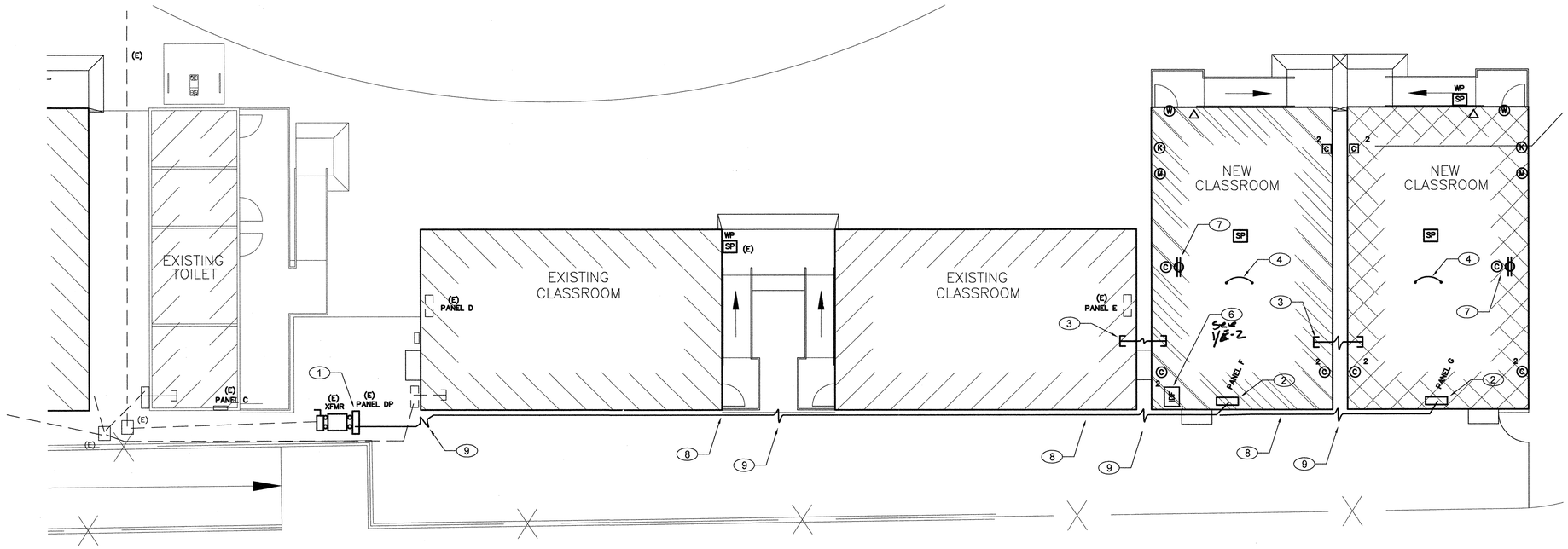
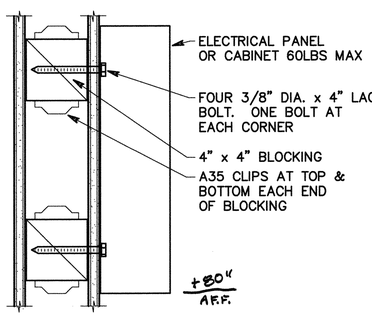


POWER AND SIGNAL PLAN

SCALE : 1/8" = 1' – 0"

(E)PANEL A					120/240V 1ø 3W				REAR			FLUSH
					100 AMP MAIN BREAKER				10,000 AIC			NEMA 1
CKT	SERVING	NOTE	GND	AVG	AMP POLE	TOTAL LOAD KVA ØA	ØB	AMP POLE	AVG	GND	NOTE	SERVING	CKT
1	RECEPTACLE		12	12	20/1	0.7	7.1	60/2	8	10		HVAC 3.5 TON	2
3	RECEPTACLE		12	12	20/1	0.7	7.1						4
5	SPACE		12	12	20/1			20/1	12	12		SPACE	6
7	SPACE		12	12	20/1			20/1	12	12		SPACE	8
9	INT/EXT LIGHTS		12	12	20/1	0.9		20/1	12	12		SPACE	10
11	INT LIGHTS		12	12	20/1		0.8	20/1	12	12	2	FIRE ALARM NAC PANEL	12
						8.7KVA	8.7KVA						
						72A	72A						

NOTES:
1. PROVIDE CIRCUIT DIRECTORY INSIDE PANEL.
2. PROVIDE NEW MATCHING 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

	ACTIVATE ALARM FACP	ACTIVATE ALARM AT REMOTE ANNUNCIATOR	ACTIVATE TROUBLE SIGNAL AT FACP	ACTIVATE TROUBLE SIGNAL AT REMOTE ANNUNCIATOR	ACTIVATE SUPERVISORY SIGNAL AT FACP	ACTIVATE SUPERVISORY SIGNAL AT REMOTE ANNUNCIATOR	SEND ALARM OFF-SITE VIA COMMUNICATOR	SEND SUPERVISORY SIGNAL OFF-SITE VIA COMMUNICATOR	ACTIVATE AUDIBLE/VISIBLE SIGNALS	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	RESET 120VAC MONITORED DEVICES	DEACTIVATE ALL OUTPUTS	DEACTIVATE AUDIBLE SIGNALS	DEACTIVATE VISIBLE SIGNALS	RESET 24V 4-WIRE DEVICES	SYSTEM NORMAL
MANUAL PULL STATION	X	X					X			X					X					
SMOKE DETECTORS:																				
ALL (EXCEPT LISTED BELOW)	X	X					X			X					X					
[redacted]	X	X					X			X		X			X					
[redacted]	X	X					X			X	X				X					
[redacted]	X	X					X			X		X			X					
[redacted]	X						X			X	X				X					
HEAT DETECTORS:																				
ALL (EXCEPT LISTED BELOW)	X	X					X			X					X					
[redacted]	X	X					X			X			X		X					
[redacted]	X	X					X			X			X		X					
[redacted]					X	X		X				X	X							
[redacted]	X	X					X		X	X					X					
[redacted]					X	X		X												
[redacted]					X	X		X												
WIRING CONDITIONS:																				
SIGNALING LINE CIRCUIT (SLC)–																				
WIRE-TO-WIRE SHORT			X	X				X												
SINGLE OPEN			X	X				X												
SINGLE GROUND			X	X				X												
INITIATING DEVICE CIRCUIT (IDC)–																				
WIRE-TO-WIRE SHORT	X	X					X			X					X					
SINGLE OPEN			X	X				X												
SINGLE GROUND			X	X				X												
NOTIFICATION APPLIANCE CIRCUIT (NAC)–																				
WIRE-TO-WIRE SHORT			X	X																
SINGLE OPEN			X	X																
SINGLE GROUND			X	X																
LOSS OF 120VAC POWER			X	X				X								X				
SIGNAL SILENCE																	X	X		
RESET FACP															X		X	X	X	X

NOTE: SOME SEQUENCE OF OPERATIONS SHOWN MAY NOT APPLY

SHEET NOTES

1. APPROXIMATE LOCATION FOR EXISTING DIST. PANEL DP. PROVIDE NEW MATCHING BREAKERS AND POWER CONNECTION FOR NEW BUILDINGS PER PLANS. SEE SINGLE LINE DIAGRAM.
2. PROVIDE POWER CONNECTION FOR RELOCATABLE BUILDING PRE-WIRED PANEL. SEE SINGLE LINE DIAGRAM ON DRAWING E-4.
3. PROVIDE 2" WP FLEX CONDUIT BETWEEN BUILDINGS AND STUB INTO BUILDING CEILING CAVITY FOR SIGNAL WIRING RACEWAY. CORE DRILL AND SEAL EXTERIOR WALL AS REQUIRED. PULL BACK PA/IC/TELE CABLE TO ADMIN OFFICE MASTER EQUIPMENT FOR NEW DEVICES CONNECTION. SEE RISER DIAGRAMS.
4. PROVIDE #6 COPPER GROUNDING CONDUCTOR AND BOND TO EACH SECTION STRUCTURAL STEEL BEAM, FIELD VERIFY EXACT LOCATION WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.
5. NEW SECURITY ALARM PANEL AND SYSTEM, PROVIDE 110V POWER CONNECTION AND INTERCONNECTION TO (E) MASTER EQUIPMENT IN ADMIN OFFICE. FIELD VERIFY EXACT LOCATION AND REQUIREMENT WITH OWNER PRIOR TO INSTALLATION. SEE RISER DIAGRAM.
6. 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) MDF IN ADMIN OFFICE FOR INTERCONNECTION. FIELD VERIFY EXACT LOCATION AND REQUIREMENT WITH OWNER PRIOR TO INSTALLATION. SEE RISER DIAGRAM.
7. DATA AND POWER OUTLET AT CEILING FOR SMART BOARD. FIELD VERIFY EXACT LOCATION AND REQUIREMENT WITH OWNER PRIOR TO INSTALLATION. SEE RISER DIAGRAM.
8. NEW SURFACE MOUNTED POWER CONDUITS AND FEEDERS. SEE SINGLE LINE DIAGRAM.
9. PROVIDE FLEX CONDUIT RACEWAY BETWEEN BUILDINGS AS REQUIRED.

SIGNAL AND COMM. LEGEND

SECURITY ALARM SYSTEM

- DSC — DIGITAL SECURITY ALARM CONTROL PANEL. MODEL SONITROL (64ZONE). INTERFACE WITH EXISTING BUILDING MASTER SECRITY ALARM PANEL AS REQUIRED.
- (K) — LCD KEYPAD – MATCH EXISTING EQUIPMENT AS REQUIRED.
- (M) — DUAL TECHNOLOGY CEILING MOUNT DETECTOR. MATCH EXISTING EQUIPMENT AS REQUIRED.
- (B) — EXTERIOR BELL (SIREN) – DSC/SD15W 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 — OUTDOOR SECURITY ALARM CABLE. WEST PENN #AOC224

COMMUNICATION (TELEPHONE/INTERCOM) SYSTEM

- ▽ — HANDSET/IP PHONE – FIELD VERIFY MODEL NO. AND MATCH EXISTING MASTER EQUIPMENT AS REQUIRED.
- SP — CEILING SPEAKER – RAULAND #US0221 W/ACC1000 BAFFLE. PROVIDE BACKBOX AND CEILING SUPPORT AS REQUIRED
- SP WP — OUTDOOR SPEAKER – ATLAS #APF15 HORN W/XFMR AND LOWELL (#C884 FOR SURFACE, #P875X FOR RECESS) BACK BOX W/SQLK GRILL
- —T — OUTDOOR TELE/IC CABLE. 22AWG SOILD COPPER 12 PAIR SHIELDED AND 12 PAIR UNSHIELDED CABLE.
- —T1 — INDOOR TELEPHONE CABLE. CAT.3 22AWG SOILD COPPER 4UTP SHIELDED CABLE.
- —P1 — OUTDOOR PA/IC CABLE – WEST PENN #AOC-369

DATA COMMUNICATION SYSTEM

- C 2 — DATA OUTLET – LEVITON CAT 5E (DUAL RECEPTACLE RED IN COLOR FOR ADMINISTRATIVE)
- C 2 — DATA OUTLET – LEVITON CAT 5E (DUAL RECEPTACLE BLUE IN COLOR FOR INSTRUCTIONAL)
- —FO — FIBER OPTIC CABLE WA INNER DUCT WITH J-HOOK IN ATTIC AND 2"C 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:
1. ALL SIGNAL CONDUCTORS CANNOT SPLICE INSIDE PULL BOX. CONDUCTOR MUST BE CONTINUE RUN BETWEEN SIGNAL DEVICES BACK BOX OR ABOVE GROUND TERMINAL CABINET.

CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
2027 E. DECATUR AVE, FRESNO CA 93710
(559) 325-2280 • FAX 251-5401
jcengineer@aol.com

REGISTERED PROFESSIONAL ENGINEER — JOHN S. CHONG — E 14419 — Exp.8/30/2018 — ELECTRICAL — STATE OF CALIFORNIA

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 · ENGINEERING · INTERIOR DESIGN · CONSTRUCTION MANAGEMENT
6011 N. Fresno, Suite 130 – Fresno, California 93710
Phone (559) 436-0881 Fax (559) 436-0887 E-Mail: design@somam.com
www.integratedd esigns.com

Revision:	Revision Description:	Rev. Date:	Revision:	Revision Description:	Rev. Date:

Sheet Title: POWER AND SIGNAL PLAN

Project Name & Address: WASHINGTON MIDDLE SCHOOL 2RELOCATABLE CLASSROOMS
BAKERSFIELD CITY SCHOOL DISTRICT
1101 NOBLE AVE, BAKERSFIELD, CA 93305

Issue Date: 00/00/16
Date: 06/05/16
Designer: J CHONG
DR: J CHONG
PC: —

Agency Approval Stamp:
FILE #: 15-6
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
117154
AC FL SS
DATE JUN 20 2016
TRACKING #: DSA TRACKING NO

Stamp(s):

Job No.: 5223

Sheet No.: E-2

Release: