



- INSTALL (N) DECORATIVE METAL GUARDRAIL. RE: 22/A8.11. (N) HSS COLUMN, REF: STRUCTURAL DWGS. STAGE FLOOR REPAIR AND REFINISH WOOD WITH CLEAR STAIN INSTALL SALVAGED (E) DOORS AND FRAME.
- FIXED AUDITORIUM SEATING RE: THEATER DWGS (N) 24 X 24 SHELVES. SEE THEATER DWGS PROVIDE A 2" SEISMIC SEPARATION BETWEEN EXISTING BUILDING AND NEW BUILDING. RE: 05/A8.11 AND RE: STRUCTURAL DWGS. (N) CONCRETE RAMP AND STAIRS, RE: L1.01.

LEGEND

WALL TYPE. LETTER INDICATES WALL TYPE. SEE A9.0X SERIES.

- **STUD SIZE.** NUMBER INDICATES STUD SIZE. SEE A9.0X SERIES. REFER TO S0.91 FOR INTERIOR STUD WALL SCHEDULE

EXISTING CONCRETE WALL CONSTRUCTION

NEW METAL STUD WALL CONSTRUCTION

NOT IN SCOPE OF WORK

SCOPE OF WORK



ARCHITECTURE ENGINEERING INTERIOR DESIGN LANDSCAPE ARCHITECTURE PLANNING 949-261-1001 Office

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Middle

Wicker

ELEVATIONS SEMI-RECESSED FIRE EXTINGUISHER CABINET,

DENOTES MILLWORK - REFER TO INTERIOR

DENOTES ELEVATED CONCRETE SLAB-ON-GRADE OR

FLOOR SLAB CHANGE IN ELEVATION

DENOTES NEW CONCRETE RAMP/STAIRS

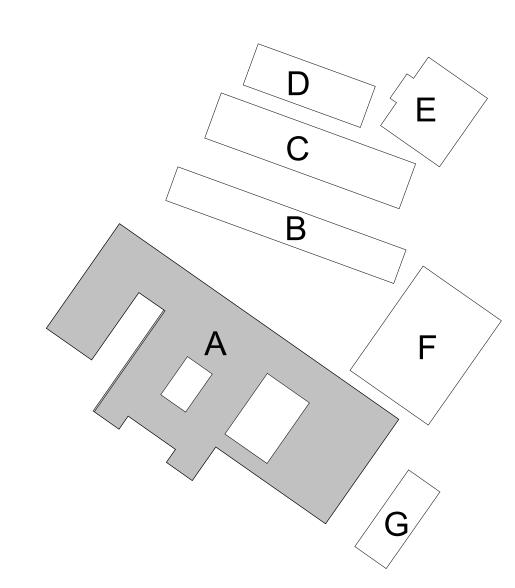
RECESSED FIRE EXTINGUISHER CABINET,

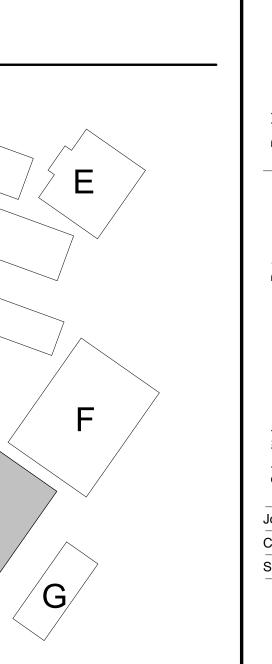
OPENING TYP

GENERAL NOTES

- 1. ALL WALLS TO BE WALL TYPE "INSERT", UNO
- 2. PROVIDE 6" HIGH CONCRETE CURBS AT ALL RESTROOMS, CUSTODIAL CLOSETS, WATER HEATER CLOSETS, AND SHOWER COMPARTMENTS, UNO
- 3. PROVIDE MOISTURE RESISTANT GYP BD IN ALL WET LOCATIONS, UNO.
- 4. PROVIDE CEMENTITIOUS BACKER BOARD AT ALL TILE WALL LOCATIONS, UNO
- 5. REFER TO G0.52 FOR TYPICAL CLEARANCE AT DOOR LOCATIONS.
- 6. FOR TYPICAL SWITCH AND DEVICE ALIGNMENTS, REFER TO 17/G3.03
- 7. REFER TO A9.15 FOR PENETRATIONS THROUGH RATED WALL CONDITIONS. FOR ALL RATED WALLS, PROVIDE THE FOLLOWING MARKINGS AND IDENTIFICATIONS PER THE APPLICABLE CODES:
- A. BE LOCATED WITHIN 15 FEET OF THE END OF EACH WALL AND AT INTERVALS NOT EXCEEDING 30 FEET MEASURED HORIZONTALLY ALONG THE WALL OR PARTITION.
- B. INCLUDE LETTERING NOT LESS THAN 3 INCHES IN HEIGHT WITH A MINIMUM 3/8 INCH STROKE IN A CONTRASTING COLOR INCORPORATING THE SUGGESTED WORDING, "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS", OR OTHER WORDING.
- 8. REFER TO EDGE OF SLAB PLANS FOR FLOOR DRAIN LOCATIONS.

KEYPLAN

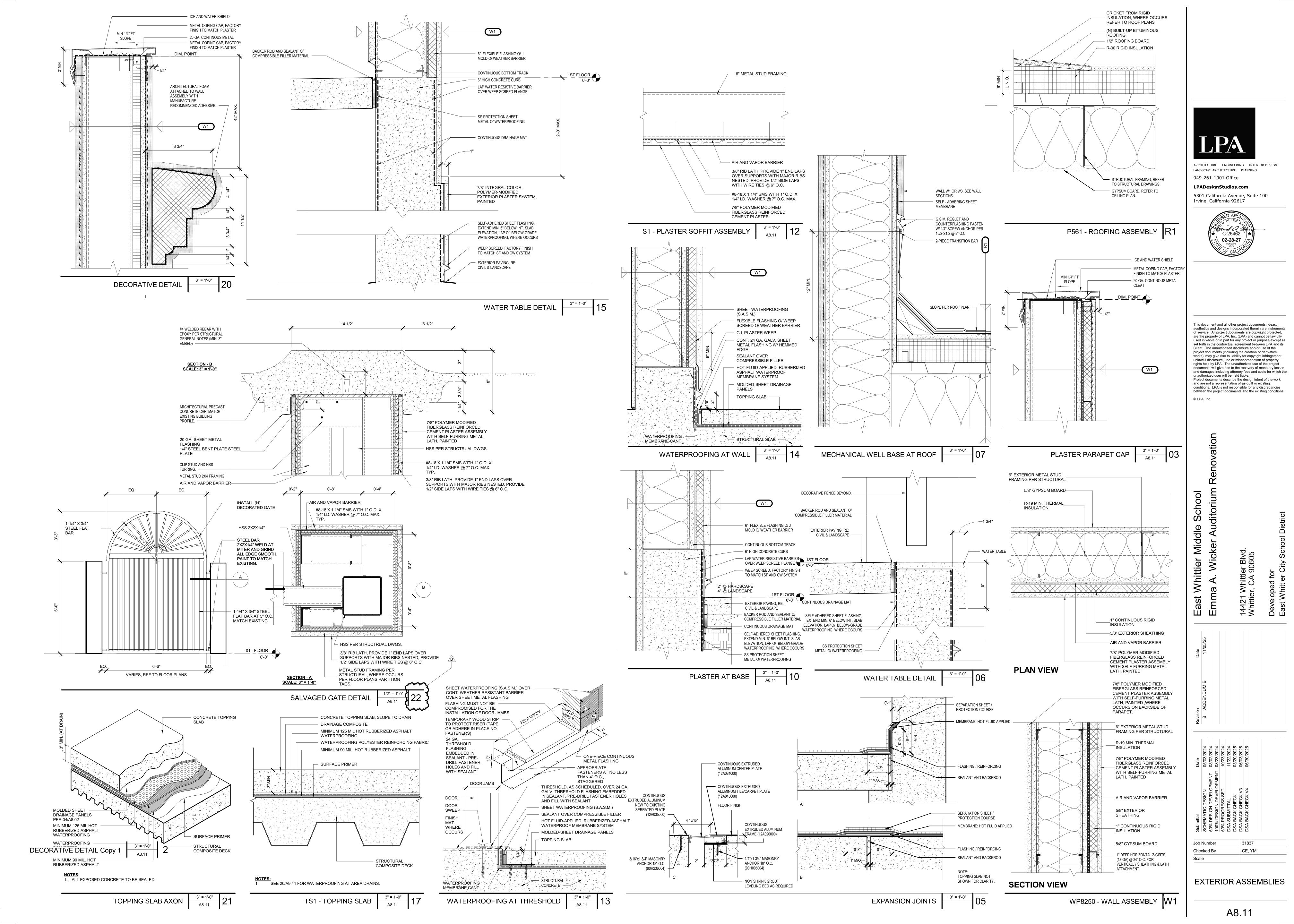


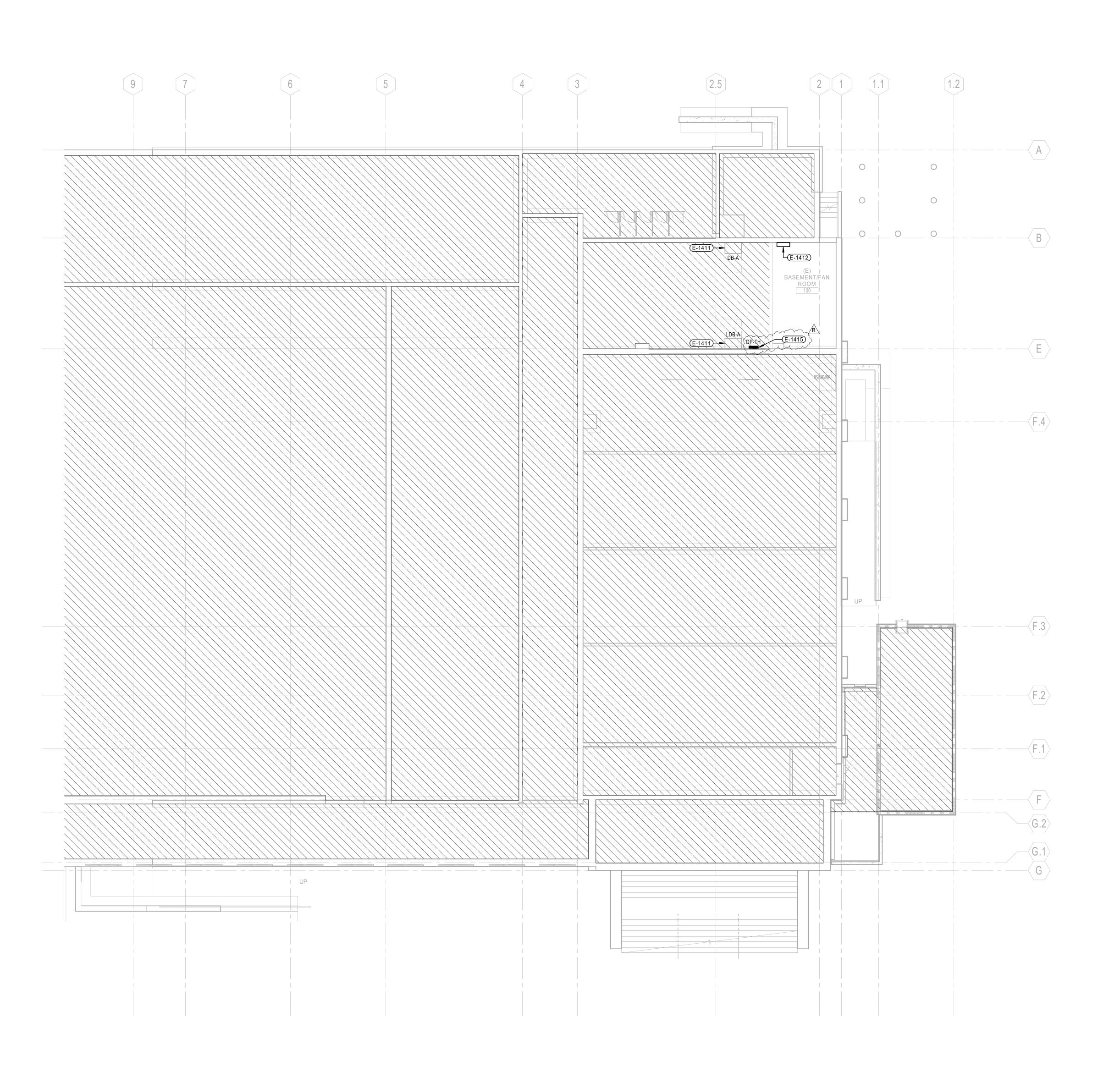


01 - RENOVATION FLOOR PLAN

A2.01

1/8" = 1'-0"





KEYNOTES DESCRIPTION E-1411 EXISTING ELECTRICAL DISTRIBUTION BOARD. E-1412 EXISTING CONTACTOR BOARD TO BE DEMOLISHED AND REPLACED IN KIND IN NEW LOCATION ON ADJACENT WALL. PROVIDE NEW CONDUIT AND CONDUCTORS AND EXTEND AS NEEDED. NEW CONDUIT AND CONDUCTORS TO MATCH EXISTING. E-1415 REFER TO STRUCTURAL DETAIL 03/S6.91 FOR WALL MOUNTED EQUIPMENT ANCHORAGE INFORMATION.

LEGEND EXISTING CONCRETE WALL CONSTRUCTION EXISTING STUD WALL CONSTRUCTION NOT IN SCOPE OF WORK

SCOPE OF WORK

GENERAL NOTES

1. ALL CONDUIT AT THE STAGE AREA TO BE ABOVE THE RIGGING.

KEYPLAN

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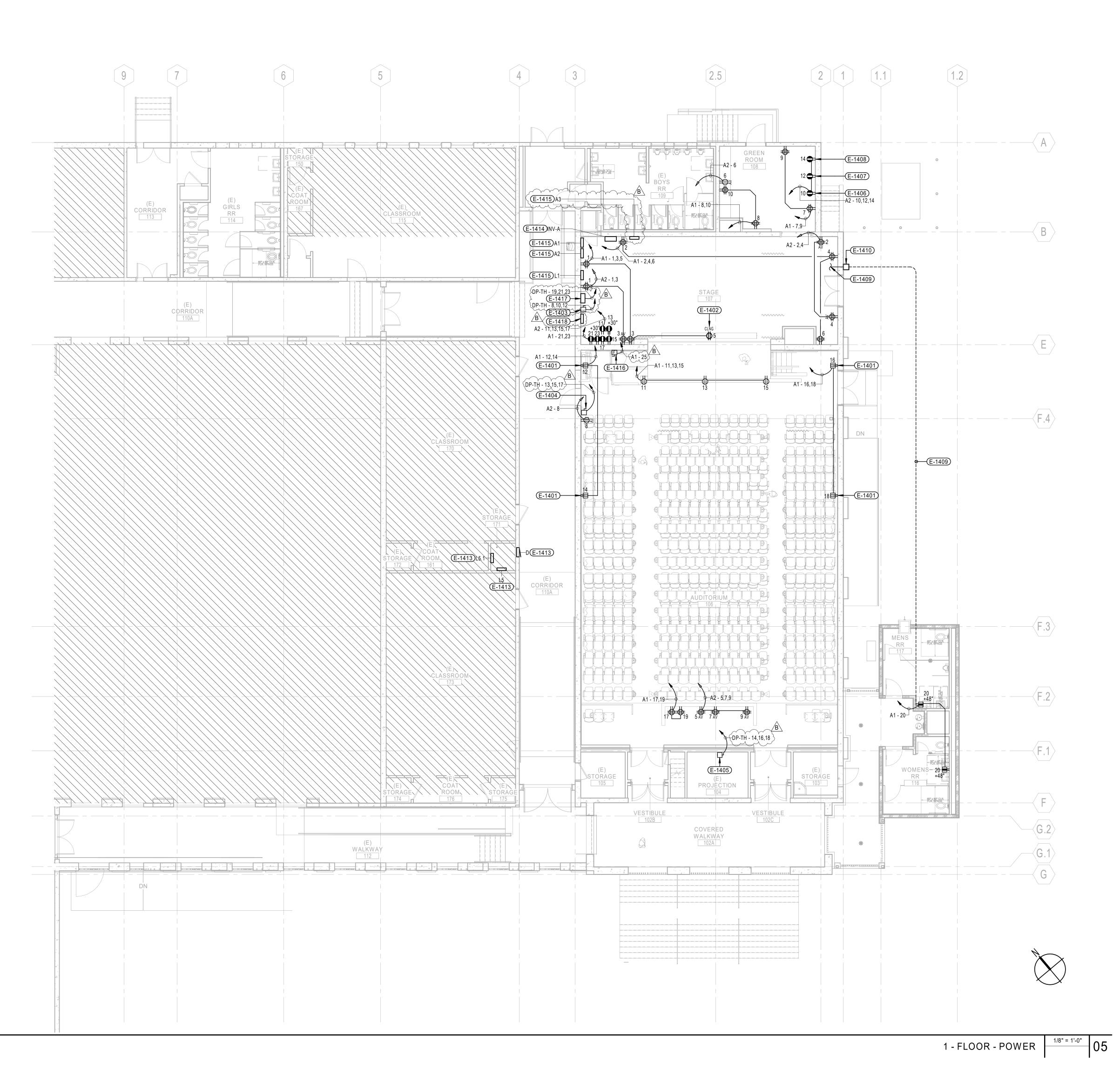
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ELECTRICAL BASEMENT POWER PLAN

E2.01

1/8" = 1'-0"

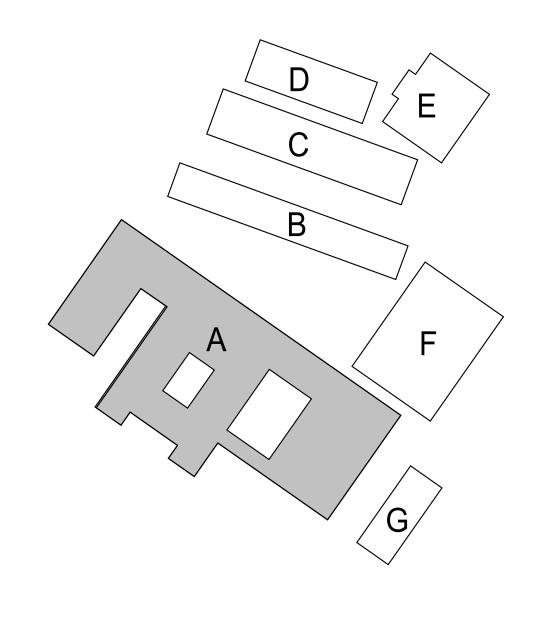
B - FLOOR - POWER | 1/8" = 1'-0" | 05



KEYNOTES DESCRIPTION 120V. DOUBLE DUPLEX RECEPTACLE MOUNTED AT +198" A.F.F. E-1401 (TOP OF BOX BOOM). COORDINATE EXACT LOCATION WITH THEATER DRAWINGS PRIOR TO ROUGH-IN. E-1402 120V. CEILING MOUNTED DUPLEX RECEPTACLE FOR POWER CONNECTION TO SCREEN CONTROL. COORDINATE EXACT LOCATION WITH THEATER DRAWINGS PRIOR TO ROUGH-IN. E-1403 DISCONNECT SWITCH, 15A, 120/208V, 3PH, 4W FOR FRONT OF HOUSE WINCH CONTROLLER. MOUNTED AT +48" A.F.F. COORDINATE EXACT LOCATION WITH THEATER DRAWINGS PRIOR TO ROUGH-IN. E-1404 DISCONNECT SWITCH, 20A, 120/208V, 3PH, 4W FOR FRONT OF HOUSE WINCH CONTROLLER. MOUNTED AT +234" A.F.F. COORDINATE EXACT LOCATION WITH THEATER DRAWINGS PRIOR TO ROUGH-IN. E-1405 DISCONNECT SWITCH, 30A, 120/208V, 3PH, 4W FOR PROJECTOR POWER. MOUNTED AT +102" A.F.F. COORDINATE EXACT LOCATION WITH THEATER DRAWINGS PRIOR TO ROUGH-IN. E-1406 120V DEDICATED DUPLEX RECEPTACLE FOR POWER CONNECTION TO INTERCOM/PAGING SYSTEM. INSTALL ON BACKBOARD AT +36" A.F.F. COORDINATE EXACT LOCATION WITH TECHNOLOGY DRAWINGS PRIOR TO ROUGH-IN. 120V DEDICATED DUPLEX RECEPTACLE FOR POWER CONNECTION TO INTRUSION DETECTION SYSTEM. INSTALL ON BACKBOARD AT +36" A.F.F. COORDINATE EXACT LOCATION WITH TECHNOLOGY DRAWINGS PRIOR TO ROUGH-IN. E-1408 | 120V DEDICATED DUPLEX RECEPTACLE FOR POWER CONNECTION TO IDF CABINET. INSTALL WITHIN IDF CABINET. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH TECHNOLOGY DRAWINGS PRIOR TO ROUGH-IN. E-1409 ROUTE (1) 1"C. 2#10 + 1#12 GND. TO ELECTRICAL PANEL "A1" LOCATED AT STAGE 107. E-1410 EXISTING WALL MOUNTED ELECTRICAL PULL BOX. E-1413 EXISTING ELECTRICAL PANEL. E-1414 WALL MOUNTED EMERGENCY MINI INVERTER. MYERS MODEL #1-EM-4-S-BA3206-C-BAC. REFER TO STRUCTURAL DETAIL 03/S6.91 FOR WALL MOUNTED EQUIPMENT ANCHORAGE INFORMATION. E-1415 REFER TO STRUCTURAL DETAIL 03/S6.91 FOR WALL MOUNTED EQUIPMENT ANCHORAGE INFORMATION. E-1416 DISCONNECT SWITCH FOR POWER CONNECTION TO WHEELCHAIR LIFT. 120V/1PH, 2HP, ROUTE 3/4"C. 2#10 + 1#10 GND. TQ PANEL "A1".) LIFT. 120V/1PH, 2HP, ROUTE 3/4"C. 2#10 + 1#10 GND. TQ DISCONNECT SWITCH TO BE LOCATED ON WHEELCHAIR LIFT PLATFORM PER GARAVENTA LIFT TECHNICAL DRAWINGS. DISCONNECT SWITCH TO BE PROVIDED BY MANUFACTURER. WHEELCHAIR LIFT TO BE PROVIDED WITH EMERGENCY BATTERY BACKUP BY MANUFACTURER. THEATER COMPANY SWITCH "T-CS". COORDINATE EXACT LOCATION WITH THEATER DRAWINGS PRIOR TO ROUGH-IN. ROUTE 1-1/2"C. 5#4 + 1#10 GND. TO DISTRIBUTION PANEL "DP-TH". THEATER DMX CONTROLLED MOTORIZED RELAY PANEL "T-MBP". COORDINATE EXACT LOCATION WITH THEATER DRAWINGS PRIOR TO ROUGH-IN. "T-MBP" TO BE FED FROM PANEL "A3". LEGEND EXISTING CONCRETE WALL CONSTRUCTION EXISTING STUD WALL CONSTRUCTION NOT IN SCOPE OF WORK SCOPE OF WORK **GENERAL NOTES**

1. ALL CONDUIT AT THE STAGE AREA TO BE ABOVE THE RIGGING.

KEYPLAN





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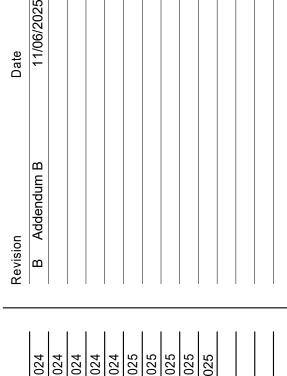


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er Auditorium Renovation

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Whittier, CA 90605



Submittal

SCHEMATIC DESIGN

SCHEMATIC DESIGN

50% DESIGN DEVELOPMENT

100% DESIGN DEVELOPMENT

11/02/2024

DSA BACK CHECK

11/05/2025

ADDENDUM B

11/05/2025

1/8" = 1'-0"

ELECTRICAL FIRS

ELECTRICAL FIRST FLOOR POWER PLAN

E2.02

MARK	CON	DUITS	CONDUCTO	ORS PER SET	MARK	CONI	DUITS	CONDUCTO	DRS PER SET
(AMPACITY)	# SETS	SIZE	Φ & N	GND	(AMPACITY)	# SETS	SIZE	Ф	GND
15-4	1	3/4"	(4)12	12	15-3	1	3/4"	(3)12	12
20-4	1	3/4"	(4)12	12	20-3	1	3/4"	(3)12	12
30-4	1	3/4"	(4)10	10	30-3	1	3/4"	(3)10	10
40-4	1	1"	(4)8	10	40-3	1	3/4"	(3)8	10
50-4		1"	(4)6	10	50-3	1	1"	(3)6	10
50-4S	1	1"	(4)4	10	7	_	_	(3/3	10
60-4	1	1-1/2	(4)4	10	60-3	1	1-1/2"	(3)4	10
70-4	1	1-1/2"	(4)4	8	70-3	1	1-1/2"	(3)4	8
80-4	1	1-1/2"	(4)2	8	80-3	1	1-1/2"	(3)2	8
90-4	1	1-1/2"	(4)2	8	90-3	1	1-1/2"	(3)2	8
100-4	1	1-1/2"	(4)2	8	100-3	1	1-1/2"	(3)2	8
100-4S	1	1-1/2"	(4)2	8					
110-4	1	1-1/2"	(4)2	6	110-3	1	1-1/2"	(3)2	6
125-4	1	2"	(4)1	6	125-3	1	1-1/2"	(3)1	6
150-4	1	2"	(4)1/0	6	150-3	1	2"	(3)1/0	6
150-4S	1	2"	(4)1/0	6					
175-4	1	2"	(4)2/0	6	175-3	1	2"	(3)2/0	6
200-4	1	2-1/2"	(4)3/0	6	200-3	1	2"	(3)3/0	6
225-4	1	2-1/2"	(4)4/0	4	225-3	1	2-1/2"	(3)4/0	4
225-45	1	2-1/2"	(4)4/0	2			,	(-, , -	
250-4	1	3"	(4)250	4	250-3	1	2-1/2"	(3)250	4
300-4	1	3"	(4)350	4	300-3	1	3"	(3)350	4
350-4	1	4"	(4)500	2	350-3	1	4"	(3)500	2
400-4	2	2-1/2"	(4)3/0	2	400-3	2	2"	(3)3/0	2
400-45	2	2-1/2"	(4)3/0	1/0					
450-4	2	2-1/2"	(4)4/0	2	450-3	2	2-1/2"	(3)4/0	2
500-4	2	3"	(4)250	2	500-3	2	2-1/2"	(3)250	2
500-4S	2	3"	(4)250	2/0					
600-4	2	3"	(4)350	1	600-3	2	3"	(3)350	1
650-4	2	4"	(4)400	1/0	650-3	2	3"	(3)400	1/0
750-4	2	4"	(4)500	1/0	750-3	2	4"	(3)500	1/0
800-4	3	3"	(4)300	1/0	800-3	3	3"	(3)300	1/0
800-4S	3	3"	(4)300	3/0					
1000-4	3	4"	(4)500	2/0	1000-3	3	4"	(3)500	2/0
1000-4S	3	4"	(4)500	3/0					
1200-4	4	4"	(4)350	3/0	1200-3	4	3"	(3)350	3/0
1600-4	5	4"	(4)400	4/0	1600-3	4	3"	(3)400	4/0
1600-4S	5	4"	(4)400	4/0					
2000-4	6	4"	(4)500	250	2000-3	5	4"	(3)500	250
2500-4	7	4"	(4)500	350	2500-3	7	4"	(3)500	350
2500-4S	7	4"	(4)500	250					
3000-4	8	4"	(4)500	400	3000-3	8	4"	(3)500	400
4000-4	11	4"	(4)500	500	4000-3	11	4"	(3)500	500

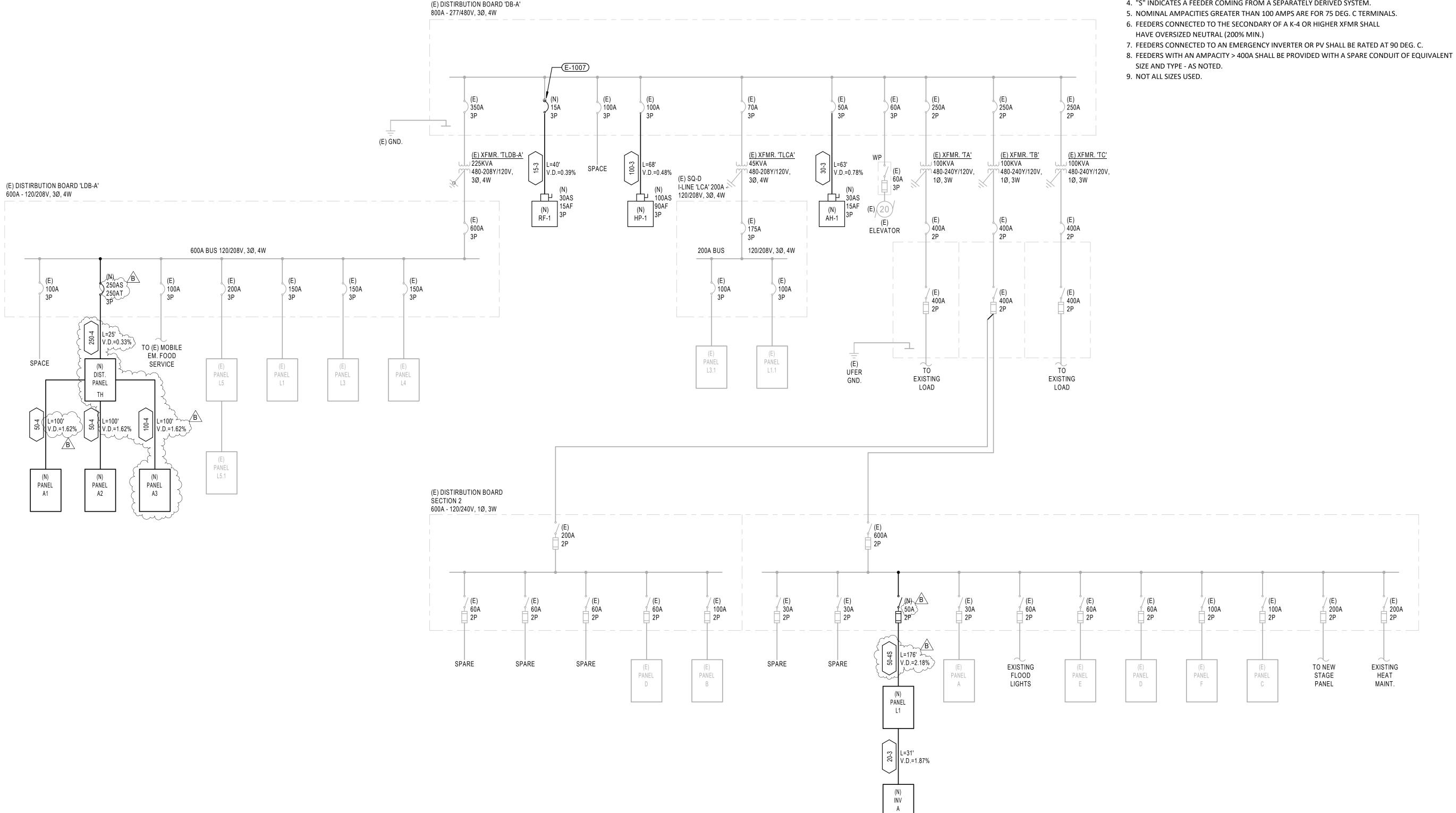
FEEDER SIZING NOTES

1. CONDUCTOR AND CONDUITSIZE SHOWN IN THIS SCHEDULE ARE BASED ON COPPER WIRE AND

INSULATION TYPE (THHN/THWN) AT ONE HUNDRED (100') FEEDER LENGTH. 2. "+" IN FEEDER TAGS SHOWN ON PLANS INDICATES A FEEDER UPSIZED DUE TO VOLTAGE DROP.

3. CONDUIT SIZES CALLED OUT ON PLANS SUPERSEDE THIS SCHEDULE. 4. "S" INDICATES A FEEDER COMING FROM A SEPARATELY DERIVED SYSTEM.

7. FEEDERS CONNECTED TO AN EMERGENCY INVERTER OR PV SHALL BE RATED AT 90 DEG. C.



KEYNOTES

DESCRIPTION E-1007 EXISTING 100A/3P BREAKER TO BE REMOVE. INSTALL NEW 15A/3P BREAKER IN EXISTING SPACE.

GENERAL NOTES

- 1. ALL EQUIPMENT TO BE SQUARE D OR EQUAL BY SIEMENS, CUTLER-HAMMER, G.E., OR RSC-SIERRA.
- 2. ALL ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH SPECIFIED AND APPROPRIATE UL LISTING BASED ON THE ENVIRONMENT IN WHICH THE EQUIPMENT IS TO BE MOUNTED.
- 3. ALL ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH AND BRACED FOR REQUIRED FAULT CURRENT RATINGS BASED ON THEIR VOLTAGE AND LOCATION WITHIN THE SYSTEM. SHOP DRAWINGS TO INCLUDE FAULT CURRENT RATINGS FOR ALL ELECTRICAL EQUIPMENT. ALL EQUIPMENT SHALL BE FULLY RATED, NO SERIES RATING SHALL BE ALLOWED.
- 4. ALL TERMINATIONS AND ENCLOSURES SHALL BE RATED FOR USE WITH 75 DEGREES CELSIUS CONDUCTORS.
- 5. ALL SERVICE ENTRANCE EQUIPMENT/DISTRIBUTION BOARDS/SWITCHBOARDS RATED AT 600A OR GREATER SHALL BE PROVIDED WITH A SOLID STATE MAIN OVER-CURRENT PROTECTIVE DEVICE AND
- BUSSING RATED AT 100% OPERATION. 6. ALL SWITCH/DISTRIBUTION BOARDS SHALL BE PROVIDED WITH: a. TIN-PLATED ALUMINUM BUSSING WITH RECTANGULAR CROSS
- SECTION, HORIZONTAL AND VERTICAL BUSSING SHALL BE FULL LENGTH AND HAVE PROVISIONS FOR FUTURE EXTENSIONS WERE APPLICABLE. ALL BUSSING SHALL HAVE A MINIMUM WITHSTAND RATING EQUAL TO AVAILABLE FAULT CURRENT INDICATED ON THE AIC CALCULATION. ALL VERTICAL AND HORIZONTAL BUSSING SHALL BE RATED AT FULL CAPACITY IN ALL SWITCHBOARD AND DISTRIBUTION BOARD ASSEMBLIES. PROVIDE 100% NEUTRAL BUSSING MINIMUM - UNLESS OTHERWISE NOTED. PROVIDE FULL LENGTH GROUND BUSS, AND WHERE INDICATED ON PLANS, ISOLATED GROUND BUSSING. PROVIDE REAR WIRE WAY IN ALL SWITCHBOARD SECTIONS - UNLESS OTHERWISE NOTED OR
- b. LUGS SHALL BE SUITABLE FOR USE WITH BOTH COPPER AND ALUMINUM CONDUCTORS AND 75 DEGREE CELSIUS AMPACITY c. PERMANENT PLACARDS(S) MARKED PER THE SPECIFICATIONS AND PER CEC - WHERE ADOPTED SECTIONS 225.37, 230.2(E), 690.56(B) & (C), 692.56, 700.8, 701.9, AND 702.8 DENOTING PRESENCE OF ADDITIONAL SERVICES, PHOTOVOLTAIC SYSTEMS, FUEL CELLS,
- EMERGENCY OR STAND-BY POWER SOURCES, ETC. AS APPLICABLE 7. CONTRACTOR SHALL PROVIDE SWITCHBOARD SHOP DRAWINGS TO SERVING UTILITY COMPANY PRIOR TO FABRICATION OF EQUIPMENT. CONTRACTOR SHALL SECURE CONFIRMATION PROPOSED SWITCHBOARD COMPLIES WITH ELECTRICAL UTILITY COMPANY REGULATIONS.
- 8. ELECTRICAL EQUIPMENT SUBMITTALS SHALL BE ACCOMPANIED BY A 1/4" = 1'-0" SCALED DRAWING WHICH REFERENCES ALL ELECTRICAL EQUIPMENT ROOMS AND EQUIPMENT. DRAWING SHALL CLEARLY IDENTIFY ADEQUATE SPACE IS PROVIDED IN ELECTRICAL ROOMS TO ACCOMMODATE THE INSTALLATION OF ELECTRICAL EQUIPMENT WHILE MAINTAINING ALL REQUIRED CODE CLEARANCES. ALL SUBMITTALS NOT ACCOMPANIED BY
- SCALED DRAWING WILL BE REJECTED AS INCOMPLETE. 9. EC SHALL CONDUCT, WITH ASSISTANCE OF SWITCHGEAR MANUFACTURER, AN ELECTRICAL HAZARD ANALYSIS CONSISTING OF AN ARC FLASH, SHORT CIRCUIT, AND COORDINATION STUDY TO DETERMINE APPROPRIATE LEVELS OF PERSONNEL PROTECTIVE EQUIPMENT (PPE) AS REQUIRED BY NFPA 70E AND IEEE STD 1584, AND TO ENSURE PROPER COORDINATION (INCLUDING GROUND FAULT COORDINATION) EXISTS BETWEEN ALL OVER- CURRENT PROTECTIVE DEVICES SHOWN ON SINGLE-LINE DIAGRAM. ADDITIONALLY:
- a. STUDY SHALL INCLUDE ALL PORTIONS OF ELECTRICAL SINGLE-LINE DIAGRAM. NORMAL SYSTEM CONNECTIONS AND THOSE THAT RESULT IN MAXIMUM FAULT CONDITION SHALL BE ADEQUATELY COVERED IN THE STUDY. PERFORM STUDY WITH THE AID OF A COMPUTER PROGRAM, SKM CAPTOR, OR EQUAL. STUDY SHALL IDENTIFY SELECTIVE COORDINATION SUCH THAT DEVICE CLOSEST TO FAULT WILL TRIP FIRST. GROUND FAULT PORTION OF THE STUDY SHALL DEMONSTRATE COORDINATION OF MAIN BREAKER AND ANY FEEDER GROUND FAULT DEVICES WITH DOWNSTREAM CIRCUIT BREAKERS
- b. EC SHALL BE RESPONSIBLE TO RECOMMEND SETTINGS OF ALL DEVICES AND TO NCLUDE GROUND FAULT SETTINGS NECESSARY TO ACHIEVE SYSTEM COORDINATION. CONTRACTOR SHALL FIELD ADJUST DEVICES ACCORDINGLY UTILIZING A QUALIFIED MANUFACTURER'S REPRESENTATIVE.
- c. DURING THE CONSTRUCTION PHASE OF THE PROJECT ALL GROUND FAULT RELAYS SHALL BE SET AT SHORTEST AVAILABLE TIME DELAY.
- d. RESULT OF COORDINATION STUDY SHALL BE SUBMITTED AS PART OF OVERALL SWITCHGEAR SUBMITTAL AND SHALL INCLUDE PROTECTIVE DEVICE TIME VERSUS CURRENT COORDINATION CURVES, GROUPING APPROPRIATE DEVICES TOGETHER, TABULATIONS OF RELAY AND CIRCUIT BREAKER TRIP SETTINGS, FUSE SELECTION, AND COMMENTARY REGARDING SAME.
- e. A GROUND FAULT SYSTEM TEST SHALL BE CONDUCTED BY AN INDEPENDENT TESTING AGENCY PER CEC - 230.95(C). GROUND FAULT SYSTEM TEST SHALL BE PERFORMED IN PRESENCE OF LOCAL AHJ. VERIFICATION OF DEVICE SETTINGS PER THE COORDINATION STUDY SHALL BE PERFORMED BY SAME INDEPENDENT TESTING AGENCY. GROUND FAULT TEST RESULTS SHALL BE DELIVERED TO ENGINEER
- f. PERFORM ARC FLASH ANALYSIS TO DETERMINE FALSH BOUNDARY, FLASH HAZARD CATEGORY, PPE REQUIREMENTS, AND MINIMUM ARC RATING (CAL/SQUARE CM). ABOVE INFORMATION SHALL BE INDICATED AT EACH ARC FLASH SOURCE ON A CEC COMPLIANT ARC FLASH HAZARD LABEL(S) AS MANUFACTURED BY BRADY.
- 10. GROUND ALL ELECTRICAL EQUIPMENT, BRANCH CIRCUITS, FEEDERS, PANEL AND DISTRIBUTION BOARDS, ELECTRICAL SERVICES, ETC. PER ADOPTED
- 11. FEEDER SPECIFICATIONS ARE BASED ON USE OF COPPER CONDUCTORS AND SHALL BE PROVIDED WITH A CODE SIZED COPPER GROUNDING
- 12. ALL MAIN SWITCHBOARDS, PANELBOARDS, DISTRIBUTION BOARDS, ETC SHALL BE PROVIDED WITH A COPPER BUSS RATED AT SPECIFIED AMPACITY. ALL SWITCHBOARDS AND DISTRIBUTION BOARDS SHALL ALIGN IN FRONT. ALL PANELBOARDS SHALL BE PROVIDED WITH BOLT-ON BREAKERS, DEADFRONT COVERS WITH LOCKABLE DOORS, FACTORY INSTALLED MAIN CIRCUIT BREAKERS (IF APPLICABLE), AND PANEL DIRECTORY PER THESE
- 13. TRANSIENT VOLTAGE SURGE PROTECTION SHALL BE PROVIDED IN ALL MAIN SWITCHGEAR AND DISTRIBUTION BOARD UNLESS OTHERWISE NOTED OR
- IDENTIFIED ON DRAWINGS. COORDINATE WITH LOCAL UTILITY COMPANY. 14. ALL PANELBOARDS INSTALLED IN GARAGES OR AREAS COMPLYING WITH ARTICLE 500, 511, AND/OR 514 SHALL BE INSTALLED 18" ABOVE FLOOR LINE

TO BOTTOM OF PANEL AND SHALL BE IN MULTIPLE PANELS AS REQUIRED

- WITH TOP MOST BREAKER NO HIGHER THAN 6'-7" A.F.F. PER ARTICLE 380. 15. ALL ELECTRICAL EQUIPMENT (I.E. SWITCHGEAR, TRANSFORMERS, DISTRIBUTION BOARDS, PANELBOARDS, DISCONNECT SWITCHES, ETC.) SHALL BE PROVIDED WITH A PHENOLIC NAMEPLATE WITH ENGRAVED WHITE LETTERS REFERENCING FOLLOWING INFORMATION:
 - LINE 1 "EQUIPMENT NAME" LINE 2 - "FED FROM ..." LINE 3 - "VOLTAGE, AMPACITY, PHASE" LINE 4 - "DATE INSTALLED"
 - NAMEPLATES SHALL BE SIZED BASED ON FOLLOWING:
 - SWITCHBOARDS, DISTRIBUTION BOARDS, TRANSFORMERS * LINE 1 = 1/2" LETTERS, LINES 2, 3, & 4 = 1/4" LETTERS
 - PANELBOARDS, MOTOR CONTROL CENTERS, DISCONNECTS, STARTERS, ETC: * LINE 1 = 3/8" LETTERS, LINES 2, 3, & 4 = 1/4" LETTERS
 - NAMEPLATE COLORS SHALL BE AS FOLLOWS: BLACK = NORMAL POWER RED = LIFE SAFETY/EMERGENCY POWER

DIRECTIONS.

- BLUE = STANDBY POWER GREEN = INVERTOR POWER ALL NAMEPLATES SHALL BE FASTENED WITH A MINIMUM OF TWO (2)
- MACHINE SCREWS. NO SELF ADHESIVE NAMEPLATES ARE ALLOWED. 16. ELECTRICAL DESIGN COMPUTES VOLTAGE DROP BASED ON FEEDER LENGTHS REFERENCED ON SINGLE-LINE DIAGRAM. EC TO NOTIFY ENGINEER

OF RECORD IN EVENT FIELD CONDITIONS CAUSE A SUBSTANTIAL INCREASE

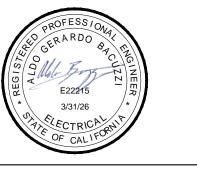
- IN OVERALL FEEDER LENGTH. 17. ANY FLOOR-STANDING ELECTRICAL EQUIPMENT (I.E. INVERTERS, DISTRIBUTION BOARDS, SWITCHBOARDS, ATS SWITCHES, MOTOR CONTROL CENTERS, ETC.) WHICH ARE MOUNTED AT/BELOW GRADE AND/OR SUSCEPTIBLE TO WATER DAMAGE SHALL BE MOUNTED ON A MINIMUM 4" HIGH HOUSEKEEPING PAD WHICH EXTENDS 4" BEYOND EQUIPMENT IN ALL
- 18. ALL MOTOR RELATED CIRCUITS ARE TO BE PROVIDED WITH PROTECTIVE RELAYS FOR PHASE FAILURE AND UNDER-VOLTAGE.
- 19. ELECTRICAL CONTRACTOR TO INCLUDE IN BID ALL ASSOCIATED COSTS FOR THIRD PARTY TESTING OF ELECTRICAL EQUIPMENT, GROUND FAULT, CONDUCTORS, ETC..



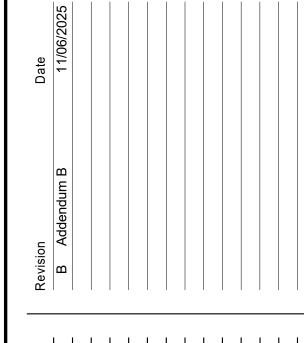
ARCHITECTURE ENGINEERING INTERIOR DESIGN LANDSCAPE ARCHITECTURE PLANNING 949-261-1001 Office

LPADesignStudios.com

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31837 Job Number

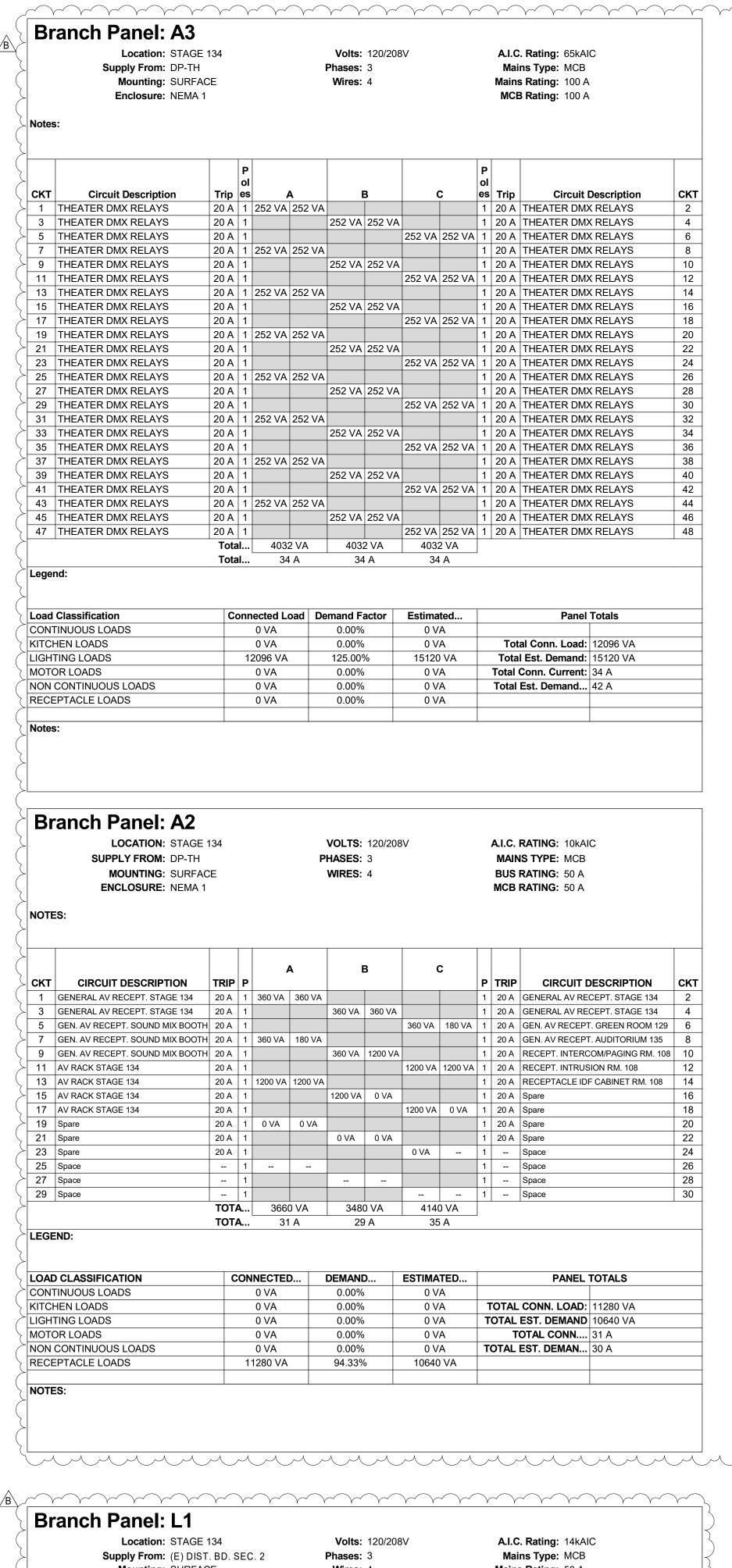
12" = 1'-0" **ELECTRICAL SINGLE**

Checked By

LINE DIAGRAM

E5.01

Checker



NOTE	ranch Panel: DP- LOCATION: THEATE SUPPLY FROM: LDB-A MOUNTING: SURFACE ENCLOSURE: NEMA 1 ES:	R BAS	SEN	IENT	Р	VOLTS: HASES: WIRES:	3	3V			MAIN BUS	RATING: 65kAIC IS TYPE: MCB RATING: 250 A RATING: 250 A		
СКТ	CIRCUIT DESCRIPTION	TRIP	Р		A	E	3			P	TRIP	CIRCUIT D	ESCRIPTION	CK
1	PANEL "A1" (GENERAL POWER)	50 A	3	4720 VA	3660 VA					3	50 A	PANEL "A2" (AV PO	OWER)	2
3						3200 VA	3480 VA			-				4
5								3460 VA	4140 VA					6
7	PANEL "A3" (T-MBP POWER)	100 A	3	4032 VA	1801 VA					3	20 A	FOH WINCH CONT	TROL DISCONNECT	8
9						4032 VA	1801 VA							10
11								4032 VA	1801 VA					12
13	FOH WINCH CONTROL DISCONNECT	25 A	3	2401 VA	3603 VA					3	40 A	PROJECTOR POW	/ER RM. 104	14
15						2401 VA	3603 VA							16
17								2401 VA	3603 VA					18
19	COMPANY SWITCH	60 A	3	3528 VA						1		Space		20
21						3528 VA				1		Space		22
23								3528 VA		1		Space		24
25	Space		1							1		Space		26
27	Space		1							1		Space		28
29	Space		1							1		Space		30
		TOT.					5 VA 4 A	1	5 VA 3 A					
LEGE														
	D CLASSIFICATION			INECTE		DEMANI		ESTIMA				PANEL T	UIALS	
	TINUOUS LOADS HEN LOADS		1	0984 VA		125.009		13730		-	OTAL	CONN. LOAD:	60755 \/^	
				0 VA		0.00%		0 V						
	TING LOADS			2096 VA		125.009		15120		- '		EST. DEMAND OTAL CONN		
	IOTOR LOADS		25615 VA			100.009		25615 0 V		T/		EST. DEMAN		
МОТ	CONTINUOUS LOADS										LIAL	COLUCIVIAIS I		
MOT NON	CONTINUOUS LOADS EPTACLE LOADS		2	0 VA 0060 VA		0.00% 74.93%		15030		-	<u> </u>	2011 22111/11111	100 A	

NOTE	LOCATION: STAGE 1 SUPPLY FROM: DP-TH MOUNTING: SURFACI ENCLOSURE: NEMA 1 ES:			Р	VOLTS: HASES: WIRES:	3	8V			MAIN BUS	RATING: 10kAlo IS TYPE: MCB RATING: 50 A RATING: 50 A	C		
СКТ	CIRCUIT DESCRIPTION	TRIP	Р	4	A	E	В		C	Р	TRIP	CIRCUIT D	ESCRIPTION	Ck
1	GENERAL RECEPTACLE STAGE 134	20 A	1	360 VA	360 VA					1	20 A		TACLE STAGE 134	2
3	GENERAL RECEPTACLE STAGE 134	20 A	1			360 VA	360 VA			1	20 A	GENERAL RECEP	TACLE STAGE 134	4
5	SCREEN CONTROL STAGE 134	20 A	1					800 VA	360 VA	1	20 A	GENERAL RECEF	TACLE STAGE 134	6
7	GENERAL RECEPT. GREEN ROOM 129	20 A	1	360 VA	360 VA					1	20 A	GENERAL RECEP	T. GREEN ROOM 129	8
9	GENERAL RECEPT. GREEN ROOM 129	20 A	1			360 VA	360 VA			1	20 A	GENERAL RECEP	T. GREEN ROOM 129	1
11	GEN. RECEPT. AUDITORIUM 135	20 A	1					180 VA	180 VA	1	20 A	GEN. RECEPT. AL	JDITORIUM 135	1:
13	GEN. RECEPT. AUDITORIUM 135	20 A	1	180 VA	180 VA					1	20 A	GEN. RECEPT. AL	JDITORIUM 135	1
15	GEN. RECEPT. AUDITORIUM 135	20 A	1			180 VA	180 VA			1	20 A	GEN. RECEPT. AL	JDITORIUM 135	1
17	GEN. RECEPT. SOUND MIX BOOTH	20 A	1					360 VA	180 VA	1	20 A	GEN. RECEPT. AL	JDITORIUM 135	1
19	GEN. RECEPT. SOUND MIX BOOTH	20 A	1	360 VA	360 VA					1	20 A	RECEPTACLES R	M. 117 & 118	2
21	LIGHTING CONTROL RACK STAGE 134	20 A	1			1200 VA	200 VA			1	20 A	FACP STORAGE	159 (A,E)	2
23	LIGHTING CONTROL RACK STAGE 134	20 A	1					1200 VA	200 VA	1	20 A	FAPS-1 STORAGE	E 159 (A,E)	2
25	WHEELCHAIR LIFT DISCONNECT	25 A	1	2200 VA	0 VA					1	20 A	Spare		2
27	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare		2
29	Space		1							1		Space		3
		TOT	٩	4720) VA	3200	0 VA	3460	O VA					
		TOT	٩	40	Α	27	' A	29) A					
LEGE	END: O CLASSIFICATION			INECTEL		DEMANI		ESTIMA				PANEL 7	TOTALS	_
CON	TINUOUS LOADS			400 VA		125.009		500						_
KITCI	HEN LOADS			0 VA		0.00%	,	0 V	A	TOTAL CONN. LOAD		CONN. LOAD:	11380 VA	
_IGH	TING LOADS			0 VA		0.00%	,	0 V	A	Т	OTAL	EST. DEMAND	11480 VA	
МОТ	OR LOADS		2	2200 VA		100.009	%	2200	VA		T	OTAL CONN	32 A	
NON	CONTINUOUS LOADS			0 VA		0.00%		0 V	Α	T	OTAL	EST. DEMAN	32 A	
RECE	EPTACLE LOADS		8	3780 VA		100.009	%	8780	VA					
NOTE														

STORAGE 171 3-A Phases: 3 Wires: 4 B C es Trip F O O O O O O O O O O O O O O O O O O
Trip es
Trip es
20 A 1 1332 VA 2170 VA
20 A 1
20 A 1 540 VA 360 VA 1518 VA 1932 VA 1
20 A 1 540 VA 360 VA 1932 VA 1
30 A 3
1518 VA 1932 VA
1518 VA 1932 VA 3 3 30 A (E) A/C RM. 17A 1932 VA 1932 VA 1932 VA 3 3 30 A (E) A/C RM. 13 1932 VA 1932 VA 1932 VA 3 3 30 A (E) A/C RM. 13 1932 VA 1932 VA 1932 VA
30 A 3
1932 VA 1932 VA 1932 VA
1932 VA 1932 VA 1932 VA 1932 VA 3 3 30 A (E) A/C RM. 13 1932 VA 1932 VA 1932 VA 1932 VA
30 A 3
1932 VA 1932 VA
20 A 1
20 A 1 92 VA 1932 VA 3 3 30 A (E) A/C RM. 36 30 A 2 1664 VA 1932 VA
20 A 1 92 VA 1932 VA 1932 VA
30 A 2 1664 VA 1932 VA
Space 20 A 1 1839 VA 1587 VA 1 1 Space 20 A 1 1 1839 VA 1587 VA 1 1 Space -1" 20 A 1 1 19443 VA 21483 VA 20176 VA
20 A 1 1839 VA 1 Space
20 A 1 1587 VA 1 Space
1" 20 A 1
Total 19443 VA 21483 VA 20176 VA
l otal 162 A 180 A 169 A

LIGHTING LOADS

NON CONTINUOUS LOADS

RECEPTACLE LOADS

MOTOR LOADS

350 VA

51672 VA

600 VA

8080 VA

125.00%

100.00%

100.00%

100.00%

	Mai Mains	. Rating: 65kAl ns Type: MLO s Rating: 250 A 3 Rating: 250 A			Br	canch Panel: Location: Supply From: Mounting: Enclosure:
o ol						
s	Trip	Circuit I	Description	СКТ	СКТ	Circuit Description
3	30 A	(E) PANEL L5.1		2	1	(E) WIREMOLD RM. 11 S/E WA
-				4	3	(E) WIREMOLD RM. 11 S/E WA
-				6	5	(E) WIREMOLD RM. 11 S/E WA
1	20 A	(E) RECEPTACLE	S	8	7	(E) WIREMOLD RM. 11 S/E WA
3	30 A	(E) A/C RM. 14		10	9	(E) WIREMOLD RM. 11 S/E WA
-				12	11	(E) WIREMOLD RM. 11 S/E WA
-				14	13	Space
3	30 A	(E) A/C RM. 17A		16	15	Space
-				18	17	Space
-				20		
3	30 A	(E) A/C RM. 13		22		
-				24	Legei	nd:
-		(E) E1100 (DOD)		26		
	20 A	(E) EMCS (PCP)		28	1	0 !f 4
 	20 A	Spare (E) A/C RM. 36		30		Classification FINUOUS LOADS
,	30 A	,		32		HEN LOADS
_		_		36		TING LOADS
1		Space		38		OR LOADS
		Space		40		CONTINUOUS LOADS
I		Space		42		EPTACLE LOADS
•		1 - Paul				
		Panel	Totals		Notes	: :
		al Conn. Load:				
		I Est. Demand:				
		Conn. Current:				
	Total	Est. Demand	170 A			
				1		

438 VA

51672 VA

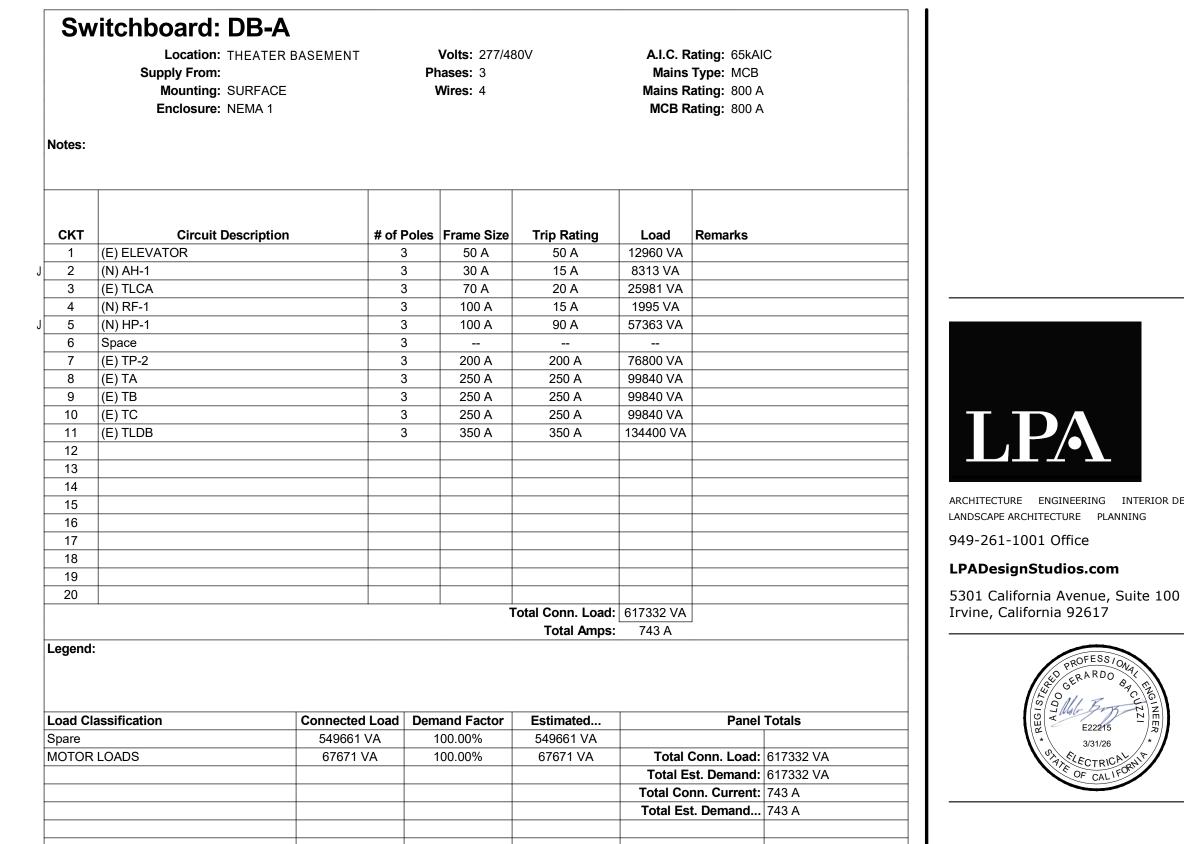
600 VA

8080 VA

	Location: THE A Supply From: Mounting: SURI Enclosure: NEM			Volts: 120/20 hases: 3 Wires: 4	08V	Mains Mains R	ating: 65kAlo Type: MCB ating: 600 A ating: 600 A	
Notes:								
СКТ	Circuit Descr	ption	# of Poles	Frame Size	Trip Rating	Load	Remarks	
1	Space	•	3					
	Space	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\sqrt{3}\sqrt					
3	DP-TH		3	250 A	250 A	68755 VA		
<u> </u>	(E) £5		3	250 A	250 A	61102 VA		
5	(E) L1		3	150 A	150 A	21840 VA		
6	(E) L3		3	150 A	150 A	23920 VA		
7	(E) L4		3	150 A	150 A	22880 VA		
8								
9 10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20					Tatal Co.	400467:::		
]	Fotal Conn. Load: │ Total Amps:	198497 VA 551 A		
_egend:								
Load Cla	assification	Connected	Load Den	nand Factor	Estimated		Panel	Totals
Spare		68640 \	/A	100.00%	68640 VA			
	LOADS	77287 \	/A	100.00%	77287 VA		Conn. Load:	
MOTOR	TACLETOADS	28140 \	/A	67.77%	19070 VA		st. Demand:	
RECEPT				105 000/				551 A
RECEPT LIGHTIN	IG LOADS	12446 \		125.00%	15558 VA		nn. Current:	
RECEPT LIGHTIN CONTIN	IG LOADS UOUS LOADS	12446 \ 11384 \	/A	125.00%	14230 VA		nn. Current: t. Demand	
RECEPT LIGHTIN CONTIN	IG LOADS	12446 \	/A					
RECEPT LIGHTIN CONTIN NON CO	IG LOADS UOUS LOADS	12446 \ 11384 \	/A	125.00%	14230 VA			
RECEPT LIGHTIN CONTIN	IG LOADS UOUS LOADS ONTINUOUS LOADS	12446 \ 11384 \ 600 V/	/A	125.00%	14230 VA			
RECEPT LIGHTIN CONTIN NON CO	IG LOADS UOUS LOADS INTINUOUS LOADS Inverter: IN	12446 \ 11384 \ 600 V/	/A	125.00% 100.00%	14230 VA	Total Es	t. Demand	542 A
RECEPT LIGHTIN CONTIN NON CO	IG LOADS UOUS LOADS INTINUOUS LOADS Inverter: IN Location: STAC	12446 \ 11384 \ 600 V/	/A	125.00% 100.00% Volts: 120V	14230 VA	A.I.C. R	t. Demand	542 A
RECEPT LIGHTIN CONTIN NON CO	Inverter: IN Location: STAC Supply From: L1	12446 \ 11384 \ 600 V/	/A	125.00% 100.00% Volts: 120V hases: 1	14230 VA	A.I.C. R	ating: 10kAlo	542 A
RECEPT LIGHTIN CONTIN NON CO	Inverter: IN Location: STAC Supply From: L1 Mounting: SURI	12446 \ 11384 \ 600 V/ 600 V/ 6E 134	/A	125.00% 100.00% Volts: 120V	14230 VA	A.I.C. R Mains Mains R	ating: 10kAlo Type: MCB ating: 30 A	542 A
RECEPT LIGHTIN CONTIN NON CO	Inverter: IN Location: STAC Supply From: L1	12446 \ 11384 \ 600 V/ 600 V/ 6E 134	/A	125.00% 100.00% Volts: 120V hases: 1	14230 VA	A.I.C. R Mains Mains R	ating: 10kAlo	542 A

	Location: STAGE 13 Supply From: L1 Mounting: SURFACE Enclosure: NEMA 1		Pł	Volts: 120V nases: 1 Wires: 2		Mains Mains R	Rating: 10kAl Type: MCB Rating: 30 A Rating: 30 A	С
Notes:								
СКТ	Circuit Description		# of Poles	Frame Size	Trip Rating	Load	Remarks	
1	INTERIOR EM. LTG. RM. 108,109,114		1	20 A	20 A	98 VA		
2	INTERIOR EM. LTG. AUDITORIUM		1	20 A	20 A	328 VA		
3	EXTERIOR EM. LIGHTING		1	20 A	20 A	395 VA		
4	INTERIOR EM. LIGHTING RM. 116 & 11	7	1	20 A	20 A	35 VA		
5	EMERGENCY SITE LIGHTING		1	20 A	20 A	1536 VA		
6	Spare		1	20 A	20 A	0 VA		
				T	Total Conn. Load:	2392 VA		
Legend	:				Total Conn. Load: Total Amps:	2392 VA 20 A		
Load Cl	lassification	Connected		and Factor	L		Panel	Totals
Load Cl		Connected 2392 V/			Total Amps:	20 A		
Load Cl	lassification			and Factor	Total Amps:	20 A	Conn. Load:	2392 VA
Load Cl	lassification			and Factor	Total Amps:	20 A Total Total E	Conn. Load:	2392 VA 2990 VA
Load Cl	lassification			and Factor	Total Amps:	Total E Total Co	Conn. Load: st. Demand: onn. Current:	2392 VA 2990 VA 20 A
Load Cl	lassification			and Factor	Total Amps:	Total E Total Co	Conn. Load:	2392 VA 2990 VA 20 A
Load Cl	lassification			and Factor	Total Amps:	Total E Total Co	Conn. Load: st. Demand: onn. Current:	2392 VA 2990 VA 20 A

–	anch Panel: L5.													
	Location: (E) STO Supply From: L5 Mounting: SURFA Enclosure: NEMA	CE	171			Volts: 120/208V A.I.C. Rating: EXISTING Phases: 3 Mains Type: MLO Mains Rating: 125 A MCB Rating: 125 A								
Notes														
			P ol							P ol				
CKT	Circuit Description	Trip	es				B	(C	es	•		Description	CK
1 3	(E) WIREMOLD RM. 11 S/E WALL (E) WIREMOLD RM. 11 S/E WALL	20 A 20 A	1	720 VA	350	900 VA	350 VA			1	20 A 20 A	(E) IDF		2
<u> </u>	(E) WIREMOLD RM. 11 S/E WALL	20 A	1			900 VA	350 VA	720 VA	350 VA	1	20 A	` '	SIGNS	6
7	(E) WIREMOLD RM. 11 S/E WALL	20 A	1	900 VA	200	VΔ		120 VA	330 VA	1	20 A	FAPS ADMIN (A,E		8
9	(E) WIREMOLD RM. 11 S/E WALL	20 A	1	300 VA	200	720 VA	200 VA			1	20 A	FA ANNUNCIATO	·	10
11	(E) WIREMOLD RM. 11 S/E WALL	20 A	1			120 V/	200 171	900 VA		1		Space	(1,C)	12
13	Space		1		0 V	/A				3	30 A	(E) SURGE SUPP	RESSION	14
15	Space		1				0 VA							16
17	Space		1						0 VA					18
		Tota	d	2170) VA	217	0 VA	1970	0 VA					
		Tota	ıl	18	Α	1	8 A	16	6 A	ı				
Legei Load	Classification	C	onn	ected Lo	oad	Demand F	actor	Estima	ited			Panel	Totals	
CONT	TINUOUS LOADS			400 VA		125.00	%	500	VA					
KITC	HEN LOADS			0 VA		0.00%	6	0 V	Ά		Tot	al Conn. Load:	6310 VA	
	TING LOADS		;	350 VA		125.00		438				I Est. Demand:		
	OR LOADS			0 VA		0.00%		0 V				Conn. Current:		
	CONTINUOUS LOADS			0 VA		0.00%		0 V			Total	Est. Demand	18 A	
RECEPTACLE LOADS			5560 VA		100.00%		5560 VA							



Bra	anch Panel: D											
Location: CORRIDOR 149 Supply From: Mounting: RECESSED Enclosure: NEMA 1					Volts: Phases: Wires:	-	0V	A.I.C. Rating: 10kAIC Mains Type: MLO Mains Rating: 100 A MCB Rating: 100 A				
otes:												
СКТ	Circuit Description	Trip	Pol es		A		В	Pol es	Trip	Circuit De	scription	СКТ
1	SPARE	20 A	1	600 VA	1284 VA			1	20 A	(E) ARCADE/CORRID	OR	2
3	(E) LIGHTS W/NEW LTG. LOAD	20 A	1			460 V	1000 VA	1	20 A	(E) EXIT PROJ. RM. (LIGHTS/PLUGS)	4
5	Space		1					1		Space		6
7	(E) LIGHTS (CLASSROOM 132)	20 A	1			456 V	456 VA	1	20 A	(E) LIGHTS (CLASSR	OOM 132)	8
9	SPARE	20 A	1	500 VA	500 VA			1	20 A	SPARE		10
11	Space		1					1		Space		12
3	(E) LIGHTS (CLASSROOM 127	20 A	1	456 VA	370 VA			1	20 A	(E) LIGHTS W/NEW L	TG. LOAD	14
15	SPARE	20 A	1			500 V	4 500 VA	1	20 A	SPARE		16
7	Space	<u> </u>	1				270.14	1	-	Space		18
		Total L			710 VA	3	372 VA					
gend	1 :	10	otal		31 A		28 A					
ad C	Classification	Conn	ected	Load	Demand F	actor	Estimate	d		Panel	Totals	
ITNC	NUOUS LOADS		0 VA		0.00%	b	0 VA					
ГСНІ	EN LOADS		0 VA		0.00%	<u> </u>	0 VA		-	Total Conn. Load:	7082 VA	
<u>SHT</u> I	NG LOADS	70	082 V	Ά	125.00°	%	8853 V	Α	To	otal Est. Demand:	8853 VA	
MOTOR LOADS			0 VA		0.00%)	0 VA		Tot	tal Conn. Current:	30 A	
	ON CONTINUOUS LOADS		0 VA		0.00%		0 VA		Т.	tal Est. Demand	27 4	
	ONTINUOUS LOADS		U VA		0.00%)	UVA		10	tai ESt. Demand	31 A	_

GENERAL PANEL SCHEDULE NOTES:

- 1. WHERE PANEL IS INDICATED TO INCLUDE FEED THRU LUGS, PROVIDE FEED THROUGH LUGS AT THE OPPOSITE END OF THE PANELBOARD FROM THE PANELBOARD MAIN LUGS.
- 2. WHERE PANEL IS INDICATED TO INCLUDE DOUBLE LUGS, PROVIDE A DOUBLE LUG KIT AT THE SAME END OF THE PANELBOARD AS THE PANELBOARD MAIN LUGS.
- 3. WHERE PANEL IS INDICATED TO INCLUDE 200% NEUTRAL, PROVIDE PANELBOARDS UL LISTED AS HAVING NEUTRAL BUSSES RATED TO CARRY 200 PERCENT OF THE CURRENT CARRYING CAPACITY OF THE PHASE BUSSING. OTHERWISE, NEUTRAL BUSSING TO BE FULL SIZE AND RECTANGULAR.
- 4. WHERE PANEL IS INDICATED TO INCLUDE AN I/G BUS, PROVIDE PANELBOARDS WITH AN ISOLATED GROUND BUS, DRILLED AND TAPPED FOR NUMBER OF ISOLATED GROUND CONDUCTORS SHOWN, AS WELL AS FOR ALL SPARES AND SPACES SHOWN ON THE PANELBOARD.
- 5. WHERE PANEL CIRCUIT BREAKER RATING IS SHOWN AS SERIES RATED, PROVIDE CIRCUIT BREAKERS IN PANELBOARD WHICH ARE SERIES RATED WITH THE UPSTREAM SYSTEM FOR THE AVAILABLE FAULT CURRENT. THE PANELBOARD SHALL BE MARKED WITH THE SERIES CONNECTED RATINGS, AS WELL AS ALL MARKING AS REQUIRED BY THE CEC
- 6. WHERE PANEL IS INDICATED AS RECESSED OR FLUSH MOUNTED, PROVIDE SPARE CONDUITS STUBBED UP INTO THE ACCESSIBLE CEILING SPACE. PROVIDE ONE (1) 3/4" CONDUIT ONLY FOR EACH THREE (3) SPARES OR SPACES, MINIMUM OF TWO (2). EACH CONDUIT SHALL BE TAGGED, CAPPED AND MARKED FOR FUTURE USE.
- ALL BUSSING SHALL BE COPPER. 8. ALL CIRCUIT BREAKERS USED AS SWITCHES SHALL BE UL LISTED AND LABELED "SWD" FOR SWITCHING DUTY.
- 9. ALL CIRCUIT BREAKERS USED TO SERVE MECHANICAL OR HEATING EQUIPMENT SHALL BE UL LISTED AND LABELED "HACR" FOR USE WITH THESE LOADS, WHERE REQUIRED.
- 10. ALL CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE AND SHALL BE SUITABLE FOR 75 DEGREE AMPACITY CONDUCTORS.
- 11. PANELS SHALL BE OF THE DEAD FRONT SAFETY TYPE. PANELS SHALL BE MINIMUM 20" WIDE AND 5 3/4" DEEP UNLESS OTHERWISE NOTED ON PLAN.
- 12. COORDINATE WITH APPLICABLE TRADE TO INSURE RECESSED MOUNTED PANELBOARDS WILL SEAT FLUSH IN THE WALLS PROVIDED. PANEL TRIMS SHALL HAVE CONCEALED DOORS AND FASTENERS WITH FLUSH TYPE COMBINATION LOCK AND CATCH, TWO MILLED TYPE KEYS SUPPLIED WITH EACH PANEL. ALL LOCKS SHALL BE KEYED ALIKE AND EACH DOOR SHALL HAVE A PLASTIC COVERED DIRECTORY FRAME WITH A TYPED IDENTIFICATION CARD OF ALL CIRCUIT AND PANEL NUMBERS FOR BRANCH CIRCUIT PANELBOARDS
- 13. UPON PROJECT COMPLETION, CONTRACTOR SHALL INSTALL TYPED AS-BUILT PANEL DIRECTORIES IN EACH PANEL WITHIN THE MFGR-PROVIDED DIRECTORY HOLDER. DIRECTORIES SHALL CONSIST OF LOAD DESCRIPTION AND CIRCUIT NUMBER FOR EACH CIRCUIT BASED ON AS-BUILT PANEL SCHEDULES. HANDWRITTEN DIRECTORIES ARE UNACCEPTABLE. LOCAL AHJ MAY REQUIRE COPIES OF ENGINEERED PANEL SCHEDULES BE PLACED IN PANEL DIRECTORIES. E.C. TO VERIFY REQUIREMENTS PRIOR TO BID AND INCLUDE ALL COSTS REQUIRED FOR LARGER-THAN-STANDARD CUSTOM PANEL DIRECTORY HOLDERS TO ACCOMMODATE COPIES OF ENGINEERED PANEL SCHEDULES.
- 14. PANELBOARDS SHALL BE MANUFACTURED BY G.E., CUTLER-HAMMER, SIEMENS, OR SQUARE "D".
- 15. PROVIDE SHOP DRAWING SUBMITTAL PER THE ELECTRICAL SPECIFICATION SUBMITTAL REQUIREMENTS FOR EACH PANEL DEPICTING CONFORMANCE WITH THE ABOVE NOTES AND SCHEDULES.
- PROVIDE LOCK-ON DEVICE
- PROVIDE LOCK-OFF DEVICE

SPECIFIC PANEL SCHEDULE NOTES:

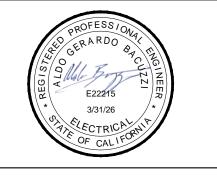
WHERE ADOPTED, 240-83(C).

"	PROVIDE SHUNT TRIP DEVICE				
"	PROVIDE GFCI TYPE DEVICE.	A 0	DD TII	(E)	(E)
"	PROVIDE A RED CIRCUIT FIRE ALARM BREAKER. SEE	A3	DP-TH		DB-A
	SHEET FA0.03, KEYNOTE #6.			LUD-A	DD-A
'	PROVIDE A NEW BREAKER TO MATCH THE EXISTING IN				
	PANEL.	A2	A1	INV-A	(F) D
"	PROVIDE BREAKER INTERLOCK WITH ADJACENT		/ /	114 4 /	(-)
	BREAKER. BREAKER INTERLOCK GROUPING SHALL BE BY			/E\	
	BRANCH CIRCUIT GROUP (i.e. MULTIPLE CIRCUITS ON A	14	(F) I 5	(⊑ <i>)</i>	NOTES
	COMMON YOKE NEC 210.4(B) FURNITURE SYSTEM NEC	L I	(E <i>)</i> L3	1 5 1	NO LES
	605.7)			LJ.	

PROVIDE HACR BREAKER EXISTING BREAKER WITH NEW LOAD

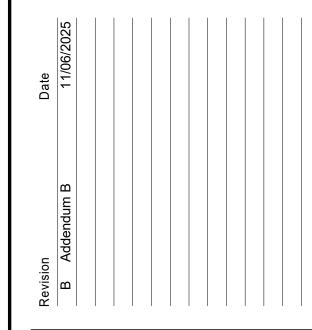
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hittier CA 90



ATIC DESIGN SIGN DEVEL ESIGN DEVEL OGRESS SET BMITTAL CK CHECK CK CHECK V CK CHECK V CK CHECK V CK CHECK V SCHEMA 50% DES 100% DE 50% PRO DSA SUB DSA BAC DSA BAC DSA BAC DSA BAC DSA BAC

ELECTRICAL PANEL SCHEDULES

31837

Checker

Job Number

Checked By

E6.01

FIRE ALARM PLAN REQUIREMENTS

- 1. ALL WALL-MOUNTED VISUAL SIGNALING APPLIANCES AND COMBINATION AUDIBLE/VISUAL SIGNALING APPLIANCES SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THEN 80 INCHES AND NO GREATER THEN 96 INCHES ABOVE THE FINISHED FLOOR. ALL WALL MOUNTED AUDIBLE SIGNALING APPLIANCES SHALL HAVE THEIR TOPS ABOVE FINISHED FLOOR AT HEIGHTS NOT LESS THEN 90 INCHES.
- 2. ALL EQUIPMENT SHALL BE U.L. AND C.S.F.M. LISTED.
- 3. ALL WIRING SHALL BE IN ACCORDANCE WITH THE C.E.C. AND AUTHORITIES HAVING JURISDICTION.
- 4. ALL JUNCTION BOXES AND CONDUITS SHALL BE SIZED IN ACCORDANCE WITH THE C.E.C. AND SHALL BE PAINTED RED
- 5. ELECTRICAL CONTRACTOR SHALL FURNISH ACCESS PANELS TO AREAS THAT REQUIRE SERVICING, TROUBLE SHOOTING,
- 6. DO NOT DEVIATE FROM CONDUIT RUNS AS SHOWN ON FLOOR PLANS WITHOUT PRIOR APPROVAL FROM ELECTRICAL ENGINEER. FACTORS SUCH AS EXCESSIVE VOLTAGE DROP, ADDITIONAL PARTS, ENGINEERING, ETC., THAT ARE A RESULT OF CONDUIT RUN DEVIATIONS SHALL BE THE SOLE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- 7. DETECTORS SHALL NOT BE LOCATED IN A DIRECT AIR-FLOW, NOR CLOSER THEN 3 FEET (915mm) FROM AN AIR SUPPLY
- 8. ALL FAN SHUTDOWN FUNCTIONS, DAMPER CLOSURES AND ASSOCIATED MECHANICAL SYSTEM FIRE ALARM INTERFACE SHALL BE BY MECHANICAL CONTRACTOR, AND SHALL BE COORDINATED WITH FIRE ALARM SYSTEM.
- 9. ALL DUCT SMOKE DETECTORS SHALL BE MOUNTED BY THE MECHANICAL CONTRACTOR. DUCT SMOKE DETECTORS EXPOSED TO THE WEATHER SHALL BE C.S.F.M. LISTED FOR OUTDOOR INSTALLATION, AND WEATHER PROTECTED BY THE MECHANICAL CONTRACTOR. ALL AIR VELOCITY TESTING SHALL BE PERFORMED BY THE MECHANICAL CONTRACTOR.

11. ALL FIRE ALARM DEVICE BACKBOXES, FIRE ALARM TERMINAL CABINETS, GUTTERS, JUNCTION BOXES, AND ASSOCIATED

- 10. ALL 120VAC POWER REQUIREMENTS FOR THE FIRE ALARM SYSTEM SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR AND SHALL MEET ALL REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.
- CONDUITS SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED. REFER TO FIRE ALARM SYMBOL LIST AND/OR MOUNTING DETAILS FOR ADDITIONAL INFORMATION. SYSTEM SUPPLIER PROVIDED BACKBOXES SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED. FIRE ALARM PANEL, REMOTES AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURER'S SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED THE WEIGHT OF 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS.
- 12. SMOKE DETECTOR TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH NFPA 72, ALL APPLICABLE CODES AND THE MANUFACTURER'S INSTRUCTIONS.
- 13. ALL WIRING, INITIATING DEVICES AND ANNUNCIATOR PANEL SHALL BE SUPERVISED TO THE PRINCIPAL POINT OF ANNUNCIATION. THE FIRE ALARM CONTROL PANEL TO SUPERVISE THE ANNUNCIATOR PANEL, ALL INITIATING AND
- 14. ALL WIRING SHALL BE CUT FOR IN AND OUT. WIRING SHALL NOT BE LOOPED THROUGH DEVICES PER CEC STANDARDS, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE THE WIRE. THERE MUST BE AT LEAST 6' OF LEAD WIRE FROM THE BOX TO THE DEVICE.
- 15. POINT AND COMMON ANNUNCIATION IS PROHIBITED. SIGNALING LINE CIRCUIT (SLC) MAY BE T-TAPED ONLY AT BUILDING FATC IF NECESSARY. INSTALL SLC LOOPED WITHIN ALL BUILDINGS AS SHOWN ON THE FLOOR PLANS..
- 16. PROVIDE 3/4" CONDUIT FROM FIRE ALARM CONTROL PANEL TO TELEPHONE BACKBOARD FOR OWNER PROVIDED CENTRAL STATION MONITORING.
- 17. CONTRACTOR TO FIELD VERIFY AND PROVIDE DECIBEL METER FOR TESTING OF AMBIENT NOISE LEVELS (MINIMUM 15db ABOVE AVERAGE AMBIENT NOISE LEVEL BUT NOT LESS 75 DBA AT 10 FEET OR MORE THAN 110 DBA AT THE MINIMUM HEARING DISTANCE - SEE NFPA 72 APPENDIX A.7.4.2.1.) INSTALL ADDITIONAL AUDIBLE DEVICES AS NEEDED TO ATTAIN REQUIRED NOISE LEVELS IN ALL REQUIRED AREAS. PROVIDE UPDATED PLANS AND CALCULATIONS THROUGH THE "CHANGE ORDER" PROCESS WHEN INSTALLING ADDITIONAL DEVICES. INSPECTOR OF RECORD (IOR) TO WITNESS FINAL TEST OF SYSTEM. CONTRACTOR(S) TO PROVIDE FINAL TEST RESULT AND "RECORD OF COMPLETION" TO ARCHITECT OF RECORD, OWNER, DIVISION OF THE STATE ARCHITECT, IOR AND LOCAL FIRE AUTHORITY.
- 18. ALL FIRE ALARM CONDUITS ARE MINIMUM 3/4" U.O.N. ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT, ABOVE CEILINGS, UNDER FLOORS AND IN WALLS IN A NEAT AND PROTECTED MANOR AS INDICATED ON DESIGN DOCUMENTS. EXPOSED
- 19. ALL FLOW SWITCHES SHALL BE 2 WIRE WITH NON-ELECTRONIC RETARD TYPE SIMILAR TO THE SYSTEM SENSOR MODEL

CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS.

- 20. ALL DEVICES IN THE ALARM SYSTEM SHALL BE COMPATIBLE AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
- 21. SYSTEM SHALL BE FURNISHED AND INSTALLED BY A MANUFACTURER'S AFFILIATE AND AUTHORIZED DISTRIBUTOR. FIRE ALARM SYSTEM INSTALLATION COMPANY SHALL BE UL LISTED (UUJS). INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING BY AN APPROVED SUPERVISING STATION PER CBC SECTION 901.6. SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST. OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACT OR
- 22. DETECTORS SHALL NOT BE INSTALLED UNTIL AFTER THE CONSTRUCTION CLEAN-UP OF ALL TRADES IS COMPETE AND FINAL. DETECTORS THAT HAVE BEEN INSTALLED PRIOR TO FINAL CLEAN-UP BY ALL TRADES SHALL BE CLEANED OR REPLACED IN ACCORDANCE WITH CHAPTER 17 SECTION 17.7.1.11. CLEANING OR REPLACEMENT OF DEVICES THAT WERE MOUNTED AT THE REQUEST OF THE CONTRACTOR WILL NOT BE PERFORMED WITHOUT WRITTEN AUTHORIZATION THAT ASSUMES FINANCIAL RESPONSIBILITY FOR COSTS INCURRED. SEE THE LATEST VERSION OF NFPA 72.
- 23. PER CBC 2022, SECTION 11B-309, CONTROLS AND OPERATING MECHANISMS AT INITIATING DEVICE "SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5lbf (22.2N)." OPERABLE PARTS SHALL BE PLACED WITHIN THE REACH RANGES SPECIFIED IN SECTION 11B-308.
- 24. FIRE ALARM SYSTEM CONTROL PANEL SHALL HAVE A MEANS FOR TURNING OFF ACTIVATED ALARM NOTIFICATION APPLIANCES, WHEN OCCUPANT NOTIFICATION ALARM SIGNAL DEACTIVATION IS ACTUATED, BOTH AUDIBLE AND VISIBLE NOTIFICATION APPLIANCES SHALL BE SIMULTANEOUSLY DEACTIVATED. THE DEACTIVATION MEANS SHALL BE KEY-
- 25. THE SYSTEM SHALL CONFORM TO CALIFORNIA CODE OF REGULATIONS (CCR) TITLES 19 AND 24 AS APPLICABLE TO THIS
- 26. AUDIBLE COVERAGE SHALL COMPLY WITH NFPA 72 AND 2022 CBC.
- 27. ALL FIRE ALARM SYSTEM VISUAL SIGNAL BE SYNCHRONIZED THROUGHOUT THE SITE.
- 28. WHERE NOTIFICATION APPLAINCES OCCUR AT WHITEBOARDS, LOCATE DEVICE(S) +4" ABOVE TOP OF WHITEBOARD, NOT TO
- 29. PROVIDE A LABEL WITHIN THE FACP AND EACH POWER SUPPLY WITH THE PANEL NUMBER AND CIRCUIT NUMBER OF THE 120 VOLT POWER SOURCE.
- 30. WHERE A DETECTOR IS INSTALLED ABOVE THE CEILING, THE DETECTOR SHALL BE EASILY ACCESSIBLE AND THE LOCATION OF THE DETECTOR SHALL BE CLEARLY MARKED. FOR DUCT SMOKE DETECTORS A REMOTE TEST STATION SHALL BE
- 31. TEMPERATURE SETTINGS OF HEAT DETECTOR DEVICES ARE TO BE SET AT A MINIMUM OF 20°F. ABOVE THE MAXIMUM
- EXPECTED TEMPERATURE OF THE SPACE INSTALLED PER NFPA 72, 2-23. 32. MECHANICAL UNIT (HVAC) SHUT DOWN SHALL UTILIZE DUCT SMOKE DETECTOR TO TRIGGER RELAY FOR HVAC UNIT SHUT
- 33. UPON COMPLETION OF SYSTEM INSTALLATION, THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF AND IN A MANNER ACCEPTABLE TO DSA/I.O.R. CONTRACTOR SHALL SUPPLY NECESSARY TESTING EQUIPMENT, INCLUDING A "SOUND LEVEL METER" TO CHECK ACCEPTABLE NOISE LEVELS OF AUDIBLE DEVICES. PROVIDE TEST RESULTS PER NFPA 72 TO ARCHITECT, D.S.A., I.O.R. AND TO LOCAL FIRE AUTHORITY. THE INSTALLING CONTRACTOR SHALL PROVIDE A RECORD OF COMPLETION PER NFPA72, FIGURE 7.8.2(a) THRU. 7.8.2(i).
- 34. THE "END OF LINE RESISTANCE" OF EACH CIRCUIT SHALL BE TESTED IN THE PRESENCE OF THE I.O.R. AND SHALL NOT
- EXCEED A MAXIMUM OF 10% VOLTAGE DROP, OR LISTED MANUFACTURER'S MINIMUM OPERATING VOLTAGE... 35. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS SHEET FOR EXTERIOR NOTIFICATION APPLIANCE MOUNTING.
- 36. ALL WIRING USED IN UNDERGROUND CONDUIT SHALL BE LISTED FOR WET AREA APPLICATION, IN ACCORDANCE WITH CEC
- 37. ALL UNDERGROUND FIRE ALARM SYSTEM CONDUCTORS SHALL BE CONTINUOUS FROM END TO END. NO UNDERGROUND SPLICES WILL BE PERMITTED, NOR ACCEPTABLE.
- 38. FIRE ALARM SYSTEM IS FULLY AUTOMATIC SYSTEM.
- 39. APPLICABLE STANDARD 2022 NFPA 72 INCLUDING CALIFORNIA AMENDMENTS
- 40. INSTALLATION OF THE SYSTEM SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATION, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAS BEEN APPROVED BY DSA.
- 41. A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION.
- 42. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF DSA AND THE ARCHITECT/ENGINEER OF THE PROJECT.
- 43. DSA, ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION
- 44. ALL PENETRATIONS THROUGH RATED ASSEMBLIES, REQUIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM AS IDENTIFIED IN CBC CHAPTER 7, UL OR OTHER LAB TESTING CRITERIA. APPROVED TYPE OF MATERIALS SHALL BE IDENTIFIED WITHIN THE SPECIFICATION WITHIN THE FIRE ALARM SECTION.
- 45. PROVIDE ALL COMPONENTS, DEVICES AND PANELS FOR A COMPLETE FUNCTIONAL FIRE ALARM SYSTEM.
- 46. THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS. 47. VISUAL DEVICES SHOULD NOT EXCEED 2 FLASHES PER SECOND AND SHOULD NOT BE SLOWER THAN 1 FLASH EVERY
- SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15 CANDELLA. VISUAL DEVICES WITHIN SAME VIEW FROM EACH OTHER SHALL BE SYNCHRONIZED.
- 48. UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATERTIGHT FITTINGS AND WIRE TO BE APPROVED FOR WET
- 49. ALL FIRE ALARM WIRING SHALL BE FLP OR FPLP (FIRE POWER LIMITED OR FIRE POWER LIMITED PLENUM) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE THHN OR THWN.
- 50. ALL LED REMOTE INDICATORS FOR DUCT DETECTORS AND FIRE/SMOKE DAMPERS SHALL BE LOCATED IN CEILINGS IN COORDINATION WITH ARCHITECT PRIOR TO ANY ROUGH-IN.
- 51. WHEN AS PART OF CONSTRUCTION OF NEW BUILDING FIRE ALARM SYSTEM IS PLACED OUT OF SERVICE AND AFFECTS ANY PORTIONS OF THE CAMPUS, PROVIDE AND MAINTAIN FIRE WATCH AT THE AFFECTED BUILDING(S).

LIST OF APPLICABLE CODES AS

2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR* 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10. TITLE 24 CCR 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

APPLICABLE STANDARDS

FOR THE LIST OF APPLICABLE STANDARDS, INCLUDING CALIFORNIA AMENDMENTS TO THE NFPA STANDARD, REFER TO CBC CHAPTER 35 AND CFC CHAPTER 80.

ABBREVIATIONS

EXISTING FIRE ALARM DEVICE TO REMAIN AND PROTECT **NEW DEVICE** TERMINATE AND DEMOLISH EXISTING FIRE ALARM DEVICES RELOCATE EXISTING FIRE ALARM DEVICES

FIRE WATCH NOTE

PROVIDE FIRE WATCH ARRANGEMENT FOR MONITORING THE BUILDING TO PREVENT AND RESPOND TO FIRES WHEN BUILDING'S FIRE SAFETY SYSTEM IS OUT OF SERVICE. WHEN FIRE ALARM SYSTEM IS DISABLED DURING THE CONSTRUCTION "FIRE WATCH" SHALL BE PROVIDED.

SYMBOL LEGEND

			SYMBOL LEGEND	
<u>SYMBOL</u>	MODEL	MFGR	DESCRIPTION	<u>C.S.F.M. #</u>
FACP	NFS2-3030	NOTIFIER	FIRE ALARM CONTROL PANEL W/DIGITAL VOICE COMMUNICATIONS	7165-0028:0224
DVC	DVC-EM DAA2-7025	NOTIFIER	DIGITAL VOICE COMMAND W/FIBER MODULE 70W DIGITAL AUDIO AMPLIFIER	7165-0028:0224
ANN	NCA-2 DVC-RPU	NOTIFIER	REMOTE ANNUNCIATOR PANEL W/REMOTE MICROPHONE	7165-0028:0243
FAPS	FCPS-24S8	NOTIFIER	FIRE ALARM POWER SUPPLY PANEL	7315-0028:0225
②	FSP-951	NOTIFIER	INTELLIGENT PHOTOELECTRIC SMOKE DETECTOR	7272-0028:0503
<u> </u>	B300-6	NOTIFIER	DETECTOR BASE	7300-1653:0109
•	FST-951-IV	NOTIFIER	INTELLIGENT HEAT DETECTOR (ABOVE ACCESSIBLE CEILING U.N.O.)	7270-0028:0502
	B300-6	NOTIFIER	DETECTOR BASE	7300-1653:0109
© ②	FPC-951	NOTIFIER	ADDRESSABLE MULTI-CRITERIA SMOKE/CO DETECTOR	7272-0028:0510
	B200S	NOTIFIER	DETECTOR SOUNDER BASE	7300-1653:0213
Zc	FRM-1	NOTIFIER	ADDRESSABLE RELAY MODULE	7300-0028:0219
Zm	FMM-1	NOTIFIER	ADDRESSABLE MONITOR MODULE	7300-0028:0219
岗	SPSCWL	SYSTEM SENSOR	CEILING-MOUNT SPEAKER/STROBE (MULTI-CANDELA)	7320-1653:0505
曼	SPSWL	SYSTEM SENSOR	WALL-MOUNT SPEAKER/STROBE (MULTI-CANDELA)	7320-1653:0505
塱	SWL	SYSTEM SENSOR	WALL -MOUNT STROBE (MULTI-CANDELA)	7125-1653:0504
WP H	SPWK	SYSTEM SENSOR	WALL SPEAKER (EXTERIOR)	7320-1653:0201
里	NBG-12LX	NOTIFIER	ADDRESSABLE MANUAL PULL STATION	7150-0028:0199
× Z	FS-OSI-RI	NOTIFIER	REFLECTIVE BEAM SMOKE DETECTOR	7260-0028:0509
	RTS151KEY	SYSTEM SENSOR	REMOTE TEST & RESET SWITCH W/KEY LOCK	7300-1653:0212
			EXISTING WATERFLOW SWITCH	
(w)	FMM-101	NOTIFIER	MINI MONITOR MODULE	7300-0028:0219
			EXISTING TAMPER SWITCH	
T	FMM-101	NOTIFIER	MINI MONITOR MODULE	7300-0028:0219
С ВН			EXISTING 120VAC EXTERIOR SPRINKLER BELL	
FADC	ACE-11	SPACE AGE	FIRE ALARM DOCUMENTS CABINET	7300-0553-0110
FATC			FIRE ALARM TERMINAL CABINET	
J			FIRE ALARM JUNCTION BOX	

WIRE LEGEND

CONDUCTOR DESIGNATION	WIRE IN CONDUIT	CONDUCTOR DESIGNATION	<u>WIRE IN CONDUIT</u> <u>UNDERGROUND / WET</u> <u>LOCATION</u>	CIRCUIT TYPE
Z	2 #16 UNSHIELDED (WEST PENN #D990)	ZU	2 #16 FPL UNSHIELDED (WEST PENN #AQ-225)	INITIATING CIRCUIT
V	2 #12 THHN STRANDED	VU	2 #12 THWN STRANDED	STROBE CIRCUIT
Р	2 #12 THHN STRANDED	PU	2 #12 THWN STRANDED	24VDC POWER CIRCUI
С	2 #16 UNSHIELDED (WEST PENN #D990)	CU	2 #16 FPL UNSHIELDED (WEST PENN #AQ-225)	NETWORK CONTROL
А	2 #16 SHIELDED (WEST PENN #D991)	AU	2 #16 FPL SHIELDED (WEST PENN #AQ-291)	SPEAKER CIRCUIT
EXAMPLE:	NUMBER OF CONDUCTOR PAIRS			

ABOVE EXAMPLE "2V" MEANS "2 PAIRS OF #12 WIRE"

- ALL WIRE MODEL NUMBERS ARE WEST PENN. EQUIVALENT BY OTHER MANUFACTURER IS ACCEPTABLE.
- 2. COLOR CODE ALL FIRE ALARM CONDUCTORS PER DISTRICT STANDARDS. VERIFY COLOR SCHEMES PRIOR TO ORDERING FIRE ALARM CONDUCTORS.

—— CONDUCTOR DESIGNATION

- 3. ALL WIRING SHALL BE CLASS "B", U.O.N.
- 4. ALL WIRING SHALL BE IN MINIMUM 3/4" CONDUIT, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SLEEVES, LOCATION AND SIZE OF CONDUITS TO COMPLY WITH CODES AND STANDARDS.
- 5. UNDERGROUND CABLES SHALL BE LISTED AS UNDERGROUND BURIAL TYPE AND EXTERIOR CONDUITS SHALL HAVE WATERTIGHT FITTINGS.

FIRE ALARM SEQUENCE OF OPERATIONS

<u></u> -		W OLGOL		<u> </u>	<u> </u>		
DEVICE	ACTIVATE NOTIFICATION ALARM SIGNALS	ACTIVATE REMOTE ANNUNCIATOR	ACTIVATE TROUBLE OR SUPERVISORY SIGNAL	SIGNAL TO UL LISTED CENTRAL MONITORING STATION	CLOSE CSFD	SHUT DOWN AH-UNIT & HVLS FAN	ACTIVATE CO DETECTOR SOUNDER BASE
CONTROL PANEL	YES	YES	YES	YES	YES	YES	YES
MANUAL PULL STATION	YES	YES	NO	YES	NO	NO	NO
SMOKE / BEAM DETECTOR	YES	YES	NO	YES	YES	YES	NO
HEAT DETECTOR	YES	YES	NO	YES	YES	YES	NO
CARBON MONOXIDE DETECTOR	YES	YES	NO	YES	YES	YES	YES
A/C POWER FAILURE	NO	YES	YES	YES	NO	NO	NO
WIRING FAULTS / LOW BATTERY	NO	YES	YES	YES	NO	NO	NO
WATERFLOW	YES	YES	NO	YES	NO	YES	NO
TAMPER / PIV	NO	YES	YES	YES	NO	NO	NO

NOTE: PER IMC 608.1 WHEN THE AUTOMATIC ACTIVATION OF A SMOKE DAMPER OR A COMBINATION SMOKE-FIRE DAMPER OCCURS, THE HVAC SYSTEM SERVING SUCH DAMPERS SHALL IMMEDIATELY SHUT DOWN. THE HVAC SYSTEM SHALL NOT BE RESTARTED AGAIN UNTIL ALL DAMPERS ARE RESET AND FULLY OPENED.

CENTRAL STATION INFORMATION

PYRO-COMM SYSTEMS, INC. UL # S4756 15531 CONTAINER LANE **HUNTINGTON BEACH. CA 92649** PHONE #: 1-888-815-6268 CUSTOMER ACCT. #: 692986

FIRE SPRINKLER INFORMATION

EXISTING ADMIN BUILDING IS FULLY SPRINKLERED

FIRE ALARM SCOPE OF WORK

O PROVIDE AND INSTALL A NEW ANALOG ADDRESSABLE VOICE EVAC. AUTOMATIC. POWER LIMITED 24V DC SUPERVISED FIRE ALARM SYSTEM WITHIN THE EXISTING ADMIN BUILDING IN EAST WHITTIER MS EXISITNG FIRE ALARM SYSTEM IN OTHER BUILDINGS SHALL BE MAINTAINED OPERATIONAL AND WILL BE RECONNECTED TO NEW FIRE ALARM CONTROL PANEL

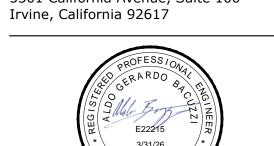
COMPLETE FIRE ALARM SUBMITTAL

MANUAL/AUTOMATIC FIRE ALARM SYSTEM



LANDSCAPE ARCHITECTURE PLANNING 949-261-1001 Office

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31837 Job Number

FIRE ALARM LEAD

Checked By

M.N

1/8" = 1'-0"

FA0.10

Panel Location: Whittier MS - Building A - Admin East Panel Name: POWER SUPPLY PANEL FAPS-3 Regulated Load in Standby Total Current Number of Current Circuits/Devices (Amps) Device Type (Amps) 0.091 = FCPS-24S8 Main Circuit Board Power Supervision Relay Auxiliary Device (Soounder Base Notification Appliance Circuit Bldg. "A" 1st Floor NAC# V9 Bldg. "A" 1st Floor NAC# V10 X 0.0004 = 0.0004 X 0.0004 = 0.0004 X 0.0004 = 0.0004 X 0.0004 = 0.0004 Bldg. "A" 1st Floor NAC# V11 Bldg. "A" 1st Floor NAC# V12 STANDBY LOAD = 0.0926 Regulated Load in ALARM Total Current Current **Device Type** Devices (Amps) X 0.145 = 0.145 X 0.025 = 0 X 0.065 = 0 FCPS-24S8 Main Circuit Board Power Supervision Relay Auxiliary Device (Soounder Base) Notification Appliance Circuit Bldg. "A" 1st Floor NAC# V9 Bldg. "A" 1st Floor NAC# V10 Bldg. "A" 1st Floor NAC# V11 X 0.000 = 0.000 Bldg. "A" 1st Floor NAC# V12 ALARM LOAD = Battery Amp Hour Calculation Required Standby Time Current (Amps) (Typically 24 or 60 Hours)

Alarm Load

Current (Amps)

24 =

Required Alarm Time

1.611 X

(2)-7AH Batteries Required
Provide 7AH Batteries

Sub Total Standby / Alarm Amp Hours

Multiply by the Derating Factor X

Total Ampere Hours Required =

(Typically 5 or 10 *Minutes*)

2.2224 AH

20.4 VOLTS

20.4 VOLTS

20.4 VOLTS

0.40 AH

Panel Location:	Whittier MS - Building	A - Admin West	
•			
Panel Name:	POWER SUPPLY PA	NEL FAPS-2	
ted Load in Standby			
-	Number of	Current	Total Current

Device Type	Number of Circuits/Devices		Current (Amps)		Total Current (Amps)
FCPS-24S8 Main Circuit Board	1	Χ	0.091	=	0.091
Power Supervision Relay	0	Х	0.025	=	0
Auxiliary Device (Soounder Base)	0	X	0.0003	=	0
Notification Appliance Circuit					
Bldg. "A" 1st Floor NAC# V5	1	X	0.0004	=	0.0004
Bldg. "A" 1st Floor NAC# V6	1	Х	0.0004	=	0.0004
Bldg. "A" 1st Floor NAC# V7	1	Х	0.0004	=	0.0004
Bldg. "A" 1st Floor NAC# V8	1	Х	0.0004	=	0.0004
	•				•
		STA	NDBY LOAD	=	0.0926

		<u> </u>	11221 2012		0.0020
Regulated Load in ALARM	_				
Device Type	Number of Devices		Current (Amps)		Total Current (Amps)
FCPS-24S8 Main Circuit Board	1	X	0.145	=	0.145
Power Supervision Relay	0	X	0.025	=	0
Auxiliary Device (Soounder Base)	0	X	0.065	=	0
Notification Appliance Circuit					
Bldg. "A" 1st Floor NAC# V5	1	Х	0.799	=	0.799
Bldg. "A" 1st Floor NAC# V6	1	Х	0.845	=	0.845
Bldg. "A" 1st Floor NAC# V7	1	Х	0.579	=	0.579
Bldg. "A" 1st Floor NAC# V8	1	Х	0.746	=	0.746
	-	P	LARM LOAD	=	3.114

Battery Amp Hour Calculation				
Standby Load			Required Standby Tim	е
Current (Amps)			(Typically 24 or 60 Hou	ırs)
	0.0926	Х	24 =	2.2224 AF
Alarm Load			Required Alarm Time	
Current (Amps)			(Typically 5 or 10 Minu	tes)
	3.114	Х	15 =	0.78 AH
	Sub Tot	al Stanc	lby / Alarm Amp Hours	3.00 AF
	Multiply b	y the De	erating Factor X	1.3
	Total Ampe	re Hou	rs Required =	4 Al

(2)-7AH Batteries Required

Provide 7AH Batteries

Panel Location: Whittier MS - Building A - Basement Main ELEC/MDF Room

Panel Name: POWER SUPPLY PANEL FAPS-1

Device Type	Number of Circuits/Devices		Current (Amps)		Total Curren (Amps)
FCPS-24S8 Main Circuit Board	1 1	Х	0.091	=	0.091
Power Supervision Relay	0	Χ	0.025	=	0
Auxiliary Device (Soounder Base)	0	Х	0.0003	=	0
Notification Appliance Circuit					
Bldg. "A" Basement NAC# V1	1	Х	0.0004	=	0.0004
Bldg. "A" Basement NAC# V2	1	Х	0.0004	=	0.0004
Bldg. "A" Basement NAC# V3	1	Х	0.0004	=	0.0004
Bldg. "A" Basement NAC# V4	1 1	Х	0.0004	=	0.0004

	_	STA	NDBY LOAD	=	0.0926
Regulated Load in ALARM					
Device Type	Number of Devices		Current (Amps)		Total Current (Amps)
FCPS-24S8 Main Circuit Board	1	X	0.145	=	0.145
Power Supervision Relay	0	Х	0.025	=	0
Auxiliary Device (Soounder Base)	0	Х	0.065	=	0
Notification Appliance Circuit					
Bldg. "A" Basement NAC# V1	1	Х	0.869	=	0.869
Bldg. "A" Basement NAC# V2	1	Х	0.582	=	0.582
Bldg. "A" Basement NAC# V3	1	Х	0.444	=	0.444
Bldg. "A" Basement NAC# V4	1	Х	0.000	=	0.000

Battery Amp Hour Calcula	ation			
Standby Load			Required Standby Time	
Current (Amps)			(Typically 24 or 60 Hour	rs)
	0.0926	Х	24 =	2.2224 AF
Alarm Load			Required Alarm Time	
Current (Amps)			(Typically 5 or 10 Minute	es)
	2.04	Х	15 =	0.51 AF
	Sub Tot	al Stand	by / Alarm Amp Hours	2.73 AF
	Multiply b	y the De	erating Factor X	1.3
	Total Ampe	re Hou	rs Required =	4 Al
	(2)-7AH Batteries	Require	ed	
	Provide 7AH Batte	eries		

ALARM LOAD =

Poject Name: Whittier MS - Emma Wicker Auditorium Renovation

Panel Location: Building A - Admin East

	Panel: <u>FAPS-3</u>													
NAC SCHEDULE / VOLTAGE DROP CALCULATION		APPLIANCE QUANTITIES/CURRENT DRAW									VOLTA	GE DROP TOTALS		
10 % MAXIMUM VOLTAGE DROP	ESTIMATED	Strobe	Strobe	Strobe	SpeakerStrobe	SpeakerStrobe	SpeakerStrobe	SpeakerStrobe	TOTAL	WIRE	ACTUAL	ACTUAL	TOTAL	MAXIMUM
CIRCUIT OUTPUT VOLTAGE = 20.4 (FOR CALCULATIONS)	CIRCUIT	15cd	30cd	75cd	15cd	30cd	75cd	95cd	CKT. LOAD	GAUGE	VOLTAGE	VOLTAGE	CIRCUIT	ALLOWABLE
CIRCUIT DESCRIPTION	LENGTH	0.041	0.063	0.111	0.041	0.063	0.111	0.134	(AMPS)	(18, 16, 14, 12)	DROP %	DROP (VOLTS)	RESISTANCE	CKT. LENGTH
#V9 BLDG. "A" FIRST FLOOR STROBE CKT. V9	400 ft.				7	5	2		0.824	12	6.24%	1.272	1.5 Ohms	641 ft.
#V10 BLDG. "A" FIRST FLOOR STROBE CKT. V10	450 ft.				6	1	3		0.642	12	5.47%	1.115	1.7 Ohms	823 ft.
#V11 BLDG. "A" FIRST FLOOR STROBE CKT. V11	0 ft.								0.000	12	0.00%	0.000	0.0 Ohms	0 ft.
#V12 BLDG. "A" FIRST FLOOR STROBE CKT. V12	0 ft.								0.000	12	0.00%	0.000	0.0 Ohms	0 ft.
			Appliance Summary											
METHOD USED TO CALCULATE PERCENT OF VOLTAGE DR [(CIRCUIT LENGTH IN FEET X 2) (AMPS X OHMS/FOOT)] X 10		0	0	0	13	6	5	0						

Panel Location: WHITTIER MS - ADMIN BLDG. BASEMENT Panel: <u>DVC-1/AMP-1</u> Regulated Load in Standby Total Current Current (Amps) Device Type (Amps) DAA-7025 70W Amplfier 0.25 Watt Speakers 0.5 Watt Speakers 1 Watt Speakers 2 Watt Speakers STANDBY LOAD = 0.2777 Regulated Load in ALARM Total Current Current Device Type (Amps) (Amps) DAA-7025 70W Amplfier 0.25 Watt Speakers X 0.02 = 0 X 0.04 = 0.76 X 0.08 = 0.640 0.5 Watt Speakers 1 Watt Speakers 2 Watt Speakers ALARM LOAD = 0.580 Battery Amp Hour Calculation
Standby Load (Typically 24 or 60 *Hours*) Current (Amps) 24 =

(Typically 5 or 15 *Minutes*)

15 =

Sub Total Standby / Alarm Amp Hours

Multiply by the Derating Factor X

Total Ampere Hours Required =

(2)-12AH Batteries Required

	Par	nel Location: Building A- Admi	in West			-									
		Panel: <u>FAPS-2</u>													
NAC SCHE	DULE / VOLTAGE DROP CALCULATION				AP	PLIANCE QUANTITIE	S/CURRENT DRAW					VOLTA	GE DROP TOTALS		•
10 % MAX	MUM VOLTAGE DROP	ESTIMATED	Strobe	Strobe	Strobe	SpeakerStrobe	SpeakerStrobe	SpeakerStrobe	SpeakerStrobe	TOTAL	WIRE	ACTUAL	ACTUAL	TOTAL	MAXIMUM
CIRCUIT OU	TPUT VOLTAGE = 20.4 (FOR CALCULATIONS)	CIRCUIT	15cd	30cd	75cd	15cd	30cd	75cd	95cd	CKT. LOAD	GAUGE	VOLTAGE	VOLTAGE	CIRCUIT	ALLOWABLE
CIRCUIT	DESCRIPTION	LENGTH	0.041	0.063	0.111	0.041	0.063	0.111	0.134	(AMPS)	(18, 16, 14, 12)	DROP %	DROP (VOLTS)	RESISTANCE	CKT. LENGTH
#V5	BLDG. "A" FIRST FLOOR STROBE CKT. V5	450 ft.				11	2	2		0.799	12	6.80%	1.388	1.7 Ohms	661 ft.
#V6	BLDG. "A" FIRST FLOOR STROBE CKT. V6	550 ft.				4	2	5		0.845	12	8.79%	1.794	2.1 Ohms	625 ft.
#V7	BLDG. "A" FIRST FLOOR STROBE CKT. V7	500 ft.				6		3		0.579	12	5.48%	1.117	1.9 Ohms	913 ft.
#V8	BLDG. "A" FIRST FLOOR STROBE CKT. V8	625 ft.				7	2	3		0.746	12	8.82%	1.800	2.4 Ohms	708 ft.
						Appliance S	ummary								
METHOD U	SED TO CALCULATE PERCENT OF VOLTAGE DRO	P:	0	0	0	28	6	13	0						
[(CIRCUIT L	<u>ENGTH IN FEET X 2) (AMPS X OHMS/FOOT)] X 100</u>			-		•	-		-	-		•			

	FAPS-1													
NAC SCHEDULE / VOLTAGE DROP CALCULATION				AP	PLIANCE QUANTITIE	S/CURRENT DRAW					VOLTA	GE DROP TOTALS		
10 % MAXIMUM VOLTAGE DROP	ESTIMATED	Strobe	Strobe	Strobe	SpeakerStrobe	SpeakerStrobe	SpeakerStrobe	SpeakerStrobe	TOTAL	WIRE	ACTUAL	ACTUAL	TOTAL	MAXIMUM
CIRCUIT OUTPUT VOLTAGE = 20.4 (FOR CALCULATIONS)	CIRCUIT	15cd	30cd	75cd	15cd	30cd	75cd	95cd	CKT. LOAD	GAUGE	VOLTAGE	VOLTAGE	CIRCUIT	ALLOWABLE
CIRCUIT DESCRIPTION	LENGTH	0.041	0.063	0.111	0.041	0.063	0.111	0.134	(AMPS)	(18, 16, 14, 12)	DROP %	DROP (VOLTS)	RESISTANCE	CKT. LENGTH
#V1 BLDG. "A" BASEMENT STROBE CKT. V1	500 ft.				10	2	3		0.869	12	8.22%	1.677	1.9 Ohms	608 ft.
#V2 BLDG. "A" BASEMENT STROBE CKT. V2	500 ft.				3	2	3		0.582	12	5.51%	1.123	1.9 Ohms	908 ft.
#V3 BLDG. "A" BASEMENT STROBE CKT. V3	500 ft.						4		0.444	12	4.20%	0.857	1.9 Ohms	1,190 ft.
#V4 BLDG. "A" BASEMENT STROBE CKT. V4	0 ft.								0.000	12	0.00%	0.000	0.0 Ohms	0 ft.
			Appliance Summary											
METHOD USED TO CALCULATE PERCENT OF VOLTAGE DROP:		0	0	0	13	4	10	0						

Panel Location: WHITTIER MS - ADMIN BLDG. FIRST FLOOR

Device Type	Number of Devices		Current (Amps)		Total Current (Amps)
DAA-7025 70W Amplfier	1	Х	0.275	=	0.275
0.25 Watt Speakers	0	Х	0.0001	=	0
0.5 Watt Speakers	0	Х	0.0001	=	0.000
1 Watt Speakers	36	Х	0.0001	=	0.0036
2 Watt Speakers	17	Х	0.0001	=	0.002

Current (Amps)

Panel: <u>DVC-2/AMP-2</u>

		STA	NDBY LOAD	=	0.2803
Regulated Load in ALARM					
Device Type	Number of Devices		Current (Amps)		Total Current (Amps)
DAA-7025 70W Amplfier	1	X	0.580	=	0.580
0.25 Watt Speakers	0	Χ	0.015	=	0
0.5 Watt Speakers	0	Х	0.02	=	0
1 Watt Speakers	36	Х	0.04	=	1.44
2 Watt Speakers	17	Х	0.08	=	1.360

Standby Load			Required Standby Time			
Current (Amps)			(Typically 24 or 60 Hour	s)		
	0.2803	X	24 =	6.7272 AF		
Alarm Load			Required Alarm Time			
Current (Amps)			(Typically 5 or 15 Minute	es)		
	0.58	Χ	15 =	0.15 AF		
	Sub Total Standb	y / Aları	m Amp Hours	6.87 AF		
	Multiply by the De	erating F	Factor X	1.3		
	Total Ampere Ho	Total Ampere Hours Required =				

Panel Location: WHITTIER MS - ADMIN BLDG. FIRST FLOOR

Panel: DVC-3/AMP-3

(Amps)		Current (Amps)		Number of Devices	Device Type
= 0.275		0.275	X	1	DAA-7025 70W Amplfier
= 0	=	0.0001	X	0	0.25 Watt Speakers
= 0.000	=	0.0001	Х	0	0.5 Watt Speakers
= 0.0019	=	0.0001	Х	19	1 Watt Speakers
= 0.001	=	0.0001	Х	13	2 Watt Speakers
	=		X		1 Watt Speakers 2 Watt Speakers

Device Type	Number of Devices		Current (Amps)		Total Current (Amps)
DAA-7025 70W Amplfier	1	Χ	0.580	=	0.580
0.25 Watt Speakers	0	Х	0.015	=	0
0.5 Watt Speakers	0	Х	0.02	=	0
1 Watt Speakers	19	Х	0.04	=	0.76
2 Watt Speakers	13	Х	0.08	=	1.040
	•	•	•	•	•
		P	LARM LOAD	=	0.580

Battery Amp Hour Calculation			
Standby Load		Required Standby Time	
Current (Amps)		(Typically 24 or 60 <i>Hours</i>)	
0.2782	Х	24 =	6.6768 AH
Alarm Load		Required Alarm Time	
Current (Amps)		(Typically 5 or 15 <i>Minutes</i>)	
0.58	Х	15 =	0.15 AH
Sub Total Stand	oy / Alarr	n Amp Hours	6.82 AH
Multiply by the D	erating F	actor X	1.3
Total Ampere Ho	ours Req	uired =	9 AH
(2)-12AH Batter	ies Requ	uired	

Calculation Sheet

	SPEAKER CIRCUIT LOAD CALCULATION							MAXIMUM -3 dB DROP PER CIRCUIT					
SPEAKER CIRCUIT DESCRIPTION	PANEL CIRCUIT NUMBER	I /18 16 1/ 17\	CIRCUIT VOLTAGE (25 OR 70 VRMS)	SPEAKER TAPPED AT 0.25 Watts	APPLIANCE SPEAKER TAPPED AT 0.5 Watts	S QUANTITIES / T SPEAKER TAPPED AT 1 Watts	AP VALUES SPEAKER TAPPED AT 2 Watts	SPEAKER TAPPED AT 4 Watts	TOTAL CIRCUIT LOAD (WATTS)	ESTIMATED CIRCUIT LENGTH (FEET)	ACTUAL WIRE/LOSS (dB)	MAXIMUM ALLOWABLE CKT. LENGTH (FEET)	TOTAL CIRCUIT RESISTANCE (OHMS)
BLDG. "A" BASEMENT SPEAKER CKT. S1 (FACP Amp.)	CKT #1	16	25	0	0	13	2	0	17.00	1000	-1.75	1,858	8.2
BLDG. "A" BASEMENT SPEAKER CKT. S2 (FACP Amp.)	CKT #2	16	25	0	0	6	2	0	10.00	1000	-1.07	3,159	8.2
BLDG. "A" BASEMENT SPEAKER CKT. S3 (FACP Amp.)	CKT #3	16	25	0	0	0	4	0	8.00	1000	-0.87	3,948	8.2
BLDG. "A" BASEMENT SPEAKER CKT. S4 (FACP Amp.)	CKT #4	16	25	0	0	0	0	0	0.00	1000	0.00	0	8.2
BLDG. "A" FIRST FLOOR SPEAKER CKT. S5 (DVC-2 Amp.)	CKT #5	16	25	0	0	13	4	0	21.00	1000	-2.11	1,504	8.2
BLDG. "A" FIRST FLOOR SPEAKER CKT. S6 (DVC-2 Amp.)	CKT #6	16	25	0	0	8	5	0	18.00	1000	-1.84	1,755	8.2
BLDG. "A" FIRST FLOOR SPEAKER CKT. S7 (DVC-2 Amp.)	CKT #7	16	25	0	0	6	3	0	12.00	1000	-1.27	2,632	8.2
BLDG. "A" FIRST FLOOR SPEAKER CKT. S8 (DVC-2 Amp.)	CKT #8	16	25	0	0	9	5	0	19.00	1000	-1.93	1,662	8.2
BLDG. "A" FIRST FLOOR SPEAKER CKT. S9 (DVC-3 Amp.)	CKT #9	16	25	0	0	12	4	0	20.00	500	-1.07	1,579	4.1
BLDG. "A" FIRST FLOOR SPEAKER CKT. S10 (DVC-3 Amp.)	CKT #10	16	25	5	0	7	9	0	26.25	500	-1.38	1,203	4.1
BLDG. "A" FIRST FLOOR SPEAKER CKT. S11 (DVC-3 Amp.)	CKT #11	16	25	0	0	0	0	0	0.00	500	0.00	0	4.1
BLDG. "A" FIRST FLOOR SPEAKER CKT. S12(DVC-3 Amp.)	CKT #12	16	25	0	0	0	0	0	0.00	500	0.00	0	4.1

NOTE:
LUMP SUM METHOD WAS USED TO CALCULATE MAXIMUM ALLOWABLE CIRCUIT LENGTH. THIS METHOD ALLOWS FOR A SMALL
MARGIN OF SAFETY, TAKING INTO CONSIDERATION THE ACTUAL INSTALLED CIRCUIT ROUTING MAY DIFFER FROM WHAT IS
SHOWN ON THE SHOP DRAWINGS. IF THE ACTUAL CIRCUIT LENGTH IS GOING TO EXCEED THE MAXIMUM ALLOWABLE CIRCUIT
LENGTH, CONTACT YOU LOCAL SIMPLEX BRANCH.

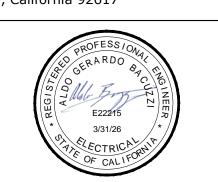
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ARCHITECTURE ENGINEERING INTERIOR DESIGN LANDSCAPE ARCHITECTURE PLANNING

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Whittier Blvd.

11/06/2025

3 Addendum B 11/06/2025

 Submittal
 Date

 SCHEMATIC DESIGN
 05/03/2024

 50% DESIGN DEVELOPMENT
 08/02/2024

 100% DESIGN DEVELOPMENT
 08/23/2024

 50% PROGRESS SET
 10/23/2024

 DSA SUBMITTAL
 11/22/2024

 DSA BACK CHECK
 03/20/2025

 DSA BACK CHECK V3
 06/03/2025

 DSA BACK CHECK V4
 06/30/2025

 DSA BACK CHECK V5
 07/25/2025

 ADDENDUM B
 11/05/2025

 Job Number
 31837

 Checked By
 M.N

 Scale
 1" = 1'-0"

FIRE ALARM CALCULATIONS