

HOUSING AUTHORITY OF THE COUNTY OF DEKALB

Taylor Street Plaza  
Hallway & Apartment Condensing Boiler Replacement  
507 E. Taylor St,  
DeKalb, IL 60115

OWNER

HOUSING AUTHORITY  
OF THE COUNTY OF DEKALB  
507 E TAYLOR ST,  
DEKALB, IL 60115

MEP ENGINEER

TRC WORLDWIDE  
ENGINEERING MEP, LLC  
53 W. JACKSON BLVD,  
SUITE 1604  
CHICAGO, IL 60604  
(312) 291-8276

ARCHITECT

RONALD G. BILLY JR.  
TYSON & BILLY ARCHITECTS P.C.  
4000 MORSAY DRIVE  
ROCKFORD, IL 61107  
(815) 229-8222

CODE COMPLIANCE

BUILDING CODES:

REQUIREMENTS BASED ON THE FOLLOWING:

<u>BUILDING:</u>	2015 ICC (IBC) INTERNATIONAL BUILDING CODE
<u>FIRE:</u>	2015 ICC (IFC) INTERNATIONAL FIRE CODE
<u>MECHANICAL:</u>	2015 ICC (IMC) INTERNATIONAL MECHANICAL CODE
<u>PLUMBING:</u>	2014 ILLINOIS PLUMBING CODE
<u>ELECTRICAL:</u>	2014 (NEC) NATIONAL ELECTRICAL CODE
<u>ACCESSIBILITY:</u>	2010 STATE OF ILLINOIS ACCESSIBILITY CODE
<u>ENERGY:</u>	2015 ICC (IECC) INTERNATIONAL ENERGY CONSERVATION CODE W/ STATE AMENDMENTS
<u>FUEL GAS:</u>	2015 INTERNATIONAL FUEL GAS CODE

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY SUPERVISION, AND TO THE BEST OF MY KNOWLEDGE, COMPLY WITH ALL APPLICABLE CODES.

Signed: \_\_\_\_\_  
Architect/Engineer  
ILLINOIS REGISTRATION NO.: 001-015480  
Exp. Date: 11/30/20  
ILLINOIS PROFESSIONAL DESIGN FIRM  
REGISTRATION NO. 184003452

STATEMENT OF COMPLIANCE  
I HAVE PREPARED, OR CAUSED TO BE PREPARED UNDER MY DIRECT SUPERVISION, THE ATTACHED PLANS AND SPECIFICATIONS AND STATE THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF AND TO THE EXTENT OF MY CONTRACTURAL OBLIGATION, THEY ARE IN COMPLIANCE WITH THE ENVIRONMENTAL BARRIERS ACT (410 ILCS 25) AND THE ILLINOIS ACCESSIBILITY CODE (71 111. ADM. CODE 400)

Signed: \_\_\_\_\_  
Architect/Engineer  
ILLINOIS REGISTRATION NO.: 001-015480  
Exp. Date: 11/30/20  
ILLINOIS PROFESSIONAL DESIGN FIRM  
REGISTRATION NO. 184003452

THESE DOCUMENTS ARE COPYRIGHTED. REPRODUCTION OF THIS DRAWING, BY ANY PHOTOGRAPHIC, XEROGRAPHIC OR OTHER SIMILAR TECHNIQUE OR PROCESS, DURING THE BIDDING PERIOD OR FOR INCORPORATING THE MATERIAL CONTAINED HEREON INTO A SHOP DRAWING, IS STRICTLY PROHIBITED

WITHOUT THE EXPRESSED CONSENT OF TYSON AND BILLY ARCHITECTS, P.C. © 2019

TYSON AND BILLY ARCHITECTS, P.C. ILLINOIS PROFESSIONAL DESIGN FIRM  
REGISTRATION NO. 184003452

SHEET INDEX

GENERAL

G1 COVER SHEET

E001 ELECTRICAL SYMBOLS & ABBREVIATIONS

E210 GROUND FLOOR ELECTRICAL DEMOLITION & NEW PLAN

E600 ELECTRICAL SCHEDULES

H001 SYMBOLS & ABBREVIATIONS

H210 GROUND FLOOR HVAC DEMOLITION & NEW PLAN

H600 HVAC SCHEDULES & DIAGRAMS

H800 HVAC DETAILS

ABBREVIATION LIST

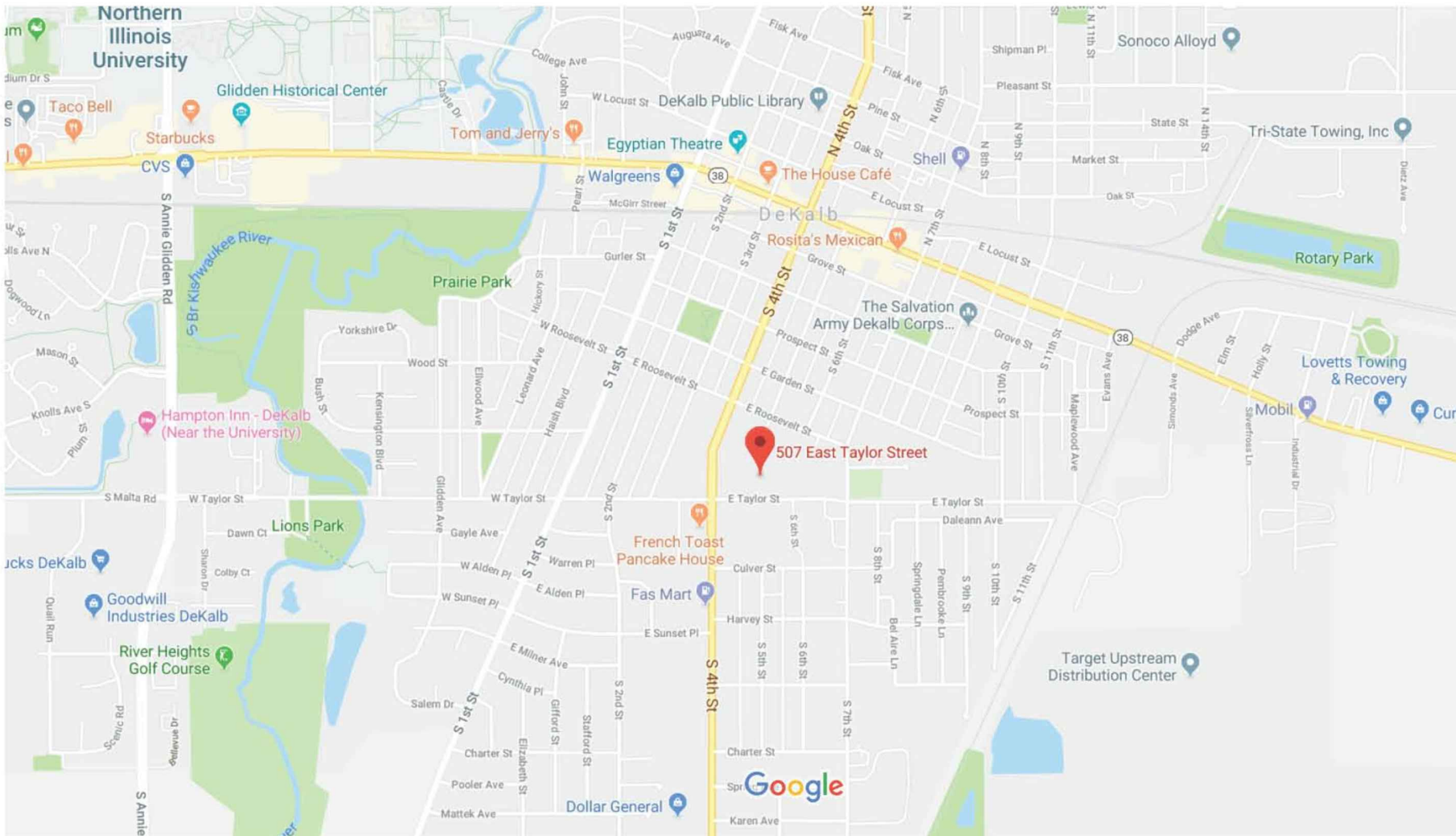
1B	ONE BEDROOM	LAV.	LAVATORY
2B	TWO BEDROOM	LB	FOUND
ADA	AMERICANS WITH DISABILITIES ACT	LN.FT.	LINEAR FEET
A.F.F.	ABOVE FINISHED FLOOR	LS	LAZY SUSAN
AL	ALUMINUM/ASSISTED LIVING	M	MEN
AUTO	AUTOMATIC	MACH	MACHINE
B	BASE	MAX	MAXIMUM
BRG	BEARING	MC	MEMORY CARE
CB	CORNER BASE	MECH.	MECHANICAL
CBNTS	CABINETS	MED	MEDICINE
CL	CENTER LINE	MIN.	MINIMUM/MINUTE
CM2	SQUARE CENTIMETER	MFR'S	MANUFACTURER'S
CMU	CONCRETE MASONRY BLOCK	M.R.	MOISTURE RESISTANT
CONC.	CONCRETE	MSS	MANUFACTURER'S STANDARD
CONT.	CONTINUOUS	N/A	GAUGE
CORP.	CORPORATION	NFPA	NOT APPLICABLE
DB	DRAWER BASE	NOM.	NATIONAL FIRE PROTECTION
DBL	DOUBLE	O.C.	ASSOCIATION
DIA	DIAMETER	OSB	NOMINAL
DM	DIMENSION	PL-LAM	ON CENTER
DN	DRYWALL		ORIENTED STRAND BOARD
D.S.	DOWNSPOUT	PLUMB.	PLASTIC LAMINATE
E	EFFICIENCY	PTAC	PLUMBING
E/J	EXPANSION JOINT	R	PACKAGED TERMINAL AIR
EL	ELEVATOR	RCP	CONDITIONERS
ELEC.	ELECTRICAL	REF.	RADIUS
ELEV.	ELEVATOR/ELEVATION	REQD	REFLECTED CEILING PLAN
EQ	EQUAL	REQMT	REFERENCE/REFRIGERATOR
EQUIP.	EQUIPMENT	S	REQUIRED
ESR	EVALUATION SERVICE REPORT	REV	REQUIREMENTS
EXST.	EXISTING	R.O	REVERSED
EXT.	EXTERIOR	SB	ROUGH OPENING
FF AND	FURNITURE, FIXTURE, AND EQUIPMENT	SC	SINK BASE
E	FIRE EXTINGUISHER CABINET	SF	SOLID CORE
F.E.C.	FIBERGLASS REINFORCED PANEL	SF	SQUARE FEET
FRFP	FOOT	SPEC	SIMILAR
FT	FOOT	SQ.FT.	SPECIFICATION
GA	GENERAL CONTRACTOR	SQ.IN.	SQUARE INCHES
G.C.	GENERAL	S.S.	SQUARE INCHES
GEN.	GYPSUM	STL.	STAINLESS STEEL
GYP.	HANDICAP BASE	STL	STEEL
HB	HANDICAP BASE DRAWER	STRUCT.	STRUCTURAL
HBD	HANDICAP CORNER BASE	T/	TOP OF
HCB	HOLLOW CORE	TEMP.	TEMPERED
HC	HOLLOW METAL	TERM.	TERMINATION
HM	INTERNATIONAL BUILDING CODE	TYP.	TYPICAL
IBC	INTERNATIONAL CODE COUNCIL	UL	UNDERWRITERS LABORATORIES
ILCS	ILLINOIS DEPARTMENT OF PUBLIC HEALTH	VEST.	VESTIBULE
IDPH	INTERNATIONAL ENERGY CONSERVATION	W	WALL
IECC	CODE	W	WOMEN
INSUL.	INSULATED/INSULATION	W	WIND
JAN.	JANITOR	W	WELD
		W.F.	WELDED WIRE FABRIC

MATERIAL INDICATIONS

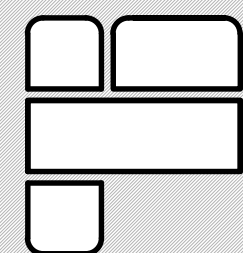
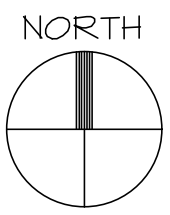
	EARTH		ROUGH WOOD
	GRAVEL OR SAND FILL		FINISH WOOD
	CONCRETE		PLYWOOD
	LIGHT WEIGHT CONCRETE		CARPET
	BRICK MASONRY		ACOUSTICAL TILE
	REINFORCING BARS (END)		LAMINATED BEAM
	REINFORCING BARS (SIDE)		VAPOR BARRIER
	CONCRETE BLOCK		RIGID INSULATION
	CUT STONE		LOOSE OR BATT INSULATION
	STUD WALL OR PARTITION		PLASTER OR DRYWALL
	STEEL OR IRON		STRUCTURAL STEEL

GRAPHIC SYMBOLS

DETAIL OR SECTION	DETAIL NO.
INTERIOR ELEVATION	SHEET NO.
DOOR SYMBOL	
WALL TYPE SYMBOL	
ELEVATION SYMBOL	
ROOM SYMBOL	
WINDOW SYMBOL	



VICINITY MAP  
NO SCALE



Tyson and Billy Architects, P.C.  
4000 Morsay Drive  
Rockford, IL 61107  
Phone: (815) 229-8222  
Fax: (815) 229-8228  
www.tysonandbilly.com

ARCHITECT

OWNER

CONTRACTOR

REVISION

DATE

BY

FOR

REVISION

DATE






















BY
















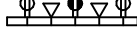
FOR

REVISION

DATE





























SYMBOL	DESCRIPTION
	MOLDED CASE CIRCUIT BREAKER
	CURRENT TRANSFORMER
	GROUND CONNECTION
	GROUND POINT
	GROUND ROD
	PAD MOUNTED TRANSFORMER ("X" DENOTES KVA SIZE)
	BRANCH PANELBOARD AND CABINET - RECESSED MOUNT
	BRANCH PANELBOARD AND CABINET - SURFACE MOUNT
	DISTRIBUTION PANELBOARD AND CABINET - SURFACE MOUNT
	ELECTRIC THERMOSTAT
	MOTOR ("X" DENOTES HORSEPOWER)
	CAPACITOR ("X" DENOTES KVAR)
	DISCONNECT SWITCH - FUSED
	DISCONNECT SWITCH - NON-FUSED
	MOTOR CONTROLLER
	COMBINATION MOTOR CONTROLLER
	HORSEPOWER RATED MANUAL MOTOR STARTER TOGGLE SWITCH WITH THERMAL OVERLOAD PROTECTION JUNCTION OR PULL BOX
	PUSHBUTTON OR PUSH PLATE
	GENERATOR/ALTERNATOR
	AUTOMATIC TRANSFER SWITCH
	EQUIPMENT JUNCTION BOX



























ELECTRICAL DEVICES	
SYMBOL	DESCRIPTION
	DUPLEX RECEPTACLE - NORMAL CIRCUIT ("X" DENOTES AS FOLLOWS)
	DUPLEX RECEPTACLE - EMERGENCY CIRCUIT("X" DENOTES AS FOLLOWS)
	DUPLEX RECEPTACLE - COUNTER TOP ("X" DENOTES AS FOLLOWS)
	QUADRAPLEX RECEPTACLE - NORMAL CIRCUIT ("X" DENOTES AS FOLLOWS)
	QUADRAPLEX RECEPTACLE - EMERGENCY CIRCUIT ("X" DENOTES AS FOLLOWS)
	SIMPLEX RECEPTACLE - NORMAL CIRCUIT ("X" DENOTES AS FOLLOWS)
	SIMPLEX RECEPTACLE - EMERGENCY CIRCUIT ("X" DENOTES AS FOLLOWS)
	NONE - 20 AMP, 125VAC
	GFI: 20 AMP, 125VAC, GROUND FAULT CURRENT INTERRUPTER TYPE
	HM - 20 AMP, 125VAC, HORIZONTAL MOUNT TYPE
	IG - 20 AMP, 125VAC, ISOLATED GROUND TYPE
	S - 20 AMP, 125VAC, SURGE GUARD PROTECTION TYPE
	ST - 20 AMP, 125VAC, SAFETY TYPE
	WP - 20 AMP, 125VAC, WEATHERPROOF TYPE
	SPECIAL RECEPTACLE - NORMAL CIRCUIT (SEE DRAWINGS AND SPECIFICATIONS)
	SPECIAL RECEPTACLE - EMERGENCY CIRCUIT (SEE DRAWINGS AND SPECIFICATIONS)
	DUPLEX - CEILING MOUNTED
	QUADRAPLEX - CEILING MOUNTED
	FLOOR BOX (DUPLEX)
	FLOOR BOX (QUADRAPLEX)
	FLOOR BOX (BLANK)
	FLOOR BOX (POWER AND DATA)
	PLUGSTRIP (POWER AND/OR DATA)
S	TOGGLE SWITCH - 20 AMP, 120/277VAC
3S	TOGGLE SWITCH - 3-WAY
4S	TOGGLE SWITCH - 4-WAY
P	TOGGLE SWITCH - PILOT LIGHT
K	TOGGLE SWITCH - KEY OPERATED
D	INDIVIDUAL LIGHT DIMMER
S <sup>a</sup>	LETTER DESIGNATION INDICATES SWITCH LEG

CLOCK SYSTEM	
<u>SYMBOL</u>	<u>DESCRIPTION</u>
HC	WALL MOUNTED CLOCK
HC(T)	DIGITAL TIME CLOCK/ELAPSED TIME SYSTEM OUTLET

RACEWAY SYSTEM	
SYMBOL	DESCRIPTION
	QUANTITY OF CONDUCTORS OR CABLES IN CONDUIT




FIRE ALARM SYSTEM	
SYMBOL	DESCRIPTION
 X	SMOKE DETECTOR ("X" DENOTES AS FOLLOWS) R - RELAY BASE
	HEAT DETECTOR
	FLAME DETECTOR
 X	DUCT DETECTOR ("X" DENOTES AS FOLLOWS) S - SUPPLY R - RETURN
	ADDRESSABLE RELAY
	REMOTE INDICATOR STATION
	REMOTE TEST STATION
	BEAM DETECTOR
	MANUAL PULL STATION
	FLOW SWITCH
	TAMPER SWITCH
 J	HORN ONLY
 H	HORN STROBE
 C	CHIME ONLY
 C	CHIME STROBE
 S	SPEAKER ONLY
 S	SPEAKER STROBE
 B	BELL ONLY
 B	BELL STROBE
 V	VISUAL ONLY
	DOOR HOLD OPEN
	ADDRESSABLE MODULE
	FIRE ALARM CONTROL PANEL




PAGING/AUDIO SYSTEM	
<u>SYMBOL</u>	<u>DESCRIPTION</u>
+M	MICROPHONE INPUT RECEPTACLE - WALL MOUNTED
	MICROPHONE INPUT RECEPTACLE - FLOOR MOUNTED
	MICROPHONE INPUT RECEPTACLE - CEILING MOUNTED
<S>	WALL MOUNTED PAGING HORN SPEAKER (ROUGH-IN)
(S)	LOUDSPEAKER - CEILING MOUNTED
(S) V	LOUDSPEAKER - CEILING MOUNTED WITH VOLUME CONTROL
+ (S)	LOUDSPEAKER - WALL MOUNTED
	VOLUME CONTROL

DOOR SECURITY SYSTEM	
SYMBOL	DESCRIPTION
	CCTV MONITOR OUTLET
	DOOR BELL
	ELECTRIC DOOR RELEASE BUTTON
	ELECTRIC DOOR STRIKE
	INTERCOM UNIT FLUSH MTD.
	MASTER INTERCOM AND DIRECTORY UNIT
	SECURITY CONTROL PANEL
	SECURITY MAGNETIC DOOR LOCK
	SECURITY CARD READER
	MOTION DETECTOR
	SECURITY DOOR CONTACTS
	SECURITY EXIT PUSH BUTTON
	SECURITY MONITOR
	SECURITY DOOR REQUEST TO EXIT MOTION DETECTOR
	SECURITY KEYPAD
	BIOSCAN ACCESS PAD
	DURESS ALARM (HOLD UP BUTTON)
	ELECTRIC POWER TRANSFER
	PUSH PLATE
	TOUCHLESS ACTUATOR
	DOOR RELEASE PUSH BUTTON
	COMBINATION CARD READER WITH KEYPAD
	DOOR POWER SUPPLY
	CAMERA
	CAMERA - EXTERIOR
	CAMERA - PAN/TILT/ZOOM





NOTE: ALL SYMBOLS AND ABBREVIATIONS MAY NOT BE USED ON THIS PROJECT

SYMBOL	DESCRIPTION
	12x48 FLUORESCENT FIXTURE
	HALF SHADED INDICATES LIFE SAFETY POWER
	FULL SHADED INDICATES EMERGENCY POWER
	2x4x24 FLUORESCENT FIXTURE
	24\"/>
	32\"/>
	48\"/>
	24\"/>
	32\"/>
	48\"/>
	WALL MOUNTED SCONCE
	2x4x48 FLUORESCENT FIXTURE
	DOWN LIGHT
	WALL MOUNTED EMERGENCY BATTERY LIGHT
	CEILING MOUNTED EMERGENCY BATTERY LIGHT
	EXIT LIGHT DIRECTIONAL ARROWS
	CEILING MOUNTED EXIT LIGHT (DUAL FACED)
	CEILING MOUNTED EXIT LIGHT
	WALL MOUNTED EXIT LIGHT
	EXTERIOR POLE LIGHTS (SINGLE HEADS)
	EXTERIOR POLE LIGHTS (DOUBLE HEADS)
	EXTERIOR POLE LIGHTS (THREE HEADS)
	EXTERIOR POLE LIGHTS (FOUR HEADS)
	EXTERIOR POLE LIGHTS (POLE TOP MOUNT)
	EXTERIOR LIGHTS (BOLLARDS)
	GROUND FLOOD LIGHT
	EXTERIOR FLOOR LIGHT
	DUAL BALLAST (NORMAL AND EMERGENCY)
	LIGHTING CONTROLLER
	MOTION DETECTOR (LIGHT SWITCH)
	OCCUPANCY SENSOR ("X" DENOTES AS FOLLOWS)
	OM - WALL MOUNT
	VACANCY SENSOR WITH SWITCH

TELECOMMUNICATION SYSTEM	
SYMBOL	DESCRIPTION
	DUPLEX DATA ONLY OUTLETS
	FLOOR BOX (VOICE, DATA, VOICE/DATA)
	CEILING MOUNTED (DATA, VOICE/DATA)

TELEVISION SYSTEM	
<u>SYMBOL</u>	<u>DESCRIPTION</u>
	TV SYSTEM OUTLET (7'')
	AUDIO/VISUAL CONTROLLER
	FLAT PANEL TV WITH RECESSED WALL BOX

FLOOR PLAN SYMBOLS	
<u>SYMBOL</u>	<u>DESCRIPTION</u>
①	PLAN NOTE
A.	GENERAL NOTE

LINE SYMBOLS	
	LIGHT/SCREENED SOLID OR DASHED LINES INDICATE EXISTING TO REMAIN
	HEAVY DASHED LINES INDICATE EXISTING TO BE REMOVED
	HEAVY CONTINUOUS LINES INDICATE NEW WORK
	HEAVY CONTINUOUS LINES INDICATE SPRINKLER ZONE

ELECTRICAL ABBREVIATIONS			
ABBREV.	DESCRIPTION	ABBREV.	DESCRIPTION
A or AMP	AMPERE	HERTZ	INTERCOMMUNICATION
AC	ALTERNATING CURRENT	IC	INSIDE DIAMETER
ACD	AIR CONDITIONING	INC	INCANDESCENT
ACP	AIR CONDITIONING UNIT	INCL	INCLUDE
ADD	ADDITION	ISOL	ISOLATED GROUND SURGE GUARD
ADJ	ADJUSTABLE	JB	JUNCTION BOX
AF	AMPERE FRAME	JC	JOINT
AFC	ABOVE FINISHED CEILING	KEC	KITCHEN EQUIPMENT CONTRACTOR
AFB	ABOVE FINISHED FLOOR	KITCHETTE	KITCHETTE
AFG	ABOVE FINISHED GRADE	KVA	KILOVOLT AMPERE
AHU	AIR HANDLING UNIT	KVAR	KILOVOLT AMPERE REACTIVE
AIC	AMPERE INTERRUPTING CAPACITY	KW	KILOWATT
AL	ALUMINUM	LAB	LABORATORY
AMB	AMMETER	LB	POUND
AMB	AMBIENT	LF	LINEAR FEET
APPROX.	APPROXIMATELY	LCS	LOCATION
ARCH	ARCHITECT	LOS	Life SAFETY
ATS	AUTOMATIC TRANSFER SWITCH	LT	LIGHT
AUTO	AUTOMATIC	LTG	LIGHTING
AVG	AVERAGE	LV	LOW VOLTAGE
BC	BARE COPPER	MATV	MASTER ANTENNA TELEVISION
BKR	BREAKER	MAX	MAXIMUM
BHP	BRAKE HORSEPOWER	MCB	MECHANICAL CONTRACTOR
BL	BUILDING LINE	MCCB	MAIN CIRCUIT BREAKER
BLDG	BUILDING	MCD	MOTOR CONTROL CENTER
BR	BRANCH	MCP	MAIN DISTRIBUTION PANEL
BTM	BOTTOM	MECH	MECHANICAL
C	CONDUIT	MH	MANHOLE
C	DEGREES CELSIUS	MIN	MINIMUM
CAB	CABINET	MISC	MISCELLANEOUS
CB or C/B	CIRCUIT BREAKER	MLO	MAIN LUGS ONLY
CC	CIRCUIT TO CENTER	MTD	MOUNTED
CCTV	CLOSED CIRCUIT TELEVISION	MOUNT	MOUNTING HEIGHT
CKT	CIRCUIT	MD	MEDICINE UNIT
CL	CENTER LINE	OD	OUTSIDE DIAMETER
CLG	CEILING	OFI	OWNER FURNISHED-CONTRACTOR INSTALLED
COL	COLUMN	OFO	OWNER FURNISHED-OWNER INSTALLED
COMM	COMMUNICATION	OPG	OPENING
COMP	COMPRESSOR	OPP	OPPOSITE
CONC	CONCRETE	OR	OPERATING ROOM
CONC	CONSTRUCTION	P	POLE
CONT	CONTINUOUS	PB	PUSHBUTTON
CONTR	CONTRACTOR	PBX	PULL BOX
CR	CRITICAL	PE	PNEUMATIC ELECTRIC CONVERTER
CT	CURRENT TRANSFORMER	PF	POWER FACTOR
CU	COPPER	PH or Ø	PHASE
DB	DEBRIED BURIAL	PV	PISTON INDICATOR VALVE
DC	DIRECT CURRENT	PNL	PANEL BOARD
DEPT	DEPARTMENT	PL	PILOT LIGHT
DF	DEFENDING FOUNTAIN	PREFAB	PREFABRICATED
DIST	DISTRIBUTION	PRES	PRESSURE
DM	DEMAND METER	PT	PNEUMATIC TUBE
DO	DRAWOUT	PTS	PNEUMATIC TUBE STATION
DPS	DOCTORS	PW	PART WINDING
DWG	DRAWING	PWR	POWER
E	ELECTRICAL CONTRACTOR	RAU	ROOM AIR CONDITIONING UNIT
EF	EXHAUST FAN	RAD	RADIANT
ELEC	ELECTRIC	RECPT	RECEPTACLE
ELEV	ELEVATOR	REF or REFR	REFRIGERATOR
ELV	ELEVATION	RENF	REINFORCED
EMER	EMERGENCY	RG	REMOTE GROUND INDICATING PANEL
ENCL	ENCLOSURE	RM	REVOLUTIONS PER MINUTE
EP	ELECTRIC PNEUMATIC	RPM	REVOLUTIONS PER MINUTE
EQUIP	EQUIPMENT	SA	SUPPLY AIR
EWC	ELECTRIC WATER COOLER	SC	SHORT CIRCUIT
EX	EXPLSION-PROOF	SGP	SURGE GUARD PROTECTION
EXH	EXHAUST	SHT	SHEET
EXP	EXPANSION	SIG	SIGNAL
EXT	EXTERIOR	SN	SOLID NEUTRAL
°F	DEGREES FAHRENHEIT	SPEC	SPECIFICATIONS
FA	FIRE ALARM	SQ	SQUARE
FAP	FIRE ALARM ANNUNCIATOR PANEL	SS	SAFETY SWITCH
FACP	FIRE ALARM CONTROL PANEL	SSSD	SOLID STATE SOFT START
FC	FAN CLAB	STD	STANDARD
FCU	FAN COIL UNIT	STN	STATION
FFC	FOOD FACILITY CONTRACTOR	STR	STRUCTURAL
FFS	FOOD FACILITY SUPPLIER	SUSP	SUSPENDED
FHC	FIRE HOSE CABINET	SW	SWITCH
FIN	FINISH	SWBD	SWITCHBOARD
FIX	FIXTURE	SWB	SWITCHGEAR
FL	FLOOR	TCC	TEMPERATURE CONTROL CONTRACTOR
FLUX	FLUORESCENT	TELE	TELECOMMUNICATION
FLEX-CONN	FLEXIBLE CONNECTION	TEMP	TEMPERATURE
FP	FIRE PROTECTION CONTRACTOR	TM	TOP OF MANHOLE
FSS	FUSED SAFETY SWITCH	TV	TELEVISION
FTG	FOOTING	TV	TYPICAL
FVR	FILM-VIEWER	UC	UNDER CARPET
FV	FULL VOLTAGE	UH	UNDER CABINET or UNDER COUNTER
FVNR	FULL VOLTAGE NON REVERSING	UJ	UNIT HATER
G or GND	GROUND	UNIT	UNIT VENTILATOR
GALV	GALVANIZED	V	VOLT
GC	GENERAL CONTRACTOR	VAC	VACUUM
GEN	GENERATOR	VB	VACUUM BREAKER
GFCI	GROUND FAULT CT. INTERRUPTER	VAC	VACUUM CLEANING
GFI	GROUND FAULT INTERRUPTER	VEL	VELOCITY
GFP	GROUND-FAULT PROTECTION	VF	VARIABLE FREQUENCY DRIVE
HGT	HEIGHT	VM	VOLTMETER
HN	HANDHOLE	VOL	VOLUME
HIO	HIGH INTENSITY DISCHARGE	VPOORF	VAPORPROOF
HO	HAND OPERATED	VSDFVC	VARIABLE SPEED DRIVE/CONTROLLER
HOA	HAND-OFF-AUTOMATIC	W	WITH
HORZ	HORIZONTAL	WO	WITHOUT
HP	HORSEPOWER	WTR	WATER
HPS	HIGH PRESSURE SODIUM	WPR	WEATHERPROOF
HTR	HEATER	WT	WEIGHT
HV	HIGH VOLTAGE	XMR	TRANSFORMER
		IMP	IMPEDANCE

## GENERAL NOTES(Cont...)

36. AT THE COMPLETION OF THE JOB, IT WILL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO TURN OVER TO THE BUILDING MANAGER AN AS—BUILT—DRAWING IN REPRODUCIBLE FORM. THESE DRAWINGS DO NOT HAVE TO BE MADE FROM SCRATCH. THE ENGINEER'S PLANS MAY BE USED AS BACKGROUND WITH THE ACTUAL CIRCUITING CHANGES ADDED.

37. DISTRIBUTION PANELS AND BRANCH CIRCUIT PANELBOARD SHALL HAVE A PANEL DIRECTORY INSTALLED. UTILIZE TYPE WRITER AS A MINIMUM OF COMPLIANCE. HAND WRITTEN CARD DIRECTORIES ARE NOT ACCEPTABLE.

38. MAIN DISTRIBUTION PANEL AND BRANCH PANELBOARD SHALL BE LABELED WITH A READILY VISIBLE LABEL PER NFPA STANDARD FOR SAFETY IN THE WORKPLACE, LABEL SHALL READ "CAUTION ARC FLASH HAZARD" SIZE AND COLOR OF TEXT SHALL BE PER STANDARD.

39. LABEL ALL J—BOX COVER PLATES, RECEPTACLE COVER PLATES WITH CIRCUIT INFORMATION.

40. COMPRESSION TYPE CONDUIT COUPLINGS ARE REQUIRED IN WALLS & CEILINGS OF WET AREA & PLENUM RATED  
CEILINGS ONLY. CONDUITS TO HAVE RIGID CONNECTIONS AT WET AREAS.

ALL EQUIPMENT INSTALLED OUTSIDE SHALL BE WEATHER PROOF RATED. REFER TO DRAWINGS FOR ADDITIONAL  
INFORMATION.

41. ALL CONDUCTORS SHALL BE MADE OF COPPER UNLESS NOTED OTHERWISE. MINIMUM WIRE SIZE SHALL BE #12 AWG UNLESS OTHERWISE INDICATED. UTILIZE SOLID CONDUCTORS FOR WIRE GAGES UP TO #12 AWG AND STRANDED CONDUCTORS FOR GAUGES # 10 AND LARGER.

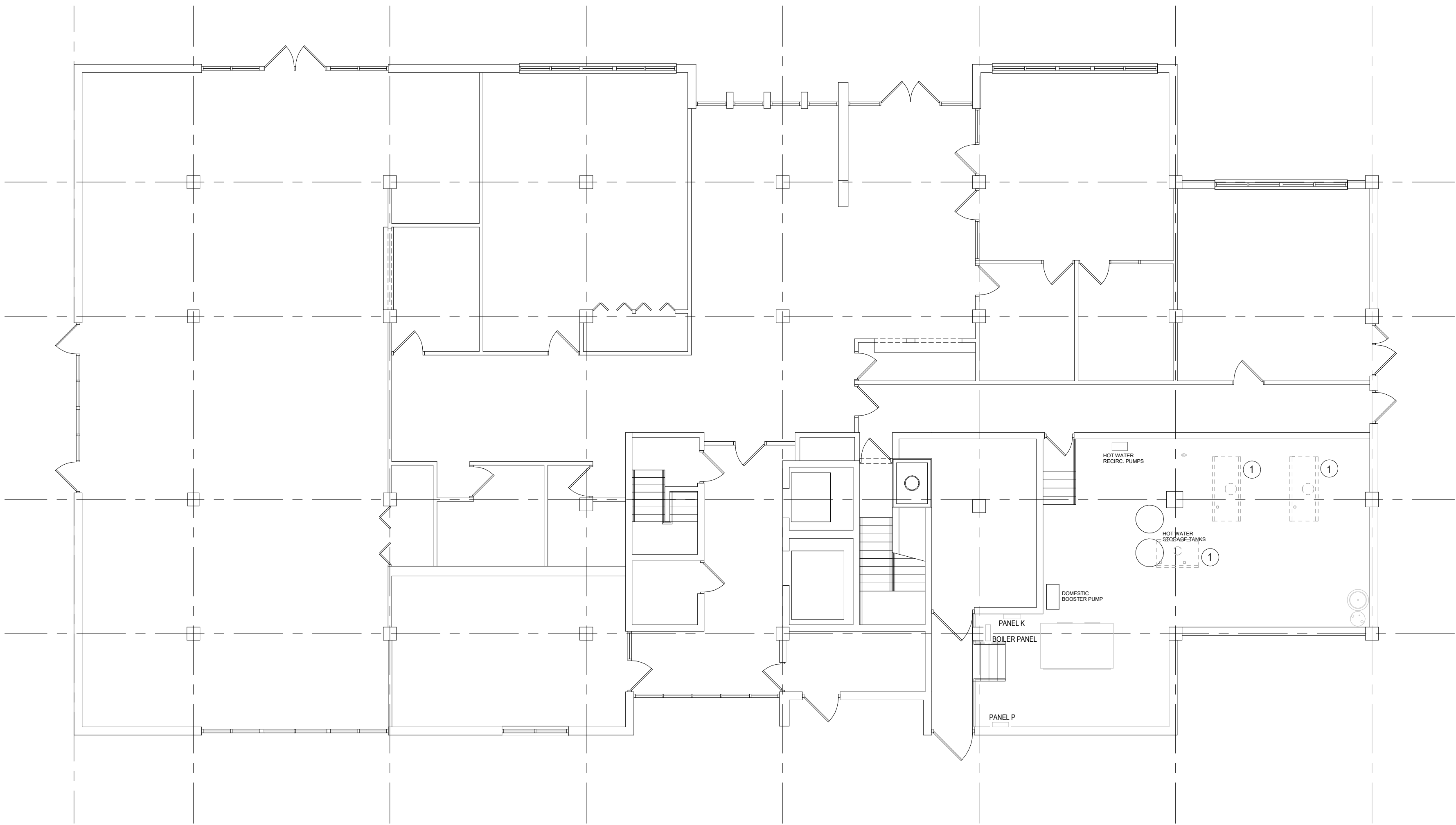
43. ALL BREAKERS SERVING EXIT SIGNS AND EMERGENCY LIGHTING EQUIPMENT SHALL BE KEY-LOCK STYLE.

## GENERAL NOTES

1. ALL ELECTRICAL WORK SHALL COMPLY WITH THE LOCAL ELECTRICAL CODE. WHERE THE CONSTRUCTION DOCUMENTS INDICATE MORE RESTRICTIVE REQUIREMENTS, THE CONSTRUCTION DOCUMENTS SHALL GOVERN OVER THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL NOT BE INTERPRETED AS AUTHORITY TO VIOLATE ANY CODES OR REGULATIONS. ANY SUCH ISSUES IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO BRING TO THE NOTICE OF CLIENT/ARCHITECT/CONSULTANT.
2. ALL ALP POWER CIRCUITS SHALL INCLUDE GREEN/ELECTRICAL GROUND CONDUCTOR SIZED PER THE LOCAL ELECTRICAL CODE. GROUND CONDUCTORS ARE NOT SHOWN ON PLANS.
3. ELECTRICAL CONTRACTOR SHALL VISIT PROJECT SITE PRIOR TO HIS BID/PROPOSAL TO BECOME AWARE OF WORKING CONDITION AND TYPE, SIZE AND QUANTITY OF WORK INVOLVED AND EQUIPMENT TO BE INSTALLED.
4. ALL ELECTRICAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND ALL OTHER DRAWINGS RELATED TO THE PERFORMANCE OF THE WORK.
5. PROVIDE ALL TRENCHING, BACKFILLING & RESURFACING REQUIRED FOR THE ELECTRICAL WORK.
6. PROVIDE TEMPORARY LIGHT & POWER FOR THE DURATION OF THE PROJECT. ON ALL DAYS WHEN ANY TRADE IS WORKING, PROVIDE TEMPORARY LIGHT & POWER FOR OVERTIME DELIVERIES BY OTHER TRADES.
7. EXACT LOCATIONS OF ALL EQUIPMENT, DEVICES, CONDUIT, ETC. MUST BE FIELD DETERMINED & COORDINATED. WHERE THE CONTRACT DOCUMENTS DO NOT AGREE, THE MORE RESTRICTIVE & COSTLY APPROACH SHALL BE USED & IDENTIFIED IN THE BID/PROPOSAL.
8. THE ELECTRICAL CONTRACTOR SHALL CHECK CAREFULLY ALL CONSTRUCTION DRAWINGS AND SPECIFICATIONS THAT ARE PART OF THE CONTRACT. THAT NO FUTURE, OUTLET OR CONTROL AND POWER WIRING IS OMITTED. HE SHALL CONSULT ALL TRADES FURNISHING EQUIPMENT AND OBTAIN FROM ALL THE DATA. IN SOME CASES EQUIPMENT, FIXTURES AND DEVICES ARE SHOWN ONLY. ASCERTAIN AGAINST ALL CONSTRUCTION DOCUMENTS THE CORRECT TEMPERATURE RATING OF THE EQUIPMENT AND TERMINATIONS MUST BE CAREFULLY CORRELATED WITH THE CONDUCTOR AMPACITY TO PREVENT OVERHEATING AND PREMATURE FAILURE.
9. WORKMANSHIP: ONLY THE BEST IN WORKMANSHIP IN ACCORDANCE WITH PRESENT STANDARDS WILL BE ACCEPTABLE. ANY WORK INSTALLED & ADJUSTED BY THE ENGINEER TO BE BELOW STANDARDS SHALL BE TAKEN OUT & REPLACED WITH PROPERLY DONE WORK AT CONTRACTOR'S EXPENSE.
10. PROVIDE ALL CUTTING, PATCHING & REFINISHING OF WALLS, FLOORS & CEILINGS REQUIRED FOR THE ELECTRICAL WORK.
11. ALL EQUIPMENT & DEVICES SHALL BE NEW & BE LISTED OR LABELED BY U.L. OR EQUIVALENT ORGANIZATION.
12. EQUIPMENT LABELS AND INSTRUCTIONS REGARDING THE APPLICATION AND INSTALLATION OF THE LISTED EQUIPMENT SHALL BE FOLLOWED TO ENSURE THAT THE EQUIPMENT IS BEING INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS LISTED INSTRUCTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AND TERMINATIONS MUST BE CAREFULLY CORRELATED WITH THE CONDUCTOR AMPACITY TO PREVENT OVERHEATING AND PREMATURE FAILURE.
13. VERIFY EXIST MOUNTING HEIGHTS & FINISHES WITH ARCHITECTURAL CONSTRUCTION DOCUMENTS AND SPECIFICATIONS PRIOR TO ROUGH-IN.
14. CONTRACTOR SHALL COORDINATE INSTALLATION OF WORK TO PROVIDE THE GREATEST POSSIBLE CLEARANCE FOR INSTALLATION OF PLUMBING & MECHANICAL. INSTALLATION CONDUIT RUNS TO BE THROUGH OR ABOVE CEILING TRUSSES WHERE POSSIBLE.
15. DETERMINE IN ADVANCE OF PURCHASE THAT ALL ELECTRICAL MATERIALS AND EQUIPMENT TO BE INSTALLED SHALL FIT AND THE ROOM OR SPACE ALLOCATED AS INDICATED ON THE DRAWINGS ALLOWING SUFFICIENT CLEARANCE FOR THE SAFE SERVICE AND/OR MAINTENANCE OR RELATED EQUIPMENT, INCLUDING THAT OF OTHER TRADES.
16. CONTRACTOR TO COORDINATE EXACT PLACEMENT OF ALL DEVICES SHOWN ON THE ELECTRICAL CONSTRUCTION DOCUMENTS WITH ARCHITECTURAL, MECHANICAL & PLUMBING DRAWINGS PRIOR TO FINAL PLACEMENT.
17. CONDUIT RUNS SHOWN ON DRAWINGS ARE DIAGRAMMATIC. ALL CONDUITS SHALL RUN CONCEALED. EXCEPT IN SPECIAL CIRCUMSTANCES AND WHERE APPROVED BY ARCHITECT OR AS INDICATED ON DRAWINGS, WIRE MOLDING IS NOT PERMITTED.
18. PROVIDE ALL SUPPLEMENTARY TEST REQUIRED FOR ELECTRICAL WORK.
19. ELECTRICAL CONTRACTOR SHALL SEAL ALL ELECTRICAL PENETRATIONS THRU FIRE RATED PARTITIONS WITH FIRE RATED MATERIAL INSTALLED PER MANUFACTURERS GUIDELINES & U.L. REQUIREMENTS. MATERIAL SELECTION SHALL BE BASED ON RATING OF PARTITION PENETRATED.
20. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY NAMEPLATE DATA OF ALL EQUIPMENT(MECH & OWNER SUPPLIED) TO INSURE PROPER WIRE SIZING & OVERCURRENT PROTECTION & SHALL NOTIFY ENGINEER OF DISCREPANCIES.
21. ELECTRICAL DESIGN HAS BEEN BASED ON THE INSTALLATION OF 75C CONDUCTORS CONNECTED TO TERMINAL LUGS & EQUIPMENT U.L. LISTED FOR A MINIMUM 75C. CONDUCTORS TERMINATED ON EQUIPMENT WITH A LOWER RATING (60C) OR RATING SHOWN TO HAVE CONDUCTOR SIZE INCREASED TO CONFORM TO NFPA CODES & LOCAL BUILDING CODES.
22. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH A PULL STRING.
23. ALL HOME RUNS GREATER THAN 100'-0" SHALL BE #10 WIRE MINIMUM.
24. PROVIDE INSULATED GROUNDING CONDUCTOR IN ALL CONDUITS & CABLE ASSEMBLIES.
25. CONDUITS INSTALLED IN DUCT BANKS, IN SLABS, IN FLOORS OR FILL SHALL BE #3/4" SCHEDULE 40 OR GALVANIZED RIGID CONDUIT. INTERMEDIATE METAL CONDUIT ENCASED IN CONCRETE, UNDER SLAB OR GALVANIZED RIGID MUST TRANSITION FROM BELOW GRADE TO GALVANIZED RIGID OR INTERMEDIATE METAL CONDUIT. THE LAST BEND BEFORE EXITING THE UNDERGROUND OR UNDER SLAB LOCATION, CONDUIT ABOVE GRADE MAY BE GALVANIZED RIGID CONDUIT OR INTERMEDIATE METAL CONDUIT. INDOORS OR OUTDOORS.
26. ALL BRANCH CIRCUITS SHALL HAVE A DEDICATED NEUTRAL CONDUCTOR INSTALLED. COLOR OF NEUTRAL CONDUCTOR SHALL BE WHITE FOR 120V AND GRAY FOR 480V SYSTEMS. SHARING OF NEUTRALS SHALL NOT BE ALLOWED.
27. ALL MOTORS, AC UNITS, COMPRESSORS & METAL UNITS SHALL BE GROUNDING WITH GREEN/GROUND WIRE SIZED & INSTALLED ACCORDING TO CODE. ALL FEEDERS RUN IN NON-METALLIC CONDUITS SHALL HAVE GROUND CONDUCTOR SIZED IN ACCORDANCE WITH APPLICABLE CODES. THE CONTRACTOR SHALL MAINTAIN UNIFORMITY & CONTINUITY OF THE GROUNDING SYSTEM.
28. E & S SHALL COORDINATE WITH HVAC CONTRACTOR EXACT POINT OF CONNECTION TO MECHANICAL UNIT PRIOR TO ROUGH-IN.
29. E.C. SHALL ALSO VERIFY EXACT BREAKER SIZE AND WIRING WITH APPROVED MECHANICAL BUILDING SHOP DRAWINGS PRIOR TO INSTALLATION.
30. E.C. SHALL FURNISH AND INSTALL .180X AND 3/4" FOR MECHANICAL THERMOSTAT. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
31. RECEPTACLES SHALL BE RATED FOR 20A, DUPLEX/QUAD/RECEPT TYPE AS NOTED ON PLANS, 125V, 3-WIRE, GROUNDING TYPE, NEMA CONFIGURATION – 5-20R.
32. PROVIDE WALL PLATES FOR FLUSH MOUNTED RECEPTACLES, STANDARD SIZE, TYPE, STYLE AND FINISH COLOR SHALL BE SELECTED BY ARCHITECT. COVER PLATES FOR DEVICES IN TYPE F & B BOXES FOR EXPOSED INSTALLATION SHALL BE OVER SIZE, SUITABLE FOR THE DEVICES INSTALLED. GANG TYPE COVERS SHALL BE USED WHERE MORE THAN ONE DEVICE IS MOUNTED IN A BOX.

[illegible]

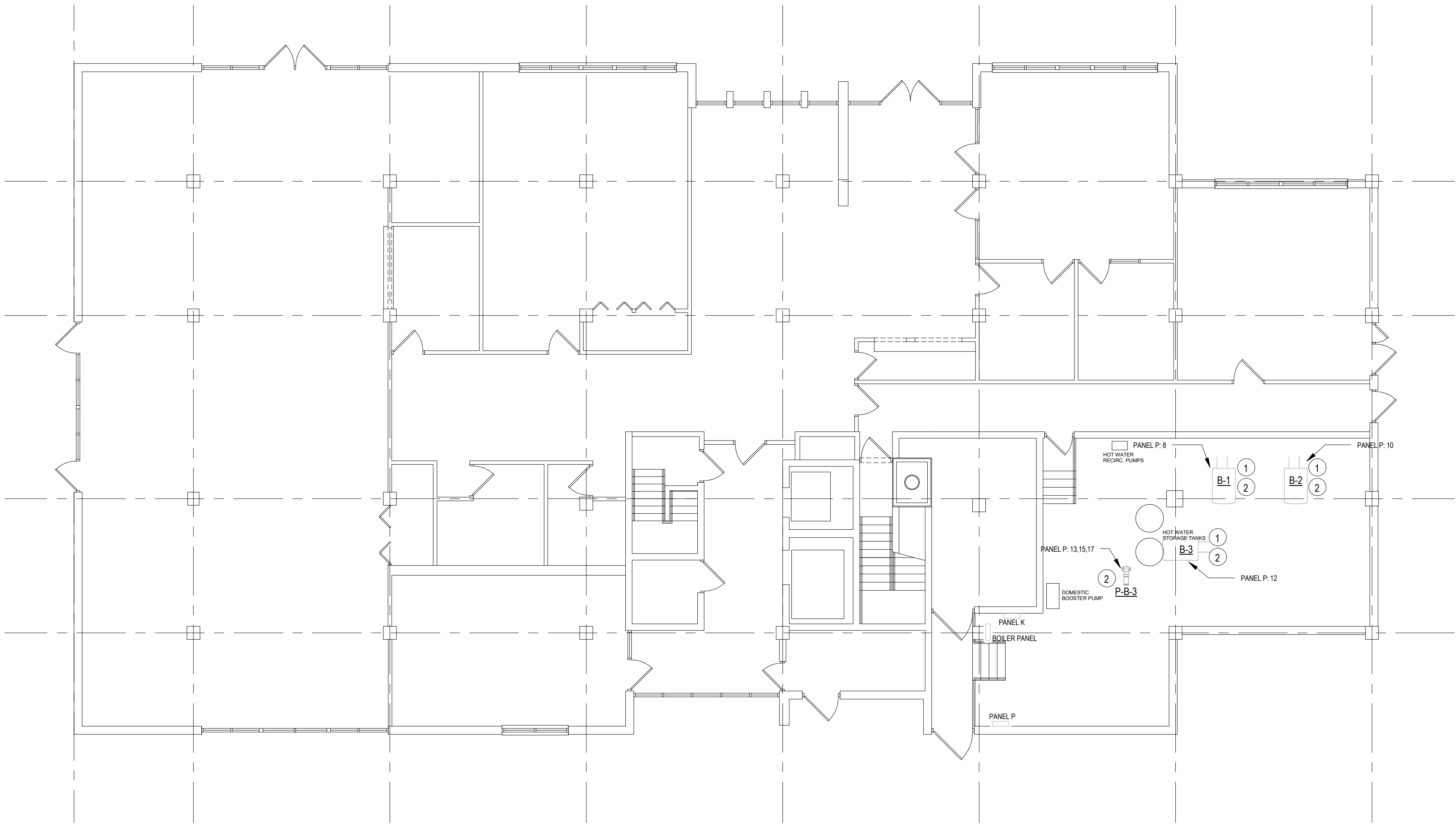




1 GROUND FLOOR ELECTRICAL DEMOLITION PLAN  
1/8" = 1'-0"

- GENERAL DEMOLITION NOTES**
- A. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED ELECTRICAL DEMOLITION WORK FOR THIS PROJECT. VISIT PROJECT SITE PRIOR TO BIDDING TO IDENTIFY TYPE, SIZE AND QUANTITY OF DEVICES TO BE REMOVED OR RELOCATED.
  - B. CONDUIT ROUTED UNDER SLAB OR EMBEDDED IN EXTERIOR WALLS THAT ARE INDICATED TO REMAIN SHALL BE CUT FLUSH WITH THE SURFACE AND THE CONDUCTORS REMOVED BACK TO THE SOURCE. RACEWAYS SHALL BE CAPPED AND SEALED.
  - C. UNDER NO CIRCUMSTANCES SHALL ELECTRICAL WIRING BE ABANDONED IN PLACE. ALL ELECTRICAL WIRING NOT BEING REUSED TO SUPPORT EXISTING TO REMAIN SYSTEMS SHALL BE REMOVED TO ITS ENTIRETY.
  - D. PATCH ALL OPENINGS IN EXISTING CONSTRUCTION AFTER REMOVAL OF EQUIPMENT AND DEVICES. PROVIDE MATCHING BLANK COVER PLATES AS REQUIRED.
  - E. ANY INTERRUPTION IN POWER, TELECOMMUNICATION, FIRE ALARM AND OTHER RELATED SERVICES SHALL BE COORDINATED WITH OWNER. SCHEDULE WORK TO CAUSE MINIMUM SERVICE INTERRUPTION IN AREAS OUTSIDE OF THE PROJECT SCOPE. TEMPORARY SERVICES SHALL BE PROVIDED AS REQUIRED TO ENSURE SUCH SERVICES TO OTHER AREAS AND TENANT SPACES ARE NOT DISRUPTED. VERIFY REQUIREMENTS FOR TEMPORARY SERVICES WITH OWNER PRIOR TO BIDDING.
  - F. ENSURE THAT ALL EXISTING TO REMAIN CONDUIT AND RACEWAYS AFFECTED BY DEMOLITION WORK ARE PROPERLY SUPPORTED AND PROVIDED WITH BONDING BUSHINGS IN ACCORDANCE WITH THE APPLICABLE CODES. PROVIDE ADDITIONAL SUPPORT WHERE REQUIRED.
  - G. PROVIDE TEMPORARY LIGHTING AND POWER AS REQUIRED DURING DEMOLITION AND CONSTRUCTION.
  - H. EXISTING WALLS WITH NEW FINISHES: EXTEND EXISTING-TO-REMAIN DEVICES TO BE FLUSH WITH THE NEW FINISH AS REQUIRED. PROVIDE NEW COVER PLATES.
  - I. ALL EXISTING TO REMAIN AND RELOCATED DEVICES SHALL BE INSPECTED. REPLACE THE DEFECTIVE UNITS WITH NEW AND PROVIDE NEW COVER PLATES.
  - J. REMOVED MATERIAL IS CONSIDERED PROPERTY OF THE OWNER. OWNER TO INSPECT AND RETAIN AS DESIRED. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF ANY AND ALL MATERIALS NOT RETAINED BY THE OWNER IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE STATE AND FEDERAL EPA.

- PLAN DEMOLITION NOTES**
- 1 DEMOLISH EXISTING WIRING AND WIRING DEVICES BACK TO ELECTRICAL PANEL FOR 3 BOILERS.



2 GROUND FLOOR ELECTRICAL PLAN  
1/8" = 1'-0"

- PLAN NOTES**
- 1 PROVIDE NEW WIRING TO NEW BOILERS.
  - 2 PROVIDE NEW NEW CIRCUIT BREAKER.

Branch Panel: BOILER... (EXISTING)													
Location:				Voltage: 120/208 Wye				Branch:					
Supplied From:				Phase: 3				A.L.C. Rating:					
Mounting:				Wire: 4				Main Type:					
Enclosure Type: Type 1				Ground:				Main Rating: 400 A					
General Panel Comments:													
Circuit Number	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	Circuit Number
1	OFFICE RECEPTACLES (EXISTING)	20 A	1	1.0	1.0					1	20 A	FIRE PUMP (EXISTING)	2
3	OFFICE P.A. OUTLET (EXISTING)	20 A	1			1.0	0.0			1	20 A	Spare (EXISTING)	4
5	OFFICE (EXISTING)	20 A	1					1.0	1.0	1	20 A	MAINTENANCE ROOM LIGHTS (EXISTING)	6
7	BOILERS #12-14 (EXISTING)	20 A	1	1.0	1.0					1	20 A	OUTSIDE BUILDING LIGHTS (EXISTING)	8
9	BOILER PANEL CONTROL (EXISTING)	20 A	1			1.0	1.0			1	20 A	PATIO LIGHTS (EXISTING)	10
11	LIGHT OVER PANEL (EXISTING)	20 A	1					1.0	1.0	1	20 A	PHOTO EYE LIGHTS (EXISTING)	12
13	DEDICATED PHONE RECEPTACLES...	20 A	1	1.0	1.0					1	20 A	FRONT SIGN AND GFI (EXISTING)	14
15	HEAT PUMP #1 (EXISTING)	20 A	1			1.0	1.0			1	20 A	PATIO LIGHTS AND SIGN (EXISTING)	16
17	HEAT PUMP #2 (EXISTING)	20 A	1					1.0	1.0	1	20 A	CIR. PUMP CONTROL BOX ON NORTH...	18
19	HEAT PUMP #3 (EXISTING)	20 A	1	1.0	1.0					1	20 A	ACTUATOR VALVE CONTROLS (EXISTING)	20
21	HEAT PUMP #4 (EXISTING)	20 A	1			1.0	0.0			1	20 A	Spare	22
23	PARKING LOT LIGHTS	20 A	1					1.0	0.0	1	20 A	Spare	24
25													26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
Total Load:				8.0 kVA		6.0 kVA		7.0 kVA					
Total Connected Load...				21.0 kVA									
Total Connected Load (Amps):				58.3 A									
Remarks:													

Branch Panel: PANEL P (EXISTING)													
Location:				Voltage: 120/208 Wye				Branch:					
Supplied From:				Phase: 3				A.L.C. Rating:					
Mounting:				Wire: 4				Main Type:					
Enclosure Type: Type 1				Ground:				Main Rating: 225 A					
General Panel Comments:													
Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number			
1	MISC. LOAD (EXISTING)	30 A	1	1.5	1.0			3	30 A VENT AIR FAN (EXISTING)	2			
3	SPACE (EXISTING)	40 A	2		0.0	1.0		--	--	4			
5	--	--	--			0.0	1.0	--	--	6			
7	MISC. LOAD (EXISTING)	20 A	1	1.0	1.9			1	20 A BOILER 1 (NEW)	8			
9	HOT WATER CIRCULATION PUMP...	40 A	2		2.0	1.9		1	20 A BOILER 2 (NEW)	10			
11	--	--	--			2.0	1.9	1	20 A BOILER 3 (NEW)	12			
13	P-B-3 (NEW)	15 A	3	0.7	1.0			3	30 A MISC. LOAD (EXISTING)	14			
15	--	--	--		0.7	1.0		--	--	16			
17	--	--	--			0.7	1.0	--	--	18			
19	MISC. LOAD (EXISTING)	20 A	3	1.0	1.0			3	20 A HOT WATER CIRCULATION PUMP	20			
21	--	--	--		1.0	1.0		--	--	22			
23	--	--	--			1.0	1.0	--	--	24			
25	MISC. LOAD (EXISTING)	20 A	1	1.0	1.0			1	20 A UNIT HEATER (EXISTING)	26			
27	DOOR BELL (EXISTING)	20 A	1		1.0	1.0		1	20 A COMPACTOR (EXISTING)	28			
29	MISC. LOAD (EXISTING)	20 A	3			1.0	1.0	1	20 A MISC. LOAD (EXISTING)	30			
31	--	--	--	1.0	1.0			1	20 A MISC. LOAD (EXISTING)	32			
33	--	--	--		1.0	1.0		1	20 A MISC. LOAD (EXISTING)	34			
35	MISC. LOAD (EXISTING)	30 A	1			1.0	1.0	3	20 A MISC. LOAD (EXISTING)	36			
37	MISC. LOAD (EXISTING)	30 A	1	1.0	0.0			--	--	38			
39	MISC. LOAD (EXISTING)	30 A	1		1.0	1.0		--	--	40			
41	MISC. LOAD (EXISTING)	30 A	1			1.0	1.0	1	20 A MISC. LOAD (EXISTING)	42			
Total Load:				14.1 kVA	14.6 kVA	14.6 kVA							
Total Connected Load...				43.2 kVA									
Total Connected Load (Amps):				119.9 A									
Remarks:													



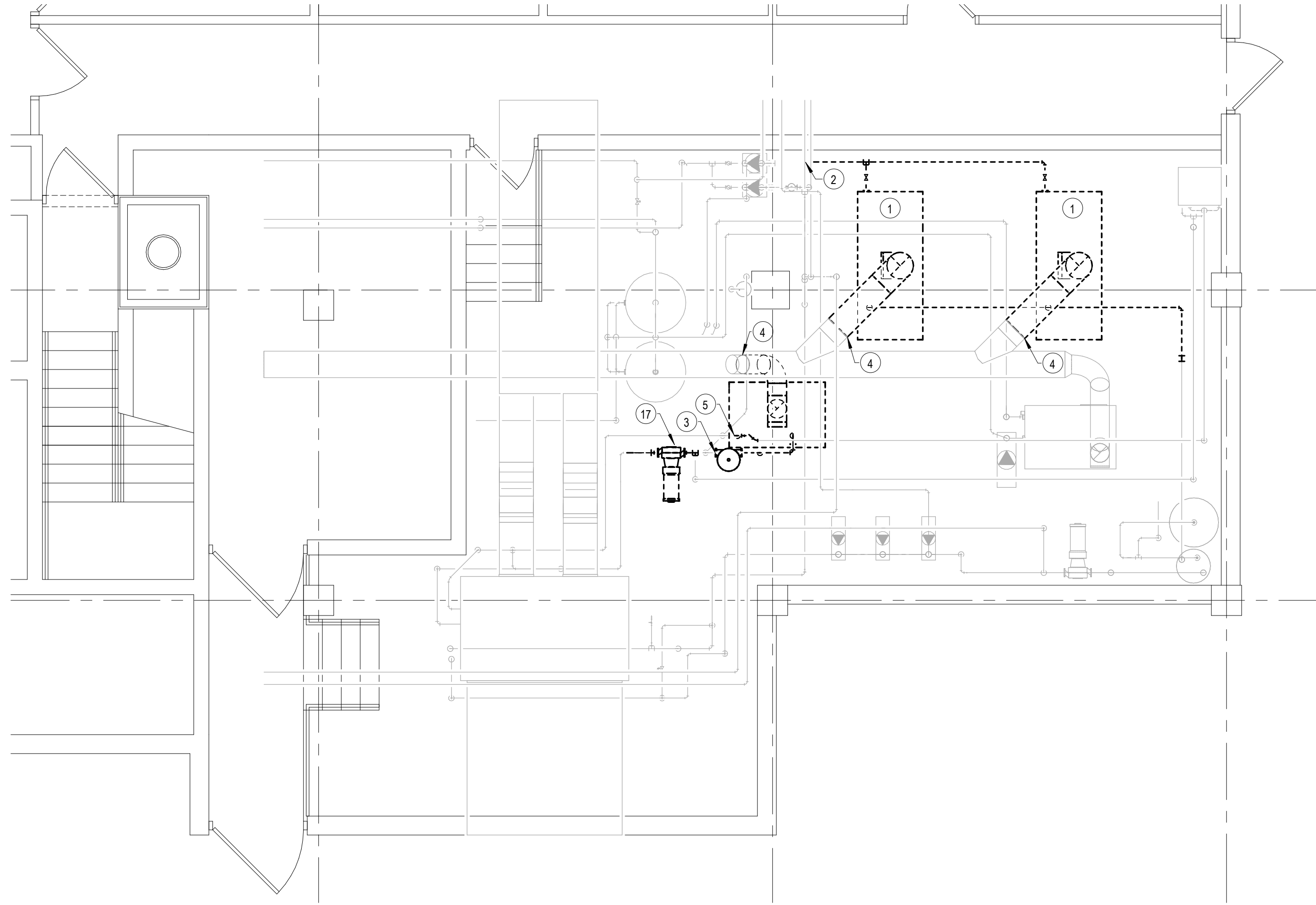
NOTE: ALL SYMBOLS AND ABBREVIATIONS MAY NOT BE USED ON THIS PROJECT

## GENERAL NOTES

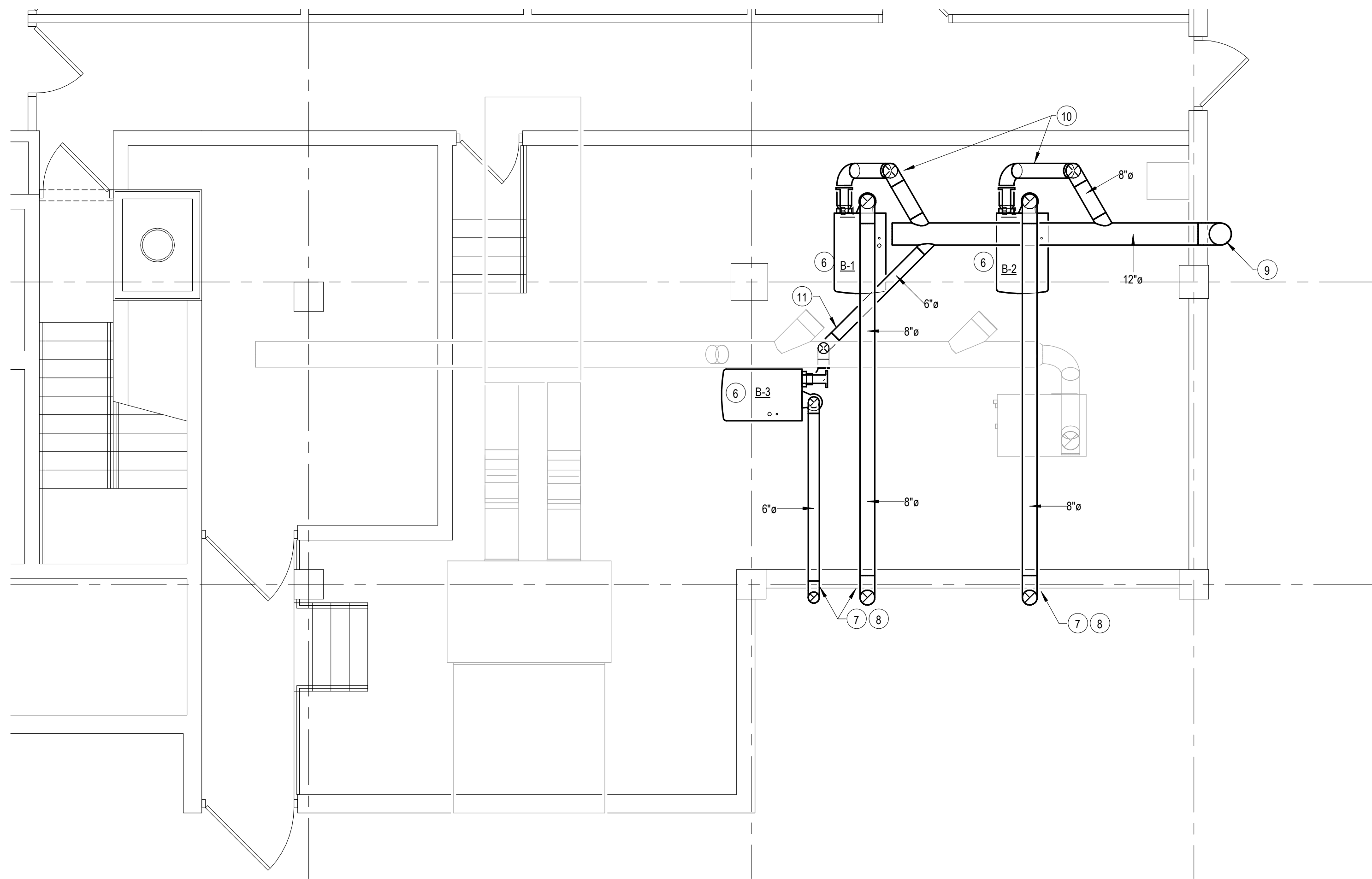
- A. THE INTENT OF THESE PLANS AND SPECIFICATIONS IS TO INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND SERVICES NECESSARY TO FURNISH, INSTALL, TEST, ADJUST, AND MAINTAIN COMPLETE WORKABLE HVAC INSTALLATION AS SHOWN, PRESCRIBED, OR REASONABLY IMPLIED BUT NOT LIMITED TO THE FOLLOWING: (1) CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, BUT NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE INTENT THEREOF; (2) THE CONTRACTOR SHALL OBTAIN ALL NECESSARY APPROVALS FROM THE CITY OF CHICAGO; (3) COORDINATE HIS WORK WITH OTHER TRADES TO PROVIDE THE BEST ARRANGEMENT OF ALL DUCT AND PIPE.
- B. CONTRACTOR AND SUBCONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION CONDITIONS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE ENTIRE DOCUMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL UTILITIES INCLUDING SITES AND LOCATIONS OF EXISTING EQUIPMENT PRIOR TO DEMOLITION. HVAC PLANS ARE DIAGRAMMATIC ONLY. THEY ARE INTENDED TO INDICATE EQUIPMENT LOCATION, CAPACITY, SIZE, AND TYPE. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING EXACT DETAILS OF CONSTRUCTION. THE DRAWINGS SHALL NOT BE SEALED FOR EXACT MEASUREMENTS. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND VERIFY ALL MEASUREMENTS PRIOR TO CONSTRUCTION.
- C. UNLESS SPECIFICALLY NOTED TO BE CUT AND PATCHED ON ARCHITECTURAL DRAWINGS, HVAC INSTALLATIONS SHALL BE CUT AND PATCHED TO MATCH EXISTING CONDITIONS. ALL EXISTING FINE FINISHES OF WALLS AND FLOORS SHALL BE MAINTAINED. THOROUGHLY SEAL ALL PENETRATIONS THROUGH RATED WALLS AND FLOORS WITH APPROVED FIRE STOPPING MATERIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING OF THE EXISTING STRUCTURE REQUIRED FOR HIS WORK.
- D. HVAC CONTRACTORS SHALL PROTECT ALL FURNISHINGS AND FINISHES BEFORE AREAS OF CONSTRUCTION.
- E. COORDINATE ENTIRE INSTALLATION OF THE HVAC SYSTEM WITH THE WORK OF OTHER TRADES PRIOR TO ANY FABRICATION OR INSTALLATION. FIELD VERIFY ALL DIMENSIONS AND CONDITIONS. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER PRIOR TO COMMENCEMENT OF WORK.
- F. LOCATION OF EXISTING UTILITIES AND POINTS OF CONNECTION ARE APPROXIMATE. CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF EXISTING UTILITIES AND SERVICES PRIOR TO STARTING WORK OF THIS SECTION. IF INDICATED POINTS OF CONNECTION CANNOT BE MATCHED TO EXISTING UTILITIES, CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE ENGINEER PRIOR TO INSTALLING ANY WORK WHICH MAY BE AFFECTED.

LINE SYMBOLS	
	LIGHT/SCREENED SOLID OR DASHED LINES INDICATE EXISTING TO REMAIN
	HEAVY DASHED LINES INDICATE EXISTING TO BE REMOVED
	HEAVY CONTINUOUS LINES INDICATE NEW WORK
	LIGHT DOT LINES INDICATE FUTURE WORK

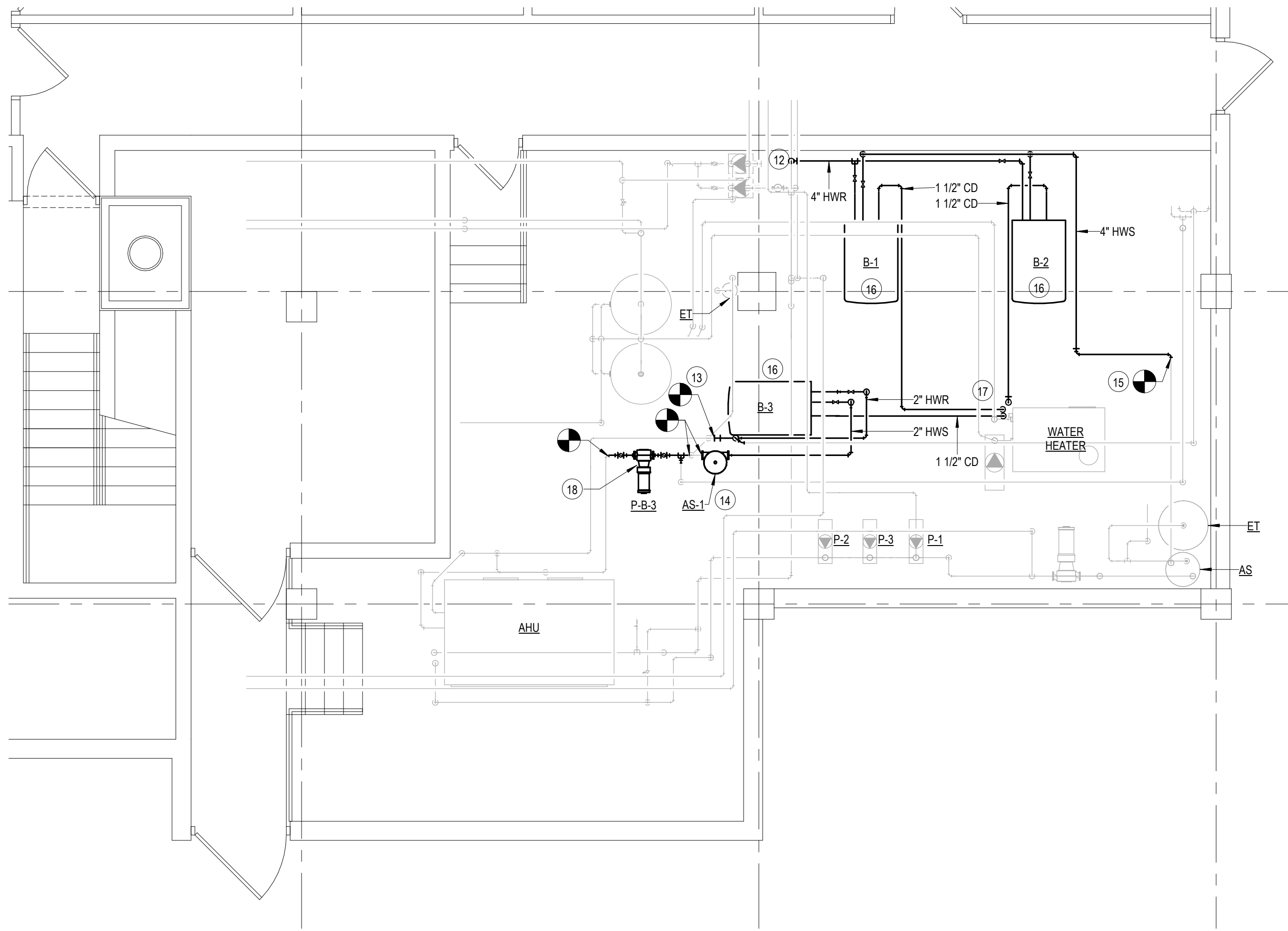
DRAWING INDEX-COMBINED	
H001	SYMBOLS AND ABBREVIATIONS
H210	GROUND FLOOR HVAC DEMOLITION & NEW PLAN
H600	HVAC SCHEDULES & DIAGRAMS
H800	HVAC DETAILS
E001	ELECTRICAL SYMBOLS AND ABBREVIATIONS
E210	GROUND FLOOR ELECTRICAL DEMOLITION & NEW PLAN
E600	ELECTRICAL SCHEDULES



1 GROUND FLOOR HVAC DEMOLITION PLAN  
1/4" = 1'-0"



2 GROUND FLOOR HVAC NEW WORK PLAN  
1/4" = 1'-0"



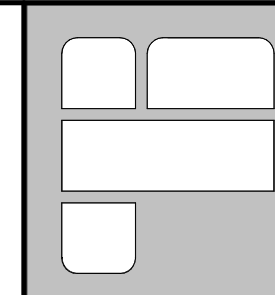
3 GROUND FLOOR HVAC NEW PIPING PLAN  
1/4" = 1'-0"

#### PLAN NOTES

- EXISTING BOILER AND ITS ASSOCIATED PIPING CONNECTIONS, FLUE DUCT TO BE DEMOLISHED AS SHOWN ON PLANS.
- EXISTING 3" HEATING WATER RETURN PIPE TO DEMOLISH WITH ITS VALES FROM THE POINT OF DROP DOWN.
- EXISTING 3" HEATING WATER RETURN PIPE TO DEMOLISH WITH ITS VALES FROM THE BOILER TO THE POINT SHOWN.
- CONTRACTOR TO CAP AND INSULATE FLUE BRANCH OUT AT THE POINT SHOWN AND TO DEMOLISH THE FLUE BRANCH OUT CONNECTING TO THE BOILER AS SHOWN.
- EXISTING AIR SEPARATOR AND ASSOCIATED PIPE CONNECTING TO BOILER TO BE DEMOLISHED.
- PROVIDE NEW BOILER WITH ITS ASSOCIATED ACCESSORIES AND INSTAL AS PER MANUFACTURER RECOMMENDATION.
- PROVIDE TERMINATION PLATE AT THE WALL.
- PROVIDE EXIST CONE AND EXHAUST FLUE OUTSIDE OF MECHANICAL ROOM WITH WALL SLEEVE. THE CONTRACTOR SHALL CUT, PATCH AND SEAL EXISTING EXTERIOR WALL AS REQUIRED TO ROUT EXHAUST FLUE.
- PROVIDE A TEE FOR FRESH AIR INTAKE OUTSIDE OF MECHANICAL ROOM WITH WALL SLEEVE. THE CONTRACTOR SHALL CUT, PATCH AND SEAL EXISTING EXTERIOR WALL AS REQUIRED TO ROUTE FRESH AIR INTAKE.
- PROVIDE 8" FLUE & INTAKE TO BOILER (TYPICAL).
- PROVIDE 6" FLUE & INTAKE TO BOILER B-3.
- CONNECT 3" HEATING WATER RETURN AT THE POINT OF CONNECTION SHOWN. CONTRACTOR TO FIELD CO-ORDINATE.
- CONNECT NEW 3" HEATING WATER RETURN FROM THE POINT OF CONNECTION SHOWN.
- PROVIDE NEW AIR SEPARATOR AND INSTALL AS PER MANUFACTURER RECOMMENDATION.
- CONNECT 3" HEATING WATER SUPPLY AT THE POINT OF CONNECTION SHOWN. CONTRACTOR TO FIELD CO-ORDINATE.
- CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY EXISTING BOILER LOCATION AND EXPAND EXISTING CONCRETE PAD AS REQUIRED FOR NEW WORK.
- DISCONNECT AND REMOVE RECIRCULATING PUMP AND PUMP ACCESSORIES.
- PROVIDE NEW VFD, RECIRCULATION PUMP AND PUMP ACCESSORIES.

#### GENERAL NOTES

- THE MECHANICAL DRAWINGS INDICATE THE GENERAL SCOPE OF WORK FOR NEW OR REPLACED MATERIALS AND EQUIPMENT. THE CONTRACTOR SHALL VISIT THE PROJECT SITE TO VIEW THE SCOPE OF WORK AND VERIFY ALL WORKING CONDITIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE NOTED EXISTING MECHANICAL EQUIPMENT. NO CUTTING OF STRUCTURAL MEMBERS OR STRUCTURE WHICH WILL DETERIORATE THE INTEGRITY AND STRENGTH OF THE BUILDING WILL BE ALLOWED WITHOUT THE WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER.
- THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT ALL NEW OR EXISTING MATERIALS, STRUCTURES AND EQUIPMENT. DAMAGED ITEMS SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER AT THE EXPENSE OF THE CONTRACTOR.
- ALL CONTRACTORS SHALL COORDINATE AS REQUIRED TO PERFORM DEMOLITION WORK AS INDICATED IN THE CONTRACT DOCUMENTS.
- CONTRACTOR IS RESPONSIBLE FOR CLEAN-UP THRU-OUT THE COURSE OF THE PROJECT AND DETAILED CLEAN-UP AT THE END OF THE PROJECT.
- REPAIR OR REPLACE ALL DAMAGED AREAS AS A RESULT OF REMOVAL OF EXISTING MECHANICAL DEMOLITION.
- ALL SYSTEM SHUTDOWNS SHALL BE COORDINATED WITH OWNER. NO SYSTEM SHUTDOWNS ARE ALLOWED WITHOUT WRITTEN PERMISSION FROM THE OWNER.
- THE CONTRACTOR SHALL CUT, PATCH AND SEAL EXISTING EXTERIOR WALL AS REQUIRED TO FINISH NEW WORK.

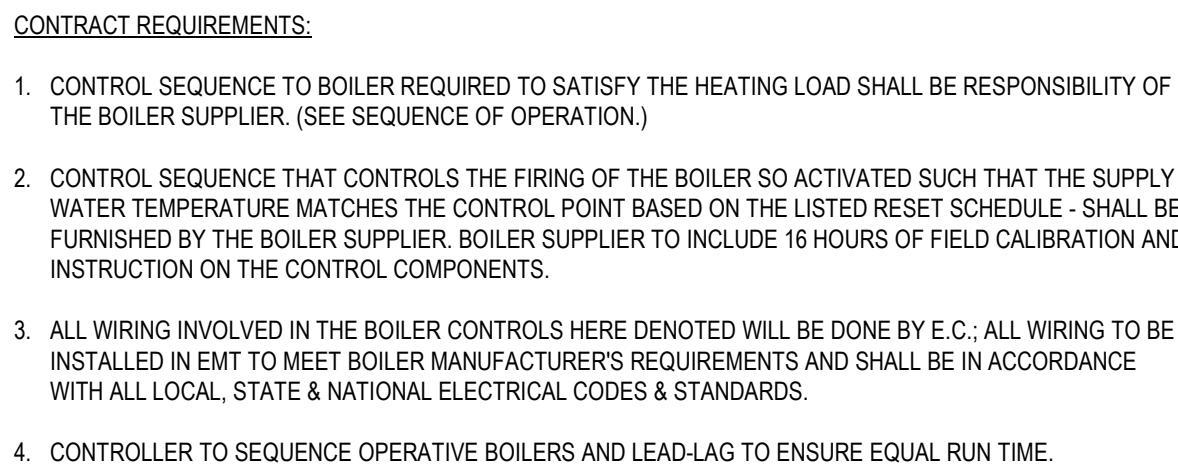


NOTE:

1. PROVIDE OUTDOOR AIR SENSOR FOR BOILERS TO OPERATE ON RESET CURVE.
2. PROVIDE MULTI-BOILER CONTROL, FOR FORCED PARALLEL OPERATION.
3. PROVIDE REMOTE HEADER TEMPERATURE SENSOR, BMS COMMUNICATION CAPABILITY, CONDENSATE NEUTRALIZATION KIT AND INTEGRAL MULTI-BOILER PLANT CONTROL.
4. MINIMUM TURNDOWN: 15:1
5. CO2/NOx SENSORS SHALL BE CAPABLE OF 02 SENSOR IN ORDER TO ALERT IF UNIT IS EXPERIENCING NON-OPTIMUM COMBUSTION CONDITIONS.
6. PROVIDE MOTORIZED ISOLATION VALVES ON EACH BOILER AS PER BOILER MANUFACTURER RECOMMENDATION.
7. PROVIDE CONDENSATE NEUTRALIZER FOR EACH BOILER AND COMMON FLUE DRAINS.
8. PROVIDE PRESSURE RELIEF VALVES FOR EACH BOILER.

NOTE:  
1. PROVIDE NEW VFD FOR NEW PUMPS. LOCATION SHALL BE COORDINATED IN THE FIELD

AIR SEPARATOR SCHEDULE							
TAG	LOCATION	SYSTEM SERVED	CAPACITY (GPM)	CONNECTION SIZE (IN.)	MAX. W.P.D. (FT. HD)	BUILT-IN STRAINER REQUIRED	NOTES
AS-1	MECHANICAL ROOM	BOILER B-3	180	24 1/2"	-	NO	



1 RTD SENSOR IN RETURN HOT WATER TO AFFORD RETURN WATER ACTUAL TEMPERATURE TO MASTER CONTROL PANEL. SENSOR BY BOILER SUPPLIER, INSTALLED IN WELL BY MC, WIRED BY ECC.

## 1 BOILER WATER TEMPERATURE CONTROL SCHEMATIC



