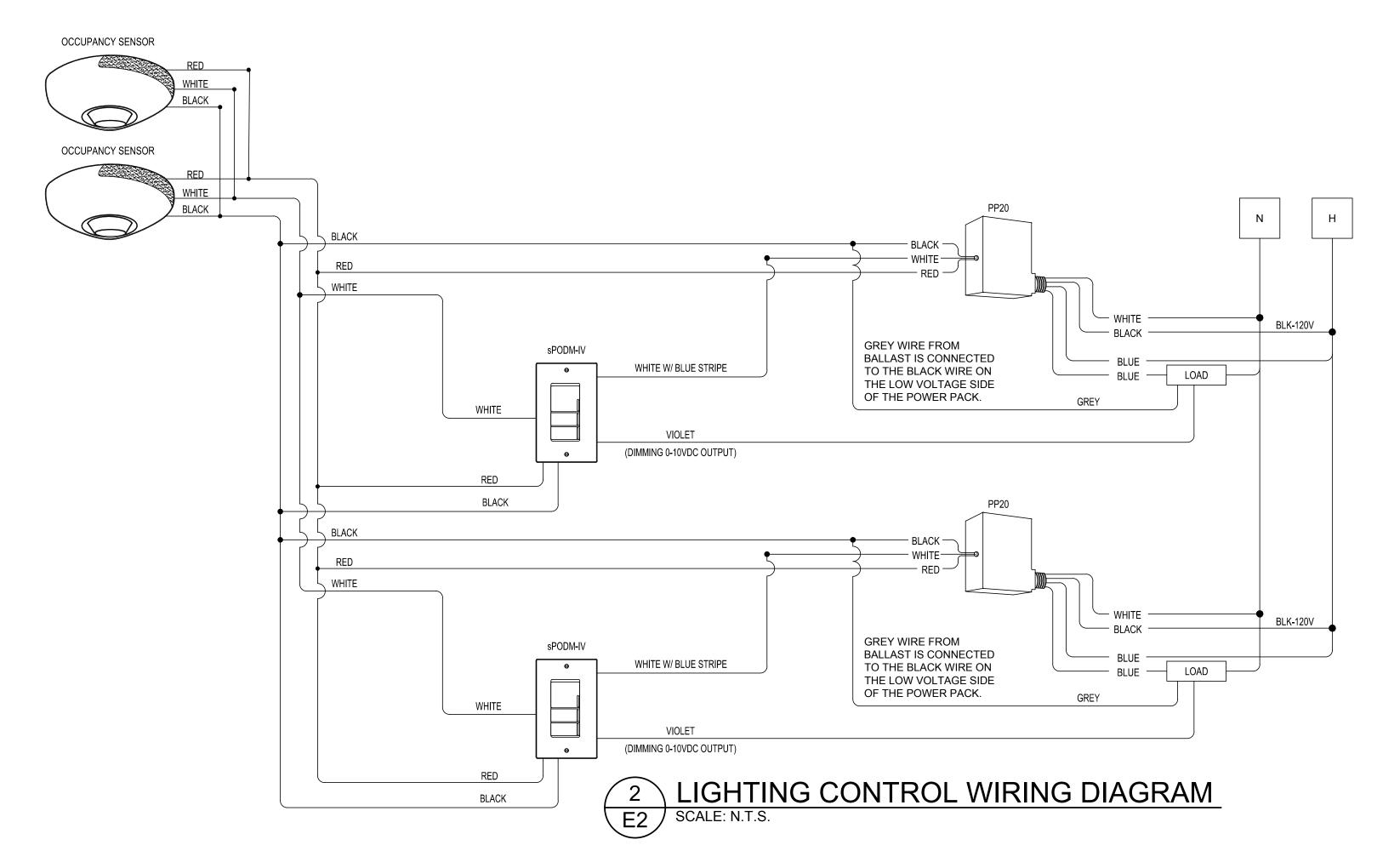
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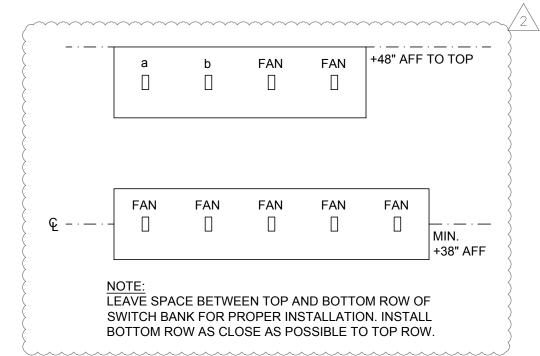
SHEET TITLE:

LIGHTING PLAN

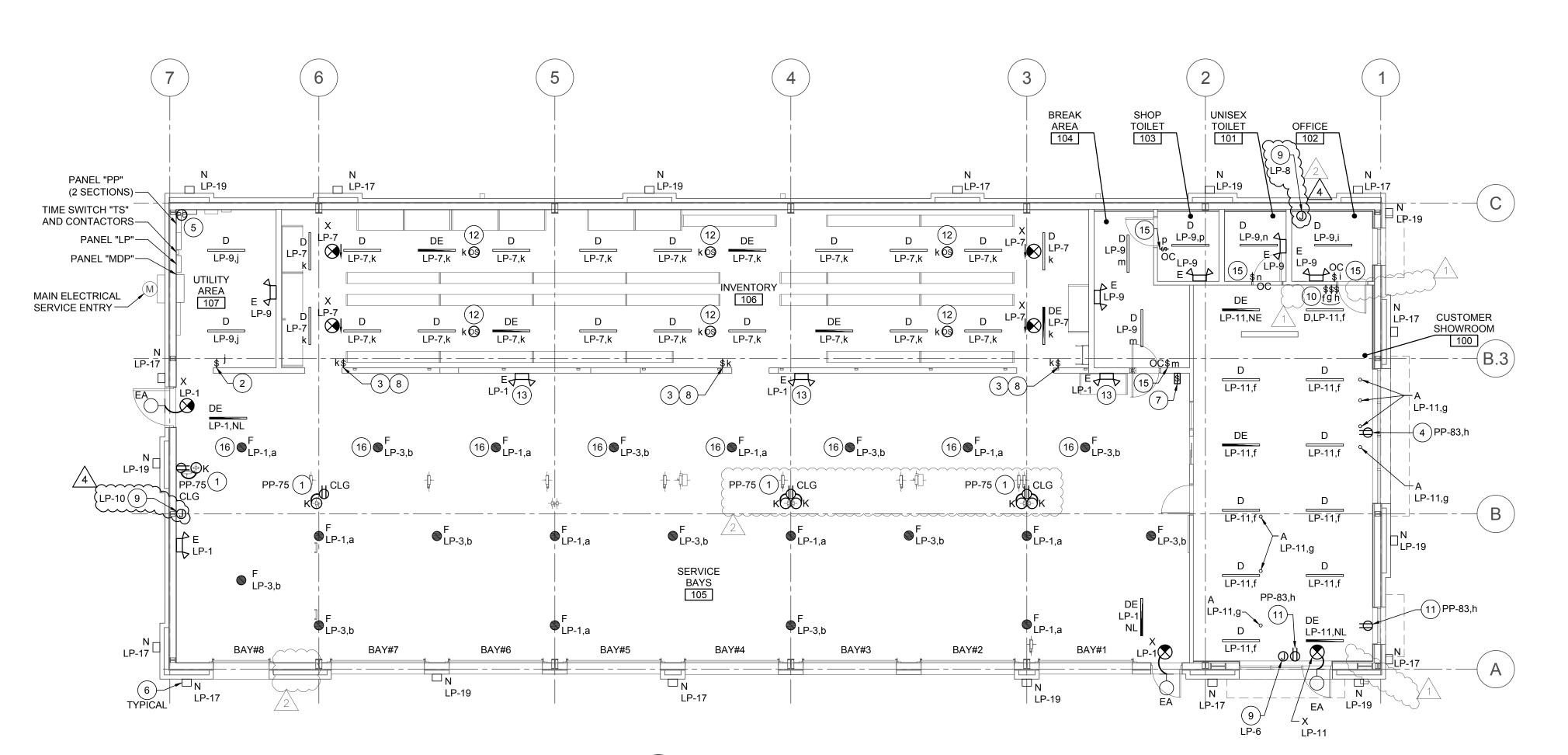
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E2











# LIGHTING PLAN GENERAL NOTES

- A. 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.
- B. SEE "ARCHITECTURAL REFLECTED CEILING PLAN" FOR ALL LIGHTING FIXTURES LOCATION DIMENSIONS.
- C. SEE "FIXTURE PLAN" SHEET F1 FOR ALL EQUIPMENT LOCATIONS AND QUANTITIES.
- D. ALL WIRING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE NEC AND LOCAL CODE AUTHORITIES HAVING JURISDICTION. SEE "GENERAL ELECTRICAL NOTES" ON SHEET F1
- E. 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.
- 2. PROVIDE TOGGLE SWITCH FOR MANUAL CONTROL OF LIGHTING FIXTURES AS INDICATED. MANUAL CONTROL IS FOR OCCUPANT SAFETY NEAR ELECTRICAL
- 3. PROVIDE POWERPACK(S) (SENSOR SWITCH #PP20) AS REQUIRED FOR LIGHTING CONTROLS IN THIS AREA. REFER TO DETAIL 2 (THIS SHEET) FOR ADDITIONAL INFORMATION.
- 4. PROVIDE RECEPTACLE 6" ABOVE SHOW WINDOW TO MEET NEC SHOW WINDOW REQUIREMENTS.
- 5. 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.
- 6. ROUTE DESIGNATED CIRCUITS VIA TIME SWITCH "TS" AND CONTACTORS, AS NOTED IN THE "CONTACTOR DIAGRAM" AND "CONTACTOR NOTES" ON SHEET
- 7. 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 UP INSIDE FACE OF WALL FOR RECESSED BOX. SEE SWITCH BANK ELEVATION (THIS SHEET) FOR MORE INFO.
- 8. PROVIDE SWITCH (SENSOR SWITCH SPODM-IV) FOR MANUAL CONTROL OF LIGHTING FIXTURES AS INDICATED.
- 9. 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.
- 10. 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.
- 11. 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.
- 12. 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.
- 13. FIXTURE TO BE PENDANT MOUNTED FROM CONDUIT AT STRUCTURE. SEE LIGHT FIXTURE SCHEDULE FOR MORE INFORMATION.
- 14. NOT USED
- 15. 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.
- 16. THESE LIGHT FIXTURES ONLY TO BE MOUNTED AT 14'-6" AFF TO MAINTAIN CLEARANCE FROM RADIANT HEATER OUTPUT.

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PLAN

SHEET NUMBER:

SHEET TITLE:

# ELECTRICAL SHOP EQUIPMENT SCHEDULE VOLTS PHASE POLE AMPS NOTES DESCRIPTION AIR DRYER 20 SEE DETAIL ON SHEET E4 FOR ADDITIONAL INFORMATION CHAMPION #CRH35 BRAKE SHOP #BL505-AB 20 PROVIDE RECEPTACLE ON UNISTRUT LADDER. RUN CONDUIT DOWN LADDER FROM CEILING. (INSTALLED BY HUNTER) 20 CUT CORD & PLUG FOR HARDWIRED CONNECTION. MOUNT DISCONNECT AT 48" AFF. PLACE DEVICES BEHIND CENTER CONSOLE ELECTRONIC WHEEL BALANCER #RFE13 (INSTALLED BY HUNTER) IN ORDER TO NOT INTERFERE WITH OPENING EQUIPMENT SHROUD. ELECTRONIC WHEEL BALANCER #SWT33 20 CUT CORD & PLUG FOR HARDWIRED CONNECTION. MOUNT DISCONNECT AT 48" AFF ON UNISTRUT LADDER. RUN CONDUIT DOWN 208 FROM CEILING. PLACE DEVICES BEHIND CENTER CONSOLE IN ORDER TO NOT INTERFERE WITH OPENING EQUIPMENT SHROUD. (INSTALLED BY HUNTER) CORD REEL POWER DROP 120 20 MOUNT TO ROOF STRUCTURE AT LOCATION SHOWN. CIRCUIT WILL HAVE GFCI PROTECTION AT BREAKER. INSTALL TO AVOID CONFLICT WITH OTHER EQUIPMENT. SEE DETAIL ON SHEET E4 FOR ADDITIONAL INFORMATION. TIRE CHANGER #TCR1S 208 30 PROVIDE NEMA L6-30R ON UNISTRUT LADDER. RUN CONDUIT DOWN LADDER FROM CEILING. (INSTALLED BY HUNTER) 5 HP AIR COMPRESSOR 30 | SEE ONE-LINE DIAGRAM ON SHEET E5 AND DETAIL ON SHEET E4 FOR ADDITIONAL INFORMATION. PROVIDE 30A, 3-POLE, LOCKABLE

NOTES: VERIFY ALL ELECTRICAL REQUIREMENTS AND NEMA CONFIGURATIONS TO ACTUAL EQUIPMENT SUPPLIED PRIOR TO ROUGH-IN.

## POWER PLAN GENERAL NOTES

CHAMPION #VR5-8

ITEM # | QUANTITY |

13A

13B

17

18B

28

CONVENIENCE

RECEPTACLE -

NOTE: SEE POWER PLAN FOR CIRCUIT INFORMATION.

BREAK COUNTER ELEVATION

- B. 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
- 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

# DATA REQUIREMENTS

DISCONNECT WITH LOCK, MAKE ALL FINAL POWER TERMINATIONS ADJACENT TO AIR PIPE MANIFOLD ON COMPRESSOR

THERE ARE A TOTAL OF EIGHT (8) LINES THAT SERVICE EACH STORE 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: FOR PHONE AND DATA. INTERNET SERVICE VIA LOCAL CABLE SERVICE / 2 \PROVIDE ONE (1) QUAD RECEPTACLE WHICH SHOULD TERMINATE IN A ŢIJŇĊŤIŎŇ BOX MŎŬŇTĚĎ ŎŇ ŤHĚ BĂCK SĬĎĚ ŎF ŤHĚ PĂŇĚĽ, BĚĽŎŴ 🤇 THE LOWEST ADJUSTABLE SHELF AND KNOCK OUT PANEL.

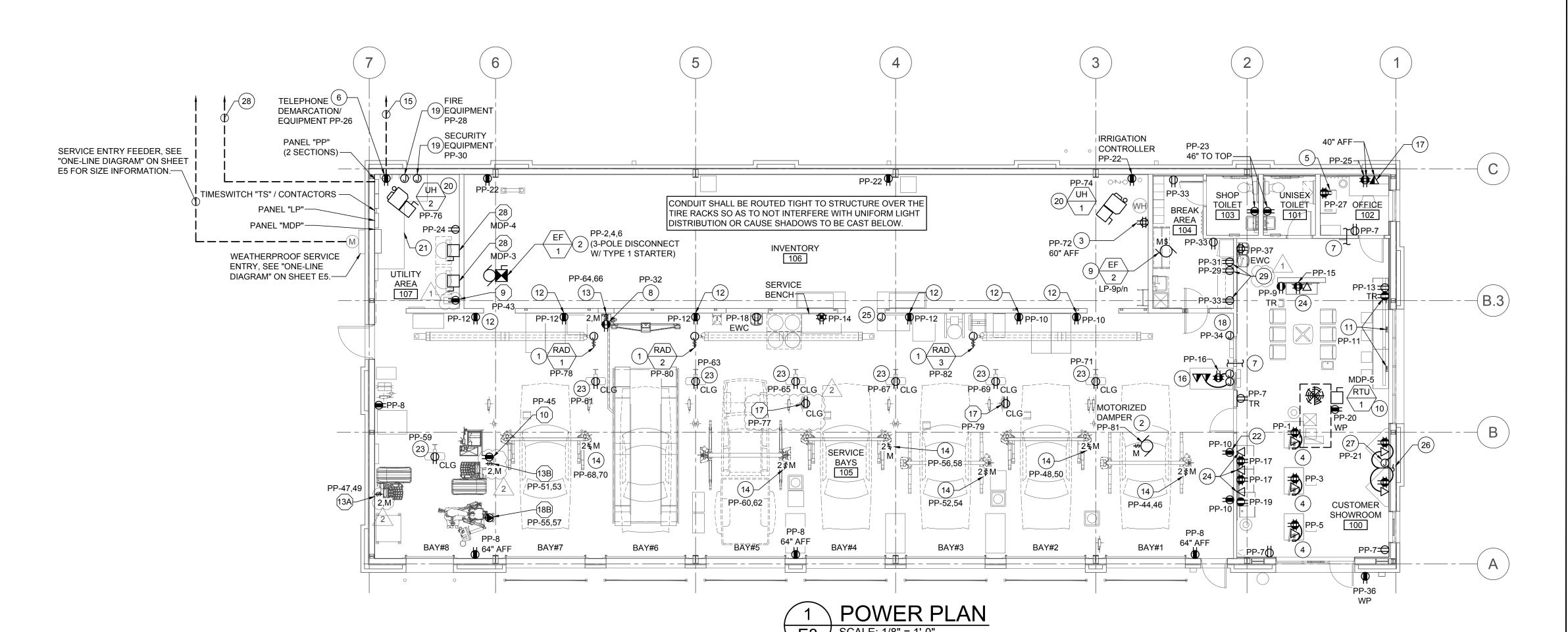
> SERVER CABINET POWER REQUIREMENTS: PROVIDE ONE (1) QUAD RECEPTACLE ON RIGHT SIDE OF SERVER CABINET MOUNTED AT 11'-0" AFF AND CIRCUIT AS SHOWN. REFER TO SHEET A7 FOR ADDITIONAL INFORMATION.

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.

- A. ALL DEVICES LOCATED IN SERVICE AREA SHALL BE MOUNTED AT 48" AFF TO TOP OF BOX, UNLESS NOTED OTHERWISE.

- D. WIRE ALL HVAC CONTROL DEVICES, AND COORDINATE WITH OTHERS, SEE "GENERAL ELECTRICAL NOTES" ON SHEET E1 FOR ADDITIONAL INFORMATION.



# **# 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.
- 10. 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.
- 11. ROUTE CORDS FOR POWER STRIPS TO RECEPTACLE SHOWN. CONCEAL ALL CORDS IN NEAT AND CLEAN MANNER.
- 12. MOUNT RECEPTACLE ON PLYWOOD AT 46" AFF FOR TEMPORARY POWER FOR SMALL HAND TOOL BATTERY RECHARGING.
- 13. 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 DISCONNECT DO NOT OBSCURE ANY 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.
- 16. REFER TO "DATA REQUIREMENTS" (THIS SHEET) FOR POWER AND CONDUIT INFORMATION IN "MVS" STATION.
- 17. CONDUIT ASSOCIATED WITH DATA BOX SHALL BE EXTENDED TO SERVER CABINET. PROVIDE PULL STRINGS IN CONDUIT.
- 18. PROVIDE 120V POWER CONNECTION FOR TOXALERT SYSTEM CONTROL PANEL.
- 19. 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.
- 20. PROVIDE POWER TO FACTORY MOUNTED DISCONNECT SWITCH. COORDINATE ALL WORK WITH MECHANICAL CONTRACTOR.
- 21. MEET ALL ELECTRICAL EQUIPMENT CLEARANCES BOTH HORIZONTALLY AND VERTICALLY IN THIS SPACE.
- 22. PROVIDE RECEPTACLE FOR "NO LOSS DAYS" SIGN AT 11-0" AFF. VERIFY EXACT

LOCATION WITH CONSTRUCTION MANAGER PRIOR TO ROUGH-IN.

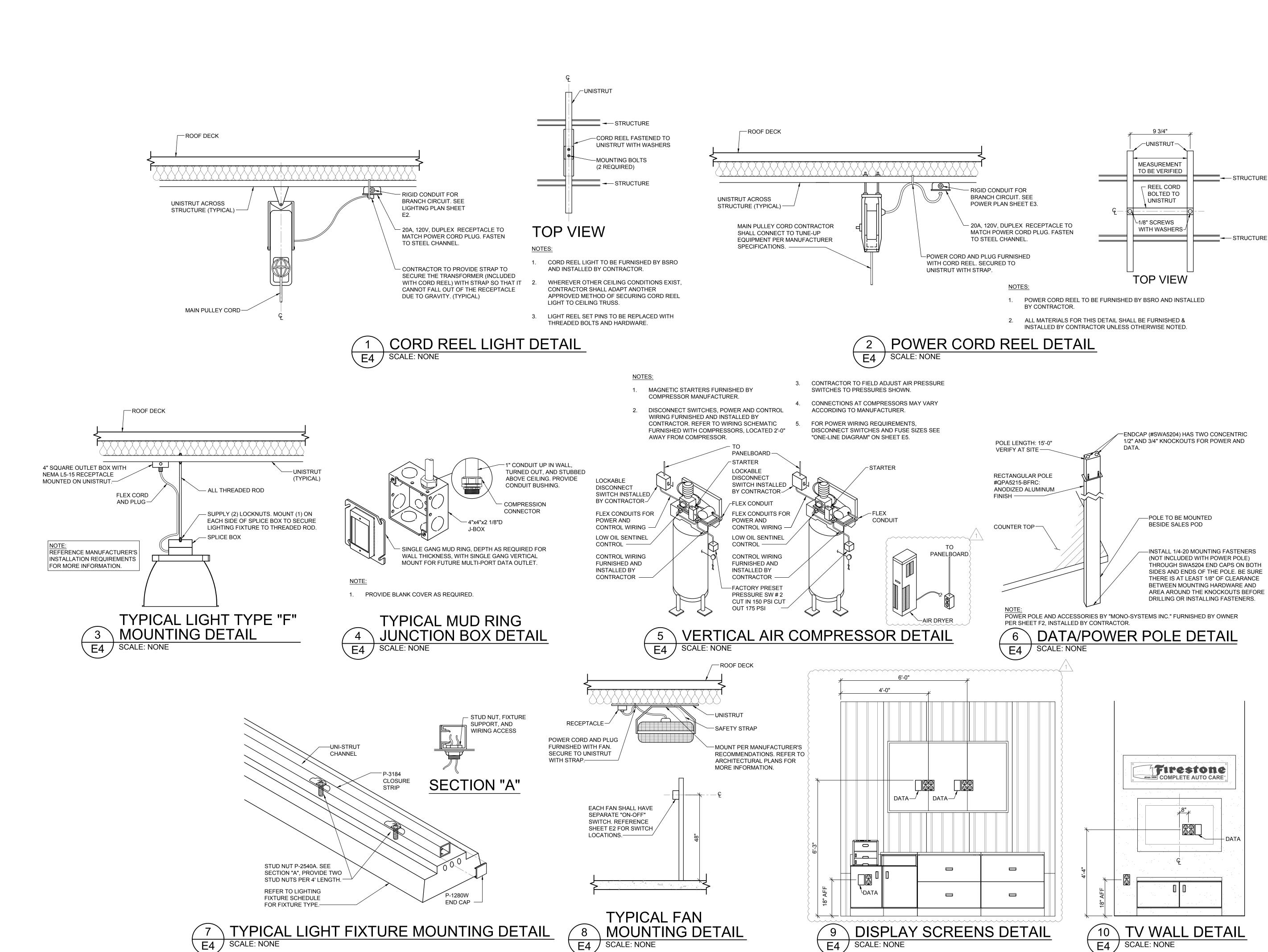
- 23. PROVIDE WORKSTATION FAN (ULINE #H-4092). RECEPTACLE FOR WORKSTATION FAN IS SUSPENDED FROM STRUCTURE. CIRCUIT WILL HAVE GFCI PROTECTION AT BREAKER. SEE SHEET E2 FOR CONTROLS AND SHEET E4 FOR MOUNTING
- 24. CONDUIT ASSOCIATED WITH DATA BOX SHALL BE EXTENDED TO SERVER CABINET. PROVIDE PULL STRINGS IN CONDUIT. REFER TO DETAIL ON SHEET E4 FOR INFORMATION ON MOUNTING LOCATION OF DATA BOX AND POWER BEHIND DEVICES IN THIS AREA.
- 25. PROVIDE JUNCTION BOX FOR TOXALERT INSTALL SENSOR AND PROVIDE WIRING BETWEEN TOXALERT PANEL AND SENSOR. COORDINATE LOCATIONS WITH MECHANICAL CONTRACTOR.
- 26. 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 CABLING 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 CABLING FROM J-BOX IN WALL TO EACH RECEPTACLE MOUNTED INSIDE MRT CABINET. COORDINATE EXACT CONNECTION MILLWORK PRIOR TO ROUGH IN.
- 28. 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.
- 29. REFER TO "BREAK COUNTER ELEVATION" (THIS SHEET) FOR MORE INFORMATION.)

MICROWAVE

RECEPTACLE-

REFRIGERATOR

RECEPTACLE -



ACERTING GROUP, LLC

1817 West 95th Street Lenexa, Kansas 66215

19 913 322 5150 P 913 322 5155

www.AcertusGroup.com

SINGE 1928 GOMPLETTE AUTO GARES CONDITIONS, LLC AND IS LOANED ON THE EXPRESS CONDITIONS.

STIPULATION OF REUSE
THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE AT LEE'S SUMMIT, MO CONTEMPORANEOUSLY WITH ITS ISSUE DATE ON 03/26/2020 AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENISED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER 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 6408

RANDALL A.
NELSON
NUMBER
PE-2007003990

ISSUE BLOCK

1 04/16/20 ADD #1

2 06/30/20 CB #1

3 07/23/20 IFC

PROPERTY NO.: 16008

PROPERTY NO.: 160
6 DIGIT NO.: 906
4 DIGIT NO.: 7

AOR PROJECT NUMBER: 19558

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

ELECTRICAL DETAILS

SHEET NUMBER:

Jul 22, 2020 — 1:42pm — USER Aar G:\Bridaestone—Firestone (Enaineerina 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.

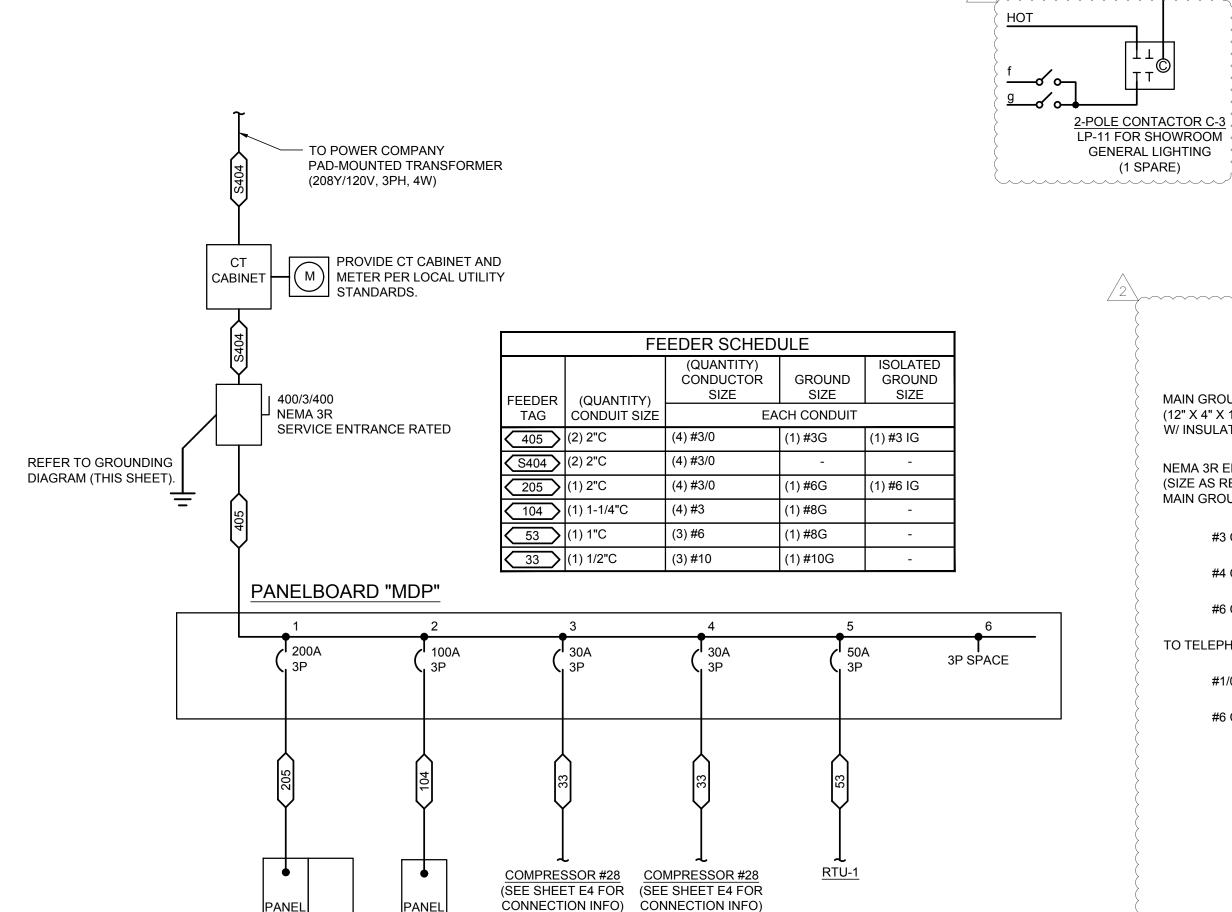
> SERVICE DISCONNECT SIZED BASED ON LOAD SUMMARY PER THE NEC.

						PANEL	BOARD	) MDP							
	BUS AMPS:	400A				LOCATION:		UTILITY ARE	A		GRC	UND BU	S: YES		
	MAIN SIZE / TYPE:	MLO				NEMA RATIN	G:	NEMA 1			ISOL	GROUN	ND BUS: YES		
	VOLTS/PHASE:	208Y/120	)V, 3F	PH, 4W		AFC VALUE:		20,335A			FEE	D THRU I	_UGS: NO		
	MOUNTING:	SURFAC	E			AIC RATING:		22,000 A FUI	LY RATED		SEC	TIONS:	1		
CKT	CIRCUIT	BREAKE	R	WIRE	LOAD	CONNECTE	D PER PHASE	(VA)	LOAD	WIRE	BRE	AKER	CIRCUIT	CKT	
#	DESCRIPTION	AMPS	Р	SIZE	(VA)	Α	В	С	(VA)	SIZE	Р	AMPS	DESCRIPTION	#	
					23,087	28,139		_	5,052						
1	PANELBOARD "PP"	OL	3	OL	22,319		26,015		3,696	OL	3	OL	PANELBOARD "LP"	2	
					20,989		_	24,080	3,091						
					1,825	3,651			1,825						
3	5HP AIR COMPRESSOR	OL	3	OL	1,825		3,651		1,825	OL	3	OL	5HP AIR COMPRESSOR	4	
	(HACR BREAKER)				1,825	· '		3,651	1,825				(HACR BREAKER)		
					3,543	3,543			0						
5	RTU-1	OL	3	OL	3,543		3,543		0				SPACE ONLY	6	
	(HACR BREAKER)				3,543			3,543	0						
PER PHASE SUB-TOTALS						35,332	33,208	31,273	LEGEND:						
		TOTAL CONN	IECTE	ED PANEL	BOARD (VA)		99,813		TS - VIA TIM	E SWITCH	1		ST - SHUNT TRIP		
	TO <sup>-</sup>	TAL CONNEC	TED	PANELBO	ARD (AMPS)		277		GF - GROUN	ND FAULT	INTE	RRUPTE	R LCK - LOCKING TAB		
		TOTAL P	ANEL	BOARD D	EMAND (VA)	111,558			FA - FIRE ALARM / RED / LOCKING TAB IG - ISOLATED GROUND						
		TOTAL PANE	ELBO	ARD DEM	AND (AMPS)		310		EM - EMERG	SENCY LT	G. / L	OCKING '	TAB OL - REFER TO ONE-LINE D	IAGRAM	

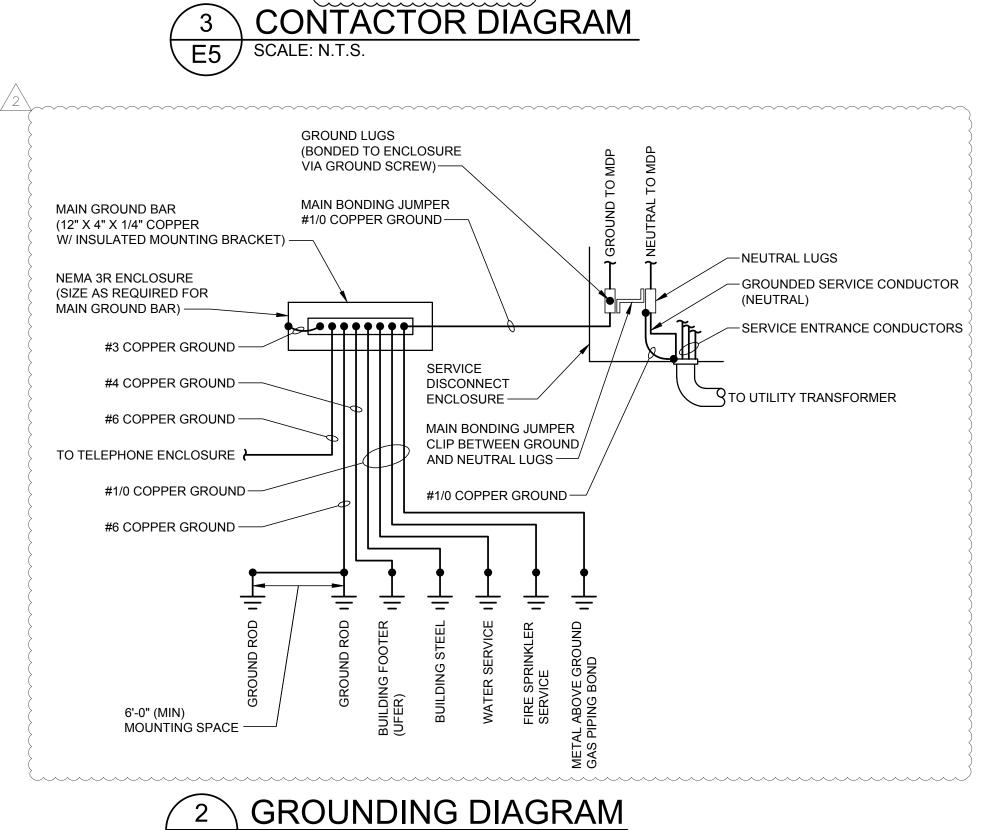
ſ							PANEL	BOARD	) LP						
		BUS AMPS: MAIN SIZE / TYPE: VOLTS/PHASE: MOUNTING:	100A MLO 208Y/120 SURFAC	•	PH, 4W		LOCATION: NEMA RATIN AFC VALUE: AIC RATING:	G:	UTILITY ARE NEMA 1 19,077A 22,000 A FUL			ISOI FEE	OUND BUS GROUN D THRU I TIONS:	ND BUS: NO	
Ī	CKT	CIRCUIT	BREAKE	R	WIRE	LOAD	CONNECTE	D PER PHASE	(VA)	LOAD	WIRE	BRI	EAKER	CIRCUIT	скт
L	#	DESCRIPTION	AMPS	Р	SIZE	(VA)	Α	В	С	(VA)	SIZE	Р	AMPS	DESCRIPTION	#
EM	1	SERVICE AREA / EM LTG	20	1	12	1,488	2,488			1,000	12	1	20	TIME SWITCH AND CONTACTORS	2
	3	SERVICE AREA LTG	20	1	12	1,562		1,562		0		1	20	SPARE	4
	5	SPARE	20	1		0			1,200	1,200	12	1	20	BUILDING SIGN	6
EM	7	INVENTORY / UTILITY RM / EM LTG	20	1	12	748	1,948			1,200	12	1	20	BUILDING SIGN	8
EM	9	OFFICE / TOILET / BREAK / EM LTG & EF-2	20	1	12	934		2,134		1,200	12	1	20	BUILDING SIGN	10
EM,TS	11	CUSTOMER SHOWROOM / EM LTG	20	1	12	539		· -	539	0		1	20	SPARE	12
TS	13	SITE LIGHTING	20	1	SL	430	430		_	0		1	20	SPARE	14
	15	SPARE	20	1		0		0		0		1	20	SPARE	16
TS	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
L	21	SPARE	20	1		0		0		0		1	20	SPARE	22
	23	SPARE	20	1		0		•	0	0		1	20	SPARE	24
ļ	25	SPARE	20	1		0	0		<b>,</b>	0		1	20	SPARE	26
ļ	27	SPARE	20	1		0		0		0		1	20	SPARE	28
Ŀ	29	SPARE	20	1		0			0	0		1	20	SPARE	30
				PEF	R PHASE S	SUB-TOTALS	5,052	3,696	3,091	LEGEND:					
Ī		TO	TAL CONN	NECTE	D PANEL	BOARD (VA)		11,839		TS - VIA TIM	IE SWITC	Н		ST - SHUNT TRIP	
		TOTAL	CONNEC	TED I	PANELBO.	ARD (AMPS)		33		GF - GROUN	ND FAULT	INTE	RRUPTE	R LCK - LOCKING TAB	
			TOTAL P	ANEL	BOARD D	EMAND (VA)		14,549		FA - FIRE AL	_ARM / RE	ED / LO	OCKING 1	TAB IG - ISOLATED GROUND	
		TC	OTAL PAN	ELBO.	ARD DEM	AND (AMPS)		40		EM - EMERO	SENCY LT	ΓG. / L	OCKING '	TAB OL - REFER TO ONE-LINE DIA	AGRAM
										SL - REFER	TO SITE	LIGHT	ING PLAI	N ESL1	

(1 SPARE)

						PANEL	.BOARL	) PP						
	BUS AMPS:	200A				LOCATION:		UTILITY ARE	ΕA		GRO	OUND BUS	S: YES	
	MAIN SIZE / TYPE:	MLO				NEMA RATIN	G:	NEMA 1			ISO	GROUN	ID BUS: YES	
	VOLTS/PHASE:	208Y/12	0V, 3F	PH, 4W		AFC VALUE:		17,264A			FEE	D THRU L	LUGS: YES	
	MOUNTING:	SURFAC	Œ			AIC RATING:		22,000 A FUI	LLY RATED		SEC	TIONS:	2	
CKT	CIRCUIT	BREAKE	R	WIRE	LOAD	CONNECTE	D PER PHASE	(VA)	LOAD	WIRE	BRI	EAKER	CIRCUIT	CKT
#	DESCRIPTION	AMPS	Р	SIZE	(VA)	Α	В	С	(VA)	SIZE	Р	AMPS	DESCRIPTION	#
1	SALES POD IG RCPT	20	1	12	360	1,297			937					2
3	SALES POD IG RCPT	20	1	12	360	,	1,297	7	937	12	3	20	EF-1	4
5	SALES POD IG RCPT	20	1	12	360	<b> </b>   '		1,297	937	1				6
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	1	720	12	1	20	SERVICE AREA RCPTS	10
11	CHARGING STATION	20	1	12	720	11		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_	3 500		860	7	360	12	1	20	MVS DESK IG RCPT	16
17	MENU BOARDS	20	1	8	1,500	<b>i</b> l '		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	1	540	12	1	20	INVENTORY RCPT	22
23	TOILET RCPTS	20	1	12	360	<b>i</b> l '	,	540	180	12	1	20	UTILTY 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 _	3\360		720	7	360	12	1	20	FIRE SERVICE PANEL	28
29	MICROWAVE	20	1 /	8	1,200	<b>il</b>		1.560	360	12	1	20	OPTIONAL SECURITY SYSTEM	30
31	REFRIGERATOR	20	1 (	8	1,000	2,200	1	.,,,,,	1,200	12	1	20	ALIGNMENT COMPUTER	32
33	BREAK RCPTS	20	1	12	540		740	7	200	12	1	20	TOXALERT SYSTEM	34
35	SIGNAGE CONVENIENCE RCPT	20	1	SL	180	<b>i</b> l		360	180	12	1	20	EXTERIOR FRONT RCPT	36
37	SHOWROOM EWC	20	1	12	500	500	Ī		0	·	1	20	SPARE	38
39	HOT BOX ON SITE	20	1	SL	200		200	7	0		1	20	SPARE	40
41	SPARE	20	1		0	<b>i</b> l '		0	0		1\	20	SPARE	42
SECTIO			<u> </u>		<u> </u>	11			<u>, , , , , , , , , , , , , , , , , , , </u>	1	/3	\	S. 7 ti 12	
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	7	1,600		) _			46
47	ELECTRONIC WHEEL BALANCER	20	2	10	1,200	<b>  </b>	3,.55	2.800	1,600	8	2	20	SMART LIFT (BAY #2)	48
49	#13A				1,200	2,800	Ī	_,,,,,	1,600	1	) -			50
51	BALANCER NON-ROAD FORCE	20	2	10	1,200		2.800	7	1,600	10	2	20	SMART LIFT (BAY #3)	52
53	#13B				1,200	<b> </b>	_,,,,,	2.800	1,600	1				54
55	RIM CLAMP TIRE CHANGER	30	2	8	2,760	4,360	Ī	2,000	1,600	10	2	20	SMART LIFT (BAY #4)	56
57	#18B				2,760	1,000	4,360	7	1,600	1				58
59	SHOP FAN #42	20	1	12	264	<b>i</b> l '	1,000	1,864	1,600	10	2	20	SMART LIFT (BAY #5)	60
61	SHOP FAN #42	20	1	12	264	1,864		.,,	1,600	1		,		62
63	SHOP FAN #42	20	1	12	264	1,001	2,964	7	2,700	8	2	30	ALIGNMENT LIFT (BAY #6)	64
65	SHOP FAN #42	20	1	12	264	11 '	-,	2,964	2,700	1 -	-			66
67	SHOP FAN #42	20	1	12	264	1,864		_,	1,600	10	2	20	SMART LIFT (BAY #7)	68
	SHOP FAN #42	20	1	12	264	-,,,,,,	1,864	7	1,600	1	-	_,	,	70
h.u		20	1	12	264	ll '	.,501	664	400	12	1	20	WATER HEATER / RECIRC. PUMP	72
69 71	ISHOP FAN #42		+ ;	· <u>-</u>	0	414			414	12	1	15	UNIT HEATER UH-1	74
71	SHOP FAN #42 SPARE	20	1				614	7	414	12	1	15	UNIT HEATER UH-2	76
71 73	SPARE	20 20	1	12	200		014							
71 73 75	SPARE OVERHEAD DROP LIGHTS #2	20	1 1	12 10	200 1.500		014	1,860	-		1			78
71 73 75 77	SPARE OVERHEAD DROP LIGHTS #2 POWER CORD REEL #17	20 20	1 1 1 1	10	1,500	1 860	014	1,860	360	12	1	20	RADIANT HEATER RAD-1	78 80
71 73 75 77 79	SPARE OVERHEAD DROP LIGHTS #2 POWER CORD REEL #17 POWER CORD REEL #17	20 20 20	1 1 1 1 1	10 10	1,500 1,500	1,860		1,860	360 360	12 12	1 1 1	20 20	RADIANT HEATER RAD-1 RADIANT HEATER RAD-2	80
71 73 75 77 79 81	SPARE OVERHEAD DROP LIGHTS #2 POWER CORD REEL #17 POWER CORD REEL #17 MOTORIZED DAMPER	20 20 20 20 20	1 1 1 1 1	10 10 12	1,500 1,500 200	1,860	560		360 360 360	12	1 1 1 1	20 20 20	RADIANT HEATER RAD-1 RADIANT HEATER RAD-2 RADIANT HEATER RAD-3	80 82
71 73 75 77 79	SPARE OVERHEAD DROP LIGHTS #2 POWER CORD REEL #17 POWER CORD REEL #17	20 20 20	1 1 1 1 1 1	10 10 12 12	1,500 1,500 200 540		560	540	360 360 360 0	12 12	1	20 20	RADIANT HEATER RAD-1 RADIANT HEATER RAD-2	80
71 73 75 77 79 81	SPARE OVERHEAD DROP LIGHTS #2 POWER CORD REEL #17 POWER CORD REEL #17 MOTORIZED DAMPER SHOW WINDOW RCPTS	20 20 20 20 20 20		10 10 12 12 12 R PHASE	1,500 1,500 200 540 SUB-TOTALS	1,860	560 22,319		360 360 360 0 LEGEND:	12 12 12	1 1 1	20 20 20	RADIANT HEATER RAD-1 RADIANT HEATER RAD-2 RADIANT HEATER RAD-3 SPARE	80 82
71 73 75 77 79 81	SPARE OVERHEAD DROP LIGHTS #2 POWER CORD REEL #17 POWER CORD REEL #17 MOTORIZED DAMPER SHOW WINDOW RCPTS	20 20 20 20 20 20	NECTI	10 10 12 12 12 R PHASE	1,500 1,500 200 540 SUB-TOTALS		560 22,319 66,394	540	360 360 360 0 LEGEND: TS - VIA TIM	12 12 12 12	1 1 1	20 20 20 20 20	RADIANT HEATER RAD-1 RADIANT HEATER RAD-2 RADIANT HEATER RAD-3 SPARE  ST - SHUNT TRIP	80 82
71 73 75 77 79 81	SPARE OVERHEAD DROP LIGHTS #2 POWER CORD REEL #17 POWER CORD REEL #17 MOTORIZED DAMPER SHOW WINDOW RCPTS	20 20 20 20 20 20 TAL CONNEC	NECTI CTED	10 10 12 12 R PHASE ED PANE	1,500 1,500 200 540 SUB-TOTALS LBOARD (VA) DARD (AMPS)		560 22,319 66,394 184	540	360 360 360 0 LEGEND: TS - VIA TIM GF - GROUN	12 12 12 12 IE SWITCH	1 1 1	20 20 20 20 20	RADIANT HEATER RAD-1 RADIANT HEATER RAD-2 RADIANT HEATER RAD-3 SPARE  ST - SHUNT TRIP LCK - LOCKING TAB	80 82
71 73 75 77 79 81	SPARE OVERHEAD DROP LIGHTS #2 POWER CORD REEL #17 POWER CORD REEL #17 MOTORIZED DAMPER SHOW WINDOW RCPTS  TO	20 20 20 20 20 20 TAL CONNEC TOTAL P	NECTI CTED PANEL	10 10 12 12 12 R PHASE ED PANE PANELBO BOARD [	1,500 1,500 200 540 SUB-TOTALS	23,087	560 22,319 66,394	540	360 360 360 0 LEGEND: TS - VIA TIM	12 12 12 12 IE SWITCH ND FAULT LARM / RE	1 1 1 1 H INTE	20 20 20 20 20 RRUPTER	RADIANT HEATER RAD-1 RADIANT HEATER RAD-2 RADIANT HEATER RAD-3 SPARE  ST - SHUNT TRIP LCK - LOCKING TAB AB IG - ISOLATED GROUND	80 82 84



**ONE-LINE DIAGRAM** 



8-POLE CONTACTOR C-1

LP-13 FOR SITE LIGHTING

LP-6,8,10 FOR BUILDING SIGNAGE

LP-18 FOR MONUMENT SIGN

(3 SPARE)

LP-17,19 FOR EXTERIOR

WALL PACK LIGHTING

PHOTOCELL (TORK #5021M)

MOUNTED ON ROOF, SEE KEYNOTE 5 ON SHEET E2 FOR ADDITIONAL INFORMATION

—— TO LP-2

AND LOCATION.

#12 CONTROL WIRING FROM CONTACTOR COIL TO TERMINALS IN TIME SWITCH

TIME SWITCH "TS" (TORK #DZS400BP-USB-MMP)

SEE SHEET E2 FOR ADDITIONAL INFORMATION

# **CONTACTOR NOTES**

- 1. ALL CONTACTORS TO BE ELECTRICALLY HELD TYPICAL.
- ALL CONTACTORS AND TIME SWITCH SHALL BE INSTALLED IN ONE (1) GENERAL PURPOSE CABINET WITH HINGED DOOR, VERIFY CABINET SIZE IN FIELD.
- PROVIDE AND WALL MOUNT TIME SWITCH "TS" CONTACTORS, AND PHOTOCELLS, TO CONTROL ALL EXTERIOR LIGHTING AND SIGNAGE AS SHOWN IN "CONTACTOR DIAGRAM" THIS SHEET. COORDINATE WITH STORE MANAGER THE HOURS OF OPERATION AND DEMONSTRATE ALL "TIME SWITCH" FUNCTIONS. PROVIDE STORE MANAGER AND BSRO CONSTRUCTION DEPARTMENT WITH COPIES OF ALL
- CONTROL INTENT IS FOR THE SHOWROOM LIGHTING TO BE ON TIME OF DAY CONTROL WITH MANUAL OVERRIDE.

OPERATION AND INSTALLATION MANUALS.

- TIMESWITCH TO ALLOW FOR PHOTOCELL OVERRIDE OF TIMESWITCH CONTROLS. CONTROL INTENT IS FOR PARKING LOT LIGHTING, SIGNAGE AND BUILDING SIGN LIGHTING TO BE 'OFF' BETWEEN 2AM AND STORE OPENING TIME. AT STORE OPENING TIME, THE FIXTURES SHOULD BE ON PHOTOCELL CONTROL ONLY TO ALLOW THESE FIXTURES TO ENERGIZE 'ON' DURING DARKER PERIODS THROUGHOUT THE DAY. WALL PACKS SHALL BE ON PHOTOCELL CONTROL ONLY 24 HOURS/DAY.
- THE CONDUIT WHICH PROVIDES POWER TO THE EXTERIOR SIGN LIGHTING, EXTERIOR LIGHTING, OR OTHER EXTERIOR REQUIREMENTS REQUIRING UNDERGROUND CONDUIT SHOULD COMMENCE UNDERGROUND AT THE INSIDE FACE OF AN EXTERIOR WALL AND EXIT THE BUILDING IMMEDIATELY WITHOUT RUNNING HORIZONTAL UNDER OR IN THE GROUND FLOOR CONSTRUCTION.

## ONE-LINE DIAGRAM NOTES

- 1. ALL METERING EQUIPMENT AND PANELS SHALL BE AS MANUFACTURED PER THE ELECTRICAL SPECIFICATION, AND MEET ALL REQUIREMENTS.
- GROUNDING CONDUCTORS AND ALL GROUNDING REQUIREMENTS SHALL BE INSTALLED AS DIRECTED BY EQUIPMENT MANUFACTURER AND AS SHOWN ON
- LABEL EACH JUNCTION BOX, PULL OR TAP BOX, DISCONNECT SWITCH ETC., WITH BLACK LETTERING ON AN ORANGE STICKER WITH LETTERING SIZED IN RELATION TO SIZE OF COVER. FOR PANELS SEE SPECIFICATIONS.
- 4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL REQUIREMENTS WITH THE UTILITY 10. COMPANY. FIELD VERIFY THE AVAILABLE FAULT CURRENT WITH THE UTILITY COMPANY AND CONTACT THE ENGINEER OF RECORD WITH THE DISCREPANCY SO AS TO REVISE THE EQUIPMENT
- SIZE ALL BRANCH CIRCUITS NOT TO EXCEED 3% VOLTAGE DROP. ALL WIRE SIZES SHALL BE FOR AMPERAGE REQUIRED PER NEC.

RATINGS AS NEED BE.

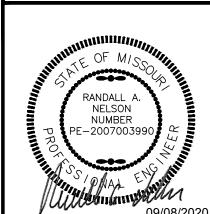
- PROVIDE MULTI-LAYERED ACRYLIC LABELS PER SPECIFICATION FOR ALL DISTRIBUTION PANELBOARDS, BRANCH CIRCUIT PANELBOARDS, SWITCH GEAR SECTIONS, STARTERS AND INDIVIDUAL SWITCH GEAR FUSED SWITCHES.
- ALL CONDUIT SHALL BE RIGID GALVANIZED STEEL THROUGHOUT, EXCEPT WHERE OTHERWISE NOTED.
- SEE ELECTRICAL SPECIFICATIONS FOR ADDITIONAL
- INFORMATION. INCLUDE IN CONTRACT ALL ONE TIME TAP CHARGERS AND FEES FROM UTILITY COMPANY,
- COORDINATE WITH UTILITY COMPANY. ALL ELECTRICAL AND TELEPHONE CONDUITS THAT PENETRATE FIRE RATED WALLS SHALL BE SEALED WITH FIRE STOP MATERIAL TO MEET ALL GOVERNING
- CODE REQUIREMENTS. 11. CONTRACTOR TO PROVIDE LABEL STATING

ARC-FAULT AND AIC RATING ON EACH PANEL

0

STIPULATION OF REUSE
THIS DRAWING WAS PREPARED FOR USE ON A SPECIFIC SITE AT LEE'S SUMMIT, MO CONTEMPORANEOUSLY WITH ITS ISSUE DATE ON 03/26/2020 AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENCONEETS DEPOROLYCION OF THIS ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

OURI ORE NEW 2020 3561 JACK LEE'S S



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

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

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

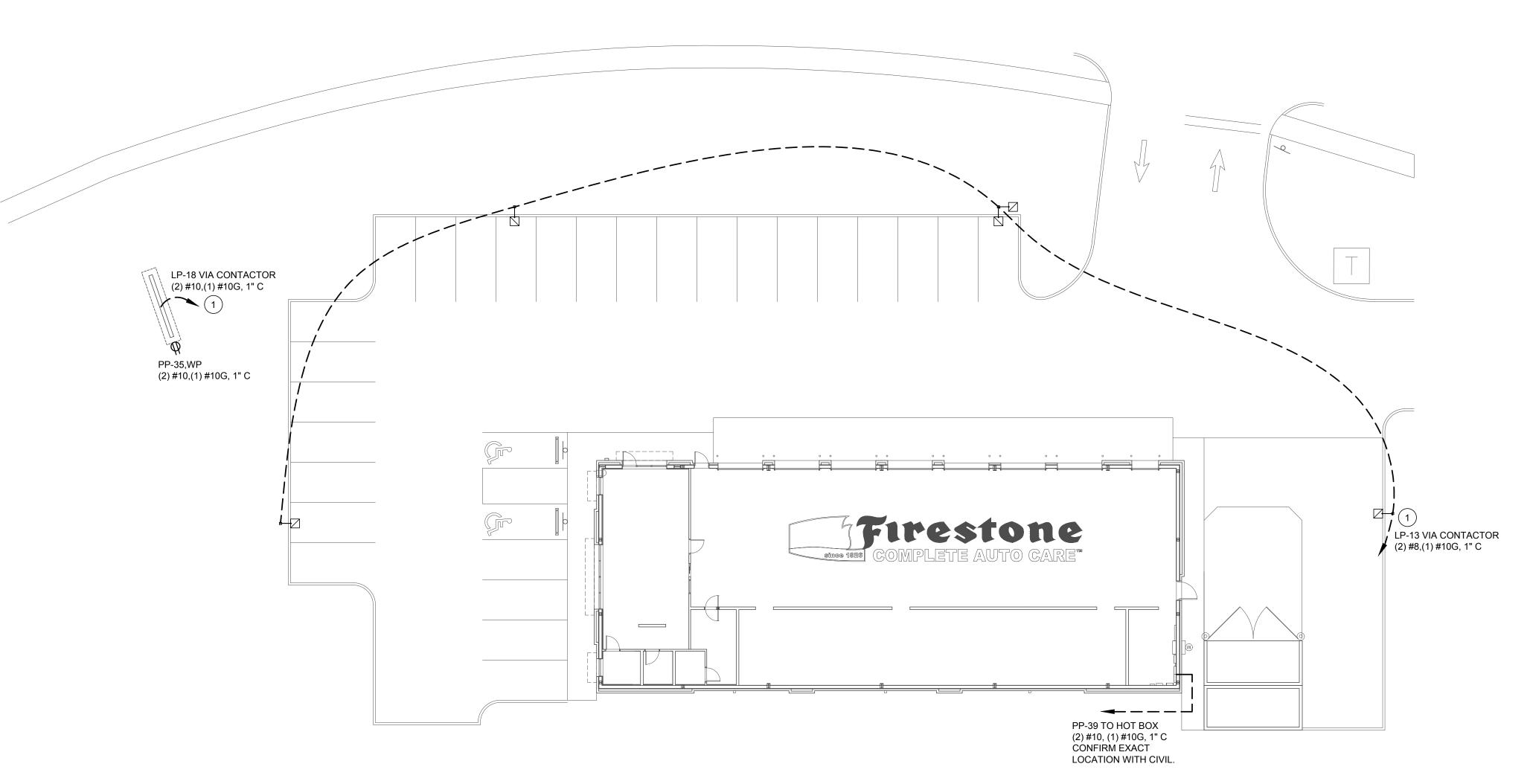
SHEET TITLE: **ONE-LINE DIAGRAM** PANEL SCHEDULES AND NOTES

# SITE LIGHTING PLAN GENERAL NOTES

- 1. FURNISH AND INSTALL ALL CONDUIT, WIRE AND DEVICES REQUIRED FOR MONUMENT SIGN. VERIFY LOCATION AND REQUIREMENTS WITH SIGN MANUFACTURER PRIOR TO ROUGH-IN.
- 2. PROVIDE ALL GROUNDING FOR MONUMENT SIGN PER MANUFACTURER'S AND LOCAL CODE REQUIREMENTS
- 3. REFERENCE PHOTOMETRIC SITE LIGHTING SHEET FOR THE FOLLOWING INFORMATION:
- 3.1. POLE SPECIFICATIONS
- 3.2. LIGHTING FIXTURE MOUNTING HEIGHT
- 3.3. LIGHTING FIXTURE SPECIFICATIONS3.4. LIGHTING FIXTURE DESIGNATIONS
- 4. REFER TO SHEET E2 FOR BUILDING MOUNTED LIGHT FIXTURE LOCATIONS AND DESIGNATIONS

# **# SITE LIGHTING PLAN KEYNOTES**

1. REFERENCE SHEET E5 FOR CONTACTOR DIAGRAM AND PANELBOARD SCHEDULES.



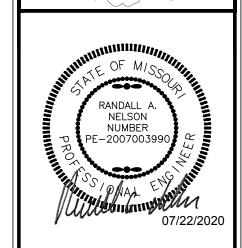




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2020 ER
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LEE'S SUMMIT, MISSOURI 6408



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6 DIGIT NO.:
4 DIGIT NO.:

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

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SHEET TITLE:
SITE
LIGHTING
PLAN