

MANGINI ASSOCIATES INC.

4320 West Mineral King Avenue Visalia, California 93291 (559) 627-0530

www.mangini.us

DATE: May 9, 2024 **MAI NO.:** 1751a

OPSC APPL. NO.:

DSA APPL. NO.: 02-120394
DSA FILE NO.: 16-H1
PTN: 63891-35

ADDENDUM FOR:

MODERNIZATION AT CORCORAN HIGH SCHOOL – SCIENCE BUILDING

CORCORAN UNIFIED SCHOOL DISTRICT CORCORAN, KINGS COUNTY, CALIFORNIA

James Ryan Morrelli ARCHITECT

MANGINI ASSOCIATES INC. 4320 W. Mineral King Avenue, Visalia, CA 93291 PHONE: (559) 627-0530 FAX: (559) 627-1926 C-33128

Ryan W. Carlson
MECHANICAL ENGINEER

LAWRENCE NYE CARLSON ASSOCIATES 7084 N. Maple Ave., Suite 101, CA 93720 PHONE: (559) 431-0101 FAX: (559) 431-1362 M-34846

Steven Kirk Eastham ELECTRICAL ENGINEER

ROSE SING EASTHAM and ASSOCIATES 131 S. Dunworth Avenue, Visalia, CA 93292 PHONE: (559) 733-2671 FAX: (559) 733-0372 E-18786

ADDENDUM NUMBER

1

DSA

ADDENDUM NO. 1

TO PROSPECTIVE BIDDERS:

This Addendum forms a part of the Contract Documents and modifies the Contract Documents dated August 24, 2022 and approved May 1, 2023.

Bidders shall acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to do so may disqualify the Bidder.

This Addendum consists of 3 printed pages and the following Attachments:

Lawrence Engineering Group Letter, dated May 1, 2024.

Rose Sing Eastham and Associates, Inc. memo dated May 8, 2024.

Drawing Sheet ES1.2, dated delta 05-08-24 Addendum 1

Drawing Sheet E1.10, dated delta 05-08-24 Addendum 1

Drawing Sheet E2.1, dated delta 05-08-24 Addendum 1

Drawing Sheet E2.2, dated delta 05-08-24 Addendum 1

Drawing Sheet E2.3, dated delta 05-08-24 Addendum 1

Drawing Sheet E2.4, dated delta 05-08-24 Addendum 1

Drawing Sheet E2.5, dated delta 05-08-24 Addendum 1

Drawing Sheet E2.6, dated delta 05-08-24 Addendum 1

Drawing Sheet E4.1, dated delta 05-08-24 Addendum 1

CHANGES TO THE PROJECT MANUAL

ITEM NO. 1.1: Refer to Section 08 7100 – Door Hardware:

See Section 3.7 Schedule of Finish Hardware Revise HW SET 02 Surface Closer to 4111 H-EDA

ITEM NO. 1.2: Refer to Section 09 2900 – Gypsum Board:

Add paragraph 1.2.A.3 in Submittals

3. Shop drawing indicating proposed control joint layout.

Add paragraph 2.3.F in Metal Trim

- F. Control Joints:
 - Provide with 1/4" wide center channel with removable tape strip and wings perforated for nailing and joint treatment at horizontal edges as manufactured by Clark Dietrich, 093 Vinc Control Joint (ZNCJ).

Add paragraph 3.5.C in Corner Treatment

- F. Control Joints:
 - 1. Walls and ceilings: Install at 30'-0" o.c. maximum spacing in either direction when planes exceed 30'-0" in length.
 - 2. Unless locations are specifically indicated on the Drawings, Contractor shall submit a control joint plan for the architect's review.

ADDENDUM NO. 1

CHANGES TO THE DRAWINGS

ITEM NO. 1.3: Refer to Sheet A1, Building 900 Demolition & New Floor Plans,

Add the following Demolition Floor Plan General Notes to Sheets A1:

"DEMOLITION FLOOR PLAN GENERAL NOTES:

- 1. VERIFY ALL CONDITIONS PRIOR TO COMMENCEMENT OF WORK
- 2. PROTECT AREAS NOT IN SCOPE OF WORK
- 3. SEE PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION
- 4. ALL FIRE ALARM, DATA AND MISCELLANEOUS ABANDONED EQUIPMENT AND ABANDONED CONDUITS ARE TO BE REMOVED, INCLUDING THOSE THAT ARE NOT CLEARLY VISIBLE

ITEM NO. 1.4: Refer to Sheet A5, Building 900 Demolition & New Roof Plans,

See Roof Plan Key Notes.

Delete key note 9 and replace with the following:

9 – "REMOVE (E) PLYWOOD SHEATHING AT INSIDE FACE OF MECHANICAL SCREEN, REPLACE WITH NEW 1/2" PLYWOOD SHEATHING. PAINT (N) PLYWOOD SHEATHING FINISH, 'b' "

ITEM NO. 1.5: Refer to Sheet A12, Door Schedule,

See Door Types. Delete wood doors from project and replace them with hollow metal doors.

Delete description of Door Type "B" and replace with the following: Type "B" -13/4" THK. HOLLOW METAL DOOR.

Delete description of Door Type "C" and replace with the following:

Type "C" – 1 3/4" THK. HOLLOW METAL DOOR, TYPE 'A' GLAZING AT NON-RATED DOORS, TYPE 'C'

GLAZING AT RATED DOORS, COORDINATE DOOR RATING WITH DOOR SCHEDULE.

See Door Schedule. At doors 902, 904, 905, & 906, delete exterior door finish 'p' and replace with exterior door finish 'c'.

See Door Schedule. At doors 902, 904, 905, & 906, delete exterior frame finish 'p' and replace with exterior frame finish 'c'.

ITEM NO. 1.6: Refer to attached letter from Lawrence Engineering Group for changes to Plumbing Drawings.

ITEM NO. 1.7: Delete Sheet ES1.2, replace with sheet ES1.2, Revisions Dated 05-08-24, attached.

Delete Sheet E1.10, replace with sheet E1.10, Revisions Dated 05-08-24, attached.

Delete Sheet E2.1, replace with sheet E2.1, Revisions Dated 05-08-24, attached.

Delete Sheet E2.2, replace with sheet E2.2, Revisions Dated 05-08-24, attached.

Delete Sheet E2.3, replace with sheet E2.3, Revisions Dated 05-08-24, attached.

Delete Sheet E2.4, replace with sheet E2.4, Revisions Dated 05-08-24, attached.

Delete Sheet E2.5, replace with sheet E2.5, Revisions Dated 05-08-24, attached.

Delete Sheet E2.6, replace with sheet E2.6, Revisions Dated 05-08-24, attached.

Delete Sheet E4.1, replace with sheet E4.1, Revisions Dated 05-08-24, attached.

Refer to attached memo from Rose Sing Eastham and Associates, dated May 8, 2024 for changes to Electrical drawings.



May 1, 2024

Mr. Manuel Acosta MANGINI ASSOCIATES INC. 4320 West Mineral King Avenue Visalia, CA 93291 LEG #22035 (**M.A.I.** #**1751a**)

Subject: Modernization at Corcoran High School Science Building

Re: Addendum 1

Dear Mr. Acosta:

Please issue the following items with your next published addendum.

PLUMBING:

1. Refer to sheet P10 BUILDING 900 ENLARGED PLUMBING PLAN:

a. Revise all GT-1 deck-mounted gas turrets to be GT-2 wall-mounted gas turrets. (Typical) Wall-mounted gas turrets GT-2 shall be installed with the center at 40 inches above finished floor.

2. Refer to sheet P11 BUILDING 900 ENLARGED PLUMBING PLAN:

a. Revise all GT-1 deck-mounted gas turrets to be GT-2 wall-mounted gas turrets. (Typical) Wall-mounted gas turrets GT-2 shall be installed with the center at 40 inches above finished floor.

Sincerely,

LAWRENCE ENGINEERING GROUP

Paul Xiong, PE

Mechanical Engineer

Rose, Sing, Eastham and Associates

Electrical Consultants

131 S. Dunworth St. • Visalia, CA 93292-6705

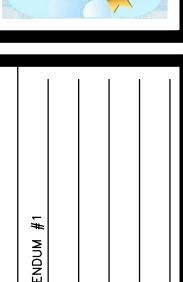
Phone: (559) 733-2671 - E-Mail: seastham@rse-eng.com

May 8, 2024

Project: 1751a Corcoran HS Science Building Modernization

RE: Electrical List of Changes for Addendum #1

SHEET#	DESCRIPTION OF CHANGE	DELTA
ES1.2	- Removed conduit runs between buildings 700, 800, and 1000	1
	- Removed FATC #F7, FACP #7, FATC #10, pull boxes NF7, -NF9,	1
	and pull cans FPC7-10	
	- Added keynotes number 4 – 6	1
	- Added FACP #SC and PEP #SC	1
E1.10	- Added keynote #21	1
	- Added FACP #SC	1
E2.1	- Removed FACP #NA, FACP #7, UFAC, and PEP#- from the fire	1
	alarm equipment legend	
	- Removed notes G and H	1
	- Added FACP #SC to the fire alarm equipment legend	1
E2.2	- Revised the signaling line circuit, notification appliance circuit, and	1
	speaker circuit schedules	
E2.3	- Removed and/or replaced fire alarm equipment shown at bldgs. 700	1
	and 100	
	- Added keynote #6 to bldgs. 1000, 1500, and 1600	1
	- Adjusted conduit at bldg 900 from EFR to EF	1
	- Replaced keynotes #5, 6, 21–28, 30, and 33	1
	- Removed keynotes #9-14, 31, 32, and 34. Aforementioned keynotes	1
	now shown as "not in use".	
E2.4	- Replaced keynotes 7-14 and 16-18	1
	- Removed and Replaced fire alarm equipment shown at buildings 700,	1
	800, 1000	
	- Removed pull boxes NF7 - NF9, and pull cans FPC7, FPC8, FPC10	1
	- Added fire alarm equipment shown at bldg 1600	1
E2.5	- Revised the PEP #SC battery calcs	1
	- Replaced FACP #7 battery calcs with FACP #SC battery calcs	1
E2.6	- Added FACP #SC mounting detail	1
E4.1	- Revised Panel L9 panel schedule	1



W.P. SP

+10'-6"

TYPICAL OF FIRE ALARM CIRCUITING BETWEEN NOTIFICATION APPLIANCES, U.O.N.: RUN 3/4"C - ONE "FSP" CABLE, 2 #12 BETWEEN NOTIFICATION APPLIANCES.

3) 3/4"C - TWO "FA" CABLES.

4 1/2"C - TWO "FSP" CABLES.

5 PROVIDE A RELAY MODULE TO CONTROL 120V POWER FOR FIRE/SMOKE DAMPERS. FLUSH MOUNT IN T-BAR CEILING, U.O.N. AND PROVIDE AN ENGRAVED NAMEPLATE: "FIRE/SMOKE DAMPERS".

(SHALL REMAIN)

- NEW FIRE ALARM CONTROL

-EXISTING FIRE ALARM POWER

EXPANDER PANEL "P.E.P. #SC"

PANEL "F.A.C.P. #SC"

PER #5/E2.6

PER #3/E2.6

TYPICAL OF ALL FIRE/SMOKE DAMPERS (SYMBOL FSD): CONNECT FIRE/SMOKE DAMPER IN ATTIC SPACE. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. PROVIDE A HORSEPOWER RATED TOGGLE SWITCH AS DISCONNECTING MEANS.

7 PROVIDE A RELAY MODULE FOR "UNIT SHUTDOWN" OF RESPECTIVE AC UNIT. FLUSH MOUNT IN T-BAR CEILING (OR GYPBOARD CEILING), U.O.N.. COORDINATE WITH MECHANICAL CONTRACTOR TO PROVIDE THE INTERCONNECTION CONDUIT/ CONDUCTORS AND ANY ADDITIONAL REQUIREMENTS . PROVIDE AN ENGRAVED NAMEPLATE: "UNIT SHUTDOWN, HC-_".

8 CONNECT THE WATERFLOW SWITCH AT FIRE SPRINKLER RISER. COORDINATE EXACT LOCATION WITH FIRE SPRINKLER CONTRACTOR. RUN 1/2" L.F.M.C. - 2 #14 FROM THE WATERFLOW SWITCH TO THE WEATHER PROOF JUNCTION BOX.

9 CONNECT ELECTRIC BELL. ROUTE BRANCH CIRCUITING THRU THE WATERFLOW SWITCH. COORDINATE EXACT LOCATION WITH THE FIRE SPRINKLER CONTRACTOR PRIOR TO ROUGH-IN.

10 PROVIDE A DUAL MONITOR MODULE FOR SUPERVISION OF TAMPER SWITCHES AT THE O.S. &Y. VALVES LOCATED ON THE DOUBLE CHECK DETECTOR/BACKFLOW PREVENTER ASSEMBLY. PROVIDE AN ENGRAVED NAMEPLATE: "TAMPER SWITCHES AT D.D.C.V.". RUN 3/4"C - TWO "FA" CABLES, 2 #14 BETWEEN ADJACENT MONITOR MODULES.

11) 3/4"C - 4 #14 TO TAMPER SWITCHES AT THE O.S. &Y. VALVES LOCATED ON THE DOUBLE CHECK DETECTOR/BACKFLOW PREVENTER ASSEMBLY. REFER TO SITE ELECTRICAL PLAN, SHEET #ES1.1, FOR CONTINUATION. ROUTE IN "COMMON" TRENCH AND SAWCUT WITH FIRE SPRINKLER PIPING.

12 FLUSH MOUNT DUAL MONITOR MODULES IN THE T-BAR CEILING.

13 NEW LOCATION OF EXISTING FIRE ALARM POWER EXPANDER PANEL "P.E.P. #SC" SALVAGED DURING DEMOLITION. MOUNT HIGH ON WALL AT CEILING.

5TUB 1"C INTO ACCESSIBLE ATTIC SPACE ABOVE T-BAR CEILING.

15 3/4°C - 6 #14.

16) PROVIDE A MONITOR MODULE FOR SUPERVISION OF WATER FLOW SWITCH AT FIRE SPRINKLER RISER. COORDINATE EXACT LOCATION WITH FIRE SPRINKLER CONTRACTOR.

(17) REFER TO THE PARTIAL FIRE ALARM SYSTEM RISER DIAGRAM - BUILDING 900, DETAIL #1/E2.4, FOR CONDUIT, CABLING AND CONDUCTOR REQUIREMENTS.

(18) REMOVE ENTIRE PORTION OF EASTERLY CONCRETE MOW STRIP AT EXISTING PULL BOX "NF1" AND ENTIRE PORTION OF THE ADJACENT CONCRETE SIDEWALK (BETWEEN CONSTRUCTION OR CONTROL JOINTS) AS REQUIRED TO INSTALL NEW FIRE ALARM CONDUITS. REPLACE WITH NEW CONCRETE MOW STRIP AND SIDEWALK PER DETAIL #7/E5.2.

19 PROVIDE A NEW FIRE ALARM PULL CAN "FPC9" PER DETAIL #4/E2.6 AND SURFACE MOUNT HIGH ON WALL AT BOTTOM OF SOFFIT. RUN CONDUITS UP INTO SOFFIT, TURN 90° AND CONTINUE INTO ACCESSIBLE ATTIC SPACE ABOVE T-BAR CEILING. SEAL AROUND CONDUIT PENETRATIONS.

MOUNT THE EXISTING FIRE ALARM POWER EXPANDER PANEL "PEP #SC" ABOVE NEW FIRE ALARM CONTROL PANEL "F.A.C.P. #SC".

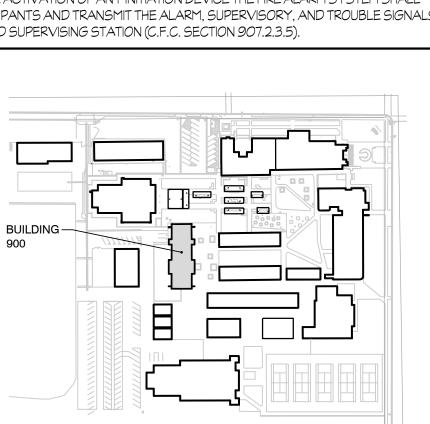
AUTOMATIC FIRE SPRINKLER SYSTEM

THIS BUILDING HAS AN AUTOMATIC FIRE SPRINKLER SYSTEM. HEAT DETECTORS HAVE BEEN OMITTED, IN CONCEALED ATTIC SPACES ABOVE CEILINGS AND SOFFITS, DUE TO THE AUTOMATIC FIRE SPRINKLER SYSTEM IS FULLY EQUIPPED IN THESE AREAS. C.F.C. 907.2.3.6.2.

COMPLETE AUTOMATIC FIRE ALARM SYSTEM PLAN SUBMITTAL

THE FIRE ALARM SYSTEM SHOWN ON THESE PLANS HAS BEEN SUBMITTED AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT. ANY SUBSTITUTION OF THE FIRE ALARM SYSTEM SHALL BE RESUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL PAY ANY ADDITIONAL FEES THAT ARE INCURRED DUE TO THIS SUBSTITUTION.

AREA. UPON THE ACTIVATION OF ANY INITIATION DEVICE THE FIRE ALARM SYSTEM SHALL ALERT ALL OCCUPANTS AND TRANSMIT THE ALARM, SUPERVISORY, AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION (C.F.C. SECTION 907.2.3.5).



WALL LEGEND

STORAGE CHEMISTRY

STORAGE

CLASSROOM

904 STORAGE

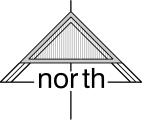
906 WORKROOM

908 BIOLOGY 909 STORAGE 910 WORKROOM

1-HOUR RATED WALL, CONTINUOUS VERTICALLY FROM FLOOR TO BOTTOM OF ROOF FRAMING.

ROOM LEGEND

ROOM NAME



Rose Sing Eastham and Associates Electrical Consultants 131 S. Dunworth - (559)733-2671

Visalia, California 93292-6705

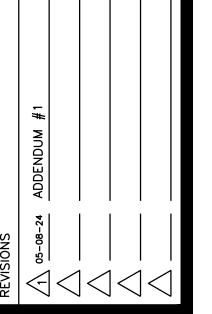
BUILDING SITE KEY



DATE: <u>AUGUST 24, 2022</u>

10008





MANGINI

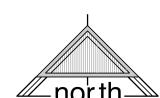
BUILDING 900 FIRE ALARM PLANS

E1.10

BUILDING 900 FIRE ALARM PLAN - INITIATION

.....

905



EXISTING SIGNAL T.C.

PANEL "F.A.C.P. #SC"

PER #5/E2.6

PER #3/E2.6

NEW FIRE ALARM CONTROL

EXISTING FIRE ALARM POWER

EXPANDER PANEL "P.E.P. #SC

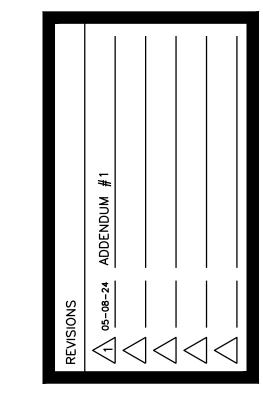
BUILDING 900 FIRE ALARM PLAN - NOTIFICATION

SED ARCHITCH No. C-33128
REN. 05-31-25
DATE: <u>AUGUST 24, 2022</u>

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	McLAIN BARENG MORRELLI SCOTT	ELLI SCOTT
	MANGINI ASSOCIATES INC. 4320 West Mineral King Avenue Visalia, California 93291	www.mangini.us (559) 627.0530 <i>Office</i> (559) 627.1926 <i>Fax</i>

FIRE ALARM SYSTEM **EQUIPMENT** SPECIFICATIONS

E2.1

FIRE ALARM SYSTEM EQUIPMENT SPECIFICATIONS MOUNTING BACKBOX REQUIREMENTS B SYMBOL DESCRIPTION MODEL# HEIGHT LISTING# (TO CENTER, U.O.N.) ADDRESSABLE PHOTOELECTRIC GAMEWELL/F.C.I. 7272-1703:0501 4" OCTAGONAL BOX x 2 1/8" DP. OR PER DETAIL 4" SQUARE OUTLET BOX x 21/8" DP. | #2/E2.6 SMOKE DETECTOR #ASD-PL3/B300-6 7300-1653:0109 ADDRESSABLE PHOTOELECTRIC GAMEWELL/F.C.I. 7272-1703:0508 4" OCTAGONAL BOX x 21/8" DP. OR PER DETAIL #MCS-COF3/B300-6 7300-1653:0109 4" SQUARE OUTLET BOX x 21/8" DP. SMOKE/CARBON MONOXIDE DETECTOR #2/E2.6 GAMEWELL/F.C.I. ADDRESSABLE 7300-1703:0102 4" SQ. x 21/8" DP. OUTLET BOX MONITOR MODULE #AMM-4F GAMEWELL/F.C.I. ADDRESSABLE DUAL 7300-1703:0107 4" SQ. x 21/8" DP. OUTLET BOX MONITOR MODULE #AMM-21F GAMEWELL/F.C.I. ADDRESSABLE RELAY 7300-1703:0102 4" SQ. x 21/8" DP. OUTLET BOX CONTROL MODULE #AOM-2RF ADDRESSABLE SUPERVISED GAMEWELL/F.C.I. 7300-1703:0102 4" SQ. x 21/8" DP. OUTLET BOX #AOM-2SF CONTROL MODULE VISUAL STROBE, CEILING MOUNTED SYSTEM SENSOR PER DETAIL 7125-1653:0504 4" SQ. x 2 1/8" DP. OUTLET BOX (CANDELA RATING AS NOTED) #2/E2.6 #SCWL SPEAKER/STROBE, CEILING MOUNTED 4" SQ. x 2 1/8" DP. OUTLET BOX PER DETAIL SYSTEM SENSOR 7320-1653:0505 (CANDELA RATING AS NOTED) WITH 11/2" DP. BOX EXTENSION #SPSCWL-P #2/E2.6 4" SQ. x 2 1/8" DP. OUTLET BOX YSTEM SENSOR PER DETAIL 7320-1653:0505 NTERIOR SPEAKER, CEILING MOUNTED WITH 11/2" DP. BOX EXTENSION #2/E2.6 PROVIDE METAL WEATHERPROOF YSTEM SENSOR EXTERIOR SPEAKER, WALL MOUNTED 7320-1653:0201 ____ #SPRK-R/#MWBB SURFACE BACKBOX END OF LINE RESISTOR VERIFY EXACT WATERFLOW SWITCH PROVIDED BY OTHERS LOCATION WITH FIRE (AT FIRE SPRINKLER RISER) REFER TO DETAIL #W-7/F SPRINKLER CONTR. VERIFY EXACT PROVIDED BY OTHERS TAMPER SWITCH LOCATION WITH FIRE AT DOUBLE DETECTOR CHECK ASSY) REFER TO DETAIL #A/F4 SPRINKLER CONTR. WEATHERPROOF BACKBOX VERIFY EXACT ELECTRIC BELL PROVIDED BY OTHERS LOCATION WITH FIRE PROVIDED BY FIRE SPRINKLER (FOR FIRE SPRINKLER RISER) REFER TO DETAIL #A/F4 CONTRACTOR SPRINKLER CONTR. VERIFY EXACT FIRE/SMOKE DAMPER MECH. CONTRACTOR LOCATION WITH REFER TO DETAIL #C/M4 MECH'L CONTR. ADDRESSABLE FIRE ALARM CABLE WEST PENN "FA" CABLE 7161-0859:0101 INDOORS) #D990 WEST PENN ADDRESSABLE FIRE ALARM CABLE "SFA" CABLE 7161-0859:0101 #AQ225 OUTDOORS) WEST PENN FIRE ALARM SPEAKER CABLE "FSP" CABLE 7161-0859:0101 #9945 WEST PENN FIRE ALARM SPEAKER CABLE "SFSP" CABLE 7161-0859:0101 OUTDOORS) #AQC224

FIRE AL	ARM SYS	TEM SEQ	UENCE C	FOPERAT	TIONS			
	TYPE OF INITIATION							
RESULT OF OPERATION	AREA SMOKE DETECTOR, HEAT DETECTOR OR SMOKE/CO DETECTOR	CARBON MONOXIDE DETECTOR (1)	LOSS OF POWER	SHORT CIRCUIT/ GROUND FAULT	FIRE SPRINKLER RISER WATER FLOW SWITCH	TAMPER SWITCHES AT O.S.&Y. VALVES ON BACKFLOW PREVENTER OR TAMPER SWITCH ON F.S.R.		
ANNUNCIATE ALARM AT FIRE ALARM CONTROL PANEL	YES				YES			
ANNUNCIATE TROUBLE AT FIRE ALARM CONTROL PANEL			YES	YES		YES		
ANNUNCIATE SUPERVISORY AT FIRE ALARM CONTROL PANEL		YES						
ACTIVATE ALL AUDIBLE AND VISUAL ALARM SIGNALS	YES				YES			
TRANSFER TO BATTERY BACK-UP			YES					
ACTIVATE TEMPORAL PATTERN, CODE 4, IN RESPECTIVE BUILDING		YES						
ANNUNCIATE AT 24 HR. ATTENDED LOCATION	YES	YES	YES		YES	YES		
CENTRAL STATION FOR MONITORING (ALARM)	YES				YES			
CENTRAL STATION FOR MONITORING (TROUBLE)			YES	YES		YES		
CENTRAL STATION FOR MONITORING (SUPERVISORY)		YES						

FIRE ALARM SYSTEM EQUIPMENT SPECIFICATIONS

LISTING#

7165-1703:0125

7165-1703:0125

7165-1703:0125

7165-1703:0125

7165-1703:0125

7165-1703:0125

7315-1637:0102

7300-1703:0102

INCLUDED

#3/E2.6

INCLUDED

MODEL#

SAMEWELL/F.C.I. #LCD-SLP

SAMEWELL/F.C.I. #PM-9

BAMEWELL/F.C.I. #INI-VGX-UTF

GAMEWELL/F.C.I. #AM-50-7C

GAMEWELL/F.C.I. #E3BB-BD/INCC

SAMEWELL/F.C.I.

GAMEWELL/F.C.I.

SAMEWELL/F.C.I. #LCD-SLP

SAMEWELL/F.C.I. #PM-9

BAMEWELL/F.C.I. #INI-VGX-UTF

SAMEWELL/F.C.I. #AM-50-7C

GAMEWELL/F.C.I. #AM-50-70

GAMEWELL/F.C.I. #INI-VGX-UTP

GAMEWELL/F.C.I. #PM-9

GAMEWELL/F.C.I. #E3BB-RC/IN>

SAMEWELL/F.C.I. #NGA

GAMEWELL/F.C.I. #INI-VGX-UTP

GAMEWELL/F.C.I. #E3BB-RAA

SAMEWELL/F.C.I.

#HPFF8/AOM-2SF

GAMEWELL/F.C.I. #E3BB-BD/INCC

#ILI-MB-E3

#ILI-MB-E3

SYMBOL

(E) FACP #2

(E) FACP #AE

(E) FACP #S

(E) FAT #

DESCRIPTION

NEW FIRE ALARM CONTROL

LCD TOUCHSCREEN ANNUNCIATOR

50W DIGITAL AMPLIFIER, QTY. OF 4

ENCLOSURE WITH PLEXI-GLASS DOOR

INTELLIGENT LOOP INTERFACE - MAIN BOARD | GAMEWELL/F.C.I. #ILI-MB-E3

INTELLIGENT LOOP INTERFACE - MAIN BOARD | GAMEWELL/F.C.I. #ILI-MB-E3

INTELLIGENT LOOP INTERFACE - MAIN BOARD | GAMEWELL/F.C.I. #ILI-MB-E3

PANEL "F.A.C.P. #SC"

120V POWER SUPPLY

EXISTING FIRE ALARM

EXISTING FIRE ALARM

PANEL "F.A.C.P. #S"

120V POWER SUPPLY

VOICE GATEWAY

VOICE GATEWAY

POWER SUPPLY

VOICE GATEWAY

ENCLOSURE, "AA" SIZE

EXISTING FIRE ALARM

CONTROL PANEL "F.A.C.P. #2"

CONTROL PANEL "F.A.C.P. #AB"

EXISTING FIRE ALARM CONTROL

LCD TOUCHSCREEN ANNUNCIATOR

50W DIGITAL AMPLIFIER, QTY. OF 2

ENCLOSURE WITH PLEXI-GLASS DOOR

EXISTING FIRE ALARM TRANSPONDER

50W 70V AUDIO AMPLIFIER

ENCLOSURE WITH SOLID DOOR

EXISTING LOCAL OPERATING CONSOLE

POWER EXPANDER PANEL "P.E.P. #SC"

NETWORK GRAPHIC ANNUNCIATOR

VOICE GATEWAY

MOUNTING

(TO CENTER, U.O.N.)

BACKBOX

REQUIREMENTS B

(1) UPON DETECTION OF CARBON MONOXIDE, A SUPERVISORY SIGNAL SHALL ANNUNCIATE AT THE NETWORKED FIRE ALARM CONTROL PANELS "F.A.C.P." AND AT THE NETWORK GRAPHIC ANNUNCIATOR, INSIDE OF THE EXISTING LOCAL OPERATING CONSOLE "L.O.C., WHICH IS LOCATED IN THE ADMINISTRATION BUILDING.

NOTES (FIRE ALARM SYSTEM EQUIPMENT SPECIFICATIONS):

- A END OF LINE RESISTORS FOR NOTIFICATION APPLIANCE CIRCUITS SHALL BE 3.9K OHM, 1/2 WATT.
- B VERIFY BACKBOX REQUIREMENTS WITH FIRE ALARM SYSTEM EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.
- EXISTING FIRE ALARM EQUIPMENT WAS SUBMITTED IN D.S.A. APPLICATION NO. 02-108893, FILE NO. 16-2 AND WAS APPROVED ON AUGUST 16, 2007.
- D EXISTING FIRE ALARM EQUIPMENT WAS SUBMITTED IN D.S.A. APPLICATION NO. 02-116520, FILE NO. 16-H1 AND WAS APPROVED ON JULY 25, 2018.
- E) EXISTING FIRE ALARM EQUIPMENT WAS SUBMITTED IN D.S.A. APPLICATION NO. 02-117217, FILE NO. 16-H1 AND WAS APPROVED ON JUNE 11, 2019.
- F EXISTING FIRE ALARM EQUIPMENT WAS SUBMITTED IN D.S.A. APPLICATION NO. 02-119740, FILE NO. 16-H1 AND WAS APPROVED ON DECEMBER 16, 2021.

COMPLETE AUTOMATIC FIRE ALARM SYSTEM PLAN SUBMITTAL

THE FIRE ALARM SYSTEM SHOWN ON THESE PLANS HAS BEEN SUBMITTED AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT. ANY SUBSTITUTION OF THE FIRE ALARM SYSTEM SHALL BE RESUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL PAY ANY ADDITIONAL FEES THAT ARE INCURRED DUE TO THIS SUBSTITUTION.

THE FIRE ALARM SYSTEM SHALL BE A TOTAL (COMPLETE) AUTOMATIC HEAT AND SMOKE DETECTION SYSTEM, PER C.F.C. SECTION 907.2.3.6, AND SHALL COVER EVERY ROOM AND/OR AREA. UPON THE ACTIVATION OF ANY INITIATION DEVICE THE FIRE ALARM SYSTEM SHALL ALERT ALL OCCUPANTS AND TRANSMIT THE ALARM, SUPERVISORY, AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION (C.F.C. SECTION 907.2.3.5).



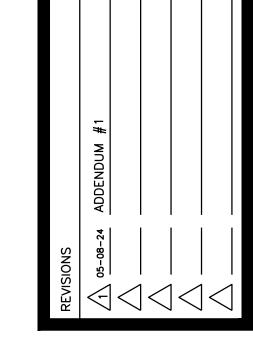
No. C-33128 REN. 05-31-25

DATE: <u>AUGUST 24, 2022</u>

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NI5 AN

FIRE ALARM SYSTEM CODES, NOTES AND SCHEDULES

E2.2

PROJECT _____1751a

Electrical Consultants

APPLICABLE STANDARD NFPA 72, AS ADOPTED AND AMENDED IN CBC CHAPTER 35.

- INSTALLATION OF THE SYSTEMS SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATION, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM, HAS BEEN APPROVED BY DSA.
- UPON COMPLETION OF SYSTEM INSTALLATION, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF A DSA PROJECT INSPECTOR TEST SHALL INCLUDE ALL INFORMATION PER NFPA 72 14.6.2.4 AND FIGURE 7.8.2(a) AND READ OUT VERIFICATION FORM FROM CENTER STATION.
- . A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION.
- ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF DSA AND THE ARCHITECT/ ENGINEER OF THE PROJECT.
- DSA, ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND/OR TESTING.
- ALL PENETRATIONS THROUGH RATED ASSEMBLIES REQUIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM AS IDENTIFIED IN CBC CHAPTER 7, UL OR OTHER APPROVED LAB TESTING CRITERIA. APPROVED TYPES OF MATERIALS SHALL BE IDENTIFIED WITHIN THE PROJECT SPECIFICATIONS WITHIN THE FIRE ALARM SECTION.
- 8. WALL MOUNTED VISIBLE NOTIFICATION DEVICES SHALL HAVE THEIR BOTTOMS MOUNTED AT 80" MINIMUM AND THEIR TOPS AT 96" MAXIMUM FROM FINISHED FLOOR.
- 9. WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM AND 100" MAXIMUM FROM FINISHED FLOOR AND NO CLOSER THAN 6" TO A HORIZONTAL STRUCTURE.
- AUDIBLE DEVICES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 DECIBELS (dBA) ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR FIVE dBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER, IN EVERY OCCUPIABLE SPACE WITHIN THE BUILDING.
- AUDIBLE DEVICES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN FOR A FIRE ALARM SIGNAL. AUDIBLE DEVICES SHALL ALSO SOUND A TEMPORAL CODE 4 PATTERN FOR A CARBON MONOXIDE SIGNAL. THE EXISTING FIRE ALARM CONTROL PANEL WILL PRODUCE/GENERATE BOTH SIGNALS.
- 12. THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
- 13. VISIBLE DEVICES SHOULD NOT EXCEED TWO FLASHES PER SECOND AND SHOULD NOT BE SLOWER THAN ONE FLASH EVERY SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15 CANDELA. VISIBLE DEVICES WITHIN 55' FROM EACH OTHER SHALL BE SYNCHRONIZED.
- 14. UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATER TIGHT FITTINGS AND WIRE TO BE APPROVED FOR WET LOCATIONS.
- ALL FIRE ALARM WIRING SHALL BE FPL OR FPLP (FIRE POWER LIMITED OR FIRE POWER LIMITED PLENUM) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE TYPE THHN OR THWN.
- 6. PER CEC STANDARDS, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE THE WIRE. ALL BOXES TO BE SIZED PER CEC.
- SMOKE DETECTORS SHALL NOT BE ANY CLOSER THAN 1' FROM FIRE SPRINKLERS OR 3' FROM ANY SUPPLY DIFFUSER. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/ CONTAMINATION ON NEWLY INSTALLED FIRE ALARM, DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.
- ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT, SURFACE RACEWAY OR OPEN RUN ABOVE CEILING, UNDER FLOORS AND IN WALLS IN A NEAT AND PROTECTED MANNER AS INDICATED ON DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS.

19. FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURERS SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS.

FIRE ALARM SYSTEM GENERAL NOTES

- 20. A DEDICATED BRANCH CIRCUIT SHALL BE PROVIDED FOR FIRE ALARM EQUIPMENT. THIS CIRCUIT SHALL BE ENERGIZED FROM THE COMMON USE AREA PANEL AND SHALL HAVE NO OTHER OUTLETS. THE BREAKER SHALL HAVE A RED LOCKING DEVICE TO BLOCK THE HANDLE IN THE "ON" POSITION. THE CIRCUIT BREAKER SHALL BE LABELED "FIRE ALARM CIRCUIT CONTROL". CIRCUIT ID TO BE LABELED AT FIRE PANELS/EXTENDERS.
- 21. THE INSTALLING CONTRACTOR SHALL PROVIDE A COMPLETED "SYSTEM RECORD OF COMPLETION" PER NFPA 72, FIGURE 17.8.2.
- 22. FIRE ALARM CONTROL PANELS AND REMOTE ANNUNCIATORS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48" ABOVE THE FINISHED FLOOR.
- 23. MICROPHONES ASSOCIATED WITH EMERGENCY VOICE ALARM COMMUNICATION SYSTEMS (EVAC) SHALL BE ACCESSIBLE FOR USE, INSTALLED IN COMPLIANCE WITH CBC SECTIONS 11B-305 AND 11B-308.
- 24. THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC SECTION 901.6.2.
- 25. SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST.
- 26. OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACT OR PROVISIONS.
- 27. PROVIDE AN ENGRAVED NAMEPLATE INDICATING THE D.S.A. APPLICATION NUMBER, FILE NUMBER AND DATE OF INSTALLATION AT THE RELOCATED FIRE ALARM POWER EXPANDER PANEL "P.E.P. #SC".
 - A. THE PRIMARY POWER SUPPLY TO THE RELOCATED FIRE ALARM POWER EXPANDER PANEL "P.E.P. #SC", SHALL BE IN ACCORDANCE WITH NFPA 72 10.6.5 AND AS FOLLOWS:
 - a) THE CIRCUIT BREAKER FEEDING THE RESPECTIVE PANEL SHALL BE LOCATED IN A LOCKED ROOM OR BEHIND A LOCKABLE DOOR AND BE READILY ACCESSIBLE TO AUTHORIZED PERSONNEL ONLY.
 - b) THE CIRCUIT BREAKER SHALL BE EQUIPPED WITH A LOCK-ON ACCESSORY, "RED IN COLOR", SPACEAGE #ELOCK-FA OR EQUAL.
 - c) THE CIRCUIT BREAKER SHALL HAVE AN ENGRAVED NAMEPLATE THAT IDENTIFIES IT AS A "FIRE ALARM CIRCUIT". THIS ENGRAVED NAMEPLATE SHALL HAVE WHITE LETTERS ON A RED BACKGROUND. MOUNT ONTO THE INTERIOR TRIM AND LOCATE ADJACENT TO CIRCUIT BREAKER WHERE POSSIBLE.
 - d) THE LOCATION OF THE CIRCUIT DISCONNECTING MEANS SHALL BE PERMANENTLY IDENTIFIED AT THE RELOCATED FIRE ALARM POWER EXPANDER PANEL "P.E.P. #SC". PROVIDE AN ENGRAVED NAMEPLATE (WHITE LETTERS ON A RED BACKGROUND) WHICH INDICATES THIS.
- B. ALL ENGRAVED NAMEPLATES SHALL BE ATTACHED TO THE FRONT OF THE RESPECTIVE ENCLOSURE WITH SCREWS OR RIVETS.
- 28. PROVIDE A COPY OF THE BATTERY CALCULATION AT THE RELOCATED FIRE ALARM POWER EXPANDER PANEL "P.E.P. #SC". BATTERY CALCULATION SHALL CONTAIN INFORMATION AS NOTED ON SCHEDULES AND BE PLASTIC LAMINATED. MOUNT ONTO INSIDE FACE OF DOOR.

SIGNALING LINE CIRCUIT SCHEDULE SLC DESCRIPTION PANEL ADDRESSABLE/INITIATION DEVICES-BUILDING 900 F.A.C.P. #SC SLC#1 ADDRESSABLE/INITIATION DEVICES-BUILDING 700 F.A.C.P. #2 SLC#2 ADDRESSABLE/INITIATION DEVICES-BUILDING 1000 F.A.C.P. #2 SLC#2

	NOTIFICATION APPLIANCE CIRCUIT SCHEDULE							
	CIRCUIT	DESCRIPTION/LOCATION	PANEL					
	N9	VISUAL STROBES - BUILDING 900	P.E.P. #SC					
		VISUAL STROBES - BUILDING 700	P.E.P. #SC					
		VISUAL STROBES - BUILDING 1000	P.E.P. #SC					
1								

	SPEAKER CIRCUIT SCHEDULE	
CIRCUIT	DESCRIPTION/LOCATION	PANEL
<i>S9</i>	SPEAKERS – BUILDIN <i>G 900</i>	F.A.C.P. #SC

COMPLETE AUTOMATIC FIRE ALARM SYSTEM

SHALL PAY ANY ADDITIONAL FEES THAT ARE INCURRED DUE TO THIS SUBSTITUTION.

THE FIRE ALARM SYSTEM SHALL BE A TOTAL (COMPLETE) AUTOMATIC HEAT AND SMOKE AREA. UPON THE ACTIVATION OF ANY INITIATION DEVICE THE FIRE ALARM SYSTEM SHALL TO AN APPROVED SUPERVISING STATION (C.F.C. SECTION 907.2.3.5).

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AMBIENT NOISE LEVELS SHALL BE CONSTRUED TO MEAN THAT WHICH CAN NORMALLY BE EXPECTED TO EXIST WHEN THE FACILITY, BUILDING, ROOM OR AREA IS

FIRE ALARM LEVEL OF AUDIBILITY

ALARM INDICATING DEVICES OF A FIRE ALARM SYSTEM INTENDED TO ALERT ALL

OCCUPANTS SHALL BE SO LOCATED AND UNOBSTRUCTED AS TO CAUSE A LEVEL OF

AUDIBILITY OF NOT LESS THAN 15db ABOVE AMBIENT NOISE LEVELS MEASURED FOUR

FUNCTIONING UNDER NORMAL OPERATIVE OR WORKING CONDITIONS. THE FIRE ALARM SIGNAL SHALL COMPLY WITH THE CALIFORNIA EDUCATION CODE, SECTIONS 32000 AND 32004, AND BE A TEMPORAL PATTERN, CODE 3 AND THEN

FEET ABOVE THE FLOOR INSIDE BUILDING.

FOLLOWED BY ANY VOICE MESSAGES

SCHOOLS FIRE ALARM REQUIREMENTS

THE FIRE ALARM SYSTEM SHALL CONFORM TO CALIFORNIA BUILDING CODE, SECTION 907.2.3; CALIFORNIA ELECTRICAL CODE, ARTICLE 760 AND CALIFORNIA FIRE CODE, SECTION 907.2.3.

UPON COMPLETION OF THE INSTALLATION OF THE FIRE PROTECTIVE SIGNALING EQUIPMENT, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE ENFORCING FIRE AGENCY, NFPA 72. IF TESTING RESULTS DETERMINE FIRE ALARM AUDIBILITY DOES NOT MEET 15db OVER AMBIENT NOISE LEVELS, ADDITIONAL FIRE ALARM SIGNALING DEVICES MAY BE REQUIRED BY THE ENFORCING FIRE AGENCY.

FIRE ALARM SYSTEM CERTIFICATION AND DESCRIPTION SHALL BE PROVIDED FOR TESTING AND A PLASTIC LAMINATED COPY SHALL REMAIN (WITH INSTRUCTIONS) AT THE FIRE ALARM CONTROL PANEL PER NFPA 72.

THE FIRE ALARM "CERTIFICATE OF COMPLETION" FORM IN NFPA 72 SHALL BE COMPLETED, SIGNED AND SUBMITTED.

SCOPE OF WORK

- EXTEND THE EXISTING ADDRESSABLE FIRE ALARM SYSTEM WITH EMERGENCY VOICE/ALARM COMMUNICATIONS TO SCIENCE BLDG. 900 AS SHOWN ON THE DRAWINGS.
- PROVIDE ADDRESSABLE INITIATION DEVICES, NOTIFICATION APPLIANCES, CONDUIT, CABLING AND CONDUCTORS AS SHOWN ON THE DRAWINGS.

FIRE ALARM MONITORING NOTE

AUTOMATIC FIRE ALARM SYSTEMS SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION IN ACCORDANCE WITH NFPA 72. THE SUPERVISING STATION SHALL BE LISTED AS EITHER UUFX (CENTRAL STATION) OR UUJS (REMOTE AND PROPRIETARY) BY UNDERWRITERS LABORATORY (UL) OR SHALL COMPLY WITH THE REQUIREMENTS OF STANDARD FM 3011. SUPERVISION OF SYSTEM SHALL BE ARRANGED BY OWNER.

PLAN SUBMITTAL

THE FIRE ALARM SYSTEM SHOWN ON THESE PLANS HAS BEEN SUBMITTED AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT. ANY SUBSTITUTION OF THE FIRE ALARM SYSTEM SHALL BE RESUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL. THE CONTRACTOR

DETECTION SYSTEM, PER C.F.C. SECTION 907.2.3.6, AND SHALL COVER EVERY ROOM AND/OR ALERT ALL OCCUPANTS AND TRANSMIT THE ALARM, SUPERVISORY, AND TROUBLE SIGNALS

NOTES (THIS SHEET ONLY):

PROJECT WAS CLOSED ON AUGUST 31, 2010.

AND WAS APPROVED ON JUNE 11, 2019.

1 EXISTING FIRE ALARM EQUIPMENT WAS SUBMITTED IN D.S.A. APPLICATION

NO. 02-108893, FILE NO. 16-2, AND WAS APPROVED ON AUGUST 16, 2007.

2 EXISTING FIRE ALARM EQUIPMENT WAS SUBMITTED IN D.S.A. APPLICATION NO. 02-117217

3 EXISTING FIRE ALARM EQUIPMENT WAS SUBMITTED IN D.S.A. APPLICATION NO. 02-116520, FILE NO. 16-H1 AND WAS APPROVED ON JUNE 25, 2018.



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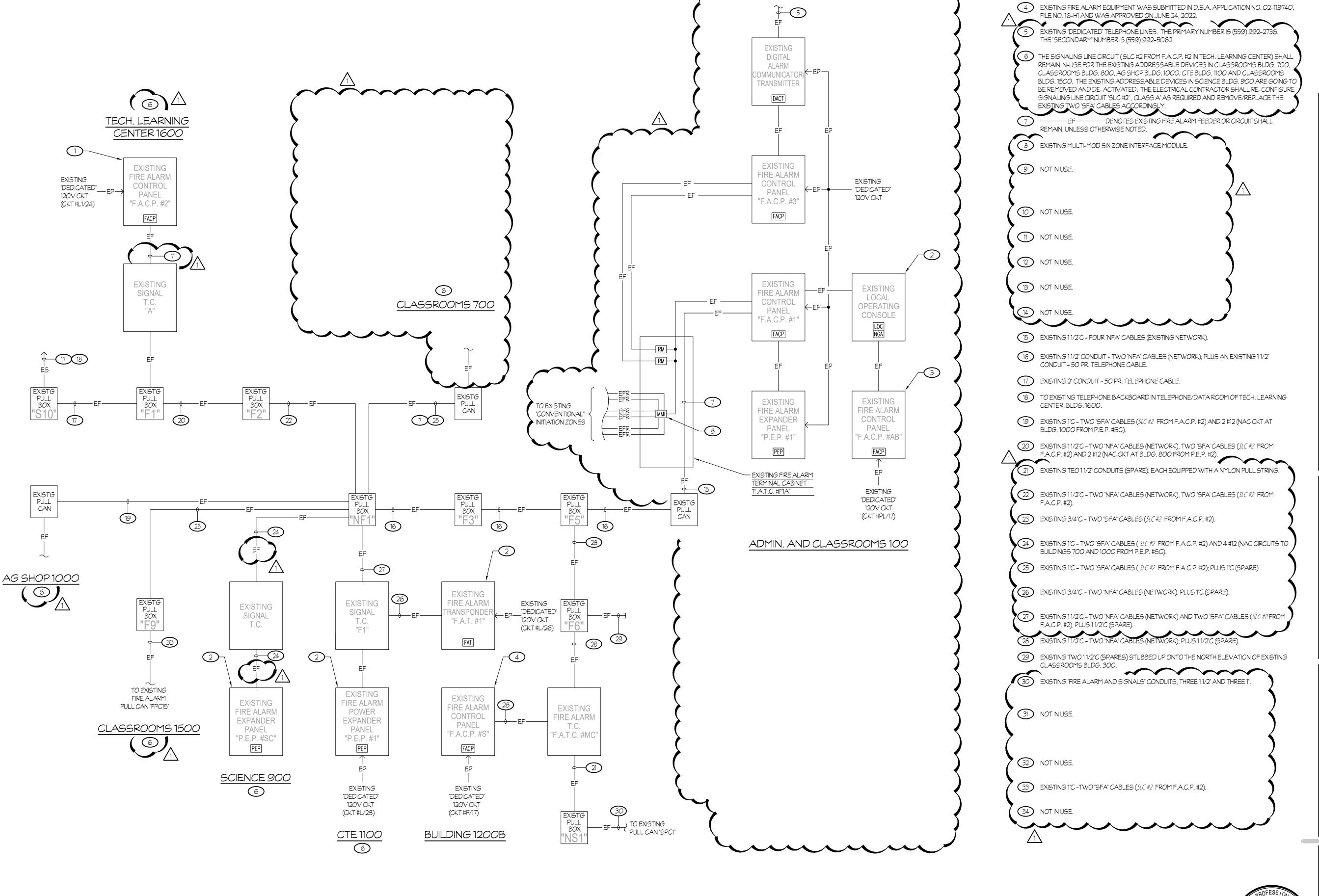
MANGINI

FIRE ALARM SYSTEM MAIN RISER DIAGRAM

E2.3

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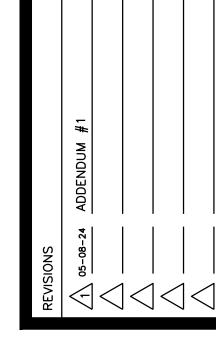






10008





AUTOMATIC FIRE SPRINKLER SYSTEM THIS BUILDING HAS AN AUTOMATIC FIRE SPRINKLER SYSTEM. HEAT DETECTORS HAVE BEEN

NOTES (THIS SHEET ONLY):

LENGTHS SHALL NOT BE USED FOR BIDDING.

CONDUCTOR REQUIREMENTS, TYPICAL.

WHITE LETTERS ON A RED BACKGROUND.

BUILDING 1000 FROM P.E.P. #SC).

BLDG. 700 FROM P.E..P #SC); PLUS 1"C SPARE.

AND REMOVE THE EXISTING TWO "SFA" CABLES.

FACP #2), AND 2 #12 (NAC CKT AT BLDG. 800 FROM PEP #2).

#12 AND RECONNECT EXISTING NAC CKT TO RELOCATED PEP #SC.

#12 AND RECONNECT EXISTING NAC CKT TO RELOCATED PEP #SC.

1"C - TWO "FA" CABLES (SLC #1 , CLASS A), PLUS 2 #12 (NAC CKT "N9").

16 11/4"C - TWO "NFA" CABLES (NEW NETWORK FROM EXISTING FIRE ALARM

5 PROVIDE "END OF LINE" RESISTORS AT ANY UNUSED OUTPUTS.

6 DENOTES END OF LINE RESISTOR ON NOTIFICATION APPLIANCE CIRCUIT.

RESISTORS SUPPLIED WITH CONTROL/EXPANDER PANELS AS REQUIRED. LOCATE RESISTORS AT END OF LINE APPLIANCES (CLASS "B" WIRING).

 $\sim\sim\sim\sim\sim\sim$

THE SIGNALING LINE CIRCUIT (SLC #2 FROM F.A.C.P. #2 IN TECH. LEARNING CENTER) SHALL REMAIN IN USE FOR THE EXISTING ADDRESSABLE DEVICES IN CLASSROOMS BUILDING 700 AND AG SHOP BLDG. 1000. THE EXISTING ADDRESSABLE DEVICES IN

8 EXISTING 1"C - TWO "SFA" CABLES (SLC #2, FROM F.A.C.P. #2) AND 2 #12 (NAC CIRCUIT AT

EXISTING 1"C - TWO "SFA" CABLES (SLC#2, FROM F.A.C.P. #2) AND 2 #12 (NAC CIRCUIT AT

(10) EXISTING 11/2"C - TWO "NFA" CABLES (NETWORK), TWO "SFA" CABLES (SLC #2 FROM

EXISTING 11/2"C - TWO "NFA" CABLES (NETWORK), TWO "SFA" CABLES (SLC #2 FROM

DISCONNECT AND REMOVE EXISTING 2 #12 (NAC CKT TO BLDG. 1000). PULL IN NEW 2

DISCONNECT AND REMOVE EXISTING 2 #12 (NAC CKT TO BLDG. 700). PULL IN NEW 2

EXISTING 3/4"C - TWO "SFA" CABLES (SLC # 2, FROM EXISTING F.A.C.P. # 2). DISCONNECT

TRANSPONDER "FAT #1 IN CTE BLDG. 1100), TWO "FA" CABLES (SLC #1); 11/4"C - ONE

"FSP" CABLE (SPKR CKT "S9"); PLUS 11/4"C (SPARE) EQUIPPED WITH A NYLON PULL

(NEW NETWORK FROM EXISTING FIRE ALARM TRANSPONDER "FAT #1 IN CTE

SCIENCE BLDG. 900 ARE GOING TO BE REMOVED AND DEACTIVATED. THE ELECTRICAL CONTRACTOR SHALL RE-CONFIGURE SIGNALING LINE CIRCUIT "SLC #2, CLASS A" AS REQUIRED AND REMOVE, REPLACE TEH EXISTING TWO "SFA" CABLES ACCORDINGLY

1 LENGTHS INDICATED WERE USED FOR CALCULATIONS/DESIGN PURPOSES ONLY AND BASED UPON THE "DIAGRAMMATIC" LAYOUT SHOWN ON THE DRAWINGS.

PROVIDE A COPY OF THE BATTERY CALCULATION FOR THE "RESPECTIVE" POWER EXPANDER PANEL (OR THE FIRE ALARM CONTROL PANEL "F.A.C.P."). THE BATTERY CALCULATION SHALL CONTAIN INFORMATION (AS NOTED ON THESE PLANS) AND BE PLASTIC LAMINATED. MOUNT ONTO INSIDE FACE OF PANEL

4 CIRCUIT BREAKER SHALL BE EQUIPPED WITH A LOCK-ON ACCESSORY, SPACEAGE

#ELOCK-FA OR EQUAL. PROVIDE AN ENGRAVED NAMEPLATE: "FIRE ALARM CIRCUIT",

3 REFER TO RESPECTIVE FIRE ALARM PLAN FOR CONDUIT AND CABLING

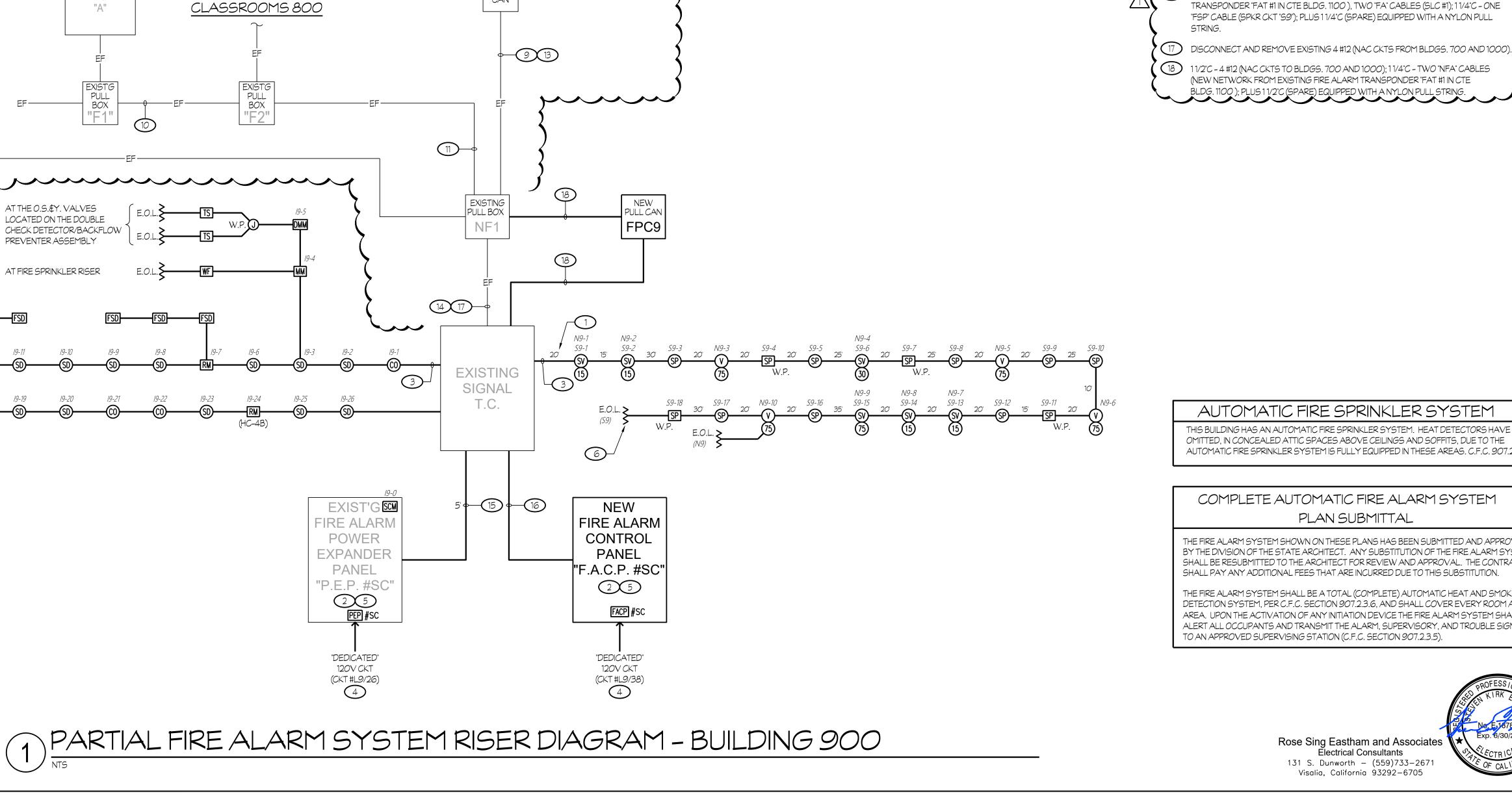
OMITTED, IN CONCEALED ATTIC SPACES ABOVE CEILINGS AND SOFFITS, DUE TO THE AUTOMATIC FIRE SPRINKLER SYSTEM IS FULLY EQUIPPED IN THESE AREAS. C.F.C. 907.2.3.6.2.

COMPLETE AUTOMATIC FIRE ALARM SYSTEM PLAN SUBMITTAL

THE FIRE ALARM SYSTEM SHOWN ON THESE PLANS HAS BEEN SUBMITTED AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT. ANY SUBSTITUTION OF THE FIRE ALARM SYSTEM SHALL BE RESUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL PAY ANY ADDITIONAL FEES THAT ARE INCURRED DUE TO THIS SUBSTITUTION.

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CLASSROOMS 700

 $\sim\sim\sim\sim$

EXISTING

"DEDICATED"

(CKT #L1/24)

120V CKT

 $\sim\sim\sim$

PULL CAN

AG SHOP 1000

19-13B

TECH. LEARNING

CENTER 1600

EXISTING FIRE ALARM

CONTROL

PANEL

"F.A.C.P. #2"

FACP

EXISTING

SIGNAL

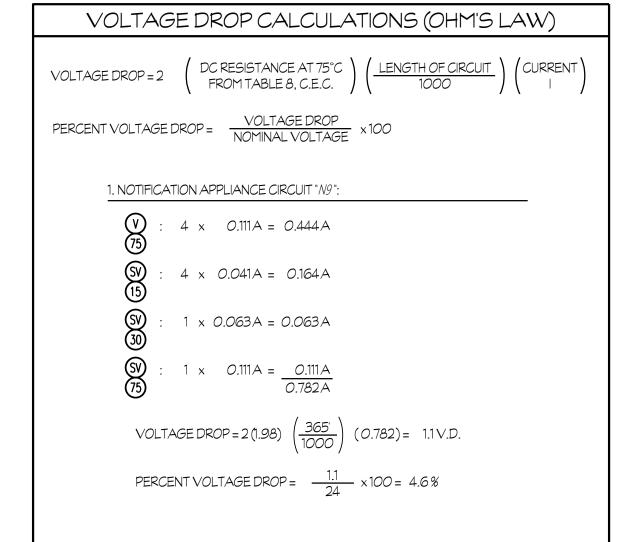
T.C.

DATE: <u>AUGUST 24, 2022</u>

MANGINI

PARTIAL FIRE ALARM SYSTEM

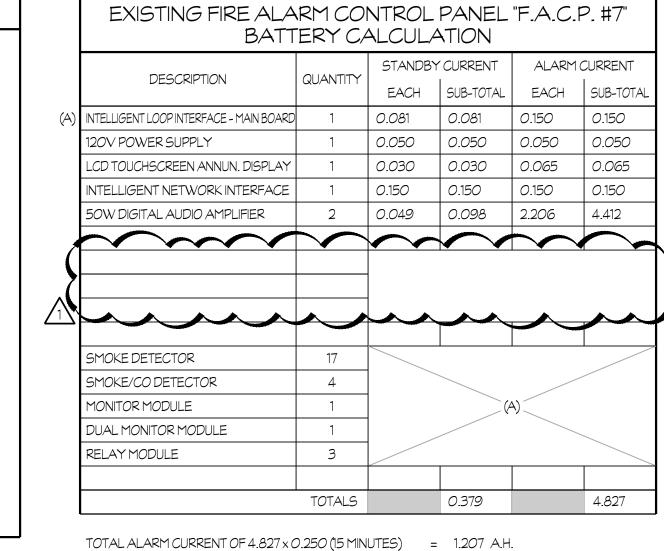
RISER DIAGRAM **E2.4**



	SPEAKER dB LOSS CALCULATION											
SPEAKER CIRCUIT	SPEAKER VOLTAGE	WIRE SIZE	RESISTANCE PER FOOT	FEET REQUIRED ON CIRCUIT	WIRE RESISTANCE	TOTAL WATTAGE OF SPEAKERS ON CIRCUIT	SPEAKER CURRENT (AMPS)	RESISTANCE OF SPEAKER LOAD		ACTUAL VOLTAGE AT SPEAKER LOAD	ACTUAL WATTS AT SPEAKER LOAD	dB LOSS
<i>S9</i>	70	18	0.1278	470'	6.01	22	0.31	222.73	18	68.162	20.860	-0.23

NOTE:

CALCULATION IS BASED ON EACH OF THE "INTERIOR" SPEAKERS TAPPED AT 1 WATT AND EACH OF THE "EXTERIOR" SPEAKERS TAPPED AT 2 WATTS.



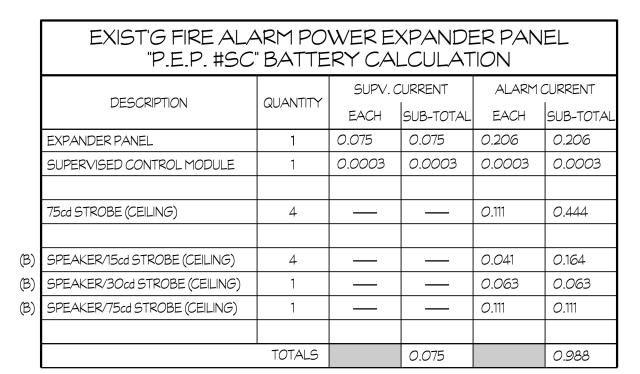
TOTAL ALARM CURRENT OF 4.827 x 0.250 (15 MINUTES)

TOTAL STANDBY CURRENT OF 0.379 x 24 HOURS

TOTAL AMP HOURS REQUIRED

= 9.096 A.H. 10.303 A.H. x 1.25 SAFETY FACTOR 12.879 A.H.

THEREFORE THE EXISTING 18.0 AMP HOUR BATTERIES ARE ADEQUATE.



TOTAL ALARM CURRENT OF 0.988 x 0.250 (15 MINUTES) = 0.247 A.H.

TOTAL SUPERVISORY CURRENT OF 0.075 x 24 HOURS = 1.800 A.H.

TOTAL AMP HOURS REQUIRED

= 1.800 A.H.

2.047 A.H.

x 1.25 SAFETY FACTOR

2.559 A.H.

ATTERIES ARE ADEQUATE.

THEREFORE THE EXISTING PROVIDE 7.0 AMP HOUR BATTERIES ARE ADEQUATE.

TYPICAL BATTERY CALCULATION NOTES:

- (A) THE CURRENT VALUES LISTED INCLUDES THE MAXIMUM NUMBER OF ADDRESSABLE DEVICES ON BOTH OF THE SIGNALING LINE CIRCUITS "SLC" (159 ADDRESSABLE DETECTORS AND 159 ADDRESSABLE MODULES PER SIGNALING LINE CIRCUIT "SLC").
- (B) THE CURRENT VALUES LISTED ARE FOR THE STROBES ONLY. THE SPEAKER CURRENT IS INCLUDED IN THE VALUES LISTED UNDER THE DIGITAL AUDIO AMPLIFIER.

AUTOMATIC FIRE SPRINKLER SYSTEM

THIS BUILDING HAS AN AUTOMATIC FIRE SPRINKLER SYSTEM. HEAT DETECTORS HAVE BEEN OMITTED, IN CONCEALED ATTIC SPACES ABOVE CEILINGS AND SOFFITS, DUE TO THE AUTOMATIC FIRE SPRINKLER SYSTEM IS FULLY EQUIPPED IN THESE AREAS. C.F.C. 907.2.3.6.2.

COMPLETE AUTOMATIC FIRE ALARM SYSTEM PLAN SUBMITTAL

THE FIRE ALARM SYSTEM SHOWN ON THESE PLANS HAS BEEN SUBMITTED AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT. ANY SUBSTITUTION OF THE FIRE ALARM SYSTEM SHALL BE RESUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL PAY ANY ADDITIONAL FEES THAT ARE INCURRED DUE TO THIS SUBSTITUTION.

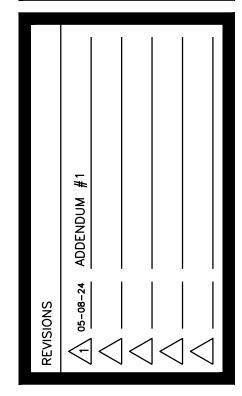
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CORCORAN UNIFIED SCHO





ARCHITECTURE INGENUITY
INGENUITY
RENG MORRELLI SCOTT
STATES INC.

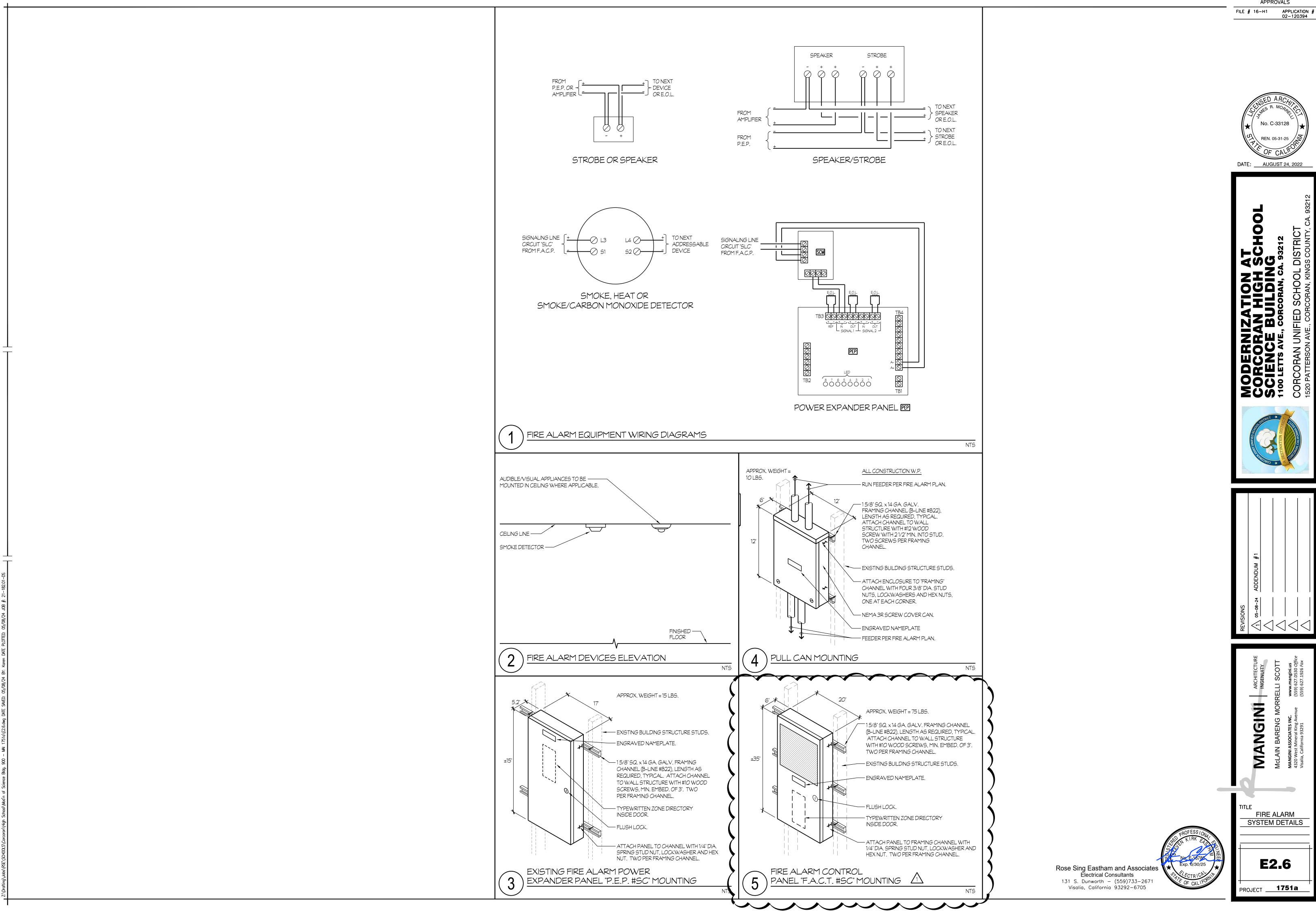
www.mangini.us
193291
(559) 627.1926 Fax
(559) 627.1926 Fax

MCLAIN BARENG MORI MANGINI ASSOCIATES INC. 4320 West Mineral King Avenue Visalia California 93291

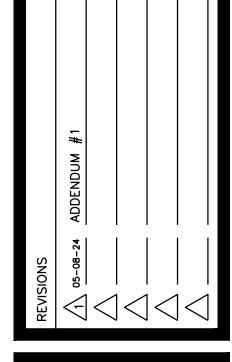
TITLE
FIRE ALARM SYSTEM
BATTERY, VOLTAGE
DROPS AND SPEAKER
dB LOSS CALCS

E2.5

PROJECT **1751a**







FILE # 16-H1 APPLICATION # 02-120394

10,000 BREAKER A.I.C.

53/4" MAX. ENCL. DEPTH

LOAD V.A. W

1260

1080

1080

300

720

__ MOUNTING

1440 2/1.

1260

720

900

435

1300

FLUSH

1440

900

900

1300

FIRE ALARM CONTROL PANEL "F.A.C.P. #SC"

PANEL "L9"

DESCRIPTION

RECEPT - CHEMISTRY

-STORAGE

- PHYSICS

FIRE/SMOKE DAMPERS FIRE SPRINKLER RISER -

UTILITY CONTROL PANEL "UCP-1"

LIFT STATION

RECEPT - I.D.F.

SPARE

EXISTING FIRE ALARM POWER EXPANDER PANEL "P.E.P. #SC"

DESCRIPTION

EXTERIOR,
L.C.P. #9

EXIT LIGHTS AND
EMERGENCY LIGHTS

RECEPT - BIOLOGY

-WORKROOM

- W.P. ON ROOF

EXTERIOR,
- SERVICE YARD
GOLF CART
- CHARGER

GOLF CART CHARGER GOLF CART CHARGER

1895

1440

360

1260

1080

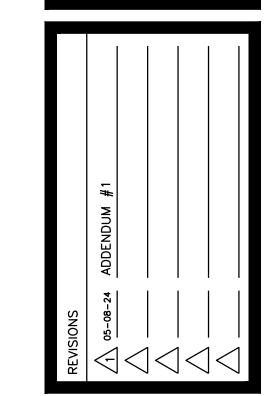
1260

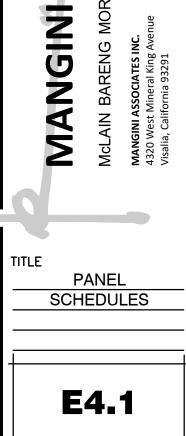
1200

No. C-33128 REN. 05-31-25 DATE: <u>AUGUST 24, 2022</u>

> 0 MODERNIZATION AT CORCORAN HIGH SCHO SCIENCE BUILDING







480 VOLTS <u>3</u> Ø <u>3</u> WIRE BREAKER A.I.C. <u>120/208</u> VOLTS <u>3</u> Ø 4 WIRE 225 A. BUSSING 200 A. MAIN BKR. 61/2" MAX. ENCL. DEPTH 400 A. BUSSING 300 A. MAIN BKR. 54 CIRCUIT 42 CIRCUIT SURFACE ___ MOUNTING PANEL "H9" BOLT-ON CKT BKRS/PNLBD NEMA 3R BOLT-ON CKT BKRS/PNLBD LOAD V.A. ØC | ØB | ØA LOAD V.A. ØA | ØB | ØC DESCRIPTION DESCRIPTION HC-1 AND EF-2A 12.1 FLA HC-4A AND EF-3 20.7 FLA 5735 1740 3355 5735 5735 HC-2 AND EF-2B 10.5 FLA 2910 5735 2910 5735 2910 5735 HC-2 AND EF-2B 12.1 FLA 3355 3355 900 900 1200 XFMR "TL9" 20,000 20,000

 ØA:
 41,090 V.A.
 ØB:
 41,090 V.A.
 ØC:
 41,090 V.A.

 9,775 V.A.
 9,775 V.A.
 9,775 V.A.
 9,775 V.A.

 50,865 V.A.
 50,865 V.A.
 50,865 V.A.

 9,775 V.A. 50,865 V.A. 9,775 V.A. 50,865 V.A.

TOTAL LOAD: L.C.L. x 25%

TYPICAL PANEL SCHEDULE NOTES:

- (1) PROVIDE A LOCK-ON DEVICE AT THIS CIRCUIT BREAKER, "RED IN COLOR", SPACEAGE #ELOCK-FA OR EQUAL. PROVIDE AN ENGRAVED NAMEPLATE: "FIRE ALARM CIRCUIT", WHITE LETTERS ON A RED BACKGROUND. MOUNT NAMEPLATE ONTO INTERIOR TRIM AND ADJACENT TO CIRCUIT BREAKER.
- (2) PROVIDE HANDLE TIES, BETWEEN ADJACENT CIRCUIT BREAKERS, TO COMPLY WITH C.E.C. 210.4 (B).

 ØA:
 12,285 V.A.
 ØB:
 12,035 V.A.
 ØC:
 12,960 V.A.

 450 V.A.
 475 V.A.
 12,510 V.A.
 13,115 V.A.

 106 A
 104 A
 109 A

(3) SUB-FEED CIRCUIT BREAKER.

TOTAL LOAD: L.C.L. x 25%:

- (4) PROVIDE A G.F.C.I. TYPE CIRCUIT BREAKER.
- (5) PROVIDE A LOCK-ON DEVICE AT THIS CIRCUIT BREAKER, "RED IN COLOR", SPACEAGE #ELOCK-FA OR EQUAL AT THIS "DEDICATED" CIRCUIT BREAKER.
- (6) PROVIDE A LOCK-ON ACCESSORY AT THIS CIRCUIT BREAKER. THIS CIRCUIT BREAKER FEEDS EITHER EMERGENCY LIGHT FIXTURES AND/OR EMERGENCY BATTERY PACKS WHICH PROVIDES THE EMERGENCY ILLUMINATION. PROVIDE AN ENGRAVED NAMEPLATE: "FEEDS EMERG. LTG.". BLACK LETTERS ON A WHITE BACKGROUND.

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