

FIRE ALARM LEGEND

- [F] FIRE ALARM MANUAL PULL STATION
- [H] (75) FIRE ALARM HORN/STROBE UNIT
CANDELA RATING AS INDICATED
- [S] (15) FIRE ALARM STROBE ONLY
CANDELA RATING AS INDICATED
- [S] SMOKE DETECTOR, PHOTOELECTRIC TYPE
- [F] (135) HEAT DETECTOR, FIXED TEMPERATURE TYPE,
DEGREE NOTED
- [B] FIRE ALARM EXTERIOR ROTATING BEACON
- [FACP] MAIN FIRE ALARM CONTROL PANEL
- [KB] KNOX BOX

FIRE DETECTION AND ALARM SYSTEM

A. GENERAL

1. THE CONTRACTOR SHALL FURNISH, INSTALL AND PLACE IN OPERATION AN ADDRESSABLE, SUPERVISED, GENERAL EVACUATION FIRE ALARM SYSTEM FOR THE BUILDING.
2. THE COMPLETED FIRE ALARM SYSTEM SHALL MEET ALL LOCAL AND STATE CODES.
3. EQUIPMENT AND COMPLETED INSTALLATION SHALL BE UL LISTED OR APPROVED AND SHALL MEET APPROVAL OF THE LOCAL FIRE DEPARTMENT, MASSACHUSETTS STATE FIRE MARSHALL, AUTHORITIES HAVING JURISDICTION AND SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE LATEST EDITION OF THE MASSACHUSETTS STATE BUILDING CODE, MASSACHUSETTS ELECTRICAL CODE, ADA CODE, NFPA 71, 72, 72E AND LIFE SAFETY CODE #101.
4. THE COMPLETE SYSTEM SHALL CONTAIN SMOKE DETECTION, HORN STROBE ALARMS, PULL STATIONS AND OTHER DEVICES AS SHOWN ON THE FLOOR PLANS.
5. THE OWNER SHALL BE RESPONSIBLE FOR TELEPHONE CONNECTION CHARGES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF TELEPHONE HOMERUN WIRING.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIRE ALARM TESTING AND CERTIFICATION CHARGES.

B. MAIN FIRE ALARM CONTROL PANEL (FACP)

1. ELECTRICAL CONTRACTOR SHALL PROVIDE AN ADDRESSABLE MAIN FIRE ALARM CONTROL PANEL.
2. THE SYSTEMS SHALL HAVE BUILT-IN 24 VDC POWER SUPPLY AND INTEGRAL BATTERY CHARGER.
3. TWENTY-FOUR (24) HOURS OF BATTERY STANDBY POWER SHALL BE PROVIDED WITH FIVE (5) MINUTES OF ALARM SIGNALING AT THE END OF THIS TWENTY-FOUR (24) HOUR PERIOD, AS REQUIRED BY NFPA 72, CHAPTER 4.4.1.5.3.1.
4. LIGHTNING PROTECTION SHALL BE INCLUDED WITHIN THE FACP TO PROTECT THE PANEL FROM LIGHTNING SURGES ON THE 120 VOLT SUPPLY CIRCUIT.

C. SEQUENCE OF OPERATION

1. REFER TO FIRE ALARM NARRATIVE FOR SEQUENCE OF OPERATION.

D. REMOTE DEVICES

1. SMOKE DETECTORS SHALL BE ADDRESSABLE PHOTOELECTRIC TYPE AND SHALL OPERATE AT 24 VDC.
2. HEAT DETECTORS SHALL BE ADDRESSABLE FIXED TEMPERATE TYPE AS INDICATED AND SHALL OPERATE AT 24VDC.
3. PULL STATIONS SHALL BE ADDRESSABLE, SEMI-FLUSH, DOUBLE ACTION BREAK ROD STATIONS.
4. HORN AND STROBE UNITS SHALL BE PROVIDED IN A COMMON ENCLOSURE. THE VISUAL STROBE SHALL MEET ALL REQUIREMENTS OF THE ADA CODE.
5. STROBE ONLY UNITS SHALL BE PROVIDED AND SHALL MEET ALL REQUIREMENTS OF NFPA AND ADA CODES.
6. ALL HORN STROBE UNITS AND STROBE ONLY UNITS SHALL BE SYNCHRONIZED.
7. PROVIDE A SUPERVISED EXTERIOR ROTATING BEACON 24 VDC WITH A RED LENS. BEACON SHALL MEASURE OVER FIVE (5) INCHES IN HEIGHT FOR VISIBILITY. LOCATION SHALL BE DETERMINED BY THE LOCAL FIRE DEPARTMENT.
8. KNOX BOX SHALL BE RECESSED MOUNTED NEAR THE FRONT ENTRY. BOX SHALL BE ALUMINUM WITH TAMPER SWITCH.

E. WIRING

1. ALL FIRE ALARM WIRE AND CABLE SHALL BE UL LISTED FOR FIRE ALARM USE.
2. THE FIRE ALARM SYSTEM SHALL BE A COMPLETE AUTOMATIC AND MANUAL, CLOSED CIRCUIT, CLASS A, 4-WIRE, CONNECTED AND LEFT IN FIRST-CLASS OPERATING CONDITION.
3. FIRE ALARM WIRING SHALL BE PLENUM RATED, TYPE FPLP, WITH RED OUTER JACKET. INSTALLATION SHALL MEET REQUIREMENTS OF NEC ARTICLE 770 AND 725. CONDUCTORS SHALL BE SOLID COPPER #14 MINIMUM, WITH LOW SMOKE, LOW FLAME TYPE JACKET.
4. FOR FIRE ALARM WIRING IN EXPOSED AREAS, PROVIDE TYPE THHN INSULATION. WIRE SIZE SHALL BE #14 AWG MINIMUM. ALL SURFACE MOUNTED WIRING RELATED TO THE FIRE ALARM SYSTEM SHALL BE INSTALLED IN TYPE EXIT CONDUIT.

F. SHOP DRAWINGS

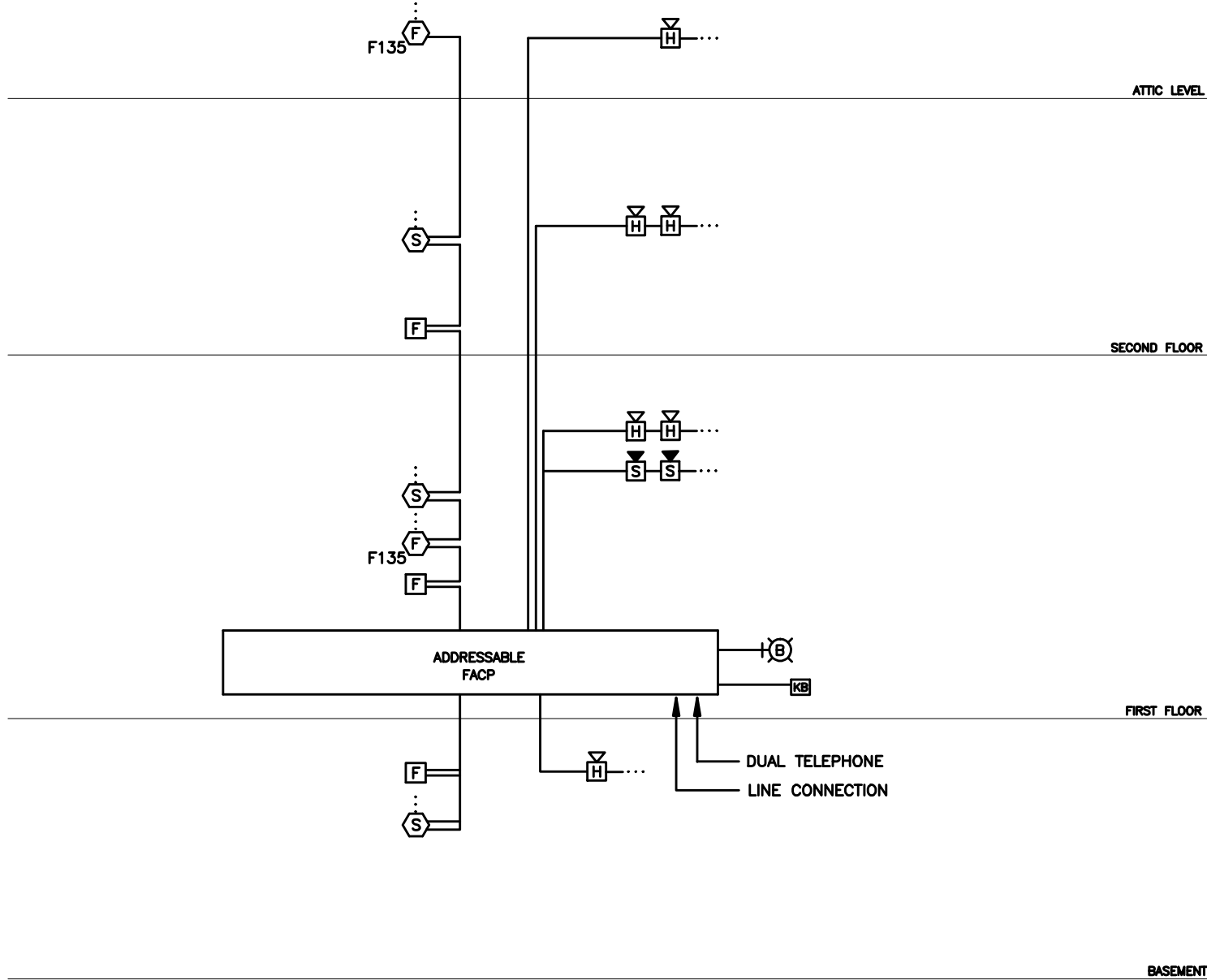
1. SHOP DRAWINGS SHALL INCLUDE BOTH EQUIPMENT CATALOG CUTS (PRODUCT DATA SHEETS).

G. TESTING

1. REFER TO FIRE ALARM NARRATIVE FOR FIRE ALARM TESTING REQUIREMENTS.

H. MANUFACTURERS

1. THE FIRE ALARM SYSTEM, DETECTION DEVICES AND MAIN FIRE ALARM PANEL SHALL BE MANUFACTURED BY A SINGLE MANUFACTURER. COMPLETE SYSTEM SHALL BE MANUFACTURED BY NOTIFIER FCI (FIRE CONTROL INSTRUMENTS), FIRE-LITE ALARMS OR EQUAL.

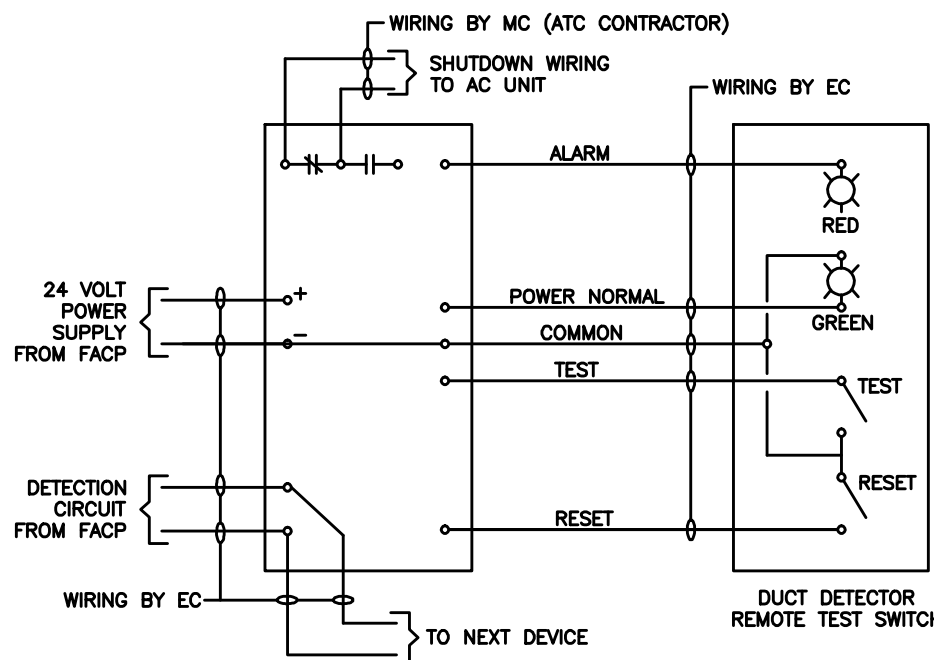


FIRE ALARM ONE-LINE DIAGRAM

SCALE: NTS

NOTES:

1. QUANTITY OF DEVICES SHOWN ARE DIAGRAMMATIC ONLY, SEE FLOOR PLANS FOR EXACT QUANTITIES AND LOCATIONS OF ALL DEVICES.
2. SEE SPECIFICATION FOR STANDARDS, SYSTEM OPERATION, MATERIALS AND TESTING REQUIREMENTS.
3. PROVIDE 1-#8G, 3/4" TO STREET SIDE OF WATER METER AND LABEL "FIRE DEPARTMENT CONNECTION, DO NOT REMOVE".



DUCT SMOKE DETECTOR WIRING DIAGRAM

SCALE: NTS

FIRE ALARM NARRATIVE

1. BUILDING ADDRESS: UNKNOWN
2. SUMMARY: THIS FIRE ALARM NARRATIVE IS PREPARED TO DESCRIBE THE DESIGN INTENT AND METHODOLOGY FOR THE BUILDING AT THE ABOVE REFERENCED ADDRESS. EQUIPMENT WILL BE UL LISTED AND MANUFACTURED BY A SINGLE EQUIPMENT SUPPLIER.
3. TYPE OF OCCUPANCY: ASSEMBLY-USE GROUP A2
4. DESIGN METHODOLOGY FOR PROTECTION OF OCCUPANTS: THE PURPOSE OF THIS PROJECT IS TO PROVIDE A COMPLETE NEW FIRE DETECTION AND ALARM SYSTEM IN ACCORDANCE WITH THE LATEST PROVISIONS OF THE STATE OF MASSACHUSETTS BUILDING CODE. A NEW ADDRESSABLE MAIN FIRE ALARM PANEL WILL BE INSTALLED AND LOCATED AT THE BUILDINGS MAIN ENTRANCE. NEW ADDRESSABLE, SMOKE DETECTORS, HEAT DETECTORS AND MANUAL PULL STATIONS ARE SHOWN ON THE DRAWINGS. NEW SYNCHRONIZED HORN STROBE UNITS AND STROBE ONLY UNITS ARE ALSO INDICATED. NOTIFICATION TO THE FIRE DEPARTMENT SHALL BE MADE VIA AUTODIALER TO A UL LISTED REMOTE SUPERVISING STATION.
5. AUTOMATIC SPRINKLER SYSTEM: THE BUILDING IS NOT EQUIPPED WITH AN COMPLETE AUTOMATIC SPRINKLER SYSTEM.
6. SITE ACCESS:

7. LOCATION OF THE FACP: THE MAIN FIRE ALARM CONTROL PANEL SHALL BE LOCATED AT THE SIDE ENTRANCE TO THE BUILDING. A REMOTE ANNUNCIATOR PANEL IS NOT SPECIFIED.

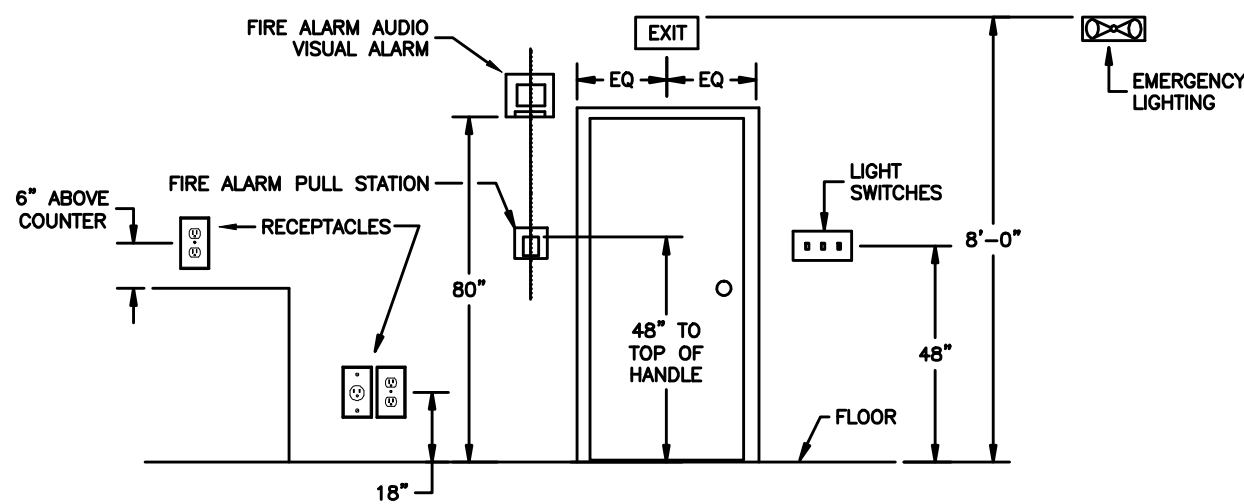
8. SEQUENCE OF OPERATION - GENERAL ALARM:

1. THE OPERATION OF ANY ADDRESSABLE MANUAL PULL STATION, HEAT DETECTOR, OR SYSTEM SMOKE DETECTOR SHALL RESULT IN THE FOLLOWING:
 - A. ALL ALARM NOTIFICATION DEVICES (HORN STROBES) SHALL SOUND AND STROBE LIGHTS SHALL FLASH.
 - B. MAIN FIRE ALARM LOCAL BUZZER SHALL SOUND.
 - C. ADDRESSABLE DEVICE IN ALARM SHALL INDICATE ON THE MAIN FIRE ALARM CONTROL PANEL. DESCRIPTION OF THE SPECIFIC ADDRESSABLE DEVICE IN ALARM SHALL BE SHOWN ON THE DISPLAY.
 - D. TRANSMIT SIGNAL VIA AUTODIALER TO A REMOTE SUPERVISING STATION.
2. THE CONTROL PANEL SHALL INDICATE THE DEVICE IN ALARM UNTIL MANUALLY RESET. THIS SHALL SILENCE THE PANEL BUZZER.

3. ALL ALARM NOTIFICATION DEVICES SHALL BE SILENCED BY ACTUATING A "SILENCE" SWITCH.

9. TESTING & CLOSEOUT:

1. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED FIRE ALARM TESTING.
2. PRIOR TO FORMAL FIRE DEPARTMENT TEST, THE CONTRACTOR SHALL CONDUCT A PRELIMINARY TEST. THE ELECTRICAL CONTRACTOR AND THE EQUIPMENT MANUFACTURER SHALL COMPLETELY TEST THE SYSTEM. THE MANUFACTURER SHALL ISSUE A LETTER OF ACCEPTABILITY STATING THAT ALL SYSTEM COMPONENTS ARE INSTALLED AND ALL REMOTE DEVICES ARE FUNCTIONING.
3. AFTER LETTER OF ACCEPTABILITY HAS BEEN RECEIVED FOR THE PRELIMINARY TEST, THE ELECTRICAL CONTRACTOR SHALL CONDUCT THE ACCEPTANCE TEST, AS MANY TIMES AS REQUIRED. THE ELECTRICAL CONTRACTOR, EQUIPMENT MANUFACTURER'S REPRESENTATIVE, OWNER'S REPRESENTATIVE, FIRE DEPARTMENT REPRESENTATIVE AND SERVICE COMPANY REPRESENTATIVE SHALL CONDUCT THE ACCEPTANCE TEST IN ACCORDANCE WITH NFPA 72. EVERY BUILDING FIRE ALARM DEVICE SHALL BE TESTED TO INSURE PROPER OPERATION AND CORRECT ANNUNCIATION AT THE CONTROL PANEL. AT LEAST ONE HALF OF ALL TESTS SHALL BE PERFORMED ON BATTERY STANDBY POWER.
4. WHEN THE TESTING HAS BEEN COMPLETED TO THE SATISFACTION OF BOTH THE CONTRACTOR'S JOB FOREMAN AND THE REPRESENTATIVES OF THE MANUFACTURER AND OWNER, A LETTER SHALL BE ISSUED BY THE ELECTRICAL CONTRACTOR ATTESTING TO THE COMPLETION OF ACCEPTANCE TESTING.



MOUNTING HEIGHT DETAIL

SCALE: NTS

NOTES:

1. THIS DETAIL INDICATES CENTERLINE FOR FIRE ALARM PULL STATION, SWITCHES AND RECEPTACLES. HOWEVER, THIS SAME CENTERLINE PRINCIPLE SHALL BE FOR ALL GROUP MOUNTED ELECTRICAL DEVICES. IF FIRE ALARM IS ON SAME SIDE OF DOOR AS SWITCHES, PULL STATION SHALL BE HORIZONTALLY SEPARATED BY A MINIMUM OF 18". THIS DETAIL IS A GENERAL ARRANGEMENT OF DEVICES, ARCHITECT PLANS TAKE PRECEDENCE FOR EXACT LOCATIONS.

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REV	DATE	ISSUED FOR
1	1/27/12	ISSUED FOR BID
2	1/6/12	ISSUED TO MHC
3	12/2/11	PROGRESS SET

FIRE ALARM LEGEND,
DIAGRAMS AND
NARRATIVE

DATE: 1/27/11

SCALE: AS NOTED

DWG. NO.

FA1