

TI	GHTENING TO	·		TORQUE, P	DUND - INCHES		
	SLOTTED HEAD NO. 10 AND LARGER (b)				HEXAGONAL HEAD/EXTERNAL DRIVE SOCKET WRENCH		
WIRE SIZE	SLOT WI	SLOT WIDTH (IN.)		IGTH (IN.)	SPLIT-BOLT	OTHER	
	TO 3/64	OVER 3/64	TO 1/4	OVER 1/4	CONNECTORS	CONNECTORS	
18-10 AWG	20	35	20	35	80	75	
8	25	40	25	40	80	75	
6	35	45	35	45	165	110	
4		45	entre	45	165	110	
3	-	50	comite	50	275	150	
2	-	50		50	275	150	
1		50		50	275	150	
1/0	_	50		50	385	180	
2/0	-	50		50	385	180	
3/0		50	****	50	500	250	
4/0		50	_	50	500	250	
250 kcmil	_	50		50	650	325	
300	-	50	Page .	50	650	325	
350	_	50	****	50	650	325	
400	-	50		50	825	325	
500		50	****	50	825	375	
600		50	***	50	1000	375	
700		50	***	50	1000	375	
750	_	50		50	1000	375	
800	_	50		50	1100	500	
900		50	***	50	1100	500	
1000	-	50	****	50	1100	500	
1250	-	_		_	1100	600	
1500	-	-	***		1100	600	
1750	-	_			1100	600	
2000		_		_	1100	600	

THIS TABLE GIVES RECOMMENDED CONNECTOR INSTALLING TORQUES FOR COPPER AND ALUMINUM CONDUCTORS. THEY ARE FOR GUIDANCE ONLY WHERE NO TIGHTENING INFORMATION IS AVAILABLE AND SHOULD NOT BE USED TO REPLACE MANUFACTURER'S INSTRUCTIONS WHICH SHOULD ALWAYS BE (a) CLAMPING SCREWS WITH MULTIPLE TIGHTENING MEANS; FOR EXAMPLE FOR A SLOTTED HEXAGONAL HEAD SCREW, USE THE HIGHEST TORQUE VALUE ASSOCIATED WITH THE DIFFERENT TIGHTENING (b) FOR VALUES OF SLOT WIDTH OR LENGTH OTHER THAN THOSE SPECIFIED, SELECT THE LARGEST TORQUE VALUS ASSOCIATED WITH CONDUCTOR SIZE.

CEC ART. 310 CONDUCTOR DERATING

NEC #310.15 (B)(2)(a) ADJUSTMENT FACTORS (a) MORE THAN THREE CURRENT-CARRYING CONDUCTORS IN A RACEWAY OR CABLE. WHERE THE NUMBER OF CURRENT-CARRYING CONDUCTORS IN A RACEWAY OR CABLE EXCEEDS THREE, THE ALLOWABLE AMPACITIES SHALL BE REDUCED AS SHOWN IN THE FOLLOWING TABLE: NUMBER OF PERCENT OF VALUES IN TABLES AS ADJUSTED FOR AMBIENT TEMPERATURE IF NECESSARY

CONDUCTORS
4 THROUGH 6 7 THROUGH O THROUGH 2 1 THROUGH 3 41 AND ABOVE

WHERE SINGLE CONDUCTORS OR MULTICONDUCTOR CABLES ARE STACKED OR BUNDLED LONGER THAN 24 INCHES (610 mm) WITHOUT MAINTAINING SPACING AND ARE NOT INSTALLED IN RACEWAYS, THI ALLOWABLE AMPACITY OF EACH CONDUCTOR SHALL BE REDUCED AS SHOWN IN THE ABOVE TABLE

EXCEPTION NO. 1: WHERE CONDUCTORS OF DIFFERENT SYSTEMS, AS PROVIDED IN SECTION 300-3, ARE INSTALLED IN A COMMON RACEWAY OR CABLE, THE DERATING FACTORS SHOWN ABOVE SHALL APPLY TO THE NUMBER OF POWER AND LIGHTING (ARTICLES 210, 215, 220, AND 230) CONDUCTORS ONLY. EXCEPTION NO. 2: FOR CONDUCTORS INSTALLED IN CABLE TRAYS, THE PROVISIONS OF SECTION 392.1

EXCEPTION NO. 3: DERATING FACTORS SHALL NOT APPLY TO CONDUCTORS IN NIPPLES HAVING A LENGTH NOT EXCEEDING 24 INCHES (600mm)

EXCEPTION NO.4: DERATING FACTORS SHALL NOT APPLY TO UNDERGROUND CONDUCTORS ENTERING OF LEAVING AN OUTDOOR TRENCH IF THOSE CONDUCTORS HAVE PHYSICAL PROTECTION IN THE FORM OF RIGID METAL CONDUIT, INTERMEDIATE METAL CONDUIT, OR RIGID NONMETALLIC CONDUIT HAVING A LENGTH NOT NING 10 FFFT (3.05m) ABOVE GRADE AND THENLIMBER OF CONDUCTORS DOES NOT EXCEED FOUR

EXCEEDING 10 FEET (3.05m) ABOVE G			Total and the second		***************************************		
CEC	WIRE FI	LL TABI	E 370—	16			
JUNCTION BOX DIMENSION.	MIN. CU. IN.	MAXIMUM NUMBER OF CONDUCTORS					
INCHES TRADE SIZE OR TYPE	CAP.	NO. 14	NO. 12	NO. 10	NO. 8	NO. 6	
4 x1-1/4 ROUND OR OCTAGONAL	12.5	6	5	5	4	2	
4 X1-1/2 ROUND OR OCTAGONAL	15.5	7	6	6	5	3	
4 X2-1/8 ROUND OR OCTAGONAL	21.5	10	9	8	7	4	
4 x1-1/4 SQUARE	18.0	9	8	7	6	3	
4 X1-1/2 SQUARE	21.0	10	9	8	7	4	
4 X2-1/8 SQUARE	30.3	15	13	12	10	6	
4-11/16 x1-1/4 SQUARE	25.5	12	11	10	8	5	
4-11/16 X1-1/2 SQUARE	29.5	14	13	11	9	5	
4-11/16 X2-1/8 SQUARE	42.0	21	18	16	14	8	
3 x2 x1-1/2 DEVICE	7.5	3	3	3	2	1	
3 x2 x2 DEVICE	10.0	5	4	4	3	2	
3 x2 x2-1/4 DEVICE	10.5	5	4	4	3	2	
3 x2 x2-1/2 DEVICE	12.5	6	5	5	4	2	
3 x2 x2-3/4 DEVICE	14.0	7	6	5	4	2	
3 x2 x3-1/2 DEVICE	18.0	9	8	7	6	3	
4 X2-1/8 X1-1/2 DEVICE	10.3	5	4	4	3	2	
4 X2-1/8 X1-7/8 DEVICE	13.0	6	5	5	4	2	
4 X2-1/8 X2-1/8 DEVICE	14.5	7	6	5	4	2	
3-3/4 x2 x2-1/2 MASONRY BOX / GANG	14.0	7	8	5	4	2	
3-3/4 x2 x3-1/2 MASONRY BOX / GANG	21.0	10	9	8	7	4	
FS — MINIMUM INTERNAL DEPTH 1—3/4 SINGLE COVER / GANG	13.5	6	6	5	4	2	
FD - MINIMUM INTERNAL DEPTH 2-3/8 SINGLE COVER / GANG	18.0	9	8	7	6	3	
FS - MINIMUM INTERNAL DEPTH 1-3/4 MULTIPLE COVER / GANG	18.0	9	8	7	6	3	
FD - MINIMUM INTERNAL DEPTH 2-3/8 MULTIPLE COVER / GANG	24.0	12	10	9	8	4	

THE DRAWINGS AND THESE GENERAL NOTES DESCRIBE THE SCOPE OF WORK AND SYSTEMS. THE MATERIAL REQUIRED FOR THE WORK SHALL BE CONTRACTOR FURNISHED AND CONTRACTOR INSTALLED, UNLESS SPECIFICALLY NOTED OTHERWISE. THE WORK INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING PRINCIPAL

GENERAL ELECTRICAL NOTES

PERMITS AND CHARGES:
OBTAIN AND PAY FOR ALL NECESSARY CONSTRUCTION PERMITS, INSPECTION FEES, AND OTHER CHARGES BY

REGULATIONS AND CODES:
PROVIDE AND INSTALL ALL MATERIALS IN CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE, CALIFORNIA ADMINISTRATIVE CODE TITLE 8, AND OTHER CODES AND REGULATIONS HAVING JURISDICTION. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE REQUIREMENTS OF THE INSPECTING AUTHORITY AND MANUFACTURERS

VERIFYING EXISTING CONDITIONS: BEFORE SUBMITTING BID, BECOME THOROUGHLY FAMILIAR WITH ACTUAL EXISTING CONDITIONS AT THE BUILDING SITE. THE INTENT OF THE WORK IS SHOWN ON THE DRAWINGS AND DESCRIBED HEREINAFTER. BY THE ACT OF SUBMITTING A BID PROPOSAL FOR THE WORK, THE CONTRACTOR SHALL BE DEEMED TO HAVE MADE SLICH STUDY AND EXAMINATION AND TO ACCEPT ALL CONDITIONS PRESENT AT THE SITE, NO REQUEST FOR ADDITIONAL PAYMENT WILL BE CONSIDERED AS VALID, DUE TO FAILURE TO ALLOW FOR CONDITIONS

COORDINATION: COORDINATE ALL WORK WITH OTHER TRADES. OBTAIN ALL DRAWINGS THAT WILL REQUIRE COORDINATION AND PROVIDE ALL ELECTRICAL CONNECTIONS REQUIRED WHETHER SHOWN ON ELECTRICAL DRAWINGS OR NOT.
ELECTRICAL EQUIPMENT LOCATIONS INDICATED ARE SHOWN DIAGRAMMATICALLY, EXACT LOCATION SHALL BE

SERVICE CONTINUITY: UNINTERRUPTED EXISTING ELECTRICAL POWER SHALL BE MAINTAINED TO OTHER TRADES FOR TEMPORARY POWER AREAS OF THE SITE DURING CONSTRUCTION. PROVIDE ANY TEMPORARY SERVICES AS MAY BE REQUIRED. IDENTIFY AT BID TIME, ALL WORK TO BE DONE ON PREMIUM TIME AND THE TOTAL OVERTIME

PROVIDE RECORD DRAWINGS TO THE OWNER WITH ALL CHANGES NOTED THEREON AT THE COMPLETION OF THE PROJECT. RECORD DRAWINGS SHALL BE SIGNED AND DATED BY CONTRACTOR PRIOR TO RELEASE OF

MARK PROJECT RECORD DOCUMENTS DAILY TO INDICATE ALL CHANGES MADE IN THE FIELD. A.) IN ADDITION TO GENERAL REQUIREMENTS OF PROJECT RECORD DRAWINGS, INDICATE ON DRÁWINGS, CHANGES OF EQUIPMENT LOCATIONS AND RATINGS, TRIP SIZES, AND SETTINGS ON CIRCUIT BREAKERS, ALTERATIONS IN RACEWAY RUNS AND SIZES, CHANGES IN WIRE SIZES, CIRCUIT DESIGNATIONS, INSTALLATION DETAILS, ONE-LINE DIAGRAMS, CONTROL DIAGRAMS AND SCHEDULES.

USE GREEN TO INDICATE DELETIONS AND RED TO INDICATE ADDITIONS. A.) USE THE SAME SYMBOLS AND FOLLOW THE SAME DRAFTING PROCEDURES USED ON THE CONTRACT

LOCATE UNDERGROUND CONDUIT STUBBED-OUT FOR FUTURE USE, UNDERGROUND FEEDER CONDUITS, AND FEEDER PULL BOX LOCATIONS USING BUILDING LINES BY INDICATING ON THE PROJECT RECORD DRAWINGS. AT THE COMPLETION OF UNDERGROUND CONDUIT INSTALLATION, PROVIDE UNDERGROUND CONDUIT RECORD DOCUMENTS TO OWNER'S REPRESENTATIVE.

TWO COPIES, IN BINDER FORM, OF ALL TEST RESULTS AS REQUIRED BY THESE DOCUMENTS. TWO COPIES OF LOCAL AND/OR STATE CODE ENFORCING AUTHORITIES FINAL INSPECTION CERTIFICATES. FIRE ALARM SYSTEM RECORDS AND TESTING REPORTS AS OUTLINED IN NFPA 72, CHAPTER 10. TWO COPIES, IN BINDER FORM, OF ELECTRICAL EQUIPMENT CUT SHEETS, MANUFACTURER'S INSTALLATION INSTRUCTIONS, WARRANTY CERTIFICATES, AND PRODUCT LITERATURE FOR ALL PRODUCTS UTILIZED ON

CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE ALL LABOR AND MATERIALS ON ALL WORK AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR.

SHOP DRAWINGS:
SUBMIT SHOP DRAWINGS AND MATERIAL LIST FOR REVIEW PRIOR TO COMMENCING ANY WORK. ALL EQUIPMENT TO BEAR U.L. LABEL OR THAT OF ANOTHER ACCEPTABLE TESTING LABORATORY. SHOP DRAWINGS MUST BE STAMPED BY THE CONTRACTOR FOR CONFORMANCE PRIOR TO SUBMITTAL. SUBMIT SIX SETS OF SHOP DRAWINGS FOR REVIEW PRIOR TO PURCHASING ALL BREAKER MOUNTING HARDWARE, DISCONNECT SWITCHES, FUSES, CONTROLLERS, LIGHTING FIXTURES, LIGHT SWITCHES,

CONTRACTOR'S BID SHALL BE BASED ON ALL WORK SHOWN ON THE PLANS AND AS SPECIFIED. IF CONTRACTOR PROPOSES TO SUBSTITUTE FOR EQUIPMENT SPECIFIED, HE SHALL SUBMIT HIS REQUEST FOR CONSIDERATION OF THE OWNER AND ENGINEER PRIOR TO BID IN WRITING. ALL SUBSTITUTIONS SHALL BE REVIEWED BY THE ENGINEER IN WRITING, SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS, AND THE CONTRACTOR SHALL BE RESPONSIBLE AT HIS/HER OWN EXPENSE FOR ANY CHARGES RESULTING FROM HIS PROPOSED SUBSTITUTIONS WHICH AFFECT OTHER PARTS OF HIS/HER OWN WORK, THE OWNER, ENGINEER OF RECORD OR THE WORK OF OTHER CONTRACTORS.

ALL MATERIALS SHALL BE NEW AND LISTED BY UNDERWRITERS LABORATORY (U.L.).
ALL WORK AND MATERIAL SHALL CONFORM TO THE LATEST RULES OF THE GOVERNING ELECTRICAL CODE AND INSTALLATION SHALL BE OF THE LATEST INDUSTRY STANDARDS OF WORKMANSHIP.

CONDUITS:
CONDUIT SHALL BE EMT, PVC, IMC, RIGID OR FLEXIBLE STEEL TYPE. CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH UL-1. A GROUND WIRE IS REQUIRED IN ALL FLEXIBLE CONDUIT AND UNDERGROUND CONDUIT. BUSHINGS SHALL BE INSTALLED ON ALL ALL EMPTY CONDUITS. NO MC, BX, OR AC90 SHALL BE PERMITTED.

SWITCHES AND RECEPTACLES: PROVIDE 20 AMP NEMA RATED SWITCHES AND RECEPTACLES OF SPECIFICATION GRADE. ALL SWITCHES SHALL BE RATED 120 AND/OR 277 VOLT AND RECEPTACLES SHALL BE NEMA 5-20R. IN ALL OFFICES AND OFFICE AREAS, DEVICES SHALL BE DECORA TYPE WITH COLOR SELECTION BY CONTRACTOR/OWNERS REPRESENTATIVE.

FEEDERS AND BRANCH CIRCUITS IDENTIFICATION:
IDENTIFY FEEDERS WITH THE CORRESPONDING CIRCUIT DESIGNATION AT THE OVER-CURRENT DEVICE, LOAD END, AND IN PULL BOXES WITH E-Z CODE OR OTHER APPROVED WIRE MARKER IDENTIFY BRANCH CIRCUITS WITH I.D. MARKERS, THE CORRESPONDING CIRCUIT DESIGNATION AT THE OVER-CURRENT DEVICE, AT ALL SPLICES, IN JUNCTION BOXES, AND IN OUTLETS. USE

PLASTIC COATED SELF-STICKING MARKERS SUCH AS THOMAS & BETTS E-Z CODE FOR IDENTIFICATION OF CONDUCTORS, IDENTIFY SIGNAL & COMMUNICATION CABLES AT TERMINAL AND OUTLET. CONDUCTORS:
DELIVER ALL CONDUCTORS TO THE JOB SITE IN ORIGINAL UNBROKEN CARTON OR REEL, PROPERLY TAGGED WITH U.L. LABEL, SIZE, TYPE, MANUFACTURER, TRADE NAME AND THE DATE OF MANUFACTURE. CONDUCTORS

MUST BE MANUFACTURED WITHIN 6 MONTHS. PROVIDE COPPER CONDUCTORS #12 AWG MINIMUM UNLESS

SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS, PROVIDE STRANDED COPPER CONDUCTORS FOR ALL WIRING. USE CONDUCTORS WITH THHN/THWN 600 VOLTS INSULATION, UNLESS OTHERWISE NOTED. PANELBOARDS:
DISTRIBUTION AND LIGHTING PANELBOARDS WITHIN PROJECT AREA SHALL BE OF THE COPPER
BUS THREE PHASE, FOUR WIRE DISTRIBUTED PHASING TYPE. CIRCUITING SHALL BE ARRANGED
AND PHASES. TO PROVIDE, AS NEARLY AS POSSIBLE, AN EVENLY BALANCED LOAD ON ALL PHASES.

STATED ON PANELBOARD SCHEDULE. PROVIDE PANEL IDENTIFICATION NAMEPLATE (ENGRAVED ON -ADHESIVE 1/2" MINIMUM LETTERS) AND TYPEWRITTEN LIST OF CIRCUITS IN THE DIRECTORY STRUCTURAL SUPPORT:
EACH SECTION OF FLOOR MOUNTED SWITCHBOARD, DISTRIBUTION BOARD, MCC, ETC. SHALL BE

PANFI BOARDS SHALL BE BOLT-ON CIRCUIT BREAKER TYPE, AVAILABLE FAULT CURRENT IS

BOLTED TO THE CONCRETE HOUSEKEEPING PAD USING (6) 3/4"-10 GRADE 2 BOLTS AND CONICAL WASHERS TORQUED TO 70LB-FT. PROVIDE MINIMUM 4000 PSI STRENGTH CONCRETE BELOW ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT. TIE THE TOP OF ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT TO THE BUILDING STRUCTURE IN A SEISMICALLY APPROVED MANNER.

DEMOLITION:
NOTIFY THE OWNER IMMEDIATELY WHEREVER EXISTING EQUIPMENT IS ENCOUNTERED WHICH MUST BE RELOCATED DUE TO THE NEW CONSTRUCTION, AND WHICH IS NOT INDICATED ON THE PLANS. 1. ALL REMOVED MATERIALS AND EQUIPMENT WHICH ARE SALVAGEABLE SHALL REMAIN THE PROPERTY OF THE OWNER. DELIVER SUCH SALVAGED MATERIALS AND EQUIPMENT ON THE PREMISES AS DIRECTED BY THE OWNER, AND NEATLY PILE OR STORE THEM AND PROTECT FROM DAMAGE. REMOVE FROM PREMISES AND DISPOSE OF ALL MATERIALS CONSIDERED BY THE OWNER TO BE SCRAP.

2. ALL DEVICES, CIRCUIT CONDUCTORS, FEEDERS, ETC., WHEN NOTED TO BE REMOVED, SHALL BE REMOVED TO THE LAST ACTIVE DEVICE. ALL OVER-CURRENT PROTECTION AND DISCONNECT DEVICES NO LONGER UTILIZED BUT REMAINING AS LAST ACTIVE DEVICE SHALL BE LABELED AS "SPARE". COORDINATE ALL OUTAGES WITH OWNER'S REPRESENTATIVE

EXECUTION:
CAREFULLY PROTECT ALL WALLS, TRIM, FLOORS, EQUIPMENT UTILITY LINES AND MATERIALS. WHEN WORKING ON FINISHED SURFACES, LIMIT DAMAGE TO THE CONFINES AS MUCH AS POSSIBLE AND RESTORE TO THE ORIGINAL CONDITION ALL SURFACES WHICH ARE DAMAGED BECAUSE OF THE INSTALLATION OF THE WORK

1.) EQUIPMENT, MATERIALS AND SUPPLIES REMOVED FOR PROTECTION SHALL BE REPLACED IN ORIGINAL LOCATIONS. ANY MATERIALS DAMAGED SHALL BE REPLACED WITH NEW MATERIALS OF LIKE KIND AND QUALITY.

2.) DO ALL DRILLING, CUTTING, CHANNELING AND PATCHING REQUIRED TO INSTALL FLECTRICAL WORK AS INDICATED OR HEREIN SPECIFIED. ALL HOLES, CURBS, ETC., IN FLOORS, CEILINGS AND WALLS SHALL BE PATCHED. UNLESS INDICATED OTHERWISE. PAINT ALL NEW ELECTRICAL RACEWAYS, CABINETS, ENCLOSURES, AND FITTINGS PENETRATING INTO FIRE RATED ENVELOPES, SPACES, ETC. 3.) ALL CONDUIT RUNS SHALL BE CONCEALED, UNLESS SHOWN OTHERWISE. PROVIDE A PULL WIRE IN ALL

4.) EXISTING CONDITION SHOWN IS FROM AVAILABLE RECORD DRAWINGS AND VISUAL FIELD SURVEY AND IS SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACTUAL EXISTING CONDITION AT SITE. 5.) ALL WORK SHOWN IS NEW UNLESS SPECIFICALLY INDICATED AS EXISTING (X). ALL ELECTRICAL EQUIPMENT MOUNTING AND ANCHORAGE MUST CONFORM WITH LOCAL AND STATE SEISMIC CODES.

TELEPHONE SYSTEMS:
PROVIDE RACEWAYS, AND ALL MATERIAL INCLUDING PULLING CABLE IN EACH RACEWAY AS REQUIRED FOR THE

GROUNDING AND BONDING: FURNISH AND INSTALL COMPLETE BONDING AND GROUNDING SYSTEM AS REQUIRED BY CODES. CONTINUITY OF GROUNDING SHALL BE MAINTAINED MECHANICALLY AND ELECTRICALLY THROUGHOUT THE SYSTEM. A GREEN GROUNDING CODE SIZED CONDUCTOR SHALL BE CARRIED THROUGH IN ALL CONDUITS.

IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS THAT A COMPLETE AND WORKABLE ELECTRICAL INSTALLATION BE PROVIDED FOR ALL THE EQUIPMENT DESCRIBED OR SHOWN AS BEING IN THIS CONTRACT. TOWARD THIS END FURNISH ALL LABOR AND TOOLS NECESSARY AND FURNISH AND INSTALL ALL APPARATUS, MATERIALS AND EQUIPMENT IN A FASHION COMPLYING WITH ALL APPLICABLE CODES. INCLUDING ITEMS REQUIRED BUT NOT NORMALLY SHOWN, SUCH AS LAMPS, COUPLINGS, HANGERS, BRACKETS, CLAMPS, BOXES

1.) PROCURE ALL PERMITS FROM LEGALLY CONSTITUTED AUTHORITIES, ARRANGE FOR ALL INSPECTIONS AND PAY ALL COSTS FOR FEES AND TESTS IN CONNECTION THEREWITH. COMPLY WITH CODES: NOTHING IN THESE

2.) DETERMINE EXACT ROUTING OF CONCEALED FEEDERS AND BRANCH CIRCUIT HOMERUNS IN COOPERATION WITH OTHER TRADES TO SIMPLIFY INSTALLATION WHEREVER POSSIBLE BUT SUBJECT TO APPROVAL OF

3.) PROVIDE A CODE APPROVED DISCONNECT SWITCH OR CIRCUIT BREAKER WITHIN SIGHT OF EVERY MOTOR AND FEED MOTORS NOT EQUIPPED WITH "BUILT IN" PROTECTION THROUGH A MAGNETIC OR MANUAL STARTER WITH OVERLOAD HEATERS SIZED TO COMPLY WITH MOTOR MANUFACTURER'S RECOMMENDATIONS AND

4.) FOR CONNECTIONS TO EXHAUST FANS, PUMPS, COMPRESSORS, SPACE HEATERS, WATER HEATERS,

AQUASTATS, SOLENOID VALVES, AND OTHER MECHANICAL EQUIPMENT AND FOR CONDUITS AND WIRE REQUIRED BUT NOT NECESSARILY SHOWN ON THESE DRAWINGS, REFER TO MECHANICAL PLANS AND DETERMINE EXACT LOCATIONS UNDER DIRECTION OF HEATING AND VENTILATING CONTRACTOR. 5.) DO NOT RUN ANY CONDUIT IN SLAB IF ITS OUTSIDE DIAMETER EXCEEDS 1/3 THE THICKNESS OF THE

SLAB. LOCATE CONDUITS WITHIN THE MIDDLE OF THE SLAB. WHERE CONDUITS ARE GROUPED IN PARALLEL RUNS, SPACE THEM 3" OR MORE APART. WHERE CONDUITS CROSS EACH OTHER, THICKEN THE SLAB PROPORTIONATELY OVER A HORIZONTAL AREA EQUAL TO TEN TIMES THE DIAMETER OF THE LARGEST CONDUIT. REFER ALSO TO DETAILS SHOWN.

6.) SIZE OUTLET BOXES IN CONFORMITY WITH CODE FOR NUMBER AND GUAGE OF CONDUCTORS THEREIN. EXCEPT WHERE NOTED TO BE LARGER, MINIMUM BOX SIZE SHALL BE 4" SQUARE BY 1-1/2" DEEP.

7.) ALL ELECTRICAL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SÉRVICING, MAINTAINING AND REPAIRING. ALL CONDUIT SHALL BE CONCEALED WHERE POSSIBLE. EXPOSED CONDUIT SHALL BE IN STRAIGHT LINES PARALLEL WITH, OR AT RIGHT ANGLES TO, COLUMN LINES OR BEAMS AND SEPARATED BY AT LEAST THREE (3) INCHES FROM WATER LINES WHENEVER THEY RUN ALONG SIDE OR ACROSS SUCH LINES. CONDUIT SHALL NOT BE RUN BELOW CABLE TRAYS OR LIGHT FIXTURES WITHOUT SPECIFIC APPROVAL OF THE OWNER'S REPRESENTATIVE. HANGERS SHALL BE FASTENED TO STEEL, CONCRETE OR MASONRY, BUT NOT TO PIPING, HANGERS AND SUPPORT SYSTEMS ARE AN INTEGRAL PART OF VISUAL ENVIRONMENT. ALL HANGERS AND SUPPORTS EXPOSED TO PUBLIC VIEW MUST BE SHOWN IN DETAIL ON PLANS SUBMITTED TO LANDLORD FOR APPROVAL OF APPEARANCE. ALL HANGERS MUST BE UNIFORMLY SPACED AND NEATLY INSTALLED WITH NO EXCESS MATERIAL BEYOND WHAT IS REQUIRED FOR THE SUPPORT FUNCTION. CONTRACTOR SHALL SELECT ACCESSORIES AND HARDWARE WITH A SMOOTH, NEAT FINISHED APPEARANCE AND PAINT ALL EXPOSED CONDUIT HANGERS TO MATCH THE ADJACENT FINISHES.

8.) ALL WALL SWITCHES AND RECEPTACLES SHALL BE MOUNTED BETWEEN 18" AND 48" PER A.D.A. REQUIREMENTS UNLESS OTHERWISE NOTED.

ELECTRICAL SWITCHES: CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF THE ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES OR COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL BE LOCATED NO MORE THAN 48" MEASURED FROM THE TOP OF OUTLET BOX NOR LESS THAN 15" MEASURED FROM THE BOTTOM OF THE OUTLET BOX TO THE LEVEL OF THE FINISHED

ELECTRICAL RECEPTACLE OUTLETS: ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES, SHALL BE LOCATED NO MORE THAN 48" MEASURED FROM THE TOP OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING NOR LESS THAN 15" MEASURED FROM THE BOTTOM OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING TO THE LEVEL OF T FINISHED FLOOR OR WORKING PLATFORM.

9.) CONTRACTOR SHALL EXAMINE PLANS AND VERIFY IN FIELD LOCATIONS OF ALL FIRE RATED WALLS, CEILINGS AND FLOORS. CONTRACTOR SHALL SEAL ALL ELECTRICAL SYSTEM PENETRATIONS THROUGH FIRE RATED WALLS, CEILINGS AND FLOORS WITH U.L. LISTED MATERIAL APPROVED BY THE AUTHORITY HAVING

0.) SURFACE MOUNTED RACEWAY COMPLETENESS: CONTRACTOR SHALL PROVIDE ALL RACEWAY, FITTINGS, SUPPORTS, BOXES, DEVICES, PLATES ETC. NECESSARY FOR A COMPLETE AND WORKABLE SURFACE MOUNTED ELECTRICAL RACEWAY SYSTEM. PRIOR TO INSTALLATION, CONTRACTOR SHALL PERFORM A PRE-INSTALLATION SURFACE MOUNTED RACEWAY JOB WALK WITH OWNER & ARCHITECT FOR CONTRACTOR TO FIELD VERIFY EXACT ROUTING OF ANY & ALL SURFACE MOUNTED RACEWAYS.

ELECTRICAL SYSTEM ANCHORAGE:
ALL ELECTRICAL EQUIPMENT SHALL BE BRACED OR SEISMICALLY ANCHORED BY THE CONTRACTOR TO RESIST SEISMIC FORCES ACTING IN ANY DIRECTION. PROVIDE COMPLETE SEISMIC ANCHORAGE AND BRACING FOR SUPPORT OF ELECTRICAL RACEWAYS, CONDUITS, CABLE TRAYS, ELECTRICAL EQUIPMENT, ETC. IN ACCORDANCE WITH THE UNIFORM BUILDING CODE WITH CALIFORNIA AMENDMENTS.

THE SEISMIC BRACING AND ANCHORAGE SHALL BE PROVIDED PER THE LATEST EDITION OF THE SMACNA

ALL ELECTRICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA GUIDELINES. WHERE BRACING DETAILS ARE NOT SHOWN ON THE PLANS, THE FIELD INSTALLATIONS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEERS, AND THE ARCHITECT. A COPY OF LATEST SMACNA GUIDELINES SHALL BE KEPT AT THE JOB SITE AT ALL TIMES.

FIRE ALARM SYSTEM BY CONTRACTOR
CONTRACTOR SHALL FURNISH AND INSTALL A FIRE ALARM SYSTEM FOR THE PROJECT AREA TO INCLUDE:

A \ SMOKE DETECTORS IN ALL REQUIRED AREAS B.) HEAT DETECTORS IN ALL REQUIRED AREAS

PART 2-CALIFORNIA BUILDING CODE

PART 3-CALIFORNIA ELECTRICAL CODE

PART 4-CALIFORNIA MECHANICAL CODE

PART 8-CALIFORNIA HISTORICAL BUILDING CODE

PART 10-CALIFORNIA EXISTING BUILDING CODE

PART 11-CALIFORNIA GREEN BUILDING STANDARDS CODE

PART 5-CALIFORNIA PLUMBING CODE

PART 6-CALIFORNIA ENERGY CODE

PART 7-NO LONGER PUBLISHED

PART 9-CALIFORNIA FIRE CODE

C.) DUCT DETECTORS IN ALL REQUIRED SPACES D.) STROBES/ALARMS IN ALL REQUIRED AREAS

E.) PULL STATIONS AT ALL LEGAL FIRE EXITS - WHERE REQUIRED

.) TAMPER AND FLOW SWITCHES AT FIRE SPRINKLER RISERS AND BACKFLOW PREVENTERS G.) BRANCH CIRCUIT AND CONTROL WIRING TO FIRE SPRINKLER ALARM BELLS

H.) SMOKE/FIRE DAMPER/HVAC UNIT SHUT-DOWN BRANCH CIRCUIT WIRING, CONTROL WIRING, CONTROL

. CONTRACTOR SHALL SUBMIT FOR THE OWNER'S SIGNED APPROVAL, APPROVED FIRE DEPARTMENT FIRE

2. ALL DEVICES AND EQUIPMENT SHALL BE CALIFORNIA STATE FIRE MARSHAL APPROVED.

3. CONTRACTOR SHALL WARRANTY ALL DEVICES AND SYSTEMS FOR A PERIOD OF TWO YEARS.

4. CONTRACTOR SHALL PROVIDE SIX (6) SETS OF FIRE ALARM MANUALS FOR ALL SYSTEMS AND DEVICES IN ADDITION TO SIX (6) SETS OF A SYSTEM OPERATIONAL MANUAL TAILORED FOR THE PROJECT SPACE. CONTRACTOR SHALL PROVIDE A SATISFACTORY TEST IN THE PRESENCE OF THE OWNER, FIRE PREVENTION

BUREAU, AND CONSULTING ENGINEER. 6. CONTRACTOR SHALL PROVIDE ALL CONNECTIONS TO POWER PANELS, CONDUIT AND WIRE AND CONNECTIONS REQUIRED TO PROVIDE AN OPERATIONAL FIRE ALARM SYSTEM.

APPLICABLE CODES AND REGULATIONS

SUBMITTAL DOCUMENTS FOR DEFERRED ITEMS SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE, WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH DESIGN OF THE BUILDING. THE DEFERRED ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL

CALIFORNIA CODE OF REGULATIONS (C.C.R.), TITLE 24 (APPLIES AFTER JULY 1, 2014)

2013 EDITION

PART 1-CALIFORNIA BUILDINGS STANDARD ADMINISTRATIVE CODE 2013 EDITION

2013 EDITION PART 12-CALIFORNIA REFERENCE STANDARDS CODE PARTIAL LIST OF NFPA STANDARDS: NFPA 13- AUTOMATIC SPRINKLER SYSTEM. 2013 EDITION NFPA 14- STANDPIPES SYSTEMS, 2013 EDITION NFPA 17A- WET CHEMICAL SYSTEMS, 2013 EDITION NFPA 20- STANDARD FOR THE INSTALLATION OF STATIONARY 2013 EDITION PUMPS FOR FIRE PROTECTION NFPA 24- PRIVATE FIRE MAINS. 2013 EDITION NFPA 70- NATIONAL ELECTRICAL CODE 2014 EDITION NFPA 72- NAT. FIRE ALARM & SIGNALING CODE 2013 EDITION (CALIFORNIA AMENDED)

NFPA 72- NATIONAL FIRE ALARM & SIGNALING CODE 2013 EDITION NFPA 96- STANDARD FOR VENTILATION CONTROL AND FIRE 2014 EDITION ELEMENTARY SCHOOL

OJAI, CA 93023 (805) 705-4772DALÈFERRANTI@LIVE.COM

PANEL		2400 TRUXTON A
/ BASE		
		OPSC or OSHPD PROJ. NO:

PROJECT NO: DRAWN BY: CHK'D BY:

ISSUE DATE: 12/06/2016 SHEET TITLE

PRIME CONSULTANT

IBI Group is forbidden.

CONSULTANT

AGENCY INFORMATION:

NO. DATE APPRD.

ARCHITECTURE PLANNING

San Luis Obispo

4119 Broad Street, Suite 210

805.546.0433 fax: 805.546.0504

San Luis Obispo, CA 93401

ibigroup.com

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BAKERSFIELD CITY SCHOOL

DISTRICT

NEW MARQUEE AT FRANKLIN

JXTON AVENUE, BAKERSFIELD, CA 93301

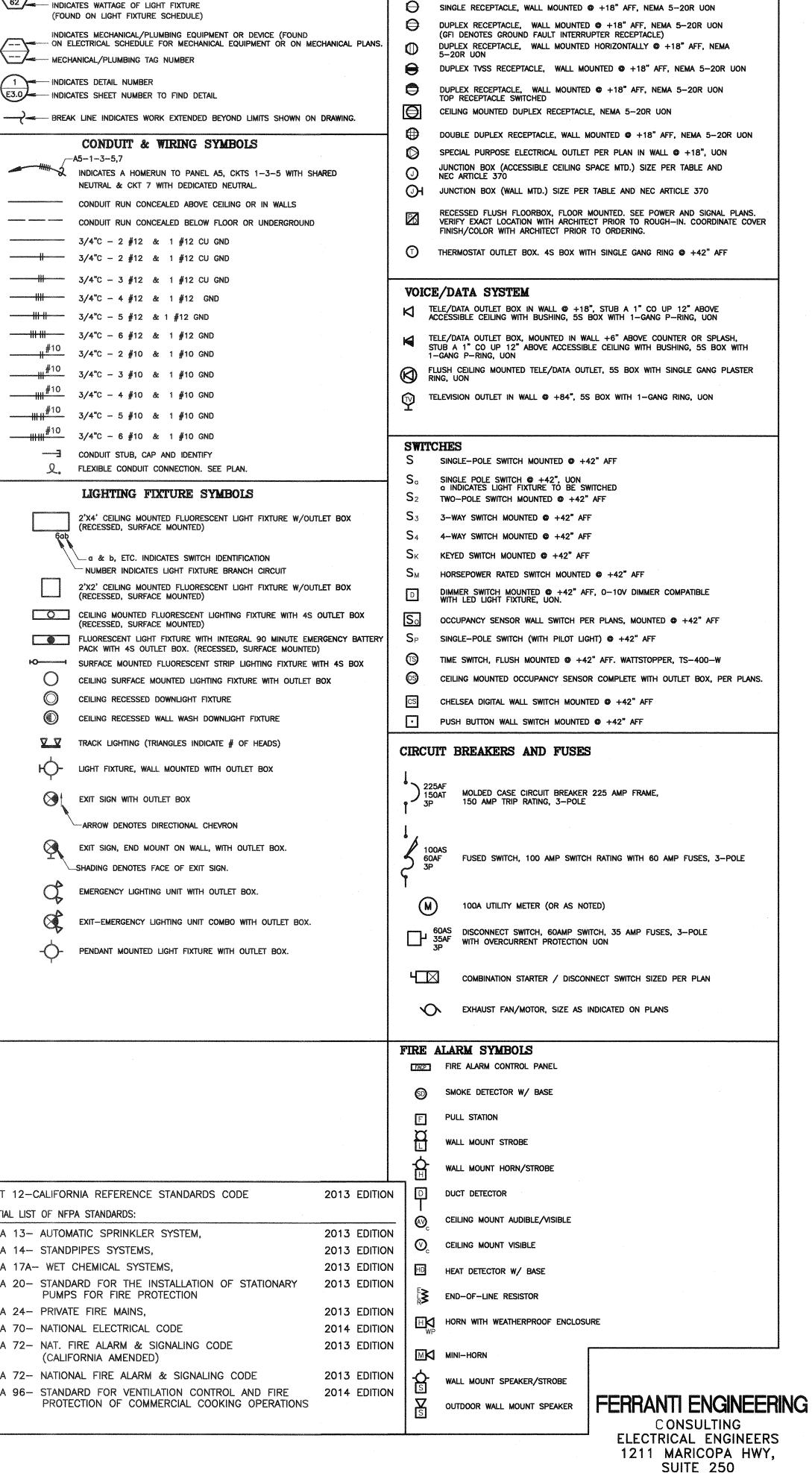
FILE NO. 15-6

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DESCRIPTION

SYMBOLS & **GENERAL NOTES**

SHEET NUMBER



ELECTRICAL SYMBOL LIST

ANNOTATIONS & CALLOUTS

1 ELECTRICAL KEYNOTE: DENOTES KEYNOTE #1 OF NOTES ON SAME SHEET.

A INDICATES LIGHTING FIXTURE TAG NUMBER

DIMENSIONS INDICATED ARE MEASURED TO CENTERLINE OF ENCLOSURE, UNLESS OTHERWISE NOTED

NOTE: SOME SYMBOLS SHOWN MAY NOT APPLY TO THIS PROJECT

POWER

PANELBOARD PER PLANS, FLUSH MOUNTED IN WALL @ +6'-6" TO TOP OF TRIM

PANELBOARD PER PLANS, SURFACE MOUNTED ON WALL @ +6'-6" TO TOP OF TRIM