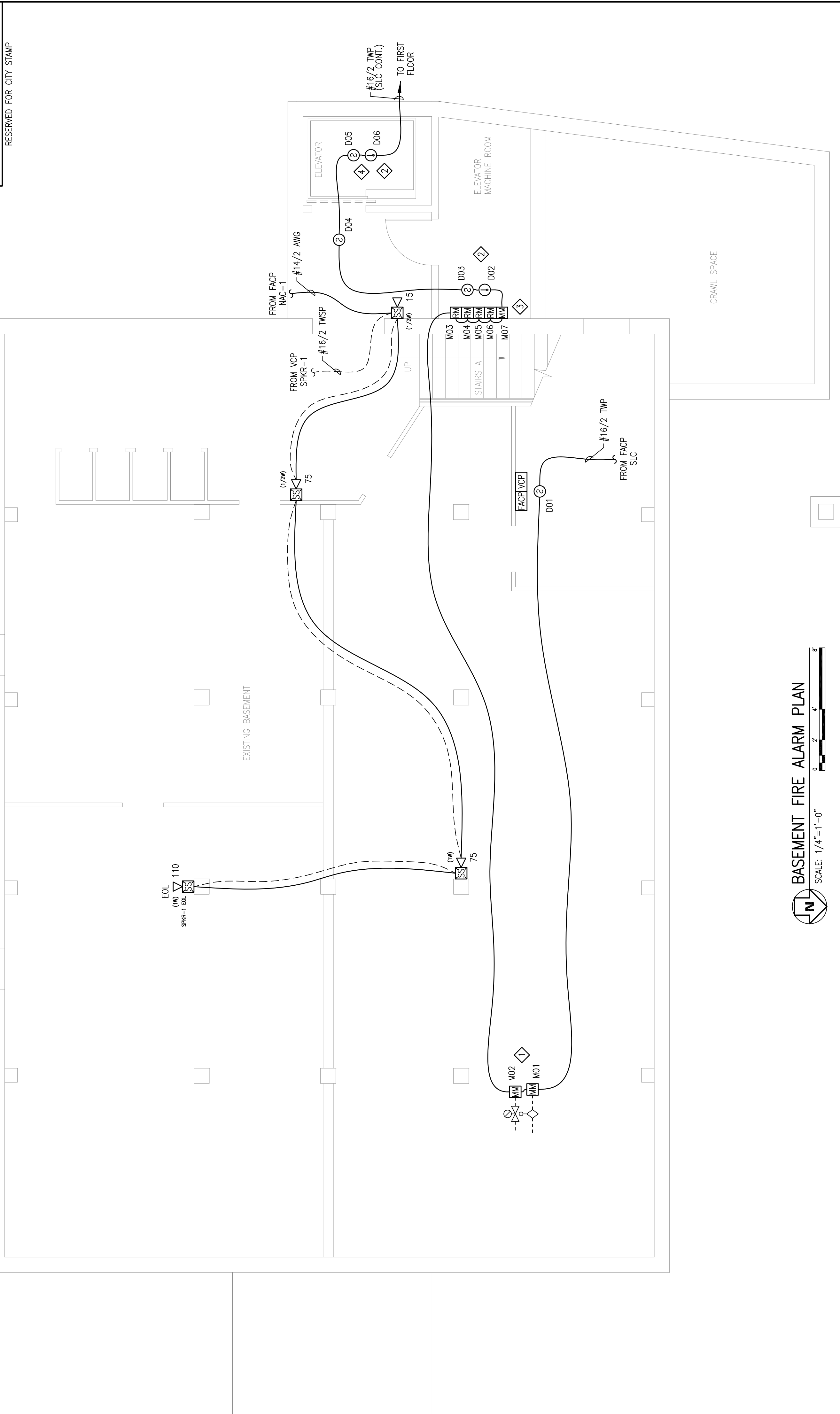
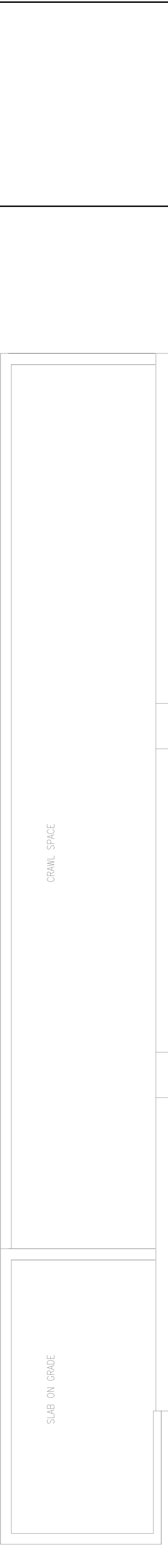


FACP Battery Calculation				2/15/2016			
PROJECT NAME: MAINE JEWISH MUSEUM							
Required Standby Time: 24 Hours							
Required Alarm Time: 15 Minutes							
Regulated Load in Standby		Regulated Load in Alarm		Regulated Load in Standby		Regulated Load in Alarm	
Device Type	Number of Devices	Current (Amps)	Total Current (Amps)	Device Type	Number of Devices	Current (Amps)	Total Current (Amps)
FACP - MS-9200UDLS MAIN CIRCUIT BOARD	1	0.14500	0.14500	FACP - MS-9200UDLS MAIN CIRCUIT BOARD	1	0.27500	0.27500
ANN-80 ANNUNCIATOR	1	0.01500	0.01500	ANN-80 ANNUNCIATOR	1	0.04000	0.04000
SD355 SMOKE DETECTOR	8	0.00030	0.00240	SD355 SMOKE DETECTOR	8	0.00000	0.00000
H355 HEAT DETECTOR	3	0.00030	0.00090	H355 HEAT DETECTOR	3	0.00000	0.00000
MMF-300 MONITOR MODULE	3	0.00040	0.00120	MMF-300 MONITOR MODULE	3	0.00000	0.00000
BC-12LX PULL STATION	1	0.00030	0.00030	BC-12LX PULL STATION	1	0.00000	0.00000
CRF-300 RELAY MODULE	4	0.00027	0.00108	CRF-300 RELAY MODULE	4	0.00000	0.00000
MAX-ALARM DRAW ALL ADDRESS DEVICES	1	0.00000	0.00000	MAX-ALARM DRAW ALL ADDRESS DEVICES	1	0.00000	0.00000
TOTAL STANDBY LOAD				TOTAL STANDBY LOAD			
0.16588				0.16588			
Regulated Load in Standby		Regulated Load in Alarm		Regulated Load in Standby		Regulated Load in Alarm	
Device Type	Number of Devices	Current (Amps)	Total Current (Amps)	Device Type	Number of Devices	Current (Amps)	Total Current (Amps)
FACP - MS-9200UDLS MAIN CIRCUIT BOARD	1	0.27500	0.27500	FACP - MS-9200UDLS MAIN CIRCUIT BOARD	1	0.27500	0.27500
ANN-80 ANNUNCIATOR	1	0.04000	0.04000	ANN-80 ANNUNCIATOR	1	0.04000	0.04000
SD355 SMOKE DETECTOR	8	0.00000	0.00000	SD355 SMOKE DETECTOR	8	0.00000	0.00000
H355 HEAT DETECTOR	3	0.00000	0.00000	H355 HEAT DETECTOR	3	0.00000	0.00000
MMF-300 MONITOR MODULE	3	0.00000	0.00000	MMF-300 MONITOR MODULE	3	0.00000	0.00000
BC-12LX PULL STATION	1	0.00000	0.00000	BC-12LX PULL STATION	1	0.00000	0.00000
CRF-300 RELAY MODULE	4	0.00000	0.00000	CRF-300 RELAY MODULE	4	0.00000	0.00000
MAX-ALARM DRAW ALL ADDRESS DEVICES	1	0.00000	0.00000	MAX-ALARM DRAW ALL ADDRESS DEVICES	1	0.00000	0.00000
TOTAL ALARM LOAD				TOTAL ALARM LOAD			
3.24300				3.24300			
Battery Requirements		Battery Requirements		Battery Requirements		Battery Requirements	
Standby Load Current (Amps)	0.16588	X	24.00000	Required Standby Time in Hours	3.98112		
Alarm Load Current (Amps)	3.24300	X	0.25000	Required Alarm Time in Hours	4.79187		
Total Ampere-Hours (before derating factor)				Total Ampere-Hours (before derating factor)			
	0.81075				0.81075		
Derating Factor				Derating Factor			
	1.2				1.2		
BATTERIES TO BE PROVIDED (2 - 12v)				BATTERIES TO BE PROVIDED (2 - 12v)			
	5.75024				5.75024		
	7 AH				7 AH		

VCP Battery Calculation				2/15/2016			
PROJECT NAME: MAINE JEWISH MUSEUM							
Required Standby Time: 24 Hours							
Required Alarm Time: 15 Minutes							
Regulated Load in Standby		Regulated Load in Alarm		Regulated Load in Standby		Regulated Load in Alarm	
Device Type	Number of Devices	Current (Amps)	Total Current (Amps)	Device Type	Number of Devices	Current (Amps)	Total Current (Amps)
ECC-50/100 PRIMARY CONSOLE	1	0.27200	0.27200	ECC-50/100 PRIMARY CONSOLE	1	0.27200	0.27200
ECC-CE6 CIRCUIT EXPANDER	1	0.02000	0.02000	ECC-CE6 CIRCUIT EXPANDER	1	0.02000	0.02000
ECC-RM REMOTE MICROPHONE	1	0.05000	0.05000	ECC-RM REMOTE MICROPHONE	1	0.05000	0.05000
SPEAKERS 1/2WATT	6	0.00000	0.00000	SPEAKERS 1/2WATT	6	0.00000	0.00000
SPEAKERS 1WATT	10	0.00000	0.00000	SPEAKERS 1WATT	10	0.00000	0.00000
TOTAL STANDBY LOAD				TOTAL STANDBY LOAD			
0.34200				0.34200			
Regulated Load in Standby		Regulated Load in Alarm		Regulated Load in Standby		Regulated Load in Alarm	
Device Type	Number of Devices	Current (Amps)	Total Current (Amps)	Device Type	Number of Devices	Current (Amps)	Total Current (Amps)
ECC-50/100 PRIMARY CONSOLE	1	0.44600	0.44600	ECC-50/100 PRIMARY CONSOLE	1	0.44600	0.44600
ECC-CE6 CIRCUIT EXPANDER	1	0.18900	0.18900	ECC-CE6 CIRCUIT EXPANDER	1	0.18900	0.18900
ECC-RM REMOTE MICROPHONE	1	0.06400	0.06400	ECC-RM REMOTE MICROPHONE	1	0.06400	0.06400
SPEAKERS 1/2WATT	6	0.03300	0.19800	SPEAKERS 1/2WATT	6	0.03300	0.19800
SPEAKERS 1WATT	10	0.06800	0.68000	SPEAKERS 1WATT	10	0.06800	0.68000
TOTAL ALARM LOAD				TOTAL ALARM LOAD			
1.57700				1.57700			
Battery Requirements		Battery Requirements		Battery Requirements		Battery Requirements	
Standby Load Current (Amps)	0.34200	X	24.00000	Required Standby Time in Hours	8.22800		
Alarm Load Current (Amps)	1.57700	X	0.25000	Required Alarm Time in Hours	6.39425		
Total Ampere-Hours (before derating factor)				Total Ampere-Hours (before derating factor)			
	8.60225				8.60225		
Derating Factor				Derating Factor			
	1.2				1.2		
BATTERIES TO BE PROVIDED (2 - 12v)				BATTERIES TO BE PROVIDED (2 - 12v)			
	10.32270				10.32270		
	12 AH				12 AH		



- SHEET NOTES:**
- ADDRESSABLE MONITOR MODULE(S) PROVIDED TO MONITOR ALL WATER FLOW PRESSURE SWITCHES, TAMPER SWITCHES AND POST INDICATING VALVES ASSOCIATED WITH THE FIRE SPRINKLER SYSTEM. INSTALLING CONTRACTOR SHALL FIELD VERIFY EXACT MOUNTING, CIRCUITING AND PROGRAMMING REQUIREMENTS. FIELD VERIFY EXACT QUANTITY AND LOCATION(S).
 - PROVIDE HEAT DETECTOR(S) WITHIN 24" OF EACH SPRINKLER HEAD IN THE ELEVATOR CONTROL ROOM AND HOISTWAY(S). HEAT DETECTORS SHALL HAVE A LOWER TEMPERATURE RATING THAN THE SPRINKLERS IN THE AREA AND BE MONITORED FOR INTEGRITY.
 - ADDRESSABLE RELAY MODULES (4) PROVIDED FOR THE ELEVATOR RECALL AND SHUT DOWN TIE TO ELEVATOR EQUIPMENT ROOM DETECTOR(S), HOISTWAY DETECTOR(S) AND LOBBY DETECTOR(S) TO INITIATE RECALL AND SHUT DOWN. ADDRESSABLE MONITOR MODULE PROVIDED TO MONITOR THE CONTROL CIRCUIT TO THE ELEVATOR SHUNT TRIP BREAKER FOR THE PRESENCE OF OPERATING VOLTAGE. LOSS OF VOLTAGE SHALL CAUSE A SUPERVISORY SIGNAL AT THE CONTROL PANEL. FIELD VERIFY EXACT MOUNTING, CIRCUITING AND PROGRAMMING REQUIREMENTS.
 - LOCATE DETECTOR AT BOTTOM OF ELEVATOR HOISTWAY.

REVISION	DESCRIPTION	DATE
0	ISSUED FOR REVIEW & APPROVAL	2/16/2016

CUNNINGHAM
Security Systems
10 Princes Point Road, Yarmouth, Maine 04096
Office: 207.846.3350 • Fax: 207.846.6080

ETZ CHAIM SYNAGOGUE/MAINE JEWISH MUSEUM
267 CONGRESS STREET
PORTLAND, MAINE 04101
BASEMENT FIRE ALARM PLAN & CALCULATIONS

DRAWN	JPB UNICAD JOB #16081
CHECKED	WAYNE B. HANS NCEET # 90496
DATE	2/16/2016
REVISION	0
SCALE	1/4" = 1'-0"

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