



State of Utah

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Governor

SPENCER J COX
Lieutenant Governor

Department of Administrative Services

KENNETH A. HANSEN
Interim Executive Director

Division of Facilities Construction and Management

ERIC R. THOLEN
Director

Addendum No. 1

Date: September 29, 2016

To: Elevator Contractors

From: Bob Anderson – Project Manager, DFCM

Reference: Elevator Modernization-Provo Regional Center
Division of Facilities Construction and Management
DFCM Project No. 15038310

Subject: **Addendum No. 1**

Pages	Addendum Cover Sheet	3 pages
	<u>Building Floor Plans</u>	<u>8 pages</u>
	Total	11 pages

Note: *This Addendum shall be included as part of the Contract Documents. Items in this Addendum apply to all drawings and specification sections whether referenced or not involving the portion of the work added, deleted, modified, or otherwise addressed in the Addendum. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to Disqualification.*

1.1 **SCHEDULE:** There are no project schedule changes.

1.2 **GENERAL ITEMS:**

QUESTION and ANSWER

1. During the pre-bid meeting, Bob Anderson indicated that the Matheson Courthouse and Provo Regional modernization projects will be awarded to a single vendor. Please confirm that these projects will be awarded as one project but managed independent of each other invoicing, etc.
Separate projects; separate contracts; managed independently.
2. The existing elevators appear to be tied into a shunt trip up from the electrical disconnects which will provide shunt trip operation for all elevators as a group. In our

survey, it was brought up that this configuration might change. Please confirm that the State of Utah/DFCM wants each elevator to shunt trip per hoistway and per disconnect independent of each other

Yes, the State of Utah/DFCM requires each elevator to shunt-trip per hoistway and per disconnect independent of each other.

3. Please confirm the location of the elevator monitoring system computer. Will a separate PC-based system in each elevator group machine room and able to be accessed remotely via a web-based interface?

The elevator monitoring system will be located in the DFCM Facilities Office in the basement of the building. Yes, a separate PC-based system in each elevator group machine room and be able to be accessed remotely via a web-based interface.

4. What are the building's hours of operation for the public and when are contractors able to work in the building (hours)?

8:00 AM – 5:00 PM. The awarded elevator contractor can work anytime; public hours, after hours, weekends, holidays. Please visit the Project Risk Factors in the RFP.

5. What time frame should bidders consider as their window for noisy activities and conversely, what hours are “quiet hours?”

I would visit this during your interview as a key item and do so based off your vast experience of elevator modernization in large occupied office buildings. The Selection Committee would be interested on what you have to say. That is, if your Firm is Short-Listed.

6. Are there any other “special restrictions” the DFCM or building has in terms of the successful bidder working on and completing the project?

If you have or think of any “special restrictions” based off your vast experience of elevator modernization in large occupied office buildings I would visit this during your interview as a key item. That is, if your Firm is Short-Listed.

7. Will all craning be required to be performed on the weekends or after hours on weekdays?

DFCM would strongly suggest it because it was covered in the Mandatory Pre-Submittal site Meeting that the only available area to spot and crane and hoist is at the East side of the building in the parking lot.

8. Is a building layout drawing available for bidders to review and plan accordingly?

Yes, attached to the addendum are the building's Fire Alarm System drawings per floor and also you can visit the building's haz-mat survey pages 57 through 63 entitled Floor Plans.

9. While bidders are to provide wiring and software provisions in the elevators for card

readers and cameras for future use, will the DFCM handle all security vendor interfacing (i.e. card reader company, providing the new or replacement card readers, etc.) during the project?

No, please propose software provisions for all 3 traction elevators.

10. Are bidders to include the cost of interim, warranty and 5-year maintenance contract in the base proposal cost?

Yes.

11. Does the \$680,000 estimated construction cost include the cost of the maintenance requirements noted in the "Notice to Contractors?"

Yes.

12. What size storage/laydown area will be available at the building and is it secured and protected from the weather?

Covered sub-parking area; 2 parking stalls provided in this area; dock can be used for storage and mobilization; this area is secured and protected.

13. Liquidated damages (LDs) were noted within the "Description of Work" as applying "...for failure to meet individual elevator schedule." Will the mutually-agreed upon installation schedule be the basis of such LDs?

Yes.

14. What is the daily amount for the LDs?

\$500.00 per day as listed in this Addendum.

15. Is a bid bond required for this project SEPARATE from the Scott Matheson Courthouse project (i.e. two (2) bid bonds for the project and both buildings in its entirety)?

Separate Bid Bonds.

16. Does the DFCM require a separate "management plan and statement of qualifications" submittal for each building or within the same submittal and different sections?

Separate Management Plans; Separate Statement of Qualifications.

FIRE ALARM SYSTEM GENERAL NOTES

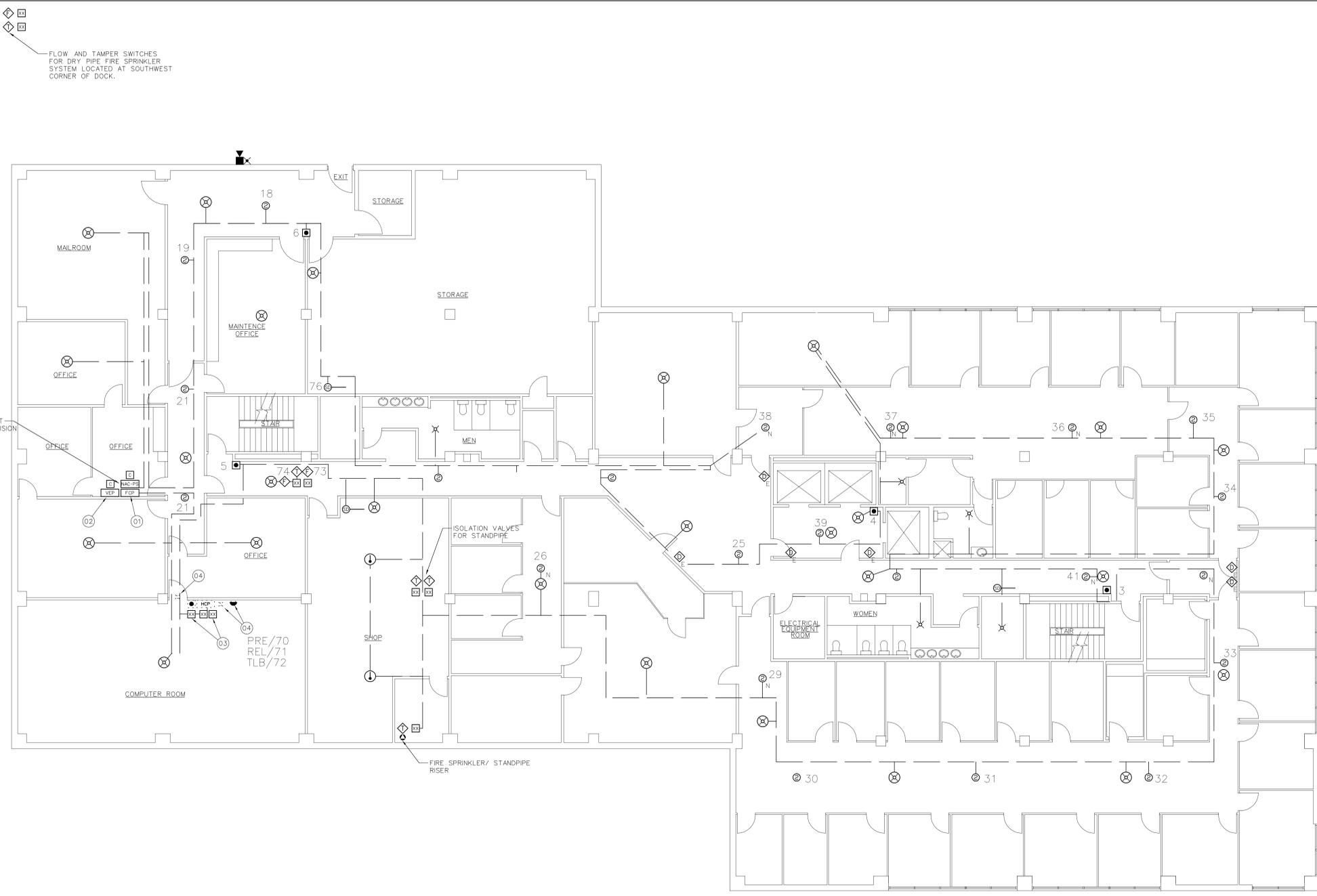
- SCOPE OF WORK: WORK SHALL INCLUDE REMOVAL OF EXISTING CONVENTIONAL FIRE ALARM SYSTEM INCLUDING ALL CONTROL EQUIPMENT, POWER SUPPLIES, INITIATING CIRCUITS AND DEVICES, NOTIFICATION APPLIANCE CIRCUITS AND DEVICES. INSTALL NEW ADDRESSABLE FIRE ALARM SYSTEM AND VOICE ACTIVATION SYSTEM THROUGHOUT BUILDING. NEW FIRE ALARM SYSTEM SHALL BE IN ACCORDANCE WITH NFPA 72, THESE DRAWINGS AND SPECIFICATIONS.
- APPLICABLE CODES/STANDARDS: INTERNATIONAL BUILDING CODE - 2003 EDITION INTERNATIONAL FIRE CODE - 2003 EDITION INTERNATIONAL MECHANICAL CODE - 2003 EDITION UTAH STATE FIRE MARSHAL RULE R710-4 NFPA 70 - 2002 EDITION NFPA 72 - 2002 EDITION NFPA 90A - 2002 EDITION
- QUALITY ASSURANCE: ALL EQUIPMENT, MATERIAL AND DEVICES LISTED FOR THE FIRE ALARM SYSTEM INSTALLATION SHALL BE UL USED AND/OR FM APPROVED FOR USE IN FIRE PROTECTION SYSTEMS. ALL INITIATING DEVICES SHALL BE LISTED COMPATIBLE WITH THE FIRE ALARM CONTROL PANEL (FACP). MAJOR SYSTEM COMPONENTS (CONTROL PANELS, INITIATING DEVICES, ADDRESSABLE MODULES AND RELAYS, POWER SUPPLIES, ETC.) SHALL BE FROM A STATE OF UTAH DFCM APPROVED MANUFACTURER. APPROVED MANUFACTURERS INCLUDE FIRE-LITE AND SILENT KNIGHT.
- SUBMITTALS: FIRE ALARM SYSTEM CONTRACTOR SHALL PREPARE AND SUBMIT SHOPS DRAWINGS TO PROVO FIRE DEPARTMENT, STATE FIRE MARSHAL, OWNER AND ENGINEER FOR REVIEW/APPROVAL PRIOR TO ORDERING OR INSTALLING ANY EQUIPMENT. SUBMITTALS SHALL CONFORM TO THE CONSTRUCTION DOCUMENTS REQUIREMENTS OF IFC 907.1.1.
- DEMOLITION: IT IS THE INSTALLER'S RESPONSIBILITY FOR THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM. ALL NEW (UNLESS OTHERWISE NOTED) DEVICES WILL REPLACE THE EXISTING AND GENERALLY REUSE THE EXISTING LOCATIONS. ANY EXISTING DEVICES AND CONDUIT NOT BEING REPLACED AND REUSED THAT ARE VISIBLE, SUCH AS NOTIFICATION APPLIANCES OR SMOKE DETECTORS SHALL BE REMOVED AND REMAINING WALL OR CEILING SURFACE REPAIRED OR REPLACED TO MATCH SURROUNDING AREAS. PULL ALL UNUSED WIRES FROM ALL CONDUITS AND J-BOXES REMAINING. CEILING TILE DAMAGED BY THE INSTALLER WILL BE REPLACED BY THE CONTRACTOR WITH THE SAME OR EQUIVALENT TILE.
- SYSTEM TYPE: FIRE ALARM SYSTEM SHALL MEET THE REQUIREMENTS FOR PROTECTED PREMISE FIRE ALARM SYSTEMS. SYSTEM SHALL PROVIDE OFF-PREMISE NOTIFICATION OF STATUS TO CENTRAL STATION DETERMINED BY OWNER.
- OCCUPANT NOTIFICATION: RECEIPT OF ANY FIRE ALARM SIGNAL AT THE FACP SHALL RESULT IN THE ACTIVATION OF ALL NOTIFICATION APPLIANCES IN THE BUILDING (STROBES, HORN/STROBES AND SPEAKER STROBES). FOR PURPOSES OF FIRE ALARM NOTIFICATION, THE BUILDING SHALL BE CONSIDERED AS A SINGLE ZONE.
- VOICE/ALARM COMMUNICATION: PROVIDE AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH IBC 907.2.12.2 AND NFPA 72. SYSTEM SHALL PROVIDE BOTH AUDIBLE AND VISUAL SIGNALS. VOICE/ALARM COMMUNICATION SYSTEM FUNCTIONS MAY BE INTEGRATED INTO THE FACP OR PROVIDED BY A SEPARATE PANEL CONTROLLED AND MONITORED BY THE FACP. SYSTEM SHALL BE CONFIGURED TO NOTIFY THE ENTIRE BUILDING AS A SINGLE ZONE BUT SHALL BE CAPABLE OF DIVIDING NOTIFICATION APPLIANCES INTO A MINIMUM OF 4 DISTINCT ZONES FOR MANUAL PAGING USE.
- WIRING/CONDUIT: ALL WIRING TO BE FREE OF SPENS, SHORTS AND GROUNDS. ALL WIRING SHALL BE INSTALLED IN RIGID OR FLEXIBLE CONDUIT. ALL PENETRATIONS THROUGH RATED PARTITIONS SHALL BE FIRE STOPPED WITH A SUITABLE CALKING COMPOUND. ALL WIRING USED IN THE FIRE ALARM SYSTEM SHALL BE FPL (FIRE POWER LIMITED) WITH 600V INSULATION OR EQUIVALENT AS PER NFPA 70 ARTICLE 760.
- WIRING STYLES/PER NFPA 72: INITIATING DEVICE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE D CIRCUITS. SIGNALING LINE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE 6 OR 7 CIRCUITS. NOTIFICATION APPLIANCE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE Z.
- POWER: EXISTING DEDICATED BRANCH CIRCUIT MAY BE REUSED TO PROVIDE PRIMARY POWER TO NEW FACP. FURNISH A BATTERY BACKUP TO PROVIDE SECONDARY POWER SUPPLY TO FIRE ALARM SYSTEM. BATTERY BACKUP SHALL BE OF SUFFICIENT CAPACITY TO PROVIDE 24 HOURS OR STANDBY POWER WITH AN ADDITIONAL RESERVE TO OPERATE SYSTEM FOR 5 MINUTES IN ALARM.
- INITIATING DEVICES: SLC CIRCUITS - SLC LOOP DEVICE ADDRESSING SHALL NOT EXCEED 127 DETECTORS (SMOKES, HEATS, DUCT SMOKES, ETC.) OR 127 MODULES (PULL STATIONS, MONITOR, CONTROL, ETC.) PER LOOP. AT LEAST 19 ADDRESSES (15%) SHOULD BE LEFT VACANT ON EACH SLC LOOP IN ORDER TO ALLOW SPACE FOR ADJUSTMENTS. SMOKE DETECTORS: PROVIDE SMOKE DETECTORS WHERE SHOWN ON PLANS IN ALL CORRIDORS, LOBBIES AND AT THE TOP OF EACH ELEVATOR SHAFT. MAXIMUM SPACING OF DETECTORS SHALL BE 30' BETWEEN DETECTORS OR 15' FROM FURTHEST WALL. MANUAL PULL STATIONS: INSTALL NEW PULL STATIONS AT SAME LOCATION AND HEIGHT AS EXISTING PULL STATIONS USING EXISTING JUNCTION BOXES.
- HEAT DETECTORS: PROVIDE HEAT DETECTORS WHERE SHOWN ON PLANS IN SHOP AREA AND ELEVATOR EQUIPMENT ROOM. MAXIMUM SPACING FOR HEAT DETECTORS SHALL BE 50' BETWEEN DETECTORS OR 25' FROM FURTHEST WALL. ADDRESSABLE MODULES: PROVIDE ADDRESSABLE MODULES TO MONITOR EXISTING CONVENTIONAL DEVICES (WATER FLOW SWITCHES, VALVE TAMPER SWITCHES, HALON CONTROL PANEL) TO REMAIN. SPRINKLER WATER FLOW AND VALVE TAMPER SWITCH LOCATIONS TO BE FIELD VERIFIED. LOCATE MONITOR MODULE ADJACENT TO FLOW OR TAMPER SWITCH IN AN ACCESSIBLE LOCATION OR ABOVE REMOVABLE CEILING TILE. LABEL AS PART OF THE FIRE ALARM SYSTEM WITH THE NAME OF THE DEVICE MONITORED ON THE COVER OF THE JUNCTION BOX.
- NOTIFICATION APPLIANCES: PROVIDE AUDIBLE AND VISUAL NOTIFICATION APPLIANCES THROUGHOUT BUILDING. PROVIDE SPEAKER/STROBES CONNECTED TO VOICE/ALARM SYSTEM IN ALL CORRIDORS, LOBBIES AND ROOMS IN EXCESS OF 1,000 SQ FT. PROVIDE STROBES OR HORN/STROBES IN OTHER LOCATIONS AS INDICATED ON THE PLANS. NEW DEVICES SHALL BE CEILING MOUNTED. WALL MOUNTED DEVICES MAY BE INSTALLED ON EXISTING J-BOXES. VOLUME OF HORNS AND SPEAKERS SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL OF 15 DB ABOVE AMBIENT IN ALL OCCUPIED AREAS. VISIBLE ALARMS SHALL BE PROVIDED THROUGHOUT ALL PUBLIC AREAS OF THE BUILDING AS WELL AS PRIVATE OFFICES AND AREAS WITH POSSIBLE OCCUPANCY BY HEARING IMPAIRED PERSONS.
- FIRE SAFETY FUNCTIONS: CONTROL MODULES WITH RELAY CONTACTS SHALL BE INSTALLED AND PROGRAMMED TO PROVIDE DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL & ACTIVATION OF VOICE/ALARM SYSTEM (UNLESS INTEGRATED WITH FACP) OR REMOTE POWER SUPPLIES FOR NOTIFICATION APPLIANCE CIRCUITS. THE CONTROL RELAY MODULES SHALL BE INSTALLED WITHIN 36" OF DEVICE OR CIRCUIT CONTROLLED. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY NUMBER AND LOCATION OF DEVICES TO BE CONTROLLED.
- PHASING: PLAN SEQUENCE OF WORK TO MINIMIZE DOWN TIME OF FIRE ALARM SYSTEM. IT IS THE INSTALLER'S RESPONSIBILITY TO PROVIDE A FIRE WATCH AND NOTIFY PROPER AUTHORITIES DURING INTERRUPTIONS OF FIRE DETECTION AND ALARM SERVICE IN THE BUILDING.
- TESTING: SCHEDULE AND PERFORM ALL ACCEPTANCE TESTS REQUIRED BY NFPA 72. TESTING SHALL BE WITNESSED BY PROVO FIRE DEPARTMENT, STATE FIRE MARSHAL'S OFFICE, PROJECT ENGINEER, DFCM AND BUILDING MAINTENANCE PERSONNEL. SUBMIT A WRITTEN TESTING PLAN DETAILING EACH TEST TO BE PERFORMED TO EACH AGENCY AT LEAST THREE DAYS PRIOR TO SCHEDULED TEST.

FIRE ALARM SYSTEM KEY NOTES

- REMOVE EXISTING CONVENTIONAL FIRE ALARM CONTROL PANEL (FACP), MODULES AND ENCLOSURE. FURNISH AND INSTALL NEW ADDRESSABLE FACP AT LOCATION OF EXISTING PANEL. FACP SHALL HAVE BUILT-IN ALPHA-NUMERIC ANNUNCIATOR AND DUAL COMMUNICATOR. NEW PANEL SHALL BE SUPPLIED FROM THE SAME DEDICATED POWER CIRCUIT SUPPLYING EXISTING FACP. NEW FACP SHALL HAVE SUFFICIENT CAPACITY TO MONITOR 254 ADDRESSABLE INITIATING DEVICES. PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS (DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL AND ACTIVATION OF VOICE EVACUATION SYSTEM) AND SUFFICIENT CAPACITY TO POWER EACH NOTIFICATION APPLIANCE CIRCUIT.
- REMOVE EXISTING VOICE EVACUATION SYSTEM CONTROL PANEL, MODULES AND ENCLOSURE. FURNISH AND INSTALL NEW CONTROL PANEL FOR VOICE EVACUATION SYSTEM. CONTROL PANEL SHALL HAVE BUILT-IN POWER SUPPLY (ADDITIONAL REMOTE POWER SUPPLIES MAY BE USED) SUFFICIENT TO PROVIDE POWER TO ALL SPEAKER/STROBE APPLIANCES IN BUILDING.
- EXISTING RELEASING PANEL AND MANUAL ACTIVATION PULL STATION FOR HALON FIRE SUPPRESSION SYSTEM IN COMPUTER ROOM TO REMAIN. INSTALL 3 NEW ADDRESSABLE MONITOR MODULES NEAR EXISTING RELEASING PANEL AND CONNECT TO ALARM SUPERVISORY AND TROUBLE OUTRITS FROM PANEL TO ALLOW INTERCONNECTIONS TEMPORARILY WITH BUILDING FACP AND OFF-PREMISE TRANSMISSION OF SIGNALS. DISABLE HALON SYSTEM PRIOR TO MAKING CONNECTIONS TO AVOID ACCIDENTAL DUMP OF HALON.
- EXISTING NOTIFICATION APPLIANCES FOR HALON FIRE SUPPRESSION SYSTEM TO REMAIN. NOTIFICATION APPLIANCES TO BE CONNECTED TO EXISTING RELEASING PANEL FOR HALON FIRE SUPPRESSION SYSTEM.
- EXISTING ILLUMINATED LAMP TYPE ANNUNCIATOR PANEL FOR CONVENTIONAL FIRE ALARM SYSTEM TO BE ABANDONED IN PLACE. REMOVE ALL EXISTING WIRING TO PANEL AND REPLACE CLEAR GLASS PANEL WITH BLACK GLASS.
- FURNISH AND INSTALL NEW REMOTE ANNUNCIATOR FOR FIRE ALARM SYSTEM INSIDE OF EAST ENTRY (FIRE DEPARTMENT ACCESS). WALL MOUNT ANNUNCIATOR AT 54" AFF. ANNUNCIATOR PANEL MAY BE INSTALLED ON A SURFACE MOUNT J-BOX BUT ALL CONDUIT TO TO PANEL MUST BE CONCEALED IN WALL.
- FURNISH AND INSTALL A PROTECTIVE COVER (STI-1100 OR EQUAL) WITH AUDIBLE ALARM OVER MANUAL FIRE ALARM PULL STATION TO DISCOURAGE FALSE ACTIVATION.
- FURNISH AND INSTALL A PROGRAMMABLE RELAY TO SHUT DOWN EACH AIR HANDLER. RELAYS SHALL BE NORMALLY ENERGIZED AND FAN CONTROLS SHALL BE CONNECTED TO NORMALLY CLOSED CONTACTS ON THE RELAYS. RELAYS SHALL BE PROGRAMMED TO SHUT DOWN ALL AIR HANDLERS SIMULTANEOUSLY UPON ACTIVATION OF ANY AREA OR DUCT SMOKE DETECTOR AND SHALL NOT RESTORE UNTIL THE FACP HAS RESET.
- FURNISH AND INSTALL PROGRAMMABLE RELAYS TO PROVIDE ELEVATOR RECALL FUNCTIONS. ELEVATOR RECALL FUNCTIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF ASME A17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS. COORDINATE WORK WITH MAINTENANCE CONTRACTOR FOR ELEVATORS.
- FURNISH AND INSTALL A NEW MAGNETIC HOLD-OPEN DEVICE FOR EXISTING DOOR. MANUFACTURER AND MODEL OF DEVICE SHALL MATCH EXISTING DEVICES. MOUNT DEVICE HIGH ON WALL TO HOLD UPPER EDGE OF DOOR. PROVIDE PROGRAMMABLE RELAYS TO RELEASE ALL NEW AND EXISTING DOOR HOLDERS SIMULTANEOUSLY UPON RECEIPT OF ANY FIRE ALARM SIGNAL AT THE FACP. POWER TO DOOR HOLDERS TO BE PROVIDED BY CIRCUIT FROM FACP OR REMOTE POWER SUPPLY SUPERVISED BY THE FACP. POWER CIRCUITS SHALL BE OF SUFFICIENT CAPACITY TO POWER ALL NEW AND EXISTING DOOR HOLDERS WITH SUFFICIENT CAPACITY FOR AN ADDITIONAL 10 DOOR HOLDERS TO ALLOW FOR FUTURE EXPANSION BY OWNER.

FIRE ALARM EQUIPMENT LEGEND

DEVICE	DESCRIPTION	MOUNTING	REMARKS
FACP	FIRE ALARM CONTROL PANEL	MOUNT AT SAME LOCATION AS EXISTING FACP THAT IS TO BE REMOVED.	INTELLIGENT/ADDRESSABLE FIRE ALARM CONTROL PANEL WITH BUILT-IN ALPHA-NUMERIC ANNUNCIATOR AND DUAL COMMUNICATOR. PROVIDE A MINIMUM OF 2 SLC CIRCUITS WITH A CAPACITY TO MONITOR AT LEAST 254 ADDRESSABLE POINTS.
VEP	VOICE EVACUATION SYSTEM CONTROL PANEL	MOUNT AT SAME LOCATION AS EXISTING VOICE EVACUATION PANEL TO BE REMOVED.	SYSTEM SHALL HAVE A BUILT-IN POWER SUPPLY SUFFICIENT TO POWER ALL SPEAKER STROBES IN THE BUILDING. SYSTEM SHALL PROVIDE SIGNALING WITH THE ABILITY TO SELECTIVELY PAGE ANY SINGLE ZONE. SYSTEM SHALL BE CAPABLE OF BROADCASTING PRE-RECORDED AND LIVE MESSAGES.
FSA	FIRE ALARM ANNUNCIATOR PANEL	54" AFF. JUNCTION BOX MAY BE SURFACE MOUNT BUT CONDUIT MUST BE CONCEALED IN EXISTING WALL.	ANNUNCIATOR SHALL HAVE A BUILT-IN LED (MINIMUM OF 80 CHARACTERS) TO DISPLAY STATUS OF FIRE ALARM SYSTEM AS WELL AS NAME AND ADDRESS OF ANY TROUBLE CONDITION. ANNUNCIATOR SHALL HAVE INVERTED ALARM SILENCE AND SYSTEM RESET.
NAC-PS	REMOTE POWER SUPPLIES FOR NOTIFICATION APPLIANCE CIRCUITS	ADJACENT TO FACP OR REMOTE IN PROTECTED LOCATION APPROVED BY BUILDING MANAGEMENT.	NUMBER AND LOCATION OF POWER SUPPLIES SHALL BE SUFFICIENT TO POWER ALL NOTIFICATION APPLIANCES IN BUILDING WITH MAXIMUM SUPPLY TO MOST REMOTE DEVICE ON CIRCUIT.
HCP	HALON SYSTEM CONTROL PANEL	EXISTING	EXISTING FENWALL PANEL TO REMAIN. CONNECT ALARM SUPERVISORY & TROUBLE OUTRITS OF EXISTING PANEL TO NEW FACP.
MDO	MAGNETIC DOOR HOLD-OPEN DEVICE (EXISTING)	EXISTING	CONNECT EXISTING MAGNETIC DOOR HOLDERS TO RELAY CONTROLLED BY NEW FIRE ALARM PANEL.
MDO-N	MAGNETIC DOOR HOLD-OPEN DEVICE (NEW)	MOUNT AT TOP EDGE OF DOOR.	INSTALL NEW MAGNETIC DOOR HOLDER WITH INVERTED ALARM SILENCE AND SYSTEM RESET. USER AND MODEL OF DEVICE SHALL MATCH EXISTING DEVICES. MOUNT DEVICE HIGH ON WALL TO HOLD UPPER EDGE OF DOOR. PROVIDE RELAY TO RELAY CONTROLLED BY FIRE ALARM PANEL.
SD	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR	CEILING MOUNTED. WHERE NEW DETECTOR REPLACES AN EXISTING DETECTOR IN SAME LOCATION EXISTING J-BOX MAY BE RE-USED.	REMOVE EXISTING CONVENTIONAL SMOKE DETECTORS AND REPLACE WITH NEW ADDRESSABLE SMOKE DETECTORS. DETECTORS ARE REQUIRED IN ALL CORRIDORS AND LOBBIES WITH A MAXIMUM SPACING OF 30' O.C.
SD-C	EXISTING CONVENTIONAL SMOKE DETECTOR	REPLACE CEILING TILE AND/OR REPAIR CEILING SURFACE WHERE DETECTOR IS REMOVED.	REMOVE EXISTING CONVENTIONAL SMOKE DETECTORS. REPAIR CEILING SURFACE WHERE DETECTOR IS REMOVED.
SD-N	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR	CEILING MOUNTED.	ADD NEW SMOKE DETECTOR WHERE INDICATED ON PLAN.
H	ADDRESSABLE HEAT DETECTOR	CEILING OR UNDERSIDE OF ROOF DECK.	SPACING OF DETECTORS SHALL CONFORM TO NFPA 72 AND TO MANUFACTURER'S RECOMMENDATIONS.
SDS	ADDRESSABLE DUCT SMOKE DETECTOR	PROVIDE A DETECTOR IN RETURN AIR DUCTS ON EACH LEVEL. PULL TO CONNECTION TO EACH RETURN AIR DUCT. SIDE OF EACH AIR HANDLER DOWN-DRAW OF FIELDS AND UPSTREAM OF ANY BRANCH CONNECTIONS.	INSTALL IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF NFPA 72, NFPA 90A AND THE IBC.
MFP	ADDRESSABLE MANUAL FIRE ALARM PULL STATION	WALL MOUNT ON EXISTING J-BOX. PROTECT BY PLASTIC STOPPER COVER. THE EXISTING COVER SHALL REMAIN.	REMOVE EXISTING CONVENTIONAL MANUAL PULL STATIONS AND REPLACE WITH NEW ADDRESSABLE PULL STATIONS.
FS	FLOW SWITCH FOR FIRE SPRINKLER SYSTEM	EXISTING TO REMAIN.	INSTALL NEW ADDRESSABLE MONITOR MODULE AT EACH EXISTING FLOW SWITCH TO FACILITATE MONITORING OF FLOW SWITCH BY FACP AS AN ADDRESSABLE POINT.
VSS	VALVE SUPERVISORY SWITCH FOR FIRE SPRINKLER SYSTEM	EXISTING TO REMAIN.	INSTALL NEW ADDRESSABLE MONITOR MODULE AT EACH EXISTING VALVE SUPERVISORY SWITCH TO FACILITATE MONITORING OF VALVE SUPERVISORY SWITCH BY FACP AS AN ADDRESSABLE POINT.
MM	ADDRESSABLE MONITOR MODULE	MOUNT ON NEW J-BOX NEAR EXISTING MONITORING DEVICE TO BE REPLACED.	INSTALL NEW CONVENTIONAL DEVICES CONFORMING TO NFPA 72. PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS SUCH AS DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL OR ACTIVATION OF VOICE EVACUATION SYSTEM.
RM	ADDRESSABLE RELAY MODULE	MOUNT ON NEW J-BOX WITHIN 3' OF DEVICE OR CIRCUIT CONTROLLED.	TO PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS SUCH AS DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL OR ACTIVATION OF VOICE EVACUATION SYSTEM.
SS	FIRE ALARM SPEAKER/STROBE	CEILING MOUNT OR WALL MOUNT	STROBE SHALL HAVE A MINIMUM RATING OF 75 CD AND SHALL BE SYNCHRONIZED WITH ALL OTHER DEVICES IN VIEW. SOUND OUTPUT FROM SPEAKER SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL OF 15 DB ABOVE AMBIENT. APPLIANCE SHALL BE COMPATIBLE WITH AND CONNECTED TO VOICE EVACUATION CONTROL PANEL.
SS-C	EXISTING FIRE ALARM SPEAKER OR SPEAKER/STROBE	REPLACE CEILING TILE AND/OR REPAIR CEILING/WALL SURFACE WHERE APPLIANCE IS REMOVED.	REMOVE EXISTING FIRE ALARM SPEAKER OR SPEAKER/STROBE. JUNCTION BOX AND WIRING TO BE REMOVED.
SS-N	FIRE ALARM STROBE	CEILING OR WALL MOUNT AT 80" TO 96" AFF	STROBE SHALL HAVE A MINIMUM CANDLE RATING OF 1500. STROBES SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.
HWS	FIRE ALARM HORN/STROBE	WALL MOUNT ON EXISTING JUNCTION BOX	REPLACE EXISTING WALL MOUNTED NOTIFICATION APPLIANCES IN PERIPHERIES WITH NEW APPLIANCES. STROBE SHALL BE 15/75 CD RATED. APPLIANCE SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.
HWS-N	EXISTING FIRE ALARM HORN/STROBE	REMOVE EXISTING DEVICE AND WIRING AND PROVIDE DECORATIVE COVER PLATE (APPROVED BY OWNER) FOR EXISTING JUNCTION BOX	REMOVE EXISTING WALL MOUNT NOTIFICATION APPLIANCES IN ELEVATOR LOBBY TO BE REMOVED.
HWS-E	EXTERIOR FIRE ALARM HORN/STROBE	WALL MOUNTED ON EXISTING EXTERIOR J-BOX OR ON NEW WEATHERPROOF J-BOX AT 10'-0" AFF (2 NEW DEVICES)	REPLACE EXISTING EXTERIOR HORNS WITH NEW APPLIANCES. ADD 2 NEW APPLIANCES WHERE INDICATED ON DRAWING. STROBES SHALL HAVE A MINIMUM RATING OF 15/75 CD AND SHALL BE SYNCHRONIZED WITH ALL OTHER STROBES IN VIEW. APPLIANCES SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.



LOWER LEVEL FIRE ALARM PLAN
1/8" = 1'-0"

REGIONAL GOVERNMENT CENTER
PROVO, UTAH

FIRE ALARM SYSTEM UPGRADES
DFCM PROJECT #04202310

JOB NO. 103819
DWG ISSUE: AS-BUILT

DRAWN BY: BAJ
CHECKED BY: GTJ

DRAWING DATE: 04/10/06
REVISION DATE: XXXX/05

LOWER LEVEL
FA-1

FIRE ALARM SYSTEM GENERAL NOTES

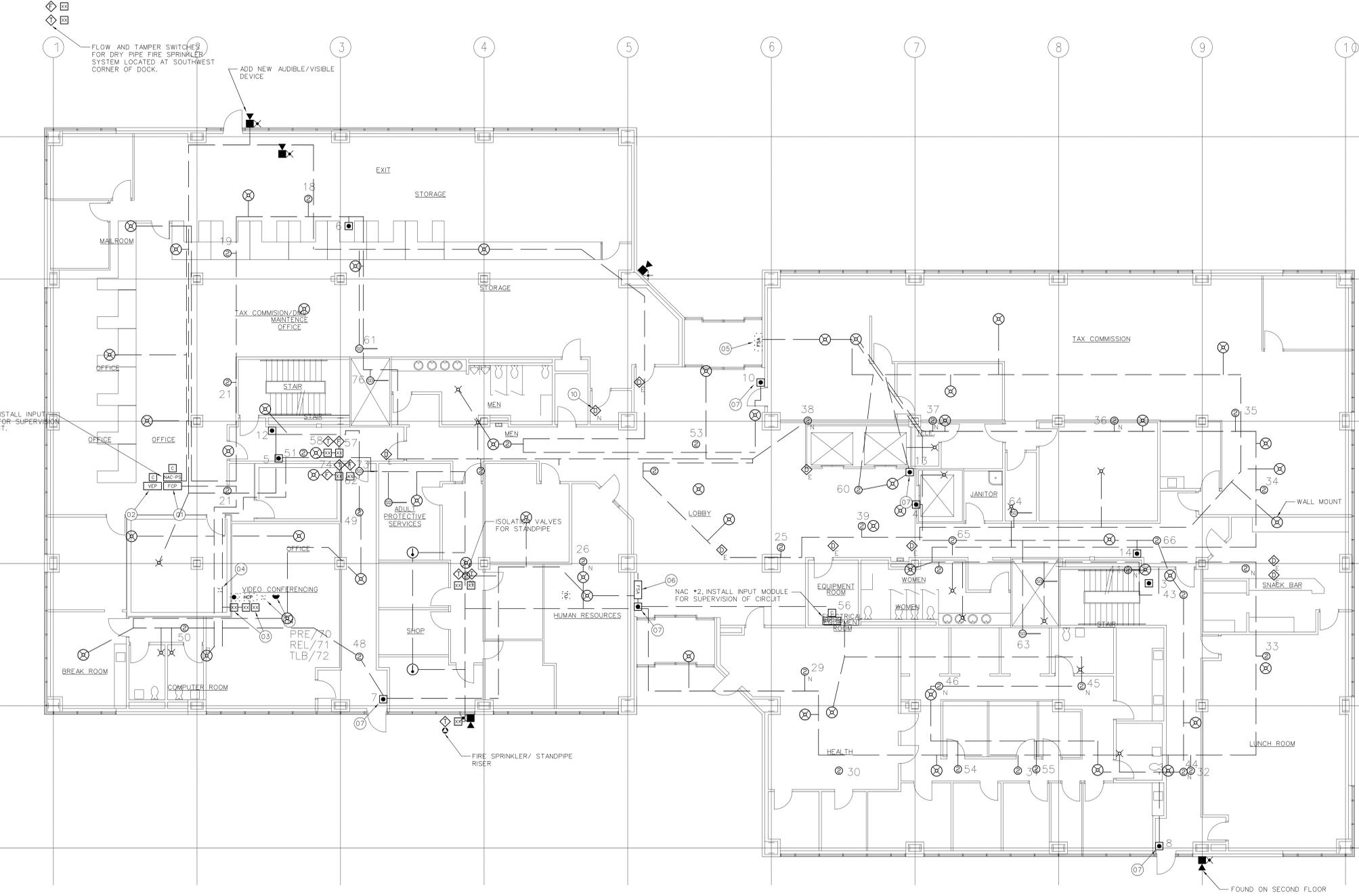
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- INSTALLATION: FIRE ALARM SYSTEM CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS TO PROVO FIRE DEPARTMENT, STATE FIRE MARSHAL, OWNER AND ENGINEER FOR REVIEW/ APPROVAL PRIOR TO ORDERING OR INSTALLING ANY EQUIPMENT. SUBMITTALS SHALL CONFORM TO THE CONSTRUCTION DOCUMENTS REQUIREMENTS OF IFC 907.1.1.
- DEMOLITION: IT IS THE INSTALLER'S RESPONSIBILITY FOR THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM. ALL NEW (UNLESS OTHERWISE NOTED) DEVICES WILL REPLACE THE EXISTING AND GENERALLY REUSE THE EXISTING LOCATIONS. ANY EXISTING DEVICES AND CONDUIT NOT BEING REPLACED AND REUSED THAT ARE VISIBLE, SUCH AS NOTIFICATION APPLIANCES OR SMOKE DETECTORS SHALL BE REMOVED AND REMAINING WALL OR CEILING SURFACE REPAIRED OR REPLACED TO MATCH SURROUNDING AREAS. PULL ALL UNUSED WIRES FROM ALL CONDUITS AND J-BOXES REMAINING. CEILING TILE DAMAGED BY THE INSTALLER WILL BE REPLACED BY THE CONTRACTOR WITH THE SAME OR EQUIVALENT TILE.
- SYSTEM TYPE: FIRE ALARM SYSTEM SHALL MEET THE REQUIREMENTS FOR PROTECTED PREMISE FIRE ALARM SYSTEMS. SYSTEM SHALL PROVIDE OFF-PREMISE NOTIFICATION OF STATUS TO CENTRAL STATION DETERMINED BY OWNER.
- OCCUPANT NOTIFICATION: RECEIPT OF ANY FIRE ALARM SIGNAL AT THE FACP SHALL RESULT IN THE ACTIVATION OF ALL NOTIFICATION APPLIANCES IN THE BUILDING (STROBES, HORN/STROBES AND SPEAKER STROBES), FOR PURPOSES OF FIRE ALARM NOTIFICATION, THE BUILDING SHALL BE CONSIDERED AS A SINGLE ZONE.
- VOICE/ALARM COMMUNICATION: PROVIDE AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH IBC 907.2.12.2 AND NFPA 72. SYSTEM SHALL PROVIDE BOTH AUDIBLE AND VISUAL SIGNALS. VOICE/ALARM COMMUNICATION SYSTEM FUNCTIONS MAY BE INTEGRATED INTO THE FACP OR PROVIDED BY A SEPARATE PANEL CONTROLLED AND MONITORED BY THE FACP. SYSTEM SHALL BE CONFIGURED TO NOTIFY THE ENTIRE BUILDING AS A SINGLE ZONE BUT SHALL BE CAPABLE OF DIVIDING NOTIFICATION APPLIANCES INTO A MINIMUM OF 4 DISTINCT ZONES FOR MANUAL PAGING USE.
- WIRING/CONDUIT: ALL WIRING TO BE FREE OF OPENS, SHORTS AND GROUNDS. ALL WIRING SHALL BE INSTALLED IN RIGID OR FLEXIBLE CONDUIT. ALL PENETRATIONS THROUGH RATED PARTITIONS SHALL BE FIRE STOPPED WITH A SUITABLE CALKING COMPOUND. ALL WIRING USED IN THE FIRE ALARM SYSTEM SHALL BE FPL (FIRE POWER LIMITED) WITH 600V INSULATION OR EQUIVALENT AS PER NFPA 70 ARTICLE 760.
- WIRING STYLES (PER NFPA 72): INITIATING DEVICE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE D CIRCUITS. SIGNALING LINE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE E OR 7 CIRCUITS. NOTIFICATION APPLIANCE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE Z.
- POWER: EXISTING DEDICATED BRANCH CIRCUIT MAY BE REUSED TO PROVIDE PRIMARY POWER TO NEW FACP. FURNISH A BATTERY BACKUP TO PROVIDE SECONDARY POWER SUPPLY TO FIRE ALARM SYSTEM. BATTERY BACKUP SHALL BE OF SUFFICIENT CAPACITY TO PROVIDE 24 HOURS OR STANDBY POWER WITH AN ADDITIONAL RESERVE TO OPERATE SYSTEM FOR 5 MINUTES IN ALARM.
- INITIATING DEVICES: SLC CIRCUITS - SLC LOOP DEVICE ADDRESSING SHALL NOT EXCEED 127 DETECTORS (SMOKES, HEATS, DUCT SMOKES, ETC.) OR 127 MODULES (PULL STATIONS, MONITOR, CONTROL, ETC.) PER LOOP. AT LEAST 19 ADDRESSES (15%) SHOULD BE LEFT VACANT ON EACH SLC LOOP IN ORDER TO ALLOW SPACE FOR ADJUSTMENTS. SMOKE DETECTORS: PROVIDE SMOKE DETECTORS WHERE SHOWN ON PLANS IN ALL CORRIDORS, LOBBIES AND AT THE TOP OF EACH ELEVATOR SHAFT. MAXIMUM SPACING OF DETECTORS SHALL BE 30' BETWEEN DETECTORS OR 15' FROM FURTHEST WALL. MANUAL PULL STATIONS: INSTALL NEW PULL STATIONS AT SAME LOCATION AND HEIGHT AS EXISTING PULL STATIONS USING EXISTING JUNCTION BOXES.
- HEAT DETECTORS: PROVIDE HEAT DETECTORS WHERE SHOWN ON PLANS IN SHOP AREA AND ELEVATOR EQUIPMENT ROOM. MAXIMUM SPACING FOR HEAT DETECTORS SHALL BE 50' BETWEEN DETECTORS OR 25' FROM FURTHEST WALL. ADDRESSABLE MODULES: PROVIDE ADDRESSABLE MODULES TO MONITOR EXISTING CONVENTIONAL DEVICES (WATER FLOW SWITCHES, VALVE TAMPER SWITCHES, HALON CONTROL PANEL) TO REMAIN. SPRINKLER WATER FLOW AND VALVE TAMPER SWITCH LOCATIONS TO BE FIELD VERIFIED. LOCATE MONITOR MODULE ADJACENT TO FLOW OR TAMPER SWITCH IN AN ACCESSIBLE LOCATION OR ABOVE REMOVABLE CEILING TILE. LABEL AS PART OF THE FIRE ALARM SYSTEM WITH THE NAME OF THE DEVICE MONITORED ON THE COVER OF THE JUNCTION BOX.
- NOTIFICATION APPLIANCES: PROVIDE AUDIBLE AND VISUAL NOTIFICATION APPLIANCES THROUGHOUT BUILDING. PROVIDE SPEAKER/STROBES CONNECTED TO VOICE/ALARM SYSTEM IN ALL CORRIDORS, LOBBIES AND ROOMS IN EXCESS OF 1,000 SQ FT. PROVIDE STROBES OR HORN/STROBES IN OTHER LOCATIONS AS INDICATED ON THE PLANS. NEW DEVICES SHALL BE CEILING MOUNTED. WALL MOUNTED DEVICES MAY BE INSTALLED ON EXISTING J-BOXES. VOLUME OF HORNS AND SPEAKERS SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL OF 15 DB ABOVE AMBIENT IN ALL OCCUPIED AREAS. VISIBLE ALARMS SHALL BE PROVIDED THROUGHOUT ALL PUBLIC AREAS OF THE BUILDING AS WELL AS PRIVATE OFFICES AND AREAS WITH POSSIBLE OCCUPANCY BY HEARING IMPAIRED PERSONS.
- FIRE SAFETY FUNCTIONS: CONTROL MODULES WITH RELAY CONTACTS SHALL BE INSTALLED AND PROGRAMMED TO PROVIDE DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL, AND ACTIVATION OF VOICE/ALARM SYSTEM (UNLESS INTEGRATED WITH FACP) OR REMOTE POWER SUPPLIES FOR NOTIFICATION APPLIANCE CIRCUITS. THE CONTROL RELAY MODULES SHALL BE INSTALLED WITHIN 36" OF DEVICE OR CIRCUIT CONTROLLED. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY NUMBER AND LOCATION OF DEVICES TO BE CONTROLLED.
- PHASING: PLAN SEQUENCE OF WORK TO MINIMIZE DOWN TIME OF FIRE ALARM SYSTEM. IT IS THE INSTALLER'S RESPONSIBILITY TO PROVIDE A FIRE WATCH AND NOTIFY PROPER AUTHORITIES DURING INTERRUPTIONS OF FIRE DETECTION AND ALARM SERVICE IN THE BUILDING.
- TESTING: SCHEDULE AND PERFORM ALL ACCEPTANCE TESTS REQUIRED BY NFPA 72. TESTING SHALL BE WITNESSED BY PROVO FIRE DEPARTMENT, STATE FIRE MARSHAL'S OFFICE, PROJECT ENGINEER, DFCM AND BUILDING MAINTENANCE PERSONNEL. SUBMIT A WRITTEN TESTING PLAN DETAILING EACH TEST TO BE PERFORMED TO EACH AGENCY AT LEAST THREE DAYS PRIOR TO SCHEDULED TEST.

FIRE ALARM SYSTEM KEY NOTES

- REMOVE EXISTING CONVENTIONAL FIRE ALARM CONTROL PANEL (FACP), MODULES AND ENCLOSURE. FURNISH AND INSTALL NEW ADDRESSABLE FACP AT LOCATION OF EXISTING FACP. FACP SHALL HAVE BUILT-IN ALPHA-NUMERIC ANNUNCIATOR AND DUAL COMMUNICATOR. NEW PANEL SHALL BE SUPPLIED FROM THE SAME DEDICATED POWER CIRCUIT SUPPLYING EXISTING FACP. NEW FACP SHALL HAVE SUFFICIENT CAPACITY TO MONITOR 254 ADDRESSABLE INITIATING DEVICES. PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS (DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL AND ACTIVATION OF VOICE EVACUATION SYSTEM) AND SUFFICIENT CAPACITY TO POWER EACH NOTIFICATION APPLIANCE CIRCUIT.
- REMOVE EXISTING VOICE EVACUATION SYSTEM CONTROL PANEL, MODULES AND ENCLOSURE. FURNISH AND INSTALL NEW CONTROL PANEL FOR VOICE EVACUATION SYSTEM. CONTROL PANEL SHALL HAVE BUILT-IN POWER SUPPLY (ADDITIONAL REMOTE POWER SUPPLIES MAY BE USED) SUFFICIENT TO PROVIDE POWER TO ALL SPEAKER/STROBE APPLIANCES IN BUILDING.
- EXISTING RELEASING PANEL AND MANUAL ACTIVATION PULL STATION FOR HALON FIRE SUPPRESSION SYSTEM IN COMPUTER ROOM TO REMAIN. INSTALL 3 NEW ADDRESSABLE MONITOR MODULES NEAR EXISTING RELEASING PANEL AND CONNECT TO ALARM SUPERVISORY AND TROUBLE OUTRITS FROM PANEL TO ALLOW INTERCONNECTION TEMPORARILY WITH BUILDING FACP AND OFF-PREMISE TRANSMISSION OF SIGNALS. DISABLE HALON SYSTEM PRIOR TO MAKING CONNECTIONS TO AVOID ACCIDENTAL DUMP OF HALON.
- EXISTING NOTIFICATION APPLIANCES FOR HALON FIRE SUPPRESSION SYSTEM TO REMAIN. NOTIFICATION APPLIANCES TO BE CONNECTED TO EXISTING RELEASING PANEL FOR HALON FIRE SUPPRESSION SYSTEM.
- EXISTING ILLUMINATED LAMP TYPE ANNUNCIATOR PANEL FOR CONVENTIONAL FIRE ALARM SYSTEM TO BE ABANDONED IN PLACE. REMOVE ALL EXISTING WIRING TO PANEL AND REPLACE CLEAR GLASS PANEL WITH BLACK GLASS.
- FURNISH AND INSTALL NEW REMOTE ANNUNCIATOR FOR FIRE ALARM SYSTEM INSIDE OF EAST ENTRY (FIRE DEPARTMENT ACCESS). WALL MOUNT ANNUNCIATOR AT 54" AFF. ANNUNCIATOR PANEL MAY BE INSTALLED ON A SURFACE MOUNT J-BOX BUT ALL CONDUIT TO TO PANEL MUST BE CONCEALED IN WALL.
- FURNISH AND INSTALL A PROTECTIVE COVER (STI-1100 OR EQUAL) WITH AUDIBLE ALARM OVER MANUAL FIRE ALARM PULL STATION TO DISCOURAGE FALSE ACTIVATION.
- FURNISH AND INSTALL A PROGRAMMABLE RELAY TO SHUT DOWN EACH AIR HANDLER. RELAYS SHALL BE NORMALLY ENERGIZED AND FAN CONTROLS SHALL BE CONNECTED TO NORMALLY CLOSED CONTACTS ON THE RELAYS. RELAYS SHALL BE PROGRAMMED TO SHUT DOWN ALL AIR HANDLERS SIMULTANEOUSLY UPON ACTIVATION OF ANY AREA OR DUCT SMOKE DETECTOR AND SHALL NOT RESTORE UNTIL THE FACP HAS RESET.
- FURNISH AND INSTALL PROGRAMMABLE RELAYS TO PROVIDE ELEVATOR RECALL FUNCTIONS. ELEVATOR RECALL FUNCTIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF ASME A17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS. COORDINATE WORK WITH MAINTENANCE CONTRACTOR FOR ELEVATORS.
- FURNISH AND INSTALL A NEW MAGNETIC HOLD-OPEN DEVICE FOR EXISTING DOOR. MANUFACTURER AND MODEL OF DEVICE SHALL MATCH EXISTING DEVICES. MOUNT HIGH ON WALL TO HOLD UPPER EDGE OF DOOR. PROVIDE PROGRAMMABLE RELAYS TO RELEASE ALL NEW AND EXISTING DOOR HOLDERS SIMULTANEOUSLY UPON RECEIPT OF ANY FIRE ALARM SIGNAL AT THE FACP. POWER TO DOOR HOLDERS TO BE PROVIDED BY CIRCUIT FROM FACP OR REMOTE POWER SUPPLY SUPERVISED BY THE FACP. POWER CIRCUITS SHALL BE OF SUFFICIENT CAPACITY TO POWER ALL NEW AND EXISTING DOOR HOLDERS WITH SUFFICIENT CAPACITY FOR AN ADDITIONAL 10 DOOR HOLDERS TO ALLOW FOR FUTURE EXPANSION BY OWNER.

FIRE ALARM EQUIPMENT LEGEND

DEVICE	DESCRIPTION	MOUNTING	REMARKS
FACP	FIRE ALARM CONTROL PANEL	MOUNT AT SAME LOCATION AS EXISTING FACP THAT IS TO BE REMOVED.	INTELLIGENT/ADDRESSABLE FIRE ALARM CONTROL PANEL WITH BUILT-IN ALPHA-NUMERIC ANNUNCIATOR AND DUAL COMMUNICATOR. PROVIDE A MINIMUM OF 2 SLC CIRCUITS WITH A CAPACITY TO MONITOR AT LEAST 254 ADDRESSABLE POINTS.
VEP	VOICE EVACUATION SYSTEM CONTROL PANEL	MOUNT AT SAME LOCATION AS EXISTING VEP THAT IS TO BE REMOVED.	SYSTEM SHALL HAVE A BUILT-IN POWER SUPPLY SUFFICIENT TO POWER ALL SPEAKER STROBES IN THE BUILDING. SYSTEM SHALL PROVIDE SIGNALS WITH THE ABILITY TO SELECTIVELY PAGE ANY SINGLE ZONE OF THE BUILDING SYSTEMS WITH THE CAPABILITY OF BROADCASTING PRE-RECORDED AND LIVE MESSAGES.
FSA	FIRE ALARM ANNUNCIATOR PANEL	54" AFF. JUNCTION BOX MAY BE SURFACE MOUNT BUT CONDUIT MUST BE CONCEALED IN EXISTING WALL.	ANNUNCIATOR SHALL HAVE A BUILT-IN LED (MINIMUM OF 80 CHARACTERS) TO SHOW STATUS OF FIRE ALARM SYSTEM AS WELL AS NAME AND ADDRESS OF ANY DEVICE INITIATING FIRE ALARM OR TROUBLE CONDITION. ANNUNCIATOR SHALL HAVE BUILT-IN VOICE/ALARM SILENCE AND SYSTEM RESET.
MAC-PS	REMOTE POWER SUPPLIES FOR NOTIFICATION APPLIANCE CIRCUITS	ADJACENT TO FACP OR REMOTE IN CONFORMANCE WITH REQUIREMENTS BY BUILDING MANAGEMENT.	NUMBER AND LOCATION OF POWER SUPPLIES SHALL BE SUFFICIENT TO PROVIDE SECONDARY POWER SUPPLY TO FIRE ALARM SYSTEM. SUPPLY TO MOST REMOTE DEVICE ON CIRCUIT.
HSP	HALON SYSTEM CONTROL PANEL	EXISTING	EXISTING FERNAL PANEL TO REMAIN. CONNECT ALARM SUPERVISORY & TROUBLE OUTRITS OF EXISTING PANEL TO NEW FACP.
MD	MAGNETIC DOOR HOLD-OPEN DEVICE (EXISTING)	EXISTING	CONNECT EXISTING MAGNETIC DOOR HOLDERS TO RELAY CONTROLLED BY NEW FIRE ALARM PANEL.
MDN	MAGNETIC DOOR HOLD-OPEN DEVICE (NEW)	MOUNT AT TOP EDGE OF DOOR.	INSTALL NEW MAGNETIC DOOR HOLDER USER AND MODEL OF DEVICE SHALL MATCH EXISTING DEVICES. MANUFACTURER AND MODEL OF DEVICE SHALL MATCH EXISTING DEVICES. MOUNT HIGH ON WALL TO HOLD UPPER EDGE OF DOOR. PROVIDE PROGRAMMABLE RELAYS TO RELAY CONTROLLED BY FIRE ALARM PANEL.
SD	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR	CEILING MOUNTED. WHERE NEW DETECTOR REPLACES AN EXISTING ADDRESSABLE SMOKE DETECTOR IN SAME LOCATION EXISTING J-BOX MAY BE RE-USED.	REMOVE EXISTING CONVENTIONAL SMOKE DETECTOR AND REPLACE WITH NEW ADDRESSABLE SMOKE DETECTOR. DETECTORS ARE REQUIRED IN ALL CORRIDORS AND LOBBIES WITH A MAXIMUM SPACING OF 30' O.C.
SDC	EXISTING CONVENTIONAL SMOKE DETECTOR	REPLACE CEILING TILE AND/OR CEILING SURFACE WHERE SMOKE DETECTOR IS REMOVED.	REMOVE EXISTING CONVENTIONAL SMOKE DETECTOR AND REPLACE WITH NEW ADDRESSABLE SMOKE DETECTOR.
SDP	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR	CEILING MOUNTED.	ADD NEW SMOKE DETECTOR WHERE INDICATED ON PLAN.
HSD	ADDRESSABLE HEAT DETECTOR	CEILING OR UNDERSIDE OF ROOF DECK.	SPACING OF DETECTORS SHALL CONFORM TO NFPA 72 AND TO MANUFACTURER'S RECOMMENDATIONS.
DDSD	ADDRESSABLE DUCT SMOKE DETECTOR	PROVIDE A DETECTOR IN RETURN AIR SYSTEM ON EACH LEVEL. FIELD CONNECTION TO EACH RETURN AIR SYSTEM SHALL BE MADE AT THE DOWN-SIDE OF EACH AIR HANDLER DOWN-SIDE OF FLOOR AND UPSTREAM OF ANY BRANCH CONNECTIONS.	INSTALL IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF NFPA 72, NFPA 90A AND THE IBC.
MFA	ADDRESSABLE MANUAL FIRE ALARM PULL STATION	WALL MOUNT ON EXISTING J-BOX WHERE EXISTING PULL STATION IS TO BE REMOVED. PROTECTED BY PLASTIC STOPPER COVER. THE EXISTING COVER SHALL REMAIN.	REMOVE EXISTING CONVENTIONAL MANUAL PULL STATIONS AND REPLACE WITH NEW ADDRESSABLE PULL STATIONS.
FS	FLOW SWITCH FOR FIRE SPRINKLER SYSTEM	EXISTING TO REMAIN.	INSTALL NEW ADDRESSABLE MONITOR MODULE AT EACH EXISTING FLOW SWITCH TO FACILITATE MONITORING OF FLOW SWITCH BY FACP AS AN ADDRESSABLE POINT.
VSS	VALVE SUPERVISORY SWITCH FOR FIRE SPRINKLER SYSTEM	EXISTING TO REMAIN.	INSTALL NEW ADDRESSABLE MONITOR MODULE AT EACH EXISTING VALVE SUPERVISORY SWITCH TO FACILITATE MONITORING OF VALVE SUPERVISORY SWITCH BY FACP AS AN ADDRESSABLE POINT.
MM	ADDRESSABLE MONITOR MODULE	MOUNT ON NEW J-BOX NEAR EXISTING MONITORING DEVICES TO BE REMOVED.	INSTALL NEW CONVENTIONAL DEVICES TO FACILITATE MONITORING OF DEVICES TO BE REMOVED.
RM	ADDRESSABLE RELAY MODULE	MOUNT ON NEW J-BOX WITHIN 3' OF DEVICE OR CIRCUIT CONTROLLED.	TO PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS SUCH AS DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL OR ACTIVATION OF VOICE EVACUATION SYSTEM.
SS	FIRE ALARM SPEAKER/STROBE	CEILING MOUNT OR WALL MOUNT	STROBE SHALL HAVE A MINIMUM RATING OF 75 C/2 AND SHALL BE SYNCHRONIZED WITH ALL OTHER DEVICES IN VIEW. SOUND OUTPUT FROM SPEAKER SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL OF 15 DB ABOVE AMBIENT. APPLIANCE SHALL BE COMPATIBLE WITH AND CONNECTED TO VOICE EVACUATION CONTROL PANEL.
SSR	EXISTING FIRE ALARM SPEAKER OR SPEAKER/STROBE	REPLACE CEILING TILE AND/OR REPAIR CEILING/WALL SURFACE WHERE EXISTING FIRE ALARM SPEAKER OR SPEAKER/STROBE IS REMOVED.	REMOVE EXISTING FIRE ALARM SPEAKER OR SPEAKER/STROBE. JUNCTION BOX AND WIRING TO BE REMOVED.
SSW	FIRE ALARM STROBE	CEILING OR WALL MOUNT AT 80" TO 96" AFF	STROBE SHALL HAVE A MINIMUM CANDLE RATING OF 1500. STROBES SHALL BE POWERED FROM THE FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.
HSS	FIRE ALARM HORN/STROBE	WALL MOUNT ON EXISTING JUNCTION BOX	REPLACE EXISTING WALL MOUNTED NOTIFICATION APPLIANCES IN PERIPHERIES WITH NEW APPLIANCES. STROBE SHALL BE 15/75 C/2 RATED. APPLIANCES SHALL BE POWERED FROM THE FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.
HSSR	EXISTING FIRE ALARM HORN/STROBE	REMOVE EXISTING DEVICE AND WIRING AND PROVIDE DECORATIVE COVER PLATE (APPROVED BY OWNER) FOR EXISTING JUNCTION BOX	REMOVE EXISTING WALL MOUNT NOTIFICATION APPLIANCES IN ELEVATOR LOBBY TO BE REMOVED.
ESS	EXTERIOR FIRE ALARM HORN/STROBE	WALL MOUNTED ON EXISTING EXTERIOR J-BOX OR ON NEW WEATHERPROOF J-BOX AT 10'-0" AFF (2 NEW DEVICES)	REPLACE EXISTING EXTERIOR HORNS WITH NEW APPLIANCES. ADD 2 NEW APPLIANCES TO FACILITATE MONITORING OF DEVICES TO BE REMOVED. STROBES SHALL HAVE A MINIMUM RATING OF 15/75 C/2 AND SHALL BE SYNCHRONIZED WITH ALL OTHER STROBES IN VIEW. APPLIANCES SHALL BE POWERED FROM THE FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.



LOWER LEVEL FIRE ALARM PLAN
1/8" = 1'-0"

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REGIONAL GOVERNMENT CENTER
PROVO, UTAH

FIRE ALARM SYSTEM UPGRADES
DFCM PROJECT #04202310

AS-BUILT 04/10/06

FIRE ALARM SYSTEM GENERAL NOTES

- SCOPE OF WORK: WORK SHALL INCLUDE REMOVAL OF EXISTING CONVENTIONAL FIRE ALARM SYSTEM INCLUDING ALL CONTROL EQUIPMENT, POWER SUPPLIES, INITIATING CIRCUITS AND DEVICES, NOTIFICATION APPLIANCE CIRCUITS AND DEVICES. INSTALL NEW ADDRESSABLE FIRE ALARM SYSTEM AND VOICE ACTIVATION SYSTEM THROUGHOUT BUILDING. NEW FIRE ALARM SYSTEM SHALL BE IN ACCORDANCE WITH NFPA 72, THESE DRAWINGS AND SPECIFICATIONS.
- APPLICABLE CODES/STANDARDS: INTERNATIONAL BUILDING CODE - 2003 EDITION INTERNATIONAL FIRE CODE - 2003 EDITION INTERNATIONAL MECHANICAL CODE - 2003 EDITION UTAH STATE FIRE MARSHAL RULE R710-4 NFPA 70 - 2002 EDITION NFPA 72 - 2002 EDITION NFPA 90A - 2002 EDITION
- QUALITY ASSURANCE: ALL EQUIPMENT, MATERIAL AND DEVICES LISTED FOR THE FIRE ALARM SYSTEM INSTALLATION SHALL BE UL USED AND/OR FM APPROVED FOR USE IN FIRE PROTECTION SYSTEMS. ALL INITIATING DEVICES SHALL BE LISTED COMPATIBLE WITH THE FIRE ALARM CONTROL PANEL (FACP). MAJOR SYSTEM COMPONENTS (CONTROL PANELS, INITIATING DEVICES, ADDRESSABLE MODULES AND RELAYS, POWER SUPPLIES, ETC.) SHALL BE FROM A STATE OF UTAH DFCM APPROVED MANUFACTURER. APPROVED MANUFACTURERS INCLUDE FIRE-LITE AND SILENT KNIGHT.
- SUBMITTALS: FIRE ALARM SYSTEM CONTRACTOR SHALL PREPARE AND SUBMIT SHOPS DRAWINGS TO PROVO FIRE DEPARTMENT, STATE FIRE MARSHAL, OWNER AND ENGINEER FOR REVIEW/ APPROVAL PRIOR TO ORDERING OR INSTALLING ANY EQUIPMENT. SUBMITTALS SHALL CONFORM TO THE CONSTRUCTION DOCUMENTS REQUIREMENTS OF IFC 907.1.1.
- DEMOLITION: IT IS THE INSTALLER'S RESPONSIBILITY FOR THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM. ALL NEW (UNLESS OTHERWISE NOTED) DEVICES WILL REPLACE THE EXISTING AND GENERALLY REUSE THE EXISTING LOCATIONS. ANY EXISTING DEVICES AND CONDUIT NOT BEING REPLACED AND REUSED THAT ARE VISIBLE, SUCH AS NOTIFICATION APPLIANCES OR SMOKE DETECTORS SHALL BE REMOVED AND REMAINING WALL OR CEILING SURFACE REPAIRED OR REPLACED TO MATCH SURROUNDING AREAS. PULL ALL UNUSED WIRES FROM ALL CONDUITS AND J-BOXES REMAINING. CEILING TILE DAMAGED BY THE INSTALLER WILL BE REPLACED BY THE CONTRACTOR WITH THE SAME OR EQUIVALENT TILE.
- SYSTEM TYPE: FIRE ALARM SYSTEM SHALL MEET THE REQUIREMENTS FOR PROTECTED PREMISE FIRE ALARM SYSTEMS. SYSTEM SHALL PROVIDE OFF-PREMISE NOTIFICATION OF STATUS TO CENTRAL STATION DETERMINED BY OWNER.
- OCCUPANT NOTIFICATION: RECEIPT OF ANY FIRE ALARM SIGNAL AT THE FACP SHALL RESULT IN THE ACTIVATION OF ALL NOTIFICATION APPLIANCES IN THE BUILDING (STROBES, HORN/STROBES AND SPEAKER STROBES). FOR PURPOSES OF FIRE ALARM NOTIFICATION, THE BUILDING SHALL BE CONSIDERED AS A SINGLE ZONE.
- VOICE/ALARM COMMUNICATION: PROVIDE AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH IBC 907.2.12.2 AND NFPA 72. SYSTEM SHALL PROVIDE BOTH AUDIBLE AND VISUAL SIGNALS. VOICE/ALARM COMMUNICATION SYSTEM FUNCTIONS MAY BE INTEGRATED INTO THE FACP OR PROVIDED BY A SEPARATE PANEL CONTROLLED AND MONITORED BY THE FACP. SYSTEM SHALL BE CONFIGURED TO NOTIFY THE ENTIRE BUILDING AS A SINGLE ZONE BUT SHALL BE CAPABLE OF DIVIDING NOTIFICATION APPLIANCES INTO A MINIMUM OF 4 DISTINCT ZONES FOR MANUAL PAGING USE.

- WIRING/CONDUIT: ALL WIRING TO BE FREE OF OPENS, SHORTS AND GROUNDS. ALL WIRING SHALL BE INSTALLED IN RIGID 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 600V INSULATION OR EQUIVALENT AS PER NFPA 70 ARTICLE 760.
- WIRING STYLES (PER NFPA 72): INITIATING DEVICE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE D CIRCUITS. SIGNALING LINE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE 6 OR 7 CIRCUITS. NOTIFICATION APPLIANCE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE Z.
- POWER: EXISTING DEDICATED BRANCH CIRCUIT MAY BE REUSED TO PROVIDE PRIMARY POWER TO NEW FACP. FURNISH A BATTERY BACKUP TO PROVIDE SECONDARY POWER SUPPLY TO FIRE ALARM SYSTEM. BATTERY BACKUP SHALL BE OF SUFFICIENT CAPACITY TO PROVIDE 24 HOURS OR STANDBY POWER WITH AN ADDITIONAL RESERVE TO OPERATE SYSTEM FOR 5 MINUTES IN A LARM.
- INITIATING DEVICES: SLC CIRCUITS - SLC LOOP DEVICE ADDRESSING SHALL NOT EXCEED 127 DETECTORS (SMOKES, HEATS, DUCT SMOKE, ETC.) OR 127 MODULES (PULL STATIONS, MONITOR, CONTROL, ETC.) PER LOOP. AT LEAST 19 ADDRESSES (15%) SHOULD BE LEFT VACANT ON EACH SLC LOOP IN ORDER TO ALLOW SPACE FOR ADJUSTMENTS. SMOKE DETECTORS: PROVIDE SMOKE DETECTORS WHERE SHOWN ON PLANS IN ALL CORRIDORS, LOBBIES AND AT THE TOP OF EACH ELEVATOR SHAFT. MAXIMUM SPACING OF DETECTORS SHALL BE 30' BETWEEN DETECTORS OR 15' FROM FURTHEST WALL. MANUAL PULL STATIONS: INSTALL NEW PULL STATIONS AT SAME LOCATION AND HEIGHT AS EXISTING PULL STATIONS USING EXISTING JUNCTION BOXES.

- HEAT DETECTORS: PROVIDE HEAT DETECTORS WHERE SHOWN ON PLANS IN SHOP AREA AND ELEVATOR EQUIPMENT ROOM. MAXIMUM SPACING FOR HEAT DETECTORS SHALL BE 50' BETWEEN DETECTORS OR 25' FROM FURTHEST WALL. ADDRESSABLE MODULES: PROVIDE ADDRESSABLE MODULES TO MONITOR EXISTING CONVENTIONAL DEVICES (WATER FLOW SWITCHES, VALVE TAMPER SWITCHES, HALON CONTROL PANEL) TO REMAIN. SPRINKLER WATER FLOW AND VALVE TAMPER SWITCH LOCATIONS TO BE FIELD VERIFIED. LOCATE MONITOR MODULE ADJACENT TO FLOW OR TAMPER SWITCH IN AN ACCESSIBLE LOCATION OR ABOVE REMOVABLE CEILING TILE. LABEL AS PART OF THE FIRE ALARM SYSTEM WITH THE NAME OF THE DEVICE MONITORED ON THE COVER OF THE JUNCTION BOX.
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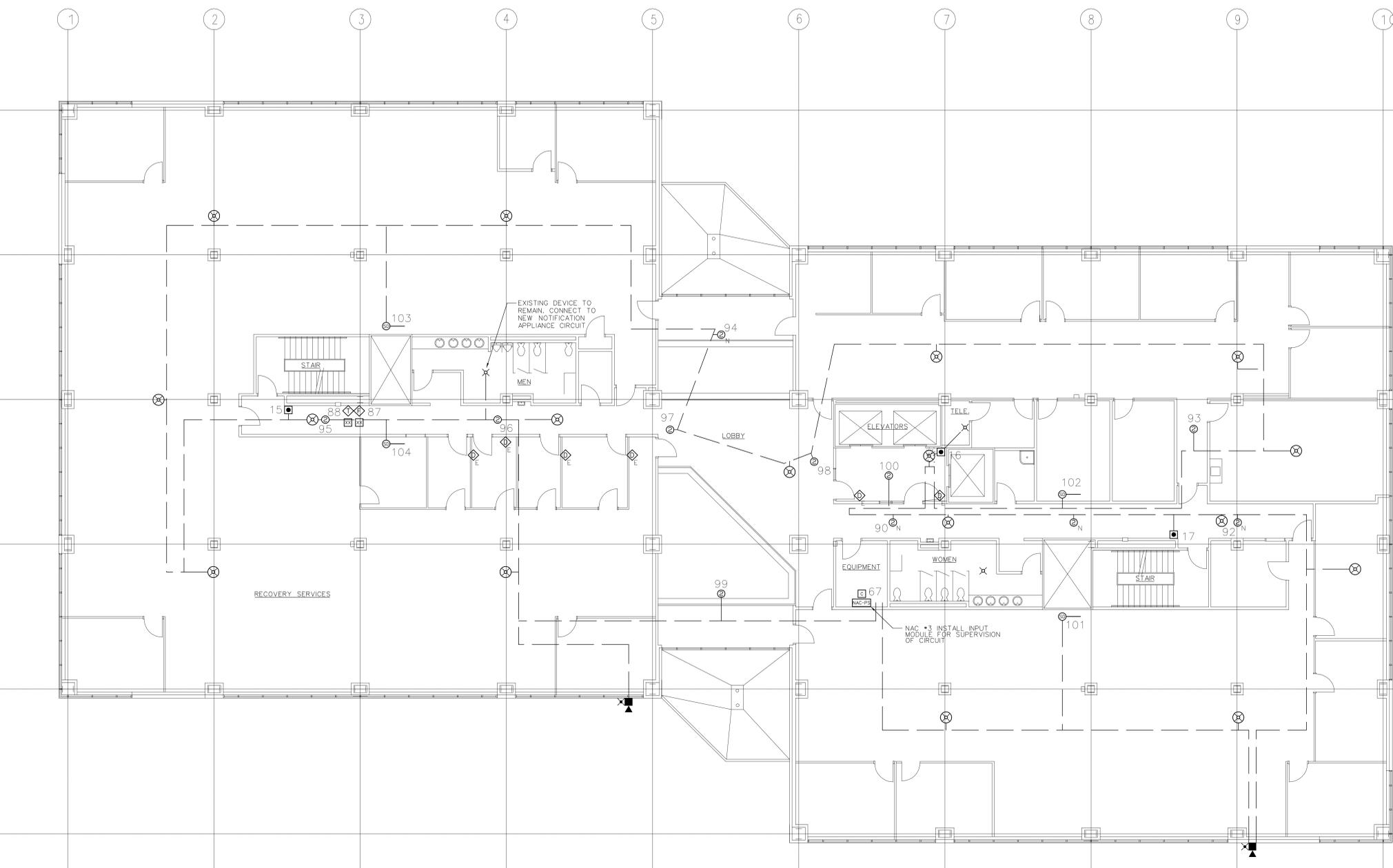
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- PHASING: PLAN SEQUENCE OF WORK TO MINIMIZE DOWN TIME OF FIRE ALARM SYSTEM. IT IS THE INSTALLER'S RESPONSIBILITY TO PROVIDE A FIRE WATCH AND NOTIFY PROPER AUTHORITIES DURING INTERRUPTIONS OF FIRE DETECTION AND ALARM SERVICE IN THE BUILDING.
- TESTING: SCHEDULE AND PERFORM ALL ACCEPTANCE TESTS REQUIRED BY NFPA 72. TESTING SHALL BE WITNESSED BY PROVO FIRE DEPARTMENT, STATE FIRE MARSHAL'S OFFICE, PROJECT ENGINEER, DFCM AND BUILDING MAINTENANCE PERSONNEL. SUBMIT A WRITTEN TESTING PLAN DETAILING EACH TEST TO BE PERFORMED TO EACH AGENCY AT LEAST THREE DAYS PRIOR TO SCHEDULED TEST.

FIRE ALARM SYSTEM KEY NOTES

- REMOVE EXISTING CONVENTIONAL FIRE ALARM CONTROL PANEL (FACP), MODULES AND ENCLOSURE. FURNISH AND INSTALL NEW ADDRESSABLE FACP AT LOCATION OF EXISTING PANEL. FACP SHALL HAVE BUILT-IN ALPHA-NUMERIC ANNUNCIATOR AND DUAL COMMUNICATOR. NEW PANEL SHALL BE SUPPLIED FROM THE SAME DEDICATED POWER CIRCUIT SUPPLYING EXISTING FACP. NEW FACP SHALL HAVE SUFFICIENT CAPACITY TO MONITOR 254 ADDRESSABLE INITIATING DEVICES. PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS (DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL AND ACTIVATION OF VOICE EVACUATION SYSTEM) AND SUFFICIENT CAPACITY TO POWER EACH NOTIFICATION APPLIANCE CIRCUIT.
- REMOVE EXISTING VOICE EVACUATION SYSTEM CONTROL PANEL, MODULES AND ENCLOSURE. FURNISH AND INSTALL NEW CONTROL PANEL FOR VOICE EVACUATION SYSTEM. CONTROL PANEL SHALL HAVE BUILT-IN POWER SUPPLY (ADDITIONAL REMOTE POWER SUPPLIES MAY BE USED) SUFFICIENT TO PROVIDE POWER TO ALL SPEAKER/STROBE APPLIANCES IN BUILDING.
- EXISTING RELEASING PANEL AND MANUAL ACTIVATION PULL STATION FOR HALON FIRE SUPPRESSION SYSTEM IN COMPUTER ROOM TO REMAIN. INSTALL 3 NEW ADDRESSABLE MONITOR MODULES NEAR EXISTING RELEASING PANEL AND CONNECT TO ALARM SUPERVISORY AND TROUBLE OUTRITS FROM PANEL TO ALLOW INTERCONNECTIONS TEMPORARILY WITH BUILDING FACP AND OFF-PREMISE TRANSMISSION OF SIGNALS. DISABLE HALON SYSTEM PRIOR TO MAKING CONNECTIONS TO AVOID ACCIDENTAL DUMP OF HALON.
- EXISTING NOTIFICATION APPLIANCES FOR HALON FIRE SUPPRESSION SYSTEM (DO NOT REMOVE NOTIFICATION APPLIANCES) TO BE CONNECTED TO EXISTING RELEASING PANEL FOR HALON FIRE SUPPRESSION SYSTEM.
- EXISTING ILLUMINATED LAMP TYPE ANNUNCIATOR PANEL FOR CONVENTIONAL FIRE ALARM SYSTEM TO BE ABANDONED IN PLACE. REMOVE ALL EXISTING WIRING TO PANEL AND REPLACE CLEAR GLASS PANEL WITH BLACK GLASS.
- FURNISH AND INSTALL NEW REMOTE ANNUNCIATOR FOR FIRE ALARM SYSTEM INSIDE OF EAST ENTRY (FIRE DEPARTMENT ACCESS). WALL MOUNT ANNUNCIATOR AT 54" AFF. ANNUNCIATOR PANEL MAY BE INSTALLED ON A SURFACE MOUNT J-BOX BUT ALL CONDUIT TO TO PANEL MUST BE CONCEALED IN WALL.
- FURNISH AND INSTALL A PROTECTIVE COVER (STI-1100 OR EQUAL) WITH AUDIBLE ALARM OVER MANUAL FIRE ALARM PULL STATION TO DISCOURAGE FALSE ACTIVATION.
- FURNISH AND INSTALL A PROGRAMMABLE RELAY TO SHUT DOWN EACH AIR HANDLER. RELAYS SHALL BE NORMALLY ENERGIZED AND FAN CONTROLS SHALL BE CONNECTED TO NORMALLY CLOSED CONTACTS ON THE RELAYS. RELAYS SHALL BE PROGRAMMED TO SHUT DOWN ALL AIR HANDLERS SIMULTANEOUSLY UPON ACTIVATION OF ANY AREA OR DUCT SMOKE DETECTOR AND SHALL NOT RESTORE UNTIL THE FACP HAS RESET.
- FURNISH AND INSTALL PROGRAMMABLE RELAYS TO PROVIDE ELEVATOR RECALL FUNCTIONS. ELEVATOR RECALL FUNCTIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF ASME A17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS. COORDINATE WORK WITH MAINTENANCE CONTRACTOR FOR ELEVATORS.
- FURNISH AND INSTALL A NEW MAGNETIC HOLD-OPEN DEVICE FOR EXISTING DOOR. MANUFACTURER AND MODEL OF DEVICE SHALL MATCH EXISTING DEVICES. MOUNT DEVICE HIGH ON WALL TO HOLD UPPER EDGE OF DOOR. PROVIDE PROGRAMMABLE RELAYS TO RELEASE ALL NEW AND EXISTING DOOR HOLDERS SIMULTANEOUSLY UPON RECEIPT OF ANY FIRE ALARM SIGNAL AT THE FACP. POWER TO DOOR HOLDERS TO BE PROVIDED BY CIRCUIT FROM FACP OR REMOTE POWER SUPPLY SUPERVISED BY THE FACP. POWER CIRCUITS SHALL BE OF SUFFICIENT CAPACITY TO POWER ALL NEW AND EXISTING DOOR HOLDERS WITH SUFFICIENT CAPACITY FOR AN ADDITIONAL 10 DOOR HOLDERS TO ALLOW FOR FUTURE EXPANSION BY OWNER.

FIRE ALARM EQUIPMENT LEGEND

DEVICE	DESCRIPTION	MOUNTING	REMARKS
FACP	FIRE ALARM CONTROL PANEL	MOUNT AT SAME LOCATION AS EXISTING FACP THAT IS TO BE REMOVED.	INTELLIGENT/ADDRESSABLE FIRE ALARM ALPHA-NUMERIC ANNUNCIATOR AND DUAL COMMUNICATORS. PROVIDE A MINIMUM OF 2 SLC CIRCUITS WITH A CAPACITY TO MONITOR AT LEAST 254 ADDRESSABLE POINTS.
VEP	VOICE EVACUATION SYSTEM CONTROL PANEL	MOUNT AT SAME LOCATION AS EXISTING VOICE EVACUATION PANEL TO BE REMOVED.	SYSTEM SHALL HAVE A BUILT-IN POWER SUPPLY SUFFICIENT TO POWER ALL SPEAKER STROBES IN THE BUILDING. SYSTEM SHALL PROVIDE SIGNALS TO THE ABILITY TO SELECTIVELY PAGE ANY SINGLE ZONE OR ZONES WITH THE CAPABILITY OF BROADCASTING PRE-RECORDED AND LIVE MESSAGES.
FSA	FIRE ALARM ANNUNCIATOR PANEL	54" AFF. JUNCTION BOX MAY BE SURFACE MOUNT BUT CONDUIT MUST BE CONCEALED IN EXISTING WALL.	ANNUNCIATOR SHALL HAVE A BUILT-IN LED (MINIMUM OF 80 CHARACTERS) TO DISPLAY STATUS OF THE FIRE ALARM SYSTEM AS WELL AS NAME AND ADDRESS OF ANY DEVICE INITIATING AN ALARM OR TROUBLE CONDITION. ANNUNCIATOR SHALL HAVE INPT KEYS TO ALLOW ALARM SILENCE AND SYSTEM RESET.
NAC-PS	REMOTE POWER SUPPLIES FOR NOTIFICATION APPLIANCE CIRCUITS	ADJACENT TO FACP OR REMOTE IN BUILDING EXISTING PULL STATIONS BY BUILDING MANAGEMENT.	NUMBER AND LOCATION OF POWER SUPPLIES SHALL BE SUFFICIENT TO POWER ALL NOTIFICATION APPLIANCE CIRCUITS IN BUILDING WITH MAXIMUM SUPPLY TO MOST REMOTE DEVICE ON CIRCUIT.
HCP	HALON SYSTEM CONTROL PANEL	EXISTING	EXISTING FENWALL PANEL TO REMAIN. CONNECT ALARM SUPERVISORY & TROUBLE OUTRITS OF EXISTING PANEL TO NEW FACP.
MDO	MAGNETIC DOOR HOLD-OPEN DEVICE (EXISTING)	EXISTING	CONNECT EXISTING MAGNETIC DOOR HOLDER TO RELAY CONTROLLED BY NEW FIRE ALARM PANEL.
MDO-N	MAGNETIC DOOR HOLD-OPEN DEVICE (NEW)	MOUNT AT TOP EDGE OF DOOR.	INSTALL NEW MAGNETIC DOOR HOLDER TO RELEASE EXISTING DOOR. MANUFACTURER AND MODEL OF DEVICE SHALL MATCH EXISTING CORNER DOOR HOLDERS TO RELAY CONTROLLED BY FIRE ALARM PANEL.
SD	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR	CEILING MOUNTED. WHERE NEW DETECTOR REPLACES AN EXISTING ADDRESSABLE SMOKE DETECTOR, EXISTING J-BOX MAY BE RE-USED.	REMOVE EXISTING CONVENTIONAL SMOKE DETECTOR AND REPLACE WITH NEW ADDRESSABLE SMOKE DETECTOR. DETECTORS ARE REQUIRED IN ALL CORRIDORS AND LOBBIES WITH A MAXIMUM SPACING OF 30' O.C.
SD-C	EXISTING CONVENTIONAL SMOKE DETECTOR	REPLACE CEILING TILE AND/OR REPAIR CEILING SURFACE WHERE DETECTOR IS REMOVED.	REMOVE EXISTING CONVENTIONAL SMOKE DETECTOR. J-BOX AND WIRING TO BE RE-USED.
SD-N	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR	CEILING MOUNTED.	ADD NEW SMOKE DETECTOR WHERE INDICATED ON PLAN.
H	ADDRESSABLE HEAT DETECTOR	CEILING OR UNDERSIDE OF ROOF DECK.	SPACING OF DETECTORS SHALL CONFORM TO NFPA 72 AND TO MANUFACTURER'S RECOMMENDATIONS.
SDS	ADDRESSABLE DUCT SMOKE DETECTOR	PROVIDE A DETECTOR IN RETURN AIR DUCTS ON EACH LEVEL. FROM 10' CONNECTION TO EACH RETURN AIR DUCT TO EACH RETURN AIR DUCT. SIDE OF EACH AIR HANDLER DOWN-DOWN DIRECTION OF FLOW AND UPSTREAM OF ANY BRANCH CONNECTIONS.	INSTALL IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF NFPA 72, NFPA 90A AND THE IBC.
MFP	ADDRESSABLE MANUAL FIRE ALARM PULL STATION	WALL MOUNT ON EXISTING J-BOX. PROTECT EXISTING PULL STATION AND REPLACE WITH NEW ADDRESSABLE PULL STATIONS.	REMOVE EXISTING CONVENTIONAL MANUAL PULL STATIONS AND REPLACE WITH NEW ADDRESSABLE PULL STATIONS.
FS	FLOW SWITCH FOR FIRE SPRINKLER SYSTEM	EXISTING TO REMAIN.	INSTALL NEW ADDRESSABLE MONITOR MODULE AT EACH EXISTING FLOW SWITCH TO FACILITATE MONITORING OF FLOW SWITCH BY FACP AS AN ADDRESSABLE POINT.
VS	VALVE SUPERVISORY SWITCH FOR FIRE SPRINKLER SYSTEM	EXISTING TO REMAIN.	INSTALL NEW ADDRESSABLE MONITOR MODULE AT EACH EXISTING VALVE SUPERVISORY SWITCH TO FACILITATE MONITORING OF VALVE SUPERVISORY SWITCH BY FACP AS AN ADDRESSABLE POINT.
MM	ADDRESSABLE MONITOR MODULE	MOUNT ON NEW J-BOX NEAR EXISTING MONITORING DEVICE TO BE REPLACED.	INSTALL NEW CONVENTIONAL DEVICES TO FACILITATE MONITORING OF EXISTING DEVICES.
RM	ADDRESSABLE RELAY MODULE	MOUNT ON NEW J-BOX WITHIN 3' OF DEVICE OR CIRCUIT CONTROLLED.	TO PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS SUCH AS DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL OR ACTIVATION OF VOICE EVACUATION SYSTEM.
SS	FIRE ALARM SPEAKER/STROBE	CEILING MOUNT OR WALL MOUNT	STROBE SHALL HAVE A MINIMUM RATING OF 75 CD AND SHALL BE SYNCHRONIZED WITH ALL OTHER DEVICES IN VIEW. SOUND LEVEL OF 15 db ABOVE AMBIENT APPLIANCE SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL OF 15 db ABOVE AMBIENT APPLIANCE. SHALL BE COMPATIBLE WITH AND CONNECTED TO VOICE EVACUATION CONTROL PANEL.
SS-C	EXISTING FIRE ALARM SPEAKER OR SPEAKER/STROBE	REPLACE CEILING TILE AND/OR REPAIR CEILING/WALL SURFACE WHERE WIRING IS REMOVED.	REPLACE EXISTING FIRE ALARM SPEAKER OR SPEAKER/STROBE. JUNCTION BOX AND WIRING TO BE REMOVED.
SS-N	FIRE ALARM STROBE	CEILING OR WALL MOUNT AT 80" TO 96" AFF.	STROBE SHALL HAVE A MINIMUM CANDLE RATING OF 1500. STROBES SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.
HWS	FIRE ALARM HORN/STROBE	WALL MOUNT ON EXISTING JUNCTION BOX	REPLACE EXISTING WALL MOUNTED NOTIFICATION APPLIANCES IN PORTHOUSES WITH NEW APPLIANCES. STROBE SHALL BE 157/75 CD RATED. APPLIANCE SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.
HWS-N	EXISTING FIRE ALARM HORN/STROBE	REMOVE EXISTING DEVICE AND WIRING AND PROVIDE DECORATIVE COVER PLATE (APPROVED BY OWNER) FOR EXISTING JUNCTION BOX	REMOVE EXISTING WALL MOUNT NOTIFICATION APPLIANCES IN ELEVATOR LOBBY TO BE REMOVED.
HWS-N	EXTERIOR FIRE ALARM HORN/STROBE	WALL MOUNTED ON EXISTING EXTERIOR J-BOX OR ON NEW WEATHERPROOF J-BOX AT 10'-0" AFF (2 NEW DEVICES)	REPLACE EXISTING EXTERIOR HORNS WITH NEW AUDIBLE/VISIBLE APPLIANCES. ADD 2 NEW APPLIANCES TO EACH EXTERIOR LOCATION. STROBES SHALL HAVE A MINIMUM RATING OF 157/75 CD AND SHALL BE SYNCHRONIZED WITH ALL OTHER STROBES IN VIEW. APPLIANCES SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.



SECOND LEVEL FIRE ALARM PLAN
1/8" = 1'-0"

PROVIDED BY: BAJ
CHECKED BY: GTJ

JOB NO. 103819
DWG ISSUE: AS-BUILT

REVISIONS:

DRAWING DATE: 04/10/06
REVISION DATE: XXXX/05

REGIONAL GOVERNMENT CENTER
PROVO, UTAH

FIRE ALARM SYSTEM UPGRADES
DFCM PROJECT #04202310

SECOND LEVEL
FA-3

AS-BUILT 04/10/06

FIRE ALARM SYSTEM GENERAL NOTES

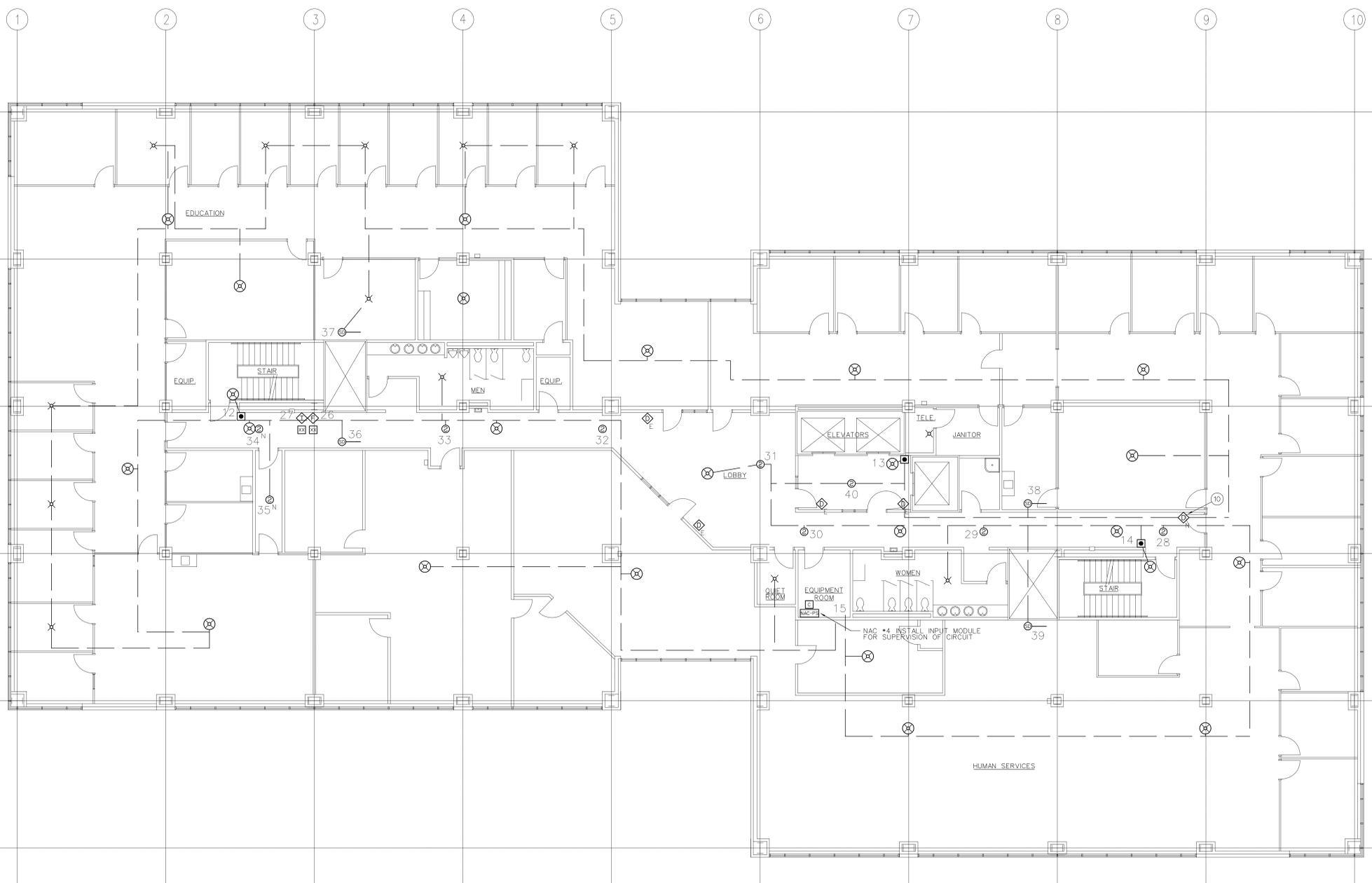
- SCOPE OF WORK: WORK SHALL INCLUDE REMOVAL OF EXISTING CONVENTIONAL FIRE ALARM SYSTEM INCLUDING ALL CONTROL EQUIPMENT, POWER SUPPLIES, INITIATING CIRCUITS AND DEVICES, NOTIFICATION APPLIANCE CIRCUITS AND DEVICES. INSTALL NEW ADDRESSABLE FIRE ALARM SYSTEM AND VOICE ACTIVATION SYSTEM THROUGHOUT BUILDING. NEW FIRE ALARM SYSTEM SHALL BE IN ACCORDANCE WITH NFPA 72, THESE DRAWINGS AND SPECIFICATIONS.
- APPLICABLE CODES/STANDARDS: INTERNATIONAL BUILDING CODE - 2003 EDITION INTERNATIONAL FIRE CODE - 2003 EDITION INTERNATIONAL MECHANICAL CODE - 2003 EDITION UTAH STATE FIRE MARSHAL RULE R710-4 NFPA 70 - 2002 EDITION NFPA 72 - 2002 EDITION NFPA 90A - 2002 EDITION
- QUALITY ASSURANCE: ALL EQUIPMENT, MATERIAL AND DEVICES LISTED FOR THE FIRE ALARM SYSTEM INSTALLATION SHALL BE UL USED AND/OR FM APPROVED FOR USE IN FIRE PROTECTION SYSTEMS. ALL INITIATING DEVICES SHALL BE LISTED COMPATIBLE WITH THE FIRE ALARM CONTROL PANEL (FACP). MAJOR SYSTEM COMPONENTS (CONTROL PANELS, INITIATING DEVICES, ADDRESSABLE MODULES AND RELAYS, POWER SUPPLIES, ETC.) SHALL BE FROM A STATE OF UTAH DFCM APPROVED MANUFACTURER. APPROVED MANUFACTURERS INCLUDE FIRE-LITE AND SILENT KNIGHT.
- SUBMITTALS: FIRE ALARM SYSTEM CONTRACTOR SHALL PREPARE AND SUBMIT SHOPS DRAWINGS TO PROVO FIRE DEPARTMENT, STATE FIRE MARSHAL, OWNER AND ENGINEER FOR REVIEW/APPROVAL PRIOR TO ORDERING OR INSTALLING ANY EQUIPMENT. SUBMITTALS SHALL CONFORM TO THE CONSTRUCTION DOCUMENTS REQUIREMENTS OF IFC 907.1.1.
- DEMOLITION: IT IS THE INSTALLER'S RESPONSIBILITY FOR THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM. ALL NEW (UNLESS OTHERWISE NOTED) DEVICES WILL REPLACE THE EXISTING AND GENERALLY REUSE THE EXISTING LOCATIONS. ANY EXISTING DEVICES AND CONDUIT NOT BEING REPLACED AND REUSED THAT ARE VISIBLE, SUCH AS NOTIFICATION APPLIANCES OR SMOKE DETECTORS SHALL BE REMOVED AND REMAINING WALL OR CEILING SURFACE REPAIRED OR REPLACED TO MATCH SURROUNDING AREAS. PULL ALL UNUSED WIRES FROM ALL CONDUITS AND J-BOXES REMAINING. CEILING TILE DAMAGED BY THE INSTALLER WILL BE REPLACED BY THE CONTRACTOR WITH THE SAME OR EQUIVALENT TILE.
- SYSTEM TYPE: FIRE ALARM SYSTEM SHALL MEET THE REQUIREMENTS FOR PROTECTED PREMISE FIRE ALARM SYSTEMS. SYSTEM SHALL PROVIDE OFF-PREMISE NOTIFICATION OF STATUS TO CENTRAL STATION DETERMINED BY OWNER.
- OCCUPANT NOTIFICATION: RECEIPT OF ANY FIRE ALARM SIGNAL AT THE FACP SHALL RESULT IN THE ACTIVATION OF ALL NOTIFICATION APPLIANCES IN THE BUILDING (STROBES, HORN/STROBES AND SPEAKER STROBES), FOR PURPOSES OF FIRE ALARM NOTIFICATION, THE BUILDING SHALL BE CONSIDERED AS A SINGLE ZONE.
- VOICE/ALARM COMMUNICATION: PROVIDE AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH IBC 907.2.12.2 AND NFPA 72. SYSTEM SHALL PROVIDE BOTH AUDIBLE AND VISUAL SIGNALS. VOICE/ALARM COMMUNICATION SYSTEM FUNCTIONS MAY BE INTEGRATED INTO THE FACP OR PROVIDED BY A SEPARATE PANEL CONTROLLED AND MONITORED BY THE FACP. SYSTEM SHALL BE CONFIGURED TO NOTIFY THE ENTIRE BUILDING AS A SINGLE ZONE BUT SHALL BE CAPABLE OF DIVIDING NOTIFICATION APPLIANCES INTO A MINIMUM OF 4 DISTINCT ZONES FOR MANUAL PAGING USE.
- WIRING/CONDUIT: ALL WIRING TO BE FREE OF OPENS, SHORTS AND GROUND. ALL WIRING SHALL BE INSTALLED IN RIGID 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 600V INSULATION OR EQUIVALENT AS PER NFPA 70 ARTICLE 760.
- WIRING STYLES (PER NFPA 72): INITIATING DEVICE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE D CIRCUITS. SIGNALING LINE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE 6 OR 7 CIRCUITS. NOTIFICATION APPLIANCE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE Z.
- POWER: EXISTING DEDICATED BRANCH CIRCUIT MAY BE REUSED TO PROVIDE PRIMARY POWER TO NEW FACP. FURNISH A BATTERY BACKUP TO PROVIDE SECONDARY POWER SUPPLY TO FIRE ALARM SYSTEM. BATTERY BACKUP SHALL BE OF SUFFICIENT CAPACITY TO PROVIDE 24 HOURS OR STANDBY POWER WITH AN ADDITIONAL RESERVE TO OPERATE SYSTEM FOR 5 MINUTES IN ALARM.
- INITIATING DEVICES: SLC CIRCUITS - SLC LOOP DEVICE ADDRESSING SHALL NOT EXCEED 127 DETECTORS (SMOKES, HEATS, DUCT SMOKES, ETC.) OR 127 MODULES (PULL STATIONS, MONITOR, CONTROL, ETC.) PER LOOP. AT LEAST 19 ADDRESSES (15%) SHOULD BE LEFT VACANT ON EACH SLC LOOP IN ORDER TO ALLOW SPACE FOR ADJUSTMENTS. SMOKE DETECTORS: PROVIDE SMOKE DETECTORS WHERE SHOWN ON PLANS IN ALL CORRIDORS, LOBBIES AND AT THE TOP OF EACH ELEVATOR SHAFT. MAXIMUM SPACING OF DETECTORS SHALL BE 30' BETWEEN DETECTORS OR 15' FROM FURTHEST WALL. MANUAL PULL STATIONS: INSTALL NEW PULL STATIONS AT SAME LOCATION AND HEIGHT AS EXISTING PULL STATIONS USING EXISTING JUNCTION BOXES.
- HEAT DETECTORS: PROVIDE HEAT DETECTORS WHERE SHOWN ON PLANS IN SHOP AREA AND ELEVATOR EQUIPMENT ROOM. MAXIMUM SPACING FOR HEAT DETECTORS SHALL BE 50' BETWEEN DETECTORS OR 25' FROM FURTHEST WALL. ADDRESSABLE MODULES: PROVIDE ADDRESSABLE MODULES TO MONITOR EXISTING CONVENTIONAL DEVICES (WATER FLOW SWITCHES, VALVE TAMPER SWITCHES, HALON CONTROL PANEL) TO REMAIN. SPRINKLER WATER FLOW AND VALVE TAMPER SWITCH LOCATIONS TO BE FIELD VERIFIED. LOCATE MONITOR MODULE ADJACENT TO FLOW OR TAMPER SWITCH IN AN ACCESSIBLE LOCATION OR ABOVE REMOVABLE CEILING TILE. LABEL AS PART OF THE FIRE ALARM SYSTEM WITH THE NAME OF THE DEVICE MONITORED ON THE COVER OF THE JUNCTION BOX.
- NOTIFICATION APPLIANCES: PROVIDE AUDIBLE AND VISUAL NOTIFICATION APPLIANCES THROUGHOUT BUILDING. PROVIDE SPEAKER/STROBES CONNECTED TO VOICE/ALARM SYSTEM IN ALL CORRIDORS, LOBBIES AND ROOMS IN EXCESS OF 1,000 SQ FT. PROVIDE STROBES OR HORN/STROBES IN OTHER LOCATIONS AS INDICATED ON THE PLANS. NEW DEVICES SHALL BE CEILING MOUNTED. WALL MOUNTED DEVICES MAY BE INSTALLED ON EXISTING J-BOXES. VOLUME OF HORNS AND SPEAKERS SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL OF 15 DB ABOVE AMBIENT IN ALL OCCUPIED AREAS. VISIBLE ALARMS SHALL BE PROVIDED THROUGHOUT ALL PUBLIC AREAS OF THE BUILDING AS WELL AS PRIVATE OFFICES AND AREAS WITH POSSIBLE OCCUPANCY BY HEARING IMPAIRED PERSONS.
- FIRE SAFETY FUNCTIONS: CONTROL MODULES WITH RELAY CONTACTS SHALL BE INSTALLED AND PROGRAMMED TO PROVIDE DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL & ACTIVATION OF VOICE/ALARM SYSTEM (UNLESS INTEGRATED WITH FACP) OR REMOTE POWER SUPPLIES FOR NOTIFICATION APPLIANCE CIRCUITS. THE CONTROL RELAY MODULES SHALL BE INSTALLED WITHIN 36" OF DEVICE OR CIRCUIT CONTROLLED. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY NUMBER AND LOCATION OF DEVICES TO BE CONTROLLED.
- PHASING: PLAN SEQUENCE OF WORK TO MINIMIZE DOWN TIME OF FIRE ALARM SYSTEM. IT IS THE INSTALLER'S RESPONSIBILITY TO PROVIDE A FIRE WATCH AND NOTIFY PROPER AUTHORITIES DURING INTERRUPTIONS OF FIRE DETECTION AND ALARM SERVICE IN THE BUILDING.
- TESTING: SCHEDULE AND PERFORM ALL ACCEPTANCE TESTS REQUIRED BY NFPA 72. TESTING SHALL BE WITNESSED BY PROVO FIRE DEPARTMENT, STATE FIRE MARSHAL'S OFFICE, PROJECT ENGINEER, DFCM AND BUILDING MAINTENANCE PERSONNEL. SUBMIT A WRITTEN TESTING PLAN DETAILING EACH TEST TO BE PERFORMED TO EACH AGENCY AT LEAST THREE DAYS PRIOR TO SCHEDULED TEST.

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- REMOVE EXISTING CONVENTIONAL FIRE ALARM CONTROL PANEL (FACP), MODULES AND ENCLOSURE. FURNISH AND INSTALL NEW ADDRESSABLE FACP AT LOCATION OF EXISTING PANEL. FACP SHALL HAVE BUILT-IN ALPHA-NUMERIC ANNUNCIATOR AND DUAL COMMUNICATOR. NEW PANEL SHALL BE SUPPLIED FROM THE SAME DEDICATED POWER CIRCUIT SUPPLYING EXISTING FACP. NEW FACP SHALL HAVE SUFFICIENT CAPACITY TO MONITOR 254 ADDRESSABLE INITIATING DEVICES. PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS (DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL AND ACTIVATION OF VOICE EVACUATION SYSTEM) AND SUFFICIENT CAPACITY TO POWER EACH NOTIFICATION APPLIANCE CIRCUIT.
- REMOVE EXISTING VOICE EVACUATION SYSTEM CONTROL PANEL, MODULES AND ENCLOSURE. FURNISH AND INSTALL NEW CONTROL PANEL FOR VOICE EVACUATION SYSTEM. CONTROL PANEL SHALL HAVE BUILT-IN POWER SUPPLY (ADDITIONAL REMOTE POWER SUPPLIES MAY BE USED) TO PROVIDE POWER TO ALL SPEAKER/STROBE APPLIANCES IN BUILDING.
- EXISTING RELEASING PANEL AND MANUAL ACTIVATION PULL STATION FOR HALON FIRE SUPPRESSION SYSTEM IN COMPUTER ROOM TO REMAIN. INSTALL 3 NEW ADDRESSABLE MONITOR MODULES NEAR EXISTING RELEASING PANEL AND CONNECT TO ALARM SUPERVISORY AND TROUBLE OUTRITS FROM PANEL TO ALLOW INTERCONNECTION TEMPORARILY WITH BUILDING FACP AND OFF-PREMISE TRANSMISSION OF SIGNALS. DISABLE HALON SYSTEM PRIOR TO MAKING CONNECTIONS TO AVOID ACCIDENTAL DUMP OF HALON.
- EXISTING NOTIFICATION APPLIANCES FOR HALON FIRE SUPPRESSION SYSTEM (DOOR RELEASE NOTIFICATION ON APPLIANCE) TO BE REUSED TO EXISTING RELEASING PANEL FOR HALON FIRE SUPPRESSION SYSTEM.
- EXISTING ILLUMINATED LAMP TYPE ANNUNCIATOR PANEL FOR CONVENTIONAL FIRE ALARM SYSTEM TO BE ABANDONED IN PLACE. REMOVE ALL EXISTING WIRING TO PANEL AND REPLACE CLEAR GLASS PANEL WITH BLACK GLASS.
- FURNISH AND INSTALL NEW REMOTE ANNUNCIATOR FOR FIRE ALARM SYSTEM INSIDE OF EAST ENTRY (FIRE DEPARTMENT ACCESS). WALL MOUNT ANNUNCIATOR AT 54" AFF. ANNUNCIATOR PANEL MAY BE INSTALLED ON A SURFACE MOUNT J-BOX BUT ALL CONDUIT TO TO PANEL MUST BE CONCEALED IN WALL.
- FURNISH AND INSTALL A PROTECTIVE COVER (KSI-1100 OR EQUAL) WITH AUDIBLE ALARM OVER MANUAL FIRE ALARM PULL STATION TO DISCOURAGE FALSE ACTIVATION.
- FURNISH AND INSTALL A PROGRAMMABLE RELAY TO SHUT DOWN EACH AIR HANDLER. RELAYS SHALL BE NORMALLY ENERGIZED AND FAN CONTROLS SHALL BE CONNECTED TO NORMALLY CLOSED CONTACTS ON THE RELAYS. RELAYS SHALL BE PROGRAMMED TO SHUT DOWN ALL AIR HANDLERS SIMULTANEOUSLY UPON ACTIVATION OF ANY AREA OR DUCT SMOKE DETECTOR AND SHALL NOT RESTORE UNTIL THE FACP HAS RESET.
- FURNISH AND INSTALL PROGRAMMABLE RELAYS TO PROVIDE ELEVATOR RECALL FUNCTIONS. ELEVATOR RECALL FUNCTIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF ASME A17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS. COORDINATE WORK WITH MAINTENANCE CONTRACTOR FOR ELEVATORS.
- FURNISH AND INSTALL A NEW MAGNETIC HOLD-OPEN DEVICE FOR EXISTING DOOR. MANUFACTURER AND MODEL OF DEVICE SHALL MATCH EXISTING DEVICES. MOUNT DEVICE HIGH ON WALL TO HOLD UPPER EDGE OF DOOR. PROVIDE PROGRAMMABLE RELAYS TO RELEASE ALL NEW AND EXISTING DOOR HOLDERS SIMULTANEOUSLY UPON RECEIPT OF ANY FIRE ALARM SIGNAL AT THE FACP. POWER TO DOOR HOLDERS TO BE PROVIDED BY CIRCUIT FROM FACP OR REMOTE POWER SUPPLY SUPERVISED BY THE FACP. POWER CIRCUITS SHALL BE OF SUFFICIENT CAPACITY TO POWER ALL NEW AND EXISTING DOOR HOLDERS WITH SUFFICIENT CAPACITY FOR AN ADDITIONAL 10 DOOR HOLDERS TO ALLOW FOR FUTURE EXPANSION BY OWNER.

FIRE ALARM EQUIPMENT LEGEND

DEVICE	DESCRIPTION	MOUNTING	REMARKS
FACP	FIRE ALARM CONTROL PANEL	MOUNT AT SAME LOCATION AS EXISTING FACP THAT IS TO BE REMOVED.	INTELLIGENT/ADDRESSABLE FIRE ALARM ALPHA-NUMERIC ANNUNCIATOR AND DUAL COMMUNICATOR. SHALL PROVIDE A MINIMUM OF 2 SLC CIRCUITS WITH A CAPACITY TO MONITOR AT LEAST 254 ADDRESSABLE POINTS.
VEP	VOICE EVACUATION SYSTEM CONTROL PANEL	MOUNT AT SAME LOCATION AS EXISTING VOICE EVACUATION PANEL TO BE REMOVED.	SYSTEM SHALL HAVE A BUILT-IN POWER SUPPLY SUFFICIENT TO POWER ALL SPEAKER STROBES IN THE BUILDING. SYSTEM SHALL PROVIDE SIGNALS TO THE FACP TO SELECTIVELY PAGE ANY SINGLE ZONE OR ZONES WITH THE CAPABILITY OF BROADCASTING PRE-RECORDED AND LIVE MESSAGES.
FSA	FIRE ALARM ANNUNCIATOR PANEL	54" AFF. JUNCTION BOX MAY BE SURFACE MOUNT BUT CONDUIT MUST BE CONCEALED IN EXISTING WALL.	ANNUNCIATOR SHALL HAVE A BUILT-IN LED (MINIMUM OF 80 CHARACTERS) TO DISPLAY STATUS OF FIRE ALARM SYSTEM AS WELL AS NAME AND ADDRESS OF ANY DEVICE INDICATING AN ALARM OR TROUBLE CONDITION. ANNUNCIATOR SHALL HAVE INVERTED KEYS TO ALLOW ALARM SILENCE AND SYSTEM RESET.
NAC-PS	REMOTE POWER SUPPLIES FOR NOTIFICATION APPLIANCE CIRCUITS	ADJACENT TO FACP OR CIRCUIT IN BUILDING APPROVED BY BUILDING MANAGEMENT.	NUMBER AND LOCATION OF POWER SUPPLIES SHALL BE SUFFICIENT TO PROVIDE A MINIMUM OF 2 SLC CIRCUITS WITH A CAPACITY TO MONITOR SUPPLY TO MOST REMOTE DEVICE ON EACH SLC.
HCP	HALON SYSTEM CONTROL PANEL	EXISTING	EXISTING FENWAL PANEL TO REMAIN. CONNECT ALARM SUPERVISORY & TROUBLE OUTRITS OF EXISTING PANEL TO NEW FACP.
MDO	MAGNETIC DOOR HOLD-OPEN DEVICE (EXISTING)	EXISTING	CONNECT EXISTING MAGNETIC DOOR HOLDER TO RELAY CONTROLLED BY NEW FIRE ALARM PANEL.
MDO-N	MAGNETIC DOOR HOLD-OPEN DEVICE (NEW)	MOUNT AT TOP EDGE OF DOOR.	INSTALL NEW MAGNETIC DOOR HOLDER. MANUFACTURER AND MODEL OF DEVICE SHALL MATCH EXISTING DEVICES. MOUNT HIGH ON WALL TO HOLD UPPER EDGE OF DOOR. RELAY TO BE RELAY CONTROLLED BY FIRE ALARM PANEL.
SD	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR	CEILING MOUNTED. WHERE NEW DETECTOR REPLACES AN EXISTING DETECTOR IN SAME LOCATION EXISTING J-BOX MAY BE RE-USED.	REMOVE EXISTING CONVENTIONAL SMOKE DETECTOR AND REPLACE WITH NEW ADDRESSABLE SMOKE DETECTOR. DETECTORS ARE REQUIRED IN ALL CORRIDORS AND LOBBIES WITH A MAXIMUM SPACING OF 30' O.C.
SD-C	EXISTING CONVENTIONAL SMOKE DETECTOR	REPLACE CEILING TILE AND/OR REPAIR CEILING SURFACE WHERE DETECTOR IS REMOVED.	REMOVE EXISTING CONVENTIONAL SMOKE DETECTOR AND REPLACE WITH NEW ADDRESSABLE SMOKE DETECTOR.
SD-N	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR	CEILING MOUNTED.	ADD NEW SMOKE DETECTOR WHERE INDICATED ON PLAN.
H	ADDRESSABLE HEAT DETECTOR	CEILING OR UNDERSIDE OF ROOF DECK.	SPACING OF DETECTORS SHALL CONFORM TO NFPA 72 AND TO MANUFACTURER'S RECOMMENDATIONS.
DS	ADDRESSABLE DUCT SMOKE DETECTOR	PROVIDE A DETECTOR IN RETURN AIR SYSTEM ON EACH LEVEL. FROM TOP CONNECTION TO EACH RETURN AIR SYSTEM TO EACH AIR HANDLER DOWN-STREAM OF FILTERS AND UPSTREAM OF ANY BRANCH CONNECTIONS.	INSTALL IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF NFPA 72, NFPA 90A AND THE IBC.
M	ADDRESSABLE MANUAL FIRE ALARM PULL STATION	WALL MOUNT ON EXISTING J-BOX WHERE EXISTING PULL STATION IS TO BE REMOVED. PROTECTED BY PLASTIC STOPPER COVER. THE EXISTING COVER SHALL REMAIN.	REMOVE EXISTING CONVENTIONAL MANUAL PULL STATIONS AND REPLACE WITH NEW ADDRESSABLE PULL STATIONS.
FS	FLOW SWITCH FOR FIRE SPRINKLER SYSTEM	EXISTING TO REMAIN.	INSTALL NEW ADDRESSABLE MONITOR MODULE AT EACH EXISTING FLOW SWITCH TO FACILITATE MONITORING OF FLOW SWITCH BY FACP AS AN ADDRESSABLE POINT.
VS	VALVE SUPERVISORY SWITCH FOR FIRE SPRINKLER SYSTEM	EXISTING TO REMAIN.	INSTALL NEW ADDRESSABLE MONITOR MODULE AT EACH EXISTING VALVE SUPERVISORY SWITCH TO FACILITATE MONITORING OF VALVE SUPERVISORY SWITCH BY FACP AS AN ADDRESSABLE POINT.
M	ADDRESSABLE MONITOR MODULE	MOUNT ON NEW J-BOX NEAR EXISTING MONITORING OF DEVICE.	INSTALL NEW CONVENTIONAL DEVICES CONVENTIONAL DEVICES TO BE REUSED TO MONITOR EXISTING DEVICES.
R	ADDRESSABLE RELAY MODULE	MOUNT ON NEW J-BOX WITHIN 3' OF DEVICE OR CIRCUIT CONTROLLED.	TO PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS SUCH AS DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL OR ACTIVATION OF VOICE EVACUATION SYSTEM.
S	FIRE ALARM SPEAKER/STROBE	CEILING MOUNT OR WALL MOUNT	STROBE SHALL HAVE A MINIMUM RATING OF 75 CD AND SHALL BE SYNCHRONIZED WITH ALL OTHER DEVICES IN VIEW. SOUND OUTPUT FROM SPEAKER SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL OF 15 DB ABOVE AMBIENT. APPLIANCE SHALL BE COMPATIBLE WITH AND CONNECTED TO VOICE EVACUATION CONTROL PANEL.
S-C	EXISTING FIRE ALARM SPEAKER OR SPEAKER/STROBE	REPLACE CEILING TILE AND/OR REPAIR CEILING/WALL SURFACE WHERE APPLIANCE IS REMOVED.	REMOVE EXISTING FIRE ALARM SPEAKER OR SPEAKER/STROBE. JUNCTION BOX AND WIRING TO BE REMOVED.
S-N	FIRE ALARM STROBE	CEILING OR WALL MOUNT AT 80" TO 96" AFF	STROBE SHALL HAVE A MINIMUM CANDLE RATING OF 1500. STROBES SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.
H	FIRE ALARM HORN/STROBE	WALL MOUNT ON EXISTING JUNCTION BOX	REPLACE EXISTING WALL MOUNTED NOTIFICATION APPLIANCES IN REVENUEHOUSE WITH NEW APPLIANCES. STROBE SHALL BE 15/75 CD RATED. APPLIANCE SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.
H-N	EXISTING FIRE ALARM HORN/STROBE	REMOVE EXISTING DEVICE AND WIRING AND PROVIDE DECORATIVE COVER PLATE (APPROVED BY OWNER) FOR EXISTING JUNCTION BOX	REMOVE EXISTING WALL MOUNT NOTIFICATION APPLIANCES IN ELEVATOR LOBBY TO BE REMOVED.
H-E	EXTERIOR FIRE ALARM HORN/STROBE	WALL MOUNTED ON EXISTING EXTERIOR J-BOX OR ON NEW WEATHERPROOF J-BOX AT 10'-0" AFF (2 NEW DEVICES)	REPLACE EXISTING EXTERIOR HORNS WITH NEW APPLIANCES. ADD 2 NEW APPLIANCES WHERE INDICATED ON DRAWING. STROBES SHALL HAVE A MINIMUM RATING OF 15/75 CD AND SHALL BE SYNCHRONIZED WITH ALL OTHER STROBES IN VIEW. APPLIANCES SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.



THIRD LEVEL FIRE ALARM PLAN
1/8" = 1'-0"

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REGIONAL GOVERNMENT CENTER
PROVO, UTAH

FIRE ALARM SYSTEM UPGRADES
DFCM PROJECT #04202310

AS-BUILT 04/10/06

THIRD LEVEL
FA-4

FIRE ALARM SYSTEM GENERAL NOTES

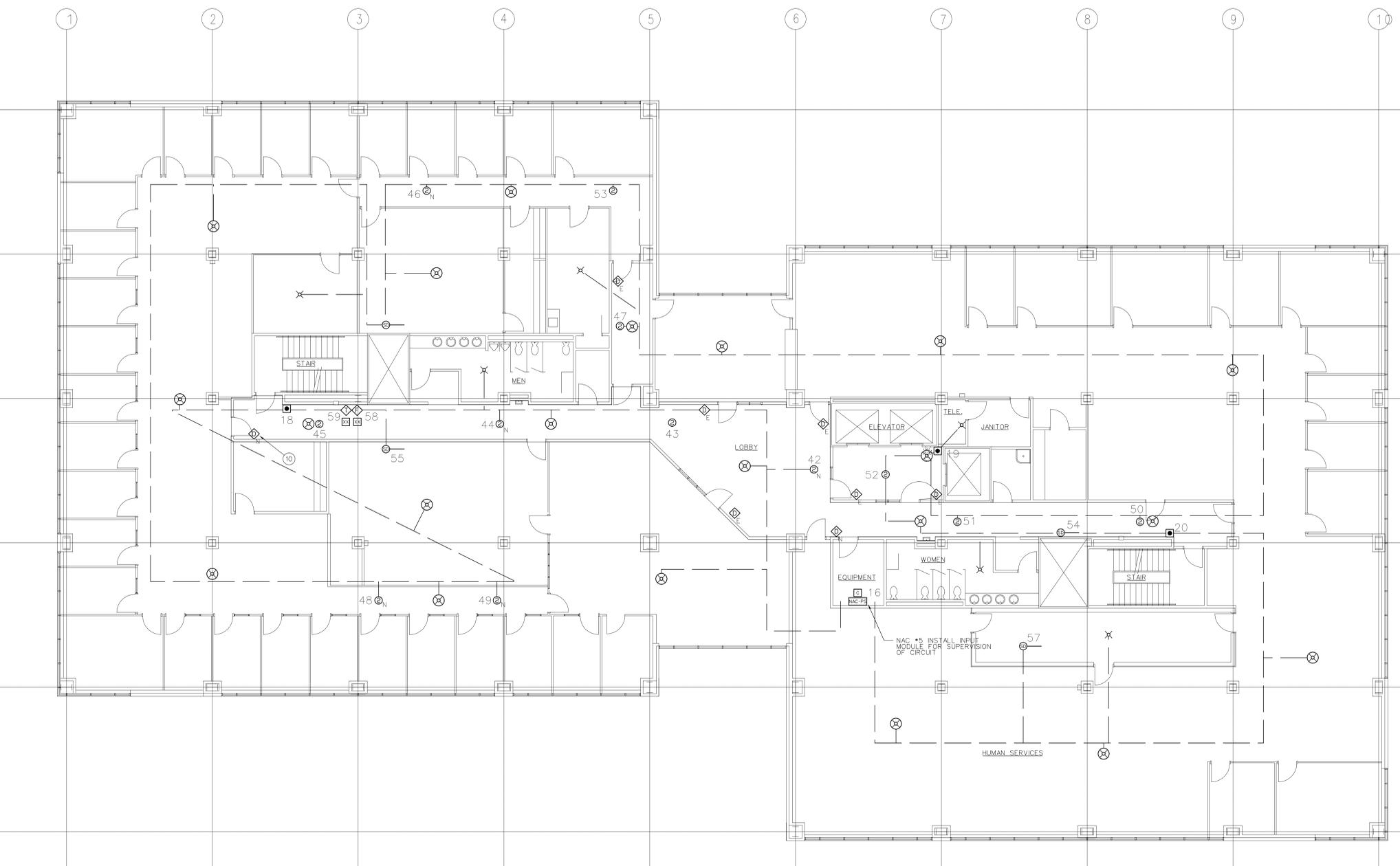
- SCOPE OF WORK: WORK SHALL INCLUDE REMOVAL OF EXISTING CONVENTIONAL FIRE ALARM SYSTEM INCLUDING ALL CONTROL EQUIPMENT, POWER SUPPLIES, INITIATING CIRCUITS AND DEVICES, NOTIFICATION APPLIANCE CIRCUITS AND DEVICES. INSTALL NEW ADDRESSABLE FIRE ALARM SYSTEM AND VOICE ACTIVATION SYSTEM THROUGHOUT BUILDING. NEW FIRE ALARM SYSTEM SHALL BE IN ACCORDANCE WITH NFPA 72, THESE DRAWINGS AND SPECIFICATIONS.
- APPLICABLE CODES/STANDARDS: INTERNATIONAL BUILDING CODE - 2003 EDITION INTERNATIONAL MECHANICAL CODE - 2003 EDITION UTAH STATE FIRE MARSHAL RULE R710-4 NFPA 70 - 2002 EDITION NFPA 72 - 2002 EDITION NFPA 90A - 2002 EDITION
- QUALITY ASSURANCE: ALL EQUIPMENT, MATERIAL AND DEVICES LISTED FOR THE FIRE ALARM SYSTEM INSTALLATION SHALL BE UL USED AND/OR FM APPROVED FOR USE IN FIRE PROTECTION SYSTEMS. ALL INITIATING DEVICES SHALL BE LISTED COMPATIBLE WITH THE FIRE ALARM CONTROL PANEL (FACP). MAJOR SYSTEM COMPONENTS (CONTROL PANELS, INITIATING DEVICES, ADDRESSABLE MODULES AND RELAYS, POWER SUPPLIES, ETC.) SHALL BE FROM A STATE OF UTAH DFCM APPROVED MANUFACTURER. APPROVED MANUFACTURERS INCLUDE FIRE-LITE AND SILENT KNIGHT.
- SUBMITTALS: FIRE ALARM SYSTEM CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS TO PROVO FIRE DEPARTMENT, STATE FIRE MARSHAL, OWNER AND ENGINEER FOR REVIEW/ APPROVAL PRIOR TO ORDERING OR INSTALLING ANY EQUIPMENT. SUBMITTALS SHALL CONFORM TO THE CONSTRUCTION DOCUMENTS REQUIREMENTS OF IFC 907.1.1.
- DEMOLITION: IT IS THE INSTALLER'S RESPONSIBILITY FOR THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM. ALL NEW (UNLESS OTHERWISE NOTED) DEVICES WILL REPLACE THE EXISTING AND GENERALLY REUSE THE EXISTING LOCATIONS. ANY EXISTING DEVICES AND CONDUIT NOT BEING REPLACED AND REUSED THAT ARE VISIBLE, SUCH AS NOTIFICATION APPLIANCES OR SMOKE DETECTORS SHALL BE REMOVED AND REMAINING WALL OR CEILING SURFACE REPAIRED OR REPLACED TO MATCH SURROUNDING AREAS. PULL ALL UNUSED WIRES FROM ALL CONDUITS AND J-BOXES REMAINING. CEILING TILE DAMAGED BY THE INSTALLER WILL BE REPLACED BY THE CONTRACTOR WITH THE SAME OR EQUIVALENT TILE.
- SYSTEM TYPE: FIRE ALARM SYSTEM SHALL MEET THE REQUIREMENTS FOR PROTECTED PREMISE FIRE ALARM SYSTEMS. SYSTEM SHALL PROVIDE OFF-PREMISE NOTIFICATION OF STATUS TO CENTRAL STATION DETERMINED BY OWNER.
- OCCUPANT NOTIFICATION: RECEIPT OF ANY FIRE ALARM SIGNAL AT THE FACP SHALL RESULT IN THE ACTIVATION OF ALL NOTIFICATION APPLIANCES IN THE BUILDING (STROBES, HORN/STROBES AND SPEAKER STROBES). FOR PURPOSES OF FIRE ALARM NOTIFICATION, THE BUILDING SHALL BE CONSIDERED AS A SINGLE ZONE.
- VOICE/ALARM COMMUNICATION: PROVIDE AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH IBC 907.2.12.2 AND NFPA 72. SYSTEM SHALL PROVIDE BOTH AUDIBLE AND VISUAL SIGNALS. VOICE/ALARM COMMUNICATION SYSTEM FUNCTIONS MAY BE INTEGRATED INTO THE FACP OR PROVIDED BY A SEPARATE PANEL CONTROLLED AND MONITORED BY THE FACP. SYSTEM SHALL BE CONFIGURED TO NOTIFY THE ENTIRE BUILDING AS A SINGLE ZONE BUT SHALL BE CAPABLE OF DIVIDING NOTIFICATION APPLIANCES INTO A MINIMUM OF 4 DISTINCT ZONES FOR MANUAL PAGING USE.
- WIRING/CONDUIT: ALL WIRING TO BE FREE OF OPENS, SHORTS AND GROUNDS. ALL WIRING SHALL BE INSTALLED IN RIGID OR FLEXIBLE CONDUIT. ALL PENETRATIONS THROUGH RATED PARTITIONS SHALL BE FIRE STOPPED WITH A SUITABLE CALKING COMPOUND. ALL WIRING USED IN THE FIRE ALARM SYSTEM SHALL BE FPL (FIRE POWER LIMITED) WITH 600V INSULATION OR EQUIVALENT AS PER NFPA 70 ARTICLE 760.
- WIRING STYLES (PER NFPA 72): INITIATING DEVICE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE D CIRCUITS. SIGNALING LINE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE 6 OR 7 CIRCUITS. NOTIFICATION APPLIANCE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE Z.
- POWER: EXISTING DEDICATED BRANCH CIRCUIT MAY BE REUSED TO PROVIDE PRIMARY POWER TO NEW FACP. FURNISH A BATTERY BACKUP TO PROVIDE SECONDARY POWER SUPPLY TO FIRE ALARM SYSTEM. BATTERY BACKUP SHALL BE OF SUFFICIENT CAPACITY TO PROVIDE 24 HOURS OR STANDBY POWER WITH AN ADDITIONAL RESERVE TO OPERATE SYSTEM FOR 5 MINUTES IN ALARM.
- INITIATING DEVICES: SLC CIRCUITS - SLC LOOP DEVICE ADDRESSING SHALL NOT EXCEED 127 DETECTORS (SMOKES, HEATS, DUCT SMOKES, ETC.) OR 127 MODULES (PULL STATIONS, MONITOR, CONTROL, ETC.) PER LOOP. AT LEAST 19 ADDRESSES (15%) SHOULD BE LEFT VACANT ON EACH SLC LOOP IN ORDER TO ALLOW SPACE FOR ADJUSTMENTS. SMOKE DETECTORS: PROVIDE SMOKE DETECTORS WHERE SHOWN ON PLANS IN ALL CORRIDORS, LOBBIES AND AT THE TOP OF EACH ELEVATOR SHAFT. MAXIMUM SPACING OF DETECTORS SHALL BE 30' BETWEEN DETECTORS OR 15' FROM FURTHEST WALL. MANUAL PULL STATIONS: INSTALL NEW PULL STATIONS AT SAME LOCATION AND HEIGHT AS EXISTING PULL STATIONS USING EXISTING JUNCTION BOXES.
- HEAT DETECTORS: PROVIDE HEAT DETECTORS WHERE SHOWN ON PLANS IN SHOP AREA AND ELEVATOR EQUIPMENT ROOM. MAXIMUM SPACING FOR HEAT DETECTORS SHALL BE 50' BETWEEN DETECTORS OR 25' FROM FURTHEST WALL. ADDRESSABLE MODULES: PROVIDE ADDRESSABLE MODULES TO MONITOR EXISTING CONVENTIONAL DEVICES (WATER FLOW SWITCHES, VALVE TAMPER SWITCHES, HALON CONTROL PANEL) TO REMAIN. SPRINKLER WATER FLOW AND VALVE TAMPER SWITCH LOCATIONS TO BE FIELD VERIFIED. LOCATE MONITOR MODULE ADJACENT TO FLOW OR TAMPER SWITCH IN AN ACCESSIBLE LOCATION OR ABOVE REMOVABLE CEILING TILE. LABEL AS PART OF THE FIRE ALARM SYSTEM WITH THE NAME OF THE DEVICE MONITORED ON THE COVER OF THE JUNCTION BOX.
- NOTIFICATION APPLIANCES: PROVIDE AUDIBLE AND VISUAL NOTIFICATION APPLIANCES THROUGHOUT BUILDING. PROVIDE SPEAKER/STROBES CONNECTED TO VOICE/ALARM SYSTEM IN ALL CORRIDORS, LOBBIES AND ROOMS IN EXCESS OF 1,000 SQ FT. PROVIDE STROBES OR HORN/STROBES IN OTHER LOCATIONS AS INDICATED ON THE PLANS. NEW DEVICES SHALL BE CEILING MOUNTED. WALL MOUNTED DEVICES MAY BE INSTALLED ON EXISTING J-BOXES. VOLUME OF HORNS AND SPEAKERS SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL OF 15 db ABOVE AMBIENT IN ALL OCCUPIED AREAS. VISIBLE ALARMS SHALL BE PROVIDED THROUGHOUT ALL PUBLIC AREAS OF THE BUILDING AS WELL AS PRIVATE OFFICES AND AREAS WITH POSSIBLE OCCUPANCY BY HEARING IMPAIRED PERSONS.
- FIRE SAFETY FUNCTIONS: CONTROL MODULES WITH RELAY CONTACTS SHALL BE INSTALLED AND PROGRAMMED TO PROVIDE DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL, & ACTIVATION OF VOICE/ALARM SYSTEM (UNLESS INTEGRATED WITH FACP) OR REMOTE POWER SUPPLIES FOR NOTIFICATION APPLIANCE CIRCUITS. THE CONTROL RELAY MODULES SHALL BE INSTALLED WITHIN 36" OF DEVICE OR CIRCUIT CONTROLLED. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY NUMBER AND LOCATION OF DEVICES TO BE CONTROLLED.
- PHASING: PLAN SEQUENCE OF WORK TO MINIMIZE DOWN TIME OF FIRE ALARM SYSTEM. IT IS THE INSTALLER'S RESPONSIBILITY TO PROVIDE A FIRE WATCH AND NOTIFY PROPER AUTHORITIES DURING INTERRUPTIONS OF FIRE DETECTION AND ALARM SERVICE IN THE BUILDING.
- TESTING: SCHEDULE AND PERFORM ALL ACCEPTANCE TESTS REQUIRED BY NFPA 72. TESTING SHALL BE WITNESSED BY PROVO FIRE DEPARTMENT, STATE FIRE MARSHAL'S OFFICE, PROJECT ENGINEER, DFCM AND BUILDING MAINTENANCE PERSONNEL. SUBMIT A WRITTEN TESTING PLAN DETAILING EACH TEST TO BE PERFORMED TO EACH AGENCY AT LEAST THREE DAYS PRIOR TO SCHEDULED TEST.

FIRE ALARM SYSTEM KEY NOTES

- REMOVE EXISTING CONVENTIONAL FIRE ALARM CONTROL PANEL (FACP), MODULES AND ENCLOSURE. FURNISH AND INSTALL NEW ADDRESSABLE FACP AT LOCATION OF EXISTING FACP. FACP SHALL HAVE BUILT-IN ALPHA-NUMERIC ANNUNCIATOR AND DUAL COMMUNICATOR. NEW PANEL SHALL BE SUPPLIED FROM THE SAME DEDICATED POWER CIRCUIT SUPPLYING EXISTING FACP. NEW FACP SHALL HAVE SUFFICIENT CAPACITY TO MONITOR 254 ADDRESSABLE INITIATING DEVICES. PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS (DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL AND ACTIVATION OF VOICE EVACUATION SYSTEM) AND SUFFICIENT CAPACITY TO POWER EACH NOTIFICATION APPLIANCE CIRCUIT.
- REMOVE EXISTING VOICE EVACUATION SYSTEM CONTROL PANEL, MODULES AND ENCLOSURE. FURNISH AND INSTALL NEW CONTROL PANEL FOR VOICE EVACUATION SYSTEM. CONTROL PANEL SHALL HAVE BUILT-IN POWER SUPPLY (ADDITIONAL REMOTE POWER SUPPLIES MAY BE USED) SUFFICIENT TO PROVIDE POWER TO ALL SPEAKER/STROBE APPLIANCES IN BUILDING.
- EXISTING RELEASING PANEL AND MANUAL ACTIVATION PULL STATION FOR HALON FIRE SUPPRESSION SYSTEM IN COMPUTER ROOM TO REMAIN. INSTALL 3 NEW ADDRESSABLE MONITOR MODULES NEAR EXISTING RELEASING PANEL AND CONNECT TO ALARM SUPERVISORY AND TROUBLE OUTRITS FROM PANEL TO ALLOW INTERCONNECTIVE TEMPORARILY WITH BUILDING FACP AND OFF-PREMISE TRANSMISSION OF SIGNALS. DISABLE HALON SYSTEM PRIOR TO MAKING CONNECTIONS TO AVOID ACCIDENTAL DUMP OF HALON.
- EXISTING NOTIFICATION APPLIANCES FOR HALON FIRE SUPPRESSION SYSTEM TO REMAIN. NOTIFICATION APPLIANCES TO BE CONNECTED TO EXISTING RELEASING PANEL FOR HALON FIRE SUPPRESSION SYSTEM.
- EXISTING ILLUMINATED LAMP TYPE ANNUNCIATOR PANEL FOR CONVENTIONAL FIRE ALARM SYSTEM TO BE ABANDONED IN PLACE. REMOVE ALL EXISTING WIRING TO PANEL AND REPLACE CLEAR GLASS PANEL WITH BLACK GLASS.
- FURNISH AND INSTALL NEW REMOTE ANNUNCIATOR FOR FIRE ALARM SYSTEM INSIDE OF EAST ENTRY (FIRE DEPARTMENT ACCESS). WALL MOUNT ANNUNCIATOR AT 54" AFF. ANNUNCIATOR PANEL MAY BE INSTALLED ON A SURFACE MOUNT J-BOX BUT ALL CONDUIT TO TO PANEL MUST BE CONCEALED IN WALL.
- FURNISH AND INSTALL A PROTECTIVE COVER (STI-1100 OR EQUAL) WITH AUDIBLE ALARM OVER MANUAL FIRE ALARM PULL STATION TO DISCOURAGE FALSE ACTIVATION.
- FURNISH AND INSTALL A PROGRAMMABLE RELAY TO SHUT DOWN EACH AIR HANDLER. RELAYS SHALL BE NORMALLY ENERGIZED AND FAN CONTROLS SHALL BE CONNECTED TO NORMALLY CLOSED CONTACTS ON THE RELAYS. RELAYS SHALL BE PROGRAMMED TO SHUT DOWN ALL AIR HANDLERS SIMULTANEOUSLY UPON ACTIVATION OF ANY AREA OR DUCT SMOKE DETECTOR AND SHALL NOT RESTORE UNTIL THE FACP HAS RESET.
- FURNISH AND INSTALL PROGRAMMABLE RELAYS TO PROVIDE ELEVATOR RECALL FUNCTIONS. ELEVATOR RECALL FUNCTIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF ASME A17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS. COORDINATE WORK WITH MAINTENANCE CONTRACTOR FOR ELEVATORS.
- FURNISH AND INSTALL A NEW MAGNETIC HOLD-OPEN DEVICE FOR EXISTING DOOR. MANUFACTURER AND MODEL OF DEVICE SHALL MATCH EXISTING DEVICES. MOUNT DEVICE HIGH ON WALL TO HOLD UPPER EDGE OF DOOR. PROVIDE PROGRAMMABLE RELAYS TO RELEASE ALL NEW AND EXISTING DOOR HOLDERS SIMULTANEOUSLY UPON RECEIPT OF ANY FIRE ALARM SIGNAL AT THE FACP. POWER TO DOOR HOLDERS TO BE PROVIDED BY CIRCUIT FROM FACP OR REMOTE POWER SUPPLY SUPERVISED BY THE FACP. POWER CIRCUITS SHALL BE OF SUFFICIENT CAPACITY TO POWER ALL NEW AND EXISTING DOOR HOLDERS WITH SUFFICIENT CAPACITY FOR AN ADDITIONAL 10 DOOR HOLDERS TO ALLOW FOR FUTURE EXPANSION BY OWNER.

FIRE ALARM EQUIPMENT LEGEND

DEVICE	DESCRIPTION	MOUNTING	REMARKS
FACP	FIRE ALARM CONTROL PANEL	MOUNT AT SAME LOCATION AS EXISTING FACP THAT IS TO BE REMOVED.	INTELLIGENT/ADDRESSABLE FIRE ALARM ALPHA-NUMERIC ANNUNCIATOR AND COMMUNICATOR. PROVIDE A MINIMUM OF 2 SLC CIRCUITS WITH A CAPACITY TO MONITOR AT LEAST 254 ADDRESSABLE POINTS.
VEP	VOICE EVACUATION SYSTEM CONTROL PANEL	MOUNT AT SAME LOCATION AS EXISTING VOICE EVACUATION PANEL TO BE REMOVED.	SYSTEM SHALL HAVE A BUILT-IN POWER SUPPLY SUFFICIENT TO POWER ALL SPEAKER STROBES IN THE BUILDING. SYSTEM SHALL PROVIDE PAGING TO ALL LEVELS. PROVIDE PAGING TO THE ABILITY TO SELECTIVELY PAGE ANY SINGLE ZONE. SYSTEM SHALL BE CAPABLE OF BROADCASTING PRE-RECORDED AND LIVE MESSAGES.
FSA	FIRE ALARM ANNUNCIATOR PANEL	54" AFF. JUNCTION BOX MAY BE SURFACE MOUNT BUT CONDUIT MUST BE CONCEALED IN EXISTING WALL.	ANNUNCIATOR SHALL HAVE A BUILT-IN LED (MINIMUM OF 80 CHARACTERS) TO DISPLAY STATUS OF THE FIRE ALARM SYSTEM AS WELL AS NAME AND ADDRESS OF ANY DEVICE INDICATING AN ALARM OR TROUBLE CONDITION. ANNUNCIATOR SHALL HAVE INVERT KEYS TO ALLOW ALARM SILENCE AND SYSTEM RESET.
NAC-PS	REMOTE POWER SUPPLIES FOR NOTIFICATION APPLIANCE CIRCUITS	ADJACENT TO FACP OR REMOTE IN LOCATION APPROVED BY BUILDING MANAGEMENT.	NUMBER AND LOCATION OF POWER SUPPLIES SHALL BE SUFFICIENT TO PROVIDE A MINIMUM OF 2 SLC CIRCUITS IN BUILDING WITH MAXIMUM SUPPLY TO MOST REMOTE DEVICE ON CIRCUIT.
HSP	HALON SYSTEM CONTROL PANEL	EXISTING	EXISTING FENWALL PANEL TO REMAIN. CONNECT ALARM SUPERVISORY & TROUBLE OUTRITS OF EXISTING PANEL TO NEW FACP.
MD	MAGNETIC DOOR HOLD-OPEN DEVICE (EXISTING)	EXISTING	CONNECT EXISTING MAGNETIC DOOR HOLDERS TO RELAY CONTROLLED BY NEW FIRE ALARM PANEL.
MDN	MAGNETIC DOOR HOLD-OPEN DEVICE (NEW)	MOUNT AT TOP EDGE OF DOOR.	INSTALL NEW MAGNETIC DOOR HOLDER. MANUFACTURER AND MODEL OF DEVICE SHALL MATCH EXISTING DEVICES. MOUNT DEVICE TO RELAY CONTROLLED BY FIRE ALARM PANEL.
SD	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR	CEILING MOUNTED. WHERE NEW DETECTOR REPLACES AN EXISTING DETECTOR IN SAME LOCATION EXISTING J-BOX MAY BE RE-USED.	REMOVE EXISTING CONVENTIONAL SMOKE DETECTOR. REPLACE WITH NEW ADDRESSABLE SMOKE DETECTOR. DETECTORS ARE REQUIRED IN ALL CORRIDORS AND LOBBIES WITH A MAXIMUM SPACING OF 30' O.C.
SDC	EXISTING CONVENTIONAL SMOKE DETECTOR	REPLACE CEILING TILE AND/OR REPAIR CEILING SURFACE WHERE DETECTOR IS REMOVED.	REMOVE EXISTING CONVENTIONAL SMOKE DETECTOR. REPAIR CEILING SURFACE WHERE DETECTOR IS REMOVED.
SDN	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR	CEILING MOUNTED.	ADD NEW SMOKE DETECTOR WHERE INDICATED ON PLAN.
HD	ADDRESSABLE HEAT DETECTOR	CEILING OR UNDERSIDE OF ROOF DECK.	SPACING OF DETECTORS SHALL CONFORM TO NFPA 72 AND TO MANUFACTURER'S RECOMMENDATIONS.
SDS	ADDRESSABLE DUCT SMOKE DETECTOR	PROVIDE A DETECTOR IN RETURN AIR SYSTEM ON EACH LEVEL. FROM 10' CONNECTION TO EACH RETURN AIR SYSTEM. DETECTOR SHALL BE INSTALLED ON SIDE OF EACH AIR HANDLER DOWN-DOWNSTREAM OF FILTERS AND UPSTREAM OF ANY BRANCH CONNECTIONS.	INSTALL IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF NFPA 72, NFPA 90A AND THE IBC.
MFS	ADDRESSABLE MANUAL FIRE ALARM PULL STATION	WALL MOUNT ON EXISTING J-BOX WHERE EXISTING PULL STATION IS TO BE REMOVED. PROTECTED BY PLASTIC STOPPER COVER. THE EXISTING COVER SHALL REMAIN.	REMOVE EXISTING CONVENTIONAL MANUAL PULL STATIONS AND REPLACE WITH NEW ADDRESSABLE PULL STATIONS.
FS	FLOW SWITCH FOR FIRE SPRINKLER SYSTEM	EXISTING TO REMAIN.	INSTALL NEW ADDRESSABLE MONITOR MODULE AT EACH EXISTING FLOW SWITCH TO FACILITATE MONITORING OF FLOW SWITCH BY FACP AS AN ADDRESSABLE POINT.
VSS	VALVE SUPERVISORY SWITCH FOR FIRE SPRINKLER SYSTEM	EXISTING TO REMAIN.	INSTALL NEW ADDRESSABLE MONITOR MODULE AT EACH EXISTING VALVE SUPERVISORY SWITCH TO FACILITATE MONITORING OF VALVE SUPERVISORY SWITCH BY FACP AS AN ADDRESSABLE POINT.
MM	ADDRESSABLE MONITOR MODULE	MOUNT ON NEW J-BOX NEAR EXISTING MONITORING DEVICES TO BE REPLACED.	INSTALL NEW CONVENTIONAL DEVICES TO BE REPLACED. MONITORING DEVICES TO BE REPLACED.
RM	ADDRESSABLE RELAY MODULE	MOUNT ON NEW J-BOX WITHIN 3' OF DEVICE OR CIRCUIT CONTROLLED.	TO PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS SUCH AS DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL OR ACTIVATION OF VOICE EVACUATION SYSTEM.
SS	FIRE ALARM SPEAKER/STROBE	CEILING MOUNT OR WALL MOUNT	STROBE SHALL HAVE A MINIMUM RATING OF 75 CD AND SHALL BE SYNCHRONIZED WITH ALL OTHER DEVICES IN VIEW. SOUND OUTPUT FROM SPEAKER SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL OF 15 db ABOVE AMBIENT. APPLIANCE SHALL BE COMPATIBLE WITH AND CONNECTED TO VOICE EVACUATION CONTROL PANEL.
SSW	EXISTING FIRE ALARM SPEAKER OR SPEAKER/STROBE	REPLACE CEILING TILE AND/OR REPAIR CEILING/WALL SURFACE WHERE APPLIANCE IS REMOVED.	REPLACE EXISTING FIRE ALARM SPEAKER OR SPEAKER/STROBE. JUNCTION BOX AND WIRING TO BE REMOVED.
SSN	FIRE ALARM STROBE	CEILING OR WALL MOUNT AT 80" TO 96" AFF	STROBE SHALL HAVE A MINIMUM CANDLE RATING OF 1500. STROBES SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.
HSS	FIRE ALARM HORN/STROBE	WALL MOUNT ON EXISTING JUNCTION BOX	REPLACE EXISTING WALL MOUNTED NOTIFICATION APPLIANCES IN PERISHABLE WITH NEW APPLIANCES. STROBE SHALL BE 12/75 CD RATED. APPLIANCE SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.
HSSN	EXISTING FIRE ALARM HORN/STROBE	REMOVE EXISTING DEVICE AND WIRING AND PROVIDE DECORATIVE COVER PLATE (APPROVED BY OWNER) FOR EXISTING JUNCTION BOX	REMOVE EXISTING WALL MOUNT NOTIFICATION APPLIANCES IN ELEVATOR LOBBY TO BE REMOVED.
HSSN	EXTERIOR FIRE ALARM HORN/STROBE	WALL MOUNTED ON EXISTING EXTERIOR J-BOX OR ON NEW WEATHERPROOF J-BOX AT 10'-0" AFF (2 NEW DEVICES)	REPLACE EXISTING EXTERIOR HORNS WITH NEW AUDIBLE/VISIBLE APPLIANCES. ADD 2 NEW APPLIANCES TO EACH EXTERIOR CORNER. STROBES SHALL HAVE A MINIMUM RATING OF 12/75 CD AND SHALL BE SYNCHRONIZED WITH ALL OTHER STROBES IN VIEW. APPLIANCES SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.



FOURTH LEVEL FIRE ALARM PLAN
1/8" = 1'-0"

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REGIONAL GOVERNMENT CENTER
PROVO, UTAH

FIRE ALARM SYSTEM UPGRADES
DFCM PROJECT #04202310

FOURTH LEVEL
FA-5

AS-BUILT 04/10/06

FIRE ALARM SYSTEM GENERAL NOTES

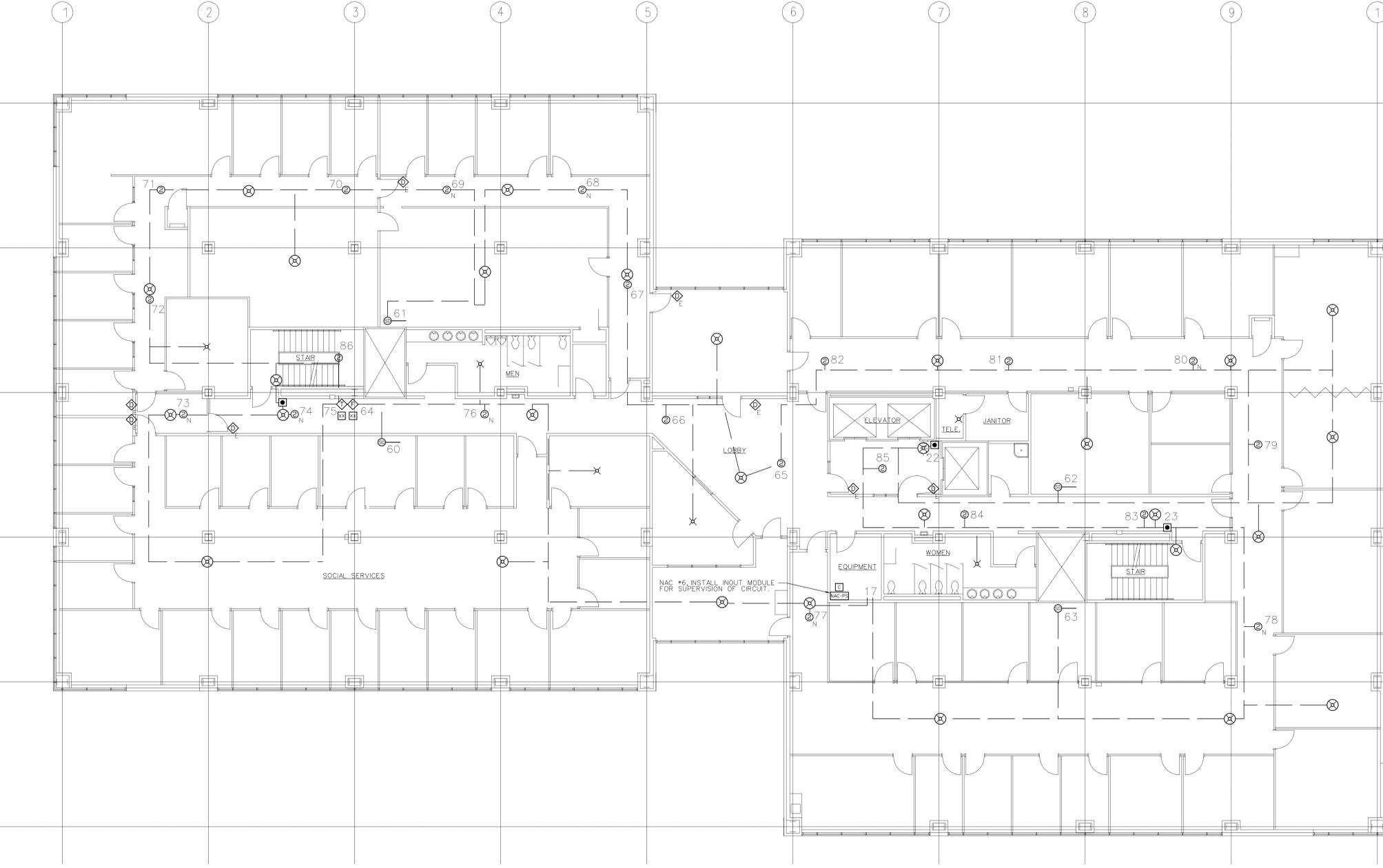
- SCOPE OF WORK: WORK SHALL INCLUDE REMOVAL OF EXISTING CONVENTIONAL FIRE ALARM SYSTEM INCLUDING ALL CONTROL EQUIPMENT, POWER SUPPLIES, INITIATING CIRCUITS AND DEVICES, NOTIFICATION APPLIANCE CIRCUITS AND DEVICES. INSTALL NEW ADDRESSABLE FIRE ALARM SYSTEM AND VOICE ACTIVATION SYSTEM THROUGHOUT BUILDING. NEW FIRE ALARM SYSTEM SHALL BE IN ACCORDANCE WITH NFPA 72, THESE DRAWINGS AND SPECIFICATIONS.
- APPLICABLE CODES/STANDARDS: INTERNATIONAL BUILDING CODE - 2003 EDITION INTERNATIONAL FIRE CODE - 2003 EDITION INTERNATIONAL MECHANICAL CODE - 2003 EDITION UTAH STATE FIRE MARSHAL RULE R710-4 NFPA 70 - 2002 EDITION NFPA 72 - 2002 EDITION NFPA 90A - 2002 EDITION
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- HEAT DETECTORS: PROVIDE HEAT DETECTORS WHERE SHOWN ON PLANS IN SHOP AREA AND ELEVATOR EQUIPMENT ROOM. MAXIMUM SPACING FOR HEAT DETECTORS SHALL BE 50' BETWEEN DETECTORS OR 25' FROM FURTHEST WALL. ADDRESSABLE MODULES: PROVIDE ADDRESSABLE MODULES TO MONITOR EXISTING CONVENTIONAL DEVICES (WATER FLOW SWITCHES, VALVE TAMPER SWITCHES, HALON CONTROL PANEL) TO REMAIN. SPRINKLER WATER FLOW AND VALVE TAMPER SWITCH LOCATIONS TO BE FIELD VERIFIED. LOCATE MONITOR MODULE ADJACENT TO FLOW OR TAMPER SWITCH IN AN ACCESSIBLE LOCATION OR ABOVE REMOVABLE CEILING TILE. LABEL AS PART OF THE FIRE ALARM SYSTEM WITH THE NAME OF THE DEVICE MONITORED ON THE COVER OF THE JUNCTION BOX.
- NOTIFICATION APPLIANCES: PROVIDE AUDIBLE AND VISUAL NOTIFICATION APPLIANCES THROUGHOUT BUILDING. PROVIDE SPEAKER/STROBES CONNECTED TO VOICE/ALARM SYSTEM IN ALL CORRIDORS, LOBBIES AND ROOMS IN EXCESS OF 1,000 SQ FT. PROVIDE STROBES OR HORN/STROBES IN OTHER LOCATIONS AS INDICATED ON THE PLANS. NEW DEVICES SHALL BE CEILING MOUNTED. WALL MOUNTED DEVICES MAY BE INSTALLED ON EXISTING J-BOXES. VOLUME OF HORNS AND SPEAKERS SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL OF 15 DB ABOVE AMBIENT IN ALL OCCUPIED AREAS. VISIBLE ALARMS SHALL BE PROVIDED THROUGHOUT ALL PUBLIC AREAS OF THE BUILDING AS WELL AS PRIVATE OFFICES AND AREAS WITH POSSIBLE OCCUPANCY BY HEARING IMPAIRED PERSONS.
- FIRE SAFETY FUNCTIONS: CONTROL MODULES WITH RELAY CONTACTS SHALL BE INSTALLED AND PROGRAMMED TO PROVIDE DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL & ACTIVATION OF VOICE/ALARM SYSTEM (UNLESS INTEGRATED WITH FACP) OR REMOTE POWER SUPPLIES FOR NOTIFICATION APPLIANCE CIRCUITS. THE CONTROL RELAY MODULES SHALL BE INSTALLED WITHIN 36" OF DEVICE OR CIRCUIT CONTROLLED. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY NUMBER AND LOCATION OF DEVICES TO BE CONTROLLED.
- PHASING: PLAN SEQUENCE OF WORK TO MINIMIZE DOWN TIME OF FIRE ALARM SYSTEM. IT IS THE INSTALLER'S RESPONSIBILITY TO PROVIDE A FIRE WATCH AND NOTIFY PROPER AUTHORITIES DURING INTERRUPTIONS OF FIRE DETECTION AND ALARM SERVICE IN THE BUILDING.
- TESTING: SCHEDULE AND PERFORM ALL ACCEPTANCE TESTS REQUIRED BY NFPA 72. TESTING SHALL BE WITNESSED BY PROVO FIRE DEPARTMENT, STATE FIRE MARSHAL'S OFFICE, PROJECT ENGINEER, DFCM AND BUILDING MAINTENANCE PERSONNEL. SUBMIT A WRITTEN TESTING PLAN DETAILING EACH TEST TO BE PERFORMED TO EACH AGENCY AT LEAST THREE DAYS PRIOR TO SCHEDULED TEST.

FIRE ALARM SYSTEM KEY NOTES

- REMOVE EXISTING CONVENTIONAL FIRE ALARM CONTROL PANEL (FACP), MODULES AND ENCLOSURE. FURNISH AND INSTALL NEW ADDRESSABLE FACP AT LOCATION OF EXISTING PANEL. FACP SHALL HAVE BUILT-IN ALPHA-NUMERIC ANNUNCIATOR AND DIAL COMMUNICATOR. NEW PANEL SHALL BE SUPPLIED FROM THE SAME DEDICATED POWER CIRCUIT SUPPLYING EXISTING FACP. NEW FACP SHALL HAVE SUFFICIENT CAPACITY TO MONITOR 254 ADDRESSABLE INITIATING DEVICES. PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS (DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL AND ACTIVATION OF VOICE EVACUATION SYSTEM) AND SUFFICIENT CAPACITY TO POWER EACH NOTIFICATION APPLIANCE CIRCUIT.
- REMOVE EXISTING VOICE EVACUATION SYSTEM CONTROL PANEL, MODULES AND ENCLOSURE. FURNISH AND INSTALL NEW CONTROL PANEL FOR VOICE EVACUATION SYSTEM. CONTROL PANEL SHALL HAVE BUILT-IN POWER SUPPLY (ADDITIONAL REMOTE POWER SUPPLIES MAY BE USED) SUFFICIENT TO PROVIDE POWER TO ALL SPEAKER/STROBE APPLIANCES IN BUILDING.
- EXISTING RELEASING PANEL AND MANUAL ACTIVATION PULL STATION FOR HALON FIRE SUPPRESSION SYSTEM IN COMPUTER ROOM TO REMAIN. INSTALL 3 NEW ADDRESSABLE MONITOR MODULES NEAR EXISTING RELEASING PANEL AND CONNECT TO ALARM SUPERVISORY AND TROUBLE OUTRITS FROM PANEL TO ALLOW INTERCONNECTIONS TEMPORARILY WITH BUILDING FACP AND OFF-PREMISE TRANSMISSION OF SIGNALS. DISABLE HALON SYSTEM PRIOR TO MAKING CONNECTIONS TO AVOID ACCIDENTAL DUMP OF HALON.
- EXISTING NOTIFICATION APPLIANCES FOR HALON FIRE SUPPRESSION SYSTEM (DOOR RELEASE NOTIFICATION ON APPLIANCE) TO BE REUSED TO EXISTING RELEASING PANEL FOR HALON FIRE SUPPRESSION SYSTEM.
- EXISTING ILLUMINATED LAMP TYPE ANNUNCIATOR PANEL FOR CONVENTIONAL FIRE ALARM SYSTEM TO BE ABANDONED IN PLACE. REMOVE ALL EXISTING WIRING TO PANEL AND REPLACE CLEAR GLASS PANEL WITH BLACK GLASS.
- FURNISH AND INSTALL NEW REMOTE ANNUNCIATOR FOR FIRE ALARM SYSTEM INSIDE OF EAST ENTRY (FIRE DEPARTMENT ACCESS). WALL MOUNT ANNUNCIATOR AT 54" AFF. ANNUNCIATOR PANEL MAY BE INSTALLED ON A SURFACE MOUNT J-BOX BUT ALL CONDUIT TO TO PANEL MUST BE CONCEALED IN WALL.
- FURNISH AND INSTALL A PROTECTIVE COVER (STI-1100 OR EQUAL) WITH AUDIBLE ALARM OVER MANUAL FIRE ALARM PULL STATION TO DISCOURAGE FALSE ACTIVATION.
- FURNISH AND INSTALL A PROGRAMMABLE RELAY TO SHUT DOWN EACH AIR HANDLER. RELAYS SHALL BE NORMALLY ENERGIZED AND FAN CONTROLS SHALL BE CONNECTED TO NORMALLY CLOSED CONTACTS ON THE RELAYS. RELAYS SHALL BE PROGRAMMED TO SHUT DOWN ALL AIR HANDLERS SIMULTANEOUSLY UPON ACTIVATION OF ANY AREA OR DUCT SMOKE DETECTOR AND SHALL NOT RESTORE UNTIL THE FACP HAS RESET.
- FURNISH AND INSTALL PROGRAMMABLE RELAYS TO PROVIDE ELEVATOR RECALL FUNCTIONS. ELEVATOR RECALL FUNCTIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF ASME A17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS. COORDINATE WORK WITH MAINTENANCE CONTRACTOR FOR ELEVATORS.
- FURNISH AND INSTALL A NEW MAGNETIC HOLD-OPEN DEVICE FOR EXISTING DOOR. MANUFACTURER AND MODEL OF DEVICE SHALL MATCH EXISTING DEVICES. MOUNT DEVICE HIGH ON WALL TO HOLD UPPER EDGE OF DOOR. PROVIDE PROGRAMMABLE RELAYS TO RELEASE ALL NEW AND EXISTING DOOR HOLDERS SIMULTANEOUSLY UPON RECEIPT OF ANY FIRE ALARM SIGNAL AT THE FACP. POWER TO DOOR HOLDERS TO BE PROVIDED BY CIRCUIT FROM FACP OR REMOTE POWER SUPPLY SUPERVISED BY THE FACP. POWER CIRCUITS SHALL BE OF SUFFICIENT CAPACITY TO POWER ALL NEW AND EXISTING DOOR HOLDERS WITH SUFFICIENT CAPACITY FOR AN ADDITIONAL 10 DOOR HOLDERS TO ALLOW FOR FUTURE EXPANSION BY OWNER.

FIRE ALARM EQUIPMENT LEGEND

DEVICE	DESCRIPTION	MOUNTING	REMARKS
FACP	FIRE ALARM CONTROL PANEL	MOUNT AT SAME LOCATION AS EXISTING FACP THAT IS TO BE REMOVED.	INTELLIGENT/ADDRESSABLE FIRE ALARM ALPHA-NUMERIC ANNUNCIATOR AND DIAL COMMUNICATOR. PROVIDE A MINIMUM OF 2 SLC CIRCUITS WITH A CAPACITY TO MONITOR AT LEAST 254 ADDRESSABLE POINTS.
VEP	VOICE EVACUATION SYSTEM CONTROL PANEL	MOUNT AT SAME LOCATION AS EXISTING VOICE EVACUATION PANEL TO BE REMOVED.	SYSTEM SHALL HAVE A BUILT-IN POWER SUPPLY SUFFICIENT TO POWER ALL SPEAKER STROBES IN THE BUILDING. SYSTEM SHALL PROVIDE SIGNALS TO THE ABILITY TO SELECTIVELY PAGE ANY SINGLE ZONE OR ZONES WITH THE CAPABILITY OF BROADCASTING PRE-RECORDED AND LIVE MESSAGES.
FSA	FIRE ALARM ANNUNCIATOR PANEL	54" AFF. JUNCTION BOX MAY BE SURFACE MOUNT BUT CONDUIT MUST BE CONCEALED IN EXISTING WALL.	ANNUNCIATOR SHALL HAVE A BUILT-IN LED (MINIMUM OF 90 CHARACTERS) TO DISPLAY STATUS OF FIRE ALARM SYSTEM AS WELL AS NAME AND ADDRESS OF ANY DEVICE INDICATING AN ALARM OR TROUBLE CONDITION. ANNUNCIATOR SHALL HAVE BUILT-IN KEYS TO ALLOW ALARM SILENCE AND SYSTEM RESET.
NAC-PS	REMOTE POWER SUPPLIES FOR NOTIFICATION APPLIANCE CIRCUITS	ADJACENT TO FACP OR REMOTE IN LOCATION APPROVED BY BUILDING MANAGEMENT.	NUMBER AND LOCATION OF POWER SUPPLIES SHALL BE SUFFICIENT TO PROVIDE A MINIMUM OF 2 SLC CIRCUITS IN BUILDING WITH MAXIMUM SPACING OF 30' O.C. AND FROM POWER SUPPLY TO MOST REMOTE DEVICE ON CIRCUIT.
HCP	HALON SYSTEM CONTROL PANEL	EXISTING	EXISTING FENWALL PANEL TO REMAIN. CONNECT ALARM SUPERVISORY & TROUBLE OUTRITS OF EXISTING PANEL TO NEW FACP.
MD	MAGNETIC DOOR HOLD-OPEN DEVICE (EXISTING)	EXISTING	CONNECT EXISTING MAGNETIC DOOR HOLDER TO RELAY CONTROLLED BY NEW FIRE ALARM PANEL.
MDN	MAGNETIC DOOR HOLD-OPEN DEVICE (NEW)	MOUNT AT TOP EDGE OF DOOR.	INSTALL NEW MAGNETIC DOOR HOLDER TO RELEASE EXISTING MANUFACTURER AND MODEL OF DEVICE. SHALL MATCH EXISTING CORNER DETECTOR TO RELAY CONTROLLED BY FIRE ALARM PANEL.
SD	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR	CEILING MOUNTED. WHERE NEW DETECTOR REPLACES AN EXISTING DETECTOR IN SAME LOCATION, EXISTING J-BOX MAY BE RE-USED.	REMOVE EXISTING CONVENTIONAL SMOKE DETECTORS AND REPLACE WITH NEW ADDRESSABLE SMOKE DETECTORS. DETECTORS ARE REQUIRED IN ALL CORRIDORS AND LOBBIES WITH A MAXIMUM SPACING OF 30' O.C.
SDC	EXISTING CONVENTIONAL SMOKE DETECTOR	REPLACE CEILING TILE AND/OR REPAIR CEILING SURFACE WHERE DETECTOR IS REMOVED.	REMOVE EXISTING CONVENTIONAL SMOKE DETECTORS. CEILING TILE AND WIRING DETECTOR IS REMOVED.
SDN	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR	CEILING MOUNTED.	ADD NEW SMOKE DETECTOR WHERE INDICATED ON PLAN.
H	ADDRESSABLE HEAT DETECTOR	CEILING OR UNDERSIDE OF ROOF DECK.	SPACING OF DETECTORS SHALL CONFORM TO NFPA 72 AND TO MANUFACTURER'S RECOMMENDATIONS.
SDS	ADDRESSABLE DUCT SMOKE DETECTOR	PROVIDE A DETECTOR IN RETURN AIR SYSTEM ON EACH LEVEL. FROM 10' CONNECTION TO EACH RETURN AIR SYSTEM TO EACH RETURN AIR SYSTEM. SIDE OF EACH AIR HANDLER DOWN-DOWN SIDE OF FIELDS AND UPSTREAM OF ANY BRANCH CONNECTIONS.	INSTALL IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF NFPA 72, NFPA 90A AND THE IBC.
M	ADDRESSABLE MANUAL FIRE ALARM PULL STATION	WALL MOUNT ON EXISTING J-BOX WHERE EXISTING PULL STATION IS REMOVED. PROTECTED BY PLASTIC STOPPER COVER. THE EXISTING COVER SHALL REMAIN.	REMOVE EXISTING CONVENTIONAL MANUAL PULL STATIONS AND REPLACE WITH NEW ADDRESSABLE PULL STATIONS.
FS	FLOW SWITCH FOR FIRE SPRINKLER SYSTEM	EXISTING TO REMAIN.	INSTALL NEW ADDRESSABLE MONITOR MODULE AT EACH EXISTING FLOW SWITCH TO FACILITATE MONITORING OF FLOW SWITCH BY FACP AS AN ADDRESSABLE POINT.
VSS	VALVE SUPERVISORY SWITCH FOR FIRE SPRINKLER SYSTEM	EXISTING TO REMAIN.	INSTALL NEW ADDRESSABLE MONITOR MODULE AT EACH EXISTING VALVE SUPERVISORY SWITCH TO FACILITATE MONITORING OF VALVE SUPERVISORY SWITCH BY FACP AS AN ADDRESSABLE POINT.
MM	ADDRESSABLE MONITOR MODULE	MOUNT ON NEW J-BOX NEAR EACH ADDRESSABLE MONITORING DEVICE TO BE MONITORED.	INSTALL NEW CONVENTIONAL DEVICES CONVENTIONAL DEVICES TO BE MONITORED.
RM	ADDRESSABLE RELAY MODULE	MOUNT ON NEW J-BOX WITHIN 3' OF DEVICE OR CIRCUIT CONTROLLED.	TO PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS SUCH AS DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL OR ACTIVATION OF VOICE EVACUATION SYSTEM.
SS	FIRE ALARM SPEAKER/STROBE	CEILING MOUNT OR WALL MOUNT	STROBE SHALL HAVE A MINIMUM RATING OF 75 CD AND SHALL BE SYNCHRONIZED WITH ALL OTHER DEVICES IN VIEW. SOUND SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL OF 15 DB ABOVE AMBIENT. APPLIANCE SHALL BE COMPATIBLE WITH AND CONNECTED TO VOICE EVACUATION CONTROL PANEL.
SSC	EXISTING FIRE ALARM SPEAKER OR SPEAKER/STROBE	REPLACE CEILING TILE AND/OR REPAIR CEILING/WALL SURFACE WHERE APPLIANCE IS REMOVED.	REPLACE EXISTING FIRE ALARM SPEAKER OR SPEAKER/STROBE. JUNCTION BOX AND WIRING TO BE REMOVED.
SSN	FIRE ALARM STROBE	CEILING OR WALL MOUNT AT 80" TO 96" AFF.	STROBE SHALL HAVE A MINIMUM CANDLE RATING OF 1500. STROBES SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.
HWS	FIRE ALARM HORN/STROBE	WALL MOUNT ON EXISTING JUNCTION BOX	REPLACE EXISTING WALL MOUNTED NOTIFICATION APPLIANCES IN REVENHOUSE WITH NEW APPLIANCES. STROBE SHALL BE 15/75 CD RATED. APPLIANCE SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.
HWSN	EXISTING FIRE ALARM HORN/STROBE	REMOVE EXISTING DEVICE AND WIRING AND PROVIDE DECORATIVE COVER PLATE (APPROVED BY OWNER) FOR EXISTING JUNCTION BOX	REMOVE EXISTING WALL MOUNT NOTIFICATION APPLIANCES IN ELEVATOR LOBBY TO BE REMOVED.
HWSN	EXTERIOR FIRE ALARM HORN/STROBE	WALL MOUNTED ON EXISTING EXTERIOR J-BOX OR ON NEW WEATHERPROOF J-BOX AT 10'-0" AFF (2 NEW DEVICES)	REPLACE EXISTING EXTERIOR HORNS WITH NEW AUDIBLE/VISIBLE APPLIANCES. ADD 2 NEW APPLIANCES WHERE INDICATED ON DRAWING. STROBES SHALL HAVE A MINIMUM RATING OF 15/75 CD AND SHALL BE SYNCHRONIZED WITH ALL OTHER STROBES IN VIEW. APPLIANCES SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.



FIFTH LEVEL FIRE ALARM PLAN
1/8" = 1'-0"

REGIONAL GOVERNMENT CENTER
PROVO, UTAH

FIRE ALARM SYSTEM UPGRADES
DFCM PROJECT #04202310

FIFTH LEVEL
FA-6

REVISIONS:

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FIRE ALARM SYSTEM GENERAL NOTES

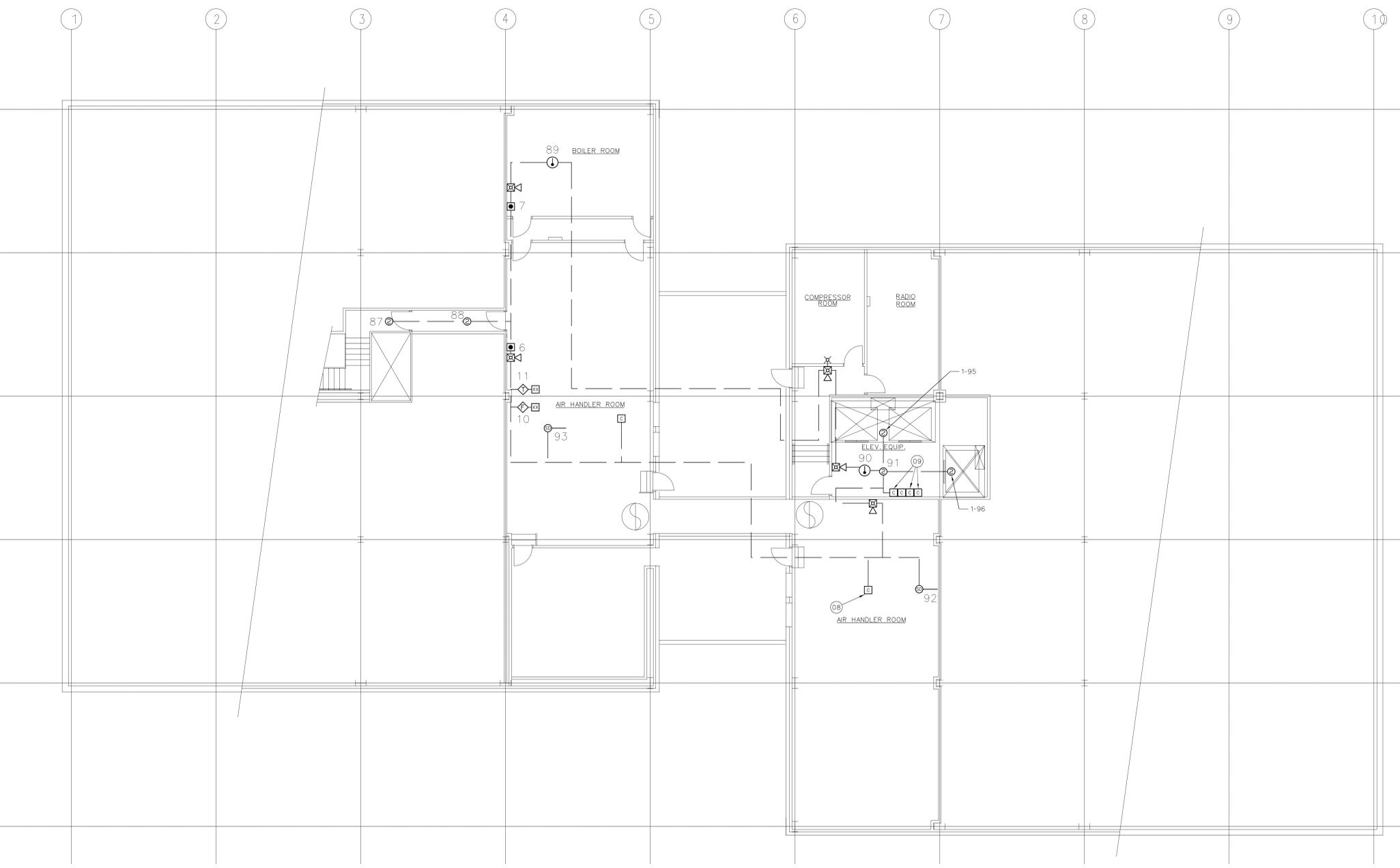
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- HEAT DETECTORS: PROVIDE HEAT DETECTORS WHERE SHOWN ON PLANS IN SHOP AREA AND ELEVATOR EQUIPMENT ROOM. MAXIMUM SPACING FOR HEAT DETECTORS SHALL BE 50' BETWEEN DETECTORS OR 25' FROM FURTHEST WALL. ADDRESSABLE MODULES: PROVIDE ADDRESSABLE MODULES TO MONITOR EXISTING CONVENTIONAL DEVICES (WATER FLOW SWITCHES, VALVE TAMPER SWITCHES, HALON CONTROL PANEL) TO REMAIN. SPRINKLER WATER FLOW AND VALVE TAMPER SWITCH LOCATIONS TO BE FIELD VERIFIED. LOCATE MONITOR MODULE ADJACENT TO FLOW OR TAMPER SWITCH IN AN ACCESSIBLE LOCATION OR ABOVE REMOVABLE CEILING TILE. LABEL AS PART OF THE FIRE ALARM SYSTEM WITH THE NAME OF THE DEVICE MONITORED ON THE COVER OF THE JUNCTION BOX.
- NOTIFICATION APPLIANCES: PROVIDE AUDIBLE AND VISUAL NOTIFICATION APPLIANCES THROUGHOUT BUILDING. PROVIDE SPEAKER/STROBES CONNECTED TO VOICE/ALARM SYSTEM IN ALL CORRIDORS, LOBBIES AND ROOMS IN EXCESS OF 1,000 SQ FT. PROVIDE STROBES OR HORN/STROBES IN OTHER LOCATIONS AS INDICATED ON THE PLANS. NEW DEVICES SHALL BE CEILING MOUNTED. WALL MOUNTED DEVICES MAY BE INSTALLED ON EXISTING J-BOXES. VOLUME OF HORNS AND SPEAKERS SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL OF 15 DB ABOVE AMBIENT IN ALL OCCUPIED AREAS. VISIBLE ALARMS SHALL BE PROVIDED THROUGHOUT ALL PUBLIC AREAS OF THE BUILDING AS WELL AS PRIVATE OFFICES AND AREAS WITH POSSIBLE OCCUPANCY BY HEARING IMPAIRED PERSONS
- FIRE SAFETY FUNCTIONS: CONTROL MODULES WITH RELAY CONTACTS SHALL BE INSTALLED AND PROGRAMMED TO PROVIDE DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL & ACTIVATION OF VOICE/ALARM SYSTEM (UNLESS INTEGRATED WITH FACP) OR REMOTE POWER SUPPLIES FOR NOTIFICATION APPLIANCE CIRCUITS. THE CONTROL RELAY MODULES SHALL BE INSTALLED WITHIN 36" OF DEVICE OR CIRCUIT CONTROLLED. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY NUMBER AND LOCATION OF DEVICES TO BE CONTROLLED.
- PHASING: PLAN SEQUENCE OF WORK TO MINIMIZE DOWN TIME OF FIRE ALARM SYSTEM. IT IS THE INSTALLER'S RESPONSIBILITY TO PROVIDE A FIRE WATCH AND NOTIFY PROPER AUTHORITIES DURING INTERRUPTIONS OF FIRE DETECTION AND ALARM SERVICE IN THE BUILDING.
- TESTING: SCHEDULE AND PERFORM ALL ACCEPTANCE TESTS REQUIRED BY NFPA 72. TESTING SHALL BE WITNESSED BY PROVO FIRE DEPARTMENT, STATE FIRE MARSHAL'S OFFICE, PROJECT ENGINEER, DFCM AND BUILDING MAINTENANCE PERSONNEL. SUBMIT A WRITTEN TESTING PLAN DETAILING EACH TEST TO BE PERFORMED TO EACH AGENCY AT LEAST THREE DAYS PRIOR TO SCHEDULED TEST.

FIRE ALARM SYSTEM KEY NOTES

- REMOVE EXISTING CONVENTIONAL FIRE ALARM CONTROL PANEL (FACP), MODULES AND ENCLOSURE. FURNISH AND INSTALL NEW ADDRESSABLE FACP AT LOCATION OF EXISTING PANEL. FACP SHALL HAVE BUILT-IN ALPHA-NUMERIC ANNUNCIATOR AND DIAL COMMUNICATOR. NEW PANEL SHALL BE SUPPLIED FROM THE SAME DEDICATED POWER CIRCUIT SUPPLYING EXISTING FACP. NEW FACP SHALL HAVE SUFFICIENT CAPACITY TO MONITOR 254 ADDRESSABLE INITIATING DEVICES. PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS (DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL AND ACTIVATION OF VOICE EVACUATION SYSTEM) AND SUFFICIENT CAPACITY TO POWER EACH NOTIFICATION APPLIANCE CIRCUIT.
- REMOVE EXISTING VOICE EVACUATION SYSTEM CONTROL PANEL, MODULES AND ENCLOSURE. FURNISH AND INSTALL NEW CONTROL PANEL FOR VOICE EVACUATION SYSTEM. CONTROL PANEL SHALL HAVE BUILT-IN POWER SUPPLY (ADDITIONAL REMOTE POWER SUPPLIES MAY BE USED) SUFFICIENT TO PROVIDE POWER TO ALL SPEAKER/STROBE APPLIANCES IN BUILDING.
- EXISTING RELEASING PANEL AND MANUAL ACTIVATION PULL STATION FOR HALON FIRE SUPPRESSION SYSTEM IN COMPUTER ROOM TO REMAIN. INSTALL 3 NEW ADDRESSABLE MONITOR MODULES NEAR EXISTING RELEASING PANEL AND CONNECT TO ALARM SUPERVISORY AND TROUBLE OUTRITS FROM PANEL TO ALLOW INTERCONNECTION TEMPORARILY WITH BUILDING FACP AND OFF-PREMISE TRANSMISSION OF SIGNALS. DISABLE HALON SYSTEM PRIOR TO MAKING CONNECTIONS TO AVOID ACCIDENTAL DUMP OF HALON.
- EXISTING NOTIFICATION APPLIANCES FOR HALON FIRE SUPPRESSION SYSTEM (DO NOT REMOVE NOTIFICATION APPLIANCES) TO BE CONNECTED TO EXISTING RELEASING PANEL FOR HALON FIRE SUPPRESSION SYSTEM.
- EXISTING ILLUMINATED LAMP TYPE ANNUNCIATOR PANEL FOR CONVENTIONAL FIRE ALARM SYSTEM TO BE ABANDONED IN PLACE. REMOVE ALL EXISTING WIRING TO PANEL AND REPLACE CLEAR GLASS PANEL WITH BLACK GLASS.
- FURNISH AND INSTALL NEW REMOTE ANNUNCIATOR FOR FIRE ALARM SYSTEM INSIDE OF EAST ENTRY (FIRE DEPARTMENT ACCESS) WALL MOUNT ANNUNCIATOR AT 54" AFF. ANNUNCIATOR PANEL MAY BE INSTALLED ON A SURFACE MOUNT J-BOX BUT ALL CONDUIT TO TO PANEL MUST BE CONCEALED IN WALL.
- FURNISH AND INSTALL A PROTECTIVE COVER (STI-100 OR EQUAL) WITH AUDIBLE ALARM OVER MANUAL FIRE ALARM PULL STATION TO DISCOURAGE FALSE ACTIVATION.
- FURNISH AND INSTALL A PROGRAMMABLE RELAY TO SHUT DOWN EACH AIR HANDLER. RELAYS SHALL BE NORMALLY ENERGIZED AND FAN CONTROLS SHALL BE CONNECTED TO NORMALLY CLOSED CONTACTS ON THE RELAYS. RELAYS SHALL BE PROGRAMMED TO SHUT DOWN ALL AIR HANDLERS SIMULTANEOUSLY UPON ACTIVATION OF ANY AREA OR DUCT SMOKE DETECTOR AND SHALL NOT RESTORE UNTIL THE FACP HAS RESET.
- FURNISH AND INSTALL PROGRAMMABLE RELAYS TO PROVIDE ELEVATOR RECALL FUNCTIONS. ELEVATOR RECALL FUNCTIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF ASME A17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS. COORDINATE WORK WITH MAINTENANCE CONTRACTOR FOR ELEVATORS.
- FURNISH AND INSTALL A NEW MAGNETIC HOLD-OPEN DEVICE FOR EXISTING DOOR. MANUFACTURER AND MODEL OF DEVICE SHALL MATCH EXISTING DEVICES. MOUNT DEVICE HIGH ON WALL TO HOLD UPPER EDGE OF DOOR. PROVIDE PROGRAMMABLE RELAYS TO RELEASE ALL NEW AND EXISTING DOOR HOLDERS SIMULTANEOUSLY UPON RECEIPT OF ANY FIRE ALARM SIGNAL AT THE FACP. POWER TO DOOR HOLDERS TO BE PROVIDED BY CIRCUIT FROM FACP OR REMOTE POWER SUPPLY SUPERVISED BY THE FACP. POWER CIRCUITS SHALL BE OF SUFFICIENT CAPACITY TO POWER ALL NEW AND EXISTING DOOR HOLDERS WITH SUFFICIENT CAPACITY FOR AN ADDITIONAL 10 DOOR HOLDERS TO ALLOW FOR FUTURE EXPANSION BY OWNER.

FIRE ALARM EQUIPMENT LEGEND

DEVICE	DESCRIPTION	MOUNTING	REMARKS
FACP	FIRE ALARM CONTROL PANEL	MOUNT AT SAME LOCATION AS EXISTING FACP THAT IS TO BE REMOVED.	INTELLIGENT/ADDRESSABLE FIRE ALARM ALPHA-NUMERIC ANNUNCIATOR AND DIAL COMMUNICATOR. PROVIDE A MINIMUM OF 2 SLC CIRCUITS WITH A CAPACITY TO MONITOR AT LEAST 254 ADDRESSABLE POINTS.
VEP	VOICE EVACUATION SYSTEM CONTROL PANEL	MOUNT AT SAME LOCATION AS EXISTING VOICE EVACUATOR PANEL TO BE REMOVED.	SYSTEM SHALL HAVE A BUILT-IN POWER SUPPLY SUFFICIENT TO POWER ALL SPEAKER STROBES IN THE BUILDING. SYSTEM SHALL PROVIDE ZONING WITH THE ABILITY TO SELECTIVELY PAGE ANY SINGLE ZONE OF THE SYSTEM. SYSTEM SHALL BE CAPABLE OF BROADCASTING PRERECORDED AND LIVE MESSAGES.
FSA	FIRE ALARM ANNUNCIATOR PANEL	54" AFF. JUNCTION BOX MAY BE SURFACE MOUNT BUT CONDUIT MUST BE CONCEALED IN EXISTING WALL.	ANNUNCIATOR SHALL HAVE A BUILT-IN LED (MINIMUM OF 80 CHARACTERS) TO DISPLAY STATUS OF THE FIRE ALARM SYSTEM AS WELL AS NAME AND ADDRESS OF ANY DEVICE INITIATING THE ALARM OR TROUBLE CONDITION. ANNUNCIATOR SHALL HAVE BUILT-IN ALARM ALARM SILENCE AND SYSTEM RESET.
MAC-PS	REMOTE POWER SUPPLIES FOR NOTIFICATION APPLIANCE CIRCUITS	ADJACENT TO FACP OR REMOTE IN BUILDING WITH APPROVED BY BUILDING MANAGEMENT.	NUMBER AND LOCATION OF POWER SUPPLIES SHALL BE SUFFICIENT TO POWER ALL NOTIFICATION APPLIANCE CIRCUITS IN BUILDING WITH MAXIMUM CURRENT DRAWING FROM REMOTE SUPPLY TO MOST REMOTE DEVICE ON CIRCUIT.
HCP	HALON SYSTEM CONTROL PANEL	EXISTING	EXISTING FENWALL PANEL TO REMAIN. CONNECT ALARM SUPERVISORY & TROUBLE OUTRITS OF EXISTING PANEL TO NEW FACP.
MD	MAGNETIC DOOR HOLD-OPEN DEVICE (EXISTING)	EXISTING	CONNECT EXISTING MAGNETIC DOOR HOLDERS TO RELAY CONTROLLED BY NEW FIRE ALARM PANEL.
MDN	MAGNETIC DOOR HOLD-OPEN DEVICE (NEW)	MOUNT AT TOP EDGE OF DOOR.	INSTALL NEW MAGNETIC DOOR HOLDER NEAR EXISTING DOOR. MANUFACTURER AND MODEL OF DEVICE SHALL MATCH EXISTING DEVICES. MOUNT DEVICE HIGH ON WALL TO HOLD UPPER EDGE OF DOOR. PROVIDE RELAY TO RELAY CONTROLLED BY FIRE ALARM PANEL.
SD	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR	CEILING MOUNTED. WHERE NEW DETECTOR REPLACES AN EXISTING ADDRESSABLE SMOKE DETECTOR, THE EXISTING ADDRESSABLE SMOKE DETECTOR IS TO BE RE-USED.	REMOVE EXISTING CONVENTIONAL SMOKE DETECTORS AND REPLACE WITH NEW ADDRESSABLE SMOKE DETECTORS. DETECTORS ARE REQUIRED IN ALL CORRIDORS AND LOBBIES WITH A MAXIMUM SPACING OF 30' O.C.
SDC	EXISTING CONVENTIONAL SMOKE DETECTOR	REPLACE CEILING TILE AND/OR REPAIR CEILING SURFACE WHERE DETECTOR IS REMOVED.	REMOVE EXISTING CONVENTIONAL SMOKE DETECTORS. CEILING TILE AND WIRING TO BE REPAIRED.
SDN	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR	CEILING MOUNTED.	ADD NEW SMOKE DETECTOR WHERE INDICATED ON PLAN.
SDR	ADDRESSABLE HEAT DETECTOR	CEILING OR UNDERSIDE OF ROOF DECK.	SPACING OF DETECTORS SHALL CONFORM TO NFPA 72 AND TO MANUFACTURER'S RECOMMENDATIONS.
SDS	ADDRESSABLE DUCT SMOKE DETECTOR	PROVIDE A DETECTOR IN RETURN AIR DUCTS ON EACH LEVEL. FROM TOP CONNECTION TO EACH RETURN AIR DUCT, PROVIDE A DETECTOR IN EACH SIDE OF EACH AIR HANDLER DOWN-DRAIN OF FILTERS AND UPSTREAM OF ANY BRANCH CONNECTIONS.	INSTALL IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF NFPA 72, NFPA 90A AND THE IBC.
MS	ADDRESSABLE MANUAL FIRE ALARM PULL STATION	WALL MOUNT ON EXISTING J-BOX WHERE EXISTING PULL STATION AND PROTECTED BY PLASTIC STOPPER COVER. THE EXISTING COVER SHALL REMAIN.	REMOVE EXISTING CONVENTIONAL MANUAL PULL STATIONS AND REPLACE WITH NEW ADDRESSABLE PULL STATIONS.
FS	FLOW SWITCH FOR FIRE SPRINKLER SYSTEM	EXISTING TO REMAIN.	INSTALL NEW ADDRESSABLE MONITOR MODULE AT EACH EXISTING FLOW SWITCH TO FACILITATE MONITORING OF FLOW SWITCH BY FACP AS AN ADDRESSABLE POINT.
VS	VALVE SUPERVISORY SWITCH FOR FIRE SPRINKLER SYSTEM	EXISTING TO REMAIN.	INSTALL NEW ADDRESSABLE MONITOR MODULE AT EACH EXISTING VALVE SUPERVISORY SWITCH TO FACILITATE MONITORING OF VALVE SUPERVISORY SWITCH BY FACP AS AN ADDRESSABLE POINT.
MM	ADDRESSABLE MONITOR MODULE	MOUNT ON NEW J-BOX NEAR EXISTING MONITORING DEVICE TO BE REPLACED.	INSTALL NEW CONVENTIONAL DEVICES CONVENTIONAL MONITORING DEVICE TO BE REPLACED.
RM	ADDRESSABLE RELAY MODULE	MOUNT ON NEW J-BOX WITHIN 3' OF DEVICE OR CIRCUIT CONTROLLED.	TO PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS SUCH AS DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL OR ACTIVATION OF VOICE EVACUATION SYSTEM.
SS	FIRE ALARM SPEAKER/STROBE	CEILING MOUNT OR WALL MOUNT	STROBE SHALL HAVE A MINIMUM RATING OF 75 CD AND SHALL BE SYNCHRONIZED WITH ALL OTHER DEVICES IN VIEW. SOUND LEVEL SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL OF 15 DB ABOVE AMBIENT. APPLIANCE SHALL BE COMPATIBLE WITH AND CONNECTED TO VOICE EVACUATION CONTROL PANEL.
SSC	EXISTING FIRE ALARM SPEAKER OR SPEAKER/STROBE	REPLACE CEILING TILE AND/OR REPAIR CEILING/WALL SURFACE WHERE APPLIANCE IS TO BE REMOVED.	EXISTING FIRE ALARM SPEAKER OR SPEAKER/STROBE. JUNCTION BOX AND WIRING TO BE REMOVED.
SSN	FIRE ALARM STROBE	CEILING OR WALL MOUNT AT 80" TO 96" AFF	STROBE SHALL HAVE A MINIMUM CANDULA RATING OF 1500. STROBES SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.
SSR	FIRE ALARM HORN/STROBE	WALL MOUNT ON EXISTING JUNCTION BOX	REPLACE EXISTING WALL MOUNTED NOTIFICATION APPLIANCES IN PENHOUSE WITH NEW APPLIANCES. STROBE SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.
SSS	EXISTING FIRE ALARM HORN/STROBE	REMOVE EXISTING DEVICE AND WIRING AND PROVIDE DECORATIVE COVER PLATE (APPROVED BY OWNER) FOR EXISTING JUNCTION BOX	EXISTING WALL MOUNT NOTIFICATION APPLIANCES IN ELEVATOR LOBBY TO BE REMOVED.
SSX	EXTERIOR FIRE ALARM HORN/STROBE	WALL MOUNTED ON EXISTING EXTERIOR J-BOX OR ON NEW WEATHERPROOF J-BOX AT 10'-0" AFF (2 NEW DEVICES)	REPLACE EXISTING EXTERIOR HORNS WITH NEW AUDIBLE/VISIBLE APPLIANCES. ADD 2 NEW APPLIANCES TO EACH EXTERIOR LOCATION. STROBES SHALL HAVE A MINIMUM RATING OF 15775 CD AND SHALL BE SYNCHRONIZED WITH ALL OTHER STROBES IN VIEW. APPLIANCES SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.



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



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REGIONAL GOVERNMENT CENTER
PROVO, UTAH

FIRE ALARM SYSTEM UPGRADES
DFCM PROJECT #04202310

PENTHOUSE
FA-7

AS-BUILT 04/10/06

FIRE ALARM SYSTEM GENERAL NOTES

- SCOPE OF WORK: WORK SHALL INCLUDE REMOVAL OF EXISTING CONVENTIONAL FIRE ALARM SYSTEM INCLUDING ALL CONTROL EQUIPMENT, POWER SUPPLIES, INITIATING DEVICES AND DEVICES, NOTIFICATION APPLIANCE CIRCUITS AND DEVICES. INSTALL NEW ADDRESSABLE FIRE ALARM SYSTEM AND VOICE ACTIVATION SYSTEM THROUGHOUT BUILDING. NEW FIRE ALARM SYSTEM SHALL BE IN ACCORDANCE WITH NFPA 72, THESE DRAWINGS AND SPECIFICATIONS.
- APPLICABLE CODES/STANDARDS: INTERNATIONAL BUILDING CODE - 2003 EDITION INTERNATIONAL MECHANICAL CODE - 2003 EDITION UTAH STATE FIRE MARSHAL RULE R710-4 NFPA 70 - 2002 EDITION NFPA 72 - 2002 EDITION NFPA 90A - 2002 EDITION
- QUALITY ASSURANCE: ALL EQUIPMENT, MATERIAL AND DEVICES USED FOR THE FIRE ALARM SYSTEM INSTALLATION SHALL BE UL LISTED AND/OR FM APPROVED FOR USE IN FIRE PROTECTION SYSTEMS. ALL INITIATING DEVICES SHALL BE LISTED COMPATIBLE WITH THE FIRE ALARM CONTROL PANEL (FACP). MAJOR SYSTEM COMPONENTS (CONTROL PANELS, INITIATING DEVICES, ADDRESSABLE MODULES AND RELAYS, POWER SUPPLIES, ETC.) SHALL BE FROM A STATE OF UTAH DFCM APPROVED MANUFACTURER. APPROVED MANUFACTURERS INCLUDE FIRE-LITE AND SILENT KNIGHT.
- SUBMITTALS: FIRE ALARM SYSTEM CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS TO PROVO FIRE DEPARTMENT, STATE FIRE MARSHAL, OWNER AND ENGINEER FOR REVIEW/APPROVAL PRIOR TO ORDERING OR INSTALLING ANY EQUIPMENT. SUBMITTALS SHALL CONFORM TO THE CONSTRUCTION DOCUMENTS REQUIREMENTS OF IFC 907.1.1.
- DEMOLITION: IT IS THE INSTALLER'S RESPONSIBILITY FOR THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM. ALL NEW (UNLESS OTHERWISE NOTED) DEVICES WILL REPLACE THE EXISTING AND GENERALLY REUSE THE EXISTING LOCATIONS. ANY EXISTING DEVICES AND CONDUIT NOT BEING REPLACED AND REUSED THAT ARE VISIBLE, SUCH AS NOTIFICATION APPLIANCES OR SMOKE DETECTORS SHALL BE REMOVED AND REMAINING WALL OR CEILING SURFACE REPAIRED OR REPLACED TO MATCH SURROUNDING AREAS. PULL ALL UNUSED WIRES FROM ALL CONDUITS AND J-BOXES REMAINING. CEILING TILE DAMAGED BY THE INSTALLER WILL BE REPLACED BY THE CONTRACTOR WITH THE SAME OR EQUIVALENT TILE.
- SYSTEM TYPE: FIRE ALARM SYSTEM SHALL MEET THE REQUIREMENTS FOR PROTECTED PREMISE FIRE ALARM SYSTEMS. SYSTEM SHALL PROVIDE OFF-PREMISE NOTIFICATION OF STATUS TO CENTRAL STATION DETERMINED BY OWNER.
- OCCUPANT NOTIFICATION: RECEIPT OF ANY FIRE ALARM SIGNAL AT THE FACP SHALL RESULT IN THE ACTIVATION OF ALL NOTIFICATION APPLIANCES IN THE BUILDING (STROBES, HORN/STROBES AND SPEAKER STROBES), FOR PURPOSES OF FIRE ALARM NOTIFICATION, THE BUILDING SHALL BE CONSIDERED AS A SINGLE ZONE.
- VOICE/ALARM COMMUNICATION: PROVIDE AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH IBC 907.2.12.2 AND NFPA 72. SYSTEM SHALL PROVIDE BOTH AUDIBLE AND VISUAL SIGNALS. VOICE/ALARM COMMUNICATION SYSTEM FUNCTIONS MAY BE INTEGRATED INTO THE FACP OR PROVIDED BY A SEPARATE PANEL CONTROLLED AND MONITORED BY THE FACP. SYSTEM SHALL BE CONFIGURED TO NOTIFY THE ENTIRE BUILDING AS A SINGLE ZONE BUT SHALL BE CAPABLE OF DIVIDING NOTIFICATION APPLIANCES INTO A MINIMUM OF 4 DISTINCT ZONES FOR MANUAL PAGING USE.

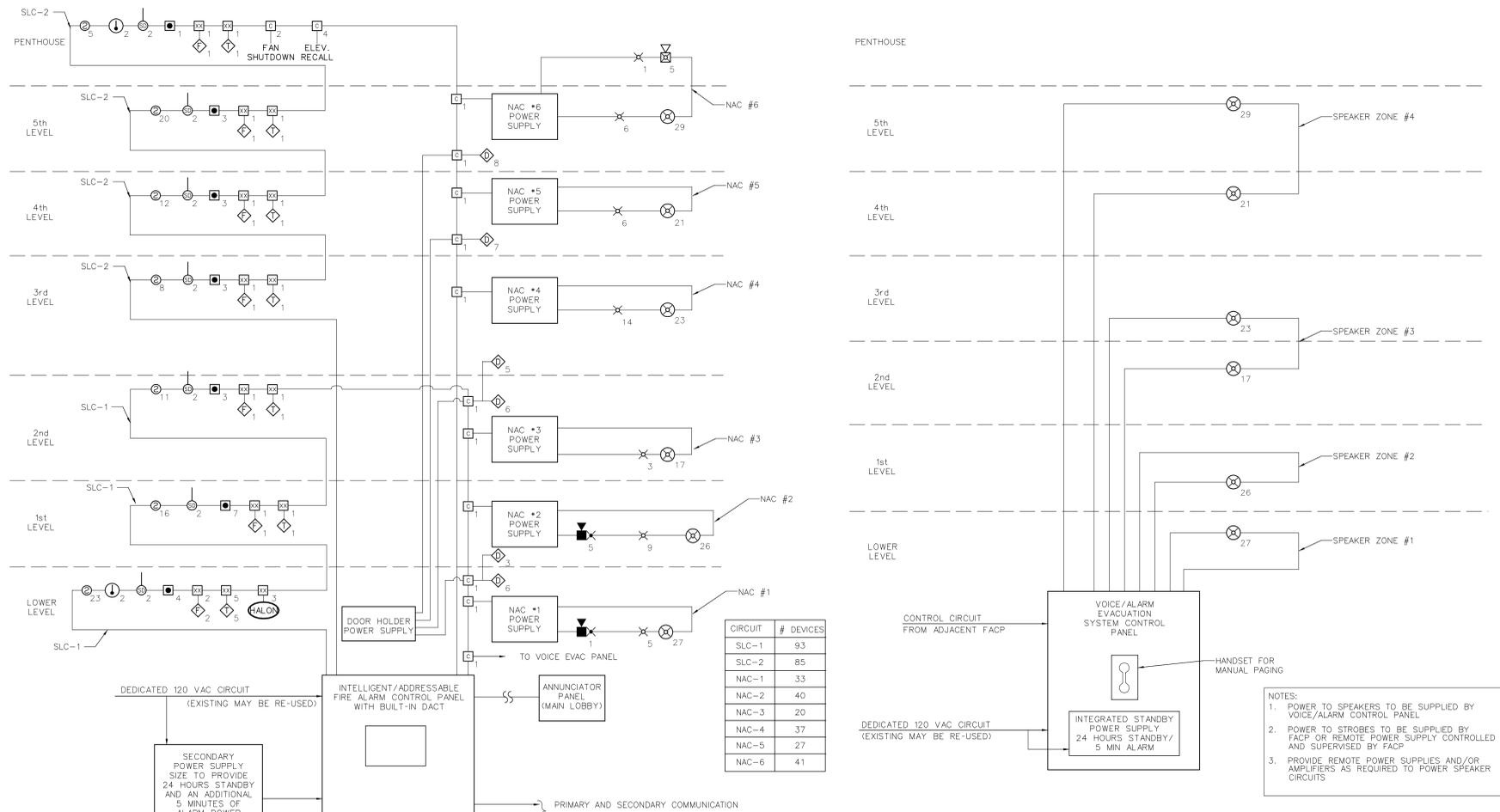
- WIRING/CONDUIT: ALL WIRING TO BE FREE OF OPENS, SHORTS AND GROUNDS. ALL WIRING SHALL BE INSTALLED IN RIGID OR FLEXIBLE CONDUIT. ALL PENETRATIONS THROUGH RATED PARTITIONS SHALL BE FIRE STOPPED WITH A SUITABLE CALKING COMPOUND. ALL WIRING USED IN THE FIRE ALARM SYSTEM SHALL BE FPL (FIRE POWER LIMITED) WITH 600V INSULATION OR EQUIVALENT AS PER NFPA 70 ARTICLE 760.
- WIRING STYLES/PER NFPA 72: INITIATING DEVICE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE D CIRCUITS. SIGNALING LINE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE E OR F CIRCUITS. NOTIFICATION APPLIANCE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE Z.
- POWER: EXISTING DEDICATED BRANCH CIRCUIT MAY BE REUSED TO PROVIDE PRIMARY POWER TO NEW FACP. FURNISH A BATTERY BACKUP TO PROVIDE SECONDARY POWER SUPPLY TO FIRE ALARM SYSTEM. BATTERY BACKUP SHALL BE OF SUFFICIENT CAPACITY TO PROVIDE 24 HOURS OR STANDBY POWER WITH AN ADDITIONAL RESERVE TO OPERATE SYSTEM FOR 5 MINUTES IN ALARM.
- INITIATING DEVICES: SLC CIRCUITS - SLC LOOP DEVICE ADDRESSING SHALL NOT EXCEED 127 DETECTORS (SMOKES, HEATS, DUCT SMOKES, ETC.) OR 127 MODULES (PULL STATIONS, MONITOR, CONTROL, ETC.) PER LOOP. AT LEAST 19 ADDRESSES (15%) SHOULD BE LEFT VACANT ON EACH SLC LOOP IN ORDER TO ALLOW SPACE FOR ADJUSTMENTS. SMOKE DETECTORS: PROVIDE SMOKE DETECTORS WHERE SHOWN ON PLANS IN ALL CORRIDORS, LOBBIES AND AT THE TOP OF EACH ELEVATOR SHAFT. MAXIMUM SPACING OF DETECTORS SHALL BE 30' BETWEEN DETECTORS OR 15' FROM FURTHEST WALL. MANUAL PULL STATIONS: INSTALL NEW PULL STATIONS AT SAME LOCATION AND HEIGHT AS EXISTING PULL STATIONS USING EXISTING JUNCTION BOXES.
- HEAT DETECTORS: PROVIDE HEAT DETECTORS WHERE SHOWN ON PLANS IN SHOP AREA AND ELEVATOR EQUIPMENT ROOM. MAXIMUM SPACING FOR HEAT DETECTORS SHALL BE 50' BETWEEN DETECTORS OR 25' FROM FURTHEST WALL. ADDRESSABLE MODULES: PROVIDE ADDRESSABLE MODULES TO MONITOR EXISTING CONVENTIONAL DEVICES (WATER FLOW SWITCHES, VALVE TAMPER SWITCHES, HALON CONTROL PANEL) TO REMAIN. SPRINKLER WATER FLOW AND VALVE TAMPER SWITCH LOCATIONS TO BE FIELD VERIFIED. LOCATE MONITOR MODULE ADJACENT TO FLOW OR TAMPER SWITCH IN AN ACCESSIBLE LOCATION OR ABOVE REMOVABLE CEILING TILE. LABEL AS PART OF THE FIRE ALARM SYSTEM WITH THE NAME OF THE DEVICE MONITORED ON THE COVER OF THE JUNCTION BOX.
- NOTIFICATION APPLIANCES: PROVIDE AUDIBLE AND VISUAL NOTIFICATION APPLIANCES THROUGHOUT BUILDING. PROVIDE SPEAKER/STROBES CONNECTED TO VOICE/ALARM SYSTEM IN ALL CORRIDORS, LOBBIES AND ROOMS IN EXCESS OF 1,000 SQ FT. PROVIDE STROBES OR HORN/STROBES IN OTHER LOCATIONS AS INDICATED ON THE PLANS. NEW DEVICES SHALL BE CEILING MOUNTED. WALL MOUNTED DEVICES MAY BE INSTALLED ON EXISTING J-BOXES. VOLUME OF HORNS AND SPEAKERS SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL OF 15 DB ABOVE AMBIENT IN ALL OCCUPIED AREAS. VISIBLE ALARMS SHALL BE PROVIDED THROUGHOUT ALL PUBLIC AREAS OF THE BUILDING AS WELL AS PRIVATE OFFICES AND AREAS WITH POSSIBLE OCCUPANCY BY HEARING IMPAIRED PERSONS.
- FIRE SAFETY FUNCTIONS: CONTROL MODULES WITH RELAY CONTACTS SHALL BE INSTALLED AND PROGRAMMED TO PROVIDE DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL & ACTIVATION OF VOICE/ALARM SYSTEM (UNLESS INTEGRATED WITH FACP) OR REMOTE POWER SUPPLIES FOR NOTIFICATION APPLIANCE CIRCUITS. THE CONTROL RELAY MODULES SHALL BE INSTALLED WITHIN 36" OF DEVICE OR CIRCUIT CONTROLLED. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY NUMBER AND LOCATION OF DEVICES TO BE CONTROLLED.
- PHASING: PLAN SEQUENCE OF WORK TO MINIMIZE DOWN TIME OF FIRE ALARM SYSTEM. IT IS THE INSTALLER'S RESPONSIBILITY TO PROVIDE A FIRE WATCH AND NOTIFY PROPER AUTHORITIES DURING INTERRUPTIONS OF FIRE DETECTION AND ALARM SERVICE IN THE BUILDING.
- TESTING: SCHEDULE AND PERFORM ALL ACCEPTANCE TESTS REQUIRED BY NFPA 72. TESTING SHALL BE WITNESSED BY PROVO FIRE DEPARTMENT, STATE FIRE MARSHAL'S OFFICE, PROJECT ENGINEER, DFCM AND BUILDING MAINTENANCE PERSONNEL. SUBMIT A WRITTEN TESTING PLAN DETAILING EACH TEST TO BE PERFORMED TO EACH AGENCY AT LEAST THREE DAYS PRIOR TO SCHEDULED TEST.

FIRE ALARM SYSTEM KEY NOTES

- REMOVE EXISTING CONVENTIONAL FIRE ALARM CONTROL PANEL (FACP), MODULES AND ENCLOSURE. FURNISH AND INSTALL NEW ADDRESSABLE FACP AT LOCATION OF EXISTING FACP. FACP SHALL HAVE BUILT-IN ALPHA-NUMERIC ANNUNCIATOR AND DIAL COMMUNICATOR. NEW PANEL SHALL BE SUPPLIED FROM THE SAME DEDICATED POWER CIRCUIT SUPPLYING EXISTING FACP. NEW FACP SHALL HAVE SUFFICIENT CAPACITY TO MONITOR 254 ADDRESSES. INITIATING DEVICES, PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS (DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL AND ACTIVATION OF VOICE EVACUATION SYSTEM) AND SUFFICIENT CAPACITY TO POWER EACH NOTIFICATION APPLIANCE CIRCUIT.
- REMOVE EXISTING VOICE EVACUATION SYSTEM CONTROL PANEL, MODULES AND ENCLOSURE. FURNISH AND INSTALL NEW CONTROL PANEL FOR VOICE EVACUATION SYSTEM. CONTROL PANEL SHALL HAVE BUILT-IN POWER SUPPLY (ADDITIONAL REMOTE POWER SUPPLIES MAY BE USED) SUFFICIENT TO PROVIDE POWER TO ALL SPEAKER/STROBE APPLIANCES IN BUILDING.
- EXISTING RELEASING PANEL AND MANUAL ACTIVATION PULL STATION FOR HALON FIRE SUPPRESSION SYSTEM IN COMPUTER ROOM TO REMAIN. INSTALL 3 NEW ADDRESSABLE MONITOR MODULES NEAR EXISTING RELEASING PANEL AND CONNECT TO ALARM SUPERVISORY AND TROUBLE OUTLETS FROM PANEL TO ALLOW INTERCONNECTION TEMPORARILY WITH BUILDING FACP AND OFF-PREMISE TRANSMISSION OF SIGNALS. DISABLE HALON SYSTEM PRIOR TO MAKING CONNECTIONS TO AVOID ACCIDENTAL DUMP OF HALON.
- EXISTING NOTIFICATION APPLIANCES FOR HALON FIRE SUPPRESSION SYSTEM INSIDE OF EAST ENTRY (FIRE DEPARTMENT ACCESS) SHALL BE EXISTING RELEASING PANEL FOR HALON FIRE SUPPRESSION SYSTEM.
- EXISTING ILLUMINATED LAMP TYPE ANNUNCIATOR PANEL FOR CONVENTIONAL FIRE ALARM SYSTEM TO BE ABANDONED IN PLACE. REMOVE ALL EXISTING WIRING TO PANEL AND REPLACE CLEAR GLASS PANEL WITH BLACK GLASS.
- FURNISH AND INSTALL NEW REMOTE ANNUNCIATOR FOR FIRE ALARM SYSTEM INSIDE OF EAST ENTRY (FIRE DEPARTMENT ACCESS). WALL MOUNT ANNUNCIATOR AT 54" AFF. ANNUNCIATOR PANEL MAY BE INSTALLED ON A SURFACE MOUNT J-BOX BUT ALL CONDUIT TO TO PANEL MUST BE CONCEALED IN WALL.
- FURNISH AND INSTALL A PROTECTIVE COVER (STI-1000 OR EQUAL) WITH AUDIBLE ALARM OVER MANUAL FIRE ALARM PULL STATION TO DISCOURAGE FALSE ACTIVATION.
- FURNISH AND INSTALL A PROGRAMMABLE RELAY TO SHUT DOWN EACH AIR HANDLER. RELAYS SHALL BE NORMALLY ENERGIZED AND FAN CONTROLS SHALL BE CONNECTED TO NORMALLY CLOSED CONTACTS ON RELAY. RELAYS SHALL BE PROGRAMMED TO SHUT DOWN ALL AIR HANDLERS SIMULTANEOUSLY UPON ACTIVATION OF ANY AREA OR DUCT SMOKE DETECTOR AND SHALL NOT RESTORE UNTIL THE FACP HAS RESET.
- FURNISH AND INSTALL PROGRAMMABLE RELAYS TO PROVIDE ELEVATOR RECALL FUNCTIONS. ELEVATOR RECALL FUNCTIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF ASME A17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS. COORDINATE WORK WITH MAINTENANCE CONTRACTOR FOR ELEVATORS.
- FURNISH AND INSTALL A NEW MAGNETIC HOLD-OPEN DEVICE FOR EXISTING DOOR. MANUFACTURER AND MODEL OF DEVICE SHALL MATCH EXISTING DEVICES. MOUNT DEVICE HIGH ON WALL TO HOLD UPPER EDGE OF DOOR. PROVIDE PROGRAMMABLE RELAYS TO RELEASE ALL NEW AND EXISTING DOOR HOLDERS SIMULTANEOUSLY UPON RECEIPT OF ANY FIRE ALARM SIGNAL AT THE FACP. POWER TO DOOR HOLDERS TO BE PROVIDED BY CIRCUIT FROM FACP OR REMOTE POWER SUPPLY SUPERVISED BY THE FACP. POWER CIRCUITS SHALL BE OF SUFFICIENT CAPACITY TO POWER ALL NEW AND EXISTING DOOR HOLDERS WITH SUFFICIENT CAPACITY FOR AN ADDITIONAL 10 DOOR HOLDERS TO ALLOW FOR FUTURE EXPANSION BY OWNER.

FIRE ALARM EQUIPMENT LEGEND

DEVICE	DESCRIPTION	MOUNTING	REMARKS
FACP	FIRE ALARM CONTROL PANEL	MOUNT AT SAME LOCATION AS EXISTING FACP THAT IS TO BE REMOVED.	INTELLIGENT/ADDRESSABLE FIRE ALARM CONTROL PANEL WITH BUILT-IN LED ALPHA-NUMERIC ANNUNCIATOR AND DIAL COMMUNICATOR. PROVIDE A MINIMUM OF 2 SLC CIRCUITS WITH A CAPACITY TO MONITOR AT LEAST 254 ADDRESSABLE POINTS.
VEP	VOICE EVACUATION SYSTEM CONTROL PANEL	MOUNT AT SAME LOCATION AS EXISTING VOICE EVACUATION PANEL TO BE REMOVED.	SYSTEM SHALL HAVE A BUILT-IN POWER SUPPLY SUFFICIENT TO POWER ALL SPEAKER STROBES IN THE BUILDING. SYSTEM SHALL PROVIDE PAGING TO THE ABILITY TO SELECTIVELY PAGE ANY SINGLE ZONE OR ALL ZONES WITH THE CAPABILITY OF BROADCASTING PRE-RECORDED AND LIVE MESSAGES.
FSA	FIRE ALARM ANNUNCIATOR PANEL	54" AFF. JUNCTION BOX MAY BE SURFACE MOUNT BUT CONDUIT MUST BE CONCEALED IN EXISTING WALL.	ANNUNCIATOR SHALL HAVE A BUILT-IN LED (MINIMUM OF 80 CHARACTERS) TO DISPLAY STATUS OF THE FIRE ALARM SYSTEM AS WELL AS NAME AND ADDRESS OF ANY DEVICE INDICATING AN ALARM OR TROUBLE CONDITION. ANNUNCIATOR SHALL HAVE INVERT KEYS TO ALLOW ALARM SILENCE AND SYSTEM RESET.
NAC-#	REMOTE POWER SUPPLIES FOR NOTIFICATION APPLIANCE CIRCUITS	ADJACENT TO FACP OR REMOTE IN BUILDING IN LOCATION APPROVED BY BUILDING MANAGEMENT.	NUMBER AND LOCATION OF POWER SUPPLIES SHALL BE SUFFICIENT TO PROVIDE SUFFICIENT CAPACITY TO POWER ALL NOTIFICATION APPLIANCES IN BUILDING WITH MAXIMUM SUPPLY TO MOST REMOTE DEVICE ON CIRCUIT.
HCP	HALON SYSTEM CONTROL PANEL	EXISTING	EXISTING FENWALL PANEL TO REMAIN. CONNECT ALARM SUPERVISORY & TROUBLE OUTLETS FROM EXISTING PANEL TO NEW FACP.
MDO	MAGNETIC DOOR HOLD-OPEN DEVICES (EXISTING)	EXISTING	CONNECT EXISTING MAGNETIC DOOR HOLDERS TO RELAY CONTROLLED BY NEW FIRE ALARM PANEL.
MDO-N	MAGNETIC DOOR HOLD-OPEN DEVICES (NEW)	MOUNT AT TOP EDGE OF DOOR.	INSTALL NEW MAGNETIC DOOR HOLDER USER AND MODEL OF DEVICE SHALL MATCH EXISTING EXISTING DOOR HOLDERS TO RELAY CONTROLLED BY FIRE ALARM PANEL.
PS	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR	CEILING MOUNTED. WHERE NEW DETECTOR REPLACES AN EXISTING DETECTOR IN SAME LOCATION EXISTING J-BOX MAY BE RE-USED.	REMOVE EXISTING CONVENTIONAL SMOKE DETECTORS AND REPLACE WITH NEW ADDRESSABLE SMOKE DETECTORS. DETECTORS ARE REQUIRED IN ALL CORRIDORS AND LOBBIES WITH A MAXIMUM SPACING OF 30' O.C.
CS	EXISTING CONVENTIONAL SMOKE DETECTOR	REPLACE CEILING TILE AND/OR REPAIR CEILING SURFACE WHERE DETECTOR IS REMOVED.	REMOVE EXISTING CONVENTIONAL SMOKE DETECTORS. CEILING TILE AND WIRING TO BE REPAIRED.
PS-N	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR	CEILING MOUNTED.	ADD NEW SMOKE DETECTOR WHERE INDICATED ON PLAN.
HS	ADDRESSABLE HEAT DETECTOR	CEILING OR UNDERSIDE OF ROOF DECK.	SPACING OF DETECTORS SHALL CONFORM TO NFPA 72 AND TO MANUFACTURER'S RECOMMENDATIONS.
DS	ADDRESSABLE DUCT SMOKE DETECTOR	PROVIDE A DETECTOR IN RETURN AIR SYSTEM ON EACH LEVEL. FROM TOP CONNECTION TO EACH RETURN AIR SYSTEM TO EACH RETURN AIR SYSTEM SIDE OF EACH AIR HANDLER DOWN-SIDE OF EACH AIR HANDLER DOWN-SIDE OF EACH BRANCH CONNECTIONS.	INSTALL IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF NFPA 72, NFPA 90A AND THE IBC.
MS	ADDRESSABLE MANUAL FIRE ALARM PULL STATION	WALL MOUNT ON EXISTING J-BOX. WHERE EXISTING PULL STATION IS TO BE REMOVED, THE EXISTING COVER SHALL REMAIN.	REMOVE EXISTING CONVENTIONAL MANUAL PULL STATIONS AND REPLACE WITH NEW ADDRESSABLE PULL STATIONS.
FS	FLOW SWITCH FOR FIRE SPRINKLER SYSTEM	EXISTING TO REMAIN.	INSTALL NEW ADDRESSABLE MONITOR MODULE AT EACH EXISTING FLOW SWITCH TO FACILITATE MONITORING OF FLOW SWITCH BY FACP AS AN ADDRESSABLE POINT.
VS	VALVE SUPERVISORY SWITCH FOR FIRE SPRINKLER SYSTEM	EXISTING TO REMAIN.	INSTALL NEW ADDRESSABLE MONITOR MODULE AT EACH EXISTING VALVE SUPERVISORY SWITCH TO FACILITATE MONITORING OF VALVE SUPERVISORY SWITCH BY FACP AS AN ADDRESSABLE POINT.
MM	ADDRESSABLE MONITOR MODULE	MOUNT ON NEW J-BOX NEAR EXISTING MONITORING DEVICES TO BE REMOVED.	INSTALL NEW CONVENTIONAL DEVICES CONVENTIONAL DEVICES TO BE REMOVED.
RM	ADDRESSABLE RELAY MODULE	MOUNT ON NEW J-BOX WITHIN 3' OF DEVICE OR CIRCUIT CONTROLLED.	TO PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS SUCH AS DOOR RELEASE, FAN SHUTDOWN, ELEVATOR RECALL OR ACTIVATION OF VOICE EVACUATION SYSTEM.
SS	FIRE ALARM SPEAKER/STROBE	CEILING MOUNT OR WALL MOUNT	STROBE SHALL HAVE A MINIMUM RATING OF 75 CD AND SHALL BE SYNCHRONIZED WITH ALL OTHER DEVICES IN VIEW. SOUND OUTPUT FROM SPEAKER SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL OF 15 DB ABOVE AMBIENT. APPLIANCE SHALL BE COMPATIBLE WITH AND CONNECTED TO VOICE EVACUATION CONTROL PANEL.
SES	EXISTING FIRE ALARM SPEAKER OR SPEAKER/STROBE	REPLACE CEILING TILE AND/OR REPAIR CEILING/WALL SURFACE WHERE APPLIANCE IS REMOVED.	REMOVE EXISTING FIRE ALARM SPEAKER OR SPEAKER/STROBE. JUNCTION BOX AND WIRING TO BE REPAIRED.
FS	FIRE ALARM STROBE	CEILING OR WALL MOUNT AT 80" TO 96" AFF	STROBE SHALL HAVE A MINIMUM CANDLE RATING OF 1500. STROBES SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.
HMS	FIRE ALARM HORN/STROBE	WALL MOUNT ON EXISTING JUNCTION BOX	REPLACE EXISTING WALL MOUNTED NOTIFICATION APPLIANCES IN PENHOUSE WITH NEW APPLIANCES. STROBE SHALL BE 157/75 CD RATED. APPLIANCE SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.
HMS-N	EXISTING FIRE ALARM HORN/STROBE	REMOVE EXISTING DEVICE AND WIRING AND PROVIDE DECORATIVE COVER PLATE (APPROVED BY OWNER) FOR EXISTING JUNCTION BOX	REMOVE EXISTING WALL MOUNT NOTIFICATION APPLIANCES IN ELEVATOR LOBBY TO BE REMOVED.
HMS-N	EXTERIOR FIRE ALARM HORN/STROBE	WALL MOUNTED ON EXISTING EXTERIOR J-BOX OR ON NEW WEATHERPROOF J-BOX AT 10'-0" AFF (2 NEW DEVICES)	REPLACE EXISTING EXTERIOR HORNS WITH NEW AUDIBLE/VISIBLE APPLIANCES. ADD 2 NEW APPLIANCES WHERE INDICATED ON DRAWING. STROBES SHALL HAVE A MINIMUM RATING OF 157/75 CD AND SHALL BE SYNCHRONIZED WITH ALL OTHER STROBES IN VIEW. APPLIANCES SHALL BE POWERED FROM FIRE ALARM CONTROL PANEL OR REMOTE NOTIFICATION CIRCUIT POWER SUPPLY.



2 VOICE/ALARM CONTROL PANEL RISER DIAGRAM

NTS

- REQUIRED NUMBER OF REMOTE POWER SUPPLIES DETERMINED BASED ON THE FOLLOWING:
 - A. POWER SUPPLY PROVIDES A MINIMUM OF 6-AMP OUTPUT
 - B. CURRENT DRAW FOR 15CD STROBE = 0.045 AMP
 - C. CURRENT DRAW FOR 75CD WALL MOUNT HORN/STROBE = 0.150 AMP
 - D. CURRENT DRAW FOR 75CD CEILING MOUNT HORN/STROBE = 0.165 AMP
 - E. CURRENT DRAW FOR 75CD CEILING MOUNT SPEAKER/STROBE = 0.119 AMP
- INCREASE SIZE OF POWER SUPPLY OR PROVIDE ADDITIONAL POWER SUPPLIES AS REQUIRED FOR ACTUAL CURRENT DRAW OF DEVICES USED

NOTES:

- REQUIRED NUMBER OF REMOTE POWER SUPPLIES DETERMINED BASED ON THE FOLLOWING:
 - A. POWER SUPPLY PROVIDES A MINIMUM OF 6-AMP OUTPUT
 - B. CURRENT DRAW FOR 15CD STROBE = 0.045 AMP
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 - E. CURRENT DRAW FOR 75CD CEILING MOUNT SPEAKER/STROBE = 0.119 AMP
- INCREASE SIZE OF POWER SUPPLY OR PROVIDE ADDITIONAL POWER SUPPLIES AS REQUIRED FOR ACTUAL CURRENT DRAW OF DEVICES USED

OUTPUT ACTIONS

	ACTIVATE LOCAL FIRE ALARM NOTIFICATION APPLIANCES (ALL CIRCUITS)	ACTIVATE VOICE ALARM EVACUATION SYSTEM (ALL ZONES)	TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION	SHUT DOWN AIR HANDLERS (ALL SIMULTANEOUSLY)	RELEASE DOOR HOLD-OPEN DEVICES	PERFORM ELEVATOR RECALL FUNCTIONS
ACTIVATION OF ANY SMOKE DETECTOR	X	X	X	X	X	X	X	X
ACTIVATION OF ANY SMOKE DETECTOR IN ELEVATOR LOBBY, SHAFT OR EQUIPMENT ROOM	X	X	X	X	X	X	X	X
ACTIVATION OF ANY HEAT DETECTOR	X	X	X	X	X	X	X	X
ACTIVATION OF ANY DUCT SMOKE DETECTOR	X	X	X	X	X	X	X	X
ACTIVATION OF ANY MANUAL PULL STATION	X	X	X	X	X	X	X	X
ACTIVATION OF ANY FIRE SPRINKLER WATER FLOW SWITCH	X	X	X	X	X	X	X	X
ACTIVATION OF ANY FIRE SPRINKLER VALVE SUPERVISORY SWITCH	X	X	X	X	X	X	X	X
RECEIPT OF FIRE ALARM SIGNAL FROM HALON CONTROL PANEL	X	X	X	X	X	X	X	X
RECEIPT OF SUPERVISORY SIGNAL FROM HALON CONTROL PANEL	X	X	X	X	X	X	X	X
RECEIPT OF TROUBLE SIGNAL FROM HALON CONTROL PANEL	X	X	X	X	X	X	X	X
LOSS OF AC POWER/LOW BATTERY VOLTAGE	X	X	X	X	X	X	X	X
SYSTEM TROUBLE	X	X	X	X	X	X	X	X

3 SEQUENCE OF OPERATION

NTS

REGIONAL GOVERNMENT CENTER
PROVO, UTAH

FIRE ALARM SYSTEM UPGRADES
DFCM PROJECT #04202310

DETAILS
FA-8

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