

7-ELEVEN PORTLAND MAINE PYRO-CHEM UL 1254 GAS ISLAND FIRE SUPPRESSION SYSTEM INSTALLATION

PROJECT

7-ELEVEN #32531

OWNER

7-ELEVEN INC.
1722 ROUTH STREET
DALLAS, TX 75221



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NOTES: 1. THIS INSTALLATION SHALL BE MADE IN STRICT ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS AND APPLICABLE NATIONAL FIRE PROTECTION ASSOCIATION STANDARDS. ALL EQUIPMENT AND DEVICES USED SHALL BE LISTED IN THE UL FIRE EQUIPMENT DIRECTORY.

2. DESIGN AND INSTALLATION OF THE DRY CHEMICAL GAS ISLAND FIRE SUPPRESSION SYSTEM WILL BE IN STRICT ACCORDANCE WITH THE FOLLOWING GUIDELINES AND REGULATORY AGENCIES:

- 2.1. NFPA 17 STANDARD FOR DRY CHEMICAL FIRE EXTINGUISHING SYSTEMS, 2009 EDITION
- 2.2. NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE, 2010 EDITION
- 2.3. NFPA 70 NATIONAL ELECTRIC CODES, 2008 EDITION
- 2.4. AMERICANS WITH DISABILITIES ACT, TITLE 24, LATEST EDITION
- 2.5. THE LOCAL AUTHORITY HAVING JURISDICTION

System Information:

PYRO-CHEM ATTENDANT II UL 1254
DRY CHEMICAL FIRE SUPPRESSION
SYSTEM PROTECTING A SELF-SERVICE
GASOLINE FUELING FACILITY

Owner/Site:

7-ELEVEN, INC.
7-ELEVEN #32531
704 CONGRESS STREET
PORTLAND, ME 04103



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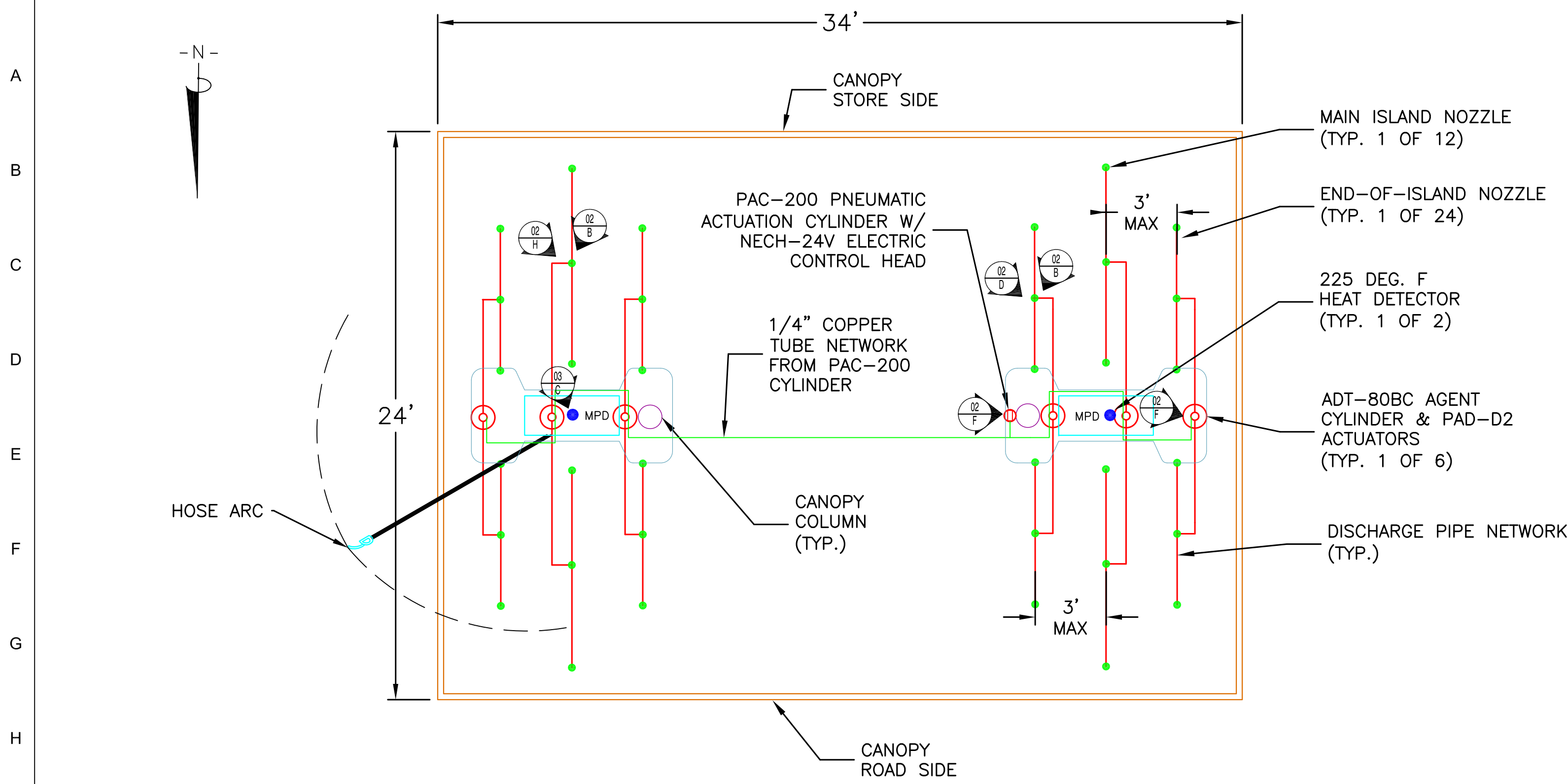
PYRO-CHEM GAS ISLAND FIRE SUPPRESSION SYSTEM
COVER SHEET

Proj. no.:
CAD File: 7-11CongrPort.dwg
Drawn By: M. STEWARD
Created on: 12/08/2014
Designed by: M. STEWARD
Checked by: T. MOONEY
Approved by: T. MOONEY
Project Lead: J. MOONEY
Scale: SCALE AS NOTED

Revisions: Date:
ii 12/08/2014

SHEET :

01



SYSTEM EQUIPMENT LAYOUT - PLAN VIEW
SCALE: 1/4 INCH = 1 FOOT

SYSTEM PIPING NOTES

1. THE ADT-80BC MUST ALWAYS USE TWO (2) NOZZLE CLUSTERS (6 NOZZLES).
2. THE MAXIMUM VERTICAL RISE OF SYSTEM PIPING ABOVE THE OUTLET CYLINDER IS 7 FEET.
3. THE NUMBER OF ELBOWS MUST BE EQUAL ON BOTH DISCHARGE LINES.
4. THE LENGTH OF THE SHORTEST SIDE OF THE PIPING CANNOT EXCEED 2/3 THE LENGTH OF THE LONGEST SIDE. THE LONGEST SIDE OF PIPE CANNOT EXCEED 18 FEET.

ADT-80BC PIPE LIMITATIONS

SECTION	MAXIMUM LENGTH	MAXIMUM ELBOWS	TEES ALLOWED	PIPE DIAMETER
CYLINDER TO NOZZLE CLUSTER (EACH SIDE)	18'	5	0	1"

GENERAL INFORMATION

1. THE AREA OF PROTECTION SHALL INCLUDE THE AREA WITHIN THE ARC SCRIBED BY THE NOZZLE END OF THE HOSE ON EACH VEHICLE FUEL DISPENSER
2. SYSTEM ACTIVATION SHALL CAUSE ALL VEHICLE FUEL DISPENSERS TO SHUT DOWN SIMULTANEOUSLY.
3. THERMAL DETECTORS SHALL BE INSTALLED ON FIFTEEN (15) FOOT CENTERS ALONG A SINGLE LINE SYMMETRICALLY OVER THE CENTER OF THE PUMP ISLAND THAT IS BEING PROTECTED.
4. A MANUAL RELEASE STATION SHALL BE INSTALLED IN A CONSPICUOUS AND ACCESSIBLE LOCATION AWAY FROM THE VEHICLE FUEL DISPENSERS AND PROTECTED AREA.

ACTUATION LINE NOTES

1. ALL AGENT SUPPLY CYLINDERS SHALL BE PNEUMATICALLY OPERATED BY A SUPPLY OF NITROGEN CONTAINED IN A PNEUMATIC ACTUATING CYLINDER (PAC). THE PAC SHALL BE ACTIVATED BY A NECH ELECTRIC CONTROL HEAD CONTROLLED BY AN AUTOPULSE Z-10 FIRE SYSTEM CONTROL PANEL. THE PAC SHALL BE CONNECTED TO A NETWORK OF PNEUMATIC TUBING GOING FROM IT TO PNEUMATIC ACTUATION DEVICES (PAD) INSTALLED ON EACH AGENT SUPPLY CYLINDER.
2. PNEUMATIC TUBING USED FOR REMOTE CYLINDER ACTUATION SHALL HAVE AN OUTSIDE DIAMETER OF 1/4 INCH WITH A MINIMUM WALL THICKNESS OF 1/32". THIS IS COMMONLY KNOWN AS REFRIDGERATION-TYPE COPPER TUBING.
3. ALL TUBING FITTINGS SHALL BE OF THE 1/4 INCH, 45 DEGREE FLARE-TYPE CONFORMING TO SAE J513C.
4. COMPRESSION TYPE FITTINGS ARE UNACCEPTABLE.

PYRO-CHEM BILL OF MATERIALS

QTY	PART NO.	DESCRIPTION
6	551143	80 Lb. BC. Cyl. (ADT-80-SBC)
12	550061	T-3W Three-Way Tee
6	551146	Cyl. Bracket - MB ATD-S
1	551166	RPS-E2 Remote Pull Station, Electrical
36	551509	ADT II Nozzle w/Cap
2	13976	Elec. Heat Detector - 225°
1	551206	NECH-24V Electric Control Head
1	550690	PAC-200 Pneumatic Actuation Cyl.
6	550829	Pneumatic Discharge Adaptor PDA-D2
1	430525	AUTOPULSE Z-10 Control System, Red, 120/240 VAC
1	430687	Coil Supervision Module (Release Circuit)
1	417692	Battery Pack, 7 AH, 24 VDC (2-12 VDC Batteries)
1	430529	4-PT Auxiliary Relay Module

SITE SPECIFIC SYSTEM COMPONENT TABLE

NUMBER OF SYSTEMS REQ'D	NUMBER OF NOZZLES REQ'D	NUMBER OF CYLS. REQ'D	CYLINDER SIZE & QTY.
1) ATD 80 SYSTEM	36 PER SYSTEM TOTAL: 36	6 PER SYSTEM TOTAL: 6	ATD-35BC= 00 ATD-80BC= 6 TOTAL: 6 ATD-80BC
NUMBER OF HEAT DETECTORS REQ'D	2 @ 225° 1 PER ISLAND	TOTAL HEAT DETECTORS REQ'D	2 @ 225°

INCLUDES MAIN AND END OF ISLAND PROTECTION

NOTES:

THE INFORMATION AND GRAPHIC DEPICTIONS ON THIS SHEET ARE DERIVED FROM INFORMATION OBTAINED IN A PUBLICATION TITLED "THE ATTENDANT II GASOLINE STATION FIRE SUPPRESSION SYSTEM - MODEL ATD-35/80sBC TECHNICAL MANUAL" PYRO-CHEM PART NUMBER: PN551227(1) REVISED MAY 28, 2004

IF ADDITIONAL TECHNICAL ASSISTANCE IS NEEDED CONTACT PYRO-CHEM, INC. 1 STANTON STREET, MARINETTE, WI 54143-2542 USA. TELEPHONE NUMBER: 1-715-732-3465 TECHNICAL ASSISTANCE.

System Information:

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DRY CHEMICAL FIRE SUPPRESSION
SYSTEM PROTECTING A SELF-SERVICE GASOLINE FUELING FACILITY

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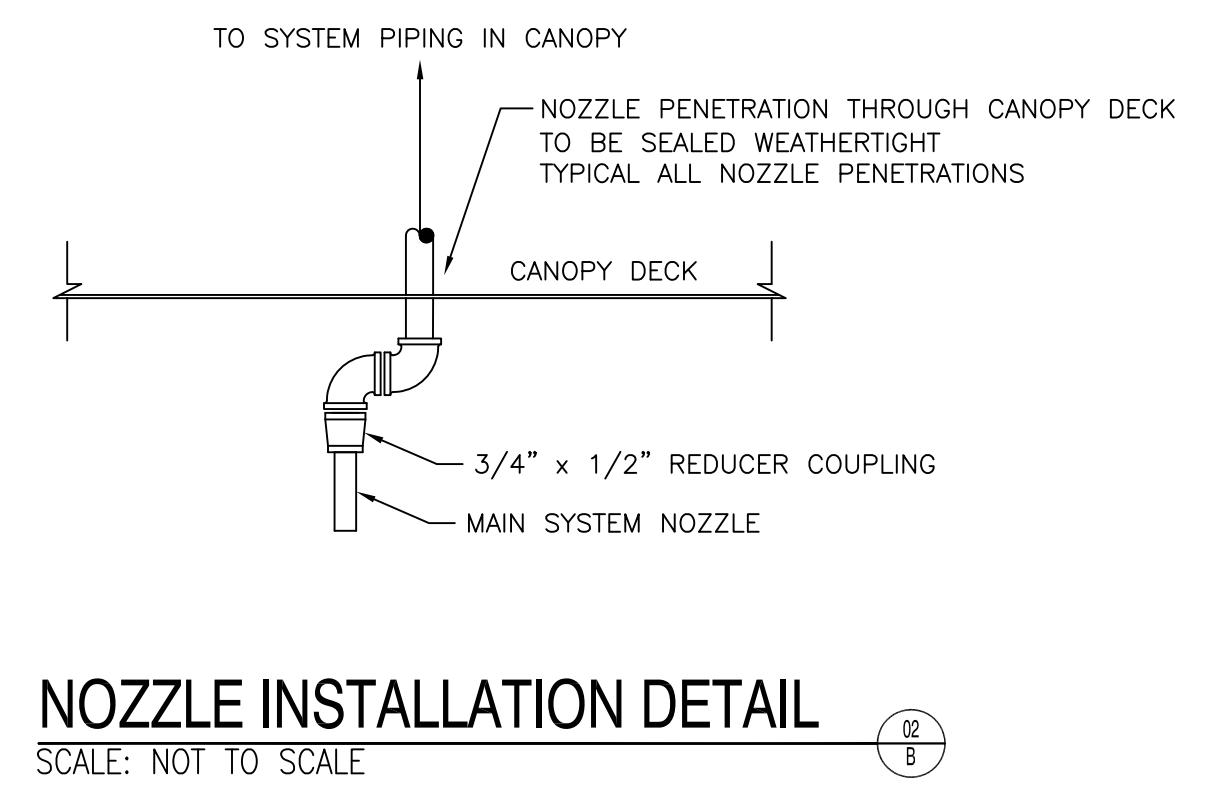
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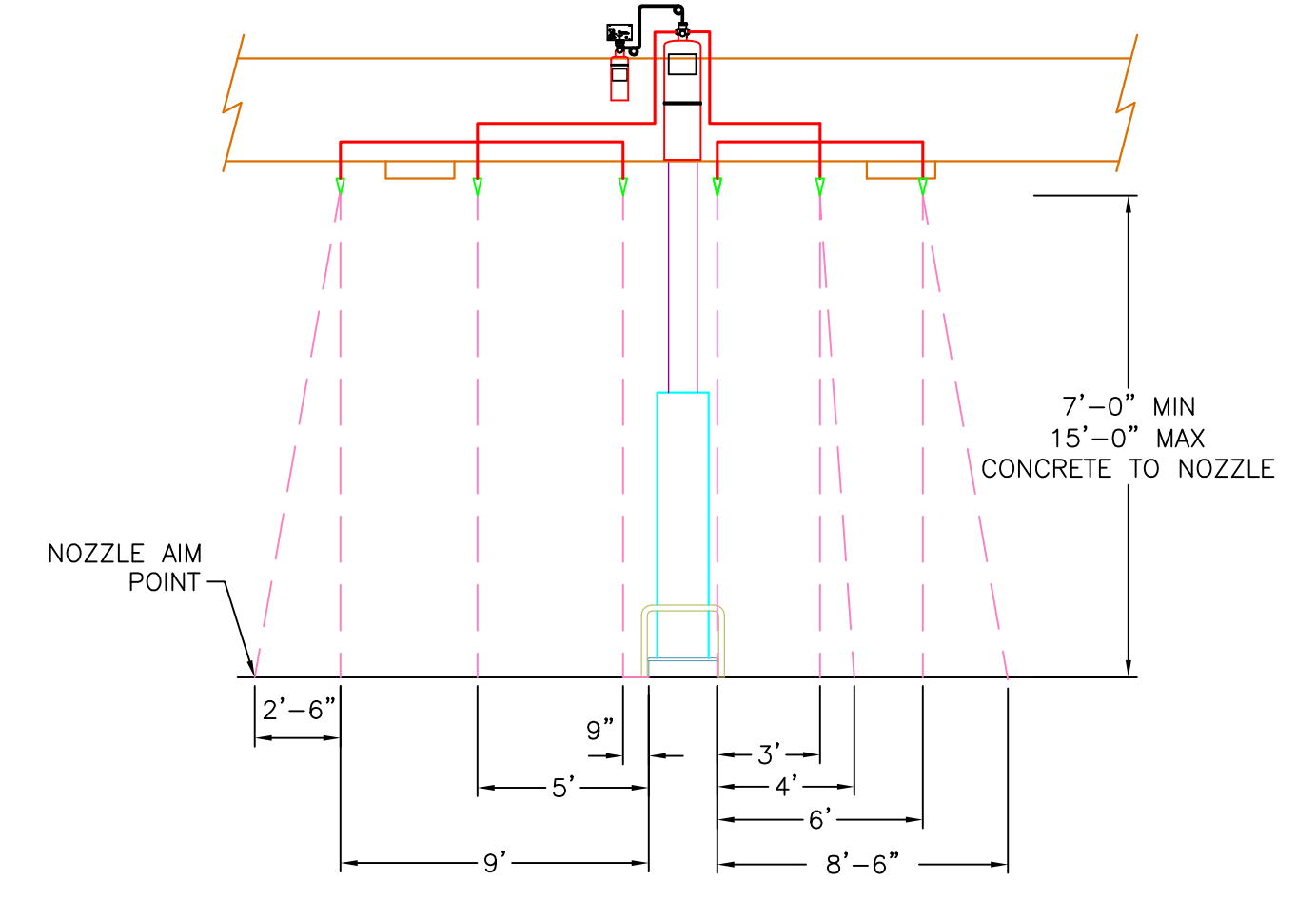
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PYRO-CHEM GAS ISLAND FIRE SUPPRESSION SYSTEM MECHANICAL DETAIL

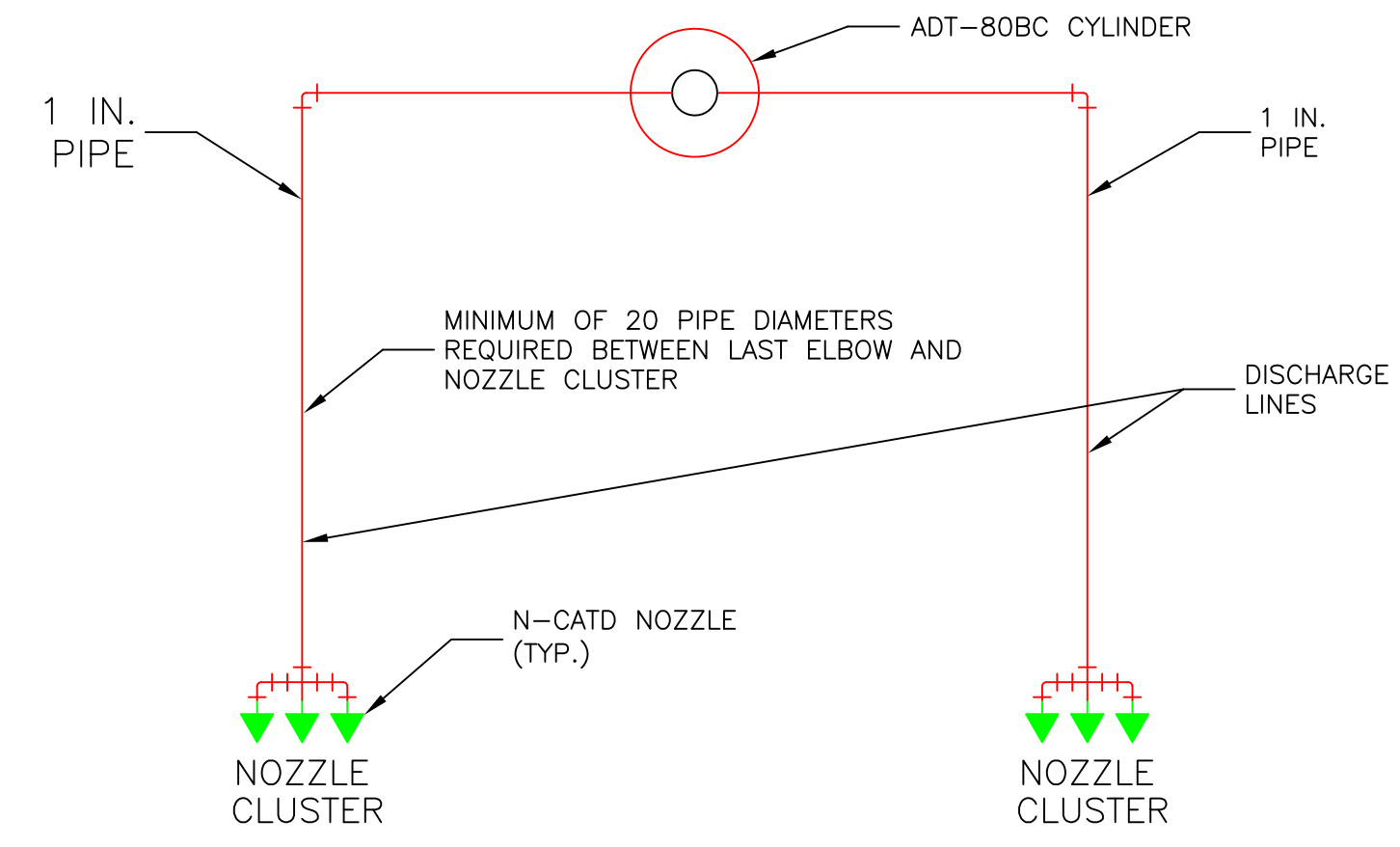
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CAD File: 7-11CongrPort.dwg	ii	12/08/2014	
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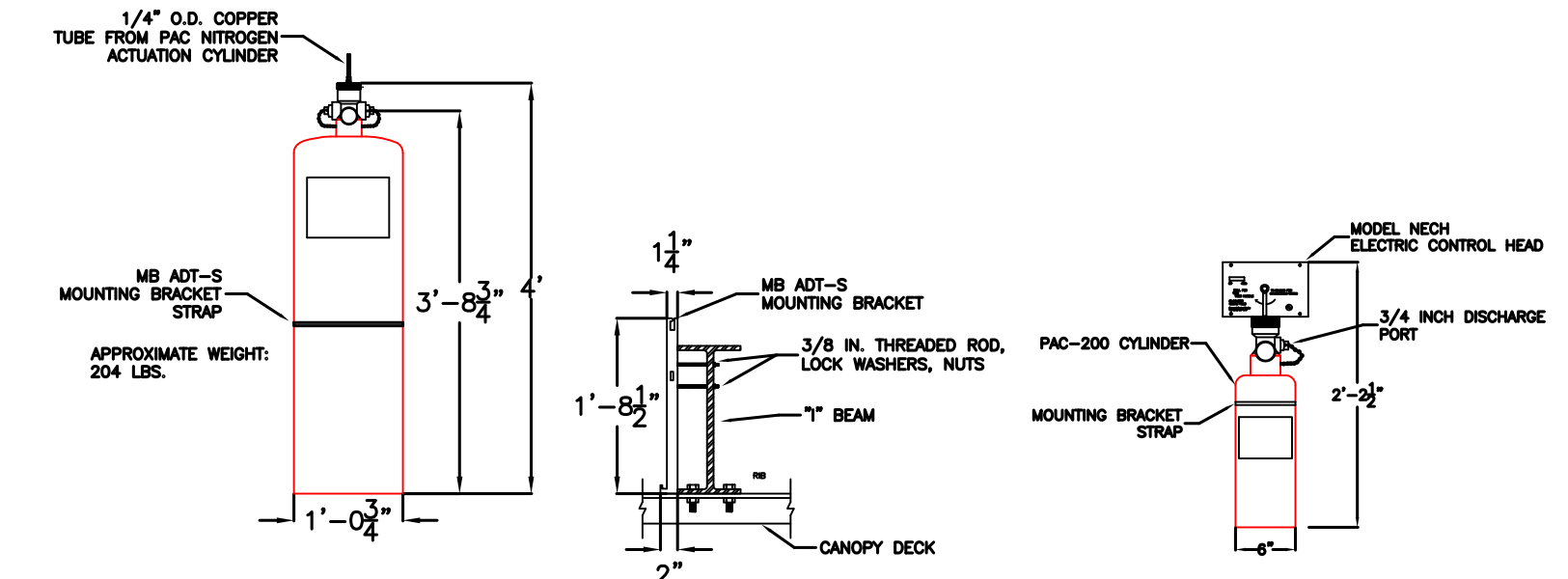
NOZZLE INSTALLATION DETAIL
SCALE: NOT TO SCALE



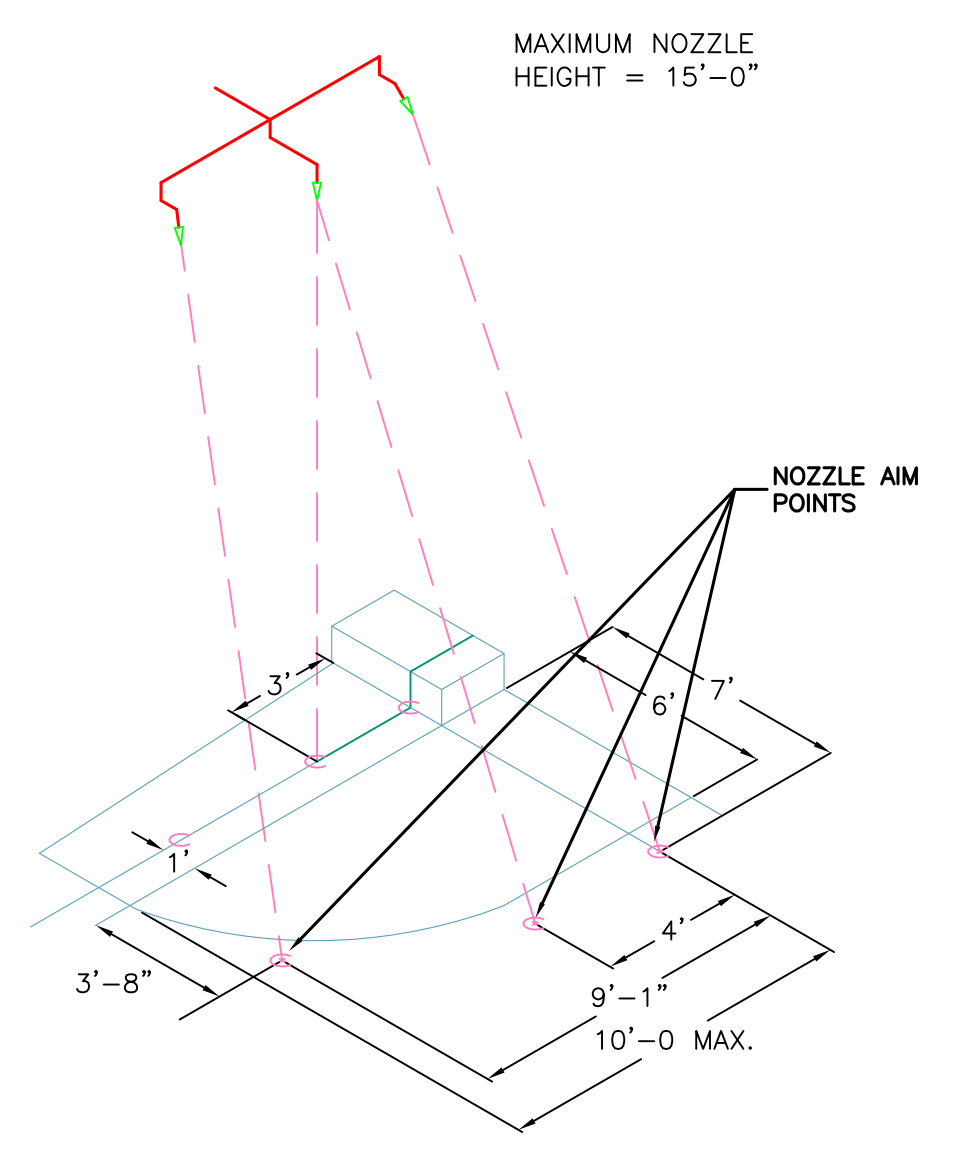
END VIEW - MAIN & END-OF-ISLAND PROTECTION
SCALE: NOT TO SCALE



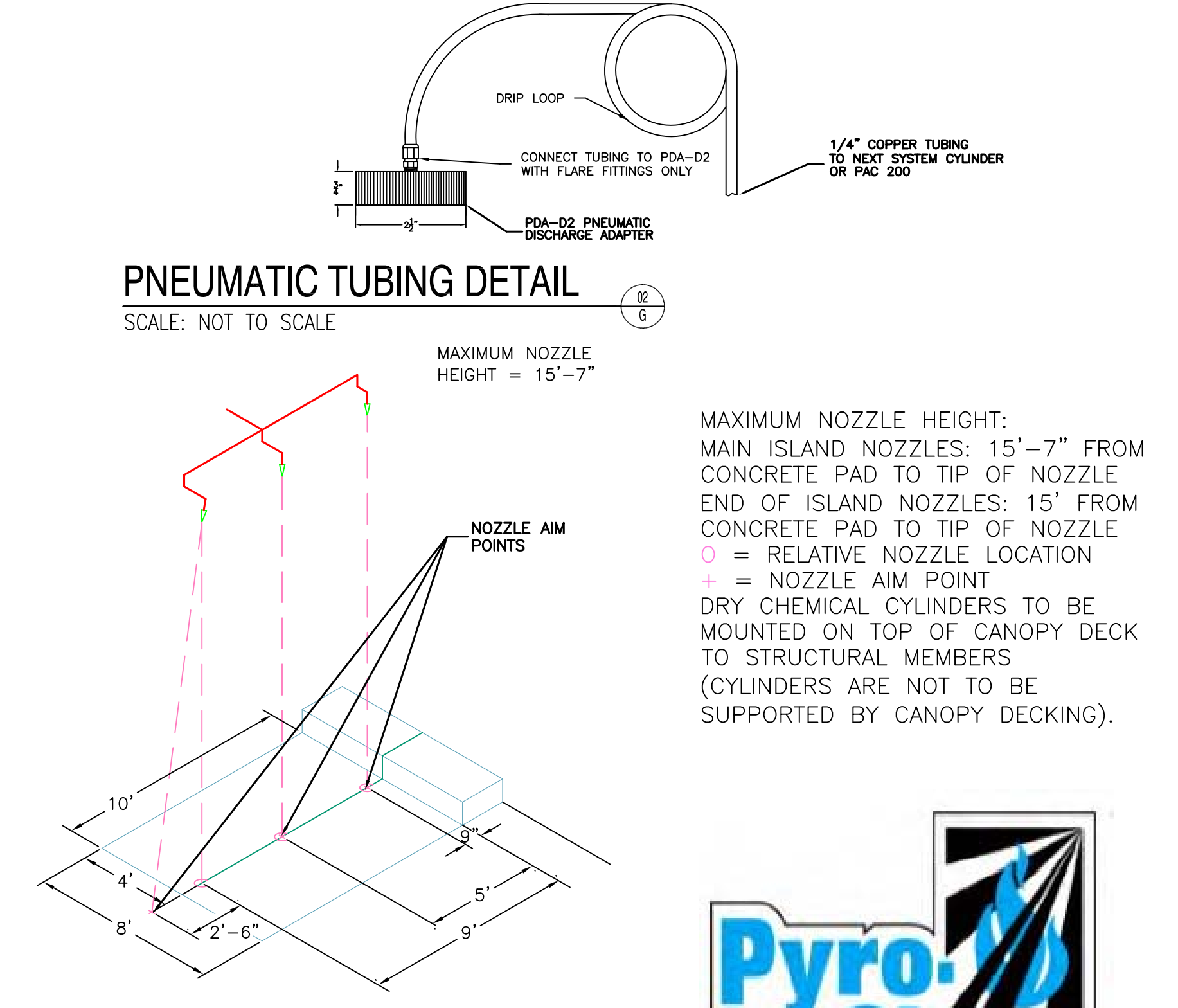
PNEUMATIC TUBING DETAIL
SCALE: NOT TO SCALE



ADT-80BC CYLINDER, BRACKET AND PAC 200 DETAIL
SCALE: NOT TO SCALE

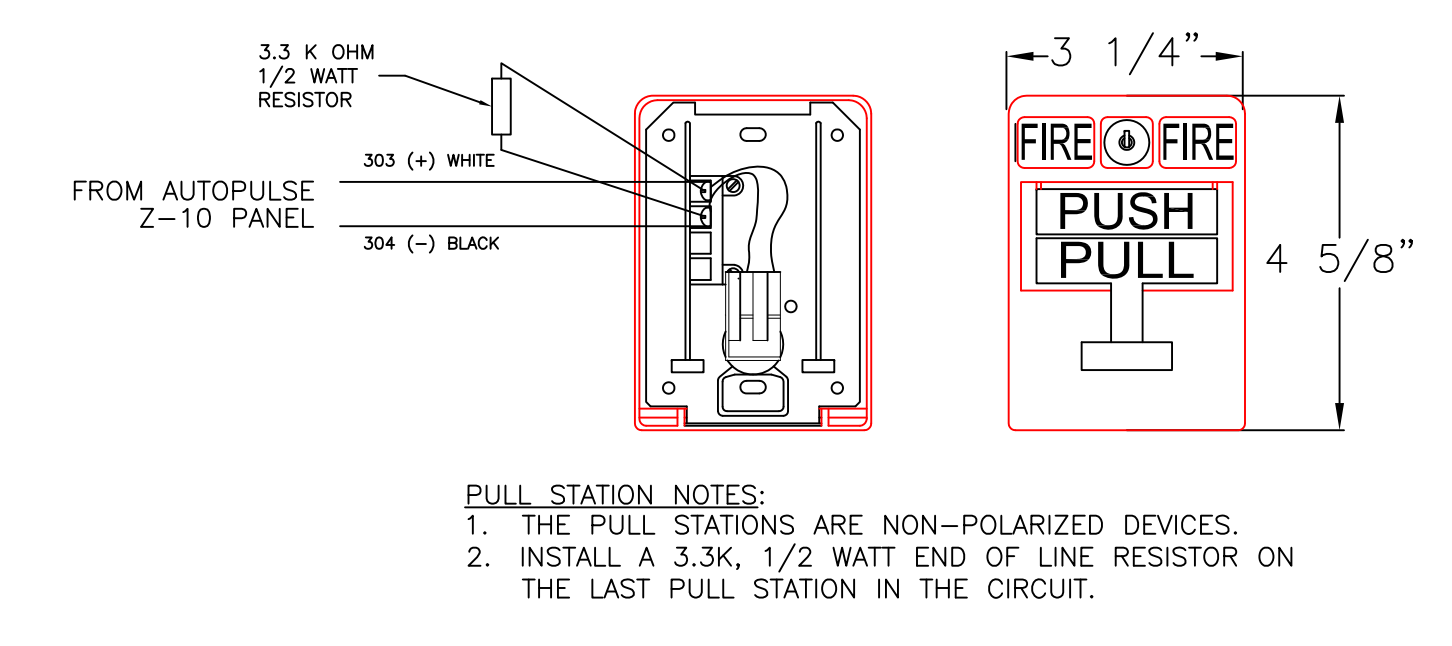
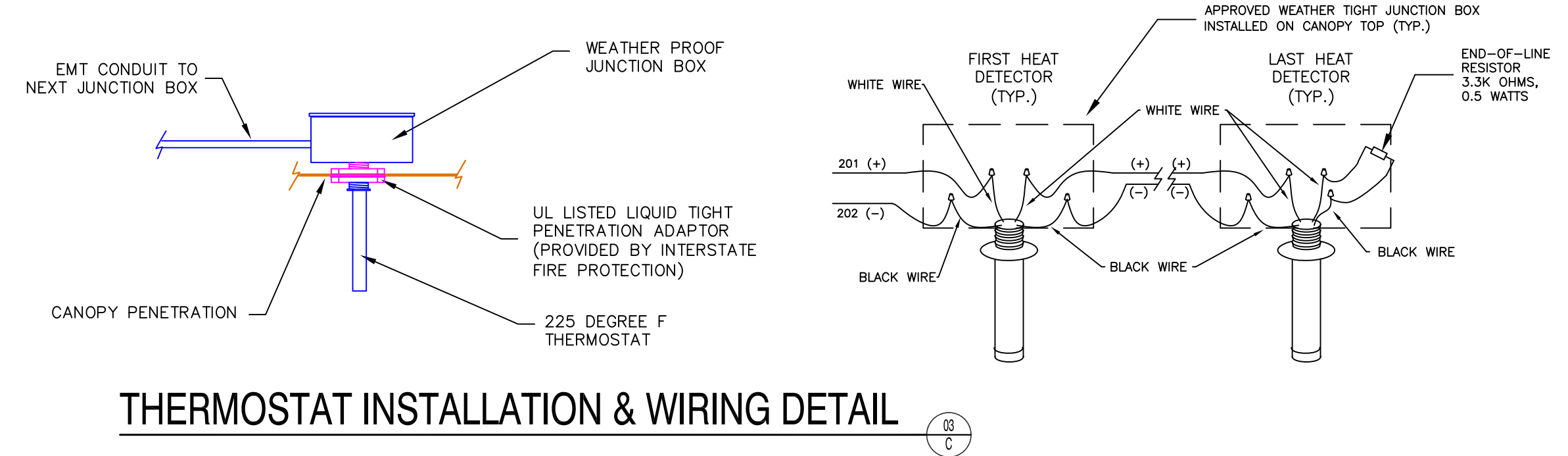
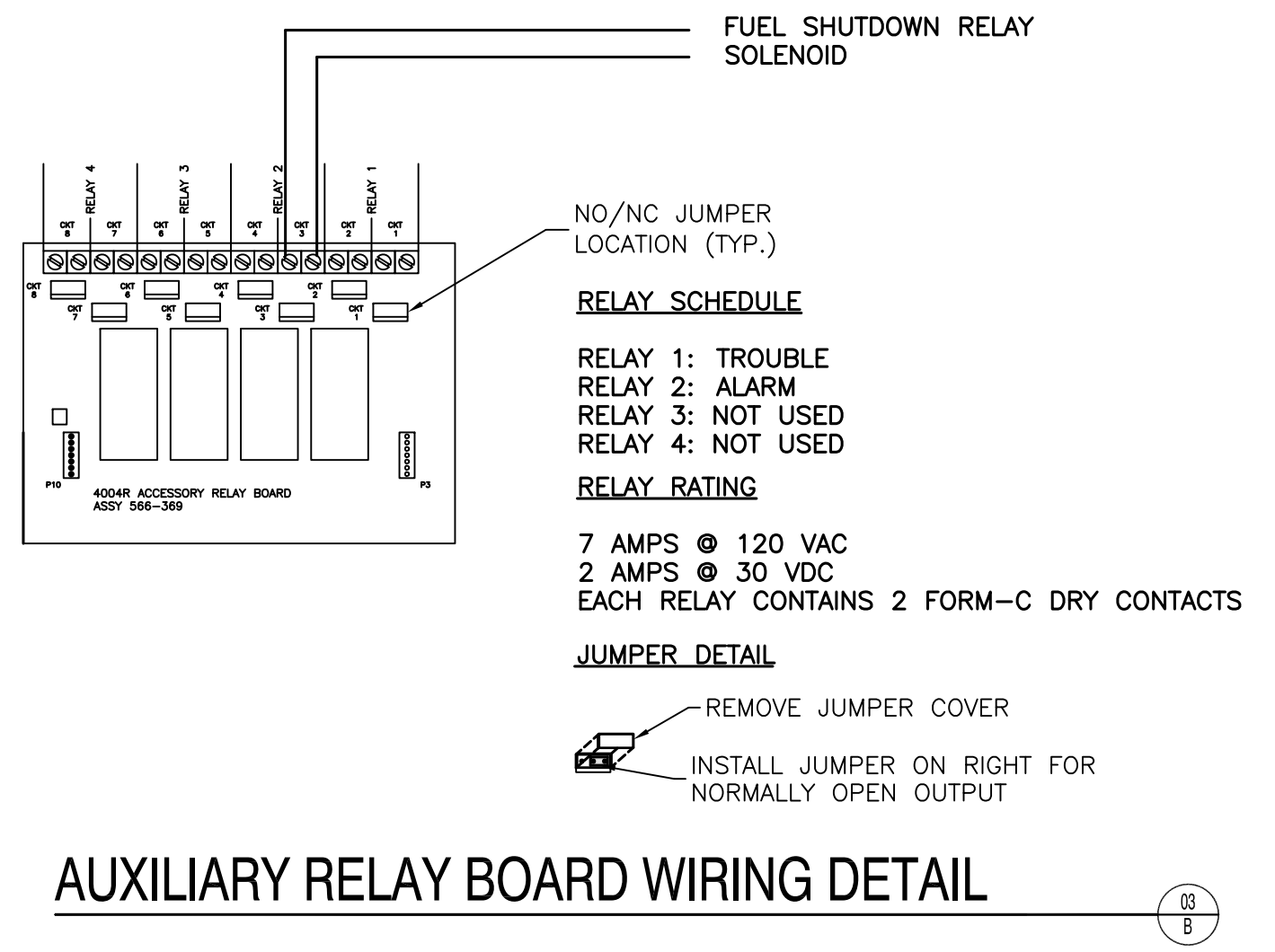
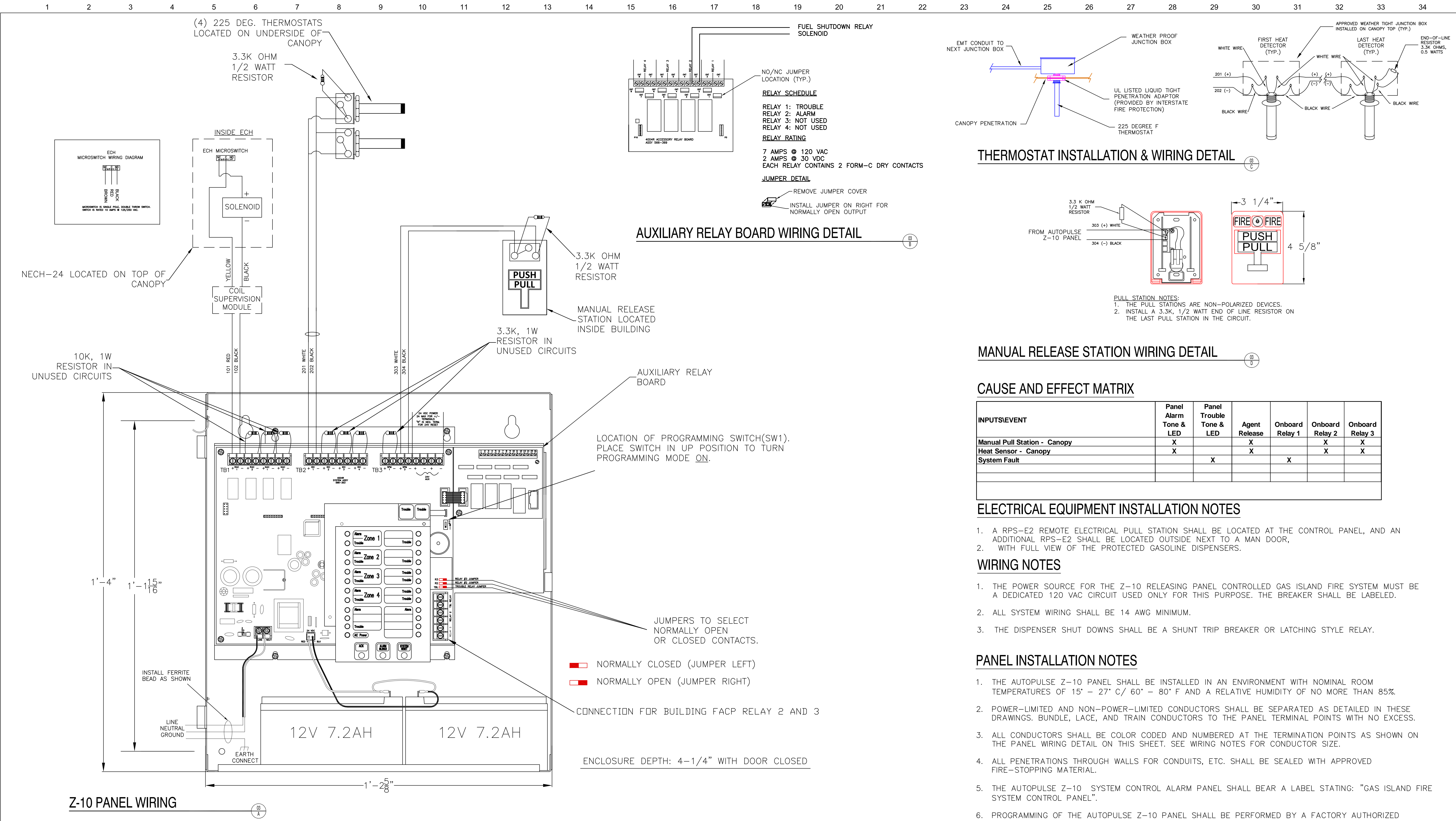


END-OF-ISLAND NOZZLE AIM POINTS
SCALE: NOT TO SCALE



MAIN ISLAND NOZZLE AIM POINTS
SCALE: NOT TO SCALE





MANUAL RELEASE STATION WIRING DETAIL

CAUSE AND EFFECT MATRIX

INPUTS/EVENT	Panel Alarm Tone & LED	Panel Trouble Tone & LED	Agent Release	Onboard Relay 1	Onboard Relay 2	Onboard Relay 3
Manual Pull Station - Canopy	X		X		X	X
Heat Sensor - Canopy	X		X		X	X
System Fault		X		X		

ELECTRICAL EQUIPMENT INSTALLATION NOTES

- A RPS-E2 REMOTE ELECTRICAL PULL STATION SHALL BE LOCATED AT THE CONTROL PANEL, AND AN ADDITIONAL RPS-E2 SHALL BE LOCATED OUTSIDE NEXT TO A MAN DOOR, WITH FULL VIEW OF THE PROTECTED GASOLINE DISPENSERS.

WIRING NOTES

- THE POWER SOURCE FOR THE Z-10 RELEASING PANEL CONTROLLED GAS ISLAND FIRE SYSTEM MUST BE A DEDICATED 120 VAC CIRCUIT USED ONLY FOR THIS PURPOSE. THE BREAKER SHALL BE LABELED.
- ALL SYSTEM WIRING SHALL BE 14 AWG MINIMUM.
- THE DISPENSER SHUT DOWNS SHALL BE A SHUNT TRIP BREAKER OR LATCHING STYLE RELAY.

PANEL INSTALLATION NOTES

- THE AUTOPULSE Z-10 PANEL SHALL BE INSTALLED IN AN ENVIRONMENT WITH NOMINAL ROOM TEMPERATURES OF 15° - 27° C/ 60° - 80° F AND A RELATIVE HUMIDITY OF NO MORE THAN 85%.
- POWER-LIMITED AND NON-POWER-LIMITED CONDUCTORS SHALL BE SEPARATED AS DETAILED IN THESE DRAWINGS. BUNDLE, LACE, AND TRAIN CONDUCTORS TO THE PANEL TERMINAL POINTS WITH NO EXCESS.
- ALL CONDUCTORS SHALL BE COLOR CODED AND NUMBERED AT THE TERMINATION POINTS AS SHOWN ON THE PANEL WIRING DETAIL ON THIS SHEET. SEE WIRING NOTES FOR CONDUCTOR SIZE.
- ALL PENETRATIONS THROUGH WALLS FOR CONDUITS, ETC. SHALL BE SEALED WITH APPROVED FIRE-STOPPING MATERIAL.
- THE AUTOPULSE Z-10 SYSTEM CONTROL ALARM PANEL SHALL BEAR A LABEL STATING: "GAS ISLAND FIRE SYSTEM CONTROL PANEL".
- PROGRAMMING OF THE AUTOPULSE Z-10 PANEL SHALL BE PERFORMED BY A FACTORY AUTHORIZED DISTRIBUTOR AND INSTALLER OF PYRO-CHEM, INC. PRODUCTS.
- UPON COMPLETION OF INSTALLATION EACH INPUT DEVICE AND OUTPUT DEVICE SHALL BE TESTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS TO VERIFY PROPER OPERATION.

SELF-SERVE EXTINGUISHING SYSTEM SHALL BE INSTALLED FROM AND IN ACCORDANCE WITH STATE FIRE MARSHALL APPROVED PLANS. ALL EXTINGUISHING SYSTEMS, DISPENSING SYSTEMS AND CONTROL EQUIPMENT SHALL BE UNDERWRITERS LABORATORY LISTED (UL).

NOTES:

THE INFORMATION AND GRAPHIC DEPICTIONS ON THIS SHEET ARE DERIVED FROM INFORMATION OBTAINED IN A PUBLICATION TITLED "AUTOPULSE Z-10 AGENT RELEASE CONTROL SYSTEM INSTALLATION, PROGRAMMING, AND OPERATING INSTRUCTIONS" PYRO-CHEM PART NUMBER: PN579-357 (REV G).

IF ADDITIONAL TECHNICAL ASSISTANCE IS NEEDED CONTACT PYRO-CHEM, INC. 1 STANTON STREET, MARINETTE, WI 54143-2542 USA. TELEPHONE NUMBER: 1-715-732-3465 TECHNICAL ASSISTANCE.

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PYRO-CHEM GAS ISLAND FIRE SUPPRESSION SYSTEM ELECTRICAL PLAN

Proj. no.:
CAD File: 7-11CongrPort.dwg
Drawn By: M. STEWARD
Created on: 12/08/2014
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Revisions: Date:
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SHEET :

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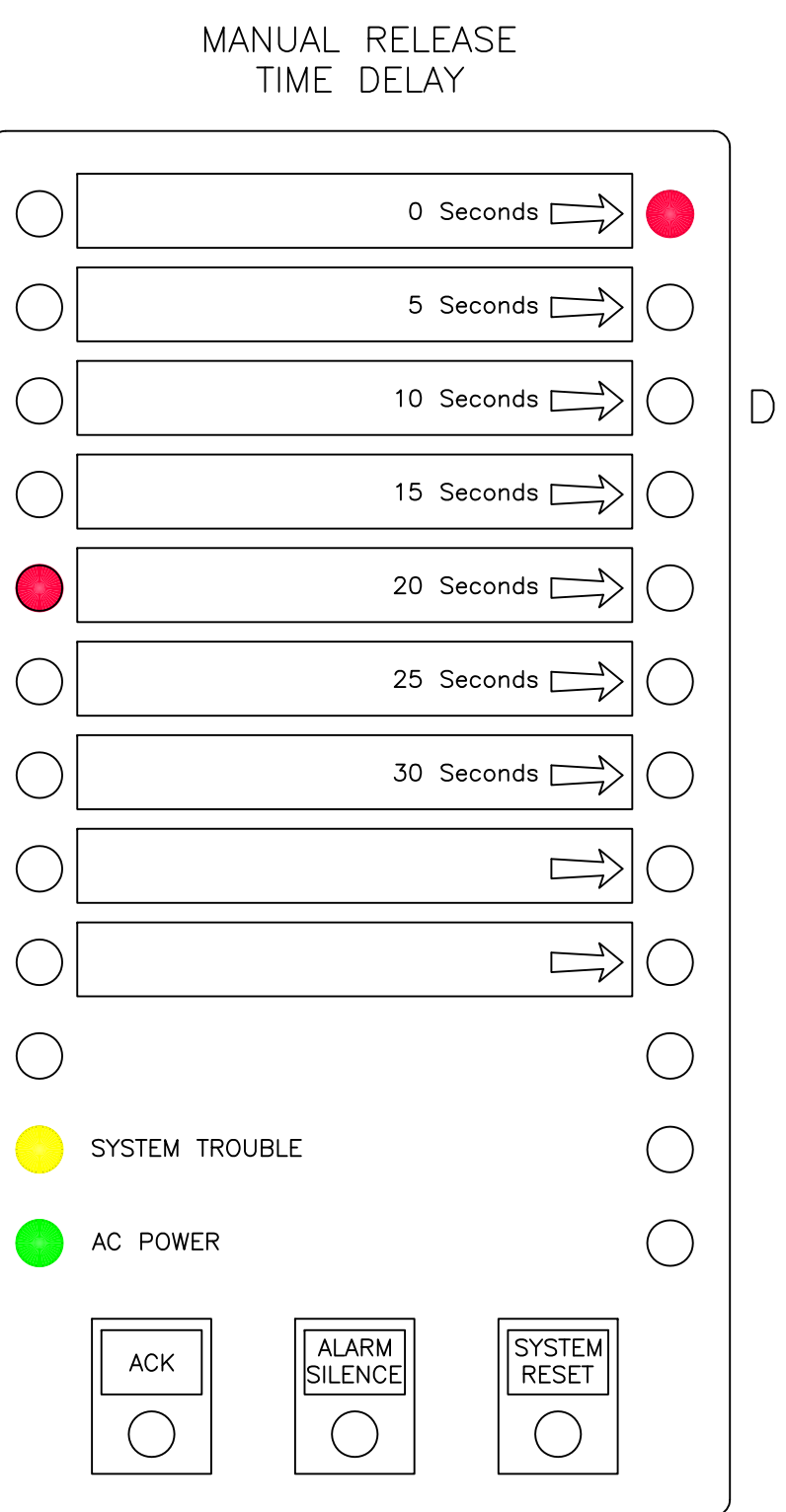
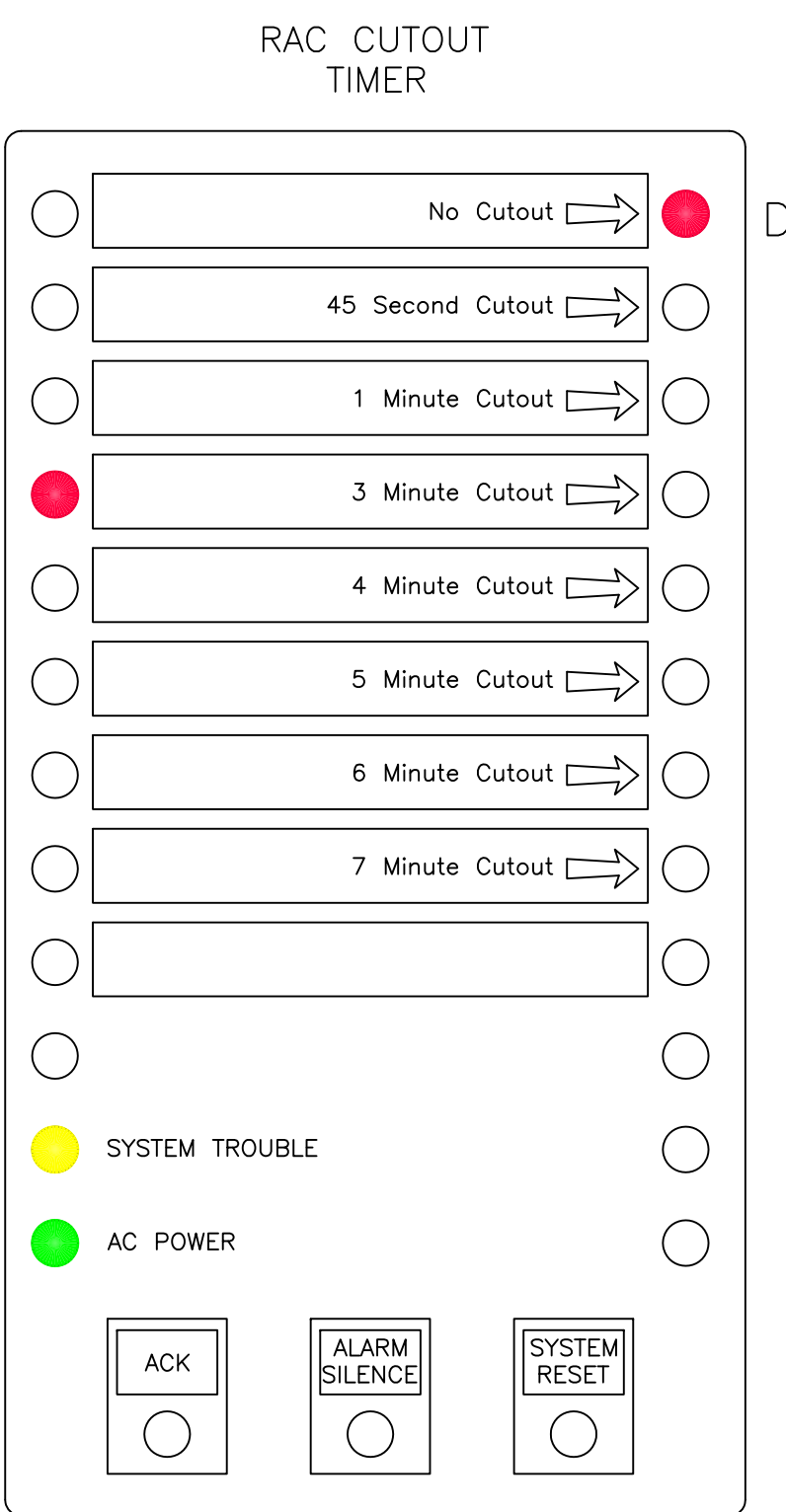
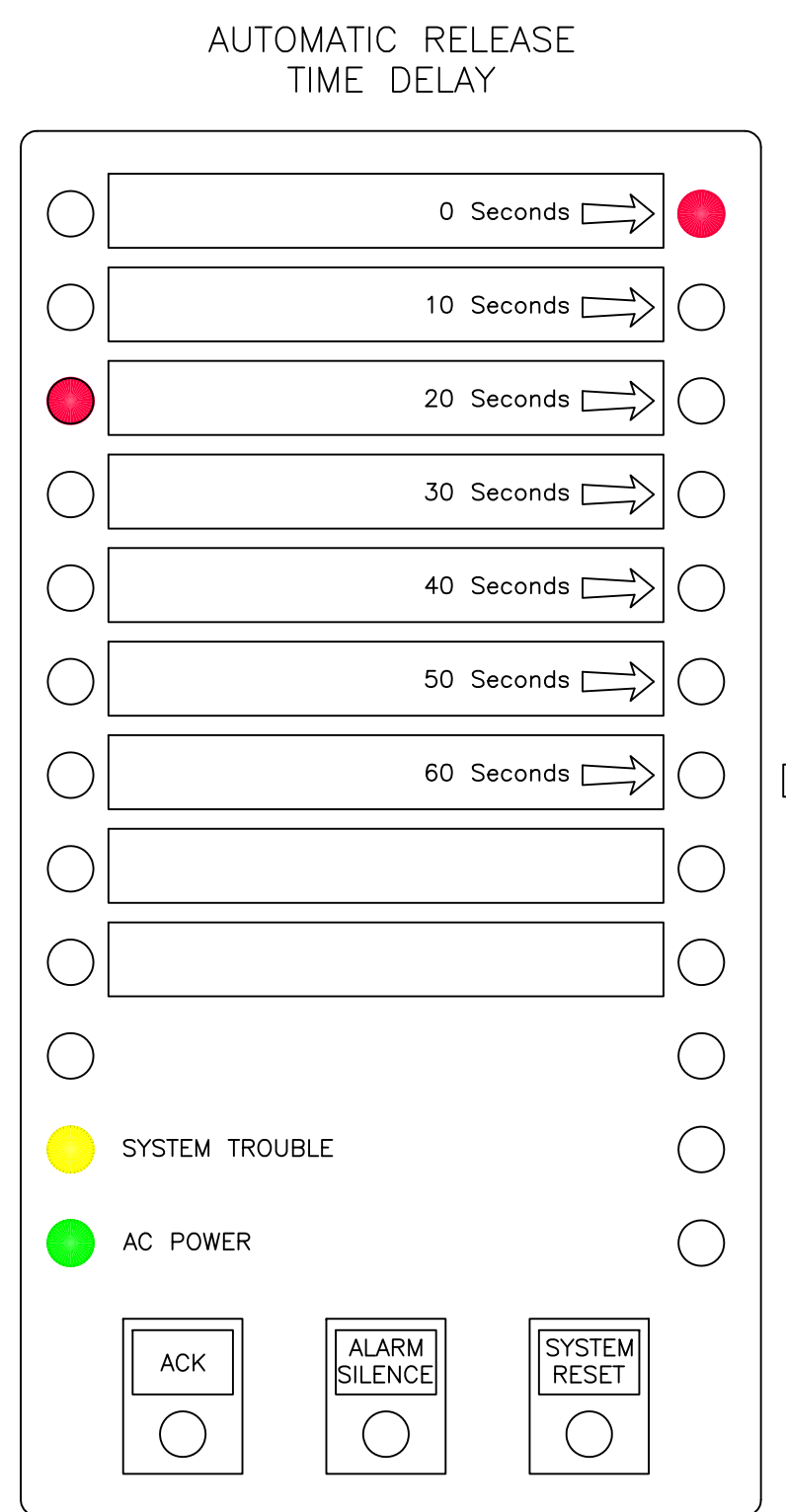
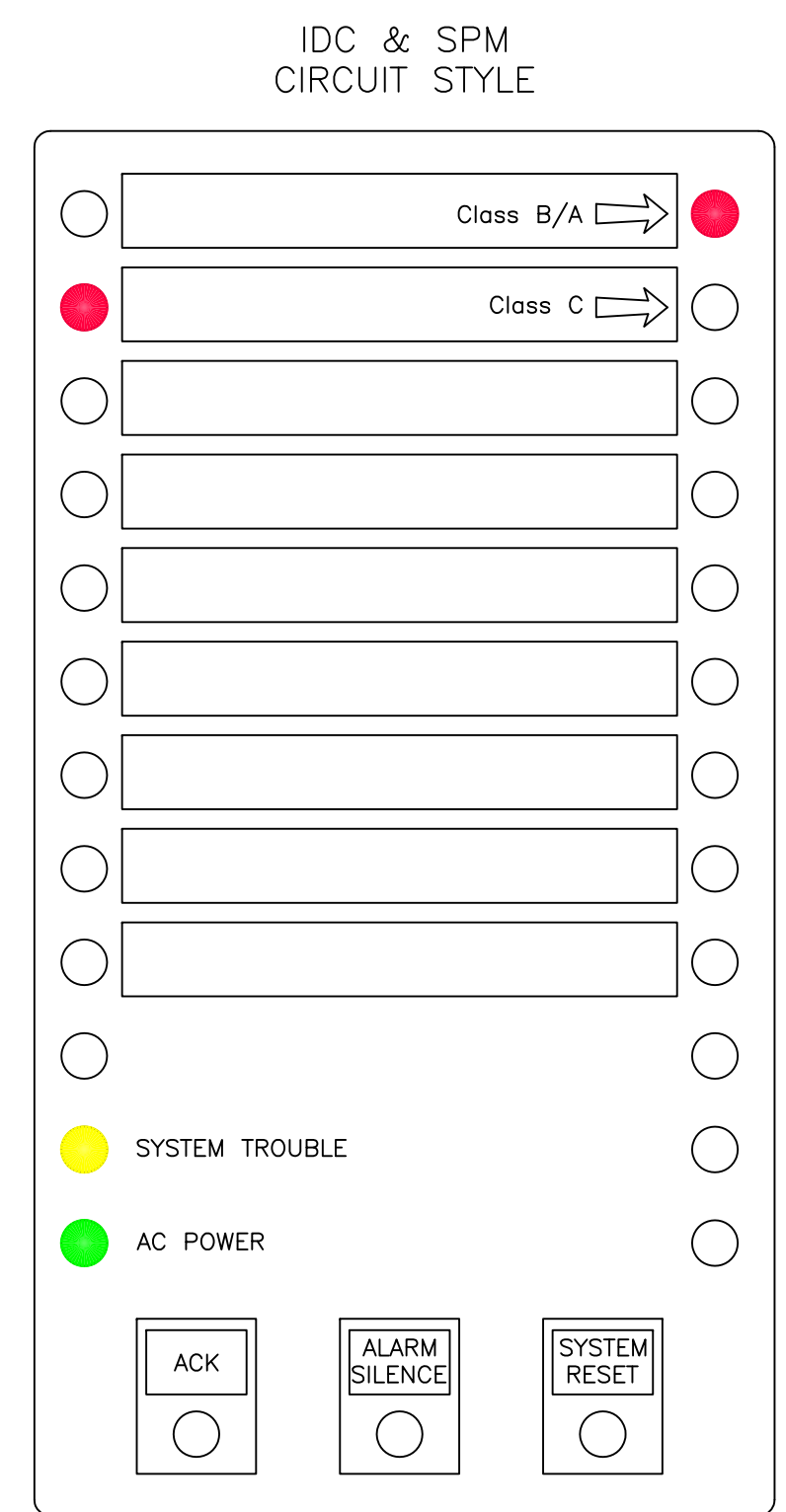
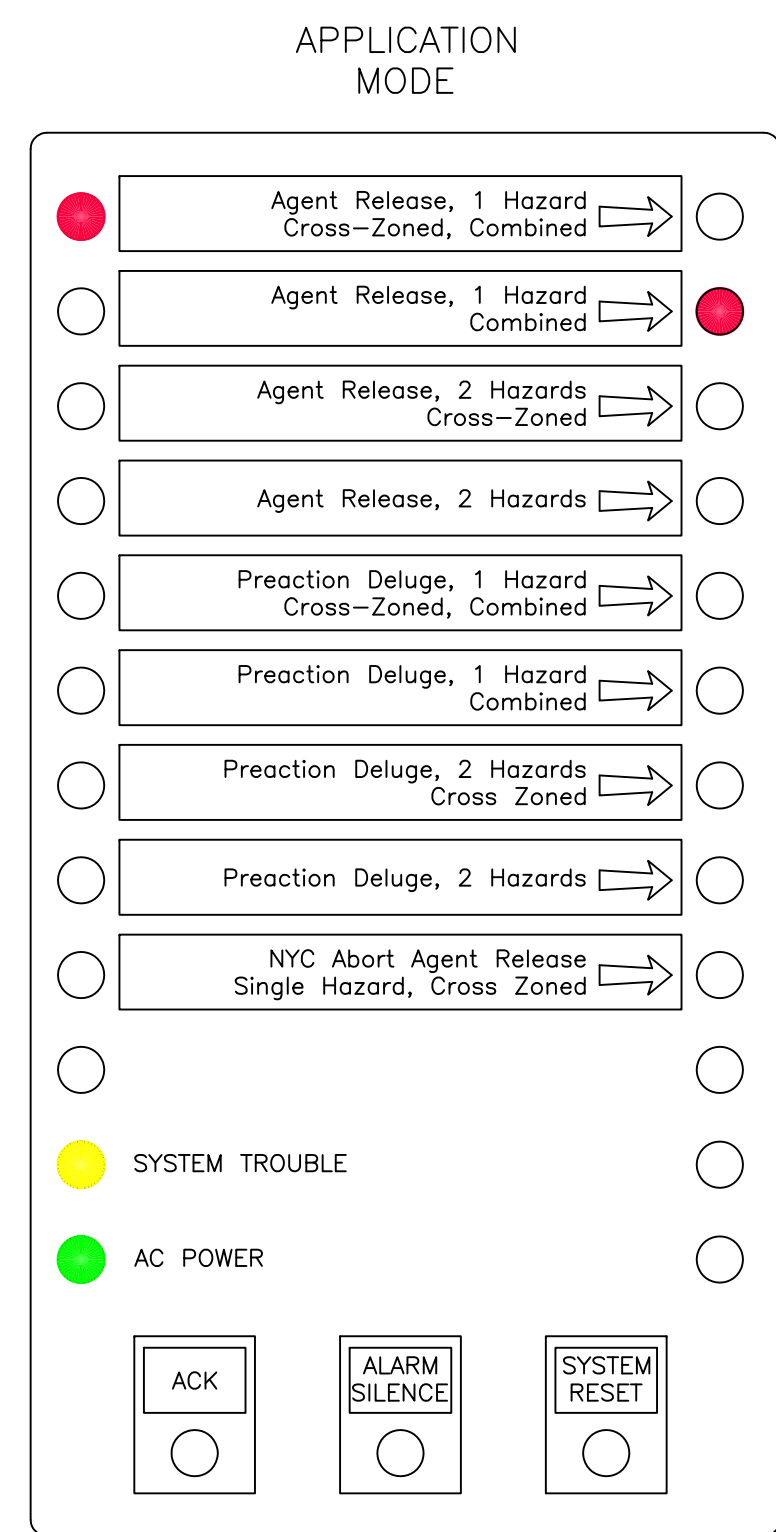
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Z-10 PANEL PROGRAMMING OPTIONS

FRONT PANEL PROGRAMMING NOTES

1. OPEN THE CABINET DOOR, REMOVE THE PLASTIC PCB COVER, AND SET THE PROGRAM SWITCH (SW1) TO THE ON POSITION. THIS PLACES THE PANEL IN PROGRAMMING MODE. WHEN YOU DO THIS, THE TONE-ALERT SOUNDS AND THE TROUBLE LED FLASHES. PRESSING ACKNOWLEDGE SILENCES THE TONE-ALERT AND CHANGES THE LED TO STEADY ON.
2. THE AUTOPULSE Z-10 PANEL USES THE LEDS ON THE FRONT OF THE PANEL TO REPRESENT THE AVAILABLE PROGRAMMING OPTIONS. THE LEFT COLUMN OF LEDS REPRESENT WHICH GENERAL PROGRAMMING OPTION IS SELECTED AND THE RIGHT COLUMN REPRESENTS CONTEXT-SENSITIVE CHOICES FOR THE SELECTED PROGRAMMING OPTION.
3. THE SYSTEM RESET KEY ALLOWS YOU TO MOVE DOWN THROUGH THE CHOICES AND THE ACK KEY IS USED TO ACCEPT A SELECTION AND MOVE TO THE NEXT PROGRAMMING STEP. (THE ALARM SILENCE KEY HAS NO PROGRAMMING FUNCTION.)
4. WHEN PANEL PROGRAMMING IS FINISHED, SET THE PROGRAMMING SWITCH TO THE OFF POSITION. THIS AUTOMATICALLY SAVES CHANGES TO THE AUTOPULSE Z-10'S PROGRAMMING AND PLACES THE PANEL IN THE ALARM MODE.

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