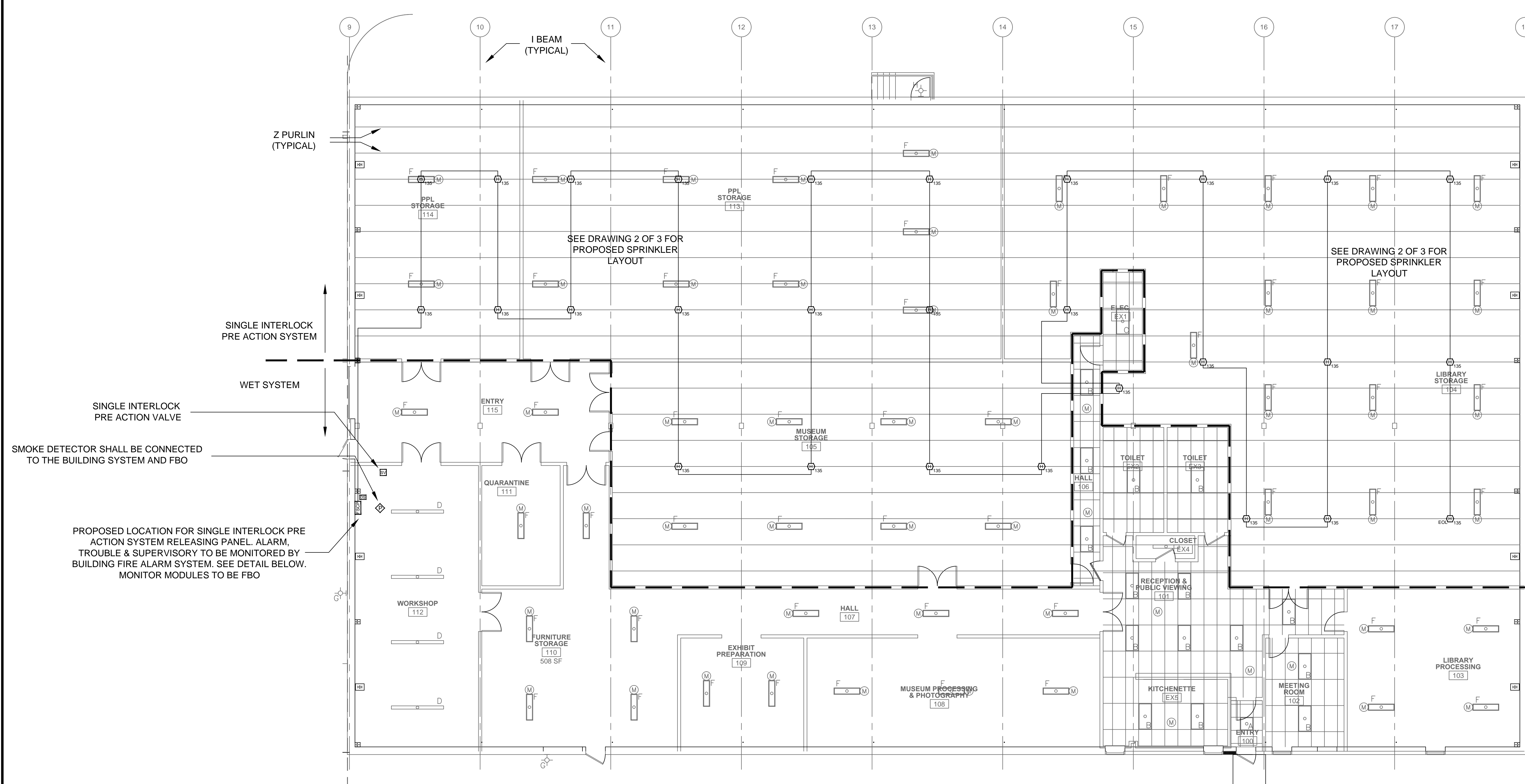


SYMBOL LEGEND

QTY	SYMBOL	DESCRIPTION	MODEL	BACK BOX
1	FSCP	FIRE SYSTEM CONTROL PANEL	TXR320	ENCLOSURE
28	H 135	HEAT DETECTOR/BASE	DT-135R	SINGLE GANG OR OCTAGON BOX
1	TS	SINGLE INTERLOCK PRE ACTION TAMPER SWITCH		
1	FS	SINGLE INTERLOCK PRE ACTION FLOW SWITCH		
1	LA	SINGLE INTERLOCK PRE ACTION LOW AIR SUPERVISORY SWITCH		
1	SV	PRE ACTION VALVE/RELEASING SOLENOID	DV-5	
1	E-L	END OF LINE MODULE	EL-320	
1	DS	MAINTENANCE DISCONNECT SWITCH	CPY-MTS	4" SQUARE



PRE ACTION DETECTION SYSTEM LAYOUT
SCALE: 1/8"=1'

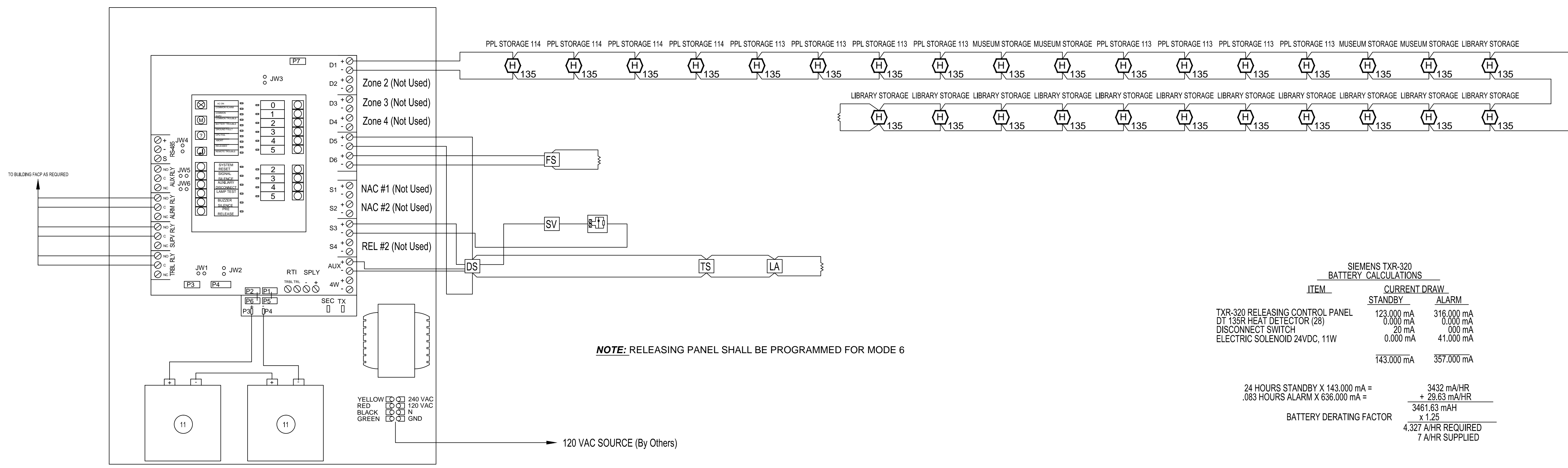
SINGLE INTERLOCK PRE ACTION SEQUENCE OF OPERATIONS

- I. ACTIVATION OF THE HEAT DETECTOR WILL CAUSE THE FOLLOWING TO OCCUR:
 1. ALARMED DETECTOR'S RED STATUS LAMP WILL LIGHT.
 2. ALARM SIGNAL WILL BE ANNUNCIATED AT THE CONTROL PANEL.
 3. ALARMED DETECTOR'S ZONE WILL BE INDICATED BY THE PANEL LED.
 4. AN ALARM SIGNAL WILL BE TRANSMITTED TO THE BUILDING FIRE ALARM SYSTEM.
 5. ELECTRONIC RELEASING SOLENOID SHALL BE ACTIVATED & WATER WILL FLOOD PIPING.
- *WATER WILL NOT DISPERSE UNLESS A SPRINKLER HEAD HAS FUSED
- II. ACTIVATION OF THE MECHANICAL RELEASE STATION ON THE PRE ACTION RISER WILL CAUSE WATER TO FLOOD PIPING

NOTE: THE KEY DISABLE SWITCH CAN BE OPERATED TO DISABLE THE RELEASING CIRCUIT FOR MAINTENANCE. OPERATION OF THE SWITCH WILL CAUSE A SUPERVISORY CONDITION TO OCCUR ON THE CONTROL PANEL.

PRE ACTION SYSTEM WIRING NOTES

1. ALL WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NFPA 70) ARTICLE 760. ALL SUPERVISED CIRCUITS ARE CLASSIFIED AS POWER LIMITED.
2. ALL WIRING SHALL BE RUN IN THIN WALL STEEL TUBING USING METALLIC CABLE WHERE FLEXIBLE RUNS ARE REQUIRED. WHEN USING MC CABLE DO NOT USE THE GREEN WIRE FOR FIELD WIRING.
3. ALL WIRING, JUNCTION BOXES, CONDUIT, ETC. IS TO BE SUPPLIED AND INSTALLED BY EASTERN FIRE PROTECTION - EXCEPT AS FOLLOWS:
 1. FIRE ALARM SYSTEM INTERFACE WIRING
 2. DEDICATED 120 VAC 20A CKT
4. UNLESS OTHERWISE SPECIFIED, MINIMUM WIRE SIZES SHALL BE AS FOLLOWS:
 - A. ADDRESSABLE DETECTION CIRCUITS: #18/2 AWG TWISTED TYPE FPL OR FPLP.
 - B. RELEASING CIRCUITS-GENERAL: (2) #14 AWG THHN IF IN CONDUIT, TWISTED, SHIELDED TYPE FPL OR FPLP.
 - C. SIGNALING & 24 VDC CIRCUITS: (2) #14 AWG THHN OR AS OTHERWISE REQUIRED OR SPECIFIED.
 - D. AUXILIARY CONTROL CIRCUITS: (2) #14 AWG THHN OR AS OTHERWISE REQUIRED OR SPECIFIED.
 - E. AC POWER & GROUND CIRCUITS: (3) #12 AWG THHN OR 12/2 MC CABLE AS REQUIRED.
5. NO PARALLEL BRANCHING OF WIRINGS ON SUPERVISED CIRCUITS IS PERMISSIBLE AND POLARITY MUST BE OBSERVED.
6. ALL FIELD WIRING MUST BE CHECKED FOR SHORTS, AND GROUNDS, BEFORE CONNECTIONS TO THE CONTROL PANEL. DO NOT MEGGER THE WIRING.
7. BEFORE TERMINATING WIRING TO THE CONTROL PANEL, A VOLTAGE READING SHALL BE DONE TO DETERMINE THAT THERE IS NO A.C. INDUCTIVE VOLTAGES ON THE WIRING.
8. INPUT CIRCUIT WIRING AND OUTPUT CIRCUIT WIRING SHALL NOT BE RUN IN THE SAME CONDUIT UNLESS SHIELDED FROM EACH OTHER.
9. A.C. POWER WIRING SHALL NOT BE RUN IN THE SAME CONDUIT AS FIRE SUPPRESSION SYSTEM WIRING. THIS INCLUDES LOW VOLTAGE A.C. (HVAC CONTROLS), SHUNT TRIP CIRCUITS & ANY NON POWER LIMITED CIRCUITS.
10. THE A.C. POWER CIRCUIT FOR THE FIRE SUPPRESSION SYSTEM CONTROL PANEL SHALL BE A SEPARATE DEDICATED CIRCUIT FOR THE CONTROL PANEL ONLY. DO NOT CONNECT THIS CIRCUIT TO A SHUNT TRIP OPERATED CIRCUIT BREAKER PANEL, OR USE IT TO POWER OTHER EQUIPMENT, (PER NFPA 2001-6-7.2.4.3).
11. NO POWER, INCLUDING EMERGENCY BATTERIES, SHALL BE APPLIED TO THE CONTROL PANEL UNTIL THE EASTERN FIRE TECHNICIAN IS ON THE JOB SITE AND HAS CHECKED OUT THE WIRING TO THE PANEL.
12. THE HEAT DETECTORS MOUNT ON A STANDARD 4" OCTAGON BOX. HEAT DETECTORS MUST BE MOUNTED AT LEAST 3 FEET AWAY FROM A SUPPLY AIR VENT.
13. NO CONDUITS ARE ALLOWED TO BE INSTALLED IN THE BOTTOM OF THE CONTROL PANEL. THAT SPACE IS RESERVED FOR THE BATTERIES.
14. THE RELEASING SOLENOID IS TO BE WIRED WITH LIQUID TIGHT CABLE FROM A JUNCTION BOX ON THE WALL BEHIND THE PRE ACTION VALVE.
15. IF THERE ARE ANY QUESTIONS IN REGARD TO THE WIRING OR EQUIPMENT, CALL EASTERN FIRE PROTECTION, INC. AT 207-784-1507. ANY CHANGES IN EQUIPMENT LOCATIONS REQUIRE APPROVAL FROM EASTERN FIRE PROTECTION PRIOR TO BEING MADE.



RELEASING PANEL RISER DETAIL
SCALE: N.T.S.

SIEMENS TXR-320 BATTERY CALCULATIONS

ITEM	STANDBY	ALARM
TXR-320 RELEASING CONTROL PANEL	123.000 mA	316.000 mA
DT 135R HEAT DETECTOR (28)	0.000 mA	0.000 mA
DISCONNECT SWITCH	20 mA	000 mA
ELECTRIC SOLENOID 24VDC, 11W	0.000 mA	41.000 mA
	143.000 mA	357.000 mA

24 HOURS STANDBY X 143.000 mA = 3432 mA/HR
 .083 HOURS ALARM X 636.000 mA = 52.8 mA/HR
 BATTERY DERATING FACTOR = 3484.8 mA/HR x 1.25 = 4.327 A/HR REQUIRED
 7 A/HR SUPPLIED

GENERAL NOTES	DATE	REVISIONS	REQUIRED APPROVALS	1000 RIVERSIDE 1000 RIVERSIDE ST. PORTLAND, MAINE	PRE ACTION DETECTION PLANS & DETAILS
DETECTION SYSTEM INSTALLATION TO COMPLY WITH NFPA 72 & THE NEC			OWNER / ARCHITECT STATE FIRE MARSHAL PORTLAND FIRE DEPT.	CONTRACT WITH: STROUDWATER CONSTRUCTION	DWG. NO. 3 OF 3
DETECTION SPACING DESIGNED PRECISELY TO TABLE 17.6.3.5.1 OF NFPA 72 (2010). ANY DEVIATIONS REQUIRE APPROVAL BEFORE FIELD DEVIATIONS ARE MADE			DRAWN BY: CRM NICET LEVEL II CERT # 137085		
DETECTORS TO BE MOUNTED ON BOTTOM OF Z PURLIN WITHIN 12" OF THE CEILING			CHECKED BY: WAF NICET LEVEL III CERT # 095575	 AUBURN/LEWISTON INDUSTRIAL AIRPARK, AUBURN, MAINE 04210	SCALE AS NOTED
			CONTRACTOR LICENSE # 101 CONTRACTOR RMS # 368		DATE 3/13/14