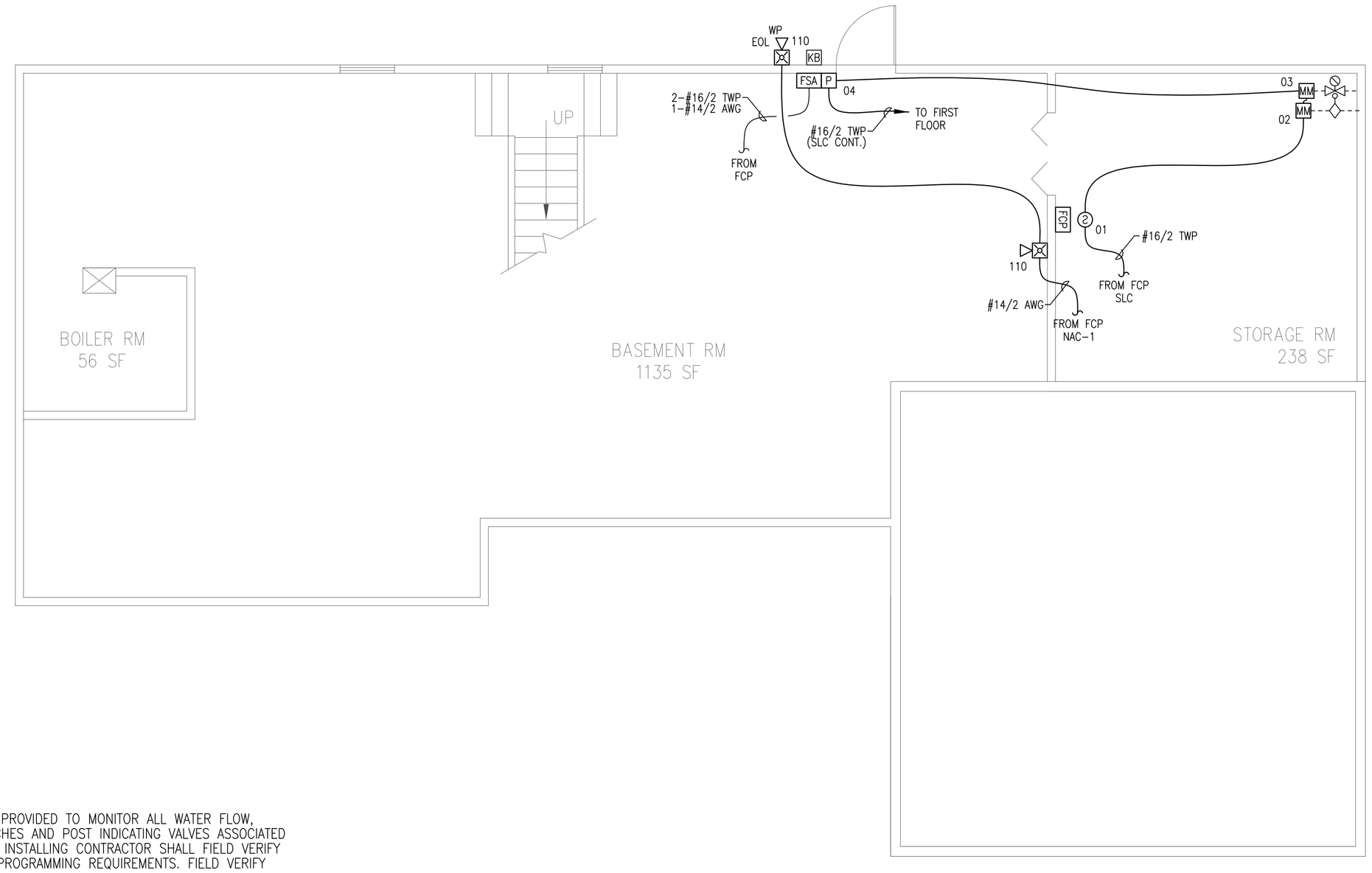

RESERVED FOR CITY STAMP

SHEET NOTES:

1. 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).

PLAN NORTH

BASEMENT FIRE ALARM PLAN

SCALE: 1/4"=1'-0" 0 2' 4' 8'

FCP Battery Calculation

10/31/2013

PROJECT NAME: 56 ALLISON AVENUE
Required Standby Time: 24 Hours
Required Alarm Time: 5 Minutes

Regulated Load in Standby

Device Type	Number of Devices		Current (Amps)		Total Current (Amps)
MS-9050UD Main Circuit Board	1	X	0.12000	=	0.12000
ANN-80 Remote Annunciator	1	X	0.01500	=	0.01500
SD355 Smoke Detector	1	X	0.00030	=	0.00030
MMF-301 Monitor Module	2	X	0.00038	=	0.00075
BG-12LX Pull Station	2	X	0.00023	=	0.00046
TOTAL STANDBY LOAD					0.13651

Regulated Load in ALARM

Device Type	Number of Devices		Current (Amps)		Total Current (Amps)
MS-9050UD Main Circuit Board	1	X	0.20000	=	0.20000
ANN-80 Remote Annunciator	1	X	0.04000	=	0.04000
All Addressable Devices - Maximum Draw	1	X	0.40000	=	0.40000
NAC-1	1	X	0.42400	=	0.42400
NAC-2	1	X	0.43900	=	0.43900
TOTAL ALARM LOAD					1.50300

Battery Requirements

			Required Standby Time in Hours		
Standby Load					
Current (Amps)	0.13651	X	24.00000	=	3.27624
Alarm Load			Required Alarm Time in Hours		
Current (Amps)	1.50300	X	0.08333	=	0.12525
Total Ampere Hours (before derating factor)					3.40149
Derating Factor				X	1.2
TOTAL AMPERE HOURS REQUIRED				=	4.08179
BATTERIES TO BE PROVIDED (2 - 12v)					7 AH

NAC Circuit Voltage Drop Calculation

10/31/2013

Project Name: 56 ALLISON AVENUE
Circuit Number: NAC-1

			Wire Gauge	Resistance Per 1000
Nominal System Voltage	20.4	volts		
Minimum Device Voltage	16	volts		
Distance from source to 1st device	5		14	6.14
Wire Gauge for balance of circuit			14	6.14
Max Output Current	1.0	amps		
Total Circuit Current	0.424	amps		

Circuit is within limits

	Device Current	Distance previous device	Voltage at Device	Drop from source	Percent Drop
Device 1	0.212		20.39	0.01	0%
Device 2	0.212	24	20.36	0.04	0%
Totals	0.424	29			

NAC Circuit Voltage Drop Calculation

10/31/2013

Project Name: 56 ALLISON AVENUE
Circuit Number: NAC-2

			Wire Gauge	Resistance Per 1000
Nominal System Voltage	20.4	volts		
Minimum Device Voltage	16	volts		
Distance from source to 1st device	15		14	6.14
Wire Gauge for balance of circuit			14	6.14
Max Output Current	1.5	amps		
Total Circuit Current	0.439	amps		

Circuit is within limits

	Device Current	Distance previous device	Voltage at Device	Drop from source	Percent Drop
Device 1	0.017		20.36	0.04	0%
Device 2	0.176	14	20.32	0.08	0%
Device 3	0.212	44	20.26	0.14	1%
Device 4	0.017	19	20.25	0.15	1%
Device 5	0.017	10	20.25	0.15	1%
Totals	0.439	102			

REVISION	DESCRIPTION	DATE
0	ISSUED FOR REVIEW & APPROVAL	11/1/2013

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56 ALLISON AVENUE
PORTLAND, MAINE 04103
CALCULATIONS & BASEMENT FIRE ALARM PLAN

DRAWN	JPB UNICAD JOB #13639
CHECKED	WAYNE B. HAWS NICET IV 90496
DATE	10/31/2013
REVISION	0
SCALE	1/4"=1'-0"

FA-2

shop drawings created by: 5794 W. 4600 So., Hooper, UT 84315 Office: 801.985.0410
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