

MECHANICAL AND ELECTRICAL SYMBOLS AND ABBREVIATIONS

A	ABOVE FINISH FLOOR ABOVE FINISH GRADE ACRYLONITRILE BUTADIENE STYRENE PIPE AIR CONDITIONING AIR HANDLING UNIT ALTERNATING CURRENT ALUMINUM AMERICAN NATIONAL STANDARDS INSTITUTE AMERICAN SOCIETY OF MECHANICAL ENGINEERS AMERICAN WIRE GAUGE AMERICANS WITH DISABILITIES ACT AMPERE ANALOG INPUT ANALOG OUTPUT ARCHITECT or ARCHITECTURAL AUTHORITY HAVING JURISDICTION AUTOMATIC TRANSFORMER SWITCH	K	KELVIN KILOWATT	L	LAUNDRY TUB LAVATORY LEAVING AIR TEMPERATURE LEAVING WATER TEMPERATURE LIGHTING LIQUIDTIGHT FLEXIBLE METAL CONDUIT	M	KCMIL (THOUSAND CIRCULAR MILLS) MAIN CIRCUIT BREAKER MAIN LUG ONLY MANHOLE MANUFACTURER MAXIMUM MAXIMUM OVERCURRENT PROTECTION MECHANICAL CONTRACTOR MINIMUM MINIMUM CIRCUIT AMPACITY NEMA RATED MOTOR STARTER MOUNTED MULTIMODE
B	BELOW CEILING BELOW GRADE BINARY INPUT BINARY OUTPUT BOOT WASH BRITISH THERMAL UNIT BTUs PER HOUR BUILDING	BC BG BI BO BW BTU BTUH BLDG	C	CABLE TELEVISION CAPACITY CATEGORY CEILING MOUNT CELSIUS CHILLED WATER CHILLED WATER RETURN CHILLED WATER SUPPLY CIRCUIT BREAKER CLEANOUT CLOTHES WASHER CONNECTION BOX COLD WATER (DOMESTIC) COMMON CONCRETE CONDENSING UNIT CONDUIT CONDUIT ONLY (WITH PULL STRING) COPPER COUNTER TOP CROSS-LINKED POLYETHYLENE PIPE CUBIC FEET PER MINUTE CUBIC YARD	CATV CAP CAT CLG C CHW CHWR CHWS CB CO CCB CW C CONC CU C CO CU CT PEX CFM CU YD	N	NATIONAL ELECTRICAL CODE (NFPA 70) NATIONAL ELECTRICAL MANUFACTURER'S ASSOC. NATIONAL FIRE PROTECTION ASSOCIATION NATIONALLY RECOGNIZED TESTING LABORATORY NATURAL GAS NEUTRAL (GROUNDED) CONDUCTOR NOMINAL NON FUSED NORMALLY CLOSED NORMALLY OPEN NORTH NOT APPLICABLE NOT TO SCALE
D	DEPTH or DEEP DIRECT CURRENT DIRECT DIGITAL CONTROL DIRECT EXPANSION DISCONNECT SWITCH DISH WASHER DRINKING FOUNTAIN DRY BULB	D DC DDC DX DS DW DF DB	E	ELECTRIC or ELECTRICAL ELECTRIC WATER COOLER ELECTRIC HEATER ELECTRICAL CONTRACTOR ELECTRICAL METALLIC TUBING ENTERING AIR TEMPERATURE ENTERING WATER TEMPERATURE EQUIPMENT EXHAUST EXHAUST AIR EXHAUST FAN EXHAUST GRILLE EXISTING EXISTING TO REMAIN EXTERNAL STATIC PRESSURE	E or ELEC EWC EH EC EMT EAT EWT EQUIP EXH EA EF EG EXIST ETR ESP	O	ON CENTER OUTDOOR AIR OUTSIDE DIAMETER OUTSIDE PLANT CABLE OVERHEAD
F	FAHRENHEIT FAN COIL UNIT FEET FEET PER MINUTE FIBER OPTIC CABEL FINISH FLOOR CLEAN OUT FINISH GRADE FINISH GRADE CLEAN OUT FIRE ALARM FLEXIBLE METALLIC CONDUIT FLOOR DRAIN FLOOR SINK	F FCU FT FPM FOC FFCO FG FGCO FA FMC FD FS	R	RECEPTACLE REQUIRED RETURN AIR RETURN GRILLE ROOF TOP UNIT REVOLUTIONS PER MINUTE	RCPT REQ'D RA RG RTU RPM	P	PASSIVE INFRARED PHASE POLYVINYL CHLORIDE POLYVINYL CHLORIDE CONDUIT POUNDS POUNDS PER SQUARE INCH PRESSURE REDUCING VALVE PULL BOX
G	GALLON GALLONS PER FLUSH GALLONS PER HOUR GALLONS PER MINUTE GALVANIZED RIGID STEEL CONDUIT GAS GAUGE GENERAL CONTRACTOR GLOBAL POSITIONING SYSTEM GOVERNMENT FURNISHED/CONTRACTOR INSTALLED GOVERNMENT FURNISHED/GOVERNMENT INSTALLED GROUNDING ELECTRODE CONDUCTOR GROUNDING (BONDING) CONDUCTOR GROUND FAULT CIRCUIT INTERRUPTER GROUND FAULT PROTECTION FOR EQUIPMENT	GAL GPF GPH GPM GRC G GA GC GPS GFCI GFCI GEC G GFI GFPE	S	SENSIBLE SERVICE ENTRANCE SWITCHBOARD SERVICE SINK SHOWER SINGLE MODE SINGLE POLE, DOUBLE THROW SPECIFICATIONS SQUARE FEET STRAND SUPPLY AIR SUPPLY DIFFUSER SURGE PROTECTION DEVICE	SENS SES SS SH SM SPDT SPEC SQ FT or SF ST SA SD SPD	U	UNDERGROUND UNDERWRITERS LABORATORIES UNINTERRUPTIBLE POWER SUPPLY UNLESS NOTED OTHERWISE UNSHIELDED TWISTED PAIR
H	HANDHOLE HEATING HEATING WATER RETURN HEATING WATER SUPPLY HIGH DENSITY POLYETHYLENE CONDUIT HORSEPOWER HOT GAS RE-HEAT HOT WATER (DOMESTIC) HOT WATER HEATER HOT WATER PUMP HOT WATER RECIRC. (DOMESTIC) HOUR	HH HTG HR HS HDPE HP HGRH HW HWH HWP HWR HR	T	TAMPERPROOF ENCLOSURE TELECOMMUNICATIONS ROOM TELEPHONE TELEVISION TEMPERATURE (CHANGE IN) TEMPERATURE/PRESSURE TEMPERATURE CONTROL CONTRACTOR THOUSAND BTUs PER HOUR TOTAL TRANSIENT VOLTAGE SURGE SUPPRESSION TYPICAL	TP TR T TV TEMP (T) T/P TC TOT MBH TVSS TYP	V	VENT BELOW SLAB VENT THROUGH ROOF VENTILATION FAN VOLT-AMPERES VOLTS VOLTS ALTERNATING CURRENT
			X	WALL HYDRANT WASH TUB WATER CLOSET WATER COLUMN (in inches) WATER SERVICE WATT(S) WEATHERPROOF ENCLOSURE WET BULB WIRE WAY WITH	WH WT WC WC W W W WP WB WW W/	X	TRANSFORMER

PLUMBING SYMBOLS

	PIPE TURNING UP
	PIPE TURNING DOWN
	CONDENSATE DRAIN LINE
	SANITARY DRAIN BELOW GRADE
	SANITARY DRAIN ABOVE GRADE
	SANITARY VENT
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRC
	WATER SERVICE PIPING
	FIRE PROTECTION PIPING
	NATURAL GAS
	UNION
	BALL VALVE
	CHECK VALVE
	GATE VALVE
	BUTTERFLY VALVE
	STRAINER
	THERMOMETER
	PRESSURE REDUCING VALVE

MECHANICAL SYMBOLS

	THERMOSTAT
	CONTROL CABLE. VERIFY TYPE WITH EQUIPMENT MANUFACTURER
	SQUARE SUPPLY DIFFUSER - TYPE AND AIRFLOW INDICATED
	SQUARE RETURN GRILLE - TYPE INDICATED
	WALL DIFFUSER
	GRILLE/DIFFUSER TAG TOP: DEVICE TAG (SEE SCHEDULE) MIDDLE: NECK SIZE BOTTOM: AIRFLOW
	MANUAL BALANCING DAMPER
	RECTANGULAR RETURN OR RELIEF AIR DUCT UP
	RECTANGULAR RETURN OR RELIEF AIR DUCT UP
	RECTANGULAR SUPPLY AIR DUCT UP
	RECTANGULAR SUPPLY AIR DUCT DOWN
	RECTANGULAR RETURN OR EXHAUST AIR DUCT DOWN
	ROUND DUCT UP
	ROUND DUCT DOWN
	FLEXIBLE DUCTWORK - MAX 5'
	RIGID DUCT RUNOUT
	90° ELBOW WITH TURNING VANES
	FIRE DAMPER

GENERAL SYMBOLS

	DETAIL REFERENCE
	DETAIL NUMBER
	SHEET NUMBER
	ELEVATION REFERENCE
	DETAIL NUMBER
	SHEET NUMBER
	SECTION CUT
	DETAIL NUMBER
	SHEET NUMBER
	KEYED PLAN NOTE
	REVISION NOTE
	ELEVATION
	CONNECT TO EXISTING. FIELD VERIFY LOCATION & MATERIAL OF EXISTING

POWER SYMBOLS

	SINGLE RECEPTACLE
	DUPLEX RECEPTACLE
	DOUBLE DUPLEX RECEPTACLE
	SPECIAL RECEPTACLE (# = NEMA CONFIGURATION)
	FLUSH FLOOR DUPLEX RECEPTACLE
	SINGLE POLE WALL SWITCH
	TWO POLE WALL SWITCH
	THREE WAY WALL SWITCH
	KEYED WALL SWITCH
	SINGLE POLE, DOUBLE THROW (SPDT) SWITCH (CENTER OFF)
	MOTOR HP RATED SWITCH WITHOUT OVERLOAD PROTECTION
	MECHANICAL DIAL TIMER WALL SWITCH
	LINE VOLTAGE OCCUPANCY SENSING WALL SWITCH
	DUAL RELAY LINE VOLTAGE OCCUPANCY SENSING WALL SWITCH
	LOW VOLTAGE OCCUPANCY SENSOR
	POWER PACK FOR LOW VOLTAGE OCCUPANCY SENSORS
	LIGHTING CONTACTOR
	EXTERIOR PHOTOCELL
	CONTACTOR
	PUSH BUTTON OPERATOR
	CLASS 2 TRANSFORMER POWER SUPPLY
	DOOR ANNUNCIATOR A/V HORN STROBE
	JUNCTION BOX
	MOTOR
	MOTORIZED DAMPER
	DISCONNECT SWITCH
	BRANCH CIRCUIT PANELBOARD
	SWITCHBOARD

CIRCUIT AND RACEWAY SYMBOLS

	CIRCUIT DESIGNATION: TOP INDICATES PANEL OF CIRCUIT ORIGIN BOTTOM INDICATES CIRCUIT NUMBER
	HOMERUN - WIRING TO PANEL OF CIRCUIT ORIGIN
	PARTIAL HOMERUN - WIRING TO PANEL OF CIRCUIT ORIGIN
	CONDUIT CONCEALED IN WALL OR ABOVE CEILING
	CONDUIT BELOW GRADE OR EMBEDDED IN CONCRETE
	LINE VOLTAGE CIRCUIT CONDUCTORS SHORT = HOT/TRACER/SWITCH LEG CONDUCTOR LONG = NEUTRAL (GROUNDED) CONDUCTOR CURVED = GROUNDING (BONDING) CONDUCTOR
	CONDUIT STUB OUT WITH NYLON END BUSHING
	CONDUIT TURNED UP
	CONDUIT TURNED DOWN
	GROUNDING CONNECTION

LIGHTING SYMBOLS

	STATIC LED TROFFER
	PENDANT OR SURFACE MOUNTED LINEAR LUMINAIRE
	LED STRIP LIGHT
	SURFACE MOUNTED ROUND LIGHT
	RECESSED DOWNLIGHT
	WALL MOUNTED LUMINAIRE
	DECORATIVE PENDANT
	SINGLE FACE EXIT SIGN - WALL AND CEILING MOUNTED WITH DIRECTIONAL ARROWS AS INDICATED ON PLANS
	DOUBLE FACE EXIT SIGN - WALL AND CEILING MOUNTED WITH DIRECTIONAL ARROWS AS INDICATED ON PLANS
	REMOTE EMERGENCY LIGHTING UNIT

SITE ELECTRICAL SYMBOLS

	UNDERGROUND ELECTRICAL SERVICE LATERAL
	UNDERGROUND ELECTRICAL PRIMARY
	UNDERGROUND TELEPHONE SERVICE
	UNDERGROUND CATV SERVICE
	POLE MOUNTED AREA LIGHT
	GRADE MOUNTED LIGHT
	RECESSED DOWNLIGHT/FLAG UPLIGHT
	POWER COMPANY PAD MOUNTED UTILITY TRANSFORMER
	POWER COMPANY UTILITY POLE

TELECOMMUNICATIONS SYMBOLS

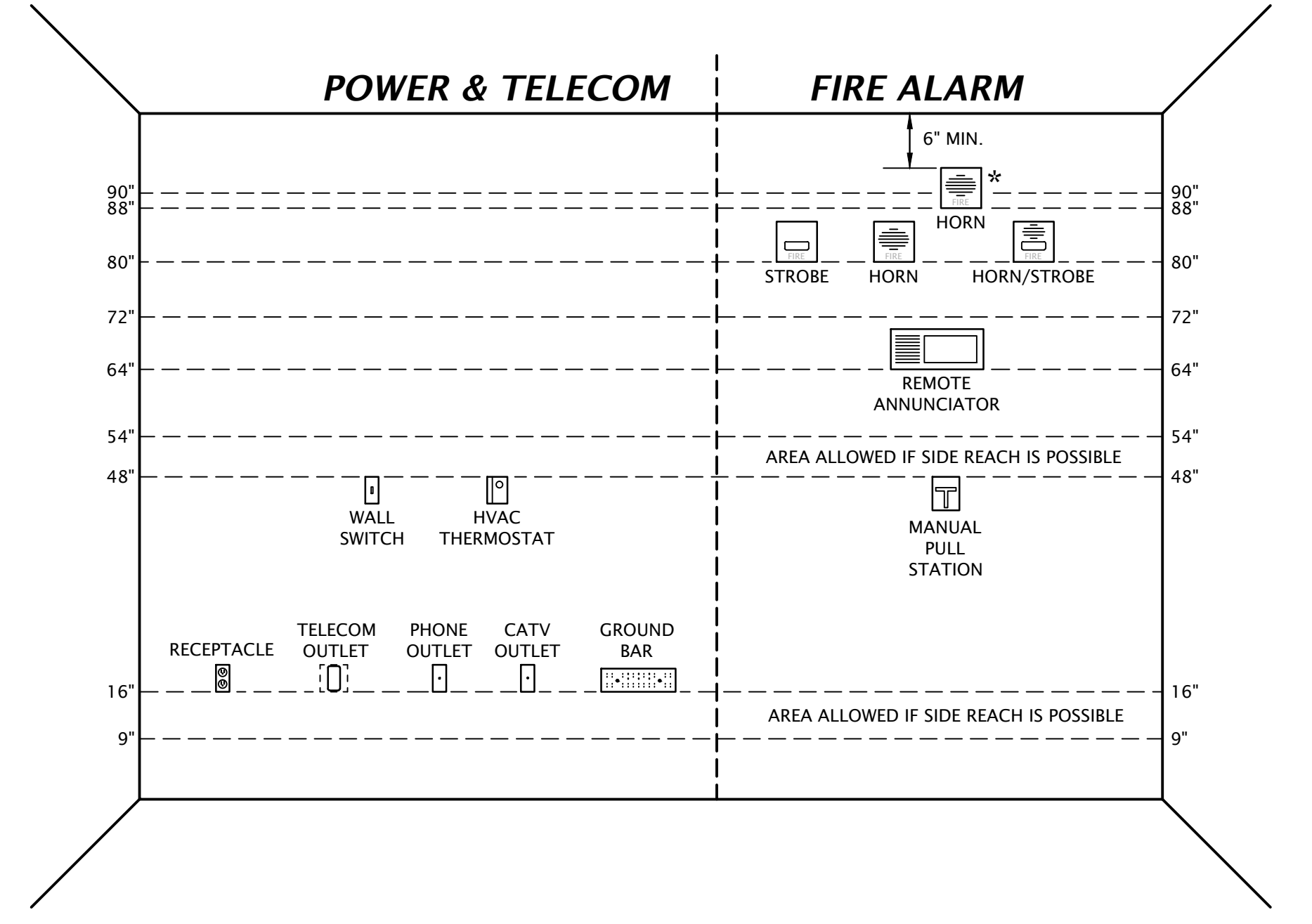
	APARTMENT PHONE OUTLET
	TELECOMMUNICATIONS OUTLET
	APARTMENT CATV OUTLET
	TELEPHONE TERMINAL BOARD

FIRE ALARM SYMBOLS

	FIRE ALARM CONTROL PANEL
	FIRE ALARM REMOTE ANNUNCIATOR PANEL
	MANUAL PULL STATION
	HEAT DETECTOR
	SMOKE DETECTOR
	ADDRESSABLE MONITORING MODULE
	NOTIFICATION HORN APPLIANCE
	NOTIFICATION STROBE APPLIANCE
	FIRE ALARM RELAY
	ELECTROMAGNETIC DOOR HOLDER
	SMOKE DAMPER OR COMBINATION FIRE/SMOKE DAMPER
	FIRE SPRINKLER FLOW SWITCH
	FIRE SPRINKLER TAMPER SWITCH
	FIRE SPRINKLER BELL/GONG OR HORN/STROBE
	120V COMBINATION CO/SMOKE ALARM
	120V, 177cd XENON STROBE

SYMBOL MODIFYING DESIGNATORS

CLG	CEILING MOUNTED • FLUSH MOUNTED IN SUSPENDED OR HARD CEILINGS • SURFACE MOUNTED TO STRUCTURE ABOVE IN OPEN CEILINGS
CT	MOUNT BOTTOM OF DEVICE AT 6" ABOVE COUNTERTOP
EM	PROVIDE LUMINAIRE WITH EMERGENCY BATTERY BACKUP
GFI	GROUND FAULT CIRCUIT INTERRUPTING DEVICE
NL	NIGHTLIGHT WIRING TO UNSWITCHED HOT CONDUCTOR
WP	PROVIDE WEATHERPROOF ENCLOSURE FOR DEVICE
XX"	MOUNTING HEIGHT OF DEVICE ABOVE FINISHED FLOOR



FIRE ALARM DEVICE MOUNTING

- VISUAL UNIT**
DEVICE BOTTOM 80" ABOVE HIGHEST FLOOR LEVEL OR TOP 6" BELOW CEILING, WHICHEVER IS LOWER (PER ADA)
 - AUDIO UNIT**
DEVICE BOTTOM 80" ABOVE HIGHEST FLOOR LEVEL OR TOP 6" BELOW CEILING, WHICHEVER IS LOWER (PER ADA)
 - AUDIO/VISUAL UNIT**
DEVICE BOTTOM 80" ABOVE HIGHEST FLOOR LEVEL OR TOP 6" BELOW CEILING, WHICHEVER IS LOWER (PER ADA)
 - PULL STATION**
HIGHEST OPERABLE PART SHALL NOT BE MORE THAN 48" ABOVE THE FLOOR (FRONT APPROACH) (PER ADA)
- * TOP OF UNIT NOT LESS THAN 90" ABOVE FLOOR AND NOT LESS THAN 6" BELOW CEILING (NFPA) (BOTTOM AT 88" WITH CMU COURSES). MOUNT AT NFPA HEIGHT ONLY IF REQUIRED BY LOCAL AHJ.

ELECTRICAL DEVICE MOUNTING HEIGHTS

1 No Scale

LST Consulting Engineers, PA
 MANHATTAN 4009 W 130th St, Suite 201, Overland Park, KS 66209
 WICHITA 400 South Emporia, Suite 100, Wichita, Kansas 67202
 Project 20027 December 2021

Architects Planners Designers
 1722 Main Street
 P.O. BOX 2928
 Kansas City, MO 64108
 785.827.0386
 jgr@jprarchitects.com

JONES GILLAM RENZ

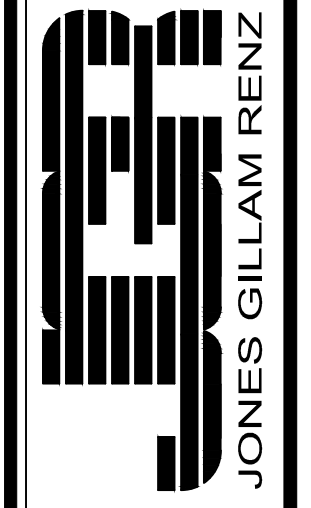
THE HERITAGE at ABILENE
 NEW BUILDING, RESTORATION, & REHAB APARTMENTS
 ABILENE, TEXAS

BUILDING A

REVISION:	
DATE:	12-3-2021
JOB:	20-3065
SHEET:	

ME0.1

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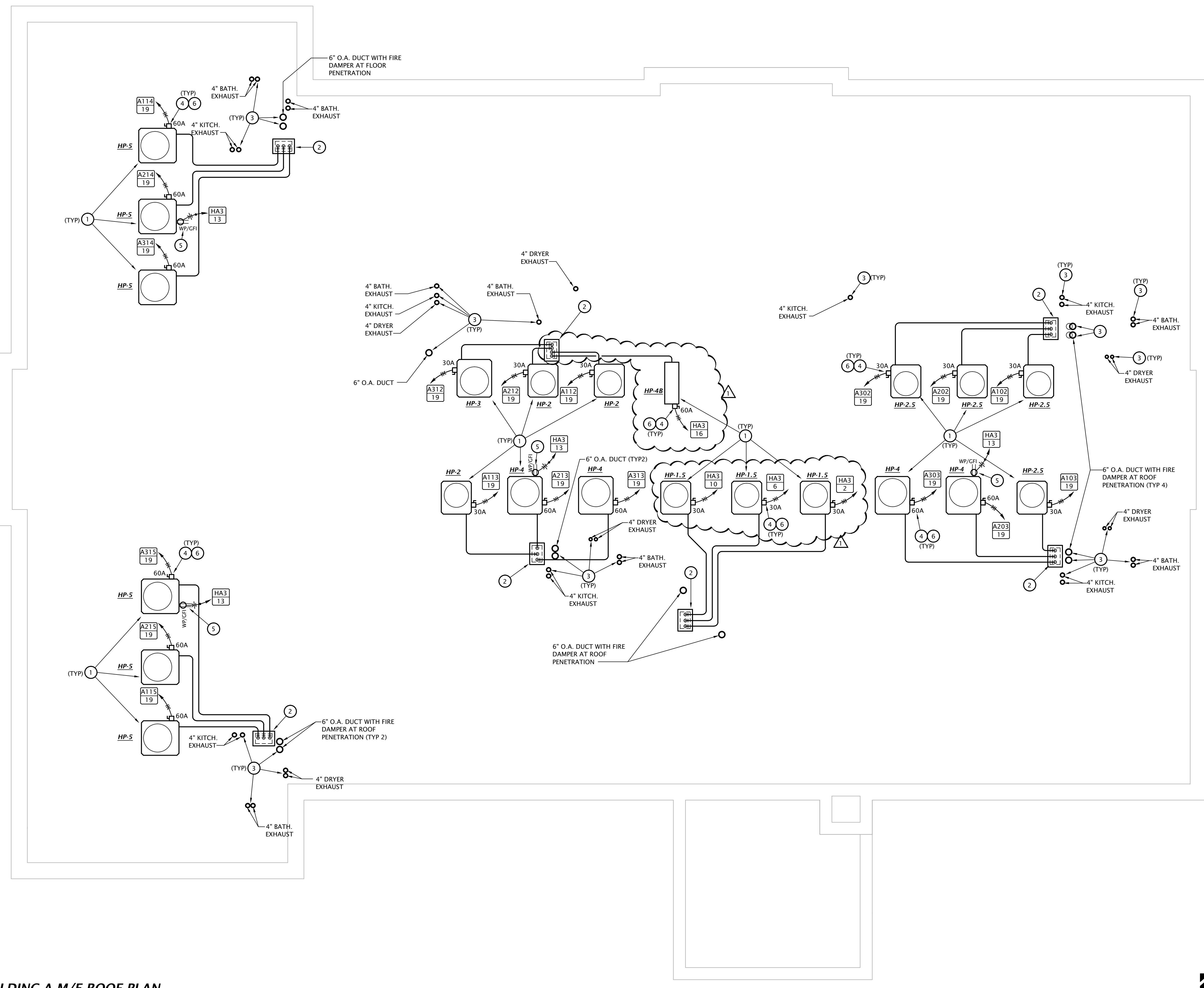
THE HERITAGE at ABILENE
 NEW BUILDING, RESTORATION, & REHAB APARTMENTS
 ABILENE, TEXAS



NOTE: ELEVATE ALL EXHAUST AND VENT OUTLETS 3' MIN. ABOVE TOP OF O.A. INTAKES. TERMINATE WITH GOOSENECK.

HVAC PLAN NOTES BY SYMBOL

1. MOUNT HEAT PUMP ON ROOF EQUIPMENT SUPPORT RAILS EQUAL TO PATE COMPATIBLE WITH ROOF TYPE. COORDINATE REQUIREMENTS WITH G.C.
2. PROVIDE ROUTE REFRIGERANT PIPING FROM HEAT PUMP TO INDOOR UNIT BELOW. PROVIDE ROOF CURB AT REFRIGERANT PIPING ROOF PENETRATION. PROVIDE PIPING PENETRATION ASSEMBLY EQUAL TO RPH AW SERIES ROOF VAULT WITH EXIT SEALS FOR REFRIGERANT PIPING AND ELECTRICAL CONDUIT AND ADDITIONAL SPARE EXIT SEAL. COORDINATE EXACT REQUIREMENTS WITH G.C.
3. PROVIDE PIPE CURB EQUAL TO PATE AT DUCT PENETRATION OF ROOF. COORDINATE REQUIREMENTS WITH G.C.
4. PROVIDED 2-POLE NON-FUSED DISCONNECT SWITCH IN NEMA 3R ENCLOSURE. MOUNT SWITCH TO UNISTRUT FRAME SUPPORTED FROM HEAT PUMP SUPPORT FRAME. SIZE AS NOTED ON PLANS.
5. MOUNT RECEPTACLE TO UNISTRUT FRAME SUPPORTED FROM HEAT PUMP SUPPORT FRAME.
6. COORDINATE CIRCUITRY TO ASSOCIATED PANEL WITH M.C.



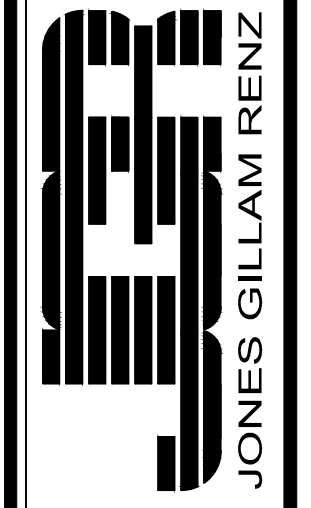
1 BUILDING A M/E ROOF PLAN
 1/4" = 1'-0"

BUILDING A

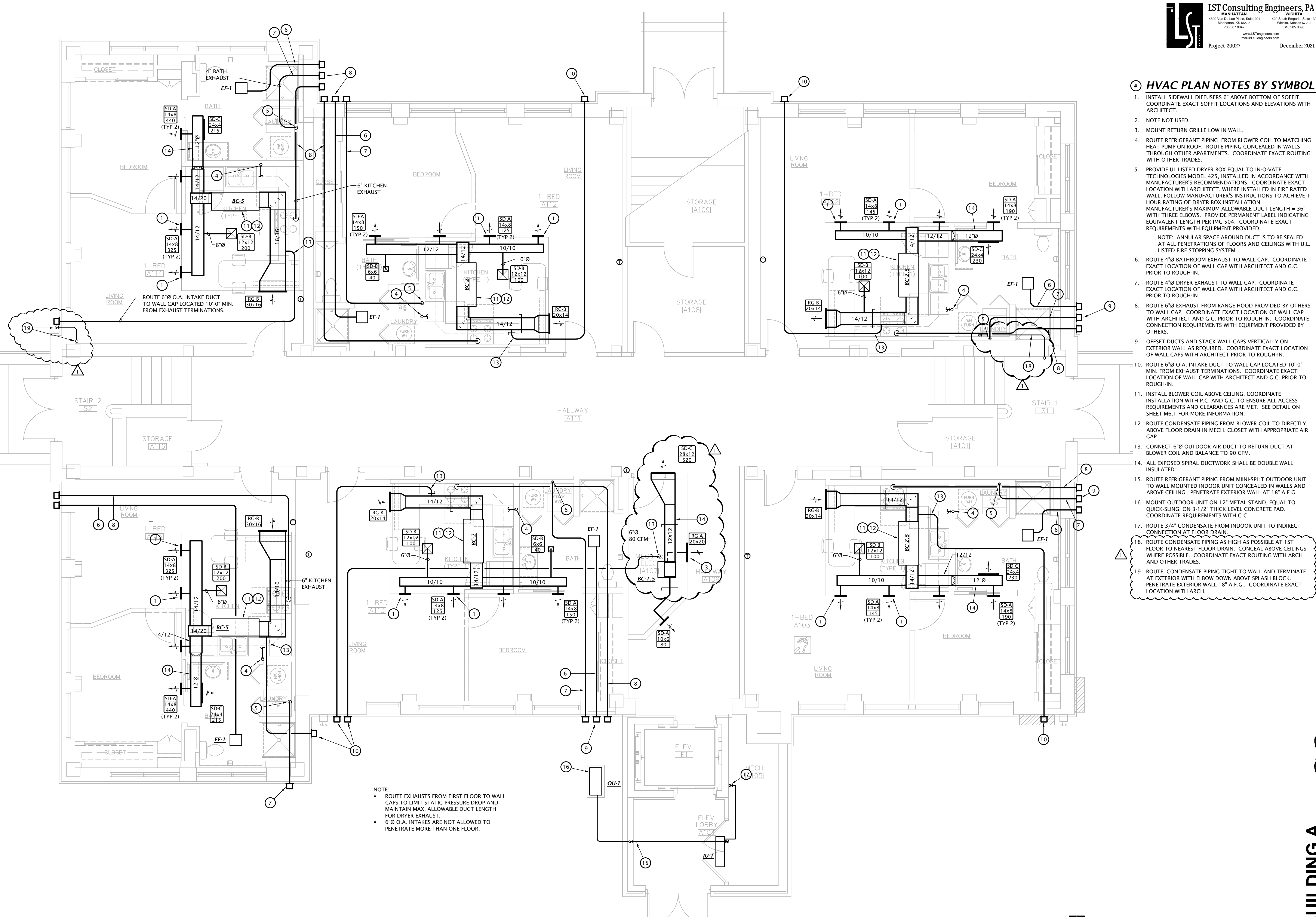
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ME1.1

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THE HERITAGE at ABILENE
 NEW BUILDING, RESTORATION, & REHAB APARTMENTS
 ABILENE, TEXAS

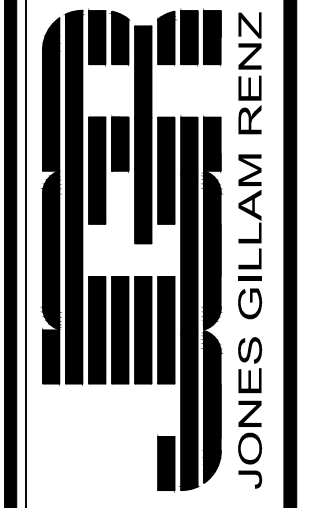


HVAC PLAN NOTES BY SYMBOL

- INSTALL SIDEWALL DIFFUSERS 6" ABOVE BOTTOM OF SOFFIT. COORDINATE EXACT SOFFIT LOCATIONS AND ELEVATIONS WITH ARCHITECT.
- NOTE NOT USED.
- MOUNT RETURN GRILLE LOW IN WALL.
- ROUTE REFRIGERANT PIPING FROM BLOWER COIL TO MATCHING HEAT PUMP ON ROOF. ROUTE PIPING CONCEALED IN WALLS THROUGH OTHER APARTMENTS. COORDINATE EXACT ROUTING WITH OTHER TRADES.
- PROVIDE UL LISTED DRYER BOX EQUAL TO IN-O-VATE TECHNOLOGIES MODEL 425. INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. COORDINATE EXACT LOCATION WITH ARCHITECT. WHERE INSTALLED IN FIRE RATED WALL, FOLLOW MANUFACTURER'S INSTRUCTIONS TO ACHIEVE 1 HOUR RATING OF DRYER BOX INSTALLATION. MANUFACTURER'S MAXIMUM ALLOWABLE DUCT LENGTH = 36' WITH THREE ELBOWS. PROVIDE PERMANENT LABEL INDICATING EQUIVALENT LENGTH PER IMC 504. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED.
 NOTE: ANNUAL SPACE AROUND DUCT IS TO BE SEALED AT ALL PENETRATIONS OF FLOORS AND CEILINGS WITH U.L. LISTED FIRE STOPPING SYSTEM.
- ROUTE 4" BATHROOM EXHAUST TO WALL CAP. COORDINATE EXACT LOCATION OF WALL CAP WITH ARCHITECT AND G.C. PRIOR TO ROUGH-IN.
- ROUTE 4" DRYER EXHAUST TO WALL CAP. COORDINATE EXACT LOCATION OF WALL CAP WITH ARCHITECT AND G.C. PRIOR TO ROUGH-IN.
- ROUTE 6" EXHAUST FROM RANGE HOOD PROVIDED BY OTHERS TO WALL CAP. COORDINATE EXACT LOCATION OF WALL CAP WITH ARCHITECT AND G.C. PRIOR TO ROUGH-IN. COORDINATE CONNECTION REQUIREMENTS WITH EQUIPMENT PROVIDED BY OTHERS.
- OFFSET DUCTS AND STACK WALL CAPS VERTICALLY ON EXTERIOR WALL AS REQUIRED. COORDINATE EXACT LOCATION OF WALL CAPS WITH ARCHITECT PRIOR TO ROUGH-IN.
- ROUTE 6" O.A. INTAKE DUCT TO WALL CAP LOCATED 10'-0" MIN. FROM EXHAUST TERMINATIONS. COORDINATE EXACT LOCATION OF WALL CAP WITH ARCHITECT AND G.C. PRIOR TO ROUGH-IN.
- INSTALL BLOWER COIL ABOVE CEILING. COORDINATE INSTALLATION WITH P.C. AND G.C. TO ENSURE ALL ACCESS REQUIREMENTS AND CLEARANCES ARE MET. SEE DETAIL ON SHEET M6.1 FOR MORE INFORMATION.
- ROUTE CONDENSATE PIPING FROM BLOWER COIL TO DIRECTLY ABOVE FLOOR DRAIN IN MECH. CLOSET WITH APPROPRIATE AIR GAP.
- CONNECT 6" O.D. OUTDOOR AIR DUCT TO RETURN DUCT AT BLOWER COIL AND BALANCE TO 90 CFM.
- ALL EXPOSED SPIRAL DUCTWORK SHALL BE DOUBLE WALL INSULATED.
- ROUTE REFRIGERANT PIPING FROM MINI-SPLIT OUTDOOR UNIT TO WALL MOUNTED INDOOR UNIT CONCEALED IN WALLS AND ABOVE CEILING. PENETRATE EXTERIOR WALL AT 18" A.F.G.
- MOUNT OUTDOOR UNIT ON 12" METAL STAND, EQUAL TO QUICK-SLING, ON 3-1/2" THICK LEVEL CONCRETE PAD. COORDINATE REQUIREMENTS WITH G.C.
- ROUTE 3/4" CONDENSATE FROM INDOOR UNIT TO INDIRECT CONNECTION AT FLOOR DRAIN.
- ROUTE CONDENSATE PIPING AS HIGH AS POSSIBLE AT 1ST FLOOR TO NEAREST FLOOR DRAIN. CONCEAL ABOVE CEILINGS WHERE POSSIBLE. COORDINATE EXACT ROUTING WITH ARCH AND OTHER TRADES.
- ROUTE CONDENSATE PIPING TIGHT TO WALL AND TERMINATE AT EXTERIOR WITH ELBOW DOWN ABOVE SPLASH BLOCK. PENETRATE EXTERIOR WALL 18" A.F.G., COORDINATE EXACT LOCATION WITH ARCH.

NOTE:
 • ROUTE EXHAUSTS FROM FIRST FLOOR TO WALL CAPS TO LIMIT STATIC PRESSURE DROP AND MAINTAIN MAX. ALLOWABLE DUCT LENGTH FOR DRYER EXHAUST.
 • 6" O.A. INTAKES ARE NOT ALLOWED TO PENETRATE MORE THAN ONE FLOOR.

1 BUILDING A FIRST FLOOR HVAC PLAN
 1/4" = 1'-0"



THE HERITAGE at ABILENE
 NEW BUILDING, RESTORATION, & REHAB APARTMENTS
 ABILENE, TEXAS

BUILDING A

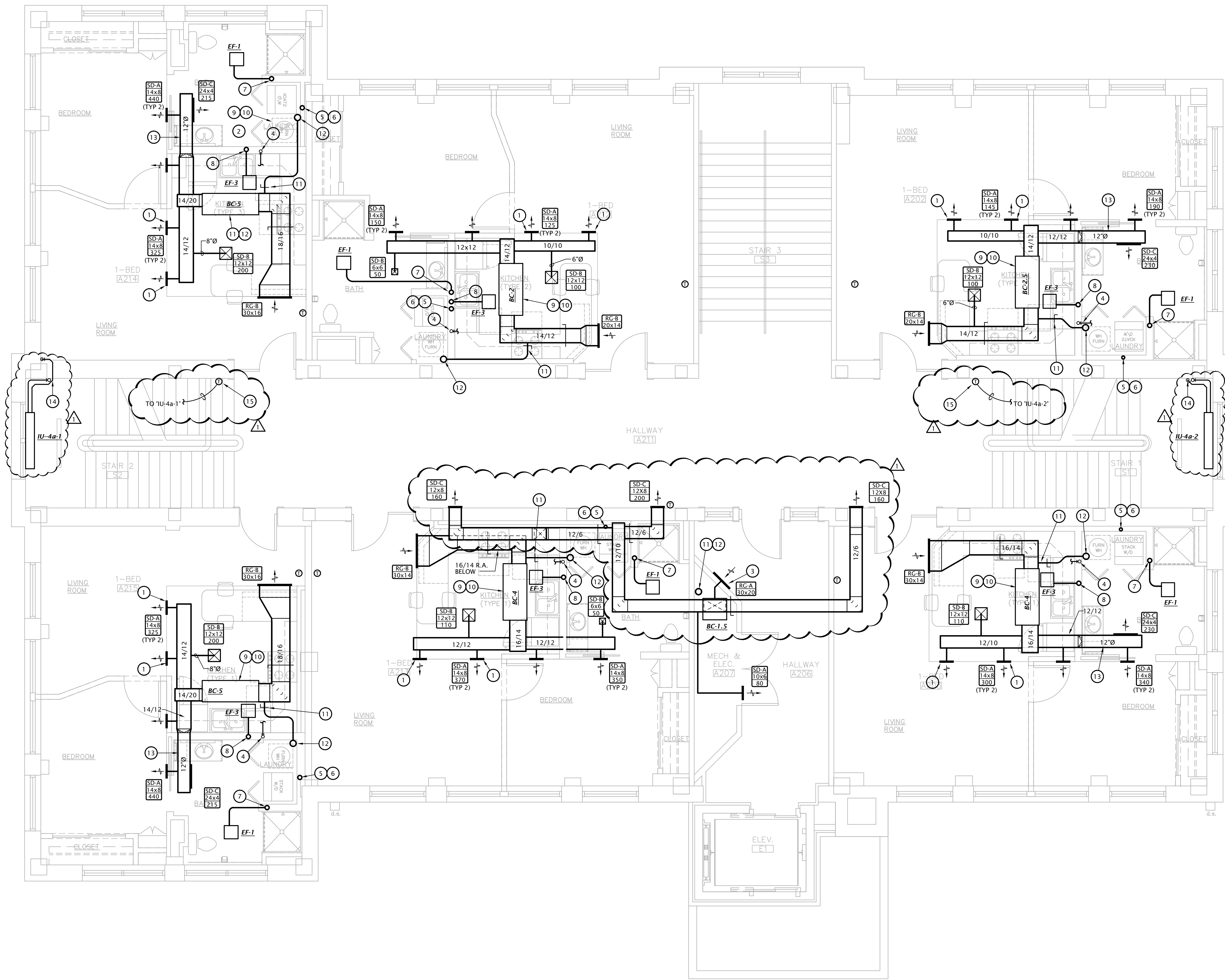
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M1.2

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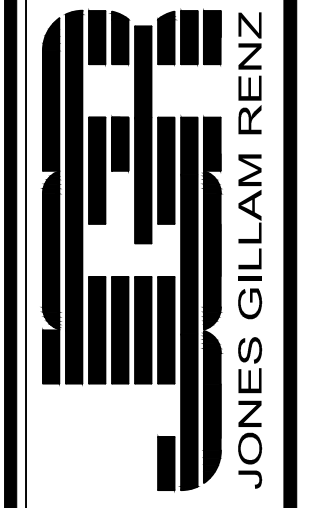
HVAC PLAN NOTES BY SYMBOL

- INSTALL SIDEWALL DIFFUSERS 6" ABOVE BOTTOM OF SOFFIT. COORDINATE EXACT SOFFIT LOCATIONS AND ELEVATIONS WITH ARCHITECT.
- NOTE NOT USED.
- MOUNT RETURN GRILLE LOW IN WALL.
- ROUTE REFRIGERANT PIPING FROM BLOWER COIL TO MATCHING HEAT PUMP ON ROOF. ROUTE PIPING CONCEALED IN WALLS THROUGH OTHER APARTMENTS. COORDINATE EXACT ROUTING WITH OTHER TRADES.
- PROVIDE UL LISTED DRYER BOX EQUAL TO IN-O-VATE TECHNOLOGIES MODEL 425, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. COORDINATE EXACT LOCATION WITH ARCHITECT. WHERE INSTALLED IN FIRE RATED WALL, FOLLOW MANUFACTURER'S INSTRUCTIONS TO ACHIEVE 1 HOUR RATING OF DRYER BOX INSTALLATION. MANUFACTURER'S MAXIMUM ALLOWABLE DUCT LENGTH = 36' WITH THREE ELBOWS. PROVIDE PERMANENT LABEL INDICATING EQUIVALENT LENGTH PER IMC 504. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED.
 NOTE: ANNULAR SPACE AROUND DUCT IS TO BE SEALED AT ALL PENETRATIONS OF FLOORS AND CEILING WITH U.L. LISTED FIRE STOPPING SYSTEM.
- ROUTE 4" Ø DRYER EXHAUST DUCT UP IN WALL TO ROOF. DUCTS SHALL RUN CONTINUOUS FROM EXHAUST FAN TO EXTERIOR OF BUILDING WITHOUT BEING COMBINED. SEE ROOF PLAN ON ME1.1 FOR MORE INFORMATION.
- ROUTE 4" Ø BATHROOM EXHAUST DUCT UP IN WALL TO ROOF. DUCTS SHALL RUN CONTINUOUS FROM EXHAUST FAN TO EXTERIOR OF BUILDING WITHOUT BEING COMBINED. SEE ROOF PLAN ON ME1.1 FOR MORE INFORMATION.
- ROUTE 4" Ø KITCHEN EXHAUST DUCT UP IN WALL TO ROOF. DUCTS SHALL RUN CONTINUOUS FROM EXHAUST FAN TO EXTERIOR OF BUILDING WITHOUT BEING COMBINED. SEE ROOF PLAN ON ME1.1 FOR MORE INFORMATION.
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- CONNECT 6" Ø OUTDOOR AIR DUCT TO RETURN DUCT AT BLOWER COIL AND BALANCE TO 90 CFM.
- ROUTE 6" Ø O.A. DUCT UP TO ROOF. PROVIDE FIRE DAMPER AT FLOOR AND ROOF PENETRATIONS.
- ALL EXPOSED SPIRAL DUCTWORK SHALL BE DOUBLE WALL INSULATED.
- ROUTE 3/4" CONDENSATE PIPE SURFACE MOUNTED DOWN TO BELOW 2ND FLOOR. COORDINATE EXACT ROUTING WITH ARCHITECT.
- COORDINATE EXACT LOCATION OF THERMOSTAT WITH ARCHITECT.
- ROUTE 3/4" CONDENSATE PIPE SURFACE MOUNTED THROUGH APARTMENT DOWN TO 1ST FLOOR. KEEP PIPING TIGHT TO WALL. COORDINATE EXACT ROUTING WITH ARCHITECT.



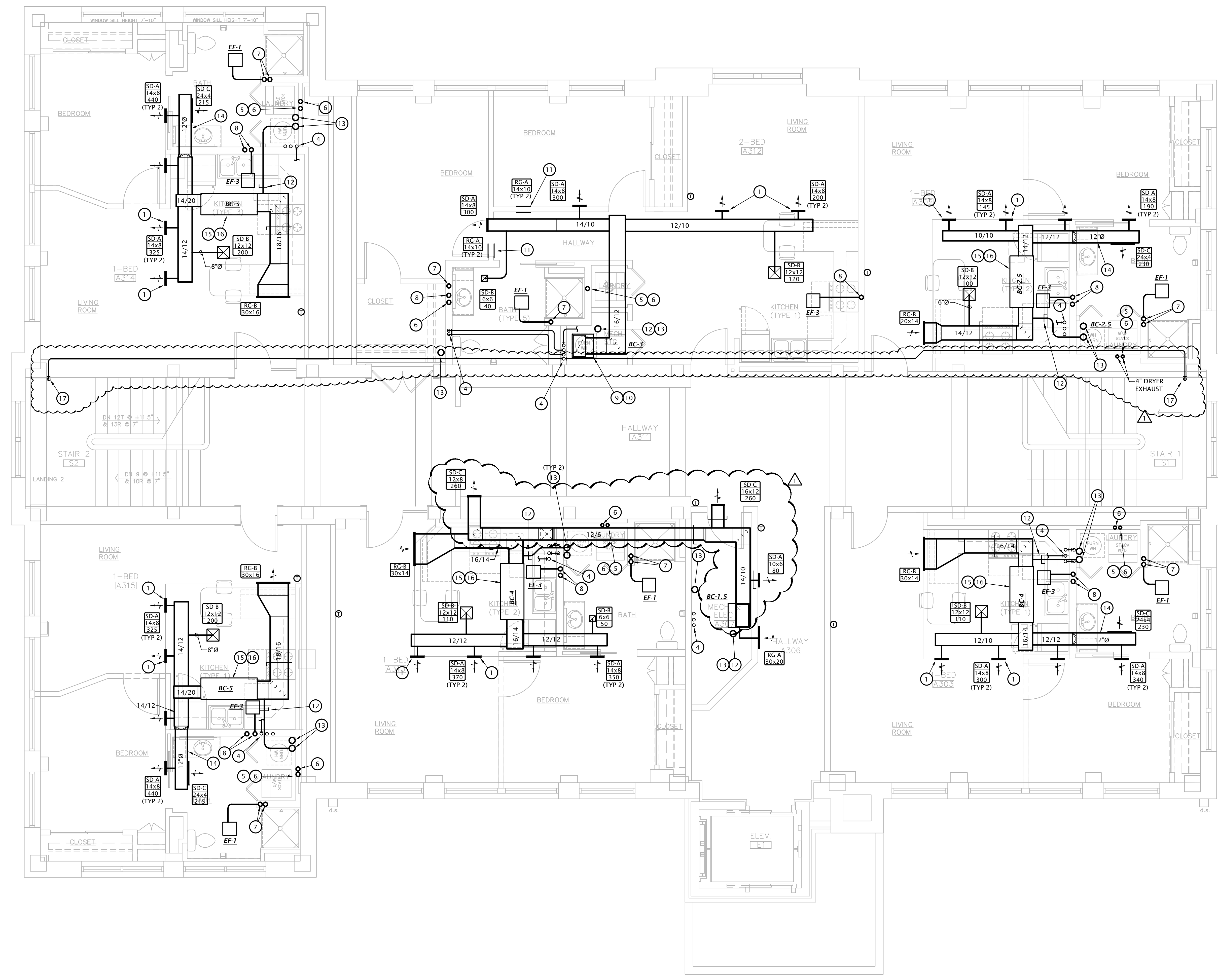
BUILDING A SECOND FLOOR HVAC PLAN
 1/4" = 1'-0"





THE HERITAGE at ABILENE
 NEW BUILDING, RESTORATION, & REHAB APARTMENTS
 ABILENE, TEXAS

BUILDING A
M1.3
 12/9/2021
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 ADDENDUM #3
 3/16/2022
 DATE: 12-3-2021
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 SHEET:
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- PROVIDE UL LISTED DRYER BOX EQUAL TO IN-O-VATE TECHNOLOGIES MODEL 425, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. COORDINATE EXACT LOCATION WITH ARCHITECT. WHERE INSTALLED IN FIRE RATED WALL, FOLLOW MANUFACTURER'S INSTRUCTIONS TO ACHIEVE 1 HOUR RATING OF DRYER BOX INSTALLATION. MANUFACTURER'S MAXIMUM ALLOWABLE DUCT LENGTH = 36' WITH THREE ELBOWS. PROVIDE PERMANENT LABEL INDICATING EQUIVALENT LENGTH PER IMC 504. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED.
 NOTE: ANNULAR SPACE AROUND DUCT IS TO BE SEALED AT ALL PENETRATIONS OF FLOORS AND CEILINGS WITH U.L. LISTED FIRE STOPPING SYSTEM.
- ROUTE 4" Ø DRYER EXHAUST DUCT UP IN WALL TO ROOF. DUCTS SHALL RUN CONTINUOUS FROM EXHAUST FAN TO EXTERIOR OF BUILDING WITHOUT BEING COMBINED. SEE ROOF PLAN ON ME.1 FOR MORE INFORMATION.
- ROUTE 4" Ø BATHROOM EXHAUST DUCT UP IN WALL TO ROOF. DUCTS SHALL RUN CONTINUOUS FROM EXHAUST FAN TO EXTERIOR OF BUILDING WITHOUT BEING COMBINED. SEE ROOF PLAN ON ME.1 FOR MORE INFORMATION.
- ROUTE 4" Ø KITCHEN EXHAUST DUCT UP IN WALL TO ROOF. DUCTS SHALL RUN CONTINUOUS FROM EXHAUST FAN TO EXTERIOR OF BUILDING WITHOUT BEING COMBINED. SEE ROOF PLAN ON ME.1 FOR MORE INFORMATION.
- INSTALL BLOWER COIL ON METAL STAND ABOVE WATER HEATER. COORDINATE INSTALLATION WITH P.C. AND G.C. TO ENSURE ALL REQUIRED CLEARANCES ARE MET. SEE DETAIL ON SHEET M6.1 FOR MORE INFORMATION.
- ROUTE CONDENSATE PIPING FROM BLOWER COIL TO DIRECTLY ABOVE FLOOR DRAIN WITH APPROPRIATE AIR GAP.
- INSTALL TRANSFER GRILLES ON OPPOSITE SIDES OF WALL. MOUNT GRILLE 6" BELOW CEILING IN BEDROOM ROOM AND 6" BELOW CEILING IN HALL, LINE STUD CAVITY WITH SHEET METAL DUCTWORK.
- CONNECT 6" Ø OUTDOOR AIR DUCT TO RETURN DUCT AT BLOWER COIL AND BALANCE TO 90 CFM.
- ROUTE 6" Ø O.A. DUCT UP TO ROOF. PROVIDE FIRE DAMPER AT ROOF PENETRATION.
- ALL EXPOSED SPIRAL DUCTWORK SHALL BE DOUBLE WALL INSULATED.
- INSTALL BLOWER COIL ABOVE CEILING. COORDINATE INSTALLATION WITH P.C. AND G.C. TO ENSURE ALL ACCESS REQUIREMENTS AND CLEARANCES ARE MET. SEE DETAIL ON SHEET M6.1 FOR MORE INFORMATION.
- ROUTE CONDENSATE PIPING FROM BLOWER COIL TO DIRECTLY ABOVE FLOOR DRAIN IN MECH. CLOSET WITH APPROPRIATE AIR GAP.
- ROUTE REFRIGERANT PIPING SURFACE MOUNTED TO INDOOR UNIT LOCATED AT LANDING BETWEEN SECOND AND THIRD FLOOR. COORDINATE EXACT MOUNTING REQUIREMENTS AND ROUTING WITH ARCH.

BUILDING A THIRD FLOOR HVAC PLAN
 1/4" = 1'-0"



REVISION:	
DATE:	12-3-2021
JOB:	20-3065
SHEET:	

- NOTES:**
- PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELS.
 - EXPOSED PIPING TO BE ROUTED AS HIGH AS POSSIBLE. UTILIZE COPPER, RIGID PEX, OR POLYPROPYLENE, ROUTED PERPENDICULAR TO BUILDING SURFACES. NEATLY TRAIN PIPING TOGETHER ALONG EXISTING CONSTRUCTION AND COORDINATE WITH OTHER TRADES. OBTAIN APPROVAL OF ROUTING FROM ARCHITECT PRIOR TO ROUGHING IN.
 - COORDINATE INSTALLATION OF PIPING IN MECHANICAL CLOSET W/ M.C. & E.C.
 - SEE PLUMBING FIXTURE SCHEDULE ON SHEET M6.2 FOR FIXTURE ROUGH-IN INFORMATION.

COPPER PIPE SIZE INDICATED	ALTERNATE MATERIAL/SIZE	
	Cross-linked polyethylene (PEX)	Polypropylene (PP)
1/2"	3/4"	1/2"
3/4"	1"	1"
1"		1-1/4"
1-1/4"		1-1/2"
1-1/2"		2"
2"		2-1/2"
2-1/2"		3"
3"		3-1/2"

Note: Pipe sizes indicated on drawings are for Type L copper pipe. If alternate materials are used, sizes shall be as indicated above. Where no pipe size is shown, use of indicated material in design pipe size is prohibited. Do not use materials other than those listed.

DOMESTIC WATER PLAN NOTES BY SYMBOL

1. PROVIDE SHUT-OFF VALVE AND PRESSURE REDUCING VALVE SET TO 80 PSI IF REQUIRED IN WATER SERVICE RISER. COORDINATE REQUIREMENTS WITH CITY OF ABILENE.
2. SEE CIVIL DRAWINGS FOR CONTINUATION.
3. FIRE SPRINKLER RISER. SEE DETAIL 1-M6.1. INSTALL IN ACCORDANCE WITH NFPA 13R. COORDINATE LOCATION OF ALL VALVES AND APPURTENANCES WITH AHJ.
4. PROVIDE 3/4" DOMESTIC WATER BRANCH TO APARTMENT WITH SHUT-OFF VALVE IN ACCESSIBLE LOCATION.
5. ROUTE 1-1/4" UP TO APARTMENTS ABOVE.
6. PROVIDE 3/4" CW BRANCH TO WATER HEATER AND ROUTE 3/4" HW FROM WATER HEATER AND 3/4" CW TO APARTMENT FIXTURES. SEE WATER HEATER PIPING DIAGRAM ON SHEET M6.1.
7. PROVIDE VALVED 1/2" HW BRANCH BELOW SINK AND CONNECT DISHWASHER. COORDINATE REQUIREMENTS WITH EQUIPMENT PROVIDED BY OTHERS.
8. COORDINATE LOCATION OF WALL HYDRANT WITH E.C.
9. PROVIDE WATER PRESSURE BOOSTER SYSTEM CAPABLE OF INCREASING PRESSURE OF 98 GPM BY 23.3 PSI, EQUIVALENT TO QUANTUM FLO "PRODIGY E2", COMPLETE WITH (2) 1.5 HP VARIABLE SPEED DUPLEX PUMPS, 3" HEADERS, 208V/3Ø MOTORS, SINGLE POINT POWER CONNECTION. PROVIDE MANUFACTURER'S ANALYSIS OF SYSTEM PRIOR TO INSTALLATION.
10. PROVIDE FULL SIZED VALVED BYPASS OF BOOSTER SYSTEM.
11. PROVIDE SKID MOUNTED FIRE PUMP.

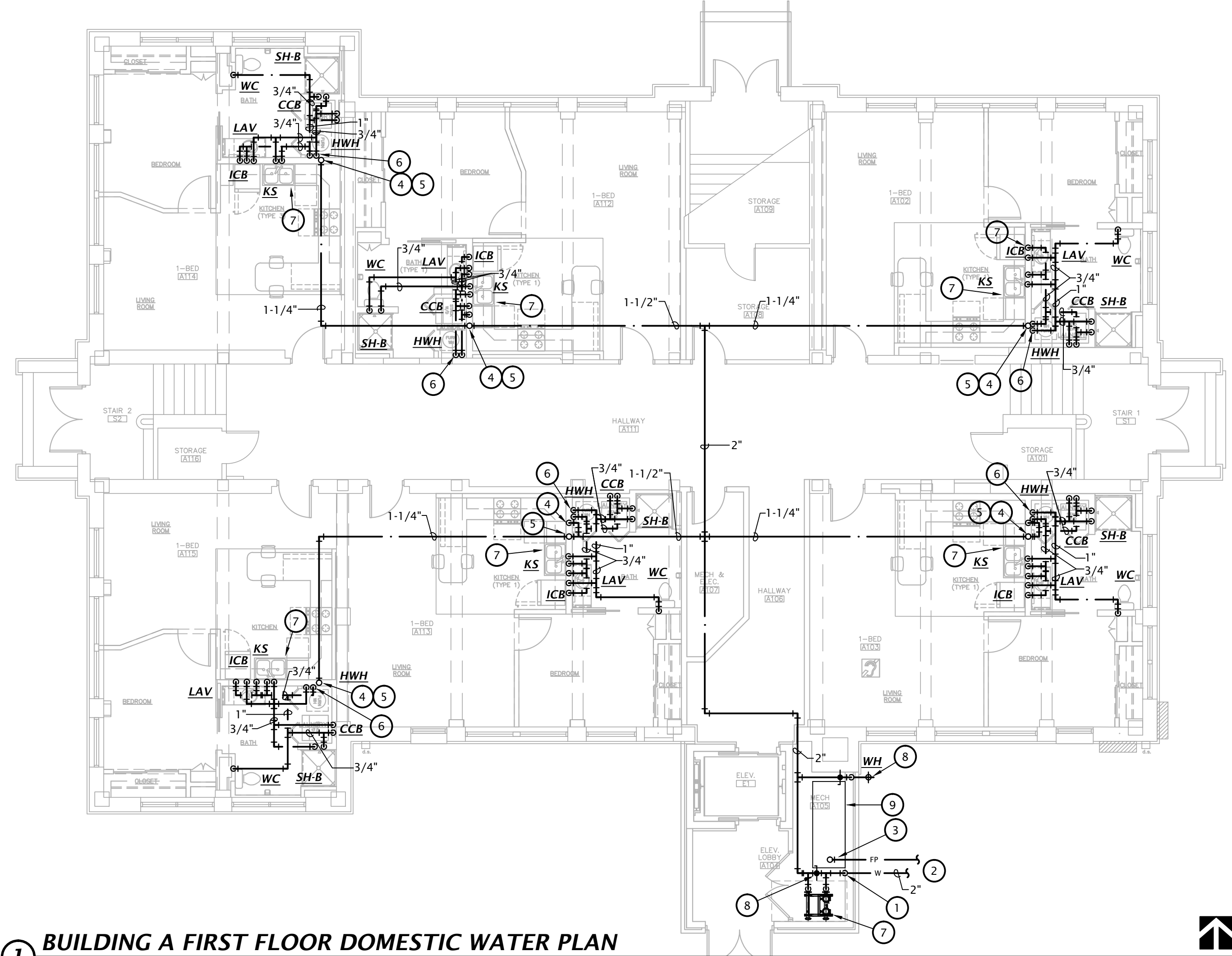
- NOTES:**
- PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELS.
 - EXPOSED DRAIN PIPING TO BE ROUTED AS HIGH AS POSSIBLE. UTILIZE CAST IRON, ROUTED PERPENDICULAR TO BUILDING SURFACES. NEATLY TRAIN PIPING TOGETHER ALONG EXISTING CONSTRUCTION AND COORDINATE WITH OTHER TRADES. OBTAIN APPROVAL OF ROUTING FROM ARCHITECT PRIOR TO ROUGHING IN.
 - SEE PLUMBING FIXTURE SCHEDULE ON SHEET M6.2 FOR FIXTURE ROUGH-IN INFORMATION.

PLUMBING SIZING SYMBOLS

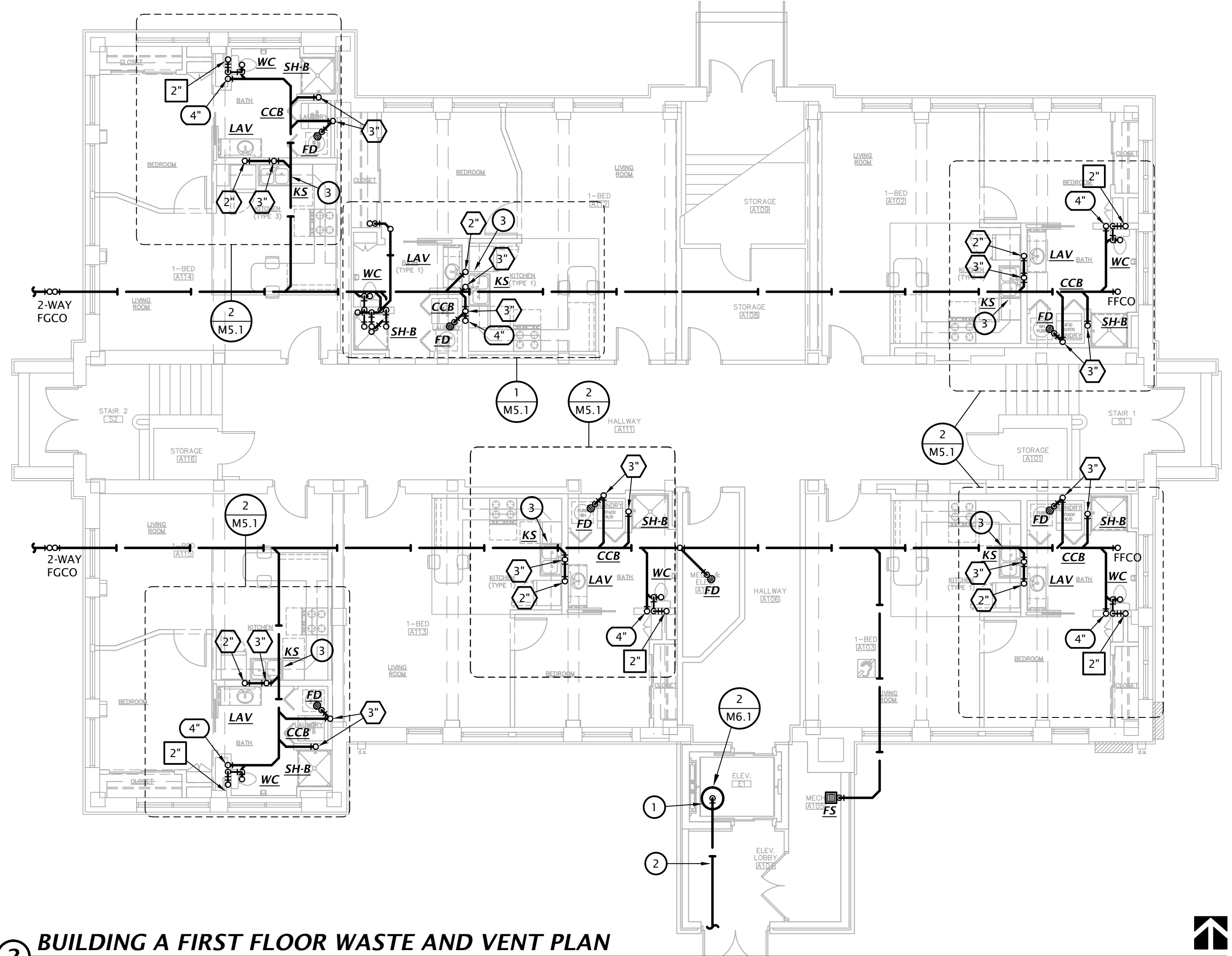
⊗ ^x	DRAIN (x = SIZE)
⊠ ^x	VENT (x = SIZE)
⊞ ^x	WASTE STACK VENT (x = SIZE)

WASTE AND VENT PLAN NOTES BY SYMBOL

1. ELEVATOR SUMP PIT.
2. ROUTE 2" DISCHARGE FROM SUMP PUMP TO EXTERIOR AND DISCHARGE TO GRADE OR EXTEND TO STORM DRAIN ON SITE. COORDINATE WITH CIVIL ENGINEER AND G.C.
3. CONNECT DISHWASHER TO INDIRECT DRAIN CONNECTION AT GARBAGE DISPOSER. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED BY OTHERS.



1 BUILDING A FIRST FLOOR DOMESTIC WATER PLAN
 1/8" = 1'-0"



2 BUILDING A FIRST FLOOR WASTE AND VENT PLAN
 1/8" = 1'-0"



NOTES:

- PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELS.
- EXPOSED PIPING TO BE ROUTED AS HIGH AS POSSIBLE. UTILIZE COPPER, RIGID PEX, OR POLYPROPYLENE, ROUTED PERPENDICULAR TO BUILDING SURFACES. NEATLY TRAIN PIPING TOGETHER ALONG EXISTING CONSTRUCTION AND COORDINATE WITH OTHER TRADES. OBTAIN APPROVAL OF ROUTING FROM ARCHITECT PRIOR TO ROUGHING IN.
- COORDINATE INSTALLATION OF PIPING IN MECHANICAL CLOSET W/ M.C. & E.C.
- SEE PLUMBING FIXTURE SCHEDULE ON SHEET M6.2 FOR FIXTURE ROUGH-IN INFORMATION.

DOMESTIC WATER PLAN NOTES BY SYMBOL

1. PROVIDE 3/4" DOMESTIC WATER BRANCH TO APARTMENT WITH SHUT-OFF VALVE IN ACCESSIBLE LOCATION.
2. ROUTE 3/4" UP TO APARTMENT ABOVE.
3. PROVIDE 3/4" CW BRANCH TO WATER HEATER AND ROUTE 3/4" HW FROM WATER HEATER AND 3/4" CW TO APARTMENT FIXTURES. SEE WATER HEATER PIPING DIAGRAM ON SHEET M6.1.
4. PROVIDE VALVED 1/2" HW BRANCH BELOW SINK AND CONNECT DISHWASHER. COORDINATE REQUIREMENTS WITH EQUIPMENT PROVIDED BY OTHERS.

COPPER PIPE SIZE INDICATED	ALTERNATE MATERIAL/SIZE	
	Cross-linked polyethylene (PEX)	Polypropylene (PP)
1/2"	3/4"	1/2"
3/4"	1"	1"
1"		1-1/4"
1-1/4"		1-1/2"
1-1/2"		2"
2"		2-1/2"
2-1/2"		3"
3"		3-1/2"

Note: Pipe sizes indicated on drawings are for Type L copper pipe. If alternate materials are used, sizes shall be as indicated above. Where no pipe size is shown, use of indicated material in design pipe size is prohibited. Do not use materials other than those listed.

NOTES:

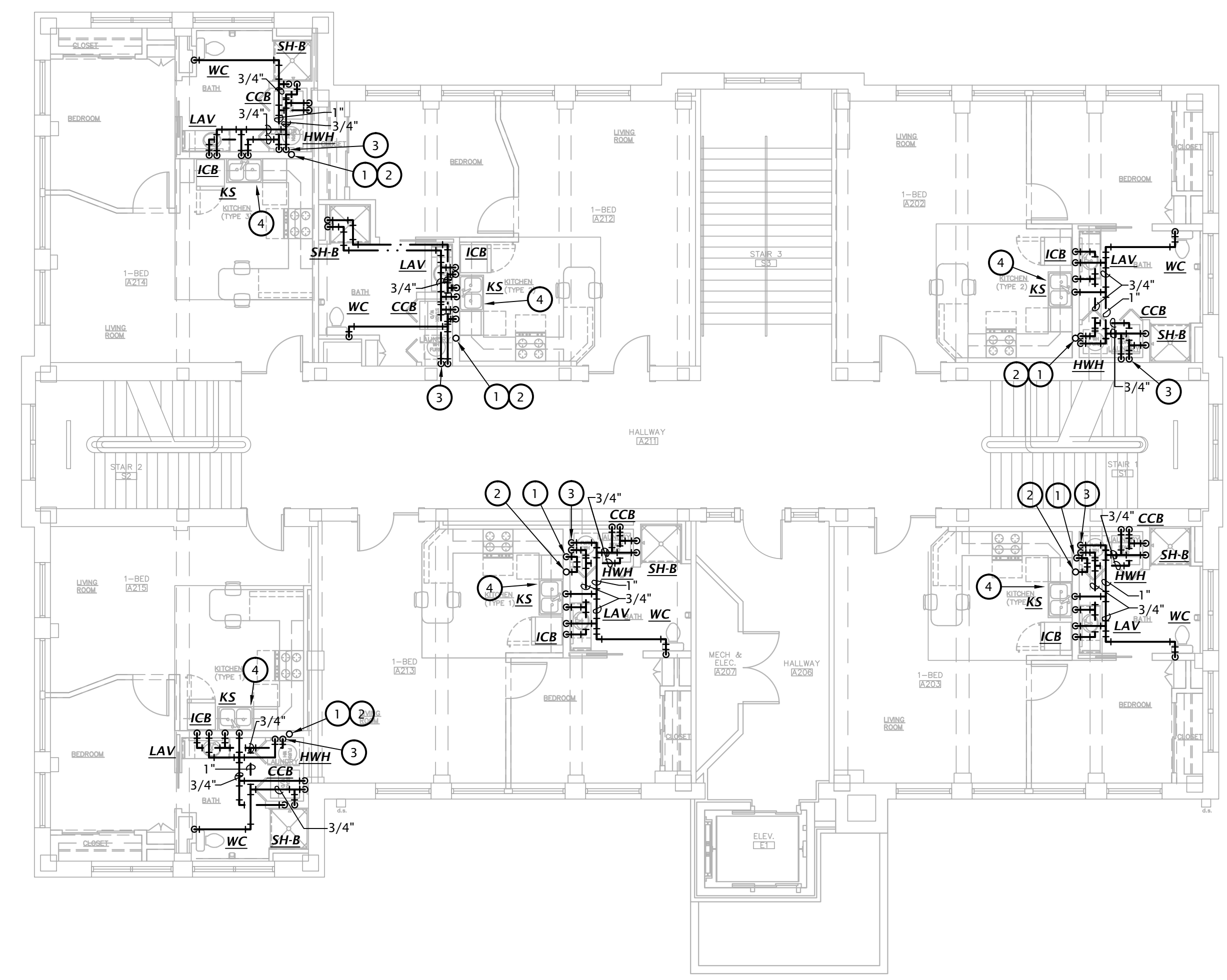
- PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELS.
- EXPOSED DRAIN PIPING TO BE ROUTED AS HIGH AS POSSIBLE. UTILIZE CAST IRON, ROUTED PERPENDICULAR TO BUILDING SURFACES. NEATLY TRAIN PIPING TOGETHER ALONG EXISTING CONSTRUCTION AND COORDINATE WITH OTHER TRADES. OBTAIN APPROVAL OF ROUTING FROM ARCHITECT PRIOR TO ROUGHING IN.
- SEE PLUMBING FIXTURE SCHEDULE ON SHEET M6.2 FOR FIXTURE ROUGH-IN INFORMATION.

PLUMBING SIZING SYMBOLS

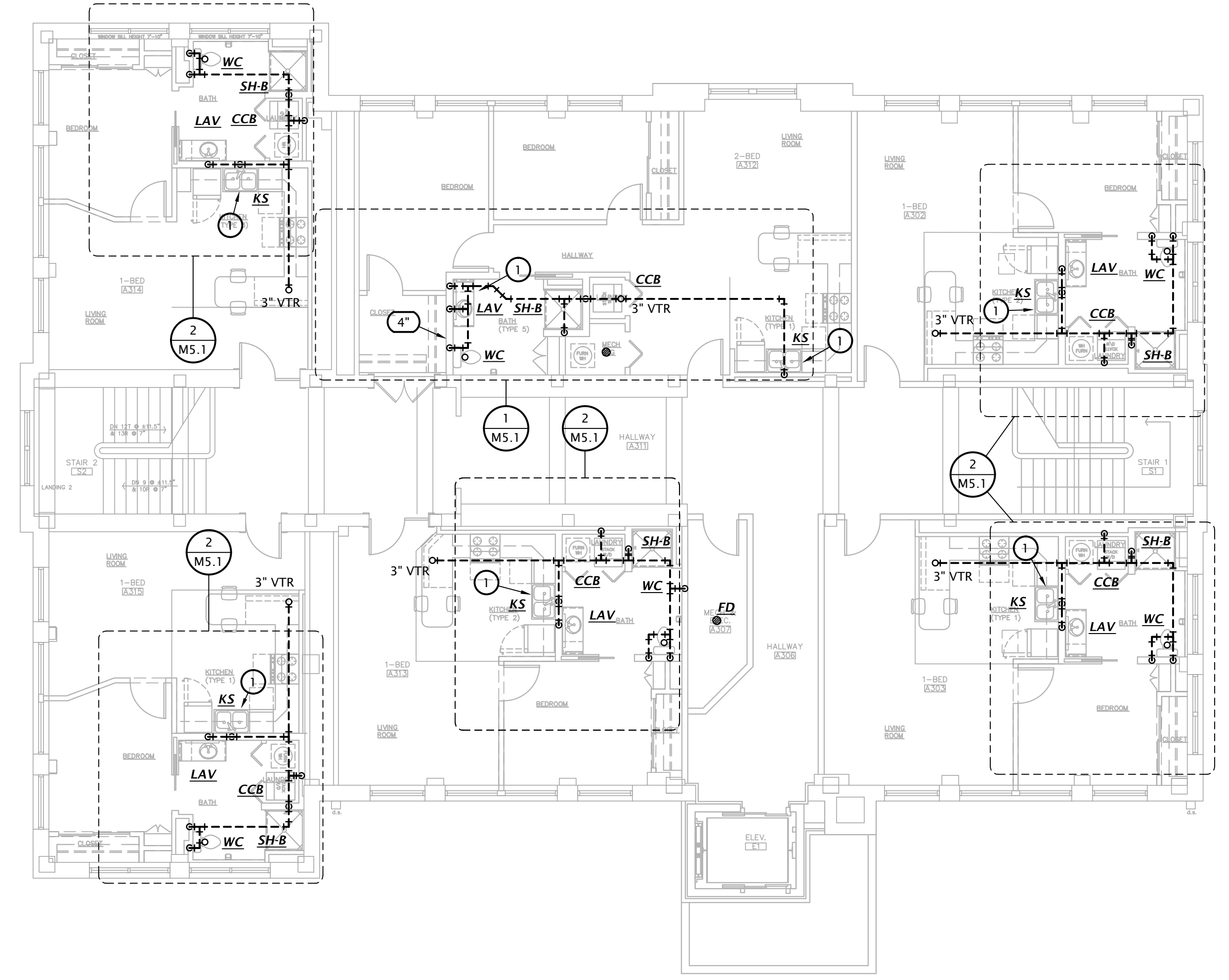
X"	DRAIN (X = SIZE)
X"	VENT (X = SIZE)
X"	WASTE STACK VENT (X = SIZE)

WASTE AND VENT PLAN NOTES BY SYMBOL

1. CONNECT DISHWASHER TO INDIRECT DRAIN CONNECTION AT GARBAGE DISPOSER. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED BY OTHERS.



BUILDING A SECOND FLOOR DOMESTIC WATER PLAN
 1/8" = 1'-0"



BUILDING A SECOND FLOOR WASTE AND VENT PLAN
 1/8" = 1'-0"

NOTES:

- PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELS.
- EXPOSED PIPING TO BE ROUTED AS HIGH AS POSSIBLE. UTILIZE COPPER, RIGID PEX, OR POLYPROPYLENE. ROUTED PERPENDICULAR TO BUILDING SURFACES. NEATLY TRAIN PIPING TOGETHER ALONG EXISTING CONSTRUCTION AND COORDINATE WITH OTHER TRADES. OBTAIN APPROVAL OF ROUTING FROM ARCHITECT PRIOR TO ROUGHING IN.
- COORDINATE INSTALLATION OF PIPING IN MECHANICAL CLOSET W/ M.C. & E.C.
- SEE PLUMBING FIXTURE SCHEDULE ON SHEET M6.2 FOR FIXTURE ROUGH-IN INFORMATION.

DOMESTIC WATER PLAN NOTES BY SYMBOL

1. PROVIDE 3/4" DOMESTIC WATER BRANCH TO APARTMENT WITH SHUT-OFF VALVE IN ACCESSIBLE LOCATION.
2. PROVIDE 3/4" CW BRANCH TO WATER HEATER AND ROUTE 3/4" HW FROM WATER HEATER AND 3/4" CW TO APARTMENT FIXTURES. SEE WATER HEATER PIPING DIAGRAM ON SHEET M6.1.
3. PROVIDE VALVED 1/2" HW BRANCH BELOW SINK AND CONNECT DISHWASHER. COORDINATE REQUIREMENTS WITH EQUIPMENT PROVIDED BY OTHERS.

COPPER PIPE SIZE INDICATED	ALTERNATE MATERIAL/SIZE	
	Cross-linked polyethylene (PEX)	Polypropylene (PP)
1/2"	3/4"	1/2"
3/4"	1"	1"
1"		1-1/4"
1-1/4"		1-1/2"
1-1/2"		2"
2"		2-1/2"
2-1/2"		3"
3"		3-1/2"

Note: Pipe sizes indicated on drawings are for Type L copper pipe. If alternate materials are used, sizes shall be as indicated above. Where no pipe size is shown, use of indicated material in design pipe size is prohibited. Do not use materials other than those listed.



1 BUILDING A FIRST FLOOR DOMESTIC WATER PLAN
 1/8" = 1'-0"

NOTES:

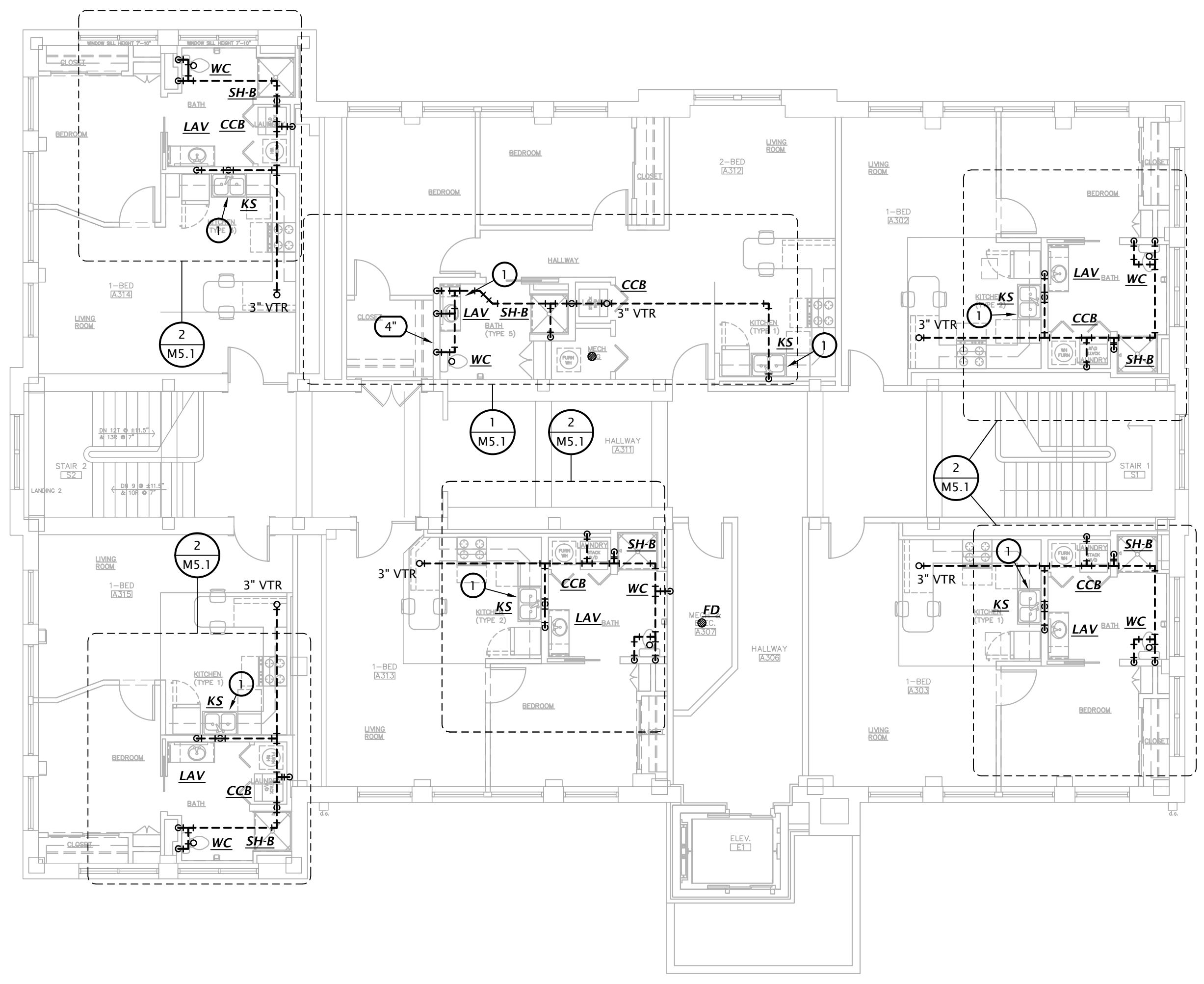
- PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELS.
- EXPOSED DRAIN PIPING TO BE ROUTED AS HIGH AS POSSIBLE. UTILIZE CAST IRON, ROUTED PERPENDICULAR TO BUILDING SURFACES. NEATLY TRAIN PIPING TOGETHER ALONG EXISTING CONSTRUCTION AND COORDINATE WITH OTHER TRADES. OBTAIN APPROVAL OF ROUTING FROM ARCHITECT PRIOR TO ROUGHING IN.
- SEE PLUMBING FIXTURE SCHEDULE ON SHEET M6.2 FOR FIXTURE ROUGH-IN INFORMATION.

WASTE AND VENT PLAN NOTES BY SYMBOL

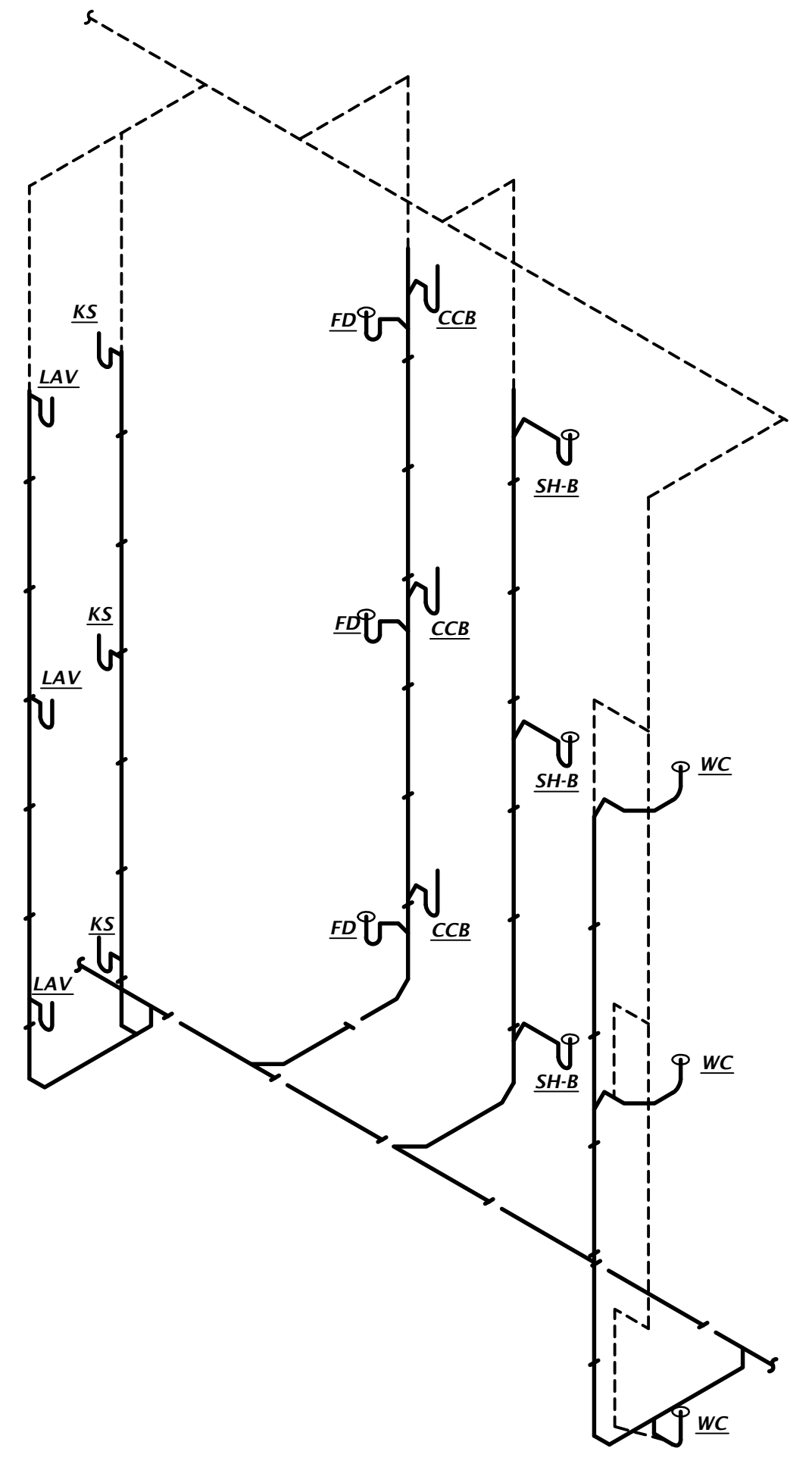
1. CONNECT DISHWASHER TO INDIRECT DRAIN CONNECTION AT GARBAGE DISPOSER. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED BY OTHERS.

PLUMBING SIZING SYMBOLS

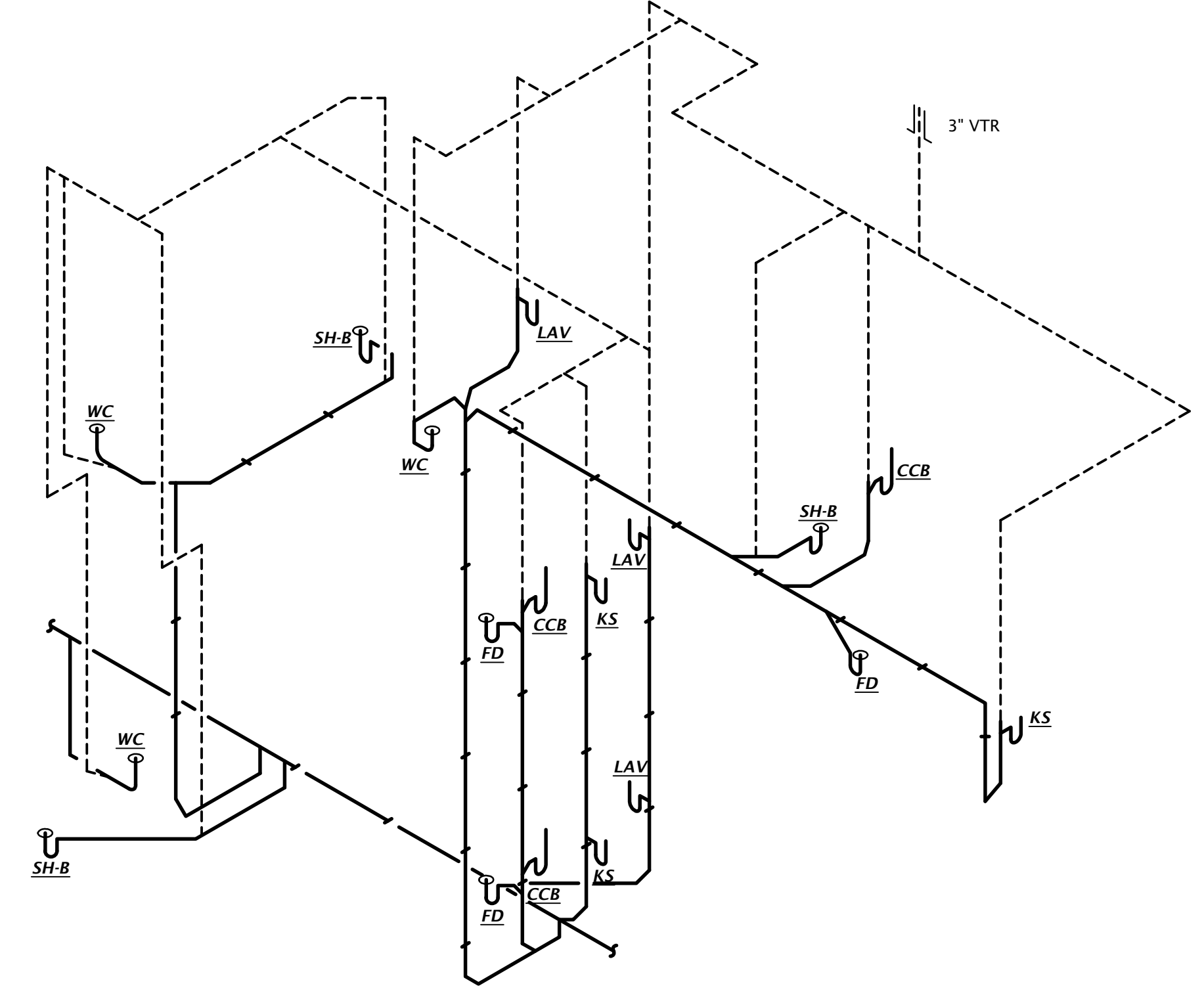
⊗	DRAIN (X = SIZE)
⊠	VENT (X = SIZE)
⊗	WASTE STACK VENT (X = SIZE)



2 BUILDING A FIRST FLOOR WASTE AND VENT PLAN
 1/8" = 1'-0"



② **TYPICAL APARTMENT WASTE AND VENT ISOMETRIC**
 NOT TO SCALE



① **WASTE AND VENT ISOMETRIC**
 NOT TO SCALE

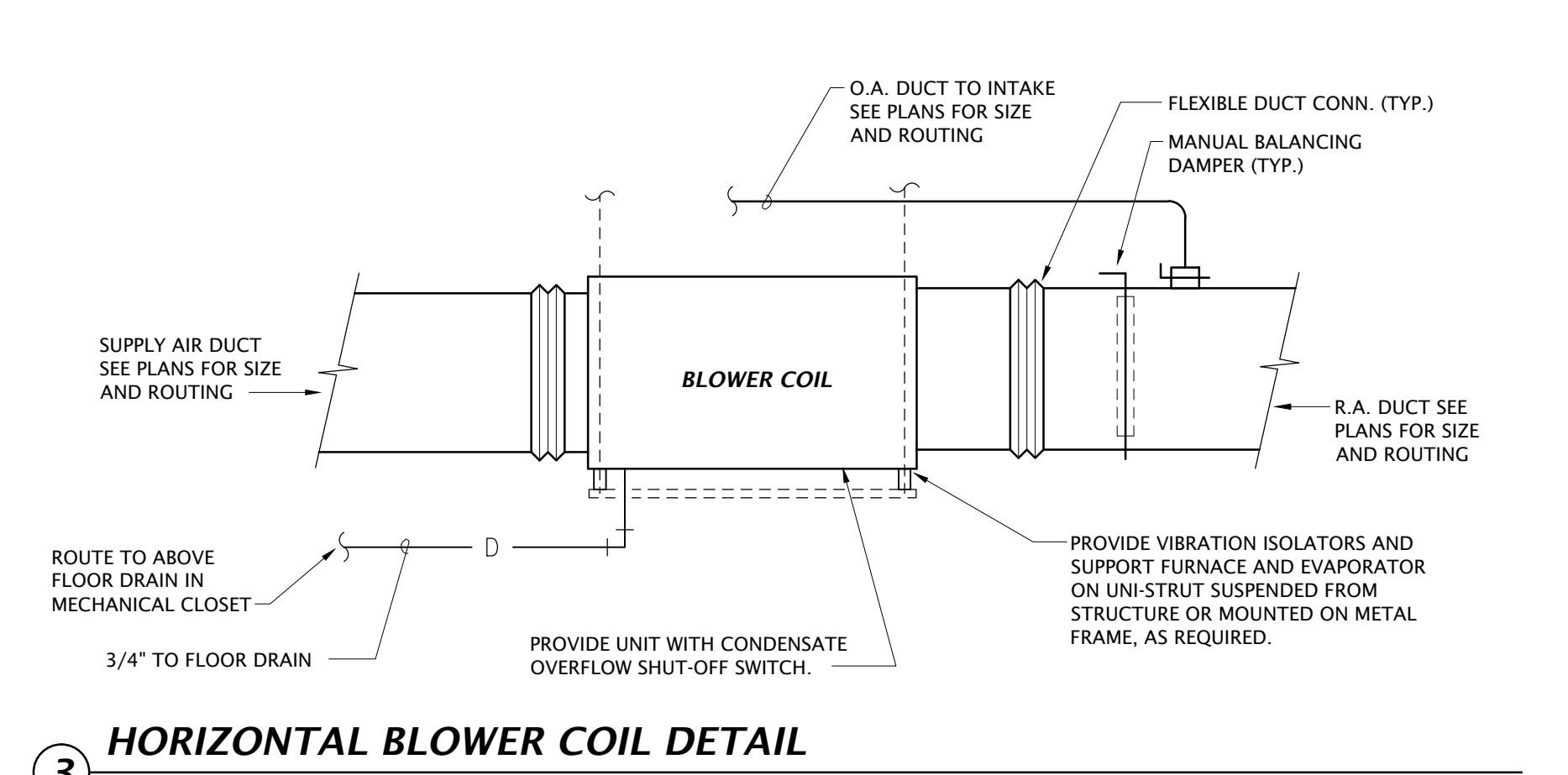
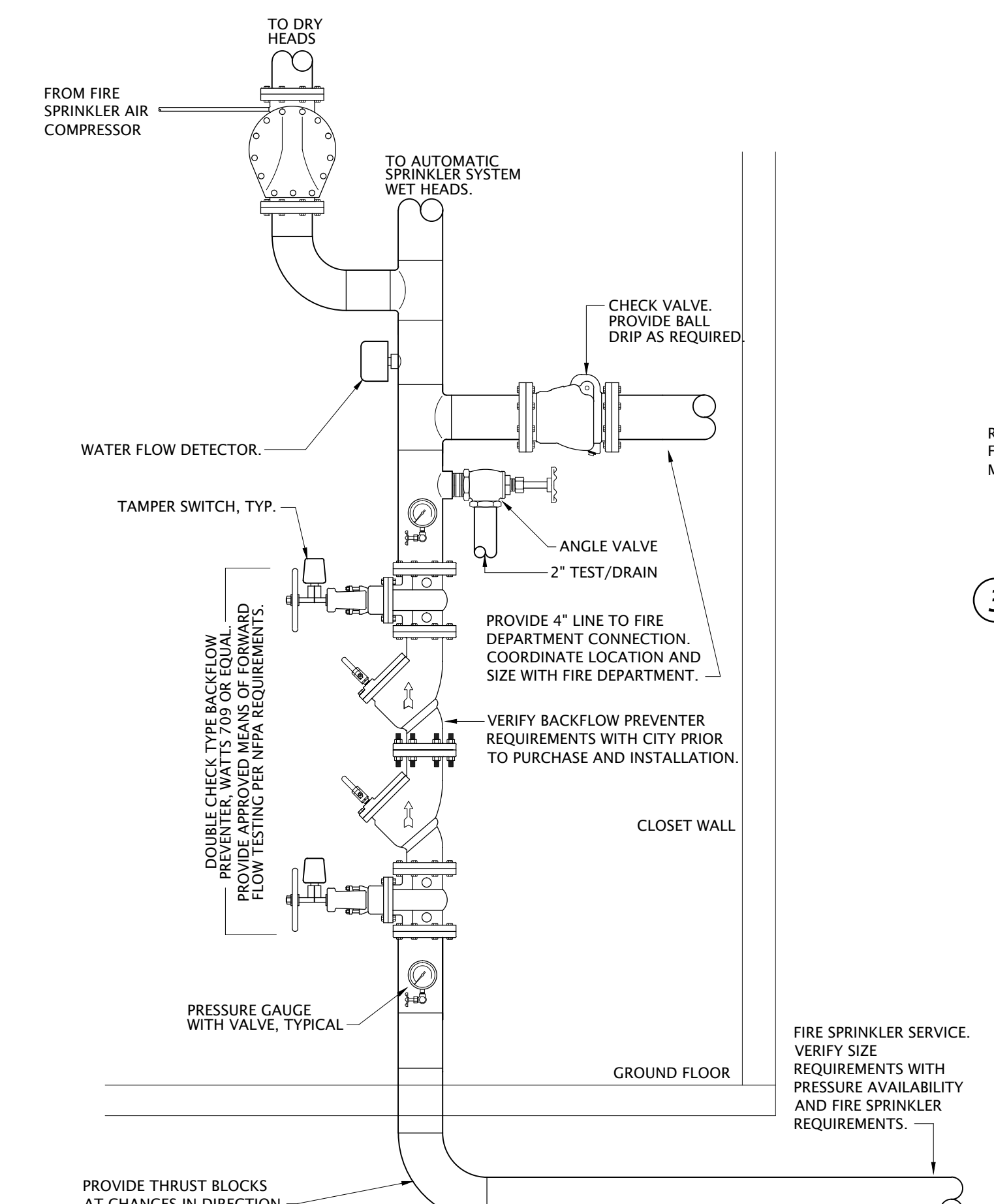
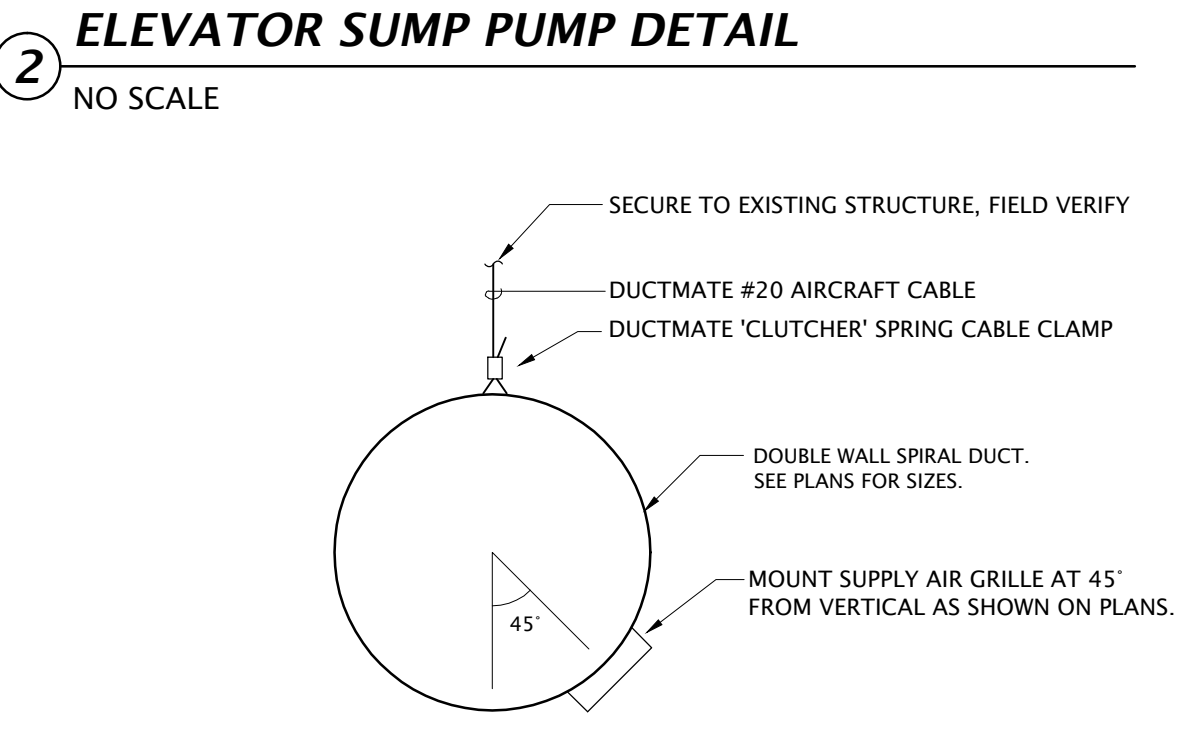
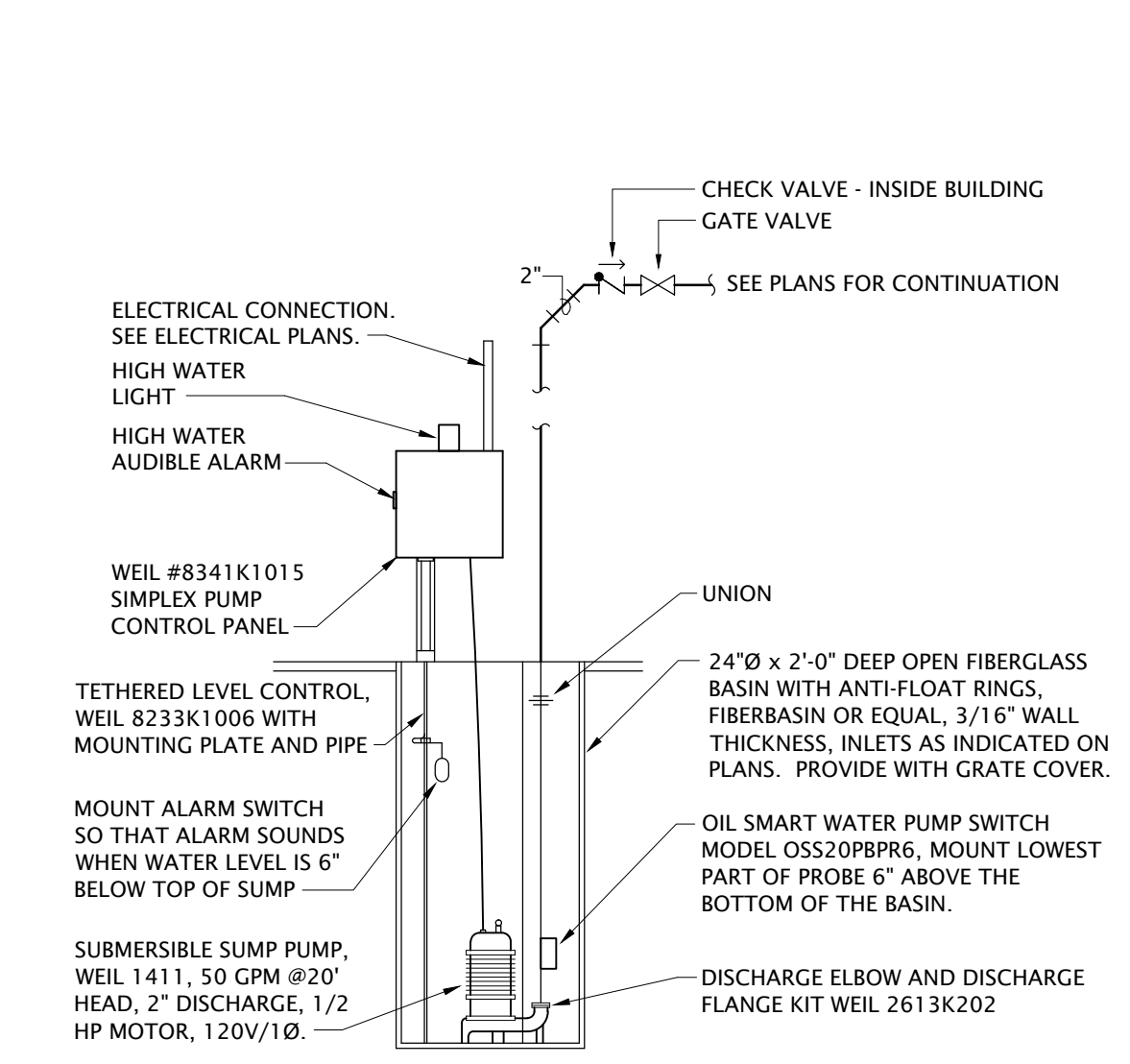
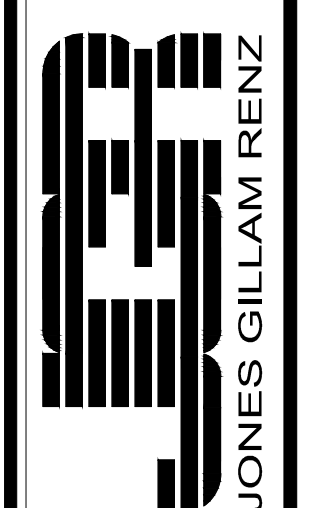


REVISION:	
DATE:	12-3-2021
JOB:	20-3065
SHEET:	

BUILDING A

M5.1

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BLOWER COIL SCHEDULE

MARK	MANUF.	MODEL	FAN			HEATING KW	V/PH	MOTOR FLA	MCA	MOC	MOP	NOTES
			CFM	ESP	SPEED							
BC-1.5	TRANE	TEM4A0B24	600	0.6	HIGH	7.2	208/1	1.2	45	45		
BC-2	TRANE	TEM4A0B31	800	0.6	HIGH	7.2/3.6	208/1	4.1	51/22	60/25	1	
BC-2.5	TRANE	TEM4A0B37	1000	0.6	HIGH	7.2/3.6	208/1	2.5	46/22	50/25	1	
BC-3	TRANE	TEM4A0C42	1200	0.6	MED	7.2/3.6	208/1	4.1	48/22	50/25	1	
BC-3.5	TRANE	TEM4A0C49	1400	0.6	MED-HIGH	7.2/3.6	208/1	6.0	51/22	60/25	1	
BC-4	TRANE	TEM4A0C49	1600	0.6	HIGH	7.2/3.6	208/1	6.0	51/22	60/25	1	
BC-5	TRANE	TEM6A0C60	1950	0.6	HIGH	7.2/3.6	208/1	6.8	52/22	60/25	1	

General Notes:
 - Single point connection required, coordinate the exact electrical requirements of equipment provided with E.C., UNO
 - Electric heater shall not operate simultaneously with heat pump. Electric heater shall be used as back-up heat only.

Notes:
 1. Blower coil heat has two circuits, first circuit indicated includes fan motor.

DUCTLESS SPLIT SYSTEM SCHEDULE

INDOOR UNIT	
MARK	IU-1
MANUFACTURER	TRANE-MITSUBISHI
MODEL	TPKA0A018LA00A
CONFIGURATION	WALL MOUNTED
VOLTAGE / PHASE	208/1
MCA / MOC	NOTE #4
NOMINAL COOLING CAPACITY	18,000 BTU/H
OUTDOOR HEAT PUMP UNIT	
MARK	OU-1
MANUFACTURER	TRANE-MITSUBISHI
MODEL	TRUZA0181KA70NA
NOMINAL COOLING CAPACITY	18,000 BTU/H
VOLTAGE / PHASE	208/1
MIN. CKT. AMPS	11
MAX C/B SIZE	28

Notes:
 1. Provide refrigerant piping sized in accordance with manufacturer's recommendations for actual field installed length and routing.
 2. Provide wired thermostat for each indoor unit.
 3. Provide with R410-A refrigerant.
 4. Indoor units are powered from outdoor unit.
 5. Provide high wall mount indoor unit with manufacturer's accessory condensate lift.
 6. Provide with advanced wind baffle for cooling down to -40F O.A.D.B.

PLUMBING FIXTURE SCHEDULE

MARK	MANUFACTURER	DESCRIPTION	TRIM		ROUGH-IN SIZES				NOTES
			MANUFACTURER	DESCRIPTION	WASTE	VENT	CW	HW	
WC	KOHLER	Model 3999-0 "Highline" ADA compliant flush tank water closet, white vitreous china, two piece, 12" rough-in, elongated 16-1/2" high bowl, siphon jet flushing action, 1.28 GPF, polished chrome actuator located on open side of room.	KOHLER	#K-4636-0 white, closed front plastic seat with slow closing lid.	4"	2"	1/2"	---	1
LAV	KOHLER	Model 2196-4-0 self-rimming lavatory, white vitreous china, 20"W x 17", faucet holes on 4" centers. Maximum 1.5 GPM flow rate.	KOHLER	Model 15182-4RA single handle faucet. Provide pop-up drain.	2"	1-1/2"	1/2"	1/2"	1,2,4
KS	JUST	Model DL-ADA-2233-A-GR two compartment 18 GA stainless steel sink, self rimming, 14"x16"x5"D inside, fully undercated, faucet holes as req., and drain holes center rear. Maximum 1.8 GPM flowrate.	DELTA IN-SINK-ERATOR	Model 400-HDF single handle kitchen sink faucet with hose spray attachment. Chrome finish. Provide basket strainer. "Badger 5" garbage disposal, 1/2hp, 120V, cord and plug connected.	2"	1-1/2"	1/2"	1/2"	1,3,2,4
SH-A	AQUARIUS	Center drain option: Model "G-3637-8F" reinforced fiberglass ADA base model shower, 39-1/2"W x40-1/4"D x77-1/4"H, with integral soap/toiletry shelves in accordance with ADA requirements, fold-up seat, right or left hand rough-in as required, center drain, white finish. Maximum 2.0 GPM flowrate. Provide with collapsible dam.	DELTA	Model R10000-UNWS/T13220-H2OT pressure balancing shower valve with integral temperature limits, single metal lever handle, handshower with double check valves, flexible hose, and 24" stainless steel slide bar.	2"	1-1/2"	1/2"	1/2"	1
SH-B	AQUARIUS	Model MP6033-8F-.75 reinforced fiberglass ADA roll-in shower, 60"W x33-3/8"D x73-3/4"H, with integral soap/toiletry shelves in accordance with ADA requirements, right or left hand rough-in as required, white finish. Maximum 2.0 GPM flowrate. Provide with collapsible dam.	DELTA	Model R10000-UNWS/T13220-H2OT pressure balancing shower valve with integral temperature limits, single metal lever handle, handshower with double check valves, flexible hose, and 24" stainless steel slide bar.	2"	1-1/2"	1/2"	1/2"	1, 5
SS	FIAT	Model MSB-2424 one piece molded stone mop basin, 24" square, stainless steel integral drain body with caulk connection, stainless steel wall guards.	DELTA	Model 28T9 faucet with hose thread outlet, vacuum breaker, pail hook, wall brace, metal lever handles.	3"	1-1/2"	3/4"	3/4"	4
WH	WOODFORD	Model 25 frost proof wall hydrant with anti-siphon vacuum breaker, metal handle.			---	---	3/4"	---	
CCB	WATER TITE	Model W4700 recessed washing machine box with 2"PVC/ABS drain coupling and knockout test cap. Two, 1/4 turn adaptor ball valves, sweat connection.			2"	2"	1/2"	1/2"	
ICB	WATER TITE	Model W9700 ice maker connection box with 1/4 turn ball valve and 1/2" sweat copper connection.			---	---	1/2"	---	
FD	SIOUX CHIEF	Series 833 adjustable floor drain with nickel bronze strainer. Provide Proset Trapguard trap protection device.			2"	---	---	---	6
FS	SIOUX CHIEF	Series 861 PVC floor sink with PVC strainer. Provide Proset Trapguard trap protection device.			3"	---	---	---	6
HWH	A.O. SMITH	Model ENJ-40, 38 gallon lowboy electric water heater, (2) non simultaneous 4500 watts, 208 volt / 1-phase heating elements, 21 GPH recovery @ 90°F temp rise. Minimum 0.94 Energy Factor. Supplied with temperature & pressure relief valve and brass drain valve.							

GENERAL:
 - Provide fixtures with all trim necessary for complete installation
 - Fixtures and installation shall meet all requirements of 2012 Green Plumbing and Mechanical Supplement, with local amendments.

NOTES:
 1. Fixture and installation to meet requirements of Americans with Disabilities Act.
 2. Provide Dearborn supplies with stops and escutcheon plate, 1-1/4" cast brass p-trap.
 3. Insulate water and waste piping below lavatory. Utilize insulation kit equivalent to LavGuard by Trueborn.
 4. Trim shall be provided with polished chrome finish.
 5. Order shower pan with offset hole as required to avoid structural conflicts. Field verify exact drain locations prior to rough-in to avoid conflicts with existing structure.
 6. Provide trap protection device equal to Proset Trapguard.

EXHAUST FAN SCHEDULE

MARK	MANUFACTURER	MODEL	CFM	ESP (°wg)	POWER	VOLTS/PHASE	NOTES
EF-1	BROAN	XB80	80	0.4"	6 W	120 / 1	1,2,3,4,5,6
EF-2	BROAN	XB50	50	0.35"	6 W	120 / 1	3,4,5,6
EF-3	BROAN	XB110	110	0.3"	8 W	120 / 1	1,2,3,4,5,6

NOTES:
 1. Fixture shall be Energy Star listed.
 2. Fixture shall operate at <1 SONE
 3. Provide with integral disconnect.
 4. Provide manufacturer's wall cap or roof jack, see plans.
 5. Provide integral backdraft damper.
 6. Provide with manufacturer's ceiling radiation damper. Omit radiation dampers where rated ceilings are not present, coordinate with Arch.

ELECTRIC HEATER SCHEDULE

MARK	MANUF.	MODEL	MOUNTING	WATTS	VOLTAGE/PHASE	DESCRIPTION	NOTES
EWH	TRANE	UHWA	WALL	1,500	120/1	Architectural fan forced wall heater	1,2,3

NOTES:
 1. Provide with high temp. thermal cutout and fan delay.
 2. Provide with integral thermostat and unit mounted disconnect switch.
 3. Provide with manufacturer's surface mounting adapter sleeve. Coordinate exact mounting requirements and locations with Arch. and rated construction.

HEAT PUMP SCHEDULE

MARK	MANUF.	MODEL	NOMINAL TONS	COOLING CAPACITY					HEATING CAPACITY			ELECTRICAL			
				OA DB	ENT AIR DB/WB	SENS MBH	TOT MBH	MIN SEER	OA DB	ENT AIR DB	TOT MBH	MIN HSPF	MCA	MOC	V/PH
HP-1.5	TRANE	4TWR6018	1.5	105	75/63	11.9	14.6	15	47	70	18.3	8.5	12	20	208/1
HP-2	TRANE	4TWR6024	2	105	75/63	16.8	21.1	15.5	47	70	23.2	8.5	13	25	208/1
HP-2.5	TRANE	4TWR6030	2.5	105	75/63	21.5	26.2	15.5	47	70	26.8	8.5	17	25	208/1
HP-3	TRANE	4TWR4036	3	105	75/63	26.1	31.7	15	47	70	34.4	8.5	18	30	208/1
HP-3.5	TRANE	4TWR6042	3.5	105	75/63	29.8	37.1	16	47	70	38.7	9	21	35	208/1
HP-4	TRANE	4TWR4048	4	105	75/63	33.8	41.9	16	47	70	44.0	9	24	40	208/1
HP-5	TRANE	4TWR4060	5	105	75/63	41.9	51.4	15	47	70	56.1	9	27	45	208/1

Notes:
 1. Refrigerant lines shall be field fabricated. Coordinate line sizing requirements with equipment manufacturer for length of run for each apartment. Provide suction accumulators, etc. as required.
 2. Heat pump system shall have greater than 8.2 HSPF/14.5 SEER/12 EER ARI rating and shall be Energy Star qualified. Verify minimum energy rating requirements with local AHJ.
 3. Provide 7-day programmable thermostat.
 4. Provide with R140a refrigerant.
 5. Provide 2 sets of MERV-7 filters.

AIR DEVICE SCHEDULE

MARK	MANUFACTURER	MODEL	APPLICATION			FINISH	MOUNTING	DAMPER	DESCRIPTION	NOTES
			SUPPLY	RETURN	EXHAUST					
SD-A	HART & COOLEY	92HVV	•			WHITE	SURFACE	YES	Aluminum, straight blade vertical fin register with opposed blade damper	1,2,3
SD-B	HART & COOLEY	684	•			WHITE	SURFACE	YES	Steel, 4-way register with damper	1,2,3,5
SD-C	HART & COOLEY	SVH3	•			SATIN ANODIZED	SPIRAL DUCT	NO	Aluminum double deflection spiral duct diffuser with air scoop	2
SD-D	HART & COOLEY	DPD	•			WHITE	LAY-IN	YES	24x24" steel square plate diffuser, neck size as indicated on plans	2
RG-A	HART & COOLEY	650	•	•		WHITE	SURFACE	NO	Single deflection, steel, louvered face return grille	1,2,3,4
RG-B	PRICE	80	•			WHITE	SURFACE	NO	Aluminum egg crate return grille, size as indicated on plans	2,3

NOTES:
 1. Provide mounting frame as required for ceiling type.
 2. Maximum NC shall be 25.
 3. Paint objects visible through grilles with flat black paint.
 4. Neck size shall be same as face.
 5. Provide round to square neck adapter as required for runout size indicated on plans.



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M6.2

MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF OUTDOOR UNIT SCHEDULE

Tag Reference	Model Number	Nominal Cooling Capacity (BTU/h)	Nominal Heating Capacity (BTU/h)	Cooling Efficiency IEER/IEER [SEER]	Heating COP @ 47°F [HSPF]	Nom System Connected Capacity (% of NOM)	Design Cooling Outdoor Temp DB (°F)	Design Heating Outdoor Temp WB (°F)	Corrected Cooling Total Capacity (BTU/h)	Corrected Heating Capacity (BTU/h)	Electrical-Per Module 208/230				Notes / Options
											Voltage / Phase	MCA 208/230	RFS	MOCP	
HP-4a	NTXMSH48A182AA	48,000.0	54,000.0	0 / 12.2 [19.75]	3.65 [11.5]	100.0%	101.0	0.0	42,681.4	49,111.4	208/230V / 1-phase	36	40	40	1, 2, 3, 4

Notes & Options:
 1 Nominal cooling capacities are based on indoor coil EAT of 80/67°F (DB/WB), outdoor of 95°F (DB)
 2 Nominal heating capacities are based on indoor coil EAT of 70°F (DB), outdoor of 43°F (WB)
 3 Efficiency values for EER, IEER, COP are based on AHRI 1230 test method for mixture of ducted & non-ducted indoor units.
 4 Provide with hail guards.

MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF INDOOR UNIT SCHEDULE

Tag Reference	Model	Type	Nominal Cooling Capacity (BTU/h)	Nominal Heating Capacity (BTU/h)	Cooling Design Entering Temp DB/WB	Heating Design Entering Temp DB/WB (°F) /	Corrected Capacity		Heating Diversity Full/Partial	Heating Capacity (BTU/h)	Estimated Cooling Coil LAT (°F)	Estimated Heating Coil LAT (°F)	Refrig Pipe Dim Liquid/Suction (inch)	Fan Speed Setting	Peak Fan Airflow (cfm)	Voltage / Phase	Electrical MCA/MFS	Notes / Options	
							Cooling Diversity Full/Partial	Cooling Sensible Capacity											
IU-4a-1	TPFFYP024CS140A	Floor-Standing Type (Exposed)	24,000.0	27,000.0	80.0/67.0	70.0	PARTIAL DEMAND	22,505.5	14,897.5	FULL DEMAND	24,555.7	49.4	119.6	3/8 / 5/8	HIGH	494	208/230V/1-phase	0.59/0.64/15	1, 2, 3, 4
IU-4a-2	TPFFYP024CS140A	Floor-Standing Type (Exposed)	24,000.0	27,000.0	80.0/67.0	70.0	PARTIAL DEMAND	22,505.5	14,897.5	FULL DEMAND	24,555.7	49.4	119.6	3/8 / 5/8	HIGH	494	208/230V/1-phase	0.59/0.64/15	1, 2, 3, 4

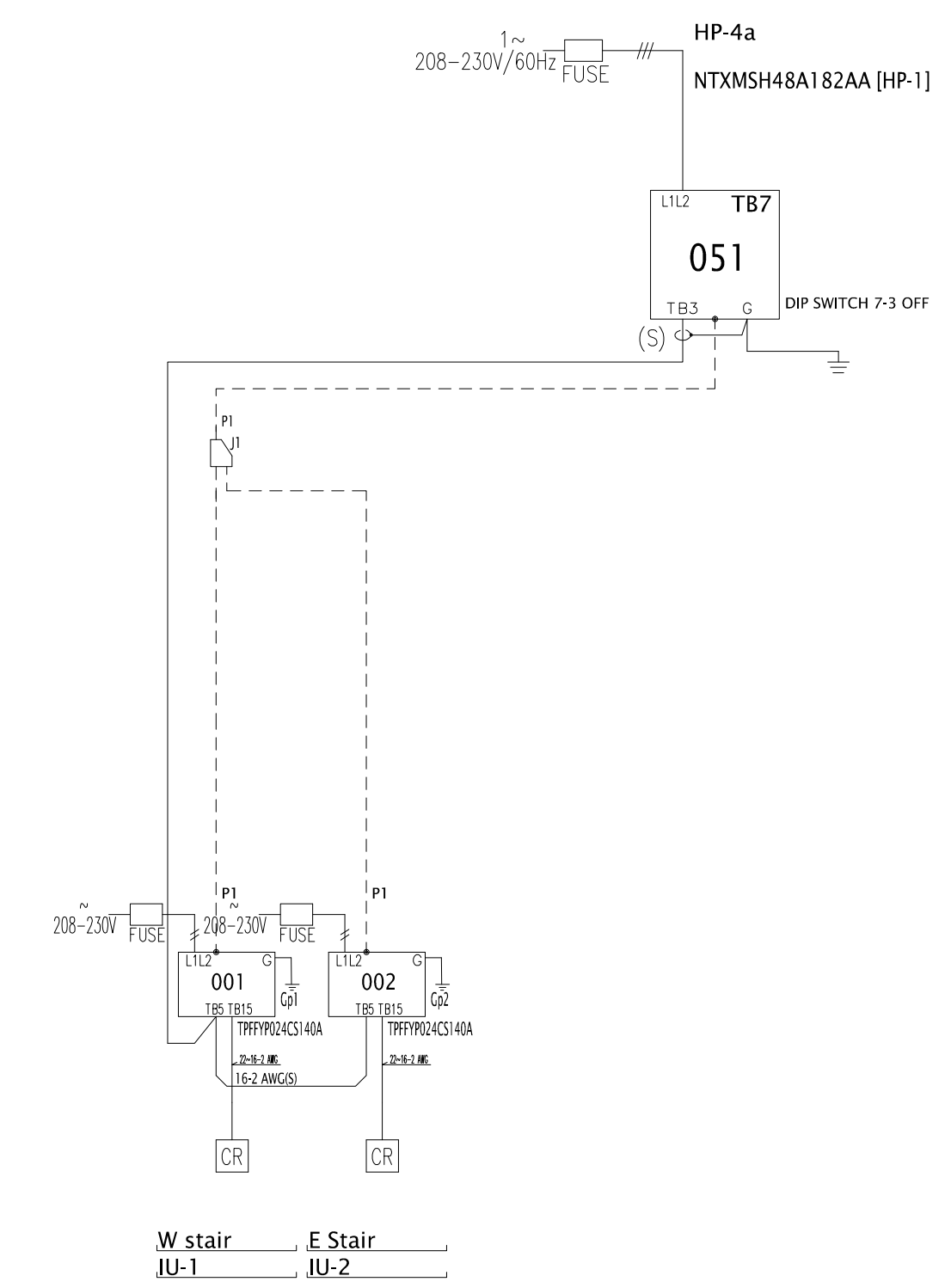
Notes & Options:
 1 Nominal cooling capacities are based on indoor coil EAT of 80/67°F (DB/WB), outdoor of 95°F (DB)
 2 Nominal heating capacities are based on indoor coil EAT of 70°F (DB), outdoor of 43°F (WB)
 3 See outdoor unit schedule for outdoor ambient conditions, connected capacity, and other factors associated with corrected
 4 See schematic piping/control diagram for indication of required indoor unit remote controllers, system controllers, and

DIAGRAM	SYMBOL	LEGEND	CONT.No	PAGE
---	---	POWER WIRE		
---	---	CONTROL WIRE		
---	---	REF. PIPE		

PIPING AND CONTROLS	SYMBOL	BRANCH PIPE MODEL NAME
---	---	COMPRESSOR
---	---	LIQUID PIPE
---	---	SUCKER PIPE
---	---	CR
---	---	TR-PT3520AH

CITY MULTI SYSTEM SCHEMATIC DWG.

This drawing is schematic in nature. Final routing of piping & wiring shall be determined by the installing contractor and/or designer of record. Additional refrigerant charge is needed depending on the size and length of extended piping. Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book.
 1.25mm(1/8 AWG) : 1.25mm(1/8 AWG) or more, 0.75mm(20 AWG) : between 0.5mm(24 AWG) and 0.75mm(20 AWG).



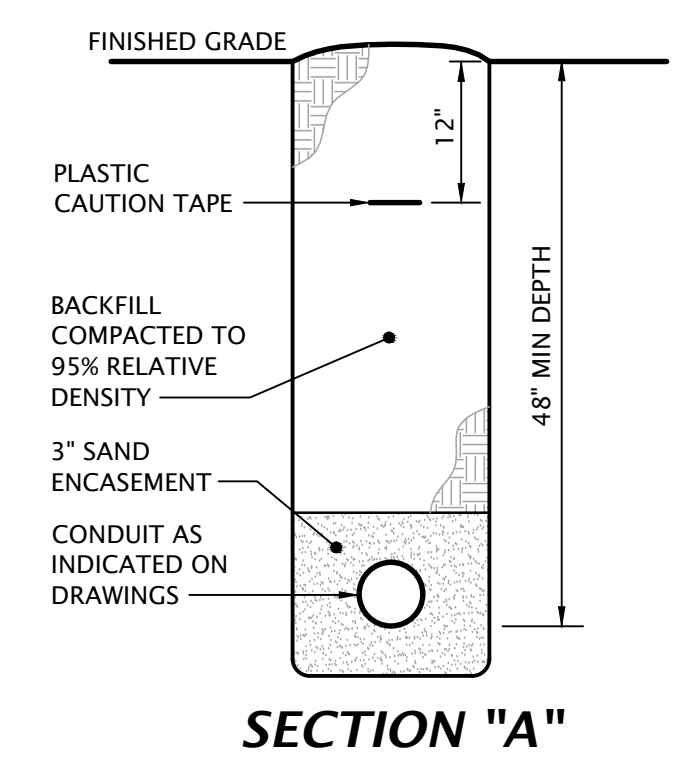
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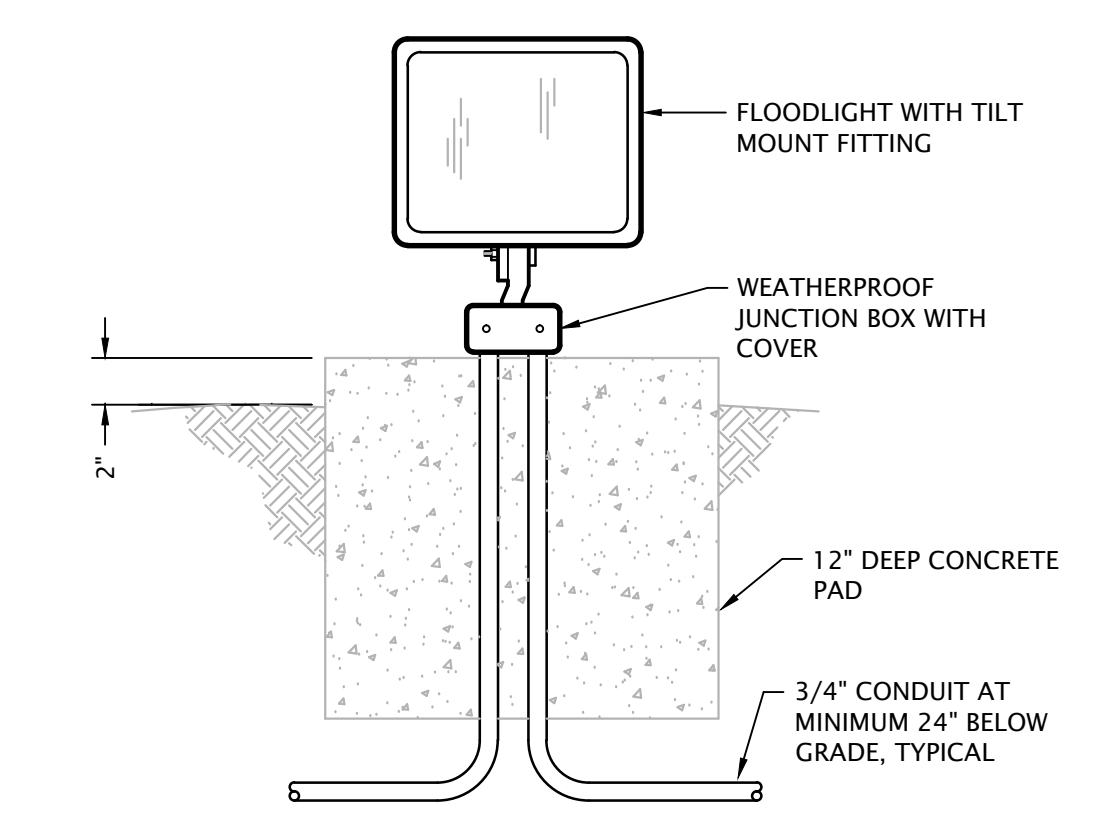
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DATE:	12-3-2021
JOB:	20-3065
SHEET:	E1.0

7 ELECTRICAL SITE PLAN NOTES BY SYMBOL

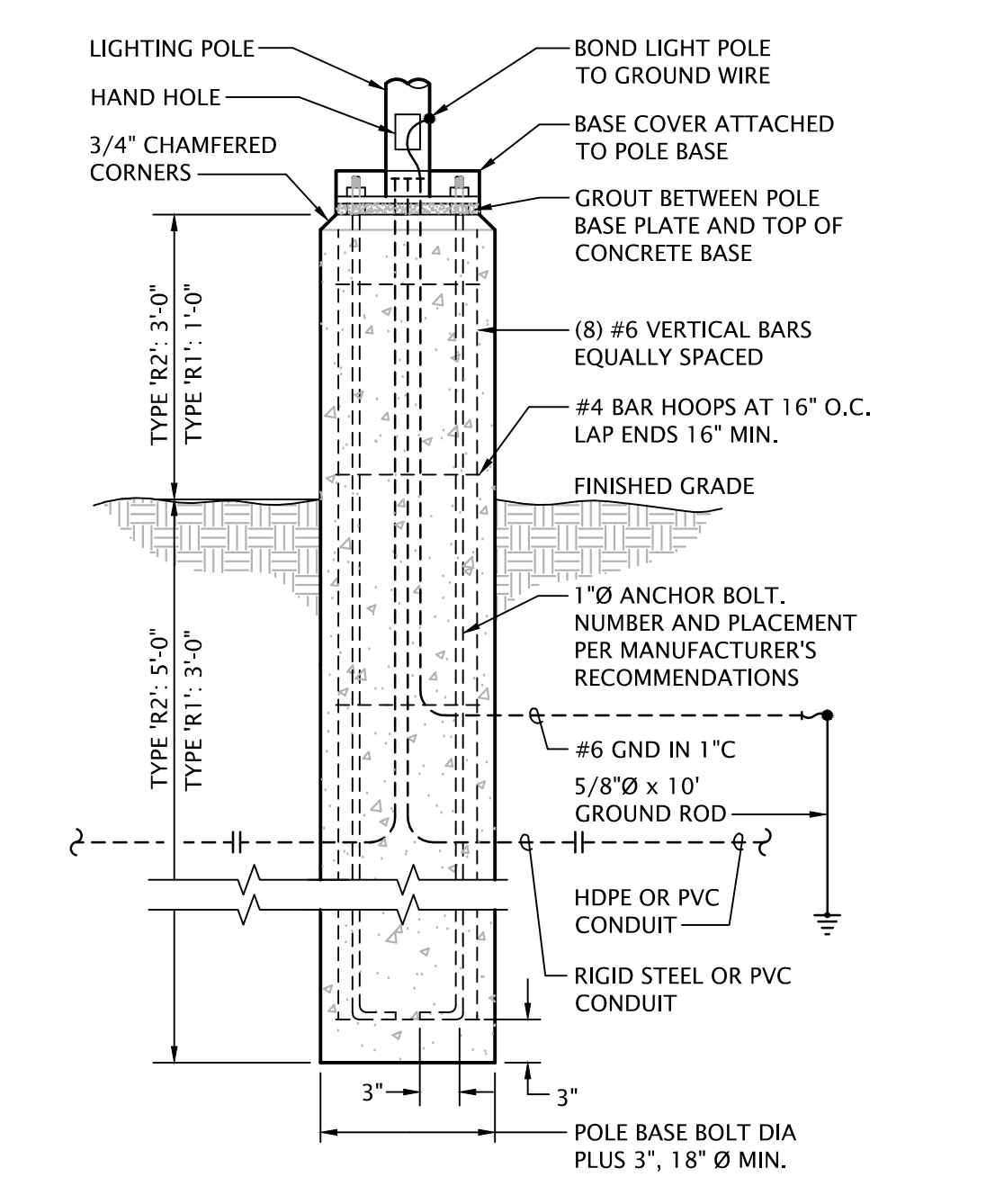
- ROUTE CIRCUIT THROUGH BUILDING 'A' EXTERIOR LIGHTING CONTROLS. SEE DETAIL 4.E6.1 EXTERIOR LIGHTING CONTROL INFORMATION.
- ROUTE CIRCUIT THROUGH BUILDING 'C' EXTERIOR LIGHTING CONTROLS. SEE DETAIL 4.E6.1 EXTERIOR LIGHTING CONTROL INFORMATION.
- POLE MOUNTED AREA LIGHT, REFERENCE 2.E1.0 FOR MORE INFORMATION.
- MONUMENT LIGHT, REFERENCE 3.E1.0 FOR MORE INFORMATION.
- EXISTING UTILITY POWER POLE TO BE UTILIZED FOR NEW 1-PHASE PRIMARY DROPS TO BUILDINGS 'B' AND 'C' TRANSFORMERS. POWER COMPANY TO REMOVE EXISTING 3-PHASE TRANSFORMER BANK FROM POLE.
- EXISTING POWER COMPANY OVERHEAD 3-PHASE PRIMARY ELECTRICAL DISTRIBUTION TO REMAIN.
- EXISTING UTILITY POWER POLE TO BE UTILIZED FOR NEW 3-PHASE PRIMARY DROP TO BUILDING 'A' TRANSFORMER.
- PROVIDE 4" CONDUIT WITH PULL STRING BELOW GRADE FOR POWER COMPANY PROVIDED 3-PHASE PRIMARY CABLE. COORDINATE EXACT ROUTING WITH AEP TEXAS. SEE DETAIL 4, THIS SHEET.
- PROVIDE 2" CONDUIT WITH PULL STRING BELOW GRADE FOR POWER COMPANY PROVIDED 1-PHASE PRIMARY CABLE. COORDINATE EXACT ROUTING WITH AEP TEXAS. SEE DETAIL 4, THIS SHEET.
- POWER COMPANY 3-PHASE PAD MOUNTED TRANSFORMER. GENERAL CONTRACTOR SHALL PROVIDE 8' X 9' CONCRETE PAD PER POWER COMPANY REQUIREMENTS. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH AEP TEXAS PRIOR TO COMMENCING WORK.
- POWER COMPANY 1-PHASE PAD MOUNTED TRANSFORMER. POWER COMPANY SHALL PROVIDE POLYMER PAD. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH AEP TEXAS PRIOR TO COMMENCING WORK.
- EXISTING UTILITY POLE TO BE DEMOLISHED.
- UNDERGROUND SERVICE LATERAL FROM UTILITY TRANSFORMER TO BUILDING. SEE RISER DIAGRAM ON SHEET E6.1.
- ELECTRICAL SERVICE TAP BOX, METER CENTER, AND FIRE PUMP SERVICE METER. SEE RISER DIAGRAM ON SHEET E6.1.



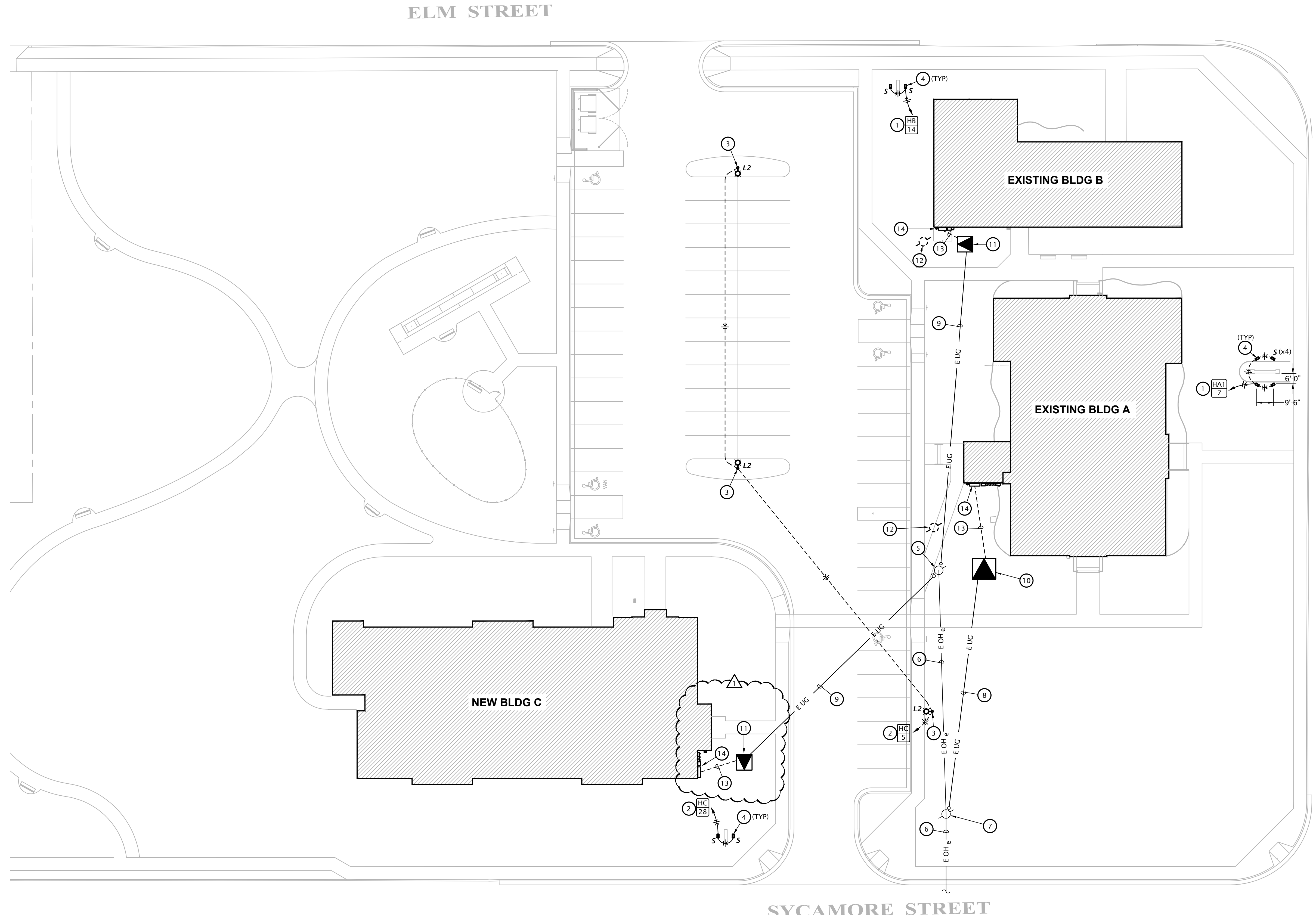
4 CONDUIT TRENCH DETAILS
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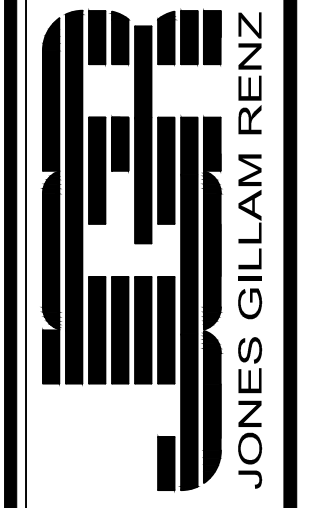
3 MONUMENT LIGHT DETAIL
 No Scale



2 CONCRETE POLE BASE DETAIL
 No Scale



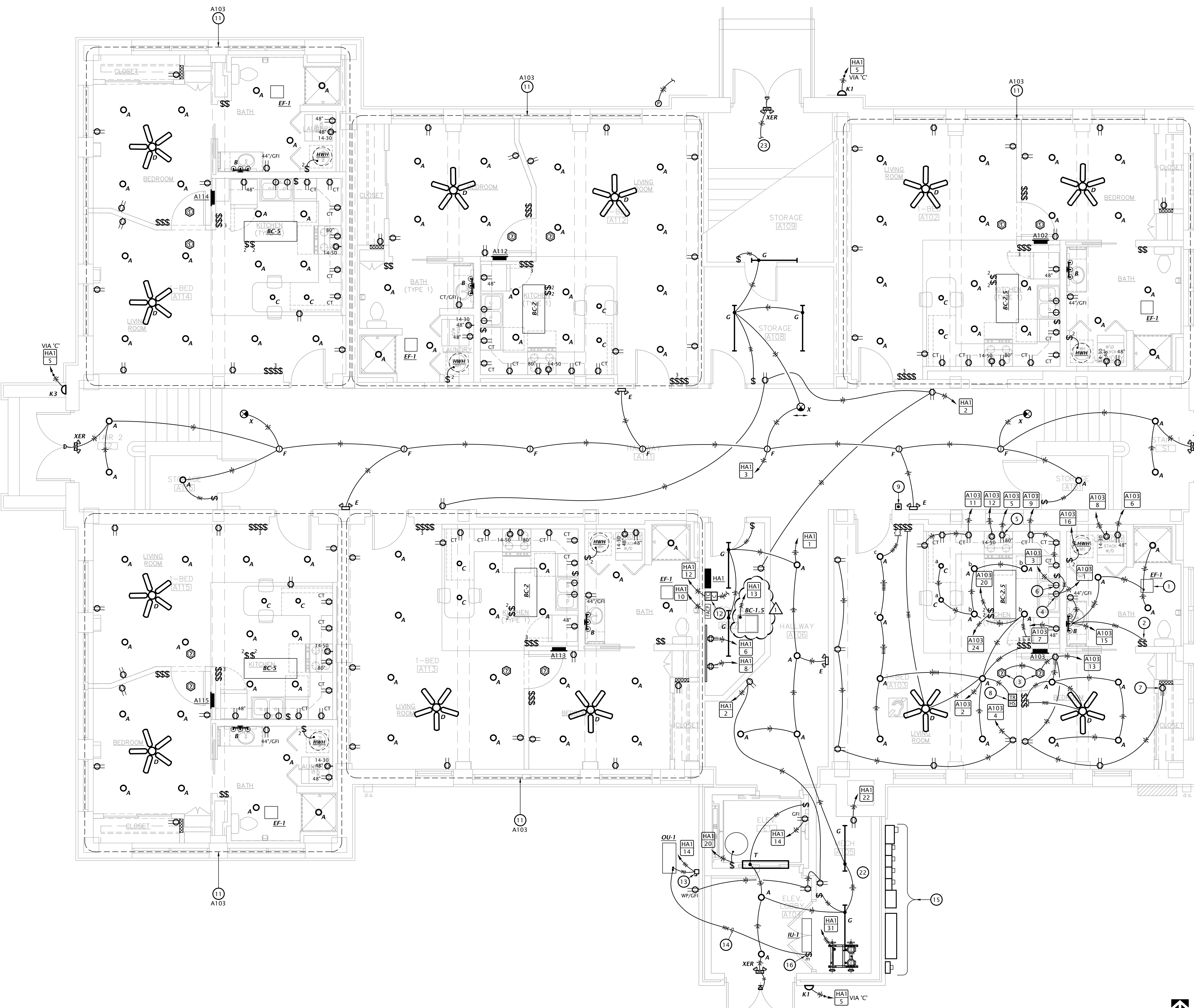
1 ELECTRICAL SITE PLAN
 1" = 20'-0"



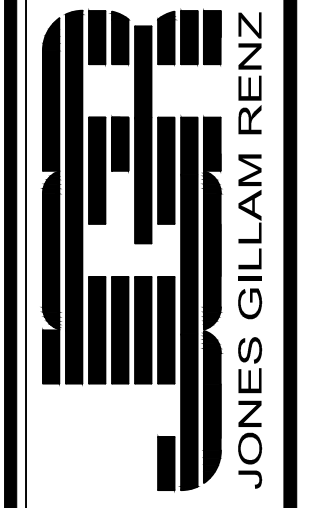
THE HERITAGE at ABILENE
 NEW BUILDING, RESTORATION, & REHAB APARTMENTS
 ABILENE, TEXAS

ELECTRICAL PLAN NOTES BY SYMBOL

- NOTES SHOWN ARE TYPICAL FOR ALL APARTMENTS WHERE APPLICABLE.
- VERIFY EXACT LOCATIONS AND ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT PROVIDED OR SELECTED BY OWNER.
 - PROVIDE TAMPER PROOF RECEPTACLES IN DWELLING UNITS PER NEC REQUIREMENTS.
 - CONNECT EXHAUST FAN PROVIDED BY MECHANICAL CONTRACTOR.
 - SWITCH CLOSEST TO THE DOOR SHALL CONTROL ALL LIGHTS IN BATHROOM, AND THE OTHER SWITCH SHALL CONTROL THE EXHAUST FAN.
 - CEILING MOUNTED SMOKE ALARM IN APARTMENTS TO BE 120VAC WITH 9V BATTERY BACKUP, INTERCONNECTED TO OTHERS IN SAME APARTMENT. DEVICE SHALL HAVE PHOTOELECTRIC TYPE SMOKE DETECTOR WITH SOUNDER HORN HAVING AN 85dB OUTPUT AT 10', SHALL HAVE A SINGLE BUTTON FOR TEST/SILENCE AND LED INDICATOR LIGHTS, AND SHALL BE UL 217 LISTED, FIRST ALERT #70108 OR EQUAL.
 - PROVIDE SIMPLEX RECEPTACLE BELOW COUNTER FOR DISPOSAL CONTROLLED BY SWITCH MOUNTED ABOVE COUNTER.
 - PROVIDE RECEPTACLE IN CABINET FOR MICROWAVE. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED. SEE ARCHITECTURAL ELEVATIONS.
 - PROVIDE SIMPLEX RECEPTACLE BELOW COUNTER FOR CORD AND PLUG CONNECTION OF DISHWASHER. PROVIDE CORD AND GROUNDING PLUG AS REQUIRED. RECEPTACLE SHALL BE LOCATED IN BASE CABINET ADJACENT TO DISHWASHER TO ALLOW ACCESS TO PLUG.
 - POWER FOR APARTMENT TELECOM EQUIPMENT. COORDINATE WITH OVERALL TELECOM PLANS E1.3 & E1.4.
 - PROVIDE DOOR ANNUNCIATOR SYSTEM A/V HORN/STROBE DEVICE AND LOW VOLTAGE TRANSFORMER AT ALL ACCESSIBLE APARTMENTS AND ALSO AT APARTMENTS DESIGNATED FOR HEARING-IMPAIRED GUESTS. REFER TO ARCH DRAWINGS FOR APPLICABLE ROOMS. INSTALL HORN/STROBE APPLIANCE AT 80" AFF PER ADA. INSTALL TRANSFORMER IN DOUBLE GANG JUNCTION BOX ABOVE HORN/STROBE WITH BLANK COVER PLATE AND PROVIDE LOW VOLTAGE CONTROL WIRING. REFER TO DETAIL 3, SHEET E6.1. PROVIDE ENGRAVED SIGN AT THE HORN/STROBE DEVICE TO READ "DOOR".
 - PROVIDE PUSH BUTTON AT 48" AFF FOR ANNUNCIATOR SYSTEM AT ALL ACCESSIBLE APARTMENTS AND ALSO AT APARTMENTS DESIGNATED FOR HEARING-IMPAIRED. REFER TO ARCH DRAWINGS FOR APPLICABLE ROOMS. REFER TO DETAIL 3, SHEET E6.1.
 - PROVIDE RECEPTACLE IN CABINET FOR RANGE HOOD AND INSTALL SWITCH ON WALL FOR CONTROL OF RANGE HOOD. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED. SEE ARCHITECTURAL ELEVATIONS.
 - REFER TO APARTMENT UNIT INDICATED FOR CIRCUITRY REQUIREMENTS.
 - EXTERIOR LIGHTING CONTROLS. SEE 4-E6.1 FOR MORE INFORMATION.
 - PROVIDE 30A/2P NON-FUSED DISCONNECT SWITCH IN NEMA 3R ENCLOSURE AND MAKE FINAL CONNECTION TO EQUIPMENT.
 - (3) #12, #12G, 1/2"C BETWEEN OUTDOOR AND INDOOR A/C UNITS.
 - ELECTRICAL SERVICE TAP BOX, METER CENTER, AND FIRE PUMP METER. SEE RISER DIAGRAMS ON SHEET E6.1.
 - 30A/3P MANUAL MOTOR STARTER SNAP SWITCH (W/O OVERLOAD PROTECTION) IN NEMA 1 ENCLOSURE. MOUNT ADJACENT TO INDOOR A/C UNIT AND MAKE FINAL CONNECTION.
 - 30A/2P DISCONNECT SWITCH WITH SOLID NEUTRAL AND (1) 20A DUAL-ELEMENT, TIME DELAY FUSE IN NEMA 1 ENCLOSURE FOR ELEVATOR CAB LIGHTS & EXHAUST. SWITCH SHALL BE CAPABLE OF BEING LOCKED "OFF". MOUNT AT 6'-0" AFF TO TOP AND LABEL WITH CIRCUIT NUMBER. COORDINATE EXACT MOUNTING LOCATION AND REQUIREMENTS WITH ELEVATOR EQUIPMENT INSTALLER. PROVIDE FINAL ELECTRICAL CONNECTION TO INSPECTION AND TEST PANEL (LDT) AT TOP OF 3RD FLOOR WITHIN ELEVATOR DOOR JAMB.
 - ELEVATOR POWER MODULE SWITCH: 60A/208V/3P SWITCH COMPLETE WITH 60A DUAL ELEMENT, TIME DELAY CLASS 'T' FUSES, 120V CONTROL TRANSFORMER, FIRE ALARM SAFETY INTERFACE RELAY, KEY TEST SWITCH, GREEN PILOT LIGHT, AUXILIARY CONTACTS FOR ELEVATOR RECALL, AND FIRE ALARM VOLTAGE MONITORING RELAY. EATON BUSSMAN #PS-6-T20-R1-K-G-B-F1 OR EQUAL. COORDINATE EXACT MOUNTING LOCATION AND REQUIREMENTS WITH ELEVATOR EQUIPMENT INSTALLER.
 - 60A/3P NON-FUSED DISCONNECT SWITCH (JH1) IN NEMA 1 ENCLOSURE. PROVIDE WITH SPST AUXILIARY CONTACTS RATED FOR MIN 2A AT 24VDC. MAKE FINAL CONNECTION TO ELEVATOR FUSE BOX. COORDINATE REQUIREMENTS WITH ELEVATOR EQUIPMENT INSTALLER.
 - 3-PHASE POWER FEEDER AND (2) #18 STRANDED CU CONDUCTORS FROM ELEVATOR POWER MODULE SWITCH TO 'JH1' DISCONNECT SWITCH.
 - VERIFY EXACT LOCATION OF RECEPTACLE, LUMINAIRE, AND 'JH1' DISCONNECT SWITCH AT TOP OF HOISTWAY WITH ELEVATOR EQUIPMENT INSTALLER.
 - REFER TO FIRE PUMP ELECTRICAL SERVICE RISER DIAGRAM, 6/E6.1, FOR POWER TO FIRE PUMP AND ACCESSORIES.
 - SEE SHEET E1.2 FOR CONTINUATION.
 - SEE SHEET E1.1 FOR CONTINUATION.



BUILDING A FIRST FLOOR ELECTRICAL PLAN
 1/4" = 1'-0"



THE HERITAGE at ABILENE
 NEW BUILDING, RESTORATION, & REHAB APARTMENTS
 ABILENE, TEXAS

BUILDING A

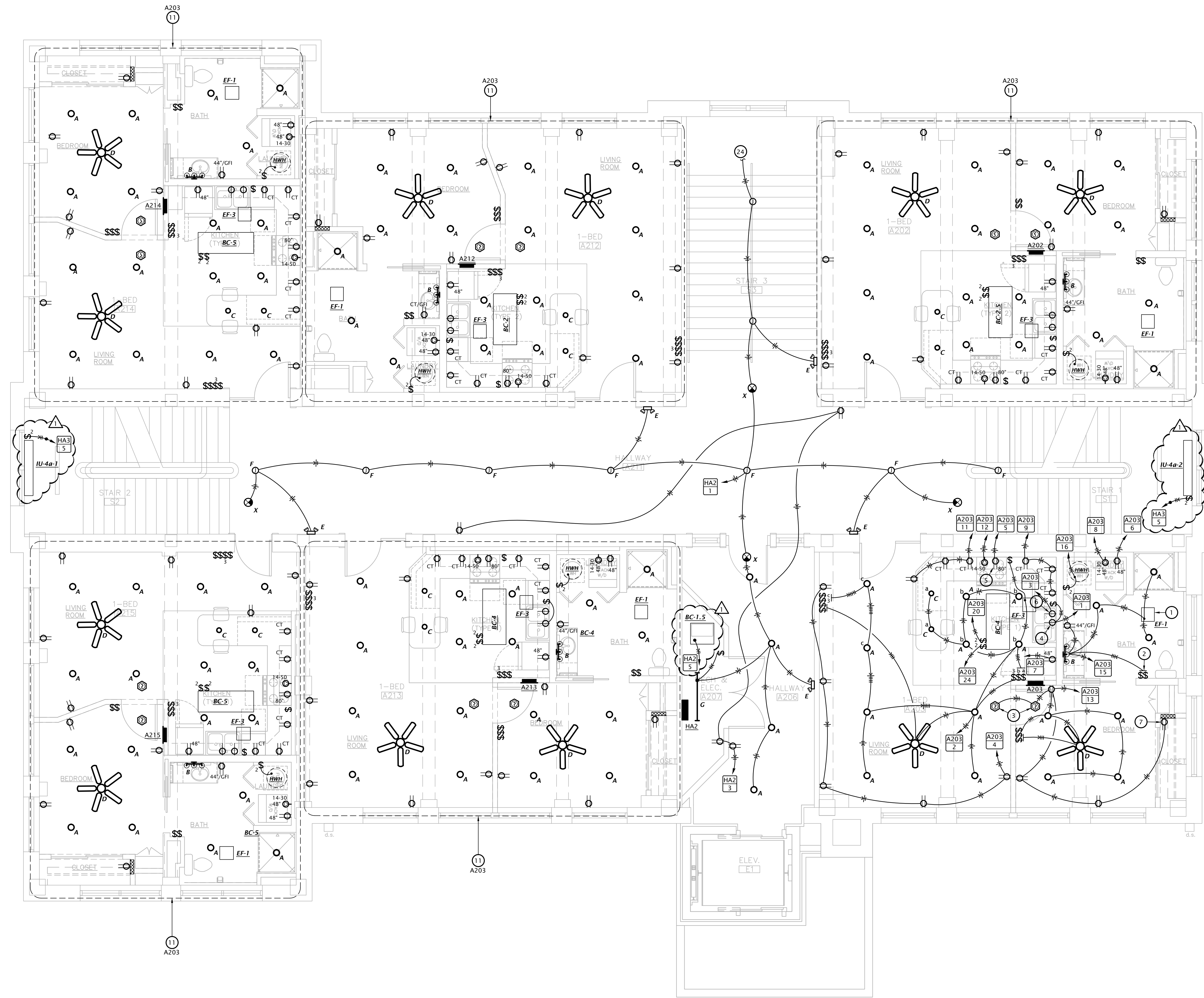
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SHEET:	E1.2

E1.2

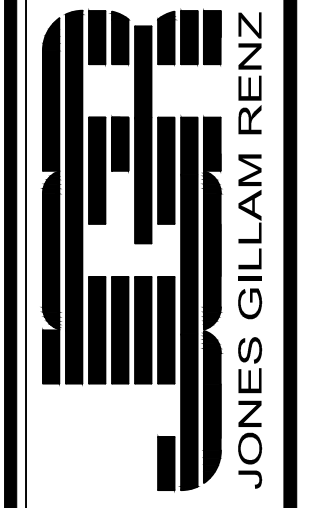
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ELECTRICAL PLAN NOTES BY SYMBOL

- NOTES SHOWN ARE TYPICAL FOR ALL APARTMENTS WHERE APPLICABLE.
- VERIFY EXACT LOCATIONS AND ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT PROVIDED OR SELECTED BY OWNER.
 - PROVIDE TAMPER PROOF RECEPTACLES IN DWELLING UNITS PER NEC REQUIREMENTS.
 - CONNECT EXHAUST FAN PROVIDED BY MECHANICAL CONTRACTOR.
 - SWITCH CLOSEST TO THE DOOR SHALL CONTROL ALL LIGHTS IN BATHROOM, AND THE OTHER SWITCH SHALL CONTROL THE EXHAUST FAN.
 - CEILING MOUNTED SMOKE ALARM IN APARTMENTS TO BE 120VAC WITH 9V BATTERY BACKUP, INTERCONNECTED TO OTHERS IN SAME APARTMENT. DEVICE SHALL HAVE PHOTOELECTRIC TYPE SMOKE DETECTOR WITH SOUNDER HORN HAVING AN 85DB OUTPUT AT 10'; SHALL HAVE A SINGLE BUTTON FOR TEST/SILENCE AND LED INDICATOR LIGHTS, AND SHALL BE UL 217 LISTED, FIRST ALERT #7010B OR EQUAL.
 - PROVIDE SIMPLEX RECEPTACLE BELOW COUNTER FOR DISPOSAL CONTROLLED BY SWITCH MOUNTED ABOVE COUNTER.
 - PROVIDE RECEPTACLE IN CABINET FOR MICROWAVE. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED. SEE ARCHITECTURAL ELEVATIONS.
 - PROVIDE SIMPLEX RECEPTACLE BELOW COUNTER FOR CORD AND PLUG CONNECTION OF DISHWASHER. PROVIDE CORD AND GROUNDING PLUG AS REQUIRED. RECEPTACLE SHALL BE LOCATED IN BASE CABINET ADJACENT TO DISHWASHER TO ALLOW ACCESS TO PLUG.
 - POWER FOR APARTMENT TELECOM EQUIPMENT. COORDINATE WITH OVERALL TELECOM PLANS E1.3 & E1.4.
 - PROVIDE DOOR ANNUNCIATOR SYSTEM A/V HORN/STROBE DEVICE AND LOW VOLTAGE TRANSFORMER AT ALL ACCESSIBLE APARTMENTS AND ALSO AT APARTMENTS DESIGNATED FOR HEARING-IMPAIRED GUESTS. REFER TO ARCH DRAWINGS FOR APPLICABLE ROOMS. INSTALL HORN/STROBE APPLIANCE AT 80" AFF PER ADA. INSTALL TRANSFORMER IN DOUBLE GANG JUNCTION BOX ABOVE HORN/STROBE WITH BLANK COVER PLATE AND PROVIDE LOW VOLTAGE CONTROL WIRING. REFER TO DETAIL 3, SHEET E6.1. PROVIDE ENGRAVED SIGN AT THE HORN/STROBE DEVICE TO READ "DOOR".
 - PROVIDE PUSH BUTTON AT 48" AFF FOR ANNUNCIATOR SYSTEM AT ALL ACCESSIBLE APARTMENTS AND ALSO AT APARTMENTS DESIGNATED FOR HEARING-IMPAIRED. REFER TO ARCH DRAWINGS FOR APPLICABLE ROOMS. REFER TO DETAIL 3, SHEET E6.1.
 - PROVIDE RECEPTACLE IN CABINET FOR RANGE HOOD AND INSTALL SWITCH ON WALL FOR CONTROL OF RANGE HOOD. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED. SEE ARCHITECTURAL ELEVATIONS.
 - REFER TO APARTMENT UNIT INDICATED FOR CIRCUITRY REQUIREMENTS.
 - EXTERIOR LIGHTING CONTROLS. SEE 4-E6.1 FOR MORE INFORMATION.
 - PROVIDE 30A/2P NON-FUSED DISCONNECT SWITCH IN NEMA 3R ENCLOSURE AND MAKE FINAL CONNECTION TO EQUIPMENT.
 - (3) #12, #12G, 1/2" C BETWEEN OUTDOOR AND INDOOR A/C UNITS.
 - ELECTRICAL SERVICE TAP BOX, METER CENTER, AND FIRE PUMP METER. SEE RISER DIAGRAMS ON SHEET E6.1.
 - PROVIDE 30A/3P MANUAL MOTOR STARTER SNAP SWITCH (W/O OVERLOAD PROTECTION) IN NEMA 1 ENCLOSURE. MOUNT ADJACENT TO INDOOR A/C UNIT AND MAKE FINAL CONNECTION.
 - 30A/2P DISCONNECT SWITCH WITH SOLID NEUTRAL AND (1) 20A DUAL-ELEMENT, TIME DELAY FUSE IN NEMA 1 ENCLOSURE FOR ELEVATOR CAB LIGHTS & EXHAUST. SWITCH SHALL BE CAPABLE OF BEING LOCKED "OFF". MOUNT AT 6'-0" AFF TO TOP AND LABEL WITH CIRCUIT NUMBER. COORDINATE EXACT MOUNTING LOCATION AND REQUIREMENTS WITH ELEVATOR EQUIPMENT INSTALLER. PROVIDE FINAL ELECTRICAL CONNECTION TO INSPECTION AND TEST PANEL (LDU) AT TOP OF 3RD FLOOR WITHIN ELEVATOR DOOR JAMB.
 - ELEVATOR POWER MODULE SWITCH: 60A/208V/3P SWITCH COMPLETE WITH 60A DUAL ELEMENT, TIME DELAY CLASS 'J' FUSES, 120V CONTROL TRANSFORMER, FIRE ALARM SAFETY INTERFACE RELAY, KEY TEST SWITCH, GREEN PILOT LIGHT, AUXILIARY CONTACTS FOR ELEVATOR RECALL, AND FIRE ALARM VOLTAGE MONITORING RELAY. EATON BUSSMAN #PS-6-T20-R1-K-G-B-F1 OR EQUAL. COORDINATE EXACT MOUNTING LOCATION AND REQUIREMENTS WITH ELEVATOR EQUIPMENT INSTALLER.
 - 60A/3P NON-FUSED DISCONNECT SWITCH (JH1) IN NEMA 1 ENCLOSURE. PROVIDE WITH SPST AUXILIARY CONTACTS RATED FOR MIN 2A AT 24VDC. MAKE FINAL CONNECTION TO ELEVATOR FUSE BOX. COORDINATE REQUIREMENTS WITH ELEVATOR EQUIPMENT INSTALLER.
 - 3-PHASE POWER FEEDER AND (2) #18 STRANDED CU CONDUCTORS FROM ELEVATOR POWER MODULE SWITCH TO 'JH1' DISCONNECT SWITCH.
 - VERIFY EXACT LOCATION OF RECEPTACLE, LUMINAIRE, AND 'JH1' DISCONNECT SWITCH AT TOP OF HOISTWAY WITH ELEVATOR EQUIPMENT INSTALLER.
 - REFER TO FIRE PUMP ELECTRICAL SERVICE RISER DIAGRAM, 6/E6.1, FOR POWER TO FIRE PUMP AND ACCESSORIES.
 - SEE SHEET E1.2 FOR CONTINUATION.
 - SEE SHEET E1.1 FOR CONTINUATION.



BUILDING A SECOND FLOOR ELECTRICAL PLAN
 1/4" = 1'-0"



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 NEW BUILDING, RESTORATION, & REHAB APARTMENTS
 ABILENE, TEXAS

BUILDING A

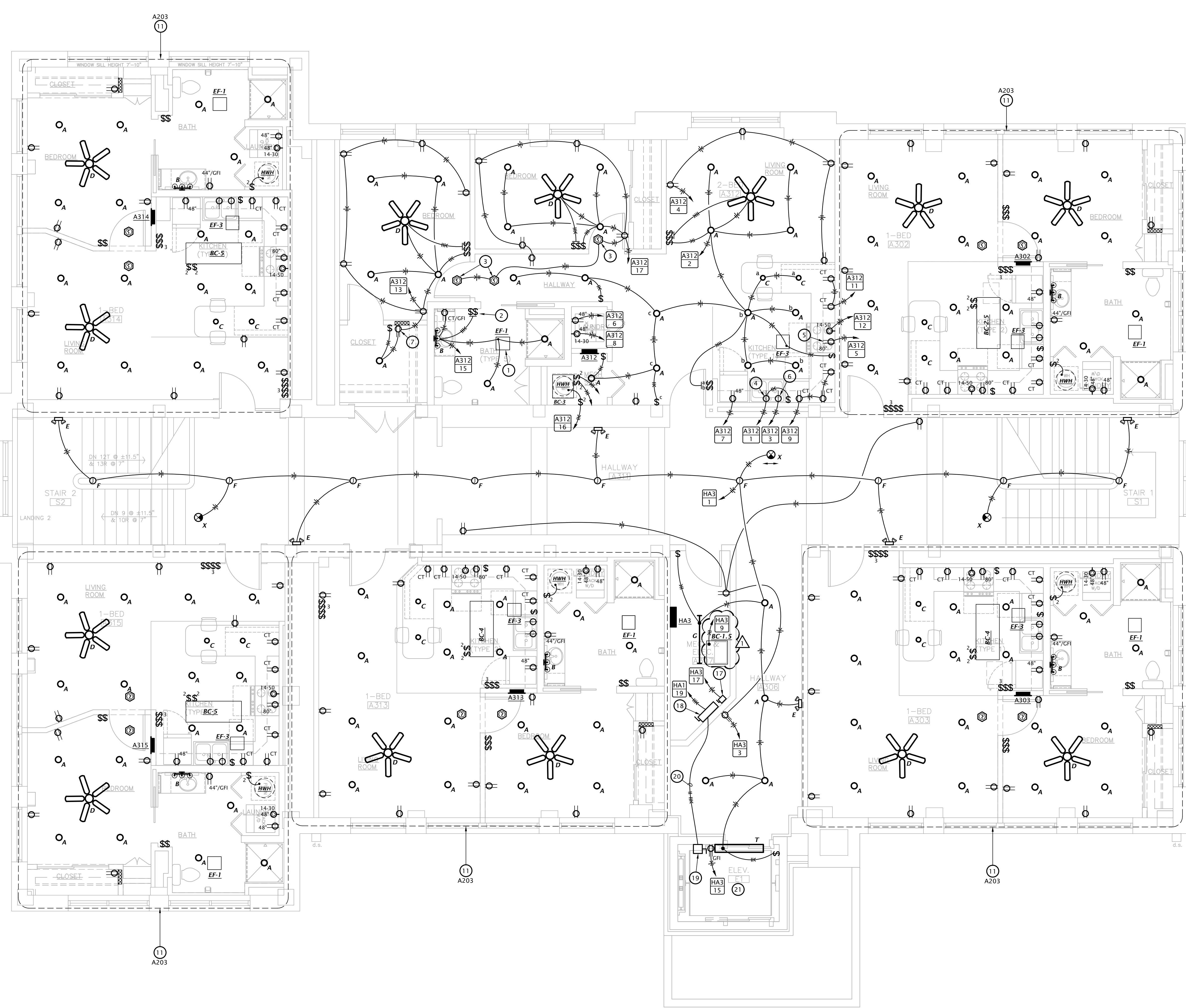
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SHEET:	E1.3

E1.3

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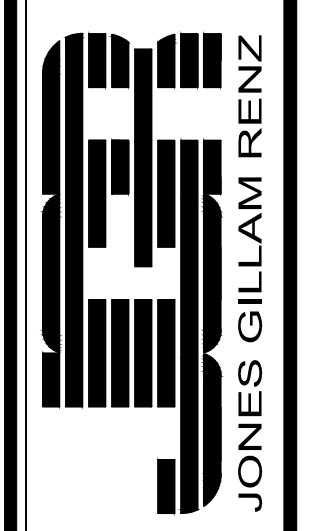
ELECTRICAL PLAN NOTES BY SYMBOL

- NOTES SHOWN ARE TYPICAL FOR ALL APARTMENTS WHERE APPLICABLE.
- VERIFY EXACT LOCATIONS AND ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT PROVIDED OR SELECTED BY OWNER.
 - PROVIDE TAMPER PROOF RECEPTACLES IN DWELLING UNITS PER NEC REQUIREMENTS.
- CONNECT EXHAUST FAN PROVIDED BY MECHANICAL CONTRACTOR.
 - SWITCH CLOSEST TO THE DOOR SHALL CONTROL ALL LIGHTS IN BATHROOM, AND THE OTHER SWITCH SHALL CONTROL THE EXHAUST FAN.
 - CEILING MOUNTED SMOKE ALARM IN APARTMENTS TO BE 120VAC WITH 9V BATTERY BACKUP, INTERCONNECTED TO OTHERS IN SAME APARTMENT. DEVICE SHALL HAVE PHOTOELECTRIC TYPE SMOKE DETECTOR WITH SOUNDER HORN HAVING AN 85dB OUTPUT AT 10', SHALL HAVE A SINGLE BUTTON FOR TEST/SILENCE AND LED INDICATOR LIGHTS, AND SHALL BE UL 217 LISTED. FIRST ALERT #7010B OR EQUAL.
 - PROVIDE SIMPLEX RECEPTACLE BELOW COUNTER FOR DISPOSAL CONTROLLED BY SWITCH MOUNTED ABOVE COUNTER.
 - PROVIDE RECEPTACLE IN CABINET FOR MICROWAVE. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED. SEE ARCHITECTURAL ELEVATIONS.
 - PROVIDE SIMPLEX RECEPTACLE BELOW COUNTER FOR CORD AND PLUG CONNECTION OF DISHWASHER. PROVIDE CORD AND GROUNDING PLUG AS REQUIRED. RECEPTACLE SHALL BE LOCATED IN BASE CABINET ADJACENT TO DISHWASHER TO ALLOW ACCESS TO PLUG.
 - POWER FOR APARTMENT TELECOM EQUIPMENT. COORDINATE WITH OVERALL TELECOM PLANS E1.3 & E1.4.
 - PROVIDE DOOR ANNUNCIATOR SYSTEM A/V HORN/STROBE DEVICE AND LOW VOLTAGE TRANSFORMER AT ALL ACCESSIBLE APARTMENTS AND ALSO AT APARTMENTS DESIGNATED FOR HEARING-IMPAIRED GUESTS. REFER TO ARCH DRAWINGS FOR APPLICABLE ROOMS. INSTALL HORN/STROBE APPLIANCE AT 80" AFF PER ADA. INSTALL TRANSFORMER IN DOUBLE GANG JUNCTION BOX ABOVE HORN/STROBE WITH BLANK COVER PLATE AND PROVIDE LOW VOLTAGE CONTROL WIRING. REFER TO DETAIL 3, SHEET E6.1. PROVIDE ENGRAVED SIGN AT THE HORN/STROBE DEVICE TO READ "DOOR".
 - PROVIDE PUSH BUTTON AT 48" AFF FOR ANNUNCIATOR SYSTEM AT ALL ACCESSIBLE APARTMENTS AND ALSO AT APARTMENTS DESIGNATED FOR HEARING-IMPAIRED. REFER TO ARCH DRAWINGS FOR APPLICABLE ROOMS. REFER TO DETAIL 3, SHEET E6.1.
 - PROVIDE RECEPTACLE IN CABINET FOR RANGE HOOD AND INSTALL SWITCH ON WALL FOR CONTROL OF RANGE HOOD. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED. SEE ARCHITECTURAL ELEVATIONS.
 - REFER TO APARTMENT UNIT INDICATED FOR CIRCUITRY REQUIREMENTS.
 - EXTERIOR LIGHTING CONTROLS. SEE 4-E6.1 FOR MORE INFORMATION.
 - PROVIDE 30A/2P NON-FUSED DISCONNECT SWITCH IN NEMA 3R ENCLOSURE AND MAKE FINAL CONNECTION TO EQUIPMENT.
 - (3) #12, #12G, 1/2" C BETWEEN OUTDOOR AND INDOOR A/C UNITS.
 - ELECTRICAL SERVICE TAP BOX, METER CENTER, AND FIRE PUMP METER. SEE RISER DIAGRAMS ON SHEET E6.1.
 - 30A/2P MANUAL MOTOR STARTER SNAP SWITCH (W/O OVERLOAD PROTECTION) IN NEMA 1 ENCLOSURE. MOUNT ADJACENT TO INDOOR A/C UNIT AND MAKE FINAL CONNECTION.
 - 30A/2P DISCONNECT SWITCH WITH SOLID NEUTRAL AND (1) 20A DUAL-ELEMENT, TIME DELAY FUSE IN NEMA 1 ENCLOSURE FOR ELEVATOR CAB LIGHTS & EXHAUST. SWITCH SHALL BE CAPABLE OF BEING LOCKED "OFF". MOUNT AT 6'-0" AFF TO TOP AND LABEL WITH CIRCUIT NUMBER. COORDINATE EXACT MOUNTING LOCATION AND REQUIREMENTS WITH ELEVATOR EQUIPMENT INSTALLER. PROVIDE FINAL ELECTRICAL CONNECTION TO INSPECTION AND TEST PANEL (LDU) AT TOP OF 3RD FLOOR WITHIN ELEVATOR DOOR JAMB.
 - ELEVATOR POWER MODULE SWITCH: 60A/208V/3P SWITCH COMPLETE WITH 60A DUAL ELEMENT, TIME DELAY CLASS 'J' FUSES, 120V CONTROL TRANSFORMER, FIRE ALARM SAFETY INTERFACE RELAY, KEY TEST SWITCH, GREEN PILOT LIGHT, AUXILIARY CONTACTS FOR ELEVATOR RECALL, AND FIRE ALARM VOLTAGE MONITORING RELAY. EATON BUSSMAN #PS-6-T20-R1-K-G-B-F1 OR EQUAL. COORDINATE EXACT MOUNTING LOCATION AND REQUIREMENTS WITH ELEVATOR EQUIPMENT INSTALLER.
 - 60A/3P NON-FUSED DISCONNECT SWITCH (JH1) IN NEMA 1 ENCLOSURE. PROVIDE WITH SPST AUXILIARY CONTACTS RATED FOR MIN 2A AT 24VDC. MAKE FINAL CONNECTION TO ELEVATOR FUSE BOX. COORDINATE REQUIREMENTS WITH ELEVATOR EQUIPMENT INSTALLER.
 - 3-PHASE POWER FEEDER AND (2) #18 STRANDED CU CONDUCTORS FROM ELEVATOR POWER MODULE SWITCH TO 'JH1' DISCONNECT SWITCH.
 - VERIFY EXACT LOCATION OF RECEPTACLE, LUMINAIRE, AND 'JH1' DISCONNECT SWITCH AT TOP OF HOISTWAY WITH ELEVATOR EQUIPMENT INSTALLER.
 - REFER TO FIRE PUMP ELECTRICAL SERVICE RISER DIAGRAM, 6/E6.1, FOR POWER TO FIRE PUMP AND ACCESSORIES.
 - SEE SHEET E1.2 FOR CONTINUATION.
 - SEE SHEET E1.1 FOR CONTINUATION.

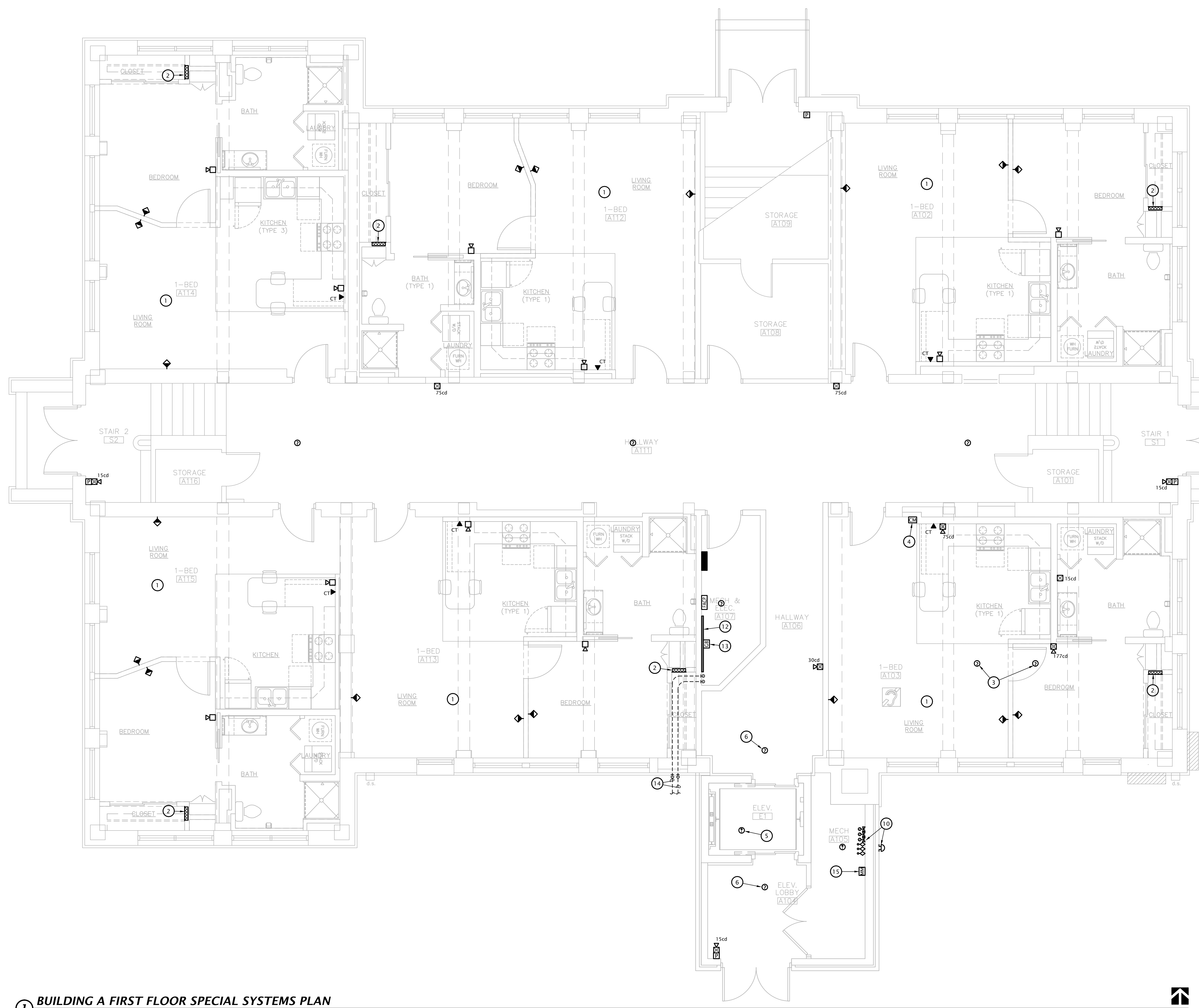


BUILDING A THIRD FLOOR ELECTRICAL PLAN
 1/4" = 1'-0"

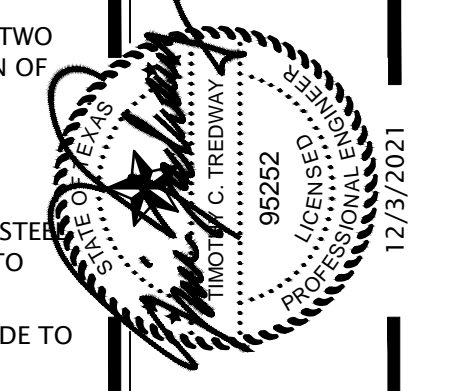




THE HERITAGE at ABILENE
 NEW BUILDING, RESTORATION, & REHAB APARTMENTS
 ABILENE, TEXAS



- PLAN NOTES BY SYMBOL**
- COORDINATE FINAL LOCATIONS OF ALL CATV AND PHONE OUTLETS IN APARTMENT UNITS WITH OWNER. ALL CABLING ROUTED EXPOSED OVERHEAD AND ON EXISTING WALLS SHALL BE INSTALLED IN 3/4" EMT. SEE 2.E6.1 FOR OUTLET DETAILS.
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 - FIRE ALARM ADDRESSABLE CONTROL MODULE FOR CONTROL OF APARTMENT UNIT'S NOTIFICATION APPLIANCE CIRCUIT. MODULE SHALL BE PROGRAMMED TO ACTIVATE APARTMENT UNIT'S NOTIFICATION APPLIANCES UPON GENERAL BUILDING FIRE ALARM AND UPON ACTIVATION OF ANY SMOKE DETECTOR OR CO DETECTOR WITHIN APARTMENT UNIT. MOUNT FLUSH IN WALL AT 8'-0" AFF.
 - INSTALL HEAT DETECTOR IN ELEVATOR PIT. SEE DETAIL 5.E6.1.
 - ELEVATOR LOBBY SMOKE DETECTOR. SEE DETAIL 5.E6.1.
 - INSTALL SMOKE DETECTOR AND HEAT DETECTOR AT TOP OF ELEVATOR HOISTWAY PER LOCAL JURISDICTION REQUIREMENTS. SEE DETAIL 5.E6.1.
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 - TELECOMMUNICATIONS GROUND BAR: 13-1/4" x 2 1/4" x 1/4" THICK ELECTRO-TIN PLATED COPPER BUS BAR, COMPLETE WITH INSULATED STAND-OFFS AND STAINLESS STEEL BRACKETS, ERICO#TCBA14L06PT OR EQUAL. MOUNT AT 18" AFF AND PROVIDE #6 CU GROUND TO BUILDING STEEL AND TO EQUIPMENT GROUND BUS OF PANEL 'HA1'. ALL CONNECTIONS TO GROUND BAR SHALL BE MADE USING COMPRESSION TYPE LUGS.
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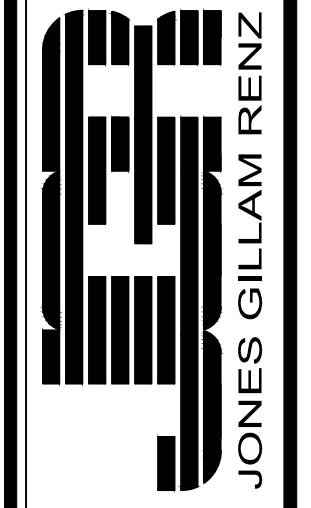


1 BUILDING A FIRST FLOOR SPECIAL SYSTEMS PLAN
 1/4" = 1'-0"

BUILDING A

REVISION:	
DATE:	12-3-2021
JOB:	20-3065
SHEET:	E1.4

12/3/2021
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THE HERITAGE at ABILENE
 NEW BUILDING, RESTORATION, & REHAB APARTMENTS
 ABILENE, TEXAS



BUILDING A

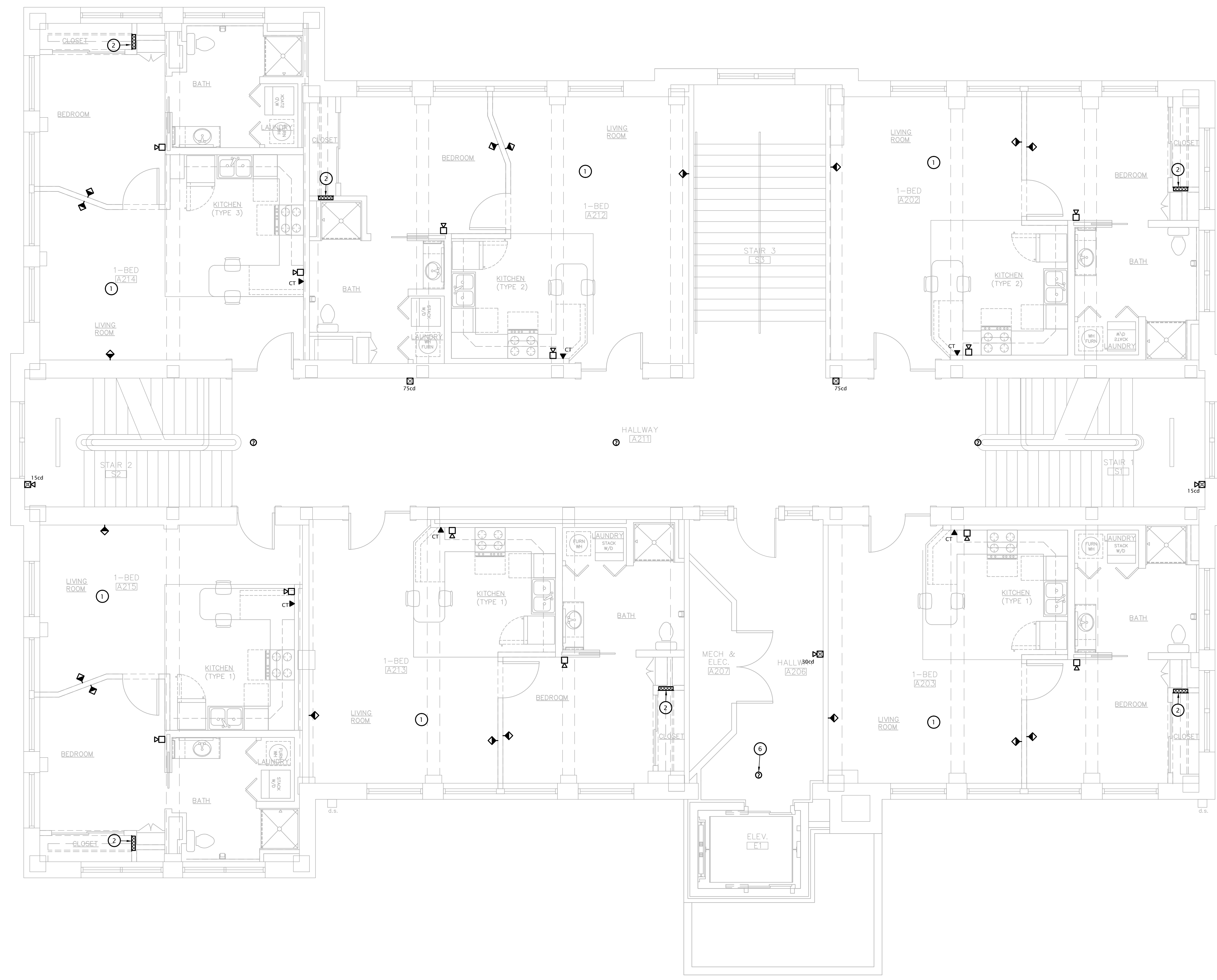
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JOB:	20-3065
SHEET:	

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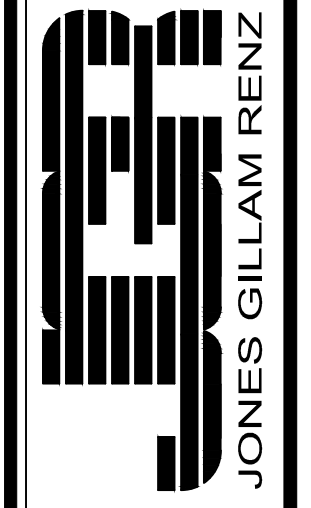
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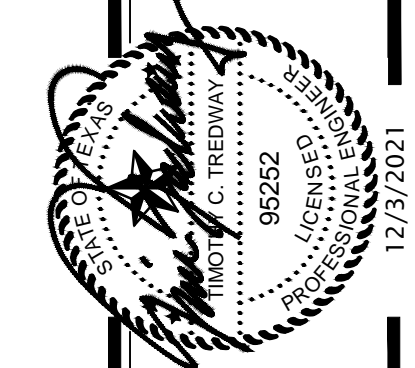


1 BUILDING A SECOND FLOOR SPECIAL SYSTEMS PLAN
 1/4" = 1'-0"





THE HERITAGE at ABILENE
 NEW BUILDING, RESTORATION, & REHAB APARTMENTS
 ABILENE, TEXAS



BUILDING A

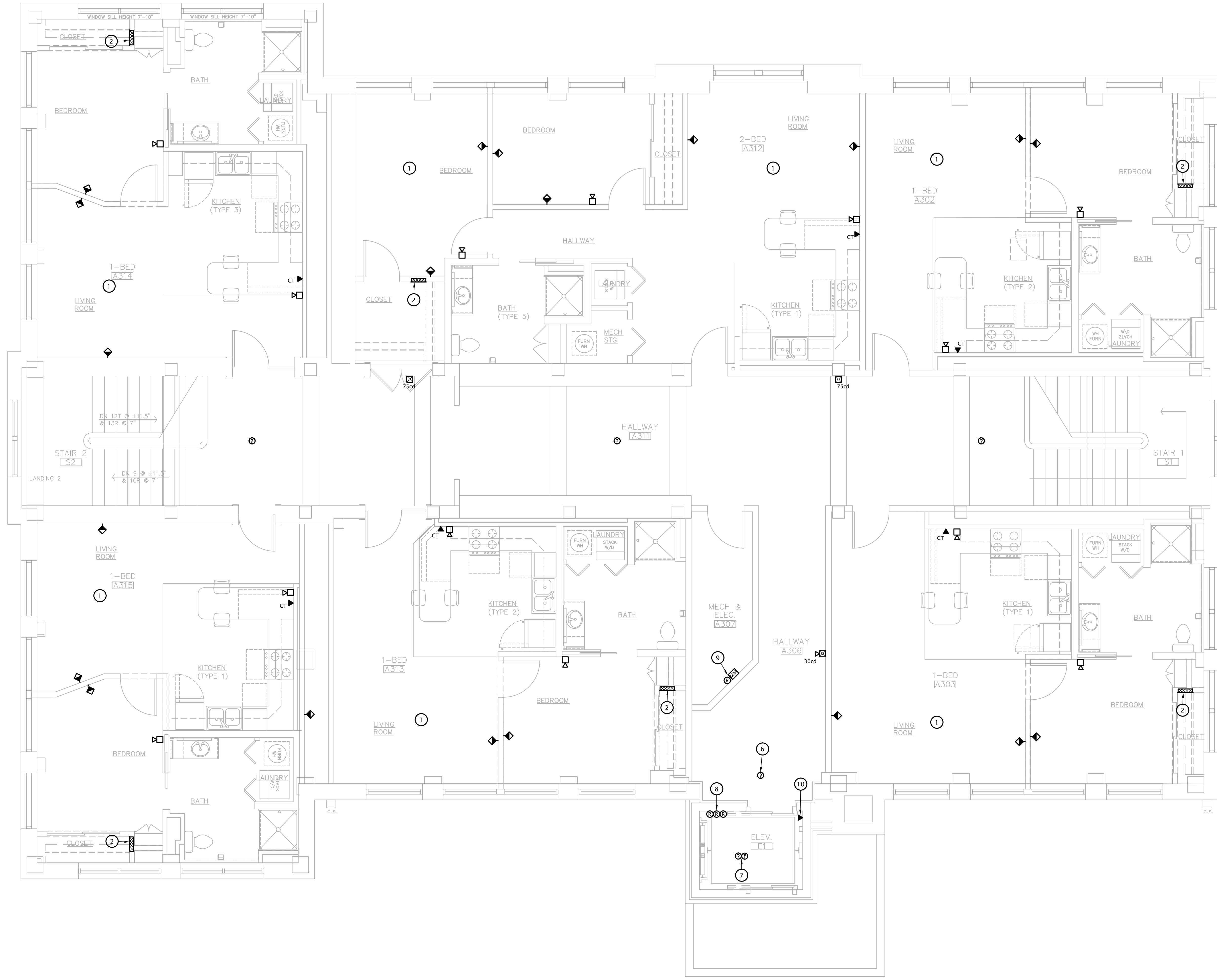
REVISION:	
DATE:	12-3-2021
JOB:	20-3065
SHEET:	

E1.6

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1 BUILDING A THIRD FLOOR SPECIAL SYSTEMS PLAN
 1/4" = 1'-0"

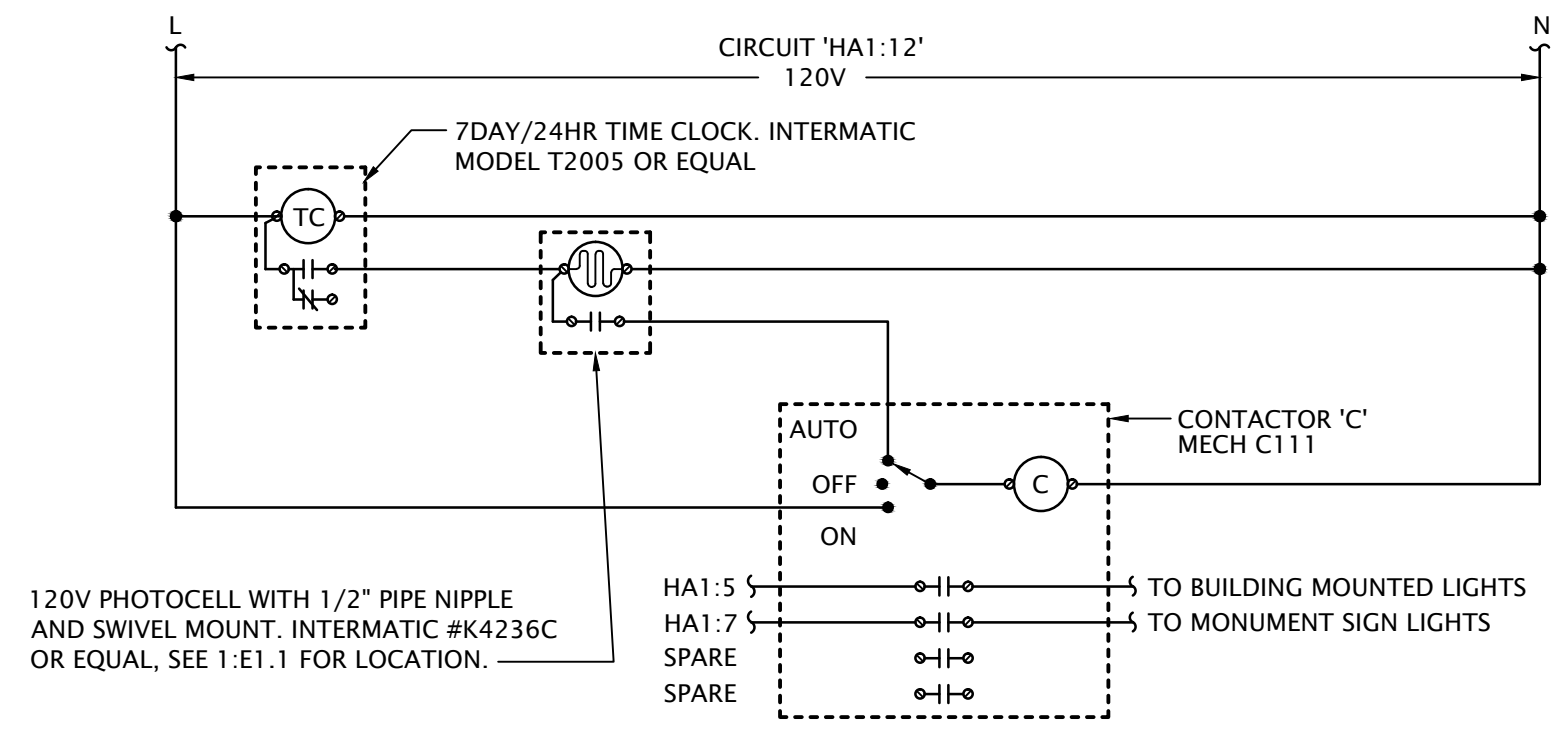


APARTMENT FEEDER SCHEDULE

Apartment #	Feeder Size
A102, A103, A112, A113, A202, A203, A212, A213, A303, A313	(3)#1, #6G IN 1-1/4" C OR MC CABLE
A115, A215, A302, A312	(3)#1/0, #4G IN 1-1/2" C OR MC CABLE
A114, A214, A314, A315	(3)#2/0, #3G IN 2" C. OR MC CABLE

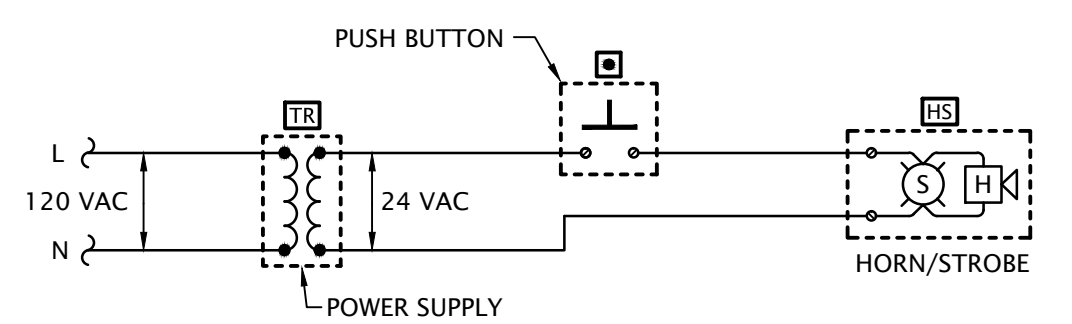
NOTES:
 1. Conductor sizes indicated in this schedule account for voltage drop. No further upsizing is necessary.
 2. Ensure panel lugs are adequately sized to handle up-sized feeders.

NOTES:
 • Main disconnect section shall be 65 kAIC rated, provide branch breakers series rated for 65 kAIC.
 • All conductor sizes are based on copper, U.N.O.
 • Entire installation shall comply with NEC.
 • Coordinate all responsibilities and requirements with utility company and pay associated fees. Contact Information:
 Nickie Plaisance
 AEP Texas
 nplaisance@aep.com
 (325) 674-7028
 • Coordinate final location of meter assemblies with utility company. Provide shop drawings of proposed equipment whether as specified or substituted to utility company for approval.
 • All meter center components shall be NEMA 3R
 • All meter sockets shall be ringless type with bypass
 • All dimensions based on Square D equipment
 • For each meter, provide a permanent brass, copper or aluminum tag identifying the apartment served. Tags shall be securely fastened to the meter base and be stamped with 1/8" letters, minimum.



PROVIDE LIGHTING CONTACTORS WITH QUANTITY OF POLES SHOWN, 120V COIL, INTEGRAL 3-POSITION MANUAL SELECTOR SWITCH, AND NEMA 1 ENCLOSURE.

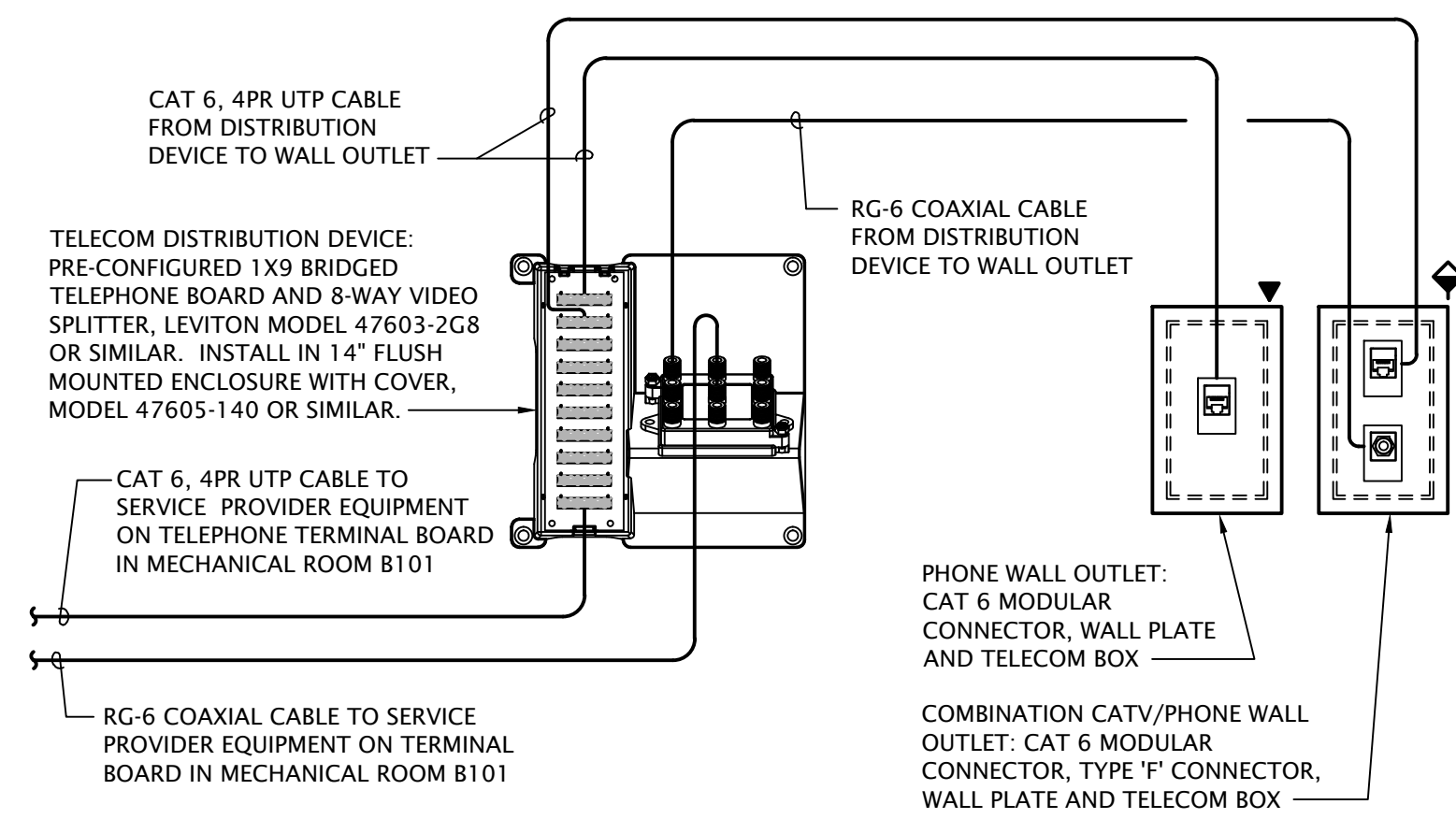
4 EXTERIOR LIGHTING CONTROL DIAGRAM
 No Scale



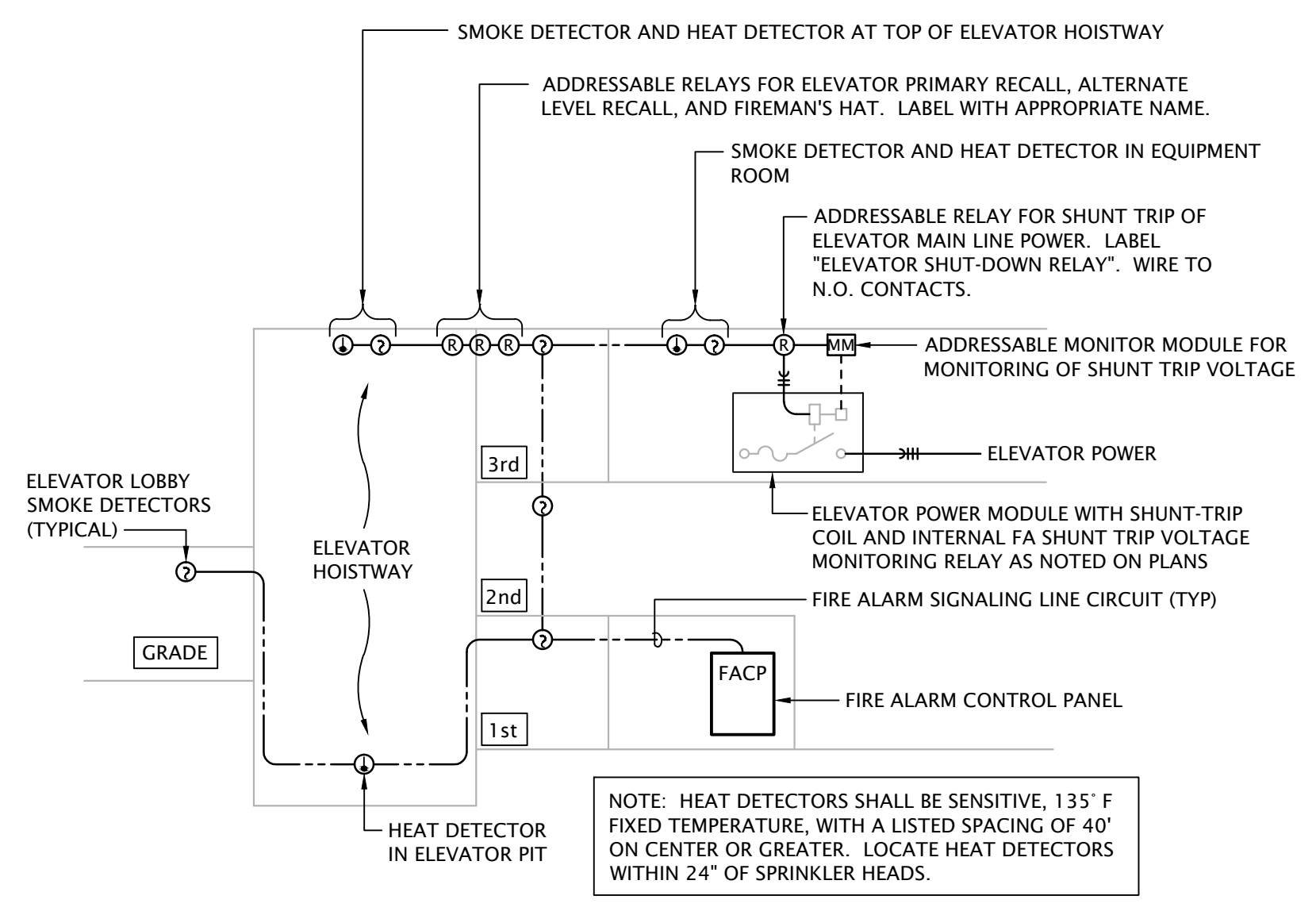
DOOR ALARM BUZZER SYSTEM NOTES

1. PROVIDE DOOR ANNUNCIATOR SYSTEM COMPLETE WITH PUSH BUTTON, HORN/STROBE(S), POWER SUPPLIES AND ALL WIRING REQUIRED. HORN/STROBE SHALL ACTIVATE WHEN PUSH BUTTON IS DEPRESSED.
2. HORN/STROBE SHALL OPERATE AT 24VAC, HAVE A CLEAR LENS WITH 50cd STROBE AND HORN WITH 82dB AT 10', UL 1638 LISTED, EDWARDS #6536-G5. FLUSH MOUNT IN WALL AT 6'-8" AFF.
3. PUSH BUTTON SHALL BE WHITE WITH CHROME RIM, NON-ILLUMINATED, WITH N.O. MOMENTARY CONTACTS, RATED FOR 0.67 AMPS AT 24VAC, EDWARDS #620. PROVIDE WITH STAINLESS STEEL COVER PLATE, EDWARDS #147-10. MOUNT AT 48" AFF.
4. POWER SUPPLY SHALL BE A LOW VOLTAGE CLASS 2 TRANSFORMER WITH 120VAC PRIMARY AND 24VAC SECONDARY, 20VA, EDWARDS #598. FLUSH MOUNT IN 2-GANG WALL BOX WITH BLANK COVER PLATE, DIRECTLY ABOVE HORN/STROBE.
5. LOW VOLTAGE CLASS 2 CABLING SHALL BE MINIMUM 18 AWG UNSHIELDED.

3 APARTMENT DOORBELL WIRING SCHEMATIC
 No Scale



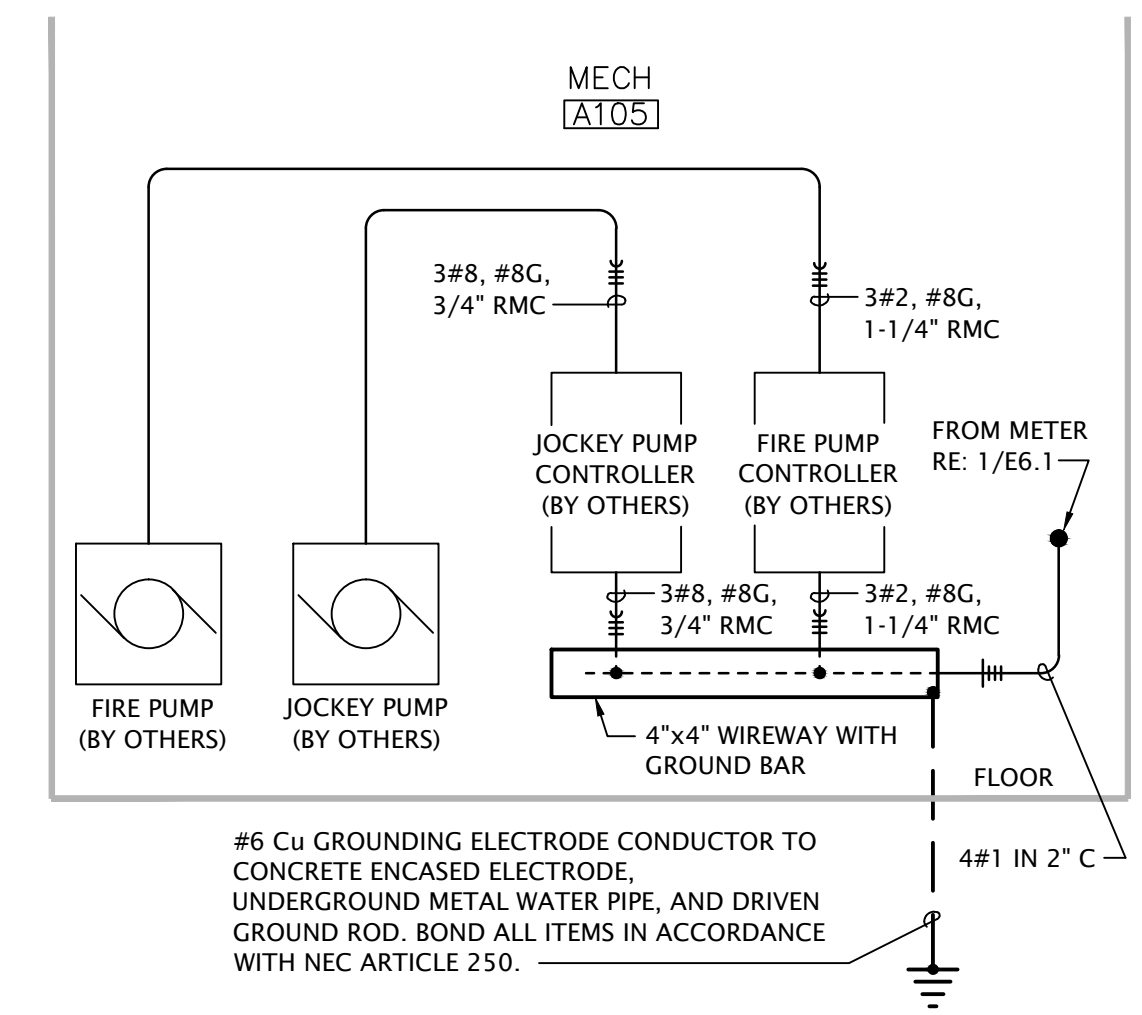
2 APARTMENT TELECOM WIRING SCHEMATIC
 NO SCALE



ELEVATOR SEQUENCE OF OPERATION: (DURING SMOKE/HEAT ALARM)

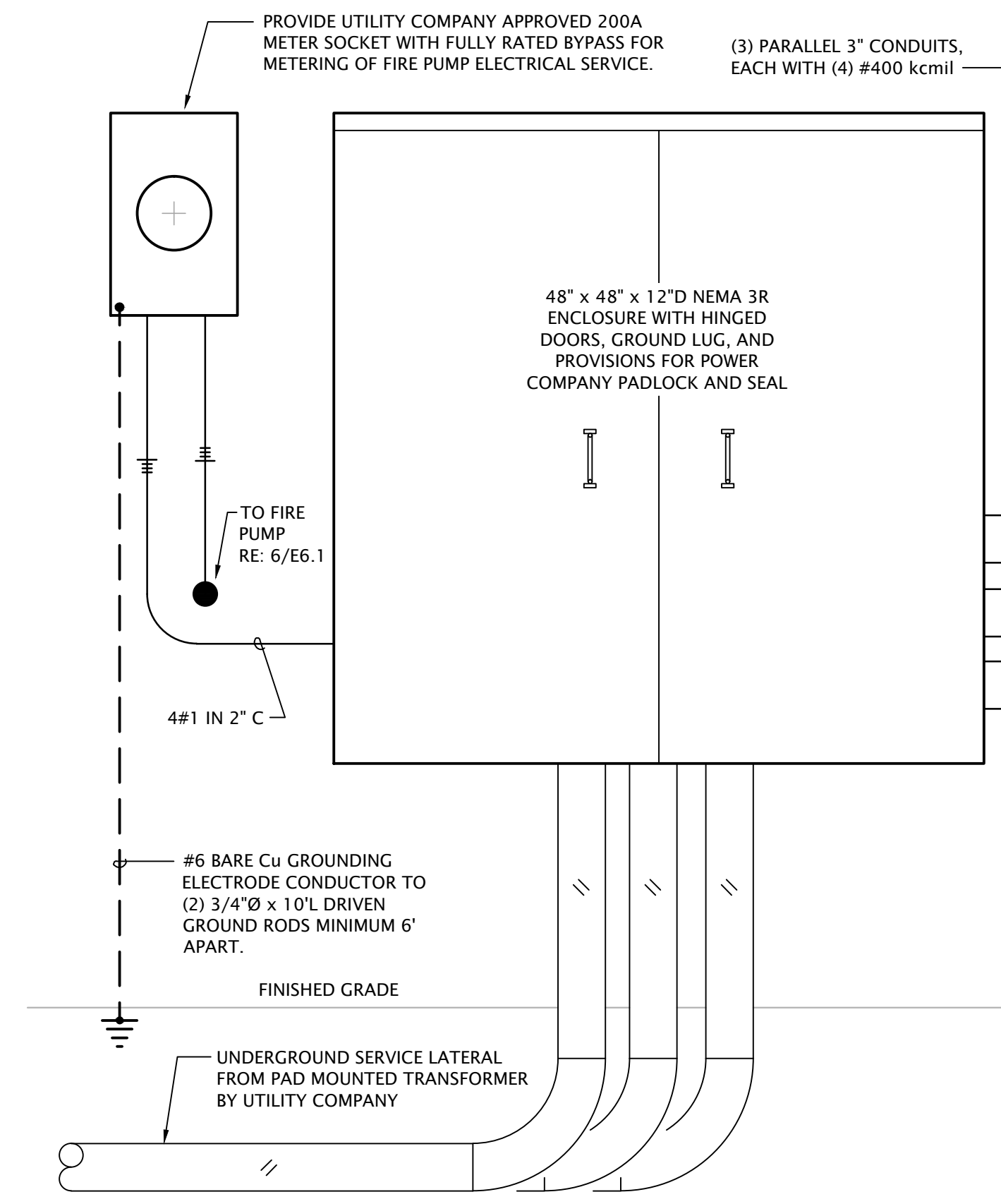
1. UPON SENSING SMOKE FROM ONE OR MORE LOBBY, ELEVATOR HOISTWAY OR ELEVATOR EQUIPMENT ROOM, THE SMOKE DETECTOR SHALL SIGNAL THE FACP, WHICH WILL FORWARD THE SIGNAL TO THE ELEVATOR LOGIC CONTROLLER TO RECALL ELEVATOR CAB TO THE DESIGNATED MAIN FLOOR. IF DESIGNATED FLOOR'S LOBBY SMOKE DETECTOR SENSES SMOKE AT THAT FLOOR, THE ELEVATOR CONTROLLER WILL SEND THE ELEVATOR CAB TO THE NEXT FLOOR CLEAR OF SMOKE. ONCE THE ELEVATOR CAB HAS REACHED THE DESIGNATED FLOOR, THE ELEVATOR CAB DOORS WILL OPEN AND THE CONTROLLER WILL LOCK THE ELEVATOR CAB AT THAT FLOOR, DISABLING THE ELEVATOR CAB CONTROLS, UNLESS A FIREMAN'S KEY IS USED TO OVERRIDE AUTOMATIC CONTROLS.
2. ALL SMOKE DETECTORS (LOBBIES, HOISTWAY, EQUIPMENT ROOM) SHALL TRANSMIT A SEPARATE AND DISTINCT VISIBLE ANNUNCIATION AT THE FACP AND ANNUNCIATOR PANEL.
3. HEAT DETECTORS IN THE ELEVATOR HOISTWAY AND ELEVATOR EQUIPMENT ROOM WILL SEND A SIGNAL TO THE SHUNT-TRIP SWITCH POWERING THE ELEVATOR SO AS TO SHUT DOWN POWER TO THAT CIRCUIT. (THIS IS A NON-AUTO RESET SWITCH). WHEN THE SPRINKLER HEAD HAS REACHED ITS CRITICAL TEMPERATURE OF 165° F., THE HEAD WILL BEGIN DISCHARGE OF WATER.

5 ELEVATOR INTERLOCK WITH FIRE ALARM
 No Scale

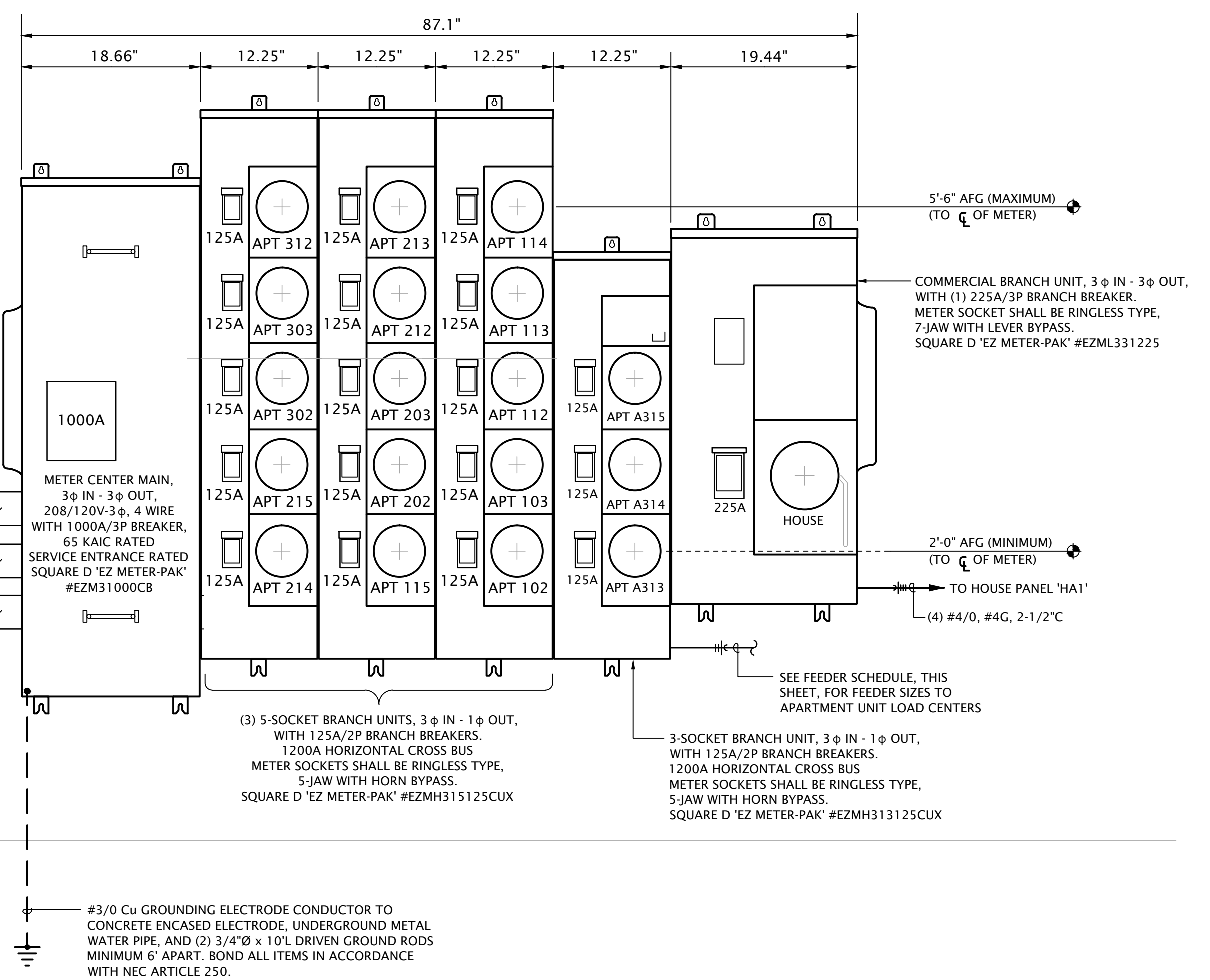


NOTE: VERIFY FEEDER SIZES AND ALL OTHER REQUIREMENTS WITH FIRE PUMP SYSTEM INSTALLER PRIOR TO COMMENCING WORK.

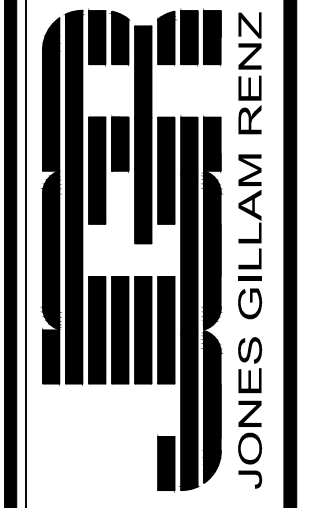
6 ELECTRICAL RISER DIAGRAM - FIRE PUMP
 No Scale



1 ELECTRICAL RISER DIAGRAM
 No Scale



#3/0 Cu GROUNDING ELECTRODE CONDUCTOR TO CONCRETE ENCASED ELECTRODE, UNDERGROUND METAL WATER PIPE, AND (2) 3/4"Ø x 10'L DRIVEN GROUND RODS MINIMUM 6' APART. BOND ALL ITEMS IN ACCORDANCE WITH NEC ARTICLE 250.



THE HERITAGE at ABILENE
 NEW BUILDING, RESTORATION, & REHAB APARTMENTS
 ABILENE, TEXAS

Designation: HA2 **Manufacturer: Square D 'NQ'**
Location: MECH. A207 **Bus Amps: 225**
Voltage: 208Y/120V-3Ph-4W **MCB Amps: MLO**
Enclosure: NEMA 1 **AIC Rating: 10 kAIC**
Mounting: Surface **Other: Integral Surge Protection**

Circuit #	Load Description	Conductors	C/B Size	C/B Size	Conductors	Load Description	Circuit #
1	LTC - HALL A211/A206	2#12,#12G,1/2"	20 / 1	20 / 1	—	SPARE	2
3	RECEPTS - HALL A211/A206	2#12,#12G,1/2"	20 / 1	20 / 1	—	SPARE	4
5	BLOWER COIL 'BC-1.5'	2#6,#10G,3/4"	45 / 2	—	—	SPACE ONLY	6
7	—	—	—	—	—	SPACE ONLY	8
9	SPACE ONLY	—	—	—	—	SPACE ONLY	10
11	SPACE ONLY	—	—	—	—	SPACE ONLY	12
13	SPACE ONLY	—	—	—	—	SPACE ONLY	14
15	SPACE ONLY	—	—	—	—	SPACE ONLY	16
17	SPACE ONLY	—	—	—	—	SPACE ONLY	18
19	SPACE ONLY	—	—	—	—	SPACE ONLY	20
21	SPACE ONLY	—	—	—	—	SPACE ONLY	22
23	SPACE ONLY	—	—	—	—	SPACE ONLY	24
25	SPACE ONLY	—	—	—	—	SPACE ONLY	26
27	SPACE ONLY	—	—	—	—	SPACE ONLY	28
29	SPACE ONLY	—	—	—	—	SPACE ONLY	30

NOTE: PROVIDE PANEL 'HA2' WITH FULLY RATED FEED-THROUGH LUGS AND CABLING TO PANEL 'HA3' (3#1, #6G, 1-1/4")

Designation: HA3 **Manufacturer: Square D 'NQ'**
Location: MECH A307 **Bus Amps: 225**
Voltage: 208Y/120V-3Ph-4W **MCB Amps: MLO**
Enclosure: NEMA 1 **AIC Rating: 10 kAIC**
Mounting: Surface **Other:**

Circuit #	Load Description	Conductors	C/B Size	C/B Size	Conductors	Load Description	Circuit #
1	LTC - HALL A311/A306	2#12,#12G,1/2"	20 / 1	20 / 2	2#12,#12G,1/2"	HEAT PUMP 'HP-1.5'	2
3	RECEPTS - HALL A311/A306	2#12,#12G,1/2"	20 / 1	—	—	—	4
5	'IU-4a-1' / 'IU-4a-2'	2#12,#12G,1/2"	15 / 2	20 / 2	2#12,#12G,1/2"	HEAT PUMP 'HP-1.5'	6
7	—	—	—	—	—	—	8
9	BLOWER COIL 'BC-1.5'	2#6,#10G,3/4"	45 / 2	20 / 2	2#12,#12G,1/2"	HEAT PUMP 'HP-1.5'	10
11	—	—	—	—	—	—	12
13	RECEPTS - ROOFTOP	2#12,#12G,1/2"	20 / 1	20 / 1	—	SPARE BREAKER	14
15	RCPT - ELEV HOSTWAY	2#12,#12G,1/2"	20 / 1	40 / 2	2#8,#10G,3/4"	HEAT PUMP 'HP-4a'	16
17	ELEVATOR CAB LTS/EXH	2#12,#12G,1/2"	20 / 1	—	—	—	18
19	SPACE ONLY	—	—	20 / 1	—	SPARE BREAKER	20
21	SPACE ONLY	—	—	20 / 1	—	SPARE BREAKER	22
23	SPACE ONLY	—	—	—	—	SPACE ONLY	24
25	SPACE ONLY	—	—	—	—	SPACE ONLY	26
27	SPACE ONLY	—	—	—	—	SPACE ONLY	28
29	SPACE ONLY	—	—	—	—	SPACE ONLY	30

Designation: HA1 **Manufacturer: Square D 'NQ'**
Location: MECH A107 **Bus Amps: 225**
Voltage: 208Y/120V-3Ph-4W **MCB Amps: MLO**
Enclosure: NEMA 1 **AIC Rating: 10 kAIC**
Mounting: Surface **Other: Integral Surge Protection**

Circuit #	Load Description	Conductors	C/B Size	C/B Size	Conductors	Load Description	Circuit #
1	LTC - HALL/ ELEV LOBBY	2#12,#12G,1/2"	20 / 1	20 / 1	2#12,#12G,1/2"	RECEPTS - HALL A106/ LOBBY A104	2
3	LTC - HALL A111/ STORAGE A108/A109	2#12,#12G,1/2"	20 / 1	20 / 1	2#12,#12G,1/2"	RECEPTS - HALL A111/ MECH A107	4
5	LTC - EXTERIOR	2#12,#12G,1/2"	20 / 1	20 / 1	2#12,#12G,1/2"	TELECOMBOARD	6
7	LTC - MONUMENT SIGN	2#12,#12G,1/2"	20 / 1	20 / 1	2#12,#12G,1/2"	TELECOMBOARD	8
9	SPACE ONLY	—	—	20 / 1	2#12,#12G,1/2"	FIRE ALARM CONTROL PANEL	10
11	SPACE ONLY	—	—	20 / 1	2#12,#12G,1/2"	EXTERIOR LIGHTING CONTROLS	12
13	BLOWER COIL 'BC-1.5'	2#6,#10G,3/4"	45 / 2	20 / 1	2#12,#12G,1/2"	RECEPT - ELEVATOR PIT	14
15	—	—	—	25 / 2	2#10,#10G,1/2"	HEAT PUMP 'OU-1'	16
17	—	—	—	—	—	—	18
19	ELEVATOR	3#4,#10G,1"	60 / 3	20 / 1	2#12,#12G,1/2"	ELEVATOR SUMP PUMP	20
21	—	—	—	20 / 1	2#12,#12G,1/2"	FIRE SPRINKLER COMPRESSOR	22
23	—	—	—	20 / 1	—	SPARE	24
25	PANEL 'HA2'/'HA3'	3#1,#6G,1-1/4"	125 / 3	20 / 1	—	SPARE	26
27	—	—	—	20 / 1	—	SPARE	28
29	—	—	—	—	—	SPACE ONLY	30
31	DOMESTIC WATER BOOSTER PUMP	3#10,#10G,3/4"	25 / 3	—	—	SPACE ONLY	32
33	—	—	—	—	—	SPACE ONLY	34
35	SPACE ONLY	—	—	—	—	SPACE ONLY	36
37	SPACE ONLY	—	—	—	—	SPACE ONLY	38
39	SPACE ONLY	—	—	—	—	SPACE ONLY	40
41	SPACE ONLY	—	—	—	—	SPACE ONLY	42

PANEL SCHEDULE NOTES BY SYMBOL

- CIRCUIT SHALL BE PROTECTED BY AFCI TYPE BREAKER.
- CIRCUIT SHALL BE PROTECTED BY COMBINATION AFCI/GFCI TYPE BREAKER.
- PROVIDE BREAKERS AND CIRCUITRY FOR BLOWER COILS AS FOLLOWS:
 - BC-2: APTS #A113, #A112, #A212; CIRCUIT #1 BREAKER: 60A/2P, CIRCUITRY: 2#4, #10G, 1"; CIRCUIT #2 BREAKER: 25A/2P, CIRCUITRY: 2#10,#10G, 3/4".
 - BC-2.5: APTS #A102, #A103, #A202, #A302; CIRCUIT #1 BREAKER: 50A/2P, CIRCUITRY: 2#6, #10G, 3/4"; CIRCUIT #2 BREAKER: 25A/2P, CIRCUITRY: 2#10,#10G, 3/4".
 - BC-3: APTS #A312; CIRCUIT #1 BREAKER: 50A/2P, CIRCUITRY: 2#6, #10G, 3/4"; CIRCUIT #2 BREAKER: 25A/2P, CIRCUITRY: 2#10,#10G, 3/4".
 - BC-4: APTS #A203, #A213, #A303, #A313; CIRCUIT #1 BREAKER: 60A/2P, CIRCUITRY: 2#4, #10G, 1"; CIRCUIT #2 BREAKER: 25A/2P, CIRCUITRY: 2#10,#10G, 3/4".
 - BC-5: APTS #A114, #A115, #A214, #A215, #A314, #A315; CIRCUIT #1 BREAKER: 60A/2P, CIRCUITRY: 2#4, #10G, 1"; CIRCUIT #2 BREAKER: 25A/2P, CIRCUITRY: 2#10,#10G, 3/4".
- PROVIDE BREAKERS AND CIRCUITRY FOR HEAT PUMPS AS FOLLOWS:
 - HP-2: APTS #A113, #A112, #A212; BREAKER 25A/2P, CIRCUITRY: 2#10,#10G, 3/4".
 - HP-2.5: APTS #A102, #A103, #A202, #A302; BREAKER 25A/2P, CIRCUITRY: 2#10,#10G, 3/4".
 - HP-3: APTS #A312; BREAKER 30A/2P, CIRCUITRY: 2#10,#10G, 3/4".
 - HP-4: APTS #A203, #A213, #A303, #A313; BREAKER 40A/2P, CIRCUITRY: 2#8,#10G, 3/4".
 - HP-5: APTS #A114, #A115, #A214, #A215, #A314, #A315; BREAKER 45A/2P, CIRCUITRY: 2#6,#6G, 3/4".
- CIRCUIT ONLY OCCURS IN UNIT A312, LEAVE AS SPACE IN ALL OTHER UNITS.

LIGHT FIXTURE SCHEDULE

MARK	MANUFACTURER	MODEL NUMBER	LAMP DATA	DRIVER	MOUNTING	FINISH	DESCRIPTION	NOTES
A	HALO	SMD6R12930WH	15.1W LED 1242 LUMEN	PHASE DIMMING	SURFACE	WHITE	3000K, 6" ROUND LED DOWNLIGHT	
B	SEAGULL	4414503-782	SEE NOTE 4	FIXED OUTPUT	SURFACE WALL	BRONZE	3-LAMP LED VANITY LAMP WITH CLEAR SEEDED GLASS	4
C	TECH LIGHTING	700TDSOCOP V088Z	SEE NOTE 4	FIXED OUTPUT	PENDANT	BRONZE	DECORATIVE PENDANT WITH EXPOSED SOCKET AND BULB, BRONZE FINISH WITH BLACK CORD	4
D	MINKA AIRE	F553L-ORB	26W LED MODULE	FIXED OUTPUT	SURFACE	BRONZE	52" DIAMETER CEILING FAN WITH LED LIGHT KIT	8
E	DUAL-LITE	EV2I	(2)1W LED	N/A	SURFACE	WHITE	EMERGENCY LIGHTING UNIT	2
F	(BY OWNER)	(BY OWNER)	---	FIXED OUTPUT DRIVER	PENDANT	(BY OWNER)	DECORATIVE PENDANT SELECTED BY OWNER, PROVIDED AND INSTALLED BY E.C.	6
G	COLUMBIA	LCL4-35MLEU	42W LED 5300 LUMEN	FIXED OUTPUT	SURFACE WALL/CEILING	WHITE	3500K, 4 FOOT LENSED LED STRIP LIGHT	
K1	HUBBELL	TRP1-12L-30-4K7-3-UNV-DBT	30W LED 2800 LUMEN	FIXED OUTPUT	WALL 9'-0" AFF	DARK BRONZE	LED WALL PACK WITH IES TYPE III DISTRIBUTION	5
K2	HUBBELL	TRP1-12L-30-4K7-4-UNV-DBT	30W LED 2800 LUMEN	FIXED OUTPUT	WALL 9'-0" AFF	DARK BRONZE	LED WALL PACK WITH IES TYPE IV DISTRIBUTION	5
K3	HUBBELL	TRP1-12L-30-4K7-2-UNV-DBT	30W LED 2800 LUMEN	FIXED OUTPUT	WALL 9'-0" AFF	DARK BRONZE	LED WALL PACK WITH IES TYPE II DISTRIBUTION	5
S	ACCLAIM	DFB-111-AKEU	50W LED 2455 LUMEN	FIXED OUTPUT	GRADE	BLACK	IP-66, GRADE MOUNTED LED FLOOD LIGHT	5
T	WILLIAMS	96-4-L40/830-HIAFR-WET/1-DRV-UNV	30W LED 4,000 LUMENS	FIXED OUTPUT DRIVER	SURFACE	WHITE	4" FULLY ENCLOSED AND GASKETED INDUSTRIAL FIXTURE WITH FROSTED, RIBBED, IMPACT-RESISTANT ACRYLIC LENS	
X	DUAL-LITE	EVEURWEI	LED	N/A	UNIVERSAL	RED LETTERS WHITE HOUSING	POLYCARBONATE LED EXIT, FACES AS REQUIRED	1,2
XE	DUAL-LITE	EVCURVI	LED	N/A	UNIVERSAL	RED LETTERS WHITE HOUSING	COMBO EXIT/EMERGENCY LIGHTING UNIT	1,2
XER	DUAL-LITES	EVCURWD41 + EVODB	LED + (2)1W REMOTE HEAD	N/A	UNIVERSAL	RED LETTERS WHITE HOUSING BLACK REMOTE	COMBO EXIT/EMERGENCY LIGHTING UNIT WITH DOUBLE REMOTE HEADS	1,2,3

- GENERAL:
- All LED lamps installed in apartments shall be 3000'k corrected color temperature, min. 80 CRI.
 - All LED lamps installed in common areas shall be 3500'k corrected color temperature, min. 80 CRI.
 - All light fixtures shall be provided with universal drivers capable of operating at 120V or 277V UNO.
 - Fixtures shown half shaded or denoted with 'EM' shall be wired for emergency operation.
 - Fixtures denoted with 'NL' shall be wired for continuous operation.

- NOTES:
- Fixture shall be capable of wall or ceiling mount applications and shall have self-diagnostic/self-testing electronics.
 - Provide with emergency battery integral charger with self-diagnostics
 - Install remote head on exterior wall above door and connect to unit per manufacturer's instructions.
 - Provide 8.5W, 3500K, LED Edison type lamps, Coordinate style with Owner.
 - U.L. listed for 'wet location'
 - Not Used.
 - Provide fixture with 20' steel pole and vibration dampers if recommended by manufacturer. See Light Pole Base Detail, this sheet, for more information.
 - Provide downrod of adequate length to clear structural beams as required.

Designation: APT # **Manufacturer: Square D 'QO'**
Location: Bedroom **Bus Amps: 125**
Voltage: 208/120V-1Ph-3W **MCB Amps: MLO**
Enclosure: NEMA 1 **AIC Rating: 10 kAIC**
Mounting: Recessed Flush **Other:**

Circuit #	Load Description	Conductors	C/B Size	C/B Size	Conductors	Load Description	Circuit #
2	DISPOSAL	2#12,#12G,1/2"	20 / 1	20 / 1	2#12,#12G,1/2"	KITCHEN/LIVING LIGHTS	2
2	DISHWASHER	2#12,#12G,1/2"	20 / 1	20 / 1	2#12,#12G,1/2"	LIVING RECEPTS	4
2	HOOD/MICROWAVE	2#12,#12G,1/2"	20 / 1	20 / 1	2#12,#12G,1/2"	CLOTHES WASHER RCPT	6
2	REFRIGERATOR	2#12,#12G,1/2"	20 / 1	30 / 2	3#10,#10G,3/4"	CLOTHES DRYER	8
2	KITCHEN RECEPTS	2#12,#12G,1/2"	20 / 1	—	—	—	10
2	KITCHEN RECEPTS	2#12,#12G,1/2"	20 / 1	50 / 2	3#6,#10G,1"	RANGE	12
1	BEDROOM LIGHTS/RECEPTS	2#12,#12G,1/2"	20 / 1	—	—	—	14
1	BATHROOM LIGHTS/RECEPTS	2#12,#12G,1/2"	20 / 1	30 / 2	2#10,#10G,1/2"	WATER HEATER	16
5	2ND BEDROOM LIGHTS/RECEPTS	2#12,#12G,1/2"	20 / 1	—	—	—	18
4	HEAT PUMP	SEE NOTE	— 2	— 2	SEE NOTE	BLOWER COIL CIRCUIT # 1	20
21	—	—	—	—	—	—	22
23	SPACE ONLY	—	—	— 2	SEE NOTE	BLOWER COIL CIRCUIT # 2	24
25	SPACE ONLY	—	—	—	—	—	26
27	SPACE ONLY	—	—	—	—	—	28
29	SPACE ONLY	—	—	—	—	—	30

GENERAL NOTES - STRUCTURAL

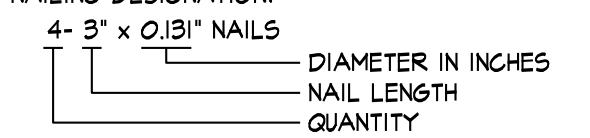
- The contractor shall verify dimensions and conditions before construction and notify the engineer of any discrepancies, inconsistencies, or difficulties affecting the work before proceeding.
- The contractor shall coordinate all disciplines, verifying size and location of all openings, whether shown on structural drawings or not, as called for on architectural, mechanical, or electrical drawings. All conflicts, inconsistencies, or other difficulties affecting structural work shall be called to the architect or engineer's attention for direction before proceeding.
- All design and construction work for this project shall conform to the requirements of the 2012 International Building Code, as amended by the City of Abilene, Texas.
- The drawings are for this specific project and no other use is authorized.
- Structural Design Load Criteria:
 - A. Dead Load: $P_D = 20 \text{ psf}$
 - B. Snow: $P_S = 20 \text{ psf}$, $C_e = 1.0$, $P_f = 14 \text{ psf}$, $P_g = 14 \text{ psf}$, $P_m = 20 \text{ psf}$
 $I_s = 1.0$, $C_s = 1.0$, $C_t = 1.0$
 Drift & unbalanced snow loads per ASCE/SEI 7-10
 - C. Lateral Loads:
 - 1) Wind: $V = 15 \text{ mph}$, exposure B, $G_C P_i = +/- 1.0B$
 Design wind pressures to be used for the design of exterior components and cladding materials on the designated zones of walls and roof structures shall be per Section 301 and Table 301-2 of ASCE/SEI 7-10. Tabulated pressures shall be multiplied by effective area reduction factors, exposure adjustment factors, and topographic factors where applicable.
 - 2) Seismic: $S_e = 0.066$, $S_1 = 0.035$, $I_E = 1.0$
 Site Classification E
 Seismic Design Category B
 Basic Seismic Force-Resisting System:
 A1.7- Light-Framed Walls with Shear Panels of All Other Materials
 $R=2$, $\Omega = 2$, $V = 1.004 \text{ MN}$
- The project is designed to resist the most critical effects resulting from the load combinations of section 1605.3 of the 2012 International Building Code.
- Concrete:
 - A. All concrete for foundations (walls, grade beams, and footings) shall develop minimum ultimate compressive design strength of 3500 psi in 28 days, but not less than 500 pounds of cement shall be used per cubic yard of concrete regardless of strengths obtained, not over 4 inches of slump.
 - B. All concrete for interior flat work shall develop minimum ultimate compressive design strength of 4000 psi in 28 days, but not less than 560 pounds of cement shall be used per cubic yard of concrete regardless of strengths obtained, not over 5 gallons of water per 100 pounds of cement and not over 4 inches of slump.
 - C. Concrete for exterior flatwork shall have a minimum design compressive strength of 4500 psi in 28 days, with not less than 560 pounds of cement per cubic yard of concrete, not over 5 gallons of water per 100 pounds of cement, with 6% +/- 1% air entrainment, and a maximum of 4 inches of slump.
 - D. The preceding minimum mix requirements may have water-reducing admixtures conforming to ASTM C494 added to the mix at manufacturer's dosage rates for improved workability.
 - E. The preceding minimum mix requirements may have up to 15% maximum of the cement content replaced with an approved ASTM C618 Class C fly ash, provided the total minimum cementitious content is not reduced.
 - F. All concrete is reinforced concrete unless specifically called out as unreinforced. Reinforce all concrete not otherwise shown with same steel as in similar sections or areas. Any details not shown shall be detailed per ACI 315 and most recent requirements of ACI 318, current editions.
 - G. Contractor shall verify that all concrete inserts, reinforcing and embedded items are correctly located and rigidly secured prior to concrete placement.
 - H. Construction joints in beams, slabs, and grade beams shall occur at midspan (middle third) unless noted otherwise. Provide 2 x 4 horizontal keys at construction joints for shear transfer.
 - I. No aluminum items shall be embedded in any concrete.
- Reinforcing Steel:
 - A. All reinforcing steel shall conform to the requirements of ASTM A615 or A106 grade 60 steel. Welded plain wire fabric shall be supplied in sheets and conform to the requirements of ASTM A185.
 - B. Clear minimum coverage of concrete over reinforcing steel shall be as follows:
 - Concrete placed against earth: 3"
 - Formed concrete against earth: 2"
 - Slabs: 1"
 - Other: 2"
 - C. All coverage shall be nominal bar diameter minimum.
 - D. All dowels shall be the same size and spacing as adjoining main bars (splice lap 48 bar diameters or 30" minimum unless noted otherwise).
 - E. At corners of all grade beams supply corner bars (minimum 2"-6" in each direction or 48 bar diameters) in outside face of wall, matching size and spacing of horizontal bars.
 - F. Bars marked continuous shall be lapped 48 bar diameters (3"-0" minimum) at splices and embedments, unless shown otherwise. Splice lap bars near midspan and splice bottom bars over supports, unless noted otherwise.
 - G. Accessories shall be as specified in latest edition of the ACI Detailing Handbook and the concrete Reinforcing Steel Institute Design Handbook. Maximum accessory spacing shall be 4'-0" on center, and all accessories on exposed surfaces are to have plastic coated feet.
 - H. All slabs and stairs not shown otherwise shall be 6" thick with #4 bars at 12" on center each way.
- Structural Steel:
 - A. All structural steel beams and columns shall be ASTM A992, grade 50 steel and all miscellaneous steel shall be ASTM A36 grade steel. Hollow Structural Sections (HSS) shall be ASTM A500, grade B. Fabrication and erection shall be in accordance with AISC 303-05 "Code of Standard Practice for Steel Buildings and Bridges" in the 13th Edition of the AISC Steel Construction Manual.
 - B. All welding shall conform to the recommendations of the AWS.
 - C. All bolts not otherwise specified shall be 3/4" diameter high strength (ASTM A325-N). All bolts shall be fully pretensioned. All beam connections shall be designed per the AISC Manual of Steel Construction "Framed Beam Connections" for 40 kip reactions, and shall account for eccentricity when the bolt line is more than 2" from the center of the support. All connections must be two bolt minimum.
 - D. All anchor bolts shall be 3/4" diameter, ASTM F1554, grade 36 unless noted otherwise.
- Foundations:
 - A. The soil investigation was prepared by Eprotech/Hibbs & Todd, Inc. The report number is 20-163T and their telephone number is 325-449-5560.
 - B. Spread footings and continuous wall footings are designed to bear on a prepared soil subgrade compacted in agreement with the project geotechnical report capable of safely sustaining 2800 psf.
 - C. Contractor shall provide for denaturing at excavations from either surface water or seepage.
 - D. All foundation excavations shall be inspected by a qualified soil engineer, approved by the architect and/or structural engineer, prior to placement of steel or concrete. This inspection shall be at the owner's expense.
 - E. Moisture content in soils beneath building locations should not be allowed to change after footing excavations and after grading for slabs on grade are completed. If subgrade materials become desiccated or softened by water or other conditions, recompact materials to the density and water content specified for engineered fill. Do not place concrete on frozen ground.

- Concrete Block Masonry
 - A. Concrete block used in exterior walls or load bearing walls shall meet the requirements of ASTM C90 and have a minimum net compressive strength of 2500 psi and laid up using type N mortar such that f_m equals 1500 psi. Mortar shall be volume proportion based cement lime mortar. Proportioning shall be completed by box measure. Any block in contact with earth shall be normal weight units, laid using type "S" mortar and grouted solid.
 - B. The contractor shall provide adequate temporary bracing for all masonry walls during construction.
 - C. All concrete block shall have 4 #3 (or larger) horizontal joint reinforcing (ladder or truss) per architectural drawings and specifications (6" maximum vertical spacing).
 - D. Concrete block shall be reinforced as follows in 8" walls unless noted otherwise:
 - 1) Vertical reinforcing shall be a minimum of 1 - #5 bar in 8" walls at 2'-0" on center, at each corner, at each door and window jamb, each side of control joints and in the end void of each length of wall. Lap splices for masonry vertical reinforcing shall be 48 bar diameters or 24" minimum.
 - 2) Horizontal reinforcing:
 - A) Horizontal joint reinforcing as noted above.
 - B) Continuous horizontal bars shall be included per section or detail in bond beam or optional running bond beam where noted. Where bond beams are continuous at corners of walls, supply corner bars matching size of horizontal bars (minimum 2"-0" or 40 bar diameters in each direction).
 - E. Grout, where noted above, shall have a minimum design ultimate compressive strength of 2500 psi at 28 day test and 3/8" maximum aggregate size.
 - F. Lintels over all openings in walls not otherwise covered shall be an 8" x 8" bond beam with 2 - #6 bars in the bottom of the bond beam.
- Post-Installed Anchors:
 - A. Post-installed anchors shall be used only where specified on the drawings unless approved in writing by the engineer of record. See drawings for anchor diameter, spacing and embedment. Performance values of the anchors shall be obtained for specified products using appropriate design procedures and/or standards as required by the governing building code. Anchors installed in concrete shall have ICC-ES Evaluation Service Report. Special inspection is required for all post-installed anchors.
 - B. Mechanical anchors used in cracked and uncracked concrete shall have been tested and qualified for use in accordance with ACI 308.2 and ICC-ES AC308. All anchors shall be installed per the anchor manufacturer's written instructions.
 - C. Adhesive anchors used in cracked and uncracked concrete shall have been tested and qualified for use in accordance with ICC-ES AC308. All anchors shall be installed per the anchor manufacturer's written instructions.
- Timber and Wood Framing:
 - A. Quality and construction of wood framing members and their fasteners for load supporting purposes not otherwise indicated on the drawings shall be in accordance with the 2012 International Building Code.
 - B. All studs and top and bottom plates shall be Douglas Fir No. 2 grade visually graded lumber, with an allowable fiber stress in bending of 900 psi minimum and an elastic modulus of 1600,000 psi unless noted otherwise. All joist, truss members and headers to be No. 2 grade (min) (unless noted otherwise).
 - C. Bridging of stud bearing walls and shear walls shall be solid, matching sheathing joints.
 - D. Joint blocking and bracing shall be solid wood or cross bridging of either wood or metal straps. Spacing, in any case, shall not exceed 8'-0".
 - E. Wood members and sheathing shall be fastened with number and size of fasteners not less than that set forth in Tables 2304.1 of the 2012 International Building Code. Sheathing of shear walls or roof diaphragms shall be edge nailed with 8d common nails at 4" on center and nailed to intermediate framing and/or blocking members with 8d common nails at 12" on center unless otherwise noted on the drawings.
 - F. Sill plates shall be bolted to concrete slabs with 1/2" diameter bolts at 32" on center (NO. 8; shearnail sched). Provide plate washers at sill plate anchors for shearnails per shearnail sched. Plates in direct contact with concrete or masonry shall be treated lumber.
 - G. All hangers, ties and connections shown are based on Simpson Strong-Tie as the basis of design, provide Simpson Strong-Tie or an approved equal. Joist hangers shall be equal to "LJ5" for wood application and "LB" for steel weld-on application. Roof truss ties shall be equal to "H2.5A" and tie the roof truss to the top plate (provide 2) "H2.5A" diagonally across from each other when uplift load shown in truss shop submittal exceeds 600lbs). Roof girder ties shall be equal to a "L6T2", "L6T3" or "L6T4" tie (dependent on number of plies) and tie the truss girder to the top plate. Provide "H4" at the top of each stud to top track when the top track has roof truss attached. Service condition - dry with moisture content at or below 19% in service.
 - H. Laminated veneer lumber (LVL) shall have an allowable flexural stress (F_b) of 2800 psi (reduced by size factor) and an elastic modulus (E) of 1,900,000 psi.
 - I. Pre-engineered wood trusses shall be designed in accordance with the Truss Plate Institute's national design standard for metal-plate connected wood truss construction (ANSI/TPI-1 latest edition). Trusses shall be designed and manufactured by an authorized member of the Wood Truss Council of America (WTCOA). Truss design shall conform to specified codes, allowable stress increases, deflection limitations and other applicable criteria of the governing code.
 - J. Truss shop drawings showing complete erection and fabrication details and calculations (including connections) shall be submitted to the project architect / engineer for review prior to fabrication and/or erection. Calculations shall bear the seal of a professional engineer registered in the state of the project location. Shop drawings shall also be submitted to the local government controlling agency when requested by that agency.
 - K. All trusses shall be securely braced both during erection and permanently, as indicated on the approved truss design drawings and in accordance with TPI's commentary and recommendations for handling, installing and bracing metal-plate connected wood trusses (HIB-TI, booklet) and the latest edition of ANSI/TPI-1.
 - L. The truss manufacturer shall supply all hardware and fasteners for joining truss members together and fastening truss members to their supports. Metal connector plates shall be manufactured by a member of the Wood Truss Council of America (WTCOA) and shall be 20 gauge minimum. Connector plates shall meet or exceed ASTM A653, grade 33, with ASTM A624 galvanized coating design 660.
 - M. Provide truss space directly above and centered over HVAC closets. Refer to Architectural and MEP drawings for exact locations.
 - N. Shipment, handling and erection of trusses shall be by experienced, qualified persons and shall be performed in a manner so as not to endanger life or property. Apparent truss damage shall be reported to the truss manufacturer for evaluation prior to erection. Cutting or alteration of trusses is not permitted.
 - O. Roof Truss Design Criteria:
 - Top Chord Dead Load: 10 psf
 - Top Chord Live Load: 25 psf (Plus Rooftop Equipment)
 - Top Chord Snow Load: 20 psf or 14 psf plus Drift
 - Bottom Chord Dead Load: 10 psf
 - Bottom Chord Live Load: 5 psf
 - Live Load Deflection: L/360
 - Total Load Deflection: L/300
 - P. Roof trusses shall be designed per IBC 2012 for net uplift resulting from wind loading as calculated using components and cladding loading.
 - Q. Construction bracing shall be provided by the contractor as required to keep the building and studs plumb.

- Structural members shall not be cut for pipes, etc., unless specifically detailed. Notching and boring of studs and top of plates shall conform to the provisions of section 2308.4.10 and 2308.4.11 of the IBC. Where top plates or sole plates are cut for pipes, a metal plate tension tie with minimum 0.058 inches thick and 1/2" inches wide shall be fastened to each plate across and to each side of the opening with not less than (6) 16d nails, in accordance section 2308.4.8 of the IBC.
- All fasteners for wood to wood connections and wood connectors shall be as indicated in structural drawings or manufacturer literature to achieve full capacity of connector. Alternate fasteners may be submitted as a substitution request. Submittal must show that alternative fasteners will not reduce the capacity of the connection.
- Shop Drawing Review:
 - A. Bob D. Campbell and Company, Inc. will review the General Contractor's (GC) shop drawings and related submittals (as indicated below) with respect to the ability of the detailed work, when complete, to be a properly functioning integral element of the overall structural system designed by Bob D. Campbell and Company, Inc.
 - B. Prior to submittal of a shop drawing or any related material to Bob D. Campbell and Company, Inc., the GC shall:
 - 1) Review each submission for conformance with the means, methods, techniques, sequences and operations of construction and safety precautions and programs included therein, all of which are the sole responsibility of the GC.
 - 2) Review and approve each submission.
 - 3) Stamp each submission as approved.
 - C. Bob D. Campbell and Company, Inc. shall assume that no submission comprises a variation unless the GC advises Bob D. Campbell and Company, Inc. with written documentation.
 - D. Shop drawings and material (if any) required are indicated below. Should Bob D. Campbell and Company, Inc. require more than ten (10) working days to perform the review, Bob D. Campbell and Company, Inc. shall so notify the GC.
 - 1) Concrete mix designs and material certificates including admixtures and compounds applied to the concrete after placement.
 - 2) Reinforcing steel shop drawings including erection drawings, wall elevations (include all mesh openings) and bending details. Bar list will not be reviewed for correct quantities.
 - 3) Structural steel shop drawings including erection drawings and piece details, include connection submittals and miscellaneous framing.
 - 4) Miscellaneous anchors shown on the structural drawings.
 - 5) Wood truss design calculations and detailed erection and fabrication drawings. Standard stick framing shop drawings need not be submitted.
 - E. Bob D. Campbell and Company, Inc. shall review shop drawings and related materials with comments provided that each submission has met the above requirements. Bob D. Campbell and Company, Inc. shall return without comment unrequired material or submissions without GC approval stamp.
- Structural Special Inspection:
 - A. The structural design for this project is based on completion of special inspections during construction in accordance with chapter 17 of the 2012 International Building Code. The owner shall employ one or more qualified special inspectors to provide the required special inspections.
 - B. Special inspections shall be required for the items indicated below. The General Contractor shall provide notification to the inspector when items requiring inspection are ready to be inspected and provide access for those inspections.
 - 1) Placement of Concrete
 - 2) Testing of Concrete
 - 3) Bolts in Concrete
 - 4) Placement of Reinforcing Steel
 - 5) Verification of Soil Bearing Capacities
 - 6) High Strength Bolting
 - 7) Drill & Epoxy Bolts
 - 8) Structural Welding
 - 9) Shear Wall Installation
 - 10) Post-Installed Anchors
 - 11) Wood shear walls and holdowns
 - 12) Wood gravity framing and placement
 - C. The special inspector shall furnish inspection reports to the building official, owner, architect and structural engineer, and any other designated person.
 - D. All discrepancies shall be brought to the immediate attention of the contractor for correction. If uncorrected, to the proper design authority, building official and structural engineer.
 - E. The special inspector shall submit a final signed report stating that the work requiring special inspection met, to the best of the inspector's knowledge, in conformance with the approved plans and specifications and the applicable workmanship provisions of the building code.
- Copyright and Disclaimer:
 - A. All drawings in the structural set (5-series drawings) are the copyrighted work of Bob D. Campbell and Company, Inc. These drawings may not be photographed, traced, or copies in any manner without the written permission of Bob D. Campbell and Company, Inc. Exception: Original drawings may be printed for distribution to the owner, architect, and general contractor for coordination, bidding and construction. Subcontractors may not reproduce these drawings for any purpose or in any manner.
 - B. Michael J. Falbe, P.E., registered engineer and a representative of Bob D. Campbell and Company, Inc., do hereby accept professional responsibility as required by the professional registration laws of this state for the structural design drawings consisting of 5-series drawings. I hereby disclaim responsibility for all other drawings in the construction document package, they being the responsibility of other design professionals whose seals and signed statements may appear elsewhere in the construction document package.

NAILING SCHEDULE (REFER TO NOTES #1 and #2)

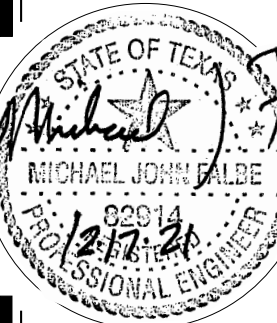
CONNECTION		ATTACHMENTS (REF NOTE #3 and #4)	
1	JOIST TO SILL OR GIRDER	3- 3" x 0.131" NAILS-TOENAIL	3-8d NAILS-TOENAIL
2	BRIDGING TO JOIST	2- 3" x 0.131" NAILS-TOENAIL EACH END	2-8d NAILS-TOENAIL EACH END
3	SOLE PLATE TO JOIST OR BLOCKING & TRUSS TO TOP P.	3" x 0.131" NAILS AT 8" o.c. - TYPICAL FACE NAIL 4- 3" x 0.131" NAILS AT 16" o.c. - BRACED WALL PANELS	16d BOX NAILS AT 16" o.c. MAX. FACE NAILING 3-16d BOX NAILS AT 16" o.c. BRACED WALL PANEL
4	TOP PLATE TO STUD	3- 3" x 0.131" NAILS-END NAIL	2-16d NAILS-END NAIL
5	STUD TO SOLE PLATE	4- 3" x 0.131" NAILS-TOENAIL OR 3- 3" x 0.131" NAILS-END NAIL	4-8d NAILS-TOENAIL OR 2-16d NAILS-END NAIL
6	DOUBLE STUDS	3" x 0.131" NAILS AT 8" o.c. - FACE NAIL	16d BOX NAILS AT 24" o.c. MAX. FACE NAIL
7	DOUBLED TOP PLATES	3" x 0.131" NAILS AT 12" o.c. - FACE NAIL	16d BOX NAILS AT 16" o.c. MAX. FACE NAIL
8	DOUBLE TOP PLATE LAPS AND INTERSECTIONS	12- 3" x 0.131" NAILS	8-16d NAILS
9	BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE	3- 3" x 0.131" NAILS - TOENAIL	3-8d NAILS-TOENAIL
10	RIM JOIST TO TOP PLATE	3" x 0.131" NAILS AT 6" o.c. - TOENAIL	10d NAILS AT 6" o.c. MAX. - TOENAIL
11	TOP PLATE LAPS AND INTERSECTIONS	3- 3" x 0.131" NAILS-FACE NAIL	2-16d NAILS-FACE NAIL
12	CONTINUOUS HEADER, TWO PIECES	3" x 0.131" NAILS AT 10" o.c. ALONG EACH EDGE	16d NAILS AT 16" o.c. MAX. ALONG EACH EDGE-TOENAIL
13	CEILING JOISTS TO PLATE	5- 3" x 0.131" NAILS-TOENAIL	3-8d NAILS-TOENAIL
14	CONTINUOUS HEADER TO STUD	4- 3" x 0.131" NAILS-TOENAIL	4-8d NAILS-TOENAIL
15	CEILING JOISTS, LAPS OVER PARTITIONS	4- 3" x 0.131" NAILS-FACE NAIL	3-16d NAILS-FACE NAIL
16	CEILING JOISTS TO PARALLEL RAFTERS	4- 3" x 0.131" NAILS-FACE NAIL	3-16d NAILS-FACE NAIL
17	RAFTER TO PLATE	3- 3" x 0.131" NAILS-TOENAIL	3-8d NAILS-TOENAIL
18	1" BRACE TO EACH STUD AND PLATE	2- 3" x 0.131" NAILS-FACE NAIL	2-8d NAILS-FACE NAIL
19	BUILT-UP CORNER AND MULTIPLE STUDS	3" x 0.131" NAILS AT 16" o.c.	16d NAILS AT 24" o.c. MAX.
20	BUILT-UP GIRDER AND BEAMS	3" x 0.131" NAILS AT 24" o.c. FACE NAILED TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES 3- 3" x 0.131" NAILS AT ENDS AND EACH SPLICE	20d NAILS AT 32" o.c. MAX. TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES. 2-20d NAILS AT ENDS AND EACH SPLICE
21	BUILT-UP LAMINATED VENEER LUMBER BEAMS	3" x 0.131" NAILS AT 6" o.c. TOP AND BOTTOM ALONG EDGE	16d NAILS AT 12" o.c. TOP AND BOTTOM ALONG EDGE
22	2" PLANKING	4- 3" x 0.131" NAILS AT EACH SUPPORT	16d NAILS AT EACH SUPPORT
23	RIM BOARD TO TRUSS	2 - 3" x 0.131" FACE NAILS (17/16 @ EA TRUSS)	2-10d NAILS - FACE NAILS (17/16 @ EA TRUSS)
24	BUILT-UP STUD PACK COLUMNS	REFER TO DETAIL 6/S/1	REFER TO DETAIL 6/S/1

NOTES:
 1) ALL NAILS SHALL BE AS NOTED UNLESS OTHERWISE SPECIFIED ON STRUCTURAL DRAWINGS OR ALTERNATE PROVIDED BY ENGINEER IN WRITING.
 2) CONDITIONS NOT SPECIFIED SHALL BE IN ACCORDANCE WITH CURRENT INTERNATIONAL BUILDING CODE.
 3) NAILING DESIGNATION:

 4) ALL NAILS NOTED AS 8d, 10d, 16d, ETC. SHALL BE COMMON NAILS UNLESS NOTED BOX.
 5) REFER TO SHEARWALL SCHEDULE FOR ADDTL. NAILING REQUIREMENTS.

BUILDING A

REVISION:	
DATE:	12-17-2021
JOB:	20-3065
SHEET:	SA1.0

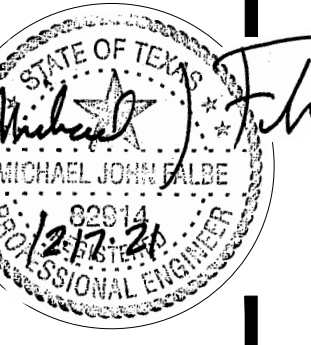
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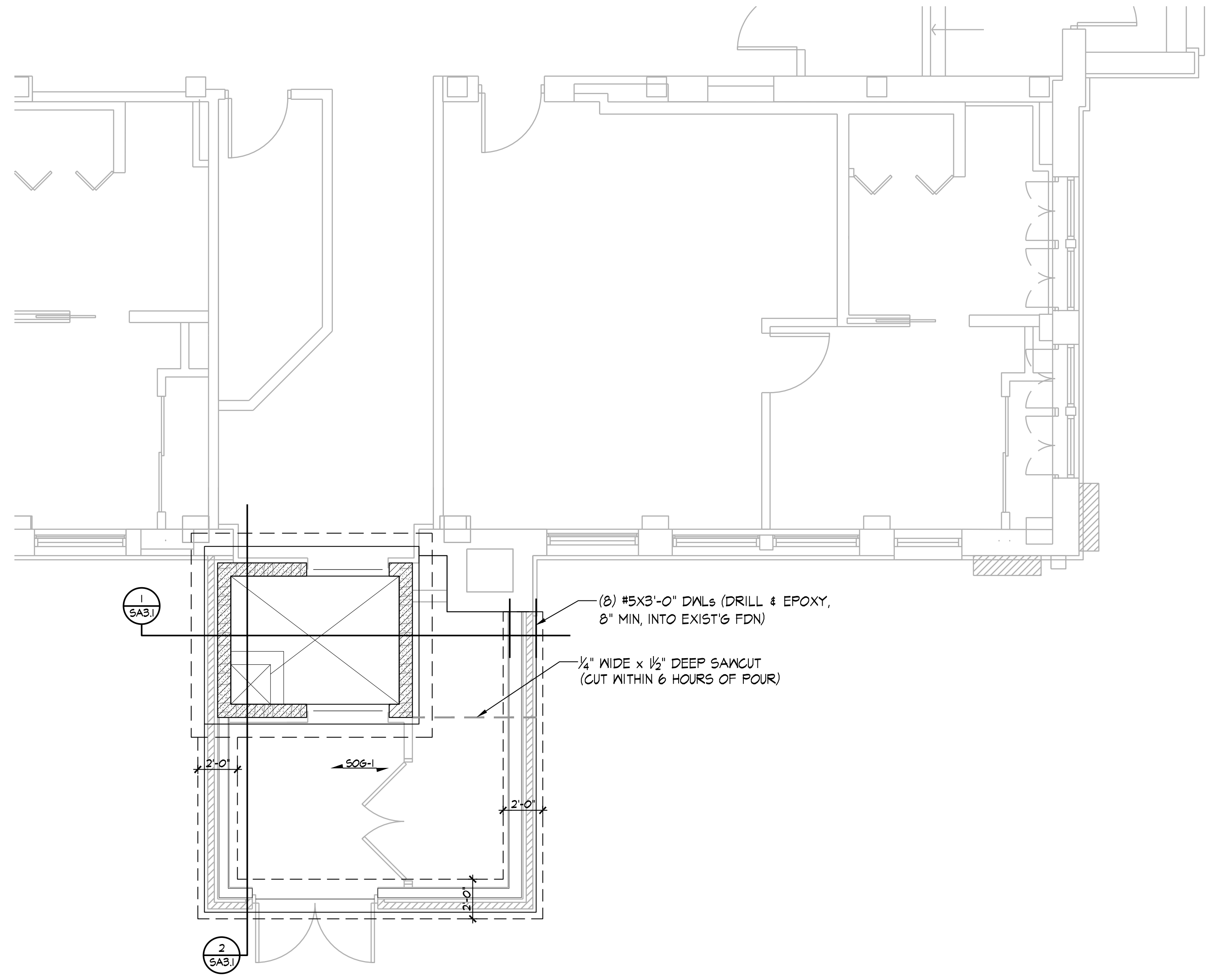
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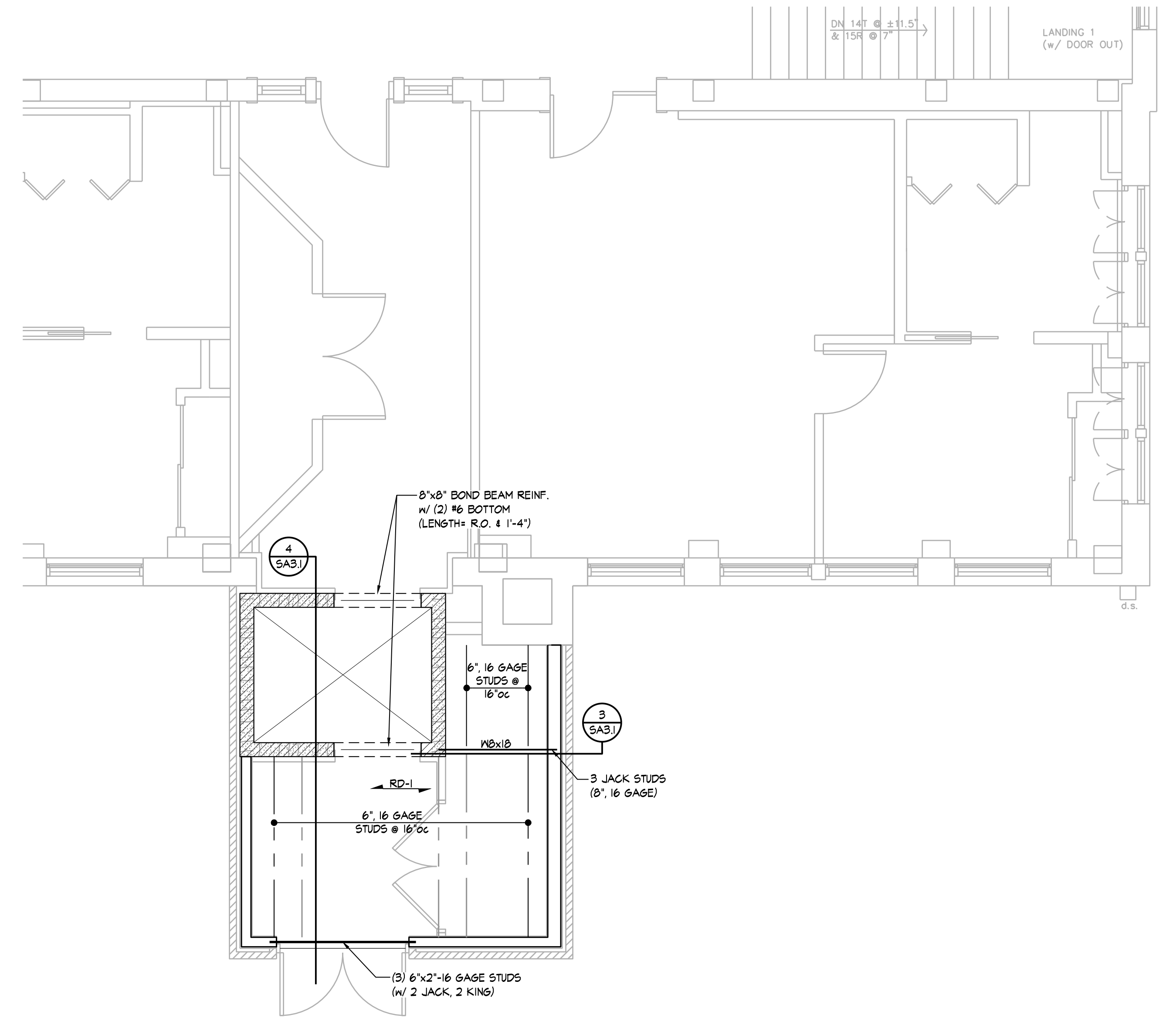


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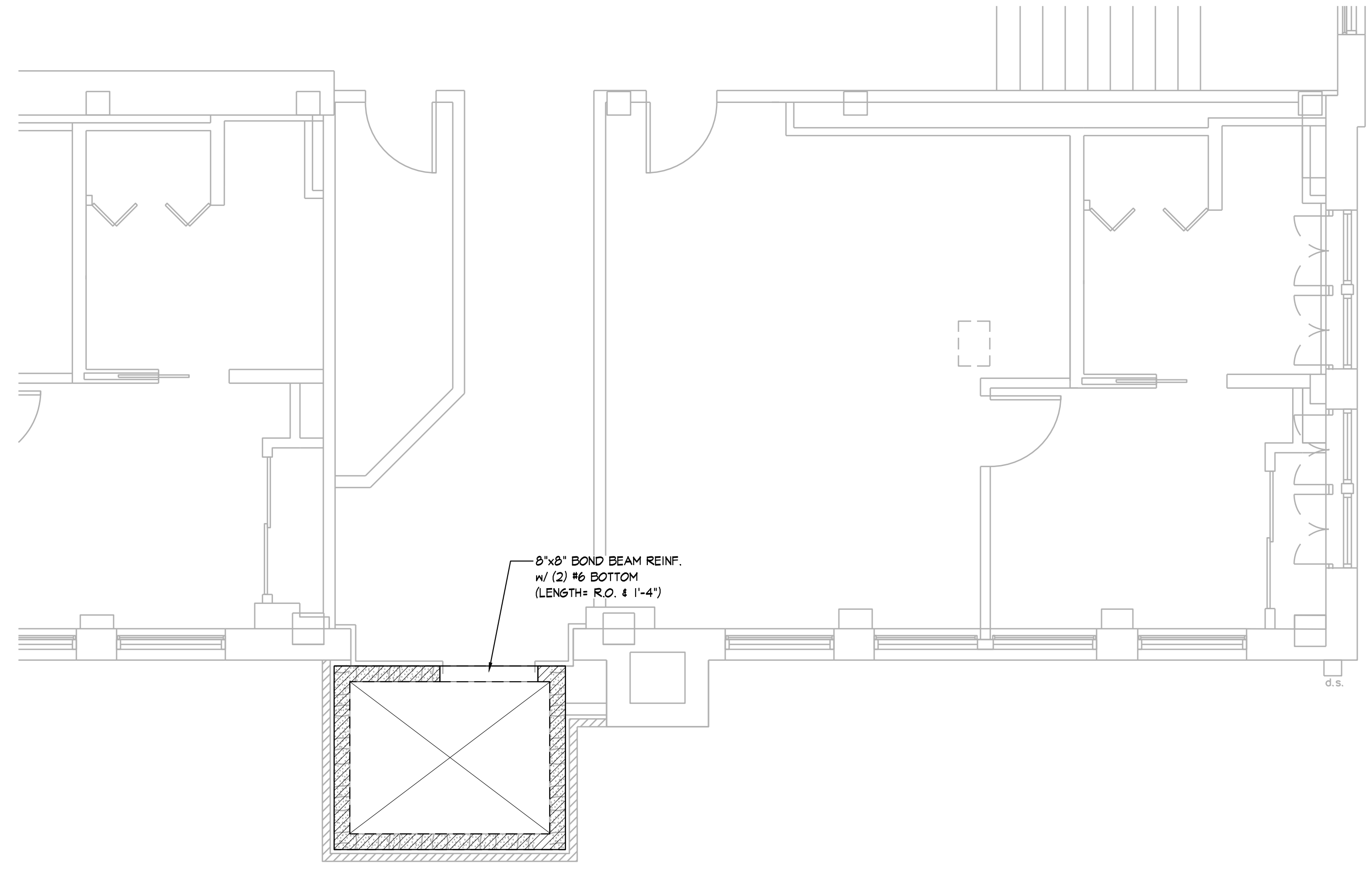
PARTIAL FOUNDATION PLAN - BUILDING A
1/4" = 1'-0"

- NOTES:
1. REFER TO GENERAL NOTES ON SHEET SA1.0
 2. REFER TO COLUMN & FOOTING SCHEDULE ON SHEET SA1.0
 3. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN
 4. "506-1" DENOTES 6" CONC. SLAB ATOP 15 MIL VAPOR BARRIER ATOP 4" GRAVEL ATOP COMPACTED SELECT FILL & SUBGRADE AS REQ'D BY PROJECT GEOTECH. REPORT. REINF. w/ 6x6-6/16 W/W T/C EL. 100'-0". NOTE: 3'-0" OF TOP CLAY TO BE REMOVED & PREPARED PER PROJECT GEOTECHNICAL REPORT.

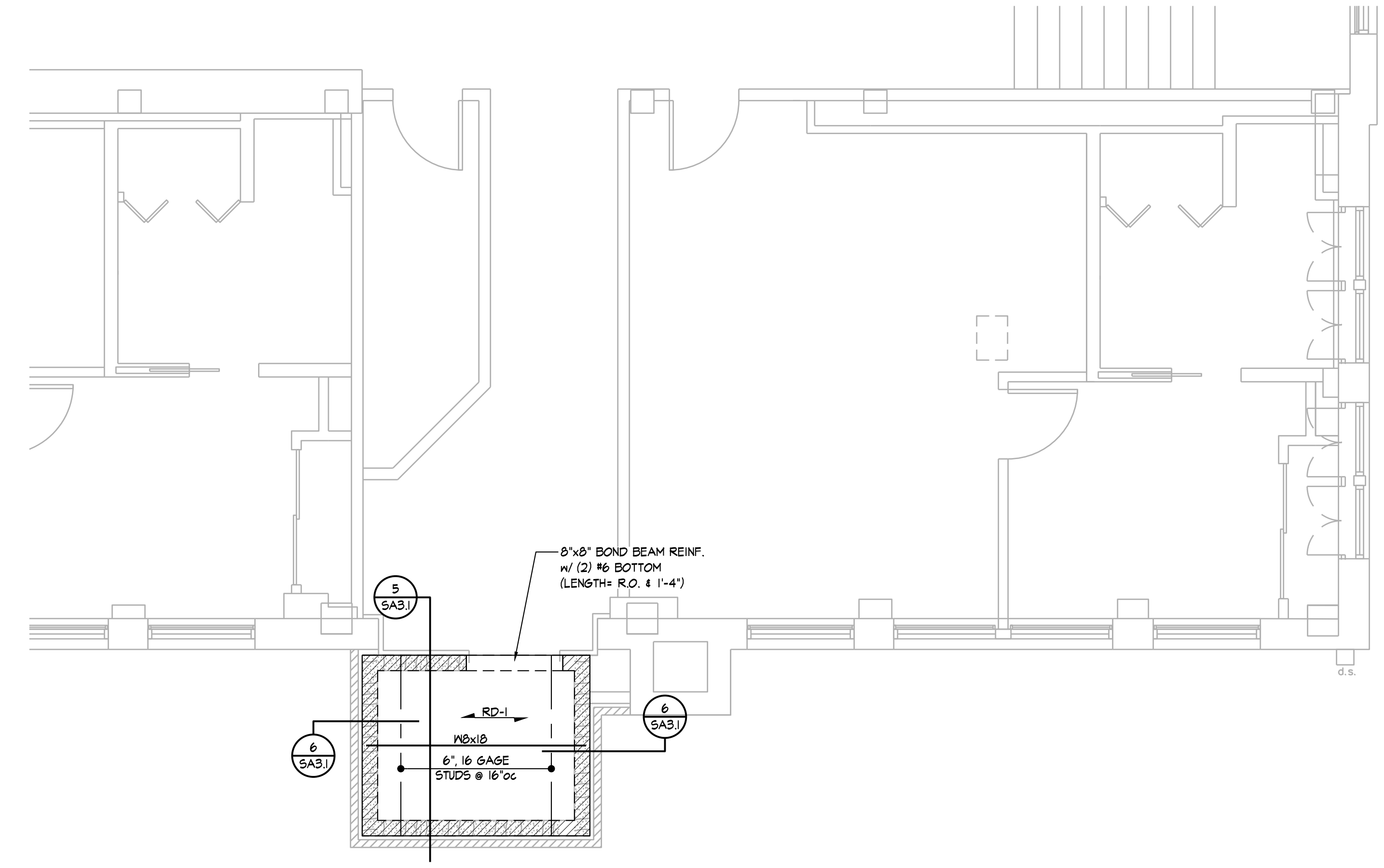


PARTIAL SECOND FLOOR FRAMING PLAN - BUILDING A
1/4" = 1'-0"

- NOTES:
1. REFER TO GENERAL NOTES ON SHEET SA1.0
 2. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN
 3. "RD-1" DENOTES 3/4" FRD PLYWOOD ROOF DECK



PARTIAL THIRD FLOOR FRAMING PLAN - BUILDING A
 1/4" = 1'-0"
 NOTES:
 1. REFER TO GENERAL NOTES ON SHEET SA1.0
 2. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN

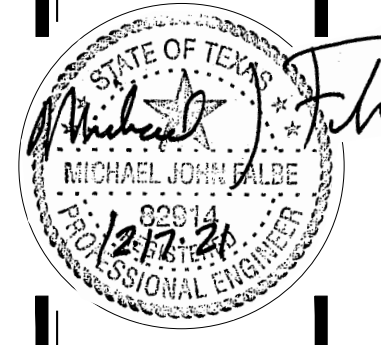


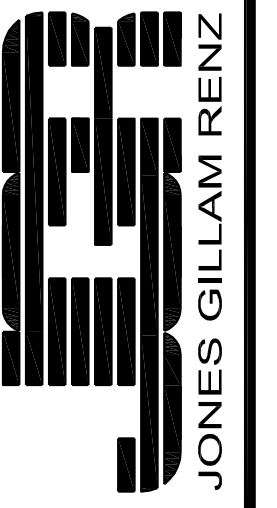
PARTIAL ROOF FRAMING PLAN - BUILDING A
 1/4" = 1'-0"
 NOTES:
 1. REFER TO GENERAL NOTES ON SHEET SA1.0
 2. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN
 3. "RD-1" DENOTES 3/4" FRT PLYWOOD ROOF DECK

BUILDING A

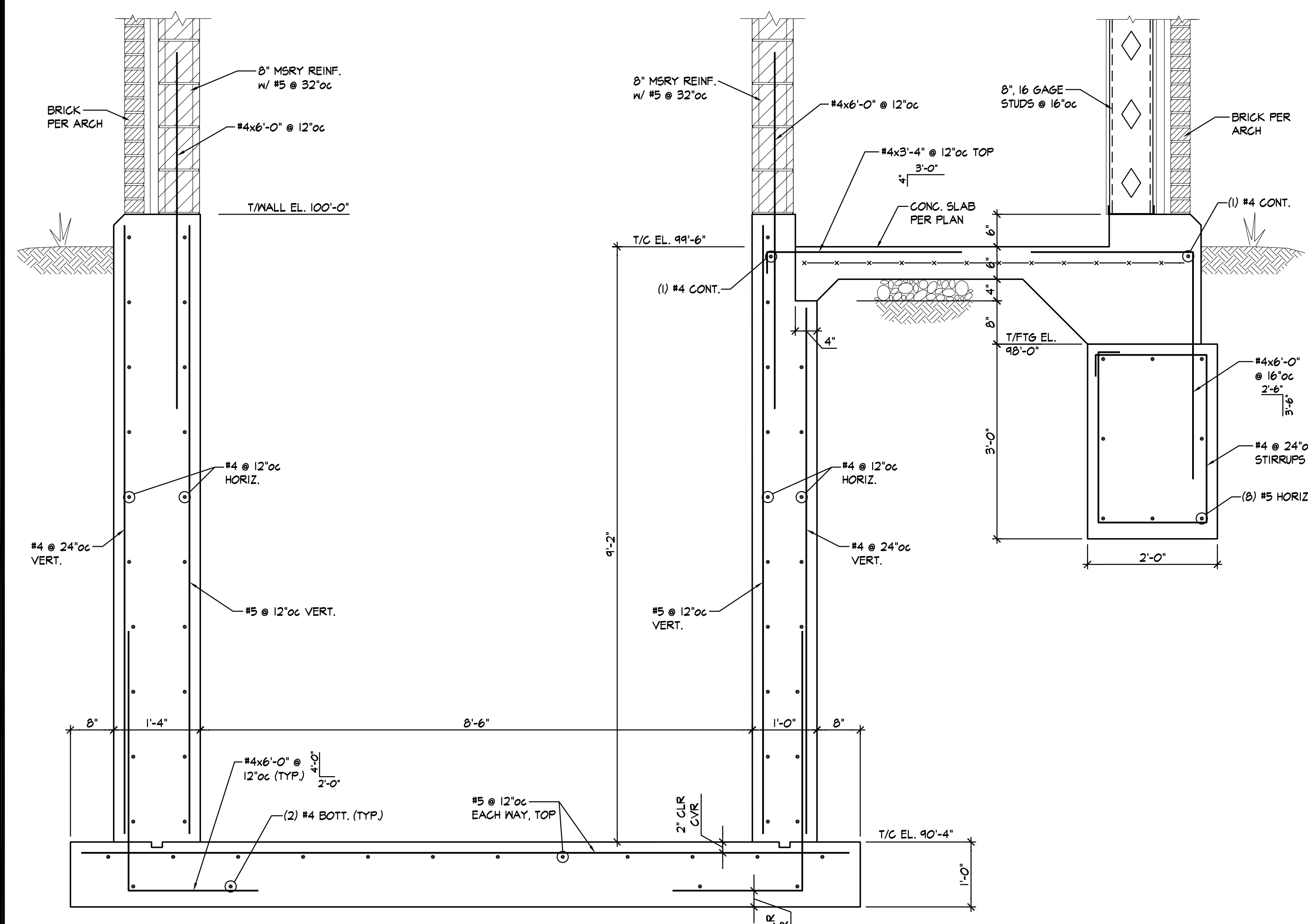
REVISION:	
DATE:	12-17-2021
JOB:	20-3065
SHEET:	

SA2.2

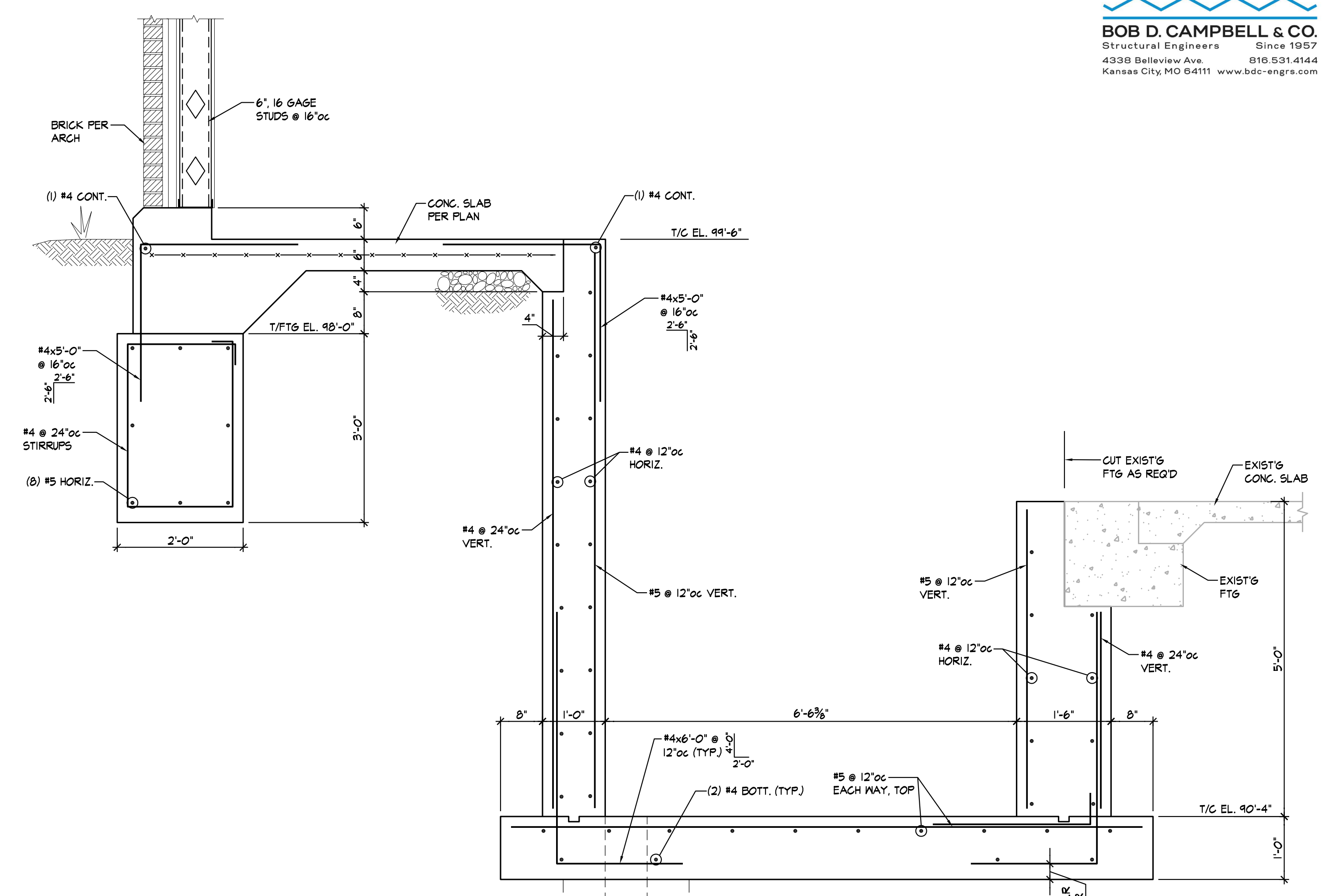




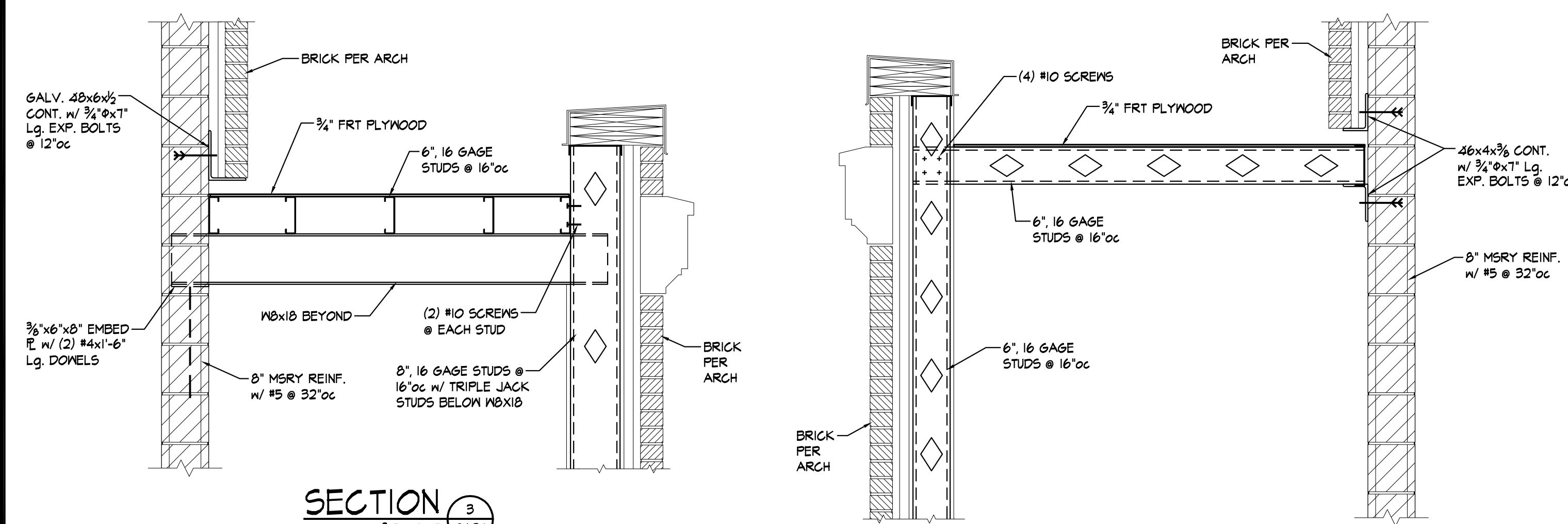
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 ABILENE, TEXAS



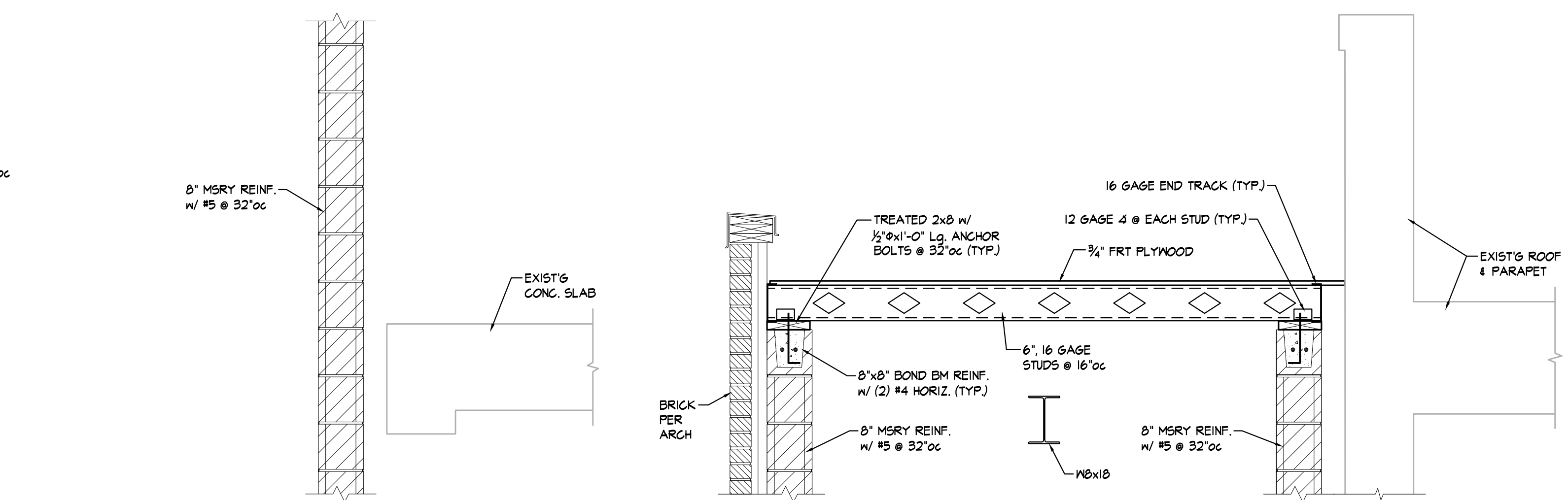
SECTION 1
 3/4" - 1'-0" (SA3.1)



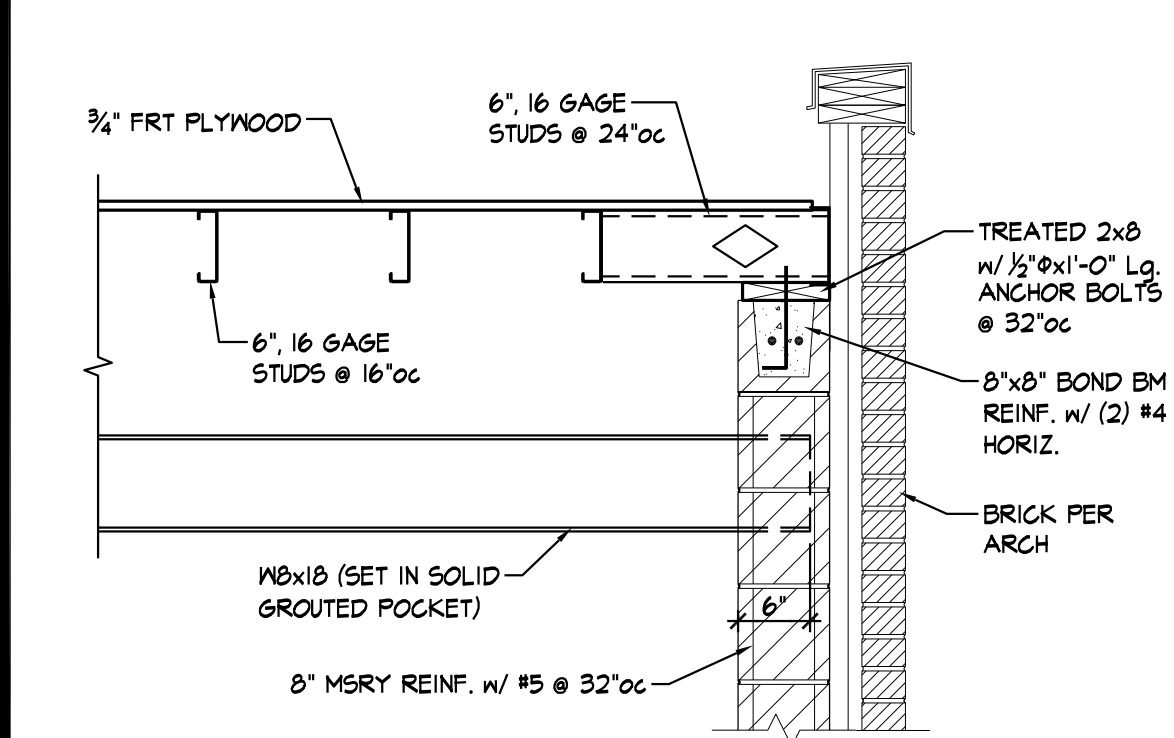
SECTION 2
 3/4" - 1'-0" (SA3.1)



SECTION 3
 3/4" - 1'-0" (SA3.1)



SECTION 4
 3/4" - 1'-0" (SA3.1)



SECTION 5
 3/4" - 1'-0" (SA3.1)



SECTION 6
 3/4" - 1'-0" (SA3.1)

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SA3.1

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