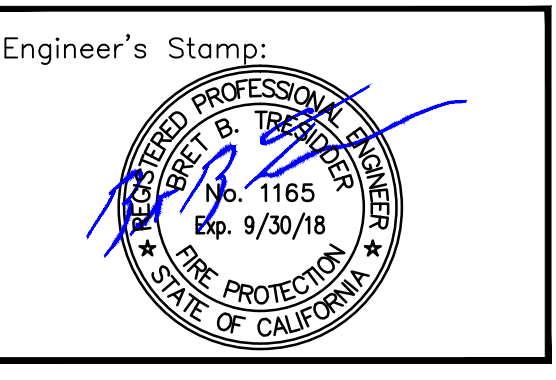




CLIENT: HUMBOLDT STATE UNIVERSITY
1 HARPST STREET
ARCATA, CA 95521

PROJECT NAME:
**CAMPUS FIRE ALARM
REPLACEMENT PROJECT**
VARIOUS BUILDINGS
PROJECT # XHS408

Project Building(s):
CANYON COMPLEX
• ALDER RESIDENCE HALL
• CEDAR RESIDENCE HALL
• CHINQUAPIN RESIDENCE HALL
• HEMLOCK RESIDENCE HALL
• MAPLE RESIDENCE HALL
• TAN OAK RESIDENCE HALL
• PEPPERWOOD RESIDENCE HALL



This project has demonstrated conformance with applicable codes and standards established by statute and University policy. Based on this determination these documents are
'APPROVED FOR CONSTRUCTION'
Traci Ferdeloge
Campus Deputy Building Official
Humboldt State University
The California State University
Date: 3/31/2017
Permit #: 2016/17-026
Other approvals, as applicable:
SFM Approval: 3/16/2017
DSA Access Approval: N/A
Seismic Peer Review: N/A
Mech. Peer Review: N/A

CALIFORNIA STATE FIRE MARSHAL
APPROVED
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. Set of approved plans shall be available on the project site at all times.
Reviewed by: [Signature]
Date: 3/18/17

REVISIONS

DATE	NO.	DESCRIPTION

SHEET TITLE:
FIRE ALARM
**GENERAL NOTES,
LEGEND AND
CODE REQUIREMENTS**

SCALE: AS NOTED DATE: 03.17.17

SHEET: **FA0.0**

GENERAL NOTES:

- SCOPE OF WORK:** THIS DESIGN PROVIDES A COMPLETE REPLACEMENT FIRE ALARM SYSTEM FOR THE BUILDING(S), UTILIZING A NOTIFIER NFS-320 FIRE ALARM CONTROL, PHOTOELECTRIC SMOKE DETECTORS AND HEAT DETECTORS (FOR PROTECTION OF THE AREAS SHOWN IN THE DRAWINGS), DUCT-TYPE SMOKE DETECTORS FOR HVAC FAN SHUTDOWN, MANUAL FIRE ALARM PULL STATIONS, AUDIBLE/VISUAL OCCUPANT NOTIFICATION APPLIANCES, AND VISUAL OCCUPANT NOTIFICATION APPLIANCES. ALL INITIATING DEVICES AND NOTIFICATION APPLIANCES SHALL BE COMPATIBLE WITH THE NEW CONTROL UNIT. THE DEVICES AND APPLIANCES SHALL BE PROVIDED AND INSTALLED AS INDICATED IN THE DRAWINGS, NATIONAL PROTECTION ASSOCIATION (NFPA) 72, NATIONAL FIRE ALARM AND SIGNALING CODE (2016 EDITION WITH CALIFORNIA AMENDMENTS), THE REQUIREMENTS OF THE CALIFORNIA STATE FIRE MARSHAL'S OFFICE, THE REQUIREMENTS OF THE CALIFORNIA DIVISION OF THE STATE ARCHITECT'S OFFICE, THE REQUIREMENTS OF THE UNIVERSITY, AND THE MANUFACTURER'S LISTINGS AND APPROVALS.
- PROJECT NARRATIVE:** ALL OF THE EXISTING FIRE ALARM DEVICES, APPLIANCES AND EQUIPMENT FOR SYSTEMS TO BE REPLACED SHALL REMAIN OPERABLE UNTIL THE NEW SYSTEM IS COMPLETE, ACCEPTED BY THE UNIVERSITY AND ACCEPTED BY THE AHJ. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND IDENTIFY ALL OF THE EXISTING EQUIPMENT AND OTHER ITEMS THAT MUST BE REMOVED AS PART OF THEIR BID. EXCEPT WHERE NOTED IN THE DRAWINGS (OR WHERE THE CONTRACTOR DESIRES TO UTILIZE EXISTING CONDUIT AND/OR CONDUCTORS), THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL FIRE ALARM DEVICES, APPLIANCES, EQUIPMENT, RACEWAYS, AND WIRING SERVING THE EXISTING FIRE ALARM SYSTEMS FOLLOWING THE ACCEPTANCE OF THE REPLACEMENT FIRE ALARM SYSTEM INSTALLATION. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL VISIBLE ELECTRICAL BOXES (AND REPAIR AND PAINT THE EXPOSED SURFACE TO MATCH THE SURROUNDING SURFACE) OR COVER THE BOXES WITH AN APPROPRIATE COVER ACCEPTED BY THE UNIVERSITY (WITH THE COVER PAINTED TO MATCH THE SURROUNDING SURFACE). THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL EXPOSED UNUSED CONDUIT SERVING THE EXISTING FIRE ALARM SYSTEM FOLLOWING THE ACCEPTANCE OF THE NEW/REPLACEMENT FIRE ALARM SYSTEM. CONDUIT CONCEALED BY BUILDING CONSTRUCTION WHICH IS NOT READILY ACCESSIBLE (E.G. CONDUIT WITHIN WALLS, ABOVE GYPSUM OR PLASTER FINISHED CEILINGS, ETC.) SERVING THE EXISTING FIRE ALARM SYSTEMS MAY REMAIN ABANDONED IN PLACE (WITH ALL UNUSED WIRING AND CONDUCTORS REMOVED). THE CONTRACTOR SHALL PREPARE AND IN-DEPTH, DETAILED IMPAIRMENT PLAN IN ACCORDANCE WITH CFC SECTION 901.7.
- ALL NEW FIRE ALARM SYSTEM RACEWAY (E.G. CONDUIT) SHALL BE MINIMUM 3/4 INCH IN SIZE, PROVIDED IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE, IN ACCORDANCE WITH THE UNIVERSITY'S STANDARDS, AND THESE CONTRACT DOCUMENTS. ALL CONDUIT SHALL BE ROUTED CONCEALED TO THE EXTENT PRACTICAL. CONDUIT ROUTED ABOVE DROP CEILING SYSTEMS SHALL BE INSTALLED AT A HEIGHT PERMITTING THE EASY REMOVAL OF THE CEILING TILE (E.G. CONDUIT SHALL NOT BE INSTALLED ABOVE THE TILE TO PREVENT EASY LIFTING FOR ACCESS). EXPOSED CONDUIT IN FINISHED AREAS SHALL BE PAINTED.
- WITH THE EXCEPTION OF UNFINISHED AREAS, ANY EXPOSED RACEWAY MAY BE CEILING OR WALL SURFACE MOUNTED WIREMOLD OR OTHER DECORATIVE RACEWAY SYSTEM. WIREMOLD OR OTHER DECORATIVE RACEWAY SHALL BE METALLIC.
- THE WORK TAKES PLACE IN OCCUPIED BUILDINGS, WITH RESTRICTED ACCESS AND WORK CONDITIONS, WITH FUNCTIONING FIRE ALARM SYSTEMS. THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF ACTIVITIES FOR EACH AREA OF WORK FOR ACCEPTANCE BY THE UNIVERSITY. THE CONTRACTOR SHALL COORDINATE THE SCHEDULE AND WORK TO AVOID DISRUPTIONS TO THE UNIVERSITY TO THE EXTENT PRACTICAL AND FEASIBLE.
- THESE DRAWINGS ARE DIAGRAMMATIC IN THAT EXACT DEVICE, APPLIANCE, AND EQUIPMENT LOCATIONS, CONDUIT ROUTING, CONDUIT SUPPORT AND CONSTRUCTION DETAILS, VOLTAGE DROP CALCULATIONS, AND POWER SUPPLY AND BATTERY CALCULATIONS ARE TO BE DEVELOPED BY THE CONTRACTOR.
- THE RISER DIAGRAMS ARE DIAGRAMMATIC AND REPRESENT FEASIBLE CONNECTIVITY. THE CONTRACTOR MAY MODIFY THE CONNECTIVITY TO SUIT FIELD CONDITIONS PROVIDED THAT THE NOTIFICATION APPLIANCE AND SIGNALING LINE CIRCUIT LOADS DO NOT EXCEED THOSE SPECIFIED IN THE LISTINGS AND APPROVALS FOR EACH MANUFACTURER'S PIECE OF EQUIPMENT.
- ANY FIRE ALARM SIGNAL SHALL CAUSE ALL OCCUPANT NOTIFICATION APPLIANCES TO OPERATE CONTINUOUSLY IN ACCORDANCE WITH THE UNIVERSITY'S REQUIREMENTS. ANY FIRE ALARM SIGNAL SHALL ALSO CAUSE AN ALARM SIGNAL TO BE TRANSMITTED TO THE UNIVERSITY'S RECEIVER.
- ANY SUPERVISORY OR TROUBLE SIGNAL SHALL CAUSE A LOCAL ALARM AT THE FACU TO OPERATE. ANY SUPERVISORY OR TROUBLE SIGNAL SHALL ALSO CAUSE A SUPERVISORY/TROUBLE SIGNAL TO BE TRANSMITTED TO THE UNIVERSITY'S RECEIVER.
- ALL WIRING SHALL BE INSTALLED IN COMPLIANCE WITH THE CALIFORNIA ELECTRICAL CODE (SPECIFICALLY ARTICLE 760) AND NFPA 72, NATIONAL FIRE ALARM CODE.
- NO WIRING SHALL BE EXPOSED. CONDUIT OR DECORATIVE METALLIC RACEWAY (I.E. WIREMOLD) SHALL BE USED. WIRING WITHIN ENCLOSURES SHALL BE NEATLY BUNDLED AND STRAPPED OR FASTENED TO THE ENCLOSURE OR ENCLOSURE DOORS.
- IN SUB-PANELS OR ENCLOSURE SURFACES, WIRING CONNECTED TO HINGED DOORS SHALL BE BUNDLED AND SLEEVED IN A FLEXIBLE PLASTIC TUBING TO PERMIT OPENING AND CLOSING OF THE DOOR WITHOUT STRAINING WIRING AND WITHOUT ABRASION OF WIRE INSULATION.
- NO CABLE SHALL BE INSTALLED IN VENTILATION DUCTS OR PLENUMS WITHOUT SPECIFIC PRIOR WRITTEN APPROVAL OF THE UNIVERSITY'S REPRESENTATIVE.
- NO CLASS 2 OR 3 SIGNAL WIRING SHALL BE INSTALLED IN CONDUIT WITH LIGHT, POWER, OR CLASS 1 SIGNAL WIRING.
- ALL WIRING, EXCEPT WIRING INSIDE ENCLOSURES, SHALL BE CABLED WITH A THERMOPLASTIC INSULATION JACKET, WITH A VOLTAGE RATING EXCEEDING THE VOLTAGE OF ANY POWER IN PROXIMITY TO THE WIRING.
- ALL SIGNAL WIRING SHALL BE OPERATED AT NOT MORE THAN 30 VOLTS, AC OR DC.
- ANY FIRE ALARM DEVICE LOCATED IN A CONCEALED LOCATION SHALL BE PROVIDED WITH A REMOTE ALARM INDICATOR. THE REMOTE ALARM INDICATOR SHALL BE LOCATED IN A READILY VISIBLE LOCATION IN THE VICINITY OF THE CONCEALED DEVICE.
- BEFORE REQUESTING FINAL APPROVAL OF THE INSTALLATION, THE INSTALLING CONTRACTOR SHALL FURNISH A WRITTEN STATEMENT TO THE UNIVERSITY & STATE FIRE MARSHAL TO THE EFFECT THAT THE SYSTEM HAS BEEN INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND COMPLETELY TESTED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND APPROPRIATE NFPA REQUIREMENTS.
- UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A SATISFACTORY TEST OF THE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE UNIVERSITY'S REPRESENTATIVE AND THE STATE FIRE MARSHAL'S REPRESENTATIVE.

LEGEND:

- L1-01 SMOKE DETECTOR, ADDRESS AS NOTED
- L1-02^{DSD} DUCT SMOKE DETECTOR, ADDRESS AS NOTED
- L1-03 HEAT DETECTOR, ADDRESS AS NOTED
- L1-04 MP MANUAL FIRE ALARM PULL STATION, ADDRESS AS NOTED
- L1-05 CM INTELLIGENT CONTROL MODULE, ADDRESS AS NOTED
- L1-06 MM INTELLIGENT MONITOR MODULE, ADDRESS AS NOTED
- WF FIRE SPRINKLER WATERFLOW SWITCH, ADDRESS AS NOTED
- VS FIRE SPRINKLER VALVE POSITION SUPERVISORY SWITCH, ADDRESS AS NOTED
- DH MAGNETIC DOOR HOLDER
- FSD COMBINATION FIRE/SMOKE DAMPER (SEE HVAC PLANS FOR LOCATIONS)
- FACU FIRE ALARM CONTROL UNIT
- PWR REMOTE NOTIFICATION APPLIANCE POWER SUPPLY
- ANN ANNUNCIATOR
- AV-01 15 cd WALL MOUNTED STROBE, NUMBER/MIN. CANDELA RATING AS NOTED
- AV-02 WALL MOUNTED HORN/STROBE, NUMBER/MIN. CANDELA RATING AS NOTED
- AV-03 H WALL MOUNTED HORN, NUMBER AS NOTED
- AV-04 30 cd CEILING MOUNTED STROBE, NUMBER/MIN. CANDELA RATING AS NOTED
- AV-05 30 cd CEILING MOUNTED HORN/STROBE, NUMBER/MIN. CANDELA RATING AS NOTED
- AV-06 H CEILING MOUNTED HORN, NUMBER AS NOTED

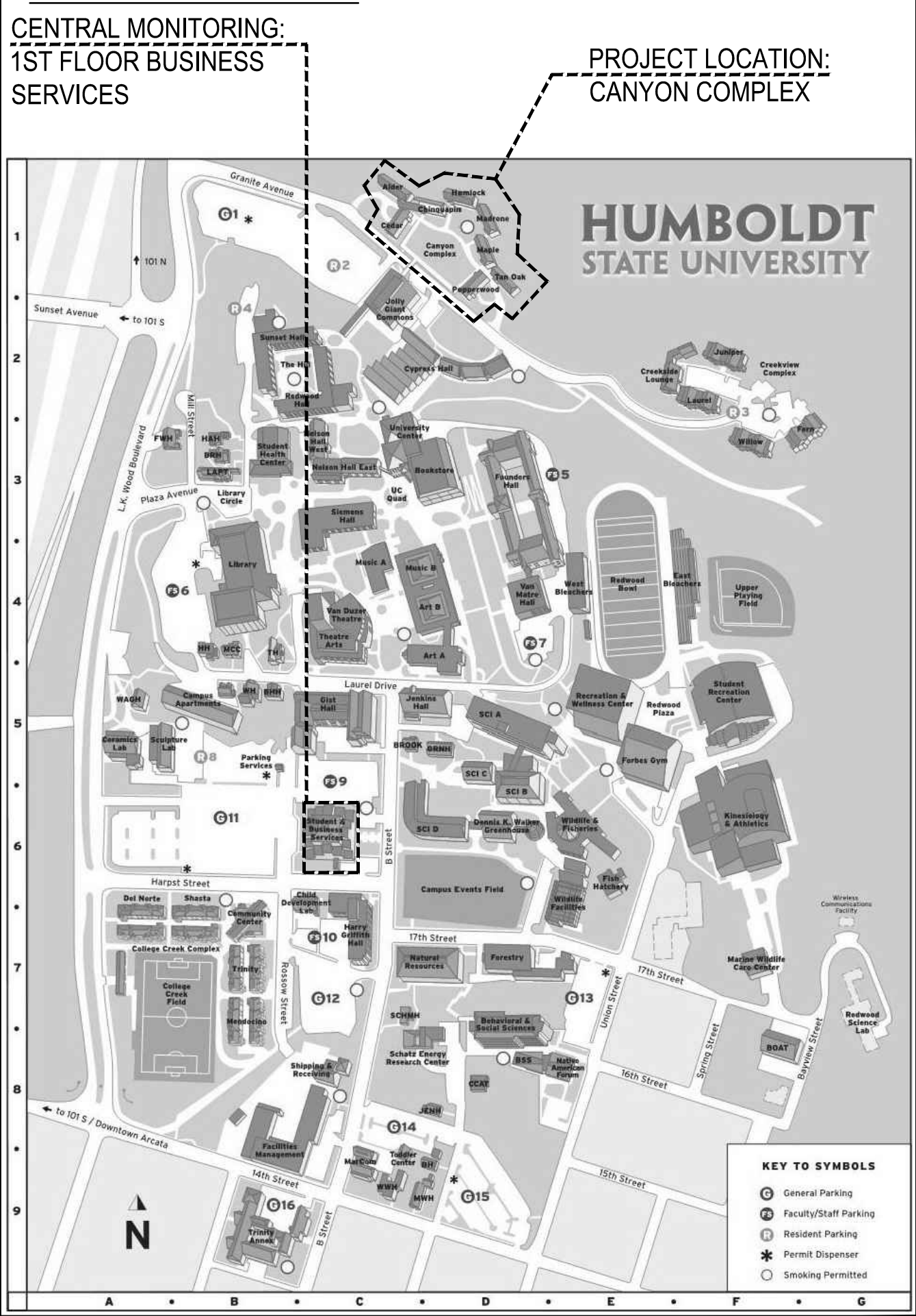
SHEET LIST:

DRAWING#	SHEET TITLE
FA0.0	GENERAL NOTES, SHEET INDEX, CAMPUS MAP, LEGEND, CODE REQUIREMENTS
FA0.1	DETAILS
FA0.2	CONTROL UNIT ARRANGEMENT
FA0.3	TYPICAL REMOTE POWER SUPPLY ARRANGEMENT & DETAILS
FA0.4	RISER DIAGRAMS
FA0.5	RISER DIAGRAMS
FA0.6	RISER DIAGRAMS
FA0.7	RISER DIAGRAMS & DETAILS
FA2.1	ALDER RESIDENCE HALL - FIRE ALARM PLANS
FA2.2	CEDAR RESIDENCE HALL - FIRE ALARM PLANS
FA2.3	CHINQUAPIN RESIDENCE HALL - FIRE ALARM PLANS
FA2.4	HEMLOCK RESIDENCE HALL - FIRE ALARM PLANS
FA2.5	MAPLE RESIDENCE HALL - FIRE ALARM PLANS
FA2.6	TAN OAK RESIDENCE HALL - FIRE ALARM PLANS
FA2.7	PEPPERWOOD RESIDENCE HALL - FIRE ALARM PLANS

FIRE ALARM SEQUENCE OF OPERATIONS

SYSTEM EVENT	RESPONSE					
	ANNUNCIATE AT FACU	FIRE SIGNAL TO CAMPUS PD	TROUBLE SIGNAL TO CAMPUS PD	SUPERVISORY SIGNAL TO CAMPUS PD	OPERATE ALL BASES UNIT IN ALARM	OPERATE ALL UNIT SOUNDER BASES
MANUAL FIRE ALARM PULL STATION	●	●			●	●
COMMON AREA SMOKE/HEAT DETECTOR	●	●			●	●
DWELLING UNIT SMOKE DETECTOR	●		●	●		
SPRINKLER WATERFLOW SWITCH	●	●				●
SPRINKLER VALVE SUPERVISORY SWITCH	●		●			
FIRE ALARM CONTROL UNIT FAILURE	●		●			
POWER SUPPLY FAILURE	●		●			

CAMPUS MAP:



APPLICABLE FIRE ALARM CODE REQUIREMENTS:

THESE NOTES IDENTIFY THE REQUIREMENTS FOR FIRE ALARM SYSTEM INSTALLATIONS FOR THE PROTECTION OF THE CANYON RESIDENCE HALLS.

IN GENERAL, THE REQUIREMENTS FOR THE INSTALLATION OF FIRE ALARM SYSTEMS FOR THE BUILDING IS DEPENDENT UPON THE BUILDING OCCUPANCY, THE OCCUPANT LOAD, AND THE LOCATION OF THE OCCUPANT LOAD (I.E. ABOVE OR BELOW THE LEVEL OF EXIT DISCHARGE).

TITLE 24 OF THE CALIFORNIA CODE OF REGULATIONS, PART 2, 2016 CALIFORNIA BUILDING CODE (CBC) IDENTIFIES THE FOLLOWING OCCUPANCY DEFINITIONS FOR THE RELEVANT SPACES WITHIN THESE BUILDINGS:

310.4 RESIDENTIAL GROUP R-2: RESIDENTIAL OCCUPANCIES CONTAINING SLEEPING UNITS OR MORE THAN TWO DWELLING UNITS WHERE THE OCCUPANTS ARE PRIMARILY PERMANENT IN NATURE, INCLUDING: ... DORMITORIES.

THESE BUILDINGS HOUSE R2-OCCUPANCIES (RESIDENCE HALLS).

THE CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2, CALIFORNIA FIRE CODE REQUIRES THE FOLLOWING IN REGARD TO FIRE ALARM SYSTEM INSTALLATIONS FOR THE OCCUPANCIES PRESENT IN THE EXISTING BUILDING:

907.2.9 GROUP R2 AND R2.1 OCCUPANCIES: A MANUAL FIRE ALARM SYSTEM THAT ACTIVITIES THE OCCUPANT NOTIFICATION SYSTEM IN ACCORDANCE WITH SECTION 907.5 SHALL BE INSTALLED IN GROUP R2 OCCUPANCIES WHERE:

- ANY DWELLING UNIT OR SLEEPING UNIT IS LOCATED THREE OR MORE STORIES ABOVE THE LOWEST LEVEL OF EXIT DISCHARGE.
- ANY DWELLING UNIT OR SLEEPING UNIT IS LOCATED MORE THAN ONE STORY BELOW THE HIGHEST LEVEL OF EXIT DISCHARGE.
- THE BUILDING CONTAINS MORE THAN 16 DWELLING UNITS.
- CONGREGATE RESIDENCES WITH MORE THAN 16 OCCUPANTS.

EXCEPTION 2 PERMITS THE OMISSION OF MANUAL FIRE ALARM BOXES WHEN THE BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2 AND THE OCCUPANT NOTIFICATION APPLIANCES WILL AUTOMATICALLY ACTIVATE THROUGHOUT THE NOTIFICATION ZONES UPON A SPRINKLER WATERFLOW. THE UNIVERSITY HAS ELECTED NOT TO APPLY EXCEPTION 2 AND TO PROVIDE PULL STATIONS AS PART OF THE DESIGN/INSTALLATION.

907.2.9.2 SMOKE ALARMS: SINGLE AND MULTIPLE STATION SMOKE ALARMS SHALL BE INSTALLED IN ACCORDANCE WITH 907.2.11. SECTION 907.2.11 REQUIRES A SMOKE ALARM IN SLEEPING AREAS AND IN EVERY ROOM IN THE PATH OF EGRESS FROM THE SLEEPING AREA TO THE DOOR LEADING FROM THE SLEEPING UNIT.

AN EXCEPTION PERMITS SMOKE DETECTORS CONNECTED TO A FIRE ALARM SYSTEM TO BE USED IN LIEU OF SMOKE ALARMS PROVIDED THAT UPON ALARM, ONLY THOSE NOTIFICATION APPLIANCES IN THE DWELLING UNIT OPERATE (I.E. DOES NOT RESULT IN BUILDING EVACUATION).

907.2.9.3 GROUP R2 COLLEGE AND UNIVERSITY BUILDINGS: AN AUTOMATIC SMOKE DETECTION SYSTEM THAT ACTIVITIES THE OCCUPANT NOTIFICATION SYSTEM SHALL BE INSTALLED IN R2 COLLEGE AND UNIVERSITY BUILDINGS IN THE FOLLOWING LOCATIONS:

- COMMON SPACES OUTSIDE OF DWELLING UNITS AND SLEEPING UNITS.
- LAUNDRY ROOMS, MECHANICAL EQUIPMENT ROOMS, AND STORAGE ROOMS.
- ALL INTERIOR CORRIDORS SERVING SLEEPING UNITS OR DWELLING UNITS.

THE RESIDENTIAL HALLS REQUIRE THE INSTALLATION OF AN AUTOMATIC FIRE ALARM SYSTEM WITH DETECTION IN ACCORDANCE WITH SECTIONS, 907.2.9.2 AND 907.2.9.3 FOR THE OPERATION OF OCCUPANT NOTIFICATION THROUGH THE BUILDINGS. THE REQUIREMENT FOR A MANUAL FIRE ALARM SYSTEM MAY BE WAIVED BY EXCEPTION 2 TO THE REQUIREMENT. THE INSTALLATION OF DETECTION AND OCCUPANT NOTIFICATION APPLIANCES IS REQUIRED TO BE IN ACCORDANCE WITH NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 72, NATIONAL FIRE ALARM AND SIGNALING CODE.

OCCUPANCY CLASSIFICATION & USE: R-2 DORMITORIES
CONSTRUCTION TYPE: TYPE V-A
YEAR CONSTRUCTED, APPROX: 1967
NUMBER OF STORIES: 3 + BASEMENT
BUILDING HEIGHT: ± 45'

NOTE: FLOOR AREAS VARY SLIGHTLY BETWEEN BUILDINGS, SEE PLANS.
BASEMENT AREA: 1,502 SF
1st FLOOR AREA: 2,993 SF
1st FLOOR AREA: 2,993 SF
2nd FLOOR AREA: 2,993 SF
BUILDING AREA (TOTAL): 10,481 SF

NON-SEPARATED USE: N/A
ALLOWABLE AREA PER (CBC): N/A (NO CHANGE)
AREA INCREASE: N/A (NO CHANGE)
HEIGHT INCREASE: N/A (NO CHANGE)

FIRE SPRINKLERS: YES (NO CHANGE)
FIRE ALARM: YES, MANUAL (EXISTING)
OTHER FIRE PROTECTION SYSTEMS: PORTABLE FIRE EXTINGUISHERS

NOTE: BEDROOMS VARY SLIGHTLY BETWEEN BUILDINGS, SEE PLANS.
BASEMENT OCCUPANT LOAD: 7 OCCUPANTS
1st FLOOR OCCUPANT LOAD: 15 OCCUPANTS (21 BEDS)
2nd FLOOR OCCUPANT LOAD: 15 OCCUPANTS (21 BEDS)
3rd FLOOR OCCUPANT LOAD: 15 OCCUPANTS (21 BEDS)
BUILDING OCCUPANT LOAD (TOTAL): 52 OCCUPANTS (63 BEDS)
(OCCUPANT LOADS CALCS PER 2016 CBC TABLE 1004.1.2)

HIGH FIRE HAZARD SEVERITY ZONE: NO
SEISMIC JOINTS: NO
EMERGENCY RESPONDER RADIO: N/A

NOTE: THE BUILDING DATA SHOWN ABOVE WAS PROVIDED BY THE UNIVERSITY AND HAS NOT BEEN INDEPENDENTLY VERIFIED BY HYT CORPORATION.

SFM BUILDING CODE DATA:

ALDER HALL: HSU BLDG #069, CSFM # 18-12-03-0001-001
CEDAR HALL: HSU BLDG #070, CSFM # 18-12-03-0001-010
CHINQUAPIN: HSU BLDG #068, CSFM # 18-12-03-0001-012
HEMLOCK HALL: HSU BLDG #067, CSFM # 18-12-03-0001-034
MAPLE HALL: HSU BLDG #065, CSFM # 18-12-03-0001-047
PEPPERWOOD: HSU BLDG #063, CSFM # 18-12-03-0001-057
TAN OAK HALL: HSU BLDG #064, CSFM # 18-12-03-0001-081

NOTE: THE CONTRACT INCLUDES WORK ONLY AT HEMLOCK AND MAPLE HALLS. SOME REFERENCES IN THIS DRAWING SET HAVE BEEN MARKED AND/OR NOTED AS NOT IN CONTRACT (NIC) TO CLARIFY THIS CONDITION. THE DOCUMENTS ARE NOT ALTERED IN ANY WAY.

HYT Corporation
Fire Protection Engineers
and Consultants
3498 Clayton Road - Suite 101
Concord, California 94519
Phone: (925) 681-2731

CLIENT:

HUMBOLDT STATE UNIVERSITY
1 HARPST STREET
ARCATA, CA 95521

PROJECT NAME:
**CAMPUS FIRE ALARM
REPLACEMENT PROJECT**
VARIOUS BUILDINGS
PROJECT # XHS408

Project Building(s):
CANYON COMPLEX

- ALDER RESIDENCE HALL
- CEDAR RESIDENCE HALL
- CHINQUAPIN RESIDENCE HALL
- HEMLOCK RESIDENCE HALL
- MAPLE RESIDENCE HALL
- TAN OAK RESIDENCE HALL
- PEPPERWOOD RESIDENCE HALL

Engineer's Stamp:

This project has demonstrated conformance with applicable codes and standards established by statute and University policy. Based on this determination these documents are

'APPROVED FOR CONSTRUCTION'

Traci Ferdolage
Campus Deputy Building Official
Humboldt State University
The California State University
Date: 3/31/2017
Permit #: 2016/17-026

Other approvals, as applicable:
SFM Approval: 3/18/2017
DSA Access Approval: N/A
Seismic Peer Review: N/A
Mech. Peer Review: N/A

CALIFORNIA STATE FIRE MARSHAL APPROVED

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. Set of approved plans shall be available on the project site at all times.

Reviewed by: *Andrew Meservey*
Date: 3/18/17

REVISIONS

DATE	NO.	DESCRIPTION

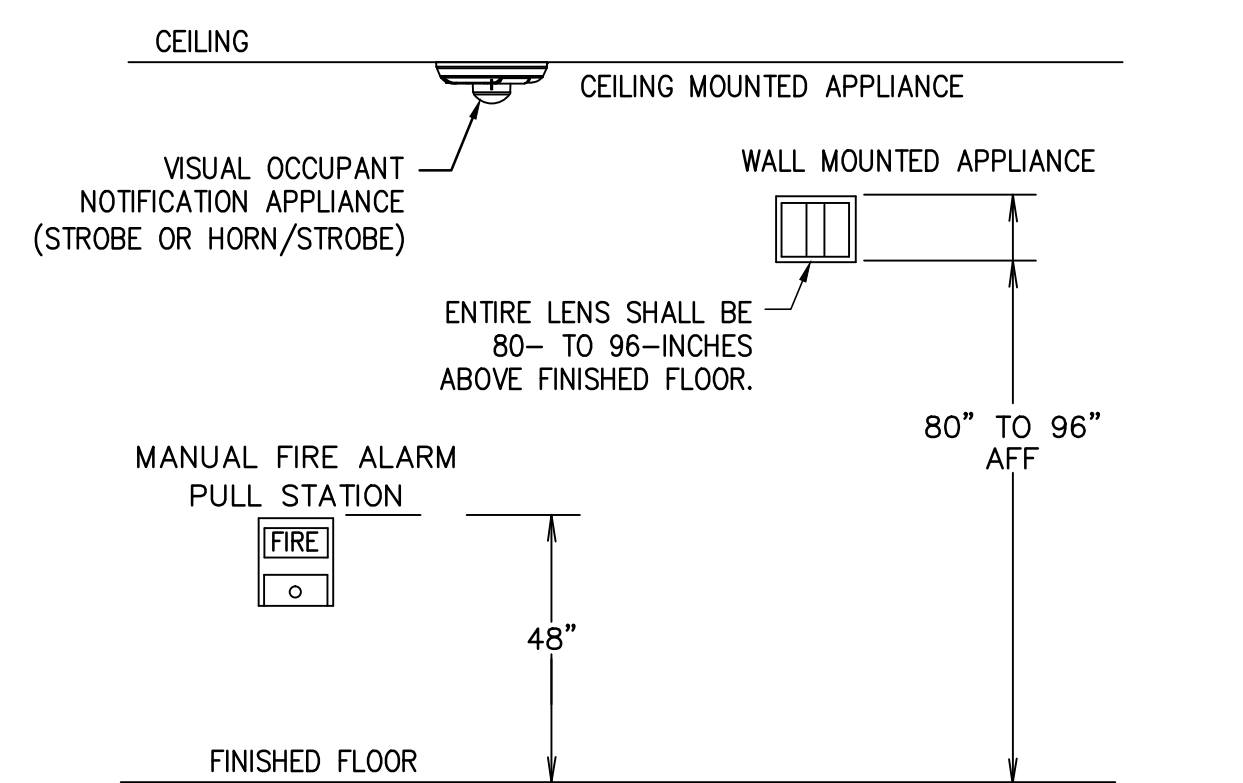
SHEET TITLE:
**FIRE ALARM
DETAILS**

SCALE	DATE
AS NOTED	03.17.17

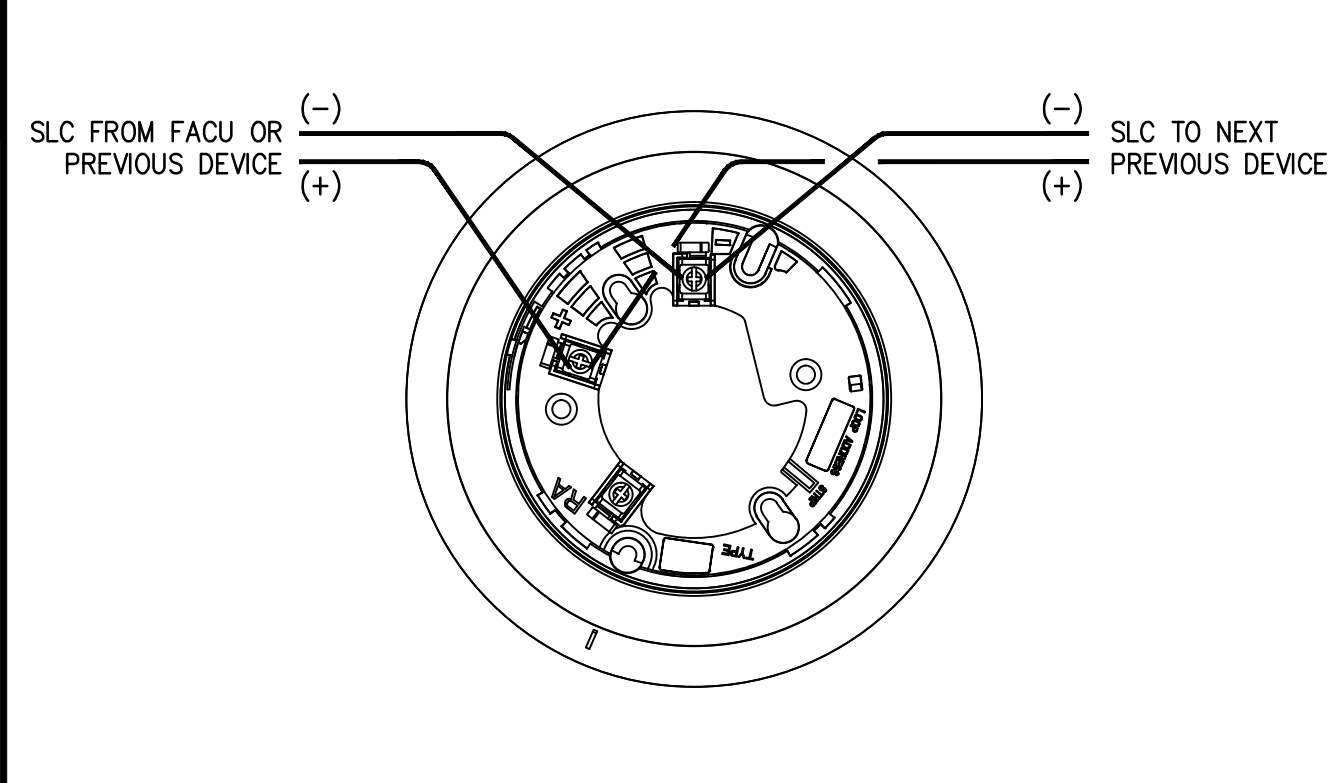
SHEET
FA0.1

APPLICABLE CODES:

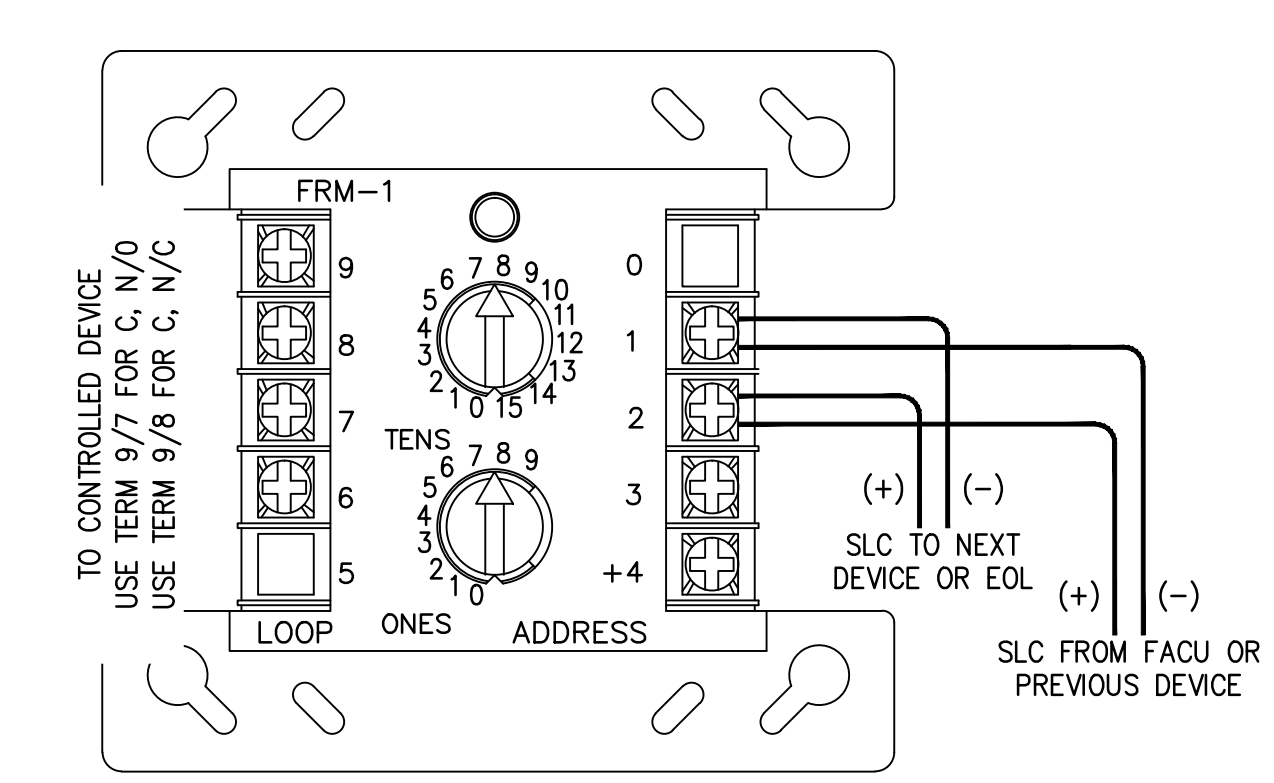
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- CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 3, CALIFORNIA ELECTRICAL CODE (CEC), 2016 EDITION
- CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 9, CALIFORNIA FIRE CODE (CFC), 2016 EDITION
- NFPA 72, NATIONAL FIRE ALARM AND SIGNALING CODE, 2016 EDITION WITH CALIFORNIA AMENDMENTS.



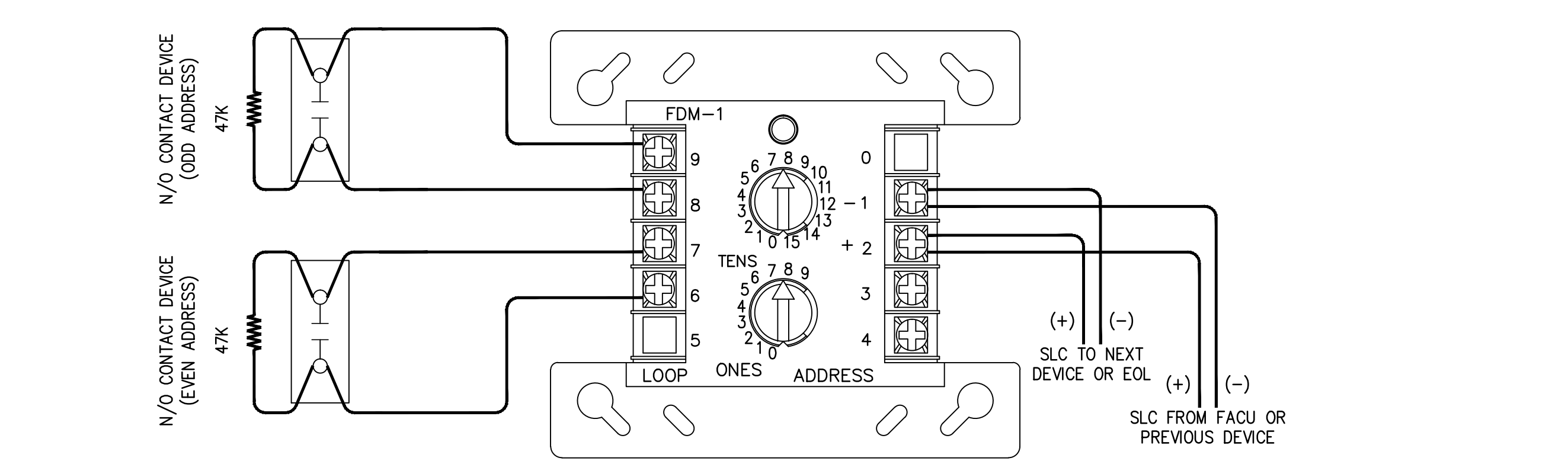
1 TYPICAL DEVICE ARRANGEMENT
FA0.1 SCALE: NONE



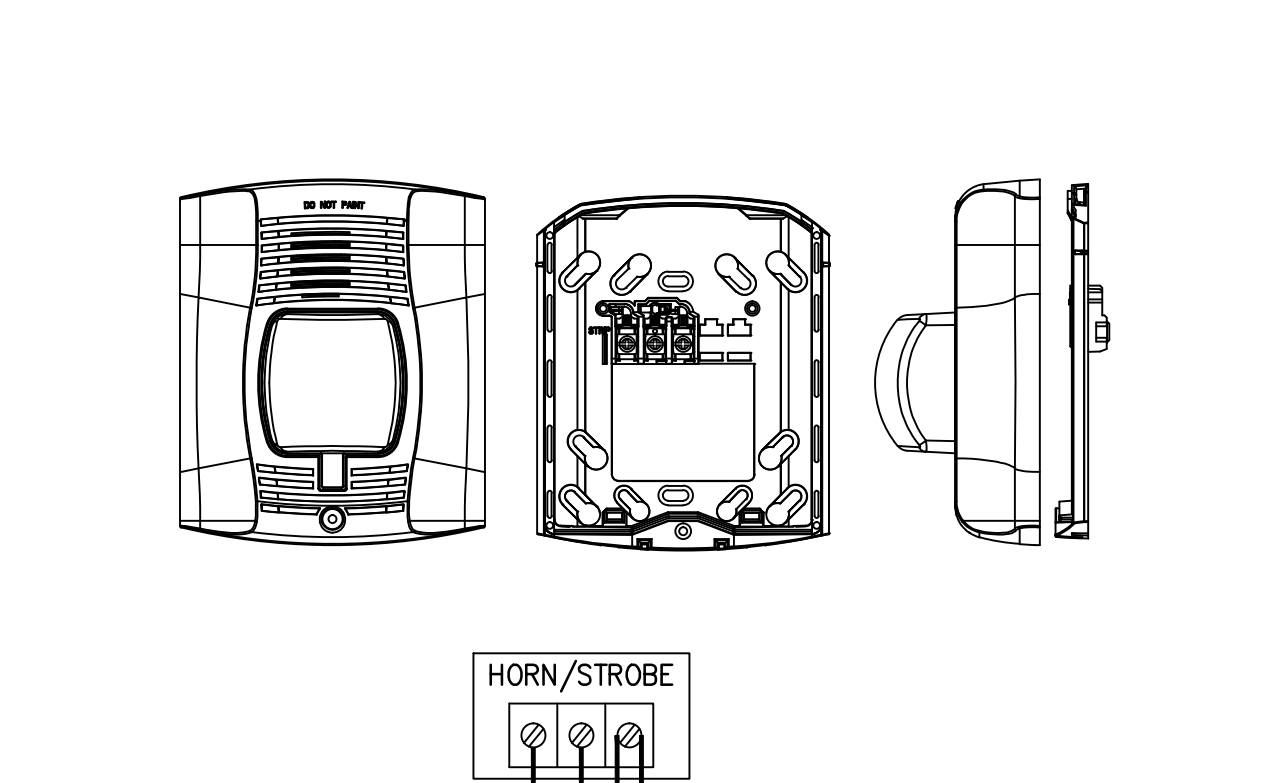
5 TYPICAL DETECTOR BASE WIRING
FA0.1 SCALE: NONE



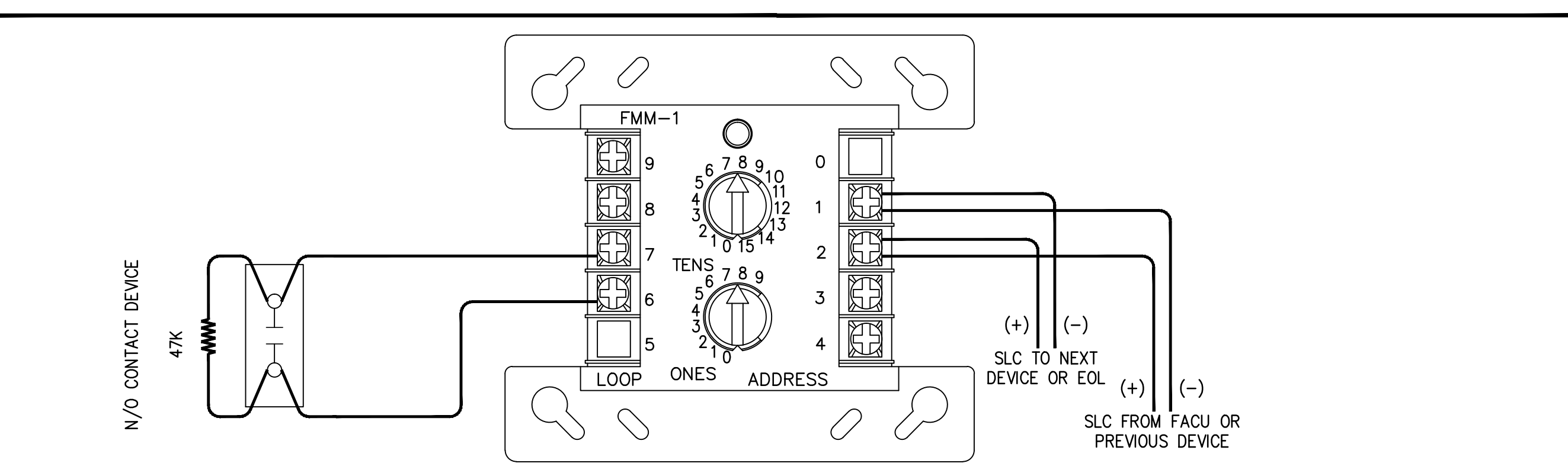
6 TYPICAL FRM-1 WIRING DETAIL
FA0.1 SCALE: NONE



2 TYPICAL FDM-1 WIRING DETAIL
FA0.1 SCALE: NONE



7 TYPICAL WALL APPLIANCE WIRING
FA0.1 SCALE: NONE



3 TYPICAL FDMM-1 WIRING DETAIL
FA0.1 SCALE: NONE

NOTES APPLICABLE TO ALL CANYON COMPLEX RESIDENCE HALLS

1. THE FOLLOWING ASSEMBLIES SHALL BE PROTECTED AS 1-HR. FIRE RATED ASSEMBLIES, WITH THE NECESSARY AND REQUIRED THROUGH PENETRATION PROTECTION/FIRE RATING:
 - CORRIDOR WALL AND CEILING ASSEMBLIES
 - WALL ASSEMBLIES SEPARATING MECHANICAL SPACES
 - WALL ASSEMBLIES SEPARATING THROUGH FLOOR SHAFTS
 - WALL ASSEMBLIES AS PART OF AN EXIT STAIR
 - FLOOR/CEILING ASSEMBLIES SEPARATING INDIVIDUAL DWELLING SUITES
2. UNLESS SHOWN OR NOTED OTHERWISE, ALL WALL & CEILING SYSTEMS CONSIST OF GYPSUM BOARD ASSEMBLIES.
3. ALL CEILINGS ARE 8'-0" ABOVE FINISHED FLOOR.
4. ALL STROBES IN SLEEPING ROOMS SHALL BE RATED 177cd (RATING NOT SHOWN IN PLANS).

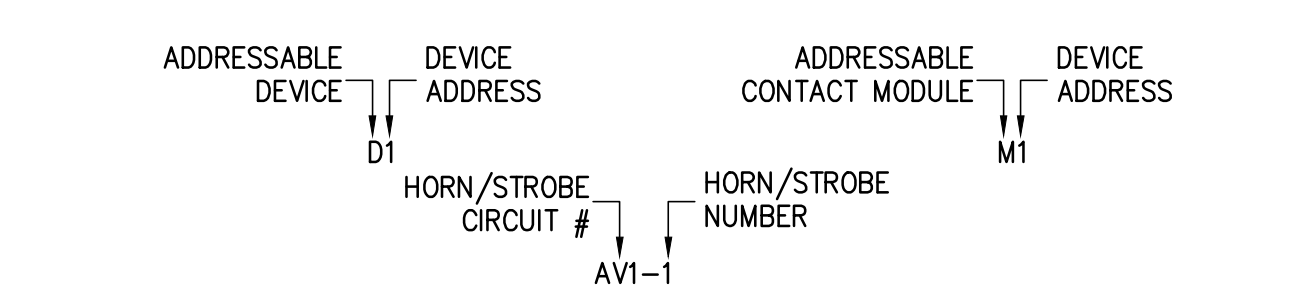
KEY NOTES

- ① PROVIDE NEW MONITOR MODULE FOR EXISTING FIRE SPRINKLER WATERFLOW SWITCH AND FOR THE EXISTING FIRE SPRINKLER VALVE POSITION SUPERVISORY SWITCH.
- ② DENOTES SMOKE DETECTOR WITH CONTROL MODULE FOR OPERATION OF THE 520 HZ SOUNDER BASE (NOTIFIER B200S-LF) FOR SLEEPING AREA(S). (SEE DETAIL 4, THIS SHEET)
- ③ DENOTES COMBINATION CARBON MONOXIDE/SMOKE DETECTOR WITH SOUNDING BASE (NOTIFIER FC0-851).

WIRE LEGEND

- V = HORN/STROBE CIRCUIT #14 TWISTED PAIR, UNSHIELDED (NAC)
M = SLC CIRCUIT #18 TSP (SLC)

DEVICE ADDRESSING LEGEND



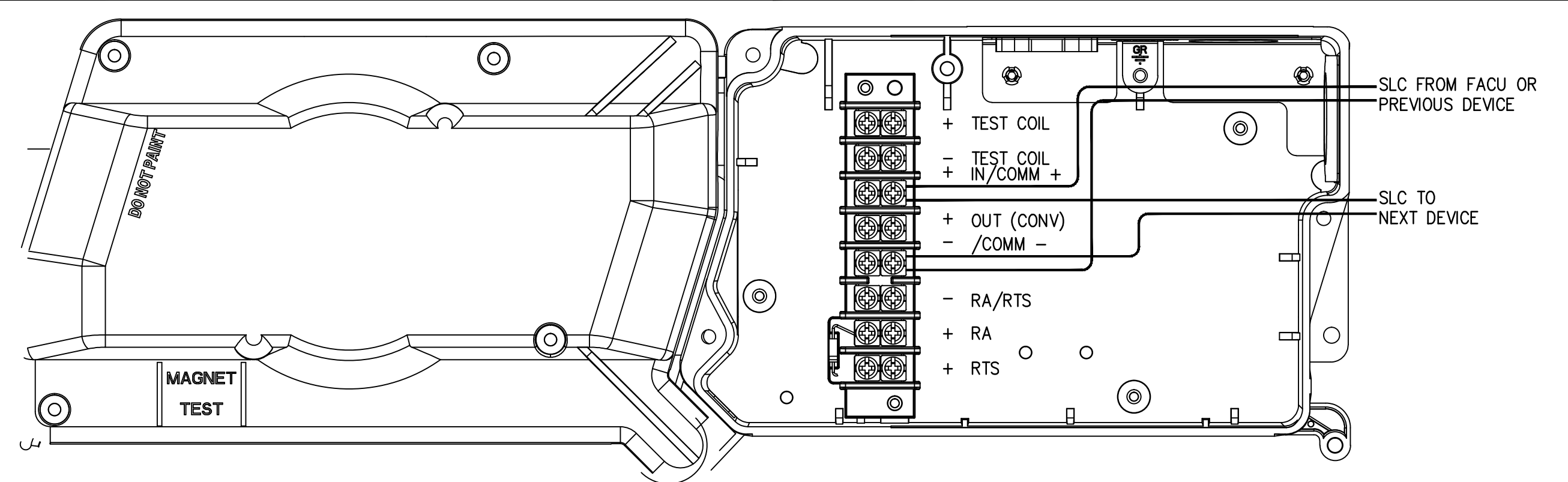
RESIDENTIAL SUITE NOTIFICATION NOTES:

1. UTILIZE SOFTWARE ZONES WITHIN THE CONTROL UNIT FOR PROGRAMMING THE OPERATION OF THE DETECTOR SOUNDER BASES LOCATED WITHIN EACH RESIDENTIAL SUITE. PROGRAM THE SOFTWARE ZONE TO CAUSE FOR THE OPERATION OF THE SOUNDER BASES IN THE BUILDING TO OPERATE ON FIRE SPRINKLER WATERFLOW ALARM, MANUAL PULL STATION ALARM, OR COMMON BUILDING FIRE DETECTION ALARM. PROGRAM THE SOFTWARE ZONES SUCH THAT A DETECTOR IN ALARM IN A RESIDENTIAL SUITE CAUSES ALL SOUNDER BASES IN THE RESIDENTIAL SUITE (ONLY) TO OPERATE.

SOFTWARE ZONES FOR RESIDENTIAL SUITE SOUNDER BASES

BUILDING	1ST FLOOR	2ND FLOOR	3RD FLOOR	BUILDING TOTAL
ALDER HALL*	10	10	10	30
CEDAR HALL	8	8	8	24
CHINQUAPIN HALL	8	8	8	24
HEMLOCK HALL	8	8	8	24
MAPLE HALL	8	8	8	24
TAN OAK HALL	8	8	8	24
PEPPERWOOD HALL	8	8	8	24

* ALDER HAL ALSO CONTAINS A RESIDENTIAL UNIT ON THE BASEMENT LEVEL WHICH REQUIRES A SOFTWARE ZONE FOR TWO SOUNDER BASES.



8 TYPICAL DUCT DETECTOR WIRING DETAIL
FA0.1 SCALE: NONE

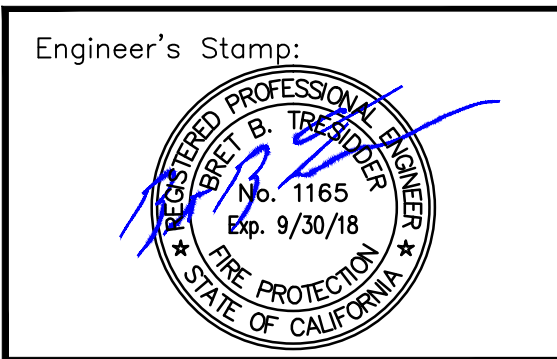
4 TYPICAL RESIDENTIAL SUITE ARRANGEMENT
FA0.1 SCALE: NONE



CLIENT:
HUMBOLDT STATE UNIVERSITY
1 HARPST STREET
ARCATA, CA 95521

PROJECT NAME:
**CAMPUS FIRE ALARM
REPLACEMENT PROJECT**
VARIOUS BUILDINGS
PROJECT # XHS408

Project Building(s):
CANYON COMPLEX
• ALDER RESIDENCE HALL
• CEDAR RESIDENCE HALL
• CHINQUAPIN RESIDENCE HALL
• HEMLOCK RESIDENCE HALL
• MAPLE RESIDENCE HALL
• TAN OAK RESIDENCE HALL
• PEPPERWOOD RESIDENCE HALL



This project has demonstrated conformance with applicable codes and standards established by statute and University policy. Based on this determination these documents are
'APPROVED FOR CONSTRUCTION'
Traci Ferdolage
Campus Deputy Building Official
Humboldt State University
The California State University
Date: 3/31/2017
Permit #: 201617-026
Other approvals, as applicable:
SFM Approval: 3/18/2017
DSA Access Approval: N/A
Seismic Peer Review: N/A
Mech. Peer Review: N/A

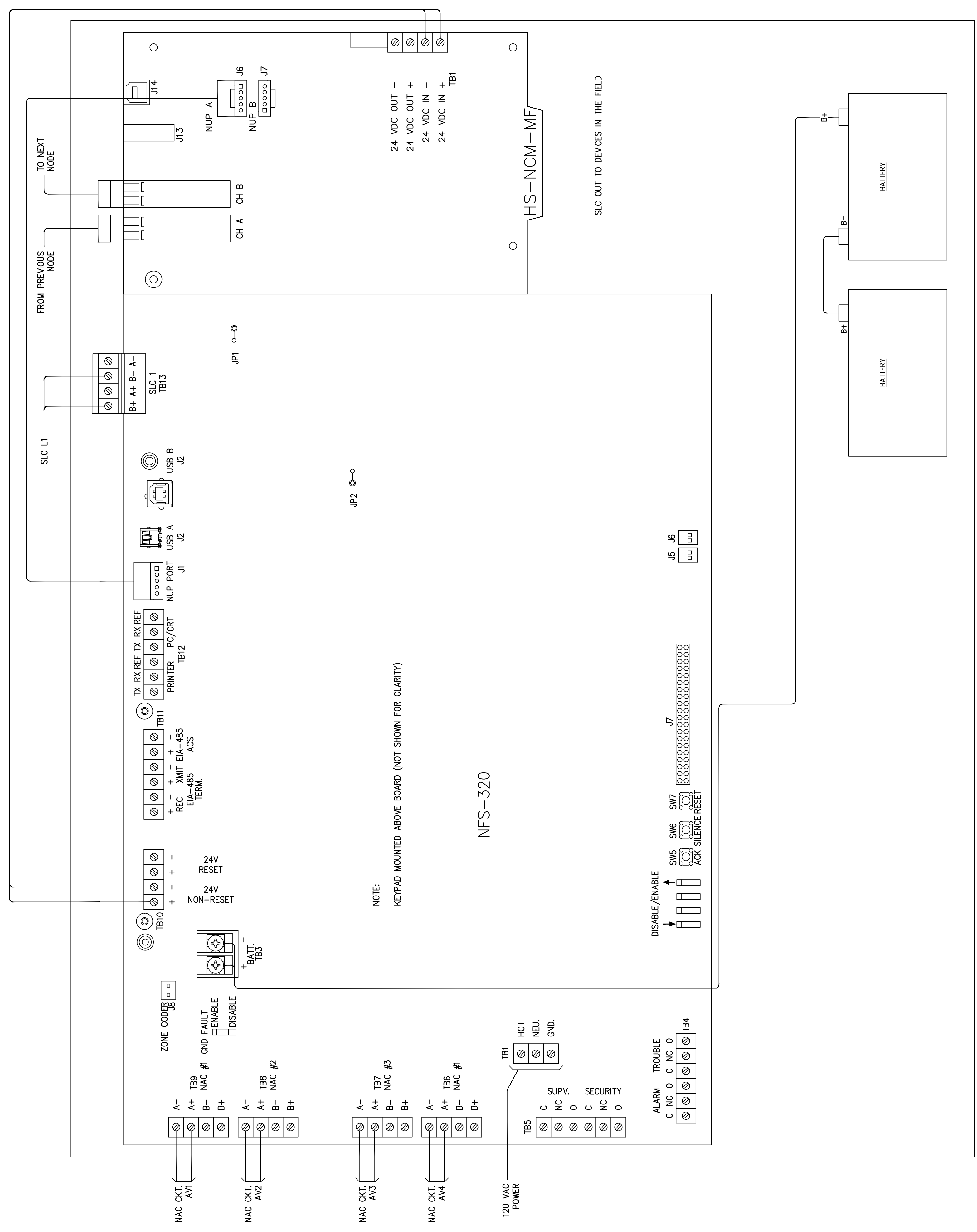
CALIFORNIA STATE FIRE MARSHAL APPROVED
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. Set of approved plans shall be available on the project site at all times.
Reviewed by: *Andrew McSorley*
Date: 3/18/17

REVISIONS		
DATE	NO.	DESCRIPTION

SHEET TITLE:
**FIRE ALARM
CONTROL UNIT
ARRANGEMENT**

SCALE AS NOTED	DATE 03.17.17
-------------------	------------------


SHEET
FA0.2



NOTES:
1. THIS CONTROL UNIT ARRANGEMENT IS TYPICAL FOR EACH OF THE BUILDINGS.

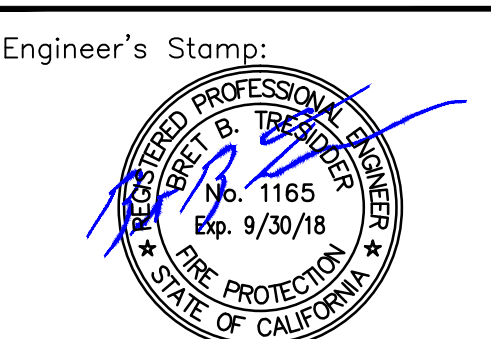
FIRE ALARM CONTROL UNIT ARRANGEMENT
SCALE: NONE



CLIENT:

HUMBOLDT STATE UNIVERSITY
1 HARPST STREET
ARCATA, CA 95521

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DSA Access Approval: N/A
Seismic Peer Review: N/A
Mech. Peer Review: N/A

CALIFORNIA STATE FIRE MARSHAL APPROVED
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Reviewed by: *Antonio Meservey*
Date: 3/18/17

REVISIONS

DATE	NO.	DESCRIPTION

SHEET TITLE:
**FIRE ALARM
TYPICAL REMOTE
POWER SUPPLY
PANEL ARRANGEMENT
& DETAILS**

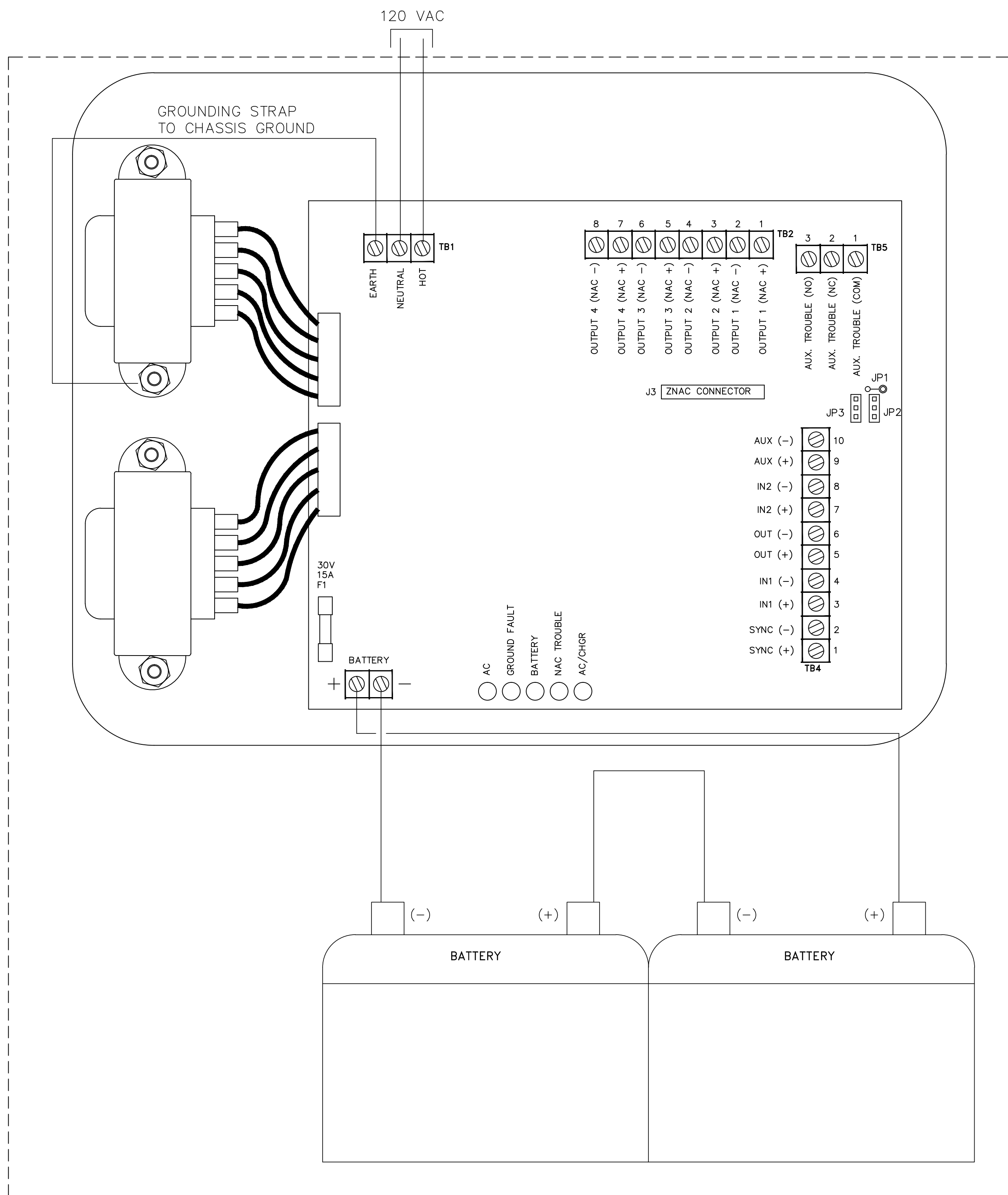
SCALE	DATE
AS NOTED	03.17.17

SHEET
FA0.3

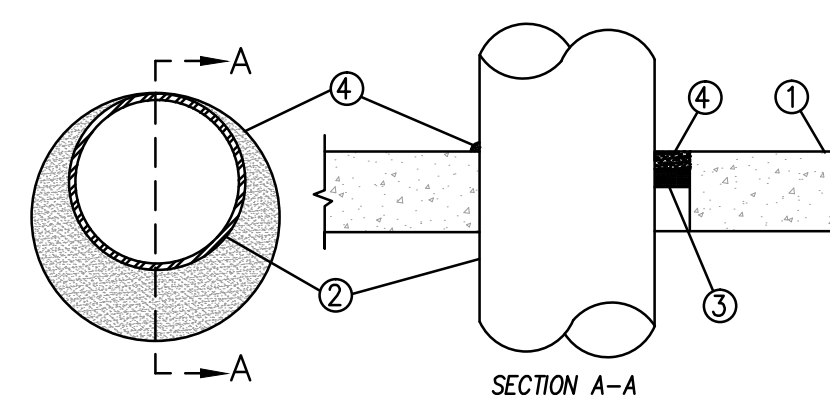
NOTES:

- THIS POWER SUPPLY ARRANGEMENT IS TYPICAL FOR THE ALDER, CEDAR, CHINQUAPIN, HEMLOCK, MAPLE, TAN OAK, AND PEPPERWOOD RESIDENCE HALLS.
- WITH THE EXCEPTION OF ALDER HALL, THE POWER DEMAND FOR EACH OF THE RESIDENTIAL BUILDINGS CONSISTS OF 2.16 AMP. THE POWER DEMAND FOR ALDER HALL CONSISTS OF 2.70 AMP.

PROVIDE ONE (1) FCPS-24S6 NOTIFIER POWER SUPPLY FOR EACH OF THE RESIDENCE HALLS TO POWER THE SMOKE DETECTOR SOUNDER BASES IN EACH RESIDENTIAL UNIT AND/OR SUITE.



1 TYPICAL FCPS-24S6 REMOTE POWER SUPPLY ARRANGEMENT
FA0.3 SCALE: NONE



Max Pipe Diam in. (mm)	Max Annular Space in. (mm)	Packing Matl Type (a)	Min Caulk Thkns in. (mm)
10 (254)	1 (25)	BR, CF, GF or MW	1/2 (13) (b)
10 (254)	1 (25)	CF or MW	1/2 (13) (c)
30 (762)	2-1/2 (64)	BR, CF, GF or MW	1 (25) (b)

1. Floor or Wall Assembly – Min 4-1/2 in. (114 mm) thick lightweight or normal weight (100–150 pcf or 1600–2400 kg/m³) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of circular through opening is 32-1/2 in. (826 mm).

See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

1A. Steel Sleeve (Optional, not shown) – Nom 12 in. (305 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe sleeve cast into concrete floor or wall. Sleeve to be flush with or project max 2 in. (51mm) from top surface of floor or from both surfaces of wall.

2. Through Penetrant – One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min of 0 in. (0 mm)(point contact) to max 1-3/8 in. (35 mm). Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

- A. Steel Pipe – Nom 30 in. (762 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
- A1. Iron Pipe – Nom 30 in. (762 mm) diam (or smaller) cast or ductile iron pipe.
- B. Conduit – Nom 6 in. (152 mm) diam (or smaller) rigid steel conduit.
- C. Conduit – Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing.

3. Packing Material – Polyethylene backer rod or nom 1 in. (25 mm) thickness of tightly-packed ceramic (alumina silica) fiber blanket, mineral wool batt or glass fiber insulation material used as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of solid concrete or concrete block wall as required to accommodate the required thickness of caulk fill material (Item 4). As an alternate when max pipe size is 10 in. (254 mm) diam and when max annular space is 1 in. (25 mm), a min 1 in. (25 mm) thickness of tightly-packed ceramic fiber blanket or mineral wool batt packing material may be recessed min 1/2 in. (13 mm) from bottom surface of floor or from either side of solid concrete wall.

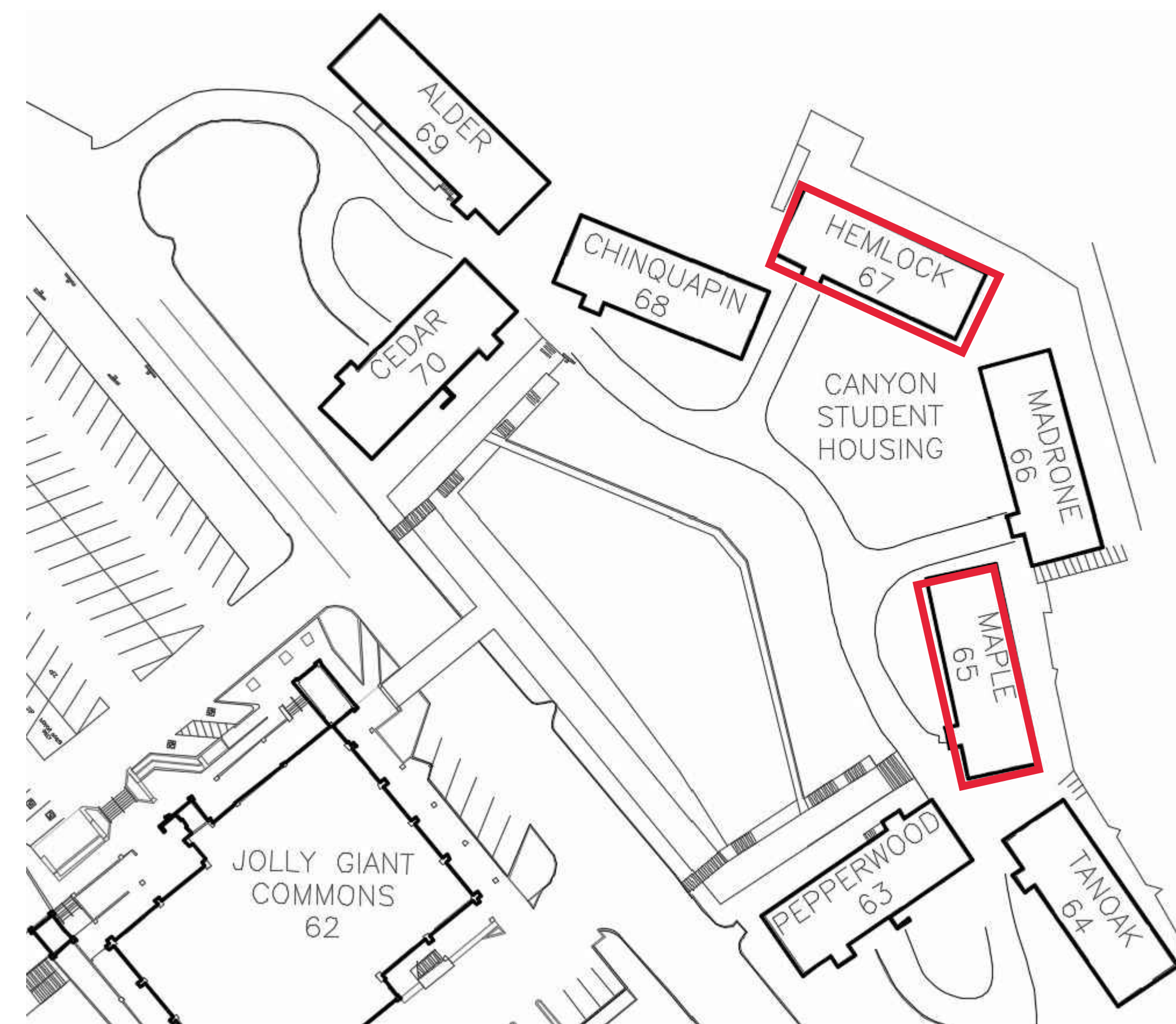
4. Fill, Void or Cavity Materials* – Caulk or Sealant – Applied to fill the annular space to the min thickness shown in the table:

- (a) BR = Polyethylene backer rod.
- CF = Ceramic fiber blanket.
- GF = Glass fiber insulation.
- MW = Mineral-wool batt.
- (b) Caulk installed flush with top surface of floor or both surfaces of wall.
- (c) Caulk installed flush with bottom surface of floor or one surface of solid (non-concrete block) wall.

3M COMPANY – CP 25WB+ caulk or FB-3000 WT sealant.
(Note: W Rating applies only when FB-3000 WT sealant is used.)

*Bearing the UL Classification Marking

2 FIRE RATED CONCRETE WALL & FLOOR/CEILING PENETRATION DETAIL
FA0.3 SCALE: NONE



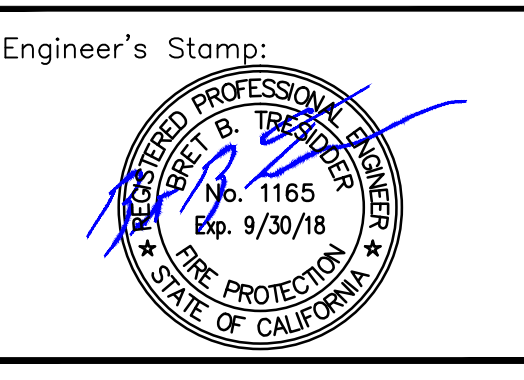
3 ENLARGED SITE PLAN (CANYON COMPLEX)
FA0.3 SCALE: NONE



CLIENT:
HUMBOLDT STATE UNIVERSITY
1 HARPST STREET
ARCATA, CA 95521

PROJECT NAME:
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REPLACEMENT PROJECT**
VARIOUS BUILDINGS
PROJECT # XHS408

- Project Building(s):
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 - CEDAR RESIDENCE HALL
 - CHINQUAPIN RESIDENCE HALL
 - HEMLOCK RESIDENCE HALL
 - MAPLE RESIDENCE HALL
 - TAN OAK RESIDENCE HALL
 - PEPPERWOOD RESIDENCE HALL



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'APPROVED FOR CONSTRUCTION'

Traci Ferdlage
Campus Deputy Building Official
Humboldt State University
The California State University
Date: 3/31/2017
Permit #: 2016/17-026
Other approvals, as applicable:
SFM Approval: 3/18/2017
DSA Access Approval: N/A
Seismic Peer Review: N/A
Mech. Peer Review: N/A

CALIFORNIA STATE FIRE MARSHAL APPROVED
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Reviewed by: *Andrew McSorley*
Date: 3/18/17

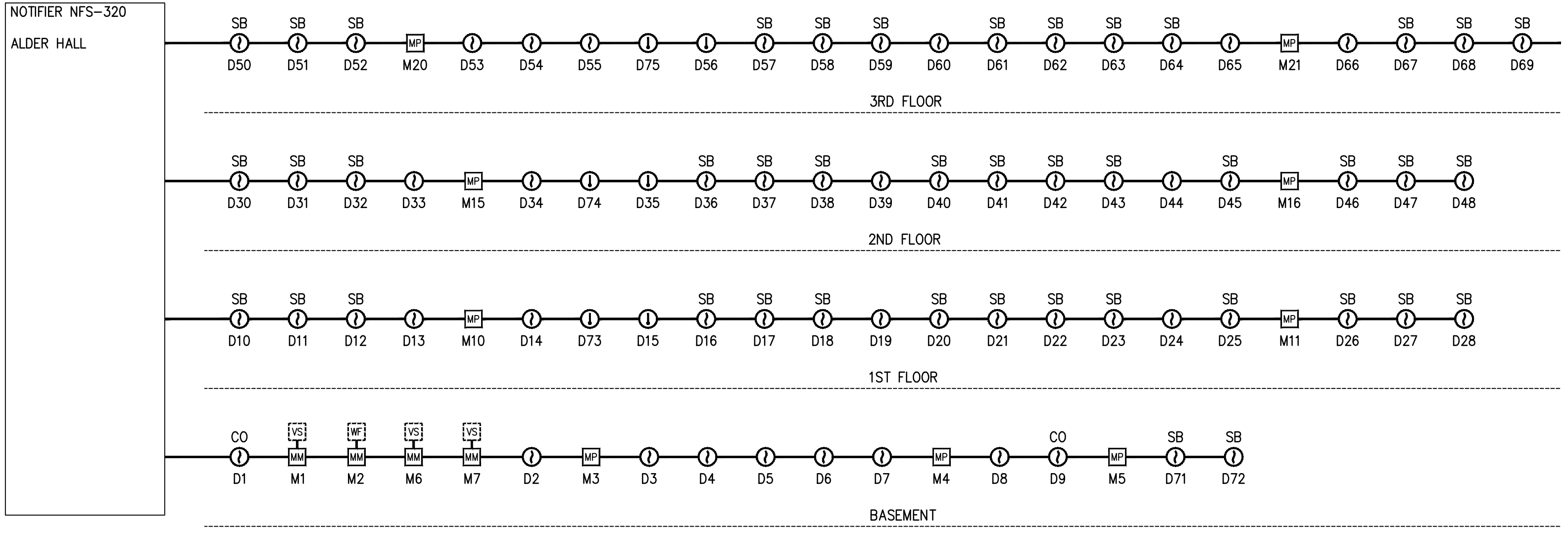
REVISIONS

DATE	NO.	DESCRIPTION

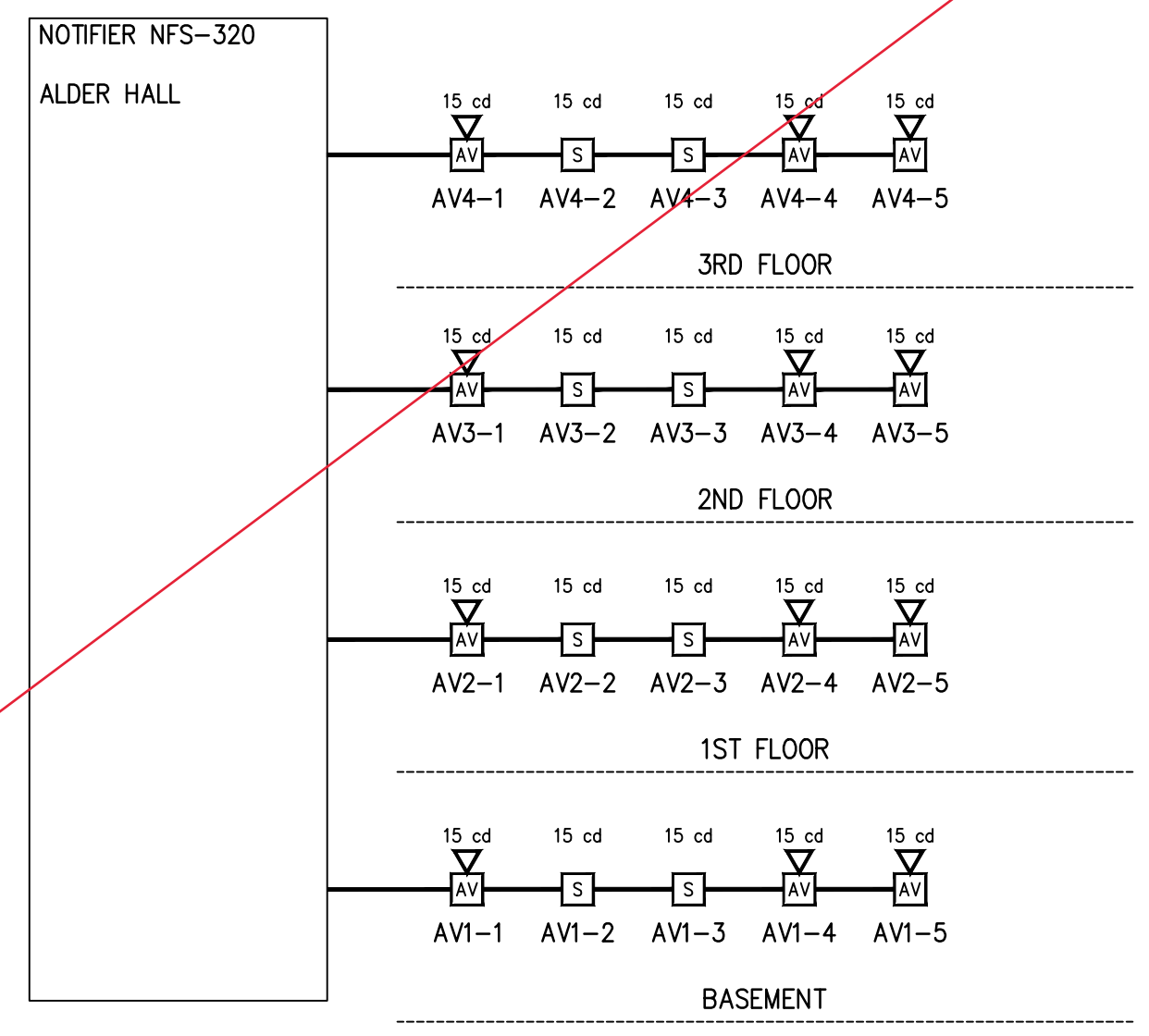
SHEET TITLE:
**FIRE ALARM
RISER DIAGRAMS**

SCALE	DATE
AS NOTED	03.17.17

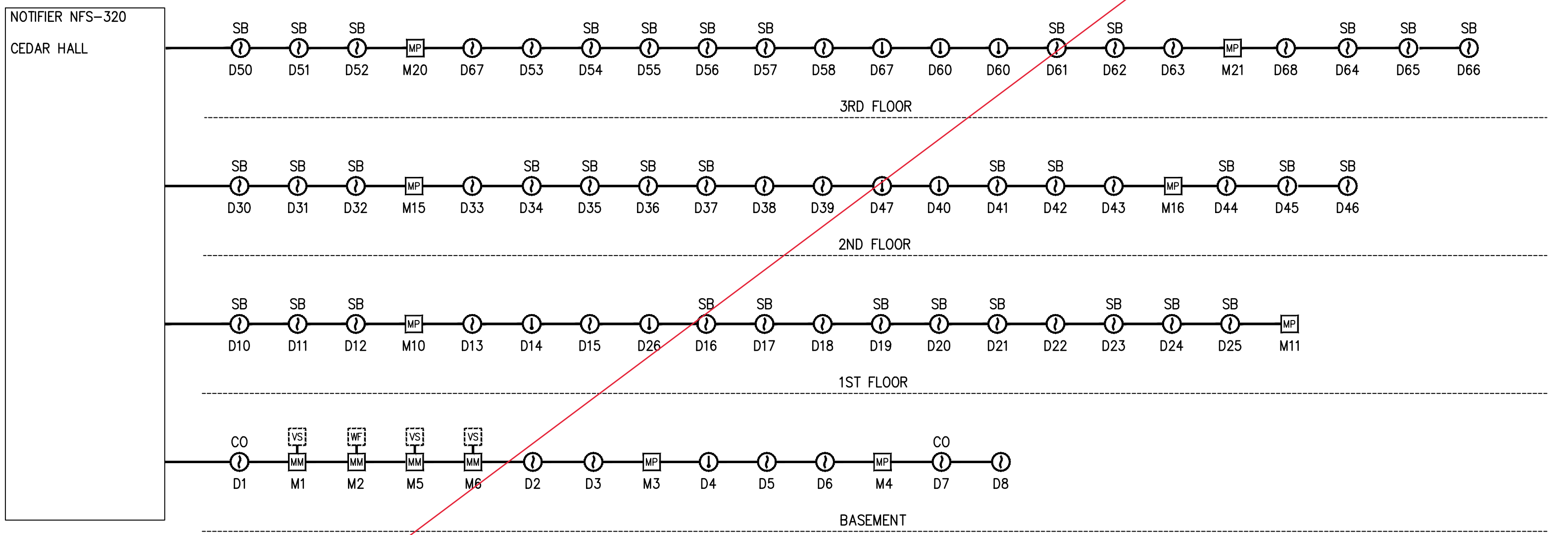
SHEET
FA0.4



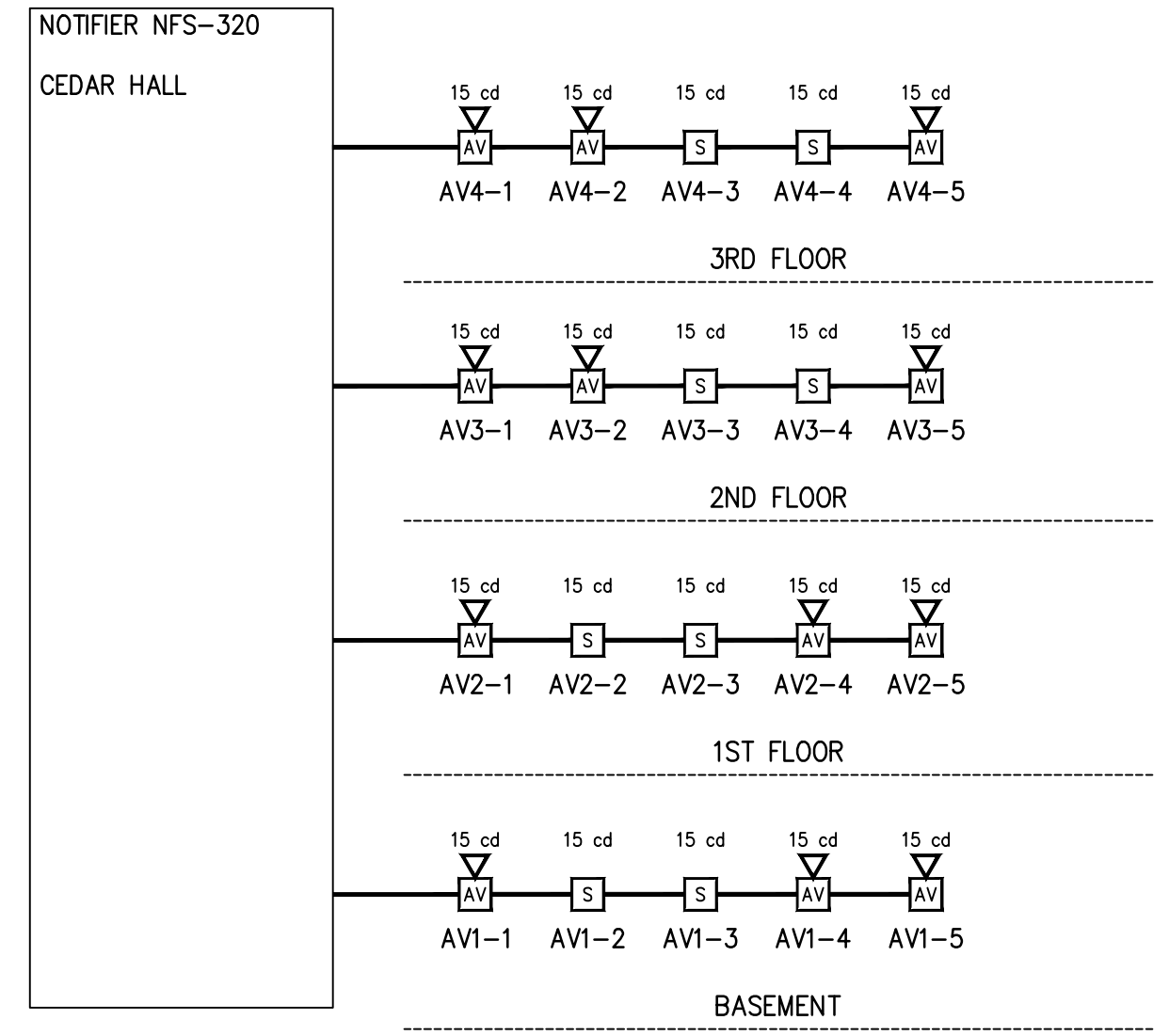
1 ALDER SLC RISER DIAGRAM
FA0.4 SCALE: NONE



2 ALDER NAC RISER DIAGRAM
FA0.4 SCALE: NONE




3 CEDAR SLC RISER DIAGRAM
FA0.4 SCALE: NONE



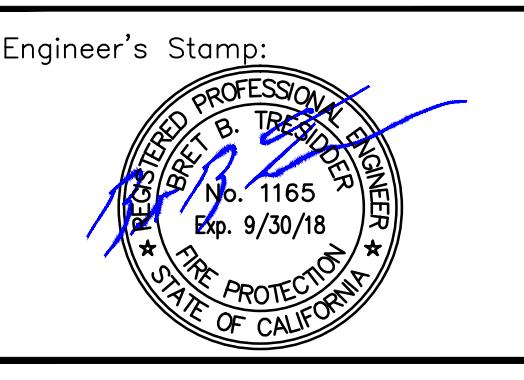
4 CEDAR NAC RISER DIAGRAM
FA0.4 SCALE: NONE

HYT Corporation
Fire Protection Engineers
and Consultants
3498 Clayton Road - Suite 101
Concord, California 94519
Phone: (925) 681-2731

CLIENT:

HUMBOLDT STATE UNIVERSITY
1 HARPST STREET
ARCATA, CA 95521

PROJECT NAME:
**CAMPUS FIRE ALARM
REPLACEMENT PROJECT**
VARIOUS BUILDINGS
PROJECT # XHS408

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The California State University
Date: 3/31/2017
Permit #: 2016/17-026
Other approvals, as applicable:
SEM Approval: 3/18/2017
DSA Access Approval: N/A
Seismic Peer Review: N/A
Mech. Peer Review: N/A

CALIFORNIA STATE FIRE MARSHAL APPROVED

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Reviewed by: *Andrew McSorley*
Date: 3/18/17

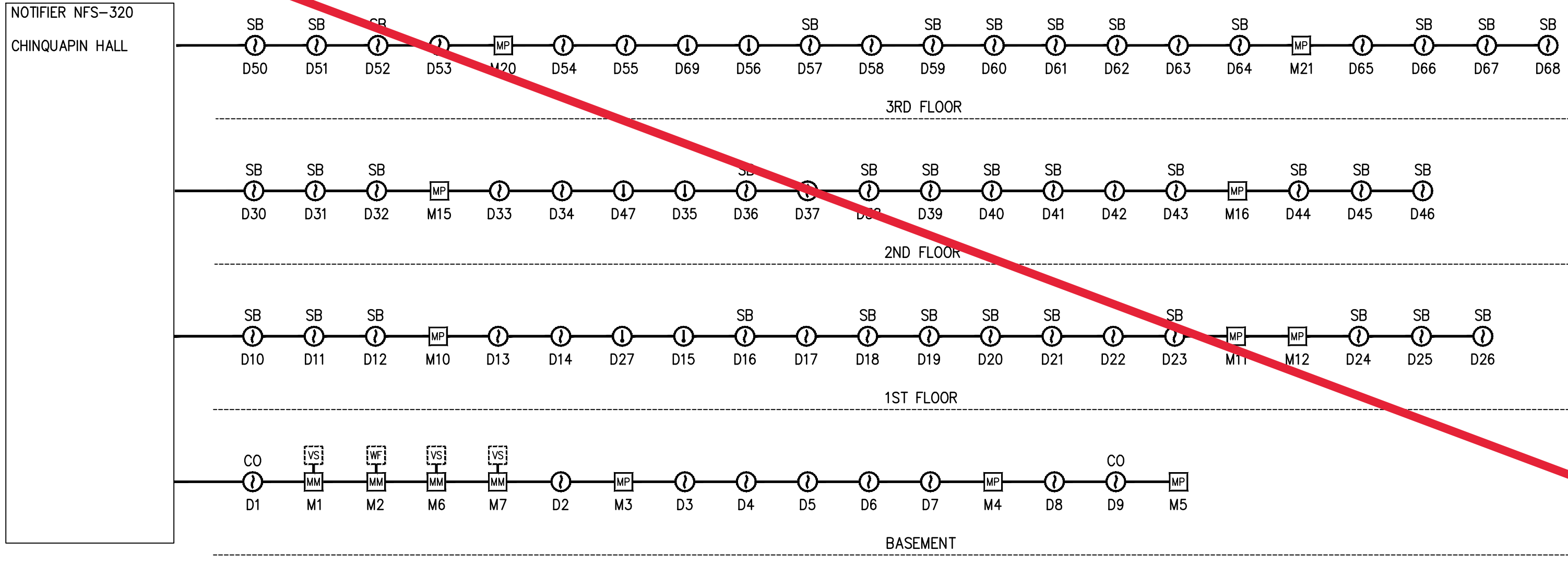
REVISIONS

DATE	NO.	DESCRIPTION

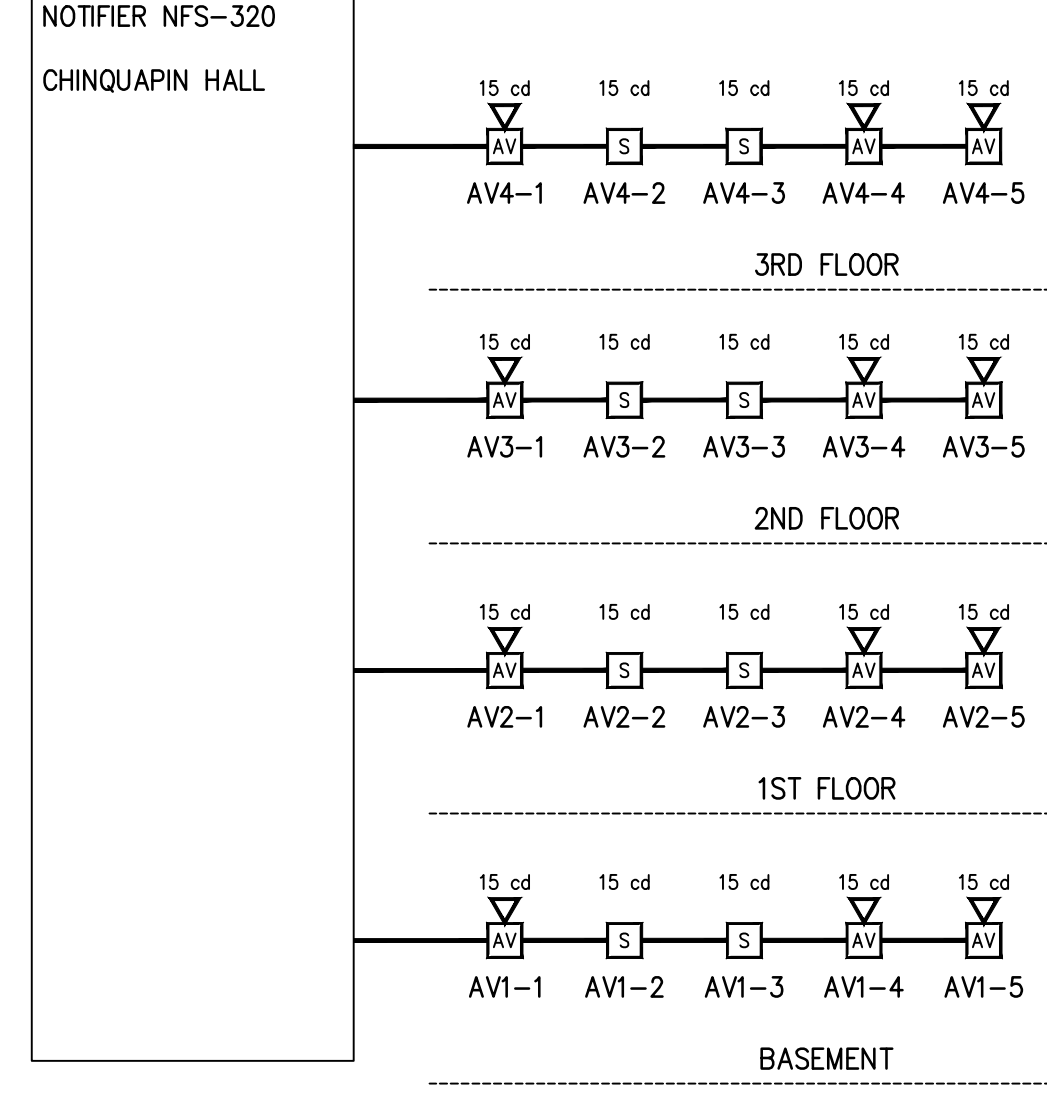
SHEET TITLE:
**FIRE ALARM
RISER DIAGRAMS**

SCALE	DATE
AS NOTED	03.17.17

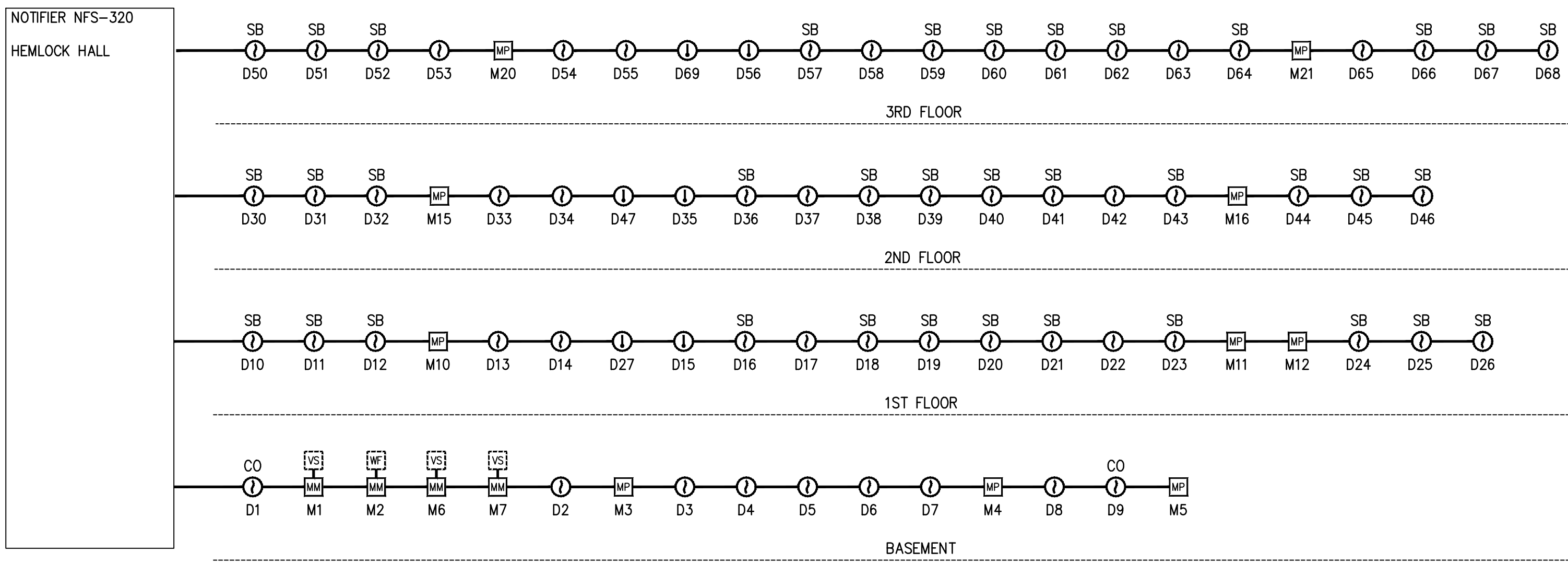
SHEET
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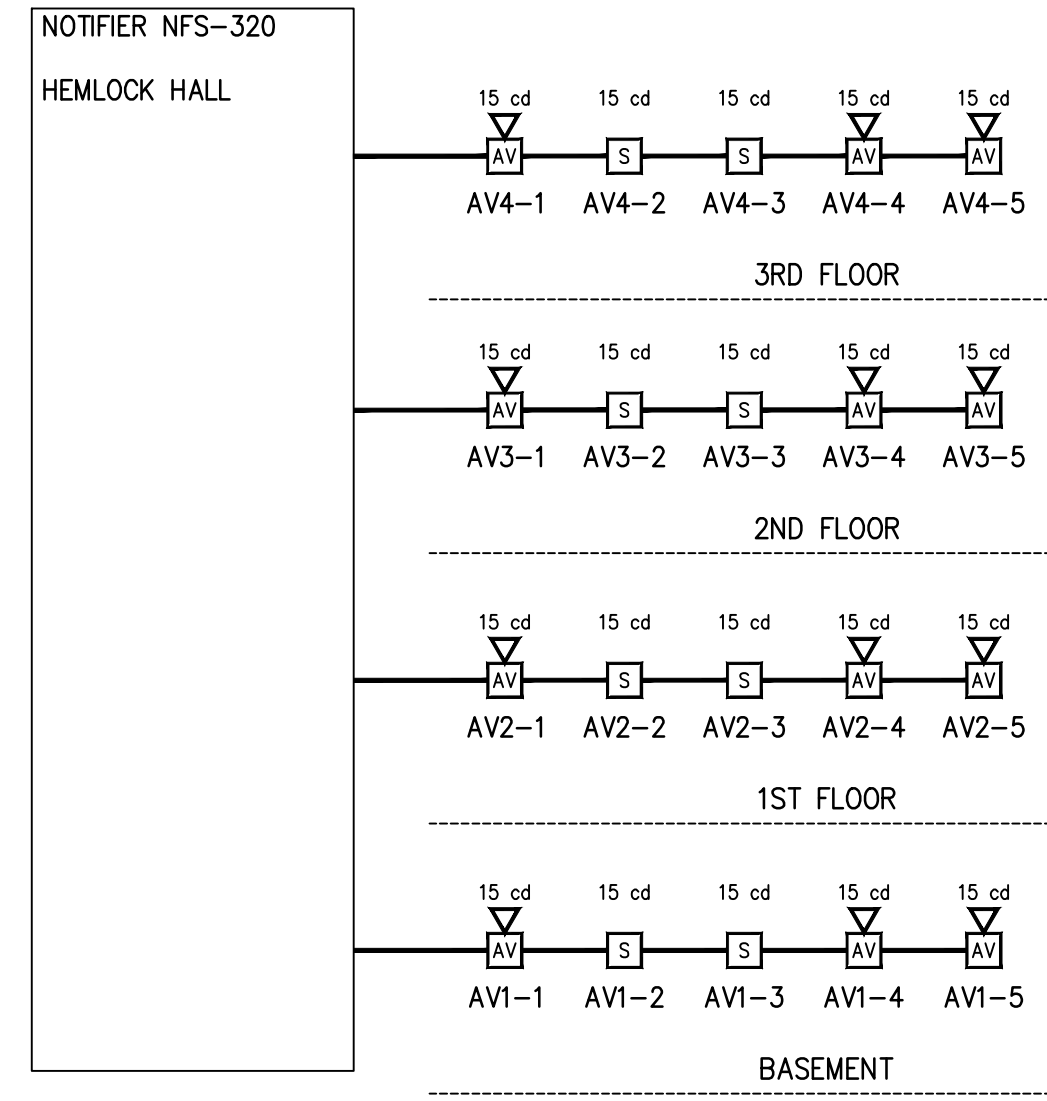
1 CHINQUAPIN SLC RISER DIAGRAM
FA0.5 SCALE: NONE



2 CHINQUAPIN NAC RISER DIAGRAM
FA0.5 SCALE: NONE




3 HEMLOCK SLC RISER DIAGRAM
FA0.5 SCALE: NONE



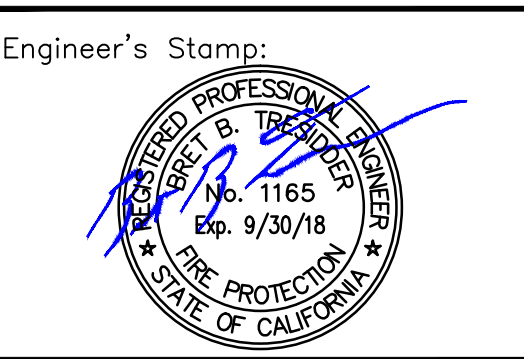
4 HEMLOCK NAC RISER DIAGRAM
FA0.5 SCALE: NONE

HYT Corporation
Fire Protection Engineers
and Consultants
3498 Clayton Road - Suite 101
Concord, California 94519
Phone: (925) 681-2731

CLIENT:

HUMBOLDT STATE UNIVERSITY
1 HARPST STREET
ARCATA, CA 95521

PROJECT NAME:
**CAMPUS FIRE ALARM
REPLACEMENT PROJECT**
VARIOUS BUILDINGS
PROJECT # XHS408

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 - PEPPERWOOD RESIDENCE HALL



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The California State University
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SEM Approval: 3/18/2017
DSA Access Approval: N/A
Seismic Peer Review: N/A
Mech. Peer Review: N/A

CALIFORNIA STATE FIRE MARSHAL APPROVED

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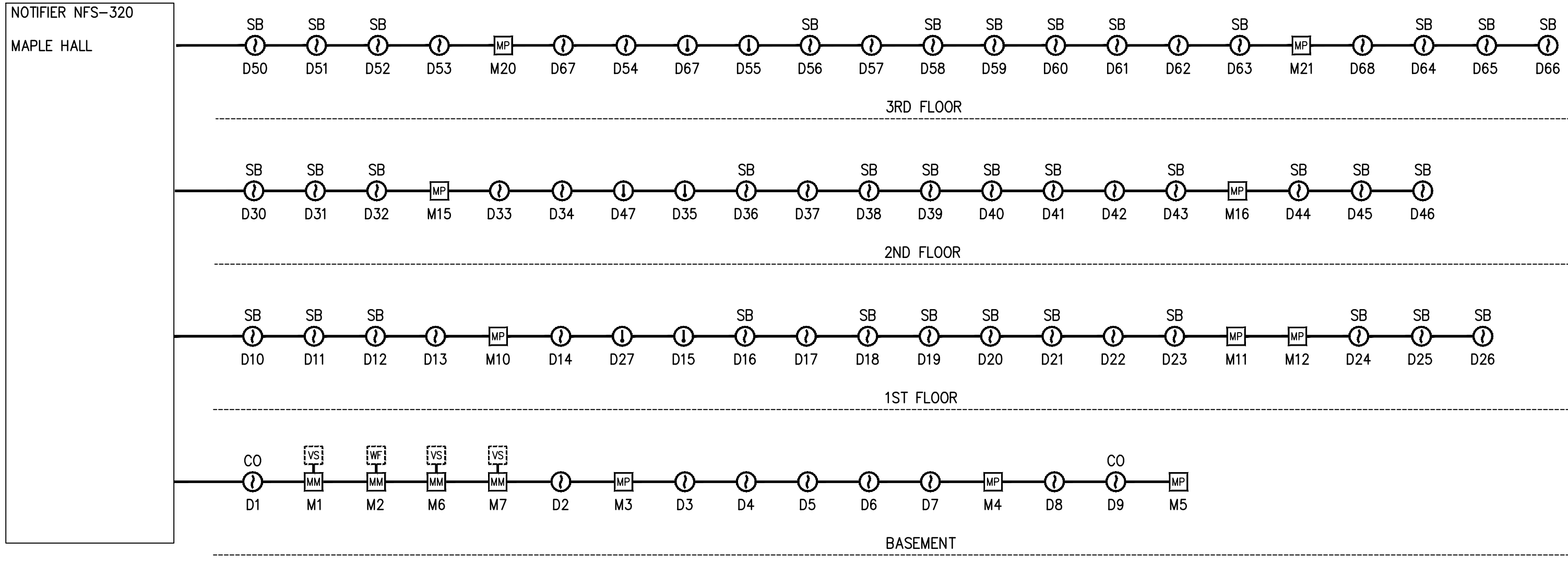
REVISIONS

DATE	NO.	DESCRIPTION

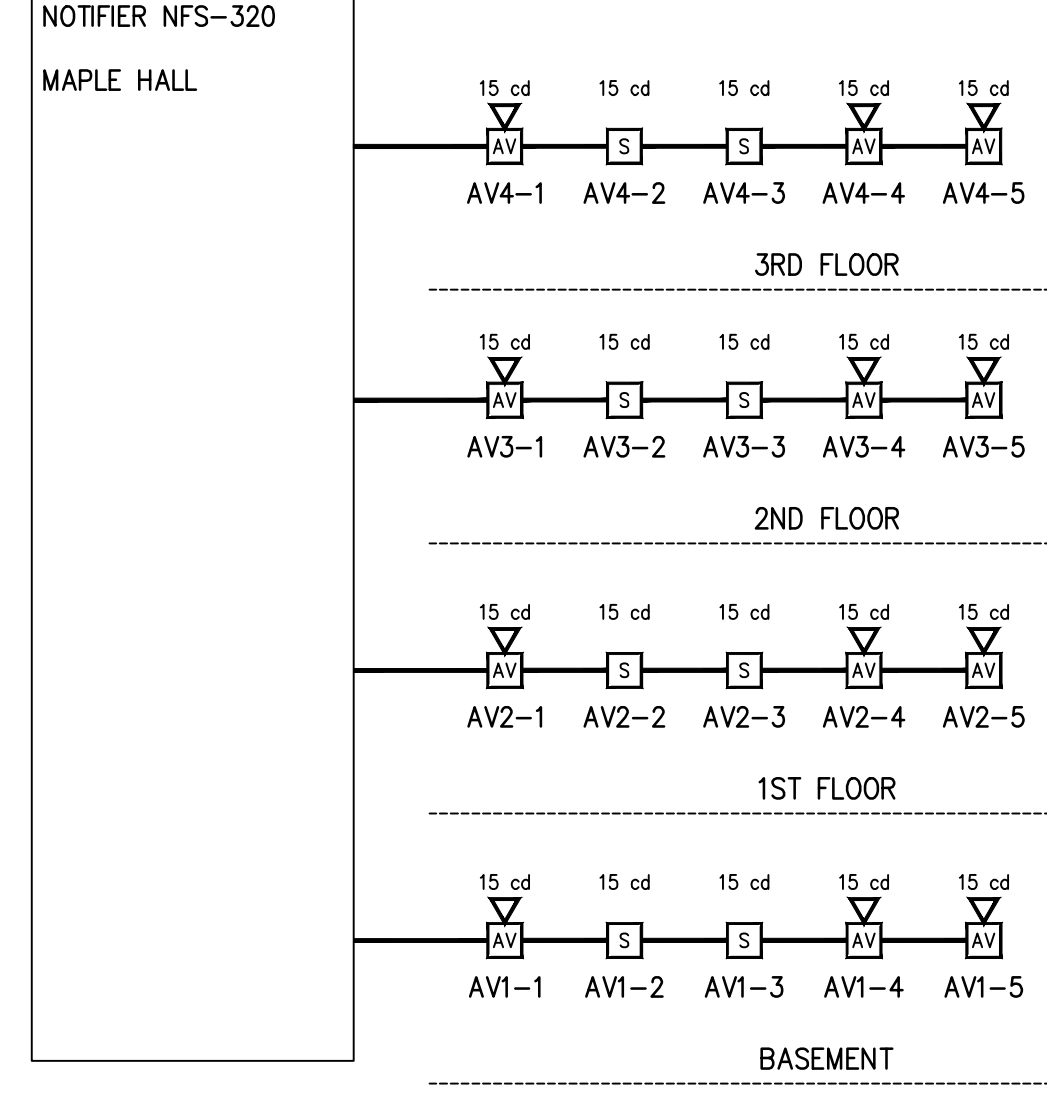
SHEET TITLE:
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RISER DIAGRAMS**

SCALE	DATE
AS NOTED	03.17.17

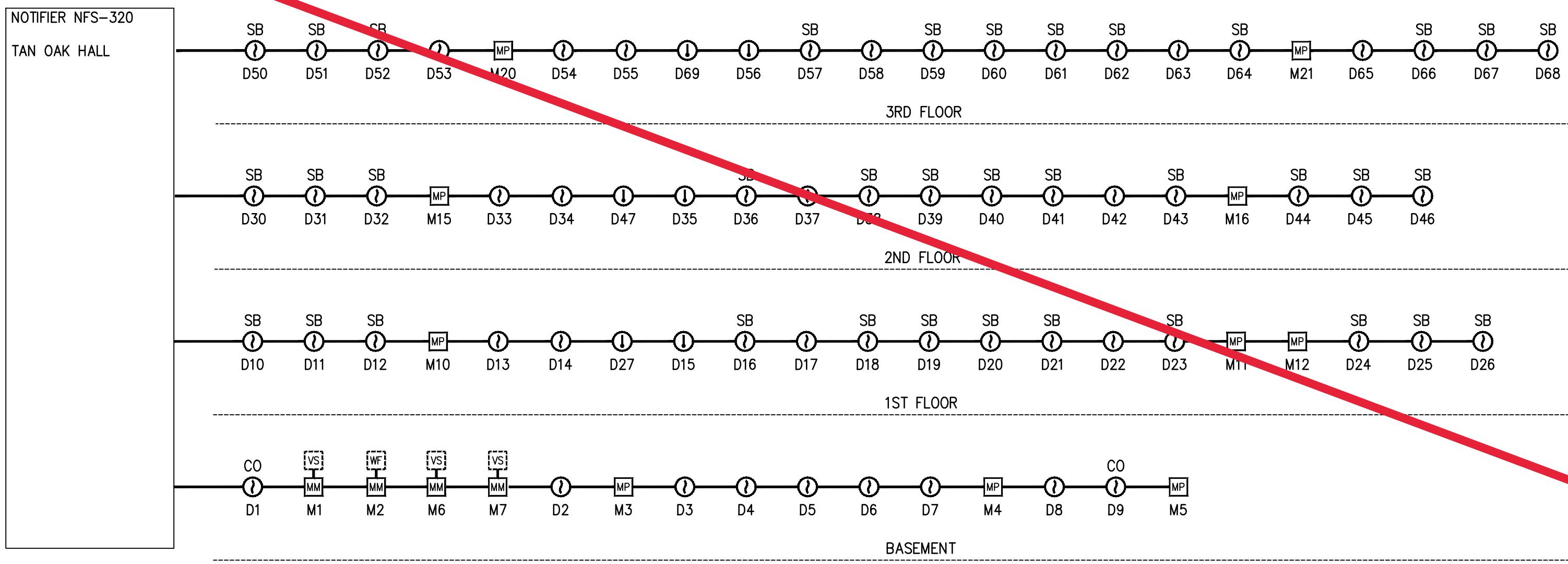
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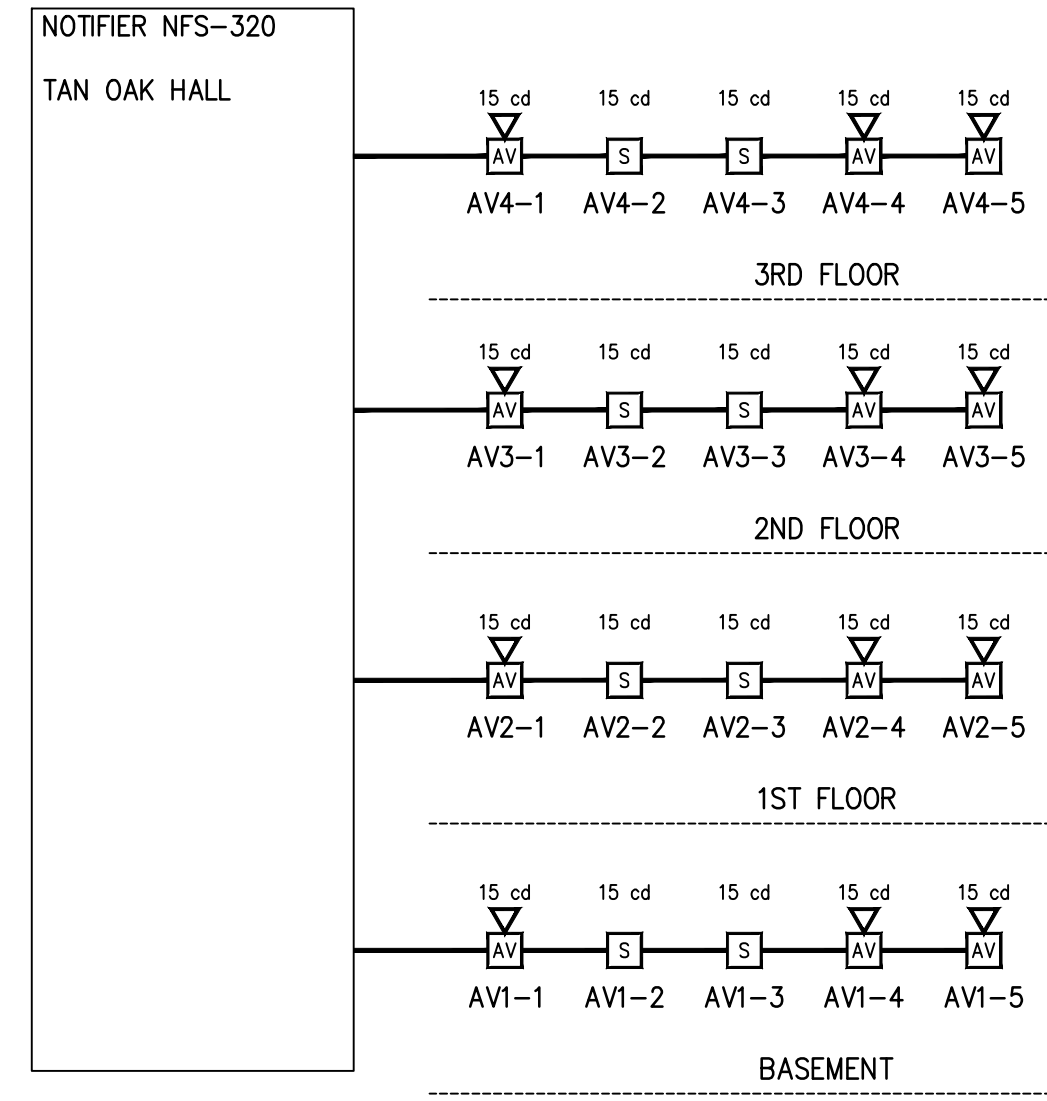
1 MAPLE SLC RISER DIAGRAM
FA0.6 SCALE: NONE



2 MAPLE NAC RISER DIAGRAM
FA0.6 SCALE: NONE



3 TAN OAK SLC RISER DIAGRAM
FA0.6 SCALE: NONE



4 TAN OAK NAC RISER DIAGRAM
FA0.6 SCALE: NONE

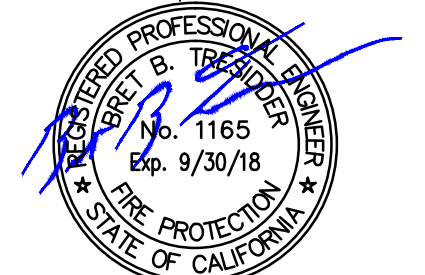
HYT Corporation
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3498 Clayton Road - Suite 101
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Phone: (925) 681-2731

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Engineer's Stamp:


This project has demonstrated conformance with applicable codes and standards established by statute and University policy. Based on this determination these documents are
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Mech. Peer Review: N/A

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Reviewed by: 
Date: 3/18/17

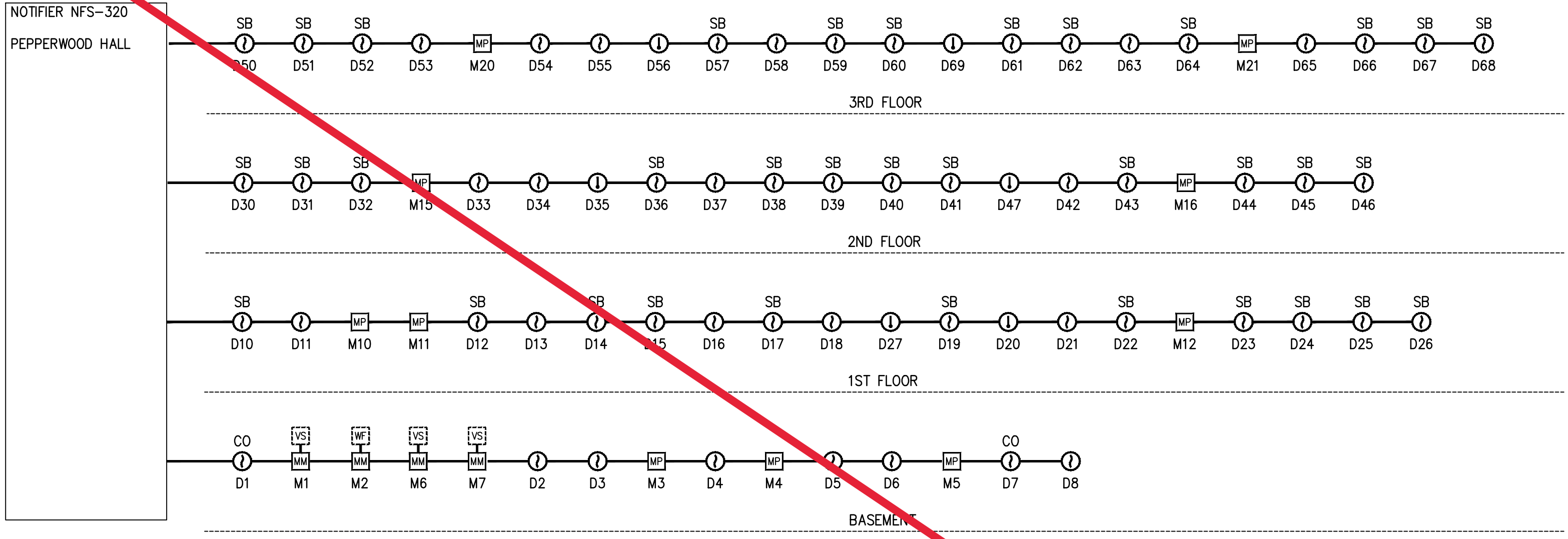
REVISIONS

DATE	NO.	DESCRIPTION

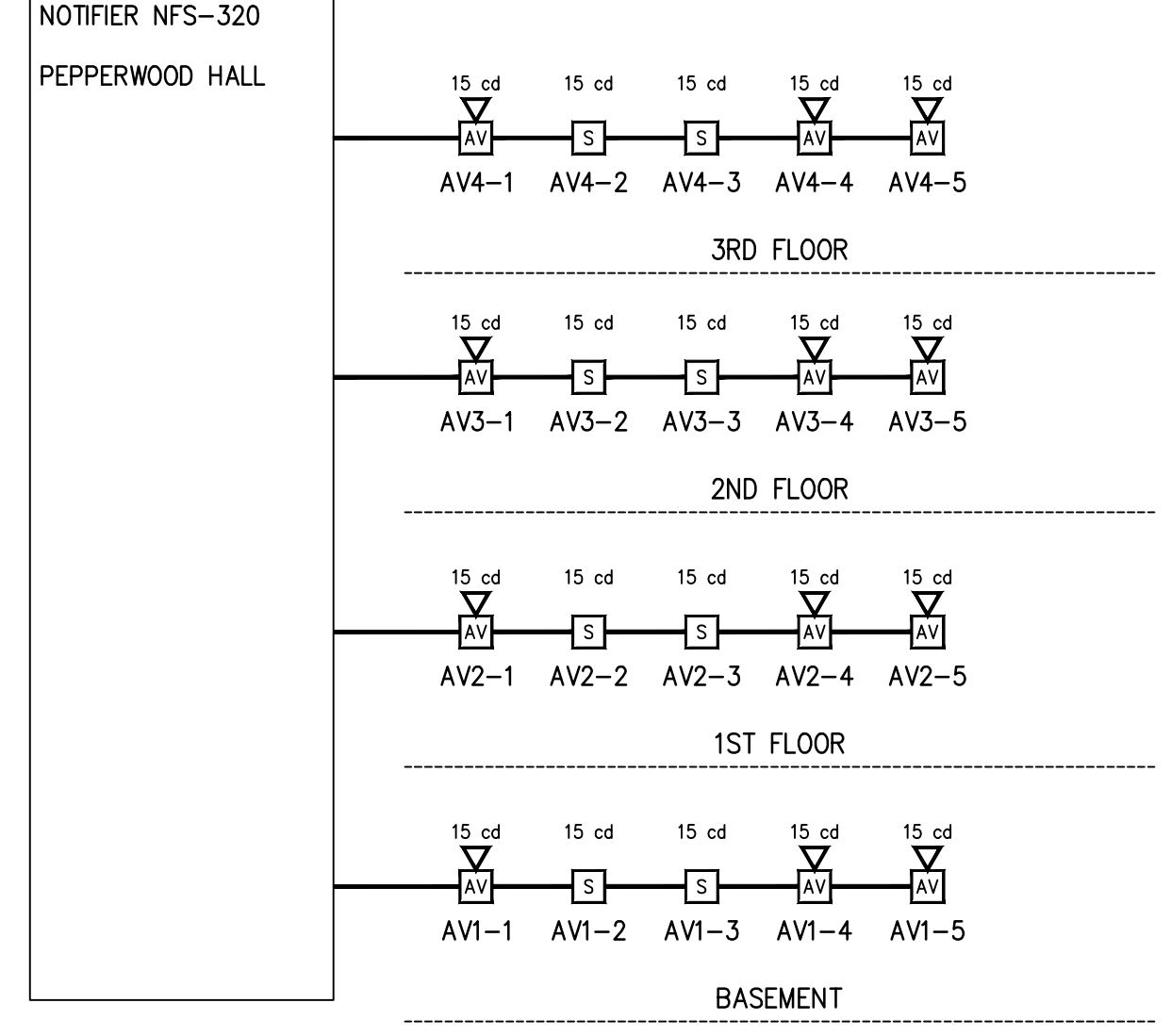
SHEET TITLE:
**FIRE ALARM
RISER DIAGRAMS
& DETAILS**

SCALE	DATE
AS NOTED	03.17.17

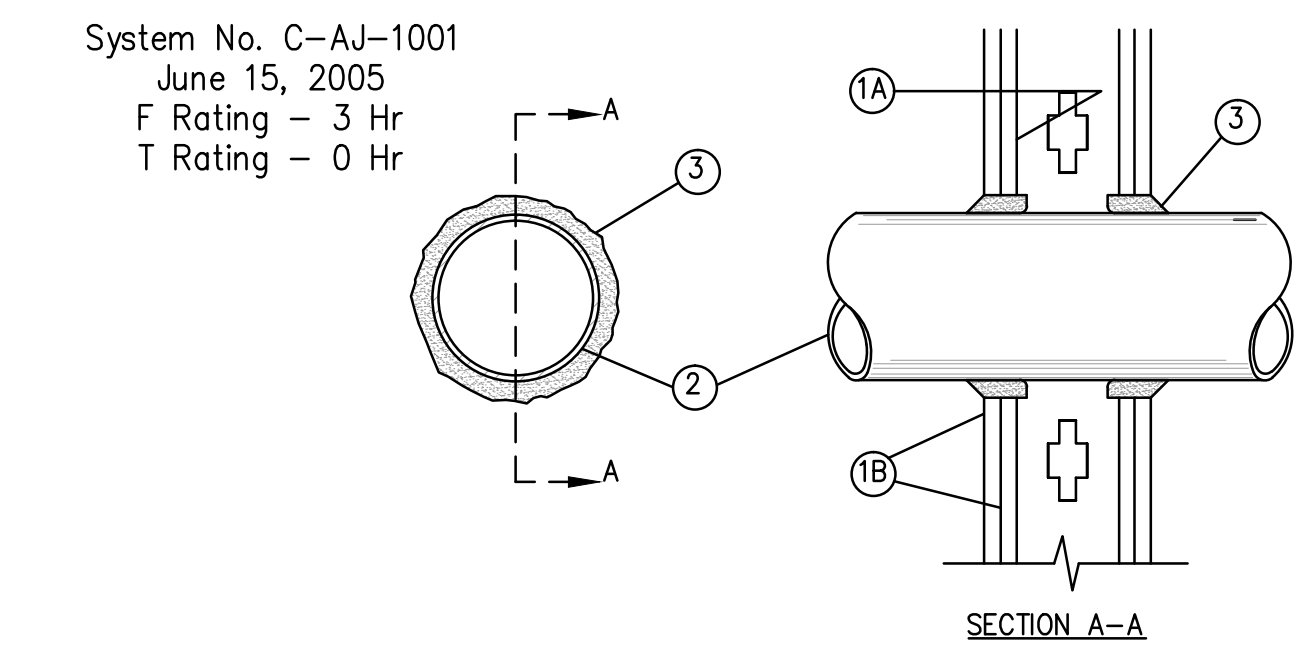
SHEET
FA0.7



1 PEPPERWOOD SLC RISER DIAGRAM
FA0.7 SCALE: NONE



2 PEPPERWOOD NAC RISER
FA0.7 SCALE: NONE



- Wall Assembly - The 1, 2, 3 or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - Studs - Wall framing may consist of either wood studs (max 2 hr fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC with nom 2 by 4 in. lumber end plates and cross braces. Steel studs to be min 3-5/8 in. wide by 1-3/8 in. deep channels spaced max 24 in. OC.
 - Gypsum Board* - Nom 1/2 or 5/8 in. thick, 4 ft. wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam. of opening is 26 in.
- Through Penetrant - One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min of 0 in. (point contact) to max 2 in. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
 - Steel Pipe - Nom 24 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - Iron Pipe - Nom 24 in. diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in. diam (or smaller) or Class 50 (or heavier) ductile iron pressure pipe.

- Conduit - Nom 6 in. diam (or smaller) steel conduit or nom 4 in. diam (or smaller) steel electrical metallic tubing
- Copper Tubing - Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing
- Copper Pipe - Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.
- Through Penetrating Product* - Flexible Metal Piping - The following types of steel flexible metal gas piping may be used:
 - Nom 2 in. diam (or smaller) steel flexible metal gas piping. OMEGA FLEX INC: Nom 1 in. diam (or smaller) steel flexible metal gas piping.
 - TITEFLEX CORP BUNDY CO Nom 1 in. diam (or smaller) steel flexible metal gas piping. WARD MFG INC.

- Fill,Void or Cavity Material* - Caulk or Sealant - Min 5/8. 1-1/4,1-7/8 and 2-1/2 in. thickness of caulk for 1, 2, 3 and 4 hr rated assemblies, respectively, applied within annulus, flush with both surfaces of wall. Min 1/4 in. diam bead of caulk applied to gypsum board/penetrant interface at point contact location on both sides of wall.

The hourly F Rating of the firestop system is dependent upon the hourly fire rating of the wall assembly in which it is installed, as shown in the table.

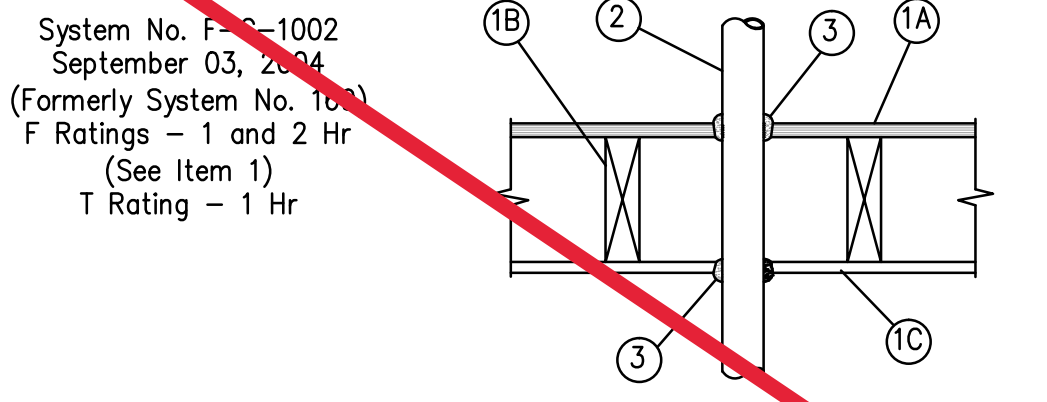
The hourly T Rating of the firestop system is dependent upon the type or size of the pipe or conduit and the hourly fire rating of the wall assembly in which it is installed as shown in the Table:

+When copper pipe is used, T Rating is 0 hr.

3M COMPANY - CP 25WB+ caulk or FB-3000 WT sealant,
*Bearing the UL Classification Marking

Max Pipe or Conduit Diam in. (mm)	F Rating Hr	T Rating Hr
1 (25)	1 or 2	0+, 1 or 2
1 (25)	3 or 4	3 or 4
4 (102)	1 or 2	0
6 (152)	3 or 4	0
12 (305)	1 or 2	0

3 FIRE RATED GYPSUM WALL PENETRATION DETAIL
FA0.7 SCALE: NONE



- Floor-Ceiling Assembly - The 1 or 2 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the UL Fire Resistance Directory. The 1 hr fire rated assembly shall be constructed as specified in Design No. L501, L512 or L537. The 2 hr fire rated assembly shall be constructed as specified in Design No. L505, L511 or L536.

The F Rating of the firestop system is equal to the fire rating of the floor-ceiling assembly. The general construction details of the floor-ceiling assembly are summarized below:

- Flooring System - Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Max diam of opening is 1 in. larger than outside diam of penetrant.
- Wood Joists - Nom 2 by 10 in. lumber joists spaced 16 in. O.C. with nom 1 by 3 in. lumber bridging and with ends firestopped.
- Furring Channels (Not Shown) - Resilient galv steel furring channels installed perpendicular to wood joists between first and second layers of wallboard (Item 1D) in 2 hr fire rated assembly. Furring channels spaced max 24 in. O.C.
- Gypsum Board* - Nom 4 ft wide by 5/8 in. thick as specified in the individual Floor-Ceiling Design. First layer of wallboard nailed to wood joists. Second layer of wallboard (2 hr fire rated assembly only) screw-attached to furring channels. Max diam of opening is 1 in. larger than outside diam of penetrant.


3M COMPANY - CP 25WB+ caulk or FB-3000 WT sealant.
*Bearing the UL Classification Mark

4 FIRE RATED GYPSUM FLOOR/CEILING PENETRATION DETAIL
FA0.7 SCALE: NONE



HYT Corporation
Fire Protection Engineers
and Consultants
3498 Clayton Road - Suite 101
Concord, California 94519
Phone: (925) 681-2731

CLIENT:



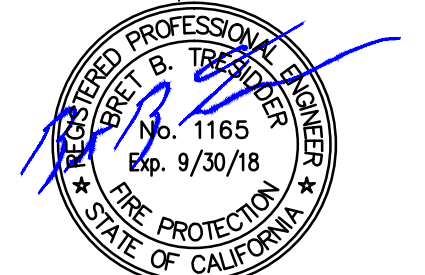
HUMBOLDT STATE UNIVERSITY
1 HARPST STREET
ARCATA, CA 95521

PROJECT NAME:
**CAMPUS FIRE ALARM
REPLACEMENT PROJECT**
VARIOUS BUILDINGS
PROJECT # XHS408

Project Building(s):
CANYON COMPLEX

- ALDER RESIDENCE HALL
- CEDAR RESIDENCE HALL
- CHINQUAPIN RESIDENCE HALL
- HEMLOCK RESIDENCE HALL
- MAPLE RESIDENCE HALL
- TAN OAK RESIDENCE HALL
- PEPPERWOOD RESIDENCE HALL

Engineer's Stamp:



Traci Ferdolage
No. 1165
Exp. 9/30/18
FIRE PROTECTION
STATE OF CALIFORNIA

This project has demonstrated compliance with applicable codes and standards established by statute and University policy. Based on this determination these documents are

'APPROVED FOR CONSTRUCTION'

Traci Ferdolage
Campus Deputy Building Official
Humboldt State University
The California State University
Date: 3/31/2017
Permit #: 2016/17-026

Other approvals, as applicable:
SFM Approval: 3/18/2017
DSA Access Approval: N/A
Seismic Peer Review: N/A
Mech. Peer Review: N/A

CALIFORNIA STATE FIRE MARSHAL APPROVED

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. Set of approved plans shall be available on the project site at all times.

Reviewed by: *Antonio McSorley*
Date: 3/18/17

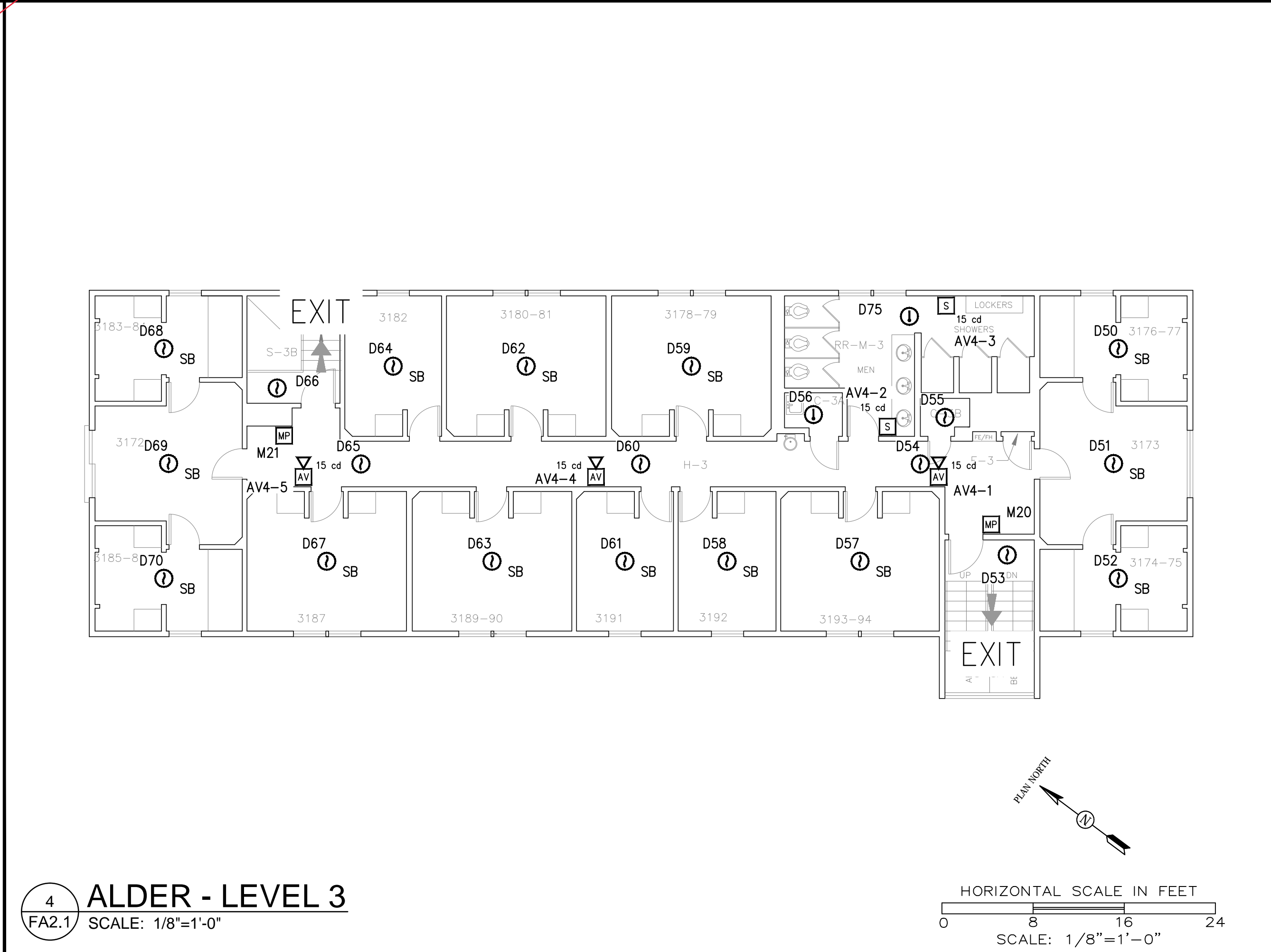
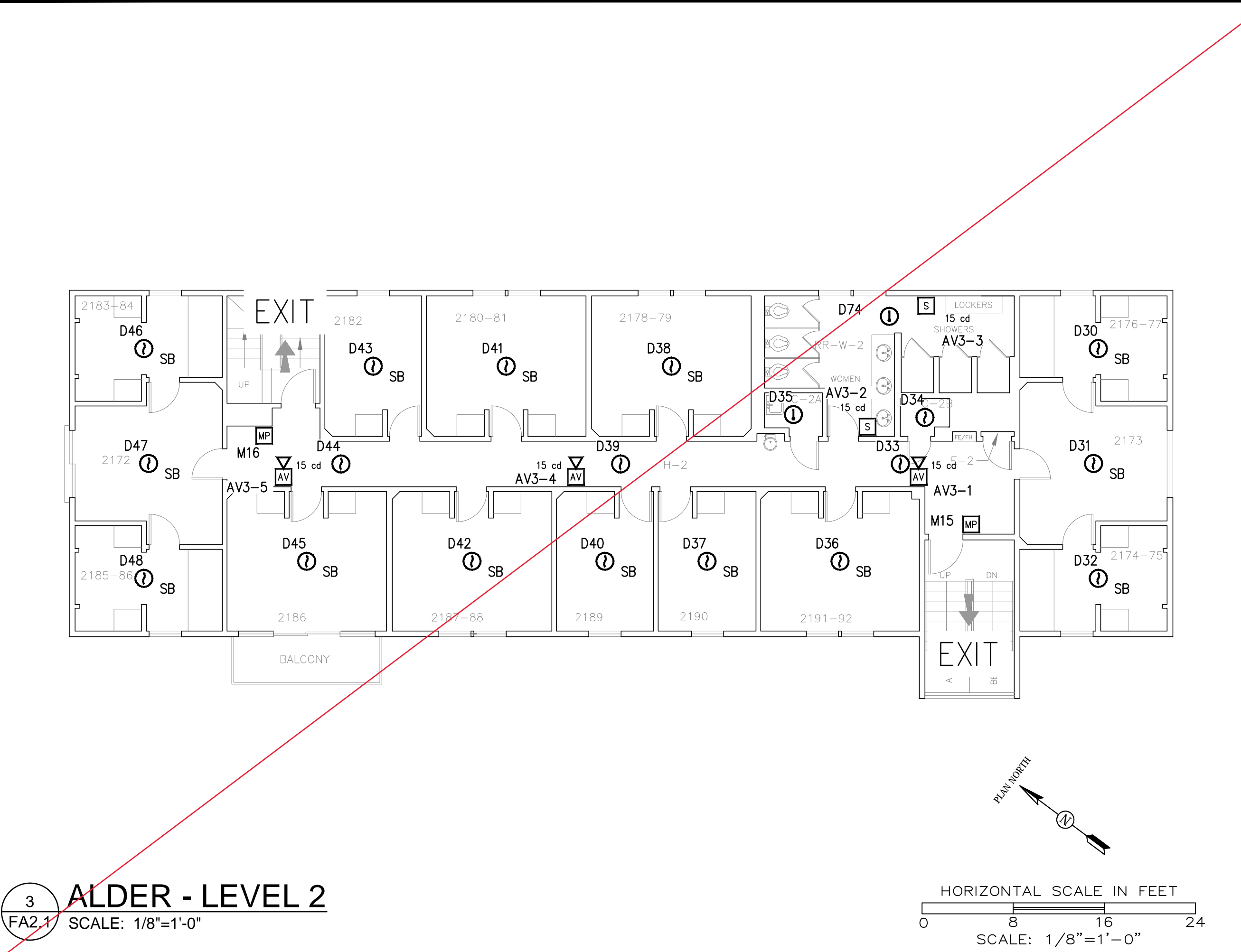
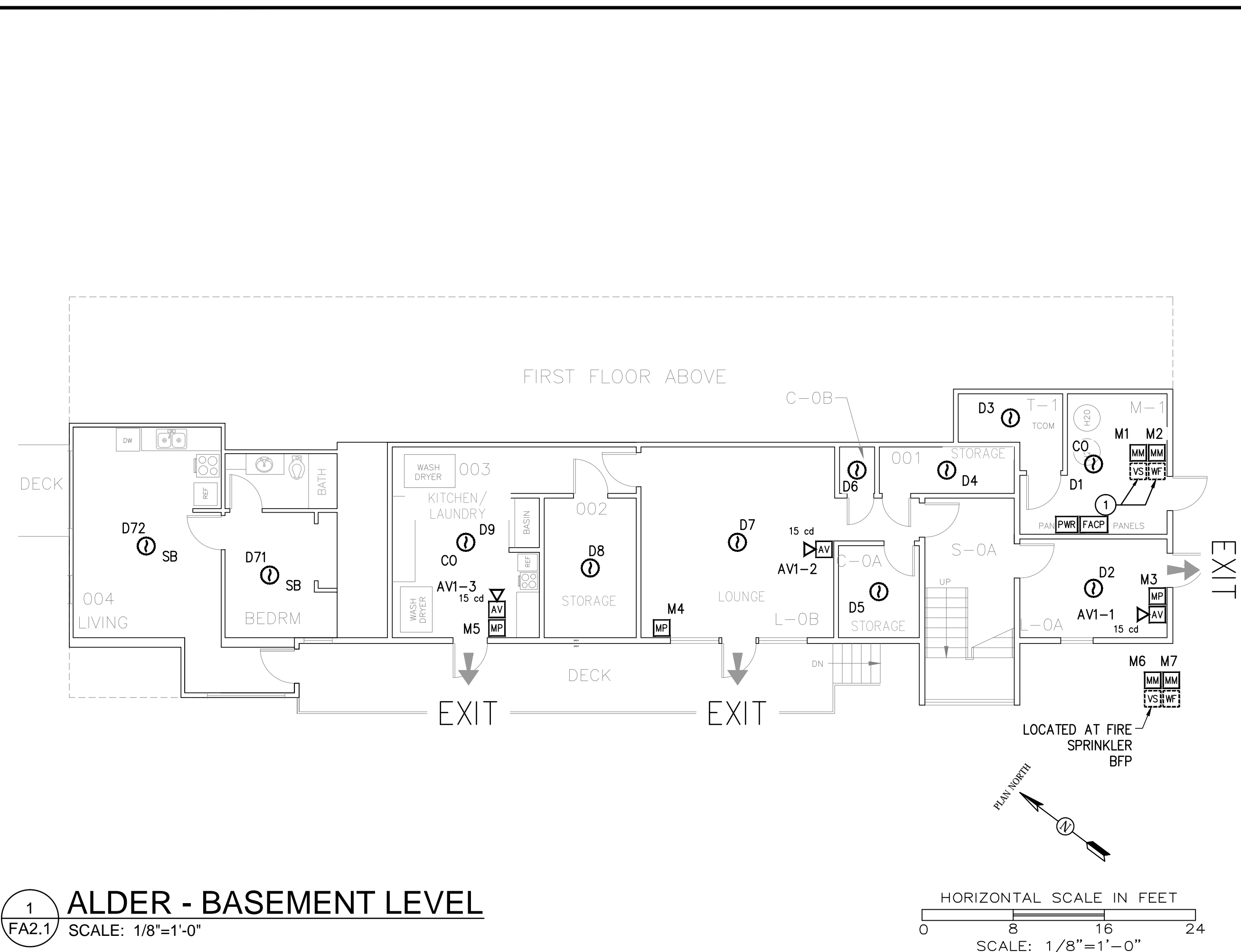
REVISIONS

DATE	NO.	DESCRIPTION


SHEET TITLE:
**FIRE ALARM
ALDER RESIDENCE
HALL PLANS**

SCALE	DATE
AS NOTED	03.17.17

SHEET
FA2.1

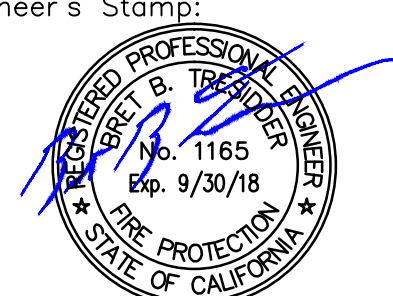


HYT Corporation
 Fire Protection Engineers
 and Consultants
 3498 Clayton Road - Suite 101
 Concord, California 94519
 Phone: (925) 681-2731

CLIENT:

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 1 HARPST STREET
 ARCATA, CA 95521

PROJECT NAME:
**CAMPUS FIRE ALARM
 REPLACEMENT PROJECT**
 VARIOUS BUILDINGS
 PROJECT # XHS408

Project Building(s):
CANYON COMPLEX
 • ALDER RESIDENCE HALL
 • CEDAR RESIDENCE HALL
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Engineer's Stamp:


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 DSA Access Approval: N/A
 Seismic Peer Review: N/A
 Mech. Peer Review: N/A

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 Reviewed by: *Andrew McSorley*
 Date: 3/18/17

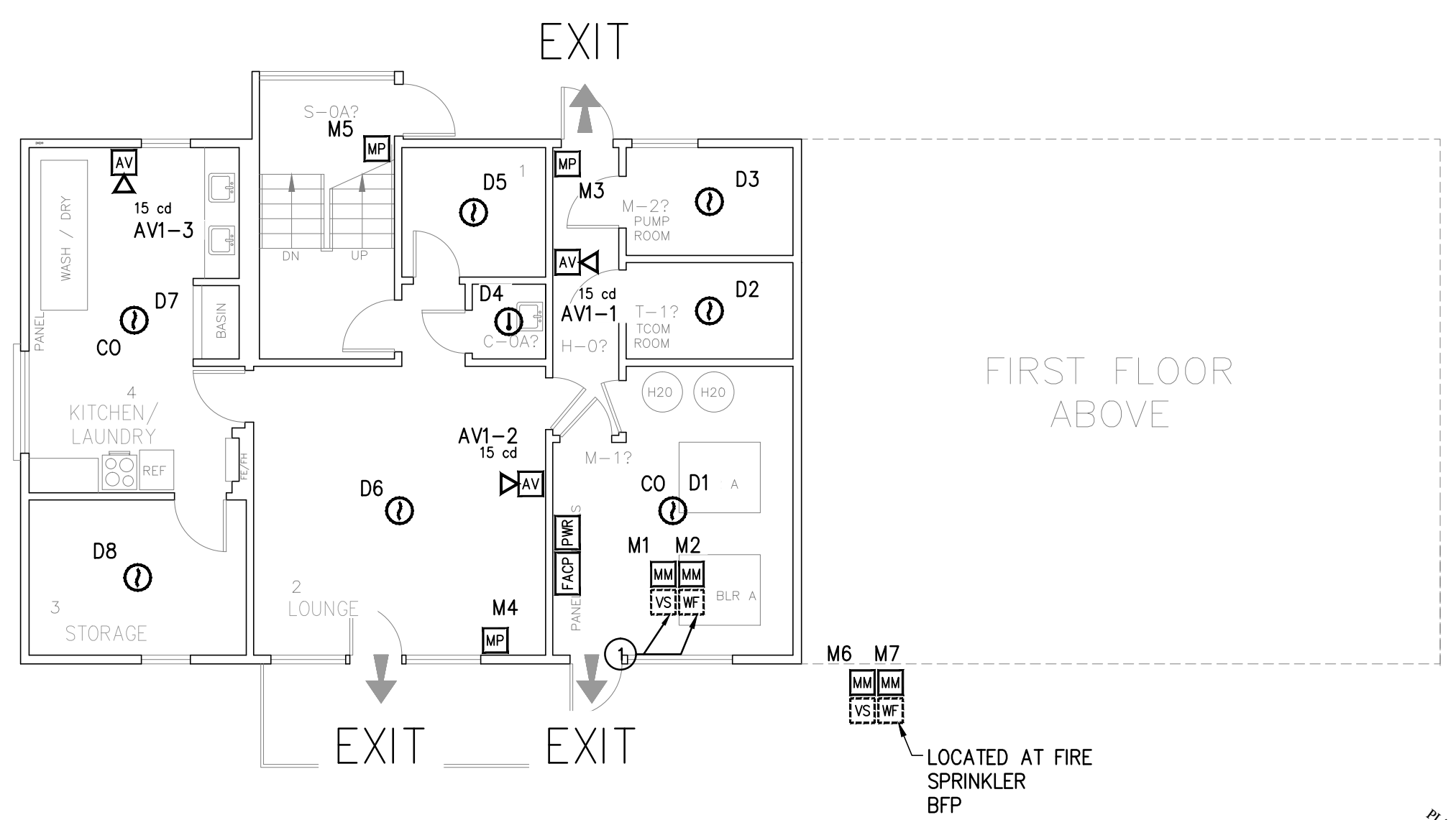
REVISIONS

DATE	NO.	DESCRIPTION

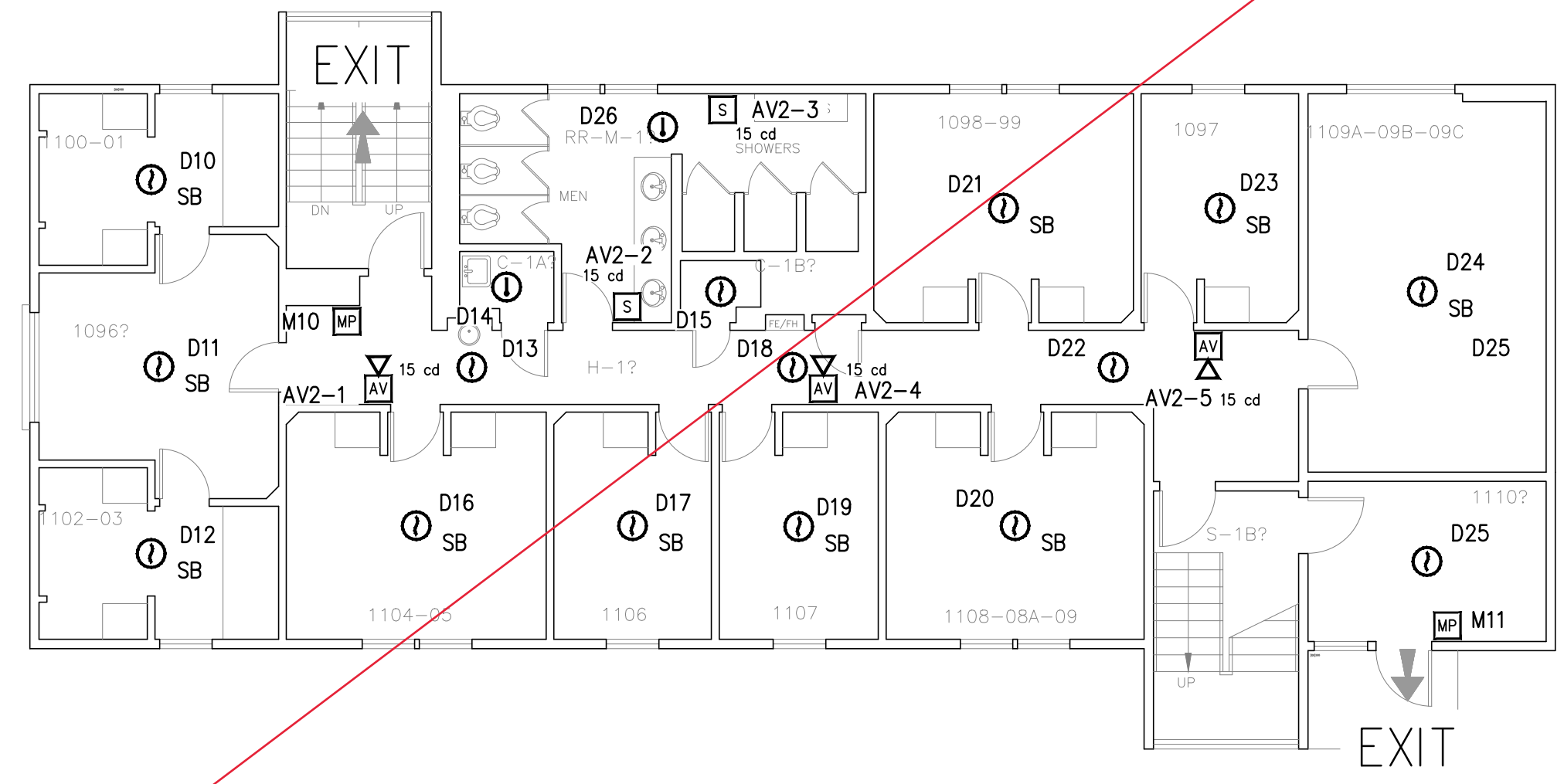
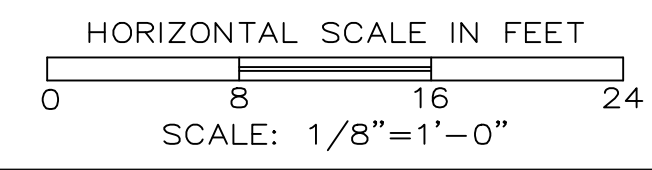
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**FIRE ALARM
 CEDAR RESIDENCE
 HALL PLANS**

SCALE	DATE
AS NOTED	03.17.17

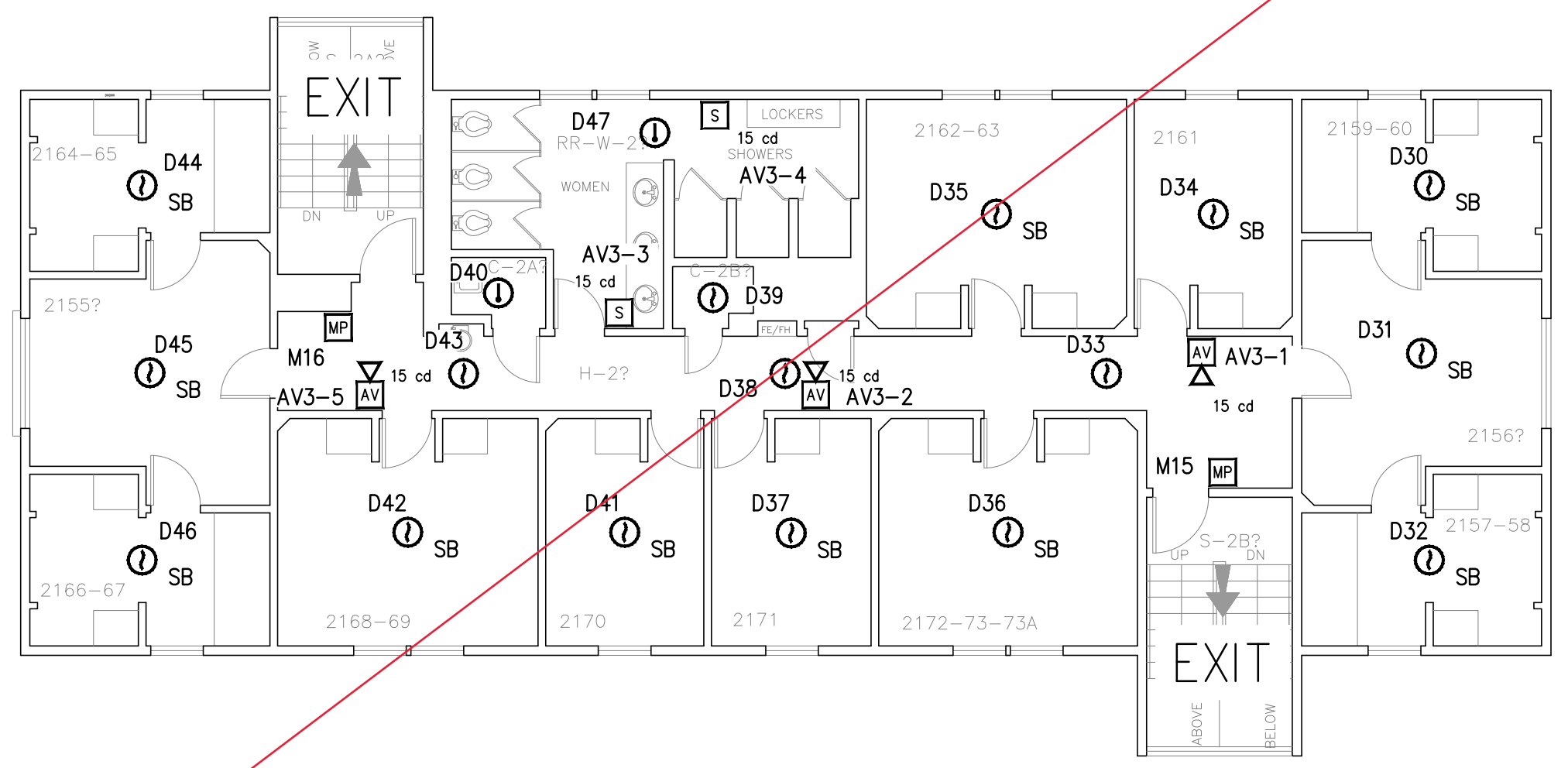
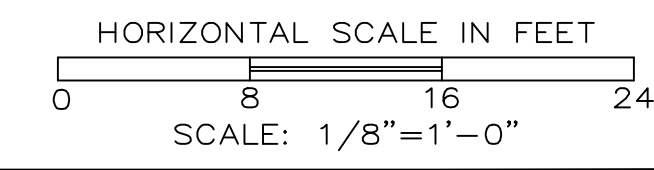
SHEET
FA2.2



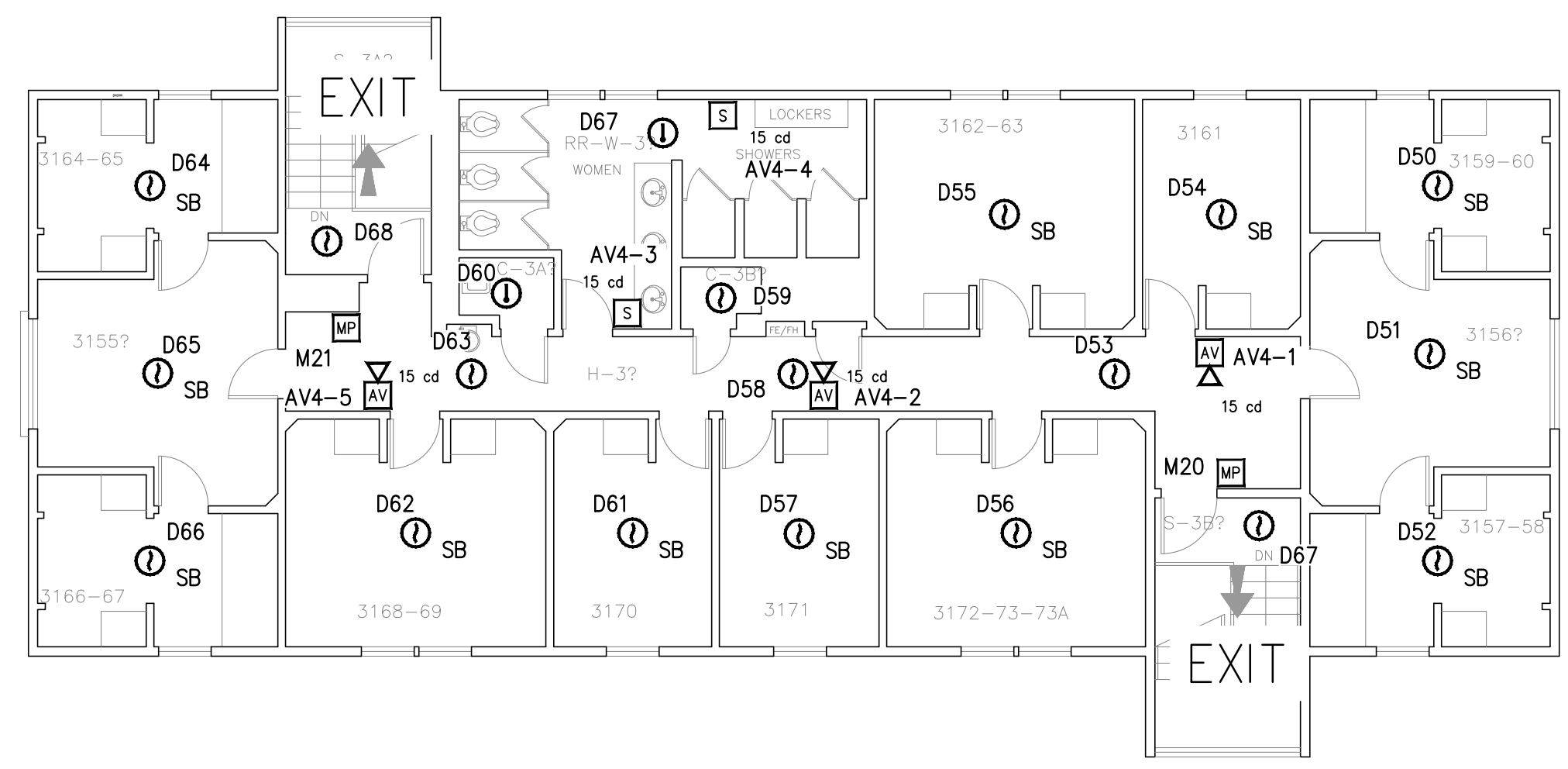
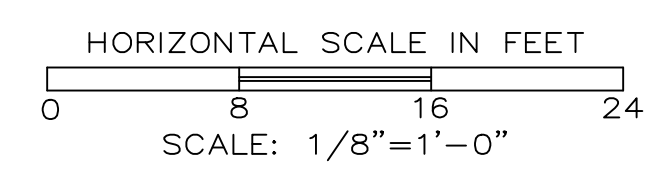
1 CEDAR - BASEMENT LEVEL
 FA2.2 SCALE: 1/8"=1'-0"



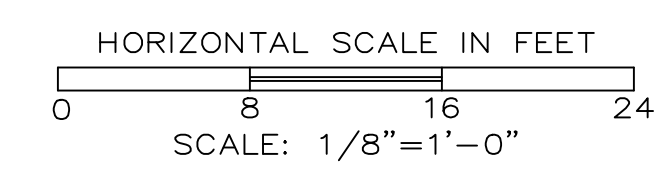
2 CEDAR - LEVEL 1
 FA2.2 SCALE: 1/8"=1'-0"




3 CEDAR - LEVEL 2
 FA2.2 SCALE: 1/8"=1'-0"



4 CEDAR - LEVEL 3
 FA2.2 SCALE: 1/8"=1'-0"

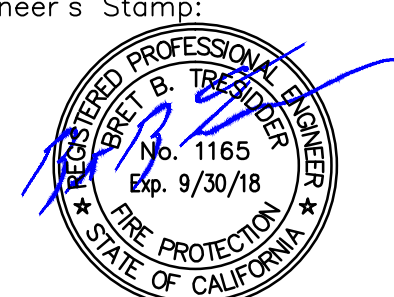


HYT Corporation
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 Phone: (925) 681-2731

CLIENT:

 HUMBOLDT STATE UNIVERSITY
 1 HARPST STREET
 ARCATA, CA 95521

PROJECT NAME:
**CAMPUS FIRE ALARM
 REPLACEMENT PROJECT**
 VARIOUS BUILDINGS
 PROJECT # XHS408

Project Building(s):
CANYON COMPLEX
 • ALDER RESIDENCE HALL
 • CEDAR RESIDENCE HALL
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 • HEMLOCK RESIDENCE HALL
 • MAPLE RESIDENCE HALL
 • TAN OAK RESIDENCE HALL
 • PEPPERWOOD RESIDENCE HALL

Engineer's Stamp:


This project has demonstrated compliance with applicable codes and standards established by statute and University policy. Based on this determination these documents are
'APPROVED FOR CONSTRUCTION'
 Traci Ferdolage
 Campus Deputy Building Official
 Humboldt State University
 The California State University
 Date: 3/31/2017
 Permit #: 2016/17-026
 Other approvals, as applicable:
 SFM Approval: 3/18/2017
 DSA Access Approval: N/A
 Seismic Peer Review: N/A
 Mech. Peer Review: N/A

CALIFORNIA STATE FIRE MARSHAL APPROVED
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 Reviewed by: *Andrew McSorley*
 Date: 3/18/17

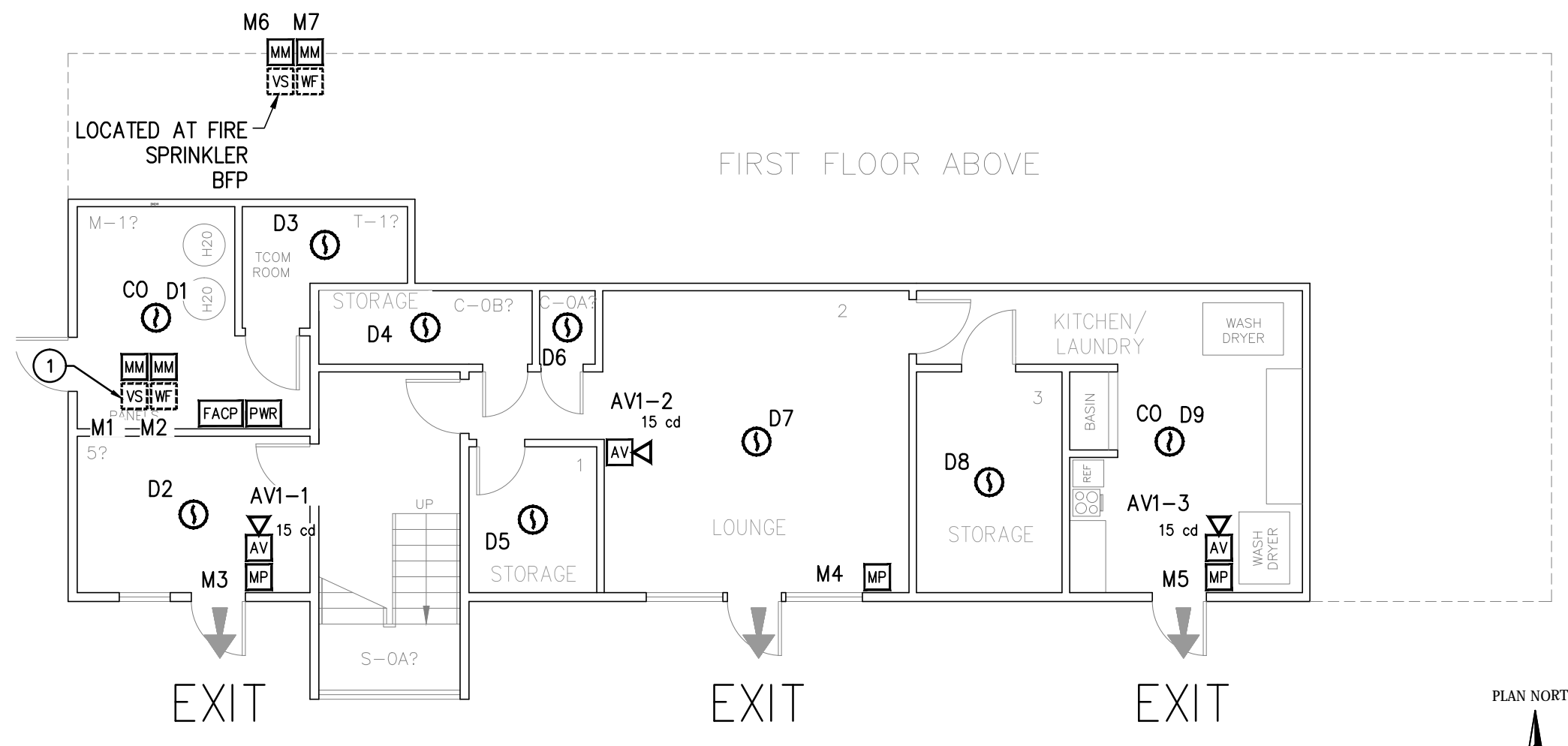
REVISIONS

DATE	NO.	DESCRIPTION

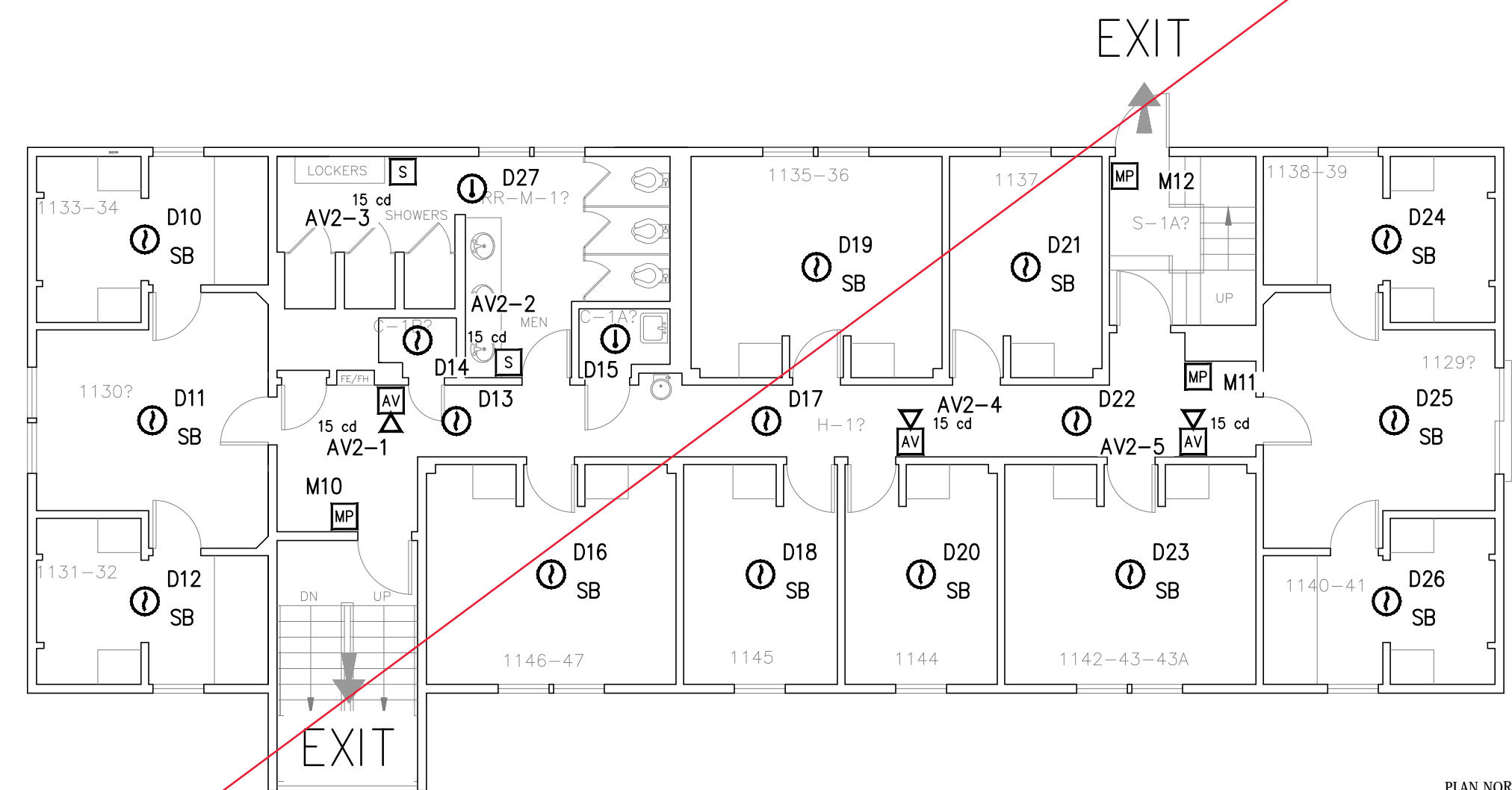
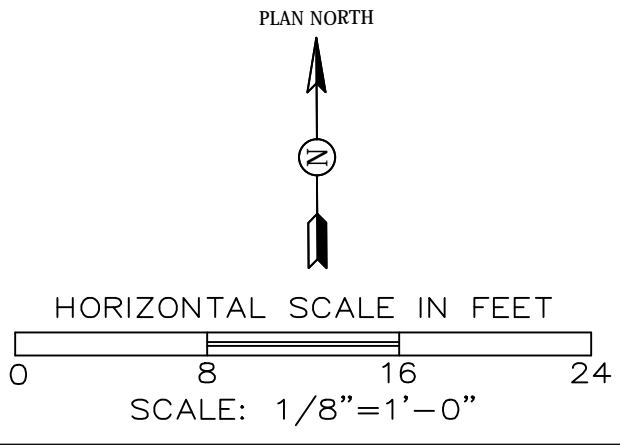
SHEET TITLE:
**FIRE ALARM
 CHINQUAPIN
 RESIDENCE HALL
 PLANS**
[ALT. #1]

SCALE	DATE
AS NOTED	03.17.17

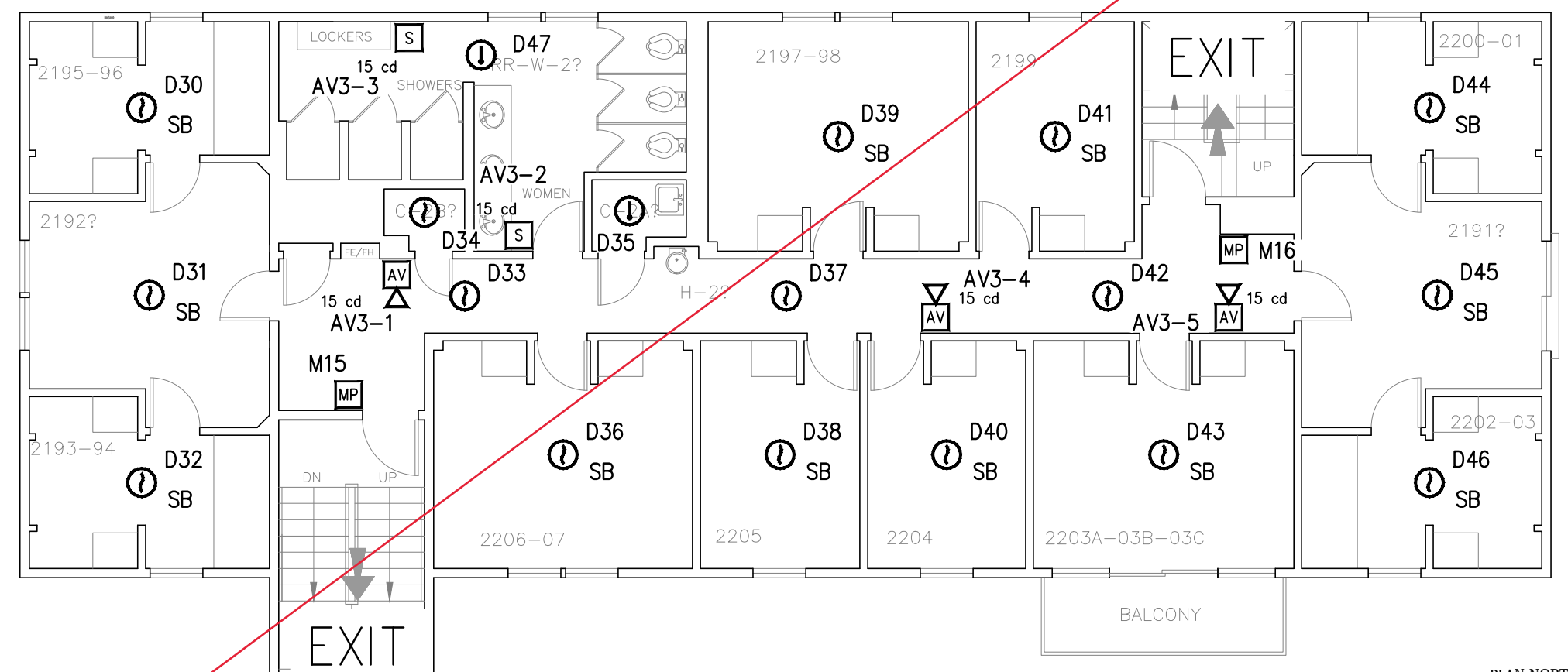
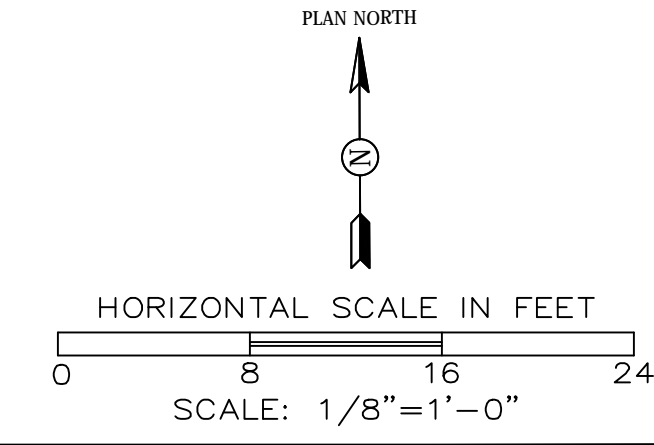
SHEET
FA2.3



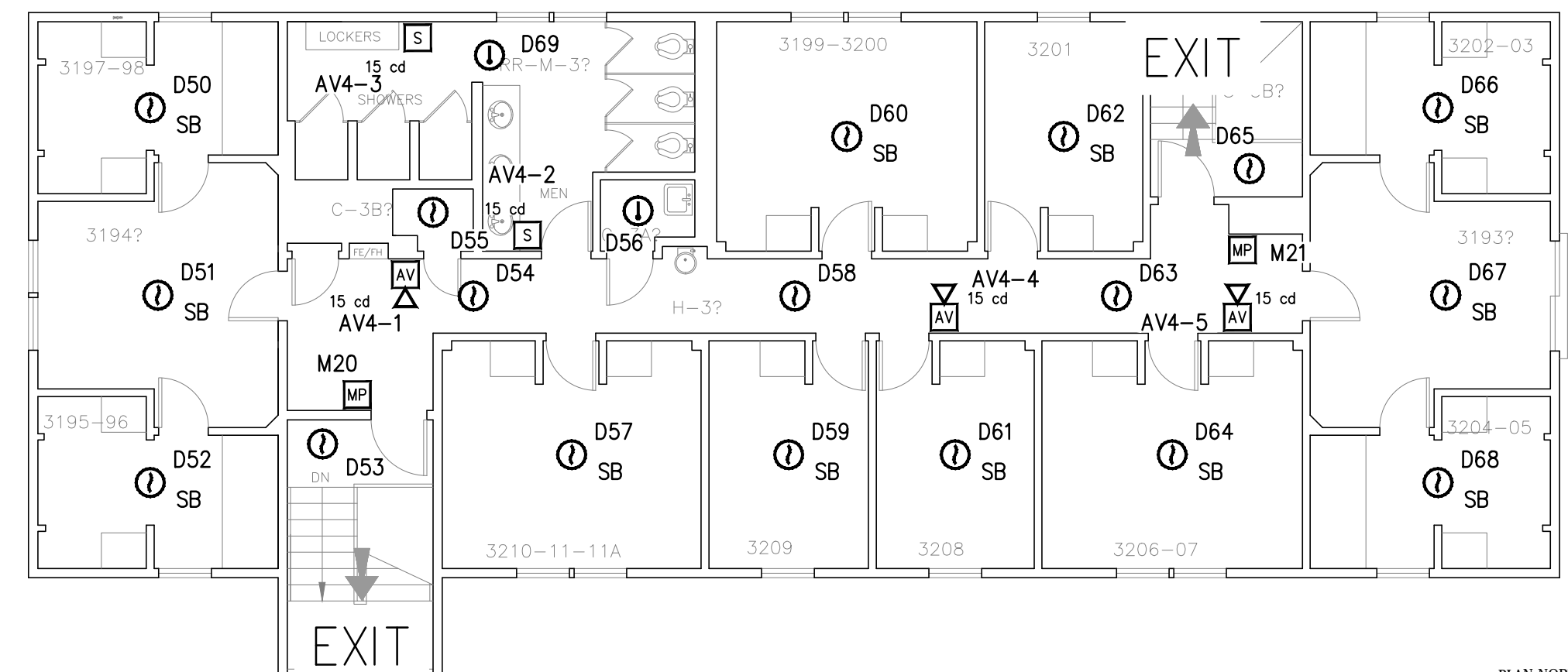
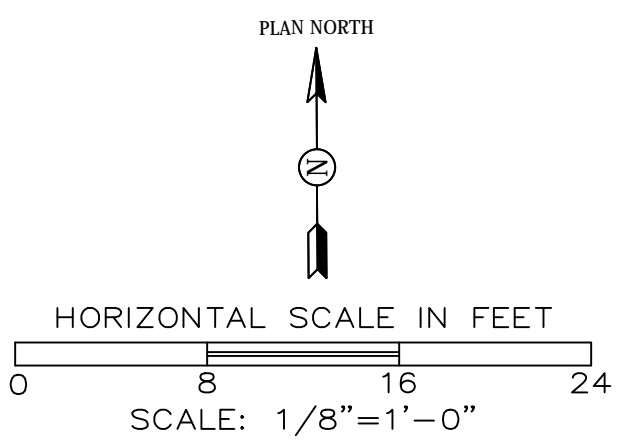
1 CHINQUAPIN - BASEMENT LEVEL
 FA2.3 SCALE: 1/8"=1'-0"



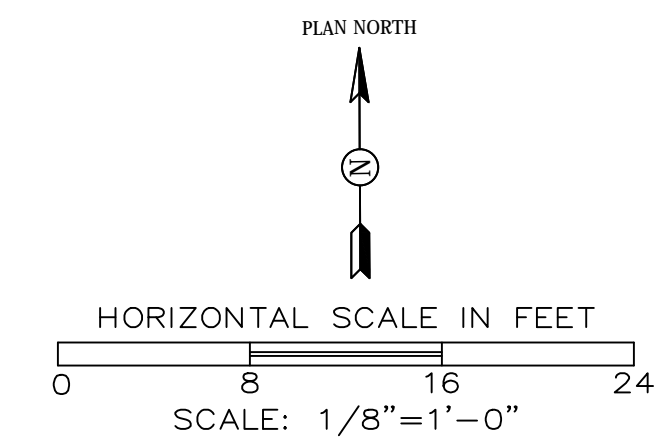
2 CHINQUAPIN - LEVEL 1
 FA2.3 SCALE: 1/8"=1'-0"




3 CHINQUAPIN - LEVEL 2
 FA2.3 SCALE: 1/8"=1'-0"



4 CHINQUAPIN - LEVEL 3
 FA2.3 SCALE: 1/8"=1'-0"

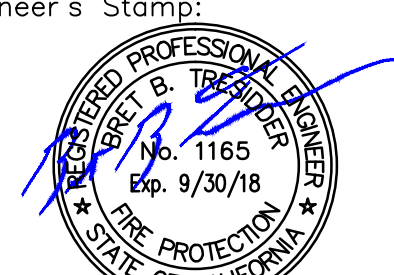


HYT Corporation
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 and Consultants
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 Phone: (925) 681-2731

CLIENT:

 HUMBOLDT STATE UNIVERSITY
 1 HARPST STREET
 ARCATA, CA 95521

PROJECT NAME:
**CAMPUS FIRE ALARM
 REPLACEMENT PROJECT**
 VARIOUS BUILDINGS
 PROJECT # XHS408

Project Building(s):
CANYON COMPLEX
 • ALDER RESIDENCE HALL
 • CEDAR RESIDENCE HALL
 • CHINQUAPIN RESIDENCE HALL
 • HEMLOCK RESIDENCE HALL
 • MAPLE RESIDENCE HALL
 • TAN OAK RESIDENCE HALL
 • PEPPERWOOD RESIDENCE HALL

Engineer's Stamp:


This project has demonstrated conformance with applicable codes and standards established by statute and University policy. Based on this determination these documents are
'APPROVED FOR CONSTRUCTION'
 Traci Ferdolage
 Campus Deputy Building Official
 Humboldt State University
 The California State University
 Date: 3/31/2017
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 Other approvals, as applicable:
 SFM Approval: 3/18/2017
 DSA Access Approval: N/A
 Seismic Peer Review: N/A
 Mech. Peer Review: N/A

CALIFORNIA STATE FIRE MARSHAL
 APPROVED
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 Reviewed by: *[Signature]*
 Date: 3/18/17

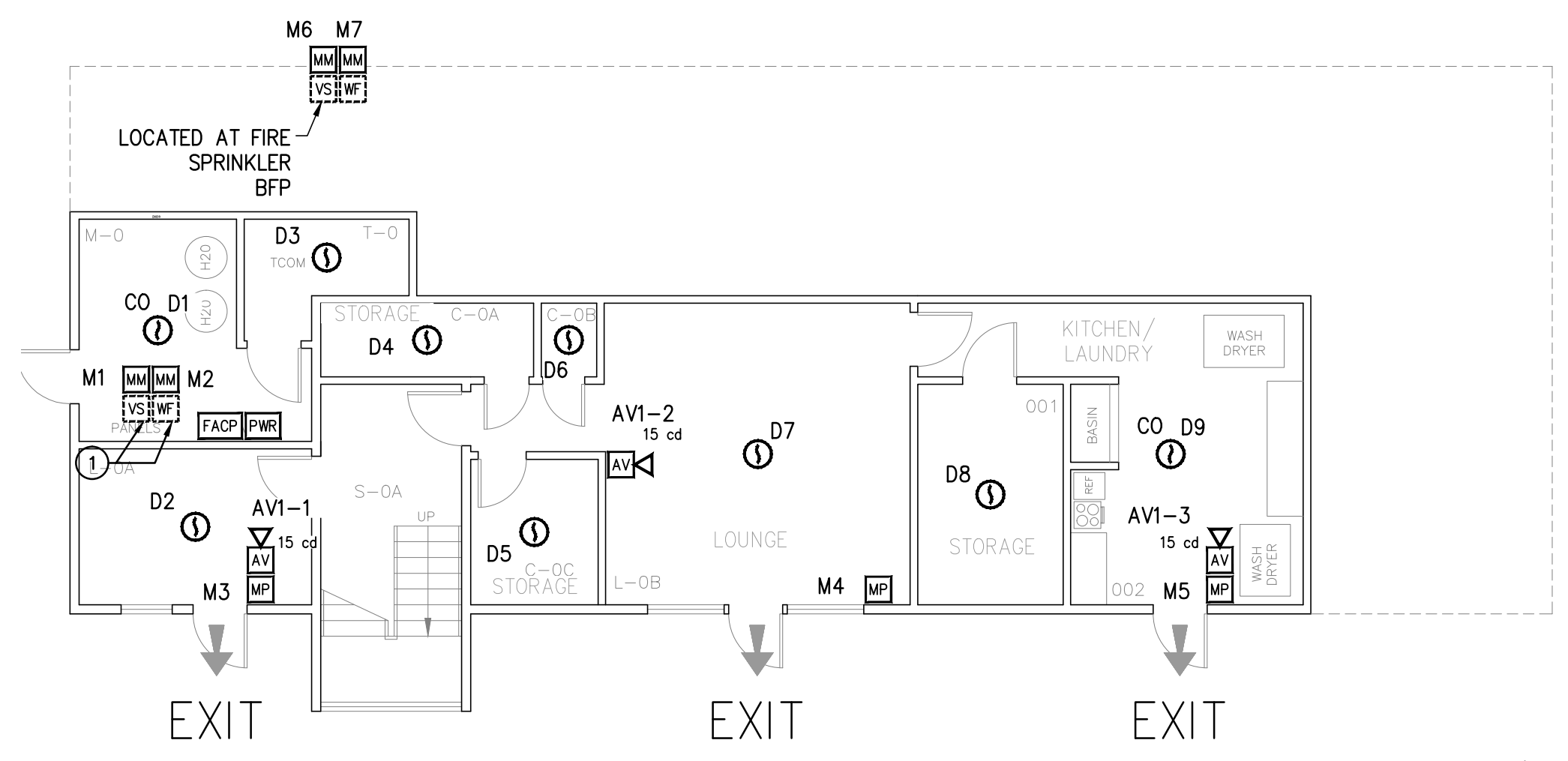
REVISIONS

DATE	NO.	DESCRIPTION

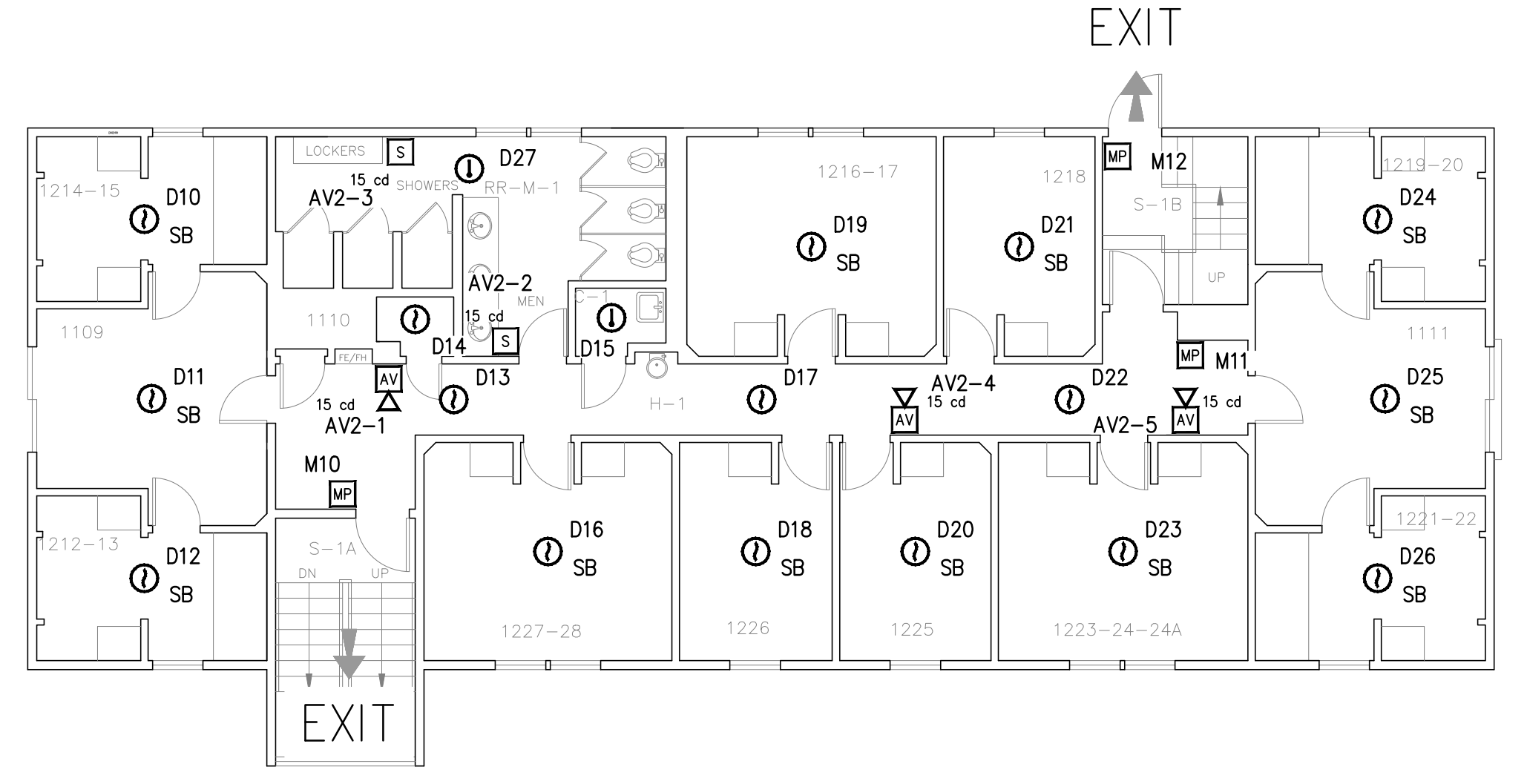
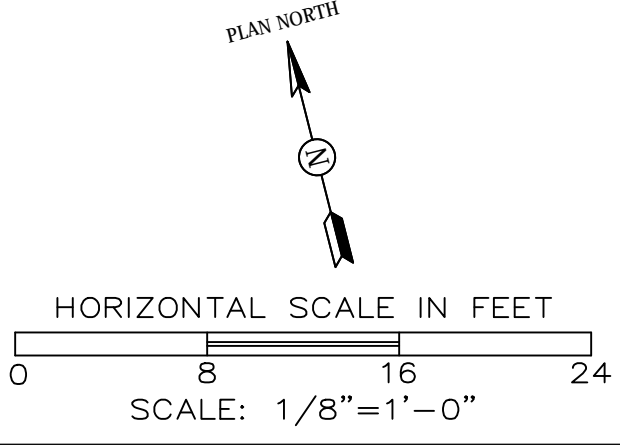
SHEET TITLE:
FIRE ALARM
HEMLOCK RESIDENCE HALL PLANS
ALT. #2

SCALE	DATE
AS NOTED	03.17.17

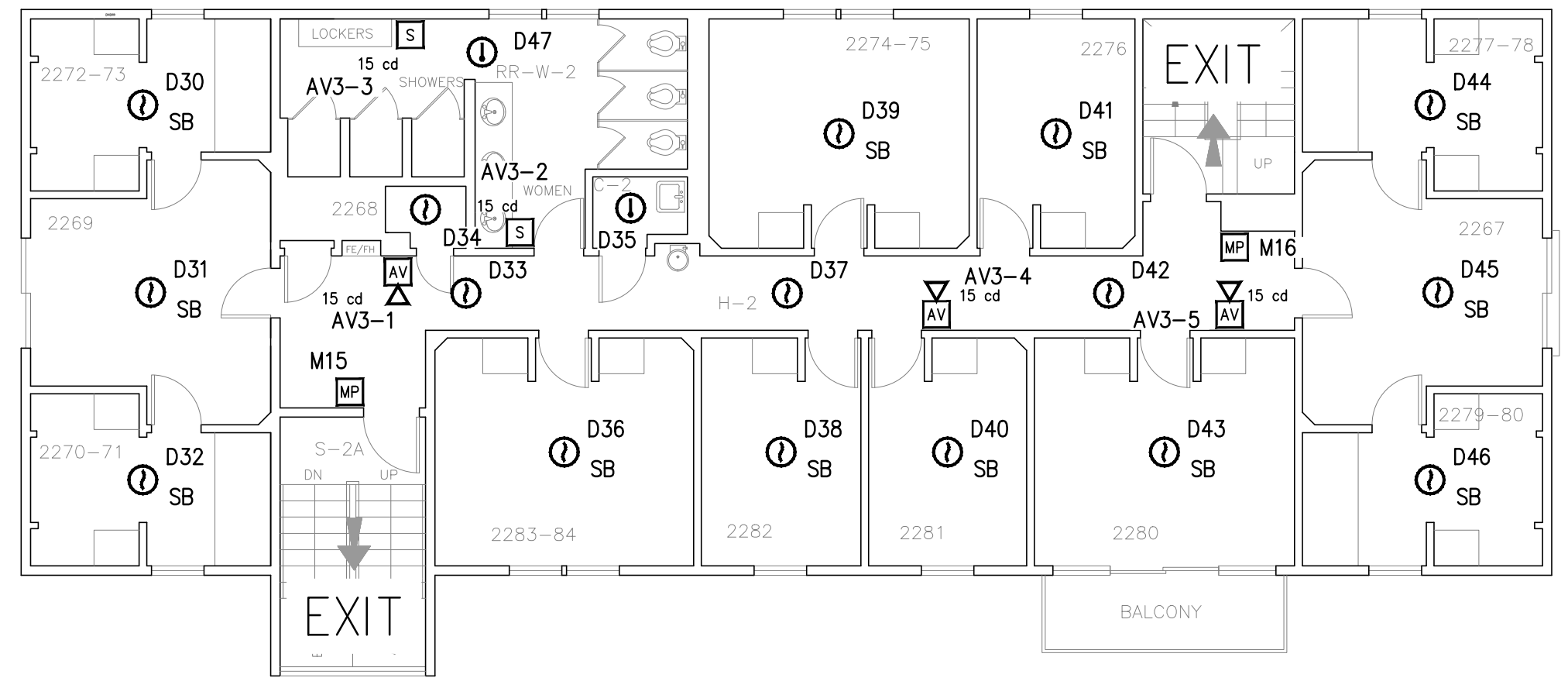
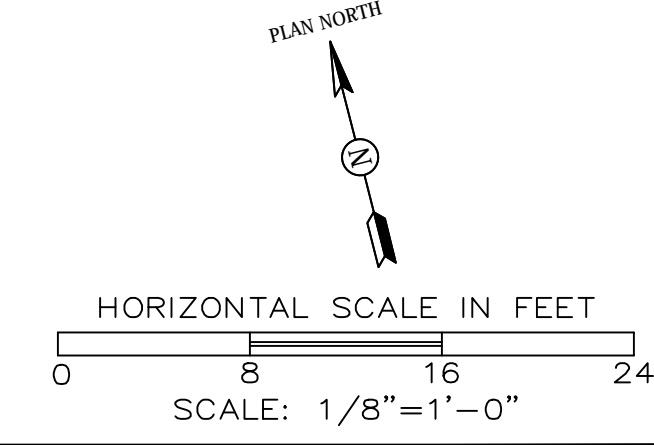
SHEET
FA2.4



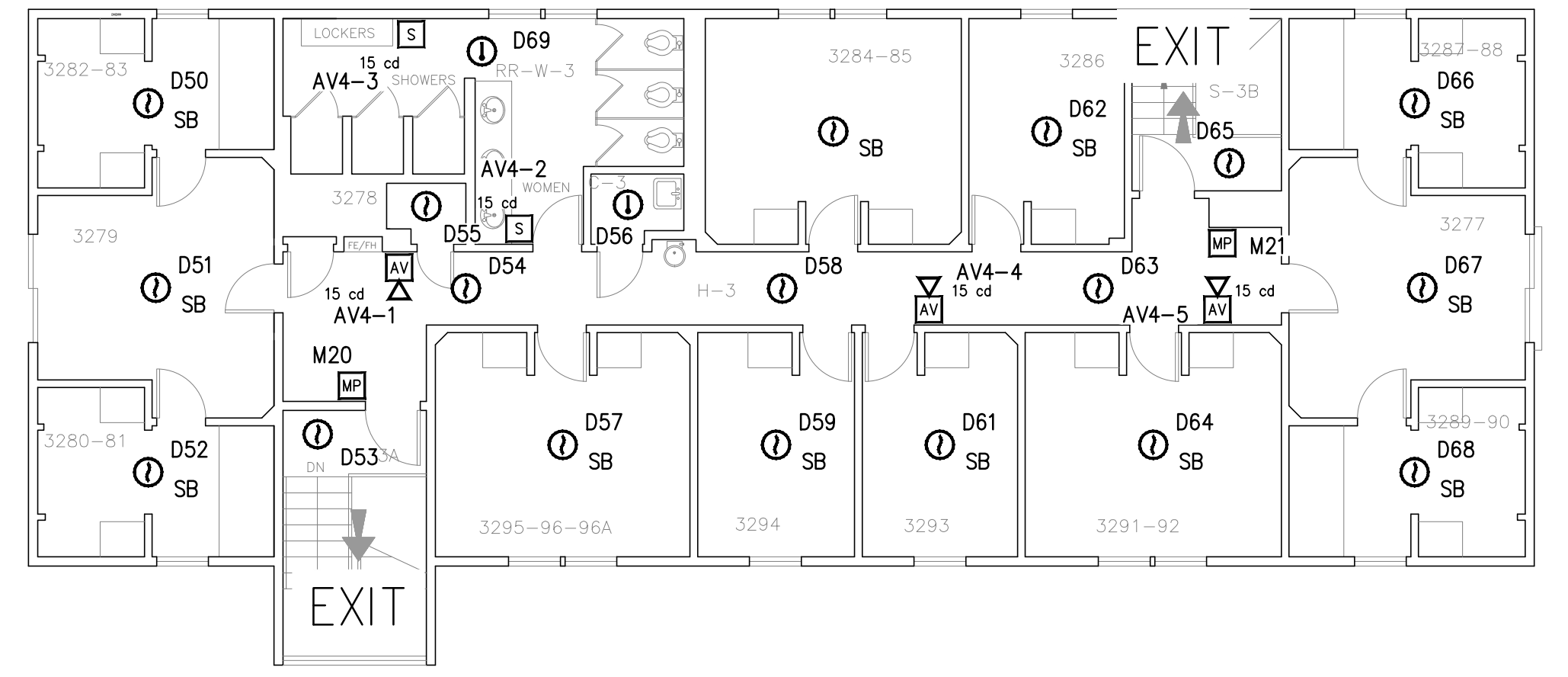
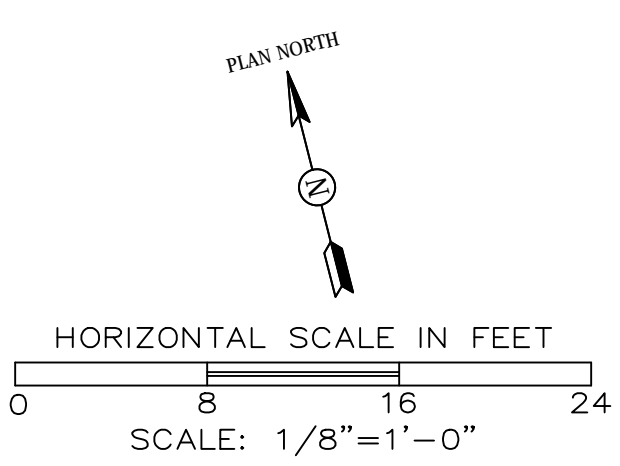
1 HEMLOCK - BASEMENT LEVEL
 FA2.4 SCALE: 1/8"=1'-0"



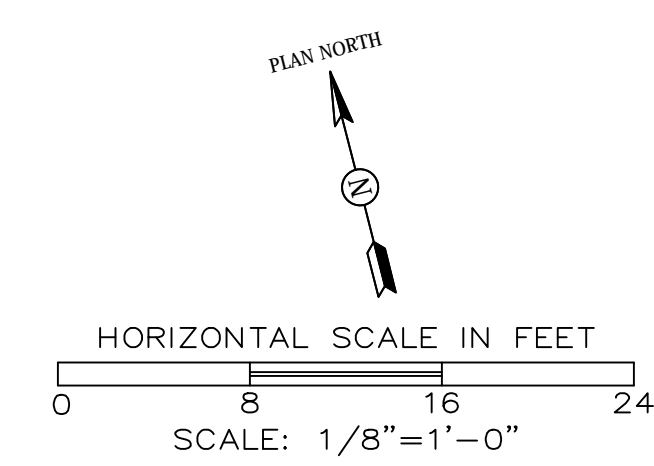
2 HEMLOCK - LEVEL 1
 FA2.4 SCALE: 1/8"=1'-0"



3 HEMLOCK - LEVEL 2
 FA2.4 SCALE: 1/8"=1'-0"




4 HEMLOCK - LEVEL 3
 FA2.4 SCALE: 1/8"=1'-0"





HYT Corporation
Fire Protection Engineers
and Consultants
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CLIENT:

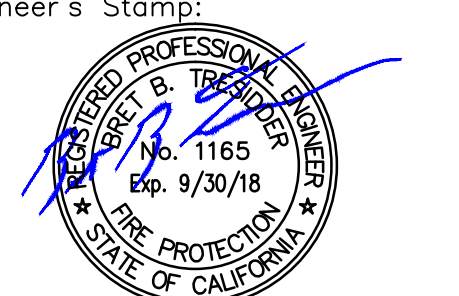


HUMBOLDT STATE UNIVERSITY
1 HARPST STREET
ARCATA, CA 95521

PROJECT NAME:
**CAMPUS FIRE ALARM
REPLACEMENT PROJECT**
VARIOUS BUILDINGS
PROJECT # XHS408

- Project Building(s):
- CANYON COMPLEX**
- ALDER RESIDENCE HALL
 - CEDAR RESIDENCE HALL
 - CHINQUAPIN RESIDENCE HALL
 - HEMLOCK RESIDENCE HALL
 - MAPLE RESIDENCE HALL
 - TAN OAK RESIDENCE HALL
 - PEPPERWOOD RESIDENCE HALL

Engineer's Stamp:



Traci Ferdolage
Professional Engineer
No. 1165
Exp. 9/30/18
FIRE PROTECTION
STATE OF CALIFORNIA

This project has demonstrated conformance with applicable codes and standards established by statute and University policy. Based on this determination these documents are

'APPROVED FOR CONSTRUCTION'

Traci Ferdolage
Campus Deputy Building Official
Humboldt State University
The California State University
Date: 3/31/2017
Permit #: 2016/17-026

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SFM Approval: 3/18/2017
DSA Access Approval: N/A
Seismic Peer Review: N/A
Mech. Peer Review: N/A

CALIFORNIA STATE FIRE MARSHAL APPROVED

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Reviewed by: *[Signature]*
Date: 3/18/17

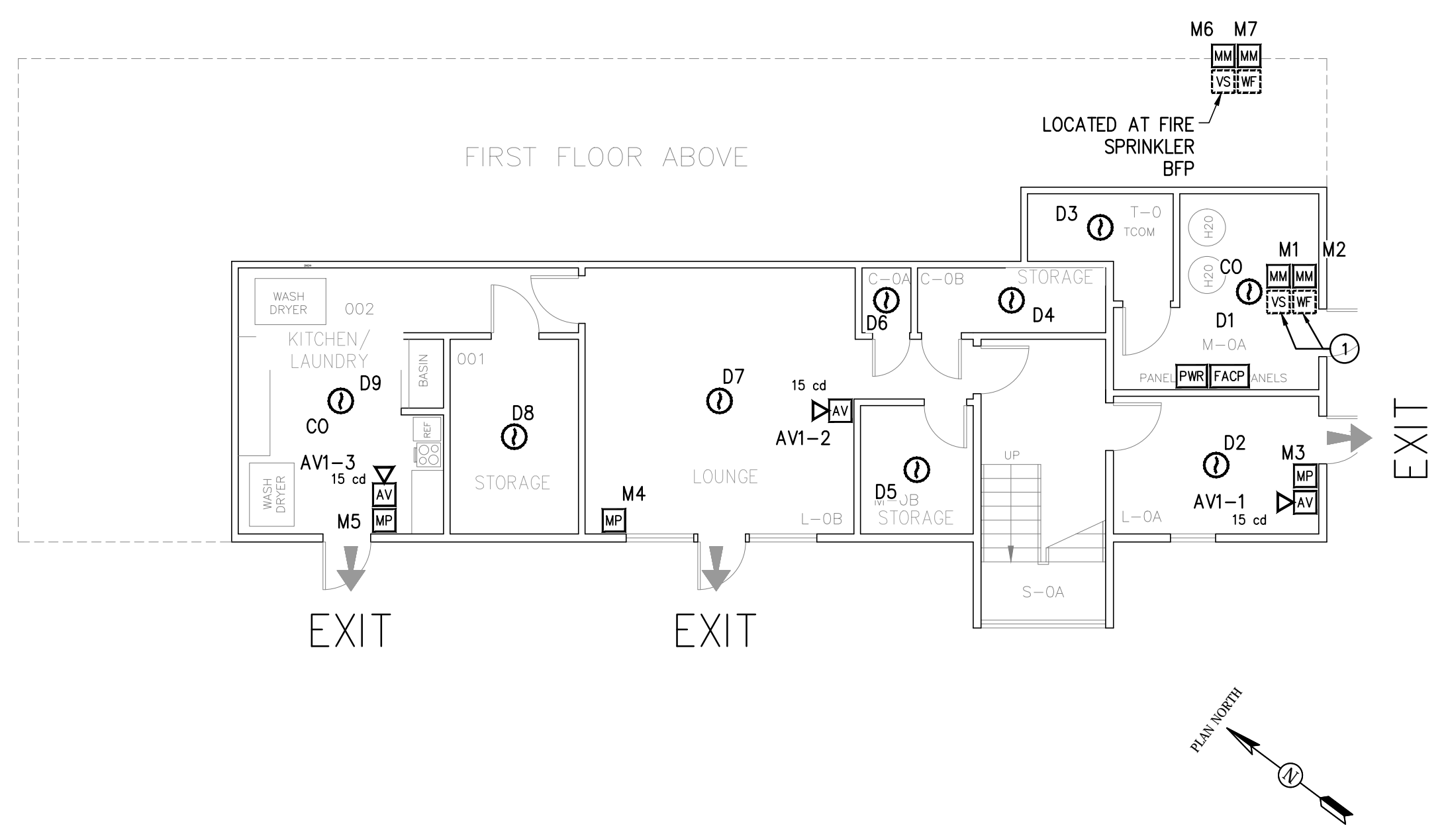
REVISIONS

DATE	NO.	DESCRIPTION

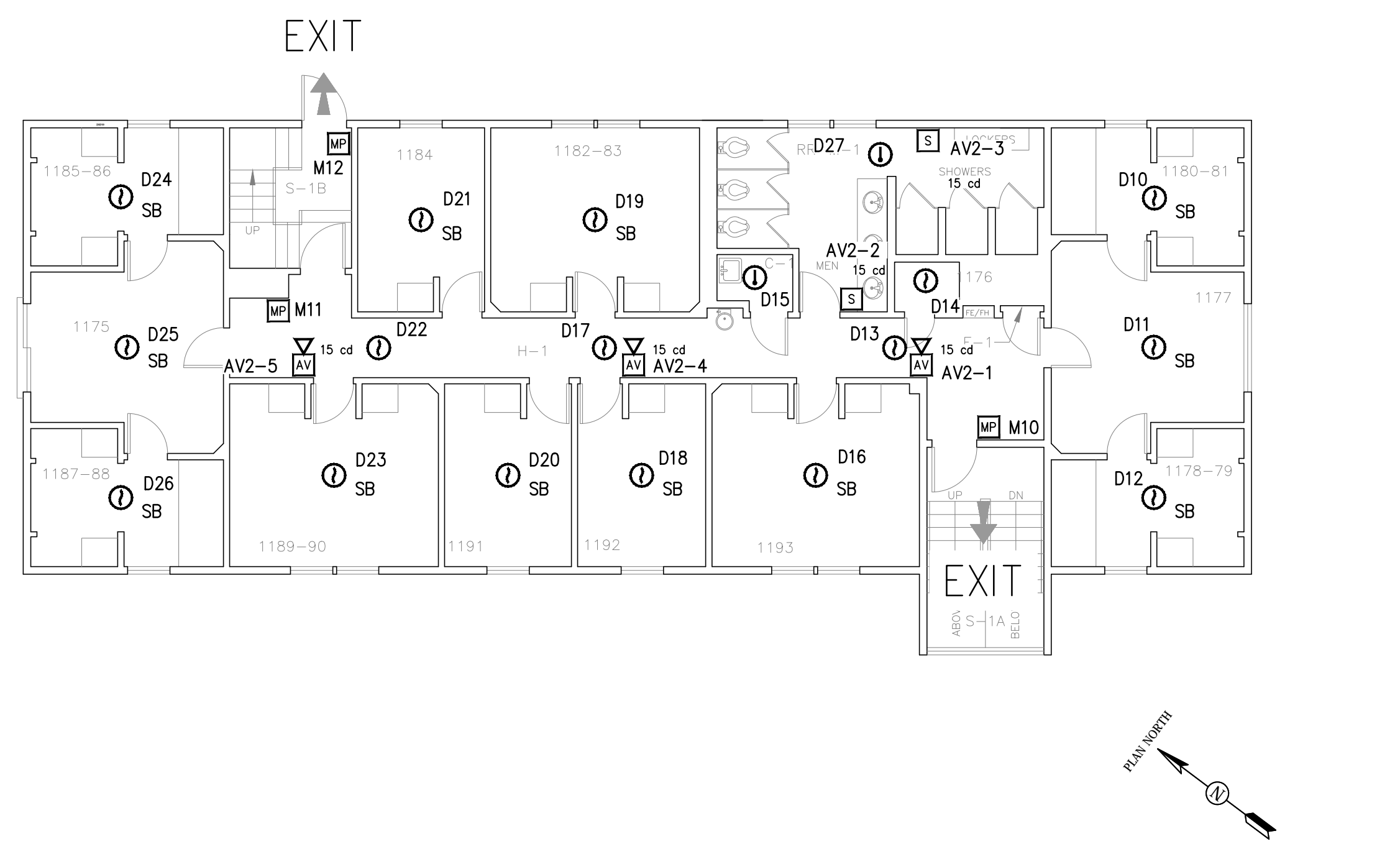
SHEET TITLE:
**FIRE ALARM
MAPLE RESIDENCE
HALL PLANS**

SCALE	DATE
AS NOTED	03.17.17

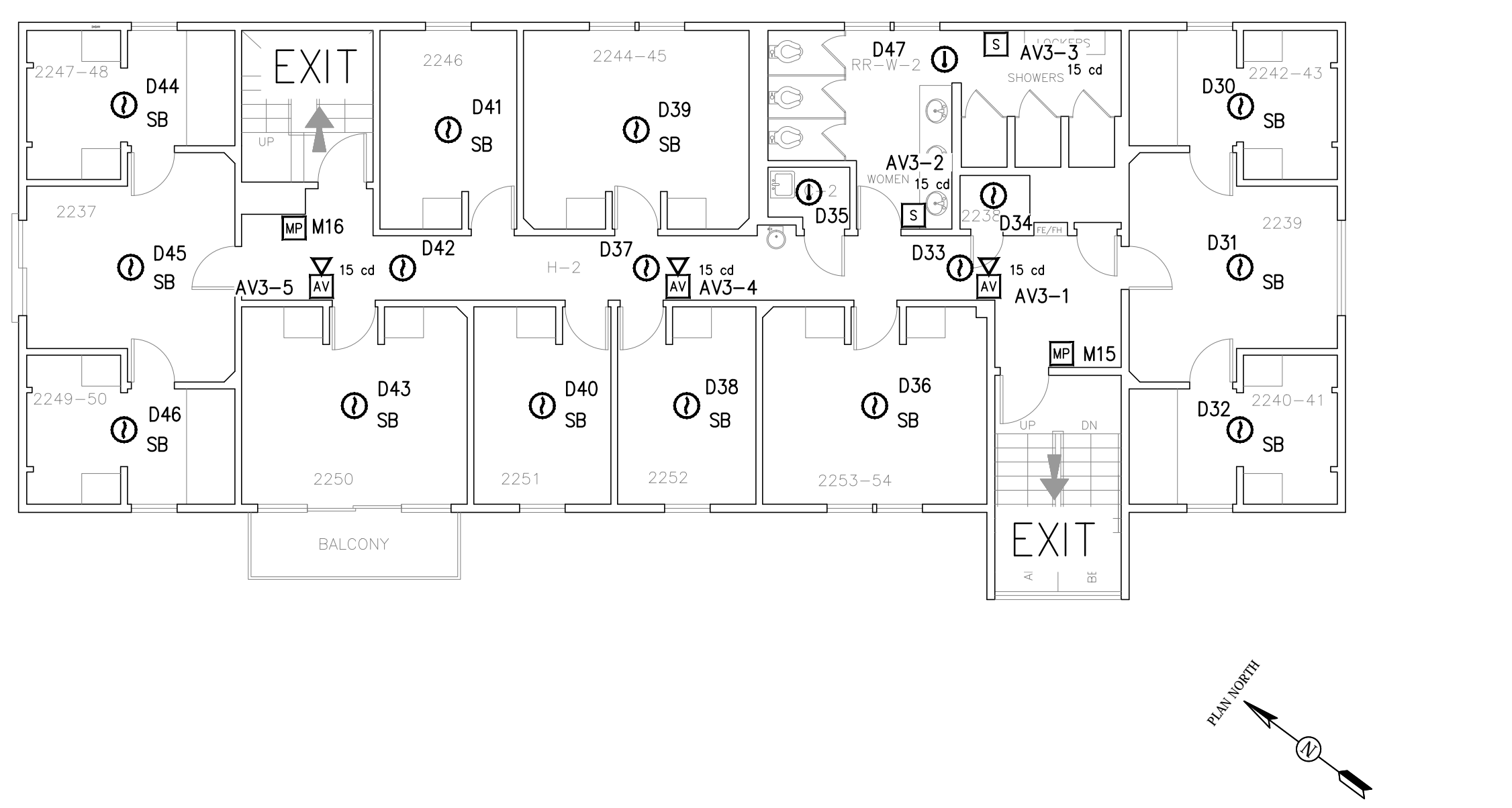
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FA2.5



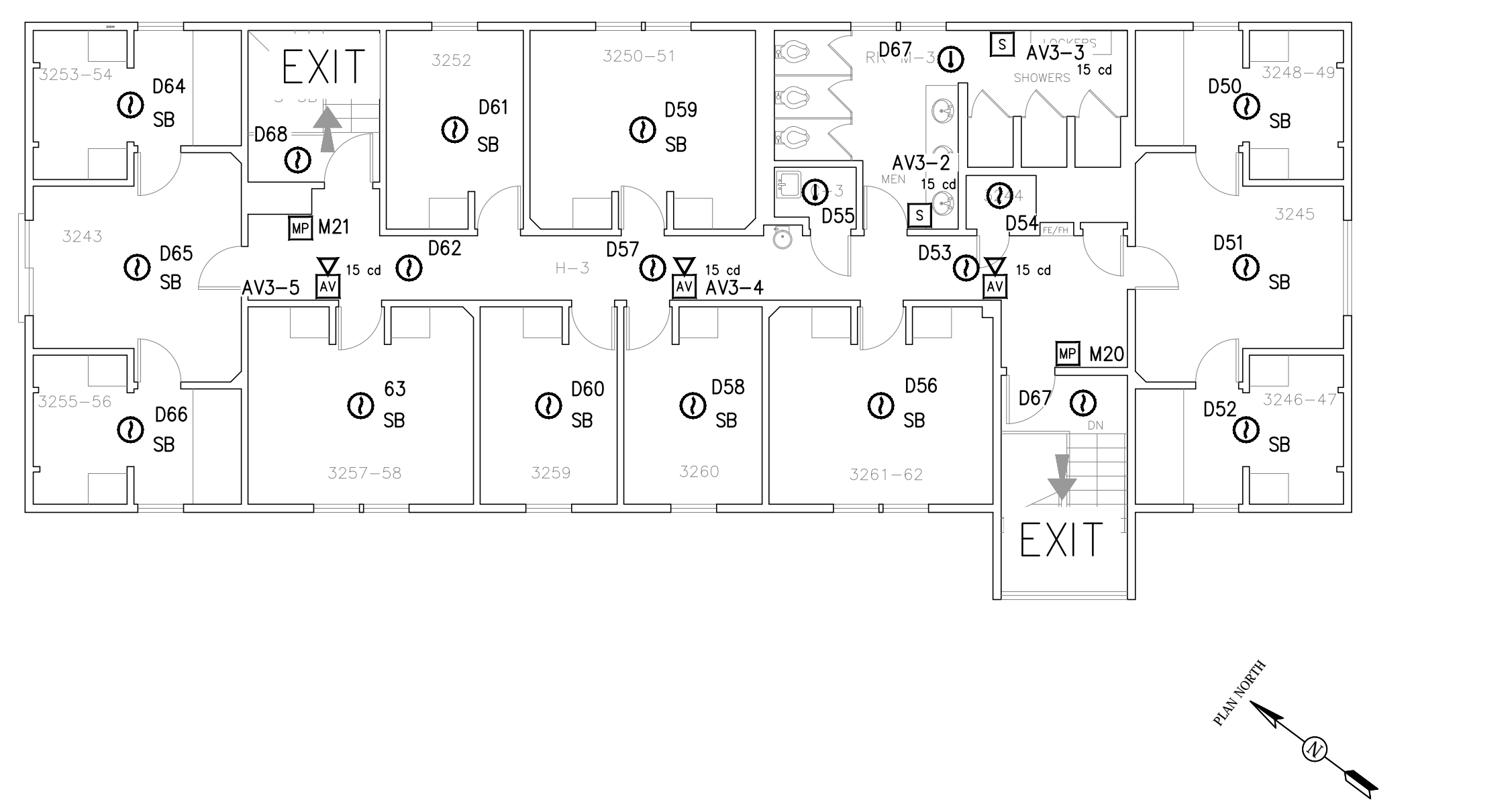
1 **MAPLE - BASEMENT LEVEL**
FA2.5 SCALE: 1/8"=1'-0"



2 **MAPLE - LEVEL 1**
FA2.5 SCALE: 1/8"=1'-0"




3 **MAPLE - LEVEL 2**
FA2.5 SCALE: 1/8"=1'-0"



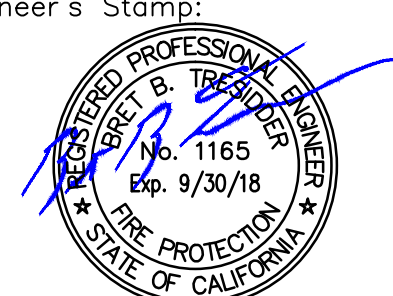
4 **MAPLE - LEVEL 3**
FA2.5 SCALE: 1/8"=1'-0"

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Concord, California 94519
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ARCATA, CA 95521

PROJECT NAME:
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REPLACEMENT PROJECT**
VARIOUS BUILDINGS
PROJECT # XHS408

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 - HEMLOCK RESIDENCE HALL
 - MAPLE RESIDENCE HALL
 - TAN OAK RESIDENCE HALL
 - PEPPERWOOD RESIDENCE HALL

Engineer's Stamp:


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Mech. Peer Review: N/A

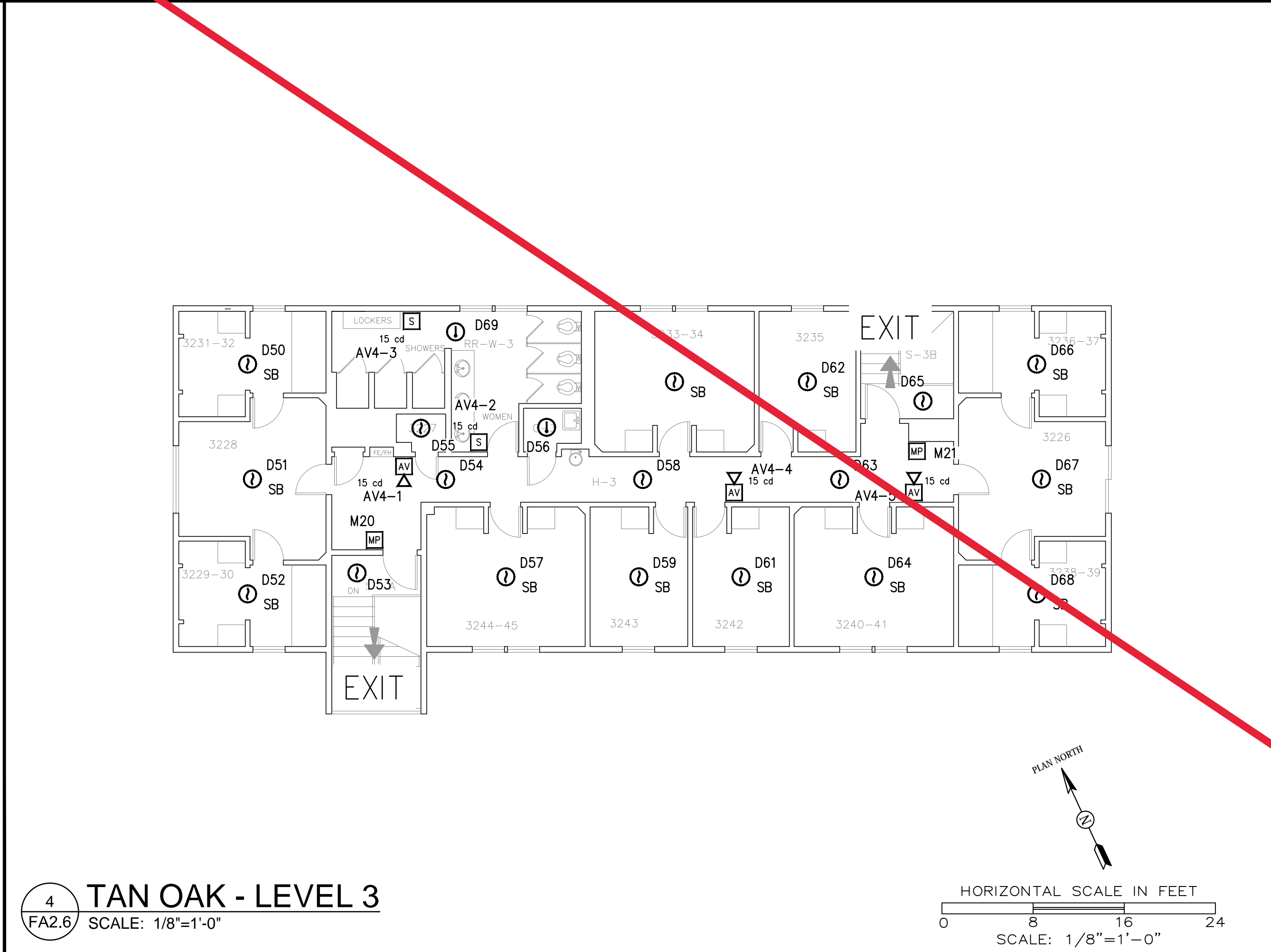
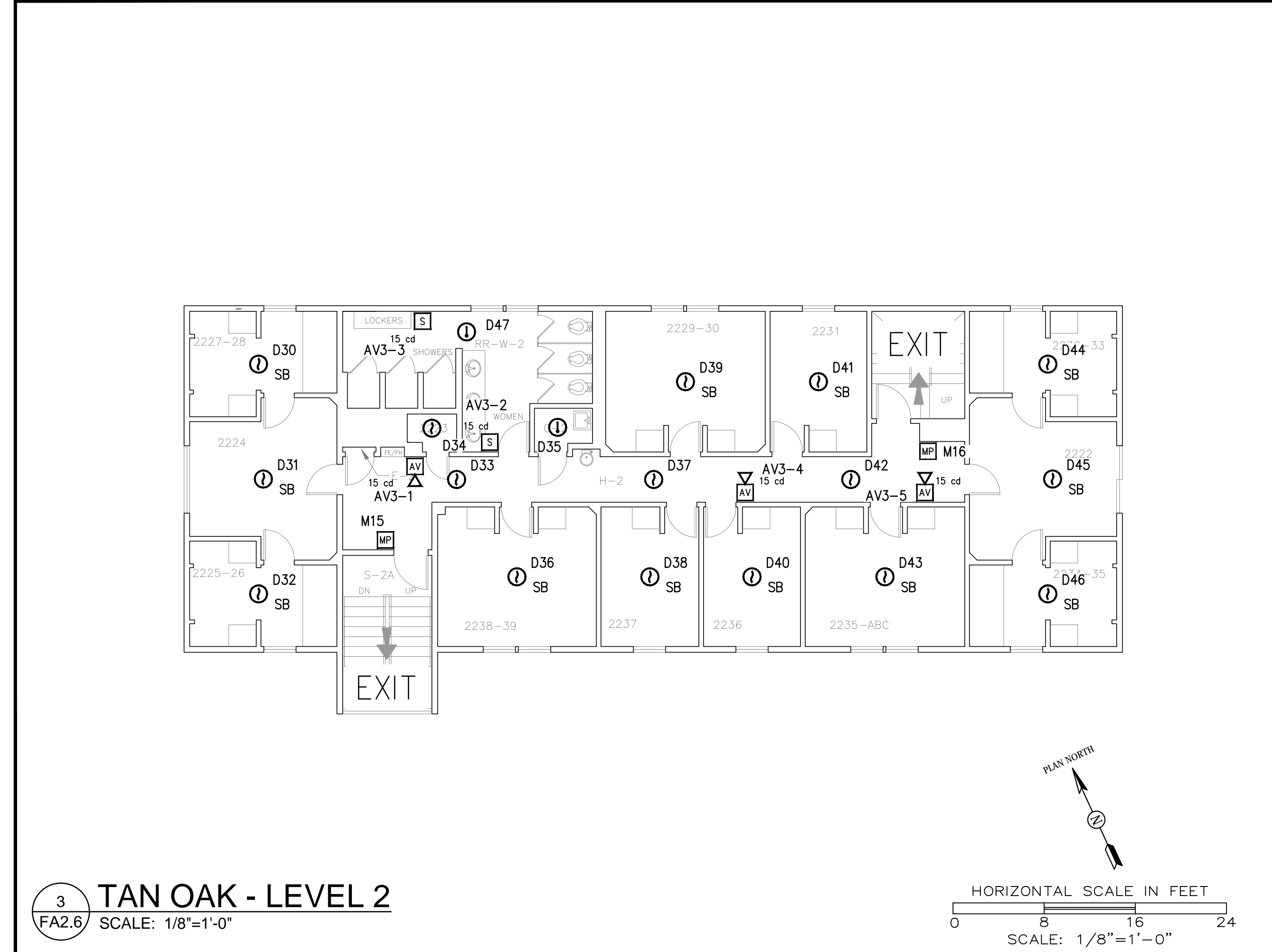
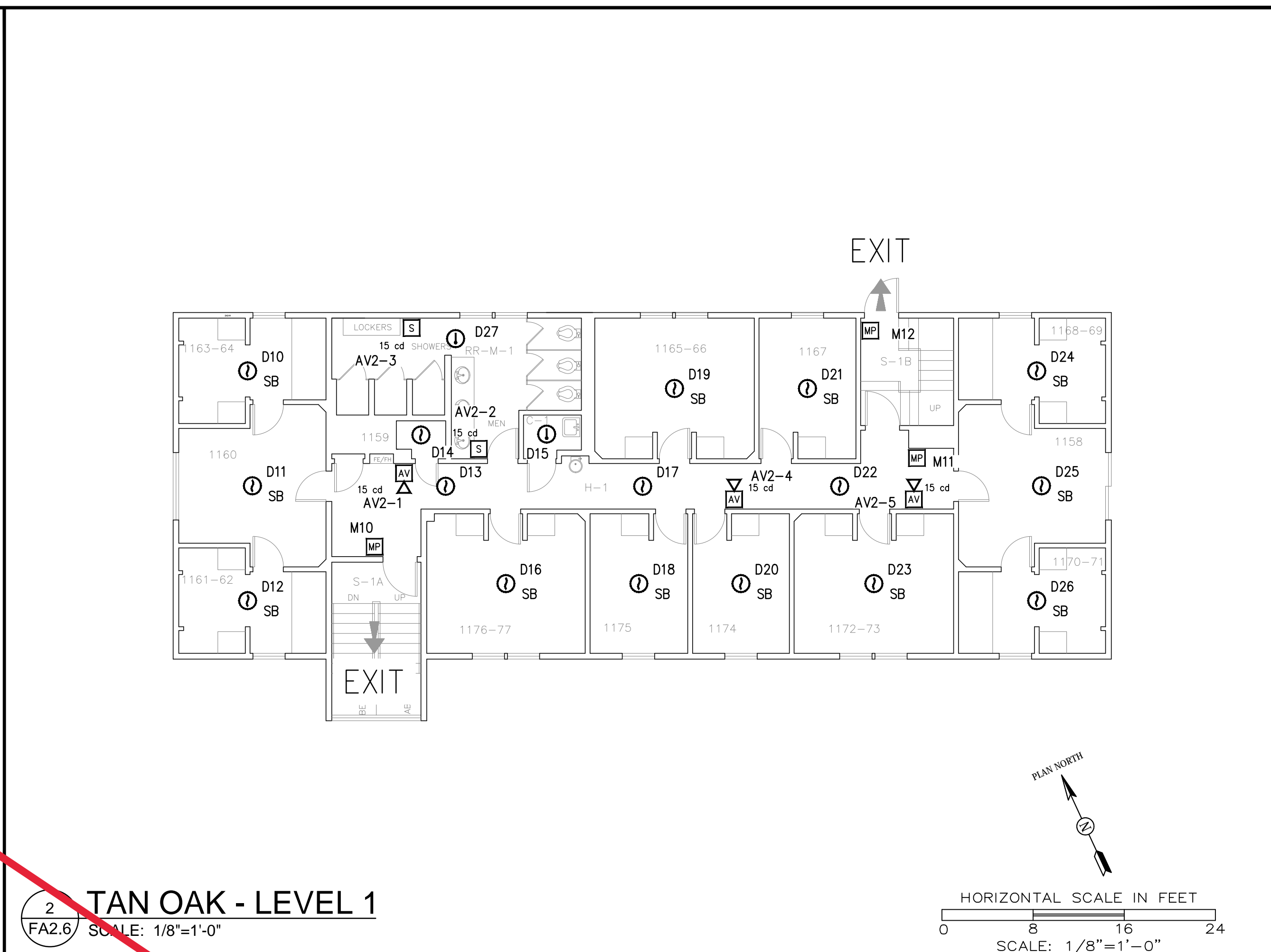
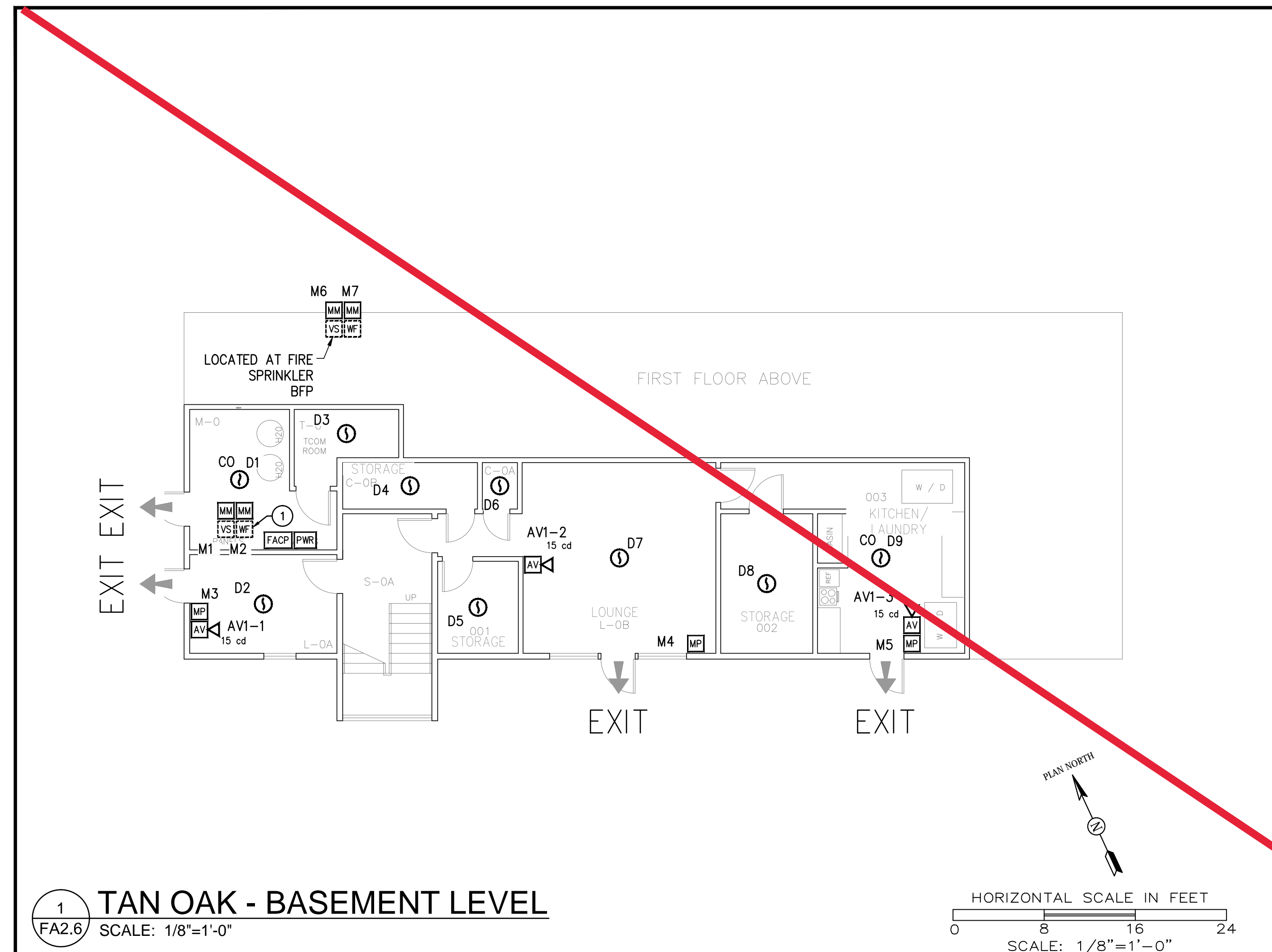
CALIFORNIA STATE FIRE MARSHAL APPROVED
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Reviewed by: 
Date: 3/18/17

REVISIONS		
DATE	NO.	DESCRIPTION


SHEET TITLE:
**FIRE ALARM
TAN OAK
RESIDENCE HALL
PLANS**

SCALE	DATE
AS NOTED	03.17.17

SHEET
FA2.6

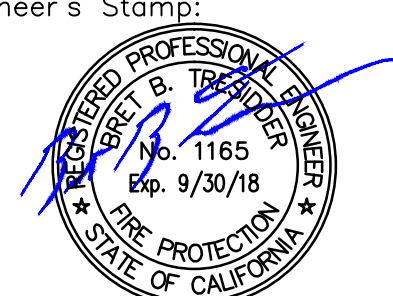


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PROJECT NAME:
**CAMPUS FIRE ALARM
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 VARIOUS BUILDINGS
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Project Building(s):
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 Mech. Peer Review: N/A

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 Reviewed by: *Andrew McSorley*
 Date: 3/18/17

REVISIONS		
DATE	NO.	DESCRIPTION

SHEET TITLE:
**FIRE ALARM
 PEPPERWOOD
 RESIDENCE HALL
 PLANS**

SCALE	DATE
AS NOTED	03.17.17

SHEET
FA2.7

