



State of Utah

JON M. HUNTSMAN, JR.
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Department of Administrative Services

KIMBERLY K. HOOD
Executive Director

Division of Facilities Construction and Management

DAVID G. BUXTON
Director

ADDENDUM NO. 1

Date: May 26, 2009
To: Shortlisted FY2009 Electrical Contractors
From: Jim Russell – Project Manager
Reference: Campus Wide Fire Alarm Upgrade
Snow College – Ephraim, Utah
DFCM Project No. 07159700
Subject: **Addendum No. 1**

Pages	Addendum Cover Sheet	1 page
	Revised Bid Form	2 pages
	Engineer's Addendum	2 pages
	<u>Drawings</u>	<u>6 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.

While we contend that SB220 should only be potentially applicable to a contract issued after the effective date of said bill, this is to clarify that for purposes of this contract, regardless of the execution or effective dates of this contract, the status of Utah Law and remedies available to the State of Utah and DFCM, as it relates to any matter referred to or affected by said SB220, shall be the Utah law in effect at the time of the issuance of this Addendum.

1.1 SCHEDULE CHANGES: No Project Schedule Changes.

1.2 GENERAL ITEMS:

- 1.2.1 Revised Bid Form attached – one Additive Alternate added.
- 1.2.2 All work shall be performed under the direction of a licensed Electrical Contractor. All conduit and wiring shall be performed by licensed Electricians as per State of Utah DPOL requirements.
- 1.2.3 All work inside the existing buildings shall be performed after hours, on weekends, or during school breaks.
- 1.2.4 Work in housing units shall be performed during Christmas and Spring Break and during the month of May 2010.
- 1.2.5 The Contractor shall install the FACPs and communications loop prior to removing, replacing or adding any new Fire Alarm devices.



**BID FORM – REVISED
PER ADDENDUM NO. 1 DATED MAY 26, 2009**

NAME OF BIDDER _____ DATE _____

To the Division of Facilities Construction and Management
4110 State Office Building
Salt Lake City, Utah 84114

The undersigned, responsive to the "Invitation to Bid" and in accordance with the Request for Bids for the **CAMPUS WIDE FIRE ALARM UPGRADE - SNOW COLLEGE – EPHRAIM, UTAH - DFCM PROJECT NO. 07159700** and having examined the Contract Documents and the site of the proposed Work and being familiar with all of the conditions surrounding the construction of the proposed Project, including the availability of labor, hereby proposes to furnish all labor, materials and supplies as required for the Work in accordance with the Contract Documents as specified and within the time set forth and at the price stated below. This price is to cover all expenses incurred in performing the Work required under the Contract Documents of which this bid is a part:

I/We acknowledge receipt of the following Addenda: _____

BASE BID: For all work shown on the Drawings and described in the Specifications and Contract Documents, I/we agree to perform for the sum of:

_____ DOLLARS (\$ _____)

(In case of discrepancy, written amount shall govern)

ADDITIVE ALTERNATE NO. 1: For all work shown on the Drawings and described in the Specifications and Contract Documents to provide and install a Simplex True Alarm Information Management System, I/we agree to perform for the sum of:

_____ DOLLARS (\$ _____)

(In case of discrepancy, written amount shall govern)

I/We guarantee that the Work will be Substantially Complete by **June 30, 2010**, should I/we be the successful bidder, and agree to pay liquidated damages in the amount of **\$250.00** per day for each day after expiration of the Contract Time as stated in Article 3 of the Contractor’s Agreement.

This bid shall be good for 45 days after bid opening.

Enclosed is a 5% bid bond, as required, in the sum of _____

The undersigned Contractor's License Number for Utah is _____

BID FORM
PAGE NO. 2

Upon receipt of notice of award of this bid, the undersigned agrees to execute the contract within ten (10) days, unless a shorter time is specified in Contract Documents, and deliver acceptable Performance and Payment bonds in the prescribed form in the amount of 100% of the Contract Sum for faithful performance of the contract. The Bid Bond attached, in the amount not less than five percent (5%) of the above bid sum, shall become the property of the Division of Facilities Construction and Management as liquidated damages for delay and additional expense caused thereby in the event that the contract is not executed and/or acceptable 100% Performance and Payment bonds are not delivered within time set forth.

Type of Organization: _____
(Corporation, Partnership, Individual, etc.)

Any request and information related to Utah Preference Laws:

Respectfully submitted,

Name of Bidder

ADDRESS:

Authorized Signature



Date: May 26, 2009

To: Jim Russell
State of Utah DFCM

From: Greg Jones
Protection Consultants, Inc.

Project: Snow College Fire Alarm Upgrade – DFCM 07159700

Subject: Revisions to Fire Alarm Drawings for Addendum 1

Based on questions presented and conditions observed in the pre-bid walkthrough held Thursday May 14, 2009 at Snow College, several revisions were made to the drawings for the fire alarm system upgrade. A brief description of the revisions made to each drawing sheet is included below. This letter should be issued with the revised drawings to allow bidding contractors to rapidly identify the revisions to the contract documents.

Sheet FA-0.1 (1 of 48):

1. Revised general note 2 to clarify fiber optic cable requirements.
2. Added Network Circuit “Raceway/Cable Tray Legend” to assign a line styles to graphically indicate where network circuits in tunnels can be installed exposed on existing cable trays.

Sheet PP-FA1 (2 of 48):

3. Revised key note 2 to clarify location for new NDU as well as requirement to maintain continuous operation of the fire alarm system network throughout project.
4. Revised Key note 3 to indicate that DACT is existing.
5. Revised plan to indicate new NDU to be installed on west side of corridor.

Sheet AC-FA4 (22 of 48):

6. Revised key notes 1 and 7 to require installation of new ID-MAP module and circuit to facilitate communication between FACP and True Alarm Sign Board.

Sheet PA-FA1 (44 of 48):

7. Revised key notes 1 and 4 to require installation of new ID-MAP module and circuit to facilitate communication between FACP and True Alarm Sign Board.

Sheet SC-FA1 (47 of 48):

8. Revised key notes 1 and 4 to require installation of new ID-MAP module and circuit to facilitate communication between FACP and True Alarm Sign Board.

Sheet NY-FA1 (48 of 48):

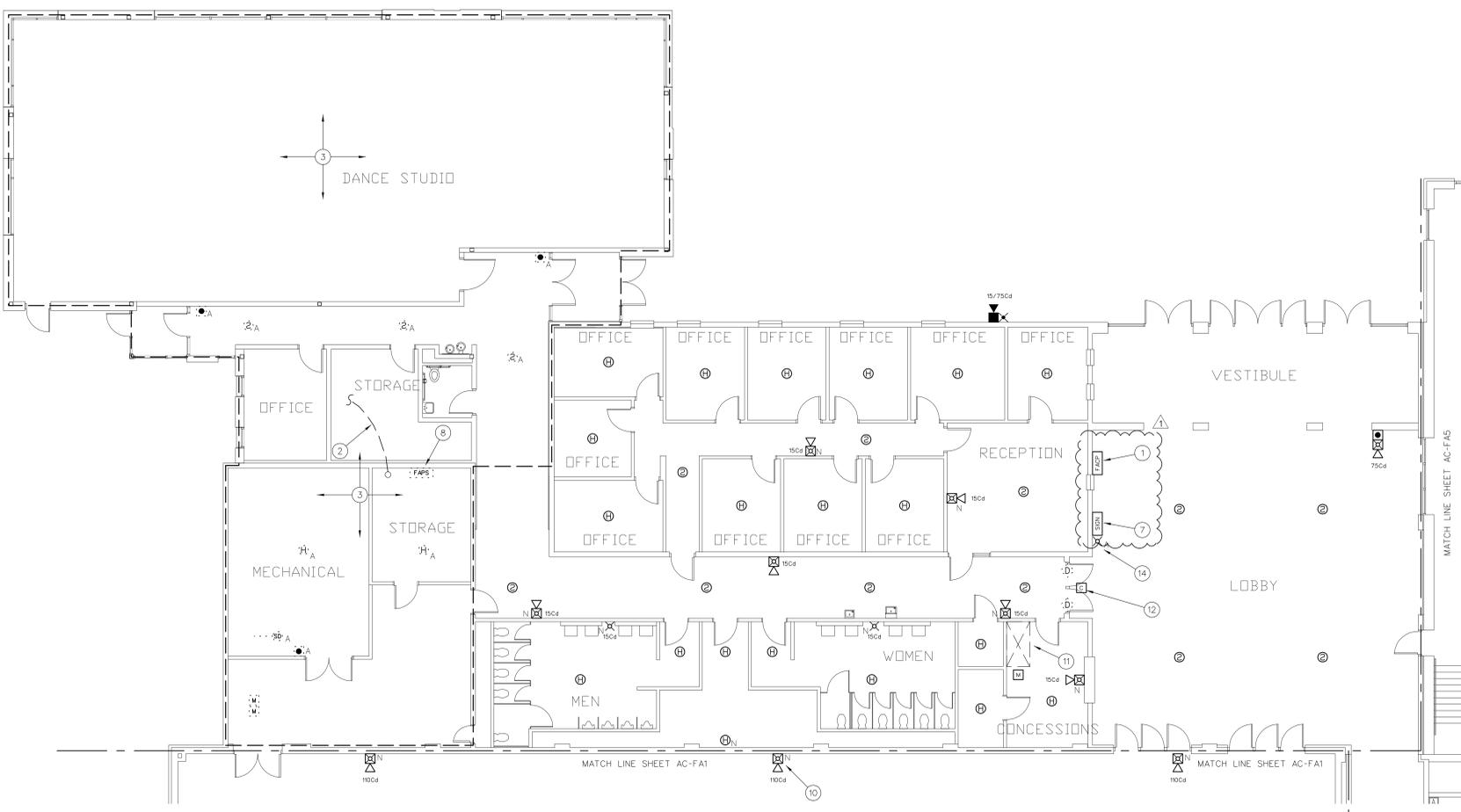
9. Revised key notes 1 and 4 to require installation of new ID-MAP module and circuit to facilitate communication between FACP and True Alarm Sign Board.

FIRE ALARM SYSTEM GENERAL NOTES

- SCOPE OF WORK: WORK SHALL INCLUDE UPGRADING ALL EXISTING CONVENTIONAL FIRE ALARM SYSTEMS (CONTROL EQUIPMENT AND INITIATING DEVICES) TO NEW ADDRESSABLE FIRE ALARM SYSTEMS. EXISTING OCCUPANT NOTIFICATION SHALL BE UPGRADED TO COMPLY WITH CURRENT IBC, NFPA 72 AND ADA REQUIREMENTS. EXISTING CONDUIT, J-BOXES AND WIRING MAY BE RECONFIGURED AND REUSED WHERE COMPATIBLE WITH NEW EQUIPMENT/CIRCUITS. INSTALL NEW CIRCUITS WHERE REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM. A NEW CAMPUS FIRE ALARM NETWORK SHALL BE INSTALLED TO LINK ALL CONTROL PANELS ON CAMPUS TOGETHER AND TO A NEW NETWORK DISPLAY UNIT IN THE PHYSICAL PLANT. FIRE ALARM SYSTEMS SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF THE IBC, IFC, NFPA 72, EQUIPMENT MANUFACTURER (SMPLX), THESE DRAWINGS AND THE PROJECT SPECIFICATIONS.
- APPLICABLE CODES/STANDARDS:
INTERNATIONAL BUILDING CODE - 2006 EDITION
INTERNATIONAL FIRE CODE - 2006 EDITION
INTERNATIONAL MECHANICAL CODE - 2006 EDITION
UTAH STATE FIRE MARSHAL RULE R710-4
NFPA 70 - 2005 EDITION
NFPA 72 - 2007 EDITION
NFPA 90A - 2002 EDITION
- QUALITY ASSURANCE: ALL EQUIPMENT, MATERIAL AND DEVICES USED FOR THE FIRE ALARM SYSTEM INSTALLATION SHALL BE 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). FIRE ALARM EQUIP. (INCLUDING PROGRAMMING/COMMISSIONING) SHALL BE PROVIDED BY SIMPLEX-GRINNELL UNDER SOLE SOURCE ARRANGEMENT APPROVED BY DFCM FOR SNOW COLLEGE. CONTRACTOR SHALL CONTACT SIMPLEX-GRINNELL FOR EQUIPMENT QUOTE:
CONTACT: DAVE CROFF
ADDRESS: 2702 S 1030 W • 60 SALT LAKE CITY, UT 84119
PHONE: 801-703-2735
FAX: 801-262-9423
EMAIL: DCROFF@TYCOINT.COM
- SUBMITTALS: CONTRACTOR SHALL PREPARE AND SUBMIT COMPLETE SHOP DRAWINGS AND CALCULATIONS FOR EACH SYSTEM TO 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. NEW DEVICES WILL REPLACE THE OLD AND GENERALLY REUSE THE EXISTING LOCATIONS. ANY EXISTING DEVICES AND CONDUIT NOT BEING REUSED THAT ARE VISIBLE, SUCH AS CABINETS, NOTIFICATION APPLIANCES, INITIATING DEVICES, ETC. SHALL BE REMOVED AND REMAINING WALL OR CEILING SURFACE REPAIRED OR REPLACED TO MATCH SURROUNDING AREAS. REMOVE ALL UNUSED WIRE IN ALL REMAINING J-BOXES AND/OR CONDUITS. ANY CEILING TILE DAMAGED BY THE INSTALLER MUST BE REPLACED WITH THE SAME OR EQUIV. TILE.
- SYSTEM TYPE: FIRE ALARM SYSTEM SHALL MEET THE REQUIREMENTS FOR PROTECTED PREMISE FIRE ALARM SYSTEMS (AS DEFINED BY NFPA 72). 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 AND HORN/STROBES), FOR PURPOSES OF FIRE ALARM NOTIFICATION, EACH BUILDING SHALL BE CONSIDERED AS A SINGLE ZONE.
- WIRING/CONDUIT: ALL WIRING SHALL BE INSTALLED IN CONDUIT (EMT, RIGID, WIRE MOLD, ETC.). EXISTING CONDUIT AND J-BOXES MAY BE USED FOR NEW OR RECONFIGURED CIRCUITS. MINIMUM CONDUIT SIZE FOR NEW CONDUIT SHALL BE 1/2". CONDUIT MAY BE INSTALLED CONCEALED OR EXPOSED BUT SHALL MATCH TYPE, COLOR, APPEARANCE OF EXISTING. EXPOSED CONDUIT IN UNFINISHED AREAS MAY BE UNPAINTED BUT SHALL BE PERIODICALLY MARKED WITH RED TAPE OR PAINT. EXPOSED CONDUIT IN FINISHED AREAS SHALL BE PAINTED TO MATCH SURROUNDINGS. FLEXIBLE CONDUIT MAY BE USED FOR DROPS TO SINGLE DEVICES. ALL PENETRATIONS THROUGH RATED PARTITIONS SHALL BE FIRE STOPPED WITH A SUITABLE CAULKING COMPOUND. EXISTING WIRING MAY BE REUSED IN NEW FIRE ALARM SYSTEM WHERE COMPATIBLE WITH NEW FIRE ALARM CIRCUITS/DEVICES, FREE OF SHORTS AND GROUND FAULTS. INSTALL NEW WIRING AS REQUIRED FOR NEW OR RECONFIGURED CIRCUITS. NEW WIRING SHALL MEET THE REQUIREMENTS OF FIRE ALARM EQUIPMENT MANUFACTURER (SMPLX) AND BE FREE OF OPENS, SHORTS AND GROUND FAULTS. ALL WIRING USED IN THE FIRE ALARM SYSTEM SHALL BE FPL FIRE POWER LIMITED WITH MINIMUM 300V INSULATION OR EQUIVALENT AS PER ARTICLE 760 OF NFPA 70.
- 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 CIRCUITS. NOTIFICATION APPLIANCE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE Z.
- POWER: PROVIDE 120VAC (15 AMP MIN.) CIRCUIT FROM EXISTING POWER DISTRIBUTION PANELS TO EACH FACP AND POWER SUPPLY. EXISTING BRANCH CIRCUITS MAY BE REUSED TO PROVIDE PRIMARY POWER TO NEW CONTROL PANELS AND REMOTE POWER SUPPLIES. FURNISH A BATTERY BACKUP TO PROVIDE SECONDARY POWER SUPPLY TO FIRE ALARM PANELS AND REMOTE POWER SUPPLIES. BATTERY BACKUP SHALL BE OF SUFFICIENT CAPACITY TO PROVIDE 24 HOURS OF 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 250 DEVICES (DETECTORS AND MODULES) PER LOOP. AT LEAST 50 ADDRESSES (20%) SHALL BE LEFT VACANT ON EACH SLC LOOP IN ORDER TO ALLOW SPACE FOR ADJUSTMENTS/EXPANSION.
SMOKE DETECTORS: INSTALL SMOKE DETECTORS AS SHOWN ON PLANS IN ALL CORRIDORS AND LOBBIES AND ABOVE CONTROL EQUIP. MAXIMUM SPACING OF DETECTORS SHALL BE 30' BETWEEN DETECTORS OR 15' FROM FURTHEST WALL. INSTALL DETECTORS ON RECESSED OR SURFACE MOUNT J-BOXES TIGHT TO CEILING/DECK.
HEAT DETECTORS: INSTALL HEAT DETECTORS AS SHOWN ON PLANS IN AREAS WITH FIRE SPRINKLERS OR SMOKE DETECTORS AND IN MECHANICAL/EQUIPMENT AREAS. MAXIMUM SPACING OF DETECTORS SHALL BE 50' BETWEEN DETECTORS OR 25' FROM FURTHEST WALL. REDUCE SPACING PER NFPA 72 FOR INSTALLATION IN HIGH CEILING AREAS. INSTALL DETECTORS ON RECESSED OR SURFACE MOUNT J-BOXES TIGHT TO CEILING/DECK. FOLLOW REQUIREMENTS OF NFPA 72 FOR INSTALLATION UNDER BEAMED CEILINGS.
MANUAL PULL STATIONS: INSTALL NEW PULL STATIONS AS SHOWN ON PLANS AT EACH BUILDING EXIT AND IN BOILER ROOMS. INSTALL PULL STATIONS ON RECESSED OR SURFACE MOUNT J-BOXES WITH THE OPERATING ELEMENT AT 48" AFF. ADJUST HEIGHT OF EXISTING J-BOXES AS REQUIRED.
DUCT SMOKE DETECTORS: INSTALL DUCT SMOKE DETECTORS (SAMPLING TUBE TYPE) IN SUPPLY AND/OR RETURN DUCTS OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL NEW DETECTORS AT SAME LOCATION AS EXISTING DETECTORS WHERE PRESENT. INSTALL PER NFPA 72 AND MANUFACTURER'S REQUIREMENTS.
BEAM DETECTORS: INSTALL PROJECTED BEAM TYPE SMOKE DETECTORS AS INDICATED ON PLANS FOR LARGE OPEN AREAS WITH HIGH CEILINGS. DETECTORS SHALL BE SINGLE-ENDED, REFLECTIVE TYPE WITH ADJUSTABLE SENSITIVITY AND BUILT-IN SENSITIVITY TEST FEATURE (INSTALL REMOTE TEST SWITCH). INSTALL PER NFPA 72 AND MANUFACTURER'S REQUIREMENTS.
- INPUT MODULES: PROVIDE ADDRESSABLE MODULES TO MONITOR NEW OR EXISTING CONVENTIONAL INITIATING DEVICES (FIRE SPKR SWITCHES, BEAM DETECTORS, ETC.). LOCATE MODULES ADJACENT TO DEVICE MONITORED IN AN ACCESSIBLE LOCATION OR ABOVE REMOVABLE CEILING TILE. MODULE SHALL HAVE EXTERNALLY VISIBLE LED TO INDICATE STATUS. LABEL MODULE WITH THE TYPE AND ADDRESS OF THE DEVICE MONITORED.
- NOTIFICATION APPLIANCES: PROVIDE AUDIBLE AND VISUAL NOTIFICATION APPLIANCES THROUGHOUT BUILDING. VOLUME OF HORNS SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL OF 15 DB ABOVE AMBIENT IN ALL OCCUPIED AREAS. VISIBLE ALARMS SHALL BE PROVIDED THROUGHOUT ALL OCCUPIED AREAS OF THE BUILDING AS REQUIRED BY THE IBC AND ADA GUIDELINES. STROBES SHALL FLASH IN SYNCHRONIZATION. CONFIGURE CIRCUITS TO ALLOW HORNS TO BE SILENCED WHILE STROBES CONTINUE TO FLASH.
- PROTECTED PREMISE FIRE SAFETY FUNCTIONS: INSTALL PROGRAMMABLE OUTPUT MODULES WITH RELAY CONTACTS TO INITIATE REQUIRED FIRE SAFETY FUNCTIONS (DOOR RELEASE, FAN SHUTDOWN, DAMPER ACTUATION, ELEVATOR RECALL, ETC.). OUTPUT MODULES SHALL BE INSTALLED WITHIN 36" OF DEVICE OR CIRCUIT CONTROLLED. ALL EXISTING PROTECTED PREMISE FIRE SAFETY FUNCTIONS CONTROLLED BY EXISTING FIRE ALARM SYSTEM SHALL BE MIGRATED TO NEW SYSTEM AND TESTED TO VERIFY PROPER FUNCTION.
- PHASING: PLAN SEQUENCE OF WORK TO MINIMIZE DOWN TIME OF FIRE ALARM SYSTEM AND EXISTING FIRE ALARM NETWORK. IT IS THE INSTALLER'S RESPONSIBILITY TO NOTIFY PROPER AUTHORITIES AND PROVIDE A FIRE WATCH 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 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 ONE DAY PRIOR TO SCHEDULED TEST.

FIRE ALARM SYSTEM KEY NOTES

- EXISTING ADDRESSABLE FIRE ALARM CONTROL PANEL (SIMPLEX 4100) TO REMAIN. PROVIDE ALL MODULES, CABINETS, INTERFACE CARDS, POWER SUPPLIES, ETC. TO ALLOW CONVERSION OF ALL INITIATING DEVICES IN BUILDING TO ADDRESSABLE DEVICES AND TO ALLOW CONNECTION OF EXISTING FACP TO NEW CAMPUS FIRE ALARM NETWORK. FACP SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL NEW AND EXISTING ADDRESSABLE INITIATING DEVICES IN THE BUILDING WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. PERFORM BATTERY CALCULATIONS WITH NEW LOAD AND UPGRADE/REPLACE BATTERY AS REQUIRED TO PROVIDE 24 HOURS STANDBY (PLUS 5 MINUTES ALARM POWER). PROVIDE NEW SIGNALING LINE AND NOTIFICATION APPLIANCE CIRCUITS FROM FACP TO NEW AND EXISTING APPLIANCES. EXISTING CIRCUITS MAY BE RECONFIGURED AND REUSED IF COMPATIBLE WITH NEW DEVICES). INSTALL NEW ID-NET MODULE AND CIRCUIT SUITABLE FOR COMMUNICATION WITH NEW TRUERALM SIGN BOARD. SEE KEY NOTE 07 FOR FURTHER DETAILS.
- NEW CAMPUS FIRE ALARM NETWORK SHALL BE RUN OVERHEAD IN BUILDINGS (IN CONDUIT) BUT SHALL BE INSTALLED IN EXISTING UNDERGROUND COMMUNICATIONS CONDUIT OR TUNNELS EXCEPT WHERE NETWORK PLAN REQUIRES OTHERWISE. BUILDING ADDITION AT NORTHWEST AND NORTHEAST CORNERS OF BUILDING CONTAIN ADDRESSABLE INITIATING DEVICES AND UPGRADED AUDIBLE/VISIBLE NOTIFICATION APPLIANCES IN BUILDING ADDITIONS TO REMAIN WITHOUT MODIFICATION. REPLACE EXISTING PROJECTED BEAM TYPE SMOKE DETECTOR WITH NEW EQUIPMENT. NEW BEAM DETECTORS SHALL BE SINGLE ENDED TYPE WITH TRANSMITTER AND RECEIVER ON ONE WALL AND REFLECTING PAD ON OPPOSITE WALL. DETECTORS SHALL HAVE BUILT-IN SENSITIVITY TEST FEATURE WITH REMOTE TEST SWITCH (SYSTEM SENSOR BEAM 12245 OR EQUIV.) INSTALL REMOTE TEST SWITCH ADJACENT TO FACP OR AT OTHER LOCATION APPROVED BY THE OWNER. PROVIDE TWO MONITOR MODULES (ALARM AND TROUBLE CONDITIONS) AT DETECTOR TO FACILITATE CONNECTION OF DETECTOR TO FACP AS AN ADDRESSABLE POINT. PROVIDE SUPERVISED 12 VDC OR 24 VDC POWER.
- INSTALL PROGRAMMABLE OUTPUT MODULE TO SHUT DOWN BUILDING AIR HANDLER UPON OPERATION OF DUCT SMOKE DETECTORS OR GENERAL FIRE ALARM. RELAY SHALL BE NORMALLY ENERGIZED AND FAN CONTROLS SHALL BE CONNECTED TO NORMALLY CLOSED CONTACTS ON THE RELAY. RELAY SHALL NOT RESTORE UNTIL FACP HAS BEEN RESET. CONTRACTOR SHALL FIELD VERIFY LOCATION OF HVAC CONTROLS AND FAN CONTROLS. JUMP AND REWIRE AS NECESSARY.
- INSTALL SIMPLEX TRUERALM SIGN BOARD WHERE INDICATED ON PLAN. CONNECT SIGN BOARD TO NEW ID-NET CIRCUIT FROM FACP FOR CONTROL. PROVIDE 24 VDC POWER TO BOARD FROM FACP. COORDINATE MOUNTING HEIGHT, LOCATION AND EMERGENCY MESSAGES TO BE DISPLAYED WITH OWNER. OWNER TO PROVIDE LAN CONNECTION (FUTURE) TO SIGN BOARD TO ALLOW OFF-SITE CONTROL VIA IP NETWORK.
- EXISTING FIRE SUPPRESSION SYSTEM PROTECTING COOKING HOOD TO REMAIN. PROVIDE MONITOR MODULE AND CONNECT TO ACTIVATION CONTACTS OF FIRE SUPPRESSION SYSTEM CONTROLS TO FACILITATE CONNECTION OF SYSTEM TO FACP AS AN ADDRESSABLE POINT.
- INSTALL NEW REMOTE POWER TO POWER NEW AND EXISTING NOTIFICATION APPLIANCES IN SOUTHWEST PORTION OF BUILDING. PROVIDE ADDRESSABLE CONTROL RELAY (CONNECTED TO SLC) TO PROVIDE ACTIVATION TRIGGER FOR NOTIFICATION APPLIANCE CIRCUITS. PROVIDE ADDRESSABLE MONITOR MODULE TO SYNCHRONIZE THE STROBE FLASHES AND HORNS WITH ALL OTHER NOTIFICATION APPLIANCES IN THE BUILDING. PROVIDE NEW 120 VAC DEDICATED POWER CIRCUIT TO POWER SUPPLY FROM NEARBY POWER DISTRIBUTION PANEL TO PROVIDE PRIMARY POWER. INSTALL BATTERY BACKUP TO PROVIDE SECONDARY POWER (24 HOURS STANDBY PLUS 5 MINUTES OF ALARM).
- EXISTING NOTIFICATION APPLIANCE LOCATED ABOVE MAXIMUM HEIGHT OF 96" AFF ALLOWED BY NFPA 72. REMOVE EXISTING APPLIANCE AND RELOCATE J-BOX TO BE BETWEEN 80" AND 96" AFF. INSTALL NEW NOTIFICATION APPLIANCE ON RECESSED J-BOX.
- EXISTING FIRE SUPPRESSION SYSTEM PROTECTING COOKING HOOD TO REMAIN. PROVIDE MONITOR MODULE AND CONNECT TO ACTIVATION CONTACTS OF FIRE SUPPRESSION SYSTEM CONTROLS TO FACILITATE CONNECTION OF SYSTEM TO FACP AS AN ADDRESSABLE POINT.
- INSTALL NEW CONTROL RELAY. OPERATE EXISTING ROLL DOWN DOOR PROGRAM RELAY TO RELEASE DOOR UPON OPERATION OF SMOKE DETECTOR ON EITHER SIDE OF DOOR. TEST DOOR FOR PROPER FUNCTION. PERFORM MINOR ADJUSTMENTS OR REPAIRS TO EXISTING FIRE DOOR AS REQUIRED. NOTIFY OWNER AND ENGINEER IN WRITING IF DOOR IS NOT OPERATIONAL OR IF DOOR REQUIRED MAJOR REPAIR.
- INSTALL NOTIFICATION APPLIANCE LISTED FOR EXTERIOR INSTALLATION ON A WATERPROOF J-BOX IN AREAS WITH HIGH RELATIVE HUMIDITY.
- INSTALL AMBER STROBE ADJACENT TO TEXT MESSAGE BOARD. DEVICE SHALL BE CONNECTED TO SPARE NAC CIRCUIT OF FACP AND SHALL BE PROGRAMMED TO FLASH CONTINUOUSLY WHEN AN EMERGENCY MESSAGE IS DISPLAYED ON ADJACENT MESSAGE BOARD.

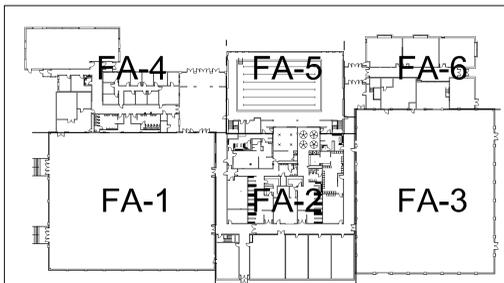


1 FIRE ALARM PLAN - ACTIVITY CENTER
1/8" = 1'-0"



FIRE ALARM EQUIPMENT LEGEND

DEVICE	DESCRIPTION	MOUNTING	REMARKS
FACP	ADDRESSABLE FIRE ALARM CONTROL PANEL	SURFACE MOUNT AT SAME HEIGHT AS EXISTING	REPLACE EXISTING FACP WITH NEW SIMPLEX 4100 V
NDU	FIRE ALARM NETWORK DISPLAY UNIT	SURFACE MOUNT AT SAME HEIGHT AS EXISTING	REPLACE EXISTING NETWORK CONTROL PANEL WITH NEW EQUIPMENT
ANN	FIRE ALARM ANNUNCIATOR PANEL	SURFACE MOUNT OR MOUNT ON RECESSED J-BOX AT 54" AFF	TO DISPLAY STATUS OF FIRE ALARM SYSTEM. PROVIDE 24 VDC POWER TO ALLOW SYSTEM SILENCE AND RESET
FAPS	REMOTE POWER SUPPLY	SURFACE MOUNT AT 54" AFF	TO PROVIDE POWER TO NOTIFICATION APPLIANCES, DOOR HOLDERS, INITIATING DEVICES, ETC.
DACT	DIGITAL ALARM COMMUNICATOR/TRANSMITTER	SURFACE MOUNT AT SAME HEIGHT AS EXISTING	TO RELAY FIRE ALARM SUPERVISORY AND TROUBLE SIGNALS FROM NDU TO CENTRAL STATION
SNB	TRUERALM TEXT MESSAGE BOARD	WALL MOUNT WHERE INDICATED ON PLANS. COORDINATE HEIGHT WITH LAN INTERFACES TO PROVIDE EMERGENCY INSTRUCTIONS	TO DISPLAY TEXT MESSAGES (FIRE, ALARM, TROUBLE, EMERGENCY) TO BUILDING OCCUPANTS
1	ADDRESSABLE PHOTOELECTRIC TYPE SMOKE DETECTOR	CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING SMOKE DETECTOR WITH NEW ADDRESSABLE DEVICE WHERE INDICATED
2	ADDRESSABLE PHOTOELECTRIC TYPE SMOKE DETECTOR	CEILING MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX	INDICATED
3	EXISTING SMOKE DETECTOR	EXISTING	REMOVE EXISTING DETECTOR AND INSTALL COVER PLATE ON REMAINING J-BOX
4	EXISTING ADDRESSABLE SMOKE DETECTOR	EXISTING	EXISTING DETECTOR TO REMAIN. CONNECT TO NEW FACP
5	SLEEPING AREA SMOKE ALARM WITH INTEGRAL HEAT DETECTOR	CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING SMOKE DETECTOR WITH SLEEPING AREA SMOKE ALARM WITH SOUNDER BASE TO FUNCTION AS A SLEEPING AREA SMOKE ALARM. PROGRAM ACTIVATION OF SMOKE DETECTOR AS A PROGRAM ACTUATION. ACTUATING ALL SOUNDER BASES WITHIN THE DWELLING UNIT. PROGRAM ACTIVATION OF SMOKE DETECTOR AS A FIRE ALARM SIGNAL. ACTUATING ALL SOUNDER BASES AND AUDIBLE/VISUAL ALARMS IN THE BUILDING
6	ADDRESSABLE FIXED TEMP. TYPE HEAT DETECTOR	CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING CONVENTIONAL DEVICE WITH NEW ADDRESSABLE DEVICE
7	ADDRESSABLE FIXED TEMP. TYPE HEAT DETECTOR	CEILING MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX	ADD NEW HEAT DETECTOR WHERE INDICATED
8	EXISTING HEAT DETECTOR	EXISTING	REMOVE EXISTING DETECTOR AND INSTALL COVER PLATE ON REMAINING J-BOX
9	EXISTING ADDRESSABLE HEAT DETECTOR	EXISTING	EXISTING DETECTOR TO REMAIN. CONNECT TO NEW FACP
10	ADDRESSABLE MANUAL PULL STATION	WALL MOUNT ON EXISTING OR RECESSED J-BOX AT 48" AFF	REPLACE EXISTING CONVENTIONAL DEVICE WITH NEW ADDRESSABLE DEVICE ON PLAN
11	ADDRESSABLE MANUAL PULL STATION	WALL MOUNT ON EXISTING OR RECESSED J-BOX AT 48" AFF	ADD NEW PULL STATION WHERE INDICATED ON PLAN
12	EXISTING MANUAL PULL STATION	EXISTING	REMOVE EXISTING PULL STATION AND INSTALL COVER PLATE ON REMAINING J-BOX
13	EXISTING ADDRESSABLE MANUAL PULL STATION	EXISTING	EXISTING PULL STATION TO REMAIN. CONNECT TO NEW FACP
14	PROJECTED BEAM TYPE SMOKE DETECTOR	WALL OR CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING BEAM DETECTOR WITH NEW SINGLE ENDED REFLECTED TYPE BEAM DETECTOR (SYSTEM SENSOR BEAM 12245 OR EQUIV.)
15	ADDRESSABLE DUCT MOUNTED SMOKE DETECTOR	EXISTING	REPLACE EXISTING CONVENTIONAL DEVICE WITH NEW ADDRESSABLE DEVICE
16	ADDRESSABLE DUCT MOUNTED SMOKE DETECTOR	MOUNT ON EXISTING SUPPLY AND/OR RETURN DUCT	ADD NEW DUCT MOUNTED SMOKE DETECTOR (WITH SAMPLING TUBES) WHERE INDICATED
17	EXISTING DUCT MOUNTED SMOKE DETECTOR	EXISTING	REMOVE EXISTING DETECTOR. HOUSING AND SAMPLING TUBES. PATCH HOLE IN DUCT
18	EXISTING ADDRESSABLE DUCT MOUNTED SMOKE DETECTOR	EXISTING	EXISTING DUCT SMOKE DETECTOR TO REMAIN. CONNECT TO NEW FACP
19	ADDRESSABLE INPUT MODULE	SURFACE MOUNT ON J-BOX NEAR CONVENTIONAL DEVICE TO BE MONITORED	CONNECT TO CONTACTS OF CONVENTIONAL DEVICE TO BE MONITORED
20	ADDRESSABLE OUTPUT MODULE	SURFACE MOUNT ON J-BOX WITHIN 3' OF DEVICE OR CIRCUIT CONTROLLED	TO PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS SUCH AS DOOR RELEASE, FAN SHUTDOWN, DAMPER ACTUATION, ELEVATOR RECALL, NOTIFICATION CIRCUIT ACTIVATION, ETC.
21	EXISTING DEVICE TO REMAIN. CONNECT TO NEW FACP TO PROVIDE POWER AND CONTROL	EXISTING	EXISTING DEVICE TO REMAIN. CONNECT TO NEW FACP TO PROVIDE POWER AND CONTROL
22	MAGNETIC DOOR HOLD-OPEN DEVICE (EXISTING)	EXISTING	CONNECT TO NEW FACP TO PROVIDE POWER AND CONTROL
23	MAGNETIC DOOR HOLD-OPEN DEVICE (NEW)	WALL MOUNT AT TOP EDGE OF DOOR	CONNECT TO NEW FACP TO PROVIDE POWER AND CONTROL
24	FIRE SPRINKLER VALVE TAMPER SWITCH	EXISTING	PROVIDE INPUT MODULE AND CONNECT TO NEW FACP
25	FIRE SPRINKLER WATER FLOW SWITCH	EXISTING	PROVIDE INPUT MODULE AND CONNECT TO NEW FACP
26	STROBE	WALL MOUNT ON EXISTING OR RECESSED J-BOX BETWEEN 80" AND 96" AFF	INSTALL NEW NOTIFICATION APPLIANCE TO REPLACE EXISTING STROBE. MOUNTING AS INDICATED ON DWGS. STROBES SHALL BE SYNCHRONIZED. DEVICES COLOR SHALL BE RED
27	HORN/STROBE	CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING HORN/STROBE WITH NEW ADDRESSABLE DEVICE
28	STROBE	WALL MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX BETWEEN 80" AND 96" AFF	INDICATED
29	HORN/STROBE	EXISTING	EXISTING HORN/STROBE TO REMAIN. CONNECT TO NEW FACP
30	HORN/STROBE	CEILING MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX	INDICATED
31	EXTERIOR HORN/STROBE	WALL MOUNT ON EXISTING WEATHERPROOF J-BOX	REPLACE EXISTING HORN/STROBE WITH NEW WEATHERPROOF DEVICE
32	EXTERIOR HORN/STROBE	WALL MOUNT AT 10' AFF ON NEW SURFACE MOUNT WEATHERPROOF J-BOX	INDICATED
33	EXISTING NOTIFICATION APPLIANCE	EXISTING	REMOVE EXISTING BELL, HORN, STROBE OR HORN/STROBE AND PROVIDE COVER PLATE ON RECESSED J-BOX
34	AMBER STROBE	WALL MOUNT ADJACENT TO TEXT MESSAGE BOARD	AMBER STROBE TO FLASH CONTINUOUSLY WHILE EMERGENCY MESSAGE IS DISPLAYED ON ADJACENT TEXT MESSAGE BOARD. PROVIDE 24 VDC SUPERVISED POWER FROM FACP



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SNOW COLLEGE - ACTIVITY CENTER
EPHRAIM, UTAH

FIRE ALARM SYSTEM UPGRADE
DFCM PROJECT # 07159700

FIRE ALARM PLAN
ACTIVITY CENTER
(AREA - D)

AC-FA4

SHEET 22 OF 48

FIRE ALARM SYSTEM GENERAL NOTES

- SCOPE OF WORK: WORK SHALL INCLUDE UPGRADING ALL EXISTING CONVENTIONAL FIRE ALARM SYSTEMS (CONTROL EQUIPMENT AND INITIATING DEVICES) TO NEW ADDRESSABLE FIRE ALARM SYSTEMS. EXISTING OCCUPANT NOTIFICATION SHALL BE UPGRADED TO COMPLY WITH CURRENT IBC, NFPA 72 AND ADA REQUIREMENTS. EXISTING CONDUIT, J-BOXES AND WIRING MAY BE RECONFIGURED AND REUSED WHERE COMPATIBLE WITH NEW EQUIPMENT/CIRCUITS. INSTALL NEW CIRCUITS WHERE REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM. A NEW CAMPUS FIRE ALARM NETWORK SHALL BE INSTALLED TO LINK ALL CONTROL PANELS ON CAMPUS TOGETHER AND TO A NEW NETWORK DISPLAY UNIT IN THE PHYSICAL PLANT. FIRE ALARM SYSTEMS SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF THE IBC, IFC, NFPA 72, EQUIPMENT MANUFACTURER (SMPLX), THESE DRAWINGS AND THE PROJECT SPECIFICATIONS.
- APPLICABLE CODES/STANDARDS:
INTERNATIONAL BUILDING CODE - 2006 EDITION
INTERNATIONAL FIRE CODE - 2006 EDITION
INTERNATIONAL MECHANICAL CODE - 2006 EDITION
UTAH STATE FIRE MARSHAL RULE R710-4
NFPA 70 - 2005 EDITION
NFPA 72 - 2007 EDITION
NFPA 90A - 2002 EDITION
- QUALITY ASSURANCE: ALL EQUIPMENT, MATERIAL AND DEVICES USED FOR THE FIRE ALARM SYSTEM INSTALLATION SHALL BE 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). FIRE ALARM EQUIP. (INCLUDING PROGRAMMING/COMMISSIONING) SHALL BE PROVIDED BY SIMPLEX-GRINNELL UNDER SOLE SOURCE ARRANGEMENT APPROVED BY DFCM FOR SNOW COLLEGE. CONTRACTOR SHALL CONTACT SIMPLEX-GRINNELL FOR EQUIPMENT QUOTE:
CONTACT: DAVE CROFF
ADDRESS: 2702 S 1030 W * 60 SALT LAKE CITY, UT 84119
PHONE: 801-703-2735
FAX: 801-262-9423
EMAIL: DCROFF@TYCONT.COM
- SUBMITTALS: CONTRACTOR SHALL PREPARE AND SUBMIT COMPLETE SHOP DRAWINGS AND CALCULATIONS FOR EACH SYSTEM TO STATE FIRE MARSHAL, OWNER AND ENGINEER FOR REVIEW/APPROVAL. SUBMITTALS 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. NEW DEVICES WILL REPLACE THE OLD AND GENERALLY REUSE THE EXISTING LOCATIONS. ANY EXISTING DEVICES AND CONDUIT NOT BEING REUSED THAT ARE VISIBLE, SUCH AS CABINETS, NOTIFICATION APPLIANCES, INITIATING DEVICES, ETC. SHALL BE REMOVED AND REMAINING WALL OR CEILING SURFACE REPAIRED OR REPLACED TO MATCH SURROUNDING AREAS. REMOVE ALL UNUSED WIRE IN ALL REMAINING J-BOXES AND/OR CONDUITS. ANY CEILING TILE DAMAGED BY THE INSTALLER MUST BE REPLACED WITH THE SAME OR EQUIV. TILE.
- SYSTEM TYPE: FIRE ALARM SYSTEM SHALL MEET THE REQUIREMENTS FOR PROTECTED PREMISE FIRE ALARM SYSTEMS (AS DEFINED BY NFPA 72). 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 AND HORN/STROBES), FOR PURPOSES OF FIRE ALARM NOTIFICATION, EACH BUILDING SHALL BE CONSIDERED AS A SINGLE ZONE.
- WIRING/CONDUIT: ALL WIRING SHALL BE INSTALLED IN CONDUIT (EMT, RIGID, WIRE MOLD, ETC.). EXISTING CONDUIT AND J-BOXES MAY BE USED FOR NEW OR RECONFIGURED CIRCUITS. MINIMUM CONDUIT SIZE FOR NEW CONDUIT SHALL BE 1/2". CONDUIT MAY BE INSTALLED CONCEALED OR EXPOSED BUT SHALL MATCH TYPE, COLOR, APPEARANCE OF EXISTING. EXPOSED CONDUIT IN UNFINISHED AREAS MAY BE UNPAINTED BUT SHALL BE PERIODICALLY MARKED WITH RED TAPE OR PAINT. EXPOSED CONDUIT IN FINISHED AREAS SHALL BE PAINTED TO MATCH SURROUNDINGS. FLEXIBLE CONDUIT MAY BE USED FOR DROPS TO SINGLE DEVICES. ALL PENETRATIONS THROUGH RATED PARTITIONS SHALL BE FIRE STOPPED WITH A SUITABLE CAULKING COMPOUND. EXISTING WIRING MAY BE REUSED IN NEW FIRE ALARM SYSTEM WHERE COMPATIBLE WITH NEW FIRE ALARM EQUIPMENT MANUFACTURER (SMPLX) AND BE FREE OF OPENS, SHORTS AND GROUND FAULTS. ALL WIRING USED IN THE FIRE ALARM SYSTEM SHALL BE FFL FIRE POWER LIMITED) WITH MINIMUM 300V INSULATION OR EQUIVALENT AS PER ARTICLE 760 OF NFPA 70.
- WIRING STYLE/SUPPER 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 D CIRCUITS. NOTIFICATION APPLIANCE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE Z.
- POWER: PROVIDE 120VAC (15 AMP MIN.) CIRCUIT FROM EXISTING POWER DISTRIBUTION PANELS TO EACH FACP AND POWER SUPPLY. EXISTING BRANCH CIRCUITS MAY BE REUSED TO PROVIDE PRIMARY POWER TO NEW CONTROL PANELS AND REMOTE POWER SUPPLIES. FURNISH A BATTERY BACKUP TO PROVIDE SECONDARY POWER SUPPLY TO FIRE ALARM PANELS AND REMOTE POWER SUPPLIES. BATTERY BACKUP SHALL BE OF SUFFICIENT CAPACITY TO PROVIDE 24 HOURS OF 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 250 DEVICES (DETECTORS AND MODULES) PER LOOP. AT LEAST 50 ADDRESSES (20%) SHALL BE LEFT VACANT ON EACH SLC LOOP IN ORDER TO ALLOW SPACE FOR ADJUSTMENTS/EXPANSION.
SMOKE DETECTORS: INSTALL SMOKE DETECTORS AS SHOWN ON PLANS IN ALL CORRIDORS AND LOBBIES AND ABOVE CONTROL EQUIP. MAXIMUM SPACING OF DETECTORS SHALL BE 30' BETWEEN DETECTORS OR 15' FROM FURTHEST WALL. INSTALL DETECTORS ON RECESSED OR SURFACE MOUNT J-BOXES TIGHT TO CEILING/DECK.
HEAT DETECTORS: INSTALL HEAT DETECTORS AS SHOWN ON PLANS IN AREAS WITH FIRE SPRINKLERS OR SMOKE DETECTORS AND IN MECHANICAL/EQUIPMENT AREAS. MAXIMUM SPACING OF DETECTORS SHALL BE 50' BETWEEN DETECTORS OR 25' FROM FURTHEST WALL. REDUCE SPACING PER NFPA 72 FOR INSTALLATION IN HIGH CEILING AREAS. INSTALL DETECTORS ON RECESSED OR SURFACE MOUNT J-BOXES TIGHT TO CEILING/DECK. FOLLOW REQUIREMENTS OF NFPA 72 FOR INSTALLATION UNDER BEAMED CEILINGS.
MANUAL PULL STATIONS: INSTALL NEW PULL STATIONS AS SHOWN ON PLANS AT EACH BUILDING EXIT AND IN BOILER ROOMS. INSTALL PULL STATIONS ON RECESSED OR SURFACE MOUNT J-BOXES WITH THE OPERATING ELEMENT AT 48" AFF. ADJUST HEIGHT OF EXISTING J-BOXES AS REQUIRED.
DUCT SMOKE DETECTORS: INSTALL DUCT SMOKE DETECTORS (SAMPLING TUBE TYPE) IN SUPPLY AND/OR RETURN DUCTS OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL NEW DETECTORS AT SAME LOCATION AS EXISTING DETECTORS WHERE PRESENT. INSTALL PER NFPA 72 AND MANUFACTURER'S REQUIREMENTS.
BEAM DETECTORS: INSTALL PROJECTED BEAM TYPE SMOKE DETECTORS AS INDICATED ON PLANS FOR LARGE OPEN AREAS WITH HIGH CEILINGS. DETECTORS SHALL BE SINGLE-ENDED, REFLECTIVE TYPE WITH ADJUSTABLE SENSITIVITY AND BUILT-IN SENSITIVITY TEST FEATURE (INSTALL REMOTE TEST SWITCH). INSTALL PER NFPA 72 AND MANUFACTURER'S REQUIREMENTS.
- INPUT MODULES: PROVIDE ADDRESSABLE MODULES TO MONITOR NEW OR EXISTING CONVENTIONAL INITIATING DEVICES (FIRE SPRINKLER SWITCHES, BEAM DETECTORS, ETC.). LOCATE MODULES ADJACENT TO DEVICE MONITORED IN AN ACCESSIBLE LOCATION OR ABOVE REMOVABLE CEILING TILE. MODULE SHALL HAVE EXTERNALLY VISIBLE LED TO INDICATE STATUS. LABEL MODULE WITH THE TYPE AND ADDRESS OF THE DEVICE MONITORED.
- NOTIFICATION APPLIANCES: PROVIDE AUDIBLE AND VISUAL NOTIFICATION APPLIANCES THROUGHOUT BUILDING. VOLUME OF HORNS SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL OF 15 DB ABOVE AMBIENT IN ALL OCCUPIED AREAS. VISIBLE ALARMS SHALL BE PROVIDED THROUGHOUT ALL OCCUPIED AREAS OF THE BUILDING AS REQUIRED BY THE IBC AND ADA GUIDELINES. STROBES SHALL FLASH IN SYNCHRONIZATION. CONFIGURE CIRCUITS TO ALLOW HORNS TO BE SILENCED WHILE STROBES CONTINUE TO FLASH.
- PROTECTED PREMISE FIRE SAFETY FUNCTIONS: INSTALL PROGRAMMABLE OUTPUT MODULES WITH RELAY CONTACTS TO INITIATE REQUIRED FIRE SAFETY FUNCTIONS (DOOR RELEASE, FAN SHUTDOWN, DAMPER ACTUATION, ELEVATOR RECALL, ETC.). OUTPUT MODULES SHALL BE INSTALLED WITHIN 36" OF DEVICE OR CIRCUIT CONTROLLED. ALL EXISTING PROTECTED PREMISE FIRE SAFETY FUNCTIONS CONTROLLED BY EXISTING FIRE ALARM SYSTEM SHALL BE MIGRATED TO NEW SYSTEM AND TESTED TO VERIFY PROPER FUNCTION.
- PHASING: PLAN SEQUENCE OF WORK TO MINIMIZE DOWN TIME OF FIRE ALARM SYSTEM AND EXISTING FIRE ALARM NETWORK. IT IS THE INSTALLER'S RESPONSIBILITY TO NOTIFY PROPER AUTHORITIES AND PROVIDE A FIRE WATCH 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 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 ONE DAY PRIOR TO SCHEDULED TEST.

FIRE ALARM SYSTEM KEY NOTES

- REPLACE EXISTING CONVENTIONAL FIRE ALARM CONTROL PANEL (SIMPLEX 4200) WITH NEW ADDRESSABLE FACP (SIMPLEX 4000). PROVIDE ALL REQUIRED CABINETS, MODULES, INTERFACE CARDS, SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL LOCAL FIRE ALARM SYSTEM AS WELL AS CONNECTION TO THE CAMPUS FIRE ALARM NETWORK. FACP SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON THE PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120VAC DEDICATED POWER CIRCUIT MAY BE REUSED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. PROVIDE NEW SIGNALING LINE AND NOTIFICATION APPLIANCE CIRCUITS FROM FACP TO NEW ADDRESSABLE INITIATING DEVICES AND NEW NOTIFICATION APPLIANCES (EXISTING CIRCUITS MAY BE RECONFIGURED AND REUSED IF COMPATIBLE).
- REPLACE EXISTING CAMPUS FIRE ALARM NETWORK CONTROL PANEL (SIMPLEX 2120) WITH NEW SIMPLEX FIRE NETWORK DISPLAY UNIT (NDU). PROVIDE ALL REQUIRED CABINETS, MODULES, INTERFACE CARDS, SUPPLIES, ETC. TO PROVIDE A COMPLETE NETWORK OF ALL FIRE ALARM CONTROL PANELS ON CAMPUS (SEE NETWORK PLAN - SHEET FA-01). EXISTING 120 VAC DEDICATED POWER CIRCUIT MAY BE EXTENDED AND REUSED. PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. INSTALL NEW NDU ON WEST SIDE OF CORRIDOR. KEEP EXISTING 2120 NETWORK PANEL IN SERVICE UNTIL INSTALLATION OF NEW FIRE ALARM NETWORK IS COMPLETE AND ALL REMOTE FIRE ALARM CONTROL PANELS ARE CONNECTED TO AND COMMUNICATING WITH NEW NDU. ONCE NEW FIRE ALARM NETWORK IS FUNCTIONAL, REMOVE EXISTING 2120 AND CABINET AND PATCH/PART REMAINING HOLES IN WALL. REMOVE EXISTING SILENT KNIGHT DIGITAL ALARM COMMUNICATOR/TRANSMITTER (DACT) TO REMAIN. CONNECT FIRE ALARM AND SUPERVISORY SIGNAL OUTPUTS FROM NEW NDU TO EXISTING DACT TO ALLOW RELAY OF ALL SIGNALS TO CENTRAL STATION. AS A DESIGN OPTION, CONTRACTOR MAY ELECT TO INSTALL NEW DACT INTEGRATED INTO NDU TO RELAY SIGNALS. IF INTEGRATED DACT IS PROVIDED, CONTRACTOR SHALL EXTEND PHONE LINES TO NDU, REMOVE EXISTING DACT AND PATCH PANELS FROM EXISTING DACT TO NEW FIRE ALARM NETWORK.
- REMOVE EXISTING FACP (SIMPLEX 4002) FOR HEAT PLANT. INSTALL NEW REMOTE POWER SUPPLY TO PROVIDE POWER TO NOTIFICATION APPLIANCE CIRCUITS. PROVIDE ADDRESSABLE CONTROL RELAY (CONNECTED TO SLC) TO PROVIDE ACTIVATION TRIGGER FOR NOTIFICATION APPLIANCE CIRCUITS. PROVIDE ADDRESSABLE MONITOR MODULES TO MONITOR TROUBLE OUTPUTS OF POWER SUPPLY. EXISTING 120 VAC CIRCUIT FROM FACP (TO BE REMOVED) MAY BE USED TO PROVIDE PRIMARY POWER. PROVIDE BATTERIES FOR SECONDARY POWER SUPPLY (24 HOURS STANDBY + 5 MINUTES OF ALARM). CONFIGURE OUTPUT OF POWER SUPPLY TO SYNCHRONIZE THE FLASHES OF ALL FIRE ALARM NOTIFICATION APPLIANCES WITHIN A SINGLE FIELD OF VIEW. INSTALL ANNUNCIATOR PANEL FOR FIRE ALARM SYSTEM ANNUNCIATOR SHALL HAVE AN ALPHANUMERIC DISPLAY INDICATING STATUS OF FIRE ALARM SYSTEM IN BOTH PHYSICAL PLANT AND HEAT PLANT. SURFACE MOUNT ANNUNCIATOR AT 54" AFF. CONDUIT MAY BE EXPOSED. CONNECT ANNUNCIATOR TO FACP IN PHYSICAL PLANT WITH NEW CIRCUIT INSTALLED IN EXISTING UNDERGROUND CONDUIT PRESENT BETWEEN BUILDINGS. PROVIDE ISOLATOR MODULES/SURGE SUPPRESSION WHERE CONDUIT ENTERS/EXITS THE BUILDING.
- EXISTING NOTIFICATION APPLIANCE LOCATED ABOVE MAXIMUM HEIGHT OF 96" AFF. ALLOWED BY NFPA 72. REMOVE EXISTING APPLIANCE AND RELOCATE J-BOX TO BE BETWEEN 80" AND 96" AFF. INSTALL NEW NOTIFICATION APPLIANCE ON RECESSED J-BOX.
- INSTALL NEW FIBER OPTIC CABLE FOR FIRE ALARM NETWORK COMMUNICATION BETWEEN EACH FACP ON CAMPUS. CABLE MAY BE RUN OVERHEAD IN BUILDINGS (ON CONDUIT) BUT SHALL BE INSTALLED IN EXISTING UNDERGROUND COMMUNICATIONS CONDUIT OR TUNNELS BETWEEN BUILDINGS. SEE NETWORK PLAN (SHEET FA-01).
- BID ALTERNATE #1: FURNISH AND INSTALL A SIMPLEX TRUE ALARM INFORMATION MANAGEMENT SYSTEM (IMS) FOR THE CAMPUS FIRE ALARM NETWORK. IMS SHALL BE CONFIGURED FOR DESKTOP INSTALLATION WITH 17" LCD MONITOR, KEYBOARD AND MOUSE. IMS SHALL HAVE PRE-LOADED GRAPHIC MAPS/DISPLAYS OF ALL FIRE ALARM SYSTEMS CONNECTED TO THE NETWORK. MAPS/DISPLAYS SHALL INCLUDE FLOOR PLANS, ROOM DESIGNATIONS, INITIATING DEVICES (WITH ADDRESSES), CONTROL EQUIPMENT AND CONTROL RELAYS. COORDINATE LOCATION OF IMS INSTALLATION WITH OWNER. PROVIDE COMPLETE TRAINING IN IMS CONFIGURATION AND OPERATION TO OWNER.

FIRE ALARM EQUIPMENT LEGEND

DEVICE	DESCRIPTION	MOUNTING	REMARKS
FACP	ADDRESSABLE FIRE ALARM CONTROL PANEL	SURFACE MOUNT AT SAME HEIGHT AS EXISTING	REPLACE EXISTING FACP WITH NEW SIMPLEX 4000 U
NDU	FIRE ALARM NETWORK DISPLAY UNIT	SURFACE MOUNT AT SAME HEIGHT AS EXISTING	REPLACE EXISTING NETWORK CONTROL PANEL WITH NEW SIMPLEX NDU
ANN	FIRE ALARM ANNUNCIATOR PANEL	SURFACE MOUNT OR MOUNT ON RECESSED J-BOX AT 54" AFF	TO DISPLAY STATUS OF FIRE ALARM SYSTEM. DISPLAY SHALL HAVE ALPHANUMERIC READOUT AND KEYPAD TO ALLOW SYSTEM SILENCE AND RESET
FAPS	REMOTE POWER SUPPLY	SURFACE MOUNT AT 54" AFF	TO PROVIDE POWER TO NOTIFICATION APPLIANCES, DOOR HOLDERS, INITIATING DEVICES, ETC.
DACT	DIGITAL ALARM COMMUNICATOR/TRANSMITTER	SURFACE MOUNT AT SAME HEIGHT AS EXISTING	TO RELAY FIRE ALARM, SUPERVISORY AND TROUBLE SIGNALS FROM NDU TO CENTRAL STATION
SMI	TRULERTM TEXT MESSAGE BOARD	WALL MOUNT WHERE INDICATED ON PLANS. COORDINATE WITH OWNER.	TO DISPLAY TEXT MESSAGES (PRE-PROGRAMMED OR THROUGH FUTURE LAN INTERFACE) TO PROVIDE EMERGENCY INSTRUCTIONS
SD	ADDRESSABLE PHOTOELECTRIC TYPE SMOKE DETECTOR	CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING SMOKE DETECTOR WITH NEW ADDRESSABLE DEVICE
SDN	ADDRESSABLE PHOTOELECTRIC TYPE SMOKE DETECTOR	CEILING MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX	ADD NEW SMOKE DETECTOR WHERE INDICATED
SDA	EXISTING SMOKE DETECTOR	EXISTING	REMOVE EXISTING DETECTOR AND INSTALL COVER PLATE ON REMAINING J-BOX
SDA	EXISTING ADDRESSABLE SMOKE DETECTOR	EXISTING	EXISTING DETECTOR TO REMAIN. CONNECT TO NEW FACP
SDS	SLEEPING AREA SMOKE ALARM WITH INTEGRAL HEAT DETECTOR	CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING SMOKE DETECTOR WITH SLEEPING AREA SMOKE ALARM WITH SOUNDER BASE TO FUNCTION AS A SLEEPING AREA SMOKE ALARM. PROGRAM ACTIVATION OF SMOKE DETECTOR AS A SUPERVISORY FUNCTION. WITHDRAW ALL SOUNDER BASES WITHIN THE DWELLING UNIT. PROGRAM ACTIVATION OF SLEEPING AREA SMOKE ALARM AS A FIRE ALARM SIGNAL. ACTUATING ALL SOUNDER BASES AND AUDIBLE/VISUAL ALARMS IN THE BUILDING
HT	ADDRESSABLE FIXED TEMP. TYPE HEAT DETECTOR	CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING CONVENTIONAL DEVICE WITH NEW ADDRESSABLE DEVICE
HTN	ADDRESSABLE FIXED TEMP. TYPE HEAT DETECTOR	CEILING MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX	ADD NEW HEAT DETECTOR WHERE INDICATED
HTA	EXISTING HEAT DETECTOR	EXISTING	REMOVE EXISTING DETECTOR AND INSTALL COVER PLATE ON REMAINING J-BOX
HTA	EXISTING ADDRESSABLE HEAT DETECTOR	EXISTING	EXISTING DETECTOR TO REMAIN. CONNECT TO NEW FACP
M	ADDRESSABLE MANUAL PULL STATION	WALL MOUNT ON EXISTING OR RECESSED J-BOX AT 48" AFF	REPLACE EXISTING CONVENTIONAL DEVICE WITH NEW ADDRESSABLE DEVICE
MN	ADDRESSABLE MANUAL PULL STATION	WALL MOUNT ON EXISTING OR RECESSED J-BOX AT 48" AFF	ADD NEW PULL STATION WHERE INDICATED ON PLAN
M	EXISTING MANUAL PULL STATION	EXISTING	REMOVE EXISTING PULL STATION AND INSTALL COVER PLATE ON REMAINING J-BOX
MA	EXISTING ADDRESSABLE MANUAL PULL STATION	EXISTING	EXISTING PULL STATION TO REMAIN. CONNECT TO NEW FACP
PTR	PROJECTED BEAM TYPE SMOKE DETECTOR	WALL OR CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING BEAM DETECTOR WITH NEW SINGLE ENDED REFLECTIVE TYPE BEAM DETECTOR (SYSTEM SENSOR BEAM 1228 OR EQUIV.)
SD	ADDRESSABLE DUCT MOUNTED SMOKE DETECTOR	EXISTING	REMOVE EXISTING CONVENTIONAL DEVICE WITH NEW ADDRESSABLE DEVICE
SDN	ADDRESSABLE DUCT MOUNTED SMOKE DETECTOR	MOUNT ON EXISTING SUPPLY AND/OR RETURN DUCT	ADD NEW DUCT MOUNTED SMOKE DETECTOR (WITH SAMPLING TUBES) WHERE INDICATED
SDN	EXISTING DUCT MOUNTED SMOKE DETECTOR	EXISTING	REMOVE EXISTING DETECTOR. HOUSING AND SAMPLING TUBES. PATCH HOLE IN DUCT
SDN	EXISTING ADDRESSABLE DUCT MOUNTED SMOKE DETECTOR	EXISTING	EXISTING DUCT SMOKE DETECTOR TO REMAIN. CONNECT TO NEW FACP
IM	ADDRESSABLE INPUT MODULE	SURFACE MOUNT ON J-BOX NEAR CONVENTIONAL DEVICE TO BE MONITORED	CONNECT TO CONTACTS OF CONVENTIONAL DEVICE TO FACILITATE MONITORING AS AN ADDRESSABLE POINT
OM	ADDRESSABLE OUTPUT MODULE	SURFACE MOUNT ON J-BOX WITHIN 3' OF DEVICE OR CIRCUIT CONTROLLED	TO PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS SUCH AS DOOR RELEASE, FAN SHUTDOWN, DAMPER ACTUATION, ELEVATOR RECALL, NOTIFICATION CIRCUIT ACTIVATION, ETC.
MD	MAGNETIC DOOR HOLD-OPEN DEVICE (EXISTING)	EXISTING	EXISTING DEVICE TO REMAIN. CONNECT TO NEW FACP TO PROVIDE POWER AND CONTROL
MDN	MAGNETIC DOOR HOLD-OPEN DEVICE (NEW)	WALL MOUNT AT TOP EDGE OF DOOR OR RECESSED OR SURFACE MOUNT J-BOX	CONNECT TO NEW FACP TO PROVIDE POWER AND CONTROL
FS	FIRE SPRINKLER VALVE TAMPER SWITCH	EXISTING	REMOVE EXISTING TAMPER SWITCH AND CONNECT TO NEW FACP
FSN	FIRE SPRINKLER WATER FLOW SWITCH	EXISTING	REMOVE EXISTING WATER FLOW SWITCH AND CONNECT TO NEW FACP
S	STROBE	WALL MOUNT ON EXISTING OR SURFACE MOUNT J-BOX BETWEEN 80" AND 96" AFF	INSTALL NEW NOTIFICATION APPLIANCE TO PROVIDE VISUAL NOTIFICATION AS INDICATED ON DWS. STROBES SHALL BE SYNCHRONIZED. DEVICES COLOR SHALL BE RED
HS	HORN/STROBE	CEILING MOUNT ON EXISTING J-BOX	REMOVE EXISTING BELL, HORN, STROBE OR HORN/STROBE AND PROVIDE COVER PLATE ON RECESSED J-BOX
HSN	HORN/STROBE	WALL MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX BETWEEN 80" AND 96" AFF	INSTALL NEW NOTIFICATION APPLIANCE TO PROVIDE VISUAL NOTIFICATION AS INDICATED ON DWS. STROBES SHALL BE SYNCHRONIZED. DEVICES COLOR SHALL BE RED
HSN	HORN/STROBE	CEILING MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX	INSTALL NEW NOTIFICATION APPLIANCE TO PROVIDE VISUAL NOTIFICATION AS INDICATED ON DWS. STROBES SHALL BE SYNCHRONIZED. DEVICES COLOR SHALL BE RED
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HSN	HORN/STROBE	CEILING MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX	INSTALL NEW NOTIFICATION APPL

FIRE ALARM SYSTEM GENERAL NOTES

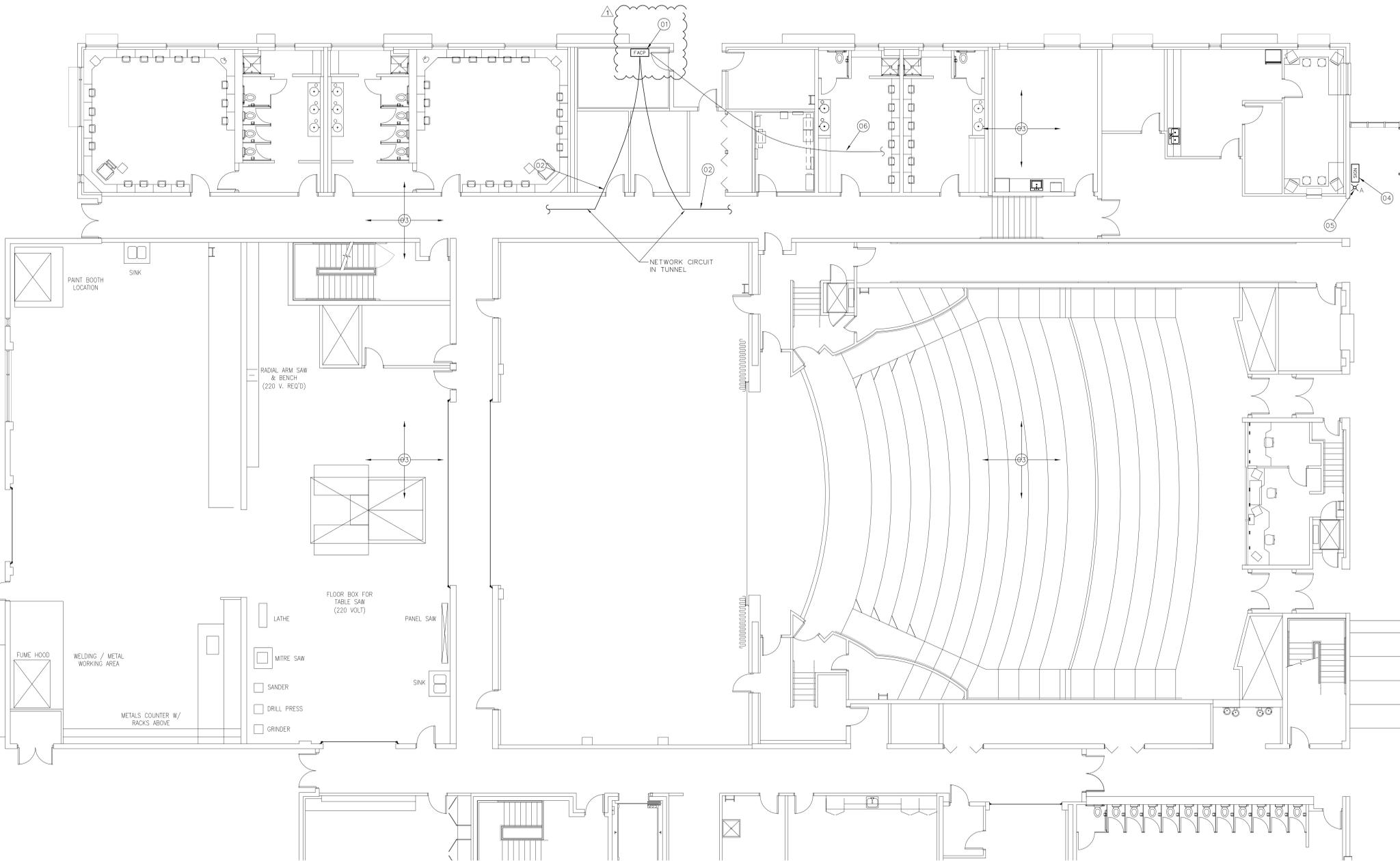
- SCOPE OF WORK: WORK SHALL INCLUDE UPGRADING ALL EXISTING CONVENTIONAL FIRE ALARM SYSTEMS (CONTROL EQUIPMENT AND INITIATING DEVICES) TO NEW ADDRESSABLE FIRE ALARM SYSTEMS. EXISTING OCCUPANT NOTIFICATION SHALL BE UPGRADED TO COMPLY WITH CURRENT IBC, NFPA 72 AND ADA REQUIREMENTS. EXISTING CONDUIT, J-BOXES AND WIRING MAY BE RECONFIGURED AND REUSED WHERE COMPATIBLE WITH NEW EQUIPMENT/CIRCUITS. INSTALL NEW CIRCUITS WHERE REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM. A NEW CAMPUS FIRE ALARM NETWORK SHALL BE INSTALLED TO LINK ALL CONTROL PANELS ON CAMPUS TOGETHER AND TO A NEW NETWORK DISPLAY UNIT IN THE PHYSICAL PLANT. FIRE ALARM SYSTEMS SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF THE IBC, IFC, NFPA 72, EQUIPMENT MANUFACTURER (SMPLX), THESE DRAWINGS AND THE PROJECT SPECIFICATIONS.
- APPLICABLE CODES/STANDARDS:
INTERNATIONAL BUILDING CODE - 2006 EDITION
INTERNATIONAL FIRE CODE - 2006 EDITION
UTAH STATE FIRE MARSHAL RULE R710-4
NFPA 70 - 2005 EDITION
NFPA 72 - 2007 EDITION
NFPA 90A - 2002 EDITION
- QUALITY ASSURANCE: ALL EQUIPMENT, MATERIAL AND DEVICES USED FOR THE FIRE ALARM SYSTEM INSTALLATION SHALL BE 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). FIRE ALARM EQUIP. (INCLUDING PROGRAMMING/COMMISSIONING) SHALL BE PROVIDED BY SIMPLEX-GRINNELL UNDER SOLE SOURCE ARRANGEMENT APPROVED BY DFCM FOR SNOW COLLEGE. CONTRACTOR SHALL CONTACT SIMPLEX-GRINNELL FOR EQUIPMENT QUOTE:
CONTACT: DAVE CROFF
ADDRESS: 2702 S 1030 W • 60 SALT LAKE CITY, UT 84119
PHONE: 801-703-2735
FAX: 801-262-9423
EMAIL: DCROFF@TYCOINT.COM
- SUBMITTALS: CONTRACTOR SHALL PREPARE AND SUBMIT COMPLETE SHOP DRAWINGS AND CALCULATIONS FOR EACH SYSTEM TO STATE FIRE MARSHAL, OWNER AND ENGINEER FOR REVIEW/PROVAL 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. NEW DEVICES WILL REPLACE THE OLD AND GENERALLY REUSE THE EXISTING LOCATIONS. ANY EXISTING DEVICES AND CONDUIT NOT BEING REUSED THAT ARE VISIBLE, SUCH AS CABINETS, NOTIFICATION APPLIANCES, INITIATING DEVICES, ETC. SHALL BE REMOVED AND REMAINING WALL OR CEILING SURFACE REPAIRED OR REPLACED TO MATCH SURROUNDING AREAS. REMOVE ALL UNUSED WIRE IN ALL REMAINING J-BOXES AND/OR CONDUITS. ANY CEILING TILE DAMAGED BY THE INSTALLER MUST BE REPLACED WITH THE SAME OR EQUIV. TILE.
- SYSTEM TYPE: FIRE ALARM SYSTEM SHALL MEET THE RQMTS FOR PROTECTED PREMISE FIRE ALARM SYSTEMS (AS DEFINED BY NFPA 72). 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 AND HORN/STROBES), FOR PURPOSES OF FIRE ALARM NOTIFICATION, EACH BUILDING SHALL BE CONSIDERED AS A SINGLE ZONE.
- WIRING STYLE/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 CIRCUITS. NOTIFICATION APPLIANCE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE Z.
- POWER: PROVIDE 120VAC (15 AMP MIN.) CIRCUIT FROM EXISTING POWER DISTRIBUTION PANELS TO EACH FACP AND POWER SUPPLY. EXISTING BRANCH CIRCUITS MAY BE REUSED TO PROVIDE PRIMARY POWER TO NEW CONTROL PANELS AND REMOTE POWER SUPPLIES. FURNISH A BATTERY BACKUP TO PROVIDE SECONDARY POWER SUPPLY TO FIRE ALARM PANELS AND REMOTE POWER SUPPLIES. BATTERY BACKUP SHALL BE OF SUFFICIENT CAPACITY TO PROVIDE 24 HOURS OF STANDBY POWER WITH AN ADDITIONAL RESERVE TO OPERATE SYSTEM FOR 5 MINUTES IN ALARM.
- WIRING/CONDUIT: ALL WIRING SHALL BE INSTALLED IN CONDUIT (EMT, RIGID, WIRE MOLD, ETC.). EXISTING CONDUIT AND J-BOXES MAY BE USED FOR NEW FIRE ALARM SYSTEM. INSTALL NEW CONDUIT AS REQUIRED FOR NEW OR RECONFIGURED CIRCUITS. MINIMUM CONDUIT SIZE FOR NEW CONDUIT SHALL BE 1/2". CONDUIT MAY BE INSTALLED CONCEALED OR EXPOSED BUT SHALL MATCH TYPE, COLOR, APPEARANCE OF EXISTING. EXPOSED CONDUIT IN UNFINISHED AREAS MAY BE UNPAINTED BUT SHALL BE PERIODICALLY MARKED WITH RED TAPE OR PAINT. EXPOSED CONDUIT IN FINISHED AREAS SHALL BE PAINTED TO MATCH SURROUNDINGS. FLEXIBLE CONDUIT MAY BE USED FOR DROPS TO SINGLE DEVICES. ALL PENETRATIONS THROUGH RATED PARTITIONS SHALL BE FIRE STOPPED WITH A SUITABLE CAULKING COMPOUND.
- INITIATING DEVICES:
SLS CIRCUITS: SLS LOOP DEVICE ADDRESSING SHALL NOT EXCEED 250 DEVICES (DETECTORS AND MODULES) PER LOOP. AT LEAST 50 ADDRESSES (20%) SHALL BE LEFT VACANT ON EACH SLS LOOP IN ORDER TO ALLOW SPACE FOR ADJUSTMENTS/EXPANSION.
SMOKE DETECTORS: INSTALL SMOKE DETECTORS AS SHOWN ON PLANS IN ALL CORRIDORS AND LOBBIES AND ABOVE CONTROL EQUIP. MAXIMUM SPACING OF DETECTORS SHALL BE 30' BETWEEN DETECTORS OR 15' FROM FURTHEST WALL. INSTALL DETECTORS ON RECESSED OR SURFACE MOUNT J-BOXES TIGHT TO CEILING/DECK. FOLLOW REQUIREMENTS OF NFPA 72 FOR INSTALLATION UNDER BEAMED CEILING.
MANUAL PULL STATIONS: INSTALL NEW PULL STATIONS AS SHOWN ON PLANS AT EACH BUILDING EXIT AND IN BOILER ROOMS. INSTALL PULL STATIONS ON RECESSED OR SURFACE MOUNT J-BOXES WITH THE OPERATING ELEMENT AT 48" AFF. ADJUST HEIGHT OF EXISTING J-BOXES AS REQUIRED.
DUCT SMOKE DETECTORS: INSTALL DUCT SMOKE DETECTORS (SAMPLING TUBE TYPE) IN SUPPLY AND/OR RETURN DUCTS OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL NEW DETECTORS AT SAME LOCATION AS EXISTING DETECTORS WHERE PRESENT. INSTALL PER NFPA 72 AND MANUFACTURER'S REQUIREMENTS.
BEAM DETECTORS: INSTALL PROJECTED BEAM TYPE SMOKE DETECTORS AS INDICATED ON PLANS FOR LARGE OPEN AREAS WITH HIGH CEILINGS. DETECTORS SHALL BE SINGLE-ENDED, REFLECTIVE TYPE WITH ADJUSTABLE SENSITIVITY AND BUILT-IN SENSITIVITY TEST FEATURE (INSTALL REMOTE TEST SWITCH). INSTALL PER NFPA 72 AND MANUFACTURER'S REQUIREMENTS.
- INPUT MODULES: PROVIDE ADDRESSABLE MODULES TO MONITOR NEW OR EXISTING CONVENTIONAL INITIATING DEVICES (FIRE SPRINKLERS, BEAM DETECTORS, ETC.). LOCATE MODULES ADJACENT TO DEVICE MONITORED IN AN ACCESSIBLE LOCATION OR ABOVE REMOVABLE CEILING TILE. MODULE SHALL HAVE EXTERNALLY VISIBLE LED TO INDICATE STATUS. LABEL MODULE WITH THE TYPE AND ADDRESS OF THE DEVICE MONITORED.
- NOTIFICATION APPLIANCES: PROVIDE AUDIBLE AND VISUAL NOTIFICATION APPLIANCES THROUGHOUT BUILDING. VOLUME OF HORNS SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL OF 15 DB ABOVE AMBIENT IN ALL OCCUPIED AREAS. VISIBLE ALARMS SHALL BE PROVIDED THROUGHOUT ALL OCCUPIED AREAS OF THE BUILDING AS REQUIRED BY THE IBC AND ADA GUIDELINES. STROBES SHALL FLASH IN SYNCHRONIZATION. CONFIGURE CIRCUITS TO ALLOW HORNS TO BE SILENCED WHILE STROBES CONTINUE TO FLASH.
- PROTECTED PREMISE FIRE SAFETY FUNCTIONS: INSTALL PROGRAMMABLE OUTPUT MODULES WITH RELAY CONTACTS TO INITIATE REQUIRED FIRE SAFETY FUNCTIONS (DOOR RELEASE, FAN SHUTDOWN, DAMPER ACTUATION, ELEVATOR RECALL, ETC.). OUTPUT MODULES SHALL BE INSTALLED WITHIN 36" OF DEVICE OR CIRCUIT CONTROLLED. ALL EXISTING PROTECTED PREMISE FIRE SAFETY FUNCTIONS CONTROLLED BY EXISTING FIRE ALARM SYSTEM SHALL BE MIGRATED TO NEW SYSTEM AND TESTED TO VERIFY PROPER FUNCTION.
- PHASING: PLAN SEQUENCE OF WORK TO MINIMIZE DOWN TIME OF FIRE ALARM SYSTEM AND EXISTING FIRE ALARM NETWORK. IT IS THE INSTALLER'S RESPONSIBILITY TO NOTIFY PROPER AUTHORITIES AND PROVIDE A FIRE WATCH 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 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 ONE DAY PRIOR TO SCHEDULED TEST.

FIRE ALARM SYSTEM KEY NOTES

- EXISTING SIMPLEX 4100U, FULLY ADDRESSABLE FIRE ALARM CONTROL PANEL TO REMAIN. EXISTING INITIATING DEVICES THROUGHOUT BUILDING ARE ADDRESSABLE AND SHALL REMAIN. EXISTING NOTIFICATION APPLIANCE CIRCUITS AND DEVICES IN BUILDING COMPLY WITH CURRENT CODES AND SHALL REMAIN. INSTALL NEW NETWORK CIRCUIT AND INTERFACE CARD FOR EXISTING FACP TO FACILITATE CONNECTION OF EXISTING FIRE ALARM SYSTEM TO NEW CAMPUS FIRE ALARM NETWORK. INSTALL NEW ID-NET MODULE AND CIRCUIT SUITABLE FOR COMMUNICATION WITH NEW TRUEALARM SIGN BOARD (SEE KEY NOTE 04 BELOW).
- INSTALL NEW FIBER OPTIC CABLE FOR FIRE ALARM NETWORK COMMUNICATION BETWEEN EACH FACP ON CAMPUS. CABLE MAY BE RUN OVERHEAD IN BUILDINGS (IN CONDUIT) BUT SHALL BE INSTALLED IN EXISTING UNDERGROUND COMMUNICATIONS CONDUIT OR TUNNELS BETWEEN BUILDINGS. SEE NETWORK PLAN (SHEET FA-01).
- EXISTING ADDRESSABLE INITIATING DEVICES ARE PRESENT THROUGHOUT BUILDING AND SHALL REMAIN. EXISTING NOTIFICATION APPLIANCE CIRCUITS AND DEVICES ARE PRESENT THROUGHOUT BUILDING AND SHALL REMAIN.
- INSTALL SIMPLEX TRUEALARM SIGN BOARD WHERE INDICATED ON PLAN. CONNECT SIGN BOARD TO NEW ID-NET CIRCUIT FROM FACP FOR CONTROL. PROVIDE 24 VDC POWER TO BOARD FROM FACP. COORDINATE MOUNTING HEIGHT, LOCATION AND EMERGENCY MESSAGES TO BE DISPLAYED WITH OWNER. OWNER TO PROVIDE LAN CONNECTION (FUTURE) TO SIGN BOARD TO ALLOW OFF-SITE CONTROL VIA IP NETWORK.
- INSTALL AMBER STROBE ADJACENT TO TEXT MESSAGE BOARD. DEVICE SHALL BE CONNECTED TO SPACE INAC CIRCUIT OF FACP AND SHALL BE PROGRAMMED TO FLASH CONTINUOUSLY WHEN AN EMERGENCY MESSAGE IS DISPLAYED ON ADJACENT MESSAGE BOARD.
- FACP IN STADIUM IS NOT COMPATIBLE WITH NEW FIRE ALARM NETWORK AND NOT SCHEDULED TO BE UPGRADED UNDER THIS CONTRACT. EXTEND EXISTING ID-NET LOOP FROM ADJACENT PERFORMING ARTS BUILDING THROUGH UTILITY TUNNEL AND/OR BURIED CONDUIT TO STADIUM FACP. PROVIDE MONITOR MODULES ON EXTENDED ID-NET LOOP FOR ALARM, SUPERVISORY AND TROUBLE RELAYS OF STADIUM FACP. CONNECT MONITOR MODULES TO STADIUM FACP TO ALLOW NETWORK REPORTING OF STADIUM FACP EVENTS THROUGH PERFORMING ARTS FACP.

FIRE ALARM EQUIPMENT LEGEND

DEVICE	DESCRIPTION	MOUNTING	REMARKS
FACP	ADDRESSABLE FIRE ALARM CONTROL PANEL	SURFACE MOUNT AT SAME HEIGHT AS EXISTING	REPLACE EXISTING FACP WITH NEW SIMPLEX 4100 U
NDU	FIRE ALARM NETWORK DISPLAY UNIT	SURFACE MOUNT AT SAME HEIGHT AS EXISTING	REPLACE EXISTING NETWORK CONTROL PANEL WITH NEW SIMPLEX 4100 U
ANN	FIRE ALARM ANNUNCIATOR PANEL	SURFACE MOUNT OR MOUNT ON RECESSED J-BOX AT 54" AFF	TO DISPLAY STATUS OF FIRE ALARM SYSTEM. COORDINATE HEIGHT WITH ALPHA-NUMERIC READER AND KEYPAD TO ALLOW OFF-SITE CONTROL.
FAPS	REMOTE POWER SUPPLY	SURFACE MOUNT AT 54" AFF	TO PROVIDE POWER TO NOTIFICATION APPLIANCES, DOOR HOLDERS, INITIATING DEVICES, ETC.
DACT	DIGITAL ALARM COMMUNICATOR/TRANSMITTER	SURFACE MOUNT AT SAME HEIGHT AS EXISTING	TO RELAY FIRE ALARM, SUPERVISORY AND TROUBLE SIGNALS FROM NDU TO CENTRAL STATION.
SIGN	TRUEALARM TEXT MESSAGE BOARD	WALL MOUNT WHERE INDICATED ON PLANS. COORDINATE HEIGHT WITH OWNER	TO DISPLAY TEXT MESSAGES (E.G. "FIRE IN STADIUM") THROUGH FUTURE LAN INTERFACES TO PROVIDE EMERGENCY INSTRUCTIONS.
Ⓢ	ADDRESSABLE PHOTOELECTRIC TYPE SMOKE DETECTOR	CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING SMOKE DETECTOR WITH NEW ADDRESSABLE DEVICE.
ⓈN	ADDRESSABLE PHOTOELECTRIC TYPE SMOKE DETECTOR	CEILING MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX	ADD NEW SMOKE DETECTOR WHERE INDICATED.
ⓈA	EXISTING SMOKE DETECTOR	EXISTING	REMOVE EXISTING DETECTOR AND INSTALL COVER PLATE ON REMAINING J-BOX.
ⓈA	EXISTING ADDRESSABLE SMOKE DETECTOR	EXISTING	EXISTING DETECTOR TO REMAIN. CONNECT TO NEW FACP.
ⓈS	SLEEPING AREA SMOKE ALARM WITH INTEGRAL HEAT DETECTOR	CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING SMOKE DETECTOR WITH SOUNDER BASE TO FUNCTION AS A SLEEPING AREA SMOKE ALARM. PROGRAM ACTIVATION OF SMOKE DETECTOR AS A SLEEPING AREA SMOKE ALARM. SOUNDER BASES WITHIN THE DWELLING UNIT. PROGRAM ACTIVATION OF ALL SOUNDER BASES WITHIN THE DWELLING UNIT. PROGRAM ACTIVATION OF ALL SOUNDER BASES AND AUDIBLE/VISUAL ALARMS IN THE BUILDING.
ⓈH	ADDRESSABLE FIXED TEMP. TYPE HEAT DETECTOR	CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING CONVENTIONAL DEVICE WITH NEW ADDRESSABLE DEVICE.
ⓈHN	ADDRESSABLE FIXED TEMP. TYPE HEAT DETECTOR	CEILING MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX	ADD NEW HEAT DETECTOR WHERE INDICATED.
ⓈH	EXISTING HEAT DETECTOR	EXISTING	REMOVE EXISTING DETECTOR AND INSTALL COVER PLATE ON REMAINING J-BOX.
ⓈHA	EXISTING ADDRESSABLE HEAT DETECTOR	EXISTING	EXISTING DETECTOR TO REMAIN. CONNECT TO NEW FACP.
ⓈM	ADDRESSABLE MANUAL PULL STATION	WALL MOUNT ON EXISTING OR RECESSED J-BOX AT 48" AFF	REPLACE EXISTING CONVENTIONAL DEVICE WITH NEW ADDRESSABLE DEVICE.
ⓈMN	ADDRESSABLE MANUAL PULL STATION	WALL MOUNT ON EXISTING OR RECESSED J-BOX AT 48" AFF	ADD NEW PULL STATION WHERE INDICATED ON PLAN.
ⓈM	EXISTING MANUAL PULL STATION	EXISTING	REMOVE EXISTING PULL STATION AND INSTALL COVER PLATE ON REMAINING J-BOX.
ⓈMA	EXISTING ADDRESSABLE MANUAL PULL STATION	EXISTING	EXISTING PULL STATION TO REMAIN. CONNECT TO NEW FACP.
ⓈP/R	PROJECTED BEAM TYPE SMOKE DETECTOR	WALL OR CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING BEAM DETECTOR WITH NEW SINGLE ENDED REFLECTED TYPE BEAM DETECTOR (SYSTEM SENSOR BEAM 1224S OR EQUAL).
ⓈD	ADDRESSABLE DUCT MOUNTED SMOKE DETECTOR	EXISTING	REPLACE EXISTING CONVENTIONAL DEVICE WITH NEW ADDRESSABLE DEVICE.
ⓈDN	ADDRESSABLE DUCT MOUNTED SMOKE DETECTOR	MOUNT ON EXISTING SUPPLY AND/OR RETURN DUCT	ADD NEW DUCT MOUNTED SMOKE DETECTOR (WITH SAMPLING TUBES) WHERE INDICATED.
ⓈD	EXISTING DUCT MOUNTED SMOKE DETECTOR	EXISTING	REMOVE EXISTING DETECTOR. HOUSING AND SAMPLING TUBES. PATCH HOLE IN DUCT.
ⓈDA	EXISTING ADDRESSABLE DUCT MOUNTED SMOKE DETECTOR	EXISTING	EXISTING DUCT SMOKE DETECTOR TO REMAIN. CONNECT TO NEW FACP.
ⓈI	ADDRESSABLE INPUT MODULE	SURFACE MOUNT ON J-BOX NEAR CONVENTIONAL DEVICE TO BE MONITORED	CONNECT TO CONTACTS OF CONVENTIONAL DEVICE TO FACILITATE MONITORING AS AN ADDRESSABLE POINT.
ⓈO	ADDRESSABLE OUTPUT MODULE	SURFACE MOUNT ON J-BOX WITHIN 3' OF DEVICE OR CIRCUIT CONTROLLED	TO PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS SUCH AS DOOR RELEASE, FAN SHUTDOWN, DAMPER ACTUATION, ELEVATOR RECALL, NOTIFICATION CIRCUIT ACTIVATION, ETC.
ⓈD	MAGNETIC DOOR HOLD-OPEN DEVICE (EXISTING)	EXISTING	EXISTING DEVICE TO REMAIN. CONNECT TO NEW FACP TO PROVIDE POWER AND CONTROL.
ⓈDN	MAGNETIC DOOR HOLD-OPEN DEVICE (NEW)	WALL MOUNT AT TOP EDGE OF DOOR	CONNECT TO NEW FACP TO PROVIDE POWER AND CONTROL.
ⓈT	FIRE SPRINKLER VALVE TAMPER SWITCH	EXISTING	PROVIDE INPUT MODULE AND CONNECT TO NEW FACP.
ⓈF	FIRE SPRINKLER WATER FLOW SWITCH	EXISTING	PROVIDE INPUT MODULE AND CONNECT TO NEW FACP.
ⓈX	STROBE	WALL MOUNT ON EXISTING OR RECESSED J-BOX BETWEEN 80" AND 96" AFF	INSTALL NEW NOTIFICATION APPLIANCE TO REPLACE EXISTING SMOKE ALARM AS INDICATED ON DWGS. STROBES SHALL BE SYNCHRONIZED. DEVICES COLOR SHALL BE RED.
ⓈXN	HORN/STROBE	CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING HORN/STROBE WITH NEW ADDRESSABLE DEVICE.
ⓈXN	STROBE	WALL MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX BETWEEN 80" AND 96" AFF	ADD NEW HORN/STROBE WHERE INDICATED ON PLAN.
ⓈXN	HORN/STROBE	CEILING MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX	ADD NEW HORN/STROBE WHERE INDICATED ON PLAN.
ⓈXN	EXTERIOR HORN/STROBE	WALL MOUNT ON EXISTING WEATHERPROOF J-BOX	REPLACE EXISTING WEATHERPROOF DEVICE WITH NEW ADDRESSABLE DEVICE.
ⓈXN	EXTERIOR HORN/STROBE	WALL MOUNT AT 10' AFF ON NEW SURFACE MOUNT WEATHERPROOF J-BOX	ADD NEW WEATHERPROOF HORN/STROBE WHERE INDICATED ON PLAN.
ⓈN	EXISTING NOTIFICATION APPLIANCE	EXISTING	REMOVE EXISTING BELL, HORN, STROBE OR HORN/STROBE AND PROVIDE COVER PLATE ON RECESSED J-BOX.
ⓈA	AMBER STROBE	WALL MOUNT ADJACENT TO TEXT MESSAGE BOARD	AMBER STROBE TO FLASH CONTINUOUSLY WHILE EMERGENCY MESSAGE IS DISPLAYED ON ADJACENT TEXT MESSAGE BOARD. PROVIDE 24 VDC SUPERVISED POWER FROM FACP.



1 FIRE ALARM PLAN - PERFORMING ARTS
1/8" = 1'-0"
0 8' 16' 32'

104180
DWG ISSUE: ADD #1

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REVISIONS:
ADDENDUM #1
05/26/09

DRAWING DATE: 04/30/09
REVISION DATE: 05/26/09

SNOW COLLEGE - PERFORMING ARTS
EPHRAIM, UTAH

FIRE ALARM SYSTEM UPGRADE
DFCM PROJECT # 07159700

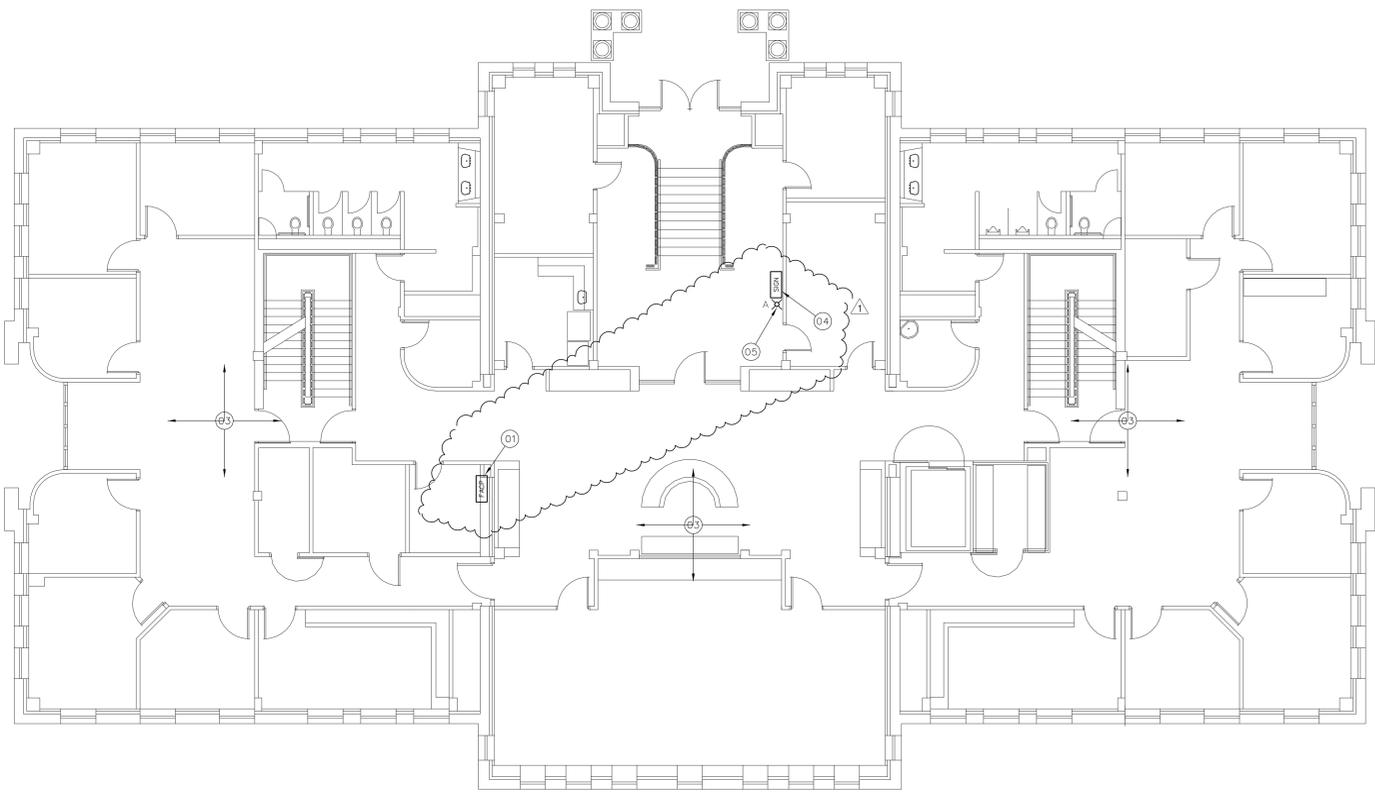
FIRE ALARM PLAN - PERFORMING ARTS
PA-FA1

FIRE ALARM SYSTEM GENERAL NOTES

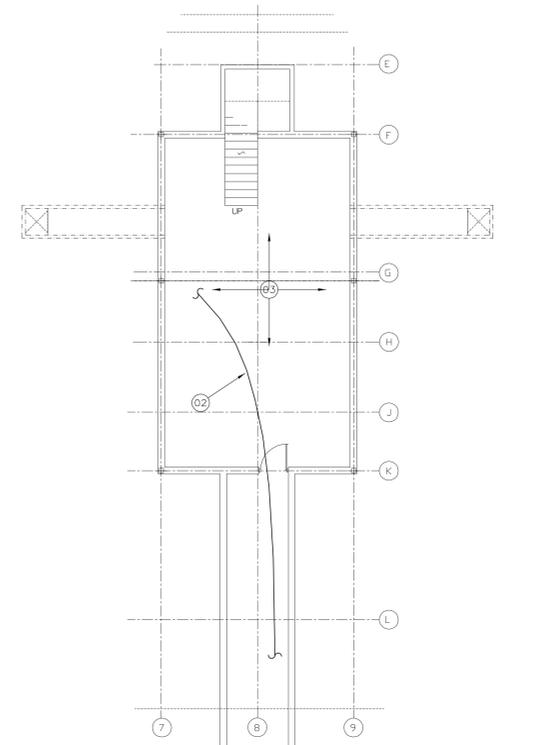
- SCOPE OF WORK: WORK SHALL INCLUDE UPGRADING ALL EXISTING CONVENTIONAL FIRE ALARM SYSTEMS (CONTROL EQUIPMENT AND INITIATING DEVICES) TO NEW ADDRESSABLE FIRE ALARM SYSTEMS. EXISTING OCCUPANT NOTIFICATION SHALL BE UPGRADED TO COMPLY WITH CURRENT IBC, NFPA 72 AD ADA REQUIREMENTS. EXISTING CONDUIT, J-BOXES AND WIRING MAY BE RECONFIGURED AND REUSED WHERE COMPATIBLE WITH NEW EQUIPMENT/CIRCUITS. INSTALL NEW CIRCUITS WHERE REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM. A NEW CAMPUS FIRE ALARM NETWORK SHALL BE INSTALLED TO LINK ALL CONTROL PANELS ON CAMPUS TOGETHER AND TO A NEW NETWORK DISPLAY UNIT IN THE PHYSICAL PLANT. FIRE ALARM SYSTEMS SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF THE IBC, IFC, NFPA 72, EQUIPMENT MANUFACTURER (SIMPLEX), THESE DRAWINGS AND THE PROJECT SPECIFICATIONS.
- APPLICABLE CODES/STANDARDS:
INTERNATIONAL BUILDING CODE - 2006 EDITION
INTERNATIONAL FIRE CODE - 2006 EDITION
INTERNATIONAL MECHANICAL CODE - 2006 EDITION
UTAH STATE FIRE MARSHAL RULE R710-4
NFPA 70 - 2005 EDITION
NFPA 72 - 2007 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). FIRE ALARM EQUIP (INCLUDING PROGRAMMING/COMMISSIONING) SHALL BE PROVIDED BY SIMPLEX-GRINNELL UNDER SOLE SOURCE ARRANGEMENT APPROVED BY DFCM FOR SNOW COLLEGE. CONTRACTOR SHALL CONTACT SIMPLEX-GRINNELL FOR EQUIPMENT QUOTE:
CONTACT: DAVE CROFF
ADDRESS: 2702 S 103RD W * 60 SALT LAKE CITY, UT 84119
PHONE: 801-703-2735
FAX: 801-262-9423
EMAIL: DCROFF@TYCONT.COM
- SUBMITTALS: CONTRACTOR SHALL PREPARE AND SUBMIT COMPLETE SHOP DRAWINGS AND CALCULATIONS FOR EACH SYSTEM TO STATE FIRE MARSHAL, OWNER AND ENGINEER FOR REVIEW/PROVAL 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. NEW DEVICES WILL REPLACE THE OLD AND GENERALLY REUSE THE EXISTING LOCATIONS. ANY EXISTING DEVICES AND CONDUIT NOT BEING REUSED THAT ARE VISIBLE, SUCH AS CABINETS, NOTIFICATION APPLIANCES, INITIATING DEVICES, ETC. SHALL BE REMOVED AND REMAINING WALL OR CEILING SURFACE REPAIRED OR REPLACED TO MATCH SURROUNDING AREAS. REMOVE ALL UNUSED WIRE IN ALL REMAINING J-BOXES AND/OR CONDUITS. ANY CEILING TILE DAMAGED BY THE INSTALLER MUST BE REPLACED WITH THE SAME OR EQUIV. TILE.
- SYSTEM TYPE: FIRE ALARM SYSTEM SHALL MEET THE ROMTS FOR PROTECTED PREMISE FIRE ALARM SYSTEMS (AS DEFINED BY NFPA 72). 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 AND HORN/STROBES), FOR PURPOSES OF FIRE ALARM NOTIFICATION, EACH BUILDING SHALL BE CONSIDERED AS A SINGLE ZONE.
- WIRING/CONDUIT: ALL WIRING SHALL BE INSTALLED IN CONDUIT (EMT, RIGID, WIRE MOLD, ETC.). EXISTING CONDUIT AND J-BOXES MAY BE USED FOR NEW OR RECONFIGURED CIRCUITS. MINIMUM CONDUIT SIZE FOR NEW CONDUIT SHALL BE 1/2". CONDUIT MAY BE INSTALLED CONCEALED OR EXPOSED BUT SHALL MATCH TYPE, COLOR, APPEARANCE) OF EXISTING. EXPOSED CONDUIT IN UNFINISHED AREAS MAY BE UNPAINTED BUT SHALL BE PERIODICALLY MARKED WITH RED TAPE OR PAINT. EXPOSED CONDUIT IN FINISHED AREAS SHALL BE PAINTED TO MATCH SURROUNDINGS. FLEXIBLE CONDUIT MAY BE USED FOR DROPS TO SINGLE DEVICES. ALL PENETRATIONS THROUGH RATED PARTITIONS SHALL BE FIRE STOPPED WITH A SUITABLE CAULKING COMPOUND. EXISTING WIRING MAY BE REUSED IN NEW FIRE ALARM SYSTEM WHERE COMPATIBLE WITH NEW FIRE ALARM CIRCUITS/DEVICES, FREE OF OPENS SHORTS AND GROUND FAULTS. INSTALL NEW WIRING AS REQUIRED FOR NEW OR RECONFIGURED CIRCUITS. NEW WIRING SHALL MEET THE REQUIREMENTS OF FIRE ALARM EQUIPMENT MANUFACTURER (SIMPLEX) AND BE FREE OF OPENS, SHORTS AND GROUND FAULTS. ALL WIRING USED IN THE FIRE ALARM SYSTEM SHALL BE FFL FIRE POWER LIMITED) WITH MINIMUM 300V INSULATION OR EQUIVALENT AS PER ARTICLE 760 OF NFPA 70.
- 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 B CIRCUITS. NOTIFICATION APPLIANCE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE Z.
- POWER: PROVIDE 120VAC (15 AMP MIN.) CIRCUIT FROM EXISTING POWER DISTRIBUTION PANELS TO EACH FACP AND POWER SUPPLY. EXISTING BRANCH CIRCUITS MAY BE REUSED TO PROVIDE PRIMARY POWER TO NEW CONTROL PANELS AND REMOTE POWER SUPPLIES. FURNISH A BATTERY BACKUP TO PROVIDE SECONDARY POWER SUPPLY TO FIRE ALARM PANELS AND REMOTE POWER SUPPLIES. BATTERY BACKUP SHALL BE OF SUFFICIENT CAPACITY TO PROVIDE 24 HOURS OF 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 250 DEVICES (DETECTORS AND MODULES) PER LOOP. AT LEAST 50 ADDRESSES (20%) SHALL BE LEFT VACANT ON EACH SLC LOOP IN ORDER TO ALLOW SPACE FOR ADJUSTMENTS/EXPANSION.
SMOKE DETECTORS: INSTALL SMOKE DETECTORS AS SHOWN ON PLANS IN ALL CORRIDORS AND LOBBIES AND ABOVE CONTROL EQUIP. MAXIMUM SPACING OF DETECTORS SHALL BE 30' BETWEEN DETECTORS OR 15' FROM FURTHEST WALL. INSTALL DETECTORS ON RECESSED OR OR SURFACE MOUNT J-BOXES TIGHT TO CEILING/DECK.
HEAT DETECTORS: INSTALL HEAT DETECTORS AS SHOWN ON PLANS IN AREAS WITH FIRE SPRINKLERS OR SMOKE DETECTORS AND IN MECHANICAL/EQUIPMENT AREAS. MAXIMUM SPACING OF DETECTORS SHALL BE 50' BETWEEN DETECTORS OR 25' FROM FURTHEST WALL. REDUCE SPACING PER NFPA 72 FOR INSTALLATION IN HIGH CEILING AREAS. INSTALL DETECTORS ON RECESSED OR SURFACE MOUNT J-BOXES TIGHT TO CEILING/DECK. FOLLOW REQUIREMENTS OF NFPA 72 FOR INSTALLATION UNDER BEAMED CEILINGS.
MANUAL PULL STATIONS: INSTALL NEW PULL STATIONS AS SHOWN ON PLANS AT EACH BUILDING EXIT AND IN BOILER ROOMS. INSTALL PULL STATIONS ON RECESSED OR SURFACE MOUNT J-BOXES WITH THE OPERATING ELEMENT AT 48" AFF. ADJUST HEIGHT OF EXISTING J-BOXES AS REQUIRED.
DUCT SMOKE DETECTORS: INSTALL DUCT SMOKE DETECTORS (SAMPLING TUBE TYPE) IN SUPPLY AND/OR RETURN DUCTS OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL NEW DETECTORS AT SAME LOCATION AS EXISTING DETECTORS WHERE PRESENT. INSTALL PER NFPA 72 AND MANUFACTURER'S REQUIREMENTS.
BEAM DETECTORS: INSTALL PROJECTED BEAM TYPE SMOKE DETECTORS AS INDICATED ON PLANS FOR LARGE OPEN AREAS WITH HIGH CEILINGS. DETECTORS SHALL BE SINGLE-ENDED, REFLECTIVE TYPE WITH ADJUSTABLE SENSITIVITY AND BUILT-IN SENSITIVITY TEST FEATURE (INSTALL REMOTE TEST SWITCH). INSTALL PER NFPA 72 AND MANUFACTURER'S REQUIREMENTS.
- TESTING: SCHEDULE AND PERFORM ALL ACCEPTANCE TESTS REQUIRED BY NFPA 72. TESTING SHALL BE WITNESSED BY 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 ONE DAY PRIOR TO SCHEDULED TEST.

FIRE ALARM SYSTEM KEY NOTES

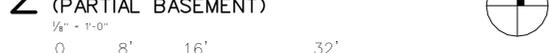
- EXISTING SIMPLEX 4100 FIRE ALARM CONTROL PANEL TO BE UPGRADED TO BE A 4100U, REPLACE ALL REQUIRED MODULES, DEVICES, CABINETS, ETC. REQUIRED TO PERFORM THE UPGRADE. INSTALL NEW NETWORK CIRCUITS AND INTERFACE CARDS TO FACILITATE CONNECTION OF FACP TO NEW CAMPUS FIRE ALARM NETWORK. EXISTING MAP-NET CIRCUITS, INITIATING DEVICE CIRCUITS AND NOTIFICATION APPLIANCE CIRCUITS TO REMAIN. INSTALL NEW ID-NET MODULE AND CIRCUIT SUITABLE FOR COMMUNICATION WITH NEW TRUEALARM SIGN BOARD (SEE KEY NOTE 04 BELOW).
- INSTALL NEW FIBER OPTIC CABLE FOR FIRE ALARM NETWORK COMMUNICATION BETWEEN EACH FACP ON CAMPUS. CABLE MAY BE RUN OVERHEAD IN BUILDINGS (IN CONDUIT) BUT SHALL BE INSTALLED IN EXISTING UNDERGROUND COMMUNICATIONS CONDUIT OR TUNNELS BETWEEN BUILDINGS. SEE NETWORK PLAN (SHEET FA-0.1).
- EXISTING ADDRESSABLE INITIATING DEVICES ARE PRESENT THROUGHOUT BUILDING AND SHALL REMAIN. EXISTING NOTIFICATION APPLIANCE CIRCUITS AND DEVICES ARE PRESENT THROUGHOUT BUILDING AND SHALL REMAIN.
- INSTALL SIMPLEX TRUEALARM SIGN BOARD WHERE INDICATED ON PLAN. CONNECT SIGN BOARD TO NEW ID-NET CIRCUIT FROM FACP FOR CONTROL. PROVIDE 24 VDC POWER TO BOARD FROM FACP. COORDINATE MOUNTING HEIGHT, LOCATION AND EMERGENCY MESSAGES TO BE DISPLAYED WITH OWNER. OWNER TO PROVIDE LAN CONNECTION (FUTURE) TO SIGN BOARD TO ALLOW OFF-SITE CONTROL VIA IP NETWORK.
- INSTALL AMBER STROBE ADJACENT TO TEXT MESSAGE BOARD. DEVICE SHALL BE CONNECTED TO SPARE NAC CIRCUIT OF FACP AND SHALL BE PROGRAMMED TO FLASH CONTINUOUSLY WHEN AN EMERGENCY MESSAGE IS DISPLAYED ON ADJACENT MESSAGE BOARD.



1 FIRE ALARM PLAN - NOYES BUILDING (MAIN LEVEL)



2 FIRE ALARM PLAN - NOYES BUILDING (PARTIAL BASEMENT)



FIRE ALARM EQUIPMENT LEGEND

DEVICE	DESCRIPTION	MOUNTING	REMARKS
FACP	ADDRESSABLE FIRE ALARM CONTROL PANEL	SURFACE MOUNT AT SAME HEIGHT AS EXISTING	REPLACE EXISTING FACP WITH NEW SIMPLEX 4100 U
NDU	FIRE ALARM NETWORK DISPLAY UNIT	SURFACE MOUNT AT SAME HEIGHT AS EXISTING	REPLACE EXISTING NETWORK CONTROL PANEL WITH NEW SIMPLEX 4100 U
ANN	FIRE ALARM ANNUNCIATOR PANEL	SURFACE MOUNT OR MOUNT ON RECESSED J-BOX AT 54" AFF	TO DISPLAY STATUS OF FIRE ALARM SYSTEM. PROVIDE 24 VDC POWER TO BOARD FROM FACP. COORDINATE MOUNTING HEIGHT, LOCATION AND EMERGENCY MESSAGES TO BE DISPLAYED WITH OWNER. OWNER TO PROVIDE LAN CONNECTION (FUTURE) TO SIGN BOARD TO ALLOW OFF-SITE CONTROL VIA IP NETWORK.
FAPS	REMOTE POWER SUPPLY	SURFACE MOUNT AT 54" AFF	TO PROVIDE POWER TO NOTIFICATION APPLIANCES, DOOR HOLDERS, INITIATING DEVICES, ETC.
DNCT	DIGITAL ALARM COMMUNICATOR/TRANSMITTER	SURFACE MOUNT AT SAME HEIGHT AS EXISTING	TO RELAY FIRE ALARM, SUPERVISORY AND TROUBLE SIGNALS FROM NDU TO CENTRAL STATION
SMIB	TRUEALERT TEXT MESSAGE BOARD	WALL MOUNT WHERE INDICATED ON PLANS. COORDINATE HEIGHT WITH OWNER.	TO DISPLAY TEXT MESSAGES (PRE-PROGRAMMED) TO FACILITATE FUTURE LAN INTERFACES TO PROVIDE EMERGENCY INSTRUCTIONS
⊙	ADDRESSABLE PHOTOELECTRIC TYPE SMOKE DETECTOR	CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING SMOKE DETECTOR WITH NEW ADDRESSABLE DEVICE
⊙N	ADDRESSABLE PHOTOELECTRIC TYPE SMOKE DETECTOR	CEILING MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX	ADD NEW SMOKE DETECTOR WHERE INDICATED
⊙A	EXISTING SMOKE DETECTOR	EXISTING	REMOVE EXISTING DETECTOR AND INSTALL COVER PLATE ON REMAINING J-BOX
⊙A	EXISTING ADDRESSABLE SMOKE DETECTOR	EXISTING	EXISTING DETECTOR TO REMAIN. CONNECT TO NEW FACP
⊙S	SLEEPING AREA SMOKE ALARM WITH INTEGRAL HEAT DETECTOR	CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING SMOKE DETECTOR WITH NEW ADDRESSABLE SMOKE ALARM WITH SOUNDER BASE TO FUNCTION AS A SLEEPING AREA SMOKE ALARM. PROGRAM ACTIVATION OF SMOKE DETECTOR AS A SUPERVISORY FUNCTION. INSTALL ALL SOUNDER BASES WITHIN THE DWELLING UNIT. PROGRAM ACTIVATION OF HEAT DETECTOR AS A FIRE ALARM SIGNAL. ACTUATING ALL SOUNDER BASES AND AUDIBLE/VISUAL ALARMS IN THE BUILDING.
⊙H	ADDRESSABLE FIXED TEMP. TYPE HEAT DETECTOR	CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING CONVENTIONAL DEVICE WITH NEW ADDRESSABLE DEVICE
⊙HN	ADDRESSABLE FIXED TEMP. TYPE HEAT DETECTOR	CEILING MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX	ADD NEW HEAT DETECTOR WHERE INDICATED
H	EXISTING HEAT DETECTOR	EXISTING	REMOVE EXISTING DETECTOR AND INSTALL COVER PLATE ON REMAINING J-BOX
H/A	EXISTING ADDRESSABLE HEAT DETECTOR	EXISTING	EXISTING DETECTOR TO REMAIN. CONNECT TO NEW FACP
⊙M	ADDRESSABLE MANUAL PULL STATION	WALL MOUNT ON EXISTING OR RECESSED J-BOX AT 48" AFF	REPLACE EXISTING CONVENTIONAL DEVICE WITH NEW ADDRESSABLE DEVICE
⊙MN	ADDRESSABLE MANUAL PULL STATION	WALL MOUNT ON EXISTING OR RECESSED J-BOX AT 48" AFF	ADD NEW PULL STATION WHERE INDICATED ON PLAN
⊙M	EXISTING MANUAL PULL STATION	EXISTING	REMOVE EXISTING PULL STATION AND INSTALL COVER PLATE ON REMAINING J-BOX
⊙M/A	EXISTING ADDRESSABLE MANUAL PULL STATION	EXISTING	EXISTING PULL STATION TO REMAIN. CONNECT TO NEW FACP
⊙T/R	PROJECTED BEAM TYPE SMOKE DETECTOR	WALL OR CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING BEAM DETECTOR WITH NEW SINGLE ENDED REFLECTED TYPE BEAM DETECTOR (SYSTEM SENSOR BEAM 12250 OR EQUAL)
⊙D	ADDRESSABLE DUCT MOUNTED SMOKE DETECTOR	EXISTING	REPLACE EXISTING CONVENTIONAL DEVICE WITH NEW ADDRESSABLE DEVICE
⊙DN	ADDRESSABLE DUCT MOUNTED SMOKE DETECTOR	MOUNT ON EXISTING SUPPLY AND/OR RETURN DUCT	ADD NEW DUCT MOUNTED SMOKE DETECTOR (WITH SAMPLING TUBES) WHERE INDICATED
⊙D	EXISTING DUCT MOUNTED SMOKE DETECTOR	EXISTING	REMOVE EXISTING DETECTOR, HOUSING AND SAMPLING TUBES. PATCH HOLE IN DUCT
⊙D/A	EXISTING ADDRESSABLE DUCT MOUNTED SMOKE DETECTOR	EXISTING	EXISTING DUCT SMOKE DETECTOR TO REMAIN. CONNECT TO NEW FACP
⊙I	ADDRESSABLE INPUT MODULE	SURFACE MOUNT ON J-BOX NEAR CONVENTIONAL DEVICE TO BE MONITORED	CONNECT TO CONTACTS OF CONVENTIONAL DEVICE TO FACILITATE MONITORING AS AN ADDRESSABLE POINT
⊙O	ADDRESSABLE OUTPUT MODULE	SURFACE MOUNT ON J-BOX WITHIN 3' OF DEVICE OR CIRCUIT CONTROLLED	TO PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS SUCH AS DOOR RELEASE, FAN SHUTDOWN, DAMPER ACTUATION, ELEVATOR RECALL, ETC.
⊙D	MAGNETIC DOOR HOLD-OPEN DEVICE (EXISTING)	EXISTING	EXISTING DEVICE TO REMAIN. CONNECT TO NEW FACP TO PROVIDE POWER AND CONTROL
⊙D	MAGNETIC DOOR HOLD-OPEN DEVICE (NEW)	WALL MOUNT AT TOP EDGE OF DOOR OR RECESSED OR SURFACE MOUNT J-BOX	CONNECT TO NEW FACP TO PROVIDE POWER AND CONTROL
⊙T	FIRE SPRINKLER VALVE TAMPER SWITCH	EXISTING	PROVIDE INPUT MODULE AND CONNECT TO NEW FACP
⊙F	FIRE SPRINKLER WATER FLOW SWITCH	EXISTING	PROVIDE INPUT MODULE AND CONNECT TO NEW FACP
⊙X	STROBE	WALL MOUNT ON EXISTING OR RECESSED J-BOX BETWEEN 80" AND 96" AFF	INSTALL NEW NOTIFICATION APPLIANCE TO FACILITATE MONITORING AS AN ADDRESSABLE POINT
⊙X	HORN/STROBE	CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING HORN/STROBE WITH NEW ADDRESSABLE DEVICE
⊙XN	STROBE	WALL MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX BETWEEN 80" AND 96" AFF	ADD NEW STROBE WHERE INDICATED
⊙XN	HORN/STROBE	CEILING MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX	ADD NEW HORN/STROBE WHERE INDICATED
⊙XN	EXTERIOR HORN/STROBE	WALL MOUNT ON EXISTING WEATHERPROOF J-BOX	REPLACE EXISTING HORN/STROBE WITH NEW ADDRESSABLE DEVICE
⊙XN	EXTERIOR HORN/STROBE	WALL MOUNT AT 10" AFF ON NEW SURFACE MOUNT WEATHERPROOF J-BOX	ADD NEW EXTERIOR HORN/STROBE WHERE INDICATED
⊙A	EXISTING NOTIFICATION APPLIANCE	EXISTING	REMOVE EXISTING BELL, HORN, STROBE OR HORN/STROBE AND PROVIDE COVER PLATE ON RECESSED J-BOX
⊙A	AMBER STROBE	WALL MOUNT ADJACENT TO TEXT MESSAGE BOARD	AMBER STROBE TO FLASH CONTINUOUSLY WHILE EMERGENCY MESSAGE IS DISPLAYED ON ADJACENT TEXT MESSAGE BOARD. PROVIDE 24 VDC SUPERSEDED POWER FROM FACP

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DWG ISSUE: ADD #1

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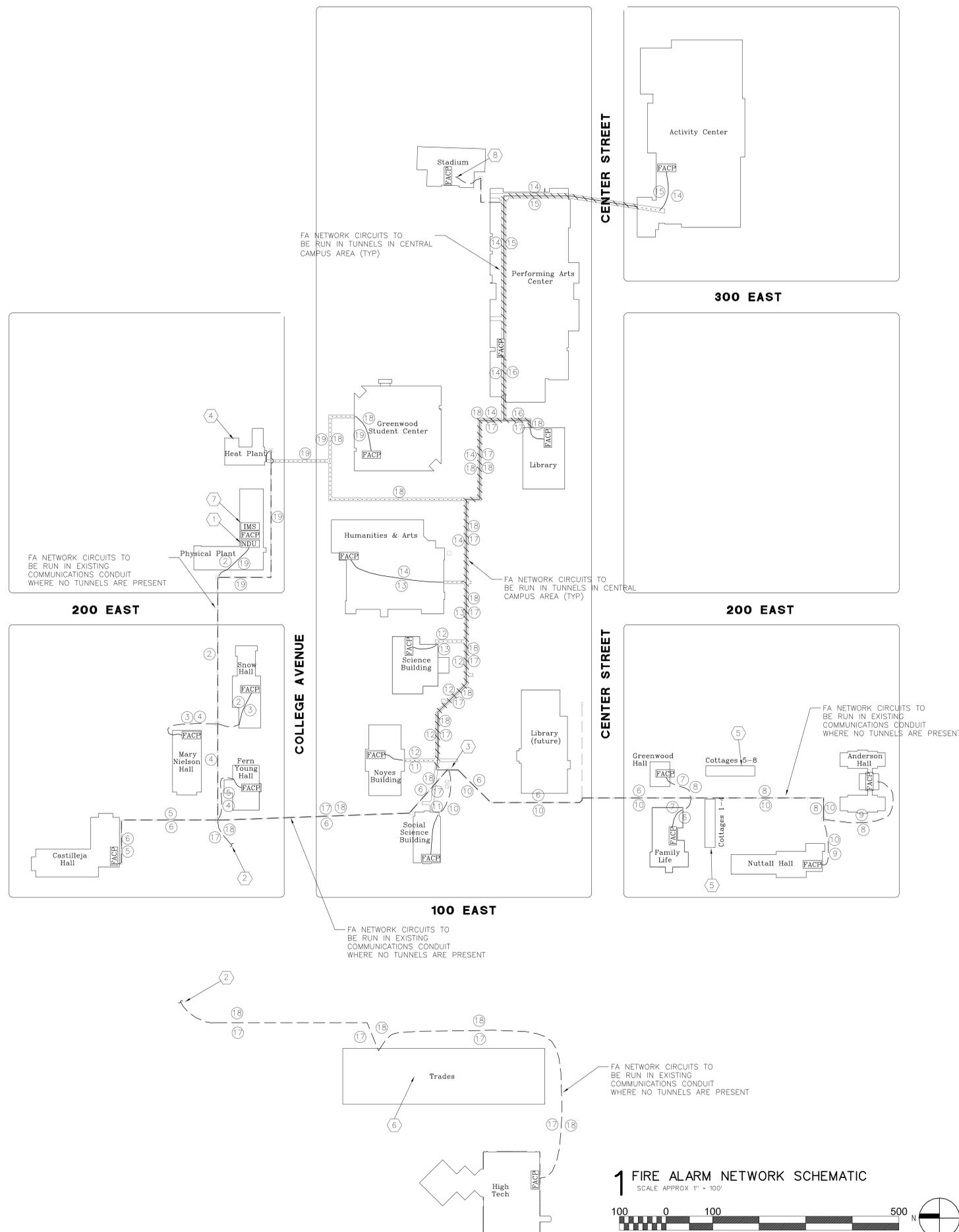
REVISIONS:
ADDENDUM #1
05/26/09

DRAWING DATE: 04/30/09
REVISION DATE: 05/26/09

SNOW COLLEGE - NOYES BUILDING
EPHRAIM, UTAH

FIRE ALARM SYSTEM UPGRADE
DFCM PROJECT # 07159700

FIRE ALARM PLAN - NOYES BUILDING
NY-FA1



FIRE ALARM NETWORK KEYED NOTES

- ① NETWORK DISPLAY UNIT (NDU) TO BE INSTALLED ADJACENT TO FIRE ALARM CONTROL PANEL (FACP) IN PHYSICAL PLANT BUILDING. NDU SHALL DISPLAY ALL FIRE ALARM SIGNALS (ALARM, SUPERVISORY & TROUBLE) FROM ALL CONNECTED FACPS ON CAMPUS. NDU SHALL DISPLAY BUILDING WHERE SIGNAL ORIGINATES ALONG WITH DEVICE TYPE, ADDRESS AND A PRE-PROGRAMMED DESCRIPTION TO ENABLE RAPID IDENTIFICATION OF LOCATION OF FIRE ALARM SIGNAL. INSTALL A DIGITAL ALARM COMMUNICATOR/TRANSMITTER (DACT) TO RELAY SIGNALS RECEIVED BY THE NDU TO THE OFF-PREMISE CENTRAL STATION SELECTED BY THE OWNER. DACT MAY BE INTEGRATED INTO THE NDU OR SEPRATE FROM NDU.
- ② NETWORK CONNECTION BETWEEN THE FACP IN THE LIBRARY (EAST CAMPUS) AND THE FACP IN THE HIGH TECH/TRADES BUILDING (WEST CAMPUS) SHALL USE EXISTING FIBER OPTIC CABLE PROVIDED BY OWNER. EXISTING FIBER RUNS THROUGH UTILITY TUNNEL FROM LIBRARY TO SOCIAL SCIENCE BUILDING, THEN IN UNDERGROUND COMMUNICATIONS CONDUIT TO NEAR FERN YOUNG HALL WHERE IT TRANSITIONS TO OVERHEAD TELEPHONE POLES. COORDINATE USE OF EXISTING FIBER WITH OWNER.
- ③ TRANSITION NETWORK CIRCUITS FROM BURIED COMMUNICATIONS CONDUIT TO UTILITY TUNNELS NEAR SOCIAL SCIENCE BUILDING.
- ④ NO FACP IS PRESENT IN THE HEAT PLANT. FIRE ALARM DEVICES IN THE HEAT PLANT ARE CONNECTED TO FACP IN PHYSICAL PLANT. NO NETWORK CIRCUIT IS REQUIRED TO EXTEND TO HEAT PLANT.
- ⑤ NO FACP IS PRESENT IN COTTAGES 1-4 OR COTTAGES 5-8. FIRE ALARM DEVICES IN THE COTTAGES ARE CONNECTED TO THE FACP IN GREENWOOD HALL. NO NETWORK CIRCUIT IS REQUIRED TO EXTEND TO COTTAGES 1-4 OR COTTAGES 5-8.
- ⑥ NO FACP IS PRESENT IN THE TRADES BUILDING. FIRE ALARM DEVICES IN THE TRADES BUILDING ARE CONNECTED TO THE FACP IN THE HIGH TECH BUILDING. NO NETWORK CIRCUIT IS REQUIRED TO EXTEND TO THE TRADES BUILDING.
- ⑦ BID ALTERNATE #1: FURNISH AND INSTALL A SIMPLEX TRUE ALARM INFORMATION MANAGEMENT SYSTEM (IMS) FOR THE CAMPUS FIRE ALARM NETWORK. IMS SHALL BE CONFIGURED FOR DESKTOP INSTALLATION WITH 17" LCD MONITOR, KEYBOARD AND MOUSE. IMS SHALL HAVE PRE-LOADED GRAPHIC MAPS/DISPLAYS OF ALL FIRE ALARM SYSTEMS CONNECTED TO THE NETWORK. MAPS/DISPLAYS SHALL INCLUDE FLOOR PLANS, ROOM DESIGNATIONS, INITIATING DEVICES (WITH ADDRESSES), CONTROL EQUIPMENT AND CONTROL RELAYS. COORDINATE LOCATION OF IMS INSTALLATION WITH OWNER. PROVIDE COMPLETE TRAINING IN IMS CONFIGURATION AND OPERATION TO OWNER.
- ⑧ FACP IN STADIUM IS NOT COMPATIBLE WITH NEW FIRE ALARM NETWORK AND NOT SCHEDULED TO BE UPGRADED UNDER THIS CONTRACT. EXTEND EXISTING ID-NET LOOP FROM ADJACENT PERFORMING ARTS BUILDING THROUGH UTILITY TUNNEL AND/OR BURIED CONDUIT TO STADIUM FACP. PROVIDE MONITOR MODULES ON EXTENDED ID-NET LOOP FOR ALARM, SUPERVISORY AND TROUBLE RELAYS OF STADIUM FACP. CONNECT MONITOR MODULES TO STADIUM FACP TO ALLOW NETWORK REPORTING OF STADIUM FACP EVENTS THROUGH PERFORMING ARTS FACP.

FIRE ALARM NETWORK ROUTING

LEG #	FROM (FACP OR NET NODE)	TO (FACP OR NET NODE)	ESTIMATED MINIMUM DISTANCE**
*①	NETWORK DISPLAY UNIT	PHYSICAL PLANT	10'
②	PHYSICAL PLANT	SNOW HALL	600'
③	SNOW HALL	MARY NIELSON HALL	400'
④	MARY NIELSON HALL	FERN YOUNG HALL	650'
⑤	FERN YOUNG HALL	CASTILLEJA HALL	550'
⑥	CASTILLEJA HALL	FAMILY LIFE	1,850'
⑦	FAMILY LIFE	GREENWOOD HALL	300'
⑧	GREENWOOD HALL	ANDERSON HALL	800'
⑨	ANDERSON HALL	NUTTALL HALL	500'
⑩	NUTTALL HALL	SOCIAL SCIENCE	1,600'
⑪	SOCIAL SCIENCE	NOYES	570'
⑫	NOYES	SCIENCE	780'
⑬	SCIENCE	HUMANITIES	740'
⑭	HUMANITIES	ACTIVITY CENTER	2,510'
⑮	ACTIVITY CENTER	PERFORMING ARTS	850'
⑯	PERFORMING ARTS	LIBRARY	330'
⑰	LIBRARY	HIGH TECH/TRADES	6,000' ***
⑱	HIGH TECH/TRADES	STUDENT CENTER ****	6,000' *** + 1,300'
⑲	STUDENT CENTER	IMS	1,150'
⑳	IMS	NETWORK DISPLAY UNIT	200'
TOTAL			15,690'

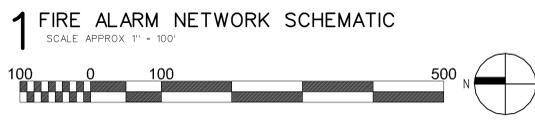
* LEG 1 & 20 (NDU TO IMS & TO ADJACENT FACP FOR PHYSICAL PLANT) MAY BE FIBER OR COPPER (CONTRACTOR'S OPTION)
 ** DISTANCE PROVIDED IS ENGINEER'S ESTIMATE ONLY AND NOT TO BE RELIED UPON FOR BID. CONTRACTOR SHALL FIELD VERIFY ACTUAL DISTANCE.
 *** LEGS 17 & 18 TO USE (IN PART) EXISTING FIBER PROVIDED BY SNOW COLLEGE AND ARE NOT INCLUDED IN TOTAL
 **** SPLICE FIBER AS REQUIRED AT TERMINATION POINT IN LIBRARY

FIRE ALARM NETWORK GENERAL NOTES

1. PROVIDE A NEW FIRE ALARM NETWORK TO CONNECT EACH SIMPLEX FIRE ALARM PANEL (EXISTING OR UPGRADED) ON THE CAMPUS OF SNOW COLLEGE (INCLUDING WEST CAMPUS) TO THE NEW NETWORK DISPLAY UNIT AND INFORMATION MANAGEMENT SYSTEM (BID ALTERNATE #1) TO BE INSTALLED IN THE PHYSICAL PLANT BUILDING. THE NETWORK ARCHITECTURE SHALL BE BASED ON A LOCAL AREA NETWORK WITH PEER-TO-PEER CONNECTIONS. ROUTING OF FIRE ALARM NETWORK CONNECTIONS SHALL BE AS SHOWN ON THIS DRAWING AND INDICATED IN THE TABLE ABOVE. EACH LEG SHALL BEGIN AT THE NETWORK INTERFACE BOARD AT ONE PANEL/NODE AND EXTEND WITHOUT INTERRUPTION OR BREAK TO THE NETWORK INTERFACE BOARD AT THE NEXT PANEL.
2. ALL CABLING USED TO CREATE THE FIRE ALARM NETWORK SHALL BE NEW FIBER OPTIC CABLE WITH THE EXCEPTION OF LEG 17 AND 18 (LIBRARY TO HIGH TECH). LEG # 17 AND THE PORTION OF LEG #18 BETWEEN THE HIGH TECH BUILDING AND THE LIBRARY SHALL UTILIZE EXISTING FIBER OPTIC CABLE PROVIDED BY SNOW COLLEGE. NEW FIBER OPTIC CABLE SHALL MEET ALL OF THE REQUIREMENTS OF THE FIRE ALARM SYSTEM MANUFACTURER (SIMPLEX) AND THE FOLLOWING:
 A. FIBER MODE: SINGLE MODE
 B. FIBER COUNT: 6
 C. MAXIMUM LOSS: 9/125 UM
 D. MAXIMUM ATTENUATION: 15 dB/KM
 E. CONNECTOR TYPE: ST
 F. SPLICES: NOT ALLOWED WITH SPECIFIC APPROVAL FROM ENGINEER
 G. OTHER: OUTDOOR RATED AND RODENT RESISTANT SYSIMAX 3DNX (OR EQUAL)
3. EXCEPT AS NOTED BELOW, ALL NETWORK CABLE SHALL BE INSTALLED IN CONDUIT (RIGID OR EMT). CABLE SHALL BE ROUTED THROUGH EXISTING UTILITY TUNNELS WHERE TUNNELS ARE PRESENT AND MAY BE INSTALLED IN EXISTING UNDERGROUND COMMUNICATIONS CONDUITS WHERE NO TUNNELS ARE PRESENT. WHERE EXISTING PULL STRINGS ARE USED TO INSTALL NEW CABLE IN EXISTING BURIED CONDUITS THEY SHALL BE REPLACED. COORDINATE LOCATION OF COMMUNICATIONS CONDUIT WITH OWNER. CONDUIT IS NOT REQUIRED WHERE NETWORK FIBER CAN BE INSTALLED ON AND SECURED TO EXISTING CABLE TRAYS IN UTILITY TUNNELS.
4. SEQUENCE INSTALLATION OF NEW CABLE AND CONNECTION OF EACH FACP TO THE NETWORK TO MINIMIZE THE DOWN TIME OF EACH FIRE ALARM SYSTEM. NOTIFY CAMPUS PERSONELL WHEN THE COMMUNICATION LINK BETWEEN ANY FIRE ALARM PANEL AND THE CENTRAL MONITORING STATION WILL BE INTERRUPTED. EXISTING FIRE ALARM PANEL MAY ONLY BE DISCONNECTED FROM LINK TO CENTRAL STATION WHILE THE CONTRACTOR IS ON CAMPUS WORKING ON FIRE ALARM NETWORK.
5. LENGTH OF REQUIRED FIBER REPORTED IN TABLE ABOVE SHOULD BE CONSIDERED AS AN ESTIMATE FOR BIDDING PURPOSES AND SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING FIBER OPTIC CABLE AND CONDUIT.
6. CONDUIT CONTAINING FIRE ALARM NETWORK CIRCUITS THAT IS LOCATED IN ACCESSIBLE UTILITY TUNNELS OR WITHIN BUILDINGS SHALL BE PERMANENTLY MARKED TO IDENTIFY CIRCUITS AS FIRE ALARM CIRCUITS. MARKING SHALL CONSIST OF RED PAINTED J-BOXES AND RED BANDING (PAINT OR TAPE) OF CONDUIT EVERY 20'. WHERE CIRCUIT IS INSTALLED EXPOSED ON CABLE TRAY (NO CONDUIT REQUIRED), CABLE SHALL HAVE A RED SHEATH OR SHALL BE MARKED (PAINT OR TAPE) RED EVERY 20'.
7. CONTRACTOR SHALL TEST EACH FIBER OPTIC CABLE INSTALLED UNDER THIS CONTRACT FOR CONTINUITY AND INTEGRITY. DOCUMENT EACH TEST AND SUBMIT TEST DOCUMENTS TO PROJECT ENGINEER FOR APPROVAL. EACH CABLE SHALL CONSIST OF A MINIMUM OF 4 SEPARATE FIBERS, 3 OF WHICH, SHALL BE VERIFIED BY TESTING TO BE CONTINUOUS AND COMPLETELY FUNCTIONAL FOR CURRENT OR FUTURE FIRE ALARM NETWORK SYSTEM USE.

NETWORK CIRCUIT "RACEWAY/CABLE TRAY" LEGEND

CIRCUIT GRAPHIC DESIGNATION	RACEWAY/CABLE TRAY DESCRIPTION
—————	INSTALL NETWORK CIRCUIT IN 1" CONDUIT (RIGID OR EMT) WHERE INSTALLED WITHIN BUILDINGS
- - - - -	INSTALL NETWORK CIRCUIT IN EXISTING BURIED COMMUNICATIONS CONDUIT
.....	INSTALL NETWORK CIRCUIT IN 1" CONDUIT WHERE LOCATED IN TUNNEL WITHOUT CABLE TRAY
=====	INSTALL NETWORK CIRCUIT ON EXISTING CABLE TRAY IN UTILITY TUNNEL WHERE PRESENT (NO CONDUIT REQUIRED)



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 05/26/09

SNOW COLLEGE - FIRE ALARM NETWORK
 EPHRAIM, UTAH

FIRE ALARM SYSTEM UPGRADE
 DFCM PROJECT # 07159700

FA-0.1

FIRE ALARM SYSTEM GENERAL NOTES

- SCOPE OF WORK: WORK SHALL INCLUDE UPGRADING ALL EXISTING CONVENTIONAL FIRE ALARM SYSTEMS (CONTROL EQUIPMENT AND INITIATING DEVICES) TO NEW ADDRESSABLE FIRE ALARM SYSTEMS. EXISTING OCCUPANT NOTIFICATION SHALL BE UPGRADED TO COMPLY WITH CURRENT IBC, NFPA 72 AND ADA REQUIREMENTS. EXISTING CONDUIT, J-BOXES AND WIRING MAY BE RECONFIGURED AND REUSED WHERE COMPATIBLE WITH NEW EQUIPMENT/CIRCUITS. INSTALL NEW CIRCUITS WHERE REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM. A NEW CAMPUS FIRE ALARM NETWORK SHALL BE INSTALLED TO LINK ALL CONTROL PANELS ON CAMPUS TOGETHER AND TO A NEW NETWORK DISPLAY UNIT IN THE PHYSICAL PLANT. FIRE ALARM SYSTEMS SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF THE IBC, IFC, NFPA 72, EQUIPMENT MANUFACTURER (SMPLX), THESE DRAWINGS AND THE PROJECT SPECIFICATIONS.
- APPLICABLE CODES/STANDARDS:
INTERNATIONAL BUILDING CODE - 2006 EDITION
INTERNATIONAL FIRE CODE - 2006 EDITION
INTERNATIONAL MECHANICAL CODE - 2006 EDITION
UTAH STATE FIRE MARSHAL RULE R710-4
NFPA 70 - 2005 EDITION
NFPA 72 - 2007 EDITION
NFPA 90A - 2002 EDITION
- QUALITY ASSURANCE: ALL EQUIPMENT, MATERIAL AND DEVICES USED FOR THE FIRE ALARM SYSTEM INSTALLATION SHALL BE 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). FIRE ALARM EQUIP. (INCLUDING PROGRAMMING/COMMISSIONING) SHALL BE PROVIDED BY SIMPLEX-GRINNELL UNDER SOLE SOURCE ARRANGEMENT APPROVED BY DFCM FOR SNOW COLLEGE. CONTRACTOR SHALL CONTACT SIMPLEX-GRINNELL FOR EQUIPMENT QUOTE:
CONTACT: DAVE CROFF
ADDRESS: 2702 S 1030 W • 60 SALT LAKE CITY, UT 84119
PHONE: 801-703-2735
FAX: 801-262-9423
EMAIL: DCROFF@TYCOINT.COM
- SUBMITTALS: CONTRACTOR SHALL PREPARE AND SUBMIT COMPLETE SHOP DRAWINGS AND CALCULATIONS FOR EACH SYSTEM TO 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. NEW DEVICES WILL REPLACE THE OLD AND GENERALLY REUSE THE EXISTING LOCATIONS. ANY EXISTING DEVICES AND CONDUIT NOT BEING REUSED THAT ARE VISIBLE, SUCH AS CABINETS, NOTIFICATION APPLIANCES, INITIATING DEVICES, ETC. SHALL BE REMOVED AND REMAINING WALL OR CEILING SURFACE REPAIRED OR REPLACED TO MATCH SURROUNDING AREAS. REMOVE ALL UNUSED WIRE IN ALL REMAINING J-BOXES AND/OR CONDUITS. ANY CEILING TILE DAMAGED BY THE INSTALLER MUST BE REPLACED WITH THE SAME OR EQUIV. TILE.
- SYSTEM TYPE: FIRE ALARM SYSTEM SHALL MEET THE ROAMTS FOR PROTECTED PREMISE FIRE ALARM SYSTEMS (AS DEFINED BY NFPA 72). 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 AND HORN/STROBES), FOR PURPOSES OF FIRE ALARM NOTIFICATION, EACH BUILDING SHALL BE CONSIDERED AS A SINGLE ZONE.
- WIRING/CONDUIT: ALL WIRING SHALL BE INSTALLED IN CONDUIT (EMT, RIGID, WIRE MOLD, ETC.). EXISTING CONDUIT AND J-BOXES MAY BE USED FOR NEW OR RECONFIGURED CIRCUITS. MINIMUM CONDUIT SIZE FOR NEW CONDUIT SHALL BE 1/2". CONDUIT MAY BE INSTALLED CONCEALED OR EXPOSED BUT SHALL MATCH TYPE, COLOR, APPEARANCE OF EXISTING. EXPOSED CONDUIT IN UNFINISHED AREAS MAY BE UNPAINTED BUT SHALL BE PERIODICALLY MARKED WITH RED TAPE OR PAINT. EXPOSED CONDUIT IN FINISHED AREAS SHALL BE PAINTED TO MATCH SURROUNDINGS. FLEXIBLE CONDUIT MAY BE USED FOR DROPS TO SINGLE DEVICES. ALL PENETRATIONS THROUGH RATED PARTITIONS SHALL BE FIRE STOPPED WITH A SUITABLE CAULKING COMPOUND. EXISTING WIRING MAY BE REUSED IN NEW FIRE ALARM SYSTEM WHERE COMPATIBLE WITH NEW FIRE ALARM CIRCUITS/DEVICES, FREE OF OPENS SHORTS AND GROUND FAULTS. INSTALL NEW WIRING AS REQUIRED FOR NEW OR RECONFIGURED CIRCUITS. NEW WIRING SHALL MEET THE REQUIREMENTS OF FIRE ALARM EQUIPMENT MANUFACTURER (SMPLX) AND BE FREE OF OPENS, SHORTS AND GROUND FAULTS. ALL WIRING USED IN THE FIRE ALARM SYSTEM SHALL BE FPL (FIRE POWER LIMITED) WITH MINIMUM 300V INSULATION OR EQUIVALENT AS PER ARTICLE 760 OF NFPA 70.
- 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 CIRCUITS. NOTIFICATION APPLIANCE CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A STYLE Z.
- POWER: PROVIDE 120VAC (15 AMP MIN) CIRCUIT FROM EXISTING POWER DISTRIBUTION PANELS TO EACH FACP AND POWER SUPPLY. EXISTING BRANCH CIRCUITS MAY BE REUSED TO PROVIDE PRIMARY POWER TO NEW CONTROL PANELS AND REMOTE POWER SUPPLIES. FURNISH A BATTERY BACKUP TO PROVIDE SECONDARY POWER SUPPLY TO FIRE ALARM PANELS AND REMOTE POWER SUPPLIES. BATTERY BACKUP SHALL BE OF SUFFICIENT CAPACITY TO PROVIDE 24 HOURS OF 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 250 DEVICES (DETECTORS AND MODULES) PER LOOP. AT LEAST 50 ADDRESSES (20%) SHALL BE LEFT VACANT ON EACH SLC LOOP IN ORDER TO ALLOW SPACE FOR ADJUSTMENTS/EXPANSION.
SMOKE DETECTORS: INSTALL SMOKE DETECTORS AS SHOWN ON PLANS IN ALL CORRIDORS AND LOBBIES AND ABOVE CONTROL EQUIP. MAXIMUM SPACING OF DETECTORS SHALL BE 30' BETWEEN DETECTORS OR 15' FROM FURTHEST WALL. INSTALL DETECTORS ON RECESSED OR SURFACE MOUNT J-BOXES TIGHT TO CEILING/DECK.
HEAT DETECTORS: INSTALL HEAT DETECTORS AS SHOWN ON PLANS IN AREAS WITH FIRE SPRINKLERS OR SMOKE DETECTORS AND IN MECHANICAL/EQUIPMENT AREAS. MAXIMUM SPACING OF DETECTORS SHALL BE 50' BETWEEN DETECTORS OR 25' FROM FURTHEST WALL. REDUCE SPACING PER NFPA 72 FOR INSTALLATION IN HIGH CEILING AREAS. INSTALL DETECTORS ON RECESSED OR SURFACE MOUNT J-BOXES TIGHT TO CEILING/DECK. FOLLOW REQUIREMENTS OF NFPA 72 FOR INSTALLATION UNDER BEAMED CEILINGS.
MANUAL PULL STATIONS: INSTALL NEW PULL STATIONS AS SHOWN ON PLANS AT EACH BUILDING EXIT AND IN BOILER ROOMS. INSTALL PULL STATIONS ON RECESSED OR SURFACE MOUNT J-BOXES WITH THE OPERATING ELEMENT AT 48" AFF. ADJUST HEIGHT OF EXISTING J-BOXES AS REQUIRED.
DUCT SMOKE DETECTORS: INSTALL DUCT SMOKE DETECTORS (SAMPLING TUBE TYPE) IN SUPPLY AND/OR RETURN DUCTS OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL NEW DETECTORS AT SAME LOCATION AS EXISTING DETECTORS WHERE PRESENT. INSTALL PER NFPA 72 AND MANUFACTURER'S REQUIREMENTS.
BEAM DETECTORS: INSTALL PROJECTED BEAM TYPE SMOKE DETECTORS AS INDICATED ON PLANS FOR LARGE OPEN AREAS WITH HIGH CEILINGS. DETECTORS SHALL BE SINGLE-ENDED, REFLECTIVE TYPE WITH ADJUSTABLE SENSITIVITY AND BUILT-IN SENSITIVITY TEST FEATURE (INSTALL REMOTE TEST SWITCH). INSTALL PER NFPA 72 AND MANUFACTURER'S REQUIREMENTS.
- INPUT MODULES: PROVIDE ADDRESSABLE MODULES TO MONITOR NEW OR EXISTING CONVENTIONAL INITIATING DEVICES (FIRE SPKR SWITCHES, BEAM DETECTORS, ETC.). LOCATE MODULES ADJACENT TO DEVICE MONITORED IN AN ACCESSIBLE LOCATION OR ABOVE REMOVABLE CEILING TILE. MODULE SHALL HAVE EXTERNALLY VISIBLE LED TO INDICATE STATUS. LABEL MODULE WITH THE TYPE AND ADDRESS OF THE DEVICE MONITORED.
- NOTIFICATION APPLIANCES: PROVIDE AUDIBLE AND VISUAL NOTIFICATION APPLIANCES THROUGHOUT BUILDING. VOLUME OF HORNS SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL OF 15 DB ABOVE AMBIENT IN ALL OCCUPIED AREAS. VISIBLE ALARMS SHALL BE PROVIDED THROUGHOUT ALL OCCUPIED AREAS OF THE BUILDING AS REQUIRED BY THE IBC AND ADA GUIDELINES. STROBES SHALL FLASH IN SYNCHRONIZATION. CONFIGURE CIRCUITS TO ALLOW HORNS TO BE SILENCED WHILE STROBES CONTINUE TO FLASH.
- PROTECTED PREMISE FIRE SAFETY FUNCTIONS: INSTALL PROGRAMMABLE OUTPUT MODULES WITH RELAY CONTACTS TO INITIATE REQUIRED FIRE SAFETY FUNCTIONS (DOOR RELEASE, FAN SHUTDOWN, DAMPER ACTUATION, ELEVATOR RECALL, ETC.). OUTPUT MODULES SHALL BE INSTALLED WITHIN 36" OF DEVICE OR CIRCUIT CONTROLLED. ALL EXISTING PROTECTED PREMISE FIRE SAFETY FUNCTIONS CONTROLLED BY EXISTING FIRE ALARM SYSTEM SHALL BE MIGRATED TO NEW SYSTEM AND TESTED TO VERIFY PROPER FUNCTION.
- PHASING: PLAN SEQUENCE OF WORK TO MINIMIZE DOWN TIME OF FIRE ALARM SYSTEM AND EXISTING FIRE ALARM NETWORK. IT IS THE INSTALLER'S RESPONSIBILITY TO NOTIFY PROPER AUTHORITIES AND PROVIDE A FIRE WATCH 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 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 ONE DAY PRIOR TO SCHEDULED TEST.

FIRE ALARM SYSTEM KEY NOTES

- EXISTING SIMPLEX 4100 FIRE ALARM CONTROL PANEL TO BE UPGRADED TO BE A 4100U. REPLACE ALL REQUIRED MODULES, DEVICES, CABINETS, ETC. REQUIRED TO PERFORM THE UPGRADE. INSTALL NEW NETWORK CIRCUITS AND INTERFACE CARDS TO FACILITATE CONNECTION OF FACP TO NEW CAMPUS FIRE ALARM NETWORK. EXISTING MAP-NET CIRCUITS, INITIATING DEVICE CIRCUITS AND NOTIFICATION APPLIANCE CIRCUITS TO REMAIN. INSTALL NEW ID-NET MODULE AND CIRCUIT SUITABLE FOR COMMUNICATION WITH NEW TRUE-ALARM SIGN BOARD (SEE KEY NOTE 04 BELOW).
- INSTALL NEW FIBER OPTIC CABLE FOR FIRE ALARM NETWORK COMMUNICATION BETWEEN EACH FACP ON CAMPUS. CABLE MAY BE RUN OVERHEAD IN BUILDINGS (IN CONDUIT) BUT SHALL BE INSTALLED IN EXISTING UNDERGROUND COMMUNICATIONS CONDUIT OR TUNNELS BETWEEN BUILDINGS. SEE NETWORK PLAN (SHEET FA-0.1).
- EXISTING ADDRESSABLE INITIATING DEVICES ARE PRESENT THROUGHOUT BUILDING AND SHALL REMAIN. EXISTING NOTIFICATION APPLIANCE CIRCUITS AND DEVICES ARE PRESENT THROUGHOUT BUILDING AND SHALL REMAIN.
- INSTALL SIMPLEX TRUE-ALARM SIGN BOARD WHERE INDICATED ON PLAN. CONNECT SIGN BOARD TO NEW ID-NET CIRCUIT FROM FACP FOR CONTROL. PROVIDE 24 VDC POWER TO BOARD FROM FACP. COORDINATE MOUNTING HEIGHT, LOCATION AND EMERGENCY MESSAGES TO BE DISPLAYED WITH OWNER. OWNER TO PROVIDE LAN CONNECTION (FUTURE) TO SIGN BOARD TO ALLOW OFF-SITE CONTROL VIA IP NETWORK.
- INSTALL AMBER STROBE ADJACENT TO TEXT MESSAGE BOARD. DEVICE SHALL BE CONNECTED TO SPACE NAC CIRCUIT OF FACP AND SHALL BE PROGRAMMED TO FLASH CONTINUOUSLY WHEN AN EMERGENCY MESSAGE IS DISPLAYED ON ADJACENT MESSAGE BOARD.

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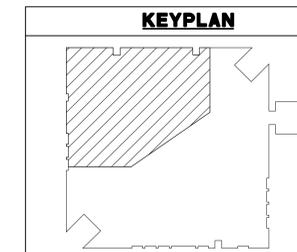
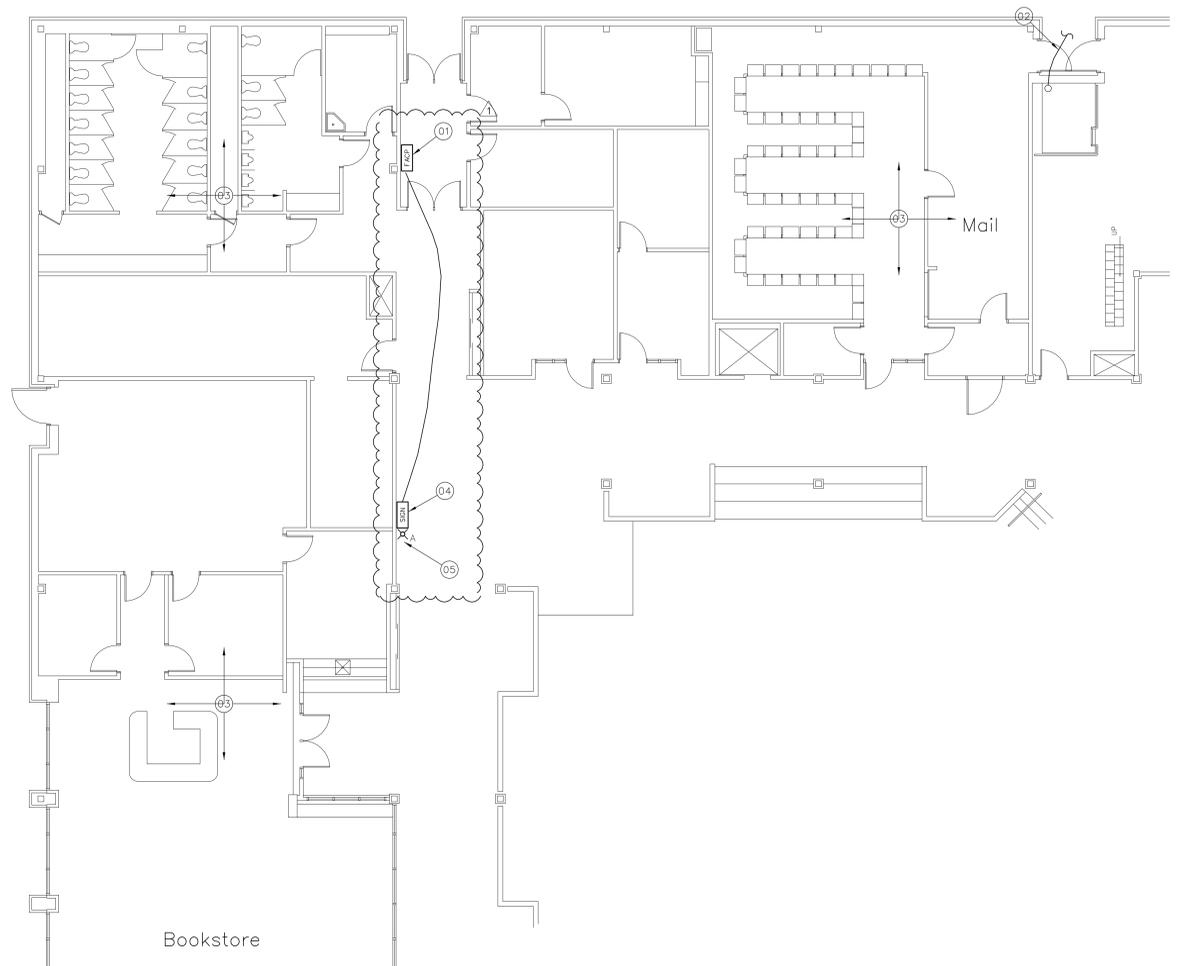
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SNOW COLLEGE - STUDENT CENTER
EPHRAIM, UTAH

FIRE ALARM SYSTEM UPGRADE
DFCM PROJECT # 07159700

FIRE ALARM PLAN - STUDENT CENTER
SC-FA1

SHEET 47 OF 48



FIRE ALARM EQUIPMENT LEGEND

DEVICE	DESCRIPTION	MOUNTING	REMARKS
FACP	ADDRESSABLE FIRE ALARM CONTROL PANEL	SURFACE MOUNT AT SAME HEIGHT AS EXISTING	REPLACE EXISTING FACP WITH NEW SIMPLEX 4100 U
NDU	FIRE ALARM NETWORK DISPLAY UNIT	SURFACE MOUNT AT SAME HEIGHT AS EXISTING	REPLACE EXISTING NETWORK CONTROL PANEL WITH NEW SIMPLEX 4100U
ANN	FIRE ALARM ANNUNCIATOR PANEL	SURFACE MOUNT OR MOUNT ON RECESSED J-BOX AT 54" AFF	TO DISPLAY STATUS OF FIRE ALARM SYSTEM. ANNUNCIATOR SHALL HAVE ALPHA-NUMERIC READOUT AND KEYPAD TO ALLOW SYSTEM SILENCE AND RESET.
FAPS	REMOTE POWER SUPPLY	SURFACE MOUNT AT 54" AFF	TO PROVIDE POWER TO NOTIFICATION APPLIANCES, DOOR HOLDERS, INITIATING DEVICES, ETC.
DACT	DIGITAL ALARM COMMUNICATOR/ TRANSMITTER	SURFACE MOUNT AT SAME HEIGHT AS EXISTING	TO RELAY FIRE ALARM, SUPERVISORY AND TROUBLE SIGNALS FROM NDU TO CENTRAL STATION
SIGN	TRUE-ALARM TEXT MESSAGE BOARD	WALL MOUNT WHERE INDICATED ON PLAN. COORDINATE HEIGHT WITH OWNER	TO DISPLAY TEXT MESSAGES (PRE-PROGRAMMED OR THROUGH FUTURE LAN INTERFACE) TO PROVIDE EMERGENCY INSTRUCTIONS
⊙	ADDRESSABLE PHOTOELECTRIC TYPE SMOKE DETECTOR	CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING SMOKE DETECTOR WITH NEW ADDRESSABLE DEVICE
⊙N	ADDRESSABLE PHOTOELECTRIC TYPE SMOKE DETECTOR	CEILING MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX	ADD NEW SMOKE DETECTOR WHERE INDICATED
⊙A	EXISTING SMOKE DETECTOR	EXISTING	REMOVE EXISTING DETECTOR AND INSTALL COVER PLATE ON REMAINING J-BOX
⊙A	EXISTING ADDRESSABLE SMOKE DETECTOR	EXISTING	EXISTING DETECTOR TO REMAIN. CONNECT TO NEW FACP
⊙S	SLEEPING AREA SMOKE ALARM WITH INTEGRAL HEAT DETECTOR	CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING SMOKE DETECTOR WITH SOUNDER BASE TO FUNCTION AS A SMOKE DETECTOR. SMOKE ALARM PROGRAM ACTIVATION OF SMOKE DETECTOR AS A SUPERVISORY SIGNAL. ACTUATING ALL SOUNDER BASES WITHIN THE DWELLING UNIT. PROGRAM ACTIVATION OF SMOKE DETECTOR AS A FIRE ALARM SIGNAL. ACTUATING ALL SOUNDER BASES AND AUDIBLE/VISUAL ALARMS IN THE BUILDING.
⊙	ADDRESSABLE FIXED TEMP. TYPE HEAT DETECTOR	CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING CONVENTIONAL DEVICE WITH NEW ADDRESSABLE DEVICE
⊙N	ADDRESSABLE FIXED TEMP. TYPE HEAT DETECTOR	CEILING MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX	ADD NEW HEAT DETECTOR WHERE INDICATED
H	EXISTING HEAT DETECTOR	EXISTING	REMOVE EXISTING DETECTOR AND INSTALL COVER PLATE ON REMAINING J-BOX
H/A	EXISTING ADDRESSABLE HEAT DETECTOR	EXISTING	EXISTING DETECTOR TO REMAIN. CONNECT TO NEW FACP
⊙	ADDRESSABLE MANUAL PULL STATION	WALL MOUNT ON EXISTING OR RECESSED J-BOX AT 48" AFF	REPLACE EXISTING CONVENTIONAL DEVICE WITH NEW ADDRESSABLE DEVICE
⊙N	ADDRESSABLE MANUAL PULL STATION	WALL MOUNT ON EXISTING OR RECESSED J-BOX AT 48" AFF	ADD NEW PULL STATION WHERE INDICATED ON PLAN
⊙	EXISTING MANUAL PULL STATION	EXISTING	REMOVE EXISTING PULL STATION AND INSTALL COVER PLATE ON REMAINING J-BOX
⊙A	EXISTING ADDRESSABLE MANUAL PULL STATION	EXISTING	EXISTING PULL STATION TO REMAIN. CONNECT TO NEW FACP
⊙T/R	PROJECTED BEAM TYPE SMOKE DETECTOR	WALL OR CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING BEAM DETECTOR WITH NEW SINGLE ENDED REFLECTED TYPE BEAM DETECTOR (SYSTEM SENSOR BEAM 1224S OR EQUAL)
⊙	ADDRESSABLE DUCT MOUNTED SMOKE DETECTOR	EXISTING	REPLACE EXISTING CONVENTIONAL DEVICE WITH NEW ADDRESSABLE DEVICE
⊙N	ADDRESSABLE DUCT MOUNTED SMOKE DETECTOR	MOUNT ON EXISTING SUPPLY AND/OR RETURN DUCT	ADD NEW DUCT MOUNTED SMOKE DETECTOR (WITH SAMPLING TUBES) WHERE INDICATED
⊙S	EXISTING DUCT MOUNTED SMOKE DETECTOR	EXISTING	REMOVE EXISTING DETECTOR, HOUSING AND SAMPLING TUBES. PATCH HOLE IN DUCT
⊙S/A	EXISTING ADDRESSABLE DUCT MOUNTED SMOKE DETECTOR	EXISTING	EXISTING DUCT SMOKE DETECTOR TO REMAIN. CONNECT TO NEW FACP
⊙	ADDRESSABLE INPUT MODULE	SURFACE MOUNT ON J-BOX NEAR CONVENTIONAL DEVICE TO BE MONITORED	CONNECT TO CONTACTS OF CONVENTIONAL DEVICE TO FACILITATE MONITORING AS AN ADDRESSABLE POINT
⊙	ADDRESSABLE OUTPUT MODULE	SURFACE MOUNT ON J-BOX WITHIN 3' OF DEVICE OR CIRCUIT CONTROLLED	TO PROVIDE PROTECTED PREMISE FIRE SAFETY FUNCTIONS SUCH AS DOOR RELEASE, FAN SHUTDOWN, DAMPER ACTUATION, ELEVATOR RECALL, NOTIFICATION CIRCUIT ACTIVATION, ETC.
⊙	EXISTING DEVICE TO REMAIN. CONNECT TO NEW FACP TO PROVIDE POWER AND CONTROL	EXISTING	EXISTING DEVICE TO REMAIN. CONNECT TO NEW FACP TO PROVIDE POWER AND CONTROL
⊙	MAGNETIC DOOR HOLD-OPEN DEVICE (EXISTING)	EXISTING	CONNECT TO NEW FACP TO PROVIDE POWER AND CONTROL
⊙N	MAGNETIC DOOR HOLD-OPEN DEVICE (NEW)	WALL MOUNT AT TOP EDGE OF DOOR ON RECESSED OR SURFACE MOUNT J-BOX	CONNECT TO NEW FACP TO PROVIDE POWER AND CONTROL
⊙	FIRE SPRINKLER VALVE TAMPER SWITCH	EXISTING	PROVIDE INPUT MODULE AND CONNECT TO NEW FACP
⊙	FIRE SPRINKLER WATER FLOW SWITCH	EXISTING	PROVIDE INPUT MODULE AND CONNECT TO NEW FACP
⊙	STROBE	WALL MOUNT ON EXISTING OR RECESSED J-BOX BETWEEN 80" AND 96" AFF	INSTALL NEW NOTIFICATION APPLIANCE TO REPLACE EXISTING. STROBES SHALL BE SYNCHRONIZED. DEVICES COLOR SHALL BE RED
⊙N	HORN/STROBE	CEILING MOUNT ON EXISTING J-BOX	REPLACE EXISTING BELL, HORN, STROBE OR HORN/STROBE AND PROVIDE COVER PLATE ON RECESSED J-BOX
⊙	STROBE	WALL MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX BETWEEN 80" AND 96" AFF	ADD NEW STROBE WHERE INDICATED ON DWG. STROBES SHALL BE SYNCHRONIZED. DEVICES COLOR SHALL BE RED
⊙N	HORN/STROBE	EXISTING	REMOVE EXISTING BELL, HORN, STROBE OR HORN/STROBE AND PROVIDE COVER PLATE ON RECESSED J-BOX
⊙N	HORN/STROBE	CEILING MOUNT ON NEW RECESSED OR SURFACE MOUNT J-BOX	ADD NEW HORN/STROBE WHERE INDICATED ON DWG. STROBES SHALL BE SYNCHRONIZED. DEVICES COLOR SHALL BE RED
⊙N	EXTERIOR HORN/STROBE	WALL MOUNT ON EXISTING WEATHERPROOF J-BOX	REPLACE EXISTING BELL, HORN, STROBE OR HORN/STROBE AND PROVIDE COVER PLATE ON RECESSED J-BOX
⊙N	EXTERIOR HORN/STROBE	WALL MOUNT AT 10" AFF ON NEW SURFACE MOUNT WEATHERPROOF J-BOX	ADD NEW EXTERIOR HORN/STROBE WHERE INDICATED ON DWG. STROBES SHALL BE SYNCHRONIZED. DEVICES COLOR SHALL BE RED
⊙	EXISTING NOTIFICATION APPLIANCE	EXISTING	REMOVE EXISTING BELL, HORN, STROBE OR HORN/STROBE AND PROVIDE COVER PLATE ON RECESSED J-BOX
⊙A	AMBER STROBE	WALL MOUNT ADJACENT TO TEXT MESSAGE BOARD	AMBER STROBE TO FLASH CONTINUOUSLY WHILE EMERGENCY MESSAGE IS DISPLAYED ON ADJACENT TEXT MESSAGE BOARD. PROVIDE 24 VDC SUPERSEDED POWER FROM FACP

1 FIRE ALARM PLAN - STUDENT CENTER

