ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	SPECIFICATION GRADE DUPLEX RECEPTACLE, - 20 AMP, 125V.
	SPECIFICATION GRADE QUADPLEX RECEPTACLE, - 20 AMP, 125V
G	SPECIFICATION GRADE, DUPLEX RECEPTACLE - GROUND FAULT INTERRUPT.
WP G	SPECIFICATION GRADE WEATHER RESISTANT, DUPLEX RECEPTACLE - TAMPER PROOF WITH GROUND FAULT INTERRUPT.
U	SPECIFICATION GRADE DUPLEX RECEPTACLE, - 20 AMP, 125V. TAMPER PROOF. WITH USB CHARGING PORTS.
	FLOOR MOUNTED DUPLEX RECEPTACLE - 20A, 125V. TAMPER PROOF HEAVY DUTY. MTD. IN FLOOR BOX WITH BRASS COVER PLATE.
	SPECIFICATION GRADE DUPLEX RECEPTACLE - 20 AMP, 125V. TAMPER PROOF HEAVY DUTY. MTD. IN FLOOR BOX, WITH BRASS COVERPLATE.
	SPECIFICATION GRADE DOUBLE DUPLEX RECEPTACLE - 20 AMP, 125V. TAMPER PROOF HEAVY DUTY. MTD. IN FLOOR BOX, WITH BRASS COVERPLATE.
20A	20A, 240V SIMPLEX RECEPTACLE, MOUNTED AS REQUIRED BY EQUIPMENT BEING SERVED, WITH BRUSHED STAINLESS STEEL FACEPLATE.
30A	30A, 240V SIMPLEX RECEPTACLE, MOUNTED AS REQUIRED BY EQUIPMENT BEING SERVED, WITH BRUSHED STAINLESS STEEL FACEPLATE.
XXA	240V SIMPLEX RECEPTACLE, MTD. AS REQUIRED BY EQUIPMENT BEING SERVED, COORDINATE IN FIELD, AMPERAGE AS NOTED.
	JUNCTION BOX LOCATION MOUNTED AS NOTED ON DRAWING, SIZED AS REQUIRED BY EQUIPMENT BEING SERVED.
$	SPECIFICATION GRADE 20A-1P TOGGLE SWITCH, HEAVY DUTY
$3	SPECIFICATION GRADE 20 AMP THREE WAY TOGGLE SWITCH, HEAVY DUTY.
$D	SPECIFICATION GRADE 0-10V LED DIMMER SWITCH
$OD	SPECIFICATION GRADE 0-10V LED DIMMER/OCCUPANCY SWITCH
$O	SPECIFICATION GRADE WALL MOUNTED OCCUPANCY SWITCH
$M	120V, 20AMP MOTOR RATED TOGGLE SWITCH, WITH LOCKING DEVICE.
$P	SPECIFICATION GRADE 20A-1P TOGGLE SWITCH WITH PILOT LIGHT, HEAVY DUTY.
$DT	SPECIFICATION TRIAC DIMMER SWITCH MOUNTED @ 46" A.F.F.
$LVD	LOW VOLTAGE DIMMER SWITCH.
$ML	FOUR BUTTON MULTI LEVEL SWITCH. LSI ALB WS E04B WH.
$OC	DUAL TECHNOLOGY WALL OCCUPANCY SWITCH.
$OC2	DOUBLE POLE, DUAL TECHNOLOGY WALL OCCUPANCY SWITCH.
$H	HUMIDITY SENSOR SWITCH, FOR RESTROOM EXHAUST FANS.
OC	CEILING MOUNTED OCCUPANCY SENSOR.
	DISCONNECT SWITCH, SIZE AND TYPE AS NOTED.
	HOME RUN CONDUIT, CIRCUIT NUMBER AS INDICATED ON DRAWINGS. HASHMARKS INDICATE UNGROUNDED (SHORT), GROUNDED (LONG), AND GROUNDING (LONG W/ TICK) CONDUCTORS.
----------	CONDUIT RUN IN FLOOR OR SLAB
————	CONDUIT RUN IN WALLS OR CEILING
PP	LOW VOLTAGE POWER PACK.
EXIT EM	LIGHTING FIXTURE, SEE FIXTURE SCHEDULE
	EXHAUST FAN

SECURITY LEGEND

	IP VIDEO SURVEILLANCE CAMERA WALL MOUNTED WITH DOME ENCLOSURE. PROVIDE (1) CAT 6 CABLE. (CAMERA PROVIDED BY OWNER)
	IP VIDEO SURVEILLANCE CAMERA CEILING MOUNTED WITH DOME ENCLOSURE. PROVIDE (1) CAT 6 CABLE. (CAMERA PROVIDED BY OWNER)
	IP VIDEO SURVEILLANCE CAMERA WITH LENS. PROVIDE (1) CAT 6 CABLE. (CAMERA PROVIDED BY OWNER)
CR	CARD READER
	DOOR CONTROLLER. PROVIDE (1) CAT 6 CABLE. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR.

TELECOMMUNICATIONS LEGEND

4D	TELECOMMUNICATIONS OUTLET. PROVIDE (2) CAT 6 CABLES, UON. 4D = 4 DATA JACKS. MOUNTED AT 18" AFF, UON.
WAP	TELECOMMUNICATIONS OUTLET, MOUNTED AT CEILING. PROVIDE (1) CAT 6 CABLE. WAP = WIRELESS ACCESS POINT (WAP PROVIDED BY OWNER).
WAP	TELECOMMUNICATIONS OUTLET, MOUNTED ON WALL (10' AFF) OR POLE (12' AFF), UON. PROVIDE (1) CAT 6 CABLE FOR WALL MOUNTED. WAP = WIRELESS ACCESS POINT (WAP PROVIDED BY OWNER).
	TELECOMMUNICATIONS OUTLET LOCATED IN FLOORBOX. FLOORBOX PROVIDED/INSTALLED BY ELECTRICAL CONTRACTOR. PROVIDE (2) CAT 6 CABLES, UON.
2D AV +72"	TELECOMMUNICATIONS/AV/POWER FLUSH WALL BOX FOR WALL MOUNTED TV. MOUNTING HEIGHT FROM FINISHED FLOOR TO CENTER OF BOX AS INDICATED ON PLANS. PROVIDE SEPARATE CONDUIT CONNECTIONS FOR DATA/AV CABLING. PROVIDE (2) CAT 6 CABLES, UON.
2D AV	TELECOMMUNICATIONS/AV/POWER LOCATED IN FLOORBOX. FLOORBOX PROVIDED/INSTALLED BY ELECTRICAL CONTRACTOR. PROVIDE SEPARATE CONDUIT CONNECTIONS FOR DATA/AV CABLING. PROVIDE (2) CAT 6 CABLES, UON.
	TELECOMMUNICATIONS PROJECTOR LOCATION. PROVIDE CONNECTIONS/PATHWAYS FOR DATA/AV CABLING AS REQUIRED.
	2-POST FLOOR MOUNTED TELECOMMUNICATIONS RACK. COORDINATE POWER/UPS REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
	4-POST FLOOR MOUNTED TELECOMMUNICATIONS RACK OR LOCKABLE CABINET. COORDINATE POWER/UPS REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
	LOCKABLE WALL MOUNTED CABINET. COORDINATE POWER/UPS REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
	LOCKABLE WALL MOUNTED CABINET. COORDINATE POWER/UPS REQUIREMENTS WITH ELECTRICAL CONTRACTOR. PROVIDE A/C OPTION AS REQUIRED PER LOCATION.

TELECOM GENERAL NOTES

A. WORK SHALL COMPLY WITH THE GOVERNING REQUIREMENTS LISTED IN THE SPECIFICATIONS.
B. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO FINALIZE EQUIPMENT LOCATIONS, DEVICE LOCATIONS AND CONDUIT ROUTING REQUIREMENTS PRIOR TO ELECTRICAL ROUGH-IN.
C. ALL PUBLIC ADDRESS CABLING RUNS SHALL BE IN CONDUIT.
D. ALL CABLE AND CONDUIT SHALL BE RUN PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE.
E. PROVIDE IS HEREBY TO MEAN THAT THE CONTRACTOR SHALL FURNISH AND INSTALL THE EQUIPMENT OR ITEM IN A FUNCTIONAL MANNER.
F. FLOOR BOX LOCATIONS SHOWN ARE APPROXIMATE. PRIOR TO ROUGH-IN COORDINATE FINAL LOCATION WITH ARCHITECTURAL, STRUCTURAL, FURNITURE, ELECTRICAL AND OWNER'S REPRESENTATIVE, AS WELL AS WITH ALL OTHER TRADES WHICH WILL MAKE USE OF THE FLOOR BOX.
G. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL WORK WITH OTHER TRADES, PRIOR TO STARTING WORK.
H. INSTALLATION OF GROUNDING AND BONDING SYSTEM SHALL COMPLY WITH TIA/EIA-607 GROUNDING AND BONDING STANDARD, NEC AND SPECIFICATIONS.
I. ALL CONDUIT BENDS SHALL BE LARGE RADIUS SWEEPS, SHALL CONFORM TO TIA/EIA 569 BEND RADIUS REQUIREMENTS, AND SHALL BE A MINIMUM OF NO LESS THAT 6 TIMES THE INTERNAL DIAMETER OF THE CONDUIT FOR CONDUITS 2-INCHES OR LESS, AND 10 TIMES THE INTERNAL DIAMETER OF THE CONDUIT FOR CONDUITS GREATER THAN 2-INCHES.
J. CONDUIT STUBS FROM DEVICE BOXES SHALL EXTEND A MINIMUM OF 6-INCHES INTO ACCESSIBLE SPACE AND SHALL BE ANGLED AT 30 DEGREES.
K. CONTRACTOR SHALL COORDINATE ALL PENETRATIONS, OPENINGS, FASTNERS, CONNECTIONS, HANGERS AND SUPPORTS WITH STRUCTURAL ENGINEER PRIOR TO COMMENCEMENT OF WORK.
L. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL RACEWAYS/PATHWAYS, INCLUDING BUT NOT LIMITED TO CONDUIT, UNDERGROUND DUCTS, CABLE TRAY, GUTTER, PULL BOXES, MANHOLES, HAND HOLES AND SURFACE RACEWAYS.
M. IF FLEXIBLE CONDUIT MUST BE USED, IT SHALL BE ONE TRADE SIZE LARGER THAN REQUIRED FOR RIGID CONDUIT (i.e. 1-1/4" RIGID TO 1-1/2" FLEXIBLE).
N. LOW-VOLTAGE CONTRACTORS SHALL PROVIDE ALL RACEWAY/PATHWAY (SLEEVES, PENETRATIONS, CABLE SUPPORTS, ETC.) NECESSARY FOR SUPPORTING AND ROUTING CABLE FOR THEIR RESPECTIVE SYSTEM NOT WITHIN PRIMARY RACEWAY/PATHWAYS.
O. PROVIDE PULL BOXES FOR CONDUIT RUNS AT INTERVALS REQUIRED PER THE SPECIFICATIONS. DO NOT INSTALL CONDUITS INTO A PULL BOX IN SUCH A WAY AS TO OBSTRUCT THE INSTALLATION OF FUTURE FEEDER CONDUITS INTO OR OUT OF THE PULLBOX.
P. PRIOR TO INSTALLATION, VERIFY THE TOTAL RUN LENGTH FOR EACH HORIZONTAL CABLE FROM THE TELECOMMUNICATIONS OUTLET TO ITS TELECOMMUNICATIONS CABINET, USING THE RACEWAYS (CONDUIT, SLEEVES, ETC.) AS INSTALLED. FOR RUN LENGTHS WHICH EXCEED 270 FEET, INCLUDING UP/DOWN TRANSITIONS, REQUIRED CABLE SLACK, ETC., OBTAIN THE ENGINEER'S DIRECTION PRIOR TO PROCEEDING.
Q. PRIOR TO PROCUREMENT AND INSTALLATION OF CABLE, PHYSICALLY VERIFY ON SITE THE TOTAL RUN LENGTH FOR EACH CABLE FROM ENDPOINT TO ENDPOINT, INCLUDING VERTICAL TRANSITIONS, REQUIRED CABLE SLACK, ETC. PRE-CUT/PRE-MANUFACTURED CABLES OF INSUFFICIENT LENGTH ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
R. CONTRACTOR SHALL INSTALL EACH LOUDSPEAKER WITH A SEISMIC RESTRAINING SYSTEM AS SPECIFICED BY LOCAL AND STATE MANDATED LAWS.
S. LOUDSPEAKER LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE LOCATIONS WITH OTHER DEVICES. ENSURE THAT FINAL LOCATIONS MEET THE SOUND REINFORCEMENT INTENT FOR THE TARGET AREA.
T. CONDUIT ROUTING FOR TELECOMMUNICATIONS HORIZONTAL CABLING SHALL BE INSTALLED VIA THE SHORTEST ROUTE FROM TELECOMMUNICATIONS OUTLET TO TELECOMMUNICATIONS CABINET.
U. ALL EMPTY CONDUITS AND INNERDUCTS WILL INCLUDE PULL TAPE UPON COMPLETION.
V. PROVIDE CONCEALED (1) 1 INCH EMT CONDUIT FROM ALL VOICE AND DATA TELECOMMUNICATIONS OUTLETS (T.O.) TO NEAREST CABLE TRAY OF J-HOOK PATHWAY, UNLESS OTHERWISE NOTED.
W. ALL RACEWAYS SHALL BE CONCEALED, UNLESS OTHERWISE NOTED.
X. PROVIDE 10-FEET OF NEATLY COILED CABLE FOR ALL TELECOMMUNICATION OUTLETS, FLOOR BOXES AND WIRELESS ACCESS POINTS.
Y. CAMERA LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING CAMERAS IN THEIR FINAL POSITION SUCH THAT VIEWING ANGLES ARE OPTIMIZED, AND BLIND SPOTS, OBSTRUCTIONS, AND OTHER LIMITATIONS TO CAMERA EFFECTIVENESS ARE ELIMINATED TO THE GREATEST EXTENT POSSIBLE.
Z. CABLING SUBCONTRACTOR SHALL FURNISH AND INSTALL ALL CABLES, TERMINATION AND ACCESSORIES AS REQUIRED FOR COMPLETE INSTALLATION.

BASIS OF DESIGN

1. 2020 NATIONAL ELECTRICAL CODE
2. 2018 INTERNATIONAL ENERGY CONSERVATION CODE
3. SERVICE CHARACTERISTICS: THESE DRAWINGS ARE FOR A SECONDARY METERED, OVERHEAD BUILDING SERVICE OF 277/480V, 600A THREE PHASE, FOUR WIRE, 60 HERTZ.
4. ALL CONDUCTORS SHALL BE COPPER, U.N.O.
5. ALL WIRE AND CABLES SHALL BE UNDERWRITERS LABORATORIES' LISTED, AND LABELED, AND CONFORM WITH APPLICABLE STANDARDS OF U.L. (44 AND 83), NEMA (WC-5 AND WC-7), IPECA (S-61-402 AND S-66-524), FEDERAL SPECIFICATIONS (J-C-30A1(1) AND HH-I-595C), ANSI, AND OTHER APPLICABLE INDUSTRY STANDARDS. CONNECTORS AND LUGS SHALL MEET U.L. PUBLICATION 486. ALL BRANCH CIRCUIT WIRING SHALL BE 600 VOLT, COPPER, 75 DEGREE C (MINIMUM), TYPE THHN/THWN WITH A MINIMUM SIZE OF #12 AWG UNLESS NOTED OTHERWISE. WIRE SIZES OF #8 AWG AND LARGER SHALL BE STRANDED. SERVICE AND FEEDER CABLES SHALL BE 600 VOLT, STRANDED COPPER, 90 DEGREE C (MINIMUM), TYPE XHHW. ALL CIRCUITS SHALL HAVE A SEPARATE GROUNDED CONDUCTOR. PROVIDE GREEN INSULATED GROUNDING CONDUCTOR IN ALL RACEWAYS, CABLE ASSEMBLIES, AND WHERE NOTED.
6. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND OF THE QUALITY INDICATED BY THE SPECIFIED BRAND NAMES. REMANUFACTURED, REPAIRED, AND RECONDITIONED EQUIPMENT ARE NOT ACCEPTABLE.
7. ALL EQUIPMENT IS SCHEDULED WITHOUT SUBSTITUTIONS. HOWEVER, SUBSTITUTIONS OF MATERIAL OF EQUAL QUALITY BY OTHER MAJOR MANUFACTURERS OF COMMERCIAL EQUIPMENT MAY BE ACCEPTABLE PROVIDED A LIST OF SUCH SUBSTITUTIONS IS APPROVED BY THE OWNER, ARCHITECT, AND ENGINEER OF RECORD.
8. PANEL BOARDS SHALL BE BOLT-ON CIRCUIT BREAKER TYPE, AS SHOWN ON THE PLANS. PANELS SHALL BE OF A PANEL BOARD CONSTRUCTION, 20 INCHES WIDE (MINIMUM), 5-3/4" TO 6-1/2" DEEP,UNLESS NOTED OTHERWISE U.L. LISTED, AND MEET U.L. 67, U.L. 50, AND FEDERAL SPECIFICATION W-P-115B AS TYPE 1, CLASS 1, WITH BOLT-ON CIRCUIT BREAKERS, COPPER BUS BARS, NEUTRAL BUS, GROUND BUS, AND A HINGED LOCKABLE DOOR. CABINETS SHALL BE CODE GAUGE, GALVANIZED STEEL, MOUNTED AS SHOWN.
9. ALL JUNCTION BOXES, PULL BOXES, WIRE WAYS, ETC., SHALL BE SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
10. ALL PRODUCTS AND EQUIPMENT SHALL BE LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY.
11. ALL FURNISHED EQUIPMENT TERMINALS SHALL BE LISTED FOR USE AT 75 DEGREE C MINIMUM, UNLESS NOTED OTHERWISE.
12. NO CONDUIT SMALLER THAN 3/4" SHALL BE INSTALLED.

CONTRACTOR NOTES

1. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT IN ACCORDANCE WITH THESE SPECIFICATIONS, AND THE ACCOMPANYING DRAWINGS TO PROVIDE A COMPLETE AND PROPERLY OPERATING ELECTRICAL SYSTEM FOR THE BUILDING.
2. BIDDING CONTRACTORS MUST VISIT THE SITE, REVIEW ALL CONSTRUCTION DOCUMENTS, AND OBTAIN WRITTEN COPIES OF ALL REFERENCED CODES AND ORDINANCES PRIOR TO SUBMITTING BIDS. NO ALLOWANCE WILL BE MADE FOR ADVERSE CONDITIONS WHICH WERE ASCERTAINABLE PRIOR TO BID TIME.
3. THE ELECTRICAL CONTRACTOR SHALL COORDINATE AND VERIFY THE ELECTRICAL SERVICE ARRANGEMENTS WITH THE LOCAL POWER COMPANY AND WITH OWNER SUPPLIED SITE PLAN. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT FOR A COMPLETE INSTALLATION.
4. SHORT CIRCUIT RATINGS IN THIS DESIGN ARE BASED ON DATA KNOWN AT THE TIME OF DESIGN. PRIOR TO PURCHASING EQUIPMENT, CONTRACTOR SHALL CONTACT THE LOCAL UTILITY TO VERIFY THE AVAILABLE FAULT CURRENT AT THE POINT OF SERVICE AND RECALCULATE SHORT CIRCUIT CURRENTS. CONTRACTOR SHALL CONTACT ENGINEER OF RECORD FOR DIRECTION IF SHORT CIRCUIT CURRENTS EXCEED DESIGNED EQUIPMENT RATINGS. CONTRACTOR SHALL AFFIX LABELING TO EQUIPMENT PER LATEST ADOPTED VERSION OF THE NEC USING CONTRACTOR-CALCULATED SHORT CIRCUIT VALUES.
5. THE ELECTRICAL CONTRACTOR SHALL APPLY ARC FLASH LABELING PER NEC REQUIREMENTS. IF AHJ REQUIRES AN ARC FLASH STUDY, CONTRACTOR SHALL SUPPLY SUCH STUDY AND INCLUDE FEES IN CONTRACT.
6. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIAL, EQUIPMENT AND APPURTENANCES SHOWN ON DRAWINGS, UNLESS NOTED OTHERWISE, INCLUDING BUT NOT LIMITED TO: PANEL BOARDS; TRANSFORMERS; LIGHTING FIXTURES; LAMPS; RACEWAYS; 600 VOLT WIRE AND CABLE; WIRING DEVICES; DEVICE PLATES; DEVICE, PULL, AND JUNCTION BOXES; HARDWARE SUPPORTS; SAFETY SWITCHES; MOTOR STARTERS; LIGHTING CONTROLS; CIRCUIT BREAKERS; FUSES; TIME CLOCKS; EQUIPMENT IDENTIFICATION (NAMEPLATES AND DIRECTORIES); WIRE AND CABLE TERMINATIONS; CONNECTIONS TO INDIVIDUAL UNITS OF EQUIPMENT. THIS REQUIREMENT INCLUDES DEVICES, CONDUCTORS, ETC. REQUIRED BY OTHER DISCIPLINES. THE ELECTRICAL CONTRACTOR SHALL REVIEW OTHER INSTALLATION PACKAGES TO INSURE EQUIPMENT NEEDED TO BE INSTALLED.
7. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND REVIEW THE MECHANICAL AND SPECIAL EQUIPMENT SUBMITTALS PRIOR TO SUBMITTING THE ELECTRICAL SUBMITTALS. ANY ELECTRICAL EQUIPMENT, CONDUIT, AND WIRE SIZE CHANGES RESULTING FROM THIS REVIEW SHALL ALSO BE SUBMITTED FOR APPROVAL.
8. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL FITTINGS AND NECESSARY EQUIPMENT FOR LIGHT FIXTURE MOUNTING AND INSTALLATION.
9. ALL WORK SHALL BE PERFORMED BY SKILLED, LICENSED ELECTRICIANS IN IN A NEAT AND WORKMANLIKE MANNER IN ACCORDANCE WITH THE BEST PRACTICES OF THE TRADE, MEETING THE REQUIREMENTS OF THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE, APPLICABLE FEDERAL, STATE, AND LOCAL CODES, AND THE REQUIREMENTS OF THE ELECTRICAL UTILITY COMPANY FURNISHING THE SERVICES. ALL NECESSARY CONSTRUCTION PERMITS AND CERTIFICATES OF INSPECTION SHALL BE PURCHASED AND OBTAINED UNDER THIS CONTRACT.
10. FURNISH A GUARANTEE IN WRITING TO THE OWNER THAT ALL WORK EXECUTED UNDER THIS PACKAGE IS FREE FROM DEFECTS OF MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE. IN ADDITION, DURING THE TERM OF THIS GUARANTEE, THE REPAIR AND/OR REPLACEMENT OF ANY DEFECTIVE WORK, AND ALL RESULTING DAMAGES SHALL BE MADE AT NO ADDITIONAL EXPENSE TO THE OWNER.

POWER GENERAL NOTES

1. NON-METALLIC SHEATHED (TYPE NM) CABLE AND ELECTRICAL NON METALLIC TUBING (ENT) ARE NOT PERMITTED.
2. ALL WIRING SHALL BE RUN IN CONDUIT.
3. ALL WIRES SHALL BE TAGGED WITH PANEL AND CIRCUIT NUMBERS.
4. FOR HOME RUNS ON 20 AMP CIRCUITS EXCEEDING FIFTY-FIVE (55) FEET FROM THE PANEL BOARD SHALL USE #10 AWG MINIMUM.
5. AN ELECTRICALLY CONTINUOUS, EQUIPMENT GROUNDING CONDUCTOR SHALL BE RAN WITH EACH POWER AND LIGHTING CONDUIT. SIZE OF THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE AS NOTED OR AS DETERMINED IN TABLE 250.122 OF THE NEC, IF NOT NOTED. EQUIPMENT GROUNDING CONDUCTOR SHALL BE INCLUDED REGARDLESS OF THE CONDUIT TYPE AND MATERIAL USED.
6. BOND TELEPHONE EQUIPMENT TO THE ELECTRICAL SERVICE GROUNDING SYSTEM PER NATIONAL ELECTRICAL CODE.
7. ALL CIRCUITS SHALL HAVE AN INDIVIDUAL GROUNDED CONDUCTOR. NO MULTIWIRE CIRCUITS ARE PERMISSIBLE.
8. CONDUCTORS SHALL BE COLOR CODED AS FOLLOWS. FOR CONDUCTORS SMALLER THAN #6, THE JACKET SHALL BE OF THE NOTED COLOR. FOR CONDUCTORS LARGER THAN #6, EACH END OF THE CONDUCTOR SHALL BE MARKED WITH TAPE FOR A MINIMUM OF FOUR (4) INCHES.

CONDUCTOR COLOR CODES					
	PHASE A	PHASE B	PHASE C	GROUNDED CONDUCTOR	GROUNDING CONDUCTOR
<= 240V	BLACK	RED	BLUE	WHITE	GREEN
> 240V	BROWN	ORANGE	YELLOW	GREY	GREEN

9. ALL PANEL BOARDS, SWITCHBOARDS, SWITCH GEAR, CIRCUIT BREAKERS, DISCONNECTS, AND OTHER PROTECTIVE DEVICES SHALL BE FULLY RATED TO WITHSTAND THE MAXIMUM AVAILABLE FAULT CURRENT AT THE SITE AS DETERMINED BY THE LOCAL UTILITY OR AS DETERMINED BY A CURRENT SHORT CIRCUIT STUDY. E.C. SHALL COORDINATE WITH LOCAL UTILITY BEFORE STARTING WORK IF A CURRENT SHORT CIRCUIT STUDY IS NOT AVAILABLE.
10. ALL BUILDING SYSTEM GROUNDING ELECTRODES SHALL BE BONDED TOGETHER TO FORM A SINGLE GROUNDING ELECTRODE SYSTEM. GROUNDING SYSTEM SHALL COMPLY WITH N.E.C. ARTICLE 250.
11. EMERGENCY LIGHTING UNIT EQUIPMENT SHALL BE CONNECTED TO THE UNSWITCHED LEG OF THE LIGHTING CIRCUIT OF THE LIGHTS IN THE IMMEDIATE AREA.
12. ALL LIGHTING FIXTURES SHALL BE SUPPORTED INDEPENDENTLY OF THE CEILING SYSTEM. 2' X 4' FIXTURES SHALL BE SUPPORTED WITH A CABLE FROM AT LEAST TWO CORNERS.
13. HIGH BAY LIGHTING SHALL HAVE A SAFETY CHAIN INSTALLED IN ADDITION TO OTHER RECOMMENDED SUPPORTS.
14. ALL MOUNTING HEIGHTS ARE GIVEN FROM THE BOTTOM OF THE DEVICE OR FIXTURE LENS.
15. LIGHT SWITCHES SHALL BE MOUNTED 46" A.F.F. U.N.O.
16. RECEPTACLES SHALL BE MOUNTED 18" A.F.F. U.N.O.
17. WALL MOUNTED TELECOMMUNICATIONS AND DATA OUTLETS SHALL BE MOUNTED 18" A.F.F. U.N.O.
18. CABLE T.V. OUTLET SHALL BE MOUNTED 18" A.F.F. U.N.O.
17. ELECTRICAL CONTRACTOR TO COORDINATE ALL RECEPTACLE AND LIGHT SWITCH MOUNTING HEIGHTS AT ALL LOCATIONS WHERE CABINETS AND COUNTERS ARE SHOWN ON DRAWINGS IN FIELD WITH ARCHITECT AND OWNER PRIOR TO ROUGH IN OF BOXES.
18. DISCONNECT SWITCHES SHALL BE FURNISHED, AS PART OF THIS PACKAGE, AND INSTALLED FOR EACH UNIT OF HVAC AND OTHER REQUIRED EQUIPMENT.
19. PROVIDE NAMEPLATES FOR ALL PANEL BOARDS, CONTROLS, DISCONNECTS, AND OTHER ELECTRICAL EQUIPMENT. NAMEPLATES SHALL BE ENGRAVED PHENOLIC LABELS WITH WHITE LETTERING ON A BLACK BACKGROUND.
20. PROVIDE TYPEWRITTEN CIRCUIT DIRECTORIES WITH CLEAR PLASTIC PROTECTORS IN ALL PANELS.
21. OUTDOOR RECEPTACLES SHALL HAVE INSTALLED AN EXTRA HEAVY-DUTY, WEATHER PROOF, WHILE-IN-USE RECEPTACLE COVER.
22. ALL EMPTY AND UNUSED CONDUIT SHALL HAVE A 1/8" POLYPROPYLENE PULL STRING. CAP AND SEAL UNUSED CONDUITS. DURING CONSTRUCTION, CONDUIT SHALL BE KEPT FREE OF ALL FOREIGN MATTER BY USE OF CAPPED BUSHINGS ON ALL TURNED-UP ENDS. PAPER OR WOOD PLUGS ARE NOT ACCEPTABLE FOR THIS PURPOSE.
23. CONDUIT PLACED IN CONCRETE OR RUN UNDERGROUND SHALL BE PLASTIC COATED RIGID GALVANIZED CONDUIT OR PVC. IF PVC IS USED, ALL ELBOWS, SWEEPS AND STUB-UPS SHALL BE PLASTIC COATED RIGID GALVANIZED STEEL OR EQUIVALENT. 36" MINIMUM BENDING RADIUS U.N.O OR APPROVED BY EOR. ALL CONDUIT BENDS SHALL BE FREE FROM DENTS AND KINKS
24. CONDUIT EXPOSED OR RUN IN MASONRY WALLS ABOVE GRADE MAY BE PVC OR EMT WHERE ALLOWED BY LOCAL CODES. IF EMT IS NOT PERMITTED, RIGID SCREWED GALVANIZED PIPE CONDUIT AND FITTINGS SHALL BE USED. IF SHIELDED CABLE IS REQUIRED FOR CONTROL CIRCUITRY, IT SHALL BE TAN, GREY OR ANY NEUTRAL COLOR OTHER THAN THAT AS SPECIFIED FOR POWER DISTRIBUTION.
25. WHERE CONNECTIONS ARE TO BE MADE BETWEEN CONDUIT TERMINATIONS AND MOTORS, EQUIPMENT, OR APPARATUS NECESSITATING FLEXIBLE CONNECTIONS, APPROVED FLEXIBLE CONDUIT SHALL BE USED. OUTDOOR CONNECTIONS TO FANS, HVAC UNITS, OR ROTATING EQUIPMENT SHALL BE MADE WITH HELICAL WOUND, LIQUID TIGHT, FLEXIBLE STEEL CONDUIT. EXPOSED CONDUIT SHALL BE SUITABLY SUPPORTED AT INTERVALS NOT TO EXCEED FIVE (5) FEET.
26. ALL CIRCUITS ENTERING A JUNCTION BOX SHALL BE IDENTIFIED BY A MEANS ACCEPTABLE TO THE NATIONAL ELECTRICAL CODE.
27. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED SO THAT ALL CODE-REQUIRED AND MANUFACTURER RECOMMENDED SERVICING CLEARANCES ARE MAINTAINED.
28. ALL PENETRATIONS OF FIRE RATED ASSEMBLIES SHALL BE SEALED USING UL-LISTED FIRESTOP SYSTEMS APPROPRIATE FOR THE TYPE OF PENETRATION AND CONSTRUCTION. CONTRACTOR SHALL REVIEW EXISTING SITE AND ALL CONTRACT DOCUMENTS TO IDENTIFY FIRE-RATED ASSEMBLIES AND INCLUDE ALL REQUIRED FIRESTOPPING IN THE BASE BID. ROUTE CONDUIT AND CABLE SYSTEMS TO MINIMIZE PENETRATIONS OF FIRE-RATED ASSEMBLIES WHERE PRACTICAL.
29. CONDUIT IN CEILINGS AND VISIBLE LOCATIONS SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO BUILDING STRUCTURE.

DRAWING INDEX

E1.01 GENERAL NOTES
E2.01 POWER PLAN
E3.01 LIGHTING PLAN
E4.01 PANEL SCHEDULES/RISER DIAGRM

ABBREVIATIONS

A OR AMP	AMPERES
AC	ABOVE COUNTER TOP (6")
ACT	ACOUSTICAL CEILING TITLE
AF	AMP FRAME
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
APPROX	APPROXIMATELY
ASYM	ASYMMETRICAL
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
C	COUNTER
"C	INCH CONDUIT
/C	CONDUCTOR
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLF	CURRENT LIMITING FUSE
CO	COMPANY
COL	COLUMN
CNTL	CONTROL
CT	CURRENT TRANSFORMER
DIA	DIAMETER
DISC	DISCONNECT SWITCH
DWG(S)	DRAWING(S)
EC	ELECTRICAL CONTRACTOR
EOR	ENGINEER OF RECORD
ELEC	ELECTRIC, ELECTRICAL
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ESTOP	EMERGENCY STOP
EX, EXIST.	EXISTING
EXP	EXPLOSION PROOF
EF	EXHAUST FAN
EG	EQUIPMENT GROUND
EGC	EQUIPMENT GROUND CONDUCTOR
EMS	ENERGY MANAGEMENT SYSTEM
ETC	ET CETERA
EXIST	EXISTING
F	FUSE
FL, FLR	FLOOR
FT	FEET
G OR GND	GROUND
GA	GAUGE
GALV	GALVANIZED
GEN	GENERATOR
GF	GROUND FAULT
GFCI	GROUND FAULT CIRCUIT INTERRUPT
GFI	GROUND FAULT INTERRUPTING
H-O-A	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HVAC	HEATING, VENTILATION & AIR CONDITIONING
IG	ISOLATED GROUND
ISBR	INTRINSICALLY SAFE BARRIER RELAY
IN	INCH
IR	INFRARED
ISCA	INSTANTANEOUS SHORT CIRCUIT AVAILABLE
JB OR J	JUNCTION BOX
kVA	KILOVOLT - AMPS
kW	KILOWATTS
kWH	KILOWATT-HOUR
LA	LIGHTNING ARRESTOR
LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
LTG	LIGHTING
MAX	MAXIMUM
MCB OR MB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MFR	MANUFACTURER
MH OR MTG	MOUNTING HEIGHT
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MTD	MOUNTED
N	NEUTRAL
NC	NORMALLY CLOSED
NEMA	NATIONAL ELECTRICAL MFRS ASSOCIATION
NF	NON-FUSIBLE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
No.	NUMBER
NO	NORMALLY OPEN
NTS	NOT TO SCALE
O.C.	ON CENTER
OCPD	OVERCURRENT PROTECTIVE DEVICE
OHE	OVERHEAD ELECTRICAL
P	POLE
PERM	PERMANENT
PFC	POWER FACTOR CAPACITOR
PH	PHASE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
PR	PAIR
PVC	POLYVINYLCHLORIDE CONDUIT
PWR	POWER
R&R	REMOVE AND RELOCATE
RELOC	RELOCATED
RECEPT	RECEPTACLE

GENERAL NOTES:

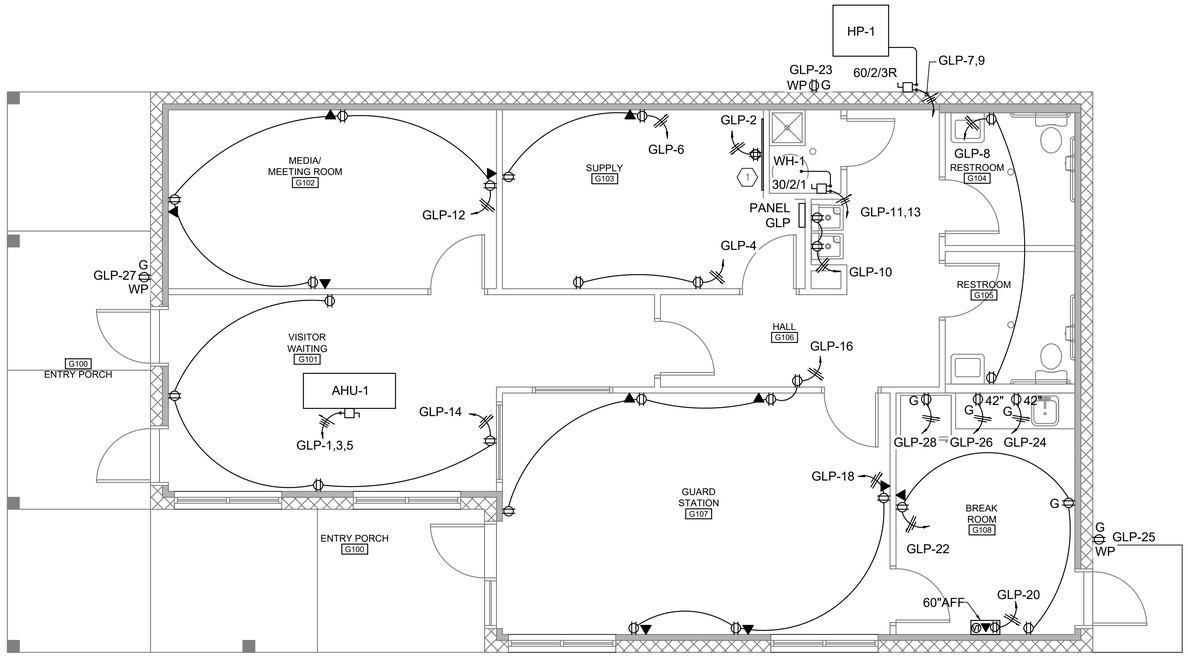
1. FOR 120V 20A CIRCUITS, WHEN BRANCH CIRCUIT LENGTH EXCEEDS 75' FROM PANEL, WIRING SHALL BE INCREASED TO #10 CU WITH #10 CU GROUND. WHEN BRANCH CIRCUIT LENGTH EXCEEDS 150' FROM PANEL, BRANCH WIRING SHALL BE INCREASED TO #8 CU WITH #8 CU GROUND.
2. CONTRACTOR TO VERIFY ALL EQUIPMENT ELECTRICAL REQUIREMENTS AFTER SELECTION.
3. CONTRACTOR TO VERIFY RECEPTACLE HEIGHTS IN AREAS THAT ARE TO INCLUDE FUTURE MILLWORK.
4. ALL EQUIPMENTS AND INSTALLATION NEED TO BE COORDINATED WITH VENDOR, ARCHITECT AND OWNER. PROVIDE DISCONNECT PER MANUFACTURER'S REQUIREMENT.
5. ALL SECURITY CAMERAS AND TELECOMMUNICATION EQUIPMENTS AND INSTALLATION NEED TO BE COORDINATED WITH VENDOR, ARCHITECT AND OWNER.
6. ALL CONDUIT RUN EXPOSED SHALL BE RUN PARALLEL TO STRUCTURE AND PLUMBING.
7. ALL MOUNTING HEIGHTS TO BE VERIFIED WITH EQUIPMENT SPECS PRIOR TO INSTALLATION OF SERVICES.
8. CONTRACTOR SHALL VERIFY SIZING OF BREAKERS AND CABLES PRIOR TO INSTALLATION.
9. FURNITURE MANUFACTURER TO FIELD VERIFY EXISTING SPACE BEFORE ORDERING FURNITURE. DO NOT SCALE FROM PLAN
10. ANY AND ALL PENETRATIONS TO EXTERIOR BUILDING MATERIALS ARE TO BE SEALED WATERTIGHT DURING / AT COMPLETION OF DEVICE INSTALL. ANY DISTURBED AREAS OF PAINT / FINISH ARE TO BE TOUCHED UP TO MATCH EXISTING.
11. GFCI RECEPTACLES SHALL BE READILY ACCESSIBLE IN COMPLIANCE WITH SECTION 210.8 OF NEC.
12. RECEPTACLES MARKED 'D' ARE DEDICATED RECEPTACLES AND TO BE ON A SEPARATE 20A CIRCUIT.

(#) KEYED NOTES:

1. CONTRACTOR TO PROVIDE AND INSTALL 4' X 8' X 3/4" PLYWOOD BACKBOARD. PLYWOOD BACKBOARD TO BE TREATED ON ALL SIDES WITH AT LEAST 2 COATS OF FIRE RETARDANT PAINT. SEE DETAIL ON SHEET E4.1

MECHANICAL EQUIPMENT SCHEDULE

EQUIPMENT ID	ELECTRICAL DATA					WIRING DATA				ELECTRICAL NOTES
	MCA/FLA	MCB	WATT	CB	V/Ph/Hz	COND SIZE	GND SIZE	CONDUIT SIZE	DISC SIZE	
AHU-1	35 A	50 A	12,609	50A/3P	208/3/60	3-#6 CU	1-#10 CU	3/4"	60A/3P NEMA 1	GLP-1,3,5
HP-1	34 A	50 A	7,920	50A/2P	208/1/60	2-#6 CU	1-#10 CU	3/4"	60A/2P NEMA 3R	GLP-7,9
EF-1 & EF-2			32 W	20A/1P	115/1/60	2-#12 CU	1-#12 CU	3/4"		POWERED WITH LIGHTING CIRCUIT
WH-1			5000 W	30A/2P	208/1/60	2-#10 CU	1-#10 CU	3/4"	30A/2P NEMA 1	GLP-11,13



1 E2.01 **POWER PLAN**

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

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Project Title:
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BLUE SAPPHIRE
GUARD SHACK.

Project Location:
39018 LA-3089
DONALDSONVILLE, LA 70346

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No.	Date	Description

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POWER PLAN

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SCOTT D. FLOWERS
License No. 35285
PROFESSIONAL ENGINEER
09/22/2026

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JUNE 5, 2026

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Sheet Number:
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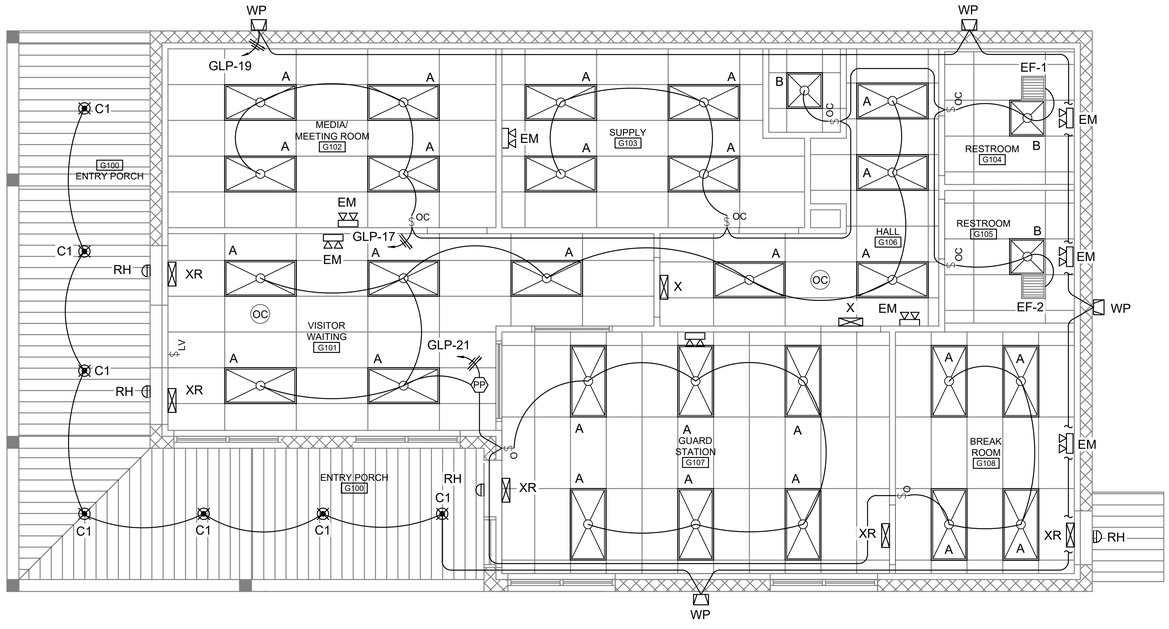
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GENERAL NOTES:

1. FOR 120V 20A CIRCUITS, WHEN BRANCH CIRCUIT LENGTH EXCEEDS 75' FROM PANEL, WIRING SHALL BE INCREASED TO #10 CU WITH #10 CU GROUND. WHEN BRANCH CIRCUIT LENGTH EXCEEDS 150' FROM PANEL, BRANCH WIRING SHALL BE INCREASED TO #8 CU WITH #8 CU GROUND.
2. CONTRACTOR TO VERIFY LIGHTING FIXTURE ELECTRICAL REQUIREMENTS AFTER SELECTION.
3. ALL EXIT SIGNS AND EMERGENCY LIGHTS SHALL HAVE A 90 MINUTE BACKUP BATTERY, AND BE CONNECTED TO THE SAME BRANCH CIRCUIT AS THAT SERVING THE NORMAL LIGHTING IN THE AREA, AHEAD OF ANY LOCAL SWITCHES.
4. ALL MOUNTING HEIGHTS TO BE VERIFIED WITH EQUIPMENT SPECS PRIOR TO INSTALLATION OF SERVICES.
5. COORDINATE LIGHTING CONTROLS W/ LIGHTING FIXTURE TO INSURE ALL DIMMERS AND FIXTURES ARE COMPATIBLE.
6. CONTRACTOR SHALL VERIFY SIZING OF BREAKERS AND CABLES PRIOR TO INSTALLATION.
7. ANY AND ALL PENETRATIONS TO EXTERIOR BUILDING MATERIALS ARE TO BE SEALED WATERTIGHT DURING / AT COMPLETION OF DEVICE INSTALL. ANY DISTURBED AREAS OF PAINT / FINISH ARE TO BE TOUCHED UP TO MATCH EXISTING.
8. COORDINATE INSTALLATION OF LIGHTING FIXTURES WITH MECHANICAL DUCTWORK TO PREVENT INTERFERENCE.

LIGHTING FIXTURE SCHEDULE

MARK	SYMBOL	TYPE	VOLTAGE	WATTS	LAMP	BRAND & CATALOG NO.	NOTES
A		2'X4' LED FLAT PANEL LIGHT	120-277	48	3600 LUMEN 3500K F.S.	LSI CLRT24-FS1-UNV	-
B		2'X2' LED FLAT PANEL LIGHT	120-277	38	4400 LUMEN 3500K F.S.	LSI CLRT22-FS1-UNV	-
C1		6"Ø RECESSED LED CANOPY LIGHT	120-277	14	1210 LUMEN 2700K	LSI LAD6-LED-14L-UNV-27-FL	-
EM		EMERGENCY LED PATH LIGHT	120-277	4	-	EVENLITE TCL-2-W-SD	CONNECT TO THE SAME BRANCH CIRCUIT AS THAT SERVING THE NORMAL LIGHTING IN THE AREA, AHEAD OF ANY LOCAL SWITCHES.
X		EMERGENCY EXIT SIGN	120-277	3	-	EVENLITE TLX-EM-RU-SD	CONNECT TO THE SAME BRANCH CIRCUIT AS THAT SERVING THE NORMAL LIGHTING IN THE AREA, AHEAD OF ANY LOCAL SWITCHES.
XR		EMERGENCY EXIT SIGN W/ REMOTE CAPACITY	120-277	3	-	EVENLITE TLRC-RU-SD	CONNECT TO THE SAME BRANCH CIRCUIT AS THAT SERVING THE NORMAL LIGHTING IN THE AREA, AHEAD OF ANY LOCAL SWITCHES.
RH		EXTERIOR EMERGENCY LIGHT REMOTE HEAD	120-277	2	-	EVENLITE PRW-LED-2-MV-SD	CONNECT TO 'XR' FIXTURE
WP		EXTERIOR WALL MOUNTED LIGHT	120-277	60	7000 LUMEN 4000K	LSI TLWP LED-7L-UNV-40	FIXTURES TO BE CONTROLLED BY PHOTOCELL



1 E3.01 LIGHTING PLAN

1/4"=1'-0"

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Date: JUNE 5, 2026

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120/208 PANEL GLP

120/208Y VOLT, 3 PHASE, 4 WIRE, 60HZ — NEMA 1 SURFACE MOUNT

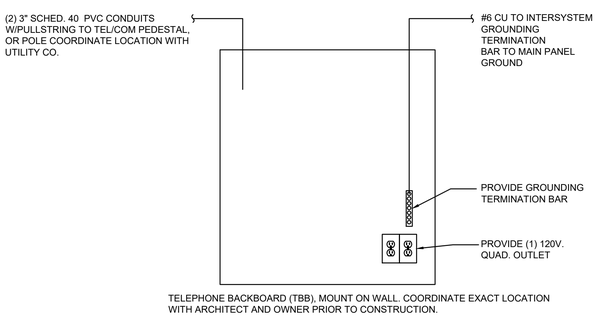
LOCATION	LOAD (VA)	CIRCUIT NUMBER		CIRCUIT NUMBER	LOAD (VA)	LOCATION
			200 AMP MAIN CB (L1 L2 L3 N G; N; GND)			
AIR HANDLER AH-1	4,203	1	50A	2	360	RECEPT: DATA/TEL BACKBOARD
↓	4,203	3	20A	4	360	RECEPT: SUPPLY ROOM G105
↓	4,203	5	20A	6	360	RECEPT: SUPPLY ROOM G105
HEAT PUMP HP-1	3,960	7	50A	8	360	RECEPT: R.R. G103, R.R. G104
↓	3,960	9	20A	10	600	RECEPT: DRINKING FOUNTAIN HALL G106
WATER HEATER WH-1	2,500	11	30A	12	720	RECEPT: MEDIA/MEETING ROOM G102
↓	2,500	13	20A	14	720	RECEPT: VISITOR WAITING G101
SPARE	·	15	20A	16	540	RECEPT: GUARD STATION G107, HALL G106
LIGHTING: G102, G103, G104, G105	718	17	20A	18	540	RECEPT: GUARD STATION G107
LIGHTING: EXTERIOR	338	19	20A	20	400	RECEPT: TV BREAKROOM G108
LIGHTING: G101, G107, G108, G106	987	21	20A	22	540	RECEPT: BREAK ROOM G108
RECEPT: EXTERIOR AT HP-1	180	23	20A	24	180	RECEPT: BREAK ROOM G108
RECEPT: EXTERIOR	180	25	20A	26	180	RECEPT: BREAK ROOM G108
RECEPT: EXTERIOR	180	27	20A	28	1,600	RECEPT: REFRIGERATOR BREAK ROOM G108
SPARE	·	29	20A	30	·	SPARE
SPARE	·	31	20A	32	·	SPARE
SPARE	·	33	20A	34	·	SPARE
SPARE	·	35	20A	36	·	SPARE
SPARE	·	37	20A	38	·	SPARE
SPARE	·	39	20A	40	·	SPARE
SPARE	·	41	20A	42	·	SPARE
TOTAL CONNECTED LOAD: 35.5 KW - DEMAND LOAD 37.4 KW				ALL BRANCH BREAKERS SIZED AS SHOWN		
PANEL LOCATION: SUPPLY ROOM G105						

NOTE: CONTRACTOR SHALL VERIFY SHORT CIRCUIT RATING OF PANELBOARD/BREAKERS IS SUFFICIENT WITH UTILITY PRIOR TO PURCHASING EQUIPMENT.

TYPE OF LOAD		VA LOAD PER PHASE			CALCULATIONS		
		A	B	C	Total VA	MULT.	VA LOAD
O	Other Loads	2,500	600	2,500	5,600	1.25	7,000
ON	Other Load Non Cont	-	-	-	-	1	-
R	Receptacles	2,200	3,220	1,980	7,400	1	7,400
	Receptacles > 10,000					0.5	-
K	Kitchen	-	-	-	-	0.65	-
E	Existing Load	-	-	-	-	1.25	-
L	Lighting	338	987	718	2,043	1.25	2,554
H	Heating Only	8,163	8,163	4,203	20,529	1	20,529
C	Cooling Only	-	-	-	-	1	-
M	Motors	-	-	-	-	1	-
	Total Load (VA)	13,201	12,970	9,401			
	Balance	37%	36%	26%			
	Largest Motor					0.25	-
	Total Load (VA)				35,572		37,483
	Current (Amps)				99		104

1 E4.01 PANEL "GLP" SCHEDULE AND LOAD CALCULATIONS

SCALE: NTS

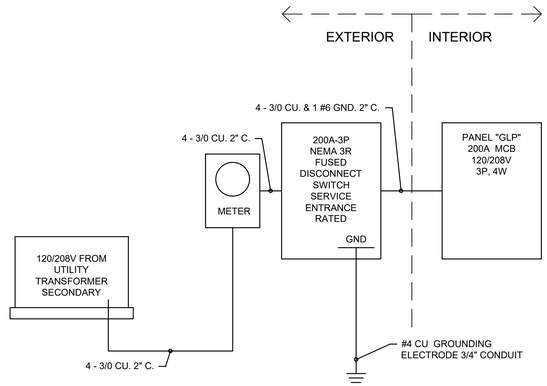


3 E4.01 TELEPHONE BACKBOARD DETAIL

SCALE: NTS

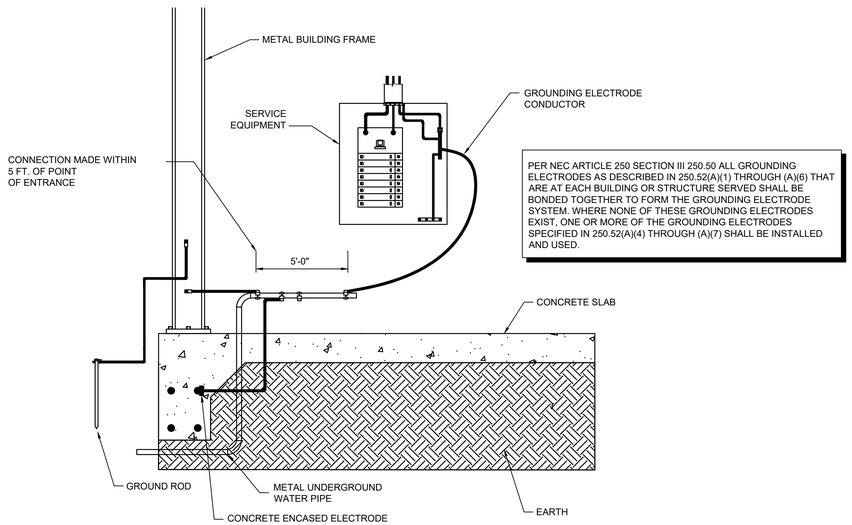
RISER NOTES:

1. CONTRACTOR TO VERIFY ALL SITE UTILITIES ARE ADEQUATELY SIZED FOR NEW SPACE USAGE AND CAPACITY REQUIREMENTS.
2. CONTRACTOR TO VERIFY AVAILABLE FAULT CURRENT WITH LOCAL UTILITY AND ENSURE ALL EQUIPMENT RATINGS EXCEED AVAILABLE FAULT CURRENT.



2 E4.01 RISER DIAGRAM

SCALE: NTS



4 E4.01 LIFE SAFETY DETAIL

SCALE: NTS

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RISER DIAGRAM AND PANEL SCHEDULE

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HVAC SCOPE OF WORK

SCOPE: THE SCOPE OF THE WORK IS GENERALLY INDICATED BY THE DRAWINGS AND SUMMARIZED BY THIS SCOPE OF WORK. DRAWINGS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO INDICATE ALL DETAILS OF THE INSTALLATION OF MECHANICAL WORK. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE ACTUAL CONDITIONS AND REQUIREMENTS FOR THE INSTALLATION OF THE WORK. WHERE INFORMATION REQUIRED TO PROVIDE A COMPLETE WORK IS OMITTED OR UNCLEAR, THE CONTRACTOR IS RESPONSIBLE FOR REQUESTING A CLARIFICATION FROM THE ENGINEER PRIOR TO SUBMISSION OF BIDS. BIDDING CONTRACTORS MUST VISIT THE SITE, REVIEW ALL CONSTRUCTION DOCUMENTS, AND OBTAIN WRITTEN COPIES OF ALL REFERENCED CODES AND ORDINANCES PRIOR TO SUBMITTING BIDS. NO ALLOWANCE WILL BE MADE FOR ADVERSE CONDITIONS WHICH WERE ASCERTAINABLE PRIOR TO BID TIME.

CODES & STANDARDS: BIDDING CONTRACTORS MUST VISIT THE SITE, REVIEW ALL CONSTRUCTION DOCUMENTS, AND OBTAIN WRITTEN COPIES OF ALL REFERENCED CODES AND ORDINANCES PRIOR TO SUBMITTING BIDS. NO ALLOWANCE WILL BE MADE FOR ADVERSE CONDITIONS WHICH WERE ASCERTAINABLE PRIOR TO BID TIME.

MECHANICAL CODE COMPLIANCE: COMPLY WITH THE REQUIREMENTS OF THE 2021 INTERNATIONAL MECHANICAL CODE AND ALL LOCAL AMENDMENTS IN THE PERFORMANCE OF MECHANICAL WORK REQUIRED FOR THIS PROJECT. ENSURE THAT ALL OUTDOOR AIR INTAKES ARE 10'-0" OR MORE FROM EXHAUSTS, FLUES, PLUMBING VENTS AND OTHER SOURCES OF CONTAMINATION. ALL COMBUSTIBLE MATERIALS INCORPORATED INTO THE PROJECT SHALL HAVE MAXIMUM RATINGS OF 25 FLAME SPREAD AND 50 SMOKE DEVELOPED.

COORDINATION: COORDINATE THE MECHANICAL WORK WITH THE WORK OF THE GENERAL CONTRACTOR AND OTHER SUB-CONTRACTORS. OBTAIN INFORMATION REGARDING THE ROUGH-IN AND FINAL CONNECTION REQUIREMENTS FOR EQUIPMENT TO BE PROVIDED BY THE OWNER OR OTHER CONTRACTORS PRIOR TO COMMENCING WORK. OBTAIN FINAL LOCATIONS OF CEILING GRIDS, LIGHTING FIXTURES, SPRINKLERS, PIPING AND OTHER COMPONENTS THAT WILL AFFECT THE LAYOUT OF HVAC DUCTWORK AND TERMINAL DEVICES PRIOR TO COMMENCING INSTALLATION WORK.

CUTTING & PATCHING: CONTRACTOR SHALL PROVIDE SLEEVES, CURBS, AND PORTALS AS NECESSARY TO MINIMIZE THE NEED TO CUT STRUCTURAL COMPONENTS. PROVIDE LABOR, EQUIPMENT AND SPECIAL SERVICES NECESSARY TO CREATE OPENING NECESSARY FOR THE PASSAGE OF PIPING, DUCTWORK, AND OTHER MECHANICAL WORK. APPLY A ROUGH PATCH TO CLOSE OFF UNUSED PORTIONS OF OPENINGS USING MATERIALS THAT ARE SUBSTANTIALLY SIMILAR TO THAT OF THE ADJACENT STRUCTURE. NO STRUCTURAL COMPONENTS MAY BE CUT WITHOUT 24-HOUR PRIOR WRITTEN APPROVAL OF ARCHITECT/ENGINEER.

MATERIALS, EQUIPMENT, AND SUBMITTALS: PROVIDE MATERIALS AND EQUIPMENT OF THE TYPE SIZE, CAPACITY, AND QUANTITY INDICATED BY THESE DOCUMENTS. WHERE MATERIAL SPECIFICATIONS ARE NOT INDICATED, PROVIDE MATERIALS THAT COMPLY WITH THE HIGHEST QUALITY INDUSTRY STANDARD. IF NO SUCH STANDARD EXISTS, CONTACT THE ARCHITECT/ENGINEER TO ASCERTAIN THE APPROPRIATE SPECIFICATION. THE CONTRACTOR SHALL PROVIDE COMPLETE SHOP DRAWINGS FOR ALL SYSTEMS, INCLUDING ORTHOGRAPHIC PIPING DRAWINGS SHOWING LOCATIONS OF ALL INSTRUMENTS. IN THE EVENT OF A CONFLICT BETWEEN DRAWINGS AND/OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

SUBSTITUTIONS: THE OWNER WILL CONSIDER SUBSTITUTIONS OF THE "DESIGN BASIS" SPECIFICATION WHERE GREATER VALUE CAN BE ACHIEVED. OBTAIN THE WRITTEN PERMISSION OF THE ARCHITECT/ENGINEER PRIOR TO MAKING ANY SUBSTITUTIONS AND TAKE RESPONSIBILITY FOR THE DIMENSIONAL AND PERFORMANCE CONSTRAINTS IMPOSED BY THE SUBSTITUTED EQUIPMENT/MATERIAL.

H.V.A.C. EQUIPMENT: ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. PROVIDE AN EFFECTIVE MEANS OF ISOLATING VIBRATIONS GENERATED BY EQUIPMENT FROM DUCTWORK, PIPING, CONDUITS, AND THE BUILDING STRUCTURE.

DUCTWORK: ALL DUCTWORK SHALL BE FABRICATED OF PRIME A-60 COATED GALVANIZED STEEL OF LOCK FORMING GRADE CONFORMING TO ASTM STANDARDS A-525 AND A-527, EXCEPT AS OTHERWISE INDICATED ON PROJECT CONTRACT DOCUMENTS. FABRICATE AND INSTALL DUCTWORK, FITTINGS, CONNECTORS, HANGERS, AND DUCTWORK ACCESSORIES IN ACCORDANCE WITH THE RECOMMENDATIONS OF S.M.A.C.N.A. 'HVAC DUCT CONSTRUCTION STANDARDS, METAL AND FLEXIBLE', LATEST EDITION, USING THE 2" W.C. POSITIVE PRESSURE CHART, EXCEPT NO DUCTWORK SHALL BE LIGHTER THAN 24 GAUGE. SEAL ALL DUCTWORK SUBSTANTIALLY AIRTIGHT TO COMPLY WITH S.M.A.C.N.A. SEAL CLASS "A". CLEAR AIRWAY DUCT DIMENSIONS ARE INDICATED ON THE DRAWINGS. ALL DUCTS THAT CONVEY GREASE-LADEN OR VAPOR-BEARING (>80% RH) AIR SHALL BE SEALED WATER-TIGHT AND PITCHED TO THE SOURCE AT NO LESS THAN 2% SLOPE. ALL FLEXIBLE AIR CONNECTORS SHALL BE TESTED IN ACCORDANCE WITH UL 181. SUCH CONNECTORS SHALL BE LISTED AND LABELED AS CLASS 0 OR CLASS 1 FLEXIBLE AIR CONNECTORS AND SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 304.1 IN THE INTERNATIONAL MECHANICAL CODE. ALL FLEXIBLE AIR CONNECTORS SHALL BE LIMITED IN LENGTH TO 5 FEET AND SHALL NOT PASS THROUGH ANY WALL, FLOOR OR CEILING.

DUCTWORK INSULATION: PROVIDE 2" THICK, MIN. R-6.0 FIBERGLASS BLANKET INSULATION WITH FSK VAPOR BARRIER ON ALL SUPPLY, RETURN, AND OUTDOOR AIR INTAKE DUCTWORK. PROVIDE PRESSURE SENSITIVE TAPE, MASTIC, OR OTHER MATERIALS AS MAY BE REQUIRED TO MAINTAIN A CONTINUOUS VAPOR BARRIER THROUGHOUT THE SYSTEM. JACKETS AND VAPOR BARRIER MATERIALS MUST MEET LOCAL ORDINANCE REQUIREMENTS FOR FLAME SPREAD AND SMOKE DEVELOPED RATINGS.

REFRIGERANT PIPING: PROVIDE TYPE L-ACR HARD TEMPER COPPER TUBING AND WROUGHT COPPER REFRIGERATION TYPE FITTINGS FOR ALL REFRIGERANT PIPING. BRAZE ALL JOINTS TO WITHSTAND MINIMUM 500 PSIG PRESSURE. PURGE REFRIGERANT PIPES WITH DRY NITROGEN AFTER INSTALLATION AND EVACUATE SYSTEM TO 250 MICRONS FOR A PERIOD OF 24 HOURS PRIOR TO CHARGING SYSTEMS. CHARGE SYSTEMS WITH REFRIGERANT INDICATED IN EQUIPMENT SCHEDULES AS REQUIRED TO OBTAIN PROPER OPERATING PRESSURES DURING NORMAL OPERATION. PROVIDE ALL DX SYSTEM'S REFRIGERANT PIPING WITH PRESSURE GAUGES. PROVIDE A LIQUID LINE FILTER-DRIER AND MOISTURE INDICATING SIGHT GLASS FOR EACH SYSTEM, AS WELL AS OTHER REFRIGERATION SPECIALTIES INDICATED ON DRAWINGS. TEST SYSTEMS AFTER STARTUP FOR LEAKS, AND REPAIR ALL LEAKS FOUND AND CLEAN & RECHARGE SYSTEMS ANEW. PROVIDE UNICELLULAR RUBBER INSULATION ON SUCTION PIPING AND COLD REFRIGERATION EQUIPMENT, WITH A MINIMUM THICKNESS OF 3/8" INDOORS AND 3/4" OUTDOORS. PROVIDE A TRAPPED CONDENSATE DRAIN FOR EACH EVAPORATOR COIL, SIZED TO THE CONNECTION PROVIDED AND RUN OUT TO AN APPROPRIATE SANITARY DRAIN CONNECTION, OR SUITABLE FRENCH DRAIN, WITH A MINIMUM 2" AIR GAP.

PIPING INSULATION: PROVIDE 1½" THICK FIBERGLASS PIPE INSULATION WITH ALL-SERVICE JACKET (ASTM C-547, C-921, TYPE I or II AS APPROPRIATE FOR TEMPERATURE) ON ALL PIPING WHERE FLUIDS TEMPERATURE ARE MORE THAN 10°F BELOW AMBIENT OR MORE THAN 25° ABOVE AMBIENT TEMPERATURE.. PROVIDE PRESSURE SENSITIVE TAPE, MASTIC, OR OTHER MATERIALS AS MAY BE REQUIRED TO MAINTAIN A CONTINUOUS VAPOR BARRIER THROUGHOUT THE SYSTEM. PROVIDE PRE-MOLDED PVC COVERS AT ALL FITTINGS. JACKETS AND VAPOR BARRIER MATERIALS MUST MEET LOCAL ORDINANCE REQUIREMENTS FOR FLAME SPREAD AND SMOKE DEVELOPED RATINGS. (SEE FLOOR PLANS FOR INSULATION REQUIREMENTS AT SPECIAL SYSTEMS.)

INSTRUMENTATION: PROVIDE THERMOMETERS, THERMOWELLS, PRESSURE GAUGES, FLOW INDICATORS, CALIBRATED BALANCING VALVES, P&T PLUGS, AND OTHER INSTRUMENTATION INDICATED ON THE DRAWINGS. IN THE ABSENCE OF SUCH INDICATION, PROVIDE, AT MINIMUM, THERMOWELLS AND THERMOMETERS AT EACH ITEM OF HEAT TRANSFER (BOILER, CHILLER, COOLING TOWER, COIL, HEAT EXCHANGER, ETC.) AND PRESSURE GAUGES WITH GAUGE COCKS AND SNUBBERS, AT ITEM OF HEAT TRANSFER EQUIPMENT AND EACH PRIME MOVER (PUMP, FAN, ETC.).

IDENTIFICATION: PROVIDE MECHANICAL SYSTEMS IDENTIFICATION TO INDICATE THE TAG, TYPE, FLOW, TEMPERATURE RANGE, CAPACITY, ETC. OF EACH ITEM OF EQUIPMENT AND ALL CONVEYANCES (DUCTWORK AND PIPING SYSTEMS). PROVIDE ENGRAVED PLASTIC LAMINATE PLATES FOR EQUIPMENT, "SNAP-ON" PIPE MARKERS FOR PIPING, AND ADHESIVE BACKED PLASTICIZED MARKERS FOR DUCTWORK. PROVIDE ENGRAVED PLASTIC LAMINATE VALVE TAGS AT EACH VALVE AND A VALVE TAG SCHEDULE FRAMED UNDER GLASS.

CONTROLS: PROVIDE ALL CONTROL DEVICES, CONDUIT, CONDUCTORS, AND ACCESSORIES REQUIRED TO FURNISH AND INSTALL A COMPLETE AND OPERATING SYSTEM OF TEMPERATURE CONTROLS TO ACCOMPLISH THE INDICATED SEQUENCE OF OPERATION.

SAFETY DEVICES: ALL AIR MOVING EQUIPMENT WITH RATED AIRFLOW CAPACITY OF 2000 CFM OR GREATER SHALL BE EQUIPPED WITH A RETURN-AIR DUCT-MOUNTED SMOKE DETECTOR. WHERE THE AIRFLOW CAPACITY EXCEEDS 15,000 CFM, PROVIDE SMOKE DETECTORS AT THE SUPPLY AND RETURN DUCTS. WHEN THE DETECTOR SENSES AIRBORNE SMOKE IN THE DUCTS, THE DEVICE SHALL SHUT DOWN THE ASSOCIATED FAN. THE DEVICE SHALL INCLUDE AN AUXILIARY DRY CONTACT FOR FIRE ALARM SYSTEM INTERLOCK, WHERE PROVIDED. PROVIDE A MAGNETICALLY ACTUATED SMOKE DETECTOR TEST STATION FOR EACH SMOKE DETECTOR, LOCATED ON A WALL, 54" A.F.F., AS DIRECTED BY THE FIRE AUTHORITY HAVING JURISDICTION.

SYSTEMS COMMISSIONING: AIR SYSTEMS TESTING, ADJUSTING AND BALANCING WORK SHALL BE PERFORMED BY A FIRM THAT IS CERTIFIED BY NEBB OR AABC, EMPLOYING CERTIFIED TECHNICIANS. TEST, BALANCE, AND ADJUST ALL AIR QUANTITIES TO WITHIN 10% OF THOSE INDICATED ON DRAWINGS. PROVIDE ADDITIONAL DAMPERS, DRIVES, MOTORS OR OTHER DEVICES AND ACCESSORIES AS MAY BE REQUIRED TO ADJUST AIR QUANTITIES AS REQUIRED. SUBMIT THREE COPIES OF THE FINAL REPORT TO THE ARCHITECT WITHIN 15 DAYS OF THE SUBSTANTIAL COMPLETION OF THE WORK.

AIR TEST & BALANCE: PROVIDE THE SERVICES OF A TECHNICIAN, QUALIFIED AND EXPERIENCED IN THE FIELD OF H.V.A.C. SYSTEMS COMMISSIONING TO INITIATE, QUANTIFY, ADJUST AND CALIBRATE THE OPERATION OF THE INSTALLED SYSTEMS. PERFORM COMMISSIONING WORK IN ACCORDANCE WITH THE STANDARDIZED METHODOLOGY SET FORTH IN ASHRAE GUIDELINE 1-1996 'THE HVAC COMMISSIONING PROCESS'. PRIOR TO COMMISSIONING, REPLACE ALL AIR FILTER MEDIA. USE MINIMUM MERV-13 FILTERS FOR LEED-CERTIFIABLE PROJECTS, AND MINIMUM MERV-8 FOR OTHER PROJECTS. SUBMIT COMMISSIONING REPORTS WITHIN 3 DAYS OF SUBSTANTIAL COMPLETION. THE PROJECT SHALL BE DEEMED SUBSTANTIALLY COMPLETE WHEN THE WORK OR A DESIGNATED PORTION THEREOF IS SUFFICIENTLY COMPLETE, IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, SO THAT THE OWNER MAY OCCUPY THE WORK OR DESIGNATED PORTION THEREOF FOR THE USE FOR WHICH IT IS INTENDED.

CONTRACT CLOSEOUT: PROVIDE EVIDENCE THAT ALL CONTRACTUAL OBLIGATIONS HAVE BEEN MET, INCLUDING, BUT NOT NECESSARILY LIMITED TO, PROVIDING "AS-BUILT" DRAWINGS, SYSTEM COMMISSIONING REPORTS, OPERATING AND MAINTENANCE MANUALS, TRAINING OF PERSONNEL, FULLY EXECUTED PUNCHLIST, WARRANTIES, EXTENDED WARRANTIES, AND OTHER DOCUMENTS THAT MAY BE PERTINENT TO THE MECHANICAL PORTION OF THE PROJECT.

WARRANTY: THE CONTRACTOR SHALL WARRANT THE WORK PROVIDED AS PART OF THIS PROJECT TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE COMMISSIONING ACCEPTANCE DATE. PROVIDE EVIDENCE OF ALL EXTENDED WARRANTIES AVAILABLE FROM EQUIPMENT MANUFACTURERS.

TEMPERATURE CONTROL SEQUENCE OF OPERATION:

SPLIT AIR CONDITIONING SYSTEMS:

1. THE TEMPERATURE CONTROL SYSTEM SHALL CONSIST OF DISCRETE ELECTRIC DEVICES. EACH H.V.A.C. SYSTEM SHALL BE CONTROLLED INDEPENDENTLY OF THE OTHERS.

2. ALL DEVICES SHALL BE MOUNTED ON NEMA RATED ELECTRICAL BOXES AND ALL CONDUCTORS SHALL BE CONTAINED WITHIN E.M.T. CONDUIT. DO NOT RUN LOW VOLTAGE CONTROL WIRING IN CONDUITS WITH LINE VOLTAGE POWER WIRING.

3. PROVIDE A 7-DAY, SINGLE STAGE (UNLESS OTHERWISE INDICATED) HEATING/COOLING PROGRAMMABLE THERMOSTAT FOR EACH SPLIT SYSTEM. PROVIDE CONDUCTORS FROM THE THERMOSTAT TO THE AIR HANDLER AND FROM THE AIR HANDLER TO THE OUTDOOR HEAT PUMP UNIT CONTROL PANEL IN ACCORDANCE WITH THE REQUIREMENTS OF THE HEATING AND COOLING EQUIPMENT MANUFACTURER'S REQUIREMENTS. PROVIDE TWO SPARE CONDUCTORS IN EACH RUN.

4. THE THERMOSTAT SHALL BE MOUNTED WITHIN THE ASSOCIATED CONDITIONED SPACE, AT 54" ABOVE THE FINISHED FLOOR UNLESS NOTED, AND SHALL INCLUDE AN INTEGRAL TEMPERATURE SENSOR AND MANUALLY OPERATED "SYSTEM" SWITCHES.

5. THE AIR HANDLER SUPPLY FANS SHALL OPERATE CONTINUOUSLY OR INTERMITTENTLY AS DETERMINED BY USER-SELECTABLE SWITCH. EXHAUST FANS SHALL OPERATE FROM A LOCAL, WALL MOUNTED TOGGLE SWITCH.

6. DURING OCCUPIED HOURS, WHEN THE SYSTEM SWITCH IS SET TO "COOL" AND THE SPACE TEMPERATURE RISES ABOVE THE SETPOINT, THE REFRIGERATION COMPRESSOR SHALL START TO PROVIDE COOLED AIR TO THE SPACE UNTIL THE SETPOINT TEMPERATURE IS SATISFIED, AT WHICH TIME THE COMPRESSOR SHALL STOP. NO COOLING SHALL BE PROVIDED TO THE SPACE DURING UNOCCUPIED HOURS.

7. REFRIGERATION COMPRESSOR SHALL OPERATE IN REVERSE MODE DURING OCCUPIED HOURS, WHEN THE SYSTEM SWITCH IS SET TO "HEAT" AND THE SPACE TEMPERATURE DROPS BELOW THE SETPOINT, TO PROVIDE HEATED AIR TO THE SPACE UNTIL THE SETPOINT TEMPERATURE IS SATISFIED, AT WHICH TIME THE COMPRESSOR SHALL SHUT OFF. WHEN THE OUTDOOR AIR TEMPERATURE DROPS BELOW 30°F, THE ELECTRIC RESISTANCE HEATER SHALL OPERATE TO SATISFY HEATING REQUIREMENTS.

8. DURING UNOCCUPIED HOURS, WHEN THE SYSTEM SWITCH IS SET TO "HEAT" AND THE SPACE TEMPERATURE DROPS BELOW THE LOWERED SETPOINT, THE AIR HANDLER FAN SHALL START AND THE HEATER OR REVERSE CYCLE COMPRESSOR SHALL OPERATE TO PROVIDE HEATED AIR TO THE SPACE UNTIL THE SETPOINT TEMPERATURE IS SATISFIED, AT WHICH TIME THE UNIT SHALL SHUT OFF.

9. IN ADDITION TO STANDARD SAFETY DEVICES PROVIDED BY THE EQUIPMENT MANUFACTURERS, PROVIDE A DUCT MOUNTED SMOKE DETECTOR FOR EACH FURNACE WHERE REQUIRED BY LOCAL ORDINANCE, WIRED TO SHUT DOWN THE FURNACE OPERATION UPON DETECTION OF PRODUCTS OF COMBUSTION IN THE AIRSTREAM. PROVIDE AUXILIARY N.C. CONTACTS FOR CONNECTION TO A FIRE ALARM SYSTEM.

10. HVAC CONTROLS TO BE OF DIFFERENT MANUFACTURER THAN HVAC UNITS.

DUCTWORK LEGEND

NEW WORK	
	SQUARE TO ROUND SIDE TAKEOFF WITH MANUAL VOLUME DAMPER
	LAY-IN DIFFUSER WITH FLEX. DUCT CONN. (5'-0" MAX. LENGTH)
R	RADIUS ELBOW R=1/2 DUCT WIDTH MINIMUM
	SQUARE ELBOW WITH ACOUSTIC TURNING VANES
X	ECCENTRIC TRANSITION X=30° MAXIMUM
X	CONCENTRIC TRANSITION X=30° MAXIMUM
FOT	TRANSITION FLAT ON TOP
FOB	TRANSITION FLAT ON BOTTOM
	OFFSET UP OR DOWN AS INDICATED
	MANUAL VOLUME DAMPER WITH LOCKING QUADRANT
	MOTOR OPERATED OPPOSED BLADE CONTROL DAMPER
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN/EXHAUST DUCT UP
	RETURN/EXHAUST DUCT DOWN
	U/L 555 DYNAMIC 1½ HR. FIRE DAMPER (PROVIDE ACCESS DOOR)
	FLEXIBLE DUCT CONNECTION
T	THERMOSTAT OR TEMPERATURE SENSOR
CFM	SUPPLY AIRFLOW (CUBIC FEET PER MINUTE)
EAD	EXHAUST AIR DAMPER

FAN SCHEDULE

TAG	MFR --- MODEL No.	FAN TYPE	SERVICE	AIRFLOW CFM	E.S.P. in. W.C.	RPM	MOTOR HP	ELECTRICAL	ACCESSORIES/REMARKS
EF-1 & EF-2	GREENHECK CSP-A390	CEILING	RESTROOM	75	0.7	1412	32W	115/60/1	WC,DS,BDD,LSW,MS

FAN ACCESSORIES LEGEND:

WC - WALL CAP W/ BIRD SCREEN
DS - DISCONNECT SWITCH
BDD - BACK DRAFT DAMPER
LSW - INTERLOCKED W/ LIGHT SWITCH
MS - MOTOR STARTER

REGISTER, DIFFUSER, GRILLE SCHEDULE

TAG	MFR. --- MODEL	MOUNTING & TYPE	BORDER	FACE	MATERIAL	FINISH	OBD	ACCESSORIES / REMARKS
D1	TITUS TMS-AA	LAY-IN, ROUND NECK SUPPLY DIFFUSER	TYPE 3	LOUVERED	ALUMINUM	#26 WHITE	YES	2x2 MODULE
R1	TITUS 300FS	SURFACE MTD. SUPPLY REGISTER	-	ADJ. BLADE	ALUMINUM	#26 WHITE	YES	DOUBLE DEFLECTION
G1	TITUS 50F-NT	LAY-IN RETURN/EXHAUST GRILLE	TYPE 3	EGGCRATE	ALUMINUM	#26 WHITE	NO	1/2" x 1/2" ALUM. GRID
G2	TITUS 8F	TRANSFER GRILLE	TYPE 1	PERFORATED	ALUMINUM	#26 WHITE	NO	-

INDOOR UNIT SCHEDULE

TAG	MANUFACTURER --- MODEL No.	CONFIGURATION	FAN DATA: NOM. CFM	O.A. CFM	E.S.P.	MOTOR HP	DRIVE SPEED	DX COIL DATA - COOLING: REFR	SST	THC	SHC	REFR METER TYPE	MIN. SEER	HEATING DATA: MBH	C.O.P.	AUX. COIL kW	STAGES	ELECTRICAL DATA: VOLT	FAN FLA	MCA	MCB
AHU-1	5TEM4D07AC51	HORIZONTAL	1547	170	0.5	1.0	1050	454B	45°	59	52	TXV	15	24.6	3.1	7.2	1	208/3Ø	7.6	35	48

INDOOR UNIT ACCESSORIES:
AEHC – AUXILIARY ELECTRIC HEATING COIL
SPWK – SINGLE POINT WIRING KIT
TXVK – THERM. EXPANSION VALVE KIT
TSAT – 7-DAY PROGRAMMABLE THERMOSTAT W/LOCKING ENCLOSURE

OUTDOOR UNIT SCHEDULE

TAG	MANUFACTURER --- MODEL No.	COMP. DATA: COMPR. TYPE	LIQ CONN	SUC CONN	ELECTRICAL DATA: VOLT	RLA/FLA COMP/FAN	MCA	MCB
HP-1	TRANE 5TWB5060L001AA	SCROLL	5/16	7/8	208/1Ø	26.3/.94	33	50

OUTDOOR UNIT ACCESSORIES:
CHSK - COMPRESSOR HARD START KIT
CCHT - COMPRESSOR CRANKCASE HEATER
IBTD - INDOOR BLOWER TIME DELAY
5ART - 5 MIN. ANTI RECYCLE TIMER

2021 INTERNATIONAL MECHANICAL CODE VENTILATION SCHEDULE

SPACE NAME	USE OF SPACE	FLOOR AREA SQ. FT.	OCCUPANT DENSITY (PEOPLE/1000 SQ. FT.)	TOTAL PEOPLE	PEOPLE OUTDOOR AIRFLOW RATE (CFM/PERSON)	PEOPLE OUTSIDE AIR CFM	AREA OUTDOOR AIRFLOW RATE (CFM/SQ. FT.)	AREA OUTSIDE AIR CFM	TOTAL OUTSIDE AIR CFM	EXHAUST RATE (CFM/SQ. FT.)	EXHAUST AIR CFM
GUARD STATION	OFFICE	292	5	1	5	7	0.06	18	25	-	-
MEDIA/MEETING/TELECOM	OFFICE	340	5	2	5	9	0.06	20	29	-	-
RESTROOMS	RESTROOM	106	-	-	-	-	-	-	-	75 CFM PER FIXTURE	150
BREAK ROOM	RECEPTION AREA	135	30	4	5	20	0.06	8	28	-	-
VISITOR WAITING	LOBBY	200	50	10	5	50	0.06	12	62	-	-
HALL	CORRIDOR	180	-	-	-	-	-	-	-	-	-
BUILDING TOTALS		1253				86		58	144		150

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Project Title:
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BLUE SAPPHIRE
GUARD SHACK.

Project Location:
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DONALDSONVILLE, LA 70346

Sheet Revisions:

No.	Date	Description
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Sheet Name:
Mechanical Notes Sheet

Seal

STATE OF LOUISIANA
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09/22/2026

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Date:
JUNE 5, 2026

Document Phase:
CONSTRUCTION DOCUMENTS

Sheet Number:
M0.01

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GENERAL NOTES:

1. THIS DRAWING IS DIAGRAMMATICAL IN NATURE. COORDINATE ALL DUCT SIZES, TURNS, DROPS AND LOCATIONS WITH EXISTING CONDITIONS TO ENSURE NO CONFLICTS. CONTRACTOR TO VERIFY THAT ALL EQUIPMENT, AS SHOWN ON THESE DRAWINGS, WILL NOT CONFLICT WITH ANY DRAINS, SCUTTLES, JOINTS, VENTS, ETC.

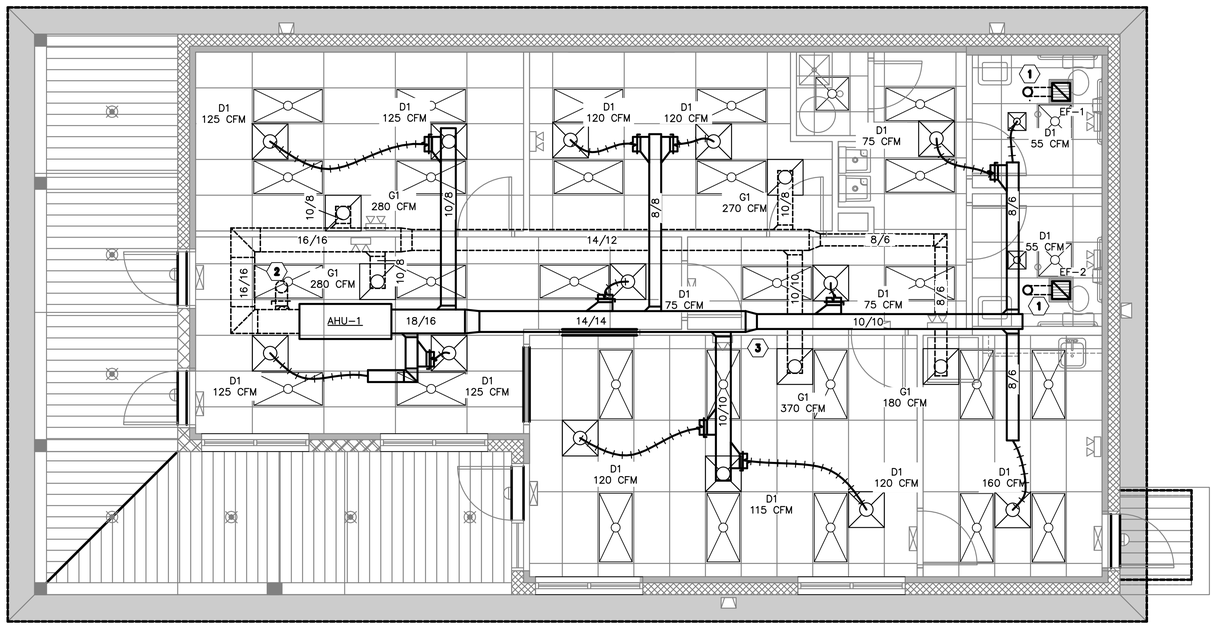
2. ENSURE ALL EXHAUST TERMINATIONS ARE NO LESS THAN 10'-0" FROM ANY OUTSIDE AIR INTAKE, 10'-0" FROM ANY OPERABLE OPENINGS, AND 3'-0" VERTICAL STRUCTURES.

KEYED NOTES:

1. 6" DUCT UP TO GREENHECK GRS-6, OR EQUIVALENT, ROOF CAP. PROVIDE ROOF CURB SIZED TO MATCH ROOF CAP, COORDINATE CURB WITH ROOF CONSTRUCTION. PROVIDE ALL NECESSARY ACCESSORIES/CONNECTORS TO ENSURE A LEAK-FREE INSTALLATION.
2. 8"Ø OUTSIDE AIR DUCT TO GREENHECK GRS-6, OR EQUIVALET, ROOF CAP. PROVIDE ROOF CURB SIZED TO MATCH ROOF CAP, COORDINATE CURB WITH ROOF CONSTRUCTION. PROVIDE ALL NECESSARY ACCESSORIES/CONNECTORS TO ENSURE A LEAK-FREE INSTALLION.
3. THERMOSTAT TO BE MOUNTED 54" A.F.F

FLEX DUCT SCHEDULE	
AIRFLOW	SIZE
0-90 CFM	6"Ø
100-140 CFM	7"Ø
150-200 CFM	8"Ø
205-260 CFM	9"Ø
265-360 CFM	10"Ø
365-550 CFM	12"Ø
NOTE: PROVIDE FLEX DUCT TAKE-OFFS WITH AIR SCOOP AND BALANCING DAMPER AT ALL ROUND SA BRANCH DUCTS. FLEX DUCTS SHALL BE EQUAL TO TITUS FLEX DUCT TYPE T-26. MAXIMUM FLEX DUCT SHALL BE 8'-0". PROVIDE EQUAL SIZE HARD DUCT RUNOUTS FOR TAKEOFFS OVER 8'-0" LONG. EXTERNALLY INSULATE ROUND HARD DUCTS WITH 2" THICK, 3/4# DUCT WRAP WITH FOIL FACING.	

HP-1



1,445 SF

1 M2.10 MECHANICAL DRAWING

1/4"=1'-0"

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Mechanical Plan Sheet

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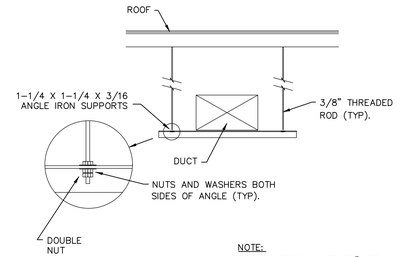
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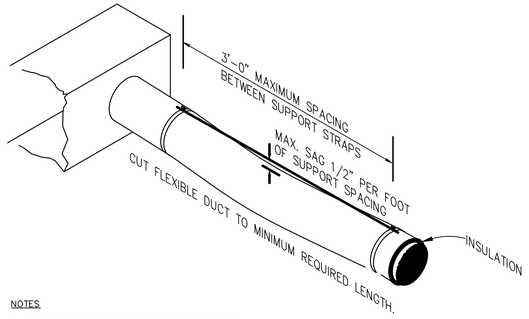
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NOTE:
FOR DUCTWORK OVER 60"WIDE W/SPACING @5'-0"O.C.

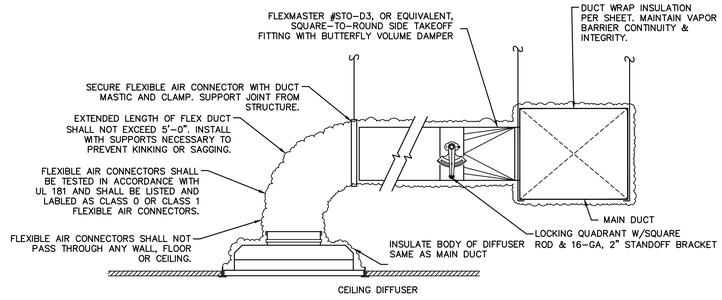
DUCTWORK SUPPORT DETAIL 1
SCALE: NONE



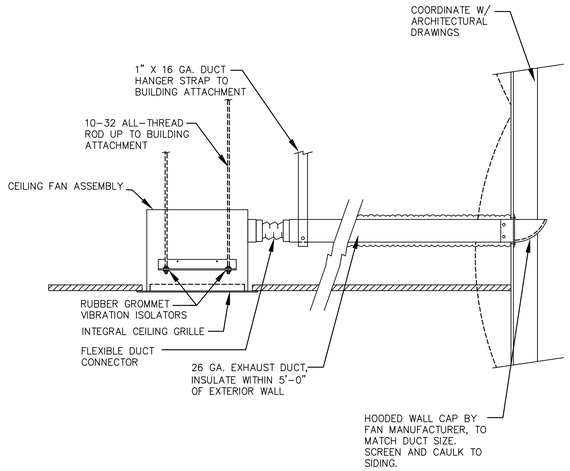
NOTES

1. FLEX DUCT ONLY ALLOWED OVER CONCEALED CEILING SPACES IN OFFICES. ALL EXPOSED DUCT TO BE INTERNALLY LINED.

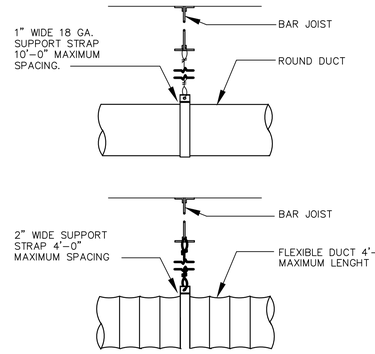
RUNOUT CONNECTION DETAIL 2
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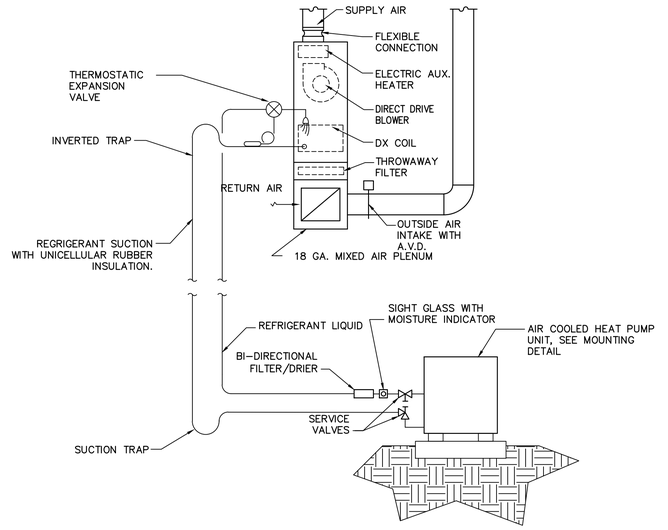
DUCT RUNOUT DETAIL 3
SCALE: NONE



CEILING FAN WITH WALL CAP DETAIL 4
SCALE: NONE



DUCTO SUPPORT DETAIL 5
SCALE: NONE



SPLIT SYSTEM HEAT PUMP DETAIL 6
SCALE: NONE

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Sheet Number:
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PLUMBING GENERAL NOTES:

SCOPE: THE SCOPE OF THE WORK IS GENERALLY INDICATED BY THE DRAWINGS AND SUMMARIZED BY THIS SCOPE OF WORK. DRAWINGS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO INDICATE ALL DETAILS OF THE INSTALLATION OF PLUMBING WORK. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE ACTUAL CONDITIONS AND REQUIREMENTS FOR THE INSTALLATION OF THE WORK.

CODES & STANDARDS: BIDDING CONTRACTORS MUST VISIT THE SITE, REVIEW ALL CONSTRUCTION DOCUMENTS, AND OBTAIN WRITTEN COPIES OF ALL REFERENCED CODES AND ORDINANCES PRIOR TO SUBMITTING BIDS. NO ALLOWANCE WILL BE MADE FOR ADVERSE CONDITIONS WHICH WERE ASCERTAINABLE PRIOR TO BID TIME.

PLUMBING CODE COMPLIANCE: COMPLY WITH THE REQUIREMENTS OF THE 2021 INTERNATIONAL PLUMBING CODE AND ALL LOCAL ORDINANCES IN THE PERFORMANCE OF PLUMBING WORK REQUIRED FOR THIS PROJECT.

COORDINATION: COORDINATE THE PLUMBING WORK WITH THE WORK OF THE GENERAL CONTRACTOR AND OTHER SUB-CONTRACTORS. OBTAIN INFORMATION REGARDING THE ROUGH-IN AND FINAL CONNECTION REQUIREMENTS FOR EQUIPMENT TO BE PROVIDED BY THE OWNER OR OTHER CONTRACTORS PRIOR TO COMMENCING WORK.

CUTTING & PATCHING: PROVIDE LABOR, EQUIPMENT AND SPECIAL SERVICES NECESSARY TO CREATE OPENING NECESSARY FOR THE PASSAGE OF PIPING AND OTHER PLUMBING WORK. APPLY A ROUGH PATCH TO CLOSE OFF UNUSED PORTIONS OF OPENINGS USING MATERIALS THAT ARE SUBSTANTIALLY SIMILAR TO THAT OF THE ADJACENT STRUCTURE. FINAL PATCH AND FINISHES WILL BE APPLIED BY THE GENERAL CONTRACTOR.

MATERIALS, EQUIPMENT, AND SUBMITTALS: PROVIDE MATERIALS AND EQUIPMENT OF THE TYPE SIZE, CAPACITY, AND QUANTITY INDICATED BY THESE DOCUMENTS. WHERE MATERIAL SPECIFICATIONS ARE NOT INDICATED, PROVIDE MATERIALS THAT COMPLY WITH THE HIGHEST QUALITY INDUSTRY STANDARD. IF NO SUCH STANDARD EXISTS, CONTACT THE ARCHITECT/ENGINEER TO ASCERTAIN THE APPROPRIATE SPECIFICATION.

SUBSTITUTIONS: THE MANUFACTURER AND MODEL OF EQUIPMENT ARE INDICATED ONLY TO ESTABLISH A BASIS OF DESIGN. SUBMITTALS FOR EQUIPMENT OF OTHER MANUFACTURERS WILL BE CONSIDERED IF SPATIAL AND PERFORMANCE REQUIREMENTS ARE MET. BIDDERS MAY REQUEST "PRIOR REVIEW" FROM THE ENGINEER UP TO 3 DAYS PRIOR TO THE BID DATE TO ENSURE THE ACCEPTABILITY OF PROPOSED SUBSTITUTIONS.

WATER DISTRIBUTION PIPING: PROVIDE DOMESTIC COLD WATER, HOT WATER, HOT WATER RETURN AND OTHER INDICATED WATER DISTRIBUTION PIPING SYSTEMS OF TYPE, SIZE, QUANTITY, AND CAPACITY INDICATED ON THE DRAWINGS, OF MATERIALS INDICATED IN THE PLUMBING MATERIALS TABLE. PROVIDE HANGERS, ANCHORS, CLAMPS, SUPPORTS, AND ACCESSORIES REQUIRED FOR A COMPLETE SYSTEM.

DRAINAGE PIPING: PROVIDE DRAIN, WASTE, VENT AND OTHER INDICATED DRAINAGE PIPING SYSTEMS OF TYPE, SIZE, QUANTITY, AND CAPACITY INDICATED ON THE DRAWINGS, OF MATERIALS INDICATED IN THE PLUMBING MATERIALS TABLE. PROVIDE HANGERS, ANCHORS, CLAMPS, SUPPORTS, AND ACCESSORIES REQUIRED FOR A COMPLETE SYSTEM.

UTILITY TAPS: THE PLUMBING CONTRACTOR SHALL COORDINATE SEWER AND WATER TAPS WITH THE LOCAL UTILITY. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY TAP FEES.

PIPING INSULATION: PROVIDE 1" THICK FIBERGLASS PIPE INSULATION WITH ALL-SERVICE JACKET (ASTM C-547, C-921, TYPE I or II AS APPROPRIATE FOR TEMPERATURE) ON ALL COLD WATER, HOT WATER, HOT RETURN AND COLD DRAINAGE PIPING AS WELL AS ROOF DRAIN LEADERS TO 5'-0" FROM ROOF DRAIN. PROVIDE PRESSURE SENSITIVE TAPE, MASTIC, OR OTHER MATERIALS AS MAY BE REQUIRED TO MAINTAIN A CONTINUOUS VAPOR BARRIER THROUGHOUT THE SYSTEM. PROVIDE PRE-MOLDED PVC COVERS AT ALL FITTINGS. JACKETS AND VAPOR BARRIER MATERIALS MUST MEET LOCAL ORDINANCE REQUIREMENTS FOR FLAME SPREAD AND SMOKE DEVELOPED RATINGS. (SEE FLOOR PLANS FOR INSULATION REQUIREMENTS AT SPECIAL SYSTEMS.)

INSTRUMENTATION: PROVIDE THERMOMETERS, THERMOWELLS, PRESSURE GAUGES, FLOW INDICATORS, CALIBRATED BALANCING VALVES, P&T PLUGS, AND OTHER INSTRUMENTATION INDICATED ON THE DRAWINGS. IN THE ABSENCE OF SUCH INDICATION, PROVIDE, AT MINIMUM, THERMOWELLS AND THERMOMETERS AT EACH ITEM OF HEAT TRANSFER EQUIPMENT (WATER HEATER, WATER CHILLER, HOT WATER GENERATOR, ETC.) AND PRESSURE GAUGES WITH GAUGE COCKS AND SNUBBERS, AT ITEM OF HEAT TRANSFER EQUIPMENT AND EACH PRIME MOVER (PUMP, ETC.).

IDENTIFICATION: PROVIDE MECHANICAL SYSTEMS IDENTIFICATION TO INDICATE THE TAG, TYPE, FLOW, TEMPERATURE RANGE, CAPACITY, ETC. OF EACH ITEM OF EQUIPMENT AND ALL CONVEYANCES (PIPING SYSTEMS). PROVIDE ENGRAVED PLASTIC LAMINATE PLATES FOR EQUIPMENT, "SNAP-ON" PIPE MARKERS FOR PIPING, AND ADHESIVE BACKED PLASTICIZED MARKERS FOR DUCTWORK. PROVIDE ENGRAVED PLASTIC LAMINATE VALVE TAGS AT EACH VALVE AND A VALVE TAG SCHEDULE FRAMED UNDER GLASS.

CONTROLS: PROVIDE ALL CONTROL DEVICES, CONDUIT, CONDUCTORS, AND ACCESSORIES REQUIRED TO FURNISH AND INSTALL A COMPLETE AND OPERATING SYSTEM OF PLUMBING EQUIPMENT CONTROLS TO ACCOMPLISH THE INDICATED SEQUENCE OF OPERATION.

TEST & BALANCE: TEST, BALANCE, AND ADJUST ALL WATER FLOW QUANTITIES TO WITHIN 10% OF THOSE INDICATED ON DRAWINGS. PROVIDE ADDITIONAL DRIVES, MOTORS OR OTHER DEVICES AND ACCESSORIES AS MAY BE REQUIRED TO ADJUST FLOW QUANTITIES AS REQUIRED. SUBMIT THREE COPIES OF THE FINAL REPORT TO THE ARCHITECT WITHIN 10 DAYS OF THE COMPLETION OF BALANCING WORK.

CONTRACT CLOSEOUT: PROVIDE EVIDENCE THAT ALL CONTRACTUAL OBLIGATIONS HAVE BEEN MET, INCLUDING, BUT NOT NECESSARILY LIMITED TO, PROVIDING "AS-BUILT" DRAWINGS, SYSTEM COMMISSIONING REPORTS, OPERATING AND MAINTENANCE MANUALS, TRAINING OF PERSONNEL, FULLY EXECUTED PUNCHLIST, WARRANTIES, EXTENDED WARRANTIES, AND OTHER DOCUMENTS THAT MAY BE PERTINENT TO THE PLUMBING PORTION OF THE PROJECT.

WARRANTY: THE CONTRACTOR SHALL WARRANT THE WORK PROVIDED AS PART OF THIS PROJECT TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE COMMISSIONING ACCEPTANCE DATE.

PLUMBING LEGEND

NEW WORK			
—S—	SANITARY		PIPE ELBOW UP
----V----	VENT		PIPE ELBOW DOWN
---UGV---	UNDER GRADE VENT		GATE VALVE
—CW—	DOMESTIC COLD WATER		CHECK VALVE
----HW----	DOMESTIC HOT WATER		GAS COCK
—FCW—	FILTERED COLD WATER		FLOOR DRAIN
—NG—	NATURAL GAS		FLOOR SINK
			HUB DRAIN
		FCO	FLOOR CLEANOUT
		ECO	EXTERIOR CLEANOUT
		WCO	WALL CLEANOUT
		CO	PLUG CLEANOUT
		VTR	VENT THROUGH ROOF (INCREASER AS REQ.)
		HB	HOSE BIBB - 3/4"
		FPWH	FREEZE PROOF WALL HYDRANT - 3/4"

WATER SUPPLY SIZING WORKSHEET

FIXTURE OR GROUP TYPE	OCCUPANCY	CONTROL	W.S.F.U.	QUANTITY	S/T DEMAND
WATER CLOSET	PUBLIC	FLUSH TANK	5	2	10
LAVATORY	PUBLIC	FAUCET	2	2	4
HAND SINK	PUBLIC	FAUCET	1.5	3	4.5
DRINKING FOUNTAIN	PUBLIC	FAUCET	0.25	3	0.5
MOP SINK	PUBLIC	FAUCET	3	1	3

SUM OF W.S.F.U. (TOTAL DEMAND)	22 W.S.F.U.
CONVERT TO G.P.M. (PREDOM. FLUSH TANK)	21.5 GPM
DETERMINE BUILDING WATER SERVICE SIZE	1 1/4"

PLUMBING FIXTURE SCHEDULE

TAG	TYPE	MOUNTING	RIM HT.	MFR.	MODEL NO.	MATERIAL	FINISH	CW	HW	TRAP	DRAIN	VENT	TRIM / REMARKS
WATER CLOSET													
WC-1	ADA FLUSH TANK WATER CLOSET	FLOOR	16½"	KOHLER	K-3979 "HIGHLINE"	VITREOUS CHINA	WHITE	3/8"	-	3"	4"	2"	K-7637 SUPPLY, K-4731-C-0 SEAT
LAVATORIES													
L-1	ADA LAVATORY	WALL HUNG	34"	KOHLER	K-1722 "CHESAPEAKE"	VITREOUS CHINA	WHITE	3/8"	1/2"	1¼"	1½"	1¼"	K-7605-P SUPPLIES, K-7131-A OFFSET DRAIN, K-8998 P-TRAP, K-13460 FAUCET, K-7129-A GRID DRAIN, JOSAM #17100 FLOOR MOUNT CARRIER
SINKS													
MS-1	MOP SINK	24" X 24" CORNER SINK FLOOR MOUNT	12"	FIAT PRODUCTS	TSBC6010	TERRAZZO	GREY	1/2"	1/2"	3"	3"	1½"	T&S BRASS #B-0695-ST FAUCET w/ VB @ 90" AFF, 830AA MOP SERVICE BASIN FITTING, 832AA HOSE & HOSE BRACKET, 833AA SILICONE SEALANT, MSG WALL GUARDS.
US-1	UTILITY SINK	24" X 24" FREESTANDING UTILITY SINK	35"	EAGLE GROUP	1836-2-16/3	16 GAUGE 304 STAINLESS STEEL	BRUSHED SS	1/2"	1/2"	3"	3"	1½"	PROVIDE WITH FACTORY OPTION HEAVY DUTY FAUCET.
DRINKING FOUNTAIN													
DF-1	ADA DRINKING FOUNTAIN - SGL	WALL	33.5"	ELKAY	EDFP-214-C	#302 STAINLESS STEEL	SATIN	3/8"	-	1¼"	1½"	1¼"	MPW101 CARRIER, ML100 SUPPORT COLUMNS, PROVIDE WITH SERVICE STOP, AND WALL PLATE
DRAINS AND DRAINAGE FIXTURES													
FD-1	FLOOR DRAIN FINISHED AREAS	FLOOR	-	JOSAM	3000n-A	COATED CAST IRON	NIKALOY SATIN	-	-	-	n"	-	6" TOP, ¾" TRAP PRIMER TAP
HD-1	HUB DRAIN	FLOOR	-	JOSAM	3000n-A	COATED CAST IRON	NIKALOY SATIN	-	-	-	n"	-	6" TOP, ¾" TRAP PRIMER TAP
FCO	FLOOR CLEANOUT	FLOOR	-	JOSAM	5700(*)	COATED CAST IRON	NIKALOY SATIN	-	-	-	-	-	* SIZE TO PIPE, 3" MIN.
ECO	EXTERIOR CLEANOUT	FLOOR	-	JOSAM	5700(*)	COATED CAST IRON	NIKALOY SATIN	-	-	-	-	-	* SIZE TO PIPE, 3" MIN.
WCO	WALL CLEANOUT	WALL	-	JOSAM	5854(*)	STAINLESS STEEL	POLISHED BRONZE	-	-	-	-	-	* SIZE TO PIPE, 3" MIN.

WATER HEATER SCHEDULE

TAG	TYPE	FUEL	MFR.	MODEL	STORAGE GALLONS	FUEL INPUT	GPH RECOV. @ 75°F	ACCESSORIES / REMARKS
WH-1	STORAGE	ELECTRIC	RHEEM	ELD30-TB	30	5kW	24	208v/1, NON-SIMULTANEOUS WIRING, ASME T & P VALVE, INSULATION BLANKET

2021 INTERNATIONAL PLUMBING CODE PIPING MATERIALS

PIPING TYPE	COPPER PIPE ASTM B42, ASTM B302	COPPER TUBE ASTM B75, ASTM B88, ASTM B251, ASTM B306	GALV. STEEL ASTM A53	PEX-AL-PEX PIPE ASTM F1281, ASTM F2262, CAN/CSA B137.10M	PEX TUBE ASTM 876, ASTM F877, CSA B137.5	PVC PLASTIC ASTM D2665, ASTM D2949, ASTM F1488	ABS PLASTIC ASTM D2661, ASTM F628	CAST IRON ASTM A74, CISPI 301, ASTM A888	CONCRETE ASTM C14, ASTM C76	VITRIFIED CLAY ASTM C4, ASTM C700
WATER SERVICE	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO
WATER DISTRIBUTION	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO
ABOVE GROUND DRAINAGE & VENT	YES	YES	YES	NO	NO	YES	YES			
UNDERGROUND BLDG. DRAINAGE & VENT	NO	YES	NO	NO	NO	YES	YES	YES	NO	NO
BUILDING SEWER	NO	YES	NO	NO	NO	YES	YES	YES	YES	YES
BUILDING STORM SEWER	NO	YES	NO	NO	NO	YES	YES	YES	YES	YES
SUBSOIL DRAIN	NO	NO	NO	NO	NO	ASTM D2729	NO	YES	NO	YES

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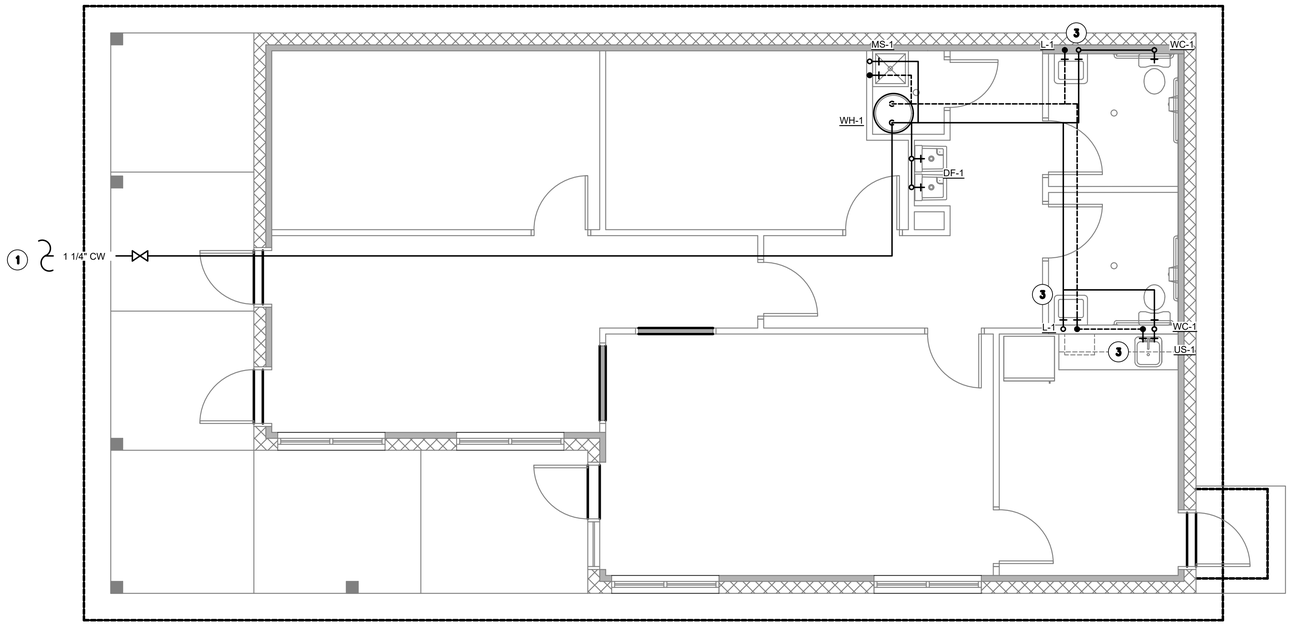
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GENERAL NOTES:

1. THIS CONTRACTOR SHALL EXECUTE ALL WORK SO THAT IT PROCEEDS WITH A MINIMUM OF INTERFERENCE WITH OTHER TRADES AND NORMAL FUNCTIONING OF EXISTING FACILITIES AND SERVICES.
2. VERIFY EXACT ROUGH-IN AND FINAL EQUIPMENT REQUIREMENTS IN FIELD.
3. THE CONTRACTOR SHALL VERIFY THAT ALL PIPING, AS SHOWN ON THESE DRAWINGS WILL NOT CONFLICT WITH ANY DRAINS, SCUTTLES, JOINTS, VENTS, EQUIPMENT, ETC.
4. THE PLUMBING CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND OTHER TRADES, ALL REQUIRED OPENINGS AND EXCAVATIONS. ALL REQUIRED OPENINGS IN FOUNDATIONS, FLOORS, WALLS, AND ROOFS SHALL BE DESIGNED INTO THE STRUCTURE INITIALLY BY THE USE OF SLEEVES, CURBS, ETC. CUTTING AND PATCHING SHALL BE HELD TO A MINIMUM.
5. ALL ITEMS PROJECTING THROUGH THE ROOF SHALL BE FLASHED A MINIMUM OF 12" ABOVE THE ROOF. ALL VENTS SHALL BE A MINIMUM OF 10' FROM ANY OUTSIDE AIR INTAKE DEVICE.
6. PROVIDE STOPS AND SHOCK ABSORBERS AT EACH FIXTURE OR GROUP OF FIXTURES. CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDENSATE DRAIN PIPING AND FITTINGS. INSULATE ALL CONDENSATE DRAIN PIPING AND FITTINGS WITH 1/2" "ARMAFLEX" PIPE INSULATION.
7. PROVIDE VACUUM BREAKERS AT FIXTURES WITH HOSE THREAD CONNECTIONS AND APPLIANCES WITH DIRECT CONNECTIONS TO DOMESTIC WATER.
8. PROVIDE DI-ELECTRIC UNIONS AT ALL DISSIMILAR METAL PIPE CONNECTIONS.
9. ALL WATER LINES INSTALLED IN EXTERIOR WALLS SHALL BE INSTALLED INSIDE OF WALL INSULATION AND INSULATED INDIVIDUALLY TO PROTECT FROM FREEZING, PIPING AND FITTINGS. INSULATE ALL CONDENSATE DRAIN PIPING AND FITTINGS WITH 1/2" "ARMAFLEX" PIPE INSULATION.ALL PLUMBING FIXTURES SHALL BE WHITE.
10. PROVIDE APPROVED BACKFLOW PREVENTION AT ALL EQUIPMENT DIRECTLY CONNECTED TO WATER SYSTEM.
11. PROVIDE A PRESSURE REDUCING VALVE IF THE INCOMING PRESSURE EXCEEDS 80 PSI. IF A PRV IS UTILIZED THEN IT SHALL BE SET TO 80 PSI. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO DETERMINE IF REQUIRED.

KEYED NOTES:

1. 1 1/4" DOMESTIC WATER SUPPLY FROM METER
2. CONTRACTOR TO PROVIDE A FULL SIZE BACKFLOW PREVENTOR VALVE.
3. ASSE 1070 COMPLIANT MIXING VALVE SET AT 110°F.



1,445 SF

1 P2.10 PLUMBING DRAWING

1/4"=1'-0"

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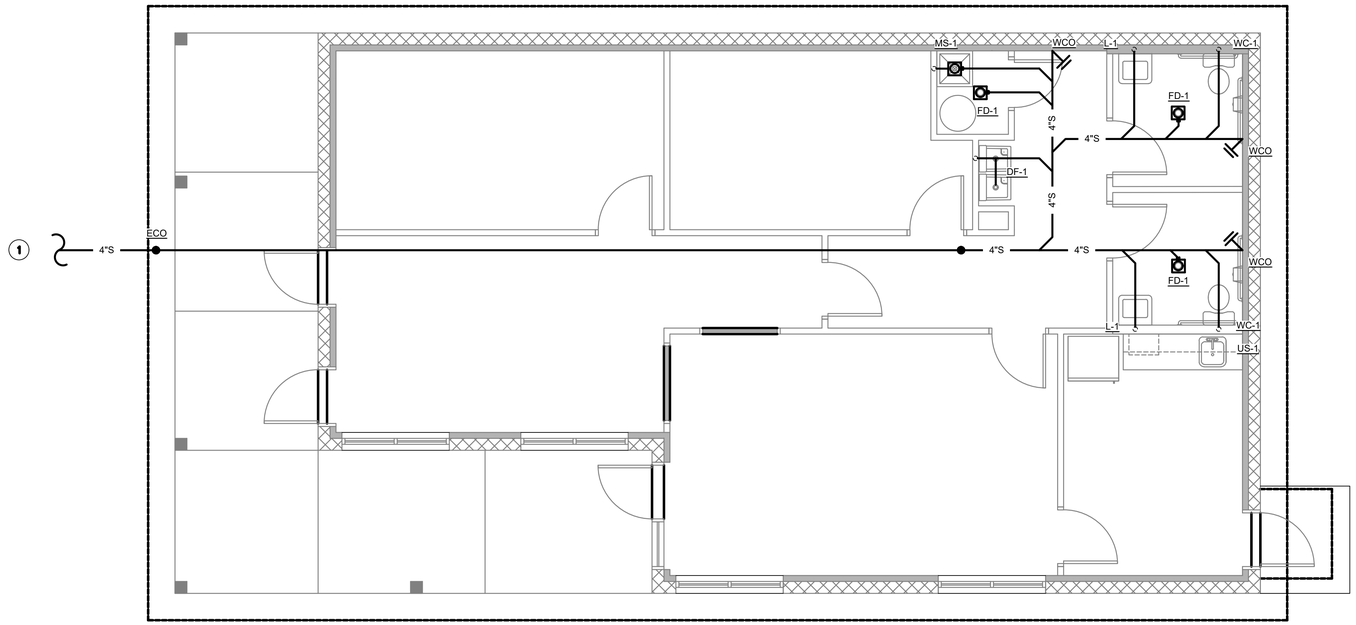
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GENERAL NOTES:

1. THIS DRAWING IS DIAGRAMMATICAL AND SOME FIXTURES ARE SHOWN FOR CLARITY. COORDINATE ALL DRAINS AND WATER CONNECTIONS WITH EQUIPMENT PLANS AND CUT SHEETS PRIOR TO ROUGH-IN. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO BIDDING. CONTRACTOR WILL PROVIDE THE WORK OF ANY ISSUE NOT IDENTIFIED PRIOR TO BIDDING AT NO COST TO THE OWNER.
2. ALL FD-1 FIXTURES TO HAVE 1/2" TRAP PRIMER FIELD ROUTED FROM NEAREST PLUMBING FIXTURE.
3. THIS CONTRACTOR SHALL EXECUTE ALL WORK SO THAT IT PROCEEDS WITH A MINIMUM OF INTERFERENCE WITH OTHER TRADES AND NORMAL FUNCTIONING OF EXISTING FACILITIES AND SERVICES.
4. THE CONTRACTOR SHALL VERIFY THAT ALL PIPING, AS SHOWN ON THESE DRAWINGS WILL NOT CONFLICT WITH ANY DRAINS, SCUTTLES, JOINTS, VENTS, EQUIPMENT, ETC.
5. COORDINATE ROUTING AND LOCATIONS OF WASTE AND VENT PIPING WITH ALL OTHER TRADES.
6. THE PLUMBING CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND OTHER TRADES, ALL REQUIRED OPENINGS AND EXCAVATIONS. ALL REQUIRED OPENINGS IN FOUNDATIONS, FLOORS, WALLS, AND ROOFS SHALL BE DESIGNED INTO THE STRUCTURE INITIALLY BY THE USE OF SLEEVES, CURBS, ETC. CUTTING AND PATCHING SHALL BE HELD TO A MINIMUM.
7. ALL ITEMS PROJECTING THROUGH THE ROOF SHALL BE FLASHED A MINIMUM OF 12" ABOVE THE ROOF. ALL VENTS SHALL BE A MINIMUM OF 10' FROM ANY OUTSIDE AIR INTAKE DEVICE.
8. ALL FLOOR DRAINS ARE TO HAVE 4" DEEP SEAL TRAPS. PROVIDE 1/2" TRAP PRIMER FROM LAVATORIES FOR FLOOR DRAINS IN RESTROOMS AND JANITOR.
9. PROVIDE DI-ELECTRIC UNIONS AT ALL DISSIMILAR METAL PIPE CONNECTIONS.
10. PROVIDE CLEANOUTS EVERY 50' OR AT EACH CHANGE IN DIRECTION MORE THAN 45° AS REQUIRED BY CODE.

KEYED NOTES:

(1) 4" SANITARY, OUT OF BUILDING AND TO CIVIL / SITE UTILITIES.



1,445 SF

1 P2.20 SANITARY DRAWING

1/4"=1'-0"

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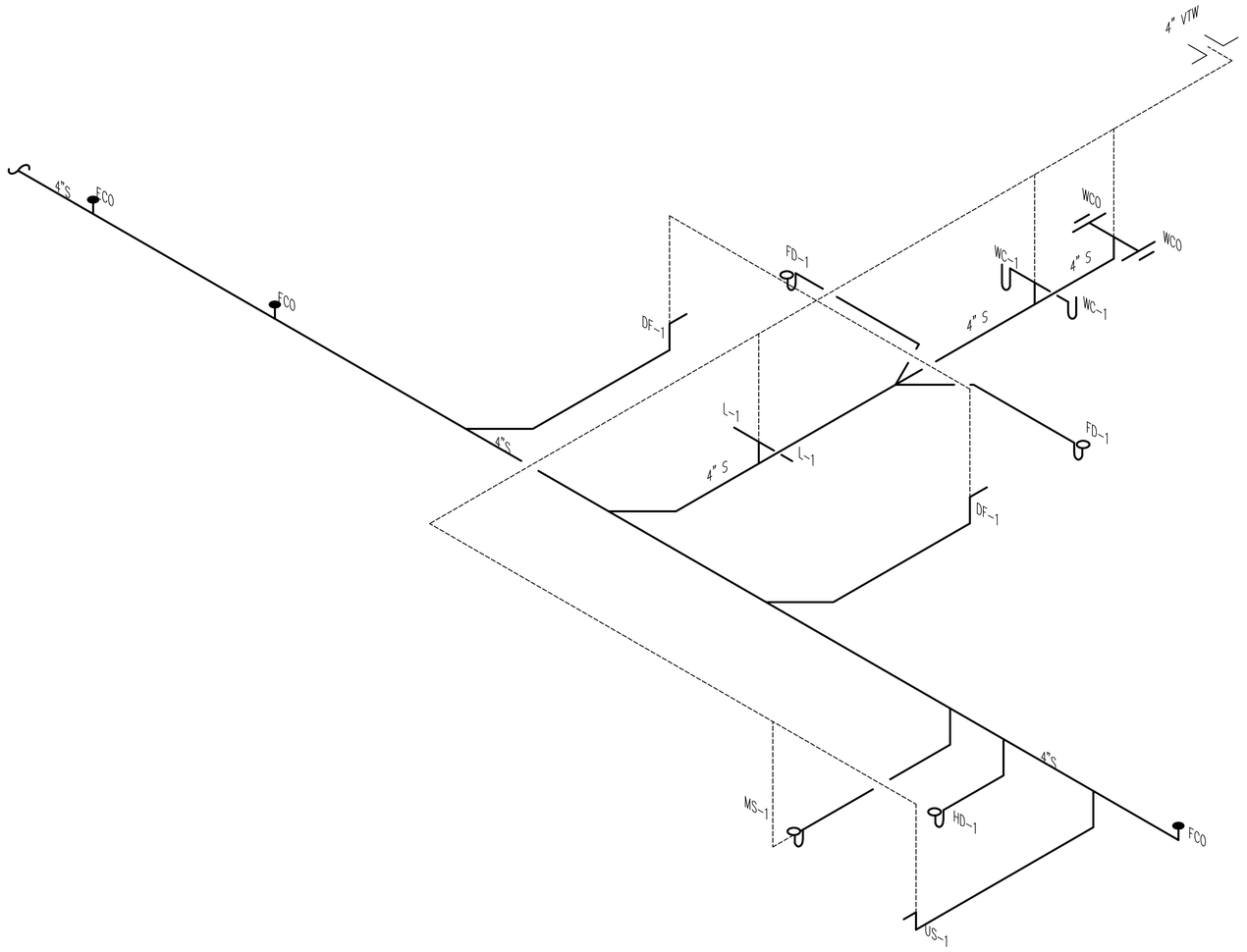
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1 / 3.0 SANITARY RISER DIAGRAM

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Riser Diagram Sheet

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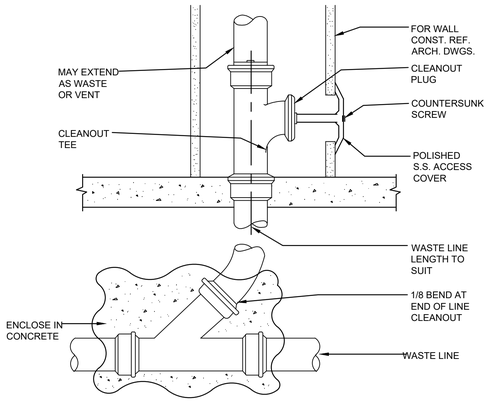
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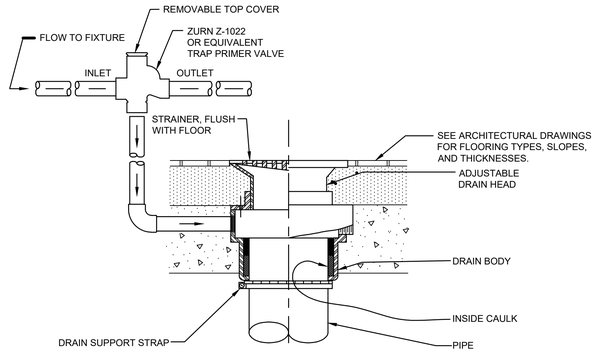
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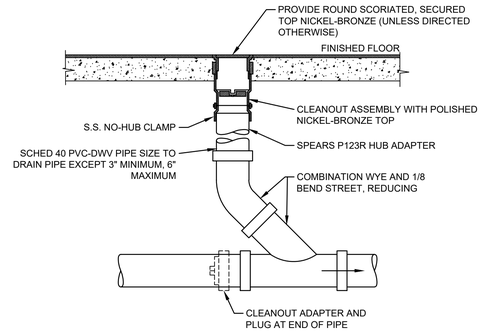
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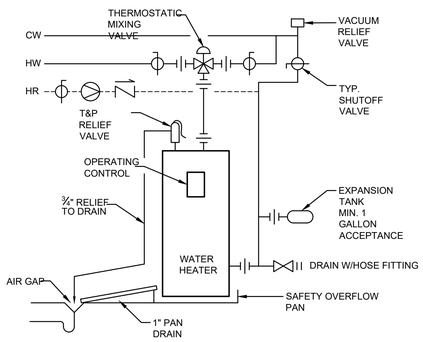
WALL CLEANOUT DETAIL — 1
SCALE: NONE



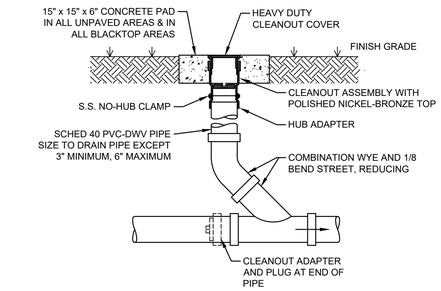
FLOOR DRAIN WITH TRAP PRIMER DETAIL — 2
SCALE: NONE



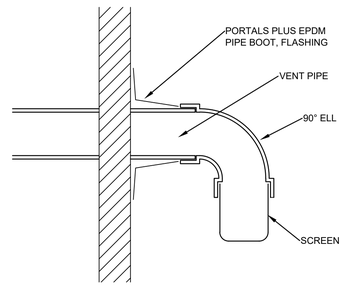
FINISHED FLOOR CLEANOUT DETAIL — 3
SCALE: NONE



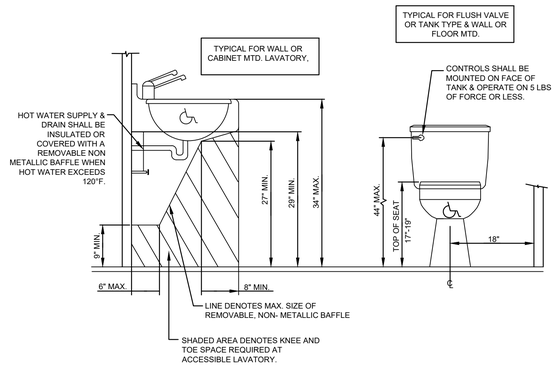
WATER HEATER DETAIL — 4
SCALE: NONE



EXTERIOR CLEANOUT — 5
SCALE: NONE



VENT THROUGH WALL — 6
SCALE: NONE



ADA PLUMBING INSTALLATION DETAIL — 7
SCALE: NONE

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GENERAL NOTES:

1. THE CONTRACTOR IS TO FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, AND CONDITIONS PRIOR TO CONSTRUCTION OR FABRICATION.

2. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE DRAWINGS OF ALL OTHER DISCIPLINES AND ANY APPLICABLE SPECIFICATIONS. THE CONTRACTOR SHALL VERIFY THE REQUIREMENTS OF OTHER TRADES AS TO SLEEVES, HANGERS, INSERTS, ANCHORS, HOLES, AND OTHER ITEMS TO BE INCORPORATED INTO THE STRUCTURE.

3. THE STRUCTURAL DRAWINGS HEREIN REPRESENT THE FINISHED STRUCTURE. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY BRACING AND SUPPORTS REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL ALL STRUCTURAL WORK, CURING, CONNECTIONS, ETC. HAVE BEEN COMPLETED. THE INVESTIGATION, DESIGN, SAFETY, ADEQUACY, AND INSPECTION OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

4. WHERE A DETAIL IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL LIKE OR SIMILAR CONDITIONS EVEN THOUGH NOT SPECIFICALLY CALLED FOR ON THE DRAWINGS.

DESIGN LOADS:

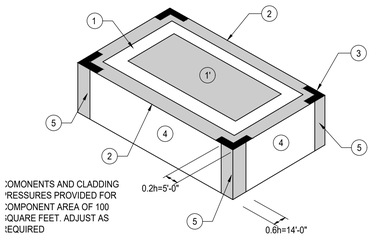
1. GENERAL BUILDING CODE:
   -2021 INTERNATIONAL BUILDING CODE
   -ACI 318-2019 BUILDING CODE FOR STRUCTURAL CONCRETE
   -AISC STEEL CONSTRUCTION MANUAL - 15TH EDITION
   -ASCE 7-2016 MINIMUM DESIGN LOADS FOR BUILDINGS...

2. DESIGN LOADS:
   ROOF LIVE LOAD: 20 PSF
   ROOF DEAD LOAD: 17 PSF (TO BE USED BY METAL BUILDING COMPANY TO DETERMINE NET UPLIFT)

3. WIND CODE:
   WIND CODE: ASCE 7-2016
   WIND SPEED: 120 MPH
   RISK CATEGORY: II
   EXPOSURE CATEGORY: B
   INTERNAL PRESSURE COEFFICIENTS: +0.18 AND -0.18

4. THE BUILDINGS SHALL BE DESIGNED UTILIZING PINNED BASES.
   MAX DEFLECTIONS OF PRIMARY AND SECONDARY BUILDING SUPPORT FRAMES:
   1. FRAME = H/180
   2. PURLINS = L/180
   3. GIRTS = L/120
   4. SHEETING = L/120

5. COMPONENTS AND CLADDING DESIGN WIND PRESSURES (TO BE USED FOR THE DESIGN OF EXTERIOR COMPONENT AND CLADDING MATERIALS NOT SPECIFICALLY DESIGNED BY THE REGISTERED DESIGN PROFESSIONAL OF RECORD)



COMPONENTS AND CLADDING PRESSURES PROVIDED FOR COMPONENT AREA OF 100 SQUARE FEET. ADJUST AS REQUIRED

WIND COMPONENTS AND CLADDING (ELEMENTS)

ZONE	DESCRIPTION	PRESSURE
1	INTERIOR ROOF ZONE	+18.0, −41.3
1'	INTERIOR ROOF ZONE	+18.0, −23.7
2	ROOF END ZONE	+18.0, −54.4
3	ROOF CORNER ZONE	+18.0, −74.2
4	INTERIOR WALL ZONE	+25.9, −28.1
5	WALL END ZONE	+25.9, −34.7

SITEWORK & SOIL NOTES

1. STRUCTURAL FILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY STANDARD PROCTOR, ASTM D698, AND AT LEAST 98% OF STANDARD PROCTOR WITHIN 1'-0" BELOW CONCRETE SUBGRADE. FILL SHALL BE PLACED IN LIFTS NOT TO EXCEED 8 INCHES IN COMPACTED FILL THICKNESS.

2. FOUNDATION DESIGN IS BASED ON AN ALLOWABLE BEARING PRESSURE OF 1,000 P.S.F. AT MINIMUM 12" BELOW FINISHED SUB-GRADE LEVELS. MINIMUM CONTINUOUS FOOTING WIDTH IS 18 INCHES.

3. REMOVE ALL VEGETATION AND DEBRIS, INCLUDING PAVEMENTS, SIDEWALKS, BUILDING FOUNDATIONS, AND ABANDONED UTILITIES.

4. PROOFROLL THE EXPOSED SUBGRADE TO DETECT SOFT OR YIELDING SOILS. REMOVE ANY SOFT OR YIELDING SOILS, SCARIFY, MOISTURE CONDITION AND RECOMPACT IN ACCORDANCE WITH ASTM D-698.

5. PROVIDE A 10 MIL THICK VAPOR BARRIER BELOW THE CONCRETE SLAB. DO NOT PUNCTURE THE VAPOR BARRIER. LAP AND TAPE ENDS.

7. IT IS IMPERATIVE THAT THE ACTUAL BEARING GRADE BE CHECKED IN THE FIELD DURING CONSTRUCTION BY THE SOILS CONSULTANT TO ENSURE THAT THE FOUNDATION SYSTEM IS SUPPORTED BY SUITABLE BEARING SOILS AND WILL PERFORM IN ACCORDANCE WITH THE ASSUMED CONDITIONS.

8. PROVIDE POSITIVE DRAINAGE AWAY FROM EXCAVATIONS SO AS NOT TO ALLOW STANDING WATER FOR LONG PERIODS OF TIME.

9. SOILS EXCAVATED FROM THE SITE THAT ARE FREE OF DELETERIOUS MATERIALS MAY BE USED AS FILL.

10. FOOTING EXCAVATIONS LEFT OPEN FOR MORE THAN ONE DAY SHALL BE PROTECTED TO REDUCE EVAPORATION OR ENTRY OF SOIL MOISTURE.

11. WATER SHALL NOT BE ALLOWED TO COLLECT NEAR THE FOUNDATIONS OR FLOOR SLAB AREAS OF THE BUILDING EITHER DURING OR AFTER CONSTRUCTION. UNDERCUT OR EXCAVATION AREAS SHALL BE SLOPED TO ONE CORNER TO FACILITATE REMOVAL OF ANY COLLECTED GROUND WATER OR SURFACE RUNOFF.

SITEWORK & SOIL NOTES (CONT.):

12. REFER TO GEOTECHNICAL REPORT ISSUED BY EUSTIS ENGINEERING, LLC., DATED 11/10/2022, FOR ALL SUBSURFACE PREPARATION. CONTRACTOR TO NOTE THAT THE SITE PREPARATION PROCEDURE CONTAINED IN THE REPORT SUPERCEDES ALL SOIL AND SITE INFORMATION PROVIDED BY GSE. THE GEOTECHNICAL ENGINEER OF RECORD SHALL BE RETAINED DURING CONSTRUCTION BY THE CONTRACTOR TO INSPECT EXCAVATION, PLACEMENT OF FILL, AND COMPACTION AS REQUIRED.

GENERAL CONCRETE NOTES

1. ALL CONCRETE NOT SPECIFICALLY NOTED = 4000 PSI @ 28 DAYS

2. REBAR: ASTM A615, GRADE 60
   DEFORMED WELDED WIRE FABRIC: ASTM A185

3. JOINT FILLER: VINYLFORM GRADE #300 BY SONNEBORN; CERAMAR FLEXIBLE FOAM BY W.R. MEADOWS; PLASTAZOTE BY E-POXY INDUSTRIES, INC. OR APPROVED EQUIVALENT.

6. MOISTEN SUBGRADE PRIOR TO PLACING CONCRETE.

7. FOR SPECIAL WEATHER CONCRETING - HOT & COLD WEATHER CONCRETING - FOLLOW ALL APPLICABLE ACI SPECIFICATIONS

8. CONCRETE FINISHES:
   A. BROOM FINISH AT EXTERIOR CONCRETE.
      1. WHEN CONCRETE HAS HARDENED SUFFICIENTLY, IT SHALL BE FLOATED TO A COMPACT AND SMOOTH SURFACE. FLOATING MAY BE ACCOMPLISHED WITH WOOD OR METAL FLOATS OR BY MECHANICAL FLOAT.
      2. AFTER FLOATING IS COMPLETED AND THE CONCRETE HAS HARDENED ENOUGH SO THAT IT WILL RETAIN THE SCORING, BRUSH THE SURFACE WITH A STEEL WIRE BROOM OR ONE MADE FROM STIFF COARSE FIBERS IN A DIRECTION TRANSVERSE TO THE DIRECTION OF TRAFFIC.

   B. TROWELLED FINISH AT INTERIOR CONCRETE.
      1. AFTER FLOATING IS COMPLETED AND THE CONCRETE HAS HARDENED ENOUGH SO THAT WATER AND FINE MATERIAL ARE NOT WORKED TO THE SURFACE, THE SURFACE SHALL BE THOROUGHLY TROWELLED BY MACHINE TROWELLING WITH A MOTOR DRIVEN ROTARY TROWEL. THE MACHINE COMPACTING, HAND AND MACHINE TROWELLING OPERATIONS SHALL LEAVE A SMOOTH, HARD, IMPERVIOUS, EVEN FINISH.

   C. THE HORIZONTAL SURFACES OF PUMP PADS, COLUMN PEDESTALS, TOPS OF WALLS, EQUIPMENT FOUNDATIONS REQUIRING GROUT, STAIR TREADS AND CONCRETE PADS FOR STAIRS SHALL RECEIVE A WOOD FLOAT FINISH UNLESS OTHERWISE SPECIFIED.

   D. VERTICAL SURFACES OF EXPOSED AREAS ARE TO RECEIVE A RUBBED FINISH USING A WOOD OR STEEL FLOAT OR BURLAP TO APPLY THE GROUT. EXCESS GROUT SHALL BE REMOVED.

9. DUSTING WITH ANY MATERIAL TO ABSORB SURFACE WATER IS PROHIBITED.

10. IMMEDIATELY AFTER FORMS ARE REMOVED, FILL ALL HONEYCOMB DEPRESSIONS OR OTHER VOIDS TO OBTAIN STRAIGHT AND FLUSH SURFACES.

11. VERTICAL SURFACES SHALL HAVE ALL TIE HOLES AND SURFACE IMPERFECTIONS CORRECTED WITH MORTAR.

12. CURING:
    APPLY LIQUID CURING COMPOUND TO HORIZONTAL SURFACES AS SOON AS POSSIBLE AFTER FINISHING, IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. CURE VERTICAL SURFACES BY LEAVING FORMS IN PLACE A MINIMUM OF (7) DAYS.

13. REBAR DETAILING SHALL BE PER THE LATEST EDITION OF THE ACI BUILDING CODE AND DETAILING MANUAL.

14. CONSTRUCTION JOINTS:
    IN GENERAL, CONSTRUCTION JOINTS SHALL BE PLACED WHERE SHOWN ON THE DRAWINGS. JOINTS NOT SHOWN ON THE DRAWINGS SHALL BE APPROVED BY THE PROJECT ENGINEER AND SHALL BE LOCATED AND MADE SO AS TO LEAST IMPAIR THE STRENGTH OF THE STRUCTURE. ALL JOINTS SHALL BE KEYED AND DOWELED UNLESS OTHERWISE SHOWN ON THE DRAWINGS. WHERE A JOINT IS TO BE MADE, THE SURFACE OF THE CONCRETE SHALL BE THOROUGHLY CLEANED AND ALL LAITANCE REMOVED. IN ADDITION, VERTICAL JOINTS SHALL BE THOROUGHLY WETTED, AND SLUSHED WITH A COAT OF NEAT CEMENT GROUT IMMEDIATELY BEFORE PLACING OF NEW CONCRETE.

15. EARLY ENTRY SAW CUTTING SHOULD BE PERFORMED IN GREEN CONCRETE AS SOON AS SUFFICIENT CURING HAS TAKEN PLACE TO SUPPORT THE WEIGHT OF THE OPERATOR AND SAW. CUTS SHOULD BE PERFORMED USING A BLADE SPECIFICALLY DESIGNED FOR DRY EARLY ENTRY CUTTING.

16. CONTINUOUS FOUNDATION BARS SHALL HAVE SPLICES STAGGERED A MINIMUM OF 4'-0". ALL LAP SPLICES SHALL BE MADE WITH A MINIMUM LENGTH OF 36 BAR DIAMETERS. MAKE ALL BARS CONTINUOUS AROUND CORNERS BY USE OF CORNER BARS.

17. DETAIL BARS IN ACCORDANCE WITH A.C.I. DETAILING MANUAL AND A.C.I. BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, LATEST EDITIONS. NO WELDING OF REINFORCEMENT SHALL BE ALLOWED UNLESS NOTED OR OTHERWISE APPROVED BY THE ARCHITECT AND STRUCTURAL ENGINEER.

18. PROVIDE THE FOLLOWING CONCRETE COVER FOR ALL REINFORCEMENT:
    1. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH = 3"
    2. ALL OTHER AREAS = 1 1/2"

19. PROVIDE 3/4" CHAMFER OR RADIUS ON ALL EXPOSED CORNERS.

20. CONTRACTOR SHALL NOT PLACE ANY CONCRETE REINFORCEMENT UNTIL REINFORCING SHOP DRAWINGS HAVE BEEN SUBMITTED, REVIEWED AND RETURNED BY THE ARCHITECT AND STRUCTURAL ENGINEER. REINFORCING SHOP DRAWINGS SHALL CONSIST OF BOTH "CUT" AND PLACING SHEETS. PLACING SHEETS SHALL CONTAIN ALL INFORMATION NECESSARY TO POSITION ALL REINFORCING STEEL IN THE FIELD WITHOUT HAVING TO REFER TO THE STRUCTURAL DRAWINGS. ARCHITECTURAL AND STRUCTURAL DRAWINGS ARE NOT PERMITTED FOR USE AS SHOP DRAWINGS. ARCHITECTURAL AND STRUCTURAL DRAWINGS SHALL NOT BE REPRODUCED IN ANY MANNER FOR USE AS SHOP DRAWINGS.

21. EMBEDMENT AND LAP SPLICES OF ALL REINFORCEMENT SHALL CONFORM TO THE FOLLOWING SCHEDULES, UNLESS NOTED OTHERWISE.
    A. EMBEDMENT LENGTHS:
       #3 - 14" #6 - 28" #9 - 54"
       #4 - 14" #7 - 42" #10 - 60"
       #5 - 24" #8 - 48" #11 - 66"
    B. LAP SPLICE LENGTHS:
       #3 - 19" #6 - 37" #9 - 70"
       #4 - 25" #7 - 54" #10 - 79"
       #5 - 31" #8 - 62" #11 - 87"

22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, ENGINEERING, STRUCTURAL ADEQUACY, AND CONSTRUCTION OF ALL SOIL RETAINING STRUCTURES AND CONCRETE SHORING AND FORMWORK IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.

23. COORDINATE ALL CONCRETE WORK WITH THE PLACEMENT OF PIPING, INSERTS, FLOOR DRAINS, AND OTHER EMBEDDED ITEMS INDICATED ON THE CONTRACT DRAWINGS.

ANCHOR BOLTS AND THREADED ROD

1. ALL FOUNDATION ANCHOR BOLTS TO BE F1554 GRADE 36 STEEL UNLESS SPECIFICALLY NOTED OTHERWISE

2. LOCATE ANCHOR BOLTS ACCURATELY, SET WITH TEMPLATES, AND SECURELY HOLD IN POSITION WHILE PLACING CONCRETE. PROTECT IN-PLACE ANCHOR BOLTS FROM CONSTRUCTION ACTIVITY.

3. INSERTING ANCHOR BOLTS INTO FRESH OR PARTIALLY HARDENED CONCRETE IS PROHIBITED. SUBSTITUTING CONCRETE/EXPANSION OR ADHESIVE ANCHORS WHERE EMBEDDED ANCHOR BOLTS ARE SHOWN IS PROHIBITED UNLESS NOTED OTHERWISE.

4. ALL ANCHOR BOLTS SHALL BE DELIVERED TO THE JOB SITE FREE OF EXCESS RUST, MILL SCALE, GREASE, ETC.

PRE-ENGINEERED METAL BUILDING DESIGN:

1. THE BUILDINGS SHALL BE DESIGNED UTILIZING PINNED BASES.

2. THE BUILDINGS SHALL BE DESIGNED UTILIZING PINNED BASES.
   MAX DEFLECTIONS OF PRIMARY AND SECONDARY BUILDING SUPPORT FRAMES SHALL BE IN COMPLIANCE WITH THE SPECIFIED DESIGN CRITERIA

3. LIVE LOADS AND APPLICABLE CODES:SEE DESIGN CRITERIA

4. THE METAL BUILDING MANUFACTURER TO CALCULATE AND DESIGN FOR APPLICABLE WIND PRESSURES FOR THE MAIN WIND FORCE RESISTING SYSTEM AND COMPONENTS AND CLADDING

5. SEISMIC LOADS PER IBC SECTION 1607: TO BE PROVIDED BY THE METAL BUILDING MANUFACTURER.

SPECIAL INSPECTIONS:

1. THE CONTRACTOR SHALL INCLUDE IN THE BID THE COST OF ALL TESTING AND INSPECTIONS INDICATED ON THE PLANS AND IN THE SPECIFICATIONS, INCLUDING SPECIAL INSPECTIONS REQUIRED BY THE BUILDING CODE. THE ACTUAL CONTRACTING OF THE INSPECTION AND TESTING SERVICES SHALL BE IN ACCORDANCE WITH THE DIVISION OF RESPONSIBILITY DICTATED BY THE LOCAL BUILDING CODE.

2. IBC SECTION 1704 REQUIRES THAT IN ADDITION TO THE INSPECTIONS REQUIRED BY SECTION 109, THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS WHO SHALL PROVIDE INSPECTIONS DURING CONSTRUCTION OF CERTAIN TYPES OF WORK.

3. "SPECIAL INSPECTION" CONCERNS WORK REQUIRING OBSERVATION AND JUDGEMENT AND SHALL BE PERFORMED BY A STRUCTURAL ENGINEER (OR A DESIGNATED PERSON UNDER THE SUPERVISION OF THE ENGINEER). "TESTING" INVOLVES THE ANALYSIS OF MATERIALS IN ACCORDANCE WITH APPROVED STANDARDS AND SHALL BE PERFORMED BY AN INDEPENDENT TESTING AGENCY.

4. THE CONTRACTOR SHALL COORDINATE THE TESTING AND INSPECTION SERVICES IN ACCORDANCE WITH THE PROGRESS OF THE WORK. THE CONTRACTOR SHALL PROVIDE SUFFICIENT PRIOR NOTICE TO THE TESTING AND/OR INSPECTION AGENCY OF THE REQUIRED WORK TO ALLOW PROPER SCHEDULING OF PERSONNEL. THE COST OF ANY RETESTING OR ADDITIONAL INSPECTIONS AS A RESULT OF FAILED TESTS AND REJECTED WORK SHALL BE BORNE BY THE CONTRACTOR.

5. THIS PROJECT REQUIRES A STRUCTURAL TESTING AND SPECIAL INSPECTION SCHEDULE, TO BE SIGNED BY THE OWNER, CONTRACTOR, ARCHITECT, STRUCTURAL ENGINEER OF RECORD AND TESTING AGENCY. REFER TO THE PROGRAM SUMMARY SCHEDULE FOR FREQUENCY OF TESTING AND INSPECTIONS.

REQUIRED SPECIAL INSPECTIONS

DESCRIPTION OF WORK IBC SECTION 1704		INSPECTION YES	INSPECTION NO	TESTING YES	TESTING NO	N/A	REMARKS
6A. CONCRETE	(1704.4)	●		●			6A
6B. SOILS	(1704.7)		●	●			6B
6C. STEEL	(1704.3)	●					6C

6. SPECIAL INSPECTION WORK REQUIRED INCLUDE CONVENTIONAL TESTING NOT STRICTLY A PART OF SECTION 1704 BUT ARE REQUIRED FOR ADEQUATE QUALITY ASSURANCE AND CAN BE PROVIDED BY THE CONTRACTOR. ALL OTHER WORK MUST BE PROVIDED BY THE OWNER AS INDICATED BY THE INTERNATIONAL BUILDING CODE

6A. CONCRETE TESTING
   A. PROVIDE MIX DESIGN IN ACCORDANCE WITH ACI REQUIREMENTS.
   B. TEST CONCRETE AT THE TIME OF POURING FOR SLUMP, AIR-ENTRAINMENT, AND TEMPERATURE IN ACCORDANCE WITH THE SPECIFICATIONS.
   C. MAKE AND TEST CONCRETE CYLINDERS FOR REPRESENTATIVE STRENGTH IN ACCORDANCE WITH THE SPECIFICATIONS
   D. PROVIDE PERIODIC VISUAL INSPECTION OF REINFORCING:
      - VISUAL INSPECTION OF 25% OF CONTINUOUS STRIP FOOTINGS PRIOR TO POUR
      - VISUAL INSPECTION OF 50% OF SLAB ON GRADE

6B. SOILS
   A. VERIFY FOOTING EXCAVATION FOR SUITABILITY FOR PLANNED FOOTING.
   B. VERIFY MATERIAL USED FOR COMPACTED BACKFILL.
   C. TEST COMPACTED BACKFILL FOR SPECIFIED COMPACTION.

6C. STEEL
   A. MATERIAL VERIFICATION OF HIGH-STRENGH BOLTS, NUTS AND WASHERS
   B. REVIEW PRE-ENGINEERED BUILDING MANUFACTURER'S CERTIFICATE OF
   C. COMPLIANCE
   D. INSPECTION OF HIGH-STRENGTH BOLTED CONNECTION TYPES
   E. MATERIAL VERIFICATION OF HIGH-STRENGH BOLTS, NUTS AND WASHERS
   F. MATERIAL VERIFICATION OF WELD FILLER MATERIALS
   G. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS:
      - DETAILS SUCH AS BRACING AND STIFFENING
      - MEMBER LOCATIONS
      - APPLICATION OF DETAILS AT EACH CONNECTION

ABBREVIATIONS:

A.F.F. — ABOVE FINISH FLOOR
B.F.F. — BELOW FINISH FLOOR
B.O.S. — BOTTOM OF STEEL
C.B. — CASTELLATED BEAM
C.J. — CONSTRUCTION JOINT
CONT. — CONTINUOUS
E.F. — EACH FACE
E.J. — EXPANSION JOINT
E.W. — EACH WAY
E.O.F. — EDGE OF FOUNDATION
S.J. — SAWN JOINT
T-1 — TRUSS
T.O.C. — TOP OF CONCRETE
∠ — ANGLE
S.J.I. — STEEL JOIST INSTITUTE
REQ'D — REQUIRED
T&B — TOP AND BOTTOM
Ø — DIAMETER
A.B. — ANCHOR BOLT
℄ — CENTERLINE
CMU — CONCRETE MASONRY UNIT
CONC. — CONCRETE
CONT. — CONTINUOUS
FDN — FOUNDATION
GALV. — GALVANIZED
T.O.F. — TOP OF FOOTING
T.O.J. — TOP OF JOIST
T.O.M. — TOP OF MASONRY
T.O.S. — TOP OF STEEL
U.N.O. — UNLESS NOTED OTHERWISE
DBA — DEFORMED BAR ANCHOR
E.W. — EACH WAY
U.N.O. — UNLESS NOTED OTHERWISE
WWF — WELDED WIRE FABRIC

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Project Title:
CF INDUSTRIES
BLUE SAPPHIRE
GUARD SHACK.

Project Location:
39018 LA-3089
DONALDSONVILLE, LA 70346

Sheet Revisions:

No.	Date	Description

Sheet Name:
STRUCTURAL NOTES

Seal



09/01/2026

Project Number:
22-18B

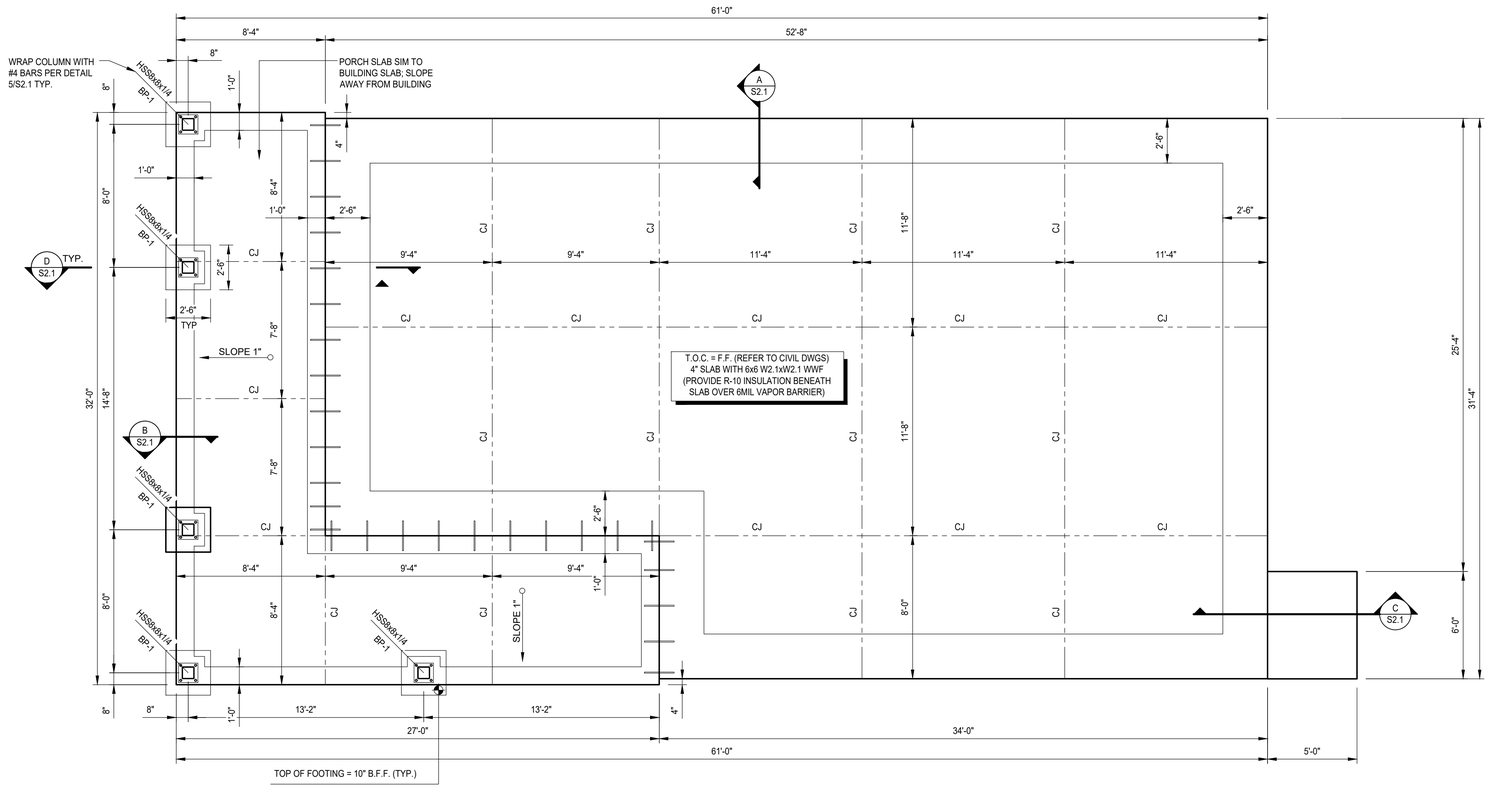
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CONSTRUCTION DOCUMENTS

Sheet Number:
S0.1

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FOUNDATION & SLAB PLAN

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

LEGEND	
CJ —— – – ——	1-1/2" EARLY ENTRY SAW CUT CONTROL JT; REFER TO DTLS ON S2.2

TYPICAL SLAB NOTES

1. SAW CUT LOCATIONS ARE GENERALLY INDICATED ON PLAN; FINAL LOCATIONS SHALL BE VERIFIED DURING REINFORCEMENT SHOP DRAWING PROCESS
2. COMPLY WITH EARLY SAW CUT CONTROL JOINT DETAILS; EARLY ENTRY SAW CUTTING SHALL BE PERFORMED IN GREEN CONCRETE AS SOON AS SUFFICIENT CURING HAS TAKEN PLACE TO SUPPORT THE WEIGHT OF THE OPERATOR AND SAW. CUTS SHOULD BE PERFORMED USING A BLADE SPECIFICALLY DESIGNED FOR DRY EARLY ENTRY CUTTING.
3. CONTRACTOR MAY REPLACE SAW CUT CONTROL JOINTS WITH DIAMOND DOWEL CONSTRUCTION JOINTS WHERE NECESSARY

4" FLOOR SLAB	
MAXIMUM STORAGE LOAD	350 PSF[1]
CONSTRUCTION WHEEL LOAD	3 KIPS[2]

1. MAXIMUM DISTRIBUTED LOAD

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Sheet Revisions:

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Sheet Name:
FOUNDATION
AND SLAB PLAN

Seal

STATE OF LOUISIANA
TIMOTHY G. MORRIS
REG. NO. 39378
PROFESSIONAL ENGINEER IN ENGINEERING
09/01/2026

Project Number:
22-18B

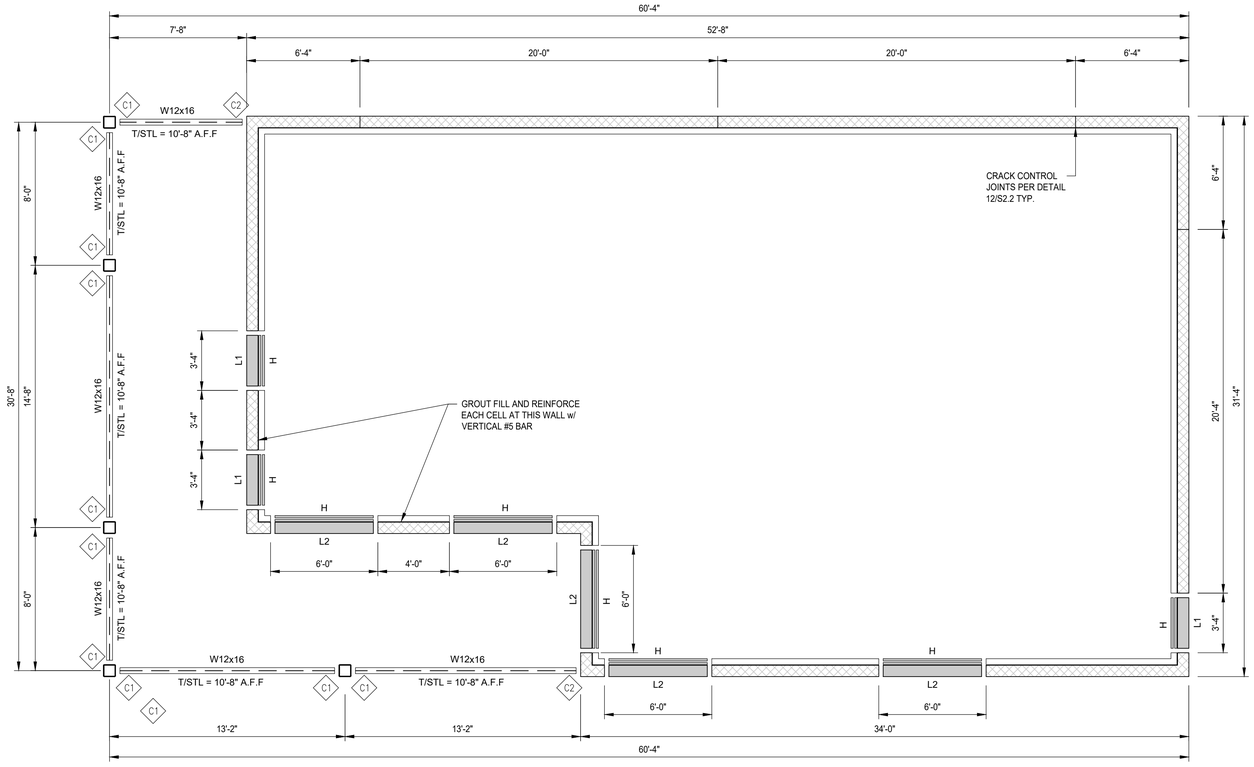
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WALL AND HEADER PLAN

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

LEGEND	
	8" MASONRY BLOCK WALL; GROUT ALL REINFORCED CELLS, REINFORCE WITH #5 BAR AT 48" O.C. TYP UNLESS NOTED OTHERWISE; TOP COURSE IS CONT. BOND BEAM w/ (2) #5 BARS; SEE S2.2 FOR TYP. CMU DETAILS
L1/L2	L1: 8" MASONRY LINTEL PER DETAIL 1 & 2 / S2.2 L2: 16" MASONRY LINTEL PER DETAIL 1 & 2 / S2.2
H	COLD FORMED STEEL BUILT UP HEADER; (2) 600S200-68 VERTICAL & 400T200-68 T.B.; SEE DETAIL 8 / S2.2
	COLD FORMED STEEL STUD WALL; 400S162-54

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CF INDUSTRIES
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Sheet Revisions:

No.	Date	Description

Sheet Name:
WALL AND HEADER PLAN

Seal

STATE OF LOUISIANA
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REG. NO. 28978
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
09/01/2026

Project Number:
22-18B

Date:
JUNE 5, 2026

Document Phase:
CONSTRUCTION DOCUMENTS

Sheet Number:
S1.2

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PRE-ENGINEERED WOOD TRUSSES:

1. FABRICATOR IS RESPONSIBLE FOR THE DESIGN AND DETAILING OF ALL PRE-ENGINEERED WOOD TRUSS FRAMING AS SHOWN ON DRAWINGS. ALL TRUSS COMPONENTS AND CONNECTIONS SHALL BE DESIGNED BY QUALIFIED ENGINEER REGISTERED IN THE STATE OF TN. TRUSS MANUFACTURER DESIGN FOR THE FOLLOWING SUPERIMPOSED LOADS:

2. TRUSS DESIGN LOADS:
   - TOP CHORD LIVE LOAD 20 PSF
   - TOP CHORD DEAD LOAD 10 PSF
   - BOTTOM CHORD DEAD LOAD 7 PSF

3. WIND LOADS SHALL BE DESIGNED PER THE 2018 INTERNATIONAL BUILDING CODE AND REFERENCED DESIGN GUIDES.

4. IN ADDITION TO THE SUPERIMPOSED ABOVE, TRUSSES SHALL BE DESIGNED FOR ANY CONCENTRATED LOADS HUNG AND/OR SUPPORTED BY TRUSSES.

5. PRIOR TO TRUSS FABRICATION, THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT AND ENGINEER SIGNED AND SEALED CALCULATIONS AND SHOP DRAWINGS FOR DETAILING, FABRICATION, AND ERECTION OF WOOD TRUSSES. DRAWINGS SHALL CLEARLY INDICATE SPACING, TYPE, MATERIAL AND MEMBER PROPERTIES, BRACING AND DETAILING OF ALL CONNECTIONS FOR WOOD TRUSS FRAMING.

6. METAL TRUSS SHOP DRAWING SHALL BE REVIEWED AND APPROVED BY STRUCTURAL ENGINEER PRIOR TO START OF FABRICATION.

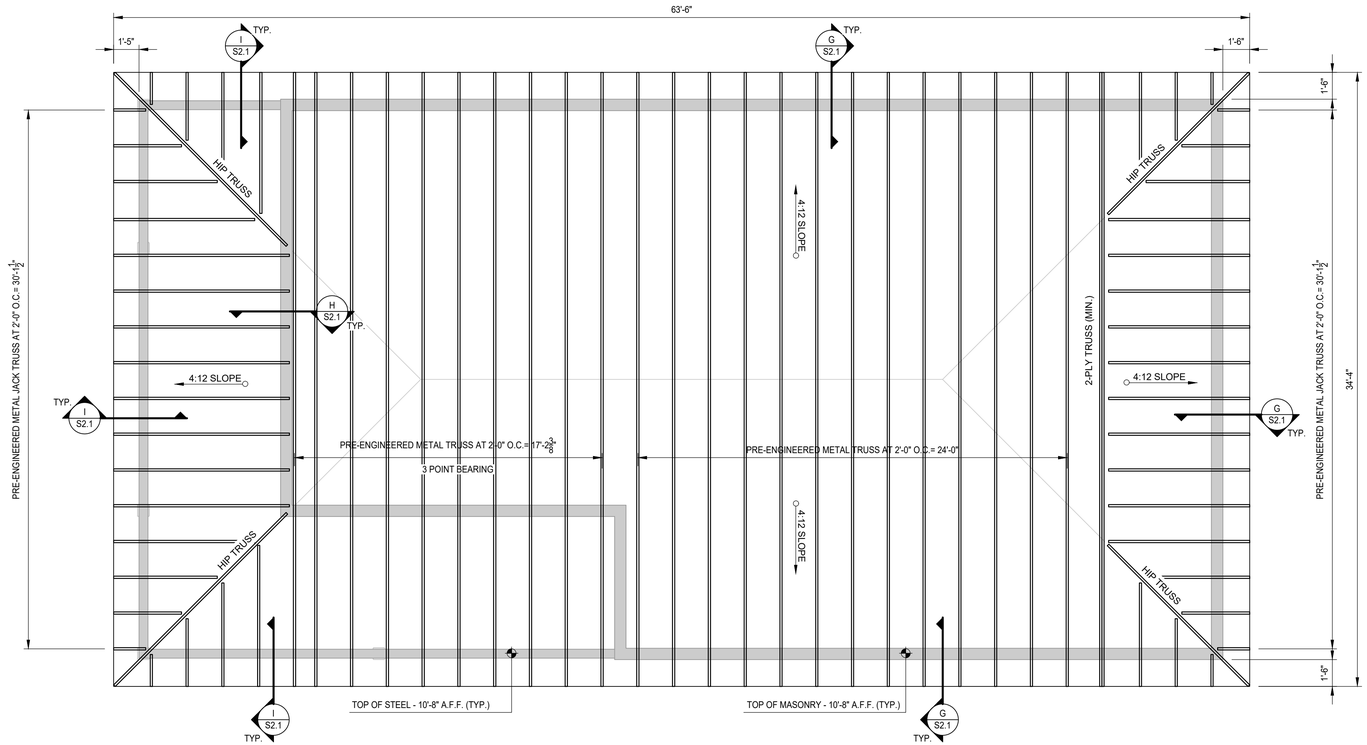
7. STRUCTURAL ENGINEER'S AND ARCHITECT'S CONTRACT DRAWINGS SHALL NOT BE REPRODUCED AND USED FOR SHOP DRAWINGS.

8. TRUSS MANUFACTURE TO SPECIFY TRUSS-TO-TRUSS CONNECTIONS.

TRUSS DESIGN LOADS	
20 PSF *	LIVE LOAD
10 PSF (APPLY TO TOP CHORD)	DEAD LOAD
7 PSF (APPLY TO BOTTOM CHORD)	DEAD LOAD

2018 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC) AND ASCE 7-16

WIND: WIND SPEED = 120MPH
RISK CATEGORY II
EXPOSURE = C



ROOF FRAMING PLAN

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

LEGEND	
	STRUCTURAL SUPPORT BELOW (CMU WALL OR STEEL BEAM)

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GUARD SHACK.

Project Location:
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DONALDSONVILLE, LA 70346

Sheet Revisions:

No.	Date	Description

Sheet Name:
ROOF FRAMING PLAN

Seal

STATE OF LOUISIANA
TIMOTHY G. MORRIS
REG. No. 38978
REGISTERED PROFESSIONAL ENGINEER IN ENGINEERING
09/01/2026

Project Number:
22-18B

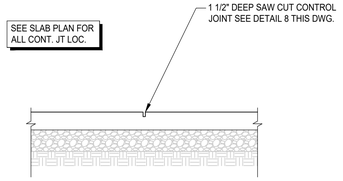
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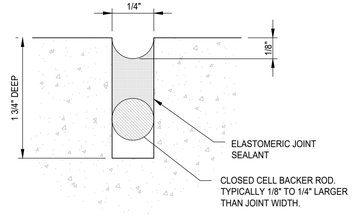
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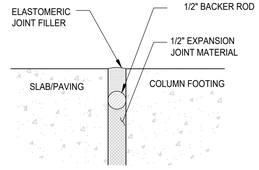
DETAIL 1
TYP. CONTROL JOINT
SCALE: 3/4" = 1'-0"



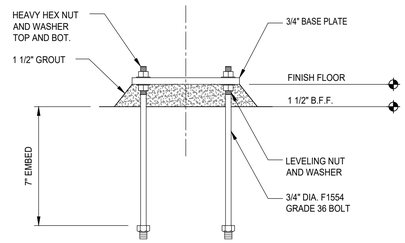
DETAIL 2
TYP. JOINT SEALANT AT SAW CUT
SCALE: NTS

JOINT SEALANT NOTES:

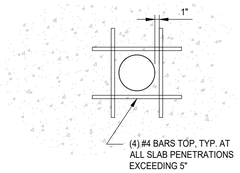
1. WAIT AS LONG AS FEASIBLE TO SEAL JOINTS TO ALLOW CONCRETE SHRINKAGE TO OCCUR. IF REQUIRED, RE-SAW JOINT IMMEDIATELY PRIOR TO INSTALLING SEALANT TO ACHIEVE A 1/4" JOINT WIDTH.
2. ENSURE JOINTS ARE CLEAN AND DRY PRIOR TO THE APPLICATION OF THE JOINT SEALANT.
3. INSTALL CLOSED CELL BACKER ROD AFTER JOINTS HAVE BEEN CLEANED AND DRIED IN ACCORDANCE WITH SEALANT MANUFACTURER'S REQUIREMENTS.
4. INSTALL BACKER ROD AT CONSISTENT AND UNIFORM DEPTH.
5. JOINT SEALANT APPLICATION SHALL BE IN STRICT COMPLIANCE WITH SEALANT MANUFACTURER'S REQUIREMENTS.



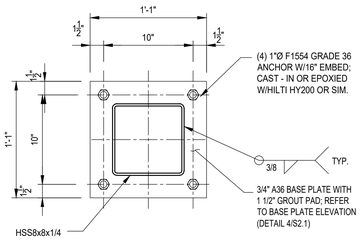
DETAIL 3
TYP. EXPANSION JOINT
SCALE: 3" = 1'-0"



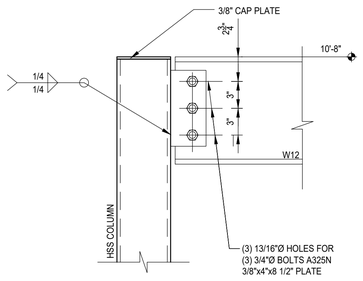
DETAIL 4
BASE PLATE W/GROUT PAD
SCALE: 1 1/2" = 1'-0"



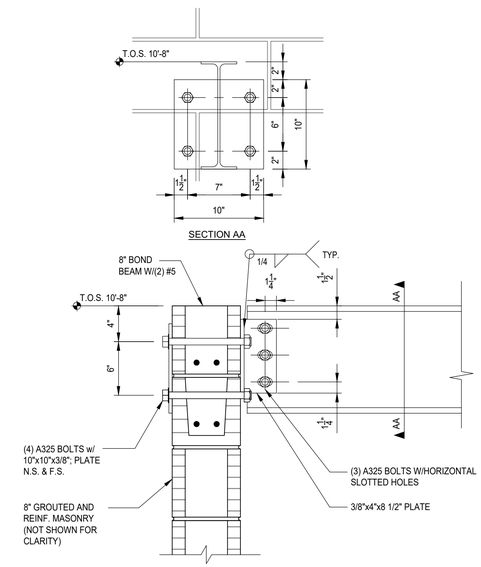
DETAIL 5
REBAR AROUND SLAB PENETRATION
SCALE: 3/4" = 1'-0"



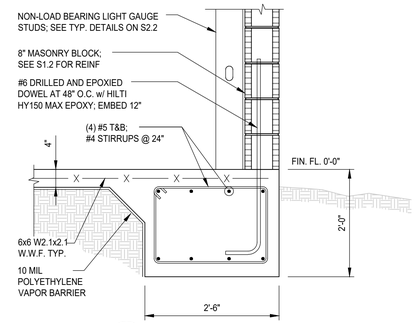
DETAIL BP-1
HSS8x8 BASE PLATE
SCALE: 1 1/2" = 1'-0"



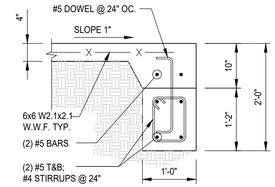
DETAIL C-1
STEEL CONNECTION
SCALE: 1 1/2"=1'-0"



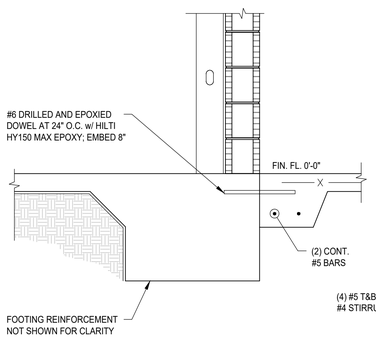
DETAIL C-2
STEEL CONNECTION
SCALE: 1 1/2"=1'-0"



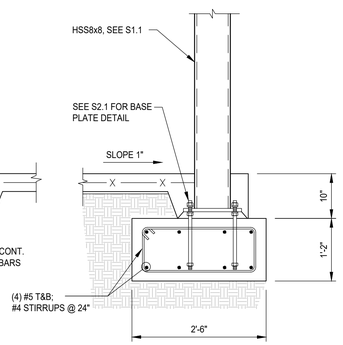
A S2.2 SECTION
SCALE: 3/4" = 1'-0"

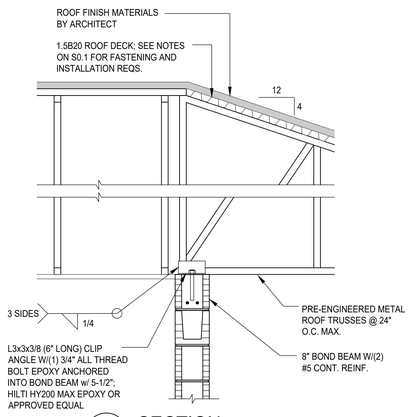


B S2.2 SECTION
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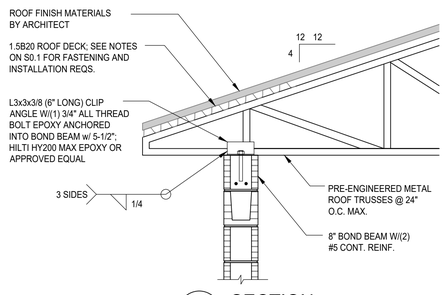


D S2.2 SECTION
SCALE: 3/4" = 1'-0"

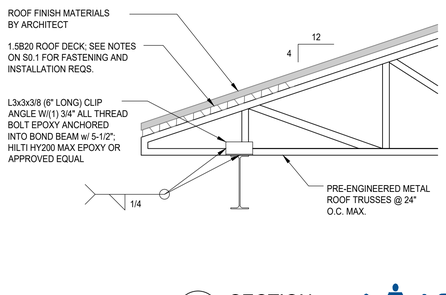




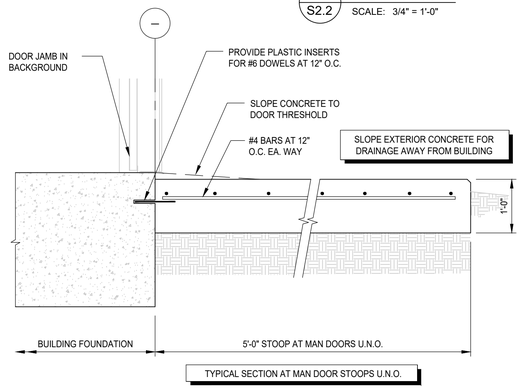
D S2.2 SECTION
SCALE: 3/4" = 1'-0"



E S2.2 SECTION
SCALE: 3/4" = 1'-0"



F S2.2 SECTION
SCALE: 3/4" = 1'-0"



C S2.2 SECTION
SCALE: 3/4" = 1'-0"

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Project Location:
39018 LA-3089
DONALDSONVILLE, LA 70346

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FOUNDATION AND FRAMING DETAILS/SECTIONS

Seal

STATE OF LOUISIANA
TIMOTHY G. MORRIS
REG. No. 39078
09/01/2026
PROFESSIONAL CIVIL ENGINEER
09/01/2026

Project Number:
22-188

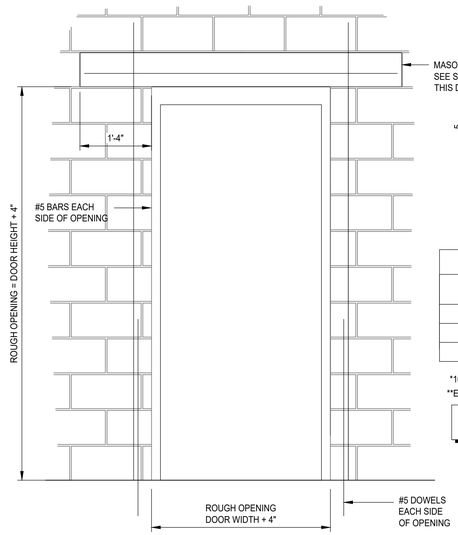
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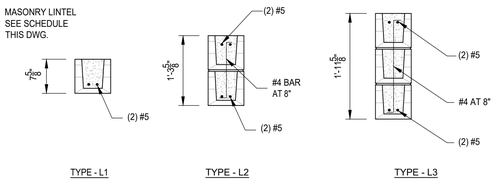
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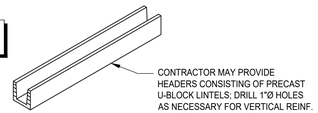
DETAIL 1
TYP. ROUGH DOOR OPENING
SCALE: 3/4"=1'-0"



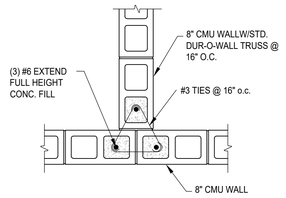
TYPICAL BRICK AND CMU LINTEL SCHEDULE*				
SPAN	CMU HEADER DEPTH	CMU HEADER TYPE	CMU LENGTH PAST ROUGH OPENING	STEEL ANGLE FOR BRICK SUPPORT**
L < 3-6"	8" CMU	L-1	1 COURSE U.N.O.	L3½"x3½"x5/16"
3'-6" < L < 5'-0"	16" CMU	L-2	2 COURSE U.N.O.	L3½"x3½"x5/16"
"L > 5'-0"	24" CMU	L-3	2 COURSE U.N.O.	L5"x3½"x5/16"

*10'-0" MAX SPAN; PROVIDE W16x31 STEEL BEAM HEADER WHERE MAX SPAN EXCEED 10'-0"
**EXPOSED STEEL ANGLES TO BE HOT DIP GALV.

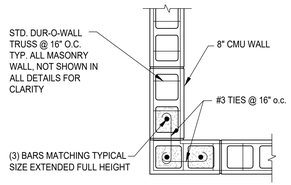
CONTRACTOR MUST RECEIVE APPROVAL BEFORE ALTERING ANY HEADER DETAIL



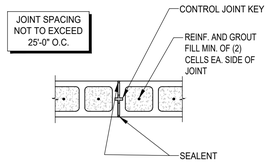
DETAIL 2
TYP. LINTEL DETAILS / SCHEDULE
SCALE: 3/4"=1'-0"



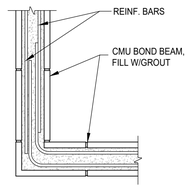
DETAIL 3
CMU WALL TEE
SCALE: 3/4"=1'-0"



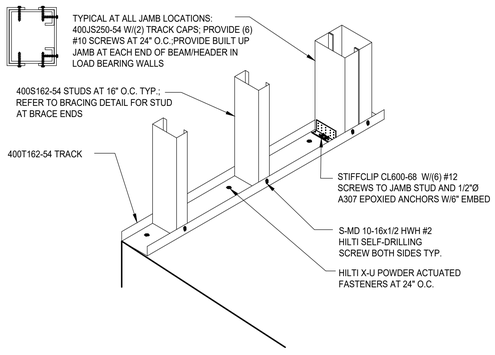
DETAIL 4
CMU WALL CORNER
SCALE: 3/4"=1'-0"



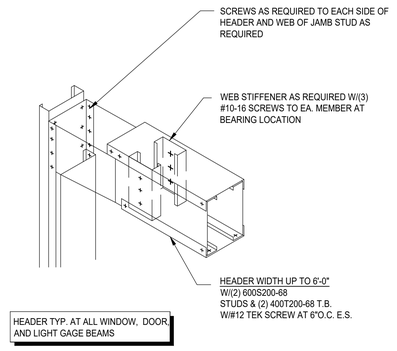
DETAIL 5
MASONRY CONT. JT.
SCALE: 3/4"=1'-0"



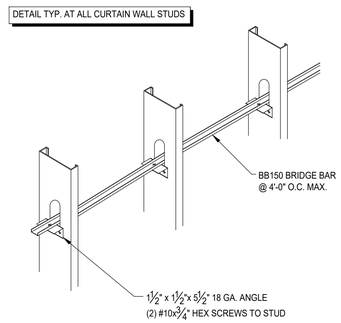
DETAIL 6
BOND BEAM AT CORNER
SCALE: 3/4"=1'-0"



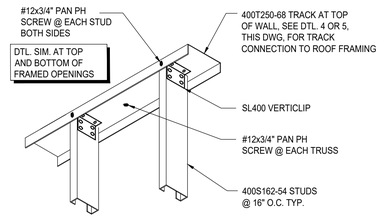
DETAIL 7
METAL STUD CURTAIN WALL
SCALE: 3/4"=1'-0"



DETAIL 8
LIGHT GAGE HEADER
SCALE: 3/4"=1'-0"



DETAIL 9
TYPICAL STUD BRIDGING
SCALE: 3/4"=1'-0"



DETAIL 10
TOP OF STUD WALL TYP.
SCALE: 3/4"=1'-0"

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Seal

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