EXISTING PANELBOARD SCHEDULE - 'LP3'

MAIN: 225A MLO | VOLTAGE: 480/277 | PHASE: 3 | WIRE: 4 | MOUNTING: | AIC:

CKT #	TRIP	POLE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTR	KIT	MISC	PHASE A	PHASE B	PHASE C	LOAD (KVA) LTG	REC	MTR	A/C	HTR	KIT	MISC	DESCRIPTION	TRIP	POLE	CKT #
1	50/3	EXISTING												11.8							AHU-1	60/3	2	4
3	30/3	PSU-2-4					6.2							11.8							---	---	---	6
5	15/2	PSU-2-5					0.5							11.8							---	---	---	8
7	--						2.6										8.2				PSU-3-1	15/3	5	9
9	--						2.6										3.2				---	---	---	10
11	15/3	PSU-2					2.4										3.2				---	---	---	12
13	--						2.4										3.6				PSU-3-2	20/3	14	14
15	--						2.4										3.6				---	---	---	16
17	20/1	SPARE															3.6							18
19	20/1	SPARE															3.9				PSU-3-3	20/3	20	20
21	20/1	SPARE															3.9							22
23	20/1	SPARE															3.9							24
25	20/2	EXISTING	0.3	1.8	0.2	0.0	0.0	0.0	0.7												EXISTING	30/3	26	26
27	---	---	1.2	1.2	0.5	0.0	0.0	0.0	0.7												---	---	---	28
29	---	---	0.4	1.0	0.0	0.0	0.0	0.0													---	---	---	30
31	-/1	SPACE									1.2	1.6	1.2	0.0	0.0	17.7	0.0				PANEL RK3	70/3	32	32
33	-/1	SPACE										1.5	2.5	0.0	0.0	16.6	0.0				---	---	---	34
35	-/1	SPACE									1.7	2.6	0.9	0.0	0.0	18.2	0.0				---	---	---	36
LIGHTING (KVA):			6.2	1.8	6.0	1.6	0.0	25.2	0.0	1.4		6.7	6.6	1.2	1.8	34.8	32.1	50.5	0.0	CONNECTED LOAD (KVA):		181.7	
RECEPTACLES (KVA):			10.6																		DEMAND LOAD (KVA):		143.0	
MOTORS (KVA):			2.8								PHASE A		33	138.5										
A/C (KVA):			34.8								PHASE B		38	159.4							CONNECTED LOAD (AMPS):		764.5	
HEATING (KVA):			50.3								PHASE C		51	191.8							DEMAND LOAD (AMPS):		599.0	
KITCHEN (KVA):			32.5											1930.1	AMPS									
MISCELLANEOUS (KVA):			1.4																		AMPACITY REQUIRED:		1319	

NOTE: BREAKERS PROTECTING MULTI-WIRE BRANCH CIRCUITS SHALL BE EQUIPPED WITH A PAD-LOCK DEVICE SO THAT CIRCUITS CAN BE DISCONNECTED SIMULTANEOUSLY.

EXISTING PANELBOARD SCHEDULE - 'B'

MAIN: 225A | BRKR TYPE: MLO | VOLTAGE: 208/120 | PHASE: 3 | WIRE: 4 | MOUNTING: SURFACE | AIC:

CKT #	TRIP	POLE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTR	KIT	MISC	PHASE A	PHASE B	PHASE C	LOAD (KVA) LTG	REC	MTR	A/C	HTR	KIT	MISC	DESCRIPTION	TRIP	POLE	CKT #
1	20/1	WATER COOLER			0.8									1.5							OFFICE RECEPTACLES	20/1	2	2
3	20/1	WATER COOLER			0.8									1.2							OFFICE RECEPTACLES	20/1	4	4
5	20/1	CORRIDOR RECEPTACLES		1.8																	SPARE	30/1	6	6
7	20/1	RESTROOM RECEPTACLES		0.6																	SPARE	30/1	8	8
9	20/1	EXIT LIGHTING	1.2																		SPARE	20/1	10	10
11	20/1	EXIT LIGHTING	0.4																		SPARE	20/1	12	12
13	20/1	SPARE																			SPARE	30/1	14	14
15	20/1	SPARE																			SPARE	20/1	16	16
17	20/2	SPARE																			SPARE	20/1	18	18
19	--	SPARE																			SPARE	30/1	20	20
21	30/2	SPARE																			SPARE	20/1	22	22
23	--	SPARE																			SPARE	20/1	24	24
25	30/2	SPARE																			SPARE	30/1	26	26
27	--	SPARE																			SPARE	20/1	28	28
29	20/1	SPARE																			SPARE	20/1	30	30
31	-/1	SPACE																			SPACE	-/1	32	32
LIGHTING (KVA):			1.8	1.8	1.8	0.0	0.0	0.0	0.0		3.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0		CONNECTED LOAD (KVA):		7.8	
RECEPTACLES (KVA):			4.9																		DEMAND LOAD (KVA):		7.2	
MOTORS (KVA):			1.9								PHASE A		3	21.7										
A/C (KVA):			9.0								PHASE B		3	26.7							CONNECTED LOAD (AMPS):		224	
HEATING (KVA):			0.0								PHASE C		1	11.7							DEMAND LOAD (AMPS):		320	
KITCHEN (KVA):			0.0																KVA	AMPS				
MISCELLANEOUS (KVA):			0.0																					

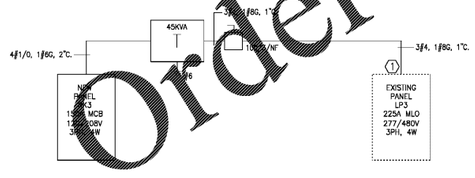
NOTE: BREAKERS PROTECTING MULTI-WIRE BRANCH CIRCUITS SHALL BE EQUIPPED WITH A PAD-LOCK DEVICE SO THAT CIRCUITS CAN BE DISCONNECTED SIMULTANEOUSLY.
* - PROVIDE GFCI CIRCUIT BREAKER

NEW PANELBOARD SCHEDULE - 'RK3'

MAIN: 100A MCB | VOLTAGE: 208/120 | PHASE: 3 | WIRE: 4 | MOUNTING: | AIC:

CKT #	TRIP	POLE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTR	KIT	MISC	PHASE A	PHASE B	PHASE C	LOAD (KVA) LTG	REC	MTR	A/C	HTR	KIT	MISC	DESCRIPTION	TRIP	POLE	CKT #
1	20/1*	CONVENIENCE RECEPTS.		0.4																	OVEN	30/2*	2	2
3	20/1*	BLENDER STATION						1.8													---	---	---	4
5	20/1*	BLENDER STATION						1.8													OVEN	30/2*	6	6
7	20/1*	BACK BAR COOLER						0.8													---	---	---	8
9	20/1*	BACK BAR COOLER						0.9													OVEN	30/2*	10	10
11	45/2*	ICE DISHWASHER						3.4													---	---	---	12
13	--							3.4													REFRIGERATOR	20/1*	14	14
15	20/1*	KEG COOLER						0.9													REFRIGERATOR	20/1*	16	16
17	20/1*	POS STATION						0.2													CONFERENCE RECEPTACLES	20/1*	18	18
19	20/1*	POS STATION						0.2													ICE MACHINE	20/1*	20	20
21	20/1	SUDA GRN						1.8													BAG-N-BOX	20/1*	22	22
23	20/1*	COFFEE MACHINE						1.8													WALK-IN COOLER ACCESS.	20/1*	24	24
25	20/2*	MISCHANDISER						1.7													WALK-IN COOLER EVAP.	20/2*	26	26
27	--							1.7													---	---	---	28
29	20/1*	BOTTLE COOLER						0.7													WALK-IN COOLER COND.	20/2*	30	30
31	20/1*	BACK BAR COOLER						0.8													---	---	---	32
33	20/1*	CONVENIENCE RECEPTS						0.4													POS PRINTER	20/1*	34	34
35	20/1*	BLENDER STATION						1.8													SPARE	20/1	36	36
37	20/1*	BLENDER STATION						1.8													SPARE	30/1	38	38
39	20/1*	POS STATION						0.2													SPARE	20/1	40	40
41	20/1	SPARE																			SPARE	20/1	42	42
43	20/1	AIR CURTAINS			1.2																SPARE	30/1	44	44
45	20/1*	KITCHEN RECEPTACLES		0.8																	SPARE	20/1	46	46
47	20/1	DINING RECEPTACLES		1.2																	SPARE	20/1	48	48
49	20/1	BAR RECEPTACLES		0.8																	SPARE	30/1	50	50
51	20/1	POS SYSTEM		0.5										0.8							EXTERIOR LIGHTING	20/1	52	52
53	20/1	POS SYSTEM		0.4										0.7							LIGHTING	20/1	54	54
55	20/1	EXTERIOR RECEPTACLES		0.6										1.2							LIGHTING	30/1	56	56
57	20/1	EXTERIOR RECEPTACLES		0.5										1.2							LIGHTING	20/1	58	58
59	20/1	EXTERIOR RECEPTACLES		1.0										1.3							LIGHTING	20/1	60	60
LIGHTING (KVA):			4.7	0.0	0.6	1.2	0.0	0.0	0.0	25.1	0.0			4.7	0.0	0.0	0.0	0.0	20.4	0.0	CONNECTED LOAD (KVA):		53.0	
RECEPTACLES (KVA):			5.6																		DEMAND LOAD (KVA):		48.5	
MOTORS (KVA):			1.2								PHASE A		22	182.5										
A/C (KVA):			0.0								PHASE B		21	171.7							CONNECTED LOAD (AMPS):		441	
HEATING (KVA):			0.0								PHASE C		27	187.5							DEMAND LOAD (AMPS):		404	
KITCHEN (KVA):			12.5																KVA	AMPS				
MISCELLANEOUS (KVA):			0.0																		AMPACITY REQUIRED:		1515	

NOTE: BREAKERS PROTECTING MULTI-WIRE BRANCH CIRCUITS SHALL BE EQUIPPED WITH A PAD-LOCK DEVICE SO THAT CIRCUITS CAN BE DISCONNECTED SIMULTANEOUSLY.
* - PROVIDE GFCI CIRCUIT BREAKER



THIRD LEVEL

1 / E0.2 PARTIAL ELECTRICAL RISER DIAGRAM
SCALE: N.T.S

SUBMITALS:
1. SUBMIT SHOP DRAWINGS & PRODUCT INFORMATION FOR THE FOLLOWING:
   * SERVICE & DISTRIBUTION EQUIPMENT
   * PROTECTIVE DEVICES
   * LIGHTING FIXTURES AND LAMPS
   * WIRING DEVICES AND COVER PLATES

DISTRIBUTION EQUIPMENT:
1. DISTRIBUTION EQUIPMENT: RATED FOR 240 OR 600 VAC, 60 HZ, FAULT CURRENT INTERRUPTING CAPACITY AS INDICATED, IN AMPERES, RMS, SYMMETRICAL, BUT NOT LESS THAN 10,000 AMPS, WITH SOLID NEUTRAL GROUND (S/N); GENERAL ELECTRIC (G.E.), WESTINGHOUSE, SQUARE-D, SIEMENS-ALLIS ITE PRODUCTS; CUTLER HAMMER.

2. DISTRIBUTION EQUIPMENT USING CIRCUIT BREAKER TYPE PROITCTIVE DEVICES; BOLTED-ON OR 'SQUARE D' I-LINE DEVICES.

3. PANELBOARDS: FACTORY ASSEMBLED, MINIMUM WIDTH OF 20 INCHES, A MINIMUM DEPTH OF 5-3/4 INCHES, AND MINIMUM MAINS RATED 100 AMPERES, WITH POLE 'SPACES'; BUSSED AND READY FOR INSTALLATION OF PROTECTIVE DEVICES. CABINETS: FULL SIZED SINGLE DOORS WITH CHROMIUM PLATED COMBINATION CYLINDER LOCK AND CATCH AND TWO KEYS. "GENERAL ELECTRIC" OR EQUAL: TYPE "NLAB" W/ Q-LINE BRANCH CIRCUIT BREAKERS; TYPE "NHB" WITH E-FRAME BREAKERS.

4. PANELBOARD MAINS: COPPER OR ALUMINUM WITH BRANCH CONNECTIONS IN VERTICALLY DISTRIBUTED CONSECUTIVE PHASE SEQUENCE SUCH THAT ONE OR MULTIPLE POLE BREAKERS CAN BE MOUNTED IN ANY POSITION. SOLID NEUTRAL BUS; WITH A FEEDER LUG AND WITH A SEPARATE SET-SCREW TERMINAL FOR EACH BRANCH CIRCUIT POLE.

5. PANELBOARD MOUNTING: TOP OF ENCLOSURE 78 INCHES ABOVE THE FINISHED FLOOR/GRADE, WITH THE BOTTOM OF THE CABINET NOT CLOSER THAN 6 INCHES TO THE FLOOR/GRADE PROPERLY ALIGNED AND SUPPORTED INDEPENDENTLY OF THE CONNECTING RACEWAYS. COMPLETE INSIDE CIRCUIT DIRECTORY CARD USING A TYPEWRITER.

6. DISCONNECT SWITCHES: 'HEAVY-DUTY' RATED WITH QUICK-MAKE AND QUICK-BREAK MECHANISMS. PROVIDE GROUND LUGS AND CODE REQUIRED ACCESSORIES. SWITCHES LOCATED OUTSIDE; 'NEMA-3R' ENCLOSED TYPE WITH LOCKING HASP.

7. PROVIDE AN ENCLOSED SWITCH FOR ELECTRICALLY SERVED EQUIPMENT. PROVIDE SWITCHES & FUSES, INCLUDING HEATER ELEMENTS, RATED PER THE CHARACTERISTICS AND NAMEPLATE RATINGS OF EQUIPMENT IN ACCORDANCE WITH CODE REQUIREMENTS. MANUFACTURER'S RECOMMENDATIONS AND CHARTS. PROVIDE SWITCHES WITH CODE REQUIRED ACCESSORIES.

8. FUSED SWITCHES IN BRANCH CIRCUITS; NON-RENEWABLE CARTRIDGE FUSES RATED 250 OR 300 VAC OR 600VAC AS FOLLOWS:
   * SIZES 1 - 200 AMPS: DUAL ELEMENT, CURRENT LIMITING FUSES, CLASS 'RK-1', OR 'RK-5', SELECTED TO PROVIDE STARTING AND LIMIT LET-THRU CURRENT.
   * OTHER RATINGS, SIZES OR SPECIAL APPLICATIONS AS INDICATED.

9. STATIONARY FRACTIONAL HORSEPOWER MOTORS NOT PROVIDED WITH INTEGRAL MOTOR RUNNING OVER-LOAD PROTECTION, OR INHERENTLY PROTECTED BY DESIGN; SWITCHED BY A FRACTIONAL HORSEPOWER STARTER PROVIDING SUPPLEMENTARY PROTECTION.

10. STARTERS AND DISCONNECT SWITCHES; ENCLOSED QUICK-MAKE AND QUICK-BREAK MECHANISMS.

11. BRANCH CIRCUIT BREAKERS; MOLDED CASE, AUTOMATIC TRIPPING TYPE, BOLT-ON OR I-LINE CONSTRUCTION, MINIMUM FRAME SIZE OF 100 AMPS AND A MINIMUM TRIP SIZE OF 15 AMPS, CALIBRATED FOR 40oC. PROVIDE SUITABLE TYPE BREAKERS SERVING HIGH INRUSH CIRCUITS FOR INCANDESCENT LIGHTING.

12. GROUP SINGLE-POLE BREAKERS USED FOR MULTI-WIRE CIRCUITS CONSECUTIVELY ON THE SAME SIDE OF THE CABINET.

CONDUCTORS:
1. CONDUCTORS; SOFT DRAWN, ANNEALED COPPER WITH CONDUCTIVITY OF NOT LESS THAN 98 'ASTM' STANDARDS.

2. CONDUCTOR SIZE NUMBERS; AMERICAN WIRE GAUGE (AWG. SYSTEM, STANDARD TRADE SIZES.

3. CONDUCTORS; COLOR CODED PER CODE AND UTILITY CO.

4. CONDUCTORS;
   * No.10 AWG SIZEAND SMALLER; SOLID OR STRANDED.
   * No.8 AWG SIZE AND LARGER; STRANDED. STRANDED CONDUCTORS; CLASS 'B' OR 'C'.
   * CONTROL CIRCUITS; MINIMUM AWG No.14.
   * POWER AND LIGHTING BRANCH CIRCUITS; AWG # 12 FOR GENERAL CIRCUITS NOT REQUIRING DERATING OR SIZE INCREASE TO REDUCE VOLTAGE DROP.

5. USE A SEPARATE LUG FOR EACH CONDUCTOR WHERE MULTIPLE CONDUCTORS ARE CONNECTED TO THE SAME ELECTRICAL TERMINAL POSITION

6. BRANCH CIRCUIT CONDUCTORS; UNSPLICED EXCEPT WHERE CIRCUITS ARE SHOWN TO DIVIDE BY THE PLANS.

7. GENERAL WIRING CONDUCTORS OPERATING AT 600 VOLTS AND BELOW; RATED 60 HERTZ, 600 VOLTS, WITH 75oC OR 90oC INSULATION AS FOLLOWS:
   A. FEEDER CONDUCTORS: RATED FOR WET LOCATIONS OF 'THW', 'THWN' OR 'XHHW'.
   B. BRANCH CONDUCTORS RATED FOR:
      * WET LOCATIONS, OR LOCATIONS LOCATED BELOW GRADE OR ENCASED IN SLAB ON GRADE, OF 'THW', 'THWN' OR 'XHHW'.
      * DRY LOCATIONS OF 'THW', 'THWN', 'XHHW' OR 'THHN'.
   C. RATED LIGHTING CONDUCTORS FOR CIRCUITS REQUIRING 90oC RATING; 'THHN' OR 'XHHW', OR OTHER APPROVED TYPE.
   D. JOINTS ON CONDUCTORS RATED ABOVE 75oC; TAPED OR MADE-UP WITH MATERIALS HAVING A SUITABLE HIGH TEMPERATURE RATING.

RACEWAYS:
1. INSTALL WIRING IN METALLIC, RIGID TYPE RACEWAYS ABOVE ACCESSIBLE CEILINGS. MC CABLE MAY BE PERMITTED TO BE USED IN NON-ACCESSIBLE AREAS.

2. RUN RACEWAYS AND CABLE CONCEALED, EXCEPT RACEWAYS IN EQUIPMENT ROOMS RUN EXPOSED.

3. RACEWAYS IN ORDINARY LOCATIONS:
   * INSIDE (NOT IN WET OR DAMP LOCATIONS OR EXPOSED TO MECHANICAL INJURY): STEEL, ELECTRICAL METALLIC TUBING (EMT) OR MC CABLE.
   * EXPOSED OUTSIDE, THROUGH OUTSIDE WALL, OR THROUGH ONE HOUR OR MORE RATED FIRE BARRIERS: GALVANIZED RIGID STEEL (GRS) CONDUIT, OR LIQUID-TIGHT FLEXIBLE METAL CONDUIT.
   * FINAL CONNECTION IN DRY LOCATIONS SERVING LIGHTING FIXTURES: FLEXIBLE METAL CONDUIT OR FLEXIBLE METALLIC TUBING.
   * CONNECTIONS TO MOTORS, OR TO COMPONENTS IN WET OR DAMP LOCATIONS, LIQUIDTIGHT FLEXIBLE METAL CONDUIT(LFMC).

4. RIGID STEEL GRS, AND STEEL IMC: HOT DIP GALVANIZED

5. STEEL EMT; HOT DIP GALVANIZED OUTSIDE AND ENAMEL OR GALVANIZED FINISHED INSIDE.

6. EMT COUPLINGS AND CONNECTORS METALLIC FOLLOWS:
   * RAINTIGHT HEX-NUT EXPANSION GLAND COMPRESSION STEEL, FOR ANY WET OR DAMP LOCATION OR FEEDER OR SUB-FEEDER.
   * SET-SCREW OR TAP-ON, STEEL OR CAST METAL, FOR DRY LOCATIONS.

7. CIRCULAR RACEWAYS; MINIMUM TRADE SIZES AS FOLLOWS:
   * 1/2-INCH: GENERAL BRANCH CIRCUIT WIRING;
   * 3/4-INCH: HOMERUNS OF 4 OR MORE #12 WIRING;
   * MORE THAN 3 CONDUCTORS.

8. SIZE RACEWAYS TO ACCOMMODATE THE ENCLOSED CONDUCTORS.

9. PROVIDE JUNCTION OR PULL BOXES TO AVOID EXCESSIVE RUNS OR BENDS BETWEEN OUTLETS, AND AT LOW POINTS IN RACEWAY RUNS.

10. SUPPORT CONCEALED CONDUIT ABOVE THE CEILING INDEPENDENTLY OF CEILING CONSTRUCTION. INSTALL CONDUITS HIGH ABOVE LAY-IN CEILINGS TO PERMIT REMOVAL OF CEILING PANELS OR EQUIPMENT.

11. INSTALL EXPOSED RACEWAYS PARALLEL OR PERPENDICULAR TO STRUCTURAL MEMBERS AND ARCHITECTURAL FEATURES. INSTALL CONCEALED CONDUIT RACEWAYS WITH AS FEW BENDS AS FEASIBLE, COORDINATED WITH STRUCTURAL, MECHANICAL AND ARCHITECTURAL REQUIREMENTS. ROUTE RACEWAYS TO AVOID 'TRAPPING' WHERE PRACTICABLE.

ENCLOSURES AND BOXES:
1. EQUIPMENT ENCLOSURES, BOXES, & COVERS; GALVANIZED STEEL, MALLEABLE IRON, GRAY IRON, OR COPPER-FREE ALUMINUM. SCREWS; STAINLESS STEEL; ALUMINUM FOR ALUMINUM BOXES.

2. ENCLOSURES:
   * FLUSH MOUNTED WITH CONCEALED RACEWAYS OR FLUSH MOUNTED DEVICES.
   * SURFACE MOUNTED TYPE IN EQUIPMENT ROOMS, WITH EXPOSED RACEWAYS AND OTHER SURFACE MOUNTED DEVICES.

3. BOXES FOR USE WITH GENERAL RACEWAY SYSTEMS; 4 INCHES SQUARE OR OCTAGONAL SIZE, NOT BE LESS THAN 1-1/2 INCHES DEEP, EXCEPT WHERE SHALLOWER BOXES ARE REQUIRED BY STRUCTURAL CONDITIONS. 4 BY 2 INCH BOXES; WHERE ONLY ONE RACEWAY ENTERS AN OUTLET BOX, OR WHERE NEEDED TO MATCH DEVICES AND/OR MOUNTING HARDWARE.

4. BOXES FOR RACEWAY SYSTEMS SERVING CEILING 'POWER' GRID SYSTEMS OR LIGHTING FIXTURES; SIZE 4-11/16 INCH SQUARE BOXES, 42 CU. IN. USE EXTENSION RINGS OR LARGER BOXES IF NECESSARY TO MEET CU. IN. CAPACITY REQUIRED BY CODE.

5. ENCLOSURES AND BOXES; VOLUME AND REQUIRED WIRE BENDING AND CUTTER SPACE AND FEATURES TO SUIT CODE REQUIREMENTS.

6. DO NOT INSTALL BOXES BACK-TO-BACK. DO NOT USE 'THRU-WALL' TYPE BOXES. SEPARATE BOXES IN THE SAME FIRE RATED WALL BY EITHER SOLID STUDS, OR A MINIMUM DISTANCE ESTABLISHED BY LOCAL BUILDING OFFICIALS. SEAL CONNECTING CONDUIT TO PREVENT THE TRANSMISSION OF HEAT, SMOKE, AND NOISE, WITH SEALING METHOD AS APPROVED BY THE FIRE MARSHAL.

7. DO NOT USE SUSPENDED CEILING CONSTRUCTION TO SUPPORT RACEWAYS, BOXES OR OTHER ITEMS, EXCEPT AS ALLOWED BY CODE AND ACCEPTED BY THE ARCHITECT IN WRITING.

DEVICES:
1. SWITCHES; STANDARD LINE STYLE, MAINTAINED, 15 OR 20 AMPS, 120-277 VAC, QUIET OPERATING, FLUSH MOUNTING, BY LEVITON, 'SPEC-MASTER', COMMERCIAL SPEC. GRADE' SERIES, HUBBELL OR ARROW HART.

2. RECEPTACLES; STANDARD LINE STYLE, STRAIGHT BLADE, 2-POLE, 3-WIRE GROUNDING TYPE, RATED 125 VAC, 15 OR 20 AMPS, BY LEVITON, 'SPECMASTER, 'COMM. SPEC. GRADE' SERIES, HUBBELL OR ARROW HART.

3. DIMMER SWITCHES; RATED FOR FULL RANGE DIMMING OF 120 VAC LOADS, EITHER FLUORESCENT OR INCANDESCENT, KNOB OR SLIDE CONTROLLED W/ FULL OFF POSITION, FLUSH MOUNTABLE IN STANDARD 1-GANG OR 2-GANG BOXES. ARCHITECTURAL' STYLE, THIN PROFILE TYPES, BY LEVITON, 'COMM. SPEC. GRADE' SERIES, LUTRON OR LITHONIA.

4. GROUND FAULT CIRCUIT INTERRUPTED (GFCI) RECEPTACLES; U.L. LISTED FOR PERSONNEL PROTECTION AGAINST LINE-TO-GROUND SHOCK HAZARD. GFCI RECEPTS.; LEVITON, 'SPECMASTER STYLE' BY LEVITON, 'COMM. SPEC. GRADE', HUBBELL OR ARROW HART.

5. KEYLESS LAMPHOLDER: WHITE PORCELAIN, 660 WATTS AT 250 VOLTS; LEVITON, CAT. NO. 9875-2.

6. LOW VOLTAGE SWITCHES & COMPONENTS: GENERAL ELECTRIC, 'ULTRA-DOLI' SYSTEM.

7. COVER PLATES: FOR FLUSH, INSIDE, WALL MOUNTED DEVICES; LI

8. MOUNT DEVICES RECESSED FOR FLUSH INSTALLATION. PROVIDE COVER PLATES FOR EACH DEVICE.

9. ALIGN DEVICES AT DIFFERENT LEVELS WITH EQUAL GROUP DEVICES AT THE SAME LEVEL USING SECTIONAL GANG BOXES. CENTER DEVICES IN ARCHITECTURAL FEATURES.

10. LOCATE WALL SWITCHES ON THE STRIKE SIDE OF A DOOR, SIX (6) INCHES FROM THE OPENING.

11. MOUNT SMALL FLUSH MOUNTED MOTOR DEVICES IN STANDARD DEVICE BOXES.

12. INSTALL WIRING DEVICES WITH TOP-OF-BOX MOUNTED HEIGHTS ABOVE FINISHED FLOORS BETWEEN 15 INCHES AND 48 INCHES, AS REQUIRED BY HANDICAPPED CODES.

13. COVER PLATES FOR FLUSH, DRY, ORDINARY LOCATIONS; STANDARD SIZE ONE PIECE. WIRING DEVICES AND COVER PLATES; AS INDICATED BY THE PLANS.

LIGHTING:
1. LIGHTING DRIVERS ALL DRIVERS SHALL HAVE AN OPERATING EFFICIENCY MEETING THAT OF 85% AND SHALL HAVE A POWER FACTOR GREATER THAT THAT OF .9.

2. LED FIXTURES SHALL COME EQUIPPED WITH INTEGRAL HEAT DISSIPATION SYSTEMS AND SHALL HAVE A SERVICE LIFE OF 50,000 HOURS AT AMBIENT 25 DEGREES CELSIUS OPERATING TEMPERATURE.

3. ALL DRIVERS SHALL HAVE A THD (TOTAL HARMONIC DISTORTION) NOT EXCEEDING THAT OF 20%.

GROUNDING:
1. GROUND ELECTRICAL SYSTEMS, EQUIPMENT, AND SUPPORTING STRUCTURES. PROVIDE BONDING JUMPERS WHERE NECESSARY. MECHANICALLY AND ELECTRICALLY SECURE METAL RACEWAYS AND FITTINGS, JOINTS AND CONNECTIONS AT EQUIPMENT TO PROVIDE AN GROUNDING MEANS. METAL RACEWAYS; ELECTRICALLY CONTINUOUS THROUGHOUT THEIR LENGTH FOR AN EFFECTIVE GROUNDING PATH TO THE POWER SERVICE DISCONNECT SWITCH.

2. INSTALL GROUNDING CONDUCTORS WITHOUT JOINT OR SPLICE TO THE GREATEST PRACTICAL EXTENT.

3. PROVIDE FOR EACH RACEWAY A GREEN #12 GROUNDING CONDUCTOR IN ADDITION TO BRANCH CONDUCTORS INDICATED.

4. DO NOT SPLICE MAIN BONDING JUMPER. CONFIRM THAT A MAIN BONDING JUMPER IS PROVIDED AT THE POINT OF SERVICE ONLY.

TESTING:
1. TEST INDIVIDUAL SYSTEMS AND COMPONENTS FOR FULL FUNCTIONAL REQUIREMENTS. PERFORM TESTS AS REQUIRED BY CODE, LOCAL PRACTICES, OR AS REASONABLY REQUIRED BY THE OWNER'S REPRESENTATIVE WHERE A QUESTION ARISES AS TO THE PROPER INSTALLATION OR OPERATION OF MATERIALS.

2. PROVIDE TESTING INSTRUMENTS, PROCEDURES, AND DOCUMENTATION.

MISCELLANEOUS:
1. SELECT, SIZE, AND ASSEMBLE FOUNDATIONS, SUPPORTS, AND FASTENERS.

2. FASTENINGS FOR SECURING CONDUIT RUNS, LIGHT APPARATUS.
   * BOLTS, BEAM CLAMPS, OR DRIVEN OR WELDED STUDS ON STEEL WORK
   * TOGGLE BOLTS ON HOLLOW TILE OR CONCRETE BLOCKS
   * STEEL ANCHORS OF THE SELF-DRILLING OR NON-DRILLING TYPES ON SOLID CONCRETE OR MASONRY.
   * POWER DRIVEN STUDS MAY BE USED ON STEEL AND SOLID CONCRETE WHERE ACCEPTED BY THE OWNER'S REPRESENTATIVE.

3. MAJOR COMPONENTS OF THE DISTRIBUTION SYSTEM SUCH AS THE PANELBOARD SHALL HAVE PERMANENT NAMEPLATES FOR EQUIPMENT IDENTIFICATION.

4. SEAL CONDUITS ROUTED BETWEEN SPACES OF DIFFERENT AMBIENT TEMPERATURES, SUCH AS REFRIGERATED SPACES OR OUTDOOR AREAS,TO PREVENT CIRCULATION OF AIR.

5. INSTALL RACEWAY OR CABLE, ETC. THAT PENETRATES A FIRE BARRIER, WITH MATERIALS AND METHODS APPROVED FOR APPLICATION BY BUILDING OFFICIALS. IDENTIFY EACH FIRE BARRIER FROM THE ARCHITECTURAL PLANS, AND FOR SECURE APPROVAL OF MATERIALS AND METHODS FOR EACH TYPE PENETRATION.

TELEPHONE SYSTEM ROUGH-IN:
1. CONTACT THE TELEPHONE CO., COORDINATE THE WORK TO MAKE THE INSTALLATION READY FOR THE TELEPHONE COMPANY, INCLUDING CABINETS, RACEWAYS AND PULL WIRES, 'RACEWAY SYSTEM BOXES, DEDICATED ELECTRICAL BRANCH CIRCUITS AND RECEPTACLES, DEDICATED GROUNDING CONDUCTORS, AND MISCELLANEOUS MATERIALS OR DEVICES.

2. PROVIDE COMPLETE ENCLOSED RACEWAYS WITH MEASURED PULL CORDS FOR FUTURE USE BY OTHERS. PROVIDE A 3/4" PVC CONDUIT FRO