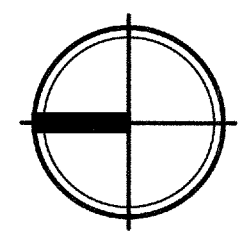
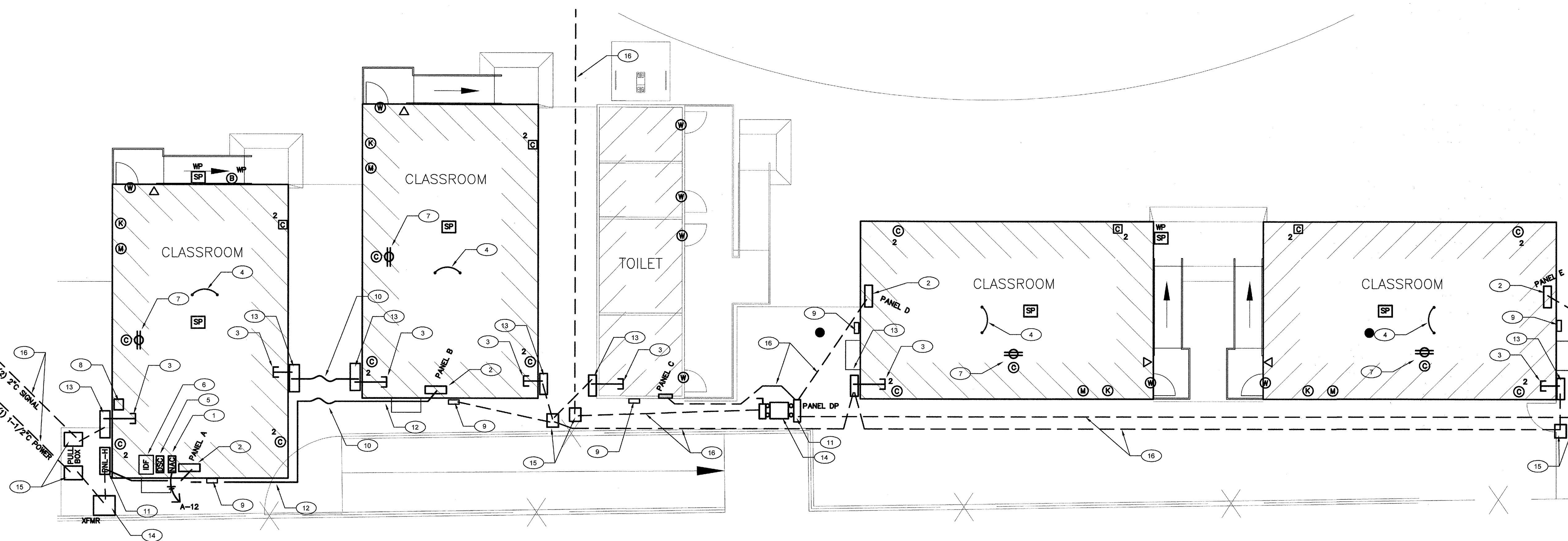


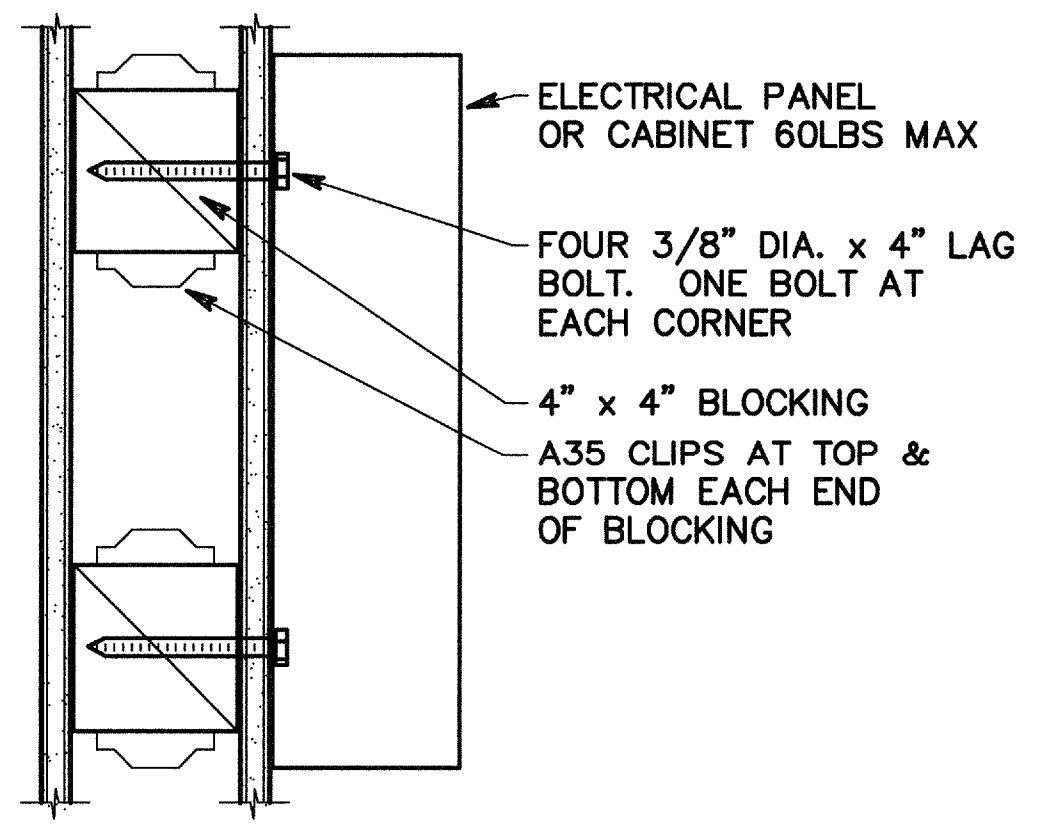
120
80
40
0
30
60
90
120
0
20
40
60
80
100
120
0
20
40
60
80
100
120
0
20
40
60
80
100
120
0
20
40
60
80
100
120



POWER AND SIGNAL PLAN
4 RELOCATABLE CLASSROOMS 1 TOILET BLDG

PANEL A		120/240V 1Ø 3W		REAR	FLUSH
		100 AMP MAIN BREAKER		10,000 AIC	NEMA 1
EXT	SERVING	NOTE	AVG	AVG	SERVING
			ØA	ØB	
1	RECEPTACLE	12/12 20/1	0.7(7.1)	60/2 8 10	HVAC 3.5 TON
3	RECEPTACLE	12/12 20/1		20/1 12/12	SPACE
6	SPACE	12/12 20/1		20/1 12/12	SPACE
7	SPACE	12/12 20/1	0.8	20/1 12/12	SPACE
8	INT/EXT LIGHTS	12/12 20/1	0.8(0.1)	20/1 12/12	2 FIRE ALARM NAC PANEL
11	INT LIGHTS	12/12 20/1		20/1 12/12	2 FIRE ALARM NAC PANEL
			8.7KVA	8.7KVA	
			72A	72A	

NOTES:
1. PROVIDE CIRCUIT DIRECTORY INSIDE PANEL.
2. PROVIDE NEW WATCHING BREAKER AND MECHANICAL LOCK ON BREAKER PER NFPA 72, 10.6.5.2: DEDICATED CIRCUIT, MECHANICALLY PROTECTED (LOCKOUT), RED MARKING, ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL, ID'D AS FIRE ALARM, EMERGENCY COMMUNICATIONS OR FIRE ALARM/ECS. LOCATION OF CIRCUIT DISCONNECT (BREAKER) PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT.



1 SURFACE MOUNTED IDF DETAIL
N.T.S

FIRE ALARM SEQUENCE OF OPERATIONS

	MANUAL PULL STATION	SMOKE DETECTORS:	HEAT DETECTORS:	DUCT DETECTOR	FIRE SPRINKLER WATERFLOW SWITCH	FIRE SPRINKLER TAMPER SWITCH	POST INDICATOR VALVE	WIRING CONDITIONS:	INITIATING DEVICE CIRCUIT (DC)-	NOTIFICATION APPLIANCE CIRCUIT (NAC)-	LOSS OF 120VAC POWER	SIGNAL SILENCE	RESET FAULT
ACTIVATE ALARM FAULT	X												
ACTIVATE ALARM AT REMOTE ANNUNCIATOR	X												
ACTIVATE TROUBLE SIGNAL AT FAULT	X												
ACTIVATE TROUBLE SIGNAL AT REMOTE ANNUNCIATOR	X												
ACTIVATE SUPERSTANT SIGNAL AT FAULT	X												
ACTIVATE SUPERSTANT SIGNAL AT REMOTE ANNUNCIATOR	X												
SEND ALARM OFF-SITE VIA COMMUNICATOR	X												
SEND SUPERSTANT SIGNAL OFF-SITE VIA COMMUNICATOR	X												
ACTIVATE ALARM/USBLE SIGNALS	X												
ACTIVATE WATER FLOW BELL	X												
ACTIVATE WATER FLOW BELL	X												
SEVERELY FAULT SIGNAL	X												
ELEVATOR SHUNT TRIP	X												
SHUTDOWN HVAC UNITS	X												
SHUT FIRE/SMOKE DAMPERS	X												
SHUT FIRE DOORS	X												
ACTIVATE WATER FLOW BELL	X												
ACTIVATE WATER FLOW BELL	X												
ACTIVATE WATER FLOW BELL	X												
DEACTIVATE USBLE SIGNALS	X												
RESET 24V 4-WIRE LEWIS	X												
SYSTEM MANUAL	X												

SHEET NOTES

- APPROXIMATE LOCATION FOR NEW FIRE ALARM SIGNAL AND AUDIO BOOSTER PANEL. PROVIDE 110V POWER CONNECTION AND DEDICATED CIRCUIT FROM PANEL A-12. SEE DRAWING E-3 FOR MORE INFORMATION.
- PROVIDE POWER CONNECTION FOR RELOCATABLE BUILDING PRE-WIRED PANEL. SEE SINGLE LINE DIAGRAM ON DRAWING E-4.
- PROVIDE 2" EMT BETWEEN BUILDINGS AND STUB INTO BUILDING CEILING CAVITY AS REQUIRED. PULL BACK PA/IC/TELE CABLE TO ADMIN OFFICE MASTER EQUIPMENT FOR NEW DEVICES CONNECTION. SEE RISER DIAGRAM.
- PROVIDE #4 COPPER GROUNDING CONDUCTOR AND BOND TO EACH SECTION STRUCTURAL STEEL BEAM. FIELD VERIFY EXACT LOCATION WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.
- NEW SECURITY ALARM PANEL AND SYSTEM. PROVIDE 110V POWER CONNECTION AND INTERCONNECTION TO (3) MASTER EQUIPMENT IN ADMIN OFFICE. FIELD VERIFY EXACT LOCATION AND REQUIREMENT WITH OWNER PRIOR TO INSTALLATION. SEE RISER DIAGRAM.
- NEW IDF AND CABINET SURFACE MOUNTED BELOW CEILING. PROVIDE 110V POWER CONNECTION, DATA SWITCH, FO CABLE AND DATA CABLE PATCH PANEL FOR NEW DATA OUTLET CONNECTION. PROVIDE FO CABLE TO (E) MOF IN ADMIN OFFICE FOR INTERCONNECTION. FIELD VERIFY EXACT LOCATION AND REQUIREMENT WITH OWNER PRIOR TO INSTALLATION. SEE RISER DIAGRAM.
- DATA AND POWER OUTLET AT CEILING FOR SMART BOARD. FIELD VERIFY EXACT LOCATION AND REQUIREMENT WITH OWNER PRIOR TO INSTALLATION. SEE RISER DIAGRAM.
- PROVIDE 50 PAIR PUNCH DOWN BLOCK AND SURFACE MOUNTED BELOW CEILING FOR INTERCOM / TELEPHONE WIRING TERMINATION.
- PROVIDE NEW FA PULL BOX. SEE DRAWING E-3 FOR MORE INFORMATION.
- PROVIDE FLEX CONDUIT RACEWAY BETWEEN BUILDINGS AS REQUIRED.
- NEW FREE STAND MOUNTED DIST. PANEL. PROVIDE NEW CONDUITS AND FEEDERS FOR NEW PRE-WIRED PANEL POWER CONNECTION. SEE SINGLE LINE DIAGRAM.
- NEW SURFACE MOUNTED POWER CONDUITS AND FEEDERS. SEE SINGLE LINE DIAGRAM.
- NEW 24"x24"x4" NEMA1 SIGNAL TO SURFACE MOUNTED ON EXTERIOR WALL. PROVIDE (2) 2" STUB INTO BUILDING ATTIC CAVITY. SEE SIGNAL RISER DIAGRAM.
- NEW PAD MOUNTED STEP DOWN TRANSFORMER. PROVIDE CONCRETE PAD AND DISCONNECT SWITCH. SEE SINGLE LINE DIAGRAM.
- PROVIDE NEW PULL BOXES FOR NEW UNDERGROUND POWER AND SIGNAL CONDUITS. SAW CUT AND PATCH EXISTING GROUND AS REQUIRED. SEE RISER DIAGRAM.
- TRENCHING AND INSTALL NEW UNDERGROUND POWER AND SIGNAL CONDUITS. SAW CUT AND PATCH EXISTING GROUND AS REQUIRED. SEE RISER DIAGRAM.

SIGNAL AND COMM. LEGEND

- SECURITY ALARM SYSTEM**
- (DSC) DIGITAL SECURITY ALARM CONTROL PANEL. MODEL SONTROL (4420N). INTERFACE WITH EXISTING BUILDING MASTER SECURITY ALARM PANEL AS REQUIRED.
 - (K) LO2 KEYPAD - MATCH EXISTING EQUIPMENT AS REQUIRED.
 - (M) DUAL TECHNOLOGY CEILING MOUNT DETECTOR. MATCH EXISTING EQUIPMENT AS REQUIRED.
 - (B) EXTERIOR BELL (SREX) - DISCONNECT WITH WEATHERPROOF BACKBOX AND TAMPER SWITCH.
 - (W) DOOR CONTACT SWITCH. RECESS ABOVE DOOR JAMB AT OPEN SIDE.
 - B- INDOOR SECURITY ALARM CABLE. WEST PENN #241
 - B1- INDOOR SECURITY ALARM CABLE. WEST PENN #40224
 - B1- OUTDOOR SECURITY ALARM CABLE. WEST PENN #40224
- COMMUNICATION (TELEPHONE/INTERCOM) SYSTEM**
- (HANSER/P PHONE - FIELD VERIFY MODEL NO. AND MATCH EXISTING MASTER EQUIPMENT AS REQUIRED.
 - (SP) CEILING SPEAKER - RAUAND JUS2221 W/ACC1000 Baffle. PROVIDE BACKBOX AND CEILING SUPPORT AS REQUIRED.
 - (SP) OUTDOOR SPEAKER - ATLAS #AP15 HORN W/FAIR AND LONELL (#384 FOR SURFACE, #876X FOR RECESS) BACK BOX W/SOLK GRILL AND 12 PAIR UNSHIELDED CABLE.
 - T- OUTDOOR TELE/IC CABLE. 22AWG SOLID COPPER 12 PAIR SHIELDED AND 12 PAIR UNSHIELDED CABLE.
 - T1- INDOOR TELEPHONE CABLE. CAT.3 22AWG SOLID COPPER 4UTP SHIELDED CABLE.
 - P1- OUTDOOR PA/IC CABLE - WEST PENN #40C-369
- DATA COMMUNICATION SYSTEM**
- (D2) DATA OUTLET - LEVITON CAT 5E (DUAL RECEPTACLE RED IN COLOR FOR ADMINISTRATIVE)
 - (C2) DATA OUTLET - LEVITON CAT 5E (DUAL RECEPTACLE BLUE IN COLOR FOR INSTRUCTIONAL)
 - FO- FIBER OPTIC CABLE VIA INNER DUCT WITH J-HOOK IN ATTIC AND 2" FOR OUTDOOR. SEE RISER DIAGRAM FOR MODEL NO.
 - C1- (ONE) CAT 5E 22AWG 4UTP. SEE RISER DIAGRAM FOR MODEL NO.
 - C2- (TWO) CAT 5E 22AWG 4UTP. SEE RISER DIAGRAM FOR MODEL NO.
- NOTES:**
- ALL SIGNAL CONDUCTORS CANNOT SPlice INSIDE PULL BOX. CONDUCTOR MUST BE CONTINUOUS RUN BETWEEN SIGNAL DEVICES BACK BOX OR ABOVE GROUND TERMINAL CABINET.

Ownership of Documents
This document, the ideas and designs incorporated herein, as an instrument of Professional Service is the property of Integrated Designs by SOMAM Inc. and is not to be used, in whole or in part for any other project without written authorization. © COPYRIGHT 2013

integrated designs by SOMAM, Inc.
ARCHITECTURE - INTERIOR DESIGN - CONSTRUCTION MANAGEMENT
8011 N. Fremont, Suite 530 - Fresno, California 93710
Phone (559) 439-0881 Fax (559) 439-0887 E-Mail: design@somam.com
www.integrateddesigns.com

Rev. Date: _____
Revision Description: _____

POWER AND SIGNAL PLAN

WASHINGTON MIDDLE SCHOOL
4 RELOCATABLE CLASSROOMS AND 1 TOILET BLDG
BAKERSFIELD CITY SCHOOL DISTRICT
1101 NOBLE AVE., BAKERSFIELD, CA 93305

Issue Date: 11/13/14
Date: 08/05/15
Designer: J CHONG
DR: J CHONG
PC: CUM

Agency Approval Stamp:
FILE #15-6
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
03-117025
AC: FLS: SS: AS
DATE: 07/31/2016
TRACKING # DSA TRACKING NO

CONSULTING ENGINEERS **Chong**

JOHN CHONG ENGINEERING
JOHN S. CHONG
E 14419
Exp. 6/30/2018
ELECTRICAL
STATE OF CALIFORNIA

2017 E. DECATUR AVE, FRESNO CA 93710
(559) 915-9966 • FAX 257-9421
jchong1neer@aol.com

Job No.: **5127**

Sheet No.: **E-2**

Release: