

ELECTRICAL SYMBOLS	
SYMBOL	DESCRIPTION
	CONDUIT UP +2" UNLESS NOTED
	CONDUIT DOWN
	CONDUIT BELOW FLOOR
	CONDUIT IN CEILING OR WALL 2 #12 THWN-CU
	3 #12 THWN-CU IN 1/2" CONDUIT (2 CIR. & 1 NEUTRAL WIRES)
	4 #12 THWN-CU IN 3/4" CONDUIT (3 CIR. & 1 NEUTRAL WIRES)
	3 #12 THWN-CU IN 1/2" CONDUIT (1 CIR. WITH EQUIPMENT GND)
	3 #12 THWN-CU IN 1/2" CONDUIT (1 CIR. WITH DEDICATED GND)
	HOME RUN
	JUNCTION BOX
	20A, 1P, 125V, GROUNDING TYPE DUPLEX RECEPTACLE, E = EXISTING; R = EXISTING RELOCATED
	20A, 1P, 125V, DEDICATED GROUNDING TYPE DUPLEX RECEPTACLE
	20A, 1P, 125V, GFCI TYPE DUPLEX RECEPTACLE
	20A, 1P, 125V, GROUNDING TYPE DOUBLE DUPLEX RECEPTACLE
	20A, 1P, 125V, DEDICATED GROUNDING TYPE DOUBLE DUPLEX RECEPTACLE
	LOW VOLTAGE BELL
	EXHAUST FAN
	LIGHT SWITCH
	DIMMER SWITCH
	OCCUPANCY SENSOR SWITCH
	CEILING MOUNTED, DUAL TECHNOLOGY OCCUPANCY SENSOR WITH POWER PACK, SYMMETRICAL PATTERN, BASIS OF DESIGN IS 'WATTSTOPPER' DT-300 W/BZ-50 POWER PACK
	DATA OUTLET ROUGH-IN WITH 1" C. AND PULL WIRE TO ABOVE ACCESSIBLE CEILING OR ACCESSIBLE LOCATION (#D = QUANTITY OF DATA OUTLETS) (#T = QUANTITY OF TELEPHONE OUTLETS)
	COAXIAL OUTLET ROUGH-IN WITH 3/4" C. AND PULL WIRE TO ABOVE ACCESSIBLE CEILING OR ACCESSIBLE LOCATION
	PA/TONES SPEAKER WITH 3/4" C. TO ACCESSIBLE CEILING, CEILING RECESSED LOWELL NO. R1810-72, LBS891 TILE BRIDGE, BXD4-S ENCLOSURE; R = OUTDOOR RECESSED LOWELL NO. LUH-15T, LUH-BOX ENCLOSURE, ATLAS AT35 VOLUME CONTROL; H = HORN LOWELL NO. LH-15T
	RECESSED VOLUME CONTROL BOX - ATLAS NO. AT10-PA
	INCANDESCENT FIXTURE, TYPE "G", CIRCUIT #11, SWITCH α .
	FLUORESCENT FIXTURE. R = EXISTING RELOCATED
	FLUORESCENT FIXTURE WITH EMERGENCY BALLAST. NL = NIGHT LIGHT
	1 LAMP STRIPLIGHT
	WALL MOUNTED EMERGENCY LIGHT. R = EXISTING RELOCATED
	DISCONNECT SWITCH
	STARTER/DISCONNECT SWITCH
	12" ABOVE FLOOR LINE OF AREA WHERE SHOWN
	UNFUSED SAFETY SWITCH (AMPS)
	FUSED SAFETY SWITCH (AMPS SW/FUSE)
	ELECTRIC BRANCH CIRCUIT PANEL
	ELECTRIC DISTRIBUTION/POWER PANEL

FIRE ALARM SYMBOLS	
SYMBOL	DESCRIPTION
	FIRE ALARM CONTROL PANEL
	FIRE ALARM ANNUNCIATOR PANEL
	FIRE ALARM SUPPLEMENTARY NOTIFICATION APPLIANCE CIRCUIT PANEL
	FIRE ALARM MANUAL PULL STATION
	FIRE ALARM SMOKE DETECTOR
	FIRE ALARM SMOKE DETECTOR - ELEVATOR RECALL
	FIRE ALARM DUCT SMOKE DETECTOR
	FIRE ALARM REMOTE INDICATOR / TEST SWITCH
	FIRE ALARM HEAT DETECTOR
	FIRE ALARM COMBINATION SMOKE/CARBON MONOXIDE DETECTOR
	FIRE ALARM MAGNETIC DOOR HOLD OPEN DEVICE
	FIRE ALARM STROBE - CANDELA RATING INDICATED
	FIRE ALARM HORN/STROBE
	FIRE ALARM RELAY MODULE
	FIRE ALARM MONITOR MODULE
	SPRINKLER SYSTEM FLOW SWITCH
	SPRINKLER SYSTEM TAMPER SWITCH

GENERAL NOTES:

EXCEPT AS OTHERWISE SPECIFIED, THESE PLANS AND SPECIFICATIONS DETAIL PROVISION OF ALL LABOR, MATERIALS AND SERVICES TO INSTALL, TEST AND LEAVE OPERATIVE THE COMPLETE ELECTRICAL SYSTEM AS SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE SITE AND EXISTING CONDITIONS.

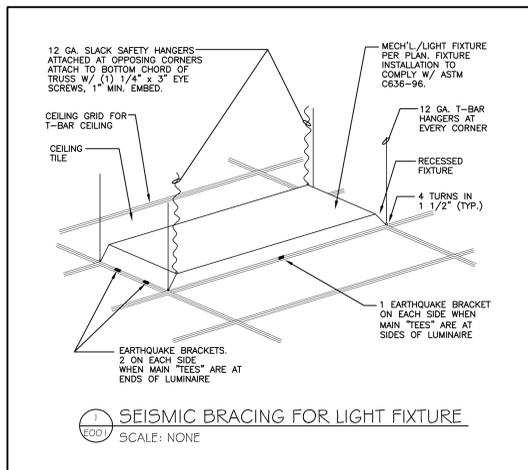
PROVIDE INSTALLATION IN ACCORDANCE WITH LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC), NFPA 72, NFPA 101, AND LOCAL CODES AND ORDINANCES. MATERIAL SHALL CONFORM TO APPLICABLE CODES AND STANDARDS AND SHALL BEAR LABEL OF UNDERWRITER LABORATORIES, INC.

GUARANTEE MATERIALS AND WORK PER SPECIFICATIONS, AND REPAIR OR REPLACE DEFECTIVE OR FAULTY MATERIAL AT NO ADDITIONAL EXPENSE.

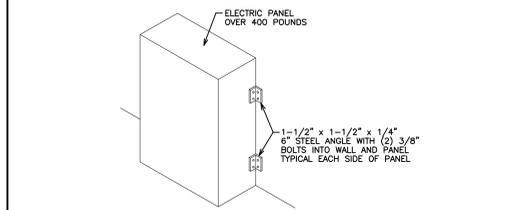
CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES OR TAPS IN CONDUIT RUNS. INSTALL WIRING IN CONDUIT UNLESS OTHERWISE NOTED. MAKE SPLICES AT OUTLET BOXES, PULL BOXES OR JUNCTION BOXES. SPLICE OR JOIN CONDUCTORS AT JOINTS, SO AS TO BE MECHANICALLY AND ELECTRICALLY SECURE.

IDENTIFICATION OF NEUTRALS, GROUNDING OF CIRCUITS, AND QUANTITY OF WIRES IN CONDUIT SHALL COMPLY WITH NEC. LABEL BRANCH CIRCUITS AT EVERY JUNCTION BOX. BRANCH WIRE SIZE SHALL BE MINIMUM #12 AWG. MAINTAIN MAXIMUM BRANCH CIRCUIT CONDUCTOR LENGTHS PER NEC, INCLUDING GROUNDING CONDUCTOR DERATINGS.

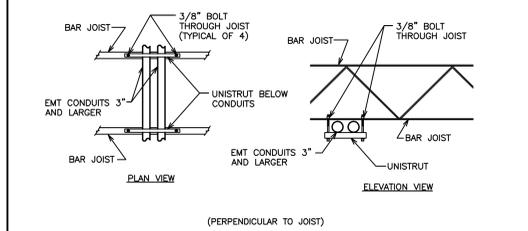
CONDUIT SHALL BE CONTINUOUS AND COMPLETE BETWEEN PANELS, JUNCTION, OUTLET, PULL AND FIXTURE BOXES. KEEP CONDUIT CLEAN AND UNRESTRICTED INSIDE WITH ENDS FREE OF BURRS OR OTHER PROJECTIONS WHICH WOULD DAMAGE OR IMPEDE PULLING OF WIRE. ROUTE CONDUIT RUNS PARALLEL OR PERPENDICULAR TO BUILDING LINES, AND CONCEALED IN FINISHED AREAS, UNLESS OTHERWISE NOTED.



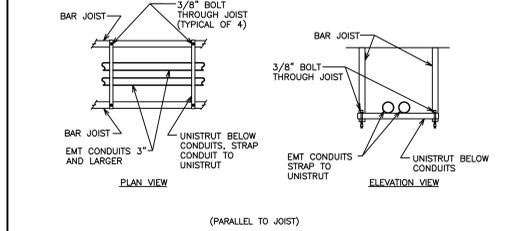
1 SEISMIC BRACING FOR LIGHT FIXTURE
SCALE: NONE



2 SEISMIC BRACING FOR ELECTRIC PANELS
SCALE: NONE



3 SEISMIC CONDUIT SUPPORT DETAIL
SCALE: NONE



4 SEISMIC CONDUIT SUPPORT DETAIL
SCALE: NONE

SET BOXES AND ENCLOSURES PLUMB AND LEVEL AND SECURELY FASTEN. SET BOXES FLUSH WITH FINISHED SURFACES IN FINISHED WALLS. SIZE PULL AND JUNCTION BOXES PER ARTICLE 370 OF NEC.

PROVIDE GROUNDING OF DEVICES AND SYSTEMS PER NEC.

FOR EXACT LOCATIONS OF CEILING COMPONENTS, CEILING CONSTRUCTION AND FINISHED SURFACE CONDITIONS, SEE ARCHITECTURAL DRAWINGS, ELEVATIONS AND REFLECTED CEILING PLANS. FOR ROOM NAMES AND NUMBERS, SEE ARCHITECTURAL PLANS.

FOR EXACT LOCATIONS OF FACILITY EXPANSION JOINTS, FIRE RATED WALLS AND SMOKE PARTITIONS, SEE ARCHITECTURAL DRAWINGS.

FOR EXACT LOCATIONS OF DUCT MOUNTED SMOKE DETECTORS, WATER FLOW AND TAMPER DEVICES, AND MECHANICAL EQUIPMENT, SEE MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS.

MOUNTING HEIGHTS ARE TO CENTER OF WALL MOUNTED, AND TO BOTTOM OF CEILING MOUNTED DEVICES, LIGHTING FIXTURES AND EQUIPMENT, UNLESS OTHERWISE NOTED.

ALL DIMMED CIRCUITS SHALL HAVE SEPARATE NEUTRALS. SHARED NEUTRALS ARE NOT ALLOWED.

CONTRACTOR SHALL PROVIDE TELECOM ROUGH-IN (TELEPHONE & DATA) CONSISTING OF FLOOR BOXES AND EMPTY DOUBLE-GANG WALL BOXES WITH SINGLE-GANG MUD RINGS AND 1" EMPTY CONDUITS TURNED OUT 12" ABOVE ACCESSIBLE CEILINGS WITH NYLON PULL STRING AND TERMINATED WITH INSULATED BUSHINGS. CONTRACTOR SHALL PROVIDE 4" x 8" x 3/4" FIRE-RETARDANT PLYWOOD TERMINAL BOARD WITH 2" LONG GROUND BUS. OWNER WILL BE RESPONSIBLE FOR ALL TELECOM WIRING, DEVICES, EQUIPMENT AND EQUIPMENT RACKS FOR THE TELECOM SYSTEMS.

LIGHT FIXTURE SCHEDULE						
TYPE	MFR.	CATALOG NUMBERS		LAMP	DESCRIPTION	VA
		FIXTURE	BALLAST			
A	LITHONIA	IB2454L WD PDL125 2/2 ACRP LP835		F54W/T8HQ/SPX35	4-LAMP FLUORESCENT HIGH BAY, CLEAR POLYCARBONATE SHIELDING, (2) 2-LAMP COOL-RUNNING ELECTRONIC BALLASTS	234
B	LITHONIA	S82 32 MVOLT GEB10PS		F32W/T8/SPX35	2-LAMP FLUORESCENT, SURFACE MOUNT, SQUARE-BASKET WRAPAROUND, ELECTRONIC BALLAST	65
C	LITHONIA	CA 1 32 MVOLT GEB10PS		F32W/T8/SPX35	1-LAMP FLUORESCENT, 4-FT CORRIDOR ACRYLIC WRAPAROUND, SURFACE MOUNT, ELECTRONIC BALLAST	35
D	LITHONIA	C 2 32 MVOLT GEB10PS		F32W/T8/SPX35	2-LAMP GENERAL PURPOSE 4-FT STRIP FIXTURE	65
DA	LITHONIA	C 2 17 MVOLT GEB10PS		F17W/T8/SPX35	2-LAMP GENERAL PURPOSE 2-FT STRIP FIXTURE	33
F3	LITHONIA	WC 1 25 MVOLT GEB10PS		F25W/T8/SPX35	1-LAMP FLUORESCENT, 3-FT COMMERCIAL WALL BRACKET	27
F4	LITHONIA	WC 1 32 MVOLT GEB10PS		F32W/T8/SPX35	1-LAMP FLUORESCENT, 4-FT COMMERCIAL WALL BRACKET	35
G	LITHONIA	2RT8S 2 32 MVOLT GEB10IS HTB		F32W/T8/SPX35	2-LAMP FLUORESCENT, RECESSED GRID, ACRYLIC BASKET LENSES, ELECTRONIC BALLAST	65
H	LITHONIA	LF6N 1/26TRT F6014Z MVOLT		26W TRT	HORIZONTAL 1-LAMP TRIPLE TUBE (TRT) FLUORESCENT, 6" RECESSED DOWNLIGHT, SEMI-SPECULAR OPEN REFLECTOR, ELECTRONIC BALLAST	28
J	LITHONIA	WSQ LED 1 10A700/40K SR2 MVOLT PIR		---	EXTERIOR WALL MOUNT, COLOR BY ARCHITECT	24
K	VISUAL COMFORT & CO	MENZEL MEDIUM OUTDOOR WALL LANTERN #CHO 2118BC-CG		60W CANDELABRA	EXTERIOR WALL MOUNT, 3-LAMP LANTERN	180
L	LITHONIA	LB 3 32 MVOLT GEB10PS		F32W/T8/SPX35	3-LAMP FLUORESCENT, SURFACE MOUNT, LOW-PROFILE WRAPAROUND, ELECTRONIC BALLAST. **PROVIDE TANDUM WIRING WITH INDOOR/OUTDOOR SWITCHING FOR FIXTURES IN BUNK ROOMS - PROVIDE 2 BALLASTS, INWARD LAMP TO BE COVERED WITH RED LENS AND SWITCH BY FIRE STATION CONTROLLER RELAY ONLY.	28
M	LITHONIA	VSL 2 32 MVOLT GEB10IS		F32W/T8/SPX35	4-FT, 2-LAMP, ENCLOSED LINEAR FLUORESCENT, ELECTRONIC BALLAST	65
N	CRAFTMADE	ELLINGTON CUS2WWS CM-RIT-W		---	52" FLUSH MOUNT CEILING FAN, WHITE, 4-SPEED FAN CONTROL	80
NW	---	---		---	PROVIDE SIMILAR TO FAN TYPE 'N' EXCEPT UL WET LOCATION	80
S	LIGMAN	UN-6009S N 120V ADA S 01		100W T6 CMH	EXTERIOR INGROUND UPLIGHT, NARROW BEAM, BLACK, STAINLESS STEEL RING	110
XA	SURE-LITES	EUX6 R		RED LED	UNIVERSAL MOUNT (SURFACE/RECESSED, CEILING/WALL), LED EDGE-LIT EXIT, SINGLE FACE, RED LETTERS	1

MECHANICAL EQUIPMENT SCHEDULE												
LINE ITEM	DESCRIPTION	LOAD				UNIT DISCONNECT				REMARKS		
		VOLTS/PHASE	HORSEPOWER (APPROXIMATE)	TOTAL KW (WATTS)	TOTAL UNIT FLA (MCA)	MOCP	SAFETY SWITCH BY E.C. OR M.C.	TOGGLE SWITCH BY E.C.	SIZE		MOTOR STARTER NOM. SIZE	WIRE AND CONDUIT SIZE
1	AHU-1 AIR HANDLING UNIT	208/1	---	---	(27.7)	40A-2P CB	EC	---	60A-2P NF	---	(3)#8,(1)#10,3/4" C.	NOTE 1
2	AHU-2 AIR HANDLING UNIT	120/1	---	---	(12.9)	20A-1P CB	EC	X	20A-1P NF	---	(2)#12,(1)#12,3/4" C.	NOTE 1
3	AHU-3 AIR HANDLING UNIT	120/1	---	---	(12.5)	20A-1P CB	EC	X	20A-1P NF	---	(2)#12,(1)#12,3/4" C.	NOTE 1
4	AHU-4 AIR HANDLING UNIT	120/1	---	---	(12.5)	20A-1P CB	EC	X	20A-1P NF	---	(2)#12,(1)#12,3/4" C.	NOTE 1
5	AHU-5 AIR HANDLING UNIT	120/1	---	---	(5.2)	15A-1P CB	EC	X	20A-1P 1P	---	(2)#12,(1)#12,3/4" C.	NOTE 1
6												
7	CU-1 CONDENSING UNIT	208/1	---	---	(12)	20A-2P CB	EC	---	30A-2P NF	---	(2)#12,(1)#12,3/4" C.	NOTES 1 & 3
8	CU-2 CONDENSING UNIT	208/3	---	---	(23)	40A-3P CB	EC	---	60A-3P NF	---	(3)#8,(1)#10,3/4" C.	NOTES 1 & 3
9	CU-3 CONDENSING UNIT	208/3	---	---	(13)	20A-3P CB	EC	---	30A-3P NF	---	(3)#12,(1)#12,3/4" C.	NOTES 1 & 3
10	CU-4 CONDENSING UNIT	208/3	---	---	(16)	25A-3P CB	EC	---	30A-3P NF	---	(3)#12,(1)#12,3/4" C.	NOTES 1 & 3
11	CU-5 CONDENSING UNIT	208/3	---	---	(13)	20A-3P CB	EC	---	30A-3P NF	---	(3)#12,(1)#12,3/4" C.	NOTES 1 & 3
12												
13	EF-1 (EXHAUST FAN)	120/1	1	(59.9)	---	20A-1P CB	MC	---	20A-1P NF	---	(3)#12,(1)#12,3/4" C.	NOTE 5
14	EF-2 (EXHAUST FAN)	120/1	125	---	---	---	EC	---	20A-1P NF	---	(3)#12,(1)#12,3/4" C.	NOTE 2, 4
15	EF-3 (EXHAUST FAN)	120/1	125	---	---	---	EC	---	20A-1P NF	---	(3)#12,(1)#12,3/4" C.	NOTE 2, 4
16	EF-4 (EXHAUST FAN)	120/1	---	(92.1)	---	20A-1P CB	MC	---	20A-1P NF	---	(3)#12,(1)#12,3/4" C.	NOTE 5
17	EF-5 (EXHAUST FAN)	120/1	---	(92.1)	---	20A-1P CB	MC	---	20A-1P NF	---	(3)#12,(1)#12,3/4" C.	NOTE 5
18	EF-6 (EXHAUST FAN)	120/1	---	(92.1)	---	20A-1P CB	MC	---	20A-1P NF	---	(3)#12,(1)#12,3/4" C.	NOTE 5
19	EF-6 (EXHAUST FAN)	120/1	---	(92.1)	---	20A-1P CB	MC	---	20A-1P NF	---	(3)#12,(1)#12,3/4" C.	NOTE 5
20	WFF-8 (OSCILLATING WALL FAN)	120/1	25	---	---	20A-1P CB	MC	---	20A-1P NF	---	(3)#12,(1)#12,3/4" C.	NOTE 1
21	EF-9 (RANGE HOOD)	120/1	---	4.4	---	20A-1P CB	MC	---	20A-1P NF	---	(3)#12,(1)#12,3/4" C.	NOTE 7
22												
23	EH-1 (ELECTRIC HEATER)	208/1	---	5	---	---	EC	X	30A-2P	---	(2)#10,(1)#10,3/4" C.	NOTE 6
24												
25	RH-1 (RADIANT HEATER)	208/1	---	5	---	---	EC	X	30A-2P NF	---	(2)#10,(1)#10,3/4" C.	NOTE 1
26	TRH-1 (RADIANT HEATER)	120/1	---	---	---	---	EC	X	20A-1P NF	---	(2)#12,(1)#12,3/4" C.	NOTE 1 & 8
27												
28	VP-1 (VACUUM PUMP)	120/1	---	---	---	20A-1P CB	MC	---	20A-1P NF	---	(2)#12,(1)#12,3/4" C.	NOTE 8
29												
30	GWH-1 GAS WATER HEATER	120/1	---	4.5	---	---	EC	X	20A-1P	---	(2)#12,(1)#12,3/4" C.	NOTE 1
31												
32	P-1 (CIRCULATING PUMP)	120/1	1/6	---	---	---	EC	X	20A-1P	---	(2)#12,(1)#12,3/4" C.	NOTE 1

EC = ELECTRICAL CONTRACTOR
MC = MECHANICAL CONTRACTOR
F = FUSED
NF = NON FUSED
CB = CIRCUIT BREAKER IN PANEL

NOTES:
1. EC TO FURNISH, INSTALL AND CONNECT UNIT DISCONNECT SWITCH.
2. EC TO FURNISH, INSTALL AND CONNECT COMBINATION STARTER/DISCONNECT SWITCH RELAY.
3. NEMA 3R ENCLOSURE FOR DISCONNECT SWITCH.
4. FAN TO BE INTERLOCKED WITH DAMPER AND CO CONTROLLER. COORDINATE REQUIREMENTS WITH MECHANICAL CONTRACTOR.
5. FAN CONTROLLED BY SWITCH WITH LIGHTING.
6. EC TO PROVIDE ELECTRIC WALL HEATER EQUAL OR SIMILAR TO "QMARK" #QWH3504F WITH INTERNAL DISCONNECT SWITCH.
7. FAN AND INTEGRAL CONTROLS FOR LTO/FAN PROVIDED WITH RANGE HOOD.
8. VACUUM PUMP VP-1 TO BE INTERLOCKED WITH RADIANT HEATERS TRHP1 THRU 4. COORDINATE WITH MECHANICAL CONTRACTOR.

ST. LOUIS COUNTY RULES, REGULATIONS, AND INTERPRETATIONS ON MECHANICAL, ELECTRICAL AND PLUMBING SYSTEM COMPONENTS						
TABLE 3.2 EARTHQUAKE SYSTEM COMPONENTS EARTHQUAKE LOAD RESISTANCE						
LISTING OF EQUIPMENT AND SYSTEM COMPONENTS	ANCHORAGE TO FLOORS, ROOFS, ETC (SEE NOTE 1 BELOW)		SMAY BRACING (SEE NOTE 1 BELOW)		LOCATION OF PROFESSIONAL SEALED ANCHORAGE AND SMAY BRACING DETAILS (SEE NOTE 2 BELOW)	
	NOT PROVIDED FOR PROJECT	PROVIDED FOR PROJECT	NOT PROVIDED FOR PROJECT	PROVIDED FOR PROJECT	ON CONTRACT DOCUMENTS (DRAWING NO. OR SPEC. SECTION)	SUBSEQUENT SUBMITTAL (SEE NOTE 2 BELOW) (SEPARATE PERMIT & PLANS)
FIRE PROTECTION, DETECTION & ALARM EQUIPMENT, & SYSTEM COMPONENTS: * See Chapter 4, Table 4.1. (LIST ITEMS SUCH AS FIRE ALARM PANELS, ELECTRIC CONDUCTORS POWERING FIRE PROTECTION EQUIPMENT, ETC.)	X		X			X
EMERGENCY OR STANDBY EQUIP. AND SYSTEM COMPONENTS: * SEE CHAPTER 4, TABLE 4.1			X	X		X
GENERATOR			X	X		X
OTHER EQUIPMENT & SYSTEM COMPONENTS NEEDED FOR CONTINUED OPERATION OF OCCUPANCY CATEGORY IV FACILITIES OR WHOSE FAILURE WOULD IMPAIR THEIR CONTINUED OPERATION * SEE CHAPTER 4, TABLE 4.1	X		X			
OTHER GENERAL EQUIPMENT & SYSTEM COMPONENTS LIGHTING FIXTURES POWER PANEL CONDUIT		X		X	E001 E001	
FREE STANDING ELECTRIC PANEL	X		X			ALL SUSPENDED CONDUIT LESS THAN 3" EXEMPT PER TABLE 600 PART 3

NOTES:
1. IT IS THE BASIC INTENT OF THIS CODE BLOCK TO DECLARE WHETHER OR NOT ANCHORAGE AND SMAY BRACING IS BEING PROVIDED ON THE PROJECT. IF SO, TO DECLARE WHETHER OR NOT THE DETAILS ARE SHOWN ON THE PLANS OR WILL BE SHOWN ON A SUBSEQUENT SUBMISSION. IF SEISMIC RESTRAINT OF A COMPONENT IS NOT REQUIRED BY CODE THIS SHOULD BE STATED IN COMMENTS. IF SEISMIC RESTRAINT, WHICH IS NOT REQUIRED BY CODE, IS BEING PROVIDED BY CODE THIS SHOULD ALSO BE STATED IN THE COMMENTS.
2. SHOP DRAWINGS NEED TO BE SUBMITTED TO THE COUNTY A MINIMUM OF TWO WEEKS PRIOR TO THE PLANNED INSTALLATION TO ALLOW FOR PLAN REVIEW AND DISTRIBUTION TO THE INSPECTOR. ADDITIONAL TIME MAY BE NEEDED IF SUCH SUBMISSIONS ARE DEFICIENT.

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PANEL BOARD 'MP'									
120/208 VOLTS 3 PHASE 4 WIRE 400 AMP. BUS 10,000 A.I.C. SERIES RATED SURFACE MOUNTED									
MAIN LUGS & SUB-FEED BREAKER					CIRCUIT BREAKER TYPE				
TRIP	NO.	LOAD	LOAD	LOAD	LOAD	LOAD	LOAD	LOAD	LOAD
AMPS	POLE	SERVED	V. A.	V. A.	V. A.	V. A.	V. A.	V. A.	V. A.
NO.	NO.		AØ	BØ	CØ				
1	20	CU-1	1248	2881			AHU-1		2
3	20	ICE MACHINE	1248	2881	600	1548	AHU-2		6
5	20		2760	1500			AHU-3		8
7	40	CU-2	2760	1500			AHU-4		10
9	40		2760	1500			AHU-5		12
11	20		1560	1600			TRH-1 THRU 4		14
13	20	CU-3	1560	1600			EH-1		16
15	20		1920	750			EF-2, 3 & WALL LOUVERS (APPARATUS BAY EXHAUST)		18
17	20		1920	500			GWH-1/CP-1		22
19	25	CU-4	1560	2500			AIR COMPRESSOR		24
21	25		1560	2500			RH-1 BREAK ROOM		26
23	20	CU-5	2880	1056			VP-1 (2)		30
25	20		2880	1056			-SPARE-		32
27	20	HOSE DRYER	2500	4721			-SPARE-		34
29	30	RH-1 WORK ROOM	2500	3184			PANEL B		36
31	30		2500	3184			PANEL AA/AB		38
33	30	RH-1 WORK ROOM	15020	18610					40
35	30		15020	18610					42
37	30		44436	46063	42912				44

LOAD DESCRIPTION	DEMAND FACTOR D.F.	VOLT - AMPS	
		CONNECTED	DEMAND
LIGHTING	1.25	9815	12269
RECEPTACLES	1st 10kVA @ 100%	10000	10000
RECEPTACLES	REMAINDER @ 50%	14840	7420
MISC. EQUIPMENT	1.00	38020	38020
ELECTRIC HEAT	1.25	20000	25000
HVAC EQUIPMENT	1.00	40736	40736
TOTAL		133411	133445

HT PROVIDE HANDLE TIE ON BREAKERS
L/O PROVIDE LOCK-ON DEVICE
GFI GROUND FAULT CURRENT INTERRUPTER

PANELBOARD LOAD = 133445 V.A.
FULL LOAD AMPS = 370.7 A.

PANEL BOARD 'AA' (SECT 1)									
120/208 VOLTS 3 PHASE 4 WIRE 200 AMP. BUS 10,000 A.I.C. SERIES RATED SURFACE MOUNTED									
MAIN LUGS / FEED-THRU LUGS					CIRCUIT BREAKER TYPE				
TRIP	NO.	LOAD	LOAD	LOAD	LOAD	LOAD	LOAD	LOAD	LOAD
AMPS	POLE	SERVED	V. A.	V. A.	V. A.	V. A.	V. A.	V. A.	V. A.
NO.	NO.		AØ	BØ	CØ				
1	20	RECEPT - IT ROOM	180	540			RECEPT - RECEPTION		2
3	20	RECEPT - IT ROOM	180	540			COPIER - RECEPTION		4
5	20	RECEPT - IT ROOM	180	540			RECEPTS - CHIEF'S OFFICE		6
7	20	RECEPT - IT ROOM	180	540			RECEPTS - ASST CHIEF'S OFFICE		8
9	20	RECEPT - IT ROOM	180	540			RECEPTS - CAPTAIN'S OFFICE		10
11	20	RECEPT - IT ROOM	180	540			RECEPTS - EMS OFFICE		12
13	20	RECEPT - IT ROOM	180	540			MEDIAVAULT - EMS STORAGE		14
15	20	CONVENIENCE RECEPT, TV	180	540			-SPARE-		16
17	20	FANS - BSMNT	360	1080			-SPARE-		18
19	20	FITNESS EQUIP - BSMNT	360	1080			CONVENIENCE RECEPT - ADMIN AREA, RESTRM, BREAK		20
21	20	FITNESS EQUIP - BSMNT	360	1080			WATER COOLER		22
23	20	FITNESS EQUIP - BSMNT	360	1080			COFFEE MACHINE - BREAK		24
25	20	FITNESS EQUIP - BSMNT	360	1080			DOOR LOCK ENTRANCE		26
27	20	RECEPTS - REAR OF APPARATUS BAY	540	1620			FIRE ALARM PANEL (FACP)		28
29	20	RECEPTS - FRONT OF APPARATUS BAY	540	1620			CO POWER SUPPLY		30
31	20	RECEPTS - WORK RM	720	2160			APPARATUS BAY CO CONTROLLER		32
33	20	RECEPTS - WORK RM (BATTERY CHARGING)	360	1080			RIP & RUN		34
35	20	RECEPTS - WORK RM (BATTERY CHARGING)	360	1080			TV - APPARATUS BY, BREAK		36
37	20	CONDENSATE PUMP	250	750			WPF-8 (2)		38
39	20	-SPARE-					-SPARE-		40
41	20	-SPARE-					-SPARE-		42
TOTAL			8780	12370	12370		FEED-THRU LUGS (PANEL AB)		
TOTAL			15020	18610	16530				

LOAD DESCRIPTION	DEMAND FACTOR D.F.	VOLT - AMPS	
		CONNECTED	DEMAND
LIGHTING	1.25	9815	12269
RECEPTACLES	1st 10kVA @ 100%	10000	10000
RECEPTACLES	REMAINDER @ 50%	13940	6970
MISC. EQUIPMENT	1.00	26220	26220
ELECTRIC HEAT	1.25	20000	25000
HVAC EQUIPMENT	1.00	40736	40736
TOTAL		50160	43190

HT PROVIDE HANDLE TIE ON BREAKERS
L/O PROVIDE LOCK-ON DEVICE
GFI GROUND FAULT CURRENT INTERRUPTER

PANELBOARD LOAD = 43190 V.A.
FULL LOAD AMPS = 120.0 A.

PANEL BOARD 'AB' (SECT 2)									
120/208 VOLTS 3 PHASE 4 WIRE 200 AMP. BUS 10,000 A.I.C. SERIES RATED SURFACE MOUNTED									
MAIN LUGS ONLY					CIRCUIT BREAKER TYPE				
TRIP	NO.	LOAD	LOAD	LOAD	LOAD	LOAD	LOAD	LOAD	LOAD
AMPS	POLE	SERVED	V. A.	V. A.	V. A.	V. A.	V. A.	V. A.	V. A.
NO.	NO.		AØ	BØ	CØ				
1	20	CORD REEL APPARATUS BAY	360	1080			RECEPT - BUNK 210		2
3	20	CORD REEL APPARATUS BAY	360	1080			RECEPT - BUNK 211		4
5	20	CORD REEL APPARATUS BAY	360	1080			RECEPT - OFF. BUNK 212		6
7	20	CORD REEL APPARATUS BAY	360	1080			RECEPT - BUNK 213		8
9	20	OVERHEAD DOOR - APPARATUS BAY	830	2490			RECEPT - BUNK 214		10
11	20	OVERHEAD DOOR - APPARATUS BAY	830	2490			RECEPT - BUNK 202		12
13	20	RECEPTS - MEZZANINE	900	2700			TV'S - DAY RM, KITCHEN		14
15	20	-SPARE-					RECEPT - DAY RM, STUDY		16
17	20	-SPARE-					CONVENIENCE RECEPTS - LAUNDRY, CORR, STAIR		18
19	20	-SPARE-					RECEPT - TOILET 216		20
21	20	EMERGENCY OFF SWITCH	180	540			RECEPT - TOILET 217		22
23	20	CONVENIENCE RECEPTS - KITCHEN, BALCONY	100	300			RECEPT - TOILET 218		24
25	20	GAS SOLENOIDS (2) - RANGE & GRILL	180	540			REFRIGERATOR		26
27	20	RECEPT - KITCHEN COUNTER	180	540			REFRIGERATOR		28
29	20	RECEPT - KITCHEN COUNTER	180	540			REFRIGERATOR		30
31	20	RANGE HOOD	500	1500			DISHWASHER		32
33	20	RANGE	180	540			RECEPT - KITCHEN COUNTER		34
35	20	WASHER	1400	4200			RECEPT - KITCHEN COUNTER		36
37	20	DRYER	1400	4200			DISPOSER - KITCHEN		38
39	20	-SPARE-					DISPOSER - KITCHEN		40
41	20	-SPARE-					DISPOSER - KITCHEN		42
TOTAL			8780	12370	12370				

LOAD DESCRIPTION	DEMAND FACTOR D.F.	VOLT - AMPS	
		CONNECTED	DEMAND
LIGHTING	1.25	9815	12269
RECEPTACLES	1st 10kVA @ 100%	10000	10000
RECEPTACLES	REMAINDER @ 50%	1700	850
MISC. EQUIPMENT	1.00	21820	21820
ELECTRIC HEAT	1.25	20000	25000
HVAC EQUIPMENT	1.00	40736	40736
TOTAL		33520	32670

HT PROVIDE HANDLE TIE ON BREAKERS
L/O PROVIDE LOCK-ON DEVICE
GFI GROUND FAULT CURRENT INTERRUPTER

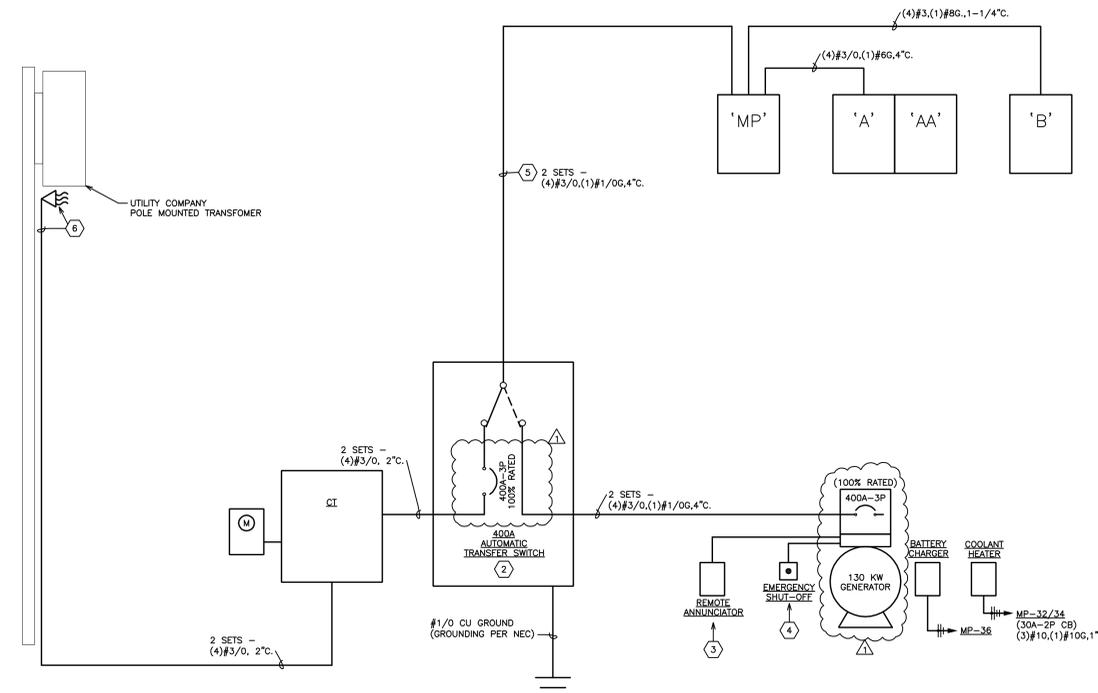
PANELBOARD LOAD = 32670 V.A.
FULL LOAD AMPS = 90.8 A.

PANEL BOARD 'B'									
120/208 VOLTS 3 PHASE 4 WIRE 100 AMP. BUS 10,000 A.I.C. SERIES RATED SURFACE MOUNTED									
MAIN LUGS ONLY					CIRCUIT BREAKER TYPE				
TRIP	NO.	LOAD	LOAD	LOAD	LOAD	LOAD	LOAD	LOAD	LOAD
AMPS	POLE	SERVED	V. A.	V. A.	V. A.	V. A.	V. A.	V. A.	V. A.
NO.	NO.		AØ	BØ	CØ				
1	20	LTG - BASEMENT	781	2343			LTG - BUNK ROOMS		2
3	20	LTG - STAIRWELL, MEZZ.	928	2804			CLG FANS - BUNK ROOMS		4
5	20	LTG - OFFICES, EMS STOR., CORRIDOR, RECEPTION	480	1440			LTG - CORRIDORS, STUDY, DAYROOM, CLG FANS		6
7	20	LTG - BREAK AREA, TOILET, WORK ROOM	455	1365			LTG - KITCHEN, BALCONY		8
9	20	LTG - EXTERIOR BLDG	800	2400			LTG - RESTRMS, LAUNDRY		10
11	20	LTG - APPARATUS BAY	1055	3165			-SPARE-		12
13	20	LTG - APPARATUS BAY	1053	3159			-SPARE-		14
15	20	LTG - FLAG POLE	220	660			-SPARE-		16
17	20	LTG - CARPORT	195	585			-SPARE-		18
19	20	RECEPTS - VEHICLE EQUIP CHARGING (CARPORT)	360	1080			-SPARE-		20
21	20	RECEPT - CARPORT	180	540			-SPARE-		22
23	20	RECEPTS - VEHICLE EQUIP CHARGING (BLDG)	360	1080			-SPARE-		24
25	20	-SPARE-					-SPARE-		26
27	20	-SPARE-					-SPARE-		28
29	20	-SPARE-					-SPARE-		30
31	20	-SPARE-					-SPARE-		32
33	20	-SPARE-					-SPARE-		34
35	20	-SPARE-					-SPARE-		36
37	20	-SPARE-					-SPARE-		38
39	20	-SPARE-					-SPARE-		40
41	20	-SPARE-					-SPARE-		42
TOTAL			4721	3164	3310				

LOAD DESCRIPTION	DEMAND FACTOR D.F.	VOLT - AMPS	
		CONNECTED	DEMAND
LIGHTING	1.25	9815	12269
RECEPTACLES	1st 10kVA @ 100%	900	900
RECEPTACLES	REMAINDER @ 50%	---	---
MISC. EQUIPMENT	1.00	480	480
ELECTRIC HEAT	1.25	---	---
HVAC EQUIPMENT	1.00	---	---
TOTAL		1195	13649

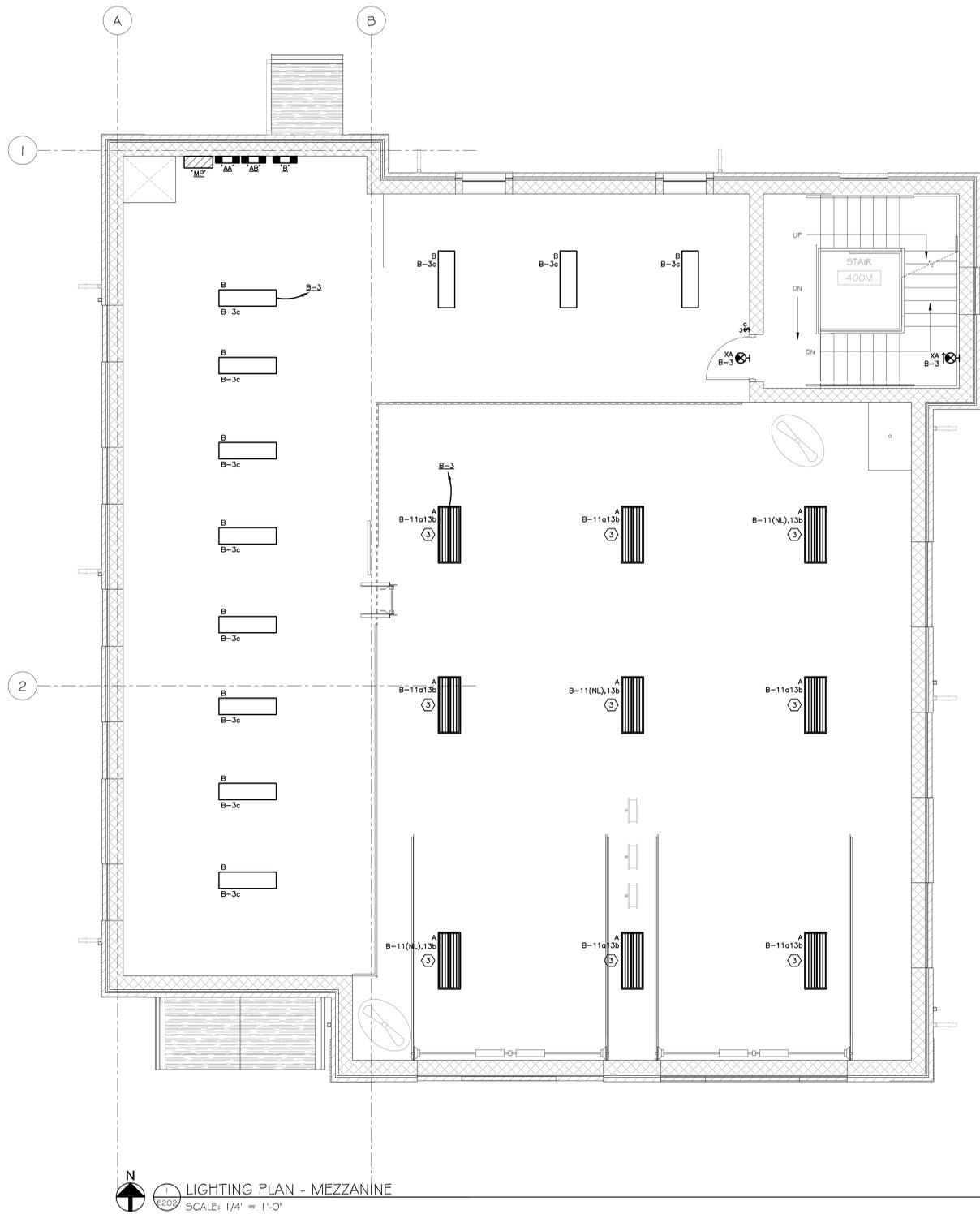
HT PROVIDE HANDLE TIE ON BREAKERS
L/O PROVIDE LOCK-ON DEVICE
GFI GROUND FAULT CURRENT INTERRUPTER

PANELBOARD LOAD = 13649 V.A.
FULL LOAD AMPS = 37.9 A.

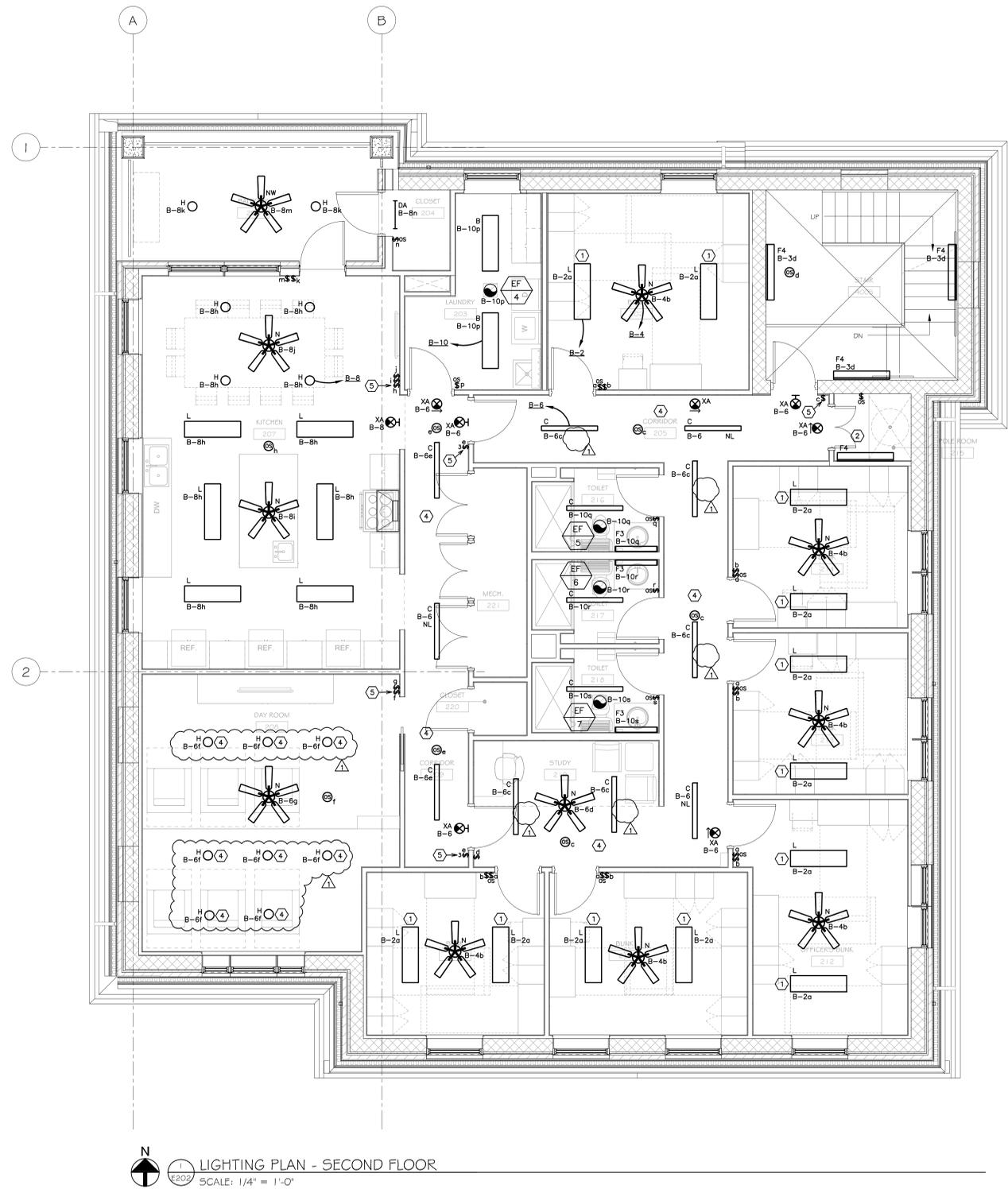


1 POWER ONE-LINE DIAGRAM
SCALE: NONE

- KEYED ELECTRICAL:**
- REFER TO SITE PLAN ON SHEET, E101 FOR LOCATION OF EMERGENCY GENERATOR. PORTABLE EMERGENCY GENERATOR.
 - FURNISH AND INSTALL SERVICE ENTRANCE RATED, AUTOMATIC TRANSFER SWITCH - 120/208V, 400 AMP, THREE-POLE, FOUR-WIRE, WITH A SOLID NEUTRAL, NEMA 3R ENCLOSURE.
 - REFER TO SHEET E301 FOR LOCATION OF REMOTE ANNUNCIATOR.
 - FIELD VERIFY WITH OWNER LOCATION OF GENERATOR EMERGENCY SHUT-OFF.
 - RUN FEEDERS THROUGH CHASE.
 - RUN FEEDER UP UTILITY POLE AND PROVIDE WEATHER HEAD WITH ADDITIONAL 10' FT OF WIRE COILED AT TOP FOR CONNECTION TO TRANSFORMER. COORDINATE WITH UTILITY COMPANY.



1 LIGHTING PLAN - MEZZANINE
SCALE: 1/4" = 1'-0"



1 LIGHTING PLAN - SECOND FLOOR
SCALE: 1/4" = 1'-0"

- KEYED NOTES:**
- 1 PROVIDE RELAY TO SWITCH RED LAMPS ON WITH TONE SIGNAL FROM FIRE STATION CONTROLLER. PROVIDE 3/4"C. WITH PULL WIRE TO FIRE STATION CONTROLLER AND COORDINATE REQUIREMENTS WITH MANUFACTURER'S INSTRUCTIONS. OUTDOOR LAMPS TO BE SWITCHED BY LOCAL WALL SWITCH OCCUPANCY SENSOR. ALSO SEE TYPE 'L' FIXTURE IN LIGHTING FIXTURE SCHEDULE ON SHEET E201 FOR ADDITIONAL INFORMATION.
 - 2 PROVIDE TIME SWITCH TO OVERRIDE FIXTURE ON BETWEEN DUSK AND DAWN.
 - 3 LIGHTS IN APPARATUS BAY ARE TO BE CONTROLLED BY THE TOGGLE SWITCHES SHOWN ON SHEET E201 - FIRST LEVEL LIGHTING PLAN. PROVIDE A SEPARATE RELAY WIRED IN PARALLEL TO BE CONTROLLED BY THE TONES SYSTEM FOR LIGHTING OVERRIDE DURING A DISPATCH TONE. FIXTURES DESIGNATED AS 'NL' (NIGHT LIGHT) SHALL BE FED FROM AN UNSWITCHED HOT CONDUCTOR AND REMAIN ON AT ALL TIMES. PROVIDE A 3/4"C. WITH PULL WIRE TO THE FIRE STATION CONTROLLER AND COORDINATE WIRING REQUIREMENTS WITH MANUFACTURER'S INSTRUCTIONS.
 - 4 LIGHTS IN THIS AREA ARE TO BE CONTROLLED BY THE OCCUPANCY SENSORS AND RELAY AS SHOWN. PROVIDE A SEPARATE RELAY WIRED IN PARALLEL TO BE CONTROLLED BY THE TONES SYSTEM FOR LIGHTING OVERRIDE DURING A DISPATCH TONE. PROVIDE A 3/4"C. WITH PULL WIRE TO THE FIRE STATION CONTROLLER AND COORDINATE WIRING REQUIREMENTS WITH MANUFACTURER'S INSTRUCTIONS.
 - 5 SWITCH TO ACT AS OCCUPANCY SENSOR OVERRIDE.

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REVISIONS:

1	06-15-16	Addendum 1

CONSTRUCTION SET - 06/03/16

LIGHTING PLANS
MEZZANINE &
SECOND FLOOR

Project Number: 2010.100.03
Date: 2016.06.03
Drawn By: RAB

E202

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REVISIONS:

1	06-15-16	Addendum 1

POWER & SIGNAL
PLANS
BASEMENT &
FIRST FLOOR

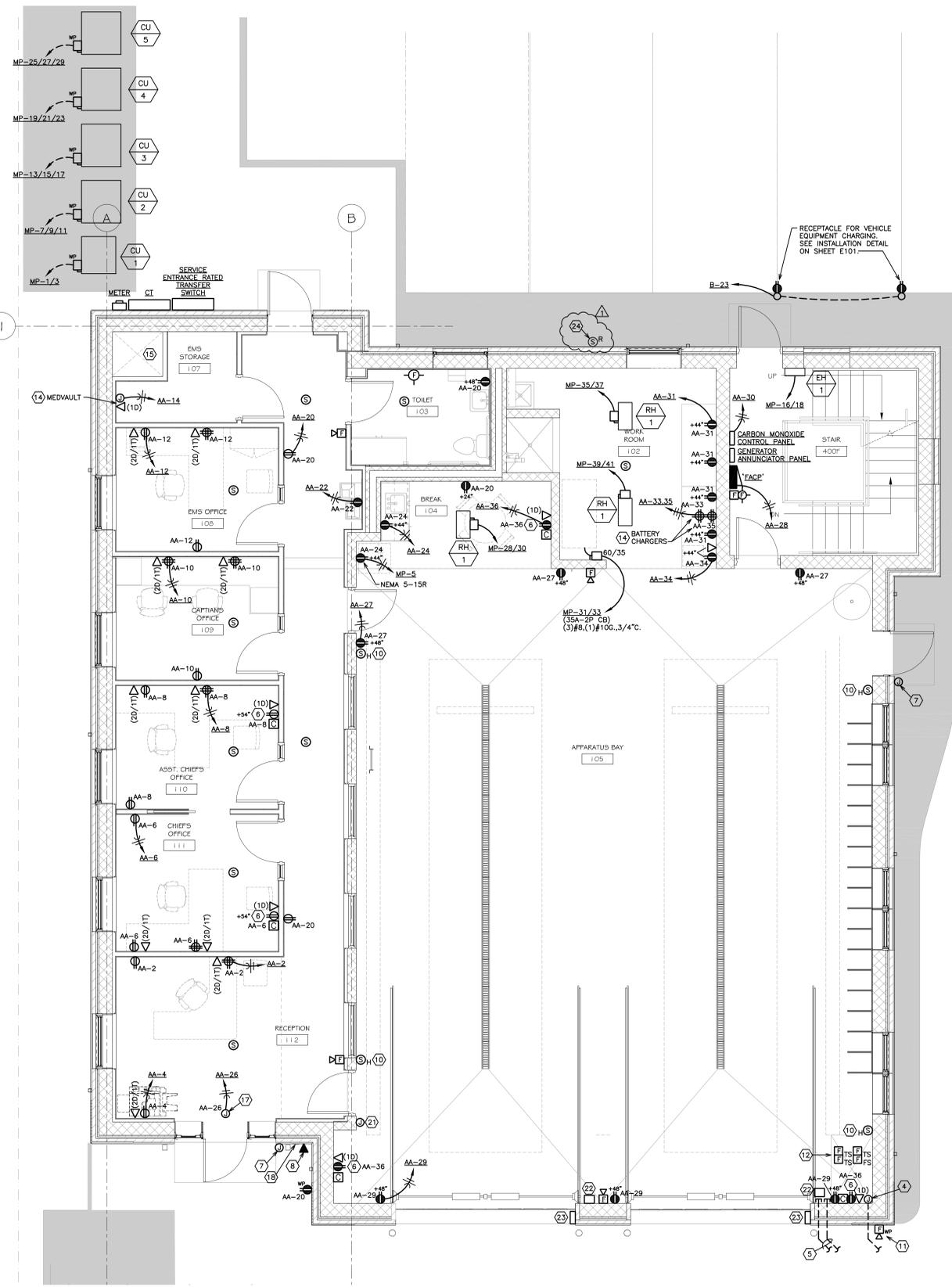
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Date: 2016.06.03

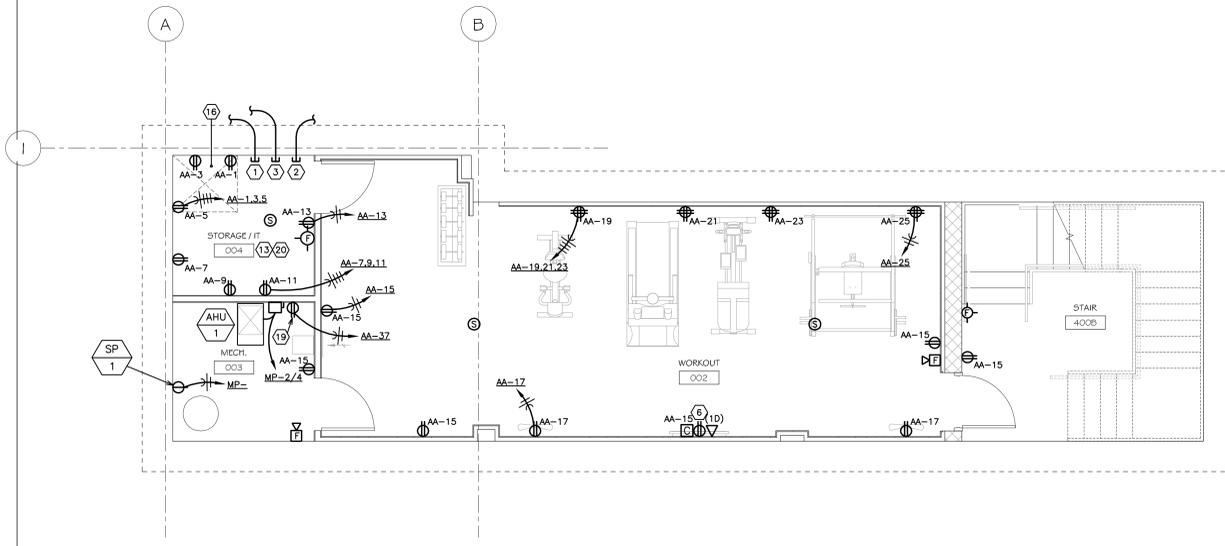
Drawn By: RAB

E301

CONSTRUCTION SET - 06/03/16



POWER & SIGNAL PLAN - FIRST FLOOR
SCALE: 1/4" = 1'-0"



POWER & SIGNAL PLAN - BASEMENT
SCALE: 1/4" = 1'-0"

KEYED NOTES:

- 1 FURNISH AND INSTALL 3" CONDUIT WITH PULL WIRE TO FIBER NETWORK UTILITY PEDESTAL. COORDINATE REQUIREMENTS WITH CHARTER COMMUNICATIONS PRIOR TO COMMENCEMENT OF WORK. REFER TO SITE PLAN ON SHEET E101 FOR ADDITIONAL INFORMATION.
- 2 FURNISH AND INSTALL 3" CONDUIT WITH PULL WIRE TO CABLE UTILITY PEDESTAL. COORDINATE REQUIREMENTS WITH CHARTER COMMUNICATIONS PRIOR TO COMMENCEMENT OF WORK. REFER TO SITE PLAN ON SHEET E101 FOR ADDITIONAL INFORMATION.
- 3 FURNISH AND INSTALL 3" CONDUIT WITH PULL WIRE TO TELEPHONE UTILITY PEDESTAL. COORDINATE REQUIREMENTS WITH CHARTER COMMUNICATIONS PRIOR TO COMMENCEMENT OF WORK. REFER TO SITE PLAN ON SHEET E101 FOR ADDITIONAL INFORMATION.
- 4 PROVIDE (2) #12, (1) #12C, IN 1" C. FROM NEW RELAY TO EXISTING EMERGENCY SIGNALING FIXTURE. PROVIDE SIGNAL CABLE ROUTED TO FIRE STATION CONTROLLER AT IT CLOSET. COORDINATE WITH OWNER'S VENDOR FOR CONNECTION REQUIREMENTS.
- 5 FURNISH AND INSTALL (2) SPARE 2" CONDUITS WITH PULL WIRES FROM STUB AT +60" AFF TO CAPPED STUBS AT EXISTING EMERGENCY SIGNALING FIXTURE.
- 6 WALL MOUNTED TV LOCATION. MOUNT RECEPTACLE, TV, AND DATA OUTLETS AT +60" AFF UNLESS NOTED OTHERWISE.
- 7 PROVIDE J-BOX WITH CABLE TO IT CLOSET FOR DOORBELL PA ANNOUNCEMENT. PROVIDE EDWARDS NO. 630 PUSHBUTTON. COORDINATE REQUIREMENTS WITH OWNER'S TELEPHONE VENDOR.
- 8 PROVIDE ALLEN-TEL NO. 68975NDADAXX EMERGENCY TELEPHONE. COORDINATE WIRING WITH OWNER'S TELEPHONE VENDOR.
- 9 WALL MOUNTED TV LOCATION. RECEPTACLE, TV, AND DATA OUTLETS TO BE LOCATED IN FIELD WITH ARCHITECT.
- 10 FURNISH AND INSTALL HORN SPEAKER (4 TOTAL) WITH A SINGLE HOMERUN DOWN TO STORAGE/IT ROOM.
- 11 ELECTRICAL CONTRACTOR TO PROVIDE POWER CONNECTION TO FIRE ALARM SPRINKLER BELL ON BUILDING. ELECTRICAL CONTRACTOR TO VERIFY EXACT LOCATION AND REQUIREMENTS WITH SPRINKLER CONTRACTOR AND FIRE MARSHAL.
- 12 VERIFY ACTUAL QUANTITIES OF FLOW, TAMPER, AIR PRESSURE, AND LOW AIR PRESSURES SWITCHES WITH FIRE PROTECTION CONTRACTOR.
- 13 FIELD COORDINATE EXACT LOCATIONS AND MOUNTING HEIGHT OF OUTLETS WITH ARCHITECT, OWNER AND OWNER'S VENDOR.
- 14 FIELD COORDINATE EXACT LOCATIONS AND MOUNTING HEIGHT OF OUTLETS WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
- 15 CHASE FOR CONDUIT ROUTING TO AND FROM FLOORS BELOW AND ABOVE.
- 16 OPENING FOR CONDUITS COMING FROM FLOORS ABOVE.
- 17 ELECTRONIC DOOR LOCK. COORDINATE ALL REQUIREMENTS WITH DOOR HARDWARE SUPPLIER INCLUDING ALL WIRING AND CONTROL BUTTON AT RECEPTION DESK.
- 18 KNOX BOX. COORDINATE ELECTRICAL REQUIREMENTS WITH ARCHITECT.
- 19 CONDENSATE PUMP. COORDINATE LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
- 20 PROVIDE AMPLIFIER IN RACK FOR PAGING SYSTEM. AMPLIFIER TO BE CAPABLE OF DRIVING ALL SPEAKERS AND HAVE INPUTS FOR ALERT TONE SYSTEM.
- 21 GPS SYSTEM. COAX CABLING DOWN TO IT ROOM. COORDINATE REQUIREMENTS WITH OWNER'S ALERT SYSTEM VENDOR.
- 22 PROVIDE DIRECTIONAL SYSTEMS TRAFFIC CONTROLLER #10893 OR APPROVED EQUAL WITH RELAY TO OPERATE ON OVERHEAD DOOR OPEN SWITCH. SIGNAL TO ILLUMINATE GREEN WHEN DOOR IS OPEN AND RED AT ALL OTHER TIMES. CONNECT TO RESPECTIVE OVERHEAD DOOR 120V CIRCUIT.
- 23 PROVIDE FEDERAL SIGNAL WARNING LIGHT #LP1-120R OR APPROVED EQUAL WITH RELAY TO OPERATE WHILE OVERHEAD DOOR IS OPENING. CONNECT TO RESPECTIVE OVERHEAD DOOR 120V CIRCUIT.
- 24 PROVIDE BRICK RECESSED SPEAKER WITH A HOMERUN TO IT CLOSET.