

GENERAL NOTES

- 1. THE ELECTRICAL DRAWINGS, SPECIFICATIONS AND GENERAL NOTES DESCRIBE THE INTENDED SCOPE OF WORK AND THE DOCUMENTS SHALL BE USED FOR THE PURPOSE OF BIDDING, BUILDING DEPARTMENT REVIEW, AND SECURING THE NECESSARY CONSTRUCTION PERMIT ONLY. CONTRACTOR SHALL PROVIDE CONSTRUCTION DRAWINGS AND OBTAIN WRITTEN APPROVAL OF ALL INSPECTION AUTHORIZED GOVERNMENTAL AGENCIES AND UTILITY COMPANIES PRIOR TO START OF AFFECTED WORK. ELECTRICAL INSTALLATION SHALL COMPLY WITH CALIFORNIA ELECTRICAL CODE (LATEST VERSION) ADAPTED BY THE JURISDICTION AND ANY LOCAL SUPPLEMENT.
2. CONTRACTOR SHALL PROVIDE CONSTRUCTION AND SHOP DRAWINGS BASED ON THESE DRAWINGS, SPECIFICATIONS AND ADDITIONAL DESIGN CRITERIA FURNISHED BY OWNER AND SUBMIT TO ARCHITECT. CONTRACTOR SHALL SUBMIT ALL DEFERRED APPROVAL CONSTRUCTION DRAWINGS TO ALL GOVERNMENTAL AGENCIES AND UTILITY COMPANIES HAVING JURISDICTION INCLUDING POLICE AND FIRE DEPARTMENT FOR THEIR REVIEW AND APPROVAL OF DRAWINGS FOR CONSTRUCTION.
3. CONTRACTOR'S BID SHALL NOT BE LIMITED TO THE WORK SHOWN ON THE PLANS AND SPECIFICATIONS. ALL PREMIUM OVERTIME COSTS, UTILITY CHARGES, COST FOR TEMPORARY UTILITY SERVICES, ALTERATION, DEMOLITION AND EXTENSION WORKS, PLAN CHECK/INSPECTION FEES, MISCELLANEOUS CONTINGENCY COSTS, ETC., SHALL BE INCLUDED IN THE BID. (THE CONTINGENCY COST SHALL NOT BE LESS THAN 25% OF THE OVERALL ELECTRICAL BID. CONTRACTOR SHALL IDENTIFY THE CONTINGENCY AMOUNT IN THE BID DOCUMENT.)
4. ALL EQUIPMENT AND DEVICES SHOWN ARE NEW, CONTRACTOR FURNISHED AND INSTALLED, UNLESS OTHERWISE NOTED. IF CONTRACTOR PROPOSES TO SUBSTITUTE SPECIFIED EQUIPMENT, HE SHALL SUBMIT HIS REQUEST FOR CONSIDERATION TO THE OWNER AND ENGINEER PRIOR TO THE BID IN WRITING. ALL SUBSTITUTIONS MUST BE REVIEWED BY THE ENGINEER. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE AT HIS OWN EXPENSE FOR ANY CHANGE RESULTING FROM HIS PROPOSED SUBSTITUTIONS WHICH AFFECT OTHER PARTS OF HIS OWN WORK OR THE WORK OF OTHER CONTRACTORS.
5. THE ELECTRICAL DRAWINGS, CONDUIT RUNS, WIRINGS AND ELECTRICAL INFORMATION ARE DIAGRAMMATIC ONLY. DO NOT DERIVE THE ELECTRICAL DRAWINGS TO DETERMINE THE LOCATION OF EQUIPMENT OR OUTLETS. ALL RECEPTACLE AND OUTLET MOUNTING HEIGHTS AND EXACT LOCATION SHALL BE COORDINATED WITH ARCHITECTURAL DRAWING ELEVATIONS PRIOR TO ROUGH-IN WORK.
6. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL LIGHTING FIXTURES, CEILING MOUNTED OUTLETS AND EQUIPMENT. PORTIONS OF THE CEILING SYSTEMS MAY BE INACCESSIBLE. THE CONTRACTOR SHALL STRATEGICALLY LOCATE ACCESS BOXES, ETC., WHICH SHALL BE READILY ACCESSIBLE IN COMPLIANCE TO CEC ARTICLE 100. ALL LIGHTING FIXTURE WIRING, BALLASTS, BOXES, ETC., SHALL BE ACCESSIBLE FROM FIXTURE OPENINGS. PROVIDE AN ADDITIONAL JUNCTION BOX (SIZE AS REQUIRED) WHERE THE NUMBER OF CONDUCTORS EXCEEDS THE MAXIMUM ALLOWED FOR A GIVEN JUNCTION POINT OR OUTLET.
7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY TYPES OF CEILING SYSTEMS AND TO FURNISH APPROVED LIGHTING FIXTURES OF THE TYPE REQUIRED FOR MOUNTING IN RELATION TO CEILINGS. FIXTURES SHALL BE COMPLETED WITH NECESSARY MOUNTING HARDWARE AND ACCESSORIES. FIXTURES LOCATED IN DAMP OR WET LOCATIONS SHALL BE LABELED FOR USE IN SUCH LOCATIONS.
8. SEAL ALL PENETRATIONS THROUGH FIRE RATED WALLS, CEILINGS, FLOORS, ETC., TO MAINTAIN FIRE RATING. FURNISH AND INSTALL FIRE RATED ENCLOSURES FOR ALL EQUIPMENT PENETRATING INTO FIRE RATED ENVELOPES, SPACES ETC. ALL RECESSED LIGHTING FIXTURES, PANELBOARDS, SWITCHES, ETC., MOUNTED IN FIRE RATED STRUCTURES SHALL BE ENCLOSED WITH AN APPROVED ENCLOSURE CARRYING THE SAME FIRE RATING AS THE STRUCTURE.
9. ALL WIRING AND ELECTRICAL EQUIPMENT INSTALLED FOR MECHANICAL AND PLUMBING EQUIPMENT SHALL BE IN ACCORDANCE WITH DIVISION 15 AND ASSOCIATED DRAWINGS. CONTRACTOR SHALL OBTAIN THE REQUIRED MECHANICAL AND PLUMBING DRAWINGS AND PROVIDE ALL EQUIPMENT, RACEWAYS, WIRINGS, ETC., AS INDICATED THEREON.
10. ALL FINAL CONNECTIONS TO OWNER FURNISHED EQUIPMENT SHALL BE MADE BY THE CONTRACTOR UNLESS OTHERWISE NOTED. VERIFY ELECTRICAL CHARACTERISTICS AND U.L. LISTINGS PRIOR TO CONNECTION. CONTRACTOR SHALL VERIFY THE LOAD INPUT VOLTAGE OF ALL EQUIPMENT PRIOR TO INSTALLATION. ACCEPTING ANY EQUIPMENT RESULTING IN LOAD INCREASE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
11. ELECTRICAL OUTLETS ON OPPOSITE SIDES OF FIRE RATED WALLS AND PARTITIONS MUST BE SEPARATED BY DISTANCE OF 24 IN. HORIZONTALLY. IN ACCORDANCE WITH C.E.C. SEC. 714.3.2. EXCEPTION 1.1. OPENINGS IN FIRE RATED WALLS GREATER THAN 16 SQ. IN. MUST BE FIRE STOPPED.
12. ALL CONDUCTORS AND CURRENT CARRYING DEVICES SHALL BE COPPER DUAL RATED THHN/THWN 600 VOLT 75°C MINIMUM INSULATION UNLESS OTHERWISE NOTED. USE PROPER TEMPERATURE RATINGS OF CONDUCTORS BASED ON THE AMBIENT AIR OR SOIL TEMPERATURE WHERE CONDUCTORS ARE BEING USED. HIGHER AMPACITY CONDUCTORS AND LARGER RACEWAYS SHALL BE PROVIDED TO OFFSET THE AMPACITY CORRECTION FACTORS AS INDICATED IN NEC TABLE 310 AND ELSEWHERE IN CODE. ALL BUSSING SHALL BE COPPER. NIC CABLE MAY BE USED WITHIN THE DWELLING TYPE OCCUPANCY PER NEC 334.10 IF APPROVED BY AHJ.
13. DO ALL DRILLING, CUTTING, CHANNELING AS REQUIRED TO ELECTRICAL WORK AND AS INDICATED OR HEREN SPECIFIED. ALL HOLES, CURBS, ETC., IN FLOORS, CEILINGS AND WALLS SHALL BE PATCHED, UNLESS OTHERWISE NOTED. PAINT ALL EXPOSED ELECTRICAL RACEWAYS, CABINETS, ENCLOSURES AND FITTINGS TO MATCH IN COLOR TO ADJACENT SURFACES IN FINISHED AREAS.
14. EMERGENCY LIGHTING AND EXIT SIGNS SHALL BE PROVIDED PER U.B.C. AND SHALL BE DESIGNED TO PROVIDE MINIMUM REQUIRED FOOTCANDLES AND LUMENS. PROVIDE ADDITIONAL EMERGENCY ILLUMINATION AS REQUIRED BY INSPECTION AUTHORITIES HAVING JURISDICTION.
15. ALL ELECTRICAL EQUIPMENT SHALL BE BRACED OR ANCHORED TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION USING THE SMAGNA CRITERIA.
16. BRANCH CONTROL CIRCUITING AND WIRE COUNT MAY NOT BE INDICATED ON PLANS. CONTRACTOR IS RESPONSIBLE TO COMPLETE THE BRANCH CIRCUIT WIRING IN ACCORDANCE WITH PLAN NOTES AND AS PERMITTED BY AUTHORITY. CONTRACTOR SHALL SUBMIT AS-BUILT DRAWINGS AS A PART OF RECORD DRAWING SUBMITTAL TO ARCHITECT AND AUTHORITY HAVING JURISDICTION (AHJ).
17. ALL EXISTING UTILITIES OR STRUCTURES REPORTED BY THE OWNER OR OTHERS AND THOSE SHOWN ON THESE DRAWINGS ARE INDICATED WITH THEIR APPROXIMATE LOCATION AND EXTENT. BY ACCEPTING THESE PLANS OR PROCEEDING WITH IMPROVEMENTS THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES OR STRUCTURES SHOWN AND ANY OTHER UTILITIES OR STRUCTURES FOUND AT THE SITE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNERS OF THE UTILITIES OR STRUCTURES CONCERNED BEFORE STARTING WORK.
18. COORDINATE ALL PHASES OF CONSTRUCTION AND OBTAIN APPROVAL OF WORK SCHEDULE, SHUTDOWN, CUTOVER, OVERTIME WORK, ETC. WITH BUILDING ENGINEER OR OWNER. PROVIDE ALL TEMPORARY SERVICE, STANDBY GENERATOR, 24 HOURS FIRE WATCH, ETC. AS REQUIRED TO MAINTAIN UNINTERRUPTED FACILITY OPERATION DURING CONSTRUCTION WORK.
19. THE CONTRACTOR AGREES THAT, IN ACCORDANCE WITH GENERAL CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT AT ALL TIMES. CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH PERFORMANCE OF WORK ON THIS PROJECT.

NOTICE

THESE DRAWINGS ARE DIAGRAMMATIC AND SHOW INTENT OF PROJECT AND ARE SUBJECT TO THE APPROVAL OF THE BUILDING DEPARTMENT, FIRE MARSHAL, AND UTILITY COMPANY AND ENGINEER OR INSPECTION AUTHORITIES HAVING JURISDICTION (AHJ), BY THE ACT OF SUBMITTING A BID PROPOSAL FOR WORK. THE CONTRACTOR HAS REVIEWED THE PLANS THOROUGHLY, VERIFIED FIELD CONDITIONS, AND ACCEPTED FULL RESPONSIBILITY OF PLAN CORRECTIONS, CONTINGENCY, AND ASSOCIATED EXTRA CONSTRUCTION COSTS THAT HAVE BEEN INCLUDED IN THE CONTRACTOR'S BID.

SYMBOLS AND NOTES

Table with columns for SYMBOLS and DESCRIPTION. Symbols include SM (Motor Rated Switch), G (Garage Gate Switch), etc. Descriptions include Motor Rated Switch H.P. Rated, Garage Gate Switch, Single Receptacle, Duplex Receptacle, etc.

SHORT CIRCUIT COMPLIANCE NOTES

- 1. MAXIMUM AVAILABLE FAULT CURRENT: SERVING UTILITY COMPANY'S LETTER OR DATA INDICATES THAT THE MAXIMUM AVAILABLE FAULT CURRENT (MAFC) WILL NOT EXCEED THE VALUE SHOWN ON THE SINGLE LINE DIAGRAM. THE VALUE SHOWN AS "MAFC" INCLUDES FACILITY MOTOR CONTRIBUTION.
2. ALL CURRENT CARRYING DEVICES SHALL BE U.L. LISTED FULLY RATED AND BRACED TO WITHSTAND THE MAXIMUM AVAILABLE FAULT CURRENT AT ITS TERMINUS.
3. SERIES/COMBINATION SHORT CIRCUIT RATING MAY BE USED BY THE CONTRACTOR WHEN OVERCURRENT DEVICE COMBINATIONS ARE LISTED UNDER U.L. 67 STANDARD. INSTALLATION SHALL COMPLY WITH CALIFORNIA ELECTRICAL CODE (C.E.C.) ARTICLE 110-9, 110-22 AND OTHER APPLICABLE SECTIONS.
4. APPLICABLE SERIES/COMBINATION RATED EQUIPMENT ENCLOSURES SHALL BE CLEARLY MARKED "CAUTION - SERIES COMBINATION SYSTEM RATED \_\_\_ (AS NOTED ON SINGLE LINE DIAGRAM) AMPERES. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED." IN COMPLIANCE WITH CEC SECTION 110-22. END-USE EQUIPMENT SHALL ALSO BE MARKED WITH THE HIGHER SERIES COMBINATION INTERRUPTING RATINGS AS PER CEC SECTION 240-83(c).
5. ELECTRICAL SERVICE GEAR: VENDOR/MANUFACTURER/CONTRACTOR SHALL PROVIDE SHORT CIRCUIT STUDY AND PROTECTIVE DEVICE COORDINATIONS AS SHOP DRAWING SUBMITTAL FOR REVIEW TO THE ENGINEER OF RECORD PRIOR TO THE PURCHASE OF ANY ELECTRICAL GEARS FOR THE PROJECT.

PANELBOARD AND SWITCHBOARD NOTES

- 1. METER, SERVICE AND DISTRIBUTION SECTIONS OF MAIN SWBD TO BE 100% RATED FOR CURRENT CARRYING AND 100% RATED FOR SHORT CIRCUIT DUTY FOR AVAILABLE FAULT FROM UTILITY. THE SHOP DRAWING OF THE METERING AND UTILITY INCOMING SECTIONS SHALL BE REVIEWED AND APPROVED BY THE SERVING UTILITY COMPANY.
2. PANELBOARD SHALL HAVE FLUSHED LOCKABLE DOOR KEY TO MATCH FACILITY MASTER KEY AND ALL ELECTRICAL CABINETRIES.
3. ALL CIRCUIT BREAKERS ON THE PANELBOARD SHALL HAVE PADLOCK OFF DEVICE & ALL CIRCUIT BREAKERS FEEDING ESSENTIAL LOAD SHALL HAVE LOCK ON DEVICE INDICATED BY (\*). THE CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE RATED TO WITHSTAND AVAILABLE SHORT CIRCUIT CURRENT (+18" AFF OR AS NOTED).
4. PROVIDE TOP CONTROL SECTION BEHIND SEPARATE LOCKABLE DOOR FOR MOUNTING TIME SWITCHES, RELAYS, EMC CONTROL DEVICES, ETC. AS REQUIRED OR AS SHOWN. PROVIDE SHOCK MOUNT FOR ANY MECHANICALLY HELD ELECTRONICALLY OPERATED CONTACTORS FOR SOUND AND VIBRATION LIMITATIONS.
5. PROVIDE NAMEPLATE IDENTIFICATION TO BE MOUNTED ABOVE DOOR AND CIRCUIT DIRECTORY HOLDER FRAMED WITH PLASTIC COVER MOUNTED BEHIND THE DOOR. ADHESIVE TYPE PLASTIC ENVELOPE ATTACHED BEHIND THE DOOR IS NOT AN ACCEPTABLE TYPE OF DIRECTORY CARD HOLDER.
6. PANELBOARD & DISTRIBUTION SWITCHBOARD SHALL HAVE COPPER BUSSING SIZES AS INDICATED WITH 200% RATED NEUTRAL BUSSING FOR SUPPLYING COMPUTER LOAD. PROVIDE EQUIPMENT & ISOLATED GROUND BUSSES. TRANSFORMER SHALL BE ENERGY EFFICIENT TYPE WITH COPPER WINDINGS.
7. PROVIDE NEMA-3R ENCLOSURE WITH GASKET LOCKABLE DOOR FOR ALL PANELBOARDS EXPOSED TO WEATHER. PANELBOARDS LOCATED IN SUNLIGHT SHALL HAVE AMBIENT COMPENSATED OVERCURRENT DEVICES.
8. PANELBOARD LOCATED IN ANY DAMP LOCATION IN BUILDING SHALL HAVE GASKET DOOR.
9. CIRCUITS INDICATED BY (T) ARE TIMESWITCH & RELAY CONTROLLED.
10. BUILDING STEEL, UFER, COLD WATER PIPE AND DRIVEN GROUNDING ROD BONDING TO BE UTILIZED FOR COMPLETE GROUNDING ELECTRODE SYSTEM & SUPPLEMENTS PER CEC 250. GROUNDING, THE BONDING TO BUILDING NATURAL GAS PIPING MAY BE REQUIRED BY THE AHJ.
11. FOR EXISTING PANEL WITH EXISTING BREAKERS, CONTRACTOR TO VERIFY ALL EXISTING CIRCUITS FOR EXISTING AREAS THAT ARE TO REMAIN AND IDENTIFY IN PANEL & IN AS-BUILT. MAINTAIN CIRCUIT CONTINUITY IF THESE CIRCUITS SERVE AREAS THAT ARE TO REMAIN.
12. NEW BREAKERS TO BE INSTALLED IN EXISTING PANEL ARE TO MATCH THE EXISTING PANELBOARD MFG. & AIC RATING AS INDICATED OR AS REQUIRED.
13. NEW PANELBOARD IN EXISTING FACILITY SHALL MATCH EXISTING FACILITY SERVICES & DISTRIBUTION EQUIPMENT MANUFACTURER AND SHORT CIRCUIT RATING.
14. NEW PANELBOARD IN EXISTING FACILITY SHALL HAVE LOCKABLE DOOR KEY TO MATCH EXISTING FACILITY ELECTRICAL MASTER LOCK AND KEY.

CODE REFERENCE

THE GOVERNING CODES FOR THIS PROJECT ARE:

- 2016 CALIFORNIA BUILDING CODE (CBC)
2016 CALIFORNIA ELECTRICAL CODE (CEC)
2016 CALIFORNIA MECHANICAL CODE (CMC)
2016 CALIFORNIA PLUMBING CODE (CPC)
2016 CALIFORNIA ENERGY CODE (CEES)

AUXILIARY SYSTEM DEFERRED APPROVAL NOTES

- DESIGN BUILD AUXILIARY SYSTEMS ARE UNDER SEPARATE PLAN CHECK AND PERMIT. SYSTEMS INCLUDE BUT ARE NOT LIMITED TO LIFE SAFETY, FIRE ALARM, INTRUSION ALARM, CCTV/CATV, TELEDATA SYSTEMS AND ALL OTHER BUILDING REQUIRED AND OPTIONAL SYSTEMS.
1. THE AUXILIARY SYSTEMS VENDOR/CONTRACTOR/DESIGN BUILDER SHALL PROVIDE THE APPLICATION ENGINEERING, DOCUMENTATION, AND TESTING REQUIRED TO OBTAIN BUILDING OCCUPANCY PERMIT. LOCAL AND CALIFORNIA STATE FIRE MARSHAL'S APPROVAL AND SYSTEM ACCEPTANCE BY THE AUTHORITY HAVING JURISDICTIONS.
2. PROVIDE EQUIPMENT AND DEVICES INDICATED HEREIN AND ON THE DRAWINGS AND VARIOUS OTHER REQUIRED COMPONENTS.
3. VENDOR SHALL PROVIDE A SYSTEM DIAGRAM INCLUDING RISER DIAGRAMS AND FLOOR PLANS INDICATING ALL CONDUIT AND WIRE SIZES & QUANTITIES BETWEEN ALL DEVICES.
4. PROVIDE ALL CONDUITS, WIRES AND CABLES AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER. INSTALL AND CONNECT ALL SYSTEM COMPONENTS IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
5. FINAL WIRING TERMINATIONS SHALL BE PERFORMED BY THE CONTRACTOR HAVING AT LEAST 5 YEARS EXPERIENCE INSTALLING THE SYSTEMS.
6. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 72, 101, CALIFORNIA BUILDING CODE AND CALIFORNIA FIRE CODE APPLICABLE SUBSECTIONS SHALL APPLY TO THE SPECIFIED EQUIPMENT.
7. VENDOR SHALL PROVIDE ALARM DECIBEL/CANDELA CALCULATION, VOLTAGE DROP AND BACKUP POWER SUPPLY CAPACITY CALCULATIONS REQUIRED BY THE AGENCIES.
8. VENDOR SHALL SUBMIT CATALOG CUTS, TECHNICAL DATA, CONDUCTOR TYPE AND DESCRIPTIVE LITERATURE ON ALL HARDWARE COMPONENTS TO BE FURNISHED INCLUDING CALIFORNIA STATE FIRE MARSHALL (CSFM) LISTINGS FOR FIRE ALARM SYSTEMS.
9. VENDOR SHALL SUBMIT CALIBRATION AND TESTS PRIOR TO FINAL ACCEPTANCE.
10. SHOULD ADDITIONAL DEVICES BE REQUIRED BY THE AUTHORITIES FOR THE FINAL ACCEPTANCE TEST, IT SHALL BE PROVIDED BY THE VENDOR/CONTRACTOR/DESIGN BUILDER AT NO ADDITIONAL COST.
11. VENDOR/CONTRACTOR OF AUXILIARY SYSTEMS SHALL PROVIDE A MINIMUM 1 YEAR CERTIFICATE OF GUARANTEE FOR LABOR AND MATERIALS. INSTRUCTIONS AND MAINTENANCE MANUAL WITH 24 HOUR FACTORY REPRESENTATIVE SUPPORT HOTLINE. PROVIDE 8 HOURS OF INSTRUCTION TIME TO SHOW OWNER'S REPRESENTATIVE THE FUNCTION OF THE SYSTEM.

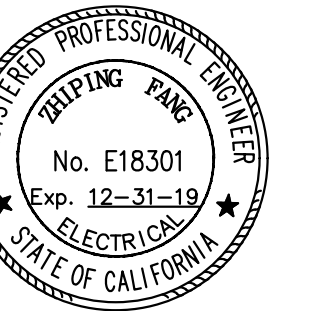
PROJECT:

T.I. (FURNITURE STORE)

565 N. TUSTIN ST. ORANGE, CA 92867

SHEET TITLE:

ELECTRICAL NOTES, SINGLE LINE



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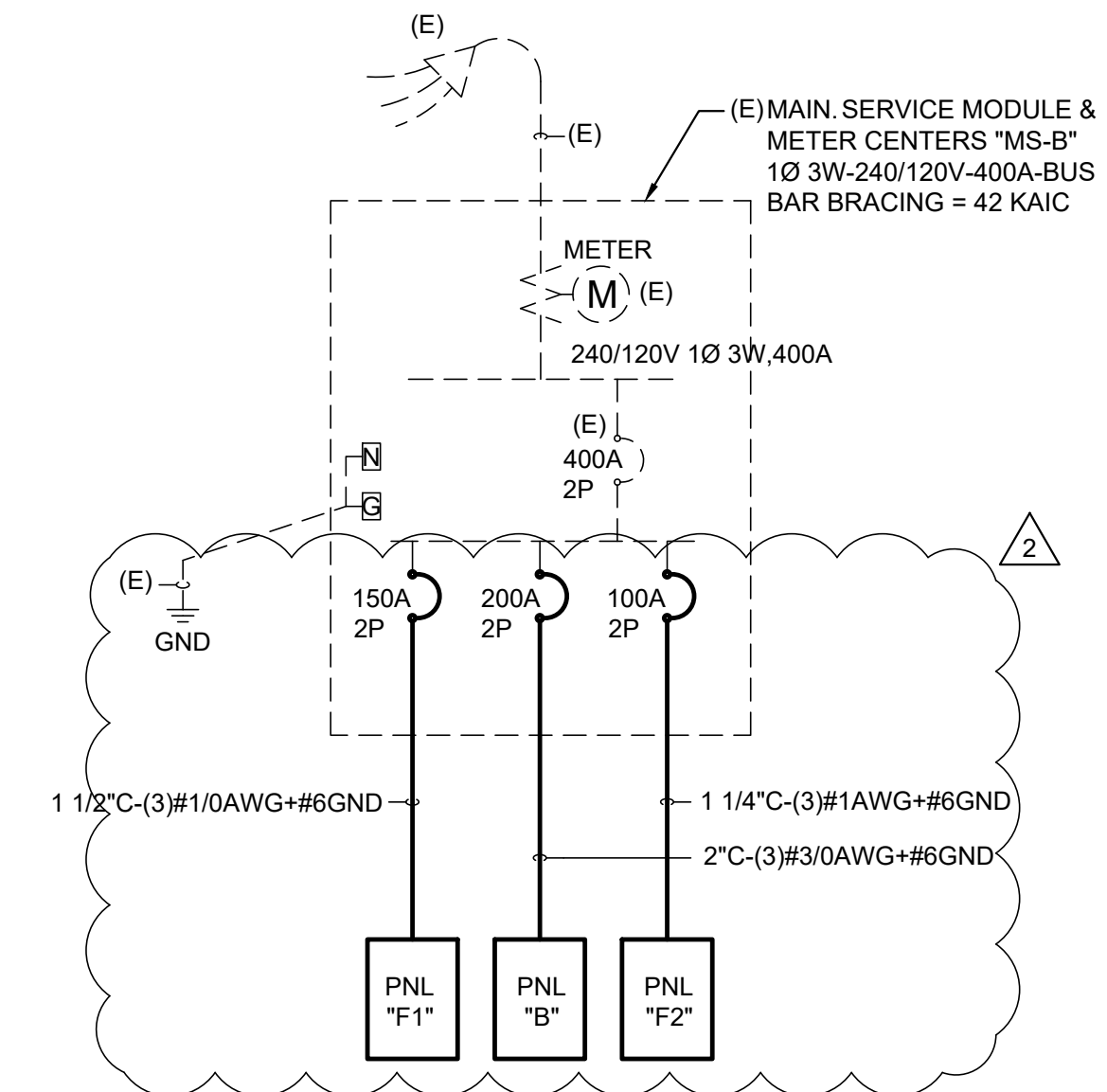
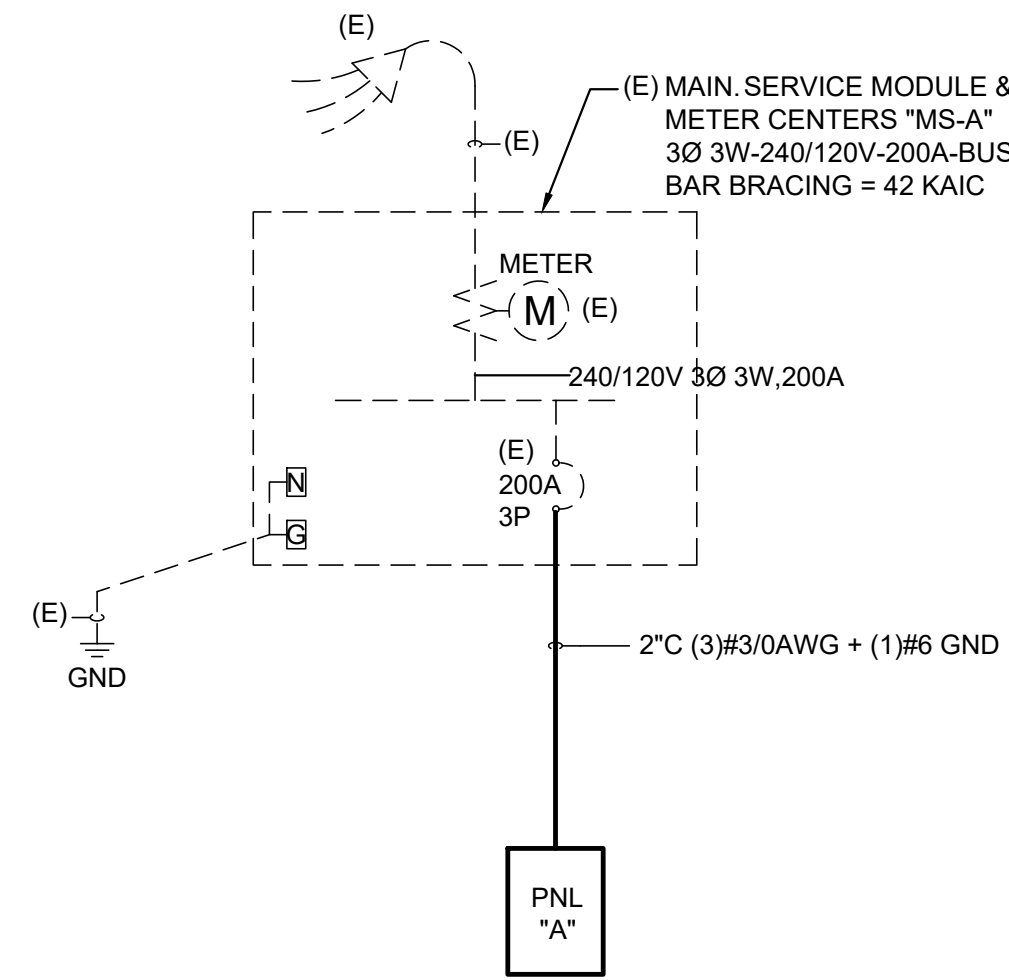
DRAWN BY: V.X

CHECK BY:

JOB NUMBER: C19006

DATE: 02-20-2019

Revision table with 2 entries: 1. OWNER'S CHANGE MAY 21, 2019; 2. SITE CHANGE NOV. 14, 2019.



SINGLE LINE DIAGRAM N.T.S.

SHEET NUMBER:

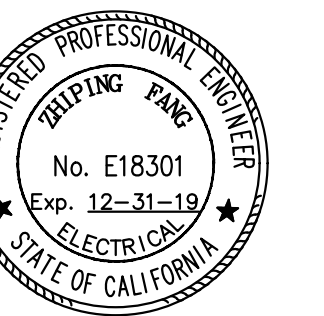
PROJECT:

**T.I.  
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565 N. TUSTIN ST.  
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SHEET TITLE:

**SITE POWER PLAN**

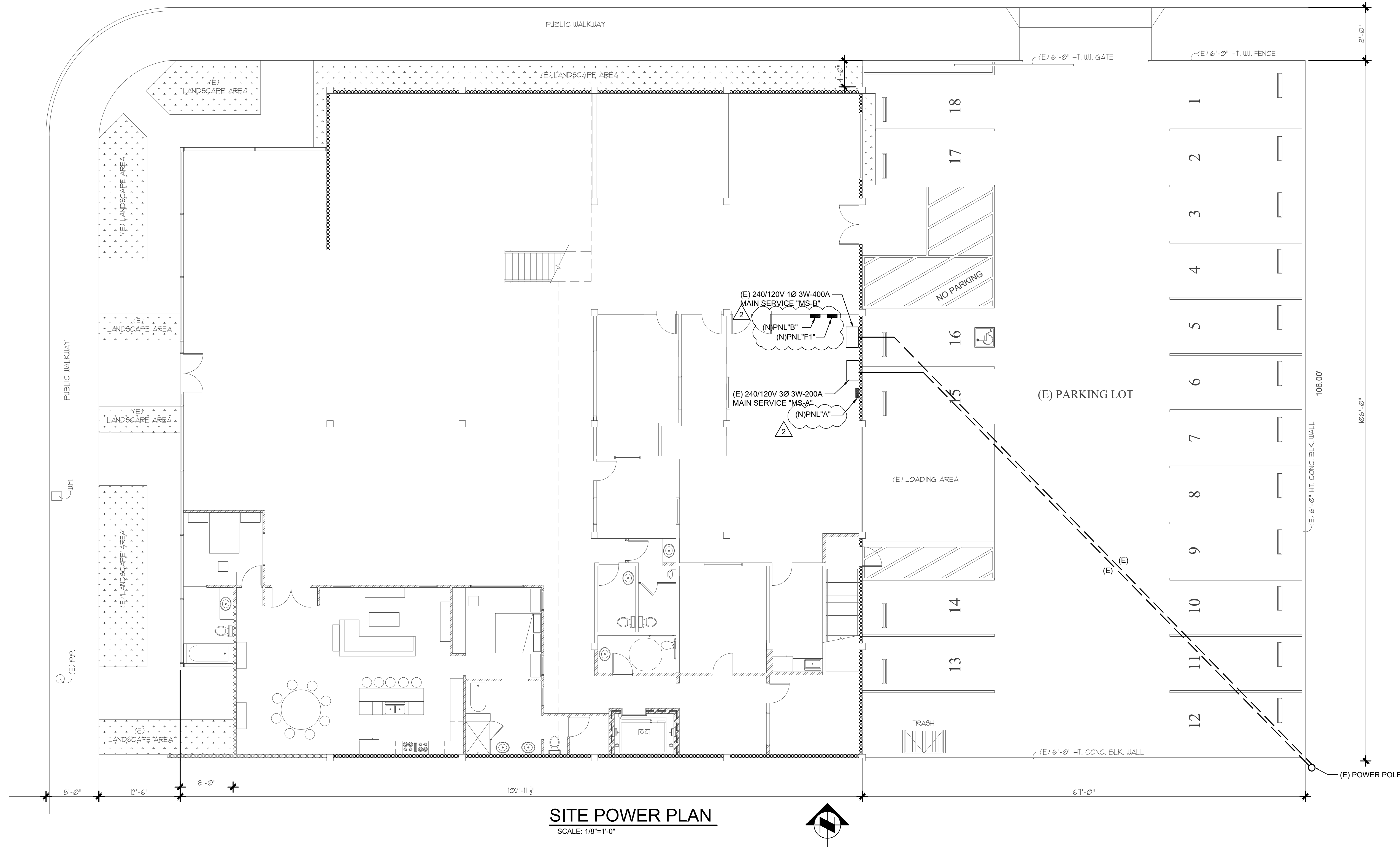


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JOB NUMBER: C18006

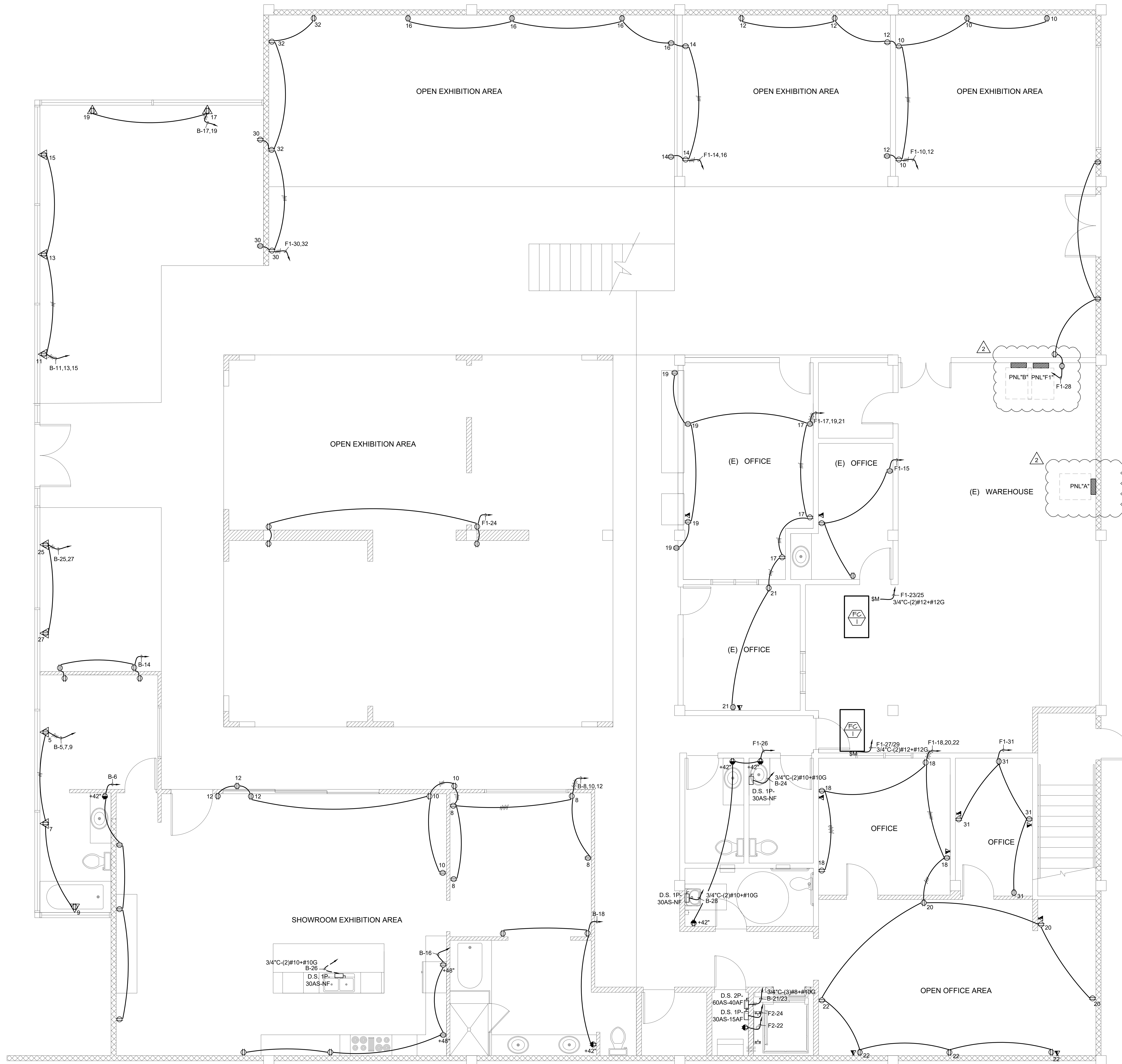
DATE: 02-20-2019

1	OWNER'S CHANGE	MAY 21, 2019
2	SITE CHANGE	NOV. 14, 2019

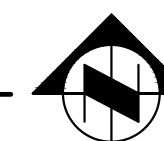


**SITE POWER PLAN**  
SCALE: 1/8"=1'-0"

SHEET NUMBER:



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



DESIGN • PLANNING • CONSTRUCTION  
Tel: 909-510-0857  
e-mail: whtpartners@gmail.com

PROJECT:  
**T.I.  
(FURNITURE STORE)**

565 N. TUSTIN ST.  
ORANGE, CA 92867

SHEET TITLE:  
**FIRST FLOOR POWER PLAN**



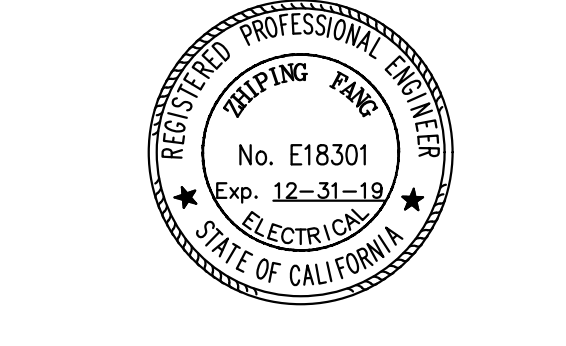
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1	OWNER'S CHANGE	MAY 21, 2019
2	SITE CHANGE	NOV. 14, 2019

SHEET NUMBER:

**LIGHTING NOTES AND LEGENDS:**

- EM EMERGENCY LIGHT WITH 90 MINUTE BATTERY BACKUP OR UNIT MOUNTED EMERGENCY INVERTER. PROVIDE UNSWITCHED HOT WIRE AS NOTED.
- 0.1 THE LIGHTING PLAN IS LIMITED TO PROVIDING CODE COMPLIANCE AND LIGHTING FIXTURE POWER SUPPLY. CONTRACTOR TO OBTAIN LIGHTING CONTROL LAYOUT FROM MANUFACTURER FOR ALL REQUIRED DEVICES & WIRING. INCLUDE ALL EXTENDED WORK IN BIDDING.
- 0.2 PROVIDE 6" OF FLEX METAL WIRES FROM J-BOX ABOVE EACH FIXTURE TO EACH LIGHTING FIXTURE.
- 0.3 PROVIDE 90 MINUTES BATTERY BACKUP FOR EXIT SIGN. PROVIDE LOW LEVEL EXIT SIGN AS REQUIRED BY FIRE DEPARTMENT OR C.B.C. 1011.6 & 1011.7
- 0.4 FIXTURE SHALL HAVE MINIMUM 60 LUMENS/WATT EFFICIENCY, AND BALLAST AND LAMP SHALL BE ENERGY SAVING TYPE U.O.N.
- 0.5 VERIFY WITH OWNER OR ARCHITECT FOR NIGHT LIGHT REQUIREMENT.
- 0.6 LIGHTING SWITCH TO BE 36"-48" A.F.F. U.O.N.
- ◇ RUN LIGHTING CIRCUITS THROUGH CONTROL DEVICES. PROVIDE UNCONTROLLED HOT WIRE FOR EXIT SIGN, EMERGENCY LIGHT, AND LIGHTING CONTROL DEVICES.
- ◇ DAYLIGHT AREA. PROVIDE DAYLIGHT SENSOR FOR LIGHTING CONTROL.
- ◇ DISCONNECT & J-BOX FOR SIGN. PROVIDE DEDICATED NEUTRAL FOR ALL SIGNS. FIELD VERIFY J-BOX/SIGN LOCATION AND REQUIREMENTS WITH OWNER.
- ◇ PROVIDE LOCKABLE COVER FOR LIGHTING SWITCH IN PUBLIC AREA. LIGHTING CONTROL DEVICE FOR AUTOMATIC TIMER AND DIMMER SWITCH: Sa, Sb, Sc, Sd, Se, Sh, Sk, Sq, Ss, St, Su, Sv, Sw, Sx, Sy, Sz.

**CONTROL DEVICES LEGEND:**

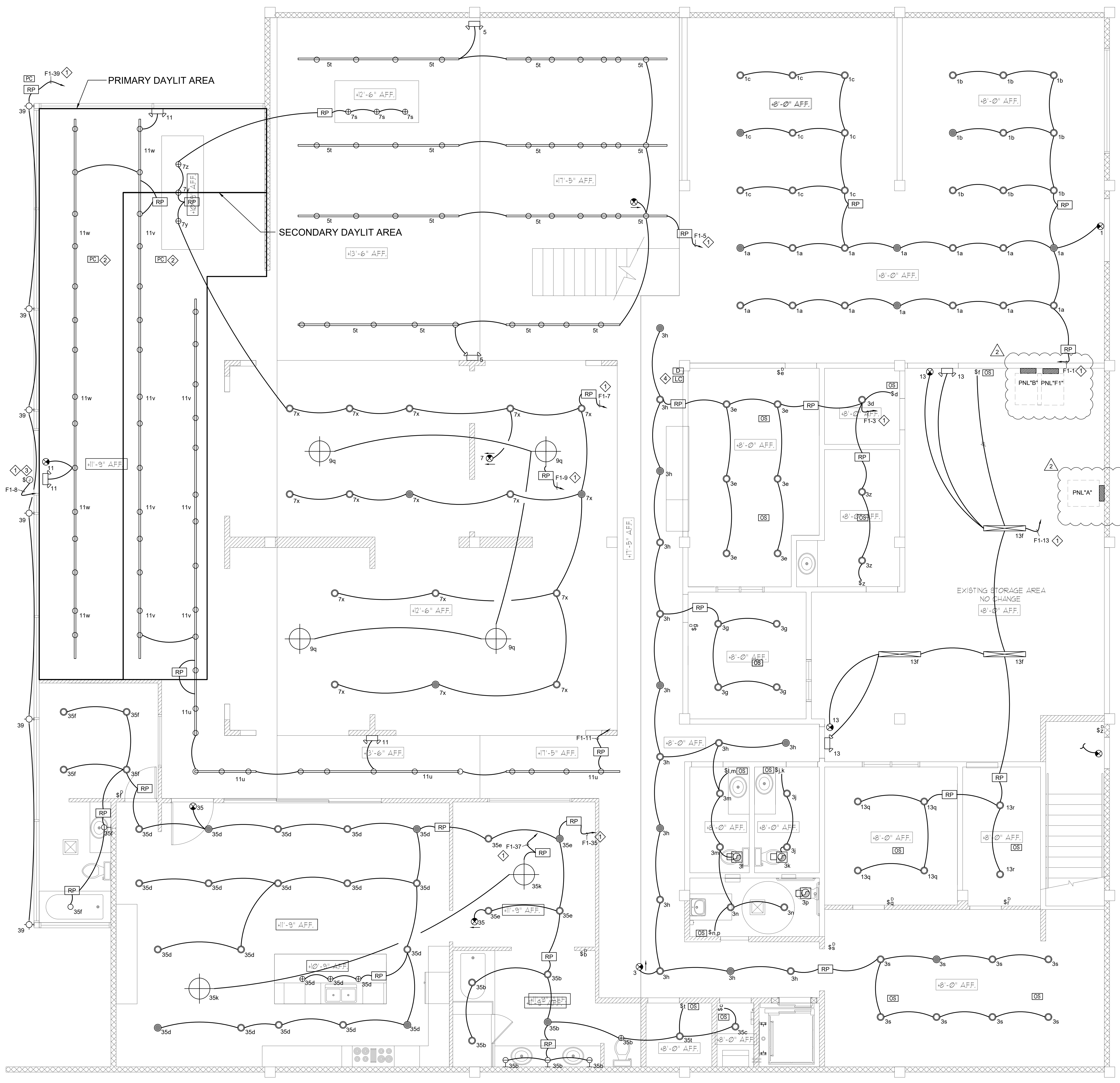
- § SINGLE POLE TOGGLE SWITCH, 36"-48" A.F.F.
- §<sup>3</sup> THREE WAY SWITCH 20 AMP, 36"-48" A.F.F.
- §<sup>4</sup> FOUR WAY SWITCH 20 AMP, 36"-48" A.F.F.
- §<sup>5</sup> DIMMER SWITCH, SWITCH TYPE TO CORRESPOND WITH CONNECTED FIXTURES, 36"-48" A.F.F.
- §<sup>2</sup> THREE WAY DIMMER SWITCH, 36"-48" A.F.F.
- ◇ 0-2 HR. MANUAL BY-PASS TIMER FOR LTG. ZONE CONTROL. PROVIDE AS REQUIRED BY CEC FOR ELECTRIC METERED SPACE OF GREATER THAN 5000 S.F.
- [OS] OCCUPANCY SENSOR, PROVIDE DEVICES SENSING ENTIRE ENCLOSED AREA WHERE THE DEVICES ARE LOCATED OR FIXTURES / AREA AS SHOWN ON LIGHTING PLAN
- [MS] MOTION SENSOR, PROVIDE DEVICES SENSING ENTIRE ENCLOSED AREA WHERE THE DEVICES ARE LOCATED OR FIXTURES / AREA AS SHOWN ON LIGHTING PLAN
- [PC] PHOTOCELL / DAYLIGHT SENSOR
- [RP] CONTROL RELAY PACK FOR LIGHTING / RECEPTACLES
- [LC] AUTOMATIC TIME SWITCH FOR LIGHTING CONTROL
- [D] DEMAND RESPONSE FOR LIGHTING CONTROL

NOTE: LIGHTING FIXTURE MANUFACTURER & MODEL IS FOR REFERENCE ONLY. FIXTURE SHALL BE SELECTED BY ARCHITECT. POWER AND QUALITY SHALL BE SPECIFICATION GRADE.

TYPE	SYMBOL	DESCRIPTION	LAMP	TYPE	NO.	WATT	VOLT	MOUNTING	MANUFACTURER & MODEL
A1	○	6" DOWN LIGHT	LED	--	26W	120V	RECESSED	"LITHONIA LIGHTING" LDN6 40/10 LO6 AR 120	
A2	●	6" DOWN LIGHT W/ 90 MIN. BATTERY BACKUP	LED	--	26W	120V	CEILING RECESSED	"LITHONIA LIGHTING" LDN6 40/10 LO6 AR 120	
B	⊕	CHANDELIER	LED	--	300W	120V	PENDANT	SELECTED BY OWNER OR ARCHITECT	
C	⊖	PENDANT LIGHT	LED	--	20W	120V	PENDANT	SELECTED BY OWNER OR ARCHITECT	
D	⊕+	WALL VANITY LIGHT	LED	--	10W	120V	PENDANT	SELECTED BY OWNER OR ARCHITECT	
E	⊖	WALL LIGHT	LED	--	20W	120V	PENDANT	SELECTED BY OWNER OR ARCHITECT	
F	⊖	TRACK LIGHT W/ CURRENT LIMITING BREAKER	LED	--	20W	120V	TRACK	SELECTED BY OWNER OR ARCHITECT	
G	⊖	4'X2' LED LIGHT	LED	--	61W	120V	CEILING RECESSED	"LITHONIA LIGHTING" 2BL14 72L LP840 N100	
H	⊖	4' LED STRIP LIGHT	LED	--	52W	120V	SURFACE	"LITHONIA LIGHTING" ZLN L48 7000L MVGLT	
L	⊖	EXIT SIGN W/ 90 MIN. BATTERY BACKUP	LED	--	2W	120V	SURFACE	"LITHONIA LIGHTING" EDG 1 R EL	
K	⊖	HIGH OUTPUT EMERGENCY LGT W/ 90 MIN. BATTERY BACKUP	LED	--	11W	120V	SURFACE	"LITHONIA LIGHTING" ELMLT W LP08VS LTP	
M	⊖	EXHAUST FAN	--	--	65W	120V	CEILING RECESSED		

**LIGHTING CONTROL PER APPLICATION**

SPACE / LIGHTING TYPE	CONTROL TYPE														
	INDOOR							OUTDOOR							
	MANUAL SWITCH (ON/OFF)	REMOTE SWITCH WITH ANNUNCIATION	TIME CLOCK & OVERRIDE SWITCH	VACANCY SENSOR	OCCUPANCY SENSOR	PARTIAL OFF	CARD KEY CONTROL / AUTOMATIC VACANCY OFF	DAY LIGHT SENSOR	DIMMING	RECEPTACLE CONTROL	DEMAND RESPONSE (ON/OFF)	PHOTO CONTROL	TIME CLOCK	ASTRONOMICAL TIME SWITCH	MOTION SENSOR
DISPLAY AREA	X	X							X		X				
OFFICE AREA	X			X							X				
RESTROOM	X			X						X					
EXTERIOR SIGN												X	X		
EXTERIOR LIGHT												X	X		



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

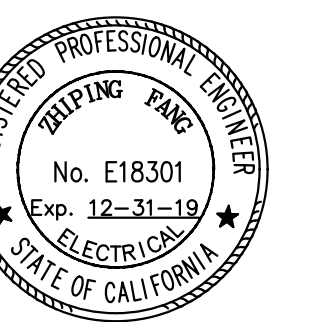
PROJECT:

T.I.  
(FURNITURE STORE)

565 N. TUSTIN ST.  
ORANGE, CA 92867

SHEET TITLE:

LIGHTING CONTROL



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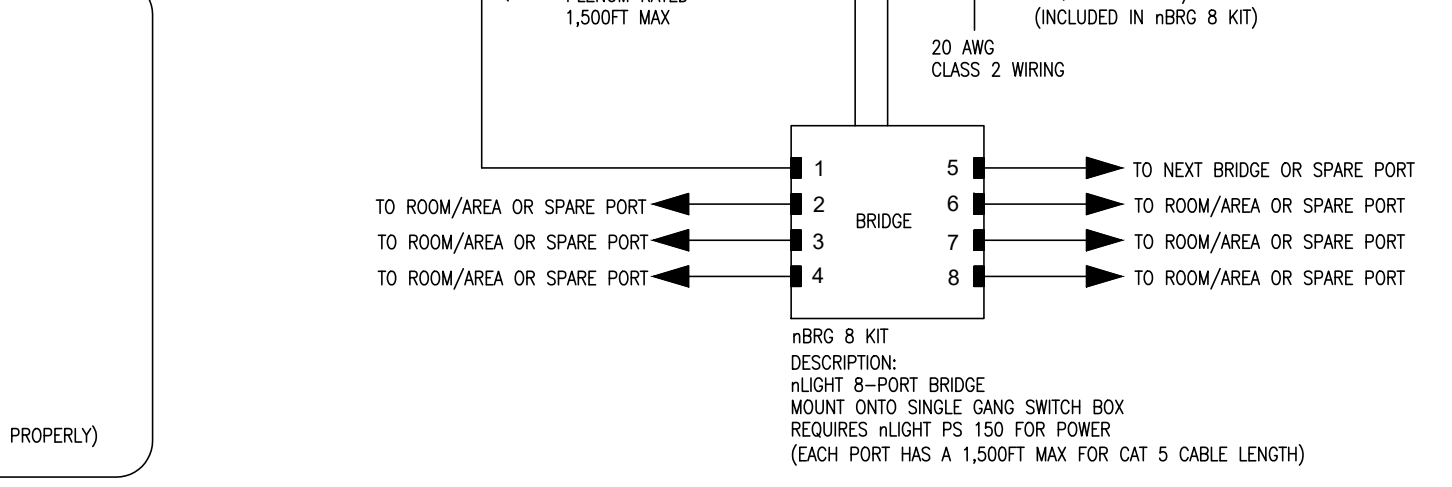
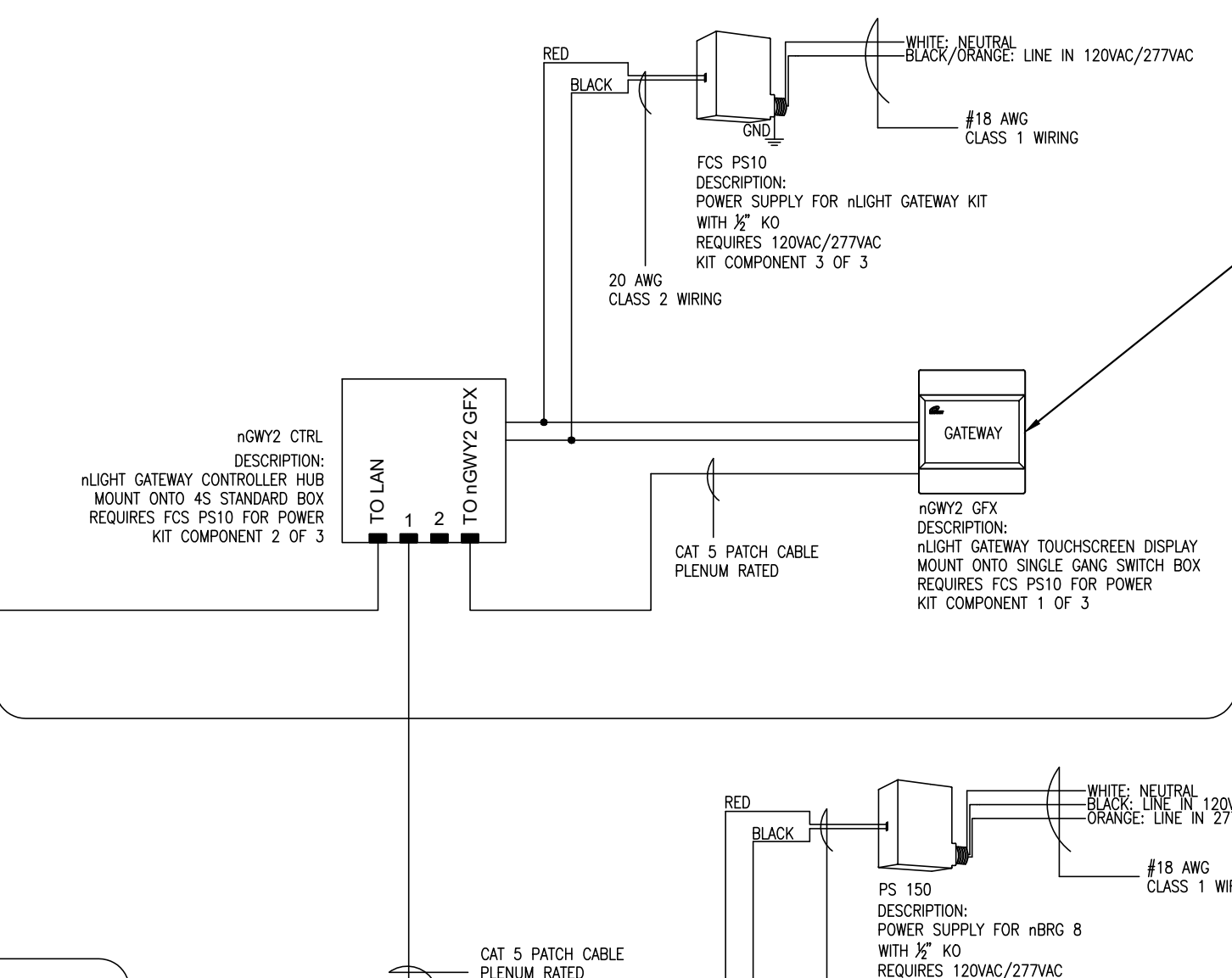
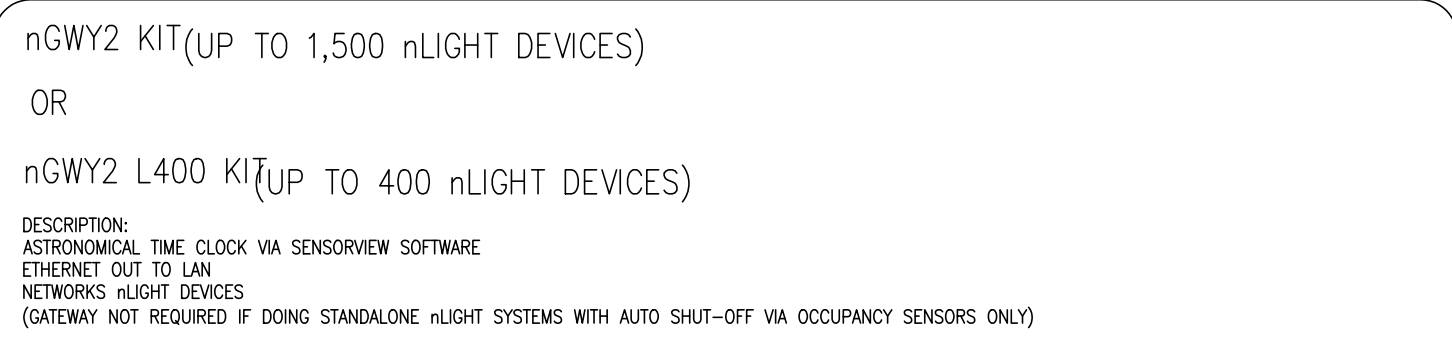
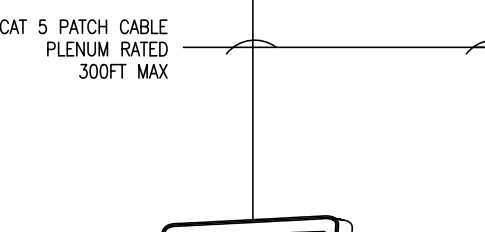
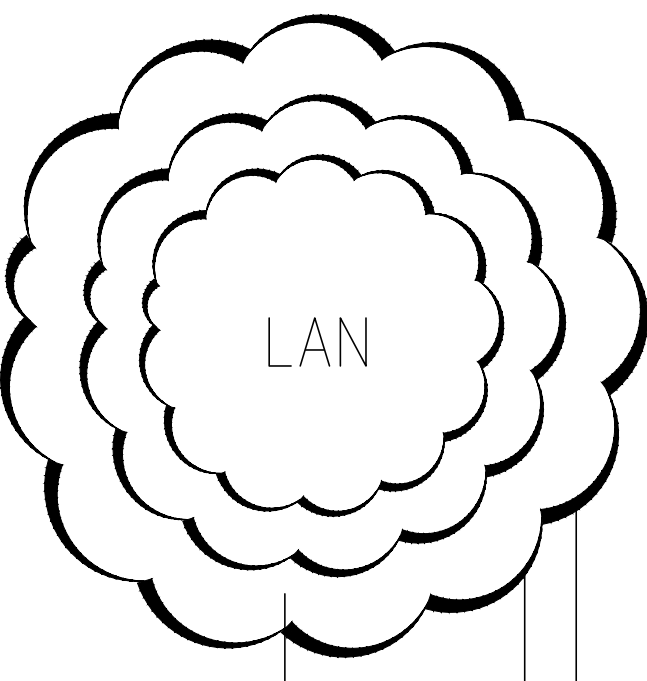
DRAWN BY: V.X

CHECK BY:

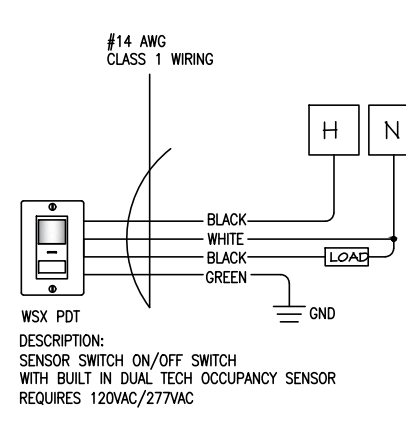
JOB NUMBER: C18006

DATE: 02-20-2019

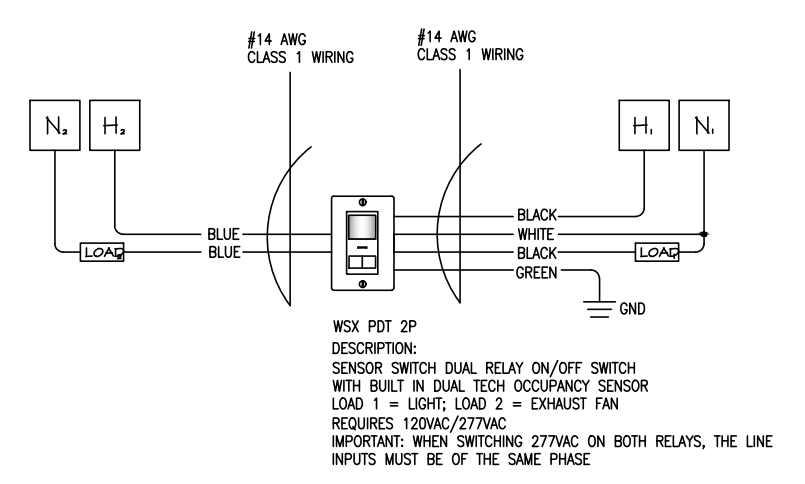
1	OWNER'S CHANGE	MAY 21, 2019
2	SITE CHANGE	NOV. 14, 2019



NTS nLIGHT BACKBONE SYSTEM  
REFER TO LIGHTING CONTROL PLANS FOR TYPES AND QUANTITIES

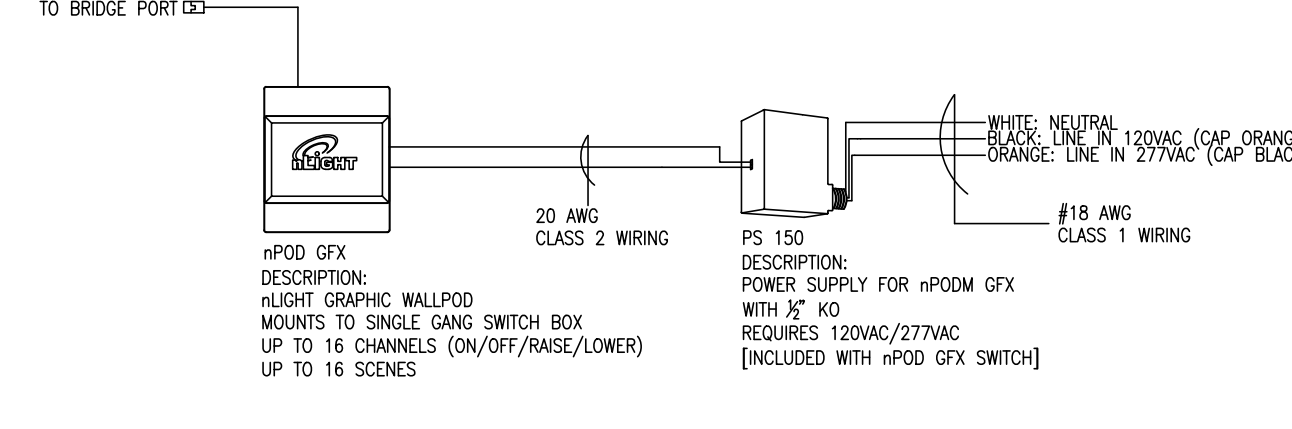


NTS SPACES USING LINE VOLTAGE SENSOR SWITCH WSX PDT SWITCH  
REFER TO PLANS FOR TYPES AND QUANTITIES



NTS SINGLE STALL RESTROOM WITH EXHAUST FAN CONTROL USING SENSORSWITCH  
NON-DIMMING STANDALONE LINE VOLTAGE SOLUTION; NOT nLIGHT  
REFER TO PLANS FOR TYPES AND QUANTITIES

NTS GENERAL INTERIOR LIGHTS, EXTERIOR LIGHTS, SIGNAGE  
REFER TO LIGHTING CONTROL PLANS FOR TYPES AND QUANTITIES



NTS MASTER OVERRIDE SWITCH FOR ENTIRE SPACE (IF REQUIRED)  
REFER TO LIGHTING CONTROL PLANS FOR TYPES AND QUANTITIES

C.E.C. MANDATORY LIGHTING/OUTLET CONTROL SYSTEM

E-5 N.T.S.

PANEL "A"																
240/120 VOLTS 3 PHASE																
3 WIRE 225 BUS AMPS																
TYPE SURFACE MOUNTING																
MAIN BKR. SIZE MAIN LUG SIZE																
REMARKS	ΦA	ΦB	ΦC	LTG	REC	HSEC	BKR	CIR	CIR	BKR	HSEC	REC	LTG	ΦA	ΦC	
AC-1	3824						1	40/2	1	2	40/2	1	3220			AC-4
---							1	40/2	3	4	---					---
---							5	40/2	1	6	40/2	1				3220 AC-5
AC-2	3824						1	40/3	7	8	---					3220 AC-6
---							9	40/2	1	10	40/2	1				3220 AC-7
---							11	---		12	---					3220 AC-8
AC-3	3824						1	40/3	13	14	40/2	1	3220			3220 AC-9
---							15	---		16	---					3220 AC-10
---							17	25/2	3	18	25/2	3				2542 SHP-1
SPACE							19	---		20	---		2542			SHP-1
SPACE							21	---		22	---					SPACE
SPACE							23	---		24	---					SPACE
SPACE							25	---		26	---					SPACE
SPACE							27	---		28	---					SPACE
SPACE							29	---		30	---					SPACE
TOTAL	23674	21132	20454													TOTAL

PANEL "B"															
240/120 VOLTS 1 PHASE															
3 WIRE 100 BUS AMPS															
TYPE SURFACE MOUNTING															
MAIN BKR. SIZE MAIN LUG SIZE															
REMARKS	ΦA	ΦC	LTG	REC	HSEC	BKR	CIR	CIR	BKR	HSEC	REC	LTG	ΦA	ΦC	
MEZZ OUTLETS	540						3	20/1	1	2	20/1	1	4	720	MEZZ OUTLETS
MEZZ OUTLETS	540						3	20/1	3	4	20/1	3			540 MEZZ OUTLETS
MEZZ OUTLETS	720						4	20/1	5	6	20/1	4	720		540 MEZZ OUTLETS
MEZZ OUTLETS	720						4	20/1	7	8	20/1	3			540 MEZZ OUTLETS
MEZZ OUTLETS	540						3	20/1	9	10	20/1	3			540 MEZZ OUTLETS
MEZZ OUTLETS	540						3	20/1	11	12	20/1	5			900 MEZZ OUTLETS
SPARE							3	20/1	13	14	20/1	3			540 MEZZ OUTLETS
SPARE							15	20/1	15	16	20/1	1			180 ROOF RECEPT
MEZZ OUTLETS	540						3	20/1	17	18	20/1	1			180 ROOF RECEPT
MEZZ OUTLETS	540						3	20/1	19	20	20/1	1			180 ROOF RECEPT
ROOF OUTLET	180						1	20/1	21	22	20/1	1			180 ELEV ROOM OUTLET
SPARE							21	20/1	23	24	15/1	1			200 ELEV LIGHTING
SPARE							25	20/1	25	26	20/1				SPARE
SPARE							27	20/1	27	28	20/1				SPARE
SPARE							29	20/1	29	30	20/1				SPARE
TOTAL	5400	4880													TOTAL

PANEL "F1"															
240/120 VOLTS 1 PHASE															
3 WIRE 150 BUS AMPS															
TYPE SURFACE MOUNTING															
MAIN BKR. SIZE MAIN LUG SIZE															
REMARKS	ΦA	ΦC	LTG	REC	HSEC	BKR	CIR	CIR	BKR	HSEC	REC	LTG	ΦA	ΦC	
SPACE							1	---		2	---				SPACE
SPACE							3	---		4	---				SPACE
SHOW WINDOW	1800						9FT	20/1	5	6	20/1	4	720		720 SHOWROOM OUTLETS
SHOW WINDOW	1800						9FT	20/1	7	8	20/1	4	720		720 SHOWROOM OUTLETS
SHOW WINDOW	1800						9FT	20/1	9	10	20/1	3	540		720 SHOWROOM OUTLETS
SHOW WINDOW	1800						9FT	20/1	11	12	20/1	3	540		540 SHOWROOM OUTLETS
SHOW WINDOW	1800						9FT	20/1	13	14	20/1	4	720		720 SHOWROOM OUTLETS
SHOW WINDOW	1800						9FT	20/1	15	16	20/1	4	720		720 SHOWROOM OUTLETS
SHOW WINDOW	1800						9FT	20/1	17	18	20/1	3	540		720 SHOWROOM OUTLETS
SHOW WINDOW	1800						9FT	20/1	19	20	---				SPACE
ELEVATOR	3000						1	40/2	21	22	---				SPACE
SHOW WINDOW	1800						9FT	20/1	23	24	30/1	1			3060 IEVH-1
SHOW WINDOW	1800						9FT	20/1	25	26	30/1	1			3060 IEVH-1
SHOW WINDOW	1800						9FT	20/1	27	28	30/1	1			3060 IEVH-1
SPACE							---	---	29	30	---				SPACE
SPACE							---	---	31	32	---				SPACE
TOTAL	17980	20100													TOTAL

PANEL "F2"															
240/120 VOLTS 1 PHASE															
3 WIRE 100 BUS AMPS															
TYPE SURFACE MOUNTING															
MAIN BKR. SIZE MAIN LUG SIZE															
REMARKS	ΦA	ΦC	LTG	REC	HSEC	BKR	CIR	CIR	BKR	HSEC	REC	LTG	ΦA	ΦC	
KITCHEN (1)							1	---		2	---				KITCHEN LOAD
KITCHEN (1)							1	---		2	---				KITCHEN LOAD
LIGHTING LCL (2)							1.25	---		0	---				LIGHTING CONTINUOUS LOAD
REMAINDER	55,600						1	55,600		(T)					PROVIDE LIGHTING CONTROL AS SHOWN ON PLAN
TOTAL DEMAND (VA)								65,250							TOTAL
TOTAL DEMAND AMPS.								157							TOTAL

PANEL NOTES:

- ALL BREAKERS ARE NEW U.O.N.
- MULTI-WIRE CIRCUITS MUST BE DISCONNECTED SIMULTANEOUSLY. USE MULTI-POLE BREAKERS OR LISTED HANDLE-TIES. CEC SECTION 210.4.
- INTERRUPTING CAPACITY OF ALL NEW CIRCUIT BREAKERS TO BE GREATER THAN OR EQUAL TO EXISTING BREAKERS.

SHEET NUMBER: