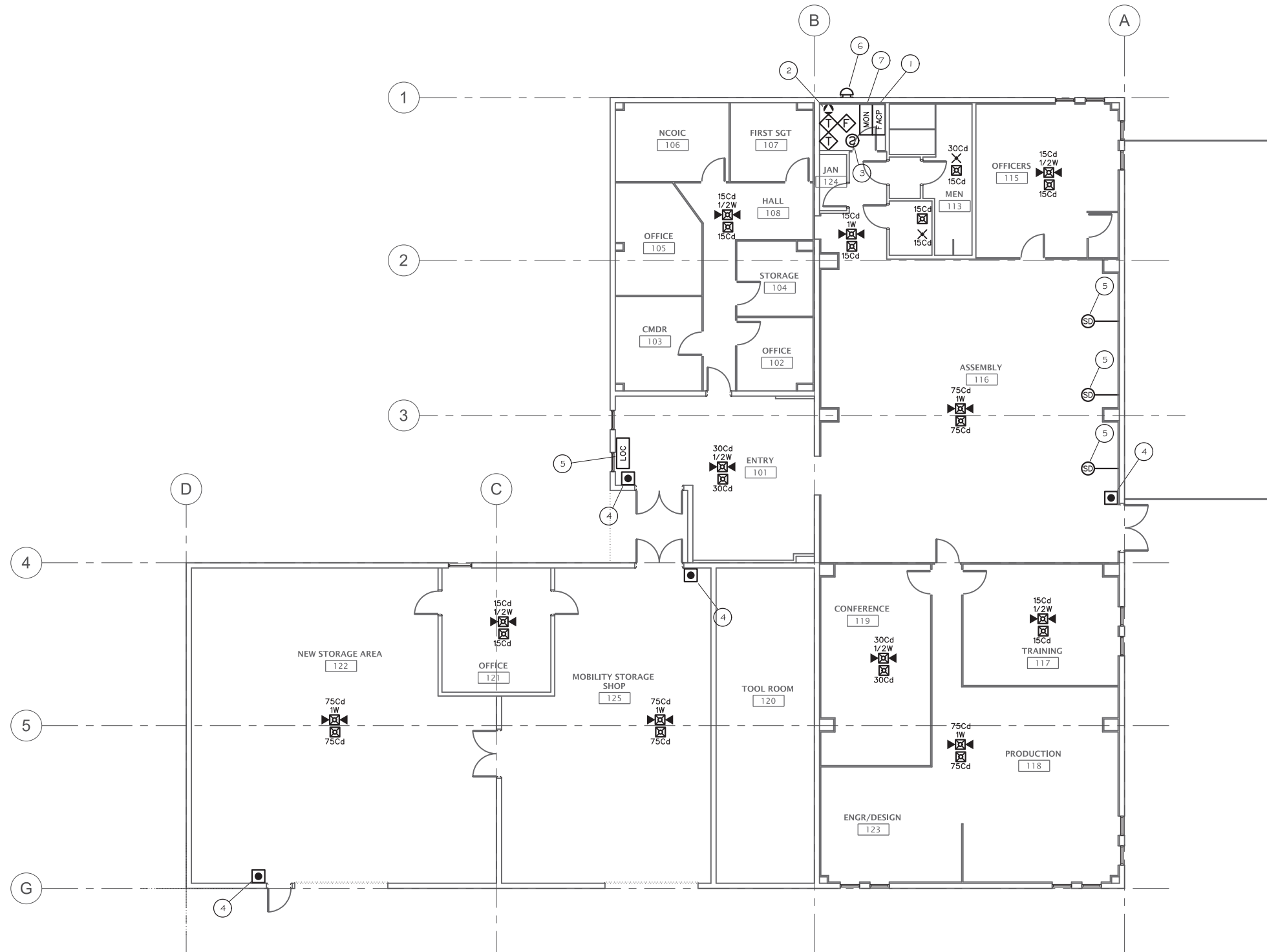


KEYNOTE - FIRE ALARM

- 1 FIRE ALARM/MASS NOTIFICATION CONTROL PANEL. FURNISH AND INSTALL ALL REQUIRED EQUIPMENT, MODULES, DEVICES, CABINETS, MICROPHONES, ETC. REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE ALARM/MASS NOTIFICATION SYSTEM PER UFC 3-600-01, UFC 4-021-01, NFPA 72 AND HAFB STANDARDS. PROVIDE PRIMARY (120 VAC) AND SECONDARY (12 VDC BATTERIES) POWER SUPPLY.
- 2 FIRE SPRINKLER RISER, CONNECT WATER FLOW (ALARM SIGNAL) AND VALVE SUPERVISORY (SUPERVISORY SIGNAL) SWITCHES TO FIRE ALARM CONTROL PANEL.
- 3 INSTALL SMOKE DETECTOR ABOVE FIRE ALARM CONTROL EQUIPMENT IN ACCORDANCE WITH NFPA 72 10.4.4.
- 4 INSTALL PULL STATIONS 48" ABOVE FLOOR AND WITHIN 5' OF ALL EXIT DOORS IN ACCORDANCE WITH UFC 3-600-01 9-18.7.4.1.
- 5 APPROXIMATE LOCATION OF ROOF TOP AIR HANDLER. CONTRACTOR SHALL FIELD VERIFY LOCATION AND CAPACITY. INSTALL DUCT MOUNTED SMOKE DETECTORS ON RETURN DUCTS OF ALL UNITS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL RELAYS FROM FIRE ALARM/MASS NOTIFICATION SYSTEM TO SHUT DOWN ALL AIR HANDLERS IN BUILDING UNDER ANY OF THE FOLLOWING CONDITIONS:
A. ACTIVATION OF ANY SINGLE DUCT SMOKE DETECTOR
B. ACTIVATION OF ANY SINGLE PULL STATION
C. ACTIVATION OF SMOKE DETECTOR ABOVE FACP
D. ACTIVATION OF FIRE SPRINKLER WATER FLOW SWITCH
E. ACTIVATION OF MECHANICAL SYSTEM MANUAL SHUTDOWN BUTTON AT FACP
- 6 EXTERIOR WATER FLOW BELL. WALL MOUNT ABOVE FIRE DEPARTMENT CONNECTION AT 10'-0" ABOVE FINISHED EXTERIOR GRADE ON WEATHER-PROOF J-BOX. CONFIGURE BELL TO ACTIVATE UPON OPERATION OF WATER FLOW SWITCH ONLY.
- 7 MONACO RADIO TRANSCEIVER PER HAFB STANDARDS TO PROVIDE INTERCONNECTION BETWEEN NEW FIRE ALARM CONTROL PANEL AND EXISTING BASE FIRE REPORTING SYSTEM. SURFACE MOUNT ON WALL ADJACENT TO NEW FACP. CONNECT TO FIRE ALARM, SUPERVISORY AND TROUBLE OUTPUTS (PROVIDE A MINIMUM OF 8 TRANSMISSION CHANNELS/ZONES) OF NEW FACP. PROVIDE NEW PRIMARY (120 VAC) AND SECONDARY (12 VDC BATTERIES) POWER SUPPLIES PER NFPA 70 AND NFPA 72. INSTALL ANTENNA WITH LIGHTING SUPPRESSION PER MANUFACTURER'S RECOMMENDATIONS.
- 8 LOCAL OPERATING CONSOLE FOR FIRE ALARM/MASS NOTIFICATION SYSTEM CONFORMING TO UFC 4-021.01. CONSOLE SHALL DISPLAY FULL STATUS AND ALLOW FULL CONTROL OF FIRE ALARM SYSTEM. CONSOLE SHALL INCORPORATE A MICROPHONE/HANDSET FOR USE BROADCASTING LIVE VOICE MESSAGES.

FIRE ALARM GENERAL NOTES

1. SCOPE OF WORK: WORK SHALL INCLUDE COMPLETE DEMOLITION OF EXISTING FIRE ALARM SYSTEM AND INSTALLATION OF NEW FIRE ALARM/MASS NOTIFICATION SYSTEM THROUGHOUT BUILDING. DESIGN AND INSTALLATION OF FIRE ALARM/MASS NOTIFICATION SYSTEM SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF UFC 3-600-01, UFC 4-021-01, NFPA 72 AND HAFB STANDARDS.
2. APPLICABLE CODES AND STANDARDS:
A. UNIFIED FACILITIES CRITERIA (UFC) 3-600-1
B. UFC 4-021-01
C. NFPA 70 2015 EDITION
D. NFPA 72 2016 EDITION
3. QUALITY ASSURANCE: ALL NEW EQUIPMENT, MATERIAL AND DEVICES USED FOR THE FIRE ALARM SYSTEM EXPANSION SHALL BE UL LISTED AND/OR FM APPROVED FOR USE IN FIRE PROTECTION SYSTEMS. ALL INITIATING DEVICES SHALL BE LISTED COMPATIBLE WITH THE NEW FIRE ALARM CONTROL PANEL (FACP).
4. SUBMITTALS: FIRE ALARM SYSTEM CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS TO ALL AUTHORITIES HAVING JURISDICTION FOR REVIEW/APPROVAL PRIOR TO ORDERING OR INSTALLING ANY EQUIPMENT. SUBMITTALS SHALL CONFORM TO THE CONSTRUCTION DOCUMENTS REQUIREMENTS OF NFPA 72.
5. SYSTEM TYPE: FIRE ALARM/MASS NOTIFICATION SYSTEM SHALL MEET THE REQUIREMENTS FOR PROTECTED PREMISE FIRE ALARM SYSTEMS. SYSTEM PROVIDES OFF-PREMISE NOTIFICATION OF STATUS TO BASE FIRE ALARM RECEIVING STATION. FIRE ALARM SYSTEM SHALL TRANSMIT FIRE ALARM SIGNALS (WATER FLOW SWITCH, MANUAL PULL STATIONS AND SMOKE DETECTOR), SUPERVISORY SIGNALS (VALVE TAMPER SWITCHES AND DUCT SMOKE DETECTORS) AND TROUBLE SIGNALS TO BASE FIRE ALARM RECEIVING STATION VIA NEW MONACO RADIO TRANSCEIVER
6. WIRING/CONDUIT: ALL WIRING TO NEW WIRING SHALL BE FREE OF OPENS, SHORTS AND GROUNDS. ALL WIRING SHALL BE INSTALLED IN RIGID, EMT OR FLEXIBLE CONDUIT. ALL PENETRATIONS THROUGH RATED PARTITIONS SHALL BE FIRE STOPPED WITH A SUITABLE CAULKING COMPOUND. ALL WIRING USED IN THE FIRE ALARM SYSTEM SHALL BE FPL (FIRE POWER LIMITED) WITH 300V INSULATION OR EQUIVALENT AS PER NFPA 70 ARTICLE 760.
7. WIRING STYLES: ALL CIRCUITS SHALL COMPLY WITH REQUIREMENTS FOR CLASS B CIRCUITS AS ALLOWED BY UFC 3-600-01 9-18.9.1.
8. POWER: PRIMARY POWER SUPPLY TO NEW FIRE ALARM/MASS NOTIFICATION CONTROL EQUIPMENT SHALL BE PROVIDED BY A DEDICATED BRANCH CIRCUIT (20 AMP) FROM NEARBY POWER DISTRIBUTION PANEL. CIRCUIT SHALL BE MECHANICALLY PROTECTED AND SHALL BE PERMANENTLY MARKED AND IDENTIFIED AS "FIRE ALARM CIRCUIT". SECONDARY POWER SHALL BE PROVIDED BY 12 VDC BATTERIES TO OPERATE THE SYSTEM FOR 48 HOURS IN STANDBY MODE WITH AN ADDITIONAL RESERVE TO OPERATE THE SYSTEM FOR 15 MINUTES IN ALARM MODE.
9. INITIATING DEVICES:
A. MANUAL PULL STATIONS: INSTALL PULL STATION AT EACH BUILDING EXIT. PROGRAM ALL PULL STATIONS AS AN ALARM SIGNAL.
B. SMOKE DETECTOR: INSTALL SMOKE DETECTOR ABOVE FIRE ALARM CONTROL EQUIPMENT
C. FIRE SPRINKLER DEVICES (WATER FLOW-ALARM, VALVE TAMPER-SUPERVISORY)
D. DUCT MOUNTED SMOKE DETECTORS FOR AIR MOVEMENT SYSTEM SHUTDOWN
10. NOTIFICATION APPLIANCES: AUDIBLE NOTIFICATION APPLIANCES (SPEAKERS) SHALL BE PROVIDED THROUGHOUT BUILDING. VOLUME OF SPEAKERS SHALL BE SUFFICIENT TO PRODUCE AN INTELLIGIBLE MESSAGE (PER UFC 4-021-01) IN ALL AREAS. VISIBLE ALARMS SHALL BE PROVIDED AS SHOWN ON DRAWING TO PROVIDE VISUAL NOTIFICATION OF FIRE ALARM CONDITION. PROVIDE CLEAR STROBES FOR FIRE ALARM AND AMBER STROBES FOR MASS NOTIFICATION. ALL VISIBLE SIGNALING APPLIANCES WITHIN ANY SINGLE FIELD OF VIEW SHALL BE SYNCHRONIZED. WALL MOUNT APPLIANCES SHALL BE 80" TO 96" ABOVE FLOOR.
11. TESTING: CONTRACTOR SHALL SCHEDULE AND PERFORM ALL ACCEPTANCE TESTS REQUIRED BY NFPA 72. TESTING SHALL BE WITNESSED BY HAFB FIRE DEPARTMENT.



FIRE ALARM LEGEND	
SYMBOL	DESCRIPTION
	FIRE ALARM/MASS NOTIFICATION CONTROL PANEL
	MONACO RADIO TRANSCEIVER
	SMOKE DETECTOR
	FIRE ALARM PULL STATION
	FIRE SPRINKLER WATER FLOW SWITCH
	DUCT MOUNTED SMOKE DETECTOR
	FIRE ALARM SPEAKER/STROBE (CLEAR) - CEILING MOUNT
	FIRE ALARM STROBE (CLEAR)
	MASS NOTIFICATION STROBE (AMBER)
	EXTERIOR WATER FLOW BELL
	LOCAL OPERATING CONSOLE

1 FIRE ALARM PLAN
FA101 1/8" = 1'-0"



DATE	APPROVAL
DESCRIPTION	



DESIGNED BY: Greg Jones CAPITAL PROJECT NO.	CHECKED BY: Greg Jones SITE CODE:
LEGACY PROJECT NO. KSRM	DATE: 02/07/19
BASE PROJECT MANAGER: Approver	

HILL AIR FORCE BASE, UTAH - B591 REPAIR HVAC AND OFFICE SPACE
CAPITOL PROJECT NO. 169011
FIRE ALARM PLAN