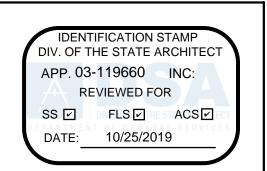
HVAC ADDITIONS TO MUSIC BUILDING COMPTON COLLEGE 1111 E. ARTESIA BLVD., COMPTON, CA. 90221



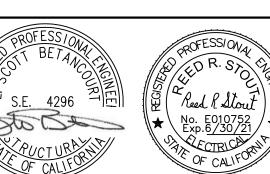
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SCOPE OF WORK

THE SCOPE OF THE WORK AS STATED BELOW IS FOR DSA PLAN REVIEW PURPOSES ONLY AND DOES NOT CONSTITUTE A DETAILED AND FULL EXPLANATION OF THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

SELECTIVE DEMOLITION OF EXISTING HVAC EQUIPMENT AND THE INSTALLATION OF NEW HVAC EQUIPMENT. SELECTIVE DEMOLITION OF EXISTING ELECTRICAL RELATED TO THE HVAC EQUIPMENT AND INSTALLATION OF NEW DUCTS NEW CONDUIT, CABLING

AS REQUIRED TO RESTORE OPERATION OF THE HVAC SYSTEM. ANY REPAIRS OR NEW INSTALLATION AND PENETRATIONS TO ROOF SHALL BE PER SPECIFICATIONS AND ADHERE TO ALL REQUIREMENTS OF THE DISTRICT STANDARD ROOFING SYSTEM.

INSTALLATION OF NEW AUTOMATIC FIRE ALARM SYSTEM.

DSA APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED AS THE CERTIFICATION OF COMPLIANCE FOR THE FOLLOWING BUILDINGS AS REQUIRED BY THE FIELD ACT, EDUCATION CODE SECTION 17280-17316 AND SECTIONS 81130-81147. REFER TO E1.0 SITE PLAN.

PROJECT TEAM

PROJECT ADDRESS

1111 E. ARTESIA BLVD.

1111 E. ARTESIA BLVD.

(310) 900-1600 Ext. 2606

ELECTRICAL ENGINEER

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MECHANICAL ENGINEER

PAIS CONSULTING GROUP

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COMPTON COMMUNITY COLLEGE DISTRICT

COMPTON, CA. 90221

OWNER

COMPTON COLLEGE

2016 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 1

CALIFORNIA CODE OF REGULATIONS

(CCR) TITLE 24, PART 3

2016 CALIFORNIA BUILDING CODE (CBC) (2015 INTERNATIONAL BUILDING CODE CALIFORNIA CODE OF REGULATIONS (IBC) VOLUMES 1-2 W/2016CALIFORNIA AMENDMENTS) (CCR) TITLE 24, PART 2

2016 CALIFORNIA ELECTRICAL CODE (CEC) (2014 NATIONAL ELECTRIC CODE (NEC) W/ 2016 CALIFORNIA AMENDMENTS

2016 CALIFORNIA MECHANICAL CODE (CMC) (2015 UNIFORM MECHANICAL CODE CALIFORNIA CODE OF REGULATIONS (CMC) W/ 2016 CALIFORNIA AMENDMENTS (CCR) TITLE 24, PART 4

APPLICABLE CODES

2016 CALIFORNIA PLUMBING CODE (CPC) (2015 UNIFORM PLUMBING CODE CALIFORNIA CODE OF REGULATIONS (CPC) 2016 W/ CALIFORNIA AMENDMENTS (CCR) TITLE 24, PART 5

2013 ASME A17.1(w/A17.1a/CSA B44a-08 ADDENDA) SAFETY CODE FOR ESCALATORS AND ELEVATORS

2016 CALIFORNIA FIRE CODE (CFC) CALIFORNIA CODE OF REGULATIONS

(CCR) TITLE 24, PART 9 2016 CALIFORNIA REFERENCED

AMERICANS WITH DISABILITIES ACT (ADA)

CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, CALIFORNIA STATE ACCESSIBILITY STANDARDS

(AS AMMENDED TO DATE) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 19, 2016 EDITION

2016 CALIFORNIA GREEN BUILDING STANDARDS CODE

APPLICABLE NFPA STANDARDS

NFPA 14 - STANDPIPE SYSTEMS, 2013 EDITION NFPA 17 - DRY CHEMICAL SYSTEMS, 2013 EDITION

NFPA 24 - PRIVATE FIRE MAINS, 2016 EDITION

NFPA 72 - NATIONAL FIRE ALARM CODE WITH CALIFORNIA AMENDMENTS, 2016 EDITION SEE UL STD. 1971 FOR "VISUAL DEVICES"

NFPA 92 - STANDARD FOR SMOKE CONTROL SYSTEMS, 2015 EDITION

COVERING SYSTEMS, 2015 EDITION

NFPA 2001 - CLEAN AGENT FIRE EXTINGUISHING SYSTEMS, 2015 EDITION AUDIBLE SIGNAL APPLIANCES, 2003 EDITION

HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS, 1999

REFERENCE CODE SECTION FOR NFPA STANDARDS - 2016 CBC (SFM). SEE CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO NFPA STANDARDS

STANDARDS CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 12

ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAAG)

STATE FIRE MARSHAL REGULATIONS

(2015 INTERNATIONAL FIRE CODE

(IFC) W/ 2016 CALIFORNIA AMENDMENTS

2016 CALIFORNIA ENERGY CODE (CEC) (CCR) TITLE 24, PART 6

(CCR) TITLE 24, PART 11

NFPA 13 - AUTOMATIC SPRINKLER SYSTEMS, 2016 EDITION

NFPA 17a - WET CHEMICAL SYSTEMS, 2013 EDITION

NFPA 70E - STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE, 2015 EDITION

NFPA 80 - FIRE DOOR AND OTHER OPENING PROTECTIVES, 2016 EDITION

NFPA 253 - CRITICAL RADIANT FLUX OF FLOOR

EDITION

NO DATE BY DESCRIPTION

REVISIONS

CHECKED: RFH DRAWN: JC DATE: 8/31/2018 SCALE: AS NOTED PROJECT NUMBER: 17-302

TITLE SHEET

NUMBER :

T0.0

MUSIC FIRST FLOOR PLAN S-1S-2ENLARGED FOUNDATION PLANS CONSTRUCTION DETAILS CONSTRUCTION DETAILS 19 SHEETS TYPE OF CONSTRUCTION BUILDING "B" TYPE IB E OCCUPANCY NON FIRE SPRINKLERED 710 FWY LONG BEACH BLVD. MAIN CAMPUS DRIVE **PROJECT** SITE

TITLE SHEET

ELECTRICAL SITE PLAN

FIRE ALARM SUBMITTAL

ELECTRICAL FLOOR PLAN

FIRE ALARM FLOOR PLAN

MECHANICAL SCHEDULES

MECHANICAL SCHEDULES

MECHANICAL DETAILS

PLUMBING FLOOR PLAN

PLUMBING DETAILS

MECHANICAL FLOOR PLAN

E1.0

MO.3

DRAWING INDEX

GENERAL NOTES, SYMBOLS LIST & DETAILS

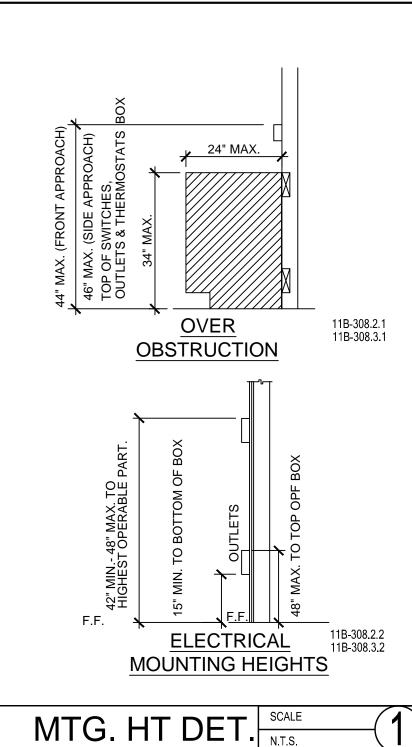
SINGLE LINE DIAGRAM & PANEL SCHEDULES

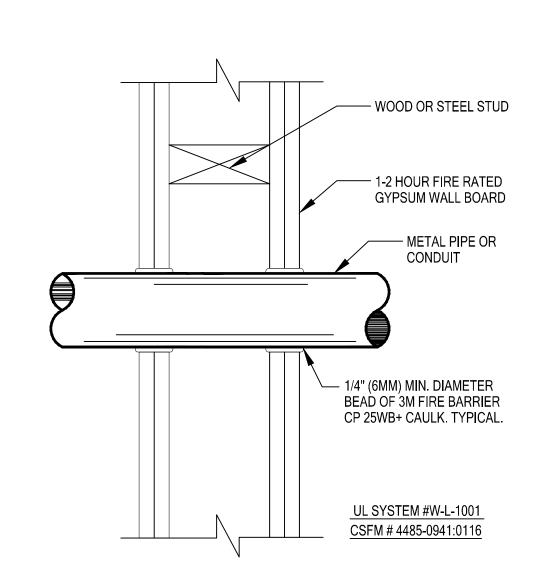
MECHANICAL GENERAL NOTES & LEGEND

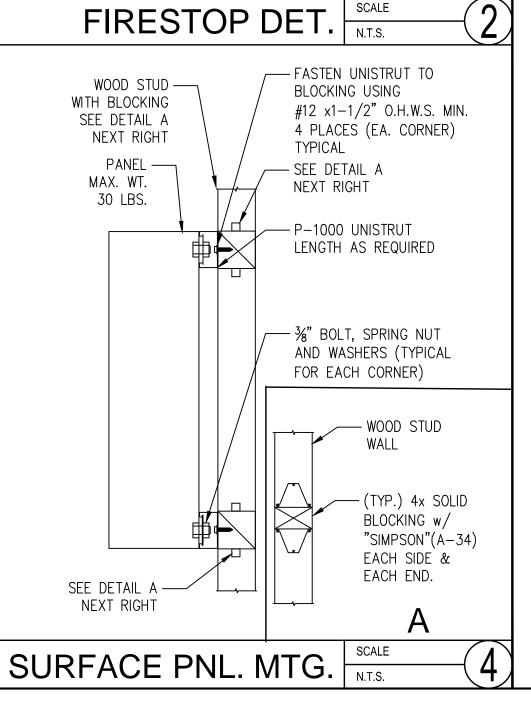
PLUMBING GENERAL NOTES & LEGEND

S. SANTA FE AVE.

VICINITY MAP







GENERAL NOTES:

- VERIFY EXISTING SITE CONDITIONS, SERVICE REQUIREMENTS (ELECTRICAL, INTEGRATED COMMUNICATIONS AND FIRE ALARM) AND EXACT LOCATIONS OF SERVICE FACILITIES BEFORE SUBMITTING BID. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS, ACTUAL PHYSICAL LOCATIONS, AND WORK TO BE PERFORMED.
- CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC. FOR A COMPLETE AND PROPERLY OPERATING ELECTRICAL SYSTEM.
- CONSTRUCTION TERMINOLOGY, AND THE STANDARDS AND ACCEPTABLE METHODS OF INSTALLATION REQUIRED BY THESE CONTRACT DOCUMENTS ARE BASED ON PUBLISHED STANDARDS OF N.E.C.A. (NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION), NATIONAL ELECTRICAL SAFETY CODE, AMERICAN NATIONAL STANDARDS INSTITUTE DOCUMENTS, NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION, UNDERWRITERS LABORATORIES, AND THE CALIFORNIA ELECTRICAL CODE. SUBMITTAL OF BID INDICATES THE CONTRACTOR IS COGNIZANT OF THESE STANDARDS AND THE REQUIREMENTS NECESSARY TO PERFORM ALL THE WORK AS SET FORTH IN THESE CONTRACT DOCUMENTS.
- ALL WORK THAT REQUIRES SERVICE INTERRUPTION TO ANY BUILDING ON THE CAMPUS SHALL BE COORDINATED WITH THE DISTRICT A MINIMUM OF (7) DAYS IN ADVANCE AND SHALL NOT OCCUR DURING SCHOOL HOURS. WORK FOR THIS PROJECT SHALL NOT BE PERFORMED DURING SCHOOL HOURS, INCLUDING AFTER HOURS PROGRAMS AND/OR EVENTS. INCLUDE ALL COSTS FOR SHIFT DIFFERENTIAL, WEEKEND, OVERTIME, OR HOLIDAYS, IN BASE BID FOR THIS PROJECT.
- C.C.C.D. WILL NOT BE RESPONSIBLE FOR ANY PREMIUM PAY FOR THIS PROJECT.
- THESE PLANS ARE DIAGRAMMATIC ONLY, FOLLOW AS CLOSELY AS POSSIBLE AND REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS, STRUCTURAL DETAILS, EXACT EQUIPMENT AND OUTLET LOCATIONS. ALTHOUGH NOT SHOWN, CONTRACTOR SHALL PROVIDE ALL J-BOXES, PULL BOXES, ELLS, OFFSETS ETC., FOR A COMPLETE CODE APPROVED INSTALLATION. FOOTAGE SHOWN ON ELECTRICAL SINGLE LINES AND RISER DIAGRAMS ARE FOR CALCULATION PURPOSES ONLY AND ARE NOT FOR BIDDING PURPOSES OR MATERIAL TAKEOFF. ALL LOCATIONS OF EVERY OUTLET SHALL BE VERIFIED PRIOR TO ROUGH-IN.
- THE CONNECTION METHOD SHOWN IS FOR BIDDING PURPOSES. THIS CONTRACTOR SHALL COORDINATE AND PROVIDE, FROM ACTUAL BUILDING SHOP DRAWINGS, THE CONNECTION SHOWN ON THOSE DRAWINGS.
- EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN COMPLIANCE WITH OSHA.
- ALL MATERIALS SHALL BE NEW, AND OF THE SAME MANUFACTURER FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORIES FOR THE USE AND ENVIRONMENT, AND SHALL BEAR THE INSPECTION LABEL WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH THE APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY, AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY A.N.S.I., U.L., N.E.M.A. AND N.B.F.U. INSTALL PER MANUFACTURERS' RECOMMENDATIONS. ALL EXTERIOR EQUIPMENT SHALL BE WEATHERPROOF.
- SUBSTITUTIONS OF SPECIFIED MATERIALS ARE IN ACCORDANCE WITH THE GENERAL CONDITIONS. APPROVAL OF EQUAL MATERIALS PRIOR TO BID ARE BY WRITTEN ADDENDUM ONLY OR AS STATED ON THE PLANS.
- SUBMIT SHOP DRAWINGS FOR ALL MAJOR PIECES OF ELECTRICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO: ELECTRICAL COMPONENTS.
- CONTRACTOR SHALL PERFORM HIS WORK IN ACCORDANCE WITH ALL GOVERNING STATE COUNTY, LOCAL CODES, O.S.H.A. AND THE 2016 CALIFORNIA ELECTRICAL CODE (CEC).
- 12. THE COMPLETE ELECTRICAL SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH THE 2016 CALIFORNIA ELECTRICAL CODE (C.E.C). ART. #250, AND AS SHOWN ON THE DRAWINGS. AT THE REQUEST OF AND IN THE PRESENCE OF THE AUTHORIZED INSPECTOR, THE CONTRACTOR SHALL PROVIDE SYSTEM RESISTANCE READINGS.
- PENETRATIONS TO FIRE-RATED MATERIALS SHALL BE RESTORED TO EQUAL RATING AS REQUIRED BY THE STATE FIRE MARSHAL.
- CONDUCTORS SHALL BE CODE GRADE, 600 VOLT CLASS, COPPER, MARKED 24" ALONG ITS LENGTH SHOWING MANUFACTURER'S NAME, MAXIMUM ALLOWABLE VOLTAGE AND SIZE. CONDUCTORS SHALL BE TYPE "THWN" (WET) OR "THHN" (DRY). DELIVER THE WIRE TO THE SITE IN UNBROKEN PACKAGES
- CONDUIT SHOWN AS EXPOSED OR APPROVED FOR EXPOSED INSTALLATION SHALL BE INTERMEDIATE METALLIC CONDUIT (I.M.C.), OR RIGID GALVANIZED STEEL (RGS), SECURED WITH TWO HOLE MALLEABLE PIPE STRAPS AND SCREWS. ALL BOXES AND FITTINGS SHALL BE SUPPORTED AND SECURED IN COMPLIANCE WITH THE 2016 CALIFORNIA ELECTRICAL CODE (C.E.C.) ART. #370.
- P.V.C. CONDUIT, WITH CODE SIZED GROUND, SHALL BE USED UNDERGROUND ONLY, IF APPROVED BY LOCAL CODE. INSTALL PER LOCAL CODE REQUIREMENTS. ALL CONDUIT SWEEPS AND RISERS SHALL BE I.M.C. OR RGS, WITH HALF-LAPPED TAPE COVERING OR FACTORY APPLIED PVC COATING. ROUTE UNDERGROUND CONDUITS AROUND PROPOSED BUILDING LOCATIONS.
- 17. ALL CONDUIT ONLY (C.O.) SHALL HAVE A 1/4" PULL WIRE OR ROPE.
- 18. USE ONLY COMPETENT AND SKILLED PERSONNEL AND PERFORM ALL WORK, INCLUDING AESTHETIC AS WELL AS ELECTRICAL AND MECHANICAL ASPECTS TO STANDARDS CONSISTENT WITH THE BEST PRACTICES OF THE TRADE.
- UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBER SHALL BE CUT, DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DISTRICT STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.
- 20. THE SEISMIC ANCHORAGE OF MECHANICAL AND ELECTRICAL EQUIPMENT SHALL CONFORM TO C.C.R. TITLE 24, 2013 C.B.C. SECTION 1632A AND ASCE 7-10. ANCHORAGE DETAILS FOR ROOF/FLOOR MOUNTED EQUIPMENT SHALL BE SHOWN ON PLANS.
- WHERE IT BECOMES NECESSARY TO DRILL INTO OR CUT THROUGH ANY EXISTING FLOORS, WALLS OR CEILINGS TO PERMIT THE INSTALLATION OF ANY WORK UNDER THIS CONTRACT, OR TO REPAIR ANY DEFECTS THAT MAY APPEAR TO THE EXPIRATION OF THE WARRANTY, SUCH CUTTING AND PATCHING SHALL BE PERFORMED BY TRADESMEN EXPERIENCED IN THE WORK REQUIRED. CONTRACTOR SHALL PAY FOR ALL COSTS REQUIRED FOR CUTTING OR REPAIRING. ALL FINISHES SHALL MATCH EXISTING OR NEW ADJACENT SURFACES. THIS WILL INCLUDE REPLACING SEAM TO SEAM OR COMPLETE SURFACE REPLACEMENT TO MATCH EXISTING OR NEW SURFACES.
- 22. ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2016 CBC, SECTIONS 1616A.1.18 THRU 1616A.1.26 AND ASCE 7-10 CHAPTER 13, 26 AND 30.
- A. ALL PERMANENT EQUIPMENT AND COMPONENTS.
- B. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (e.g. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. C. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND
- HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS. THE ATTACHMENT OF THE FOLLOWING MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED ON THE PLANS. THESE

COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND

- ASSOCIATED DUCTWORK, PIPING AND CONDUIT. A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT
- B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG
- FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

- 23. PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL BE DETAILED ON THE APPROVED DRAWINGS OR THEY SHALL COMPLY WITH ONE OF THE OSHPD PRE-APPROVALS (OPM#) AS MODIFIED TO SATISFY ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D. COPIES OF THE MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF HANGING AND BRACING OF PIPE, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.
- PROVIDE ENGRAVED PLASTIC NAMEPLATES FOR ALL ELECTRICAL PANELS, INTERIOR & EXTERIOR JUNCTION BOXES EXISTING AND NEW, PLATES SHALL BE 3 PLY. OR PERMENANT ADHESIVE TAPE ONLY AS MANUFACTURED BY 3M IS PERMITTED.
- 25. PROVIDE THE OWNER WITH THREE (3) SETS OF COMPLETE ELECTRICAL "AS-BUILT" REPRODUCIBLE DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DEPTHS OF UNDERGROUND RUNS AND ALL LOCATIONS. ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO THE OWNER AT PROJECT COMPLETION. DRAWINGS SHALL BE IN CAD & PDF FORMAT. REFER TO SPECIFICATIONS. "AS-BUILT" DRAWINGS SHALL BE AVAILABLE ON SITE AND ALL CHANGES DOCUMENTED AND "RED LINED" DIALY FOR REVIEW. I.O.R. SHALL BE NOTIFIED OF ANY CHANGES PRIOR TO INSPECTIONS.
- COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF ACCEPTANCE BY OWNER. ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE ELECTRICAL CONTRACTOR.
- WHERE A CONFLICT OCCURS BETWEEN THESE NOTES AND ELECTRICAL SPECIFICATION ISSUED AS A PART OF THESE DOCUMENTS. THE MORE STRINGENT REQUIREMENT SHALL
- ALL LOW VOLTAGE ELECTRONIC SYSTEMS CONDUCTORS AND EQUIPMENT SHALL BE PROVIDED BY AN ELECTRONIC SYSTEMS CONTRACTOR WHO HOLDS A VALID C-7 LICENSE. EQUIPMENT SHALL MATCH EXISTING AND SHALL BE INSTALLED IN ACCORDANCE WITH SPECIFICATIONS PROVIDED BY THE FACTORY AUTHORIZED DISTRIBUTOR OF THE EXISTING SYSTEM. NEW COMPONENTS INSTALLED ON EXISTING SYSTEM SHALL BE COVERED BY FULL WRITTEN WARRANTY, FOR ALL PARTS AND INSTALLATION, FOR ENTIRE SYSTEM. CABLE SPLICES IN UNDERGROUND PULL BOXES ARE ABSOLUTELY PROHIBITED. SYSTEMS APPLICABLE TO THIS SECTION ARE AS NOTED: INTERCOM/PUBLIC ADDRESS, TELEPHONE, CLOCK, ENERGY MANAGEMENT, INTRUSION ALARM, FIRE ALARM, TELEVISION, AND DATA.
- 29. ALL UNDERGROUND CONDUITS TO HAVE FULL ENCASEMENT WITH SLURRY MIX, 3" AROUND WITH 2" SEPARATION BETWEEN CONDUITS. MAINTAIN 12" SEPARATION BETWEEN POWER AND SYSTEMS CONDUITS. PROVIDE 24" NATIVE COVER ABOVE ENCASEMENT IN NON-TRAFFIC AREAS. PROVIDE SLURRY ENCASEMENT TO SUB-GRADE IN CONCRETE OR ASPHALT AREAS.
- 30. PROVIDE 12" OF 3/4" ROCK BELOW UNDERGROUND PULL BOXES.
- 31. ALL EXISTING SERVICES INTERUPTED DURING AND NOT PART OF DEMOLITION SHALL BE RESTORED TO NORMAL CONDITION.
- 32. THESE DRAWINGS DO NOT CONTAIN THE NECESSARY COMPONENTS FOR
- 33. CONTRACTOR SHALL NOT SCALE DRAWINGS. ALL MEASUREMENTS SHALL BE FIELD VERIFIED.
- 34. ALL WORK SHOWN ON THESE DRAWINGS SHALL COMPLY WITH THE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
- 35. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR A CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT AS REQUIRED BY TITLE 24, CCR, PART 1, SECTION 4-338.
- 36. LOCATIONS OF ALL UTILITIES SHOWN ARE APPROXIMATE AND CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID INTERCEPTING EXISTING PIPING OR CONDUITS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WETHER SHOWN HEREON OR NOT AND TO PROTECT THEM FROM DAMAGE. THE ENGINEER IS NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN OR DETAILED AND INSTALLED BY AN' OTHER CONTRACT. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER SHOULD ANY UNIDENTIFIED CONDITIONS BE DISCOVERED. THE CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE PROSECUTION OF THIS WORK.
- 37. CONTRACTOR TO NOTIFY THE CONSTRUCTION MANAGER PRIOR TO ANY EXCAVATION.
- 38. THESE DOCUMENTS AND THE IDEAS AND DESIGNS INCORPORATED HERERIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF R. F. HAWKINS CONSULTING, AND ARE NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF R. F. HAWKINS CONSULTING.
- THE WORK SHOWN ON THESE DRAWINGS AS EXISTING AS EXISTING CONDITIONS WAS PREPARED FROM INFORMATION FURNISHED BY THE OWNER. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, R. F. HAWKINS CONSULTING, IS NOT RESPONSIBLE FOR THE ACCURACY OR ADEQUACY OF ANY WORK SHOWN AS EXISTING NOR IS R. F. HAWKINS CONSULTING RESPONSIBLE FOR ANY ERRORS OR EMISSIONS WHICH MAY
- HAVE BEEN INCORPORATED INTO THESE DRAWINGS AS A RESULT. EACH BIDDER SHALL POSSESS AT THE TIME OF BID A CLASS B, LICENSE PER PUBLIC CONTRACT CODE SECTION 3300 AND BUSINESS AND PROFESSIONS CODE SECTION 7028.15. THE SUCCESSFUL BIDDER MUST MAINTAIN THE LICENSE THROUGHOUT THE DURATION OF THE CONTRACT. THE BIDDER SHALL COMPLY WITH SENATE BILL 854 FOR LABOR COMPLIANCE.
- 41. FIRE SAFETY DURING CONSTRUCTION A. GENERAL: FIRE SAFETY DURING CONSTRUCTION SHALL COMPLY WITH 2016 CALIFORNIA FIRE CODE (CFC), 2016 CALIFORNIA CODE OF REGULATONS (CCR) TITLE 24, PART 9, CHAPTER 33.
- B. ACCESS ROADS: FIRE DEPARTMENT ACCESS ROADS SHALL BE ESTABLISHED AND
- AND MAINTAINED IN ACCORDANCE WITH ARTICLE 9, SECTION 902.
- WATER SUPPLY: WATER MAINS AND HYDRANTS SHALL BE OPERATIONAL IN ACCORDANCE WITH ARTICLE 9, SECTION 903.
- D. BUILDING ACCESS: ACCESS TO BUILDINGS FOR THE PURPOSE OF FIREFIGHTING SHALL PURPOSE OF FIREFIGHTING SHALL BE PROVIDED. CONSTRUCTION MATERIAL SHALL NOT BLOCK ACCESS TO BUILDINGS, HYDRANTS OR FIRE APPLIANCES.
- E. FIRE WATCH: MAINTAIN FIRE WATCH AT ALL TIMES WHEN EXISTING FIRE PROTECTION SYSTEMS ARE SHUT DOWN FOR ALTERATIONS AND UPGRADES. FIRE WATCH SHALL REMAIN IN EFFECT UNTIL EXISTING FIRE PROTECTION SYSTEMS ARE RETURNED TO SERVICE. FIRE WATCH TO BE PROVIDED BY M.V.U.S.D. FOR DURATION OF SCHEDULE AS NOTED IN GENERAL CONDITIONS. VERIFY WITH LOCAL FIRE AUTHORITY FOR ANY ADDITIONAL REQUIREMENTS.
- 42. PENETRATIONS TO FIRE RATED MATERIALS OR ASSEMBLIES SHALL BE RESTORED TO SHALL BE RESTORED TO EQUAL RATING. FIRE STOP SYSTEMS AS LISTED BY UNDERWRITERS LABORATORIES SHALL BE INSTALLED PER FIRE RESISTANCE DIRECTORY. FIRE STOP SYSTEMS SHALL BE AS SPECIFIED.
- INSPECTOR OF RECORD REQUIREMENTS
- A. ONE OR MORE INSPECTORS EMPLOYED BY THE DISTRICT (OWNER) IN ACCORDANCE WITH THE REQUIREMENTS OF TITLE 24 OF THE CALIFORNIA CODE OF REGULATIONS WILL BE ASSIGNED AND SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE INSPECTORS DUTIES ARE SPECIFICALLY DEFINED IN SECTION 4-342 OF SAID TITLE 24, PART 1 AND IN ADDITION SHALL BE STIPULATED IN INTERPRETATION OF REGULATION DOCUMENT IR A-8.

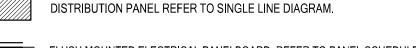
INSPECTOR SHALL BE CERTIFIED AS A CLASS [2] INSPECTOR THROUGH THE DIVISION

OF THE STATE ARCHITECT INSPECTOR EXAMINATION PROGRAM. INSPECTOR SHALL ALSO BE SPECIFICALLY APPROVED BY THE DIVISION OF THE STATE ARCHITECT FOR THIS PROJECT AT LEAST 10 DAYS PRIOR TO THE START OF ANY WORK FOR THIS PROJECT. EXACT LOCATION OF EQUIPMENT/DEVICES SHALL BE COORDINATED IN FIELD PRIOR TO INSTALLATION TO AVOID INTERFERENCE WITH EXISTING EQUIPMENT.

- ALL ELECTRICAL EQUIPMENT, PANELS, AND CONDUCTORS SHALL BE INSTALLED AS INDICATED
- IN PLANS AND SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. 46. PROVIDE ACCESS PANELS AS REQUIRED IN HARD CEILINGS OR WALLS AND PATCH CEILINGS TO MATCH EXISTING MATERIAL AND FINISH. ACCESS PANELS SHALL BE KARP MODEL #DSC-214M FOR GENERAL PURPOSE, MODEL #KRP-150FR FOR FIRE RATED CONDITIONS, OR EQUAL. SIZE TO BE 24"x24" MINIMUM.
- 47. WHERE EXISTING SUSPENDED CEILINGS ARE REQUIRED TO BE REMOVED, REPLACE THE
- CEILING TO MEET CURRENT CODE REQUIREMENTS. 48. CONDUIT SUPPORTED BY SUSPENDED CEILING WIRES SHALL HAVE NEW CEILING WIRES
- INSTALLED, INDEPENTDANT OF CEILING OR FIXTURE SUPPORTS, PER CODE. EXPOSED CONDUIT IF REQUIRED ON INTERIOR OF BUILDING TO BE WIREMOLD WITH ALL
- NECESSARY FITTINGS AND STRAPS. VERIFY LOCATION WITH ENGINEER PRIOR TO INSTALL. 50. REMOVE ALL CONSTRUCTION DEBRIS ON A DAILY BASIS. PROVIDE NECESSARY CONTAINERS
- TO DISPOSE OF DEBRIS. KEEP ALL CONSTRUCTION AREAS CLEAN. 51. ALL EXISTING FURNITURE, EQUIPMENT, CELING TILES ETC. MOVED DURING OFF TIME HOURS SHALL BE PROTECTED AND PLACED BACK (CLEAN) IN ORIGINAL LOCATION PRIOR TO NEXT
- DAY OF SCHOOL .
- 52. INSTALLATION OF THE ELECTRICAL SYSTEM SHALL NOT START UNTIL PLANS AND SPECIFICATIONS ARE APPROVED BY THE DIVISION OF THE STATE ARCHITECT.
- 53. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
- 54. COMPLY WITH ALL REQUIREMENTS OF NFPA 72 E.

ELECTRICAL SYMBOLS LIST:

MAIN SWITCHBOARD REFER TO SINGLE LINE DIAGRAM.



FLUSH MOUNTED ELECTRICAL PANELBOARD. REFER TO PANEL SCHEDULE. SURFACE MOUNTED ELECTRICAL PANELBOARD, REFER TO PANEL SCHEDULE.

 \Rightarrow DUPLEX RECEPTACLE, WALL MOUNTED + 15" A.F.F. TO BOTTOM OF BOX OR AS NOTED QUADPLEX RECEPTACLE, WALL MOUNTED + 15" A.F.F. TO BOTTOM OF BOX OR AS NOT

FUSED DISCONNECT, SIZE AND NEMA RATING AS NOTED ON PLANS.

Р PULLBOX, SIZED PER N.E.C. OR AS NOTED. CONCRETE WITH BOLT DOWN COVER. JUNCTION BOX, ACCESSIBLE AND MOUNTED FOR THE APPLICATION DENOTED ON PLANS.

—— A-1,3,5 HIII > HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBER INDICATES CIRCUITS.

CONDUIT RUN CONCEALED, IN WALLS, FLOOR, OR ABOVE CEILING.

— — CONDUIT RUN CONCEALED BELOW GRADE, 3/4"C MINIMUM.

CONDUIT STUB OUT, CAP & MARK.

BRANCH CIRCUIT WIRING, 2 #12 IN 1/2" CONDUIT (C) OR AS NOTED OR SYMBOLIZED 1/2"C-3 #12 3/4"C-6 #12 3/4"C-7 #12

SURFACE MOUNTED LOCKABLE TERMINAL CABINET W/ TERMINAL STRIPS AS REQUIRED.

TELEPHONE TERMINAL BACKBOARD SIZED AS NOTED

MECHANICAL EQUIPMENT CALLOUT, "AH" INDICATES UNIT TYPE AND "2" INDICATES UNIT NUMBER. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND FULL RATING.

DETAIL CALLOUT, "3" INDICATES DETAIL NUMBER "E0.1" INDICATES SHEET NUMBER.

PLAN NOTE REFERENCE.

REVISION REFERENCE. MOUNTING HEIGHT

WEATHERPROOF, NEMA 3R PROVIDE FURNISH, INSTALLED AND CONNECTED, COMPLETE.

GFCI GROUND FAULT CIRCUIT INTERRUPTER EM **EMERGENCY**

CONDUIT

EQUIPMENT GROUND (GREEN) INTEGRATED COMMUNICATIONS SYSTEM RACK

COMMUNICATIONS WALL DISPLAY EXISTING TO REMAIN

EXISTING, TO BE REMOVED.

EXISTING, TO BE REMOVED AND RELOCATED.

UNDERGROUND

GROUNDING ELECTRODE CONDUCTOR CALIFORNIA ELECTRICAL COD UNLESS OTHERWISE NOTED



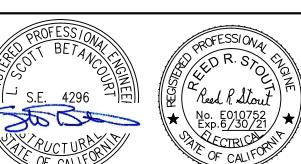


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M IST A ОЩ

GENERAL DEMOLITION NOTES:

- THE CONTRACTOR SHALL COORDINATE WITH THE OWNER, PRIOR TO REMOVAL OF EXISTING EQUIPMENT, PANELS, CONDUCTORS/CABLING AND TURN OVER REMOVED ITEMS THAT THE OWNER REQUESTS IN AS FOUND CONDITION. ITEMS ARE TO BE BOXED AND IDENTIFIED.
- ALL EXISTING CONDUIT AS SHOWN ON PLANS WERE TAKEN FROM OWNERS RECORD DRAWINGS. THE CONTRACTOR IS RESPONSIBLE TO VERIFY EXISTING LOCATION AND ROUTING OF CONDUITS.
- REMOVE EXISTING CABLING/CONDUCTORS FROM EXISTING FEEDER CONDUIT. CLEAN EXISTING UNDERGROUND CONDUIT AND MANDREL TO INSURE INTEGRITY, WITNESSED BY I.O.R. FOR FUTURE
- USE. SEAL ALL ENDS OF CONDUITS. PROVIDE BLANK COVERS ON ALL EXISTING OUTLETS NOT BEING REUSED. MATCH EXISTING COVERS IN TYPE AND COLOR.
- WHERE EXISTING EQUIPMENT, BOXES, CONDUIT ETC. IS REMOVED, REPAIR EXISTING SURFACES TO MATCH SURROUNDING AREA.

SERVICE INTERRUPTION NOTES:

THE CONTRACTOR SHALL PROVIDE CONTINUOUS ELECTRICAL SERVICE TO CAMPUS AS REQUIRED. PROVIDE ALL COSTS FOR BACK-UP POWER IN BID. CONTRACTOR WILL PROVIDE A SCHEDULE FOR ANY SERVICE INTERRUPTION AND NOTIFY THE DISTRICT (7) DAYS IN ADVANCE PRIOR TO SHUT-DOWN,

BUILDINGS WITH PRIOR APPROVAL OF DISTRICT.

NON ESSENTIAL ELECTRICAL SERVICE MAY BE SCHEDULED FOR INTERRUPTION OF UN-OCCUPIED

GENERAL NOTES SYMBOLS LIST & DETAILS

BY

REVISIONS

DESCRIPTION

CHECKED: RFH

17-302

SCALE: AS NOTED

NUMBER

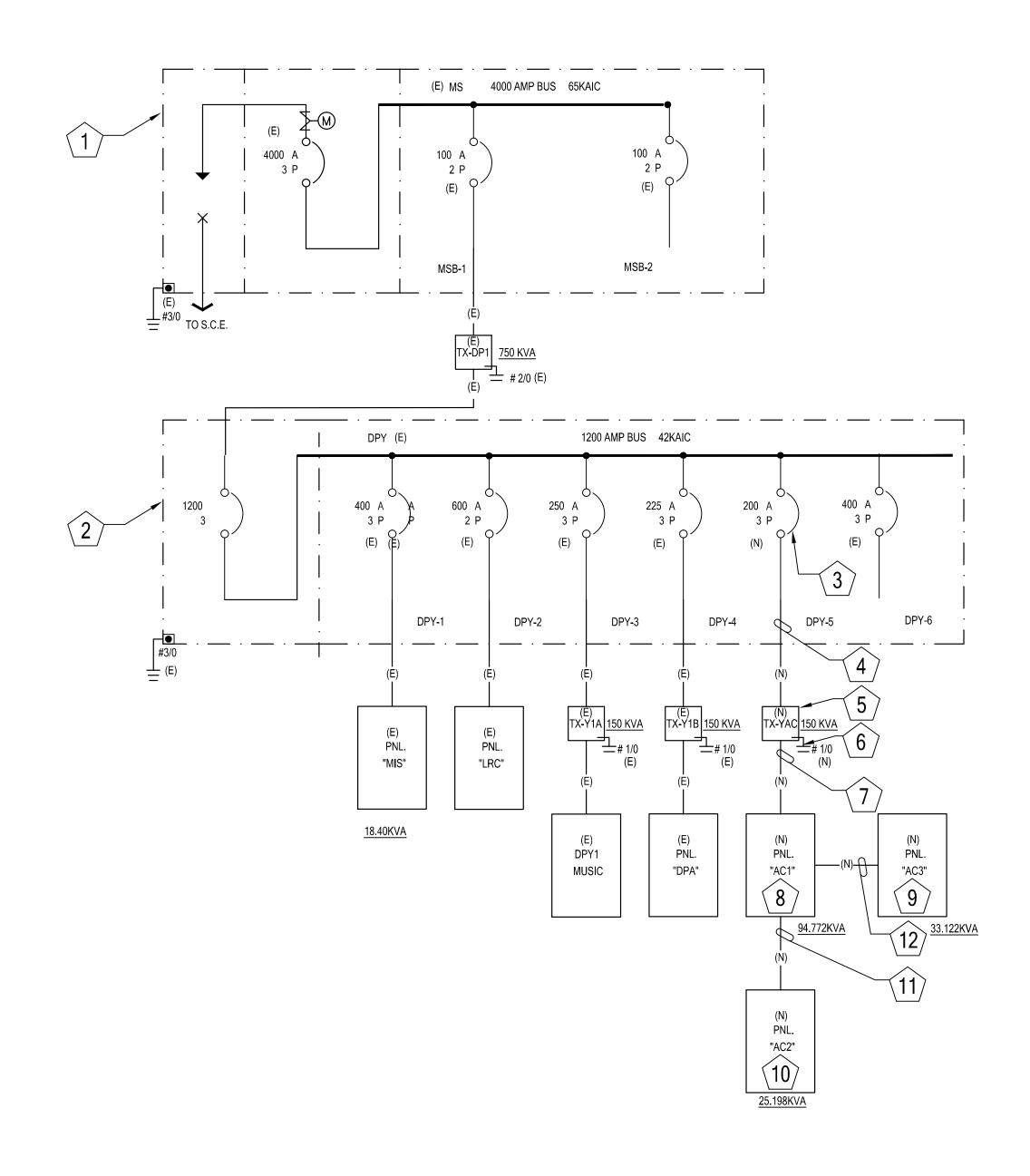
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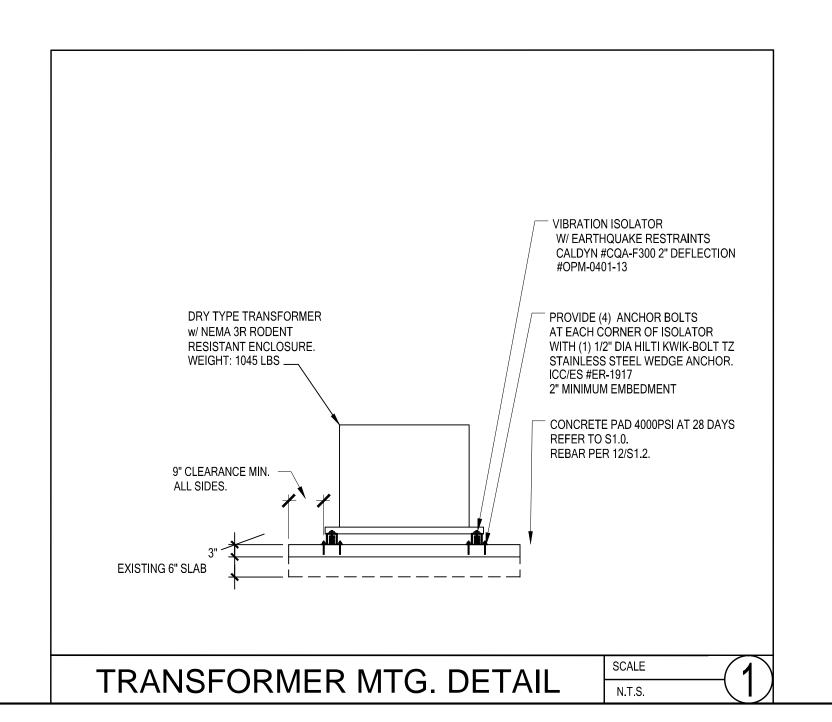
DRAWN: JC

DATE: 8/31/2018

PROJECT NUMBER:

E0.





SINGLE LINE DIAGRAM NOTES:

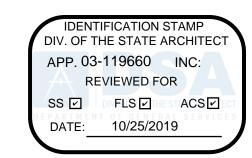
- EXISTING MAIN SWITCH BOARD "MS" NEMA 3R. 12 KV 3 PHASE 4 WIRE 4000 AMP 65000 AIC NEMA 3R.
- EXISTING DISTRIBUTION PANELBOARD "DPY1" NEMA 1. 120/208 VOLT 3 PHASE 4 WIRE 1200 AMP 42000 AIC NEMA 3R.
- PROVIDE NEW SQUARE D CIRCUIT BEAKER, AMPERAGE AS NOTED. MATCH EXISTING IN TYPE, RATING & CHARECTERISTICS.
- **4** 2-1/2" C. w/ (4) #3/0 & (1) #4 E/G.
- DRY TRANSFORMER KVA AS NOTED. 480V 3Ø TO 120/208V 3Ø 4W NEMA 1. PROVIDE ELECTROSTATICALLY SHIELDED AND ISOLATED TRANSFORMER WITH "K" FACTOR RATING OF 4.0 FOR NON-LINEAR LOADS. REFER TO DET. 1.
- PROVIDE 3/4"x10'-0" COPPER GROUND ROD. #3/0 TO BLDG. COLD WATER & GROUND ROD.

- 7 (2) 3" C. w/ (4) #3/0 & (1) #1/0 E/G IN EACH CONDUIT.
- PANELBOARD "AC1". NEMA 1 SURFACE 120/208 VOLT 3 PHASE 4 WIRE 400 AMP 22000 AIC NEMA 1. REFER TO PANEL SCHEDULE.
- PANELBOARD "AC2". NEMA 1 SURFACE 120/240 VOLT 1 PHASE 3 WIRE 100 AMP 10000 AIC NEMA 1. REFER TO PANEL SCHEDULE.
- PANELBOARD "AC3". NEMA 3R SURFACE 120/240 VOLT 1 PHASE 3 WIRE 1025AMP 10000 AIC NEMA 1. REFER TO PANEL SCHEDULE.
- 11 1-1/2"" C. w/ (4) #1& (1) #6 E/G.
- 12) 2" C. w/ (4) #1/0 & (1) #4 E/G.

	BUSSING AMF	PS: 400 VOI	LTAGE: 1	20/208		PH	IASE: 3	1	WIRE: 4	NEM	A: 1		_
		MAINS: 225A M.L	0.	МС	OUNTING:	SURF	ACE	A	IC RATIN	NG: 22,00	0		_
	LOAD	DESCRIPTION		V/A		АМР	PHASE	AMP		V/A		LOAD DESCRIPTION	
1	CU-4		2790			40	Α	100	9715			PANEL AC2	2 2
3	"			2790		3/P	—B—	3/P		8721		31	' 4
5	"				2790	_	С	125			6762	21	' 6
7	CU-5		2790			40	A	3/P	11758			PANEL AC3	5 8
9	"			2790		3/P	—в—	20		10546		31	1(
11	"				2790	_	—с	20			10818	21	12
3	CU-6		3744			50	Α	20	540			SPARE	14
5	"			3744		3/P	—в—	20		540		SPARE	1/
7	"				3744	_	—с	20			540	SPARE	1/
9	FC-4		707			20	Α	20	*			SPACE	2
21	**			707		2/P	—B—	20		*		SPACE	2
23	FC-5				707	20	С	20			*	SPACE	2
25	"		707			2/P	Α	20	*			SPACE	2
27	FC-6			1344		20	—в—	20		*		SPACE	2
29	**				1344	3/P	—С	20			*	SPACE	3
31	,,		1344			_	Α	20	*			SPACE	3
33	SPACE			*		20	—в—	20		*		SPACE	. 3
55	SPACE				*	20	—с	20			*	SPACE	
37	SPACE		*			20	Α	20	*			SPACE	
39	SPACE			*		20	—в—	20		*		SPACE	
41	SPACE				*	20	—с	20			*	SPACE	- 4
	\	//A SUB-TOTAL:	12082	11375	11375				22013	19807	18120	V/A SUB-TOTAL:	
VC	LTAMPS:	PHASE A: 3409	5	PHASE	B: <u>3118</u>	2		PHAS	SE C: <u>29</u>	9495	тот	AL CONNECTED VA: 94772	

	BUSSING AMPS: 100 VO MAINS: 100A M.C										COPPER BUSS * PROVIDE LOCK—ON DEVICE.PAINT BREAI HANDLE "RED"
	LOAD DESCRIPTION		V/A		Тамр	PHASE	AMP		V/A		LOAD DESCRIPTION
1	HP-Y1	2319	1		50			1986			CU-1
3	"		2319		2/P	—В—	2/P		1986		"
5	CU-2			1986	30	—-с	20			1352	FC-1.1
7	"	1986			2/P	Α	2/P	1352			"
9	FC-2		1352		20	—в—	20		1352		FC-1.2
11	"			1352	2/P	—-с	2/P			1352	"
3	FIRE ALARM CONTROL PANEL	360			20	Α	20	1352			FC-1.3
15	FIRE ALARM POWER SUPPLY		360		20	—в—	2/P		1352		"
17	SPARE			360	20	——с	20			360	SPARE
19	SPACE	*			20	Α	20	360			SPARE
21	SPACE		*		20	—в—	20		*		SPACE
23	SPACE			*	20	——с	20			*	SPACE
25	SPACE	*			20	Α	20	*			SPACE
27	SPACE		*		20	—в—	20		*		SPACE
29	SPACE			*	20	—с	20			*	SPACE
	V/A SUB-TOTAL:	4665	4031	3698				5050	4690	3064	V/A SUB-TOTAL:
V	DLTAMPS: PHASE A: 9715		PHASE	B: <u>872</u>	1		PHAS	SE C: <u>6</u>	762	TOT	TAL CONNECTED VA: 25198

	SCHEDULE F	OR PANEI	: <u>"AC3"</u>		-							REMARKS: 30 CIRCUI	T PANEL	_
	BUSSING AMPS	S: 125	VOLTAGE: 12	20/208		PH	ASE: 3	,	WIRE: 4	NEM	1A: 1	COFFLIX	1033	-
	٨	MAINS: 125A	M.C.B.	МС	DUNTING:	SURF	ACE	A	IC RATII	NG: 10,0	00			-
	LOAD D	ESCRIPTION		V/A		АМР	PHASE	AMP		V/A		LOAD DESCRIPT	ΓΙΟΝ	
1	FC-3.1		1352			20	Α	50	2319				HP-Y2	2
3	"			1352		2/P	—в—	2/P		2319			"	4
5	FC-3.2				1352	20	—с	50			2319		HP-Y3	6
7	"		1352			2/P	Α	2/P	2319				"	8
9	FC-3.3			1352		20	—В—	50		2819			CU-3	10
11	"				1352	2/P	—с	2/P			2819		"	12
13	FC-3.4		1352			20	Α	20	1352				FC-3.6	14
15	"			1352		2/P	—В—	2/P		1352			"	16
17	FC-3.5				1352	20	——с	20			360		SPARE	18
19	"		1352			2/P	Α	20	360				SPARE	20
21	SPACE			*		20	—В—	20		*			SPACE	22
23	SPACE				*	20	——с	20			*		SPACE	24
25	SPACE		*			20	Α	20	*				SPACE	26
27	SPACE			*		20	—В—	20		*			SPACE	28
29	SPACE				*	20	——с	20			*		SPACE	30
	V,	/A SUB-TOT	AL: 5408	4056	4056				6350	6490	5498	V/A SUB-TOTAL:		
V	OLTAMPS:	PHASE A: 1	1758	PHASE	B: <u>105</u> 4	16		PHAS	SE C: 10)818	TO	TAL CONNECTED VA: _3	33122	_
((CONTINUOUS VA	4 (31222) ;	× 1.25 :+ (R	EMAINDE	ER x 1.00)) =_	41403	TC	TAL DE	MAND VA	۸: <u>414</u>	03 TL AMPS: 1	15.01	_

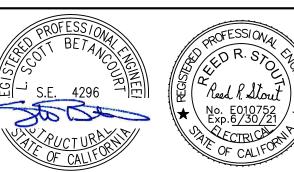




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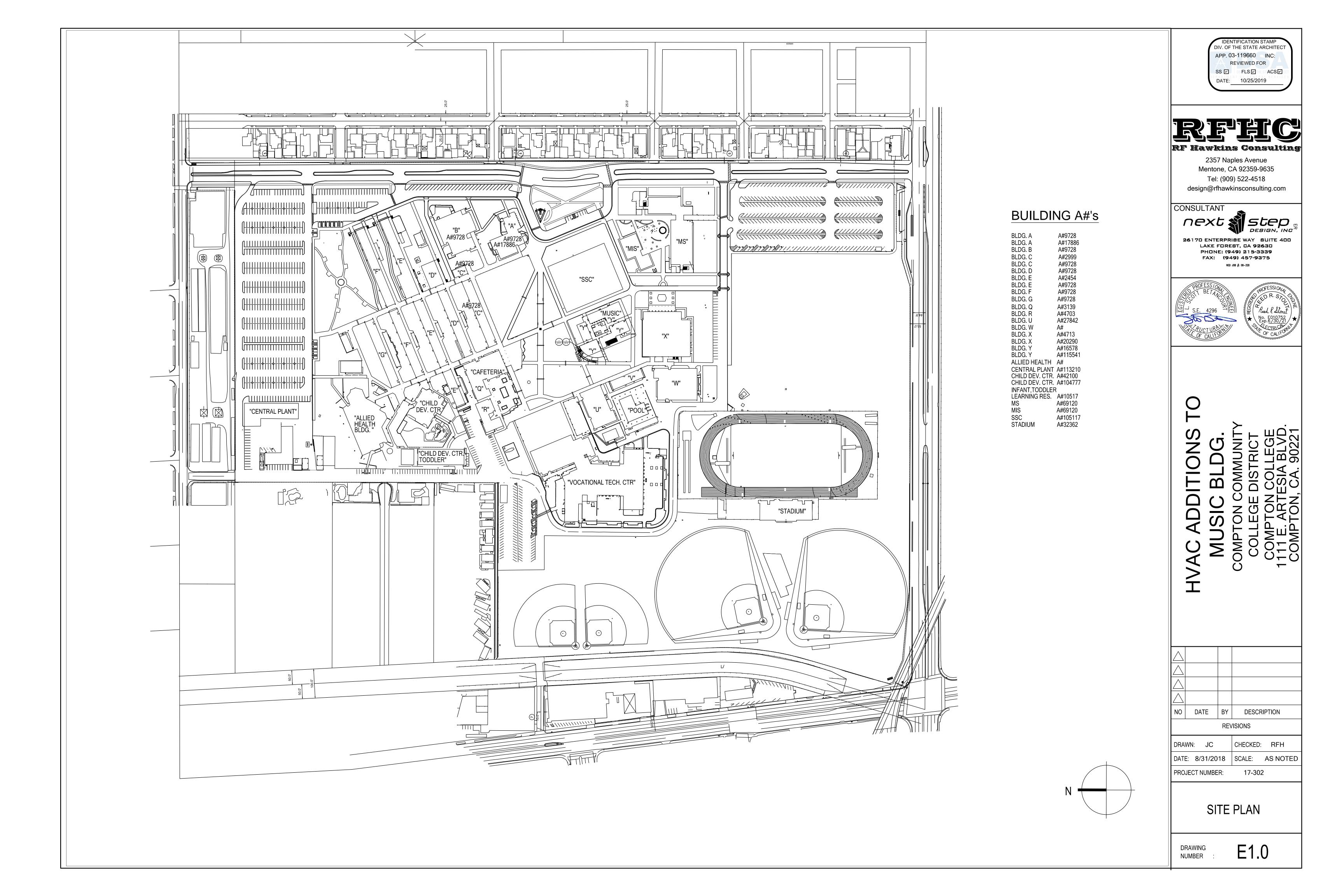


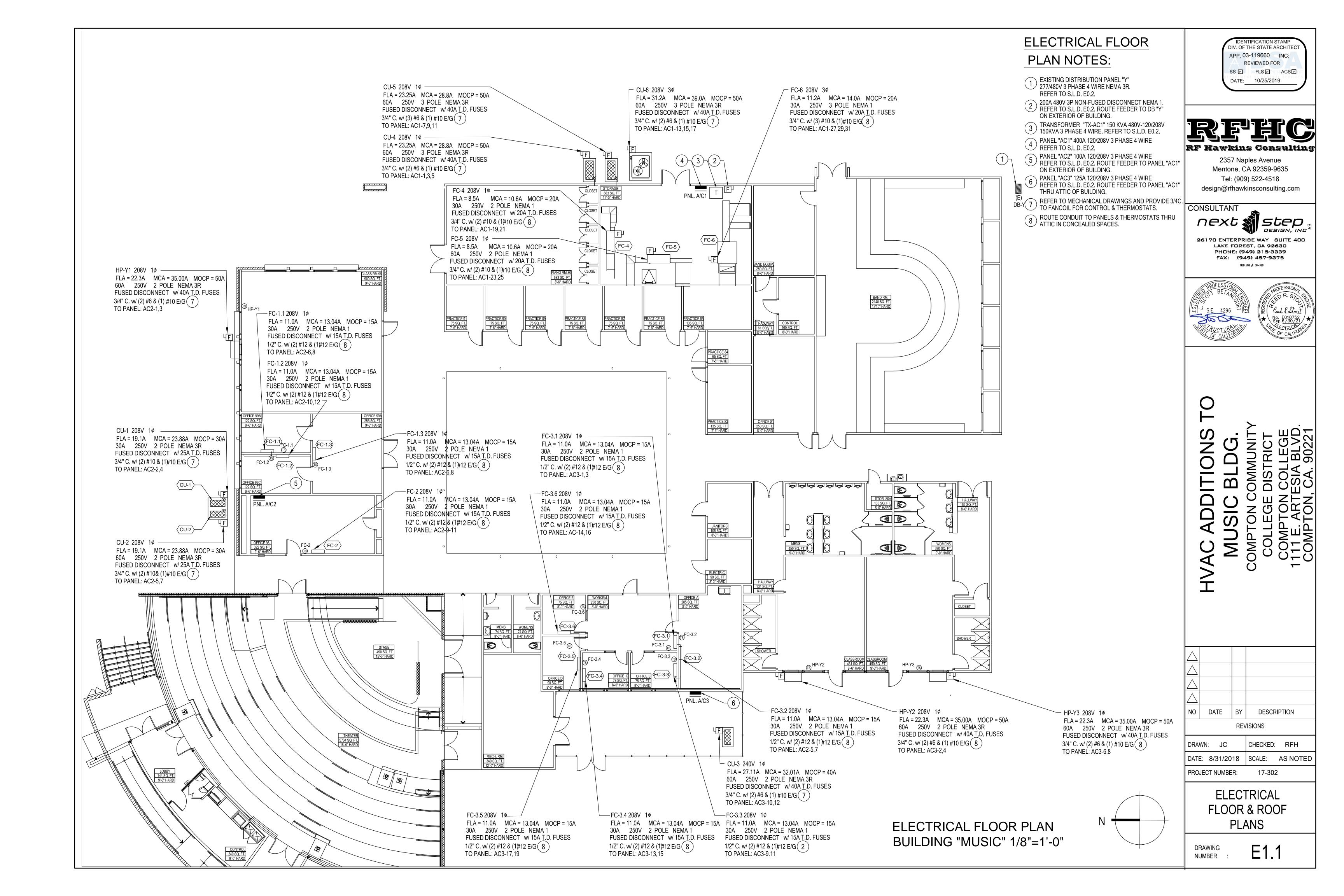


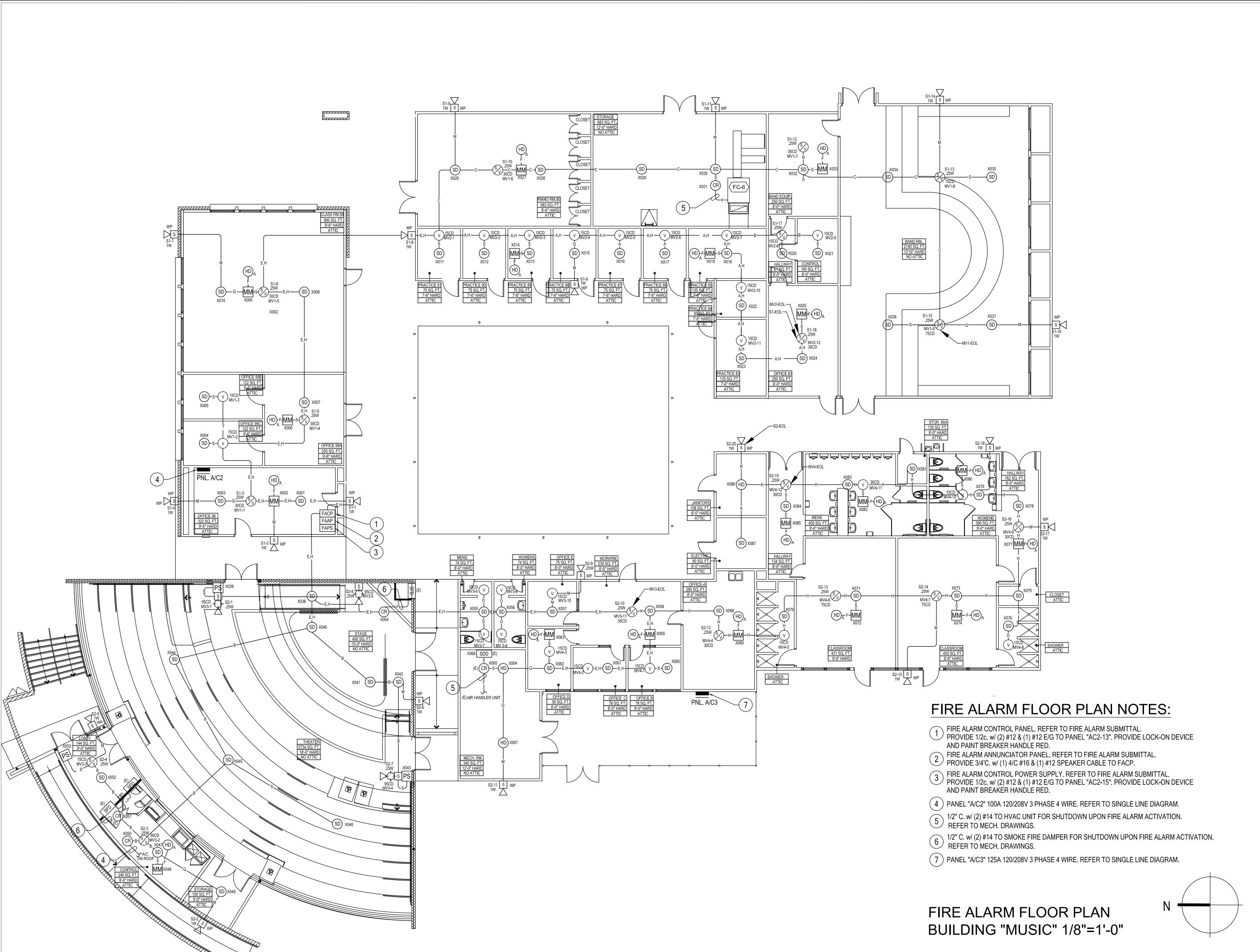
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NO	DATE	BY	DESCR	IPTION
		REV	/ISIONS	
DRA	WN: JC		CHECKED:	RFH
DATI	E: 8/31/20	18	SCALE:	AS NOTED
PRO	JECT NUMBE	R:	17-302	2

SINGLE LINE DIAGRAM & PANEL SCHEDULE

E0.2







DIV. OF THE STATE ARCHITEC APP. 03-119660 INC: REVIEWED FOR SS I FLS I ACS I DATE: 10/25/2019

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NO	DATE	BY	DESCRIPTION
		RF\	/ISIONS

REVISIONS

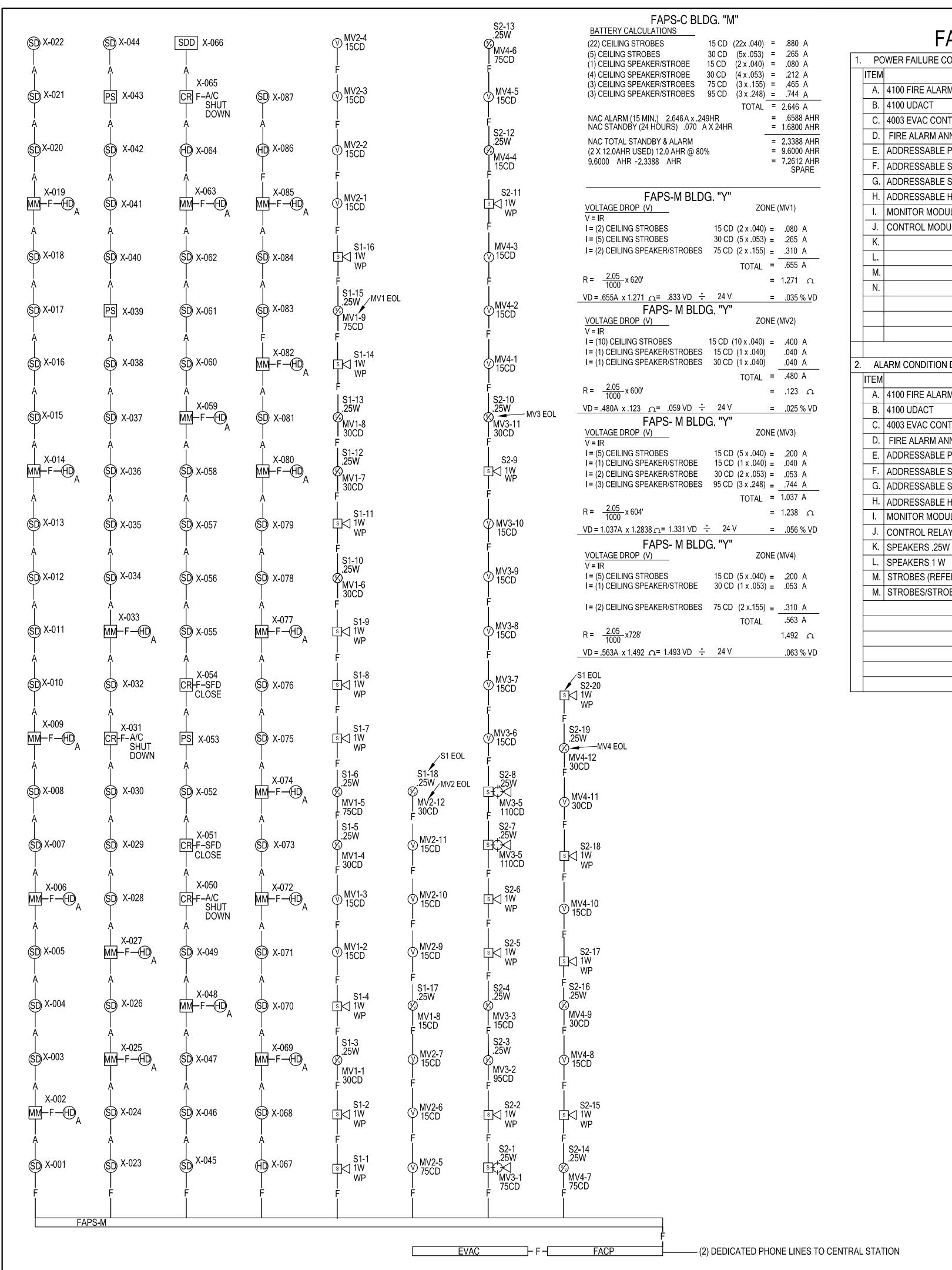
DATE: 8/31/2018

CHECKED: RFH SCALE: AS NOTED 17-302 PROJECT NUMBER:

> FIRE ALARM FLOOR PLAN

NUMBER

E2.1



FACP "C" BATTERY CALCULATIONS

1.	DC	NACE EVILLIBE CONDITION (STANDBY EOD 34 HOLD	101		
<u> </u>		OWER FAILURE CONDITION (STANDBY FOR 24 HOUR	, 	AMPO	TOTAL ANADO
	ITEM		QTY.	AMPS	TOTAL AMPS
	Α.	4100 FIRE ALARM CONTROL CIRCUIT BOARD	1	.4450	.4450
	В.	4100 UDACT	1	.0400	.0400
	C.	4003 EVAC CONTROL PANEL	1	.1300	.1300
	D.	FIRE ALARM ANNUNCIATOR PANEL	1	.3000	.3000
	E.	ADDRESSABLE PULL STATION	3	.0008	.0024
	F.	ADDRESSABLE SMOKE DETECTOR	57	.0008	.0456
	G.	ADDRESSABLE SMOKE DUCT DETECTOR	1	.0008	.0008
	H.	ADDRESSABLE HEAT DETECTOR	3	.0008	.0024
	I.	MONITOR MODULES	18	.0008	.0144
	J.	CONTROL MODULES	5	.0008	.0040
	K.				
	L.				
	M.				
	N.				
			STA	NDBY AMPS TOTAL	.9846 A
				24 HR. STANDBY	X 24 HR
			STA	ND BY AHR TOTAL	23.6304 AHR
2.	AL	ARM CONDITION DURING POWER FAILURE FOR 5 M	INUTES (.083)		1
	ITEM	DESCRIPTION	QTY.	AMPS	TOTAL AMPS
	A.	4100 FIRE ALARM CONTROL CIRCUIT BOARD	1	.5000	.5000
	В.	4100 UDACT	1	.0400	.0400
1					

2.	AL	ARM CONDITION DURING POWER FAILURE FOR 5 MI	NUTES (.083)		1							
	ITEM	DESCRIPTION	QTY.	AMPS	TOTAL AMPS							
	A.	4100 FIRE ALARM CONTROL CIRCUIT BOARD	1	.5000	.5000							
	B.	4100 UDACT	1	.0400	.0400							
	C.	4003 EVAC CONTROL PANEL	1	.1300	.1300							
	D.	FIRE ALARM ANNUNCIATOR PANEL	1	.3000	.3000							
	E.	ADDRESSABLE PULL STATION	3	.0010	.0030							
	F.	ADDRESSABLE SMOKE DETECTOR	57	.0010	.0570							
	G.	ADDRESSABLE SMOKE DUCT DETECTOR	1	.0010	.0010							
	H.	ADDRESSABLE HEAT DETECTOR	3	.0010	.0030							
	l.	MONITOR MODULES	18	.0010	.0180							
	J.	CONTROL RELAY	5	.0010	.0050							
	K.	SPEAKERS .25W	20	.0038	.0760							
	L.	SPEAKERS 1 W	18	.0070	.1260							
	M.	STROBES (REFER TO FAPS-M CALCS.)										
	M.	STROBES/STROBES (REFER TO FAPS-M CALCS.)										
	ALARM CONDITION TOTAL AMPS 1.2590											
			15 M	INUTE OPERATION	x .25 HR							

 M.
 STROBES (REFER TO FAPS-M CALCS.)
 ALARM CONDITION TOTAL AMPS
 1.2590

 ** JUB TOTAL
 X .25 HR

 ** SUB TOTAL
 .3148 AHR

 ** GRAND TOTAL (STAND BY & ALARM)
 23.9452 AHR

 ** (2) BAT-12500 BATTERY USED 50AHR @ 80%
 40.0000 AHR

 ** SPARE CAPACITY
 16.0548 AHR

(BLDG. Y NAC CIRCUIT)

= .0324 A

= .0630 A

= 2.690 Ω

= .00366 % VD

= .0396 A

TOTAL = .1026 A

FINISHED CEILING.

SPEAKER ONLY:

MIN. 90" A.F.F.

STROBE, SPEAKER/STROBE, SPEAKER.

MIN. 80" A.F.F. MAX. 96" A.F.F. BOTTOM OF LENSE TOP OF LENSE

- Finished Floor.

= .0630 A

= 3.251 <u>∩</u>

TOTAL = .0953 A

AMP BLDG. "Y"

I = (9) SPEAKER/STROBE .25W (9 x .0036)

 $V = .0953A \times 2.690 \Omega = .2564 \text{ VD} \div 70 \text{ V}$

I = (11) SPEAKER/STROBE .25W (11 x .0036)

 $V = .1026A \times 3.251 \Omega = .3336 \text{ VD} \div 70 \text{ V}$

— MANUAL

PULL STATION

48" TO TOP OF

ACTIVATING HANDLE OR LEVER A.F.F.

F/A DEVICE MNTG HT.

VOLTAGE DROP (V)

(9) SPEAKER WP

AMP BLDG. "Y"

VOLTAGE DROP (V)

(9) SPEAKER WP

 $R = \frac{4.016}{1000} \times 810'$

 $R = \frac{4.016}{1000} \times 670'$

FIRE ALARM GENERAL NOTES:

- 1. NEWSYSTEM IS A SIMPLEX 4100, AUTOMATIC ACTIVATED, ADDRESSABLE POWER LIMITED, 24V DC, SUPERVISED FIRE ALARM SYSTEM WITH SUPPLEMENTAL MANUAL PROTECTION IN COMPLIANCE WITH CALIFORNIA BUILDING CODE SECTION 907, THE 2016 CALIFORNIA ELECTRICAL CODE, 2016 NFPA 72 AND 2016 CALIFORNIA FIRE CODE, INCLUDE ALL PROGRAMMING.
- 2. FIRE ALARM CABLE SPLICES IN UNDERGROUND PULL BOXES ARE ABSOLUTELY PROHIBITED.
- 3. ALL FIRE ALARM CONDUIT SHALL BE 3/4"C. UNLESS NOTED OTHERWISE. ALL FIRE ALARM CONDUCTORS SHALL BE
- INSTALLED IN AN APPROVED RACEWAY.

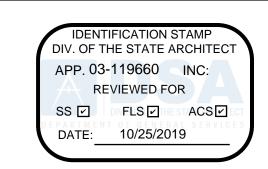
 4. ALL CONDUCTORS SHALL BE #12 THWN 600V FOR ALL ALARM AND FA DEVICE POWER CIRCUITS
- UNLESS NOTED OTHERWISE.

 5. ALL CONDUCTORS SHALL BE #18 T.S.P. 600 VOLT FOR ALL
- INITIATING CIRCUITS UNLESS NOTED OTHERWISE.6. CONTRACTOR SHALL FIELD VERIFY NEW DEVICES AND MATCH EXISTING PRIOR TO ROUGH-IN.
- 7. COLOR CODING OF CONDUCTORS AS RECOMMENDED BY MANUFACTURERS REPRESENTATIVE AND AS INDICATED BELOW: FIRE ALARM PULL STATIONS (1) DARK BLUE (NEG.), (1) ORANGE (POS.) FIRE ALARM SMOKE (1) LT. BLUE (NEG.), (1) YELLOW (POS.) FIRE ALARM AUDIBLE (1) BLACK (NEG.), (1) RED (POS.) FIRE ALARM VISUALS (1) GRAY (NEG.), (1) PINK (POS.)
- 8. UPON COMPLETION OF THE FIRE ALARM SYSTEM INSTALLATION, THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF AND IN A MANNER ACCEPTABLE TO THE DSA/PROJECT INSPECTOR OF RECORD (IOR). THE LOCAL FIRE AUTHORITY SHALL BE NOTIFIED OF DATE AND TIME OF FINAL FIRE ALARM TESTING AND SHALL ASSIST/WITNESS SUCH TESTING WHEN ABLE.
- 9. FIRE ALARM CONTRACTOR SHALL SUPPLY ALL NECESSARY TEST EQUIPMENT TO PERFORM REQUIRED TESTING INCLUDING A "SOUND LEVEL METER" TO CHECK THE ACCEPTABLE LEVELS OF AUDIBLE DEVICES. ALL NORMALLY OCCUPIED AREAS SHALL BE PROVIDED WITH A FIRE ALARM AUDIBLE LEVEL AT 15dba ABOVE AMBIENT NOISE LEVELS. PROVIDE INTELLIGIBILITY TEST FOR ALL AREAS OF COVERAGE.
- 10. FIRE ALARM CONTRACTOR SHALL PERFORM AN "END OF LINE RESISTENCE" TEST IN THE PRESENCE OF THE "IOR" FOR EACH CIRCUIT AND IT SHALL NOT EXCEED 10% OF THE 24 VOLT SYSTEM. EACH COMPONENT IN THE SYSTEM SHALL NOT EXCEED THE LISTED MANUFACTURER'S MINIMUM OPERATING VOLTAGE. THE LOOP RESISTANCE TEST INCLUDES ALL INITIATING AND INDICATING (NOTIFICATION APPLIANCE) CIRCUITS.
- 11. IOR SHALL VERIFY THAT ALL STROBE APPLIANCES FLASH AT A RATE OF NOT EXCEEDING TWO FLASHES PER SECOND, NOR BE LESS THAN ONE FLASH PER SECOND.
- 12. FIRE ALARM CONTRACTOR SHALL PROVIDE ALL TEST RESULTS AND A "RECORD OF COMPLETION" TO THE IOR AFTER COMPLETION OF OPERATIONAL ACCEPTANCE TESTS (2016 NFPA 72, SECTION 10.4.1, SECTION 1-7.2.2 & FIGURE 1-7.2.1) TO THE ARCHITECT, ENGINEER, DSA, PROJECT INSPECTOR (IOR), OWNER AND TO THE LOCAL FIRE AUTHORITY HAVING JURISDICTION.
- 13. EVERY NEW FIRE ALARM SYSTEM SHALL PROVIDE A DOCUMENTATION CABINET, INSTALLED AT THE SYSTEM CONTROL PANEL OR OTHER APPROVED LOCATION. DOCUMENTS". ALL RECORD AND TESTING DOCUMENTATION SHALL BE STORED IN THE CABINET. CONTENTS SHALL BE ACCESSIBLE BY AUTHORIZED PERSONNEL ONLY. WHERE CABINET IS INSTALLED IN A LOCATION OTHER THAN THE SYSTEM CONTROL UNIT, IT'S LOCATION SHALL BE IDENTIFIED AT THE SYSTEM CONTROL UNIT. SYSTEM DOCUMENTS AS APPLICABLE:

 RECORD DRAWINGS/AS-RUILTS FOURMENT CUT SHEETS AND CSEM LISTINGS
- RECORD DRAWINGS/AS-BUILTS, EQUPMENT CUT SHEETS AND CSFM LISTINGS ALTERNATIVE MEANS AND METHODS, PERFORMANCE BASED DESIGN DOCUMENTATION SYSTEM RECORD OF COMPLETION & ANY SUPPLEMENTAL INSPECTION AND TESTING DOCUMENTATION, EMERGENCY RESPONSE PLAN, EVALUATION DOCUMENTATION RISK ANALYSIS DOCUMENTATION, SOFTWARE & FIRMWARE CONTROL DOCUMENTATION

	10.03+0 ATTI	SEQUE	NCE OF (OPERATION	ONS		
_	DEVICE	MANUAL PULL STATION	AREA SMOKE DETECTOR	AREA HEAT DETECTOR	SMOKE DUCT DETECTOR	A/C POWER FAILURE	LOW BATTERY
	SOUND ALARM THROUGHOUT BLDG.	YES	YES	YES	YES	NO	NO
	REPORT TO CENTRAL STATION	YES	YES	YES	YES	YES	YES
	ANNUNCIATE AT PANEL AND ANNUNCIATOR	YES	YES	YES	YES	YES	YES
	CLOSE SMOKE FIRE DAMPERS HVAC SHUTDOWN	NO	YES	YES	YES	YES	YES
	TONE FOLLOWED BY VOICE EVACUATION	YES	YES	YES	YES	NO	NO
	SOUND TROUBLE BUZZER	ON WIRING FAULT	ON WIRING FAULT	ON WIRING FAULT	ON WIRING FAULT	YES	YES

		UDA (EN EL LOTINIO		╜
		JIPMENT LISTING		
SYMBOL	MANUFACTURER & MODEL #	DESCRIPTION	CSFM#	ı
	SIMPLEX 4100-9114	FIRE ALARM CONTROL PANEL	7165-0026:0251	L
FACP		W/ 2 SLC LOOP CARDS, W/ DIGITAL ALARM COMMUNICATOR TRANSMITTER		ı
		W/ DIGITAL ALARIM COMMUNICATOR TRANSMITTER		Ŀ
EVAC	SIMPLEX 4003EC	FIRE ALARM VOICE EVAC AMPLIFIER PANEL	6911-0026:0332	ı
				ŀ
[FAPS]	SIMPLEX 4009	FIRE ALARM POWER SUPPLY	7300-0026:0368	I.
	CHAIN ELEX 1000			r
(E) PS	SIMPLEX 4099-9021	FIRE ALARM PULL STATION	7150-0026:0224	Ļ
([) [65]	SIMPLEX 4098-9756	FIDE ALADM DUCT CMOVE DETECTOR HOUGING	3240-0026:0241	
(E) SDD	SIMPLEX 4098-9756	FIRE ALARM DUCT SMOKE DETECTOR HOUSING FIRE ALARM PHOTOELECTRIC SMOKE DETECTOR	7272-0026:0241	ŀ
	SIMPLEX 4098-9714	FIRE ALARM PHOTOELECTRIC SMOKE DETECTOR	7272-0026.0218	l
(SD)	(BASE) 4098-9792	SURFACE CEILING	7300-0026:0217	ŀ
	SIMPLEX 4098-9733	FIRE ALARM HEAT DETECTOR	7272-0026:0216	
HD	(BASE) 4098-9792	SURFACE CEILING	7300-0026:0217	ŀ
	SYSTEM SENSOR 5602	FIRE ALARM HEAT DETECTOR 194 DEG. FIXED	7270-1653:0167	l
\bigoplus_{A}	3131EM 3EN3OR 3002	"A" INDICATES MOUNTED IN ATTIC	/2/0-1000.010/	ľ
A	IAM 4090-9001	FIRE ALARM MONITOR MODULE	7300-0026:0223	l
MM	IAW 4090-9001	SURFACE CEILING	/300-0020.0223	ſ
	IAM 4090-9002	FIRE ALARM CONTROL MODULE		
(CR)	IAW 4090-9002	SURFACE CEILING	7300-0026:0223	
(V) ₁₅	EXCEDER LSTRC3	FIRE ALARM STROBE CEILING MOUNTED	7125-0785:0169	
	CANDELA AS NOTED			
.25W (\$ _V)	EXCEDER LSPSTRC3	FIRE ALARM SPEAKER/STROBE CEILING MOUNT	7125-0785:0175	t
75	CANDELA& WATTS AS NOTED	<u> </u>		
¹W S⋈ _{WP}	WHEELOCK ET1010	FIRE ALARM WEATHERPROOF SPEAKER	7320-0785:0105	
□ 7 WP	W/ WBB BACKBOX			ı



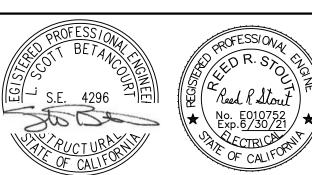


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MUSIC BLDG.

COMPTON COMMUNITY

COLLEGE DISTRICT

COMPTON COLLEGE

1111 E. ARTESIA BLVD.

COMPTON, CA. 90221

A DESCRIPTION

DEVISIONS

REVISIONS

DRAWN: JC CHECKED: RFH

DATE: 8/31/2018 SCALE: AS NOTED

PROJECT NUMBER: 17-302

FIRE ALARM SUBMITTAL

DRAWING NUMBER :

E2.2

	LEG	GEND
SYMBOL	ABBR.	DESCRIPTION
	-	SUPPLY AIR RISER
	-	RETURN AIR RISER
	-	EXHAUST AIR RISER
	SAG	SUPPLY AIR GRILLE
Ø	RAG	RETURN AIR GRILLE
Ø	EAG	EXHAUST AIR GRILLE
	SWR	SIDEWALL REGISTER
<u> </u>	(L)	LINED DUCTWORK
-5000-	-	FLEXIBLE CONNECTION
	FC	FLEXIBLE CONNECTION
\$	-	NEW DUCT (SEE PLAN)
	MVD	MANUAL VOLUME DAMPER
	BDD	BACKDRAFT DAMPER
U.C	UC	UNDERCUT DOOR 3/4"
SFD— —	SFD	SMOKE / FIRE DAMPER
	FD	FIRE DAMPER
T	T-STAT	THERMOSTAT
S	S	SWITCH
	W/	WITH
	S/M	SHEET METAL
	G.C.	GENERAL CONTRACTOR
	VTR	VENT THRU ROOF
	O/C	ON CENTER
E	E	ITEMS FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AS SPECIFIED ON THE ELECTRICAL CONTRACT DOCUMENTS
M	М	ITEMS FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR AS SPECIFIED ON THE MECHANICAL CONTRACT DOCUMENTS
€М	EM	ITEMS FURNISHED BY ELECTRICAL CONTRACTOR AND INSTALLED BY MECHANICAL CONTRACTOR
MB	ME	ITEMS FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR

GENERAL NOTES

- 1. ENTIRE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE 2016 CALIFORNIA MECHANICAL CODE, 2016 CALIFORNIA BUILDING CODE, AND ALL OTHER APPLICABLE CODES AND REGULATIONS, INCLUDING 2016 CALIFORNIA ENERGY CONSERVATION STANDARDS DIVISION T-24.
- 2. COORDINATE ENTIRE INSTALLATION OF THE HVAC SYSTEM WITH THE WORK OF ALL OTHER TRADES PRIOR TO ANY FABRICATION OR INSTALLATION. PROVIDE ALL FITTINGS, OFFSETS, AND TRANSITIONS AS REQUIRED FOR A COMPLETE WORKABLE INSTALLATION. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ITEMS TO BE PROVIDED BY OTHER TRADES WHERE MENTIONED IN THE CONTRACT DOCUMENTS PRIOR TO BID NO EXCEPTIONS.
- 3. COORDINATE THE LOCATIONS OF ALL CEILING DIFFUSERS, REGISTERS AND GRILLES WITH THE ARCHITECTURAL REFLECTIVE CEILING PLAN, ELECTRICAL LIGHTING LAYOUT AND ARCHITECTURAL ROOM ELEVATIONS. THE ARCHITECT AND ENGINEER SHALL BE IMMEDIATELY NOTIFIED OF ANY CONFLICTS PRIOR TO FABRICATION AND INSTALLATION.
- 4. ALL EQUIPMENT, DUCTS, PIPING, AND OTHER DEVICES AND MATERIALS INSTALLED OUTSIDE OF THE BUILDING OR OTHERWISE EXPOSED TO THE WEATHER SHALL BE COMPLETELY WEATHER-PROOFED AND PAINTED TO MATCH, COORDINATE WITH ARCHITECT PRIOR TO PAINTING.
- 5. ALL DIMENSIONS SHOWN ON THESE PLANS ARE APPROXIMATE AND MUST BE CONFIRMED ON SITE.
- PRIOR TO OCCUPANCY, THE ENTIRE H.V.A.C. SYSTEMS SHALL BE BALANCED IN ACCORDANCE WITH "AABC" OR "NEEB" STANDARDS BY AN INDEPENDENT THIRD PARTY AIR BALANCE CONTRACTOR MEMBER OF "AABC" OR "NEBB" CERTIFICATION SHALL BE PROVIDED BY THE CONTRACTOR FOR AIR AND HYDRONIC AS APPLICABLE. SYSTEMS SHALL BE BALANCED AS INDICATED ON PLANS INCLUDING FRESH AIR VENTILATION. WHERE THERE IS A CONFLICT WITH THE MECHANICAL PLANS THE AIR BALANCE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO BALANCING SYSTEM. IF NOT THE AIR BALANCE CONTRACTOR SHALL BEAR ALL COSTS INCURRED FOR WORK THAT MUST BE RE-BALANCED DUE TO CONFLICTS ON CONTRACT DOCUMENTS. CONTRACTOR SHALL PROVIDE THREE COPIES OF THE AIR BALANCE REPORT TO THE ENGINEER FOR APPROVAL.
- 7. FOR INACCESSIBLE AREAS THE CONTRACTOR SHALL PROVIDE ACCESS PANELS TO ALL DAMPERS, EQUIPMENT, SMOKE DETECTORS, AND CONTROL DEVICES. THESE PANELS SHALL MATCH THE RATING OF THE WALL AND/OR CEILING THAT THEY ARE LOCATED IN. MINIMUM ACCESS PANEL SIZES SHALL BE AS FOLLOWS:

1) HAND ACCESS: 12"x12".

2) BODY ACCESS: 30"x30" MIN. WHERE A LARGER ACCESS SIZE IS REQUIRED DUE TO INSTALLATION CONSTRAINTS, THE CONTRACTOR SHALL DO SO AT NO ADDITIONAL COST AND SHALL NOTIFY THE ARCHITECT AND ENGINEER OF DEVIATIONS PRIOR TO INSTALLATION.

- 8. COORDINATE THE LOCATION OF ALL ROOF OPENINGS AND THE LOCATION OF ALL ROOF MOUNTED EQUIPMENT WITH THE STRUCTURAL AND ARCHITECTURAL PLANS PRIOR TO ANY INSTALLATION.
- 9. PLATFORMS, CURBS, AND FLASHINGS FOR MECHANICAL EQUIPMENT SHALL BE AS INDICATED ON THE STRUCTURAL AND ARCHITECTURAL PLANS, UNLESS NOTED OTHERWISE. WHERE THERE IS A CONFLICT WITH THE MECHANICAL PLANS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER PRIOR TO FABRICATION AND INSTALLATION.
- 10. ALL EQUIPMENT, ACCESSORIES, AND RELATED PIPING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL FITTINGS, TRANSITIONS, DAMPERS, VALVES, AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
- 11. MAINTENANCE LABEL SHALL BE AFFIXED TO ALL MECHANICAL EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED FOR THE OWNER'S USE.
- 12. PROVIDE MERV 13 MIN. EFFICIENCY THROWAWAY FILTERS FOR ALL AIR CONDITIONING UNITS. SEE EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR TYPE. SIZES SHALL BE AS RECOMMENDED BY THE MANUFACTURER, UNLESS OTHERWISE SPECIFIED.
- 13. AIR FILTERS SHALL BE STATE FIRE MARSHALL APPROVED AND LISTED. PREFORMED FILTERS HAVING COMBUSTIBLE FRAMING SHALL BE TESTED AS A COMPLETE ASSEMBLY. AIR FILTERS SHALL SHALL ACCESSIBLE FOR CLEANING OR REPLACEMENT.
- 14. ALL EQUIPMENT WITH MOVING PARTS SHALL BE PROVIDED WITH FLEXIBLE DUCT AND PIPE CONNECTION.
- 15. ALL HVAC EQUIPMENT SHALL BE CERTIFIED BY THE CALIFORNIA ENERGY COMMISSION TO COMPLY WITH LATEST EFFICIENCY STANDARDS.
- 16. AC UNITS PROVIDED WITH ECONOMY CYCLE DAMPERS SHALL HAVE DAMPERS SET UP TO CLOSE AUTOMATICALLY ON FAN SHUTDOWN.
- 17. PROVIDE MANUAL VOLUME DAMPERS AND BACKDRAFT DAMPERS FOR FRESH AIR INTAKES ON ALL AIR HANDLING EQUIPMENT AND EXHAUST FANS SERVING CONDITIONED SPACES. EXCEPTION: EQUIPMENT WITH FACTORY ECONOMIZERS.
- 18. ALL FRESH AIR INTAKES SHALL MEET CODE REQUIRED CLEARANCES FROM EXHAUST, FLUE, FUEL BURNING APPLIANCE AND PLUMBING VENT OUTLETS. FOR GAS/ELECTRIC AIR CONDITIONING UNITS WHERE THE CODE REQUIRED CLEARANCES ARE NOT MET, A FACTORY FLUE GAS DEFLECTOR AND EXTENSION SHALL BE USED TO MINIMIZE THESE CLEARANCES. CONTRACTOR SHALL DETERMINE LOCATIONS WHERE REQUIRED PRIOR TO BID. THIS SHALL BE PROVIDED AT NO ADDITIONAL COST.

19. ALL AIR HANDLING EQUIPMENT SERVING CONDITIONED

- SPACES SHALL PROVIDE CONTINUOUS FRESH AIR TO SPACES IN OCCUPIED MODE.

 20. CONTRACTOR SHALL VERIFY ALL CLEARANCES AND
- AND / OR FABRICATING MATERIAL.

 21. CONTRACTOR TO SUBMIT ALL EQUIPMENT, DUCTWORK, AIR DISTRIBUTION DEVICES, AND OTHER ACCESSORIES TO

THE ENGINEER FOR APPROVAL PRIOR TO ANY ANY

ORDERING OF SUCH ITEMS.

AVAILABLE SPACE FOR DUCTWORK PRIOR TO ORDERING

- 22. CONTRACTOR SHALL BE RESPONSIBLE FOR COMMISSIONING OF EQUIPMENT AS STIPULATED ON MECH-1-C FORM ON PLANS UNLESS NOTED OTHERWISE.
- 23. PAINT EXPOSED SURFACE, WHETHER OR NOT COLORS ARE DESIGNATED IN SCHEDULES, EXCEPT WHERE A SURFACE OR MATERIAL IS SPECIFICALLY INDICATED NOT TO BE PAINTED OR IS TO REMAIN NATURAL WHERE AN ITEM OR SURFACE IS NOT SPECIFICALLY MENTIONED. PAINT THE SAME AS SIMILAR ADJACENT MATERIALS OR SURFACES. IF COLOR OR FINISH IS NOT DESIGNATED, THE OWNER'S REPRESENTATIVE WILL SELECT FROM STANDARD COLORS OR FINISHES AVAILABLE.
- 1. PAINTING INCLUDES FIELD PAINTING EXPOSED BARE AND COVERED PIPES AND DUCTS (INCLUDING COLOR CODING), HANGERS, EXPOSED STEEL AND IRON WORK, AND PRIMED METAL SURFACES OF MECHANICAL AND ELECTRICAL EQUIPMENT.

CONTROLS

24. NOT USED.

- 25. ALL LINE AND LOW VOLTAGE WIRING SHALL BE INSTALLED IN CONDUIT. ALL LINE VOLTAGE CONDUIT AND WIRING, INCLUDING FINAL CONNECTIONS, SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AS INDICATED ON THE ELECTRICAL DRAWINGS OR SPECIFIED IN THE ELECTRICAL SECTION OF THE SPECIFICATIONS. ALL ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS OF ALL GOVERNING BODIES HAVING JURISDICTION THEREOF.
- 26. ALL LOW VOLTAGE CONDUIT AND WIRING AS APPLICABLE, INCLUDING FINAL CONNECTIONS, SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR AS INDICATED ON MECHANICAL DRAWINGS OR SPECIFIED IN THE MECHANICAL SECTION OF THE SPECIFICATIONS.
- A) ALL LOW VOLTAGE WIRING SHALL BE INSTALLED IN CONDUIT.

B) WHERE THE CONTROLS CONTRACTOR IS RETAINED THEY SHALL BE RESPONSIBLE FOR THE FOLLOWING:

1) FURNISH AND INSTALL ALL DEVICES, WIRING, AND TERMINATIONS REQUIRED FOR A COMPLETE AND FUNCTIONAL INSTALLATION.

2) COORDINATE ALL WORK AND REQUIREMENTS WITH OTHER TRADES INCLUDING GENERAL, MECHANICAL, AND ELECTRICAL CONTRACTORS PRIOR TO BID.

3) CONTRACTOR SHALL FOLLOW ALL SUBMITTAL REQUIREMENTS PER DRAWINGS AND SPECIFICATIONS
4) ALL CONTROL WIRING SHALL BE INSTALLED IN

27. ELECTRICAL CONTRACTOR SHALL PROVIDE REQUIRED RELAY ACCESSORIES FOR CONNECTION OF 120 VOLT, 1 PHASE VENTILATING EQUIPMENT TO 277 VOLT, 1 PHASE

28. NOT USED.

MIN. 3/4" CONDUIT.

LIGHTING AS APPLICABLE.

NOTES:

1) THERMOSTATS THAT ARE PART OF ANY ENERGY MANAGEMENT SYSTEM SHALL FOLLOW CONTROL SPECIFICATIONS AND DRAWING REQUIREMENTS.

2) SHOULD THE LOCATION OF THE THERMOSTAT NOT MEET THE ADA HEIGHT REQUIREMENTS DUE TO OBSTRUCTIONS, THEN AN ALTERNATE LOCATION SHALL BE PROPOSED OR REQUESTED BY CONTRACTOR THAT SHALL BE APPROVED BY THE ENGINEER AND ARCHITECT.

- 29. LINE VOLTAGE THERMOSTATS SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR.
- 30. CONTROLS CONTRACTOR AND AIR BALANCE CONTRACTOR SHALL COORDINATE WORK AND PERFORM NECESSARY TASKS AS REQUIRED TO OBTAIN AIR AND WATER FLOW QUANTITIES FOR SYSTEMS SHOWN HEREIN.
- 31. CONTROLS SHALL BE PROVIDED TO PROVIDE THE MINIMUM RATE OF OUTDOOR AIR REQUIRED BY THE STATE ENERGY REGULATIONS.

AIR DISTRIBUTION

- 32. ALL DUCTWORK SHALL BE SHEET METAL CONSTRUCTED OR SPIRAL, ERECTED, AND TESTED IN ACCORDANCE WITH THE MOST RESTRICTIVE OF LOCAL REGULATIONS, PROCEDURES DETAILED IN THE ASHRAE HANDBOOK OF FUNDAMENTALS, CHAPTER 6 OF UNIFORM MECHANICAL CODE, OR THE APPLICABLE STANDARDS ADOPTED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION.
- 33. ALL FLEXIBLE DUCTWORK SHALL NOT EXCEED FIVE FEET IN LENGTH TO RESPECTIVE DIFFUSERS, GRILLES, AND REGISTERS, OR OTHER AIR DEVICES.
- 34. PROVIDE SEISMIC RESTRAINTS TO ALL DUCTWORK, PIPE, AND EQUIPMENT SUPPORTS IN ACCORDANCE WITH THE LATEST SMACNA GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS. SUSPENDED EQUIPMENT SHALL BE PROVIDED WITH SEISMIC ANCHORAGE AND ISOLATION SUPPORTS.
- 35. ALL DUCTS TURNS IN SUPPLY, RETURN, AND EXHAUST DUCTS SHALL HAVE TURNING VANES UNLESS OTHERWISE NOTED.
- 36. ALL INSULATION SHALL HAVE A FLAME SPREAD OF NOT MORE THAN 25 AND A SMOKE DENSITY NOT EXCEEDING 50.
- 37. MANUAL VOLUME DAMPERS SHALL BE PROVIDED IN ALL DUCT BRANCHES TO INDIVIDUAL DIFFUSERS, GRILLES AND REGISTERS, AS WELL AS FRESH AIR INTAKE DUCTS. DAMPERS SHALL BE LOCATED AT THE BRANCH DUCT LOCATIONS. THE MECHANICAL CONTRACTOR SHALL COORDINATE LOCATIONS OF DAMPERS WITH THE AIR BALANCE CONTRACTOR PRIOR TO BID, SO THEY ARE ACCESSIBLE PRIOR TO INSTALLATION. IN LOCATIONS WHERE THESE DAMPERS ARE INACCESSIBLE, CABLE OPERATED ADJUSTMENT CONTROLS SHALL BE PROVIDED AT NO ADDITIONAL COST. OPPOSED BLADE DAMPERS SHALL NOT BE PERMITTED UNLESS NOTED OTHERWISE.
- 38. DUCTWORK HANDLING CONDITIONED AIR SHALL BE INSULATED OR LINED AS INDICATED ON DRAWINGS. SUPPLY AND RETURN DUCT INSULATION SHALL BE MIN 3" THICK, 3/4 LB./CUBIC FT. DENSITY AND HAVE A MIN VALUE OF R-8 WHERE LOCATED IN ONE OR MORE OF THE FOLLOWING SPACES:

A) OUTDOORS, OR

B) IN A SPACE BETWEEN THE ROOF AND AN INSULATED CEILING, OR

C) IN A SPACE DIRECTLY UNDER A ROOF WITH FIXED VENTS OR OPENINGS TO THE OUTSIDE OR UNCONDITIONED SPACES, OR

D) IN AN UNCONDITIONED CRAWLSPACE, OR

E) IN OTHER UNCONDITIONED SPACES

PER 2016 C.E.C., OTHERWISE PROVIDE R-8.0 WHEN LOCATED IN CONDITIONED ATTIC SPACES ABOVE CEILING. ALL DUCTWORK EXPOSED ON ROOF SHALL BE INTERNALLY LINED WITH 1.5" THICK, 1.5LB./CUBIC FT. DENSITY DUCT LINER UNLESS OTHERWISE INDICATED OR SPECIFIED. ALL DUCT SIZES ARE SHEET METAL SIZES. ALL DUCT JOINTS SHALL BE SEALED PER C.M.C. CHAPTER 6 REQUIREMENTS. PROVIDE PIPING AND DUCT INSULATION IN ACCORDANCE WITH THE LATEST STANDARDS OF THE CALIFORNIA ENERGY COMMISSION.

39. AUTOMATIC FIRE DAMPER REQUIREMENTS ARE AS FOLLOWS:

A) PROVIDE AUTOMATIC FIRE DAMPERS AT ALL PENETRATIONS OF FIRE-RATED CEILINGS AND WALLS THROUGHOUT. CONTRACTOR SHALL COORDINATE FIRE-RATED AREAS WITH THE ARCHITECTURAL DRAWINGS AND OTHER TRADES PRIOR TO INSTALL AND SHALL NOTIFY PERTINENT PARTIES PRIOR TO ANY WORK PERFORMED IN THESE AREAS. IN ADDITION, CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE PROPER ACCESS FOR DAMPERS INSTALLED. THE DAMPER FIRE RATING SHALL BE COMPATIBLE WITH THE CEILING/WAL RATING.

B) LOCATION OF FIRE-RATED CEILINGS AND WALLS ARE AS INDICATED ON THE ARCHITECTURAL DRAWINGS.

C) FIRE AND / OR SMOKE DAMPER(S) SHALL BE PROVIDED AS REQUIRED BY THE LATEST CALIFORNIA BUILDING CODE.

D) CONTRACTOR SHALL FURNISH FLUSH MOUNTED FIRE AND / OR SMOKE DAMPERS, SO THAT THAT DAMPER DO NOT EXTEND PASS WALLS, FOR AREAS WITHOUT CEILINGS FOR QUALITY WORKMANSHIP.

- 40. NOT USED.
- 41. ALL DUCT WORK PASSING THROUGH FIRE RATED CORRIDORS AND LOBBIES SHALL BE MIN. 26 GAGE SHEET METAL CONSTRUCTION.
- 42. ALL DUCTWORK, PIPING, CONDUIT, & ETC. PENETRATING FIRE RATED CONSTRUCTION SHALL HAVE APPROVED FIRE STOPPING.
- 43. CONTRACTOR SHALL STUDY COMPLETELY AND THOROUGHLY THE DESIGN OF THE ENTIRE AIR CONDITIONING SYSTEM, AND VERIFY THE CONSTRUCTABILITY WITH OTHER TRADES PRIOR TO BID. NOTIFY THE ARCHITECT AND ENGINEER IMMEDIATELY IF THERE IS A CONFLICT. ALL CONSTRUCTABILITY ISSUES ARISE AFTER BID SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. NO EXCEPTION.
- 44. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBERS SHALL BE CUT, DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DISTRICT STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.



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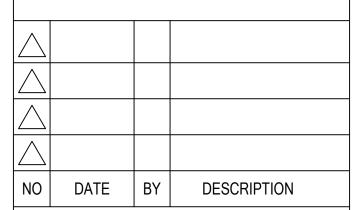
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REVISIONS

DRAWN: IZ CHECKED: IP

PROJECT NUMBER:

DATE: 8/31/2018

MECHANICAL GENERAL NOTES, LEGEND

DRAWING NUMBER

M0.1

SCALE: AS NOTED

17-302

		٨٥٢٨	NOMINAL		EXT.	SUPPLY	004	(COOLING		HEATING	3			ELE	CTRIC	AL				WEIGHT		NOTES	ANCHORAGE
MANUFACTURER & MODEL	LOCATION	AREA SERVED	TONAGE	CFM	S.P.	FAN HP	OSA CFM	TOTAL (mbh)	SENSIBLE (mbh)	IEER	CAPCITY (mbh)	СОР	V	PH	HZ	MCA	МОСР	FLA	LRA		CURB	TOTAL		DETAIL
BARD W48HA-A	WALL BUILDING "Y"	CLASSROOM Y-	4.0	1,600	0.3	1/2	470	43.9	34.5	10.0	42.5	3.17	208	1	60	35	50			551	-	551	1,2, 3, 4, 5, 6, 7, 8, 9	8 S-4
BARD W48HA-A	WALL BUILDING "Y"	CLASSROOM Y-	4.0	1,600	0.3	1/2	470	43.9	34.5	10.0	42.5	3.17	208	1	60	35	50	22.3	117	551	-	551	1,2, 3, 4, 5, 6, 7, 8, 9	8 S-4
BARD W48HA-A	WALL BUILDING "Y"	CLASSROOM Y-	4.0	1,600	0.3	1/2	470	43.9	34.5	10.0	42.5	3.17	208	1	60	35	50	22.3	117	551	-	551	1,2, 3, 4, 5, 6, 7, 8, 9	8 S-4
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	BARD W48HA-A BARD W48HA-A	BARD WALL W48HA-A BUILDING "Y" BARD WALL W48HA-A BUILDING "Y" BARD WALL W48HA-A WALL	BARD WALL CLASSROOM Y- BARD WALL BUILDING "Y" Y- BARD WALL BUILDING "Y" Y- BARD WALL CLASSROOM Y-	BARD WALL CLASSROOM Y- BARD WALL BUILDING "Y" BARD WALL BUILDING "Y" BARD WALL CLASSROOM Y- BARD WALL CLASSROOM Y- BARD WALL CLASSROOM Y-	BARD WALL BUILDING "Y" BARD WALL BUILDING "Y" WALL BUILDING "Y" BARD WALL BUILDING "Y" WALL BUILDING "Y" CLASSROOM 4.0 1,600 BARD WALL CLASSROOM 4.0 1,600	BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3	BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2	BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 BARD W48HA-A WALL CLASSROOM Y- 4.0 1,600 0.3 1/2 470	BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9	BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 BARD W48HA-A WALL CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5	BARD WALL BUILDING "Y" BARD WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 BARD WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 BARD WALL CLASSROOM Y- BARD WALL CLASSROOM Y- CLASSROOM Y- CLASSROOM Y- CLASSROOM Y- A.0 1,600 0.3 1/2 470 43.9 34.5 10.0	## BARD WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 ## BARD WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 ## BARD WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5	& MODEL SERVED IONAGE S.P. HP CFM (mbh) IEER (mbh) COP BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 BARD WALL CLASSROOM 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17	& MODEL SERVED TONAGE S.P. HP CFM (mbh) (mbh) IEER (mbh) COP V BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 BARD WALL CLASSROOM 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208	8 MODEL SERVED IONAGE S.P. HP CFM (mbh) (mbh) IEER (mbh) COP V PH BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 BARD WALL CLASSROOM 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1	8 MODEL SERVED IONAGE S.P. HP CFM (mbh) (mbh) IEER (mbh) COP V PH HZ BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 BARD WALL CLASSROOM 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60	BARD WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 35 BARD WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 35 BARD WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 35 BARD WALL CLASSROOM Y- CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 35	& MODEL SERVED IONAGE S.P. HP CFM (mbh) IEER (mbh) COP V PH HZ MCA MOCP BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 35 50 BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 35 50	& MODEL SERVED IONAGE S.P. HP CFM (mbh) IEER (mbh) COP V PH HZ MCA MOCP FLA BARD W48HA-A WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 35 50 22.3 BARD W48HA-A WALL CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 35 50 22.3	BARD WALL BUILDING "Y" CLASSROOM 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 35 50 22.3 117 BARD WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 35 50 22.3 117	BARD WALL CLASSROOM 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 35 50 22.3 117 551 BARD WALL BUILDING "Y" Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 35 50 22.3 117 551	BARD WALL CLASSROOM 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 35 50 22.3 117 551 - BARD WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 35 50 22.3 117 551 -	BARD WALL CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 35 50 22.3 117 551 - 551 BARD WALL CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 35 50 22.3 117 551 - 551	BARD WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 35 50 22.3 117 551 - 551 1,2,3,4,5,6,7,8,9 BARD WALL BUILDING "Y" CLASSROOM Y- 4.0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 35 50 22.3 117 551 - 551 1,2,3,4,5,6,7,8,9 BARD WALL CLASSROOM A 0 1,600 0.3 1/2 470 43.9 34.5 10.0 42.5 3.17 208 1 60 35 50 22.3 117 551 - 551 1,2,3,4,5,6,7,8,9

- 1. HORIZONTAL DISCHARGE, WALL MOUNTED HEAT PUMP WITH OUTSIDE AIR AND BAROMETRIC RELIEF HOOD, TIME GUARD II CONTROL CIRCUIT, LOW AMBIENT KIT AND AND CRANKCASE HEATER PROVIDE WITH R410A REFRIGERANT.
- PROVIDE GLASS FIBER DISPOSABLE MEDIA IN METAL FRAMES, SIZED PER MANUFACTURER WITH MINIMUM ARRESTANCE ACCORDING TO ASHRAE 52.1, AND A MINIMUM EFFICIENCY REPORTING VALUE (MERV) ACCORDING TO ASHRAE 52.2
- PROVIDE FIELD INSTALLED DISCONNECT SWITCH. SEE ELECTRICAL DRAWINGS.
- PROVIDE FAN STATUS AND PRESSURE DIFFERENTIAL SENSOR FILTER STATUS.

- 6. AREAS WITH UNIT SUPPLYING MORE THAN 2,000 CFM SHALL BE EQUIPPED WITH TOTAL COVERAGE DETECTION SYSTEM, ABLE TO SHUT DOWN UNIT(S) WITHIN COVERAGE AREA AND SEND SIGNAL TO BUILDING FIRE ALARM PANEL
- PER 2016 CMC, SECTION 608. SEE FIRE ALARM DRAWINGS FOR COMPLETE WIRING AND UNIT SHUT DOWN SEQUENCE. 7. PROVIDED WITH REFRIGERATION SERVICE PORTS, FITTED WITH LOCKING TYPE TAMPER RESISTANT CAP OR SHALL BE PROTECTED FROM UNAUTHORIZED ACCESS IN ACCORDANCE WITH 2016 CMC, SECTION 1105.11.
- 8. PROVIDE AUTOMATED LOGIC CONTROLLER. COORDINATE WITH CONTROLS CONTRACTOR. 9. WALL MOUNT HEAT PUMP WITH OUTSIDE AIR AND BAROMETRIC RELIEF HOOD, LOW AMBIENT KIT AND AND

IN	DOOR	FAN COI	L UNIT	SCH	HED	ULE	- M	IUS	SIC	BU	ILDI	NG				
SYMBOL	SERVICE	MANUFACTURER	MODEL	CFM	EXT. S.P."	MOTOR HP	ELE VOLT	PH.		MCA	МОСР	OSA CFM	FILTERS	WGT. LBS.	REMARKS	ANCHORAGE DETAIL
(FAU-4)	SEE PLAN	CARRIER	FV4C	1600	0.8	3/4	208/ 230	1	60	8.5	15	-	FILTER BANK, MERV 8	207	INTERLOCK WITH CU-4, PROVIDE AUXILIARY CONDENSATE OVERFLOW SAFETY SWITCH 'LITLE GIANT' MODEL ACS-5 WITH AUDIBLE ALARM FOR CONDENSATE DRAIN LINE.	3 M2.1
(FAU-5)	SEE PLAN	CARRIER	FV4C	1600	1.0	3/4	208/ 230	1	60	8.5	15	-	FILTER BANK, MERV 8	207	INTERLOCK WITH CU-5, PROVIDE AUXILIARY CONDENSATE OVERFLOW SAFETY SWITCH 'LITLE GIANT' MODEL ACS-5 WITH AUDIBLE ALARM FOR CONDENSATE DRAIN LINE.	3 M2.1
(FAU-6)	SEE PLAN	CARRIER	40RUQ	4000	1.2	3.7	208/ 230	3	60	14	20	-	FILTER BANK, MERV 8	427	INTERLOCK WITH CU-6, PROVIDE AUXILIARY CONDENSATE OVERFLOW SAFETY SWITCH 'LITLE GIANT' MODEL ACS-5 WITH AUDIBLE ALARM FOR CONDENSATE DRAIN LINE.	3 M2.1

Ol	JTDO	OR HEAT	PUMP U	NIT S	CHED	ULE	- ML	JSIC	BL	JILD	ING							
SYMBOL	SERVICE	MANUFACTURER	MODEL		LING		HEATING						COND. FAN	MCA	MOCP	WGT.	REMARKS	ANCHORAGE
	0202			TOTAL	SEER/EER	INPUT	OUTPUT	EFF.	V	P HZ	<u>r</u> RLA	LRA	FLA			LBS.		DETAIL
CU-4	SEE PLAN	CARRIER	25HHA448	45.34 MBTUH	15.0 / 12.0	-	47.05 MBTUH	3.96 COP	208/	3 60	21.8	117.0	1.45	28.8	50	276	INTERLOCK WITH FAU-4, PROVIDE WITH 6" CONCRETE EQUIPMENT PAD AND MOUNTING BRACKETS. REFRIGERANT PIPES SHALL BE SIZED AND INSTALLED PER MANUFACTURER'S RECOMMENDATION BASED ON TOTAL LENGTH BETWEEN INDOOR AND OUTDOOR UNIT.	2 5 S-3 S-3
CU-5	SEE PLAN	CARRIER	25HHA448	45.34 MBTUH	15.0 / 12.0	1	47.05 MBTUH	3.96 COP		3 60	21.8	117.0	1.45	28.8	50	276	INTERLOCK WITH FAU-5, PROVIDE WITH 6" CONCRETE EQUIPMENT PAD AND MOUNTING BRACKETS. REFRIGERANT PIPES SHALL BE SIZED AND INSTALLED PER MANUFACTURER'S RECOMMENDATION BASED ON TOTAL LENGTH BETWEEN INDOOR AND OUTDOOR UNIT.	2 5 S-3 S-3
CU-6	SEE PLAN	CARRIER	38AUQ012	119.00 MBTUH	13.8 / 11.0	-	104.48 MBTUH		208/ 230	3 60	15.9	110	-	39	50	575	INTERLOCK WITH FAU-6, PROVIDE WITH 6" CONCRETE EQUIPMENT PAD AND MOUNTING BRACKETS. REFRIGERANT PIPES SHALL BE SIZED AND INSTALLED PER MANUFACTURER'S RECOMMENDATION BASED ON TOTAL LENGTH BETWEEN INDOOR AND OUTDOOR UNIT.	2 5 S-3 S-3

- 1. HEAT PUMP SPLIT SYSTEM WITH R410A REFRIGERANT.
- 2. PROVIDE WITH FACTORY INSTALLED FILTER DRIER, HIGH-LOW PRESSURE SWITCH, TIME GUARD, CRANCKCASE HEATER, SOLENOID VALVE, SIGHT GLASS, EXPANSION VALE AND EQUALIZER LINE.
- 3. PROVIDE GLASS FIBER DISPOSABLE MEDIA IN METAL FRAMES, SIZED PER MANUFACTURER WITH MINIMUM ARRESTANCE ACCORDING TO ASHRAE 52.1, AND A MINIMUM EFFICIENCY REPORTING VALUE (MERV) ACCORDING TO ASHRAE 52.2
- 4. FILTER KIT CONVERSION. 5. PROVIDE FIELD INSTALLED DISCONNECT SWITCH. SEE ELECTRICAL DRAWINGS.
- 6. UNITS SHALL BE EQUIPPED WITH TOTAL COVERAGE SMOKE DETECTION SYSTEM, ABLE TO SHUT DOWN
- UNIT(S) WITHIN COVERAGE AREA AND SEND SIGNAL TO BUILDING FIRE ALARM PANEL PER 2016 CMC, SECTION 608. SEE FIRE ALARM DRAWINGS FOR COMPLETE WIRING AND UNIT SHUT DOWN SEQUENCE.
- 7. HORIZONTAL SUCTION LINES TO BE PITCHED TOWARD COMPRESSOR MINIMUM 1/2" FOR EACH 10 FEET. PROVIDE 1" FOAM INSULATION TO ALL SUCTION PIPES ARE REQUIRED. PROVIDE LONG TURN ELLS ON ALL REFRIGERANT PIPING TURNS. PROVIDE SIGHT GLASS AT CONDENSING UNIT AND PRESSURE TAPS AT FAN COIL UNIT. FOR EXACT INSTALLATION SEE MANUFACTURER'S RECOMMENDED PIPING DETAIL.
- 7. PROVIDED WITH REFRIGERATION SERVICE PORTS, FITTED WITH LOCKING TYPE TAMPER RESISTANT CAP OR SHALL BE PROTECTED FROM UNAUTHORIZED ACCESS IN ACCORDANCE WITH 2016 CMC, SECTION 1105.11.



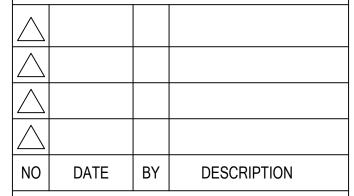


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consulting group 18 Pine Hill Lane Ladera Ranch, CA 92694 phone: 949.610.9675





REVISIONS

CHECKED: IP DRAWN: IZ DATE: 8/31/2018 | SCALE: AS NOTED

PROJECT NUMBER:

MECHANICAL SCHEDULES

17-302

NUMBER

		(OFFICE	ES -	VR	F SP	LIT	SY	′ST	EM	IUN	IIT S	СНЕ	EDULE - FAN COIL (INDOOR) - MUSIC BUILDING	
SYMBOL	SERVICE	MANUFACTURER	MODEL	CFM	EXT. S.P."	MOTOR HP	ELE VOLT	CTRIC	CAL HZ	MCA	МОСР	OSA CFM	WGT. LBS.	REMARKS	ANCHORAGE DETAIL
(FC-1.1)	OFFICE #1	LG	ARNU073SEL2	163	0.3	1/2	208	1	60	13.4	15	-	20	PROVIDE WITH PROGRAMMABLE DIGITAL THERMOSTAT, MOUNTING BRACKETS, R410, CONDENSATE OVERFLOW ACCESSORIES.	3 S-4
(FC-1.2)	OFFICE #2	LG	ARNU073SEL2	163	0.5	1/2	208	1	60	13.4	15	-	20	PROVIDE WITH PROGRAMMABLE DIGITAL THERMOSTAT, MOUNTING BRACKETS, R410, CONDENSATE OVERFLOW ACCESSORIES.	3 S-4
(FC-1.3)	OFFICE #3	LG	ARNU073SEL2	200	0.3	1/2	208	1	60	13.4	15	-	20	PROVIDE WITH PROGRAMMABLE DIGITAL THERMOSTAT, MOUNTING BRACKETS, R410, CONDENSATE OVERFLOW ACCESSORIES.	3 S-4
(FC-3.1)	OFFICE #4	LG	ARNU073SEL2	200	0.3	1/2	208	1	60	13.4	15	-	20	PROVIDE WITH PROGRAMMABLE DIGITAL THERMOSTAT, MOUNTING BRACKETS, R410, CONDENSATE OVERFLOW ACCESSORIES.	3 S-4
(FC-3.2)	OFFICE #5	LG	ARNU073SEL2	200	0.3	1/2	208	1	60	13.4	15	-	20	PROVIDE WITH PROGRAMMABLE DIGITAL THERMOSTAT, MOUNTING BRACKETS, R410, CONDENSATE OVERFLOW ACCESSORIES.	3 S-4
(FC-3.3)	OFFICE #6	LG	ARNU073SEL2	200	0.3	1/2	208	1	60	13.4	15	-	20	PROVIDE WITH PROGRAMMABLE DIGITAL THERMOSTAT, MOUNTING BRACKETS, R410, CONDENSATE OVERFLOW ACCESSORIES.	3 S-4
(FC-3.4)	OFFICE #7	LG	ARNU073SEL2	200	0.3	1/2	208	1	60	13.4	15	-	20	PROVIDE WITH PROGRAMMABLE DIGITAL THERMOSTAT, MOUNTING BRACKETS, R410, CONDENSATE OVERFLOW ACCESSORIES.	3 S-4
(FC-3.5)	OFFICE #8	LG	ARNU073SEL2	200	0.3	1/2	208	1	60	13.4	15	-	20	PROVIDE WITH PROGRAMMABLE DIGITAL THERMOSTAT, MOUNTING BRACKETS, R410, CONDENSATE OVERFLOW ACCESSORIES.	3 S-4
(FC-3.6)	OFFICE #9	LG	ARNU073SEL2	200	0.3	1/2	208	1	60	13.4	15	-	20	PROVIDE WITH PROGRAMMABLE DIGITAL THERMOSTAT, MOUNTING BRACKETS, R410, CONDENSATE OVERFLOW ACCESSORIES.	3 S-4

		OFF	ICES - \	/RF SI	PLIT (SYST	EM UNIT	SC	HED	ULE	- C	ONDENSING (OUTDOOR) - MUSIC BUILDING	
SYMBOL	SERVICE	MANUFACTURER	MODEL	NOMINAL TONS	EER	IEER	POWER	TRICAL FLA	MOCP	МОСР	WGT. LBS.	REMARKS	ANCHORAGE DETAIL
(CU-1)	FC-1.1, FC-1.2, FC-1.3	LG MULTI V	ARUB024GSS4	2	10.8	20	208-230 / 60 / 1	19.1	23.2	35	540	PROVIDE COMPLETE WITH CONCRETE EQUIPMENT PAD AND MOUNTING BRACKETS. REFRIGERANT PIPES SHALL BE SIZED AND INSTALLED PER MANUFACTURER'S RECOMMENDATION BASED ON TOTAL LENGTH BETWEEN INDOOR AND OUTDOOR UNIT.	3 5 S-3 S-3
CU-3	FC-3.1, FC-3.2, FC-3.3, FC-3.4, FC-3.5, FC-3.6	LG MULTIN	ARUB060GSS4	5	10.8	20	208-230 / 60 / 1	28.4	31.6	40		PROVIDE COMPLETE WITH CONCRETE EQUIPMENT PAD AND MOUNTING BRACKETS. REFRIGERANT PIPES SHALL BE SIZED AND INSTALLED PER MANUFACTURER'S RECOMMENDATION BASED ON TOTAL LENGTH BETWEEN INDOOR AND OUTDOOR UNIT.	1 5 S-3 S-3

			DATA	RO	MC	- SPL	IT S	YS	STEM	UNI	T S	CHE	DULE - FAN COIL (INDOOR) - MUSIC BUILDING	
SYMBOL	SERVICE	MANUFACTURER	MODEL	CFM	EXT. S.P."	MOTOR HP	ELECT VOLT PI		AL HZ MCA	МОСР	OSA CFM	WGT. LBS.	REMARKS	ANCHORAGE DETAIL
FC-2	DATA ROOM	LG MULTI V S	ARNU123SJA4	200	0.3	1/2	208 1	1	60 13.4	15	-	20	PROVIDE WITH PROGRAMMABLE DIGITAL THERMOSTAT, MOUNTING BRACKETS, R410, TXV, SECONDARY DRAIN PAN AND CONDENSATE OVERFLOW SAFETY SWITCH, SLIM DUCT CONNECTOR KIT.	3 S-4

		DAT	A ROOI	M - SF	PLIT S	YSTE	EM UNIT	SCH	IEDL	JLE -	CC	NDENSING (OUTDOOR) - MUSIC BUILDING	
SYMBOL	SERVICE	MANUFACTURER	MODEL	NOMINAL TONS	EER	IEER	ELECT POWER	RICAL FLA	MOCP	MOCP	WGT. LBS.	REMARKS	ANCHORAGE DETAIL
CU-2	FC-2	LG MULTI V S	ARUN024GSS4		10.8	20	208-230 / 60 / 1	19.1	23.2	35	540	PROVIDE COMPLETE WITH CONCRETE EQUIPMENT PAD AND MOUNTING BRACKETS. REFRIGERANT PIPES SHALL BE SIZED AND INSTALLED PER MANUFACTURER'S RECOMMENDATION BASED ON TOTAL LENGTH BETWEEN INDOOR AND OUTDOOR UNIT.	3 5 S-3 S-3



RF Hawkins Consulting

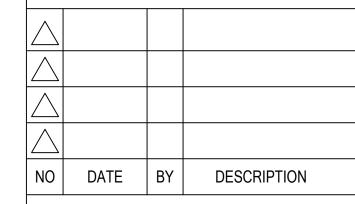
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pais consulting group 18 Pine Hill Lane Ladera Ranch, CA 92694 phone: 949.610.9675



C ADDITIONS 10 IUSIC BLDG. MPTON COMMUNITY COLLEGE DISTRICT



REVISIONS

DRAWN: IZ

DATE: 8/31/2018 SCALE: AS NOTED
PROJECT NUMBER: 17-302

MECHANICAL SCHEDULES

DRAWING NUMBER :

M0.3

CERTIFICATE OF C	COMPLIAN	NCE						NRCC-MCH-01-E
Mechanical Syste	ems							(Page 3 of 4
Project Name: HVAC	ADDITIO	NS TO CAFETERIA BI	JILDING 'Y'			Date Prepared: 0	1.16.2019	
C. MECHANICAL Test Performed		CEPTANCE FORMS (cr	neck box for required o	compliance document	s)			
Designer:	by.							
•			-		-	for HVAC systems. The d		
boxes for all accept of systems.	tance tests	that apply and list all ed	quipment that requires a	n acceptance test. All eq	uipment of the same ty	pe that requires a test, li	ist the equipment descrip	ption and the number
Installing Contract	or:							
				-		ed entity run the test for		=
responsibility for ti Enforcement Agen		nce testing, each persor	i shall sign and submit th	e Certificate of Acceptar	ice applicable to the po	rtion of the construction	or installation for which	they are responsible.
		01-E compliance docume	ent is not considered a co	ompleted document and	is not to be accepted b	y the building departmer	nt unless the correct box	es are checked.
nspector - Before	occupancy	permit is granted all ne	wly installed process sys	tems must be tested to e	ensure proper operation	ns.	<u> </u>	
Test Descript	ion	MCH-12-A	MCH-13-A	MCH-14-A	MCH-15-A	MCH-16-A	MCH-17-A	MCH-18-A
Equipment	# of	Fault Detection &	Automatic Fault Detection &	Distributed Energy	Thermal Energy	Supply Air	Condenser Water	
Requiring Testing or Verification	Units	Diagnostics for DX Units	Diagnostics for Air &	Storage DX AC Systems	Storage (TES) Systems	Temperature Reset Controls	Reset Controls	ECMS
			Zone	•			_	_
HP-Y1	1	X				X		
		_				X		
HP-Y2	1	X					_	_
HP-Y2 HP-Y3	1	×				×		
HP-Y2 HP-Y3 FAU-4/CU-4	1	X				X X		
HP-Y2 HP-Y3 FAU-4/CU-4 FAU-5/CU-5	1 1 1	X				X X X		
HP-Y2 HP-Y3 FAU-4/CU-4	1	X				X X		
HP-Y2 HP-Y3 FAU-4/CU-4 FAU-5/CU-5	1 1 1	X				X X X		
HP-Y2 HP-Y3 FAU-4/CU-4 FAU-5/CU-5	1 1 1	X				X		
HP-Y2 HP-Y3 FAU-4/CU-4 FAU-5/CU-5	1 1 1	X				X		

STATE OF CALIFORNIA
MECHANICAL SYSTEMS CEC-NRCC-MCH-01-E (Revised 01/16) CERTIFICATE OF COMPLIANCE

Project Name: HVAC ADDITIONS TO CAFETERIA BUILDING 'Q'

I certify that this Certificate of Compliance documentation is accurate and complete.

I certify the following under penalty of perjury, under the laws of the State of California: 1. The information provided on this Certificate of Compliance is true and correct.

conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.

worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

2357 NAPLES AVENUE MENTONE, CA 92359-9635

2357 NAPLES AVENUE

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance

RESPONSIBLE PERSON'S DECLARATION STATEMENT

building owner at occupancy. Responsible Designer Name: ILIE PAIS

City/State/Zip: MENTONE, CA 92359-9635

Mechanical Systems

CERTIFICAT	E OF CO	MPLIANCE			NRCC-MCH-01-E
Mechanica	System	s			(Page 1 of 4
Project Name:	HVAC A	DDITIONS TO CAFETERIA BUILD	ING 'Y'	Date Prepared	01.16.2019
A. MECHAN	ICAL CO	MPLIANCE DOCUMENTS & WOR	KSHEETS (check box if worksheet is included)		
or detailed	instruct	ions on the use of this and all Ene	rgy Efficiency Standards compliance forms, refer to the	2016 Nonresidential M	lanual
Note: The E	nforcem	ent Agency may require all forms	to be incorporated onto the building plans.		
YES	NO	Comp. Doc./Worksheet #	Title		
X		NRCC-MCH-01-E (Part 1 of 3)	Certificate of Compliance, Declaration. Required on p	olans for all submittals.	
X		NRCC-MCH-01-E (Part 2 of 3)	Certificate of Compliance, Required Acceptance Test	s (MCH-02-A to 11-A). I	Required on plans for all submittals.
X		NRCC-MCH-01-E (Part 3 of 3)	Certificate of Compliance, Required Acceptance Test	s (MCH-12-A to 18-A). I	Required on plans where applicable.
	X	NRCC-MCH-02-E (Part 1 of 2)	Mechanical Dry Equipment Summary is required for	all submittals with Cen	tral Air Systems. It is optional on plans.
	X	NRCC-MCH-02-E (Part 2 of 2)	Mechanical Wet Equipment Summary is required for systems. It is optional on plans.	all submittals with chil	led water, hot water or condenser water
X		NRCC-MCH-03-E	Mechanical Ventilation and Reheat is required for all optional on plans.	submittals with multip	le zone heating and cooling systems. It is
	X	NRCC-MCH-07-E (Part 1 of 2)	Power Consumption of Fans. Required on plans when	re applicable	
	X	NRCC-MCH-07-E (Part 2 of 2)	Power Consumption of Fans, Declaration. Required of	on plans where applicat	ole

Page 1 of 4)	DATE: 10/25/2019
	RF Hawkins Consulting
ns. vater	2357 Naples Avenue Mentone, CA 92359-9635
s. It is	Tel: (909) 522-4518 design@rfhawkinsconsulting.com
	CONSULTANT
	pais consulting group
	18 Pine Hill Lane Ladera Ranch, CA 92694 phone: 949.610.9675
	PROFESSIONAL PROFE

January 2016

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT APP. 03-119660 INC: REVIEWED FOR SS 🗹 FLS 🗸 ACS 🗸

DATE: 10/25/2019

CERTIFICATE OF C	COMPLIA	NCE							
Mechanical Syste	ms								
Project Name: HVAC	ADDITIO	NS TO CAFE	TERIA BUILDI	NG 'Y'				Date Prepared	d: (
			/						
B. MECHANICAL		CEPTANCE FO	ORIVIS (check I	oox for require	d compliance d	ocuments)			
Test Performed E Designer:	oy:								
This compliance do boxes for all accep of systems.	tance tests								
Installing Contract The contractor whe responsibility for the Enforcement Agen Plancheck – The Ni	o installed ne accepta i cy:	nce testing, ea	ch person shall	sign and submit	the Certificate o	f Acceptance app	icable to the por	tion of the constr	uctio
Inspector - Before					•				ai tiii
Test Descript	ion	MCH-02-A	MCH-03-A	MCH-04-A	MCH-05-A	MCH-06-A	MCH-07-A	MCH-08-A	ı
rest bestript	1011								
Equipment Requiring Testing or Verification	# of Units	Outdoor Air	Single Zone Unitary	Air Distribution Ducts	Economizer Controls	Demand Control Ventilation (DCV)	Supply Fan VAV	Valve Leakage Test	
Equipment Requiring Testing	# of	Outdoor		Distribution		Control Ventilation		_	
Equipment Requiring Testing or Verification	# of Units	Outdoor Air	Unitary	Distribution Ducts	Controls	Control Ventilation (DCV)	VAV	Test	
Equipment Requiring Testing or Verification HP-K1	# of Units	Outdoor Air	Unitary	Distribution Ducts	Controls	Control Ventilation (DCV)	VAV	Test	
Equipment Requiring Testing or Verification HP-K1 HP-K2	# of Units	Outdoor Air	Unitary	Distribution Ducts	Controls	Control Ventilation (DCV)	VAV	Test	Su Te
Equipment Requiring Testing or Verification HP-K1 HP-K2 HP-K3	# of Units	Outdoor Air	Unitary	Distribution Ducts	Controls	Control Ventilation (DCV)	VAV	Test	
Equipment Requiring Testing or Verification HP-K1 HP-K2 HP-K3 FAU-4/CU-4	# of Units 1 1 1 1	Outdoor Air	Unitary X X X X	Distribution Ducts	Controls	Control Ventilation (DCV)	VAV	Test	
Equipment Requiring Testing or Verification HP-K1 HP-K2 HP-K3 FAU-4/CU-4 FAU-5/CU-5	# of Units 1 1 1 1 1 1	Outdoor Air	Unitary IX IX IX IX IX IX IX	Distribution Ducts	Controls	Control Ventilation (DCV)	VAV	Test	
Equipment Requiring Testing or Verification HP-K1 HP-K2 HP-K3 FAU-4/CU-4 FAU-5/CU-5	# of Units 1 1 1 1 1 1	Outdoor Air	Unitary IX IX IX IX IX IX IX	Distribution Ducts	Controls	Control Ventilation (DCV)	VAV	Test	
Equipment Requiring Testing or Verification HP-K1 HP-K2 HP-K3 FAU-4/CU-4 FAU-5/CU-5	# of Units 1 1 1 1 1 1	Outdoor Air	Unitary IX IX IX IX IX IX IX IX IX I	Distribution Ducts	Controls	Control Ventilation (DCV)	VAV	Test	

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance

(Page 4 of 4)

January 2016

Date Prepared: 01.16.2019

CEA/ HERS Certification Identification (if applicable):

2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible

The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance

The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents,

I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the

Responsible Designer Signature:

Date Signed: 01.16.2019

M-36549

(949) 610-9675

(949) 610-9675

The pat

Mechanical Syste	ems										(Page 2 of
Project Name: HVAC	C ADDITIC	NS TO CAFE	TERIA BUILDI	NG 'Y'				Date Prepared	01.16.2019		
B. MECHANICAL	HVAC AC	CEPTANCE FO	ORMS (check l	box for require	d compliance d	ocuments)					
Test Performed E	By:										
Designer: This compliance do boxes for all accep of systems. Installing Contract	tor:	s that apply and	d list all equipm	ent that require	s an acceptance t	est. All equipmen	t of the same ty	oe that requires a	test, list the equi	pment description	and the numb
The contractor wh											
responsibility for the Enforcement Ager		nce testing, ea	ich person shall	sign and submit	the Certificate of	f Acceptance appl	icable to the por	tion of the constru	uction or installat	ion for which they	are responsibl
Plancheck – The Ni Inspector - Before	RCC-MCH-0								artment unless th	e correct boxes ar	e checked.
Test Descript		MCH-02-A	MCH-03-A	MCH-04-A	MCH-05-A	MCH-06-A	MCH-07-A	MCH-08-A	MCH-09-A	MCH-10-A	MCH-11-A
Equipment Requiring Testing or Verification	# of Units	Outdoor Air	Single Zone Unitary	Air Distribution Ducts	Economizer Controls	Demand Control Ventilation (DCV)	Supply Fan VAV	Valve Leakage Test	Supply Water Temp. Reset	Hydronic System Variable Flow Control	Automatic Demand She Control
HP-K1	1	X	X	X							
HP-K2	1	X	X	X							
HP-K3	1	X	X	X							
FAU-4/CU-4	1	X	×	X							
FAU-5/CU-5	1	X	X	X							
FAU-6/CU-6	1	X	×	X							

NO	DATE	BY	DESCRIPTION
		REV	/ISIONS

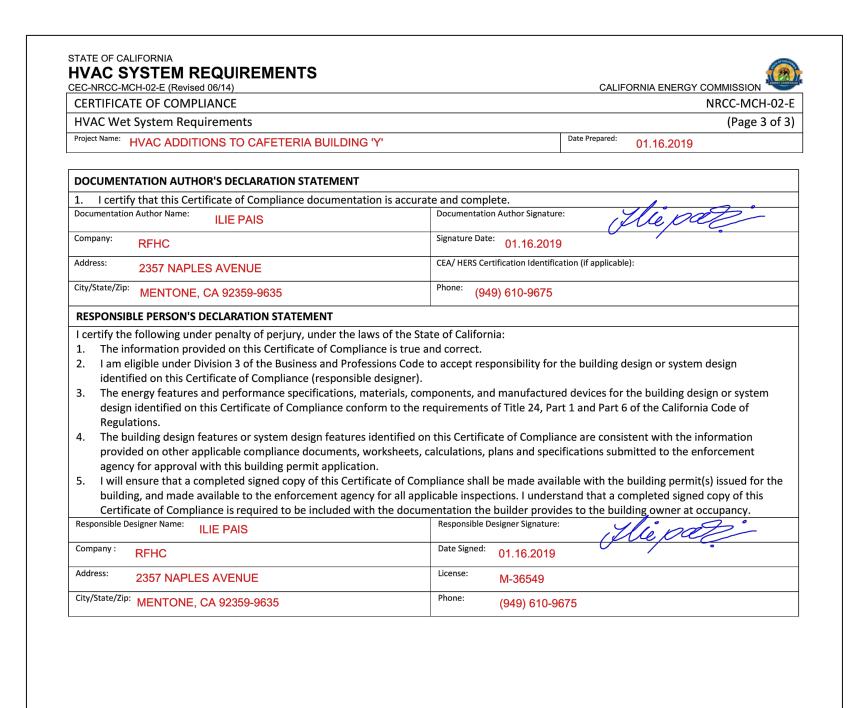
NO	DATE	BY	DESCR	IPTION		
REVISIONS						
DRA	WN: IZ		CHECKED:	IP		
ודמת	E 8/31/20	18	SCALE:	AS NOTE		

| DATE: 8/31/2018 | SCALE: AS NOTED 17-302 PROJECT NUMBER:

BUILDING 'Y' TITLE-24

NUMBER

COMPLIANCE



CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance

CERTIFICATE OF COM	sed 01/16)			CALIFORNIA ENERG	
					NRCC-MCH-02-E
HVAC Dry & Wet Syste	<u> </u>				(Page 1 of 3)
Project Name: HVAC ADDI	TIONS TO CAFETERIA B	BUILDING 'Y'		oate Prepared: 01.16.201	9
A. Equipment Tags ar	nd System Description ¹	– Dry Systems	FAU-4/CU-4	FAU-4/CU-4	FAU-4/CU-4
MANDATORY MEASU	IRES	T-24 Sections	Reference to the Re	equirements in the Co	ontract Documents ²
Heating Equipment Ef	ficiency ³	110.1 or 110.2(a)	M0.2	M0.2	M0.2
Cooling Equipment Ef		110.1 or 110.2(a)	M0.2	M0.2	M0.2
HVAC or Heat Pump T		110.2(b), 110.2(c)	Heat Pump	Heat Pump	Heat Pump
Furnace Standby Loss	+	110.2(d)	N/A	N/A	N/A
Low Leakage AHUs	Control	110.2(f)	N/A	N/A	N/A
Ventilation ⁴		120.1(b)	M0.2	M0.2	M0.2
Demand Control Vent	ilation ⁵	120.1(b) 120.1(c)4	N/A	N/A	N/A
Occupant Sensor Ven		120.1(c)5, 120.2(e)3	N/A N/A	N/A	N/A
Shutoff and Reset Cor		120.2(e)	N/A	N/A	N/A
Outdoor Air and Exha		120.2(e)	M1.1	M1.1	M1.1
Isolation Zones	dat bamper control	120.2(g)	N/A	N/A	N/A
Automatic Demand Sl	ned Controls	120.2(g)	N/A	N/A	N/A
Economizer FDD	ica controls	120.2(i)	N/A	N/A	N/A
Duct Insulation	+	120.4	M0.1	M0.1	M0.1
PRESCRIPTIVE MEASU	IDEC	120.1	IVIO. I	111011	
					T
Equipment is sized in	conformance with	140.4(a & b)	Y/N	Y/N	Y/N
140.4(a & b)	`antral	140.4(a)	N	N	N
Supply Fan Pressure C Simultaneous Heat/Co		140.4(c)	N	N N	N
Economizer	JOI	140.4(d) 140.4(e)	N	N N	N
	nly Posst	140.4(e) 140.4(f)	N	N N	N
Heat and Cool Air Sup Electric Resistance He	· · ·	+ ''	N		
Duct Leakage Sealing		140.4(g)	N	N N	N N
	and resting	140.4(I)	IN	IN	N
Notes:	ont togs /o.g. AUII 1 to 1	.0) and system description	o lo a Sinalo Duct VA	V roboat) as annronri	ata Multipla units
	equirements can be grou		i (e.g. Siligle Duct VA	v reneat) as appropri	ate. Multiple units
	-	g Sheet Numbers) and/or	specifications (includ	ing Section name/nu	mher and relevant
paragraphs) where each requirement is specified. Enter "N/A" if the requirement is not applicable to this system. 3. The referenced plans and specifications must include all of the following information: equipment tag, equipment nominal					
	pians and specifications		_		
3. The referenced	4 minimum efficiency re	dullements, and actual ra	. coa oquipinioni oni	•	•
3. The referenced capacity, Title 24	4 minimum efficiency re	•	Where appliance stan	dards apply (1110, 1), i	uc,
3. The referenced capacity, Title 24 requirements ar	e applicable (e.g. full- ar	nd part-load) include all. \	Where appliance stan	dards apply (110.1), i	
3. The referenced capacity, Title 24 requirements ar equipment is rec	e applicable (e.g. full- a quired to be listed per T	nd part-load) include all. \ itle 20 1601 et seq.			ces to both central
 The referenced capacity, Title 24 requirements are equipment is red Identify where t 	e applicable (e.g. full- ar quired to be listed per T he ventilation requirem	nd part-load) include all. \ itle 20 1601 et seq. ents are documented for	each central HVAC sy	stem. Include referen	
 The referenced capacity, Title 24 requirements are equipment is red Identify where the unit schedules and the capacity of the capaci	e applicable (e.g. full- ar quired to be listed per T he ventilation requirem nd sequences of operat	nd part-load) include all. Nitle 20 1601 et seq. ents are documented for ion. If one or more spaces	each central HVAC sy s is naturally ventilate	stem. Include referen	is documented in
 The referenced capacity, Title 24 requirements are equipment is red. Identify where the unit schedules a the plans and specific capacity. 	e applicable (e.g. full- ar quired to be listed per T he ventilation requirem nd sequences of operat recifications. Multiple zo	nd part-load) include all. Nitle 20 1601 et seq. ents are documented for ion. If one or more spaces one central air systems mu	each central HVAC sy s is naturally ventilate ust also provide a MC	stem. Include referen ed identify where this H-03-E compliance do	is documented in ocument.
 The referenced capacity, Title 24 requirements are equipment is red. Identify where the unit schedules a the plans and specific capacity. 	e applicable (e.g. full- and applicable (e.g. full- and application requirements applications). Multiple applications. Multiple applications demand continuations applications	nd part-load) include all. Nitle 20 1601 et seq. ents are documented for ion. If one or more spaces	each central HVAC sy s is naturally ventilate ust also provide a MC	stem. Include referen ed identify where this H-03-E compliance do	is documented in ocument.
 The referenced capacity, Title 24 requirements are equipment is red. Identify where tunit schedules a the plans and sp. If one or more s the sequence of 	e applicable (e.g. full- arquired to be listed per The ventilation requiremend sequences of operatecifications. Multiple zopaces has demand controperation.	nd part-load) include all. It itle 20 1601 et seq. ents are documented for ion. If one or more spaces one central air systems mu rolled ventilation identify	each central HVAC sy s is naturally ventilate ust also provide a MC where it is specified i	stem. Include referented identify where this H-03-E compliance do ncluding the sensor s	is documented in ocument. pecifications and
 The referenced capacity, Title 24 requirements are equipment is red. Identify where tunit schedules a the plans and sp. If one or more s the sequence of 	e applicable (e.g. full- ar quired to be listed per T he ventilation requirem nd sequences of operat ecifications. Multiple zo paces has demand conti operation. pace has occupant senso	nd part-load) include all. Nitle 20 1601 et seq. ents are documented for ion. If one or more spaces one central air systems mu	each central HVAC sy s is naturally ventilate ust also provide a MC where it is specified i	stem. Include referented identify where this H-03-E compliance do ncluding the sensor s	is documented in ocument. pecifications and
 The referenced capacity, Title 24 requirements are equipment is red. Identify where the unit schedules and the plans and sport the sequence of the s	e applicable (e.g. full- ar quired to be listed per T he ventilation requirem nd sequences of operat recifications. Multiple zo paces has demand contr operation. pace has occupant sense ce of operation	nd part-load) include all. In the 20 1601 et seq. ents are documented for ion. If one or more spaces one central air systems murolled ventilation identify or ventilation control iden	each central HVAC sy s is naturally ventilate ust also provide a MC where it is specified i	stem. Include referenced identify where this H-03-E compliance do ncluding the sensor s	is documented in ocument. pecifications and cor specifications
 The referenced capacity, Title 24 requirements are equipment is red Identify where the unit schedules and the plans and sp If one or more so the sequence of If one or more so and the sequence If the system is If 	e applicable (e.g. full- ar quired to be listed per T he ventilation requirem nd sequences of operat recifications. Multiple zo paces has demand contr operation. pace has occupant sense ce of operation DDC identify the sequen	nd part-load) include all. It itle 20 1601 et seq. ents are documented for ion. If one or more spaces one central air systems mu rolled ventilation identify	each central HVAC sy s is naturally ventilate ust also provide a MC where it is specified i ntify where it is specif top, optimal start, se	stem. Include referenced identify where this H-03-E compliance do ncluding the sensor sied including the sens	is documented in ocument. pecifications and cor specifications

specification of the zone controls. Provide a MCH-03-E compliance document.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance

9. Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.

10. If duct leakage sealing and testing is required, a MCH-04-A compliance document must be submitted.

CERTIFICATE OF COMPLIANCE				NRCC-MCH-
HVAC Dry & Wet System Requirements			Data Barranada	(Page 1
Project Name: HVAC ADDITIONS TO CAFETERIA	BUILDING 'Y'		Date Prepared: 01.16.201	9
A. Equipment Tags and System Description ¹	- Dry Systems	HP-Y1	HP-Y2	HP-Y3
MANDATORY MEASURES	T-24 Sections	Reference to the	Requirements in the Co	ontract Docume
Heating Equipment Efficiency ³	110.1 or 110.2(a)	M0.2	M0.2	M0.2
Cooling Equipment Efficiency ³	110.1 or 110.2(a)	M0.2	M0.2	M0.2
HVAC or Heat Pump Thermostats	110.2(b), 110.2(c)	Heat Pump	Heat Pump	Heat Pump
Furnace Standby Loss Control	110.2(d)	N/A	N/A	N/A
Low Leakage AHUs	110.2(f)	N/A	N/A	N/A
Ventilation⁴	120.1(b)	M0.2	M0.2	M0.2
Demand Control Ventilation ⁵	120.1(c)4	N/A	N/A	N/A
Occupant Sensor Ventilation Control ⁶	120.1(c)5, 120.2(e)3	N/A	N/A	N/A
Shutoff and Reset Controls ⁷	120.2(e)	N/A	N/A	N/A
Outdoor Air and Exhaust Damper Control	120.2(f)	M1.1	M1.1	M1.1
Isolation Zones	120.2(g)	N/A	N/A	N/A
Automatic Demand Shed Controls	120.2(h)	N/A	N/A	N/A
Economizer FDD	120.2(i)	N/A	N/A	N/A
Duct Insulation	120.4	M0.1	M0.1	M0.1
PRESCRIPTIVE MEASURES				
Equipment is sized in conformance with 140.4(a & b)	140.4(a & b)	Y/N	Y/N	Y/N
Supply Fan Pressure Control	140.4(c)	N	N	N
Simultaneous Heat/Cool ⁸	140.4(d)	N	N	N
Economizer	140.4(e)	N	N	N
Heat and Cool Air Supply Reset	140.4(f)	N	N	N
Electric Resistance Heating ⁹	140.4(g)	N	N	N
Duct Leakage Sealing and Testing ¹⁰	140.4(I)	N	N	N

2. Provide references to plans (i.e. Drawing Sheet Numbers) and/or specifications (including Section name/number and relevant

The referenced plans and specifications must include all of the following information: equipment tag, equipment nominal capacity, Title 24 minimum efficiency requirements, and actual rated equipment efficiencies. Where multiple efficiency requirements are applicable (e.g. full- and part-load) include all. Where appliance standards apply (110.1), identify where

Identify where the ventilation requirements are documented for each central HVAC system. Include references to both central unit schedules and sequences of operation. If one or more spaces is naturally ventilated identify where this is documented in

If one or more spaces has demand controlled ventilation identify where it is specified including the sensor specifications and

If the system is DDC identify the sequences for the system start/stop, optimal start, setback (if required) and setup (if required).

6. If one or more space has occupant sensor ventilation control identify where it is specified including the sensor specifications

paragraphs) where each requirement is specified. Enter "N/A" if the requirement is not applicable to this system.

the plans and specifications. Multiple zone central air systems must also provide a MCH-03-E compliance document.

8. Identify where the heating, cooling and deadband airflows are scheduled for this system. Include a reference to the

Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.

For all systems identify the specification for the thermostats and time clocks (if applicable).

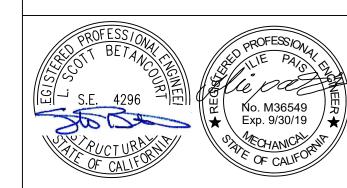
10. If duct leakage sealing and testing is required, a MCH-04-A compliance document must be submitted.

specification of the zone controls. Provide a MCH-03-E compliance document.

equipment is required to be listed per Title 20 1601 et seq.

the sequence of operation.

and the sequence of operation



consulting group

Ladera Ranch, CA 92694

phone: 949.610.9675

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT APP. 03-119660 INC:

REVIEWED FOR

SS I FLS I ACS I

RF Hawkins Consulting

2357 Naples Avenue

Mentone, CA 92359-9635

Tel: (909) 522-4518

design@rfhawkinsconsulting.com

CONSULTANT

18 Pine Hill Lane

10/25/2019

NO	DATE	BY	DESCRIPTION	
	REVISIONS			

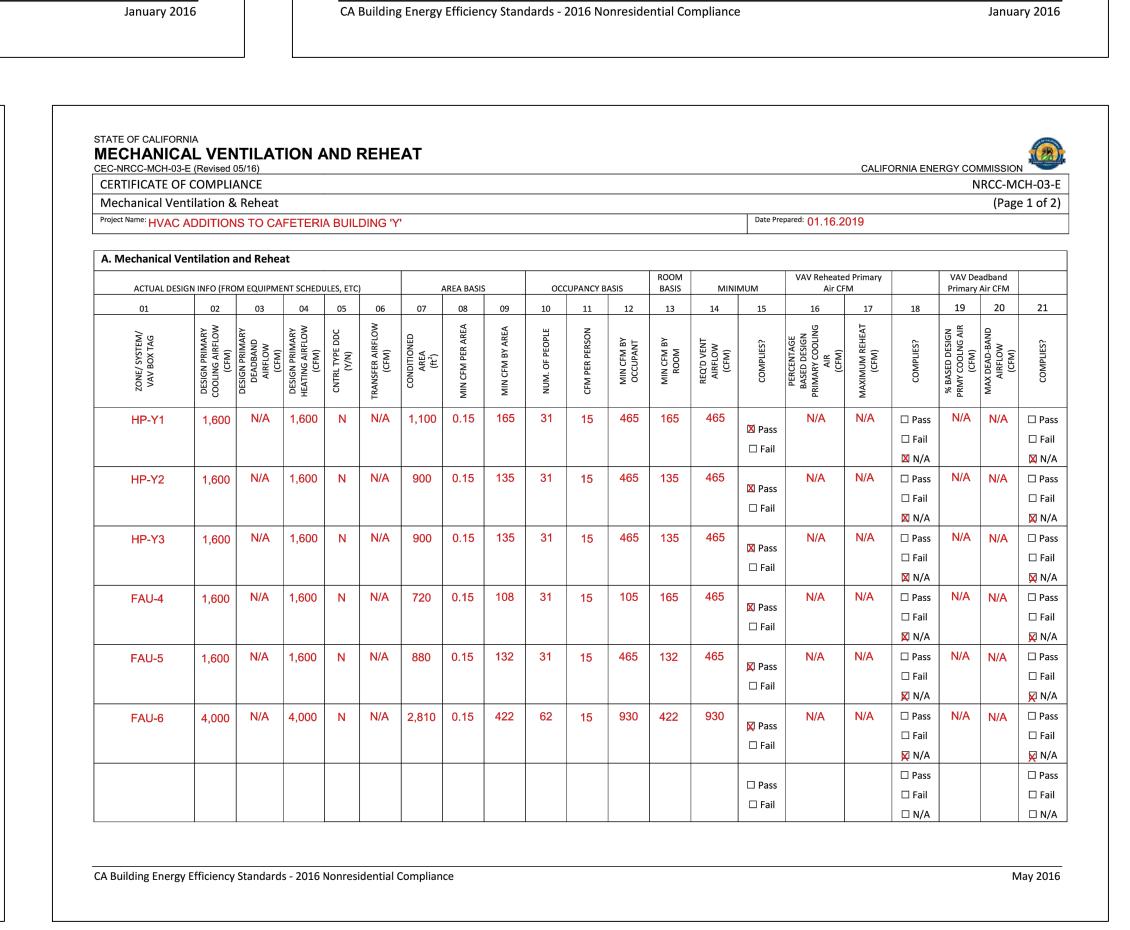
CHECKED: IP DRAWN: IZ DATE: 8/31/2018 SCALE: AS NOTED

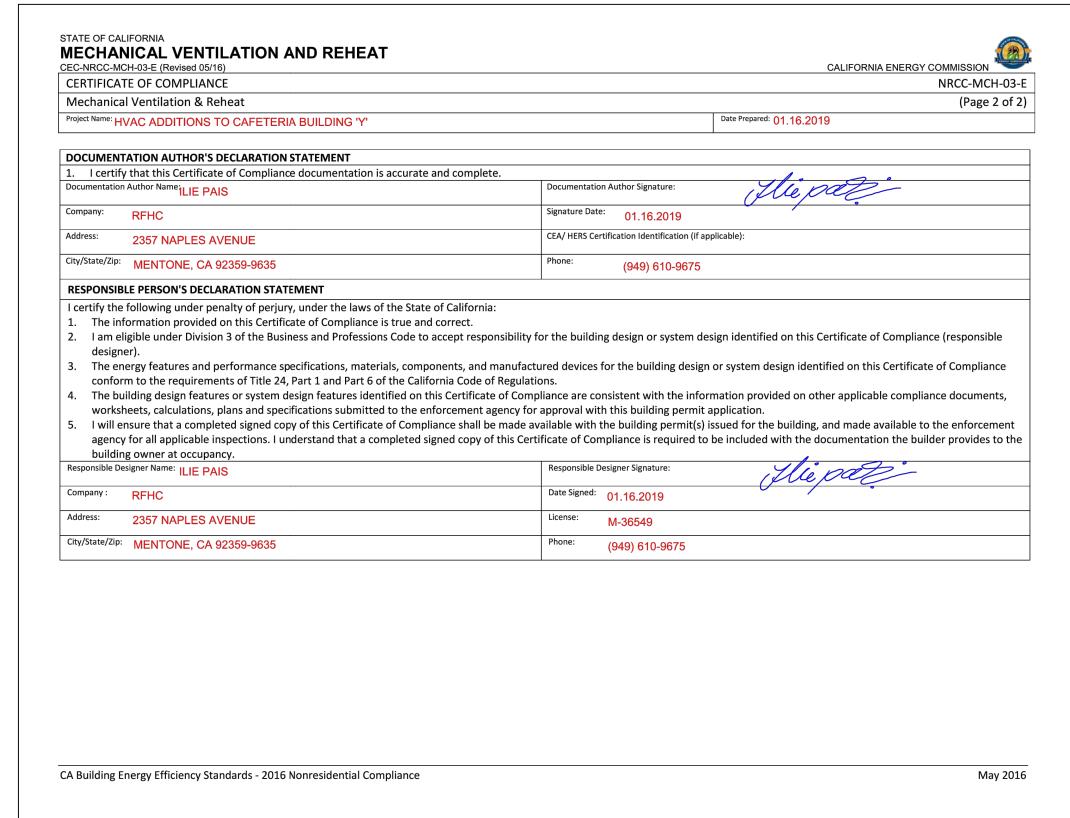
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NUMBER

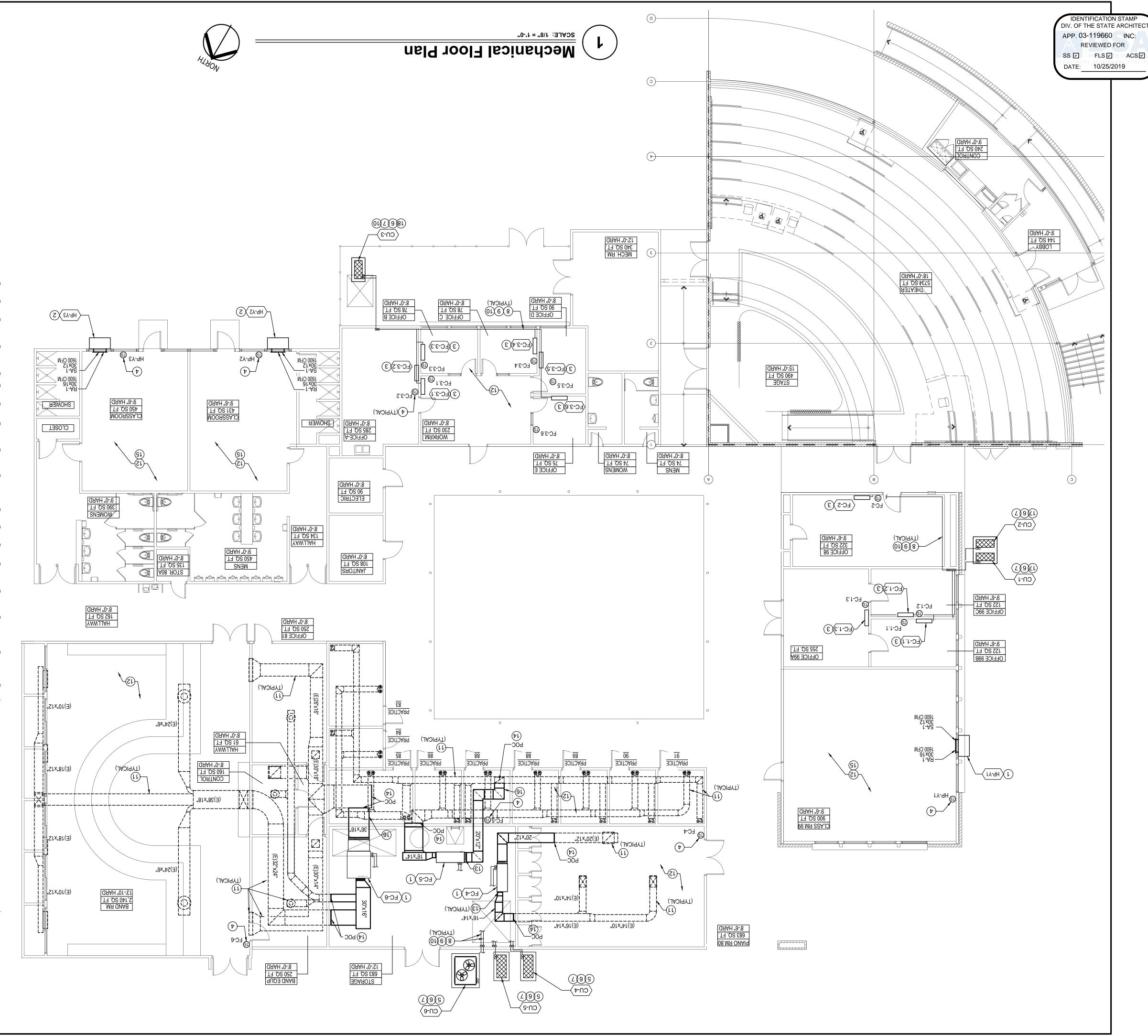
BUILDING 'Y'

17-302





January 2016



NOMBER DRAWING

PLANS MECHANICAL

PROJECT NUMBER: OPTE: 8/31/2018 | SCALE: AS NOTED CHECKED: IB DRAWN: IZ

BEAISIONS						
DESCRIPTION	ВХ	JTA D	ON			
			\bigvee			
			\bigvee			
			\bigvee			

OMMUNIT

- (18) 5" HIGH CONCRETE PAD FOR OUTDOOR CONDENSER UNIT PER DETAILS
- (1) 4" HIGH & 12" BELOW GRADE CONCRETE PAD FOR OUTDOOR (16) INSTALL DUCTWORK ABOVE EXISTING CEILING. REMOVE AND REPLACE CEILING TO MATCH EXISTING AS REQUIRED.
- BE REMOVED, CAP DUCTWORK AND REPLACE AND REPAIR CEILING TO
- (15) ALL NON-FUNCTIONAL EXISTING CEILING GRILLES/ DIFFUSERS SHALL VERIFIED IN FIELD AND SHALL BE COORDINATED WITH ALL EXISTING ROOM EQUIPMENT AND FIXTURES PRIOR TO INSTALLATION. (14) EXACT POINT OF CONNECTION AND EXISTING DUCT SIZE SHALL BE
 - (13) PROVIDE FLEX CONNECTION.
 - TO REPAIR WALL TO MATCH EXISTING ADJACENT SURFACE. (12) EXISTING HVAC ROOM CONTROL TO BE REMOVED. CONTRACTOR
 - DEVICES SHALL BE COMPLETELY CLEANED.
 - FIXTURES PRIOR TO INSTALLATION.
- BE COORDINATED WITH ALL EXISTING ROOM EQUIPMENT AND (10) EXACT PIPING LOCATION SHALL BE VERIFIED IN FIELD AND SHALL
- PROVIDE COVER FOR ALL EXPOSED PIPING AND PAINT TO MATCH WALL 9 REFRIGERANT PIPING FROM OUTDOOR A/C UNIT TO INDOOR FAN COIL SHALL BE INSTALLED AS HIGH AS POSSIBLE AND SECURED AT WALL.
- ACTUAL DEVELOPED LENGTH BETWEEN OUTDOOR AND INDOOR UNITS. SIZED BY A/C UNIT MANUFACTURER, BASED UPON DETERMINATION OF FAN COIL. REFRIGERATION PIPING LINES SHALL BE INSULATED AND 8 PROVIDE REFRIGERANT PIPING FROM OUTDOOR A/C UNIT TO INDOOR
- SPACE IN FRONT.

 SPACE IN FRONT.
- PER CMC 1106.3.1. (6) PROVIDE LOCKING CAPS ON ACCESSIBLE A/C/ REFRIGERATION PORTS
 - CONDENSER UNIT PER DETAIL 2/5-3. (5) 4" HIGH & 12" BELOW GRADE CONCRETE PAD FOR OUTDOOR
 - ALL REQUIRED CLEARANCES PRIOR TO BID. CONTRACTOR TO VERIFY EXISTING FIELD CONDITION TO PROVIDE
- (t) INSTALL NEW ROOM TEMPERATURE SENSOR PER DETAIL 1/M2.1.
- CONDITION TO PROVIDE ALL REQUIRED CLEARANCES PRIOR TO
- 3 WALL MOUNTED FAN COIL. CONTRACTOR TO VERIFY EXISTING FIELD
- FIELD CONDITION TO PROVIDE ALL REQUIRED CLEARANCES PRIOR TO DRAWINGS FOR INSTALLATION DETAIL. CONTRACTOR TO VERIFY EXISTING 2 VERTICAL WALL MOUNTED HEAT PUMP, REFER TO STRUCTURAL
- REQUIRED CLEARANCES PRIOR TO INSTALLATION. CONTRACTOR TO VERIFY EXISTING FIELD CONDITION TO PROVIDE ALL ABOVE. REFER TO DETAIL 3/M2.1 AND STRUCTURAL DRAWINGS. (1) HORIZONTAL INDOOR FAN COIL UNIT, SUSPENDED FROM STRUCTURE
 - PLAN KEY NOTES:

DURING CONSTRUCTION, & ETC. FABRICATION AND INSTALLATION OF ANY CONFLICTS BETWEEN TRADES, AND ENGINEER SHALL BE NOTIFIED IMMEDIATELY PRIOR TO REVISIONS, AT NO ADDITIONAL COST TO THE CLIENT. THE ARCHITECT SHALL BE RESPONSIBLE AND BEAR ALL COST INCURRED FOR ANY TRADES, DURING CONSTRUCTION, & ETC. THEN, THE CONTRACTOR ENGINEER FOR APPROVAL, AND ANY CONFLICTS OCCUR BETWEEN

- AWARD OF CONTRACT. IF SHOP DRAWINGS ARE NOT PROVIDED TO THE 6. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS WITHIN 30 DAYS OF
 - DUCT SIZES SHOWN ON PLAN ARE INSIDE DIMENSIONS.
- CALIFORNIA ENERGY CODE TABLE 121-A. CONFORMANCE WITH CALIFORNIA MECHANICAL CODE TABLE 4-1 AND/OR 4. THE MINIMUM VENTILATION RATES IN BREATHING ZONES SHALL BE IN
- MECHANICAL EQUIPMENT. MAINTAIN MANUFACTURER MIN. CLEARANCES ON ALL ROOF-TOP PIPING SIZES AND LOCATIONS WITH OTHER TRADES PRIOR TO INSTALLATION
- CONTRACTOR SHALL COORDINATE EXACT EQUIPMENT, DUCTWORK AND OUTLETS, PLUMBING VENTS, AND FLUES. FRESH AIR INTAKES SHALL BE 10'-0" MIN. AWAY FROM ALL EXHAUST
 - PLAN NOTES:

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2799.019.949 :enodq

18 Pine Hill Lane

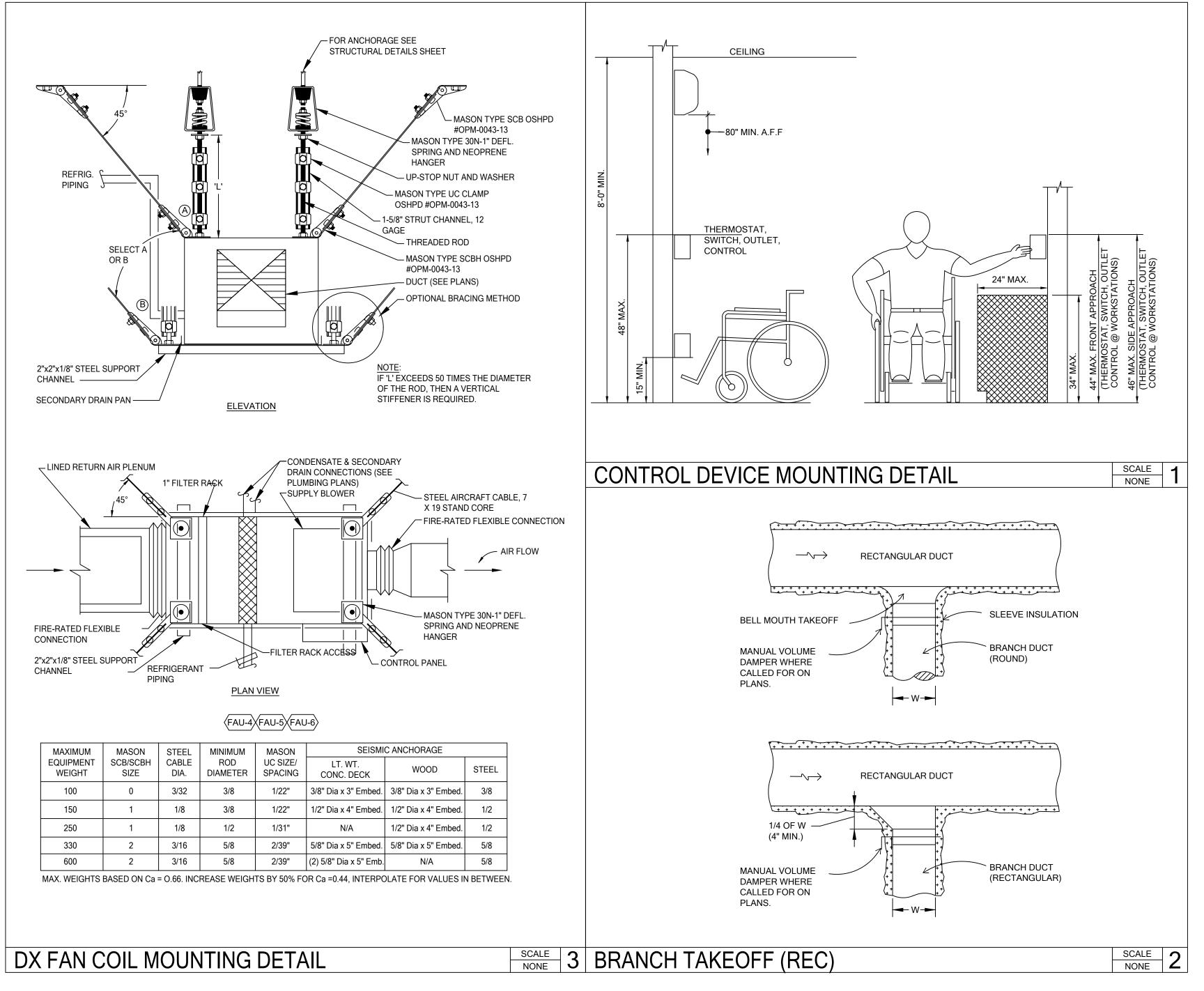
Ladera Ranch, CA 92694

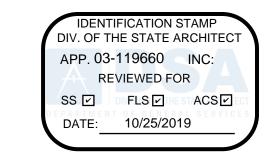
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Mentone, CA 92359-9635

S357 Naples Avenue





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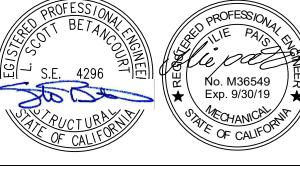
2357 Naples Avenue Mentone, CA 92359-9635 Tel: (909) 522-4518 design@rfhawkinsconsulting.com

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NO DATE BY DESCRIPTION

REVISIONS

CHECKED: IP DRAWN: IZ SCALE: AS NOTED DATE: 8/31/2018

PROJECT NUMBER:

MECHANICAL

DETAILS

NUMBER

M2.1

17-302

SEISMIC ANCHORAGE NOTES

EQUIPMENT ANCHORAGE NOTE:

ALL MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE ANCHORED OR BRACED TO MEET THE HORIZONTAL AND VERTICAL FORCES PRESCRIBED IN THE 2010 CBC, SECTION 1614A.1.13 AND ASCE 7-05 SECTIONS 13.3, 13.4, 13.6, AND CHAPTER 6.

THE ATTACHMENTS OF THE FOLLOWING ITEMS SHALL BE DESIGNED TO RESIST THE FORCES PRESCRIBED ABOVE, BUT NEED NOT TO BE DETAILED ON THE PLANS, AND THE PROJECT INSPECTOR WILL VERIFY THAT THESE ITEMS (EQUIPMENT) HAVE BEEN ANCHORED:

A. EQUIPMENT WEIGHING LESS THAN 400 POUNDS SUPPORTED DIRECTLY ON THE FLOOR OR ROOF.

B. FURNITURE REQUIRED TO BE ATTACHED IN ACCORDANCE WITH ASCE 7-05, SECTION 13.5

C. TEMPORARY OR MOVABLE EQUIPMENT WITH FLEXIBLE CONNECTION TO POWER OR UTILITIES.

D. EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUPPORTED BY VIBRATION ISOLATORS.

E. EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE MECHANICAL/ELECTRICAL ENGINEER. THESE ITEMS (EQUIPMENT) HAVE BEEN ANCHORED.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE:

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM SHALL BE BRACED TO RESIST THE FORCES PRESCRIBED IN ASCE 7-05 SECTION 13.3 AS DEFINED IN ASCE 7-05 SECTION 13.6.8, 13.6.7, 13.6.5.5 ITEM 6.

THE BRACING ATTACHEMENTS TO THE STRUCTURE SHALL COMPLY WITH ONE OF THE OSHPD PRE- APPROVALS WITH AN OPA #, SUCH AS MASON INDUSTRIES (OPA 349), OR ISAT (OPA 485) AS MODIFIED TO SATISFY ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D.

COPIES OF THE MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO START OF HANGING AND BRACING OF THE PIPE, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS.

THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

SYMBOL	ABBREVIATION	DESCRIPTION
	S OR W	SOIL OR WASTE ABOVE FLOOR
	S OR W	SOIL OR WASTE BELOW FLOOR OR GRADE
	V	SANITARY VENT
	CW	COLD WATER
	HW	HOT WATER
CD	CD	CONDENSATE DRAIN
OCD	OCD	OVERFLOW CONDENSATE DRAIN
TP	TP	TRAP PRIMER
-	SOV	SHUT-OFF VALVE
	SOV/GC	SHUT-OFF VALVE OR GAS COCK IN YARD BOX
Ф	FCO	FLOOR CLEANOUT
	wco	WALL CLEANOUT
		RISER UP
		RISER DOWN
	ABV	ABOVE
	BEL	BELOW
	CLG	CEILING
	CONT	CONTINUATION
	DN	DOWN
	EXIST	EXISTING
	FLR	FLOOR
	FFE	FINISH FLOOR ELEVATION
	HDR	HEADER
	I.E.	INVERT ELEVATION
	POC	POINT OF CONNECTION
	PLCS	PLACES
	SLVE	SLEEVE
	VTR	VENT THRU ROOF
	YB	YARD BOX

LEGEND

GENERAL NOTES

- 1. BEFORE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF ALL UTILITIES AND PIPING, AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
- 2. ALL VALVES, UNIONS, ETC. TO BE SAME SIZE AS PIPE UNLESS OTHERWISE INDICATED ON DRAWINGS.
- ALL PLUMBING FIXTURE VENTS TO TERMINATE A MINIMUM OF 12 INCHES FROM ANY VERTICAL SURFACE AND 10 FEET FROM ANY
 OUTSIDE AIR INTAKES.
- 4. CONNECTION BETWEEN INCOMPATIBLE MATERIALS ABOVE GRADE AND INSIDE BUILDING SHALL BE MADE WITH TWO (2) DIELECTRIC UNIONS SEPARATED BY A TWELVE INCH (12") SECTION OF RED BRASS PIPE.
- 5. ALL CLEANOUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE. THE CONTRACTOR SHALL COORDINATE ALL CLEANOUT LOCATIONS WITH EQUIPMENT, CABINETS, ETC., AND THE ARCHITECT PRIOR TO ANY INSTALLATION.
- 6. ALL PLUMBING WORK SHALL BE INSTALLED SO AS TO AVOID INTERFERENCE WITH ELECTRICAL AND MECHANICAL EQUIPMENT AND STRUCTURAL FRAMING.
- 7. ALL WORK AND MATERIAL SHALL BE PERFORMED AND INSTALLED IN COMPLIANCE WITH CALIFORNIA PLUMBING CODE 2013.
- 8. ANY ALTERATIONS TO A STRUCTURAL MEMBER, SUCH AS CUTTING, BORING, BRAZING, DRILLING, WELDING, ETC. SHALL HAVE PRIOR WRITTEN APPROVAL OF ARCHITECT AND STRUCTURAL ENGINEER.
- 9. INSULATION (SEE SPECIFICATION FOR TYPE REQUIRED) AND COVERING ON PIPE AND TUBING SHALL HAVE A FLAME SPREAD RATING NOT TO EXCEED 25 AND A SMOKE DENSITY NOT TO EXCEED 50 WHEN TESTED IN ACCORDANCE WITH 2013 U.B.C. STANDARD NO. 8-1.
- 10. THE SEISMIC ANCHORAGE OF MECHANICAL AND ELECTRIC EQUIPMENT SHALL CONFORM TO ASCE 7-05 CHAPTER 13 TITLE 24 PART 5.

THE SEISMIC BRACING AND ANCHORAGE OF PIPING AND EQUIPMENT SHALL CONFORM TO SEISMIC HAZARD LEVEL "AA" TYPICAL AND BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE "GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING SYSTEMS" PUBLISHED BY SMACNA WITH SUPPLEMENT 2000 AND APPOVED BY THE DSA.

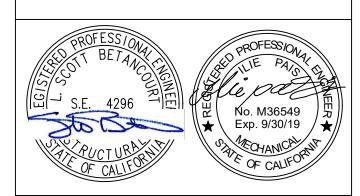


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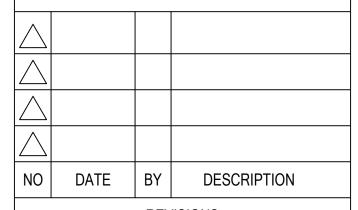
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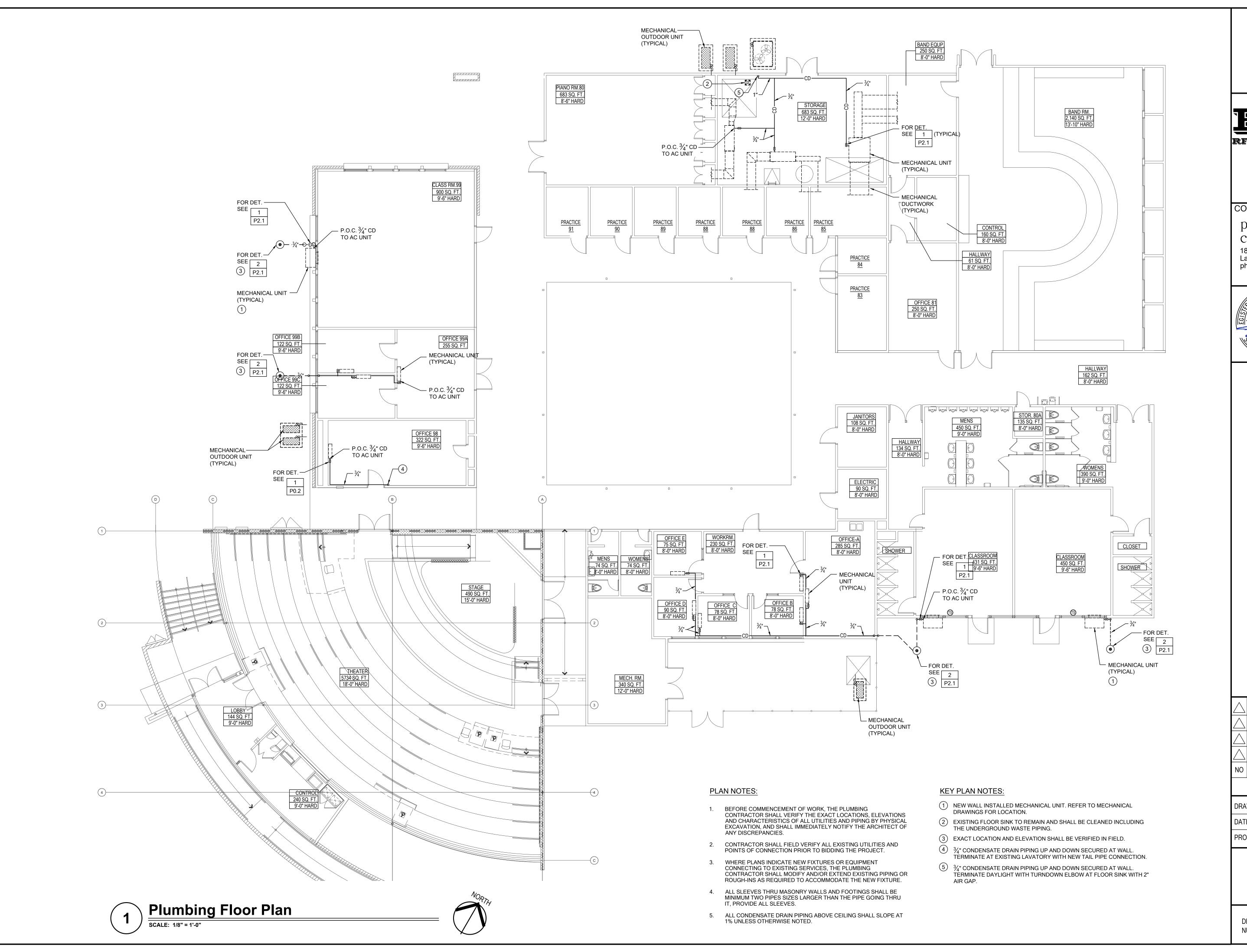
DATE: 8/31/2018 SCALE: AS NOTED

PROJECT NUMBER:

PLUMBING GENERAL NOTES, LEGEND & DETAILS

17-302

DRAWING NUMBER : P0.1



DIV. OF THE STATE ARCHITEC APP. 03-119660 INC: REVIEWED FOR SS 🗸 FLS 🗸 ACS 🗸 DATE: 10/25/2019

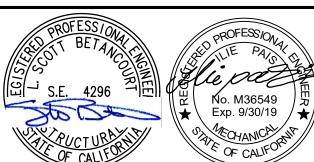
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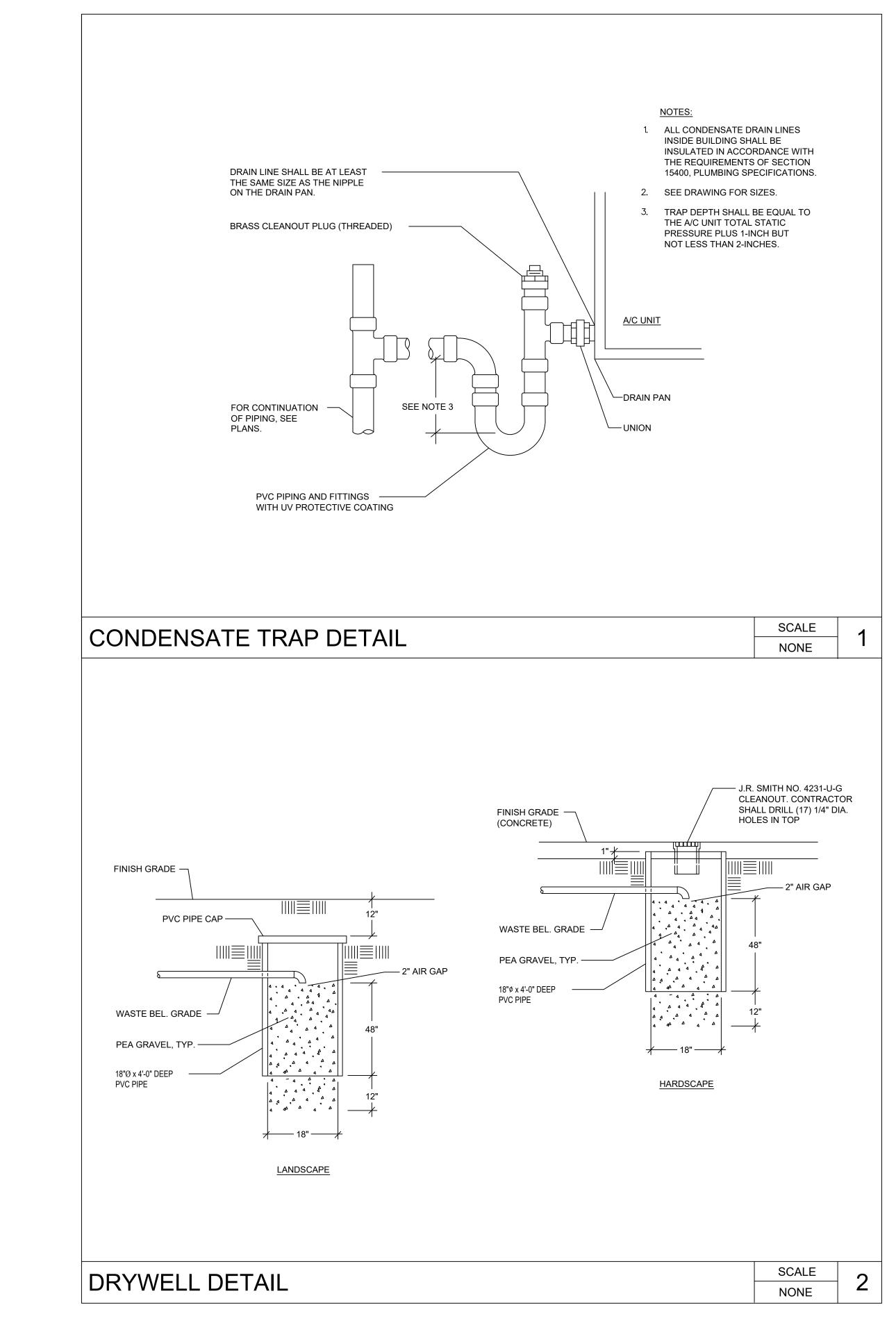
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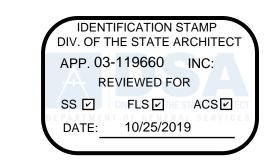
SCALE: AS NOTED DATE: 8/31/2018 PROJECT NUMBER: 17-302

> PLUMBING FLOOR PLAN

DRAWING NUMBER

P1.1





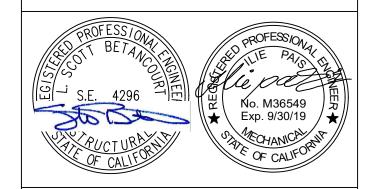
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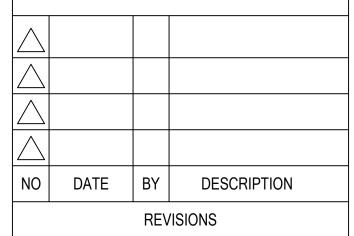
CONSULTANT

CONSUITING GROUP

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HAC ADDITIONS TO MUSIC BLDG. COMPTON COMMUNITY COMPTON COLLEGE 1111 E. ARTESIA BLVD.



DRAWN: IZ CHECKED: IP

DATE: 8/31/2018 SCALE: AS NOTED

PROJECT NUMBER:

PLUMBING DETAILS

17-302

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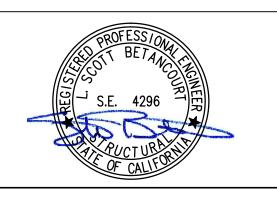


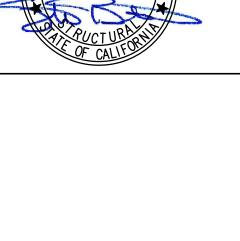


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	02/22/19	SB	100% CD	
NO	DATE	BY	DESCRIPTION	
REVISIONS				

CHECKED: SB SCALE: AS NOTED PROJECT NUMBER: AS NOTED

> MUSIC FIRST FLOOR PLAN

> > S-1

CLOSET

~----~

PRACTICE 87 75 SQ. FT. 7'-6" HARD

WORKEM.
230 SQ. FT.
8-0" HARD

FAN COIL (20#)
SEE 3/S4 FOR
ATTACHMENT

FC-5

PRACTICE 86 75 SQ. FT. 7'-6" HARD

FC-6

FAN COIL (20#)
SEE 3/S4 FOR
ATTACHMENT

SHOWER

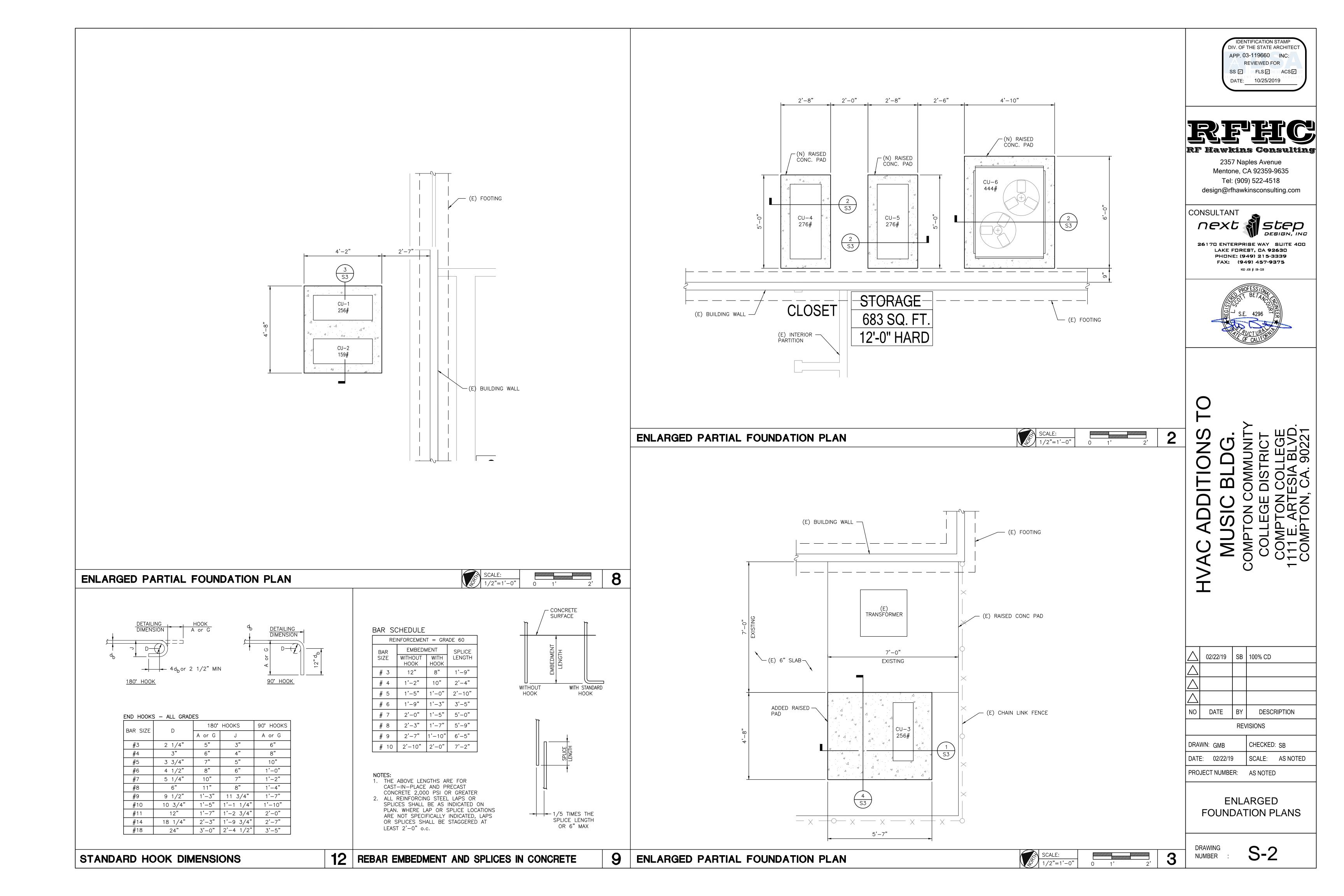
NUMBER :

8 54

FAN COIL (20#)
SEE 3/S4 FOR ATTACHMENT

STAGE 490 SQ. FT. 15'-0" HARD

FAN COIL (20#)
SEE 3/S4 FOR
ATTACHMENT



GENERAL NOTES:

1. DESIGN CRITERIA:

DESIGN CODE: 2016 CALIFORNIA BUILDING CODE (CBC) OCCUPANCY CAT = 2 $S_S = 1.67$ R = 2 $C_S = ..557$ SITE CLASS $S_1 = .611$

— LT FRAMED WALLS, OTHER THAN PLYWOOD RHO = 1.3S.F.R.S. $F_a = 1.00$ ANALYSIS PROCEDURE = E.L.F.A. $F_{v} = 1.50$ V = .517xWSDS= 1.11 SDC = DWIND SPEED = 85 M.P.H. (A.S.D.) SD1 = .611110 M.P.H. (L.R.F.D.)

WIND EXPOSURE I = 1.52. ALL MATERIALS AND WORK PERFORMED SHALL CONFORM WITH THE REQUIREMENTS OF

THE 2016 CBC AND GOVERNING BUILDING ORDINANCES. 3. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER THESE GENERAL

4. WHERE A SECTION OR TYPICAL DETAIL IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL LIKE OR SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.

5. NO CHANGES ARE TO BE MADE TO THESE PLANS WITHOUT THE KNOWLEDGE AND WRITTEN CONSENT OF THIS ENGINEER. UNAUTHORIZED CHANGES RENDER THESE

6. ANY REFERENCE TO THE WORDS APPROVED, OR APPROVAL IN THESE DOCUMENTS SHALL BE HERE DEFINED TO MEAN GENERAL ACCEPTANCE OR REVIEW AND SHALL NOT RELIEVE THE CONTRACTOR AND/OR HIS SUB-CONTRACTORS OF ANY LIABILITY IN FURNISHING THE

7. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES INCLUDING BUT, NOT LIMITED TO BRACING & SHORING. OBSERVATION VISITS TO THE SITE BY FIELD REPRESENTATIVES OF THE ARCHITECT OR ENGINEER SHALL NOT INCLUDE INSPECTIONS OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION PROCEDURES

8. GENERAL CONTRACTOR SHALL VISIT THE JOB SITE AND VERIFY ALL GRADES, DIMENSIONS AND CONDITIONS PRIOR TO BIDDING AND COMMENCING CONSTRUCTION. ALL DIMENSIONS CONTROLLED BY EXISTING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE

9. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT IN CONJUNCTION WITH THE EXECUTION OF THIS WORK.

10. GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER AND ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES FOUND WITHIN THE CONTRACT DOCUMENTS, PRIOR TO STARTING WORK.

CONCRETE:

1. ALL CONCRETE MATERIALS AND WORKMANSHIP SHALL CONFORM TO CHAPTER 19A OF THE CODE AND TO ALL REQUIREMENTS OF ACI 301-05. "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", EXCEPT AS MODIFIED BY THE SUPPLEMENT

REQUIREMENTS BELOW. 2. MIX DESIGN REQUIREMENTS:

A. CEMENT SHALL BE TYPE II. B. COMPRESSIVE STRENGTH = 3.000 PSI.

REQUIRED MATERIALS OR LABOR SPECIFIED.

C. CONCRETE SLUMP SHALL NOT EXCEED 5". 3. ALL REINFORCING STEEL SHALL BE SECURED IN POSITION AND INSPECTED BY THE

BUILDING OFFICIAL PRIOR TO PLACING CONCRETE.

4. SEE DETAIL 9/S2 FOR REBAR SPLICES AND EMBEDMENT IN CONCRETE.

REINFORCING STEEL

1. REINFORCING STEEL SHALL CONFORM TO ASTM A-615 GRADE 60 UNLESS OTHERWISE NOTED.

2. BARS SHALL BE CLEAN OF MUD, OIL, OR OTHER COATINGS LIKELY TO IMPAIR

ALL REINFORCING SHALL BE SECURED IN PLACE PRIOR TO INSPECTIONS,

PLACING CONCRETE, OR GROUTING MASONRY. 4. REINFORCING STEEL SHALL BE SPLICED AS SHOWN OR NOTED. SPLICES AT OTHER LOCATIONS SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER. ALL VERTICAL WALL REINFORCEMENT SHALL BE CONTINUOUS BETWEEN SPLICE

LOCATIONS SHOWN IN THE DETAILS. 5. SEE DETAIL 12/S2 FOR STANDARD BAR BEND DIMENSIONS.

STRUCTURAL STEEL:

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST REVISED EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION, WHICH INCLUDES THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, THE CODE OF STANDARD PRACTICE AND THE AWS STRUCTURAL WELDING CODE.

2. STRUCTURAL STEEL SHOP DRAWINGS SHALL BE REVIEWED BY THE STRUCTURAL

ENGINEER PRIOR TO FABRICATION.

3. MATERIAL SPECIFICATIONS: W SHAPES:

ASTM A992 GRADE 50 C, M, ANGLE, BARS, AND PLATES: ASTM 36

TUBE STEEL: ASTM A500, GRADE B PIPE COLUMNS: ASTM A53, GRADE B

4. GROUTING OF COLUMN BASE PLATES: BASE PLATES SHALL BE DRYPACKED OR GROUTED WITH NON-SHRINK GROUT. MINIMUM COMPRESSIVE STRENGTH SHALL BE 4,000 PSI AT 28 DAYS. ALL SURFACES SHALL BE PROPERLY CLEANED OF FOREIGN MATERIAL PRIOR TO THE GROUTING.

5. ALL WELDING SHALL BE ACCOMPLISHED USING THE SHIELDED METAL ARC WELDING PROCESS WITH E70XX ELECTRODES OR THE SUBMERGED ARC WELDING PROCESS WITH E7X-EXXX ELECTRODES. LOW HYDROGEN ELECTRODES SHALL BE USED AND KEPT DRY, AND PARENT METALS SHALL BE PREHEATED

IN ACCORDANCE WITH AWS STANDARDS. 6. ALL WELDING SHALL BE INSPECTED IN ACCORDANCE WITH AISC 360, TABLES N5.4-1, N5.4-2, AND N5.4-3. WELDING SHALL BE PERFORMED BY AWS

CERTIFIED WELDERS. 7. ALL EXPOSED WELDS SHALL BE FILLED AND GROUND SMOOTH WHERE METAL

COULD COME IN CONTACT WITH THE PUBLIC. 8. ALL SHOP AND FIELD BOLTED CONNECTIONS SHALL BE IN ACCORDANCE WITH ASTM A-307 USING UNFINISHED AMERICAN STANDARD REGULAR BOLTS,

UNLESS OTHERWISE NOTED. 9. NO HOLES OTHER THAN THOSE SPECIFICALLY DETAILED SHALL BE ALLOWED THRU STRUCTURAL STEEL MEMBERS. BOLT HOLES SHALL CONFORM TO AISC SPECIFICATION, AND SHALL BE STANDARD HOLES UNLESS OTHERWISE NOTED. NO CUTTING OR BURNING OF STRUCTURAL STEEL WILL BE PERMITTED WITHOUT

FRAMING LUMBER:

1. ALL VISUALLY GRADED FRAMING LUMBER SHALL CONFORM TO THE GRADING RULES SET FORTH BY THE WEST COAST LUMBER INSPECTION BUREAU (WCLIB) OR THE WESTERN WOOD PRODUCTS ASSOCIATION (WWPA). EACH PIECE SHALL BEAR THE GRADE STAMP OF AN APPROVED GRADING AGENCY, EXCEPT EXPOSED LUMBER

SHALL BEAR NO MARKINGS WHICH WILL BE VISIBLE AFTER INSTALLATION. FRAMING LUMBER SHALL BE DOUGLAS FIR-LARCH, UNLESS OTHERWISE NOTED. 2x AND 4x SAWN LUMBER SHALL HAVE A MOISTURE CONTENT NOT MORE THAN 19% AT TIME OF FABRICATION. THE FOLLOWING GRADES SHALL BE THE MINIMUM ACCEPTABLE GRADES, UNLESS OTHERWISE NOTED.

MINIMUM GRADE

STUDS: 2" THICK, 4" WIDE (STUD HT = 8'-1" MAX).... ...NO. 2 2" THICK, 4" TO 6" WIDE.. ..NO. 2 STRUCTURAL JOISTS AND LIGHT FRAMING:

2" TO 4" THICK, 4" AND WIDER.. .NO. 1 BEAMS AND STRINGERS: 5" AND THICKER, 6" AND WIDER.. ..NO. 1

POST AND TIMBERS: 5" x 5" AND LARGER.

3. STRUCTURAL PLYWOOD SHALL CONFORM TO U.S. PRODUCT STANDARD PS 1-07. STRUCTURAL USE PANELS SHALL CONFORM TO PS 2-04 (APA PRP-108). APA GRADE STAMP SHALL BE PROVIDED ON ALL SHEATHING. SHEATHING SHALL BE EXPOSURE 1 (EXTERIOR GLUE). INSTALL WITH FACE GRAIN ACROSS SUPPORTS EXCEPT WHERE NOTED ON PLANS OR DETAILS. PROVIDE GAPS AT ALL EDGES AS RECOMMENDED BY APA. ROOF AND FLOOR SHEATHING AND SHEAR WALL PANELS SHALL BE IN PLACE AND INSPECTED BY THE BUILDING OFFICIAL PRIOR TO COVERING.

FRAMING HARDWARE SHALL BE SIMPSON "STRONG TIE" OR EQUAL, UNLESS OTHERWISE NOTED. SUBSTITUTIONS SHALL BEAR ICC APPROVAL.

5. NAILING NOTES:

A. ALL NAILS SHALL BE COMMON NAILS IN CONFORMANCE WITH FEDERAL SPECIFICATIONFF-N-105B. UNLESS OTHERWISE SPECIFIED ON DRAWINGS. SINKERS SHALL NOT BE SUBSTITUTED UNLESS SPECIFICALLY APPROVED BY THIS ENGINEER.

B. ALL NAILS EXPOSED TO THE WEATHER SHALL BE GALVANIZED.

WOOD SCREWS SHALL BE IN CONFORMANCE WITH A.N.S.I. B18.6.1

C. TOE NAILS SHALL BE DRIVEN AT AN ANGLE OF 30 DEGREES TO THE PIECE SURFACE AND BE STARTED AT 1/3 THE LENGTH FROM THE EDGE OF THE PIECE.

8. BOLTS AND LAG SCREWS SHALL CONFORM TO A.N.S.I. B18.2.1. ALL BOLTS THRU WOOD SHALL HAVE STANDARD CUT WASHERS EXCEPT WHERE METAL SIDE PLATES ARE SPECIFIED. BOLT HOLES SHALL BE BORED 1/32" TO 1/16" LARGER THAT THE BOLT DIAMETER, UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL INSTALL A SIMPSON BP-5/8-S WITH (4) SDS 1/4 x 1 1/2 SCREWS AT ALL HOLES LARGER THAN 1/16" OVERSIZED AT NO ADDITIONAL COST. ALL BOLTS SHALL BE RETIGHTENED PRIOR TO APPLICATION OF PLASTER, PLYWOOD, ETC.

9. ALL WOOD BEARING ON CONCRETE OR MASONRY IF LESS THAT 4'-0" ABOVE GRADE SHALL BE PRESSURE TREATED DOUGLAS FIR.

10. STRUCTURAL MEMBERS SHALL NOT BE CUT FOR PIPES, ETC. UNLESS SPECIFICALLY NOTED OR DETAILED.

SPECIAL INSPECTION REQUIREMENTS:

1. ALL WORK SHALL CONFORM TO TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR). 2. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGED DOCUMENT APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24,

3. A PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR; CLASS 2.

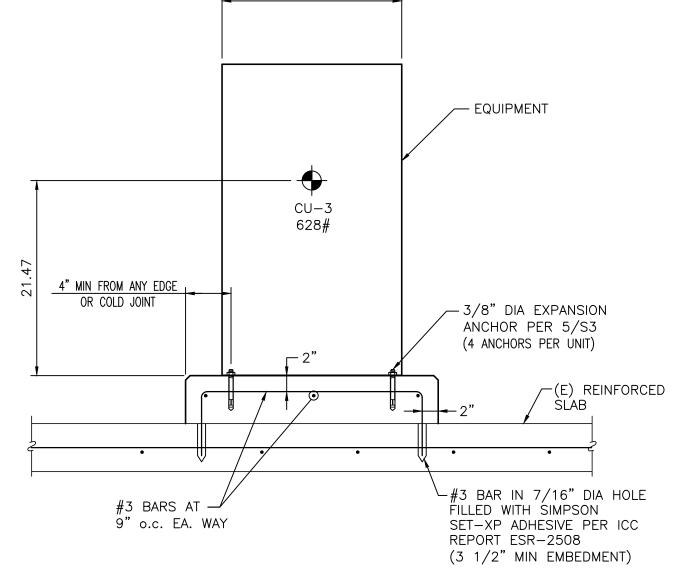
ABBREVIATIONS:

 ANCHOR BOLT ID INSIDE DIAMETER ABOVE FINISH FLOOR MACHINE BOLT MB MANUFACTURER BLK BLOCK BOUNDARY NAILING MINIMUM BOTTOM (N) - NEW CEILING JOIST NEAR SIDE CLR CLEAR NOT TO SCALE CONCRETE o.c. - ON CENTER CONT CONTINUOUS OUTSIDE DIAMETER DIMENSION OPPOSITE HAND DOUBLE PLCS - PLACES DOUGLAS FIR PLY - PLYWOOD PRESSURE TREATED DIAMETER EXISTING REINF - REINFORCEMENT FACH REQ'D - REQUIRED EN EDGE NAILING ROOF RAFTER EQUAL SHT'G - SHEATHING EQUIP - EQUIPMENT SIM SIMILAR FDN FOUNDATION SQUARE FIELD NAILING FΝ STD STANDARD FIBER REINFORCED PLASTIC STIFF STIFFENER FAR SIDE THK - THICK FOOTING T.O. — TOP OF GLB - GLU-LAM BEAM TS - TUBE STEEL HD - HOLD DOWN TYP – TYPICAL HORIZ – HORIZONTAL UON - UNLESS OTHERWISE NOTED

VERT - VERTICAL

CABINET NOT SHOWN FOR CLARITY SEE 1/S3 FOR CABINET ANCHORAGE

SEE EXISTING PLAN #3 BARS AT ┌(E) RAISED CONC. PAD 9" o.c. HEIGHT OF PAD -EXTENSION TO MATCH EXISTING (5"±)-(E) CONC SLAB $\frac{4}{3}$ BAR AT 12" o.c. IN 1/2" DIA x 3" DEEP HOLE FILLED WITH



15.34

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITEC APP. 03-119660 INC: REVIEWED FOR SS I DIFLS I HESTACS I DATE: 10/25/2019

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COL COL ESIA CA.

RAISED PAD EXTENSION RAISED CONC. PAD ON EXISTING SLAB

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CU-2

159#

#3 AT 9" o.c. ËA. WAY

SEE PLAN

SIMPSON SET-XP ADHESIVE PER

ICC ESR-2508

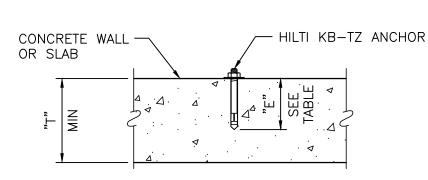
1. SUBSTITUTION OF A HILTI KWIK BOLT TZ ANCHOR WITH OTHER EXPANSION ANCHORS MANUFACTURED BY HILTI OR BY OTHER MANUFACTURERS IS NOT ALLOWED WITHOUT THE WRITTEN APPROVAL OF THIS ENGINEER PRIOR TO INSTALLATION. THE CONTRACTOR SHALL BEAR THE ENTIRE COST OF REPLACEMENT OF NON-APPROVED ANCHORS.

2. THE CONTRACTOR SHALL ACCURATELY LOCATE ALL EXISTING REINFORCING BY X-RAY OR EQUIVALENT METHODS. NO REBAR OR TENDONS SHALL BE CUT. ALL EXPENSES RELATED TO REPAIR OF CUT REBAR OR TENDONS SHALL BE ENTIRELY AT THE EXPENSE OF THE CONTRACTOR.

3. SPECIAL INSPECTION IS REQUIRED FOR INSTALLATION OF ANCHORS.

4. INSTALLATION OF CONCRETE ANCHORS IN MASONRY IS NOT ALLOWED. 5. USE STAINLESS STEEL FOR EXPOSED APPLICATIONS. CARBON STEEL SHALL BE USED

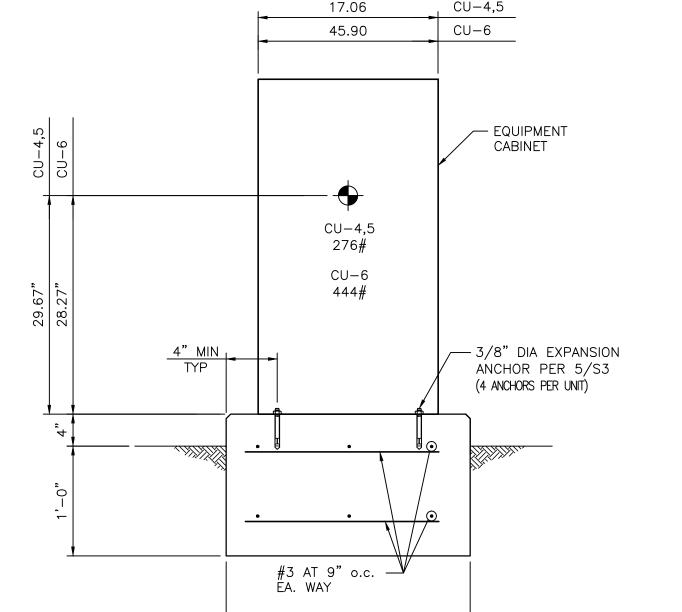
FOR INTERIOR APPLICATIONS ONLY.



ANCHOR SCHEDULE (1) DIA EMBEDMENT THICKNESS 1/2" | 1/2" | 3 1/4" 5/8" | 5/8" | 3/4" 3/4" 4 3/4"

(1) INFORMATION SHOWN IN THIS TABLE IS IN ACCORDANCE WITH ICC REPORT ESR-1917.

HILTI KWIK BOLT TZ EXPANSION ANCHOR



SEE PLAN **EQUIPMENT PAD**

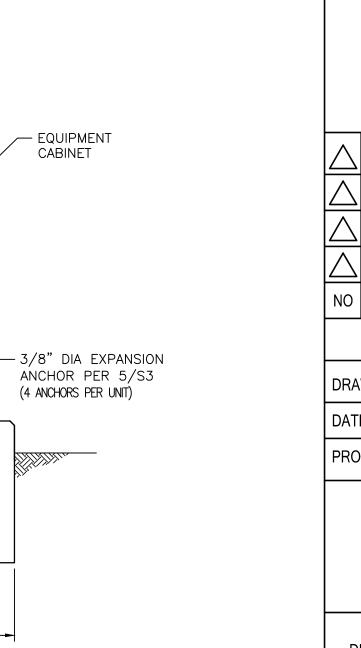
EQUIPMENT

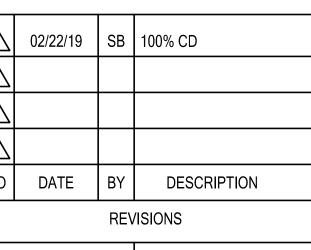
CABINET

15.34

CU-1

256#





DRAWN: GMB CHECKED: SB DATE: 02/22/19 SCALE: AS NOTED PROJECT NUMBER: AS NOTED

CONSTRUCTION

5-3

CONSTRUCTION NOTES

PRIOR CONSENT OF THIS ENGINEER.

EQUIPMENT PAD

DETAILS

NUMBER

