

FIRE ALARM GENERAL NOTES:

- MANUAL PULL STATIONS SHALL BE LOCATED NOT MORE THAN 6-FEET FROM BUILDING EXIT.
- SUBMIT SHOP DRAWINGS INDICATING LAYOUT, INTERCONNECTIONS, AND WIRING. SEE SPECIFICATIONS.
- SEE FOOD SERVICE FOR ANSUL SUPPRESSION SYSTEM CONNECTIONS.
- SEE ELECTRICAL SUITE PLANS FOR ADDITIONAL SINGLE STATION SUITE DETECTOR REQUIREMENTS.
- ADDITIONAL TAMPER AND FLOW SWITCHES MAY BE LOCATED IN STAIRWELLS AND OTHER LOCATIONS THAN MECHANICAL ROOM. COORDINATE WITH FIRE SPRINKLER DESIGNER.
- SMOKE DETECTORS SHALL BE PHOTO ELECTRIC TYPE UNLESS OTHERWISE NOTED.
- PROVIDE SYSTEM SMOKE DETECTOR ABOVE FIRE ALARM EXPANSION PANEL LOCATIONS.
- ALL FIRE ALARM WIRING MUST BE IN STRICT COMPLIANCE WITH APPLICABLE SECTIONS OF THE NATIONAL ELECTRICAL CODE AND ALL APPLICABLE NFPA STANDARDS.
- INSTALLATION MUST COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR LOCAL LAWS, REGULATIONS, CODES, AND SPECIFICATIONS.
- ALL INSTALLATION MUST BE APPROVED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- TO AVOID CONTAMINATION AND DUST ACCUMULATION IN THE SMOKE DETECTORS, IT IS RECOMMENDED THAT THE SMOKE DETECTORS NOT BE INSTALLED UNTIL AFTER CONSTRUCTION IS COMPLETED AND THE SUBJECT AREA HAS BEEN CLEANED. THE SUPPLIER IS NOT RESPONSIBLE FOR DUST ACCUMULATION IN SMOKE DETECTORS AND WILL NOT WARRANT DEVICES THAT HAVE NOT BEEN PROPERLY MAINTAINED. WHEN DETECTORS ARE INSTALLED, PROTECTIVE COVERS SHALL BE INSTALLED OVER EACH DETECTOR AND REMOVED BY AUTHORIZED SERVICE PERSONNEL.
- ALL FIRE ALARM SYSTEM WIRING SHALL BE CLEAR FROM SHORTS, OPENS, AND GROUNDS.
- WHERE CONDUCTORS ARE RUN IN CONDUIT, USE ONLY APPROVED CABLE IN RACEWAYS, PIPES, OR CONDUITS.
- WIRING RUNS SHOW DIAGRAMMATIC PURPOSES AND ARE PROVIDED ONLY TO ILLUSTRATE ROUTING OF CIRCUIT CONDUCTORS. EXACT LOCATIONS AND METHODS OF INSTALLATION MAY VARY DUE TO FIELD CONDITIONS AND ARE TO BE DETERMINED BY THE INSTALLATION CONTRACTOR.
- SIGNALING CIRCUIT WIRE RUNS ARE CRITICAL. SOME MINOR DEVIANCE IS BUILT INTO BATTERY CALCULATIONS. HOWEVER, ANY SIGNIFICANT INCREASE IN LENGTH OF WIRE MAY AFFECT CIRCUIT CONFIGURATIONS.
- ALL DEVICES SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- SMOKE DETECTORS SHALL BE INSTALLED ACCORDING TO NFPA 72 AND MANUFACTURER'S RECOMMENDATIONS FOR THE AREA OF INTENT. SMOKE DETECTORS SHALL BE LOCATED A MINIMUM 36" FROM SUPPLY & RETURN AIR REGISTERS.
- ALL WIRING IN ELEVATOR EQUIPMENT ROOM SHALL BE WITHIN CONDUIT TO ASSURE THE INTEGRITY OF THE ROOM. THIS CONDUIT SHALL BE SEALED USING APPROVED LISTED MATERIALS AND METHODS WHERE IT PENETRATES THE FIRE WALL ASSEMBLY.
- ANY LISTED RELAY OR OTHER LISTED APPLIANCE CONNECTED TO THE FIRE ALARM SYSTEM USED TO INITIATE CONTROL OF FIRE SAFETY FUNCTIONS SHALL BE LOCATED WITHIN 36" OF THE CONTROLLED CIRCUIT OR APPLIANCE (FAIL-SAFE CONFIGURATIONS EXCEPTED).
- ALL POWER LIMITED CIRCUITS SHALL BE PERMANENTLY IDENTIFIED AT THE FACP AND MAIN JUNCTION BOXES.
- VISIBLE NOTIFICATION APPLIANCES SHALL BE CONFIGURED TO FLASH IN SYNCHRONIZATION AS REQUIRED.
- FIRE ALARM SYSTEM CONTROL UNITS (FACP AND INTELLIGENT POWER MODULES) SHALL EACH BE SUPPLIED BY A DEDICATED 120VAC BRANCH CIRCUIT (ONE CIRCUIT PER CONTROL UNIT, OR AS OTHERWISE REQUIRED) FROM A 20 AMP EMERGENCY PANEL. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A LOCK-OUT DEVICE AND BE IDENTIFIED AT THE BREAKER. EACH CONTROL UNIT SHALL BE EQUIPPED WITH DEDICATED BACKUP BATTERIES (SEE CALCULATIONS FOR MINIMUM BATTERY SIZE).
- THE DACT (COMMUNICATOR) BUILT INTO THE FACP WILL BE EQUIPPED WITH TWO LOOP START TELEPHONE LINES AND PROGRAMMED FOR TWO TELEPHONE NUMBER DIALING. LOCAL TROUBLE SIGNAL WILL SOUND IF TELEPHONE LINE FAILURE OCCURS. FAILURE OF EITHER TELEPHONE LINE MUST BE TRANSMITTED WITHIN 4 MINUTES OVER THE SECOND LINE. LINES THAT ARE PROVIDED THROUGH A CENTREX OF OTHER TYPE SYSTEM WHERE ACCESS NUMBERS MUST BE USED TO OBTAIN AN OUT-BOUND LINE MUST HAVE 24-HOUR STANDBY CURRENT AVAILABLE AT THE K.S.U. IF NOT AVAILABLE, 2 LOOP START PHONE LINES BY THE LOCAL PHONE COMPANY MUST BE MADE AVAILABLE TO BE USED FOR COMMUNICATION BY THE DACT. THERE SHALL BE NO MIXING OF THE TYPES OF LINES MADE. IF LONG DISTANCE TELEPHONE SERVICE (INCLUDING WATTS) IS USED, THE SECOND TELEPHONE NUMBER SHALL BE PROVIDED BY A DIFFERENT LONG DISTANCE PROVIDER, WHERE AVAILABLE. THE TRANSDUCER WILL BE PROGRAMMED TO INITIATE AND COMPLETE A TEST SIGNAL TRANSMISSION ONCE EVERY 24 HOURS. THE EQUIPMENT AND MATERIAL USED ARE TO BE STATE FIRE MARSHALL APPROVED FOR TRANSMISSION OF SIGNALS AS SET FOR BY NFPA 72.
- THE SYSTEM SHALL BE GROUNDED IN ACCORDANCE TO MANUFACTURER'S INSTRUCTIONS AND NEC.
- ALL POWER LIMITED WIRING SHALL BE SEPARATED FROM NON-POWER LIMITED ELECTRIC LIGHT POWER AND CLASS 1 CIRCUITS BY A MINIMUM OF 2 INCHES OR AS OTHERWISE REQUIRED.
- FACP SHALL BE INSTALLED 72" ABOVE FINISHED FLOOR TO THE TOP OF THE BOX.
- SMOKE DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72 AND MANUFACTURER'S RECOMMENDATION FOR THE AREA OF INTENT.
- WORST CASE VOLTAGE FOR NOTIFICATION APPLIANCES SHALL NOT DROP BELOW MANUFACTURER'S LISTING FOR MINIMUM VOLTAGE. FOR THE GENTEX COMMANDER SERIES, THIS VALUE IS 16 VOLTS.
- WIRING SHALL NOT BE LOOPED THROUGH DEVICES. WIRE MUST BE CUT FOR IN AND OUT CONNECTIONS.
- POINT, COMMON ANNUNCIATION, AND T-TAPPING IS PROHIBITED. DOOR HOLDER CIRCUITS EXCEPTED.
- ALL INITIATING, NOTIFICATION, AND DATA COMMUNICATION CIRCUITS SHALL BE SUPERVISED.
- THE SYSTEM SHALL BE ELECTRICALLY MONITORED FOR INTEGRITY SO THAT THE OCCURRENCE OF A SINGLE OPEN OR GROUND FAULT ON ANY FIELD WIRING OR FAILURE OF PRIMARY POWER SUPPLY WILL INITIATE A TROUBLE SIGNAL AT THE FACP AND THE REMOTE ANNUNCIATOR(S) AND A TROUBLE SIGNAL WILL BE TRANSMITTED TO THE APPROVED CENTRAL MONITORING STATION FOR APPROPRIATE ACTION.
- 24-HOUR EMERGENCY RESPONSE NUMBER FOR THE APPROVED CENTRAL MONITORING STATION SHALL BE POSTED ON THE FACP.
- CERTIFICATE OF COMPLETION SHALL BE PROVIDED AT FIELD TEST.
- THE HVAC SYSTEM SHALL BE APPROPRIATELY BALANCED PRIOR TO TESTING OF THE DUCT MOUNTED SMOKE DETECTORS. CONTRACTORS SHALL BE CAPABLE OF PERFORMING AIR PRESSURE DIFFERENTIAL TESTING OF THE DUCT MOUNTED SMOKE DETECTOR TO VERIFY THE PROPER PLACEMENT OF THE DEVICE.
- SUITE SMOKE DETECTORS IN SAME SUITE SHALL BE CONNECTED IN TANDEM AND POWERED FROM SAME 120V CIRCUIT.
- ALL ELECTRICAL PENETRATIONS MADE IN FIRE-RESISTANT-RATED WALLS SHALL BE FIRE STOPPED USING APPROVED METHODS AND MATERIALS IN ACCORDANCE WITH NEC ARTICLE 300.21
- VERIFY SEQUENCE OF OPERATION WITH OWNER AND LOCAL AHJ PRIOR TO SYSTEM PROGRAMMING.

SEE SMOKE CONTROL SHEETS SC1.1-SC2.1 FOR ADDITIONAL FIRE ALARM REQUIREMENTS.

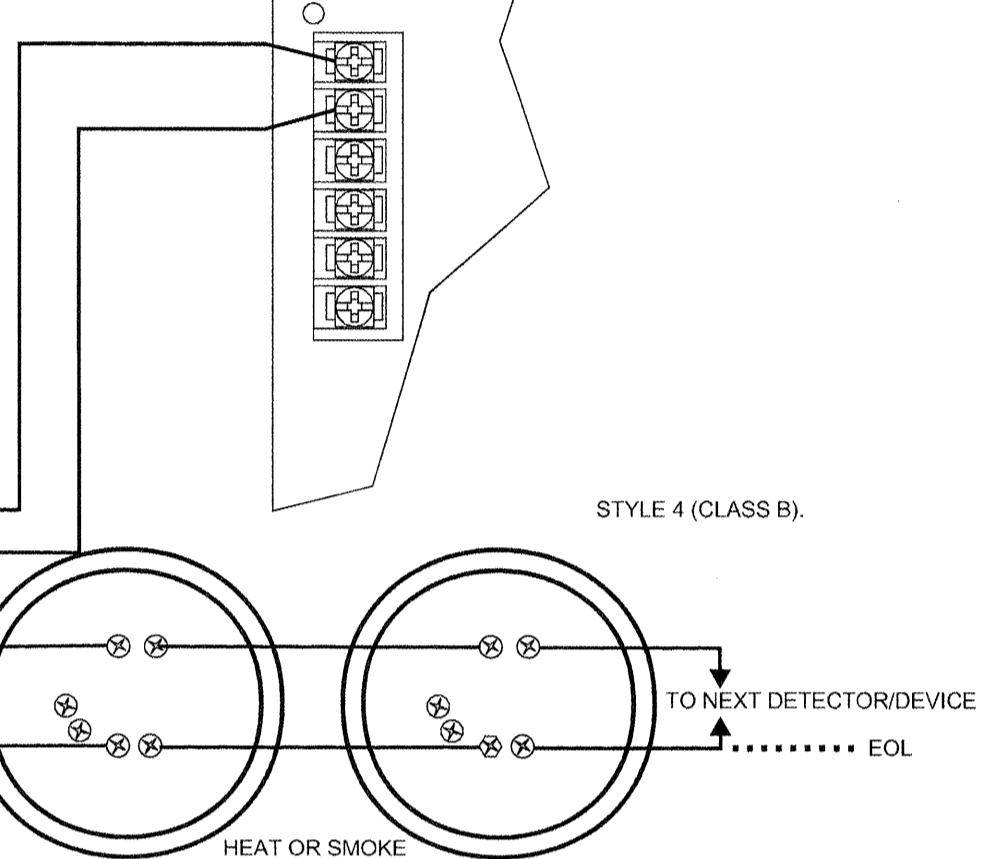
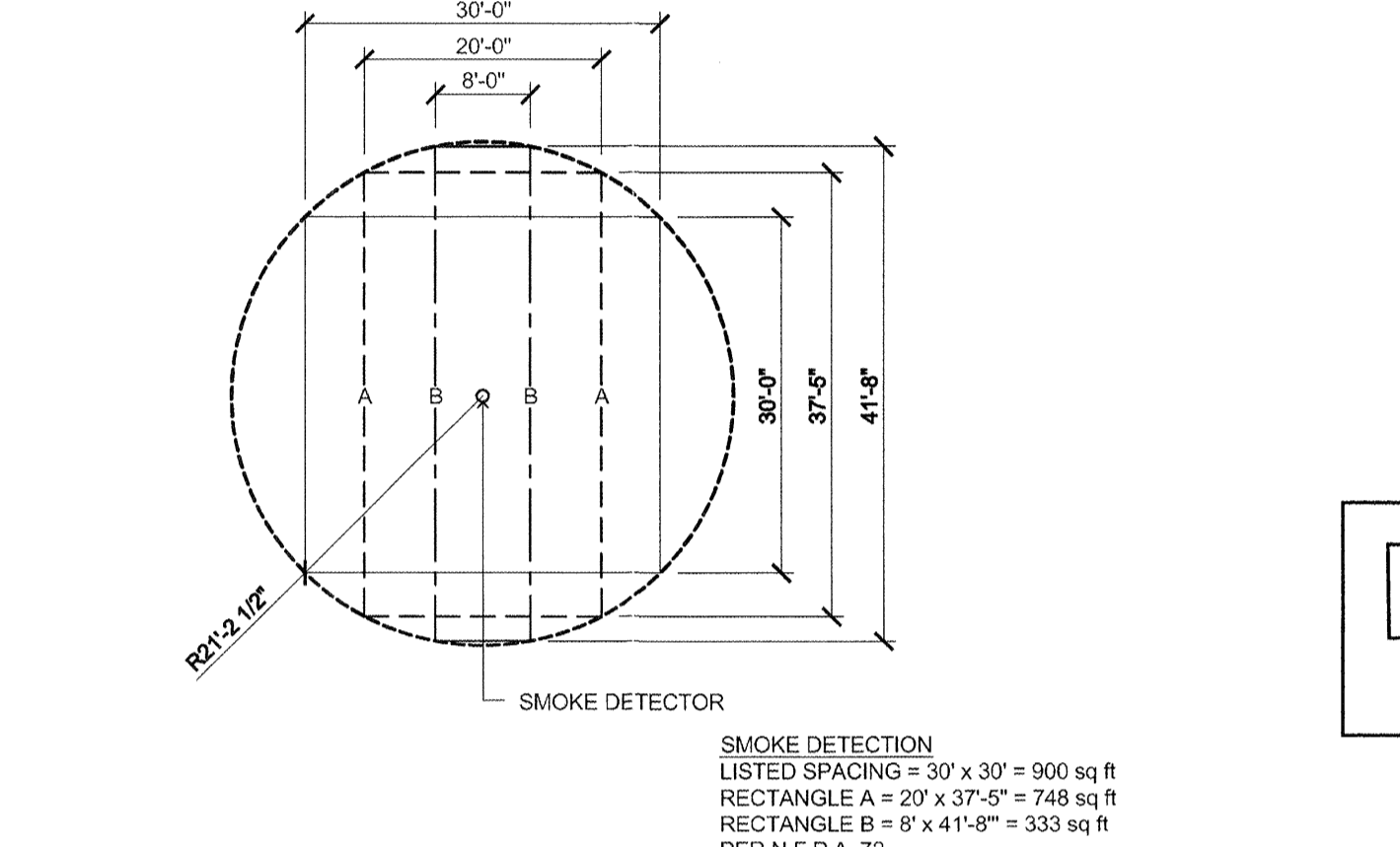
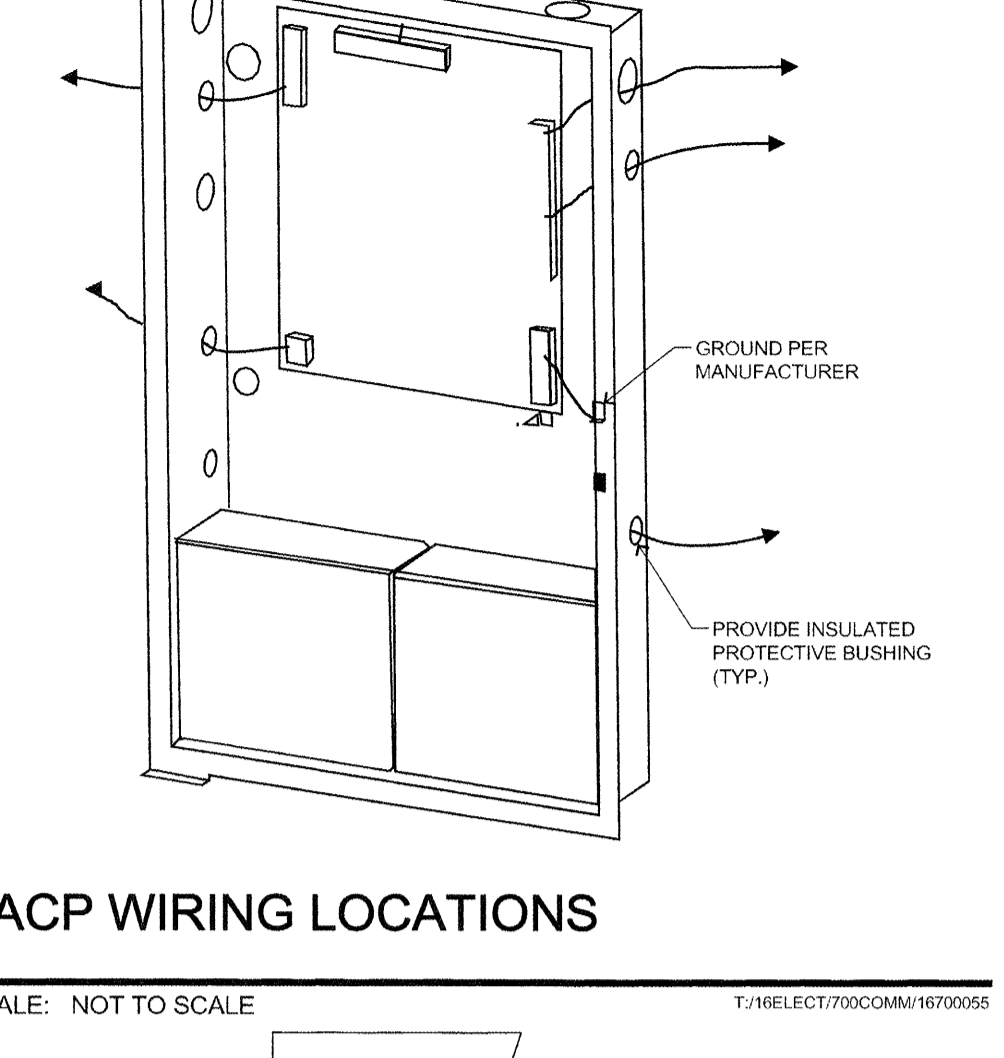
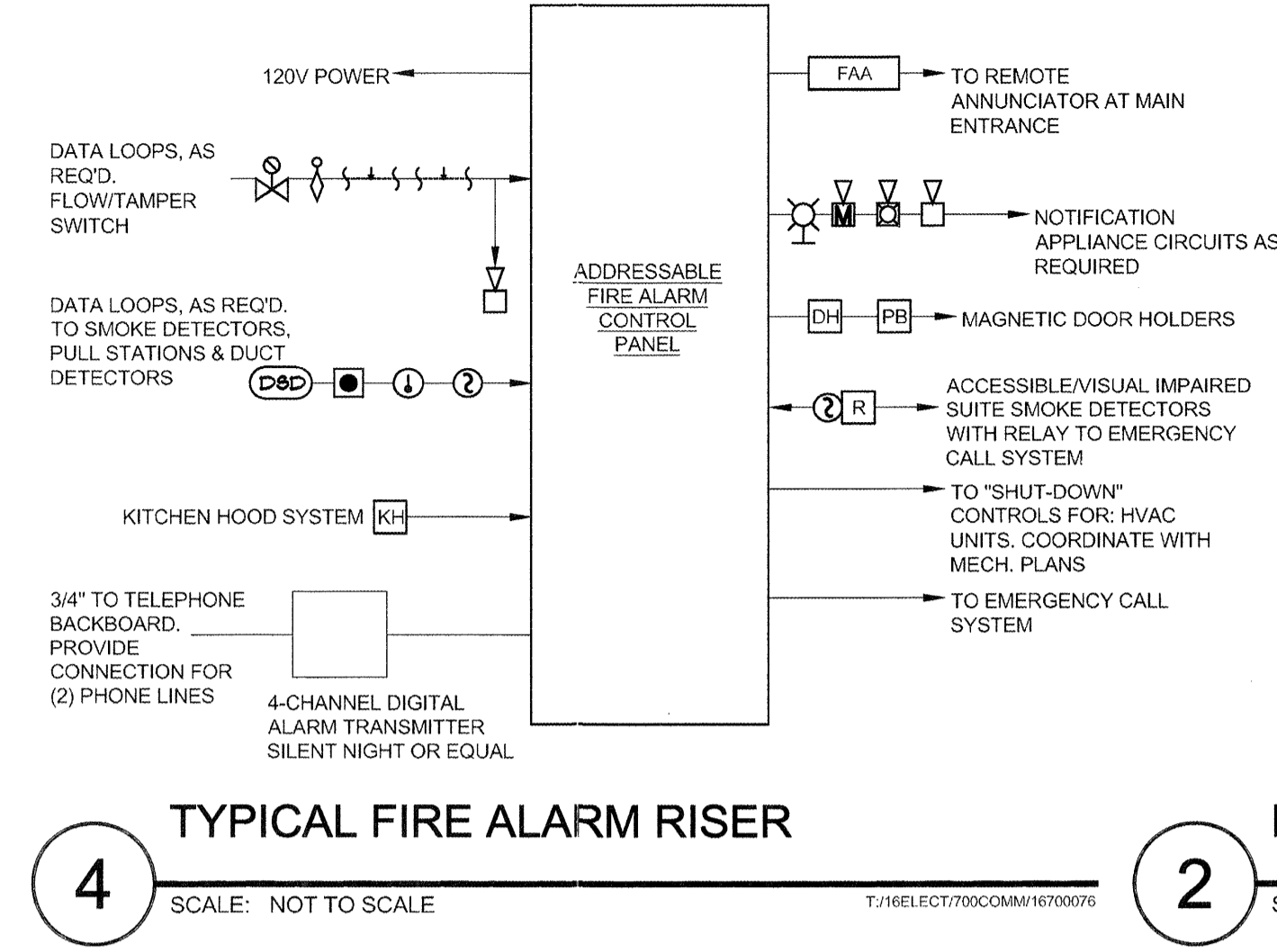
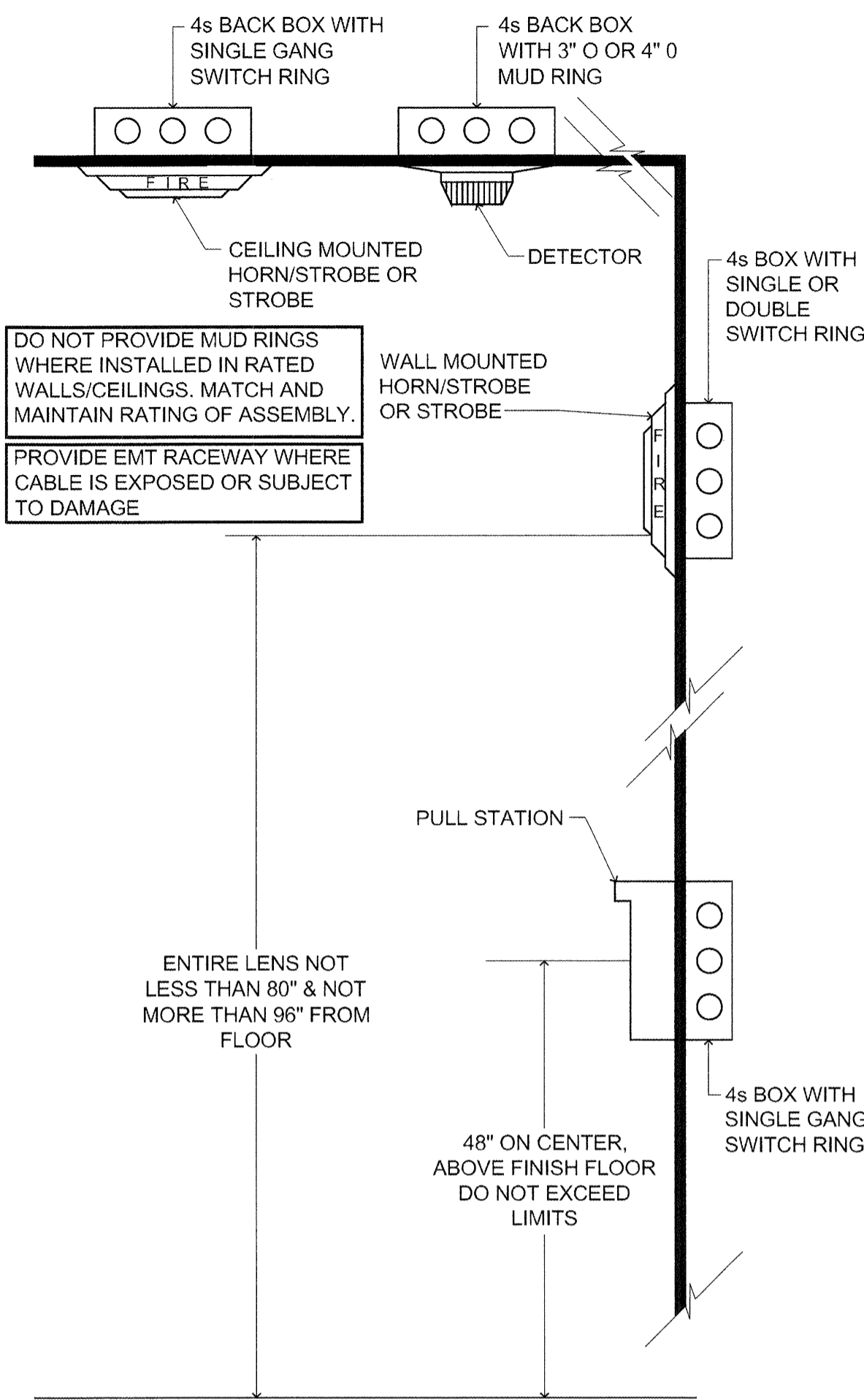
WIRE SCHEDULE	
WIRE	APPLICATION
18-2 TP	SIGNALING LINE CIRCUIT (SLC)
14-2 TP	NOTIFICATION APPLIANCE CIRCUIT (NAC)
18-4 FPL	SBUS - DATA CIRCUIT
18-4 FPL	DUCT SMOKE DET REMOTE TEST STATION
CAT 5	PHONE LINE
18-2 P	INITIATING DEVICE CIRCUIT
14-2 P	24 VDC POWER
12-3 THHN	120 VAC POWER

ALL LOW VOLTAGE WIRE SHALL BE A MINIMUM OF FPL RATING PER NEC, 760. T-TAPS ARE ALLOWED ONLY WHERE SHOWN.

P - Pair
TP - Twisted Pair
TSP - Twisted Shielded Pair
TPSS - Twisted Pair Shielded Strand

FPL - General Fire Wire
FPLR - Riser Fire Wire
FPLP - Plenum Fire Wire

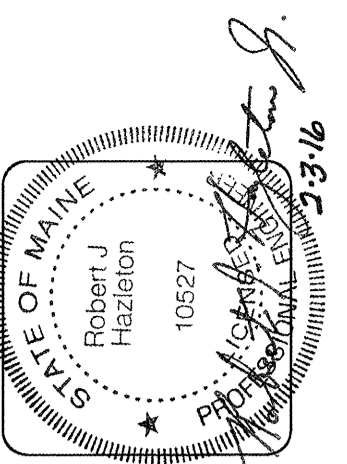
PROVIDE LOW FREQUENCY NOTIFICATION IN SLEEPING ROOMS.



FIRE ALARM SEQUENCE OF OPERATION

	ANNUNCIATE FACP ALARM	ANNUNCIATE FACP TROUBLE	ANNUNCIATE FACP SUPERVISORY	ANNUNCIATE FACP WATERFLOW	TRANSMIT SIGNAL TO CENTRAL STATION	ACTIVATE AUDIBLE AND VISUAL ALARM SIGNALS	ACTIVATE OUTDOOR A/V SIGNAL ABOVE FDC	ACTIVATE A/V SIGNALS IN HEARING IMPAIRED ROOMS	AUDIBLE SIGNAL FROM DETECTOR SOUNDER BASE	AUDIBLE SIGNAL FROM DETECTOR SOUNDER BASE	CLOSE FIRE-SMOKE DAMPERS	SHUTDOWN HVAC UNITS	RELEASE MAGNETIC DOOR HOLDER DEVICES	SHUTDOWN ELEVATOR 208V POWER	ELEVATOR RECALL TO PRIMARY EGRESSES LEVEL	ELEVATOR RECALL TO ALTERNATE EGRESSES LEVEL	FLASH ELEVATOR FIRE HAT	ANNUNCIATE EMERGENCY CALL SYSTEM	ACTIVATE ATRIUM SMOKE CONTROL SYSTEM	ACTIVATE VOICE EVACUATION SYSTEM	
SUITE SYSTEM SMOKE / CO ALARM			YES		YES					YES**									YES**		
HEARING IMPAIRED SUITE SMOKE / CO DETECTOR			YES		YES		YES*		YES										YES**		
ATRIUM AREA SMOKE DETECTOR	YES				YES	YES		YES	YES	YES	YES	YES	YES							YES	YES
COMMON AREA SPOT-TYPE CO DETECTORS			YES		YES				YES	YES											
AREA SPOT-TYPE SMOKE AND HEAT DETECTORS	YES				YES	YES		YES	YES	YES	YES	YES	YES								
MANUAL PULL STATIONS	YES				YES	YES		YES	YES	YES	YES	YES	YES								
KITCHEN HOOD SUPPRESSION SYSTEM	YES				YES	YES		YES	YES	YES	YES	YES	YES								
SMOKE DETECTOR ELEV LOBBY GROUND LEVEL	YES				YES	YES		YES	YES	YES	YES	YES	YES			YES					
SMOKE DETECTOR ELEV LOBBY ALTERNATE LEVEL	YES				YES	YES		YES	YES	YES	YES	YES	YES		YES						
SMOKE DETECTOR ELEVATOR EQUIPMENT ROOM	YES				YES	YES		YES	YES	YES	YES	YES	YES			YES	YES				
SMOKE DETECTOR ELEVATOR SHAFT	YES				YES	YES		YES	YES	YES	YES	YES	YES		YES		YES				
HEAT DETECTOR ELEV EQUIP ROOM AND SHAFT	YES				YES	YES		YES	YES	YES	YES	YES	YES	YES							YES
FIRE SPRINKLER WATERFLOW ALARM	YES			YES	YES	YES	YES	YES	YES	YES	YES	YES	YES							YES	YES
FIRE SPRINKLER TAMPER SWITCH			YES		YES																
VENT DUCT SMOKE DETECTOR			YES		YES						YES	YES									
POWER FAILURE		YES			YES								YES	YES							

* IN THE HEARING IMPAIRED SUITE WHERE DETECTOR IS LOCATED ONLY.
** IN SUITE WHERE DETECTOR IS LOCATED.



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FIRE ALARM DETAILS

DATE: 8/28/2015
REVISED DATE: 9/22/2015
SHEET E4.4