

GENERAL NOTES

- 1- ALL WIRING SHALL BE IN ACCORDANCE WITH CALIFORNIA ELECTRICAL CODE (CEC) AND REGULATIONS. REFERENCE APPLICABLE EDITIONS UNDER "APPLICABLE CODES AND REGULATIONS".
- 2- WIRING SHALL NOT BE LOOPED THROUGH DEVICES UPON TERMINATION. WIRE MUST BE CUT FOR IN AND OUT RUNS PRIOR TO DEVICE TERMINATION.
- 3- ALL CONDUITS SHALL BE A MINIMUM OF 3/4" CONDUIT SIZES SHALL BE IN ACCORDANCE WITH C.E.C., CHAPTER 9 TABLES AND EXAMPLES ON CONDUIT FITS.
- 4- ALL DEVICES IN THE ALARM SYSTEM SHALL BE COMPATIBLE AND INSTALLED TO THE MANUFACTURERS SPECIFICATIONS.
- 5- AUDIBILITY OF ALARM SHALL HAVE A SOUND LEVEL AT LEAST 15 DB ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR 5 DB ABOVE THE MAXIMUM SOUND LEVEL, HAVING A DURATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER, MEASURED 5 FT (1.5 M) ABOVE THE FLOOR IN THE AREA REQUIRED TO BE SERVED BY THE SYSTEM USING THE AWEIGHTED SCALE (dBA) PER NFPA 72 18.4.3.1
- 6- ALL STROBE APPLIANCES SHALL BE SYNCHRONIZED IN ACCORDANCE WITH NATIONAL FIRE ALARM CODE (NFPA 72), REFERENCE APPLICABLE EDITIONS UNDER "APPLICABLE CODES AND REGULATIONS".
- 7- SMOKE DETECTOR AND HEAT DETECTOR LOCATIONS ARE BASED ON SMOOTH CEILING WITH MAXIMUM HEIGHT OF 10 FEET UNLESS OTHERWISE NOTED.
- 8- STROBE LOCATIONS ARE BASED ON 10 FOOT CEILING HEIGHTS AND ARE INSTALLED IN ACCORDANCE WITH NATIONAL FIRE ALARM CODE (NFPA 72) UNLESS OTHERWISE NOTED. REFERENCE APPLICABLE EDITIONS UNDER "APPLICABLE CODES AND REGULATIONS".
- 9- WALL-MOUNTED STROBE APPLIANCES SHALL BE MOUNTED SUCH THAT THE ENTIRE LESS IS NOT LESS THAN 80 INCHES AND NOT GREATER THAN 96 INCHES ABOVE FINISHED FLOOR LEVEL.
- 10- OPERABLE PORTION OF MANUAL PULL STATIONS SHALL BE MOUNTED AT 48" ABOVE FINISHED FLOOR LEVEL.
- 11- FIRE ALARM SIGNAL SHALL MEET ANSI Y34-11, AUDIBLE EMERGENCY EVACUATION SIGNAL (TEMPORAL PATTERN).
- 12- INITIATION DEVICE CIRCUITS ARE RATED POWER LIMITED. MINIMUM RECOMMENDED WIRE SIZE IS LISTED.
- 13- CONTROL CIRCUITS ARE NON-POWER LIMITED. MINIMUM RECOMMENDED WIRE SIZE TO BE DETERMINED BY CIRCUIT LOAD.
- 14- WHERE SHIELDED CABLE IS USED, THE SHIELD SHALL BE CONTINUOUS AND GROUNDED ONLY AT THE RESPECTIVE CONTROL PANEL.
- 15- REFER TO RESPECTIVE CATALOG CUT SHEETS FOR ELECTRICAL MOUNTING HARDWARE.
- 16- T-TAPPING OR PARALLEL BRANCHING OF ADDRESSABLE INITIATION DEVICE CIRCUITS IS PERMITTED ON CLASS B CIRCUITS ONLY. T-TAPPING IS PROHIBITED ON ANY OTHER CIRCUITS (I.E. NAC, IDC, PANEL NETWORK WIRING).
- 17- PHOTOELECTRIC DETECTORS SHALL NOT BE WITHIN 36" OF DIRECT AIR STREAM SUPPLY AIR OUTLETS.
- 18- UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE PERFORMED IN THE PRESENCE OF THE AFI.
- 19- ALL DEVICES OF THE FIRE ALARM SYSTEM SHALL BE APPROVED AND LISTED BY THE CALIFORNIA STATE FIRE MARSHAL.
- 20- AUDIBILITY WILL BE DETERMINED BY THE FIELD FIRE MARSHAL.
- 21- FIRE ALARM INSTALLER IN CHARGE OF THIS PROJECT MUST BE "STATE CERTIFIED" WITH THE DIVISION OF APPRENTICESHIP STANDARDS, AND SHALL FURNISH TO CARD UPON REQUEST LOCAL AFI.
- 22- INITIATION AND NOTIFICATION CIRCUITS SHALL BE CLEARLY IDENTIFIED AT ALL JUNCTION BOXES AND TERMINATIONS.
- 23- THE TELEPHONE NUMBER OF THE 24 HOUR MONITORING SERVICE SHALL BE PLACED ON THE DOOR OF THE PANEL OR NEXT TO THE PANEL ON THE WALL.
- 24- CIRCUIT BREAKER FOR THE FIRE ALARM PANEL SHALL BE RED IN COLOR AND HAVE A LOCK OUT ON IT.
- 25- SPRINKLER FIRE BELL SHALL BE ON ITS OWN BREAKER SO THAT WHEN PANEL HAS AC FAIL THE BELL WILL CONTINUE TO FUNCTION.
- 26- ALL NOTIFICATION APPLIANCES INSTALLED WITHIN THIS PROJECT SHALL PROVIDE A DISTINCTIVE THREE-PULSE TEMPORAL PULSE FIRE ALARM SIGNAL IN ACCORDANCE WITH SECTION 5-7.2 OF NFPA.
- 26- 48 HOUR ADVANCE NOTICE REQUIRED FOR ALL INSPECTIONS.
- 27- ACCESS KEYS FOR FACP AND PULSTATIONS SHALL BE PROVIDED AND LABELED FOR PLACEMENT IN THE KNOX BOX.
- 28- A 24 HOUR LISTED FIRE MONITORING SERVICES SHALL RECEIVE SIGNALS.
- 29- ROOM IN WHICH FACP IS LOCATED SHALL BE LABEL ACCORDING TO PD POLICY.

TACO BELL RESTAURANT

12265 WOODSIDE AVE LAKESIDE, CA 92040

SPRINKLER MONITORING SYSTEM

SCOPE OF WORK

INSTALLATION OF ONE SPRINKLER MONITORING PANEL PER THESE DRAWINGS. INSTALL ONE HORN-STROBE AND ONE PULL STATION IN KITCHEN AREA. INSTALL ONE SMOKE DETECTOR ABOVE THE PANEL. MONITOR ALL SPRINKLER DEVICES AND TWO DUCT DETECTORS INSTALLED BY MECHANICAL CONTRACTOR. MECHANICAL CONTRACTOR TO PERFORM FAN SHUTDOWN VIA DUCT DETECTORS. UPON COMPLETION OF THE INSTALLATION A COMPLETE PRETEST SHALL BE PERFORM TO VERIFY FUNCTIONALITY OF THE SYSTEM. IF FUNCTIONALITY IS SATISFACTORY, THEN THE PROPER DOCUMENTATION SHALL SUBMITTED TO THE AFI PRIOR TO SCHEDULING A FINAL INSPECTION.

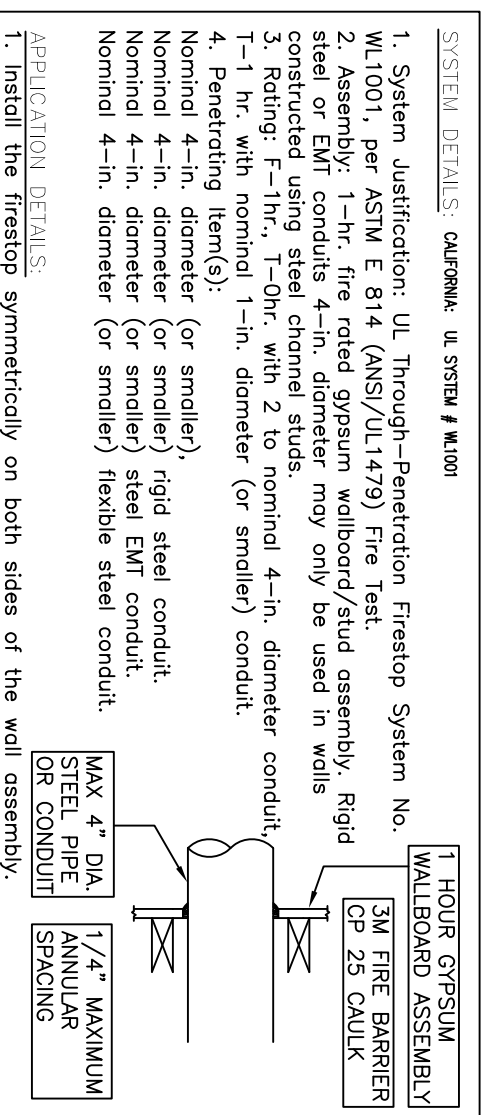
CODE ANALYSIS TABLE

BUILDING (NEW OR EXISTING):	NEW
BUILDING CLASS:	B
CONSTRUCTION TYPE:	TYPE V
NUMBER OF LEVELS/STORIES:	1 STORY BLDG
BUILDING TOTAL SQUARE FOOTAGE:	1,718 S.F.
TYPE OF SYSTEM:	SPRINKLER MONITORING SYSTEM
BUILDING IS FULLY SPRINKLERED:	YES
MECHANICAL UPGRADE:	YES
RPOA (BACKFLOW DEVICE):	YES

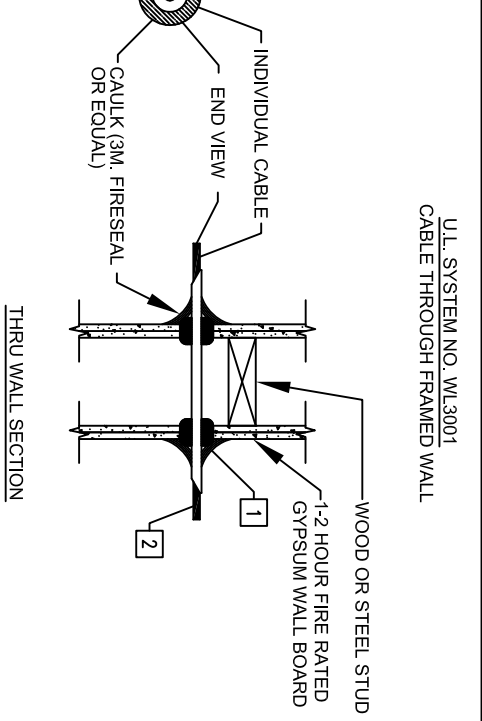
SEQUENCE OF OPERATIONS

ACTION:	ACTIVATE COMMON ALARM SIGNAL INDICATOR	ACTIVATE AUDIBLE ALARM SIGNAL	ACTIVATE SUPERVISORY SIGNAL INDICATOR	ACTIVATE AUDIBLE SUPERVISORY SIGNAL	ACTIVATE COMMON TROUBLE SIGNAL INDICATOR	ACTIVATE COMMON TROUBLE SIGNAL	NOTIFICATION APPLIANCE CIRCUITS ACTIVATED	SHUT DOWN OF ASSOCIATED SUPPLY (SEE NOTE #1)	TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION
MANUAL PULL STATION	YES	YES	NO	NO	NO	NO	YES	NO	YES	NO	NO
SMOKE DETECTOR ABOVE THE PANEL	YES	YES	NO	NO	NO	NO	YES	NO	YES	NO	NO
DUCT DETECTOR MONITOR	NO	NO	YES	NO	NO	NO	NO	YES	NO	YES	NO
VALVE-FLOW SWITCH ACTIVATED	YES	YES	NO	NO	NO	NO	YES	NO	YES	NO	NO
SPRINKLER VALVE CLOSED	NO	NO	YES	NO	NO	NO	NO	NO	NO	YES	NO
SLC LOOP OPEN	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	YES
SLC LOOP SHORT	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	YES
SLC LOOP EARTH GROUND	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	YES
NOTIFICATION CIRCUIT OPEN	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	YES
NOTIFICATION CIRCUIT SHORT	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	YES
NOTIFICATION CIRCUIT EARTH GROUND	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	YES
LOW BATTERY	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	YES
AC FAIL	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	YES

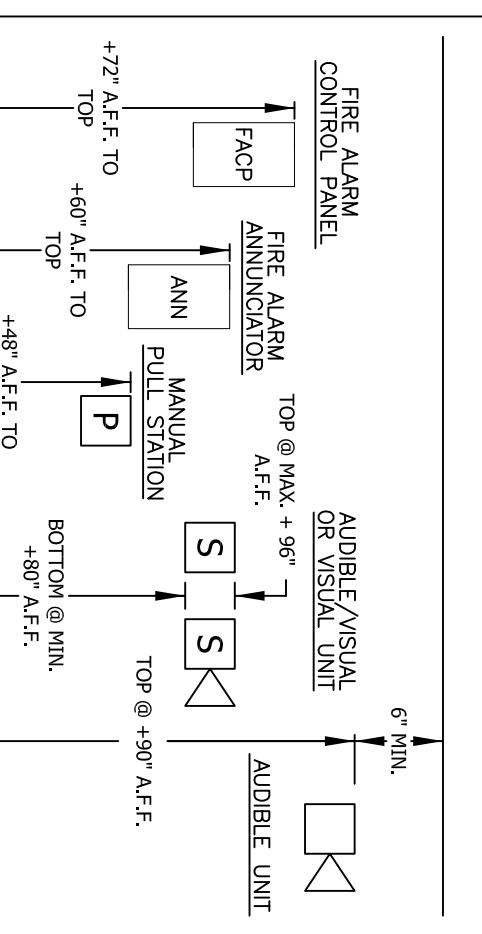
NOTE #1: SUPPLY FAN SHUTDOWN PROVIDED BY MECHANICAL CONTRACTOR



1. System Identification: UL Through-Penetration Firestop System No. W1001, per ASTM E 814 (ANSI/UL1479) Fire Test.
2. Assembly: 1-Hr. fire rated gypsum wallboard/stud assembly. Rigid steel or EMT conduits 4-in. diameter may only be used in wells.
3. Rating: F-1hr., T-0hr. with 2 to nominal 4-in. diameter conduit.
4. 1-1hr. with nominal 1-in. diameter (or smaller) conduit.
5. Nominal 4-in. diameter (or smaller) rigid steel conduit.
6. Nominal 4-in. diameter (or smaller) flexible steel conduit.
7. Nominal 4-in. diameter (or smaller) steel EMT conduit.



1. GASKET OR PUTTY SEAL MATERIAL INSTALLED TO COMPLETE SEAL BOTH SIDES OF WALL AND WITH A MINIMUM 7/8" DIAMETER BEAD EDGES FROM EACH SIDE OF THE WALL CENTER OF CABLE FITS
2. DIAMETER OF GASKET/PUTTY SEALING MATERIAL TO BE 3/8" TO 5/8" LARGER THAN OUTSIDE OF CABLE



DRAWING SHEET INDEX

SHEET	TITLE SHEET	SHEET CONTENTS
FA-0.0	FIRST FLOOR PLAN	SEQ OF OPS, NOTES, DETAILS, CODE ANALYSIS, LEGEND & LIST OF MATERIAL, SCOPE OF WORK, WIRE LEGEND
FA-1.0	FACP WIRING DETAIL	SITE PLAN, PANEL BATTERY & VOLTAGE DROP CALCULATION, SYSTEM RISER
FA-2.0		

LEGEND & LIST OF MATERIALS

SYMBOL	QTY	DESCRIPTION	MANUFACTURE	MODEL	CFM#	BACKBOX TYPE
[FACP]	1	FIRE ALARM SYSTEM CONTROL PANEL	FIRE LITE	MS-25	7165-0075-0224	N/A
[BATT]	2	12V, ZAH RECHARGEABLE LEAD-ACID BATTERIES	FIRE LITE	BPACT-2/2UD BATT-1270	7165-0075-0224	INCLUDED
[P]	1	INTELLIGENT MANUAL PULL STATION	FIRE LITE	BC-1A1X	7150-0075-0184	SINGLE GANG
[M]	1	INTELLIGENT PHOTOELECTRIC SMOKE DETECTOR	HOMEWELL	HFS-P	7272-1130-0280	45 BOX
[M]	5	ADDRESSABLE MINI-MONITOR MODULE	HOMEWELL	HFS-MM	7300-0075-0185	45 BOX
[M]	2	DUCT DETECTOR (BY OTHERS, FOR REFERENCE ONLY)	--	--	--	--
[M]	1	MULTI-CANDELA WALL HORN/ STROBE	SYSTEM SENSOR	P2R	7125-1633-0188	4 1/4 W/ 1-GANG
[M]	1	SPRINKLER FLOW SWITCH (BY OTHERS)	MUST BE CFM# LISTED	--	--	--
[M]	1	BACKFLOW SWITCH (BY OTHERS)	MUST BE CFM# LISTED	--	--	--

WIRE LEGEND

PURPOSE	WIRE TAG	WIRE SIZE/TYP	WIRING CLASS	WIRING STYLE
SLC LOOP/ ZONE WIRING	D	18/4 FPLR	CLASS B	STYLE 4
NAC CIRCUITS	V	14/2 FPLR	CLASS B	STYLE Y
UNDERGROUND CIRCUITS**	U	18/4 UNDERGROUND RATED PPL CABLE IN CONDUIT	CLASS B	STYLE Y

**CONDUIT SHALL BE A MINIMUM SIZE OF 3/4"

APPLICABLE CODES AND REGULATIONS

- CALIFORNIA BUILDING CODE, TITLE 24 CALIFORNIA CODE OF REGULATIONS (CCRA)
- 2013 CALIFORNIA BUILDING CODE (CBC), TITLE 24 PART 2
- 2013 CALIFORNIA ELECTRICAL CODE (CEC), TITLE 24 PART 3
- 2013 CALIFORNIA MECHANICAL CODE (CMC), TITLE 24 PART 4
- 2013 CALIFORNIA FIRE CODE (FC), TITLE 24 PART 9
- NATIONAL FIRE PROTECTION ASSOCIATION
- 2013 NFPA 72
- 2013 NFPA 70
- 2013 NFPA 90A

CENTRAL MONITORING STATION

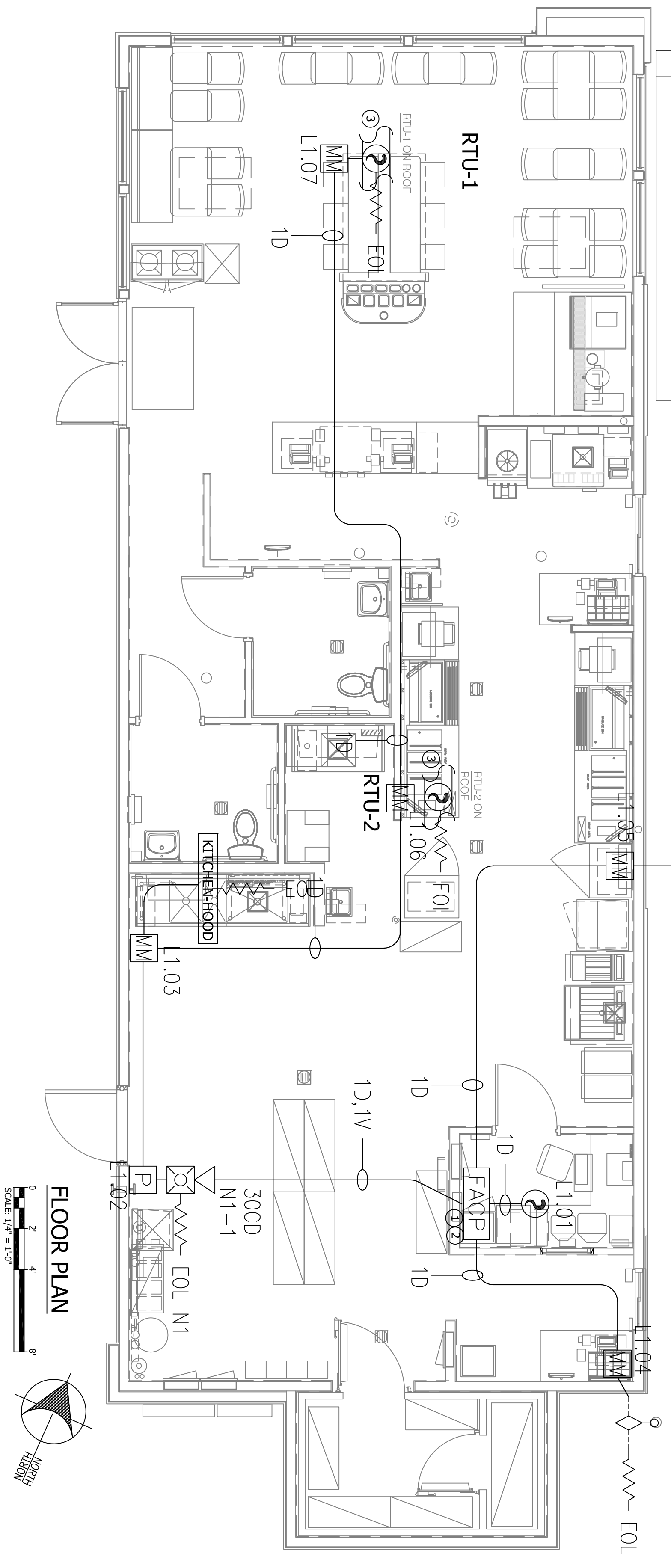
TRISTAR MONITORING, LLC
1255 GRAPPHITE DRIVE
CORONA, CA 92681
PHONE#: 951-273-1098

<p>SHEET NO. FA-0.0</p>	<p>SPRINKLER MONITORING SYSTEM TITLE SHEET</p>	<p>TACO BELL RESTAURANT 12265 WOODSIDE ROAD LAKESIDE, CA 92040</p>	<p>INSTALLATION COMPANY: ADDAX ELECTRIC PO BOX 21436 ELCAJON, CALIFORNIA 92021 CONTACT: JASON GANDY @ (619) 997-1972 C#10 #295999 EXPIRATION DATE: 07/21/2016</p>
------------------------------------	--	--	--

DESIGN COMPANY:
FUEGO ENGINEERING & DESIGN
P O BOX 212731
CHULA VISTA, CA 91921
OFFICE: (619) 966-3380
CELL: (619) 610-8637
carlos.oliveras@fuegoeng.com

DESIGN COMPANY:
FUEGO ENGINEERING & DESIGN

- KEY NOTES**
- INTERNET CONNECTION TO FACP PROVIDED BY CUSTOMER
 - 120VAC DEDICATED CIRCUIT TO FACP PROVIDED BY ELECTRICAL CONTRACTOR
 - DUCT DETECTOR FOR REFERENCE ONLY. SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR. WIRED TO MONITOR MODULE BY FIRE ALARM CONTRACTOR.



MS-25 Rev.2 Battery Calculation
Secondary Power Source Requirements

Device Type	Qty	Standby Current (amps)	Secondary Alarm Current (amps)
1. Control Panel	1	0.135000	0.135000
2. ANN-BUS Devices	0	0.037000	0.040000
3. Addressable SILC Devices	1	0.002270	0.006500
HFS-SP	5	0.003175	0.015875
BG-24C Devices	1	0.003175	0.003175
3. Auxiliary Devices	1	0.053000	0.135000
4. Notification Appliance Circuits	1	0.107000	0.107000
SPARE	0	0.000000	0.000000
Total Standby Load		0.230520	0.471750

MS-25 Rev.2 Battery Calculation
Secondary Power Source Requirements

Standby Load Current	Required Standby Time in Hours	Required Alarm Time in Minutes
0.23052 Amps	24 Hours	5.532 AH
0.47175 Amps	5 Minutes	0.040 AH
Total Current Load		5.572 AH
Multiply by the Derating Factor		6.69 AH
Total Ampere Hours Required		6.69 AH

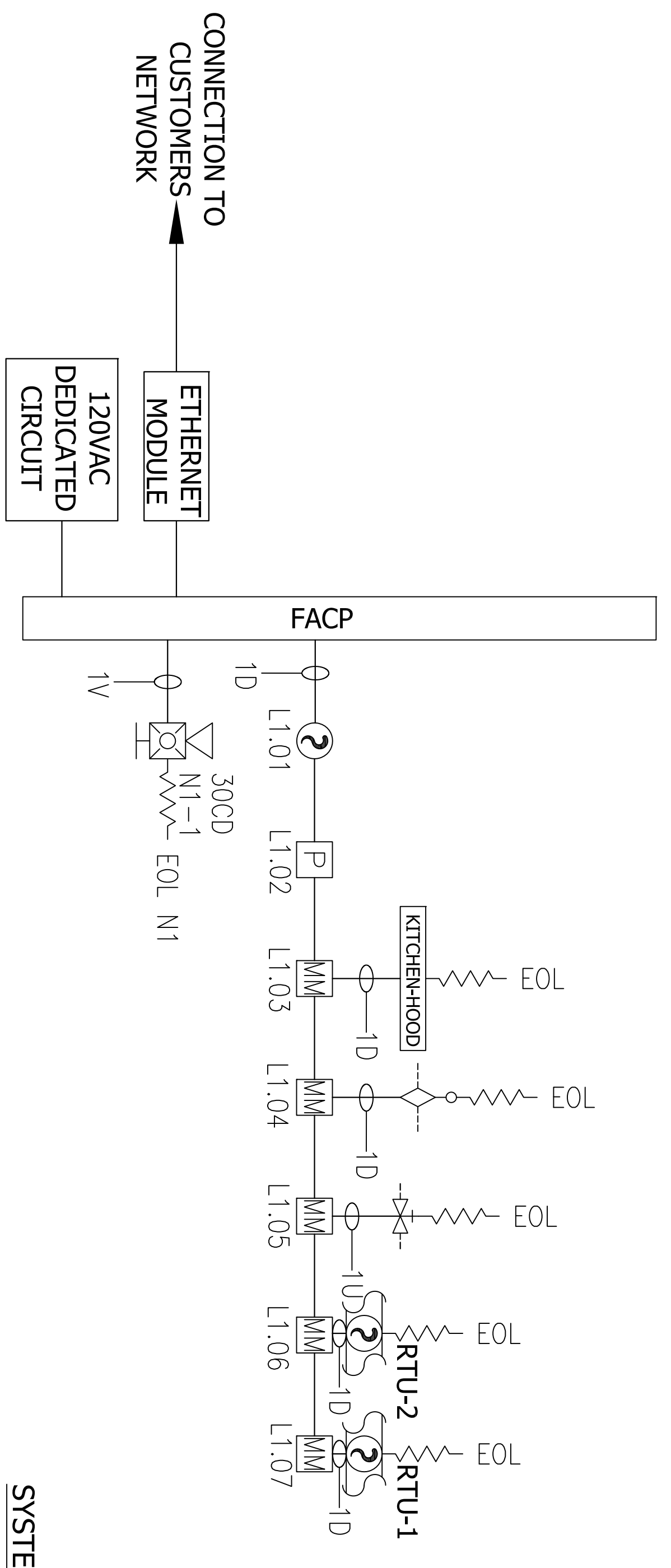
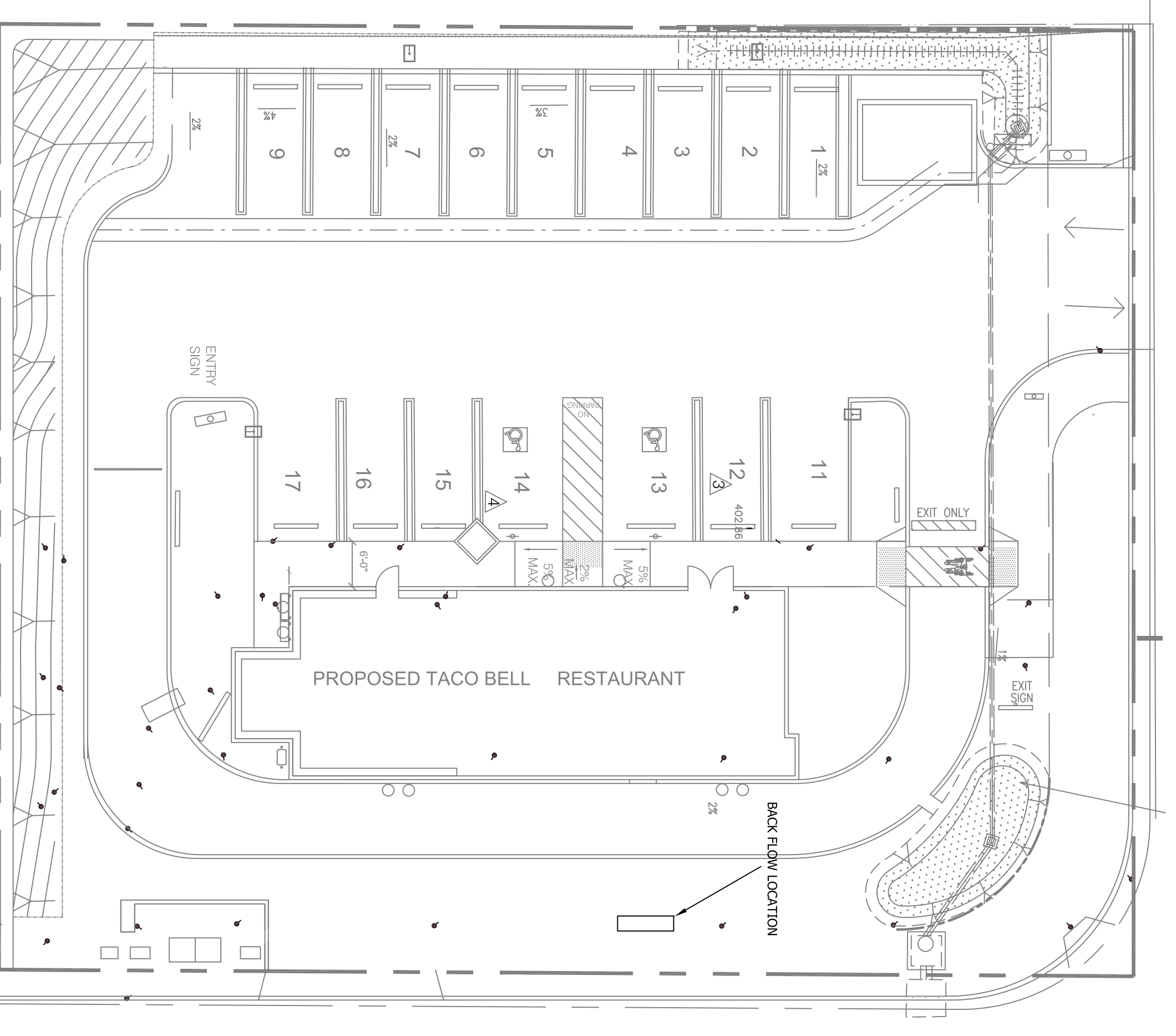
NOTIFICATION CIRCUIT SUMMARY

Notification Type	Current Draw	Circuit #
HORN-STROBE MODEL	107mA	1
(PZR) SYSTEM SENSOR HORN-STROBE	107mA	1
Circuit Total	107mA	1

FACP VOLTAGE DROP - FORMULA

VD = (WIRE RESISTANCE IN OHMS PER 1000 FT X WIRE LENGTH X 2 X TOTAL CURRENT) / (AREA X 100)	VD PERCENTAGE = (VD/20.4 X 100)
14 AWG = 3.07 OHM PER 1000 FT	0.01

PANEL BATTERY & VOLTAGE DROP CALCULATION



SYSTEM RISER

SCALE: 1/4" = 1'-0"

FED ENGINEERING & DESIGN
FUEGO ENGINEERING & DESIGN
P.O. BOX 212731
CHULA VISTA, CA 91921
OFFICE: (619) 796-3380
CELL: (619) 810-0837
carlos.silveras@fuedesign.com

TRIBON COMPANY

FA-0.0
NICET LEVEL III
CERT # 84003
Micki M...
DITY PLAN CHECK NUMBER:

SPRINKLER MONITORING SYSTEM
TITLE SHEET

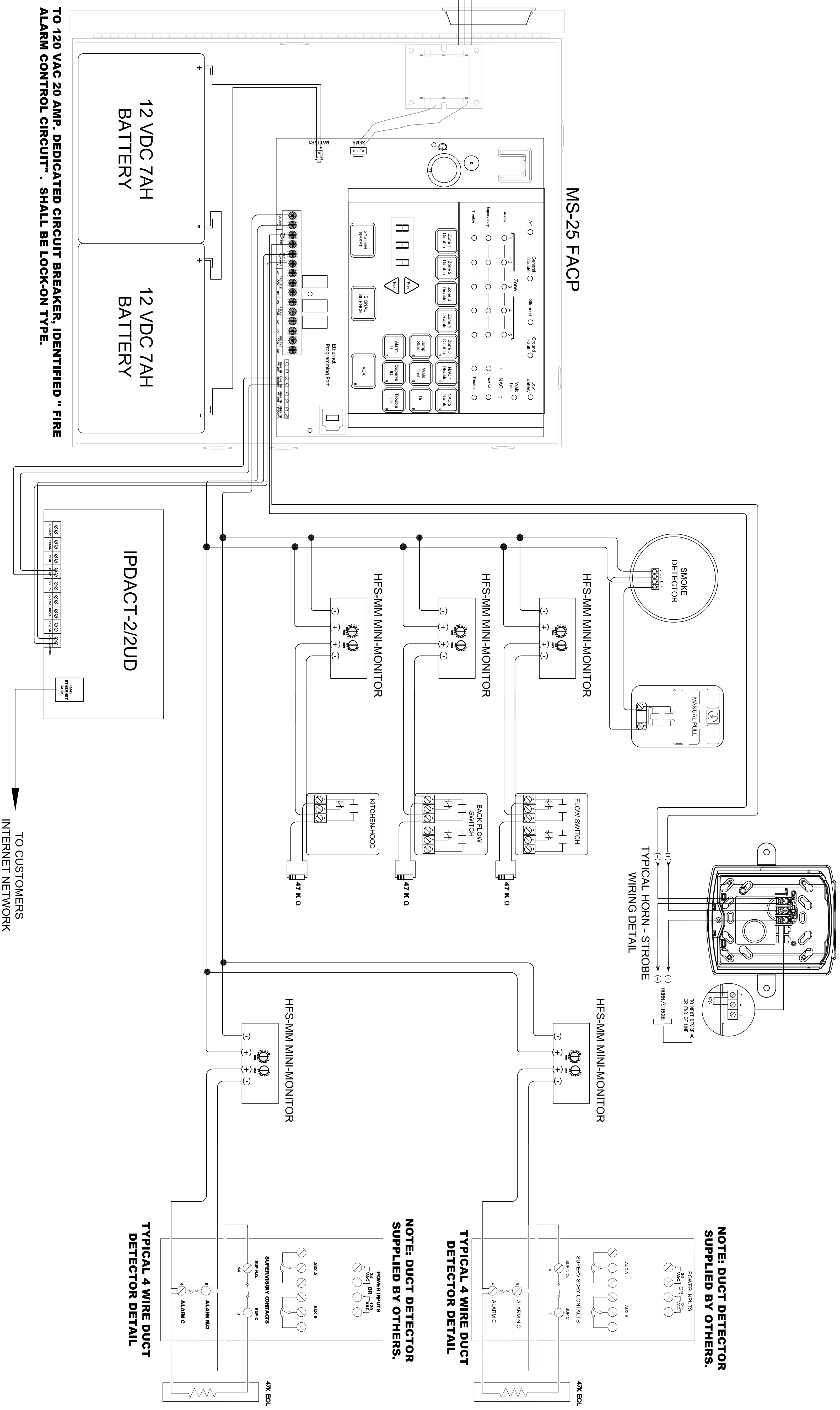
TACO BELL RESTAURANT
12265 WOODSIDE ROAD
LAKESIDE, CA 92040

Revisions:

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

INSTALLATION COMPANY:
ADDAX ELECTRIC
PO BOX 21436
ELCAJON, CALIFORNIA 92021
CONTACT: JASON GANDY @ (619) 997-1972
C-10 #295999
EXPIRATION DATE: 09/26/2016

120VAC
DEDICATED
CIRCUIT BY
OTHERS



TO 120 VAC 20 AMP, DEDICATED CIRCUIT BREAKER, IDENTIFIED " FIRE ALARM CONTROL CIRCUIT", SHALL BE LOCK-ON TYPE.


TO CUSTOMERS
INTERNET NETWORK

NOTE: DUCT DETECTOR SUPPLIED BY OTHERS.

NOTE: DUCT DETECTOR SUPPLIED BY OTHERS.

NOTE: DUCT DETECTOR SUPPLIED BY OTHERS.

INSTALLATION COMPANY:



ADDAX ELECTRIC
PO BOX 21436
ELCAJON, CALIFORNIA 92021
CONTACT: JASON GANDY @ (619) 997-1972
C-10 #295999
EXPIRATION DATE: 07/21/2016

NO.	DATE	REVISIONS
1.	05-12-2015	DATE: 05-12-2015
2.		NAME:
3.		DATE:
4.		
5.		
6.		
7.		
8.		
9.		
10.		

TACO BELL RESTAURANT
12265 WOODSIDE ROAD
LAKESIDE, CA 92040



SPRINKLER MONITORING SYSTEM
FACP WIRING DETAIL

SHEET NO. **FA-2.0**
CITY PLAN CHECK NUMBER:

DESIGN COMPANY:
FUEGO ENGINEERING & DESIGN
P.O. BOX 212731
CHULULA VISTA, CA 91921
OFFICE: (619) 796-3380
CELL: (619) 610-8637
carlo.silveras@fuegoeng.com

FA-2.0

DESIGN COMPANY:
FUEGO ENGINEERING & DESIGN
P.O. BOX 212731
CHULULA VISTA, CA 91921
OFFICE: (619) 796-3380
CELL: (619) 610-8637
carlo.silveras@fuegoeng.com

FA-2.0

DESIGN COMPANY:
FUEGO ENGINEERING & DESIGN
P.O. BOX 212731
CHULULA VISTA, CA 91921
OFFICE: (619) 796-3380
CELL: (619) 610-8637
carlo.silveras@fuegoeng.com