GENERAL FIRE ALARM NOTES

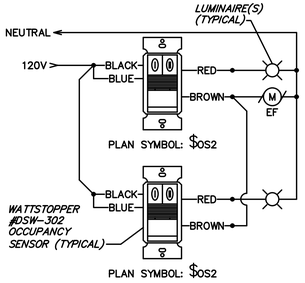
A. THE CONTRACTOR SHALL PROVIDE A FULLY ENGINEERED DESIGN OF THE FIRE DETECTION AND ALARM SYSTEM FROM A QUALIFIED FIRE DETECTION AND ALARM SYSTEM DESIGNER. ANY FIRE DETECTION AND ALARM INFORMATION INDICATED ON THE DRAWINGS IS STRICTLY FOR THE PURPOSE OF ESTABLISHING A MINIMUM CRITERIA TO AID THE FIRE DETECTION AND ALARM SYSTEM DESIGNER IN THE DESIGN OF THE FULLY ENGINEERED FIRE DETECTION AND ALARM DRAWINGS. DESIGNER SHALL BE NICET LEVEL III OR IV (3 OR 4) CERTIFIED FIRE ALARM TECHNICIAN OR REGISTERED FIRE PROTECTION ENGINEER, EMPLOYED BY FIRE ALARM CONTROL UNIT MANUFACTURER, CONTRACTOR, OR INSTALLER, WITH EXPERIENCE DESIGNING FIRE ALARM SYSTEMS IN THE JURISDICTIONAL AREA OF THE AUTHORITIES HAVING JURISDICTION.
B. THE DESIGNER SHALL PRODUCE ALL REQUIRED DRAWINGS, CALCULATIONS, AND EQUIPMENT SPECIFICATIONS REQUIRED FOR JURISDICTIONAL APPROVAL AND SUBMIT ALL REQUIRED DOCUMENTS TO THE AUTHORITY HAVING JURISDICTION FOR APPROVAL.

ELECTRICAL SYMBOL LEGEND (SOME MAY NOT BE USED)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	WALL MOUNTED SINGLE RECEPTACLE, NEMA 5-20R		PANELBOARD, UTILITY POWER
	WALL MOUNTED DUPLEX RECEPTACLE		POWER DISTRIBUTION PANEL OR SWITCHBOARD, UTILITY POWER
	WALL MOUNTED DEDICATED DUPLEX RECEPTACLE		METER AND SOCKET
	WALL MOUNTED DUPLEX RECEPTACLE, ONE RECEPTACLE SWITCHED OR SPLIT-WIRED	J	WALL MOUNTED JUNCTION/OUTLET BOX
	WALL MOUNTED QUADRUPLEX RECEPTACLE	J	FLUSH FLOOR MOUNTED JUNCTION/OUTLET BOX
	WALL MOUNTED DEDICATED QUADRUPLEX RECEPTACLE	J C	CEILING MOUNTED JUNCTION/OUTLET BOX
	WALL MOUNTED QUADRUPLEX RECEPTACLE, SPLIT-WIRED	J	JUNCTION BOX MOUNTED ABOVE CEILING
	WALL MOUNTED SPECIAL RECEPTACLE, NEMA CONFIGURATION AS NOTED		MULTI-OUTLET ASSEMBLY
	WALL MOUNTED RANGE RECEPTACLE, NEMA 14-50R UNLESS INDICATED OTHERWISE		CORD AND PLUG
	FLUSH FLOOR MOUNTED SINGLE RECEPTACLE, NEMA 5-20R	M	MOTOR
	FLUSH FLOOR MOUNTED DUPLEX RECEPTACLE	XX/X XXA FUSES	SAFETY SWITCH, SIZE AS INDICATED ON PLAN
	FLUSH FLOOR MOUNTED DEDICATED DUPLEX RECEPTACLE		
	FLUSH FLOOR MOUNTED DUPLEX RECEPTACLE, SPLIT-WIRED	XX/X XXA FUSES	COMBINATION MAGNETIC MOTOR STARTER AND DISCONNECT SWITCH, SIZE AS INDICATED ON PLAN
	FLUSH FLOOR MOUNTED QUADRUPLEX RECEPTACLE		
	FLUSH FLOOR MOUNTED DEDICATED QUADRUPLEX RECEPTACLE	$ MOD	SWITCH. SPST UNLESS INDICATED WITH MODIFIER. HORSEPOWER RATED WHEN USED FOR MOTOR CONTROL OR DISCONNECTING MEANS. SWITCH MODIFIERS, INCLUDING COMBINATIONS THEREOF: 2: DPST. 3: 3-WAY (SPDT). 4: 4-WAY. D: DIMMER. F: BOX COVER UNIT, BUSSMANN SSU OR STY SERIES. G: GLOW HANDLE (HANDLE GLOWS WHEN SWITCH IS OFF). H: HORIZONTALLY MOUNTED. K: KEY OPERATED. M: MANUAL MOTOR CONTROLLER WITH OVERLOAD HEATER. SB: SWITCH BANK (GANGED SWITCHES) OS1: OCCUPANCY SENSOR. OS2: DUAL-RELAY OCCUPANCY SENSOR. P: PILOT LIGHT (PILOT ON WHEN SWITCH IS ON). T: TIMER. LV: LOW VOLTAGE. OR: OVERRIDE. OT: OVERRIDE WITH TIMER. WP: WEATHERPROOF DTG: SPDT, CENTER OFF, MAINTAINED CONTACT. DTM: SPDT, CENTER OFF, MOMENTARY CONTACT. LOWERCASE LETTER: CONTROL LUMINAIRE WITH SAME LETTER.
	FLUSH FLOOR MOUNTED SPECIAL RECEPTACLE, NEMA CONFIGURATION AS NOTED		
	ABOVE FLOOR SERVICE FITTING, HUBBELL #SC3098A OR EQUAL; NEMA CONFIGURATION AS NOTED		
C	CEILING MOUNTED SINGLE RECEPTACLE, NEMA 5-20R		
C	CEILING MOUNTED DUPLEX RECEPTACLE		
C	CEILING MOUNTED DEDICATED DUPLEX RECEPTACLE		
C	CEILING MOUNTED DUPLEX RECEPTACLE, SPLIT-WIRED		
C	CEILING MOUNTED QUADRUPLEX RECEPTACLE		
C	CEILING MOUNTED DEDICATED QUADRUPLEX RECEPTACLE		
C	CEILING MOUNTED QUADRUPLEX RECEPTACLE, SPLIT-WIRED		
C	CEILING MOUNTED SPECIAL RECEPTACLE, NEMA CONFIGURATION AS NOTED	PS	CEILING MOUNTED PHOTOSENSOR
	BRANCH CIRCUITING, CONCEALED IN WALL OR CEILING	OS	CEILING MOUNTED OCCUPANCY SENSOR
	BRANCH CIRCUITING, CONCEALED IN OR UNDER FLOOR	OS	WALL MOUNTED OCCUPANCY SENSOR
	BRANCH CIRCUITING, EXPOSED	XX	TRACK LIGHTING LIVE END FEED; "XX" INDICATES CURRENT LIMITER RATING IF APPLICABLE
	HOMERUN TO PANEL. THE NUMBER OF ARROWS INDICATES THE NUMBER OF CIRCUITS. TWO WIRES UNLESS NOTED OTHERWISE; SLASHES INDICATE NUMBER OF WIRES. GROUND WIRE IS REQUIRED BUT NOT INDICATED. A 7 INDICATES ISOLATED GROUND CONDUCTOR.	XXX RPS	LOW VOLTAGE LIGHTING POWER SUPPLY/TRANSFORMER; "XXX" INDICATES VOLT-AMP RATING
			TELEPHONE OUTLET, FLOOR; *P DENOTES NUMBER OF TELEPHONE PORTS
		C	TELEPHONE OUTLET, CEILING; *P DENOTES NUMBER OF TELEPHONE PORTS
	CONDUIT STUB		TELEPHONE OUTLET, WALL; *P DENOTES NUMBER OF TELEPHONE PORTS
	VERTICAL CONDUIT/CIRCUIT		DATA OUTLET, FLOOR; *D DENOTES NUMBER OF DATA PORTS
B	BELL	C	DATA OUTLET, CEILING; *D DENOTES NUMBER OF DATA PORTS
B	BUZZER		DATA OUTLET, WALL; *D DENOTES NUMBER OF DATA PORTS
B	CHIME		COMBINATION TELEPHONE AND DATA OUTLET, FLOOR; *P/*D DENOTES NUMBER OF TELEPHONE/DATA PORTS
S	SPEAKER, CEILING	C	COMBINATION TELEPHONE AND DATA OUTLET, CEILING; *P/*D DENOTES NUMBER OF TELEPHONE/DATA PORTS
S	SPEAKER, WALL		COMBINATION TELEPHONE AND DATA OUTLET, WALL; *P/*D DENOTES NUMBER OF TELEPHONE/DATA PORTS
S G	SPEAKER, GROUND-MOUNTED		3/4" THICK PLYWOOD BACKBOARD, SIZE AS INDICATED ON DRAWINGS
VC	VOLUME CONTROL	TV	TELEVISION OUTLET, FLOOR
AMP	SOUND SYSTEM AMPLIFIER	TV C	TELEVISION OUTLET, CEILING
TR	LOW VOLTAGE CONTROL TRANSFORMER	TV	TELEVISION OUTLET, WALL
TC	AUTOMATIC TIMECLOCK		PUSHBUTTON STATION, ONE BUTTON
FACP	FIRE ALARM CONTROL PANEL		PUSHBUTTON STATION, TWO BUTTON
EVAC	FIRE ALARM VOICE EVACUATION PANEL		PUSHBUTTON STATION, THREE BUTTON
FAA	FIRE ALARM REMOTE ANNUNCIATOR	R	RELAY
ZAM	FIRE ALARM ZONE ADDRESSABLE MODULE	PC	PHOTOCELL
F	FIRE ALARM MANUAL PULLSTATION	F	FIRE ALARM HORN, WALL MOUNTED
	AUTOMATIC SMOKE DETECTOR, WALL MOUNTED	F	FIRE ALARM SPEAKER, WALL MOUNTED
	AUTOMATIC SMOKE DETECTOR, CEILING MOUNTED		FIRE ALARM STROBE, WALL MOUNTED
D	AUTOMATIC SMOKE DETECTOR, DUCT MOUNTED, AND FIRE ALARM RELAY (INTEGRAL OR FIELD-INSTALLED)		FIRE ALARM COMBINATION HORN AND STROBE, WALL MOUNTED
RTS	DUCT SMOKE DETECTOR REMOTE TEST SWITCH		FIRE ALARM COMBINATION SPEAKER AND STROBE, WALL MOUNTED
	AUTOMATIC HEAT DETECTOR, WALL MOUNTED	F C	FIRE ALARM HORN, CEILING MOUNTED
	AUTOMATIC HEAT DETECTOR, CEILING MOUNTED	F C	FIRE ALARM SPEAKER, CEILING MOUNTED
OF	FIRE SPRINKLER FLOW SWITCH	C	FIRE ALARM STROBE, CEILING MOUNTED
TF	FIRE SPRINKLER TAMPER SWITCH AND CORROSION MONITORING SYSTEM SUPERVISORY CONNECTION	C	FIRE ALARM COMBINATION HORN AND STROBE, CEILING MOUNTED
F	FIRE SPRINKLER ALARM BELL	C	FIRE ALARM COMBINATION SPEAKER AND STROBE, CEILING MOUNTED
	FIRE ALARM MAGNETIC DOOR HOLDER	PIV	FIRE SPRINKLER ELECTRONICALLY SUPERVISED POST INDICATOR VALVE

ABBREVIATIONS AND MODIFIERS (SOME MAY NOT BE USED)

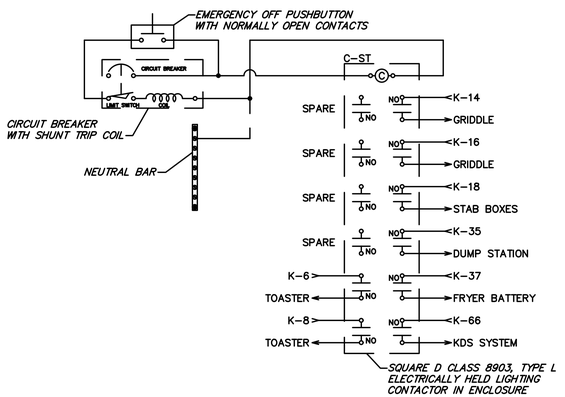
AFF	ABOVE FINISHED FLOOR	SPST	SINGLE POLE, SINGLE THROW	+XX"	MOUNTING HEIGHT MODIFIER
AFG	ABOVE FINISHED GRADE	DPST	DOUBLE POLE, SINGLE THROW	WP	WEATHERPROOF MODIFIER
NIC	NOT IN CONTRACT	3PST	THREE POLE, SINGLE THROW	PT	POKE-THROUGH MODIFIER
UNO	UNLESS NOTED OTHERWISE	4PST	FOUR POLE, SINGLE THROW	H	HORIZONTAL MOUNT MODIFIER
N.F.	NON-FUSED	SPDT	SINGLE POLE, DOUBLE THROW	HG	HOSPITAL GRADE MODIFIER
GFPE	GROUND-FAULT PROTECTION OF EQUIPMENT	DPDT	DOUBLE POLE, DOUBLE THROW	G	ISOLATED GROUND MODIFIER
ST	SHUNT TRIP MODIFIER	3PDT	THREE POLE, DOUBLE THROW	SP	SURGE PROTECTION MODIFIER
GND	GROUND	4PDT	FOUR POLE, DOUBLE THROW	GFCI	GROUND-FAULT CIRCUIT INTERRUPTER MODIFIER
EGC	EQUIPMENT GROUNDING CONDUCTOR	EM	EMERGENCY LIGHT MODIFIER		
GEC	GROUNDING ELECTRODE CONDUCTOR	NL	NIGHTLIGHT LUMINAIRE MODIFIER	SR	SHOW WINDOW RECEPTACLE MOUNTED WITHIN 18 INCHES OF TOP OF SHOW WINDOW
AHJ	AUTHORITY HAVING JURISDICTION				
NEC	NATIONAL ELECTRICAL CODE (NFPA 70)			CR	CONTROLLED RECEPTACLE MODIFIER
				CH	CLOCK HANGER RECEPTACLE



GENERAL NOTES APPLICABLE TO THIS DETAIL:
A. CONTRACTOR SHALL SET DIP SWITCHES TO ACCOMPLISH THE FOLLOWING SEQUENCE OF OPERATION:
1. RELAY 1 (RED WIRE) OF EACH OCCUPANCY SENSOR SHALL BE SET AS MANUAL ON TO TURN LIGHTS IN THE RESTROOM ON AND SHALL TURN LIGHTS OFF AFTER 15 MINUTES OF NOT SENSING MOTION.
A. ONLY THE LIGHTS WITHIN THE RESTROOM ASSOCIATED WITH THE OCCUPANCY SENSOR SHALL BE ENERGIZED BY THE OCCUPANCY SENSOR.
2. RELAY 2 (BROWN WIRE) OF EACH OCCUPANCY SENSOR SHALL BE SET AS AUTOMATIC ON TO TURN EXHAUST FAN ON UPON OCCUPANT ENTERING THE ROOM AND SHALL AUTOMATICALLY TURN EXHAUST FAN OFF AFTER 30 MINUTES OF NOT SENSING MOTION.
A. ACTIVATION OF EITHER OCCUPANCY SENSOR SHALL ENERGIZE THE EXHAUST FAN. EXHAUST FAN SHALL ONLY TURN OFF WHEN BOTH OCCUPANCY SENSORS TIMEOUT AFTER 30 MINUTES OF NOT SENSING MOTION.
B. EXHAUST FAN SHALL REMAIN RUNNING FOR 15 MINUTES AFTER THE OCCUPANCY SENSOR SWITCHES THE ROOM'S LIGHTING OFF.

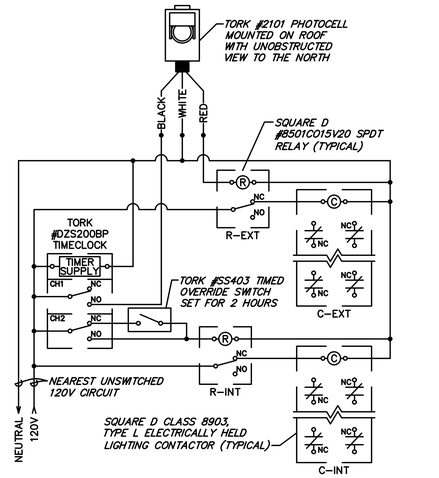
3 RESTROOM LIGHTING AND EXHAUST FAN CONTROL DETAIL

NOT TO SCALE



2 SHUNT TRIP CONTACTOR WIRING DIAGRAM

NOT TO SCALE



GENERAL NOTES APPLICABLE TO THIS DETAIL:
A. SEE PANEL SCHEDULES FOR CIRCUITS THAT ARE TO BE CONTROLLED BY EACH CONTACTOR.
B. EACH CONTACTOR CONSTITUTES A CONTROL ZONE. ALTHOUGH NOT SPECIFICALLY SHOWN ON THIS DETAIL, PROVIDE MULTIPLE CONTACTORS WIRED IN PARALLEL WHEN THE NUMBER OF CIRCUITS IN A CONTROL ZONE EXCEEDS THE MAXIMUM NUMBER OF POLES AVAILABLE ON A SINGLE CONTACTOR. PROVIDE A MINIMUM OF 2 SPARE CONTACTOR POLES PER CONTROL ZONE.
C. ALL CONTACTORS SHALL BE PROVIDED WITH NORMALLY CLOSED CONTACTS. THE CONTACTORS SHALL BE DELIVERED FROM THE FACTORY WITH NORMALLY CLOSED CONTACTS OR WITH FIELD-CONVERTIBLE CONTACTS. THE CONTRACTOR SHALL FIELD-CONVERT CONTACTORS TO NORMALLY CLOSED WHEN FIELD-CONVERTIBLE NORMALLY OPEN CONTACTS ARE PROVIDED.
D. ANY LOCAL SWITCHING INDICATED ON THE PLANS SHALL BE ON THE LOAD SIDE OF THE CONTACTOR.
E. THE ELECTRICAL CONTRACTOR SHALL PROGRAM ALL TIMECLOCKS AND INDIVIDUAL DIGITAL TIMECLOCK CHANNELS. COORDINATE ALL ON, OFF, AND HOLIDAY SETTINGS WITH THE OWNER. INTERIOR CONTROL ZONES SHALL HAVE THE ASTRONOMIC FUNCTION FOR THE CHANNEL TURNED OFF. EXTERIOR CONTROL ZONES SHALL HAVE THE ASTRONOMIC FUNCTION FOR THE CHANNEL TURNED ON.
F. MOUNT TIMECLOCK, RELAYS, AND CONTACTORS ADJACENT TO THE ASSOCIATED PANELBOARD(S). ALL CONTACTORS AND RELAYS SHALL BE PROVIDED WITH INDIVIDUAL ENCLOSURES. AT THE CONTRACTOR'S OPTION, OPEN RELAYS AND CONTACTORS ARE PERMITTED WHEN MOUNTED WITHIN A COMMON ENCLOSURE.
G. COORDINATE MOUNTING LOCATION OF OVERRIDE SWITCH WITH THE OWNER.
H. PROVIDE TO THE OWNER A VOLUNTARY BID ALTERNATE TO UTILIZE A RELAY PANEL WITH A DIGITAL TIMECLOCK, LOW VOLTAGE EXTERIOR PHOTOSENSOR, AND LOW VOLTAGE OVERRIDE SWITCH IN LIEU OF THE COMPONENTS SHOWN WITHIN THIS DETAIL.

1 LIGHTING CONTROL DETAIL

NOT TO SCALE

PAUL DHANENS • ARCHITECT

ARCHITECT

PAUL DHANENS
NO. C-23843
RENEWAL
STATE OF CALIFORNIA

5100 CALIFORNIA AVE., SUITE 107
BAKERSFIELD, CALIFORNIA 93309
TELEPHONE: (661) 324-8336
FACSIMILE: (661) 324-8337

CONSULTANT

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NOTICE TO CONTRACTORS
Written dimensions on these drawings shall take precedence over scaled dimensions. Contractor shall verify and be responsible for confirming all dimensions and shall notify the architect immediately of any descrepancies or field variations discovered.

PROJECT

TENANT IMPROVEMENT FOR

Steak 'n Shake — FAMOUS FOR — STEAKBURGERS

1966 WEST AVE L
LANCASTER, CA

DATE	ISSUED FOR
9-24-18	BUILDING DEPT SUBMITTAL
6-26-19	

NO.	REVISIONS

ELECTRICAL

FILE NAME: 2366A2-0

SHEET

E-401