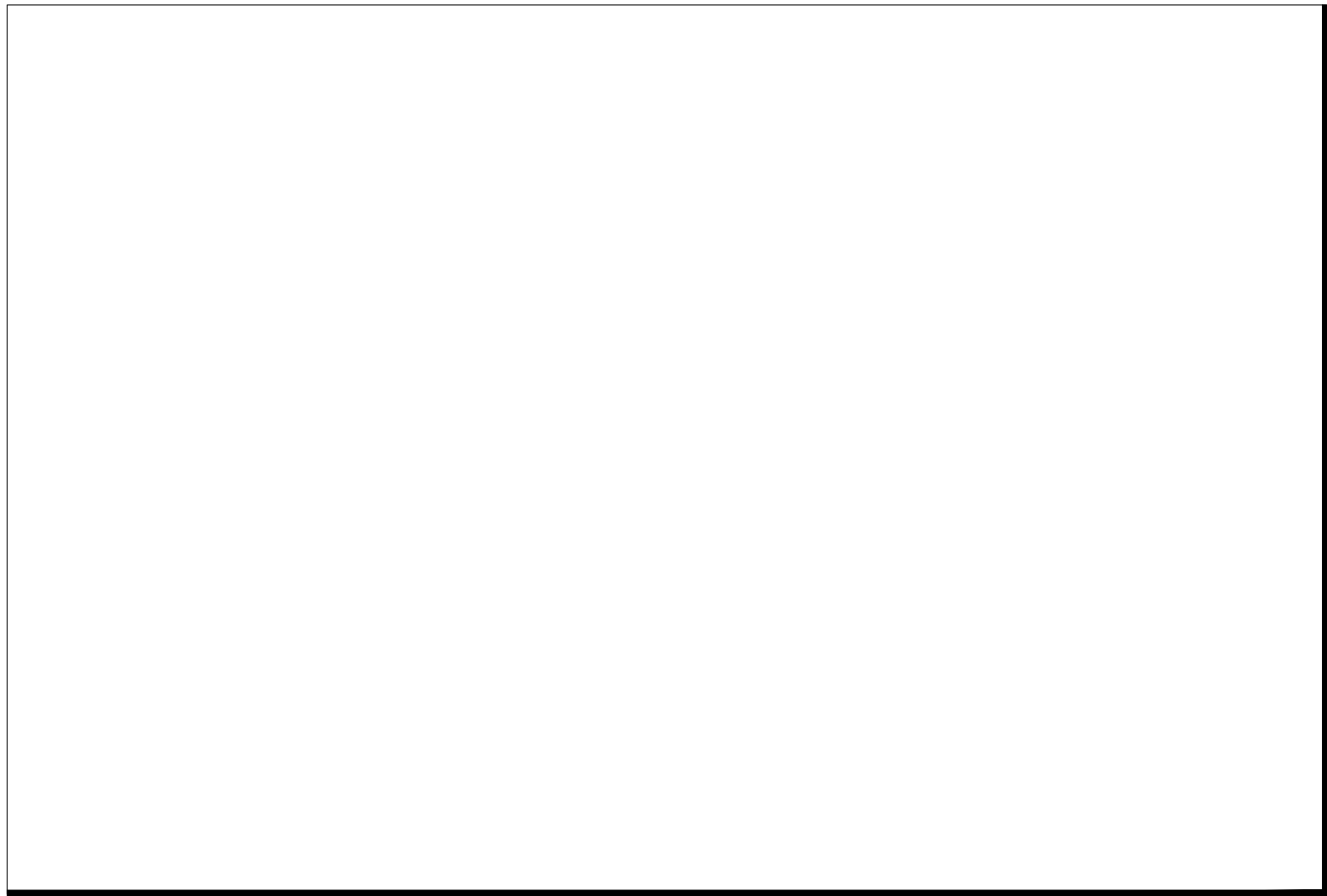


BURGLAR ALARM SECURITY SYSTEM



BA SECURITY SYMBOL LEGEND			
SYMBOL	QTY	PART NUMBERS	
	1	DMP, XR550NL-G, CONTROL PANEL DMP, 263LTE-V/381-2, LTE CELLULAR COMMUNICATOR	
	2	YUASA, NP7-12 12V 7AH, SLA BATTERY	
	1	DMP, 1100XH-W, WIRELESS HIGH PWR RECEIVER	
	1	DMP, 1116-W, WIRELESS RELAY OUTPUT	
	3	DMP, 1129, WIRELESS GLASSBREAK	
	5	DMP, 7872-W, TOUCHSCREEN KEYPAD	
	10	DMP, 1126R-W, WIRELESS 360 CEILING PIR	
	2	DMP, SX-360Z, HARDWIRE 360 CEILING PIR	
	5	DMP, 1135-W, WIRELESS SIREN	
	5	DMP, 1106-W, UNIVERSAL WIRELESS TRANSMITTER	
	3	GRI, 4400-A, ARMORED CABLE DOOR CONTACT	
	9	GRI, 180-12-W, RECESSED DOOR CONTACT	
	1	EDWARDS,EST 2304A-L, CURTAIN DOOR CONTACT	
	2	SCLAGE, 653-141, KEYSWITCH	
	1	HEAT DETECTOR, BY OTHERS	
	1	VIBRATION SENSOR, BY OTHERS	
	1	KNOX BOX, BY OTHERS	

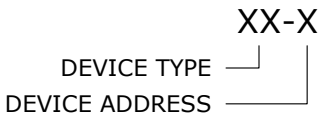
BA SECURITY WIRE LEGEND				
SYMBOL	LINE TYPE	CIRCUIT TYPE	FUNCTION	DESCRIPTION
A		DATA & POWER	TO WIRELESS RECEIVER	18AWG /4C UNSHIELDED CABLE
B		KEYPAD	TO KEYPADS	18AWG /4C UNSHIELDED CABLE
C		CONTACTS	TO DOOR CONTACTS	22AWG /4C UNSHIELDED CABLE
D		DATA & POWER	TO MOTION DETECTOR, MISC. SENSORS, ETC	22AWG /4C UNSHIELDED CABLE
-		-	WIREFPATH	SHOWS WIRE PATH & COUNDUIT SLEEVE & SIZE

BA SECURITY SCHEDULE																	
PROJECT																	
ZONE LIST				1	3	5	10	2	5	5	3	9	1	1	2	1	1
DRAWING PAGE	KEYPAD/ZONE NUMBER	DESCRIPTION	TERMINATION POINT	WIRELESS RECEIVER PART # DMP 1100XH-W	WIRELESS GLASSBREAK PART # DMP 1129	KEYPAD PART # DMP 7872-W	WIRELESS 360 PIR PART # DMP 1126R-W	HARDWIRE 360 PIR PART # DMP SX-360Z	WIRELESS SIREN PART # DMP 1135-W	UNIVERSAL WIRELESS TRANSMITTER PART # DMP 1106-W	DOOR CONTACT PART # GRI 4400-A	DOOR CONTACT PART # GRI 180-12-W	DOOR CONTACT PART # EST 2304A-L	WIRELESS RELAY OUTPUT PART # DMP 1116-W + 860	KEY SWITCH PART # 653-141	HEAT SENSOR BY OTHERS	VIBRATION SENSOR BY OTHERS
BA-01	KP-01	A.P ROOM 120	PANEL			1											
BA-01	KP-02	C.R 115	KP-03			1											
BA-01	KP-03	RECEIVING 125A	KP-01			1											
BA-01	KP-04	MC 122	KP-02			1											
BA-01	KP-05	VESTIBULE 101C	KP-04			1											
BA-01	WR-01	SALES 100	PANEL	1													
BA-01	ZN-01	C.R 115	KP-02									1					
BA-01	ZN-02	C.R 115	KP-02								1						
BA-01	ZN-03	C.R 115	KP-02													1	
BA-01	ZN-04	C.R 115	KP-02														1
BA-01	ZN-05	C.R 115	KP-02					1									
BA-01	ZN-06	WORK AREA 112	-						1								
BA-01	ZN-07	WORK AREA 112	-				1										
BA-01	ZN-08	MAINT 121	-											1			
BA-01	ZN-09	MAINT 121	WT							1	1						
BA-01	ZN-10	CORRIDOR 105	WT							1		1					
BA-01	ZN-11	CORRIDOR 105	-				1										
BA-01	ZN-12	CORRIDOR 105	-						1								
BA-01	ZN-13	SALES 100	-				1										
BA-01	ZN-14	SALES 100	-						1								
BA-01	ZN-15	SALES 100	-				1										
BA-01	ZN-16	OPU 125B	-				1										
BA-01	ZN-17	RECEIVING 125A	KP-03					1									
BA-01	ZN-18	RECEIVING 125A	-						1								
BA-01	ZN-19	RECEIVING 125A	KP-03									1					
BA-01	ZN-20	RECEIVING 125A	WT							1			1		1		
BA-01	ZN-21	RECEIVING 125A	WT							1	1				1		
BA-01	ZN-22	RECEIVING 125A	-				1										
BA-01	ZN-23	RECEIVING 125A	-				1										
BA-01	ZN-24	RECEIVING 125A	KP-04									1					
BA-01	ZN-25	SALES 100 - FLEX	-				1										
BA-01	ZN-26	SALES 100 - FLEX	-		1												
BA-01	ZN-27	SALES 100 - FLEX	-		1												
BA-01	ZN-28	SALES 100 - FLEX	-						1								
BA-01	ZN-29	SALES 100 - FLEX	-				1										
BA-01	ZN-30	SALES 100 - FLEX	-		1												
BA-01	ZN-31	SALES 100 - FLEX	WT							1		4					
BA-01	ZN-32	SALES 100 - HOME	-				1										
BA-01	ZN-33	VESTIBULE 101C	KP-05									1					

DRAWING INDEX

SHEET NUMBER	SHEET TITLE
BA-00	COVER PAGE
BA-01	FIRST FLOOR - DEVICE PLACEMENT
BA-02	RISER DIAGRAM
BA-03	CALCULATIONS & BA DETAILS

DEVICE ADDRESS LEGEND



SCOPE OF WORK

THE BA (BURGLAR ALARM) SECURITY SYSTEM CONSISTS OF: DOOR CONTACTS, MOTION DETECTORS, GLASSBREAK DETECTORS, KEYPADS, ALARM SOUNDERS, WIRELESS TRANSMITTERS, CONTROL PANELS, POWER SUPPLIES, AND ALL ASSOCIATED CABLING, CONDUIT, BACKBOXES, DEVICE SUPPORTS, PROGRAMMING, TESTING, AND COMMISSIONING REQUIRED FOR A COMPLETE AND FULLY OPERATIONAL SYSTEM.

120VAC POWER CONNECTIONS TO SECURITY EQUIPMENT, DEDICATED ELECTRICAL CIRCUITS, BRANCH CIRCUIT WIRING, NETWORK SWITCHES, DATA CABLING BEYOND THE SECURITY SYSTEM DEMARCATION POINT, FIRESTOPPING, PATCHING, PAINTING, CORE DRILLING, STRUCTURAL SUPPORTS, AND CEILING REPLACEMENT SHALL BE PROVIDED BY OTHERS UNLESS SPECIFICALLY NOTED OTHERWISE. FINAL DEVICE PROGRAMMING, WIRELESS DEVICE ENROLLMENT, SYSTEM CERTIFICATION, CENTRAL STATION MONITORING CONNECTIONS, AND OWNER-FURNISHED EQUIPMENT ARE BY OTHERS.

SYSTEM NOTES

- PROVIDE DMP 1135-W WIRELESS ALARM SOUNDER. MOUNT FLUSH TO THE BOTTOM OF ACOUSTICAL CEILING TILE. IN RECEIVING AND STOCK AREAS, MOUNT TO A JUNCTION BOX SUPPORTED BY 3/8" THREADED ROD AT THE LIGHT LEVEL. DEVICE BY OTHERS.
- PROVIDE DMP 1126R WIRELESS PIR MOTION DETECTOR. IN SALES AREAS, MOUNT FLUSH TO THE BOTTOM OF ACOUSTICAL CEILING TILE. IN STOCK AREAS, MOUNT TO THE BACK OF THE RECEIVER ENCLOSURE OR TO A JUNCTION BOX SUPPORTED BY 3/8" THREADED ROD AT THE LIGHT LEVEL. LOCATIONS SHOWN ARE APPROXIMATE. FINAL DEVICE LOCATION SHALL BE DETERMINED BY THE DMP REPRESENTATIVE.
- PROVIDE SECURITY DOOR CONTACT MOUNTED IN THE DOOR FRAME HEADER WITH MAGNET MOUNTED IN THE TOP OF THE DOOR. INSTALL CH48S-W LOW-PROFILE PLASTIC BOX ON THE UNDERSIDE OF THE DOOR HEADER FOR DMP 1106-W WIRELESS TRANSMITTER. CONNECT DOOR CONTACT WIRING TO THE TRANSMITTER AND PROVIDE WHITE COVER PLATE.
- PROVIDE MAGNETIC DOOR CONTACTS ON BOTH SIDES OF COILING DOOR SHROUD. MOUNT CONTACTS IN THE DOOR RAIL. CONCEAL CABLING WITHIN WALLS WHERE POSSIBLE. PROVIDE CONDUIT FOR ALL EXPOSED CABLING. DO NOT MOUNT CONTACTS TO THE FLOOR. MOUNT CONTACT PLATES TO THE SIDE OF THE DOOR ASSEMBLY. PROVIDE CONDUIT BETWEEN JUNCTION BOXES AND STUB TO BAR JOIST. WIRE CONTACTS IN SERIES TO THE DLSM MODULE.
- INSTALL RECESSED DOOR CONTACT IN DOOR HEADER ON THE LATCH SIDE. PROVIDE 1/2" EMT FROM DOOR HEADER TO 4" SQUARE BOX WITH SINGLE-GANG MUD RING MOUNTED AT 46" AFF FOR DMP 7872-W KEYPAD. PROVIDE 3/4" EMT FROM KEYPAD BOX TO BAR JOIST.
- MOUNT DMP 7872-W INTRUSION ALARM KEYPAD AT 46" AFF TO CENTERLINE. PROVIDE 3/4" EMT ABOVE ACOUSTICAL CEILING TO BAR JOIST IN OPEN CEILING AREAS. KEYPAD SHALL UTILIZE A HARDWIRED ZONE FOR INTERIOR ENTRY DELAY POINT AS REQUIRED.
- PROVIDE DOOR CONTACT AT SAFE DOOR. MOUNT CONTACT ON THE INTERIOR SIDE OF THE SAFE DOOR. ROUTE CABLING FROM THE ACCESS CONTROL PANEL TO THE CONTACT. DO NOT PROVIDE A SEPARATE WIRELESS TRANSMITTER. PROVIDE ARMORED CABLE FROM JUNCTION BOX TO SAFE CONTACT.
- PROVIDE SURFACE-MOUNT DR-440 DOOR CONTACT WITH 4" OCTAGON BOX AND 3/4" EMT FROM BAR JOIST. CONTINUE EMT TO 4" SQUARE BOX WITH SINGLE-GANG MUD RING MOUNTED AT 46" AFF ON THE INTERIOR SIDE OF THE DOOR. FOR KEYSWITCH APPLICATIONS, INSTALL CH48S-W PLASTIC BOX AND CONNECT DOOR CONTACT TO WIRELESS TRANSMITTER. CONNECT KEYSWITCH IN PARALLEL TO SHUNT THE CONTACT WHEN KEYSWITCH INDICATOR IS RED.
- PROVIDE DMP 1129 WIRELESS GLASSBREAK DETECTOR MOUNTED TO APPROVED SUBSTRATE OR PLASTIC BACKBOX.
- PROVIDE SECURITY DOOR CONTACT IN DOOR FRAME HEADER WITH MAGNET MOUNTED AT THE TOP OF THE DOOR. PROVIDE ADDITIONAL CONTACT AND MAGNET FOR THE BREAKAWAY PORTION OF THE STOREFRONT DOOR ASSEMBLY. CONCEAL ALL WIRING WITHIN THE DOOR FRAME. INSTALL DMP 1106-W WIRELESS TRANSMITTER IN CH48S-W PLASTIC JUNCTION BOX. PROVIDE REQUIRED POWER CONNECTIONS AND CONDUIT.
- PROVIDE INTRUSION ALARM CONTROL PANEL AND POWER SUPPLY WITH SUFFICIENT CAPACITY FOR ALL POWER AND LOW-VOLTAGE WIRING. MOUNT EQUIPMENT AT LOCATION INDICATED. PROVIDE NETWORK CABLING TERMINATED AT LOCAL DATA JACKS AS REQUIRED. MOUNT DMP 7872-W KEYPAD BELOW THE INTRUSION ALARM CONTROL PANEL.
- PROVIDE RECESSED PLASTIC WORK BOX ABOVE UNISTRUT ELEVATION WITH CONDUIT AND PULL STRING TO KNOX BOX, WHEN PROVIDED. INSTALL DMP 1166 WIRELESS TRANSMITTER IN THE BOX TO MONITOR THE KNOX BOX TAMPER SWITCH.

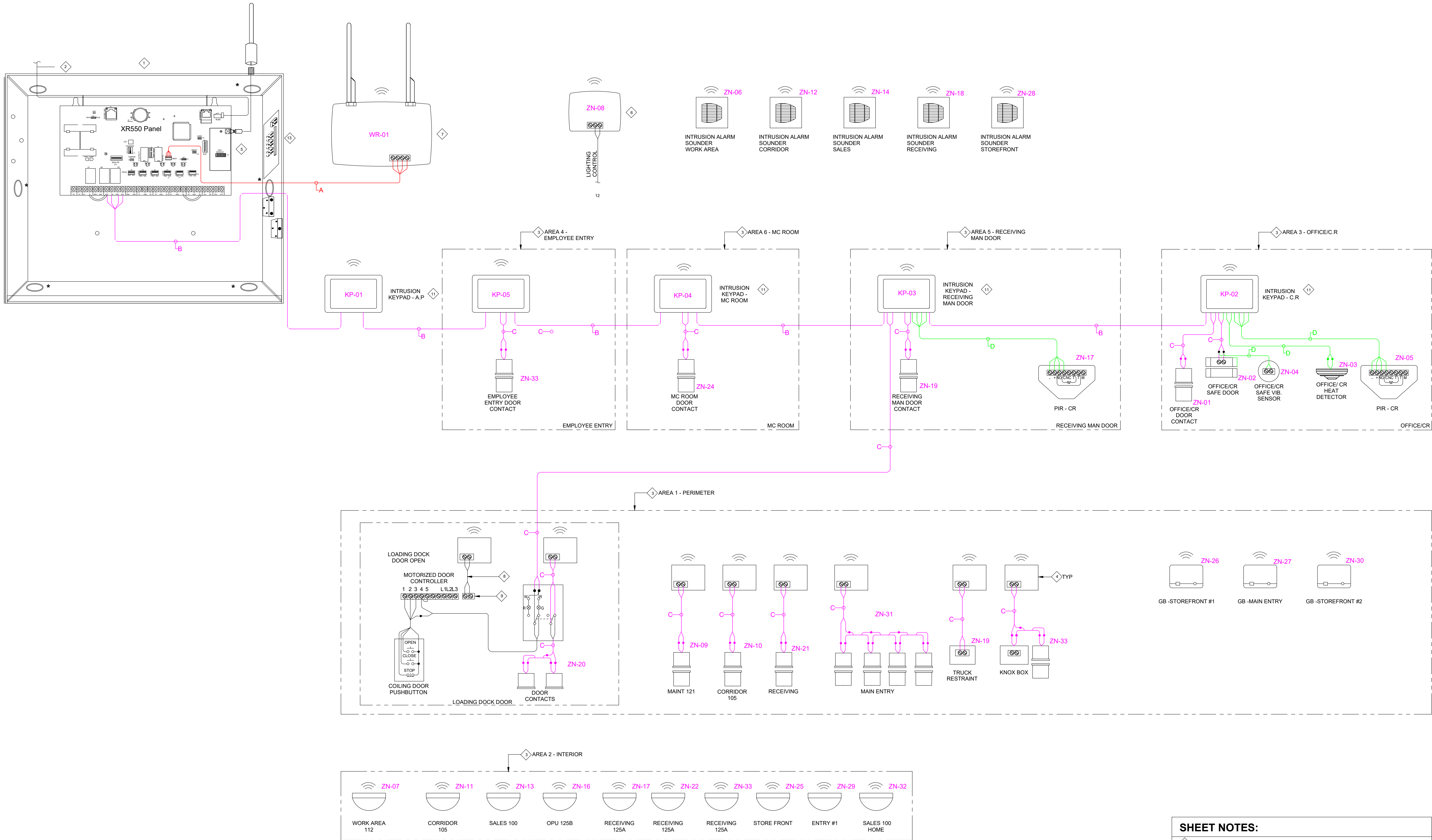
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DESCRIPTION	DATE:
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Date:	AP	AS NOTED
Designed by:	AP	AS NOTED
Drawn by:	AP	AS NOTED
Approved By:	SP	AS NOTED

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BURGLAR ALARM SECURITY SYSTEM
COVER PAGE



- SHEET NOTES:**
1. WIRELESS INTRUSION SYSTEM CONTROL PANEL. PROVIDE ALL COMPONENTS NECESSARY TO PROVIDE SPECIFIED INTRUSION SYSTEM OPERATION. FOLLOW ALL MANUFACTURER'S INSTRUCTIONS FOR MOUNTING OF ALL COMPONENTS.
 2. CAT 6 CABLE BY COMMUNICATIONS CONTRACTOR TERMINATED ON AN 8P8C MODULE AND PLUGGED INTO RJ45 PLUG ON THE MAIN PANELBOARD FOR ETHERNET CONNECTIVITY.
 3. PROGRAM AS A SEPARATE AREA.
 4. WIRELESS TRANSMITTER.
 5. PROVIDE VERIZON LTE CELLULAR COMMUNICATOR WITH ANTENNA.
 6. PROVIDE WIRELESS RELAY OUTPUT. LOCATE IN MAINTENANCE ROOM. RELAY TO CONNECT TO LIGHTING CONTROL PANEL AND TURN ALL LIGHTING ON DURING INTRUSION SYSTEM ALARM CONDITION.
 7. WIRELESS RECEIVER.
 8. PROGRAM AS SUPERVISORY ZONE ONLY.
 9. AUXILIARY CONTACTS IN DOOR MOTOR CONTROLLER REPORTING DOOR OPEN STATUS.
 10. NOT USED.
 11. PROVIDE HARDWIRED INTRUSION SYSTEM KEYPAD.
 12. CONNECT TO WIRELESS LIGHTING CONTROL RELAY IN MAINTENANCE ROOM.
 13. DMP MODEL 860 RELAY MODULE WITH (4) DMP 305 RELAYS FOR AREAS #3, #4, #5 AND #6 NOT ARMED ZONES.
- GENERAL NOTES:**
1. REFER TO PLANS FOR EXACT DEVICE LOCATIONS AND QUANTITIES.
 2. DEVICES INDICATED MAY NOT ALL BE USED. REFER TO PLANS FOR DEVICES USED ON THIS PROJECT.
 3. THIS DETAIL IS TO ILLUSTRATE A STANDARD WIRING SYSTEM FOR THE INTRUSION AND DOOR ACCESS SYSTEM NECESSARY TO ACCOMMODATE THE REQUIRED PROGRAMMING. PROVIDE ADJUSTMENTS AND ADDITIONAL WIRING/DEVICES AS NEEDED FOR A COMPLETE AND OPERATIONAL SYSTEM.

REVISION		DATE:
#	DESCRIPTION	

Designed by:	AP	Date:	---/---/---
Drawn by:	AP	Scale:	AS NOTED
Approved By:	SP	Project:	

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BURGULAR ALARM SECURITY SYSTEM
RISER DIAGRAM

Job Name: _____

XR150/XR550 SERIES STANDBY BATTERY POWER CALCULATIONS

XR150/XR550 Series Control Panel
263LTE Cellular Communicator
860 Relay Output Module, one relay active
1100XH Wireless High Power Receiver
7872 Graphic Touchscreen Keypad
Aux. Powered Devices

Standby Current				
Qty		mA		Total mA
1	X	174	=	174
1	X	20	=	20
1	X	34	=	34
1	X	75	=	75
5	X	145	=	725
0	X		=	0

Alarm Current				
Qty		mA		Total mA
1	X	217	=	217
1	X	20	=	20
1	X	34	=	34
1	X	102	=	102
5	X	215	=	1075
0	X		=	0

* Based on 10% active zones in alarm

Total Standby mA 1028

Total Alarm mA 1448

Required Minimum Alarm Time in minutes 5Minutes X Total Alarm mA 1448 = Total Required Alarm Current 120.667

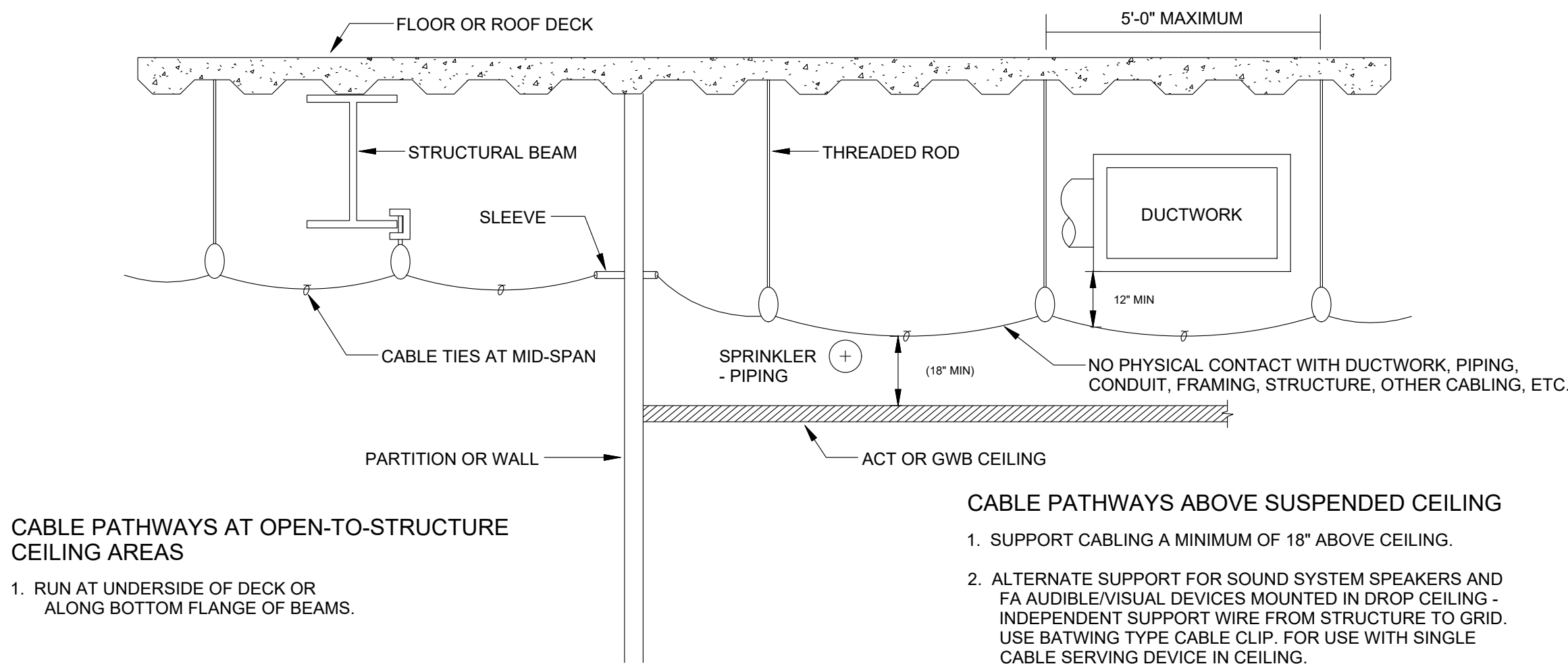
Total Standby mA 1028 mA
Number of standby hours needed * 24 h
Total number of standby mA hours = 24672 mAh
Total required alarm current (rounded) + 121mAh
Total number of mA hours = 24793 mAh 1
Contingency factor + 20 %
Total number of mAh = 29752 mAh
Convert mAh to Ah ÷ 1000h

Battery Amp hours required

30

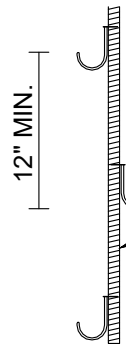
Ah

BA BATTERY CALCULATIONS



CABLE PATHWAYS AT OPEN-TO-STRUCTURE CEILING AREAS

1. RUN AT UNDERSIDE OF DECK OR ALONG BOTTOM FLANGE OF BEAMS.



TYPICAL J-HOOK SUPPORT

1. PROVIDE SEPARATE J-HOOK FOR EACH SYSTEM CABLE PATHWAY
2. INTERCOM CABLING REQUIRES SEPARATE PATHWAY FROM SOUND SYSTEM CABLING

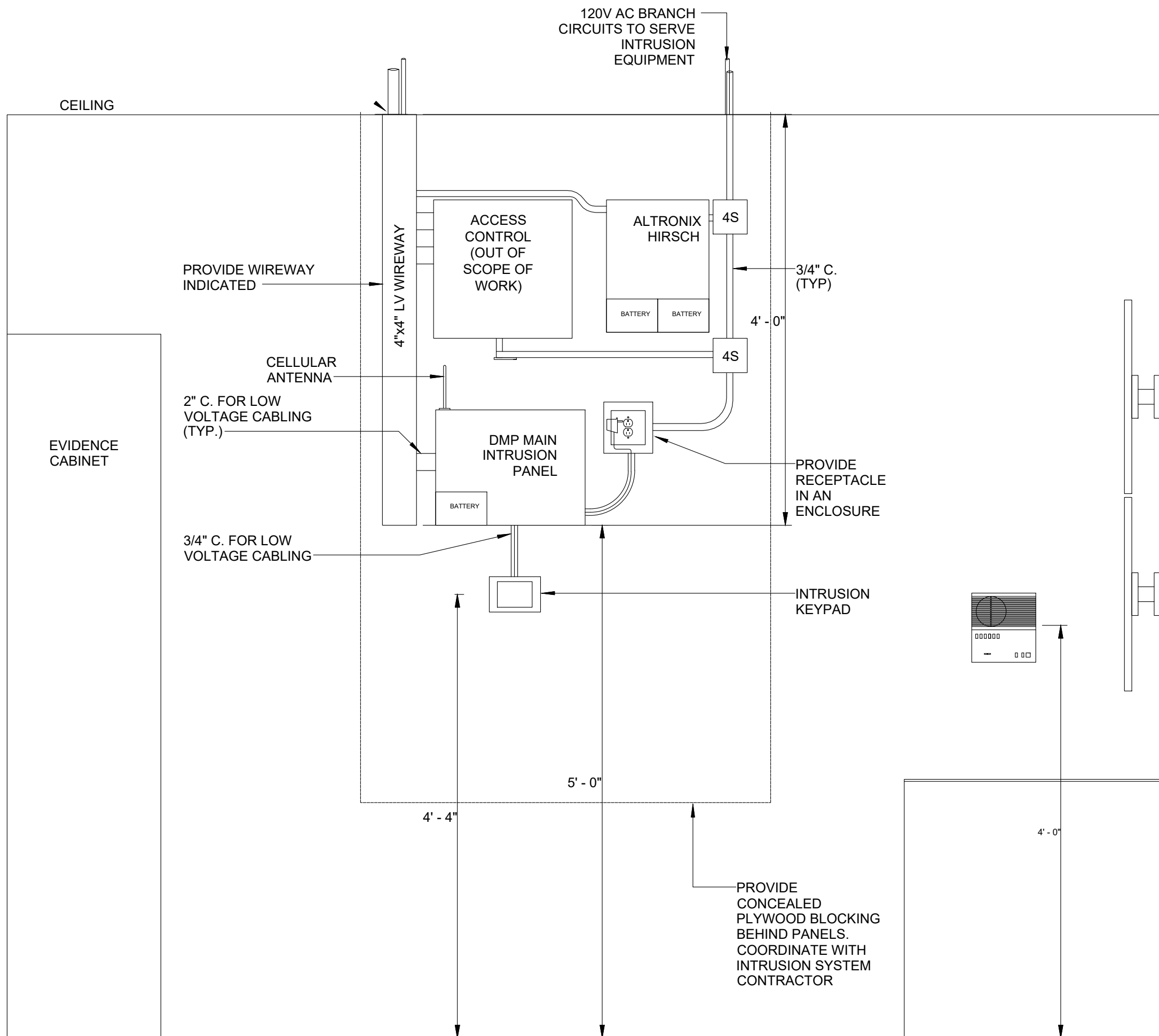
COORDINATE WITH LANDLORD FOR REQUIREMENTS FOR ATTACHMENT TO EXISTING STRUCTURE AND UNDERSIDE OF EXISTING ROOF. IN THE EVENT ATTACHMENT TO UNDERSIDE OF EXISTING ROOF STRUCTURE IS NOT ALLOWED, PROVIDE UNISTRUT ATTACHED TO STRUCTURE FOR TRAPEZE TYPE SUPPORT.

CABLE PATHWAYS ABOVE SUSPENDED CEILING

1. SUPPORT CABLING A MINIMUM OF 18" ABOVE CEILING.
2. ALTERNATE SUPPORT FOR SOUND SYSTEM SPEAKERS AND FA AUDIBLE/VISUAL DEVICES MOUNTED IN DROP CEILING - INDEPENDENT SUPPORT WIRE FROM STRUCTURE TO GRID. USE BATWING TYPE CABLE CLIP. FOR USE WITH SINGLE CABLE SERVING DEVICE IN CEILING.

NOTES:

1. SEE SPECIFICATION SECTION 260500 FOR ADDITIONAL CABLE SUPPORT AND SPACING CRITERIA.
2. PROVIDE GROUPED SUPPORTS OR INDIVIDUAL SUPPORTS AS NEEDED.
3. J-HOOKS, SADDLE TYPE SUPPORTS REQUIRED FOR ALL COMMUNICATION CABLING PER SPECIFICATIONS. BRIDLE RINGS ACCEPTABLE FOR ALL OTHER CABLES.
4. DO NOT MIX CABLE TYPES WITHIN INDIVIDUAL SUPPORTS. KEEP SYSTEMS SEPARATE.
5. ALL SUPPORTS TO BE RIGID, NO CEILING WIRES ALLOWED.
6. ASSURE 12" MINIMUM CLEARANCE BETWEEN LV CABLING AND ANY PARALLEL BRANCH CIRCUITS.
7. COORDINATE WITH OTHER TRADES TO ASSURE MINIMUM CLEARANCES ARE MET.
8. DO NOT SUPPORT CABLES HORIZONTAL RUNS FROM WALLS. SUPPORT FROM PERMANENT SHELL STRUCTURE ABOVE.
9. PROPOSED CABLE SUPPORT PATHWAYS SHOWN ON THE PLANS ARE DIAGRAMMATIC IN NATURE TO ILLUSTRATE PATHWAY INTENT. CONTRACTOR TO PROVIDE SUPPORT PATHWAYS THAT ALLOW FOR CABLE INSTALLATIONS THAT DO NOT EXCEED THE MAXIMUM ALLOWED CABLE LENGTHS IN ACCORDANCE WITH THE SPECIFICATIONS AND MANUFACTURER REQUIREMENTS, WHICHEVER REQUIREMENT IS MORE STRINGENT. PROVIDE CABLE PATHWAYS THAT ARE PARALLEL TO THE BUILDING GRIDLINES, AND DROPS THAT ARE AT A 90 DEGREE ANGLE - DIAGONAL RUNS ARE NOT ALLOWED WITHOUT PRIOR APPROVAL FROM THE ENGINEER OF RECORD.



SECURITY SYSTEM PANEL ELEVATION

SHEET NOTES:

VERIFY ON SITE WHETHER ANY ADDITIONAL POWER SOURCES ARE REQUIRED TO ENSURE THE SYSTEM CAN MAINTAIN FULL STANDBY OPERATION WITH 24-HOUR BATTERY BACKUP

DATE:

REVISION

DESCRIPTION

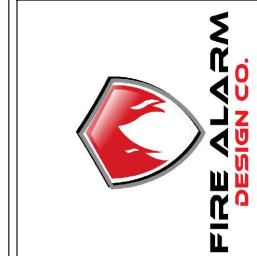
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Date:

AP

Designed by:

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BURGULAR ALARM SECURITY SYSTEM
CALCULATIONS & BA DETAILS

BA-03