

CLOVIS UNIFIED SCHOOL DISTRICT

BUCHANAN HIGH SCHOOL COLD BOX REPLACEMENT

1560 N. MINNEWAWA AVE.
CLOVIS, CA 93619

APPROVALS:
APPLICATION #
02-120017

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-120017 INC:
REVIEWED FOR
SS FLS ACS
DATE: 03/01/2023



DATE: 12-27-2022

OWNER
CLOVIS UNIFIED SCHOOL DISTRICT

1450 HERNDON AVE.
CLOVIS, CA 93611
(559) 327-9000

CONTACT: ADAM BELMONT

MECHANICAL ENGINEER
LAWRENCE ENGINEERING GROUP

7084 NORTH MAPLE AVE. SUITE 101
FRESNO, CA 93720
(559) 431-0101

CONTACT: RYAN CARLSON

ELECTRICAL ENGINEER
BORELLI & ASSOCIATES, INC.

2032 N. GATEWAY BLVD.
FRESNO, CA 93727
(559) 233-4438

CONTACT: JOHN BORELLI

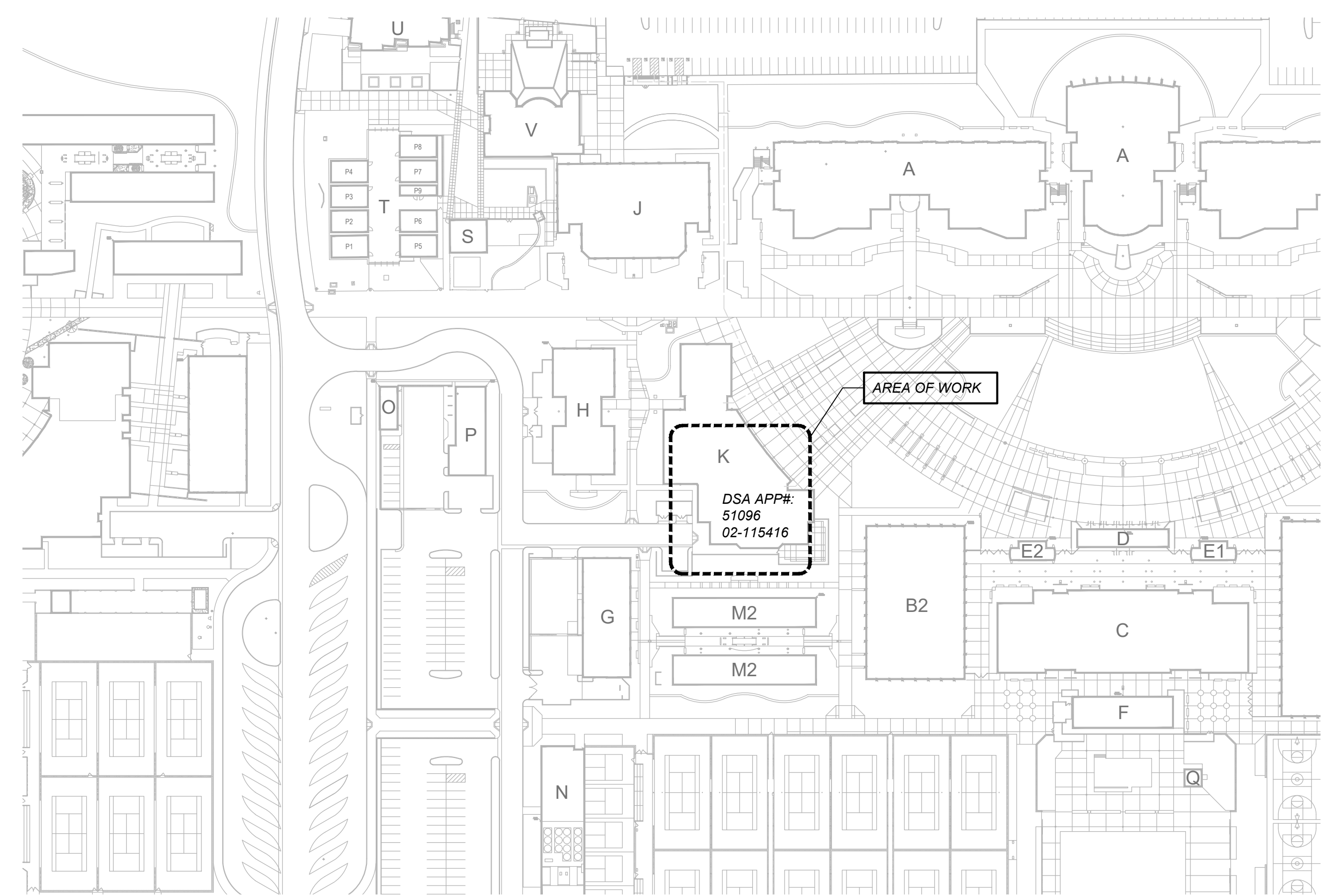
STRUCTURAL ENGINEER
PARRISH HANSEN

418 CLOVIS AVE.
CLOVIS, CA 93612
(559) 323-1023

CONTACT: BOB PARRISH

GENERAL NOTES:

- ALL WORK SHALL CONFORM TO 2019 EDITION TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
- CHANGE TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY DSA, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
- A "DSA CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR. PROJECT REQUIRES A CLASS 3 INSPECTOR.
- A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
- THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317(C), PART 1, TITLE 24, CCR)
- LAYOUT OF MATERIALS, EQUIPMENT AND SYSTEMS IS GENERALLY DIAGRAMMATIC UNLESS SPECIFICALLY DIMENSIONED. SOME WORK MAY BE SHOWN OFFSET FOR CLARITY. THE ACTUAL LOCATIONS OF ALL MATERIALS, PIPING, DUCTWORK, FIXTURES, EQUIPMENT, SUPPORTS, ETC. SHALL BE CAREFULLY PLANNED, PRIOR TO INSTALLATION OF ANY WORK TO AVOID ALL INTERFERENCE WITH EACH OTHER, OR WITH STRUCTURAL, ELECTRICAL, ARCHITECTURAL, OR OTHER ELEMENTS. ALL DUCT AND PIPE OFFSET ELBOWS FOR COORDINATION BETWEEN TRADES ARE NOT SHOWN. CONTRACTOR SHALL INCLUDE SUFFICIENT FUNDS FOR THE COORDINATION OFFSETS IN THE BID. VERIFY THE PROPER VOLTAGE AND PHASE OF ALL EQUIPMENT WITH THE ELECTRICAL PLANS. ALL CONFLICTS SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER PRIOR TO THE INSTALLATION OF ANY WORK OR THE ORDERING OF ANY EQUIPMENT.
- MEP COMPONENT ANCHORAGE NOTE**
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 2019 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-16 CHAPTER 13, 26 AND 30.
 - ALL PERMANENT EQUIPMENT AND COMPONENTS.
 - TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (e.g. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.
 - 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.



OVERALL SITE PLAN
SCALE: 1"=100'-0"

KEYNOTES: (THIS SHEET ONLY)
① THIS PROJECT HAS NO DEFERRED SUBMITTALS.

(E) PATH OF TRAVEL (POT).
DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT: THE POT IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS MEETS THE REQUIREMENTS OF THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE (CBC) ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WERE DETERMINED TO BE NONCOMPLIANT WITH THE CBC HAVE BEEN IDENTIFIED AND THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE INDICATED IN THESE CONSTRUCTION DOCUMENTS. DURING CONSTRUCTION, IF POT ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CBC COMPLIANT ARE FOUND TO BE NONCONFORMING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THE ITEMS SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT."

SHEET INDEX	
MECHANICAL	SHEET COUNT
G-1 COVER SHEET	1
M-1 MECHANICAL DEMOLITION FLOOR & ROOF PLAN	2
M-2 MECHANICAL FLOOR & ROOF PLAN	3
M-3 MECHANICAL SCHEDULES & DETAILS	4
M-4 MECHANICAL SPECIFICATIONS	5
ELECTRICAL	
E1.01 SYMBOLS LEGEND, NOTES, ABBREVIATIONS	6
E1.02 ADDITIONAL ELECTRICAL NOTES	7
E1.03 PARTIAL SINGLE LINE DIAGRAM, PANEL SCHEDULE, WEIGHT AND DIMENSION SCHEDULE	8
E2.01 ELECTRICAL SITE PLAN	9
E3.01 PARTIAL BUILDING 'K' DEMOLITION ELECTRICAL ROOF & FLOOR PLAN	10
E3.02 PARTIAL BUILDING 'K' ELECTRICAL ROOF & FLOOR PLAN	11
E4.01 TYPICAL DETAILS	12
STRUCTURAL	
S1.0 STRUCTURAL DETAILS	13
SHEET COUNT TOTAL:	13

BUILDING ANALYSIS	
OCCUPANCY:	A3, B
EXISTING AREA:	690 FT ²
CONSTRUCTION TYPE:	TYPE III - 1HR. - SPRINKLERED
FLOOD HAZARD ZONE X (SHADED):	AS DELINEATED ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP (MAP NUMBER 06019C1580H) FOR COMMUNITY NO. 060044, CITY OF CLOVIS, FRESNO COUNTY, CALIFORNIA, EFFECTIVE FEBRUARY 18, 2009, THE PROPERTY SHOWN ON THIS MAP LIES FULLY WITHIN FLOOD ZONE AREA DESIGNATED ZONE X (SHADED), WHICH ARE AREAS OF 0.2% ANNUAL CHANCE FLOODING.

SCOPE OF WORK
THE SCOPE OF WORK IS AS INDICATED BY THE CONTRACT DRAWINGS AND SPECIFICATION AND IS SUMMARIZED AS FOLLOWS:

- REPLACE EXISTING WALK-IN COOLER & FREEZER. SPACE IS STAFF ONLY AND DOES NOT INVOLVE ANY STUDENT PARTICIPATION NOR ARE THEY AVAILABLE TO THE GENERAL PUBLIC.
- REPLACE EXISTING REFRIGERATION CONDENSING UNITS ON ROOF.

- APPLICABLE CODES**
- 2022 CALIFORNIA ADMINISTRATIVE CODE - CCR TITLE 24, PART 1
 - 2019 CALIFORNIA BUILDING CODE - CCR TITLE 24, PART 2
 - 2019 CALIFORNIA ELECTRICAL CODE - CCR TITLE 24, PART 3
 - 2019 CALIFORNIA MECHANICAL CODE - CCR TITLE 24, PART 4
 - 2019 CALIFORNIA PLUMBING CODE - CCR TITLE 24, PART 5
 - 2019 CALIFORNIA ENERGY CODE - CCR TITLE 24, PART 6
 - 2019 CALIFORNIA FIRE CODE - CCR TITLE 24, PART 9
 - 2019 EXISTING BUILDING CODE - CCR TITLE 24, PART 10
 - 2019 CALIFORNIA GREEN CODE - CCR TITLE 24 PART 11
 - 2019 CALIFORNIA REFERENCE CODE - CCR TITLE 24 PART 12
 - TITLE 19 CCR PUBLIC SAFETY, STATE FIRE MARSHALL REGULATIONS
 - 2019 NFPA 72 FOR FIRE ALARM SYSTEM. CFC CH 33 FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION

Statement of General Conformance
FOR ARCHITECTS/ENGINEERS WHO UTILIZE PLANS, INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS, PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS
(Application No. 02-120017 File No. 10-113)
The Architectural, Structural and Electrical Drawings Listed above have been prepared by other design professionals or consultants who are licensed and/or authorized to prepare such drawings in this state. They have been examined by me for:

- Design intent and appears to meet the appropriate requirements of Title 24, California Code of Regulations and the project specifications prepared by me, and
- Coordination with my plans and specifications and is acceptable for incorporation into the construction of this project.

This Statement of General Conformance shall not be construed as relieving me of my rights, duties, and responsibilities under Section 17302 and 81138 of the Education Code and Sections 4-336, 4-341 and 4-344 of Title 24, Part 1, (Title 24, Part 1, Section 4-317 (b))
Ryan W. Carlson
LICENSE NUMBER: M34846
EXPIRATION DATE: 6-30-24

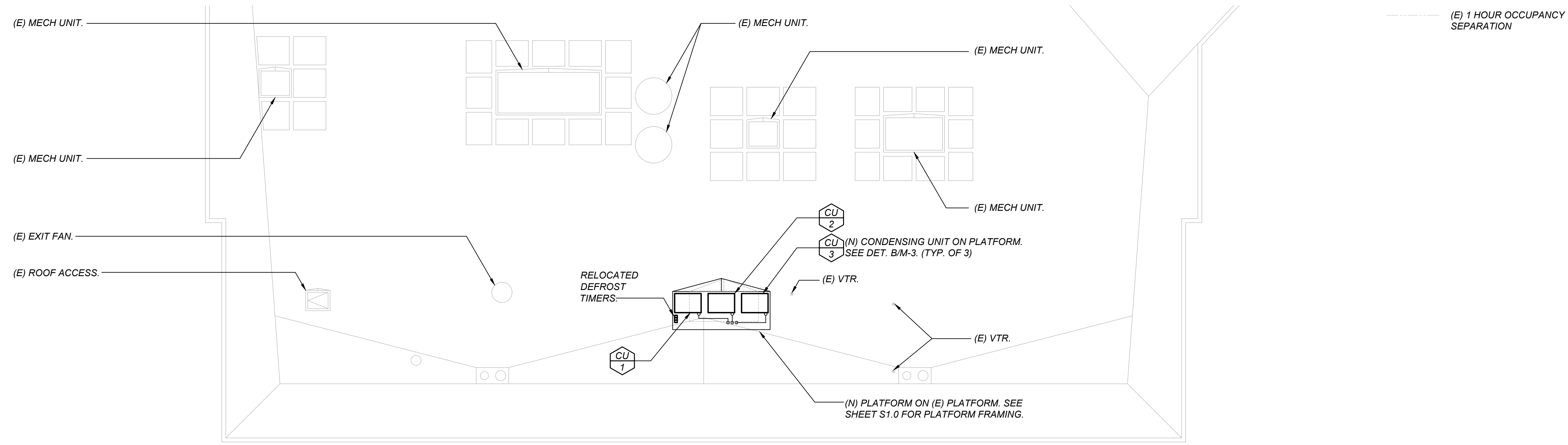
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REVISIONS

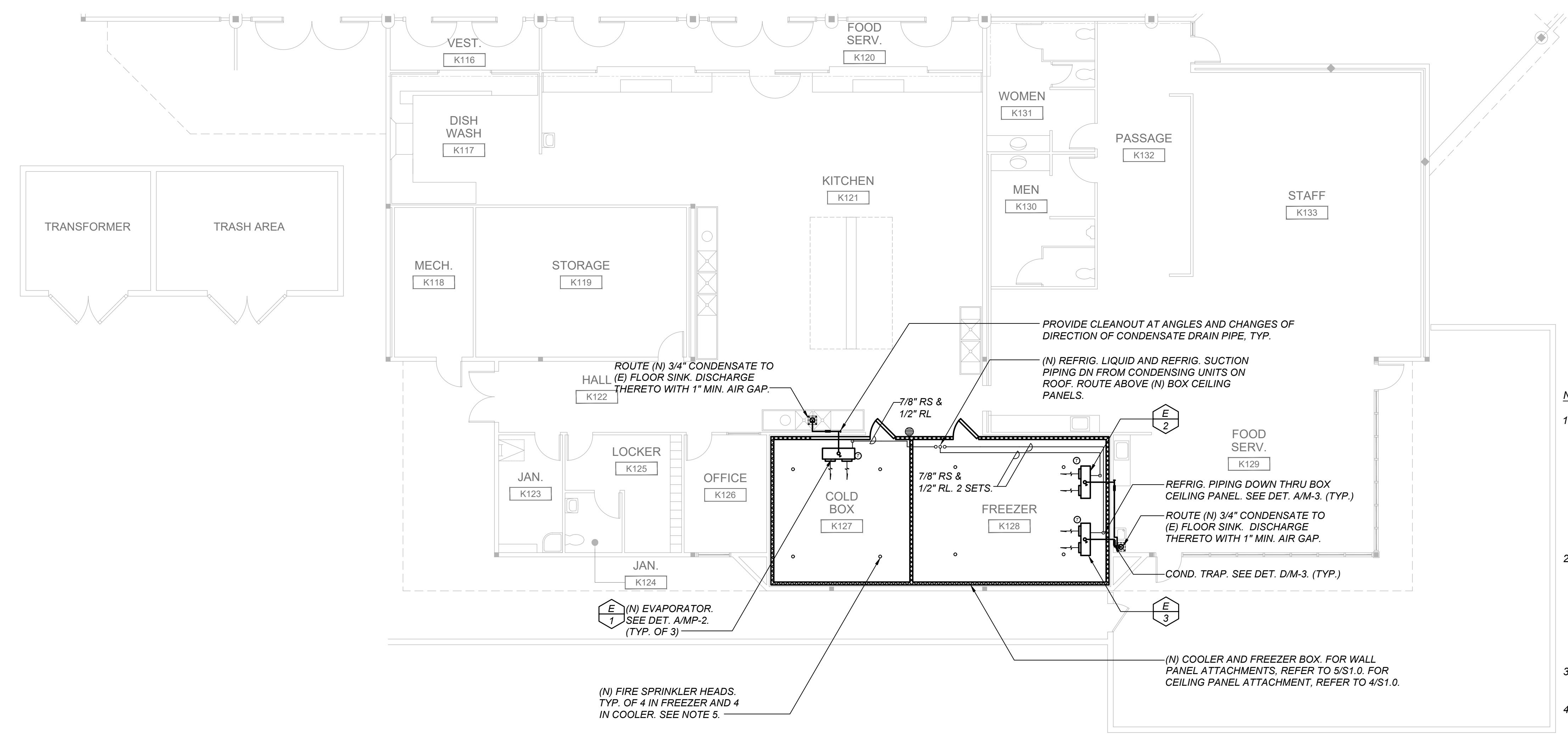
LAWRENCE ENGINEERING GROUP
FRESNO, CA 93727
4910 E. Clinton Way, Suite 101
(559) 431-1342
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TITLE:
COVER
SHEET

SHEET:
G-1
PROJECT 21191



MECHANICAL ROOF PLAN
SCALE: 1/8"=1'-0"



MECHANICAL FLOOR PLAN
SCALE: 1/8"=1'-0"

- NOTES:**
- FREEZER BOX TO BE 17'-5"W x 23'-3"L x 8'-0"H, COOLER BOX TO BE 17'-5"W x 16'-6"L x 8'-0"H AND INCLUDE THE FOLLOWING:
STUCCO EMBOSSED 26 GA. GALV. INT. FINISH. SMOOTH CEILING FINISH.
22 GA. STAINLESS STEEL FLOOR.
(x) LED LIGHT FIXTURES.
DEFROST TIMER.
FREEZER PRESSURE RELIEF PORT.
 - COOLER DOOR TO BE 36" WIDE x 76" HIGH. FREEZER DOOR TO BE 36" WIDE x 76" HIGH.
BOTH DOORS TO HAVE:
DIAMOND PLATE ON LOWER 1/2 OF DOOR. VERTICAL ERGO HANDLE.
LED LIGHT & THERMOMETER SWITCH.
FREEZER DOOR TO HAVE FRAME HEATER.
 - SLOPE CD 1/4" PER FOOT DOWN INSIDE FREEZER BOX.
 - REFRIGERANT PIPING IS SHOWN AS A SINGLE LINE FOR CLARITY. EACH SINGLE REFRIGERANT LINE REPRESENTS 2 PIPES, REFRIGERANT LIQUID AND REFRIGERANT SUCTION, AS NOTED.
 - EXISTING FIRE SPRINKLER SYSTEM TO REMAIN. REPLACE DRY SPRINKLER HEAD WITH NEW IN ACCORDANCE TO NPFA 13 (2016) §8.4.9. IF DRY SPRINKLERS ARE LESS THAN 10-YEARS OLD, HEADS MAY BE REPLACED IN ACCORDANCE TO NFPA 13 (2016) §6.2.1.1.1.

**BUCHANAN HIGH SCHOOL
COLD BOX REPLACEMENT**
1560 N. MINNEWAWA AVE.
CLOVIS, CA 93619

REVISIONS



TITLE:
MECHANICAL
PLAN

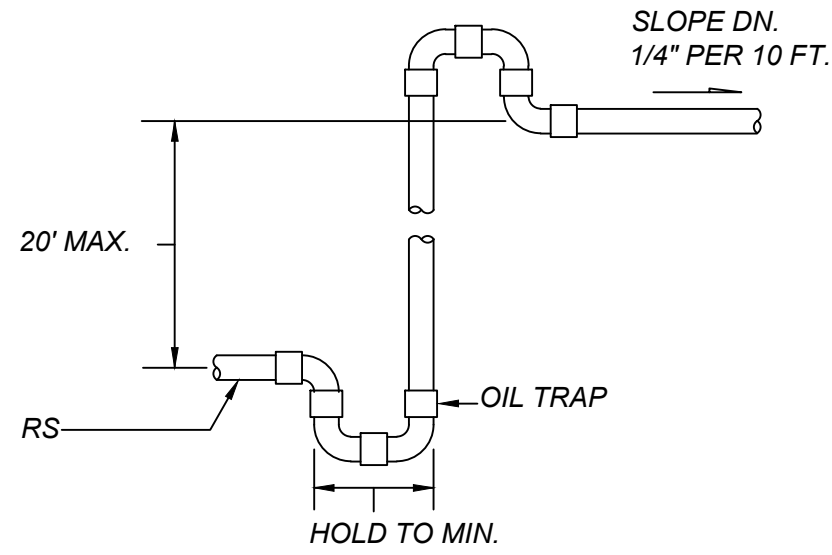
SHEET:
M-2
PROJECT: 21191

EVAPORATOR SCHEDULE			
DESIGNATION	E 1	E 2	E 3
AIRFLOW (CFM)	1,281	1,371	1,371
FLA (AMPS)	1.0	1.0	1.0
MCA / MOCP	10.1 / 15	10.1 / 15	10.1 / 15
VOLTS/PHASE	208 / 1	208 / 1	208 / 1
NO. OF FANS	2	1	1
TOTAL CAP. (MBH)	14.60	8.40	8.40
AWEF (AT ARI)	4.03	4.03	4.03
REFRIGERANT	R-448A	R-448A	R-448A
EVAP. TEMP. (°F)	25	-20	-20
BOX TEMP. (°F)	35	-10	-10
REFRIGERANT PIPING			
LIQUID (IN.)	1/2	1/2	1/2
SUCTION (IN.)	7/8	5/8	5/8
CONDENSATE CONN. (IN.)	3/4	3/4	3/4
DIMENSIONS (IN.)			
(LxWxH)	75"x10"x27"	75"x10"x27"	75"x10"x27"
MANUFACTURER			
MODEL NUMBER	BOHN	BOHN	BOHN
LOCATION	BEL0100BS6EMA	BEL0080BS6EMAB	BEL0080BS6EMAB
OPER. WT (LBS)	COOLER	FREEZER	FREEZER
ACCESSORIES	60	54	54
	1.3	2.3	2.3

1. PROVIDE WITH ELECTRIC DEFROST, 230V 1Ø 9.1 AMPS
2. PROVIDE WITH ELECTRIC DEFROST, 230V 1Ø 9.1 AMPS
3. PROVIDE WITH ELECTRONIC THERMOSTAT, THERMOSTATIC EXPANSION VALVE, SOLENOID VALVE

CONDENSING UNIT SCHEDULE			
DESIGNATION	CU 1	CU 2	CU 3
NAME PLATE AMPS	13.3	10.9	10.9
VOLTS/PHASE	208/1	208/3	208/3
MCA / MOP	20 / 30	20 / 45	20 / 45
COMPRESSOR HP	2.0	3.0	3.0
AWEF (AT ARI)	7.6	3.15	3.15
COOLING CAP (MBH)	14.6	8.4	8.4
AMBIENT (°F)	110	110	110
REFRIGERANT	R448A	R448A	R448A
SUCTION LINE CONN. (IN.)	7/8	5/8	5/8
LIQUID LINE CONN. (IN.)	1/2	1/2	1/2
DIMENSIONS (IN.)			
(LxWxH)	44"x30"x29"	39"x28"x20"	39"x28"x20"
MANUFACTURER			
TYPE	BOHN	BOHN	BOHN
SERVICE	AIR-COOLED	AIR-COOLED	AIR-COOLED
MODEL NUMBER	COOLER	FREEZER	FREEZER
LOCATION	BCH0020MBALZA	BCH0030LBACZA	BCH0030LBACZA
OPER. WT (LBS)	ROOF	ROOF	ROOF
ACCESSORIES	220	297	297
	1.2	1.2	1.2

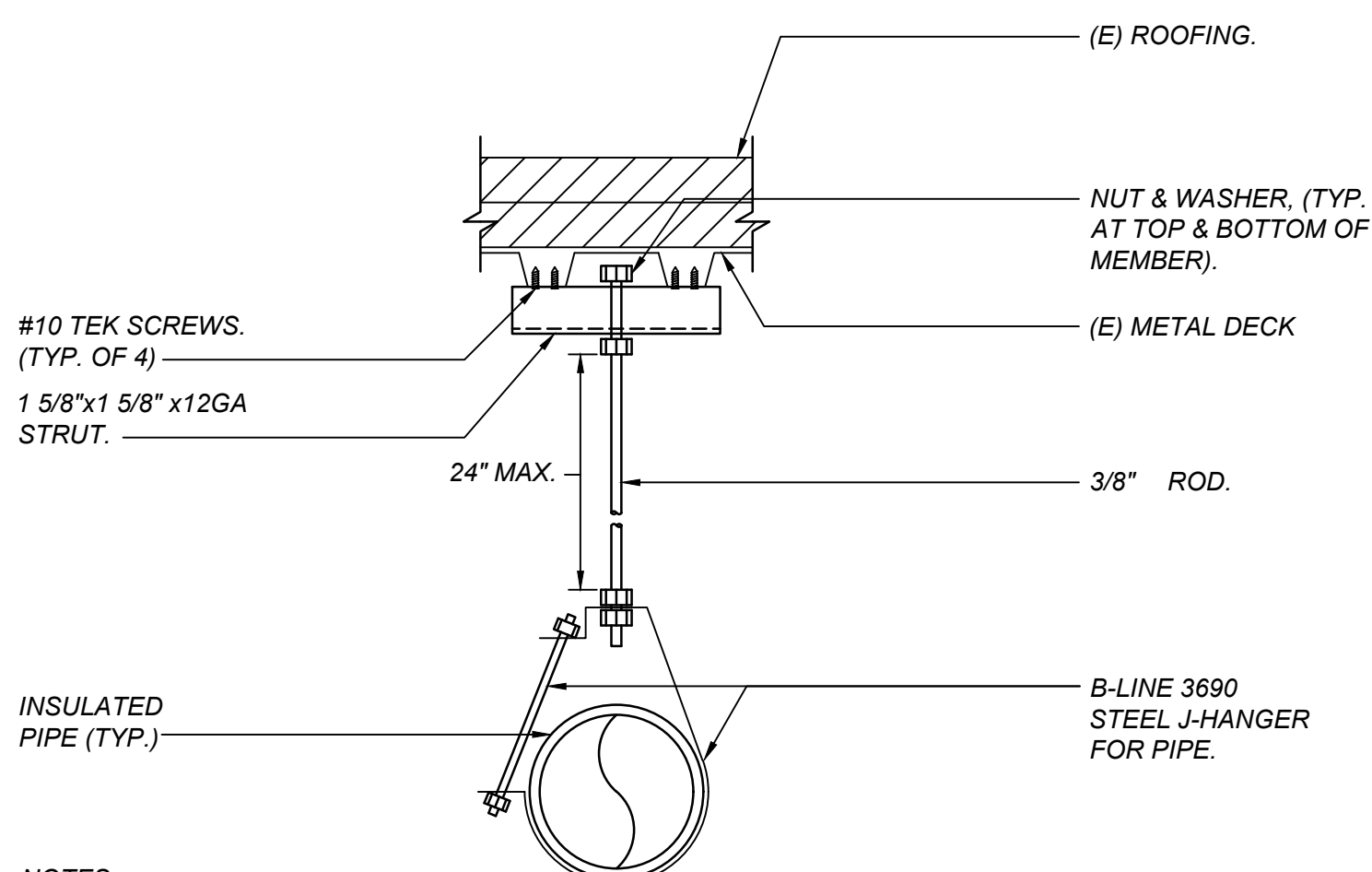
1. PROVIDE WITH ELECTRONIC THERMOSTAT
2. REPLACEABLE CORE SUCTION FILTER, REPLACEABLE CORE LIQUID FILTER, FAN CYCLING CONTROL, SUCTION ACCUMULATOR, MANUAL RESET HIGH PRESSURE SWITCH.



RS RISER DETAIL

SCALE: NONE

E
M-3

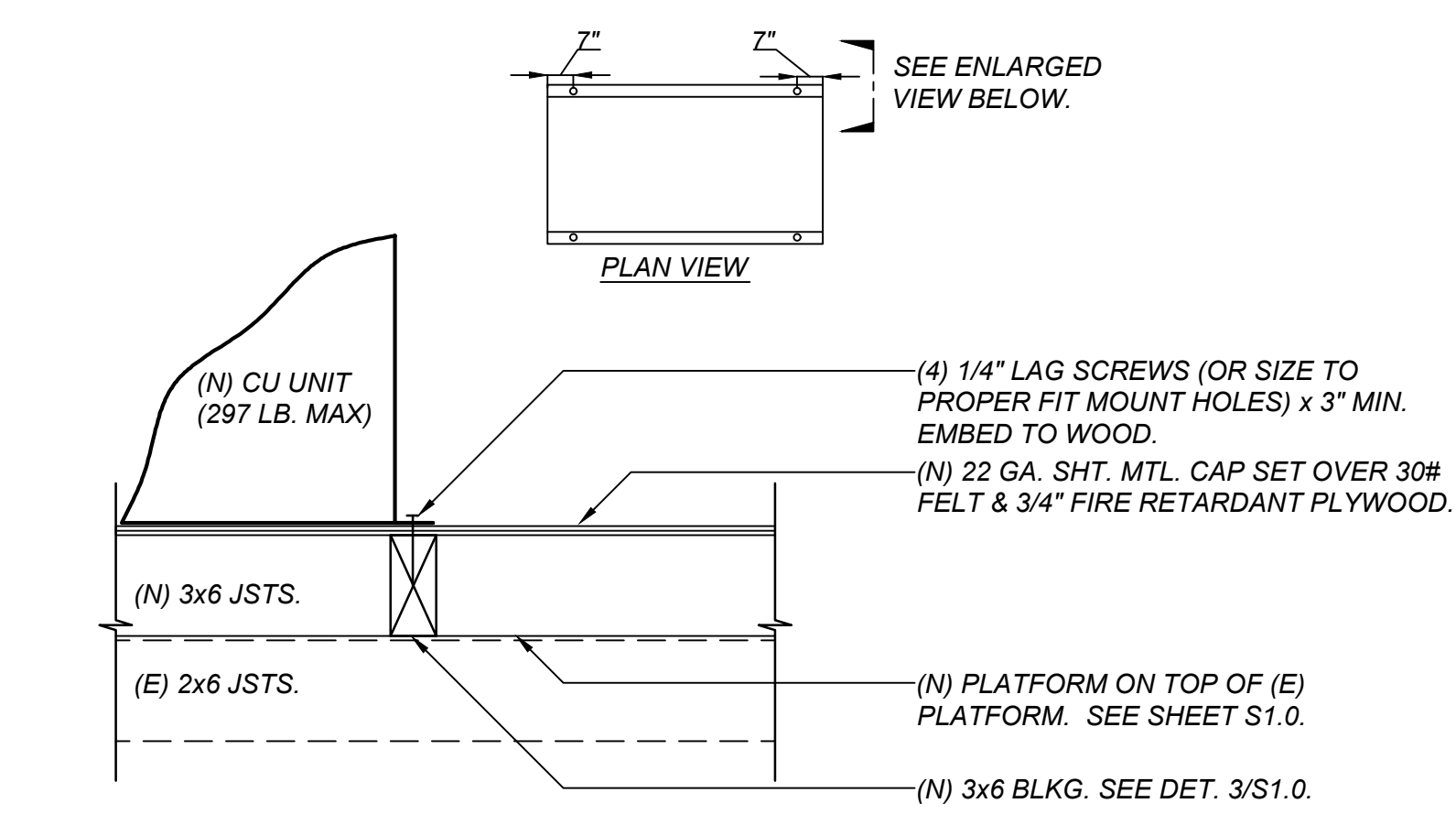


- NOTES:
1. SEE PLANS FOR PIPE SIZE. MAXIMUM PIPE SIZE 7/8\"/>
 - 2. MAXIMUM 6 FT SPACING AND AT EVERY CHANGE OF DIRECTION.

PIPE SUPPORT HANGER DETAIL

SCALE: NONE

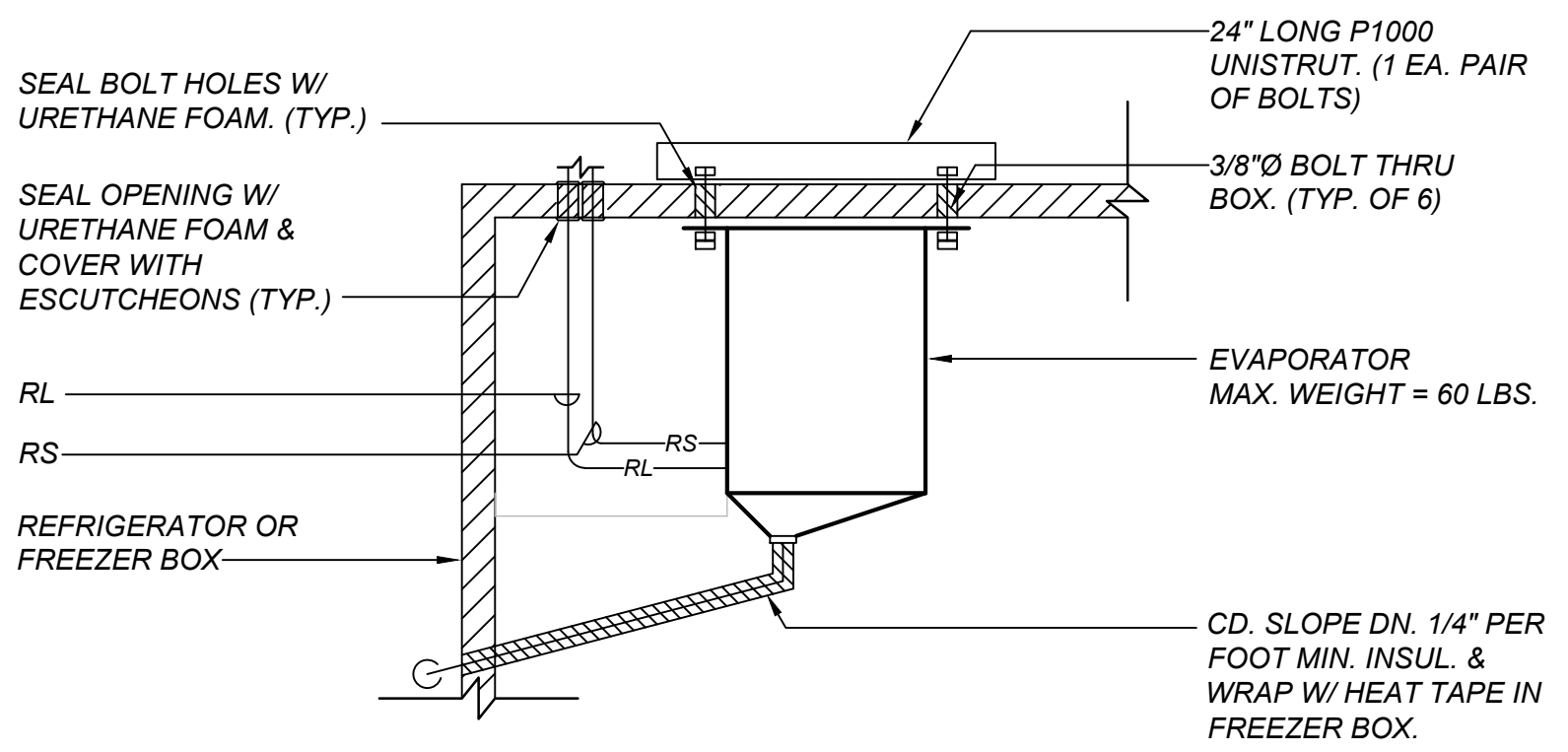
F
M-3



CONDENSING UNIT ON PLATFORM

SCALE: NONE

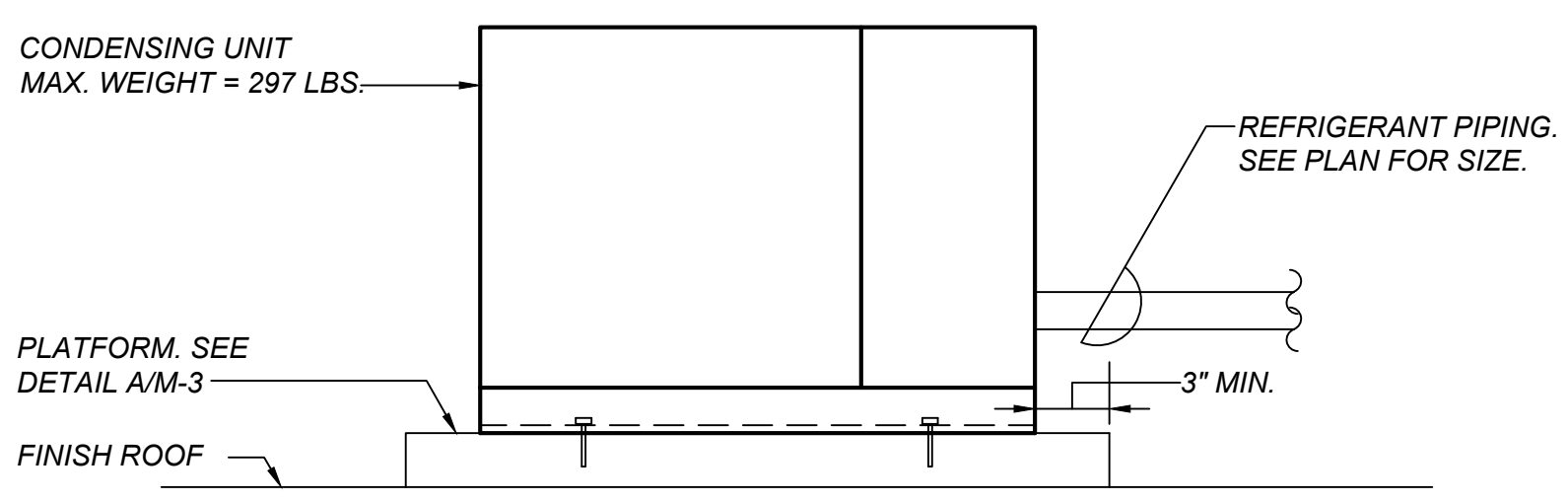
A
M-3



EVAPORATOR MOUNTING DETAIL

SCALE: NONE

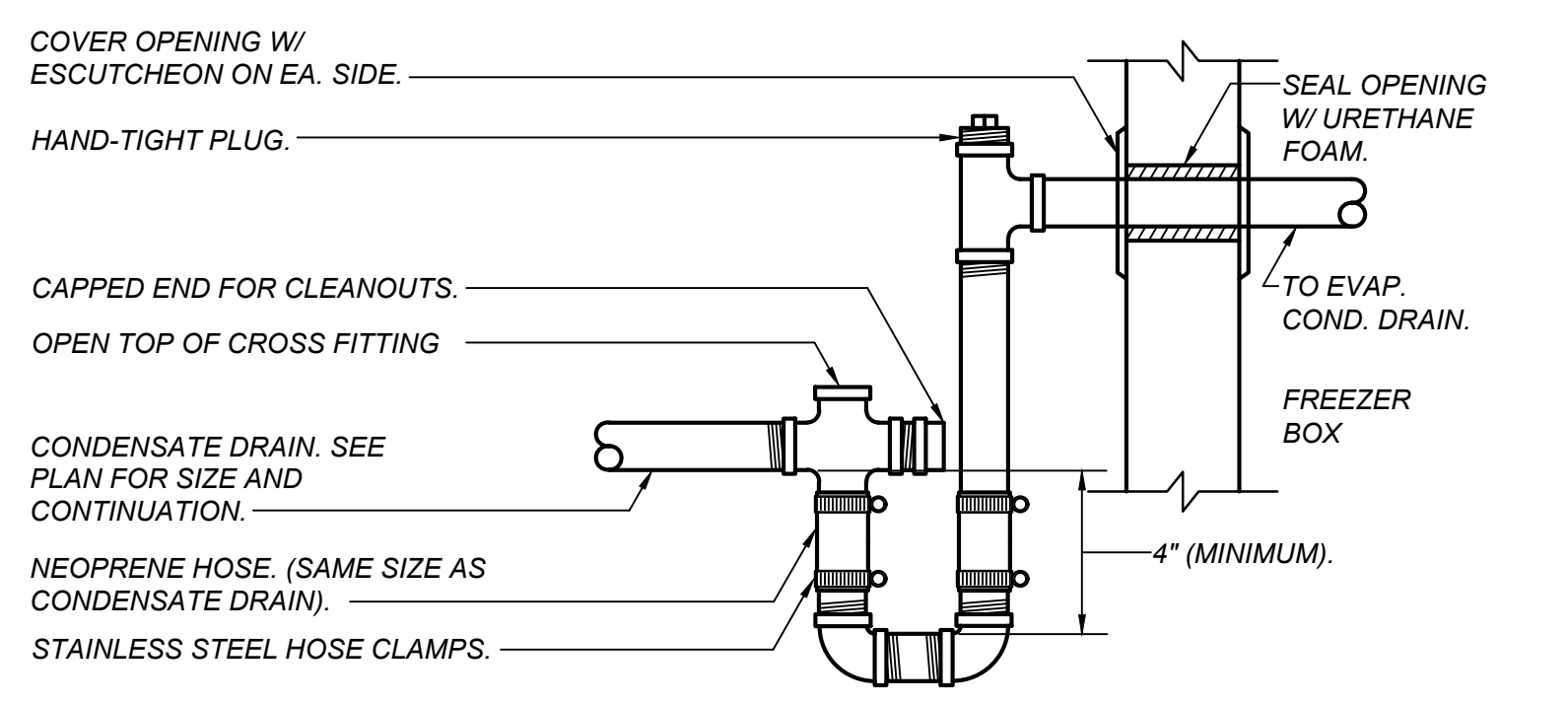
B
M-3



CONDENSING UNIT MOUNTING DETAIL

SCALE: NONE

C
M-3



CONDENSATE DRAIN CONNECTION DETAIL

SCALE: NONE

D
M-3

BUCHANAN HIGH SCHOOL
COLD BOX REPLACEMENT
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CLOVIS, CA 93619

REVISIONS

LAWRENCE
ENGINEERING GROUP
4910 E. Clinton Way, Suite 101
Clovis, CA 93617
(559) 431-1342
(559) 431-0101

TITLE:
MECHANICAL
SCHEDULES &
DETAILS

SHEET:
M-3
PROJECT: 21191

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
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REVISIONS					
	1				
	2				
	3				
	4				
	5				

LAWRENCE
ENGINEERING GROUP
4910 E. Clinton Way, Suite 101
(559) 431-1342
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TITLE:
MECHANICAL
SPECIFICATIONS

SHEET:
M-4
PROJECT 21191

MECHANICAL SPECIFICATIONS:

- GENERAL:** ALL GENERAL MECHANICAL SPECIFICATIONS APPLY TO THIS SECTION.
- PIPE LAYOUT:** ROUTE PIPING TO AVOID CUTTING STRUCTURAL MEMBERS. WHERE CUTTING OR NOTCHING IS REQUIRED, THE STRUCTURAL MEMBER SHALL BE REINFORCED IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE. PIPING SHALL BE INSTALLED TO ENSURE UNRESTRICTED FLOW, ELIMINATE AIR POCKETS, PREVENT UNUSUAL NOISE AND PERMIT COMPLETE DRAINAGE OF THE SYSTEM. PROVIDE INDIVIDUAL SHUT OFF VALVES AT EACH EQUIPMENT ITEM.
- PIPING MATERIALS:**
 - REFRIGERANT:** HARD DRAWN TYPE ACR COPPER, WROUGHT COPPER FITTINGS, SILVER ALLOY BRAZED, 1100°F, SILFOS.
 - CONDENSATE DRAIN:** HARD TEMPER TYPE L COPPER, ASTM B88, 95-5 TIN-ANTIMONY SOLDER, WROUGHT COPPER FITTINGS OR SCHEDULE 40 GALV. STEEL, ASTM A53, GALV. MALLEABLE IRON SCREWED FITTING, ANSI B16.3.
- VALVES AND FITTINGS:**
 - LINE VALVE:** BRONZE BODY, BALL TYPE, TFE LOCKED IN SEALS, BACK SEATED VALVE STEM, CONTROLMATICS C-11.
 - VIBRATION ISOLATING CONNECTION:** SEAMLESS FLEXIBLE BRONZE TUBING, BRAID COVERED, SUITABLE FOR SYSTEM PRESSURE, AMERICAN.
 - SOLENOID VALVE:** FULL LINE SIZE, SPORLAN.
- PIPING FREEZE PROTECTION TAPE:** THE SELF-REGULATING HEATING CABLE SHALL CONSIST OF TWO (2) 16 AWG NICKEL-COPPER BUS WIRES EMBEDDED IN PARALLEL IN A SELF-REGULATING POLYMER CORE THAT VARIES ITS POWER OUTPUT TO RESPOND TO TEMPERATURE ALL ALONG ITS LENGTH, ALLOWING THE HEATING CABLE TO BE CUT TO LENGTH IN THE FIELD. THE HEATING CABLE SHALL BE COVERED BY A RADIATION-CROSSLINKED, MODIFIED POLYOLEFIN DIELECTRIC JACKET, TO PROVIDE A GROUND PATH AND TO ENHANCE THE HEATING CABLE'S RUGGEDNESS. THE HEATING CABLE SHALL HAVE A BRAID OF TINNED COPPER AND AN OUTER JACKET OF MODIFIED POLYOLEFIN. POWER CONNECTION, END SEAL, SPLICE, AND TEE KIT COMPONENTS SHALL BE APPLIED IN THE FIELD. HEATING CABLE CIRCUIT SHALL BE PROTECTED BY A GROUND-FAULT DEVICE FOR EQUIPMENT PROTECTION. RAYCHEM XL-TRACE, OR EQUAL.

THE HEATING CABLE SHALL HAVE A SELF-REGULATING FACTOR OF AT LEAST 90 PERCENT. THE SELF-REGULATION FACTOR IS DEFINED AS THE PERCENTAGE REDUCTION, WITHOUT THERMOSTATIC CONTROL, OF THE HEATING CABLE OUTPUT GOING FROM 40°F PIPE TEMPERATURE OPERATION TO 150°F PIPE TEMPERATURE OPERATION. THE HEATING CABLE SHALL OPERATE ON LINE VOLTAGES OF 120 VOLTS WITHOUT THE USE OF TRANSFORMERS. CABLE SHALL BE SIZED AS FOLLOWS:

MINIMUM PIPE SIZE (INCHES)	AMBIENT TEMPERATURE 0°F	-20°F
3 OR LESS	5 WATTS	5 WATTS

ALL HEATING-CABLE COMPONENTS SHALL BE UL LISTED, CSA CERTIFIED, OR FM APPROVED FOR USE AS PART OF THE SYSTEM TO PROVIDE PIPE FREEZE PROTECTION. COMPONENT ENCLOSURES SHALL BE RATED NEMA 4X TO PREVENT WATER INGRESS AND CORROSION. INSTALLATION SHALL NOT REQUIRE THE INSTALLING CONTRACTOR TO CUT INTO THE HEATING-CABLE CORE TO EXPOSE THE BUS WIRES. CONNECTION SYSTEMS THAT REQUIRE THE INSTALLING CONTRACTOR TO STRIP THE BUS WIRES OR THAT US CRIMPS OR TERMINAL BLOCKS, SHALL NOT BE ACCEPTABLE. ALL COMPONENTS THAT MAKE AN ELECTRICAL CONNECTION SHALL BE REENTERABLE FOR SERVICING. NO COMPONENT SHALL USE SILICONE TO SEAL THE ELECTRICAL CONNECTIONS. AN EXCEPTION WILL BE MADE IN AREAS WHERE A CONDUIT TRANSITION IS REQUIRED.

THE SYSTEM SHALL BE CONTROLLED BY A LINE SENSING THERMOSTAT, (EC-TS) SET AT 40°F.

SYSTEM SHALL BE INSTALLED ON THE CONDENSATE DRAIN PIPING INSIDE THE WALK-IN REFRIGERATOR AND FREEZER BOXES. INSTALLATION SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. APPLY THE HEATING CABLE LINEARLY ON THE PIPE AFTER PIPING HAS BEEN SUCCESSFULLY LEAK TESTED. SECURE THE HEATING CABLE TO PIPING WITH CABLE TIES OR FIBERGLASS TAPE. APPLY "ELECTRIC TRACED" LABELS TO THE OUTSIDE OF THE THERMAL INSULATION, AFTER INSTALLATION AND BEFORE AND AFTER INSTALLING THE THERMAL INSULATION, SUBJECT HEATING CABLE TO TESTING USING A 2500-VDC MEGGER, MINIMUM INSULATION RESISTANCE SHALL BE 20 MEGOHMS OR GREATER.
- PIPE INSULATION:** RUBBER BASED ELASTOMERIC PREFORMED PIPE INSULATION. THERMAL CONDUCTIVITY SHALL NOT EXCEED 0.27 BTU-IN/HR-FT °F AT A MEAN TEMPERATURE OF 70°F. REFRIG. PIPE 1/2" THICK, COND. DRAIN PIPE IN FREEZER 1" THICK. PROVIDE ADHESIVE BY SAME MANUFACTURER. ARMACELL ARMAFLEX. COVER INSUL. PIPE EXPOSED TO WEATHER WITH 0.024" STUCCO MANUFACTURED ALUMINUM JACKET AND 0.016" THICK ALUM. FITTING CURVES.
- PIPE SUPPORT:** TO 4" PIPE - STEEL "J" HANGER WITH SIDE BOLT; 5" AND LARGER PIPE - STEEL CLEVIS HANGER, LOAD AND JAM NUTS, SIZE AND MAX. LOAD PER MFG'R'S. RECOMMENDATIONS. FELT LINER FOR COPPER PIPING. HANGER AND ROD SHALL HAVE GALV. FINISH. UNISTRUT.
- SYSTEM IDENTIFICATION:** FOR PIPE SYSTEMS OTHER THE DRAIN, MARK FLUID CONVEYED IN PIPE AND DIRECTION OF FLOW. COLORS PER ANSI 13.1. LOCATE AT ENDS OF LINES, MAJOR CONNECTIONS, PENETRATIONS OF WALLS, FLOORS OR CEILING, 50' O.C. MAX. SPACING.
- CONTROLS:**
 - REFRIGERATOR REFRIGERATION SYSTEM:** REFRIGERATOR SYSTEM SHALL RUN ON INTERNAL CONTROLS AT THE CONDENSING UNIT AND THE THERMOSTATS AT THE REFRIGERATOR EVAPORATORS.
 - FREEZER REFRIGERATION SYSTEM:** FREEZE SYSTEM SHALL OPERATE SIMILAR TO THE REFRIGERATOR SYSTEM.
 - REFRIGERATOR SYSTEM ALARM MONITORING SYSTEM:** THE REFRIGERATOR TEMPERATURE SET POINT SHALL BE 35°F (ADJ.).
 - FREEZER SYSTEM ALARM MONITORING SYSTEM:** THE FREEZER TEMPERATURE SET POINT SHALL BE 0°F(ADJ.).
- TESTS:** PERFORM ALL TESTS AS REQUIRED BY APPLICABLE CODES IN THE PRESENCE OF INSPECTOR.

GENERAL MECHANICAL SPECIFICATIONS:

- CODES AND REGULATIONS:** ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE FOLLOWING CODES AS ADOPTED AND AMENDED BY THE AUTHORITY HAVING JURISDICTION. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO CONSTRUCT THE FREEZER IN ACCORDANCE WITH THE 2019 EDITION OF TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH SAID TITLE 24, CALIFORNIA CODE OF REGULATIONS, NOTHING IN THESE DRAWINGS OR SPECIFICATIONS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.
 - CALIFORNIA BUILDING CODE - CBC - 2019
 - CALIFORNIA MECHANICAL CODE - CMC - 2019
 - CALIFORNIA PLUMBING CODE - CPC - 2019
 - CALIFORNIA FIRE CODE - CFC - 2019
 - CALIFORNIA ELECTRICAL CODE - CEC - 2019
 - CALIFORNIA CODE OF REGULATIONS, TITLE 8, INDUSTRIAL RELATIONS
 - CALIFORNIA CODE OF REGULATIONS, TITLE 24, BUILDING STANDARDS
 - NFPA 13, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS, 2019
- PERMIT CHARGES:** OBTAIN ALL PERMITS REQUIRED FOR PERFORMING WORK AND PAY ALL RELATED FEES.
- WORK BY OTHERS:** UNLESS OTHERWISE NOTED, THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL POWER WIRING, MOTOR STARTERS IN MOTOR CONTROL CENTERS, DISCONNECTS AND CONDUIT.
- GUARANTEE:** THE CONTRACTOR SHALL REPAIR ANY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP AND PAY FOR ANY DAMAGE TO OTHER WORK RESULTING THEREFROM WHICH APPEARS WITHIN A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE OF WORK.
- EXAMINATION OF SITE:** THE CONTRACTOR SHALL EXAMINE THE SITE PRIOR TO ORDERING OR FABRICATING ANY MATERIALS. EXISTING CONDITIONS THAT CONFLICT WITH THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. NO ALLOWANCE SHALL BE MADE IN THE CONTRACTOR'S BEHALF FOR ANY EXTRA EXPENSE TO WHICH HE MAY BE PUT DUE TO FAILURE OR NEGLIGENCE ON HIS PART TO MAKE SUCH AN EXAMINATION.
- MATERIALS, EQUIPMENT AND INSTALLATION:** EACH ITEM REFERRED TO ON THE DRAWINGS AND IN THE SPECIFICATIONS REPRESENTS THE STANDARD OF QUALITY DESIRED FOR MATERIALS, EQUIPMENT AND INSTALLATION. ALL SUBSTITUTIONS MUST BE REVIEWED IN WRITING BY THE ENGINEER. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND FREE FROM DEFECTS. ALL INSTALLATIONS SHALL BE AS RECOMMENDED BY THE MANUFACTURER AND AS SHOWN ON DRAWINGS.
- SUBMITTALS:** WITHIN 30 DAYS OF CONTRACT AWARD, THE CONTRACTOR SHALL SUBMIT ELECTRONIC COPIES OF SHOP DRAWINGS FOR ALL MATERIALS, EQUIPMENT, ETC. PROPOSED FOR USE ON THIS PROJECT. SUBMITTALS SHALL BE A SINGLE FILE IN PDF FORMAT, WITH BOOKMARKS FOR TABLE OF CONTENTS AND EACH TAB, AND SUB-BOOKMARKS FOR EACH ITEM. MATERIAL OR EQUIPMENT SHALL NOT BE ORDERED OR INSTALLED UNTIL WRITTEN REVIEW IS PROCESSED BY THE ENGINEER. ANY ITEM OMITTED FROM THE SUBMITTAL SHALL BE PROVIDED AS SPECIFIED WITHOUT SUBSTITUTION.
- CLOSEOUT DOCUMENTS:**

CONTRACTOR GUARANTEES: ALL CONTRACTORS INVOLVED IN THE PROJECT SHALL SUBMIT WRITTEN GUARANTEES FOR THEIR WORK FOR ONE YEAR FROM THE DATE OF ACCEPTANCE TO THE OWNER THROUGH THE ENGINEER.

RECORD DRAWINGS: CONTRACTORS SHALL OBTAIN A SET OF PROJECT PRINTS TO KEEP AT THE JOB SITE. CONTRACTORS SHALL MARK ALL CHANGES FROM DESIGN PLANS ON THE PRINTS. WORK UNDERGROUND SHALL SHOW DEPTH AND DISTANCE FROM NEARBY STRUCTURES. SUBMIT THE RECORD DRAWINGS TO THE ENGINEER FOR REVIEW.

OPERATING AND MAINTENANCE INSTRUCTIONS: TWO COPIES OF ALL EQUIPMENT OPERATION AND MAINTENANCE INSTRUCTIONS AND WIRING DIAGRAMS SHALL BE FURNISHED TO THE OWNER, THROUGH THE ENGINEER. O&M MANUAL SHALL INCLUDE COPIES OF ALL INSPECTION REPORTS & VERIFICATIONS REQUIRED BY THE ENFORCING AGENCY.

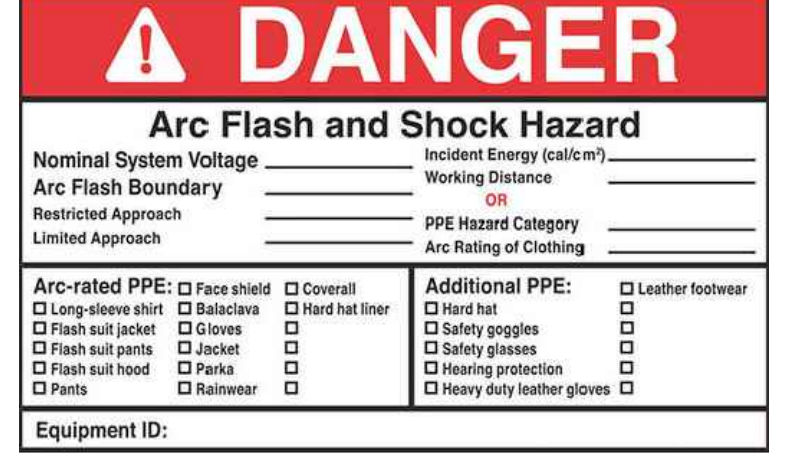
ARC FLASH WARNING LABEL REQUIREMENTS

CONDITION 1



ARC FLASH HAZARD WARNING LABELS SHALL BE FIELD MARKED/PLACED ON ALL NEW AND EXISTING ELECTRICAL DISTRIBUTION BOARDS, MAIN SWITCHBOARDS, TRANSFORMERS, PANELS, PANELBOARDS, DISCONNECTS, MCC'S, PER CEC/NEC 110.1.6A THAT IS WITHIN THE SCOPE OF THIS PROJECT. LABELS SHALL BE APPLIED TO EXISTING EQUIPMENT WHERE NEW CONNECTIONS ARE MADE. THE LABELS SHALL MEET THE REQUIREMENTS OF 110.21(B) PER ANSI Z535.4-2011 GUIDELINES BY USING EFFECTIVE COLORS, SYMBOLS OR ANY COMBINATION THEREOF.

CONDITION 2



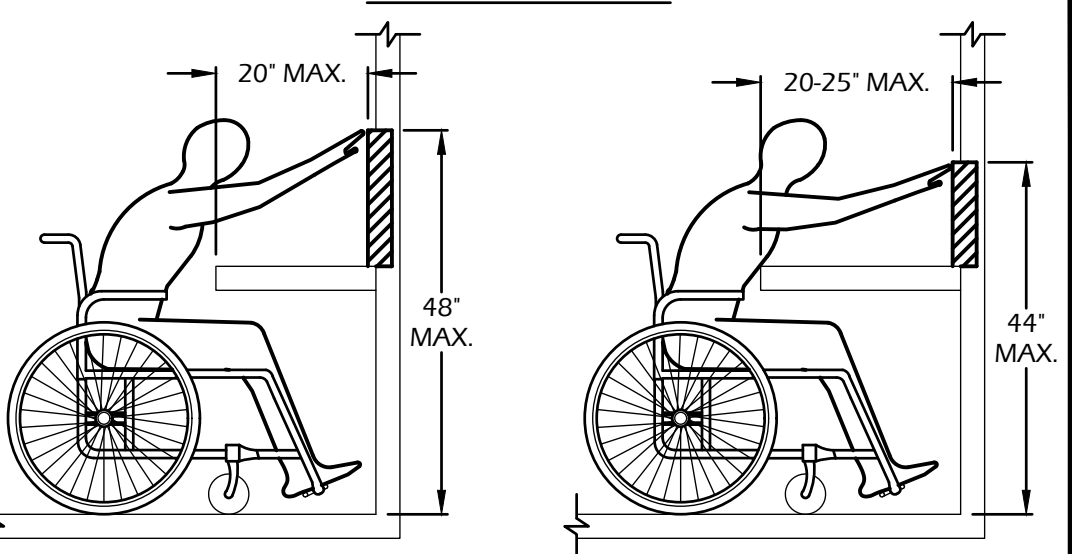
ARC FLASH HAZARD WARNING LABELS FOR AN ENTIRELY NEW ELECTRICAL SERVICE AND DISTRIBUTION SYSTEMS, THE EXCEPTION TO 110.16(B) SHALL BE UTILIZED AND ALL ELECTRICAL COMPONENTS OF THE DISTRIBUTION EQUIPMENT SHALL HAVE AN ARC FLASH WARNING LABEL WITH THE FOLLOWING INFORMATION:
 a. NOMINAL SYSTEM VOLTAGE
 b. ARC FLASH BOUNDARY
 c. MINIMAL ARC RATING OF CLOTHING
 d. AT LEAST ONE, BUT NOT BOTH OF THE FOLLOWING:
 • INCIDENT ENERGY & CORRESPONDING WORKING DISTANCE
 • THE ARC FLASH PPE CATEGORY
 THE LABELS SHALL MEET THE REQUIREMENTS OF 110.21(B) PER ANSI Z535.4-2011 GUIDELINES BY USING EFFECTIVE COLORS, SYMBOLS OR ANY COMBINATION THEREOF. THE CONTRACTOR SHALL HAVE THE EQUIPMENT MANUFACTURER PROVIDE THE REQUIRED LABELING OR OBTAIN THE SERVICES OF A THIRD PARTY OR THE ELECTRICAL ENGINEER OF RECORD.

CONDITION 3

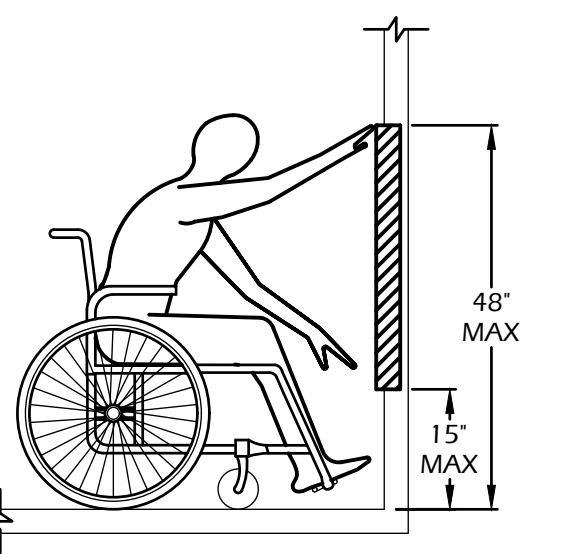
ARC FLASH HAZARD WARNING LABELS SHALL BE FIELD MARKED/PLACED ON ALL NEW SERVICE EQUIPMENT WITH THE FOLLOWING INFORMATION: NOMINAL SYSTEM VOLTAGE, AVAILABLE FAULT CURRENT AT THE SERVICE OVERCURRENT PROTECTIVE DEVICES, CLEARING TIME OF THE SERVICE OVERCURRENT PROTECTIVE DEVICES BASED ON THE AVAILABLE FAULT CURRENT AT THE SERVICE EQUIPMENT, THE DATE THE LABEL WAS APPLIED. THE LABELS SHALL MEET THE REQUIREMENTS OF 110.21(B) PER ANSI Z535.4-2011 GUIDELINES BY USING EFFECTIVE COLORS, SYMBOLS OR ANY COMBINATION THEREOF.

TYPICAL WALL DEVICE MOUNTING HEIGHTS

ADA GUIDELINES

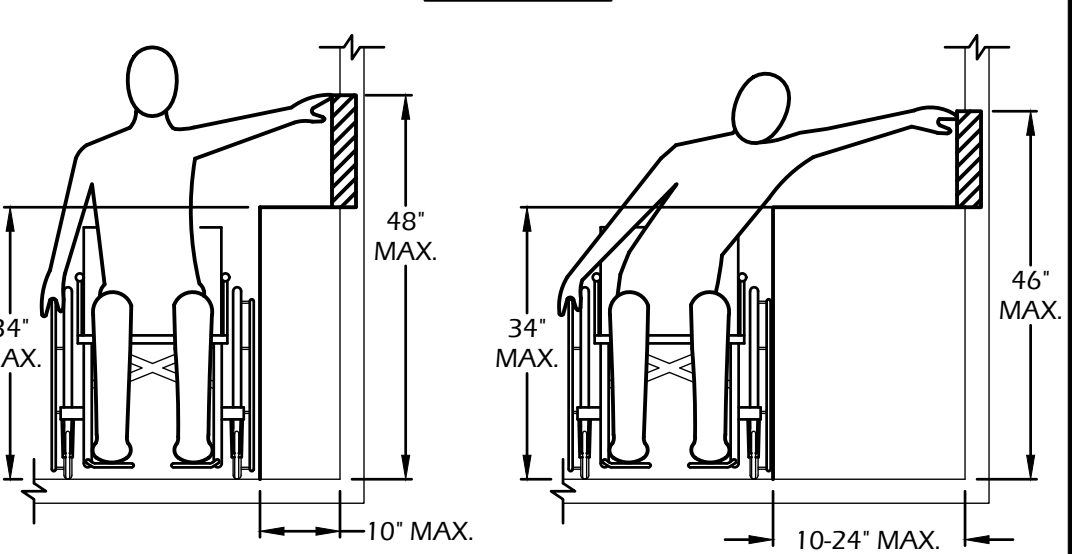


INSTALL ABOVE COUNTER DEVICE AT 44" ABOVE FINISHED FLOOR. INSTALL ABOVE COUNTER DEVICE AT 40" ABOVE FINISHED FLOOR.



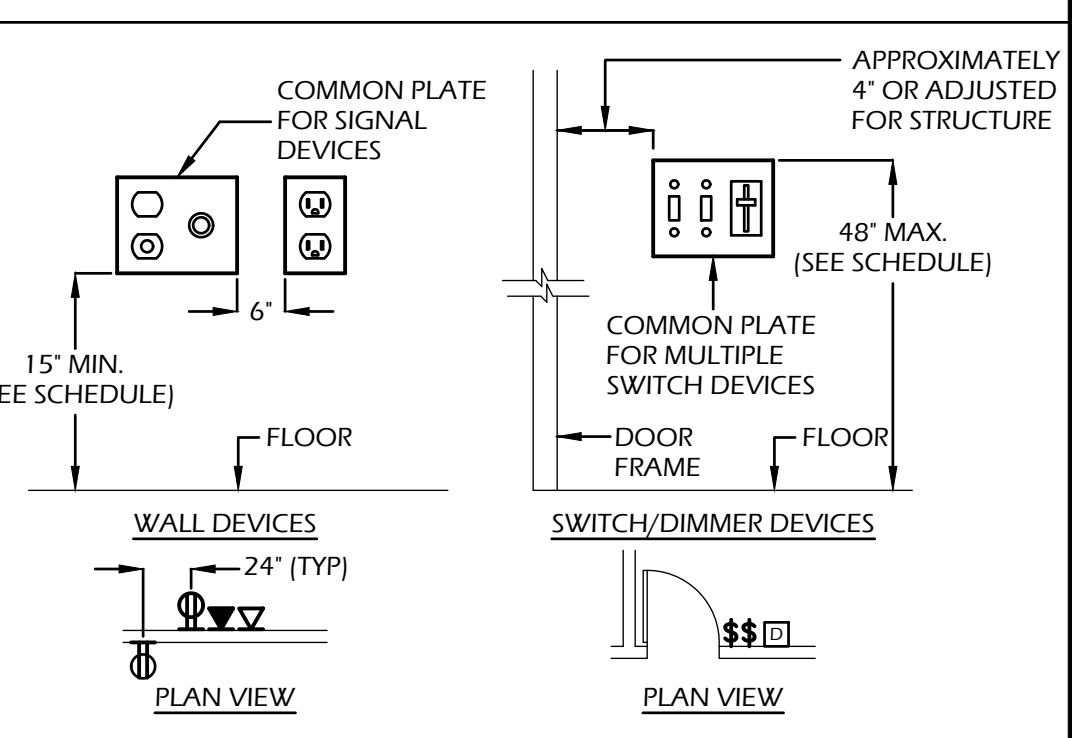
INSTALL DEVICE AT 18" ABOVE FINISHED FLOOR

FRONT ACCESS



INSTALL DEVICE AT 44" ABOVE FINISHED FLOOR. INSTALL DEVICE AT 42" ABOVE FINISHED FLOOR.

SIDE ACCESS



INSTALL DEVICE AT 44" ABOVE FINISHED FLOOR. INSTALL DEVICE AT 42" ABOVE FINISHED FLOOR.

DEVICE TYPE	MOUNTING HEIGHT
SWITCHES	NO MORE THAN 48" A.F.F. TO TOP OF DEVICE
DIMMERS	NO MORE THAN 48" A.F.F. TO TOP OF DEVICE
RECEPTACLES	NO LESS THAN 15" A.F.F. TO BOTTOM OF DEVICE
TEL. OUTLETS (OFFICE)	NO LESS THAN 15" A.F.F. TO BOTTOM OF DEVICE
TEL. OUTLETS (CLASSROOMS)	NO MORE THAN 48" A.F.F. TO TOP OF DEVICE
DATA OUTLETS	NO LESS THAN 15" A.F.F. TO BOTTOM OF DEVICE
INTERCOM OUTLETS	NO LESS THAN 15" A.F.F. TO BOTTOM OF DEVICE
TELEVISION OUTLETS	NO LESS THAN 15" A.F.F. TO BOTTOM OF DEVICE
MICROPHONE OUTLETS	NO LESS THAN 15" A.F.F. TO BOTTOM OF DEVICE
RECEPTACLES, OUTLETS, SWITCHES, ETC. MOUNTED ABOVE COUNTERS	WITHIN THE REACH RANGE SPECIFIED IN SECTION 11B-308 OF THE CALIFORNIA BUILDING CODE.
CLOCKS	AS SHOWN ON DRAWINGS
SPEAKERS	AS SHOWN ON DRAWINGS
HAND DRYERS	REFER TO ARCHITECTURAL PLANS
HAIR DRYERS	REFER TO ARCHITECTURAL PLANS
WALL SCONCES	ABOVE 80" FOR PROJECTIONS INTO CORRIDORS OF MORE THAN 4" OR AS SHOWN ON DRAWING
EXIT LIGHTS	SEE DETAILS
EXIT MARKERS	SEE DETAILS
EMERGENCY LIGHTING WALL PACK	AS SHOWN ON DRAWINGS
KEYPADS	NO MORE THAN 48" A.F.F. TO TOP OF DEVICE
WIREMOLD	MOUNTING HEIGHT SHALL BE SUCH THAT THE LOWEST DEVICE MOUNTED ON WIREMOLD IS AT 15" A.F.F. TO BOTTOM OF DEVICE, U.O.N.

- NOTES:
 1. ALL VERTICAL MEASUREMENTS ARE 'ABOVE FINISHED FLOOR' - (A.F.F.).
 2. SEE DRAWINGS FOR NON-TYPICAL MOUNTING HEIGHTS.
 3. WHERE MOUNTING HEIGHTS ARE NOT SHOWN, REFER TO ARCHITECTURAL PLANS.
 4. RECEPTACLES, LIGHT SWITCHES, TELEPHONE-DATA OUTLETS AND OTHER RECESSED ELECTRICAL DEVICES THAT ARE SHOWN BACK-TO-BACK ON WALLS SEPARATING CORRIDORS, ROOMS AND OPEN AREAS SHALL BE SEPARATED HORIZONTALLY BY AT LEAST 24 INCHES. THIS REQUIREMENT IS TO SATISFY BOTH THE CONDITIONS AT FIRE RATED CORRIDORS AND SOUND TRANSMISSION FACTOR BETWEEN ALL CORRIDORS, ROOMS AND OPEN AREAS INCLUDING EXTERIOR WALLS.

STANDARD SYMBOL LEGEND

FIXTURE DESIGNATOR - # INDICATES FIXTURE TYPE.
 LIGHT FIXTURE - APPROXIMATELY TO SCALE
 FIXTURE WITH 90 MINUTE EMERGENCY BATTERY BACK-UP UNIT - SEE TYPICAL WIRING DETAIL
 LIGHT FIXTURE - WALL OR CEILING MOUNTED. '3' INDICATES CIRCUIT, 'a' INDICATES SWITCH CONTROL.
 EXIT LIGHTS - CEILING OR WALL MOUNTED, ARROW(S) INDICATES DIRECTION.
 EXISTING POLE LIGHTING
 WATTSTOPPER LMRC-101 ON/OFF, 1 SWITCH LEG LIGHTING CONTROLLER
 WATTSTOPPER LMRC-102 ON/OFF, 2 SWITCH LEG LIGHTING CONTROLLER
 WATTSTOPPER LMRC-211 DIMMING, 1 SWITCH LEG LIGHTING CONTROLLER
 WATTSTOPPER LMRC-212 DIMMING, 2 SWITCH LEG LIGHTING CONTROLLER
 WATTSTOPPER LMRC-213 DIMMING, 3 SWITCH LEG LIGHTING CONTROLLER
 WATTSTOPPER LMDC-100 DUAL TECHNOLOGY MOTION SENSOR
 WATTSTOPPER LMDX-100 DUAL TECHNOLOGY OCCUPANCY SENSOR
 WATTSTOPPER LMSW-101 SWITCH, 'a' INDICATES SWITCH LEG CONTROL, 2 LETTERS NEXT TO EACH OTHER WITHOUT A COMMA INDICATES 1 SWITCH LEG
 WATTSTOPPER LMDM-101 DIMMER, 'a' INDICATES SWITCH LEG CONTROL, 2 LETTERS NEXT TO EACH OTHER WITHOUT A COMMA INDICATES 1 SWITCH LEG
 WATTSTOPPER LMLS-400 PHOTOSENSOR
 WATTSTOPPER LMPL-201 RECEPTACLE CONTROLLER
 PANEL IDENTIFICATION
 CIRCUIT IDENTIFICATION
 SWITCH-LEG IDENTIFICATION
 LIGHTING AND RECEPTACLE ROOM CONTROLLERS SHALL BE LOCATED ABOVE THE T-BAR CEILING FOR THE ROOMS THEY ARE CONTROLLING. IF THE ROOM WITH THE CONTROLLED DEVICES HAS A HARD CEILING THEN LOCATE THE ROOM CONTROLLERS AT THE NEAREST ADJACENT ROOM WITH A T-BAR CEILING. IF NO T-BAR CEILING EXISTS LOCATE THE ROOM CONTROLLERS IN THE ELECTRICAL ROOM. LABEL ALL ROOM LIGHTING AND RECEPTACLE CONTROLLERS WITH THE ROOM NAME, ROOM NUMBER, AND CIRCUIT(S) THEY CONTROL.
 SKYLIT OR PRIMARY SIDE DAYLIT ZONE
 SECONDARY SIDE DAYLIT ZONE
 SPST TOGGLE WALL SWITCH - 20A, 120/277V, 'a' INDICATES CONTROL
 OCCUPANCY SENSOR COMBO WALL SWITCH - 20A, 120/277V RATED
 CEILING OR WALL MOUNTED JUNCTION BOX
 PULLBOX(S) - SIZE AND NUMBER AS INDICATED
 RECEPTACLE, DUPLEX - 20A, 120V & GROUND
 RECEPTACLE, DUPLEX CEILING MOUNTED
 RECEPTACLE, DUPLEX - WITH ONE-HALF SWITCHED/CONTROLLED
 RECEPTACLE, DUPLEX - WITH GFCI PROTECTION
 RECEPTACLE, DUPLEX - WITH GFCI PROTECTION IN WEATHERPROOF HOUSING
 20A, 120V RECEPTACLE, DUPLEX - WITH TWO USB PORTS
 RECEPTACLE, DOUBLE DUPLEX - (2) 20A, 120V & GROUND
 RECEPTACLE, DOUBLE DUPLEX CEILING MOUNTED
 RECEPTACLE, DOUBLE DUPLEX WITH GFCI PROTECTION
 RECEPTACLE, DOUBLE DUPLEX - WITH ONE-HALF SWITCHED/CONTROLLED
 RECEPTACLE, DOUBLE DUPLEX - WITH ONE-HALF SWITCHED/CONTROLLED, FLUSH FLOOR BOX - CARPET PLATE WHERE REQUIRED.
 RECEPTACLE, SPECIAL - REFER TO FLOOR PLAN FOR RECEPTACLE SIZE.
 TELEPHONE OUTLET: PROVIDE & INSTALL 2-GANG BOX WITH 1" CONDUIT, STUB-UP INTO T-BAR CEILING. FOR HARD CEILINGS, RUN THE CONDUIT TO THE CABLE TERMINATION LOCATION INDICATED PER THE RISER DIAGRAM.
 DATA OUTLET: PROVIDE & INSTALL 2-GANG BOX WITH 1" CONDUIT, STUB-UP INTO T-BAR CEILING. FOR HARD CEILINGS, RUN THE CONDUIT TO THE CABLE TERMINATION LOCATION INDICATED PER THE RISER DIAGRAM.
 RECEPTACLE, FLUSH FLOOR BOX - CARPET PLATE WHERE REQUIRED.
 RECEPTACLE WITH ONE-HALF SWITCHED/CONTROLLED, FLUSH FLOOR BOX - CARPET PLATE WHERE REQUIRED.
 TELEPHONE OUTLET, FLUSH FLOOR BOX - CARPET PLATE WHERE REQUIRED.
 DATA OUTLET, FLUSH FLOOR BOX - CARPET PLATE WHERE REQUIRED.
 INTERCOM OUTLET, FLUSH FLOOR BOX - CARPET PLATE WHERE REQUIRED.
 FLUSH, FLOOR MOUNTED DUPLEX RECEPTACLE, DATA JACK, AND TELEPHONE JACK.
 DATA OUTLET, CEILING MOUNTED
 CEILING OR WALL MOUNTED WIRELESS ACCESS POINT PROVISIONS. PROVIDE AND INSTALL ONE DATA CABLE FROM EACH ACCESS POINT TO IDF. FOR HARD CEILINGS TERMINATE THE CABLES INTO A BOX WITH COVER PLATE. FOR T-BAR CEILINGS TERMINATE THE CABLES INTO A CUBE CAT-6 PORT AND CURL UP THE CABLE WITH 10-FEET OF SLACK. LEAVE ABOVE THE T-BAR CEILING. PROVIDE A LABEL BENEATH THE T-BAR CEILING TO INDICATE DATA PORTS ABOVE.
 3/4" THICK x 96" TALL FIRE RETARDANT PLYWOOD BACKBOARD, PROVIDE QUANTITY OF PLYWOOD SHEETS TO ENCOMPASS ENTIRE LENGTH INDICATED ON PLANS.
 TERMINAL CABINET - SURFACE OR FLUSH MOUNTED WITH FLAME RETARDANT PLYWOOD BACKBOARD
 PANELBOARD - SURFACE OR FLUSH MOUNTED
 DISTRIBUTION OR SWITCHBOARD
 NEUTRAL LINK
 TRANSFORMER
 TRANSFORMER
 FUSED DISCONNECT - MOTOR RATED, FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. DISCONNECTS TO BE FURNISHED WITH DUAL ELEMENT FUSES SIZED ACCORDING TO NAME PLATE DATA ON EQUIPMENT - INSTALLED. SIZE AS: #A - AMPERE RATING OF DISCONNECT, #B - POLES, #C - FUSE SIZE REQUIRED. ALSO REFER TO MECHANICAL EQUIPMENT SCHEDULE FOR DISCONNECT REQUIREMENTS. IF NO AMPERE RATING IS INDICATED ON PLAN SIZE DISCONNECT PER NAMEPLATE RATING AND CEC.
 UNFUSED DISCONNECT - MOTOR RATED, FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. #1 - AMPERE RATING OF DISCONNECT, #2 - POLES REQUIRED. ALSO REFER TO MECHANICAL EQUIPMENT SCHEDULE FOR DISCONNECT REQUIREMENTS. IF NO AMPERE RATING IS INDICATED ON PLAN SIZE DISCONNECT PER NAMEPLATE RATING AND CEC.
 MAGNETIC MOTOR STARTER FURNISHED, INSTALLED AND CONNECTED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED.
 MOTOR - FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR AND CONNECTED BY ELECTRICAL CONTRACTOR.
 METER
 FIRE SPRINKLER HEAD. REFER TO OTHER DISCIPLINE PLANS.
 INTRUSION ALARM DOOR CONTACT PROVISION, SEE TYPICAL DETAILS.
 INTRUSION ALARM KEYPAD
 INTRUSION ALARM MOTION DETECTOR, AIM AS INDICATED ON PLANS.
 GROUND
 CIRCUIT BREAKER
 EXISTING ABOVE GROUND CONDUIT
 EXISTING UNDERGROUND CONDUIT
 WIREMOLD 5400 SERIES DUAL CHANNEL IVORY RACEWAY, PROVIDE ALL ACCESSORIES, FITTINGS, DIVIDERS, ETC FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM.
 WIREMOLD RACEWAY VERTICAL RUNS. PROVIDE ALL ELBOWS, FITTINGS, AND CONNECTORS AS NECESSARY FOR A COMPLETE RACEWAY SYSTEM.
 NEW ELECTRICAL EQUIPMENT
 EXISTING ELECTRICAL EQUIPMENT TO REMAIN
 EXISTING ELECTRICAL EQUIPMENT TO BE DEMOLISHED
 GROUND WIRE WITH GREEN INSULATION SIZE PER N.E.C., U.O.N.
 CONDUIT CONCEALED IN WALL OR CEILINGS. PROVIDE NUMBER OF WIRES NECESSARY FOR BRANCH CIRCUIT, SWITCH LEGS, ETC. PROVIDE SEPARATE NEUTRALS FOR EACH PHASE WIRE. SIZE SHALL BE DETERMINED BY OCPD CONNECTED TO THE PHASE CONDUCTORS AND VOLTAGE DROP CONSIDERATIONS. ALL CONDUITS SHALL HAVE GROUND CONDUCTOR(S). SIZE CONDUIT PER NEC.
 CONDUIT CONCEALED UNDERGROUND OR BELOW FLOOR. MINIMUM SIZE IS 3/4". PROVIDE NUMBER OF WIRES NECESSARY FOR BRANCH CIRCUIT, SWITCH LEGS, ETC. PROVIDE SEPARATE NEUTRALS FOR EACH PHASE WIRE. SIZE SHALL BE DETERMINED BY OCPD CONNECTED TO THE PHASE CONDUCTORS AND VOLTAGE DROP CONSIDERATIONS. ALL CONDUITS SHALL HAVE GROUND CONDUCTOR(S). SIZE CONDUIT PER NEC.
 CONDUIT-UP
 CONDUIT-DOWN
 SHEET NOTE NUMBER - #. SEE NOTE DESCRIPTION ON SAME SHEET.
 GENERAL NOTE NUMBER - #. SEE NOTE DESCRIPTION ON SAME SHEET.
 REFERENCE TO PLAN/DETAIL/DIAGRAM
 DESIGNATES SIZE AND QUANTITY OF FEEDERS SEE FEEDER SCHEDULE
 PROVIDE AND INSTALL TWO MALE F-TYPE CONNECTORS AND TV FACEPLATE. PROVIDE AND INSTALL RG-6 COAXIAL CABLE FROM EACH CONNECTOR TO THE CABLE TV HEADEND & TERMINATE WITH A MALE F-TYPE CONNECTOR.
 TELEVISION OUTLET IN FLUSH FLOOR BOX - CARPET PLATE WHERE REQUIRED, SEE TELEVISION SYMBOL.
 NUMBER IN PARENTHESIS INDICATES QUANTITY OF DEVICES. TYPICAL FOR ALL TYPES OF DEVICES.
 SPEAKER - WALL OR CEILING MOUNTED, REFER TO RISER DIAGRAM AND/OR NOTES ON PLANS.
 TIME CLOCK FOR WALK-IN FREEZER
 COMBINATION CLOCK & SPEAKER, SEE CLOCK & SPEAKER SYMBOLS.

ELECTRICAL EQUIPMENT NOTES

- THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF ELECTRICAL EQUIPMENT, DEVICES AND WIRING. REFER TO THE TECHNICAL SPECIFICATIONS FOR FURTHER REQUIREMENTS.

ELECTRICAL SHEET LIST

- E1.01 SYMBOLS LEGEND, NOTES, ABBREVIATIONS, AND REQUIREMENTS
 - E1.02 ADDITIONAL ELECTRICAL NOTES
 - E1.03 PARTIAL SINGLE DIAGRAM, PANEL SCHEDULE, WEIGHT AND DIMENSION SCHEDULE
 - E2.01 ELECTRICAL SITE PLAN
 - E3.01 PARTIAL BUILDING 'K' DEMOLITION ELECTRICAL ROOF & FLOOR PLAN
 - E3.02 PARTIAL BUILDING 'K' ELECTRICAL ROOF & FLOOR PLAN
 - E4.01 TYPICAL DETAILS
- THESE PLANS ARE ACCOMPANIED WITH BOOK SPECIFICATIONS THAT FORM PART OF THE CONTRACT DOCUMENTS.

ABBREVIATIONS

A. AMP	AMPERES
A.C.	ABOVE COUNTER
A.F.F.	ABOVE FINISHED FLOOR
AL	ALUMINUM CONDUCTOR OR BUS
BD	BOARD
C	CONDUIT
CAB	CABINET
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CC	CENTER TO CENTER
CKT	CIRCUIT
CO	CONDUIT ONLY (EMPTY CONDUIT) WITH PULL WIRE
CPB	COMMUNICATIONS PULL BOX
CU	COPPER CONDUCTOR OR BUS
DB	DISTRIBUTION PANEL
(E)	EXISTING
EM	EMERGENCY
EMLT	ELECTRIC METALLIC TUBING
END OF LINE	END OF LINE
EPO	EMERGENCY POWER-OFF
EWC	ELECTRIC WATER COOLER
F	FUSE
F.A./FA	FIRE ALARM
FACF	FIRE ALARM CONTROL PANEL
F.B.O.	FURNISHED BY OTHER/FURNISHED BY OWNER
FLO	FULL LOAD AMPS
FMC	FLEXIBLE METALLIC CONDUIT
FS	FLOW SWITCH
G	GREEN GROUND WIRE
GFCI	GROUND FAULT CIRCUIT INTERRUPT
GRND	GROUND
GRS	GALVANIZED RIGID STEEL
HC	HORIZONTAL CROSSCONNECT
HID	HIGH INTENSITY DISCHARGE
HPS	HIGH PRESSURE SODIUM
I.B.O.	INSTALLED BY OTHER
I.B.E.	INSTALLED AND CONNECTED BY ELECTRICAL CONTRACTOR
IDF	INTERMEDIATE DISTRIBUTION FRAME (DATA)
IG	ISOLATED GROUND
INT	INTRUSION ALARM
J/JB	JUNCTION BOX
KV	KILOVOLTS
KVA	KILOVOLTS-AMPERES
KW	KILOWATT
LFMC	LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT
LCP	LIGHTING CONTROL PANEL
LTG	LIGHTING
LV	LOW VOLTAGE
LV	MOUNTED
MTG	MOUNTING
ML	MAIN LUG ONLY
N	NEUTRAL
(N)	NEW
NL	NIGHT LIGHT
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
O.C./OC	ON CENTER
OFOI	OWNER FURNISHED OWNER INSTALLED
Ø	PHASE
P	POLE
P.A./PA	PUBLIC ADDRESS SYSTEM
PB	PULL BOX
PIV	POST INDICATOR VALVE
PNL	PANEL
PPB	POWER PULL BOX
REC./RECEPT.	RECEPTACLE
REF.	REFRIGERATOR
RELO	RELOCATABLE BUILDING/ PORTABLE BUILDING
RM	ROOM
RS	RAPID START
RJ	RACK UNIT
SC	SIGNAL CURRENT EXPANDER PANEL
S.L.	SECURITY LIGHT
SCTB	SIGNAL AND COMMUNICATION TERMINAL BACKBOARD
SPB	SIGNAL PULL BOX
SPD	SURGE SUPPRESSION DEVICE
STB	SIGNAL TERMINAL BOARD
STC	SIGNAL TERMINAL CABINET
SW	SWITCH
TPB	TELEPHONE PULL BOX
TS	TAMPER SWITCH
TEL	TELEPHONE
TERM	TERMINAL
TYP	TYPICAL
TTB	TELEPHONE TERMINAL BOARD
TTT	TELEPHONE TERMINAL CABINET
U.C.	UNDER COUNTER
UG	UNDERGROUND
U.O.N.	UNLESS OTHERWISE NOTED
V	VOLTS/VOLTAGE
V.P.	VANDAL PROOF
W	WATTS
WP	WEATHERPROOF
WM	WIREMOLD

IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 APP: 02-120017 INC:
 REVIEWED FOR
 SS FLS ACS
 DATE: 03/01/2023



DATE: 12-27-2022

BUCHANAN HIGH SCHOOL
 COLD BOX REPLACEMENT
 1560 N. MINNEWAWA AVE.
 CLOVIS, CA 93619

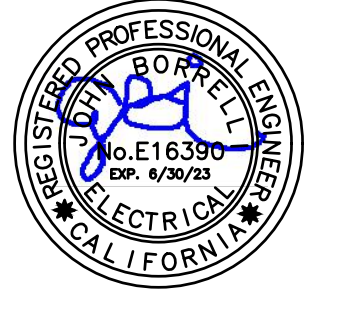
REVISIONS

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TITLE:
 SYMBOLS LEGEND, NOTES,
 ABBREVIATIONS

SHEET:
E1.01
 PROJECT: 21191

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 BA# 21111



GENERAL NOTES

- ALL WORK AND MATERIAL SHALL CONFORM TO LATEST CODES AND ORDINANCES. IT IS THE INTENTION OF THESE PLANS AND SPECIFICATIONS TO COVER ALL THINGS REQUIRED TO PROVIDE COMPLETE AND OPERATIVE SYSTEMS. THE CONTRACTOR SHALL FURNISH LABOR, MATERIAL, TRANSPORTATION, EQUIPMENT, MISCELLANEOUS SERVICES, ETC. REQUIRED TO ACCOMPLISH THIS RESULT. ANYTHING WHICH MAY BE REASONABLY CONSTRUED AS A NECESSARY PART OF THE INSTALLATION SHALL BE INCLUDED. NOTHING IN THESE PLANS OR SPECIFICATIONS MAY BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO ANY CONSTRUCTION CODES.
- ALL EQUIPMENT SHALL HAVE TESTING LABORATORY LABEL ATTACHED (U.L. C.S.A. ETC.) AS PER N.E.C. 110. PROOF OF TESTING LABELS REQUIRED WITH ALL SUBMITTALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL THESE REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO PURCHASING. IF ANY OF THE SPECIFIED MATERIAL FAILED THESE REQUIREMENTS, WHERE A FIELD CERTIFIED PRODUCT MAY BE REQUIRED FOR FIELD ASSEMBLED COMPONENT, PROVIDE CERTIFIED REPORT BY AN APPROVED TESTING AGENCY ACCEPTABLE TO THE AUTHORITIES HAVING JURISDICTION. INCLUDE ALL TESTING FEES IN BID.
- THE ENGINEERING SERVICE ARE LIMITED TO PREPARATION OF PLANS AND SPECIFICATIONS. THE PLANS AND SPECIFICATIONS ARE INTENDED TO BE USED AS CONSTRUCTION GUIDELINES ONLY AND NOT THE TOTAL INSTRUMENT OF CONTRACT DOCUMENTS. IT IS NOT THE INTENTION OF ANY CONSTRUCTION PLANS TO DIVIDE WORK AMONG DIFFERENT TRADES. VERIFY SCOPE OF WORK WITH GENERAL CONTRACTOR/OWNER SINCE THE ENGINEER IS NOT SUPERVISING THE JOB. THE ENGINEER WILL PROVIDE INTERPRETATION OF THE CONSTRUCTION DOCUMENTS, BUT SUPERVISION IS UNDER THE RESPONSIBILITY OF THE OWNER OR HIS APPOINTEE.
- WORKING CLEARANCE SHALL BE MAINTAINED AS PER C.E.C./N.E.C. FOR ALL PANEL(S). SERVICE EQUIPMENT, DISCONNECT SWITCH, ETC. LOCAL UTILITY COMPANY WORKING CLEARANCE REQUIREMENT SHALL ALSO BE OBSERVED. POWER EQUIPMENT MANUFACTURER'S PRODUCT MAY VARY IN DIMENSION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF WORKING CLEARANCE REQUIREMENT WHEN LAYING OUT THE ELECTRICAL EQUIPMENT.
- AVAILABLE FAULT CURRENT SHALL BE INDICATED ON ALL NEWLY INSTALLED SERVICE EQUIPMENT. THE FIELD MARKING SHALL INCLUDE THE DATE OF THE FAULT CURRENT CALCULATION WAS PERFORMED.
- THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF TERMINAL BOXES AND CONDUIT ENTRANCES OF ALL EQUIPMENT AGAINST SHOP DRAWINGS BEFORE STUBBING UP CONDUITS OR PENETRATING EXTERIOR WALL(S) OF BUILDING(S).
- IN CASE OF INTERFERENCE BETWEEN ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS AND OTHER EQUIPMENT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING BEFORE PROCEEDING.
- ALL OUTDOOR DEVICES SHALL BE WEATHERPROOF.
- ONLY MAJOR PULL BOXES ARE SHOWN. CONTRACTOR SHALL PROVIDE ADDITIONAL PULL BOXES WHERE THEY ARE REQUIRED TO MAKE A WORKABLE INSTALLATION. ALL PULL BOXES ABOVE GROUND SHALL BE PAD LOCKABLE. ALL PULL BOXES UNDERGROUND SHALL HAVE HOLD DOWN BOLTS AND BE TRAFFIC RATED.
- MARK ALL PANELS WITH LAMANOID TAGS. PROVIDE TYPE WRITTEN PANEL SCHEDULE AT ALL PANELS.
- ALL FLOOR/GROUND MOUNTED EQUIPMENT SHALL SIT ON A CONCRETE PAD 3" HIGHER THAN SURROUNDING SURFACE FOR INTERIOR EQUIPMENT AND 6" FOR EXTERIOR EQUIPMENT.
- CONTRACTOR SHALL FURNISH ALL MATERIALS, TOOLS, LABOR, EQUIPMENT AND SUPERVISION SHOWN AND SHALL SUBMIT SHOP DRAWINGS FOR ALL EQUIPMENT PRIOR TO PURCHASE.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GENERAL ARRANGEMENT OF EQUIPMENT UNDERGROUND CONDUITS. COORDINATE WITH AGENCIES SUCH AS UNDERGROUND SERVICE ALERT PRIOR TO EXCAVATION.
- CAUTION SHOULD BE USED WHEN EXCAVATING OR TRENCHING TO LOCATE EXISTING UNDERGROUND CONDUITS. COORDINATE WITH AGENCIES SUCH AS UNDERGROUND SERVICE ALERT PRIOR TO EXCAVATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING VISITED THE SITE AND SATISFIED HIMSELF AS TO THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. THE CONTRACTOR SHALL CHECK ALL OF THE CONDITIONS WHICH MAY AFFECT HIS WORK. THE SITE VISIT SHALL BE MADE PRIOR TO SUBMITTING THE BID. BIDDERS SHALL PREARRANGE A SITE VISIT WITH THE OWNER/PROJECT ENGINEER.
- THE CONTRACTOR SHALL OBTAIN A FULL SET OF PLANS WHEN BIDDING THE JOB.
- ALL PHASE CONDUCTORS SHALL HAVE THEIR OWN NEUTRALS. NO SHARING OF NEUTRALS ALLOWED.
- A CERTIFIED ELECTRICAL SHALL BE PRESENT ON THE PROJECT WHENEVER ELECTRICAL WORK IS IN PROGRESS. AN ELECTRICAL CONTRACTOR IS NOT EXEMPT FROM THIS REQUIREMENT AND SHALL ALSO BE CERTIFIED IF HE IS WORKING AS THE RESPONSIBLE PROJECT ELECTRICIAN. VIOLATION OF THIS REQUIREMENT BY EITHER ELECTRICIANS OR WORKING CONTRACTORS SHALL BE REPORTED TO THE STATE LICENSE CONTRACTOR BOARD AS REQUIRED UNDER THE EXISTING LABOR CODE SECTION 108.2. NO VOLUNTEERS ARE ALLOWED TO PERFORM WORK ON THIS PROJECT AND ALL CITY INSURANCE REQUIREMENTS MUST BE MET PRIOR TO PERFORMING ANY WORK.
- ALL CONDUIT SHALL BE CONCEALED WITHIN ATTIC SPACE AND WALLS.
- ALL EXTERIOR CONDUIT USED ON THIS PROJECT SHALL BE IMC OR RIGID.
- ALL FASTENERS USED SHALL BE STAINLESS STEEL GRADE 316.
- ALL EXTERIOR RECEPTACLES SHALL BE GFCI TYPE WITH A LOCKING, WEATHERPROOF IN-USE COVER.
- ALL DISCONNECTS SHALL BE READILY ACCESSIBLE AND IN SIGHT OF THE EQUIPMENT, PER THE CALIFORNIA ELECTRICAL CODE. IF THE DISCONNECTING MEANS CANNOT BE LOCATED WITHIN SIGHT OF THE EQUIPMENT SERVED, IT SHALL HAVE THE CAPABILITY OF BEING LOCKED IN THE OPEN POSITION.
- ALL CONDUCTORS IN STALLED IN UNDERGROUND OR WET LOCATIONS SHALL BE LISTED FOR WET LOCATIONS AND MARKED WITH "W" PER CEC.
- SPLICES AND TERMINALS SHALL BE COMPRESSION TYPE OF SEAMLESS PURE COPPER, TIN PLATED, LONG BARREL TERMINALS WITH TWO-HOLE PAD AND INSPECTION WINDOW WITH NEMA DRILLING, AS MANUFACTURED BY BURNDY TYPE YS, YAZ-2N OR EQUAL. CLEAN ALL SURFACES AND INSTALL WITH OXIDE INHIBITING COMPOUND. BURNDY PENETROX-E OR EQUAL. INSTALL COMPRESSION CONNECTORS WITH 360° CIRCUMFERENTIAL COMPRESSION DYE. BURNDY HYPRSS OR EQUAL. THE INDENTER OR OTHER TYPE TOOLS WILL NOT BE ACCEPTABLE.
- INSTALL MECHANICALLY FASTENED PHENOLIC NAMEPLATE WITH WHITE LETTERING ON BLACK BACKGROUND ON ALL EQUIPMENT, INCLUDING PULL BOXES, WITH DESCRIPTION INDICATED ON DRAWINGS. NAMEPLATES SHALL READ EXACTLY AS DESCRIBED ON THE DRAWINGS. IN GENERAL NAMEPLATE LETTERING SIZE SHALL BE 3/16-INCH HIGH FOR ALL NAMEPLATES SERVING FEEDER AND BRANCH CIRCUIT BREAKERS. ON MAIN SERVICE PANELS AND ALL OTHER NAMEPLATES LETTERING SHALL BE 1/4-INCH HIGH.
 - ALL SWITCHBOARDS, SWITCHGEAR, PANELBOARDS, VFD'S, MOTORS, JUNCTION BOXES, PULL BOXES, DISCONNECT SWITCHES, ETC., SHALL BE MARKED TO INDICATE EACH DEVICE OR EQUIPMENT WHERE THE POWER ORIGINATES PER CEC 408.4. FIELD IDENTIFICATION REQUIRED. (B) SOURCE OF SUPPLY.
- COORDINATE EQUIPMENT LOCATIONS, CONTROL AND POWER WIRING REQUIREMENTS AND CONNECT POINTS WITH ALL APPLICABLE DISCIPLINES.
- PROVIDE AND INSTALL FUSES PER UNIT NAMEPLATE DATA ON THE EQUIPMENT PROVIDED.
- REINSTALL EXISTING ELECTRICAL INSTALLATIONS DISTURBED. CERTAIN EXISTING ELECTRICAL INSTALLATIONS MAY BE LOCATED IN WALL, CEILINGS OR FLOORS THAT ARE TO BE REMOVED AND ARE ESSENTIAL FOR THE OPERATION OF OTHER REMAINING INSTALLATIONS. WHERE THIS CONDITIONS OCCURS, PROVIDE A NEW EXTENSION OF ORIGINAL CIRCUITS, RACEWAYS, EQUIPMENT AND OUTLETS TO RETAIN SERVICE CONTINUITY. INSTALLATIONS SHALL BE CONCEALED IN FINISHED AREAS.

MEP ANCHORAGE BRACING NOTE

MEP COMPONENT ANCHORAGE NOTE:

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 2019 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30:

- ALL PERMANENT EQUIPMENT AND COMPONENTS.
- TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. 'PERMANENTLY ATTACHED' SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
- TEMPORARY MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCT/WORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

- 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 THE COMPONENT.
- 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 FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL. RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE:

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8 AND 2019 CBC, SECTIONS 1617A.1.24, 1617A.1.25, AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHAT BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G. OSHPD OPM FOR 2013 CBC OR LATER). COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOB SITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEM (E):

MP [] MD [] PP [] E [] OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS

MP [] MD [] PP [] E [X] OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM#) # OPM-0052-13

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APP: 02-120017 INC:
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DATE: 12-27-2022

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COLD BOX REPLACEMENT
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TITLE:
ADDITIONAL ELECTRICAL
NOTES

SHEET:
E1.02
PROJECT 21191

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MECHANICAL EQUIPMENT SCHEDULE

DESIG. #	DESCRIPTION	FLA/MCA/HP/W	STARTER/FUSES	VOLT	PHASE	MAX. OCPD SIZE	CONDUIT SIZE	CONDUCTOR		GND.
								#	SIZE	
CU-1	CONDENSING UNIT	20 MCA	FUSE/DISC.	208	1	NOTE 2	1"	2	NOTE 4	NOTE 3
CU-2										
CU-3										
E-1	EVAPORATOR UNIT	1 FLA								
E-2										
E-3										

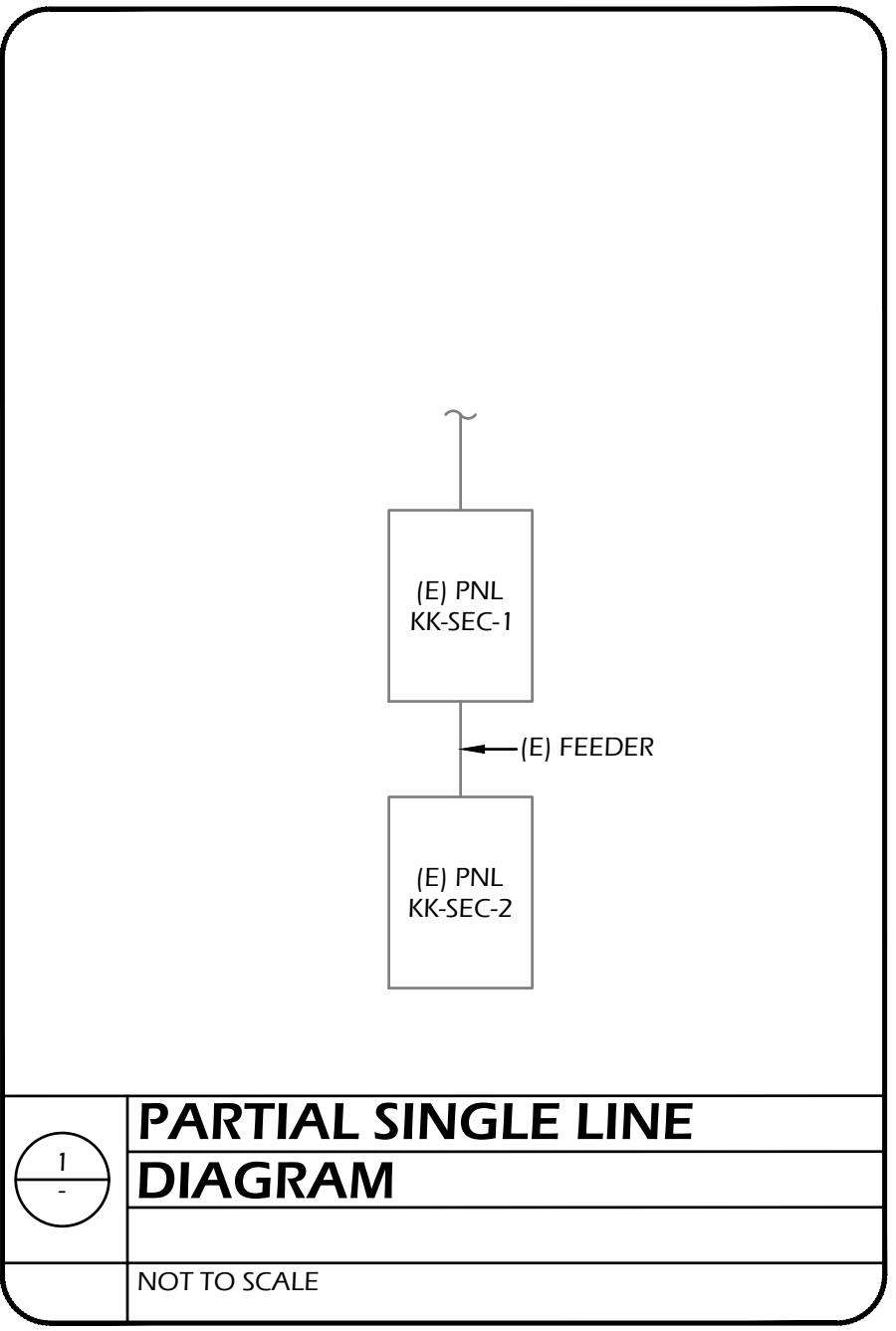
NOTES:
1. * = THERMAL RATED SWITCH FOR FRACTIONAL HORSEPOWER MOTORS.
2. REFER TO THE PANEL SCHEDULE AND SINGLE LINE DIAGRAM FOR THE CIRCUIT BREAKER AND CONDUIT SIZES, IF NOT INDICATED WITHIN THE SCHEDULE.
3. GROUNDING CONDUCTOR SIZE TO MATCH CONDUCTOR SIZE.
4. REFER TO CABLE SIZE SCHEDULE FOR THE CONDUCTOR SIZES.

GENERAL NOTES:
1. COORDINATE LOCATIONS AND POWER REQUIREMENT FOR MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR.
2. PROVIDE FUSED SWITCH DISCONNECT PER NAME PLATE RATING OF MECHANICAL UNITS FOR OVERLOAD PROTECTION.

CABLE SIZE SCHEDULE FOR 208/120V CIRCUIT SYSTEMS

CIRCUIT LOAD(A)	CABLE SIZE PER DISTANCE					
	50FT	100FT	150FT	200FT	250FT	300FT
4	#12	#12	#10	#10	#8	#8
8	#12	#10	#8	#6	#6	#4
12	#10	#8	#6	#4	#4	#2
16	#10	#6	#4	#4	#2	#2
20	#8	#6	#4	#2	#2	#1
24	#8	#4	#2	#2	#1	#1/0
28	#6	#4	#2	#1	#1	#1/0
32	#6	#4	#2	#1	#1/0	#2/0
36	#6	#2	#2	#1/0	#2/0	#2/0
40	#6	#2	#1	#1/0	#2/0	#3/0

NOTES:
1. MINIMUM CONDUCTOR SIZE AMPACITY AT 75 DEGREES CELSIUS FOR EACH CIRCUIT SHALL MATCH OR EXCEED THE CIRCUIT BREAKER RATING. CONDUCTOR SIZE SHALL BE INCREASED PER THE ABOVE TABLE AS CIRCUIT DISTANCES INCREASES, SO VOLTAGE DROP WILL NOT EXCEED 3% FROM PANEL CIRCUIT ORIGIN.
2. CONDUIT SHALL BE SIZED PER THE ABOVE TABLE AND SHALL NOT CARRY MORE THAN 6 CURRENT CARRYING CONDUCTORS.
3. UTILIZE THIS SCHEDULE AND NOTES IF CONDUCTORS AND CONDUIT SIZES ARE NOT SHOWN WITHIN THE PLANS.



VOLTAGE: 208/120V, 3Ø, 4W
BUS: 600A
BREAKER AIC: 35,000
MOUNTING: SURFACE
ENCLOSURE: NEMA 3R

(E) PANEL 'KK-SEC-2' NEW CONFIGURATION

CIR #	BKR	LOAD (VA)			DESCRIPTION	DESCRIPTION	LOAD (VA)			BKR	CIR #
		PHASE A	PHASE B	PHASE C			PHASE C	PHASE B	PHASE A		
2		1351			(E) WASTE DISPOSER	(N) FREEZER LIGHTS* (E) COOLER		500	500	20A/1P	44
4	15A/3P		1351		(E) WASTE DISPOSER	(N) COOLER LTGS/ROOF REC.		500		20A/1P	46
6				1351		(N) SPARE		100		20A/1P	48
8	20A/1P	1000			(E) FOOD CUTTER	(N) CONDENSING UNIT CU-1		2074	2074	30A/2P	50
10	40A/1P		1000		(E) SLICING MACHINE			2074			52
12				1351		(N) CONDENSING UNIT CU-2		1883		25A/2P	54
14	15A/3P	1351			(E) WASTE DISPOSER			1883		25A/2P	56
16			1351			(N) CONDENSING UNIT CU-3		1883		25A/2P	58
18	20A/1P			1000	(E) ANSUL SYSTEM			1883			60
20	↓	1000			(E) VENDING MACHINE	(N) COOLER EVAP E-1		1338		15A/2P	62
22	↓		1000		(E) VENDING MACHINE			1338			64
24	↓			1000	(E) VENDING MACHINE	(N) FREEZER EVAP, E-2		1338		15A/2P	66
26	20A/2P	1000			(E) HOT FOOD WELL			1338			68
28			1000			(N) FREEZER EVAP, E-3		1338		15A/2P	70
30				1000	(E) COLD PAN			1338			72
32	20A/2P			1000		(E) REC. RM 22,29			1080	20A/1P	74
34	20A/2P		500		(E) CASH REGISTER	(E) REC. RM 22			1080	↓	76
36				500	(E) COFFEE MACHINE	(E) REC. RM 22			1080	↓	78
38		1500				(E) REC. SVR RM 18,19			1080	↓	80
40	60A/3P		1500		(E) DISH WASHER	(E) SPARE			100	↓	82
42				1500	(E) MICROWAVE				1500	↓	84

TOTAL Ø LOADS (VA): PHASE A = 17495 PHASE B = 16015 PHASE C = 16824
 TOTAL Ø LOADS (A): PHASE A = 146 PHASE B = 133 PHASE C = 140
 TOTAL LOAD: 50334 VA 353 A

NOTES:
1. PROVIDE AND INSTALL A NEW CIRCUIT BREAKER AS INDICATED ON SCHEDULE FOR ALL CIRCUITS INDICATED AS NEW.
* COMBINE EXISTING LOAD

VOLTAGE: 208/120V, 3Ø, 4W
BUS: 600A
BREAKER AIC: 35,000
MOUNTING: SURFACE
ENCLOSURE: NEMA 3R

(E) PANEL 'KK-SEC-2' EXISTING CONFIGURATION

CIR #	BKR	LOAD (VA)			DESCRIPTION	DESCRIPTION	LOAD (VA)			BKR	CIR #
		PHASE A	PHASE B	PHASE C			PHASE C	PHASE B	PHASE A		
2		1351			(E) FREEZER LIGHTS	(E) FREEZER LIGHTS		500	500	20A/1P	44
4	15A/3P		1351		(E) WASTE DISPOSER	(E) COOLER		500		20A/1P	46
6				1351				1321		15A/3P	48
8	20A/1P	1000			(E) FOOD CUTTER	(E) CONDENSING UNIT		1321	1321	15A/3P	50
10	40A/1P		1000		(E) SLICING MACHINE			1321			52
12				1351		(N) CONDENSING UNIT CU-2		1321		20A/3P	54
14	15A/3P	1351			(E) WASTE DISPOSER	(E) CONDENSING UNIT		1321	1321	20A/3P	56
16			1351					1321			58
18	20A/1P			1000	(E) ANSUL SYSTEM			1321			60
20	↓	1000			(E) VENDING MACHINE	(E) CONDENSING UNIT		1321	1321	15A/3P	62
22	↓		1000		(E) VENDING MACHINE			1321			64
24	↓			1000	(E) VENDING MACHINE	(E) FREEZER EAST		1088		20A/2P	66
26	20A/2P	1000			(E) HOT FOOD WELL			1088			68
28			1000			(E) FREEZER WEST		1088		20A/2P	70
30				1000	(E) COLD PAN	(E) REC. RM 22,29		1088		20A/1P	72
32	20A/2P			1000		(E) REC. RM 22,29		1080		20A/1P	74
34	20A/2P		500		(E) CASH REGISTER	(E) REC. RM 22		1080		↓	76
36				500	(E) COFFEE MACHINE	(E) REC. RM 22		1080		↓	78
38		1500				(E) REC. SVR RM 18,19		1080		↓	80
40	60A/3P		1500		(E) DISH WASHER	(E) SPARE		0		↓	82
42				1500	(E) MICROWAVE			1500		↓	84

TOTAL Ø LOADS (VA): PHASE A = 15913 PHASE B = 14333 PHASE C = 16422
 TOTAL Ø LOADS (A): PHASE A = 133 PHASE B = 119 PHASE C = 137
 TOTAL LOAD: 46668 VA 344 A

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SS FLS ACS
DATE: 03/01/2023



DATE: 12-27-2022

**BUCHANAN HIGH SCHOOL
COLD BOX REPLACEMENT**

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**LAWRENCE
ENGINEERING GROUP**

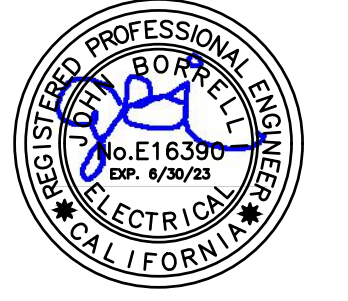
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TITLE:
PARTIAL SINGLE DIAGRAM
PANEL SCHEDULE, WEIGHT AND
DIMENSION SCHEDULE

SHEET:
E1.03
PROJECT: 21191

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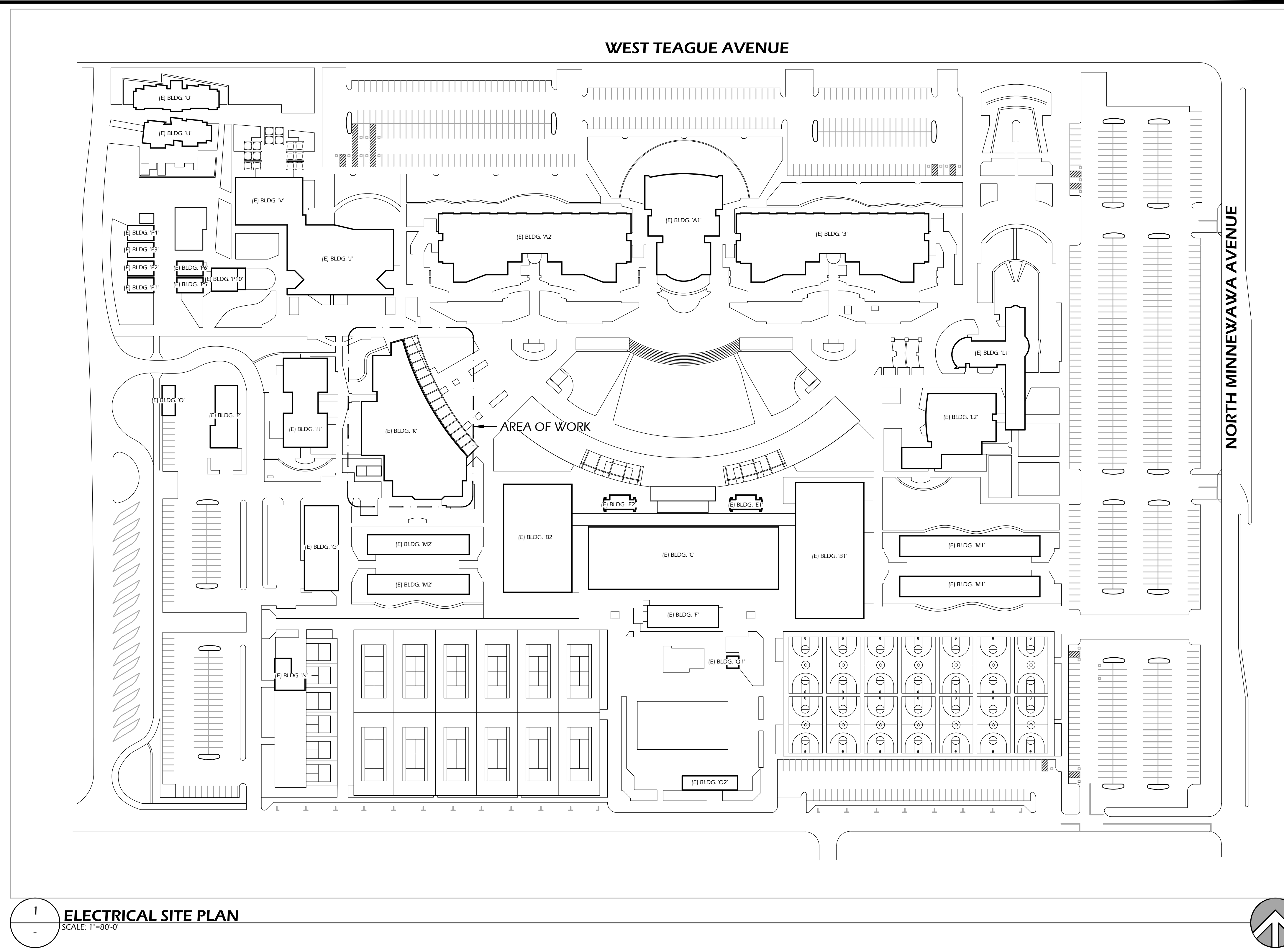
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TITLE:
ELECTRICAL SITE PLAN

SHEET:
E2.01
PROJECT: 21191

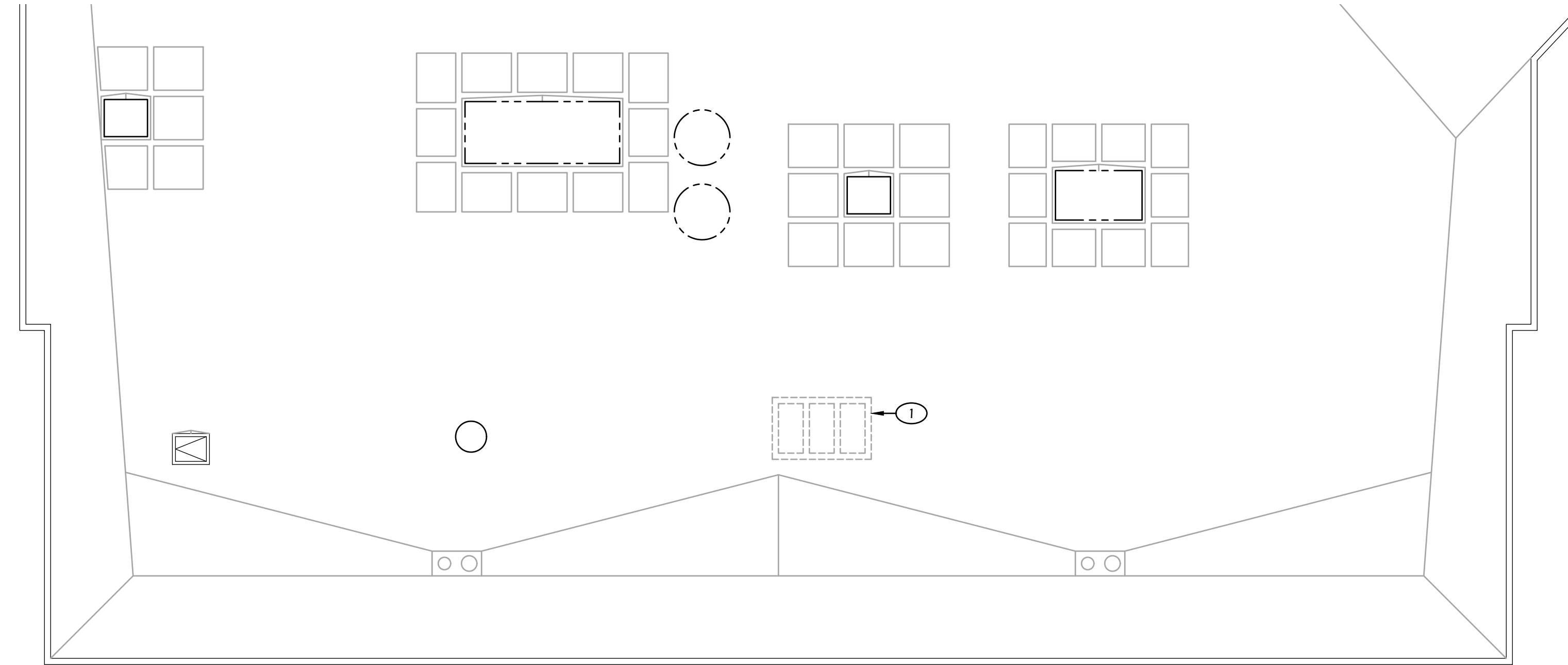


1 ELECTRICAL SITE PLAN
SCALE: 1"=80'-0"

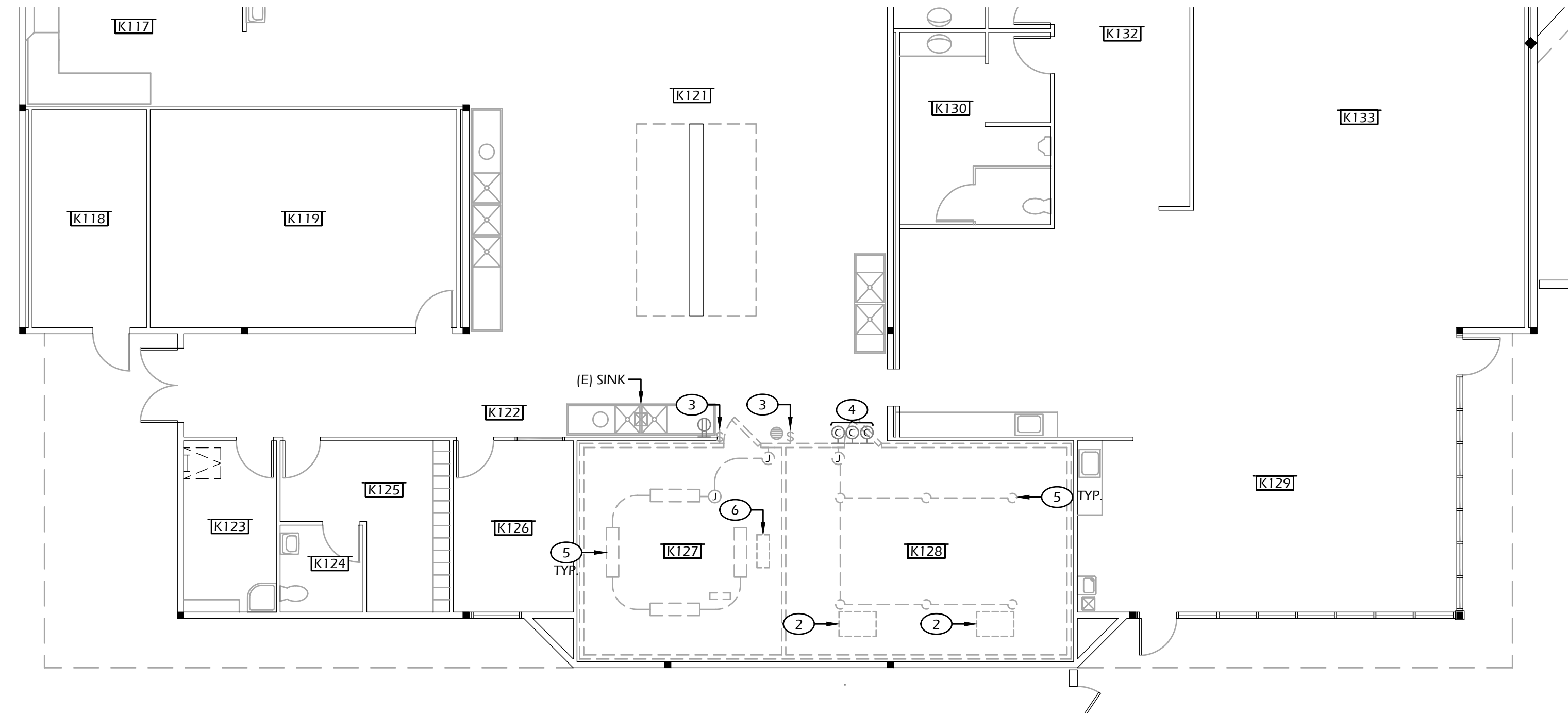
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1 PARTIAL BUILDING 'K' DEMOLITION ELECTRICAL ROOF PLAN
SCALE: 1/8"=1'-0"



2 PARTIAL BUILDING 'K' DEMOLITION ELECTRICAL FLOOR PLAN
SCALE: 1/8"=1'-0"

ROOM SCHEDULE			
###	ROOM NAME	###	ROOM NAME
K101	MULTI-PURPOSE ROOM	K118	MECHANICAL ROOM
K102	PLATFORM	K119	STORAGE
K103	STORAGE	K120	FOOD SERVICE
K104	STORAGE	K121	KITCHEN
K105	STORAGE	K122	HALLWAY
K106	JANITOR'S ROOM	K123	JANITOR'S ROOM
K107	MEN'S RESTROOM	K124	JANITOR'S RESTROOM
K108	MEETING ROOM	K125	LOCKER ROOM
K109	STORAGE	K126	OFFICE
K110	STUDENT STORE	K127	COLD BOX
K111	OFFICE	K128	FREEZER
K112	VESTIBULE	K129	FOOD SERVICE
K113	VAULT	K130	MEN'S RESTROOM
K114	WOMEN'S RESTROOM	K131	WOMEN'S RESTROOM
K115	LOBBY	K132	PASSAGEWAY
K116	VESTIBULE	K133	STAFF ROOM
K117	DISH WASH ROOM		

- SHEET NOTES**
- CAREFULLY DISCONNECT POWER TO EXISTING CONDENSING UNITS. PULL ALL CONDUCTORS BACK TO SOURCE AND REMOVE EXISTING CONDUIT UP TO ACCESSIBLE POINT AND CAP OFF. PROVIDE AND INSTALL A NEW CONDUIT AND NEW CONDUCTORS. REFER TO THE MECHANICAL SCHEDULE. RUN CONDUIT AND CONDUCTORS TO NEW CONDENSING UNIT LOCATION. CONNECT TO THE PANEL AND CIRCUITS INDICATED ON PLANS. MAKE ALL CONNECTIONS FOR A FULLY FUNCTIONING SYSTEM.
 - CAREFULLY DISCONNECT POWER TO EXISTING EVAPORATORS. EXTEND CONDUIT AND CONDUCTORS TO NEW EVAPORATORS AFTER INSTALLATION. MAKE ALL CONNECTIONS FOR A FULLY FUNCTIONING SYSTEM.
 - CAREFULLY DISCONNECT LIGHT SWITCH. EXTEND CIRCUITS AS REQUIRED IN LIQUID TIGHT FLEXIBLE METAL CONDUIT TO LOCATION OF NEW LIGHT SWITCH AFTER INSTALLATION OF NEW FREEZER.
 - CAREFULLY DISCONNECT THE THREE TIMECLOCKS LOCATED HIGH ON FRONT OF FREEZER DOOR AND STORE IN A SAFE PLACE. EXTEND CIRCUITS AND RECONNECT AFTER REPLACEMENT OF FREEZER.
 - PROVIDE AND INSTALL JBOX ABOVE LIGHT FIXTURES. INTERCEPT EXISTING CIRCUIT FOR LIGHT FIXTURES AND EXTEND TO NEW LIGHT FIXTURE LOCATIONS. RECONNECT TO CIRCUIT INDICATED ON PLANS.
 - CAREFULLY DISCONNECT AND REMOVE POWER TO EXISTING EVAPORATOR. PULL ALL CONDUCTORS BACK TO SOURCE AND REMOVE EXISTING CONDUIT UP TO ACCESSIBLE POINT AND CAP OFF. PROVIDE AND INSTALL A NEW CONDUIT AND NEW CONDUCTORS. REFER TO THE MECHANICAL SCHEDULE. CONNECT CONDUCTORS TO THE PANEL AND CIRCUIT INDICATED ON PLANS. MAKE ALL CONNECTIONS FOR A FULLY FUNCTIONING SYSTEM.

- GENERAL NOTES**
- ALL CONDUIT PENETRATIONS SHALL BE SEALED WITH APPROVED SEALANT TO PREVENT MOISTURE PENETRATION WITHIN THE FREEZER AND COOLER.
 - FIRE ALARM SYSTEM SHALL BE TESTED AND INSPECTED IN ACCORDANCE WITH NFPA 72, CHAPTER 14.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-120017 INC:
REVIEWED FOR
SS FLS ACS
DATE: 03/01/2023



DATE: 12-27-2022

**BUCHANAN HIGH SCHOOL
COLD BOX REPLACEMENT**
1560 N. MINNEWAWA AVE.
CLOVIS, CA 93619

REVISIONS

**LAWRENCE
ENGINEERING GROUP**
Fresno, CA 93720
7084 N. Maple Ave., Suite 101
(559) 431-1342
FAX (559) 431-0101

TITLE:
PARTIAL BUILDING 'K'
DEMOLITION ELECTRICAL
ROOF & FLOOR PLAN

SHEET:
E3.01
PROJECT 21191

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http://www.borrelliengineering.com/
ca-bai@borrelliengineering.com
BAI# 22111



ROOM SCHEDULE			
###	ROOM NAME	###	ROOM NAME
K101	MULTI-PURPOSE ROOM	K118	MECHANICAL ROOM
K102	PLATFORM	K119	STORAGE
K103	STORAGE	K120	FOOD SERVICE
K104	STORAGE	K121	KITCHEN
K105	STORAGE	K122	HALLWAY
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K107	MEN'S RESTROOM	K124	JANITOR'S RESTROOM
K108	MEETING ROOM	K125	LOCKER ROOM
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K113	VAULT	K130	MEN'S RESTROOM
K114	WOMEN'S RESTROOM	K131	WOMEN'S RESTROOM
K115	LOBBY	K132	PASSAGEWAY
K116	VESTIBULE	K133	STAFF ROOM
K117	DISH WASH ROOM		

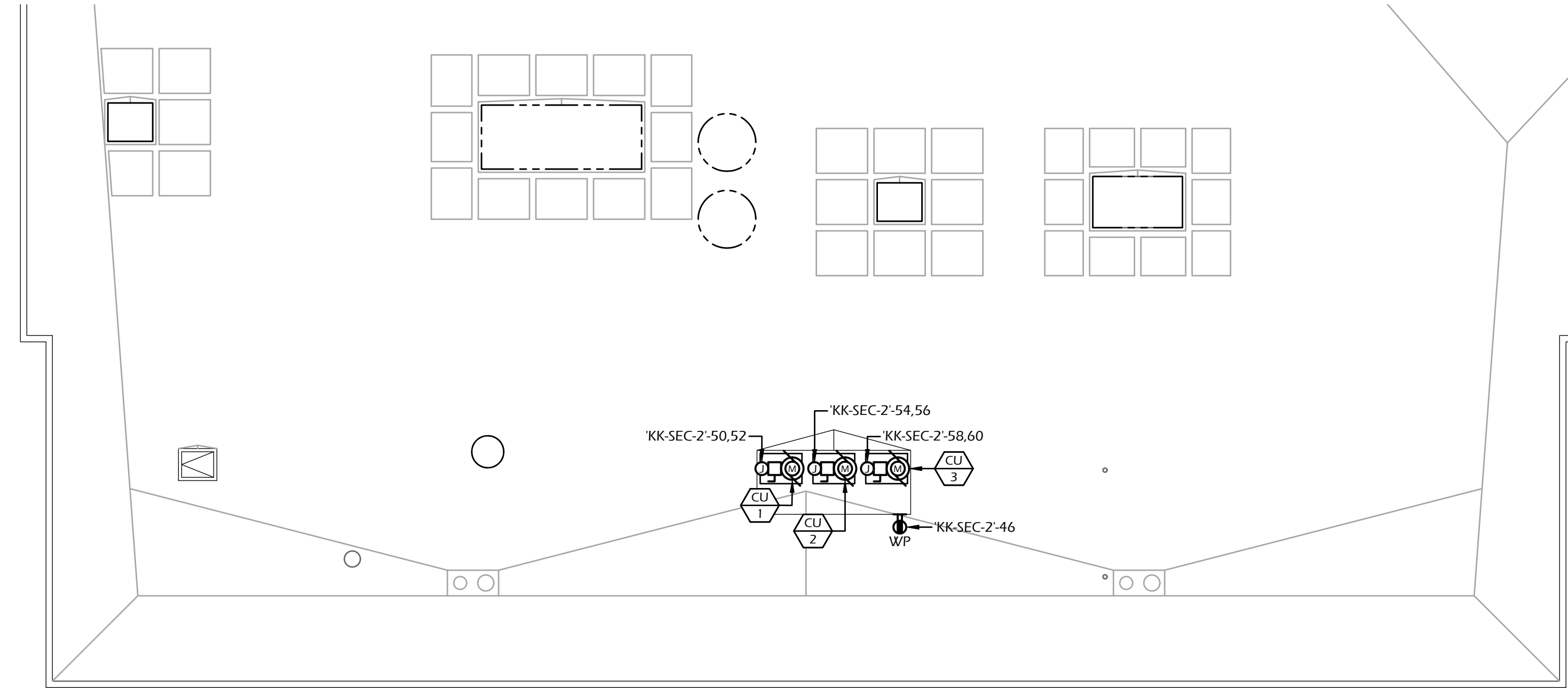
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-120017 INC:
REVIEWED FOR
SS FLS ACS
DATE: 03/01/2023



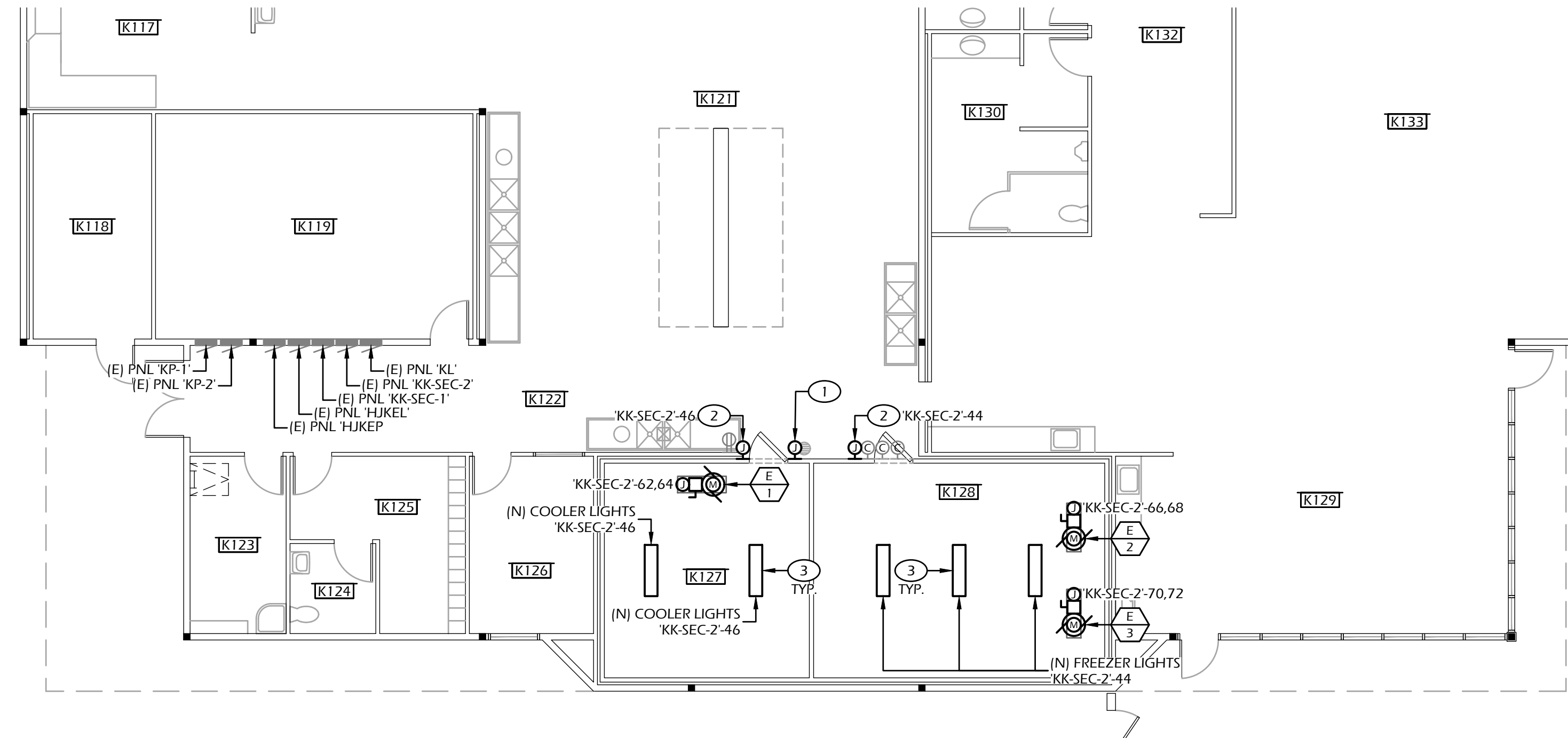
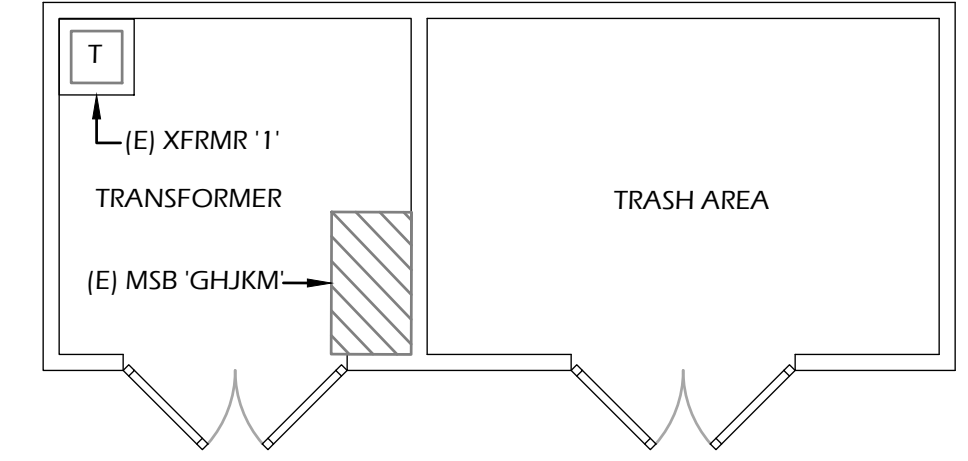
DATE: 12-27-2022

- SHEET NOTES**
- PROVIDE AND INSTALL A 6x6x4-INCH JUNCTION BOX, MOUNTED ABOVE THE FREEZER DOORS. PROVIDE AND INSTALL TWO 1-1/4-INCH CONDUIT FOR LOW VOLTAGE. ROUTE CONDUIT ABOVE CEILING LEVEL BACK TO DATA BOX LOCATED IN ROOM K123. TERMINATE AT BOTH ENDS.
 - EXTEND CIRCUITS FROM THE PREVIOUSLY REMOVED FREEZER/COOLER SWITCHES AND MAKE CONNECTIONS TO THE NEW SWITCHES. MAKE ALL LIGHTING CONNECTIONS WITH 3/4" LIQUID TIGHT CONDUITS TO THE LIGHTS AND SWITCHES.
 - LIGHT FIXTURE SHALL BE MASTER-BILT 48-INCH FIXTURE P/N #157752. FIXTURE SHALL HAVE OPTIONAL CEILING MOUNT AND MOUNTED ON CEILING OR FREEZER COOLER.

- GENERAL NOTES**
- ALL CONDUIT PENETRATIONS SHALL BE SEALED WITH APPROVED SEALANT TO PREVENT MOISTURE PENETRATION WITHIN THE FREEZER AND COOLER.



1 PARTIAL BUILDING 'K' ELECTRICAL ROOF PLAN
SCALE: 1/8"=1'-0"



2 PARTIAL BUILDING 'K' ELECTRICAL FLOOR PLAN
SCALE: 1/8"=1'-0"

**BUCHANAN HIGH SCHOOL
COLD BOX REPLACEMENT**
1560 N. MINNEWAWA AVE.
CLOVIS, CA 93619

REVISIONS

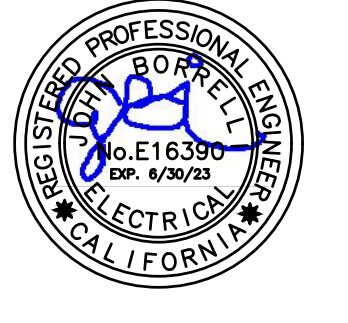
**LAWRENCE
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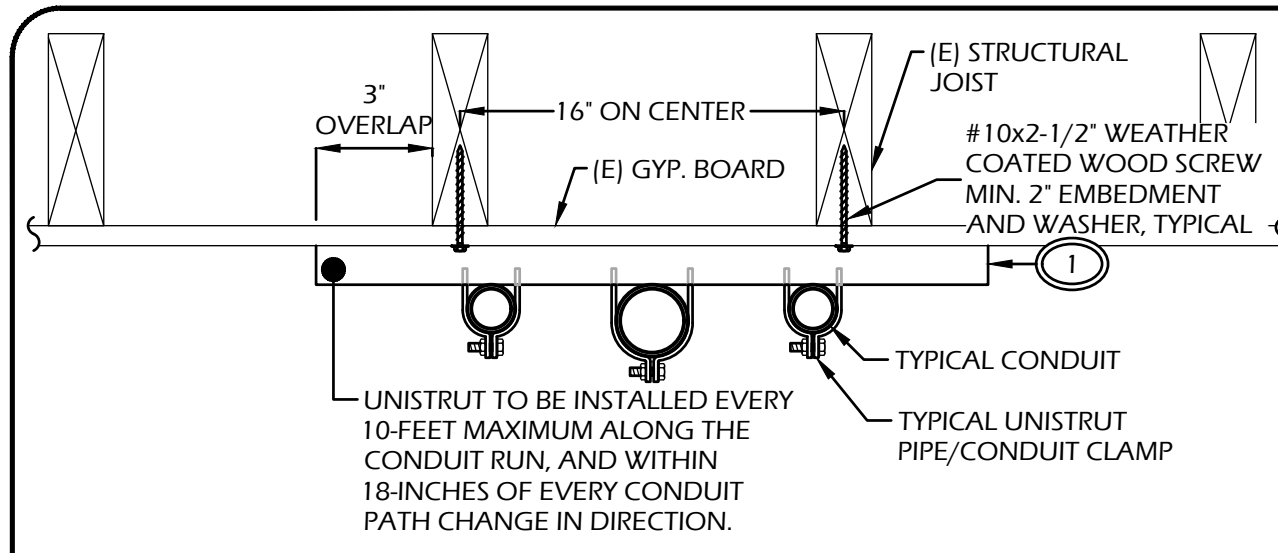
TITLE:
PARTIAL BUILDING 'K'
ELECTRICAL ROOF &
FLOOR PLAN

SHEET:
E3.02
PROJECT 21191

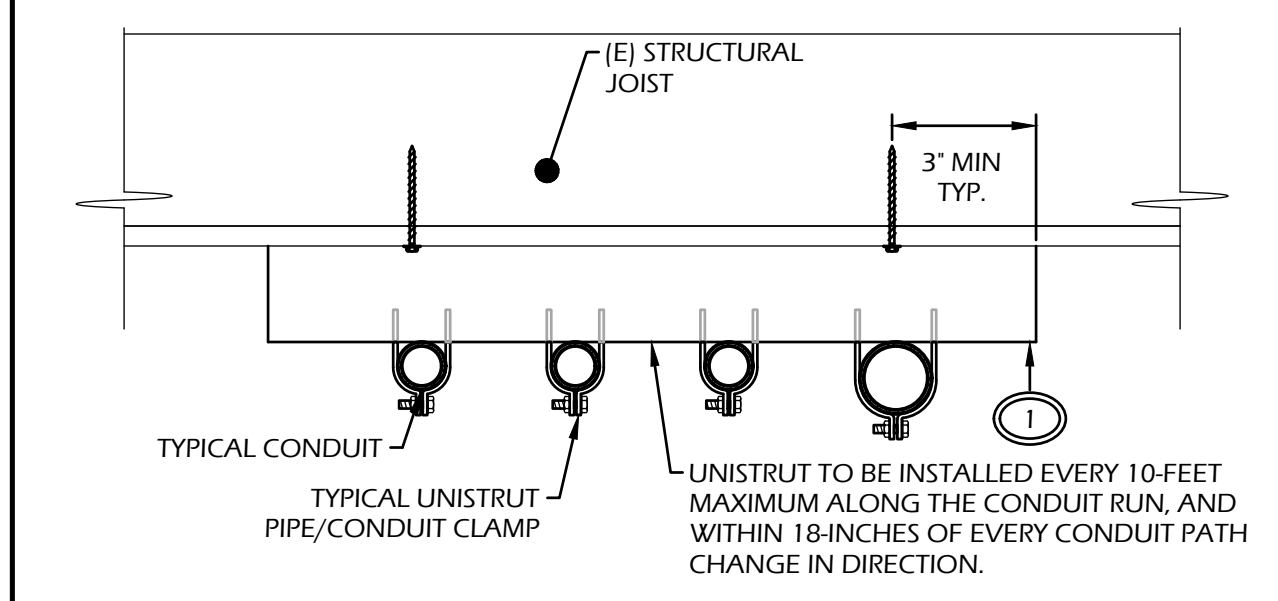
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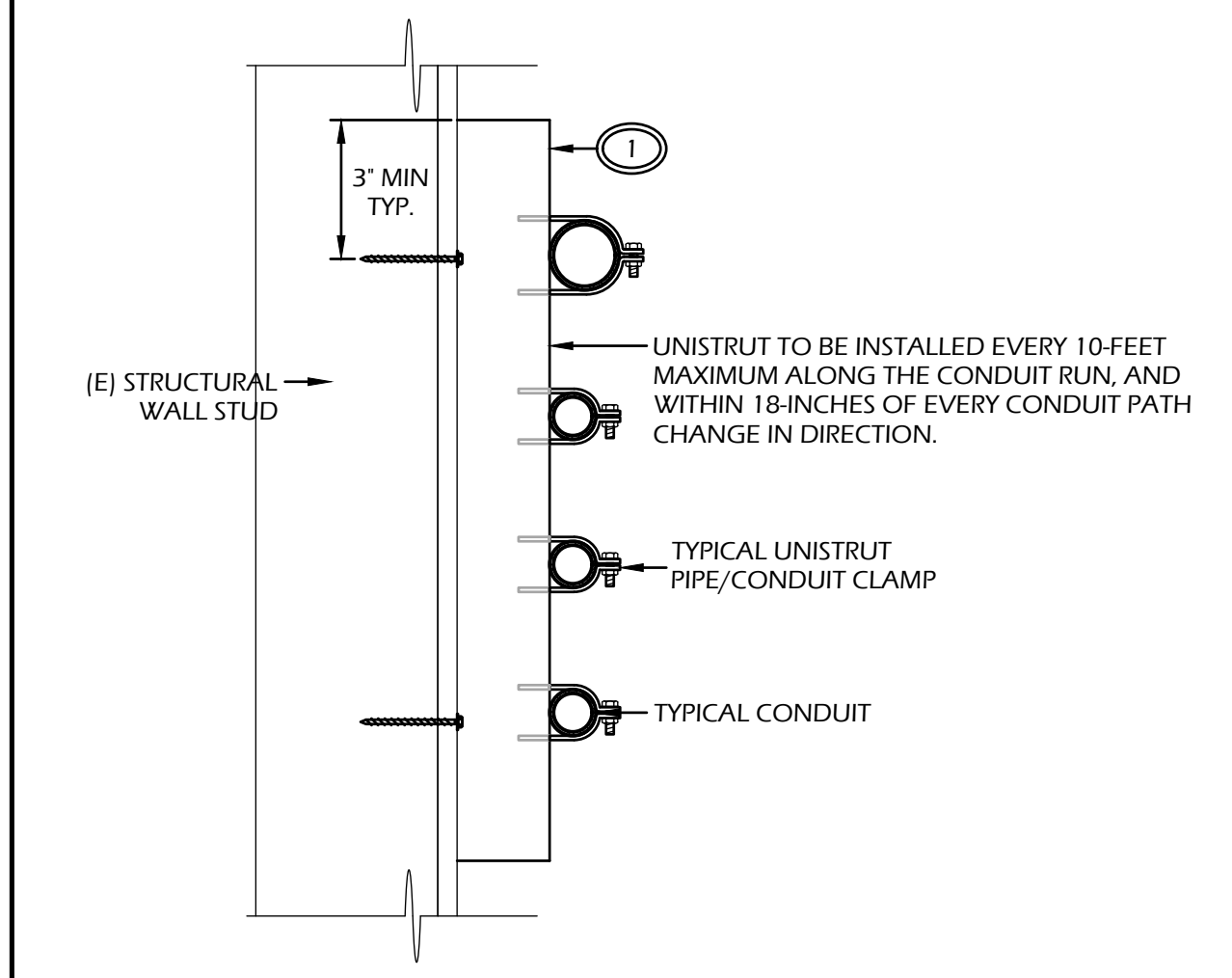




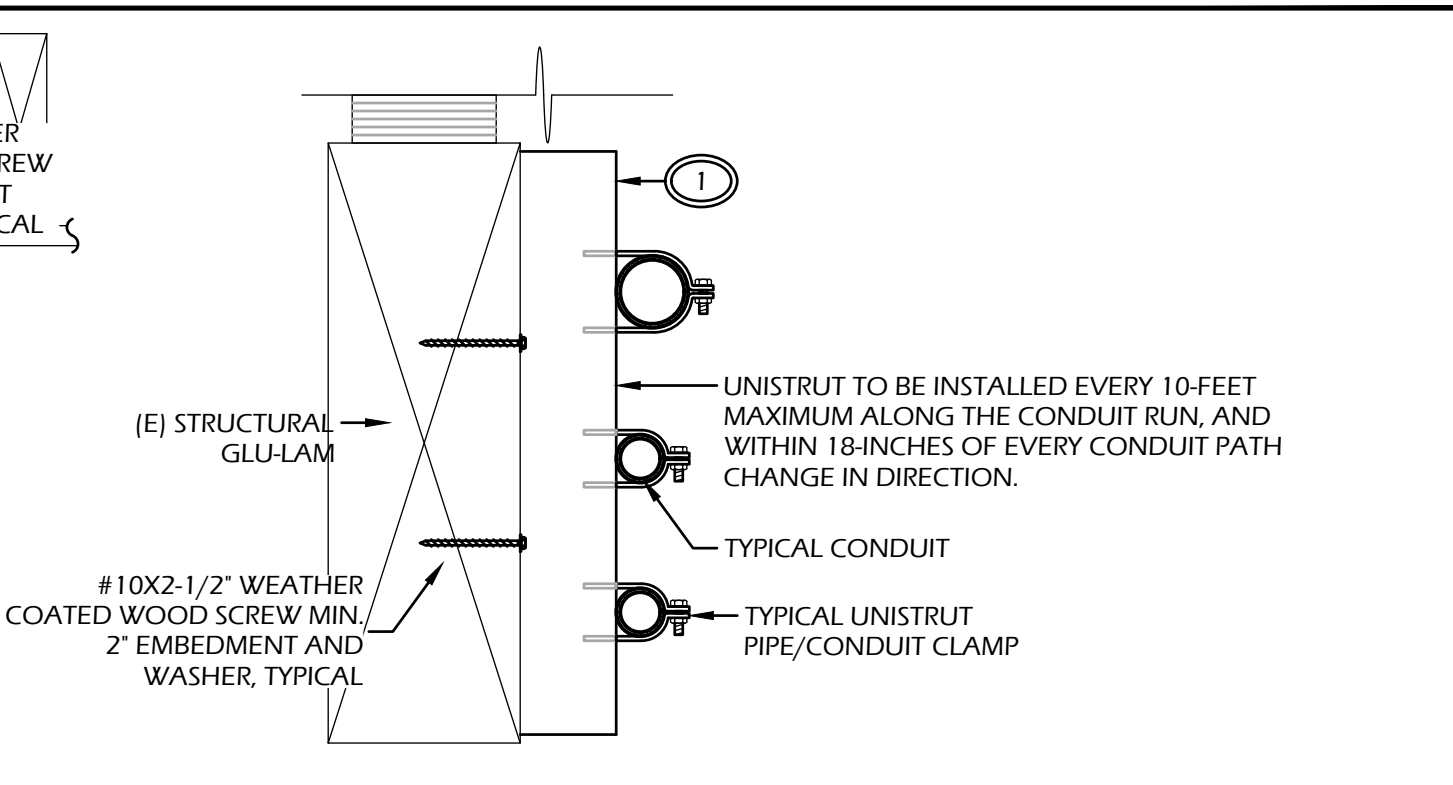
A CONDITION 1 - CEILING MOUNTED
CEILING JOIST PARALLEL TO CONDUIT RUN



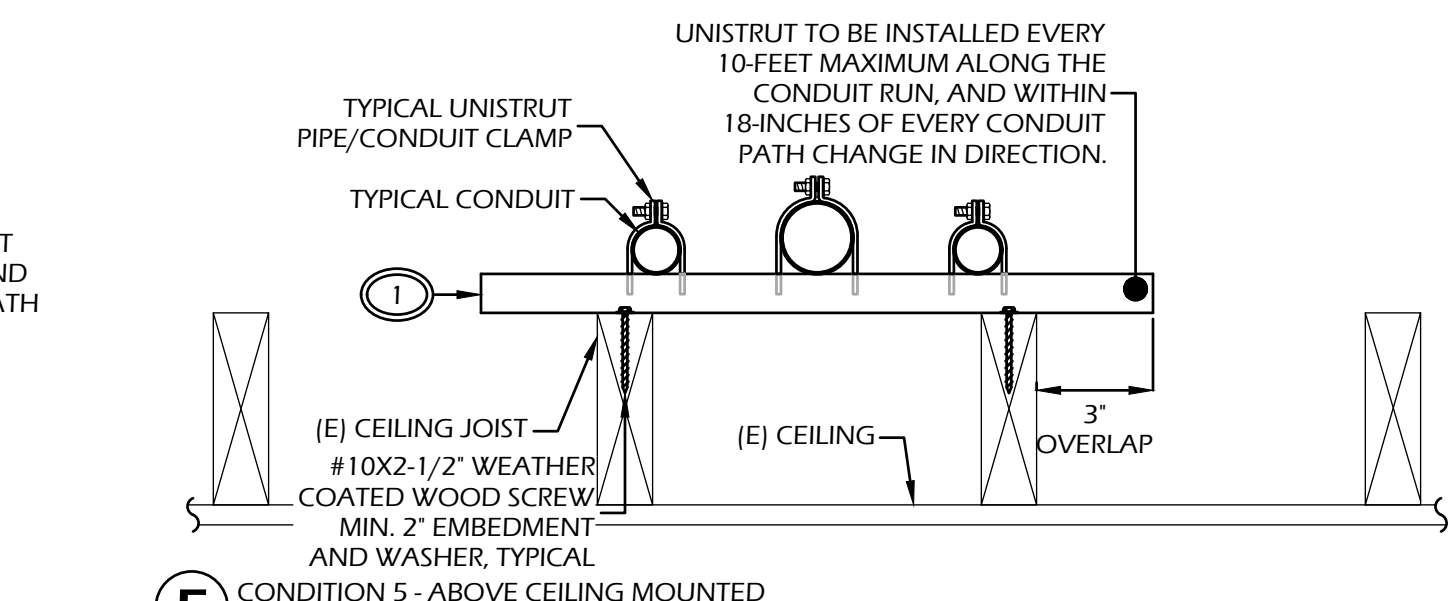
B CONDITION 2 - CEILING MOUNTED
CEILING JOIST PERPENDICULAR TO CONDUIT RUN



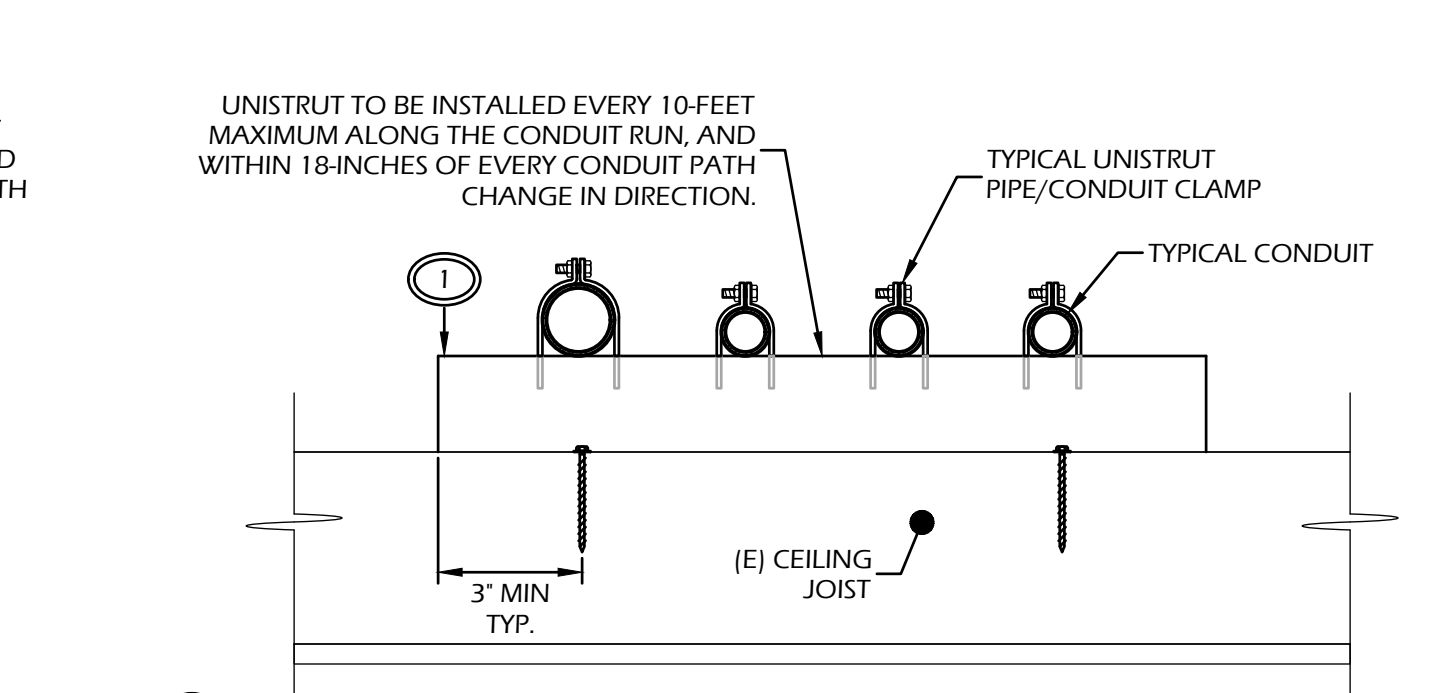
C CONDITION 3 - WALL MOUNTED



D CONDITION 4 - CONDUIT MOUNTING ON GLU-LAM



E CONDITION 5 - ABOVE CEILING MOUNTED
CEILING JOIST PARALLEL TO CONDUIT RUN



F CONDITION 6 - ABOVE CEILING MOUNTED
CEILING JOIST PERPENDICULAR TO CONDUIT RUN

DETAIL NOTES

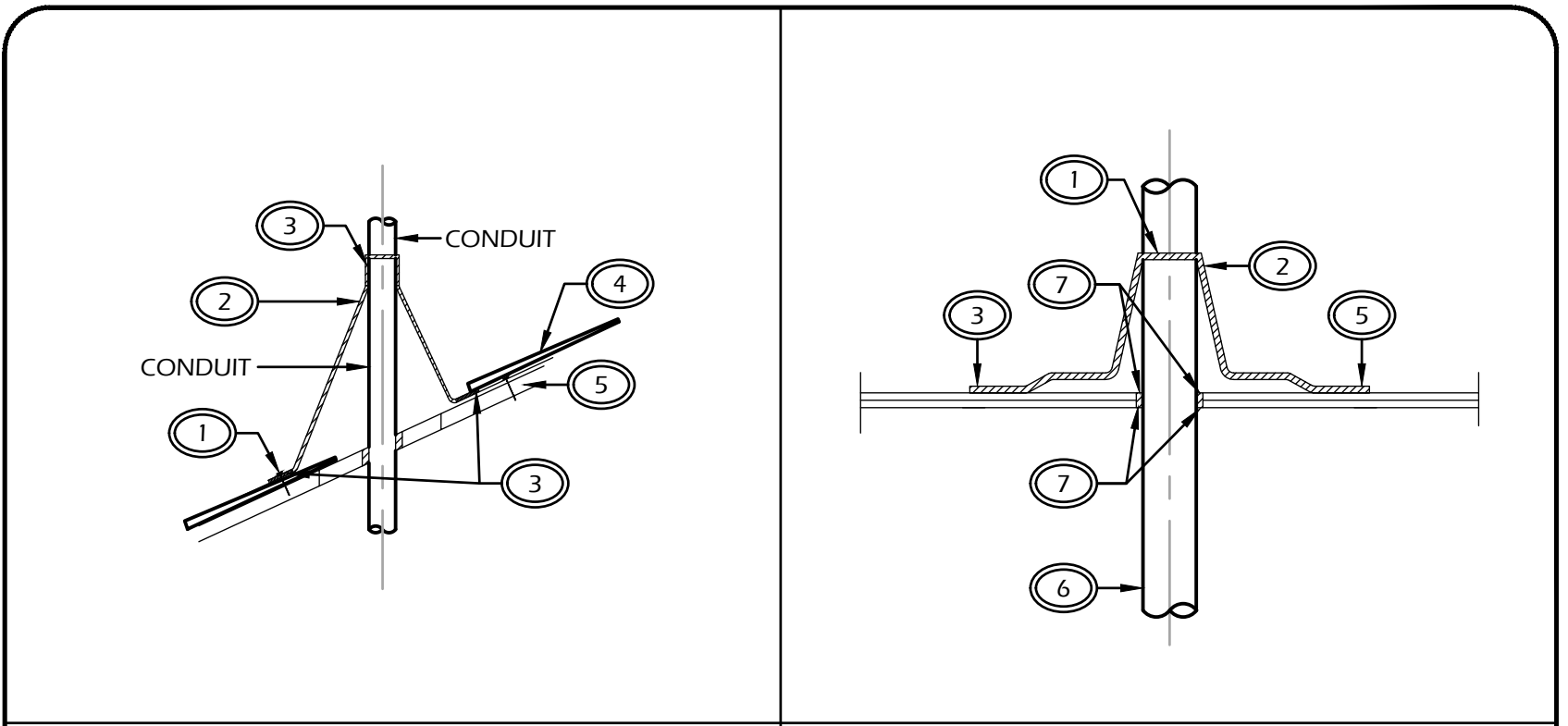
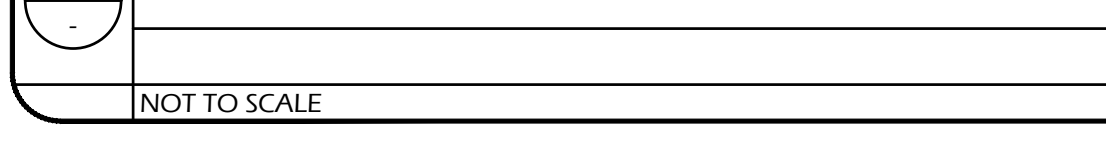
1. PROVIDE AND INSTALL UNISTRUT CONDUIT CLAMPS. COORDINATE UNISTRUT MEMBER SIZE. REFER TO SCHEDULE BELOW FOR CLAMP MODEL NUMBER AND MAXIMUM CONDUIT SIZE PER CLAMP.

PART NO.	CONDUIT SIZE IN (mm)	THICKNESS GAUGE (mm)	WT/100 PCS LBS (kg)	DESIGN LOAD LBS (kN)
P1211	1/2	16	10	400
	12.7	1.5	4.5	1.78
P1212	3/4	16	11	400
	19.1	1.5	5.0	1.78
P1213	1	16	12	400
	25.4	1.5	5.4	1.78
P1214	1-1/4	14	18	600
	31.8	1.9	8.2	2.67
P1215	1-1/2	14	20	600
	38.1	1.9	9.1	2.67
P1217	2	14	22	600
	50.8	1.9	10.0	2.67
P1218	2-1/2	12	40	800
	63.5	2.7	18.1	3.56
P1219	3	12	47	800
	76.2	2.7	21.3	3.56
P1220	3-1/2	11	62	1000
	88.9	3.0	28.1	4.45
P1221	4	11	67	1000
	101.6	3.0	30.4	4.45

GENERAL NOTES

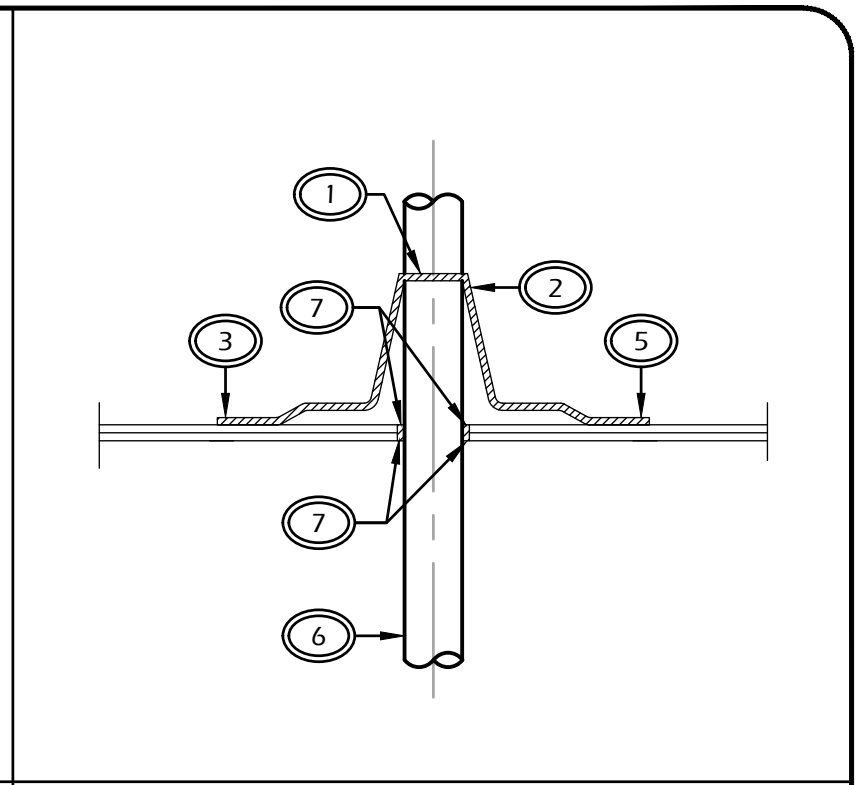
1. QUANTITY OF CONDUIT ON UNISTRUT MOUNTED MAY VARY. REFER TO CONDUIT ROUTING FLOOR PLAN FOR QUANTITY OF CONDUIT.
2. FOR CONDUITS ROUTING PARALLEL TO THE ROOF JOISTS WITH A WEIGHT GREATER THAN 15LBS./FT., THE SUPPORTS SHALL BE WITHIN 2 FEET OF AN EXISTING STRUCTURAL BEAM, ONE SUPPORT ON EACH SIDE OF THE BEAM.
3. CONDUITS ROUTING PERPENDICULAR TO THE ROOF JOISTS WITH A WEIGHT GREATER THAN 25LBS./FT. SHALL BE WITHIN 2 FEET OF AN EXISTING STRUCTURAL GLU-LAM.
4. UNISTRUT CHANNEL SHALL BE P1000-HS. UON. COORDINATE UNISTRUT MEMBER SIZE.

TYPICAL CONDUIT SUPPORT DETAIL



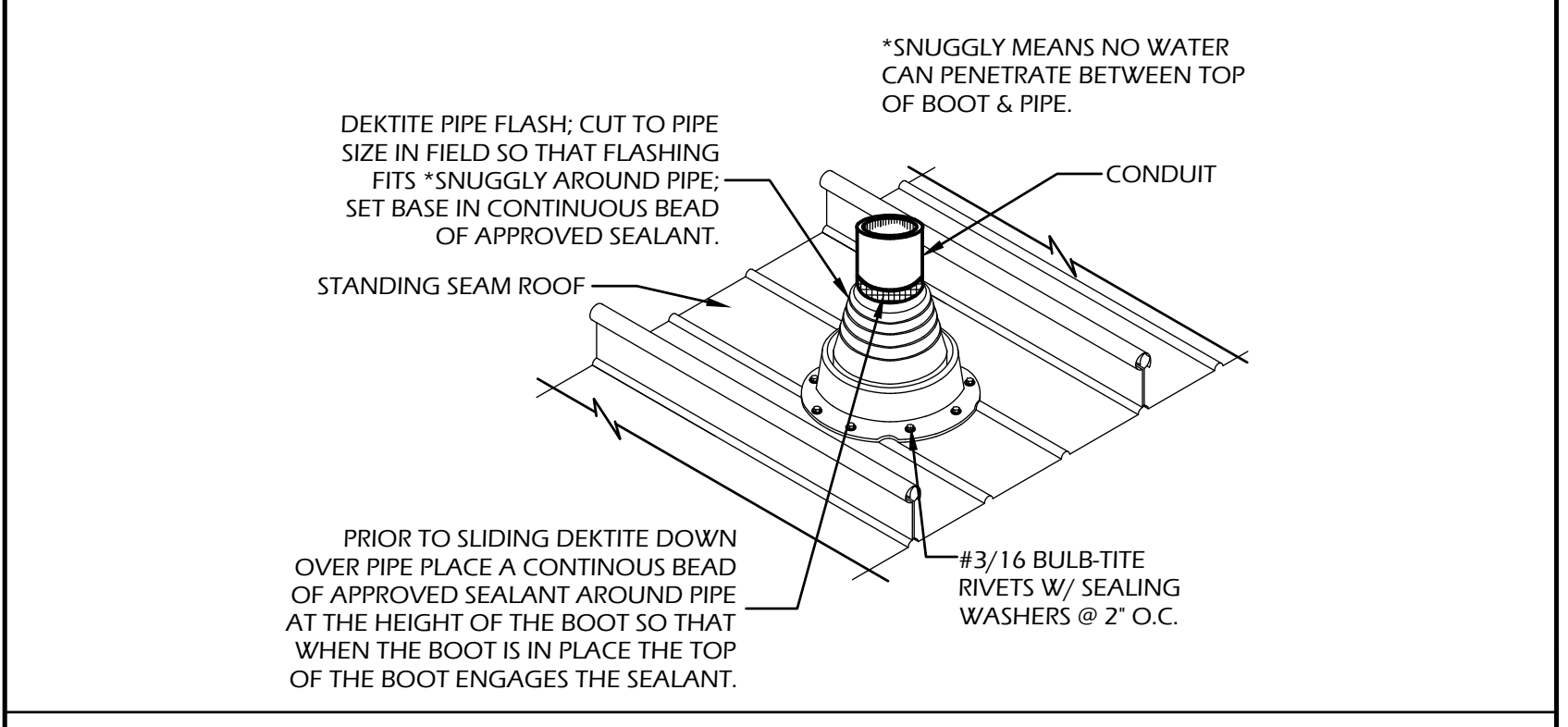
SHINGLE ROOF

- DETAIL NOTES: **1**
1. TYPICAL OF (4), TYPICAL WASHER ROOFING NAIL, SIMPSON TYPE 304 8-PENNY x2\"/>



ROLL ON ROOF

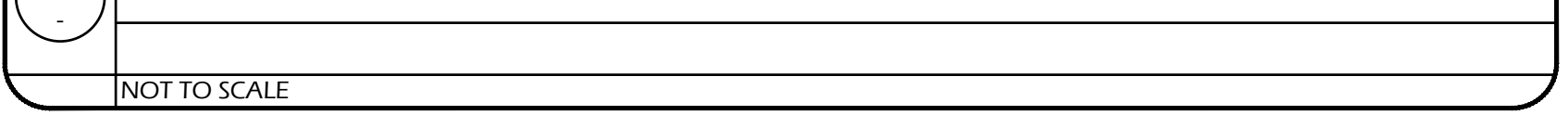
- DETAIL NOTES: **2**
1. SEAL MASTIC.
 2. ROOF JACK.
 3. REMOVE CAP SHEET, SET ROOF JACK IN HOT ASPHALT OR RUBBERIZED ROOF MASTIC.
 4. NOT USED.
 5. APPLY 6\"/>



STANDING SEAM ROOF

- NOTES:
1. THE DEKITE CONDUIT FLASHING MUST BE FASTENED TO THE PANEL ONLY AND NOT INTO THE ROOF SUBSTRATE TO ALLOW THE PANEL TO MOVE THERMALLY.
 2. ADEQUATE CLEARANCE MUST BE LEFT BETWEEN THE CONDUIT AND THE PANEL TO ALLOW FOR THERMAL MOVEMENT WITHOUT INTERFERENCE.
 3. THE CONDUIT MUST BE CENTERED IN THE PANEL TO ALLOW ADEQUATE CLEARANCE FOR INSTALLATION OF THE DEKITE WITHOUT INTERFERENCE WITH THE PANEL RIBS.
 4. FOR REGIONS WITH SNOW & ICE, A ROW OF SNOW GUARDS MUST BE INSTALLED NO GREATER THAN 3\"/>

TYPICAL CONDUIT ROOF PENETRATIONS





**BUCHANAN HIGH SCHOOL
 COLD BOX REPLACEMENT**
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 Fresno, CA 93277
 4910 E. Clinton Way, Suite 101
 (559) 431-1342
 (559) 431-0101

TITLE: STRUCTURAL
DETAILS

SHEET: **S1.0**
 PROJECT: 21191

1. GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE CALIFORNIA BUILDING CODE (CBC), 2019 EDITION, AND ALL OTHER PUBLICATIONS AND STANDARDS LISTED HEREIN.
- ALL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND ALL OTHER CONTRACT DRAWINGS AND SPECIFICATIONS.
- DETAILS SHOWN ON STRUCTURAL DRAWINGS ARE TYPICAL. SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS. CONDITIONS NOT COMPATIBLE TO THE DETAILS PROVIDED SHALL BE REPORTED TO THE ARCHITECT.
- DIMENSIONS SHOWN SHALL TAKE PRECEDENCE OVER SCALE ON PLANS, SECTIONS AND DETAILS. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IMMEDIATELY.
- NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
- FRAMING AND DETAIL CONDITIONS SPECIFIED BY THESE DRAWINGS SHALL NOT BE MODIFIED WITHOUT APPROVED WRITTEN DOCUMENTATION FROM THE ENGINEER AND ARCHITECT. CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION OF CONDITIONS NOT APPROVED.
- CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FLOOR OR ROOF FRAMING MEMBERS. LOAD SHALL NOT EXCEED DESIGN LIVE LOAD.
- DESIGN LOADING: PER CBC, 2019 EDITION.
- CONSTRUCTION DOCUMENTS SHALL CONSIST OF THE "APPROVED" DRAWINGS, SPECIFICATIONS AND ADDENDUM BEARING THE STAMP AND SIGNATURE OF THE ARCHITECT AND THE APPROVAL STAMP OF THE DIVISION OF THE STATE ARCHITECT (DSA). STRUCTURAL CALCULATIONS ARE NOT PART OF THE CONSTRUCTION DOCUMENTS AND SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.
- ALL WORK SHALL BE PERFORMED FROM THE "APPROVED" DOCUMENTS ONLY. A FULL SET OF APPROVED DOCUMENTS SHALL BE KEPT ON SITE DURING ALL CONSTRUCTION PHASES.
- DESIGN DATA CONDITIONS AS LISTED BELOW.

LOADING DATA	THIS PROJECT WORK
ROOF DEAD LOAD	12 psf MIN. 16 psf MAX.
ROOF LIVE LOAD	20 psf

SEISMIC DESIGN DATA	THIS PROJECT WORK
SITE COORDINATES	36.659° N -119.714° W
SEISMIC IMPORTANCE FACTOR (I)	1.25
RISK CATEGORY	III
MAPPED SPECTRAL RESPONSE	S _s = 0.532 S ₁ = 0.213
SITE CLASS	D
SPECTRAL RESPONSE COEFFICIENTS	S _w = 0.487 S _u = N/A
SEISMIC DESIGN CATEGORY	D
SEISMIC-RESISTING FORCE SYSTEM(S)	COMPONENT
RESPONSE MODIFICATION FACTOR(S) R	ap = 2.5 Rp = 6
SEISMIC RESPONSE COEFFICIENT(S) C _s	0.244 Wp
ANALYSIS PROCEDURE USED	ASCE 7-16 (13.3-1)

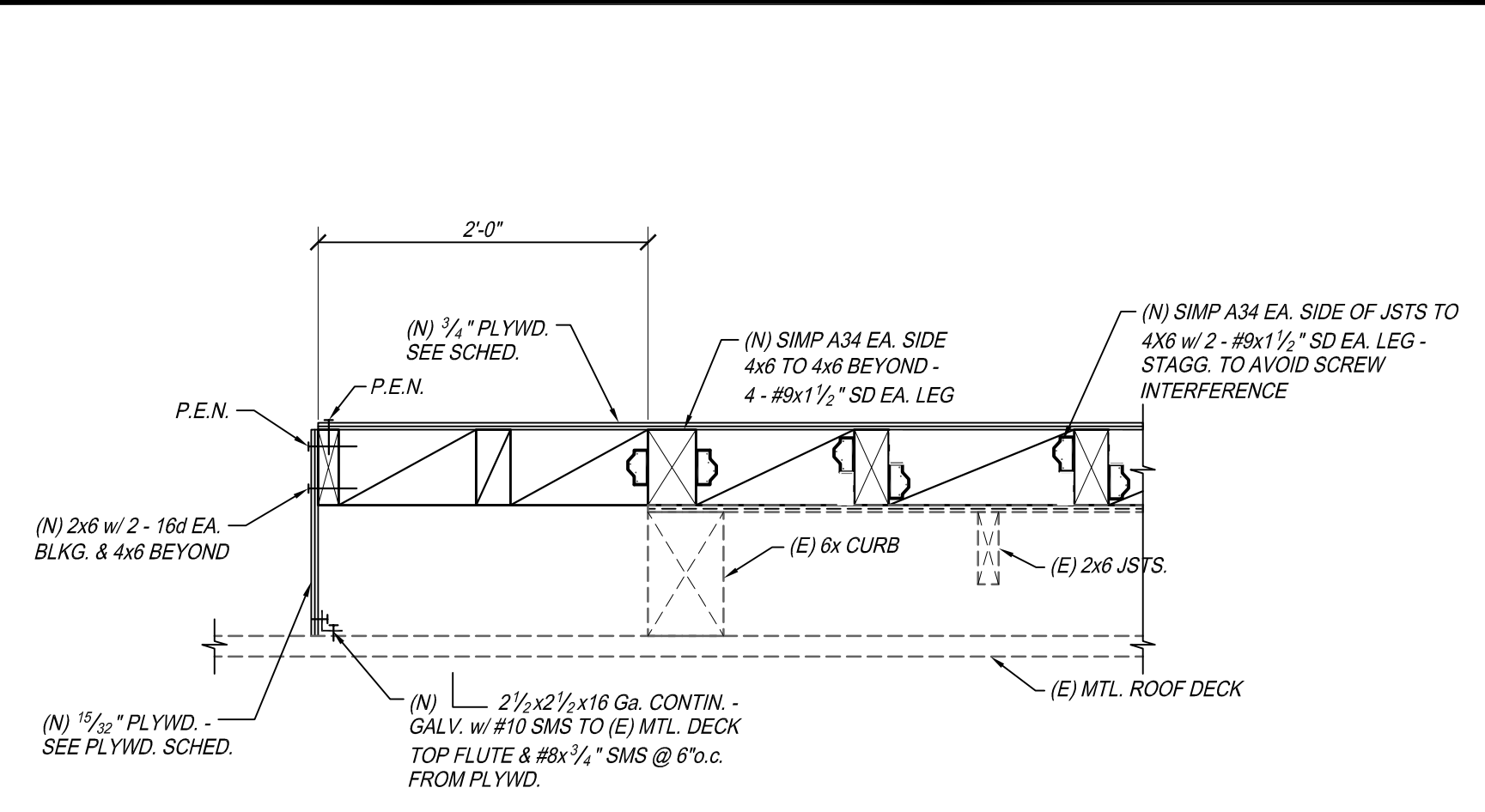
WIND DESIGN DATA	THIS PROJECT WORK
ULTIMATE WIND SPEED (3 SECOND GUST)	101 mph
WIND EXPOSURE CATEGORY	C
RISK CATEGORY	III
INTERNAL PRESSURE COEFFICIENT	N/A
WIND PRESSURE FOR COMPONENTS & CLADDING	RSP
ANALYSIS PROCEDURE	ASCE 7-16 30.4-1

2. STRUCTURAL WOOD

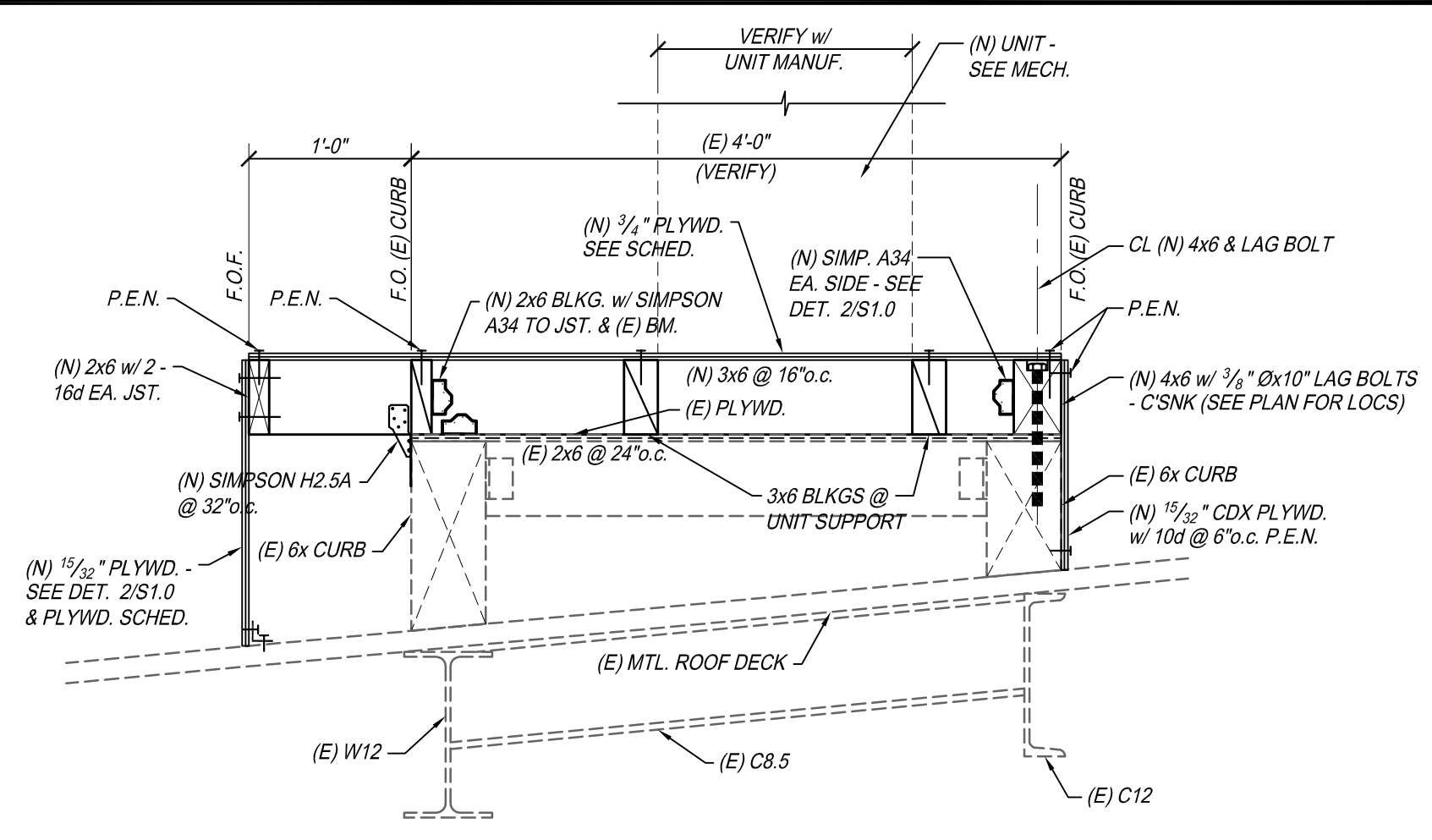
- MATERIALS: (UNLESS OTHERWISE NOTED ON DRAWINGS)
 - ALL 2X AND 4X FRAMING MEMBERS: #2 D.F. - UNLESS NOTED
 - WOOD STRUCTURAL PANELS (PLYWOOD): EACH PANEL SHALL BE IDENTIFIED WITH THE GRADE TRADEMARK OF THE APA. REFER TO THE PLYWOOD SCHEDULE FOR MATERIAL TYPE.
- LAG SCREWS:
 - LAG SCREWS: LEAD HOLE FOR THREADED PORTION SHALL BE 70% OF SHANK DIAMETER WITH A DEPTH EQUAL TO THE LENGTH OF SCREW AND CLEARANCE HOLE FOR UNTHREADED PORTION SHALL EQUAL THE DIAMETER AND LENGTH OF THE SCREW SHANK.
- WOOD SCREWS: ANS/ASME STANDARD B18.6.1
 - CONNECTION WOOD TO WOOD: WOOD SCREWS MAY BE PRE-DRILLED. THE LEAD HOLE RECEIVING THE SHANK SHALL BE NO MORE THAN 1/8" OF THE SHANK DIAMETER. THE LEAD HOLE RECEIVING THE THREADED PORTION SHALL BE NO MORE THAN 1/4" DIAMETER OF THE SHANK AT THE THREADED PORTION.
 - WOOD SCREWS SHALL NOT HAVE UPSET THREADS. DECKING SCREWS ARE NOT ALLOWED. SOAP OR OTHER LUBRICANT SHALL BE USED ON WOOD SCREWS TO FACILITATE INSERTION.
- FASTENERS, INCLUDING BOLTS AND ANCHOR BOLTS, IN CONTACT WITH PRESSURE TREATED MATERIAL: FASTENERS SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL (ASTM A 153). FASTENERS OTHER THAN NAILS, WOOD SCREWS AND LAG SCREWS SHALL BE MECHANICALLY DEPOSITED ZINC COATED STEEL (ASTM B 685, CLASS 55 MIN), UNLESS NOTED OTHERWISE.
- NAILED JOINTS: USE ONLY COMMON WIRE NAILS OR SPIKES. REPLACE WOOD COMPONENT. (SINKERS AND BOX NAILS ARE NOT ALLOWED). PRE-DRILL HOLES WHERE WOOD TENDS TO SPLIT.
- PLYWOOD NAILING: WHETHER HAND-NAILED OR MACHINE-NAILED, NAILS SHALL BE "COMMON WIRE" ONLY AND NAIL HEADS SHALL BE FLUSH WITH THE SURFACE OF THE SHEATHING. NAIL HEADS SHALL NOT PENETRATE THE SURFACE PLY. NAIL HEAD PENETRATION OF SURFACE PLY INTO 2ND PLY WILL BE CAUSE FOR RE-NAILING OR REJECTION OF THE PLYWOOD SHEET PENDING ENGINEER'S INSPECTION.
- MISC. METAL CONNECTORS: ALL SHEET METAL CONNECTORS USED FOR CONNECTING STRUCTURAL WOOD MEMBERS SHALL HAVE ICC APPROVAL AND CONNECTORS SHALL BE GALVANIZED.
- CONTRACTOR SHALL PROVIDE MISC. BLOCKING, FURRING, SHIMS, ETC. FOR ATTACHMENT OF FINISHES AND OTHER NON-STRUCTURAL MATERIALS SPECIFIED.
- WOOD MATERIALS SHALL NOT BE INSTALLED UNTIL MOISTURE CONTENT IS 19% OR LESS.

3. CONSTRUCTION PREPARATION

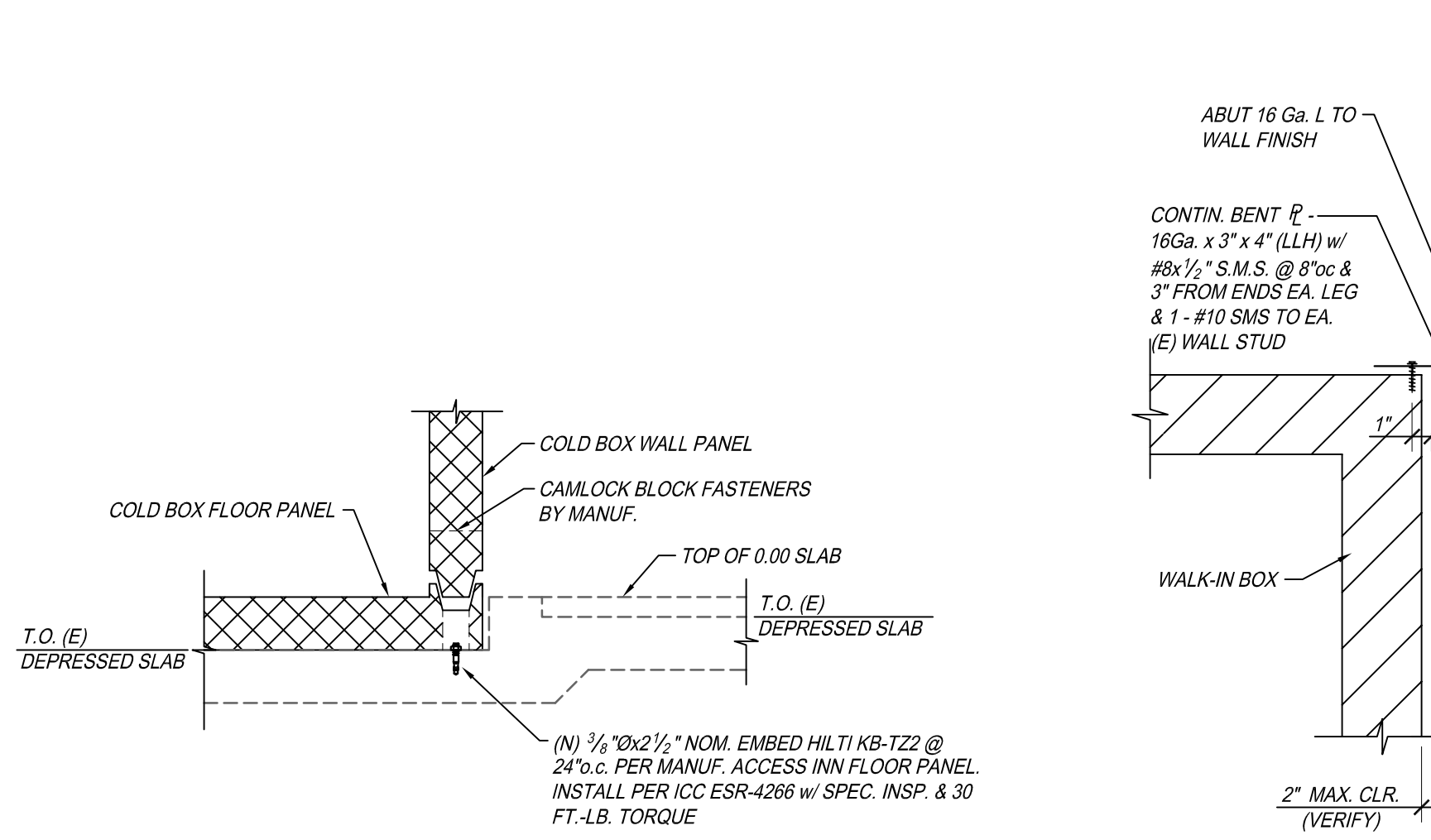
- PRIOR TO ORDERING, FABRICATING, EXCAVATING OR INSTALLING THE CONTRACTOR SHALL HAVE REVIEWED THE REQUIREMENTS OF THESE DRAWINGS AND COORDINATED CONDITIONS WITH ALL OTHER DISCIPLINES AND EXISTING SITE CONDITIONS.
- IN AS MUCH AS THE DESIGN FOR THE REMODELING AND ALTERATION OF AN EXISTING BUILDING REQUIRES THAT CERTAIN ASSUMPTIONS BE MADE REGARDING EXISTING CONDITIONS, AND BECAUSE SOME OF THESE ASSUMPTIONS MAY NOT BE VERIFIABLE WITHOUT DEMOLITION EFFORTS, THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS RELATED TO THIS WORK PRIOR TO ORDERING OR FABRICATING COMPONENTS TO BE INSTALLED.
- DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IMMEDIATELY FOR PROPER CLARIFICATION.
- THE CONDITION OF ALL WOOD MATERIALS SHALL BE REVIEWED BY THE CONTRACTOR AND DETERMINED TO BE ACCEPTABLE PRIOR TO INSTALLATION.



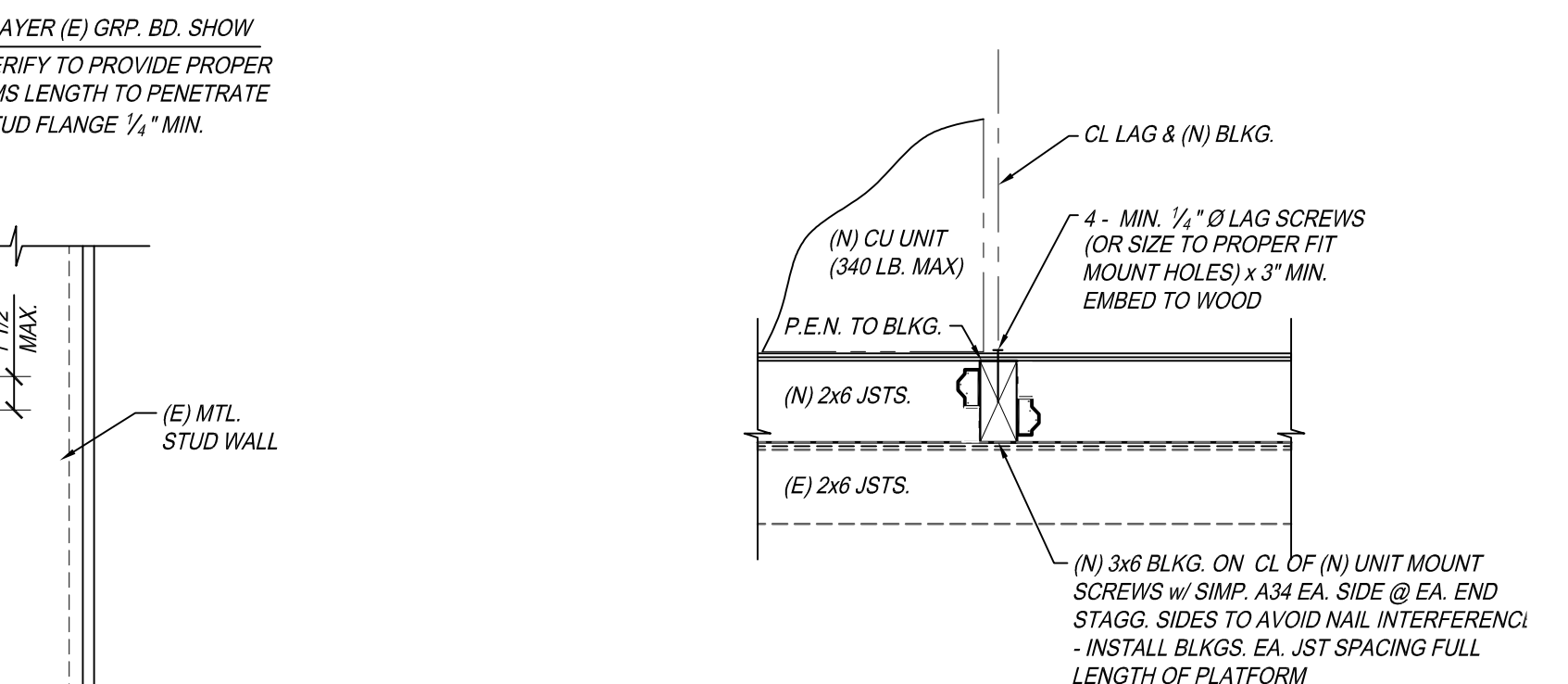
DETAIL 2
 SCALE: 1" = 1'-0"
 DET02 S1.0



DETAIL 1
 SCALE: 1" = 1'-0"
 DET01 S1.0



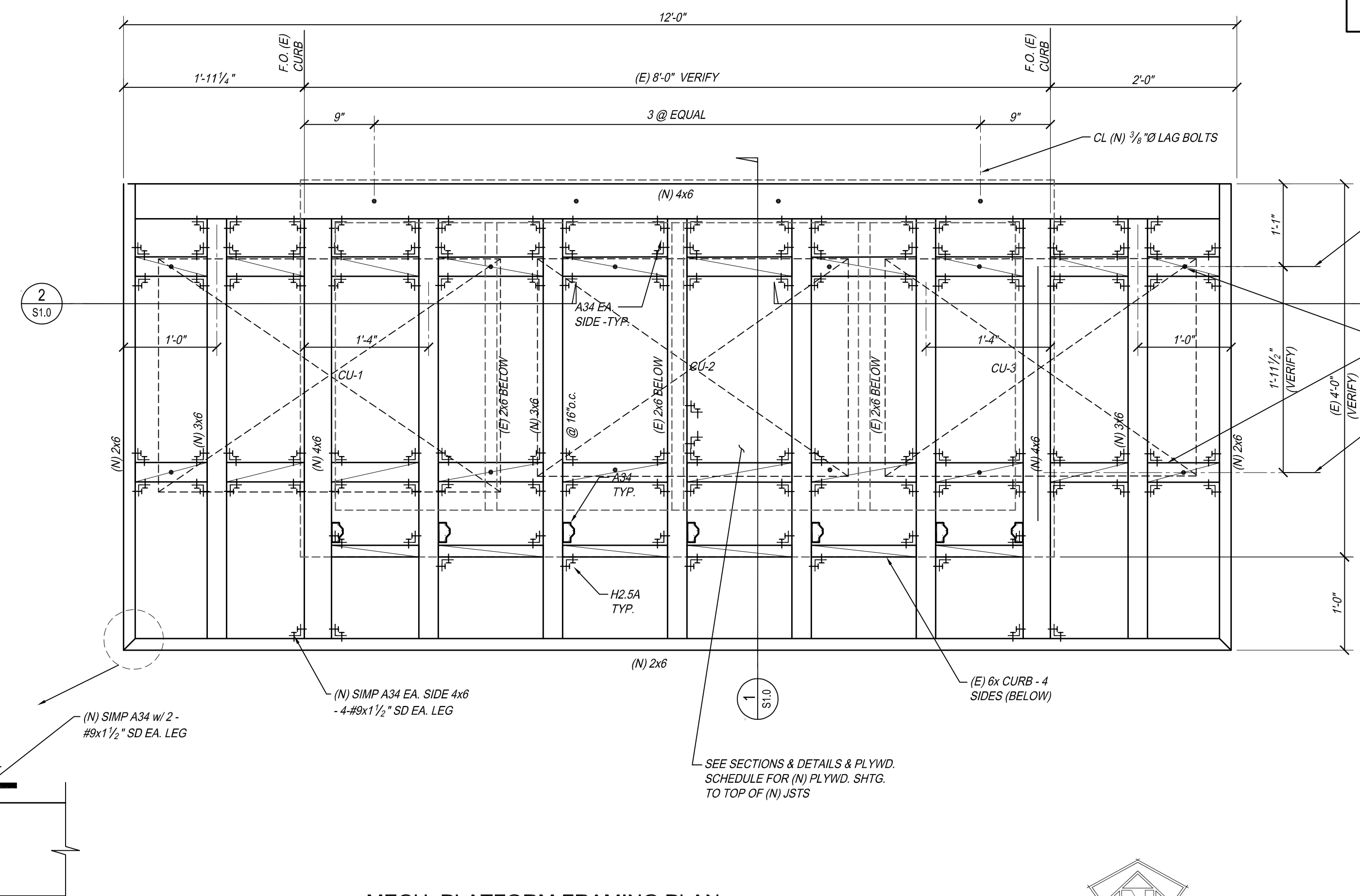
DETAIL 5
 SCALE: 1" = 1'-0"
 REF. - DRWG M-2 FOR DETAIL LOCATION
 DET05 S1.0



DETAIL 3
 SCALE: 1" = 1'-0"
 DET03 S1.0

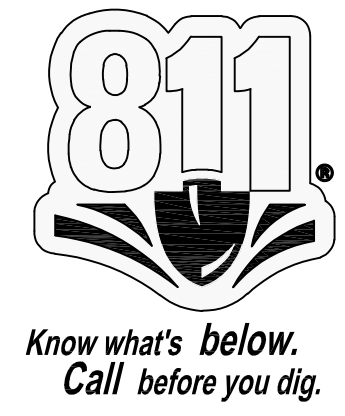
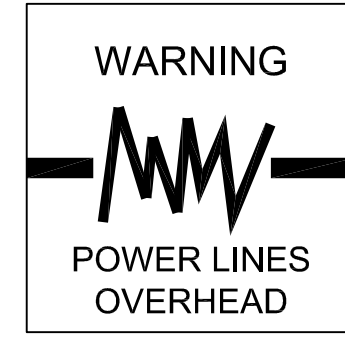


DETAIL 4
 SCALE: 1 1/2" = 1'-0"
 REF. - DRWG M-2 FOR DETAIL LOCATION
 DET04 S1.0



MECH. PLATFORM FRAMING PLAN
 SCALE: 1" = 1'-0"

PLYWOOD SCHEDULE	
LOCATION	TYPE
TOP OF PLATFORM	1/2" STR1 w/ SIMPSON
TOP OF PLATFORM	3" WSV SCREWS @ 6" c. ALL SUPPORTS & EDGES
SIDES OF PLATFORM	1/2" STR1 w/ 10d NAILS @ 6" c. ALL SUPPORTS & EDGES



THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS IT BEARS THE STAMPS AND SIGNATURES OF THE ARCHITECT AND ENGINEER AND THE "APPROVAL" STAMP OF THE JURISDICTIONAL BUILDING DEPARTMENT



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