

DIVISION 16 - FIRE ALARM

PART 1 - GENERAL

1.1 DESCRIPTION OF THE WORK

- A. Work under this section includes, but is not necessarily limited to, furnishing and installing the following:
 1. Fire alarm panel, wiring and devices
- B. All work shall be complete and items, equipment, etc., shall be electrically connected for proper and correct operation.
- C. All work under this contract shall be installed in accordance with the latest edition of the following codes and standards insofar as they apply:
 1. The 2008 National Electrical Code.
 2. NFPA 72
 3. Underwriter's Laboratories, Inc., Standards and approved listings.
 4. Electrical Testing Laboratories standards.
 5. North Carolina Building Code, Latest Edition and Revisions.
 6. All local codes and ordinances.
- D. The Fire Alarm Contractor shall be licensed in the State of North Carolina and have all local licenses required for the work.
- E. Obtain all permits, licenses, inspections, etc., required for the work and pay for the same. Furnish final certificate of inspection and approval from the electrical inspector having jurisdiction prior to acceptance of the work.
- F. All work shall be done by skilled mechanics and shall present a neat, trim, workmanlike condition when complete.

1.2 INTENT

- A. The intent of these specifications and the accompanying drawings is to convey as reasonably as possible the requirements for a complete job ready for the building to operate. The Fire Alarm Contractor shall take this into consideration and include in his bid allowance for contingencies as well allow him to provide minor pieces of equipment and labor not specifically indicated but required for the job to operate properly, at no additional cost to the Owner.

1.3 COORDINATION

- A. Coordinate work with other contractors. Notify Architect of apparent conflicts early to expedite construction. If structural damage appears imminent, stop work and notify Architect for a decision before resuming operations.
- B. Locations shown are approximate. The drawings do not give exact details as to elevations and locations of various pipes, fittings, ducts, conduit, etc., and do not show all offsets and other installation details which may be required. Coordinate all locations with architect before any rough-in.

1.4 SHOP DRAWINGS

- A. Provide complete shop drawings per NCSFC section 907.1 to the local fire marshal including:
 1. Floorplan with room names
 2. Location of all FA devices
 3. Location of panels
 4. Power connections
 5. Battery calculations
 6. Conductors types and sizes
 7. Voltages drop calculations
 8. Equipment cut-sheets, model numbers, etc.

PART 3 - EXECUTION

3.1 FIRE ALARM SYSTEM EQUIPMENT

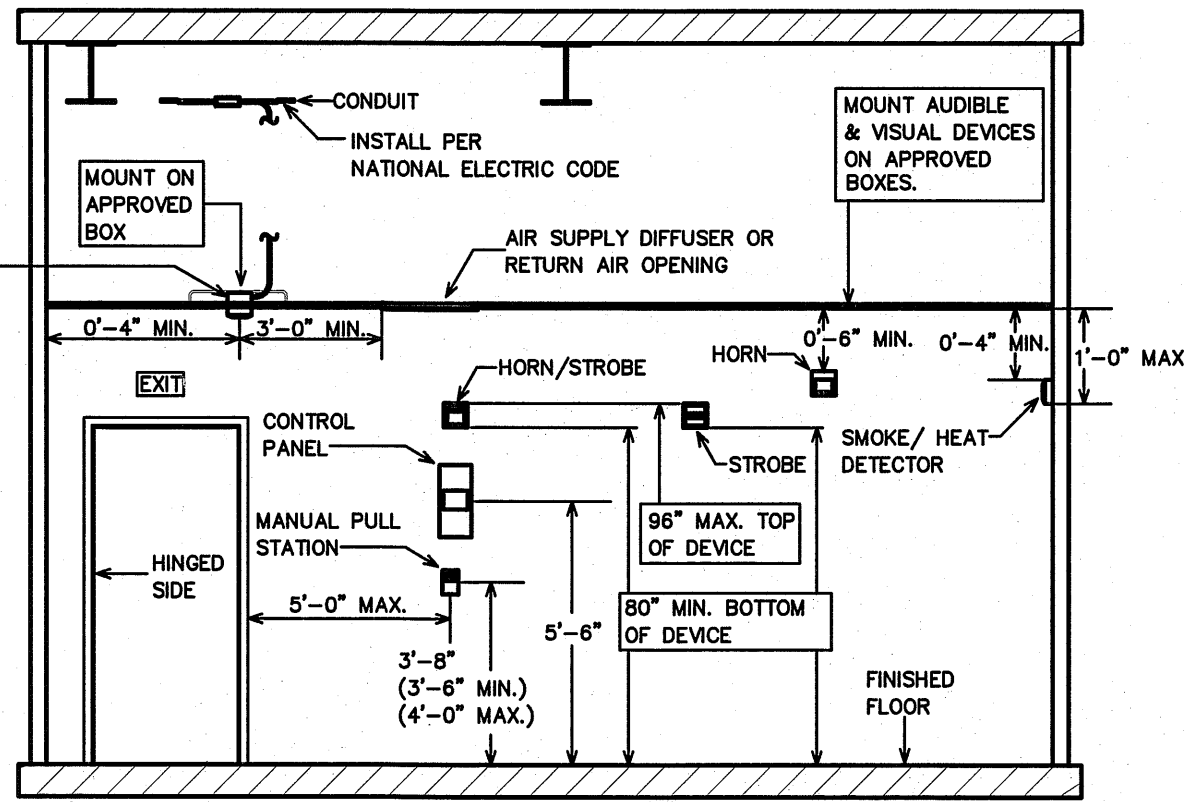
- A. Provide a complete operable fire alarm system as shown on the drawings and as required by State, and Local codes.
- B. The main control panel is existing. The unit is an addressable type. Verify spare capacity is available prior to bid. Expand as required.
- C. Provide a remote key test switch for the duct detectors. Locate as directed by the local AHI.
- D. All fire alarm system cables shall be installed in conduit. Size as required by the equipment supplier. Provide a submittal of all devices and a riser diagram for approval before installation of any equipment.
- E. The return air smoke detectors will be furnished by the E.C. to the HVAC contractor for installation. The HVAC contr shall be responsible for the shut down of all AHU'S. The E.C. shall be responsible for all connections to the fire alarm controller.

3.2 CLEAN UP

- A. During construction, keep the site clean of debris. Upon completion, and before final inspection, clean up the premises to remove all evidence of work. In addition upon completion of construction leave equipment clean.

3.3 GUARANTEE

- A. Guarantee all materials and labor included in the fire alarm work for a period of one year from date of final acceptance by the Owner. Any part or parts of the work or equipment which prove to be defective during the guarantee period shall be replaced at no additional cost to the Owner.



4
FA-1 SCALE: NOT TO SCALE

SYSTEM INPUTS	SYSTEM OUTPUTS																																						
	CONTROL UNIT ANNUNCIATION																NOTIFICATION								REQUIRED FIRE SAFETY CONTROL							SUPPLEMENTAL							
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG						
1 SMOKE DETECTORS																																							
2 IN-DUCT SMOKE DETECTORS																																							
3 LINEAR BEAM SMOKE DETECTORS																																							
4 ELEVATOR (PR) SMOKE/THERMAL DETECTORS																																							
5 ELEVATOR (ALT) SMOKE/THERMAL DETECTORS																																							
6 ELEVATOR MECH ROOM SMOKE/THERMAL DETECTORS																																							
7 ELEVATOR PITS SMOKE/THERMAL DETECTORS																																							
8 THERMAL DETECTORS																																							
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5 FIRE ALARM MATRIX
SCALE: NOT TO SCALE

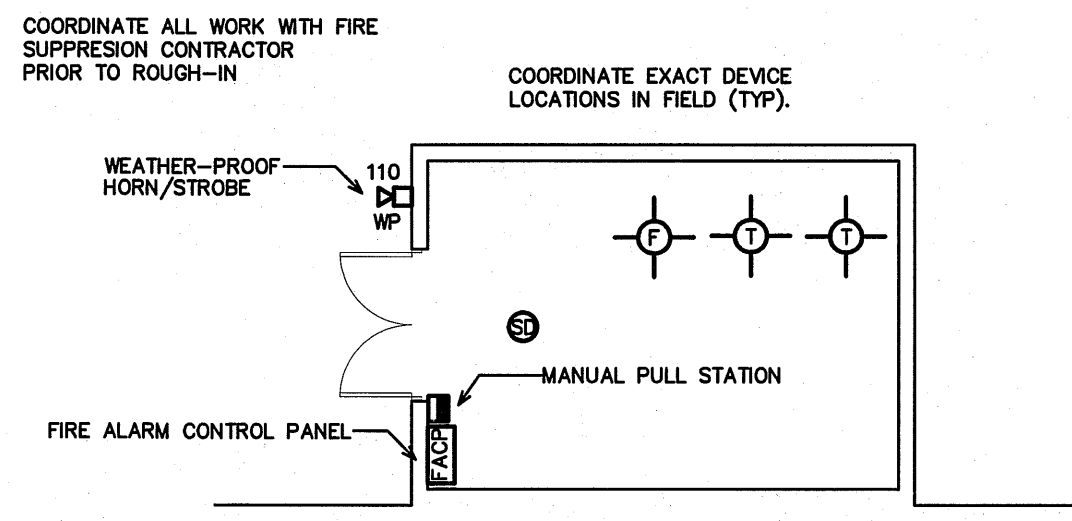
PART 2 - PRODUCTS AND MATERIALS

2.1 GENERAL

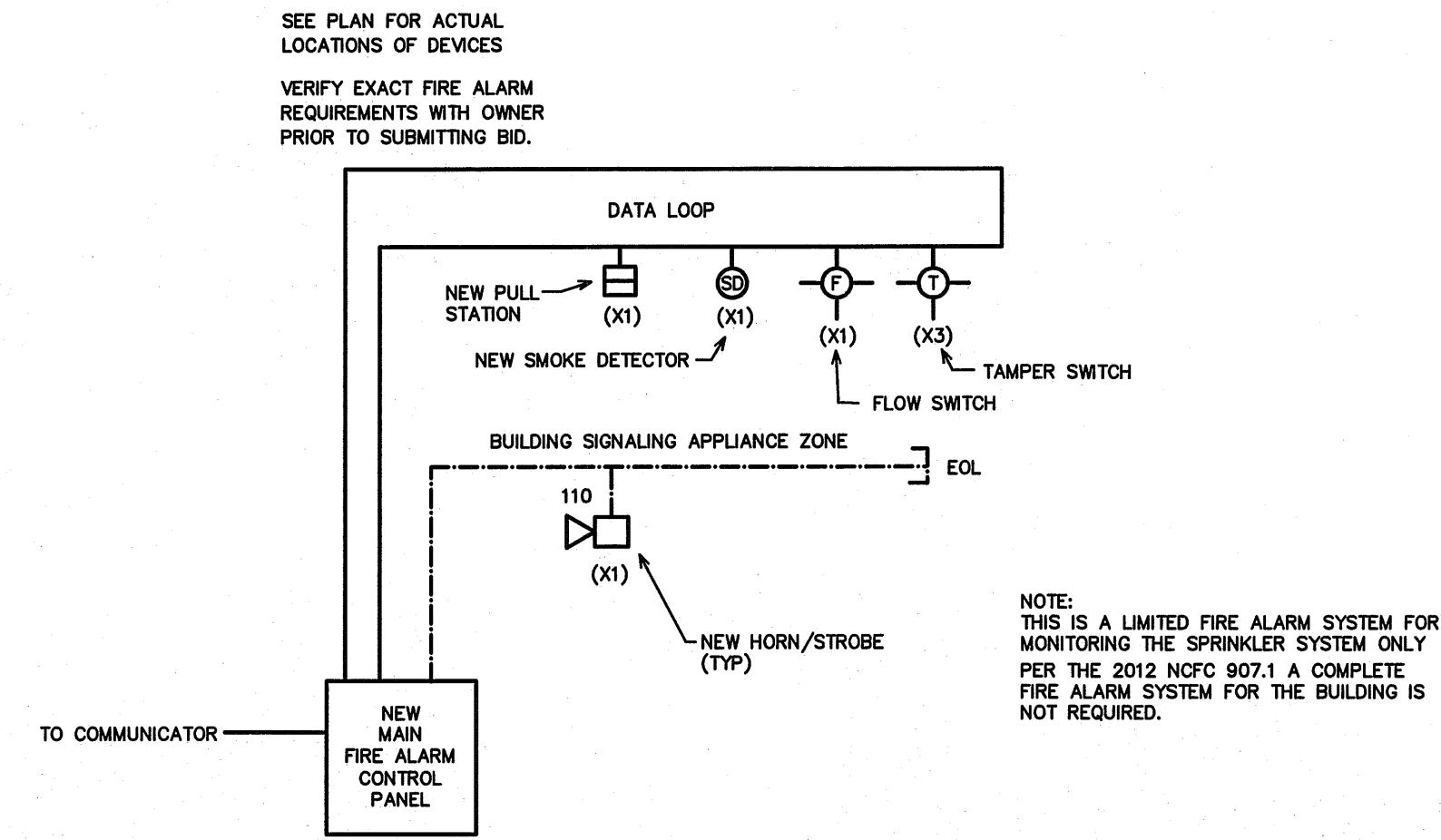
- A. All material shall be new and shall bear the manufacturer's name, trade name, and UL label where such standard has been established for the particular material. Materials shall be the standard products of manufacturer's regularly engaged in the manufacturer of the required type of equipment and the manufacturer's latest approved design.
 1. Boxes installed in concealed locations shall be set flush with the finished surfaces.
 2. Provide rated boxes in all fire barriers & walls installed per code.

GENERAL FIRE ALARM NOTES:

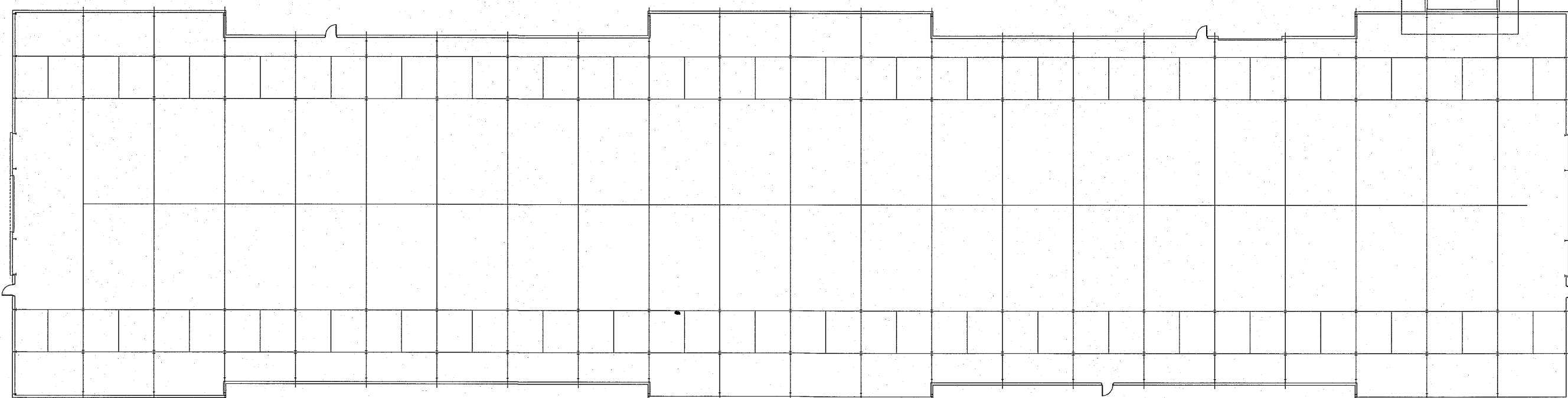
1. HORN/SIROBES MUST BE WITHIN 15'-0" OF THE END OF EACH CORRIDOR. PROVIDE STROBES IN ALL CORRIDORS, BATHROOMS, BREAK ROOMS AND STORAGE AREAS. INSTALL PER ADA.
2. CANDELA RATINGS SHOULD BE LABELED ON ALL STROBES.
3. ALL STROBES WITHIN SIGHT OF EACH OTHER MUST BE SYNCHRONIZED PER NFPA 72 UNLESS MAXIMUM REQUIRED SEPARATION IS OBTAINED.
4. MAIN FIRE ALARM PANEL LOCATED IN THE FIRE PUMP ROOM. VERIFY LOCATION.
5. VERIFY THAT A SD IS ADJACENT TO THE FACP.
6. ALL EXPOSED WIRE SHALL BE IN CONDUIT. PLENUM RATED CABLE MAY BE USED WHERE CONCEALED IN ALL AREAS EXCEPT ASSEMBLY AREAS. ALL WIRING IN ASSEMBLY AREAS MUST BE IN CONDUIT.
7. ALL DEVICES, PANELS, ETC MUST BE BY SAME MANUFACTURER AND COMPATIBLE. PROVIDE ALL ITEMS REQUIRED FOR A COMPLETE SYSTEM MEETING ALL CODES.
8. ALL WORK MUST MEET NFPA 72 AND APPLICABLE LOCAL CODES AND ORDINANCES. COORDINATE THE INSTALLATION WITH THE LOCAL FIRE MARSHALL.
9. MOUNT WALL-MOUNT HORN STROBES SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80" AND NOT GREATER THAN 96" ABOVE THE FINISHED FLOOR.
10. MOUNT MANUAL PULL STATIONS SUCH THAT THE OPERABLE PART OF THE DEVICE IS NOT LESS THAN 42" AFF AND NOT MORE THAN 54" AFF.



2
FA-1 SCALE: 1/16 = 1'-0"



3
FA-1 SCALE: NOT TO SCALE



1
FA-1 SCALE: NOT TO SCALE

FIRE ALARM LEGEND

- HORN/SIROBES SIGNALING DEVICE
- CEILING MOUNTED HORN/SIROBES SIGNALING DEVICE
- SMOKE DETECTOR
- MANUAL PULL STATION
- FIRE ALARM CONTROL PANEL
- FLOW SWITCH
- TAMPER SWITCH