DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND

BUILDING PERMIT

This is to certify that
PROTECTION ONE
10 MANUEL DR
PORTLAND, ME 04103

For installation at
71 HIGH ST
GOODWILL

Job ID: 2011-12-2939-FAFS

CBL: 040- A-001-001

has permission to install master box fire alarm system
provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise closed-in. 48 HOUR NOTICE IS REQUIRED.	A final inspection must be completed by owner before this building or part thereof is occupied. If a certificate of occupancy is required, it must be

Fire Prevention Officer

Code Enforcement Officer / Plan Reviewer

THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY
PENALTY FOR REMOVING THIS CARD

BUILDING PERMIT INSPECTION PROCEDURES

Please call 874-8703 or 874-8693 (ONLY)

or email: buildinginspections@portlandmaine.gov

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the city of Portland Inspections Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- **Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.**
- **Permits expire in 6 months. If the project is not started or ceases for 6 months.**
- **If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.**

Final Fire

The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OF CIRCUMSTANCES.

IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCUPIED.

PORTLAND MAINE

Strengthening a Remarkable City, Building a Community for Life • *www.portlandmaine.gov*

Director of Planning and Urban Development
Penny St. Louis

Job ID: 2011-12-2939-FAFS
install master box fire alarm system

For installation at:
71 HIGH ST
GOODWILL

CBL: 040- A-001-001

Conditions of Approval:

Fire

The fire alarm system shall comply with the City of Portland Standard for Signaling Systems for the Protection of Life and Property. All fire alarm installation and servicing companies shall have a Certificate of Fitness from the Fire Department.

In field installation shall be installed per code as conditions dictate.

Audible alarm levels shall be verified and documented per code.

All smoke detectors and smoke alarms shall be photoelectric.

Carbon Monoxide is detection required in accordance with NFPA 720, *Standard for Installation of Carbon Monoxide (CO) Detection and Warning Equipment*, 2009 edition.

Records cabinet, FACP, annunciator(s), and pull stations shall be keyed alike.

Central Station monitoring for addressable fire alarm systems shall be by point.

All fire alarm records required by NFPA 72 should be stored in an approved cabinet located at the FACP labeled "FIRE ALARM RECORDS".

Installation of a Fire Alarm system requires a Knox Box to be installed per city ordinance.

The fire alarm system shall be certified by a master fire alarm company and have a new fire alarm inspection sticker.

System acceptance and commissioning must be coordinated with alarm and suppression system contractors and the Fire Department. Call 874-8703 to schedule.

Fire Alarm system shall be maintained. If system is to be off line over 4 hours a fire watch shall be in place. Dispatch notification required 874-8576.

Fire alarm system requires a wireless master box connection per city ordinance. Masterbox design and installation shall be as approved be City Electrical Division.

AES Zones shall be

1. Water Flow
2. City disconnect: Water flow
3. Pull stations & detectors
4. City Disconnect: Pull stations & detectors
5. Unassigned
6. Unassigned
7. Unassigned
8. AES Tamper switch

Sprinkler supervision shall be provided in accordance with NFPA 101, *Life Safety* Code, and NFPA 72, *National Fire Alarm and Signaling Code*.

Zoning

1. This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.
2. ANY exterior work requires a separate review and approval thru Historic Preservation. This property is located within an Historic District.
3. The legal use of this property is nine (9) dwelling units with four bedrooms in one unit. Any change of use shall require a separate permit application for review and approval.

City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, FAX: (207) 8716

Job No:	Date Applied:	CBL:	
2011-12-2939-FAFS	**12/16/2011**	**040- A-001-001**	
Location of Construction: **71 HIGH ST (79)**	Owner Name: **THE GOODWILL DEVELOPMENT CORP.**	Owner Address: **353 CUMBERLAND AVE** **PORTLAND, ME 04101**	Phone:
Business Name:	Contractor Name: **Protection One**	Contractor Address: **10 Manuel Drive, Portland, ME 04103**	Phone:
Lessee/Buyer's Name:	Phone:	Permit Type: **FIRE ALARM - Fire Alarm**	Zone: **R-6**
Past Use: **Nine dwelling units / one with 4 bedrooms**	Proposed Use: **Same - Nine Dwelling units – install fire alarm**	Cost of Work: **38000.00** Fire Dept: ✓ Approved w/ conditions ___ Denied ___ N/A Signature: Brandon (58)	CEO District: Inspection: Use Group: Type: Signature:
Proposed Project Description: **fire alarm permit**		Pedestrian Activities District (P.A.D.)	
Permit Taken By:			

1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
2. Building Permits do not include plumbing, septic or electrial work.
3. Building permits are void if work is not started within six (6) months of the date of issuance. False informatin may invalidate a building permit and stop all work.

Zoning Approval

Special Zone or Reviews	Zoning Appeal	Historic Preservation
___ Shoreland	___ Variance	___ Not in Dist or Landmark
___ Wetlands	___ Miscellaneous	___ Does not Require Review
___ Flood Zone	___ Conditional Use	___ Requires Review
___ Subdivision	___ Interpretation	___ Approved
___ Site Plan	___ Approved	___ Approved w/Conditions
___ Maj ___ Min ___ MM	___ Denied	___ Denied
Date: DP w/ condition 12/19/11 ABM	Date:	Date: Any exterior work requires a separate review + approval thru historic preservation.

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the appication is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT ADDRESS DATE PHONE

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE DATE PHONE

Benjamin Wallace - RE: 79 High Street

From:	Scott Dana <ScottDana@ProtectionOne.com>
To:	'Benjamin Wallace' <wallaceb@portlandmaine.gov>
Date:	1/16/2012 11:10 PM
Subject:	RE: 79 High Street
CC:	Jason Gervais <jasongervais@ProtectionOne.com>, "Timothy C. Parent" <tim...
Attachments:	P1narrative79HighStreet-V3.pdf; 79HighSt-FAPlanV3.pdf; 99HighSt-FA_MATRIX-V3.pdf

Lt. Wallace,
I have attached revised plans, narrative, and Matrix.
To summarize, please note:

1) Re. Single Station CO and Smoke detectors: These were never part of our scope of work. This customer is a National Account of P-1 which means we do not have a first- hand relationship with the decision makers. It is our hope that we can complete the monitored alarm system installation first. Then, it will be our pleasure to inform the local staff of the requirement for additional devices. P-1 can recommend an electrician to install the devices. P-1 can inspect the devices and report to PFD once they have been installed.
2) Notification appliance locations are noted on the plans. Audibility can be verified once installed (I have a meter). There are no sleeping rooms without horns. Some (ADA) rooms also have visual notification.
3) The building IS sprinklered. Flow and Tamper are noted on Plans, Riser, Matrix, and Narrative
4) Room dimensions have been added to the plans. These are the best plans our office could find. Detection device locations and spacing are compliant with NFPA 72. Notification appliance locations are also compliant with NFPA 72. The plans will be printed 'Full Size' and delivered to your office.

I hope I have addressed all of your concerns. Please feel free to call me any time.

Thank you,

C. Scott Dana, SET
Sr Commercial Sales Representative
NICET IV
Mobile: 508.922.9572
Fax: 508.590.2433
381 University Avenue
Westwood, MA 02090
www.Protection1.com

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License: MA 7066C, RI 9775

From: Benjamin Wallace [mailto:wallaceb@portlandmaine.gov]
Sent: Wednesday, January 11, 2012 2:34 PM
To: Scott Dana
Subject: Re: 79 High Street

Good afternoon,
So here's my list:

Single-station smoke alarms are required in each sleeping room and immediately outside each sleeping room within the dwelling. They're missing from the bedrooms. They need to be photoelectric if new and hardwired w/ battery backup, but do not need to be interconnected.
Single-station CO alarms are required immediately outside each sleeping room within the dwelling. They appear to be in a bedroom. They need to be hardwired w/ battery backup, but do not need to be interconnected.
Notification appliance location and audibility needs to be verified, specifically in the dwellings. For instance 1B has a strobe in the bathroom but no other notification. Is this ADA? Audibility will need to be verified after installation for occupied and sleeping rooms without horns.
Please update the operations matrix please:

add column "Transmit fire alarm signal via master box."
add column "Transmit city disconnect signal via master box."
add a line for "Actuate city disconnect switch."
add a line for "Actuate drill switch."
re-label the "Supervised CO detectors" as "system CO detectors."

If this building is covered by a supervised, automatic sprinkler system throughout the heat detectors can go away. Please indicate one way or the other. If the answer is yes the water flow must be transmitted on AES zone 1 with its own disconnect on zone 2. Pulls and detectors will be transmitted on zone 3 with its own disconnect on zone 4.
Once you've made the updates and cleaned up the plans I'll need a full size, scalable paper set.

Thanks,

Lt. Benjamin Wallace Jr.
Fire Prevention Officer
Portland Fire Department
380 Congress Street
Portland, Maine 04101
(207)874-8400
wallaceb@portlandmaine.gov
>>> Scott Dana <ScottDana@ProtectionOne.com> 1/2/2012 12:11 PM >>>
Good morning,
I think I have addressed all of the concerns you mentioned. Please call or write if I have left anything out.
Thanks,
-Scott

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Benjamin Wallace - RE: 79 High Street

From: Benjamin Wallace
To: Scott Dana
Date: 12/21/2011 12:55 PM
Subject: RE: 79 High Street
CC: Stephen Nigro; Timothy C. Parent
Attachments: Benjamin Wallace.vcf

I've got the permit application but not the master box application. Also on the plans:

> They are not scalable so I have no reference on the strobe placement;
> The typical symbols for a smoke alarm is S (or backwards S) in a circle or for Carbon Monoxide CO (or a triangle) in a circle with ss next to the either circles to indicate a single-station alarm.

I'm seeing what appears to be 4 system CO detectors all in the basement but none on the other floors. 720:5.5.5.3.1 requires in addition to one in the furnace room, one on every habitable level (common area) of the building. That would be a total of 5 CO detectors (2 basement, one each 1st, 2nd and 3rd floors). The CO detectors required by this section of the code are not supervisory alarms; they are alarm signals all the way to central/ remote station except that they don't activate the master box and the alarm signal is a 4-tap rather than the 3-tap for fire. Also, I'm believing that these CO detectors are going to be connected via a supervised monitor module but they are not shown on the wiring diagram or battery calculations. They don't appear to be directly compatible with the panel otherwise.

Please provide revised, legible wiring diagrams and scalable floor plans with updated battery and voltage calculations and master box approval form.

Thank you,

Lt. Benjamin Wallace Jr.
Fire Prevention Officer
Portland Fire Department
380 Congress Street
Portland, Maine 04101
(207)874-8400
wallaceb@portlandmaine.gov
>>> Scott Dana <ScottDana@ProtectionOne.com> 12/11/2011 11:01 PM >>>
I need Jason to add the 'Hard Wired Smoke Detectors' and 'Hard Wired CO Detectors' to the plans. We noticed them during our walkthrough, but we didn't take notes because they are usually (in my experience) someone else's responsibility.
Indicate 'SS' as suggested. Call the Cos 'CO'
My plan is to make note of their locations, but indicate that they are existing.

After I get a look at NFPA 720, I will need to add CO detectors to our system. You can decide if that will be a rider. I think there will only be a few detectors required in the mechanical areas of the basement.

Once the plans are done, you can bring the whole bundle to the Building Dept

C. Scott Dana, SET

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From: Benjamin Wallace [mailto:wallaceb@portlandmaine.gov]
Sent: Friday, December 09, 2011 1:21 PM
To: Scott Dana
Cc: Stephen Nigro; Timothy C. Parent
Subject: RE: 79 High Street

Ok. Include your battery and voltage drop calculations and don't forget to add the required CO detectors on the system as we discussed earlier (720:5.5.5.3). On the floor plans indicate the single-station alarms with an SS next to the symbol so I can differentiate the alarms from the detectors. You also need a master box approval form, and the input/output matrix (see 72:A.14.6.2.4(9)) including master box transmission. To be clear signals to remote station need to be by point and the AES master box zones will be broken out as follows (alarm signals only):

1. Water flow
2. City Disconnect: Water flow
3. Pulls and detectors
4. City Disconnect: Pulls and detectors
5. Unassigned
6. Unassigned
7. Unassigned
8. AES Tamper Switch

Once you have it all together submit the permit to City Hall. At that point I can do a complete review for permit.

Lt. Benjamin Wallace Jr.
Fire Prevention Officer
Portland Fire Department
380 Congress Street
Portland, Maine 04101
(207)874-8400
wallaceb@portlandmaine.gov
>>> Scott Dana <ScottDana@ProtectionOne.com> 12/8/2011 10:58 PM >>>
Good Morning,
I understand that I am supposed to submit the package to the Building Dept. Being unfamiliar with the procedures, I thought I would run this by you first.
I am comfortable with the system design and I am prepared to stand behind it. My trepidation is with the submittal process. I am not sure I have answered everything. Please forgive my inexperience. I will provide whatever is missing.
Thank you for your help.
-Scott

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Westwood, MA 02090
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From: Benjamin Wallace [mailto:wallaceb@portlandmaine.gov]
Sent: Wednesday, December 07, 2011 2:11 PM
To: Scott Dana
Cc: Stephen Nigro; Timothy C. Parent
Subject: Re: 79 High Street

Hi Scott,
I'm sorry I couldn't meet yesterday; I had a family emergency come up. I've contacted the State Inspector to see if he has any info on the building.
It sounds like we have mixed use: Board and Care, Apartments, and perhaps also Lodging and Rooming. That would indicate that we should apply the most restrictive requirements for fire alarm of the 3 occupancies. Based on that I would say the following requirements apply within the scope of our Signaling System Rules:

Addressable panel at the front door (or annunciator)
Remote station monitoring
AES wireless box- required by City Code 10-101(a)(7) for *residential board and care*
Complete sprinkler supervision and pull stations

If more than 3 stories in height smoke detection as required by MRSA 25 §2464 sub-§ 3
CO detection in accordance with 720:5.5.5.3 (remote station signal only – no master box signal)
Complete occupant notification

Additionally each sleeping room requires a hardwired, battery backup photoelectric smoke alarm.
If arranged as suites a hardwired, battery backup photoelectric smoke alarm immediately outside each sleeping room on each level within the suite and a hardwired, battery backup CO alarms required per 720:9.4.1.1.
If residential board and care and less then 3 stories in height hardwired, battery backup photoelectric smoke alarms per 101:33.2.3.4.3.
Thanks,

Lt. Benjamin Wallace Jr.
Fire Prevention Officer
Portland Fire Department
380 Congress Street
Portland, Maine 04101
(207)874-8400
wallaceb@portlandmaine.gov
>>> Scott Dana <ScottDana@ProtectionOne.com> 12/6/2011 11:12 PM >>>

I am sorry I missed you today. I was looking forward to meeting you;.
I visited the building at 79 High Street. It's occupancy classification is a bit fuzzy.
There are 12 units
There are 13 Residents (Beds)
There are Kitchens in 7 units
7 Beds are listed as" Non-Medical Private"
DSS and HUD are involved. This is a Goodwill facility. 4 Units are Handicapped accessable.
There is an attendant on duty 24/7
There is a common cooking facility
There is an elevator
The building is fully sprinklered. There are single-station smoke detectors and CO detectors in all dwelling units.
There is a relatively new Zoned fire alarm. It does not seem to be Compliant with any applicable Codes.

As you can see, it is difficult to determine between "Board and Care" or "Lodging and Rooming"

Thankfully, the owner wants to install a new addressable fire alarm. Once we have the Occupancy ironed out, we can prepare a system design and submittal for your review.
My colleagues from our Portland office can meet you at the building if you think it is necessary. I am always available to discuss this over the phone.
Please call to tell me how you want to proceed.

Thanks,

C. Scott Dana, SET
Sr Commercial Sales Representative
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Fax: 508.590.2433
381 University Avenue
Westwood, MA 02090

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HOME AND BUSINESS
SECURITY

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NARRATIVE REPORT

INSTALLATION OF

AUTOMATIC FIRE DETECTION SYSTEM AT:

79 High Street
Portland, ME.

PREPARED BY:

C. SCOTT DANA, S.E.T.

Protection One Alarm monitoring, Inc.

Scott Dana
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Westwood, MA 02090
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SCOPE OF WORK

Provide and install a new LOW VOLTAGE fire alarm system.

BUILDING DESCRIPTION

Approximately 8,000 sq. feet. Three stories above grade. One basement level. The construction is wood frame. The building serves as residential mixed use. Board and Care, Apartments, Lodging and Rooming.

APPLICABLE LAWS

The proposed fire alarm system meets
Portland City Codes and Maine State Codes to the best of my understanding
MRS 25 2464 sub 3
NFPA 72 2010
ADA
NFPA 101
Existing Single station smoke and CO detectors are noted on the plans. The owner will be advised of any need or requirement to add or change detectors. P-1 will gladly inspect the work by others.
Supervised (monitored) CO detectors will be installed as indicated on the plans. These devices will be monitored and the signals handled by P-1 according to NFPA 720 (2009).

FIRE PROTECTION SYSTEMS TO BE INSTALLED

The SILENT KNIGHT 5808 fire alarm control panel will be installed. A complete compilation of manufacturer's literature is included with this narrative.

There is one elevator. It will be recalled in the same manner that is existing

The building is sprinklered. Water flow and tamper switches will be supervised

The fire alarm system will provide protection of the entire building as specified by applicable codes. All devices and their installation will conform to all applicable codes such as NFPA 72, 101, and NEC.

The system is designed to notify all building occupants via the use of strategically placed (NFPA72) horns and horn/strobe units in all common areas and sleeping rooms.

Handicap-Accessible Sleeping areas will have 177Cd strobes in an effort to comply with NFPA 72 (2010) 18.5.4.6.2 and A 18.5.4.6.2

Scott Dana
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Telephone 508-922-9572
Fax 508-590-2433

The following WILL apply under another scope of work:

Single- or multiple-station smoke alarms shall be installed and maintained by others in all of the following locations: 1. On the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms. 2. In each room used for sleeping purposes. 3. each story within a dwelling unit, including basements

The existing SINGLE-STATION devices are shown on the low-voltage fire alarm 'system' plan. These devices can be inspected by the Inspector during the final test of the fire alarm. P-1 will assist PFD to communicate the requirements to the building owner.
Upon request, P-1 will verify compliance by the owner. These devices are not included in P-1's scope of work at this time.

Evacuation will be via front and rear stairs and emergency exits.

SEQUENCE OF OPERATION

The fire alarm control panel will signal three types of alarms: Fire alarms (either manually or automatically actuated) shall sound all audible and visual notification devices. Fire Trouble and Fire supervisory signals will sound a tone and a light on the panel.

All signals will be monitored by P-1. PFD will be notified of Fire Alarms. The customer will be notified of Fire trouble and Fire Supervisory signals.

The AES master box will send signals to PFD as instructed

Elevator recall will be activated as it exists

Upon entry to the building, firefighters will find the Fire Alarm Annunciator panel, which will lead them to the zone/device that tripped the alarm.

Scott Dana
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381 University Ave
Westwood, MA 02090
Telephone 508-922-9572
Fax 508-590-2433

TESTING CRITERIA

Protection One will perform a complete system pre-test prior to the lead installer (the professional in charge of the test) arranging for and scheduling the final acceptance test with an inspector from the Portland Fire Department.

Protection One will have two technicians and all necessary equipment available with the lead technician to perform a complete test of the system as well as the individual tests of devices.

The building owner will have contracted with Protection One to perform required tests of the FACP and tests of each device as specified by NFPA72. The results of these tests will be furnished to the Portland Fire Department. The building owner will also contract with Protection One for ongoing maintenance of the entire fire alarm system. This means that any devices or components found to be defective during Protection One's periodic inspections (or any other time) will be automatically repaired or replaced by Protection One.

Upon successful completion of the acceptance test, Protection One will furnish the inspector with any and all documentation that has not already been supplied. Most importantly, Protection One's commitment as the monitoring, testing, and maintenance entity of record.

SUMMARY AND CONCLUSION

I take my position and responsibilities in situations such as the design, specification, and installation of fire alarm systems very seriously. This is more than a sale for me. If there is anything I left out of this narrative, please let me know as soon as possible. My responsibility to my client is to make the approval process go as smoothly as possible. I will endeavor to do everything I can to fulfill all requests for information.

The equipment used and the procedures for installation by Protection One are the finest available. Protection One's Customer Monitoring Centers and service department are the best in the world. Our commitment to service excellence before, during, and after the installation are unrivaled.

In short, we'll be there when you need us. Please feel free to contact me at 508-922-9572 with any requests, questions, or comments.

Sincerely,

C. Scott Dana, SET

Scott Dana
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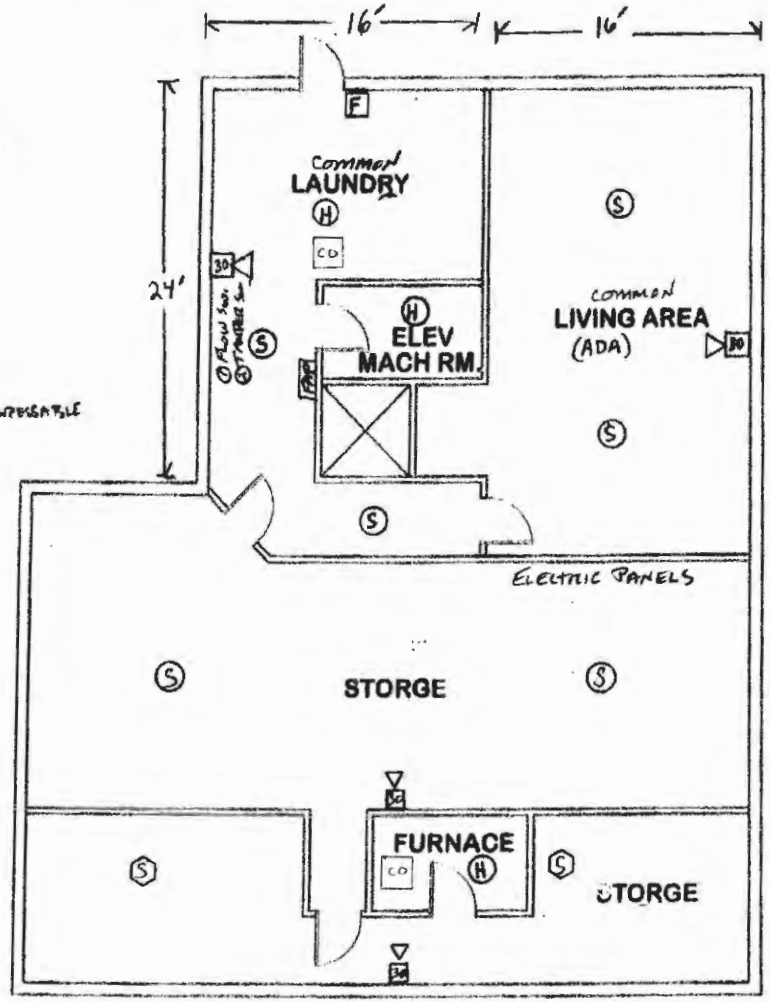
Fire Alarm Legend

- FAP - Fire Alarm Panel
- FAN - Remote Annunciator
- (S) - Addressable P.E Smoke Det.
- (H) - Addressable Heat Det.
- F - Addressable M.F.A.
- H - Horn
- Horn + Strobe
- Strobe
- CO - CO detector supervised by Addressable input module, monitored
- Existing 120VAC devices not supervised by FACP
- (CO) - CO detector
- (SS) - Single Station Smoke Detector



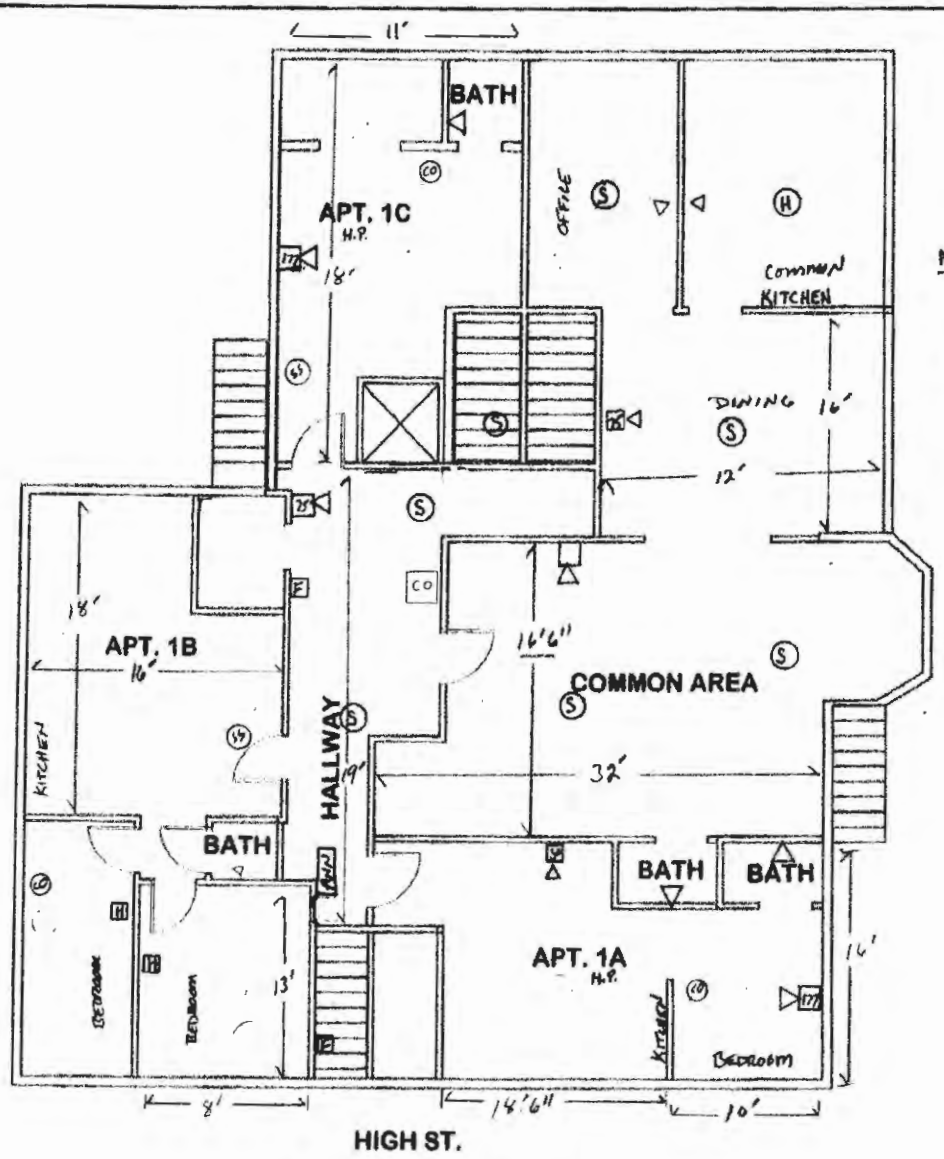
BASEMENT

Fire Alarm Plan
By. C. Scott Dana SET
Protection One, Inc.

PROPERTY OF
FMC THE ARC RESOURCE

79 HIGH ST.
PORTLAND ME.

2.
1.
REVS:
CODE:
TOWN: PORTLAND
DATE: 10-27-11
SCALE: 3/4"=1'-0"
DESIGNED: FMC
DRAWN: BIA
TITLE: BASEMENT LEVEL
FILE:
SHEET: MAP 3



Notes:

Ceiling height is 10½ ft.

Apts 1A + 1C are ADA

Common area is ADA

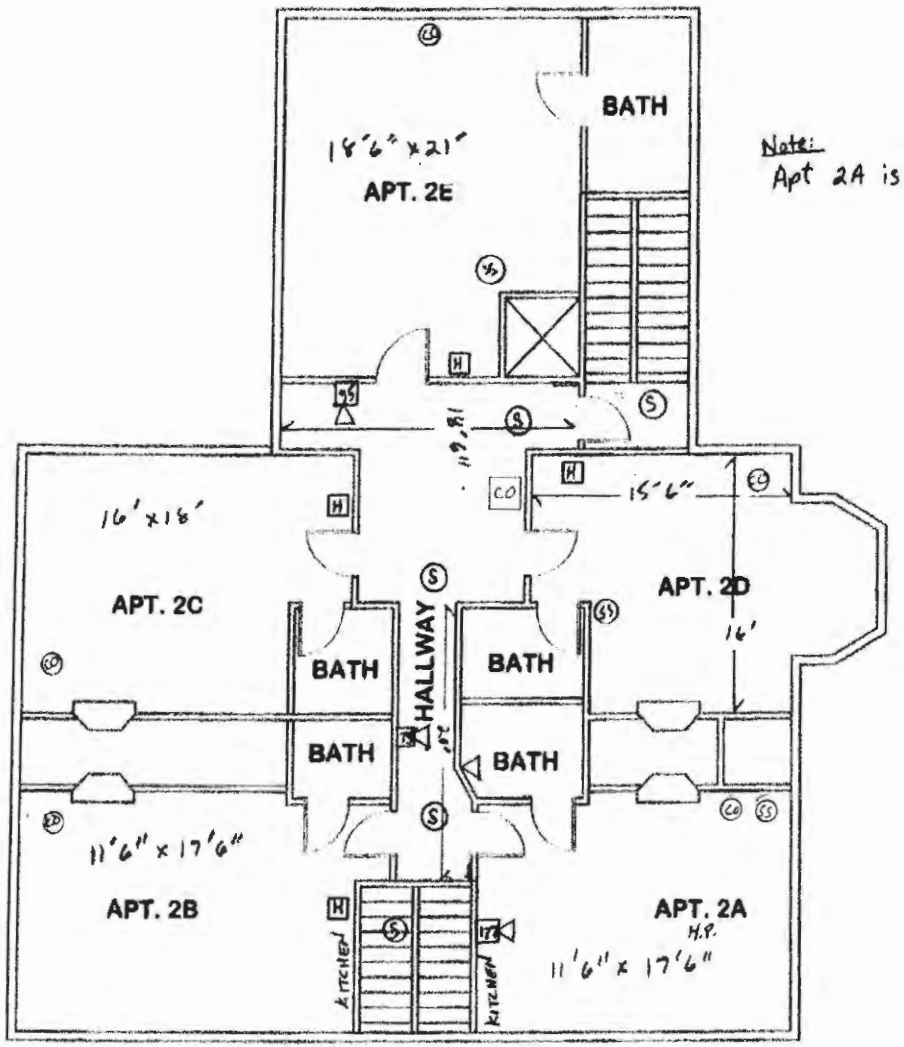
FIRST FLOOR

PROPERTY OF

FMC THE ARC RESOURCE

79 HIGH ST.
PORTLAND ME.

REVR:	
CODE:	
TOWN: PORTLAND	
DATE: 10-27-11	
SCALE: 1/4"=1'-0"	
DESIGNED: FMC	
DRAWN: BSA	
TITLE: First Floor Plan	
FILE:	
SHEET: MAP 1	



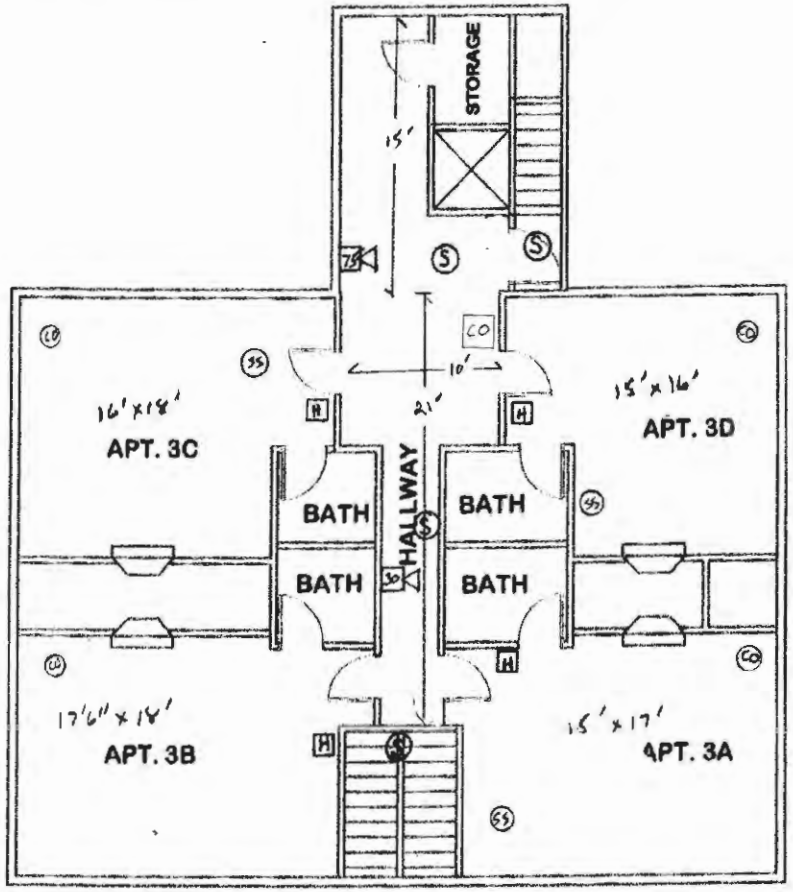
SECOND FLOOR

PROPERTY OF

FMC THE AEC RESOURCE

79 HIGH ST.
PORTLAND ME

2.	
1.	
REVS:	
CODE:	
TOWN: PORTLAND	
DATE: 10-27-11	
SCALE: 1/4"=1'-0"	
DESIGNED: FMC	
DRAWN: SSA	
TITLE: SECOND FLOOR	
FILE:	
SHEET: MAP 2	



THIRD FLOOR

PROPERTY OF

FMC
the ABC RESOURCE

79 HIGH ST.
PORTLAND ME.

3.	
1.	
REVS:	
CODE:	
TOWN: PORTLAND	
DATE: 10-27-11	
SCALE: 1/4"=1'-0"	
DESIGNED:FMC	
DRAWN: BSA	
TITLE: THIRD FLOOR	
FILE:	
SHEET: MAP 8	

Protection One Branch 11660
10 Manual Drive, Portland, ME 04103 PH# 1-800-310-5011

System Outputs

System Inputs	Actuate common alarm signal indicator	Actuate audible alarm system	Actuate common supervisory signal indicator	Actuate audible supervisory signal	Actuate common trouble signal indicator	Actuate audible common alarm signal indicator	ACTUATE AUDIBLE CO SIGNAL AT DEVICE	Actuate Lower floor evacuation signals	Actuate 1st floor evacuation signals	Actuate Upper floor evacuation signals	TRANSMIT CO ALARM SIGNAL TO CS	Transmit fire alarm signal to supervising station	Transmit supervisory signal to supervising station	Transmit trouble signal to supervising station	TRANSMIT FA VIA MASTER BOX	TRANSMIT CITY DISCONNECT SIG. VIA MASTER BOX
	Control Unit Annunciation							Notification								
System Pull Stations	X					x			X	x		X			X	
System Smoke Detectors	x	x				x		x	x	x		x			X	
System Heat Detectors	X	X				x		X	X	X		X			X	
Sprinkler Water Flow	x	x				x		x	x	x		x			X	
Sprinkler Gate Valve Tamper			x	x									x			
SYSTEM CO detectors	x						X				X					
FACP AC Loss					X									x		
FACP Low Battery					X									x		
FACP Ground Fault					X									x		
Phone Line #1 Fail					X									x		
Phone Line #2 Fail					X									x		
ACTUATE CITY DISC. SW																X
ACTUATE DRILL SW															X	

VIA MASTER BOX

Supplementary

Goodwill
79 High Street
Portland, Maine 04103

Benjamin Wallace - Re: 79 High Street

From: Benjamin Wallace
To: Scott Dana
Date: 1/11/2012 2:34 PM
Subject: Re: 79 High Street
Attachments: Benjamin Wallace.vcf

Good afternoon,
So here's my list:

> Single-station smoke alarms are required in each sleeping room and immediately outside each sleeping room within the dwelling. They're missing from the bedrooms. They need to be photoelectric if new and hardwired w/ battery backup, but do not need to be interconnected.
> Single-station CO alarms are required immediately outside each sleeping room within the dwelling. They appear to be in a bedroom. They need to be hardwired w/ battery backup, but do not need to be interconnected.
> Notification appliance location and audibility needs to be verified, specifically in the dwellings. For instance 1B has a strobe in the bathroom but no other notification. Is this ADA? Audibility will need to be verified after installation for occupied and sleeping rooms without horns.
> Please update the operations matrix please:
>
> > add column "Transmit fire alarm signal via master box."
> > add column "Transmit city disconnect signal via master box."
> > add a line for "Actuate city disconnect switch."
> > add a line for "Actuate drill switch."
> > re-label the "Supervised CO detectors" as "system CO detectors."
>
> If this building is covered by a supervised, automatic sprinkler system throughout the heat detectors can go away. Please indicate one way or the other. If the answer is yes the water flow must be transmitted on AES zone 1 with its own disconnect on zone 2. Pulls and detectors will be transmitted on zone 3 with its own disconnect on zone 4.
> Once you've made the updates and cleaned up the plans I'll need a full size, scalable paper set.

Thanks,

Lt. Benjamin Wallace Jr.
Fire Prevention Officer
Portland Fire Department
380 Congress Street
Portland, Maine 04101
(207)874-8400
wallaceb@portlandmaine.gov
>>> Scott Dana <ScottDana@ProtectionOne.com> 1/2/2012 12:11 PM >>>
Good morning,
I think I have addressed all of the concerns you mentioned. Please call or write if I have left anything out.
Thanks,
-Scott

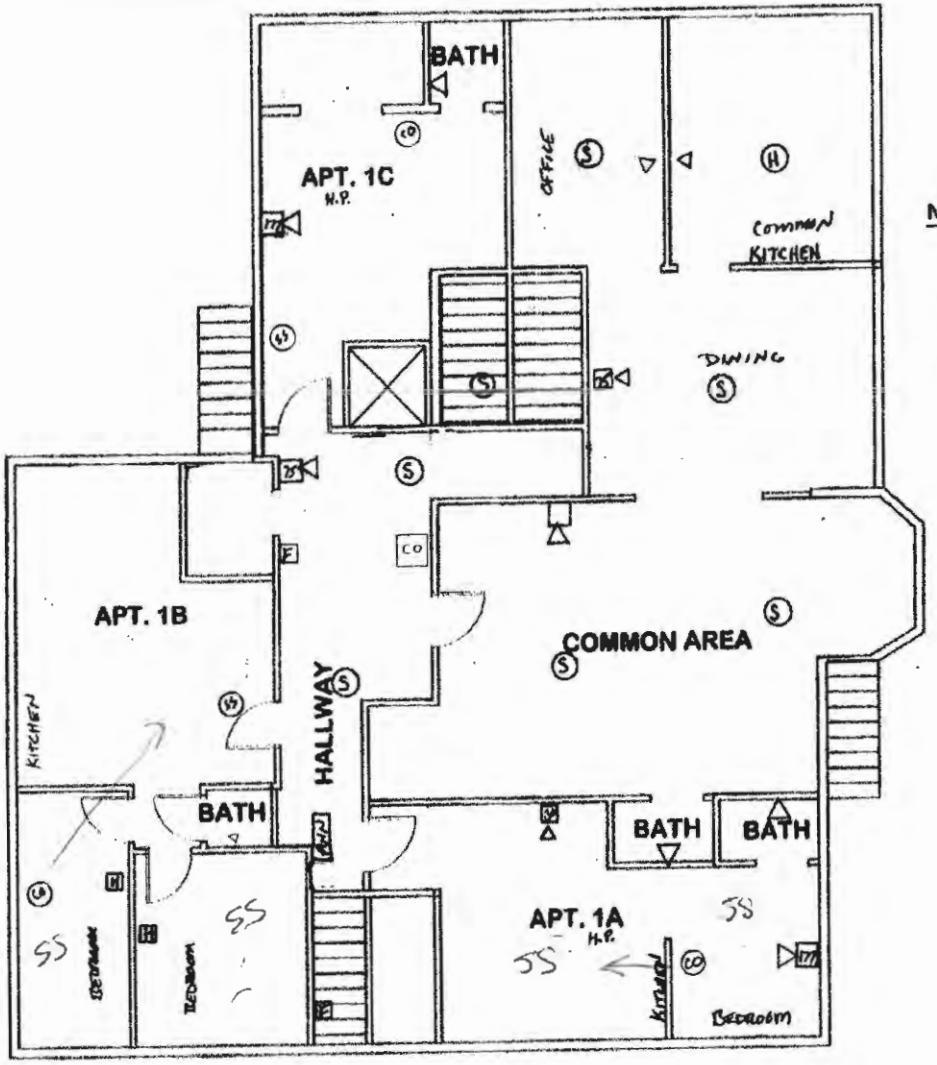
C. Scott Dana, SET

Sr Commercial Sales Representative
NICET IV
Mobile: 508.922.9572
Fax: 508.590.2433
381 University Avenue
Westwood, MA 02090
www.Protection1.com

Protection1
SECURITY SOLUTIONS
A BETTER CHOICE FOR YOU

License: MA 7066C, RI 9775

NOT FINALED



Notes:

Ceiling height is 10½ ft.

Apts 1A + 1C are ADA

Common area is ADA

FIRST FLOOR

PROPERTY OF

FMC THE ARC RESOURCE

79 HIGH ST.
PORTLAND ME.

TOWN: PORTLAND

DATE: 10-27-11

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

DESIGNED: FMC

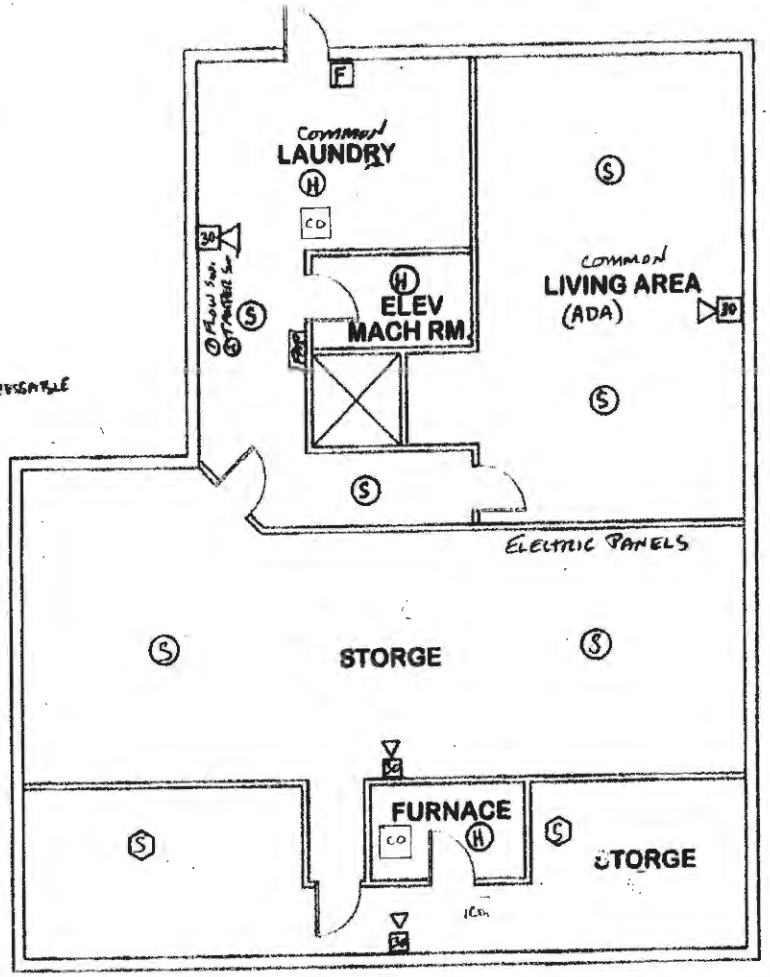
DRAWN: BBA

TITLE: First Floor Plan

SHEET: MAP 1

Fire Alarm Legend

- FAP - Fire Alarm Panel
- FAN - Remote Annunciator
- (S) - Addressable P.E. Smoke Det.
- (H) - Addressable Heat Det.
- F - Addressable M.F.A.
- H - Horn
- Horn + Strobe
- Strobe
- LO - CO detector supervised by addressable input module. Monitored.
- Existing 120VAC devices not supervised by FACP
- CO - CO detector
- SS - Single station smoke detector



BASEMENT

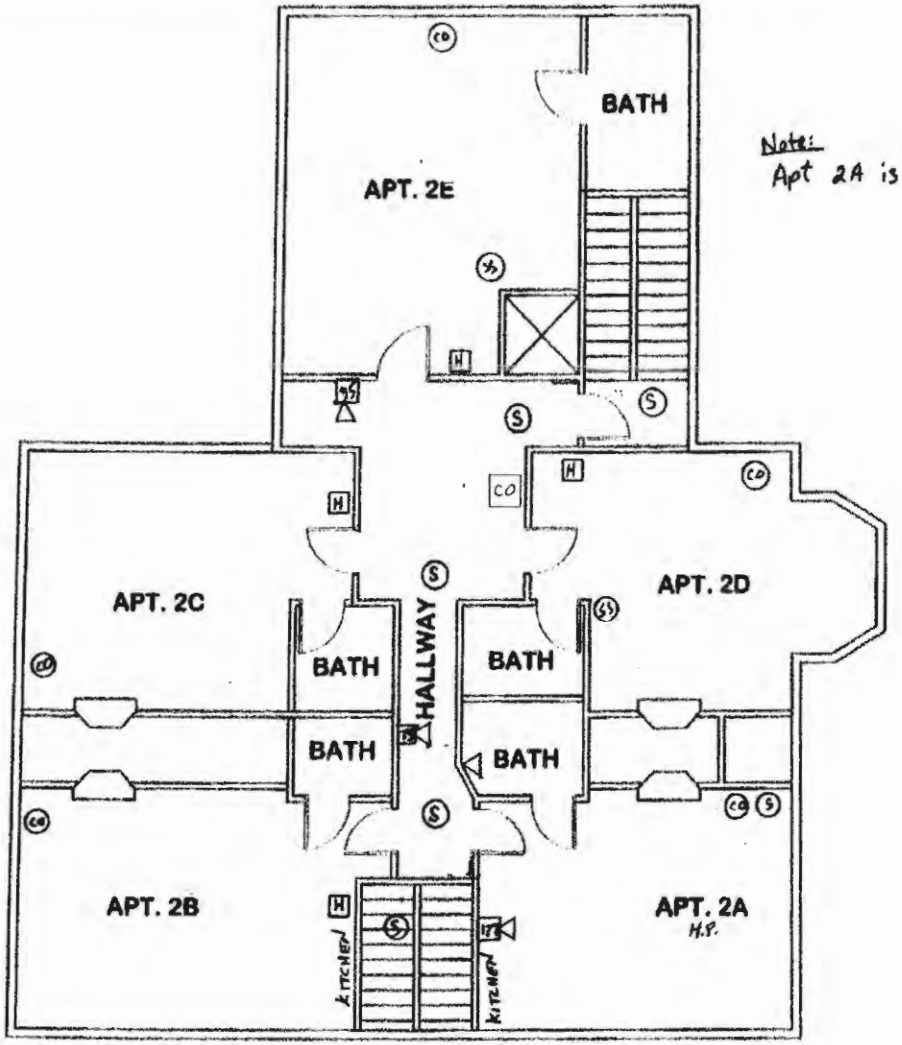
Fire Alarm Plan
By. C. Scott Dana SET
Protection One, Inc.

NOTE:

PROPERTY OF
FMC
THE ARC RESOURCE

79 HIGH ST.
PORTLAND ME.

2.	
1.	
REVS:	
CODE:	
TOWN: PORTLAND	
DATE: 10-27-11	
SCALE: 1/4"=1'-0"	
DESIGNED: FMC	
DRAWN: BBA	
TITLE: BASEMENT LEVEL	
FILE:	
SHEET: MAP 3	



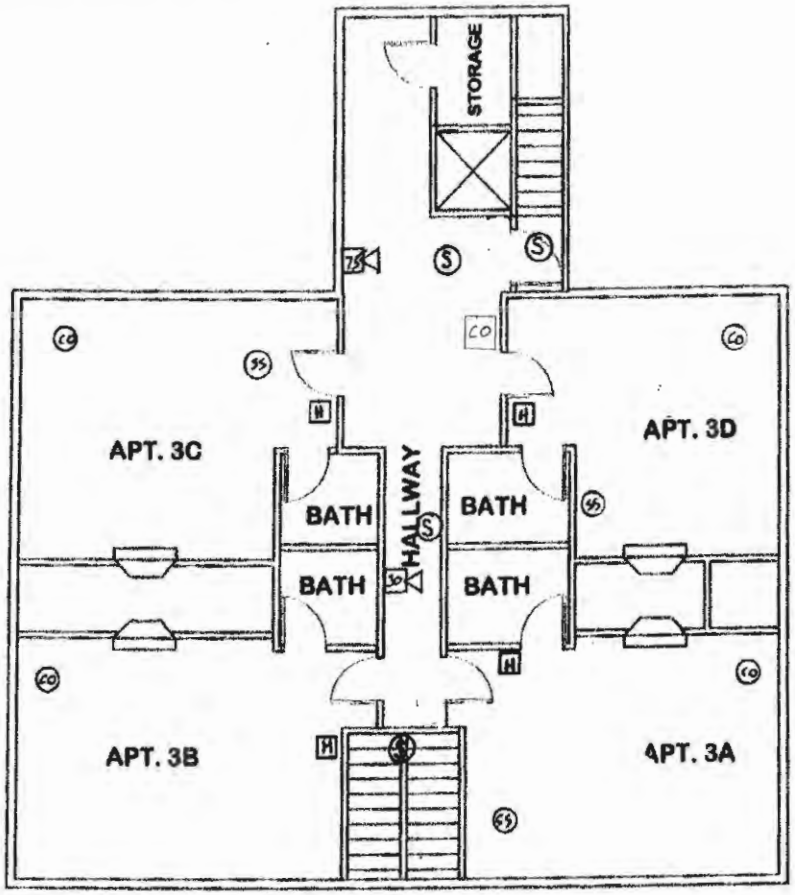
SECOND FLOOR

PROPERTY OF

FMC The AEC Resource

79 HIGH ST.
PORTLAND ME.

8.	
1.	
REVS:	
CODE:	
TOWN: PORTLAND	
DATE: 10-07-11	
SCALE: 1/4"=1'-0"	
DESIGNED: FMC	
DRAWN: BBA	
TITLE: SECOND FLOOR	
FILE:	
SHEET: MAP 2	



THIRD FLOOR

PROPERTY OF

FMC THE ARC RESOURCE

79 HIGH ST.
PORTLAND ME.

REVR:	
CODE:	
TOWN: PORTLAND	
DATE: 10-27-11	
SCALE: 1/4"=1'-0"	
DESIGNED: FMC	
DRAWN: BBA	
TITLE: THIRD FLOOR	
FILE:	
SHEET: SHP 3	

SILENT KNIGHT
by Honeywell

IntelliKnight 5808 Battery Calculati

Secondary Power Source Requirements

	Standby Current (amps)					Secondary Alarm Curr			
Device Type	Qty		Current Draw		Total	Qty		Current Draw	
1. Control Panel									
5808 Control Panel	1	x	0.170000	=	0.170000	1	x	0.325000	=
2. Addressable SLC Devices									
SK-PHOTO	24	x	0.000270	=	0.006480	24	x	0.000270	=
SK-PHOTO-T	0	x	0.000270	=		0	x	0.000270	=
SK-ION	0	x	0.000270	=		0	x	0.000270	=
SK-HEAT	4	x	0.000270	=	0.001080	4	x	0.000270	=
SK-HEAT-HT	0	x	0.000270	=		0	x	0.000270	=
SK-HEAT-ROR	0	x	0.000300	=		0	x	0.000300	=
SK-BEAM	0	x	0.002000	=		0	x	0.002000	=
SK-BEAM-T	0	x	0.002000	=		0	x	0.002000	=
SK-DUCT	0	x	0.000270	=		0	x	0.000270	=
SK-ACCLIMATE	0	x	0.000300	=		0	x	0.000300	=
SK-CONTROL	0	x	0.000375	=		0	x	0.000375	=
SK-MONITOR	1	x	0.000375	=	0.000375	1	x	0.000375	=
SK-MINIMON	5	x	0.000375	=	0.001875	5	x	0.000375	=
SK-PULL-SA	0	x	0.000375	=		0	x	0.000375	=
SK-PULL-DA	3	x	0.000375	=	0.001125	3	x	0.000375	=
SK-MONITOR-2	1	x	0.000750	=	0.000750	1	x	0.000750	=
SK-MON-10	0	x	0.003500	=		0	x	0.003500	=
SK-RELAY-6	0	x	0.001450	=		0	x	0.001450	=
SK-CONTROL-6	0	x	0.002250	=		0	x	0.002250	=
SK-RELAY	2	x	0.000255	=	0.000510	2	x	0.000255	=
SK-ZONE	0	x	0.000270	=		0	x	0.000270	=
SK-ZONE-6	0	x	0.002000	=		0	x	0.002000	=
3. SLC Accessory Bases									
B200SR	0	x	0.000500	=		0	x	0.000500	=
B224RB	0	x	0.000500	=		0	x	0.000500	=
RTS151	0	x	0.000000	=		0	x	0.007500	=
RTS151KEY	0	x	0.000000	=		0	x	0.007500	=
RA100Z	0	x	0.000000	=		0	x	0.010000	=
4. SLC Isolator Devices									
SK-ISO	0	x	0.000092	=		0	x	0.000092	=
B224BI	0	x	0.000092	=		0	x	0.000092	=
5. Accessory Modules									
5860	0	x	0.020000	=		0	x	0.025000	=
5860R	1	x	0.020000	=	0.020000	1	x	0.025000	=
5824	0	x	0.045000	=		0	x	0.045000	=
5496	0	x	0.010000	=		0	x	0.010000	=
5865-4	0	x	0.035000	=		0	x	0.145000	=
5865-3	0	x	0.035000	=		0	x	0.145000	=
5880	1	x	0.035000	=	0.035000	1	x	0.200000	=
5883	1	x	0.000000	=	0.000000	1	x	0.220000	=
SK-IP-2	0	x	0.093000	=		0	x	0.136000	=
SK-IP-2UD	0	x	0.098000	=		0	x	0.155000	=
6. Miscellaneous Devices									
Conventional Detectors	1	x	0.120000	=	0.120000	1	x	0.220000	=
SK-CO1224T	5	x	0.000020	=	0.000100	5	x	0.000040	=
Miscellaneous Device 2	0	x	0.000000	=		0	x	0.000000	=
Miscellaneous Device 3	0	x	0.000000	=		0	x	0.000000	=
Miscellaneous Device 4	0	x	0.000000	=		0	x	0.000000	=
Miscellaneous Device 5	0	x	0.000000	=		0	x	0.000000	=
6. Notification Appliance Circuits									

NAC 1		1	x	2.266000	=	
NAC 2		1	x	0.909000	=	
NAC 3		0	x	0.000000	=	
NAC 4		0	x	0.000000	=	
	Total Standby Load	**0.357295**		**Total Alarm Load**		

on
ent (amps) Total
0.325000
0.006480
0.001080
0.000375
0.001875
0.001125
0.000750
0.000510
0.025000
0.200000
0.220000
0.220000
0.000200

2.266000
0.909000
4.177395

SILENT KNIGHT
by Honeywell

IntelliKnight 5808 Battery Calculati

Note 1: You are fully responsible for verifying these calculations.
Note 2: Use the dropdowns in the **yellow** cells to enter values.

Calculation in Total Sheet

		Required Standby Tim		
		24 Hours		
Standby Load Current	**0.35729 Amps**	x	24	=
		Required Alarm Time		
		5 Minutes		
Alarm Load Current (Amps)	**4.17740 Amps**	x	0.084	=
			Total Current Load	
	Multiply by the Derating Factor		1.2	=
			Total Ampere Hours Required	

Recommended Batteries:	6914 - 18AH Batt

Battery Check
The batteries can be charged by the 5808 Charger.
The batteries can be housed in the 5808 Cabinet.

Current Draw Check
NAC#1 current is within the limitations of the circuit.
NAC#2 current is within the limitations of the circuit.
NAC#3 current is within the limitations of the circuit.
NAC#4 current is within the limitations of the circuit.
5808 Control Panel:
The output current is within the panel's limitations.

on
ıe in Hours
8.575 AH
in Minutes
0.351 AH
8.926 AH
x 1.20
10.71 AH
teries

Protection One Branch 11660
10 Manual Drive, Portland, ME 04103 PH# 1-800-310-5011

System Outputs: Control Unit Annunciation | Notification | Safety Control | Supplementary

System Inputs	Actuate common alarm signal indicator	Actuate audible alarm system	Actuate common supervisory signal indicator	Actuate audible supervisory signal	Actuate common trouble signal indicator	Actuate audible common alarm signal indicator	ACTUATE IN LOCAL SOUNDER ON DETECTOR			Actuate Lower floor evacuation signals	Actuate 1st floor evacuation signals	Actuate Upper floor evacuation signals			Transmit fire alarm signal to supervising station	Transmit supervisory signal to supervising	Transmit trouble signal to supervising station	TRANSMIT CO ALARM SIGNAL TO CENTRAL STATION
System Pull Stations	X					x					X	x		x	X			
System Smoke Detectors	x	x				x				x	x	x		x	x			
System Heat Detectors	X	X				x				X	X	X		x	X			
Sprinkler Water Flow	x	x				x				x	x	x		x	x			
Sprinkler Gate Valve Tamper			x	x												x		
Supervised CO detectors	x						X											x
FACP AC Loss					X												x	
FACP Low Battery					X												x	
FACP Ground Fault					X												x	
Phone Line #1 Fail					X												x	
Phone Line #2 Fail					X												x	

Goodwill
79 High Street
Portland, Maine 04103

www.ProtectionOne.com

Your World Is Worth Protecting®

NARRATIVE REPORT

INSTALLATION OF

AUTOMATIC FIRE DETECTION SYSTEM AT:

79 High Street
Portland, ME.

PREPARED BY:

C. SCOTT DANA, S.E.T.

Protection One Alarm monitoring, Inc.

Scott Dana
NICET IV
381 University Ave
Westwood, MA 02090
Telephone 508-922-9572
Fax 508-590-2433

www.ProtectionOne.com

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Fax 508-590-2433

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SCOPE OF WORK

Provide and install a new fire alarm system.

BUILDING DESCRIPTION

Approximately 8,000 sq. feet. Three stories above grade. One basement level. The construction is wood frame. The building serves as residential mixed use. Board and Care, Apartments, Lodging and Rooming.

APPLICABLE LAWS

The proposed fire alarm system meets
Portland City Codes and Maine State Codes to the best of my understanding
MRS 25 2464 sub 3
NFPA 72 2010
ADA
NFPA 101
Existing Single station smoke and CO detectors are noted on the plans. The owner will be advised of any need or requirement to add or change detectors. P-1 will gladly inspect the work by others.
Supervised (monitored) CO detectors will be installed as indicated on the plans. These devices will be monitored and the signals handled by P-1 according to NFPA 720 (2009).

FIRE PROTECTION SYSTEMS TO BE INSTALLED

The SILENT KNIGHT 5808 fire alarm control panel will be installed. A complete compilation of manufacturer's literature is included with this narrative.

There is one elevator. It will be recalled in the same manner that is existing

The building is sprinklered. Water flow and tamper switches will be supervised

The fire alarm system will provide protection of the entire building as specified by applicable codes. All devices and their installation will conform to all applicable codes such as NFPA 72, 101, and NEC.

The system is designed to notify all building occupants via the use of strategically placed (NFPA72) horns and horn/strobe units in all common areas and sleeping rooms.

Handicap-Accessible Sleeping areas will have 177Cd strobes in an effort to comply with NFPA 72 (2010) 18.5.4.6.2 and A 18.5.4.6.2

Scott Dana
NICET IV
381 University Ave
Westwood, MA 02090
Telephone 508-922-9572
Fax 508-590-2433

The following WILL apply under another scope of work:

Single- or multiple-station smoke alarms shall be installed and maintained by others in all of the following locations: 1. On the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms. 2. In each room used for sleeping purposes. 3. each story within a dwelling unit, including basements

These devices are not shown on the low-voltage fire alarm 'system' plan. They ARE, however installed already. These devices can be inspected by the Inspector during the final test of the fire alarm.

Evacuation will be via front and rear stairs and emergency exits.

SEQUENCE OF OPERATION

The fire alarm control panel will signal three types of alarms: Fire alarms (either manually or automatically actuated) shall sound all audible and visual notification devices. Fire Trouble and Fire supervisory signals will sound a tone and a light on the panel.

All signals will be monitored by P-1. PFD will be notified of Fire Alarms. The customer will be notified of Fire trouble and Fire Supervisory signals.

The AES master box will send signals to PFD as instructed

Elevator recall will be activated as it exists

Upon entry to the building, firefighters will find the Fire Alarm Annunciator panel, which will lead them to the zone/device that tripped the alarm.

Scott Dana
NICET IV
381 University Ave
Westwood, MA 02090
Telephone 508-922-9572
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www.ProtectionOne.com

TESTING CRITERIA

Protection One will perform a complete system pre-test prior to the lead installer (the professional in charge of the test) arranging for and scheduling the final acceptance test with an inspector from the Portland Fire Department.

Protection One will have two technicians and all necessary equipment available with the lead technician to perform a complete test of the system as well as the individual tests of devices.

The building owner will have contracted with Protection One to perform required tests of the FACP and tests of each device as specified by NFPA72. The results of these tests will be furnished to the Portland Fire Department. The building owner will also contract with Protection One for ongoing maintenance of the entire fire alarm system. This means that any devices or components found to be defective during Protection One's periodic inspections (or any other time) will be automatically repaired or replaced by Protection One.

Upon successful completion of the acceptance test, Protection One will furnish the inspector with any and all documentation that has not already been supplied. Most importantly, Protection One's commitment as the monitoring, testing, and maintenance entity of record.

SUMMARY AND CONCLUSION

I take my position and responsibilities in situations such as the design, specification, and installation of fire alarm systems very seriously. This is more than a sale for me. If there is anything I left out of this narrative, please let me know as soon as possible. My responsibility to my client is to make the approval process go as smoothly as possible. I will endeavor to do everything I can to fulfill all requests for information.

The equipment used and the procedures for installation by Protection One are the finest available. Protection One's Customer Monitoring Centers and service department are the best in the world. Our commitment to service excellence before, during, and after the installation are unrivaled.

In short, we'll be there when you need us. Please feel free to contact me at 508-922-9572 with any requests, questions, or comments.

Sincerely,

C. Scott Dana, SET

Scott Dana
NICET IV
381 University Ave
Westwood, MA 02090
Telephone 508-922-9572
Fax 508-590-2433

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Westwood, MA 02090
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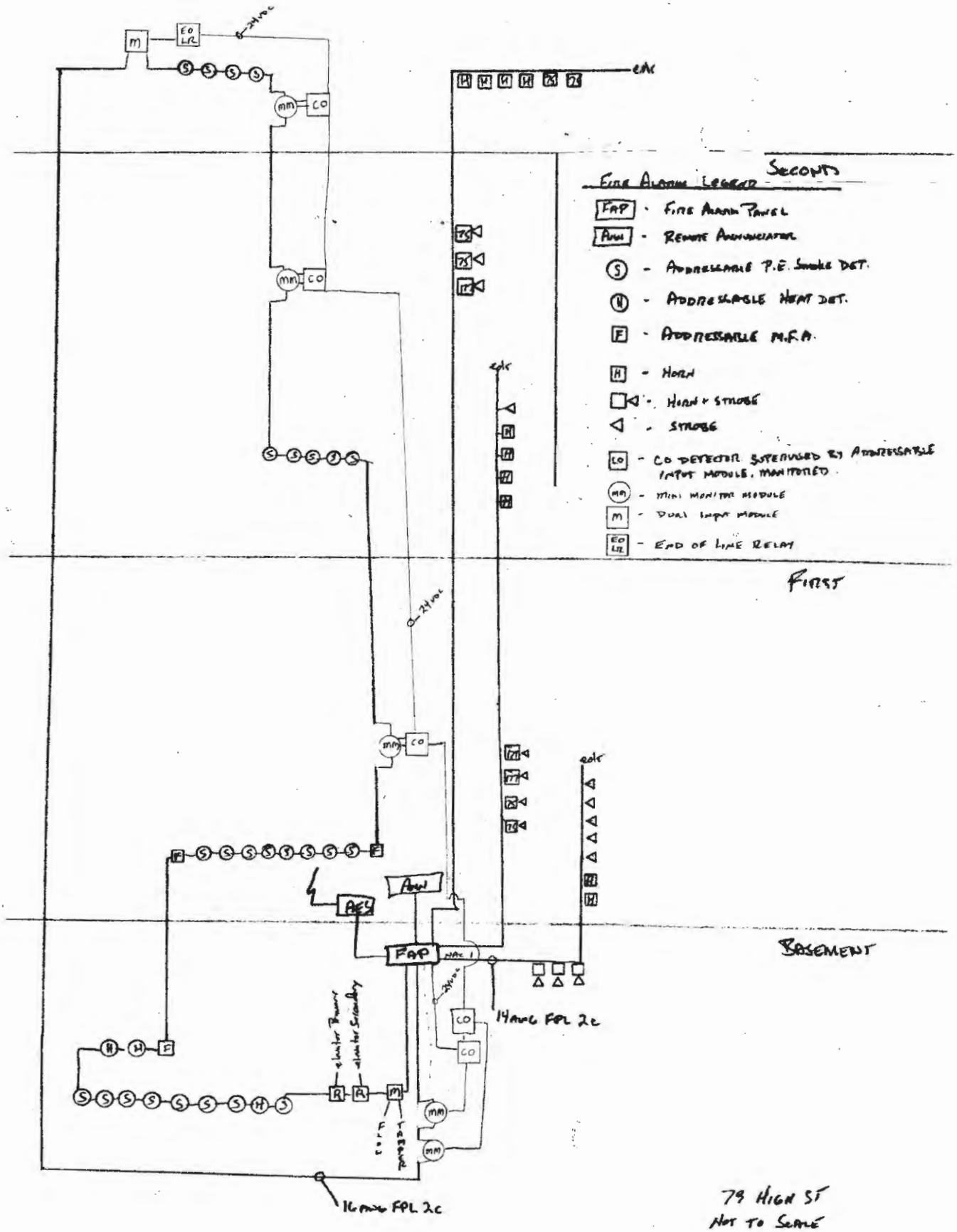
THIRD



79 HIGH ST
NOT TO SCALE

R-6
hist2.

2011 12 2939 G-G

Fire Alarm Permit

If you or the property owner owes real estate or property taxes or user charges on any property within the city, payment arrangements must be made before permits of any kind are accepted.

RECEIVED
DEC 16
Dept. of Building Inspections
City of Portland Maine

Installation address: 71 29 HIGH ST CBL: 040 A001

Exact location: (within structure) BM, 1st, 2nd, 3rd FLOORS

Type of occupancy(s) (NFPA & ICC): MIXED RESIDENTIAL

Building owner: GOODWILL

Must be

System Designer (point of contact): SCOTT DANA

Designer phone: 508-922-9572 E-mail: Scottdana@protectionone.com

Installing contractor: _____ Certificate of Fitness No: _____

Contractor phone: _____ E-mail: _____

This is a new application: YES ⊗ NO ○ New AES Master Box: YES ⊗ NO ○
(Include Master Box approval form)

Amendment to an existing permit: YES ○ NO ⊗ Permit no: _____

The following documents shall be provided with this application:

- [X] Floor plans
- [X] Wiring diagram
- [X] Annunciator details
- [ ] Input/ Output Matrix
- [X] Equipment data sheets
- [ ] Electrical Permit Pulled (check alarm/com)
- [X] Scope of Work
- [X] 11 ½ x 17s
- [X] pdf copy (may be e-mailed)
- [X] Designer qualifications
- [X] Battery/ voltage drop calcs

Master box approval only: YES ○ NO ○
(If yes check *New AES Master Box* above)

COST OF WORK: $37,500.

PERMIT FEE: 400.00
($10 PER $1,000 + $30 FOR THE FIRST $1,000)

Protection One
10 Manuel Drive
Portland, ME 04103

The designer shall be the responsible party for this application. Download a new copy of this application at www.portlandmaine.gov/fire for every submittal. Submit all plans in electronic PDF in addition to readable 11 ½ x 17s to the Building Inspections Department, 389 Congress Street, Room 315, Portland, Maine 04101.

Prior to acceptance of any fire alarm system, a complete commissioning and acceptance test must be coordinated with all fire system contractors and the Fire Department, and proper documentation of such test(s) provided.

All installation(s) must comply with the *City of Portland Technical Standard for Signaling Systems for the Protection of Life and Property*, available at www.portlandmaine.gov/fire .

Applicant signature: _____ Date: 12-8-11

NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES®

Providing Certification Programs Since 1961

BE IT KNOWN THAT

Charles S Dana

IS HEREBY AWARDED CERTIFICATION AT

LEVEL IV

IN FIRE PROTECTION ENGINEERING TECHNOLOGY
FIRE ALARM SYSTEMS

BASED UPON SUCCESSFUL DEMONSTRATION OF REQUISITE KNOWLEDGE, EXPERIENCE AND WORK PERFORMANCE AS SET FORTH BY THIS INSTITUTE.

Certification Valid through June 1, 2012

CERTIFICATION NUMBER 116620

Arthur B DeVoe

CHAIRMAN OF THE NICET BOARD OF GOVERNORS

A DIVISION OF THE NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

www.ProtectionOne.com

NARRATIVE REPORT

INSTALLATION OF

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NFPA 72
Existing Single station smoke and CO detectors are noted on the plans. The owner will be advised of any need or requirement to add or change detectors. P-1 will gladly inspect the work by others.
Supervised (monitored) CO detectors will be installed in the basement (the source of possible CO). These devices will be monitored and the signals handled by P-1 according to NFPA 720.

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SEQUENCE OF OPERATION

The fire alarm control panel will signal three types of alarms: Fire alarms (either manually or automatically actuated) shall sound all audible and visual notification devices. Fire Trouble and Fire supervisory signals will sound a tone and a light on the panel.

All signals will be monitored by P-1. PFD will be notified of Fire Alarms. The customer will be notified of Fire trouble and Fire Supervisory signals.

The AES master box will send signals to PFD as instructed

Elevator recall will be activated as it exists

Upon entry to the building, firefighters will find the Fire Alarm Annunciator panel, which will lead them to the zone/device that tripped the alarm.

Scott Dana
NICET IV
381 University Ave
Westwood, MA 02090
Telephone 508-922-9572
Fax 508-590-2433

TESTING CRITERIA

Protection One will perform a complete system pre-test prior to the lead installer (the professional in charge of the test) arranging for and scheduling the final acceptance test with an inspector from the Portland Fire Department.

Protection One will have two technicians and all necessary equipment available with the lead technician to perform a complete test of the system as well as the individual tests of devices.

The building owner will have contracted with Protection One to perform required tests of the FACP and tests of each device as specified by NFPA72. The results of these tests will be furnished to the Portland Fire Department. The building owner will also contract with Protection One for ongoing maintenance of the entire fire alarm system. This means that any devices or components found to be defective during Protection One's periodic inspections (or any other time) will be automatically repaired or replaced by Protection One.

Upon successful completion of the acceptance test, Protection One will furnish the inspector with any and all documentation that has not already been supplied. Most importantly, Protection One's commitment as the monitoring, testing, and maintenance entity of record.

SUMMARY AND CONCLUSION

I take my position and responsibilities in situations such as the design, specification, and installation of fire alarm systems very seriously. This is more than a sale for me. If there is anything I left out of this narrative, please let me know as soon as possible. My responsibility to my client is to make the approval process go as smoothly as possible. I will endeavor to do everything I can to fulfill all requests for information.

The equipment used and the procedures for installation by Protection One are the finest available. Protection One's Customer Monitoring Centers and service department are the best in the world. Our commitment to service excellence before, during, and after the installation are unrivaled.

In short, we'll be there when you need us. Please feel free to contact me at 508-922-9572 with any requests, questions, or comments.

Sincerely,

C. Scott Dana, SET

Scott Dana
NICET IV
381 University Ave
Westwood, MA 02090
Telephone 508-922-9572
Fax 508-590-2433

www.ProtectionOne.com

Your World Is Worth Protecting®

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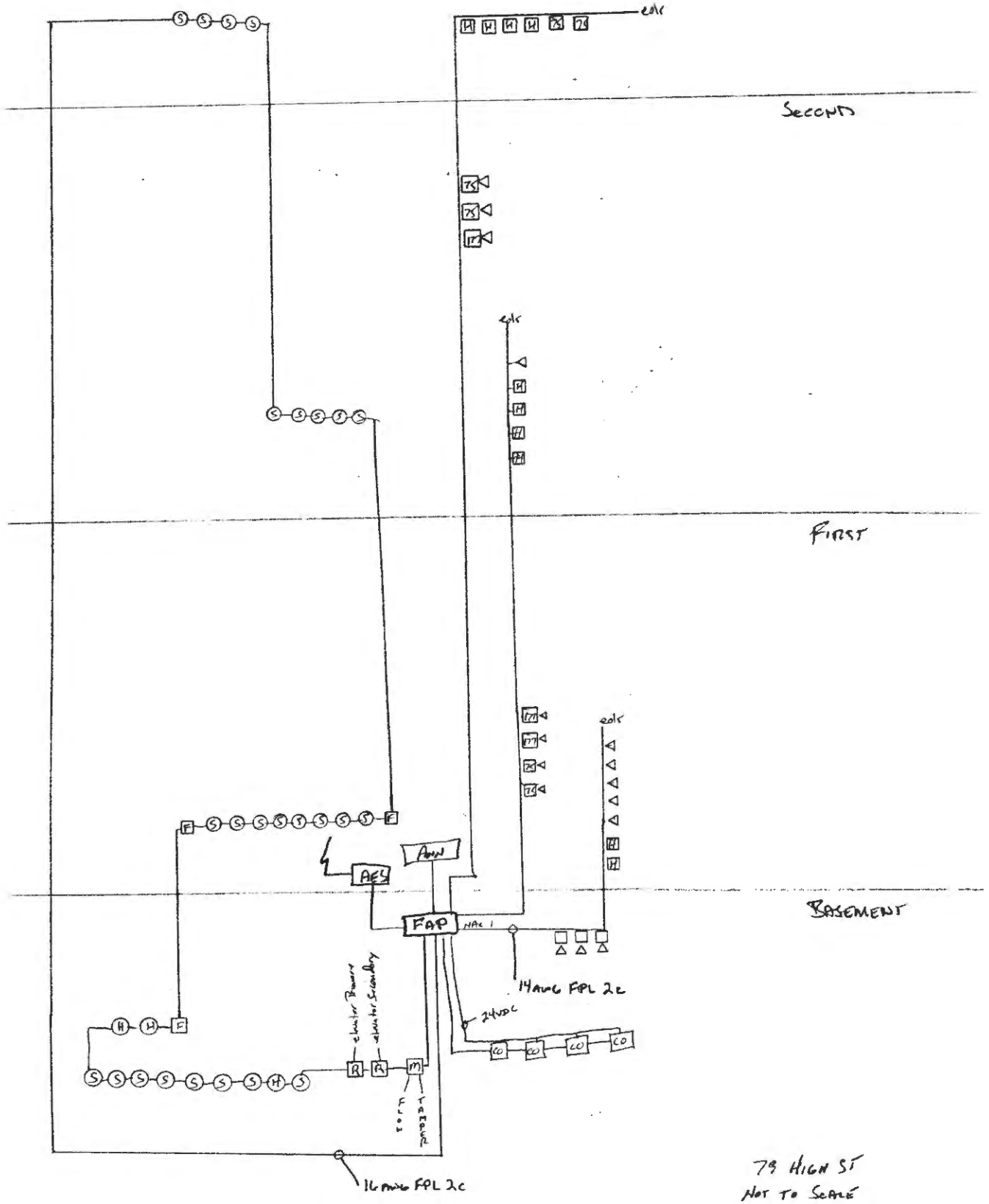
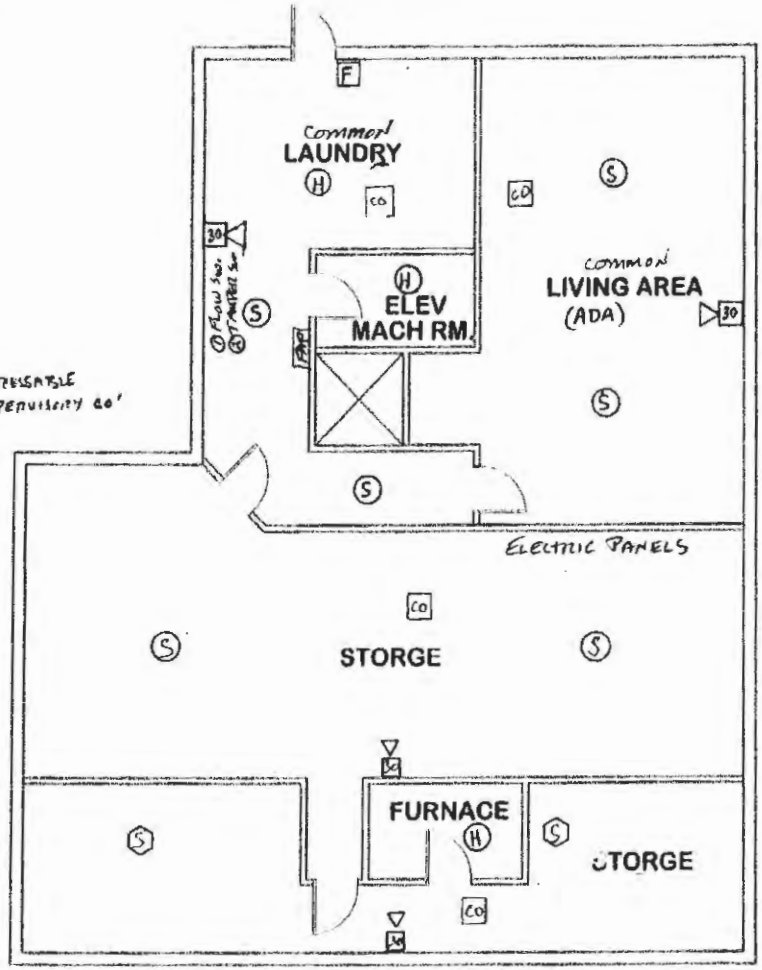


79 HIGH ST
NOT TO SCALE

Fire Alarm Legend

- FAP - Fire Alarm Panel
- FAN - Remote Annunciator
- (S) - Addressable P.E Smoke Det.
- (H) - Addressable Heat Det.
- [F] - Addressable M.F.A.
- [H] - Horn
- [H]◁ - Horn + Strobe
- ◁ - Strobe
- [CO] - CO Detector supervised by Addressable input module, monitored as "supervisory CO"
- Existing 120VAC devices not supervised by FACT
- (CO) - CO Detector
- (SS) - Single Station Smoke Detector



BASEMENT

Fire Alarm Plan
By. C. Scott Dana SET
Protection One, Inc.

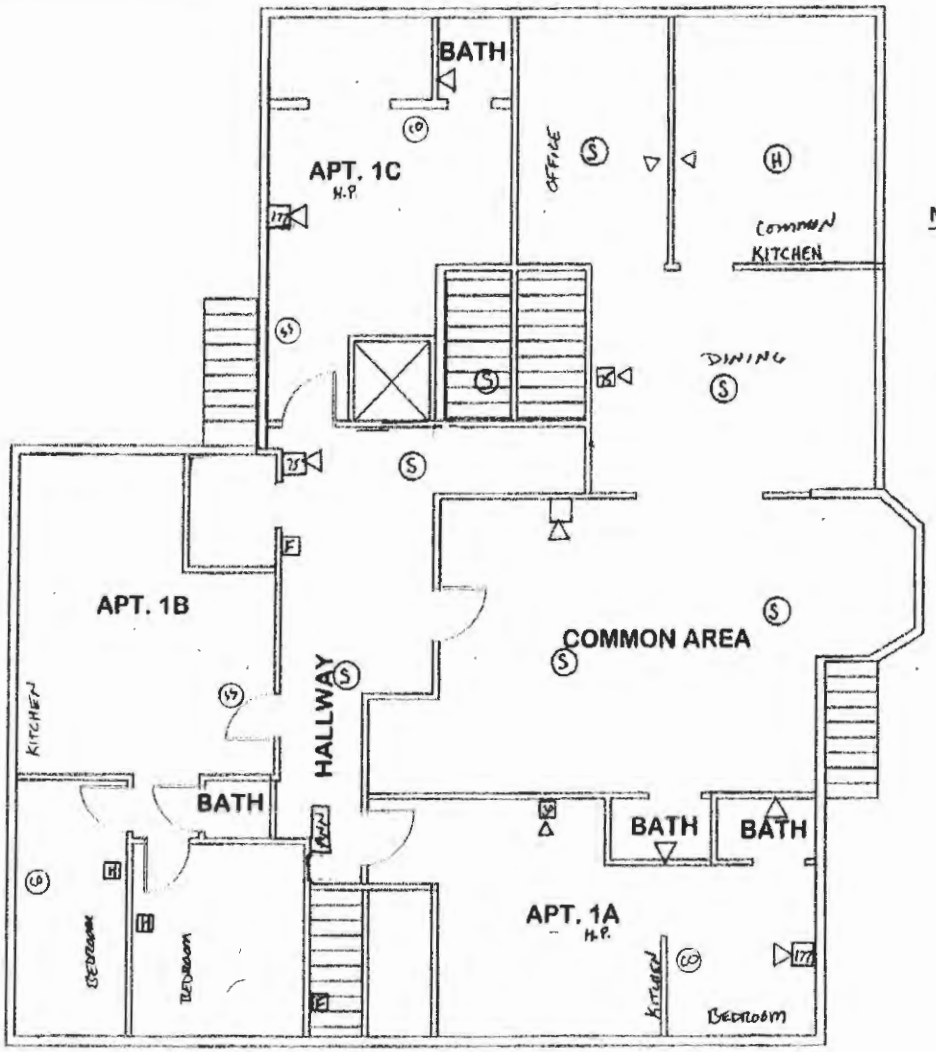
NOTE:

PROPERTY OF

FMC
THE AEC RESOURCE

79 HIGH ST.
PORTLAND ME.

Z:	
L:	
REVS:	
CODE:	
TOWN: PORTLAND	
DATE: 10-27-11	
SCALE: 1/4"=1'-0"	
DESIGNED: FMC	
DRAWN: BSA	
TITLE: BASEMENT LEVEL	
FILE:	
SHEET: MAP 3	



HIGH ST.

FIRST FLOOR

Notes:

Ceiling height is 10½ ft.

Apts 1A + 1C are ADA

Common area is ADA

3 dr.

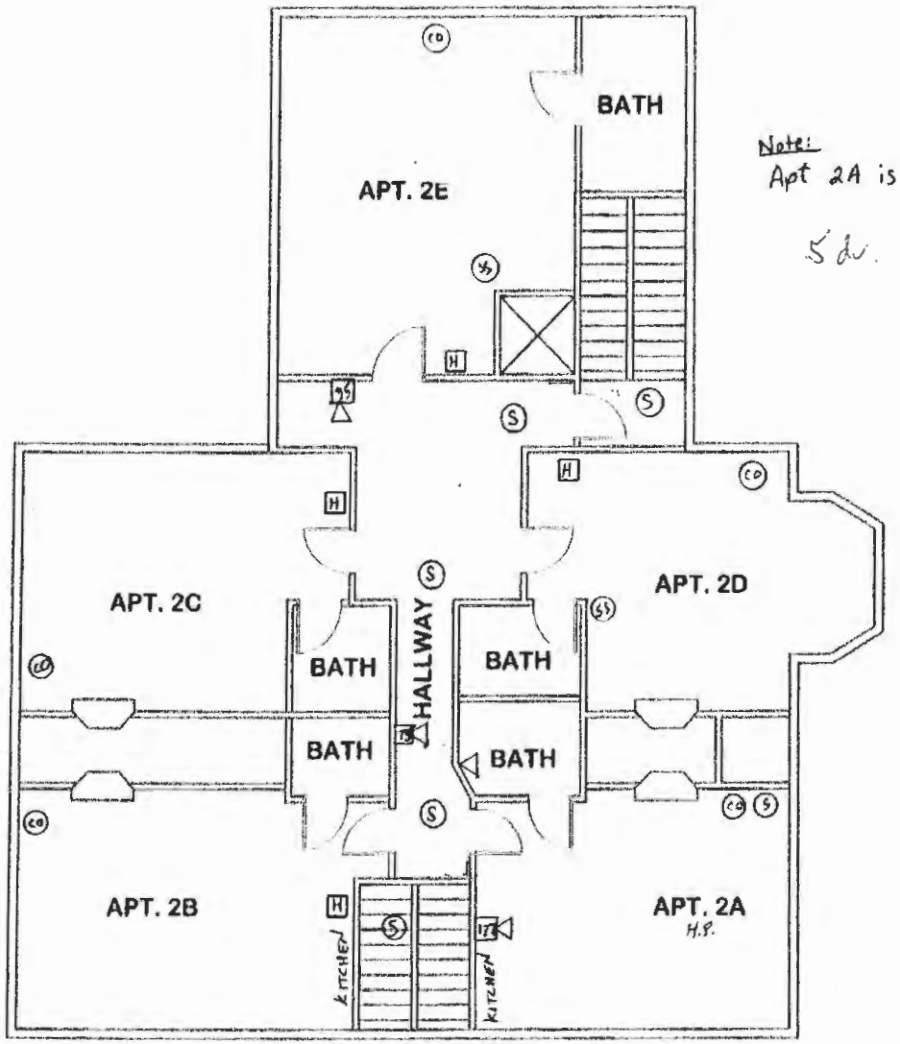
NOTE:

PROPERTY OF

FMC THE ARC RESOURCE

79 HIGH ST.
PORTLAND ME.

2.	
1.	
REVS:	
CODE:	
TOWN: PORTLAND	
DATE: 10-27-11	
SCALE: 1/4"=1'-0"	
DESIGNED: FMC	
DRAWN: BSA	
TITLE: First Floor Plan	
FILE:	
SHEET: MAP 1	



Note:
Apt 2A is ADA

5 dv.

SECOND FLOOR

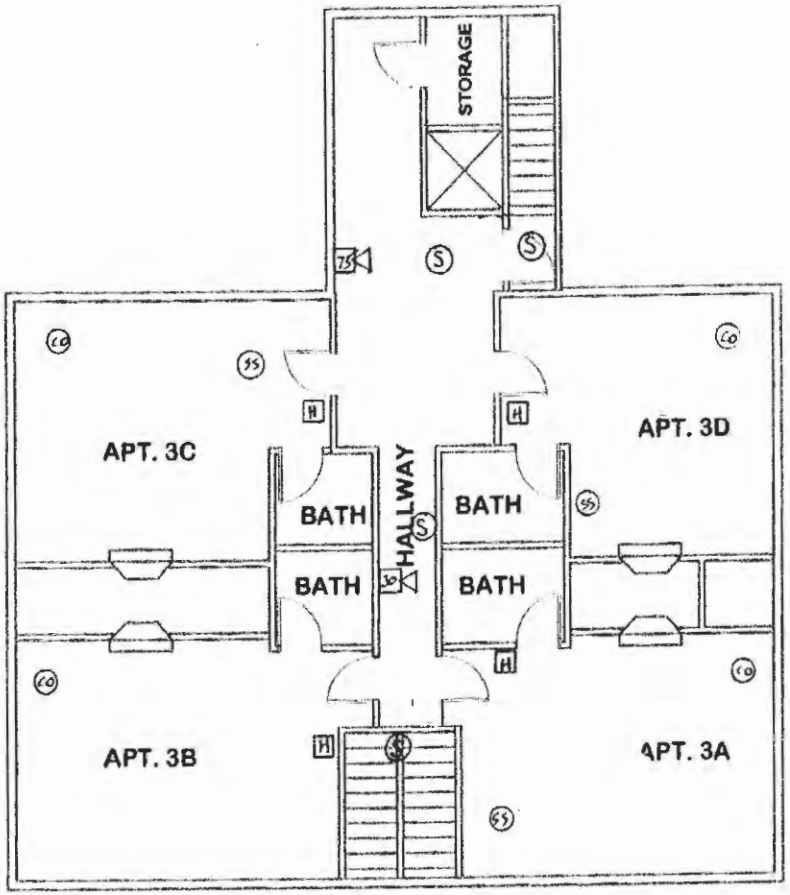
NOTE:

PROPERTY OF

FMC THE AEC RESOURCE

79 HIGH ST.
PORTLAND ME

2.	
1.	
REVS:	
CODE:	
TOWN: PORTLAND	
DATE: 10-27-11	
SCALE: 1/4"=1'-0"	
DESIGNED: FMC	
DRAWN: SSA	
TITLE: SECOND FLOOR	
FILE:	
SHEET: MAP 2	



THIRD FLOOR

NOTE:

PROPERTY OF

FMC THE AEC RESOURCE

79 HIGH ST.
PORTLAND ME.

2.	
1.	
REVS:	
CODE:	
TOWN: PORTLAND	
DATE: 10-27-11	
SCALE: 1/4"=1'-0"	
DESIGNED: FMC	
DRAWN: BSA	
TITLE: THIRD FLOOR	
FILE:	
SHEET: MAP 3	

Protection One Branch 11660

10 Manual Drive, Portland, ME 04103 PH# 1-800-310-5011

System Outputs: Control Unit Annunciation | Notification | Safety Control | Supplementary

System Inputs	Actuate common alarm signal indicator	Actuate audible alarm system	Actuate common supervisory signal indicator	Actuate audible supervisory signal	Actuate common trouble signal indicator	Actuate audible common alarm signal indicator				Actuate Lower floor evacuation signals	Actuate 1st flooor evacuation signals	Actuate Upper floor evacuation signals		ACTIVATE RADIO BOX TO BFD	Transmit fire alarm signal to supervising station	Transmit supervisory signal to supervising station	Transmit trouble signal to supervising station	TRANSMIT SUPERVISORY CO TO CS	Safety Control	Supplementary
System Pull Stations	X					x					X	x		x	X					
System Smoke Detectors	x	x				x				x	x	x		x	x					
System Heat Detectors	X	X				x				X	X	X		x	X					
Sprinkler Water Flow	x	x				x				x	x	x		x	x					
Sprinkler Gate Valve Tamper			x	x												x				
Supervised CO detectors			x															x		
FACP AC Loss					X												x			
FACP Low Battery					X												x			
FACP Ground Fault					X												x			
Phone Line #1 Fail					X												x			
Phone Line #2 Fail					X												x			
Goodwill																				
79 High Street																				
Portland, Maine 04103																				

SILENT KNIGHT
by Honeywell

IntelliKnight 5808 Battery Calculation

Secondary Power Source Requirements

Device Type	Standby Current (amps) Qty		Current Draw		Total	Secondary Alarm Current (amps) Qty		Current Draw		Total
1. Control Panel										
5808 Control Panel	1	x	0.170000	=	0.170000	1	x	0.325000	=	0.325000
2. Addressable SLC Devices										
SK-PHOTO	24	x	0.000270	=	0.006480	24	x	0.000270	=	0.006480
SK-PHOTO-T	0	x	0.000270	=		0	x	0.000270	=	
SK-ION	0	x	0.000270	=		0	x	0.000270	=	
SK-HEAT	4	x	0.000270	=	0.001080	4	x	0.000270	=	0.001080
SK-HEAT-HT	0	x	0.000270	=		0	x	0.000270	=	
SK-HEAT-ROR	0	x	0.000300	=		0	x	0.000300	=	
SK-BEAM	0	x	0.002000	=		0	x	0.002000	=	
SK-BEAM-T	0	x	0.002000	=		0	x	0.002000	=	
SK-DUCT	0	x	0.000270	=		0	x	0.000270	=	
SK-ACCLIMATE	0	x	0.000300	=		0	x	0.000300	=	
SK-CONTROL	4	x	0.000375	=	0.001500	4	x	0.000375	=	0.001500
SK-MONITOR	0	x	0.000375	=		0	x	0.000375	=	
SK-MINIMON	0	x	0.000375	=		0	x	0.000375	=	
SK-PULL-SA	0	x	0.000375	=		0	x	0.000375	=	
SK-PULL-DA	3	x	0.000375	=	0.001125	3	x	0.000375	=	0.001125
SK-MONITOR-2	1	x	0.000750	=	0.000750	1	x	0.000750	=	0.000750
SK-MON-10	0	x	0.003500	=		0	x	0.003500	=	
SK-RELAY-6	0	x	0.001450	=		0	x	0.001450	=	
SK-CONTROL-6	0	x	0.002250	=		0	x	0.002250	=	
SK-RELAY	0	x	0.000255	=		0	x	0.000255	=	
SK-ZONE	0	x	0.000270	=		0	x	0.000270	=	
SK-ZONE-6	0	x	0.002000	=		0	x	0.002000	=	
3. SLC Accessory Bases										
B200SR	0	x	0.000500	=		0	x	0.000500	=	
B224RB	0	x	0.000500	=		0	x	0.000500	=	
RTS151	0	x	0.000000	=		0	x	0.007500	=	
RTS151KEY	0	x	0.000000	=		0	x	0.007500	=	
RA100Z	0	x	0.000000	=		0	x	0.010000	=	
4. SLC Isolator Devices										
SK-ISO	0	x	0.000092	=		0	x	0.000092	=	
B224BI	0	x	0.000092	=		0	x	0.000092	=	
5. Accessory Modules										
5860	0	x	0.020000	=		0	x	0.025000	=	
5860R	1	x	0.020000	=	0.020000	1	x	0.025000	=	0.025000
5824	0	x	0.045000	=		0	x	0.045000	=	
5496	0	x	0.010000	=		0	x	0.010000	=	
5865-4	0	x	0.035000	=		0	x	0.145000	=	
5865-3	0	x	0.035000	=		0	x	0.145000	=	
5880	0	x	0.035000	=		0	x	0.200000	=	
5883	0	x	0.000000	=		0	x	0.220000	=	
SK-IP-2	0	x	0.093000	=		0	x	0.136000	=	
SK-IP-2UD	0	x	0.098000	=		0	x	0.155000	=	
6. Miscellaneous Devices										
Conventional Detectors	0	x	0.000000	=		0	x	0.000000	=	
Miscellaneous Device 1	0	x	0.000000	=		0	x	0.000000	=	
Miscellaneous Device 2	0	x	0.000000	=		0	x	0.000000	=	
Miscellaneous Device 3	0	x	0.000000	=		0	x	0.000000	=	
Miscellaneous Device 4	0	x	0.000000	=		0	x	0.000000	=	
Miscellaneous Device 5	0	x	0.000000	=		0	x	0.000000	=	
6. Notification Appliance Circuits										
NAC 1						1	x	1.254000	=	1.254000
NAC 2						1	x	1.760000	=	1.760000
NAC 3						1	x	0.909000	=	0.909000
NAC 4						0	x	0.000000	=	
			Total Standby Load		0.200935			**Total Alarm Load**		4.283935

SILENT KNIGHT
by Honeywell

IntelliKnight 5808 Battery Calculation

Note 1: You are fully responsible for verifying these calculations.
Note 2: Use the dropdowns in the **yellow** cells to enter values.

Calculation in Total Sheet

		Required Standby Time in Hours			
			24 Hours		
Standby Load Current	**0.20094 Amps**	x	24	=	4.822 AH
		Required Alarm Time in Minutes			
			5 Minutes		
Alarm Load Current (Amps)	**4.28393 Amps**	x	0.084	=	0.360 AH
			Total Current Load		**5.182 AH**
	Multiply by the Derating Factor		1.2	=	x 1.20
			Total Ampere Hours Required		**6.22 AH**

Recommended Batteries:	**6712 - 7AH Batteries**

Battery Check
The batteries can be charged by the 5808 Charger.
The batteries can be housed in the 5808 Cabinet.

Current Draw Check
NAC#1 current is within the limitations of the circuit.
NAC#2 current is within the limitations of the circuit.
NAC#3 current is within the limitations of the circuit.
NAC#4 current is within the limitations of the circuit.
5808 Control Panel: The output current is within the panel's limitations.

SILENT KNIGHT
by Honeywell

IntelliKnight 5808 Battery Calculation

Secondary Power Source Requirements

Device Type	Standby Current (amps) Qty		Current Draw		Total	Secondary Alarm Current (amps) Qty		Current Draw		Total
1. Control Panel										
5808 Control Panel	1	x	0.170000	=	0.170000	1	x	0.325000	=	0.325000
2. Addressable SLC Devices										
SK-PHOTO	24	x	0.000270	=	0.006480	24	x	0.000270	=	0.006480
SK-PHOTO-T	0	x	0.000270	=		0	x	0.000270	=	
SK-ION	0	x	0.000270	=		0	x	0.000270	=	
SK-HEAT	4	x	0.000270	=	0.001080	4	x	0.000270	=	0.001080
SK-HEAT-HT	0	x	0.000270	=		0	x	0.000270	=	
SK-HEAT-ROR	0	x	0.000300	=		0	x	0.000300	=	
SK-BEAM	0	x	0.002000	=		0	x	0.002000	=	
SK-BEAM-T	0	x	0.002000	=		0	x	0.002000	=	
SK-DUCT	0	x	0.000270	=		0	x	0.000270	=	
SK-ACCLIMATE	0	x	0.000300	=		0	x	0.000300	=	
SK-CONTROL	4	x	0.000375	=	0.001500	4	x	0.000375	=	0.001500
SK-MONITOR	0	x	0.000375	=		0	x	0.000375	=	
SK-MINIMON	0	x	0.000375	=		0	x	0.000375	=	
SK-PULL-SA	0	x	0.000375	=		0	x	0.000375	=	
SK-PULL-DA	3	x	0.000375	=	0.001125	3	x	0.000375	=	0.001125
SK-MONITOR-2	1	x	0.000750	=	0.000750	1	x	0.000750	=	0.000750
SK-MON-10	0	x	0.003500	=		0	x	0.003500	=	
SK-RELAY-6	0	x	0.001450	=		0	x	0.001450	=	
SK-CONTROL-6	0	x	0.002250	=		0	x	0.002250	=	
SK-RELAY	0	x	0.000255	=		0	x	0.000255	=	
SK-ZONE	0	x	0.000270	=		0	x	0.000270	=	
SK-ZONE-6	0	x	0.002000	=		0	x	0.002000	=	
3. SLC Accessory Bases										
B200SR	0	x	0.000500	=		0	x	0.000500	=	
B224RB	0	x	0.000500	=		0	x	0.000500	=	
RTS151	0	x	0.000000	=		0	x	0.007500	=	
RTS151KEY	0	x	0.000000	=		0	x	0.007500	=	
RA100Z	0	x	0.000000	=		0	x	0.010000	=	
4. SLC Isolator Devices										
SK-ISO	0	x	0.000092	=		0	x	0.000092	=	
B224BI	0	x	0.000092	=		0	x	0.000092	=	
5. Accessory Modules										
5860	0	x	0.020000	=		0	x	0.025000	=	
5860R	1	x	0.020000	=	0.020000	1	x	0.025000	=	0.025000
5824	0	x	0.045000	=		0	x	0.045000	=	
5496	0	x	0.010000	=		0	x	0.010000	=	
5865-4	0	x	0.035000	=		0	x	0.145000	=	
5865-3	0	x	0.035000	=		0	x	0.145000	=	
5880	0	x	0.035000	=		0	x	0.200000	=	
5883	0	x	0.000000	=		0	x	0.220000	=	
SK-IP-2	0	x	0.093000	=		0	x	0.136000	=	
SK-IP-2UD	0	x	0.098000	=		0	x	0.155000	=	
6. Miscellaneous Devices										
Conventional Detectors	0	x	0.000000	=		0	x	0.000000	=	
Miscellaneous Device 1	0	x	0.000000	=		0	x	0.000000	=	
Miscellaneous Device 2	0	x	0.000000	=		0	x	0.000000	=	
Miscellaneous Device 3	0	x	0.000000	=		0	x	0.000000	=	
Miscellaneous Device 4	0	x	0.000000	=		0	x	0.000000	=	
Miscellaneous Device 5	0	x	0.000000	=		0	x	0.000000	=	
6. Notification Appliance Circuits										
NAC 1						1	x	1.254000	=	1.254000
NAC 2						1	x	1.760000	=	1.760000
NAC 3						1	x	0.909000	=	0.909000
NAC 4						0	x	0.000000	=	
			Total Standby Load		0.200935			**Total Alarm Load**		4.283935

SILENT KNIGHT by Honeywell

IntelliKnight 5808 Battery Calculation

Note 1: You are fully responsible for verifying these calculations.

Note 2: Use the dropdowns in the **yellow** cells to enter values.

Calculation in Total Sheet

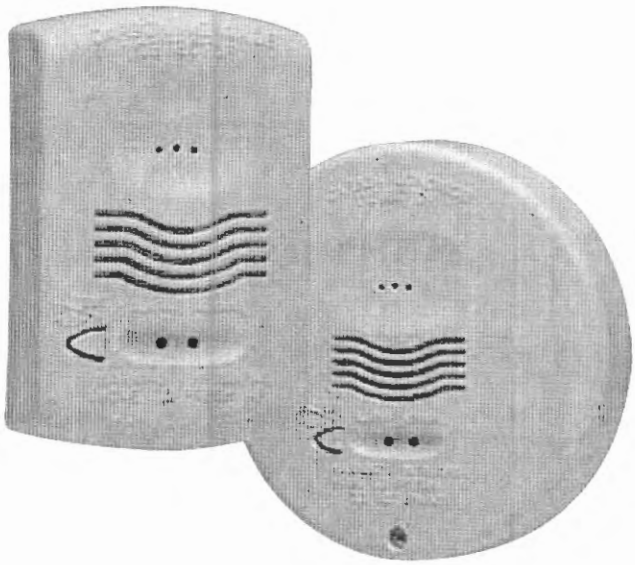
		Required Standby Time in Hours			
		24 Hours			
Standby Load Current	**0.20094 Amps**	x	24	=	4.822 AH
		Required Alarm Time in Minutes			
		5 Minutes			
Alarm Load Current (Amps)	**4.28393 Amps**	x	0.084	=	0.360 AH
				Total Current Load	**5.182 AH**
			Multiply by the Derating Factor	=	x 1.20
				Total Ampere Hours Required	**6.22 AH**

Recommended Batteries:	**6712 - 7AH Batteries**

Battery Check
The batteries can be charged by the 5808 Charger.
The batteries can be housed in the 5808 Cabinet.

Current Draw Check
NAC#1 current is within the limitations of the circuit.
NAC#2 current is within the limitations of the circuit.
NAC#3 current is within the limitations of the circuit.
NAC#4 current is within the limitations of the circuit.
5808 Control Panel: The output current is within the panel's limitations.

CO1224T and CO1224TR Carbon Monoxide Detectors
with RealTest® Technology



The System Sensor CO1224T and CO1224TR (round) Carbon Monoxide (CO) Detectors use a highly accurate and reliable electrochemical sensing cell to provide early warning of dangerous CO levels.

Features

- RealTest® enables a functional test using canned CO
- Full compliance with UL 2075
- A code-required trouble relay
- Wiring supervision with SEMS terminals
- A six-year end-of-life timer
- 12/24 VDC
- A low current draw of 20 mA in standby and 40 mA in alarm
- Versatile mounting for wall and ceiling
- Accurate and reliable electrochemical sensing technology
- Optional CO-PLATE CO Detector Replacement Plate to upgrade previously installed competitor detectors to the CO1224T

With RealTest® technology, the CO gas sensing cell used in the CO1224T and CO1224TR CO detectors can be tested using a CO gas agent, fully meeting the requirements of NFPA 720: 2009. Simply put the detector into RealTest mode, spray a small amount of CO into the detector per the installation instructions, and within seconds the detector will alarm, indicating successful gas entry (See the reverse page or the user manual for complete instructions.)

When dangerous amounts of CO are detected, the CO1224T and CO1224TR detectors alert residents by sounding and flashing a temp 4 signal alarm. With 24/7 central station monitoring, residents are guaranteed protection whether they are away from home, sleeping, or already suffering from the effects of CO.

The CO1224T and CO1224TR are designed for system operation. These detectors are fully listed to UL 2075 and offer a code-required trouble relay to send a sensor failure or end-of-life signal to the control panel and the central station. The CO1224T and CO1224TR also use SEMS-type terminal Philips head screws for quicker and more positive wiring connections and code-required wiring supervision. With a low current draw, these detectors enable more devices to be connected to the panel, limiting the need to purchase extra power supplies or more expensive panels. As 12/24 VDC detectors, the CO1224T and CO1224TR will operate on most industry security and fire alarm control panels.

Agency Listings

UL LISTED 2075

CO1224T and CO1224TR Carbon Monoxide Detector Specifications

Architectural/Engineering Specifications

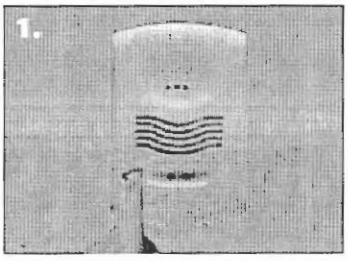
Carbon monoxide detector shall be a System Sensor model number CO1224T or CO1224TR listed to Underwriters Laboratories UL 2075 for Gas and Vapor Detectors and Sensors. The detector shall be equipped with a sounder and a trouble relay. The detector's base shall be able to mount to a single-gang electrical box or direct (surface) mount to the wall or ceiling. Wiring connections shall be made by means of SEMS screws. The detector shall provide dual color LED indication that blinks to indicate normal standby, alarm, or end-of-life. When the sensor supervision is in a trouble condition, the detector shall send a trouble signal to the panel. When the detector gives a trouble or end-of-life signal, the detector shall be replaced. The detector shall provide a means to test CO gas entry into the CO sensing cell. The detector shall provide this with a test mode that accepts CO gas from a test agent and alarms immediately upon sensing CO entry.

Electrical Specifications	
Operating Voltage	12/24 VDC
Audible Signal	85 dB in alarm
Standby Current	20 mA
Alarm Current	40 mA (75 mA test)
Alarm Contact Ratings	0.5 A @ 30 VDC
Trouble Contact Ratings	0.5 A @ 30 VDC
Physical Specifications	
Size: CO1224T	Length: 5.1 in, Width: 3.3 in, Height: 1.3 in
CO1224TR	Diameter: 6 in, Height: 1.3 in
Approximate Weight	CO1224T: 7 oz ; CO1224TR: 11 oz
Operating Temperature Range	32°F to 104° F (0°C to 40° C)
Operating Humidity Range	22 to 90% RH
Input Terminals	14 to 22 AWG
Mounting	Single-gang back box; surface mount to wall or ceiling

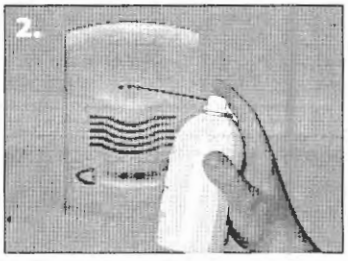
Operation Modes

Operation Mode	Green LED	Red LED	Sounder
Normal (standby)	Blink 1 per minute	—	—
Alarm	—	Blink in temp 4 pattern	Sound in temp 4 pattern

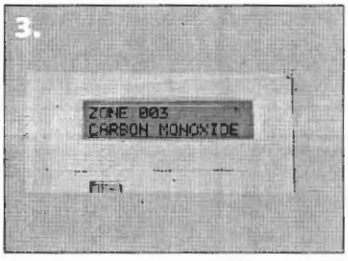
RealTest® Feature: The System Sensor CO1224T and CO1224TR Carbon Monoxide Detectors with RealTest enable evaluation of the functionality of the CO sensing cell using a canned CO test agent.



Push and hold the Test/Hush button for two seconds to enter RealTest mode. The green LED will flash once every second to indicate RealTest mode has started.



Spray canned CO agent into the detector.



Verify CO sensing at the control panel. The detector will automatically exit RealTest alarm mode after about 20-60 seconds.

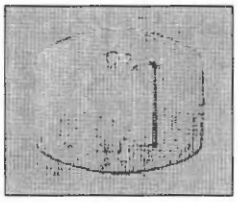
NOTE: Check with local codes and the AHJ to determine if a functional gas test is desired for an installation.

Hush Feature: Pushing the Test/Hush button will silence the sounder for 5 minutes (except in RealTest mode).

Trouble Feature: When the detector is in a trouble condition, it will send a trouble signal to the panel.

End-of-Life Timer: After the detector's internal sensor has reached the end of its life, a trouble signal will be sent to the panel to indicate it is time to replace the detector. An electrochemical CO detector lifespan is about six years. The detector must be replaced by the date marked on the inside of the product.

CO-PLATE: System Sensor also offers the CO-PLATE CO Detector Replacement Plate to cover the footprint (when necessary) of previously installed competitive carbon monoxide detectors that require replacement.



CO-PLATE

Ordering Information

Part No.	Description
CO1224T	12/24 volt, 4-wire system-monitored carbon monoxide detector with RealTest® Technology
CO1224TR	12/24 volt, 4-wire system-monitored round carbon monoxide detector with RealTest® Technology
CO-PLATE	CO detector replacement plate to cover the footprint of previously installed competitive detectors as necessary

SYSTEM SENSOR

3825 Ohio Avenue • St. Charles, IL 60174
Phone: 800-SENSOR2 • Fax: 630-377-6495

A05-0437-002 • 11/11 • #2357

SILENT KNIGHT
by Honeywell

IntelliKnight® 5808 Single Loop Addressable Fire Alarm Control System

The convenience of an addressable fire alarm control panel in a cost-effective easy to use package.

IntelliKnight Model 5808 is a 127 point class leading single loop addressable fire alarm control/communicator system. 5808 provides you with the revolutionary value and performance of addressable sensing technology combined with exclusive, built-in digital communication, distributed intelligent power, easy to use interface. Powerful features such as drift compensation and maintenance alert are delivered in this powerful FACP from Silent Knight.

For more information about the IntelliKnight system, or to locate your nearest source, please call 1-800-328-0103.

Description

The basic 5808 system can be enhanced by adding modules such as 5860 remote annunciator, 5824 serial/parallel printer interface module (for printing system reports), and 5496 intelligent power module. 5808 supports Hochiki or SK protocol devices. 5808 also features a powerful built-in dual line fire communicator that allows for reporting of all system activity to a remote monitoring location.

Features

- Built-in support for up to 99 SK detectors *and* 99 SK modules.
- Built in support for 127 Hochiki SD devices.
- Up to 125 zones and 125 output groups.
- Uses standard wire—no shielded or twisted pair required
- Built-in digital communicator.
- Central station reporting by point or by zone
- Supports Class B (Style 4) and Class A (Style 6 or 7) configuration for SLC.
- Distributed, intelligent power.
- Drift compensation.
- 13 pre-programmed output cadences, (including ANSI-3.41), and 4 programmable outputs.
- Notification circuits can be configured as 2 Class A (Style Z) or 4 Class B (Style Y), or auxiliary power for resettable, constant, or door holder power.
- Built-in annunciator with 80-character LCD display.
- RS-485 bus provides communication to system accessories.
- Built-in RS-232 and USB interface for programming via a PC.
- Upload or download programming, event history, or detector status via remote or direct connection.
- Improvements in SKSS deliver five times faster upload/downloads.
- Built-in synchronization for appliances from AMSECO, Gentex®, Faraday, System Sensor®, and Wheelock®.
- One Form C trouble relay rated at 2.5A at 27.4 VDC and two Form C programmable relays rated at 2.5A at 27.4 VDC.

Model 5808

- Programmable date setting for Daylight Saving Time
- Plex-2 door option combines a dead front cabinet door with a clear window, limiting access to the panel while providing single button operation of the reset and silence functions.

  Integrated dead front panel protects operator from exposure to electrical components.
- The FACP enclosure features a Plexiglass® viewing window to protect annunciator.
- Acknowledge function allows operator to keep track of event status.

Installation

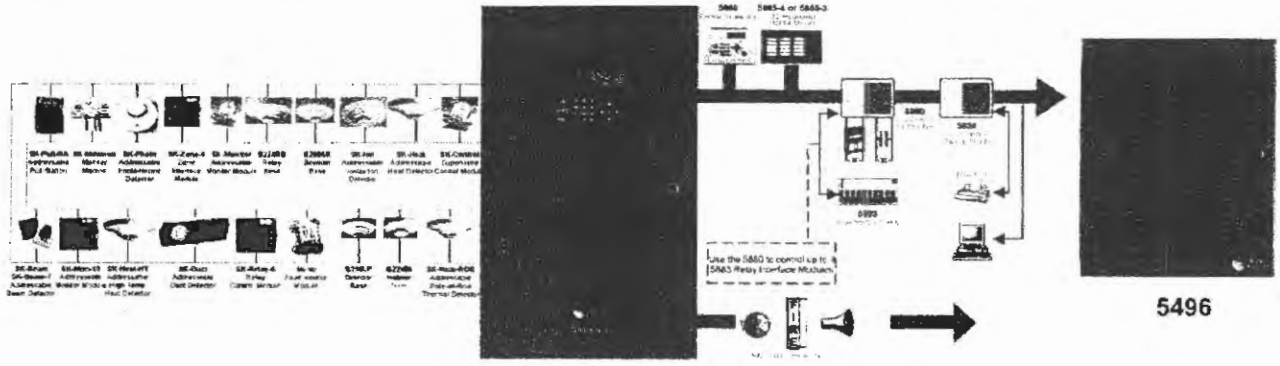
The 5800 can be surface or flush mounted.

Compatibility

The 5808 SLC supports multiple device types of the *same* protocol:

- SK (System Sensor)
- Hochiki SD

You cannot mix SD and SK devices on a FACP.



5808

5496

Specifications

Electrical

Primary AC: 120 VRMS at 50/60 Hz, 2.75A

Total Accessory Load: 6A @ 27.4 VDC

Notification Power: 6A @ 27.4 VDC, power-limited

Standby Current: 170 mA

Alarm Current: 325 mA

Notification & Auxiliary Circuits: 3A @ 27.4 VDC per circuit,power-limited

Battery Charging Capacity: 7.0-35 AH

Battery Size: 18 AH max. allowed in FACP. Larger capacity batteries can be housed in an RBB accessory cabinet

Physical

Flush Mount Dimensions:
14.5" W x 24.75" H x 3.5" D
(36.8 W x 62.9 H x 8.73 D cm)

Overall Dimensions:
16" W x 26.4" H x 4.65" D
(40.6 W x 67 H x 11.8 D cm)

Weight: 28 lbs. (12.8 kg)

Color: Red

Telephone Requirements:
FCC Part 15 and Part 68 approved
Type of Jack: RJ31X (two required)

Approvals

NFPA 13, NFPA 15, NFPA 16, NFPA 70, & NFPA 72: Central Station; Remote Signalling; Local Protective Signalling Systems; Auxiliary Protected Premises Unit; & Water Deluge Releasing Service. Suitable for automatic, manual, waterflow, sprinkler supervisory (DACT non-coded) signalling services.
UL Listed
CSFM 7165-0559:0142;
MEA 429-92-E Vol. XIV

S-BUS Accessories

5860/R Remote Fire Annunciator
Features the same 80 character backlit LCD display keypad and firefighter's key switch as the 5808. 5860 is gray and 5860R is red.

5496 Intelligent Power Module
A 6 amp notification power expander that provides four additional power-limited notification appliance circuit outputs.

5880 LED/IO Module
Features 40 LED outputs, 8 normally open dry contact inputs and one piezo output.

5865-3 and 5865-4 Remote LED Annunciator
Features 30 programmable LED (15 red and 15 yellow) outputs and a piezo sounder. The 5865-4 adds a silence and reset switch to the package.

5824 Serial/Parallel Printer Interface Module
Provides one parallel and one RS-232 serial port for connecting a printer to 5808. Use to print a real-time log of system events, detector status reports, and event history.

5883 Relay Board
Features 10 general purpose Form C relays. Used with 5880 module.

Miscellaneous Accessories

5660 Silent Knight Software Suite
PC-base software for FACP programming. Upload and view panel account information, event history, and detector status.

5670 Silent Knight Software Suite
End-user facility management software allows viewing of detector status and event history via modem or direct connection.

Plex-2 Door
Dead front cabinet door with clear window to limit access to the FACP.

RBB
Remote Battery Box Accessory Cabinet. Use if backup batteries are too large to fit into FACP cabinet. Dimensions:

16" W x 10" H x 6" D(406 mm W x 254 mm H x 152 mm D)

Hochiki and SK Devices

See the specification sheets listed below for a complete listing of the Hochiki and SK devices.

53624	Hochiki SD Devices data sheet
53623	SK Device Protocol Devices data sheet

SILENT KNIGHT
by Honeywell

MADE IN AMERICA

350386 Rev. H

SILENT KNIGHT

by Honeywell

5220 Direct Connect Module Installation Instructions

The 5220 is a direct connect module used to connect a fire alarm control panel (FACP) to a city box or polarity reversal communicator. The following instruction are generic installation instructions, refer to the FACP installation manual for compatibility and usage.

Note: Installation and wiring of this device must be done in accordance with NFPA 72 and local ordinances.

Specifications

Operating Voltage: 19.4 to 28 VDC
City Box Current : 1 A for 1 Second, max coil resistance 30 ohms
Polarity Reversal: 20 mA max., max loop resistance 3 k ohms
Ambient Temperature: 32°F to 120°F (0°C to 49°C), or humidity within the range of 10%-93% at 30°C (86°F) noncondensing.
Dimensions: 8-1/2"W x 1-5/16"H x 2-1/8"D (16.51 cm W x 3.33 cm H x 5.40 cm D)
Terminal Wire Rating: 12 - 24 AWG

Mounting

The 5220 comes equipped with its own cabinet assembly. The 5220 is intended for indoor use only in a dry location.

1. Remove the cover from the 5220.
2. Mount the 5220 with four screws in the holes shown in Figure 1.

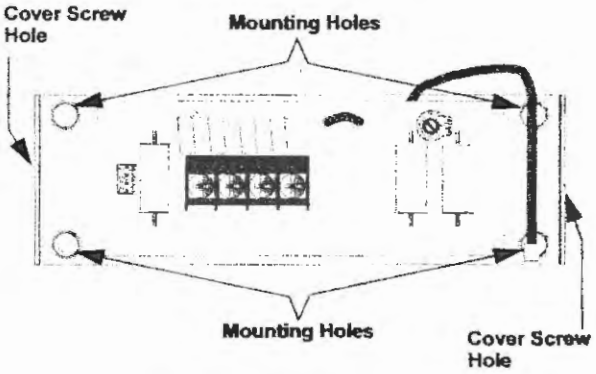


Figure 1: Mounting the 5220

3. Wiring the 5220 as shown in Figure 2.
4. Replace the 5220 cover and secure it with the two self-tapping screws supplied.

Wiring

1. Connect the 5220 as shown in Figure 2.

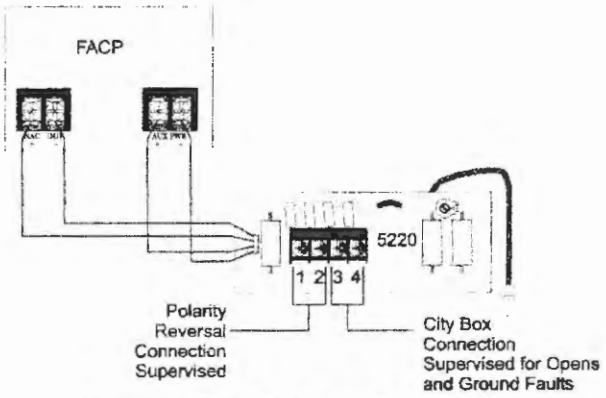


Figure 2: 5220 Wiring Connections

SILENT KNIGHT
by Honeywell
7550 Meridian Circle
Maple Grove, MN 55369-4927
763-493-6455 or 800-328-0103
Fax: 763-493-6475
www.silentknight.com

SILENT KNIGHT
by Honeywell

5860 Remote Annunciator

Bring the power to control an IntelliKnight fire alarm control panel to every area within your facility.

Now you can operate and program your IntelliKnight system from up to eight locations throughout your facility. The 5860 remote annunciator provides the same advanced, easy-to-use interface found on the IntelliKnight panel's built-in annunciator. The 80-character display and ergonomically designed keypad allow for simple and error-free system operation. All operations—including reset, silence, detector status checking, fire drill, and programming—are identical.

Access to the system is through a firefighter's key or an access code. For security, a special installation code is needed for programming functions. The 5860 connects to the IntelliKnight panel via the RS-485 system bus. Wire runs can be up to 6000 feet from the panel.

For more information about the IntelliKnight system, or to locate your nearest source, please call 1-800-328-0103.

Description
Features include an 80-character backlit LCD providing easy-to-understand system messages. The annunciator is ergonomically designed with over-sized buttons for the most frequently used features, like Reset and Silence.

In addition to status messages displayed on the LCD, there are five LEDs for alarm, supervisory, trouble, silence, and AC power status.

The annunciator is available in gray to match virtually any decor and red for applications where the annunciator must stand out. The annunciator enclosure can be surface or flush mounted. A trim ring kit is available for surface mounting.

Features
- 80-character backlit LCD display (4 lines with 20 characters on each line)
- Tactile and audible feedback
- Accepts user codes or fire fighter's key
- Larger keypad buttons for system reset and silence
- Install up to eight 5860s per FACP
- Available in red or light gray
- Support for simultaneous use of multiple 5860s
- RS-485 interface to panel
- Operation and appearance is identical to 5860 built-in annunciator
- On-board piezo sounder audibly indicates alarms, troubles, and supervisories
- Five status LEDs for alarm, supervisory, trouble, silence and AC power conditions
- Wiring lengths up to 6000 ft. from the FACP (depending on wire gauge and number of devices on SBUS)
- UL listed, complies with NFPA 72
- CSFM approved

Electrical Specifications
Operating Voltage: 24 VDC

Standby Current: 20 mA max

Alarm Current: 25 mA

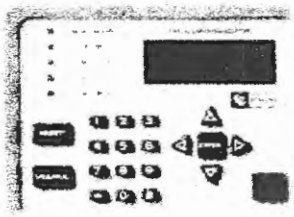
Wiring Distance: 6,000 max. from FACP (depending on wire gauge and number of devices on the SBUS)

Max Per System: 8

Mechanical Specifications
Physical 9.1" W x 7.4" H x 1.5" D (23.1 W x 18.8 H x 3.8 D cm)

Shipping Weight: 2.8 lbs (1.3 kg)

Color
5860R: Red
5860: Gray



5860

Environmental
Operating Temperature: 32°F – 120°F (0°C – 49°C)

Humidity: 10% – 93% non-condensing

Compatibility
The 5860 is compatible is the following FACP's:
- IntelliKnight 5820XL FACP
- IntelliKnight 5808 FACP
- IntelliKnight 5700 FACP

Approvals/Listings
NFPA 72; UL Listed;
CSFM 7170-0559: 135;
MEA 429-92-E Vol. IX;
FM Approved

5860 Remote Annunciator

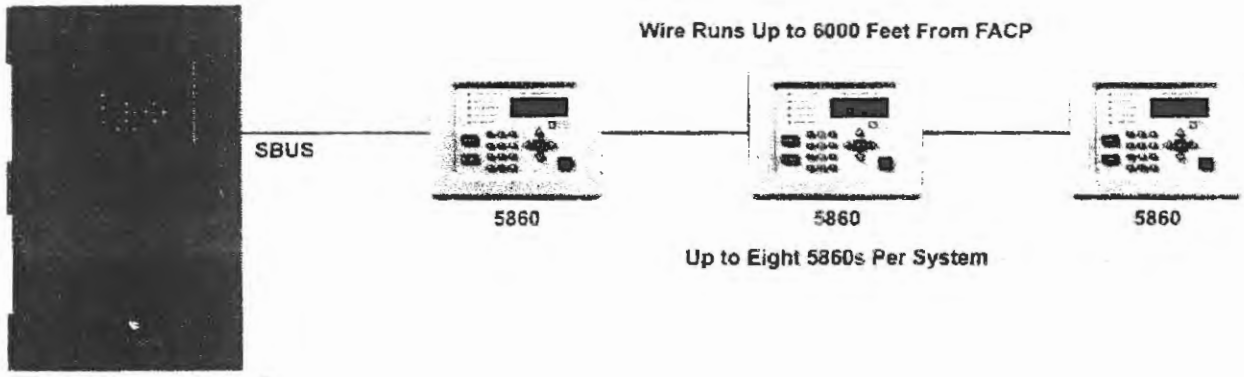
Engineering Specifications

The main control must have a built-in annunciator and must support up to eight remote annunciators. Remote annunciators shall have the same control and display layout so as to match the appearance of the built-in annunciator. Remote annunciators shall be available in two colors, red or light gray.

Remote annunciators shall have identical functionality and operation as the built-in annunciator. All annunciators must have an 80-character LCD display and must feature five LEDs for: General Alarm, Supervisory, System Trouble, System Silence, and System Power.

All controls and programming keys are silicone mechanical type with tactile and audible feedback. Keys have a travel of .040 inches. No membrane style buttons will be permissible.

The annunciator must be able to silence and reset alarms through the use of a code entered on the annunciator keypad or by using a firefighter's key. The annunciator must have two levels of user codes that will limit the operating system programming to authorized individuals. The control panel must allow all annunciators to accommodate multiple user input simultaneously.



Compatible IntelliKnight FACP

Ordering Information

5860R	Remote Annunicator four line LCD annunciator with 20 characters per line. Red.
5860	Remote Annunciator.Four line LCD annunciator with 20 characters per line. Gray.

Accessories

5860TR	Red Trim Ring for surface mounting.
5860TG	Gray Trim Ring for surface mounting.

SILENT KNIGHT by Honeywell

MADE IN AMERICA

FORM# 350224 Rev E

SILENT KNIGHT
by Honeywell

SK-Heat, SK-Heat-HT and SK-Heat-ROR

Addressable thermal heat and rate-of-rise detectors

The SK-Heat, SK-Heat-HT, and SK-Heat-ROR are plug in thermal detectors, with integral communication, that provide features that surpass conventional detectors. These thermal detectors are for use with Silent Knight IntelliKnight series Fire Alarm Control Panels (FACPs).

IntelliKnight heat detectors are an essential component in virtually any IntelliKnight installation. The IntelliKnight panel recognizes each detector by its specific address, so precious seconds are not wasted in determining location of an alarm.

Description

SK-Heat, SK-Heat-HT and SK-Heat-ROR are intelligent sensors that utilize a state-of-the art thermistor sensing circuit for fast response. Sensitivity is continuously monitored and reported to the FACP. Point ID capability allows each detector's address to be set with rotary address switches, providing exact detector locations for selective maintenance when chamber contamination reaches unacceptable levels.

SK-Heat is a fixed temperature sensor that uses a thermistor sensing circuit to produce 135°F (57°C) fixed temperature alarm.

SK-Heat-HT is a variable high temperature detector that provides high temperature detection at 135°F - 190°F. (57°C - 88°C)

SK-Heat-ROR is a rate-of-rise temperature sensor with 135°F (57°C) fixed temperature alarm.

Features

- Reliable analog communications for trouble-free operation
- Age resistant polymer housing
- Innovative thermistor sensing circuit
- Superior EMI resistance for reliability
- Variety of mounting options to meet any application
- Dual LED indicators for 360° visibility
- Detector transmits signal to indicate maintenance is required
- Plug-in mounting provides ease of installation
- Optional remote LED annunciator (System Sensor® PN RA100Z)
- Tamper-proof feature available on mounting bases
- Rotary address switches for fast installation
- UL Listed

Specifications

Physical
Height: 2.0" (51 mm)
Diameter: 6.1" (155 mm)installed in B210LP base
Shipping Weight: 4.8 oz (137 g)

Electrical
Operating Voltage: 15 to 32 Volts DC Peak

Standby Current: 300µA @ 24 VDC

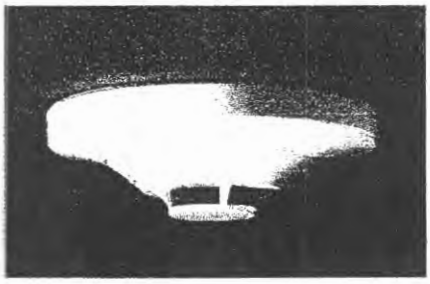
LED Current: 6.5 mA@ 24 VDC

Environmental

Operating Temperature
SK-Heat & SK-Heat-ROR: -4° – 100°F (-20°C– 38°C)

SK-Heat-HT: -4° – 150°F (-20°C – 66°C)

Humidity: 10% – 93% noncondensing



SK-Heat (base included)

Thermal Ratings
SK-Heat: Fixed temperature alarm 135°F (57°C)

SK-Heat-HT: High temperature heat sensor 135°F - 190°F (57°C - 88°C)

SK-Heat-ROR: Rate-of-rise detection 15°F/min (8.3°C/min)

Compatibility

The SK-Heat, SK-Heat-HT and SK-Heat-ROR are compatible with the following IntelliKnight FACP's:

5700
5808
5820XL

The SK-Heat, SK-Heat-HT and SK-Heat-ROR are compatible with the following detector bases:

B210LP	(included) 6" base
B501	2 wire base
B224BI	Isolator base
B224RB	Relay base
B200SR	Sounder base

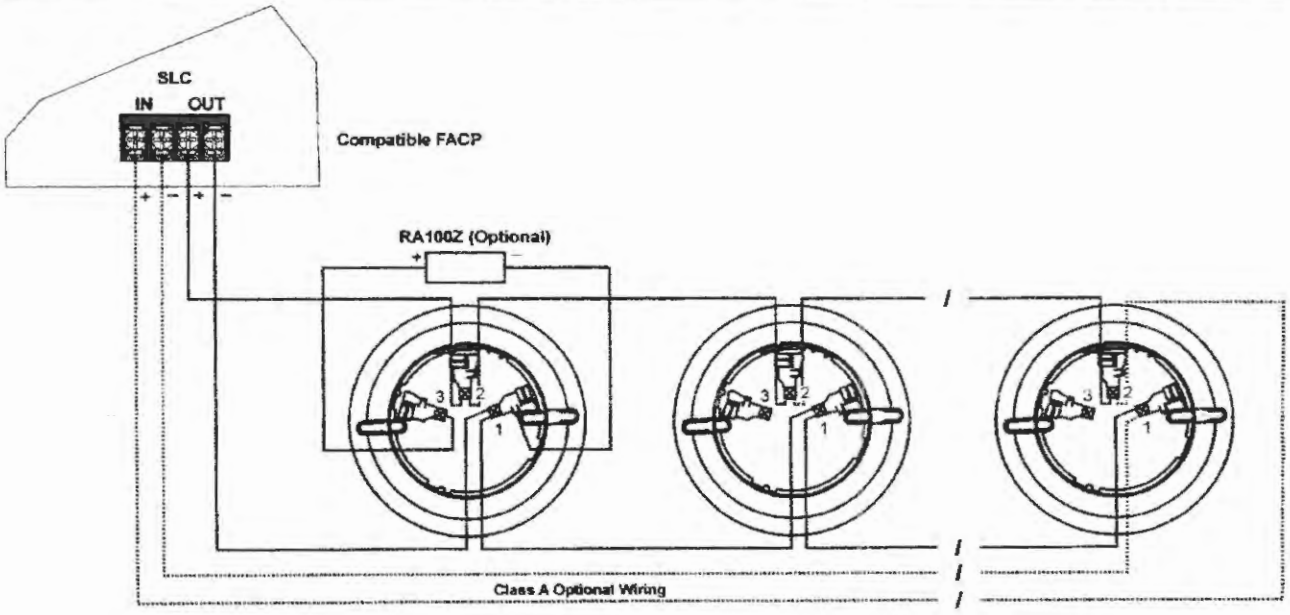
Model SK-Heat, SK-Heat-HT, SK-Heat ROR Addressable Thermal and Rate-of-Rise Thermal Detectors

Engineering Specifications

The contractor shall furnish and install where indicated on the plans, Intelligent Thermal Sensor Silent Knight Model SK-Heat, SK-Heat-HT or SK-Heat-ROR. The base included shall be B210LP.

The Heat detector shall have a flashing status LED for visual supervision. When the detector is activated, the flashing LED will latch on steady at full brilliance. The detector may be reset by actuating the control panel reset switch.

The vandal-resistant, security locking feature shall be used in those areas as indicated on the drawing. The locking feature shall be field removable when not required.Voltage and RF/transient suppression techniques shall be employed to minimize false alarm potential.



Wiring SK-Series Detector Mounting Bases

Accessories

RA100Z - Remote LED Annunciator.

RMK400 - Recessed Mounting Kit. Provides low profile for use with B501.

XR2B - Detector Removal Tool. A removal and re- placement tool for SK plug-in detectors. Includes the T55-127-000.

M02-04-01 - Replacement Test Magnet.

M02-09-00 - Test Magnet with Telescoping Handle.

XP-4 - Extension Pole for XR2B. Extends from 5 – 15 ft.

T55-127-000 - Detector Removal Head.

BCK-200B - Black Detector Kit. For SK-series detectors.

* Unless otherwise noted, specifications apply to all SK thermal detectors.

SILENT KNIGHT
by Honeywell

MADE IN AMERICA

FORM# 350120 Rev. C

SILENT KNIGHT
by Honeywell

SK-Monitor-2

Intelligent Dual Monitor Module

The SK-Monitor-2 module is capable of monitoring two separate Class B circuits simultaneously, making it ideal for waterflow tamper switch and flow switch monitoring.

For more information about the IntelliKnight system, or to locate you nearest source, please call 1-800-328-0103.

Description

The SK-Monitor-2 is an addressable monitor module with two initiating circuits for use with Silent Knight IntelliKnight series fire alarm control panels (FACPs). The SK-Monitor-2 acts as an interface to contact devices, such as waterflow switches and pull stations.

The SK-Monitor-2 supports Class B supervised wiring to the load device. Conventional 4-wire smoke detectors can be monitored for alarm and trouble conditions.

Features

- Monitor two circuits, with unique addresses, simultaneously
- Support for Class B wiring
- Fully supervised
- Panel controlled status LED that flashes green in normal state and is solid red in alarm
- Attractive ivory cover plate
- Rotary address switches for fast installation
- SEMS screws for easy wiring
- UL Listed

SK-Monitor-2

Installation

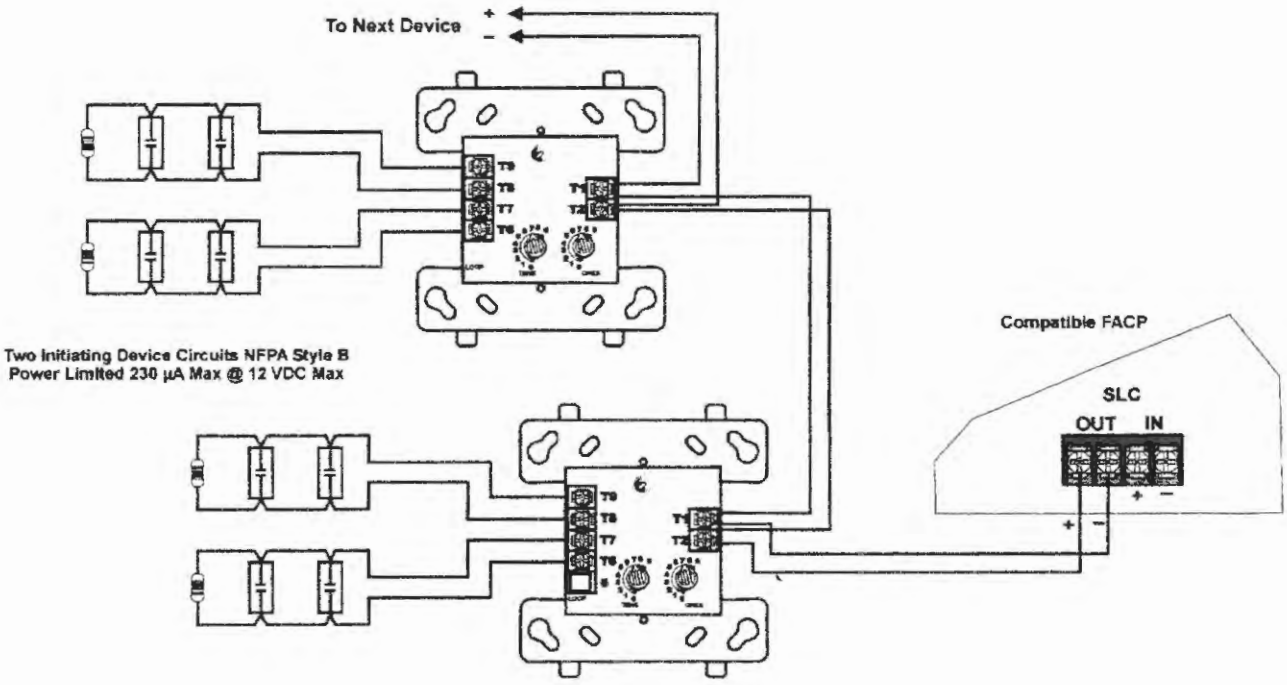
SK-Monitor-2 mounts directly into a 4" square electrical box. The box must have a minimum depth of 2-1/8". A surface mount electrical box (System Sensor® part number SMB500) is available from Silent Knight.

Compatibility

The SK-Monitor-2 is compatible with the following IntelliKnight FACP's:

5700
5808
5820XL

Model SK-Monitor-2
Intelligent Dual Monitor Module



Wiring SK-Monitor-2 Modules

Specifications

Physical
Height: 4.5" H x 4" W x 1.25" D

Shipping Weight: 6.3 oz (196 g)

Electrical
Operating Voltage: 15 – 32 VDC

Current Draw (LED on): 6.4 mA max

Operating Current (LED flashing): 750 µA

End-of-Line Resistance: 47K Ω

Max IDC wiring resistance: 1,500Ω

SLC Line Loop Resistance: 40Ω max.

Environmental
Operating Temperature: 32°F – 120°F (0°C – 49°C)

Humidity: 10% – 93% non-condensing

Accessories
SMB500 4" Square Surface Mount Electrical Box

SILENT KNIGHT
by Honeywell

MADE IN AMERICA

FORM# 350124 Rev B

SK-Photo and SK-Photo-T

Intelligent Photoelectric Smoke Sensors

The SK-Photo is a photoelectric smoke detector and the SK-Photo-T is a photoelectric smoke detector with thermal. These plug in smoke detectors, with integral communication, provide features that surpass conventional detectors and are for use with Silent Knight IntelliKnight Fire Alarm Control Panels (FACPs).

For more information about the IntelliKnight system, or to locate your nearest source, please call 800-328-0103 or in Connecticut, call (203) 484-7161.

Description

SK-Photo and SK-Photo-T are plug-in type smoke sensors that combine a photoelectric sensing chamber with addressable analog communications. Point ID capability allows each detector's address to be set with rotary address switches, providing exact detector locations for selective maintenance when chamber contamination reaches unacceptable levels.

SK-Photo and SK-Photo-T have a unique optical sensing chamber that is engineered to sense smoke produced by a wide range of combustion sources. In the SK-Photo-T, dual electronic thermistors add 135°F (57°C) thermal technology to maximize detection.

Features

- Sleek, low-profile design
- Base included
- Reliable analog communications for trouble-free operation
- Age resistant polymer housing
- Dual electronic thermistor design on the SK-Photo-T
- Superior EMI resistance for reliability
- Simple field cleaning for code compliance
- Variety of mounting options to meet any application
- Dual LED indicators for 360° visibility
- Detector transmits signal to indicate maintenance is required
- Optional remote LED annunciator (System Sensor® PN RA100Z)
- Plug-in mounting provides ease of installation
- Tamper-proof feature available on mounting bases
- Listed for use in duct applications
- Rotary address switches for fast installation
- UL Listed
- FM Approved

Specifications

Physical

Height: 2.0" (5.0 cm)

Diameter: 4.1" (10.4 cm)

Shipping Weight: 5.2 oz. (147 g)

Electrical

Operating Voltage: 15–32 VDC

Standby Current:

300 µA @ 24 VDC Maximum

Alarm Current: 6.5 mA @ 24 VDC max (with LED on)

Environmental

Operating Temperature

SK-Photo: 32° – 120°F (0°C – 49°C)

SK-Photo-T: 32° – 100°F (0°C – 38°C)

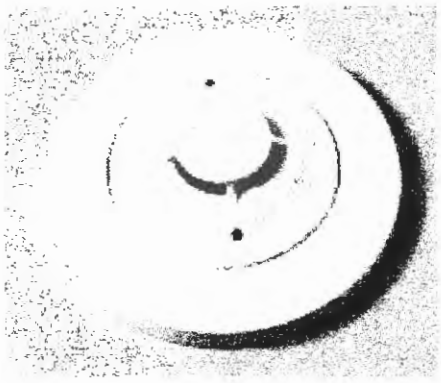
Humidity: 10% – 93% non-condensing

Other Ratings

SK-Photo-T Thermal: Fixed temperature set point 135°F (57°C)

Velocity: 0 – 4000 fpm (0 – 20 m/sec)

SK-Photo Insect Screen Hole Size: 0.016" (0.41 mm) nominal



SK-Photo (Base included)

Compatibility

The SK-Photo and SK-Photo-T are compatible with the following IntelliKnight FACPs:

5700
5808
5820XL

SK-Photo and SK-Photo-T are compatible with the following detector bases:

B210LP	(included) 6" base
B501	2 wire base
B501BHT-2	Temporal base
B224RB	Relay base
B224BI	Isolator base
B501BH-2	Sounder base

SILENT KNIGHT
by Honeywell

Model SK-Photo and SK-Photo-T Intelligent Photoelectric Smoke Sensors

Engineering Specifications

The contractor shall furnish and install where indicated on the plans, Intelligent photoelectric smoke sensors Silent Knight SK-Photo or SK-Photo-T with thermal. The combination detector head, and twist-lock base, shall be UL listed and compatible with Silent Knight's IntelliKnight fire control panels.

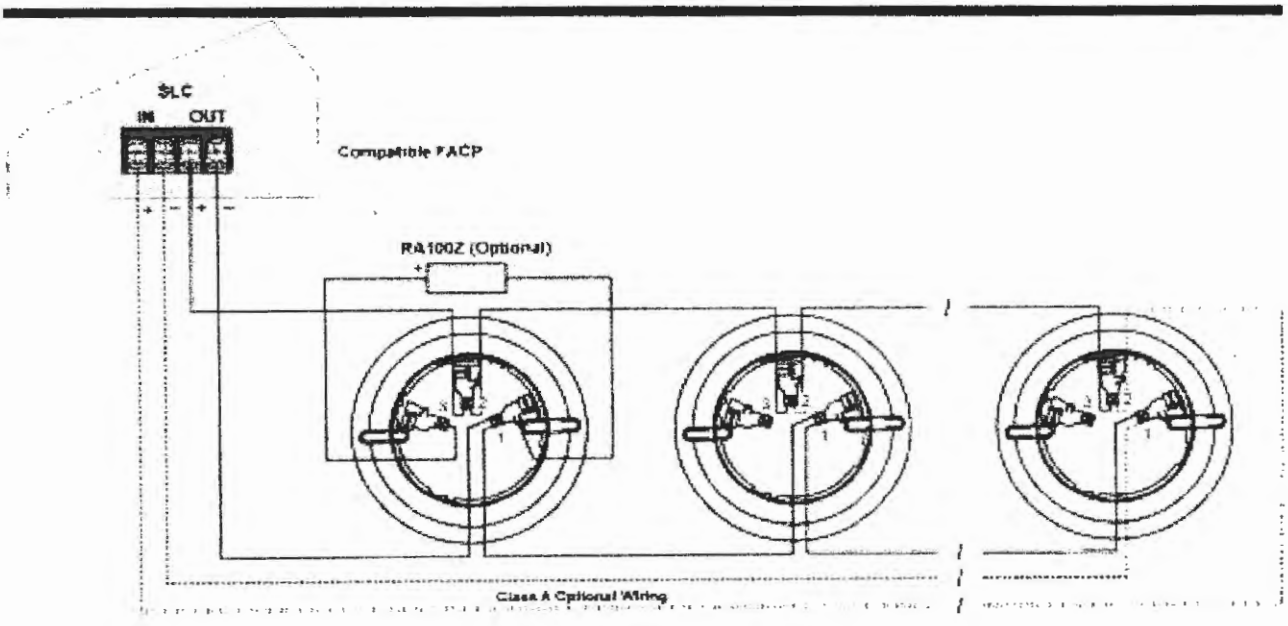
The base shall permit direct interchange with SK-Photo or SK-Photo-T. Base shall be the appropriate twist-lock base part number B210LP (included).

The smoke detector shall have a flashing status LED for visual supervision. When the detector is actuated, the flashing LED will latch on steady. The detector may be reset by actuating the control panel reset switch.

The calibration of the detector shall be capable of being selected and measured by the control panel without the need for external test apparatus.

The vandal-resistant, security locking feature shall be used in those areas as indicated on the drawing. The locking feature shall be field selectable as required.

The SK-Photo shall automatically perform a functional test of the detector. The test method shall simulate effects of products of combustion in the chamber to ensure testing of detector circuits.



Wiring SK-Series Detector Mounting Bases

SILENT KNIGHT
by Honeywell

MADE IN AMERICA

FORM# 350118 Rev A.

SILENT KNIGHT®
by Honeywell

SK-Pull-SA and SK-Pull-DA

Intelligent Pull Stations

The SK-Pull-SA and SK-Pull-DA are a single action or dual action addressable fire alarm pull station for use with Silent Knight's IntelliKnight fire control panel. Extremely easy to operate, the SK-Pull-DA and SK-Pull-SA provide a fast and practical means of manually initiating a fire alarm signal. The IntelliKnight panel recognizes each manual pull station by its specific address saving precious seconds in determining the location of an alarm.

For more information about the IntelliKnight system, or to locate you nearest source, please call 1-800-328-0103.

Description

The SK-Pull-SA is a single action pull station requiring only one motion to activate the station. The SK-Pull-DA is a dual action pull station requiring two motions to active the station. Both pull stations are designed to work with Silent Knight Intelliknight series fire alarm control panels (FACPs).

Features

- Installer can open station without causing an alarm condition
- Dual-color LED is visible through handle of station blinks green to indicate normal operation and remains steady red in an alarm condition
- Key operated test and reset lock using lock plate actuator
- Key matches compatible FACP locks
- Meets the Americans with Disabilities Act Accessibility Guidelines (ADAAG) controls and operating mechanisms guidelines (Section 4.1.3[13])
- Meets ADA requirement for 5 lbs maximum pull force to active
- Shell, door, and handle molded from durable LEXAN®
- Reliable analog communications for trouble-free operation
- Braille text on station handle
- Handle latches in down position and the word *Activated* appears, clearly indicating the station has been pulled
- Rotary address switches for fast installation
- UL Listed, including UL 38, Standard of Manually Actuated Signaling System

SK-Pull-SA

SK-Pull-DA

Compatibility

The SK-Pull-SA and SK-Pull-DA are compatible with the following IntelliKnight FACP's:

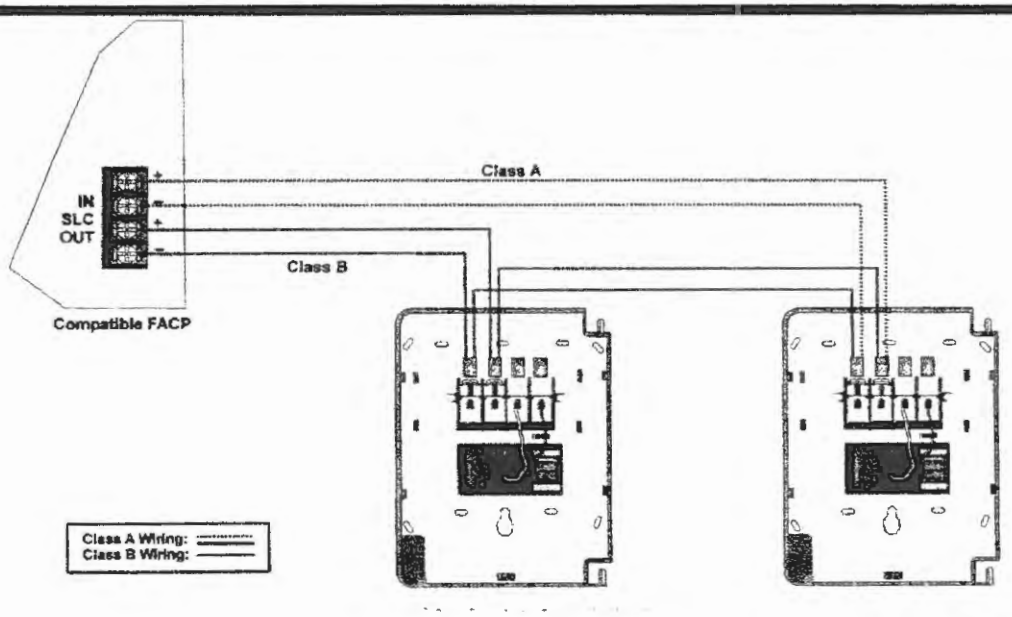
5600
5700
5808
5820XL

Model SK-Pull-DA and SK-Pull-SA

Engineering Specifications

The contractor shall furnish and install where indicated on the plans, Addressable Pull Stations, Silent Knight model SK-Pull-SA single action pull station or SK-Pull-DA, dual action pull station.

SK-Pull-DA or SK-Pull-SA meet the ADAAG controls and operating mechanisms guidelines, and the ADA requirements for a 5 lb. maximum pull force to activate the pull station.



Wiring SK-Pull-SA & SK-Pull-DA Pull Stations

Specifications

Physical

Height: 5.5" (14 cm)

Width: 4" (10.2 cm)

Depth: 5.4 oz. (3.7 cm)

Housing Material: LEXAN polycarbonate resin

Bi-Colored LED:
Blinking Green: Normal

Steady Red: Alarm

Switch: Single pole, single throw (SPST) normally open (N/O) switch which closes upon activation of the pull station

Electrical

Operating Voltage: 15–32 VDC

Average Operating Current (LED flashing): 300 µA

Wire Gauge: Up to 12 AWG (3.1 mm^2)

Environmental

Operating Temperature 32° – 120°F (0°C – 49°C)

Humidity: 10% – 93% non-condensing

Accessories

BG-TR	Optional trim ring.
SB-I/O	Surface backbox

SILENT KNIGHT by Honeywell

MADE IN AMERICA

FORM# 350135 Rev A

SYSTEM SENSOR®

Selectable-Output Horns, Strobes, and Horn Strobes

SpectrAlert® Advance selectable-output horns, strobes, and horn strobes are rich with features guaranteed to cut installation times and maximize profits.

SPECTRAlert ADVANCE from System Sensor

Features

- Plug-in design with minimal intrusion into the back box
- Tamper-resistant construction
- Automatic selection of 12- or 24-volt operation at 15 and 15/75 candela
- Field-selectable candela settings on wall and ceiling units: 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185
- Horn rated at 88+ dBA at 16 volts
- Rotary switch for horn tone and three volume selections
- Universal mounting plate for wall and ceiling units
- Mounting plate shorting spring checks wiring continuity before device installation
- Electrically compatible with existing SpectrAlert products
- Compatible with MDL sync module

The SpectrAlert Advance series offers the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry. With white and red plastic housings, wall and ceiling mounting options, and plain and FIRE-printed devices, SpectrAlert Advance can meet virtually any application requirement.

Like the entire SpectrAlert Advance product line, horns, strobes, and horn strobes include a variety of features that increase their application versatility while simplifying installation. All devices feature plug-in designs with minimal intrusion into the back box, which make installations fast and foolproof while virtually eliminating costly and time-consuming ground faults. Furthermore, a universal mounting plate with an onboard shorting spring tests wiring continuity before the device is installed, protecting devices from damage.

In addition, field-selectable candela settings, automatic selection of 12- or 24-volt operation, and a rotary switch for horn tones with three volume selections enables installers to easily adapt devices to suit a wide range of application requirements.

Agency Listings

SIGNALING UL LISTED
S4011 (chimes, horn strobes, horns)
S5512 (strobes)

FM APPROVED
3023572

MEA approved
ME445Z-05-E

7125-1653:186 (indoor strobes)
7125-1653:188 (horn strobes, chime strobes)
7135-1653:189 (horns, chimes)

SpectrAlert Advance Specifications

Architect/Engineer Specifications

General

SpectrAlert Advance horns, strobes, and horn strobes shall mount to a standard 4 x 4 x 1½-inch back box, 4-inch octagon back box, or double-gang back box. Two-wire products shall also mount to a single-gang 2 x 4 x 1⅞-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance products, when used with the Sync-Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync-Circuit Module, 12-volt-rated notification appliance circuit outputs shall operate between 9 and 17.5 volts; 24-volt-rated notification appliance circuit outputs shall operate between 17 and 33 volts. Indoor SpectrAlert Advance products shall operate between 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified unfiltered power supply. Strobes and horn strobes shall have field-selectable candela settings including 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185.

Strobe

The strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and shall be approved for fire protective service. The strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

Horn Strobe Combination

The horn strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and UL 464 and shall be approved for fire protective service. The horn strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system. The horn shall have three audibility options and an option to switch between a temporal three-pattern and a non-temporal (continuous) pattern. These options are set by a multiple position switch. On four-wire products, the strobe shall be powered independently of the sounder. The horn on horn strobe models shall operate on a coded or non-coded power supply.

Synchronization Module

The module shall be a System Sensor Sync-Circuit model MDL listed to UL 464 and shall be approved for fire protective service. The module shall synchronize SpectrAlert strobes at 1 Hz and horns at temporal three. Also, while operating the strobes, the module shall silence the horns on horn strobe models over a single pair of wires. The module shall mount to a 4Ⅶ x 4Ⅶ x 2⅛-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

Physical/Electrical Specifications

Standard Operating Temperature	32°F to 120°F (0°C to 49°C)
Humidity Range	10 to 93% non-condensing
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12 DC/FWR or regulated 24 DC/FWR[1]
Operating Voltage Range[2]	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Ceiling-Mount Dimensions (including lens)	6.8˝ diameter x 2.5˝ high (173 mm diameter x 64 mm high)
Wall-Mount Dimensions (including lens)	5.6˝ L x 4.7˝ W x 2.5˝ D (142 mm L x 119 mm W x 64 mm D)
Horn Dimensions	5.6˝ L x 4.7˝ W x 1.3˝ D (142 mm L x 119 mm W x 33 mm D)
Wall-Mount Back Box Skirt Dimensions (BBS-2, BBSW-2)	5.9˝ L x 5.0˝ W x 2.2˝ D (151 mm L x 128 mm W x 56 mm D)
Ceiling-Mount Back Box Skirt Dimensions (BBSC-2, BBSCW-2)	7.1˝ diameter x 2.2˝ high (180 mm diameter x 57 mm high)
Wall-Mount Trim Ring Dimensions (sold as a 5 pack) (TR-HS, TRW-HS)	5.7˝ L x 4.8˝ W x 0.35˝ D (145 mm L x 122 mm W x 9 mm D)
Ceiling-Mount Trim Ring Dimensions (sold as a 5 pack) (TRC-HS, TRCW-HS)	6.9˝ diameter x 0.35˝ high (175 mm diameter x 9 mm high)

Notes:

1. Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.
2. P, S, PC, and SC products will operate at 12 V nominal only for 15 and 15/75 cd.

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

		8–17.5 Volts		16–33 Volts	
	Candela	DC	FWR	DC	FWR
Standard Candela Range	15	123	128	66	71
	15/75	142	148	77	81
	30	NA	NA	94	96
	75	NA	NA	158	153
	95	NA	NA	181	176
	110	NA	NA	202	195
	115	NA	NA	210	205
High Candela Range	135	NA	NA	228	207
	150	NA	NA	246	220
	177	NA	NA	281	251
	185	NA	NA	286	258

UL Max. Horn Current Draw (mA RMS)

		8–17.5 Volts		16–33 Volts	
Sound Pattern	dB	DC	FWR	DC	FWR
Temporal	High	57	55	69	75
Temporal	Medium	44	49	58	69
Temporal	Low	38	44	44	48
Non-temporal	High	57	56	69	75
Non-temporal	Medium	42	50	60	69
Non-temporal	Low	41	44	50	50
Coded	High	57	55	69	75
Coded	Medium	44	51	56	69
Coded	Low	40	46	52	50

UL Max. Current Draw (mA RMS), 2-Wire Horn Strobe, Standard Candela Range (15–115 cd)

	8–17.5 Volts		16–33 Volts						
DC Input	15	15/75	15	15/75	30	75	95	110	115
Temporal High	137	147	79	90	107	176	194	212	218
Temporal Medium	132	144	69	80	97	157	182	201	210
Temporal Low	132	143	66	77	93	154	179	198	207
Non-Temporal High	141	152	91	100	116	176	201	221	229
Non-Temporal Medium	133	145	75	85	102	163	187	207	216
Non-Temporal Low	131	144	68	79	96	156	182	201	210
FWR Input									
Temporal High	136	155	88	97	112	168	190	210	218
Temporal Medium	129	152	78	88	103	160	184	202	206
Temporal Low	129	151	76	86	101	160	184	194	201
Non-Temporal High	142	161	103	112	126	181	203	221	229
Non-Temporal Medium	134	155	85	95	110	166	189	208	216
Non-Temporal Low	132	154	80	90	105	161	184	202	211

UL Max. Current Draw (mA RMS), 2-Wire Horn Strobe, High Candela Range (135–185 cd)

	16–33 Volts			
DC Input	135	150	177	185
Temporal High	245	259	290	297
Temporal Medium	235	253	288	297
Temporal Low	232	251	282	292
Non-Temporal High	255	270	303	309
Non-Temporal Medium	242	259	293	299
Non-Temporal Low	238	254	291	295

	16–33 Volts			
FWR Input	135	150	177	185
Temporal High	215	231	258	265
Temporal Medium	209	224	250	258
Temporal Low	207	221	248	256
Non-Temporal High	233	248	275	281
Non-Temporal Medium	219	232	262	267
Non-Temporal Low	214	229	256	262

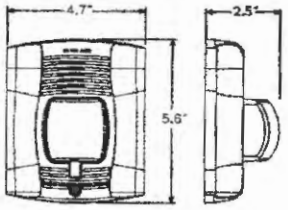
Horn Tones and Sound Output Data

Horn and Horn Strobe Output (dBA)

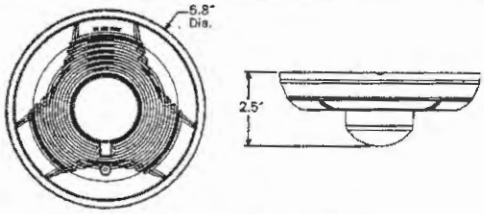
			8–17.5 Volts		16–33 Volts		24-Volt Nominal			
							Reverberant		Anechoic	
Switch Position	Sound Pattern	dB	DC	FWR	DC	FWR	DC	FWR	DC	FWR
1	Temporal	High	78	78	84	84	88	88	99	98
2	Temporal	Medium	74	74	80	80	86	86	96	96
3	Temporal	Low	71	73	76	76	83	80	94	89
4	Non-Temporal	High	82	82	88	88	93	92	100	100
5	Non-Temporal	Medium	78	78	85	85	90	90	98	98
6	Non-Temporal	Low	75	75	81	81	88	84	96	92
7†	Coded	High	82	82	88	88	93	92	101	101
8†	Coded	Medium	78	78	85	85	90	90	97	98
9†	Coded	Low	75	75	81	81	88	85	96	92

†Settings 7, 8, and 9 are not available on 2-wire horn strobe.

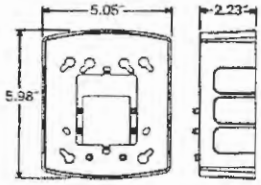
SpectrAlert Advance Dimensions



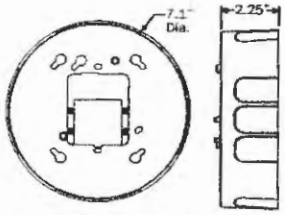
Wall-mount horn strobes



Ceiling-mount horn strobes



Wall back box skirt



Ceiling back box skirt

SpectrAlert Advance Ordering Information

Model	Description
Wall Horn Strobes	
P2R*†	2-Wire Horn Strobe, Standard cd‡, Red
P2RH*	2-Wire Horn Strobe, High cd, Red
P2W*	2-Wire Horn Strobe, Standard cd, White
P2WH*	2-Wire Horn Strobe, High cd, White
P4R*	4-Wire Horn Strobe, Standard cd, Red
P4RH	4-Wire Horn Strobe, High cd, Red
P4W	4-Wire Horn Strobe, Standard cd, White
Wall Strobes	
SR*†	Strobe, Standard cd, Red
SRH*†	Strobe, High cd, Red
SW*	Strobe, Standard cd, White
SWH*	Strobe, High cd, White
Ceiling Horn Strobes	
PC2R*	2-Wire Horn Strobe, Standard cd, Red
PC2RH	2-Wire Horn Strobe, High cd, Red
PC2W*†	2-Wire Horn Strobe, Standard cd, White
PC2WH*	2-Wire Horn Strobe, High cd, White
PC4R	4-Wire Horn Strobe, Standard cd, Red
PC4RH	4-Wire Horn Strobe, High cd, Red
PC4W	4-Wire Horn Strobe, Standard cd, White

Model	Description
Ceiling Strobes	
SCR	Strobe, Standard cd, Red
SCRH	Strobe, High cd, Red
SCW*	Strobe, Standard cd, White
SCWH	Strobe, High cd, White
Horns	
HR	Horn, Red
HW	Horn, White
Accessories	
BBS-2	Back Box Skirt, Wall, Red
BBSW-2	Back Box Skirt, Wall, White
BBSC-2	Back Box Skirt, Ceiling, Red
BBSCW-2	Back Box Skirt, Ceiling, White
TR-HS	Trim Ring, Wall, Red
TRW-HS	Trim Ring, Wall White
TRC-HS	Trim Ring, Ceiling, Red
TRCW-HS	Trim Ring, Ceiling, White

Notes:

* Add "-P" to model number for plain housing (no "FIRE" marking on cover), e.g., P2R-P.

† Add "-SP" to model number for "FUEGO" marking on cover, e.g., P2R-SP.

‡ "Standard cd" refers to strobes that include 15, 15/75, 30, 75, 95, 110, and 115 candela settings. "High cd" refers to strobes that include 135, 150, 177, and 185 candela settings.

SYSTEM SENSOR

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Phone: 800-SENSOR2 • Fax: 630-377-6495

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