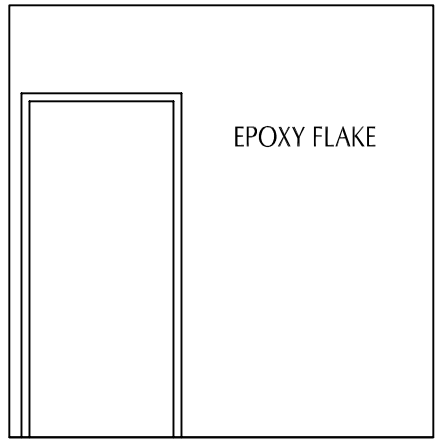
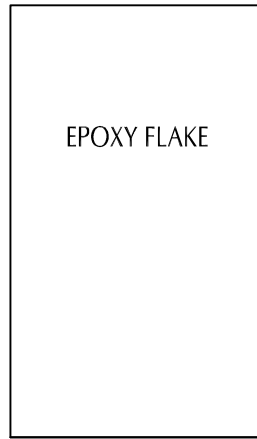
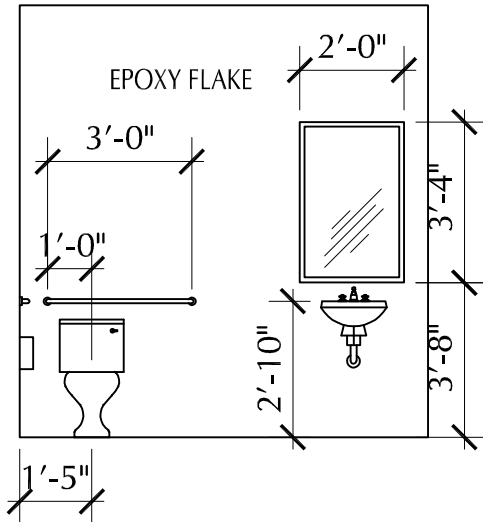
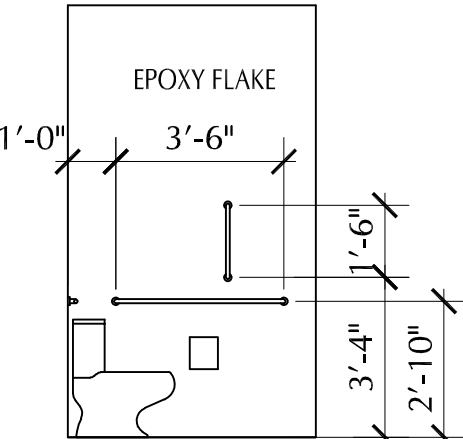


Aug 02, 2023 -- 9:32am -- USER ChrisB  
T:\Rose\Drawings-Current\23016 Crash Building B remodel\Production\Planning & Zoning\Architectural\A1 FLOOR PLAN.dwg  
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- NOTES:
1. PROVIDE WOOD BLOCKING IN WALLS FOR ALL RESTROOM GRAB BARS & ACCESSORIES
  2. PROVIDE INSULATION WRAPS / COVERS FOR ALL EXPOSED LAVATORY WATER & DRAIN LINES

- TOILET ACCESSORIES (BOBRICK)
1. CHANNEL-FRAME MIRRORS
  2. GRAB BARS: 1.5" DIA 18 GA TYPE 304 STAINLESS STEEL
  3. PAPER TOWEL DISPENSERS (1) B-2620 & (1) B-2860
  4. SOAP DISPENSERS (1) B-2111 & B-5050 (1)

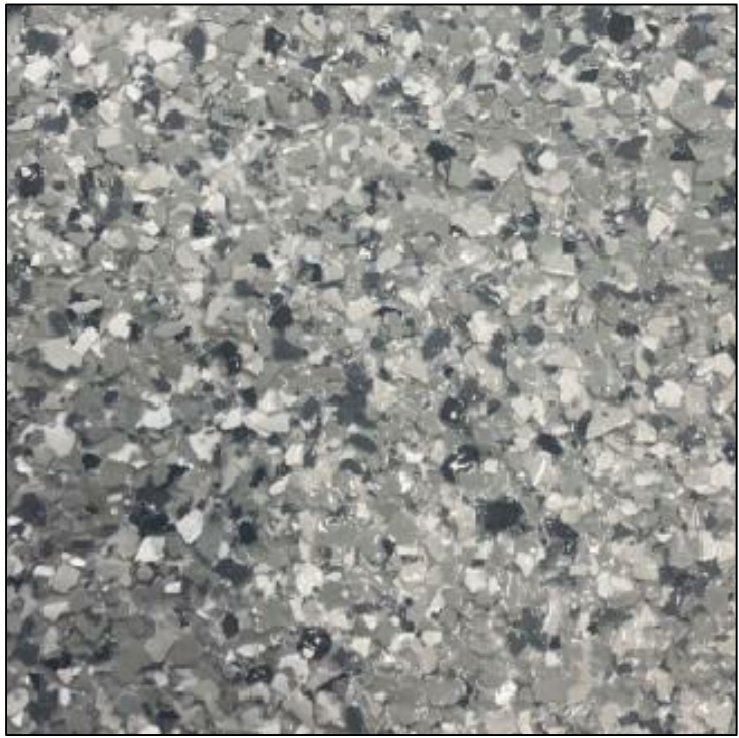


## UNISEX ELEVATIONS 6

Scale 1/4" = 1'-0"

SHERWIN-WILLIAMS 703265	08/29/21
815-469-7557	Order# 0321217
INTERIOR PROMAR 200 ZERO VOC	ARCHITECTURAL LATEX
SEMI-GLOSS	IFC 6012NP
INTERIOR SHOP GRAY	
CUSTOM MANUAL MATCH	
CCE*COLORANT	OZ 32 64 128
W1-White	4 48 - 1
B1-Black	30 13 1 1
R2-Maroon	- 38 1 1
R3-Magenta	10 - - -
T1-Yellow	12 27 - 1
FIVE GALLON	DEEP
B31402653	650187230

SW CUSTOM SHOP COLOR, COLOR FOR NEW GYP BD WALLS



EPOXY COLOR SAMPLE

GYP. BD WALLS RUBBER BASE: 4" ROPPE RUBBER 700 SERIES #129 DOLPHIN  
2X4 ACT CEILING & GRID IN UNISEX & OFFICE: USG - RADAR (8'-6" AFF)

DOOR SCHEDULE  
UNISEX  
36"X84" 18 GA H.M. DOOR  
18 GA H.M. FRAME  
PRIVACY LOCK W/ CLOSURE

PARTS MANAGER  
36"X84" 18 GA H.M. DOOR  
18 GA H.M. FRAME  
36"W X 42"H SIDE LITE, 1/4" TEMP GLAZING  
LOCK SET

18 GA H.M. FRAME FOR WINDOW  
36"W X 42"H 1/4" TEMP GLAZING

1000 GALLON SAND / OIL  
INTERCEPTOR TANK  
RELOCATE EXISTING GAS  
& WATER LINES AROUND TANK

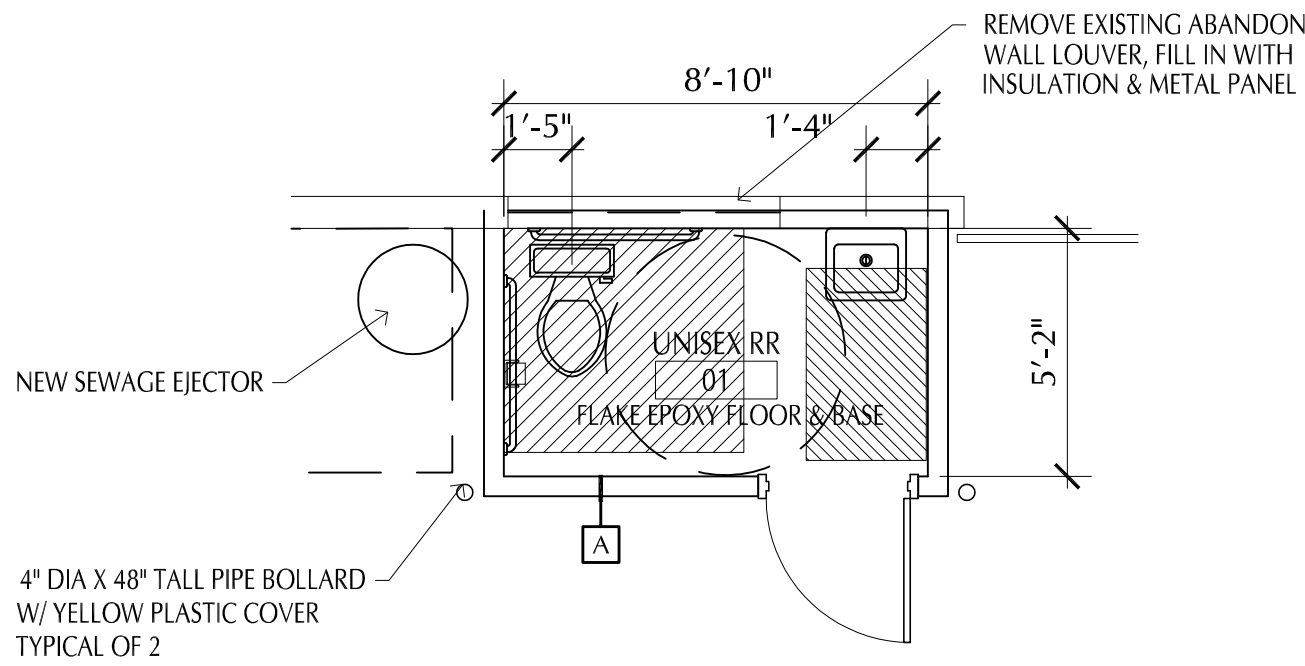
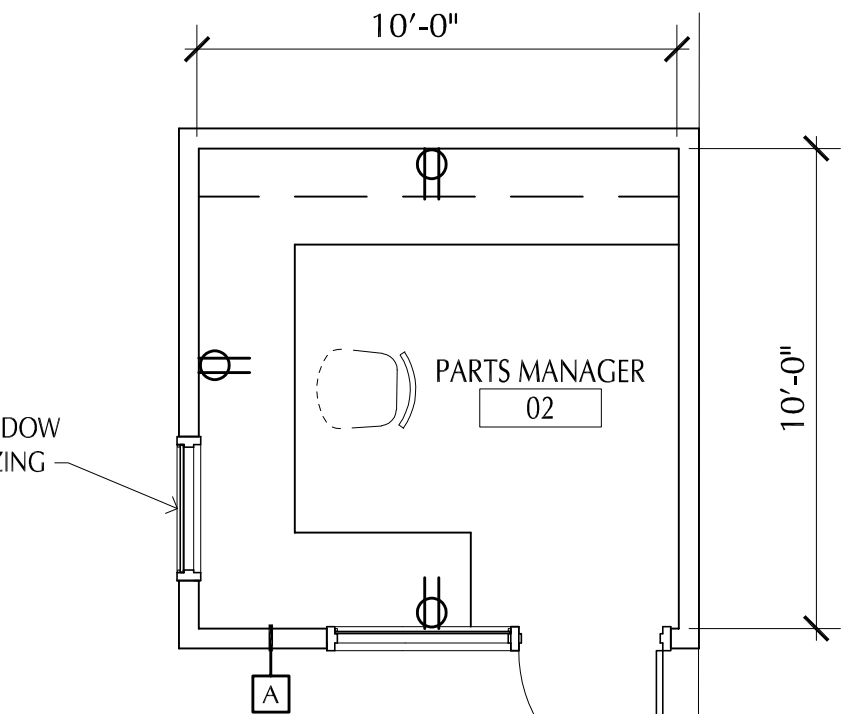
NEW SEWAGE EJECTOR  
BELOW GRADE  
APPROX LOCATION OF  
2" GAS LINE

RELOCATE EXISTING  
AIR COMPRESSOR

18 GA H.M. FRAME FOR WINDOW  
36"W X 42"H 1/4" TEMP GLAZING

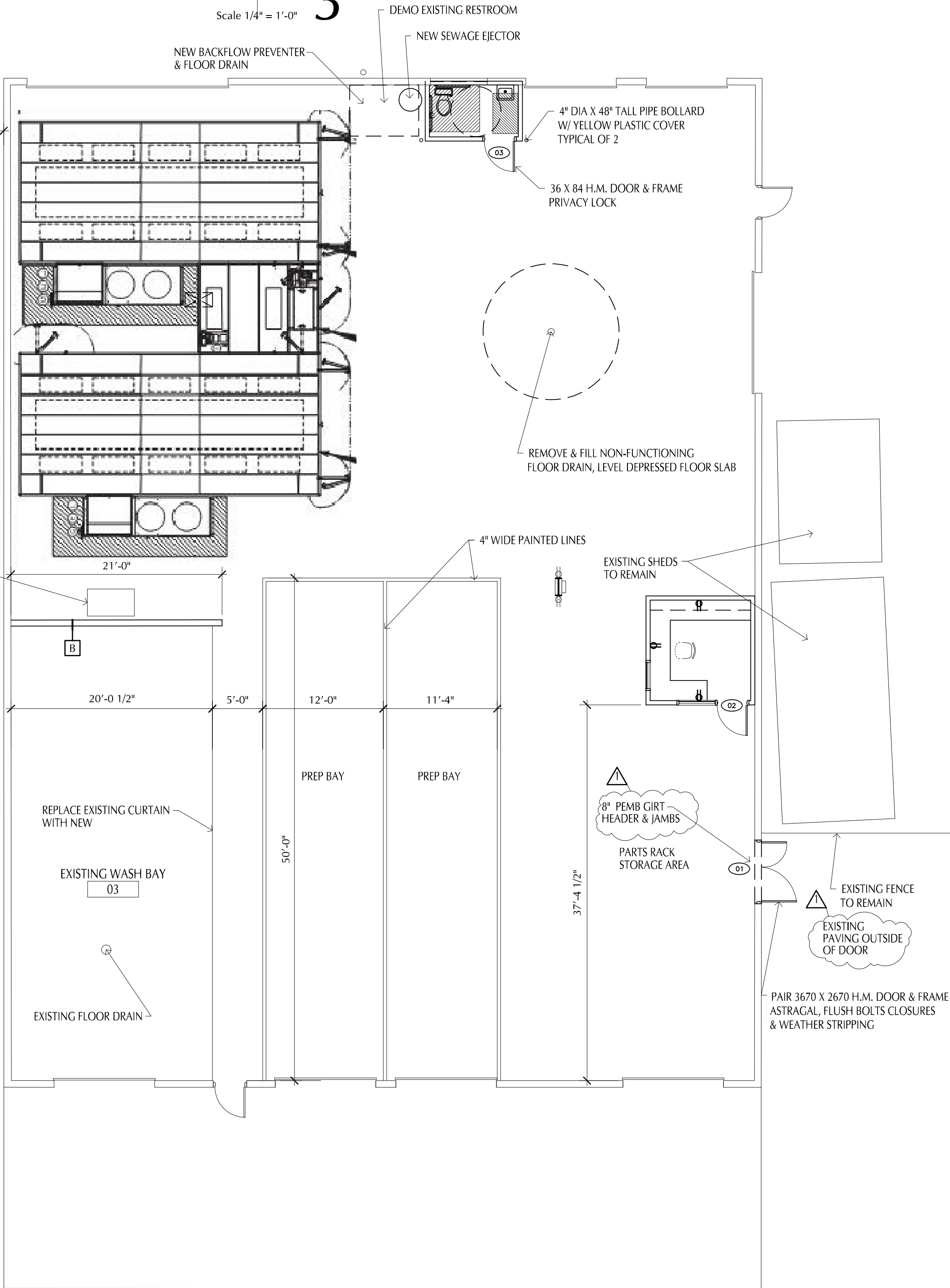
## ENLARGED FLOOR PLAN 3

Scale 1/4" = 1'-0"



## ENLARGED FLOOR PLAN 2

Scale 1/4" = 1'-0"



## FLOOR PLAN 1

Scale 1/8" = 1'-0"

## PLAN NOTES

- NOTE:  
PROVIDE CO SENSORS ALONG WITH EXHAUST FAN  
& INTAKE LOUVER PER CODE REQUIREMENTS
- NOTE:  
THERE IS NOT ANY EXISTING OR NEW RTU HEATING,  
AIR-CONDITIONING OR REFRIGERATION EQUIPMENT  
MOUNTED ON THE ROOF

## CODE DATA

2018 INTERNATIONAL BUILDING CODE (IBC)  
2018 INTERNATIONAL MECHANICAL CODE  
2018 INTERNATIONAL PLUMBING CODE  
2018 INTERNATIONAL FIRE CODE  
2017 NATIONAL ELECTRICAL CODE  
2012 ENERGY CODE

OCCUPANCY: (GROUP S1)  
7,150 S.F.  
CONSTRUCTION TYPE: TYPE V B  
OCCUPANT LOAD: 14 (1 / 500)  
FIRE SPINKLERS: NO

DRINKING FOUNTAINS & MOP SINK ARE LOCATED IN  
ADJACENT STRUCTURES LESS THAN 500' AWAY

## WALL TYPES

- [A] 5/8" GYP BD ON 3 5/8" 20 GA. METAL STUDS 16" O.C.  
W/ SOUND ATTENUATION INSULATION TO  
STRUCTURE ABOVE (+/- 12'-2" AFF)
- [B] 5/8" GYP BD ON 6" 20 GA. METAL STUDS 16" O.C. TO  
STRUCTURE ABOVE (+/- 12'-7" AFF)
- [C] EXISTING CONSTRUCTION TO REMAIN

RELEASED FOR CONSTRUCTION

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Christopher R. Bell  
STATE OF MISSOURI  
REGISTERED ARCHITECT  
NUMBER  
A-6275  
05-09-23  
CHRISTOPHER R. BELL - ARCHITECT  
MOP 24-6275

**ROSE**  
DESIGN GROUP INC.

ARCHITECTS ■ PLANNERS

A Division of Rose Design Build

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MISSOURI STATE CERTIFICATE OF  
AUTHORITY # 2008034845 www.BuildWithRose.com

**CRASH CHAMPIONS**  
COLLISION REPAIR TEAM

BUILDING B INTERIOR MODIFICATIONS:

**CRASH CHAMPIONS**

UNIT B 451 SE OLDHAM PARKWAY

LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
1	REVISIONS PER STAFF COMMENTS	08-02-23

PROJECT NUMBER 23016  
DATE ISSUED: 05 / 09 / 23

SHEET NUMBER

**A1**

FLOOR PLAN



LINETYPES LEGEND:

- NEW  
--- NEW - ON ROOF  
- - - EXISTING  
- - - EXISTING - ON ROOF  
- - - - DEMOLITION

DUCTWORK LEGEND:

- DUCT (SINGLE LINE)  
= DUCT (DOUBLE LINE)  
R-1 ROUND O/A OR S/A DOWN  
R-2 ROUND O/A OR S/A UP  
R-3 ROUND E/A OR R/A DOWN  
R-4 ROUND E/A OR R/A UP  
R-5 RECTANGULAR O/A OR S/A DOWN  
R-6 RECTANGULAR O/A OR S/A UP  
R-7 RECTANGULAR E/A OR R/A DOWN  
R-8 RECTANGULAR E/A OR R/A UP  
O/A OR S/A DIFFUSER  
E/A OR R/A GRILLE  
AIR DEVICE WITH FLEX DUCT CONNECTION  
AIR DEVICE WITH HARD DUCT CONNECTION  
FLEXIBLE CONNECTION TO EQUIPMENT  
DUCT BREAK/CONTINUATION  
MANUAL BALANCING DAMPER  
MOTOR-OPERATED DAMPER  
THERMOSTAT

ANNOTATION LEGEND:

- ABC-1 EQUIPMENT / FIXTURE TAG  
PLAN NOTE  
CONNECT TO EXISTING  
AIR FLOW DIRECTION  
G/R/D TAG  
NECK SIZE  
AIR FLOW (CFM)

ABBREVIATIONS LEGEND:

- AFF ABOVE FINISHED FLOOR  
APD AIR PRESSURE DROP  
CAV CONSTANT AIR VOLUME  
CFM CUBIC FEET PER MINUTE  
CU CONDENSING UNIT  
(E) EXISTING  
EA EXHAUST AIR  
EAT ENTERING AIR TEMPERATURE  
EF EXHAUST FAN  
ESP EXTERNAL STATIC PRESSURE  
FPM FEET PER MINUTE  
HC HEATING CAPACITY  
HP HORSEPOWER  
IN.WG INCHES WATER GAUGE  
LAT LEAVING AIR TEMPERATURE  
MAX MAXIMUM  
MBH 1,000 BTUH  
MIN MINIMUM  
NC NOISE CRITERIA  
OA OUTDOOR AIR  
QTY QUANTITY  
RA RETURN AIR  
REFR REFRIGERANT  
SA SUPPLY AIR  
SC SENSIBLE COOLING CAPACITY  
TC TOTAL COOLING CAPACITY  
TRA TO ROOF ABOVE  
TSP TOTAL STATIC PRESSURE  
VEL VELOCITY

MECHANICAL GENERAL NOTES:

- DRAWINGS ARE SCHEMATIC IN NATURE AND BASED ON PRELIMINARY SITE OBSERVATION AND ORIGINAL DESIGN DRAWINGS (WHEN AVAILABLE). CONTRACTOR SHALL INVESTIGATE THE PROJECT SITE AND BECOME FULLY AWARE OF ALL FIELD CONDITIONS, CURRENT SYSTEM OPERATION, AS WELL AS COORDINATION REQUIREMENTS. COORDINATE ALL MECHANICAL WORK WITH ARCHITECTURAL DRAWINGS, EXISTING CONDITIONS, AND OTHER TRADES PRIOR TO START OF WORK.
- MECHANICAL WORK SHALL CONFORM TO APPLICABLE CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- COORDINATE WITH ELECTRICAL CONTRACTOR FOR REQUIRED ELECTRICAL POWER WIRING AND ROUGH-IN FOR LOW-VOLTAGE CONTROL WIRING. PROVIDE ALL CONTROL WIRING AND FINAL CONTROL DEVICE (E.G. THERMOSTATS).
- FABRICATE AND INSTALL DUCTWORK PER SMACNA RECOMMENDATIONS FOR THE PRESSURE CLASSIFICATIONS ENCOUNTERED.
  - EXHAUST AIR (DOWNSTREAM OF FAN): +1.0 IN.WG
- PROVIDE ALL CONDENSATE DRAINS FOR EQUIPMENT THAT GENERATES CONDENSATE. COORDINATE WITH PLUMBING CONTRACTOR.
- DUCT DIMENSIONS SHOWN ON THE PLANS INDICATE THE FREE AREA DIMENSIONS. INCREASE SHEET METAL DIMENSIONS AS REQUIRED TO MEET FREE AREA DIMENSIONS WITH LINER INSTALLED.
- FLEXIBLE DUCTWORK SHALL HAVE 2" THICK, MINIMUM R-6.0 INSULATION. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" IN LENGTH FOR SUPPLY AIR APPLICATIONS AND 3'-0" IN LENGTH FOR RETURN AIR AND EXHAUST AIR APPLICATIONS.
- TOILET ROOM EXHAUST FANS SHALL BE AS SCHEDULED. PROVIDE A MINIMUM OF 75 CFM EXHAUST PER FLUSH FIXTURE.
- COORDINATE ALL REQUIRED ROOF PENETRATIONS WITH ROOFING CONTRACTOR TO AVOID ROOF WARRANTY CONFLICTS.
- VERIFY AVAILABLE SPACE ABOVE ALL CEILINGS PRIOR TO FABRICATION OR INSTALLATION OF ANY DUCTWORK. COORDINATE DUCT INSTALLATION WITH OTHER TRADES.
- ALL DIMENSIONS SHOWN ON PLAN ARE IN INCHES, UNLESS EXPLICITLY LABELED OTHERWISE.
- PROVIDE A COMPLETE TEST AND BALANCE OF ALL NEW EQUIPMENT AND SYSTEMS, AND OF EXISTING SYSTEMS AS NOTED ON THE DRAWINGS. FINAL SYSTEM TESTING, BALANCING, AND ADJUSTMENTS SHALL BE PERFORMED BY A CONTRACTOR CERTIFIED BY THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB). PERFORM TAB AS REQUIRED BY NEBB STANDARDS. BALANCE AIR SYSTEMS TO WITHIN ±10% FOR TERMINAL DEVICES AND BRANCH LINES, AND ±5% FOR MAIN DUCTS AND AIR HANDLING EQUIPMENT OF THE AMOUNT OF AIR SHOWN ON THE DRAWINGS. SUBMIT FINAL TAB REPORT TO ENGINEER REVIEW.
- PROVIDE ACCESS PANELS AND ADEQUATE CLEARANCE FOR ACCESS TO ALL EQUIPMENT, VALVES, DAMPERS AND DEVICES.
- INSPECT ALL EXISTING MECHANICAL EQUIPMENT TO REMAIN. REPORT ANY DEFICIENCIES TO OWNER PRIOR TO START OF WORK.
- LABEL ALL DUCTWORK, PIPING, MAINTENANCE DEVICES, AND EQUIPMENT WITH MANUFACTURER STANDARD LABELING SYSTEMS. COORDINATE WITH OWNER FOR FINAL EQUIPMENT DESIGNATIONS.
- PROVIDE O&M MANUAL TO OWNER UPON COMPLETION OF PROJECT.

FAN SCHEDULE										
TAG	AREA SERVED	MANUFACTURER	MODEL	MOUNTING	AIR FLOW (CFM)	ESP (IN.WG)	MOTOR POWER	DRIVE TYPE	V/PH	NOTES
EF-1	REPAIR GARAGE	GREENHECK	GB-240	ROOF	4300	0.25	3/4 HP	BELT	120/1	B,C,D,G,I
EF-2	PARKING GARAGE	GREENHECK	SP-B200	SUSPENDED	300	0.25	1/30 HP	DIRECT	120/1	C,E,G,H
EF-3	RESTROOM	GREENHECK	CSP-A125	CEILING	100	0.25	52 WATTS	DIRECT	120/1	A,C,D,E,F

NOTES:

- A. PROVIDE WITH MANUFACTURER'S STANDARD HANGING KIT AND CEILING MOUNT TRIM.  
B. PROVIDE MINIMUM 1'-2" TALL, INSULATED ROOF CURB WITH DAMPER TRAY. FIELD VERIFY ROOF SLOPE.  
C. PROVIDE WITH DISCONNECT SWITCH.  
D. PROVIDE WITH BACKDRAFT DAMPER.  
E. PROVIDE WITH ROOF DISCHARGE CAP FOR EXHAUST THROUGH THE ROOF.  
F. INTERLOCK FAN WITH ASSOCIATED RESTROOM LIGHT SWITCH  
G. PROVIDE WITH ALUMINUM BIRDSCREEN AT FAN DISCHARGE.  
H. FAN TO OPERATE AT ALL TIMES. COORDINATE WITH ELECTRICAL CONTRACTOR.  
I. FAN TO OPERATE SUBJECT TO GAS DETECTION SYSTEM STATE. COORDINATE WITH ELECTRICAL CONTRACTOR.

OUTDOOR AIR CALCULATIONS (MECHANICAL VENTILATION)										
TAG	OCCUPANCY CLASSIFICATION	AREA (FT²)	OCCUPANTS (QTY)	R <sub>p</sub> (CFM/PERSON)	MIN OCCUPANT O/A FLOW (CFM)	R <sub>A</sub> (CFM/FT²)	MIN AREA O/A FLOW (CFM)	MIN REQ'D O/A FLOW (CFM)	PROVIDED MIN O/A FLOW (CFM)	NOTES
EF-1	REPAIR GARAGE	5,496	--	--	--	0.75	4,122	4,122	4,300	ALL
EF-2	PARKING GARAGE		--	--	--	0.05	275	275	300	

NOTES:

- A. R<sub>p</sub> REPRESENTS PEOPLE OUTDOOR AIRFLOW RATE IN BREATHING ZONE PER TABLE 403.3.  
B. R<sub>A</sub> REPRESENTS AREA OUTDOOR AIRFLOW RATE IN BREATHING ZONE PER TABLE 403.3.

UNIT HEATER SCHEDULE								
TAG	MANUFACTURER	MODEL	MOUNTING	OUTPUT	INPUT	VOLT/PHASE	AMP	NOTES
UH-1	QMARK	CWH1201	WALL	6.1 MBH	1,800 WATTS	120/1/60	15	A,B

NOTES:

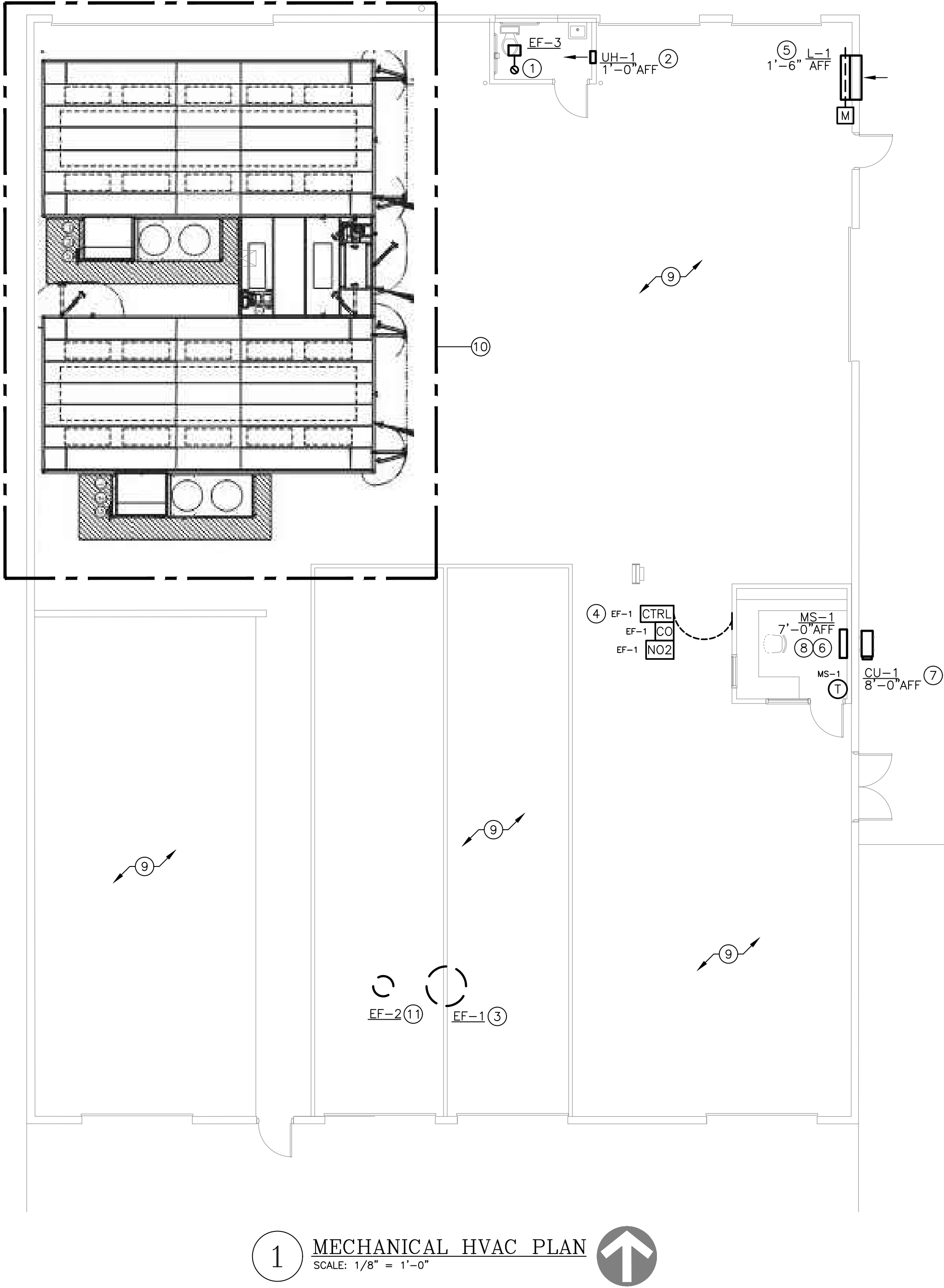
- A. PROVIDE WITH UNIT MOUNTED THERMOSTAT AND DISCONNECT SWITCH.  
B. PROVIDE WITH MANUFACTURER'S STANDARD TRIM FOR WALL MOUNTING.

MINI-SPLIT SYSTEM SCHEDULE																			
TAG	MANUFACTURER	FAN COIL MODEL	CONDENSING UNIT MODEL	TONS	SERVES	INDOOR UNIT MOUNTING	FAN COIL SUPPLY FAN			COOLING			HEATING			FAN UNIT ELEC			CONDENSING UNIT ELEC
							CFM	ESP (IN)	TYPE	TOT CAP (MBH)	EAT (DB/WB)	LAT (DB/WB)	EAT (DEGF)	LAT (DEGF)	CAP (MBH)	V/PH	MCA	MOCP	V/PH
MS-1 / CU-1	YORK	DHP09NBW11S	DHP09CSB11S	0.75	PARTS MANAGER	WALL	300	0.1	R-410A	9	75/63	55/54	65	90	9.6	120/1	17	25	120/1

APPROVED MANUFACTURERS: DAIKIN, LG, MITSUBUSHI, YORK, OR PRE-APPROVED EQUAL.

NOTES:

- A. PROVIDE WITH MANUFACTURER'S STANDARD FILTER SYSTEM.  
B. EQUIPMENT SIZED FOR 100 DEGF AMBIENT SUMMER AND 14 DEGF AMBIENT WINTER CONDITIONS.  
C. PROVIDE WITH MANUFACTURER'S STANDARD CONTROLLER.



MECHANICAL PLAN NOTES:

- ROUTE 8" EXHAUST DUCT FROM EXHAUST FAN THROUGH ROOF. PROVIDE ROOF PENETRATION AND VENT CAP PER MANUFACTURER'S RECOMMENDATIONS. LOCATE DISCHARGE AT MINIMUM OF 10'-0" FROM ANY BUILDING OPENINGS OR OUTDOOR AIR INTAKES.
- LOCATE UNIT HEATER ON WALL WHERE SHOWN. INSTALL PER MANUFACTURER'S REQUIREMENTS.
- INSTALL EXHAUST FAN ON ROOF PER MANUFACTURER'S REQUIREMENTS. COORDINATE ROOF PENETRATIONS WITH OTHER TRADES. INSTALL AT MINIMUM OF 10'-0" FROM HVAC OUTDOOR AIR INTAKES.
- PROVIDE CARBON MONOXIDE / NITROGEN DIOXIDE DETECTION SYSTEM, MONOXIVENT MODEL # FDS-SA-CO-NO OR EQUAL, WITH CONTROLLER AND QUANTITY OR SENSORS AS RECOMMENDED BY THE MANUFACTURER. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
- PROVIDE MOTOR OPERATED DAMPER IN LOUVER. MATCH DAMPER SIZE TO LOUVER FACE DIMENSIONS. ACTUATOR TO BE 120 VOLT, SPRING CLOSED, INTERLOCK DAMPER WITH GAS DETECTION SYSTEM.
- INSTALL WALL-MOUNTED MINI-SPLIT INDOOR UNIT WHERE INDICATED ON PLAN, AT MINIMUM 7'-0" AFF. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- INSTALL MINI-SPLIT CONDENSING UNIT ON WALL-MOUNTED BRACKETS, AT MINIMUM 8'-0" WALL HEIGHT.
- PROVIDE REFRIGERANT PIPING FROM INDOOR MINI-SPLIT UNIT TO ITS ASSOCIATED OUTDOOR CONDENSING UNIT. SIZE AND SLOPE REFRIGERANT PIPING, AND PROVIDE VALVES AND SPECIALS AS REQUIRED BY THE MANUFACTURER'S INSTALLATION REQUIREMENTS.
- HEATING SYSTEM IN SHOP AREA IS EXISTING TO REMAIN.
- ALL MECHANICAL SYSTEMS IN SPRAY BOOTH AREA ARE EXISTING TO REMAIN.
- SUSPEND INLINE EXHAUST FAN FROM STRUCTURE. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS. COORDINATE ROOF PENETRATION WITH OTHER TRADES. INSTALL AT MINIMUM OF 10'-0" FROM HVAC OUTDOOR AIR INTAKES.

5BY5  
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MO LICENSE # PE-2019012798



ARCHITECTS ■ PLANNERS

A Division of Rose Design Build

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MISSOURI STATE CERTIFICATE OF AUTHORITY # 2008034845



BUILDING B INTERIOR MODIFICATIONS:  
**CRASH CHAMPIONS**  
UNIT B 451 SE OLDHAM PARKWAY  
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
---	FOR PERMIT	05.10.2023

PROJECT NUMBER 23016  
DATE ISSUED: 05 / 10 / 2023

SHEET NUMBER

M1.0

MECHANICAL PLAN



LINETYPES LEGEND:

- NEW — ABOVE SLAB
- - - - NEW — BELOW SLAB
- - - - EXISTING — ABOVE SLAB
- - - - EXISTING — BELOW SLAB
- - - - DEMOLITION

PIPING LEGEND:

- ↪ ELBOW DOWN
- ↪ ELBOW UP
- ↪ P-TRAP
- ↪ TEE DOWN
- ↪ ELBOW UP
- ↪ SHUT-OFF VALVE (GENERIC)
- ↪ BALL VALVE
- ↪ GLOBE VALVE
- ↪ BUTTERFLY VALVE
- ↪ GATE VALVE
- ↪ CHECK VALVE
- ↪ BALANCING VALVE
- ↪ PRESSURE REDUCING VALVE
- ↪ GAS COCK
- ↪ WYE-STRAINER
- ↪ UNION
- ↪ FLANGE
- ↪ RELIEF VALVE
- ↪ AIR VENT (MANUAL/AUTOMATIC)
- ↪ FLOW DIRECTION
- ↪ PIPE BREAK / CONTINUATION
- FLOOR DRAIN
- FLOOR SINK
- FLOOR CLEANOUT
- + HOSE BIBB

ANNOTATION LEGEND:

- ABC-1 EQUIPMENT / FIXTURE TAG
- PLAN NOTE
- ⊕ CONNECT TO EXISTING

ABBREVIATIONS LEGEND:

- AFF ABOVE FINISHED FLOOR
- CW DOMESTIC COLD WATER
- (E) EXISTING
- ECO EXTERIOR CLEANOUT
- ET EXPANSION TANK
- FOO FLOOR CLEANOUT
- FD FLOOR DRAIN
- FT.WG FEET WATER GAUGE
- GPM GALLONS PER MINUTE
- HB HOSE BIBB
- HP HORSEPOWER
- IE INVERT ELEVATION
- LV LAVATORY
- MAX MAXIMUM
- MIN MINIMUM
- NHB NON-FREEZE HOSE BIBB
- QTY QUANTITY
- RPTZ REDUCED PRESSURE ZONE
- RPZ BACKFLOW PREVENTER
- S SANITARY WASTE
- SOI SAND/OIL INTERCEPTOR
- SP SEWAGE PUMP
- TMV THERMOSTATIC MIXING VALVE
- TRA TO ROOF ABOVE
- V VENT
- WC WATER CLOSET
- WH WATER HEATER
- WCO WALL CLEANOUT

PLUMBING GENERAL NOTES:

- DRAWINGS ARE SCHEMATIC IN NATURE AND BASED ON PRELIMINARY SITE OBSERVATION AND ORIGINAL DESIGN DRAWINGS (WHEN AVAILABLE). CONTRACTOR SHALL INVESTIGATE THE PROJECT SITE AND BECOME FULLY AWARE OF ALL FIELD CONDITIONS, CURRENT SYSTEM OPERATION, AS WELL AS COORDINATION REQUIREMENTS. COORDINATE ALL PLUMBING WORK WITH ARCHITECTURAL DRAWINGS, EXISTING CONDITIONS, AND OTHER TRADES PRIOR TO BID OR START OF WORK.
- PLUMBING WORK SHALL CONFORM TO APPLICABLE CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- PRIOR TO START OF WORK, CONTRACTOR SHALL CAMERA ALL EXISTING UNDERGROUND SANITARY SEWER LINES. VERIFY UNDERGROUND PIPING LOCATION, DEPTH AND FLOW DIRECTION. REPORT ANY PIPING DAMAGE OR LOCATION DISCREPANCIES TO ENGINEER AND/OR OWNER PRIOR TO START OF WORK.
- EXACT LOCATION AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE VERIFIED PRIOR TO ANY INSTALLATION OF CONNECTIONS THEREOF. ALL CONNECTIONS TO EXISTING UTILITIES (E.G. DOMESTIC WATER AND SEWER) SHALL BE MADE WITH APPROVAL OF THE ADMINISTRATIVE AUTHORITY AND THE RESPECTIVE UTILITY COMPANIES.
- SANITARY WASTE AND VENT PIPING BELOW GRADE SHALL BE SCHEDULE 40 PVC WITH SOLVENT-WELDED JOINTS.
- SANITARY WASTE AND VENT PIPING ABOVE GRADE SHALL BE NO-HUB CAST IRON. SCHEDULE 40 PVC PIPING WITH SOLVENT-WELDED JOINTS MAY BE USED IN AREAS OTHER THAN RETURN AIR PLENUMS AS ALLOWED BY CODE.
- SLOPE SANITARY PIPING AS FOLLOWS: 1/4" PER FOOT FOR PIPE SIZES 2-1/2" AND SMALLER, AND 1/8" PER FOOT FOR PIPE SIZES 3" AND LARGER.
- CONDENSATE DRAIN PIPING SHALL BE TYPE M COPPER PIPING WITH WROUGHT FITTINGS AND SOLDERED JOINTS. SCHEDULE 40 PVC PIPING WITH SOLVENT-WELDED JOINTS MAY BE USED IN AREAS OTHER THAN RETURN AIR PLENUMS AS ALLOWED BY CODE.
- SLOPE CONDENSATE DRAIN PIPING AS FOLLOWS: 1/4" PER FOOT FOR ALL PIPE SIZES.
- PROVIDE WATER SUPPLY SHUT-OFF VALVES ON EACH TOILET ROOM GROUP AND TO MISCELLANEOUS EQUIPMENT.
- PROVIDE SIZE "A" WATER HAMMER ARRESTORS ON SUPPLY TO ALL PLUMBING FIXTURES.
- PROVIDE STOP VALVES ON ALL INDIVIDUAL PLUMBING FIXTURE SUPPLIES.
- COORDINATE SELECTION OF ALL PLUMBING FIXTURES WITH ARCHITECT AND OWNER. ALL HANDICAPPED FIXTURES (WHERE REQUIRED) SHALL COMPLY WITH A.D.A. REQUIREMENTS.
- DOMESTIC WATER PIPING BELOW GRADE SHALL BE TYPE K SOFT COPPER WITH FLARED FITTINGS OR TYPE K HARD COPPER WITH WROUGHT FITTINGS AND SOLDERED JOINTS.
- DOMESTIC WATER PIPING ABOVE GRADE SHALL BE TYPE L COPPER WITH WROUGHT FITTINGS AND SOLDERED JOINTS.
- INSULATE NEW DOMESTIC COLD WATER, HOT WATER, AND INTERIOR CONDENSATE DRAIN PIPING WITH MINIMUM 1" FIBERGLASS INSULATION (MINIMUM R-4.0) WITH PAPER COVERING.
- INSTALL ALL PLUMBING EQUIPMENT, FIXTURES, VALVES, ETC. PER MANUFACTURER'S INSTALLATION REQUIREMENTS. PROVIDE ADDITIONAL APPURTENANCES PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
- INSTALL CLEANOUTS AT EVERY END OF SANITARY PIPING RUNS, AT MINIMUM OF EVERY 100'-0" OF SANITARY PIPING, AND AT EVERY CHANGE IN DIRECTION GREATER THAN 45°. REFER TO SECTION 708 OF THE INTERNATIONAL PLUMBING CODE FOR ADDITIONAL REQUIREMENTS.
- EXISTING NATURAL GAS SYSTEM SHALL REMAIN IN USE. VERIFY PROPER OPERATION AND REPORT ANY DEFICIENCIES TO OWNER.

PLUMBING FIXTURE SCHEDULE:

INFORMATION BELOW IS FOR GENERAL FIXTURE REQUIREMENTS ONLY. PLUMBING CONTRACTOR SHALL COORDINATE WITH OWNER AND ARCHITECT FOR EXACT FIXTURE REQUIRED FOR THE PROJECT. COORDINATE WITH OWNER FOR INFORMATION ON PROCURING FIXTURES AND ASSOCIATED COSTS. CONTRACTOR SHALL BE CLEAR AS TO WHAT FIXTURES ARE INCLUDED IN THEIR PROPOSED COSTS.

FIXTURES IN THIS SCHEDULE, OR THE APPROVED EQUIVALENT, SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR UNLESS NOTED OTHERWISE. REFER TO SPECIFICATIONS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR FURTHER REQUIREMENTS.

ET1

- EXPANSION TANK: 150 PSIG MAXIMUM WORKING PRESSURE, 2.0-GALLON CAPACITY, 0.45" MAXIMUM ACCEPTANCE FACTOR, AND 3/4" PIPE CONNECTION. SET THE AIR CHARGE PRESSURE TO MATCH EXISTING WATER SYSTEM PRESSURE.

FCO1

- FLOOR CLEANOUT - HEAVY DUTY: JAY R. SMITH # 4111L CAST IRON BODY, FLASHING FLANGE WITH CLAMPING COLLAR, ABS PLUG, AND ADJUSTABLE, ROUND, SECURED, HEAVY DUTY SCORATED NICKEL BRONZE TOP.

FD1

- FLOOR DRAIN: SIOUX CHIEF # 860-APLU SERIES WITH 5" DEEP ROUND PVC BODY, PVC SOCKET OUTLET, ANCHOR FLANGE, ROUND PVC DEBRIS BUCKET, 9" ROUND CAST IRON GRATE AND FRAME. PROVIDE TRAP GUARD.

LV1

- WALL-MOUNTED LAVATORY (ADA ACCESSIBLE): RECTANGULAR WALL MOUNTED WHITE VITREOUS CHINA FIXTURE WITH FAUCET LEDGE AND FRONT OVERFLOW.
- FAUCET: 4" CENTRESET, VANDAL-RESISTANT, WITH LEVER HANDLES AND 0.5 GPM AERATOR.
- TRIM: GRID DRAIN WITH TAILPIECE, QUARTER-TURN BALL TYPE ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, 1-1/4" 17-GAUGE TUBULAR CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, CONCEALED ARM CARRIER WITH ANCHIONS TO FLOOR AND INSULATION KIT FOR WATER AND WASTE PIPES.

SP1

- SEWAGE PUMP: ZOELLER SERIES 912 SIMPLEX SEWAGE SYSTEM OR EQUAL, COMPLETE SEWAGE PUMP SYSTEM WITH BASIN, PUMP, AND NON-CLOG CHECK VALVE. SET PUMP FOR 20 GPM AT 18.0 FT.WG HEAD WITH A 2" DISCHARGE CONNECTION.
- ACCESSORIES: CONTROL PANEL, HIGH LEVEL ALARM, BATTERY BACKUP, RETRIEVAL SYSTEM, FLOAT SWITCHES, AND OTHER ACCESSORIES FOR A COMPLETE SYSTEM.
- ELECTRICAL: 1/2 HP PUMP MOTOR, 120V/1Ø POWER CONNECTION.

TMV1

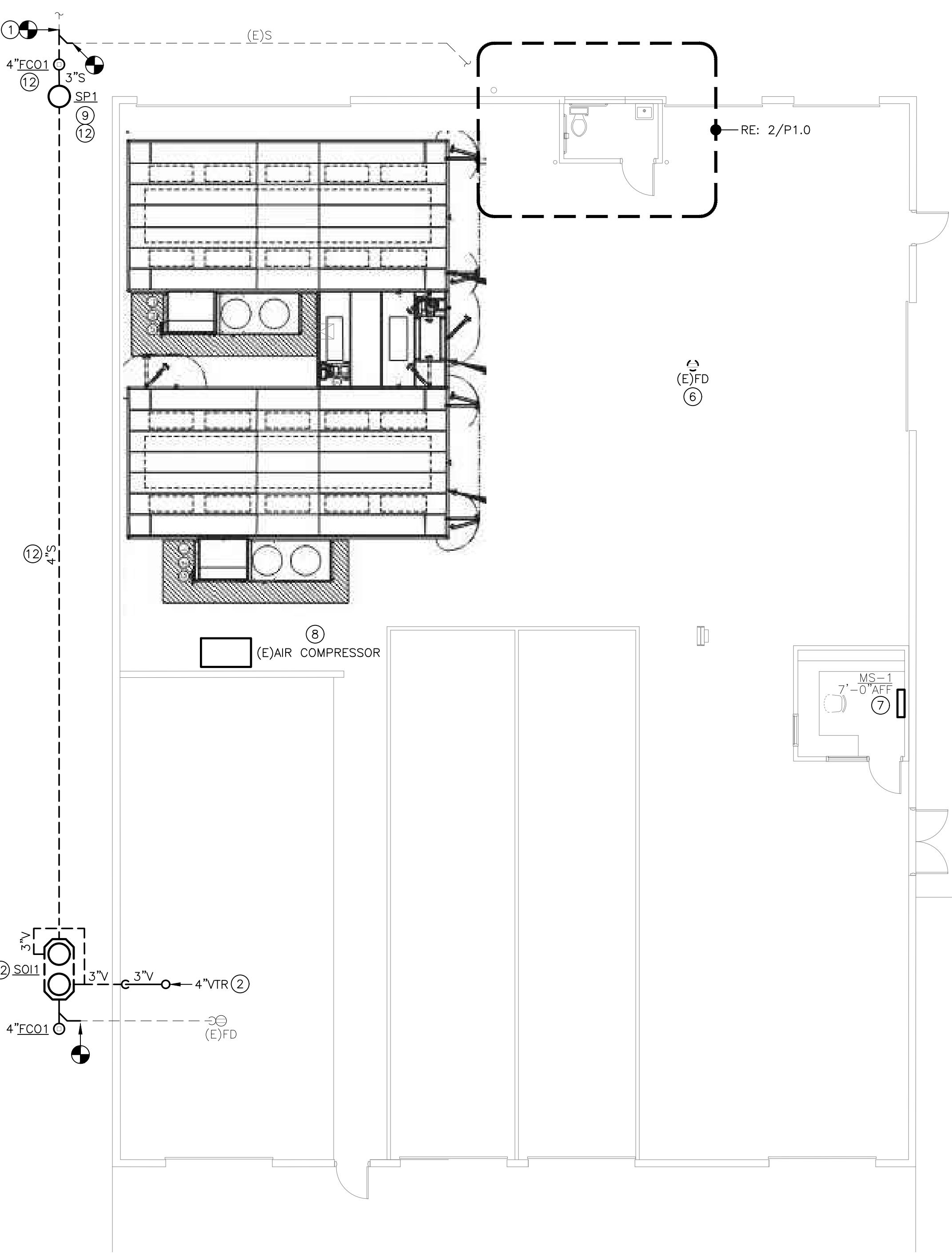
- THERMOSTATIC MIXING VALVE: SOLID BRASS BODY, THERMOSTATIC WAX ELEMENT, CORROSION RESISTANT INTERNAL PARTS, AND INTEGRAL CHECKS, ASSE 1070 COMPLIANT, CAPABLE OF 2.2 GPM WITH A 20 PSI DIFFERENTIAL AND A MINIMUM FLOW RATE OF 0.5 GPM. MAXIMUM TEMPERATURE STOP SET FOR 110 DEGREES. MOUNT BELOW THE PLUMBING FIXTURE WHERE INDICATED ON PLANS.

WC1

- FLOOR-MOUNTED WATER CLOSET (ADA ACCESSIBLE): TANK TYPE WHITE VITREOUS CHINA FIXTURE WITH ELONGATED BOWL, 1.6 GALLON PER FLUSH, SIPHON FLUSH ACTION, AND CLOSE-COUPLED TANK WITH TRIP LEVER ON THE WIDE SIDE OF THE STALL.
- TRIM: WHITE OPEN-FRONT CONTOURED, SOLID PLASTIC, HEAVY-DUTY, SEAT-LESS COVER WITH SELF-SUSTAINING HINGES AND STAINLESS STEEL BOLTS; QUARTER-TURN BALL TYPE ANGLE STOP VALVE WITH RISER AND CHROME-PLATED ESCUTCHEON.

WH1

- WATER HEATER: A.O. SMITH MODEL # DEL-10 OR EQUAL, ELECTRIC, 10 GALLON, 1.5 kW INPUT, 8 GALLON PER HOUR RECOVERY AT 80°F TEMPERATURE RISE AND 120°F OPERATING TEMPERATURE. PROVIDE ALL WATER CONNECTIONS, VALVES, AND SPECIALS PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
- ELECTRICAL REQUIREMENTS: 120V/1Ø, 13 FLA.



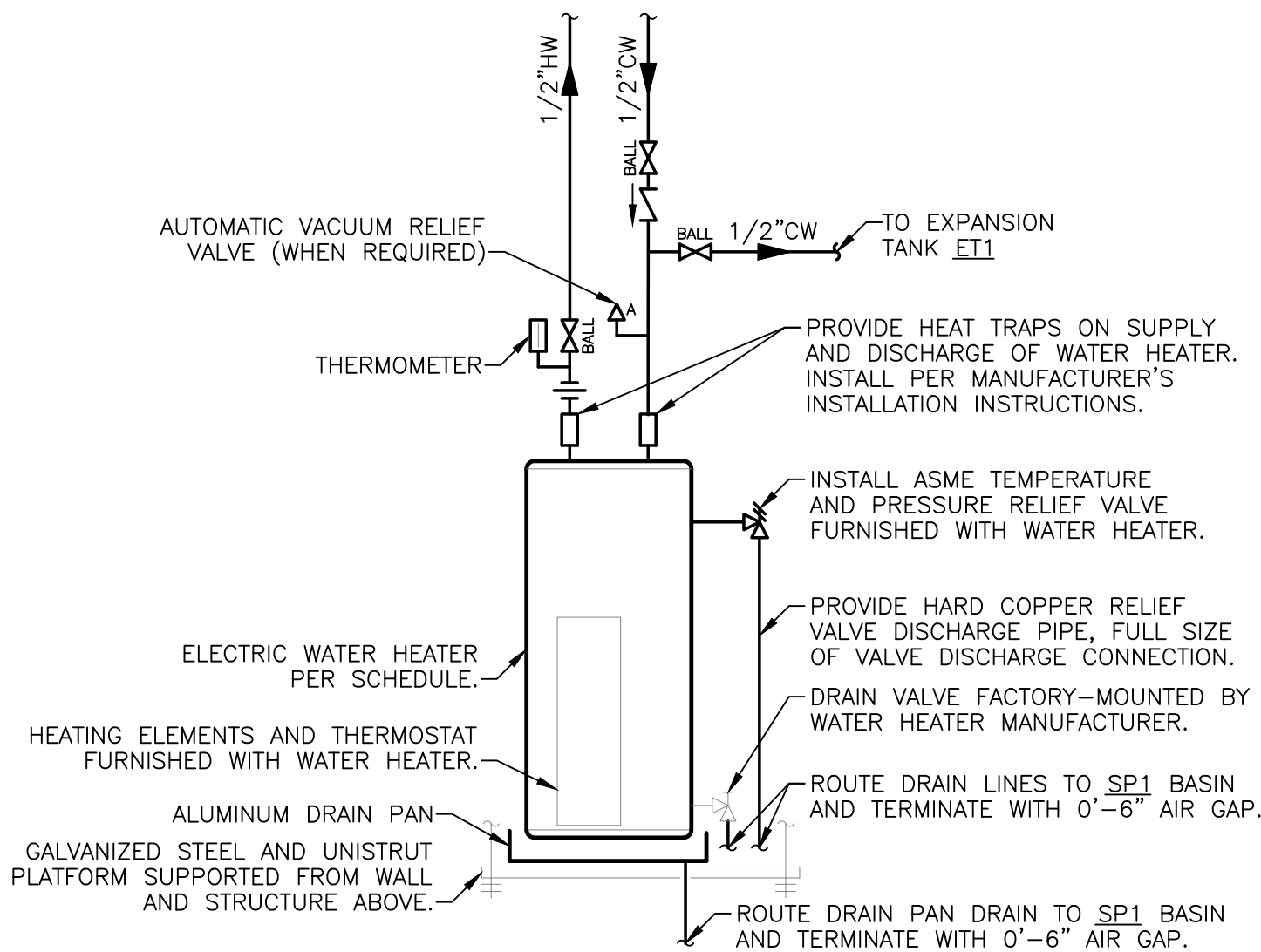
1 PLUMBING PLAN  
SCALE: 1/8" = 1'-0"

FIXTURE CONNECTION SCHEDULE					
FIXTURE	WASTE	VENT	COLD	HOT	NOTES
LAVATORY - PUBLIC	2"	1-1/2"	1/2"	1/2"	TMV
WATER CLOSET (TANK TYPE)	4"	2"	1/2"	---	---

NOTES:  
TMV: POINT OF USE TYPE THERMOSTATIC MIXING VALVE CONFORMING TO ASSE 1070.  
VB: ATMOSPHERIC TYPE VACUUM BREAKER CONFORMING TO ASSE 1020.

OIL SEPARATOR CALCULATIONS	
SERVICE AREA	1000 SQ. FT.
OIL SEPARATOR SIZING	
6.0 CU. FT. FOR FIRST 100 SQ. FT. OF DRAINAGE AREA	6 CU. FT.
1.0 CU. FT. FOR EACH ADDITIONAL 100 SQ. FT. OF DRAINAGE AREA	9 CU. FT.
CU. FT. REQUIREMENT	15 CU. FT.
GAL. REQUIREMENT	113 GAL.

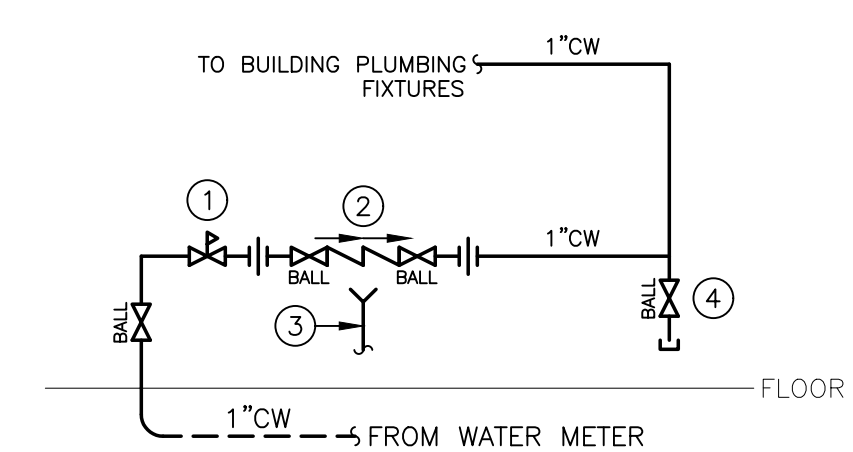
Sizing methodology complies with UPC section 1017.2 and IPC section 1003.4.2.2.



NOTES:

- STRUCTURE AND PLATFORM SHALL BE DESIGNED TO HOLD THE MAXIMUM WEIGHT OF THE WATER HEATER. CONFIRM CAPACITY OF SHELF WITH MANUFACTURER PRIOR TO INSTALLATION.

4 WATER HEATER DETAIL  
SCALE: NTS



DETAIL 3/P1.0 NOTES:

- PROVIDE PRESSURE REDUCING VALVE (PRV) WHEN UTILITY PRESSURE EXCEEDS 80 PSIG.
- PROVIDE LINE SIZE USC-APPROVED REDUCED PRESSURE BACKFLOW PREVENTER.
- PROVIDE FUNNEL FOR RPZ DISCHARGE AND ROUTE TO FLOOR DRAIN. SIZE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- PROVIDE 3/4" DRAIN VALVE WITH THREADED CAP AT BASE OF RISER.

3 WATER SERVICE ENTRANCE DETAIL  
SCALE: NTS

PLUMBING PLAN NOTES:

- CONNECT TO MINIMUM 4" EXISTING SANITARY. FIELD VERIFY EXACT LOCATION, SIZE, FLOW DIRECTION, AND INVERT ELEVATION AT CONNECTION TO EXISTING.
- ROUTE 4"V UP THROUGH ROOF ("VTR"). INSTALL AT A MINIMUM OF 10'-0" FROM ALL AIR INTAKES AND BUILDING OPENINGS.
- INSTALL SAND/OIL INTERCEPTOR BELOW GRADE. PROVIDE ACCESSORIES AS RECOMMENDED BY THE MANUFACTURER, WHICH MAY INCLUDE SAMPLING PORT, MANHOLE RISER EXTENSIONS, ETC).
- PROVIDE NEW 1" DOMESTIC WATER SERVICE ENTRANCE. REFER TO DETAIL 3/P1.0 FOR MORE INFORMATION.
- INSTALL WATER HEATER ABOVE CEILING. PROVIDE PIPING CONNECTIONS, VALVES, AND SPECIALS PER DETAIL 4/P1.0 AND MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- REMOVE EXISTING FLOOR DRAIN. CAP ITS ASSOCIATED BRANCH PIPING AT ACTIVE MAIN.
- PROVIDE CONDENSATE DRAIN WITH P-TRAP, FULL SIZE OF CONNECTION AT WALL-MOUNTED MINI-SPLIT EVAPORATOR COIL. ROUTE CONDENSATE PIPING CONCEALED IN WALL CAVITY, AND DISCHARGE OUT WALL AT 1'-6" AFG TO SPLASH BLOCK ON GRADE.
- INSTALL SAVED AIR COMPRESSOR AT NEW LOCATION. PROVIDE NEW COMPRESSED AIR PIPING FROM CONNECTION AT COMPRESSOR TO EXISTING MAIN, OF SAME SIZE AS EXISTING MAIN. FIELD VERIFY SIZE AND LOCATION OF CONNECTION AT EXISTING. COMPRESSED AIR PIPING SHALL BE GALVANIZED STEEL PIPE WITH MALLEABLE IRON SCREWED FITTINGS. INSTALL VALVES, FILTERS, REGULATORS, AND OTHER FITTINGS FURNISHED BY THE OWNER AS PART OF THE COMPRESSED AIR SYSTEM. AT THE COMPLETION OF THE WORK, LEAVE A COMPLETE AND OPERATING SYSTEM, CONFORMING TO THE LATEST EDITION OF THE OSHA CODE.
- COORDINATE FINAL LOCATION OF SEWAGE PUMP WITH EXISTING CONDITIONS AND OTHER TRADES. INSTALL PER MANUFACTURER'S REQUIREMENTS.
- CONNECT NEW 3" SANITARY FROM SEWAGE PUMP DISCHARGE INTO EXISTING CLEANOUT. FIELD VERIFY EXACT LOCATION, SIZE, FLOW DIRECTION, AND INVERT ELEVATION AT CONNECTION TO EXISTING.
- CONNECT TO EXISTING COLD WATER MAIN AND/OR EXISTING FIXTURES. FIELD VERIFY LOCATION AND SIZES AT CONNECTIONS TO EXISTING.
- COORDINATE NEW INSTALLATION WITH EXISTING WATER UTILITY AND GAS UTILITY LINES ALONG WEST SIDE OF BUILDING.

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

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BUILDING B INTERIOR MODIFICATIONS:

CRASH CHAMPIONS

UNIT B 451 SE OLDHAM PARKWAY

LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
---	FOR PERMIT	05.10.2023

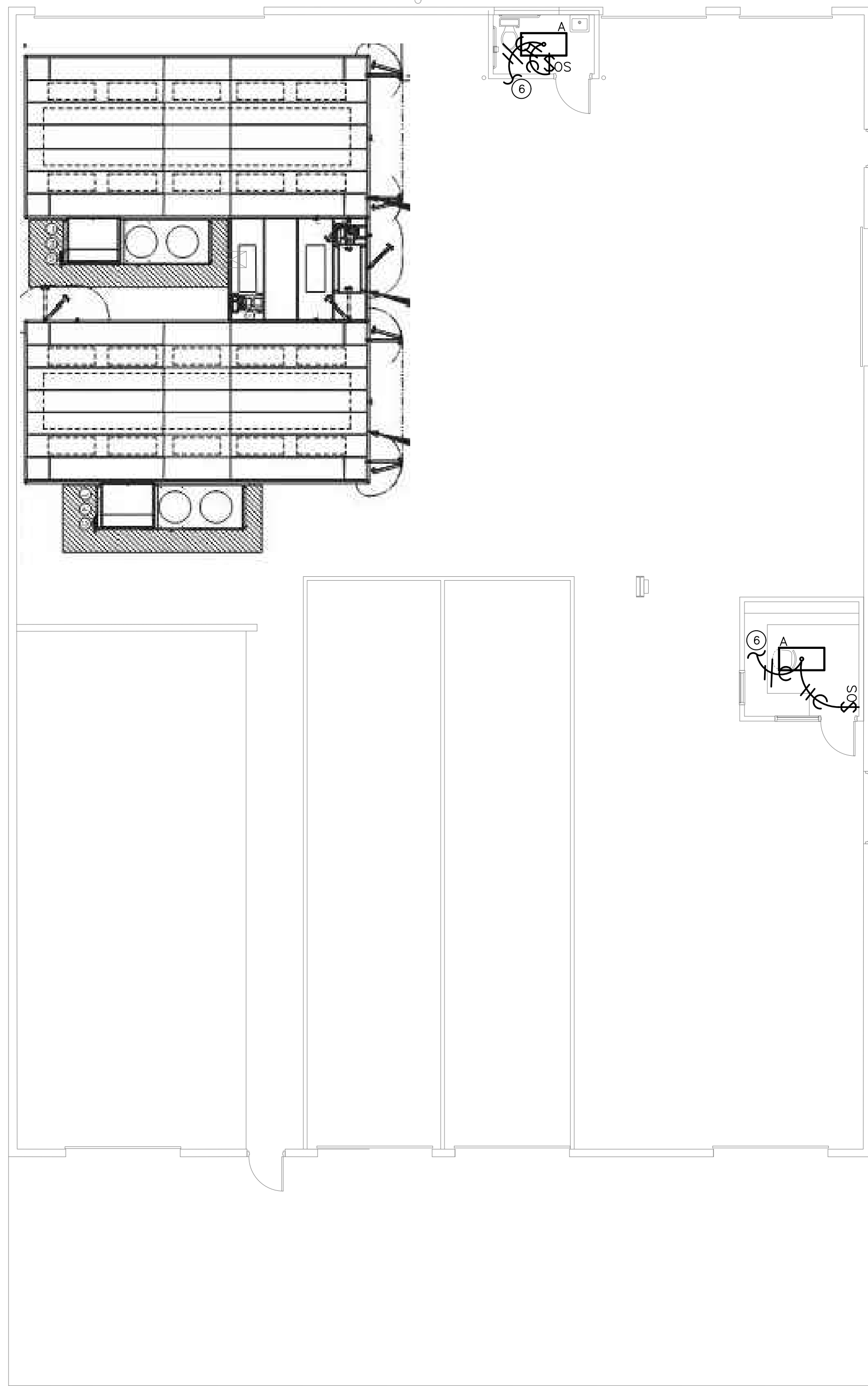
PROJECT NUMBER 23016  
DATE ISSUED: 05 / 10 / 2023  
SHEET NUMBER

P1.0

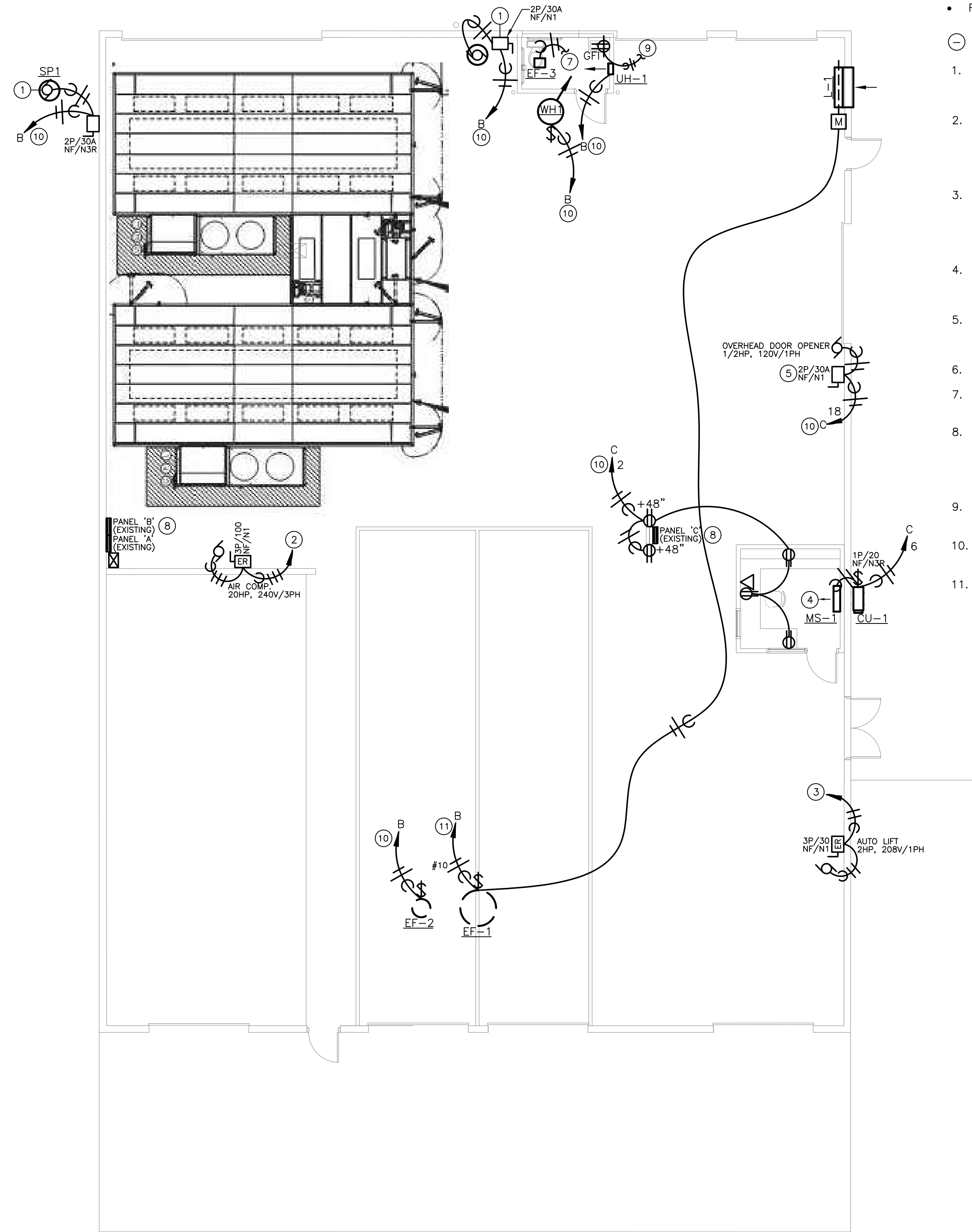
PLUMBING PLANS



May 10, 2023 - 2:24pm - USER ScottGroshans  
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2 ELECTRICAL LIGHTING PLAN  
SCALE: 1/8" = 1'-0"



1 ELECTRICAL POWER PLAN  
SCALE: 1/8" = 1'-0"

ELECTRICAL GENERAL NOTES:

- REFERENCE SHEET E2.0 FOR ELECTRICAL GENERAL NOTES.

ELECTRICAL PLAN NOTES:

- DISCONNECT SWITCH AND FLEXIBLE CONNECTION TO SEWAGE EJECTOR PUMP, 120V. USE LIQUID-TITE FLEXIBLE METAL CONDUIT FOR OUTDOOR LOCATION.
- RELOCATE DISCONNECT, MOTOR CONNECTION AND EXTEND FEED TO NEW AIR COMPRESSOR LOCATION. VERIFY EXACT LOCATION WITH OWNER. CONTRACTOR SHALL VISIT SITE TO CONFIRM EXISTING LOCATION AND CONDUIT AND CONDUCTOR SIZES.
- RELOCATE DISCONNECT, MOTOR CONNECTION AND EXTEND FEED TO NEW AUTO LIFT LOCATION. VERIFY EXACT LOCATION WITH OWNER. CONTRACTOR SHALL VISIT SITE TO CONFIRM EXISTING LOCATION AND CONDUIT AND CONDUCTOR SIZES.
- NEW MINI-SPLIT HVAC UNIT IN OFFICE. REFER TO MECHANICAL FLOORPLANS AND SCHEDULES FOR LOCATIONS AND CONNECTION DETAILS.
- PROVIDE MOTOR POWER CONNECTION TO OVERHEAD DOOR OPERATOR. COORDINATE CONTROL PUSHBUTTON STATION WITH OPERATOR SUPPLIER.
- CONNECT LIGHTING TO RECEPTACLE CIRCUIT IN AREA.
- CONNECT EXHAUST FAN TO SWITCHED LIGHTING CIRCUIT IN ROOM.
- RECONFIGURE EXISTING PANEL TO ACCEPT ADDITIONAL LOADS. USE OR REPLACE UN-USED BREAKERS AS NECESSARY. BREAKERS THAT BECAME SPARE AFTER DEMOLITION OF SHED ON EAST SIDE MAY BE USED FOR NEW LOADS.
- CONNECT TO ADJACENT NEARBY 120V RECEPTACLE CIRCUIT IN NORTHEAST CORNER OF BUILDING.
- TERMINATE ON SPARE 20A/1P CIRCUIT BREAKER AVAILABLE IN PANEL INDICATED.
- TERMINATE ON NEW 25A/1P CIRCUIT BREAKER AVAILABLE IN PANEL INDICATED.

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ELECTRICAL POWER AND  
LIGHTING PLANS



